CITY OF COLUMBIA
TENNESSEE

AGENDA

The Columbia Municipal Planning Commission will meet on Wednesday, July 9, 2025 at 4:00 PM in Council Chambers in the basement of City Hall, 700 N. Garden Street. The Planning Commission will consider the following:

I. Organization

1. Call to Order
2. Roll Call
3. Welcome of Visitors/Rules of Conduct
4. Acknowledgement of Official Communications of the Columbia City Council on Annexation and Zoning.
5. Approval of Minutes
6. Review of Bonds and Letters of Credit

II. Consent

1. Request from Wyatt Woeltje for Final Plat approval of Columbia Mall Lot 1 located at 800 S James M. Campbell Blvd. being Tax Map 100N Group L Parcel 6.

Documents:

1. 25-0203_Final Plat_06-16-2025
2. 25-0203_Final Plat_05-19-2025
3. 25-0203_Development Agreement_05-19-2025
4. 25-0203_Submittal Letter_05-19-2025
5. 25-0203_Application_05-19-2025

III. Discussion Items

1. Request from Michael Sandifer for a Preliminary PUD Master Plan recommendation for the construction of a telecommunications tower on the site of Christ Our Savior Church at 2494 Nashville Highway, being Tax Map 51 Parcel 7.01. **THIS ITEM WAS DEFERRED FROM A PREVIOUS AGENDA.**

   Documents:

   1. 25-0083_Staff Report
   2. 25-0083_Public Comment Email
   3. 25-0083_Deferral Email
   4. 25-0083_Tower Documents_Site Plan
   5. 25-0083_Zoning Submittal Letter with Site Photos_3-11-2025
   6. 25-0083_Response to DRC Comments_04-21-2025
   7. 25-0083_DRC Comments_04-08-2025
   8. 25-0083_FLU Map
   9. 25-0083_Zone Map
   10. 25-0083_Special Area_FLU Map
   11. 25-0083_Submittal Letter_3-11-2025
   12. 25-0083_Application_03-19-2025

2. Request from Allison Corolla for Preliminary Plat and Site Development Plan approval for Trotwood Foster Subdivision off Trotwood Ave, being Tax Map 112 Parcel 18.03. THIS ITEM WAS FORWARDED FROM A PREVIOUS AGENDA.

   Documents:

   1. 25-0136_Staff Report
   2. 25-0136_Site Development Plan Part 2_05-19-2025
   3. 25-0136_Site Development Plan Part 1_05-19-2025
   4. 25-0136_Landscape Plan_05-19-2025
   5. 25-0136_Easement Deed Dobual - Nomau_05-19-2025
   6. 25-0136_Fire Tanker Truck_05-19-2025
   7. 25-0136_HOA Docs_05-19-2025
   8. 25-0136_2024 ALTA_05-19-2025
   9. 25-0136_Easement Deed Dobual - Nomau_05-19-2025
   10. 25-0136_Comment Response Letter_05-19-2025
   11. 25-0136_DRC Comments_05-13-2025
   12. 25-0136_Preliminary Plat_04-21-2025
   13. 25-0136_ALTA_04-21-2025
   14. 25-0136_HOA Docs_04-21-2025
   15. 25-0136_Home Example Bradford_04-21-2025
   16. 25-0136_Home Example Burgess_04-21-2025
   17. 25-0136_Home Example Cumberland_04-21-2025
   18. 25-0136_Home Example Fuller_04-21-2025

19. 25-0136_Home Example Natchez_04-21-2025
20. 25-0136_Home Example Pinson_04-21-2025
21. 25-0136_Home Example Roan_04-21-2025
22. 25-0136_Playground Examples_04-21-2025
23. 25-0136_Project Letter of Intent_04-21-2025
24. 25-0136_Landscape Plan_04-21-2025
25. 25-0136_Easement Deed RECORDED Halliday_04-21-2025
26. 25-0136_RECORDED Main Sewer Easements and Improvements Agreement_04-21-2025
27. 25-0136_Water Availability Letter_04-21-2025
28. 25-0136_Submittal Letter_04-21-2025
29. 25-0136_Checklist_04-21-2025
30. 25-0136_Application_04-21-2025

3. Request from Colton Dorris for Preliminary Plat and Site Development Plan approval of Hampshire Pike Steadfast Mixed Use Development located off Hampshire Pike, being a portion of Tax Map 89 Parcel 41.15. THIS ITEM WAS FORWARDED FROM A PREVIOUS AGENDA

Documents:

1. 25-0137_Staff Report
2. 25-0137_SDP Resubmittal_05-28-2025
3. 25-0137_Response to Staff Comments_05-28-2025
4. 25-0137_Site Development Plan_05-19-2025
5. 25-0137_Preliminary Plat_05-19-2025
6. 25-0137_Committment Letter_05-19-2025
7. 25-0137_Legal Description_05-19-2025
8. 25-0137_Application_05-19-2025
9. 25-0137_Response to DRC Comments_05-19-2025
10. 25-0137_DRC Comments_05-19-2025
11. 25-0137_ Site Plan_04-21-2025
12. 25-0137_Preliminary Plat_04-21-2025
13. 25-0137-Use_Preliminary Plat_04-21-2025
14. 25-0137_Building Elevations_04-21-2025
15. 25-0137_Floor Plans_04-21-2025
16. 25-0137_Traffic Study_04-21-2025
17. 25-0137_Traffic Impact Analysis_04-21-2025
18. 25-0137_Public Improvement Committment Letter_04-21-2025
19. 25-0137_Water Availability Letter_04-21-2025
20. 25-0137_Power Availability_04-21-2025
21. 25-0137_Sewer Availability Letter_04-21-2025
22. 25-0137_SDP Checklist_04-21-2025
23. 25-0137_Description of Proposed Project_04-21-2025
24. 25-0137_Application_04-21-2025

4. Request from Abigail Overstreet for Final Plat approval with surety in the amount of $535,000 for Hampshire Pike Steadfast Mixed Use Subdivision Phase 1 located at Tax Map 89 Parcel 41.15 off Hampshire Pike.

   Documents:

   1. 25-0205_Final Plat_05-19-2025
   2. 25-0205_Development Agreement_05-19-2025
   3. 25-0205_Owner Affidavit_05-19-2025
   4. 25-0205_Application_05-19-2025

5. Request from WES Engineers & Surveyors for Preliminary Plat and Site Development Plan approval of Legends at Hunters Glen, being Tax Map 112 Parcel 18.02 located off Hunters Glen Drive.

   Documents:

   1. 25-0138_Preliminary Plat-SDP_5-19-25
   2. 25-0138_Impact Study_05-13-2025
   3. 25-0138_Preliminary Plat_04-21-2025
   4. 25-0138_Survey_04-21-2025
   5. 25-0138_Parcel Map_05-19-2025
   6. 25-0138_Aerial Map_04-21-2025
   7. 25-0138_WAL_04-23-2025
   8. 25-0138_WAL_11-14-2024
   9. 25-0138_Fire Flow_04-21-2025
   10. 25-0138_WW Will Serve_04-21-2025
   11. 25-0138_Checklist_04-21-2025
   12. 25-0138_Submittal Letter_04-21-2025
   13. 25-0138_Application_04-21-2025

6. Request from TKC Architecture & Engineering to Rezone property at 1221 E. End Street, being Tax Map 99 Parcel 59.03 from CD-3L (Residential Large Lot Character District) to CD-3 (Neighborhood Character District).

   Documents:

   1. 25-0193_Concept Plan_05-19-2025
   2. 25-0193_Legal Description Exhibit_05-19-2025
   3. 25-0193_Legal Description_05-19-2025
   4. 25-0193_Water Availability Letter_05-19-2025
   5. 25-0193_Wastewater Availability Letter_05-19-2025
   6. 25-0193_Submittal Letter_05-19-2025

7. 25-0193_Application_05-19-2025

7. Request from Adam Crunk, PE, for Annexation with Plan of Services approval with a requested zoning designation of CD-3 (Neighborhood Character District) being Tax Map 112 Parcel 17.00 including a Comprehensive Land Use Designation Amendment from Rural Transition to Suburban Neighborhoods for property at Tax Map 112 Parcel 17.00 and Tax Map 112 Parcel 18.02 located off Foster Lane.

   Documents:

   1. 25-0198_Concept Plan_05-19-2025
   2. 25-0198_Legal Description_05-19-2025
   3. 25-0198_WAL Ext_12-13-2024
   4. 25-0198_Fire Flow _05-19-2025
   5. 25-0198_Electric Will-Serve Letter_12-04-2024
   6. 25-0198_WW Will-Serve Letter_Foster Ln_11-22-2024
   7. 25-0198_Property Owner Permission Form_05-19-2025
   8. 25-0198_Submittal Letter-Plan Amendment_05-19-2025
   9. 25-0198_Application_05-19-2025
   10. 25-0198_Annexaton Application_05-19-2025

8. Request from Nick Moran for Annexation with Plan of Services approval including a Comprehensive Plan Land Use Designation Amendment from Rural Transition to Suburban Neighborhoods with the default zoning designation of CD-3L (Neighborhood Large Lot Character District) for property at Tax Map 67 Parcel 1 located off Double Branch Road.

   Documents:

   1. 25-0200_Concept Plan_05-19-2025
   2. 25-0200_Recorded Plat_05-19-2025
   3. 25-0200_Requested Zone_05-19-2025
   4. 25-0200_Comprehensive Plan FLU Pre-Post 2024_05-19-2025
   5. 25-0200_FLU Statement_05-19-2025
   6. 25-0200_Legal Description_05-19-2025
   7. 25-0200_WAL_05-19-2025
   8. 25-0200_Property Owner Permission_Lepley_05-19-2025
   9. 25-0200_Application_05-19-2025
   10. 25-0200_Annexation Application_05-19-2025

IV. Other Business

1. Residential Parking Standards

V. Adjourn

The Planning Commission of the City of Columbia welcomes your presence and participation at this meeting. If you wish to address the Commission regarding any item on the Agenda, please sign the sign-up sheet and indicate which agenda item you would like to comment on. You will have the opportunity to comment on an item when it comes up on the Agenda and before the Commission votes on the item. Once recognized, you may then come to the podium and state your name and address. Anyone requesting accommodation due to disabilities should contact the ADA Coordinator, Wanda McClain, at 931-560-1570 prior to the meeting. For other questions, please contact the Department of Development Services at 931-560-1560.

800 S James Campbell Blvd. – Final Plat

Project #:	25-0203	**Location:**	100N L 006.00
Applicant:	Wyatt Woeltje	**Case Type(s):**	Final Plat
Staff Planner:	Robert Archibald, Principal Planner	**Proposed Use:**	PUDAE/CPWS Access Easement

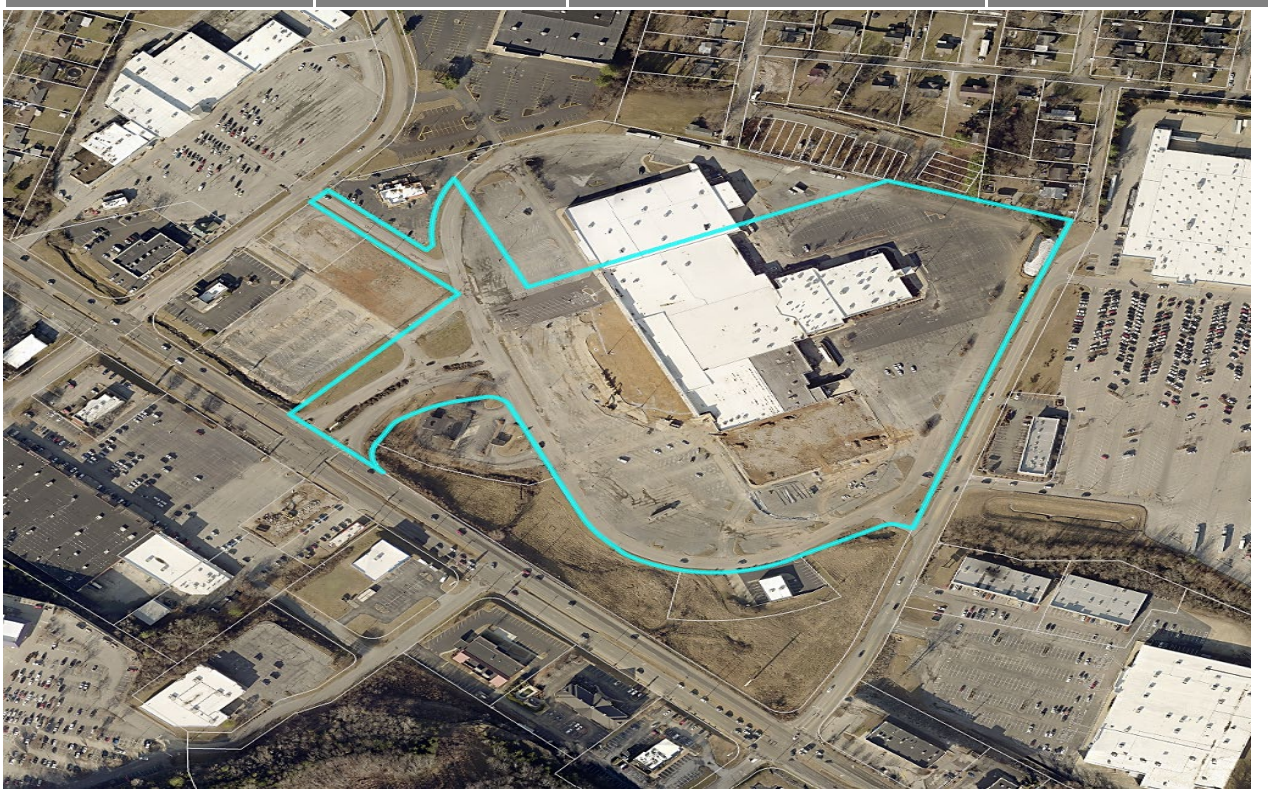
PROJECT SUMMARY

The applicant is seeking approval for a Final Plat to establish a Public Utility Drainage and Access Easement (PUDAE) as well as a Utility Easement for Columbia Power and Water Systems. This lot is part of a larger commercial development. On April 9, 2025, the Planning Commission granted approval for a Preliminary Plat, Site Development Plan, and Alternative Performance (25-0047). This prior approval has created a vested right to develop in accordance with the CD-4C (General Urban Corridor) character district standards outlined in the current Zoning Ordinance. This development is subject to Ordinance 4400, the current zoning ordinance.

- The Final Plat conforms to the Preliminary Plat, with the exception as noted below in Conformity with the Zoning Ordinance.
- The DRC reviewed this proposal at its June 2025 meeting. Staff review included standard comments and requests for technical corrections. Full technical comments are provided in the agenda packet.
- Staff review included standard comments and requests for technical corrections.
- The Planning Commission is the **Decision-Making Authority** for the Final Plat.
- Templates are provided at the end of the report to assist the Planning Commission in crafting properly formatted motions.

SITE INFORMATION

CURRENT ZONING	EXISTING USE	EXISTING IMP.	LAND AREA
CD-4C	In Development	Commercial	+/-24.64 Acres



FUTURE LAND USE MAP	ZONING MAP





SITE CONTEXT/ADJACENT PROPERTIES			
	Future Land Use	Zoning	Current Use
Subject Property	City Center Urban Village	CD-4C	Commercial/Retail
North	City Center Urban Village	CD-4C	Commercial/Retail
South	City Center Urban Village	CD-4C	Commercial/Retail
East	City Center Urban Village	CD-4C	Commercial/Retail
West	City Center Urban Village	CD-4C	Commercial/Retail

The subject site is a part of larger commercial development surrounding the area that is compatible with the CD-4C district standards.

CONFORMITY WITH ZONING ORDINANCE

The Final Plat adheres to the Preliminary Plat, the CD-4C district standards outlined in the applicable zoning ordinance (4400), and the City of Columbia's Subdivision Regulations, except for the noted request below:

- A request was made by Engineering to extend the PUDAE (Public Utility and Drainage Easement) to include the area between the undeveloped 7 Brew site and the Valvoline site, reaching the adjacent property line. However, the developer of this parcel has indicated that they would prefer not to commit to this easement, as it may interfere with future development plans for the property in that area.

REVIEW PROCESS

The Development Review Committee evaluated the proposed Final Plat at its June 2025 meeting, as directed by section **8.3.7** of the Zoning Ordinance. Technical comments are provided in the agenda package and summarized above.

Section **8.5.24** of the Zoning Ordinance directs the Planning Commission to review Subdivision Plats for conformity with the standards of the Ordinance and the City Subdivision Regulations. The Ordinance indicates that all Preliminary and Final Plats must be prepared, submitted, reviewed and acted upon in accordance with the Subdivision Regulations.

The Planning Commission is the Decision-Making Authority for Final Plats under **§ 8.3.3.B.1** of the Zoning Ordinance and **§ 2.3** of the Subdivision Regulations.

Section **2.3.6** of the Subdivision Regulations establishes the review criteria for approval of Final Plats.

> *A. Recommendations and final action on a Final Plat shall be based on consideration of the following criteria:*

1. Whether the proposed Final Plat complies with the applicable zoning district and overlay districts;

2. Whether the proposed Final Plat is consistent with all standards of these Subdivision Regulations and other related codes and ordinances enforced by the City; and

3. Whether the proposed Final Plat meets all the requirements or conditions of any applicable development approvals, such as development plans or associated modification of standards.

In the event of a denial, **§ 2.3.5** of the Subdivision Regulations requires the Planning Commission to identify the specific parts of applicable plans and regulations with which the plat does not comply.

SAMPLE MOTIONS

Approve:

Move to approve the Final Plat as presented and find that the plat conforms to the applicable zoning ordinance, the Subdivision Regulations, and the Preliminary Plat [subject to remaining technical comments from staff].

Approve with Conditions:

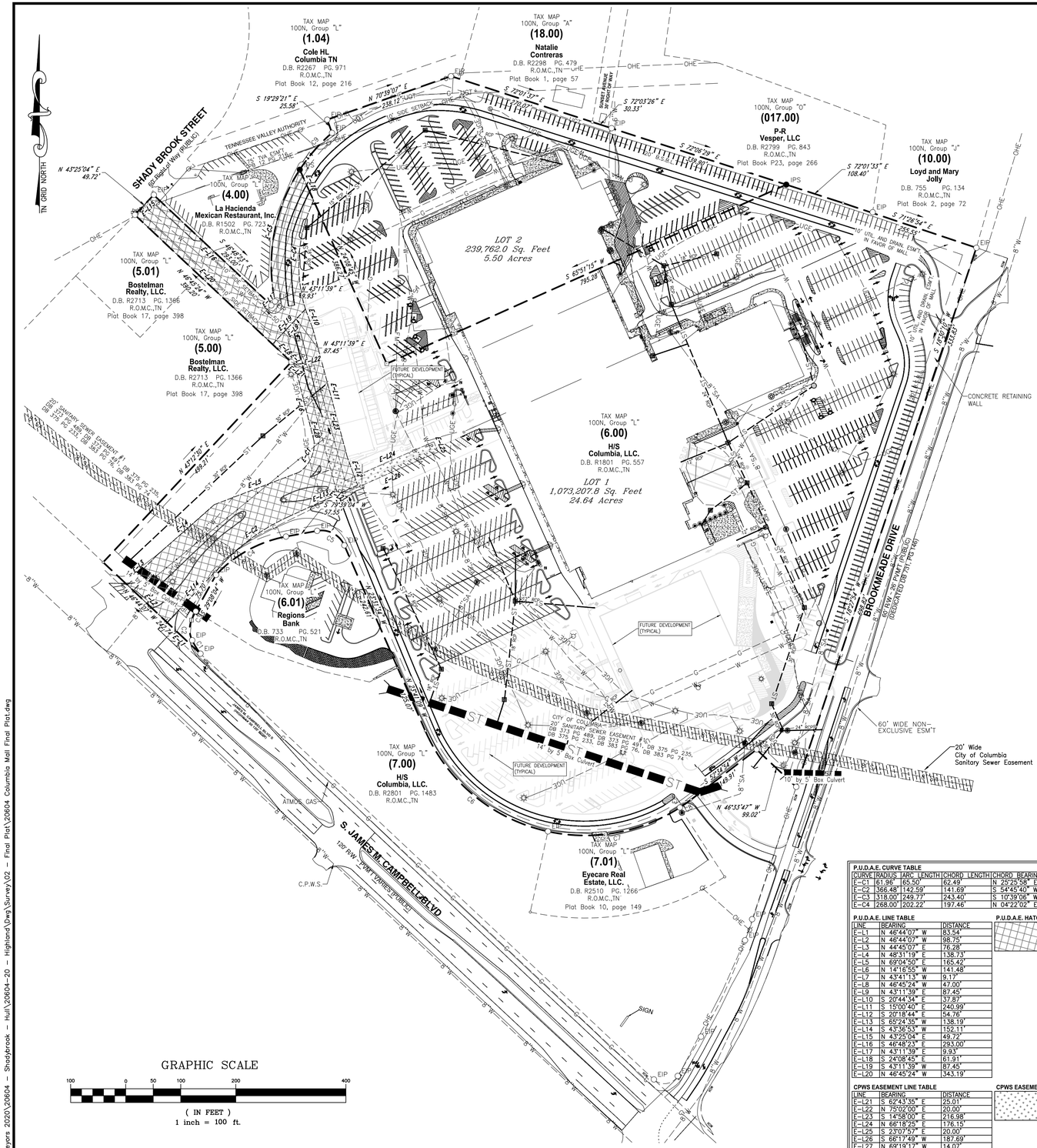
Move to approve the Final Plat as presented and find that the plat conforms to the applicable zoning ordinance, the Subdivision Regulations, and the Preliminary Plat, subject to the following conditions: [list conditions of approval crafted by Planning Commission].

Defer for Continued Review:

Move to find that there is insufficient information to make a decision, defer the application for continued review, and request that the applicant provide: [list additional information] for review at the next regularly scheduled meeting of the Planning Commission.

Deny:

Move to find that the Final Plat as presented does not conform to the applicable zoning ordinance, the Subdivision Regulations, or the approved Preliminary Plat, and deny the request due to [list specific deficiencies].


TAX MAP 100N, Group "L" (1.04) Cole HL Columbia TN D.B. R2267 PG. 971 R.O.M.C.,TN Plat Book 12, page 216
TAX MAP 100N, Group "A" (18.00) Natalie Contreras D.B. R2298 PG. 479 R.O.M.C.,TN Plat Book 1, page 57
TAX MAP 100N, Group "O" (017.00) P-R Vesper, LLC D.B. R2799 PG. 843 R.O.M.C.,TN Plat Book P23, page 266
TAX MAP 100N, Group "J" (10.00) Loyd and Mary Jolly D.B. 755 PG. 134 R.O.M.C.,TN Plat Book 2, page 72
TAX MAP 100N, Group "L" (4.00) La Hacienda Mexican Restaurant, Inc. D.B. R1502 PG. 723 R.O.M.C.,TN
TAX MAP 100N, Group "L" (5.01) Bostelman Realty, LLC. D.B. R2713 PG. 1366 R.O.M.C.,TN Plat Book 17, page 398
TAX MAP 100N, Group "L" (5.00) Bostelman Realty, LLC. D.B. R2713 PG. 1366 R.O.M.C.,TN Plat Book 17, page 398
TAX MAP 100N, Group "L" (6.00) H/S Columbia, LLC. D.B. R1801 PG. 557 R.O.M.C.,TN
TAX MAP 100N, Group (6.01) Regions Bank D.B. 733 PG. 521 R.O.M.C.,TN
TAX MAP 100N, Group "L" (7.00) H/S Columbia, LLC. D.B. R2801 PG. 1483 R.O.M.C.,TN
TAX MAP 100N, Group "L" (7.01) Eyecare Real Estate, LLC. D.B. R2510 PG. 1266 R.O.M.C.,TN Plat Book 10, page 149
LOT 2 239,762.0 Sq. Feet 5.50 Acres
LOT 1 1,073,207.8 Sq. Feet 24.64 Acres
SHADY BROOK STREET (50' Right-of-Way) (PUBLIC)
BROOKMEADE DRIVE (PUBLIC) (DEDICATED BY PLAT, PB P22, PG 391)
S. JAMES M. CAMPBELL BLVD 120' R/W (PART VARIES) (PUBLIC)
TENNESSEE VALLEY AUTHORITY
CITY OF COLUMBIA 20' SANITARY SEWER EASEMENT #1 DB 373 PG 485, DB 383 PG 76, DB 375 PG 235, DB 383 PG 74
CITY OF COLUMBIA 20' SANITARY SEWER EASEMENT #2 DB 373 PG 485, DB 383 PG 76, DB 375 PG 235, DB 383 PG 74
60' WIDE NON-EXCLUSIVE ESM'T
20' Wide City of Columbia Sanitary Sewer Easement
CONCRETE RETAINING WALL
FUTURE DEVELOPMENT (TYPICAL)
10' by 5' Box Culvert
14' by 5' Box Culvert
ATMOS GAS
C.P.W.S.
SIGN
N 43°25'04" E 49.72'
S 19°29'21" E 25.58'
N 70°39'07" E 258.12'
S 72°01'33" E 108.40'
S 72°03'26" E 30.33'
S 72°28'29" E 265.80'
S 71°26'34" E 265.24'
S 65°51'15" W 795.28'
N 43°11'39" E 87.45'
N 46°44'07" W 98.75'
N 43°11'39" E 69.82'
N 46°33'47" W 99.02'
N 43°17'20" E 409.81'
S 79°39'04" E 57.55'
N 46°48'23" E 230.36'
S 43°11'39" W 9.93'
S 24°08'45" E 61.91'
S 43°11'39" W 87.45'
N 46°45'24" W 343.19'
S 22°43'54" W 149.91'
S 43°11'39" W 87.45'
S 24°08'45" E 61.91'
S 43°11'39" W 9.93'
N 46°48'23" E 230.36'
S 79°39'04" E 57.55'
N 43°17'20" E 409.81'
N 46°45'24" W 343.19

June 16, 2025

City of Columbia
Development Services
700 North Garden Street
Columbia, TN 38401

RE: Project Name: Revision Lot 1 – 800 S James M Campbell, Final Plat
City of Columbia Staff Review Submittal

On behalf of HC Columbia, LLC, the owner of lot 1 containing the proposed easements, WES Engineers & Surveyors would like to re-submit this Final Plat to the City of Columbia for Planning Commission approval. Items area addressed below in RED.

ITEM NO.
25-0203

DESCRIPTION: 800 S James Campbell Mall

Planning

1. The lead staff person for this case is Robert Archibald, Principal Planner. Please contact rarchibald@columbiatn.gov with questions about the development review process or technical comments. The case planner should be copied on all communication with other city staff.
   Noted
2. At resubmittal, please provide a response letter addressing each comment along with any revised plans. If the nature of the comment does not warrant a response, or the comment was previously addressed, please simply note that the information has been acknowledged. Any documents or additional information that you want to present to the Planning Commission should be included in your resubmittal.
   Noted
3. If existing easement, identify and highlight on plat.
   The existing sanitary sewer line has been hatched for clarity on the final plat. The access easement to Lot 2 is now encompassed in the overall PUDEA as hatched on the current Final Plat.

Fire

4. No comments

Engineering

5. Extend PUDAE to encompass the drive between the 7 Brew and Valvoline to the adjacent property line.
   At this time, the developer for this parcel would request to not have to commit to this easement, as the location could interfere with the future development of the property in this area.

Wastewater

6. Columbia Wastewater wants the owner to distinguish between public and private sewer within the parcel via notes and legend symbolism.
   The public sewer line that crosses the property has been hatched and all other sewer lines are privately owned.

Building

7. No comments.

City Attorney

8. No comments provided.

Maury County E911

9. Road name is incorrect. It needs to be S. James M. Campbell. This will need to be correct before we can sign off.
   The developer is working with E-911 on the naming of the Loop Road to run addresses from.
10. Maury 911 suggest this entire development have new road names and new addresses for all businesses.
    The developer is working with E-911 on the naming of the Loop Road to run addresses from.

Maury County Schools

11. No comment.

Columbia Water

12. No comments at this time, once development of the lot moves forward a valid Water Availability Letter will be required.
    Noted

Columbia Power

13. Columbia Power System has an existing power line near your proposed development. We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction.
    . Unfortunately, due to current supply chain challenges, no timeframe can be guaranteed regarding the availability of meters or transformers appropriate for your development.
    Noted

Police

14. No comments provided.

Public Works

15. No comments.

Duck River Electric Membership Corp

16. No comments.

Maury County Highway Dept.

17. No comment.

ATT

18. No comment provided.

Atmos Energy

19. No comment provided.

If you have any questions or comments with this submittal, please do not hesitate to contact me directly.

Sincerely,
WES Engineers & Surveyors

Allen B. O'Leary, RLS
Principal

CITY OF
COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, June 10, 2025

ITEM NO.
25-0203

DESCRIPTION: 800 S James Campbell Mall

COMMENTS:

Planning

1. The lead staff person for this case is Robert Archibald, Principal Planner. Please contact rarchibald@columbiatn.gov with questions about the development review process or technical comments. The case planner should be copied on all communication with other city staff.
2. At resubmittal, please provide a response letter addressing each comment along with any revised plans. If the nature of the comment does not warrant a response, or the comment was previously addressed, please simply note that the information has been acknowledged. Any documents or additional information that you want to present to the Planning Commission should be included in your resubmittal.
3. If existing easement, identify and highlight on plat.

Fire

4. No comments

Engineering

5. Extend PUDAE to encompass the drive between the 7 Brew and Valvoline to the adjacent property line.

Wastewater

6. Columbia Wastewater wants the owner to distinguish between public and private sewer within the parcel via notes and legend symbolism.

CITY OF
COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

Building

7. No comments.

City Attorney

8. No comments provided.

Maury County E911

9. Road name is incorrect. It needs to be S. James M. Campbell. This will need to be correct before we can sign off.
10. Maury 911 suggest this entire development have new road names and new addresses for all businesses.

Maury County Schools

11. No comment.

Columbia Water

12. No comments at this time, once development of the lot moves forward a valid Water Availability Letter will be required.

Columbia Power

13. Columbia Power System has an existing power line near your proposed development. We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction.
    . Unfortunately, due to current supply chain challenges, no timeframe can be guaranteed regarding the availability of meters or transformers appropriate for your development.

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

Police

14. No comments provided.

Public Works

15. No comments.

Duck River Electric Membership Corp

16. No comments.

Maury County Highway Dept.

17. No comment.

ATT

18. No comment provided.

Atmos Energy

19. No comment provided.

Resubmittal Guidelines

Please provide a comment response letter as well as digital copies of revised plans and supporting documentation. Submit all required documents electronically through the online portal: columbia.onlama.com. If the files are oversized, please provide a file sharing link.

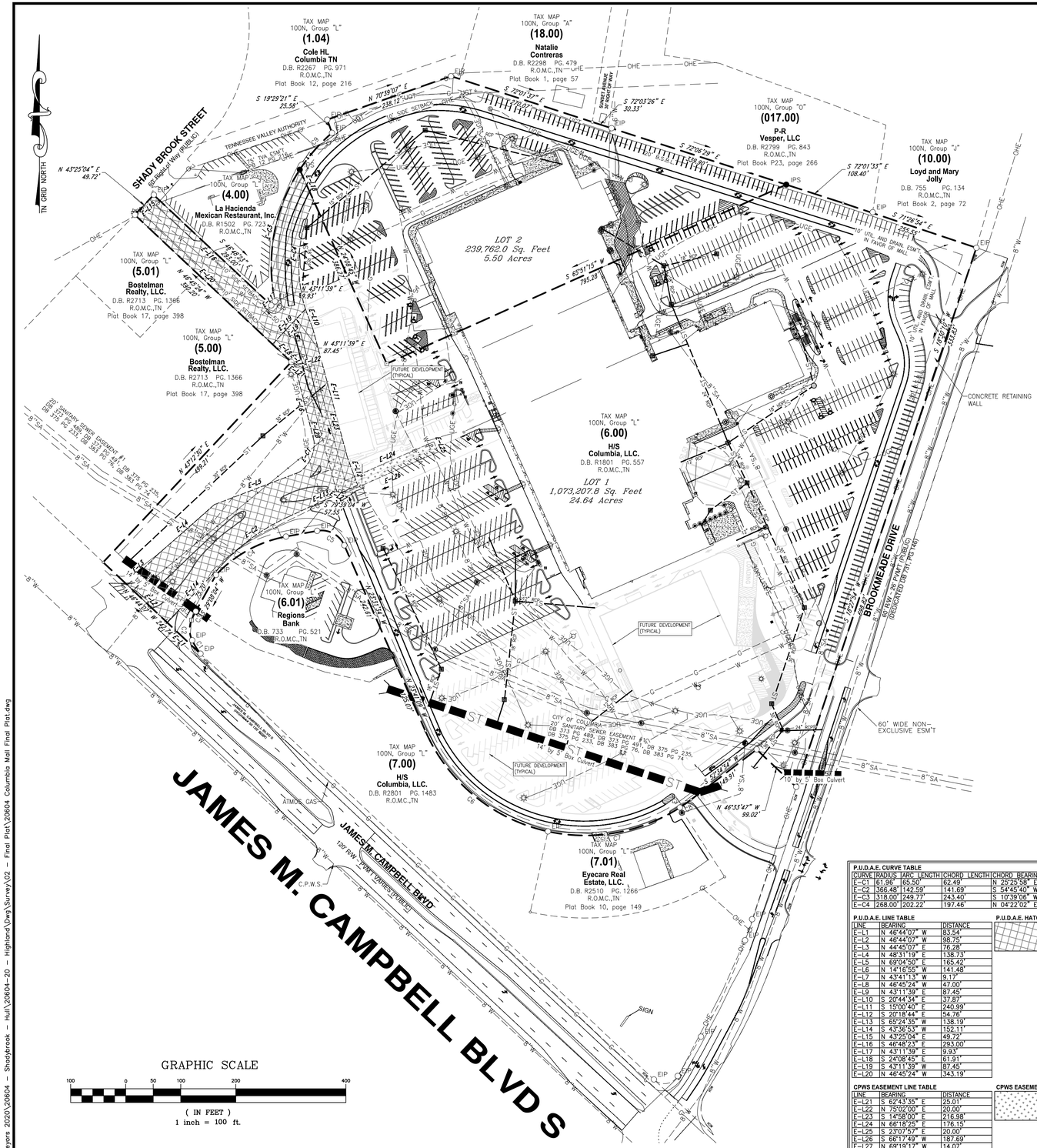
DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

Please contact the case planner identified in the Planning Comments with any questions about the review process.

Please contact pkeltner@columbiatn.gov or srichardson@columbiatn.gov if you encounter difficulties with the online portal.

You will receive an invoice for required advertising and mailing fees. All fees must be paid by the Friday following resubmittal in order advance to the Planning Commission agenda.

NOTE: All resubmittals must demonstrate compliance with city standards prior to Planning Commission review. Requests which do not adhere to regulations and/or remain unresponsive to technical comments will not be forwarded to the next agenda until such items are amended. Final Plat applications which are not ready to proceed to Planning Commission following the first resubmittal deadline will be added to the following DRC agenda to confirm the status of required infrastructure and utilities. Applications which remain incomplete following two resubmittal deadlines will be closed.



Legend

- EIP — Iron Rod/Pipe Found
- IPS — Iron Rod Set
- ECM — Concrete Monument Existing
- MAG — Mag Nail
- Fence Post
- T–Post
- Bench Mark
- Stake Found
- Fire Hydrant
- Water Meter
- Water Valve
- Water Reducer
- Post Indicator Valve
- Clean Out
- Sanitary Sewer Manhole
- Storm Sewer Manhole
- Curb Inlet
- Catch Basin
- Area Drain
- Cable Manhole
- Electric Manhole
- Telephone Manhole
- Water Manhole
- Electric Meter
- Electric Riser
- Cable Riser
- Telephone Riser
- Gas Meter
- Gas Valve
- Light Pole
- Power Pole
- Telephone Pole
- Guy Pole
- Power Pole
- Guy Wire
- Flag Pole
- Sign
- Parking Block
- Handicap Parking
- Bollard
- Water Spigot
- Mailbox
- Evergreen Tree
- Deciduous Tree
- Bush
- Adjoining Property Line
- Subject Property Line
- Easement Line
- Building Setback Line
- Centerline
- Edge of Pavement
- Edge of Gravel
- Fence Line
- Landscape
- Woods / Tree line
- Edge of Water
- Ditch / Creek Centerline
- Minor Contour Line
- Index Contour Line
- Gas Line
- Sanitary Sewer Line
- Water Line
- Storm Sewer Line
- Overhead Utility Line
- Overhead Cable Line
- Overhead Electric Line
- Overhead Telephone Line
- Underground Utility Line
- Underground Cable Line
- Underground Electric Line
- Underground Telephone Line
- Forced Main Line

P.U.D.A.E. CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
E–C1	61.98'	65.50'	62.49'	N 25°25'58" E	60°34'08"
E–C2	366.48'	142.59'	141.69'	S 54°45'40" W	22°17'34"
E–C3	318.00'	249.77'	243.40'	S 10°39'06" W	45°00'07"
E–C4	268.00'	202.22'	197.46'	N 04°22'02" E	43°13'58"

P.U.D.A.E. LINE TABLE

LINE	BEARING	DISTANCE
E–L1	N 46°44'07" W	83.54'
E–L2	N 46°44'07" W	98.75'
E–L3	N 44°45'07" E	76.28'
E–L4	N 48°31'19" E	138.73'
E–L5	N 69°04'50" E	165.42'
E–L6	N 14°16'55" W	141.48'
E–L7	N 43°41'13" W	9.17'
E–L8	N 46°45'24" W	47.00'
E–L9	N 43°11'39" E	87.45'
E–L10	S 20°44'34" E	37.87'
E–L11	S 15°00'40" E	240.99'
E–L12	S 20°18'44" E	54.76'
E–L13	S 69°24'35" W	138.19'
E–L14	S 43°36'53" W	152.11'
E–L15	N 43°25'04" E	49.72'
E–L16	S 46°48'23" E	293.00'
E–L17	N 43°11'39" E	9.93'
E–L18	S 24°08'45" E	61.91'
E–L19	S 43°11'39" W	87.45'
E–L20	N 46°45'24" W	343.19'

P.U.D.A.E. HATCHING

CPWS EASEMENT LINE TABLE

LINE	BEARING	DISTANCE
E–L21	S 62°43'35" E	25.01'
E–L22	N 75°02'00" E	20.00'
E–L23	S 14°58'00" E	216.98'
E–L24	N 66°18'25" E	176.15'
E–L25	S 23°07'57" E	20.00'
E–L26	S 66°17'49" W	187.69'
E–L27	N 69°19'17" W	14.07'
E–L28	N 14°58'00" W	230.36'

CPWS EASEMENT HATCHING

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	145.00'	29.06'	29.01'	N 31°37'32" W	11°29'03"
C2	45.00'	37.80'	36.70'	N 01°38'26" W	48°07'50"
C3	145.00'	17.61'	17.60'	N 29°28'50" E	6°57'32"
C4	233.22'	147.41'	144.97'	N 61°16'02" E	36°12'52"
C5	45.00'	60.36'	55.94'	S 62°01'44" E	76°51'11"
C6	316.28'	299.13'	288.11'	S 50°37'21" E	54°11'21"
C7	316.82'	250.02'	243.58'	S 79°43'59" W	45°12'52"
C8	316.82'	25.03'	25.02'	N 54°53'45" E	4°31'33"
C9	318.00'	89.09'	88.80'	N 41°10'42" E	16°03'05"
C10	318.00'	249.77'	243.40'	N 10°39'06" E	45°00'07"
C11	268.00'	202.22'	197.46'	N 04°22'02" E	43°13'58"

Surveyor's Notes

1. All distances measured with E.D.M. equipment and have been adjusted for temperature and pressure, GNSS distances measured are ground distances.
2. The property (Boundary) Line Survey exceeds the minimum requirements of an Urban Land Survey Category IV as per Standards of Practice adopted by the State Board of Examiners for Land Surveyors for the State of Tennessee, and the precision of the unadjusted survey is greater than 1 foot in 10,000 feet.
3. Information concerning site utility services and appurtenances shown hereon is based on visible evidence noted during the survey, information provided by utility representatives or information shown on original construction plans by other. Information and location of service lines on site should be considered approximate and there may be underground utility lines that are not shown on the survey. Owner(s) and contractor(s) should assume responsibility of locating all underground utility service lines prior to any construction, excavation or any disturbance of the existing ground elevation to avoid hazard of unnecessary expense.
4. Information concerning major utilities or appurtenances shown hereon are based on visible evidence noted during the survey or information provided by utility representatives. Verification of existence, size, location, depth and availability of service should be confirmed by local utility agencies.
5. The property shown hereon is located within the City of Columbia, Maury County, TN. All matters pertaining to construction, use location of improvements, signage, parking, noise, vibration, emissions, fire hazards, radiation, illumination, setback provisions, etc., are subject to the City of Columbia's Zoning Regulation as interpreted and regulated by the Department of Planning and Codes.
6. The area of the parcels as shown hereon.
7. This property currently identified as Tax Map No. 100N, Group "L" Parcel No. 006.00, Maury County. For designation shown thus ( ) indicates Parcel Numbers for said map.
8. Plat reference: Plat Book P8, Page 126, Plat Book P22, Page 391
9. Deed reference: Book R3037, Page 568
10. Bearings based on: Tennessee State Plane, NAD 83(2011).
11. This drawing was prepared in accordance with our field survey notes. It shows improvements as they exist to the best of our knowledge, but is not guaranteed to be correct in each and every detail.
12. This survey was prepared from current deeds of record and does not represent a title search or a guarantee of title, and is subject to any state of facts a current and accurate search may reveal.
13. This survey was prepared for the exclusive use of the person, persons, or entity, if any, named on the certification hereon. Said certificate does not extend to any unnamed person without an express re–certification by the surveyor naming said person.
14. The certification as provided on this survey, is purely a statement of professional opinion based on knowledge, information and belief, based on existing field evidence and documentary evidence provided by others.
15. The certification is not an expressed or implied warranty or guarantee.
16. This property is not located in a Special Flood Hazard Area as shown on F.E.M.A. Flood Insurance Rate Map, Community Panel No. 47119C0285, dated April 16, 2007, and shown hereon graphically.
17. All public utility and drainage easements located on proposed lots are to be maintained by the individual property owner for said lot.
18. All property corners are ½" rebar with cap reading "WES 1987" unless otherwise noted.

PARCEL NUMBER:
TAX MAP 110N, GROUP "L", PARCEL 006.00

DEED BOOK:
R3037, PAGE 568

PARCEL ADDRESS:
800 S James M CAMPBELL BLVD

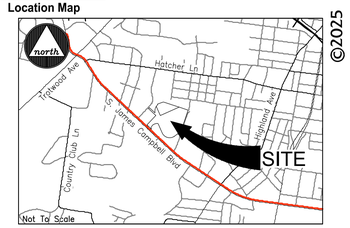
EXISTING ZONING:
CD–4C

BUILDING SETBACKS:
FRONT – 6' MIN, 40' MAX
SIDE – 0' MIN
REAR – 3' MIN OR 15' MIN FROM CL OF REAR ALLEY

ACREAGE OF PARCEL:
±24.64 ACRES

PROPERTY OWNER:
HC COLUMBIA LLC
76 WHITE BRIDGES ROAD
SUITE 103 #230
NASHVILLE, TN 37205

Location Map



©2025

PURPOSE NOTE:
The purpose of this plat is to create Public Utility, Drainage, & Access Easements and an Utility Easement for Columbia Power & Water Systems.

CERTIFICATE OF OWNERSHIP AND DEDICATION

I, (we) hereby certify that I am (we are) the owner(s) of the property shown and described hereon as evidenced in Book Number R3037, Page 568, Maury County Registers Office, and that I (we) hereby adopt this plan of subdivision with my (our) free consent, establish the minimum building restriction lines, and that offers of irrevocable dedication for all public ways, utilities, and other facilities have been filed.

Date — HC Columbia, LLC, a Tennessee limited liability company, Wyatt Woeltje, Principal

CERTIFICATE OF APPROVAL FOR SUBDIVISION NAME AND STREET NAMES

Subdivision name and street names approved by the City Engineering Department and by E-911 Maury County.

Date — Maury County E-911 Columbia, Tennessee

CERTIFICATE OF APPROVAL OF SEWER SYSTEM

I hereby certify that the sewer system outlined or indicated on this final subdivision plat has been installed in accordance with the current local and state government requirements, or a sufficient bond or other has been filed to guarantee said installation.

Date — Director of Wastewater Department Columbia, Tennessee

CERTIFICATE OF APPROVAL OF WATER SYSTEM

I, (we) hereby certify that the water system(s) outlined or indicated on the final subdivision plat entitled Revision Lot 1 - 800 S. James M. Campbell Blvd has/have been installed in accordance with current local and state government requirements, or a sufficient bond or other surety has been filed to guarantee said installation.

Date — Columbia Power & Water Systems Columbia, Tennessee

CERTIFICATE OF COMPLIANCE

I hereby certify that the subdivision plat shown hereon has been found to comply with the City of Columbia Subdivision Regulations and other adopted ordinances and policies.

Date — City Engineer Columbia, Tennessee

CERTIFICATE OF APPROVAL FOR RECORDING

I hereby certify that the subdivision plat shown hereon has been found to comply with the City of Columbia Subdivision Regulations, with the exception of such variances, if any, as are noted in the minutes of the Planning Commission, and that it has been approved for recording in the Office of the County Register:

Date — Secretary, Planning Commission Columbia, Tennessee

SURVEYOR'S CERTIFICATION (TENNESSEE)

I hereby certify that to the best of my knowledge and belief this is a true and accurate survey of the property shown hereon; that this is a category "I" Land Survey as defined in Title 62, Chapter 18, Tennessee Code Annotated, and that the ratio of precision is greater than or equal to 1:10,000.

5/19/25 — Date
Allen B. O'Leary — Allen B. O'Leary
TN RLS #1987 — Number

Register of Deed Recording Stamp

ALLEN B. O'LEARY — REGISTERED LAND SURVEYOR — STATE OF TENNESSEE — AGRICULTURE — NO. 1987

WES ENGINEERS & SURVEYORS
CIVIL ENGINEERS & LAND SURVEYORS
2486 NASHVILLE HIGHWAY
COLUMBIA, TN 38401
PHONE: (931) 388-2329
www.wesengineers.com

WES ENGINEERS & SURVEYORS

Client
HC COLUMBIA, LLC.
73 WHITE BRIDGE ROAD, SUITE 103 #230
NASHVILLE, TN 37205
WYATT WOELTJE

REVISIONS | DATE

Drawn:
Checked: AO
Approved:
Date: 5-19-2025

Job. no. 20604-20
Scale:
Vertical: 1"=100'
Horizontal:

FINAL PLAT
REVISION LOT 1 - 800 S. JAMES M. CAMPBELL BLVD
COLUMBIA, TN (MAURY COUNTY)

1 of 1

FILE: J:\WES_Engineers_Surveyors 2020\20604 – Shadybrook – Hull\20604–20 – Highland\Dwg\Survey\02 – Final Plat\20604 Columbia Mall Final Plat.dwg

none

May 19, 2025

City of Columbia
Development Services
700 North Garden Street
Columbia, TN 38401

RE: **Project Name: Revision Lot 1 – 800 S James M Campbell, Final Plat**
City of Columbia Staff Review Submittal

On behalf of HC Columbia, LLC, the owner of lot 1 containing the proposed easements, **WES Engineers & Surveyors** would like to submit this Final Plat to the City of Columbia for Planning Commission approval.

If you have any questions or comments with this submittal, please do not hesitate to contact me directly.

Sincerely,
WES Engineers & Surveyors



Allen B. O'Leary, RLS
Principal

CITY OF COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560

PLANNING COMMISSION
PROJECT DEVELOPMENT APPLICATION

SUBMITTAL REQUIREMENTS

Please submit scanned copy of the application online at City of Columbia | Permitting (onlama.com)

If there is no access to a computer, please submit all pertinent information on a flash drive as well as provide one hard copy. Additional fee may apply.

ADDRESS/LOCATION	800 N. JAMES M. CAMPBELL BOULEVARD		
	TAX MAP: 100N	GROUP: L	PARCEL: 006.00
SUMMARY OF NATURE OF REQUEST AND WORK	REVISION TO LOT 1, 800 N. JAMES M. CAMPBELL BLVD TO ADD PUDAE AND CPWS WATERLINE EASEMENT TO PROPOSED BUILDING		

DATE OF PRE-APPLICATION CONFERENCE		*Pre-application meetings are scheduled for Wednesdays. Concept plan/fee due the Friday before the meeting.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
❑ Comprehensive Plan Amendment ❑ Annexation ❑ Rezoning ❑ Preliminary Plat ☒ Final Plat ❑ PUD Preliminary Master Plan ❑ PUD Final Site Plan ❑ Site Development Plan ❑ ARC Alternative Compliance ❑ As Approved Plans ❑ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations:** ❑ Annexation Permission Form **Annexations/Rezoning/Plan Amendments:** ❑ Requested Zone Listed ❑ Statement of Compliance with Comprehensive Plan ❑ Concept Plan **Preliminary Plats/Site Development Plans:** ❑ Plans and/or Plats conforming to City standards with signed and completed check list **All Annexations/Rezoning/Preliminary Plats/Site Development Plans and PUDS:** ❑ Receipt of Payment for Pre-Application Meeting ❑ Written Legal Description copy ❑ Columbia Water System Availability

	Letter ❑ Columbia Waste Water Department Will Serve Letter **Plats/PUDs:** ❑ Project Name (include Sections & Phases) REVISION LOT 1, 800 N. JAMES M. CAMPBELL BLVD. ❑ Total Number of Lots/Residential Units ONE ❑ Square Footage of Non-Residential Floor Space ❑ Total acreage 5.50 ACRES

Applications and all required submittals must be filed with the Department of Development Services prior to the established deadline. Both the applicant and property owner (if different from applicant) must sign the application. Any requests to defer or move the item to future meeting dates must be requested by the resubmittal date listed on the Planning Commission schedule.

APPLICANT
All communications will go to the Applicant's email that is provided.

NAME	Wyatt Woeltje	PHONE	731-313-9048
ADDRESS	73 White Bridge Rd, STE 103 #230, Nashville, TN 37205	EMAIL	wyatt@highlandcpt.com

PROPERTY OWNER NAME	HC Columbia, LLC	PHONE	731-313-9048
ADDRESS	73 White Bridge Rd, STE 103 #230, Nashville, TN 37205	EMAIL	wyatt@highlandcpt.com

If owner is not a natural person, documentation must be provided showing signing authority on behalf of the entity. If multiple persons are listed as owners in the records of the Maury County Assessor, all owners must sign or the signatory must provide documentation of authority to apply on behalf of record owner (i.e., Power of Attorney or notarized Letter of Authorization). In filling out this application, I attest that (1) I am familiar with the rules, regulations, and procedures of the City of Columbia & (2) all information contained herein is accurate & true to the best of my knowledge.

Wyatt Woeltje		5/12/2025
APPLICANT NAME	APPLICANT SIGNATURE	DATE

HC Columbia, LLC		5/12/2025
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE

2494 Nashville HWY CEG-PUD (Christ Our Savior)

Project #:	25-0083	Location:	Map 051 Parcel 007.01
Applicant:	Michael Sandifer & Vogue Towers II	Case Type(s):	PUD Revision
Staff Planner:	Charles Rush, Principal Planner	Proposed Use:	None

PROJECT SUMMARY

The applicant requests a PUD revision and has submitted a preliminary PUD Master Plan for 2494 Nashville Hwy, which will allow a 110' mono-pine with grounding, utilities, fenced compound, and other support structures and components. The Planning Commission approved the rezoning from RS-40 (Residential Single-Family Low Density) to CEG-PUD (Commercial Enterprise General Planned Unit Development) in Ordinance 4042 for the development of a sign in December 2015.

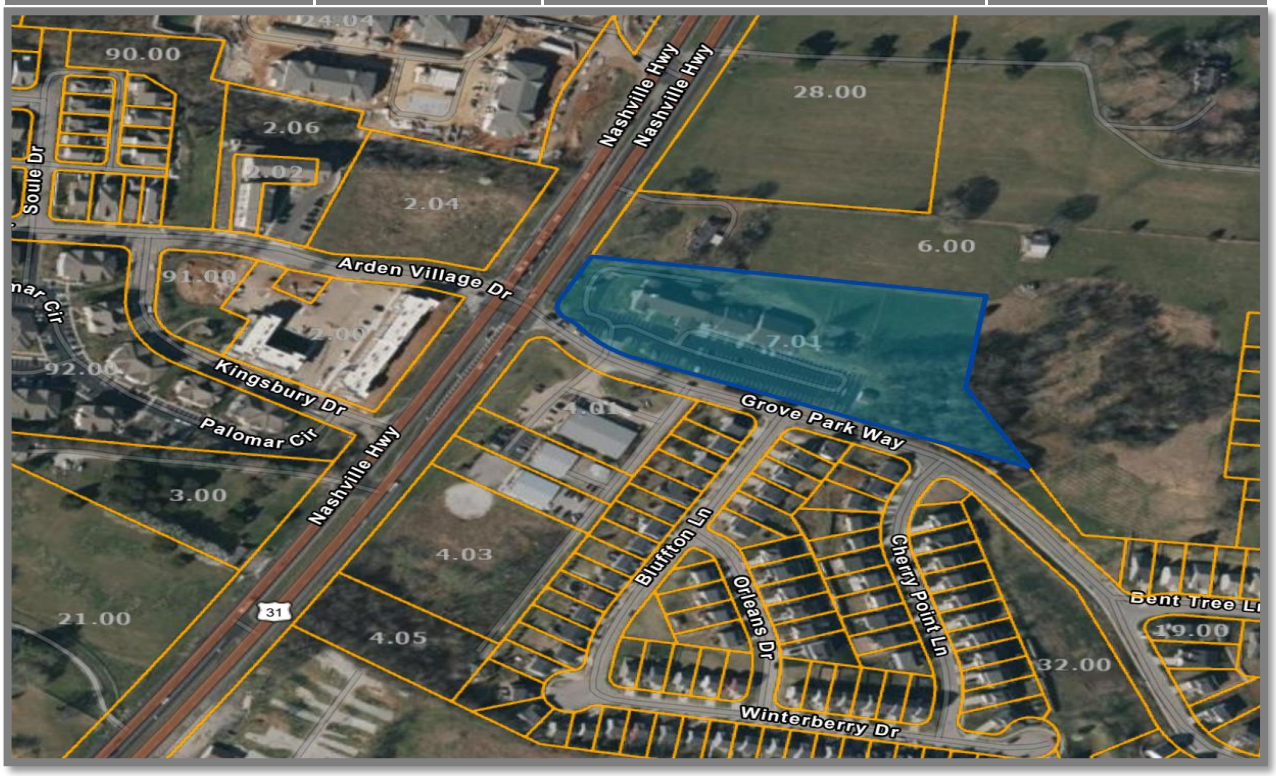
- The development is subject to Ordinance 4400
- This PUD revision complies with all standards that govern a cell tower
- A Financial Surety, Development Agreement, and stormwater maintenance agreement are not applicable to this request.
- The DRC reviewed this proposal at its April 2025 meeting. Staff review included standard comments and requests for technical corrections. Full technical comments are provided in the agenda packet.
- The applicant complies with requirements except for **Article 4.3.9.E.rr.4.l. "**Evidence that the site complies with requirements of the NEPA (National Environmental Policy Act) in regards to impact on wildlife, endangered species, historical sites, Native American religious sites, floodplains, wetlands, high intensity white lights in Residential neighborhoods , and frequency emissions in excess of FCC guidelines. Applicant's site development process includes completing the National Environmental Policy Act (NEPA) review process, which includes consultation with the State Historical Preservation Office, Tribal Historical Preservation Office, US Fish & Wildlife, and others to evaluate any impact of the proposed facility at this location. The NEPA process is ongoing, and the Applicant is happy to make the final NEPA report a condition of approval. Addressing high-intensity white lights, as described in (j) above, the proposed tower has been approved by the FAA and does not require any lighting."
- Since the applicant is unable to comply with this requirement, a positive recommendation with a condition of approval subject to the NEPA report will be required.
- The applicant has requested that if a motion is made to approve with conditions, the Applicant request a condition be included to incorporate the engineered 44' fall zone

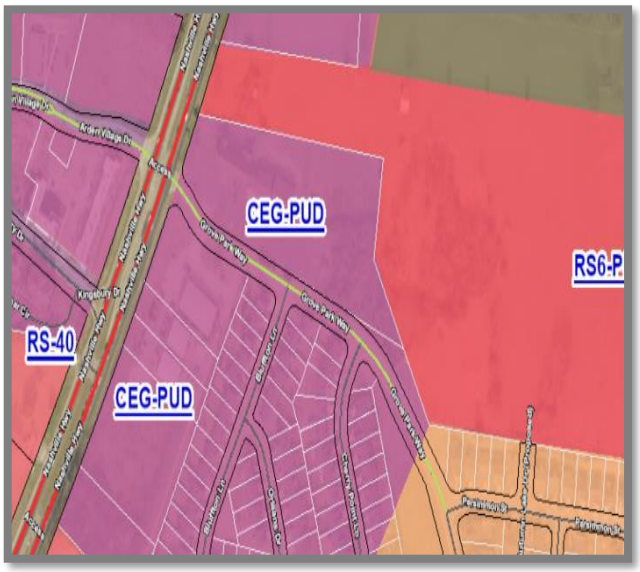
radius, as depicted in the site design and described in supplied documentation, into the PUD amendment for this property to satisfy requirements 5 of **Article 4.3.9.E**.

- Applicant submittal reflects a monopine structure as previously requested by the property owner, but they have recently stated they would be open to a traditional monopole should this be favored by the City (the ordinance has no subject language that deals with the monopine).
- The Planning Commission is the **Recommending Authority** for a PUD revision.
- The City Council is the **Decision-Making Authority** for a PUD revision.
- Templates are provided at the end of the report to assist the Planning Commission in crafting properly formatted motions.

SITE INFORMATION

CURRENT ZONING	EXISTING USE	EXISTING IMP.	LAND AREA
CEG-PUD	Vacant	None	+/-2.56 Acres







PREVIOUS ZONING MAP	ZONING MAP		
SITE CONTEXT/ADJACENT PROPERTIES			
	Future Land Use	Zoning	Current Use
Subject Property	City Center Urban Village	PUD	Commercial
North	City Center Urban Village	PUD	Commercial/Residential
South	City Center Urban Village	PUD	Commercial/Residential
East	City Center Urban Village	PUD	Residential
West	City Center Urban Village	PUD	Residential

The subject site is part of an independent PUD development. It is bordered entirely by other PUD developments. Aside from the parcels that front Nashville Highway the rest of the land around the subject parcel will be or currently is used for residential.

CONFORMITY WITH ZONING ORDINANCE

Article 4.3.9.E. (p.255) of the Zoning Ordinance governs Wireless Communication Facilities other than Communication Towers

Wireless Communication Facilities other than Communications Towers shall be permitted in accordance with the applicable Use Table, subject to the following:

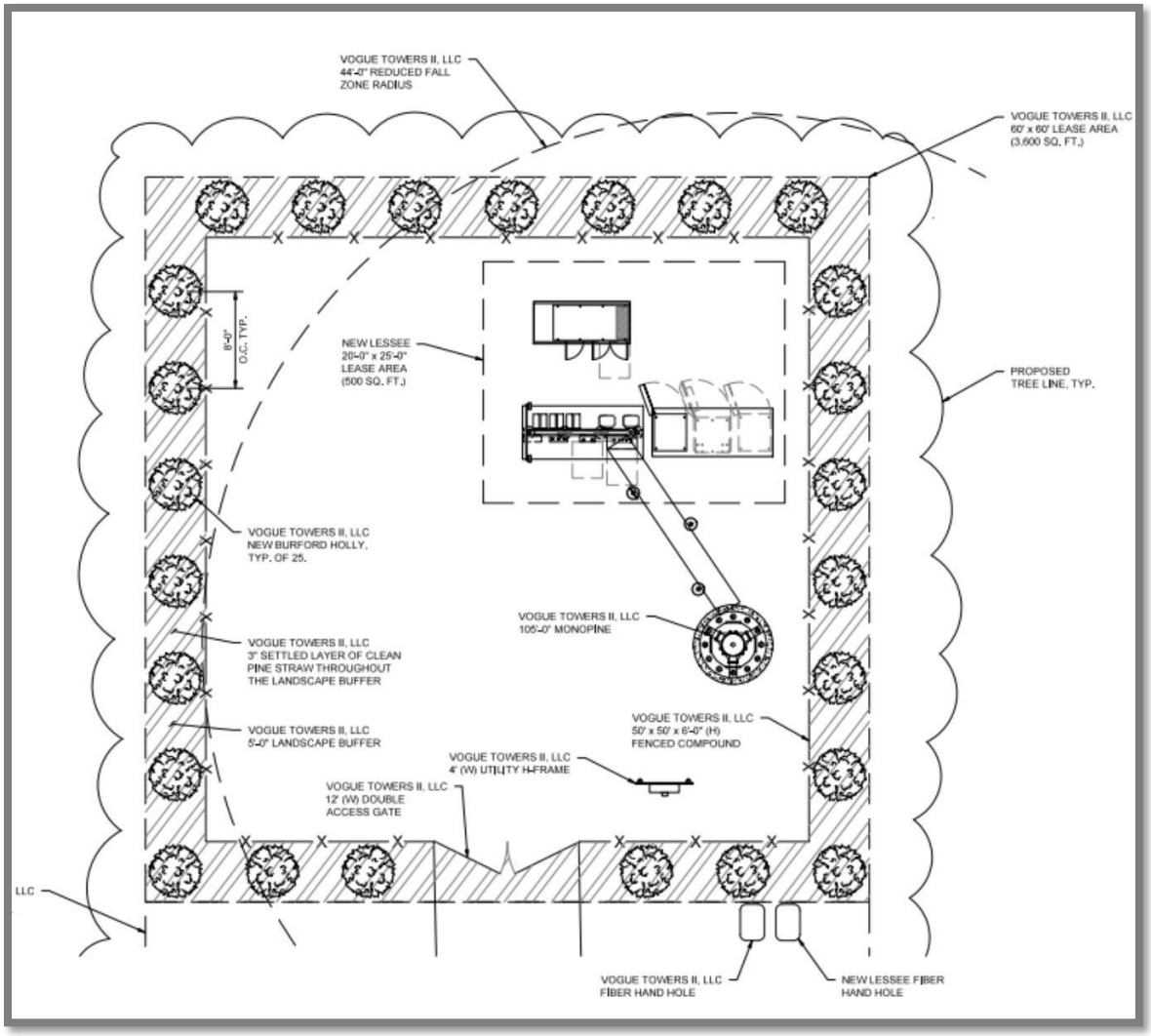
(1) The requirements set forth in this Section 4.3.9.D.6.n. shall govern the location of Towers that exceed, and antennas that are installed at a height in excess of 70 feet. The height limitations applicable to Buildings and Structures shall not apply to Towers and Antennas.

(2) Antennas or Towers located on property owned, leased, or otherwise controlled by the CITY shall be exempt from the requirements of this subsection, provided a license or lease authorizing such Antenna or Tower has been approved by City Council. N/A, property is owned by Christ our Savior Evangelical Lutheran Church.

(3) This Section shall not govern any Tower, or the installation of any Antenna, that is under 70 feet in height and is owned and operated by a federally – licensed amateur radio station operator or is used exclusively for receive – only Antennas. N/A

(4) The following requirements must be met:

(a) Site and landscape plans drawn to scale and landscape plans drawn to scale; Site and landscape plans included in attached design drawings.



(b) A report including a description of the Tower with technical reasons for its design; The proposed mono-pine tower consists of an eighteen-sided monopole structure, tapered from bottom to top. The structure, foundation, and anchor bolt designs are based strictly on ANSI/TIA-222 as amended (currently Rev H). Monopole materials are hot dip galvanized as outlined in ASTM A-123. The attached Fall Zone Letter provides additional explanation as to tower design parameters, including Risk Category, Site Exposure Category, Topographic Category, and Environmental Loading.

(c) Documentation establishing the structural integrity for the Tower's proposed uses, certified by a professional engineer licensed in the State of Tennessee competent in such design, the general capacity of the Tower and information necessary to assure that ANSI (American National Standard Institute) standards are met; See attached tower manufacturer design.

(d) A statement of intent whether excess space on the Tower will be leased; See attached letter.

(e) Proof of ownership of the site or a copy of the owner's authorization to use the site; See attached (recorded) Memorandum of Option to Lease between Applicant and property owner.

(f) Copies of any Easements necessary to gain access or limited Development areas; Easements noted on survey included in design drawings.

(g) An analysis of the site containing existing topographical contours; Topographical contours are depicted on survey and addressed in the grading plan included in the attached design drawings.

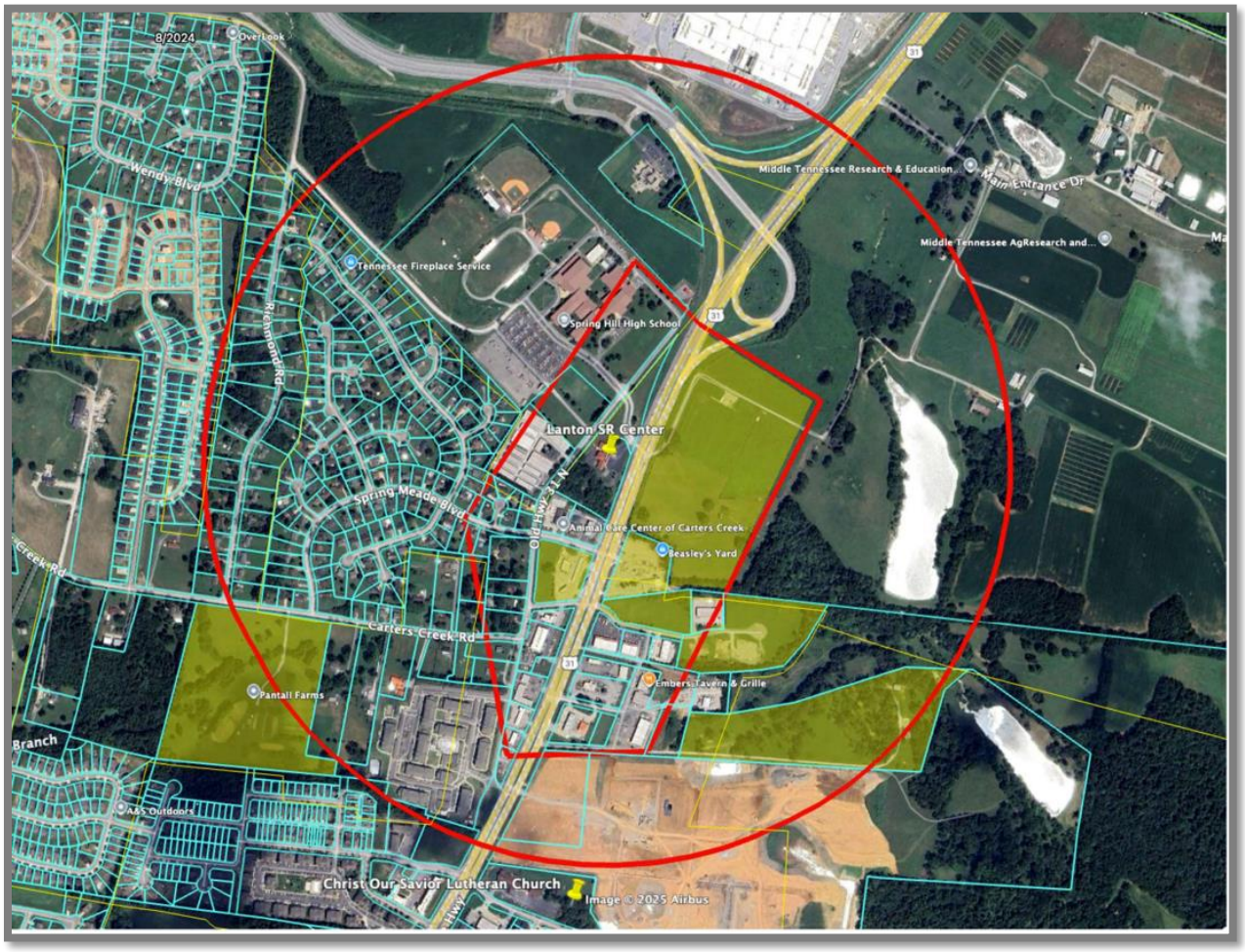
(h) A written opinion from an appropriate authority that the soils and underlying materials will support the intended Structure; The Engineer of Record for the site civil design has reviewed and approved all related design elements as noted in the design drawings, considering typical soils for the region. All sites are drilled for geotechnical data and that information, including boring log and engineer analysis, are provided to the tower manufacturer as part of their engineered design of the tower and foundation.

(i) Evidence that the Tower facility meets technical emissions standards set by the FCC (Federal Communication Commission); See attached letter from Co-Applicant, Verizon Wireless.

(j) Evidence of "Determination of No Hazard" from the FAA (Federal Aviation Administration), as well as all required FCC permit information; Applicant complies, receiving a "Determination

of No Hazard to Air Navigation" from the FAA (2025-ASO-245-OE). In addition, Applicant utilizes a 3rd party to review their locations in conjunction with the FAA filing. The attached report from Airspace Safety Analysis & Compliance (ASAC) evaluated the proposed tower in accordance with the requirements specified by the FAA under Federal Aviation Rules part 77 and found that this proposed tower is not a hazard to air navigation.

(k) Alternatives to the Tower location and why this site was selected; and Applicant contacted Edwards Real Estate, Dean Norton and Beasley's Yard, none of which 3 were interested. We initiated discussions Middle Tennessee Ag Research Station, and they were initially interested but then stopped responding. We also spoke to Bell Group and could not come to financial terms. We tried to reach Pantall Farms with voicemail and a letter but never received a response. Christ our Savior Lutheran Church said expressed and maintained interest. The attached Real Estate Candidates map highlights the various parcels attempted.



(l) Evidence that the site complies with requirements of the NEPA (National Environmental Policy Act) in regard to impact on wildlife, endangered species, historical sites, Native American religious sites, floodplains, wetlands, high intensity white lights in Residential neighborhoods, and frequency emissions in excess of FCC guidelines. Applicant's site development process includes completing the National Environmental Policy Act (NEPA) review process, which includes consultation with State Historical Preservation Office, Tribal Historical Preservation Office, US Fish & Wildlife, and others to evaluate any impact of the proposed facility at this location. The NEPA process is ongoing, and Applicant is happy to make the final NEPA report a condition of approval. Addressing high intensity white lights, as described in (j) above, the proposed tower has been approved by the FAA and does not require any lighting.

(5) Towers may be built on the same Lot or Building Site with another Principal Use. A separation a minimum of the Tower height between the Tower and any other Principal Use is required in order to provide for the health, safety, and welfare of individuals and Structures occupying the same site. Joint use is prohibited on a Lot or Building Site where a proposed or existing Principal Use includes the storage, distribution or sale of volatile, flammable, explosive or hazardous wastes such as LP gas, propane, gasoline, natural gas, and corrosive or dangerous chemicals. Applicant has sited the proposed facility with setbacks in mind, complying with the 100% setback requirement to the property owner's future development as depicted in the attached design drawings. However, if a motion is made to approve with conditions, Applicant requests a condition be included to incorporate the engineered 44' fall zone radius described below into the PUD amendment for this property to satisfy this provision of the ordinance. Applicant is proposing a 105' monopine (110' overall), a self-supporting tubular tower structure, similar to ones used for utility lines. Applicant is providing documentation outlining the design characteristics of the reduced "fall zone" area in the form of the attached engineer stamped letter. Per the attached and sealed "Fall Zone" letter, the Tower will be designed such that the top 40% will collapse over onto itself in the event of a catastrophic failure, reducing the impacted area via a reduced "fall zone" that will be contained within the reduced boundaries of thinner setback radius in the attached design drawings of 44'. This is accomplished by overdesigning the bottom portion of the structure. Specifically, the tower base and its foundation are designed to carry the entire force applied to the tower (Force X); however, When the top 40% of a monopole telecommunications tower collapses or is otherwise removed, it results in a reduction of base moment by approximately 30% to 45%, depending on wind exposure category, tower geometry, and site-specific wind conditions. The base and foundation were originally designed to resist the full-height wind and structural loading.

However, in the scenario where the top 40% of the tower is no longer present, the base and foundation will experience reduced demand. As the design drawings depict, incorporating this engineering into the design, that the fall zone area is greatly reduced and contained within a much smaller area

(6) Towers 80 feet or more in height shall be located on the Lot so that the distance from the base of the Tower to any adjoining property line or supporting Structure of another Tower is a minimum of 100% of the proposed Tower height. No Variance shall be granted from this minimum setback requirement. As depicted in the attached design drawings, Applicant complies.

(7) Except as specifically required by the FAA (Federal Aviation Administration) or the FCC (Federal Communication Commission), transmission Structures shall: Applicant will comply.

(a) use colors such as gray, blue, or green, which reduce their visual impacts; provided, wooden poles do not have to be painted; and As depicted in the attached design drawings and photo simulations, Applicant is proposing a monopine tower structure. The pole will be painted brown with the branches starting at approximately the halfway point. If the City prefers a traditional monopole structure, the property owner has indicaed they would be open to a different structure.

(b) not be illuminated, except equipment shelters may use lighting for security reasons which is compatible with the surrounding neighborhood; Applicant complies.

(c) not use strobe lights unless specifically required by FAA. Applicant complies (see 4(j) above).

(8) Any proposed Tower shall be structurally designed so as to accommodate the minimum number of foreseeable shared users. Applicant's design incorporates space on the tower and ground for a minimum of three wireless providers, including Co-Applicant, Verizon Wireless.

(9) No advertising or display is permitted on any Communication Tower. Applicant will comply, only posting signage for site identification, emergency contact or as required by federal agencies.

(10) Any Accessory Buildings or Structures shall be located a minimum of 50 feet from any adjoining property line. Except for emergency purposes, the accessory facilities may not include offices, long-term vehicular storage, other outdoor storage, or broadcast studios, unless the Use is permitted in the district. Applicant will comply.

(11) The Tower base and equipment area shall be enclosed with a fence no less than six feet in height. Access shall be locked at all times when the site is not occupied. Applicant complies, see attached design drawings.

(12) Where the Tower site abuts or is contiguous to any Residential District, there shall be provided a continuous, solid Screening and it shall be of such plant material as will provide an evergreen Screen. Screening as required herein shall be not less than four feet in height at the time of planting and shall be permanently maintained. See attached landscape buffer design and tree preservation plan in the attached design drawings. In addition, the site has been located to utilize the natural vegetation buffer of the wooded area on the property.

(13) Location on any other Structure other than a Tower (i.e., water tank, utility poles, roof tops, etc.) is permitted subject to the provisions listed above relating to a Tower location. The attached Nearby Structures table and map illustrate that there are no existing tower structures within one mile of the Applicant's location, the closest broadband structure being approx. 1.62 miles away, with Verizon Wireless located on this structure. There are also no structures capable of meeting the coverage objective within the immediate area.

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Vogue Towers	35.705626	-86.974395	Pending	N/A	*Candidate Location*
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TVA (2)	35.7411	-86.9633	None	2.53	*Inside former plant, likely direct bury pole.*

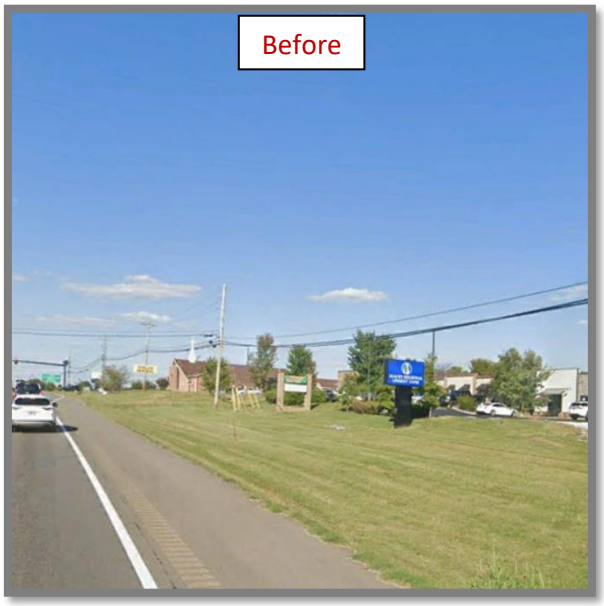
(14) Co – location on Towers is encouraged. See (13) above.

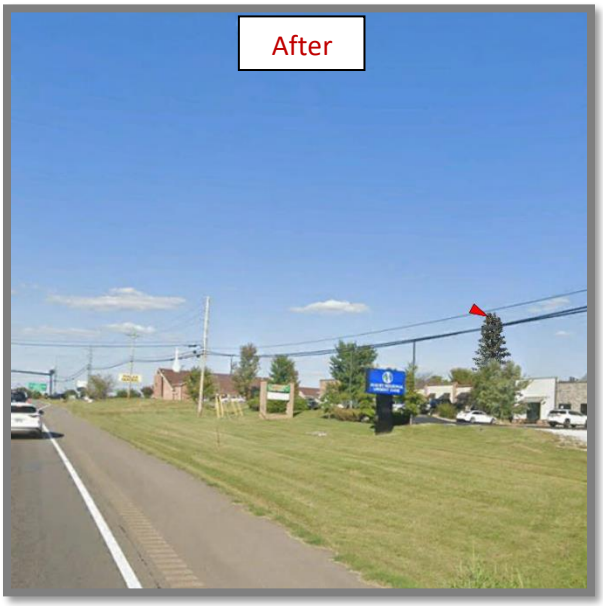
The Zoning Administrator has authority to approve a co – location on an existing Tower subject to: (a) receipt of a letter from a licensed engineer stating that the Tower is structurally adequate to handle the additional load; and (b) the FCC technical emissions standards not being exceeded.

(15) Any Antenna or Tower that is not operated for a continuous period of 12 months shall be considered abandoned and the owner of such antenna or tower, as well as any shared user(s) of the Tower or Antenna, shall remove same within 90 days of receipt of notice from the City notifying the owner and shared user(s) of such abandonment. If such Antenna or Tower is not removed within said 90 days, the City may remove or have the Structure removed at the owner's expense. The applicant will comply.

Staff has reviewed the PUD revision approval and found that this tower will align with the requirements of this ordinance as it pertains to towers. Staff will work closely with the developer to ensure compliance. Any future modifications to this plan will necessitate a revision of the PUD.

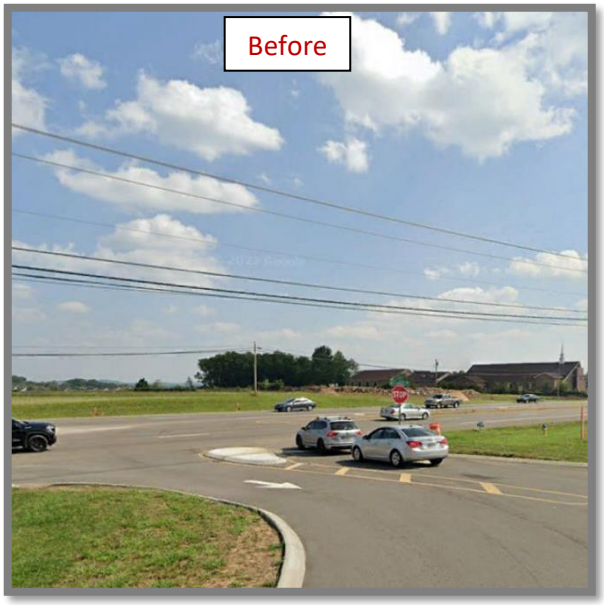
MONOPINE PHOTOSHOP IMAGES, MANUFACTURER IMAGES & REAL-LIFE IMAGES







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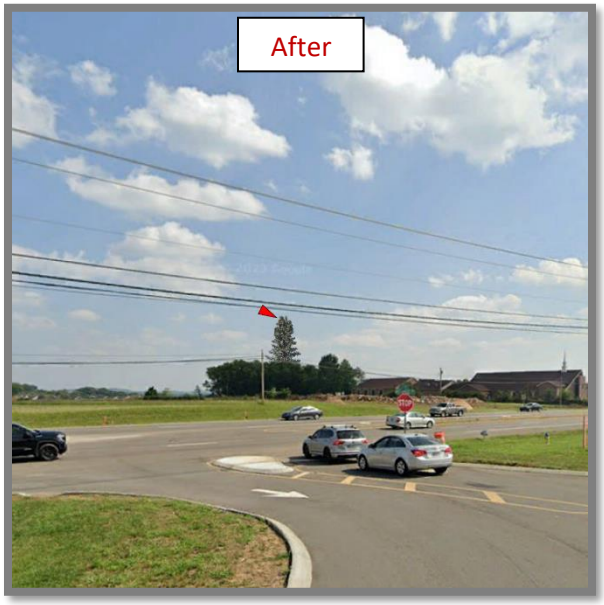
After


Manufacturer


Manufacturer





REVIEW PROCESS

The Development Review Committee evaluated the proposed PUD revision at its April 2025 meeting, as directed by section **8.3.7** of the Zoning Ordinance. Technical comments are provided in the agenda package and summarized below.

The tower has been reviewed under the requirements of **4.3.9.E.rr.**

As required by **8.5.4.D** of the Zoning Ordinance, staff posted signs on the subject property, mailed letters to adjacent property owners, and published notice of the Planning Commission's meeting in newspapers of general circulation.

Section **8.5.21** of the Zoning Ordinance directs the Planning Commission to review any and all Planned Unit Developments for conformity with the standards of the Ordinance.

The Planning Commission is the **recommending body** for PUD revisions that are major in nature under **8.3.3.B.8** of the Zoning Ordinance.

SUMMARY OF DEVELOPMENT REVIEW COMMITTEE COMMENTS

The DRC reviewed this proposal at its January 2025 meeting. A full list of comments and the applicant's responses is provided in the agenda packet. Some key comments are noted below.

Planning - NEPA (National Environmental Policy Act) will be a condition of approval.

Engineering - Access easement shall have a provision allowing adjustment in the future to accommodate modification.

FCC LAWS REGARDING TOWERS

Section 704 of the 1996 Telecommunications Act contains several key provisions affecting the authority of municipalities to regulate the placement of towers for cellular telephones, personal communications services, and other similar transmitters. Generally, the act preserves municipal zoning authority as it relates to radio towers and their siting, but it also creates three key protections for firms seeking to erect a tower:

- Local ordinances may not "unreasonably" discriminate among providers of functionally equivalent services. Tower siting policies must not favor one company, or one technology, over another;
- Local government may not impose a blanket prohibition against the placement of telecommunications towers; and
- Local ordinances may not impose more stringent "environmental effects" limits on radio frequency emissions than those adopted by the Federal Communications Commission (FCC).

A municipality would do well to encourage colocation of telecommunications facilities — essentially the sharing of a single tower by multiple telecommunications services. Such practices have the potential to reduce the proliferation of towers. Federal law encourages this practice and gives cities some leverage to assure that legitimate efforts are made to effect colocation. 47 U.S.C. 251(c)(1) and 47 U.S.C. 251(c)(6) discuss the "duty" of telecommunications service to negotiate in good faith for colocation opportunities. Municipal ordinances should reflect this obligation, and final tower approval should depend on an applicant's demonstration of these efforts. Federal law allows cities to deny construction permit applications for telecommunications towers. The denial, however, must be based on a reasoned approach, otherwise the FCC is authorized to pre-empt the local decision and grant the construction permit. Without adopting a telecommunications tower policy, it is doubtful that a municipality's denial of a construction permit will be seen as resulting from a reasoned approach.

SAMPLE MOTIONS

Positive Recommendation with Conditions:

Move to send a positive recommendation on the PUD Revision for the preliminary PUD Master Plan as presented and find that the tower conforms to the applicable zoning ordinance, [subject to a condition of approval that the NEPA report meets the requirements of the Zoning Ordinance].

Positive Recommendation with Conditions (Applicant's Condition Request):

Move to send a positive recommendation on the PUD Revision for the preliminary PUD Master Plan as presented and find that the tower conforms to the applicable zoning ordinance, [subject to a condition of approval that the NEPA report meets the requirements of the Zoning Ordinance and to incorporate the engineered 44' fall zone radius (as depicted in the site design and described in the supplied documentation) will satisfy the requirements of **Article 4.3.9.E.rr.5**].

Defer for Continued Review:

Move to find that there is insufficient information to make a decision, defer the application for continued review, and request that the applicant provide: [list additional information] for review at the next regularly scheduled meeting of the Planning Commission.

Negative Recommendation:

Move to send a negative recommendation on the PUD Revision for the preliminary PUD Master Plan presented does not conform to the applicable zoning ordinance, the Subdivision Regulations, or the approved Preliminary Plat [list specific deficiencies].

APPLICATION FOR APPROVAL BY VOGUE TOWERS II, LLC, AND CELLCO PARTNERSHIP, d/b/a VERIZON WIRELESS FOR THE CONSTRUCTION OF A WIRELESS COMMUNICATION FACILITY

Application: For City of Columbia approval by Vogue Towers II, LLC ("Vogue Towers") and Cellco Partnership, d/b/a Verizon Wireless ("Verizon"), together "Applicant" for the zoning approval for a proposed multi-provider wireless communications facility.

Site Name: Lanton (TN-5001)

Project Description: Vogue Towers proposes to construct a multi-provider 105' monopine tower (105' structure with 5' lightning rod, overall height 110') within a fenced compound area (see attached design drawings for details). This facility will have provisions for multiple wireless providers, satisfying the purpose of the City's ordinance to reduce the need for new towers.

Parcel Address: 2494 Nashville Hwy, Columbia, TN, Parcel #051 007.01

Property Owner: Christ our Savior Evangelical Lutheran Church

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Narrative:

The wireless industry is continually improving networks to best meet the needs of the community. In the present case, the increase in usage at existing locations requires a new tower. The purpose of this proposed wireless communications facility will be to provide improved wireless service quality and safety to the area, specifically to customers and residents in and around this area of Columbia.

As the demand for wireless continues to increase with the use of "smart phones" there is an increased need for wireless telecommunications infrastructure to keep up with the demand. Per CTIA's 2024 Annual Survey, *"Demand for wireless data continued to skyrocket in 2023, with Americans using more than 100 trillion MBs – enough data for every single US Household to watch the first season of House of the Dragon every day for the entire year."* 100T MB is almost a 2x increase over data usage just two years ago (2021) and is more data than was used between 2010-2018 combined. 2023 wireless traffic totaled over 2.1 trillion messages (SMS and MMS), or 67,000 messages/second, and over 2.4 trillion minutes of talking via wireless connections.

As network traffic increases on a given wireless network, additional facilities are needed to provide consumers with quality, high-speed mobile broadband. Each wireless telecommunications facility can only process a fixed amount of service and/or cover so far, and this tower is needed to provide additional coverage and capacity for this portion of the community as per CTIA there are now 558 million connections in America, or 1.6 connections for every American. Greater signal strength is needed to adequately penetrate the buildings and provide reliable voice and improved data throughput rates for wireless subscribers.

This proposal is to construct a multi-provider wireless communications facility. Applicant will lease the use of space and access as shown on the site plan. Within that area, there will be an approx. 2,500 sq/ft fenced compound providing room for Verizon Wireless and other wireless providers such as AT&T, T-Mobile, and DISH to place equipment cabinets/buildings within the compound of the new tower. In addition, Vogue Towers makes space available to local E911 and first responders at no cost, whenever possible.

Consideration of this application should not, however, be limited to examining how successfully Vogue Towers has mitigated any negative impact through design and location. The positive impact of the site should be given full weight as well. We live in a society where our wireless devices have become an essential tool for daily living, a necessity with approximately 80% of E911 calls (of an est. 240 million) being made from wireless devices each year and more than 7 out of 10 adults living in wireless-only households, 72.6% as of 2022 (*National Center for Health Statistics*). These figures peak among younger demographic ranges for wireless only adults, the next generation of homebuyers and entrepreneurs, with 25-29 at 87.6%, and 30-34 at 88.4%. Furthermore, the benefits of this site to the community go beyond just convenience for residents and businesses where 80% of consumers now consider wireless service "indispensable" (*CTIA*). Quality wireless service is part of the critical infrastructure necessary for public safety and first responders in emergency situations such as accidents, crimes, health incidents or natural disaster. Given the design, location and benefits provided by this proposed site, and lack of significant impacts, approval of this application is respectfully requested.

ARTICLE 4: BUILDING, LOT & BUILDING SITE TANDARDS

am. ***Wireless Communication Facilities other than Communications Towers*** *shall be permitted in accordance with the applicable Use Table, subject to the following:*

(1) *The requirements set forth in this Section 4.3.9.D.6.n. shall govern the location of Towers that exceed, and antennas that are installed at a height in excess of 70 feet. The height limitations applicable to Buildings and Structures shall not apply to Towers and Antennas.*

(2) *Antennas or Towers located on property owned, leased, or otherwise controlled by the CITY shall be exempt from the requirements of this subsection, provided a license or lease authorizing such Antenna or Tower has been approved by City Council.* **N/A, property is owned by Christ our Savior Evangelical Lutheran Church.**

(3) *This Section shall not govern any Tower, or the installation of any Antenna, that is under 70 feet in height and is owned and operated by a federally – licensed amateur radio station operator or is used exclusively for receive – only Antennas.* **N/A**

(4) *The following requirements must be met:*

(a) *Site and landscape plans drawn to scale and landscape plans drawn to scale;* **Site and landscape plans included in attached design drawings.**

(b) *A report including a description of the Tower with technical reasons for its design;* **The proposed monopine tower consists of an eighteen-sided monopole structure, tapered from bottom to top. The structure, foundation and anchor bolt designs are based strictly on ANSI/TIA-222 as amended (currently Rev H). Monopole materials are hot dip galvanized as outlined in ASTM A-123. The attached Fall Zone Letter provides additional explanation as to tower design parameters, including Risk Category, Site Exposure Category, Topographic Category and Environmental Loading.**

(c) *Documentation establishing the structural integrity for the Tower's proposed uses, certified by a professional engineer licensed in the State of Tennessee competent in such design, the general capacity of the Tower and information necessary to assure that ANSI (American National Standard Institute) standards are met;* **See attached tower manufacturer design.**

(d) *A statement of intent whether excess space on the Tower will be leased;* **See attached letter.**

(e) *Proof of ownership of the site or a copy of the owner's authorization to use the site;* **See attached (recorded) Memorandum of Option to Lease between Applicant and property owner.**

(f) *Copies of any Easements necessary to gain access or limited Development areas;* **Easements noted on survey included in design drawings.**

(g) *An analysis of the site containing existing topographical contours;* **Topographical contours are depicted on survey and addressed in the grading plan included in the attached design drawings.**

(h) *A written opinion from an appropriate authority that the soils and underlying materials will support the intended Structure;* **The Engineer of Record for the site civil design has reviewed and approved all related design elements as noted in the design drawings, considering typical soils for the region. All sites are drilled for geotechnical data and that information, including boring log and engineer analysis, are provided to the tower manufacturer as part of their engineered design of the tower and foundation.**

(i) *Evidence that the Tower facility meets technical emissions standards set by the FCC (Federal Communication Commission);* **See attached letter from Co-Applicant, Verizon Wireless.**

(j) *Evidence of "Determination of No Hazard" from the FAA (Federal Aviation Administration), as well as all required FCC permit information;* **Applicant complies, receiving a "Determination of No Hazard to Air Navigation" from the FAA (2025-ASO-245-OE). In addition, Applicant utilizes a 3rd party to review their locations in conjunction with the FAA filing. The attached report from Airspace Safety Analysis & Compliance (ASAC) evaluated the proposed tower in accordance with the requirements specified by the FAA under Federal Aviation Rules part 77 and found that this proposed tower is not a hazard to air navigation. The approved FAA will be amended for the reduced overall height of the proposed tower as amended.**

(k) *Alternatives to the Tower location and why this site was selected; and* **Applicant contacted Edwards Real Estate, Dean Norton and Beasley's Yard, none of which 3 were interested. We initiated discussions Middle Tennessee Ag Research Station, and they were initially interested but then stopped responding. We also spoke to Bell Group and could not come to financial terms. We tried to reach Pantall Farms with voicemail and a letter but never received a response. Christ our Savior Lutheran Church said expressed and maintained interest. The attached Real Estate Candidates map highlights the various parcels attempted.**

(l) *Evidence that the site complies with requirements of the NEPA (National Environmental Policy Act) in regard to impact on wildlife, endangered species, historical sites, Native American religious sites, floodplains, wetlands, high intensity white lights in Residential neighborhoods ,and frequency emissions in excess of FCC guidelines.* **Applicant's site development process includes completing the National Environmental Policy Act (NEPA) review process, which includes consultation with State Historical Preservation Office, Tribal Historical Preservation Office, US Fish & Wildlife, and others to evaluate any impact of the proposed facility at this location. The NEPA process is ongoing, and Applicant is happy to make the final NEPA report a condition of approval. Addressing high intensity white lights, as described in (j) above, the proposed tower has been approved by the FAA and does not require any lighting.**

(5) *Towers may be built on the same Lot or Building Site with another Principal Use. A separation a minimum of the Tower height between the Tower and any other Principal Use is required in order to provide for the health, safety and welfare of individuals and Structures occupying the same site. Joint use is prohibited on a Lot or Building Site where a proposed or existing Principal Use includes the storage, distribution or sale of volatile, flammable, explosive or hazardous wastes such as LP gas, propane, gasoline, natural gas and corrosive or dangerous chemicals.* **Applicant has sited the proposed facility with setbacks in mind, complying with the 100% setback requirement to the property owner's future development as depicted in the attached design drawings. However, if a motion is made to approve with conditions, Applicant requests a condition be included to incorporate the engineered 44' fall zone radius described below into the PUD amendment for this property to satisfy this provision of the ordinance. Applicant is proposing a 105' monopine (110' overall), a self-supporting tubular tower structure, similar to ones used for utility lines. Applicant is providing documentation outlining the design characteristics of the reduced "fall zone" area in the form of the attached engineer stamped letter. Per the attached and sealed "Fall Zone" letter, the Tower will be designed such that the top 40% will collapse over onto itself in the event of a catastrophic failure, reducing the impacted area via a reduced "fall zone" that will be contained within the reduced boundaries of thinner setback radius in the attached design drawings of 44'. This is accomplished by overdesigning the bottom portion of the structure. Specifically, the tower base and its foundation are designed to carry the entire force applied to the tower (Force X); however, When the top 40% of a monopole telecommunications tower collapses or is otherwise removed, it results in a reduction of base moment by approximately 30% to 45%, depending on wind exposure category, tower geometry, and site-specific wind conditions. The base and foundation were originally designed to resist the full-height wind and structural loading. However, in the scenario where the top 40% of the tower is no longer present, the base and foundation will experience reduced demand. As the design drawings depict, incorporating this engineering into the design, the fall zone area is greatly reduced and contained within a much smaller area**

(6) *Towers 80 feet or more in height shall be located on the Lot so that the distance from the base of the Tower to any adjoining property line or supporting Structure of another Tower is a minimum of 100% of the proposed Tower height. No Variance shall be granted from this minimum setback requirement.* **As depicted in the attached design drawings, Applicant complies.**

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(a) *use colors such as gray, blue or green which reduce their visual impacts; provided, wooden poles do not have to be painted; and* **As depicted in the attached design drawings and photo simulations, Applicant is proposing a stealth monopine tower structure. The pole will be painted brown with the branches starting at approx. the**

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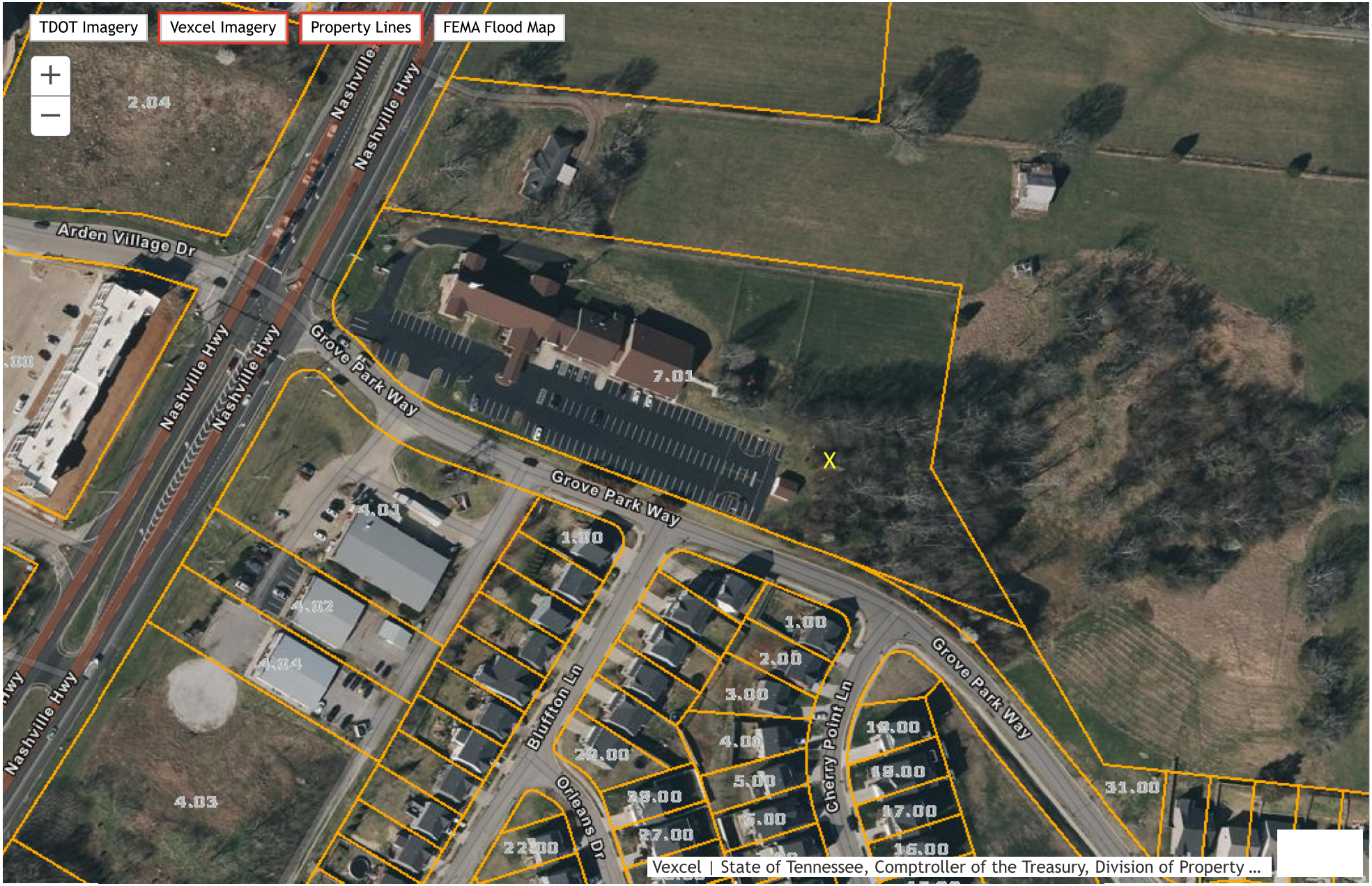
As provided for in this application package, Vogue Towers is requesting approval of their application as identified above per the conditions and specifications of the City's Ordinance, ARTICLE 4: BUILDING, LOT & BUILDING SITE TANDARDS; am. Wireless Communication Facilities other than Communications Towers. Wireless service is increasingly considered a public necessity as it is often the only means citizens have to emergency services. The location and character of the use, if developed according to the plan submitted and recommended, will be in harmony with the area in which it is to be located. The proposed wireless telecommunications facility will meet the infrastructure needs of this area and will provide additional access to emergency services, if needed.

Respectfully submitted,

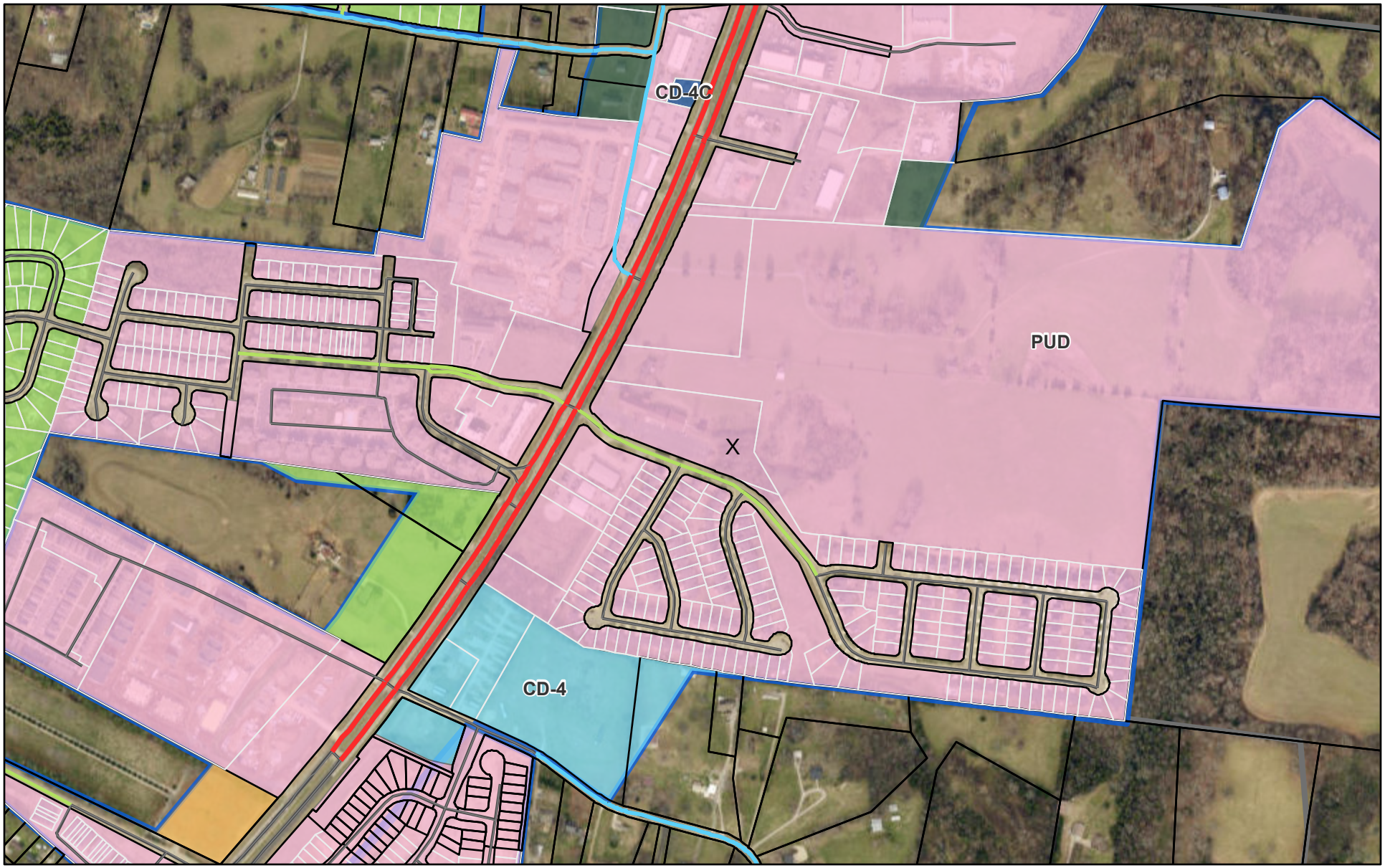
Pat Troxell-Tant

Pat Troxell-Tant
President of Development
Vogue Towers II, LLC

Tennessee Property Viewer



City of Columbia GIS Mapping



August 8, 2024

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0 0.1 0.2 0.4 km

VOGUE TOWERS

430 Chestnut Street – Suite 101-B
Chattanooga, TN 37402

423-269-7455

Voguetowers.net

February 21, 2025

City of Columbia, TN
Attn: Austin Brass
700 N Garden St
Columbia, TN 38401

RE: Proposed Tower, Article 4, am.(4)(d), Collocation Letter of Intent
Vogue Tower Site – Lanton
Vogue Tower Site # - TN-5001
Parcel ID: #051 007.01

Dear Mr. Brass:

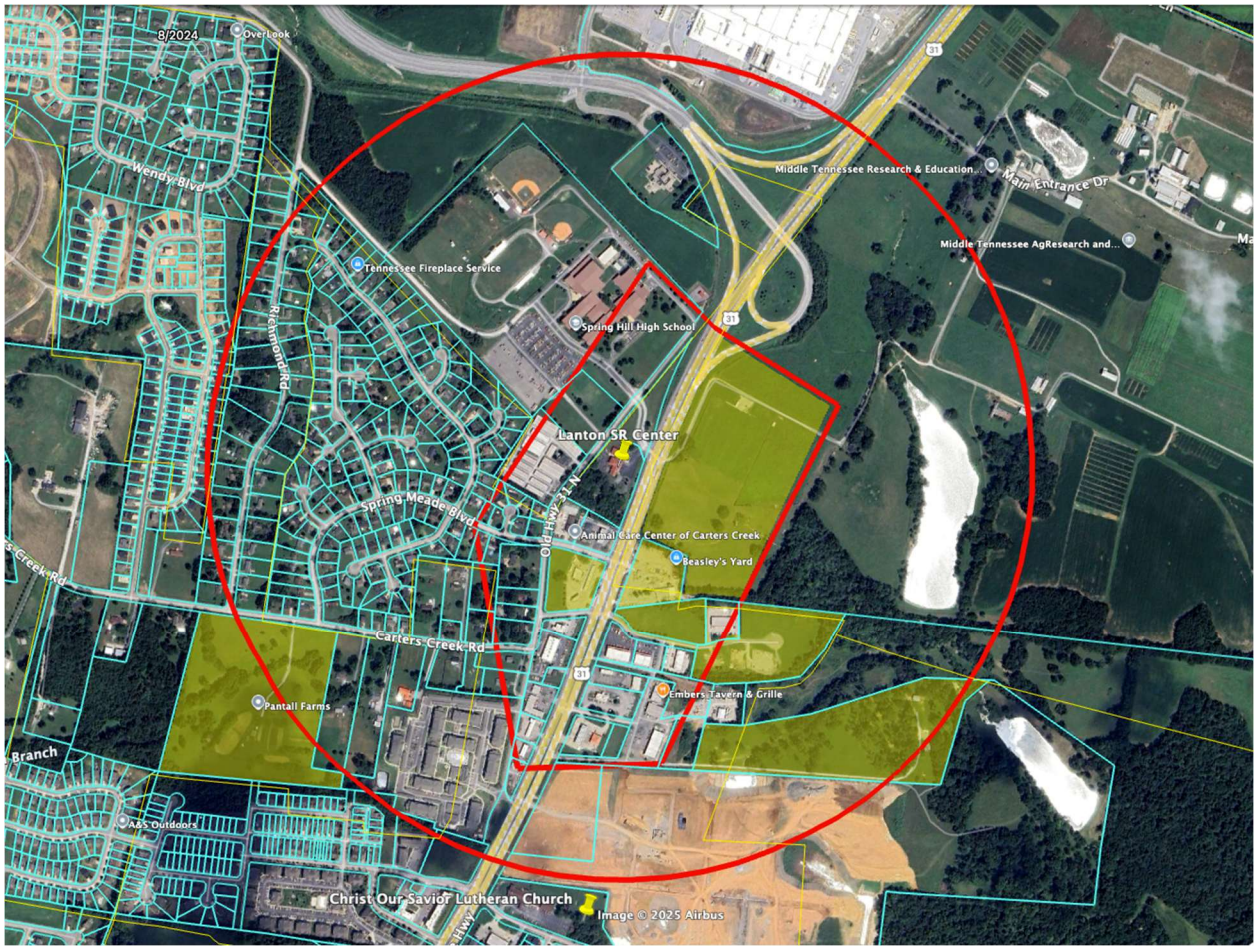
This letter is provided as confirmation that the new Tower will be designed to accommodate the collocation of additional antennas for future users and Applicant confirms to leasing excess space on the Tower to such users utilizing standard industry terms and rates, per the above reference section of the City's ordinance. Vogue Towers is not a wireless provider but is a developer of multi-provider wireless communications facilities. As such, Vogue's facilities are designed to accommodate multiple providers. The current design drawings included in this application package illustrate this design intent.

Respectfully submitted,

Patricia Troxell-Tant

Patricia Troxell-Tant
President
Vogue Towers II, LLC

Real Estate Candidate Search



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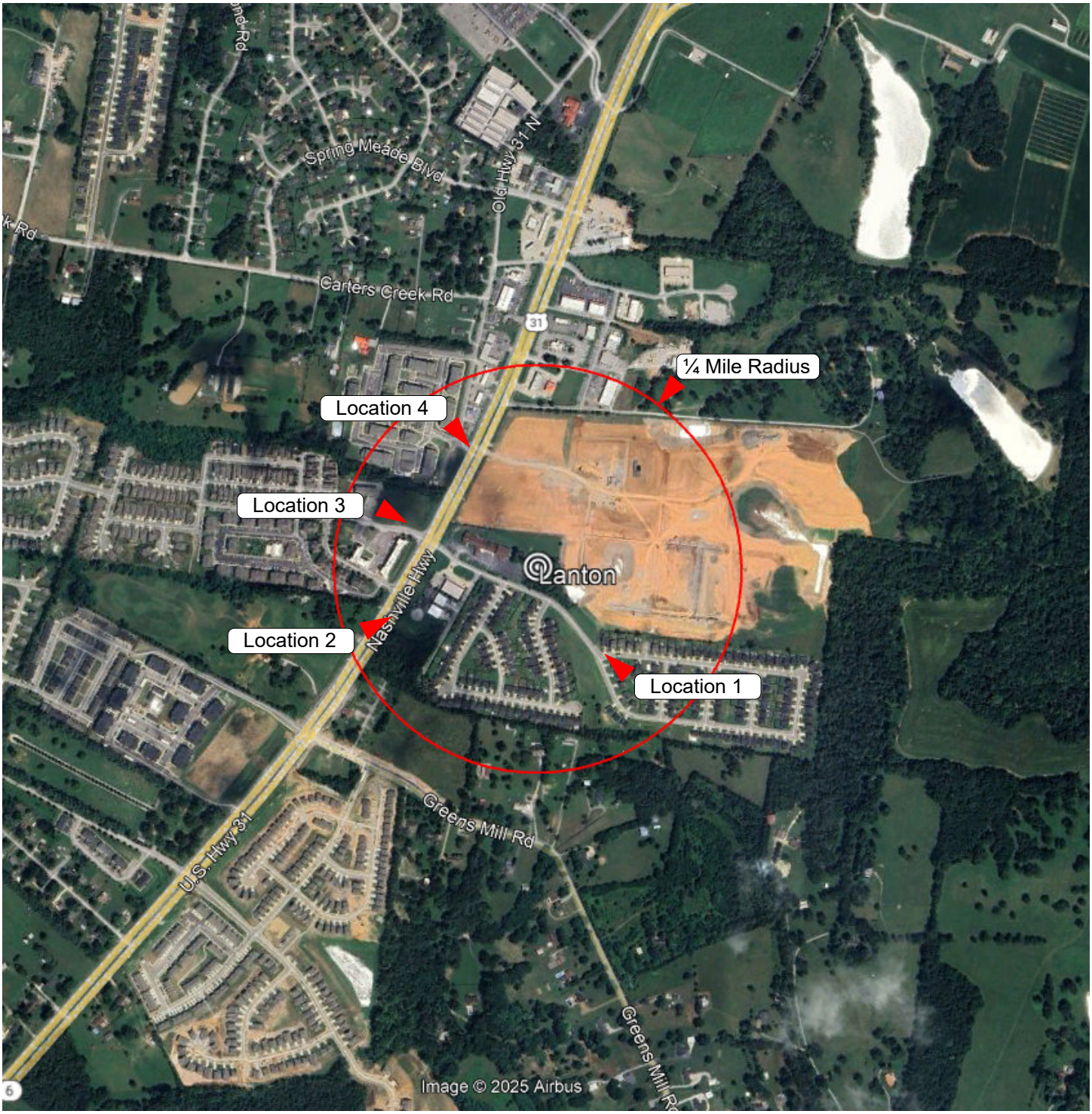
Vogue Towers - Lanton
Nearby Structures
.5 mile radius
Animal Care Center of Carters Creek
Beasley's Yard
Carters Creek Rd
Embers Tavern & Grille
Pantall Farms
A&S Outdoors
Vogue Towers
Maury Regional Urgent Care | North Columbia
Nashville Hwy
Bexley Spring Hill
Pinecrest Memorial Gardens
Greens Mill Rd
U.S. Hwy 31
Lennar at Drumwright
Google Earth
Image © 2025 Airbus
2000 ft
N

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Locations of the photosims.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Location 1 before the photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Location 1 after photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

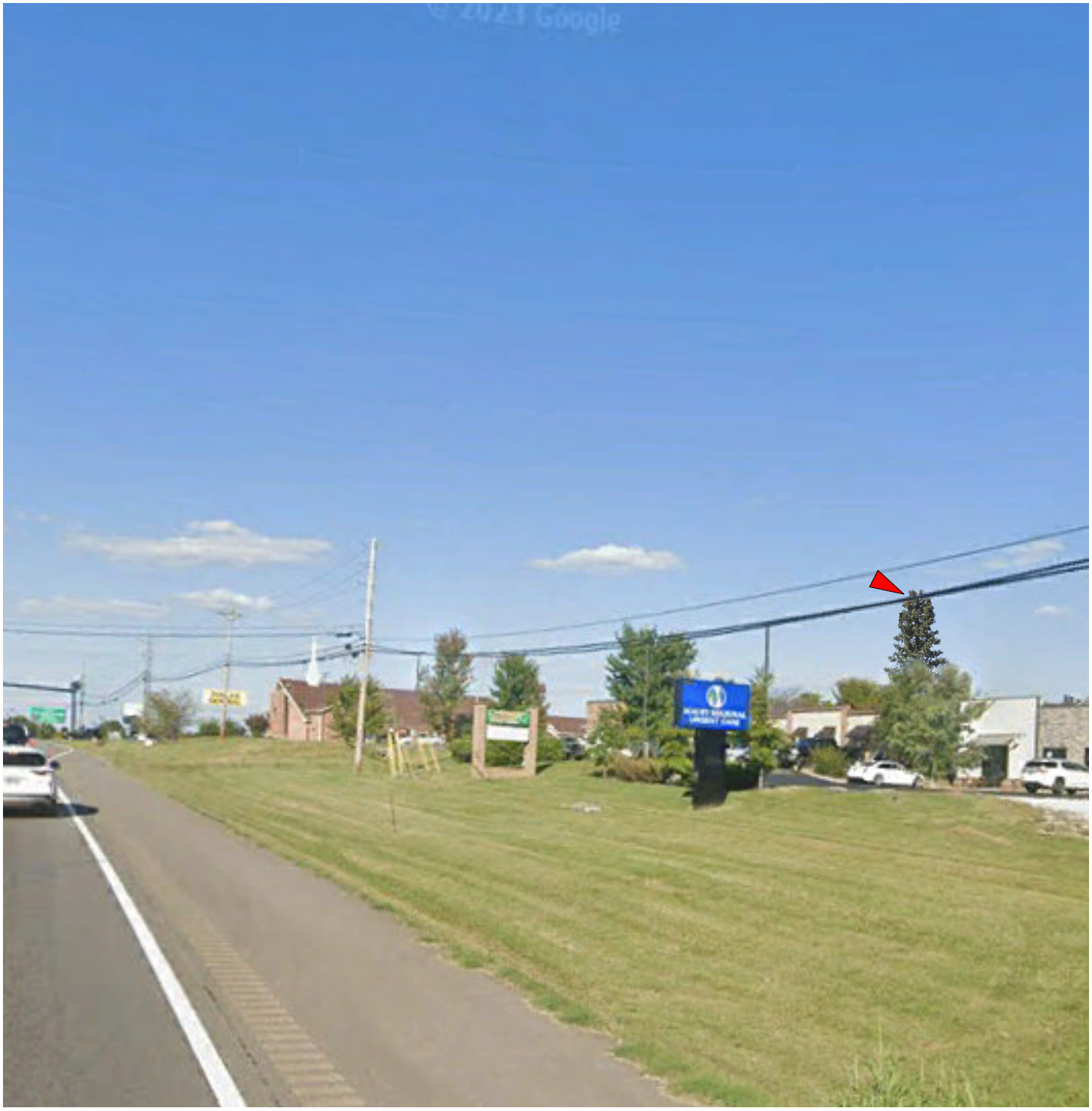
Lanton PhotoSims



Notes: Location 2 before photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Location 2 after photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Location 3 before photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Location 3 after photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

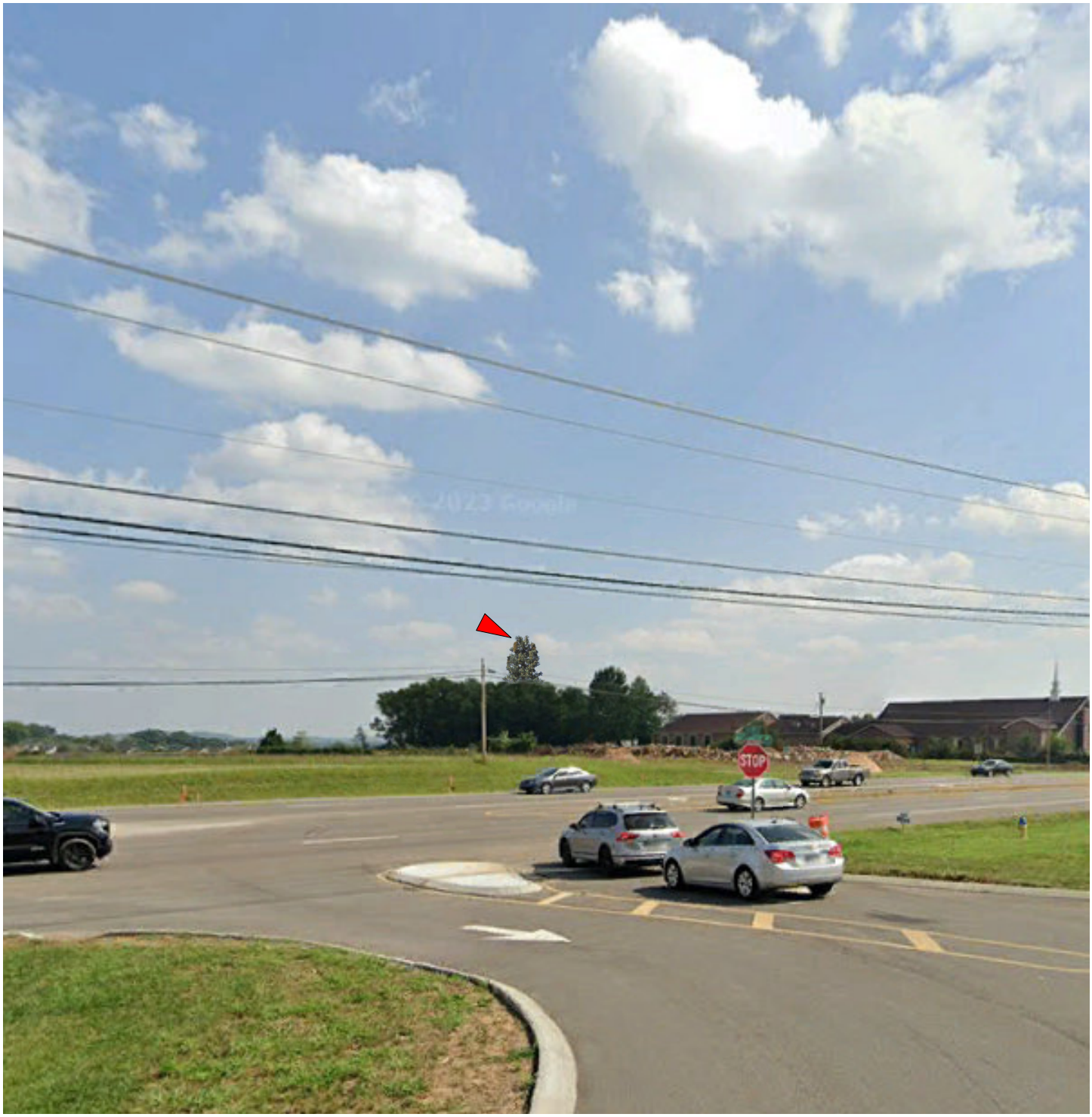
Lanton PhotoSims



Notes: Location 4 before photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Location 4 after photosim.

November 14, 2024

Transmitted via email to janet@voguetowers.net
RE: Verizon Colocation on Vogue Macro Monopole Site Located at: Grove Park Way, Columbia, TN 38401

To Whom It May Concern,

This is in response to your inquiry to Verizon concerning interference to your existing telecommunications devices and services related to Verizon's proposed facilities at Grove Park Way, Columbia, TN 38401. Verizon provides Commercial Mobile Radio Services (CMRS) under licenses granted by the Federal Communication Commission (FCC). Pursuant to these licenses, Verizon is authorized to operate its CMRS network in many geographic areas throughout the nation, including the above noted location.

The FCC exclusively regulates all technical aspects of Verizon operations and network and preempts all state and local regulation of radiofrequency transmissions. The FCC rules protect co-channel and adjacent licensees against harmful interference. The above noted proposed Verizon facility is compliant with all applicable FCC requirements. The points below cover Verizon's practices pertinent to complying with the FCC requirements:

1. Verizon locates its transmitting antenna(s) in order to maximize vertical and horizontal separation from other operator's systems to minimize interference potential.
2. All equipment at the proposed facility is designed and certified to operate within the frequencies licensed to Verizon by the FCC, and to operate in a manner approved by the FCC.
3. The power levels generated by the facility's radios and corresponding effective radiated power (ERP) from the transmitting antenna(s) are within the limitations specified by Part 22 (for cellular), Part 24 (for PCS), Part 27 (for 700 MHz, AWS or C-Band), Part 96 (for CBRS), Part 30 (UMFUS/mmWave) or Part 101 (for microwave) of the Commission's Rules.

Verizon is committed to providing state of the art wireless services that benefit your community.
In the unlikely event that interference does occur, Verizon agrees to fully cooperate with the entity experiencing interference to identify and correct, to the extent reasonably possible, any issues caused by the Verizon installation.

Please contact your local Verizon resource below if you have additional site-specific questions.

Contact Name	Contact Email	Contact Phone
Jamison Tyler	SE-Regulatory@verizonwireless.com	NA

Sincerely,

Minny Vidhya Duggirala
Manager-RF System Design
Verizon

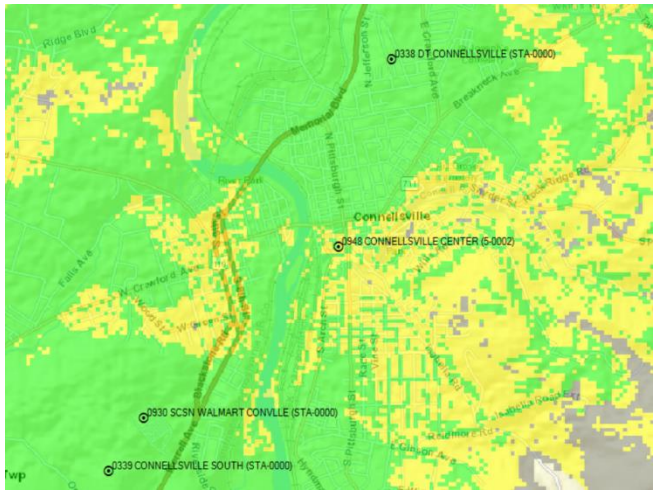
Introduction:

Coverage and/or capacity deficiencies are the two main drivers that prompt the need for a new wireless communications facility (WCF). Most WCF provide a mixture of both capacity and coverage for the benefit of the end user.

Coverage describes the existence or lack of wireless service in an area. The request for improved service often comes from our customers or emergency services personnel that have no service or poor service. Coverage used to refer to the ability to make or place a call in vehicles, however, as usage patterns have shifted, coverage is now determined based on whether or not sufficient WCF exist to provide a reliable signal inside of buildings and residential areas, as well. Historically, when wireless was still in its infancy, coverage was the primary means to measure the effectiveness of the network in a given area.

Capacity is the metric used to determine if sufficient wireless resources exist and is now the primary means to measure how a community's wireless needs are being addressed. "Five bars" no longer means guaranteed coverage and capacity because each WCF has a limited amount of resources to handle voice calls, data connections and data volume. When these limits are reached and the WCF becomes overloaded (meaning there is more demand than signal to service it), the user experience quickly degrades preventing customers from making/receiving calls or getting applications to run. A WCF short on capacity could also make internet connections time out or delay information to emergency response personnel.

Explanation of Wireless Coverage



Coverage is best shown via coverage maps. RF engineers use tools that take into account terrain, vegetation, building types, and WCF specifics to model the existing coverage and prediction what we expect to see with the addition of a proposed WCF.

Coverage also changes depending on which frequencies are used. Most phones today use 3G at 800 MHz or 4G at 700 MHz spectrum which are considered low frequencies. Low frequencies can travel further distances than then the higher 1900 MHz and 2100 MHz frequencies now being employed due to increased capacity demands. Operating at higher frequencies makes it necessary for carriers to install substantially more wireless facilities to achieve the same coverage as one tower operating on the lower frequencies.

Explanation of Wireless Capacity



Capacity is the amount of resources that a WCF has to service customer demand. Verizon utilizes sophisticated programs and customer feedback to monitor current usage trends and to forecast future needs. Because it takes an average of 2-3 years to complete a WCF, we have to start the process of adding a new WCF several years in advance of when the WCF will be needed.

Location, Location, Location. A good capacity WCF needs to be in the center of a user population which insures that traffic is evenly distributed around the WCF. A typical WCF is configured into three sectors (like a pie cut into three pieces), with each slice (sector) having 33% of the WCF resources. If one sector is under-utilized, it's resources can not necessarily be diverted to another sector. Therefore, optimal performance is only obtained when all three sectors have an even traffic distribution.

Explanation of Wireless Data Growth

Wireless Data Growth

Each year Verizon sees large increases in how much data its customers need. As the resolution of the pictures we send increases, the quality of the video we watch improves and the complexity of the applications grow, we commonly see tremendous growth year-over-year.

- 240 million 911-calls are made annually. In many areas, 80% or more are from wireless devices.[1]
- The average North American smartphone user will consume 48 GB of data per month in 2023, up from just 5.2 GB per month in 2016 and 7.1 GB per month in 2017.[2]
- More than one-half of American homes had wireless only homes. [3]
- In North America, the average household has 13 connected devices with smartphones outnumbering tablets 6 to 1. [4]

Machine to Machine communications will also increase the data burden on wireless networks, as over the next five (5) years more and more services that improve our safety and make our lives easier will be available over the wireless infrastructure , such as:

- Cars that notify 911 when an airbag deploys.
- "Driverless" cars needing traffic data and maps to reach your destination as quickly as possible.
- Medical monitors that will alert us should a loved one neglect taking their prescription drugs.
- Home alarms that notify you when your child arrives home from school.
- Smart street lights that notify the city when they are not working.
- City garbage cans that let people know when they need to be emptied.
- Tracking watches will aid in finding lost Alzheimer patients.

1. National Emergency Number Association, 9-1-1 Statistics (January 7, 2019)
2. Ericsson Mobility Report, November 2017
3. CDC's 2018 Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, January-July, 2018
4. IHS Market Connected Device Market Monitor: Q1 2016 , June 7, 2016

Radio Emission Safety...

A common question received is “Are the radio emissions safe?”

Verizon goes to great effort to ensure that all of its projects meet the standards established by the FCC to ensure safety of the public and its employees. The links below are to three reputable organizations that have performed extensive reviews of the science available on this subject and have good educational articles on the results of their research.

World Health Organization
http://www.who.int/peh-emf/about/WhatisEMF/en/index1.html

America Cancer Society
http://www.cancer.org/cancer/cancercauses/othercarcinogens/athome/wireless facilityular-phone-towers

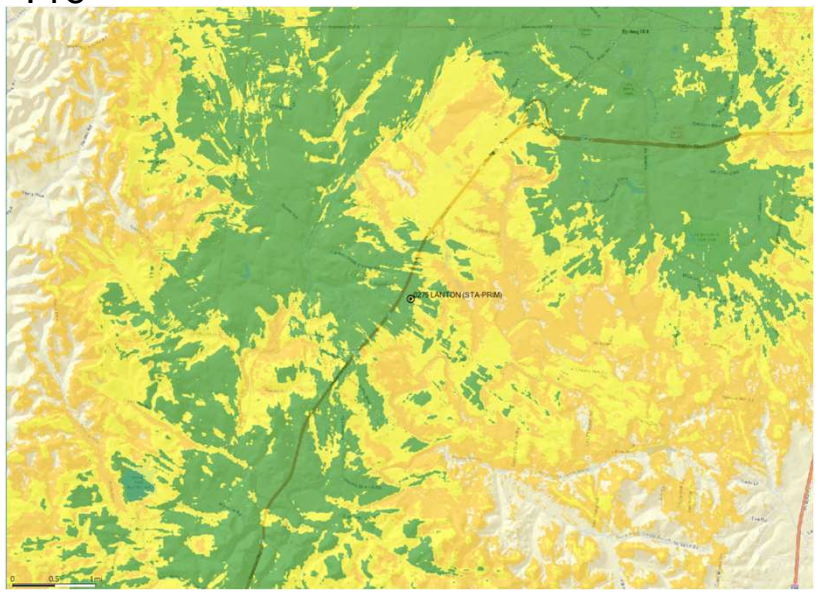
FCC Radio Frequency Safety
https://www.fcc.gov/general/radio-frequency-safety-0

Lanton RF Plots

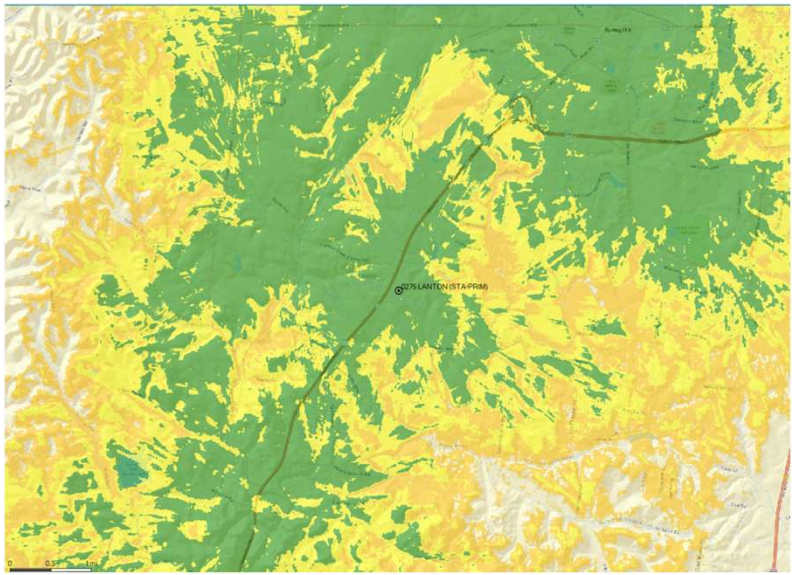
Verizon confidential and proprietary. Unauthorized disclosure, reproduction or other use prohibited.

Plots - Pre and Post 700MHz RSRP Coverage

Pre



Post



Coverage Level	Color
In-Building	
In-Vehicle	
On-Street	

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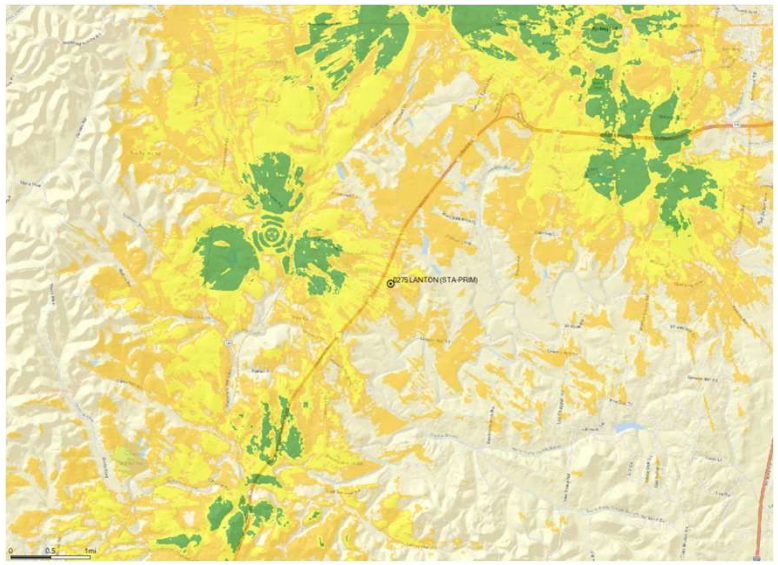
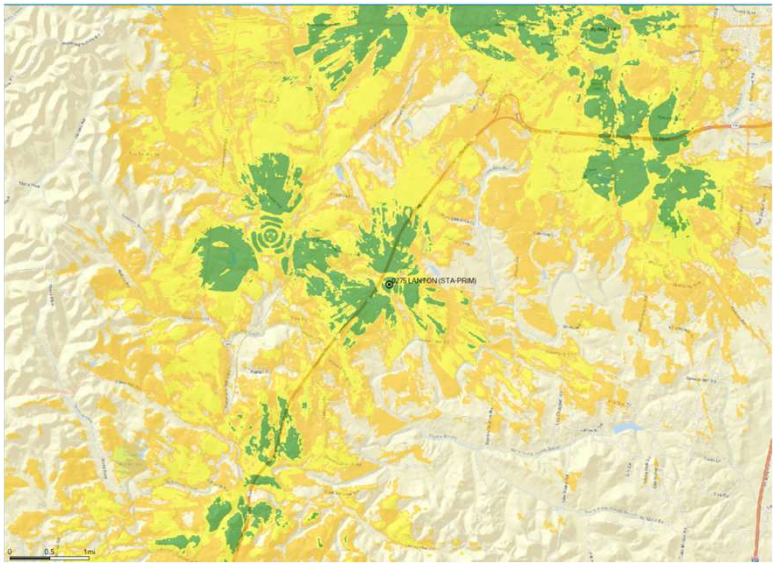
Plots - Pre and Post 2100 MHz RSRP Coverage

Pre



Post



Coverage Level	Color
In-Building	
In-Vehicle	
On-Street	

Verizon confidential and proprietary. Unauthorized disclosure, reproduction or other use prohibited.

STRUT
Engineering & Investment, Inc

3485 Desert Dr Building 2
Suite 101
East Point, GA 30344
T: (404) 480-5555
Info@STRUTeni.com
www.STRUTeni.com

June 05, 2025

Attn: **Vogue Towers II, LLC**
430 Chestnut St., Suite 101B
Chattanooga, TN 37402

Re: **Fall Zone Letter for Proposed 105' Monopole (Excluding 5' Lightning Rod)**

Site Name:	Lanton
Address:	Grove Park Way, Columbia, TN 38401
Building Code:	IBC 2018
Design Standard:	ANSI/TIA-222-H

Dear Vogue Towers II,

Strut Engineering & Investment, Inc (Strut E&I, Inc) has reviewed the proposed Vogue Tower communications tower installation at the above-mentioned site. The project will contain a monopole-type antenna support tower with a height of 105' above ground level (AGL). The monopole structure is made up of hot dipped galvanized high strength steel tubing that is typically 48-60" diameter at its base and tapering to 18" diameter at the top.

The antenna cables will be routed from the ground-based equipment up the inside of the pole to the proposed antenna rad center. The tower manufacturer shall supply structural design drawings prepared by a licensed Structural Engineer in the State of Tennessee at the time of Building Permit submission for review by the County before construction can commence.

The tower will be designed in accordance with the Tennessee State Building Code and International Building Code (IBC). Both of these codes have adopted the Telecommunications Industry Association/Electronics Industry Association Standards (ANSI/TIA-222-H). These standards dictate the design of all communications towers and take into consideration the following parameters:

1. Structure Risk Category/Class
   Category/Class is chosen based upon the function of risk to human life, potential damage to property in the event of failure and the type of services that the tower will provide (i.e. essential communications vs. services that are optional)
2. Environmental Loading
   Includes wind, ice, and seismic loads based upon local county-based data
3. Site Exposure Category
   Category is chosen based upon "surface roughness" of local surrounding vegetation, structures and natural topography. This also impacts wind loading calculations
4. Topographic Category
   Category is chosen based upon wind "speed-up" effects from surrounding topography, such as towers being located within gently rolling terrain or at the top of a hill or ridge

The design of the tower shall be such that in the unlikely event of structural failure, the monopole will collapse onto itself and not onto a street or a building. In other words, structural failure would be typical of that of a straw bending onto itself, rather than a bowling pin being knocked over. **Vogue Towers shall stipulate to the tower manufacturer/designer that the area of probable failure be located at the 60% TOTAL height (66'-0" AGL) of the monopole plus lightning rod so that only the top 40% of the monopole plus the lightning rod (top 44'-0") would collapse onto itself. This is done by over-designing the tower sections below the failure point as necessary.**

In regard to the possibility of any future corrosion of the structure, the monopole shall be constructed with hot dipped galvanized steel, similar to that of highway signs and traffic signal poles. The ANSI/TIA-222-H standards have been based in part on the American Association of State Highway and Transportation Officials (AASHTO) standards which govern the construction and design standards for those structures (which have an extremely rare rate of corrosion related failures). Furthermore, the tower owner will be required to inspect the structure at intervals stipulated by ANSI/TIA-222-H standards or as may be stipulated by the underlying municipal authority, whichever is more stringent.

A geotechnical evaluation will be conducted that will explore the subsurface conditions in the vicinity of the proposed tower and develop geotechnical engineering recommendations to facilitate the design of the tower foundation. A report will be generated that shall be utilized by the tower manufacturer/designer to prepare foundation design drawings to be submitted at the time of Building Permit submission for review by the County before construction can commence. The geotechnical report and design drawings shall all be prepared by licensed Geotechnical Engineers in the State of Tennessee.

In summary, monopole-type antenna support structures are designed for extreme wind conditions with factors of safety that result in a design that is extremely conservative. The occurrence of monopole failure is exceptionally rare and historically these structures have survived after experiencing wind speeds considerably higher than their design speeds.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

STRUT Engineering & Investment, Inc.

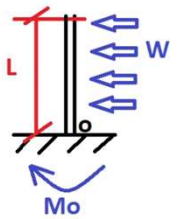


Emad Badiee, P.E.
Senior Structural Engineer
ebadiee@struteni.com
(404) 480-5555



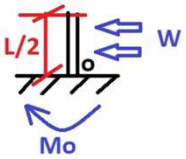
Designed Tower Fall Zones

- Towers designed per TIA-222 standards (currently Revision “H”)
- The load calculated at the base of the tower does not change
- Reduction of 50% of tower height results in applied force reduction of 75%, the remaining pole now only carries 25% of the original applied load
  - Layman’s terms, the remaining portion of the tower has a constant capacity, while the applied force is significantly decreased to 1/4th of the original applicable force. In another word, the base following a failure event is approx. 4x stronger because of the reduced applied force exerted on the tower
- Reduction of 40% of tower height from the top (bottom 60% remaining) results in applied force reduction of approx. 64%, meaning the remaining tower base and its foundation are almost 3 times stronger (100%/36%) than the maximum fore that can be applied to them when the top 40% of the tower collapses



Mo = (WL^2)/2

L=full height of the monopole



Mo = (W(L/2)^2)/2
= (W(L^2/4))/2
= (WL^2)/8

L/2=break point= half height of the monopole

Fall zone @ 60% of tower height:
Mo = (W (0.6L)^2)/2
= 0.36 WL^2/2

Designed Tower Failure





- Monopoles and Lattice Towers have a long history of providing safe and reliable antenna support for the telecommunications industry. In instances in which they do fail; the surrounding landscape has often been forever changed by extraordinary weather events well in excess of the required design loading.
- Both Monopoles and Lattice towers can be designed with theoretical failure points to ensure that the structure falls within a specified boundary even under extreme circumstances.
- Monopoles typically collapse like a bent straw during hurricanes or severe weather.
- All around us: In addition to supporting antennas, these same structures support lighting, power transmission lines, signage, and numerous other applications.

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2025-ASO-245-OE

To be amended per tower shift within the compound.

Issued Date: 02/11/2025

Michael Sandifer
Vogue Towers II, LLC
100 North Point Center East, Suite
Alpharetta, GA 30022

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Monopole TN-5001 Lanton
Location:	Columbia, TN
Latitude:	35-42-20.26N NAD 83
Longitude:	86-58-27.82W
Heights:	742 feet site elevation (SE)
	130 feet above ground level (AGL)
	872 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Emissions from this site must be in compliance with the parameters set by collaboration between the FAA and telecommunications companies and reflected in the FAA 5G C band compatibility evaluation process (such as power, frequencies, and tilt angle). Operational use of this frequency band is not objectionable provided the Wireless Providers (WP) obtain and adhere to the parameters established by the FAA 5G C band compatibility evaluation process. **Failure to comply with this condition will void this determination of no hazard.**

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

See attachment for additional condition(s) or information.
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M Change 1.

This determination expires on 08/10/2026 unless:

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (817) 222-5915, or Rodney.H-CTR.Love@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2025-ASO-245-OE.

Signature Control No: 643365461-647029366 (DNE)
Rodney Love
Technician

Attachment(s)
Additional Information
Frequency Data

Map(s)

cc: FCC

Additional information for ASN 2025-ASO-245-OE

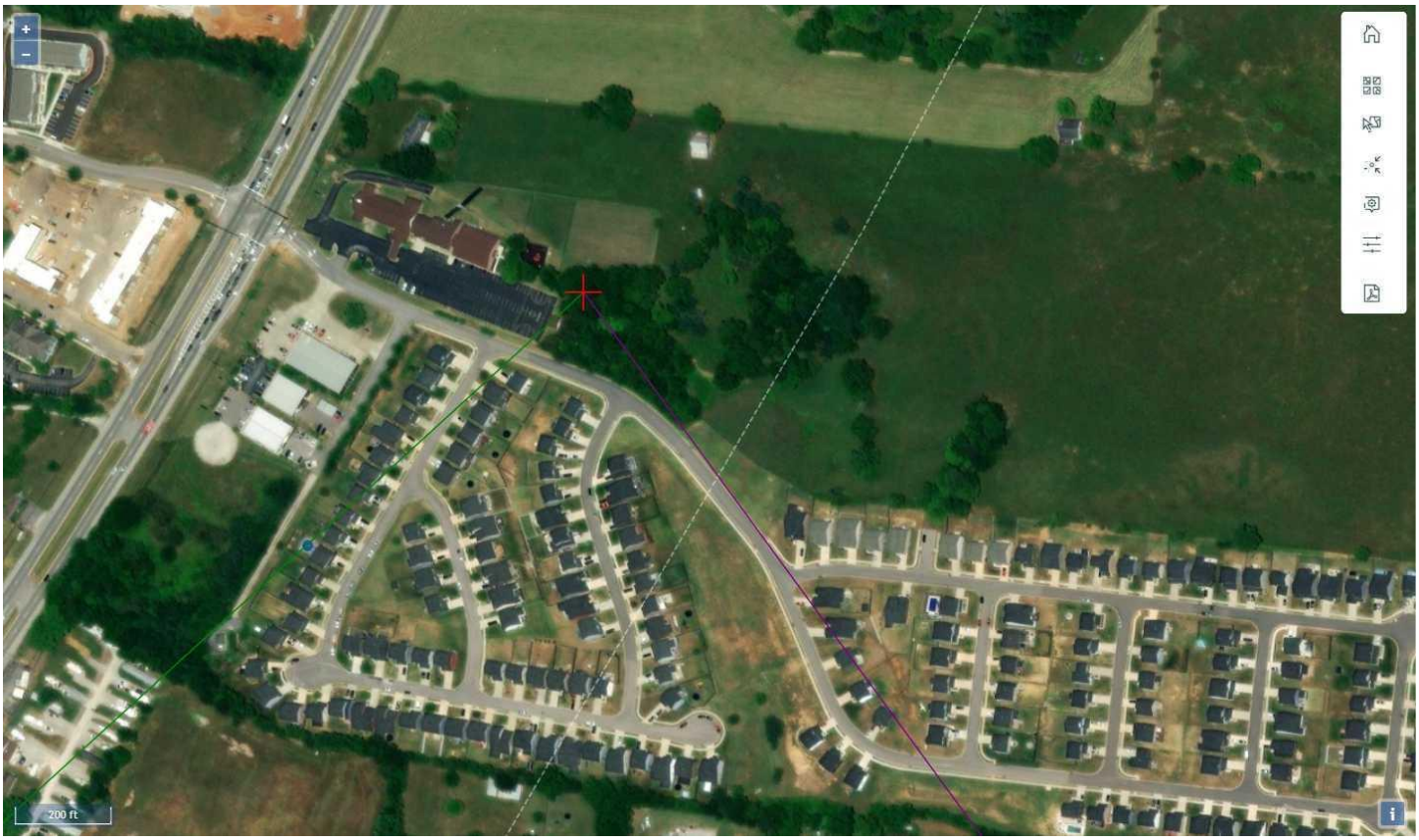
The FAA recognizes emissions in 3.7-3.98 GHz at this location will result in Electromagnetic Interference (EMI) as described in Airworthiness Directives (AD) 2021-23-12 and 2021-23-13. NAS services including airport and helicopter operations within a radius of 42 NM will be impacted by 5G RF emissions. Operational use of this frequency band is not objectionable provided the Wireless Providers (WP) obtain and adhere to the parameters established by the FAA 5G C band compatibility evaluation process.

Frequency Data for ASN 2025-ASO-245-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
6	7	GHz	42	dBW
6	7	GHz	55	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
806	901	MHz	500	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1756	1780	MHz	3280	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W
3450	3550	MHz	3280	W
3550	3700	MHz	50	W
3700	3980	MHz	3280	W
27500	28350	MHz	31623	W
29100	29250	MHz	31623	W
31000	31300	MHz	31623	W

38600	40000	MHz	31623	W

Verified Map for ASN 2025-ASO-245-OE



ASAC SITE SPECIFIC EVALUATION
FOR
Site Name: Lanton
Site Number: TN-5001
Site Location: Spring Hill, TN

Requestors Name: Michael Sandifer
Company Name: Vogue Towers II, LLC
Street Address: 430 Chestnut Street, Ste 101-B
City and Zip: Chattanooga, TN. 37402

This is an evaluation based on application of surfaces identified in Federal Aviation Regulation (FAR) Part 77 and Federal Communication Commission (FCC) Rules Part 17.

EXECUTIVE SUMMARY

- **The max height that can be built at this site without notice to the FAA is 200 feet AGL or 942 feet AMSL.**
- **The max No Extended Study height at this site is 499 AGL, or 1241 AMSL.**
- **The max no hazard height at this site is 499 AGL, or 1241 AMSL.**
- **The max no marking and lighting height at this site is 200 AGL, or 942 AMSL.**

SITE DATA

Structure Type: Antenna Tower

Coordinates of site:	**Lat:**	**35°42'20.26"**
	Long:	**86°58'27.82"**
	Datum:	**NAD 83**

Site ground elevation:	**742**
Total height above the ground of the entire structure (AGL):	**130**
Total height above mean sea level (AMSL):	**872**

AIRPORT/HELIPORT INFORMATION

Nearest public use or Government Use (DOD) facility: Maury County Regional.

This structure will be located 13.5 NM or 82051 FT from the airport on a bearing of 227 degrees true to the airport.

Nearest private use landing facility is: Hunter.

This structure will be located 0.9 NM from the airport on a bearing of 120 degrees true to the airport.

STUDY FINDINGS

FAA FAR Part 77 paragraph 9 (FAR 77.9): (Construction or Alteration requiring notice.) (These are the imaginary surfaces that the FAA has implemented to provide general criteria for notification purposes.)

This structure does not require notification to the FAA.

FAA FAR Part 77 paragraph 17(FAR 77.17): (Standards for Determining Obstructions.)(These are the imaginary surfaces that the FAA has implemented to protect aircraft safety. If any of these surfaces are penetrated, the structure may pose a Hazard to Air Navigation.)

This structure does not exceed these surfaces.

FCC Notice Requirements:
(FCC Rules, Part 17)

This structure does not require notification to the FAA or FCC based on these rules.

FAA EMI:
(The FAA protects certain air navigational aids, radio transmitters, and RADAR facilities from possible interference. The distance and direction are dependent on the type of facility being evaluated. Some of these transmission and receiver facilities are listed in the National Flight Data Center (NFDC) database.)

This site would not affect any FAA air navigational aids or transmitters.

Military Airspace:
(This would include low level visual and instrument routes along with operations areas and special use airspace.)

This structure will not affect this airspace.

AM Facilities:
(The FCC protects AM radio stations from possible interference for a distance of 3.0 km for directional facilities, and 1.0 km for non-directional facilities. New changes to the FCC critical distances are calculated based on the AM transmission Movement Method Proof evaluation.)

This site was evaluated against the FCC's AM antenna database using the Movement Method proof calculations and no further action is required.

MARKING AND LIGHTING

FAA Advisory Circular 70/7460-1:

Marking and lighting is not required for this structure.

RECOMMENDATIONS

This site was evaluated in accordance with the requirements specified by the FAA under Federal Aviation Rules part 77, and found not to be a hazard to air navigation.

Carter's Creek Station Antiques
Carters Creek
Carters
Terrell Br
CARTERS CREEK ROAD
Cem
The Ridge at Carter's Station by Richmond...
Roadside park
Park
125
31
700
Middle Tennessee Agricultural Experiment Station
Neapolis
Embers Tavern & Grille
Coleman Branch
Mile 3
640
Branch
Rainbow Ch
Meadow Lawn Memorial Garden
BM TS 1L
714
Bexley Spring Hill
883
Greens Mill Rd
GREENS MILL ROAD
Lennar at Drumwright
Hunter Lake
Hunter Airport
Rutherford
Mile 15
Southern Scapes landscaping
Greens Mill Rd
BM LRT 1576
750
Google Earth
Image © 2024 Airbus
Earth Point
3000 ft

Sabre Industries™
INNOVATION DELIVERED

Structural Design Report

125' Monopine
Site: Lanton, TN
Site Number: TN-5001

For example of tower engineering only, site specific tower design for new (reduced) tower will be provided once geotechnical information is available complete foundation design.

Prepared for: VOGUE TOWERS
by: Sabre Industries ™

Job Number: 25-4001-JDS

March 10, 2025

Monopole Profile..... **1**

Foundation Design Summary (Preliminary) (Option 1)..... **2**

Foundation Design Summary (Preliminary) (Option 2)..... **3**

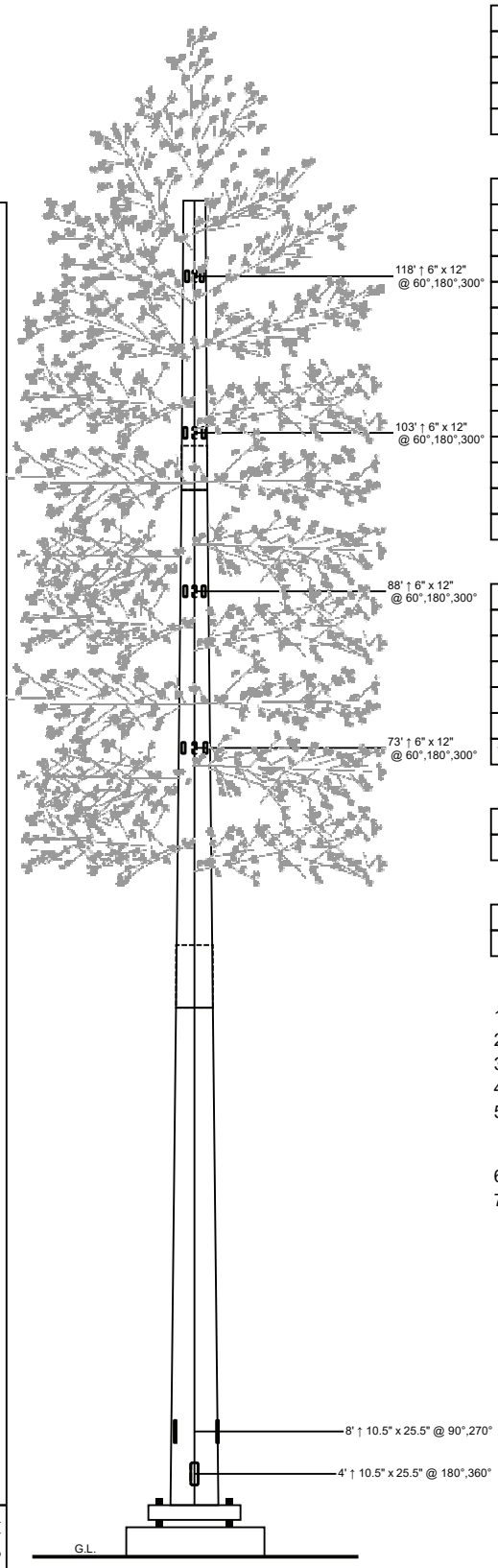
Pole Calculations..... **4-24**

Foundation Calculations..... **25-34**



Digitally Signed By Amy R. Herbst
DN: C=US,SERIALNUMBER=MAS20250205984400,ST=Texas,L=Alvarado,2.5.4.97=NTRUS\+DE-4349737,O=SABRE INDUSTRIES\, INC.,CN=Amy R. Herbst Date: 2025.03.10 13:05:22

Length (ft)	53'-3"	53'-6"	27'-6"
Number Of Sides	18		
Thickness (in)	1/2"	3/8"	1/4"
Lap Splice (ft)	6' - 0"		4' - 3"
Top Diameter (in)	40.29"	29.26"	24"
Bottom Diameter (in)	53.49"	42.53"	30.82"
Taper (in/ft)	0.2479		
Grade	A572-65		
Weight (lbs)	15963	8342	2318
Overall Steel Height (ft)	124		



Designed Appurtenance Loading

Elev	Description	Tx-Line
120	(1) 40,000 Sq. In. EPA 6000# (no ice)	(12) 1 5/8"
105	(1) 30,000 sq. in. EPA 6,000# (no ice)	(12) 1 5/8"
90	(1) 30,000 sq. in. EPA 6,000# (no ice)	(12) 1 5/8"
75	(1) 30,000 sq. in. EPA 6,000# (no ice)	(12) 1 5/8"

Design Criteria - ANSI/TIA-222-H

Wind Speed (No Ice)	105 mph
Wind Speed (Ice)	30 mph
Design Ice Thickness	1.50 in
Risk Category	II
Exposure Category	C
Topographic Factor Procedure	Method 1 (Simplified)
Topographic Category	1
Ground Elevation	742 ft
Seismic Importance Factor, Ie	1.00
0.2-sec Spectral Response, Ss	0.294 g
1-sec Spectral Response, S1	0.143 g
Site Class	D (DEFAULT)
Seismic Design Category	D
Basic Seismic Force-Resisting System	Telecommunication Tower (Pole: Steel)

Limit State Load Combination Reactions

Load Combination	Axial (kips)	Shear (kips)	Moment (ft-k)	Deflection (ft)	Sway (deg)
1.2 D + 1.0 Wo	70.22	64.1	6121.83	7.96	6.33
0.9 D + 1.0 Wo	52.73	64.14	6066.92	7.87	6.26
1.2 D + 1.0 Di + 1.0 Wi	129.29	8.55	852.34	1.14	0.9
1.2 D + 1.0 Ev + 1.0 Eh	73.5	3.27	336.34	0.46	0.37
0.9 D - 1.0 Ev + 1.0 Eh	48.86	3.24	327.62	0.45	0.36
1.0 D + 1.0 Wo (Service @ 60 mph)	58.35	18.77	1786.21	2.34	1.85

Base Plate Dimensions

Shape	Diameter	Thickness	Bolt Circle	Bolt Qty	Bolt Diameter
Round	66.25"	2.5"	60.5"	22	2.25"

Anchor Bolt Dimensions

Length	Diameter	Hole Diameter	Weight	Type	Finish
84"	2.25"	2.625"	2664.2	A615-75	Galv

Notes

1) Antenna Feed Lines Run Inside Pole
2) All dimensions are above ground level, unless otherwise specified.
3) Weights shown are estimates. Final weights may vary.
4) Full Height Step Bolts
5) This tower design and, if applicable, the foundation design(s) shown on the following page(s) also meet or exceed the requirements of the 2012 International Building Code.
6) Tower Rating: 95.4%
7) This structure has been designed to support pine tree branches starting at the 62' elevation to an overall height of 130'.

Sabre Industries
INNOVATION DELIVERED

Sabre Industries
7101 Southbridge Drive
P.O. Box 658
Sioux City, IA 51102-0658
Phone: (712) 258-6690
Fax: (712) 279-0814

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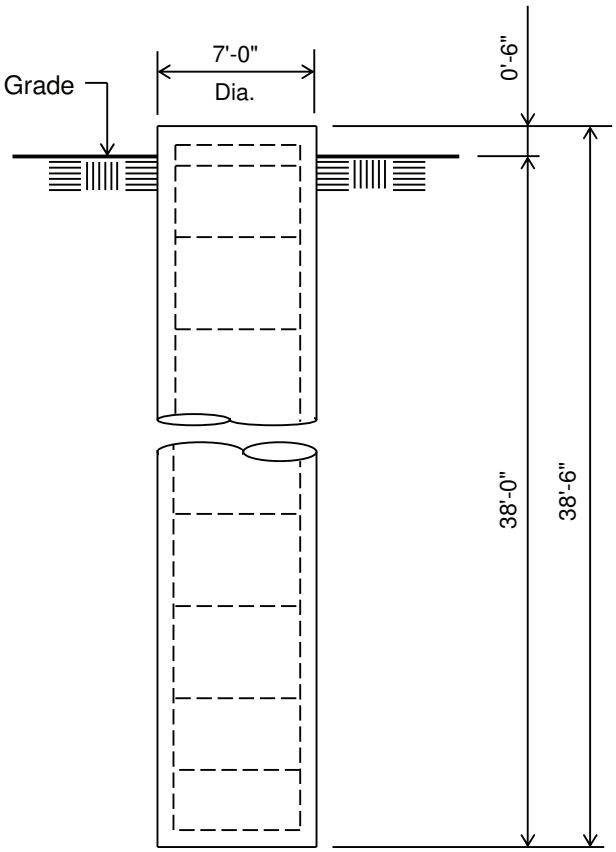
Job:	**25-4001-JDS**
Customer:	VOGUE TOWERS
Site Name:	Lanton, TN TN-5001
Description:	125' Monopine
Date:	3/10/2025 By: ARH

No.: 25-4001-JDS
Date: 03/10/25
By: ARH

Customer: VOGUE TOWERS
Site: Lanton, TN TN-5001
125' Monopine

PRELIMINARY -NOT FOR CONSTRUCTION-



ELEVATION VIEW
(54.88 Cu. Yds.)
(1 REQUIRED; NOT TO SCALE)

Notes:

1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-14.
2) Rebar to conform to ASTM specification A615 Grade 60.
3) All rebar to have a minimum of 3" concrete cover.
4) All exposed concrete corners to be chamfered 3/4".
5) The foundation design is based on presumptive clay soil as defined in ANSI/TIA-222-H-2017. It is recommended that a soil analysis of the site be performed to verify the soil parameters used in the design.
6) This foundation is designed for a max capacity ratio of 99.5%.
7) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

Rebar Schedule for Pier	
Pier	(38) #10 vertical rebar w/ #5 ties, (2) within top 5" of pier, then 8" C/C

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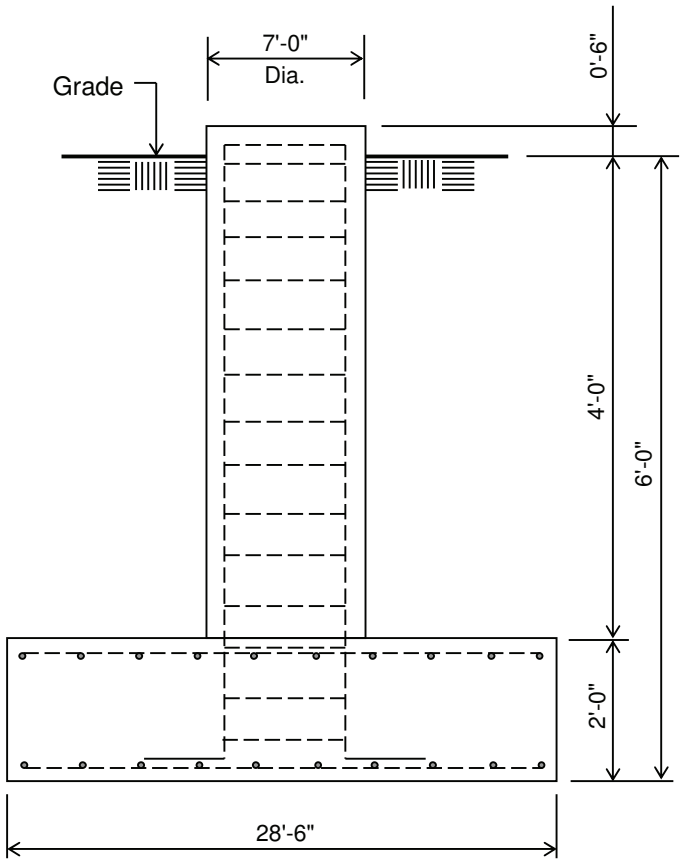
No.: 25-4001-JDS
Date: 03/10/25
By: ARH

Customer: VOGUE TOWERS
Site: Lanton, TN TN-5001
125' Monopine

PRELIMINARY -NOT FOR CONSTRUCTION-



ELEVATION VIEW
(66.58 Cu. Yds.)
(1 REQUIRED; NOT TO SCALE)

Notes:

1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-14.
2) Rebar to conform to ASTM specification A615 Grade 60.
3) All rebar to have a minimum of 3" concrete cover.
4) All exposed concrete corners to be chamfered 3/4".
5) The foundation design is based on presumptive clay soil as defined in ANSI/TIA-222-H-2017. It is recommended that a soil analysis of the site be performed to verify the soil parameters used in the design.
6) 4 ft of soil cover is required over the entire area of the foundation slab.
7) This foundation is designed for a max capacity ratio of 99.5%.
8) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

Rebar Schedule for Pad and Pier	
Pier	(42) #9 vertical rebar w/ hooks at bottom w/ #5 ties, (2) within top 5" of pier, then 4" C/C
Pad	(41) #10 horizontal rebar evenly spaced each way top and bottom (164 total)

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Processed under license at:

Sabre Towers and Poles on: 10 mar 2025 at: 12:50:48

125' Monopine / Lanton, TN

* All pole diameters shown on the following pages are across corners.
See profile drawing for widths across flats.

POLE GEOMETRY

ELEV ft	SECTION NAME	No. SIDE	OUTSIDE DIAM in	THICK -NESS in	RESISTANCES φ*Pn kip	φ*Mn ft-kip	SPLICE TYPE	...OVERLAP... LENGTH ft	RATIO	w/t
124.0										
			24.37	0.250	1400.1	682.2				
	A	18								15.7
			30.22	0.250	1647.1	999.0				
100.7										
			30.22	0.250	1647.1	999.0				
	A/B	18					SLIP	4.25	1.68	
			30.79	0.375	2648.5	1624.2				
96.5										
			30.79	0.375	2648.5	1624.2				
	B	18								13.3
			41.66	0.375	3475.8	2902.5				
53.2										
			41.66	0.375	3475.8	2902.5				
	B/C	18					SLIP	6.00	1.72	
			42.43	0.500	4868.0	4117.1				
47.2										
			42.43	0.500	4868.0	4117.1				
	C	18								13.9
			54.31	0.500	6065.9	6601.4				
0.0										

POLE ASSEMBLY

SECTION NAME	BASE ELEV ft	.....BOLTS AT BASE OF SECTION..... NUMBER	TYPE	DIAM in	STRENGTH ksi	THREADS IN SHEAR PLANE	CALC BASE ELEV ft
A	96.500	0	A325	0.00	92.0	0	96.500
B	47.250	0	A325	0.00	92.0	0	47.250
C	0.000	0	A325	0.00	92.0	0	0.000

POLE SECTIONS

SECTION NAME	No.of SIDES	LENGTH	OUTSIDE.DIAMETER BOT *	OUTSIDE.DIAMETER TOP *	BEND RAD	MAT-ERIAL ID	FLANGE.ID BOT	FLANGE.ID TOP	FLANGE.WELD ..GROUP.ID.. BOT	FLANGE.WELD ..GROUP.ID.. TOP
		ft	in	in	in					
A	18	27.50	31.29	24.37	0.625	1	0	0	0	0
B	18	53.50	43.18	29.72	0.625	2	0	0	0	0
C	18	53.25	54.31	40.91	0.625	3	0	0	0	0

* - Diameter of circumscribed circle

MATERIAL TYPES
==============

TYPE OF SHAPE	TYPE NO	NO OF ELEM.	ORIENT &	HEIGHT	WIDTH	.THICKNESS. WEB	FLANGE	IRREGULARITY .PROJECTION. % OF AREA	ORIENT
			deg	in	in	in	in		deg
PL	1	1	0.0	31.29	0.25	0.250	0.250	0.00	0.0
PL	2	1	0.0	43.18	0.38	0.375	0.375	0.00	0.0
PL	3	1	0.0	54.31	0.50	0.500	0.500	0.00	0.0

& - With respect to vertical

MATERIAL PROPERTIES
==================

MATERIAL TYPE NO.	ELASTIC MODULUS	UNIT WEIGHT	.. STRENGTH .. Fu	Fy	THERMAL COEFFICIENT
	ksi	pcf	ksi	ksi	/deg
1	29000.0	490.0	80.0	65.0	0.00001170
2	29000.0	490.0	80.0	65.0	0.00001170
3	29000.0	490.0	80.0	65.0	0.00001170

* Only 5 condition(s) shown in full

==========

LOADING CONDITION A ==========

105 mph wind with no ice. Wind Azimuth: 0° (1.2 D + 1.0 Wo)

LOADS ON POLE
=============

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	......FORCES...... HORIZ	DOWN	......MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	126.500	0.00	0.0	0.0	0.9561	0.3000	0.0000	0.0000
C	122.000	0.00	0.0	0.0	0.0111	0.0067	0.0000	0.0000

C	121.500	0.00	0.0	0.0	0.9481	0.3000	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.0000	1.7821	0.0000	0.0000
C	119.000	0.00	0.0	0.0	10.4975	7.2000	0.0000	0.0000
C	116.500	0.00	0.0	0.0	1.8797	0.6000	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0273	0.0168	0.0000	0.0000
C	111.500	0.00	0.0	0.0	1.8626	0.6000	0.0000	0.0000
C	106.500	0.00	0.0	0.0	1.8448	0.6000	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0268	0.0168	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.0000	1.5575	0.0000	0.0000
C	104.000	0.00	0.0	0.0	7.6365	7.2000	0.0000	0.0000
C	101.500	0.00	0.0	0.0	1.8264	0.6000	0.0000	0.0000
C	96.500	0.00	0.0	0.0	1.8073	0.6000	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0262	0.0168	0.0000	0.0000
C	91.500	0.00	0.0	0.0	1.7874	0.6000	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0000	1.3329	0.0000	0.0000
C	89.000	0.00	0.0	0.0	7.3927	7.2000	0.0000	0.0000
C	86.500	0.00	0.0	0.0	1.7666	0.6000	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0256	0.0168	0.0000	0.0000
C	81.500	0.00	0.0	0.0	1.7448	0.6000	0.0000	0.0000
C	76.500	0.00	0.0	0.0	1.7220	0.6000	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0250	0.0168	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0000	1.1082	0.0000	0.0000
C	74.000	0.00	0.0	0.0	7.1143	7.2000	0.0000	0.0000
C	71.500	0.00	0.0	0.0	1.8868	0.6000	0.0000	0.0000
C	66.500	0.00	0.0	0.0	1.8587	0.6000	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0242	0.0168	0.0000	0.0000
C	63.500	0.00	0.0	0.0	1.1046	0.3600	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0234	0.0168	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0224	0.0168	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0213	0.0168	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0198	0.0168	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0178	0.0168	0.0000	0.0000
D	124.000	0.00	180.0	0.0	0.0495	0.0784	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0573	0.0942	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0586	0.2406	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0586	0.2406	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0599	0.1495	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0699	0.1937	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0703	0.4641	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0703	0.4641	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0709	0.2726	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0665	0.3195	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0667	0.3289	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0686	0.3383	0.0000	0.0000

==========

LOADING CONDITION M ==========

105 mph wind with no ice. Wind Azimuth: 0° (0.9 D + 1.0 Wo)

LOADS ON POLE
==========

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	......FORCES...... HORIZ	DOWN	......MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip

C	126.500	0.00	0.0	0.0	0.9561	0.2250	0.0000	0.0000
C	122.000	0.00	0.0	0.0	0.0111	0.0050	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.9481	0.2250	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.0000	1.3366	0.0000	0.0000
C	119.000	0.00	0.0	0.0	10.4975	5.4000	0.0000	0.0000
C	116.500	0.00	0.0	0.0	1.8797	0.4500	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0273	0.0126	0.0000	0.0000
C	111.500	0.00	0.0	0.0	1.8626	0.4500	0.0000	0.0000
C	106.500	0.00	0.0	0.0	1.8448	0.4500	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0268	0.0126	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.0000	1.1681	0.0000	0.0000
C	104.000	0.00	0.0	0.0	7.6365	5.4000	0.0000	0.0000
C	101.500	0.00	0.0	0.0	1.8264	0.4500	0.0000	0.0000
C	96.500	0.00	0.0	0.0	1.8073	0.4500	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0262	0.0126	0.0000	0.0000
C	91.500	0.00	0.0	0.0	1.7874	0.4500	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0000	0.9996	0.0000	0.0000
C	89.000	0.00	0.0	0.0	7.3927	5.4000	0.0000	0.0000
C	86.500	0.00	0.0	0.0	1.7666	0.4500	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0256	0.0126	0.0000	0.0000
C	81.500	0.00	0.0	0.0	1.7448	0.4500	0.0000	0.0000
C	76.500	0.00	0.0	0.0	1.7220	0.4500	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0250	0.0126	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0000	0.8312	0.0000	0.0000
C	74.000	0.00	0.0	0.0	7.1143	5.4000	0.0000	0.0000
C	71.500	0.00	0.0	0.0	1.8868	0.4500	0.0000	0.0000
C	66.500	0.00	0.0	0.0	1.8587	0.4500	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0242	0.0126	0.0000	0.0000
C	63.500	0.00	0.0	0.0	1.1046	0.2700	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0234	0.0126	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0224	0.0126	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0213	0.0126	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0198	0.0126	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0178	0.0126	0.0000	0.0000
D	124.000	0.00	180.0	0.0	0.0495	0.0588	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0573	0.0707	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0586	0.1804	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0586	0.1804	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0599	0.1121	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0699	0.1453	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0703	0.3481	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0703	0.3481	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0709	0.2044	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0665	0.2396	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0667	0.2467	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0686	0.2537	0.0000	0.0000

==========

LOADING CONDITION Y ==========

30 mph wind with 1.5 ice. Wind Azimuth: 0° (1.2 D + 1.0 Di + 1.0 Wi)

LOADS ON POLE
==========

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	......FORCES...... HORIZ	DOWN	......MOMENTS..... VERTICAL	TORSNAL

	ft	ft			kip	kip	ft-kip	ft-kip
C	126.500	0.00	0.0	0.0	0.0995	0.9868	0.0000	0.0000
C	122.000	0.00	0.0	0.0	0.0070	0.0187	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.0986	0.9841	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.0000	1.7821	0.0000	0.0000
C	119.000	0.00	0.0	0.0	1.4415	17.4402	0.0000	0.0000
C	116.500	0.00	0.0	0.0	0.2162	1.2812	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0172	0.0288	0.0000	0.0000
C	111.500	0.00	0.0	0.0	0.2139	1.2783	0.0000	0.0000
C	106.500	0.00	0.0	0.0	0.2116	1.2752	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0167	0.0288	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.0000	1.5575	0.0000	0.0000
C	104.000	0.00	0.0	0.0	1.0439	17.3044	0.0000	0.0000
C	101.500	0.00	0.0	0.0	0.2092	1.2720	0.0000	0.0000
C	96.500	0.00	0.0	0.0	0.2067	1.2687	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0162	0.0288	0.0000	0.0000
C	91.500	0.00	0.0	0.0	0.2041	1.2651	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0000	1.3329	0.0000	0.0000
C	89.000	0.00	0.0	0.0	1.0044	17.1498	0.0000	0.0000
C	86.500	0.00	0.0	0.0	0.2014	1.2615	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0157	0.0288	0.0000	0.0000
C	81.500	0.00	0.0	0.0	0.1986	1.2576	0.0000	0.0000
C	76.500	0.00	0.0	0.0	0.1957	1.2535	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0151	0.0288	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0000	1.1082	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.9596	16.9701	0.0000	0.0000
C	71.500	0.00	0.0	0.0	0.2080	1.2491	0.0000	0.0000
C	66.500	0.00	0.0	0.0	0.2045	1.2445	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0145	0.0288	0.0000	0.0000
C	63.500	0.00	0.0	0.0	0.2023	1.2416	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0138	0.0288	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0130	0.0288	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0121	0.0288	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0109	0.0288	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0094	0.0288	0.0000	0.0000
D	124.000	0.00	180.0	0.0	0.0080	0.1338	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0091	0.1590	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0093	0.3069	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0093	0.3069	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0094	0.2174	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0107	0.2763	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0108	0.5483	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0108	0.5483	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0108	0.3579	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0100	0.4088	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0100	0.4156	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0102	0.4195	0.0000	0.0000

==========

LOADING CONDITION AK ==========

Seismic - Azimuth: 0° (1.2 D + 1.0 Ev + 1.0 Eh)

LOADS ON POLE
==========

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	......FORCES...... HORIZ kip	DOWN kip	......MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	126.500	0.00	0.0	0.0	0.0317	0.3154	0.0000	0.0000
C	122.000	0.00	0.0	0.0	0.0007	0.0070	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.0293	0.3154	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.6735	7.5684	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.1667	1.8733	0.0000	0.0000
C	116.500	0.00	0.0	0.0	0.0538	0.6307	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0015	0.0177	0.0000	0.0000
C	111.500	0.00	0.0	0.0	0.0493	0.6307	0.0000	0.0000
C	110.250	0.00	0.0	0.0	0.1938	2.5374	0.0000	0.0000
C	106.500	0.00	0.0	0.0	0.0450	0.6307	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0012	0.0177	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.5144	7.5684	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.1113	1.6372	0.0000	0.0000
C	101.500	0.00	0.0	0.0	0.0408	0.6307	0.0000	0.0000
C	96.500	0.00	0.0	0.0	0.0369	0.6307	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0010	0.0177	0.0000	0.0000
C	91.500	0.00	0.0	0.0	0.0332	0.6307	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.3767	7.5684	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0697	1.4010	0.0000	0.0000
C	86.500	0.00	0.0	0.0	0.0297	0.6307	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0008	0.0177	0.0000	0.0000
C	81.500	0.00	0.0	0.0	0.0263	0.6307	0.0000	0.0000
C	76.500	0.00	0.0	0.0	0.0232	0.6307	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0006	0.0177	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.2604	7.5684	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0401	1.1649	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.3332	9.6838	0.0000	0.0000
C	71.500	0.00	0.0	0.0	0.0203	0.6307	0.0000	0.0000
C	66.500	0.00	0.0	0.0	0.0175	0.6307	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0005	0.0177	0.0000	0.0000
C	63.500	0.00	0.0	0.0	0.0160	0.6307	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0003	0.0177	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0002	0.0177	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0001	0.0177	0.0000	0.0000
C	26.620	0.00	0.0	0.0	0.0747	16.7844	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0001	0.0177	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0000	0.0177	0.0000	0.0000
D	124.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000
D	0.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000

==========

LOADING CONDITION AL ==========

Seismic - Azimuth: 0° (0.9 D - 1.0 Ev + 1.0 Eh)

LOADS ON POLE
==========

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	......FORCES...... HORIZ kip	DOWN kip	......MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	126.500	0.00	0.0	0.0	0.0317	0.2096	0.0000	0.0000

```
C      122.000      0.00    0.0    0.0    0.0007    0.0047    0.0000    0.0000
C      121.500      0.00    0.0    0.0    0.0293    0.2096    0.0000    0.0000
C      119.000      0.00    0.0    0.0    0.6735    5.0316    0.0000    0.0000
C      119.000      0.00    0.0    0.0    0.1667    1.2454    0.0000    0.0000
C      116.500      0.00    0.0    0.0    0.0538    0.4193    0.0000    0.0000
C      115.000      0.00    0.0    0.0    0.0015    0.0117    0.0000    0.0000
C      111.500      0.00    0.0    0.0    0.0493    0.4193    0.0000    0.0000
C      110.250      0.00    0.0    0.0    0.1938    1.6869    0.0000    0.0000
C      106.500      0.00    0.0    0.0    0.0450    0.4193    0.0000    0.0000
C      105.000      0.00    0.0    0.0    0.0012    0.0117    0.0000    0.0000
C      104.000      0.00    0.0    0.0    0.5144    5.0316    0.0000    0.0000
C      104.000      0.00    0.0    0.0    0.1113    1.0884    0.0000    0.0000
C      101.500      0.00    0.0    0.0    0.0408    0.4193    0.0000    0.0000
C       96.500      0.00    0.0    0.0    0.0369    0.4193    0.0000    0.0000
C       95.000      0.00    0.0    0.0    0.0010    0.0117    0.0000    0.0000
C       91.500      0.00    0.0    0.0    0.0332    0.4193    0.0000    0.0000
C       89.000      0.00    0.0    0.0    0.3767    5.0316    0.0000    0.0000
C       89.000      0.00    0.0    0.0    0.0697    0.9314    0.0000    0.0000
C       86.500      0.00    0.0    0.0    0.0297    0.4193    0.0000    0.0000
C       85.000      0.00    0.0    0.0    0.0008    0.0117    0.0000    0.0000
C       81.500      0.00    0.0    0.0    0.0263    0.4193    0.0000    0.0000
C       76.500      0.00    0.0    0.0    0.0232    0.4193    0.0000    0.0000
C       75.000      0.00    0.0    0.0    0.0006    0.0117    0.0000    0.0000
C       74.000      0.00    0.0    0.0    0.2604    5.0316    0.0000    0.0000
C       74.000      0.00    0.0    0.0    0.0401    0.7745    0.0000    0.0000
C       74.000      0.00    0.0    0.0    0.3332    6.4379    0.0000    0.0000
C       71.500      0.00    0.0    0.0    0.0203    0.4193    0.0000    0.0000
C       66.500      0.00    0.0    0.0    0.0175    0.4193    0.0000    0.0000
C       65.000      0.00    0.0    0.0    0.0005    0.0117    0.0000    0.0000
C       63.500      0.00    0.0    0.0    0.0160    0.4193    0.0000    0.0000
C       55.000      0.00    0.0    0.0    0.0003    0.0117    0.0000    0.0000
C       45.000      0.00    0.0    0.0    0.0002    0.0117    0.0000    0.0000
C       35.000      0.00    0.0    0.0    0.0001    0.0117    0.0000    0.0000
C       26.620      0.00    0.0    0.0    0.0747   11.1586    0.0000    0.0000
C       25.000      0.00    0.0    0.0    0.0001    0.0117    0.0000    0.0000
C       15.000      0.00    0.0    0.0    0.0000    0.0117    0.0000    0.0000

D      124.000      0.00  180.0  180.0    0.0000    0.0000    0.0000    0.0000
D        0.000      0.00  180.0  180.0    0.0000    0.0000    0.0000    0.0000

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125' Monopine / Lanton, TN


MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)
============================================================

  MAST   .......DEFLECTIONS (ft).........   .........ROTATIONS (deg).........
```

ELEV	HORIZONTAL		DOWN	TILT		TWIST
ft	ALONG	ACROSS		ALONG	ACROSS	
124.0	7.96L	0.06F	0.67L	6.33L	0.05F	0.00E
120.7	7.60L	0.06F	0.63L	6.33L	0.05F	0.00E
117.4	7.24L	0.05F	0.59L	6.32L	0.05F	0.00E
114.0	6.88L	0.05F	0.55L	6.29L	0.05F	0.00E
110.7	6.52L	-0.05U	0.51L	6.24L	0.05F	0.00E
107.4	6.16L	-0.05U	0.47L	6.16L	0.05F	0.00E
104.1	5.81L	-0.04U	0.44L	6.07L	0.05F	0.00E
100.7	5.47L	-0.04U	0.40L	5.95L	0.05F	0.00E
96.5	5.03L	-0.04U	0.36L	5.82L	0.04F	0.00E
90.3	4.42L	-0.03U	0.29L	5.58L	0.04F	0.00E
84.1	3.84L	-0.03U	0.24L	5.30L	0.04F	0.00E
78.0	3.29L	-0.02U	0.19L	4.96L	-0.04U	0.00E
71.8	2.78L	-0.02U	0.15L	4.59L	-0.03U	0.00E
65.6	2.31L	-0.02U	0.11L	4.18L	-0.03U	0.00E
59.4	1.89L	-0.01U	0.08L	3.74L	-0.03U	0.00E
53.2	1.51L	-0.01U	0.06L	3.27L	-0.02U	0.00E
47.2	1.19L	-0.01U	0.04L	2.92L	-0.02U	0.00E
41.3	0.91L	-0.01U	0.03L	2.55L	-0.02U	0.00E
35.4	0.66L	0.00U	0.02L	2.18L	-0.02U	0.00E
29.5	0.46L	0.00U	0.01L	1.80L	-0.01U	0.00E
23.6	0.29L	0.00U	0.01L	1.43L	-0.01U	0.00E
17.7	0.16L	0.00U	0.00L	1.07L	-0.01U	0.00E
11.8	0.07L	0.00U	0.00L	0.70L	-0.01U	0.00E
5.9	0.02L	0.00U	0.00AB	0.35L	0.00U	0.00E
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

MAST ELEV	TOTAL AXIAL	SHEAR.w.r.t.WIND.DIR ALONG	SHEAR.w.r.t.WIND.DIR ACROSS	MOMENT.w.r.t.WIND.DIR ALONG	MOMENT.w.r.t.WIND.DIR ACROSS	TORSION
ft	kip	kip	kip	ft-kip	ft-kip	ft-kip

```
124.0  ..................................................................
         0.99 AA     1.04 K      0.03 X     -2.54 R      0.05 X     -0.01 X

         2.44 AA     2.16 K      0.03 X     -6.92 B     -0.05 X      0.01 X
120.7  ..................................................................
         2.44 AF     2.31 B     -0.14 N     -6.97 L      0.11 Q     -0.02 Q

        22.13 AF    12.98 B     -0.14 N    -33.53 B      0.46 N      0.04 L
117.4  ..................................................................
        22.13 AF    13.00 A     -0.24 X    -33.69 B      0.49 N      0.05 L

        23.91 AF    15.08 A     -0.24 X    -84.28 K      0.83 X      0.08 L
114.0  ..................................................................
        23.91 AF    15.12 M     -0.28 T    -84.32 K      1.00 X     -0.10 X

        25.68 AF    17.16 M     -0.28 T   -139.48 A      1.36 T      0.13 R
110.7  ..................................................................
        25.68 AF    17.17 M     -0.25 T   -139.65 A      1.37 T     -0.12 T

        26.18 AF    17.35 M     -0.25 T   -199.54 A      2.19 T     -0.19 T
107.4  ..................................................................
        26.18 AF    17.24 C     -0.34 T   -199.54 A      1.98 T      0.20 U

        27.99 AF    19.30 C     -0.34 T   -265.04 C      3.10 T     -0.28 T
104.1  ..................................................................
        27.99 AD    19.28 M      0.37 F   -265.45 C      3.09 T     -0.28 T

        48.65 AD    28.93 M      0.37 F   -362.47 C      3.87 T      0.34 R
100.7  ..................................................................
        48.65 AF    29.02 M     -0.35 H   -362.82 C      3.99 T     -0.35 T

        49.95 AF    29.27 M     -0.35 H   -494.84 C      5.11 T     -0.44 T
 96.5  ..................................................................
        51.22 AF    31.14 M      0.36 F   -494.83 C      5.04 T     -0.45 C

        53.88 AF    33.33 M      0.36 F   -702.44 C      6.93 T     -0.59 T
 90.3  ..................................................................
        53.88 AF    33.30 M      0.35 F   -702.54 C      6.98 T     -0.60 T

        75.08 AF    42.86 M      0.35 F   -965.20 L     -8.89 F     -0.72 H
 84.1  ..................................................................
        75.08 AF    42.88 L     -0.38 U   -965.23 L     -8.92 F     -0.72 T

        77.81 AF    45.02 L     -0.38 U  -1255.56 L    -11.30 F     -0.88 H
 78.0  ..................................................................
        77.81 AF    45.03 M     -0.43 U  -1255.65 L    -11.33 F     -0.88 H

        98.70 AF    54.29 M     -0.43 U  -1577.57 L    -13.86 F      1.10 E
 71.8  ..................................................................
        98.69 AF    54.37 M      0.43 F  -1577.66 L    -13.84 F      1.10 E

       102.77 AF    58.52 M      0.43 F  -1947.58 L    -16.59 F      1.29 E
 65.6  ..................................................................
       102.77 AF    58.41 M     -0.46 U  -1947.67 L    -16.58 F      1.28 E

       105.66 AF    59.96 M     -0.46 U  -2333.30 L    -18.80 F      1.47 E
 59.4  ..................................................................
       105.66 AF    60.02 M     -0.45 U  -2333.39 L    -18.84 F      1.47 E
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         107.37 AF    60.47 M     -0.45 U  -2722.70 L    -20.98 F      1.62 E
   53.2  ..........................................................................
         107.37 AF    60.49 M     -0.49 U  -2722.76 L    -20.97 F      1.63 E

         110.66 AF    60.91 M     -0.49 U  -3102.14 L     23.13 U      1.76 E
   47.2  ..........................................................................
         110.66 AF    60.93 M     -0.46 U  -3102.11 L     23.16 U      1.76 E

         112.83 AF    61.37 M     -0.46 U  -3477.51 L     25.91 U      1.89 E
   41.3  ..........................................................................
         112.83 AF    61.31 M     -0.42 U  -3477.55 L     25.92 U      1.89 E

         115.02 AF    61.73 M     -0.42 U  -3853.63 L     28.48 U      1.99 E
   35.4  ..........................................................................
         115.02 AF    61.69 M     -0.45 U  -3853.65 L     28.45 U      1.99 E

         117.29 AF    62.12 M     -0.45 U  -4230.58 L     31.18 U      2.08 E
   29.5  ..........................................................................
         117.29 AF    62.08 M     -0.47 U  -4230.60 L     31.20 U      2.08 E

         119.61 AF    62.51 M     -0.47 U  -4608.11 L     33.99 U      2.14 E
   23.6  ..........................................................................
         119.61 AF    62.52 M     -0.46 U  -4608.09 L     34.02 U      2.14 E

         121.94 AF    62.92 M     -0.46 U  -4986.23 L     36.79 U      2.19 E
   17.7  ..........................................................................
         121.94 AF    62.92 M     -0.47 U  -4986.25 L     36.79 U      2.19 E

         124.36 AF    63.33 M     -0.47 U  -5364.70 L     39.59 U      2.23 E
   11.8  ..........................................................................
         124.36 AF    63.33 M     -0.46 U  -5364.71 L     39.59 U      2.23 E

         126.82 AF    63.72 M     -0.46 U  -5743.22 L     42.34 U      2.25 E
    5.9  ..........................................................................
         126.82 AF    63.74 M     -0.47 U  -5743.22 L     42.34 U      2.25 E

         129.29 AF    64.14 M     -0.47 U  -6121.83 L     45.11 U      2.26 E
--------------------------------------------------------------------------------
 base
 reaction  129.29 AF   -64.14 M      0.47 U   6121.83 L    -45.11 U     -2.26 E
--------------------------------------------------------------------------------


 COMPLIANCE WITH 4.8.2 & 4.5.4
 =============================

   ELEV       AXIAL   BENDING SHEAR +       TOTAL SATISFIED  D/t(w/t)   MAX
                              TORSIONAL                                  ALLOWED
     ft

 124.00  ..........................................................................
             0.00AA    0.00R     0.00K     0.00R     YES      15.69A       45.2

             0.00AA    0.01B     0.00K     0.01B     YES      16.27A       45.2
 120.68  ..........................................................................
             0.00AF    0.01L     0.00B     0.01L     YES      16.27A       45.2

             0.01AF    0.04B     0.02B     0.05B     YES      16.85A       45.2
 117.36  ..........................................................................
             0.01AF    0.04B     0.02A     0.05B     YES      16.85A       45.2
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          0.02AF    0.10K     0.02A     0.11K     YES      17.44A       45.2
114.04 ..........................................................................
          0.02AF    0.10K     0.02M     0.11K     YES      17.44A       45.2

          0.02AF    0.16A     0.02M     0.17A     YES      18.02A       45.2
110.71 ..........................................................................
          0.02AF    0.16A     0.02M     0.17A     YES      18.02A       45.2

          0.02AF    0.22A     0.02M     0.23A     YES      18.60A       45.2
107.39 ..........................................................................
          0.02AF    0.22A     0.02C     0.23A     YES      18.60A       45.2

          0.02AF    0.28C     0.02C     0.29A     YES      19.18A       45.2
104.07 ..........................................................................
          0.02AD    0.28C     0.02M     0.29C     YES      19.18A       45.2

          0.03AD    0.36C     0.04M     0.38C     YES      19.76A       45.2
100.75 ..........................................................................
          0.02AF    0.23C     0.02M     0.24C     YES      13.06A       45.2

          0.02AF    0.29C     0.02M     0.30C     YES      13.55A       45.2
 96.50 ..........................................................................
          0.02AF    0.30C     0.02M     0.31C     YES      13.32A       45.2

          0.02AF    0.39C     0.02M     0.40C     YES      14.04A       45.2
 90.32 ..........................................................................
          0.02AF    0.39C     0.02M     0.40C     YES      14.04A       45.2

          0.03AF    0.49L     0.03M     0.50L     YES      14.76A       45.2
 84.14 ..........................................................................
          0.03AF    0.49L     0.03L     0.50L     YES      14.76A       45.2

          0.03AF    0.58L     0.03L     0.59L     YES      15.48A       45.2
 77.96 ..........................................................................
          0.03AF    0.58L     0.03M     0.59L     YES      15.48A       45.2

          0.03AF    0.67L     0.03M     0.69L     YES      16.20A       45.2
 71.79 ..........................................................................
          0.03AF    0.67L     0.03M     0.69L     YES      16.20A       45.2

          0.03AF    0.77L     0.04M     0.79L     YES      16.92A       45.2
 65.61 ..........................................................................
          0.03AF    0.77L     0.04M     0.79L     YES      16.92A       45.2

          0.03AF    0.86L     0.04M     0.88L     YES      17.64A       45.2
 59.43 ..........................................................................
          0.03AF    0.86L     0.04M     0.88L     YES      17.64A       45.2

          0.03AF    0.94L     0.03M     0.95L     YES      18.36A       45.2
 53.25 ..........................................................................
          0.02AF    0.69L     0.03M     0.70L     YES      13.68A       45.2

          0.02AF    0.73L     0.02M     0.74L     YES      14.20A       45.2
 47.25 ..........................................................................
          0.02AF    0.75L     0.03M     0.77L     YES      13.94A       45.2

          0.02AF    0.79L     0.02M     0.80L     YES      14.46A       45.2
 41.34 ..........................................................................
          0.02AF    0.79L     0.02M     0.80L     YES      14.46A       45.2

          0.02AF    0.82L     0.02M     0.83L     YES      14.97A       45.2
```

```
 35.44  ..........................................................................
           0.02AF    0.82L     0.02M     0.83L     YES      14.97A       45.2

           0.02AF    0.84L     0.02M     0.85L     YES      15.49A       45.2
 29.53  ..........................................................................
           0.02AF    0.84L     0.02M     0.85L     YES      15.49A       45.2

           0.02AF    0.86L     0.02E     0.87L     YES      16.01A       45.2
 23.62  ..........................................................................
           0.02AF    0.86L     0.02M     0.87L     YES      16.01A       45.2

           0.02AF    0.88L     0.02E     0.89L     YES      16.52A       45.2
 17.72  ..........................................................................
           0.02AF    0.88L     0.02E     0.89L     YES      16.52A       45.2

           0.02AF    0.90L     0.02E     0.91L     YES      17.04A       45.2
 11.81  ..........................................................................
           0.02AF    0.90L     0.02E     0.91L     YES      17.04A       45.2

           0.02AF    0.91L     0.02E     0.93L     YES      17.55A       45.2
  5.91  ..........................................................................
           0.02AF    0.91L     0.02E     0.93L     YES      17.55A       45.2

           0.02AF    0.93L     0.02E     0.94L     YES      18.07A       45.2
  0.00  ..........................................................................

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)
====================================================

    DOWN    SHEAR.w.r.t.WIND.DIR   MOMENT.w.r.t.WIND.DIR     TORSION
               ALONG      ACROSS       ALONG      ACROSS
     kip         kip         kip      ft-kip      ft-kip      ft-kip

  129.29       64.14       -0.47    -6121.83       45.11        2.26
      AF          M           U           L           U           E


================================================================================


================================================================================
(USA 222-H) - Monopole Spatial Analysis               (c)2017      Guymast Inc.

Tel:(416)736-7453             Fax:(416)736-4372             Web:www.guymast.com

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Sabre Towers and Poles                              on: 10 mar 2025  at: 12:51:19
================================================================================

125' Monopine / Lanton, TN


********************************************************************************
*************************  Service Load Condition  *****************************
********************************************************************************

* Only 1 condition(s) shown in full
```

LOADING CONDITION A ==========

60 mph wind with no ice. Wind Azimuth: 0° (1.0 D + 1.0 Wo)

LOADS ON POLE
=============

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	126.500	0.00	0.0	0.0	0.2793	0.2500	0.0000	0.0000
C	122.000	0.00	0.0	0.0	0.0032	0.0056	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.2770	0.2500	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.0000	1.4851	0.0000	0.0000
C	119.000	0.00	0.0	0.0	3.0669	6.0000	0.0000	0.0000
C	116.500	0.00	0.0	0.0	0.5492	0.5000	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0080	0.0140	0.0000	0.0000
C	111.500	0.00	0.0	0.0	0.5442	0.5000	0.0000	0.0000
C	106.500	0.00	0.0	0.0	0.5390	0.5000	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0078	0.0140	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.0000	1.2979	0.0000	0.0000
C	104.000	0.00	0.0	0.0	2.2311	6.0000	0.0000	0.0000
C	101.500	0.00	0.0	0.0	0.5336	0.5000	0.0000	0.0000
C	96.500	0.00	0.0	0.0	0.5280	0.5000	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0077	0.0140	0.0000	0.0000
C	91.500	0.00	0.0	0.0	0.5222	0.5000	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0000	1.1107	0.0000	0.0000
C	89.000	0.00	0.0	0.0	2.1598	6.0000	0.0000	0.0000
C	86.500	0.00	0.0	0.0	0.5161	0.5000	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0075	0.0140	0.0000	0.0000
C	81.500	0.00	0.0	0.0	0.5098	0.5000	0.0000	0.0000
C	76.500	0.00	0.0	0.0	0.5031	0.5000	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0073	0.0140	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0000	0.9235	0.0000	0.0000
C	74.000	0.00	0.0	0.0	2.0785	6.0000	0.0000	0.0000
C	71.500	0.00	0.0	0.0	0.5513	0.5000	0.0000	0.0000
C	66.500	0.00	0.0	0.0	0.5430	0.5000	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0071	0.0140	0.0000	0.0000
C	63.500	0.00	0.0	0.0	0.3227	0.3000	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0068	0.0140	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0066	0.0140	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0062	0.0140	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0058	0.0140	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0052	0.0140	0.0000	0.0000
D	124.000	0.00	180.0	0.0	0.0145	0.0653	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0168	0.0785	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0171	0.2005	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0171	0.2005	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0175	0.1246	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0204	0.1614	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0205	0.3867	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0205	0.3867	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0207	0.2271	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0194	0.2663	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0195	0.2741	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0201	0.2819	0.0000	0.0000

MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)

MAST ELEV ft	DEFLECTIONS (ft) HORIZONTAL ALONG	HORIZONTAL ACROSS	DOWN	ROTATIONS (deg) TILT ALONG	TILT ACROSS	TWIST
124.0	2.34L	0.02K	0.06L	1.85L	0.01K	0.00I
120.7	2.24L	0.02K	0.06L	1.85L	0.01K	0.00I
117.4	2.13L	0.02K	0.05L	1.85L	0.01K	0.00I
114.0	2.02L	0.01K	0.05L	1.84L	0.01K	0.00I
110.7	1.91L	0.01K	0.05L	1.82L	0.01K	0.00I
107.4	1.81L	0.01K	0.04L	1.80L	0.01K	0.00I
104.1	1.71L	0.01K	0.04L	1.77L	0.01K	0.00I
100.7	1.60L	0.01K	0.04L	1.74L	0.01K	0.00I
96.5	1.48L	0.01K	0.03L	1.70L	0.01K	0.00I
90.3	1.30L	0.01K	0.03L	1.63L	0.01K	0.00I
84.1	1.13L	0.01K	0.02L	1.55L	0.01K	0.00I
78.0	0.96L	0.01K	0.02L	1.45L	0.01K	0.00I
71.8	0.81L	0.01K	0.01L	1.34L	0.01K	0.00L
65.6	0.68L	0.00K	0.01L	1.22L	0.01K	0.00L
59.4	0.55L	0.00K	0.01L	1.09L	0.01K	0.00L
53.2	0.44L	0.00K	0.01L	0.95L	0.01K	0.00L
47.2	0.35L	0.00K	0.00L	0.85L	0.01K	0.00L
41.3	0.26L	0.00K	0.00L	0.74L	0.01K	0.00L
35.4	0.19L	0.00K	0.00L	0.63L	0.00K	0.00L
29.5	0.13L	0.00K	0.00L	0.53L	0.00K	0.00L
23.6	0.09L	0.00K	0.00I	0.42L	0.00K	0.00L
17.7	0.05L	0.00K	0.00I	0.31L	0.00K	0.00L
11.8	0.02L	0.00K	0.00I	0.21L	0.00K	0.00L
5.9	0.01L	0.00K	0.00I	0.10L	0.00K	0.00L
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)
==========

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND.DIR ALONG kip	ACROSS kip	MOMENT.w.r.t.WIND.DIR ALONG ft-kip	ACROSS ft-kip	TORSION ft-kip
124.0						
	0.25 C	0.31 E	-0.01 K	-0.77 K	-0.03 K	0.00 K
	0.73 C	0.64 E	-0.01 K	-2.02 E	-0.04 E	0.00 E
120.7						
	0.73 B	0.67 L	0.08 L	-2.04 F	0.06 L	0.00 I
	8.45 B	3.79 L	0.08 L	-9.81 L	-0.21 L	0.01 L
117.4						
	8.45 B	3.78 L	-0.05 F	-9.77 A	-0.18 C	0.01 L
	9.20 B	4.39 L	-0.05 F	-24.65 L	-0.27 L	0.01 L
114.0						
	9.20 B	4.38 A	-0.08 F	-24.69 L	-0.32 L	0.01 L
	9.94 B	4.98 A	-0.08 F	-40.69 A	0.39 F	0.01 I
110.7						
	9.94 B	5.03 A	-0.04 E	-40.69 A	0.40 F	0.01 I
	10.19 B	5.08 A	-0.04 E	-58.49 A	0.53 F	0.02 I
107.4						
	10.19 B	5.08 L	-0.09 F	-58.52 A	0.50 F	0.02 I
	10.96 B	5.68 L	-0.09 F	-77.85 L	0.79 F	0.02 I
104.1						
	10.96 B	5.70 I	0.09 K	-77.76 A	0.78 F	0.02 I
	19.01 B	8.52 I	0.09 K	-106.21 L	1.09 F	0.02 I
100.7						
	19.01 B	8.49 L	0.11 K	-106.21 L	1.12 F	0.03 I
	19.86 B	8.57 L	0.11 K	-144.89 L	1.40 F	0.03 I
96.5						
	20.36 B	9.06 L	-0.10 L	-144.88 L	1.39 F	0.03 I
	21.66 B	9.70 L	-0.10 L	-205.56 L	-1.93 K	0.04 I
90.3						
	21.66 B	9.72 L	-0.11 L	-205.57 L	-1.92 K	0.04 I
	30.10 B	12.52 L	-0.11 L	-282.38 L	-2.57 K	0.05 I
84.1						
	30.10 B	12.53 K	-0.12 L	-282.37 L	-2.57 K	0.05 I
	31.46 B	13.16 K	-0.12 L	-366.77 L	-3.21 K	0.07 I
78.0						
	31.46 B	13.16 L	-0.11 L	-366.74 L	-3.20 K	0.07 I
	39.78 B	15.87 L	-0.11 L	-460.57 L	-3.79 K	0.08 I
71.8						
	39.78 B	15.87 L	-0.11 L	-460.56 L	-3.78 K	0.08 I
	41.69 B	17.08 L	-0.11 L	-568.24 L	-4.37 K	0.10 I

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  65.6   ..........................................................................
          41.69 B     17.07 L      0.10 C   -568.25 L     -4.38 K      0.10 I

          42.95 B     17.52 L      0.10 C   -680.68 L     -5.04 K      0.11 I
  59.4   ..........................................................................
          42.95 B     17.53 L      0.11 K   -680.66 L     -5.05 K      0.11 I

          43.95 B     17.66 L      0.11 K   -794.12 L     -5.72 K     -0.12 L
  53.2   ..........................................................................
          43.95 B     17.67 I      0.11 K   -794.14 L     -5.72 K      0.12 I

          46.27 B     17.79 I      0.11 K   -904.68 L     -6.39 K     -0.12 L
  47.2   ..........................................................................
          46.27 B     17.80 L      0.12 K   -904.65 L     -6.38 K     -0.12 L

          47.64 B     17.93 L      0.12 K  -1013.97 L     -7.09 K     -0.13 L
  41.3   ..........................................................................
          47.64 B     17.92 L      0.11 K  -1013.95 L     -7.09 K     -0.13 L

          49.04 B     18.04 L      0.11 K  -1123.57 L     -7.74 K     -0.14 L
  35.4   ..........................................................................
          49.04 B     18.05 L      0.12 K  -1123.58 L     -7.74 K     -0.14 L

          50.49 B     18.17 L      0.12 K  -1233.53 L     -8.43 K     -0.15 L
  29.5   ..........................................................................
          50.49 B     18.18 L      0.12 K  -1233.54 L     -8.43 K     -0.15 L

          51.98 B     18.30 L      0.12 K  -1343.72 L     -9.14 K     -0.15 L
  23.6   ..........................................................................
          51.98 B     18.30 L      0.12 K  -1343.72 L     -9.14 K     -0.15 L

          53.50 B     18.41 L      0.12 K  -1454.10 L     -9.83 K     -0.15 L
  17.7   ..........................................................................
          53.50 B     18.41 L      0.12 K  -1454.10 L     -9.83 K     -0.15 L

          55.07 B     18.53 L      0.12 K  -1564.67 L    -10.53 K     -0.16 L
  11.8   ..........................................................................
          55.07 B     18.54 L      0.12 K  -1564.67 L    -10.53 K     -0.16 L

          56.70 B     18.66 L      0.12 K  -1675.38 L    -11.24 K     -0.16 L
   5.9   ..........................................................................
          56.70 B     18.66 L      0.12 K  -1675.38 L    -11.24 K     -0.16 L

          58.35 B     18.77 L      0.12 K  -1786.21 L    -11.95 K     -0.16 L
-------------------------------------------------------------------------------
 base
 reaction   58.35 B    -18.77 L     -0.12 K   1786.21 L     11.95 K      0.16 L
-------------------------------------------------------------------------------


 COMPLIANCE WITH 4.8.2 & 4.5.4
 =============================

   ELEV       AXIAL   BENDING SHEAR +       TOTAL SATISFIED  D/t(w/t)   MAX
                              TORSIONAL                                  ALLOWED
     ft

 124.00  ..........................................................................
            0.00C     0.00K     0.00E     0.00K     YES      15.69A       45.2

            0.00C     0.00E     0.00E     0.00E     YES      16.27A       45.2
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120.68 ..........................................................................
          0.00B     0.00F     0.00L     0.00F     YES      16.27A       45.2

          0.01B     0.01L     0.01L     0.02L     YES      16.85A       45.2
117.36 ..........................................................................
          0.01B     0.01A     0.01L     0.02A     YES      16.85A       45.2

          0.01B     0.03L     0.01L     0.04L     YES      17.44A       45.2
114.04 ..........................................................................
          0.01B     0.03L     0.01A     0.04L     YES      17.44A       45.2

          0.01B     0.05A     0.01A     0.05A     YES      18.02A       45.2
110.71 ..........................................................................
          0.01B     0.05A     0.01A     0.05A     YES      18.02A       45.2

          0.01B     0.06A     0.01A     0.07A     YES      18.60A       45.2
107.39 ..........................................................................
          0.01B     0.06A     0.01L     0.07A     YES      18.60A       45.2

          0.01B     0.08L     0.01L     0.09L     YES      19.18A       45.2
104.07 ..........................................................................
          0.01B     0.08A     0.01I     0.09A     YES      19.18A       45.2

          0.01B     0.11L     0.01I     0.12L     YES      19.76A       45.2
100.75 ..........................................................................
          0.01B     0.07L     0.01L     0.08L     YES      13.06A       45.2

          0.01B     0.09L     0.01L     0.09L     YES      13.55A       45.2
 96.50 ..........................................................................
          0.01B     0.09L     0.01L     0.10L     YES      13.32A       45.2

          0.01B     0.11L     0.01L     0.12L     YES      14.04A       45.2
 90.32 ..........................................................................
          0.01B     0.11L     0.01L     0.12L     YES      14.04A       45.2

          0.01B     0.14L     0.01L     0.15L     YES      14.76A       45.2
 84.14 ..........................................................................
          0.01B     0.14L     0.01K     0.15L     YES      14.76A       45.2

          0.01B     0.17L     0.01K     0.18L     YES      15.48A       45.2
 77.96 ..........................................................................
          0.01B     0.17L     0.01L     0.18L     YES      15.48A       45.2

          0.01B     0.20L     0.01L     0.21L     YES      16.20A       45.2
 71.79 ..........................................................................
          0.01B     0.20L     0.01L     0.21L     YES      16.20A       45.2

          0.01B     0.22L     0.01L     0.24L     YES      16.92A       45.2
 65.61 ..........................................................................
          0.01B     0.22L     0.01L     0.24L     YES      16.92A       45.2

          0.01B     0.25L     0.01L     0.26L     YES      17.64A       45.2
 59.43 ..........................................................................
          0.01B     0.25L     0.01L     0.26L     YES      17.64A       45.2

          0.01B     0.27L     0.01L     0.29L     YES      18.36A       45.2
 53.25 ..........................................................................
          0.01B     0.20L     0.01I     0.21L     YES      13.68A       45.2

          0.01B     0.21L     0.01I     0.22L     YES      14.20A       45.2
 47.25 ..........................................................................
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           0.01B     0.22L     0.01L     0.23L     YES      13.94A       45.2

           0.01B     0.23L     0.01L     0.24L     YES      14.46A       45.2
 41.34  ..........................................................................
           0.01B     0.23L     0.01L     0.24L     YES      14.46A       45.2

           0.01B     0.24L     0.01L     0.25L     YES      14.97A       45.2
 35.44  ..........................................................................
           0.01B     0.24L     0.01L     0.25L     YES      14.97A       45.2

           0.01B     0.24L     0.01L     0.25L     YES      15.49A       45.2
 29.53  ..........................................................................
           0.01B     0.24L     0.01L     0.25L     YES      15.49A       45.2

           0.01B     0.25L     0.01L     0.26L     YES      16.01A       45.2
 23.62  ..........................................................................
           0.01B     0.25L     0.01L     0.26L     YES      16.01A       45.2

           0.01B     0.26L     0.01L     0.27L     YES      16.52A       45.2
 17.72  ..........................................................................
           0.01B     0.26L     0.01L     0.27L     YES      16.52A       45.2

           0.01B     0.26L     0.01L     0.27L     YES      17.04A       45.2
 11.81  ..........................................................................
           0.01B     0.26L     0.01L     0.27L     YES      17.04A       45.2

           0.01B     0.27L     0.01L     0.28L     YES      17.55A       45.2
  5.91  ..........................................................................
           0.01B     0.27L     0.01L     0.28L     YES      17.55A       45.2

           0.01B     0.27L     0.01L     0.28L     YES      18.07A       45.2
  0.00  ..........................................................................

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)
====================================================

    DOWN    SHEAR.w.r.t.WIND.DIR   MOMENT.w.r.t.WIND.DIR     TORSION
               ALONG      ACROSS       ALONG      ACROSS
     kip         kip         kip      ft-kip      ft-kip      ft-kip

   58.35       18.77        0.12    -1786.21      -11.95       -0.16
      B           L           K           L           K           L


================================================================================
```

Seismic Load Effects
Equivalent Lateral Force Procedure
ANSI/TIA-222-H

Parameters	
Risk Category	II
R	1.500
S_S	0.294
S_1	0.143
Site Class	D (default)
T_L (sec)	12.000
F_a	1.565
F_v	2.314
S_{MS}	0.460
S_{M1}	0.331
S_{DS}	0.307
S_{D1}	0.221
T_s	0.720
I_e	1.000
Ω	1.500
C_S	0.056
E (ksi)	29,000
I_{top} (in^4)	1,346
I_{bot} (in^4)	29,906
I_{avg} (in^4)	15,626
g (in/s^2)	386.4
W_t (kips)	58.472
W_u (kips)	18.000
W_L (kips)	40.472
L_p (in)	1488
f_1 (Hertz)	0.383
T (sec)	2.612
k_e	2.0000
V_s (kips)	3.274
Seismic Design Category	D

Vertical Distribution of Seismic Forces

Description	h_i (ft.)	w_i (kips)	W_u (kips)	$w_i h_i^{ke}$	F_{sz} or E_h (kips)	E_V (kips)	1.2 D + 1.0 E_V (kips)	0.9 D - 1.0 E_V (kips)
Branches Load	126.50	0.2500	0.0000	4,000.5625	0.0317	0.0154	0.3154	0.2096
Step Bolts/Safety Climb Load	122.00	0.0056	0.0000	83.3504	0.0007	0.0003	0.0070	0.0047
Branches Load	121.50	0.2500	0.0000	3,690.5625	0.0293	0.0154	0.3154	0.2096
Antenna Load	119.00	6.0000	6.0000	84,966.0000	0.6735	0.3684	7.5684	5.0316
Line Deadload	119.00	1.4851	0.0000	21,030.5011	0.1667	0.0912	1.8733	1.2454
Branches Load	116.50	0.5000	0.0000	6,786.1250	0.0538	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	115.00	0.0140	0.0000	185.1500	0.0015	0.0009	0.0177	0.0117
Branches Load	111.50	0.5000	0.0000	6,216.1250	0.0493	0.0307	0.6307	0.4193
Structure - Section 1	110.25	2.0116	0.0000	24,451.1237	0.1938	0.1235	2.5374	1.6869
Branches Load	106.50	0.5000	0.0000	5,671.1250	0.0450	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	105.00	0.0140	0.0000	154.3500	0.0012	0.0009	0.0177	0.0117
Antenna Load	104.00	6.0000	6.0000	64,896.0000	0.5144	0.3684	7.5684	5.0316
Line Deadload	104.00	1.2979	0.0000	14,038.0864	0.1113	0.0797	1.6372	1.0884
Branches Load	101.50	0.5000	0.0000	5,151.1250	0.0408	0.0307	0.6307	0.4193
Branches Load	96.50	0.5000	0.0000	4,656.1250	0.0369	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	95.00	0.0140	0.0000	126.3500	0.0010	0.0009	0.0177	0.0117
Branches Load	91.50	0.5000	0.0000	4,186.1250	0.0332	0.0307	0.6307	0.4193
Antenna Load	89.00	6.0000	6.0000	47,526.0000	0.3767	0.3684	7.5684	5.0316
Line Deadload	89.00	1.1107	0.0000	8,797.8547	0.0697	0.0682	1.4010	0.9314
Branches Load	86.50	0.5000	0.0000	3,741.1250	0.0297	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	85.00	0.0140	0.0000	101.1500	0.0008	0.0009	0.0177	0.0117
Branches Load	81.50	0.5000	0.0000	3,321.1250	0.0263	0.0307	0.6307	0.4193
Branches Load	76.50	0.5000	0.0000	2,926.1250	0.0232	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	75.00	0.0140	0.0000	78.7500	0.0006	0.0009	0.0177	0.0117
Antenna Load	74.00	6.0000	0.0000	32,856.0000	0.2604	0.3684	7.5684	5.0316
Line Deadload	74.00	0.9235	0.0000	5,057.0860	0.0401	0.0567	1.1649	0.7745
Structure - Section 2	74.00	7.6770	0.0000	42,039.2520	0.3332	0.4714	9.6838	6.4379
Branches Load	71.50	0.5000	0.0000	2,556.1250	0.0203	0.0307	0.6307	0.4193
Branches Load	66.50	0.5000	0.0000	2,211.1250	0.0175	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	65.00	0.0140	0.0000	59.1500	0.0005	0.0009	0.0177	0.0117
Branches Load	63.50	0.5000	0.0000	2,016.1250	0.0160	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	55.00	0.0140	0.0000	42.3500	0.0003	0.0009	0.0177	0.0117
Step Bolts/Safety Climb Load	45.00	0.0140	0.0000	28.3500	0.0002	0.0009	0.0177	0.0117
Step Bolts/Safety Climb Load	35.00	0.0140	0.0000	17.1500	0.0001	0.0009	0.0177	0.0117
Structure - Section 3	26.62	13.3062	0.0000	9,429.0980	0.0747	0.8170	16.7844	11.1586
Step Bolts/Safety Climb Load	25.00	0.0140	0.0000	8.7500	0.0001	0.0009	0.0177	0.0117
Step Bolts/Safety Climb Load	15.00	0.0140	0.0000	3.1500	0.0000	0.0009	0.0177	0.0117

Seismic Load Effects
Equivalent Lateral Force Procedure
ANSI/TIA-222-H

Vertical Distribution of Seismic Forces

Description	h_i (ft.)	w_i (kips)	W_u (kips)	$w_i h_i^{ke}$	F_{sz} or E_h (kips)	E_V (kips)	1.2 D + 1.0 E_V (kips)	0.9 D - 1.0 E_V (kips)
	Σ	58.47	18.0000	413,104.63	3.27	3.59	73.76	49.03

Sabre Industries™
INNOVATION DELIVERED

SO#: 25-4001-JDS
Site Name: Lanton, TN
Date: 3/10/2025

Round Base Plate and Anchor Rods, per ANSI/TIA 222-H

Pole Data

Diameter:	53.490	in (flat to flat)
Thickness:	0.5	in
Yield (Fy):	65	ksi
# of Sides:	18	"0" IF Round
Strength (Fu):	80	ksi

Reactions

Moment, Mu:	6121.83	ft-kips
Axial, Pu:	70.22	kips
Shear, Vu:	64.1	kips

Anchor Rod Data

Quantity:	22		
Diameter:	2.25	in	
Rod Material:	A615		
Strength (Fu):	100	ksi	
Yield (Fy):	75	ksi	
BC Diam. (in):	60.5	BC Override:	

Anchor Rod Results

(per 4.9.9)

Maximum Put:	218.38	Kips
Φt*Rnt:	243.75	Kips
Vu:	2.91	Kips
Φv*Rnv:	149.10	Kips
Tension Interaction Ratio:	0.80	
Maximum Puc:	223.96	Kips
Φc*Rnc:	268.39	Kips
Vu:	2.91	Kips
Φc*Rnvc:	120.77	Kips
Compression Interaction Ratio:	0.84	
Maximum Interaction Ratio:	**83.5%**	**Pass**

Plate Data

Diameter (in):	66.25	Dia. Override:	
Thickness:	2.5	in	
Yield (Fy):	50	ksi	
Eff Width/Rod:	7.72	in	
Drain Hole:	2.625	in. diameter	
Drain Location:	24.5	in. center of pole to center of drain hole	
Center Hole:	41	in. diameter	

Base Plate Results

Base Plate (Mu/Z):	40.0	ksi
Allowable Φ*Fy:	45.0	ksi (per AISC)
Base Plate Interaction Ratio:	**88.8%**	**Pass**

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================================================================================

                     LPile for Windows, Version 2019-11.009

                 Analysis of Individual Piles and Drilled Shafts
                Subjected to Lateral Loading Using the p-y Method
                           © 1985-2019 by Ensoft, Inc.
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================================================================================

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--------------------------------------------------------------------------------
                             Files Used for Analysis
--------------------------------------------------------------------------------

Path to file locations:
\Program Files (x86)\Ensoft\Lpile2019\files\

Name of input data file:
25-4001-JDS.lp11d

Name of output report file:
25-4001-JDS.lp11o

Name of plot output file:
25-4001-JDS.lp11p

Name of runtime message file:
25-4001-JDS.lp11r



--------------------------------------------------------------------------------
                           Date and Time of Analysis
--------------------------------------------------------------------------------

               Date:  March 10, 2025             Time:  13:00:04



--------------------------------------------------------------------------------
                                  Problem Title
--------------------------------------------------------------------------------

Site         : Lanton, TN
```

Tower : 125' Monopine

Prepared for : VOGUE TOWERS

Job Number : 25-4001-JDS

Engineer : ARH

Program Options and Settings

Computational Options:
- Conventional Analysis

Engineering Units Used for Data Input and Computations:
- US Customary System Units (pounds, feet, inches)

Analysis Control Options:

- Maximum number of iterations allowed	=	999
- Deflection tolerance for convergence	=	1.0000E-05 in
- Maximum allowable deflection	=	100.0000 in
- Number of pile increments	=	100

Loading Type and Number of Cycles of Loading:
- Static loading specified

- Use of p-y modification factors for p-y curves not selected
- Analysis uses layering correction (Method of Georgiadis)
- No distributed lateral loads are entered
- Loading by lateral soil movements acting on pile not selected
- Input of shear resistance at the pile tip not selected
- Input of moment resistance at the pile tip not selected
- Input of side resistance moment along pile not selected
- Computation of pile-head foundation stiffness matrix not selected
- Push-over analysis of pile not selected
- Buckling analysis of pile not selected

Output Options:
- Output files use decimal points to denote decimal symbols.
- Report only summary tables of pile-head deflection, maximum bending moment, and maximum shear force in output report file.
- No p-y curves to be computed and reported for user-specified depths
- Print using wide report formats

Pile Structural Properties and Geometry

Number of pile sections defined	=	1
Total length of pile	=	38.500 ft
Depth of ground surface below top of pile	=	0.5000 ft

Pile diameters used for p-y curve computations are defined using 2 points.

p-y curves are computed using pile diameter values interpolated with depth over the length of the pile. A summary of values of pile diameter vs. depth follows.

Point No.	Depth Below Pile Head feet	Pile Diameter inches
1	0.000	84.0000
2	38.500	84.0000

Input Structural Properties for Pile Sections:

Pile Section No. 1:

Section 1 is a round drilled shaft, bored pile, or CIDH pile
Length of section = 38.500000 ft
Shaft Diameter = 84.000000 in
Shear capacity of section = 0.0000 lbs

Ground Slope and Pile Batter Angles

Ground Slope Angle = 0.000 degrees
= 0.000 radians

Pile Batter Angle = 0.000 degrees
= 0.000 radians

Soil and Rock Layering Information

The soil profile is modelled using 1 layers

Layer 1 is stiff clay without free water

Distance from top of pile to top of layer = 0.500000 ft
Distance from top of pile to bottom of layer = 60.500000 ft
Effective unit weight at top of layer = 110.000000 pcf
Effective unit weight at bottom of layer = 110.000000 pcf
Undrained cohesion at top of layer = 1000.000000 psf
Undrained cohesion at bottom of layer = 1000.000000 psf
Epsilon-50 at top of layer = 0.010000
Epsilon-50 at bottom of layer = 0.010000

(Depth of the lowest soil layer extends 22.000 ft below the pile tip)

Summary of Input Soil Properties

Layer Num.	Soil Type Name (p-y Curve Type)	Layer Depth ft	Effective Unit Wt. pcf	Cohesion psf	E50 or krm
1	Stiff Clay w/o Free Water	0.5000 60.5000	110.0000 110.0000	1000.0000 1000.0000	0.01000 0.01000

Static Loading Type

Static loading criteria were used when computing p-y curves for all analyses.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 2

Load Run No.	Load Analysis Type	Condition 1	Condition 2	Axial Thrust Force, lbs	Compute Top y vs. Pile Length
1	1	V = 85896. lbs	M = 98441487. in-lbs	94097.	No
Yes					
2	1	V = 18864. lbs	M = 21542231. in-lbs	58643.	No
Yes					

V = shear force applied normal to pile axis
M = bending moment applied to pile head
y = lateral deflection normal to pile axis
S = pile slope relative to original pile batter angle
R = rotational stiffness applied to pile head
Values of top y vs. pile lengths can be computed only for load types with
specified shear loading (Load Types 1, 2, and 3).
Thrust force is assumed to be acting axially for all pile batter angles.

Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness

---

Axial thrust force values were determined from pile-head loading conditions

Number of Pile Sections Analyzed = 1

Pile Section No. 1:

Dimensions and Properties of Drilled Shaft (Bored Pile):

Length of Section = 38.500000 ft

```
Shaft Diameter                                          =    84.000000 in
Concrete Cover Thickness (to edge of long. rebar)       =     3.625000 in
Number of Reinforcing Bars                              =           38 bars
Yield Stress of Reinforcing Bars                        =      60000. psi
Modulus of Elasticity of Reinforcing Bars               =    29000000. psi
Gross Area of Shaft                                     =       5542. sq. in.
Total Area of Reinforcing Steel                         =    48.137211 sq. in.
Area Ratio of Steel Reinforcement                       =         0.87 percent
Edge-to-Edge Bar Spacing                                =     4.963089 in
Maximum Concrete Aggregate Size                         =     0.750000 in
Ratio of Bar Spacing to Aggregate Size                  =         6.62
Offset of Center of Rebar Cage from Center of Pile      =       0.0000 in

Axial Structural Capacities:
----------------------------

Nom. Axial Structural Capacity = 0.85 Fc Ac + Fy As     =    23901.376 kips
Tensile Load for Cracking of Concrete                   =    -2579.712 kips
Nominal Axial Tensile Capacity                          =    -2888.233 kips


Reinforcing Bar Dimensions and Positions Used in Computations:
```

Bar Number	Bar Diam. inches	Bar Area sq. in.	X inches	Y inches
1	1.270000	1.266769	37.740000	0.00000
2	1.270000	1.266769	37.225276	6.211800
3	1.270000	1.266769	35.695143	12.254158
4	1.270000	1.266769	33.191339	17.962255
5	1.270000	1.266769	29.782163	23.180388
6	1.270000	1.266769	25.560607	27.766220
7	1.270000	1.266769	20.641823	31.594663
8	1.270000	1.266769	15.159985	34.561285
9	1.270000	1.266769	9.264622	36.585166
10	1.270000	1.266769	3.116544	37.611099
11	1.270000	1.266769	-3.116544	37.611099
12	1.270000	1.266769	-9.264622	36.585166
13	1.270000	1.266769	-15.159985	34.561285
14	1.270000	1.266769	-20.641823	31.594663
15	1.270000	1.266769	-25.560607	27.766220
16	1.270000	1.266769	-29.782163	23.180388
17	1.270000	1.266769	-33.191339	17.962255
18	1.270000	1.266769	-35.695143	12.254158
19	1.270000	1.266769	-37.225276	6.211800
20	1.270000	1.266769	-37.740000	0.00000
21	1.270000	1.266769	-37.225276	-6.211800
22	1.270000	1.266769	-35.695143	-12.254158
23	1.270000	1.266769	-33.191339	-17.962255
24	1.270000	1.266769	-29.782163	-23.180388
25	1.270000	1.266769	-25.560607	-27.766220
26	1.270000	1.266769	-20.641823	-31.594663
27	1.270000	1.266769	-15.159985	-34.561285
28	1.270000	1.266769	-9.264622	-36.585166
29	1.270000	1.266769	-3.116544	-37.611099
30	1.270000	1.266769	3.116544	-37.611099
31	1.270000	1.266769	9.264622	-36.585166
32	1.270000	1.266769	15.159985	-34.561285
33	1.270000	1.266769	20.641823	-31.594663
34	1.270000	1.266769	25.560607	-27.766220
35	1.270000	1.266769	29.782163	-23.180388

36	1.270000	1.266769	33.191339	-17.962255
37	1.270000	1.266769	35.695143	-12.254158
38	1.270000	1.266769	37.225276	-6.211800

NOTE: The positions of the above rebars were computed by LPile

Minimum spacing between any two bars not equal to zero = 4.963 inches
between bars 32 and 33.

Ratio of bar spacing to maximum aggregate size = 6.62

Concrete Properties:

Compressive Strength of Concrete	=	4500. psi
Modulus of Elasticity of Concrete	=	3823676. psi
Modulus of Rupture of Concrete	=	-503.115295 psi
Compression Strain at Peak Stress	=	0.002001
Tensile Strain at Fracture of Concrete	=	-0.0001152
Maximum Coarse Aggregate Size	=	0.750000 in

Number of Axial Thrust Force Values Determined from Pile-head Loadings = 2

Number	Axial Thrust Force kips
1	58.643
2	94.097

Summary of Results for Nominal Moment Capacity for Section 1

Moment values interpolated at maximum compressive strain = 0.003
or maximum developed moment if pile fails at smaller strains.

Load No.	Axial Thrust kips	Nominal Mom. Cap. in-kip	Max. Comp. Strain
1	58.643	102713.680	0.00300000
2	94.097	103791.767	0.00300000

Note that the values of moment capacity in the table above are not
factored by a strength reduction factor (phi-factor).

In ACI 318, the value of the strength reduction factor depends on whether
the transverse reinforcing steel bars are tied hoops (0.65) or spirals (0.75).

The above values should be multiplied by the appropriate strength reduction
factor to compute ultimate moment capacity according to ACI 318,
or the value required by the design standard being followed.

The following table presents factored moment capacities and corresponding
bending stiffnesses computed for common resistance factor values used for
reinforced concrete sections.

Axial Resist. Nominal Nominal Ult. (Fac) Ult. (Fac) Bend. Stiff.

Load No.	Factor	Ax. Thrust kips	Moment Cap in-kips	Ax. Thrust kips	Moment Cap in-kips	at Ult Mom kip-in^2
1	0.65	58.643216	102714.	38.118090	66764.	2.0885E+09
2	0.65	94.097152	103792.	61.163149	67465.	2.1128E+09
1	0.75	58.643216	102714.	43.982412	77035.	2.0129E+09
2	0.75	94.097152	103792.	70.572864	77844.	2.0370E+09
1	0.90	58.643216	102714.	52.778894	92442.	1.3401E+09
2	0.90	94.097152	103792.	84.687437	93413.	1.3583E+09

Summary of Pile-head Responses for Conventional Analyses

Definitions of Pile-head Loading Conditions:

Load Type 1: Load 1 = Shear, V, lbs, and Load 2 = Moment, M, in-lbs
Load Type 2: Load 1 = Shear, V, lbs, and Load 2 = Slope, S, radians
Load Type 3: Load 1 = Shear, V, lbs, and Load 2 = Rot. Stiffness, R, in-lbs/rad.
Load Type 4: Load 1 = Top Deflection, y, inches, and Load 2 = Moment, M, in-lbs
Load Type 5: Load 1 = Top Deflection, y, inches, and Load 2 = Slope, S, radians

Load Case No.	Load Type 1	Pile-head Load 1	Load Type 2	Pile-head Load 2	Axial Loading lbs	Pile-head Deflection inches	Pile-head Rotation radians	Max Shear in Pile lbs	Max Moment in Pile in-lbs
1	V, lb	85896.	M, in-lb	9.84E+07	94097.	19.6421	-0.08174	-482018.	1.02E+08
2	V, lb	18864.	M, in-lb	2.15E+07	58643.	0.08257	-5.44E-04	-97887.	2.21E+07

Maximum pile-head deflection = 19.6420646061 inches
Maximum pile-head rotation = -0.0817445446 radians = -4.683617 deg.

The analysis ended normally.

IBC 1807.3.2.1

Moment (ft·k)	6,152.59	
Shear (k)	64.42	
Caisson diameter (ft)	7	
Caisson height above ground (ft)	0.5	
Caisson height below ground (ft)	31	
Lateral soil pressure (lb/ft^2)	**300.00**	
Ground to application of force, h (ft)	96.00	
Applied lateral force, P (lb)	64,422	
Lateral soil bearing pressure, S_1 (lb/ft)	3,100.00	
Diameter, b (ft)	7	
A	6.95	$= (2.34P)/(S_1 b)$
Minimum depth of embedment, d (ft)	30.66	$= 0.5A[\ 1 + (\ 1 + (\ 4.36h\ /\ A\ )\ )^{1/2}\ ]$

MAT FOUNDATION DESIGN BY SABRE INDUSTRIES

125' Monopine VOGUE TOWERS Lanton, TN (25-4001-JDS) 03/10/25 ARH

Overall Loads:			
Factored Moment (ft-kips)	6152.59		
Factored Axial (kips)	70.57		
Factored Shear (kips)	64.42		
Bearing Design Strength (ksf)	3.75	Max. Net Bearing Press. (ksf)	3.52
Water Table Below Grade (ft)	999		
Width of Mat (ft)	28.5	Allowable Bearing Pressure (ksf)	2.50
Thickness of Mat (ft)	2	Safety Factor	2.00
Depth to Bottom of Slab (ft)	6	Ultimate Bearing Pressure (ksf)	5.00
Quantity of Bolts in Bolt Circle	22	Bearing Φs	0.75
Bolt Circle Diameter (in)	60.5		
Effective Anchor Bolt Embedment (in)	66.5		
Diameter of Pier (ft)	7	Minimum Pier Diameter (ft)	7.00
Ht. of Pier Above Ground (ft)	0.5	Equivalent Square b (ft)	6.20
Ht. of Pier Below Ground (ft)	4	Square Pier? (Y/N)	N
Quantity of Bars in Mat	41		
Bar Diameter in Mat (in)	1.27		
Area of Bars in Mat (in^2)	51.94		
Spacing of Bars in Mat (in)	8.37	Recommended Spacing (in)	5 to 12
Quantity of Bars Pier	42		
Bar Diameter in Pier (in)	1.128		
Tie Bar Diameter in Pier (in)	0.625		
Spacing of Ties (in)	4		
Area of Bars in Pier (in^2)	41.97	Minimum Pier A_s (in^2)	27.71
Spacing of Bars in Pier (in)	5.66	Recommended Spacing (in)	5 to 12
f'c (ksi)	4.5		
fy (ksi)	60		
Unit Wt. of Soil (kcf)	0.11		
Unit Wt. of Concrete (kcf)	0.15		
Volume of Concrete (yd^3)	66.58		
Two-Way Shear Action:			
Average d (in)	19.73		
ϕv_c (ksi)	0.201	v_u (ksi)	0.141
$\phi v_c = \phi(2 + 4/\beta_c)f'_c{}^{1/2}$	0.302		
$\phi v_c = \phi(\alpha_s d/b_o+2)f'_c{}^{1/2}$	0.206	J (in^3)	1.111E+07
$\phi v_c = \phi 4f'_c{}^{1/2}$	0.201	c + d (in)	94.17
Shear perimeter, b_o (in)	376.69	$0.40M_{sc}$ (ft-kips)	2577.0
β_c	1		
One-Way Shear:			
ϕV_c (kips)	679.0	V_u (kips)	418.8
Stability:			
Overturning Design Strength (ft-k)	8578.9	Total Applied M (ft-k)	6571.3

Pier-Slab Transfer by Flexure:

b_{slab} (ft)	13.00		
ϕM_n (ft-kips)	3952.8	$0.60M_{sc}$ (ft-kips)	3865.5

Pier Design:

ϕV_n (kips)	1035.5	V_u (kips)	64.4
$\phi V_c=\phi 2(1+N_u/(2000A_g))f'_c{}^{1/2}b_wd$	571.6		
V_s (kips)	618.5	*** V_s max = 4 $f'_c{}^{1/2}b_wd$ (kips)	1514.7
Maximum Spacing (in)	8.71	(Only if Shear Ties are Required)	
Actual Hook Development (in)	18.46	Req'd Hook Development l_{dh} (in) - Tension	14.12
		Req'd Hook Development l_{dc} (in) - Compression	15.23

Flexure in Slab:

ϕM_n (ft-kips)	4332.9	M_u (ft-kips)	3295.8
a (in)	2.38		
Steel Ratio	0.00770		
β_1	0.825		
Maximum Steel Ratio (ρ_t)	0.0197		
Minimum Steel Ratio	0.0018		
Rebar Development in Pad (in)	126.00	Required Development in Pad (in)	34.08

Condition	1 is OK, 0 Fails
Maximum Soil Bearing Pressure	1
Pier Area of Steel	1
Pier Shear	1
Interaction Diagram	1
Two-Way Shear Action	1
One-Way Shear Action	1
Overturning	1
Flexure	1
Steel Ratio	1
Length of Development in Pad	1
Hook Development	1
Anchor Bolt Pullout	1
Anchor Bolt Punching Shear	1

BK/PG:R3041/488-494
25000439

7 PGS : LEASE	
BECKY BUCHANAN 343406 - 25000439	
01/13/2025 - 08:58 AM	
VALUE	
MORTGAGE TAX	0.00
TRANSFER TAX	0.00
RECORDING FEE	35.00
DP FEE	2.00
REGISTER'S FEE	0.00
TOTAL AMOUNT	37.00

STATE of TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

(Above 3" Space for Recorder's Use Only)

Prepared by and Return to:

Vogue Towers II, LLC
430 Chestnut Street, Suite 101-B
Chattanooga, TN 37402
ATTN: Pat Troxell-Tant

Tenant Site Reference: TN-50001
Parcel Reference: 060051007010002023

MEMORANDUM OF OPTION TO LEASE

This Memorandum of Option to Lease (the "**Memorandum**") evidences an Option and Lease Agreement (the "**Lease**") between **Christ Our Savior Evangelical Lutheran Church a/k/a Christ Our Savior Lutheran Church** ("**Landlord**"), whose address is 2494 Nashville Highway, Columbia, TN 38401 (the "**Landlord**"), and **Vogue Towers II, LLC**, a Delaware limited liability company, whose mailing address is 1000 Corporate Centre Drive, Suite 130, Franklin, TN 37067 (the "**Tenant**"), dated the 20 day of July, 2024 (the "**Effective Date**"), for a portion (the "**Premises**") of the real property (the "**Property**") described in Exhibit A attached hereto.

Pursuant to the Lease, Landlord has granted Tenant an exclusive option to lease the Premises (the "**Option**"). The Option commenced as of the Effective Date and shall continue in effect for a period of one (1) year from the Effective Date and may be renewed by Tenant for an additional one (1) year period.

Landlord ratifies, restates, and confirms the Lease and, upon exercise of the Option, shall lease to Tenant the Premises, subject to the terms and conditions of the Lease. The Lease provides for the lease by Landlord to Tenant of the Premises for an initial term of five (5) years with seven (7) renewal option(s) of an additional five (5) years each, and further provides:

1. The Lease may be assigned by Landlord only in its entirety and only to a purchaser of the fee interest of the Property;

2. Under certain circumstances, Tenant has a right of first refusal to acquire the Premises from Landlord;

3. This Memorandum is not intended to amend or modify and shall not be deemed or construed as amending or modifying, any of the terms, conditions, or provisions of the Lease. In the event of a conflict between the provisions of this Memorandum and the provisions of the Lease, the provisions

of the Lease shall control. The Lease shall be binding upon and inure to the benefit of Landlord and Tenant and shall inure to the benefit of their respective heirs, successors, and assigns, subject to the provisions of the Lease.

[Signatures to follow]

IN WITNESS WHEREOF, the parties hereto have executed this MEMORANDUM OF OPTION TO LEASE as of the date last signed by a party hereto.

LANDLORD:

Christ Our Savior Evangelical Lutheran Church
a/k/a Christ Our Savior Lutheran Church

By: _____

Name: John P. Fowler

STATE OF TENNESSEE
COUNTY OF _____

I, John K. Dale, a Notary Public of Maury County, Tennessee, certify that John P. Fowler personally came before me this day and acknowledged that he/she is the President of **Christ Our Savior Evangelical Lutheran Church a/k/a Christ Our Savior Lutheran Church**, a Tennessee Nonprofit Corporation, and that he/she, as said President, being authorized to do so, executed the foregoing instrument on behalf of said Nonprofit Corporation.

WITNESS my hand and official seal this 21st day of July, 2024.

_____
Notary Public

My Commission Expires:
10/19/2027

JOHN K. DALE
STATE OF TENNESSEE NOTARY PUBLIC
MAURY COUNTY

[Tenant's Signature Page to Memorandum of Option to Lease]

TENANT:

VOGUE TOWERS II, LLC

By: Pat Troxell-Tant
Name: Pat Troxell-Tant
Title: President of Development

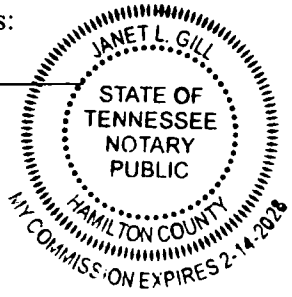
STATE OF TENNESSEE
COUNTY OF HAMILTON

I, Janet L. Gill, a Notary Public of Hamilton County, Tennessee, certify that **PAT TROXELL-TANT**, personally came before me this day and acknowledged that she is the **PRESIDENT OF DEVELOPMENT** of **VOGUE TOWERS II, LLC**, a Delaware limited liability company, and that she, as such **PRESIDENT OF DEVELOPMENT**, being authorized to do so, executed the foregoing instrument on behalf of said limited liability company.

Witness my hand and official seal this 24 day of July, 2024.

Janet L. Gill
Notary Public

My Commission Expires:
2-14-28



By: _____
Name: Scott Riggs
Title: Chief Operating Officer

STATE OF TENNESSEE
COUNTY OF WILLIAMSON

I, _____, a Notary Public of Williamson County, Tennessee, certify that **SCOTT RIGGS** personally came before me this day and acknowledged that he is the **CHIEF OPERATING OFFICER** of **VOGUE TOWERS II, LLC**, a Delaware limited liability company, and that he, as said **CHIEF OPERATING OFFICER,** being authorized to do so, executed the foregoing instrument on behalf of said limited liability company.

Witness my hand and official seal this 26th day of July, 2024.

_____
Notary Public

My Commission Expires:
9/28/26

RUTH DUGGAR
STATE OF TENNESSEE NOTARY PUBLIC
WILLIAMSON COUNTY
MY COMMISSION EXPIRES 9-28-2026

EXHIBIT A
(TO MEMORANDUM OF OPTION TO LEASE)

The Property

Being a Tract of land located in Maury County, Tennessee, and being bounded on the West by U.S. Highway 31, North and East by Edward P. Foster as of record in Deed Book 643, page 570 and South by William Hunt, Trustee as of record in Deed Book 851, page 76 and 851, page 84, from whose property this tract is taken and being more particularly described as follows:

Beginning at an iron rod in the East margin of U.S. Highway 31, the southwest corner of the herein described tract; thence with margin of said road along a curve to the left having a radius of 10817.75 feet for a distance of 200.00 feet (chord North 27degrees 51 minutes 36 seconds East 200.00 feet) to an iron rod; thence leaving said highway with Edward P. Foster as of record in Deed Book 643, Page 570 South 82 degrees 53 minutes 57 seconds East 703.08 feet to an iron rod; thence with same South 7 degrees 12 minutes 24 seconds West 218.23 feet to an iron rod; thence with same South 34 degrees 37 minutes 37 seconds East 243.00 feet to an iron rod; thence with William Hunt, Trustee as of record in Deed Book 851, page 76 and 851, page 84 from whose property this tract is taken North 70 degrees 05 minutes 41 seconds West 959.16 feet to the beginning containing 5.00 acres more or less by survey of W.A. Richardson, Jr., (RLS #689), 403 Oakwood Drive, Columbia, TN 38401, January 18, 1993.

Less and except Deed recorded in Book R2072, Page 1244, in the Register's Office for Maury County, Tennessee.

Being the same property conveyed to Christ Our Savior Evangelical Luthern Church by Warranty Deed from William L. Hunt, Trustee for the Edgar J. Doyle Trust and the Lester Hill Doyle Trust of record in Book 1174, page 310, Register's Office for Maury County, Tennessee, dated March 01, 1993 and recorded on March 02, 1993, Correction Deed recorded in Book 1195, Page 444, said Register's Office.

CERTIFICATE OF AUTHENTICITY

I, Kirby W. Yost, do hereby make oath that I am a licensed attorney and/or the custodian of the original version of the electronic document tendered for registration herewith and that this electronic document is a true and exact copy of the original document executed and authenticated according to law on July 26, 2024 *(date of document)*.

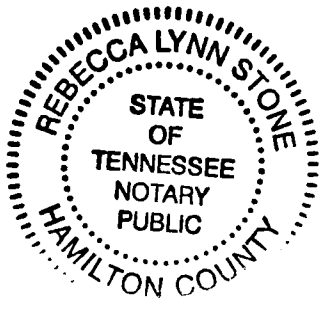
Kirby W. Yost, Affiant Signature
Dated: January 8, 2025

STATE OF TENNESSEE
COUNTY OF HAMILTON

Sworn and subscribed before me this 8th day of January, 2025

Rebecca Lynn Stone, Notary Signature

My Commission Expires: 01/17/2027



VOGUE TOWERS

(HEREINAFTER REFERRED TO AS "VOGUE TOWERS II, LLC")

TN-5001
LANTON
2507 GROVE PARK WAY
COLUMBIA, TN 38401

verizon

CELLCO PARTNERSHIP D/B/A
VERIZON WIRELESS
(HEREINAFTER REFERRED TO AS "LESSEE")

GEN7 ENGINEERING

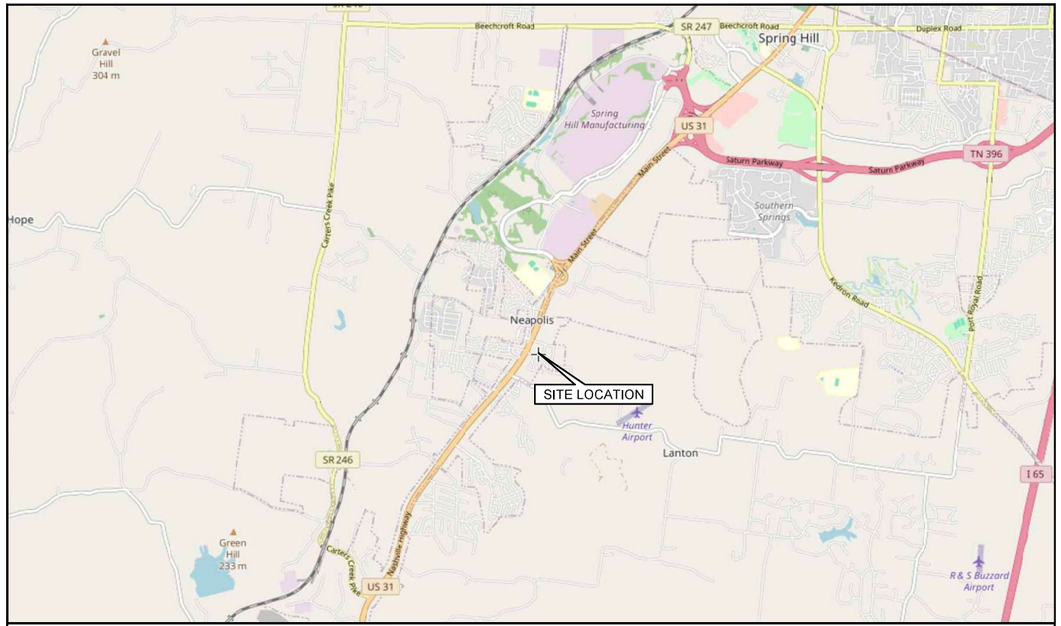
THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE, ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CLIENT IS STRICTLY PROHIBITED.

DRAWN BY	BNS
CHECKED BY	BNS

PROJECT SUMMARY

SITE NAME:	LANTON
SITE NUMBER:	TN-5001
SITE ADDRESS: (E911 ADDRESS VERIFIED)	2507 GROVE PARK WAY COLUMBIA, TN 38401
COUNTY:	MAURY COUNTY
JURISDICTION:	CITY OF COLUMBIA, TN
ZONING:	N/A
PROPERTY OWNER:	CHRIST OUR SAVIOR LUTHERAN CHURCH 2494 NASHVILLE HWY. COLUMBIA, TN 38401
CONTACT:	TBD
PHONE:	TBD
STRUCTURE OWNER:	VOGUE TOWERS II, LLC 430 CHESTNUT ST., SUITE 101-B CHATTANOOGA, TN 37402
CONTACT:	JANET GILL
PHONE:	(423) 260-4982
LESSEE:	CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS 8921 RESEARCH DR. CHARLOTTE, NC 28262
LESSEE SITE NAME:	LANTON
LESSEE SITE #:	17330373
SITE COORDINATES:	
LATITUDE:	35° 42' 20.11" N (NAD83)
LONGITUDE:	86° 58' 27.65" W (NAD83)
ELEVATION:	741.5' AMSL (NAVD88)
OCCUPANCY:	UNMANNED
SITE TYPE:	RAWLAND
POWER COMPANY:	COLUMBIA POWER & WATER SYSTEMS
CONTACT:	TBD
PHONE:	(931) 388-4833
FIBER:	TBD
CONTACT:	TBD
PHONE:	TBD
POLICE DEPARTMENT:	COLUMBIA POLICE DEPARTMENT
PHONE:	(931) 388-2727
FIRE DEPARTMENT:	COLUMBIA FIRE & RESCUE
PHONE:	(931) 560-1700

VICINITY MAP



NOT TO SCALE

SHEET INDEX

Z-001	TITLE SHEET
Z-002	GENERAL NOTES
LS-001 THRU LS-006	LAND SURVEY
Z-101	OVERALL SITE LAYOUT PLAN
Z-102	OVERALL AERIAL SITE LAYOUT PLAN
Z-103	SITE LAYOUT PLAN
Z-104	TOWER ELEVATION & EQUIPMENT LAYOUT PLAN
Z-105 THRU Z-106	LANDSCAPING DETAILS
Z-107	TREE PRESERVATION PLAN
Z-200	EROSION NOTES
Z-201	SITE GRADING PLAN
Z-202	DRIVEWAY PROFILE
Z-203	SITE GRADING DETAILS
Z-301 THRU Z-303	SITE DETAILS

REVISIONS			
2	06/18/25	BNS	FINAL ISSUE
1	04/15/25	BNS	FINAL ISSUE
0	03/07/25	BNS	FINAL ISSUE
B	03/06/25	BNS	PRELIMINARY ISSUE
A	03/05/25	BNS	PRELIMINARY ISSUE
#	DATE	BY	DESCRIPTION

STEPHEN M. CARPENTER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 105147
STATE OF TENNESSEE
06-18-2025

SCOPE OF WORK

NEW BUILD - RAWLAND

INSTALLATION OF A 105'-0" MONOPINE W/ GROUNDING, UTILITIES, FENCED COMPOUND, AND OTHER SUPPORT STRUCTURES AND COMPONENTS.

INSTALLATION OF ANTENNAS AND ANCILLARY EQUIPMENT FOR WIRELESS COMMUNICATIONS.

APPLICABLE CODES

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

CODE TYPE	CODE
BUILDING	2018 IBC
RESIDENTIAL	2018 IRC
PLUMBING	2018 IPC
MECHANICAL	2018 IMC
FIRE	2018 IFC
ENERGY	2009 IEC
FUEL GAS	2018 IFGC
PROPERTY MAINTENANCE	2018 IPMC
ELECTRICAL	2017 NFPA 70 / NEC
EXISTING BUILDING	2012 IEBC
ACCESSIBLE BUILDINGS	2009 ICC/ANSI A117.1

STRUCTURAL REVIEW

CONTRACTOR SHALL ATTAIN AND VERIFY STRUCTURAL EVALUATION REPORT OF EXISTING TOWER FOR EXACT PLACEMENT OF ANTENNAS AND COAX CABLES. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE STRUCTURAL EVALUATION REPORT AND NOTIFY VERIZON'S CONSTRUCTION MANAGER IN THE CASE OF ANY DISCREPANCIES. ANY STRUCTURAL MODIFICATION, IF REQUIRED, SHALL BE DONE PRIOR TO THE INSTALLATION OF ANTENNAS.

CALL TENNESSEE ONE CALL
(800) 351-1111
CALL 3 WORKING DAYS
BEFORE YOU DIG!
811

verizon

SITE NAME	LANTON
SITE NUMBER	17330373

VOGUE TOWERS

SITE NAME	LANTON
SITE NUMBER	TN-5001
SITE ADDRESS	2507 GROVE PARK WAY COLUMBIA, TN 38401
SITE TYPE	RAWLAND
SHEET TITLE	TITLE SHEET

SHEET NUMBER	REVISION
Z-001	2

GENERAL NOTES

1. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL APPLICABLE PERMITTING AUTHORITIES.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND THE CODES, REGULATIONS, AND STANDARDS OF ALL APPLICABLE GOVERNING AUTHORITIES.
3. THE GENERAL CONTRACTOR SHALL VERIFY THAT ALL EXISTING TOPOGRAPHY AND HORIZONTAL GEOMETRY IS AS INDICATED ON THESE DRAWINGS. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE OR REPAIR TO THESE FACILITIES CAUSED BY THE CONTRACTOR'S WORK FORCE. IMMEDIATELY NOTIFY THE OWNER REPRESENTATIVE OF ANY DISCREPANCIES OR INTERFERENCE WHICH AFFECT THE WORK OF THIS CONTRACT.
4. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE AT ALL TIMES. DO NOT ALLOW WATER TO STAND OR POND. ANY DAMAGE TO STRUCTURES OR WORK ON THE SITE CAUSED BY INADEQUATE MAINTENANCE OF DRAINAGE PROVISIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND ANY COST ASSOCIATED WITH REPAIRS FOR SUCH DAMAGE WILL BE AT THE CONTRACTOR'S EXPENSE.
5. ALL WASTE MATERIAL SHALL BE PROPERLY DISPOSED OF OFF-SITE OR AS DIRECTED BY THE OWNER REPRESENTATIVE AND IN ACCORDANCE WITH JURISDICTIONAL AUTHORITIES.
6. ANY PROPERTY DAMAGE CAUSED BY THE CONTRACTOR OR HIS OPERATIONS SHALL BE CORRECTED AND/OR RESTORED TO THE SATISFACTION OF THE PROPERTY LESSOR(S) AND THE OWNER'S CONSTRUCTION MANAGER AT NO ADDITIONAL COST TO THE OWNER.
7. CONTRACTOR SHALL MAINTAIN 20' HORIZONTAL CLEARANCE FROM CENTERLINE OF EXISTING POWER LINES OR AS REQUESTED BY THE POWER COMPANY.
8. NOTIFY THE OWNER REPRESENTATIVE TWENTY-FOUR HOURS PRIOR TO CONSTRUCTION TO ALLOW THE OWNER REPRESENTATIVE TO REVIEW THE SITE PRIOR TO EXCAVATION.
9. THE CONTRACTOR SHALL INCLUDE ALL WORK REQUIRED TO CO-LOCATE ON THE EXISTING TOWER INCLUDING ALL NECESSARY SITE IMPROVEMENTS, FOUNDATIONS, ELECTRICAL IMPROVEMENTS, SNAP-INS, H-FRAME, AND OTHER ACCESSORIES FOR COMPLETE INSTALLATION.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF THE FOLLOWING EQUIPMENT SUPPLIED BY THE OWNER: ANTENNAS, COAX CABLES, ICE BRIDGE, WAVEGUIDE LADDER, METER, AND EQUIPMENT CABINETS/SHELTER. THE EQUIPMENT CABINETS/SHELTER SHALL BE TRANSPORTED TO THE SITE BY THE CONTRACTOR.
11. CONTRACTOR TO NOTIFY THE OWNER REPRESENTATIVE FORTY-EIGHT HOURS PRIOR TO CONCRETE POURS.
12. CONTRACTOR TO PROVIDE RED LINE CONSTRUCTION DRAWINGS TO OWNER AND LESSEE AT COMPLETION OF JOB.

ABBREVIATIONS

AGL	ABOVE GROUND LEVEL	AMSL	ABOVE MEAN SEA LEVEL
CL	CENTERLINE	CONC	CONCRETE
DIA	DIAMETER	DIM	DIMENSION
(E)	EXISTING	EA	EACH
ELEV	ELEVATION	EQ	EQUAL
FTG	FOOTING	FDN	FOUNDATION
LLH	LONG LEG HORIZONTAL	HSS	HOLLOW STRUCTURE SHAPE
MAX	MAXIMUM	LLV	LONG LEG VERTICAL
NTS	NOT TO SCALE	MIN	MINIMUM
PL	PLATE	OC	ON CENTER
TOS	TOP OF STEEL	RGS	RIGID GALVANIZED STEEL
UNO	UNLESS NOTED OTHERWISE	TYP.	TYPICAL
W/	WITH	TBR	TO BE REMOVED

LEGEND

SYMBOLS OF EXISTING FEATURES	DESCRIPTION	SYMBOLS OF PROPOSED FEATURES
X 100.5	SPOT ELEVATION	712.9
95	CONTOUR LINE	98
SD	STORM DRAIN	SD
	CATCH BASIN	
ROW	RIGHT OF WAY	
	IRON PIN	
	BENCHMARK	
	CONCRETE MONUMENT	
℄	CENTERLINE	
OHT	OVERHEAD TELPHONE	OHT
UGT	UNDERGROUND TELEPHONE	UGT
OHP	OVERHEAD POWER	OHP
UGP	UNDERGROUND POWER	UGP
UGF	UNDERGROUND FIBER	UGF
X X X	FENCE LINE	X X X
SF SF	SILT FENCE	SF SF
LOD	LIMITS OF DISURBANCE	LOD
	UTILITY POLE	
	LIGHT POLE	
W	WATER LINE	
	WATER VALVE	
UGG	NATURAL GAS LINE	
G	GAS VALVE	
ST	SANITARY SEWER	
M	MANHOLE	

NOTE: THIS IS A GENERAL LEGEND. ALL FEATURES MAY NOT BE LOCATED IN THIS SITE.

GEN7 ENGINEERING

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE, ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CLIENT IS STRICTLY PROHIBITED.

DRAWN BY	BNS
CHECKED BY	BNS

REVISIONS

#	DATE	BY	DESCRIPTION
2	06/18/25	BNS	FINAL ISSUE
1	04/15/25	BNS	FINAL ISSUE
0	03/07/25	BNS	FINAL ISSUE
B	03/06/25	BNS	PRELIMINARY ISSUE
A	03/05/25	BNS	PRELIMINARY ISSUE

STEPHEN M. CARPENTER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 105147
STATE OF TENNESSEE
06-18-2025

verizon

SITE NAME: LANTON
SITE NUMBER: 17330373

VOGUE TOWERS

SITE NAME: LANTON
SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY COLUMBIA, TN 38401

SITE TYPE: RAWLAND

SHEET TITLE: GENERAL NOTES

SHEET NUMBER	REVISION
Z-002	2

GENERAL NOTES:

1. This Survey is prepared exclusively to show site conditions and/or for use in support of instruments related to Leases and Easements as may be shown hereon. Any property boundary information shown hereon is a composite of information gathered from current or previous Surveys, Plat & Deed Description and/or Assessor's Tax Maps as may be referenced hereon. This Survey is not a Boundary Survey of any Tax Parcels or Deed Tracts, and does not create, combine, or divide any existing properties.
2. Survey shown hereon was performed under the supervision of a state-registered Land Surveyor and conforms to all applicable State Board Requirements.
3. Instruments Used: One or more of: Topcon Total Station, Topcon Hiperlite Plus GPS, Carlson Surveyor Data Collector, DJI UAV.
4. Where shown, improvements (utilities, buildings, trees, fences, etc.) are based on field Survey and/or aerial mapping.
5. Any Underground Utilities shown according to surface markings made by others, found at time of survey. Additional marked utilities outside the area covered by this survey map may be shown in provided CAD Files. Utility Markings may not be comprehensive: this survey does not relieve design and construction personnel of the responsibility to determine the locations of underground utilities prior to land disturbance activities.
6. This Survey is presented in the format required by Clients. Clients are advised that Official Jurisdictions may require the Survey to be presented in another format with additional notes and certifications. In the event other formats, notes or certifications are requested by applicable jurisdictions, it is the responsibility of the Client to request same be prepared by Surveyor. Survey as published is not intended to be suitable for recording as a Subdivision Plat.
7. This survey may have been reduced or enlarged in size due to subsequent reproduction. This should be taken into consideration when obtaining scaled data.
8. Geographic Coordinates, if published, meet FAA Accuracy Code 1A, and are accurate to within ± 20 feet horizontally and to within ± 3 feet vertically.
9. Any Flood Zone information presented hereon is according to current FEMA Flood Map information as may be referenced hereon. No Flood Elevation Survey of Certification performed.
10. This survey is not valid without the original signature seal of a State-Licensed Land Surveyor, and is not complete without the total of sheets as specified in Survey Title Blocks.
11. Unless indicated otherwise by reference to Record Instruments, any Lessee's Leases, Premises or Easements shown hereon are NOT YET OF RECORD and may be subject to change pending review and approval by Carrier, applicable jurisdictions and/or other involved parties.
12. Any Survey Markers placed as required by Standards of Practice and/or Client request represent the Leases and/or Easements as requested or designed by Clients at the time of this survey issue and may not reflect changes to site design which have not been communicated to Surveyor in the form of a Survey revision request. Surveyor shall not be liable for any circumstance arising as a result of revisions to Site Design (which may invalidate existing survey markers) occurring after the date of this Survey issue.

PROPOSED TOWER LOCATION DATA

Latitude:	NORTH:	35.705586°	35° 42' 20.11"
Longitude:	WEST:	86.974347°	86° 58' 27.65"
Ground Elev:	741.5	FEET AMSL	(NAVD88)
Benchmark:	DJ9562 TN37		

PARENT TAX PARCEL

CHRIST OUR SAVIOR EVANGELICAL LUTHERAN CHURCH
TAX PARCEL: 051 007.01

NORTH ORIENTATION

TENNESSEE STATE PLANE COORDINATE SYSTEM
Based on GPS Survey relative to NGS CORS Network, NAD83 (2011)
ELEVATION DATUM: NAVD88, GEOID 12B
DATE OF SURVEY: 11-13-2024

Method: RTK (CORS); Confidence Level: 95%
Positional Accuracy: HZ ± 0.10'
EPOCH 2010.0000
Convergence: 0.57045000°; Combined Factor: 0.99991983

FLOOD DATA

FEMA FLOOD MAP PANEL: 47119C0180E, Effective Date: 04-16-2007. Surveyed Area appears to lie within: ZONE X (Areas of Minimal Flood Hazard)

TITLE EXAMINATION:

See Sheet #6

ADDITIONAL NOTES

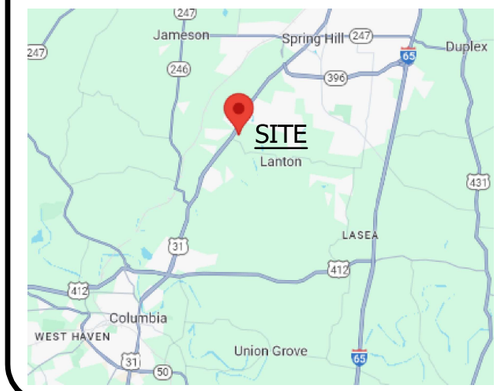
The Lessee's Access & Utility Easement extends to the Public R/W.

The Lessee's Premises lies entirely within the Parent Tax Parcel.

Except as noted hereon, no visible potential encroachments were observed at the time of the survey.

LOCATION MAP

NOT TO SCALE



LEGEND

R/W	RIGHT-OF-WAY
C/L	CENTER LINE
AU	ACCESS & UTILITY
ESMT	EASEMENT
P.O.C.	POINT OF COMMENCEMENT
P.O.B.	POINT OF BEGINNING
Sq Ft	SQUARE FEET
1	TREE (SEE TABLE, SHEET #5)

- IRON ROD FOUND (AS NOTED)
- IRON PIPE FOUND
- UTILITY POLE
- GUY ANCHOR
- LIGHT POLE
- TRANSFORMER
- TELECOM JUNCTION
- GAS LINE MARKER
- GAS VALVE
- CURB INLET
- PULL BOX
- WATER VALVE
- FIRE HYDRANT
- SEWER MANHOLE
- PROPOSED EQUIPMENT LOCATION
- SITE BENCHMARK

- PAVEMENT EDGE
- CURB LINE
- SIDEWALK
- OHU — OVERHEAD UTILITY LINES
- GUY — GUY WIRE
- FENCE
- 5' CONTOURS
- 1' CONTOURS
- RW — PUBLIC R/W
- TAX PARCEL BOUNDARY
- EXISTING EASEMENT
- LESSEE'S PREMISES
- LESSEE'S EASEMENTS

SURVEYOR'S CERTIFICATION

To: Vogue Towers II, LLC:
I hereby certify (or state) that this is a Category II Survey; the ratio of precision of the unadjusted survey exceeds 1:7.500; and that this survey was done in compliance with the current Tennessee Minimum Standards of Practice.



Travis L. Shields
Tennessee RLS
License No. 2921

SURVEY ISSUE DATA

#	DETAILS	DATE	DRAWN	APP
0	Original Survey Issue	12-16-2024	NB	TLS
1	Proposed Tower Center revised	06-18-2025	NB	TLS

THE LAND CONSULTANTS LLC
5449 HIGHWAY 41
JASPER, TN 37347
423·304·6722

PREPARED FOR

VOGUE TOWERS

VOGUE TOWERS II, LLC

(Not a Boundary Survey of Parent Lands. Not intended for fee simple Land Transfer)

SITE SURVEY
LANTON

Site Number: TN-5001
Grove Park Way, Columbia, TN 38401
Maury County, Tennessee

COVER SHEET

DWG#: 24234
ISSUE #: 1
ISSUE DATE: 06-18-2025
SEE SHEET #1

SHEET 1 OF 6

PROPERTY INFORMATION

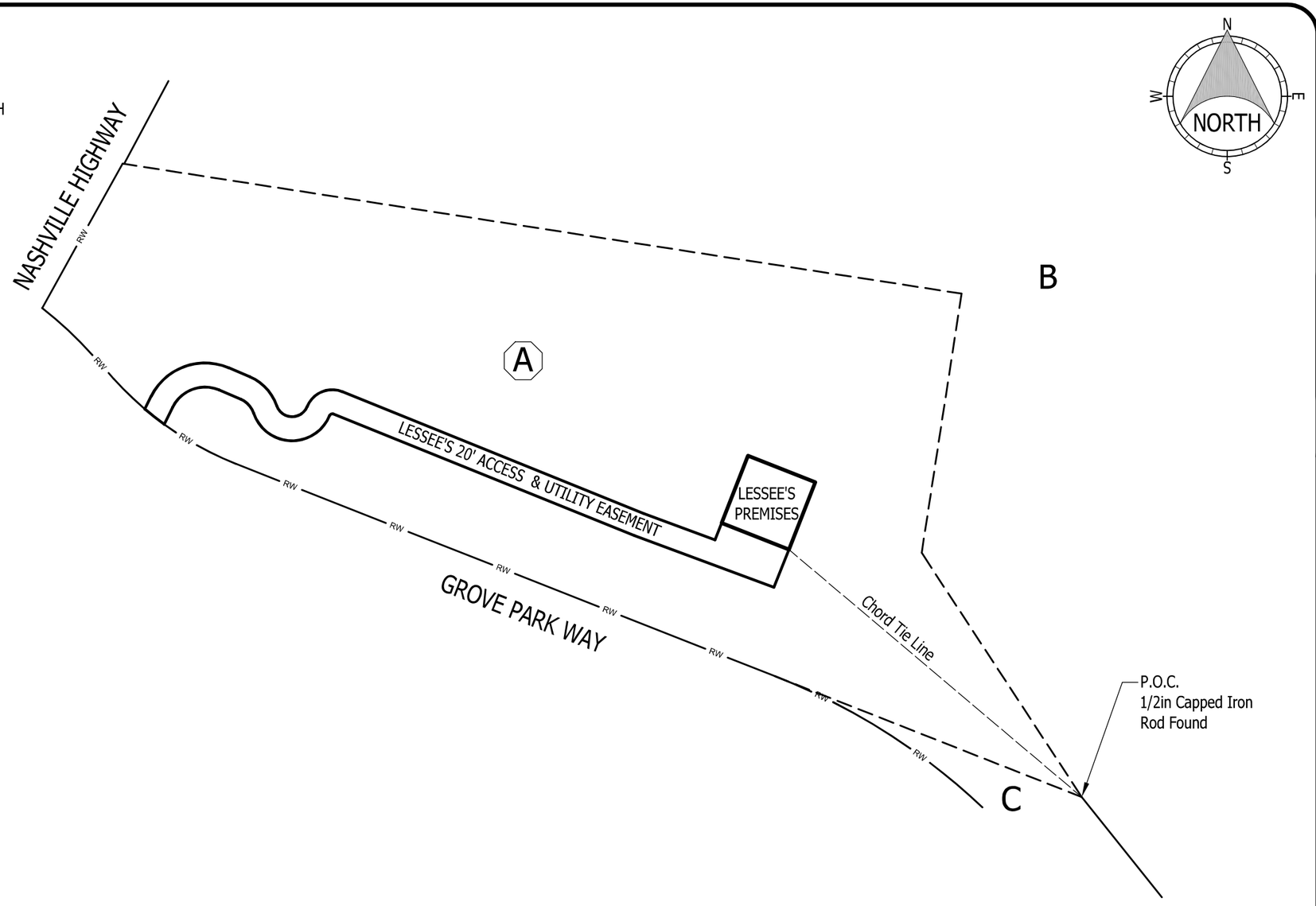
PARENT TAX PARCEL

A. CHRIST OUR SAVIOR EVANGELICAL LUTHERAN CHURCH
TAX PARCEL: 051 007.01
DEED BOOK 1195, PAGE 444

ADJOINING TAX PARCELS

B. GH TENNESSEE, LLC.
TAX PARCEL: 051 006.00
DEED BOOK R2813, PAGE 689

C. FORTUNA CAPITAL, LLC.
TAX PARCEL: 051B D 031.00
DEED BOOK R2293, PAGE 472
PLAT BOOK 21, PAGE 282



SCALE: 1in = 100'

0' 100' 200' 300'

OVERVIEW MAP CAVEAT:
OVERVIEW MAP IS NOT A SURVEY BUT A VICINITY / LOCATION MAP INTENDED ONLY TO SHOW SURVEYED PROPERTY IN RELATION TO SURROUNDING AREA. VESTING AND ADJOINING PARCEL BOUNDARIES ARE NOT INCLUDED IN OR CERTIFIED BY THIS SURVEY. BOUNDARY LINES ARE A COMPOSITE OF DEED, PLAT AND/OR TAX MAP INFORMATION

THE LAND CONSULTANTS LLC
5449 Highway 41
Jasper, TN 37347
423·304·6722

PREPARED FOR
VOGUE TOWERS
VOGUE TOWERS II, LLC

(Not a Boundary Survey of Parent Lands. Not intended for fee simple Land Transfer)

SITE SURVEY
LANTON
Site Number: TN-5001
Grove Park Way, Columbia, TN 38401
Maury County, Tennessee

OVERVIEW MAP

DWG#: 24234
ISSUE #: 1
ISSUE DATE: 06-18-2025
SEE SHEET #1

SHEET 2 OF 6

NASHVILLE HIGHWAY

EXISTING BUILDING

Paved Driveway

Paved Parking

CANOPY

Sidewalk

GROVE PARK WAY
50' Public R/W (Ref: PB 21-282)

LESSEE'S 20'
ACCESS & UTILITY
EASEMENT
12,623 Sq. Ft. - 0.29± Ac

See Call Tables, Sheet #5

N
NORTH
S
E
W

TENNESSEE
STATE PLANE

TRAVIS L. SHIELDS
REGISTERED LAND SURVEYOR
AGRICULTURE
COMMERCE
TENNESSEE NO. 2921
06/18/25

SCALE: 1in = 30'

0' 30' 60' 90'

▲ SHEET #3 ▲
▼ SHEET #4 ▼

THE LAND CONSULTANTS LLC
5449 Highway 41
Jasper, TN 37347
423·304·6722

PREPARED FOR

VOGUE TOWERS

VOGUE TOWERS II, LLC

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SITE SURVEY

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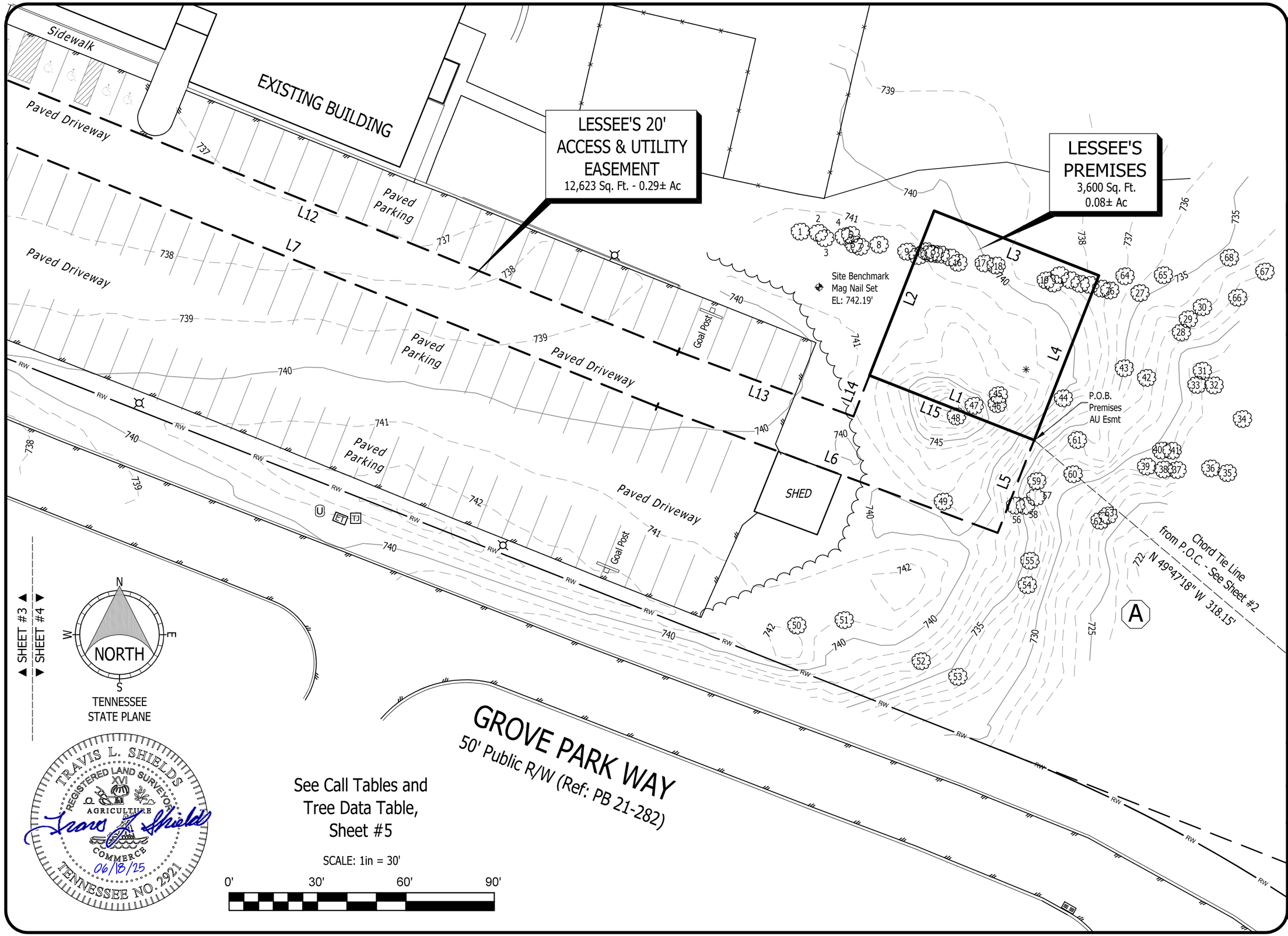
Grove Park Way, Columbia, TN 38401

Maury County, Tennessee

SITE SURVEY

DWG#: 24234
ISSUE #: 1
ISSUE DATE: 06-18-2025
SEE SHEET #1

SHEET 3 OF 6



THE LAND CONSULTANTS LLC
5449 Highway 41
Jasper, TN 37347
423·304·6722

PREPARED FOR

VOGUE TOWERS

VOGUE TOWERS II, LLC

(Not a Boundary Survey of Parent Lands. Not intended for fee simple Land Transfer)

SITE SURVEY
LANTON

Site Number: TN-5001

Grove Park Way, Columbia, TN 38401

Maury County, Tennessee

SITE SURVEY

DWG#: 24234
ISSUE #: 1
ISSUE DATE: 06-18-2025
SEE SHEET #1

SHEET 4 OF 6

LESSEE'S PREMISES

All that tract or parcel of land lying and being in Maury County, Tennessee and being a portion of the property of Christ Our Savior Evangelical Lutheran Church, of record in Deed Book 1195, Page 444, Register's Office, Maury County, Tennessee and being more particularly described as follows,

COMMENCE at a one-half-inch Iron Rod Found at the Southeast Corner of aforesaid property;
Thence along a Chord Tie Line having a Bearing of N 49°47'18" W, a distance of 318.15 feet to the POINT OF BEGINNING;

Thence N 68°32'42" W, a distance of 60.00 feet;
Thence N 21°27'18" E, a distance of 60.00 feet;
Thence S 68°32'42" E, a distance of 60.00 feet;
Thence S 21°27'18" W, a distance of 60.00 feet to the POINT OF BEGINNING.

Said tract Premises 0.08 Acres (3,600 Square Feet), more or less.

LESSEE'S 20' ACCESS & UTILITY EASEMENT

All that tract or parcel of land lying and being in Maury County, Tennessee and being a portion of the property of Christ Our Savior Evangelical Lutheran Church, of record in Deed Book 1195, Page 444, Register's Office, Maury County, Tennessee and being more particularly described as follows,

COMMENCE at a one-half-inch Iron Rod Found at the Southeast Corner of aforesaid property;
Thence along a Chord Tie Line having a Bearing of N 49°47'18" W, a distance of 318.15 feet to the POINT OF BEGINNING;

Thence S 21°27'18" W, a distance of 33.79 feet;
Thence N 69°39'42" W, a distance of 123.26 feet;
Thence N 67°59'50" W, a distance of 269.56 feet;
Thence with a curve to the left with an arc length of 3.73 feet, with a radius of 2.38 feet, with a chord bearing of S 67°03'24" W, with a chord length of 3.36 feet;
Thence with a curve to the right with an arc length of 81.44 feet, with a radius of 33.55 feet, with a chord bearing of N 88°20'53" W, with a chord length of 62.87 feet;
Thence with a curve to the left with an arc length of 16.78 feet, with a radius of 20.00 feet, with a chord bearing of N 42°50'38" W, with a chord length of 16.29 feet;
Thence N 66°52'54" W, a distance of 19.09 feet;
Thence with a curve to the left with an arc length of 45.46 feet, with a radius of 30.00 feet, with a chord bearing of S 69°42'15" W, with a chord length of 41.24 feet;
Thence S 26°17'23" W, a distance of 15.83 feet to a point on the Northern Right-of-Way Line of Grove Park Way;
Thence along said Right-of-Way Line and with a curve to the right with an arc length of 20.45 feet, with a radius of 270.00 feet, with a chord bearing of N 51°45'15" W, with a chord length of 20.44 feet;
Thence N 26°17'23" E, leaving said Right-of-Way Line and a distance of 11.59 feet;
Thence with a curve to the right with an arc length of 75.77 feet, with a radius of 50.00 feet, with a chord bearing of N 69°42'15" E, with a chord length of 68.73 feet;
Thence S 66°52'54" E, a distance of 19.09 feet;
Thence with a curve to the right with an arc length of 33.56 feet, with a radius of 40.00 feet, with a chord bearing of S 42°50'38" E, with a chord length of 32.59 feet;
Thence with a curve to the left with an arc length of 32.89 feet, with a radius of 13.55 feet, with a chord bearing of S 88°20'53" E, with a chord length of 25.39 feet;
Thence with a curve to the right with an arc length of 35.11 feet, with a radius of 22.38 feet, with a chord bearing of N 67°03'24" E, with a chord length of 31.62 feet;
Thence S 67°59'50" E, a distance of 269.27 feet;
Thence S 69°39'42" E, a distance of 63.35 feet;
Thence N 21°27'18" E, a distance of 14.95 feet;
Thence S 68°32'42" E, a distance of 60.00 feet to the POINT OF BEGINNING.

Said Easement contains 0.29 Acres (12,623 Square Feet), more or less.

CURVE DATA TABLE						
CURVE	RADIUS	ARC LEN	TANGENT	DELTA ANGLE	CHORD BEARING	CHORD LEN
C1	2.38'	3.73'	2.38'	89°53'33"	S 67°03'24" W	3.36'
C2	33.55'	81.44'	89.93'	139°05'00"	N 88°20'53" W	62.87'
C3	20.00'	16.78'	8.92'	48°04'31"	N 42°50'38" W	16.29'
C4	30.00'	45.46'	28.38'	86°49'42"	S 69°42'15" W	41.24'
C5	270.00'	20.45'	10.23'	4°20'21"	N 51°45'15" W	20.44'
C6	50.00'	75.77'	47.31'	86°49'42"	N 69°42'15" E	68.73'
C7	40.00'	33.56'	17.84'	48°04'31"	S 42°50'38" E	32.59'
C8	13.55'	32.89'	36.32'	139°05'00"	S 88°20'53" E	25.39'
C9	22.38'	35.11'	22.34'	89°53'33"	N 67°03'24" E	31.62'

LINE DATA TABLE		
LINE	BEARING	DISTANCE
L1	N 68°32'42" W	60.00'
L2	N 21°27'18" E	60.00'
L3	S 68°32'42" E	60.00'
L4	S 21°27'18" W	60.00'
L5	S 21°27'18" W	33.79'
L6	N 69°39'42" W	123.26'
L7	N 67°59'50" W	269.56'
L8	N 66°52'54" W	19.09'
L9	S 26°17'23" W	15.83'
L10	N 26°17'23" E	11.59'
L11	S 66°52'54" E	19.09'
L12	S 67°59'50" E	269.27'
L13	S 69°39'42" E	63.35'
L14	N 21°27'18" E	14.95'
L15	S 68°32'42" E	60.00'

TREE DATA TABLE			
1	14in Hackberry	35	8in Hickory
2	8in Hackberry	36	8in Hickory
3	14in Hackberry	37	12in Locust (dead)
4	6in Hackberry	38	12in Ash
5	6in Hackberry	39	10in Ash
6	12in Hackberry	40	8in Hickory
7	18in Hackberry	41	16in Hickory
8	14in Hackberry twin	42	16in Cedar
9	10in Ash	43	16in Cedar
10	14in Hackberry	44	8in Ash
11	14in Hackberry	45	6in Cherry
12	14in Hackberry	46	6in Cherry
13	14in Hackberry	47	10in Cherry
14	14in Hackberry	48	6in pear twin
15	12in Hackberry	49	14in Mimosa
16	24in Hackberry	50	14in Mimosa
17	8in Hackberry (twin)	51	10in Mimosa
18	18in Hackberry	52	10in Pear
19	18in Hackberry	53	10in Cedar
20	14in Hackberry	54	10in Hackberry
21	12in Ash	55	8in Hackberry
22	12in Hackberry	56	12in Hickory
23	10in Hackberry	57	24in Hackberry
24	12in Hackberry	58	12in Hackberry
25	6in Hackberry	59	8in Hackberry
26	14in Hackberry	60	12in Hackberry
27	12in Hackberry (quad)	61	20in Cherry
28	20in Oak	62	14in Hickory
29	10in Cedar	63	6in Hackberry
30	24in Hackberry	64	14in Hackberry (twin)
31	6in Hackberry	65	8in Hackberry
32	6in Hickory	66	18in Hickory
33	12in Locust	67	8in Hickory
34	12in Hickory	68	24in Hackberry

TRAVIS L. SHIELDS
REGISTERED LAND SURVEYOR
XVI
AGRICULTURE
COMMERCE
TENNESSEE NO. 2921
06/18/25

THE LAND CONSULTANTS LLC
5449 Highway 41
Jasper, TN 37347
423·304·6722

PREPARED FOR
VOGUE TOWERS
VOGUE TOWERS II, LLC

(Not a Boundary Survey of Parent Lands. Not intended for fee simple Land Transfer)

SITE SURVEY
LANTON
Site Number: TN-5001
Grove Park Way, Columbia, TN 38401
Maury County, Tennessee

DESCRIPTIONS & TABLES

DWG#: 24234
ISSUE #: 1
ISSUE DATE: 06-18-2025
SEE SHEET #1

SHEET 5 OF 6

TITLE EXAMINATION

Surveyor's treatment of Title Examination Items is limited to the scope described in ALTA/NSPS 2021 requirements, Section 6. C. ii., and is limited to determination of the extent of land, that Title Items may influence, if any. "Extent of Property" may be: Blanket in nature for a Parcel or Parcels (not subject to mapping, but assumed to also apply to Lessee's Areas (if any) insofar as these may lie on Parcel(s) influenced by instrument); specifically described by instrument (mapped and shown only if within the Surveyed Area). Determination of physical location may not be possible if: instrument is illegible; instrument lacks sufficient descriptive information; or instrument refers to other instruments which were not included in the title exam and not otherwise available to surveyor. Factors beyond physical location, such as the type of influence that "Restrictions, Covenants, Terms or Conditions" contained in instruments may impart upon Parcels or Lessee's Site or Easements are not evaluated by Land Surveyor. Review by Title Attorney may be warranted. Land Surveyors may not practice Law.)

Reference: Commitment for Title Insurance prepared by Chicago Title Insurance Company, Commitment No. 20241650CTN, Commitment Date: July 30, 2024, Schedule B, Part II, Exceptions.

Item 1 - 9: General Items (no record instruments listed) or Taxes, not addressed by Survey.

Item 10: Deed R1807-1092, Stormwater Detention Easement: Blanket in nature for property of Church.

LEGAL DESCRIPTION OF PARENT PARCEL

North and East by Edward P. Foster as of record in Deed Book 643, page 570 and South by William Hunt, Trustee as of record in Deed Book 851, page 76 and 851, page 84, from whose property this tract is taken and being more particularly described as follows:

Beginning at an iron rod in the East margin of U.S. Highway 31, the southwest corner of the herein described tract; thence with margin of said road along a curve to the left having a radius of 10817.75 feet for a distance of 200.00 feet (chord North 27degrees 51 minutes 36 seconds East 200.00 feet) to an iron rod; thence leaving said highway with Edward P. Foster as of record in Deed Book 643, Page 570 South 82 degrees 53 minutes 57 seconds East 703.08 feet to an iron rod; thence with same South 7 degrees 12 minutes 24 seconds West 218.23 feet to an iron rod; thence with same South 34 degrees 37 minutes 37 seconds East 243.00 feet to an iron rod; thence with William Hunt, Trustee as of record in Deed Book 851, page 76 and 851, page 84 from whose property this tract is taken North 70 degrees 05 minutes 41 seconds West 959.16 feet to the beginning containing 5.00 acres more or less by survey of W.A. Richardson, Jr., (RLS #689), 403 Oakwood Drive, Columbia, TN 38401, January 18, 1993.

Less and except Deed recorded in Book R2072, Page 1244, in the Register's Office for Maury County, Tennessee.

Being the same property conveyed to Christ Our Savior Evangelical Luthern Church by Warranty Deed from William L. Hunt, Trustee for the Edgar J. Doyle Trust and the Lester Hill Doyle Trust of record in Book 1174, page 310, Register's Office for Maury County, Tennessee, dated March 01, 1993 and recorded on March 02, 1993, Correction Deed recorded in Book 1195, Page 444, said Register's Office.

THE LAND CONSULTANTS LLC
5449 HIGHWAY 41
JASPER, TN 37347
423·304·6722

PREPARED FOR

VOGUE TOWERS

VOGUE TOWERS II, LLC

(Not a Boundary Survey of Parent Lands. Not intended for fee simple Land Transfer)

SITE SURVEY
LANTON

Site Number: TN-5001

Grove Park Way, Columbia, TN 38401

Maury County, Tennessee

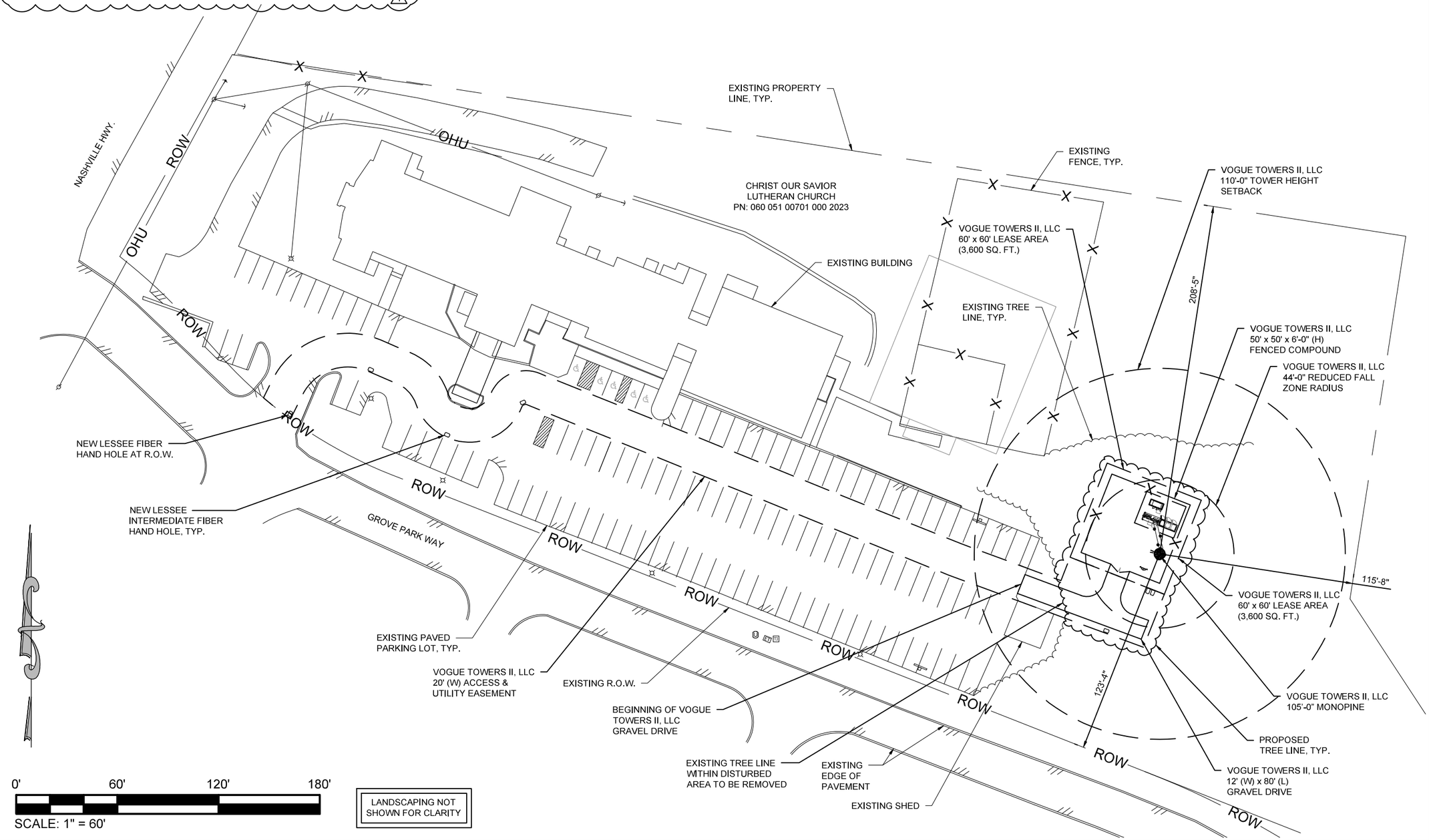
TITLE

DWG#: 24234
ISSUE #: 1
ISSUE DATE: 06-18-2025
SEE SHEET #1

SHEET 6 OF 6

NOTES:

1. THIS DRAWING IS BASED ON A SITE SURVEY BY THE LAND CONSULTANTS, LLC, DATED 06/18/2025. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. THE PROPOSED USE DOES NOT REQUIRE FULL OR PART TIME EMPLOYEES AT THE SITE.
3. FOR GENERAL SITE WORK NOTES, SEE SHEET Z-002.
4. ALL NORTH ARROWS ON SITE PLANS ARE TRUE NORTH, UNLESS OTHERWISE SPECIFIED.
5. VOGUE TOWERS II, LLC'S 20' WIDE ACCESS & UTILITY EASEMENT PATH SUBJECT TO FUTURE GROWTH PLANS OF PROPERTY OWNER AND WILL ADJUST AS NECESSARY TO ACCOMMODATE MODIFICATION TO THE ROW. (1)



0' 60' 120' 180'

SCALE: 1" = 60'

LANDSCAPING NOT SHOWN FOR CLARITY

GEN7 ENGINEERING

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE, ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CLIENT IS STRICTLY PROHIBITED.

DRAWN BY	BNS
CHECKED BY	BNS

REVISIONS

#	DATE	BY	DESCRIPTION
2	06/18/25	BNS	FINAL ISSUE
1	04/15/25	BNS	FINAL ISSUE
0	03/07/25	BNS	FINAL ISSUE
B	03/06/25	BNS	PRELIMINARY ISSUE
A	03/05/25	BNS	PRELIMINARY ISSUE

STEPHEN M. CARPENTER — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — NO. 105147 — STATE OF TENNESSEE — 06-18-2025

verizon

SITE NAME: LANTON

SITE NUMBER: 17330373

VOGUE TOWERS

SITE NAME: LANTON

SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY COLUMBIA, TN 38401

SITE TYPE: RAWLAND

SHEET TITLE: OVERALL SITE LAYOUT PLAN

SHEET NUMBER	REVISION
Z-101	2

NOTES:

1. THIS DRAWING IS BASED ON A SITE SURVEY BY THE LAND CONSULTANTS, LLC, DATED 06/18/2025. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
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STEPHEN M. CARPENTER III
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 105147
STATE OF TENNESSEE
06-18-2025

verizon

SITE NAME
LANTON

SITE NUMBER
17330373

VOGUE TOWERS

SITE NAME
LANTON

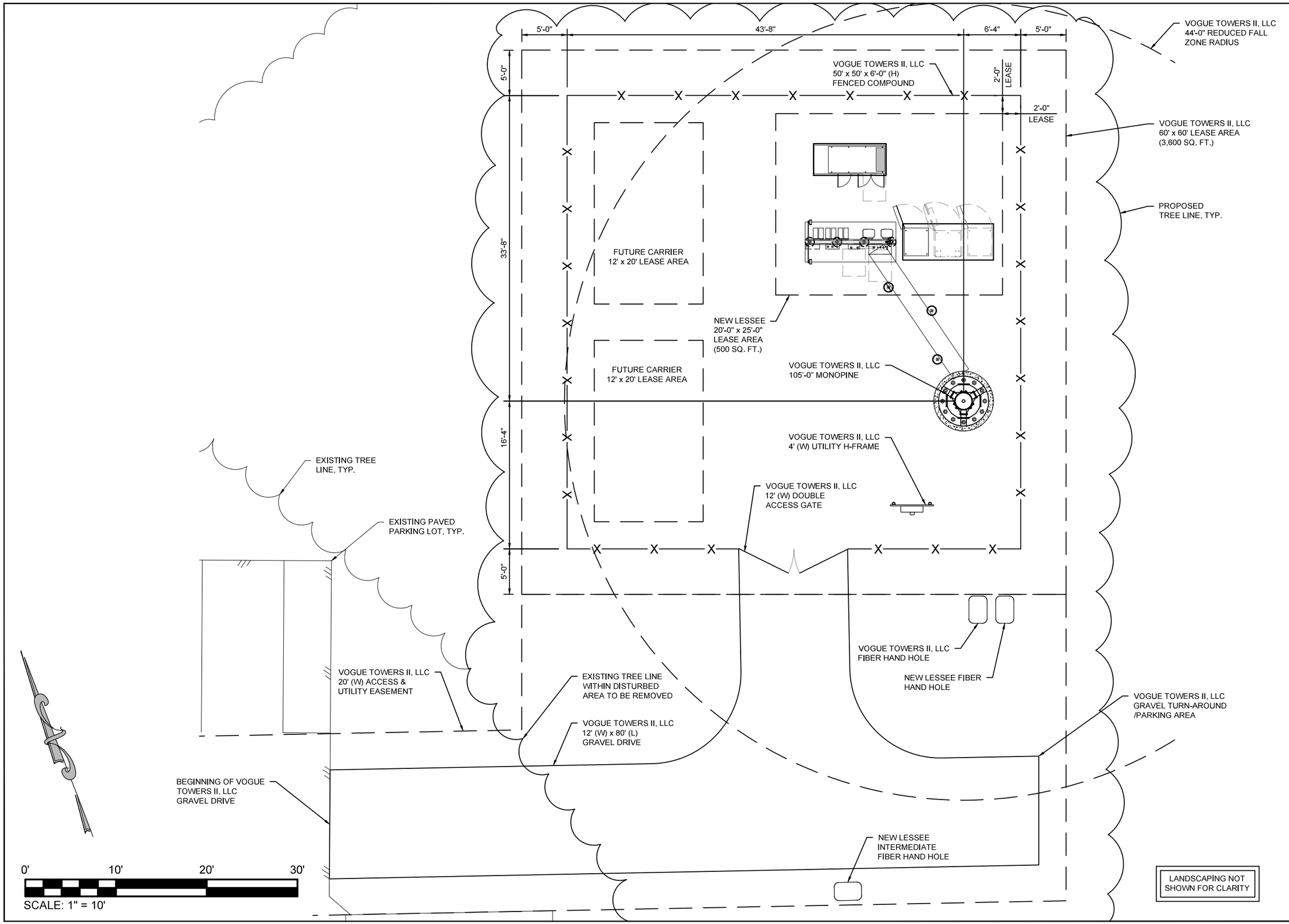
SITE NUMBER
TN-5001

SITE ADDRESS
2507 GROVE PARK WAY
COLUMBIA, TN 38401

SITE TYPE
RAWLAND

SHEET TITLE
OVERALL AERIAL SITE LAYOUT PLAN

SHEET NUMBER	REVISION
Z-102	2



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STEPHEN M. CARPENTER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 105147
STATE OF TENNESSEE
06-18-2025

verizon

SITE NAME: LANTON
SITE NUMBER: 17330373

VOGUE TOWERS

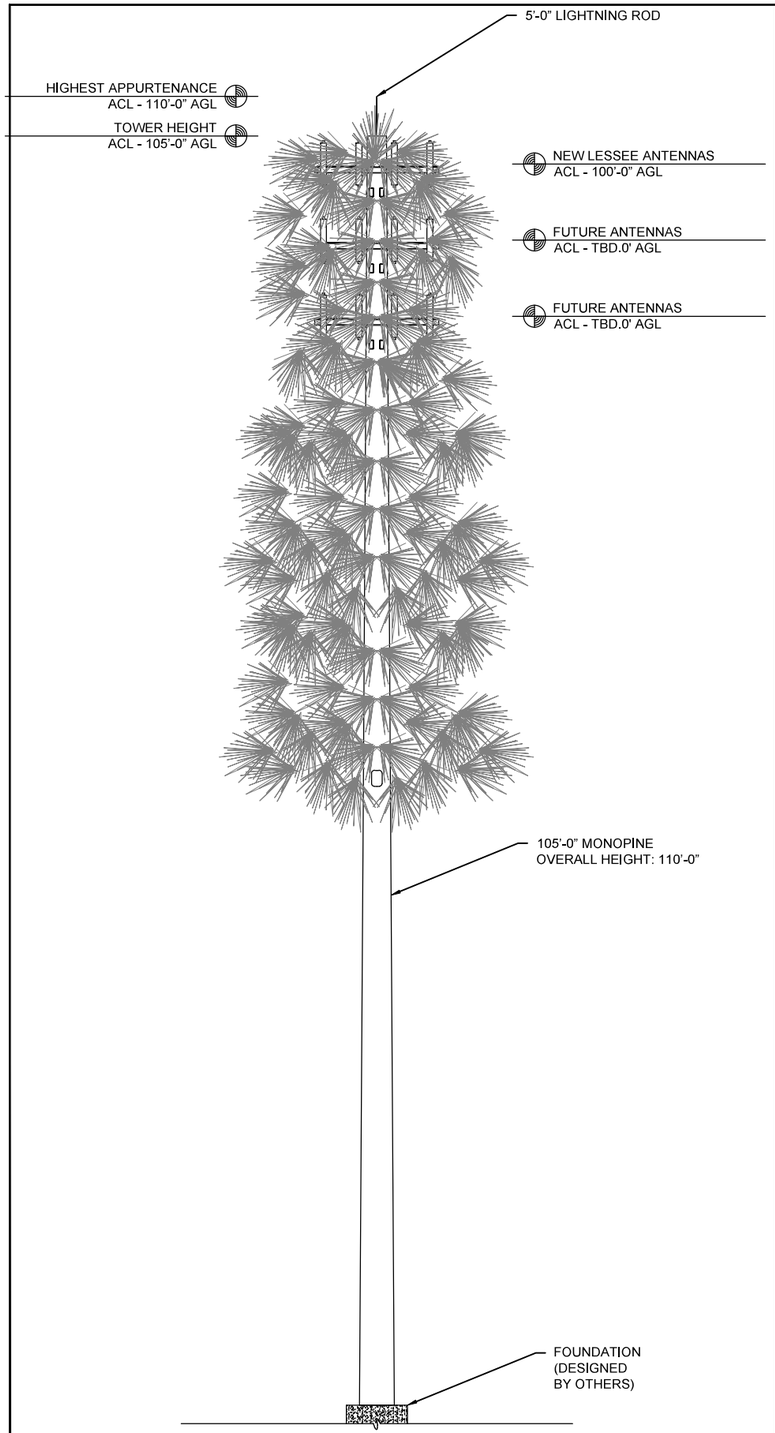
SITE NAME: LANTON
SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY
COLUMBIA, TN 38401

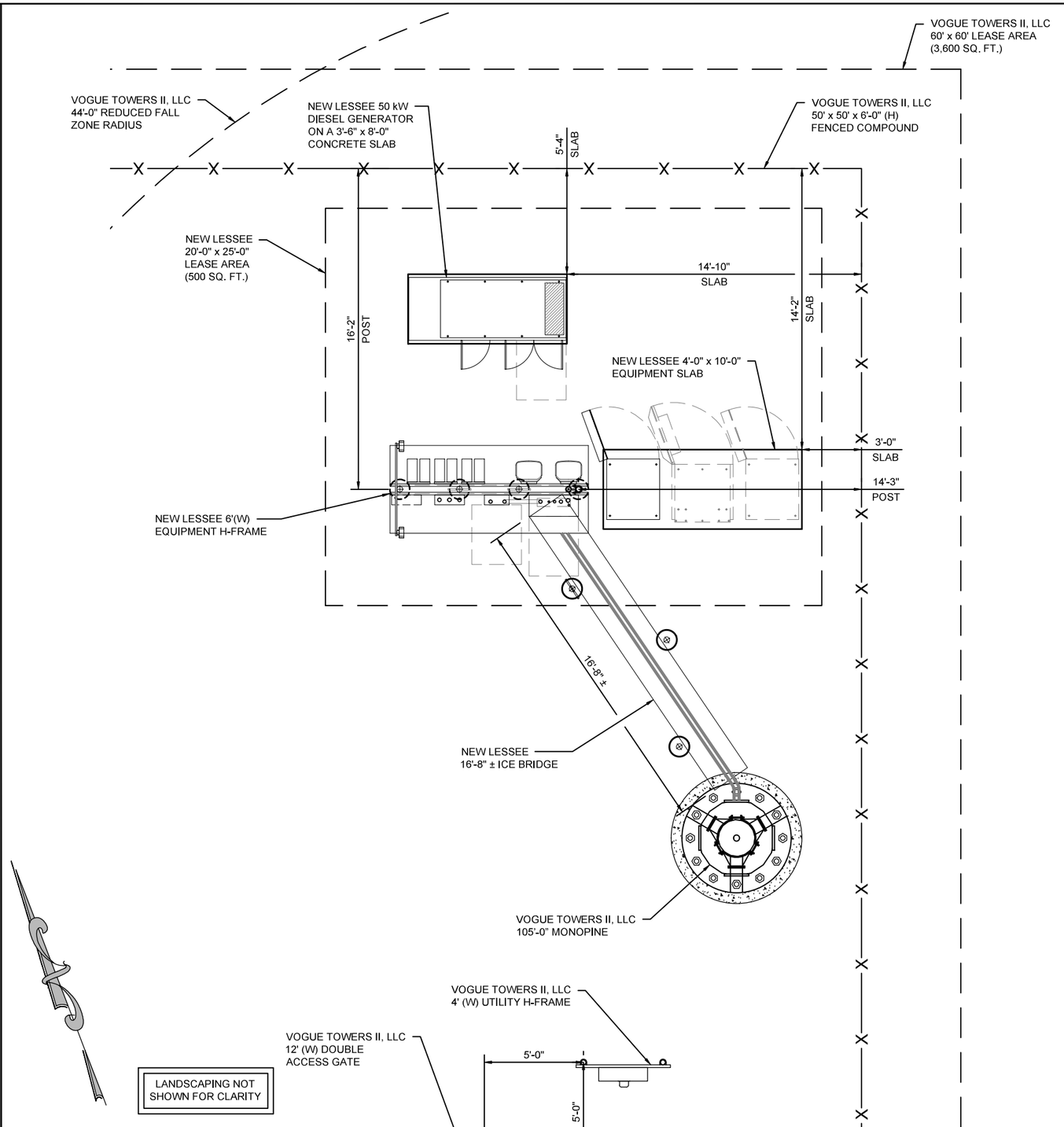
SITE TYPE: RAWLAND

SHEET TITLE: SITE LAYOUT PLAN

SHEET NUMBER	REVISION
Z-103	2



TOWER ELEVATION
NTS



SCALE: 1" = 6'

GEN7 ENGINEERING

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DRAWN BY	BNS
CHECKED BY	BNS

REVISIONS

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1	04/15/25	BNS	FINAL ISSUE
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verizon

SITE NAME	LANTON
SITE NUMBER	17330373

VOGUE TOWERS

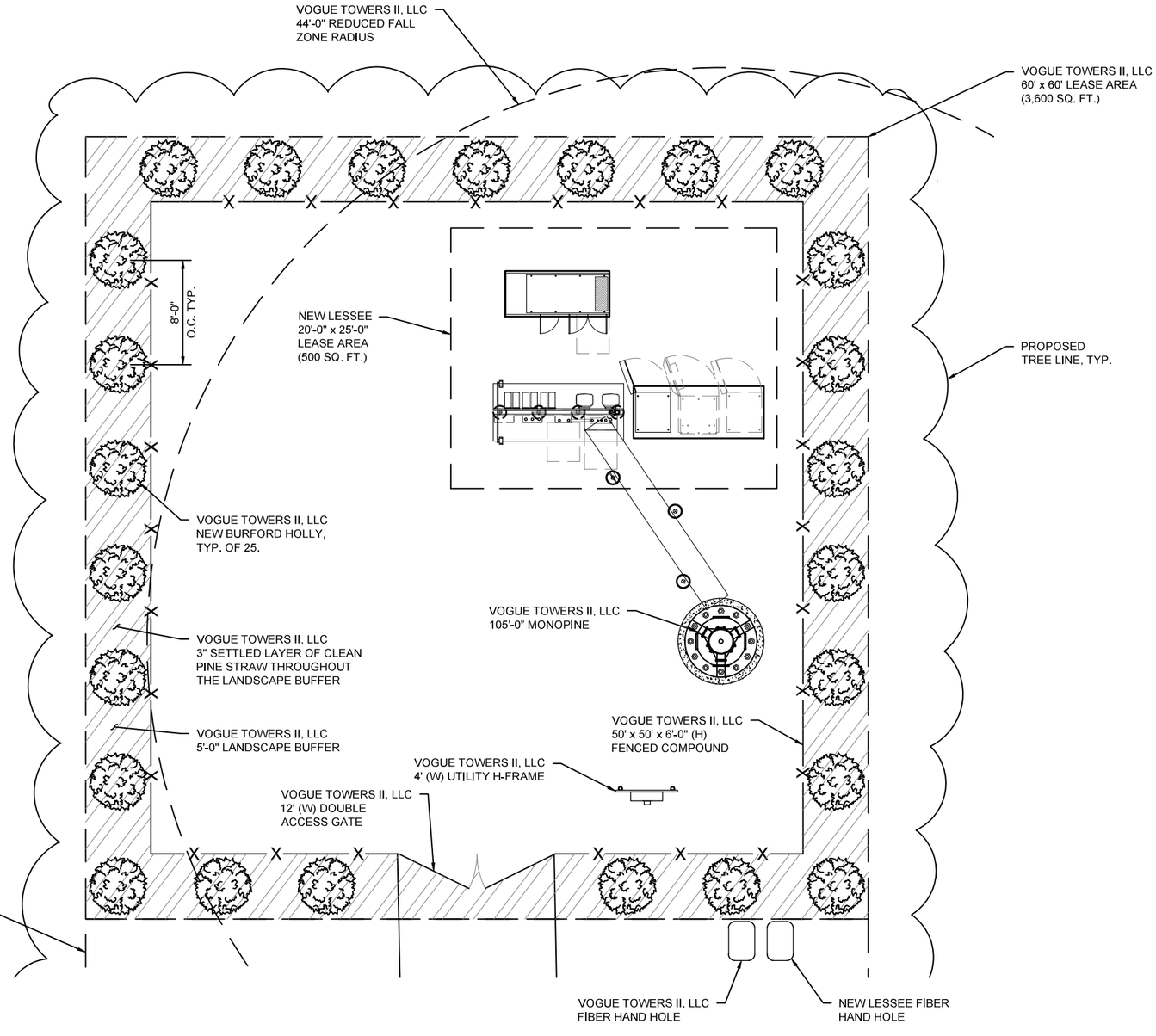
SITE NAME	LANTON
SITE NUMBER	TN-5001
SITE ADDRESS	2507 GROVE PARK WAY COLUMBIA, TN 38401
SITE TYPE	RAWLAND
SHEET TITLE	TOWER ELEVATION & EQUIPMENT LAYOUT PLAN
SHEET NUMBER	Z-104
REVISION	2

PLANTING SCHEDULE

QTY	BOTANICAL NAME	COMMON NAME	CALIPER	TYPE	SPACING	PLANTING HEIGHT	PLANTING WIDTH	MATURE HEIGHT	MATURE SPREAD	SUNLIGHT	SOIL CONDITIONS	SYMBOL	REMARKS
25	ILEX CORNUTA 'BURFORDII'	BURFORD HOLLY	N/A	UNDERSTORY EVERGREEN	SEE PLAN	5 FT	N/A	15 FT	8 FT	FULL OR PARTIAL	ADAPTABLE		FULL TO BASE

LANDSCAPE NOTES:

1. ALL PLANT MATERIAL SHALL CONFORM TO THE STANDARDS SET FORTH THE CURRENT EDITION OF AMERICAN STANDARDS FOR NURSERY STOCK OF NURSERYMEN.
2. PLANTING PLAN TAKES PRECEDENCE OVER PLANT LIST.
3. ALL TREES SHALL BE STAKED OR GUYED AT TIME OF PLANTING UNLESS NO STAKES IS PRE-APPROVED BY OWNER. STAKES OR GUYS SHALL NOT RESTRICT MOVEMENT OF THE PLANT, BUT SHALL HAVE 2"-3" OF SLACK IN EACH GUY WIRE.
4. ALL PLANT MATERIAL IS SUBJECT TO THE OWNERS APPROVAL PRIOR TO INSTALLATION TO INSURE THE CONFORMITY TO THE SPECIFICATIONS.
5. APPLY GRANULAR PRE-EMERGENT HERBICIDE TO SOIL PER MANUFACTURERS RECOMMENDATIONS BELOW MULCH BED PRIOR TO MULCH APPLICATION.
6. APPLY "LESCO" (OR EQUAL) GRANULAR SLOW RELEASE FERTILIZER PER MANUFACTURERS RECOMMENDATIONS TO TREES AT TIME OF PLANTING.
7. PLACE 3" MIN. THICKNESS OF SETTLED LAYER OF CLEAN PINE STRAW THROUGHOUT THE LANDSCAPE BUFFER AS SHOWN ON PLAN. IF NECESSARY, INSTALL METAL OR PVC EDGING STRIPS TO PREVENT PINE STRAW FROM WASHING ONTO ROAD OR OTHERWISE CAUSING PROBLEMS.
8. CONTRACTOR SHALL WARRANTY PLANTS FOR A PERIOD OF 1 YEAR AFTER FINAL ACCEPTANCE.



0' 10' 20' 30'

SCALE: 1" = 10'

GEN7 ENGINEERING

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REVISIONS

#	DATE	BY	DESCRIPTION
A	12/12/24	BNS	PRELIMINARY ISSUE

STEPHEN M. CARPENTER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 105147
STATE OF TENNESSEE
06-18-2025

verizon

SITE NAME: LANTON
SITE NUMBER: 17330373

VOGUE TOWERS

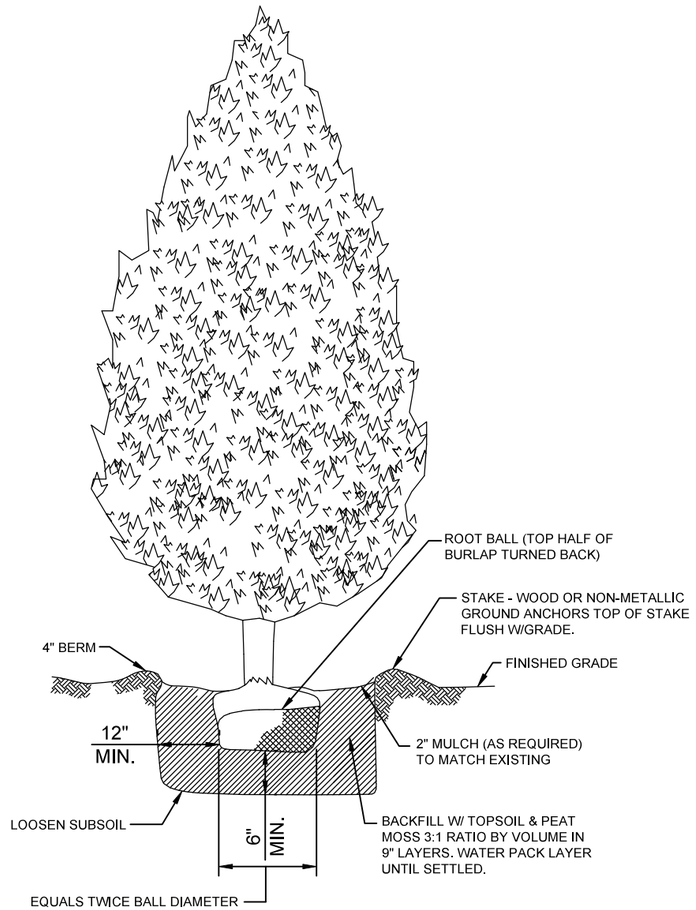
SITE NAME: LANTON
SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY
COLUMBIA, TN 38401

SITE TYPE: RAWLAND

SHEET TITLE: LANDSCAPING DETAILS

SHEET NUMBER	REVISION
Z-105	A



BURFORD HOLLY

NOTES:
1. PLANT SHALL BE MIN. 5'-0" IN HEIGHT AT TIME OF PLANTING.

GEN 7 ENGINEERING

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VOGUE TOWERS

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SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY COLUMBIA, TN 38401

SITE TYPE: RAWLAND

SHEET TITLE: LANDSCAPING DETAILS

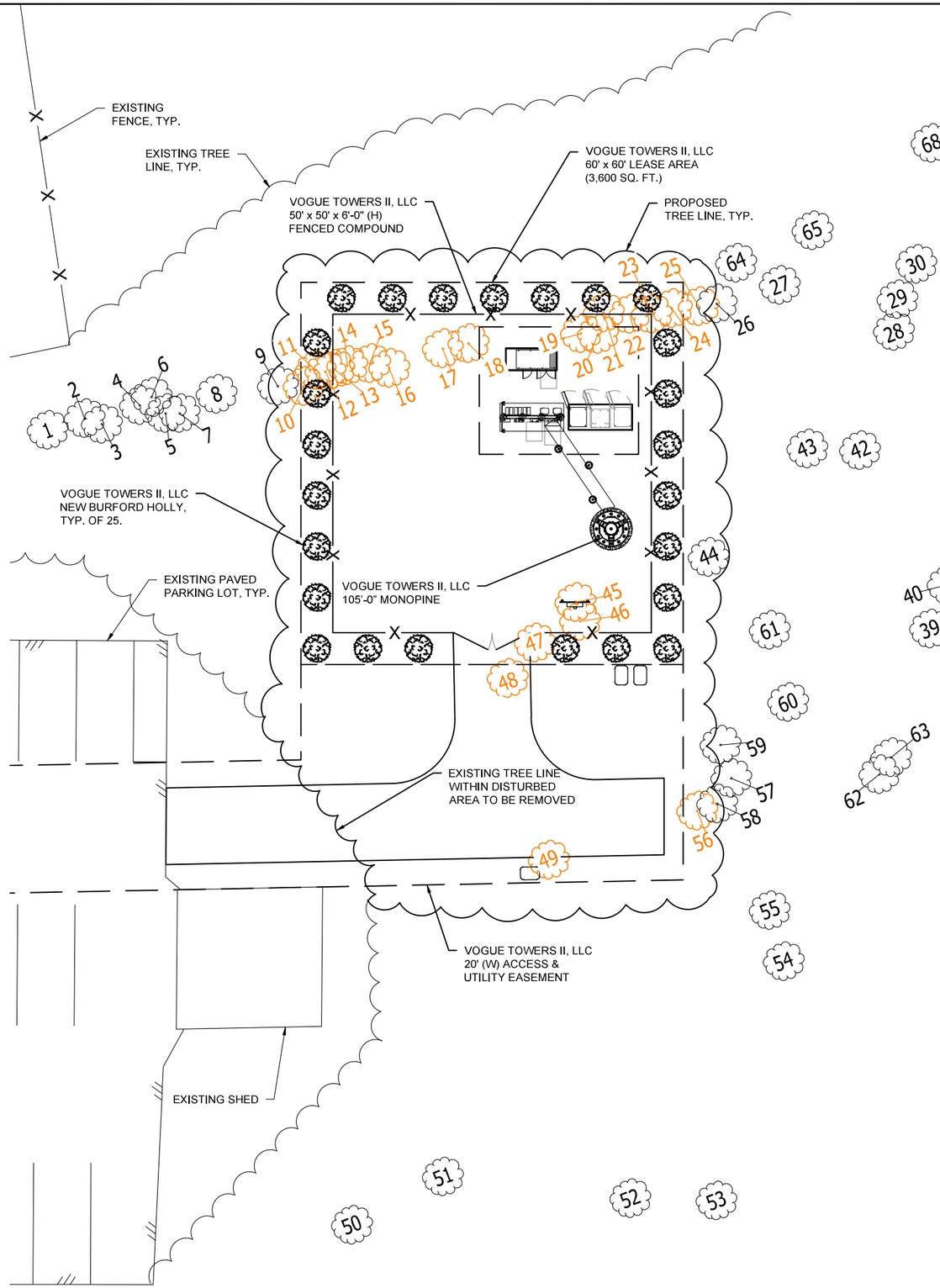
SHEET NUMBER	REVISION
Z-106	A

NOTES:

1. TREE LOCATIONS & REFERENCED NUMBERS ARE BASED ON A TREE SURVEY BY THE LAND CONSULTANTS, LLC, DATED 07/29/2024.

TREE DATA TABLE								
#	TREE TYPE	SIZE	#	TREE TYPE	SIZE	#	TREE TYPE	SIZE
1	HACKBERRY	14"	24	HACKBERRY	12"	47	CHERRY	10"
2	HACKBERRY	8"	25	HACKBERRY	6"	48	PEAR (TWIN)	6"
3	HACKBERRY	14"	26	HACKBERRY	14"	49	MIMOSA	14"
4	HACKBERRY	6"	27	HACKBERRY (QUAD)	12"	50	MIMOSA	14"
5	HACKBERRY	6"	28	OAK	20"	51	MIMOSA	10"
6	HACKBERRY	12"	29	CEDAR	10"	52	PEAR	10"
7	HACKBERRY	18"	30	HACKBERRY	24"	53	CEDAR	10"
8	HACKBERRY (TWIN)	14"	31	HACKBERRY	6"	54	HACKBERRY	10"
9	ASH	10"	32	HICKORY	6"	55	HACKBERRY	8"
10	HACKBERRY	14"	33	LOCUST	12"	56	HACKBERRY	12"
11	HACKBERRY	14"	34	HICKORY	12"	57	HACKBERRY	24"
12	HACKBERRY	14"	35	HICKORY	8"	58	HACKBERRY	12"
13	HACKBERRY	14"	36	HICKORY	8"	59	HACKBERRY	8"
14	HACKBERRY	14"	37	LOCUST (DEAD)	12"	60	HACKBERRY	12"
15	HACKBERRY	12"	38	ASH	12"	61	CHERRY	20"
16	HACKBERRY	24"	39	ASH	10"	62	HICKORY	14"
17	HACKBERRY (TWIN)	8"	40	HICKORY	8"	63	HACKBERRY	6"
18	HACKBERRY	18"	41	HICKORY	16"	64	HACKBERRY (TWIN)	14"
19	HACKBERRY	18"	42	CEDAR	16"	65	HACKBERRY	8"
20	HACKBERRY	14"	43	CEDAR	16"	66	HICKORY	18"
21	ASH	12"	44	ASH	8"	67	HICKORY	8"
22	HACKBERRY	12"	45	CHERRY	6"	68	HACKBERRY	24"
23	HACKBERRY	10"	46	CHERRY	6"			

EXISTING TOTAL TREE'S	= 68	TOTAL TREE'S BEING REMOVED	= 22 (-32.35%)
TOTAL TREE'S REMAINING	= 46 (67.65%)	TOTAL TREE'S BEING ADDED	= 25 (+36.76%)
NEW TREE TOTAL	= 71		



LEGEND

TREE TO REMAIN	
TREE TO BE REMOVED	
TREE TO BE ADDED	

0' 20' 40' 60'

SCALE: 1" = 20'

GEN7 ENGINEERING

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REVISIONS			
2	06/18/25	BNS	FINAL ISSUE
1	04/15/25	BNS	FINAL ISSUE
0	03/07/25	BNS	FINAL ISSUE
B	03/06/25	BNS	PRELIMINARY ISSUE
A	03/05/25	BNS	PRELIMINARY ISSUE
#	DATE	BY	DESCRIPTION

STEPHEN M. CARPENTER REGISTERED ENGINEER LICENSED PROFESSIONAL ENGINEER AGRICULTURE COMMERCE NO. 105147 STATE OF TENNESSEE 06-18-2025

verizon

SITE NAME: LANTON
SITE NUMBER: 17330373

VOGUE TOWERS

SITE NAME: LANTON
SITE NUMBER: TN-5001
SITE ADDRESS: 2507 GROVE PARK WAY COLUMBIA, TN 38401
SITE TYPE: RAWLAND

SHEET TITLE: TREE PRESERVATION PLAN

SHEET NUMBER	REVISION
Z-107	2

EROSION NOTES:

1. CLEARING AND GRUBBING SHALL NOT BE INITIATED MORE THAN 10 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS TEMPORARILY SEEDED.
1. ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICABLE.
2. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED CONCURRENT WITH CLEARING OPERATIONS. AND SHALL BE FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS.
3. CONSTRUCTION SHALL BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF GRADED SOIL AREAS AND SHALL BE PHASED FOR PROJECTS THAT HAVE OVER 50 ACRES OF SOIL DISTURBANCE. HOWEVER, PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EROSION CONTROL MEASURES OVER TEMPORARY EROSION CONTROL MEASURES ON ALL PROJECTS.
4. SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE / U.S. EROSION AND SEDIMENTATION CONTROL MEASURES TO PROTECT WATER QUALITY MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. SILT FENCE MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS. ON THE DOWNHILL SIDE OF STOCKPILED SOIL. AND ALONG STREAM BANKS IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION IN TO STREAMS. THEY MUST BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.
5. CHECK DAMS SHALL BE UTILIZED WHERE RUNOFF IS CONCENTRATED. CLEAN ROCK, BRUSH, SANDBAG, OR CHECK DAMS SHALL BE PROPERLY CONSTRUCTED TO DETAIN RUNOFF AND TRAP SEDIMENT. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, THAT CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS.
6. TEMPORARY OR PERMANENT SOIL STABILIZATION SHALL BE ACCOMPLISHED WITHIN 15 DAYS AFTER FINAL GRADING OR OTHER EARTHWORK, PERMANENT SOIL STABILIZATION SHALL REPLACE TEMPORARY STABILIZATION AS SOON AS PRACTICABLE.
7. THE CONTRACTOR SHALL INSTALL A RAIN GAUGE ON-SITE AND MAINTAIN IT IN GOOD WORKING CONDITION. THE CONTRACTOR SHALL RECORD DAILY PRECIPITATION ON THE PROJECT AND PROVIDE THIS INFORMATION TO THE ENGINEER ON A MONTHLY BASIS.
8. INSPECTIONS OF EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DONE BEFORE ANTICIPATED STORM EVENTS (OR SERIES OF STORM EVENTS SUCH AS INTERMITTENT SHOWERS OVER ONE OR MORE DAYS) AND WITHIN 24 HOURS AFTER THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER, AND AT LEAST TWALK-IN-CABINETE PER WEEK, 72 HOURS APART. THE RECORD OF INSPECTIONS MUST BE RETAINED ON SITE DURING THE DURATION OF THE PROJECT.
9. OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING IMPACTS TO SURROUNDING WATERS. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.
10. UPON CONCLUSION OF THE INSPECTIONS, EROSION AND SEDIMENT CONTROL MEASURE FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER THE CONDITION IS IDENTIFIED.
11. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN ON-SITE (OR AT A NEARBY OFFICE).
12. THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE / U.S., INCLUDING WETLANDS, SHALL BE ONLY AS SHOWN ON THE PROJECT PLANS AND/OR AS SO SPECIFIED IN THE ARAP AND/OR SECTION 404 PERMIT (S). ANY ADDITIONAL PERMITS REQUIRED BY THE CONTRACTOR'S METHOD OF OPERATION, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN.
13. EXCAVATION AND FILL ACTIVITIES SHALL BE SEPARATED FROM FLOWING WATERS. ALL SURFACE WATER FLOWING TOWARD THE EXCAVATION OR FILL WORK SHALL BE DIVERTED THROUGH UTILIZATION OF COFFERDAMS, BERMS, OR TEMPORARY CHANNELS. TEMPORARY DIVERSION CHANNELS MUST BE PROTECTED BY NON-ERODIBLE MATERIAL AND LINED TO THE EXPECTED HIGH WATER LEVEL. COFFERDAMS MUST BE CONSTRUCTED OF SANDBAGS, CLEAN ROCK, STEEL SHEETING OR OTHER NON-ERODIBLE MATERIAL. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, THAT CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS.
14. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS FROM ENTERING WATERS OF STATE / U.S.
15. THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS STATE / U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES: INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). APPROPRIATE CONTAINMENT MEASURE FOR THESE AREAS SHALL BE UTILIZED. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURE SHALL BE TAKES IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.
16. BORROW AND WASTE DISPOSAL AREAS SHALL BE LOCATED IN NON-WETLAND AREAS AND ABOVE THE 100-YEAR, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN. BORROW AND WASTE DISPOSAL AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE / U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY AN ARAP, 404, OR NPOES PERMIT, OBTAINED SOLELY BY THE CONTRACTOR.
17. WETLAND AREAS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS PROVIDED FOR IN THE PLANS.
18. ANY DISAGREEMENT BETWEEN THE PROJECT PLANS, THE PROJECT AS CONSTRUCTED AND THE PERMIT OR PERMITS ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE ENGINEER SHALL DECIDE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLANS REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.
19. THE EROSION AND SEDIMENT CONTROL MEASURE AND/OR PLAN SHALL BE MODIFIED AS NECESSARY SO THAT THEY ARE EFFECTIVE AT ALL TIMES THROUGHOUT THE COURSE OF THE PROJECT.
20. FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN SEVEN (7) DAYS AFTER TRENCHING. ANY TEMPORARY SPOIL PILE OF EXCAVATED EARTH SHALL BE LOCATED WITHIN THE PROJECT EROSION CONTROL MEASURES ARE NOT BACKFILLED OVERNIGHT. APPROPRIATE EROSION CONTROL AND SAFETY MEASURE WILL BE INSTALLED UNTIL SUCH TIME AS THE TRENCH IS BACKFILLED.
21. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO AND/OR CONCURRENT WITH LAND-DISTURBING ACTIVITIES AS DETAILED IN THESE PLANS.
22. THE EROSION, SEDIMENT CONTROL MEASURES, AND PLAN SHALL BE MODIFIED AS NECESSARY AS TO BE EFFECTIVE AND CURRENT AT ALL PHASES OF PROJECT.
23. CONTROLS TO PREVENT ON-SITE EROSION AND TRANSPORT OF SEDIMENT OFF-SITE SHALL AT A MINIMUM CONFORM TO THE LATEST EDITION OF THE STATE EROSION AND SEDIMENT CONTROL HANDBOOK AND ALL APPLICABLE LOCAL CODES.
24. FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL RESULT IN ALL WORK ON THE SITE IMMEDIATELY BEING BROUGHT TO A HALT UNTIL THE MEASURES CAN BE BROUGHT INTO COMPLIANCE WITH THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK AND ALL APPLICABLE LOCAL CODES.
25. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED CONCURRENT WITH CLEARING OPERATIONS AND SHALL BE FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS. THE LOCATION OF SOME CONTROL MEASURES MAY HAVE TO BE ALTERED SLIGHTLY FROM WHAT IS SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE SIGNIFICANTLY DIFFERENT FROM FINAL DRAINAGE PATTERNS, OR AS ACTUAL SITE TOPOGRAPHY REQUIRES.
26. SITE CONSTRUCTION MAY COMMENCE WHEN EROSION AND SEDIMENT CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION HAVE BEEN INSTALLED. SEDIMENT AND EROSION CONTROLS SHALL REMAIN UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED AND FINAL PAVING AND SURFACING IS COMPLETE.
27. CONSTRUCTION EXITS SHALL BE CONSTRUCTED AT EACH POINT OF ENTRY OR EXIT FROM THE SITE AND SHALL PREVENT THE TRACK-OUT OF SEDIMENT OR OTHER MATERIAL FROM THE SITE ONTO PUBLIC RIGHT-OF-WAY. ANY MATERIAL APPEARING ON THE PUBLIC RIGHT-OF-WAY SHOULD BE REMOVED IMMEDIATELY. THE CONSTRUCTION EXIT SHALL BE MAINTAINED SO ITS PERFORMANCE DOES NOT DETERIORATE OVER THE SPAN OF THE PROJECT.
28. PERIMETER CONTROLS SHALL BE INSTALLED AFTER THE INSTALLATION OF CONSTRUCTION EXITS.
29. ALL SILT BARRIERS SHALL BE INSTALLED AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL BE DONE UNTIL TUBES & WATTLES AND/OR SILT FENCES ARE INSTALLED AS SHOWN ON THE PLANS.
30. DISTURBED AREAS LEFT EXPOSED AND UNWORKED FOR PERIODS OF GREATER THAN 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY VEGETATION.
31. DISTURBED AREAS LEFT EXPOSED AND UNWORKED FOR PERIODS OF GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH AND PERMANENT VEGETATION.
32. DUST CONTROL SHALL BE UTILIZED AS NEEDED AND MUST BE IN COMPLIANCE WITH ALL APPLICABLE LOCAL CODES.
33. AMENDMENTS AND/OR REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE ENGINEER.
34. THE CONTRACTOR SHALL REMOVE SILT FROM THE SILT FENCE OR TUBES & WATTLES WHEN THE ACCUMULATED DEPTH IS ONE-HALF (1/2) OF THE HEIGHT OF THE CONTROL.
35. ALL UTILITY LOCATIONS ARE APPROXIMATE, AND IT IS POSSIBLE SOME EXISTING UTILITIES ARE NOT SHOWN ON THE PLANS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE THE LOCATIONS OF ALL UNDERGROUND UTILITIES VERIFIED AND MARKED PRIOR TO CONSTRUCTION.

GRADING NOTES :

1. PROPOSED CONTOURS AND SPOT ELEVATIONS ARE SHOWN AT TOP OF CRUSHED STONE, TOP OF FOUNDATION, OR TOP OF TOPSOIL. SEE DETAILS FOR THICKNESS OF CRUSHED STONE. MASS GRADED AREAS AND CRUSHED STONE SHALL BE FINISHED WITHIN 4" OF GRADES SHOWN. FOUNDATIONS SHALL BE FINISHED WITHIN 0.5" OF GRADES SHOWN.
2. ALL TREES, ROOTS, BRUSH, AND ORGANIC MATTER (TOPSOIL) SHALL BE REMOVED BEFORE BEGINNING FILL. FILL MATERIAL SHALL BE CLEAR SOIL CONTAINING NO ROCKS LARGER THAN 6 INCHES.
3. FILLS SHALL BE FORMED OF SATISFACTORY MATERIAL PLACED IN SUCCESSIVE HORIZONTAL LAYERS OF NOT MORE THAN 6 INCHES IN LOOSE DEPTH FOR THE FULL WIDTH OF EACH STRIP. FILL SOIL SHALL BE PLACED AT A MOISTURE CONTENT THAT IS WITHIN MINUS 1% OR PLUS 3% A OF THE OPTIMUM MOISTURE CONTENT AND TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM 698 (STANDARD PROCTOR). THE UPPER 12 INCHES OF FILL SHALL BE COMPACTED TO 98%.
4. STANDARD PROCTOR TESTS (ASTM 698) SHALL BE DONE BY AN INDEPENDENT TESTING LABORATORY EMPLOYED BY THE CONTRACTOR. IN-PLACE DENSITY TESTS SHALL BE PERFORMED ON EACH LIFT TO ENSURE PROPER PLACEMENT OF FILL MATERIAL.
5. ALL DISTURBED AREAS SHALL RECEIVE GROUND COVER. ALL AREAS TO RECEIVE GROUND COVER SHALL HAVE A MINIMUM OF 4 INCHES OF TOPSOIL. ALL FOREIGN DEBRIS SHALL BE REMOVED BEFORE PLACING TOPSOIL. AREAS WITH LESS THAN 4:1 SLOPE SHALL BE SEEDED WITH FOUR POUNDS OF KENTUCKY 31 FESCUE AND ONE POUND OF ANNUAL RYE PER 1,000 SQFT. SLOPES STEEPER THAN 4:1 SHALL BE SEEDED WITH A MIXTURE OF 1/4 POUND SCARIFIED SERICEA LESPEDEZA. 1/4 POUND CROWN VETCH, AND ONE POUND KENTUCKY 31 FESCUE PER 1,000 SQFT WITH 30 POUNDS PER 1,000 SQFT OF 6-12-12 FERTILIZER. SLOPES 3:1 OR STEEPER SHALL BE COVERED WITH NORTH AMERICAN GREEN EROSION CONTROL BLANKET S150 INSTALLED PER MANUFACTURERS SPECIFICATIONS (OR ENGINEER APPROVED EQUAL) TO PREVENT EROSION. CONTRACTOR SHALL WARRANTY GROUND COVER AND SLOPES FOR A PERIOD OF 1 YEAR.
6. CONFINE ALL CONSTRUCTION ACITIVITY TO PROPERTY OWNER'S PARCEL. DO NOT ENTER ADJACENT PROPERTY WITHOUT OBTAINING APPROVAL THROUGH TELLCO PARTNERSHIP.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FENCE AND OTHER TEMPORARY EROSION CONTROL MEASURES AFTER GRASS IS ESTABLISHED AND STABILIZED.
8. ALL DISTURBED AREAS NOT TO BE COVERED WITH GRAVEL, RIP RAP, PAVEMENT, OR OTHER STABILIZATION SHALL RECEIVE GROUND COVER. ALL AREAS TO RECEIVE GROUND COVER SHALL HAVE A MINIMUM OF 4 INCHES OF TOPSOIL
9. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE AT ALL TIMES. DO NOT ALLOW WATER TO STAND OR POND. ANY DAMAGE TO STRUCTURES OR WORK ON THE SITE CAUSED BY INADEQUATE MAINTENANCE OF DRAINAGE PROVISIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND ANY COST ASSOCIATED WITH REPAIRS FOR SUCH DAMAGE WILL BE AT THE CONTRACTOR'S EXPENSE.
10. ALL WASTE MATERIAL SHALL BE PROPERLY DISPOSED OF OFF-SITE OR AS DIRECTED BY THE VOGUE TOWERS II, LLC'S CONSTRUCTION MANAGER AND IN ACCORDANCE WITH JURISDICTIONAL AUTHORITIES.
11. EXCAVATIONS ADJACENT TO EXISTING PAVEMENT SHALL BE MADE TO A NEAT SAW-CUT LINE.
12. ALL TREES THAT ARE CUT OR KNOCKED DOWN WITHIN THE LIMITS OF DISTURBANCE SHALL BE DISPOSED OF IN ACCORDANCE WITH NOTE 10 OR MULCHED FOR LATER USE.

GEN 7 ENGINEERING

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STATE OF TENNESSEE
06-18-2025

verizon

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SITE NUMBER
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VOGUE TOWERS

SITE NAME
LANTON

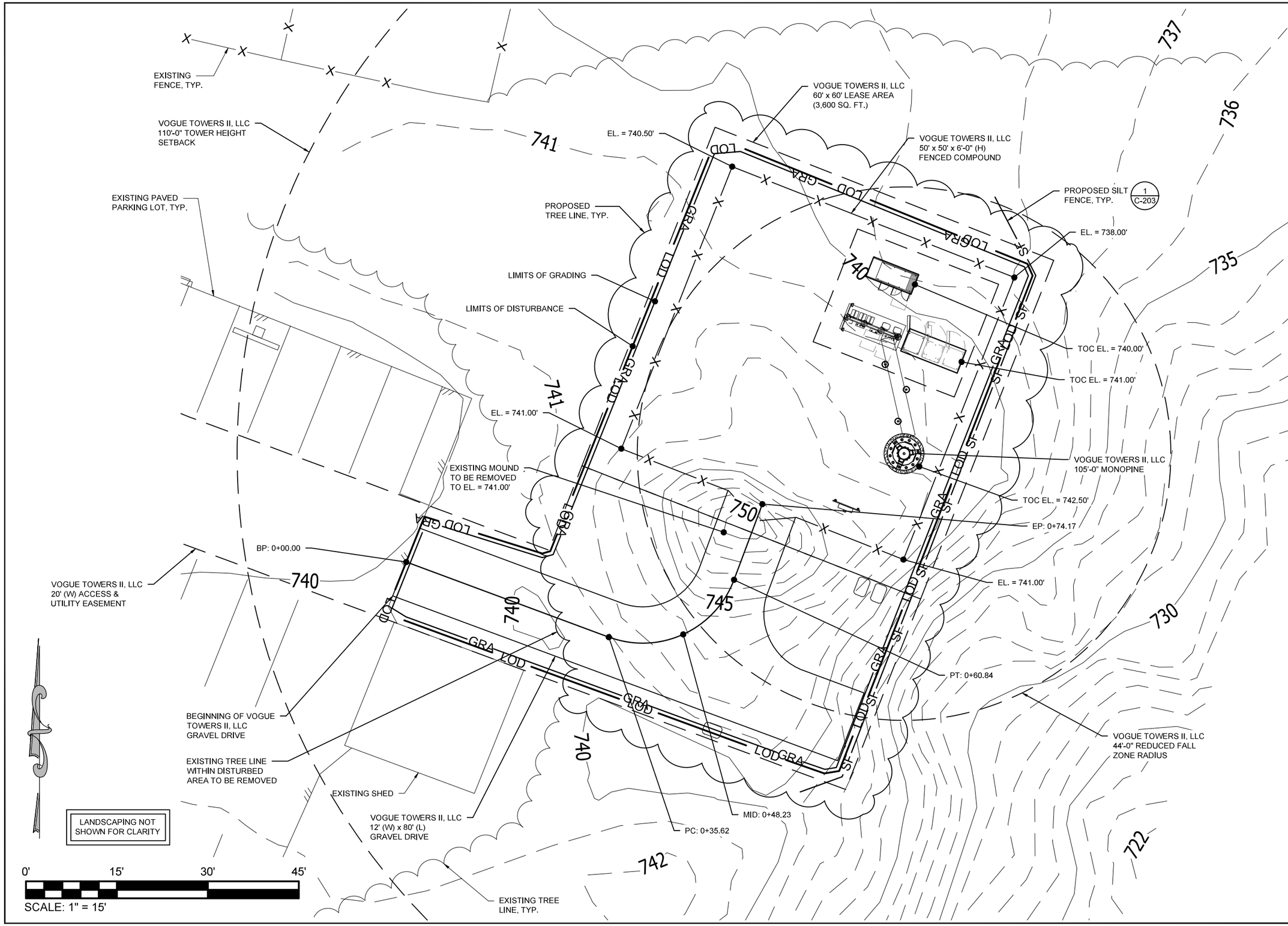
SITE NUMBER
TN-5001

SITE ADDRESS
2507 GROVE PARK WAY
COLUMBIA, TN 38401

SITE TYPE
RAWLAND

SHEET TITLE
EROSION NOTES

SHEET NUMBER	REVISION
Z-200	A



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LANTON

SITE NUMBER
TN-5001

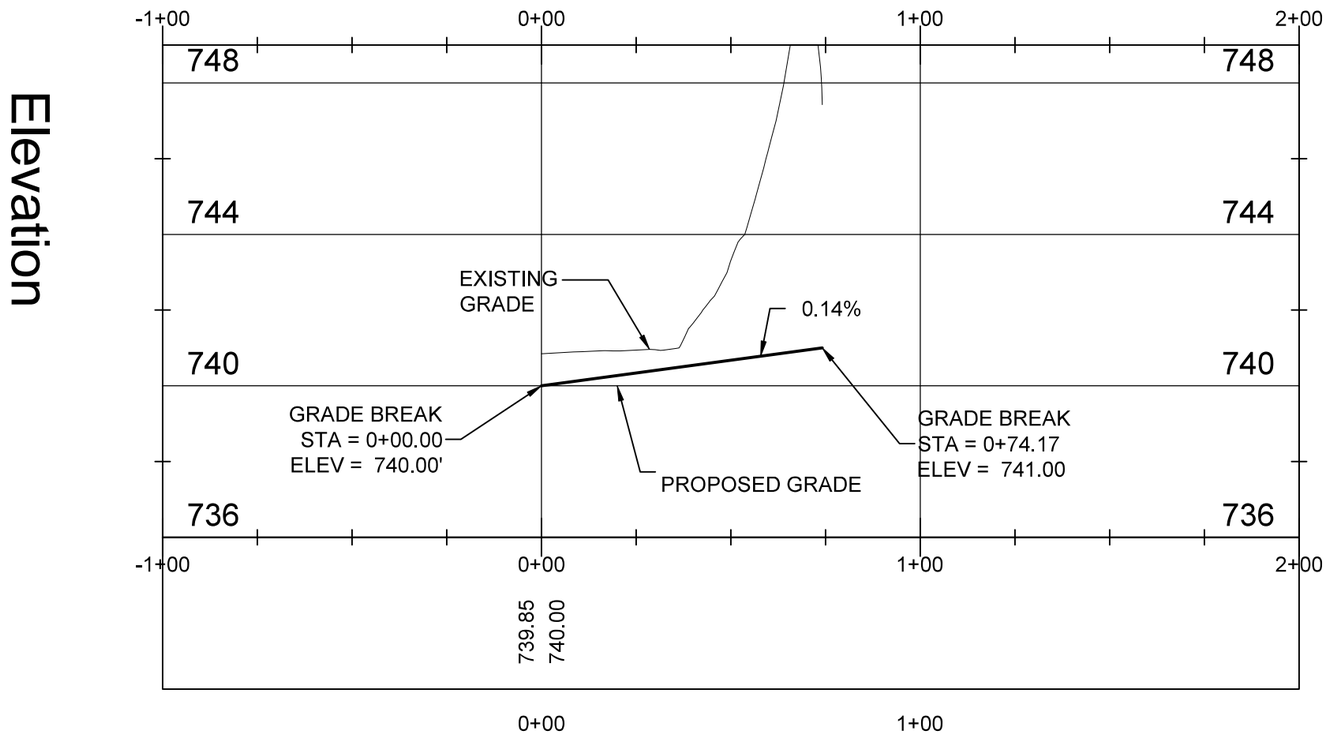
SITE ADDRESS
2507 GROVE PARK WAY
COLUMBIA, TN 38401

SITE TYPE
RAWLAND

SHEET TITLE
SITE GRADING PLAN

SHEET NUMBER	REVISION
Z-201	A

ACCESS DRIVE PROFILE



CUT / FILL SUMMARY :

TOTAL LIMITS OF DISTURBANCE :	TOTAL LIMITS OF GRADING :	NAME	2D AREA	CUT	FILL	NET
		COMPOUND vs EG	2500.00 SQ FT	15.82 CU YD	0.00 CU YD	15.82 CU YD <CUT>
		DRIVE vs EG	890.04 SQ FT	23.51 CU YD	0.00 CU YD	23.51 CU YD <CUT>
		TOTAL ROCK DISPLACEMENT	-	45.12 CU YD		45.12 CU YD <CUT>
0.125 AC ±	0.121 AC ±	TOTALS	3390.04 SQ FT	84.45 CU YD	0.00 CU YD	84.45 CU YD <CUT>

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SITE NUMBER: 17330373

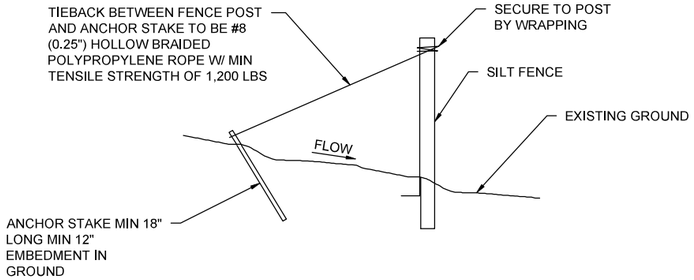
VOGUE TOWERS

SITE NAME: LANTON
SITE NUMBER: TN-5001

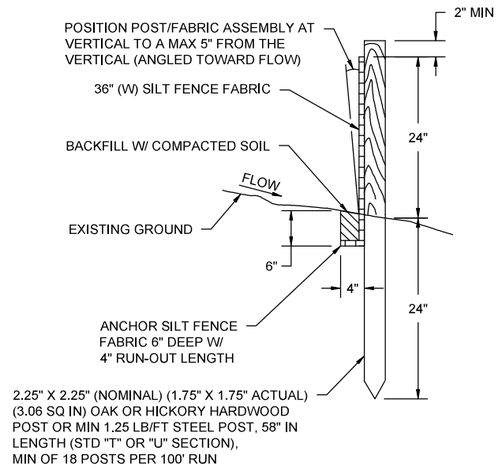
SITE ADDRESS: 2507 GROVE PARK WAY COLUMBIA, TN 38401
SITE TYPE: RAWLAND

SHEET TITLE: DRIVEWAY PROFILE

SHEET NUMBER	REVISION
Z-202	A



SILT FENCE TIEBACK FOR STEEL OR WOOD POSTS



SECTIONAL VIEW

SILT FENCE DETAIL (1)
NTS

GEN 7 ENGINEERING

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REVISIONS

#	DATE	BY	DESCRIPTION
A	12/12/24	BNS	PRELIMINARY ISSUE



verizon

SITE NAME: LANTON
SITE NUMBER: 17330373

VOGUE TOWERS

SITE NAME: LANTON
SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY COLUMBIA, TN 38401

SITE TYPE: RAWLAND

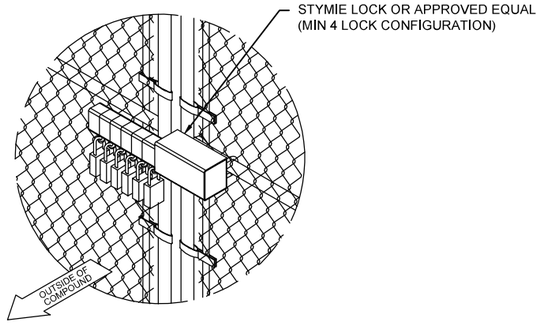
SHEET TITLE: SITE GRADING DETAILS

SHEET NUMBER	REVISION
Z-203	A

TYPICAL WOVEN WIRE FENCING NOTES:

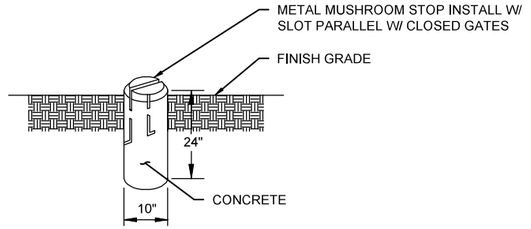
(INSTALL FENCING PER ASTM F-567, SWING GATES PER ASTM F-900)

1. GATE POST, CORNER, TERMINAL OR PULL POST SHALL BE 3"Ø SCHEDULE 40 FOR GATE WIDTHS UP THRU 7 FEET OR 14 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
2. LINE POST: 2"Ø SCHEDULE 40 PIPE PER ASTM-F1083. INSTALL EVERY 8'-0" ALONG FENCE LINE.
3. GATE FRAME: 1-1/2"Ø SCHEDULE 40 PIPE, STELL, HOT-DIPPED ZINC COATED (GALVANIZED) WELDED STEEL PIPE PER ASTM-F1083.
4. TOP RAIL & BRACE RAIL: 1-5/8"Ø SCHEDULE 40 PIPE PER ASTM-F1083.
5. CHAIN LINK FABRIC: 9 GA. MIN. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
6. TIE WIRE: MINIMUM 11 GA. GALVANIZED STEEL INSTALL A SINGLE WRAP TIE WIRE AT POSTS AND RAILS AT MAX. 24" INTERVALS. INSTALL HOG RINGS ON TENSION WIRE AT 24" INTERVALS.
7. TENSION WIRE: 7 GA. GALVANIZED STEEL
8. GATE LATCH: 1-3/8" OD PLUNGER ROD W/ MUSHROOM TYPE CATCH AND LOCK (KEYED ALIKE FOR ALL SITES OR COMBINATION AS SPECIFIED BY OWNER)
9. HEIGHT = 6'-0" VERTICAL DIMENSION. WORK WITH SPECIFICATION 2831.



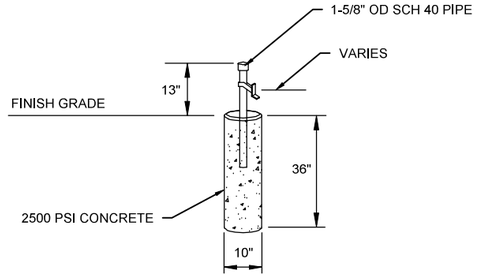
FENCE LOCK DETAIL

NTS



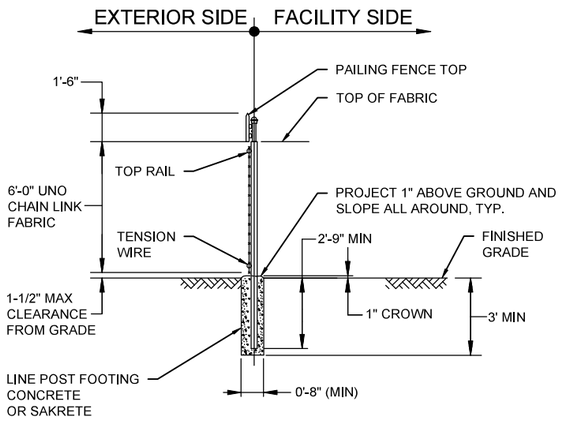
MUSHROOM STOP

NTS



GATE STOP DETAIL

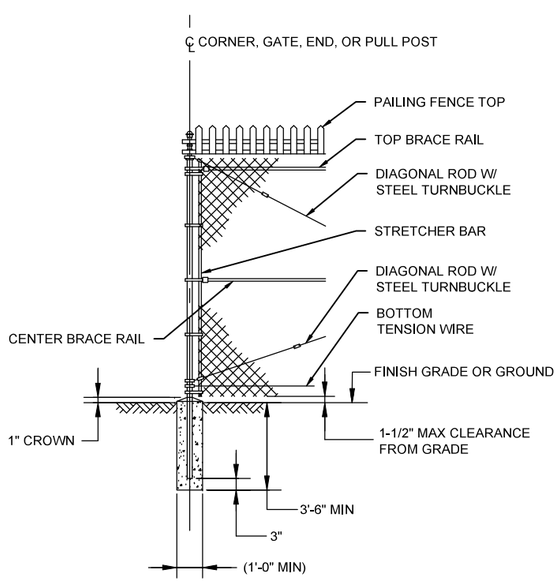
NTS



TYPICAL SECTION

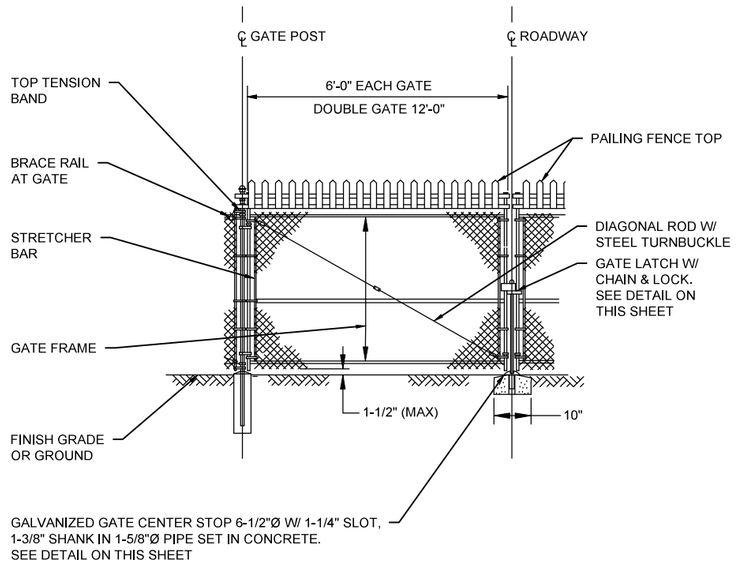
WOVEN WIRE FENCE (1)

NTS



WOVEN WIRE CORNER, GATE, END, OR PULL POST (2)

NTS



WOVEN WIRE DOUBLE GATE (3)

NTS

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REVISIONS

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0	03/07/25	BNS	FINAL ISSUE
B	03/06/25	BNS	PRELIMINARY ISSUE
A	03/05/25	BNS	PRELIMINARY ISSUE



verizon

SITE NAME: LANTON

SITE NUMBER: 17330373

VOGUE TOWERS

SITE NAME: LANTON

SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY COLUMBIA, TN 38401

SITE TYPE: RAWLAND

SHEET TITLE: SITE DETAILS

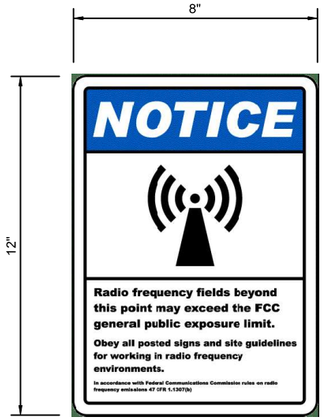
SHEET NUMBER	REVISION
Z-301	2



10" x 14"

NO TRESPASSING SIGN (1)

NTS



12" x 8"

RF GUIDELINES SIGN (2)

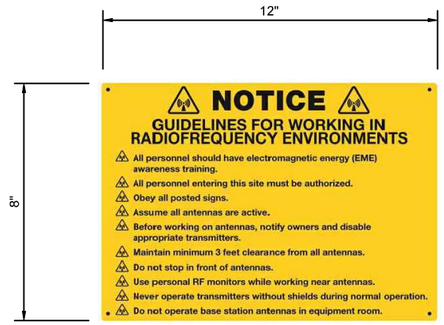
NTS



12" x 8"

RF GUIDELINES SIGN (3)

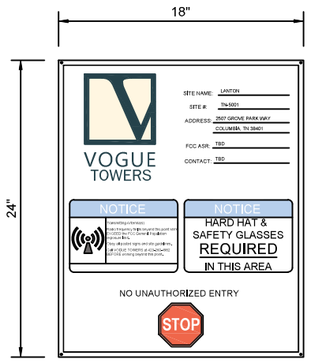
NTS



8" x 12"

RF GUIDELINES SIGN (4)

NTS



24" x 18"

SITE ID SIGN (5)

NTS

ASR # XXXXXXX

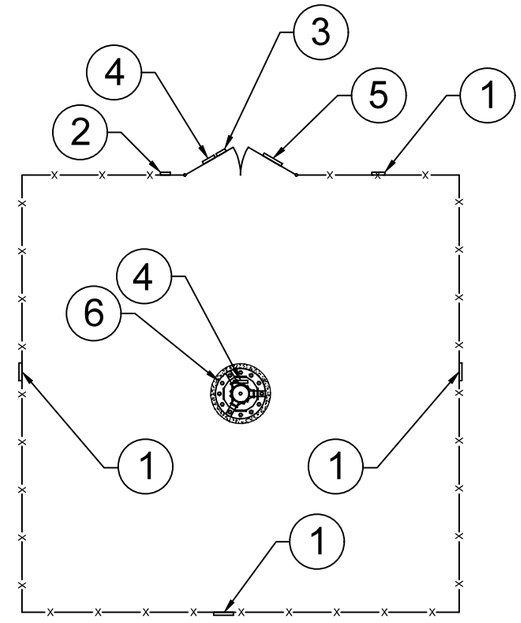
-WHEN REQUIRED, PLACE ON TOWER

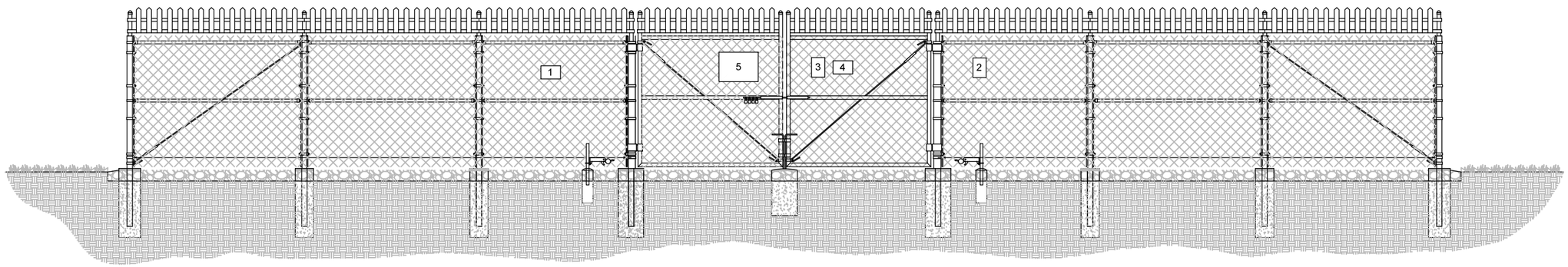
-USE A DECAL ON MONOPOLE AND METAL SIGN ON SELF-SUPPORT TOWER OR GUYED TOWER

-LETTERS TO BE 3" MIN

ASR # (6)

NTS





FENCED COMPOUND DETAILS

NTS

Gen7 Engineering

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#	DATE	BY	DESCRIPTION

FOR REFERENCE ONLY

verizon

SITE NAME: LANTON

SITE NUMBER: 17330373

VOGUE TOWERS

SITE NAME: LANTON

SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY COLUMBIA, TN 38401

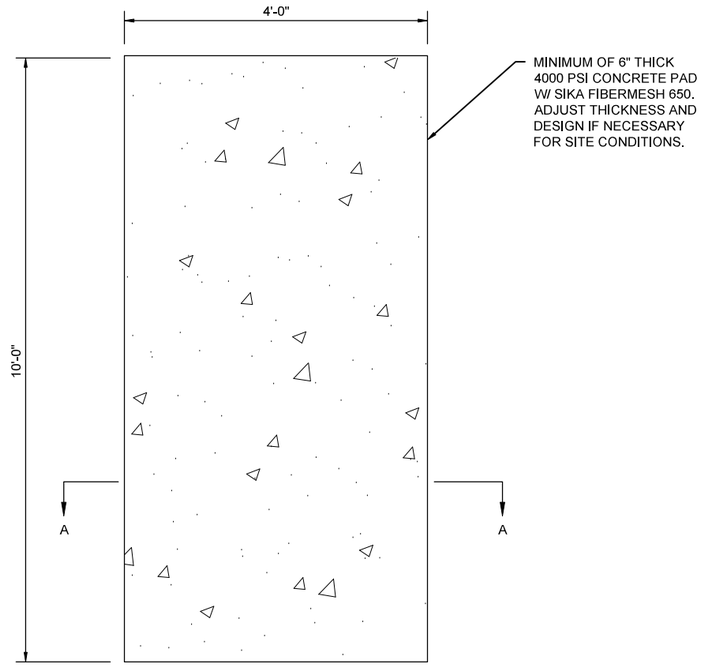
SITE TYPE: RAWLAND

SHEET TITLE: SITE DETAILS

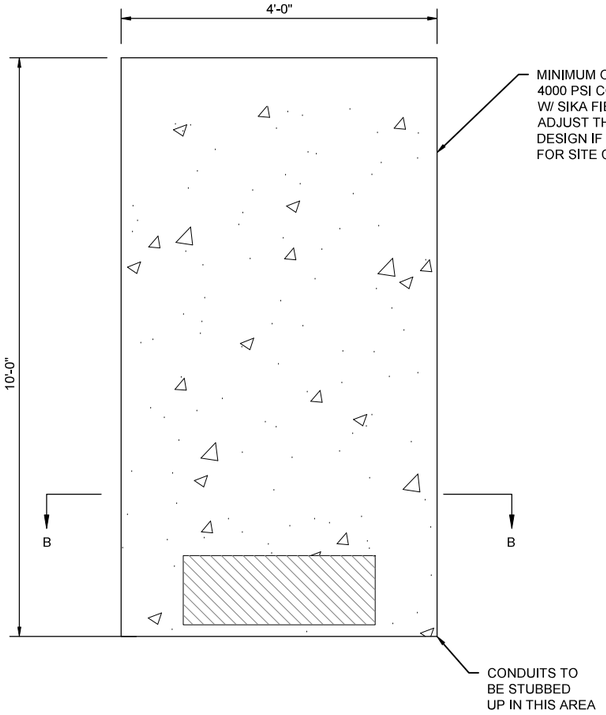
SHEET NUMBER	REVISION
Z-302	2

CONCRETE PAD NOTES:

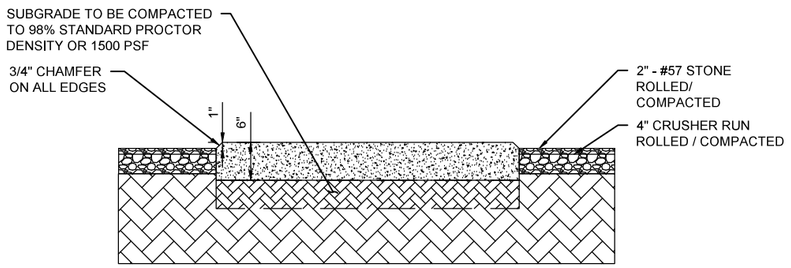
1. VERIFY GENERATOR STUB UP AREA FOR SPECIFIC MANUFACTURER/MODEL NUMBER.
2. VERIFY PAD SIZE REQUIREMENTS FOR SPECIFIC MANUFACTURER/MODEL NUMBER.
3. CONDUITS TO STUB UP FULL HEIGHT THROUGH SLEEVE IN ENHANCED DIESEL TANK ENCLOSURE.
4. EMBED CONDUITS IN CONCRETE PAD.
5. ALL CONCRETE SHALL BE NORMAL WEIGHT AND CONFORM TO THE ACI 301 AND THE FOLLOWING:
   - 5.a. MINIMUM COMPRESSION STRENGTH 4,000 PSI
   - 5.b. AIR ENTRAPMENT RANGE 3% TO 6%
   - 5.c. SLUMP GREATER THAN 3", BUT NOT TO EXCEED 6"
6. CONDUITS TO BE TERMINATED WITH MALE ADAPTER AND THREADED BUSHING.



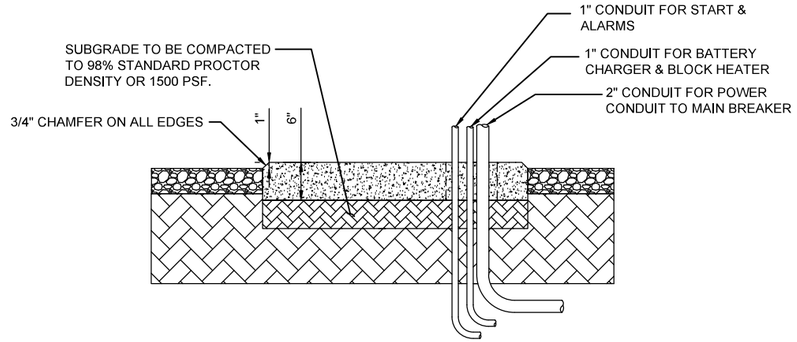
EQUIPMENT PAD PLAN (1)
NTS



GENERATOR PAD PLAN (2)
NTS



SECTION A-A THROUGH EQUIPMENT PAD
NTS



SECTION B-B THROUGH GENERATOR PAD
NTS

GEN7 ENGINEERING

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B	03/06/25	BNS	PRELIMINARY ISSUE
A	03/05/25	BNS	PRELIMINARY ISSUE



verizon

SITE NAME	LANTON
SITE NUMBER	17330373

VOGUE TOWERS

SITE NAME	LANTON
SITE NUMBER	TN-5001
SITE ADDRESS	2507 GROVE PARK WAY COLUMBIA, TN 38401
SITE TYPE	RAWLAND
SHEET TITLE	SITE DETAILS

SHEET NUMBER	REVISION
Z-303	2

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

PLANNING COMMISSION
PROJECT DEVELOPMENT APPLICATION

SUBMITTAL REQUIREMENTS

Final Plat: * *1 hard copy of all materials for submittal + PDF copy on a USB flash drive (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"
All Others: * Please submit the Application online at City of Columbia | Permitting (onlama.com)

ADDRESS/LOCATION	2494 Nashville Hwy, Columbita, TN		
	TAX MAP: 051	GROUP:	PARCEL: 007.01
SUMMARY OF NATURE OF REQUEST AND WORK	Preliminary site plan approval of proposed wireless communications facility within PUD zoning, requiring PUD Amendment. Proposed facility is a multi-provider site, including ~~125~~ 105' monopine tower structure. (110' overall)		

DATE OF PRE-APPLICATION CONFERENCE	Oct 9, 1024	*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
❑ Comprehensive Plan Amendment ❑ Annexation ❑ Rezoning ❑ Preliminary Plat ❑ Final Plat ❑ PUD Preliminary Master Plan ☒ PUD Final Site Plan ☒ Site Development Plan ☒ Other: PUD Amendment **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations:** ❑ Annexation Permission Form **Annexations/Rezoning/Plan Amendments:** ❑ Requested Zone Listed ❑ Statement of Compliance with Comprehensive Plan ❑ Concept Plan **Preliminary Plats/Site Development Plans:** ❑ Plans and/or Plats conforming to City standards with signed and completed check list **All Annexations/Rezoning/Preliminary Plats/Site Development Plans and PUDS:** ☒ Receipt of Payment for Pre-Application Meeting ☒ Written Legal Description copy ❑ Columbia Water System Availability Letter N/A ❑ Columbia Waste Water Department Will Serve Letter N/A

Rev. 2/7/2024

	Plats/PUDs: ☒ Project Name (include Sections & Phases) Lanton (TN-5001) ☒ Total Number of Lots/Residential Units 0 ☒ Square Footage of Non-Residential Floor Space 0 ☒ Total acreage Lease area 3,600 sq/ft (plus access), parent parcel approx 5 acres

Applications and all required submittals must be filed with the Department of Development Services prior to the established deadline. Both the applicant and property owner (if different from applicant) must sign the application. Any requests to defer or move the item to future meeting dates must be requested by the resubmittal date listed on the Planning Commission schedule.

APPLICANT

All communications go to the Applicant's email that is provided.

Michael Sandifer, on behalf of Vogue Towers

NAME	Vogue Towers II, LLC and Cellco Partnership, d/b/a Verizon Wireless	PHONE	205-532-4870
ADDRESS	430 Chestnut St, Suite 101-B, Chattanooga, TN	EMAIL	Michael@bear-group.net

PROPERTY OWNER NAME	Christ our Savior Evangelical Lutheran Church	PHONE	
ADDRESS	2494 Nashville Hwy, Columbia, TN	EMAIL	Elder@coslutheran.com

If owner is not a natural person, documentation must be provided showing signing authority on behalf of the entity. If multiple persons are listed as owners in the records of the Maury County Assessor, all owners must sign or the signatory must provide documentation of authority to apply on behalf of record owner (i.e., Power of Attorney or notarized Letter of Authorization). In filling out this application, I attest that (1) I am familiar with the rules, regulations, and procedures of the City of Columbia & (2) all information contained herein is accurate & true to the best of my knowledge.

Michael Sandifer, on behalf of Vogue Towers II, LLC, and Verizon Wireless		March 11, 2025
APPLICANT NAME	APPLICANT SIGNATURE	DATE
JOSHUA DAVIS		3-11-25
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE

Rev. 2/7/2024

CONDITION REQUEST

- If a motion is made to approve with conditions, Applicant requests a condition be included to incorporate the engineered 44’ fall zone radius, as depicted in the site design and described in supplied documentation, into the PUD amendment for this property to satisfy Section (5) of Article 4.
- Applicant’s submittal reflects a monopine structure as previously requested by the property owner but they have recently stated they would be open to a traditional monopole should this be favored by the City.

Site Name: **LANTON (PREV)**
Site Number: **TN-5001**
Site Location: **Grove Park Way, Columbia, TN 38401**

LESSEE'S PREMISES:
All that tract or parcel of land lying and being in Maury County, Tennessee and being a portion of the property of Christ Our Savior Evangelical Lutheran Church, of record in Deed Book 1195, Page 444, Register's Office, Maury County, Tennessee and being more particularly described as follows,

COMMENCE at a one-half-inch Iron Rod Found at the Southeast Corner of aforesaid property;
Thence along a Chord Tie Line having a Bearing of N 49°47'18" W, a distance of 318.15 feet to the POINT OF BEGINNING;

Thence N 68°32'42" W, a distance of 60.00 feet;
Thence N 21°27'18" E, a distance of 60.00 feet;
Thence S 68°32'42" E, a distance of 60.00 feet;
Thence S 21°27'18" W, a distance of 60.00 feet to the POINT OF BEGINNING.

Said tract Premises 0.08 Acres (3,600 Square Feet), more or less.

LESSEE'S 20 Access & Utility Easement
All that tract or parcel of land lying and being in Maury County, Tennessee and being a portion of the property of Christ Our Savior Evangelical Lutheran Church, of record in Deed Book 1195, Page 444, Register's Office, Maury County, Tennessee and being more particularly described as follows,

COMMENCE at a one-half-inch Iron Rod Found at the Southeast Corner of aforesaid property;
Thence along a Chord Tie Line having a Bearing of N 49°47'18" W, a distance of 318.15 feet to the POINT OF BEGINNING;

Thence S 21°27'18" W, a distance of 33.79 feet;
Thence N 69°39'42" W, a distance of 123.26 feet;
Thence N 67°59'50" W, a distance of 269.56 feet;
Thence with a curve to the left with an arc length of 3.73 feet, with a radius of 2.38 feet, with a chord bearing of S 67°03'24" W, with a chord length of 3.36 feet;
Thence with a curve to the right with an arc length of 81.44 feet, with a radius of 33.55 feet, with a chord bearing of N 88°20'53" W, with a chord length of 62.87 feet;
Thence with a curve to the left with an arc length of 16.78 feet, with a radius of 20.00 feet, with a chord bearing of N 42°50'38" W, with a chord length of 16.29 feet;
Thence N 66°52'54" W, a distance of 19.09 feet;
Thence with a curve to the left with an arc length of 45.46 feet, with a radius of 30.00 feet, with a chord bearing of S 69°42'15" W, with a chord length of 41.24 feet;
Thence S 26°17'23" W, a distance of 15.83 feet to a point on the Northern Right-of-Way Line of Grove Park Way;
Thence along said Right-of-Way Line and with a curve to the right with an arc length of 20.45 feet, with a radius of 270.00 feet, with a chord bearing of N 51°45'15" W, with a chord length of 20.44 feet;
Thence N 26°17'23" E, leaving said Right-of-Way Line and a distance of 11.59 feet;

Thence with a curve to the right with an arc length of 75.77 feet, with a radius of 50.00 feet, with a chord bearing of N 69°42'15" E, with a chord length of 68.73 feet;
Thence S 66°52'54" E, a distance of 19.09 feet;
Thence with a curve to the right with an arc length of 33.56 feet, with a radius of 40.00 feet, with a chord bearing of S 42°50'38" E, with a chord length of 32.59 feet;
Thence with a curve to the left with an arc length of 32.89 feet, with a radius of 13.55 feet, with a chord bearing of S 88°20'53" E, with a chord length of 25.39 feet;
Thence with a curve to the right with an arc length of 35.11 feet, with a radius of 22.38 feet, with a chord bearing of N 67°03'24" E, with a chord length of 31.62 feet;
Thence S 67°59'50" E, a distance of 269.27 feet;
Thence S 69°39'42" E, a distance of 63.35 feet;
Thence N 21°27'18" E, a distance of 14.95 feet;
Thence S 68°32'42" E, a distance of 60.00 feet to the POINT OF BEGINNING.

Said Easement contains 0.29 Acres (12,623 Square Feet), more or less.

2494 Nashville HWY CEG-PUD (Christ Our Savior)

Project #:	25-0083	Location:	Map 051 Parcel 007.01
Applicant:	Michael Sandifer & Vogue Towers II	Case Type(s):	PUD Revision
Staff Planner:	Charles Rush, Principal Planner	Proposed Use:	None

PROJECT SUMMARY

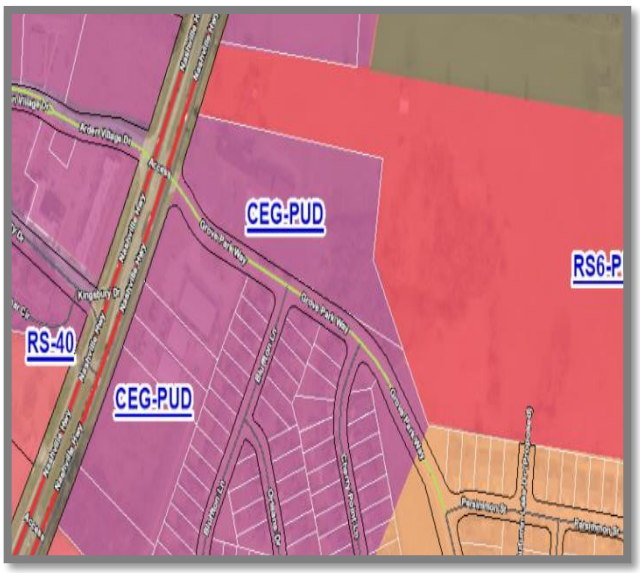
The applicant requests a PUD revision and has submitted a preliminary PUD Master Plan for 2494 Nashville Hwy which will allow a 125' mono-pine with grounding, utilities, fenced compound, and other support structures and components. The Planning Commission approved the rezoning from RS-40 (Residential Single-Family Low Density) to CEG-PUD (Commercial Enterprise General Planned Unit Development) in Ordinance 4042 for the development in December 2015.

- The development is subject to Ordinance 4400
- This PUD revision complies to all standards in which govern a cell tower
- A Financial Surety, Development Agreement, and stormwater maintenance agreement are not applicable to this request.
- The DRC reviewed this proposal at its April 2025 meeting. Staff review included standard comments and requests for technical corrections. Full technical comments are provided in the agenda packet.
- The Planning Commission is the **Recommending Authority** for a PUD revision.
- The City Council is the **Decision-Making Authority** for a PUD revision.
- Templates are provided at the end of the report to assist the Planning Commission in crafting properly formatted motions.

SITE INFORMATION

CURRENT ZONING	EXISTING USE	EXISTING IMP.	LAND AREA
CEG-PUD	Vacant	None	+/-2.56 Acres







PREVIOUS ZONING MAP		ZONING MAP	
SITE CONTEXT/ADJACENT PROPERTIES			
	Future Land Use	Zoning	Current Use
Subject Property	City Center Urban Village	PUD	Commercial
North	City Center Urban Village	PUD	Commercial/Residential
South	City Center Urban Village	PUD	Commercial/Residential
East	City Center Urban Village	PUD	Residential
West	City Center Urban Village	PUD	Residential

The subject site is part of an independent PUD development. It is bordered entirely by other PUD developments. Aside from the parcels that front Nashville Highway the rest of the land around the subject parcel will be or currently is used for residential.

CONFORMITY WITH ZONING ORDINANCE

Article 4.3.9.E. PP (p.243) of the Zoning Ordinance govern Wireless Communication Facilities other than Communication Towers

Wireless Communication Facilities other than Communications Towers shall be permitted in accordance with the applicable Use Table, subject to the following:

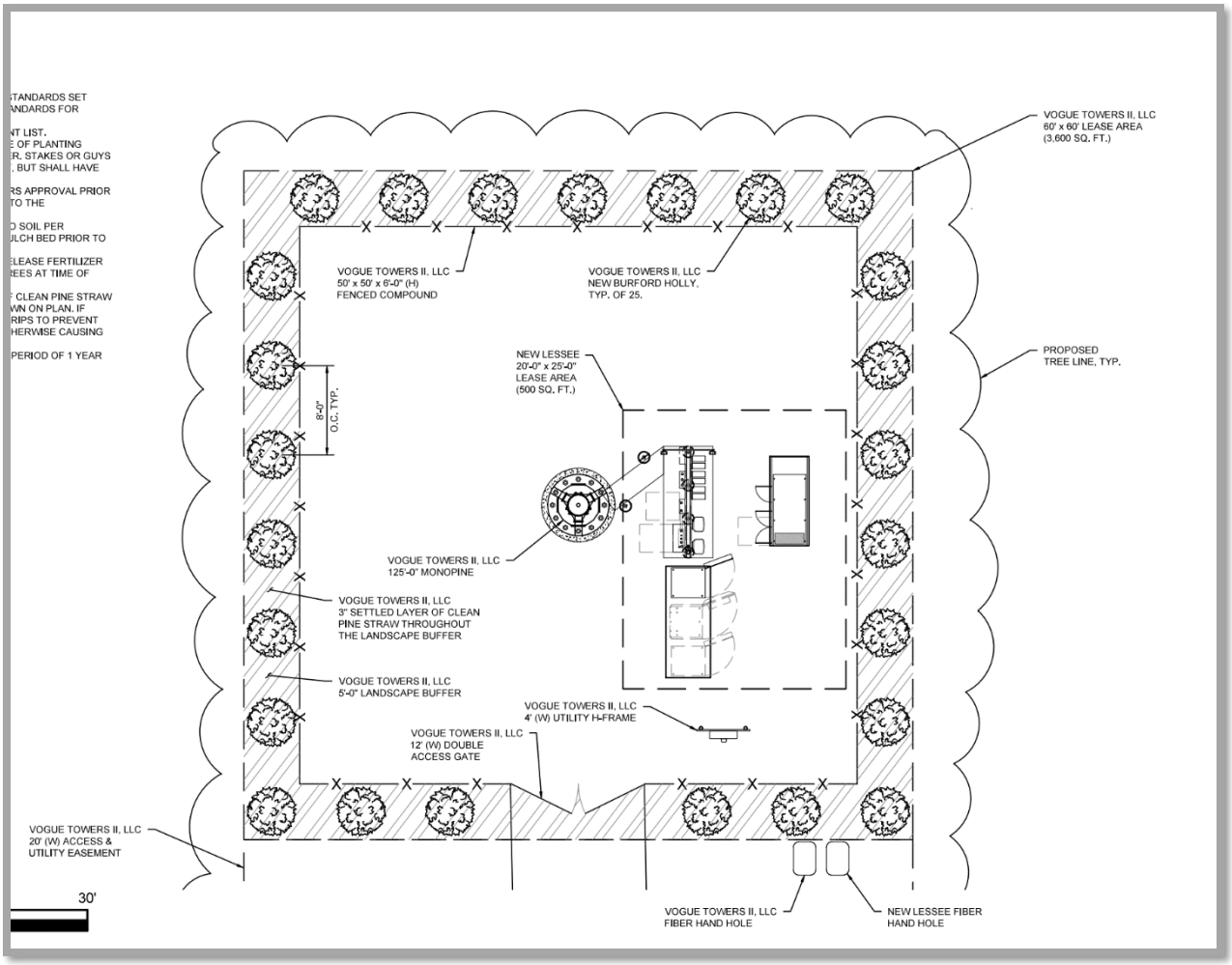
(1) The requirements set forth in this Section 4.3.9.D.6.n. shall govern the location of Towers that exceed, and antennas that are installed at a height in excess of 70 feet. The height limitations applicable to Buildings and Structures shall not apply to Towers and Antennas.

(2) Antennas or Towers located on property owned, leased, or otherwise controlled by the CITY shall be exempt from the requirements of this subsection, provided a license or lease authorizing such Antenna or Tower has been approved by City Council. N/A, property is owned by Christ our Savior Evangelical Lutheran Church.

(3) This Section shall not govern any Tower, or the installation of any Antenna, that is under 70 feet in height and is owned and operated by a federally – licensed amateur radio station operator or is used exclusively for receive – only Antennas. N/A

(4) The following requirements must be met:

> (a) Site and landscape plans drawn to scale and landscape plans drawn to scale; Site and landscape plans included in attached design drawings.



(b) A report including a description of the Tower with technical reasons for its design; The proposed mono-pine tower consists of an eighteen-sided monopole structure, tapered from bottom to top. The structure, foundation and anchor bolt designs are based strictly on ANSI/TIA-222 as amended (currently Rev H). Monopole materials are hot dip galvanized as outlined in ASTM A-123. The attached Fall Zone Letter provides additional explanation as to tower design parameters, including Risk Category, Site Exposure Category, Topographic Category and Environmental Loading.

(c) Documentation establishing the structural integrity for the Tower's proposed uses, certified by a professional engineer licensed in the State of Tennessee competent in such design, the general capacity of the Tower and information necessary to assure that ANSI (American National Standard Institute) standards are met; See attached tower manufacturer design.

(d) A statement of intent whether excess space on the Tower will be leased; See attached letter.

(e) Proof of ownership of the site or a copy of the owner's authorization to use the site; See attached (recorded) Memorandum of Option to Lease between Applicant and property owner.

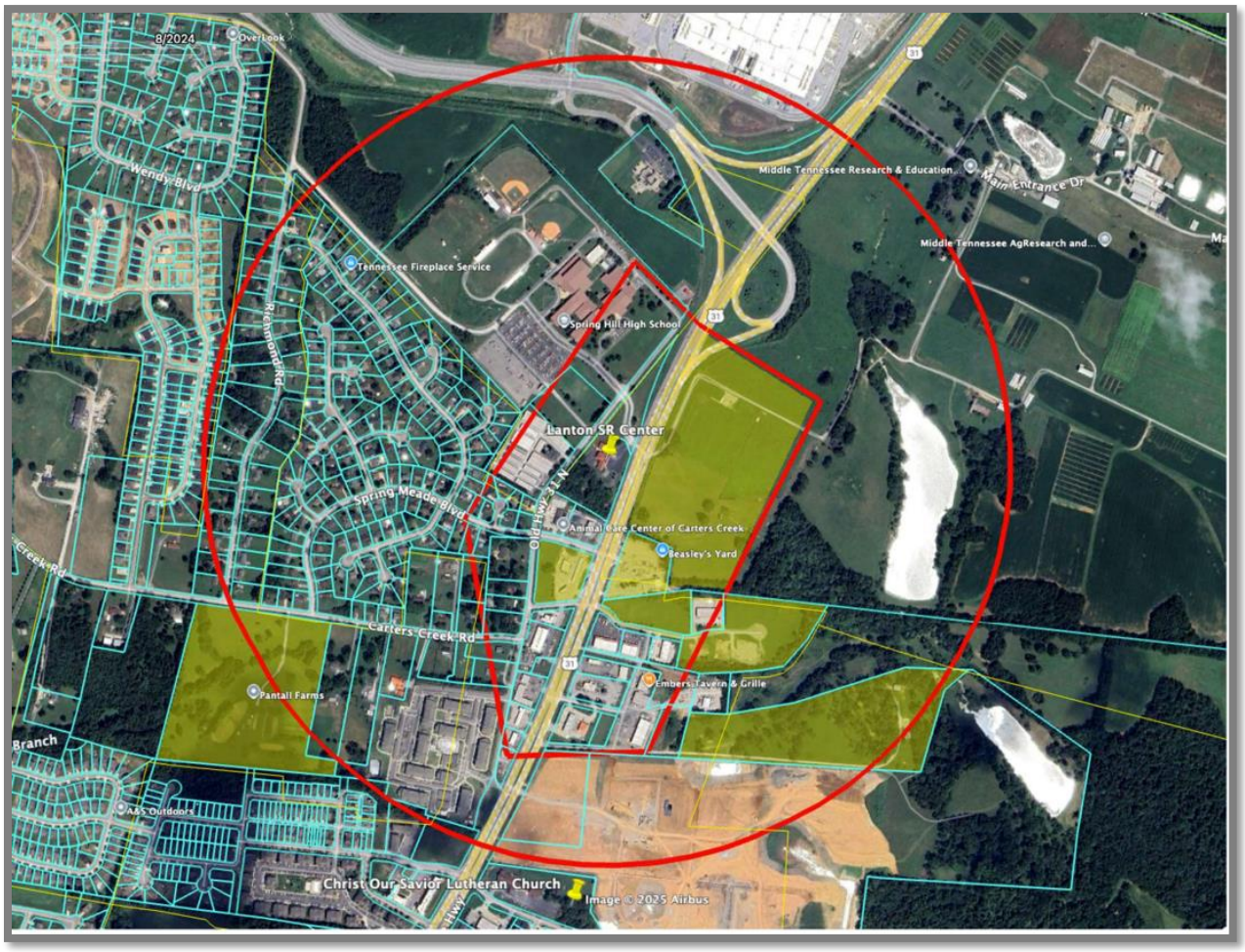
(f) Copies of any Easements necessary to gain access or limited Development areas; Easements noted on survey included in design drawings.

(g) An analysis of the site containing existing topographical contours; Topographical contours are depicted on survey and addressed in the grading plan included in the attached design drawings.

(h) A written opinion from an appropriate authority that the soils and underlying materials will support the intended Structure; The Engineer of Record for the site civil design has reviewed and approved all related design elements as noted in the design drawings, considering typical soils for the region. All sites are drilled for geotechnical data and that information, including boring log and engineer analysis, are provided to the tower manufacturer as part of their engineered design of the tower and foundation.

(i) Evidence that the Tower facility meets technical emissions standards set by the FCC (Federal Communication Commission); See attached letter from Co-Applicant, Verizon Wireless.

(j) Evidence of "Determination of No Hazard" from the FAA (Federal Aviation Administration), as well as all required FCC permit information; Applicant complies, receiving a "Determination of No Hazard to Air Navigation" from the FAA (2025-ASO-245-OE). In addition, Applicant utilizes a 3rd party to review their locations in conjunction with the FAA filing. The attached report from Airspace Safety Analysis & Compliance (ASAC) evaluated the proposed tower in accordance with the requirements specified by the FAA under Federal Aviation Rules part 77 and found that this proposed tower is not a hazard to air navigation. (k) Alternatives to the Tower location and why this site was selected; and Applicant contacted Edwards Real Estate, Dean Norton and Beasley's Yard, none of which 3 were interested. We initiated discussions Middle Tennessee Ag Research Station, and they were initially interested but then stopped responding. We also spoke to Bell Group and could not come to financial terms. We tried to reach Pantall Farms with voicemail and a letter but never received a response. Christ our Savior Lutheran Church said expressed and maintained interest. The attached Real Estate Candidates map highlights the various parcels attempted.



(l) Evidence that the site complies with requirements of the NEPA (National Environmental Policy Act) in regard to impact on wildlife, endangered species, historical sites, Native American religious sites, floodplains, wetlands, high intensity white lights in Residential neighborhoods, and frequency emissions in excess of FCC guidelines. Applicant's site development process includes completing the National Environmental Policy Act (NEPA) review process, which includes consultation with State Historical Preservation Office, Tribal Historical Preservation Office, US Fish & Wildlife, and others to evaluate any impact of the proposed facility at this location. The NEPA process is ongoing, and Applicant is happy to make the final NEPA report a condition of approval. Addressing high intensity white lights, as described in (j) above, the proposed tower has been approved by the FAA and does not require any lighting.

(5) Towers may be built on the same Lot or Building Site with another Principal Use. A separation a minimum of the Tower height between the Tower and any other Principal Use is

required in order to provide for the health, safety and welfare of individuals and Structures occupying the same site. Joint use is prohibited on a Lot or Building Site where a proposed or existing Principal Use includes the storage, distribution or sale of volatile, flammable, explosive or hazardous wastes such as LP gas, propane, gasoline, natural gas and corrosive or dangerous chemicals. Applicant is proposing a 125' monopine, a self-supporting tubular tower structure, similar to ones used for utility lines. Applicant is providing documentation outlining the design characteristics of the reduced "fall zone" area in the form of the attached engineer stamped letter. Per the attached and sealed "Fall Zone" letter, the Tower will be designed such that the top 50% will collapse over onto itself in the event of a catastrophic failure, reducing the impacted area via a reduced "fall zone" that will be contained within the reduced boundaries of this setback radius. This is accomplished by overdesigning the bottom portion of the structure. Specifically, the tower base and its foundation are designed to carry the entire force applied to the tower (Force X); however, when the top 50% of the tower collapses, only the maximum of 25% of Force X will be applied to the tower base and foundation that are designed for 100% of Force X. In layman's terms, the tower base and its foundation are approx. 4 times stronger (100%/25%) than the maximum force that can be applied to them when the top 50% of the tower collapses. As the design drawings depict, incorporating this engineering into the design, the fall zone is greatly reduced, complying with the setback requirement.

(6) Towers 80 feet or more in height shall be located on the Lot so that the distance from the base of the Tower to any adjoining property line or supporting Structure of another Tower is a minimum of 100% of the proposed Tower height. No Variance shall be granted from this minimum setback requirement. As depicted in the attached design drawings, Applicant complies.

(7) Except as specifically required by the FAA (Federal Aviation Administration) or the FCC (Federal Communication Commission), transmission Structures shall: Applicant will comply.

(a) use colors such as gray, blue or green which reduce their visual impacts; provided, wooden poles do not have to be painted; and As depicted in the attached design drawings and photo simulations, Applicant is proposing a monopine tower structure. The pole will be painted brown with the branches starting at approx. the halfway point.

(b) not be illuminated, except equipment shelters may use lighting for security reasons which is compatible with the surrounding neighborhood; Applicant complies.

(c) not use strobe lights unless specifically required by FAA. Applicant complies (see 4(j) above).

(8) Any proposed Tower shall be structurally designed so as to accommodate the minimum number of foreseeable shared users. Applicant's design incorporates space on the tower and ground for a minimum of three wireless providers, including Co-Applicant, Verizon Wireless.

(9) No advertising or display is permitted on any Communication Tower. Applicant will comply, only posting signage for site identification, emergency contact or as required by federal agencies.

(10) Any Accessory Buildings or Structures shall be located a minimum of 50 feet from any adjoining property line. Except for emergency purposes, the accessory facilities may not include offices, long-term vehicular storage, other outdoor storage, or broadcast studios, unless the Use is permitted in the district. Applicant will comply.

(11) The Tower base and equipment area shall be enclosed with a fence no less than six feet in height. Access shall be locked at all times when the site is not occupied. Applicant complies, see attached design drawings.

(12) Where the Tower site abuts or is contiguous to any Residential District, there shall be provided a continuous, solid Screening and it shall be of such plant material as will provide an evergreen Screen. Screening as required herein shall be not less than four feet in height at the time of planting and shall be permanently maintained. See attached landscape buffer design and tree preservation plan in the attached design drawings. In addition, the site has been located to utilize the natural vegetation buffer of the wooded area on the property.

(13) Location on any other Structure other than a Tower (i.e., water tank, utility poles, roof tops, etc.) is permitted subject to the provisions listed above relating to a Tower location. The attached Nearby Structures table and map illustrate that there are no existing tower structures within one mile of the Applicant's location, the closest broadband structure being approx. 1.62 miles away, with Verizon Wireless located on this structure. There are also no structures capable of meeting the coverage objective within the immediate area.

Name	Latitude	Longitude	FCC ASR#	Distance (miles)	Comments
Vogue Towers	35.705626	-86.974395	Pending	N/A	*Candidate Location*
Crown Communications LLC	35.7145	-87.001	1205701	1.62	*Appears to be 2+ carriers, including Verizon*
TVA	35.7217	-86.9737	None	1.11	*Inside TVA facility, likely direct bury pole.*
TVA (2)	35.7411	-86.9633	None	2.53	*Inside former plant, likely direct bury pole.*

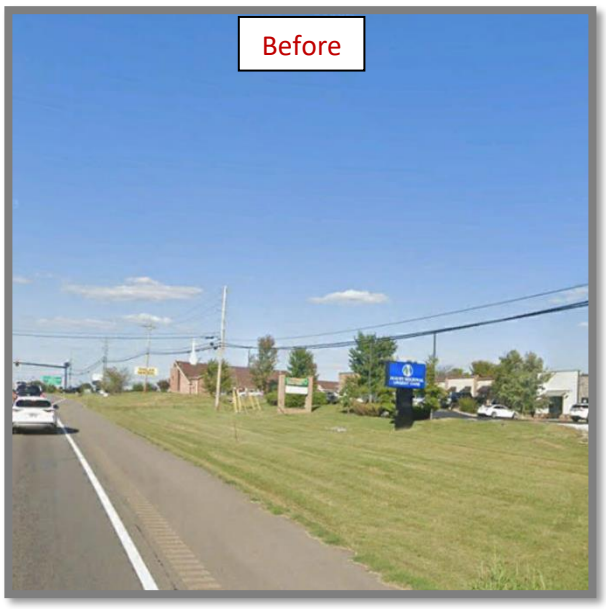
(14) Co – location on Towers is encouraged. See (13) above.

The Zoning Administrator has authority to approve a co – location on an existing Tower subject to: (a) receipt of a letter from a licensed engineer stating that the Tower is structurally adequate to handle the additional load; and (b) the FCC technical emissions standards not being exceeded.

(15) Any Antenna or Tower that is not operated for a continuous period of 12 months shall be considered abandoned and the owner of such antenna or tower, as well as any shared user(s) of the Tower or Antenna, shall remove same within 90 days of receipt of notice from the City notifying the owner and shared user(s) of such abandonment. If such Antenna or Tower is not removed within said 90 days, the City may remove or have the Structure removed at the owner's expense. Applicant will comply.

Staff has reviewed the PUD revision approval and found that this tower will align with the requirements of this ordinance as it pertains to towers. Staff will work closely with the developer to assure compliance. Any future modifications to this plan will necessitate a revision of the PUD.

MONOPINE PHOTOSHOP IMAGES, MANUFACTURER IMAGES & REAL-LIFE IMAGES






Before
After
Before
After









REVIEW PROCESS

The Development Review Committee evaluated the proposed PUD revision at its April 2025 meeting, as directed by section **8.3.7** of the Zoning Ordinance. Technical comments are provided in the agenda package and summarized below.

The tower has been reviewed under the requirements of **4.3.9.E.PP.**

As required by **8.5.4.D** of the Zoning Ordinance, staff posted signs on the subject property, mailed letters to adjacent property owners, and published notice of the Planning Commission's meeting in newspapers of general circulation.

Section **8.5.21** of the Zoning Ordinance directs the Planning Commission to review any and all Planned Unit Developments for conformity with the standards of the Ordinance.

The Planning Commission is the **recommending body** for PUD revisions that are major in nature under **8.3.3.B.8** of the Zoning Ordinance.

SUMMARY OF DEVELOPMENT REVIEW COMMITTEE COMMENTS

The DRC reviewed this proposal at its January 2025 meeting. A full list of comments, and the applicant's responses, is provided in the agenda packet. Some key comments are noted below.

Planning - NEPA (National Environmental Policy Act) will be a condition of approval.

Engineering - Access easement shall have a provision allowing adjustment in the future to accommodate modification.

FCC LAWS REGARDING TOWERS

Section 704 of the 1996 Telecommunications Act contains several key provisions affecting the authority of municipalities to regulate the placement of towers for cellular telephones, personal communications services, and other similar transmitters. Generally, the act preserves municipal zoning authority as it relates to radio towers and their siting, but it also creates three key protections for firms seeking to erect a tower:

- Local ordinances may not "unreasonably" discriminate among providers of functionally equivalent services. Tower siting policies must not favor one company, or one technology, over another;
- Local government may not impose a blanket prohibition against the placement of telecommunications towers; and
- Local ordinances may not impose more stringent "environmental effects" limits on radio frequency emissions than those adopted by the Federal Communications Commission (FCC).

A municipality would do well to encourage colocation of telecommunications facilities — essentially the sharing of a single tower by multiple telecommunications services. Such practices have the potential to reduce the proliferation of towers. Federal law encourages this practice

and gives cities some leverage to assure that legitimate efforts are made to effect colocation. 47 U.S.C. 251(c)(1) and 47 U.S.C. 251(c)(6) discuss the "duty" of telecommunications service to negotiate in good faith for colocation opportunities. Municipal ordinances should reflect this obligation, and final tower approval should depend on an applicant's demonstration of these efforts. Federal law allows cities to deny construction permit applications for telecommunications towers. The denial, however, must be based on a reasoned approach, otherwise the FCC is authorized to pre-empt the local decision and grant the construction permit. Without adopting a telecommunications tower policy, it is doubtful that a municipality's denial of a construction permit will be seen as resulting from a reasoned approach.

SAMPLE MOTIONS

Positive Recommendation with Conditions:

Move to send a positive recommendation on the PUD Revision for the preliminary PUD Master Plan as presented and find that the tower conforms to the applicable zoning ordinance, [subject to a condition of approval that the NEPA report meets the requirements of 4400)

Defer for Continued Review:

Move to find that there is insufficient information to make a decision, defer the application for continued review, and request that the applicant provide: [list additional information] for review at the next regularly scheduled meeting of the Planning Commission.

Negative Recommendation:

Move to send a negative recommendation on the PUD Revision for the preliminary PUD Master Plan presented does not conform to the applicable zoning ordinance, the Subdivision Regulations, or the approved Preliminary Plat [list specific deficiencies].

Melissa Sanders

From: Development Services
Sent: Friday, June 6, 2025 11:55 AM
To: Austin Brass; Charles Rush; Robert Archibald; Melissa Sanders; Jeremy Humphrey; Paul Keltner
Subject: FW: [External - USE CAUTION] Objection to Proposed Communications Tower

---

From: Gina Munsey <gina.munsey@gmail.com>
Sent: Friday, June 6, 2025 11:45 AM
To: COS church office <office@coslutheran.com>; Development Services <Development@Columbiatn.gov>; elder@coslutheran.com
Subject: [External - USE CAUTION] Objection to Proposed Communications Tower

To Whom it May Concern:

As a homeowner in Grove Park subdivision adjacent to Christ our Savior Lutheran Church, I am writing to express my strong opposition to the proposed installation of the communications tower on church property. I was very surprised and disappointed to learn the city and the church were considering this, as to my knowledge, no residents of the homes adjacent to this site have been notified. While I do not deny communications towers are inevitable, I object to them being installed so close to residential properties. Such a tower, in addition to being unsightly, is undesirable due to its unknown risks and hazards to human health, potential negative effect on property values, and the loss of established tree canopy required to install it. Please maintain the health of the residents, as well as the natural beauty and tree canopy of North Columbia, and place the tower elsewhere away from residential homes.

Respectfully,
Gina Munsey

Melissa Sanders

From: Charles Rush
Sent: Wednesday, May 14, 2025 3:00 PM
To: Paul Keltner; Melissa Sanders; Austin Brass
Subject: FW: Project - 25-0083-PUD

CHARLES RUSH
Development Services
Principal Planner

Office: (931) 560-1531

CRush@ColumbiaTN.gov

www.ColumbiaTN.gov

700 N Garden Street, Columbia, TN 38401

From: Michael Sandifer <michael@bear-group.net>
Sent: Wednesday, May 14, 2025 2:06 PM
To: Charles Rush <CRush@Columbiatn.gov>
Subject: [Caution External Email] - RE: Project - 25-0083-PUD

Charles,

Per our phone conversation a few minutes ago, please accept this request to defer the Vogue Towers application to the June meeting.

I will follow up to discuss your further review.

Thank you,

Michael A. Sandifer
205-532-4870
michael@bear-group.net

-------- Original message --------
From: Charles Rush <CRush@Columbiatn.gov>
Date: 5/14/25 7:13 AM (GMT-06:00)
To: Michael Sandifer <michael@bear-group.net>
Subject: RE: Project - 25-0083-PUD

Are you requesting a reduced fall zone radius from the 130' ?

CHARLES RUSH
Development Services
Principal Planner

Office: (931) 560-1531

CRush@ColumbiaTN.gov

www.ColumbiaTN.gov

700 N Garden Street, Columbia, TN 38401

From: Michael Sandifer <michael@bear-group.net>
Sent: Monday, May 12, 2025 12:55 PM
To: Charles Rush <CRush@Columbiatn.gov>
Subject: [Caution External Email] - RE: Project - 25-0083-PUD

Charles, checking on Wednesday evening, is an agenda available yet and does the City of Columbia issue a staff report?

Thanks!

BEAR
SERVICES GROUP

MICHAEL A. SANDIFER
michael@bear-group.net
205.532.4870

From: Charles Rush <CRush@Columbiatn.gov>
Sent: Monday, April 21, 2025 9:55 AM
To: Michael Sandifer <michael@bear-group.net>
Subject: RE: Project - 25-0083-PUD

Michael,

As you have marked below, layering will be achieved. Your primary layer will be off of Nashville Highway. Grove Park Way will be your second layer which will enters 3rd layer past the frontage along Grove Park.

CHARLES RUSH
Development Services
Principal Planner

Office: (931) 560-1531

CRush@ColumbiaTN.gov

www.ColumbiaTN.gov

700 N Garden Street, Columbia, TN 38401

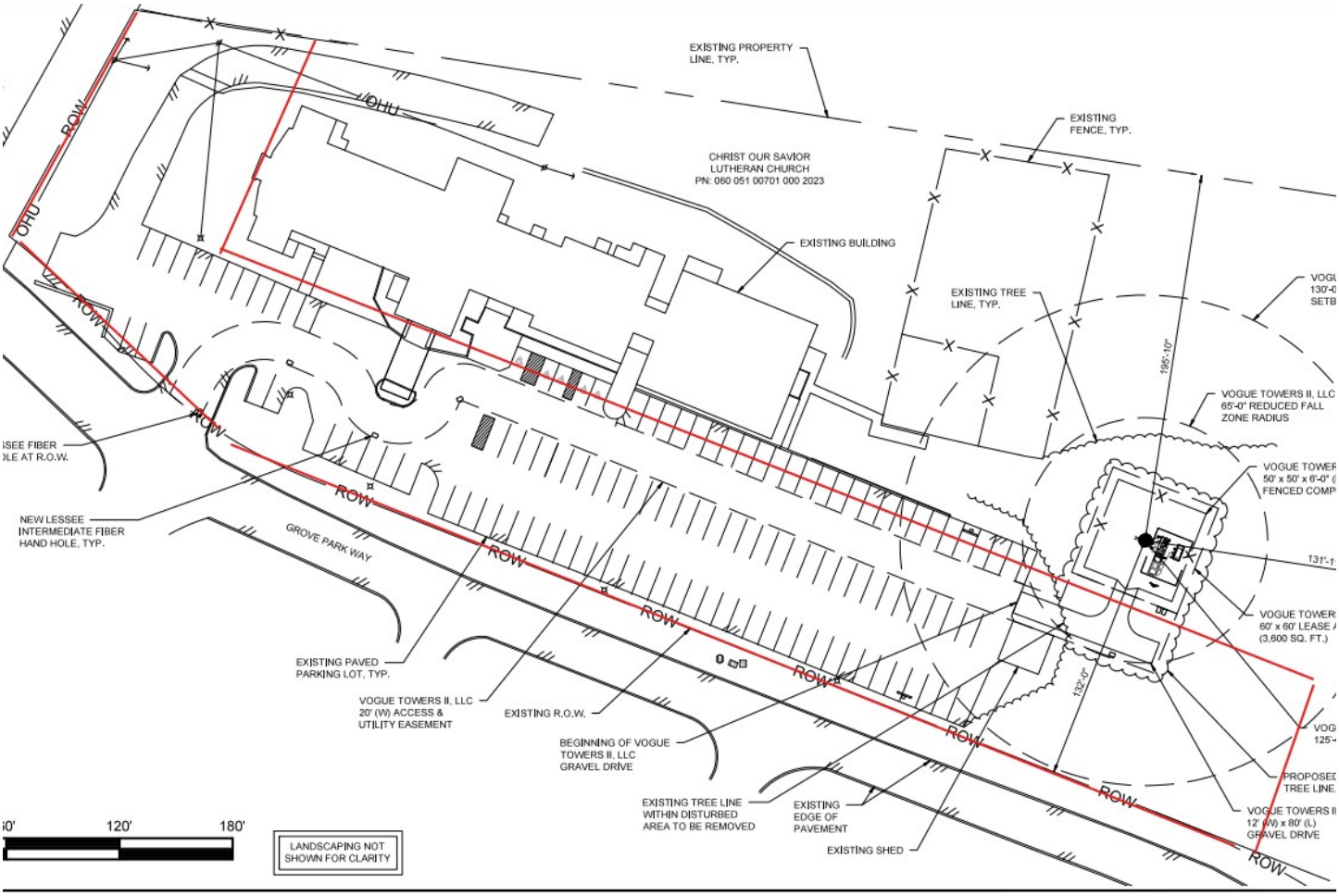
From: Michael Sandifer <michael@bear-group.net>
Sent: Thursday, April 17, 2025 1:05 PM
To: Charles Rush <CRush@Columbiatn.gov>
Subject: [Caution External Email] - RE: Project - 25-0083-PUD

Charles,

I left you a message this morning, wanted to get your insight as to the Layer issue. The explanation in Article 9 is not as clear as it could be so trying to determine what portions of this property are Level 1, 2 & 3. Would the red area below be considered Level 1? If the site is Level 1, would that mean the church building is also Level 1?

If this is the case, I assume the applicant will be requesting relief for this requirement? Why was this not discussed in the pre-application meeting back in October when I presented the prelim site plan?

Thanks!



BEAR SERVICES GROUP
MICHAEL A. SANDIFER
michael@bear-group.net
205.532.4870

From: Charles Rush <CRush@Columbiatn.gov>
Sent: Friday, April 11, 2025 2:47 PM
To: Michael Sandifer <michael@bear-group.net>
Subject: RE: Project - 25-0083-PUD

Check them all,

Total number of units will be none

CHARLES RUSH
Development Services
Principal Planner

Office: (931) 560-1531

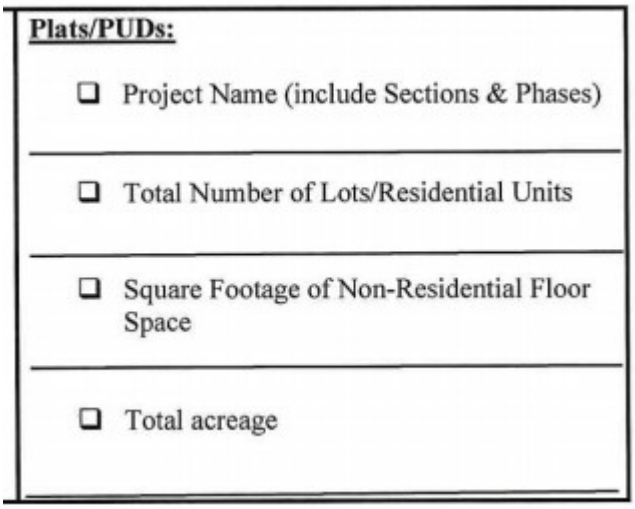
CRush@ColumbiaTN.gov

www.ColumbiaTN.gov

700 N Garden Street, Columbia, TN 38401

From: Michael Sandifer <michael@bear-group.net>
Sent: Friday, April 11, 2025 1:39 PM
To: Charles Rush <CRush@Columbiatn.gov>
Subject: [Caution External Email] - RE: Project - 25-0083-PUD

By “all”, you mean these check boxes or literally all of them on the form?



Plats/PUDs:

- ❑ Project Name (include Sections & Phases)
- ❑ Total Number of Lots/Residential Units
- ❑ Square Footage of Non-Residential Floor Space
- ❑ Total acreage

BEAR
SERVICES GROUP

MICHAEL A. SANDIFER
michael@bear-group.net
205.532.4870

From: Charles Rush <CRush@Columbiatn.gov>
Sent: Friday, April 11, 2025 1:49 PM
To: Michael Sandifer <michael@bear-group.net>
Subject: RE: Project - 25-0083-PUD

Michael,

Yes, that is the correct form, just needs all the check boxes checked, and since this is a PUD revision, it needs to be named with total sq ft and acreage.



CHARLES RUSH
Development Services
Principal Planner

Office: (931) 560-1531
CRush@ColumbiaTN.gov
www.ColumbiaTN.gov
700 N Garden Street, Columbia, TN 38401

From: Michael Sandifer <michael@bear-group.net>
Sent: Friday, April 11, 2025 12:45 PM
To: Charles Rush <CRush@Columbiatn.gov>
Subject: [Caution External Email] - FW: Project - 25-0083-PUD

Charles, for comment #5, was the attached not provided to you from our submittal or is this the incorrect application form?



MICHAEL A. SANDIFER
michael@bear-group.net
205.532.4870

From: columbia@davengis.net <columbia@davengis.net>
Sent: Friday, April 11, 2025 10:38 AM
To: Michael Sandifer <michael@bear-group.net>
Subject: Project - 25-0083-PUD

Dear Applicant:

Thank you for your attendance at the recent DRC. Please find attached technical comments. The resubmittal deadline is April 21, 2025.

Do not respond to this communication. Feel free to contact me directly with any questions you may have at (931) 560-1531 or by email at crush@columbiatn.gov..

Thank you and have a good day.

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VOGUE TOWERS

(HEREINAFTER REFERRED TO AS "VOGUE TOWERS II, LLC")

TN-5001
LANTON
2507 GROVE PARK WAY
COLUMBIA, TN 38401

verizon

CELLCO PARTNERSHIP D/B/A
VERIZON WIRELESS
(HEREINAFTER REFERRED TO AS "LESSEE")

GEN7 ENGINEERING

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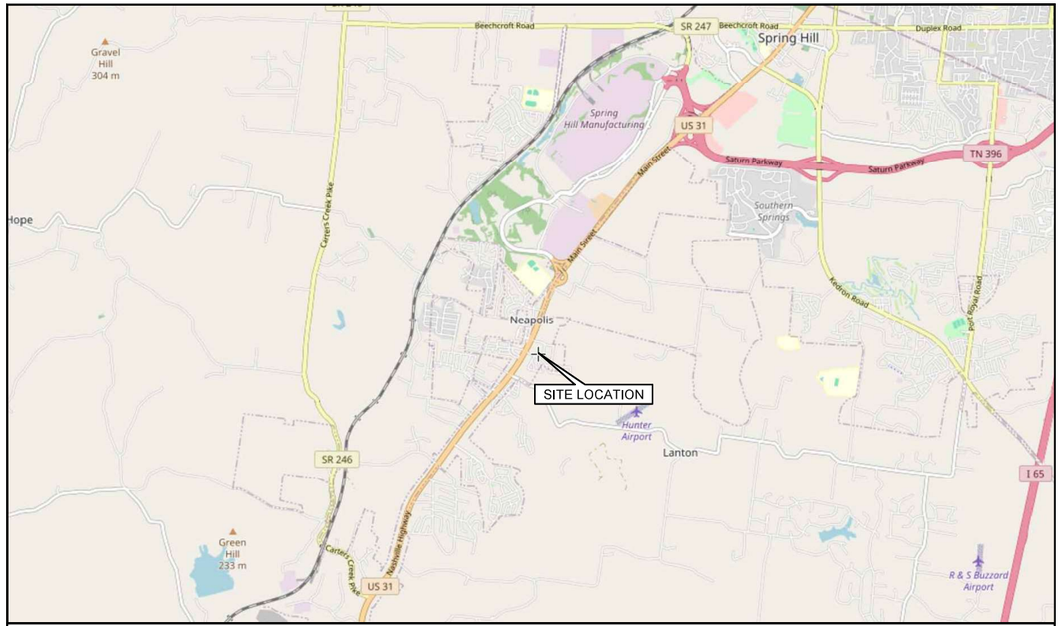
DRAWN BY	BNS
CHECKED BY	BNS

PROJECT SUMMARY

SITE NAME:	LANTON
SITE NUMBER:	TN-5001
SITE ADDRESS: (E911 ADDRESS VERIFIED)	2507 GROVE PARK WAY COLUMBIA, TN 38401
COUNTY:	MAURY COUNTY
JURISDICTION:	CITY OF COLUMBIA, TN
ZONING:	N/A
PROPERTY OWNER:	CHRIST OUR SAVIOR LUTHERAN CHURCH 2494 NASHVILLE HWY. COLUMBIA, TN 38401
CONTACT:	TBD
PHONE:	TBD
STRUCTURE OWNER:	VOGUE TOWERS II, LLC 430 CHESTNUT ST., SUITE 101-B CHATTANOOGA, TN 37402
CONTACT:	JANET GILL
PHONE:	(423) 260-4982
LESSEE:	CELLCO PARTNERSHIP D/B/A VERIZON WIRELESS 8921 RESEARCH DR. CHARLOTTE, NC 28262
LESSEE SITE NAME:	LANTON
LESSEE SITE #:	17330373
SITE COORDINATES:	
LATITUDE:	35° 42' 20.26" N (NAD83)
LONGITUDE:	86° 58' 27.82" W (NAD83)
ELEVATION:	741.8' AMSL (NAVD88)
OCCUPANCY:	UNMANNED
SITE TYPE:	RAWLAND
POWER COMPANY:	COLUMBIA POWER & WATER SYSTEMS
CONTACT:	TBD
PHONE:	(931) 388-4833
FIBER:	TBD
CONTACT:	TBD
PHONE:	TBD
POLICE DEPARTMENT:	COLUMBIA POLICE DEPARTMENT
PHONE:	(931) 388-2727
FIRE DEPARTMENT:	COLUMBIA FIRE & RESCUE
PHONE:	(931) 560-1700

VICINITY MAP



NOT TO SCALE

SHEET INDEX

Z-001	TITLE SHEET
Z-002	GENERAL NOTES
LS-001 THRU LS-006	LAND SURVEY
Z-101	OVERALL SITE LAYOUT PLAN
Z-102	OVERALL AERIAL SITE LAYOUT PLAN
Z-103	SITE LAYOUT PLAN
Z-104	TOWER ELEVATION & EQUIPMENT LAYOUT PLAN
Z-105 THRU Z-106	LANDSCAPING DETAILS
Z-107	TREE PRESERVATION PLAN
Z-200	EROSION NOTES
Z-201	SITE GRADING PLAN
Z-202	DRIVEWAY PROFILE
Z-203	SITE GRADING DETAILS
Z-301 THRU Z-303	SITE DETAILS

SCOPE OF WORK

NEW BUILD - RAWLAND

INSTALLATION OF A 125'-0" MONOPINE W/ GROUNDING, UTILITIES, FENCED COMPOUND, AND OTHER SUPPORT STRUCTURES AND COMPONENTS.

INSTALLATION OF ANTENNAS AND ANCILLARY EQUIPMENT FOR WIRELESS COMMUNICATIONS.

APPLICABLE CODES

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

CODE TYPE	CODE
BUILDING	2018 IBC
RESIDENTIAL	2018 IRC
PLUMBING	2018 IPC
MECHANICAL	2018 IMC
FIRE	2018 IFC
ENERGY	2009 IEC
FUEL GAS	2018 IFGC
PROPERTY MAINTENANCE	2018 IPMC
ELECTRICAL	2017 NFPA 70 / NEC
EXISTING BUILDING	2012 IEBC
ACCESSIBLE BUILDINGS	2009 ICC/ANSI A117.1

STRUCTURAL REVIEW

CONTRACTOR SHALL ATTAIN AND VERIFY STRUCTURAL EVALUATION REPORT OF EXISTING TOWER FOR EXACT PLACEMENT OF ANTENNAS AND COAX CABLES. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE STRUCTURAL EVALUATION REPORT AND NOTIFY VERIZON'S CONSTRUCTION MANAGER IN THE CASE OF ANY DISCREPANCIES. ANY STRUCTURAL MODIFICATION, IF REQUIRED, SHALL BE DONE PRIOR TO THE INSTALLATION OF ANTENNAS.

CALL TENNESSEE ONE CALL
(800) 351-1111
CALL 3 WORKING DAYS
BEFORE YOU DIG!

811

REVISIONS			
1	04/15/25	BNS	FINAL ISSUE
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A	03/05/25	BNS	PRELIMINARY ISSUE
#	DATE	BY	DESCRIPTION

STEPHEN M. CARPENTER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 105147
STATE OF TENNESSEE
04/15/2025

verizon

SITE NAME	LANTON
SITE NUMBER	17330373

VOGUE TOWERS

SITE NAME	LANTON
SITE NUMBER	TN-5001
SITE ADDRESS	2507 GROVE PARK WAY COLUMBIA, TN 38401
SITE TYPE	RAWLAND
SHEET TITLE	TITLE SHEET

SHEET NUMBER	REVISION
Z-001	1

GENERAL NOTES

1. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL APPLICABLE PERMITTING AUTHORITIES.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND THE CODES, REGULATIONS, AND STANDARDS OF ALL APPLICABLE GOVERNING AUTHORITIES.
3. THE GENERAL CONTRACTOR SHALL VERIFY THAT ALL EXISTING TOPOGRAPHY AND HORIZONTAL GEOMETRY IS AS INDICATED ON THESE DRAWINGS. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE OR REPAIR TO THESE FACILITIES CAUSED BY THE CONTRACTOR'S WORK FORCE. IMMEDIATELY NOTIFY THE OWNER REPRESENTATIVE OF ANY DISCREPANCIES OR INTERFERENCE WHICH AFFECT THE WORK OF THIS CONTRACT.
4. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE AT ALL TIMES. DO NOT ALLOW WATER TO STAND OR POND. ANY DAMAGE TO STRUCTURES OR WORK ON THE SITE CAUSED BY INADEQUATE MAINTENANCE OF DRAINAGE PROVISIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND ANY COST ASSOCIATED WITH REPAIRS FOR SUCH DAMAGE WILL BE AT THE CONTRACTOR'S EXPENSE.
5. ALL WASTE MATERIAL SHALL BE PROPERLY DISPOSED OF OFF-SITE OR AS DIRECTED BY THE OWNER REPRESENTATIVE AND IN ACCORDANCE WITH JURISDICTIONAL AUTHORITIES.
6. ANY PROPERTY DAMAGE CAUSED BY THE CONTRACTOR OR HIS OPERATIONS SHALL BE CORRECTED AND/OR RESTORED TO THE SATISFACTION OF THE PROPERTY LESSOR(S) AND THE OWNER'S CONSTRUCTION MANAGER AT NO ADDITIONAL COST TO THE OWNER.
7. CONTRACTOR SHALL MAINTAIN 20' HORIZONTAL CLEARANCE FROM CENTERLINE OF EXISTING POWER LINES OR AS REQUESTED BY THE POWER COMPANY.
8. NOTIFY THE OWNER REPRESENTATIVE TWENTY-FOUR HOURS PRIOR TO CONSTRUCTION TO ALLOW THE OWNER REPRESENTATIVE TO REVIEW THE SITE PRIOR TO EXCAVATION.
9. THE CONTRACTOR SHALL INCLUDE ALL WORK REQUIRED TO CO-LOCATE ON THE EXISTING TOWER INCLUDING ALL NECESSARY SITE IMPROVEMENTS, FOUNDATIONS, ELECTRICAL IMPROVEMENTS, SNAP-INS, H-FRAME, AND OTHER ACCESSORIES FOR COMPLETE INSTALLATION.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF THE FOLLOWING EQUIPMENT SUPPLIED BY THE OWNER: ANTENNAS, COAX CABLES, ICE BRIDGE, WAVEGUIDE LADDER, METER, AND EQUIPMENT CABINETS/SHELTER. THE EQUIPMENT CABINETS/SHELTER SHALL BE TRANSPORTED TO THE SITE BY THE CONTRACTOR.
11. CONTRACTOR TO NOTIFY THE OWNER REPRESENTATIVE FORTY-EIGHT HOURS PRIOR TO CONCRETE POURS.
12. CONTRACTOR TO PROVIDE RED LINE CONSTRUCTION DRAWINGS TO OWNER AND LESSEE AT COMPLETION OF JOB.

ABBREVIATIONS

AGL	ABOVE GROUND LEVEL	AMSL	ABOVE MEAN SEA LEVEL
CL	CENTERLINE	CONC	CONCRETE
DIA	DIAMETER	DIM	DIMENSION
(E)	EXISTING	EA	EACH
ELEV	ELEVATION	EQ	EQUAL
FTG	FOOTING	FDN	FOUNDATION
LLH	LONG LEG HORIZONTAL	HSS	HOLLOW STRUCTURE SHAPE
MAX	MAXIMUM	LLV	LONG LEG VERTICAL
NTS	NOT TO SCALE	MIN	MINIMUM
PL	PLATE	OC	ON CENTER
TOS	TOP OF STEEL	RGS	RIGID GALVANIZED STEEL
UNO	UNLESS NOTED OTHERWISE	TYP.	TYPICAL
W/	WITH	TBR	TO BE REMOVED

LEGEND

SYMBOLS OF EXISTING FEATURES	DESCRIPTION	SYMBOLS OF PROPOSED FEATURES
X 100.5	SPOT ELEVATION	712.9
95	CONTOUR LINE	98
SD	STORM DRAIN	SD
	CATCH BASIN	
ROW	RIGHT OF WAY	
	IRON PIN	
	BENCHMARK	
	CONCRETE MONUMENT	
℄	CENTERLINE	
OHT	OVERHEAD TELPHONE	OHT
UGT	UNDERGROUND TELEPHONE	UGT
OHP	OVERHEAD POWER	OHP
UGP	UNDERGROUND POWER	UGP
UGF	UNDERGROUND FIBER	UGF
X X X	FENCE LINE	X X X
SF SF	SILT FENCE	SF SF
LOD	LIMITS OF DISURBANCE	LOD
	UTILITY POLE	
	LIGHT POLE	
W	WATER LINE	
	WATER VALVE	
UGG	NATURAL GAS LINE	
G	GAS VALVE	
ST	SANITARY SEWER	
M	MANHOLE	

NOTE: THIS IS A GENERAL LEGEND. ALL FEATURES MAY NOT BE LOCATED IN THIS SITE.

GEN7 ENGINEERING

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CLIENT IS STRICTLY PROHIBITED.

DRAWN BY	BNS
CHECKED BY	BNS

REVISIONS

#	DATE	BY	DESCRIPTION
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STEPHEN M. CARPENTER
REGISTERED ENGINEER
AGRICULTURE
NO. 105147
STATE OF TENNESSEE
04/15/2025

verizon

SITE NAME: LANTON
SITE NUMBER: 17330373

VOGUE TOWERS

SITE NAME: LANTON
SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY COLUMBIA, TN 38401

SITE TYPE: RAWLAND

SHEET TITLE: GENERAL NOTES

SHEET NUMBER	REVISION
Z-002	1

GENERAL NOTES:

1. This Survey is prepared exclusively to show site conditions and/or for use in support of instruments related to Leases and Easements as may be shown hereon. Any property boundary information shown hereon is a composite of information gathered from current or previous Surveys, Plat & Deed Description and/or Assessor's Tax Maps as may be referenced hereon. This Survey is not a Boundary Survey of any Tax Parcels or Deed Tracts, and does not create, combine, or divide any existing properties.
2. Survey shown hereon was performed under the supervision of a state-registered Land Surveyor and conforms to all applicable State Board Requirements.
3. Instruments Used: One or more of: Topcon Total Station, Topcon Hiperlite Plus GPS, Carlson Surveyor Data Collector, DJI UAV.
4. Where shown, improvements (utilities, buildings, trees, fences, etc.) are based on field Survey and/or aerial mapping.
5. Any Underground Utilities shown according to surface markings made by others, found at time of survey. Additional marked utilities outside the area covered by this survey map may be shown in provided CAD Files. Utility Markings may not be comprehensive: this survey does not relieve design and construction personnel of the responsibility to determine the locations of underground utilities prior to land disturbance activities.
6. This Survey is presented in the format required by Clients. Clients are advised that Official Jurisdictions may require the Survey to be presented in another format with additional notes and certifications. In the event other formats, notes or certifications are requested by applicable jurisdictions, it is the responsibility of the Client to request same be prepared by Surveyor. Survey as published is not intended to be suitable for recording as a Subdivision Plat.
7. This survey may have been reduced or enlarged in size due to subsequent reproduction. This should be taken into consideration when obtaining scaled data.
8. Geographic Coordinates, if published, meet FAA Accuracy Code 1A, and are accurate to within ± 20 feet horizontally and to within ± 3 feet vertically.
9. Any Flood Zone information presented hereon is according to current FEMA Flood Map information as may be referenced hereon. No Flood Elevation Survey of Certification performed.
10. This survey is not valid without the original signature seal of a State-Licensed Land Surveyor, and is not complete without the total of sheets as specified in Survey Title Blocks.
11. Unless indicated otherwise by reference to Record Instruments, any Lessee's Leases, Premises or Easements shown hereon are NOT YET OF RECORD and may be subject to change pending review and approval by Carrier, applicable jurisdictions and/or other involved parties.
12. Any Survey Markers placed as required by Standards of Practice and/or Client request represent the Leases and/or Easements as requested or designed by Clients at the time of this survey issue and may not reflect changes to site design which have not been communicated to Surveyor in the form of a Survey revision request. Surveyor shall not be liable for any circumstance arising as a result of revisions to Site Design (which may invalidate existing survey markers) occurring after the date of this Survey issue.

SURVEYOR'S CERTIFICATION

To: Vogue Towers II, LLC:
I hereby certify (or state) that this is a Category II Survey; the ratio of precision of the unadjusted survey exceeds 1:7.500; and that this survey was done in compliance with the current Tennessee Minimum Standards of Practice.



Travis L. Shields
Tennessee RLS
License No. 2921

PROPOSED TOWER LOCATION DATA

Latitude:	NORTH:	35.705626°	35° 42' 20.26"
Longitude:	WEST:	86.974395°	86° 58' 27.82"
Ground Elev:	741.8	FEET AMSL	(NAVD88)
Benchmark:	DJ9562 TN37		

PARENT TAX PARCEL

CHRIST OUR SAVIOR EVANGELICAL LUTHERAN CHURCH
TAX PARCEL: 051 007.01

NORTH ORIENTATION

TENNESSEE STATE PLANE COORDINATE SYSTEM
Based on GPS Survey relative to NGS CORS Network, NAD83 (2011)
ELEVATION DATUM: NAVD88, GEOID 12B
DATE OF SURVEY: 11-13-2024

Method: RTK (CORS); Confidence Level: 95%
Positional Accuracy: HZ ± 0.10'
EPOCH 2010.0000
Convergence: 0.57045000°; Combined Factor: 0.99991983

FLOOD DATA

FEMA FLOOD MAP PANEL: 47119C0180E, Effective Date: 04-16-2007. Surveyed Area appears to lie within: ZONE X (Areas of Minimal Flood Hazard)

TITLE EXAMINATION:

See Sheet #6

ADDITIONAL NOTES

The Lessee's Access & Utility Easement extends to the Public R/W.

The Lessee's Premises lies entirely within the Parent Tax Parcel.

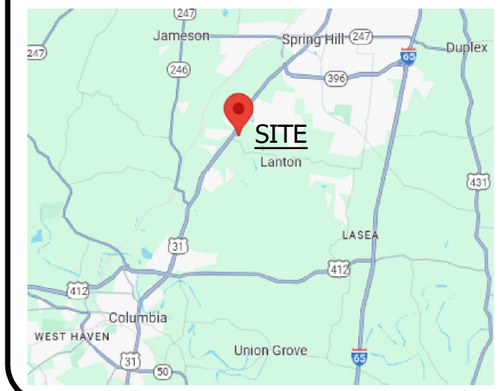
Except as noted hereon, no visible potential encroachments were observed at the time of the survey.

SURVEY ISSUE DATA

#	DETAILS	DATE	DRAWN	APP
0	Original Survey Issue	12-16-2024	NB	TLS

LOCATION MAP

NOT TO SCALE



LEGEND

R/W	RIGHT-OF-WAY
C/L	CENTER LINE
AU	ACCESS & UTILITY
ESMT	EASEMENT
P.O.C.	POINT OF COMMENCEMENT
P.O.B.	POINT OF BEGINNING
Sq Ft	SQUARE FEET
1	TREE (SEE TABLE, SHEET #5)

- IRON ROD FOUND (AS NOTED)
- IRON PIPE FOUND
- UTILITY POLE
- GUY ANCHOR
- LIGHT POLE
- TRANSFORMER
- TELECOM JUNCTION
- GAS LINE MARKER
- GAS VALVE
- CURB INLET
- PULL BOX
- WATER VALVE
- FIRE HYDRANT
- SEWER MANHOLE
- PROPOSED EQUIPMENT LOCATION
- SITE BENCHMARK

- PAVEMENT EDGE
- CURB LINE
- SIDEWALK
- OHU — OVERHEAD UTILITY LINES
- GUY — GUY — GUY — GUY WIRE
- FENCE
- 5' CONTOURS
- 1' CONTOURS
- RW — PUBLIC R/W
- TAX PARCEL BOUNDARY
- EXISTING EASEMENT
- LESSEE'S PREMISES
- LESSEE'S EASEMENTS

THE LAND CONSULTANTS LLC
5449 HIGHWAY 41
JASPER, TN 37347
423·304·6722

PREPARED FOR

VOGUE TOWERS

VOGUE TOWERS II, LLC

(Not a Boundary Survey of Parent Lands. Not intended for fee simple Land Transfer)

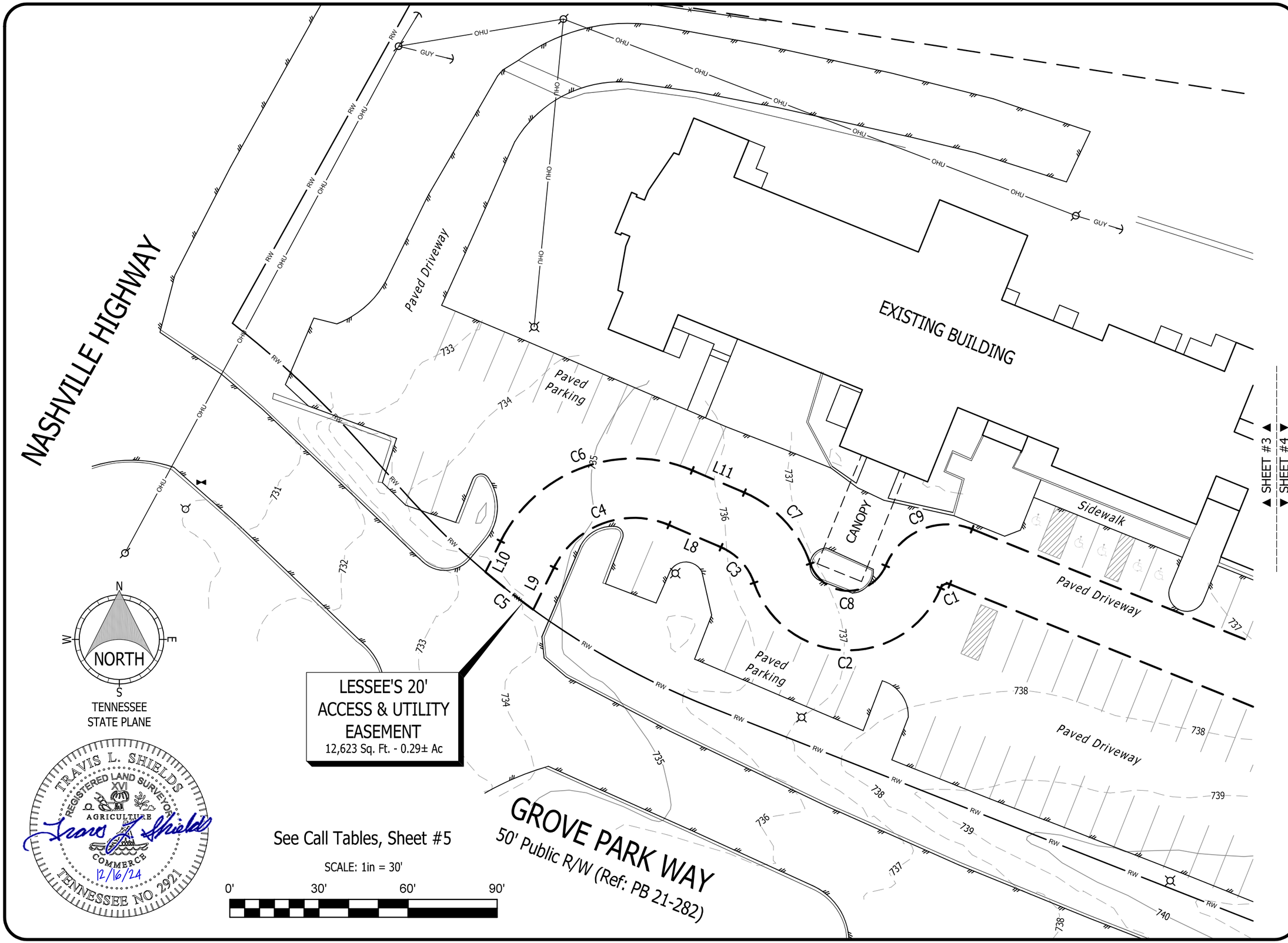
SITE SURVEY
LANTON

Site Number: TN-5001
Grove Park Way, Columbia, TN 38401
Maury County, Tennessee

COVER SHEET

DWG#: 24234
ISSUE #: 0
ISSUE DATE: 12-16-2024
SEE SHEET #1

SHEET 1 OF 6



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SITE SURVEY
LANTON

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Grove Park Way, Columbia, TN 38401
Maury County, Tennessee

SITE SURVEY

DWG#: 24234
ISSUE #: 0
ISSUE DATE: 12-16-2024
SEE SHEET #1

SHEET 3 OF 6

PROPERTY INFORMATION

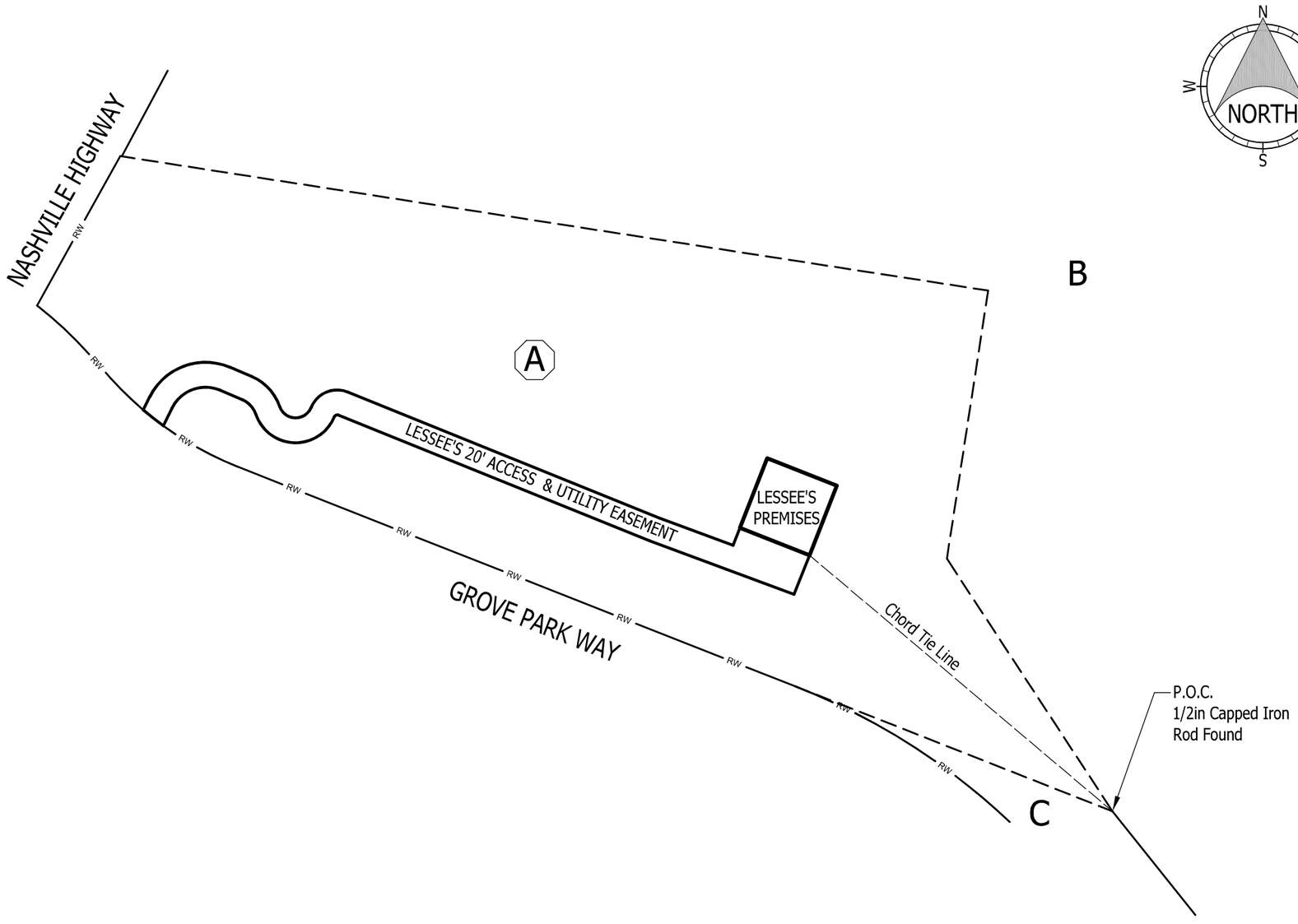
PARENT TAX PARCEL

A. CHRIST OUR SAVIOR EVANGELICAL LUTHERAN CHURCH
TAX PARCEL: 051 007.01
DEED BOOK 1195, PAGE 444

ADJOINING TAX PARCELS

B. GH TENNESSEE, LLC.
TAX PARCEL: 051 006.00
DEED BOOK R2813, PAGE 689

C. FORTUNA CAPITAL, LLC.
TAX PARCEL: 051B D 031.00
DEED BOOK R2293, PAGE 472
PLAT BOOK 21, PAGE 282



SCALE: 1in = 100'

0' 100' 200' 300'

OVERVIEW MAP CAVEAT:
OVERVIEW MAP IS NOT A SURVEY BUT A VICINITY / LOCATION MAP INTENDED ONLY TO SHOW SURVEYED PROPERTY IN RELATION TO SURROUNDING AREA. VESTING AND ADJOINING PARCEL BOUNDARIES ARE NOT INCLUDED IN OR CERTIFIED BY THIS SURVEY. BOUNDARY LINES ARE A COMPOSITE OF DEED, PLAT AND/OR TAX MAP INFORMATION

THE LAND CONSULTANTS LLC
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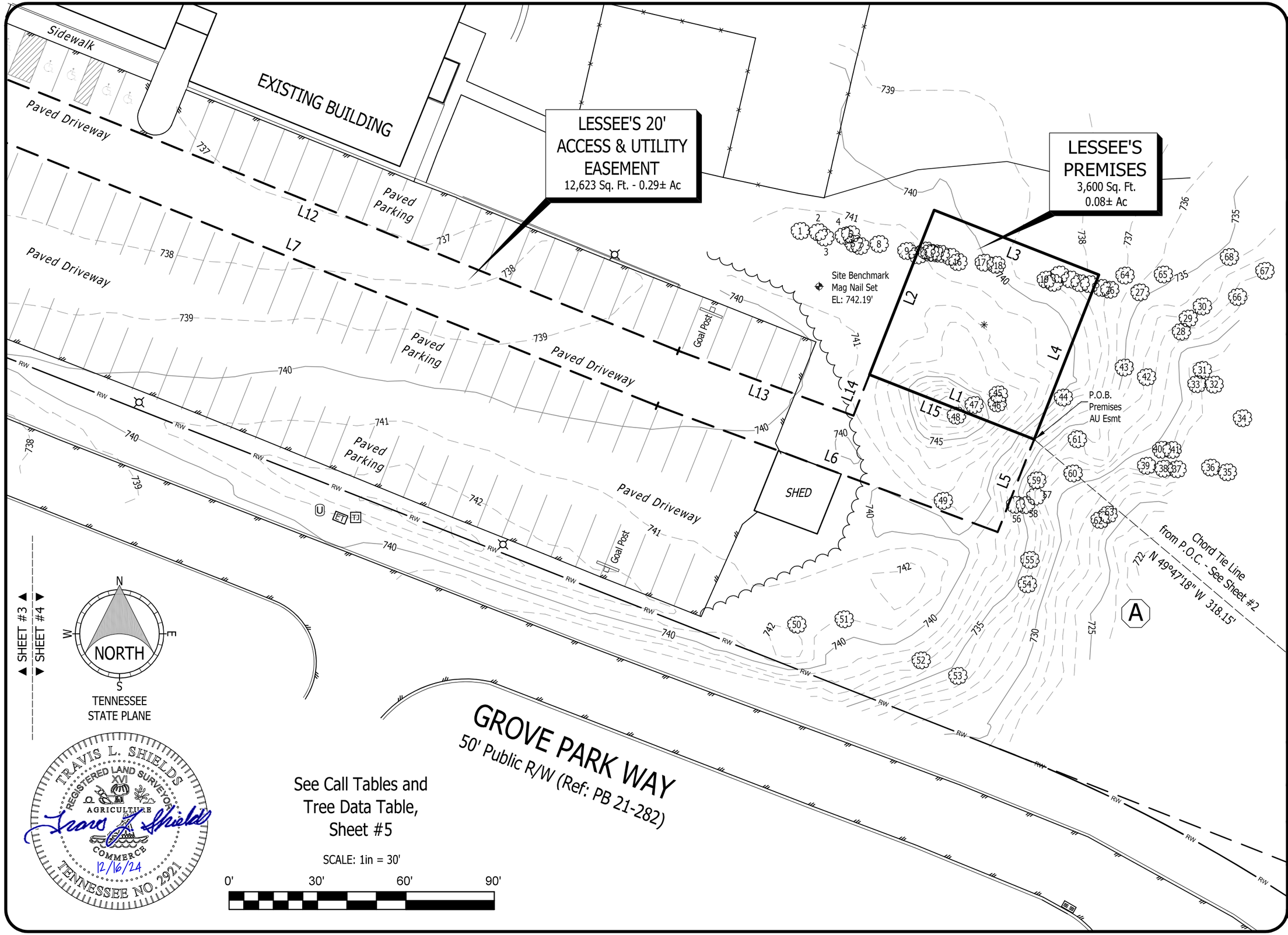
SITE SURVEY
LANTON
Site Number: TN-5001
Grove Park Way, Columbia, TN 38401
Maury County, Tennessee

OVERVIEW MAP

DWG#: 24234
ISSUE #: 0
ISSUE DATE: 12-16-2024
SEE SHEET #1

SHEET 2 OF 6



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VOGUE TOWERS
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SITE SURVEY
LANTON

Site Number: TN-5001
Grove Park Way, Columbia, TN 38401
Maury County, Tennessee

SITE SURVEY

DWG#: 24234
ISSUE #: 0
ISSUE DATE: 12-16-2024
SEE SHEET #1

SHEET 4 OF 6

LESSEE'S PREMISES

All that tract or parcel of land lying and being in Maury County, Tennessee and being a portion of the property of Christ Our Savior Evangelical Lutheran Church, of record in Deed Book 1195, Page 444, Register's Office, Maury County, Tennessee and being more particularly described as follows,

COMMENCE at a one-half-inch Iron Rod Found at the Southeast Corner of aforesaid property;
Thence along a Chord Tie Line having a Bearing of N 49°47'18" W, a distance of 318.15 feet to the POINT OF BEGINNING;

Thence N 68°32'42" W, a distance of 60.00 feet;
Thence N 21°27'18" E, a distance of 60.00 feet;
Thence S 68°32'42" E, a distance of 60.00 feet;
Thence S 21°27'18" W, a distance of 60.00 feet to the POINT OF BEGINNING.

Said tract Premises 0.08 Acres (3,600 Square Feet), more or less.

LESSEE'S 20' ACCESS & UTILITY EASEMENT

All that tract or parcel of land lying and being in Maury County, Tennessee and being a portion of the property of Christ Our Savior Evangelical Lutheran Church, of record in Deed Book 1195, Page 444, Register's Office, Maury County, Tennessee and being more particularly described as follows,

COMMENCE at a one-half-inch Iron Rod Found at the Southeast Corner of aforesaid property;
Thence along a Chord Tie Line having a Bearing of N 49°47'18" W, a distance of 318.15 feet to the POINT OF BEGINNING;

Thence S 21°27'18" W, a distance of 33.79 feet;
Thence N 69°39'42" W, a distance of 123.26 feet;
Thence N 67°59'50" W, a distance of 269.56 feet;
Thence with a curve to the left with an arc length of 3.73 feet, with a radius of 2.38 feet, with a chord bearing of S 67°03'24" W, with a chord length of 3.36 feet;
Thence with a curve to the right with an arc length of 81.44 feet, with a radius of 33.55 feet, with a chord bearing of N 88°20'53" W, with a chord length of 62.87 feet;
Thence with a curve to the left with an arc length of 16.78 feet, with a radius of 20.00 feet, with a chord bearing of N 42°50'38" W, with a chord length of 16.29 feet;
Thence N 66°52'54" W, a distance of 19.09 feet;
Thence with a curve to the left with an arc length of 45.46 feet, with a radius of 30.00 feet, with a chord bearing of S 69°42'15" W, with a chord length of 41.24 feet;
Thence S 26°17'23" W, a distance of 15.83 feet to a point on the Northern Right-of-Way Line of Grove Park Way;
Thence along said Right-of-Way Line and with a curve to the right with an arc length of 20.45 feet, with a radius of 270.00 feet, with a chord bearing of N 51°45'15" W, with a chord length of 20.44 feet;
Thence N 26°17'23" E, leaving said Right-of-Way Line and a distance of 11.59 feet;
Thence with a curve to the right with an arc length of 75.77 feet, with a radius of 50.00 feet, with a chord bearing of N 69°42'15" E, with a chord length of 68.73 feet;
Thence S 66°52'54" E, a distance of 19.09 feet;
Thence with a curve to the right with an arc length of 33.56 feet, with a radius of 40.00 feet, with a chord bearing of S 42°50'38" E, with a chord length of 32.59 feet;
Thence with a curve to the left with an arc length of 32.89 feet, with a radius of 13.55 feet, with a chord bearing of S 88°20'53" E, with a chord length of 25.39 feet;
Thence with a curve to the right with an arc length of 35.11 feet, with a radius of 22.38 feet, with a chord bearing of N 67°03'24" E, with a chord length of 31.62 feet;
Thence S 67°59'50" E, a distance of 269.27 feet;
Thence S 69°39'42" E, a distance of 63.35 feet;
Thence N 21°27'18" E, a distance of 14.95 feet;
Thence S 68°32'42" E, a distance of 60.00 feet to the POINT OF BEGINNING.

Said Easement contains 0.29 Acres (12,623 Square Feet), more or less.



CURVE DATA TABLE						
CURVE	RADIUS	ARC LEN	TANGENT	DELTA ANGLE	CHORD BEARING	CHORD LEN
C1	2.38'	3.73'	2.38'	89°53'33"	S 67°03'24" W	3.36'
C2	33.55'	81.44'	89.93'	139°05'00"	N 88°20'53" W	62.87'
C3	20.00'	16.78'	8.92'	48°04'31"	N 42°50'38" W	16.29'
C4	30.00'	45.46'	28.38'	86°49'42"	S 69°42'15" W	41.24'
C5	270.00'	20.45'	10.23'	4°20'21"	N 51°45'15" W	20.44'
C6	50.00'	75.77'	47.31'	86°49'42"	N 69°42'15" E	68.73'
C7	40.00'	33.56'	17.84'	48°04'31"	S 42°50'38" E	32.59'
C8	13.55'	32.89'	36.32'	139°05'00"	S 88°20'53" E	25.39'
C9	22.38'	35.11'	22.34'	89°53'33"	N 67°03'24" E	31.62'

LINE DATA TABLE		
LINE	BEARING	DISTANCE
L1	N 68°32'42" W	60.00'
L2	N 21°27'18" E	60.00'
L3	S 68°32'42" E	60.00'
L4	S 21°27'18" W	60.00'
L5	S 21°27'18" W	33.79'
L6	N 69°39'42" W	123.26'
L7	N 67°59'50" W	269.56'
L8	N 66°52'54" W	19.09'
L9	S 26°17'23" W	15.83'
L10	N 26°17'23" E	11.59'
L11	S 66°52'54" E	19.09'
L12	S 67°59'50" E	269.27'
L13	S 69°39'42" E	63.35'
L14	N 21°27'18" E	14.95'
L15	S 68°32'42" E	60.00'

TREE DATA TABLE			
1	14in Hackberry	35	8in Hickory
2	8in Hackberry	36	8in Hickory
3	14in Hackberry	37	12in Locust (dead)
4	6in Hackberry	38	12in Ash
5	6in Hackberry	39	10in Ash
6	12in Hackberry	40	8in Hickory
7	18in Hackberry	41	16in Hickory
8	14in Hackberry twin	42	16in Cedar
9	10in Ash	43	16in Cedar
10	14in Hackberry	44	8in Ash
11	14in Hackberry	45	6in Cherry
12	14in Hackberry	46	6in Cherry
13	14in Hackberry	47	10in Cherry
14	14in Hackberry	48	6in pear twin
15	12in Hackberry	49	14in Mimosa
16	24in Hackberry	50	14in Mimosa
17	8in Hackberry (twin)	51	10in Mimosa
18	18in Hackberry	52	10in Pear
19	18in Hackberry	53	10in Cedar
20	14in Hackberry	54	10in Hackberry
21	12in Ash	55	8in Hackberry
22	12in Hackberry	56	12in Hickory
23	10in Hackberry	57	24in Hackberry
24	12in Hackberry	58	12in Hackberry
25	6in Hackberry	59	8in Hackberry
26	14in Hackberry	60	12in Hackberry
27	12in Hackberry (quad)	61	20in Cherry
28	20in Oak	62	14in Hickory
29	10in Cedar	63	6in Hackberry
30	24in Hackberry	64	14in Hackberry (twin)
31	6in Hackberry	65	8in Hackberry
32	6in Hickory	66	18in Hickory
33	12in Locust	67	8in Hickory
34	12in Hickory	68	24in Hackberry

THE LAND CONSULTANTS LLC
5449 Highway 41
Jasper, TN 37347
423·304·6722

PREPARED FOR
VOGUE TOWERS
VOGUE TOWERS II, LLC

(Not a Boundary Survey of Parent Lands. Not intended for fee simple Land Transfer)

SITE SURVEY
LANTON
Site Number: TN-5001
Grove Park Way, Columbia, TN 38401
Maury County, Tennessee

DESCRIPTIONS & TABLES

DWG#: 24234
ISSUE #: 0
ISSUE DATE: 12-16-2024
SEE SHEET #1

SHEET 5 OF 6

TITLE EXAMINATION

Surveyor's treatment of Title Examination Items is limited to the scope described in ALTA/NSPS 2021 requirements, Section 6. C. ii., and is limited to determination of the extent of land, that Title Items may influence, if any. "Extent of Property" may be: Blanket in nature for a Parcel or Parcels (not subject to mapping, but assumed to also apply to Lessee's Areas (if any) insofar as these may lie on Parcel(s) influenced by instrument); specifically described by instrument (mapped and shown only if within the Surveyed Area). Determination of physical location may not be possible if: instrument is illegible; instrument lacks sufficient descriptive information; or instrument refers to other instruments which were not included in the title exam and not otherwise available to surveyor. Factors beyond physical location, such as the type of influence that "Restrictions, Covenants, Terms or Conditions" contained in instruments may impart upon Parcels or Lessee's Site or Easements are not evaluated by Land Surveyor. Review by Title Attorney may be warranted. Land Surveyors may not practice Law.)

Reference: Commitment for Title Insurance prepared by Chicago Title Insurance Company, Commitment No. 20241650CTN, Commitment Date: July 30, 2024, Schedule B, Part II, Exceptions.

Item 1 - 9: General Items (no record instruments listed) or Taxes, not addressed by Survey.

Item 10: Deed R1807-1092, Stormwater Detention Easement: Blanket in nature for property of Church.

LEGAL DESCRIPTION OF PARENT PARCEL

North and East by Edward P. Foster as of record in Deed Book 643, page 570 and South by William Hunt, Trustee as of record in Deed Book 851, page 76 and 851, page 84, from whose property this tract is taken and being more particularly described as follows:

Beginning at an iron rod in the East margin of U.S. Highway 31, the southwest corner of the herein described tract; thence with margin of said road along a curve to the left having a radius of 10817.75 feet for a distance of 200.00 feet (chord North 27degrees 51 minutes 36 seconds East 200.00 feet) to an iron rod; thence leaving said highway with Edward P. Foster as of record in Deed Book 643, Page 570 South 82 degrees 53 minutes 57 seconds East 703.08 feet to an iron rod; thence with same South 7 degrees 12 minutes 24 seconds West 218.23 feet to an iron rod; thence with same South 34 degrees 37 minutes 37 seconds East 243.00 feet to an iron rod; thence with William Hunt, Trustee as of record in Deed Book 851, page 76 and 851, page 84 from whose property this tract is taken North 70 degrees 05 minutes 41 seconds West 959.16 feet to the beginning containing 5.00 acres more or less by survey of W.A. Richardson, Jr., (RLS #689), 403 Oakwood Drive, Columbia, TN 38401, January 18, 1993.

Less and except Deed recorded in Book R2072, Page 1244, in the Register's Office for Maury County, Tennessee.

Being the same property conveyed to Christ Our Savior Evangelical Luthern Church by Warranty Deed from William L. Hunt, Trustee for the Edgar J. Doyle Trust and the Lester Hill Doyle Trust of record in Book 1174, page 310, Register's Office for Maury County, Tennessee, dated March 01, 1993 and recorded on March 02, 1993, Correction Deed recorded in Book 1195, Page 444, said Register's Office.

THE LAND CONSULTANTS LLC
5449 HIGHWAY 41
JASPER, TN 37347
423·304·6722

PREPARED FOR

VOGUE TOWERS

VOGUE TOWERS II, LLC

(Not a Boundary Survey of Parent Lands. Not intended for fee simple Land Transfer)

SITE SURVEY
LANTON

Site Number: TN-5001

Grove Park Way, Columbia, TN 38401

Maury County, Tennessee

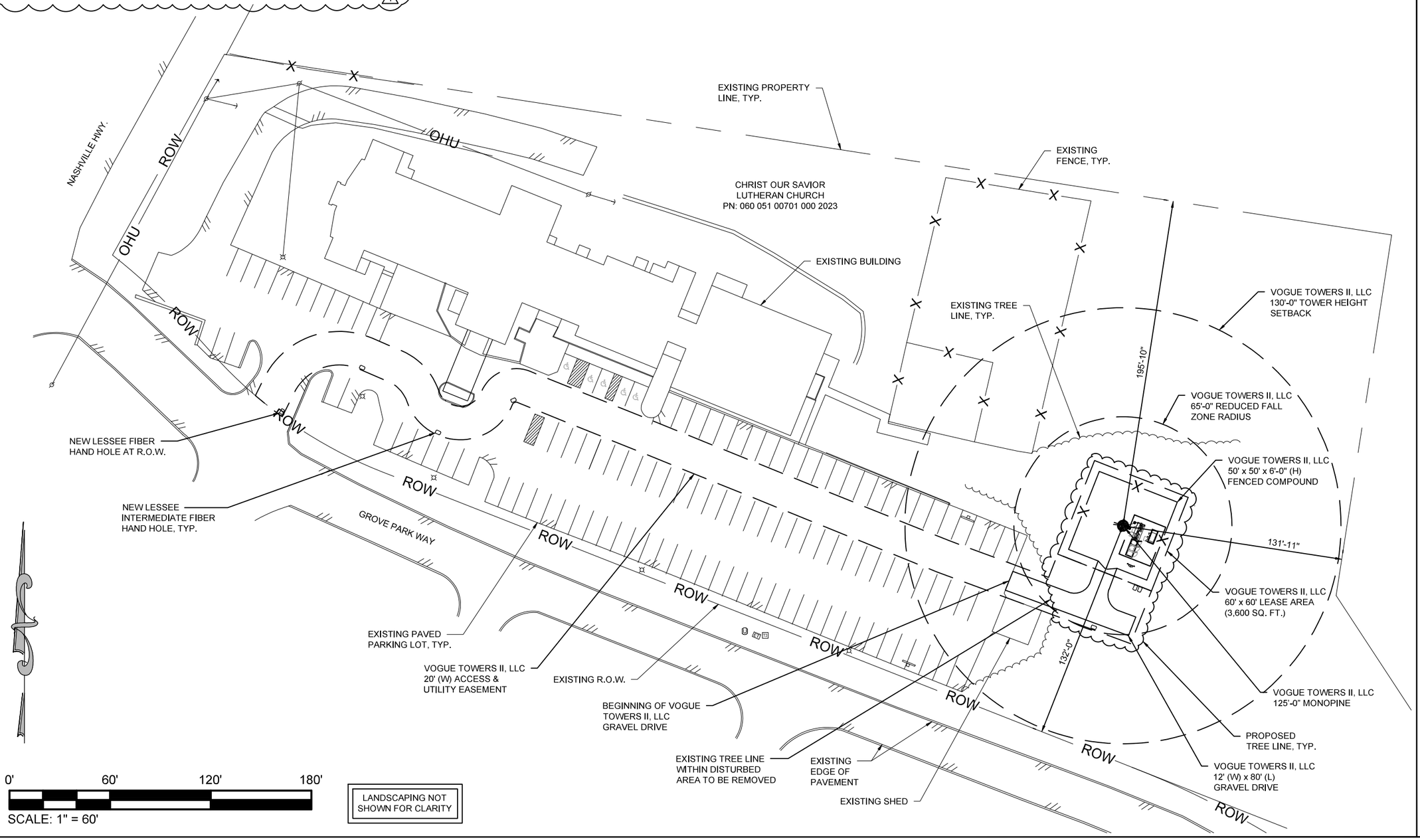
TITLE

DWG#: 24234
ISSUE #: 0
ISSUE DATE: 12-16-2024
SEE SHEET #1

SHEET 6 OF 6

NOTES:

1. THIS DRAWING IS BASED ON A SITE SURVEY BY THE LAND CONSULTANTS, LLC, DATED 12/16/2024. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. THE PROPOSED USE DOES NOT REQUIRE FULL OR PART TIME EMPLOYEES AT THE SITE.
3. FOR GENERAL SITE WORK NOTES, SEE SHEET Z-002.
4. ALL NORTH ARROWS ON SITE PLANS ARE TRUE NORTH, UNLESS OTHERWISE SPECIFIED.
5. VOGUE TOWERS II, LLC'S 20' WIDE ACCESS & UTILITY EASEMENT PATH SUBJECT TO FUTURE GROWTH PLANS OF PROPERTY OWNER AND WILL ADJUST AS NECESSARY TO ACCOMMODATE MODIFICATION TO THE ROW. 1



GEN7 ENGINEERING

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REVISIONS

#	DATE	BY	DESCRIPTION
1	04/15/25	BNS	FINAL ISSUE
0	03/07/25	BNS	FINAL ISSUE
B	03/06/25	BNS	PRELIMINARY ISSUE
A	03/05/25	BNS	PRELIMINARY ISSUE

STEPHEN M. CARPENTER — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — NO. 105147 — STATE OF TENNESSEE — 04-15-2025

verizon

SITE NAME: LANTON
SITE NUMBER: 17330373

VOGUE TOWERS

SITE NAME: LANTON
SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY COLUMBIA, TN 38401
SITE TYPE: RAWLAND

SHEET TITLE: OVERALL SITE LAYOUT PLAN

SHEET NUMBER	REVISION
Z-101	1

NOTES:

1. THIS DRAWING IS BASED ON A SITE SURVEY BY THE LAND CONSULTANTS, LLC, DATED 12/16/2024. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. THE PROPOSED USE DOES NOT REQUIRE FULL OR PART TIME EMPLOYEES AT THE SITE.
3. FOR GENERAL SITE WORK NOTES, SEE SHEET Z-002.
4. ALL NORTH ARROWS ON SITE PLANS ARE TRUE NORTH, UNLESS OTHERWISE SPECIFIED.



GEN7 ENGINEERING

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STEPHEN M. CARPENTER
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COMMERCE
NO. 105147
STATE OF TENNESSEE
04/15/2025

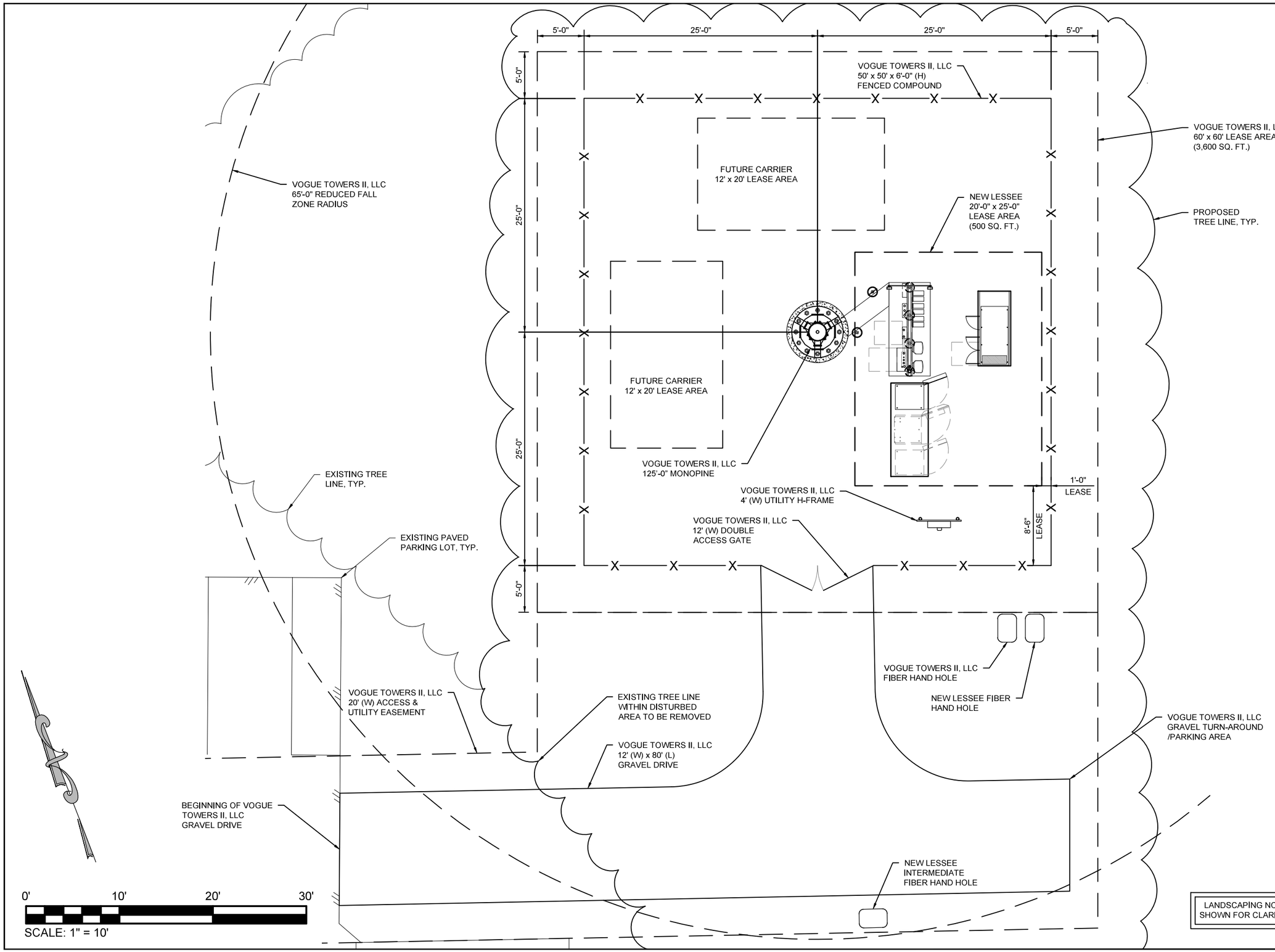
verizon

SITE NAME	LANTON
SITE NUMBER	17330373

VOGUE TOWERS

SITE NAME	LANTON
SITE NUMBER	TN-5001
SITE ADDRESS	2507 GROVE PARK WAY COLUMBIA, TN 38401
SITE TYPE	RAWLAND
SHEET TITLE	OVERALL AERIAL SITE LAYOUT PLAN

SHEET NUMBER	REVISION
Z-102	1



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STEPHEN M. CARPENTER
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04/15/2025

verizon

SITE NAME: LANTON
SITE NUMBER: 17330373

VOGUE TOWERS

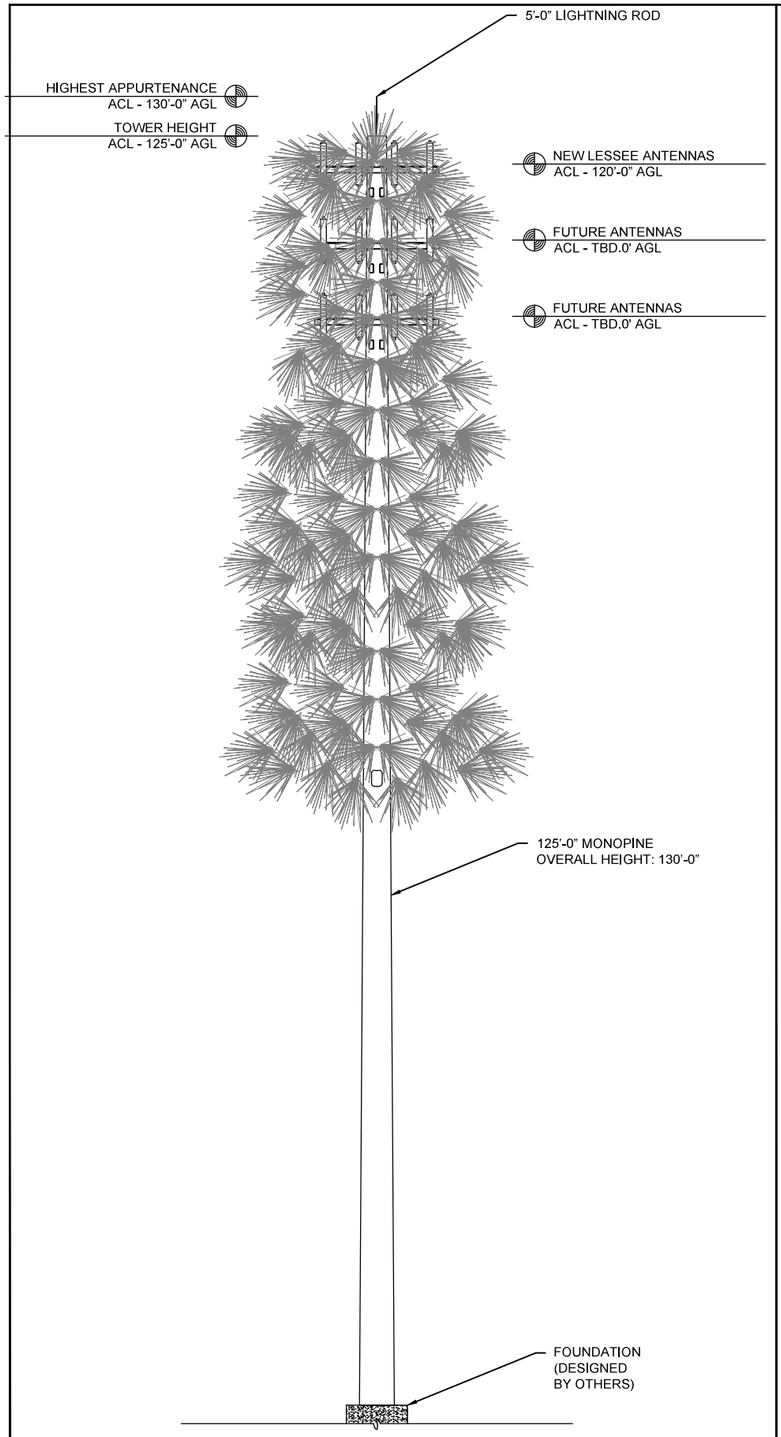
SITE NAME: LANTON
SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY
COLUMBIA, TN 38401

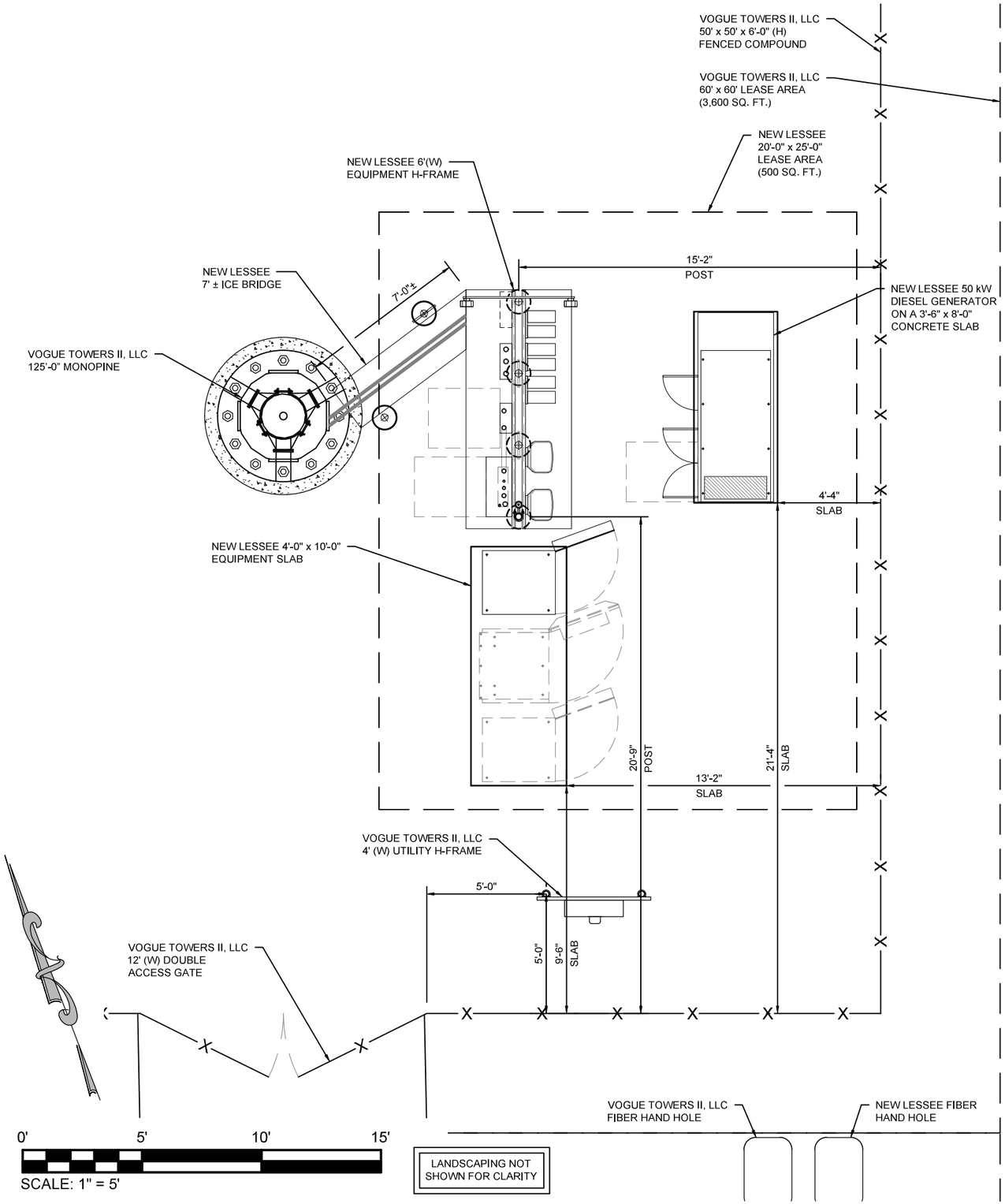
SITE TYPE: RAWLAND

SHEET TITLE: SITE LAYOUT PLAN

SHEET NUMBER	REVISION
Z-103	1



TOWER ELEVATION
NTS



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verizon

SITE NAME
LANTON

SITE NUMBER
17330373

VOGUE TOWERS

SITE NAME
LANTON

SITE NUMBER
TN-5001

SITE ADDRESS
2507 GROVE PARK WAY
COLUMBIA, TN 38401

SITE TYPE
RAWLAND

SHEET TITLE
TOWER ELEVATION &
EQUIPMENT LAYOUT PLAN

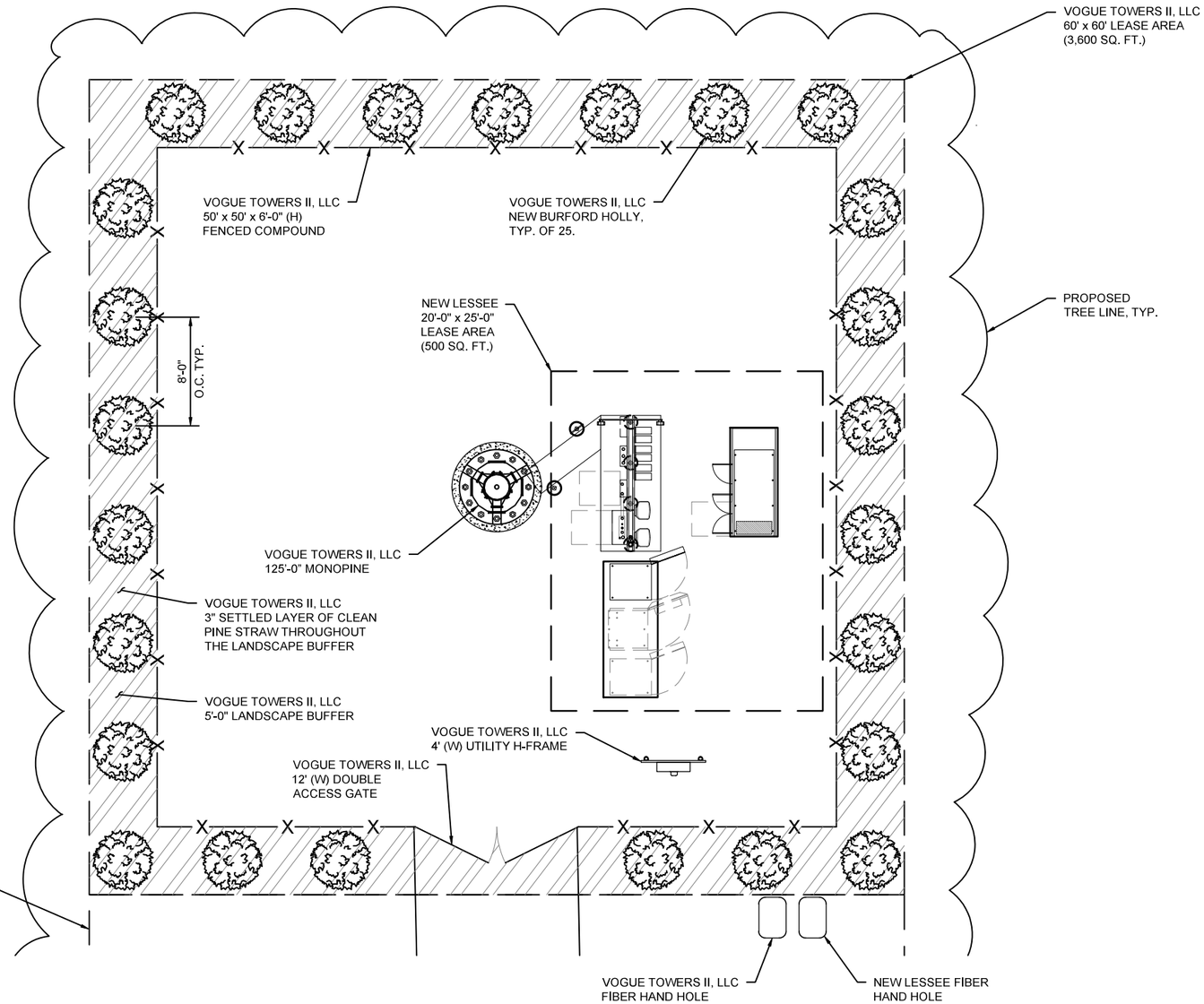
SHEET NUMBER	REVISION
Z-104	1

PLANTING SCHEDULE

QTY	BOTANICAL NAME	COMMON NAME	CALIPER	TYPE	SPACING	PLANTING HEIGHT	PLANTING WIDTH	MATURE HEIGHT	MATURE SPREAD	SUNLIGHT	SOIL CONDITIONS	SYMBOL	REMARKS
25	ILEX CORNUTA 'BURFORDII'	BURFORD HOLLY	N/A	UNDERSTORY EVERGREEN	SEE PLAN	5 FT	N/A	15 FT	8 FT	FULL OR PARTIAL	ADAPTABLE		FULL TO BASE

LANDSCAPE NOTES:

1. ALL PLANT MATERIAL SHALL CONFORM TO THE STANDARDS SET FORTH THE CURRENT EDITION OF AMERICAN STANDARDS FOR NURSERY STOCK OF NURSERYMEN.
2. PLANTING PLAN TAKES PRECEDENCE OVER PLANT LIST.
3. ALL TREES SHALL BE STAKED OR GUYED AT TIME OF PLANTING UNLESS NO STAKES IS PRE-APPROVED BY OWNER. STAKES OR GUYS SHALL NOT RESTRICT MOVEMENT OF THE PLANT, BUT SHALL HAVE 2"-3" OF SLACK IN EACH GUY WIRE.
4. ALL PLANT MATERIAL IS SUBJECT TO THE OWNERS APPROVAL PRIOR TO INSTALLATION TO INSURE THE CONFORMITY TO THE SPECIFICATIONS.
5. APPLY GRANULAR PRE-EMERGENT HERBICIDE TO SOIL PER MANUFACTURERS RECOMMENDATIONS BELOW MULCH BED PRIOR TO MULCH APPLICATION.
6. APPLY "LESCO" (OR EQUAL) GRANULAR SLOW RELEASE FERTILIZER PER MANUFACTURERS RECOMMENDATIONS TO TREES AT TIME OF PLANTING.
7. PLACE 3" MIN. THICKNESS OF SETTLED LAYER OF CLEAN PINE STRAW THROUGHOUT THE LANDSCAPE BUFFER AS SHOWN ON PLAN. IF NECESSARY, INSTALL METAL OR PVC EDGING STRIPS TO PREVENT PINE STRAW FROM WASHING ONTO ROAD OR OTHERWISE CAUSING PROBLEMS.
8. CONTRACTOR SHALL WARRANTY PLANTS FOR A PERIOD OF 1 YEAR AFTER FINAL ACCEPTANCE.



0' 10' 20' 30'

SCALE: 1" = 10'

GEN7 ENGINEERING

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REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 105147
STATE OF TENNESSEE
01-15-2025

verizon

SITE NAME: LANTON
SITE NUMBER: 17330373

VOGUE TOWERS

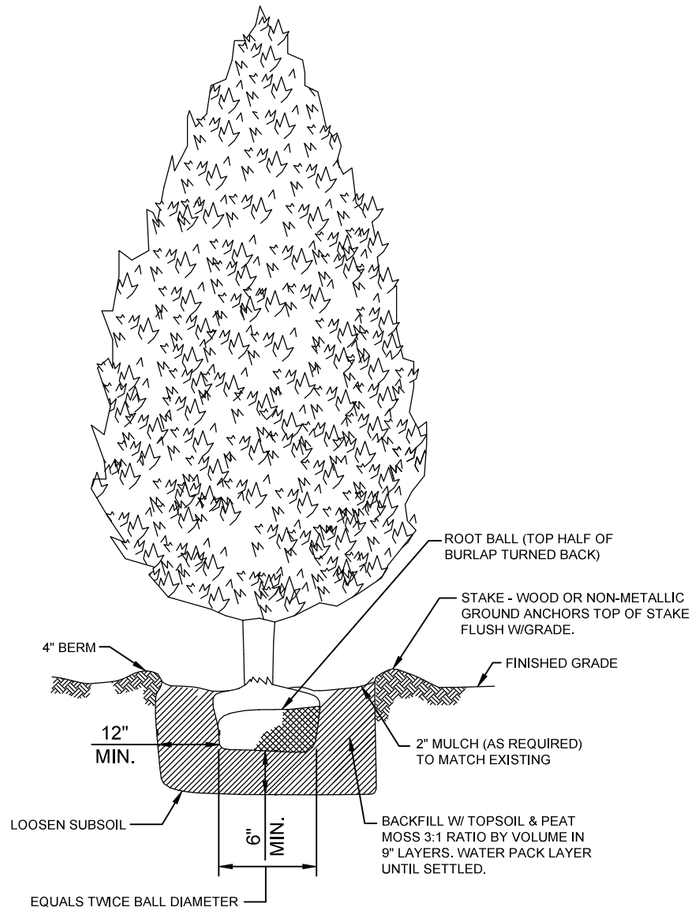
SITE NAME: LANTON
SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY
COLUMBIA, TN 38401

SITE TYPE: RAWLAND

SHEET TITLE: LANDSCAPING DETAILS

SHEET NUMBER	REVISION
Z-105	A



BURFORD HOLLY

NOTES:
1. PLANT SHALL BE MIN. 5'-0" IN HEIGHT AT TIME OF PLANTING.

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NO. 105147
STATE OF TENNESSEE
01-15-2025

verizon

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SITE NUMBER: 17330373

VOGUE TOWERS

SITE NAME: LANTON
SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY COLUMBIA, TN 38401

SITE TYPE: RAWLAND

SHEET TITLE: LANDSCAPING DETAILS

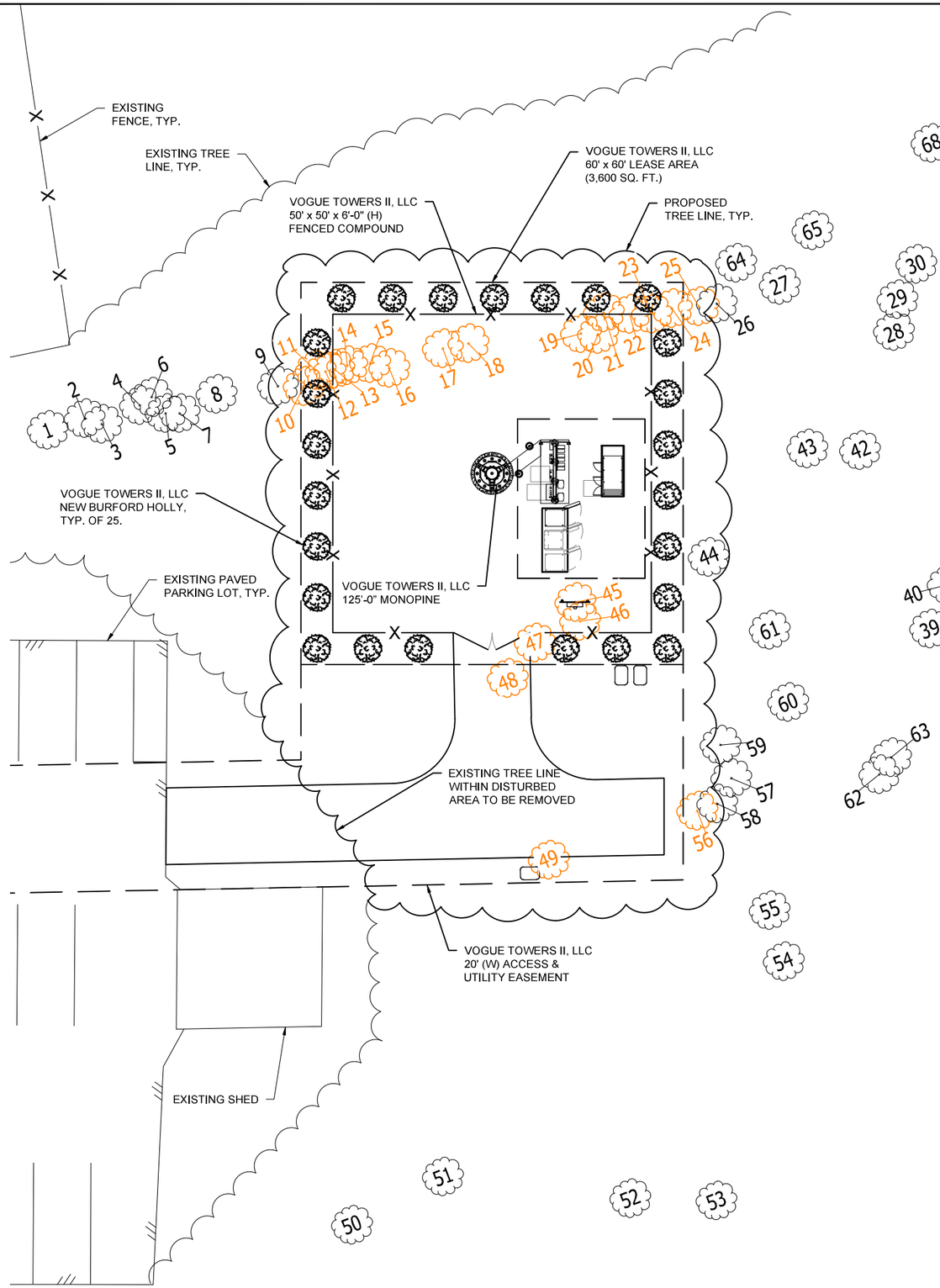
SHEET NUMBER	REVISION
Z-106	A

NOTES:

1. TREE LOCATIONS & REFERENCED NUMBERS ARE BASED ON A TREE SURVEY BY THE LAND CONSULTANTS, LLC, DATED 07/29/2024.

TREE DATA TABLE								
#	TREE TYPE	SIZE	#	TREE TYPE	SIZE	#	TREE TYPE	SIZE
1	HACKBERRY	14"	24	HACKBERRY	12"	47	CHERRY	10"
2	HACKBERRY	8"	25	HACKBERRY	6"	48	PEAR (TWIN)	6"
3	HACKBERRY	14"	26	HACKBERRY	14"	49	MIMOSA	14"
4	HACKBERRY	6"	27	HACKBERRY (QUAD)	12"	50	MIMOSA	14"
5	HACKBERRY	6"	28	OAK	20"	51	MIMOSA	10"
6	HACKBERRY	12"	29	CEDAR	10"	52	PEAR	10"
7	HACKBERRY	18"	30	HACKBERRY	24"	53	CEDAR	10"
8	HACKBERRY (TWIN)	14"	31	HACKBERRY	6"	54	HACKBERRY	10"
9	ASH	10"	32	HICKORY	6"	55	HACKBERRY	8"
10	HACKBERRY	14"	33	LOCUST	12"	56	HACKBERRY	12"
11	HACKBERRY	14"	34	HICKORY	12"	57	HACKBERRY	24"
12	HACKBERRY	14"	35	HICKORY	8"	58	HACKBERRY	12"
13	HACKBERRY	14"	36	HICKORY	8"	59	HACKBERRY	8"
14	HACKBERRY	14"	37	LOCUST (DEAD)	12"	60	HACKBERRY	12"
15	HACKBERRY	12"	38	ASH	12"	61	CHERRY	20"
16	HACKBERRY	24"	39	ASH	10"	62	HICKORY	14"
17	HACKBERRY (TWIN)	8"	40	HICKORY	8"	63	HACKBERRY	6"
18	HACKBERRY	18"	41	HICKORY	16"	64	HACKBERRY (TWIN)	14"
19	HACKBERRY	18"	42	CEDAR	16"	65	HACKBERRY	8"
20	HACKBERRY	14"	43	CEDAR	16"	66	HICKORY	18"
21	ASH	12"	44	ASH	8"	67	HICKORY	8"
22	HACKBERRY	12"	45	CHERRY	6"	68	HACKBERRY	24"
23	HACKBERRY	10"	46	CHERRY	6"			

EXISTING TOTAL TREE'S	= 68	TOTAL TREE'S BEING REMOVED	= 22 (-32.35%)
TOTAL TREE'S REMAINING	= 46 (67.65%)	TOTAL TREE'S BEING ADDED	= 25 (+36.76%)
NEW TREE TOTAL	= 71		



LEGEND

TREE TO REMAIN	
TREE TO BE REMOVED	
TREE TO BE ADDED	

0' 20' 40' 60'

SCALE: 1" = 20'

GEN7 ENGINEERING

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#	DATE	BY	DESCRIPTION

STEPHEN M. CARPENTER — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — NO. 105147 — STATE OF TENNESSEE — 04/15/2025

verizon

SITE NAME	LANTON
SITE NUMBER	17330373

VOGUE TOWERS

SITE NAME	LANTON
SITE NUMBER	TN-5001
SITE ADDRESS	2507 GROVE PARK WAY COLUMBIA, TN 38401
SITE TYPE	RAWLAND
SHEET TITLE	TREE PRESERVATION PLAN
SHEET NUMBER	Z-107
REVISION	1

EROSION NOTES:

1. CLEARING AND GRUBBING SHALL NOT BE INITIATED MORE THAN 10 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS TEMPORARILY SEEDED.
1. ALL DISTURBED AREAS SHALL BE PROPERLY STABILIZED AS SOON AS PRACTICABLE.
2. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED CONCURRENT WITH CLEARING OPERATIONS. AND SHALL BE FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS.
3. CONSTRUCTION SHALL BE SEQUENCED TO MINIMIZE THE EXPOSURE TIME OF GRADED SOIL AREAS AND SHALL BE PHASED FOR PROJECTS THAT HAVE OVER 50 ACRES OF SOIL DISTURBANCE. HOWEVER, PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EROSION CONTROL MEASURES OVER TEMPORARY EROSION CONTROL MEASURES ON ALL PROJECTS.
4. SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE / U.S. EROSION AND SEDIMENTATION CONTROL MEASURES TO PROTECT WATER QUALITY MUST BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. SILT FENCE MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS. ON THE DOWNHILL SIDE OF STOCKPILED SOIL. AND ALONG STREAM BANKS IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION IN TO STREAMS. THEY MUST BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.
5. CHECK DAMS SHALL BE UTILIZED WHERE RUNOFF IS CONCENTRATED. CLEAN ROCK, BRUSH, SANDBAG, OR CHECK DAMS SHALL BE PROPERLY CONSTRUCTED TO DETAIN RUNOFF AND TRAP SEDIMENT. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, THAT CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS.
6. TEMPORARY OR PERMANENT SOIL STABILIZATION SHALL BE ACCOMPLISHED WITHIN 15 DAYS AFTER FINAL GRADING OR OTHER EARTHWORK, PERMANENT SOIL STABILIZATION SHALL REPLACE TEMPORARY STABILIZATION AS SOON AS PRACTICABLE.
7. THE CONTRACTOR SHALL INSTALL A RAIN GAUGE ON-SITE AND MAINTAIN IT IN GOOD WORKING CONDITION. THE CONTRACTOR SHALL RECORD DAILY PRECIPITATION ON THE PROJECT AND PROVIDE THIS INFORMATION TO THE ENGINEER ON A MONTHLY BASIS.
8. INSPECTIONS OF EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DONE BEFORE ANTICIPATED STORM EVENTS (OR SERIES OF STORM EVENTS SUCH AS INTERMITTENT SHOWERS OVER ONE OR MORE DAYS) AND WITHIN 24 HOURS AFTER THE END OF A STORM EVENT OF 0.5 INCHES OR GREATER, AND AT LEAST TWALK-IN-CABINETE PER WEEK, 72 HOURS APART. THE RECORD OF INSPECTIONS MUST BE RETAINED ON SITE DURING THE DURATION OF THE PROJECT.
9. OUTFALL POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING IMPACTS TO SURROUNDING WATERS. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF-SITE ROADWAY SEDIMENT TRACKING.
10. UPON CONCLUSION OF THE INSPECTIONS, EROSION AND SEDIMENT CONTROL MEASURE FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN SEVEN DAYS AFTER THE CONDITION IS IDENTIFIED.
11. THE CONTRACTOR SHALL MAINTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN ON-SITE (OR AT A NEARBY OFFICE).
12. THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE / U.S., INCLUDING WETLANDS, SHALL BE ONLY AS SHOWN ON THE PROJECT PLANS AND/OR AS SO SPECIFIED IN THE ARAP AND/OR SECTION 404 PERMIT (S). ANY ADDITIONAL PERMITS REQUIRED BY THE CONTRACTOR'S METHOD OF OPERATION, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN.
13. EXCAVATION AND FILL ACTIVITIES SHALL BE SEPARATED FROM FLOWING WATERS. ALL SURFACE WATER FLOWING TOWARD THE EXCAVATION OR FILL WORK SHALL BE DIVERTED THROUGH UTILIZATION OF COFFERDAMS, BERMS, OR TEMPORARY CHANNELS. TEMPORARY DIVERSION CHANNELS MUST BE PROTECTED BY NON-ERODIBLE MATERIAL AND LINED TO THE EXPECTED HIGH WATER LEVEL. COFFERDAMS MUST BE CONSTRUCTED OF SANDBAGS, CLEAN ROCK, STEEL SHEETING OR OTHER NON-ERODIBLE MATERIAL. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, THAT CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS.
14. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS FROM ENTERING WATERS OF STATE / U.S.
15. THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS STATE / U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES: INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). APPROPRIATE CONTAINMENT MEASURE FOR THESE AREAS SHALL BE UTILIZED. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURE SHALL BE TAKES IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.
16. BORROW AND WASTE DISPOSAL AREAS SHALL BE LOCATED IN NON-WETLAND AREAS AND ABOVE THE 100-YEAR, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN. BORROW AND WASTE DISPOSAL AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE / U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY AN ARAP, 404, OR NPOES PERMIT, OBTAINED SOLELY BY THE CONTRACTOR.
17. WETLAND AREAS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS PROVIDED FOR IN THE PLANS.
18. ANY DISAGREEMENT BETWEEN THE PROJECT PLANS, THE PROJECT AS CONSTRUCTED AND THE PERMIT OR PERMITS ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER. THE ENGINEER SHALL DECIDE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLANS REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.
19. THE EROSION AND SEDIMENT CONTROL MEASURE AND/OR PLAN SHALL BE MODIFIED AS NECESSARY SO THAT THEY ARE EFFECTIVE AT ALL TIMES THROUGHOUT THE COURSE OF THE PROJECT.
20. FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN SEVEN (7) DAYS AFTER TRENCHING. ANY TEMPORARY SPOIL PILE OF EXCAVATED EARTH SHALL BE LOCATED WITHIN THE PROJECT EROSION CONTROL MEASURES ARE NOT BACKFILLED OVERNIGHT. APPROPRIATE EROSION CONTROL AND SAFETY MEASURE WILL BE INSTALLED UNTIL SUCH TIME AS THE TRENCH IS BACKFILLED.
21. THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO AND/OR CONCURRENT WITH LAND-DISTURBING ACTIVITIES AS DETAILED IN THESE PLANS.
22. THE EROSION, SEDIMENT CONTROL MEASURES, AND PLAN SHALL BE MODIFIED AS NECESSARY AS TO BE EFFECTIVE AND CURRENT AT ALL PHASES OF PROJECT.
23. CONTROLS TO PREVENT ON-SITE EROSION AND TRANSPORT OF SEDIMENT OFF-SITE SHALL AT A MINIMUM CONFORM TO THE LATEST EDITION OF THE STATE EROSION AND SEDIMENT CONTROL HANDBOOK AND ALL APPLICABLE LOCAL CODES.
24. FAILURE TO INSTALL, OPERATE, OR MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL RESULT IN ALL WORK ON THE SITE IMMEDIATELY BEING BROUGHT TO A HALT UNTIL THE MEASURES CAN BE BROUGHT INTO COMPLIANCE WITH THE TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK AND ALL APPLICABLE LOCAL CODES.
25. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED CONCURRENT WITH CLEARING OPERATIONS AND SHALL BE FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS. THE LOCATION OF SOME CONTROL MEASURES MAY HAVE TO BE ALTERED SLIGHTLY FROM WHAT IS SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE SIGNIFICANTLY DIFFERENT FROM FINAL DRAINAGE PATTERNS, OR AS ACTUAL SITE TOPOGRAPHY REQUIRES.
26. SITE CONSTRUCTION MAY COMMENCE WHEN EROSION AND SEDIMENT CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSITS AND EROSION HAVE BEEN INSTALLED. SEDIMENT AND EROSION CONTROLS SHALL REMAIN UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED AND FINAL PAVING AND SURFACING IS COMPLETE.
27. CONSTRUCTION EXITS SHALL BE CONSTRUCTED AT EACH POINT OF ENTRY OR EXIT FROM THE SITE AND SHALL PREVENT THE TRACK-OUT OF SEDIMENT OR OTHER MATERIAL FROM THE SITE ONTO PUBLIC RIGHT-OF-WAY. ANY MATERIAL APPEARING ON THE PUBLIC RIGHT-OF-WAY SHOULD BE REMOVED IMMEDIATELY. THE CONSTRUCTION EXIT SHALL BE MAINTAINED SO ITS PERFORMANCE DOES NOT DETERIORATE OVER THE SPAN OF THE PROJECT.
28. PERIMETER CONTROLS SHALL BE INSTALLED AFTER THE INSTALLATION OF CONSTRUCTION EXITS.
29. ALL SILT BARRIERS SHALL BE INSTALLED AS ACCESS IS OBTAINED DURING CLEARING. NO GRADING SHALL BE DONE UNTIL TUBES & WATTLES AND/OR SILT FENCES ARE INSTALLED AS SHOWN ON THE PLANS.
30. DISTURBED AREAS LEFT EXPOSED AND UNWORKED FOR PERIODS OF GREATER THAN 7 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY VEGETATION.
31. DISTURBED AREAS LEFT EXPOSED AND UNWORKED FOR PERIODS OF GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH AND PERMANENT VEGETATION.
32. DUST CONTROL SHALL BE UTILIZED AS NEEDED AND MUST BE IN COMPLIANCE WITH ALL APPLICABLE LOCAL CODES.
33. AMENDMENTS AND/OR REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE ENGINEER.
34. THE CONTRACTOR SHALL REMOVE SILT FROM THE SILT FENCE OR TUBES & WATTLES WHEN THE ACCUMULATED DEPTH IS ONE-HALF (1/2) OF THE HEIGHT OF THE CONTROL.
35. ALL UTILITY LOCATIONS ARE APPROXIMATE, AND IT IS POSSIBLE SOME EXISTING UTILITIES ARE NOT SHOWN ON THE PLANS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE THE LOCATIONS OF ALL UNDERGROUND UTILITIES VERIFIED AND MARKED PRIOR TO CONSTRUCTION.

GRADING NOTES :

1. PROPOSED CONTOURS AND SPOT ELEVATIONS ARE SHOWN AT TOP OF CRUSHED STONE, TOP OF FOUNDATION, OR TOP OF TOPSOIL. SEE DETAILS FOR THICKNESS OF CRUSHED STONE. MASS GRADED AREAS AND CRUSHED STONE SHALL BE FINISHED WITHIN 4" OF GRADES SHOWN. FOUNDATIONS SHALL BE FINISHED WITHIN 0.5" OF GRADES SHOWN.
2. ALL TREES, ROOTS, BRUSH, AND ORGANIC MATTER (TOPSOIL) SHALL BE REMOVED BEFORE BEGINNING FILL. FILL MATERIAL SHALL BE CLEAR SOIL CONTAINING NO ROCKS LARGER THAN 6 INCHES.
3. FILLS SHALL BE FORMED OF SATISFACTORY MATERIAL PLACED IN SUCCESSIVE HORIZONTAL LAYERS OF NOT MORE THAN 6 INCHES IN LOOSE DEPTH FOR THE FULL WIDTH OF EACH STRIP. FILL SOIL SHALL BE PLACED AT A MOISTURE CONTENT THAT IS WITHIN MINUS 1% OR PLUS 3% A OF THE OPTIMUM MOISTURE CONTENT AND TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM 698 (STANDARD PROCTOR). THE UPPER 12 INCHES OF FILL SHALL BE COMPACTED TO 98%.
4. STANDARD PROCTOR TESTS (ASTM 698) SHALL BE DONE BY AN INDEPENDENT TESTING LABORATORY EMPLOYED BY THE CONTRACTOR. IN-PLACE DENSITY TESTS SHALL BE PERFORMED ON EACH LIFT TO ENSURE PROPER PLACEMENT OF FILL MATERIAL.
5. ALL DISTURBED AREAS SHALL RECEIVE GROUND COVER. ALL AREAS TO RECEIVE GROUND COVER SHALL HAVE A MINIMUM OF 4 INCHES OF TOPSOIL. ALL FOREIGN DEBRIS SHALL BE REMOVED BEFORE PLACING TOPSOIL. AREAS WITH LESS THAN 4:1 SLOPE SHALL BE SEEDED WITH FOUR POUNDS OF KENTUCKY 31 FESCUE AND ONE POUND OF ANNUAL RYE PER 1,000 SQFT. SLOPES STEEPER THAN 4:1 SHALL BE SEEDED WITH A MIXTURE OF 1/4 POUND SCARIFIED SERICEA LESPEDEZA. 1/4 POUND CROWN VETCH, AND ONE POUND KENTUCKY 31 FESCUE PER 1,000 SQFT WITH 30 POUNDS PER 1,000 SQFT OF 6-12-12 FERTILIZER. SLOPES 3:1 OR STEEPER SHALL BE COVERED WITH NORTH AMERICAN GREEN EROSION CONTROL BLANKET S150 INSTALLED PER MANUFACTURERS SPECIFICATIONS (OR ENGINEER APPROVED EQUAL) TO PREVENT EROSION. CONTRACTOR SHALL WARRANTY GROUND COVER AND SLOPES FOR A PERIOD OF 1 YEAR.
6. CONFINE ALL CONSTRUCTION ACITIVITY TO PROPERTY OWNER'S PARCEL. DO NOT ENTER ADJACENT PROPERTY WITHOUT OBTAINING APPROVAL THROUGH TELLCO PARTNERSHIP.
7. CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FENCE AND OTHER TEMPORARY EROSION CONTROL MEASURES AFTER GRASS IS ESTABLISHED AND STABILIZED.
8. ALL DISTURBED AREAS NOT TO BE COVERED WITH GRAVEL, RIP RAP, PAVEMENT, OR OTHER STABILIZATION SHALL RECEIVE GROUND COVER. ALL AREAS TO RECEIVE GROUND COVER SHALL HAVE A MINIMUM OF 4 INCHES OF TOPSOIL
9. THE CONTRACTOR SHALL MAINTAIN ADEQUATE DRAINAGE AT ALL TIMES. DO NOT ALLOW WATER TO STAND OR POND. ANY DAMAGE TO STRUCTURES OR WORK ON THE SITE CAUSED BY INADEQUATE MAINTENANCE OF DRAINAGE PROVISIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND ANY COST ASSOCIATED WITH REPAIRS FOR SUCH DAMAGE WILL BE AT THE CONTRACTOR'S EXPENSE.
10. ALL WASTE MATERIAL SHALL BE PROPERLY DISPOSED OF OFF-SITE OR AS DIRECTED BY THE VOGUE TOWERS II, LLC'S CONSTRUCTION MANAGER AND IN ACCORDANCE WITH JURISDICTIONAL AUTHORITIES.
11. EXCAVATIONS ADJACENT TO EXISTING PAVEMENT SHALL BE MADE TO A NEAT SAW-CUT LINE.
12. ALL TREES THAT ARE CUT OR KNOCKED DOWN WITHIN THE LIMITS OF DISTURBANCE SHALL BE DISPOSED OF IN ACCORDANCE WITH NOTE 10 OR MULCHED FOR LATER USE.

GEN 7 ENGINEERING

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REVISIONS			
A	12/12/24	BNS	PRELIMINARY ISSUE
#	DATE	BY	DESCRIPTION

STEPHEN M. CARPENTER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 105147
STATE OF TENNESSEE
01-15-2025

verizon

SITE NAME: LANTON
SITE NUMBER: 17330373

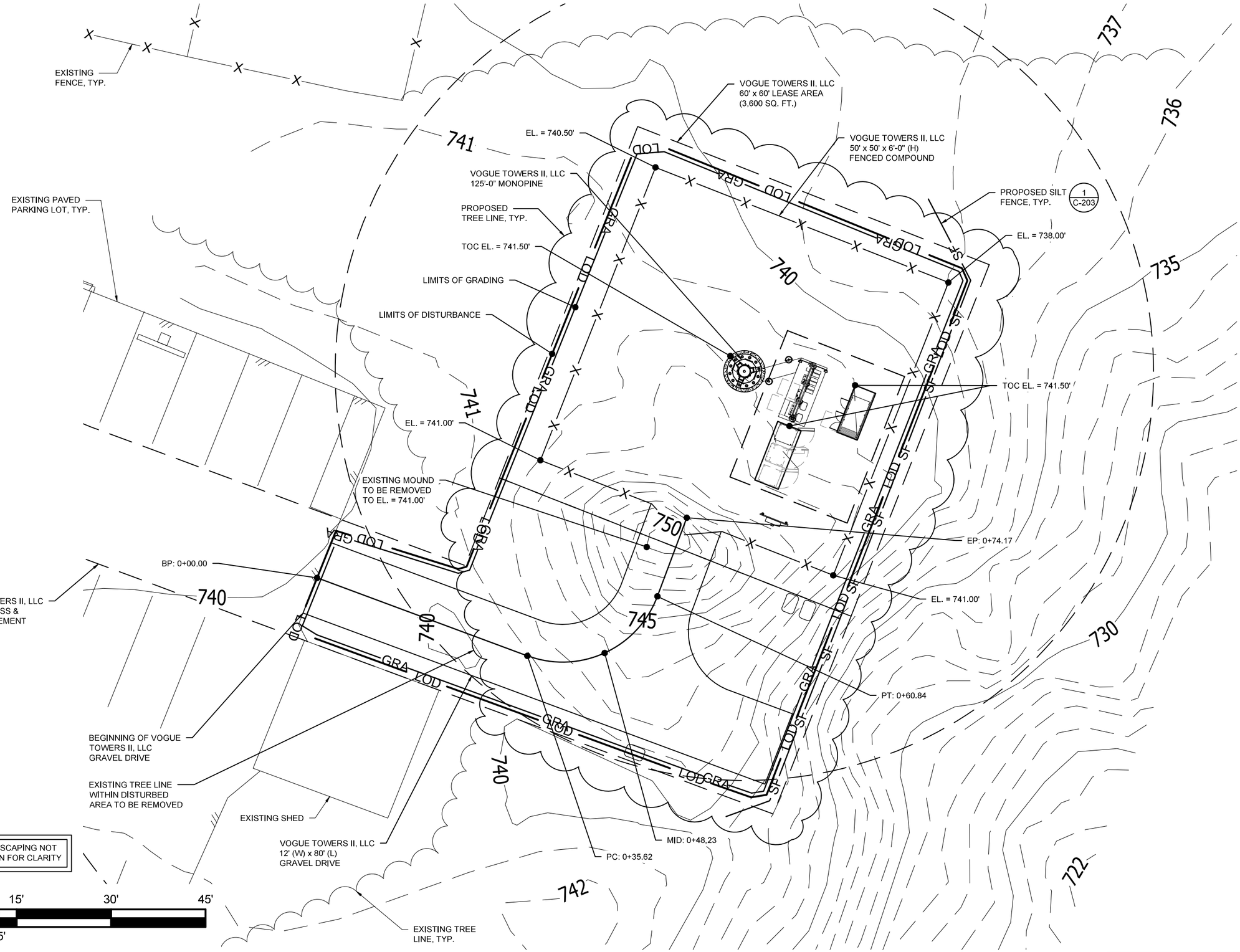
VOGUE TOWERS

SITE NAME: LANTON
SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY, COLUMBIA, TN 38401
SITE TYPE: RAWLAND

SHEET TITLE: EROSION NOTES

SHEET NUMBER	REVISION
Z-200	A



GEN7 ENGINEERING

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STEPHEN M. CARPENTER 105147 REGISTERED ENGINEER AGRICULTURE COMMERCE STATE OF TENNESSEE
01-15-2025

verizon

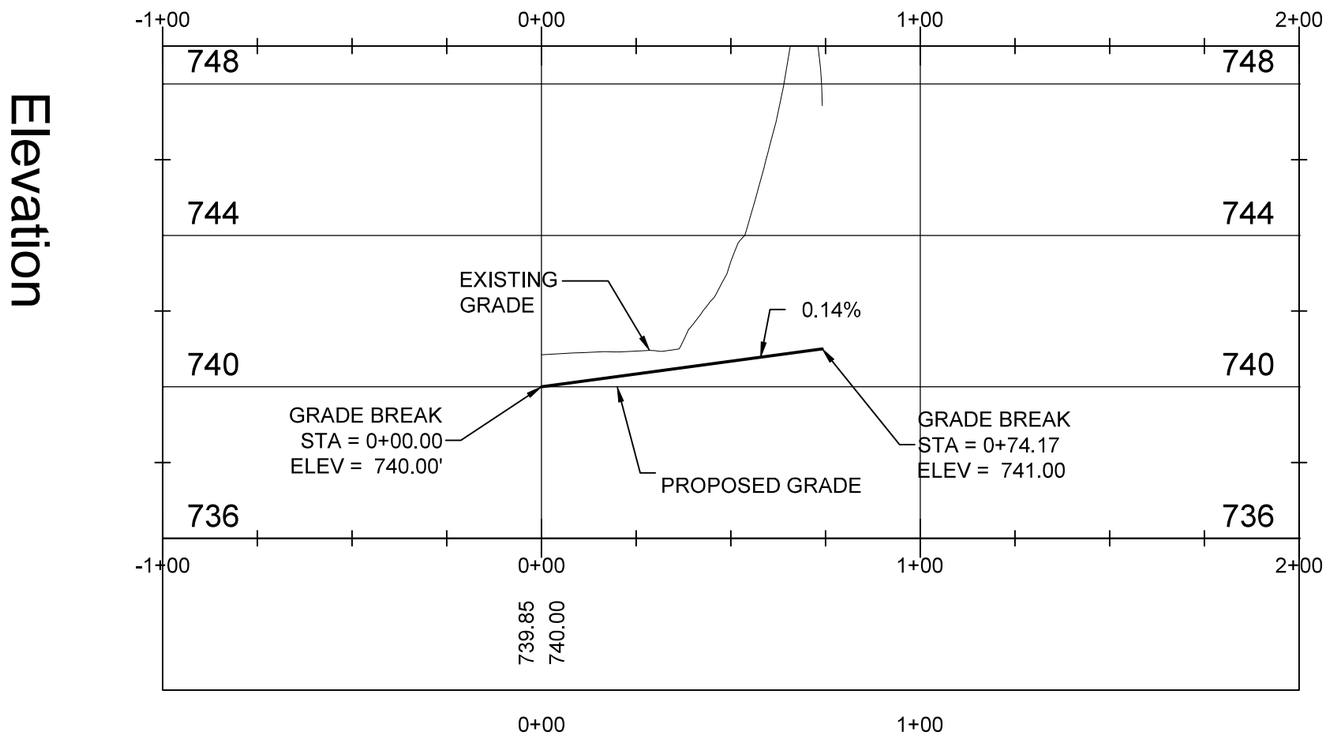
SITE NAME	LANTON
SITE NUMBER	17330373

VOGUE TOWERS

SITE NAME	LANTON
SITE NUMBER	TN-5001
SITE ADDRESS	2507 GROVE PARK WAY COLUMBIA, TN 38401
SITE TYPE	RAWLAND
SHEET TITLE	SITE GRADING PLAN

SHEET NUMBER	REVISION
Z-201	A

ACCESS DRIVE PROFILE



CUT / FILL SUMMARY :

TOTAL LIMITS OF DISTURBANCE :	TOTAL LIMITS OF GRADING :	NAME	2D AREA	CUT	FILL	NET
		COMPOUND vs EG	2500.00 SQ FT	15.82 CU YD	0.00 CU YD	15.82 CU YD <CUT>
		DRIVE vs EG	890.04 SQ FT	23.51 CU YD	0.00 CU YD	23.51 CU YD <CUT>
		TOTAL ROCK DISPLACEMENT	-	45.12 CU YD		45.12 CU YD <CUT>
0.125 AC ±	0.121 AC ±	TOTALS	3390.04 SQ FT	84.45 CU YD	0.00 CU YD	84.45 CU YD <CUT>

GEN7 ENGINEERING

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STEPHEN M. CARPENTER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 105147
STATE OF TENNESSEE
01-15-2025

verizon

SITE NAME: LANTON
SITE NUMBER: 17330373

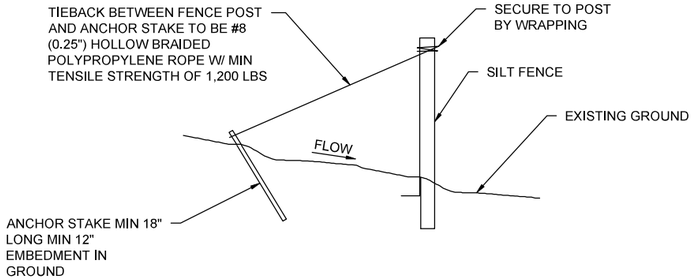
VOGUE TOWERS

SITE NAME: LANTON
SITE NUMBER: TN-5001

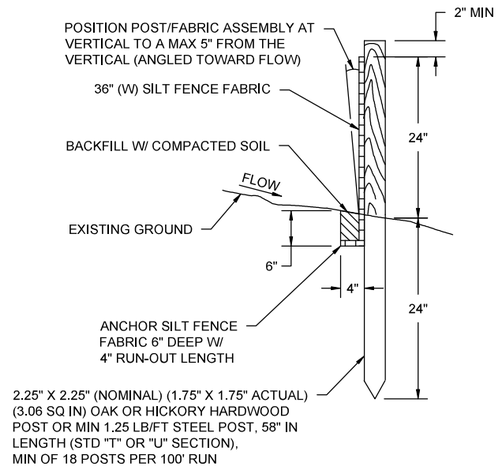
SITE ADDRESS: 2507 GROVE PARK WAY COLUMBIA, TN 38401
SITE TYPE: RAWLAND

SHEET TITLE: DRIVEWAY PROFILE

SHEET NUMBER	REVISION
Z-202	A



SILT FENCE TIEBACK FOR STEEL OR WOOD POSTS



SECTIONAL VIEW

SILT FENCE DETAIL (1)
NTS

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verizon

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SITE NUMBER: 17330373

VOGUE TOWERS

SITE NAME: LANTON
SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY COLUMBIA, TN 38401

SITE TYPE: RAWLAND

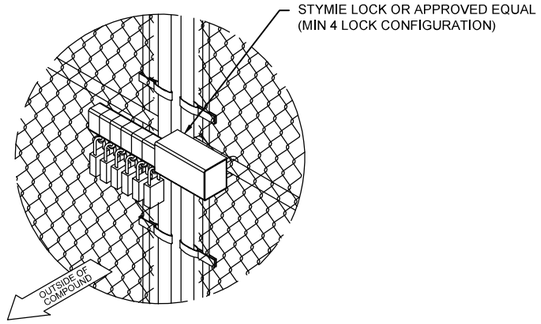
SHEET TITLE: SITE GRADING DETAILS

SHEET NUMBER	REVISION
Z-203	A

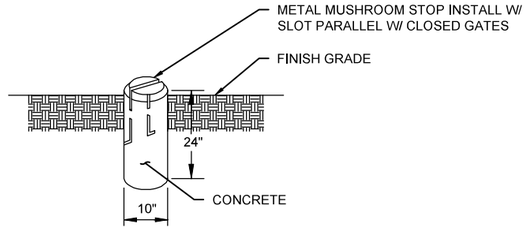
TYPICAL WOVEN WIRE FENCING NOTES:

(INSTALL FENCING PER ASTM F-567, SWING GATES PER ASTM F-900)

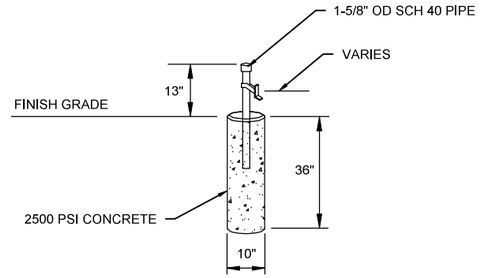
1. GATE POST, CORNER, TERMINAL OR PULL POST SHALL BE 3"Ø SCHEDULE 40 FOR GATE WIDTHS UP THRU 7 FEET OR 14 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
2. LINE POST: 2"Ø SCHEDULE 40 PIPE PER ASTM-F1083. INSTALL EVERY 8'-0" ALONG FENCE LINE.
3. GATE FRAME: 1-1/2"Ø SCHEDULE 40 PIPE, STELL, HOT-DIPPED ZINC COATED (GALVANIZED) WELDED STEEL PIPE PER ASTM-F1083.
4. TOP RAIL & BRACE RAIL: 1-5/8"Ø SCHEDULE 40 PIPE PER ASTM-F1083.
5. CHAIN LINK FABRIC: 9 GA. MIN. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
6. TIE WIRE: MINIMUM 11 GA. GALVANIZED STEEL INSTALL A SINGLE WRAP TIE WIRE AT POSTS AND RAILS AT MAX. 24" INTERVALS. INSTALL HOG RINGS ON TENSION WIRE AT 24" INTERVALS.
7. TENSION WIRE: 7 GA. GALVANIZED STEEL
8. GATE LATCH: 1-3/8" OD PLUNGER ROD W/ MUSHROOM TYPE CATCH AND LOCK (KEYED ALIKE FOR ALL SITES OR COMBINATION AS SPECIFIED BY OWNER)
9. HEIGHT = 6'-0" VERTICAL DIMENSION. WORK WITH SPECIFICATION 2831.



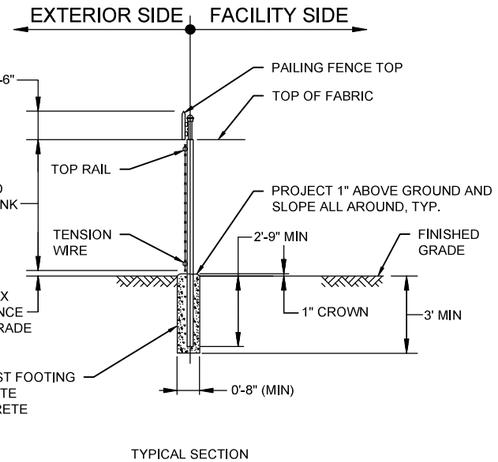
FENCE LOCK DETAIL
NTS



MUSHROOM STOP
NTS

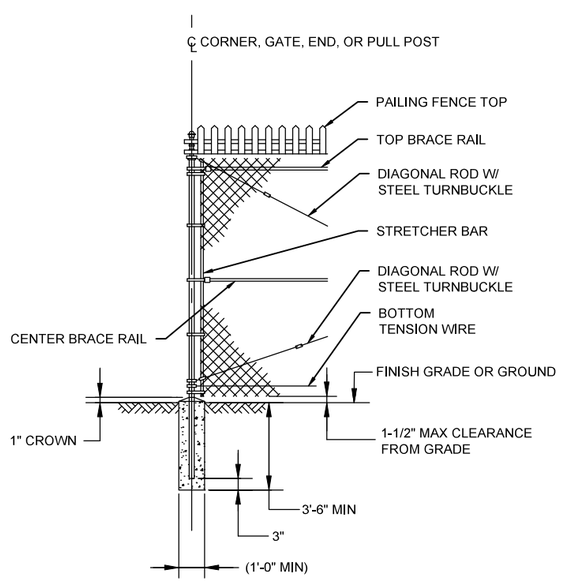


GATE STOP DETAIL
NTS

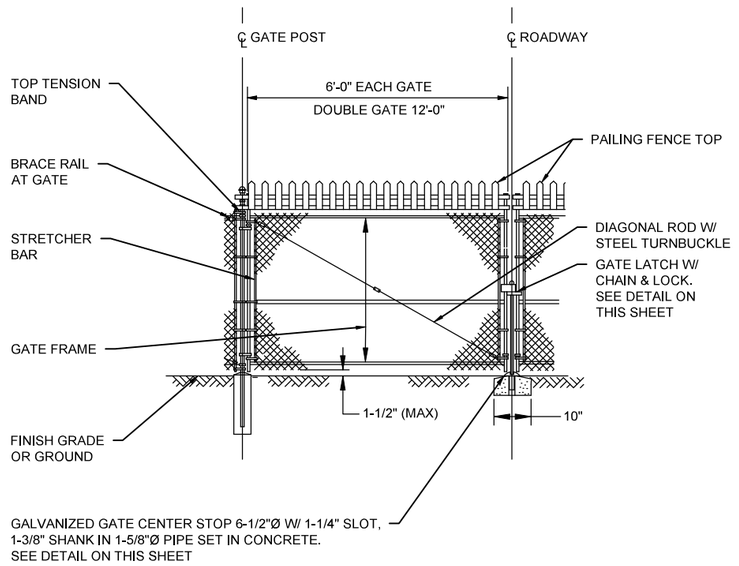


TYPICAL SECTION

WOVEN WIRE FENCE (1)
NTS



WOVEN WIRE CORNER, GATE, END, OR PULL POST (2)
NTS



WOVEN WIRE DOUBLE GATE (3)
NTS

GEN 7 ENGINEERING

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STEPHEN M. CARPENTER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 105147
STATE OF TENNESSEE
04/15/2025

verizon

SITE NAME: LANTON
SITE NUMBER: 17330373

VOGUE TOWERS

SITE NAME: LANTON
SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY
COLUMBIA, TN 38401

SITE TYPE: RAWLAND

SHEET TITLE: SITE DETAILS

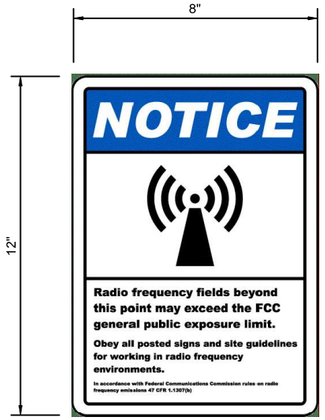
SHEET NUMBER	REVISION
Z-301	1



10" x 14"

NO TRESPASSING SIGN (1)

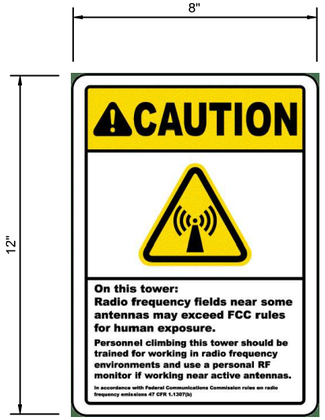
NTS



12" x 8"

RF GUIDELINES SIGN (2)

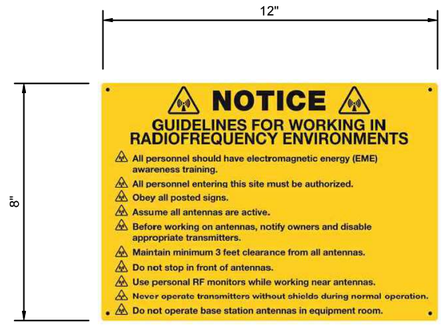
NTS



12" x 8"

RF GUIDELINES SIGN (3)

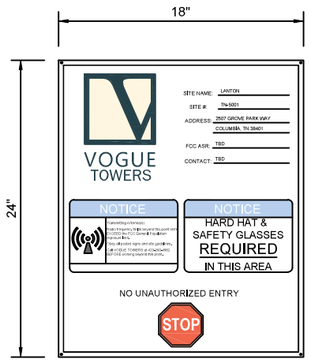
NTS



8" x 12"

RF GUIDELINES SIGN (4)

NTS



24" x 18"

SITE ID SIGN (5)

NTS

ASR # XXXXXXX

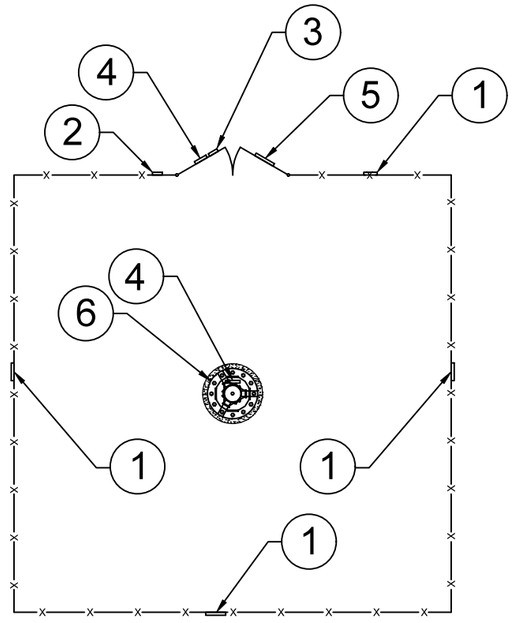
-WHEN REQUIRED, PLACE ON TOWER

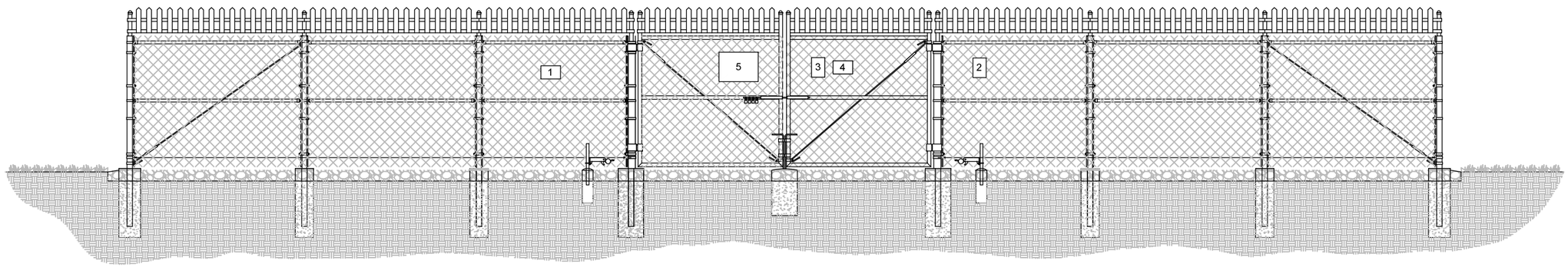
-USE A DECAL ON MONOPOLE AND METAL SIGN ON SELF-SUPPORT TOWER OR GUYED TOWER

-LETTERS TO BE 3" MIN

ASR # (6)

NTS





FENCED COMPOUND DETAILS

NTS

GEN7 ENGINEERING

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FOR REFERENCE ONLY

verizon

SITE NAME: LANTON

SITE NUMBER: 17330373

VOGUE TOWERS

SITE NAME: LANTON

SITE NUMBER: TN-5001

SITE ADDRESS: 2507 GROVE PARK WAY COLUMBIA, TN 38401

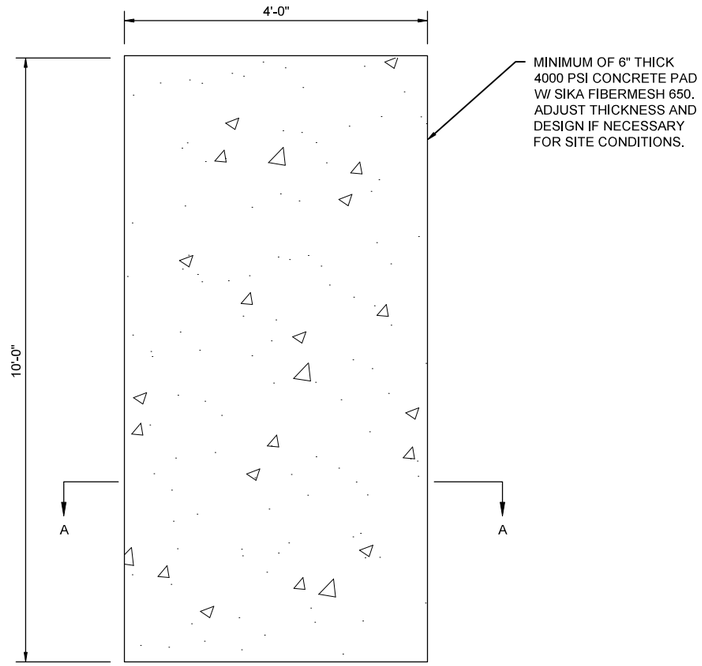
SITE TYPE: RAWLAND

SHEET TITLE: SITE DETAILS

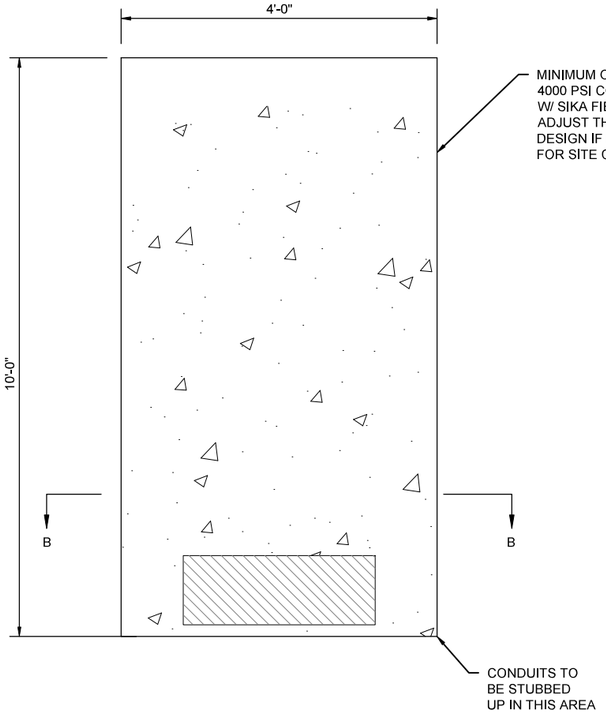
SHEET NUMBER	REVISION
Z-302	1

CONCRETE PAD NOTES:

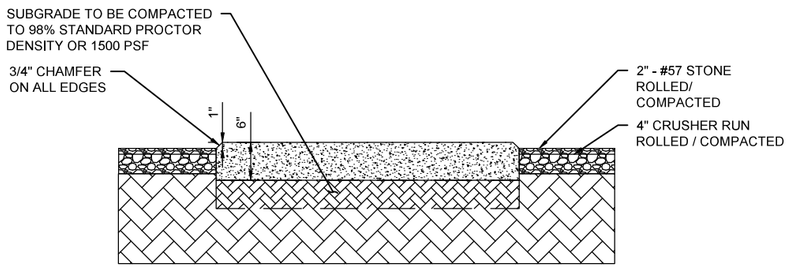
1. VERIFY GENERATOR STUB UP AREA FOR SPECIFIC MANUFACTURER/MODEL NUMBER.
2. VERIFY PAD SIZE REQUIREMENTS FOR SPECIFIC MANUFACTURER/MODEL NUMBER.
3. CONDUITS TO STUB UP FULL HEIGHT THROUGH SLEEVE IN ENHANCED DIESEL TANK ENCLOSURE.
4. EMBED CONDUITS IN CONCRETE PAD.
5. ALL CONCRETE SHALL BE NORMAL WEIGHT AND CONFORM TO THE ACI 301 AND THE FOLLOWING:
   - 5.a. MINIMUM COMPRESSION STRENGTH 4,000 PSI
   - 5.b. AIR ENTRAPMENT RANGE 3% TO 6%
   - 5.c. SLUMP GREATER THAN 3", BUT NOT TO EXCEED 6"
6. CONDUITS TO BE TERMINATED WITH MALE ADAPTER AND THREADED BUSHING.



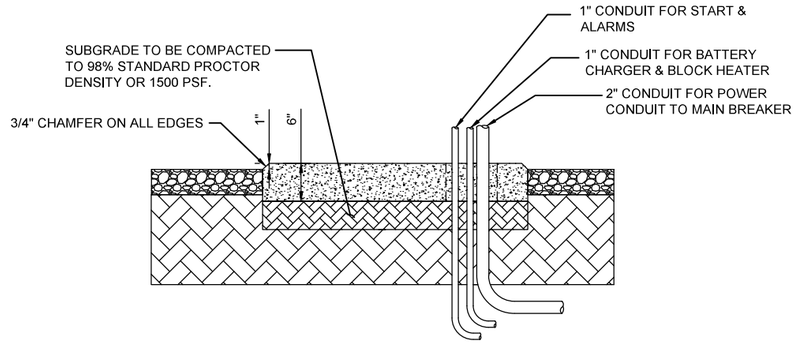
EQUIPMENT PAD PLAN (1)
NTS



GENERATOR PAD PLAN (2)
NTS



SECTION A-A THROUGH EQUIPMENT PAD
NTS



SECTION B-B THROUGH GENERATOR PAD
NTS

GEN7 ENGINEERING

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verizon

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VOGUE TOWERS

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SITE NUMBER	TN-5001
SITE ADDRESS	2507 GROVE PARK WAY COLUMBIA, TN 38401
SITE TYPE	RAWLAND
SHEET TITLE	SITE DETAILS

SHEET NUMBER	REVISION
Z-303	1

APPLICATION FOR APPROVAL BY VOGUE TOWERS II, LLC, AND CELLCO PARTNERSHIP, d/b/a VERIZON WIRELESS FOR THE CONSTRUCTION OF A WIRELESS COMMUNICATION FACILITY

Application: For City of Columbia approval by Vogue Towers II, LLC ("Vogue Towers") and Cellco Partnership, d/b/a Verizon Wireless ("Verizon"), together "Applicant" for the zoning approval for a proposed multi-provider wireless communications facility.

Site Name: Lanton (TN-5001)

Project Description: Vogue Towers proposes to construct a multi-provider 125' monopine tower (125' structure with 5' lightning rod, overall height 130') within a fenced compound area (see attached design drawings for details). This facility will have provisions for multiple wireless providers, satisfying the purpose of the City's ordinance to reduce the need for new towers.

Parcel Address: 2494 Nashville Hwy, Columbia, TN, Parcel #051 007.01

Property Owner: Christ our Savior Evangelical Lutheran Church

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Narrative:

The wireless industry is continually improving networks to best meet the needs of the community. In the present case, the increase in usage at existing locations requires a new tower. The purpose of this proposed wireless communications facility will be to provide improved wireless service quality and safety to the area, specifically to customers and residents in and around this area of Columbia.

As the demand for wireless continues to increase with the use of "smart phones" there is an increased need for wireless telecommunications infrastructure to keep up with the demand. Per CTIA's 2024 Annual Survey, *"Demand for wireless data continued to skyrocket in 2023, with Americans using more than 100 trillion MBs – enough data for every single US Household to watch the first season of House of the Dragon every day for the entire year."* 100T MB is almost a 2x increase over data usage just two years ago (2021) and is more data than was used between 2010-2018 combined. 2023 wireless traffic totaled over 2.1 trillion messages (SMS and MMS), or 67,000 messages/second, and over 2.4 trillion minutes of talking via wireless connections.

As network traffic increases on a given wireless network, additional facilities are needed to provide consumers with quality, high-speed mobile broadband. Each wireless telecommunications facility can only process a fixed amount of service and/or cover so far, and this tower is needed to provide additional coverage and capacity for this portion of the community as per CTIA there are now 558 million connections in America, or 1.6 connections for every American. Greater signal strength is needed to adequately penetrate the buildings and provide reliable voice and improved data throughput rates for wireless subscribers.

This proposal is to construct a multi-provider wireless communications facility. Applicant will lease the use of space and access as shown on the site plan. Within that area, there will be an approx. 2,500 sq/ft fenced compound providing room for Verizon Wireless and other wireless providers such as AT&T, T-Mobile, and DISH to place equipment cabinets/buildings within the compound of the new tower. In addition, Vogue Towers makes space available to local E911 and first responders at no cost, whenever possible.

Consideration of this application should not, however, be limited to examining how successfully Vogue Towers has mitigated any negative impact through design and location. The positive impact of the site should be given full weight as well. We live in a society where our wireless devices have become an essential tool for daily living, a necessity with approximately 80% of E911 calls (of an est. 240 million) being made from wireless devices each year and more than 7 out of 10 adults living in wireless-only households, 72.6% as of 2022 (*National Center for Health Statistics*). These figures peak among younger demographic ranges for wireless only adults, the next generation of homebuyers and entrepreneurs, with 25-29 at 87.6%, and 30-34 at 88.4%. Furthermore, the benefits of this site to the community go beyond just convenience for residents and businesses where 80% of consumers now consider wireless service "indispensable" (*CTIA*). Quality wireless service is part of the critical infrastructure necessary for public safety and first responders in emergency situations such as accidents, crimes, health incidents or natural disaster. Given the design, location and benefits provided by this proposed site, and lack of significant impacts, approval of this application is respectfully requested.

ARTICLE 4: BUILDING, LOT & BUILDING SITE TANDARDS

am. ***Wireless Communication Facilities other than Communications Towers*** *shall be permitted in accordance with the applicable Use Table, subject to the following:*

(1) *The requirements set forth in this Section 4.3.9.D.6.n. shall govern the location of Towers that exceed, and antennas that are installed at a height in excess of 70 feet. The height limitations applicable to Buildings and Structures shall not apply to Towers and Antennas.*

(2) *Antennas or Towers located on property owned, leased, or otherwise controlled by the CITY shall be exempt from the requirements of this subsection, provided a license or lease authorizing such Antenna or Tower has been approved by City Council.* **N/A, property is owned by Christ our Savior Evangelical Lutheran Church.**

(3) *This Section shall not govern any Tower, or the installation of any Antenna, that is under 70 feet in height and is owned and operated by a federally – licensed amateur radio station operator or is used exclusively for receive – only Antennas.* **N/A**

(4) *The following requirements must be met:*

(a) *Site and landscape plans drawn to scale and landscape plans drawn to scale;* **Site and landscape plans included in attached design drawings.**

(b) *A report including a description of the Tower with technical reasons for its design;* **The proposed monopine tower consists of an eighteen-sided monopole structure, tapered from bottom to top. The structure, foundation and anchor bolt designs are based strictly on ANSI/TIA-222 as amended (currently Rev H). Monopole materials are hot dip galvanized as outlined in ASTM A-123. The attached Fall Zone Letter provides additional explanation as to tower design parameters, including Risk Category, Site Exposure Category, Topographic Category and Environmental Loading.**

(c) *Documentation establishing the structural integrity for the Tower's proposed uses, certified by a professional engineer licensed in the State of Tennessee competent in such design, the general capacity of the Tower and information necessary to assure that ANSI (American National Standard Institute) standards are met;* **See attached tower manufacturer design.**

(d) *A statement of intent whether excess space on the Tower will be leased;* **See attached letter.**

(e) *Proof of ownership of the site or a copy of the owner's authorization to use the site;* **See attached (recorded) Memorandum of Option to Lease between Applicant and property owner.**

(f) *Copies of any Easements necessary to gain access or limited Development areas;* **Easements noted on survey included in design drawings.**

(g) *An analysis of the site containing existing topographical contours;* **Topographical contours are depicted on survey and addressed in the grading plan included in the attached design drawings.**

(h) *A written opinion from an appropriate authority that the soils and underlying materials will support the intended Structure;* **The Engineer of Record for the site civil design has reviewed and approved all related design elements as noted in the design drawings, considering typical soils for the region. All sites are drilled for geotechnical data and that information, including boring log and engineer analysis, are provided to the tower manufacturer as part of their engineered design of the tower and foundation.**

(i) *Evidence that the Tower facility meets technical emissions standards set by the FCC (Federal Communication Commission);* **See attached letter from Co-Applicant, Verizon Wireless.**

(j) *Evidence of "Determination of No Hazard" from the FAA (Federal Aviation Administration), as well as all required FCC permit information;* **Applicant complies, receiving a "Determination of No Hazard to Air Navigation" from the FAA (2025-ASO-245-OE). In addition, Applicant utilizes a 3rd party to review their locations in conjunction with the FAA filing. The attached report from Airspace Safety Analysis & Compliance (ASAC) evaluated the proposed tower in accordance with the requirements specified by the FAA under Federal Aviation Rules part 77 and found that this proposed tower is not a hazard to air navigation.**

(k) *Alternatives to the Tower location and why this site was selected; and* **Applicant contacted Edwards Real Estate, Dean Norton and Beasley's Yard, none of which 3 were interested. We initiated discussions Middle Tennessee Ag Research Station, and they were initially interested but then stopped responding. We also spoke to Bell Group and could not come to financial terms. We tried to reach Pantall Farms with voicemail and a letter but never received a response. Christ our Savior Lutheran Church said expressed and maintained interest. The attached Real Estate Candidates map highlights the various parcels attempted.**

(l) *Evidence that the site complies with requirements of the NEPA (National Environmental Policy Act) in regard to impact on wildlife, endangered species, historical sites, Native American religious sites, floodplains, wetlands, high intensity white lights in Residential neighborhoods ,and frequency emissions in excess of FCC guidelines.* **Applicant's site development process includes completing the National Environmental Policy Act (NEPA) review process, which includes consultation with State Historical Preservation Office, Tribal Historical Preservation Office, US Fish & Wildlife, and others to evaluate any impact of the proposed facility at this location. The NEPA process is ongoing, and Applicant is happy to make the final NEPA report a condition of approval. Addressing high intensity white lights, as described in (j) above, the proposed tower has been approved by the FAA and does not require any lighting.**

(5) *Towers may be built on the same Lot or Building Site with another Principal Use. A separation a minimum of the Tower height between the Tower and any other Principal Use is required in order to provide for the health, safety and welfare of individuals and Structures occupying the same site. Joint use is prohibited on a Lot or Building Site where a proposed or existing Principal Use includes the storage, distribution or sale of volatile, flammable, explosive or hazardous wastes such as LP gas, propane, gasoline, natural gas and corrosive or dangerous chemicals.* **Applicant is proposing a 125' monopine, a self-supporting tubular tower structure, similar to ones used for utility lines. Applicant is providing documentation outlining the design characteristics of the reduced "fall zone" area in the form of the attached engineer stamped letter. Per the attached and sealed "Fall Zone" letter, the Tower will be designed such that the top 50% will collapse over onto itself in the event of a catastrophic failure, reducing the impacted area via a reduced "fall zone" that will be contained within the reduced boundaries of this setback radius. This is accomplished by overdesigning the bottom portion of the structure. Specifically, the tower base and its foundation are designed to carry the entire force applied to the tower (Force X); however, when the top 50% of the tower collapses, only the maximum of 25% of Force X will be applied to the tower base and foundation that are designed for 100% of Force X. In layman's terms, the tower base and its foundation are approx. 4 times stronger (100%/25%) than the maximum force that can be applied to them when the top 50% of the tower collapses. As the design drawings depict, incorporating this engineering into the design, the fall zone is greatly reduced, complying with the setback requirement.**

(6) *Towers 80 feet or more in height shall be located on the Lot so that the distance from the base of the Tower to any adjoining property line or supporting Structure of another Tower is a minimum of 100% of the proposed Tower height. No Variance shall be granted from this minimum setback requirement.* **As depicted in the attached design drawings, Applicant complies.**

(7) *Except as specifically required by the FAA (Federal Aviation Administration) or the FCC (Federal Communication Commission), transmission Structures shall:* **Applicant will comply.**

(a) *use colors such as gray, blue or green which reduce their visual impacts; provided, wooden poles do not have to be painted; and* **As depicted in the attached design drawings and photo simulations, Applicant is proposing a monopine tower structure. The pole will be painted brown with the branches starting at approx. the halfway point.**

(b) *not be illuminated, except equipment shelters may use lighting for security reasons which is compatible with the surrounding neighborhood;* **Applicant complies.**

(c) not use strobe lights unless specifically required by FAA. **Applicant complies (see 4(j) above).**

(8) *Any proposed Tower shall be structurally designed so as to accommodate the minimum number of foreseeable shared users.* **Applicant's design incorporates space on the tower and ground for a minimum of three wireless providers, including Co-Applicant, Verizon Wireless.**

(9) *No advertising or display is permitted on any Communication Tower.* **Applicant will comply, only posting signage for site identification, emergency contact or as required by federal agencies.**

(10) *Any Accessory Buildings or Structures shall be located a minimum of 50 feet from any adjoining property line. Except for emergency purposes, the accessory facilities may not include offices, long-term vehicular storage, other outdoor storage, or broadcast studios, unless the Use is permitted in the District.* **Applicant will comply.**

(11) *The Tower base and equipment area shall be enclosed with a fence no less than six feet in height. Access shall be locked at all times when the site is not occupied.* **Applicant complies, see attached design drawings.**

(12) *Where the Tower site abuts or is contiguous to any Residential District, there shall be provided a continuous, solid Screening and it shall be of such plant material as will provide an evergreen Screen. Screening as required herein shall be not less than four feet in height at the time of planting and shall be permanently maintained.* **See attached landscape buffer design and tree preservation plan in the attached design drawings. In addition, the site has been located to utilize the natural vegetation buffer of the wooded area on the property.**

(13) *Location on any other Structure other than a Tower (i.e. water tank, utility poles, roof tops, etc.) is permitted subject to the provisions listed above relating to a Tower location.* **The attached Nearby Structures table and map illustrate that there are no existing tower structures within one mile of the Applicant's location, the closest broadband structure being approx. 1.62 miles away, with Verizon Wireless located on this structure. There are also no structures capable of meeting the coverage objective within the immediate area.**

(14) *Co – location on Towers is encouraged.* **See (13) above.**

The Zoning Administrator has authority to approve a co – location on an existing Tower subject to:

(a) *receipt of a letter from a licensed engineer stating that the Tower is structurally adequate to handle the additional load; and*

(b) *the FCC technical emissions standards not being exceeded.*

Any Antenna or Tower that is not operated for a continuous period of 12 months shall be considered abandoned and the owner of such antenna or tower, as well as any shared user(s) of the Tower or Antenna, shall remove same within 90 days of receipt of notice from the City notifying the owner and shared user(s) of such abandonment. If such Antenna or Tower is not removed within said 90 days, the City may remove or have the Structure removed at the owner's expense. **Applicant will comply.**

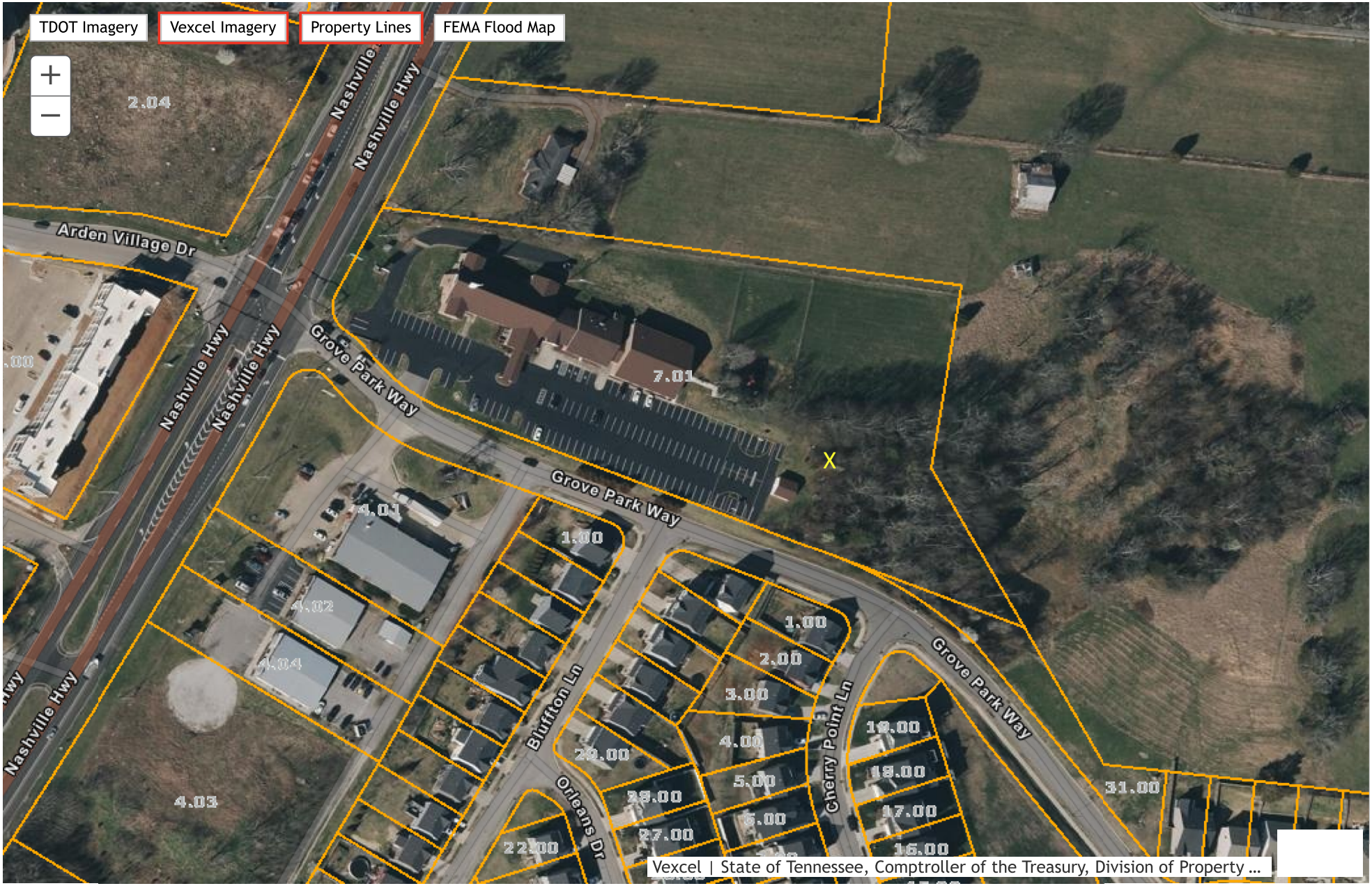
As provided for in this application package, Vogue Towers is requesting approval of their application as identified above per the conditions and specifications of the City's Ordinance, ARTICLE 4: BUILDING, LOT & BUILDING SITE TANDARDS; am. Wireless Communication Facilities other than Communications Towers. Wireless service is increasingly considered a public necessity as it is often the only means citizens have to emergency services. The location and character of the use, if developed according to the plan submitted and recommended, will be in harmony with the area in which it is to be located. The proposed wireless telecommunications facility will meet the infrastructure needs of this area and will provide additional access to emergency services, if needed.

Respectfully submitted,

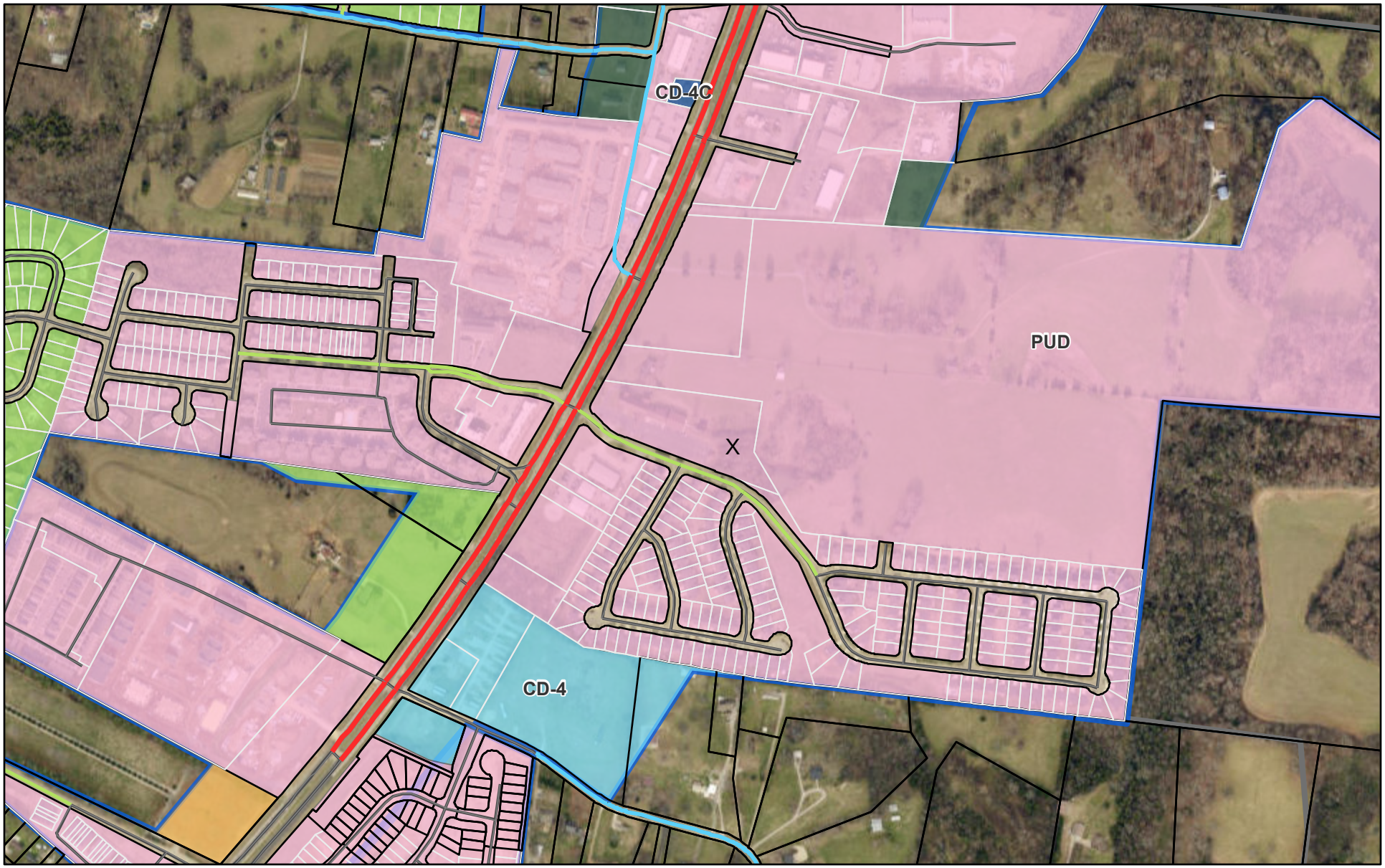
Pat Troxell-Tant

Pat Troxell-Tant
President of Development
Vogue Towers II, LLC

Tennessee Property Viewer



City of Columbia GIS Mapping



August 8, 2024

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

VOGUE TOWERS

430 Chestnut Street – Suite 101-B
Chattanooga, TN 37402

423-269-7455

Voguetowers.net

February 21, 2025

City of Columbia, TN
Attn: Austin Brass
700 N Garden St
Columbia, TN 38401

RE: Proposed Tower, Article 4, am.(4)(d), Collocation Letter of Intent
Vogue Tower Site – Lanton
Vogue Tower Site # - TN-5001
Parcel ID: #051 007.01

Dear Mr. Brass:

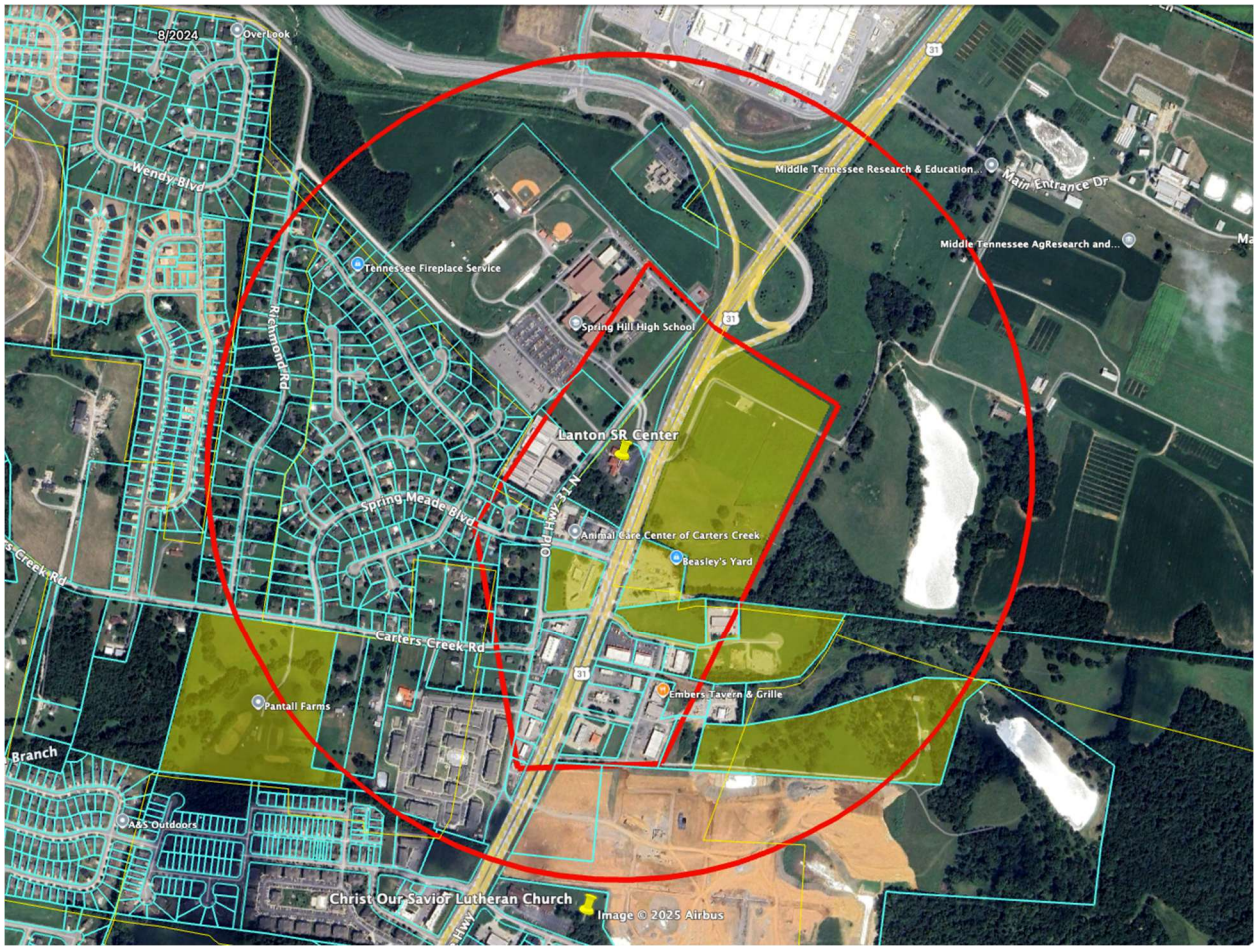
This letter is provided as confirmation that the new Tower will be designed to accommodate the collocation of additional antennas for future users and Applicant confirms to leasing excess space on the Tower to such users utilizing standard industry terms and rates, per the above reference section of the City's ordinance. Vogue Towers is not a wireless provider but is a developer of multi-provider wireless communications facilities. As such, Vogue's facilities are designed to accommodate multiple providers. The current design drawings included in this application package illustrate this design intent.

Respectfully submitted,

Patricia Troxell-Tant

Patricia Troxell-Tant
President
Vogue Towers II, LLC

Real Estate Candidate Search



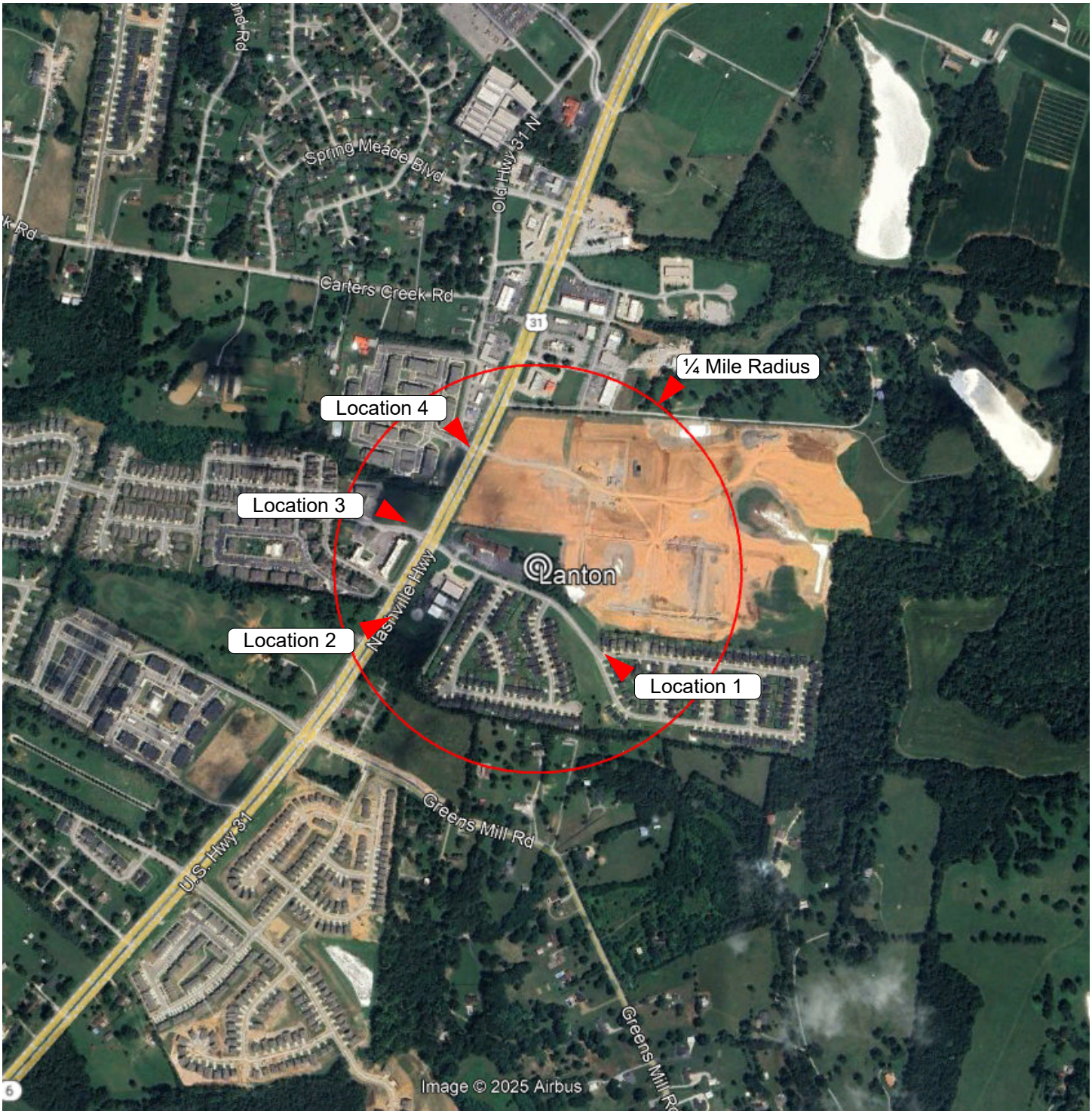
Applicant contacted Edwards Real Estate, Dean Norton and Beasley's Yard, none of which 3 were interested. We initiated discussions Middle Tennessee Ag Research Station, and they were initially interested but then stopped responding. We also spoke to Bell Group and could not come to financial terms. We tried to reach Pantall Farms with voicemail and a letter but never received a response. Christ our Savior Lutheran Church said yes. Those are all highlighted yellow on the aerial above.

Name	Latitude	Longitude	FCC ASR#	Distance (miles)	Comments
Vogue Towers	35.705626	-86.974395	Pending	N/A	*Candidate Location*
Crown Communications LLC	35.7145	-87.001	1205701	1.62	*Appears to be 2+ carriers, including Verizon*
TVA	35.7217	-86.9737	None	1.11	*Inside TVA facility, likely direct bury pole.*
TVA (2)	35.7411	-86.9633	None	2.53	*Inside former plant, likely direct bury pole.*


Vogue Towers - Lanton
Nearby Structures
.5 mile radius
Animal Care Center of Carters Creek
Beasley's Yard
Carters Creek Rd
Embers Tavern & Grille
Pantall Farms
A&S Outdoors
Vogue Towers
Maury Regional Urgent Care | North Columbia
Nashville Hwy
Bexley Spring Hill
Pinecrest Memorial Gardens
Greens Mill Rd
U.S. Hwy 31
Lennar at Drumwright
Google Earth
Image © 2025 Airbus
2000 ft
N

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Locations of the photosims.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Location 1 before the photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Location 1 after photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Location 2 before photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Location 2 after photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes:

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes:

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

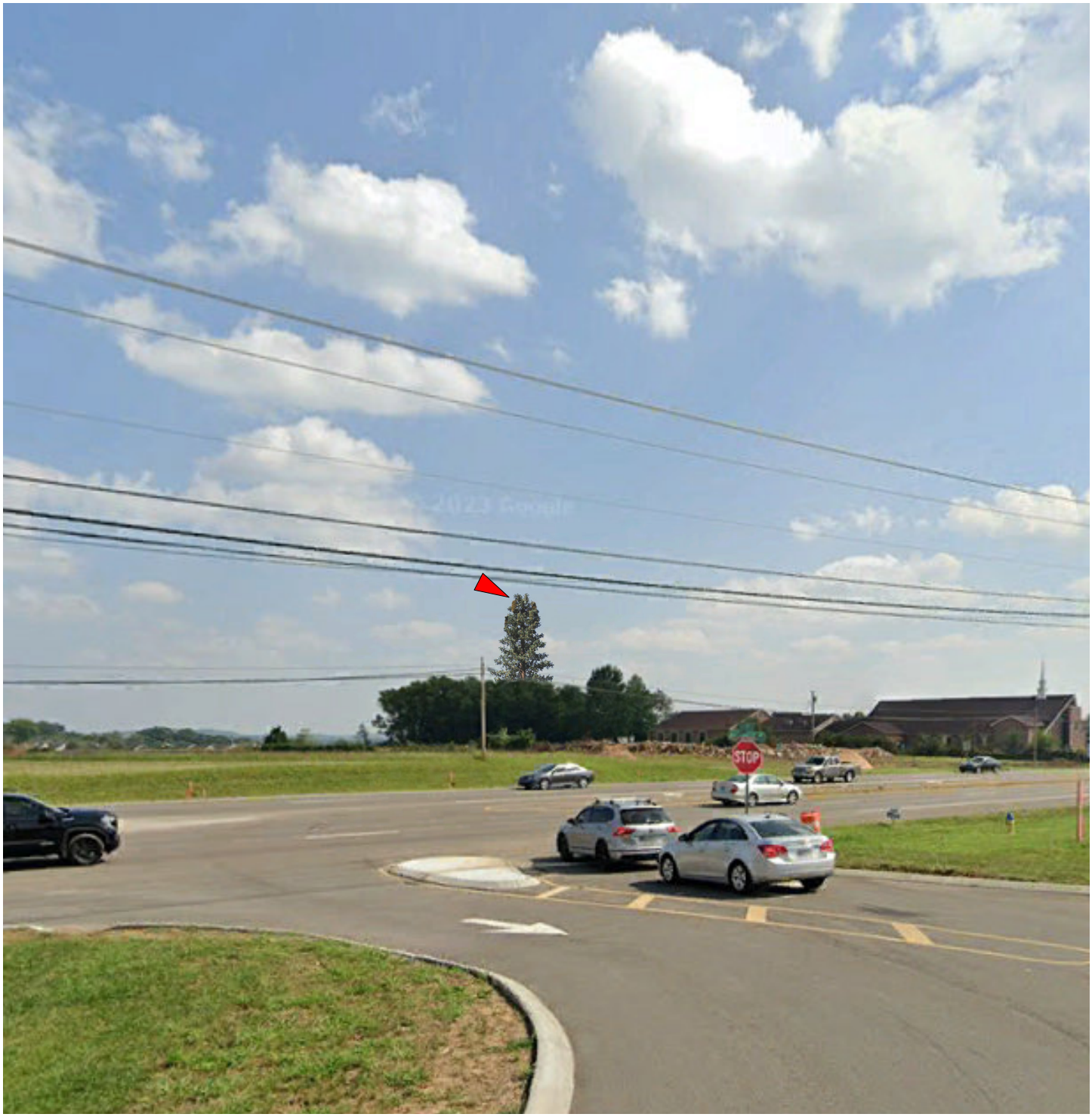
Lanton PhotoSims



Notes: Location 4 before photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Location 4 after photosim.

November 14, 2024

Transmitted via email to janet@voguetowers.net
RE: Verizon Colocation on Vogue Macro Monopole Site Located at: Grove Park Way, Columbia, TN 38401

To Whom It May Concern,

This is in response to your inquiry to Verizon concerning interference to your existing telecommunications devices and services related to Verizon's proposed facilities at Grove Park Way, Columbia, TN 38401. Verizon provides Commercial Mobile Radio Services (CMRS) under licenses granted by the Federal Communication Commission (FCC). Pursuant to these licenses, Verizon is authorized to operate its CMRS network in many geographic areas throughout the nation, including the above noted location.

The FCC exclusively regulates all technical aspects of Verizon operations and network and preempts all state and local regulation of radiofrequency transmissions. The FCC rules protect co-channel and adjacent licensees against harmful interference. The above noted proposed Verizon facility is compliant with all applicable FCC requirements. The points below cover Verizon's practices pertinent to complying with the FCC requirements:

1. Verizon locates its transmitting antenna(s) in order to maximize vertical and horizontal separation from other operator's systems to minimize interference potential.
2. All equipment at the proposed facility is designed and certified to operate within the frequencies licensed to Verizon by the FCC, and to operate in a manner approved by the FCC.
3. The power levels generated by the facility's radios and corresponding effective radiated power (ERP) from the transmitting antenna(s) are within the limitations specified by Part 22 (for cellular), Part 24 (for PCS), Part 27 (for 700 MHz, AWS or C-Band), Part 96 (for CBRS), Part 30 (UMFUS/mmWave) or Part 101 (for microwave) of the Commission's Rules.

Verizon is committed to providing state of the art wireless services that benefit your community.
In the unlikely event that interference does occur, Verizon agrees to fully cooperate with the entity experiencing interference to identify and correct, to the extent reasonably possible, any issues caused by the Verizon installation.

Please contact your local Verizon resource below if you have additional site-specific questions.

Contact Name	Contact Email	Contact Phone
Jamison Tyler	SE-Regulatory@verizonwireless.com	NA

Sincerely,

Minny Vidhya Duggirala
Manager-RF System Design
Verizon

Lanton RF Plots

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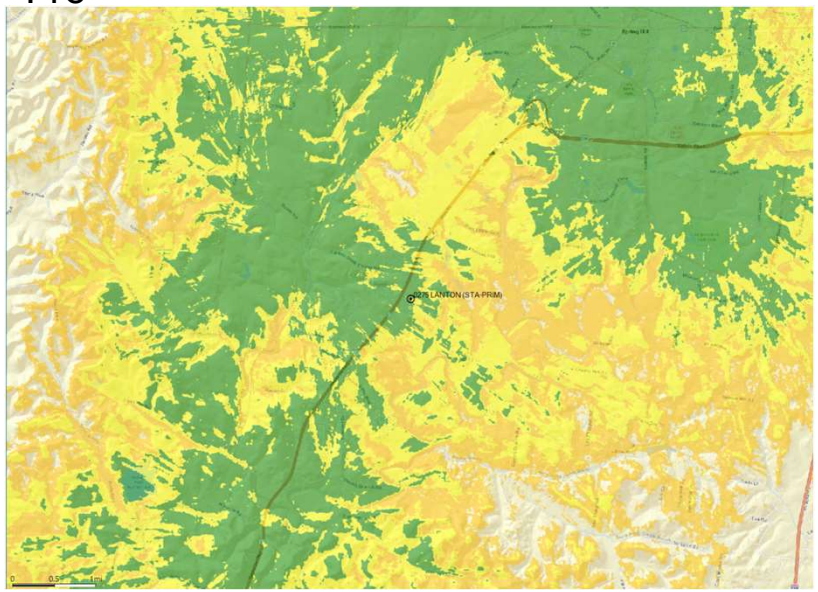
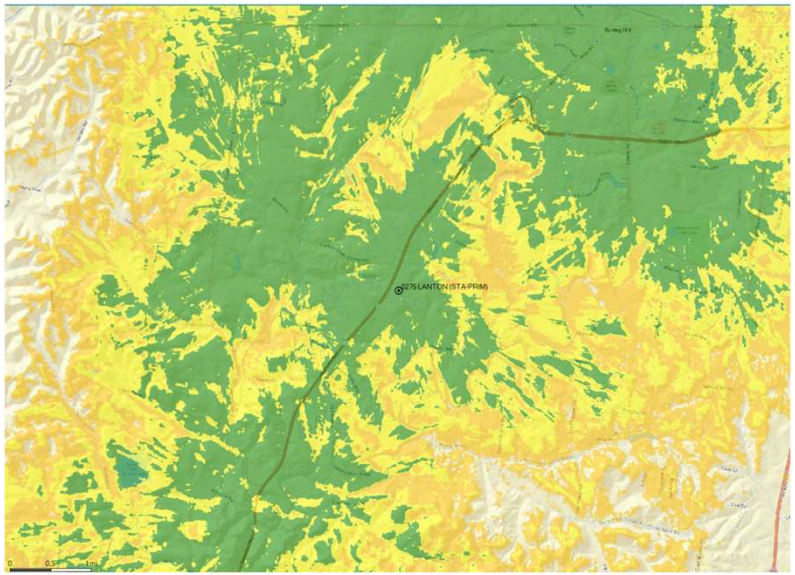
Plots - Pre and Post 700MHz RSRP Coverage

Pre



Post



Coverage Level	Color
In-Building	
In-Vehicle	
On-Street	

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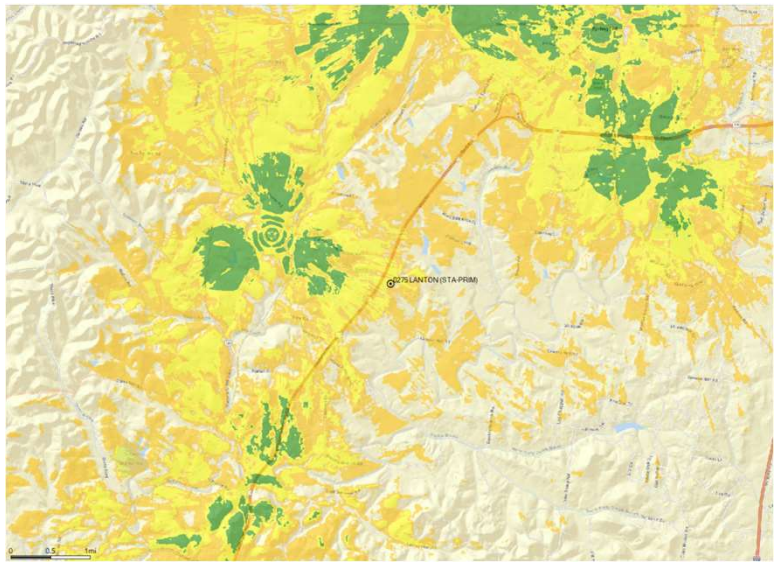
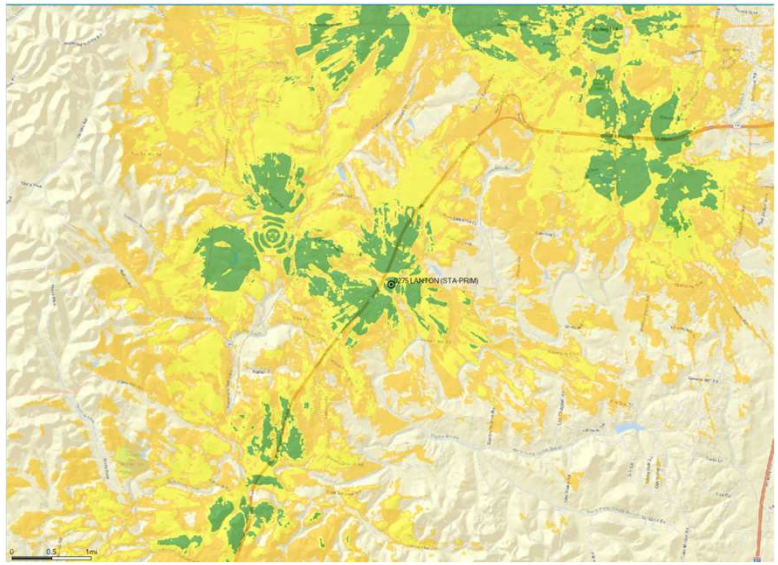
Plots - Pre and Post 2100 MHz RSRP Coverage

Pre



Post



Coverage Level	Color
In-Building	
In-Vehicle	
On-Street	

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Introduction:

Coverage and/or capacity deficiencies are the two main drivers that prompt the need for a new wireless communications facility (WCF). Most WCF provide a mixture of both capacity and coverage for the benefit of the end user.

Coverage describes the existence or lack of wireless service in an area. The request for improved service often comes from our customers or emergency services personnel that have no service or poor service. Coverage used to refer to the ability to make or place a call in vehicles, however, as usage patterns have shifted, coverage is now determined based on whether or not sufficient WCF exist to provide a reliable signal inside of buildings and residential areas, as well. Historically, when wireless was still in its infancy, coverage was the primary means to measure the effectiveness of the network in a given area.

Capacity is the metric used to determine if sufficient wireless resources exist and is now the primary means to measure how a community's wireless needs are being addressed. "Five bars" no longer means guaranteed coverage and capacity because each WCF has a limited amount of resources to handle voice calls, data connections and data volume. When these limits are reached and the WCF becomes overloaded (meaning there is more demand than signal to service it), the user experience quickly degrades preventing customers from making/receiving calls or getting applications to run. A WCF short on capacity could also make internet connections time out or delay information to emergency response personnel.

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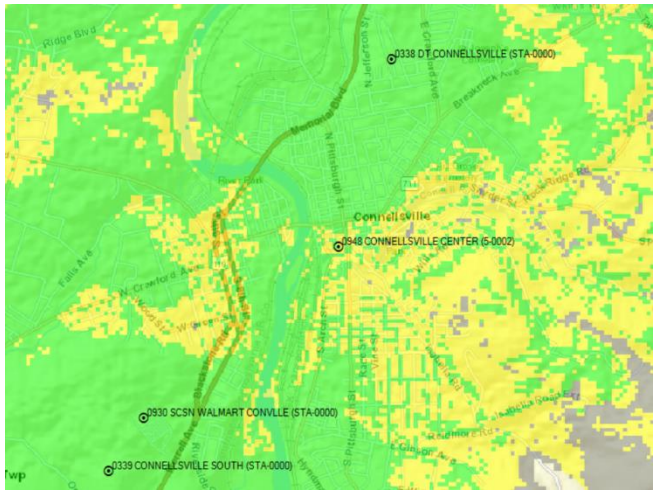
Explanation of Wireless Coverage



Coverage is best shown via coverage maps. RF engineers use tools that take into account terrain, vegetation, building types, and WCF specifics to model the existing coverage and prediction what we expect to see with the addition of a proposed WCF.

Coverage also changes depending on which frequencies are used. Most phones today use 3G at 800 MHz or 4G at 700 MHz spectrum which are considered low frequencies. Low frequencies can travel further distances than then the higher 1900 MHz and 2100 MHz frequencies now being employed due to increased capacity demands. Operating at higher frequencies makes it necessary for carriers to install substantially more wireless facilities to achieve the same coverage as one tower operating on the lower frequencies.

verizon

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Explanation of Wireless Capacity



Capacity is the amount of resources that a WCF has to service customer demand. Verizon utilizes sophisticated programs and customer feedback to monitor current usage trends and to forecast future needs. Because it takes an average of 2-3 years to complete a WCF, we have to start the process of adding a new WCF several years in advance of when the WCF will be needed.

Location, Location, Location. A good capacity WCF needs to be in the center of a user population which insures that traffic is evenly distributed around the WCF. A typical WCF is configured into three sectors (like a pie cut into three pieces), with each slice (sector) having 33% of the WCF resources. If one sector is under-utilized, it's resources can not necessarily be diverted to another sector. Therefore, optimal performance is only obtained when all three sectors have an even traffic distribution.

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Explanation of Wireless Data Growth

Wireless Data Growth

Each year Verizon sees large increases in how much data its customers need. As the resolution of the pictures we send increases, the quality of the video we watch improves and the complexity of the applications grow, we commonly see tremendous growth year-over-year.

- 240 million 911-calls are made annually. In many areas, 80% or more are from wireless devices.[1]
- The average North American smartphone user will consume 48 GB of data per month in 2023, up from just 5.2 GB per month in 2016 and 7.1 GB per month in 2017.[2]
- More than one-half of American homes had wireless only homes. [3]
- In North America, the average household has 13 connected devices with smartphones outnumbering tablets 6 to 1. [4]

Machine to Machine communications will also increase the data burden on wireless networks, as over the next five (5) years more and more services that improve our safety and make our lives easier will be available over the wireless infrastructure , such as:

- Cars that notify 911 when an airbag deploys.
- "Driverless" cars needing traffic data and maps to reach your destination as quickly as possible.
- Medical monitors that will alert us should a loved one neglect taking their prescription drugs.
- Home alarms that notify you when your child arrives home from school.
- Smart street lights that notify the city when they are not working.
- City garbage cans that let people know when they need to be emptied.
- Tracking watches will aid in finding lost Alzheimer patients.

1. National Emergency Number Association, 9-1-1 Statistics (January 7, 2019)
2. Ericsson Mobility Report, November 2017
3. CDC's 2018 Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, January-July, 2018
4. IHS Market Connected Device Market Monitor: Q1 2016 , June 7, 2016

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Radio Emission Safety...

A common question received is “Are the radio emissions safe?”

Verizon goes to great effort to ensure that all of its projects meet the standards established by the FCC to ensure safety of the public and its employees. The links below are to three reputable organizations that have performed extensive reviews of the science available on this subject and have good educational articles on the results of their research.

World Health Organization
http://www.who.int/peh-emf/about/WhatisEMF/en/index1.html

America Cancer Society
http://www.cancer.org/cancer/cancercauses/othercarcinogens/athome/wireless facilityular-phone-towers

FCC Radio Frequency Safety
https://www.fcc.gov/general/radio-frequency-safety-0

verizon

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STRUT
Engineering & Investment, Inc

3485 Desert Dr Building 2
Suite 101
East Point, GA 30344
T: (404) 480-5555
Info@STRUTeni.com
www.STRUTeni.com

February 25, 2025

Attn: **Vogue Towers II, LLC**
430 Chestnut St., Suite 101B
Chattanooga, TN 37402

Re: **Fall Zone Letter for Proposed 125' Monopole (Excluding 5' Lightning Rod)**

Site Name:	Lanton
Address:	Grove Park Way, Columbia, TN 38401
Building Code:	IBC 2018
Design Standard:	ANSI/TIA-222-H

Dear Vogue Towers II,

Strut Engineering & Investment, Inc (Strut E&I, Inc) has reviewed the proposed Vogue Tower communications tower installation at the above-mentioned site. The project will contain a monopole-type antenna support tower with a height of 125' above ground level (AGL). The monopole structure is made up of hot dipped galvanized high strength steel tubing that is typically 48-60" diameter at its base and tapering to 18" diameter at the top.

The antenna cables will be routed from the ground-based equipment up the inside of the pole to the proposed antenna rad center. The tower manufacturer shall supply structural design drawings prepared by a licensed Structural Engineer in the State of Tennessee at the time of Building Permit submission for review by the County before construction can commence.

The tower will be designed in accordance with the Tennessee State Building Code and International Building Code (IBC). Both of these codes have adopted the Telecommunications Industry Association/Electronics Industry Association Standards (ANSI/TIA-222-H). These standards dictate the design of all communications towers and take into consideration the following parameters:

1. Structure Risk Category/Class
   Category/Class is chosen based upon the function of risk to human life, potential damage to property in the event of failure and the type of services that the tower will provide (i.e. essential communications vs. services that are optional)
2. Environmental Loading
   Includes wind, ice, and seismic loads based upon local county-based data
3. Site Exposure Category
   Category is chosen based upon "surface roughness" of local surrounding vegetation, structures and natural topography. This also impacts wind loading calculations
4. Topographic Category
   Category is chosen based upon wind "speed-up" effects from surrounding topography, such as towers being located within gently rolling terrain or at the top of a hill or ridge

The design of the tower shall be such that in the unlikely event of structural failure, the monopole will collapse onto itself and not onto a street or a building. In other words, structural failure would be typical of that of a straw bending onto itself, rather than a bowling pin being knocked over. **Vogue Towers shall stipulate to the tower manufacturer/designer that the area of probable failure be located at the 50% <u>TOTAL</u> height (65'-0" AGL) of the monopole plus lightning rod so that only the top 50% of the monopole plus the**

lightning rod (top 65'-0") would collapse onto itself. This is done by over-designing the tower sections below the failure point as necessary.

In regard to the possibility of any future corrosion of the structure, the monopole shall be constructed with hot dipped galvanized steel, similar to that of highway signs and traffic signal poles. The ANSI/TIA-222-H standards have been based in part on the American Association of State Highway and Transportation Officials (AASHTO) standards which govern the construction and design standards for those structures (which have an extremely rare rate of corrosion related failures). Furthermore, the tower owner will be required to inspect the structure at intervals stipulated by ANSI/TIA-222-H standards or as may be stipulated by the underlying municipal authority, whichever is more stringent.

A geotechnical evaluation will be conducted that will explore the subsurface conditions in the vicinity of the proposed tower and develop geotechnical engineering recommendations to facilitate the design of the tower foundation. A report will be generated that shall be utilized by the tower manufacturer/designer to prepare foundation design drawings to be submitted at the time of Building Permit submission for review by the County before construction can commence. The geotechnical report and design drawings shall all be prepared by licensed Geotechnical Engineers in the State of Tennessee.

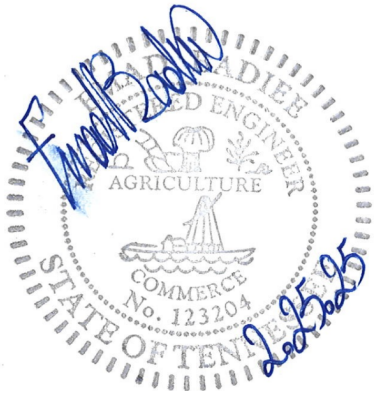
In summary, monopole-type antenna support structures are designed for extreme wind conditions with factors of safety that result in a design that is extremely conservative. The occurrence of monopole failure is exceptionally rare and historically these structures have survived after experiencing wind speeds considerably higher than their design speeds.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

STRUT Engineering & Investment, Inc.

Emad Badiee, P.E.
Senior Structural Engineer
ebadiee@struteni.com
(404) 480-5555



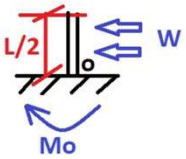
Designed Tower Fall Zones

- Towers designed per TIA-222 standards (currently Revision "H")
- The load calculated at the base of the tower does not change
- Reduction of 50% of tower height results in applied force reduction of 75%, the remaining pole now only carries 25% of the original applied load
  - Layman's terms, the remaining portion of the tower has a constant capacity, while the applied force is significantly decreased to 1/4th of the original applicable force. In another word, the base following a failure event is approx. 4x stronger because of the reduced applied force exerted on the tower
- Reduction of 40% of tower height from the top (bottom 60% remaining) results in applied force reduction of 64%



$Mo = (WL^2)/2$

L=full height of the monopole



$Mo = (W(L/2)^2)/2$
$= (W(L^2/4))/2$
$= (WL^2)/8$

L/2=break point= half height of the monopole

Fall zone @ 60% of tower height:
$Mo = (W(0.6L)^2)/2$
$= 0.36\ WL^2/2$

Designed Tower Failure





- Monopoles and Lattice Towers have a long history of providing safe and reliable antenna support for the telecommunications industry. In instances in which they do fail; the surrounding landscape has often been forever changed by extraordinary weather events well in excess of the required design loading.
- Both Monopoles and Lattice towers can be designed with theoretical failure points to ensure that the structure falls within a specified boundary even under extreme circumstances.
- Monopoles typically collapse like a bent straw during hurricanes or severe weather.
- All around us: In addition to supporting antennas, these same structures support lighting, power transmission lines, signage, and numerous other applications.

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2025-ASO-245-OE

Issued Date: 02/11/2025

Michael Sandifer
Vogue Towers II, LLC
100 North Point Center East, Suite
Alpharetta, GA 30022

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Monopole TN-5001 Lanton
Location:	Columbia, TN
Latitude:	35-42-20.26N NAD 83
Longitude:	86-58-27.82W
Heights:	742 feet site elevation (SE)
	130 feet above ground level (AGL)
	872 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Emissions from this site must be in compliance with the parameters set by collaboration between the FAA and telecommunications companies and reflected in the FAA 5G C band compatibility evaluation process (such as power, frequencies, and tilt angle). Operational use of this frequency band is not objectionable provided the Wireless Providers (WP) obtain and adhere to the parameters established by the FAA 5G C band compatibility evaluation process. **Failure to comply with this condition will void this determination of no hazard.**

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

See attachment for additional condition(s) or information.
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M Change 1.

This determination expires on 08/10/2026 unless:

ASAC SITE SPECIFIC EVALUATION
FOR
Site Name: Lanton
Site Number: TN-5001
Site Location: Spring Hill, TN

Requestors Name: Michael Sandifer
Company Name: Vogue Towers II, LLC
Street Address: 430 Chestnut Street, Ste 101-B
City and Zip: Chattanooga, TN. 37402

This is an evaluation based on application of surfaces identified in Federal Aviation Regulation (FAR) Part 77 and Federal Communication Commission (FCC) Rules Part 17.

EXECUTIVE SUMMARY

- **The max height that can be built at this site without notice to the FAA is 200 feet AGL or 942 feet AMSL.**
- **The max No Extended Study height at this site is 499 AGL, or 1241 AMSL.**
- **The max no hazard height at this site is 499 AGL, or 1241 AMSL.**
- **The max no marking and lighting height at this site is 200 AGL, or 942 AMSL.**

SITE DATA

Structure Type: Antenna Tower

Coordinates of site:	**Lat:**	**35°42'20.26"**
	Long:	**86°58'27.82"**
	Datum:	**NAD 83**

Site ground elevation:	**742**
Total height above the ground of the entire structure (AGL):	**130**
Total height above mean sea level (AMSL):	**872**

AIRPORT/HELIPORT INFORMATION

Nearest public use or Government Use (DOD) facility: Maury County Regional.

This structure will be located 13.5 NM or 82051 FT from the airport on a bearing of 227 degrees true to the airport.

Nearest private use landing facility is: Hunter.

This structure will be located 0.9 NM from the airport on a bearing of 120 degrees true to the airport.

STUDY FINDINGS

FAA FAR Part 77 paragraph 9 (FAR 77.9): (Construction or Alteration requiring notice.) (These are the imaginary surfaces that the FAA has implemented to provide general criteria for notification purposes.)

This structure does not require notification to the FAA.

FAA FAR Part 77 paragraph 17(FAR 77.17): (Standards for Determining Obstructions.)(These are the imaginary surfaces that the FAA has implemented to protect aircraft safety. If any of these surfaces are penetrated, the structure may pose a Hazard to Air Navigation.)

This structure does not exceed these surfaces.

FCC Notice Requirements:
(FCC Rules, Part 17)

This structure does not require notification to the FAA or FCC based on these rules.

FAA EMI:
(The FAA protects certain air navigational aids, radio transmitters, and RADAR facilities from possible interference. The distance and direction are dependent on the type of facility being evaluated. Some of these transmission and receiver facilities are listed in the National Flight Data Center (NFDC) database.)

This site would not affect any FAA air navigational aids or transmitters.

Military Airspace:
(This would include low level visual and instrument routes along with operations areas and special use airspace.)

This structure will not affect this airspace.

AM Facilities:
(The FCC protects AM radio stations from possible interference for a distance of 3.0 km for directional facilities, and 1.0 km for non-directional facilities. New changes to the FCC critical distances are calculated based on the AM transmission Movement Method Proof evaluation.)

This site was evaluated against the FCC's AM antenna database using the Movement Method proof calculations and no further action is required.

MARKING AND LIGHTING

FAA Advisory Circular 70/7460-1:

Marking and lighting is not required for this structure.

RECOMMENDATIONS

This site was evaluated in accordance with the requirements specified by the FAA under Federal Aviation Rules part 77, and found not to be a hazard to air navigation.

Carter's Creek Station Antiques
Carters Creek
Carters
Terrell Br
CARTERS CREEK ROAD
Cem
The Ridge at Carter's Station by Richmond...
Roadside park
Park
125
31
700
Middle Tennessee Agricultural Experiment Station
Neapolis
Embers Tavern & Grille
Coleman Branch
Mile 3
640
Branch
Rainbow Ch
Meadow Lawn Memorial Garden
BM TS 1L
714
Bexley Spring Hill
883
Greens Mill Rd
GREENS MILL ROAD
Lennar at Drumwright
Hunter Lake
Hunter Airport
Rutherford
Mile 15
Southern Scapes landscaping
Greens Mill Rd
BM LRT 1576
750
Google Earth
Image © 2024 Airbus
3000 ft
N

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (817) 222-5915, or Rodney.H-CTR.Love@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2025-ASO-245-OE.

Signature Control No: 643365461-647029366 (DNE)
Rodney Love
Technician

Attachment(s)
Additional Information
Frequency Data

Map(s)

cc: FCC

Additional information for ASN 2025-ASO-245-OE

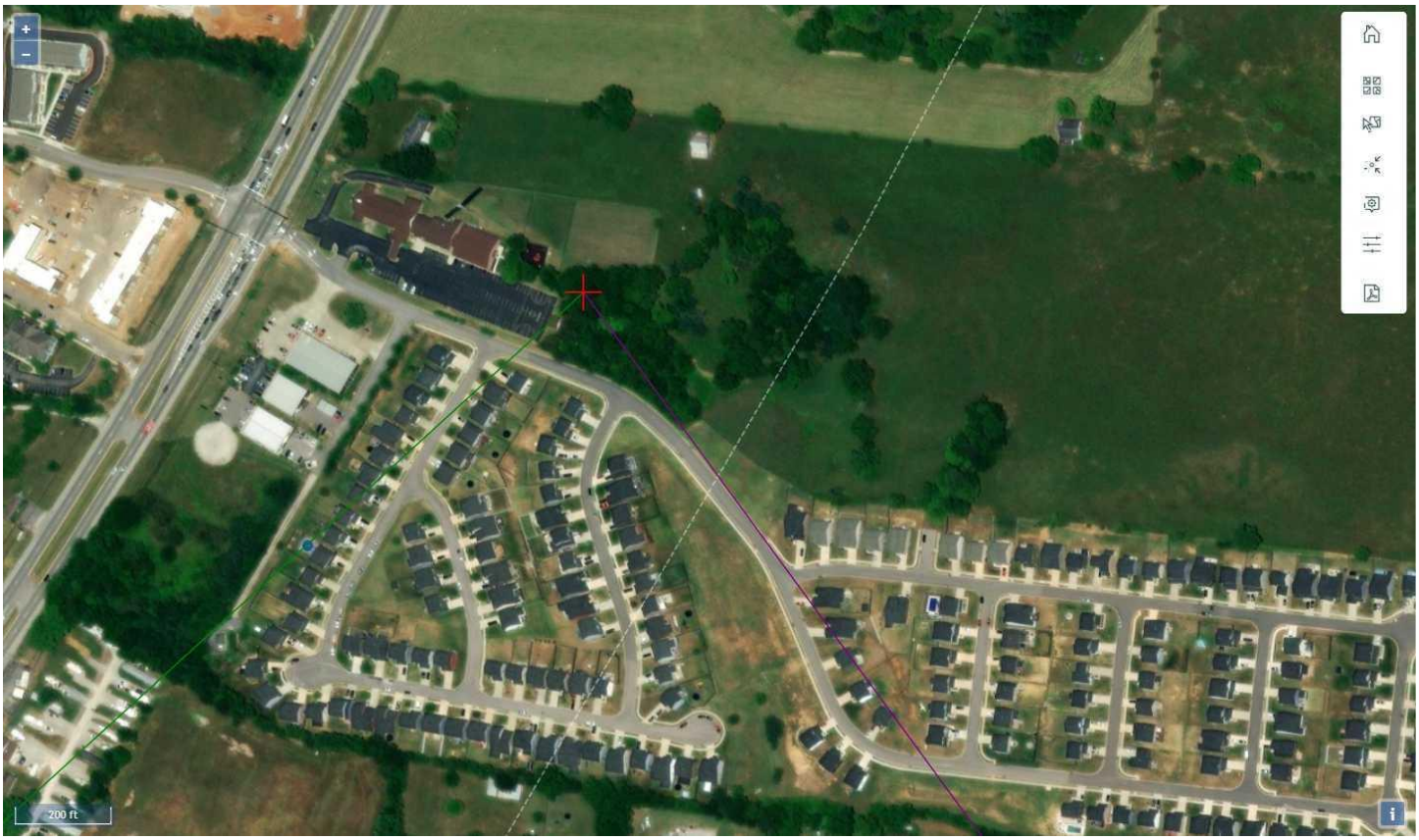
The FAA recognizes emissions in 3.7-3.98 GHz at this location will result in Electromagnetic Interference (EMI) as described in Airworthiness Directives (AD) 2021-23-12 and 2021-23-13. NAS services including airport and helicopter operations within a radius of 42 NM will be impacted by 5G RF emissions. Operational use of this frequency band is not objectionable provided the Wireless Providers (WP) obtain and adhere to the parameters established by the FAA 5G C band compatibility evaluation process.

Frequency Data for ASN 2025-ASO-245-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
6	7	GHz	42	dBW
6	7	GHz	55	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
806	901	MHz	500	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1756	1780	MHz	3280	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W
3450	3550	MHz	3280	W
3550	3700	MHz	50	W
3700	3980	MHz	3280	W
27500	28350	MHz	31623	W
29100	29250	MHz	31623	W
31000	31300	MHz	31623	W

38600	40000	MHz	31623	W

Verified Map for ASN 2025-ASO-245-OE



Sabre Industries™
INNOVATION DELIVERED

Structural Design Report

125' Monopine
Site: Lanton, TN
Site Number: TN-5001

Prepared for: VOGUE TOWERS
by: Sabre Industries ™

Job Number: 25-4001-JDS

March 10, 2025

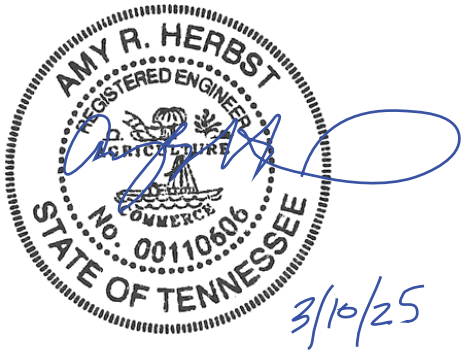
Monopole Profile..... 1

Foundation Design Summary (Preliminary) (Option 1)..... 2

Foundation Design Summary (Preliminary) (Option 2)..... 3

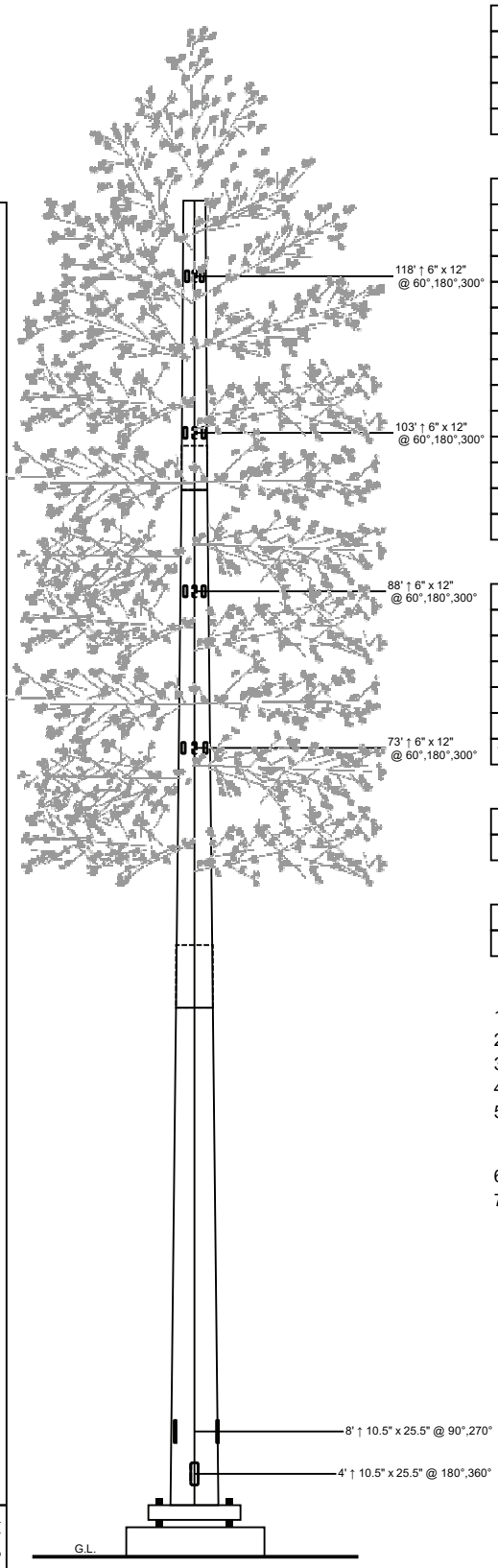
Pole Calculations..... 4-24

Foundation Calculations..... 25-34



Digitally Signed By Amy R. Herbst
DN: C=US,SERIALNUMBER=MAS20250205984400,ST=Texas,L=Alvarado,2.5.4.97=NTRUS\+DE-4349737,O=SABRE INDUSTRIES\, INC.,CN=Amy R. Herbst Date: 2025.03.10 13:05:22

Length (ft)	53'-3"	53'-6"	27'-6"
Number Of Sides	18		
Thickness (in)	1/2"	3/8"	1/4"
Lap Splice (ft)	6' - 0"		4' - 3"
Top Diameter (in)	40.29"	29.26"	24"
Bottom Diameter (in)	53.49"	42.53"	30.82"
Taper (in/ft)	0.2479		
Grade	A572-65		
Weight (lbs)	15963	8342	2318
Overall Steel Height (ft)	124		



Designed Appurtenance Loading

Elev	Description	Tx-Line
120	(1) 40,000 Sq. In. EPA 6000# (no ice)	(12) 1 5/8"
105	(1) 30,000 sq. in. EPA 6,000# (no ice)	(12) 1 5/8"
90	(1) 30,000 sq. in. EPA 6,000# (no ice)	(12) 1 5/8"
75	(1) 30,000 sq. in. EPA 6,000# (no ice)	(12) 1 5/8"

Design Criteria - ANSI/TIA-222-H

Wind Speed (No Ice)	105 mph
Wind Speed (Ice)	30 mph
Design Ice Thickness	1.50 in
Risk Category	II
Exposure Category	C
Topographic Factor Procedure	Method 1 (Simplified)
Topographic Category	1
Ground Elevation	742 ft
Seismic Importance Factor, Ie	1.00
0.2-sec Spectral Response, Ss	0.294 g
1-sec Spectral Response, S1	0.143 g
Site Class	D (DEFAULT)
Seismic Design Category	D
Basic Seismic Force-Resisting System	Telecommunication Tower (Pole: Steel)

Limit State Load Combination Reactions

Load Combination	Axial (kips)	Shear (kips)	Moment (ft-k)	Deflection (ft)	Sway (deg)
1.2 D + 1.0 Wo	70.22	64.1	6121.83	7.96	6.33
0.9 D + 1.0 Wo	52.73	64.14	6066.92	7.87	6.26
1.2 D + 1.0 Di + 1.0 Wi	129.29	8.55	852.34	1.14	0.9
1.2 D + 1.0 Ev + 1.0 Eh	73.5	3.27	336.34	0.46	0.37
0.9 D - 1.0 Ev + 1.0 Eh	48.86	3.24	327.62	0.45	0.36
1.0 D + 1.0 Wo (Service @ 60 mph)	58.35	18.77	1786.21	2.34	1.85

Base Plate Dimensions

Shape	Diameter	Thickness	Bolt Circle	Bolt Qty	Bolt Diameter
Round	66.25"	2.5"	60.5"	22	2.25"

Anchor Bolt Dimensions

Length	Diameter	Hole Diameter	Weight	Type	Finish
84"	2.25"	2.625"	2664.2	A615-75	Galv

Notes

1) Antenna Feed Lines Run Inside Pole
2) All dimensions are above ground level, unless otherwise specified.
3) Weights shown are estimates. Final weights may vary.
4) Full Height Step Bolts
5) This tower design and, if applicable, the foundation design(s) shown on the following page(s) also meet or exceed the requirements of the 2012 International Building Code.
6) Tower Rating: 95.4%
7) This structure has been designed to support pine tree branches starting at the 62' elevation to an overall height of 130'.

Sabre Industries
INNOVATION DELIVERED

Sabre Industries
7101 Southbridge Drive
P.O. Box 658
Sioux City, IA 51102-0658
Phone: (712) 258-6690
Fax: (712) 279-0814

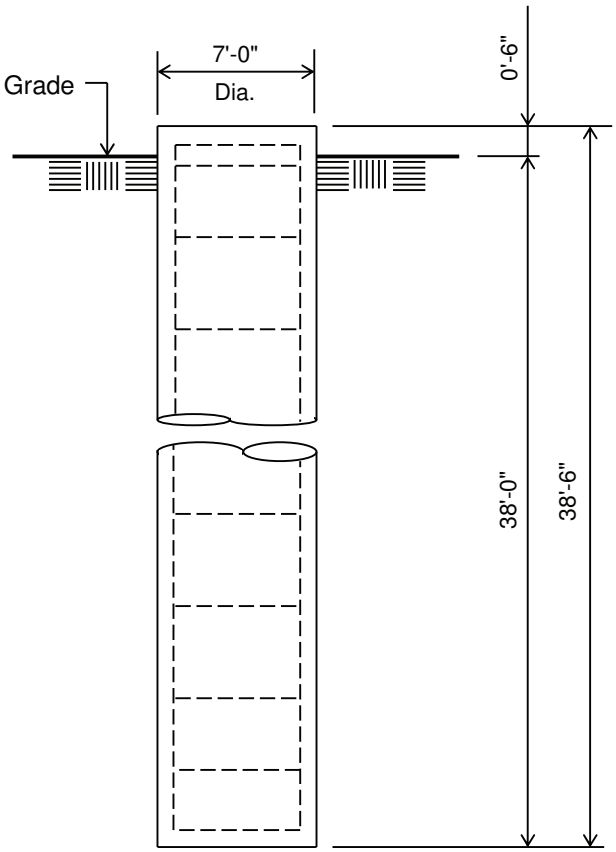
Information contained herein is the sole property of Sabre Communications Corporation, constitutes a trade secret as defined by Iowa Code Ch. 550 and shall not be reproduced, copied or used in whole or part for any purpose whatsoever without the prior written consent of Sabre Communications Corporation.

Job:	**25-4001-JDS**
Customer:	VOGUE TOWERS
Site Name:	Lanton, TN TN-5001
Description:	125' Monopine
Date:	3/10/2025 By: ARH

No.: 25-4001-JDS
Date: 03/10/25
By: ARH

Customer: VOGUE TOWERS
Site: Lanton, TN TN-5001
125' Monopine

PRELIMINARY -NOT FOR CONSTRUCTION-



ELEVATION VIEW
(54.88 Cu. Yds.)
(1 REQUIRED; NOT TO SCALE)

Notes:

1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-14.
2) Rebar to conform to ASTM specification A615 Grade 60.
3) All rebar to have a minimum of 3" concrete cover.
4) All exposed concrete corners to be chamfered 3/4".
5) The foundation design is based on presumptive clay soil as defined in ANSI/TIA-222-H-2017. It is recommended that a soil analysis of the site be performed to verify the soil parameters used in the design.
6) This foundation is designed for a max capacity ratio of 99.5%.
7) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

Rebar Schedule for Pier	
Pier	(38) #10 vertical rebar w/ #5 ties, (2) within top 5" of pier, then 8" C/C

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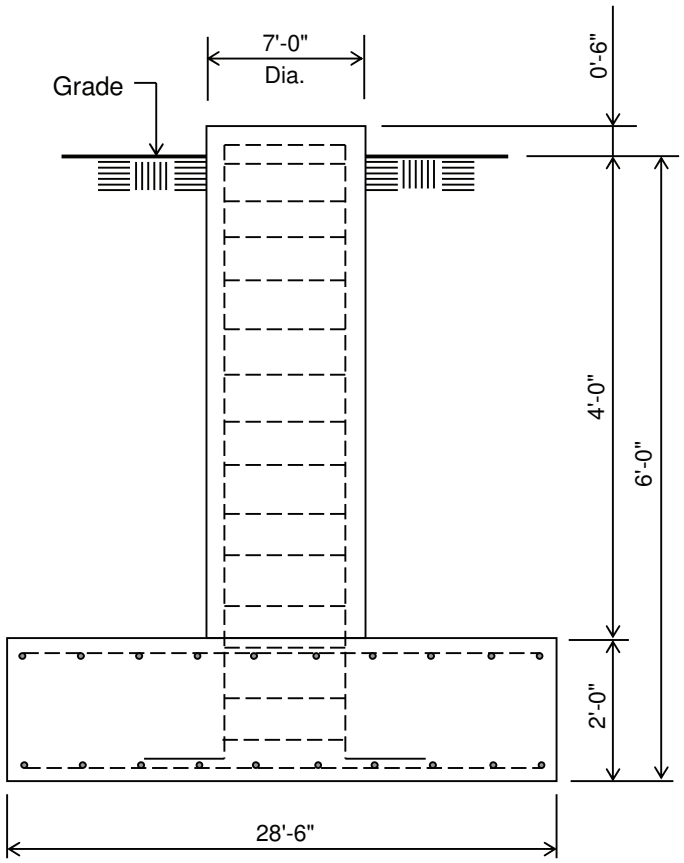
7101 Southbridge Drive - P.O. Box 658 - Sioux City, IA 51102-0658 - Phone 712.258.6690 - Fax 712.279.0814

No.: 25-4001-JDS
Date: 03/10/25
By: ARH

Customer: VOGUE TOWERS
Site: Lanton, TN TN-5001
125' Monopine

PRELIMINARY -NOT FOR CONSTRUCTION-



ELEVATION VIEW
(66.58 Cu. Yds.)
(1 REQUIRED; NOT TO SCALE)

Notes:

1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-14.
2) Rebar to conform to ASTM specification A615 Grade 60.
3) All rebar to have a minimum of 3" concrete cover.
4) All exposed concrete corners to be chamfered 3/4".
5) The foundation design is based on presumptive clay soil as defined in ANSI/TIA-222-H-2017. It is recommended that a soil analysis of the site be performed to verify the soil parameters used in the design.
6) 4 ft of soil cover is required over the entire area of the foundation slab.
7) This foundation is designed for a max capacity ratio of 99.5%.
8) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

Rebar Schedule for Pad and Pier	
Pier	(42) #9 vertical rebar w/ hooks at bottom w/ #5 ties, (2) within top 5" of pier, then 4" C/C
Pad	(41) #10 horizontal rebar evenly spaced each way top and bottom (164 total)

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7101 Southbridge Drive - P.O. Box 658 - Sioux City, IA 51102-0658 - Phone 712.258.6690 - Fax 712.279.0814

125' Monopine / Lanton, TN

* All pole diameters shown on the following pages are across corners.
See profile drawing for widths across flats.

POLE GEOMETRY

ELEV ft	SECTION NAME	No. SIDE	OUTSIDE DIAM in	THICK -NESS in	RESISTANCES ϕ*Pn kip	ϕ*Mn ft-kip	SPLICE TYPE	...OVERLAP... LENGTH ft	RATIO	w/t
124.0										
			24.37	0.250	1400.1	682.2				
	A	18								15.7
			30.22	0.250	1647.1	999.0				
100.7										
			30.22	0.250	1647.1	999.0				
	A/B	18					SLIP	4.25	1.68	
			30.79	0.375	2648.5	1624.2				
96.5										
			30.79	0.375	2648.5	1624.2				
	B	18								13.3
			41.66	0.375	3475.8	2902.5				
53.2										
			41.66	0.375	3475.8	2902.5				
	B/C	18					SLIP	6.00	1.72	
			42.43	0.500	4868.0	4117.1				
47.2										
			42.43	0.500	4868.0	4117.1				
	C	18								13.9
			54.31	0.500	6065.9	6601.4				
0.0										

POLE ASSEMBLY

SECTION NAME	BASE ELEV ft	.....BOLTS AT BASE OF SECTION..... NUMBER	TYPE	DIAM in	STRENGTH ksi	THREADS IN SHEAR PLANE	CALC BASE ELEV ft
A	96.500	0	A325	0.00	92.0	0	96.500
B	47.250	0	A325	0.00	92.0	0	47.250
C	0.000	0	A325	0.00	92.0	0	0.000

POLE SECTIONS

SECTION NAME	No.of SIDES	LENGTH	OUTSIDE.DIAMETER BOT *	OUTSIDE.DIAMETER TOP *	BEND RAD	MAT-ERIAL ID	FLANGE.ID BOT	FLANGE.ID TOP	FLANGE.WELD ..GROUP.ID.. BOT	FLANGE.WELD ..GROUP.ID.. TOP
		ft	in	in	in					
A	18	27.50	31.29	24.37	0.625	1	0	0	0	0
B	18	53.50	43.18	29.72	0.625	2	0	0	0	0
C	18	53.25	54.31	40.91	0.625	3	0	0	0	0

* - Diameter of circumscribed circle

MATERIAL TYPES
==========

TYPE OF SHAPE	TYPE NO	NO OF ELEM.	ORIENT &	HEIGHT	WIDTH	.THICKNESS. WEB	FLANGE	IRREGULARITY .PROJECTION. % OF AREA	ORIENT
			deg	in	in	in	in		deg
PL	1	1	0.0	31.29	0.25	0.250	0.250	0.00	0.0
PL	2	1	0.0	43.18	0.38	0.375	0.375	0.00	0.0
PL	3	1	0.0	54.31	0.50	0.500	0.500	0.00	0.0

& - With respect to vertical

MATERIAL PROPERTIES
==========

MATERIAL TYPE NO.	ELASTIC MODULUS	UNIT WEIGHT	.. STRENGTH .. Fu	Fy	THERMAL COEFFICIENT
	ksi	pcf	ksi	ksi	/deg
1	29000.0	490.0	80.0	65.0	0.00001170
2	29000.0	490.0	80.0	65.0	0.00001170
3	29000.0	490.0	80.0	65.0	0.00001170

* Only 5 condition(s) shown in full

==========

LOADING CONDITION A ==========

105 mph wind with no ice. Wind Azimuth: 0° (1.2 D + 1.0 Wo)

LOADS ON POLE
==========

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	126.500	0.00	0.0	0.0	0.9561	0.3000	0.0000	0.0000
C	122.000	0.00	0.0	0.0	0.0111	0.0067	0.0000	0.0000

C	121.500	0.00	0.0	0.0	0.9481	0.3000	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.0000	1.7821	0.0000	0.0000
C	119.000	0.00	0.0	0.0	10.4975	7.2000	0.0000	0.0000
C	116.500	0.00	0.0	0.0	1.8797	0.6000	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0273	0.0168	0.0000	0.0000
C	111.500	0.00	0.0	0.0	1.8626	0.6000	0.0000	0.0000
C	106.500	0.00	0.0	0.0	1.8448	0.6000	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0268	0.0168	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.0000	1.5575	0.0000	0.0000
C	104.000	0.00	0.0	0.0	7.6365	7.2000	0.0000	0.0000
C	101.500	0.00	0.0	0.0	1.8264	0.6000	0.0000	0.0000
C	96.500	0.00	0.0	0.0	1.8073	0.6000	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0262	0.0168	0.0000	0.0000
C	91.500	0.00	0.0	0.0	1.7874	0.6000	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0000	1.3329	0.0000	0.0000
C	89.000	0.00	0.0	0.0	7.3927	7.2000	0.0000	0.0000
C	86.500	0.00	0.0	0.0	1.7666	0.6000	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0256	0.0168	0.0000	0.0000
C	81.500	0.00	0.0	0.0	1.7448	0.6000	0.0000	0.0000
C	76.500	0.00	0.0	0.0	1.7220	0.6000	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0250	0.0168	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0000	1.1082	0.0000	0.0000
C	74.000	0.00	0.0	0.0	7.1143	7.2000	0.0000	0.0000
C	71.500	0.00	0.0	0.0	1.8868	0.6000	0.0000	0.0000
C	66.500	0.00	0.0	0.0	1.8587	0.6000	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0242	0.0168	0.0000	0.0000
C	63.500	0.00	0.0	0.0	1.1046	0.3600	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0234	0.0168	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0224	0.0168	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0213	0.0168	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0198	0.0168	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0178	0.0168	0.0000	0.0000
D	124.000	0.00	180.0	0.0	0.0495	0.0784	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0573	0.0942	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0586	0.2406	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0586	0.2406	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0599	0.1495	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0699	0.1937	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0703	0.4641	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0703	0.4641	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0709	0.2726	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0665	0.3195	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0667	0.3289	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0686	0.3383	0.0000	0.0000

==========

LOADING CONDITION M ==========

105 mph wind with no ice. Wind Azimuth: 0° (0.9 D + 1.0 Wo)

LOADS ON POLE
==========

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	......FORCES...... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip

C	126.500	0.00	0.0	0.0	0.9561	0.2250	0.0000	0.0000
C	122.000	0.00	0.0	0.0	0.0111	0.0050	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.9481	0.2250	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.0000	1.3366	0.0000	0.0000
C	119.000	0.00	0.0	0.0	10.4975	5.4000	0.0000	0.0000
C	116.500	0.00	0.0	0.0	1.8797	0.4500	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0273	0.0126	0.0000	0.0000
C	111.500	0.00	0.0	0.0	1.8626	0.4500	0.0000	0.0000
C	106.500	0.00	0.0	0.0	1.8448	0.4500	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0268	0.0126	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.0000	1.1681	0.0000	0.0000
C	104.000	0.00	0.0	0.0	7.6365	5.4000	0.0000	0.0000
C	101.500	0.00	0.0	0.0	1.8264	0.4500	0.0000	0.0000
C	96.500	0.00	0.0	0.0	1.8073	0.4500	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0262	0.0126	0.0000	0.0000
C	91.500	0.00	0.0	0.0	1.7874	0.4500	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0000	0.9996	0.0000	0.0000
C	89.000	0.00	0.0	0.0	7.3927	5.4000	0.0000	0.0000
C	86.500	0.00	0.0	0.0	1.7666	0.4500	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0256	0.0126	0.0000	0.0000
C	81.500	0.00	0.0	0.0	1.7448	0.4500	0.0000	0.0000
C	76.500	0.00	0.0	0.0	1.7220	0.4500	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0250	0.0126	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0000	0.8312	0.0000	0.0000
C	74.000	0.00	0.0	0.0	7.1143	5.4000	0.0000	0.0000
C	71.500	0.00	0.0	0.0	1.8868	0.4500	0.0000	0.0000
C	66.500	0.00	0.0	0.0	1.8587	0.4500	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0242	0.0126	0.0000	0.0000
C	63.500	0.00	0.0	0.0	1.1046	0.2700	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0234	0.0126	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0224	0.0126	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0213	0.0126	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0198	0.0126	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0178	0.0126	0.0000	0.0000
D	124.000	0.00	180.0	0.0	0.0495	0.0588	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0573	0.0707	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0586	0.1804	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0586	0.1804	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0599	0.1121	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0699	0.1453	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0703	0.3481	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0703	0.3481	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0709	0.2044	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0665	0.2396	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0667	0.2467	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0686	0.2537	0.0000	0.0000

==========

LOADING CONDITION Y ==========

30 mph wind with 1.5 ice. Wind Azimuth: 0° (1.2 D + 1.0 Di + 1.0 Wi)

LOADS ON POLE
==========

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	......FORCES...... HORIZ	DOWN	......MOMENTS..... VERTICAL	TORSNAL

	ft	ft			kip	kip	ft-kip	ft-kip
C	126.500	0.00	0.0	0.0	0.0995	0.9868	0.0000	0.0000
C	122.000	0.00	0.0	0.0	0.0070	0.0187	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.0986	0.9841	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.0000	1.7821	0.0000	0.0000
C	119.000	0.00	0.0	0.0	1.4415	17.4402	0.0000	0.0000
C	116.500	0.00	0.0	0.0	0.2162	1.2812	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0172	0.0288	0.0000	0.0000
C	111.500	0.00	0.0	0.0	0.2139	1.2783	0.0000	0.0000
C	106.500	0.00	0.0	0.0	0.2116	1.2752	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0167	0.0288	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.0000	1.5575	0.0000	0.0000
C	104.000	0.00	0.0	0.0	1.0439	17.3044	0.0000	0.0000
C	101.500	0.00	0.0	0.0	0.2092	1.2720	0.0000	0.0000
C	96.500	0.00	0.0	0.0	0.2067	1.2687	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0162	0.0288	0.0000	0.0000
C	91.500	0.00	0.0	0.0	0.2041	1.2651	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0000	1.3329	0.0000	0.0000
C	89.000	0.00	0.0	0.0	1.0044	17.1498	0.0000	0.0000
C	86.500	0.00	0.0	0.0	0.2014	1.2615	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0157	0.0288	0.0000	0.0000
C	81.500	0.00	0.0	0.0	0.1986	1.2576	0.0000	0.0000
C	76.500	0.00	0.0	0.0	0.1957	1.2535	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0151	0.0288	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0000	1.1082	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.9596	16.9701	0.0000	0.0000
C	71.500	0.00	0.0	0.0	0.2080	1.2491	0.0000	0.0000
C	66.500	0.00	0.0	0.0	0.2045	1.2445	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0145	0.0288	0.0000	0.0000
C	63.500	0.00	0.0	0.0	0.2023	1.2416	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0138	0.0288	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0130	0.0288	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0121	0.0288	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0109	0.0288	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0094	0.0288	0.0000	0.0000
D	124.000	0.00	180.0	0.0	0.0080	0.1338	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0091	0.1590	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0093	0.3069	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0093	0.3069	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0094	0.2174	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0107	0.2763	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0108	0.5483	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0108	0.5483	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0108	0.3579	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0100	0.4088	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0100	0.4156	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0102	0.4195	0.0000	0.0000

==========

LOADING CONDITION AK ==========

Seismic - Azimuth: 0° (1.2 D + 1.0 Ev + 1.0 Eh)

LOADS ON POLE
==========

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	......FORCES..... HORIZ kip	DOWN kip	......MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	126.500	0.00	0.0	0.0	0.0317	0.3154	0.0000	0.0000
C	122.000	0.00	0.0	0.0	0.0007	0.0070	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.0293	0.3154	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.6735	7.5684	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.1667	1.8733	0.0000	0.0000
C	116.500	0.00	0.0	0.0	0.0538	0.6307	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0015	0.0177	0.0000	0.0000
C	111.500	0.00	0.0	0.0	0.0493	0.6307	0.0000	0.0000
C	110.250	0.00	0.0	0.0	0.1938	2.5374	0.0000	0.0000
C	106.500	0.00	0.0	0.0	0.0450	0.6307	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0012	0.0177	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.5144	7.5684	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.1113	1.6372	0.0000	0.0000
C	101.500	0.00	0.0	0.0	0.0408	0.6307	0.0000	0.0000
C	96.500	0.00	0.0	0.0	0.0369	0.6307	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0010	0.0177	0.0000	0.0000
C	91.500	0.00	0.0	0.0	0.0332	0.6307	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.3767	7.5684	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0697	1.4010	0.0000	0.0000
C	86.500	0.00	0.0	0.0	0.0297	0.6307	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0008	0.0177	0.0000	0.0000
C	81.500	0.00	0.0	0.0	0.0263	0.6307	0.0000	0.0000
C	76.500	0.00	0.0	0.0	0.0232	0.6307	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0006	0.0177	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.2604	7.5684	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0401	1.1649	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.3332	9.6838	0.0000	0.0000
C	71.500	0.00	0.0	0.0	0.0203	0.6307	0.0000	0.0000
C	66.500	0.00	0.0	0.0	0.0175	0.6307	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0005	0.0177	0.0000	0.0000
C	63.500	0.00	0.0	0.0	0.0160	0.6307	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0003	0.0177	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0002	0.0177	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0001	0.0177	0.0000	0.0000
C	26.620	0.00	0.0	0.0	0.0747	16.7844	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0001	0.0177	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0000	0.0177	0.0000	0.0000
D	124.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000
D	0.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000

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LOADING CONDITION AL ==========

Seismic - Azimuth: 0° (0.9 D - 1.0 Ev + 1.0 Eh)

LOADS ON POLE
==========

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	......FORCES..... HORIZ kip	DOWN kip	......MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	126.500	0.00	0.0	0.0	0.0317	0.2096	0.0000	0.0000

```
C      122.000      0.00    0.0    0.0    0.0007    0.0047    0.0000    0.0000
C      121.500      0.00    0.0    0.0    0.0293    0.2096    0.0000    0.0000
C      119.000      0.00    0.0    0.0    0.6735    5.0316    0.0000    0.0000
C      119.000      0.00    0.0    0.0    0.1667    1.2454    0.0000    0.0000
C      116.500      0.00    0.0    0.0    0.0538    0.4193    0.0000    0.0000
C      115.000      0.00    0.0    0.0    0.0015    0.0117    0.0000    0.0000
C      111.500      0.00    0.0    0.0    0.0493    0.4193    0.0000    0.0000
C      110.250      0.00    0.0    0.0    0.1938    1.6869    0.0000    0.0000
C      106.500      0.00    0.0    0.0    0.0450    0.4193    0.0000    0.0000
C      105.000      0.00    0.0    0.0    0.0012    0.0117    0.0000    0.0000
C      104.000      0.00    0.0    0.0    0.5144    5.0316    0.0000    0.0000
C      104.000      0.00    0.0    0.0    0.1113    1.0884    0.0000    0.0000
C      101.500      0.00    0.0    0.0    0.0408    0.4193    0.0000    0.0000
C       96.500      0.00    0.0    0.0    0.0369    0.4193    0.0000    0.0000
C       95.000      0.00    0.0    0.0    0.0010    0.0117    0.0000    0.0000
C       91.500      0.00    0.0    0.0    0.0332    0.4193    0.0000    0.0000
C       89.000      0.00    0.0    0.0    0.3767    5.0316    0.0000    0.0000
C       89.000      0.00    0.0    0.0    0.0697    0.9314    0.0000    0.0000
C       86.500      0.00    0.0    0.0    0.0297    0.4193    0.0000    0.0000
C       85.000      0.00    0.0    0.0    0.0008    0.0117    0.0000    0.0000
C       81.500      0.00    0.0    0.0    0.0263    0.4193    0.0000    0.0000
C       76.500      0.00    0.0    0.0    0.0232    0.4193    0.0000    0.0000
C       75.000      0.00    0.0    0.0    0.0006    0.0117    0.0000    0.0000
C       74.000      0.00    0.0    0.0    0.2604    5.0316    0.0000    0.0000
C       74.000      0.00    0.0    0.0    0.0401    0.7745    0.0000    0.0000
C       74.000      0.00    0.0    0.0    0.3332    6.4379    0.0000    0.0000
C       71.500      0.00    0.0    0.0    0.0203    0.4193    0.0000    0.0000
C       66.500      0.00    0.0    0.0    0.0175    0.4193    0.0000    0.0000
C       65.000      0.00    0.0    0.0    0.0005    0.0117    0.0000    0.0000
C       63.500      0.00    0.0    0.0    0.0160    0.4193    0.0000    0.0000
C       55.000      0.00    0.0    0.0    0.0003    0.0117    0.0000    0.0000
C       45.000      0.00    0.0    0.0    0.0002    0.0117    0.0000    0.0000
C       35.000      0.00    0.0    0.0    0.0001    0.0117    0.0000    0.0000
C       26.620      0.00    0.0    0.0    0.0747   11.1586    0.0000    0.0000
C       25.000      0.00    0.0    0.0    0.0001    0.0117    0.0000    0.0000
C       15.000      0.00    0.0    0.0    0.0000    0.0117    0.0000    0.0000

D      124.000      0.00  180.0  180.0    0.0000    0.0000    0.0000    0.0000
D        0.000      0.00  180.0  180.0    0.0000    0.0000    0.0000    0.0000

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Sabre Towers and Poles                              on: 10 mar 2025  at: 12:50:48
================================================================================

125' Monopine / Lanton, TN


MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)
============================================================

  MAST   .......DEFLECTIONS (ft).........   .........ROTATIONS (deg).........
```

ELEV	HORIZONTAL		DOWN	TILT		TWIST
ft	ALONG	ACROSS		ALONG	ACROSS	
124.0	7.96L	0.06F	0.67L	6.33L	0.05F	0.00E
120.7	7.60L	0.06F	0.63L	6.33L	0.05F	0.00E
117.4	7.24L	0.05F	0.59L	6.32L	0.05F	0.00E
114.0	6.88L	0.05F	0.55L	6.29L	0.05F	0.00E
110.7	6.52L	-0.05U	0.51L	6.24L	0.05F	0.00E
107.4	6.16L	-0.05U	0.47L	6.16L	0.05F	0.00E
104.1	5.81L	-0.04U	0.44L	6.07L	0.05F	0.00E
100.7	5.47L	-0.04U	0.40L	5.95L	0.05F	0.00E
96.5	5.03L	-0.04U	0.36L	5.82L	0.04F	0.00E
90.3	4.42L	-0.03U	0.29L	5.58L	0.04F	0.00E
84.1	3.84L	-0.03U	0.24L	5.30L	0.04F	0.00E
78.0	3.29L	-0.02U	0.19L	4.96L	-0.04U	0.00E
71.8	2.78L	-0.02U	0.15L	4.59L	-0.03U	0.00E
65.6	2.31L	-0.02U	0.11L	4.18L	-0.03U	0.00E
59.4	1.89L	-0.01U	0.08L	3.74L	-0.03U	0.00E
53.2	1.51L	-0.01U	0.06L	3.27L	-0.02U	0.00E
47.2	1.19L	-0.01U	0.04L	2.92L	-0.02U	0.00E
41.3	0.91L	-0.01U	0.03L	2.55L	-0.02U	0.00E
35.4	0.66L	0.00U	0.02L	2.18L	-0.02U	0.00E
29.5	0.46L	0.00U	0.01L	1.80L	-0.01U	0.00E
23.6	0.29L	0.00U	0.01L	1.43L	-0.01U	0.00E
17.7	0.16L	0.00U	0.00L	1.07L	-0.01U	0.00E
11.8	0.07L	0.00U	0.00L	0.70L	-0.01U	0.00E
5.9	0.02L	0.00U	0.00AB	0.35L	0.00U	0.00E
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

MAST ELEV	TOTAL AXIAL	SHEAR.w.r.t.WIND.DIR ALONG	ACROSS	MOMENT.w.r.t.WIND.DIR ALONG	ACROSS	TORSION
ft	kip	kip	kip	ft-kip	ft-kip	ft-kip

```
124.0  ..................................................................
         0.99 AA     1.04 K      0.03 X     -2.54 R      0.05 X     -0.01 X

         2.44 AA     2.16 K      0.03 X     -6.92 B     -0.05 X      0.01 X
120.7  ..................................................................
         2.44 AF     2.31 B     -0.14 N     -6.97 L      0.11 Q     -0.02 Q

        22.13 AF    12.98 B     -0.14 N    -33.53 B      0.46 N      0.04 L
117.4  ..................................................................
        22.13 AF    13.00 A     -0.24 X    -33.69 B      0.49 N      0.05 L

        23.91 AF    15.08 A     -0.24 X    -84.28 K      0.83 X      0.08 L
114.0  ..................................................................
        23.91 AF    15.12 M     -0.28 T    -84.32 K      1.00 X     -0.10 X

        25.68 AF    17.16 M     -0.28 T   -139.48 A      1.36 T      0.13 R
110.7  ..................................................................
        25.68 AF    17.17 M     -0.25 T   -139.65 A      1.37 T     -0.12 T

        26.18 AF    17.35 M     -0.25 T   -199.54 A      2.19 T     -0.19 T
107.4  ..................................................................
        26.18 AF    17.24 C     -0.34 T   -199.54 A      1.98 T      0.20 U

        27.99 AF    19.30 C     -0.34 T   -265.04 C      3.10 T     -0.28 T
104.1  ..................................................................
        27.99 AD    19.28 M      0.37 F   -265.45 C      3.09 T     -0.28 T

        48.65 AD    28.93 M      0.37 F   -362.47 C      3.87 T      0.34 R
100.7  ..................................................................
        48.65 AF    29.02 M     -0.35 H   -362.82 C      3.99 T     -0.35 T

        49.95 AF    29.27 M     -0.35 H   -494.84 C      5.11 T     -0.44 T
 96.5  ..................................................................
        51.22 AF    31.14 M      0.36 F   -494.83 C      5.04 T     -0.45 C

        53.88 AF    33.33 M      0.36 F   -702.44 C      6.93 T     -0.59 T
 90.3  ..................................................................
        53.88 AF    33.30 M      0.35 F   -702.54 C      6.98 T     -0.60 T

        75.08 AF    42.86 M      0.35 F   -965.20 L     -8.89 F     -0.72 H
 84.1  ..................................................................
        75.08 AF    42.88 L     -0.38 U   -965.23 L     -8.92 F     -0.72 T

        77.81 AF    45.02 L     -0.38 U  -1255.56 L    -11.30 F     -0.88 H
 78.0  ..................................................................
        77.81 AF    45.03 M     -0.43 U  -1255.65 L    -11.33 F     -0.88 H

        98.70 AF    54.29 M     -0.43 U  -1577.57 L    -13.86 F      1.10 E
 71.8  ..................................................................
        98.69 AF    54.37 M      0.43 F  -1577.66 L    -13.84 F      1.10 E

       102.77 AF    58.52 M      0.43 F  -1947.58 L    -16.59 F      1.29 E
 65.6  ..................................................................
       102.77 AF    58.41 M     -0.46 U  -1947.67 L    -16.58 F      1.28 E

       105.66 AF    59.96 M     -0.46 U  -2333.30 L    -18.80 F      1.47 E
 59.4  ..................................................................
       105.66 AF    60.02 M     -0.45 U  -2333.39 L    -18.84 F      1.47 E
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         107.37 AF    60.47 M     -0.45 U  -2722.70 L    -20.98 F      1.62 E
   53.2  ..........................................................................
         107.37 AF    60.49 M     -0.49 U  -2722.76 L    -20.97 F      1.63 E

         110.66 AF    60.91 M     -0.49 U  -3102.14 L     23.13 U      1.76 E
   47.2  ..........................................................................
         110.66 AF    60.93 M     -0.46 U  -3102.11 L     23.16 U      1.76 E

         112.83 AF    61.37 M     -0.46 U  -3477.51 L     25.91 U      1.89 E
   41.3  ..........................................................................
         112.83 AF    61.31 M     -0.42 U  -3477.55 L     25.92 U      1.89 E

         115.02 AF    61.73 M     -0.42 U  -3853.63 L     28.48 U      1.99 E
   35.4  ..........................................................................
         115.02 AF    61.69 M     -0.45 U  -3853.65 L     28.45 U      1.99 E

         117.29 AF    62.12 M     -0.45 U  -4230.58 L     31.18 U      2.08 E
   29.5  ..........................................................................
         117.29 AF    62.08 M     -0.47 U  -4230.60 L     31.20 U      2.08 E

         119.61 AF    62.51 M     -0.47 U  -4608.11 L     33.99 U      2.14 E
   23.6  ..........................................................................
         119.61 AF    62.52 M     -0.46 U  -4608.09 L     34.02 U      2.14 E

         121.94 AF    62.92 M     -0.46 U  -4986.23 L     36.79 U      2.19 E
   17.7  ..........................................................................
         121.94 AF    62.92 M     -0.47 U  -4986.25 L     36.79 U      2.19 E

         124.36 AF    63.33 M     -0.47 U  -5364.70 L     39.59 U      2.23 E
   11.8  ..........................................................................
         124.36 AF    63.33 M     -0.46 U  -5364.71 L     39.59 U      2.23 E

         126.82 AF    63.72 M     -0.46 U  -5743.22 L     42.34 U      2.25 E
    5.9  ..........................................................................
         126.82 AF    63.74 M     -0.47 U  -5743.22 L     42.34 U      2.25 E

         129.29 AF    64.14 M     -0.47 U  -6121.83 L     45.11 U      2.26 E
--------------------------------------------------------------------------------
 base
 reaction  129.29 AF   -64.14 M      0.47 U   6121.83 L    -45.11 U     -2.26 E
--------------------------------------------------------------------------------


 COMPLIANCE WITH 4.8.2 & 4.5.4
 =============================

   ELEV       AXIAL   BENDING SHEAR +       TOTAL SATISFIED  D/t(w/t)   MAX
                              TORSIONAL                                  ALLOWED
     ft

 124.00  ..........................................................................
             0.00AA    0.00R     0.00K     0.00R     YES      15.69A       45.2

             0.00AA    0.01B     0.00K     0.01B     YES      16.27A       45.2
 120.68  ..........................................................................
             0.00AF    0.01L     0.00B     0.01L     YES      16.27A       45.2

             0.01AF    0.04B     0.02B     0.05B     YES      16.85A       45.2
 117.36  ..........................................................................
             0.01AF    0.04B     0.02A     0.05B     YES      16.85A       45.2
```

```
          0.02AF    0.10K     0.02A     0.11K     YES      17.44A       45.2
114.04 ..........................................................................
          0.02AF    0.10K     0.02M     0.11K     YES      17.44A       45.2

          0.02AF    0.16A     0.02M     0.17A     YES      18.02A       45.2
110.71 ..........................................................................
          0.02AF    0.16A     0.02M     0.17A     YES      18.02A       45.2

          0.02AF    0.22A     0.02M     0.23A     YES      18.60A       45.2
107.39 ..........................................................................
          0.02AF    0.22A     0.02C     0.23A     YES      18.60A       45.2

          0.02AF    0.28C     0.02C     0.29A     YES      19.18A       45.2
104.07 ..........................................................................
          0.02AD    0.28C     0.02M     0.29C     YES      19.18A       45.2

          0.03AD    0.36C     0.04M     0.38C     YES      19.76A       45.2
100.75 ..........................................................................
          0.02AF    0.23C     0.02M     0.24C     YES      13.06A       45.2

          0.02AF    0.29C     0.02M     0.30C     YES      13.55A       45.2
 96.50 ..........................................................................
          0.02AF    0.30C     0.02M     0.31C     YES      13.32A       45.2

          0.02AF    0.39C     0.02M     0.40C     YES      14.04A       45.2
 90.32 ..........................................................................
          0.02AF    0.39C     0.02M     0.40C     YES      14.04A       45.2

          0.03AF    0.49L     0.03M     0.50L     YES      14.76A       45.2
 84.14 ..........................................................................
          0.03AF    0.49L     0.03L     0.50L     YES      14.76A       45.2

          0.03AF    0.58L     0.03L     0.59L     YES      15.48A       45.2
 77.96 ..........................................................................
          0.03AF    0.58L     0.03M     0.59L     YES      15.48A       45.2

          0.03AF    0.67L     0.03M     0.69L     YES      16.20A       45.2
 71.79 ..........................................................................
          0.03AF    0.67L     0.03M     0.69L     YES      16.20A       45.2

          0.03AF    0.77L     0.04M     0.79L     YES      16.92A       45.2
 65.61 ..........................................................................
          0.03AF    0.77L     0.04M     0.79L     YES      16.92A       45.2

          0.03AF    0.86L     0.04M     0.88L     YES      17.64A       45.2
 59.43 ..........................................................................
          0.03AF    0.86L     0.04M     0.88L     YES      17.64A       45.2

          0.03AF    0.94L     0.03M     0.95L     YES      18.36A       45.2
 53.25 ..........................................................................
          0.02AF    0.69L     0.03M     0.70L     YES      13.68A       45.2

          0.02AF    0.73L     0.02M     0.74L     YES      14.20A       45.2
 47.25 ..........................................................................
          0.02AF    0.75L     0.03M     0.77L     YES      13.94A       45.2

          0.02AF    0.79L     0.02M     0.80L     YES      14.46A       45.2
 41.34 ..........................................................................
          0.02AF    0.79L     0.02M     0.80L     YES      14.46A       45.2

          0.02AF    0.82L     0.02M     0.83L     YES      14.97A       45.2
```

```
 35.44  ..........................................................................
           0.02AF    0.82L     0.02M     0.83L     YES      14.97A       45.2

           0.02AF    0.84L     0.02M     0.85L     YES      15.49A       45.2
 29.53  ..........................................................................
           0.02AF    0.84L     0.02M     0.85L     YES      15.49A       45.2

           0.02AF    0.86L     0.02E     0.87L     YES      16.01A       45.2
 23.62  ..........................................................................
           0.02AF    0.86L     0.02M     0.87L     YES      16.01A       45.2

           0.02AF    0.88L     0.02E     0.89L     YES      16.52A       45.2
 17.72  ..........................................................................
           0.02AF    0.88L     0.02E     0.89L     YES      16.52A       45.2

           0.02AF    0.90L     0.02E     0.91L     YES      17.04A       45.2
 11.81  ..........................................................................
           0.02AF    0.90L     0.02E     0.91L     YES      17.04A       45.2

           0.02AF    0.91L     0.02E     0.93L     YES      17.55A       45.2
  5.91  ..........................................................................
           0.02AF    0.91L     0.02E     0.93L     YES      17.55A       45.2

           0.02AF    0.93L     0.02E     0.94L     YES      18.07A       45.2
  0.00  ..........................................................................

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)
====================================================

    DOWN    SHEAR.w.r.t.WIND.DIR   MOMENT.w.r.t.WIND.DIR     TORSION
               ALONG      ACROSS       ALONG      ACROSS
     kip         kip         kip      ft-kip      ft-kip      ft-kip

  129.29       64.14       -0.47    -6121.83       45.11        2.26
      AF          M           U           L           U           E



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Sabre Towers and Poles                              on: 10 mar 2025  at: 12:51:19
================================================================================

125' Monopine / Lanton, TN


********************************************************************************
*************************  Service Load Condition  *****************************
********************************************************************************

* Only 1 condition(s) shown in full
```

LOADING CONDITION A ==========

60 mph wind with no ice. Wind Azimuth: 0° (1.0 D + 1.0 Wo)

LOADS ON POLE
=============

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	126.500	0.00	0.0	0.0	0.2793	0.2500	0.0000	0.0000
C	122.000	0.00	0.0	0.0	0.0032	0.0056	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.2770	0.2500	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.0000	1.4851	0.0000	0.0000
C	119.000	0.00	0.0	0.0	3.0669	6.0000	0.0000	0.0000
C	116.500	0.00	0.0	0.0	0.5492	0.5000	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0080	0.0140	0.0000	0.0000
C	111.500	0.00	0.0	0.0	0.5442	0.5000	0.0000	0.0000
C	106.500	0.00	0.0	0.0	0.5390	0.5000	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0078	0.0140	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.0000	1.2979	0.0000	0.0000
C	104.000	0.00	0.0	0.0	2.2311	6.0000	0.0000	0.0000
C	101.500	0.00	0.0	0.0	0.5336	0.5000	0.0000	0.0000
C	96.500	0.00	0.0	0.0	0.5280	0.5000	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0077	0.0140	0.0000	0.0000
C	91.500	0.00	0.0	0.0	0.5222	0.5000	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0000	1.1107	0.0000	0.0000
C	89.000	0.00	0.0	0.0	2.1598	6.0000	0.0000	0.0000
C	86.500	0.00	0.0	0.0	0.5161	0.5000	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0075	0.0140	0.0000	0.0000
C	81.500	0.00	0.0	0.0	0.5098	0.5000	0.0000	0.0000
C	76.500	0.00	0.0	0.0	0.5031	0.5000	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0073	0.0140	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0000	0.9235	0.0000	0.0000
C	74.000	0.00	0.0	0.0	2.0785	6.0000	0.0000	0.0000
C	71.500	0.00	0.0	0.0	0.5513	0.5000	0.0000	0.0000
C	66.500	0.00	0.0	0.0	0.5430	0.5000	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0071	0.0140	0.0000	0.0000
C	63.500	0.00	0.0	0.0	0.3227	0.3000	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0068	0.0140	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0066	0.0140	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0062	0.0140	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0058	0.0140	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0052	0.0140	0.0000	0.0000
D	124.000	0.00	180.0	0.0	0.0145	0.0653	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0168	0.0785	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0171	0.2005	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0171	0.2005	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0175	0.1246	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0204	0.1614	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0205	0.3867	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0205	0.3867	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0207	0.2271	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0194	0.2663	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0195	0.2741	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0201	0.2819	0.0000	0.0000

MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)

MAST ELEV ft	DEFLECTIONS (ft) HORIZONTAL ALONG	HORIZONTAL ACROSS	DOWN	ROTATIONS (deg) TILT ALONG	TILT ACROSS	TWIST
124.0	2.34L	0.02K	0.06L	1.85L	0.01K	0.00I
120.7	2.24L	0.02K	0.06L	1.85L	0.01K	0.00I
117.4	2.13L	0.02K	0.05L	1.85L	0.01K	0.00I
114.0	2.02L	0.01K	0.05L	1.84L	0.01K	0.00I
110.7	1.91L	0.01K	0.05L	1.82L	0.01K	0.00I
107.4	1.81L	0.01K	0.04L	1.80L	0.01K	0.00I
104.1	1.71L	0.01K	0.04L	1.77L	0.01K	0.00I
100.7	1.60L	0.01K	0.04L	1.74L	0.01K	0.00I
96.5	1.48L	0.01K	0.03L	1.70L	0.01K	0.00I
90.3	1.30L	0.01K	0.03L	1.63L	0.01K	0.00I
84.1	1.13L	0.01K	0.02L	1.55L	0.01K	0.00I
78.0	0.96L	0.01K	0.02L	1.45L	0.01K	0.00I
71.8	0.81L	0.01K	0.01L	1.34L	0.01K	0.00L
65.6	0.68L	0.00K	0.01L	1.22L	0.01K	0.00L
59.4	0.55L	0.00K	0.01L	1.09L	0.01K	0.00L
53.2	0.44L	0.00K	0.01L	0.95L	0.01K	0.00L
47.2	0.35L	0.00K	0.00L	0.85L	0.01K	0.00L
41.3	0.26L	0.00K	0.00L	0.74L	0.01K	0.00L
35.4	0.19L	0.00K	0.00L	0.63L	0.00K	0.00L
29.5	0.13L	0.00K	0.00L	0.53L	0.00K	0.00L
23.6	0.09L	0.00K	0.00I	0.42L	0.00K	0.00L
17.7	0.05L	0.00K	0.00I	0.31L	0.00K	0.00L
11.8	0.02L	0.00K	0.00I	0.21L	0.00K	0.00L
5.9	0.01L	0.00K	0.00I	0.10L	0.00K	0.00L
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)
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MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND.DIR ALONG kip	ACROSS kip	MOMENT.w.r.t.WIND.DIR ALONG ft-kip	ACROSS ft-kip	TORSION ft-kip
124.0						
	0.25 C	0.31 E	-0.01 K	-0.77 K	-0.03 K	0.00 K
	0.73 C	0.64 E	-0.01 K	-2.02 E	-0.04 E	0.00 E
120.7						
	0.73 B	0.67 L	0.08 L	-2.04 F	0.06 L	0.00 I
	8.45 B	3.79 L	0.08 L	-9.81 L	-0.21 L	0.01 L
117.4						
	8.45 B	3.78 L	-0.05 F	-9.77 A	-0.18 C	0.01 L
	9.20 B	4.39 L	-0.05 F	-24.65 L	-0.27 L	0.01 L
114.0						
	9.20 B	4.38 A	-0.08 F	-24.69 L	-0.32 L	0.01 L
	9.94 B	4.98 A	-0.08 F	-40.69 A	0.39 F	0.01 I
110.7						
	9.94 B	5.03 A	-0.04 E	-40.69 A	0.40 F	0.01 I
	10.19 B	5.08 A	-0.04 E	-58.49 A	0.53 F	0.02 I
107.4						
	10.19 B	5.08 L	-0.09 F	-58.52 A	0.50 F	0.02 I
	10.96 B	5.68 L	-0.09 F	-77.85 L	0.79 F	0.02 I
104.1						
	10.96 B	5.70 I	0.09 K	-77.76 A	0.78 F	0.02 I
	19.01 B	8.52 I	0.09 K	-106.21 L	1.09 F	0.02 I
100.7						
	19.01 B	8.49 L	0.11 K	-106.21 L	1.12 F	0.03 I
	19.86 B	8.57 L	0.11 K	-144.89 L	1.40 F	0.03 I
96.5						
	20.36 B	9.06 L	-0.10 L	-144.88 L	1.39 F	0.03 I
	21.66 B	9.70 L	-0.10 L	-205.56 L	-1.93 K	0.04 I
90.3						
	21.66 B	9.72 L	-0.11 L	-205.57 L	-1.92 K	0.04 I
	30.10 B	12.52 L	-0.11 L	-282.38 L	-2.57 K	0.05 I
84.1						
	30.10 B	12.53 K	-0.12 L	-282.37 L	-2.57 K	0.05 I
	31.46 B	13.16 K	-0.12 L	-366.77 L	-3.21 K	0.07 I
78.0						
	31.46 B	13.16 L	-0.11 L	-366.74 L	-3.20 K	0.07 I
	39.78 B	15.87 L	-0.11 L	-460.57 L	-3.79 K	0.08 I
71.8						
	39.78 B	15.87 L	-0.11 L	-460.56 L	-3.78 K	0.08 I
	41.69 B	17.08 L	-0.11 L	-568.24 L	-4.37 K	0.10 I

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  65.6   ...................................................................
          41.69 B     17.07 L      0.10 C   -568.25 L     -4.38 K      0.10 I

          42.95 B     17.52 L      0.10 C   -680.68 L     -5.04 K      0.11 I
  59.4   ...................................................................
          42.95 B     17.53 L      0.11 K   -680.66 L     -5.05 K      0.11 I

          43.95 B     17.66 L      0.11 K   -794.12 L     -5.72 K     -0.12 L
  53.2   ...................................................................
          43.95 B     17.67 I      0.11 K   -794.14 L     -5.72 K      0.12 I

          46.27 B     17.79 I      0.11 K   -904.68 L     -6.39 K     -0.12 L
  47.2   ...................................................................
          46.27 B     17.80 L      0.12 K   -904.65 L     -6.38 K     -0.12 L

          47.64 B     17.93 L      0.12 K  -1013.97 L     -7.09 K     -0.13 L
  41.3   ...................................................................
          47.64 B     17.92 L      0.11 K  -1013.95 L     -7.09 K     -0.13 L

          49.04 B     18.04 L      0.11 K  -1123.57 L     -7.74 K     -0.14 L
  35.4   ...................................................................
          49.04 B     18.05 L      0.12 K  -1123.58 L     -7.74 K     -0.14 L

          50.49 B     18.17 L      0.12 K  -1233.53 L     -8.43 K     -0.15 L
  29.5   ...................................................................
          50.49 B     18.18 L      0.12 K  -1233.54 L     -8.43 K     -0.15 L

          51.98 B     18.30 L      0.12 K  -1343.72 L     -9.14 K     -0.15 L
  23.6   ...................................................................
          51.98 B     18.30 L      0.12 K  -1343.72 L     -9.14 K     -0.15 L

          53.50 B     18.41 L      0.12 K  -1454.10 L     -9.83 K     -0.15 L
  17.7   ...................................................................
          53.50 B     18.41 L      0.12 K  -1454.10 L     -9.83 K     -0.15 L

          55.07 B     18.53 L      0.12 K  -1564.67 L    -10.53 K     -0.16 L
  11.8   ...................................................................
          55.07 B     18.54 L      0.12 K  -1564.67 L    -10.53 K     -0.16 L

          56.70 B     18.66 L      0.12 K  -1675.38 L    -11.24 K     -0.16 L
   5.9   ...................................................................
          56.70 B     18.66 L      0.12 K  -1675.38 L    -11.24 K     -0.16 L

          58.35 B     18.77 L      0.12 K  -1786.21 L    -11.95 K     -0.16 L
-------------------------------------------------------------------------------
 base
 reaction   58.35 B    -18.77 L     -0.12 K   1786.21 L     11.95 K      0.16 L
-------------------------------------------------------------------------------


 COMPLIANCE WITH 4.8.2 & 4.5.4
 =============================

   ELEV       AXIAL   BENDING SHEAR +       TOTAL SATISFIED  D/t(w/t)   MAX
                              TORSIONAL                                 ALLOWED
     ft

 124.00  ...................................................................
             0.00C     0.00K     0.00E     0.00K     YES      15.69A       45.2

             0.00C     0.00E     0.00E     0.00E     YES      16.27A       45.2
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120.68 ..........................................................................
          0.00B     0.00F     0.00L     0.00F     YES      16.27A       45.2

          0.01B     0.01L     0.01L     0.02L     YES      16.85A       45.2
117.36 ..........................................................................
          0.01B     0.01A     0.01L     0.02A     YES      16.85A       45.2

          0.01B     0.03L     0.01L     0.04L     YES      17.44A       45.2
114.04 ..........................................................................
          0.01B     0.03L     0.01A     0.04L     YES      17.44A       45.2

          0.01B     0.05A     0.01A     0.05A     YES      18.02A       45.2
110.71 ..........................................................................
          0.01B     0.05A     0.01A     0.05A     YES      18.02A       45.2

          0.01B     0.06A     0.01A     0.07A     YES      18.60A       45.2
107.39 ..........................................................................
          0.01B     0.06A     0.01L     0.07A     YES      18.60A       45.2

          0.01B     0.08L     0.01L     0.09L     YES      19.18A       45.2
104.07 ..........................................................................
          0.01B     0.08A     0.01I     0.09A     YES      19.18A       45.2

          0.01B     0.11L     0.01I     0.12L     YES      19.76A       45.2
100.75 ..........................................................................
          0.01B     0.07L     0.01L     0.08L     YES      13.06A       45.2

          0.01B     0.09L     0.01L     0.09L     YES      13.55A       45.2
 96.50 ..........................................................................
          0.01B     0.09L     0.01L     0.10L     YES      13.32A       45.2

          0.01B     0.11L     0.01L     0.12L     YES      14.04A       45.2
 90.32 ..........................................................................
          0.01B     0.11L     0.01L     0.12L     YES      14.04A       45.2

          0.01B     0.14L     0.01L     0.15L     YES      14.76A       45.2
 84.14 ..........................................................................
          0.01B     0.14L     0.01K     0.15L     YES      14.76A       45.2

          0.01B     0.17L     0.01K     0.18L     YES      15.48A       45.2
 77.96 ..........................................................................
          0.01B     0.17L     0.01L     0.18L     YES      15.48A       45.2

          0.01B     0.20L     0.01L     0.21L     YES      16.20A       45.2
 71.79 ..........................................................................
          0.01B     0.20L     0.01L     0.21L     YES      16.20A       45.2

          0.01B     0.22L     0.01L     0.24L     YES      16.92A       45.2
 65.61 ..........................................................................
          0.01B     0.22L     0.01L     0.24L     YES      16.92A       45.2

          0.01B     0.25L     0.01L     0.26L     YES      17.64A       45.2
 59.43 ..........................................................................
          0.01B     0.25L     0.01L     0.26L     YES      17.64A       45.2

          0.01B     0.27L     0.01L     0.29L     YES      18.36A       45.2
 53.25 ..........................................................................
          0.01B     0.20L     0.01I     0.21L     YES      13.68A       45.2

          0.01B     0.21L     0.01I     0.22L     YES      14.20A       45.2
 47.25 ..........................................................................
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```
           0.01B     0.22L     0.01L     0.23L     YES      13.94A       45.2

           0.01B     0.23L     0.01L     0.24L     YES      14.46A       45.2
 41.34  ..........................................................................
           0.01B     0.23L     0.01L     0.24L     YES      14.46A       45.2

           0.01B     0.24L     0.01L     0.25L     YES      14.97A       45.2
 35.44  ..........................................................................
           0.01B     0.24L     0.01L     0.25L     YES      14.97A       45.2

           0.01B     0.24L     0.01L     0.25L     YES      15.49A       45.2
 29.53  ..........................................................................
           0.01B     0.24L     0.01L     0.25L     YES      15.49A       45.2

           0.01B     0.25L     0.01L     0.26L     YES      16.01A       45.2
 23.62  ..........................................................................
           0.01B     0.25L     0.01L     0.26L     YES      16.01A       45.2

           0.01B     0.26L     0.01L     0.27L     YES      16.52A       45.2
 17.72  ..........................................................................
           0.01B     0.26L     0.01L     0.27L     YES      16.52A       45.2

           0.01B     0.26L     0.01L     0.27L     YES      17.04A       45.2
 11.81  ..........................................................................
           0.01B     0.26L     0.01L     0.27L     YES      17.04A       45.2

           0.01B     0.27L     0.01L     0.28L     YES      17.55A       45.2
  5.91  ..........................................................................
           0.01B     0.27L     0.01L     0.28L     YES      17.55A       45.2

           0.01B     0.27L     0.01L     0.28L     YES      18.07A       45.2
  0.00  ..........................................................................

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)
====================================================

    DOWN    SHEAR.w.r.t.WIND.DIR   MOMENT.w.r.t.WIND.DIR     TORSION
               ALONG      ACROSS       ALONG      ACROSS
     kip         kip         kip      ft-kip      ft-kip      ft-kip

   58.35       18.77        0.12    -1786.21      -11.95       -0.16
      B           L           K           L           K           L


================================================================================
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Seismic Load Effects
Equivalent Lateral Force Procedure
ANSI/TIA-222-H

Parameters	
Risk Category	II
R	1.500
S_S	0.294
S_1	0.143
Site Class	D (default)
T_L (sec)	12.000
F_a	1.565
F_v	2.314
S_{MS}	0.460
S_{M1}	0.331
S_{DS}	0.307
S_{D1}	0.221
T_s	0.720
I_e	1.000
Ω	1.500
C_S	0.056
E (ksi)	29,000
I_{top} (in^4)	1,346
I_{bot} (in^4)	29,906
I_{avg} (in^4)	15,626
g (in/s^2)	386.4
W_t (kips)	58.472
W_u (kips)	18.000
W_L (kips)	40.472
L_p (in)	1488
f_1 (Hertz)	0.383
T (sec)	2.612
k_e	2.0000
V_s (kips)	3.274
Seismic Design Category	D

Vertical Distribution of Seismic Forces

Description	h_i (ft.)	w_i (kips)	W_u (kips)	$w_i h_i^{ke}$	F_{sz} or E_h (kips)	E_V (kips)	1.2 D + 1.0 E_V (kips)	0.9 D - 1.0 E_V (kips)
Branches Load	126.50	0.2500	0.0000	4,000.5625	0.0317	0.0154	0.3154	0.2096
Step Bolts/Safety Climb Load	122.00	0.0056	0.0000	83.3504	0.0007	0.0003	0.0070	0.0047
Branches Load	121.50	0.2500	0.0000	3,690.5625	0.0293	0.0154	0.3154	0.2096
Antenna Load	119.00	6.0000	6.0000	84,966.0000	0.6735	0.3684	7.5684	5.0316
Line Deadload	119.00	1.4851	0.0000	21,030.5011	0.1667	0.0912	1.8733	1.2454
Branches Load	116.50	0.5000	0.0000	6,786.1250	0.0538	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	115.00	0.0140	0.0000	185.1500	0.0015	0.0009	0.0177	0.0117
Branches Load	111.50	0.5000	0.0000	6,216.1250	0.0493	0.0307	0.6307	0.4193
Structure - Section 1	110.25	2.0116	0.0000	24,451.1237	0.1938	0.1235	2.5374	1.6869
Branches Load	106.50	0.5000	0.0000	5,671.1250	0.0450	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	105.00	0.0140	0.0000	154.3500	0.0012	0.0009	0.0177	0.0117
Antenna Load	104.00	6.0000	6.0000	64,896.0000	0.5144	0.3684	7.5684	5.0316
Line Deadload	104.00	1.2979	0.0000	14,038.0864	0.1113	0.0797	1.6372	1.0884
Branches Load	101.50	0.5000	0.0000	5,151.1250	0.0408	0.0307	0.6307	0.4193
Branches Load	96.50	0.5000	0.0000	4,656.1250	0.0369	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	95.00	0.0140	0.0000	126.3500	0.0010	0.0009	0.0177	0.0117
Branches Load	91.50	0.5000	0.0000	4,186.1250	0.0332	0.0307	0.6307	0.4193
Antenna Load	89.00	6.0000	6.0000	47,526.0000	0.3767	0.3684	7.5684	5.0316
Line Deadload	89.00	1.1107	0.0000	8,797.8547	0.0697	0.0682	1.4010	0.9314
Branches Load	86.50	0.5000	0.0000	3,741.1250	0.0297	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	85.00	0.0140	0.0000	101.1500	0.0008	0.0009	0.0177	0.0117
Branches Load	81.50	0.5000	0.0000	3,321.1250	0.0263	0.0307	0.6307	0.4193
Branches Load	76.50	0.5000	0.0000	2,926.1250	0.0232	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	75.00	0.0140	0.0000	78.7500	0.0006	0.0009	0.0177	0.0117
Antenna Load	74.00	6.0000	0.0000	32,856.0000	0.2604	0.3684	7.5684	5.0316
Line Deadload	74.00	0.9235	0.0000	5,057.0860	0.0401	0.0567	1.1649	0.7745
Structure - Section 2	74.00	7.6770	0.0000	42,039.2520	0.3332	0.4714	9.6838	6.4379
Branches Load	71.50	0.5000	0.0000	2,556.1250	0.0203	0.0307	0.6307	0.4193
Branches Load	66.50	0.5000	0.0000	2,211.1250	0.0175	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	65.00	0.0140	0.0000	59.1500	0.0005	0.0009	0.0177	0.0117
Branches Load	63.50	0.5000	0.0000	2,016.1250	0.0160	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	55.00	0.0140	0.0000	42.3500	0.0003	0.0009	0.0177	0.0117
Step Bolts/Safety Climb Load	45.00	0.0140	0.0000	28.3500	0.0002	0.0009	0.0177	0.0117
Step Bolts/Safety Climb Load	35.00	0.0140	0.0000	17.1500	0.0001	0.0009	0.0177	0.0117
Structure - Section 3	26.62	13.3062	0.0000	9,429.0980	0.0747	0.8170	16.7844	11.1586
Step Bolts/Safety Climb Load	25.00	0.0140	0.0000	8.7500	0.0001	0.0009	0.0177	0.0117
Step Bolts/Safety Climb Load	15.00	0.0140	0.0000	3.1500	0.0000	0.0009	0.0177	0.0117

Seismic Load Effects
Equivalent Lateral Force Procedure
ANSI/TIA-222-H

Vertical Distribution of Seismic Forces

Description	h_i (ft.)	w_i (kips)	W_u (kips)	$w_i h_i^{ke}$	F_{sz} or E_h (kips)	E_V (kips)	1.2 D + 1.0 E_V (kips)	0.9 D - 1.0 E_V (kips)
	Σ	58.47	18.0000	413,104.63	3.27	3.59	73.76	49.03

Sabre Industries™
INNOVATION DELIVERED

SO#: 25-4001-JDS
Site Name: Lanton, TN
Date: 3/10/2025

Round Base Plate and Anchor Rods, per ANSI/TIA 222-H

Pole Data

Diameter:	53.490	in (flat to flat)
Thickness:	0.5	in
Yield (Fy):	65	ksi
# of Sides:	18	"0" IF Round
Strength (Fu):	80	ksi

Reactions

Moment, Mu:	6121.83	ft-kips
Axial, Pu:	70.22	kips
Shear, Vu:	64.1	kips

Anchor Rod Data

Quantity:	22		
Diameter:	2.25	in	
Rod Material:	A615		
Strength (Fu):	100	ksi	
Yield (Fy):	75	ksi	
BC Diam. (in):	60.5	BC Override:	

Anchor Rod Results

(per 4.9.9)

Maximum Put:	218.38	Kips
Φt*Rnt:	243.75	Kips
Vu:	2.91	Kips
Φv*Rnv:	149.10	Kips
Tension Interaction Ratio:	0.80	
Maximum Puc:	223.96	Kips
Φc*Rnc:	268.39	Kips
Vu:	2.91	Kips
Φc*Rnvc:	120.77	Kips
Compression Interaction Ratio:	0.84	
Maximum Interaction Ratio:	**83.5%**	**Pass**

Plate Data

Diameter (in):	66.25	Dia. Override:	
Thickness:	2.5	in	
Yield (Fy):	50	ksi	
Eff Width/Rod:	7.72	in	
Drain Hole:	2.625	in. diameter	
Drain Location:	24.5	in. center of pole to center of drain hole	
Center Hole:	41	in. diameter	

Base Plate Results

Base Plate (Mu/Z):	40.0	ksi
Allowable Φ*Fy:	45.0	ksi (per AISC)
Base Plate Interaction Ratio:	**88.8%**	**Pass**

```
================================================================================

                     LPile for Windows, Version 2019-11.009

                  Analysis of Individual Piles and Drilled Shafts
                 Subjected to Lateral Loading Using the p-y Method
                            © 1985-2019 by Ensoft, Inc.
                                All Rights Reserved

================================================================================

This copy of LPile is being used by:

Amy R. Herbst
Sabre Industries

Serial Number of Security Device: 227886682

This copy of LPile is licensed for exclusive use by:

Sabre Communications Corporation

Use of this program by any entity other than Sabre Communications Corporation
is a violation of the software license agreement.

--------------------------------------------------------------------------------
                             Files Used for Analysis
--------------------------------------------------------------------------------

Path to file locations:
\Program Files (x86)\Ensoft\Lpile2019\files\

Name of input data file:
25-4001-JDS.lp11d

Name of output report file:
25-4001-JDS.lp11o

Name of plot output file:
25-4001-JDS.lp11p

Name of runtime message file:
25-4001-JDS.lp11r



--------------------------------------------------------------------------------
                           Date and Time of Analysis
--------------------------------------------------------------------------------

               Date:  March 10, 2025             Time:  13:00:04



--------------------------------------------------------------------------------
                                  Problem Title
--------------------------------------------------------------------------------

Site         : Lanton, TN
```

Tower : 125' Monopine

Prepared for : VOGUE TOWERS

Job Number : 25-4001-JDS

Engineer : ARH

Program Options and Settings

Computational Options:
- Conventional Analysis

Engineering Units Used for Data Input and Computations:
- US Customary System Units (pounds, feet, inches)

Analysis Control Options:

- Maximum number of iterations allowed	=	999
- Deflection tolerance for convergence	=	1.0000E-05 in
- Maximum allowable deflection	=	100.0000 in
- Number of pile increments	=	100

Loading Type and Number of Cycles of Loading:
- Static loading specified

- Use of p-y modification factors for p-y curves not selected
- Analysis uses layering correction (Method of Georgiadis)
- No distributed lateral loads are entered
- Loading by lateral soil movements acting on pile not selected
- Input of shear resistance at the pile tip not selected
- Input of moment resistance at the pile tip not selected
- Input of side resistance moment along pile not selected
- Computation of pile-head foundation stiffness matrix not selected
- Push-over analysis of pile not selected
- Buckling analysis of pile not selected

Output Options:
- Output files use decimal points to denote decimal symbols.
- Report only summary tables of pile-head deflection, maximum bending moment, and maximum shear force in output report file.
- No p-y curves to be computed and reported for user-specified depths
- Print using wide report formats

Pile Structural Properties and Geometry

Number of pile sections defined	=	1
Total length of pile	=	38.500 ft
Depth of ground surface below top of pile	=	0.5000 ft

Pile diameters used for p-y curve computations are defined using 2 points.

p-y curves are computed using pile diameter values interpolated with depth over the length of the pile. A summary of values of pile diameter vs. depth follows.

Point No.	Depth Below Pile Head feet	Pile Diameter inches
1	0.000	84.0000
2	38.500	84.0000

Input Structural Properties for Pile Sections:

Pile Section No. 1:

Section 1 is a round drilled shaft, bored pile, or CIDH pile
Length of section = 38.500000 ft
Shaft Diameter = 84.000000 in
Shear capacity of section = 0.0000 lbs

Ground Slope and Pile Batter Angles

Ground Slope Angle = 0.000 degrees
= 0.000 radians

Pile Batter Angle = 0.000 degrees
= 0.000 radians

Soil and Rock Layering Information

The soil profile is modelled using 1 layers

Layer 1 is stiff clay without free water

Distance from top of pile to top of layer = 0.500000 ft
Distance from top of pile to bottom of layer = 60.500000 ft
Effective unit weight at top of layer = 110.000000 pcf
Effective unit weight at bottom of layer = 110.000000 pcf
Undrained cohesion at top of layer = 1000.000000 psf
Undrained cohesion at bottom of layer = 1000.000000 psf
Epsilon-50 at top of layer = 0.010000
Epsilon-50 at bottom of layer = 0.010000

(Depth of the lowest soil layer extends 22.000 ft below the pile tip)

Summary of Input Soil Properties

Layer Num.	Soil Type Name (p-y Curve Type)	Layer Depth ft	Effective Unit Wt. pcf	Cohesion psf	E50 or krm
1	Stiff Clay w/o Free Water	0.5000 60.5000	110.0000 110.0000	1000.0000 1000.0000	0.01000 0.01000

Static Loading Type

Static loading criteria were used when computing p-y curves for all analyses.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 2

Load Run No.	Load Analysis Type	Condition 1		Condition 2		Axial Thrust Force, lbs	Compute Top y vs. Pile Length
1	1	V = 85896. lbs	M =	98441487. in-lbs		94097.	No
Yes							
2	1	V = 18864. lbs	M =	21542231. in-lbs		58643.	No
Yes							

V = shear force applied normal to pile axis
M = bending moment applied to pile head
y = lateral deflection normal to pile axis
S = pile slope relative to original pile batter angle
R = rotational stiffness applied to pile head
Values of top y vs. pile lengths can be computed only for load types with
specified shear loading (Load Types 1, 2, and 3).
Thrust force is assumed to be acting axially for all pile batter angles.

Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness

---

Axial thrust force values were determined from pile-head loading conditions

Number of Pile Sections Analyzed = 1

Pile Section No. 1:

Dimensions and Properties of Drilled Shaft (Bored Pile):

Length of Section = 38.500000 ft

Shaft Diameter	=	84.000000	in
Concrete Cover Thickness (to edge of long. rebar)	=	3.625000	in
Number of Reinforcing Bars	=	38	bars
Yield Stress of Reinforcing Bars	=	60000.	psi
Modulus of Elasticity of Reinforcing Bars	=	29000000.	psi
Gross Area of Shaft	=	5542.	sq. in.
Total Area of Reinforcing Steel	=	48.137211	sq. in.
Area Ratio of Steel Reinforcement	=	0.87	percent
Edge-to-Edge Bar Spacing	=	4.963089	in
Maximum Concrete Aggregate Size	=	0.750000	in
Ratio of Bar Spacing to Aggregate Size	=	6.62	
Offset of Center of Rebar Cage from Center of Pile	=	0.0000	in

Axial Structural Capacities:

Nom. Axial Structural Capacity = 0.85 Fc Ac + Fy As	=	23901.376	kips
Tensile Load for Cracking of Concrete	=	-2579.712	kips
Nominal Axial Tensile Capacity	=	-2888.233	kips

Reinforcing Bar Dimensions and Positions Used in Computations:

Bar Number	Bar Diam. inches	Bar Area sq. in.	X inches	Y inches
1	1.270000	1.266769	37.740000	0.00000
2	1.270000	1.266769	37.225276	6.211800
3	1.270000	1.266769	35.695143	12.254158
4	1.270000	1.266769	33.191339	17.962255
5	1.270000	1.266769	29.782163	23.180388
6	1.270000	1.266769	25.560607	27.766220
7	1.270000	1.266769	20.641823	31.594663
8	1.270000	1.266769	15.159985	34.561285
9	1.270000	1.266769	9.264622	36.585166
10	1.270000	1.266769	3.116544	37.611099
11	1.270000	1.266769	-3.116544	37.611099
12	1.270000	1.266769	-9.264622	36.585166
13	1.270000	1.266769	-15.159985	34.561285
14	1.270000	1.266769	-20.641823	31.594663
15	1.270000	1.266769	-25.560607	27.766220
16	1.270000	1.266769	-29.782163	23.180388
17	1.270000	1.266769	-33.191339	17.962255
18	1.270000	1.266769	-35.695143	12.254158
19	1.270000	1.266769	-37.225276	6.211800
20	1.270000	1.266769	-37.740000	0.00000
21	1.270000	1.266769	-37.225276	-6.211800
22	1.270000	1.266769	-35.695143	-12.254158
23	1.270000	1.266769	-33.191339	-17.962255
24	1.270000	1.266769	-29.782163	-23.180388
25	1.270000	1.266769	-25.560607	-27.766220
26	1.270000	1.266769	-20.641823	-31.594663
27	1.270000	1.266769	-15.159985	-34.561285
28	1.270000	1.266769	-9.264622	-36.585166
29	1.270000	1.266769	-3.116544	-37.611099
30	1.270000	1.266769	3.116544	-37.611099
31	1.270000	1.266769	9.264622	-36.585166
32	1.270000	1.266769	15.159985	-34.561285
33	1.270000	1.266769	20.641823	-31.594663
34	1.270000	1.266769	25.560607	-27.766220
35	1.270000	1.266769	29.782163	-23.180388

36	1.270000	1.266769	33.191339	-17.962255
37	1.270000	1.266769	35.695143	-12.254158
38	1.270000	1.266769	37.225276	-6.211800

NOTE: The positions of the above rebars were computed by LPile

Minimum spacing between any two bars not equal to zero = 4.963 inches
between bars 32 and 33.

Ratio of bar spacing to maximum aggregate size = 6.62

Concrete Properties:

Compressive Strength of Concrete	=	4500. psi
Modulus of Elasticity of Concrete	=	3823676. psi
Modulus of Rupture of Concrete	=	-503.115295 psi
Compression Strain at Peak Stress	=	0.002001
Tensile Strain at Fracture of Concrete	=	-0.0001152
Maximum Coarse Aggregate Size	=	0.750000 in

Number of Axial Thrust Force Values Determined from Pile-head Loadings = 2

Number	Axial Thrust Force kips
1	58.643
2	94.097

Summary of Results for Nominal Moment Capacity for Section 1

Moment values interpolated at maximum compressive strain = 0.003
or maximum developed moment if pile fails at smaller strains.

Load No.	Axial Thrust kips	Nominal Mom. Cap. in-kip	Max. Comp. Strain
1	58.643	102713.680	0.00300000
2	94.097	103791.767	0.00300000

Note that the values of moment capacity in the table above are not
factored by a strength reduction factor (phi-factor).

In ACI 318, the value of the strength reduction factor depends on whether
the transverse reinforcing steel bars are tied hoops (0.65) or spirals (0.75).

The above values should be multiplied by the appropriate strength reduction
factor to compute ultimate moment capacity according to ACI 318,
or the value required by the design standard being followed.

The following table presents factored moment capacities and corresponding
bending stiffnesses computed for common resistance factor values used for
reinforced concrete sections.

Axial Resist. Nominal Nominal Ult. (Fac) Ult. (Fac) Bend. Stiff.

Load No.	Factor	Ax. Thrust kips	Moment Cap in-kips	Ax. Thrust kips	Moment Cap in-kips	at Ult Mom kip-in^2
1	0.65	58.643216	102714.	38.118090	66764.	2.0885E+09
2	0.65	94.097152	103792.	61.163149	67465.	2.1128E+09
1	0.75	58.643216	102714.	43.982412	77035.	2.0129E+09
2	0.75	94.097152	103792.	70.572864	77844.	2.0370E+09
1	0.90	58.643216	102714.	52.778894	92442.	1.3401E+09
2	0.90	94.097152	103792.	84.687437	93413.	1.3583E+09

Summary of Pile-head Responses for Conventional Analyses

Definitions of Pile-head Loading Conditions:

Load Type 1: Load 1 = Shear, V, lbs, and Load 2 = Moment, M, in-lbs
Load Type 2: Load 1 = Shear, V, lbs, and Load 2 = Slope, S, radians
Load Type 3: Load 1 = Shear, V, lbs, and Load 2 = Rot. Stiffness, R, in-lbs/rad.
Load Type 4: Load 1 = Top Deflection, y, inches, and Load 2 = Moment, M, in-lbs
Load Type 5: Load 1 = Top Deflection, y, inches, and Load 2 = Slope, S, radians

Load Case No.	Load Type 1	Pile-head Load 1	Load Type 2	Pile-head Load 2	Axial Loading lbs	Pile-head Deflection inches	Pile-head Rotation radians	Max Shear in Pile lbs	Max Moment in Pile in-lbs
1	V, lb	85896.	M, in-lb	9.84E+07	94097.	19.6421	-0.08174	-482018.	1.02E+08
2	V, lb	18864.	M, in-lb	2.15E+07	58643.	0.08257	-5.44E-04	-97887.	2.21E+07

Maximum pile-head deflection = 19.6420646061 inches
Maximum pile-head rotation = -0.0817445446 radians = -4.683617 deg.

The analysis ended normally.

IBC 1807.3.2.1

Moment (ft·k)	6,152.59	
Shear (k)	64.42	
Caisson diameter (ft)	7	
Caisson height above ground (ft)	0.5	
Caisson height below ground (ft)	31	
Lateral soil pressure (lb/ft^2)	**300.00**	
Ground to application of force, h (ft)	96.00	
Applied lateral force, P (lb)	64,422	
Lateral soil bearing pressure, S_1 (lb/ft)	3,100.00	
Diameter, b (ft)	7	
A	6.95	$= (2.34P)/(S_1 b)$
Minimum depth of embedment, d (ft)	30.66	$= 0.5A[\ 1 + (\ 1 + (\ 4.36h\ /\ A\ )\ )^{1/2}\ ]$

MAT FOUNDATION DESIGN BY SABRE INDUSTRIES

125' Monopine VOGUE TOWERS Lanton, TN (25-4001-JDS) 03/10/25 ARH

Overall Loads:			
Factored Moment (ft-kips)	6152.59		
Factored Axial (kips)	70.57		
Factored Shear (kips)	64.42		
Bearing Design Strength (ksf)	3.75	Max. Net Bearing Press. (ksf)	3.52
Water Table Below Grade (ft)	999		
Width of Mat (ft)	28.5	Allowable Bearing Pressure (ksf)	2.50
Thickness of Mat (ft)	2	Safety Factor	2.00
Depth to Bottom of Slab (ft)	6	Ultimate Bearing Pressure (ksf)	5.00
Quantity of Bolts in Bolt Circle	22	Bearing Φs	0.75
Bolt Circle Diameter (in)	60.5		
Effective Anchor Bolt Embedment (in)	66.5		
Diameter of Pier (ft)	7	Minimum Pier Diameter (ft)	7.00
Ht. of Pier Above Ground (ft)	0.5	Equivalent Square b (ft)	6.20
Ht. of Pier Below Ground (ft)	4	Square Pier? (Y/N)	N
Quantity of Bars in Mat	41		
Bar Diameter in Mat (in)	1.27		
Area of Bars in Mat (in^2)	51.94		
Spacing of Bars in Mat (in)	8.37	Recommended Spacing (in)	5 to 12
Quantity of Bars Pier	42		
Bar Diameter in Pier (in)	1.128		
Tie Bar Diameter in Pier (in)	0.625		
Spacing of Ties (in)	4		
Area of Bars in Pier (in^2)	41.97	Minimum Pier A_s (in^2)	27.71
Spacing of Bars in Pier (in)	5.66	Recommended Spacing (in)	5 to 12
f'c (ksi)	4.5		
fy (ksi)	60		
Unit Wt. of Soil (kcf)	0.11		
Unit Wt. of Concrete (kcf)	0.15		
Volume of Concrete (yd^3)	66.58		
Two-Way Shear Action:			
Average d (in)	19.73		
ϕv_c (ksi)	0.201	v_u (ksi)	0.141
$\phi v_c = \phi(2 + 4/\beta_c)f'_c{}^{1/2}$	0.302		
$\phi v_c = \phi(\alpha_s d/b_o+2)f'_c{}^{1/2}$	0.206	J (in^3)	1.111E+07
$\phi v_c = \phi 4f'_c{}^{1/2}$	0.201	c + d (in)	94.17
Shear perimeter, b_o (in)	376.69	$0.40M_{sc}$ (ft-kips)	2577.0
β_c	1		
One-Way Shear:			
ϕV_c (kips)	679.0	V_u (kips)	418.8
Stability:			
Overturning Design Strength (ft-k)	8578.9	Total Applied M (ft-k)	6571.3

Pier-Slab Transfer by Flexure:

b_{slab} (ft)	13.00		
ϕM_n (ft-kips)	3952.8	$0.60M_{sc}$ (ft-kips)	3865.5

Pier Design:

ϕV_n (kips)	1035.5	V_u (kips)	64.4
$\phi V_c=\phi 2(1+N_u/(2000A_g))f'_c{}^{1/2}b_wd$	571.6		
V_s (kips)	618.5	*** V_s max = 4 $f'_c{}^{1/2}b_wd$ (kips)	1514.7
Maximum Spacing (in)	8.71	(Only if Shear Ties are Required)	
Actual Hook Development (in)	18.46	Req'd Hook Development l_{dh} (in) - Tension	14.12
		Req'd Hook Development l_{dc} (in) - Compression	15.23

Flexure in Slab:

ϕM_n (ft-kips)	4332.9	M_u (ft-kips)	3295.8
a (in)	2.38		
Steel Ratio	0.00770		
β_1	0.825		
Maximum Steel Ratio (ρ_t)	0.0197		
Minimum Steel Ratio	0.0018		
Rebar Development in Pad (in)	126.00	Required Development in Pad (in)	34.08

Condition	1 is OK, 0 Fails
Maximum Soil Bearing Pressure	1
Pier Area of Steel	1
Pier Shear	1
Interaction Diagram	1
Two-Way Shear Action	1
One-Way Shear Action	1
Overturning	1
Flexure	1
Steel Ratio	1
Length of Development in Pad	1
Hook Development	1
Anchor Bolt Pullout	1
Anchor Bolt Punching Shear	1

BK/PG:R3041/488-494
25000439

7 PGS : LEASE	
BECKY BUCHANAN 343406 - 25000439	
01/13/2025 - 08:58 AM	
VALUE	
MORTGAGE TAX	0.00
TRANSFER TAX	0.00
RECORDING FEE	35.00
DP FEE	2.00
REGISTER'S FEE	0.00
TOTAL AMOUNT	37.00

STATE of TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

(Above 3" Space for Recorder's Use Only)

Prepared by and Return to:

Vogue Towers II, LLC
430 Chestnut Street, Suite 101-B
Chattanooga, TN 37402
ATTN: Pat Troxell-Tant

Tenant Site Reference: TN-50001
Parcel Reference: 060051007010002023

MEMORANDUM OF OPTION TO LEASE

This Memorandum of Option to Lease (the "**Memorandum**") evidences an Option and Lease Agreement (the "**Lease**") between **Christ Our Savior Evangelical Lutheran Church a/k/a Christ Our Savior Lutheran Church** ("**Landlord**"), whose address is 2494 Nashville Highway, Columbia, TN 38401 (the "**Landlord**"), and **Vogue Towers II, LLC**, a Delaware limited liability company, whose mailing address is 1000 Corporate Centre Drive, Suite 130, Franklin, TN 37067 (the "**Tenant**"), dated the 20 day of July, 2024 (the "**Effective Date**"), for a portion (the "**Premises**") of the real property (the "**Property**") described in Exhibit A attached hereto.

Pursuant to the Lease, Landlord has granted Tenant an exclusive option to lease the Premises (the "**Option**"). The Option commenced as of the Effective Date and shall continue in effect for a period of one (1) year from the Effective Date and may be renewed by Tenant for an additional one (1) year period.

Landlord ratifies, restates, and confirms the Lease and, upon exercise of the Option, shall lease to Tenant the Premises, subject to the terms and conditions of the Lease. The Lease provides for the lease by Landlord to Tenant of the Premises for an initial term of five (5) years with seven (7) renewal option(s) of an additional five (5) years each, and further provides:

1. The Lease may be assigned by Landlord only in its entirety and only to a purchaser of the fee interest of the Property;

2. Under certain circumstances, Tenant has a right of first refusal to acquire the Premises from Landlord;

3. This Memorandum is not intended to amend or modify and shall not be deemed or construed as amending or modifying, any of the terms, conditions, or provisions of the Lease. In the event of a conflict between the provisions of this Memorandum and the provisions of the Lease, the provisions

of the Lease shall control. The Lease shall be binding upon and inure to the benefit of Landlord and Tenant and shall inure to the benefit of their respective heirs, successors, and assigns, subject to the provisions of the Lease.

[Signatures to follow]

IN WITNESS WHEREOF, the parties hereto have executed this MEMORANDUM OF OPTION TO LEASE as of the date last signed by a party hereto.

LANDLORD:

Christ Our Savior Evangelical Lutheran Church
a/k/a Christ Our Savior Lutheran Church

By: John P Fowler

Name: John P. Fowler

STATE OF TENNESSEE
COUNTY OF _____

I, John K. Dale, a Notary Public of Maury County, Tennessee, certify that John P. Fowler personally came before me this day and acknowledged that he/she is the President of **Christ Our Savior Evangelical Lutheran Church a/k/a Christ Our Savior Lutheran Church**, a Tennessee Nonprofit Corporation, and that he/she, as said President, being authorized to do so, executed the foregoing instrument on behalf of said Nonprofit Corporation.

WITNESS my hand and official seal this 21st day of July, 2024.

John K. Dale
Notary Public

My Commission Expires:
10/19/2027

JOHN K. DALE
STATE OF TENNESSEE NOTARY PUBLIC
MAURY COUNTY

[Tenant's Signature Page to Memorandum of Option to Lease]

TENANT:

VOGUE TOWERS II, LLC

By: Pat Troxell-Tant
Name: Pat Troxell-Tant
Title: President of Development

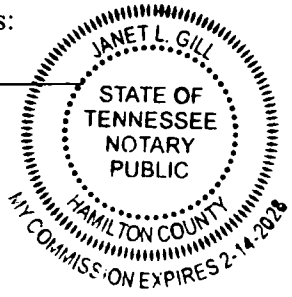
STATE OF TENNESSEE
COUNTY OF HAMILTON

I, Janet L. Gill, a Notary Public of Hamilton County, Tennessee, certify that **PAT TROXELL-TANT**, personally came before me this day and acknowledged that she is the **PRESIDENT OF DEVELOPMENT** of **VOGUE TOWERS II, LLC**, a Delaware limited liability company, and that she, as such **PRESIDENT OF DEVELOPMENT**, being authorized to do so, executed the foregoing instrument on behalf of said limited liability company.

Witness my hand and official seal this 24 day of July, 2024.

Janet L. Gill
Notary Public

My Commission Expires:
2-14-28



By:_____
Name: Scott Riggs
Title: Chief Operating Officer

STATE OF TENNESSEE
COUNTY OF WILLIAMSON

I, _____, a Notary Public of Williamson County, Tennessee, certify that **SCOTT RIGGS** personally came before me this day and acknowledged that he is the **CHIEF OPERATING OFFICER** of **VOGUE TOWERS II, LLC**, a Delaware limited liability company, and that he, as said **CHIEF OPERATING OFFICER,** being authorized to do so, executed the foregoing instrument on behalf of said limited liability company.

Witness my hand and official seal this 26th day of July, 2024.

_____
Notary Public

My Commission Expires:
9/28/26

RUTH DUGGAR
STATE OF TENNESSEE NOTARY PUBLIC
WILLIAMSON COUNTY
MY COMMISSION EXPIRES 9-28-2026

EXHIBIT A
(TO MEMORANDUM OF OPTION TO LEASE)

The Property

Being a Tract of land located in Maury County, Tennessee, and being bounded on the West by U.S. Highway 31, North and East by Edward P. Foster as of record in Deed Book 643, page 570 and South by William Hunt, Trustee as of record in Deed Book 851, page 76 and 851, page 84, from whose property this tract is taken and being more particularly described as follows:

Beginning at an iron rod in the East margin of U.S. Highway 31, the southwest corner of the herein described tract; thence with margin of said road along a curve to the left having a radius of 10817.75 feet for a distance of 200.00 feet (chord North 27degrees 51 minutes 36 seconds East 200.00 feet) to an iron rod; thence leaving said highway with Edward P. Foster as of record in Deed Book 643, Page 570 South 82 degrees 53 minutes 57 seconds East 703.08 feet to an iron rod; thence with same South 7 degrees 12 minutes 24 seconds West 218.23 feet to an iron rod; thence with same South 34 degrees 37 minutes 37 seconds East 243.00 feet to an iron rod; thence with William Hunt, Trustee as of record in Deed Book 851, page 76 and 851, page 84 from whose property this tract is taken North 70 degrees 05 minutes 41 seconds West 959.16 feet to the beginning containing 5.00 acres more or less by survey of W.A. Richardson, Jr., (RLS #689), 403 Oakwood Drive, Columbia, TN 38401, January 18, 1993.

Less and except Deed recorded in Book R2072, Page 1244, in the Register's Office for Maury County, Tennessee.

Being the same property conveyed to Christ Our Savior Evangelical Luthern Church by Warranty Deed from William L. Hunt, Trustee for the Edgar J. Doyle Trust and the Lester Hill Doyle Trust of record in Book 1174, page 310, Register's Office for Maury County, Tennessee, dated March 01, 1993 and recorded on March 02, 1993, Correction Deed recorded in Book 1195, Page 444, said Register's Office.

CERTIFICATE OF AUTHENTICITY

I, Kirby W. Yost, do hereby make oath that I am a licensed attorney and/or the custodian of the original version of the electronic document tendered for registration herewith and that this electronic document is a true and exact copy of the original document executed and authenticated according to law on July 26, 2024 *(date of document)*.

Kirby W. Yost, Affiant Signature
Dated: January 8, 2025

STATE OF TENNESSEE
COUNTY OF HAMILTON

Sworn and subscribed before me this 8th day of January, 2025

Rebecca Lynn Stone, Notary Signature

My Commission Expires: 01/17/2027

REBECCA LYNN STONE
STATE OF TENNESSEE NOTARY PUBLIC
HAMILTON COUNTY

BEAR
SERVICES GROUP

April 21, 2025

Mr. Charles Rush
Principal Planner, City of Columbia, TN
700 N Garden Street
Columbia, TN 38401

Re: 2494 Nashville Hwy; Item #25-0083; Development Review Committee Meeting Comments Received 4/11/2025

Dear Mr. Rush;

On behalf of Vogue Towers II, LLC ("Vogue Towers") and Cellco Partnership, d/b/a Verizon Wireless ("Verizon"), together "Applicant", this letter is in response to comments from the April 8th Design Review Committee Meeting, comments received April 11th, regarding item #25-0083. Below are response comments to the departmental review comments as provided.

COMMENTS:

Planning

1. The lead staff person for this case is Charles Rush, Principal Planner. Please contact crush@columbiatn.gov with questions about the development review process or technical comments. The case planner should be copied on all communication with other city staff. Understood.
2. At resubmittal, please provide a response letter addressing each comment along with any revised plans. If the nature of the comment does not warrant a response, or the comment was previously addressed, please simply note that the information has been acknowledged. Any documents or additional information that you want to present to the Planning Commission should be included in your resubmittal. Acknowledged. Does original material need to be resubmitted as well, or just revisions & responses?
3. The proposed tower has to be located in the 3rd layer. Current it is proposed to be located in the 1st which is not permitted. To achieve 3rd layer, located building site behind frontage (Dollar General side). This is classified as secondary frontage, see layer definitions in article 9 of Zoning Ordinance for better understanding. As shown in the attached, layering will be achieved. The primary layer will be off Nashville Highway. Grove Park Way will be the second layer, entering third layer past the frontage along Grove Park.
4. NEPA (National Environmental Policy Act) will be a condition of approval. Understood.
5. Need a complete application. Please check everything that relates to the PUD application requirements. See revised application attached.
6. A rendering can give a false vision of the proposed tower and what it will look like in the environment. Pictures of monopines already constructed will be helpful to the PC. Photos of monopine examples submitted 4/9.

Engineering

7. Access easement shall have a provision allowing adjustment in the future to accommodate modification. Note added to sheet Z-101.

Fire

8. No comments

Maury County Schools

9. No Comment.

Columbia Power

10. Columbia Power System has an existing power line near your proposed development. We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction.
    Unfortunately, due to current supply chain challenges, no timeframe can be guaranteed regarding the availability of meters or transformers appropriate for your development. Understood, Applicant's engineering firm will be contacting you soon to request utility walk & design.

Columbia Water

11. No comments, no water impact.

Duck River Electric Membership Corp

12. No comments.

Maury County Highway Dept.

13. No comment.

ATT

14. No comment.

Maury County E911

15. No comments provided.

Atmos Energy

16. No comments provided.

City Attorney

17. No comment provided.

BEAR
SERVICES GROUP

Public Works

18. No comment.

Police

19. No comment provided.

Building

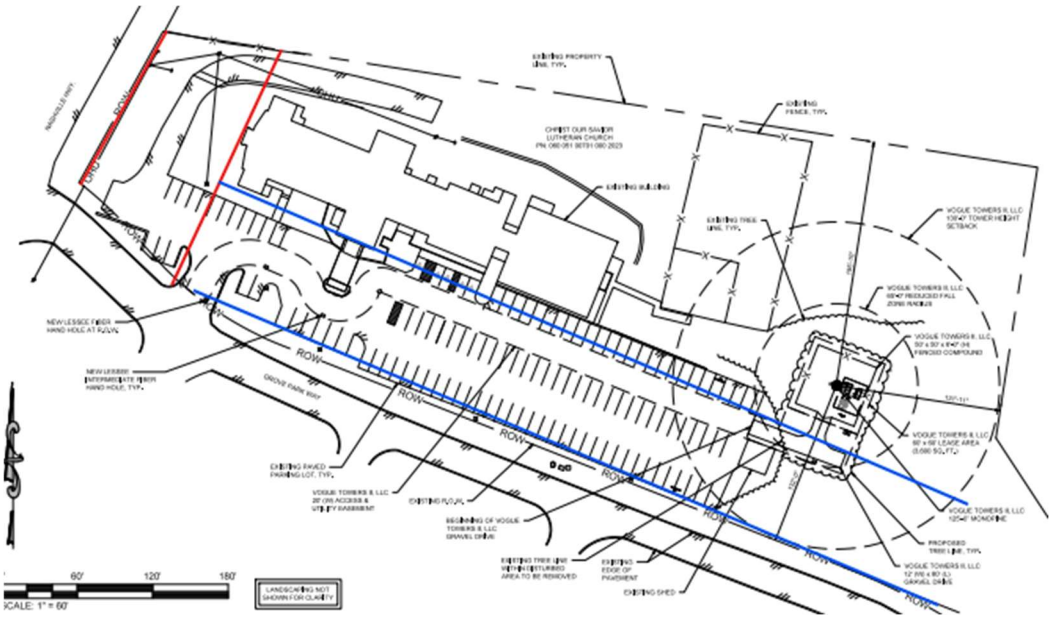
20. No comment.

Please let us know of additional questions or comments.

Respectfully Submitted,



Michael A. Sandifer
On behalf of Vogue Tower II, LLC


existing PROPERTY LINE, TYP.
existing FENCE, TYP.
CHRIST OUR SAVIOR LUTHERAN CHURCH
existing building
existing TREE LINE, TYP.
VOGUE TOWERS II, LLC 199'-0" TOWER HEIGHT SETBACK
VOGUE TOWERS II, LLC 199'-0" REDUCED FALL ZONE RADIUS
VOGUE TOWERS II, LLC 50' x 50' x 6'-0" FENCED COMPOUND
VOGUE TOWERS II, LLC 60' x 60' LEASE AREA (3,600 SQ.FT.)
VOGUE TOWERS II, LLC 125'-0" MONOPINE
PROPOSED TREE LINE, TYP.
VOGUE TOWERS II, LLC 12' (W) x 80' (L) GRAVEL DRIVE
EXISTING SHED
EXISTING EDGE OF PAVEMENT
EXISTING TREE LINE WITH DISTURBED AREA TO BE REMOVED
BEGINNING OF VOGUE TOWERS II, LLC GRAVEL DRIVE
VOGUE TOWERS II, LLC 20' (W) ACCESS & UTILITY EASEMENT
EXISTING PAVED PARKING LOT, TYP.
NEW LESSEE FIBER HAND HOLE AT R/O/W
NEW LESSEE INTERMEDIATE FIBER HAND HOLE, TYP.
GROVE PARK WAY
ROW
60'
120'
180'
SCALE: 1" = 60'
LANDSCAPING NOT SHOWN FOR CLARITY

CITY OF
COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, April 8, 2025

ITEM NO.
25-0083

DESCRIPTION: 2494 Nashville Hwy

COMMENTS:

Planning

1. The lead staff person for this case is Charles Rush, Principal Planner. Please contact crush@columbiatn.gov with questions about the development review process or technical comments. The case planner should be copied on all communication with other city staff.
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Fire

8. No comments

Maury County Schools

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

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Maury County Highway Dept.

13. No comment.

ATT

14. No comment.

Maury County E911

15. No comments provided.

Atmos Energy

16. No comments provided.

City Attorney

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

17. No comment provided.

Public Works

18. No comment.

Police

19. No comment provided.

Building

20. No comment.

Resubmittal Guidelines

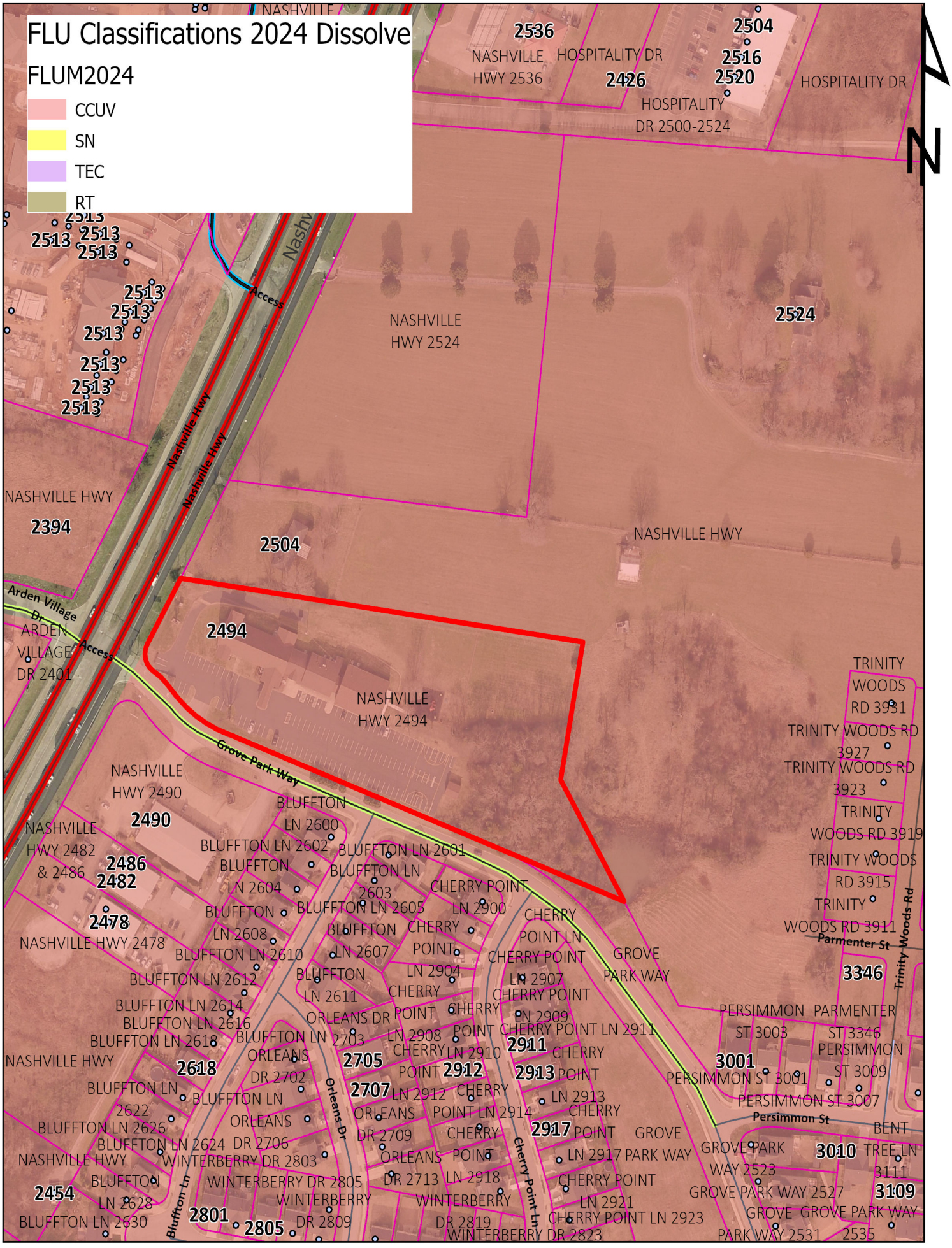
Please provide a comment response letter as well as digital copies of revised plans and supporting documentation. Submit all required documents electronically through the online portal: columbia.onlama.com. If the files are oversized, please provide a file sharing link.

Please contact the case planner identified in the Planning Comments with any questions about the review process.

Please contact pkeltner@columbiatn.gov or srichardson@columbiatn.gov if you encounter difficulties with the online portal.

You will receive an invoice for required advertising and mailing fees. All fees must be paid by the Friday following resubmittal in order advance to the Planning Commission agenda.

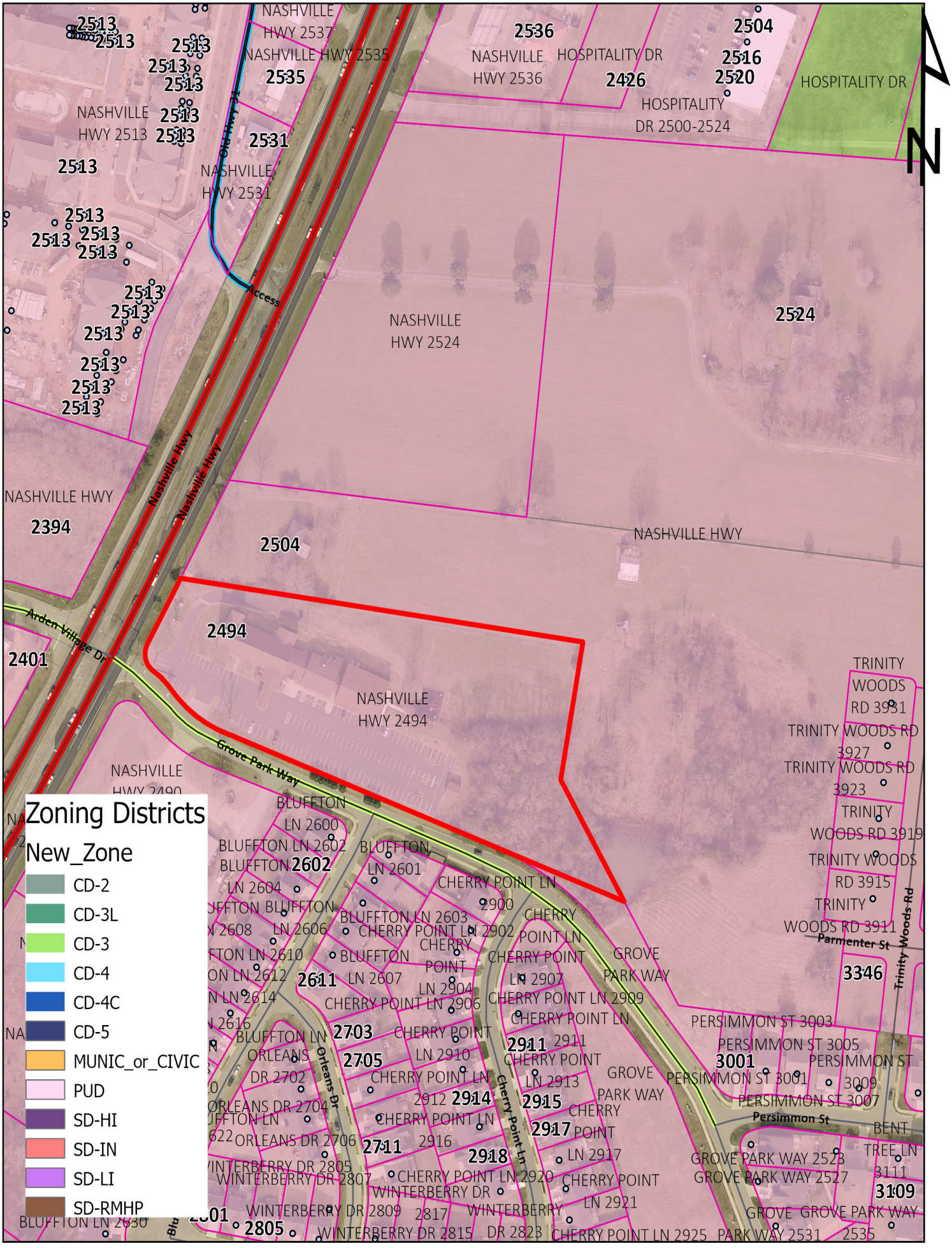
NOTE: All resubmittals must demonstrate compliance with city standards prior to Planning Commission review. Requests which do not adhere to regulations and/or remain unresponsive to technical comments will not be forwarded to the next agenda until such items are amended. Final Plat applications which are not ready to proceed to Planning Commission following the first resubmittal deadline will be added to the following DRC agenda to confirm the status of required infrastructure and utilities. Applications which remain incomplete following two resubmittal deadlines will be closed.



25-0083
2494 Nashville Hwy.
Tax Map 51 Parcel 7.01

Development Services
700 N. Garden Street
Columbia, TN 38401
www.columbiatn.gov

CITY OF COLUMBIA



25-0083
2494 Nashville Hwy.
Tax Map 51 Parcel 7.01

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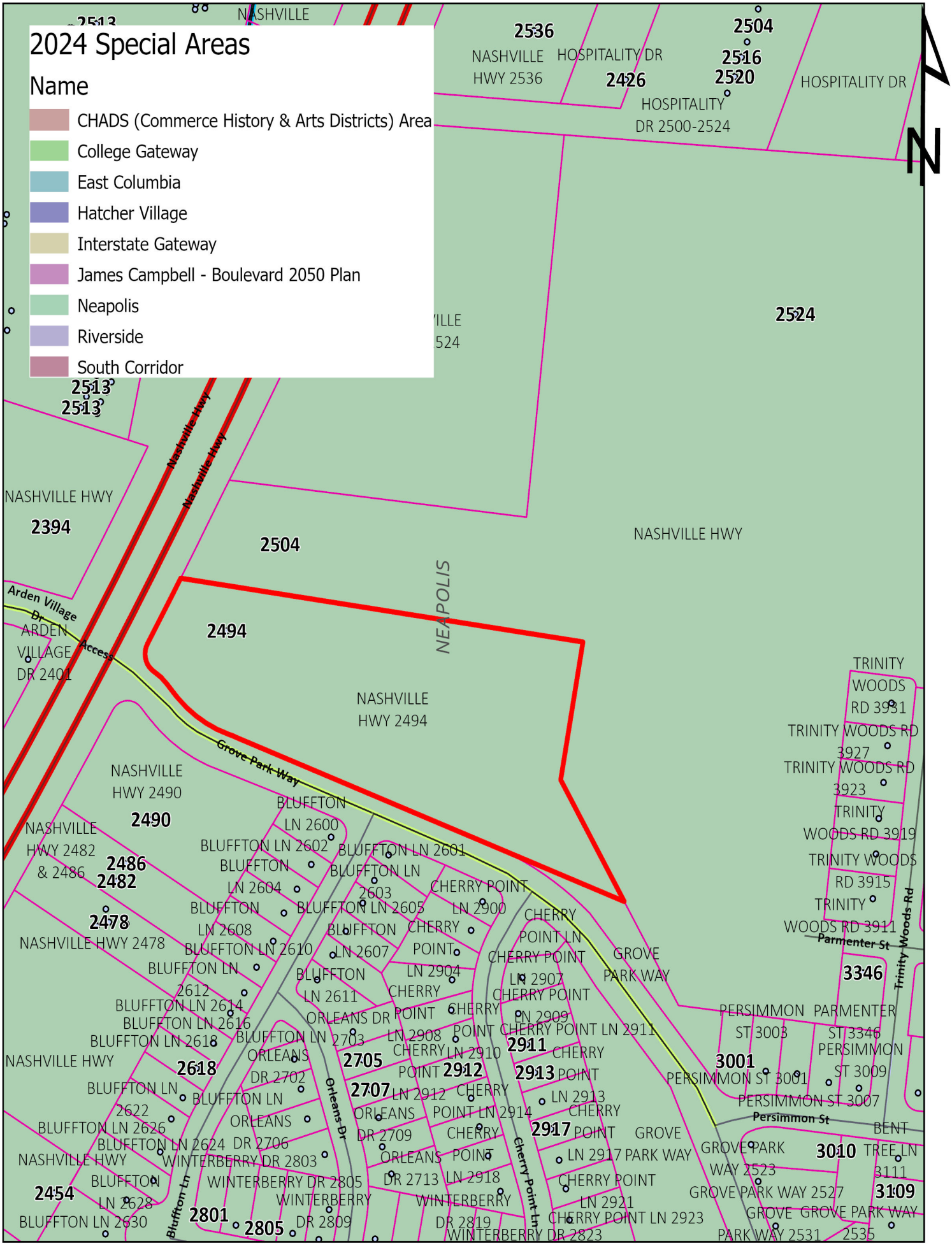
CITY OF COLUMBIA
TENNESSEE



25-0083
2494 Nashville Hwy.
Tax Map 51 Parcel 7.01

Development Services
700 N. Garden Street
Columbia, TN 38401
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CITY OF COLUMBIA
TENNESSEE

APPLICATION FOR APPROVAL BY VOGUE TOWERS II, LLC, AND CELLCO PARTNERSHIP, d/b/a VERIZON WIRELESS FOR THE CONSTRUCTION OF A WIRELESS COMMUNICATION FACILITY

Application: For City of Columbia approval by Vogue Towers II, LLC ("Vogue Towers") and Cellco Partnership, d/b/a Verizon Wireless ("Verizon"), together "Applicant" for the zoning approval for a proposed multi-provider wireless communications facility.

Site Name: Lanton (TN-5001)

Project Description: Vogue Towers proposes to construct a multi-provider 125' monopine tower (125' structure with 5' lightning rod, overall height 130') within a fenced compound area (see attached design drawings for details). This facility will have provisions for multiple wireless providers, satisfying the purpose of the City's ordinance to reduce the need for new towers.

Parcel Address: 2494 Nashville Hwy, Columbia, TN, Parcel #051 007.01

Property Owner: Christ our Savior Evangelical Lutheran Church

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Narrative:

The wireless industry is continually improving networks to best meet the needs of the community. In the present case, the increase in usage at existing locations requires a new tower. The purpose of this proposed wireless communications facility will be to provide improved wireless service quality and safety to the area, specifically to customers and residents in and around this area of Columbia.

As the demand for wireless continues to increase with the use of "smart phones" there is an increased need for wireless telecommunications infrastructure to keep up with the demand. Per CTIA's 2024 Annual Survey, *"Demand for wireless data continued to skyrocket in 2023, with Americans using more than 100 trillion MBs – enough data for every single US Household to watch the first season of House of the Dragon every day for the entire year."* 100T MB is almost a 2x increase over data usage just two years ago (2021) and is more data than was used between 2010-2018 combined. 2023 wireless traffic totaled over 2.1 trillion messages (SMS and MMS), or 67,000 messages/second, and over 2.4 trillion minutes of talking via wireless connections.

As network traffic increases on a given wireless network, additional facilities are needed to provide consumers with quality, high-speed mobile broadband. Each wireless telecommunications facility can only process a fixed amount of service and/or cover so far, and this tower is needed to provide additional coverage and capacity for this portion of the community as per CTIA there are now 558 million connections in America, or 1.6 connections for every American. Greater signal strength is needed to adequately penetrate the buildings and provide reliable voice and improved data throughput rates for wireless subscribers.

This proposal is to construct a multi-provider wireless communications facility. Applicant will lease the use of space and access as shown on the site plan. Within that area, there will be an approx. 2,500 sq/ft fenced compound providing room for Verizon Wireless and other wireless providers such as AT&T, T-Mobile, and DISH to place equipment cabinets/buildings within the compound of the new tower. In addition, Vogue Towers makes space available to local E911 and first responders at no cost, whenever possible.

Consideration of this application should not, however, be limited to examining how successfully Vogue Towers has mitigated any negative impact through design and location. The positive impact of the site should be given full weight as well. We live in a society where our wireless devices have become an essential tool for daily living, a necessity with approximately 80% of E911 calls (of an est. 240 million) being made from wireless devices each year and more than 7 out of 10 adults living in wireless-only households, 72.6% as of 2022 (*National Center for Health Statistics*). These figures peak among younger demographic ranges for wireless only adults, the next generation of homebuyers and entrepreneurs, with 25-29 at 87.6%, and 30-34 at 88.4%. Furthermore, the benefits of this site to the community go beyond just convenience for residents and businesses where 80% of consumers now consider wireless service "indispensable" (*CTIA*). Quality wireless service is part of the critical infrastructure necessary for public safety and first responders in emergency situations such as accidents, crimes, health incidents or natural disaster. Given the design, location and benefits provided by this proposed site, and lack of significant impacts, approval of this application is respectfully requested.

ARTICLE 4: BUILDING, LOT & BUILDING SITE TANDARDS

am. ***Wireless Communication Facilities other than Communications Towers*** *shall be permitted in accordance with the applicable Use Table, subject to the following:*

(1) *The requirements set forth in this Section 4.3.9.D.6.n. shall govern the location of Towers that exceed, and antennas that are installed at a height in excess of 70 feet. The height limitations applicable to Buildings and Structures shall not apply to Towers and Antennas.*

(2) *Antennas or Towers located on property owned, leased, or otherwise controlled by the CITY shall be exempt from the requirements of this subsection, provided a license or lease authorizing such Antenna or Tower has been approved by City Council.* **N/A, property is owned by Christ our Savior Evangelical Lutheran Church.**

(3) *This Section shall not govern any Tower, or the installation of any Antenna, that is under 70 feet in height and is owned and operated by a federally – licensed amateur radio station operator or is used exclusively for receive – only Antennas.* **N/A**

(4) *The following requirements must be met:*

(a) *Site and landscape plans drawn to scale and landscape plans drawn to scale;* **Site and landscape plans included in attached design drawings.**

(b) *A report including a description of the Tower with technical reasons for its design;* **The proposed monopine tower consists of an eighteen-sided monopole structure, tapered from bottom to top. The structure, foundation and anchor bolt designs are based strictly on ANSI/TIA-222 as amended (currently Rev H). Monopole materials are hot dip galvanized as outlined in ASTM A-123. The attached Fall Zone Letter provides additional explanation as to tower design parameters, including Risk Category, Site Exposure Category, Topographic Category and Environmental Loading.**

(c) *Documentation establishing the structural integrity for the Tower's proposed uses, certified by a professional engineer licensed in the State of Tennessee competent in such design, the general capacity of the Tower and information necessary to assure that ANSI (American National Standard Institute) standards are met;* **See attached tower manufacturer design.**

(d) *A statement of intent whether excess space on the Tower will be leased;* **See attached letter.**

(e) *Proof of ownership of the site or a copy of the owner's authorization to use the site;* **See attached (recorded) Memorandum of Option to Lease between Applicant and property owner.**

(f) *Copies of any Easements necessary to gain access or limited Development areas;* **Easements noted on survey included in design drawings.**

(g) *An analysis of the site containing existing topographical contours;* **Topographical contours are depicted on survey and addressed in the grading plan included in the attached design drawings.**

(h) *A written opinion from an appropriate authority that the soils and underlying materials will support the intended Structure;* **The Engineer of Record for the site civil design has reviewed and approved all related design elements as noted in the design drawings, considering typical soils for the region. All sites are drilled for geotechnical data and that information, including boring log and engineer analysis, are provided to the tower manufacturer as part of their engineered design of the tower and foundation.**

(i) *Evidence that the Tower facility meets technical emissions standards set by the FCC (Federal Communication Commission);* **See attached letter from Co-Applicant, Verizon Wireless.**

(j) *Evidence of "Determination of No Hazard" from the FAA (Federal Aviation Administration), as well as all required FCC permit information;* **Applicant complies, receiving a "Determination of No Hazard to Air Navigation" from the FAA (2025-ASO-245-OE). In addition, Applicant utilizes a 3rd party to review their locations in conjunction with the FAA filing. The attached report from Airspace Safety Analysis & Compliance (ASAC) evaluated the proposed tower in accordance with the requirements specified by the FAA under Federal Aviation Rules part 77 and found that this proposed tower is not a hazard to air navigation.**

(k) *Alternatives to the Tower location and why this site was selected; and* **Applicant contacted Edwards Real Estate, Dean Norton and Beasley's Yard, none of which 3 were interested. We initiated discussions Middle Tennessee Ag Research Station, and they were initially interested but then stopped responding. We also spoke to Bell Group and could not come to financial terms. We tried to reach Pantall Farms with voicemail and a letter but never received a response. Christ our Savior Lutheran Church said expressed and maintained interest. The attached Real Estate Candidates map highlights the various parcels attempted.**

(l) *Evidence that the site complies with requirements of the NEPA (National Environmental Policy Act) in regard to impact on wildlife, endangered species, historical sites, Native American religious sites, floodplains, wetlands, high intensity white lights in Residential neighborhoods ,and frequency emissions in excess of FCC guidelines.* **Applicant's site development process includes completing the National Environmental Policy Act (NEPA) review process, which includes consultation with State Historical Preservation Office, Tribal Historical Preservation Office, US Fish & Wildlife, and others to evaluate any impact of the proposed facility at this location. The NEPA process is ongoing, and Applicant is happy to make the final NEPA report a condition of approval. Addressing high intensity white lights, as described in (j) above, the proposed tower has been approved by the FAA and does not require any lighting.**

(5) *Towers may be built on the same Lot or Building Site with another Principal Use. A separation a minimum of the Tower height between the Tower and any other Principal Use is required in order to provide for the health, safety and welfare of individuals and Structures occupying the same site. Joint use is prohibited on a Lot or Building Site where a proposed or existing Principal Use includes the storage, distribution or sale of volatile, flammable, explosive or hazardous wastes such as LP gas, propane, gasoline, natural gas and corrosive or dangerous chemicals.* **Applicant is proposing a 125' monopine, a self-supporting tubular tower structure, similar to ones used for utility lines. Applicant is providing documentation outlining the design characteristics of the reduced "fall zone" area in the form of the attached engineer stamped letter. Per the attached and sealed "Fall Zone" letter, the Tower will be designed such that the top 50% will collapse over onto itself in the event of a catastrophic failure, reducing the impacted area via a reduced "fall zone" that will be contained within the reduced boundaries of this setback radius. This is accomplished by overdesigning the bottom portion of the structure. Specifically, the tower base and its foundation are designed to carry the entire force applied to the tower (Force X); however, when the top 50% of the tower collapses, only the maximum of 25% of Force X will be applied to the tower base and foundation that are designed for 100% of Force X. In layman's terms, the tower base and its foundation are approx. 4 times stronger (100%/25%) than the maximum force that can be applied to them when the top 50% of the tower collapses. As the design drawings depict, incorporating this engineering into the design, the fall zone is greatly reduced, complying with the setback requirement.**

(6) *Towers 80 feet or more in height shall be located on the Lot so that the distance from the base of the Tower to any adjoining property line or supporting Structure of another Tower is a minimum of 100% of the proposed Tower height. No Variance shall be granted from this minimum setback requirement.* **As depicted in the attached design drawings, Applicant complies.**

(7) *Except as specifically required by the FAA (Federal Aviation Administration) or the FCC (Federal Communication Commission), transmission Structures shall:* **Applicant will comply.**

(a) *use colors such as gray, blue or green which reduce their visual impacts; provided, wooden poles do not have to be painted; and* **As depicted in the attached design drawings and photo simulations, Applicant is proposing a monopine tower structure. The pole will be painted brown with the branches starting at approx. the halfway point.**

(b) *not be illuminated, except equipment shelters may use lighting for security reasons which is compatible with the surrounding neighborhood;* **Applicant complies.**

(c) not use strobe lights unless specifically required by FAA. **Applicant complies (see 4(j) above).**

(8) *Any proposed Tower shall be structurally designed so as to accommodate the minimum number of foreseeable shared users.* **Applicant's design incorporates space on the tower and ground for a minimum of three wireless providers, including Co-Applicant, Verizon Wireless.**

(9) *No advertising or display is permitted on any Communication Tower.* **Applicant will comply, only posting signage for site identification, emergency contact or as required by federal agencies.**

(10) *Any Accessory Buildings or Structures shall be located a minimum of 50 feet from any adjoining property line. Except for emergency purposes, the accessory facilities may not include offices, long-term vehicular storage, other outdoor storage, or broadcast studios, unless the Use is permitted in the District.* **Applicant will comply.**

(11) *The Tower base and equipment area shall be enclosed with a fence no less than six feet in height. Access shall be locked at all times when the site is not occupied.* **Applicant complies, see attached design drawings.**

(12) *Where the Tower site abuts or is contiguous to any Residential District, there shall be provided a continuous, solid Screening and it shall be of such plant material as will provide an evergreen Screen. Screening as required herein shall be not less than four feet in height at the time of planting and shall be permanently maintained.* **See attached landscape buffer design and tree preservation plan in the attached design drawings. In addition, the site has been located to utilize the natural vegetation buffer of the wooded area on the property.**

(13) *Location on any other Structure other than a Tower (i.e. water tank, utility poles, roof tops, etc.) is permitted subject to the provisions listed above relating to a Tower location.* **The attached Nearby Structures table and map illustrate that there are no existing tower structures within one mile of the Applicant's location, the closest broadband structure being approx. 1.62 miles away, with Verizon Wireless located on this structure. There are also no structures capable of meeting the coverage objective within the immediate area.**

(14) *Co – location on Towers is encouraged.* **See (13) above.**

The Zoning Administrator has authority to approve a co – location on an existing Tower subject to:

(a) *receipt of a letter from a licensed engineer stating that the Tower is structurally adequate to handle the additional load; and*

(b) *the FCC technical emissions standards not being exceeded.*

Any Antenna or Tower that is not operated for a continuous period of 12 months shall be considered abandoned and the owner of such antenna or tower, as well as any shared user(s) of the Tower or Antenna, shall remove same within 90 days of receipt of notice from the City notifying the owner and shared user(s) of such abandonment. If such Antenna or Tower is not removed within said 90 days, the City may remove or have the Structure removed at the owner's expense. **Applicant will comply.**

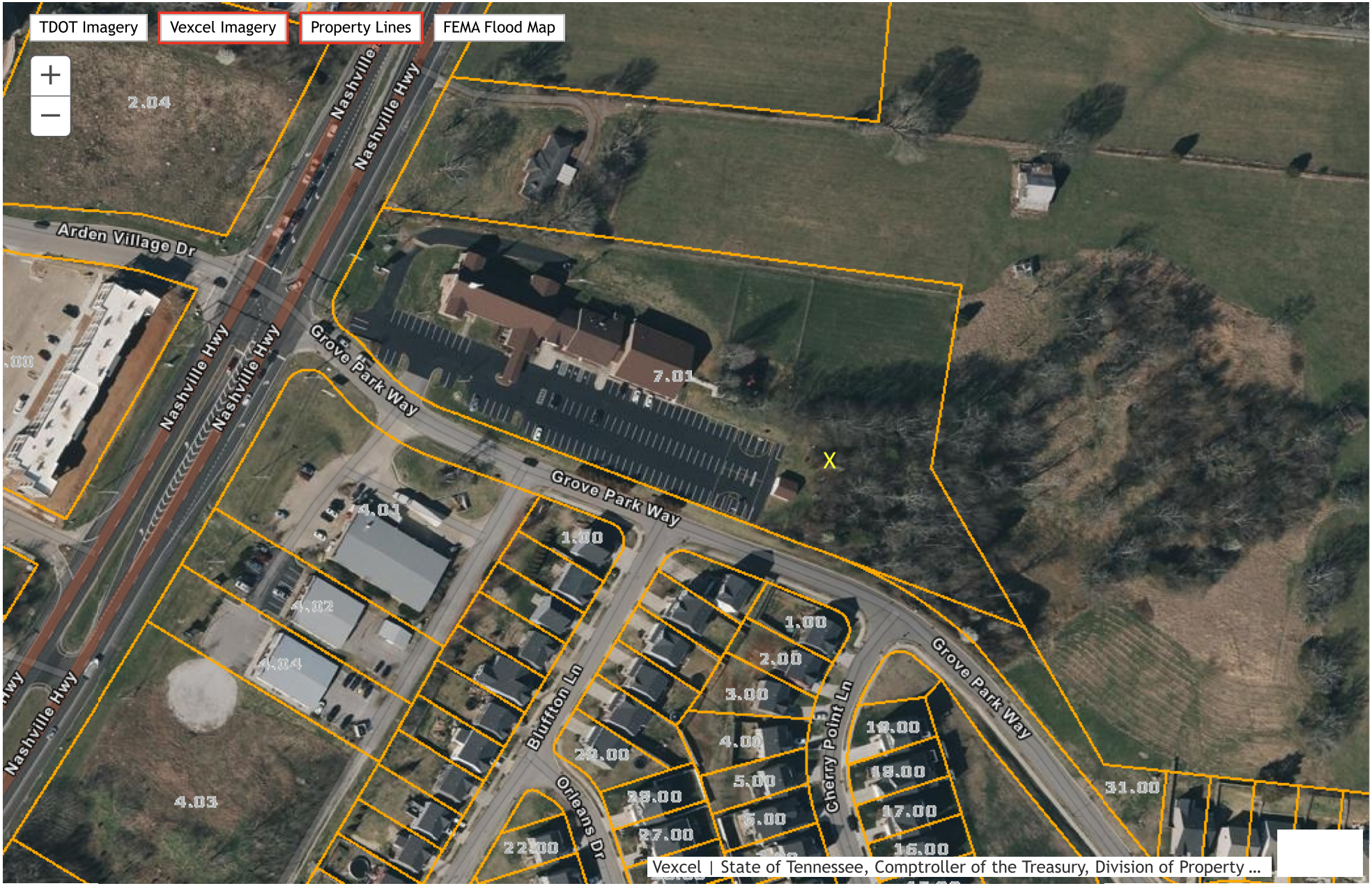
As provided for in this application package, Vogue Towers is requesting approval of their application as identified above per the conditions and specifications of the City's Ordinance, ARTICLE 4: BUILDING, LOT & BUILDING SITE TANDARDS; am. Wireless Communication Facilities other than Communications Towers. Wireless service is increasingly considered a public necessity as it is often the only means citizens have to emergency services. The location and character of the use, if developed according to the plan submitted and recommended, will be in harmony with the area in which it is to be located. The proposed wireless telecommunications facility will meet the infrastructure needs of this area and will provide additional access to emergency services, if needed.

Respectfully submitted,

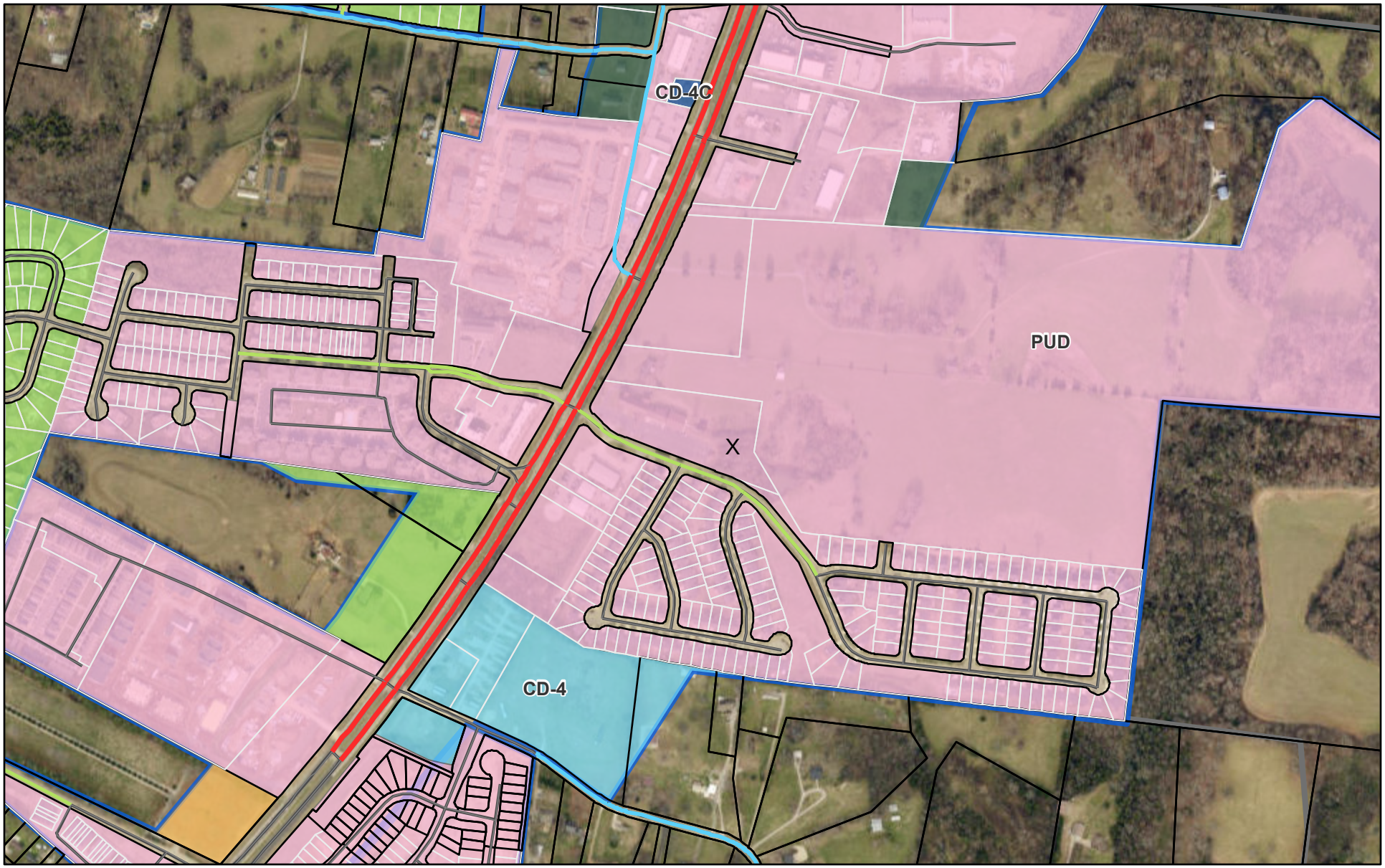
Pat Troxell-Tant

Pat Troxell-Tant
President of Development
Vogue Towers II, LLC

Tennessee Property Viewer



City of Columbia GIS Mapping



August 8, 2024

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

VOGUE TOWERS

430 Chestnut Street – Suite 101-B
Chattanooga, TN 37402

423-269-7455

Voguetowers.net

February 21, 2025

City of Columbia, TN
Attn: Austin Brass
700 N Garden St
Columbia, TN 38401

RE: Proposed Tower, Article 4, am.(4)(d), Collocation Letter of Intent
Vogue Tower Site – Lanton
Vogue Tower Site # - TN-5001
Parcel ID: #051 007.01

Dear Mr. Brass:

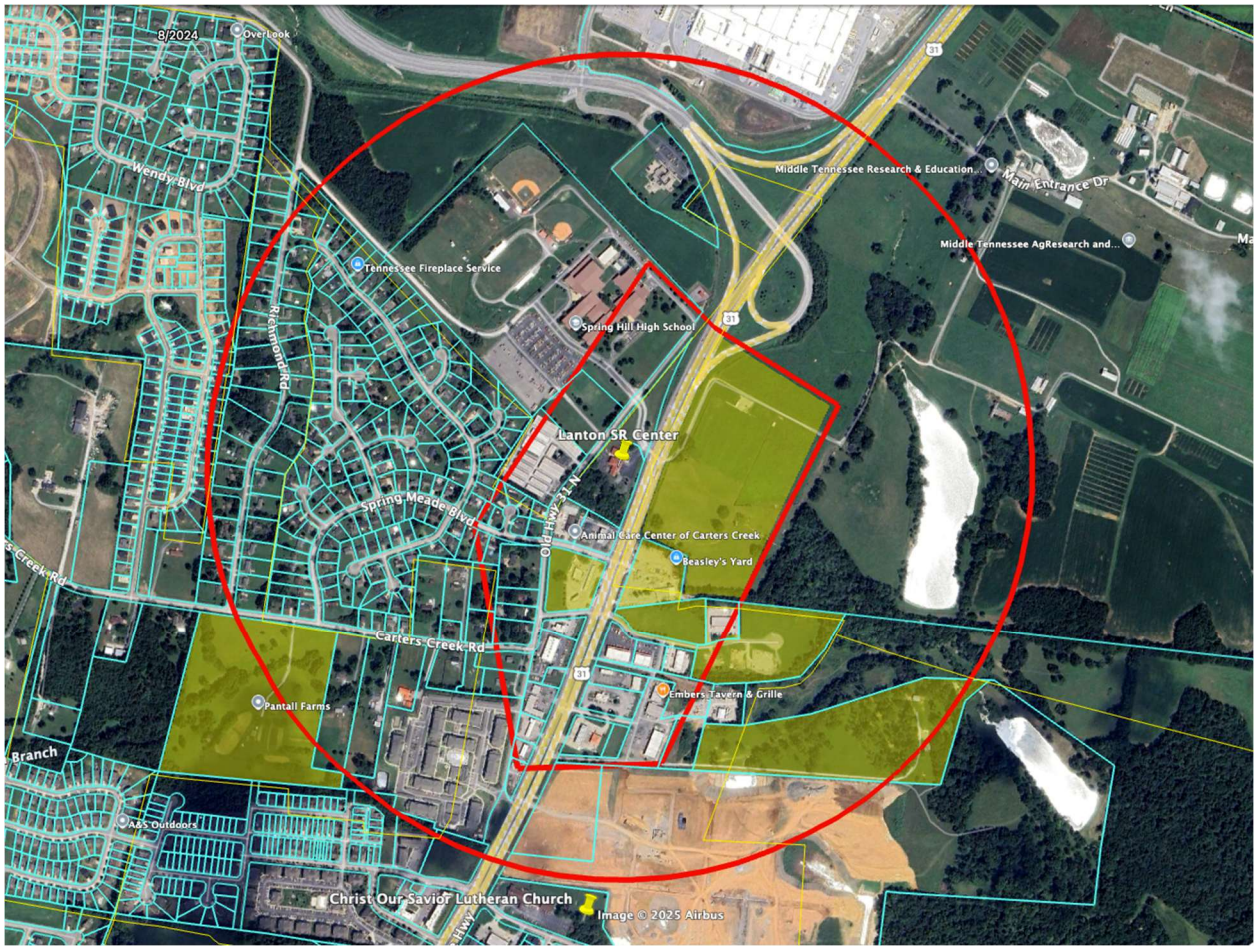
This letter is provided as confirmation that the new Tower will be designed to accommodate the collocation of additional antennas for future users and Applicant confirms to leasing excess space on the Tower to such users utilizing standard industry terms and rates, per the above reference section of the City's ordinance. Vogue Towers is not a wireless provider but is a developer of multi-provider wireless communications facilities. As such, Vogue's facilities are designed to accommodate multiple providers. The current design drawings included in this application package illustrate this design intent.

Respectfully submitted,

Patricia Troxell-Tant

Patricia Troxell-Tant
President
Vogue Towers II, LLC

Real Estate Candidate Search



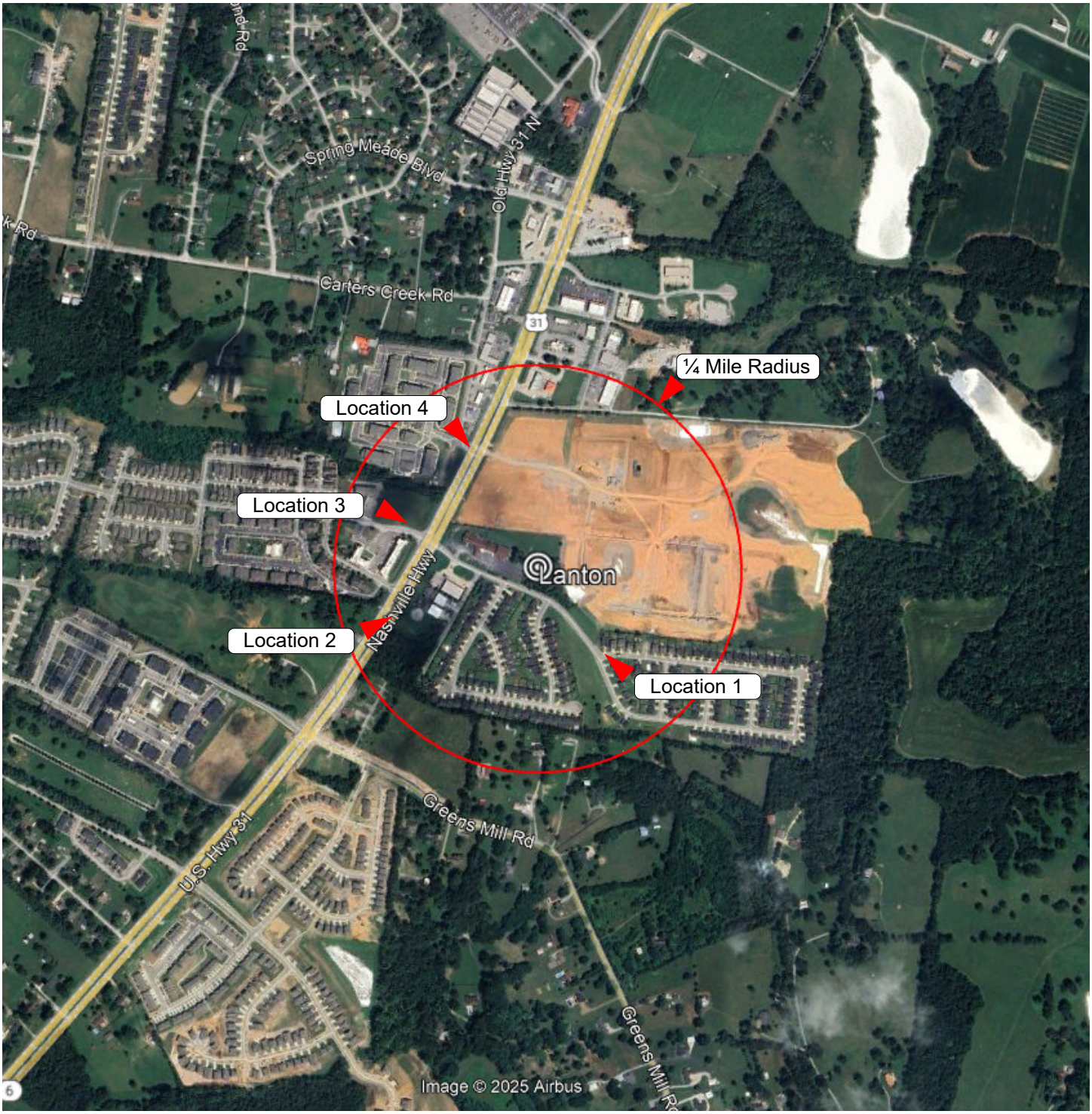
Applicant contacted Edwards Real Estate, Dean Norton and Beasley's Yard, none of which 3 were interested. We initiated discussions Middle Tennessee Ag Research Station, and they were initially interested but then stopped responding. We also spoke to Bell Group and could not come to financial terms. We tried to reach Pantall Farms with voicemail and a letter but never received a response. Christ our Savior Lutheran Church said yes. Those are all highlighted yellow on the aerial above.

Name	Latitude	Longitude	FCC ASR#	Distance (miles)	Comments
Vogue Towers	35.705626	-86.974395	Pending	N/A	*Candidate Location*
Crown Communications LLC	35.7145	-87.001	1205701	1.62	*Appears to be 2+ carriers, including Verizon*
TVA	35.7217	-86.9737	None	1.11	*Inside TVA facility, likely direct bury pole.*
TVA (2)	35.7411	-86.9633	None	2.53	*Inside former plant, likely direct bury pole.*


Vogue Towers - Lanton
Nearby Structures
.5 mile radius
Animal Care Center of Carters Creek
Beasley's Yard
Carters Creek Rd
Embers Tavern & Grille
Pantall Farms
A&S Outdoors
Vogue Towers
Maury Regional Urgent Care | North Columbia
Nashville Hwy
Bexley Spring Hill
Pinecrest Memorial Gardens
Greens Mill Rd
U.S. Hwy 31
Lennar at Drumwright
Google Earth
Image © 2025 Airbus
2000 ft
N

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Locations of the photosims.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Location 1 before the photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Location 1 after photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Location 2 before photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Location 2 after photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes:

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes:

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

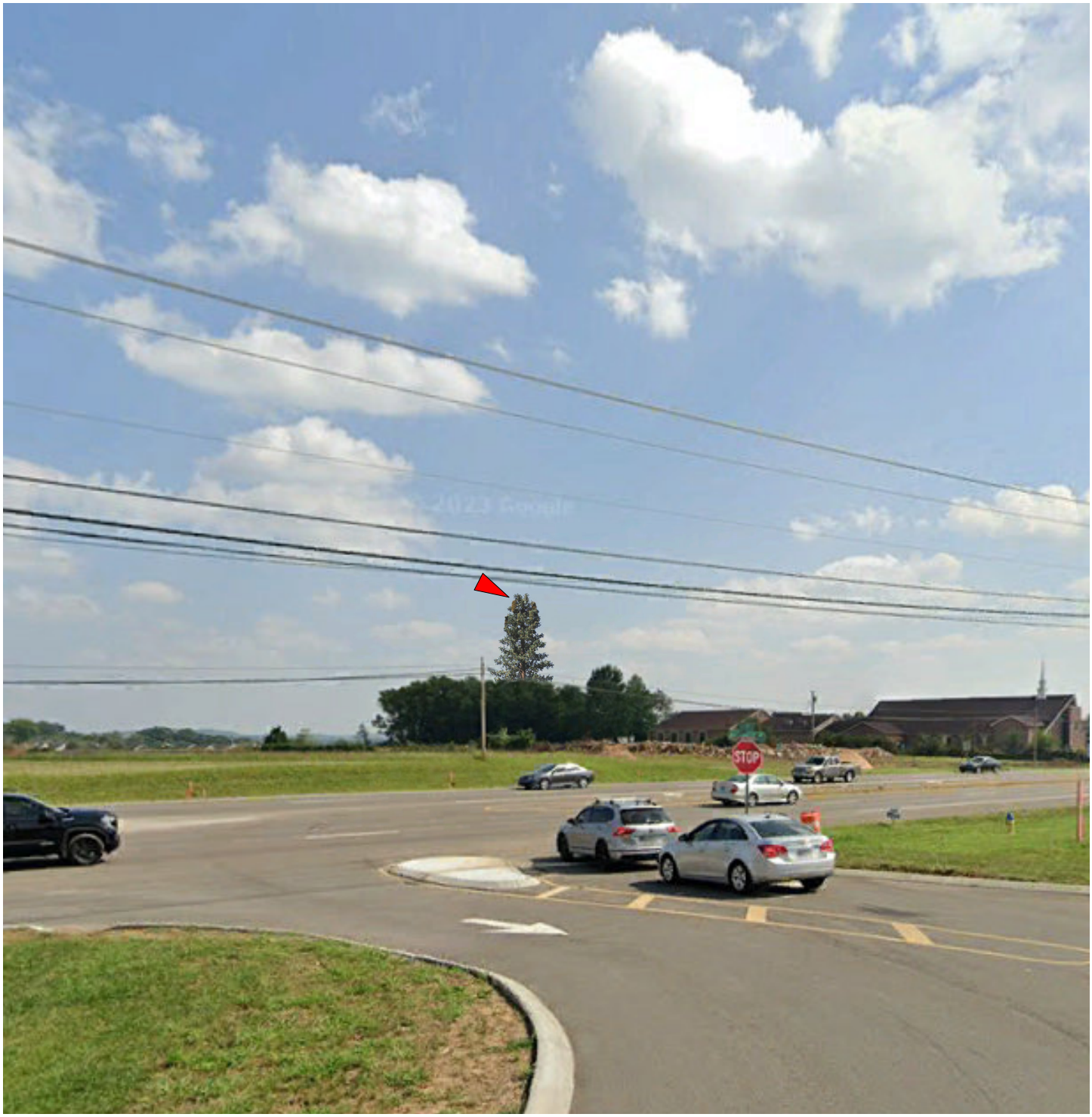
Lanton PhotoSims



Notes: Location 4 before photosim.

Gen7 Engineering, LLC
8807 Consolidated Drive
Soddy Daisy, Tennessee 37379

Lanton PhotoSims



Notes: Location 4 after photosim.

November 14, 2024

Transmitted via email to janet@voguetowers.net
RE: Verizon Colocation on Vogue Macro Monopole Site Located at: Grove Park Way, Columbia, TN 38401

To Whom It May Concern,

This is in response to your inquiry to Verizon concerning interference to your existing telecommunications devices and services related to Verizon's proposed facilities at Grove Park Way, Columbia, TN 38401. Verizon provides Commercial Mobile Radio Services (CMRS) under licenses granted by the Federal Communication Commission (FCC). Pursuant to these licenses, Verizon is authorized to operate its CMRS network in many geographic areas throughout the nation, including the above noted location.

The FCC exclusively regulates all technical aspects of Verizon operations and network and preempts all state and local regulation of radiofrequency transmissions. The FCC rules protect co-channel and adjacent licensees against harmful interference. The above noted proposed Verizon facility is compliant with all applicable FCC requirements. The points below cover Verizon's practices pertinent to complying with the FCC requirements:

1. Verizon locates its transmitting antenna(s) in order to maximize vertical and horizontal separation from other operator's systems to minimize interference potential.
2. All equipment at the proposed facility is designed and certified to operate within the frequencies licensed to Verizon by the FCC, and to operate in a manner approved by the FCC.
3. The power levels generated by the facility's radios and corresponding effective radiated power (ERP) from the transmitting antenna(s) are within the limitations specified by Part 22 (for cellular), Part 24 (for PCS), Part 27 (for 700 MHz, AWS or C-Band), Part 96 (for CBRS), Part 30 (UMFUS/mmWave) or Part 101 (for microwave) of the Commission's Rules.

Verizon is committed to providing state of the art wireless services that benefit your community.
In the unlikely event that interference does occur, Verizon agrees to fully cooperate with the entity experiencing interference to identify and correct, to the extent reasonably possible, any issues caused by the Verizon installation.

Please contact your local Verizon resource below if you have additional site-specific questions.

Contact Name	Contact Email	Contact Phone
Jamison Tyler	SE-Regulatory@verizonwireless.com	NA

Sincerely,

Minny Vidhya Duggirala
Manager-RF System Design
Verizon

Lanton RF Plots

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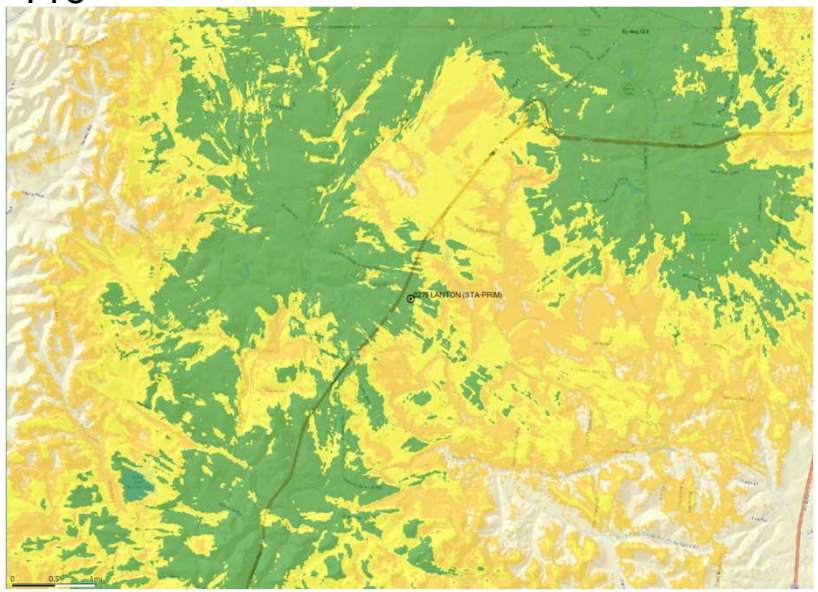
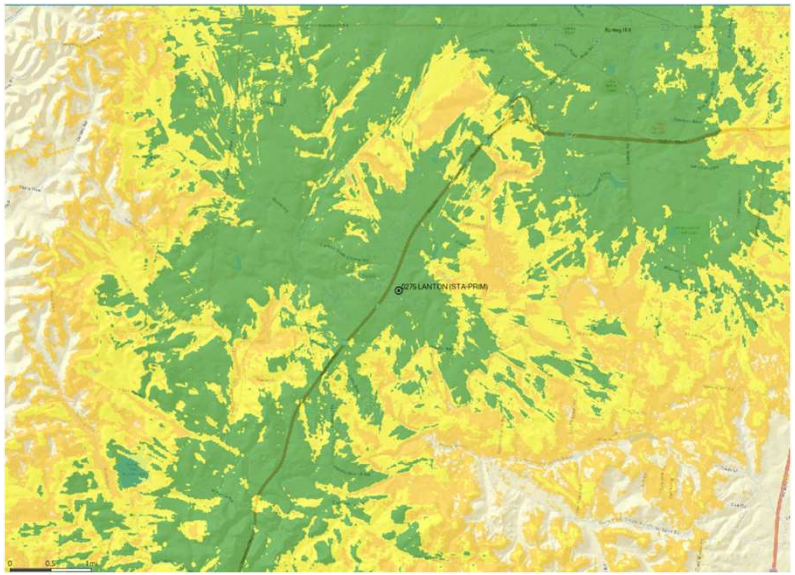
Plots - Pre and Post 700MHz RSRP Coverage

Pre



Post

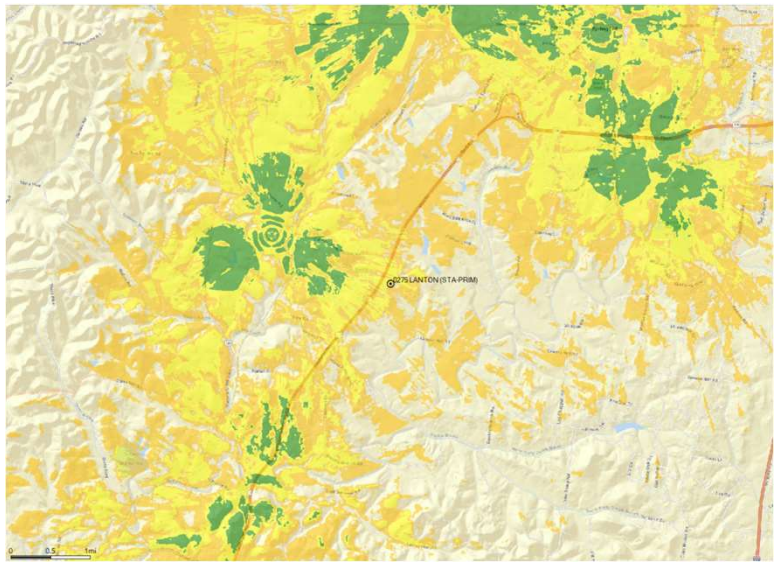


Coverage Level	Color
In-Building	
In-Vehicle	
On-Street	

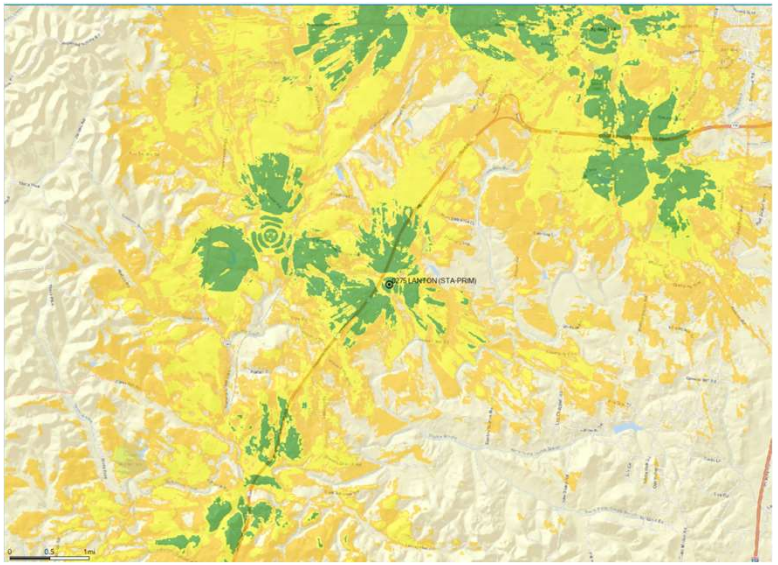
Verizon confidential and proprietary. Unauthorized disclosure, reproduction or other use prohibited.

Plots - Pre and Post 2100 MHz RSRP Coverage

Pre



Post



Coverage Level	Color
In-Building	
In-Vehicle	
On-Street	

Verizon confidential and proprietary. Unauthorized disclosure, reproduction or other use prohibited.

Introduction:

Coverage and/or capacity deficiencies are the two main drivers that prompt the need for a new wireless communications facility (WCF). Most WCF provide a mixture of both capacity and coverage for the benefit of the end user.

Coverage describes the existence or lack of wireless service in an area. The request for improved service often comes from our customers or emergency services personnel that have no service or poor service. Coverage used to refer to the ability to make or place a call in vehicles, however, as usage patterns have shifted, coverage is now determined based on whether or not sufficient WCF exist to provide a reliable signal inside of buildings and residential areas, as well. Historically, when wireless was still in its infancy, coverage was the primary means to measure the effectiveness of the network in a given area.

Capacity is the metric used to determine if sufficient wireless resources exist and is now the primary means to measure how a community's wireless needs are being addressed. "Five bars" no longer means guaranteed coverage and capacity because each WCF has a limited amount of resources to handle voice calls, data connections and data volume. When these limits are reached and the WCF becomes overloaded (meaning there is more demand than signal to service it), the user experience quickly degrades preventing customers from making/receiving calls or getting applications to run. A WCF short on capacity could also make internet connections time out or delay information to emergency response personnel.

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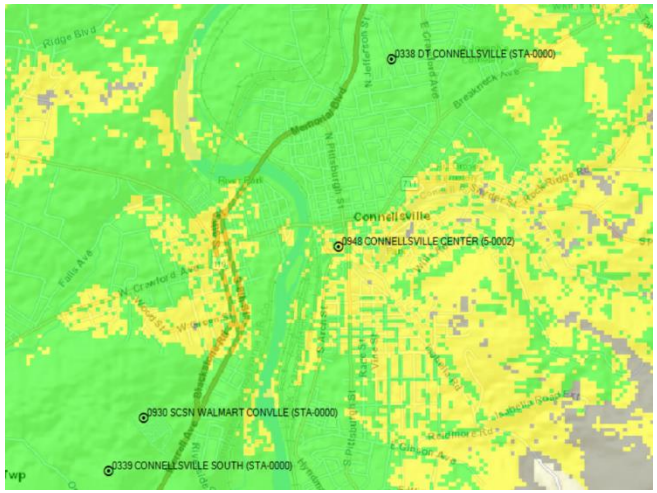
Explanation of Wireless Coverage



Coverage is best shown via coverage maps. RF engineers use tools that take into account terrain, vegetation, building types, and WCF specifics to model the existing coverage and prediction what we expect to see with the addition of a proposed WCF.

Coverage also changes depending on which frequencies are used. Most phones today use 3G at 800 MHz or 4G at 700 MHz spectrum which are considered low frequencies. Low frequencies can travel further distances than then the higher 1900 MHz and 2100 MHz frequencies now being employed due to increased capacity demands. Operating at higher frequencies makes it necessary for carriers to install substantially more wireless facilities to achieve the same coverage as one tower operating on the lower frequencies.

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Explanation of Wireless Capacity



Capacity is the amount of resources that a WCF has to service customer demand. Verizon utilizes sophisticated programs and customer feedback to monitor current usage trends and to forecast future needs. Because it takes an average of 2-3 years to complete a WCF, we have to start the process of adding a new WCF several years in advance of when the WCF will be needed.

Location, Location, Location. A good capacity WCF needs to be in the center of a user population which insures that traffic is evenly distributed around the WCF. A typical WCF is configured into three sectors (like a pie cut into three pieces), with each slice (sector) having 33% of the WCF resources. If one sector is under-utilized, it's resources can not necessarily be diverted to another sector. Therefore, optimal performance is only obtained when all three sectors have an even traffic distribution.

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Explanation of Wireless Data Growth

Wireless Data Growth

Each year Verizon sees large increases in how much data its customers need. As the resolution of the pictures we send increases, the quality of the video we watch improves and the complexity of the applications grow, we commonly see tremendous growth year-over-year.

- 240 million 911-calls are made annually. In many areas, 80% or more are from wireless devices.[1]
- The average North American smartphone user will consume 48 GB of data per month in 2023, up from just 5.2 GB per month in 2016 and 7.1 GB per month in 2017.[2]
- More than one-half of American homes had wireless only homes. [3]
- In North America, the average household has 13 connected devices with smartphones outnumbering tablets 6 to 1. [4]

Machine to Machine communications will also increase the data burden on wireless networks, as over the next five (5) years more and more services that improve our safety and make our lives easier will be available over the wireless infrastructure , such as:

- Cars that notify 911 when an airbag deploys.
- "Driverless" cars needing traffic data and maps to reach your destination as quickly as possible.
- Medical monitors that will alert us should a loved one neglect taking their prescription drugs.
- Home alarms that notify you when your child arrives home from school.
- Smart street lights that notify the city when they are not working.
- City garbage cans that let people know when they need to be emptied.
- Tracking watches will aid in finding lost Alzheimer patients.

1. National Emergency Number Association, 9-1-1 Statistics (January 7, 2019)
2. Ericsson Mobility Report, November 2017
3. CDC's 2018 Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, January-July, 2018
4. IHS Market Connected Device Market Monitor: Q1 2016 , June 7, 2016

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Radio Emission Safety...

A common question received is “Are the radio emissions safe?”

Verizon goes to great effort to ensure that all of its projects meet the standards established by the FCC to ensure safety of the public and its employees. The links below are to three reputable organizations that have performed extensive reviews of the science available on this subject and have good educational articles on the results of their research.

World Health Organization
http://www.who.int/peh-emf/about/WhatisEMF/en/index1.html

America Cancer Society
http://www.cancer.org/cancer/cancercauses/othercarcinogens/athome/wireless facilityular-phone-towers

FCC Radio Frequency Safety
https://www.fcc.gov/general/radio-frequency-safety-0

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STRUT
Engineering & Investment, Inc

3485 Desert Dr Building 2
Suite 101
East Point, GA 30344
T: (404) 480-5555
Info@STRUTeni.com
www.STRUTeni.com

February 25, 2025

Attn: **Vogue Towers II, LLC**
430 Chestnut St., Suite 101B
Chattanooga, TN 37402

Re: **Fall Zone Letter for Proposed 125' Monopole (Excluding 5' Lightning Rod)**

Site Name:	Lanton
Address:	Grove Park Way, Columbia, TN 38401
Building Code:	IBC 2018
Design Standard:	ANSI/TIA-222-H

Dear Vogue Towers II,

Strut Engineering & Investment, Inc (Strut E&I, Inc) has reviewed the proposed Vogue Tower communications tower installation at the above-mentioned site. The project will contain a monopole-type antenna support tower with a height of 125' above ground level (AGL). The monopole structure is made up of hot dipped galvanized high strength steel tubing that is typically 48-60" diameter at its base and tapering to 18" diameter at the top.

The antenna cables will be routed from the ground-based equipment up the inside of the pole to the proposed antenna rad center. The tower manufacturer shall supply structural design drawings prepared by a licensed Structural Engineer in the State of Tennessee at the time of Building Permit submission for review by the County before construction can commence.

The tower will be designed in accordance with the Tennessee State Building Code and International Building Code (IBC). Both of these codes have adopted the Telecommunications Industry Association/Electronics Industry Association Standards (ANSI/TIA-222-H). These standards dictate the design of all communications towers and take into consideration the following parameters:

1. Structure Risk Category/Class
   Category/Class is chosen based upon the function of risk to human life, potential damage to property in the event of failure and the type of services that the tower will provide (i.e. essential communications vs. services that are optional)
2. Environmental Loading
   Includes wind, ice, and seismic loads based upon local county-based data
3. Site Exposure Category
   Category is chosen based upon "surface roughness" of local surrounding vegetation, structures and natural topography. This also impacts wind loading calculations
4. Topographic Category
   Category is chosen based upon wind "speed-up" effects from surrounding topography, such as towers being located within gently rolling terrain or at the top of a hill or ridge

The design of the tower shall be such that in the unlikely event of structural failure, the monopole will collapse onto itself and not onto a street or a building. In other words, structural failure would be typical of that of a straw bending onto itself, rather than a bowling pin being knocked over. **Vogue Towers shall stipulate to the tower manufacturer/designer that the area of probable failure be located at the 50% <u>TOTAL</u> height (65'-0" AGL) of the monopole plus lightning rod so that only the top 50% of the monopole plus the**

lightning rod (top 65'-0") would collapse onto itself. This is done by over-designing the tower sections below the failure point as necessary.

In regard to the possibility of any future corrosion of the structure, the monopole shall be constructed with hot dipped galvanized steel, similar to that of highway signs and traffic signal poles. The ANSI/TIA-222-H standards have been based in part on the American Association of State Highway and Transportation Officials (AASHTO) standards which govern the construction and design standards for those structures (which have an extremely rare rate of corrosion related failures). Furthermore, the tower owner will be required to inspect the structure at intervals stipulated by ANSI/TIA-222-H standards or as may be stipulated by the underlying municipal authority, whichever is more stringent.

A geotechnical evaluation will be conducted that will explore the subsurface conditions in the vicinity of the proposed tower and develop geotechnical engineering recommendations to facilitate the design of the tower foundation. A report will be generated that shall be utilized by the tower manufacturer/designer to prepare foundation design drawings to be submitted at the time of Building Permit submission for review by the County before construction can commence. The geotechnical report and design drawings shall all be prepared by licensed Geotechnical Engineers in the State of Tennessee.

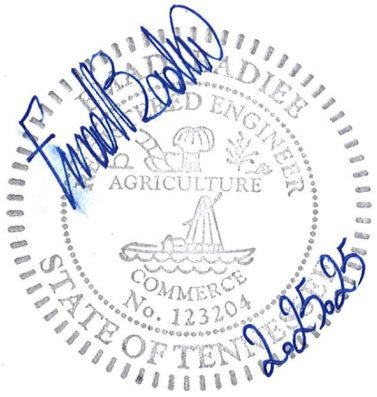
In summary, monopole-type antenna support structures are designed for extreme wind conditions with factors of safety that result in a design that is extremely conservative. The occurrence of monopole failure is exceptionally rare and historically these structures have survived after experiencing wind speeds considerably higher than their design speeds.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

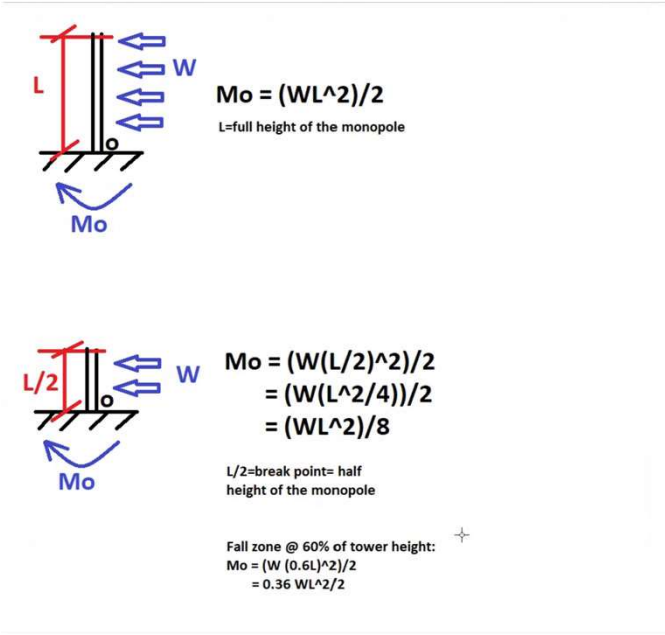
STRUT Engineering & Investment, Inc.

Emad Badiee, P.E.
Senior Structural Engineer
ebadiee@struteni.com
(404) 480-5555



Designed Tower Fall Zones

- Towers designed per TIA-222 standards (currently Revision "H")
- The load calculated at the base of the tower does not change
- Reduction of 50% of tower height results in applied force reduction of 75%, the remaining pole now only carries 25% of the original applied load
  - Layman's terms, the remaining portion of the tower has a constant capacity, while the applied force is significantly decreased to 1/4th of the original applicable force. In another word, the base following a failure event is approx. 4x stronger because of the reduced applied force exerted on the tower
- Reduction of 40% of tower height from the top (bottom 60% remaining) results in applied force reduction of 64%



Designed Tower Failure





- Monopoles and Lattice Towers have a long history of providing safe and reliable antenna support for the telecommunications industry. In instances in which they do fail; the surrounding landscape has often been forever changed by extraordinary weather events well in excess of the required design loading.
- Both Monopoles and Lattice towers can be designed with theoretical failure points to ensure that the structure falls within a specified boundary even under extreme circumstances.
- Monopoles typically collapse like a bent straw during hurricanes or severe weather.
- All around us: In addition to supporting antennas, these same structures support lighting, power transmission lines, signage, and numerous other applications.

Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2025-ASO-245-OE

Issued Date: 02/11/2025

Michael Sandifer
Vogue Towers II, LLC
100 North Point Center East, Suite
Alpharetta, GA 30022

**** DETERMINATION OF NO HAZARD TO AIR NAVIGATION ****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Monopole TN-5001 Lanton
Location:	Columbia, TN
Latitude:	35-42-20.26N NAD 83
Longitude:	86-58-27.82W
Heights:	742 feet site elevation (SE)
	130 feet above ground level (AGL)
	872 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Emissions from this site must be in compliance with the parameters set by collaboration between the FAA and telecommunications companies and reflected in the FAA 5G C band compatibility evaluation process (such as power, frequencies, and tilt angle). Operational use of this frequency band is not objectionable provided the Wireless Providers (WP) obtain and adhere to the parameters established by the FAA 5G C band compatibility evaluation process. **Failure to comply with this condition will void this determination of no hazard.**

It is required that FAA Form 7460-2, Notice of Actual Construction or Alteration, be e-filed any time the project is abandoned or:

_____ At least 10 days prior to start of construction (7460-2, Part 1)
__X__ Within 5 days after the construction reaches its greatest height (7460-2, Part 2)

See attachment for additional condition(s) or information.
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/ lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M Change 1.

This determination expires on 08/10/2026 unless:

ASAC SITE SPECIFIC EVALUATION
FOR
Site Name: Lanton
Site Number: TN-5001
Site Location: Spring Hill, TN

Requestors Name: Michael Sandifer
Company Name: Vogue Towers II, LLC
Street Address: 430 Chestnut Street, Ste 101-B
City and Zip: Chattanooga, TN. 37402

This is an evaluation based on application of surfaces identified in Federal Aviation Regulation (FAR) Part 77 and Federal Communication Commission (FCC) Rules Part 17.

EXECUTIVE SUMMARY

- **The max height that can be built at this site without notice to the FAA is 200 feet AGL or 942 feet AMSL.**
- **The max No Extended Study height at this site is 499 AGL, or 1241 AMSL.**
- **The max no hazard height at this site is 499 AGL, or 1241 AMSL.**
- **The max no marking and lighting height at this site is 200 AGL, or 942 AMSL.**

SITE DATA

Structure Type: Antenna Tower

Coordinates of site:	**Lat:**	**35°42'20.26"**
	Long:	**86°58'27.82"**
	Datum:	**NAD 83**

Site ground elevation:	**742**
Total height above the ground of the entire structure (AGL):	**130**
Total height above mean sea level (AMSL):	**872**

AIRPORT/HELIPORT INFORMATION

Nearest public use or Government Use (DOD) facility: Maury County Regional.

This structure will be located 13.5 NM or 82051 FT from the airport on a bearing of 227 degrees true to the airport.

Nearest private use landing facility is: Hunter.

This structure will be located 0.9 NM from the airport on a bearing of 120 degrees true to the airport.

STUDY FINDINGS

FAA FAR Part 77 paragraph 9 (FAR 77.9): (Construction or Alteration requiring notice.) (These are the imaginary surfaces that the FAA has implemented to provide general criteria for notification purposes.)

This structure does not require notification to the FAA.

FAA FAR Part 77 paragraph 17(FAR 77.17): (Standards for Determining Obstructions.)(These are the imaginary surfaces that the FAA has implemented to protect aircraft safety. If any of these surfaces are penetrated, the structure may pose a Hazard to Air Navigation.)

This structure does not exceed these surfaces.

FCC Notice Requirements:
(FCC Rules, Part 17)

This structure does not require notification to the FAA or FCC based on these rules.

FAA EMI:
(The FAA protects certain air navigational aids, radio transmitters, and RADAR facilities from possible interference. The distance and direction are dependent on the type of facility being evaluated. Some of these transmission and receiver facilities are listed in the National Flight Data Center (NFDC) database.)

This site would not affect any FAA air navigational aids or transmitters.

Military Airspace:
(This would include low level visual and instrument routes along with operations areas and special use airspace.)

This structure will not affect this airspace.

AM Facilities:
(The FCC protects AM radio stations from possible interference for a distance of 3.0 km for directional facilities, and 1.0 km for non-directional facilities. New changes to the FCC critical distances are calculated based on the AM transmission Movement Method Proof evaluation.)

This site was evaluated against the FCC's AM antenna database using the Movement Method proof calculations and no further action is required.

MARKING AND LIGHTING

FAA Advisory Circular 70/7460-1:

Marking and lighting is not required for this structure.

RECOMMENDATIONS

This site was evaluated in accordance with the requirements specified by the FAA under Federal Aviation Rules part 77, and found not to be a hazard to air navigation.

Carter's Creek Station Antiques
Carters Creek
Carters
Terrell Br
CARTERS CREEK ROAD
Cem
The Ridge at Carter's Station by Richmond...
Roadside park
Park
31
700
Middle Tennessee Agricultural Experiment Station
Neapolis
Embers Tavern & Grille
Coleman Branch
Mile 3
640
Branch
Rainbow Ch
Meadow Lawn Memorial Garden
BM TS 1L 714
Bexley Spring Hill
Greens Mill Rd
GREENS MILL ROAD
Lennar at Drumwright
Hunter Lake
Hunter Airport
Rutherford
Mile 15
Southern Scapes landscaping
Greens Mill Rd
BM LRT 1576 750
Google Earth
Image © 2024 Airbus
3000 ft
N

(a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
(b) extended, revised, or terminated by the issuing office.
(c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA.This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Communications Commission (FCC) because the structure is subject to their licensing authority.

If we can be of further assistance, please contact our office at (817) 222-5915, or Rodney.H-CTR.Love@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2025-ASO-245-OE.

Signature Control No: 643365461-647029366 (DNE)
Rodney Love
Technician

Attachment(s)
Additional Information
Frequency Data

Map(s)

cc: FCC

Additional information for ASN 2025-ASO-245-OE

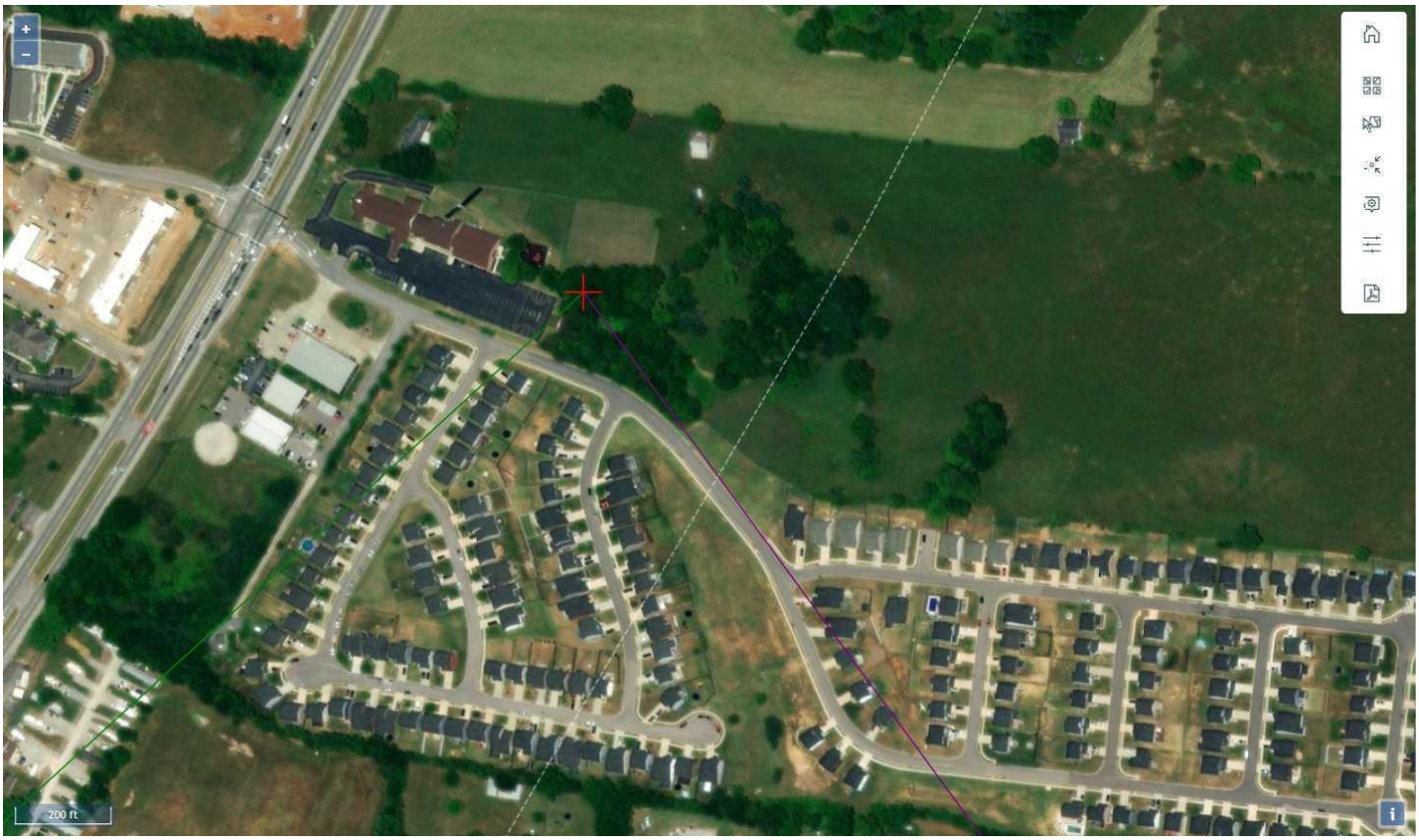
The FAA recognizes emissions in 3.7-3.98 GHz at this location will result in Electromagnetic Interference (EMI) as described in Airworthiness Directives (AD) 2021-23-12 and 2021-23-13. NAS services including airport and helicopter operations within a radius of 42 NM will be impacted by 5G RF emissions. Operational use of this frequency band is not objectionable provided the Wireless Providers (WP) obtain and adhere to the parameters established by the FAA 5G C band compatibility evaluation process.

Frequency Data for ASN 2025-ASO-245-OE

LOW FREQUENCY	HIGH FREQUENCY	FREQUENCY UNIT	ERP	ERP UNIT
6	7	GHz	42	dBW
6	7	GHz	55	dBW
10	11.7	GHz	55	dBW
10	11.7	GHz	42	dBW
17.7	19.7	GHz	42	dBW
17.7	19.7	GHz	55	dBW
21.2	23.6	GHz	55	dBW
21.2	23.6	GHz	42	dBW
614	698	MHz	1000	W
614	698	MHz	2000	W
698	806	MHz	1000	W
806	901	MHz	500	W
806	824	MHz	500	W
824	849	MHz	500	W
851	866	MHz	500	W
869	894	MHz	500	W
896	901	MHz	500	W
901	902	MHz	7	W
929	932	MHz	3500	W
930	931	MHz	3500	W
931	932	MHz	3500	W
932	932.5	MHz	17	dBW
935	940	MHz	1000	W
940	941	MHz	3500	W
1670	1675	MHz	500	W
1710	1755	MHz	500	W
1756	1780	MHz	3280	W
1850	1910	MHz	1640	W
1850	1990	MHz	1640	W
1930	1990	MHz	1640	W
1990	2025	MHz	500	W
2110	2200	MHz	500	W
2305	2360	MHz	2000	W
2305	2310	MHz	2000	W
2345	2360	MHz	2000	W
2496	2690	MHz	500	W
3450	3550	MHz	3280	W
3550	3700	MHz	50	W
3700	3980	MHz	3280	W
27500	28350	MHz	31623	W
29100	29250	MHz	31623	W
31000	31300	MHz	31623	W

38600	40000	MHz	31623	W

Verified Map for ASN 2025-ASO-245-OE



Sabre Industries™
INNOVATION DELIVERED

Structural Design Report

125' Monopine
Site: Lanton, TN
Site Number: TN-5001

Prepared for: VOGUE TOWERS
by: Sabre Industries ™

Job Number: 25-4001-JDS

March 10, 2025

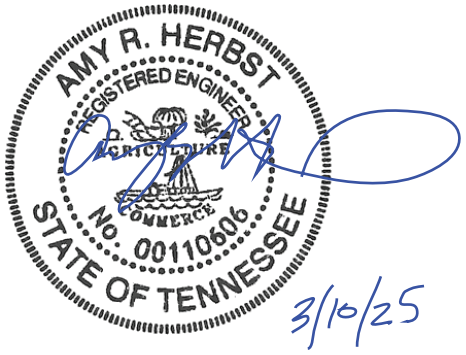
Monopole Profile..... 1

Foundation Design Summary (Preliminary) (Option 1)..... 2

Foundation Design Summary (Preliminary) (Option 2)..... 3

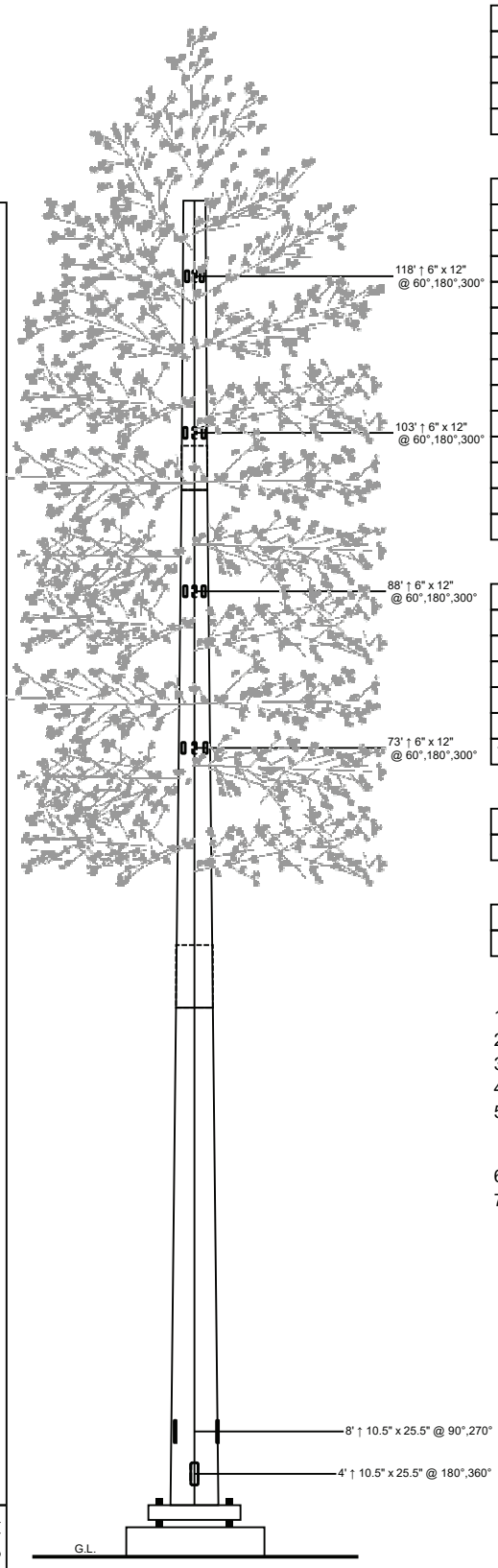
Pole Calculations..... 4-24

Foundation Calculations..... 25-34



Digitally Signed By Amy R. Herbst
DN: C=US,SERIALNUMBER=MAS20250205984400,ST=Texas,L=Alvarado,2.5.4.97=NTRUS\+DE-4349737,O=SABRE INDUSTRIES\, INC.,CN=Amy R. Herbst Date: 2025.03.10 13:05:22

Length (ft)	53'-3"	53'-6"	27'-6"
Number Of Sides	18		
Thickness (in)	1/2"	3/8"	1/4"
Lap Splice (ft)	6' - 0"		4' - 3"
Top Diameter (in)	40.29"	29.26"	24"
Bottom Diameter (in)	53.49"	42.53"	30.82"
Taper (in/ft)	0.2479		
Grade	A572-65		
Weight (lbs)	15963	8342	2318
Overall Steel Height (ft)	124		



Designed Appurtenance Loading

Elev	Description	Tx-Line
120	(1) 40,000 Sq. In. EPA 6000# (no ice)	(12) 1 5/8"
105	(1) 30,000 sq. in. EPA 6,000# (no ice)	(12) 1 5/8"
90	(1) 30,000 sq. in. EPA 6,000# (no ice)	(12) 1 5/8"
75	(1) 30,000 sq. in. EPA 6,000# (no ice)	(12) 1 5/8"

Design Criteria - ANSI/TIA-222-H

Wind Speed (No Ice)	105 mph
Wind Speed (Ice)	30 mph
Design Ice Thickness	1.50 in
Risk Category	II
Exposure Category	C
Topographic Factor Procedure	Method 1 (Simplified)
Topographic Category	1
Ground Elevation	742 ft
Seismic Importance Factor, Ie	1.00
0.2-sec Spectral Response, Ss	0.294 g
1-sec Spectral Response, S1	0.143 g
Site Class	D (DEFAULT)
Seismic Design Category	D
Basic Seismic Force-Resisting System	Telecommunication Tower (Pole: Steel)

Limit State Load Combination Reactions

Load Combination	Axial (kips)	Shear (kips)	Moment (ft-k)	Deflection (ft)	Sway (deg)
1.2 D + 1.0 Wo	70.22	64.1	6121.83	7.96	6.33
0.9 D + 1.0 Wo	52.73	64.14	6066.92	7.87	6.26
1.2 D + 1.0 Di + 1.0 Wi	129.29	8.55	852.34	1.14	0.9
1.2 D + 1.0 Ev + 1.0 Eh	73.5	3.27	336.34	0.46	0.37
0.9 D - 1.0 Ev + 1.0 Eh	48.86	3.24	327.62	0.45	0.36
1.0 D + 1.0 Wo (Service @ 60 mph)	58.35	18.77	1786.21	2.34	1.85

Base Plate Dimensions

Shape	Diameter	Thickness	Bolt Circle	Bolt Qty	Bolt Diameter
Round	66.25"	2.5"	60.5"	22	2.25"

Anchor Bolt Dimensions

Length	Diameter	Hole Diameter	Weight	Type	Finish
84"	2.25"	2.625"	2664.2	A615-75	Galv

Notes

1) Antenna Feed Lines Run Inside Pole
2) All dimensions are above ground level, unless otherwise specified.
3) Weights shown are estimates. Final weights may vary.
4) Full Height Step Bolts
5) This tower design and, if applicable, the foundation design(s) shown on the following page(s) also meet or exceed the requirements of the 2012 International Building Code.
6) Tower Rating: 95.4%
7) This structure has been designed to support pine tree branches starting at the 62' elevation to an overall height of 130'.

Sabre Industries
INNOVATION DELIVERED

Sabre Industries
7101 Southbridge Drive
P.O. Box 658
Sioux City, IA 51102-0658
Phone: (712) 258-6690
Fax: (712) 279-0814

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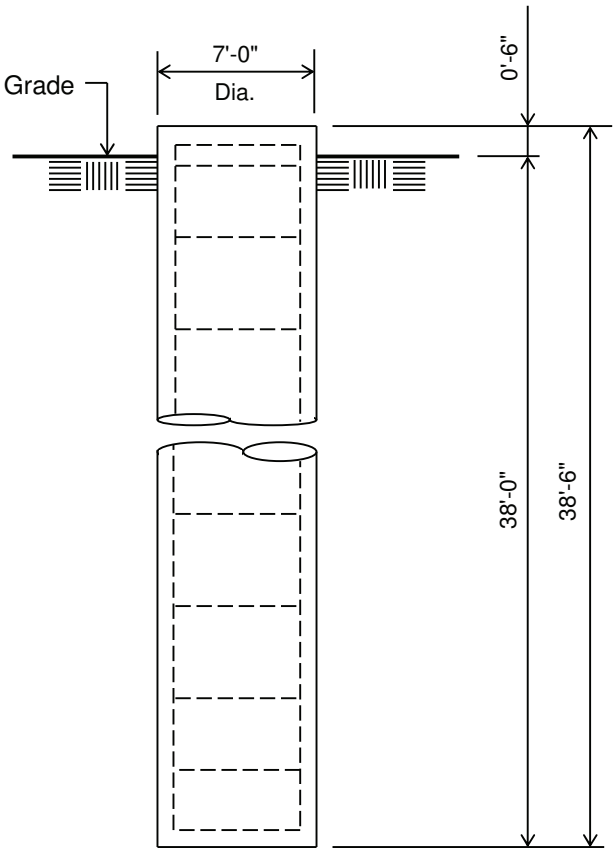
Job:	**25-4001-JDS**
Customer:	VOGUE TOWERS
Site Name:	Lanton, TN TN-5001
Description:	125' Monopine
Date:	3/10/2025 By: ARH

No.: 25-4001-JDS
Date: 03/10/25
By: ARH

Customer: VOGUE TOWERS
Site: Lanton, TN TN-5001
125' Monopine

PRELIMINARY -NOT FOR CONSTRUCTION-



ELEVATION VIEW
(54.88 Cu. Yds.)
(1 REQUIRED; NOT TO SCALE)

Notes:

1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-14.
2) Rebar to conform to ASTM specification A615 Grade 60.
3) All rebar to have a minimum of 3" concrete cover.
4) All exposed concrete corners to be chamfered 3/4".
5) The foundation design is based on presumptive clay soil as defined in ANSI/TIA-222-H-2017. It is recommended that a soil analysis of the site be performed to verify the soil parameters used in the design.
6) This foundation is designed for a max capacity ratio of 99.5%.
7) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

Rebar Schedule for Pier	
Pier	(38) #10 vertical rebar w/ #5 ties, (2) within top 5" of pier, then 8" C/C

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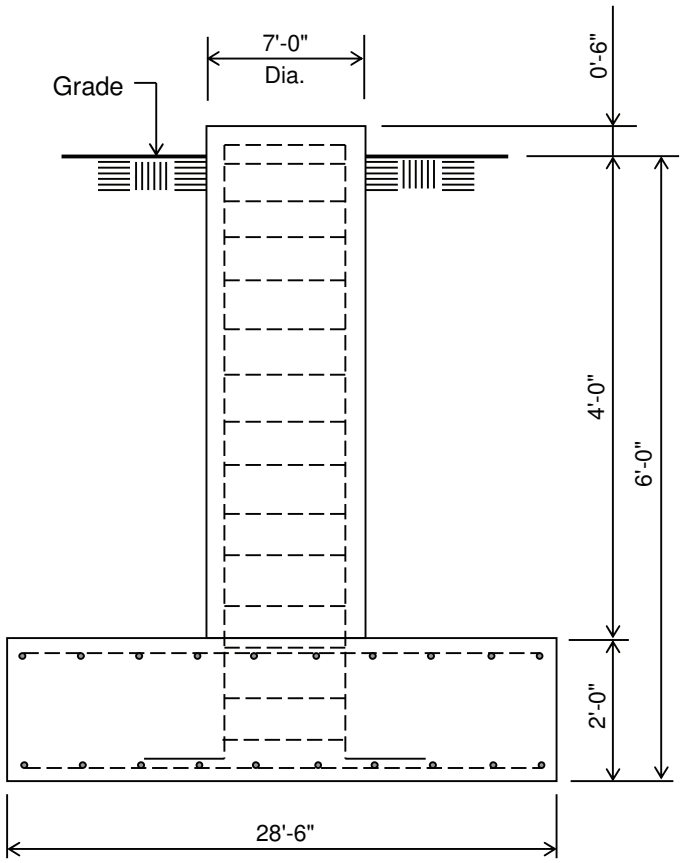
7101 Southbridge Drive - P.O. Box 658 - Sioux City, IA 51102-0658 - Phone 712.258.6690 - Fax 712.279.0814

No.: 25-4001-JDS
Date: 03/10/25
By: ARH

Customer: VOGUE TOWERS
Site: Lanton, TN TN-5001
125' Monopine

PRELIMINARY -NOT FOR CONSTRUCTION-



ELEVATION VIEW
(66.58 Cu. Yds.)
(1 REQUIRED; NOT TO SCALE)

Notes:

1) Concrete shall have a minimum 28-day compressive strength of 4,500 psi, in accordance with ACI 318-14.
2) Rebar to conform to ASTM specification A615 Grade 60.
3) All rebar to have a minimum of 3" concrete cover.
4) All exposed concrete corners to be chamfered 3/4".
5) The foundation design is based on presumptive clay soil as defined in ANSI/TIA-222-H-2017. It is recommended that a soil analysis of the site be performed to verify the soil parameters used in the design.
6) 4 ft of soil cover is required over the entire area of the foundation slab.
7) This foundation is designed for a max capacity ratio of 99.5%.
8) The bottom anchor bolt template shall be positioned as closely as possible to the bottom of the anchor bolts.

Rebar Schedule for Pad and Pier	
Pier	(42) #9 vertical rebar w/ hooks at bottom w/ #5 ties, (2) within top 5" of pier, then 4" C/C
Pad	(41) #10 horizontal rebar evenly spaced each way top and bottom (164 total)

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125' Monopine / Lanton, TN

* All pole diameters shown on the following pages are across corners.
See profile drawing for widths across flats.

POLE GEOMETRY

ELEV ft	SECTION NAME	No. SIDE	OUTSIDE DIAM in	THICK -NESS in	RESISTANCES ϕ*Pn kip	ϕ*Mn ft-kip	SPLICE TYPE	...OVERLAP... LENGTH ft	RATIO	w/t
124.0										
			24.37	0.250	1400.1	682.2				
	A	18								15.7
			30.22	0.250	1647.1	999.0				
100.7										
			30.22	0.250	1647.1	999.0				
	A/B	18					SLIP	4.25	1.68	
			30.79	0.375	2648.5	1624.2				
96.5										
			30.79	0.375	2648.5	1624.2				
	B	18								13.3
			41.66	0.375	3475.8	2902.5				
53.2										
			41.66	0.375	3475.8	2902.5				
	B/C	18					SLIP	6.00	1.72	
			42.43	0.500	4868.0	4117.1				
47.2										
			42.43	0.500	4868.0	4117.1				
	C	18								13.9
			54.31	0.500	6065.9	6601.4				
0.0										

POLE ASSEMBLY

SECTION NAME	BASE ELEV ft	.....BOLTS AT BASE OF SECTION..... NUMBER	TYPE	DIAM in	STRENGTH ksi	THREADS IN SHEAR PLANE	CALC BASE ELEV ft
A	96.500	0	A325	0.00	92.0	0	96.500
B	47.250	0	A325	0.00	92.0	0	47.250
C	0.000	0	A325	0.00	92.0	0	0.000

POLE SECTIONS

SECTION NAME	No.of SIDES	LENGTH	OUTSIDE.DIAMETER BOT *	OUTSIDE.DIAMETER TOP *	BEND RAD	MAT-ERIAL ID	FLANGE.ID BOT	FLANGE.ID TOP	FLANGE.WELD ..GROUP.ID.. BOT	FLANGE.WELD ..GROUP.ID.. TOP
		ft	in	in	in					
A	18	27.50	31.29	24.37	0.625	1	0	0	0	0
B	18	53.50	43.18	29.72	0.625	2	0	0	0	0
C	18	53.25	54.31	40.91	0.625	3	0	0	0	0

* - Diameter of circumscribed circle

MATERIAL TYPES
==============

TYPE OF SHAPE	TYPE NO	NO OF ELEM.	ORIENT &	HEIGHT	WIDTH	.THICKNESS. WEB	FLANGE	IRREGULARITY .PROJECTION. % OF AREA	ORIENT
			deg	in	in	in	in		deg
PL	1	1	0.0	31.29	0.25	0.250	0.250	0.00	0.0
PL	2	1	0.0	43.18	0.38	0.375	0.375	0.00	0.0
PL	3	1	0.0	54.31	0.50	0.500	0.500	0.00	0.0

& - With respect to vertical

MATERIAL PROPERTIES
==================

MATERIAL TYPE NO.	ELASTIC MODULUS	UNIT WEIGHT	.. STRENGTH .. Fu	Fy	THERMAL COEFFICIENT
	ksi	pcf	ksi	ksi	/deg
1	29000.0	490.0	80.0	65.0	0.00001170
2	29000.0	490.0	80.0	65.0	0.00001170
3	29000.0	490.0	80.0	65.0	0.00001170

* Only 5 condition(s) shown in full

==========

LOADING CONDITION A ==========

105 mph wind with no ice. Wind Azimuth: 0° (1.2 D + 1.0 Wo)

LOADS ON POLE
=============

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	126.500	0.00	0.0	0.0	0.9561	0.3000	0.0000	0.0000
C	122.000	0.00	0.0	0.0	0.0111	0.0067	0.0000	0.0000

C	121.500	0.00	0.0	0.0	0.9481	0.3000	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.0000	1.7821	0.0000	0.0000
C	119.000	0.00	0.0	0.0	10.4975	7.2000	0.0000	0.0000
C	116.500	0.00	0.0	0.0	1.8797	0.6000	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0273	0.0168	0.0000	0.0000
C	111.500	0.00	0.0	0.0	1.8626	0.6000	0.0000	0.0000
C	106.500	0.00	0.0	0.0	1.8448	0.6000	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0268	0.0168	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.0000	1.5575	0.0000	0.0000
C	104.000	0.00	0.0	0.0	7.6365	7.2000	0.0000	0.0000
C	101.500	0.00	0.0	0.0	1.8264	0.6000	0.0000	0.0000
C	96.500	0.00	0.0	0.0	1.8073	0.6000	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0262	0.0168	0.0000	0.0000
C	91.500	0.00	0.0	0.0	1.7874	0.6000	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0000	1.3329	0.0000	0.0000
C	89.000	0.00	0.0	0.0	7.3927	7.2000	0.0000	0.0000
C	86.500	0.00	0.0	0.0	1.7666	0.6000	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0256	0.0168	0.0000	0.0000
C	81.500	0.00	0.0	0.0	1.7448	0.6000	0.0000	0.0000
C	76.500	0.00	0.0	0.0	1.7220	0.6000	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0250	0.0168	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0000	1.1082	0.0000	0.0000
C	74.000	0.00	0.0	0.0	7.1143	7.2000	0.0000	0.0000
C	71.500	0.00	0.0	0.0	1.8868	0.6000	0.0000	0.0000
C	66.500	0.00	0.0	0.0	1.8587	0.6000	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0242	0.0168	0.0000	0.0000
C	63.500	0.00	0.0	0.0	1.1046	0.3600	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0234	0.0168	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0224	0.0168	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0213	0.0168	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0198	0.0168	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0178	0.0168	0.0000	0.0000
D	124.000	0.00	180.0	0.0	0.0495	0.0784	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0573	0.0942	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0586	0.2406	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0586	0.2406	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0599	0.1495	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0699	0.1937	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0703	0.4641	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0703	0.4641	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0709	0.2726	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0665	0.3195	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0667	0.3289	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0686	0.3383	0.0000	0.0000

==========

LOADING CONDITION M ==========

105 mph wind with no ice. Wind Azimuth: 0° (0.9 D + 1.0 Wo)

LOADS ON POLE
==========

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	......FORCES...... HORIZ	DOWN	......MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip

C	126.500	0.00	0.0	0.0	0.9561	0.2250	0.0000	0.0000
C	122.000	0.00	0.0	0.0	0.0111	0.0050	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.9481	0.2250	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.0000	1.3366	0.0000	0.0000
C	119.000	0.00	0.0	0.0	10.4975	5.4000	0.0000	0.0000
C	116.500	0.00	0.0	0.0	1.8797	0.4500	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0273	0.0126	0.0000	0.0000
C	111.500	0.00	0.0	0.0	1.8626	0.4500	0.0000	0.0000
C	106.500	0.00	0.0	0.0	1.8448	0.4500	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0268	0.0126	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.0000	1.1681	0.0000	0.0000
C	104.000	0.00	0.0	0.0	7.6365	5.4000	0.0000	0.0000
C	101.500	0.00	0.0	0.0	1.8264	0.4500	0.0000	0.0000
C	96.500	0.00	0.0	0.0	1.8073	0.4500	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0262	0.0126	0.0000	0.0000
C	91.500	0.00	0.0	0.0	1.7874	0.4500	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0000	0.9996	0.0000	0.0000
C	89.000	0.00	0.0	0.0	7.3927	5.4000	0.0000	0.0000
C	86.500	0.00	0.0	0.0	1.7666	0.4500	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0256	0.0126	0.0000	0.0000
C	81.500	0.00	0.0	0.0	1.7448	0.4500	0.0000	0.0000
C	76.500	0.00	0.0	0.0	1.7220	0.4500	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0250	0.0126	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0000	0.8312	0.0000	0.0000
C	74.000	0.00	0.0	0.0	7.1143	5.4000	0.0000	0.0000
C	71.500	0.00	0.0	0.0	1.8868	0.4500	0.0000	0.0000
C	66.500	0.00	0.0	0.0	1.8587	0.4500	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0242	0.0126	0.0000	0.0000
C	63.500	0.00	0.0	0.0	1.1046	0.2700	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0234	0.0126	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0224	0.0126	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0213	0.0126	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0198	0.0126	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0178	0.0126	0.0000	0.0000
D	124.000	0.00	180.0	0.0	0.0495	0.0588	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0573	0.0707	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0586	0.1804	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0586	0.1804	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0599	0.1121	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0699	0.1453	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0703	0.3481	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0703	0.3481	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0709	0.2044	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0665	0.2396	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0667	0.2467	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0686	0.2537	0.0000	0.0000

==========

LOADING CONDITION Y ==========

30 mph wind with 1.5 ice. Wind Azimuth: 0° (1.2 D + 1.0 Di + 1.0 Wi)

LOADS ON POLE
==========

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL

	ft	ft			kip	kip	ft-kip	ft-kip
C	126.500	0.00	0.0	0.0	0.0995	0.9868	0.0000	0.0000
C	122.000	0.00	0.0	0.0	0.0070	0.0187	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.0986	0.9841	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.0000	1.7821	0.0000	0.0000
C	119.000	0.00	0.0	0.0	1.4415	17.4402	0.0000	0.0000
C	116.500	0.00	0.0	0.0	0.2162	1.2812	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0172	0.0288	0.0000	0.0000
C	111.500	0.00	0.0	0.0	0.2139	1.2783	0.0000	0.0000
C	106.500	0.00	0.0	0.0	0.2116	1.2752	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0167	0.0288	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.0000	1.5575	0.0000	0.0000
C	104.000	0.00	0.0	0.0	1.0439	17.3044	0.0000	0.0000
C	101.500	0.00	0.0	0.0	0.2092	1.2720	0.0000	0.0000
C	96.500	0.00	0.0	0.0	0.2067	1.2687	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0162	0.0288	0.0000	0.0000
C	91.500	0.00	0.0	0.0	0.2041	1.2651	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0000	1.3329	0.0000	0.0000
C	89.000	0.00	0.0	0.0	1.0044	17.1498	0.0000	0.0000
C	86.500	0.00	0.0	0.0	0.2014	1.2615	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0157	0.0288	0.0000	0.0000
C	81.500	0.00	0.0	0.0	0.1986	1.2576	0.0000	0.0000
C	76.500	0.00	0.0	0.0	0.1957	1.2535	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0151	0.0288	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0000	1.1082	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.9596	16.9701	0.0000	0.0000
C	71.500	0.00	0.0	0.0	0.2080	1.2491	0.0000	0.0000
C	66.500	0.00	0.0	0.0	0.2045	1.2445	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0145	0.0288	0.0000	0.0000
C	63.500	0.00	0.0	0.0	0.2023	1.2416	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0138	0.0288	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0130	0.0288	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0121	0.0288	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0109	0.0288	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0094	0.0288	0.0000	0.0000
D	124.000	0.00	180.0	0.0	0.0080	0.1338	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0091	0.1590	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0093	0.3069	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0093	0.3069	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0094	0.2174	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0107	0.2763	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0108	0.5483	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0108	0.5483	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0108	0.3579	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0100	0.4088	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0100	0.4156	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0102	0.4195	0.0000	0.0000

==========

LOADING CONDITION AK ==========

Seismic - Azimuth: 0° (1.2 D + 1.0 Ev + 1.0 Eh)

LOADS ON POLE
==========

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	......FORCES...... HORIZ kip	DOWN kip	......MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	126.500	0.00	0.0	0.0	0.0317	0.3154	0.0000	0.0000
C	122.000	0.00	0.0	0.0	0.0007	0.0070	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.0293	0.3154	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.6735	7.5684	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.1667	1.8733	0.0000	0.0000
C	116.500	0.00	0.0	0.0	0.0538	0.6307	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0015	0.0177	0.0000	0.0000
C	111.500	0.00	0.0	0.0	0.0493	0.6307	0.0000	0.0000
C	110.250	0.00	0.0	0.0	0.1938	2.5374	0.0000	0.0000
C	106.500	0.00	0.0	0.0	0.0450	0.6307	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0012	0.0177	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.5144	7.5684	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.1113	1.6372	0.0000	0.0000
C	101.500	0.00	0.0	0.0	0.0408	0.6307	0.0000	0.0000
C	96.500	0.00	0.0	0.0	0.0369	0.6307	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0010	0.0177	0.0000	0.0000
C	91.500	0.00	0.0	0.0	0.0332	0.6307	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.3767	7.5684	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0697	1.4010	0.0000	0.0000
C	86.500	0.00	0.0	0.0	0.0297	0.6307	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0008	0.0177	0.0000	0.0000
C	81.500	0.00	0.0	0.0	0.0263	0.6307	0.0000	0.0000
C	76.500	0.00	0.0	0.0	0.0232	0.6307	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0006	0.0177	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.2604	7.5684	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0401	1.1649	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.3332	9.6838	0.0000	0.0000
C	71.500	0.00	0.0	0.0	0.0203	0.6307	0.0000	0.0000
C	66.500	0.00	0.0	0.0	0.0175	0.6307	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0005	0.0177	0.0000	0.0000
C	63.500	0.00	0.0	0.0	0.0160	0.6307	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0003	0.0177	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0002	0.0177	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0001	0.0177	0.0000	0.0000
C	26.620	0.00	0.0	0.0	0.0747	16.7844	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0001	0.0177	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0000	0.0177	0.0000	0.0000
D	124.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000
D	0.000	0.00	180.0	180.0	0.0000	0.0000	0.0000	0.0000

==========

LOADING CONDITION AL ==========

Seismic - Azimuth: 0° (0.9 D - 1.0 Ev + 1.0 Eh)

LOADS ON POLE
==========

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	......FORCES...... HORIZ kip	DOWN kip	......MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	126.500	0.00	0.0	0.0	0.0317	0.2096	0.0000	0.0000

```
C      122.000      0.00    0.0    0.0    0.0007    0.0047    0.0000    0.0000
C      121.500      0.00    0.0    0.0    0.0293    0.2096    0.0000    0.0000
C      119.000      0.00    0.0    0.0    0.6735    5.0316    0.0000    0.0000
C      119.000      0.00    0.0    0.0    0.1667    1.2454    0.0000    0.0000
C      116.500      0.00    0.0    0.0    0.0538    0.4193    0.0000    0.0000
C      115.000      0.00    0.0    0.0    0.0015    0.0117    0.0000    0.0000
C      111.500      0.00    0.0    0.0    0.0493    0.4193    0.0000    0.0000
C      110.250      0.00    0.0    0.0    0.1938    1.6869    0.0000    0.0000
C      106.500      0.00    0.0    0.0    0.0450    0.4193    0.0000    0.0000
C      105.000      0.00    0.0    0.0    0.0012    0.0117    0.0000    0.0000
C      104.000      0.00    0.0    0.0    0.5144    5.0316    0.0000    0.0000
C      104.000      0.00    0.0    0.0    0.1113    1.0884    0.0000    0.0000
C      101.500      0.00    0.0    0.0    0.0408    0.4193    0.0000    0.0000
C       96.500      0.00    0.0    0.0    0.0369    0.4193    0.0000    0.0000
C       95.000      0.00    0.0    0.0    0.0010    0.0117    0.0000    0.0000
C       91.500      0.00    0.0    0.0    0.0332    0.4193    0.0000    0.0000
C       89.000      0.00    0.0    0.0    0.3767    5.0316    0.0000    0.0000
C       89.000      0.00    0.0    0.0    0.0697    0.9314    0.0000    0.0000
C       86.500      0.00    0.0    0.0    0.0297    0.4193    0.0000    0.0000
C       85.000      0.00    0.0    0.0    0.0008    0.0117    0.0000    0.0000
C       81.500      0.00    0.0    0.0    0.0263    0.4193    0.0000    0.0000
C       76.500      0.00    0.0    0.0    0.0232    0.4193    0.0000    0.0000
C       75.000      0.00    0.0    0.0    0.0006    0.0117    0.0000    0.0000
C       74.000      0.00    0.0    0.0    0.2604    5.0316    0.0000    0.0000
C       74.000      0.00    0.0    0.0    0.0401    0.7745    0.0000    0.0000
C       74.000      0.00    0.0    0.0    0.3332    6.4379    0.0000    0.0000
C       71.500      0.00    0.0    0.0    0.0203    0.4193    0.0000    0.0000
C       66.500      0.00    0.0    0.0    0.0175    0.4193    0.0000    0.0000
C       65.000      0.00    0.0    0.0    0.0005    0.0117    0.0000    0.0000
C       63.500      0.00    0.0    0.0    0.0160    0.4193    0.0000    0.0000
C       55.000      0.00    0.0    0.0    0.0003    0.0117    0.0000    0.0000
C       45.000      0.00    0.0    0.0    0.0002    0.0117    0.0000    0.0000
C       35.000      0.00    0.0    0.0    0.0001    0.0117    0.0000    0.0000
C       26.620      0.00    0.0    0.0    0.0747   11.1586    0.0000    0.0000
C       25.000      0.00    0.0    0.0    0.0001    0.0117    0.0000    0.0000
C       15.000      0.00    0.0    0.0    0.0000    0.0117    0.0000    0.0000

D      124.000      0.00  180.0  180.0    0.0000    0.0000    0.0000    0.0000
D        0.000      0.00  180.0  180.0    0.0000    0.0000    0.0000    0.0000

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125' Monopine / Lanton, TN


MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)
============================================================

  MAST   .......DEFLECTIONS (ft).........   .........ROTATIONS (deg).........
```

ELEV	HORIZONTAL		DOWN	TILT		TWIST
ft	ALONG	ACROSS		ALONG	ACROSS	
124.0	7.96L	0.06F	0.67L	6.33L	0.05F	0.00E
120.7	7.60L	0.06F	0.63L	6.33L	0.05F	0.00E
117.4	7.24L	0.05F	0.59L	6.32L	0.05F	0.00E
114.0	6.88L	0.05F	0.55L	6.29L	0.05F	0.00E
110.7	6.52L	-0.05U	0.51L	6.24L	0.05F	0.00E
107.4	6.16L	-0.05U	0.47L	6.16L	0.05F	0.00E
104.1	5.81L	-0.04U	0.44L	6.07L	0.05F	0.00E
100.7	5.47L	-0.04U	0.40L	5.95L	0.05F	0.00E
96.5	5.03L	-0.04U	0.36L	5.82L	0.04F	0.00E
90.3	4.42L	-0.03U	0.29L	5.58L	0.04F	0.00E
84.1	3.84L	-0.03U	0.24L	5.30L	0.04F	0.00E
78.0	3.29L	-0.02U	0.19L	4.96L	-0.04U	0.00E
71.8	2.78L	-0.02U	0.15L	4.59L	-0.03U	0.00E
65.6	2.31L	-0.02U	0.11L	4.18L	-0.03U	0.00E
59.4	1.89L	-0.01U	0.08L	3.74L	-0.03U	0.00E
53.2	1.51L	-0.01U	0.06L	3.27L	-0.02U	0.00E
47.2	1.19L	-0.01U	0.04L	2.92L	-0.02U	0.00E
41.3	0.91L	-0.01U	0.03L	2.55L	-0.02U	0.00E
35.4	0.66L	0.00U	0.02L	2.18L	-0.02U	0.00E
29.5	0.46L	0.00U	0.01L	1.80L	-0.01U	0.00E
23.6	0.29L	0.00U	0.01L	1.43L	-0.01U	0.00E
17.7	0.16L	0.00U	0.00L	1.07L	-0.01U	0.00E
11.8	0.07L	0.00U	0.00L	0.70L	-0.01U	0.00E
5.9	0.02L	0.00U	0.00AB	0.35L	0.00U	0.00E
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

MAST ELEV	TOTAL AXIAL	SHEAR.w.r.t.WIND.DIR ALONG	ACROSS	MOMENT.w.r.t.WIND.DIR ALONG	ACROSS	TORSION
ft	kip	kip	kip	ft-kip	ft-kip	ft-kip

```
124.0  ..................................................................
         0.99 AA     1.04 K      0.03 X     -2.54 R      0.05 X     -0.01 X

         2.44 AA     2.16 K      0.03 X     -6.92 B     -0.05 X      0.01 X
120.7  ..................................................................
         2.44 AF     2.31 B     -0.14 N     -6.97 L      0.11 Q     -0.02 Q

        22.13 AF    12.98 B     -0.14 N    -33.53 B      0.46 N      0.04 L
117.4  ..................................................................
        22.13 AF    13.00 A     -0.24 X    -33.69 B      0.49 N      0.05 L

        23.91 AF    15.08 A     -0.24 X    -84.28 K      0.83 X      0.08 L
114.0  ..................................................................
        23.91 AF    15.12 M     -0.28 T    -84.32 K      1.00 X     -0.10 X

        25.68 AF    17.16 M     -0.28 T   -139.48 A      1.36 T      0.13 R
110.7  ..................................................................
        25.68 AF    17.17 M     -0.25 T   -139.65 A      1.37 T     -0.12 T

        26.18 AF    17.35 M     -0.25 T   -199.54 A      2.19 T     -0.19 T
107.4  ..................................................................
        26.18 AF    17.24 C     -0.34 T   -199.54 A      1.98 T      0.20 U

        27.99 AF    19.30 C     -0.34 T   -265.04 C      3.10 T     -0.28 T
104.1  ..................................................................
        27.99 AD    19.28 M      0.37 F   -265.45 C      3.09 T     -0.28 T

        48.65 AD    28.93 M      0.37 F   -362.47 C      3.87 T      0.34 R
100.7  ..................................................................
        48.65 AF    29.02 M     -0.35 H   -362.82 C      3.99 T     -0.35 T

        49.95 AF    29.27 M     -0.35 H   -494.84 C      5.11 T     -0.44 T
 96.5  ..................................................................
        51.22 AF    31.14 M      0.36 F   -494.83 C      5.04 T     -0.45 C

        53.88 AF    33.33 M      0.36 F   -702.44 C      6.93 T     -0.59 T
 90.3  ..................................................................
        53.88 AF    33.30 M      0.35 F   -702.54 C      6.98 T     -0.60 T

        75.08 AF    42.86 M      0.35 F   -965.20 L     -8.89 F     -0.72 H
 84.1  ..................................................................
        75.08 AF    42.88 L     -0.38 U   -965.23 L     -8.92 F     -0.72 T

        77.81 AF    45.02 L     -0.38 U  -1255.56 L    -11.30 F     -0.88 H
 78.0  ..................................................................
        77.81 AF    45.03 M     -0.43 U  -1255.65 L    -11.33 F     -0.88 H

        98.70 AF    54.29 M     -0.43 U  -1577.57 L    -13.86 F      1.10 E
 71.8  ..................................................................
        98.69 AF    54.37 M      0.43 F  -1577.66 L    -13.84 F      1.10 E

       102.77 AF    58.52 M      0.43 F  -1947.58 L    -16.59 F      1.29 E
 65.6  ..................................................................
       102.77 AF    58.41 M     -0.46 U  -1947.67 L    -16.58 F      1.28 E

       105.66 AF    59.96 M     -0.46 U  -2333.30 L    -18.80 F      1.47 E
 59.4  ..................................................................
       105.66 AF    60.02 M     -0.45 U  -2333.39 L    -18.84 F      1.47 E
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         107.37 AF    60.47 M     -0.45 U  -2722.70 L    -20.98 F      1.62 E
   53.2  ..........................................................................
         107.37 AF    60.49 M     -0.49 U  -2722.76 L    -20.97 F      1.63 E

         110.66 AF    60.91 M     -0.49 U  -3102.14 L     23.13 U      1.76 E
   47.2  ..........................................................................
         110.66 AF    60.93 M     -0.46 U  -3102.11 L     23.16 U      1.76 E

         112.83 AF    61.37 M     -0.46 U  -3477.51 L     25.91 U      1.89 E
   41.3  ..........................................................................
         112.83 AF    61.31 M     -0.42 U  -3477.55 L     25.92 U      1.89 E

         115.02 AF    61.73 M     -0.42 U  -3853.63 L     28.48 U      1.99 E
   35.4  ..........................................................................
         115.02 AF    61.69 M     -0.45 U  -3853.65 L     28.45 U      1.99 E

         117.29 AF    62.12 M     -0.45 U  -4230.58 L     31.18 U      2.08 E
   29.5  ..........................................................................
         117.29 AF    62.08 M     -0.47 U  -4230.60 L     31.20 U      2.08 E

         119.61 AF    62.51 M     -0.47 U  -4608.11 L     33.99 U      2.14 E
   23.6  ..........................................................................
         119.61 AF    62.52 M     -0.46 U  -4608.09 L     34.02 U      2.14 E

         121.94 AF    62.92 M     -0.46 U  -4986.23 L     36.79 U      2.19 E
   17.7  ..........................................................................
         121.94 AF    62.92 M     -0.47 U  -4986.25 L     36.79 U      2.19 E

         124.36 AF    63.33 M     -0.47 U  -5364.70 L     39.59 U      2.23 E
   11.8  ..........................................................................
         124.36 AF    63.33 M     -0.46 U  -5364.71 L     39.59 U      2.23 E

         126.82 AF    63.72 M     -0.46 U  -5743.22 L     42.34 U      2.25 E
    5.9  ..........................................................................
         126.82 AF    63.74 M     -0.47 U  -5743.22 L     42.34 U      2.25 E

         129.29 AF    64.14 M     -0.47 U  -6121.83 L     45.11 U      2.26 E
--------------------------------------------------------------------------------
 base
 reaction  129.29 AF   -64.14 M      0.47 U   6121.83 L    -45.11 U     -2.26 E
--------------------------------------------------------------------------------


 COMPLIANCE WITH 4.8.2 & 4.5.4
 =============================

   ELEV       AXIAL   BENDING SHEAR +       TOTAL SATISFIED  D/t(w/t)   MAX
                              TORSIONAL                                  ALLOWED
     ft

 124.00  ..........................................................................
             0.00AA    0.00R     0.00K     0.00R     YES      15.69A       45.2

             0.00AA    0.01B     0.00K     0.01B     YES      16.27A       45.2
 120.68  ..........................................................................
             0.00AF    0.01L     0.00B     0.01L     YES      16.27A       45.2

             0.01AF    0.04B     0.02B     0.05B     YES      16.85A       45.2
 117.36  ..........................................................................
             0.01AF    0.04B     0.02A     0.05B     YES      16.85A       45.2
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          0.02AF    0.10K     0.02A     0.11K     YES      17.44A       45.2
114.04 ..........................................................................
          0.02AF    0.10K     0.02M     0.11K     YES      17.44A       45.2

          0.02AF    0.16A     0.02M     0.17A     YES      18.02A       45.2
110.71 ..........................................................................
          0.02AF    0.16A     0.02M     0.17A     YES      18.02A       45.2

          0.02AF    0.22A     0.02M     0.23A     YES      18.60A       45.2
107.39 ..........................................................................
          0.02AF    0.22A     0.02C     0.23A     YES      18.60A       45.2

          0.02AF    0.28C     0.02C     0.29A     YES      19.18A       45.2
104.07 ..........................................................................
          0.02AD    0.28C     0.02M     0.29C     YES      19.18A       45.2

          0.03AD    0.36C     0.04M     0.38C     YES      19.76A       45.2
100.75 ..........................................................................
          0.02AF    0.23C     0.02M     0.24C     YES      13.06A       45.2

          0.02AF    0.29C     0.02M     0.30C     YES      13.55A       45.2
 96.50 ..........................................................................
          0.02AF    0.30C     0.02M     0.31C     YES      13.32A       45.2

          0.02AF    0.39C     0.02M     0.40C     YES      14.04A       45.2
 90.32 ..........................................................................
          0.02AF    0.39C     0.02M     0.40C     YES      14.04A       45.2

          0.03AF    0.49L     0.03M     0.50L     YES      14.76A       45.2
 84.14 ..........................................................................
          0.03AF    0.49L     0.03L     0.50L     YES      14.76A       45.2

          0.03AF    0.58L     0.03L     0.59L     YES      15.48A       45.2
 77.96 ..........................................................................
          0.03AF    0.58L     0.03M     0.59L     YES      15.48A       45.2

          0.03AF    0.67L     0.03M     0.69L     YES      16.20A       45.2
 71.79 ..........................................................................
          0.03AF    0.67L     0.03M     0.69L     YES      16.20A       45.2

          0.03AF    0.77L     0.04M     0.79L     YES      16.92A       45.2
 65.61 ..........................................................................
          0.03AF    0.77L     0.04M     0.79L     YES      16.92A       45.2

          0.03AF    0.86L     0.04M     0.88L     YES      17.64A       45.2
 59.43 ..........................................................................
          0.03AF    0.86L     0.04M     0.88L     YES      17.64A       45.2

          0.03AF    0.94L     0.03M     0.95L     YES      18.36A       45.2
 53.25 ..........................................................................
          0.02AF    0.69L     0.03M     0.70L     YES      13.68A       45.2

          0.02AF    0.73L     0.02M     0.74L     YES      14.20A       45.2
 47.25 ..........................................................................
          0.02AF    0.75L     0.03M     0.77L     YES      13.94A       45.2

          0.02AF    0.79L     0.02M     0.80L     YES      14.46A       45.2
 41.34 ..........................................................................
          0.02AF    0.79L     0.02M     0.80L     YES      14.46A       45.2

          0.02AF    0.82L     0.02M     0.83L     YES      14.97A       45.2
```

```
 35.44  ..........................................................................
           0.02AF    0.82L     0.02M     0.83L     YES      14.97A       45.2

           0.02AF    0.84L     0.02M     0.85L     YES      15.49A       45.2
 29.53  ..........................................................................
           0.02AF    0.84L     0.02M     0.85L     YES      15.49A       45.2

           0.02AF    0.86L     0.02E     0.87L     YES      16.01A       45.2
 23.62  ..........................................................................
           0.02AF    0.86L     0.02M     0.87L     YES      16.01A       45.2

           0.02AF    0.88L     0.02E     0.89L     YES      16.52A       45.2
 17.72  ..........................................................................
           0.02AF    0.88L     0.02E     0.89L     YES      16.52A       45.2

           0.02AF    0.90L     0.02E     0.91L     YES      17.04A       45.2
 11.81  ..........................................................................
           0.02AF    0.90L     0.02E     0.91L     YES      17.04A       45.2

           0.02AF    0.91L     0.02E     0.93L     YES      17.55A       45.2
  5.91  ..........................................................................
           0.02AF    0.91L     0.02E     0.93L     YES      17.55A       45.2

           0.02AF    0.93L     0.02E     0.94L     YES      18.07A       45.2
  0.00  ..........................................................................

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)
====================================================

    DOWN    SHEAR.w.r.t.WIND.DIR   MOMENT.w.r.t.WIND.DIR     TORSION
               ALONG      ACROSS       ALONG      ACROSS
     kip         kip         kip      ft-kip      ft-kip      ft-kip

  129.29       64.14       -0.47    -6121.83       45.11        2.26
      AF          M           U           L           U           E



================================================================================


================================================================================
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Sabre Towers and Poles                              on: 10 mar 2025  at: 12:51:19
================================================================================

125' Monopine / Lanton, TN


********************************************************************************
*************************  Service Load Condition  *****************************
********************************************************************************

* Only 1 condition(s) shown in full
```

LOADING CONDITION A ==========

60 mph wind with no ice. Wind Azimuth: 0° (1.0 D + 1.0 Wo)

LOADS ON POLE
==========

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	126.500	0.00	0.0	0.0	0.2793	0.2500	0.0000	0.0000
C	122.000	0.00	0.0	0.0	0.0032	0.0056	0.0000	0.0000
C	121.500	0.00	0.0	0.0	0.2770	0.2500	0.0000	0.0000
C	119.000	0.00	0.0	0.0	0.0000	1.4851	0.0000	0.0000
C	119.000	0.00	0.0	0.0	3.0669	6.0000	0.0000	0.0000
C	116.500	0.00	0.0	0.0	0.5492	0.5000	0.0000	0.0000
C	115.000	0.00	0.0	0.0	0.0080	0.0140	0.0000	0.0000
C	111.500	0.00	0.0	0.0	0.5442	0.5000	0.0000	0.0000
C	106.500	0.00	0.0	0.0	0.5390	0.5000	0.0000	0.0000
C	105.000	0.00	0.0	0.0	0.0078	0.0140	0.0000	0.0000
C	104.000	0.00	0.0	0.0	0.0000	1.2979	0.0000	0.0000
C	104.000	0.00	0.0	0.0	2.2311	6.0000	0.0000	0.0000
C	101.500	0.00	0.0	0.0	0.5336	0.5000	0.0000	0.0000
C	96.500	0.00	0.0	0.0	0.5280	0.5000	0.0000	0.0000
C	95.000	0.00	0.0	0.0	0.0077	0.0140	0.0000	0.0000
C	91.500	0.00	0.0	0.0	0.5222	0.5000	0.0000	0.0000
C	89.000	0.00	0.0	0.0	0.0000	1.1107	0.0000	0.0000
C	89.000	0.00	0.0	0.0	2.1598	6.0000	0.0000	0.0000
C	86.500	0.00	0.0	0.0	0.5161	0.5000	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0075	0.0140	0.0000	0.0000
C	81.500	0.00	0.0	0.0	0.5098	0.5000	0.0000	0.0000
C	76.500	0.00	0.0	0.0	0.5031	0.5000	0.0000	0.0000
C	75.000	0.00	0.0	0.0	0.0073	0.0140	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0000	0.9235	0.0000	0.0000
C	74.000	0.00	0.0	0.0	2.0785	6.0000	0.0000	0.0000
C	71.500	0.00	0.0	0.0	0.5513	0.5000	0.0000	0.0000
C	66.500	0.00	0.0	0.0	0.5430	0.5000	0.0000	0.0000
C	65.000	0.00	0.0	0.0	0.0071	0.0140	0.0000	0.0000
C	63.500	0.00	0.0	0.0	0.3227	0.3000	0.0000	0.0000
C	55.000	0.00	0.0	0.0	0.0068	0.0140	0.0000	0.0000
C	45.000	0.00	0.0	0.0	0.0066	0.0140	0.0000	0.0000
C	35.000	0.00	0.0	0.0	0.0062	0.0140	0.0000	0.0000
C	25.000	0.00	0.0	0.0	0.0058	0.0140	0.0000	0.0000
C	15.000	0.00	0.0	0.0	0.0052	0.0140	0.0000	0.0000
D	124.000	0.00	180.0	0.0	0.0145	0.0653	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0168	0.0785	0.0000	0.0000
D	100.750	0.00	180.0	0.0	0.0171	0.2005	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0171	0.2005	0.0000	0.0000
D	96.500	0.00	180.0	0.0	0.0175	0.1246	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0204	0.1614	0.0000	0.0000
D	53.250	0.00	180.0	0.0	0.0205	0.3867	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0205	0.3867	0.0000	0.0000
D	47.250	0.00	180.0	0.0	0.0207	0.2271	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0194	0.2663	0.0000	0.0000
D	11.812	0.00	180.0	0.0	0.0195	0.2741	0.0000	0.0000
D	0.000	0.00	180.0	0.0	0.0201	0.2819	0.0000	0.0000

MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)

MAST ELEV ft	DEFLECTIONS (ft) HORIZONTAL ALONG	HORIZONTAL ACROSS	DOWN	ROTATIONS (deg) TILT ALONG	TILT ACROSS	TWIST
124.0	2.34L	0.02K	0.06L	1.85L	0.01K	0.00I
120.7	2.24L	0.02K	0.06L	1.85L	0.01K	0.00I
117.4	2.13L	0.02K	0.05L	1.85L	0.01K	0.00I
114.0	2.02L	0.01K	0.05L	1.84L	0.01K	0.00I
110.7	1.91L	0.01K	0.05L	1.82L	0.01K	0.00I
107.4	1.81L	0.01K	0.04L	1.80L	0.01K	0.00I
104.1	1.71L	0.01K	0.04L	1.77L	0.01K	0.00I
100.7	1.60L	0.01K	0.04L	1.74L	0.01K	0.00I
96.5	1.48L	0.01K	0.03L	1.70L	0.01K	0.00I
90.3	1.30L	0.01K	0.03L	1.63L	0.01K	0.00I
84.1	1.13L	0.01K	0.02L	1.55L	0.01K	0.00I
78.0	0.96L	0.01K	0.02L	1.45L	0.01K	0.00I
71.8	0.81L	0.01K	0.01L	1.34L	0.01K	0.00L
65.6	0.68L	0.00K	0.01L	1.22L	0.01K	0.00L
59.4	0.55L	0.00K	0.01L	1.09L	0.01K	0.00L
53.2	0.44L	0.00K	0.01L	0.95L	0.01K	0.00L
47.2	0.35L	0.00K	0.00L	0.85L	0.01K	0.00L
41.3	0.26L	0.00K	0.00L	0.74L	0.01K	0.00L
35.4	0.19L	0.00K	0.00L	0.63L	0.00K	0.00L
29.5	0.13L	0.00K	0.00L	0.53L	0.00K	0.00L
23.6	0.09L	0.00K	0.00I	0.42L	0.00K	0.00L
17.7	0.05L	0.00K	0.00I	0.31L	0.00K	0.00L
11.8	0.02L	0.00K	0.00I	0.21L	0.00K	0.00L
5.9	0.01L	0.00K	0.00I	0.10L	0.00K	0.00L
0.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)
==========

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND.DIR ALONG kip	ACROSS kip	MOMENT.w.r.t.WIND.DIR ALONG ft-kip	ACROSS ft-kip	TORSION ft-kip
124.0						
	0.25 C	0.31 E	-0.01 K	-0.77 K	-0.03 K	0.00 K
	0.73 C	0.64 E	-0.01 K	-2.02 E	-0.04 E	0.00 E
120.7						
	0.73 B	0.67 L	0.08 L	-2.04 F	0.06 L	0.00 I
	8.45 B	3.79 L	0.08 L	-9.81 L	-0.21 L	0.01 L
117.4						
	8.45 B	3.78 L	-0.05 F	-9.77 A	-0.18 C	0.01 L
	9.20 B	4.39 L	-0.05 F	-24.65 L	-0.27 L	0.01 L
114.0						
	9.20 B	4.38 A	-0.08 F	-24.69 L	-0.32 L	0.01 L
	9.94 B	4.98 A	-0.08 F	-40.69 A	0.39 F	0.01 I
110.7						
	9.94 B	5.03 A	-0.04 E	-40.69 A	0.40 F	0.01 I
	10.19 B	5.08 A	-0.04 E	-58.49 A	0.53 F	0.02 I
107.4						
	10.19 B	5.08 L	-0.09 F	-58.52 A	0.50 F	0.02 I
	10.96 B	5.68 L	-0.09 F	-77.85 L	0.79 F	0.02 I
104.1						
	10.96 B	5.70 I	0.09 K	-77.76 A	0.78 F	0.02 I
	19.01 B	8.52 I	0.09 K	-106.21 L	1.09 F	0.02 I
100.7						
	19.01 B	8.49 L	0.11 K	-106.21 L	1.12 F	0.03 I
	19.86 B	8.57 L	0.11 K	-144.89 L	1.40 F	0.03 I
96.5						
	20.36 B	9.06 L	-0.10 L	-144.88 L	1.39 F	0.03 I
	21.66 B	9.70 L	-0.10 L	-205.56 L	-1.93 K	0.04 I
90.3						
	21.66 B	9.72 L	-0.11 L	-205.57 L	-1.92 K	0.04 I
	30.10 B	12.52 L	-0.11 L	-282.38 L	-2.57 K	0.05 I
84.1						
	30.10 B	12.53 K	-0.12 L	-282.37 L	-2.57 K	0.05 I
	31.46 B	13.16 K	-0.12 L	-366.77 L	-3.21 K	0.07 I
78.0						
	31.46 B	13.16 L	-0.11 L	-366.74 L	-3.20 K	0.07 I
	39.78 B	15.87 L	-0.11 L	-460.57 L	-3.79 K	0.08 I
71.8						
	39.78 B	15.87 L	-0.11 L	-460.56 L	-3.78 K	0.08 I
	41.69 B	17.08 L	-0.11 L	-568.24 L	-4.37 K	0.10 I

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  65.6   ...................................................................
          41.69 B     17.07 L      0.10 C   -568.25 L     -4.38 K      0.10 I

          42.95 B     17.52 L      0.10 C   -680.68 L     -5.04 K      0.11 I
  59.4   ...................................................................
          42.95 B     17.53 L      0.11 K   -680.66 L     -5.05 K      0.11 I

          43.95 B     17.66 L      0.11 K   -794.12 L     -5.72 K     -0.12 L
  53.2   ...................................................................
          43.95 B     17.67 I      0.11 K   -794.14 L     -5.72 K      0.12 I

          46.27 B     17.79 I      0.11 K   -904.68 L     -6.39 K     -0.12 L
  47.2   ...................................................................
          46.27 B     17.80 L      0.12 K   -904.65 L     -6.38 K     -0.12 L

          47.64 B     17.93 L      0.12 K  -1013.97 L     -7.09 K     -0.13 L
  41.3   ...................................................................
          47.64 B     17.92 L      0.11 K  -1013.95 L     -7.09 K     -0.13 L

          49.04 B     18.04 L      0.11 K  -1123.57 L     -7.74 K     -0.14 L
  35.4   ...................................................................
          49.04 B     18.05 L      0.12 K  -1123.58 L     -7.74 K     -0.14 L

          50.49 B     18.17 L      0.12 K  -1233.53 L     -8.43 K     -0.15 L
  29.5   ...................................................................
          50.49 B     18.18 L      0.12 K  -1233.54 L     -8.43 K     -0.15 L

          51.98 B     18.30 L      0.12 K  -1343.72 L     -9.14 K     -0.15 L
  23.6   ...................................................................
          51.98 B     18.30 L      0.12 K  -1343.72 L     -9.14 K     -0.15 L

          53.50 B     18.41 L      0.12 K  -1454.10 L     -9.83 K     -0.15 L
  17.7   ...................................................................
          53.50 B     18.41 L      0.12 K  -1454.10 L     -9.83 K     -0.15 L

          55.07 B     18.53 L      0.12 K  -1564.67 L    -10.53 K     -0.16 L
  11.8   ...................................................................
          55.07 B     18.54 L      0.12 K  -1564.67 L    -10.53 K     -0.16 L

          56.70 B     18.66 L      0.12 K  -1675.38 L    -11.24 K     -0.16 L
   5.9   ...................................................................
          56.70 B     18.66 L      0.12 K  -1675.38 L    -11.24 K     -0.16 L

          58.35 B     18.77 L      0.12 K  -1786.21 L    -11.95 K     -0.16 L
-------------------------------------------------------------------------------
 base
 reaction   58.35 B    -18.77 L     -0.12 K   1786.21 L     11.95 K      0.16 L
-------------------------------------------------------------------------------


 COMPLIANCE WITH 4.8.2 & 4.5.4
 =============================

   ELEV       AXIAL   BENDING SHEAR +       TOTAL SATISFIED  D/t(w/t)   MAX
                              TORSIONAL                                 ALLOWED
     ft

 124.00  ...................................................................
             0.00C     0.00K     0.00E     0.00K     YES      15.69A       45.2

             0.00C     0.00E     0.00E     0.00E     YES      16.27A       45.2
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120.68 ..........................................................................
          0.00B     0.00F     0.00L     0.00F     YES      16.27A       45.2

          0.01B     0.01L     0.01L     0.02L     YES      16.85A       45.2
117.36 ..........................................................................
          0.01B     0.01A     0.01L     0.02A     YES      16.85A       45.2

          0.01B     0.03L     0.01L     0.04L     YES      17.44A       45.2
114.04 ..........................................................................
          0.01B     0.03L     0.01A     0.04L     YES      17.44A       45.2

          0.01B     0.05A     0.01A     0.05A     YES      18.02A       45.2
110.71 ..........................................................................
          0.01B     0.05A     0.01A     0.05A     YES      18.02A       45.2

          0.01B     0.06A     0.01A     0.07A     YES      18.60A       45.2
107.39 ..........................................................................
          0.01B     0.06A     0.01L     0.07A     YES      18.60A       45.2

          0.01B     0.08L     0.01L     0.09L     YES      19.18A       45.2
104.07 ..........................................................................
          0.01B     0.08A     0.01I     0.09A     YES      19.18A       45.2

          0.01B     0.11L     0.01I     0.12L     YES      19.76A       45.2
100.75 ..........................................................................
          0.01B     0.07L     0.01L     0.08L     YES      13.06A       45.2

          0.01B     0.09L     0.01L     0.09L     YES      13.55A       45.2
 96.50 ..........................................................................
          0.01B     0.09L     0.01L     0.10L     YES      13.32A       45.2

          0.01B     0.11L     0.01L     0.12L     YES      14.04A       45.2
 90.32 ..........................................................................
          0.01B     0.11L     0.01L     0.12L     YES      14.04A       45.2

          0.01B     0.14L     0.01L     0.15L     YES      14.76A       45.2
 84.14 ..........................................................................
          0.01B     0.14L     0.01K     0.15L     YES      14.76A       45.2

          0.01B     0.17L     0.01K     0.18L     YES      15.48A       45.2
 77.96 ..........................................................................
          0.01B     0.17L     0.01L     0.18L     YES      15.48A       45.2

          0.01B     0.20L     0.01L     0.21L     YES      16.20A       45.2
 71.79 ..........................................................................
          0.01B     0.20L     0.01L     0.21L     YES      16.20A       45.2

          0.01B     0.22L     0.01L     0.24L     YES      16.92A       45.2
 65.61 ..........................................................................
          0.01B     0.22L     0.01L     0.24L     YES      16.92A       45.2

          0.01B     0.25L     0.01L     0.26L     YES      17.64A       45.2
 59.43 ..........................................................................
          0.01B     0.25L     0.01L     0.26L     YES      17.64A       45.2

          0.01B     0.27L     0.01L     0.29L     YES      18.36A       45.2
 53.25 ..........................................................................
          0.01B     0.20L     0.01I     0.21L     YES      13.68A       45.2

          0.01B     0.21L     0.01I     0.22L     YES      14.20A       45.2
 47.25 ..........................................................................
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           0.01B     0.22L     0.01L     0.23L     YES      13.94A       45.2

           0.01B     0.23L     0.01L     0.24L     YES      14.46A       45.2
 41.34  ..........................................................................
           0.01B     0.23L     0.01L     0.24L     YES      14.46A       45.2

           0.01B     0.24L     0.01L     0.25L     YES      14.97A       45.2
 35.44  ..........................................................................
           0.01B     0.24L     0.01L     0.25L     YES      14.97A       45.2

           0.01B     0.24L     0.01L     0.25L     YES      15.49A       45.2
 29.53  ..........................................................................
           0.01B     0.24L     0.01L     0.25L     YES      15.49A       45.2

           0.01B     0.25L     0.01L     0.26L     YES      16.01A       45.2
 23.62  ..........................................................................
           0.01B     0.25L     0.01L     0.26L     YES      16.01A       45.2

           0.01B     0.26L     0.01L     0.27L     YES      16.52A       45.2
 17.72  ..........................................................................
           0.01B     0.26L     0.01L     0.27L     YES      16.52A       45.2

           0.01B     0.26L     0.01L     0.27L     YES      17.04A       45.2
 11.81  ..........................................................................
           0.01B     0.26L     0.01L     0.27L     YES      17.04A       45.2

           0.01B     0.27L     0.01L     0.28L     YES      17.55A       45.2
  5.91  ..........................................................................
           0.01B     0.27L     0.01L     0.28L     YES      17.55A       45.2

           0.01B     0.27L     0.01L     0.28L     YES      18.07A       45.2
  0.00  ..........................................................................

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)
====================================================

    DOWN    SHEAR.w.r.t.WIND.DIR   MOMENT.w.r.t.WIND.DIR     TORSION
               ALONG      ACROSS       ALONG      ACROSS
     kip         kip         kip      ft-kip      ft-kip      ft-kip

   58.35       18.77        0.12    -1786.21      -11.95       -0.16
      B           L           K           L           K           L


================================================================================
```

Seismic Load Effects
Equivalent Lateral Force Procedure
ANSI/TIA-222-H

Parameters	
Risk Category	II
R	1.500
S_S	0.294
S_1	0.143
Site Class	D (default)
T_L (sec)	12.000
F_a	1.565
F_v	2.314
S_{MS}	0.460
S_{M1}	0.331
S_{DS}	0.307
S_{D1}	0.221
T_s	0.720
I_e	1.000
Ω	1.500
C_S	0.056
E (ksi)	29,000
I_{top} (in^4)	1,346
I_{bot} (in^4)	29,906
I_{avg} (in^4)	15,626
g (in/s^2)	386.4
W_t (kips)	58.472
W_u (kips)	18.000
W_L (kips)	40.472
L_p (in)	1488
f_1 (Hertz)	0.383
T (sec)	2.612
k_e	2.0000
V_s (kips)	3.274
Seismic Design Category	D

Vertical Distribution of Seismic Forces

Description	h_i (ft.)	w_i (kips)	W_u (kips)	$w_i h_i^{ke}$	F_{sz} or E_h (kips)	E_V (kips)	1.2 D + 1.0 E_V (kips)	0.9 D - 1.0 E_V (kips)
Branches Load	126.50	0.2500	0.0000	4,000.5625	0.0317	0.0154	0.3154	0.2096
Step Bolts/Safety Climb Load	122.00	0.0056	0.0000	83.3504	0.0007	0.0003	0.0070	0.0047
Branches Load	121.50	0.2500	0.0000	3,690.5625	0.0293	0.0154	0.3154	0.2096
Antenna Load	119.00	6.0000	6.0000	84,966.0000	0.6735	0.3684	7.5684	5.0316
Line Deadload	119.00	1.4851	0.0000	21,030.5011	0.1667	0.0912	1.8733	1.2454
Branches Load	116.50	0.5000	0.0000	6,786.1250	0.0538	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	115.00	0.0140	0.0000	185.1500	0.0015	0.0009	0.0177	0.0117
Branches Load	111.50	0.5000	0.0000	6,216.1250	0.0493	0.0307	0.6307	0.4193
Structure - Section 1	110.25	2.0116	0.0000	24,451.1237	0.1938	0.1235	2.5374	1.6869
Branches Load	106.50	0.5000	0.0000	5,671.1250	0.0450	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	105.00	0.0140	0.0000	154.3500	0.0012	0.0009	0.0177	0.0117
Antenna Load	104.00	6.0000	6.0000	64,896.0000	0.5144	0.3684	7.5684	5.0316
Line Deadload	104.00	1.2979	0.0000	14,038.0864	0.1113	0.0797	1.6372	1.0884
Branches Load	101.50	0.5000	0.0000	5,151.1250	0.0408	0.0307	0.6307	0.4193
Branches Load	96.50	0.5000	0.0000	4,656.1250	0.0369	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	95.00	0.0140	0.0000	126.3500	0.0010	0.0009	0.0177	0.0117
Branches Load	91.50	0.5000	0.0000	4,186.1250	0.0332	0.0307	0.6307	0.4193
Antenna Load	89.00	6.0000	6.0000	47,526.0000	0.3767	0.3684	7.5684	5.0316
Line Deadload	89.00	1.1107	0.0000	8,797.8547	0.0697	0.0682	1.4010	0.9314
Branches Load	86.50	0.5000	0.0000	3,741.1250	0.0297	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	85.00	0.0140	0.0000	101.1500	0.0008	0.0009	0.0177	0.0117
Branches Load	81.50	0.5000	0.0000	3,321.1250	0.0263	0.0307	0.6307	0.4193
Branches Load	76.50	0.5000	0.0000	2,926.1250	0.0232	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	75.00	0.0140	0.0000	78.7500	0.0006	0.0009	0.0177	0.0117
Antenna Load	74.00	6.0000	0.0000	32,856.0000	0.2604	0.3684	7.5684	5.0316
Line Deadload	74.00	0.9235	0.0000	5,057.0860	0.0401	0.0567	1.1649	0.7745
Structure - Section 2	74.00	7.6770	0.0000	42,039.2520	0.3332	0.4714	9.6838	6.4379
Branches Load	71.50	0.5000	0.0000	2,556.1250	0.0203	0.0307	0.6307	0.4193
Branches Load	66.50	0.5000	0.0000	2,211.1250	0.0175	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	65.00	0.0140	0.0000	59.1500	0.0005	0.0009	0.0177	0.0117
Branches Load	63.50	0.5000	0.0000	2,016.1250	0.0160	0.0307	0.6307	0.4193
Step Bolts/Safety Climb Load	55.00	0.0140	0.0000	42.3500	0.0003	0.0009	0.0177	0.0117
Step Bolts/Safety Climb Load	45.00	0.0140	0.0000	28.3500	0.0002	0.0009	0.0177	0.0117
Step Bolts/Safety Climb Load	35.00	0.0140	0.0000	17.1500	0.0001	0.0009	0.0177	0.0117
Structure - Section 3	26.62	13.3062	0.0000	9,429.0980	0.0747	0.8170	16.7844	11.1586
Step Bolts/Safety Climb Load	25.00	0.0140	0.0000	8.7500	0.0001	0.0009	0.0177	0.0117
Step Bolts/Safety Climb Load	15.00	0.0140	0.0000	3.1500	0.0000	0.0009	0.0177	0.0117

Seismic Load Effects
Equivalent Lateral Force Procedure
ANSI/TIA-222-H

Vertical Distribution of Seismic Forces

Description	h_i (ft.)	w_i (kips)	W_u (kips)	$w_i h_i^{ke}$	F_{sz} or E_h (kips)	E_V (kips)	1.2 D + 1.0 E_V (kips)	0.9 D - 1.0 E_V (kips)
	Σ	58.47	18.0000	413,104.63	3.27	3.59	73.76	49.03

SO#: 25-4001-JDS
Site Name: Lanton, TN
Date: 3/10/2025

Round Base Plate and Anchor Rods, per ANSI/TIA 222-H

Pole Data

Diameter:	53.490	in (flat to flat)
Thickness:	0.5	in
Yield (Fy):	65	ksi
# of Sides:	18	"0" IF Round
Strength (Fu):	80	ksi

Reactions

Moment, Mu:	6121.83	ft-kips
Axial, Pu:	70.22	kips
Shear, Vu:	64.1	kips

Anchor Rod Data

Quantity:	22		
Diameter:	2.25	in	
Rod Material:	A615		
Strength (Fu):	100	ksi	
Yield (Fy):	75	ksi	
BC Diam. (in):	60.5	BC Override:	

Anchor Rod Results (per 4.9.9)

Maximum Put:	218.38	Kips
Φt*Rnt:	243.75	Kips
Vu:	2.91	Kips
Φv*Rnv:	149.10	Kips
Tension Interaction Ratio:	0.80	
Maximum Puc:	223.96	Kips
Φc*Rnc:	268.39	Kips
Vu:	2.91	Kips
Φc*Rnvc:	120.77	Kips
Compression Interaction Ratio:	0.84	
Maximum Interaction Ratio:	**83.5%**	**Pass**

Plate Data

Diameter (in):	66.25	Dia. Override:	
Thickness:	2.5	in	
Yield (Fy):	50	ksi	
Eff Width/Rod:	7.72	in	
Drain Hole:	2.625	in. diameter	
Drain Location:	24.5	in. center of pole to center of drain hole	
Center Hole:	41	in. diameter	

Base Plate Results

Base Plate (Mu/Z):	40.0	ksi
Allowable Φ*Fy:	45.0	ksi (per AISC)
Base Plate Interaction Ratio:	**88.8%**	**Pass**

```
================================================================================

                     LPile for Windows, Version 2019-11.009

                 Analysis of Individual Piles and Drilled Shafts
                Subjected to Lateral Loading Using the p-y Method
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================================================================================

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--------------------------------------------------------------------------------
                             Files Used for Analysis
--------------------------------------------------------------------------------

Path to file locations:
\Program Files (x86)\Ensoft\Lpile2019\files\

Name of input data file:
25-4001-JDS.lp11d

Name of output report file:
25-4001-JDS.lp11o

Name of plot output file:
25-4001-JDS.lp11p

Name of runtime message file:
25-4001-JDS.lp11r



--------------------------------------------------------------------------------
                           Date and Time of Analysis
--------------------------------------------------------------------------------

               Date:  March 10, 2025             Time:  13:00:04



--------------------------------------------------------------------------------
                                  Problem Title
--------------------------------------------------------------------------------

Site         : Lanton, TN
```

Tower : 125' Monopine

Prepared for : VOGUE TOWERS

Job Number : 25-4001-JDS

Engineer : ARH

Program Options and Settings

Computational Options:
- Conventional Analysis

Engineering Units Used for Data Input and Computations:
- US Customary System Units (pounds, feet, inches)

Analysis Control Options:

- Maximum number of iterations allowed	=	999
- Deflection tolerance for convergence	=	1.0000E-05 in
- Maximum allowable deflection	=	100.0000 in
- Number of pile increments	=	100

Loading Type and Number of Cycles of Loading:
- Static loading specified

- Use of p-y modification factors for p-y curves not selected
- Analysis uses layering correction (Method of Georgiadis)
- No distributed lateral loads are entered
- Loading by lateral soil movements acting on pile not selected
- Input of shear resistance at the pile tip not selected
- Input of moment resistance at the pile tip not selected
- Input of side resistance moment along pile not selected
- Computation of pile-head foundation stiffness matrix not selected
- Push-over analysis of pile not selected
- Buckling analysis of pile not selected

Output Options:
- Output files use decimal points to denote decimal symbols.
- Report only summary tables of pile-head deflection, maximum bending moment, and maximum shear force in output report file.
- No p-y curves to be computed and reported for user-specified depths
- Print using wide report formats

Pile Structural Properties and Geometry

Number of pile sections defined	=	1
Total length of pile	=	38.500 ft
Depth of ground surface below top of pile	=	0.5000 ft

Pile diameters used for p-y curve computations are defined using 2 points.

p-y curves are computed using pile diameter values interpolated with depth over the length of the pile. A summary of values of pile diameter vs. depth follows.

Point No.	Depth Below Pile Head feet	Pile Diameter inches
1	0.000	84.0000
2	38.500	84.0000

Input Structural Properties for Pile Sections:

Pile Section No. 1:

Section 1 is a round drilled shaft, bored pile, or CIDH pile
Length of section = 38.500000 ft
Shaft Diameter = 84.000000 in
Shear capacity of section = 0.0000 lbs

Ground Slope and Pile Batter Angles

Ground Slope Angle = 0.000 degrees
= 0.000 radians

Pile Batter Angle = 0.000 degrees
= 0.000 radians

Soil and Rock Layering Information

The soil profile is modelled using 1 layers

Layer 1 is stiff clay without free water

Distance from top of pile to top of layer = 0.500000 ft
Distance from top of pile to bottom of layer = 60.500000 ft
Effective unit weight at top of layer = 110.000000 pcf
Effective unit weight at bottom of layer = 110.000000 pcf
Undrained cohesion at top of layer = 1000.000000 psf
Undrained cohesion at bottom of layer = 1000.000000 psf
Epsilon-50 at top of layer = 0.010000
Epsilon-50 at bottom of layer = 0.010000

(Depth of the lowest soil layer extends 22.000 ft below the pile tip)

Summary of Input Soil Properties

Layer Num.	Soil Type Name (p-y Curve Type)	Layer Depth ft	Effective Unit Wt. pcf	Cohesion psf	E50 or krm
1	Stiff Clay w/o Free Water	0.5000 60.5000	110.0000 110.0000	1000.0000 1000.0000	0.01000 0.01000

Static Loading Type

Static loading criteria were used when computing p-y curves for all analyses.

Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 2

Load Run No.	Load Analysis Type	Condition 1	Condition 2	Axial Thrust Force, lbs	Compute Top y vs. Pile Length
1	1	V = 85896. lbs	M = 98441487. in-lbs	94097.	No
Yes					
2	1	V = 18864. lbs	M = 21542231. in-lbs	58643.	No
Yes					

V = shear force applied normal to pile axis
M = bending moment applied to pile head
y = lateral deflection normal to pile axis
S = pile slope relative to original pile batter angle
R = rotational stiffness applied to pile head
Values of top y vs. pile lengths can be computed only for load types with
specified shear loading (Load Types 1, 2, and 3).
Thrust force is assumed to be acting axially for all pile batter angles.

Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness

Axial thrust force values were determined from pile-head loading conditions

Number of Pile Sections Analyzed = 1

Pile Section No. 1:

Dimensions and Properties of Drilled Shaft (Bored Pile):

Length of Section = 38.500000 ft

Shaft Diameter	=	84.000000	in
Concrete Cover Thickness (to edge of long. rebar)	=	3.625000	in
Number of Reinforcing Bars	=	38	bars
Yield Stress of Reinforcing Bars	=	60000.	psi
Modulus of Elasticity of Reinforcing Bars	=	29000000.	psi
Gross Area of Shaft	=	5542.	sq. in.
Total Area of Reinforcing Steel	=	48.137211	sq. in.
Area Ratio of Steel Reinforcement	=	0.87	percent
Edge-to-Edge Bar Spacing	=	4.963089	in
Maximum Concrete Aggregate Size	=	0.750000	in
Ratio of Bar Spacing to Aggregate Size	=	6.62	
Offset of Center of Rebar Cage from Center of Pile	=	0.0000	in

Axial Structural Capacities:

Nom. Axial Structural Capacity = 0.85 Fc Ac + Fy As	=	23901.376	kips
Tensile Load for Cracking of Concrete	=	-2579.712	kips
Nominal Axial Tensile Capacity	=	-2888.233	kips

Reinforcing Bar Dimensions and Positions Used in Computations:

Bar Number	Bar Diam. inches	Bar Area sq. in.	X inches	Y inches
1	1.270000	1.266769	37.740000	0.00000
2	1.270000	1.266769	37.225276	6.211800
3	1.270000	1.266769	35.695143	12.254158
4	1.270000	1.266769	33.191339	17.962255
5	1.270000	1.266769	29.782163	23.180388
6	1.270000	1.266769	25.560607	27.766220
7	1.270000	1.266769	20.641823	31.594663
8	1.270000	1.266769	15.159985	34.561285
9	1.270000	1.266769	9.264622	36.585166
10	1.270000	1.266769	3.116544	37.611099
11	1.270000	1.266769	-3.116544	37.611099
12	1.270000	1.266769	-9.264622	36.585166
13	1.270000	1.266769	-15.159985	34.561285
14	1.270000	1.266769	-20.641823	31.594663
15	1.270000	1.266769	-25.560607	27.766220
16	1.270000	1.266769	-29.782163	23.180388
17	1.270000	1.266769	-33.191339	17.962255
18	1.270000	1.266769	-35.695143	12.254158
19	1.270000	1.266769	-37.225276	6.211800
20	1.270000	1.266769	-37.740000	0.00000
21	1.270000	1.266769	-37.225276	-6.211800
22	1.270000	1.266769	-35.695143	-12.254158
23	1.270000	1.266769	-33.191339	-17.962255
24	1.270000	1.266769	-29.782163	-23.180388
25	1.270000	1.266769	-25.560607	-27.766220
26	1.270000	1.266769	-20.641823	-31.594663
27	1.270000	1.266769	-15.159985	-34.561285
28	1.270000	1.266769	-9.264622	-36.585166
29	1.270000	1.266769	-3.116544	-37.611099
30	1.270000	1.266769	3.116544	-37.611099
31	1.270000	1.266769	9.264622	-36.585166
32	1.270000	1.266769	15.159985	-34.561285
33	1.270000	1.266769	20.641823	-31.594663
34	1.270000	1.266769	25.560607	-27.766220
35	1.270000	1.266769	29.782163	-23.180388

36	1.270000	1.266769	33.191339	-17.962255
37	1.270000	1.266769	35.695143	-12.254158
38	1.270000	1.266769	37.225276	-6.211800

NOTE: The positions of the above rebars were computed by LPile

Minimum spacing between any two bars not equal to zero = 4.963 inches
between bars 32 and 33.

Ratio of bar spacing to maximum aggregate size = 6.62

Concrete Properties:

Compressive Strength of Concrete	=	4500. psi
Modulus of Elasticity of Concrete	=	3823676. psi
Modulus of Rupture of Concrete	=	-503.115295 psi
Compression Strain at Peak Stress	=	0.002001
Tensile Strain at Fracture of Concrete	=	-0.0001152
Maximum Coarse Aggregate Size	=	0.750000 in

Number of Axial Thrust Force Values Determined from Pile-head Loadings = 2

Number	Axial Thrust Force kips
1	58.643
2	94.097

Summary of Results for Nominal Moment Capacity for Section 1

Moment values interpolated at maximum compressive strain = 0.003
or maximum developed moment if pile fails at smaller strains.

Load No.	Axial Thrust kips	Nominal Mom. Cap. in-kip	Max. Comp. Strain
1	58.643	102713.680	0.00300000
2	94.097	103791.767	0.00300000

Note that the values of moment capacity in the table above are not
factored by a strength reduction factor (phi-factor).

In ACI 318, the value of the strength reduction factor depends on whether
the transverse reinforcing steel bars are tied hoops (0.65) or spirals (0.75).

The above values should be multiplied by the appropriate strength reduction
factor to compute ultimate moment capacity according to ACI 318,
or the value required by the design standard being followed.

The following table presents factored moment capacities and corresponding
bending stiffnesses computed for common resistance factor values used for
reinforced concrete sections.

Axial Resist. Nominal Nominal Ult. (Fac) Ult. (Fac) Bend. Stiff.

Load No.	Factor	Ax. Thrust kips	Moment Cap in-kips	Ax. Thrust kips	Moment Cap in-kips	at Ult Mom kip-in^2
1	0.65	58.643216	102714.	38.118090	66764.	2.0885E+09
2	0.65	94.097152	103792.	61.163149	67465.	2.1128E+09
1	0.75	58.643216	102714.	43.982412	77035.	2.0129E+09
2	0.75	94.097152	103792.	70.572864	77844.	2.0370E+09
1	0.90	58.643216	102714.	52.778894	92442.	1.3401E+09
2	0.90	94.097152	103792.	84.687437	93413.	1.3583E+09

Summary of Pile-head Responses for Conventional Analyses

Definitions of Pile-head Loading Conditions:

Load Type 1: Load 1 = Shear, V, lbs, and Load 2 = Moment, M, in-lbs
Load Type 2: Load 1 = Shear, V, lbs, and Load 2 = Slope, S, radians
Load Type 3: Load 1 = Shear, V, lbs, and Load 2 = Rot. Stiffness, R, in-lbs/rad.
Load Type 4: Load 1 = Top Deflection, y, inches, and Load 2 = Moment, M, in-lbs
Load Type 5: Load 1 = Top Deflection, y, inches, and Load 2 = Slope, S, radians

Load Case No.	Load Type 1	Pile-head Load 1	Load Type 2	Pile-head Load 2	Axial Loading lbs	Pile-head Deflection inches	Pile-head Rotation radians	Max Shear in Pile lbs	Max Moment in Pile in-lbs
1	V, lb	85896.	M, in-lb	9.84E+07	94097.	19.6421	-0.08174	-482018.	1.02E+08
2	V, lb	18864.	M, in-lb	2.15E+07	58643.	0.08257	-5.44E-04	-97887.	2.21E+07

Maximum pile-head deflection = 19.6420646061 inches
Maximum pile-head rotation = -0.0817445446 radians = -4.683617 deg.

The analysis ended normally.

IBC 1807.3.2.1

Moment (ft·k)	6,152.59	
Shear (k)	64.42	
Caisson diameter (ft)	7	
Caisson height above ground (ft)	0.5	
Caisson height below ground (ft)	31	
Lateral soil pressure (lb/ft^2)	**300.00**	
Ground to application of force, h (ft)	96.00	
Applied lateral force, P (lb)	64,422	
Lateral soil bearing pressure, S_1 (lb/ft)	3,100.00	
Diameter, b (ft)	7	
A	6.95	$= (2.34P)/(S_1 b)$
Minimum depth of embedment, d (ft)	30.66	$= 0.5A[\ 1 + (\ 1 + (\ 4.36h\ /\ A\ )\ )^{1/2}\ ]$

MAT FOUNDATION DESIGN BY SABRE INDUSTRIES

125' Monopine VOGUE TOWERS Lanton, TN (25-4001-JDS) 03/10/25 ARH

Overall Loads:			
Factored Moment (ft-kips)	6152.59		
Factored Axial (kips)	70.57		
Factored Shear (kips)	64.42		
Bearing Design Strength (ksf)	3.75	Max. Net Bearing Press. (ksf)	3.52
Water Table Below Grade (ft)	999		
Width of Mat (ft)	28.5	Allowable Bearing Pressure (ksf)	2.50
Thickness of Mat (ft)	2	Safety Factor	2.00
Depth to Bottom of Slab (ft)	6	Ultimate Bearing Pressure (ksf)	5.00
Quantity of Bolts in Bolt Circle	22	Bearing Φs	0.75
Bolt Circle Diameter (in)	60.5		
Effective Anchor Bolt Embedment (in)	66.5		
Diameter of Pier (ft)	7	Minimum Pier Diameter (ft)	7.00
Ht. of Pier Above Ground (ft)	0.5	Equivalent Square b (ft)	6.20
Ht. of Pier Below Ground (ft)	4	Square Pier? (Y/N)	N
Quantity of Bars in Mat	41		
Bar Diameter in Mat (in)	1.27		
Area of Bars in Mat (in^2)	51.94		
Spacing of Bars in Mat (in)	8.37	Recommended Spacing (in)	5 to 12
Quantity of Bars Pier	42		
Bar Diameter in Pier (in)	1.128		
Tie Bar Diameter in Pier (in)	0.625		
Spacing of Ties (in)	4		
Area of Bars in Pier (in^2)	41.97	Minimum Pier A_s (in^2)	27.71
Spacing of Bars in Pier (in)	5.66	Recommended Spacing (in)	5 to 12
f'c (ksi)	4.5		
fy (ksi)	60		
Unit Wt. of Soil (kcf)	0.11		
Unit Wt. of Concrete (kcf)	0.15		
Volume of Concrete (yd^3)	66.58		
Two-Way Shear Action:			
Average d (in)	19.73		
ϕv_c (ksi)	0.201	v_u (ksi)	0.141
$\phi v_c = \phi(2 + 4/\beta_c)f'_c{}^{1/2}$	0.302		
$\phi v_c = \phi(\alpha_s d/b_o+2)f'_c{}^{1/2}$	0.206	J (in^3)	1.111E+07
$\phi v_c = \phi 4f'_c{}^{1/2}$	0.201	c + d (in)	94.17
Shear perimeter, b_o (in)	376.69	$0.40M_{sc}$ (ft-kips)	2577.0
β_c	1		
One-Way Shear:			
ϕV_c (kips)	679.0	V_u (kips)	418.8
Stability:			
Overturning Design Strength (ft-k)	8578.9	Total Applied M (ft-k)	6571.3

Pier-Slab Transfer by Flexure:

b_{slab} (ft)	13.00		
ϕM_n (ft-kips)	3952.8	$0.60M_{sc}$ (ft-kips)	3865.5

Pier Design:

ϕV_n (kips)	1035.5	V_u (kips)	64.4
$\phi V_c=\phi 2(1+N_u/(2000A_g))f'_c{}^{1/2}b_wd$	571.6		
V_s (kips)	618.5	*** V_s max = 4 $f'_c{}^{1/2}b_wd$ (kips)	1514.7
Maximum Spacing (in)	8.71	(Only if Shear Ties are Required)	
Actual Hook Development (in)	18.46	Req'd Hook Development l_{dh} (in) - Tension	14.12
		Req'd Hook Development l_{dc} (in) - Compression	15.23

Flexure in Slab:

ϕM_n (ft-kips)	4332.9	M_u (ft-kips)	3295.8
a (in)	2.38		
Steel Ratio	0.00770		
β_1	0.825		
Maximum Steel Ratio (ρ_t)	0.0197		
Minimum Steel Ratio	0.0018		
Rebar Development in Pad (in)	126.00	Required Development in Pad (in)	34.08

Condition	1 is OK, 0 Fails
Maximum Soil Bearing Pressure	1
Pier Area of Steel	1
Pier Shear	1
Interaction Diagram	1
Two-Way Shear Action	1
One-Way Shear Action	1
Overturning	1
Flexure	1
Steel Ratio	1
Length of Development in Pad	1
Hook Development	1
Anchor Bolt Pullout	1
Anchor Bolt Punching Shear	1

BK/PG:R3041/488-494
25000439

7 PGS : LEASE	
BECKY BUCHANAN 343406 - 25000439	
01/13/2025 - 08:58 AM	
VALUE	
MORTGAGE TAX	0.00
TRANSFER TAX	0.00
RECORDING FEE	35.00
DP FEE	2.00
REGISTER'S FEE	0.00
TOTAL AMOUNT	37.00

STATE of TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

(Above 3" Space for Recorder's Use Only)

Prepared by and Return to:

Vogue Towers II, LLC
430 Chestnut Street, Suite 101-B
Chattanooga, TN 37402
ATTN: Pat Troxell-Tant

Tenant Site Reference: TN-50001
Parcel Reference: 060051007010002023

MEMORANDUM OF OPTION TO LEASE

This Memorandum of Option to Lease (the "**Memorandum**") evidences an Option and Lease Agreement (the "**Lease**") between **Christ Our Savior Evangelical Lutheran Church a/k/a Christ Our Savior Lutheran Church** ("**Landlord**"), whose address is 2494 Nashville Highway, Columbia, TN 38401 (the "**Landlord**"), and **Vogue Towers II, LLC**, a Delaware limited liability company, whose mailing address is 1000 Corporate Centre Drive, Suite 130, Franklin, TN 37067 (the "**Tenant**"), dated the 20 day of July, 2024 (the "**Effective Date**"), for a portion (the "**Premises**") of the real property (the "**Property**") described in Exhibit A attached hereto.

Pursuant to the Lease, Landlord has granted Tenant an exclusive option to lease the Premises (the "**Option**"). The Option commenced as of the Effective Date and shall continue in effect for a period of one (1) year from the Effective Date and may be renewed by Tenant for an additional one (1) year period.

Landlord ratifies, restates, and confirms the Lease and, upon exercise of the Option, shall lease to Tenant the Premises, subject to the terms and conditions of the Lease. The Lease provides for the lease by Landlord to Tenant of the Premises for an initial term of five (5) years with seven (7) renewal option(s) of an additional five (5) years each, and further provides:

1. The Lease may be assigned by Landlord only in its entirety and only to a purchaser of the fee interest of the Property;

2. Under certain circumstances, Tenant has a right of first refusal to acquire the Premises from Landlord;

3. This Memorandum is not intended to amend or modify and shall not be deemed or construed as amending or modifying, any of the terms, conditions, or provisions of the Lease. In the event of a conflict between the provisions of this Memorandum and the provisions of the Lease, the provisions

of the Lease shall control. The Lease shall be binding upon and inure to the benefit of Landlord and Tenant and shall inure to the benefit of their respective heirs, successors, and assigns, subject to the provisions of the Lease.

[Signatures to follow]

IN WITNESS WHEREOF, the parties hereto have executed this MEMORANDUM OF OPTION TO LEASE as of the date last signed by a party hereto.

LANDLORD:

Christ Our Savior Evangelical Lutheran Church
a/k/a Christ Our Savior Lutheran Church

By: _____

Name: John P. Fowler

STATE OF TENNESSEE
COUNTY OF _____

I, John K. Dale, a Notary Public of Maury County, Tennessee, certify that John P. Fowler personally came before me this day and acknowledged that he/she is the President of **Christ Our Savior Evangelical Lutheran Church a/k/a Christ Our Savior Lutheran Church**, a Tennessee Nonprofit Corporation, and that he/she, as said President, being authorized to do so, executed the foregoing instrument on behalf of said Nonprofit Corporation.

WITNESS my hand and official seal this 21st day of July, 2024.

_____
Notary Public

My Commission Expires:
10/19/2027

JOHN K. DALE
STATE OF TENNESSEE
NOTARY PUBLIC
MAURY COUNTY

[Tenant's Signature Page to Memorandum of Option to Lease]

TENANT:

VOGUE TOWERS II, LLC

By: Pat Troxell-Tant
Name: Pat Troxell-Tant
Title: President of Development

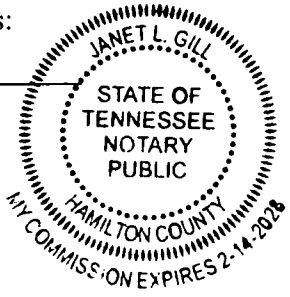
STATE OF TENNESSEE
COUNTY OF HAMILTON

I, Janet L. Gill, a Notary Public of Hamilton County, Tennessee, certify that **PAT TROXELL-TANT**, personally came before me this day and acknowledged that she is the **PRESIDENT OF DEVELOPMENT** of **VOGUE TOWERS II, LLC**, a Delaware limited liability company, and that she, as such **PRESIDENT OF DEVELOPMENT**, being authorized to do so, executed the foregoing instrument on behalf of said limited liability company.

Witness my hand and official seal this 24 day of July, 2024.

Janet L. Gill
Notary Public

My Commission Expires:
2-14-28



By:_____
Name: Scott Riggs
Title: Chief Operating Officer

STATE OF TENNESSEE
COUNTY OF WILLIAMSON

I, _____, a Notary Public of Williamson County, Tennessee, certify that **SCOTT RIGGS** personally came before me this day and acknowledged that he is the **CHIEF OPERATING OFFICER** of **VOGUE TOWERS II, LLC**, a Delaware limited liability company, and that he, as said **CHIEF OPERATING OFFICER,** being authorized to do so, executed the foregoing instrument on behalf of said limited liability company.

Witness my hand and official seal this 26th day of July, 2024.

_____
Notary Public

My Commission Expires:
9/28/26

RUTH DUGGAR
STATE OF TENNESSEE NOTARY PUBLIC
WILLIAMSON COUNTY
MY COMMISSION EXPIRES 9-28-2026

EXHIBIT A
(TO MEMORANDUM OF OPTION TO LEASE)

The Property

Being a Tract of land located in Maury County, Tennessee, and being bounded on the West by U.S. Highway 31, North and East by Edward P. Foster as of record in Deed Book 643, page 570 and South by William Hunt, Trustee as of record in Deed Book 851, page 76 and 851, page 84, from whose property this tract is taken and being more particularly described as follows:

Beginning at an iron rod in the East margin of U.S. Highway 31, the southwest corner of the herein described tract; thence with margin of said road along a curve to the left having a radius of 10817.75 feet for a distance of 200.00 feet (chord North 27degrees 51 minutes 36 seconds East 200.00 feet) to an iron rod; thence leaving said highway with Edward P. Foster as of record in Deed Book 643, Page 570 South 82 degrees 53 minutes 57 seconds East 703.08 feet to an iron rod; thence with same South 7 degrees 12 minutes 24 seconds West 218.23 feet to an iron rod; thence with same South 34 degrees 37 minutes 37 seconds East 243.00 feet to an iron rod; thence with William Hunt, Trustee as of record in Deed Book 851, page 76 and 851, page 84 from whose property this tract is taken North 70 degrees 05 minutes 41 seconds West 959.16 feet to the beginning containing 5.00 acres more or less by survey of W.A. Richardson, Jr., (RLS #689), 403 Oakwood Drive, Columbia, TN 38401, January 18, 1993.

Less and except Deed recorded in Book R2072, Page 1244, in the Register's Office for Maury County, Tennessee.

Being the same property conveyed to Christ Our Savior Evangelical Luthern Church by Warranty Deed from William L. Hunt, Trustee for the Edgar J. Doyle Trust and the Lester Hill Doyle Trust of record in Book 1174, page 310, Register's Office for Maury County, Tennessee, dated March 01, 1993 and recorded on March 02, 1993, Correction Deed recorded in Book 1195, Page 444, said Register's Office.

CERTIFICATE OF AUTHENTICITY

I, Kirby W. Yost, do hereby make oath that I am a licensed attorney and/or the custodian of the original version of the electronic document tendered for registration herewith and that this electronic document is a true and exact copy of the original document executed and authenticated according to law on July 26, 2024 *(date of document)*.

Kirby W. Yost, Affiant Signature
Dated: January 8, 2025

STATE OF TENNESSEE
COUNTY OF HAMILTON

Sworn and subscribed before me this 8th day of January, 2025

Rebecca Lynn Stone, Notary Signature

My Commission Expires: 01/17/2027

REBECCA LYNN STONE
STATE OF TENNESSEE NOTARY PUBLIC
HAMILTON COUNTY

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

PLANNING COMMISSION
PROJECT DEVELOPMENT APPLICATION

SUBMITTAL REQUIREMENTS

Final Plat: * *1 hard copy of all materials for submittal + PDF copy on a USB flash drive (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"
All Others: * Please submit the Application online at City of Columbia | Permitting (onlama.com)

ADDRESS/LOCATION	2494 Nashville Hwy, Columbita, TN		
	TAX MAP: 051	GROUP:	PARCEL: 007.01
SUMMARY OF NATURE OF REQUEST AND WORK	Preliminary site plan approval of proposed wireless communications facility within PUD zoning, requiring PUD Amendment. Proposed facility is a multi-provider site, including 125' monopine tower structure.		

DATE OF PRE-APPLICATION CONFERENCE	Oct 9, 1024	*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
❑ Comprehensive Plan Amendment ❑ Annexation ❑ Rezoning ❑ Preliminary Plat ❑ Final Plat ❑ PUD Preliminary Master Plan ☒ PUD Final Site Plan ☒ Site Development Plan ☒ Other:PUD Amendment **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations:** ❑ Annexation Permission Form **Annexations/Rezoning/Plan Amendments:** ❑ Requested Zone Listed ❑ Statement of Compliance with Comprehensive Plan ❑ Concept Plan **Preliminary Plats/Site Development Plans:** ❑ Plans and/or Plats conforming to City standards with signed and completed check list **All Annexations/Rezoning/Preliminary Plats/Site Development Plans and PUDS:** ☒ Receipt of Payment for Pre-Application Meeting ☒ Written Legal Description copy ❑ Columbia Water System Availability Letter N/A ❑ Columbia Waste Water Department Will Serve Letter N/A

Rev. 2/7/2024

	Plats/PUDs: ☒ Project Name (include Sections & Phases) Lanton (TN-5001) ☒ Total Number of Lots/Residential Units 0 ☒ Square Footage of Non-Residential Floor Space 0 ☒ Total acreage Lease area 3,600 sq/ft (plus access), parent parcel approx 5 acres

Applications and all required submittals must be filed with the Department of Development Services prior to the established deadline. Both the applicant and property owner (if different from applicant) must sign the application. Any requests to defer or move the item to future meeting dates must be requested by the resubmittal date listed on the Planning Commission schedule.

APPLICANT

All communications go to the Applicant's email that is provided.

Michael Sandifer, on behalf of Vogue Towers

NAME	Vogue Towers II, LLC and Cellco Partnership, d/b/a Verizon Wireless	PHONE	205-532-4870
ADDRESS	430 Chestnut St, Suite 101-B, Chattanooga, TN	EMAIL	Michael@bear-group.net

PROPERTY OWNER NAME	Christ our Savior Evangelical Lutheran Church	PHONE	
ADDRESS	2494 Nashville Hwy, Columbia, TN	EMAIL	Elder@coslutheran.com

If owner is not a natural person, documentation must be provided showing signing authority on behalf of the entity. If multiple persons are listed as owners in the records of the Maury County Assessor, all owners must sign or the signatory must provide documentation of authority to apply on behalf of record owner (i.e., Power of Attorney or notarized Letter of Authorization). In filling out this application, I attest that (1) I am familiar with the rules, regulations, and procedures of the City of Columbia & (2) all information contained herein is accurate & true to the best of my knowledge.

Michael Sandifer, on behalf of Vogue Towers II, LLC, and Verizon Wireless		March 11, 2025
APPLICANT NAME	APPLICANT SIGNATURE	DATE
JOSHUA DAVIS		3-11-25
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE

Rev. 2/7/2024

Site Name: **LANTON (PREV)**
Site Number: **TN-5001**
Site Location: **Grove Park Way, Columbia, TN 38401**

LESSEE'S PREMISES:
All that tract or parcel of land lying and being in Maury County, Tennessee and being a portion of the property of Christ Our Savior Evangelical Lutheran Church, of record in Deed Book 1195, Page 444, Register's Office, Maury County, Tennessee and being more particularly described as follows,

COMMENCE at a one-half-inch Iron Rod Found at the Southeast Corner of aforesaid property;
Thence along a Chord Tie Line having a Bearing of N 49°47'18" W, a distance of 318.15 feet to the POINT OF BEGINNING;

Thence N 68°32'42" W, a distance of 60.00 feet;
Thence N 21°27'18" E, a distance of 60.00 feet;
Thence S 68°32'42" E, a distance of 60.00 feet;
Thence S 21°27'18" W, a distance of 60.00 feet to the POINT OF BEGINNING.

Said tract Premises 0.08 Acres (3,600 Square Feet), more or less.

LESSEE'S 20 Access & Utility Easement
All that tract or parcel of land lying and being in Maury County, Tennessee and being a portion of the property of Christ Our Savior Evangelical Lutheran Church, of record in Deed Book 1195, Page 444, Register's Office, Maury County, Tennessee and being more particularly described as follows,

COMMENCE at a one-half-inch Iron Rod Found at the Southeast Corner of aforesaid property;
Thence along a Chord Tie Line having a Bearing of N 49°47'18" W, a distance of 318.15 feet to the POINT OF BEGINNING;

Thence S 21°27'18" W, a distance of 33.79 feet;
Thence N 69°39'42" W, a distance of 123.26 feet;
Thence N 67°59'50" W, a distance of 269.56 feet;
Thence with a curve to the left with an arc length of 3.73 feet, with a radius of 2.38 feet, with a chord bearing of S 67°03'24" W, with a chord length of 3.36 feet;
Thence with a curve to the right with an arc length of 81.44 feet, with a radius of 33.55 feet, with a chord bearing of N 88°20'53" W, with a chord length of 62.87 feet;
Thence with a curve to the left with an arc length of 16.78 feet, with a radius of 20.00 feet, with a chord bearing of N 42°50'38" W, with a chord length of 16.29 feet;
Thence N 66°52'54" W, a distance of 19.09 feet;
Thence with a curve to the left with an arc length of 45.46 feet, with a radius of 30.00 feet, with a chord bearing of S 69°42'15" W, with a chord length of 41.24 feet;
Thence S 26°17'23" W, a distance of 15.83 feet to a point on the Northern Right-of-Way Line of Grove Park Way;
Thence along said Right-of-Way Line and with a curve to the right with an arc length of 20.45 feet, with a radius of 270.00 feet, with a chord bearing of N 51°45'15" W, with a chord length of 20.44 feet;
Thence N 26°17'23" E, leaving said Right-of-Way Line and a distance of 11.59 feet;

Thence with a curve to the right with an arc length of 75.77 feet, with a radius of 50.00 feet, with a chord bearing of N 69°42'15" E, with a chord length of 68.73 feet;
Thence S 66°52'54" E, a distance of 19.09 feet;
Thence with a curve to the right with an arc length of 33.56 feet, with a radius of 40.00 feet, with a chord bearing of S 42°50'38" E, with a chord length of 32.59 feet;
Thence with a curve to the left with an arc length of 32.89 feet, with a radius of 13.55 feet, with a chord bearing of S 88°20'53" E, with a chord length of 25.39 feet;
Thence with a curve to the right with an arc length of 35.11 feet, with a radius of 22.38 feet, with a chord bearing of N 67°03'24" E, with a chord length of 31.62 feet;
Thence S 67°59'50" E, a distance of 269.27 feet;
Thence S 69°39'42" E, a distance of 63.35 feet;
Thence N 21°27'18" E, a distance of 14.95 feet;
Thence S 68°32'42" E, a distance of 60.00 feet to the POINT OF BEGINNING.

Said Easement contains 0.29 Acres (12,623 Square Feet), more or less.

Trotwood Foster Preliminary Plat/ Site Development Plan

Project #:	25-0136	Location:	Map 112 Parcel 18.03
Applicant:	Allison Corolla, PE	Case Type(s):	Preliminary Plat/SDP
Staff Planner:	Austin Brass, AICP	Proposed Use:	Single-Family Homes

PROJECT SUMMARY

The applicant requests approval of a Preliminary Plat and Site Development Plan for 119 residential lots as well as associated infrastructure and open spaces including three (3) defined civic spaces. This 51.20-acre Development Parcel yields 2.34 density units per acre (du/ac).

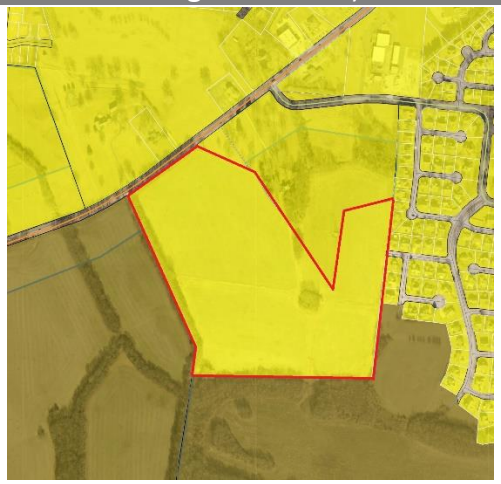
- This property was approved for annexation with an RS-10 (*CD-3*) zoning designation in 2022.
- A Preliminary Plat and Site Development plan was reviewed by Planning Commission in February 2023.
- This staff report evaluates the site development plan in adherence to all required bulk and area standards including civic space and tree canopy retention requirements.
- The Planning Commission is the **decision-making authority** for the Site Development Plan and Preliminary Plat.
- Any approval should be conditioned on timely submittal of "as-approved" plans which, in the determination of the Zoning Administrator and the City Engineer, reflect the substance of the plans approved by the Planning Commission.
- Templates are provided at the end of the report to assist the Planning Commission in crafting properly formatted motions.

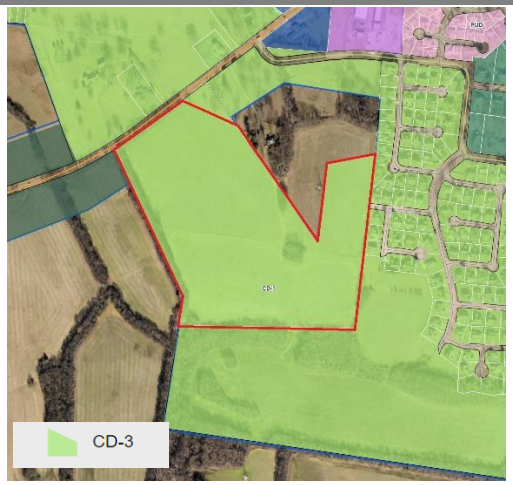
SITE INFORMATION

CURRENT ZONING	EXISTING USE	EXISTING IMP.	LAND AREA
CD-3	Vacant	Vacant	+ /- 51.20 acres



FUTURE LAND USE MAP (Suburban Neighborhoods)	ZONING MAP (CD-3)





SITE CONTEXT/ADJACENT PROPERTIES			
	Future Land Use	Zoning	Current Use
Subject Property	Suburban Neighborhoods	CD-3	Vacant
North	Suburban Neighborhoods	CD-3	Estate Lot
South	Rural Transition	County Zoning	Vacant Land
East	Suburban Neighborhoods/Rural Transition	CD-3	Single-Family Homes
West	Rural Transition	County Zoning	Estate Lot

CONSISTENCY WITH CONNECT COLUMBIA

Suburban Neighborhoods: The intent of the Suburban Neighborhoods (SN) future land use is to enhance existing suburban areas and create new neighborhoods that will improve the quality of life in Columbia. Each development parcel should add to Columbia's existing sense of place and extend the established form and pattern to create a more interconnected community. Future development should emphasize connectivity and continuity of the city as whole. The density and intensity of residential development increases in proximity to areas under the CCUV future land use classification. In the same way, density and intensity decrease in proximity to areas under the Rural Transition (RT) future land use classification. New development enhances pedestrian infrastructure with sidewalks and other multimodal routes. Over time, new and infill development connects neighborhoods and community anchors such as libraries, neighborhood centers, health facilities, retail uses, parks, and schools.



Character & Intent

The intent of the Suburban Neighborhoods (SN) future land use is to enhance existing suburban areas and create new neighborhoods that will improve the quality of life in Columbia. Where appropriate, the SN future land use area also establishes mixed-use and commercial centers which serve residents' retail needs and provide a wider range of housing options. Each development parcel should add to Columbia's existing sense of place and extend the established form and pattern to create a more interconnected community. Future development should emphasize connectivity and continuity of the city as whole. The density and intensity of residential development increases in proximity to areas under the CCUV future land use classification. In the same way, density and intensity decrease in proximity to areas under the Rural Transition (RT) future land use classification. New development enhances pedestrian infrastructure with sidewalks and other multimodal routes. Public frontages may include sidewalks and street trees. Over time, new and infill development connects neighborhoods and community anchors such as libraries, neighborhood centers, health facilities, retail uses, parks, and schools.

Land Use Considerations

The primary land use is low-density detached housing. Along arterial roadways, primary uses may include offices, retail, and all forms of medium-density housing. Secondary land uses include accessory dwellings, two-family homes, civic uses, institutional uses, schools, religious facilities, utility facilities, parks and open space. New industrial and warehouse uses are inappropriate.

Form & Pattern

The SN future land use area is characterized by the organization of the built environment to extend a succession of large-lot neighborhoods and compact walkable neighborhoods. Development parcels extend established neighborhood patterns. Leap-frogging development is inappropriate. The SN future land use is distinguished from RT in the organization of lots and thoroughfares to form blocks. Physically separated developments which do not extend established block formation and roadway networks are inappropriate. The density of streets and blocks increases with proximity to CCUV and community anchors. Implementing bulk and design standards loosely delimit the public and domestic realms though the application of layers and front-to-back discipline of lots. Along arterial roadways, commercial corridors of varying intensities emerge over time with a high-quality built environment typified by a mix of building types and a balance between automobile-oriented and pedestrian-oriented design. The physical intensity of development along arterial corridors varies based on the surrounding residential density and the roadway's place in the transportation network. New development should accompany concurrent extension of complete urban services. Parking is provided on-site by private land users, supplemented by on-street spaces.

Implementing Districts

Neighborhood-Large Lot CD-3L
Neighborhood CD-3
General Urban-Corridor CD-4C (only along Arterial roadways)
Manufactured Home Park SD-MHP
Residential PUD PUD-R
Mixed Use PUD PUD-MU
Civic CV

Implementing Standards

General Development Pattern: Mixed Uses & Isolated Uses
Density (density unites per ace): 4 - 24 du/ac
Building Height: 1 - 4 stories
Open Space Elements: Civic Spaces, Parks & Greenways

CONFORMITY WITH ZONING ORDINANCE

- **The proposed Site Development Plan and Preliminary Plat conform to the bulk standards of the Ordinance within a CD-3 Character District.**

Lots, Building Sites & Bulk Standards:

- The Zoning Ordinance permits single-family house types and conforms to section § 4.3.1 C of the Zoning Ordinance. This proposed preliminary plat includes front-loaded lots for single-family homes.
- Lot variations include:
  - 119 (65') front-loaded single-family home lots.
  - 3 civic space lots.
  - 3 open space lots
- Table 1 describes applicable bulk standards per section 4.3.1-C (building, lot & building site standards) of the Zoning Ordinance for a CD-3-character district in which the subject property is zoned.

Table 1 (CD-3) Neighborhood Character District Standards		
Bulk Standards:	**Required**	**Proposed**
Density:	4 Density Units Per Acre Maximum	2.34 Density Units Per Acre
Minimum Lot width:	40 ft if alley loaded/ 65ft front-loaded	65ft. min (*all lots are proposed to be front-loaded*)
Lot/Building Enfrontment:	Vehicle Throughfare/ 20% or less may enfront pedestrian path	All lots enfront a throughfare street section
Parking:	2 spaces/ Dwelling Unit	2 spaces/ Dwelling Unit
Max. Impervious:	50 Percent	Less than 50 Percent
Setbacks:	**Front** – 25 ft **Front Secondary:** 20 ft min **Side** – 8 ft. **Rear:** 25' or 15 min from center line of rear alley	Front – 25' Front Secondary- 20' Side- 8' Rear- 25' (*no lots are proposed to be alley loaded*)

Architecture:

- **Staff will determine conformity with the prescriptive design standards of the Ordinance at the time of building permit.**
  - The applicant has acknowledged that all structures must conform to the prescriptive design standards in Table 4.3.1-C of the Ordinance.
  - The Ordinance requires garages to maintain minimum interior dimensions of 10 by 20 feet. The Ordinance also establishes a maximum garage door width of 33% of total of garage plus façade width if garage door is in 1st of 2nd layer *(not setback 20' behind principal frontage).*

Civic Spaces:

- **Section 5.3.1 of Zoning Ordinance requires any development parcel to utilize at least 5% but no more than 20% of its gross acreage as Civic Space conforming to the standards of Table 5.3.3-A.[1] The proposed Site Development Plan provides the required Civic Space in the form of two (2) greens with one (1) playground.**

  - The Site Development Plan dedicated 3.30 acres (7%) of the 56-acre site to Civic Space.
  - Each Civic Space type has its own standards for intent, size, frontage, character, and typical facilities including two greens and a playground area.

Civic Space Types for Development Plan	Size	Area
Green 1 (*Playground*)	0.5 acres min, 8 acres max	0.68 acres
Playground	No min/ No max	0.20 acres
Green 2	0.5 acres min, 8 acres max	2.42 acres

[1] Development Parcel: a parcel of land: (1) which, either alone or together with one or more other parcels under a common Development scheme, program or plan, is ten (10) or more gross acres; (2) with respect to the Development of which any new Thoroughfare, Internal Drive, or extension or change of the design of any existing Thoroughfare or Internal Drive is required or will be made or proposed; or (3) with respect to which any District assignment or any Thoroughfare or Internal Drive or alignment thereof is proposed to be made or changed by a Zoning Map or Zoning Map amendment. (§ 9.3, p. 504).

Tree Canopy Cover Retention/ Specimen Tree Preservation:

Section 4.3.16 of the Zoning Ordinance requires a percentage of existing tree cover to be preserved based upon the existing canopy on the development site.

- A CD-3-character district has a tree canopy retention based off the existing tree canopy on site. The applicant's tree canopy retention plan indicates that 5.38 acres (19%) of the 56-acre site exists tree canopy. Table 4.3.16 L of the Zoning Ordinance indicates that a site with 19% and less existing tree canopy cover is required to retain 54% of the site as a tree save area. This site development plan indicates 1.65 acres (31%) of tree save area. As a 1.26 acres tree area is still required to be preserved, the applicant is proposing a tree replacement of 80 trees per acre with 101 trees being replaced on the site. Staff will require additional information about the caliper tree replacement plan as indicated with the inventory of caliper trees being removed.

REVIEW PROCESS

The Development Review Committee reviewed the proposed Preliminary Plat/Site Development Plan at its May 2025 meeting, as directed by section **8.3.7** of the Zoning Ordinance. Technical comments are provided in the agenda package and summarized above.

The Planning Commission is the Decision-Making Authority for all Site Development Plans that include one or more Development Parcels under **§ 8.5.6. D**.[2]

Sections **8.5.6. I.** establishes the criteria for review of a Site Development Plan.

I. Review Criteria.

1. The criteria to be applied by the Zoning Administrator in reviewing a Development Plan and application shall be whether such Plan and application comply with the applicable conditions, standards, and requirements of this Ordinance, all applicable previously approved Plans, such as earlier Development Plans, the Comprehensive Plan and all other applicable Land Use Plans.

2. With respect to a Development Plan the Planning Commission shall rely on all conditions, standards, and requirements of Articles 1-5 and Article 7 of this Ordinance and the Planning Commission shall review the Plan and application for

[2] [2] Development Parcel: a parcel of land: (1) which, either alone or together with one or more other parcels under a common Development scheme, program or plan, is ten (10) or more gross acres; (2) with respect to the Development of which any new Thoroughfare, Internal Drive, or extension or change of the design of any existing Thoroughfare or Internal Drive is required or will be made or proposed; or (3) with respect to which any District assignment or any Thoroughfare or Internal Drive or alignment thereof is proposed to be made or changed by a Zoning Map or Zoning Map amendment. (§ 9.3, p. 490).

compliance with all other conditions, standards, and requirements of this Ordinance, including without limitation those of Article 6 (Supplemental Standards) , and compliance with all applicable previously approved Plans, such as earlier Development Plans, the Comprehensive Plan and all other applicable Land Use Plans. Additionally, in the case of Development in a Special District, the Planning Commission shall determine:

a. Whether the Development Plan conforms to all applicable requirements of the Zoning Ordinance, including any methods of Alternative Performance which are included in the request.

b. Whether the Development design and Development intensity are appropriate for and tailored to the unique characteristics of the site, such as significant wooded areas, specimen trees, wetlands, steep slopes, floodplains, and zoning of or existing Development on Adjacent property.

c. Whether the proposed access and circulation are adequate with respect to traffic patterns, traffic control measures, and street pavement areas, with provisions for maintaining traffic flows and reducing any negative effects of traffic on nearby properties.

d. Compliance with site construction requirements.

e. Adequacy of stormwater facilities, water supply, sanitary sewer service, fire protection, street signs, and street lighting as evidenced by conformance with City standards, specifications and guidelines; and

f. Compliance with requirements for Easements or dedications.

Section **2.2.6** of the Subdivision Regulations establishes the review criteria for approval of Preliminary Plats.

A. Recommendations and final action on a Preliminary Plat shall be based on consideration of the following criteria:

1. Whether the proposed Preliminary Plat complies with the applicable zoning district and overlay districts;

2. Whether the proposed Preliminary Plat is consistent with all standards of these Subdivision Regulations and other related codes and ordinances enforced by the City; and

3. Whether the CMPC determines that the particular site is suitable for the type of platting and development proposed.

In the event of a denial, **§ 2.2.5** of the Subdivision Regulations requires the Planning Commission to identify the specific parts of applicable plans and regulations with which the plat does not comply.

SUMMARY OF DEVELOPMENT REVIEW COMMITTEE COMMENTS

The DRC reviewed this proposal at its May 2025 meeting. A full list of comments, and the applicant's responses, is provided in the agenda packet. Some key comments are noted below.

- **Planning** noted that a main civic space of a green, plaza, or square shall be required from the center of an 800' pedestrian shed radius. The applicant responded with a radius diameter of such.
- **Engineering** noted that street parking be removed on Holly Berry Drive and that it becomes a 55' ROW to be consistent with adjacent stub out connection roadway it is connecting with. The applicant updated this road section eliminating parking at time of resubmittal.
- **Columbia Water** indicated that the water availability letter was issued on February 18, 2025, and remains valid for 120 days. The letter has noted that the system is only able to support a minimum fire flow of 500 gpm. Fire added a note stating that a new tanker truck is in place with Mutual aid agreement with Maury County Fire and Rescue to bring an additional tanker if needed to supply an additional 600 gpm**. With the CPWS water letter stating they can supply 600 gpm; all homes will not require fire sprinklers if all homes stay under 3,600 sq ft.**

SAMPLE MOTIONS

Approve:

Move to find, based on the information presented by the applicant and the analysis provided by city staff, that the criteria listed in sections **8.5.6.I** and K of the City of Columbia Zoning Ordinance, and Section **2.2.6** of the Subdivision Regulations, have been satisfied and approve the Site Development Plan and Preliminary Plat as presented *[, subject to technical comments and other conditions presented by planning staff*].

Approve Subject of Conditions:

Move to find, based on the information presented by the applicant and the analysis provided by city staff, that the criteria listed in sections **8.5.6.I** and **K** of the City of Columbia Zoning Ordinance, and Section **2.2.6** of the Subdivision Regulations, have been satisfied and approve the Site Development Plan and Preliminary Plat subject to the following conditions: [*list conditions of approval crafted by Planning Commission*].

Deny:

Move to deny the Site Development Plan and Preliminary Plat having found, based on the information presented by the applicant and the analysis provided by city staff, that the criteria listed in sections **8.5.6.I** and K of the City of Columbia Zoning Ordinance and Section **2.2.6** of the Subdivision Regulations are not satisfied [*list specific reasons for denial*].

Defer:

Move to find that there is insufficient information to make a decision, defer the matter to the next regularly scheduled meeting of the Planning Commission, and request that the [*applicant/staff*] provide: [*list additional information*] for review at that future meeting.



GRAPHIC SCALE

(IN FEET)

100 0 50 100 200

SCALE: 1" = 100'

LEGEND

500	EXISTING MAJOR CONTOURS
498	EXISTING MINOR CONTOURS
LOD	PROPOSED LIMITS OF DISTURBANCE
SF	PROPOSED SILT FENCE
	TREE PROTECTION FENCING
	PROPOSED CONSTRUCTION EXIT
	PROPOSED CONCRETE WASHOUT

GENERAL EROSION NOTES:

A. ALL STORMWATER IS TO BE TREATED THROUGH VARIOUS EPSC MEASURES BEFORE IT REACHES THE PERMANENT STORM INFRASTRUCTURE. ALL PIPES TO REMAIN CLEAN DURING CONSTRUCTION.

B. THIS SITE DISTURBANCE IS APPROXIMATELY 49.5 ACRES AND DOES REQUIRE A SWPPP. THE STORMWATER CONTROLS SHOWN ON THIS PLAN AND IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE IMPLEMENTED PRIOR TO ANY LAND DISTURBANCE.

C. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN THESE MATERIALS AND STORM WATER THAT IS DISCHARGED FROM THE SITE.

C. THE SITE SHALL HAVE READILY AVAILABLE SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

D. DUST CONTROL ON THE SITE SHALL BE MINIMIZED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

E. NO RUBBISH, TRASH, GARBAGE, OR OTHER SUCH MATERIALS SHALL BE DISCHARGED INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

F. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN SHALL BE INITIATED AS SOON AS PRACTICAL.

G. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.

H. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.

I. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.

J. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

K. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

L. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL STABILIZATION. FINAL STABILIZATION HAS OCCURRED WHEN ALL SOIL DISTURBING ACTIVITIES ARE COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN EMPLOYED.

MAINTENANCE:

A. ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN AND SWPPP SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF THE SITE. DURING CONSTRUCTION THE FOLLOWING ITEMS SHALL BE CHECKED TWICE WEEKLY.

A.A. INLET/OUTLET PROTECTION DEVICES AND BARRIERS SHALL BE FIXED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR SHALL BE REPLACED IF THEY SHOW SIGNS OF DETERIORATION. BASED ON INSPECTIONS, EPSC MUST BE REPAIRED, REPLACED, OR MODIFIED WITHIN 7 DAYS.

A.B. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED.

A.C. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE THIRD TO ONE HALF THE HEIGHT OF THE SILT FENCE.

A.D. THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS *"ZONE X"* AS EVIDENCED ON FEMA PANEL *# 47119C0280E* OF MAURY COUNTY, TN. DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE	REVISIONS PER CITY OF COLUMBIA
1	5/19/25	

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

INITIAL EROSION CONTROL PLAN

MAP 112, PARCEL 018.03

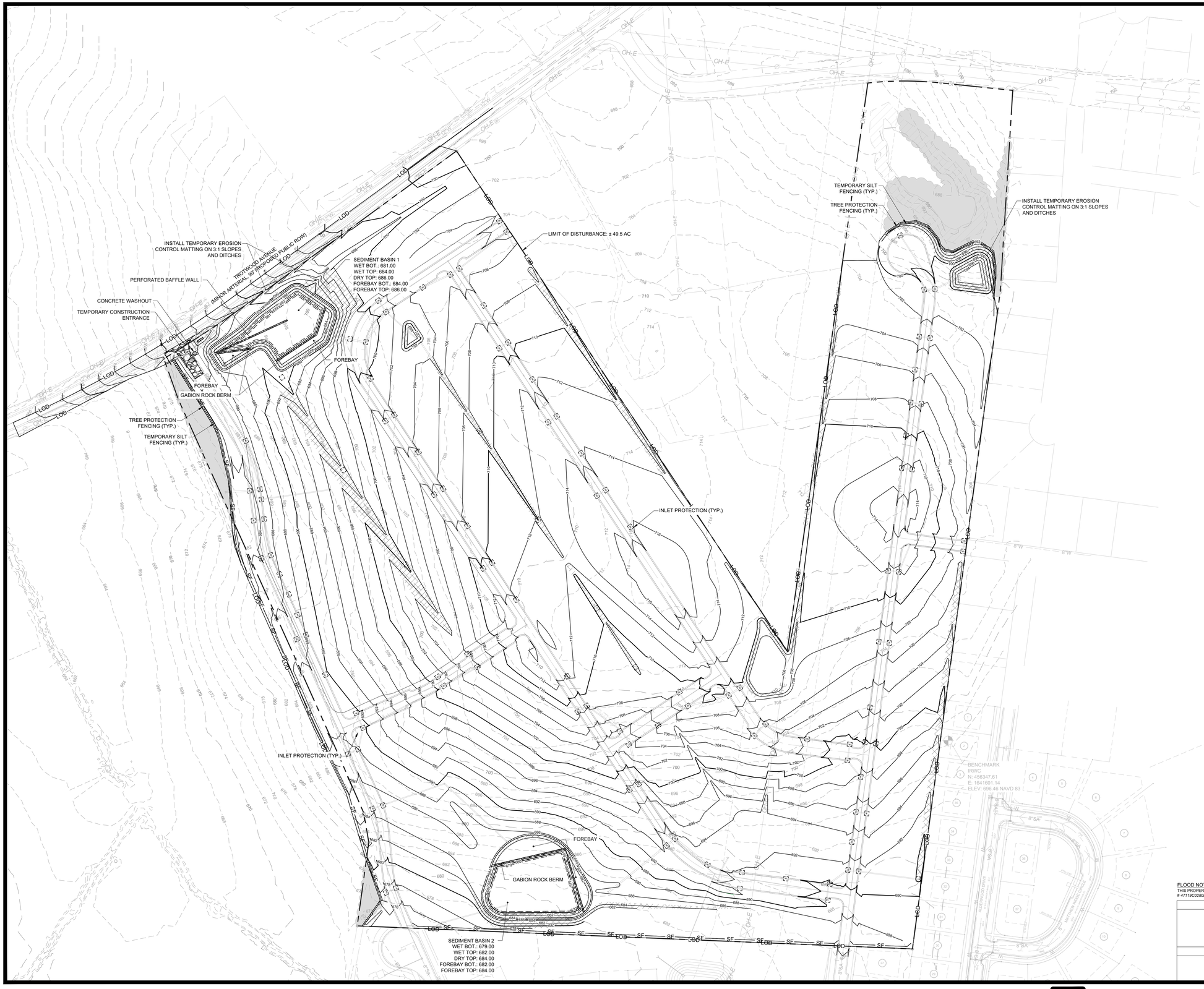
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLLA
REGISTERED ENGINEER
No. 127399
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-3.0



GRAPHIC SCALE

(IN FEET)

100 0 50 100 200

SCALE: 1" = 100'

LEGEND

- EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED SILT FENCE
- TREE PROTECTION FENCING
- PROPOSED CONSTRUCTION EXIT
- PROPOSED CONCRETE WASHOUT
- PROPOSED INLET PROTECTION

GENERAL EROSION NOTES:

A. ALL STORMWATER IS TO BE TREATED THROUGH VARIOUS EPSC MEASURES BEFORE IT REACHES THE PERMANENT STORM INFRASTRUCTURE. ALL PIPES TO REMAIN CLEAN DURING CONSTRUCTION.

B. THIS SITE DISTURBANCE IS APPROXIMATELY 49.5 ACRES AND DOES REQUIRE A SWPPP . THE STORMWATER CONTROLS SHOWN ON THIS PLAN AND IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE IMPLEMENTED PRIOR TO ANY LAND DISTURBANCE.

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C. THE SITE SHALL HAVE READILY AVAILABLE SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND OIL LEAKS.

D. DUST CONTROL ON THE SITE SHALL BE MINIMIZED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

E. NO RUBBISH, TRASH, GARBAGE, OR OTHER SUCH MATERIALS SHALL BE DISCHARGED INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

F. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN SHALL BE INITIATED AS SOON AS PRACTICAL.

G. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.

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K. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

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MAINTENANCE:

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FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS *"ZONE X"* AS EVIDENCED ON FEMA PANEL *# 47119C0280E* OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS		
NO.	DATE	REVISIONS PER CITY OF COLUMBIA
1	5/19/25	

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

TEMPORARY EROSION CONTROL PLAN

MAP 112, PARCEL 018.03

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
REGISTERED LANDSCAPE ARCHITECT
No. 127389
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-3.1

T-SQUARE ENGINEERING

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowe)\Production\24-0314 3- Erosion Control Plan.dwg, 5/16/2025 9:42:31 PM



N

GRAPHIC SCALE
(IN FEET)

100 0 50 100 200

SCALE: 1" = 100'

LEGEND

- 500 — EXISTING MAJOR CONTOURS
- 498 — EXISTING MINOR CONTOURS
- 500 — PROPOSED MAJOR CONTOURS
- 498 — PROPOSED MINOR CONTOURS
- PROPOSED PERMANENT SEEDING
- PROPOSED EROSION CONTROL MAT

GENERAL EROSION NOTES:

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K. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

L. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL STABILIZATION. FINAL STABILIZATION HAS OCCURRED WHEN ALL SOIL DISTURBING ACTIVITIES ARE COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN EMPLOYED.

MAINTENANCE:

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A.C. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE THIRD TO ONE HALF THE HEIGHT OF THE SILT FENCE.

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FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "*ZONE X*" AS EVIDENCED ON FEMA PANEL # *47119C0280E* OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP 112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS		
NO.	DATE	
1	5/19/25	REVISIONS PER CITY OF COLUMBIA

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

PERMANENT EROSION CONTROL PLAN

MAP 112, PARCEL 018.03

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
REGISTERED PROFESSIONAL ENGINEER
No. 121390
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-3.2

T-SQUARE ENGINEERING

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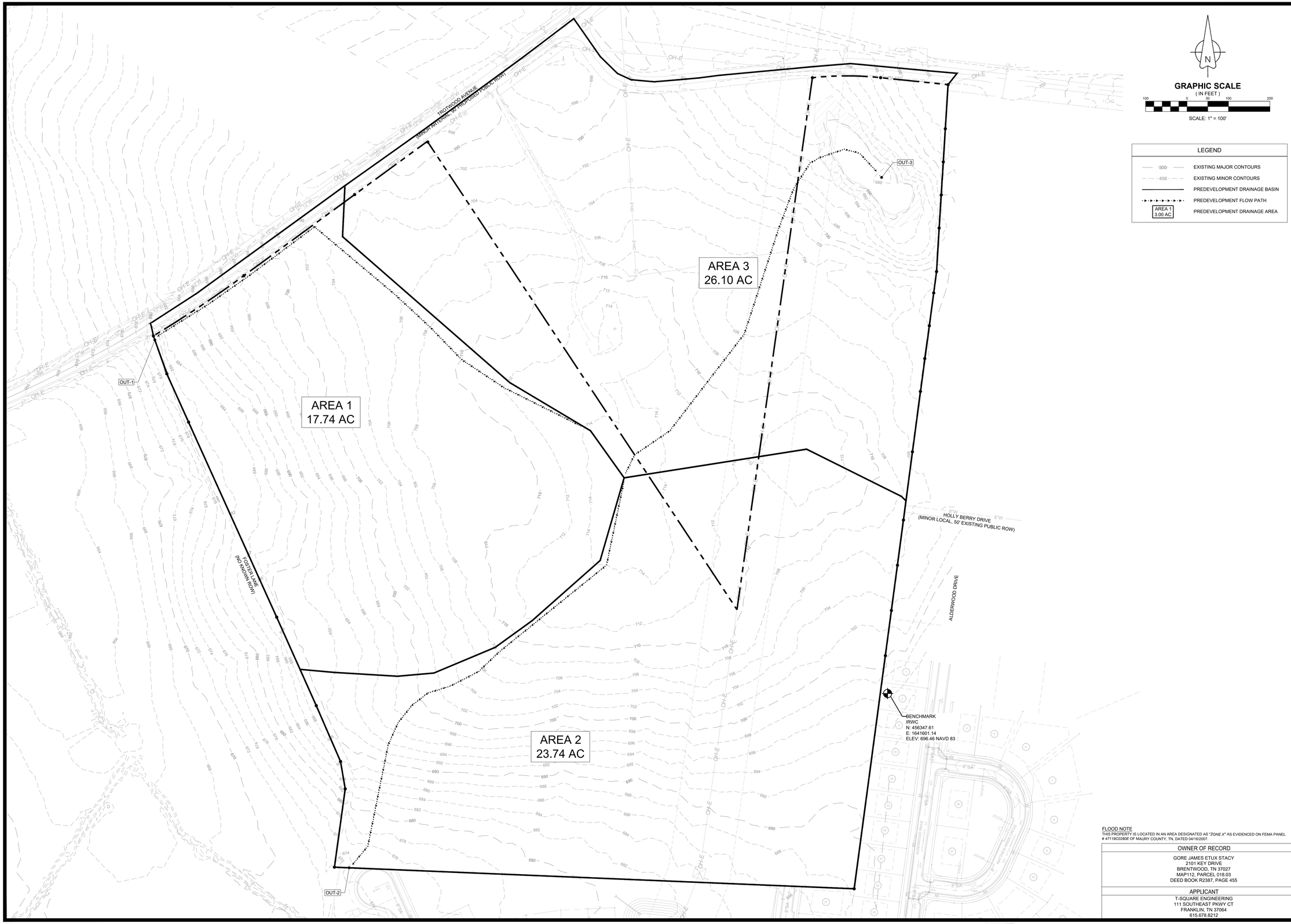

N

GRAPHIC SCALE
(IN FEET)
100 0 50 100 200
SCALE: 1" = 100'

LEGEND	
500	EXISTING MAJOR CONTOURS
498	EXISTING MINOR CONTOURS
	PREDEVELOPMENT DRAINAGE BASIN
	PREDEVELOPMENT FLOW PATH
AREA 1 3.00 AC	PREDEVELOPMENT DRAINAGE AREA

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "*ZONE X*" AS EVIDENCED ON FEMA PANEL # *47119C0280E* OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS		
NO.	DATE	
1	5/19/25	REVISIONS PER CITY OF COLUMBIA

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

PREDEVELOPMENT
STORMWATER PLAN
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
REGISTERED ENGINEER
No. 127369
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-4.0

T-SQUARE ENGINEERING

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowell)\Production\24-0314 4- Stormwater Plan ABC.dwg, 5/16/2025 8:43:06 PM



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GRAPHIC SCALE
(IN FEET)
100 0 50 100 200
SCALE: 1" = 100'

LEGEND	
500	EXISTING MAJOR CONTOURS
498	EXISTING MINOR CONTOURS
500	PROPOSED MAJOR CONTOURS
498	PROPOSED MINOR CONTOURS
	POSTDEVELOPMENT DRAINAGE BASIN
	POSTDEVELOPMENT FLOW PATH
AREA 1 3.00 AC	POSTDEVELOPMENT DRAINAGE AREA

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS *"ZONE X"* AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

NO.	DATE	REVISIONS
1	5/19/25	REVISIONS PER CITY OF COLUMBIA

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

POSTDEVELOPMENT
STORMWATER PLAN
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
REGISTERED ENGINEER
No. 127399
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-4.1

T-SQUARE ENGINEERING

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N

GRAPHIC SCALE
(IN FEET)
100 0 50 100 200
SCALE: 1" = 100'

LEGEND	
500	EXISTING MAJOR CONTOURS
498	EXISTING MINOR CONTOURS
500	PROPOSED MAJOR CONTOURS
498	PROPOSED MINOR CONTOURS
688.30	PROPOSED SPOT ELEVATION
1.0%	PROPOSED SLOPE

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "*ZONE X*" AS EVIDENCED ON FEMA PANEL # *47119C0280E* OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS		
NO.	DATE	
1	5/19/25	REVISIONS PER CITY OF COLUMBIA

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

GRADING PLAN

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORCORAN
AGRICULTURE
No. 127399
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-5.0

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GRAPHIC SCALE

(IN FEET)

100 0 50 100 200

SCALE: 1" = 100'

LEGEND

- EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- PROPOSED MAJOR CONTOURS
- PROPOSED MINOR CONTOURS
- PROPOSED STORM INLET
- PROPOSED HEADWALL
- PROPOSED AREA DRAIN
- PROPOSED STORM PIPE

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS *"ZONE X"* AS EVIDENCED ON FEMA PANEL *# 47119C0280E* OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

NO.	DATE	REVISIONS
1	5/19/25	REVISIONS PER CITY OF COLUMBIA

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

DRAINAGE PLAN

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLLA
REGISTERED ENGINEER
No. 127399
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-5.1

T-SQUARE ENGINEERING

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowell)\Production\24-0314 5- Grading and Drainage Plan.dwg, 5/16/2025 9:43:55 PM

STRUCTURE TABLE STORM A

STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
ST-A1	SINGLE INLET	RIM = 698.51 FG = 698.51	INV. IN = 693.99 INV. IN = 693.99	INV. OUT =693.99
ST-A1A	DOUBLE INLET	RIM = 698.63 FG = 698.63	INV. IN = 693.68	INV. OUT =693.68
ST-A2	SINGLE INLET	RIM = 700.75 FG = 700.75	INV. IN = 696.04 INV. IN = 694.95 INV. IN = 694.95	INV. OUT =694.95
ST-A2A	SINGLE INLET	RIM = 700.87 FG = 700.87		INV. OUT =696.35
ST-A3	SINGLE INLET	RIM = 704.57 FG = 704.57	INV. IN = 697.24	INV. OUT =697.24
ST-A4	SINGLE INLET	RIM = 705.23 FG = 705.23	INV. IN = 697.92	INV. OUT =697.92
ST-A5	SINGLE INLET	RIM = 705.23 FG = 705.23	INV. IN = 698.17 INV. IN = 698.17	INV. OUT =698.17
ST-A6	SINGLE INLET	RIM = 703.71 FG = 703.71	INV. IN = 699.52 INV. IN = 699.52	INV. OUT =699.52
ST-A6A	SINGLE INLET	RIM = 703.83 FG = 703.83		INV. OUT =699.83
ST-A7	SINGLE INLET	RIM = 706.23 FG = 706.23	INV. IN = 701.98	INV. OUT =701.98
ST-A8	SINGLE INLET	RIM = 707.23 FG = 707.23	INV. IN = 702.98 INV. IN = 702.98	INV. OUT =702.98
ST-A8A	SINGLE INLET	RIM = 707.23 FG = 707.23		INV. OUT =703.23
ST-A9	SINGLE INLET	RIM = 708.23 FG = 708.23	INV. IN = 703.98	INV. OUT =703.98
ST-A10	SINGLE INLET	RIM = 709.23 FG = 709.23	INV. IN = 704.98 INV. IN = 704.98	INV. OUT =704.98
ST-A10A	SINGLE INLET	RIM = 709.23 FG = 709.23		INV. OUT =705.23
ST-A11	SINGLE INLET	RIM = 710.23 FG = 710.23	INV. IN = 705.98	INV. OUT =705.98
ST-A12	SINGLE INLET	RIM = 711.23 FG = 711.23	INV. IN = 706.98 INV. IN = 706.98	INV. OUT =706.98
ST-A12A	SINGLE INLET	RIM = 711.23 FG = 711.23		INV. OUT =707.23
ST-A13	SINGLE INLET	RIM = 712.23 FG = 712.23		INV. OUT =708.23
ST-A14	SINGLE INLET	RIM = 700.11 FG = 700.11	INV. IN = 696.11	INV. OUT =696.11
ST-A15	SINGLE INLET	RIM = 702.08 FG = 702.08	INV. IN = 697.64 INV. IN = 697.64	INV. OUT =697.64
ST-A15A	SINGLE INLET	RIM = 702.08 FG = 702.08		INV. OUT =698.14
ST-A16	SINGLE INLET	RIM = 704.08 FG = 704.08	INV. IN = 700.04	INV. OUT =700.04
ST-A17	SINGLE INLET	RIM = 706.08 FG = 706.08	INV. IN = 702.04 INV. IN = 702.04	INV. OUT =702.04
ST-A17A	SINGLE INLET	RIM = 706.08 FG = 706.08		INV. OUT =702.16
ST-A18	SINGLE INLET	RIM = 708.08 FG = 708.08	INV. IN = 704.04	INV. OUT =704.04
ST-A19	SINGLE INLET	RIM = 710.08 FG = 710.08	INV. IN = 706.04 INV. IN = 706.04	INV. OUT =706.04
ST-A19A	SINGLE INLET	RIM = 710.08 FG = 710.08		INV. OUT =706.16
ST-A20	SINGLE INLET	RIM = 712.08 FG = 712.08		INV. OUT =708.04
ST-A21	AREA DRAIN	RIM = 701.00 FG = 701.00	INV. IN = 696.00	INV. OUT =696.00
ST-A22	DOUBLE AREA DRAIN	RIM = 708.94 FG = 708.94	INV. IN = 704.94	INV. OUT =704.94
ST-A23	DOUBLE AREA DRAIN	RIM = 711.34 FG = 711.34		INV. OUT =707.34
ST-HWA1	HEADWALL	RIM = 697.08 FG = 693.41	INV. IN = 693.29	
ST-HWA6	HEADWALL	RIM = 707.21 FG = 703.00		INV. OUT =703.00

PIPE TABLE STORM A

NAME	SIZE	LENGTH	SLOPE
ST-A1 TO ST-A1A	30" RCP	29.78	1.00%
ST-A1A TO ST-HWA1	30" RCP	37.69	1.00%
ST-A2 TO ST-A1	24" RCP	81.42	1.16%
ST-A2A TO ST-A2	18" RCP	29.87	4.52%
ST-A3 TO ST-A2	24" RCP	98.79	1.20%
ST-A4 TO ST-A3	24" RCP	66.93	1.00%
ST-A5 TO ST-A4	18" RCP	23.77	1.00%
ST-A6 TO ST-A5	18" RCP	133.64	1.00%
ST-A6A TO ST-A6	18" RCP	29.77	1.00%
ST-A7 TO ST-A5	18" RCP	98.89	3.81%
ST-A8 TO ST-A7	18" RCP	98.77	1.00%
ST-A8A TO ST-A8	18" RCP	23.77	1.00%
ST-A9 TO ST-A8	18" RCP	98.77	1.00%
ST-A10 TO ST-A9	18" RCP	98.77	1.00%
ST-A10A TO ST-A10	18" RCP	23.77	1.00%
ST-A11 TO ST-A10	18" RCP	98.77	1.00%
ST-A12 TO ST-A11	18" RCP	98.77	1.00%
ST-A12A TO ST-A12	18" RCP	23.76	1.00%
ST-A13 TO ST-A12	18" RCP	98.78	1.25%
ST-A14 TO ST-A1	18" RCP	81.37	2.56%
ST-A15 TO ST-A14	18" RCP	96.97	1.55%
ST-A15A TO ST-A15	18" RCP	23.79	2.00%
ST-A16 TO ST-A15	18" RCP	98.82	2.40%
ST-A17 TO ST-A16	18" RCP	98.81	2.00%
ST-A17A TO ST-A17	18" RCP	23.76	0.50%
ST-A18 TO ST-A17	18" RCP	98.81	2.00%
ST-A19 TO ST-A18	18" RCP	98.81	2.00%
ST-A19A TO ST-A19	18" RCP	23.76	0.50%
ST-A20 TO ST-A19	18" RCP	98.81	2.00%
ST-A21 TO ST-A2	18" RCP	103.39	1.00%
ST-A22 TO ST-A21	24" RCP	239.01	3.72%
ST-A23 TO ST-A22	24" RCP	238.79	1.00%
ST-HWA6 TO ST-A6	18" RCP	33.94	10.15%

STRUCTURE TABLE STORM B

STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
ST-B1	SINGLE INLET	RIM = 688.52 FG = 688.52	INV. IN = 680.62 INV. IN = 680.62	INV. OUT =680.62
ST-B1A	SINGLE INLET	RIM = 688.52 FG = 688.52	INV. IN = 680.49	INV. OUT =680.49
ST-B2	SINGLE INLET	RIM = 686.22 FG = 686.22	INV. IN = 681.09	INV. OUT =681.09
ST-B3	SINGLE INLET	RIM = 686.05 FG = 686.05	INV. IN = 681.26 INV. IN = 681.26 INV. IN = 681.26	INV. OUT =681.26
ST-B3A	SINGLE INLET	RIM = 686.05 FG = 686.05		INV. OUT =682.05
ST-B4	SINGLE INLET	RIM = 687.25 FG = 687.25	INV. IN = 682.00	INV. OUT =682.00
ST-B5	SINGLE INLET	RIM = 688.26 FG = 688.26	INV. IN = 682.98 INV. IN = 682.98	INV. OUT =682.98
ST-B5A	SINGLE INLET	RIM = 688.26 FG = 688.26		INV. OUT =684.26
ST-B6	SINGLE INLET	RIM = 690.50 FG = 690.50	INV. IN = 683.52 INV. IN = 683.52	INV. OUT =683.52
ST-B6A	SINGLE INLET	RIM = 690.63 FG = 690.63	INV. IN = 683.77	INV. OUT =683.77
ST-B6B	SINGLE AREA DRAIN	RIM = 689.15 FG = 689.15		INV. OUT =685.15
ST-B7	SINGLE INLET	RIM = 692.10 FG = 692.10	INV. IN = 688.10	INV. OUT =688.10
ST-B8	SINGLE INLET	RIM = 693.89 FG = 693.89	INV. IN = 689.64 INV. IN = 689.64	INV. OUT =689.64
ST-B8A	SINGLE INLET	RIM = 693.89 FG = 693.89		INV. OUT =689.89
ST-B9	SINGLE INLET	RIM = 695.99 FG = 695.99	INV. IN = 691.99 INV. IN = 691.99	INV. OUT =691.99
ST-B10	SINGLE INLET	RIM = 698.06 FG = 698.06	INV. IN = 693.81 INV. IN = 693.81	INV. OUT =693.81
ST-B10A	SINGLE INLET	RIM = 698.06 FG = 698.06		INV. OUT =694.06
ST-B11	SINGLE INLET	RIM = 700.15 FG = 700.15	INV. IN = 696.15	INV. OUT =696.15
ST-B12	SINGLE INLET	RIM = 704.08 FG = 704.08	INV. IN = 698.34 INV. IN = 698.34	INV. OUT =698.34
ST-B12A	SINGLE INLET	RIM = 704.08 FG = 704.08		INV. OUT =700.08
ST-B13	SINGLE INLET	RIM = 708.31 FG = 708.31	INV. IN = 699.95	INV. OUT =699.95
ST-B13A	SINGLE INLET	RIM = 708.31 FG = 708.31	INV. IN = 700.20	INV. OUT =700.20
ST-B14	SINGLE INLET	RIM = 709.56 FG = 709.56	INV. IN = 700.86	INV. OUT =700.86
ST-B15	SINGLE INLET	RIM = 706.31 FG = 706.31	INV. IN = 702.06	INV. OUT =702.06
ST-B15A	SINGLE INLET	RIM = 706.31 FG = 706.31		INV. OUT =702.31
ST-B16	SINGLE INLET	RIM = 697.81 FG = 697.81	INV. IN = 694.22	INV. OUT =694.22
ST-B16A	SINGLE INLET	RIM = 697.81 FG = 697.81	INV. IN = 693.85	INV. OUT =693.85
ST-B17	SINGLE INLET	RIM = 700.71 FG = 700.71	INV. IN = 696.71	INV. OUT =696.71
ST-B18	SINGLE INLET	RIM = 703.52 FG = 703.52	INV. IN = 699.14	INV. OUT =699.14
ST-B18A	SINGLE INLET	RIM = 703.51 FG = 703.51		INV. OUT =699.51
ST-B19	SINGLE INLET	RIM = 696.07 FG = 696.07	INV. IN = 691.07 INV. IN = 691.07	INV. OUT =692.38
ST-B19A	SINGLE INLET	RIM = 696.07 FG = 696.07		INV. OUT =692.07
ST-B20	SINGLE INLET	RIM = 701.74 FG = 701.74	INV. IN = 696.86 INV. IN = 696.86	INV. OUT =696.86
ST-B20A	SINGLE INLET	RIM = 701.74 FG = 701.74	INV. IN = 697.93	INV. OUT =697.74
ST-B21	SINGLE INLET	RIM = 702.63 FG = 702.63	INV. IN = 697.63	INV. OUT =697.63
ST-B22	SINGLE INLET	RIM = 704.55 FG = 704.55	INV. IN = 699.94 INV. IN = 699.94	INV. OUT =699.94
ST-B22A	SINGLE INLET	RIM = 704.55 FG = 704.55		INV. OUT =700.55
ST-B23	SINGLE INLET	RIM = 706.20 FG = 706.20	INV. IN = 700.89	INV. OUT =700.89
ST-B24	SINGLE INLET	RIM = 706.20 FG = 706.20	INV. IN = 701.20	INV. OUT =701.20
ST-B25	SINGLE INLET	RIM = 707.60 FG = 707.60	INV. IN = 702.66 INV. IN = 702.66	INV. OUT =702.66
ST-B25A	SINGLE INLET	RIM = 707.60 FG = 707.60		INV. OUT =702.91
ST-B26	SINGLE INLET	RIM = 711.47 FG = 711.47		INV. OUT =705.86
ST-HWB1	HEADWALL	RIM = 683.44 FG = 680.00	INV. IN = 679.65	
ST-HWB5	HEADWALL	RIM = 705.50 FG = 706.03		INV. OUT =705.00
ST-HWB6	HEADWALL	RIM = 693.21 FG = 682.01		INV. OUT =682.00

PIPE TABLE STORM B

NAME	SIZE	LENGTH	SLOPE
ST-B1 TO ST-B1A	30" RCP	23.77	0.50%
ST-B1A TO ST-HWB1	30" RCP	165.95	0.50%
ST-B2 TO ST-B1	30" RCP	92.54	0.50%
ST-B3 TO ST-B2	30" RCP	32.38	0.50%
ST-B3A TO ST-B3	18" RCP	23.82	3.16%
ST-B4 TO ST-B3	30" RCP		3%
ST-B5 TO ST-B4	30" RCP		1.00%
ST-B5A TO ST-B5	18" RCP		3%
ST-B6 TO ST-B5	24" RCP		3%
ST-B6A TO ST-B6	24" RCP	23.78	1.00%
ST-B6B TO ST-B6A	18" RCP		0%
ST-B7 TO ST-B6	18" RCP		8%
ST-B8 TO ST-B7	18" RCP	67.31	2.25%
ST-B8A TO ST-B8	18" RCP	23.77	1.00%
ST-B9 TO ST-B8	18" RCP	78.84	2.94%
ST-B10 TO ST-B9	18" RCP	77.81	2.30%
ST-B10A TO ST-B10	18" RCP	23.77	1.00%
ST-B11 TO ST-B10	18" RCP	78.84	2.93%
ST-B12 TO ST-B11	18" RCP	148.80	1.46%
ST-B12A TO ST-B12	18" RCP	23.94	6.96%
ST-B13 TO ST-B12	18" RCP	160.27	1.00%
ST-B13A TO ST-B13	18" RCP	23.77	1.00%
ST-B14 TO ST-B13A	18" RCP	65.05	1.00%
ST-B15 TO ST-B14	18" RCP	119.09	1.00%
ST-B15A TO ST-B15	18" RCP	23.77	1.00%
ST-B16 TO ST-B16A	18" RCP	35.77	1.00%
ST-B16A TO ST-B9	18" RCP	45.02	3.97%
ST-B17 TO ST-B16	18" RCP	95.56	2.57%
ST-B18 TO ST-B17	18" RCP	98.72	2.43%
ST-B18A TO ST-B18	18" RCP	35.77	1.00%
ST-B19 TO ST-B1	30" RCP	147.89	7.92%
ST-B19A TO ST-B19	18" RCP	23.85	4.00%
ST-B20 TO ST-B19	30" RCP	90.89	6.30%
ST-B20A TO ST-B20	18" RCP	35.81	2.38%
ST-B21 TO ST-B20	30" RCP	75.29	1.00%
ST-B22 TO ST-B21	30" RCP	78.87	2.89%
ST-B22A TO ST-B22	18" RCP	35.79	1.65%
ST-B23 TO ST-B22	30" RCP	93.39	1.00%
ST-B24 TO ST-B23	30" RCP	29.78	1.00%
ST-B25 TO ST-B20A	18" RCP	94.55	4.94%
ST-B25A TO ST-B25	18" RCP	23.77	1.00%
ST-B26 TO ST-B25	18" RCP	78.89	4.00%
ST-HWB5 TO ST-B24	30" RCP	26.04	14.52%
ST-HWB6 TO ST-B3	18" RCP	30.00	2.42%

REVISIONS

NO.	DATE	REVISIONS PER CITY OF COLUMBIA
1	5/19/25	

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

GRADING & DRAINAGE DETAILS

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALISON B. CORDELL
REGISTERED ENGINEER
No. 127799
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-5.2

T-SQUARE ENGINEERING

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowe)\Production\24-0314 5- Grading and Drainage Plan.dwg, 6/16/2025 9:44:05 PM

STRUCTURE TABLE STORM C				
STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
ST-C1	SINGLE INLET	RIM = 700.26 FG = 700.26	INV. IN = 696.26	INV. OUT =696.26
ST-C1A	DOUBLE INLET	RIM = 698.75 FG = 698.75		INV. OUT =694.75
ST-C1B	SINGLE INLET	RIM = 700.19 FG = 700.19	INV. IN = 693.30 INV. IN = 693.30	INV. OUT =693.30
ST-C2	SINGLE INLET	RIM = 702.43 FG = 702.43	INV. IN = 698.18 INV. IN = 698.18	INV. OUT =698.18
ST-C2A	SINGLE INLET	RIM = 702.43 FG = 702.43		INV. OUT =698.43
ST-C3	SINGLE INLET	RIM = 704.21 FG = 704.21	INV. IN = 700.21	INV. OUT =700.21
ST-C4	SINGLE INLET	RIM = 705.99 FG = 705.99	INV. IN = 701.74 INV. IN = 701.74	INV. OUT =701.74
ST-C4A	SINGLE INLET	RIM = 705.99 FG = 705.99		INV. OUT =701.99
ST-C5	SINGLE INLET	RIM = 707.77 FG = 707.77	INV. IN = 703.77	INV. OUT =703.77
ST-C6	SINGLE INLET	RIM = 709.56 FG = 709.56	INV. IN = 705.31	INV. OUT =705.31
ST-C6A	SINGLE INLET	RIM = 709.56 FG = 709.56		INV. OUT =705.56
ST-HWC1	HEADWALL		INV. IN = 692.80	

PIPE TABLE STORM C			
NAME	SIZE	LENGTH	SLOPE
ST-C1 TO ST-C1B	18" RCP	24.52	11.66%
ST-C1A TO ST-C1B	18" RCP	143.39	1.00%
ST-C1B TO ST-HWC1	24" RCP	48.78	1.00%
ST-C2 TO ST-C1	18" RCP	105.63	1.80%
ST-C2A TO ST-C2	18" RCP	23.77	1.00%
ST-C3 TO ST-C2	18" RCP	73.83	2.71%
ST-C4 TO ST-C3	18" RCP	73.80	2.04%
ST-C4A TO ST-C4	18" RCP	23.77	1.00%
ST-C5 TO ST-C4	18" RCP	73.83	2.71%
ST-C6 TO ST-C5	18" RCP	73.80	2.05%
ST-C6A TO ST-C6	18" RCP	23.77	1.00%

STRUCTURE TABLE BYPASS				
STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
ST-BP1	SINGLE INLET	RIM = 681.48 FG = 681.48	INV. IN = 678.06	INV. OUT =678.06
ST-BP2	SINGLE INLET	RIM = 681.48 FG = 681.48	INV. IN = 677.93	INV. OUT =677.93
ST-HWBP1	HEADWALL	RIM = 679.50 FG = 680.00		INV. OUT =678.20
ST-HWBP2	HEADWALL	RIM = 680.40 FG = 677.90	INV. IN = 677.69	

PIPE TABLE BYPASS			
NAME	SIZE	LENGTH	SLOPE
ST-BP1 TO ST-BP2	18" RCP	23.76	0.50%
ST-BP2 TO ST-HWBP2	18" RCP	45.45	0.50%
ST-HWBP1 TO ST-BP1	18" RCP	26.19	0.50%

STRUCTURE TABLE STORM E				
STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
ST-E1	SINGLE INLET	RIM = 677.82 FG = 677.82	INV. IN = 674.07	
ST-E1A	SINGLE INLET	RIM = 677.82 FG = 677.82		INV. OUT =674.32 INV. OUT =674.07
ST-HWE1	HEADWALL	RIM = 675.21 FG = 674.00	INV. IN = 673.50	

PIPE TABLE STORM E			
NAME	SIZE	LENGTH	SLOPE
ST-E1A TO ST-E1	18" RCP	23.77	1.00%
ST-E1A TO ST-HWE1	18" RCP	47.62	1.14%

STRUCTURE TABLE STORM D				
STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
ST-D 7	SINGLE INLET	RIM = 688.32 FG = 688.32	INV. IN = 684.32	INV. OUT =684.32
ST-D1	TRIPLE INLET	RIM = 681.96 FG = 681.96	INV. IN = 677.79 INV. IN = 677.79	INV. OUT =677.79
ST-D1A	SINGLE INLET	RIM = 681.96 FG = 681.96	INV. IN = 677.54	INV. OUT =677.54
ST-D2	TRIPLE INLET	RIM = 682.04 FG = 682.04	INV. IN = 678.02 INV. IN = 678.02	INV. OUT =678.02
ST-D2A	AREA DRAIN	RIM = 682.89 FG = 682.89		INV. OUT =678.89
ST-D3	TRIPLE INLET	RIM = 682.72 FG = 682.72	INV. IN = 678.47 INV. IN = 678.47	INV. OUT =678.47
ST-D3A	SINGLE INLET	RIM = 682.72 FG = 682.72		INV. OUT =678.72
ST-D4	SINGLE INLET	RIM = 684.76 FG = 684.76	INV. IN = 680.51 INV. IN = 680.51	INV. OUT =680.51
ST-D4A	SINGLE INLET	RIM = 684.76 FG = 684.76		INV. OUT =680.76
ST-D5	DOUBLE INLET	RIM = 685.94 FG = 685.94	INV. IN = 681.94	INV. OUT =681.94
ST-D6	DOUBLE INLET	RIM = 687.12 FG = 687.12	INV. IN = 683.12	INV. OUT =683.12
ST-D8	SINGLE INLET	RIM = 689.50 FG = 689.50	INV. IN = 685.25 INV. IN = 685.25	INV. OUT =685.25
ST-D8A	SINGLE INLET	RIM = 689.50 FG = 689.50		INV. OUT =685.50
ST-D9	SINGLE INLET	RIM = 691.89 FG = 691.89		INV. OUT =687.89
ST-D10	SINGLE INLET	RIM = 682.91 FG = 682.91		INV. OUT =678.91
ST-HWD1	HEADWALL	RIM = 680.81 FG = 678.00	INV. IN = 677.02	

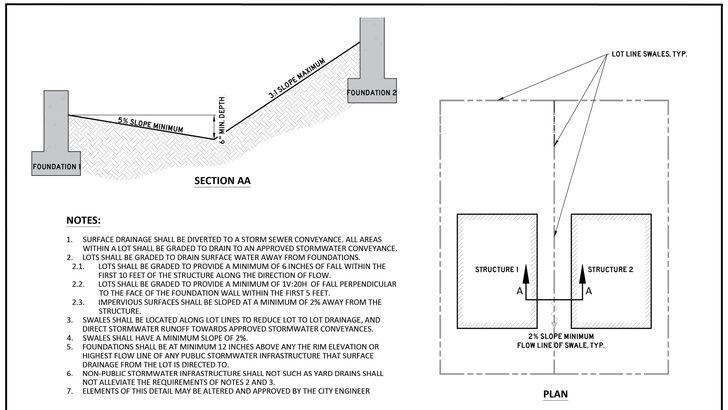
PIPE TABLE STORM D			
NAME	SIZE	LENGTH	SLOPE
ST-D 7 TO ST-D6	18" RCP	49.30	2.38%
ST-D1 TO ST-D1A	18" RCP	23.77	1.00%
ST-D1A TO ST-HWD1	30" RCP	50.77	1.00%
ST-D2 TO ST-D1	24" RCP	21.61	1.00%
ST-D2A TO ST-D2	18" RCP	155.37	0.56%
ST-D3 TO ST-D2	24" RCP	43.59	1.00%
ST-D3A TO ST-D3	18" RCP	23.77	1.00%
ST-D4 TO ST-D3	24" RCP	81.76	2.46%
ST-D4A TO ST-D4	18" RCP	23.77	1.00%
ST-D5 TO ST-D4	18" RCP	47.14	2.96%
ST-D6 TO ST-D5	18" RCP	47.98	2.40%
ST-D8 TO ST-D 7	18" RCP	48.10	1.89%
ST-D8A TO ST-D8	18" RCP	23.77	1.00%
ST-D9 TO ST-D8	18" RCP	98.87	2.64%
ST-D10 TO ST-D1	18" RCP	113.31	0.98%

STRUCTURE TABLE OUTLETS			
STRUCTURE NAME	DESCRIPTION	PIPES IN	PIPES OUT
RISER-A	RISER		INV. OUT =681.00
RISER-B	RISER		INV. OUT =677.50
RISER-C	RISER		INV. OUT =691.50
ST-HWA5	HEADWALL	INV. IN = 680.45	
ST-HWB4	HEADWALL	INV. IN = 676.00	
ST-HWC2	HEADWALL	INV. IN = 691.00	

PIPE TABLE OUTLETS			
NAME	SIZE	LENGTH	SLOPE
RISER-A TO ST-HWA5	18" RCP	60.64	0.86%
RISER-B TO ST-HWB4	18" RCP	150.40	0.99%
RISER-C TO ST-HWC2	18" RCP	46.20	1.04%

STRUCTURE TABLE STORM F				
STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
ST-F1	STORM MANHOLE	RIM = 692.74 FG = 692.74	INV. IN = 681.49	INV. OUT =681.49
ST-F2	SINGLE INLET	RIM = 686.46 FG = 686.46	INV. IN = 682.22 INV. IN = 682.22	INV. OUT =682.22
ST-F2A	SINGLE INLET	RIM = 686.47 FG = 686.47		INV. OUT =682.47
ST-F3	SINGLE INLET	RIM = 691.73 FG = 691.73	INV. IN = 687.48 INV. IN = 687.48	INV. OUT =687.48
ST-F3A	SINGLE INLET	RIM = 691.73 FG = 691.73		INV. OUT =687.73
ST-F4	SINGLE INLET	RIM = 692.95 FG = 692.95	INV. IN = 688.58	INV. OUT =688.95 INV. OUT =688.58
ST-F4A	SINGLE INLET	RIM = 692.95 FG = 692.95	INV. IN = 688.58	
ST-F5	SINGLE INLET	RIM = 701.31 FG = 701.31	INV. IN = 697.06 INV. IN = 697.06	INV. OUT =697.06
ST-F5A	SINGLE INLET	RIM = 701.31 FG = 701.31		INV. OUT =697.31
ST-F6	SINGLE INLET	RIM = 705.85 FG = 705.85	INV. IN = 701.48	INV. OUT =701.48
ST-F6A	SINGLE INLET	RIM = 705.85 FG = 705.85		INV. OUT =701.85
ST-HWF1	HEADWALL	RIM = 683.22 FG = 682.05	INV. IN = 680.51	

PIPE TABLE STORM F			
NAME	SIZE	LENGTH	SLOPE
ST-F1 TO ST-HWF1	18" RCP	188.53	0.52%
ST-F2 TO ST-F1	18" RCP	145.38	0.50%
ST-F2A TO ST-F2	18" RCP	23.77	1.00%
ST-F3 TO ST-F2	18" RCP	136.91	3.81%
ST-F3A TO ST-F3	18" RCP	23.77	1.00%
ST-F4 TO ST-F3	18" RCP	46.84	2.27%
ST-F4 TO ST-F4A	18" RCP	35.77	1.00%
ST-F5 TO ST-F4	18" RCP	204.89	4.12%
ST-F5A TO ST-F5	18" RCP	23.77	1.00%
ST-F6 TO ST-F5	18" RCP	86.09	5.07%
ST-F6A TO ST-F6	18" RCP	35.77	1.00%



NOTES:

1. SURFACE DRAINAGE SHALL BE DIVERTED TO A STORM SEWER CONVEYANCE. ALL AREAS WITHIN A LOT SHALL BE GRADED TO DRAIN TO AN APPROVED STORMWATER CONVEYANCE.
2. LOTS SHALL BE GRADED TO DRAIN SURFACE WATER AWAY FROM FOUNDATIONS.
   - 2.1. LOTS SHALL BE GRADED TO PROVIDE A MINIMUM OF 6 INCHES OF FALL WITHIN THE FIRST 10 FEET OF THE STRUCTURE ALONG THE DIRECTION OF FLOW.
   - 2.2. LOTS SHALL BE GRADED TO PROVIDE A MINIMUM OF 1V:20H OF FALL PERPENDICULAR TO THE FACE OF THE FOUNDATION WALL WITHIN THE FIRST 5 FEET.
   - 2.3. IMPERVIOUS SURFACES SHALL BE SLOPED AT A MINIMUM OF 2% AWAY FROM THE STRUCTURE.
3. SWALES SHALL BE LOCATED ALONG LOT LINES TO REDUCE LOT TO LOT DRAINAGE, AND DIRECT STORMWATER RUNOFF TOWARDS APPROVED STORMWATER CONVEYANCES.
4. SWALES SHALL HAVE A MINIMUM SLOPE OF 2%.
5. FOUNDATIONS SHALL BE AT MINIMUM 12 INCHES ABOVE ANY THE RIM ELEVATION OR HIGHEST FLOW LINE OF ANY PUBLIC STORMWATER INFRASTRUCTURE THAT SURFACE DRAINAGE FROM THE LOT IS DIRECTED TO.
6. NON-PUBLIC STORMWATER INFRASTRUCTURE SHALL NOT SUCH AS YARD DRAINS SHALL NOT ALLEVIATE THE REQUIREMENTS OF NOTES 2 AND 3.
7. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA
TENNESSEE

CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

STANDARD DETAILS

RESIDENTIAL LOT GRADING AND DRAINAGE

(NTS)

DATE
6/9/2022

DD-04

REVISIONS		
NO.	DATE	REVISIONS PER CITY OF COLUMBIA
1	5/19/25	

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

GRADING & DRAINAGE DETAILS

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
AGRICULTURE
STATE OF TENNESSEE
No. 127399
LICENSED
LANDSCAPE ARCHITECT
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-5.3

T-SQUARE ENGINEERING

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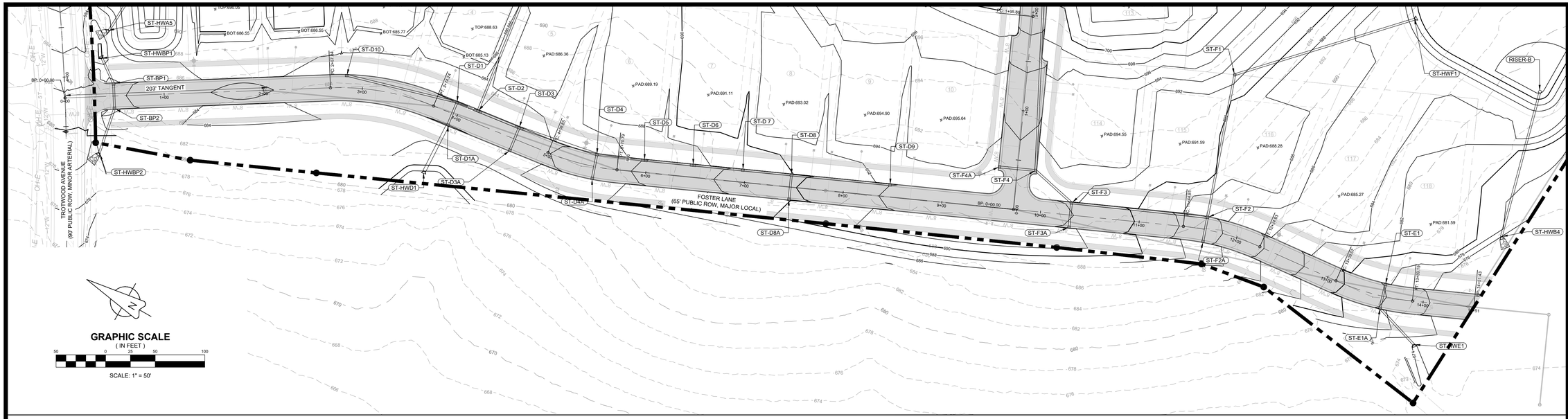

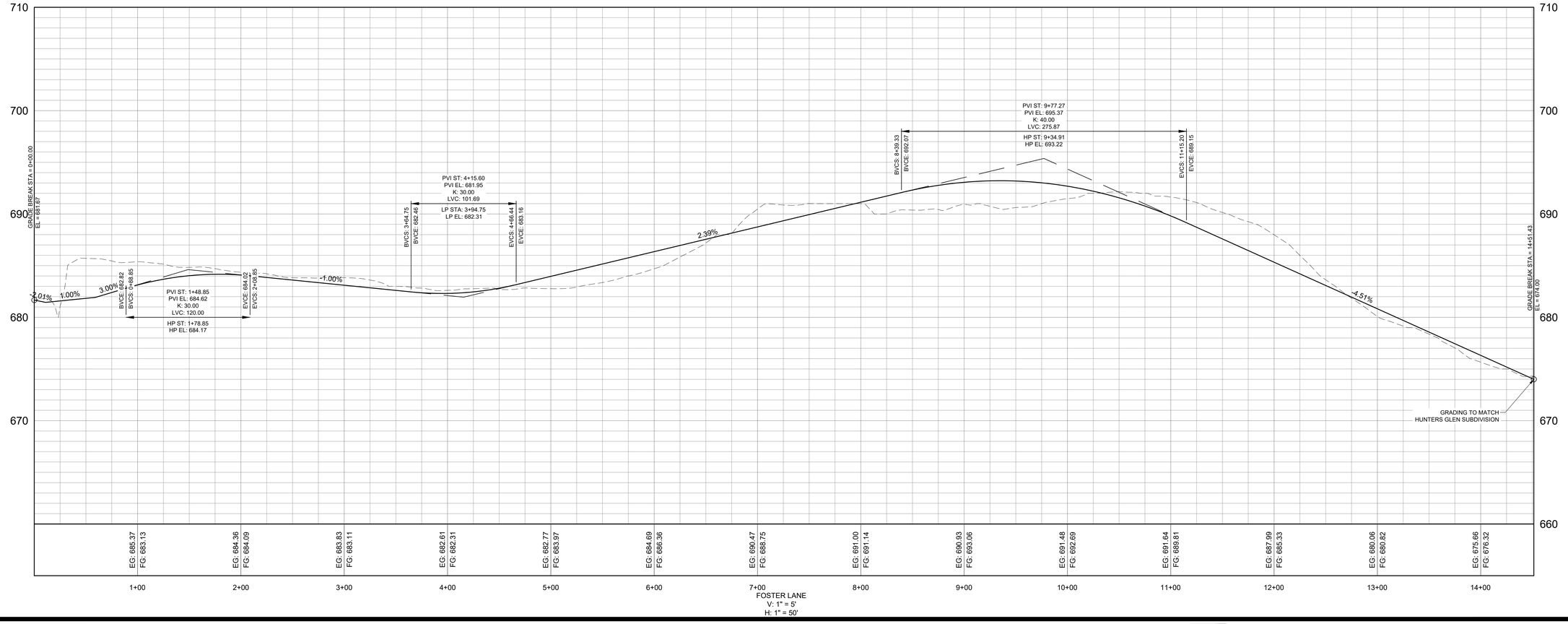

REVISIONS		
NO.	DATE	
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DRAWN BY: T-SQUARE
REVIEWER: ABC

FOSTER LANE
PLAN AND PROFILE
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD SUBDIVISION

ALLISON B. COROLLA
REGISTERED ENGINEER
No. 127369
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-6.0

T-SQUARE ENGINEERING

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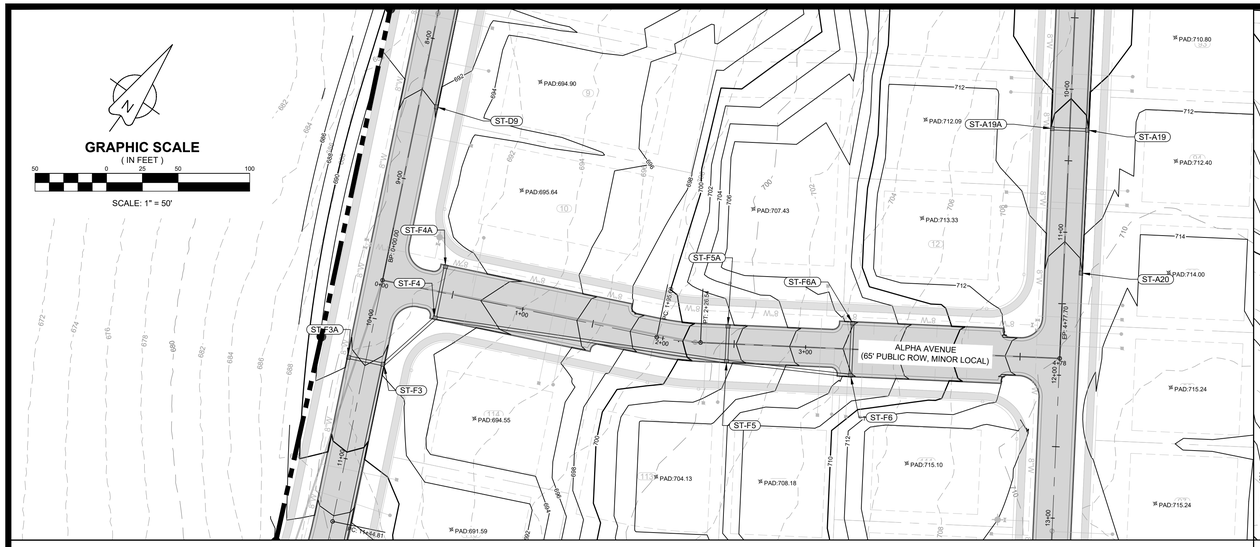



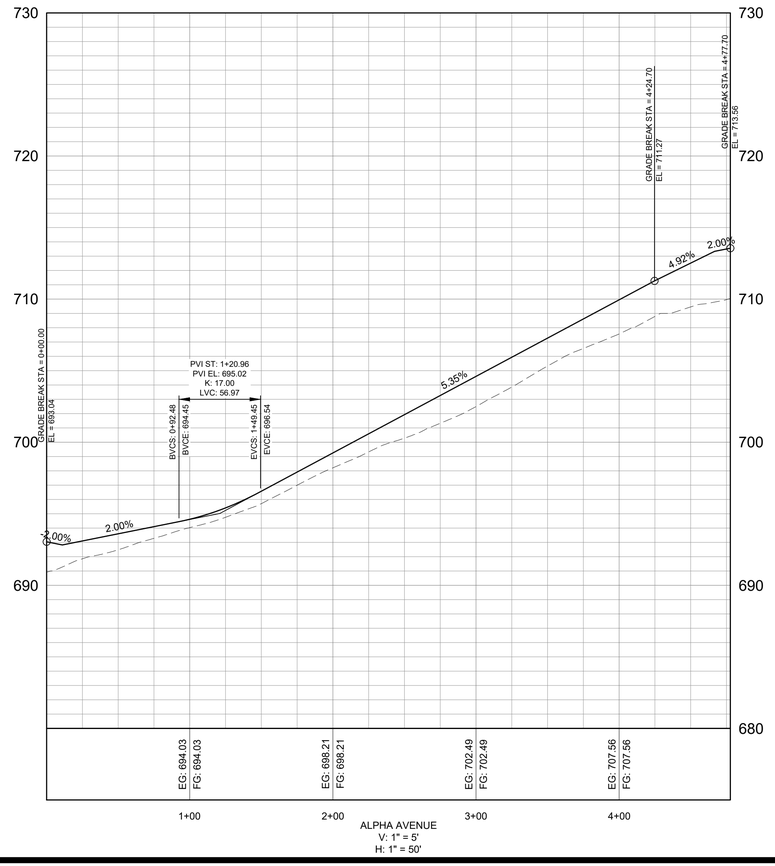

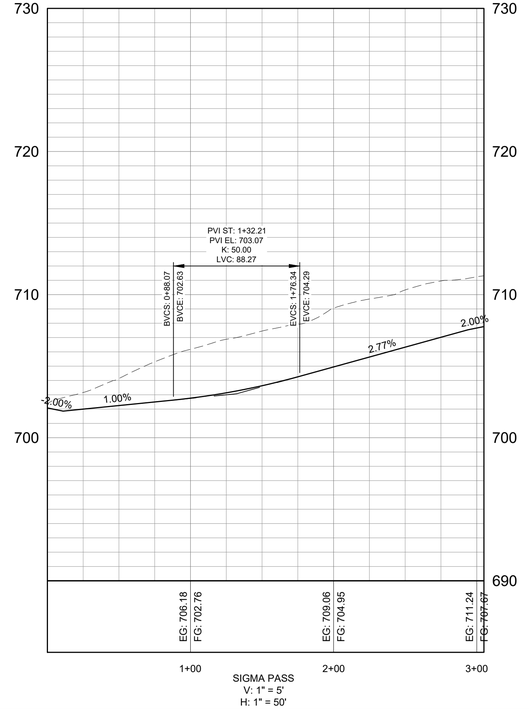

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DRAWN BY: T-SQUARE
REVIEWER: ABC

ALPHA AVENUE AND SIGMA PASS
PLAN AND PROFILE
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORCORAN
LICENSED PROFESSIONAL ENGINEER
AGRICULTURE
CIVIL
No. 127389
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-6.1

T-SQUARE ENGINEERING

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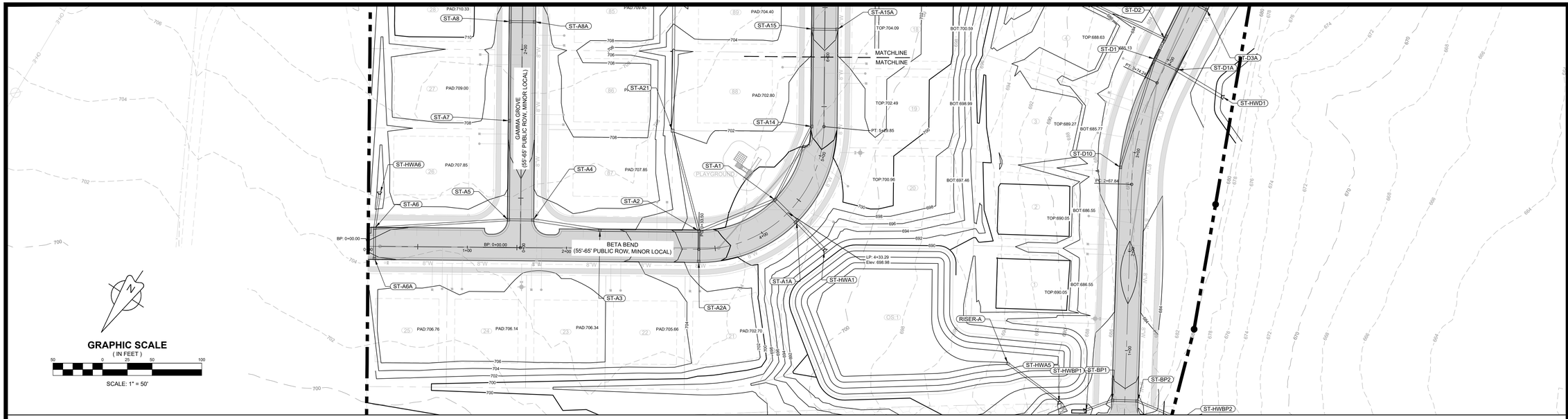

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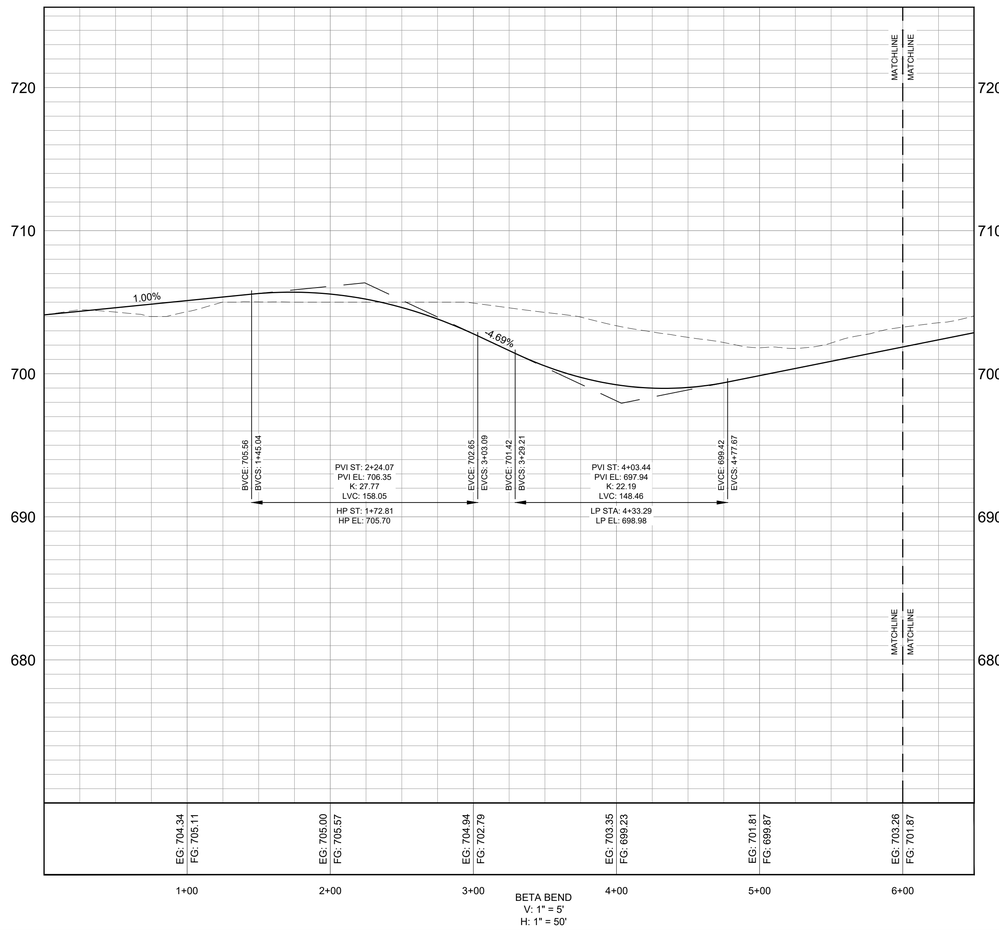

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BETA BEND
PLAN AND PROFILE
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLLA
REGISTERED ENGINEER
No. 127369
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-6.2

T-SQUARE ENGINEERING

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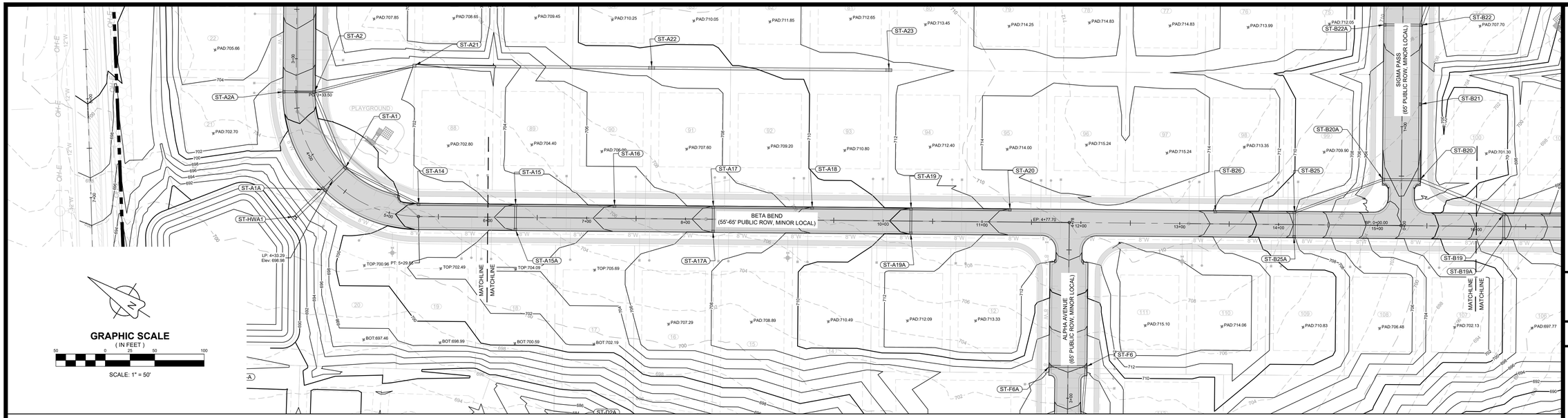

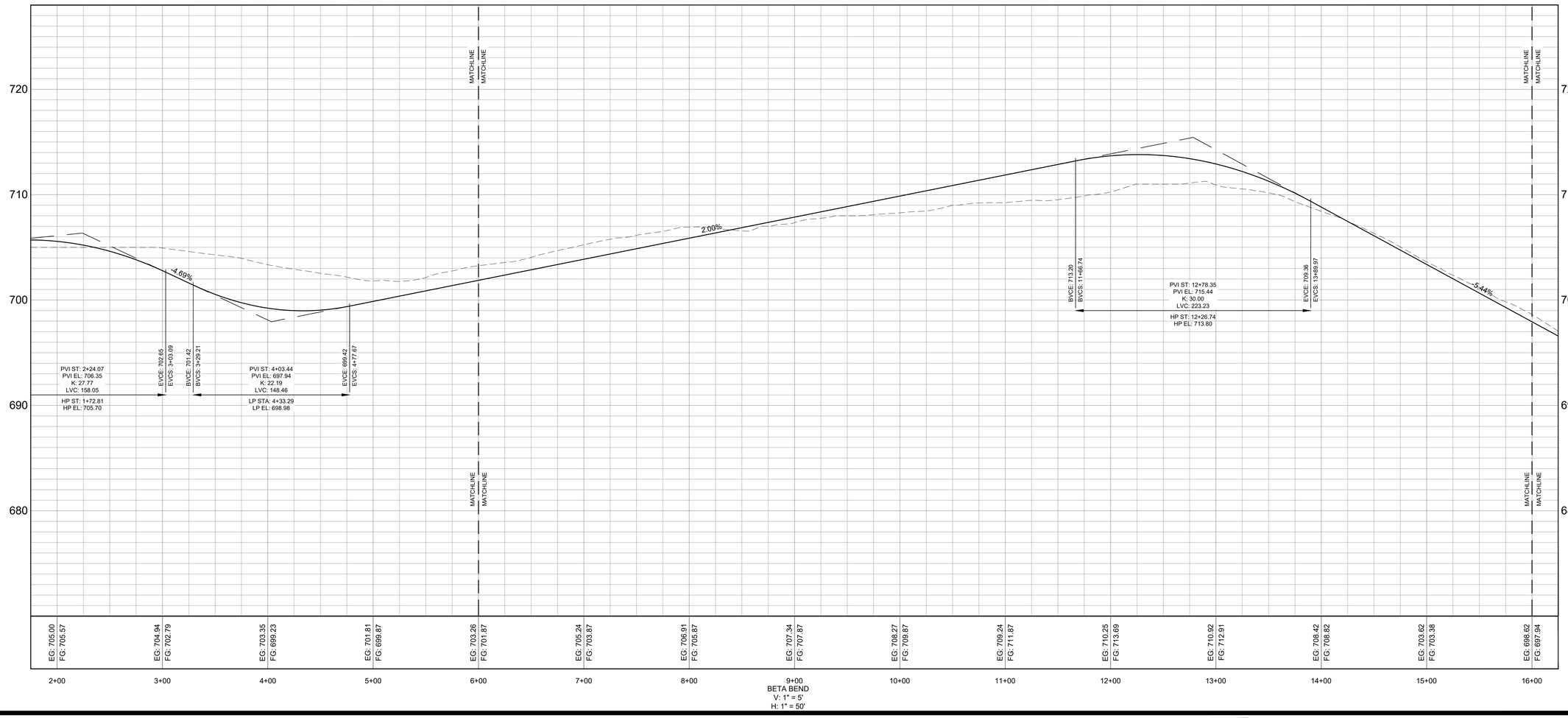

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REVIEWER: ABC

BETA BEND
PLAN AND PROFILE
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLLA
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 127309
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-6.3

T-SQUARE ENGINEERING

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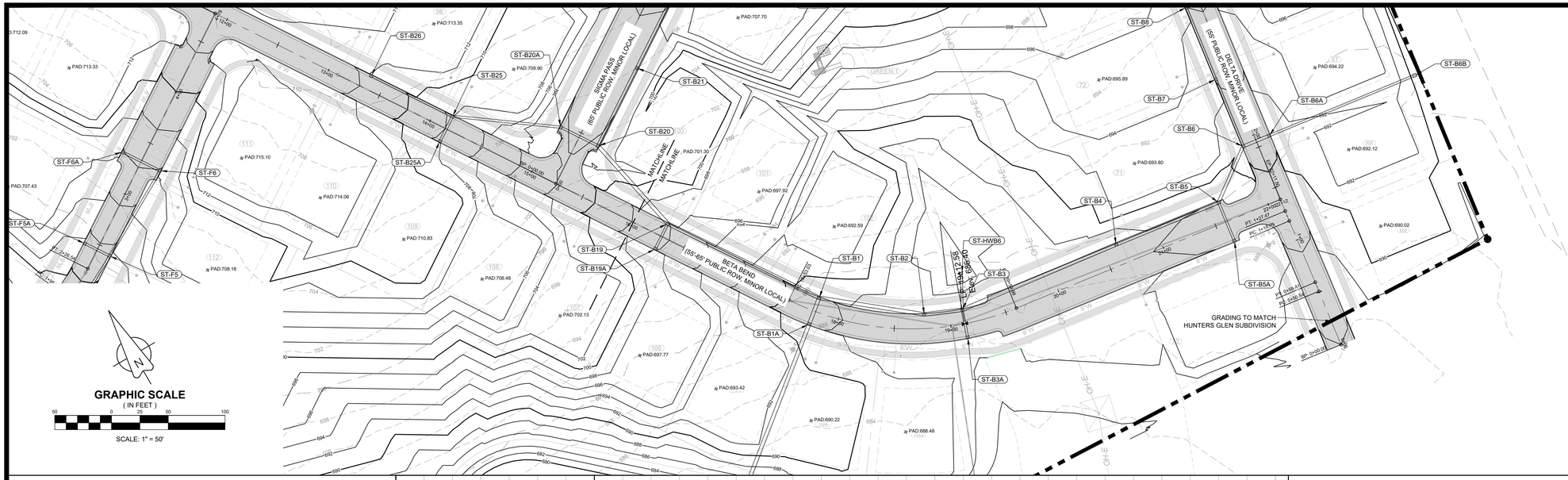
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ST-B19A
ST-B1A
ST-B1
ST-B2
ST-HWB6
ST-B3
ST-B3A
ST-B8
ST-B7
ST-B6
ST-B5
ST-B4
ST-B6B
ST-B6A
ST-B5A
SIGMA PASS
(65' PUBLIC ROW, MINOR LOCAL)
BETA BEND
(55'-65' PUBLIC ROW, MINOR LOCAL)
DELTA DRIVE
(55' PUBLIC ROW, MINOR LOCAL)
MATCHLINE
MATCHLINE
GRADING TO MATCH
HUNTERS GLEN SUBDIVISION
PAD:713.33
PAD:713.35
PAD:709.90
PAD:707.70
PAD:715.10
PAD:714.06
PAD:710.83
PAD:708.18
PAD:708.48
PAD:702.13
PAD:697.77
PAD:693.42
PAD:690.22
PAD:688.48
PAD:701.30
PAD:697.92
PAD:692.59
PAD:695.89
PAD:693.80
PAD:694.22
PAD:692.12
PAD:690.02
PAD:707.43
PAD:712.09
GREEN 1
GREEN 2
GREEN 3
GREEN 4
GREEN 5
GREEN 6
GREEN 7
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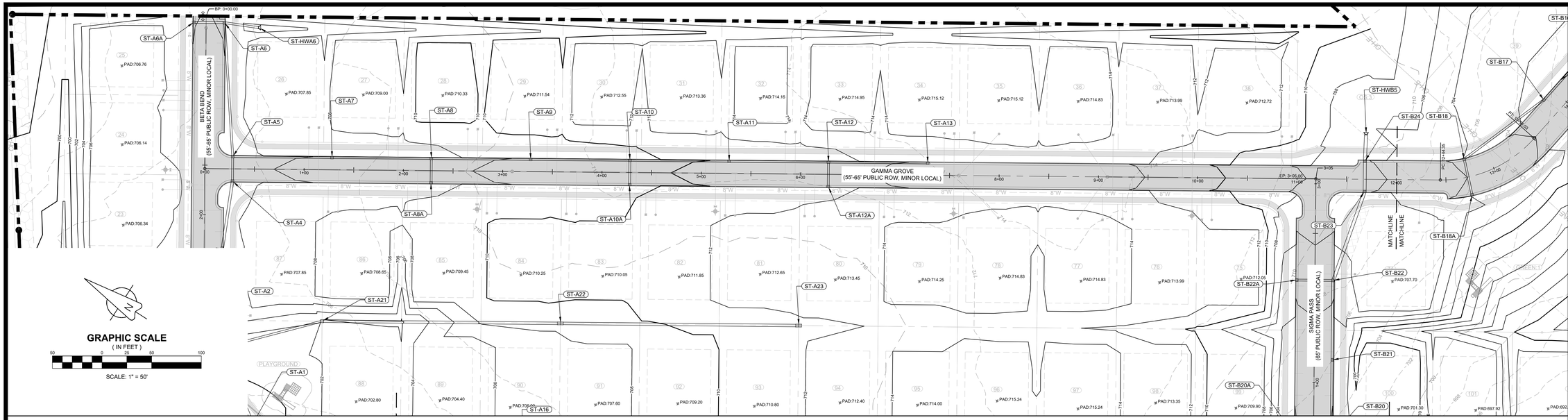
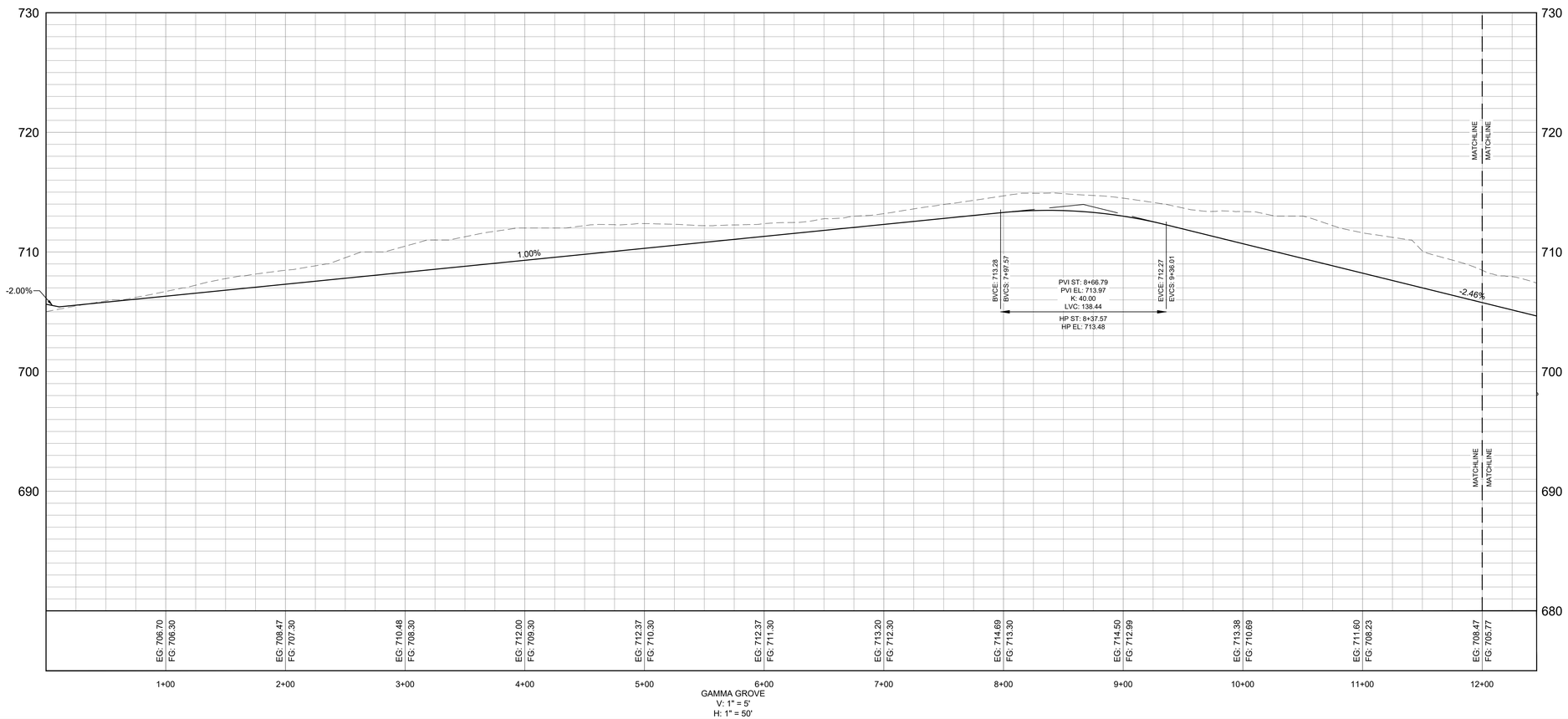
GREEN 19
GREEN 20
GREEN





REVISIONS		
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REVIEWER: ABC

GAMMA GROVE
PLAN AND PROFILE
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLLA
REGISTERED ENGINEER
AGRICULTURE
CIVIL
No. 127369
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-6.5

T-SQUARE ENGINEERING

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ST-A17A
ST-A18
ST-A19
ST-A19A
ST-A20
ST-A23
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ST-F6
ST-F6A
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ST-B25
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ST-B21
ST-B22
ST-B22A
ST-B23
ST-B24
ST-B18
ST-B18A
ST-B17
ST-B16
ST-B16A
ST-B11
ST-B10
ST-B10A
ST-B9
ST-B8
ST-B8A
ST-HWB5
BETA BEND
(55'-65' PUBLIC ROW, MINOR LOCAL)
GAMMA GROVE
(55'-65' PUBLIC ROW, MINOR LOCAL)
SIGMA PASS
(65' PUBLIC ROW, MINOR LOCAL)
DELTA DRIVE
(55' PUBLIC ROW, MINOR LOCAL)
MATCHLINE
MATCHLINE
GREEN 1
GREEN 2
GREEN 3
GREEN 4
GREEN 5
GREEN 6
GREEN 7
GREEN 8
GREEN 9
GREEN 10
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GREEN 17
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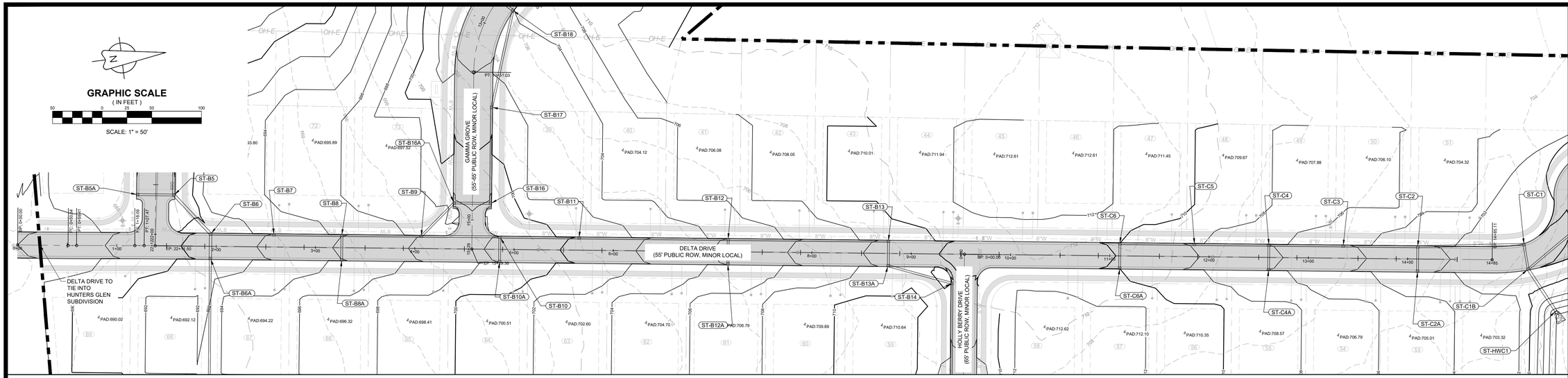
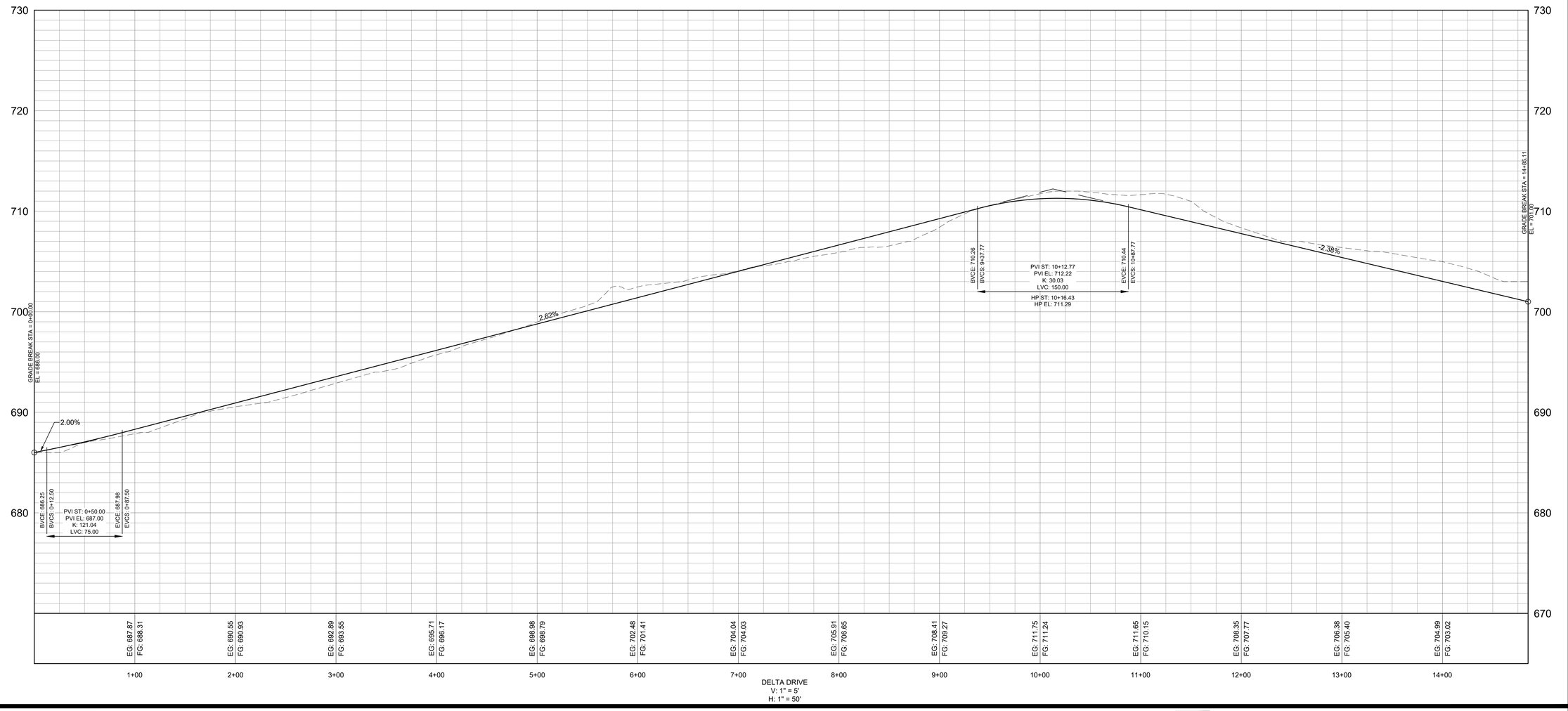
GREEN





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REVIEWER: ABC

DELTA DRIVE
PLAN AND PROFILE
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLLA
REGISTERED ENGINEER
No. 127369
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-6.7

T-SQUARE ENGINEERING

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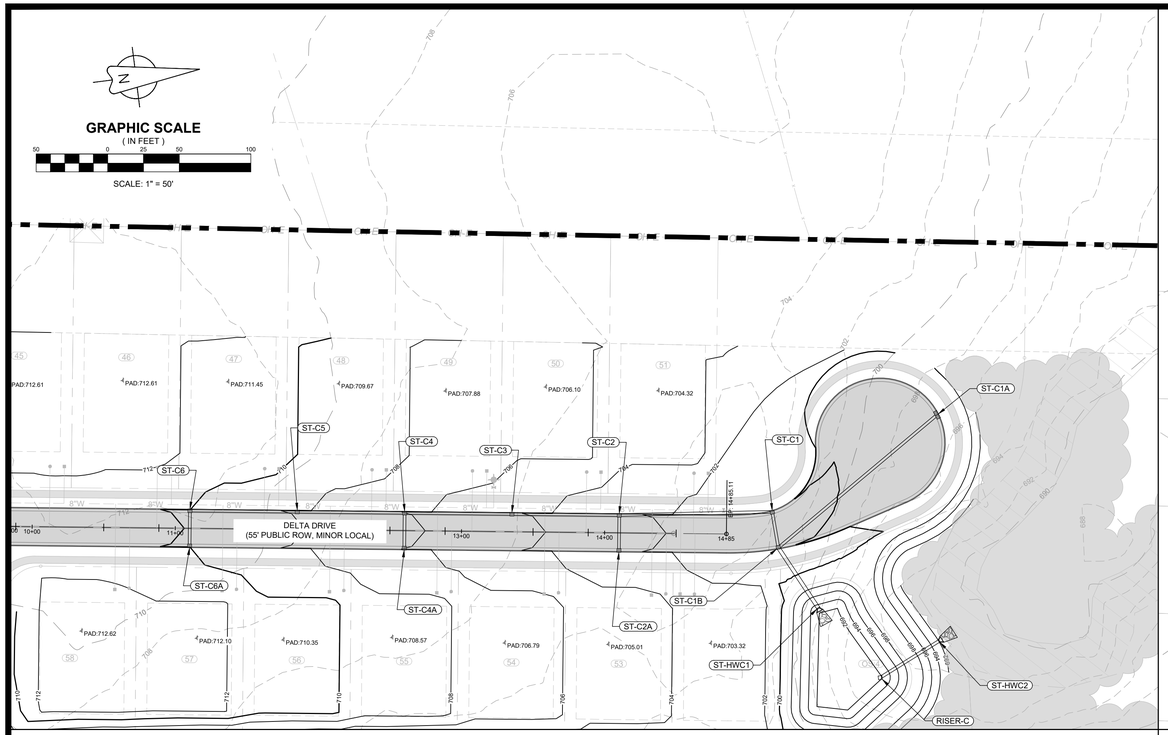

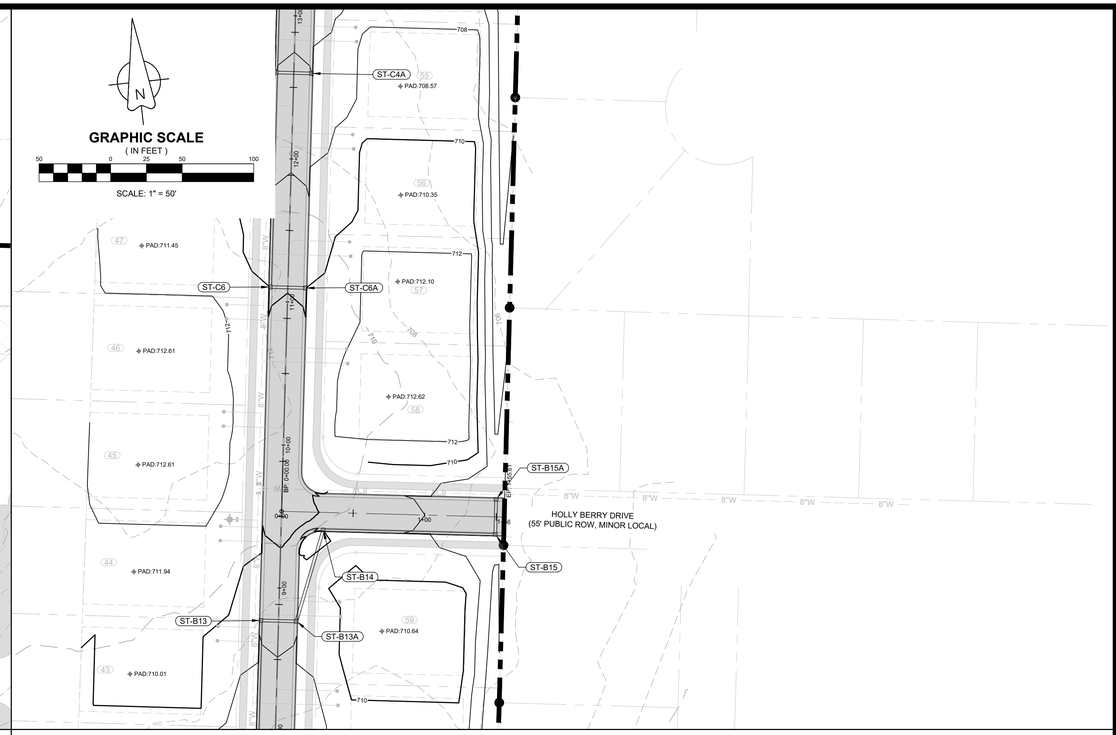

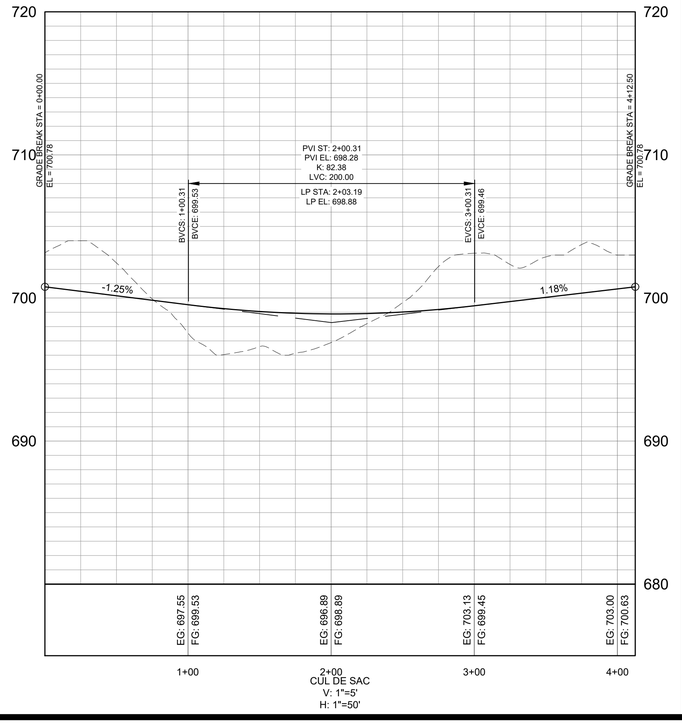

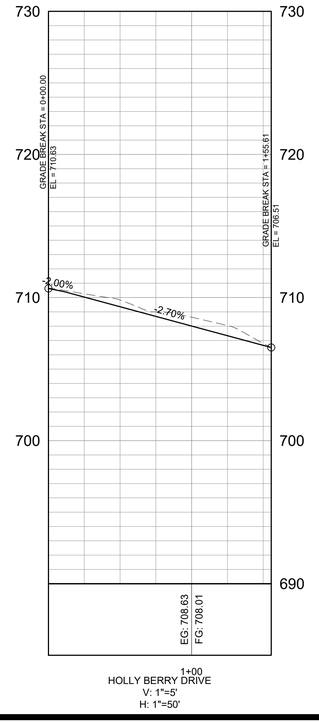

NO.	DATE	REVISIONS
1	5/19/25	REVISIONS PER CITY OF COLUMBIA

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

CUL-DE-SAC AND HOLLY BERRY DRIVE
PLAN AND PROFILE
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLLA
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 127309
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-6.8

T-SQUARE ENGINEERING

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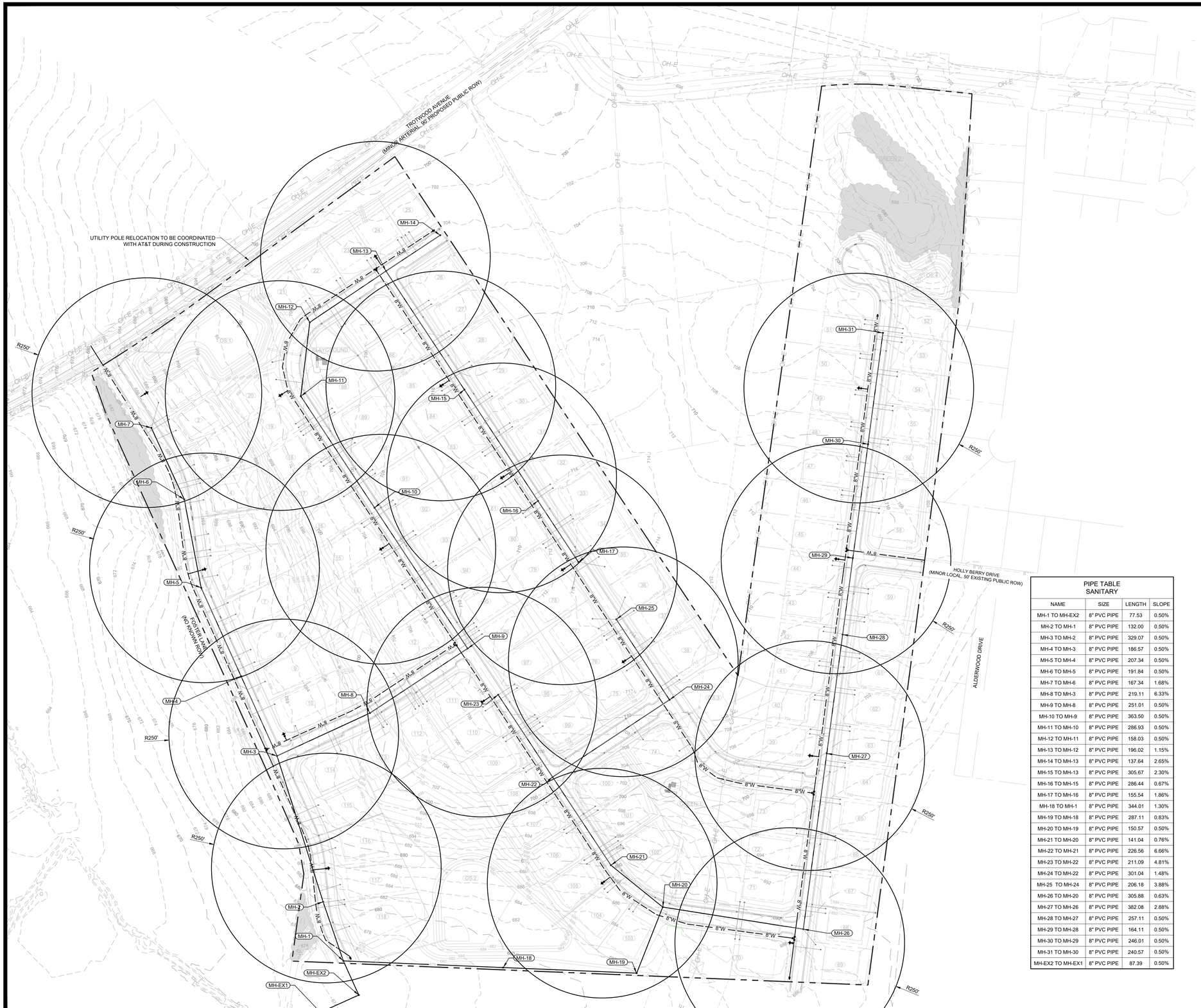

N

GRAPHIC SCALE
(IN FEET)

100 0 50 100 200

SCALE: 1" = 100'

LEGEND	
	PROPOSED UTILITY & DRAINAGE EASEMENT
8" W	PROPOSED WATER LINE
	PROPOSED WATER SERVICE
	PROPOSED FIRE HYDRANT ASSEMBLY
S	PROPOSED SANITARY MANHOLE
	PROPOSED SANITARY SERVICE
	PROPOSED STORM INLET
	PROPOSED HEADWALL

STRUCTURE TABLE
SANITARY

STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
MH-1	SANITARY MANHOLE	RIM = 674.87 FG = 674.87	INV. IN = 668.86 INV. IN = 668.86	INV. OUT =668.66
MH-2	SANITARY MANHOLE	RIM = 680.42 FG = 680.42	INV. IN = 669.74	INV. OUT =669.54
MH-3	SANITARY MANHOLE	RIM = 693.04 FG = 693.04	INV. IN = 671.61 INV. IN = 671.61	INV. OUT =671.41
MH-4	SANITARY MANHOLE	RIM = 690.71 FG = 690.71	INV. IN = 672.76	INV. OUT =672.56
MH-5	SANITARY MANHOLE	RIM = 685.66 FG = 685.66	INV. IN = 674.02	INV. OUT =673.82
MH-6	SANITARY MANHOLE	RIM = 682.38 FG = 682.38	INV. IN = 675.20	INV. OUT =675.00
MH-7	SANITARY MANHOLE	RIM = 684.08 FG = 684.08		INV. OUT =678.08
MH-8	SANITARY MANHOLE	RIM = 700.46 FG = 700.46	INV. IN = 685.90	INV. OUT =685.70
MH-9	SANITARY MANHOLE	RIM = 713.56 FG = 713.56	INV. IN = 687.28	INV. OUT =687.18
MH-10	SANITARY MANHOLE	RIM = 706.29 FG = 706.29	INV. IN = 689.32	INV. OUT =689.12
MH-11	SANITARY MANHOLE	RIM = 700.47 FG = 700.47	INV. IN = 690.97	INV. OUT =690.77
MH-12	SANITARY MANHOLE	RIM = 700.41 FG = 700.41	INV. IN = 691.98	INV. OUT =691.78
MH-13	SANITARY MANHOLE	RIM = 705.63 FG = 705.63	INV. IN = 694.48 INV. IN = 694.48	INV. OUT =694.28
MH-14	SANITARY MANHOLE	RIM = 704.23 FG = 704.23		INV. OUT =698.23
MH-15	SANITARY MANHOLE	RIM = 708.40 FG = 708.40	INV. IN = 701.79	INV. OUT =701.59
MH-16	SANITARY MANHOLE	RIM = 711.30 FG = 711.30	INV. IN = 703.94	INV. OUT =703.74
MH-17	SANITARY MANHOLE	RIM = 712.90 FG = 712.90		INV. OUT =706.90
MH-18	SANITARY MANHOLE	RIM = 678.58 FG = 678.58	INV. IN = 673.58	INV. OUT =673.38
MH-19	SANITARY MANHOLE	RIM = 681.57 FG = 681.57	INV. IN = 676.20	INV. OUT =676.00
MH-20	SANITARY MANHOLE	RIM = 686.42 FG = 686.42	INV. IN = 677.17 INV. IN = 677.17	INV. OUT =676.97
MH-21	SANITARY MANHOLE	RIM = 689.81 FG = 689.81	INV. IN = 678.47	INV. OUT =678.27
MH-22	SANITARY MANHOLE	RIM = 702.08 FG = 702.08	INV. IN = 694.00 INV. IN = 694.00	INV. OUT =693.80
MH-23	SANITARY MANHOLE	RIM = 712.67 FG = 712.67		INV. OUT =704.33
MH-24	SANITARY MANHOLE	RIM = 707.77 FG = 707.77	INV. IN = 698.70	INV. OUT =698.50
MH-25	SANITARY MANHOLE	RIM = 712.84 FG = 712.84		INV. OUT =706.84
MH-26	SANITARY MANHOLE	RIM = 689.32 FG = 689.32	INV. IN = 679.33	INV. OUT =679.13
MH-27	SANITARY MANHOLE	RIM = 699.43 FG = 699.43	INV. IN = 690.66	INV. OUT =690.46
MH-28	SANITARY MANHOLE	RIM = 706.27 FG = 706.27	INV. IN = 692.17	INV. OUT =691.97
MH-29	SANITARY MANHOLE	RIM = 710.63 FG = 710.63	INV. IN = 693.21	INV. OUT =693.01
MH-30	SANITARY MANHOLE	RIM = 707.69 FG = 707.69	INV. IN = 694.66	INV. OUT =694.46
MH-31	SANITARY MANHOLE	RIM = 701.88 FG = 701.88		INV. OUT =695.88
MH-EX1	SANITARY MANHOLE	RIM = 673.39 FG = 673.39	INV. IN = 667.59	
MH-EX2	SANITARY MANHOLE	RIM = 674.45 FG = 674.45	INV. IN = 668.25	INV. OUT =668.05

PIPE TABLE
SANITARY

NAME	SIZE	LENGTH	SLOPE
MH-1 TO MH-EX2	8" PVC PIPE	77.53	0.50%
MH-2 TO MH-1	8" PVC PIPE	132.00	0.50%
MH-3 TO MH-2	8" PVC PIPE	329.07	0.50%
MH-4 TO MH-3	8" PVC PIPE	186.57	0.50%
MH-5 TO MH-4	8" PVC PIPE	207.34	0.50%
MH-6 TO MH-5	8" PVC PIPE	191.84	0.50%
MH-7 TO MH-6	8" PVC PIPE	167.34	1.68%
MH-8 TO MH-3	8" PVC PIPE	219.11	6.33%
MH-9 TO MH-8	8" PVC PIPE	251.01	0.50%
MH-10 TO MH-9	8" PVC PIPE	363.50	0.50%
MH-11 TO MH-10	8" PVC PIPE	286.93	0.50%
MH-12 TO MH-11	8" PVC PIPE	158.03	0.50%
MH-13 TO MH-12	8" PVC PIPE	196.02	1.15%
MH-14 TO MH-13	8" PVC PIPE	137.64	2.65%
MH-15 TO MH-13	8" PVC PIPE	305.67	2.30%
MH-16 TO MH-15	8" PVC PIPE	286.44	0.67%
MH-17 TO MH-16	8" PVC PIPE	155.54	1.86%
MH-18 TO MH-1	8" PVC PIPE	344.01	1.30%
MH-19 TO MH-18	8" PVC PIPE	287.11	0.83%
MH-20 TO MH-19	8" PVC PIPE	150.57	0.50%
MH-21 TO MH-20	8" PVC PIPE	141.04	0.76%
MH-22 TO MH-21	8" PVC PIPE	226.56	6.66%
MH-23 TO MH-22	8" PVC PIPE	211.09	4.81%
MH-24 TO MH-22	8" PVC PIPE	301.04	1.48%
MH-25 TO MH-24	8" PVC PIPE	206.18	3.88%
MH-26 TO MH-20	8" PVC PIPE	305.88	0.63%
MH-27 TO MH-26	8" PVC PIPE	382.08	2.88%
MH-28 TO MH-27	8" PVC PIPE	257.11	0.50%
MH-29 TO MH-28	8" PVC PIPE	164.11	0.50%
MH-30 TO MH-29	8" PVC PIPE	246.01	0.50%
MH-31 TO MH-30	8" PVC PIPE	240.57	0.50%
MH-EX2 TO MH-EX1	8" PVC PIPE	87.39	0.50%

REVISIONS		
NO.	DATE	REVISIONS PER CITY OF COLUMBIA
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DRAWN BY: T-SQUARE
REVIEWER: ABC

UTILITY PLAN

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDLE
REGISTERED ENGINEER
No. 127199
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-7.0

T-SQUARE ENGINEERING

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TROTWOOD FOSTER SUBDIVISION

SITE DEVELOPMENT PLAN & PRELIMINARY PLAT

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

MAP 112, PARCEL 018.03

ENGINEER:
T-SQUARE ENGINEERING
ALLISON COROLLA, PE
111 SOUTHEAST PARKWAY COURT
FRANKLIN, TN 37064
(615)678-8212

SURVEYOR:
T-SQUARE SURVEYING
111 SOUTHEAST PARKWAY COURT
FRANKLIN, TN 37064
(615)678-8212

DEVELOPER:
NELSON CROWE
NELSON@FORTUNALLC.NET

WATER:
COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TN 38401
(931)388-4833

POWER:
COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TN 38401
(931)388-4833

SEWER:
COLUMBIA WASTEWATER
1244 TREATMENT PLANT ROAD
COLUMBIA, TN 38401
(931)560-1001



SITE VICINITY MAP
N.T.S.

Sheet Schedule

C-0.0	COVER SHEET
C-1.0	EXISTING CONDITIONS
C-2.0	SITE DEVELOPMENT PLAN & PRELIMINARY PLAT
C-2.1	DETAILED SITE PLAN
C-2.2	DETAILED SITE PLAN
C-2.3	DETAILED SITE PLAN
C-2.4	DETAILED SITE PLAN
C-2.5	PARCEL TABLES
C-2.6	PARCEL TABLES
C-2.7	CIVIC SPACE PLAN
C-2.8	ESTIMATED PHASING PLAN
C-2.9	SITE DETAILS
C-2.10	SITE DETAILS
C-2.11	RESOURCE PROTECTION PLAN
C-3.0	INITIAL EROSION CONTROL PLAN
C-3.1	TEMPORARY EROSION CONTROL PLAN
C-3.2	FINAL EROSION CONTROL PLAN
C-4.0	PREDEVELOPMENT STORMWATER PLAN
C-4.1	POSTDEVELOPMENT STORMWATER PLAN
C-5.0	GRADING PLAN
C-5.1	DRAINAGE PLAN
C-5.2	GRADING & DRAINAGE DETAILS
C-5.3	GRADING & DRAINAGE DETAILS
C-6.0	FOSTER LANE PLAN AND PROFILE
C-6.1	ALPHA AVENUE & SIGMA PASS PLAN AND PROFILE
C-6.2	BETA BEND PLAN AND PROFILE
C-6.3	BETA BEND PLAN AND PROFILE
C-6.4	BETA BEND PLAN AND PROFILE
C-6.5	GAMMA GROVE PLAN AND PROFILE
C-6.6	GAMMA GROVE PLAN & PROFILE
C-6.7	DELTA DRIVE PLAN & PROFILE
C-6.8	CUL-DE-SAC & HOLLY BERRY DRIVE PLAN & PROFILE
C-7.0	UTILITY PLAN

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "*ZONE X*" AS EVIDENCED ON FEMA PANEL # *47119C0280E* OF MAURY COUNTY, TN, DATED *04/16/2007*.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

NO.	DATE	REVISIONS
1	5/19/25	REVISIONS PER CITY OF COLUMBIA

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DRAWN BY: T-SQUARE
REVIEWER: ABC

COVER SHEET
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

FOSTER SUBDIVISION
TROTWOOD

ALLISON B. COROLLA
REGISTERED ENGINEER
No. 127399
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-0.0

T-SQUARE ENGINEERING

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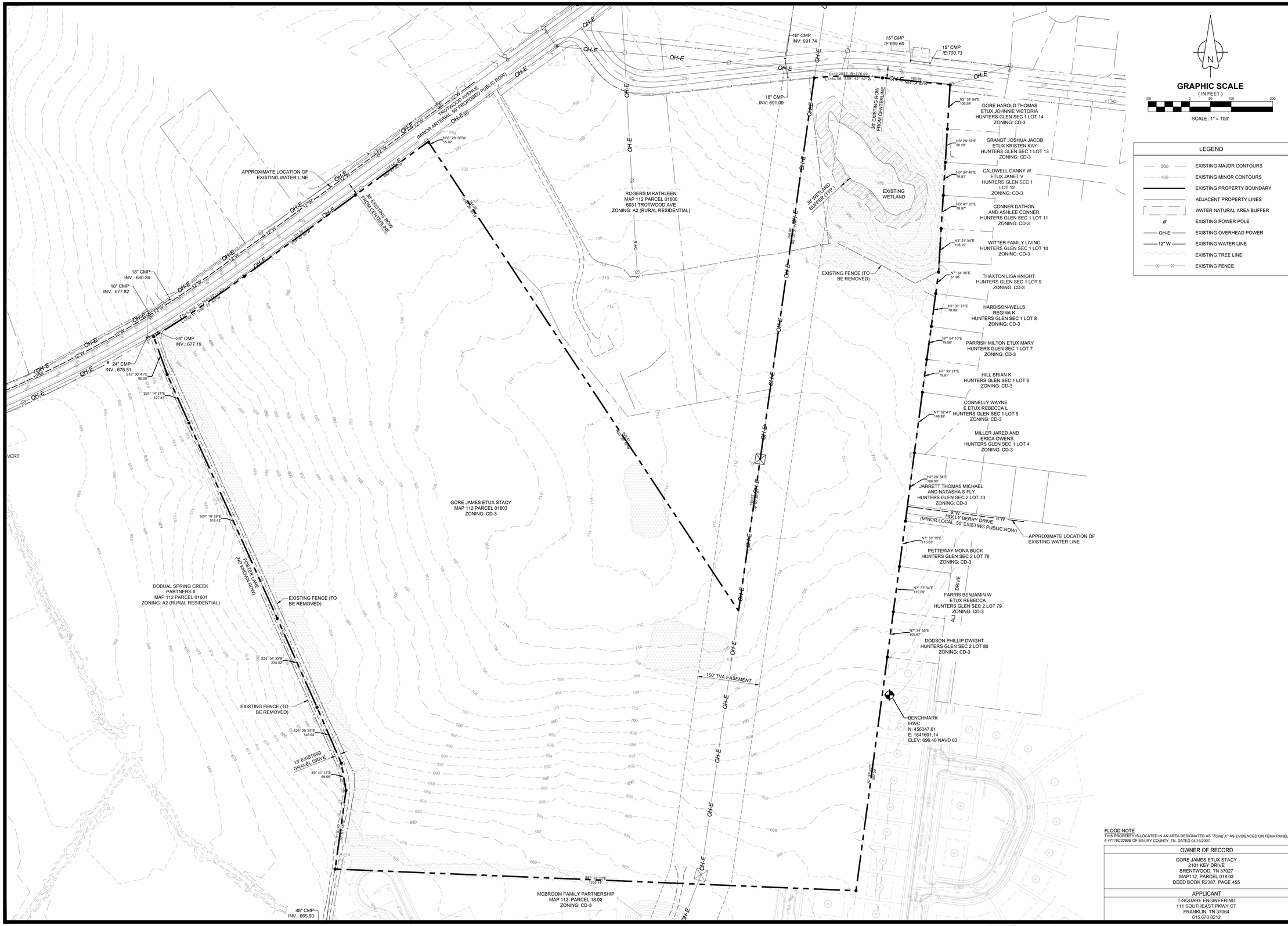

GRAPHIC SCALE
(IN FEET)
100 0 50 100 200
SCALE: 1" = 100'

LEGEND

- EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- EXISTING PROPERTY BOUNDARY
- ADJACENT PROPERTY LINES
- WATER NATURAL AREA BUFFER
- EXISTING POWER POLE
- OH-E — EXISTING OVERHEAD POWER
- 12" W — EXISTING WATER LINE
- EXISTING TREE LINE
- EXISTING FENCE

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "*ZONE X*" AS EVIDENCED ON FEMA PANEL # *47119C0280E* OF MAURY COUNTY, TN, DATED *04/16/2007*.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE	REVISIONS PER CITY OF COLUMBIA
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REVIEWER: ABC

EXISTING CONDITIONS

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORONA
REGISTERED ENGINEER
No. 127399
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-1.0

T-SQUARE ENGINEERING

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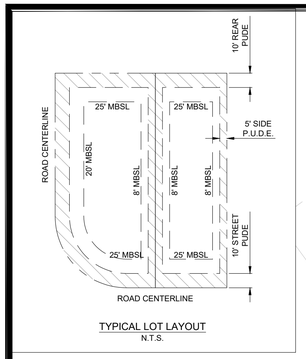


TYPICAL LOT LAYOUT
N.T.S.

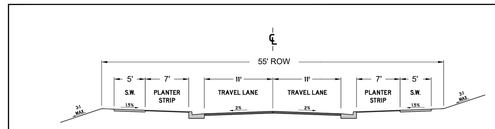
SITE DATA	
PROJECT NAME	TROTWOOD FOSTER SUBDIVISION
PROJECT NUMBER	24-0314
ADDRESS	TROTWOOD AVENUE
PARCEL ID	MAP 112 PARCEL 018.03
EXISTING ZONING	CIVIC DISTRICT 3
PROPOSED ZONING	CIVIC DISTRICT 3
EXISTING SITE AREA	51.14 AC
ROW RESERVATION	0.75 AC
PROPOSED SITE AREA	50.52 AC
PROPOSED LOTS	118
PROPOSED DENSITY	2.34 UNITS/ACRE
BUILDING HEIGHT	3 STORIES MAXIMUM
LOT WIDTH	65' MINIMUM
SETBACKS	
FRONT	25' (PRIMARY); 20' (SECONDARY)
SIDE	8'
REAR	25'
CIVIC SPACE	
REQUIRED CIVIC SPACE	2.53 AC (5%)
PLAYGROUND	0.20 AC
GREEN:1	0.68 AC
GREEN:2	2.42 AC
PROVIDED CIVIC SPACE	3.30 AC (7%)

GRAPHIC SCALE
(IN FEET)
100 0 50 100 200
SCALE: 1" = 100'

LEGEND

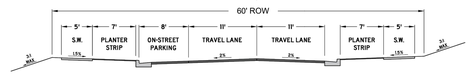
- PROPOSED LOT LINES
- (100) PROPOSED LOT NUMBER
- PROPOSED BUILDING SETBACK
- 8" W PROPOSED WATER LINE
- PROPOSED WATER SERVICE
- PROPOSED FIRE HYDRANT ASSEMBLY
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY SERVICE
- PROPOSED STORM INLET
- PROPOSED HEADWALL
- PROPOSED STORM MANHOLE
- PROPOSED PUBLIC UTILITY & DRAINAGE EASEMENT

NOTES
- ALL HOMES TO HAVE A 2-CAR GARAGE, MEETING PARKING REQUIREMENTS
- PLAYGROUND SETUP SHOWN FOR GRAPHIC PURPOSES ONLY; FULL PLAYGROUND DIMENSIONS AND DETAILS WILL BE PROVIDED WITH CONSTRUCTION PLANS
- NO STRUCTURE ENCROACHMENT IS ALLOWED ON ANY LOT WITHIN A TVA EASEMENT
- WHEN/IF DEVELOPMENT ON MAP 112, PARCEL 018.00 OCCURS, TEMPORARY CUL-DE-SAC ALONG DELTA DRIVE WILL BE REMOVED BY DEVELOPER FOR THROUGH ROADWAY TO CONTINUE.
- ELEVATIONS ARE NOT TO BE REVIEWED BY PLANNING COMMISSION, BUT ARE PROVIDED FOR REFERENCE.
- SITE DEVELOPMENT PLAN WILL COMPLY WITH ALL CD-3 SITE, PRIVATE LANDSCAPING, AND DESIGN STANDARDS.



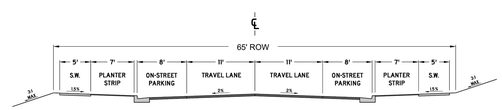
SUBURBAN NEIGHBORHOOD STREET
PARALLEL PARKING BOTH SIDES
55' R.O.W.

TYPICAL SECTION
N.T.S.



SUBURBAN NEIGHBORHOOD STREET
PARALLEL PARKING BOTH SIDES
60' R.O.W.

TYPICAL SECTION
N.T.S.



SUBURBAN NEIGHBORHOOD STREET
PARALLEL PARKING BOTH SIDES
65' R.O.W.

TYPICAL SECTION
N.T.S.

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "*ZONE X*" AS EVIDENCED ON FEMA PANEL # *47119C0280E* OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

ALLISON B. CORDELL
REGISTERED PROFESSIONAL ENGINEER
AGRICULTURE
No. 127389
STATE OF TENNESSEE
05/19/2025

REVISIONS		
NO.	DATE	REVISIONS PER CITY OF COLUMBIA
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DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

SITE DEVELOPMENT PLAN & PRELIMINARY PLAT
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

PROJECT
24-0314

SHEET
C-2.0

T-SQUARE ENGINEERING

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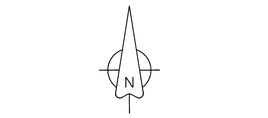
SITE DATA	
PROJECT NAME	TROTWOOD FOSTER SUBDIVISION
PROJECT NUMBER	24-0314
ADDRESS	TROTWOOD AVENUE
PARCEL ID	MAP 112 PARCEL 018.03
EXISTING ZONING	CIVIC DISTRICT 3
PROPOSED ZONING	CIVIC DISTRICT 3
EXISTING SITE AREA	51.14 AC
ROW RESERVATION	0.75 AC
PROPOSED SITE AREA	50.52 AC
PROPOSED LOTS	118
PROPOSED DENSITY	2.34 UNITS/ACRE
BUILDING HEIGHT	3 STORIES MAXIMUM
LOT WIDTH	65' MINIMUM
SETBACKS	
FRONT	25' (PRIMARY); 20' (SECONDARY)
SIDE	8'
REAR	25'
CIVIC SPACE	
REQUIRED CIVIC SPACE	2.53 AC (5%)
PLAYGROUND	0.20 AC
GREEN:1	0.68 AC
GREEN:2	2.42 AC
PROVIDED CIVIC SPACE	3.30 AC (7%)





GRAPHIC SCALE
(IN FEET)
50 0 25 50 100
SCALE: 1" = 50'

LEGEND	
	PROPOSED LOT LINES
(00)	PROPOSED LOT NUMBER
	PROPOSED BUILDING SETBACK
8" W	PROPOSED WATER LINE
	PROPOSED WATER SERVICE
	PROPOSED FIRE HYDRANT ASSEMBLY
S	PROPOSED SANITARY MANHOLE
	PROPOSED SANITARY SERVICE
	PROPOSED STORM INLET
	PROPOSED HEADWALL
D	PROPOSED STORM MANHOLE
	PROPOSED PUBLIC UTILITY & DRAINAGE EASEMENT

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
1	9375.00	0.22
2	10206.57	0.23
3	11995.77	0.28
4	11331.05	0.26
5	11878.28	0.27
6	13961.21	0.32
7	13054.92	0.30
8	13054.92	0.30
9	13054.92	0.30
10	13682.69	0.31
11	18407.87	0.42
12	10740.85	0.25
13	10000.00	0.23
14	17401.82	0.40
15	16250.56	0.37
16	15215.90	0.35
17	14181.24	0.33
18	11967.49	0.27
19	10209.62	0.23
20	11263.99	0.26

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
21	10567.22	0.24
22	9120.00	0.21
23	9120.00	0.21
24	9120.00	0.21
25	9119.71	0.21
26	10828.35	0.25
27	10080.98	0.23
28	10080.94	0.23
29	10080.86	0.23
30	10080.77	0.23
31	10080.69	0.23
32	10080.61	0.23
33	10080.53	0.23
34	10080.45	0.23
35	10080.37	0.23
36	10080.28	0.23
37	10080.20	0.23
38	12465.69	0.29
39	16092.59	0.37
40	14491.38	0.33

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
41	13489.60	0.31
42	13914.92	0.32
43	13864.56	0.32
44	13814.20	0.32
45	13763.84	0.32
46	13713.49	0.31
47	13663.13	0.31
48	13614.13	0.31
49	13570.47	0.31
50	13527.35	0.31
51	13485.50	0.31
52	9644.62	0.22
53	9597.09	0.22
54	9574.20	0.22
55	9572.15	0.22
56	9577.53	0.22
57	9583.66	0.22
58	11636.40	0.27
59	11660.91	0.27
60	10258.72	0.24

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
61	10256.77	0.24
62	10258.41	0.24
63	10257.53	0.24
64	10254.64	0.24
65	10251.74	0.24
66	10248.84	0.24
67	10245.95	0.24
68	10242.68	0.24
69	10650.39	0.24
70	18189.29	0.42
71	16436.56	0.38
72	15177.55	0.35
73	16363.60	0.38
74	10740.88	0.25
75	10740.87	0.25
76	10000.00	0.23
77	10000.00	0.23
78	10000.00	0.23
79	10000.00	0.23
80	10000.00	0.23

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
81	10000.00	0.23
82	10000.00	0.23
83	10000.00	0.23
84	10000.00	0.23
85	10000.00	0.23
86	10000.00	0.23
87	10740.88	0.25
88	9999.72	0.23
89	10000.00	0.23
90	10000.00	0.23
91	10000.00	0.23
92	10000.00	0.23
93	10000.00	0.23
94	10000.00	0.23
95	10000.00	0.23
96	10000.00	0.23
97	10000.00	0.23
98	10000.00	0.23
99	10740.88	0.25
100	10740.87	0.25

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
101	10000.00	0.23
102	15770.50	0.36
103	10595.40	0.24
104	10595.40	0.24
105	9852.50	0.23
106	10000.00	0.23
107	10000.00	0.23
108	10000.00	0.23
109	10000.00	0.23
110	10000.00	0.23
111	10740.88	0.25
112	10000.00	0.23
113	12866.32	0.30
114	10740.87	0.25
115	10440.61	0.24
116	12253.39	0.28
117	12769.22	0.29
118	14811.12	0.34

Open Space Areas		
PARCEL	SQ. FT.	ACRE
GREEN:1	29569.83	0.68
GREEN:2	105367.96	2.42
OS:1	59055.89	1.36
OS:2	146307.54	3.36
OS:3	15283.34	0.35
OS:4	18059.42	0.41
PLAYGROUND	8652.85	0.20

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "*ZONE X*" AS EVIDENCED ON FEMA PANEL # *47119C0280E* OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE	REVISIONS PER CITY OF COLUMBIA
1	5/19/25	

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

TROTWOOD FOSTER SUBDIVISION

DETAILED SITE PLAN

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

ALLISON B. CORDELL
AGRICULTURE
No. 127399
STATE OF TENNESSEE
05/19/2025

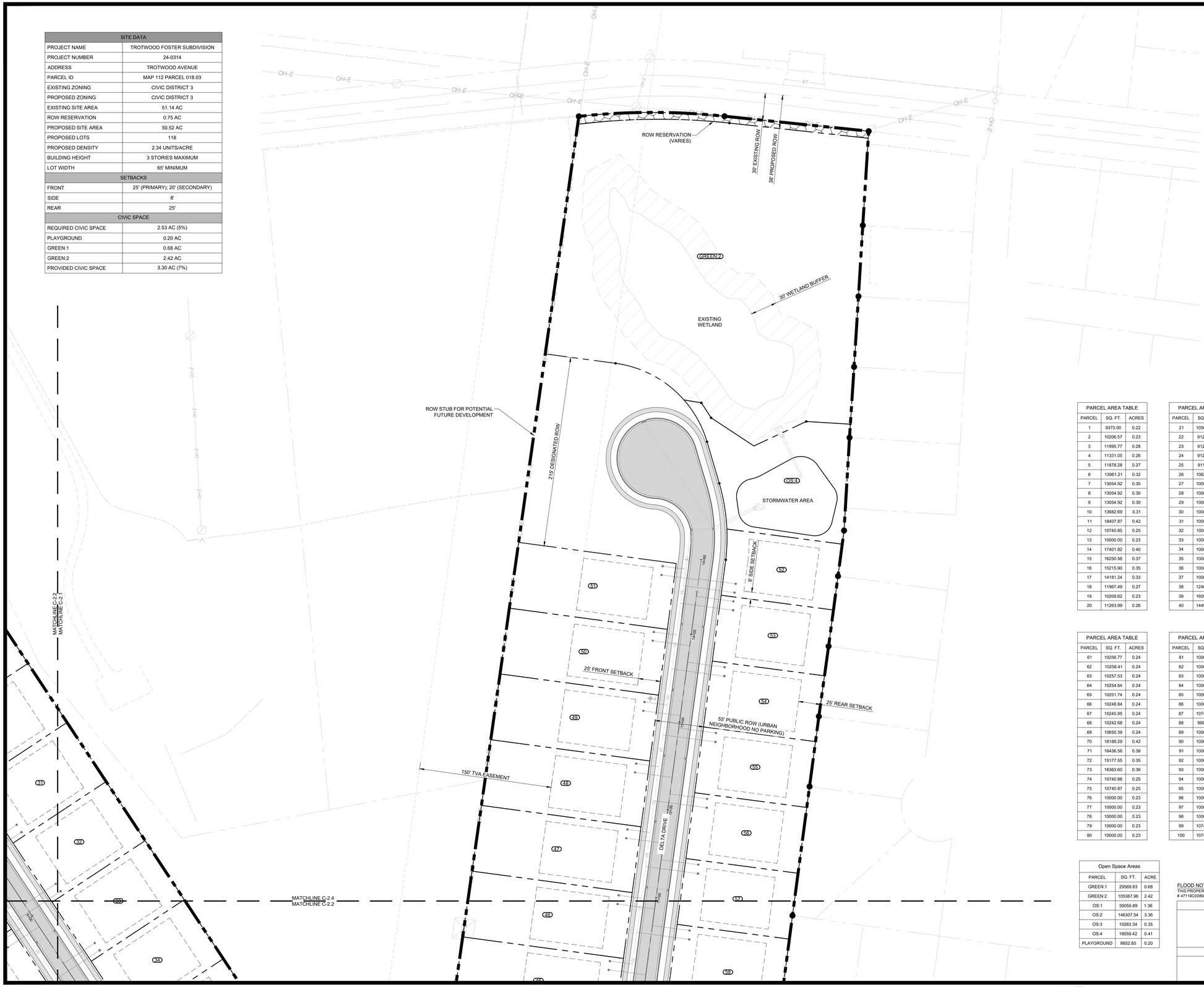
PROJECT
24-0314

SHEET
C-2.1

T-SQUARE ENGINEERING

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowe)\Production\24-0314 1- Site Plan.dwg, 5/16/2025 9:39:47 PM

SITE DATA	
PROJECT NAME	TROTWOOD FOSTER SUBDIVISION
PROJECT NUMBER	24-0314
ADDRESS	TROTWOOD AVENUE
PARCEL ID	MAP 112 PARCEL 018.03
EXISTING ZONING	CIVIC DISTRICT 3
PROPOSED ZONING	CIVIC DISTRICT 3
EXISTING SITE AREA	51.14 AC
ROW RESERVATION	0.75 AC
PROPOSED SITE AREA	50.52 AC
PROPOSED LOTS	118
PROPOSED DENSITY	2.34 UNITS/ACRE
BUILDING HEIGHT	3 STORIES MAXIMUM
LOT WIDTH	65' MINIMUM
SETBACKS	
FRONT	25' (PRIMARY); 20' (SECONDARY)
SIDE	8'
REAR	25'
CIVIC SPACE	
REQUIRED CIVIC SPACE	2.53 AC (5%)
PLAYGROUND	0.20 AC
GREEN:1	0.68 AC
GREEN:2	2.42 AC
PROVIDED CIVIC SPACE	3.30 AC (7%)



N

GRAPHIC SCALE
(IN FEET)

50 0 25 50 100

SCALE: 1" = 50'

LEGEND	
	PROPOSED LOT LINES
(00)	PROPOSED LOT NUMBER
	PROPOSED BUILDING SETBACK
8" W	PROPOSED WATER LINE
	PROPOSED WATER SERVICE
	PROPOSED FIRE HYDRANT ASSEMBLY
S	PROPOSED SANITARY MANHOLE
	PROPOSED SANITARY SERVICE
	PROPOSED STORM INLET
	PROPOSED HEADWALL
	PROPOSED STORM MANHOLE
	PROPOSED PUBLIC UTILITY & DRAINAGE EASEMENT

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
1	9375.00	0.22
2	10206.57	0.23
3	11995.77	0.28
4	11331.05	0.26
5	11878.28	0.27
6	13961.21	0.32
7	13054.92	0.30
8	13054.92	0.30
9	13054.92	0.30
10	13682.69	0.31
11	18407.87	0.42
12	10740.85	0.25
13	10000.00	0.23
14	17401.82	0.40
15	16250.56	0.37
16	15215.90	0.35
17	14181.24	0.33
18	11967.49	0.27
19	10209.62	0.23
20	11263.99	0.26

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
21	10567.22	0.24
22	9120.00	0.21
23	9120.00	0.21
24	9120.00	0.21
25	9119.71	0.21
26	10828.35	0.25
27	10080.98	0.23
28	10080.94	0.23
29	10080.86	0.23
30	10080.77	0.23
31	10080.69	0.23
32	10080.61	0.23
33	10080.53	0.23
34	10080.45	0.23
35	10080.37	0.23
36	10080.28	0.23
37	10080.20	0.23
38	12465.69	0.29
39	16092.59	0.37
40	14491.38	0.33

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
41	13489.60	0.31
42	13914.92	0.32
43	13864.56	0.32
44	13814.20	0.32
45	13763.84	0.32
46	13713.49	0.31
47	13663.13	0.31
48	13614.13	0.31
49	13570.47	0.31
50	13527.35	0.31
51	13485.50	0.31
52	9644.62	0.22
53	9597.09	0.22
54	9574.20	0.22
55	9572.15	0.22
56	9577.53	0.22
57	9583.66	0.22
58	11636.40	0.27
59	11660.91	0.27
60	10258.72	0.24

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
61	10256.77	0.24
62	10258.41	0.24
63	10257.53	0.24
64	10254.64	0.24
65	10251.74	0.24
66	10248.84	0.24
67	10245.95	0.24
68	10242.68	0.24
69	10650.39	0.24
70	18189.29	0.42
71	16436.56	0.38
72	15177.55	0.35
73	16363.60	0.38
74	10740.88	0.25
75	10740.87	0.25
76	10000.00	0.23
77	10000.00	0.23
78	10000.00	0.23
79	10000.00	0.23
80	10000.00	0.23

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
81	10000.00	0.23
82	10000.00	0.23
83	10000.00	0.23
84	10000.00	0.23
85	10000.00	0.23
86	10000.00	0.23
87	10740.88	0.25
88	9999.72	0.23
89	10000.00	0.23
90	10000.00	0.23
91	10000.00	0.23
92	10000.00	0.23
93	10000.00	0.23
94	10000.00	0.23
95	10000.00	0.23
96	10000.00	0.23
97	10000.00	0.23
98	10000.00	0.23
99	10740.88	0.25
100	10740.87	0.25

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
101	10000.00	0.23
102	15770.50	0.36
103	10595.40	0.24
104	10595.40	0.24
105	9852.50	0.23
106	10000.00	0.23
107	10000.00	0.23
108	10000.00	0.23
109	10000.00	0.23
110	10000.00	0.23
111	10740.88	0.25
112	10000.00	0.23
113	12866.32	0.30
114	10740.87	0.25
115	10440.61	0.24
116	12253.39	0.28
117	12769.22	0.29
118	14811.12	0.34

Open Space Areas		
PARCEL	SQ. FT.	ACRE
GREEN:1	29569.83	0.68
GREEN:2	105367.96	2.42
OS:1	59055.89	1.36
OS:2	146307.54	3.36
OS:3	15283.34	0.35
OS:4	18059.42	0.41
PLAYGROUND	8652.85	0.20

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "*ZONE X*" AS EVIDENCED ON FEMA PANEL # *47119C0280E* OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD

GORE JAMES ETUX STACY
2101 KEY DRIVE
BRENTWOOD, TN 37027
MAP112, PARCEL 018.03
DEED BOOK R2387, PAGE 455

APPLICANT

T-SQUARE ENGINEERING
111 SOUTHEAST PKWY CT
FRANKLIN, TN 37064
615.678.8212

T-SQUARE ENGINEERING

REVISIONS		
NO.	DATE	
1	5/19/25	REVISIONS PER CITY OF COLUMBIA

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

DETAILED SITE PLAN

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
AGRICULTURE
No. 127399
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-2.2

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowe)\Production\24-0314 1- Site Plan.dwg, 5/16/2025 9:40:03 PM

SITE DATA	
PROJECT NAME	TROTWOOD FOSTER SUBDIVISION
PROJECT NUMBER	24-0314
ADDRESS	TROTWOOD AVENUE
PARCEL ID	MAP 112 PARCEL 018.03
EXISTING ZONING	CIVIC DISTRICT 3
PROPOSED ZONING	CIVIC DISTRICT 3
EXISTING SITE AREA	51.14 AC
ROW RESERVATION	0.75 AC
PROPOSED SITE AREA	50.52 AC
PROPOSED LOTS	118
PROPOSED DENSITY	2.34 UNITS/ACRE
BUILDING HEIGHT	3 STORIES MAXIMUM
LOT WIDTH	65' MINIMUM
SETBACKS	
FRONT	25' (PRIMARY); 20' (SECONDARY)
SIDE	8'
REAR	25'
CIVIC SPACE	
REQUIRED CIVIC SPACE	2.53 AC (5%)
PLAYGROUND	0.20 AC
GREEN:1	0.68 AC
GREEN:2	2.42 AC
PROVIDED CIVIC SPACE	3.30 AC (7%)



N

GRAPHIC SCALE
(IN FEET)
50 0 25 50 100
SCALE: 1" = 50'

LEGEND

- PROPOSED LOT LINES
- (100) PROPOSED LOT NUMBER
- PROPOSED BUILDING SETBACK
- 8" W PROPOSED WATER LINE
- PROPOSED WATER SERVICE
- PROPOSED FIRE HYDRANT ASSEMBLY
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY SERVICE
- PROPOSED STORM INLET
- PROPOSED HEADWALL
- PROPOSED STORM MANHOLE
- PROPOSED PUBLIC UTILITY & DRAINAGE EASEMENT

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
1	9375.00	0.22
2	10206.57	0.23
3	11995.77	0.28
4	11331.05	0.26
5	11878.28	0.27
6	13961.21	0.32
7	13054.92	0.30
8	13054.92	0.30
9	13054.92	0.30
10	13682.69	0.31
11	18407.87	0.42
12	10740.85	0.25
13	10000.00	0.23
14	17401.82	0.40
15	16250.56	0.37
16	15215.90	0.35
17	14181.24	0.33
18	11967.49	0.27
19	10209.62	0.23
20	11263.99	0.26

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
21	10567.22	0.24
22	9120.00	0.21
23	9120.00	0.21
24	9120.00	0.21
25	9119.71	0.21
26	10828.35	0.25
27	10080.98	0.23
28	10080.94	0.23
29	10080.86	0.23
30	10080.77	0.23
31	10080.69	0.23
32	10080.61	0.23
33	10080.53	0.23
34	10080.45	0.23
35	10080.37	0.23
36	10080.28	0.23
37	10080.20	0.23
38	12465.69	0.29
39	16092.59	0.37
40	14491.38	0.33

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
41	13489.60	0.31
42	13914.92	0.32
43	13864.56	0.32
44	13814.20	0.32
45	13763.84	0.32
46	13713.49	0.31
47	13663.13	0.31
48	13614.13	0.31
49	13570.47	0.31
50	13527.35	0.31
51	13485.50	0.31
52	9644.62	0.22
53	9597.09	0.22
54	9574.20	0.22
55	9572.15	0.22
56	9577.53	0.22
57	9583.66	0.22
58	11636.40	0.27
59	11660.91	0.27
60	10258.72	0.24

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
61	10256.77	0.24
62	10258.41	0.24
63	10257.53	0.24
64	10254.64	0.24
65	10251.74	0.24
66	10248.84	0.24
67	10245.95	0.24
68	10242.68	0.24
69	10650.39	0.24
70	18189.29	0.42
71	16436.56	0.38
72	15177.55	0.35
73	16363.60	0.38
74	10740.88	0.25
75	10740.87	0.25
76	10000.00	0.23
77	10000.00	0.23
78	10000.00	0.23
79	10000.00	0.23
80	10000.00	0.23

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
81	10000.00	0.23
82	10000.00	0.23
83	10000.00	0.23
84	10000.00	0.23
85	10000.00	0.23
86	10000.00	0.23
87	10740.88	0.25
88	9999.72	0.23
89	10000.00	0.23
90	10000.00	0.23
91	10000.00	0.23
92	10000.00	0.23
93	10000.00	0.23
94	10000.00	0.23
95	10000.00	0.23
96	10000.00	0.23
97	10000.00	0.23
98	10000.00	0.23
99	10740.88	0.25
100	10740.87	0.25

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
101	10000.00	0.23
102	15770.50	0.36
103	10595.40	0.24
104	10595.40	0.24
105	9852.50	0.23
106	10000.00	0.23
107	10000.00	0.23
108	10000.00	0.23
109	10000.00	0.23
110	10000.00	0.23
111	10740.88	0.25
112	10000.00	0.23
113	12866.32	0.30
114	10740.87	0.25
115	10440.61	0.24
116	12253.39	0.28
117	12769.22	0.29
118	14811.12	0.34

Open Space Areas		
PARCEL	SQ. FT.	ACRE
GREEN:1	29569.83	0.68
GREEN:2	105367.96	2.42
OS:1	59055.89	1.36
OS:2	146307.54	3.36
OS:3	15283.34	0.35
OS:4	18059.42	0.41
PLAYGROUND	8652.85	0.20

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "*ZONE X*" AS EVIDENCED ON FEMA PANEL # *47119C0280E* OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE	REVISIONS PER CITY OF COLUMBIA
1	5/19/25	

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

DETAILED SITE PLAN

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALISON B. CORDELL
REGISTERED ENGINEER
No. 127390
STATE OF TENNESSEE
05/19/2025

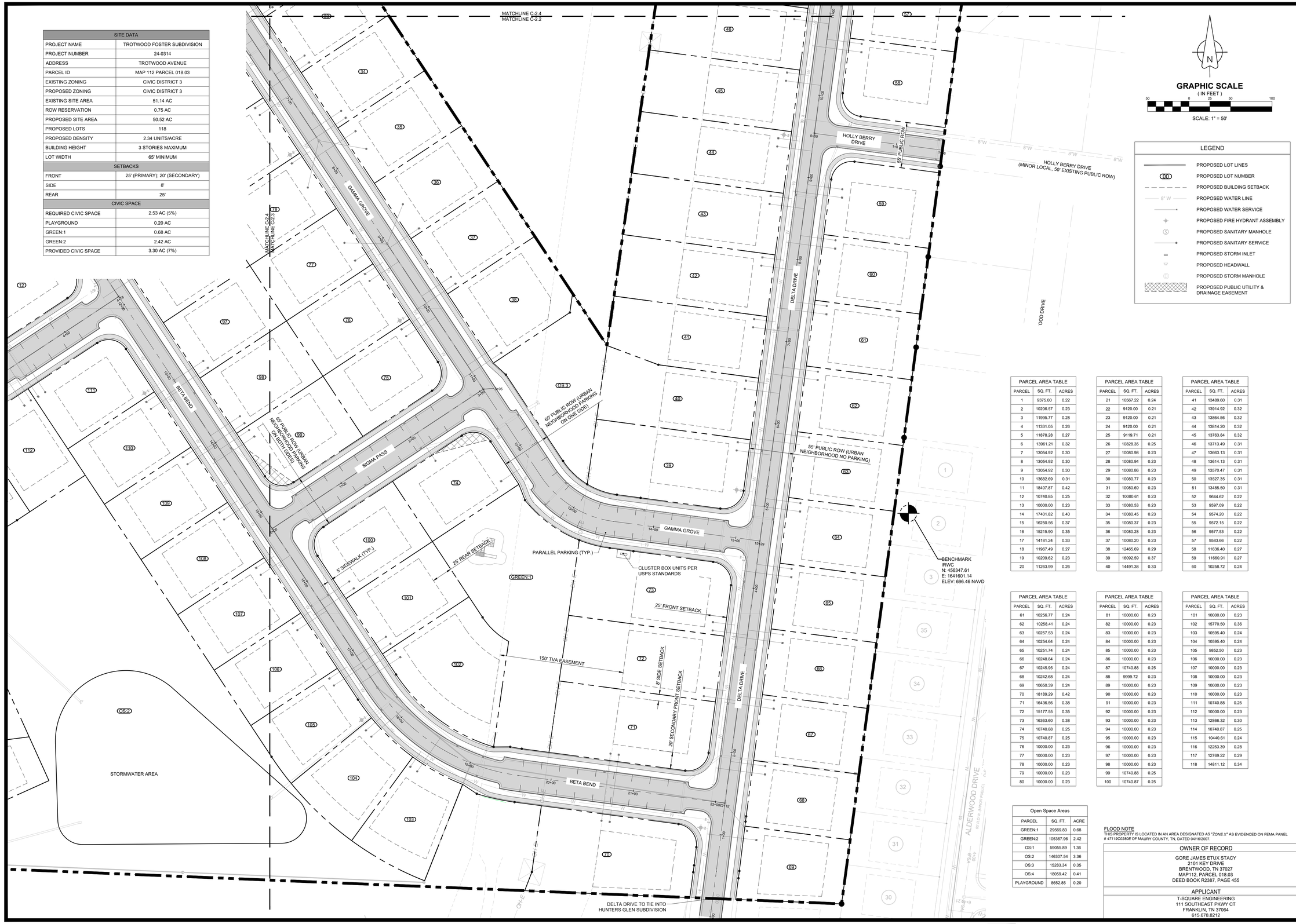
PROJECT
24-0314

SHEET
C-2.3

T-SQUARE ENGINEERING

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowe)\Production\24-0314 1- Site Plan.dwg, 5/19/2025 9:40:18 PM

SITE DATA	
PROJECT NAME	TROTWOOD FOSTER SUBDIVISION
PROJECT NUMBER	24-0314
ADDRESS	TROTWOOD AVENUE
PARCEL ID	MAP 112 PARCEL 018.03
EXISTING ZONING	CIVIC DISTRICT 3
PROPOSED ZONING	CIVIC DISTRICT 3
EXISTING SITE AREA	51.14 AC
ROW RESERVATION	0.75 AC
PROPOSED SITE AREA	50.52 AC
PROPOSED LOTS	118
PROPOSED DENSITY	2.34 UNITS/ACRE
BUILDING HEIGHT	3 STORIES MAXIMUM
LOT WIDTH	65' MINIMUM
SETBACKS	
FRONT	25' (PRIMARY); 20' (SECONDARY)
SIDE	8'
REAR	25'
CIVIC SPACE	
REQUIRED CIVIC SPACE	2.53 AC (5%)
PLAYGROUND	0.20 AC
GREEN:1	0.68 AC
GREEN:2	2.42 AC
PROVIDED CIVIC SPACE	3.30 AC (7%)



GRAPHIC SCALE
(IN FEET)

50 0 25 50 100

SCALE: 1" = 50'

LEGEND

- PROPOSED LOT LINES
- (00) PROPOSED LOT NUMBER
- PROPOSED BUILDING SETBACK
- 8" W PROPOSED WATER LINE
- PROPOSED WATER SERVICE
- PROPOSED FIRE HYDRANT ASSEMBLY
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY SERVICE
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- PROPOSED STORM MANHOLE
- PROPOSED PUBLIC UTILITY & DRAINAGE EASEMENT

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
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18	11967.49	0.27
19	10209.62	0.23
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PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
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22	9120.00	0.21
23	9120.00	0.21
24	9120.00	0.21
25	9119.71	0.21
26	10828.35	0.25
27	10080.98	0.23
28	10080.94	0.23
29	10080.86	0.23
30	10080.77	0.23
31	10080.69	0.23
32	10080.61	0.23
33	10080.53	0.23
34	10080.45	0.23
35	10080.37	0.23
36	10080.28	0.23
37	10080.20	0.23
38	12465.69	0.29
39	16092.59	0.37
40	14491.38	0.33

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
41	13489.60	0.31
42	13914.92	0.32
43	13864.56	0.32
44	13814.20	0.32
45	13763.84	0.32
46	13713.49	0.31
47	13663.13	0.31
48	13614.13	0.31
49	13570.47	0.31
50	13527.35	0.31
51	13485.50	0.31
52	9644.62	0.22
53	9597.09	0.22
54	9574.20	0.22
55	9572.15	0.22
56	9577.53	0.22
57	9583.66	0.22
58	11636.40	0.27
59	11660.91	0.27
60	10258.72	0.24

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
61	10256.77	0.24
62	10258.41	0.24
63	10257.53	0.24
64	10254.64	0.24
65	10251.74	0.24
66	10248.84	0.24
67	10245.95	0.24
68	10242.68	0.24
69	10650.39	0.24
70	18189.29	0.42
71	16436.56	0.38
72	15177.55	0.35
73	16363.60	0.38
74	10740.88	0.25
75	10740.87	0.25
76	10000.00	0.23
77	10000.00	0.23
78	10000.00	0.23
79	10000.00	0.23
80	10000.00	0.23

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
81	10000.00	0.23
82	10000.00	0.23
83	10000.00	0.23
84	10000.00	0.23
85	10000.00	0.23
86	10000.00	0.23
87	10740.88	0.25
88	9999.72	0.23
89	10000.00	0.23
90	10000.00	0.23
91	10000.00	0.23
92	10000.00	0.23
93	10000.00	0.23
94	10000.00	0.23
95	10000.00	0.23
96	10000.00	0.23
97	10000.00	0.23
98	10000.00	0.23
99	10740.88	0.25
100	10740.87	0.25

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
101	10000.00	0.23
102	15770.50	0.36
103	10595.40	0.24
104	10595.40	0.24
105	9852.50	0.23
106	10000.00	0.23
107	10000.00	0.23
108	10000.00	0.23
109	10000.00	0.23
110	10000.00	0.23
111	10740.88	0.25
112	10000.00	0.23
113	12866.32	0.30
114	10740.87	0.25
115	10440.61	0.24
116	12253.39	0.28
117	12769.22	0.29
118	14811.12	0.34

Open Space Areas		
PARCEL	SQ. FT.	ACRE
GREEN:1	29569.83	0.68
GREEN:2	105367.96	2.42
OS:1	59055.89	1.36
OS:2	146307.54	3.36
OS:3	15283.34	0.35
OS:4	18059.42	0.41
PLAYGROUND	8652.85	0.20

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP:112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

ALLISON B. CORLEY
REGISTERED PROFESSIONAL ENGINEER
AGRICULTURE
No. 127399
STATE OF TENNESSEE
05/19/2025

REVISIONS		
NO.	DATE	REVISIONS PER CITY OF COLUMBIA
1	5/19/25	

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

DETAILED SITE PLAN
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

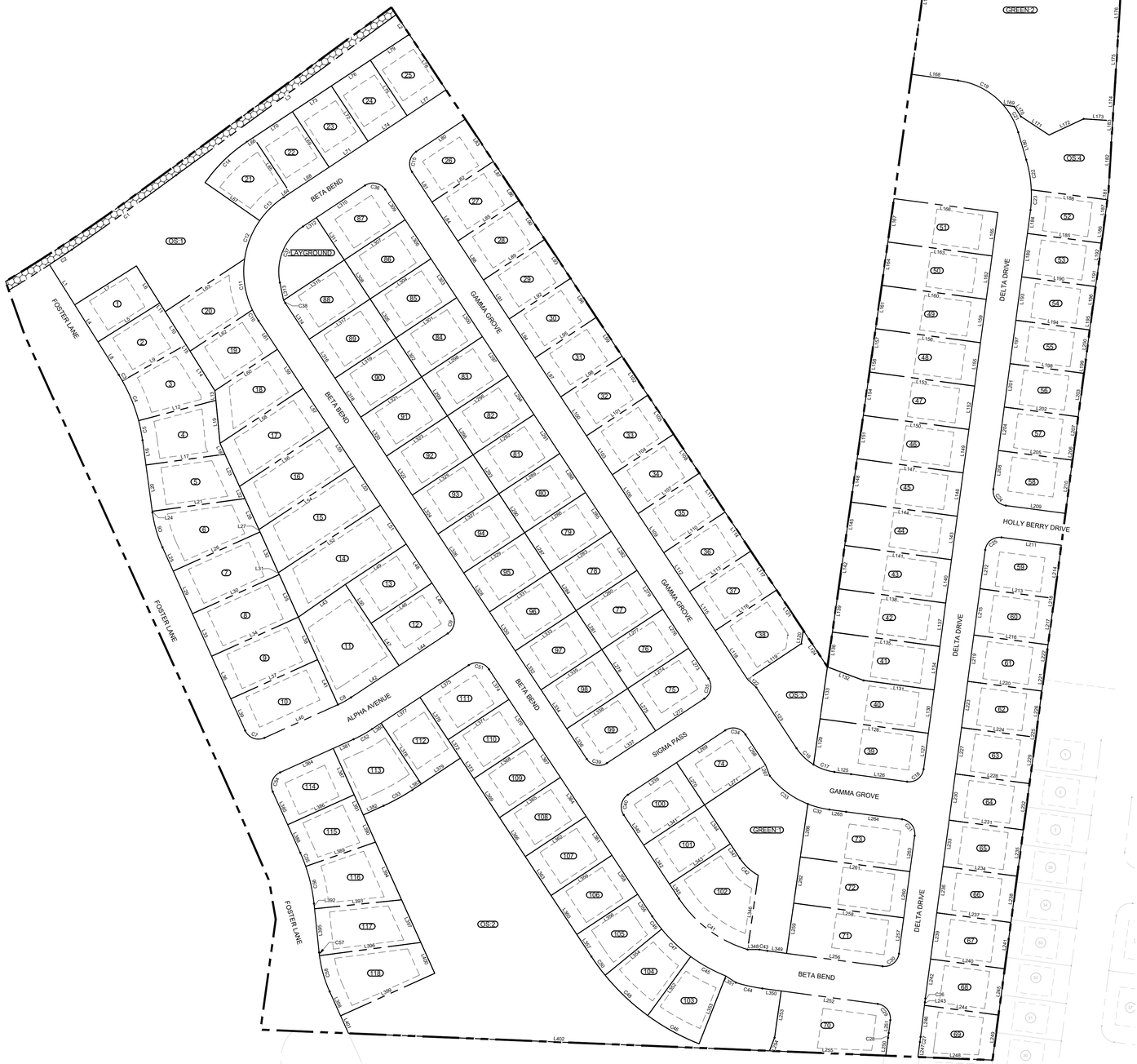
TROTWOOD FOSTER SUBDIVISION

T-SQUARE ENGINEERING

PROJECT 24-0314

SHEET C-2.4

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowe)\Production\24-0314 1- Site Plan.dwg, 5/19/2025 9:40:37 PM



PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
1	9375.00	0.22
2	10206.57	0.23
3	11995.77	0.28
4	11331.05	0.26
5	11878.28	0.27
6	13961.21	0.32
7	13054.92	0.30
8	13054.92	0.30
9	13054.92	0.30
10	13682.69	0.31
11	18407.87	0.42
12	10740.85	0.25
13	10000.00	0.23
14	17401.82	0.40
15	16250.56	0.37
16	15215.90	0.35
17	14181.24	0.33
18	11967.49	0.27
19	10209.62	0.23
20	11263.99	0.26

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
21	10567.22	0.24
22	9120.00	0.21
23	9120.00	0.21
24	9120.00	0.21
25	9119.71	0.21
26	10828.35	0.25
27	10080.98	0.23
28	10080.94	0.23
29	10080.86	0.23
30	10080.77	0.23
31	10080.69	0.23
32	10080.61	0.23
33	10080.53	0.23
34	10080.45	0.23
35	10080.37	0.23
36	10080.28	0.23
37	10080.20	0.23
38	12465.69	0.29
39	16092.59	0.37
40	14491.38	0.33

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
41	13489.60	0.31
42	13914.92	0.32
43	13864.56	0.32
44	13814.20	0.32
45	13763.84	0.32
46	13713.49	0.31
47	13663.13	0.31
48	13614.13	0.31
49	13570.47	0.31
50	13527.35	0.31
51	13485.50	0.31
52	9644.62	0.22
53	9597.09	0.22
54	9574.20	0.22
55	9572.15	0.22
56	9577.53	0.22
57	9583.66	0.22
58	11636.40	0.27
59	11660.91	0.27
60	10258.72	0.24

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
61	10256.77	0.24
62	10258.41	0.24
63	10257.53	0.24
64	10254.64	0.24
65	10251.74	0.24
66	10248.84	0.24
67	10245.95	0.24
68	10242.68	0.24
69	10650.39	0.24
70	18189.29	0.42
71	16436.56	0.38
72	15177.55	0.35
73	16363.60	0.38
74	10740.88	0.25
75	10740.87	0.25
76	10000.00	0.23
77	10000.00	0.23
78	10000.00	0.23
79	10000.00	0.23
80	10000.00	0.23

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
81	10000.00	0.23
82	10000.00	0.23
83	10000.00	0.23
84	10000.00	0.23
85	10000.00	0.23
86	10000.00	0.23
87	10740.88	0.25
88	9999.72	0.23
89	10000.00	0.23
90	10000.00	0.23
91	10000.00	0.23
92	10000.00	0.23
93	10000.00	0.23
94	10000.00	0.23
95	10000.00	0.23
96	10000.00	0.23
97	10000.00	0.23
98	10000.00	0.23
99	10740.88	0.25
100	10740.87	0.25

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
101	10000.00	0.23
102	15770.50	0.36
103	10595.40	0.24
104	10595.40	0.24
105	9852.50	0.23
106	10000.00	0.23
107	10000.00	0.23
108	10000.00	0.23
109	10000.00	0.23
110	10000.00	0.23
111	10740.88	0.25
112	10000.00	0.23
113	12866.32	0.30
114	10740.87	0.25
115	10440.61	0.24
116	12253.39	0.28
117	12769.22	0.29
118	14811.12	0.34

Open Space Areas		
PARCEL	SQ. FT.	ACRE
GREEN:1	29569.83	0.68
GREEN:2	105367.96	2.42
OS:1	59055.89	1.36
OS:2	146307.54	3.36
OS:3	15283.34	0.35
OS:4	18059.42	0.41
PLAYGROUND	8652.85	0.20

N

GRAPHIC SCALE
(IN FEET)
100 0 50 100 200
SCALE: 1" = 100'

REVISIONS		
NO.	DATE	
1	5/19/25	REVISIONS PER CITY OF COLUMBIA

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

TROTWOOD FOSTER SUBDIVISION

PARCEL TABLES

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

ALLISON B. CORDELL
LICENSED PROFESSIONAL ENGINEER
No. 127389
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-2.5

T-SQUARE ENGINEERING

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowe)\Production\24-0314 1- Site Plan.dwg, 5/16/2025 9:40:56 PM

Parcel Line Table		
Line #	Length	Direction
L1	81.21	S32° 11' 18.78"E
L2	344.05	N33° 28' 29.62"W
L3	466.91	S53° 53' 49.37"W
L4	75.00	S32° 11' 18.78"E
L5	125.00	N57° 48' 41.37"E
L6	75.00	S32° 11' 18.78"E
L7	125.00	N57° 48' 41.37"E
L8	66.63	S32° 11' 18.78"E
L9	125.39	S60° 18' 10.78"W
L10	66.93	S32° 11' 18.78"E
L11	17.43	S32° 11' 18.78"E
L12	136.83	S75° 15' 05.67"W
L13	16.60	S5° 32' 35.61"E
L14	80.02	S32° 11' 18.78"E
L15	13.09	S32° 11' 18.78"E
L16	42.79	S7° 48' 11.66"E
L17	136.64	N82° 11' 48.34"E
L18	20.44	S24° 17' 21.94"E
L19	73.95	S5° 32' 35.61"E
L20	80.00	S7° 48' 11.66"E
L21	160.32	N82° 11' 48.34"E
L22	22.83	S24° 17' 21.94"E
L23	60.60	S24° 17' 21.94"E
L24	1.83	S7° 48' 11.66"E
L25	44.72	S24° 17' 21.94"E
L26	163.19	N65° 42' 38.06"E
L27	4.50	S24° 17' 21.94"E
L28	58.20	S24° 17' 21.94"E
L29	80.00	S24° 17' 21.94"E
L30	163.19	N65° 42' 38.06"E
L31	3.46	S24° 17' 21.94"E
L32	76.54	S24° 17' 21.94"E
L33	80.00	S24° 17' 21.94"E
L34	163.19	N65° 42' 38.06"E
L35	80.00	S24° 17' 21.94"E
L36	80.00	S24° 17' 21.94"E
L37	163.19	S65° 42' 38.06"W
L38	80.00	S24° 17' 21.94"E
L39	59.67	S24° 17' 21.94"E
L40	138.19	N65° 42' 38.06"E
L41	84.67	S24° 17' 21.94"E
L42	98.67	N56° 31' 40.65"E
L43	97.95	S55° 07' 45.12"W
L44	100.00	N56° 31' 40.65"E
L45	62.00	N33° 28' 21.99"W
L46	125.00	S56° 31' 40.65"W
L47	87.00	N33° 28' 22.35"W
L48	80.00	N33° 28' 21.99"W
L49	125.00	S56° 31' 40.65"W
L50	80.00	N33° 28' 22.32"W
L51	80.00	N33° 28' 21.99"W
L52	209.60	S56° 31' 40.65"W
L53	80.00	N33° 28' 21.99"W
L54	196.67	S56° 31' 40.65"W
L55	80.00	N33° 28' 21.99"W
L56	183.73	N56° 31' 40.65"E
L57	80.00	N33° 28' 21.99"W
L58	170.80	S56° 31' 40.65"W
L59	80.00	N33° 28' 21.99"W
L60	128.39	N56° 31' 40.65"E
L61	58.91	N33° 28' 21.99"W
L62	128.06	N56° 31' 40.65"E
L63	163.12	N56° 31' 40.65"E
L64	13.50	N56° 31' 40.65"E
L65	114.00	N33° 28' 20.53"W
L66	13.50	N56° 31' 40.65"E
L67	114.00	N55° 07' 47.88"W
L68	80.00	N56° 31' 40.65"E
L69	114.00	N33° 28' 20.53"W
L70	80.00	N56° 31' 40.65"E
L71	80.00	N56° 31' 40.65"E
L72	114.00	N33° 28' 20.53"W
L73	80.00	N56° 31' 40.65"E
L74	80.00	N56° 31' 40.65"E
L75	114.00	N33° 28' 20.53"W
L76	80.00	N56° 31' 40.65"E
L77	80.00	N56° 31' 40.65"E
L78	114.00	N33° 28' 29.62"W
L79	79.99	N56° 31' 40.65"E
L80	101.00	S56° 31' 40.65"W
L81	62.00	S33° 28' 21.99"E
L82	126.01	N56° 31' 40.65"E

Parcel Line Table		
Line #	Length	Direction
L83	87.00	N33° 28' 48.57"W
L84	80.00	S33° 28' 21.99"E
L85	126.01	N56° 31' 40.65"E
L86	37.49	N33° 28' 19.35"W
L87	42.51	N33° 28' 29.62"W
L88	80.00	S33° 28' 21.99"E
L89	126.01	N56° 31' 40.65"E
L90	80.00	N33° 28' 19.35"W
L91	80.00	S33° 28' 21.99"E
L92	126.01	N56° 31' 40.65"E
L93	80.00	N33° 28' 19.35"W
L94	80.00	S33° 28' 21.99"E
L95	126.01	S56° 31' 40.65"W
L96	80.00	N33° 28' 19.35"W
L97	80.00	S33° 28' 21.99"E
L98	126.01	N56° 31' 40.65"E
L99	80.00	N33° 28' 19.35"W
L100	80.00	S33° 28' 21.99"E
L101	126.01	N56° 31' 40.65"E
L102	80.00	N33° 28' 19.35"W
L103	80.00	S33° 28' 21.99"E
L104	126.01	S56° 31' 40.65"W
L105	80.00	N33° 28' 19.35"W
L106	80.00	S33° 28' 21.99"E
L107	126.01	N56° 31' 40.65"E
L108	80.00	N33° 28' 19.35"W
L109	80.00	S33° 28' 21.99"E
L110	126.00	N56° 31' 40.65"E
L111	80.00	N33° 28' 19.35"W
L112	80.00	S33° 28' 21.99"E
L113	126.00	S56° 31' 40.65"W
L114	80.00	N33° 28' 19.35"W
L115	80.00	S33° 28' 21.99"E
L116	126.00	N56° 31' 40.65"E
L117	80.00	N33° 28' 19.35"W
L118	100.00	S33° 28' 23.51"E
L119	110.55	S56° 31' 40.65"W
L120	23.27	S8° 07' 02.03"W
L121	82.60	N33° 28' 19.35"W
L122	20.62	S47° 30' 25.14"E
L123	124.85	S33° 28' 21.99"E
L124	75.33	N33° 28' 19.35"W
L125	28.82	S82° 22' 17.17"E
L126	96.99	S82° 22' 17.17"E
L127	61.99	N7° 36' 09.50"E
L128	187.21	S82° 22' 17.17"E
L129	168.97	N8° 07' 02.03"E
L130	75.00	N7° 36' 09.50"E
L131	122.00	N82° 22' 17.17"W
L132	66.08	N69° 28' 59.12"W
L133	168.97	N8° 07' 02.03"E
L134	75.00	N7° 36' 09.50"E
L135	185.87	N82° 22' 17.18"W
L136	60.26	S8° 07' 02.03"W
L137	75.00	N7° 36' 09.50"E
L138	185.20	N82° 22' 17.18"W
L139	75.00	S8° 06' 56.07"W
L140	75.00	N7° 36' 09.50"E
L141	184.53	N82° 22' 17.18"W
L142	75.00	S8° 06' 56.07"W
L143	75.00	N7° 36' 09.50"E
L144	183.85	N82° 22' 17.18"W
L145	75.00	S8° 06' 56.07"W
L146	75.00	N7° 36' 09.50"E
L147	183.18	S82° 22' 17.18"E
L148	75.00	S8° 06' 56.07"W
L149	75.00	N7° 36' 09.50"E
L150	182.51	N82° 22' 17.18"W
L151	539.25	S8° 06' 56.07"W
L152	75.00	N7° 36' 09.50"E
L153	181.84	N82° 22' 17.18"W
L154	75.00	S8° 06' 56.07"W
L155	75.00	N7° 36' 09.50"E
L156	181.23	S82° 22' 17.18"E
L157	46.03	S8° 02' 30.70"W
L158	28.97	S8° 06' 56.07"W
L159	75.00	N7° 36' 09.50"E
L160	180.65	N82° 22' 17.18"W
L161	75.00	S8° 02' 30.70"W
L162	75.00	N7° 36' 09.50"E
L163	180.08	S82° 22' 17.18"E
L164	75.00	S8° 02' 30.70"W

Parcel Line Table		
Line #	Length	Direction
L165	75.00	N7° 37' 42.82"E
L166	179.54	N82° 22' 17.18"W
L167	75.00	S8° 02' 30.70"W
L168	80.07	S82° 22' 17.07"E
L169	19.90	N80° 37' 48.29"W
L170	20.23	N33° 02' 12.86"W
L171	57.86	N56° 38' 52.28"W
L172	65.28	S64° 53' 55.86"W
L173	49.92	N86° 28' 22.82"W
L174	64.86	N3° 44' 50.17"E
L175	79.81	N3° 31' 21.10"E
L176	80.28	N3° 28' 52.49"E
L177	98.63	N3° 34' 04.26"E
L178	157.70	N83° 45' 32.16"W
L179	261.95	S8° 02' 30.70"W
L180	48.97	S16° 24' 32.60"E
L181	15.56	S7° 34' 35.45"W
L182	105.19	N3° 21' 33.93"E
L183	79.97	N3° 41' 22.68"E
L184	40.45	S7° 33' 43.36"W
L185	128.01	S82° 31' 25.95"E
L186	79.89	N7° 37' 36.91"E
L187	51.96	N7° 34' 35.40"E
L188	131.39	N82° 31' 31.73"W
L189	75.00	S7° 36' 09.50"W
L190	127.82	S82° 31' 25.95"E
L191	33.71	N7° 54' 10.32"E
L192	41.29	N7° 37' 36.91"E
L193	75.00	S7° 36' 09.50"W
L194	127.60	S82° 31' 25.95"E
L195	79.91	N7° 33' 31.43"E
L196	46.27	N7° 54' 10.32"E
L197	75.00	S7° 36' 09.50"W
L198	127.66	S82° 31' 25.95"E
L199	23.82	N7° 32' 40.54"E
L200	51.18	N7° 33' 31.43"E
L201	75.00	S7° 36' 09.50"W
L202	127.74	S82° 31' 25.95"E
L203	75.00	N7° 32' 40.54"E
L204	75.00	S7° 36' 09.50"W
L205	127.85	N82° 31' 25.95"W
L206	26.83	N7° 28' 34.05"E
L207	48.17	N7° 32' 40.54"E
L208	66.94	S7° 36' 09.50"W
L209	102.99	S82° 31' 25.95"E
L210	92.00	N7° 28' 34.05"E
L211	103.22	N82° 31' 25.95"W
L212	67.06	S7° 36' 09.50"W
L213	128.24	S82° 31' 25.95"E
L214	92.00	N7° 33' 14.67"E
L215	80.00	S7° 36' 09.50"W
L216	128.22	S82° 31' 25.95"E
L217	69.75	N7° 37' 34.37"E
L218	10.25	N7° 33' 14.67"E
L219	80.00	S7° 36' 09.50"W
L220	128.22	S82° 31' 25.95"E
L221	39.66	N7° 34' 54.86"E
L222	40.34	N7° 37' 34.37"E
L223	80.00	S7° 36' 09.50"W
L224	128.24	S82° 31' 25.95"E
L225	9.68	N7° 37' 42.83"E
L226	70.32	N7° 34' 54.86"E
L227	80.00	S7° 36' 09.50"W
L228	128.20	S82° 31' 25.95"E
L229	80.00	N7° 37' 42.83"E
L230	80.00	S7° 36' 09.50"W
L231	128.16	S82° 31' 25.95"E
L232	80.00	N7° 37' 42.83"E
L233	80.00	S7° 36' 09.50"W
L234	128.13	S82° 31' 25.95"E
L235	80.00	N7° 37' 42.83"E
L236	80.00	S7° 36' 09.50"W
L237	128.09	S82° 31' 25.95"E
L238	80.00	N7° 37' 42.83"E
L239	80.00	S7° 36' 09.50"W
L240	128.06	N82° 31' 25.95"W
L241	80.00	N7° 37' 42.83"E
L242	68.12	S7° 36' 09.50"W
L243	5.56	S7° 03' 55.60"W
L244	127.94	N82° 31' 25.95"W
L245	80.00	N7° 37' 42.83"E
L246	54.52	S7° 03' 55.60"W

Parcel Line Table		
Line #	Length	Direction
L247	25.85	S7° 33' 22.26"W
L248	1255.14	S87° 37' 09.97"E
L249	77.82	N7° 37' 42.83"E
L250	30.83	N7° 33' 22.26"E
L251	22.13	N7° 03' 55.60"E
L252	166.84	N82° 22' 17.17"W
L253	80.79	N8° 07' 02.03"E
L254	24.14	N20° 59' 59.93"E
L255	199.25	S87° 37' 09.97"E
L256	165.85	S82° 22' 17.17"E
L257	61.99	N7° 36' 09.50"E
L258	190.08	N82° 22' 17.17"W
L259	258.59	S8° 07' 02.03"W
L260	80.00	N7° 36' 09.50"E
L261	189.36	N82° 22' 17.17"W
L262	258.59	S8° 07' 02.03"W
L263	62.01	N7° 36' 09.50"E
L264	97.01	N82° 22' 17.17"W
L265	28.85	N82° 22' 17.17"W
L266	258.59	S8° 07' 02.03"W
L267	20.46	S21° 09' 27.35"E
L268	62.00	N33° 28' 21.99"W
L269	100.00	S56° 31' 40.65"W
L270	87.00	S33° 28' 21.99"E
L271	125.00	N56° 31' 40.65"E
L272	100.00	N56° 31' 40.65"E
L273	62.00	N33° 28' 21.99"W
L274	125.00	N56° 31' 40.65"E
L275	87.00	N33° 28' 21.99"W
L276	80.00	N33° 28' 21.99"W
L277	125.00	N56° 31' 40.65"E
L278	80.00	S33° 28' 21.99"E
L279	80.00	N33° 28' 21.99"W
L280	125.00	S56° 31' 40.65"W
L281	80.00	N33° 28' 21.99"W
L282	80.00	N33° 28' 21.99"W
L283	125.00	N56° 31' 40.65"E
L284	80.00	N33° 28' 21.99"W
L285	80.00	N33° 28' 21.99"W
L286	125.00	N56° 31' 40.65"E
L287	80.00	S33° 28' 21.99"E
L288	80.00	N33° 28' 21.99"W
L289	125.00	S56° 31' 40.65"W
L290	80.00	S33° 28' 21.99"E
L291	80.00	N33° 28' 21.99"W
L292	125.00	N56° 31' 40.65"E
L293	80.00	S33° 28' 21.99"E
L294	80.00	N33° 28' 21.99"W
L295	125.00	N56° 31' 40.65"E
L296	80.00	N33° 28' 21.99"W
L297	80.00	N33° 28' 21.99"W
L298	125.00	N56° 31' 40.65"E
L299	80.00	S33° 28' 21.99"E
L300	80.00	N33° 28' 21.99"W
L301	125.00	N56° 31' 40.65"E
L302	80.00	S33° 28' 21.99"E
L303	80.00	N33° 28' 21.99"W
L304	125.00	N56° 31' 40.65"E
L305	80.00	N33° 28' 21.99"W
L306	80.00	N33° 28' 21.99"W
L307	125.00	N56° 31' 40.65"E
L308	80.00	N33° 28' 21.99"W
L309	62.00	N33° 28' 21.99"W
L310	100.00	S56° 31' 40.65"W
L311	87.00	N33° 28' 21.99"W
L312	27.50	S56° 31' 40.65"W
L313	30.82	S11° 48' 34.51"E
L314	74.50	S33° 28' 21.99"E
L315	124.84	S56° 31' 40.65"W
L316	80.00	S33° 28' 21.99"E
L317	125.00	N56° 31' 40.65"E
L318	80.00	S33° 28' 21.99"E
L319	125.00	N56° 31' 40.65"E
L320	80.00	S33° 28' 21.99"E
L321	125.00	N56° 31' 40.65"E
L322	80.00	S33° 28' 21.99"E
L323	125.00	N56° 31' 40.65"E
L324	80.00	S33° 28' 21.99"E
L325	125.00	N56° 31' 40.65"E
L326	80.00	S33° 28' 21.99"E
L327	125.00	S56° 31' 40.65"W
L328	80.00	S33° 28' 21.99"E

Parcel Line Table		
Line #	Length	Direction
L329	125.00	N56° 31' 40.65"E
L330	80.00	S33° 28' 21.99"E
L331	125.00	N56° 31' 40.65"E
L332	80.00	S33° 28' 21.99"E
L333	125.00	S56° 31' 40.65"W
L334	80.00	S33° 28' 21.99"E
L335	125.00	N56° 31' 40.65"E
L336	62.00	S33° 28' 21.99"E
L337	100.00	N56° 31' 40.65"E
L338	125.00	N56° 31' 40.65"E
L339	100.00	S56° 31' 40.65"W
L340	62.00	S33° 28' 21.99"E
L341	125.00	N56° 31' 40.65"E
L342	80.00	S33° 28' 21.99"E
L343	125.00	N56° 31' 40.65"E
L344	109.68	N33° 28' 21.99"W
L345	29.68	S33° 28' 21.99"E
L346	128.50	N8° 07' 02.03"E
L347	109.68	N33° 28' 21.99"W
L348	20.11	S89° 41' 07.71"W
L349	33.14	N82° 22' 17.17"W
L350	32.58	N82° 22' 17.17"W
L351	20.44	N56° 23' 59.71"W
L352	125.00	N36° 08' 21.82"E
L353	125.00	S21° 31' 59.35"W
L354	125.00	S50° 44' 44.30"W
L355	45.27	N33° 28' 21.99"W
L356	125.00	N56° 31' 40.65"E
L357	45.27	N33° 28' 21.99"W
L358	80.00	N33° 28' 21.99"W
L359	125.00	S56° 31' 40.65"W
L360	80.00	N33° 28' 21.99"W
L361	80.00	N33° 28' 21.99"W
L362	125.00	N56° 31' 40.65"E
L363	80.00	N33° 28' 21.99"W
L364	80.00	N33° 28' 21.99"W
L365	125.00	N56° 31' 40.65"E
L366	80.00	N33° 28' 21.99"W
L367	80.00	N33° 28' 21.99"W
L368	125.00	N56° 31' 40.65"E
L369	80.00	N33° 28' 21.99"W
L370	80.00	N33° 28' 21.99"W
L371	125.00	N56° 31' 40.65"E
L372	125.00	N33° 28' 21.99"W
L373	42.00	N33° 28' 21.99"W
L374	62.00	N33° 28' 21.99"W
L375	100.00	S56° 31' 40.65"W
L376	87.00	S33° 28' 21.99"E
L377	80.00	S56° 31' 40.65"W
L378	125.00	S33° 28' 21.99"E
L379	80.00	S56° 31' 40.65"W
L380	18.67	S56° 31' 40.65"W
L381	38.19	S65° 42' 38.06"W
L382	38.19	S65° 42' 38.06"W
L383	18.67	S56° 31' 40.65"W
L384	100.00	S65° 42' 38.06"W
L385	62.00	S24° 17' 21.94"E
L386	125.00	S65° 42' 38.06"W
L387	87.00	S24° 17' 21.94"E
L388	52.63	S24° 17' 21.94"E
L389	126.62	S70° 48' 54.24"W
L390	51.03	S24° 17' 21.94"E
L391	38.00	N24° 17' 21.94"W
L392	9.05	S5° 55' 34.65"E
L393	149.87	N84° 04' 25.35"E
L394	108.41	S24° 17' 21.94"E
L395	75.08	N5° 55' 34.65"W
L396	175.14	N82° 36' 32.47"E
L397	80.25	S24° 17' 21.94"E
L398	45.69	N24° 17' 19.35"W
L399	176.97	S65° 42' 40.65"W
L400	58.00	S24° 17' 21.94"E
L401	32.87	S24° 17' 19.35"E
L402	721.97	S87° 37' 09.97"E

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	219.59	6697.71	1.88	S54° 30' 11"W	219.58
C2	46.01	2095.00	1.26	S56° 04' 18"W	46.01
C3	12.28	282.50	2.49	S30° 56' 34"E	12.28
C4	73.70	282.50	14.95	S22° 13' 22"E	73.50
C5	34.24	282.50	6.95	S11° 16' 33"E	34.22
C6	62.58	217.50	16.49	S16° 02' 47"E	62.37
C7	39.27	25.00	90.00	S69° 17' 22"E	35.36
C8	25.64	160.00	9.18	N61° 07' 09"E	25.62
C9	39.27	25.00	90.00	N11° 31' 39"E	35.36
C10	21.16	152.50	7.95	N29° 29' 55"W	21.14
C11	89.35	152.50	33.57	N8° 44' 21"W	88.08
C12	71.40	152.50	26.82	N21° 27' 29"E	70.74
C13	57.65	152.50	21.66	N45° 41' 56"E	57.30
C14	100.74	266.50	21.66	N45° 41' 56"E	100.14
C15	39.27	25.00	90.00	S11° 31' 39"W	35.36
C16	40.76	92.50	25.25	S46° 05' 45"E	40.43
C17	38.19	92.50	23.65	S70° 32' 43"E	37.91
C18	39.28	25.00	90.03	N52° 36' 56"E	35.36
C19	89.58	125.00	41.06	S61° 50' 27"E	87.68
C20	171.72	742.64	13.25	S89° 33' 19"W	171.34
C21	54.33	125.00	24.90	S28° 51' 35"E	53.90
C22	52.47	216.50	13.89	S9° 27' 59"E	52.34
C23	34.74	216.50	9.19	S2° 04' 24"W	34.70
C24	39.33	25.00	90.13	S37° 27' 38"E	35.39
C25	39.21	25.00	89.87	S52° 32' 22"W	35.32
C26	6.31	673.50	0.54	S7° 20' 03"W	6.31
C27	8.80	1027.50	0.49	S7° 18' 39"W	8.80
C28	8.33	972.50	0.49	N7° 18' 39"E	8.33
C29	39.02	25.00	89.44	N37° 39' 11"W	35.18
C30	39.28	25.00	90.03	N52° 36' 56"E	35.36
C31	39.26	25.00	89.97	N37° 23' 04"W	35.35
C32	38.06	157.50	13.85	N75° 26' 55"W	37.97
C33	82.20	157.50	29.90	S53° 34' 28"E	81.27
C34	39.27	25.00	90.00	N78° 28' 21"W	35.36
C35	39.27	25.00	90.00	N11° 31' 39"E	35.36
C36	39.27	25.00	90.00	N78° 28' 21"W	35.36
C37	110.33	92.50	68.34	S22° 21' 33"W	103.90
C38	5.50	97.50	3.23	S31° 51' 20"E	5.50
C39	39.27	25.00	90.00	S78° 28' 21"E	35.36
C40	39.27	25.00	90.00	S11° 31' 39"W	35.36
C41	149.46	215.00	39.83	S53° 23' 18"E	146.47
C42	43.25	90.00	27.53	N47° 14' 22"W	42.83
C43	13.98	210.00	3.81	N80° 27' 51"W	13.98
C44	46.73	275.00	9.74	N77° 30' 11"W	46.68
C45	68.83	270.00	14.61	N61° 09' 49"W	68.64
C46	100.70	395.00	14.61	N61° 09' 49"W	100.42
C47	68.83	270.00	14.61	N46° 33' 27"W	68.64
C48	100.70	395.00	14.61	N46° 33' 27"W	100.42
C49	27.25	270.00	5.78	N36° 21' 49"W	27.23
C50	39.86	395.00	5.78	N36° 21' 49"W	39.84
C51	39.27	25.00	90.00	N78° 28' 21"W	35.36
C52	36.06	225.00	9.18	S61° 07' 09"W	36.02
C53	56.09	350.00	9.18	S61° 07' 09"W	56.03
C54	39.27	25.00	90.00	S20° 42' 38"W	35.36
C55	25.17	282.50	5.10	S21° 44' 14"E	25.16
C56	65.37	282.50	13.26	S12° 33' 20"E	65.23
C57	5.56	217.50	1.46	N6° 39' 31"W	5.56
C58	64.15	217.50	16.90	N15° 50' 23"W	63.91

REVISIONS

NO.	DATE	REVISIONS PER CITY OF COLUMBIA
1	5/19/25	

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

PARCEL TABLES

MAP 112, PARCEL 018.03

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLLA
REGISTERED ENGINEER
AGRICULTURE
No. 127369
CIVIL
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-2.6

T-SQUARE ENGINEERING

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GRAPHIC SCALE
(IN FEET)
100 0 50 100 200
SCALE: 1" = 100'

LEGEND
- PROPOSED LOT LINES
- PROPOSED LOT NUMBER
- WATER NATURAL AREA BUFFER
- DESIGNATED CIVIC SPACE

SITE DATA	
PROJECT NAME	TROTWOOD FOSTER SUBDIVISION
PROJECT NUMBER	24-0314
ADDRESS	TROTWOOD AVENUE
PARCEL ID	MAP 112 PARCEL 018.03
EXISTING ZONING	CIVIC DISTRICT 3
PROPOSED ZONING	CIVIC DISTRICT 3
EXISTING SITE AREA	51.14 AC
ROW RESERVATION	0.75 AC
PROPOSED SITE AREA	50.52 AC
PROPOSED LOTS	118
PROPOSED DENSITY	2.34 UNITS/ACRE
BUILDING HEIGHT	3 STORIES MAXIMUM
LOT WIDTH	65' MINIMUM
SETBACKS	
FRONT	25' (PRIMARY); 20' (SECONDARY)
SIDE	8'
REAR	25'
CIVIC SPACE	
REQUIRED CIVIC SPACE	2.53 AC (5%)
PLAYGROUND	0.20 AC
GREEN:1	0.68 AC
GREEN:2	2.42 AC
PROVIDED CIVIC SPACE	3.30 AC (7%)

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS *"ZONE X"* AS EVIDENCED ON FEMA PANEL # *47119C0280E* OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE	
1	5/19/25	REVISIONS PER CITY OF COLUMBIA

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

CIVIC SPACE PLAN

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
REGISTERED ENGINEER
AGRICULTURE
No. 127269
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-2.7

T-SQUARE ENGINEERING

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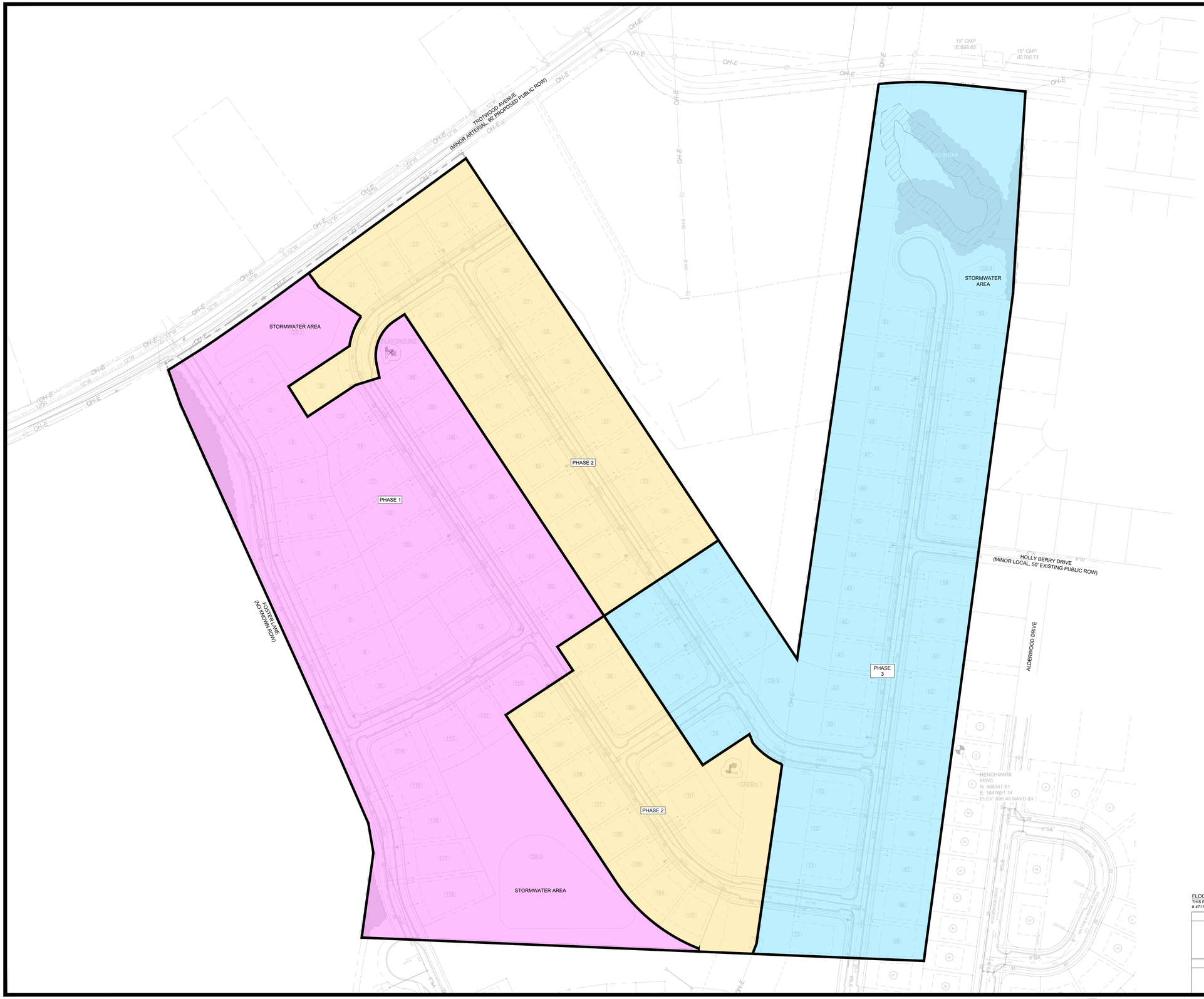

N

GRAPHIC SCALE
(IN FEET)
100 0 50 100 200
SCALE: 1" = 100'

APPROXIMATE PHASING TIMELINE:
1. PHASE 1: GRADING TO BEGIN JANUARY 2026
2. PHASE 2: GRADING TO BEGIN JANUARY 2027
3. PHASE 3: GRADING TO BEGIN JANUARY 2028

SITE DATA	
PROJECT NAME	TROTWOOD FOSTER SUBDIVISION
PROJECT NUMBER	24-0314
ADDRESS	TROTWOOD AVENUE
PARCEL ID	MAP 112 PARCEL 018.03
EXISTING ZONING	CIVIC DISTRICT 3
PROPOSED ZONING	CIVIC DISTRICT 3
EXISTING SITE AREA	51.14 AC
ROW RESERVATION	0.75 AC
PROPOSED SITE AREA	50.52 AC
PROPOSED LOTS	118
PROPOSED DENSITY	2.34 UNITS/ACRE
BUILDING HEIGHT	3 STORIES MAXIMUM
LOT WIDTH	65' MINIMUM
SETBACKS	
FRONT	25' (PRIMARY); 20' (SECONDARY)
SIDE	8'
REAR	25'
CIVIC SPACE	
REQUIRED CIVIC SPACE	2.53 AC (5%)
PLAYGROUND	0.20 AC
GREEN:1	0.68 AC
GREEN:2	2.42 AC
PROVIDED CIVIC SPACE	3.30 AC (7%)

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY
2101 KEY DRIVE
BRENTWOOD, TN 37027
MAP112, PARCEL 018.03
DEED BOOK R2387, PAGE 455

APPLICANT
T-SQUARE ENGINEERING
111 SOUTHEAST PKWY CT
FRANKLIN, TN 37064
615.678.8212

NO.	DATE	REVISIONS
1	5/19/25	REVISIONS PER CITY OF COLUMBIA

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

ESTIMATED PHASING PLAN
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLLA
REGISTERED ENGINEER
ACCREDITATION
COMMERCE
No. 127309
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-2.8

T-SQUARE ENGINEERING

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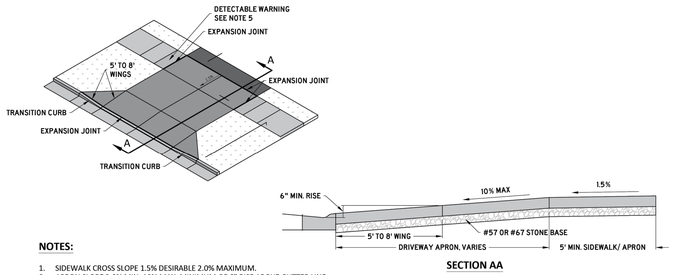
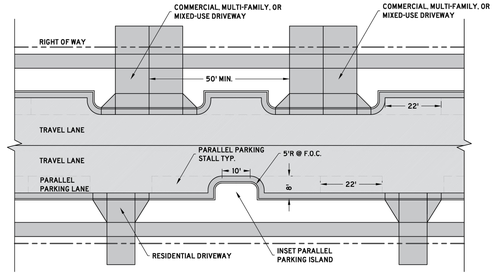


SECTION AA

NOTES:

1. SIDEWALK CROSS SLOPE 1.5% DESIRABLE 2.0% MAXIMUM.
2. APRON SLOPE 2.0% MIN. 10% MAX. MINIMUM OF 6" RISE ABOVE GUTTER LINE.
3. 4" MIN. THICK #57 OR # 67 STONE BASE
4. CLASS A 3000 PSI CONCRETE WITH FIBER REINFORCEMENT
   - 4.1. 6" MIN. THICKNESS RESIDENTIAL.
   - 4.2. 8" MIN. THICKNESS COMMERCIAL, MULTI-FAMILY, AND MIXED-USE.
5. EXPANSION JOINTS SHALL BE AS FOLLOWS:
   - 5.1. 1/2 INCH THICK.
   - 5.2. RUBBERIZED EXPANSION JOINT FILLER (AASHTO M153, TYPE 1).
   - 5.3. POLYPROPYLENE FOAM JOINT FILLER (ASTM D8139).
6. DETECTABLE WARNINGS WHERE DRIVEWAY IS STOP CONTROLLED.
7. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA DEVELOPMENT SERVICES DEPARTMENT ENGINEERING DIVISION	DRIVEWAY APRON	DATE 6/9/2022
STANDARD DETAILS	(NTS)	SD-12



NOTES:

1. ONLY PERMITTED WITHIN THE APPLICABLE ZONING DISTRICTS
2. PARKING ISLANDS SHALL BE PROVIDED EVERY 220 FEET AT MINIMUM.
3. PARKING ISLANDS SHALL BE PROVIDED AT EVERY INTERSECTION.
4. COMMERCIAL, MULTI-FAMILY, AND MIXED-USE DRIVEWAYS SHALL REQUIRE PARKING ISLANDS ADJACENT TO THE DRIVEWAY.
5. RESIDENTIAL DRIVEWAYS SHALL NOT REQUIRE PARKING ISLANDS ADJACENT TO THE DRIVEWAY, BUT SHALL BE LOCATED BETWEEN PARKING STALLS WHERE PRACTICABLE.
6. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA DEVELOPMENT SERVICES DEPARTMENT ENGINEERING DIVISION	INSET PARALLEL PARKING AND ISLANDS	DATE 6/9/2022
STANDARD DETAILS	(NTS)	SD-06

NO.	DATE	REVISIONS
1	5/19/25	REVISIONS PER CITY OF COLUMBIA

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

SITE DETAILS

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLLA
REGISTERED LANDSCAPE ARCHITECT
No. 1277369
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-2.9

T-SQUARE ENGINEERING

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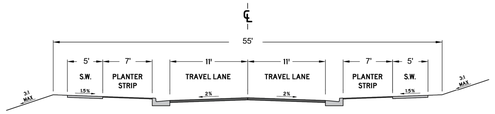


NOTES:

1. ONLY PERMITTED WITHIN THE APPLICABLE ZONING DISTRICTS
2. ONLY PERMITTED ON MINOR LOCAL AND MAJOR LOCAL ROADWAY CLASSIFICATIONS
3. PAVEMENT SECTION SHALL FOLLOW THE CORRESPONDING ROADWAY CLASSIFICATION'S STANDARD DETAIL
4. CURB AND GUTTER, SEE SD-01
5. EXTRUDED CURB, SEE SD-02
6. DECORATIVE LIGHT BASES SHALL BE BETWEEN 18" AND 24" BEHIND THE BACK OF CURB.
7. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED
8. DIMENSIONS REFLECT A MINIMUM STANDARD
9. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA TENNESSEE

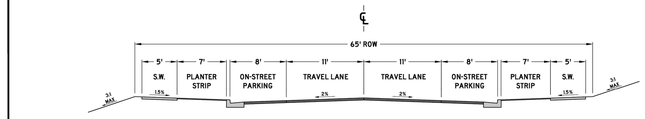
CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

STANDARD DETAILS

CHARACTER DISTRICT STREET
URBAN NEIGHBORHOOD
NO PARALLEL PARKING
(NTS)

DATE
7/1/2024

DS-12



NOTES:

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CITY OF COLUMBIA TENNESSEE

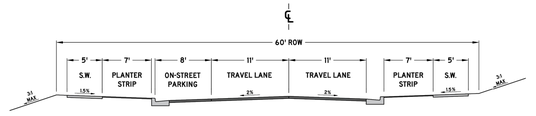
CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

STANDARD DETAILS

CHARACTER DISTRICT STREET
URBAN NEIGHBORHOOD
PARALLEL PARKING BOTH SIDES
(NTS)

DATE
7/1/2024

DS-18



NOTES:

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2. ONLY PERMITTED ON MINOR LOCAL AND MAJOR LOCAL ROADWAY CLASSIFICATIONS
3. PAVEMENT SECTION SHALL FOLLOW THE CORRESPONDING ROADWAY CLASSIFICATION'S STANDARD DETAIL
4. CURB AND GUTTER, SEE SD-01
5. EXTRUDED CURB, SEE SD-02
6. DECORATIVE LIGHT BASES SHALL BE BETWEEN 18" AND 24" BEHIND THE BACK OF CURB.
7. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED
8. DIMENSIONS REFLECT A MINIMUM STANDARD
9. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA TENNESSEE

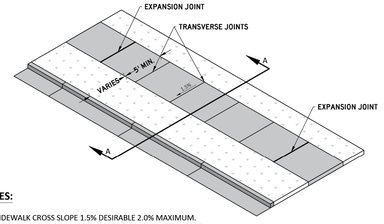
CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

STANDARD DETAILS

CHARACTER DISTRICT STREET
URBAN NEIGHBORHOOD STREET
PARALLEL PARKING ONE SIDE
(NTS)

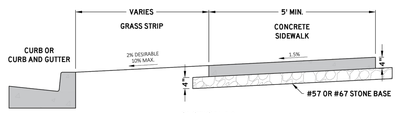
DATE
7/1/2024

DS-11



NOTES:

1. SIDEWALK CROSS SLOPE 1.5% DESIRABLE 2.0% MAXIMUM.
2. SIDEWALK GRADE SHALL FOLLOW THE ROAD GRADE WHERE POSSIBLE.
3. 4" MIN. THICK #57 OR # 67 STONE BASE
4. 4" MIN. THICKNESS CLASS A 3000 PSI CONCRETE WITH FIBER REINFORCEMENT, BROOM FINISHED.
5. EXPANSION JOINTS SHALL BE AS FOLLOWS:
   - 5.1. 1/2 INCH THICK
   - 5.2. A MAXIMUM SPACING OF 25 FEET
   - 5.3. AT TANGENTS OF ALL RADII OF CURVES
   - 5.4. BETWEEN CURBS AND ANY RIGID OBJECTS
   - 5.5. ALIGNED WITH ADJACENT EXPANSION JOINTS
   - 5.6. RUBBERIZED EXPANSION JOINT FILLER (AASHTO M153, TYPE 1)
   - 5.7. POLYPROPYLENE FOAM JOINT FILLER (ASTM D8139)
6. PROVIDE TRANSVERSE JOINTS AS NEARLY AS SQUARE AS PRACTICABLE. ON SIDEWALKS GREATER THAN 8 FEET IN WIDTH, PROVIDE A LONGITUDINAL JOINT ALONG THE CENTERLINE OF THE SIDEWALK.
7. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER



SECTION AA

CITY OF COLUMBIA TENNESSEE

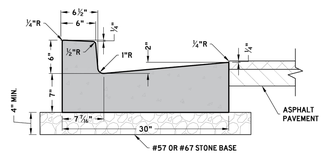
CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

STANDARD DETAILS

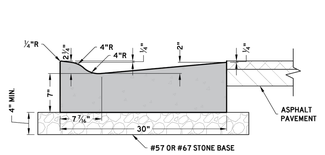
CONCRETE SIDEWALK
(NTS)

DATE
6/9/2022

SD-10



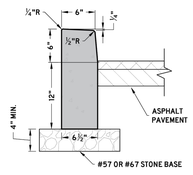
6-30 CONCRETE CURB AND GUTTER



LOWERED CONCRETE CURB AND GUTTER

NOTES:

1. BASED ON TDOT STANDARD DRAWING RP-VC-11
2. ONLY PERMITTED IN APPLICABLE ROADWAY SECTIONS
3. 4" MIN. THICK #57 OR # 67 STONE BASE
4. CLASS A 3000 PSI CONCRETE
5. EXPANSION JOINTS SHALL BE AS FOLLOWS:
   - 5.1. 1/2 INCH THICK
   - 5.2. A MAXIMUM SPACING OF 100 FEET
   - 5.3. AT TANGENTS OF ALL RADII OF CURVES
   - 5.4. BETWEEN CURBS AND ANY RIGID OBJECTS
   - 5.5. ALIGNED WITH ADJACENT EXPANSION JOINTS
   - 5.6. RUBBERIZED EXPANSION JOINT FILLER (AASHTO M153, TYPE 1)
   - 5.7. POLYPROPYLENE FOAM JOINT FILLER (ASTM D8139)
6. CONTRACTION JOINTS SHALL BE AS FOLLOWS:
   - 6.1. A MAXIMUM SPACING OF 10 FEET
   - 6.2. A MINIMUM SPACING OF 6 FEET
   - 6.3. 1/4 INCH DEPTH, EITHER SAWCUT OR HAND GROOVED.
7. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER



VERTICAL POST CURB

CITY OF COLUMBIA TENNESSEE

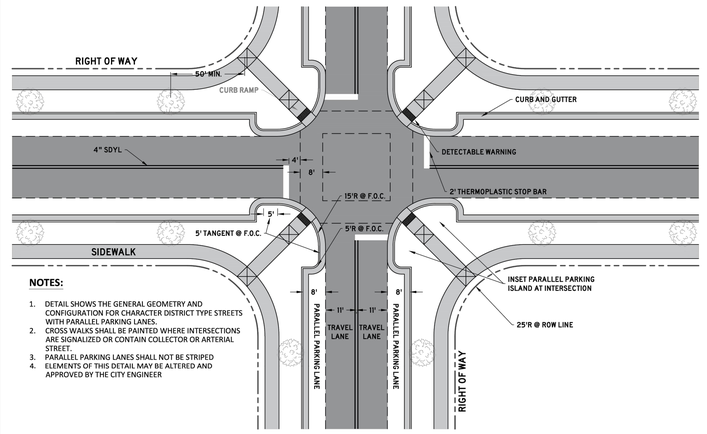
CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

STANDARD DETAILS

CURB AND GUTTER
AND POST CURB
(NTS)

DATE
6/9/2022

SD-01



NOTES:

1. DETAIL SHOWS THE GENERAL GEOMETRY AND CONFIGURATION FOR CHARACTER DISTRICT TYPE STREETS WITH PARALLEL PARKING LANES.
2. CROSS WALKS SHALL BE PAINTED WHERE INTERSECTIONS ARE SIGNALIZED OR CONTAIN COLLECTOR OR ARTERIAL STREET.
3. PARALLEL PARKING LANES SHALL NOT BE STRIPED
4. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA TENNESSEE

CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

STANDARD DETAILS

INTERSECTION CONFIGURATION
AND GEOMETRY
(NTS)

DATE
6/9/2022

SD-07

REVISIONS

NO.	DATE	REVISIONS PER CITY OF COLUMBIA
1	5/19/25	

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

TROTWOOD FOSTER SUBDIVISION

SITE DETAILS

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

ALLISON B. COROLLA
REGISTERED PROFESSIONAL ENGINEER
No. 127389
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-2.10

T-SQUARE ENGINEERING

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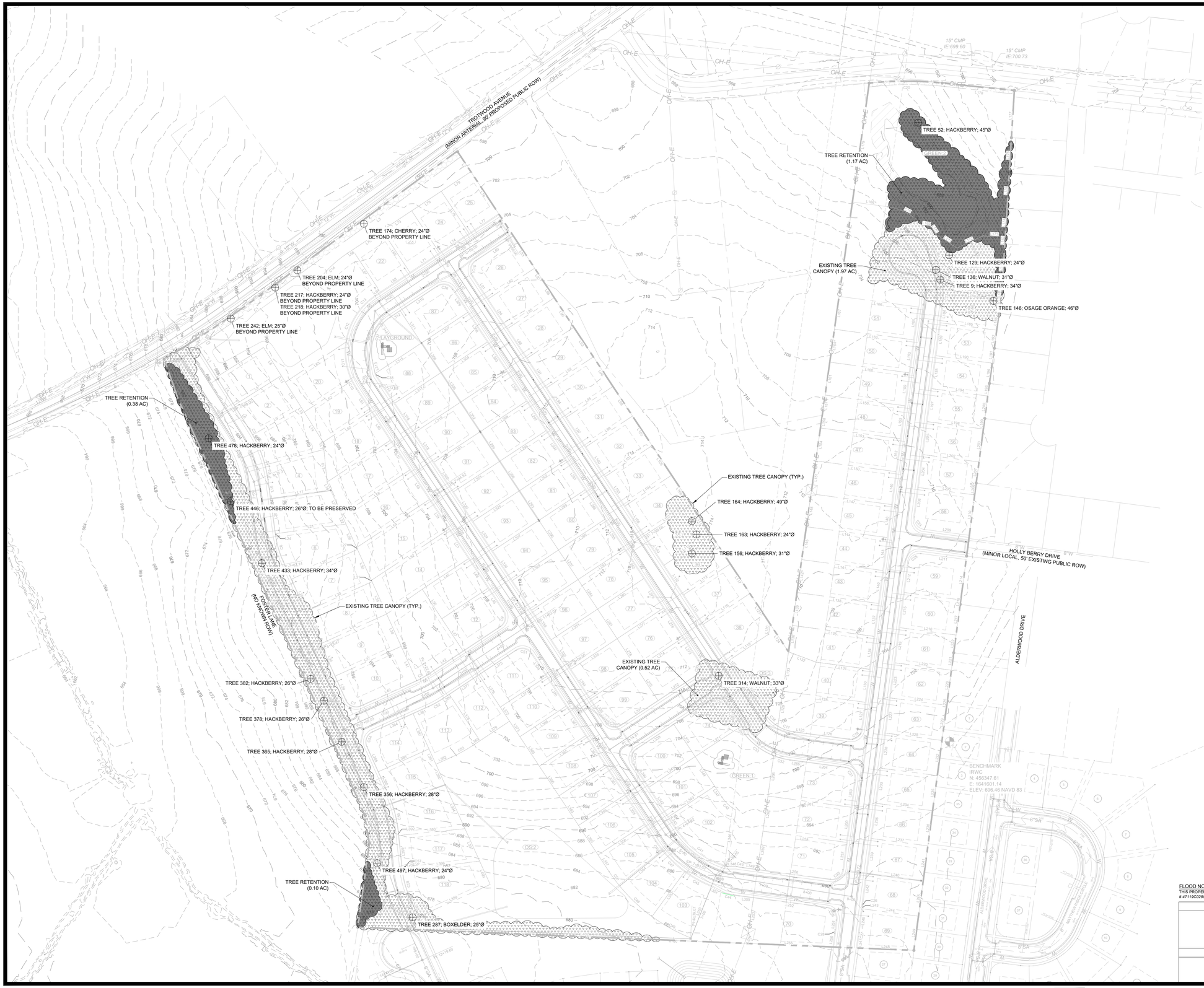

GRAPHIC SCALE
(IN FEET)
100 0 50 100 200
SCALE: 1" = 100'

LEGEND

500	EXISTING MAJOR CONTOURS
498	EXISTING MINOR CONTOURS
	EXISTING PROPERTY BOUNDARY
	PROPOSED LOT LINES
	WATER NATURAL AREA BUFFER
	EXISTING TREE CANOPY
	PROPOSED TREE CANOPY RETENTION

TREE CANOPY RETENTION
- EXISTING CANOPY: 5.38 ACRES (<19% DEVELOPMENT)
- REQUIRED RETENTION: 2.91 (54%)
- PROPOSED RETENTION: 1.65 ACRES (31%)
- PROPOSED TREE REPLACEMENT (80 TREES PER ACRE OF CANOPY DISTURBED): 101 TREES

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY
2101 KEY DRIVE
BRENTWOOD, TN 37027
MAP112, PARCEL 018.03
DEED BOOK R2387, PAGE 455

APPLICANT
T-SQUARE ENGINEERING
111 SOUTHEAST PKWY CT
FRANKLIN, TN 37064
615.678.8212

REVISIONS

NO.	DATE	REVISIONS PER CITY OF COLUMBIA
1	5/19/25	

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

RESOURCE PROTECTION PLAN
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLL
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 127309
STATE OF TENNESSEE
05/19/2025

PROJECT
24-0314

SHEET
C-2.11

T-SQUARE ENGINEERING

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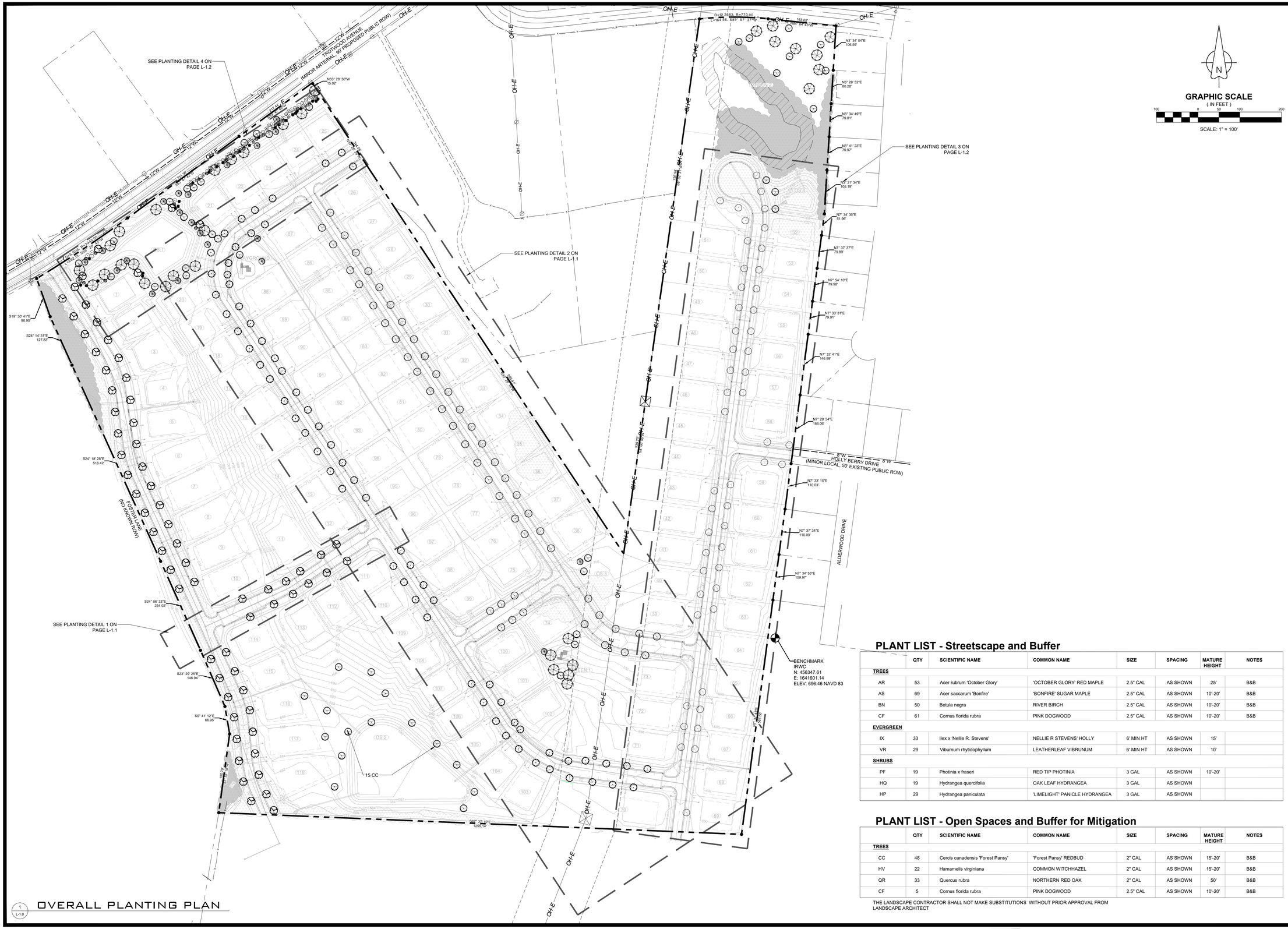

1 L-1.0 OVERALL PLANTING PLAN

PLANT LIST - Streetscape and Buffer

	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	MATURE HEIGHT	NOTES
TREES							
AR	53	Acer rubrum 'October Glory'	'OCTOBER GLORY' RED MAPLE	2.5" CAL	AS SHOWN	25'	B&B
AS	69	Acer saccarum 'Bonfire'	'BONFIRE' SUGAR MAPLE	2.5" CAL	AS SHOWN	10'-20'	B&B
BN	50	Betula negra	RIVER BIRCH	2.5" CAL	AS SHOWN	10'-20'	B&B
CF	61	Cornus florida rubra	PINK DOGWOOD	2.5" CAL	AS SHOWN	10'-20'	B&B
EVERGREEN							
IX	33	Ilex x 'Nellie R. Stevens'	NELLIE R STEVENS' HOLLY	6' MIN HT	AS SHOWN	15'	
VR	29	Viburnum rhytidophyllum	LEATHERLEAF VIBRUNUM	6' MIN HT	AS SHOWN	10'	
SHRUBS							
PF	19	Photinia x fraseri	RED TIP PHOTINIA	3 GAL	AS SHOWN	10'-20'	
HQ	19	Hydrangea quercifolia	OAK LEAF HYDRANGEA	3 GAL	AS SHOWN		
HP	29	Hydrangea paniculata	'LIMELIGHT' PANICLE HYDRANGEA	3 GAL	AS SHOWN		

PLANT LIST - Open Spaces and Buffer for Mitigation

	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	MATURE HEIGHT	NOTES
TREES							
CC	48	Cercis canadensis 'Forest Pansy'	'Forest Pansy' REDBUD	2" CAL	AS SHOWN	15'-20'	B&B
HV	22	Hamamelis virginiana	COMMON WITCHHAZEL	2" CAL	AS SHOWN	15'-20'	B&B
QR	33	Quercus rubra	NORTHERN RED OAK	2" CAL	AS SHOWN	50'	B&B
CF	5	Cornus florida rubra	PINK DOGWOOD	2.5" CAL	AS SHOWN	10'-20'	B&B

THE LANDSCAPE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS WITHOUT PRIOR APPROVAL FROM LANDSCAPE ARCHITECT

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: CES
REVIEWER: CES

LANDSCAPE PLAN

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD AVENUE

PROJECT
24-0314

SHEET
L-1.0

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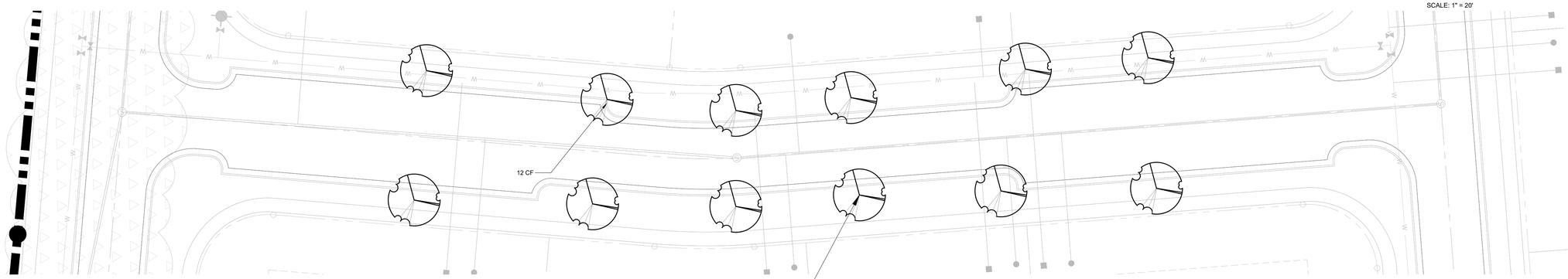

3 L-1.1 PLANTING DETAIL 1

GRAPHIC SCALE
(IN FEET)
20 0 10 20 40
SCALE: 1" = 20'

NOTE: ALL STREETTREE PLANTING LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR MUST LOCATE ALL UTILITIES PRIOR TO COMMENCING DIGGING PLANTING HOLES. ALL UTILITIES MUST BE AVOIDED.

GRAPHIC SCALE
(IN FEET)
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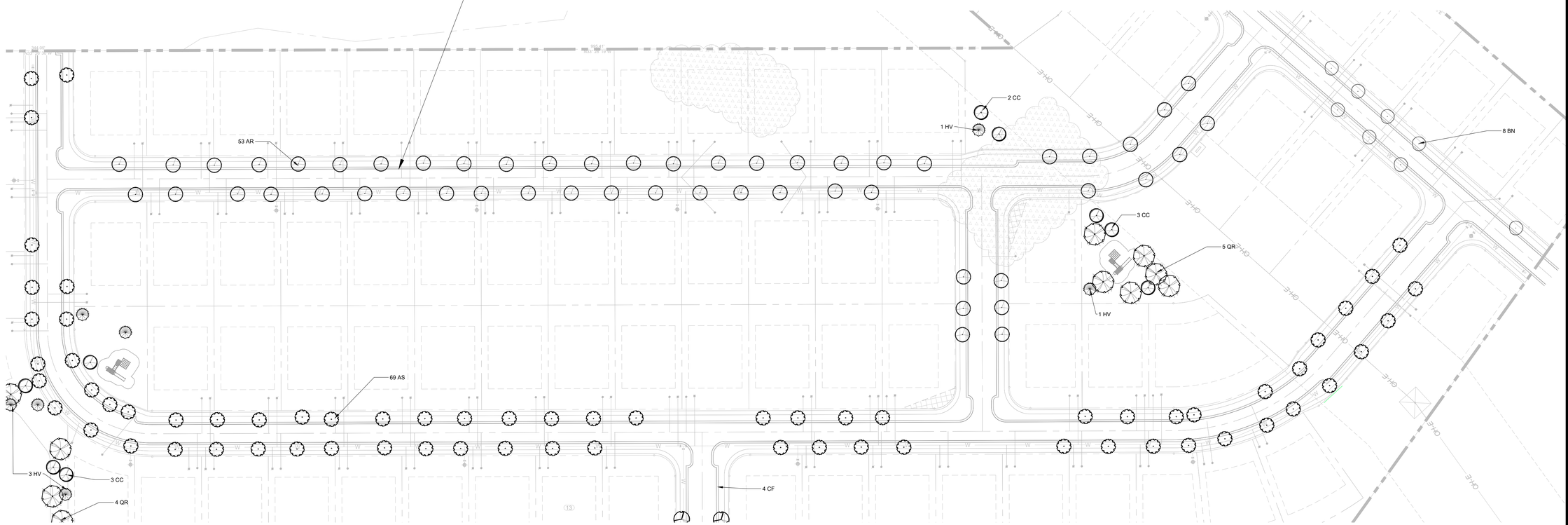
SCALE: 1" = 60'



4 L-1.1 PLANTING DETAIL 2

REVISIONS		
NO.	DATE	

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: CES
REVIEWER: CES

LANDSCAPE PLAN DETAILS

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD AVENUE

PROJECT
24-0314

SHEET
L-1.1

T-SQUARE ENGINEERING

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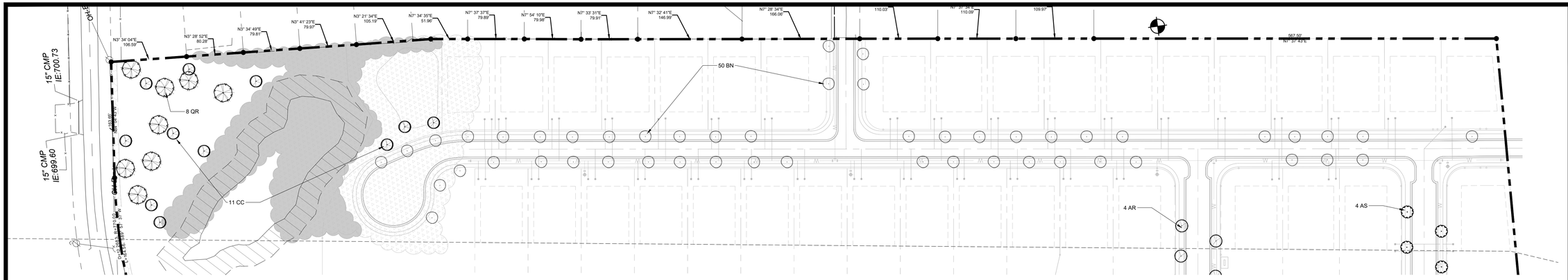
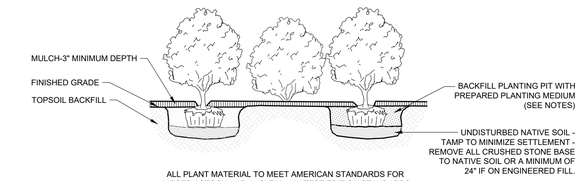


GENERAL NOTES:

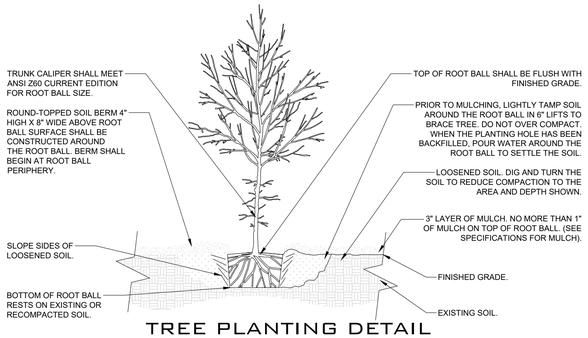
1. UTILITY SERVICES MAY EXIST ON SITE. THE LOCATION OF ALL SURFACE AND UNDERGROUND UTILITIES, RIGHT-OF-WAYS, EASEMENTS, ETC., SHALL BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES FROM DAMAGE DURING CONSTRUCTION AND TO REPAIR ANY DAMAGE WHICH SHOULD OCCUR TO THE SATISFACTION OF THE OWNER AND UTILITY COMPANIES. COMMENCEMENT OF PROJECT INSTALLATION INDICATES ACKNOWLEDGMENT OF AND ACCEPTANCE BY THE CONTRACTOR OF EXISTING CONDITIONS.
2. ACTUAL AS-BUILT AND/OR EXISTING SITE CONDITIONS MAY VARY AS SHOWN ON THIS PLAN.
3. DAMAGE BY CONTRACTOR TO UNDISTURBED AREAS OUTSIDE THE LIMITS OF CONSTRUCTION SHALL BE REPAIRED BY CONTRACTOR TO THE SATISFACTION OF THE OWNER.
4. CONTRACTOR IS RESPONSIBLE FOR CONDUCTING SITE INSPECTION PRIOR TO BIDDING WORK, TO DETERMINE SITE CONDITIONS AND AREAS TO BE IMPROVED. SUBMISSION OF BID INDICATES CONTRACTOR HAS VERIFIED SITE CONDITIONS AND PLANT MATERIAL QUANTITIES.
5. FINAL ACCEPTANCE: THE LANDSCAPE ARCHITECT OR THE OWNER'S REPRESENTATIVE WILL PROVIDE THE FINAL INSPECTION. SHOULD THE INSPECTION FIND WORK INCOMPLETE, THE CONTRACTOR SHALL REMEDY THE DEFICIENCIES.
6. IF THE SUBSTANTIAL COMPLETION OR FINAL INSPECTION REQUIRE REINSPECTION BY LANDSCAPE ARCHITECT DUE TO FAILURE OF WORK TO COMPLY WITH CONTRACTOR'S CLAIMS ON INITIAL INSPECTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPENSATING THE LANDSCAPE ARCHITECT FOR REINSPECTION SERVICES AT THE RATE OF TWO HUNDRED TWENTY FIVE DOLLARS ($225) PER HOUR PER PERSON PLUS ALL RELATED TRAVEL EXPENSES FOR EACH REQUESTED REINSPECTION TRIP.
7. AFTER FINAL ACCEPTANCE AND PRIOR TO END OF WARRANTY PERIOD, CONTRACTOR SHALL REPLACE ALL PLANT MATERIAL THAT HAS DIED OR HAS DEFECTS, INCLUDING UNSATISFACTORY GROWTH, IN THE OPINION OF THE OWNER.
8. DURING LANDSCAPE INSTALLATION KEEP PAVEMENTS CLEAN AND WORK AREA IN ORDERLY CONDITION. THE PROJECT SITE SHALL BE LEFT IN A CLEAN CONDITION AT THE END OF EVERY WORK DAY.
9. CONTRACTOR TO REPAIR ANY PAVEMENTS, CURBS, AND OTHER IMPROVEMENTS DAMAGED AS A RESULT OF LANDSCAPE INSTALLATION ACTIVITY
10. THE LOCATION OF ALL PLANT MATERIALS SHOWN ON THE PLAN SHALL BE FIELD LOCATED AND STAKED/FLAGGED BY THE CONTRACTOR AND APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE BEFORE THE DIGGING OF PLANTING HOLES. PLANTING SHALL BE LOCATED WHERE SHOWN ON THE DRAWINGS OR WHERE FIELD LOCATED BY THE LANDSCAPE ARCHITECT.
11. PROVIDE ONLY PLANTS THAT ARE FREE FROM DISEASES AND PESTS, AND THAT COMPLY WITH THE LATEST EDITION OF PUBLICATION ANSI Z60.1, AMERICAN STANDARDS FOR NURSERY STOCK", BY THE AMERICAN ASSOCIATION OF NURSERYMEN. DIMENSIONS FOR HEIGHTS, SPREAD, AND TRUNK SPECIFIED ON THE MATERIAL SCHEDULE IS A GENERAL GUIDE FOR THE MINIMUM DESIRED SIZE OF EACH PLANT.
12. DO NOT MAKE SUBSTITUTIONS REGARDING PLANT SIZES OR SPECIES WITHOUT WRITTEN PERMISSION FROM THE OWNER OR LANDSCAPE ARCHITECT.
13. REMOVE ALL METAL BASKETS, STRINGS AND OTHER TIES FROM TREES.
14. FERTILIZE ALL PLANTS WITH 16-16-16 SLOW RELEASE FERTILIZER AT THE RATE OF: 3 POUNDS PER CUBIC YARD OF SOIL MIX. 3 POUNDS PER 100 SF OF BED FOR SHRUBS
15. PLANTS DESIGNATED "B&B" IN THE PLANT LIST SHALL BE BALLED AND BURLAPPED. THEY SHALL BE DUG WITH FIRM, NATURAL BALLS OF EARTH OF SUFFICIENT DIAMETER AND DEPTH TO ENCOMPASS THE FIBROUS AND FEEDING ROOT SYSTEM NECESSARY FOR FULL RECOVERY OF THE PLANT. BALLS SHALL BE FIRMLY WRAPPED WITH BURLAP OR SIMILAR MATERIAL AND BOUND WITH TWINE OR CORD.
16. ONLY "HEMP" BURLAP AND TWINE SHALL BE USED. NO TREATED OR PRESERVED BURLAP OR TWINE IS ALLOWED. ALL HEMP TWINE ATTACHED TO THE TREE TRUNK IS TO BE REMOVED AFTER PLANTING. AT A MINIMUM THE TOP ONE-THIRD OF THE ROOT BALL IS TO HAVE ALL BURLAP AND TWINE REMOVED. IF ROOTS ARE GIRDLING OR CIRCLING THEY MUST BE LOOSENED OR CUT.
17. THE BALLS OF "B&B" PLANTS WHICH CANNOT BE PLANTED IMMEDIATELY ON DELIVERY SHALL BE COVERED WITH MOIST SOIL OR MULCH, OR OTHER PROTECTION FROM DRYING WINDS AND SUN. ALL PLANTS INSTALLED OR STORED SHALL BE WATERED BY CONTRACTOR AS NECESSARY UNTIL FINAL ACCEPTANCE.
18. FOLD DOWN OR CUT THE BURLAP FROM THE TOP 1/3 OF THE BALL OR TO THE WIDEST TOP EDGE OF THE BALL IN ORDER TO EXPOSE THE TOP PLANE OF THE BALL. REMOVE ALL NAILS, STAPLES, ETC USED TO HOLD THE BALL TOGETHER.
19. TREE BALLS SHALL HAVE A MINIMUM DIAMETER IN FEET EQUAL TO 10" FOR EACH CALIPER INCH OF THE TREE.
20. ALL PLANTS SHALL BE HANDLED SO THAT ROOTS ARE ADEQUATELY PROTECTED AT ALL TIMES. DURING SHIPMENT, THE ENTIRE PLANT SHALL BE PROTECTED BY TARPAULINS OR OTHER SUITABLE COVERING. PLANT MATERIAL SUFFERING FROM WIND BURN OR OTHER WIND DAMAGE IS NOT ACCEPTABLE.
21. NO PLANT SHALL BE BOUND WITH ROPE OR WIRE IN A MANNER THAT DAMAGES THE BARK, BREAKS BRANCHES, OR DESTROYS ITS NATURAL SHAPE. NO PLANT MATERIAL REQUIRED TO BE BALLED AND BURLAPPED SHALL BE ACCEPTED IF THE BALL IS CRACKED OR BROKEN EITHER BEFORE OR DURING THE PROCESS OF PLANTING, OR WHEN REQUIRED BURLAP, STAVES, ROPES OR PLATFORM HAVE BEEN REMOVED.
22. ANY SERIES OF TREES OR SHRUBS TO BE PLACED IN A PARTICULAR ARRANGEMENT WILL BE FIELD CHECKED FOR ACCURACY BY THE OWNER. ANY PLANTS INCORRECTLY ARRANGED SHALL BE RELOCATED WITH THE OWNER'S APPROVAL.
23. PRE-EMERGENT HERBICIDE (TREFLAN OR EQUIVALENT) SHALL BE APPLIED (ACCORDING TO MANUFACTURER'S INSTRUCTIONS) TO ALL PLANT BEDS, PRIOR TO PLANTING, FOR NOXIOUS WEED CONTROL.
24. ALL PLANTING BEDS AND TREE AND SHRUB PLANTINGS SHALL RECEIVE A MINIMUM 3" DEEP SHREDDED HARDWOOD MULCH LAYER.
25. CONTRACTOR IS RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL INSTALLED PLANT MATERIAL, INCLUDING GRASS AREAS, UNTIL FINAL ACCEPTANCE BY OWNER. WATER ALL PLANT MATERIAL AT TIME OF PLANTING.
26. ALL PLANT MATERIAL IS TO BE GUARANTEED FOR ONE (1) YEAR. GUARANTEE PERIOD STARTS FROM DATE OF FINAL ACCEPTANCE.
27. OWNER RETAINS THE RIGHT TO INSPECT TREES AND SHRUBS FOR SIZE AND CONDITION OR ROOT BALL, INSECTS, INJURIES, AND LATENT DEFECTS AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. REMOVE REJECTED MATERIAL IMMEDIATELY FROM THE PROJECT SITE.
28. REPLACEMENTS SHALL CLOSELY MATCH ADJACENT SPECIMENS OF THE SAME SPECIES AND SHALL CONFORM TO THE STANDARDS FOR PLANT MATERIALS SPECIFIED. ALL REPLACED MATERIAL SHALL IMMEDIATELY BE REMOVED FROM THE SITE AND ALL NECESSARY REPAIRS TO PLANTS, GRADES, LAWN AREAS, PAVING, AND OTHER AREAS DAMAGED DURING REPLACEMENT SHALL BE MADE AT NO COST TO THE OWNER.
29. ONLY ONE REPLACEMENT PER TREE, SHRUB, OR PLANT WILL BE REQUIRED AT THE END OF THE WARRANTY PERIOD, EXCEPT FOR LOSSES OR REPLACEMENTS DUE TO FAILURE TO COMPLY WITH THE SPECIFIED REQUIREMENTS.



ALL PLANT MATERIAL TO MEET AMERICAN STANDARDS FOR NURSERY STOCK AND ANSI Z60.1; LATEST EDITION STANDARDS.

SHRUB PLANTING IN GROUP DETAIL

NOT TO SCALE



TREE PLANTING DETAIL

NOT TO SCALE

ALL PLANT MATERIAL TO MEET AMERICAN STANDARDS FOR NURSERY STOCK & ANSI Z60.1; LATEST EDITION STANDARDS.

24" RADIUS MULCH RING ON ALL PROPOSED TREES
8" DIA. MULCH RING IF IN LAWN, NO MULCH AT TRUNK.

MIN. 3" MULCH DEPTH. CREATE MULCH RING JUST BEYOND DRIP LINE.

FINISHED GRADE

UNDISTRUBED SOIL

BACKFILL MIX, FREE OF TRASH & STONE

REMOVE ALL WIRE BASKETS & TWINE, CUT BURLAP IN 5 PLACES OR REMOVE. ROLL BURLAP AWAY FROM TRUNK.

2 TIMES WIDTH OF ROOTBALL

SINGLE STRONG LEADER, SYMMETRICAL BRANCHING FORM.

INSTALL WATER BAG OR DONUT IF AUTOMATED IRRIGATION NOT PROVIDED.

1X1 OR EQUAL WOODEN STAKE THROUGH BALL EDGE INTO SUBSOIL MIN. 18", 3 TOTAL WITH 5 ON SLOPED INSTALLATIONS. (UNTREATED WOOD ONLY)

REMOVE ALL SYNTHETIC MATERIAL FROM AROUND ROOTBALL

EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

2 L-1.2 PLANTING DETAIL 4

1 L-1.2 PLANTING DETAIL 3

SEEDING NOTES:

1. SEEDBED PREPARATION: LOOSEN SUBGRADE OF TURF AREAS TO A MINIMUM DEPTH OF 2 INCHES. REMOVE STONES MEASURING OVER 1-1/2 INCHES IN ANY DIMENSION. REMOVE STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEOUS MATTER. ADD TOPSOIL AND MIX THOROUGHLY INTO UPPER 3 INCHES OF TOPSOIL. IF SUBGRADE HAS BECOME COMPACTED DURING CONSTRUCTION, SCARIFY OR OTHERWISE BREAKUP THE COMPACTED SURFACE BEFORE SEEDBED PREPARATION.
2. MIN 1/2" OF TOPSOIL (IMPORTED OR SITE GENERATED) SHALL BE PROVIDED ON ALL AREAS TO BE SEEDED, INSTALLED AND STABILIZED PRIOR TO SEEDING. TOPSOIL SHALL BE CLEAN, FRIABLE SOIL WITH LANDSCAPE INDUSTRY ACCEPTABLE LEVELS OF ORGANIC MATERIAL. UNDER NO CIRCUMSTANCES SHALL SUBGRADE OR "B"-HORIZON SOIL BE USED AS TOPSOIL. CONTRACTOR IS ADVISED TO VERIFY WITH THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE ACCEPTABILITY OF TOPSOIL PRIOR TO PLACEMENT. UNACCEPTABLE SOILS USED AS TOPSOIL SHALL BE REMOVED AND REPLACED AT CONTRACTOR'S EXPENSE.
3. FERTILIZER: APPLY AGRICULTURAL LIME AT THE RATE OF 50 POUNDS PER 1000 SF. APPLY 10 POUNDS 10-10-10 ANALYSIS FERTILIZER (OR EQUIVALENT) PER 1000 SF. SPREAD LIME AND FERTILIZER UNIFORMLY OVER ALL AREAS AND MIX THOROUGHLY WITH THE SOIL.
4. FINE GRADE ALL DISTURBED LAWN AREAS TO SMOOTH, EVEN SURFACE WITH LOOSE, UNIFORMLY FINE TEXTURE, ROLL, RAKE, AND DRAG LAWN AREAS, REMOVE RIDGES AND FILL DEPRESSIONS, AS REQUIRED TO MEET FINISH GRADES.
5. GRASS SEED: PROVIDE FRESH, CLEAN, NEW-CROP SEED COMPLYING WITH TOLERANCE FOR PURITY AND GERMINATION ESTABLISHED BY OFFICIAL SEED ANALYSIS OF NORTH AMERICA.
6. SEED ALL DISTURBED AREAS. PRIOR TO INSTALLATION, CONTRACTOR SHOULD CONSULT WITH OWNER TO DETERMINE EXTENT OF SEEDING OPERATIONS.
7. REPAIR AND RESEED ALL ERODED OR DISTURBED SEEDED AREAS WHERE VEGETATIVE COVER HAS NOT BEEN ESTABLISHED.
8. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF SEEDED AREAS UNTIL 95% GRASS COVER IS ESTABLISHED.



GRAPHIC SCALE
(IN FEET)
30 0 15 30 60
SCALE: 1" = 30'

NO.	DATE

REVISIONS

DATE: 05/19/2025
SCALE: AS SHOWN
DRAWN BY: CES
REVIEWER: CES

LANDSCAPE PLAN DETAILS

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD AVENUE

PROJECT
24-0314

SHEET
L-1.2

T-SQUARE ENGINEERING

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowe)\Production\24-0314 8 -Landscape Plan.dwg, 5/19/2025 8:23:22 AM

BK/PG: R3063/998-1003
25005971

6 PGS:AL-EASEMENT	
NANCY BATCH: 350675	04/29/2025 - 11:25 AM
VALUE	0.00
MORTGAGE TAX	0.00
TRANSFER TAX	0.00
RECORDING FEE	30.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	0.00
TOTAL AMOUNT	32.00

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

File:

Prepared by T. Jake Wolaver, Esq.
Wolaver & Carter
809 S. Main Street Suite 100
Columbia, TN 38401

EASEMENT DEED

This instrument is entered this 23rd day of April, 2025, by and between **Dobual Spring Creek Partners II**, FIRST PARTY, and **Nomau Partners, LLC**, SECOND PARTY.

WITNESSETH:

WHEREAS, said FIRST PARTY is the owner of a certain tract of land in the Ninth (9th) Civil District of Maury County, Tennessee, the same being the land conveyed to it by deed of record in Book R2944, Page 568, Register's Office of Maury County, Tennessee; and

WHEREAS, SECOND PARTY is acquiring an adjacent/neighboring parcel of land from James Gore and Stacy Gore, described in deed of record in Book R2387, Page 455, Register's Office of Maury County, Tennessee, both of which deeds are hereby referenced for greater certainty of description; and

WHEREAS, it is necessary for SECOND PARTY to go upon a portion of the property of FIRST PARTY in order to install, maintain and repair a roadway, a forced main sewer line, and other improvements as deemed necessary by SECOND PARTY, across and upon said property of FIRST PARTY, as described herein.

NOW, THEREFORE, said FIRST PARTY, for a good and valuable consideration in hand paid, does hereby give, grant and convey unto SECOND PARTY a perpetual right to construct improvements upon the property described below, and to go upon said lands whenever the same is reasonably necessary for the purpose of installing, inspecting, maintaining and

repairing said improvements. The easement conferred upon SECOND PARTY includes the rights of ingress and egress over and upon the described property. In constructing, maintaining and repairing any such improvements, SECOND PARTY shall remove all surplus earth, and restore the land and any improvements thereon to their prior condition, and interfere as little as is reasonably possible with any plants, fence or other improvements upon the land of the FIRST PARTY. The permanent easement granted to SECOND PARTY shall lie upon the property described as follows:

> Beginning at a point in the west line of James & Stacy Gore (DB R2387, pg. 455) and the east line of Doubal Spring Creek Partners (DB R2944, pg. 568), said point being located N 07°51'18" E , 149.81' from an iron pin found, being the southwest corner of Gore; thence leaving Gore and with a new severance line, the following calls: N 16°26'41" W , 105.96'; thence with a curve turning to the left with a radius of 222.50', an arc length of 30.46', with a chord bearing of N 20°22'01" W , and a chord length of 30.44'; thence N 24°17'22" W , 564.48'; thence with a curve turning to the right with a radius of 277.50', an arc length of 79.85', with a chord bearing of N 16°02'47" W , and a chord length of 79.57'; thence N 07°48'12" W , 47.06' to a point in the west line of Gore and the east line of Doubal Spring Creek Partners; thence with the west line of Gore, the following calls: thence S 24°18'28" E , 343.34'; thence S 24°06'33" E , 234.02'; thence S 23°29'25" E , 146.94'; thence S 09°41'12" E , 66.95'; thence S 07°51'18" W , 40.89' to the Point of Beginning. Containing 0.42 Acres, as surveyed by T-Square Surveying, J. Mark Cantrell, RLS #1859, dated 4-7-2025.

To facilitate the construction of these improvements, FIRST PARTY also grants SECOND PARTY a temporary construction easement over the land described as follows:

> Beginning at a point in the west line of James & Stacy Gore (DB R2387, pg. 455) and the east line of Doubal Spring Creek Partners (DB R2944, pg. 568); thence with the west line of Gore, S 07°23'31" W , 61.86'; thence leaving Gore and proceeding through the lands of Doubal Spring Creek Partners, the following calls: N 16°26'41" W , 162.54'; thence with a curve turning to the left with a radius of 197.50', an arc length of 27.04', with a chord bearing of N 20°22'01" W , and a chord length of 27.02'; thence N 24°17'22" W , 564.48'; thence with a curve turning to the right with a radius of 302.50', an arc length of 87.04', with a chord bearing of N 16°02'47" W , and a chord length of 86.74'; thence N 07°48'12" W , 45.87'; thence N 65°41'32" E , 24.31' to a point in the west line of Gore; thence with the west line

of Gore, S 24°18'28" E , 5.96'; thence leaving Gore and proceeding through the lands of Doubal Spring Creek Partners, the following calls: S 07°48'12" E , 47.06'; thence with a curve turning to the left with a radius of 277.50', an arc length of 79.85', with a chord bearing of S 16°02'47" E , and a chord length of 79.57'; thence S 24°17'22" E , 564.48'; thence with a curve turning to the right with a radius of 222.50', an arc length of 30.46', with a chord bearing of S 20°22'01" E , and a chord length of 30.44'; thence S 16°26'41" E , 105.96' to the Point of Beginning. Containing 0.49 Acres, as surveyed by T-Square Surveying, J. Mark Cantrell, RLS #1859, dated 4-7-2025.

Being part of Map 112 Parcel 16.01

Being also known as 0 Trotwood Ave., Columbia, Tennessee.

TO HAVE AND TO HOLD said right and easement to SECOND PARTY and its successors in title; it being agreed that the right and easement hereby granted runs with the land is appurtenant to the property being acquired by SECOND PARTY. This instrument shall bind the successors and assigns of both parties. It is anticipated that some or all of the improvements to be constructed may be dedicated to the City of Columbia, Tennessee, for public use. FIRST PARTY will cooperate as needed to complete any such dedication.

As partial consideration for the grant of easements set forth herein, SECOND PARTY agrees and binds itself as follows:

1) It will replace the trees being removed on the Dobaul property located outside the county right-of-way at a 1:1 ratio (one new 2" tree for every existing tree removed greater than 6" in diameter);

2) It will remove all tree stumps from trees that are removed;

3) It will notify the landowner at least thirty (30) days in advance of beginning grading activities. Grading activities on the Dobaul property are expected to last 180 days from the commencement of operations, but may be extended due to unfavorable weather conditions;

4) It will provide topsoil replacement to a depth of 6 inches;

5) It will provide seed and straw to establish new ground cover immediately upon completion of grading activities; and

6) It will provide sewer easement access to the sewer being proposed along Foster Lane upon completion of the construction.

IN TESTIMONY WHEREOF, the parties hereunto have set their signatures the day and year first above written.

FIRST PARTY:

Dobual Spring Creek Partners II

By: _____
Name: Allen P Halliday
Title: Managing Member

GRANTEE:

Nomau Partners, LLC

By: _____
Name: G. Nelson Crowe II
Title: Co-Manager

STATE OF TENNESSEE
COUNTY OF Shelby

Personally appeared before me, the undersigned, Allen Halliday, with whom I am personally acquainted, and who acknowledged under oath that he/she executed the within instrument for the purposes therein contained, and who further acknowledged that he/she is the Managing Member of Dobual Spring Creek Partners II.

WITNESS my hand, at office, this 23 day of April, 2025.

My Commission Expires:
06/06/2028

Notary Public

DREW HANCOCK
STATE OF TENNESSEE NOTARY PUBLIC
COMM. EXP. 06-06-2028
SHELBY COUNTY

§

STATE OF TENNESSEE
COUNTY OF Maury

Personally appeared before me, the undersigned, G Nelson Crowe, with whom I am personally acquainted, and who acknowledged under oath that he/she executed the within instrument for the purposes therein contained, and who further acknowledged that he/she is the Co-Manager of Nomau Partners, LLC.

WITNESS my hand, at office, this 28 day of April, 2025.

My Commission Expires:
9/22/26

Kay Therese Hosford
Notary Public

STATE OF TENNESSEE - MAURY COUNTY

I hereby affirm that the actual consideration for this transfer or value of the property transferred, whichever is greater is $0.00.

Kimberly L. Matney
Affiant

Subscribed and sworn to before me, this 28 day of April, 2025.

My commission expires:
9/22/26

Kay Therese Hosford
Notary Public

https://mtlawgroup-my.sharepoint.com/personal/jwolaver_mtlawgroup_net/documents/easement deed dobual.row.docx

Columbia Fire & Rescue

Brad Massey
Fire Marshal

931-560-1740
bmassey@columbiatn.gov

Columbia Fire & Rescue now has a 2,000-gallon tanker truck in service and we have a mutual aid agreement with Maury County Fire to bring additional tanker trucks to every fire. With the addition of our tanker truck and the additional tanker trucks from Maury County Fire, Columbia Fire & Rescue will be able to provide an additional 600gpm on top of what CPWS says they can provide for the structure.

Thank you

This instrument prepared by:
Bradley Arant Boult Cummings LLP
1221 Broadway, Suite 2400
Nashville, Tennessee 37203

DECLARATION OF PROTECTIVE COVENANTS, CONDITIONS & RESTRICTIONS OF TROTWOOD & FOSTER

THIS DECLARATION OF PROTECTIVE COVENANTS, CONDITIONS & RESTRICTIONS (the "Declaration") is executed this ____ day of _____, 2024, by BRIGHTLAND HOMES OF TENNESSEE, LLC, a Delaware limited liability company (the "Declarant").

WITNESSETH:

WHEREAS**,** the Declarant is the owner of certain real property located in Maury County, Tennessee, more particularly described on Exhibit A attached hereto and incorporated herein by reference, and desires to create thereon a residential development to be known as Trotwood & Foster (the "Development") for the mutual benefit of the future residents of the Development; and

WHEREAS, Declarant desires to provide for the protection and preservation of the values, amenities, desirability and attractiveness of the Development; and

WHEREAS, it is in the best interest of the Declarant, as well as to the mutual benefit, interest and advantage of each and every person or other entity hereafter acquiring any of the property within the Development that certain covenants, conditions, easements, assessments, liens and restrictions governing and regulating the use and occupancy of the same be established, fixed, set forth and declared to be covenants running with the land which shall be binding on all parties having or acquiring in the future any right, title or interest in and to all or any portion of the Development, and which shall inure to the benefit of each present and future owner; and

WHEREAS, Declarant further desires to establish for Declarant's benefit and for the mutual benefit, interest and advantage of each and every person or other entity hereafter acquiring any of the property within the Development, certain rights, easements, privileges, obligations, restrictions, covenants, liens, assessments, and regulations governing the use and occupancy of the Development and the maintenance, protection and administration of the common use facilities thereof, all of which are declared to be in furtherance of a plan to promote and protect the operative aspects of residency or occupancy in the Development and on all portions thereof, and are intended to be covenants running with the land which shall be binding on all parties having or acquiring in the future any right, title or interest in and to all or any portion of the Development, and which shall inure to the benefit of each present and future owner; and

DRAFT

WHEREAS, the Declarant has caused, or will cause, to be incorporated under the laws of the State of Tennessee a non-profit corporation having as its members owners of Lots (as defined hereinafter) within the Development for the purpose of exercising the aforementioned functions.

NOW, THEREFORE, Declarant, as legal title holder of the Development, as owner of the above-referenced Lots, for the purposes set forth above, declares as follows:

ARTICLE I
DEFINITIONS

The following words when used in this Declaration, or any amendment hereto, shall have the following meanings:

1. "Annual Assessments" shall mean and refer to the assessments described in Article V.

2. "Assessments" shall mean and refer to any Annual Assessments, Special Assessments, supplemental landscape assessments, or any other charges by the Association against one or more Lots owned by an Owner together with costs of enforcement and reasonable attorneys' fees incurred by the Association in connection therewith, and shall additionally include, to the extent authorized by the provisions herein, interest thereon.

3. "Association" shall mean and refer to [_____], a not-for-profit corporation to be organized and existing under the laws of the State of Tennessee, its successors and assigns.

4. "Board of Directors" shall mean and refer to the Board of Directors of the Association.

5. "By-Laws" shall mean and refer to the By-Laws of the Association attached hereto as Exhibit B and made a part hereof as the same may be amended from time to time.

6. "Committee" shall mean the Architectural Control Committee established pursuant to Article V hereof.

7. "Common Areas" shall mean and refer to all facilities within the Development used in common by the Owners, including without limitation, all recreational facilities, entranceway, gates, boundary walls and fences, median areas, drainage facilities, entrance ways and signs, any playground areas, and any areas lying within or adjacent to the roads which are desirable for the Association to maintain and landscape. The Common Areas shall be owned by the Association in fee or for a term of years, but for the non-exclusive use, benefit and enjoyment of the Owners

subject to the provisions of this Declaration, and will be shown as Common Areas on the Plat of the Development placed of record now and/or in the future.

8. "Declaration" shall mean and refer to this Declaration of Protective Covenants, Conditions and Restrictions applicable to the Development and which shall be recorded in the Office of the Register of Deeds for Maury County, Tennessee.

9. "Declarant" shall mean and refer to Brightland Homes of Tennessee, LLC, a Delaware limited liability company, having its principal place of business at 3815 South Capital of Texas Highway, Suite 275, Austin, Texas 78704, and its successors and assigns.

10. "Development" shall mean and refer to the property as shown on Exhibit A hereto and incorporated herein by reference, and shall be deemed to incorporate any future property annexed under this Declaration.

11. "Engineer" shall mean the architect or engineer engaged by Declarant and identified on the Plat.

12. "Improvements" shall mean any building, building addition, outbuilding, garage, detached structure, swimming pool, recreational facility, driveway, parking area, walkway, wall, fence, or utility service, or such other improvement or structure constructed or located upon all or any portion of the Development. It is intended that this definition of "Improvements" be broad in scope and is intended to encompass any man-made alteration of the condition of the Lot or Common Areas from and after the date of this Declaration.

13. "Lot" shall mean and refer to any plot of land within the Development to be used for single family residential purposes and so designated on the Plat.

14. "Majority of Owners" shall mean and refer to the holders of more than fifty (50%) percent of the total Votes of the Members.

15. "Member" shall mean and refer to any person or persons who shall be an Owner, and as such, shall be a Member of the Association. "Class A Members" shall mean and refer to any Owner, other than the Declarant, and "Class B Member" shall mean the Declarant or its successors and assigns.

16. "Mortgage" shall mean and refer to any holder of a first priority deed of trust encumbering one or more Lots.

DRAFT

17. "Owner" shall mean and refer to the record owner, whether one or more persons or entities, of the fee interest in any Lot within the Development, excluding however those parties having such interest merely as a security interest for the performance of an obligation.

18. “Plat” shall mean and refer to the Final Plat of Trotwood & Foster, of record in the Register's Office for Maury County, Tennessee, as the same may be amended or supplemented from time to time, and any additional property later annexed thereto.

19. “Person” shall mean and refer to a natural person, as well as a corporation, partnership, firm, association, trust or other legal entity. The use of the masculine pronoun shall include the neuter and feminine, and the use of the singular shall include the plural where the context so requires.

20. "Plans" shall mean the detailed plans prepared for construction of any Improvement which shall comply with the provisions of Article V, Section 4 hereof.

21. "Special Assessments" shall mean additional assessments of Owners made from time to time by the Board of Directors pursuant to Article IV, Section 2.

22. “Vote” or "Votes" shall mean the vote or votes in the affairs of the Association to which each Member is entitled unless stated otherwise in this document.

ARTICLE II
PROPERTY SUBJECT TO THIS DECLARATION

1. Definition of Property Subject to this Declaration. The real property located in Maury County, Tennessee, more particularly described on Exhibit A attached hereto and incorporated herein by references, is and shall be held, transferred, sold, conveyed and occupied subject to this Declaration. The Lots and Common Areas shown on the Plat are made subject to this Declaration. The Declarant, as the legal title holder in fee of the Development, hereby submits and subjects the Development to the provisions of this Declaration and By-Laws. The covenants, conditions and restrictions contained herein shall constitute covenants running with the land and shall be binding on all parties now owning or hereafter having or acquiring any right, title or interest in any Lots or any portion of the Development, and shall inure to the benefit of each Owner hereof. Every Person hereafter acquiring a Lot or any portion of the Development, by acceptance of a deed thereof, shall accept such interest subject to the terms and conditions of this Declaration, and by acceptance of the same shall be deemed to have consented to and be bound by the covenants, conditions and restrictions of this Declaration.

ARTICLE III
ASSOCIATION MEMBERSHIP AND VOTING RIGHTS

1. Members. Every person who is an Owner of record of a fee interest in any Lot which is included in the Development shall be a Member of the Association. Membership in the Association is appurtenant to and may not be separated from ownership of any Lot.

2. Classes of Membership. The Association shall have two classes of membership:

a. Class A Members shall be all Owners of lots, except for the Declarant, prior to the termination of the Class B Membership. If, however, Declarant owns one or more Lots upon or after the termination of its Class B Membership, then Declarant shall become a Class A Member.

b. The Class B Member shall be the Declarant, its successors or assigns. The Class B Membership shall terminate and cease upon specific written termination by Declarant or its successor or assignee (its successor or assignee may include any Builder(s) owning more than 10 lots in the Development), or the last to occur of (i) Declarant ceasing to be an owner of any lots within the Development and (ii) fifteen years from the date hereof.

3. Voting and Voting Rights. The voting rights of the Members shall be appurtenant to their ownership of Lots. The two Classes of Members shall have the following voting rights:

a. The Class B Member shall have control over the Development until all Lots are sold. Each Class A Member shall be entitled to cast one vote for each Lot owned by such Member. When two or more persons hold an interest (other than a leasehold or security interest) in a Lot, all such Persons shall be Members, but the Votes attributable to such Lot shall be exercised by one of such Persons as proxy and nominee for all such Members and in no event shall more than one Member be entitled to cast the Vote attributable to any one Lot. Furthermore, neither the Declarant nor any other Person dealing with the Development shall have any duty to inquire as to the authorization of the Member casting the Vote for any such Lot, but shall be entitled to rely upon the evidence of voting as conclusive evidence of such Member's authority to cast the Vote attributable to such Lot.

b. Any Member who is delinquent in the payment of any charges or Assessments duly levied by the Association against a Lot owned by such Member shall not be entitled to vote until all such charges, together with reasonable penalties and interest thereon as the Board of Directors may impose, have been paid to the Association.

4. Manner of Voting. Except as specifically provided elsewhere herein, the Board of Directors shall have the authority to regulate the procedural rules governing the voting of

Members, the acceptance of proxies from Members, the validity of voice votes, ballot votes, or other manners of voting, and any regulation of the solicitation of votes or proxies.

5. Organization.

a. The Association is a non-profit Tennessee corporation charged with the duties and invested with the powers prescribed by law and set forth in the Articles, By-Laws and this Declaration (collectively, the "Trotwood & Foster Association Documents"). Neither the Articles nor the By-Laws shall, for any reason, be amended or otherwise changed or interpreted so as to be inconsistent with this Declaration. In the event of any such inconsistency, the provisions of this Declaration shall prevail. The officers and directors of the Association shall be required to be either (i) Members of the Association; or (ii) officers, directors, agents, representatives or employees of Declarant or a successor to Declarant.

b. The Board of Directors of the Association, and such officers as the Board of Directors may elect or appoint, shall conduct the affairs of the Association in accordance with the Trotwood & Foster Association Documents. The Board of Directors shall, except to the extent approval by the Members shall be required by the By-Laws or by this Declaration, act on behalf of the Association in the implementation of this Declaration.

6. Powers, Authority, and Duties of the Association. The Association shall have all of the powers of a non-profit corporation organized under the laws of the State of Tennessee, subject only to such limitations upon the exercise of such powers as are expressly set forth in the Articles, the By-Laws, or this Declaration. The Association shall have the power to do any and all lawful things which may be authorized, required or permitted to be done by the Association under this Declaration, the Articles and By-Laws, and to do and perform any and all acts which may be necessary or proper for or incidental to the exercise of any of the express powers of the Association, including the following which are listed without intent to limit the foregoing grant, for the benefit of the Owners and for the maintenance, administration and improvement of the Lots. In addition to the aforementioned obligations, duties and functions, the Association shall have the obligations, duties and functions (subject to the provisions of the Trotwood & Foster Association Documents and applicable law), to do and perform the following:

a. To levy Assessments and other charges on the Owners of Lots and to enforce payment of such Assessments and other charges, all in accordance with the provisions of this Declaration;

b. To enforce, in the name of the Association, on its own behalf or on behalf of any Owner or Owners who consent thereto, to commence and maintain actions and suits to

restrain and enjoin any breach or threatened breach of this Declaration and to enforce, by mandatory injunction or otherwise, all the provisions of the Declaration, Articles and By-Laws;

c. To grant and convey to any third-party easements and rights-of-way in, on, over or under the Common Areas for the purpose of constructing, erecting, operating or maintaining thereon, therein, or thereunder, (i) overhead or underground lines, cables, wires, conduit or other devices for the transmission of electricity and for lighting, heating, power, telephone, television cables, radio and audio antennae facilities and for other appropriate purposes; (ii) public sewers, storm water drains and pipes, water system, sprinkling systems, water, heating and gas lines or pipes; and (iii) any similar public or quasi-public improvements or facilities;

d. To employ the services of any Person as manager, together with employees, to manage, conduct and perform the business, obligations and duties of the Association as may be directed by the Board of Directors and to enter into contracts for such purpose. Such manager and employees shall have the right of ingress and egress over such portion of the properties as is reasonably necessary for the purpose of performing such business, duties and obligations;

e. To execute and cause to be recorded from time to time agreements in favor of holders or insurers of mortgages secured upon the Development or any portion thereof. Such agreements may condition specified action, relevant to this instrument, of the activities of the Association upon approval by a specified group or number of mortgage holders or insurers. Actions and activities which may be so conditioned by such agreement may include, but shall not be limited to, the following: (i) any act or omission which seeks to abandon, partition, subdivide, encumber, sell or transfer the Common Areas or any other real estate or improvements owned, directly or indirectly, by the Association for the benefit of any lots; (ii) any change in the method of determining the obligations, Assessments, dues or other charges which may be levied against the owners of lots; (iii) any act or omission which may change, waive or abandon any scheme or regulations, or enforcement thereof, pertaining to the architectural design, exterior appearance or exterior maintenance and improvements erected upon the properties, driveways, or the upkeep of lawns or plantings located upon the properties; (iv) any failure to maintain specified fire and extended coverage insurance on insurable portions of the Common Areas; (v) any use of hazard insurance proceeds for losses to any improvement erected upon the Common Areas for other than the repair, replacement or reconstruction of such improvements; (vi) any failure to maintain kinds of insurance and amounts, from and covering risks as specified by such mortgage holders or insurers; and/or (vii) any decision to permit holders of specified mortgages on lots to jointly or singly pay taxes or other charges which are in default which may have become a charge against the Common Areas, to pay overdue premiums on hazard insurance lapse of any such policy for such property and any decision to permit mortgagees making any such payments to recover the amount thereof from the Association;

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f. Without liability to any Owner of a Lot, to cause its agents, independent contractors, and employees after reasonable notice, or without notice in the event of an emergency, to enter upon any Lot for the purpose of enforcing any of the rights and powers granted to the Association in the Trotwood & Foster Association Documents, and for the purpose of maintaining or repairing any portion of the properties if for any reason whatsoever the Owner thereof fails to maintain it in good condition and repair and so as to present an attractive exterior or appearance as required by this Declaration, or as reasonably required to promote or protect the general health, safety and welfare of the residents and users of the Lots and Common Areas;

g. To contract and pay for or otherwise provide for the maintenance, restoration and repair of all Improvements of whatsoever kind and for whatsoever purpose from time to time located upon or within the Common Areas or as required for exterior maintenance, sidewalks or lot clean-up in the event owner fails to maintain as required;

h. To obtain, maintain and pay for such insurance policies or bonds, whether or not required by any provision of this Declaration or any By-Laws, as the Association shall deem to be appropriate for the protection or benefit of the Association, the Board of Directors, the Members of any standing committee, their tenants or guests, including, but without limitation, fire and extended insurance coverage covering the Common Areas, liability insurance, workers compensation insurance, and performance of fidelity bonds;

i. To contract and pay for, or otherwise provide for, utility services, including, without limitation, water, sewer, garbage, electrical, telephone and gas services;

j. To contract and pay for, or otherwise provide for the construction, reconstruction, repair, replacement or refinishing of any roads, drives or other paved areas upon any portion of the Development not dedicated to any governmental unit and on the Lots in the event any Owner fail to keep such paved area maintained and repaired;

k. To contract and pay for, or otherwise provide for, fire, security and such other protective services as the Association shall from time to time deem appropriate for the benefit of the Lots, the Owners and their guests;

l. To contract and pay for, or otherwise provide for, such materials, supplies, furniture, equipment and labor as and to the extent the Association deems necessary.

m. To pay and discharge any and all liens from time to time placed or imposed upon any Common Areas on account of any work done or performed by the Association and the fulfillment of any of its obligations and duties of maintenance, repair, operation or administration; and

n. To represent the Owners in any condemnation proceedings or in negotiations, settlements and agreements with the condemning authority or acquisition of any of the Common Areas or any part thereof. In the event of a taking or acquisition of part or all of the Common Areas by any condemning authority, the award or proceeds of settlement shall be paid to the Association for the use and benefit of the Owners of the Lots and their mortgagees as their interests may appear. All Owners, by the acceptance of a Deed conveying a Lot, irrevocably constitute and appoint the Association their true and lawful attorney in their name, place and stead for the purpose of dealing with any condemning authority in any condemnation proceeding. Title to the Lots is declared and expressly made subject to such irrevocable appointment of the power of attorney. Any distribution of funds in connection with the condemnation of any part of the Common Areas shall be made on a reasonable and equitable basis by the Board of Directors or by a special committee appointed by the Board of Directors for that purpose.

ARTICLE IV
PROPERTY RIGHTS

1. Owners' Easement of Enjoyment. Every Owner, in addition to a perpetual unrestricted right of ingress and egress to his own Lot which passes with title, shall have the right and easement to drain surface waters to the retention area shown on the plats which shall be appurtenant to and shall pass with the title to every Lot, subject to the following provisions:

a. The right of the Association to manage the use of any retention areas and maintain their use as retention areas;

b. The right of the Association to suspend the voting rights of an Owner for any period in which any assessment against his lot remains unpaid; and for a period not to exceed sixty (60) days after notice and hearing as may be provided for in the By-Laws or rules for an infraction of its published rules and regulations; and

c. The right of the Association to dedicate or transfer any part of the Common Areas to any public agency, authority, or utility for the purpose of providing utilities, streets, or any similar purpose.

2. Land Use. No Lot shall be used except for single-family residential purposes.

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ARTICLE V
ASSESSMENTS

1. Annual Assessments. The Board of Directors shall have the power and authority to levy annual assessments against the Lots within the Development (the "Annual Assessments"). Annual Assessments shall be used to provide funds for such purposes as the Board of Directors shall determine to be for the benefit of the Development, including, without limitation, the improvement, maintenance, operation and security of the Development and Common Areas, payment of taxes and insurance thereon, payment of utility bills thereon (including water for sprinkler systems), payment of reasonable costs to provide attractive seasonable landscaping of the Common Areas, street maintenance costs, the repair, replacement and additions that may be necessary to the Common Areas and the cost of labor, equipment, materials, management and supervision thereof. The Board of Directors shall have the right, but not the obligation, to use the Annual Assessments to provide supplemental landscaping, maintenance within Lots, and to provide garbage and trash collection and disposal, if needed, to supplement that provided by public authority. The Board of Directors shall fix the amount of Annual Assessment each year by preparing an annual budget for the services to be provided by the Association in the coming year, and allocating said amount among the Lots equally.

2. Special Assessments. In addition to the Annual Assessments authorized herein, the Board of Directors may levy a special assessment (the "Special Assessment") applicable to a particular year, provided that any such Special Assessment shall have the affirmative Votes of not less than fifty percent (50%) of the total Votes within the Association at a meeting of all Members which shall be held after not less than five (5) days' written notice of the date, time and purpose for said meeting, at which a quorum shall be present. Special Assessments shall be due and payable on the date which is fixed by the resolution authorizing such Special Assessment.

3. Exempt Property. The Assessments and any liens created under this Article shall not apply to the Common Areas. All property within the Development which is dedicated to and accepted by a public authority, which is granted to or used by a utility company, or is designated as part of the Common Areas shall be exempt from such Assessments.

4. Property Owned by Declarant and Builders. Declarant and all Builders of homes within the Development are exempt from all Annual Assessments and Special Assessments, provided, however, that the Builders shall pay an initial capital contribution in an amount to be set by the Declarant.

5. Payment of Assessments. The Board of Directors shall have the power and authority to determine the payment method for any Assessments. Unless provided otherwise by the Board of Directors, each Owner shall pay its Annual Assessment on or before the first of April

of the year to which said assessment relates, and the Board of Directors shall fix the amount of the Annual Assessment and send a notice thereof to each Owner on or before the first of February of each such year. The Board of Directors shall have the power and authority to require quarterly or monthly payments of installments of the Annual Assessments from such Owners as the Board of Directors deems suitable, or may require all Annual Assessments to be paid on a quarterly or monthly basis, at its determination.

6. Commencement. The requirement for an Owner to pay Annual Assessments for a Lot shall commence the date in which the Owner acquires title to the Lot. Assessments on Lots that first become subject to Assessments during a calendar year shall be prorated on a calendar year basis for the remainder of such calendar year.

7. Records of Assessments. The Association shall cause to be maintained in the office of the Association a record of all Lots and Assessments applicable thereto which shall be open to inspection by any Owner. Written notice of any Assessment shall be mailed to every Owner of the Lot subject to such Assessment. The Association shall, upon demand and payment of a reasonable charge, furnish to any Owner a certificate in writing signed by an officer of the Association setting forth whether the Assessments against the Owner's Lot have been paid, and if not, the amount then due and owing. Absent manifest error, such certificate shall be deemed conclusive evidence to third parties as to the status of Assessments against any Lot within the Development.

8. Creation of Lien and Personal Obligations for Assessments. Each Owner of any Lot shall, by its acceptance of a deed thereof, whether or not it shall be so expressed in any such deed or other conveyance, be deemed to covenant and agree to all the terms and conditions of this Declaration and promises to pay to the Association all Assessments which may be due from an Owner from time to time. All Assessments, together with interest thereon and cost of collection thereof shall be a continuing lien upon the Lot against which such Assessment is levied as of the effective date of each such Assessment. Each such Assessment, together with such interest thereon and cost of collection therefor as are hereinafter provided, shall also consist of the personal obligation of the Person who was Owner of such Lot at the time when the same fell due. In the event a Lot is owned by more than one Member, all of such Members shall be jointly and severally liable for the entire Assessment then due.

9. Effect of Non-Payment of Assessment. If any Assessment hereunder is not paid upon the due date, or if any similar charge otherwise agreed to be paid by Owners in this Declaration is not paid when due, then such Assessment shall be delinquent and shall accrue interest thereon at the highest rate then permissible under the laws of the State of Tennessee commencing upon the due date. If such Assessment is not paid within thirty (30) days after the due date, then the Association may bring an action at law against the Owner personally, and/or at its option, foreclose the lien against the Lot by court action or trustee sale as hereinafter provided,

and there shall be added to the amount of such Assessment all reasonable attorneys' fees and costs incurred by the Association in any such action, and in the event a judgment is obtained, such judgment shall include interest on the Assessment as indicated above.

10. Enforcement of Lien by Trustee's Sale. For and in consideration of the privileges and protection granted in this Declaration, and the mutual enjoyment and use of the Common Areas, and for the express purpose of securing the payment of the Assessment described above, in order to avoid unnecessary court proceedings or delays for the enforcement of the liens described above, each Owner by accepting a deed to a Lot for their heirs, successors and assigns, does hereby transfer and convey in trust unto Thomas N. Jones, Trustee, his successors and assigns ("Trustee") each such Lot deeded to such Owner with the appurtenances, estate, title and interest thereto belonging to the Trustee in accordance with the following:

a. Each Owner agrees to pay all Assessments provided herein when due and upon demand of said Trustee or the Association, to pay, discharge, or remove any and all liens except a first mortgage or deed of trust lien which may hereafter be placed against said Lot which would adversely affect the lien granted herein, and in case the Trustee or his successors of the Association shall hereafter be required to appear in any court or tribunal to enforce, or defend the title to, or possession of, or costs and expenses of such appearance or proceedings, together with a reasonable attorneys' fees, shall be allowed and be payable by said Owner upon demand of the Trustee or the Association, and upon failure to do any of these things then said Trustee or Association may do any or all of said things, and the amounts so paid shall bear interest from the date of payment at the highest rate then permitted by the laws of the State of Tennessee and shall be and become a part of the indebtedness secured hereby.

b. If any Assessment, together with interest thereon, is not paid promptly when due or within a period of cure allowed above, or if after said Owner fails to pay any other sums due as above provided, or further, fail to reimburse the Trustee or Association within thirty (30) days from the date of the Trustee's or Association's payment of such sums, this trust conveyance shall remain in full force and effect, and the said Trustee or his successor in trust is hereby authorized and empowered, upon giving twenty (20) days' notice by three (3) publications in any daily or weekly newspaper published in Maury County, Tennessee, to sell said Lot at the front door of the Courthouse in said County to the highest bidder for cash at public outcry, free from the equity of redemption, statutory rights of redemption, homestead, dower, and all other exemptions of any kind which are hereby expressly waived; and the said Trustee or his successor in trust, is authorized and empowered to execute and deliver a deed to the purchaser at such foreclosure sale. The Association may bid at any sale under this trust conveyance. The Trustee may at any time after default and the payment of any of the above-described indebtedness enter and take possession of said Lot and shall only account for the net rents actually received by said Trustee. It is further agreed that in the event the Trustee fails, before

selling said Lot as herein provided, to enter and take possession hereof, the purchaser shall be entitled to immediate possession of said Lot upon delivery to him by the Trustee of a deed for said Lot. In case of sale hereunder, the proceeds shall be applied by the Trustee as follows:

i. to the payment of all costs, charges and expenses of executing such conveyance and enforcing said lien as herein provided, together with reasonable attorneys' fees for advice or for instituting and defending any litigation which may arise on account of the execution of this conveyance or the enforcement of said lien, together with the expenses and costs of any such litigation;

ii. to the payment of all taxes which may be unpaid upon said Lot;

iii. to the payment of all unpaid Assessments herein secured; and

iv. the residue, if any, to be paid to the order of said Owner(s) or their representatives or assigns.

c. In the event of the death, absence, inability, or refusal to act of said Trustee at any time when action of the foregoing powers and trusts may be authorized, or for any other reason, the lawful owner and holder of said lien is hereby authorized and empowered to name and appoint a successor in trust (the "Successor Trustee") to execute this trust by an instrument in writing to be recorded in the Register's Office for Maury County, Tennessee, and title therein conveyed to the above-named Trustee shall be vested in said Successor Trustee. The Trustee is authorized to appoint an attorney-in-fact to conduct in his stead and on his behalf and with the same power possessed by said Trustee as granted herein any and all foreclosure sales authorized above.

11. Priority of Lien. The lien described in this Article shall be subordinate to the lien of any mortgagee under a recorded first mortgage or deed of trust encumbering any such Lot. In the event any mortgagee becomes the Owner of such Lot after foreclosure thereof, or conveyance by deed in lieu of foreclosure, trustee's deed, or the like, such mortgagee shall become subject to the lien reserved herein for the purpose of securing all Assessments becoming due from and after the date such mortgagee accepts a deed to said Lot.

12. Mortgagee Protection Clause. No breach of the covenants, conditions, or restrictions herein contained for the enforcement of any lien provisions herein shall defeat or render invalid the lien of any prior mortgage given in good faith and for value, but said covenants, conditions and restrictions shall be binding upon and effective against any Owner whose title is derived through foreclosure or other judicial sale or in lieu of such of any prior mortgage.

13. Each Owner shall indemnify and hold harmless each of the other Owners and the Association from any liability arising from the claim of any lien claimant or judgment debtor against the Lot of any other Owner or of the Common Areas. The Association or any affected Owner may enforce this obligation, which includes reasonable costs and attorneys' fees, in the manner of a Special Assessment or by action at law including all rights granted to the Association under Article V.

14. Notwithstanding the prior provisions of this Article V, the Declarant shall be exempt from all Assessments unless Declarant constructs a residence on any Lot in which case Declarant shall be subject to the same Assessments as other Owners within the Development.

ARTICLE VI
ARCHITECTURAL CONTROL COMMITTEE

1. Designation of Committee. The Association shall have an Architectural Control Committee (the "Committee"), which shall consist of three Members who shall be natural persons. The Members of the Committee shall be appointed and be subject to removal at any time by the Declarant until the termination of the Class B Membership, and thereafter by the Association's Board of Directors. The Committee shall designate an individual as its Secretary, and all communications with the Committee shall be conducted through the Secretary.

2. Approval of Plans and Architectural Review Committee. No construction, reconstruction, remodeling, alteration or addition to any structure, building, fence, wall, driveway, path or other improvement of any nature on any Lot shall be constructed or undertaken without obtaining the prior written approval of the Committee as to the intended location of same and as to its plans and specifications showing the nature, shape, height, materials and such other specifics as may be required including its architectural style. The Committee shall have full authority to review and act upon requests for approvals of such requests. As a prerequisite to consideration for such approval, and prior to the beginning of the contemplated work, the applicant must submit a set of plans and specifications with a written request for their approval. The Committee may withhold approval for any reason including purely aesthetic considerations. In the event the Committee fails to approve or disapprove the plans for design and location within ten (10) days after they have been submitted, approval will not be required and this section will be deemed to have been fully complied with. Upon approval being given, construction shall commence within sixty (60) days thereafter, and shall be processed to completion promptly and in strict compliance with the approved plans; otherwise the approval shall be void. Each Owner acknowledges that the decor, color scheme, landscaping, and design of the Lot has been selected in such a manner as to be consistent and harmonious with other Lots and residences in the Development and agrees to maintain and perpetuate the visual harmony of the Development.

3. Design Criteria. In carrying out the functions of the Committee, and in order to insure uniformity of quality of the Improvements located within the Development, the Committee may prepare, but is not required to, a statement of design criteria which shall be observed in the construction of all Improvements within the Development (the "Design Criteria"). If prepared, the Declarant and, after the termination of the Class B Membership, the Association, reserves the right to modify and amend the Design Criteria from time to time as it deems appropriate based upon changes and innovations in construction methods and techniques.

4. Limited Effect of Approval of Plans. The approval of the Committee of an Owner's plans for the construction of Improvements upon any Lot is not intended to be an approval of the structural stability, integrity or design of a completed improvement of the safety of any component therein but is required solely for the purpose of insuring compliance with the covenants contained herein and further to insure the harmonious and orderly architectural and aesthetic development and improvement of the Lots contained within the Development. Notice is hereby given therefore to any future occupant of any completed Improvement and all invitees, visitors and other persons who may from time to time enter or go on or about such completed Improvements, that no permission or approval granted by the Committee, the Declarant or the Association with respect to the construction of Improvements pursuant to this Declaration shall constitute or be construed as an approval of the structural stability of any building, structure or other Improvement and no liability shall accrue to the Declarant, the Committee or to the Association in the event that any such construction shall subsequently prove to be defective.

ARTICLE VII
IMPROVEMENT, SETBACK AND USE RESTRICTIONS

1. Improvement Restrictions. In addition to the requirements of Article VI above concerning compliance with the architectural review authority of the Committee, the following restrictions apply to Improvements;

a. Minimum setback requirements on the Plat shall be observed. The Declarant reserves the right to approve the location of each residence upon the Lot and to relocate the same, within the setback lines and/or building areas established by the Plat, in such manner as it shall be deemed, in its sole discretion, to be in the best interests of the overall Development and in furtherance of the goals set forth herein.

b. No Lot may be used for any purpose except for the construction and maintenance of a single-family residential building. No more than one single-family residential building may be constructed or maintained on any one Lot.

c. No Lot shall be re-subdivided, and all Lots shall remain as shown on the recorded Plat. A slight variance in the property lines may be made by adjacent owners, but not for the purpose of subdividing into more Lots.

d. No noxious or offensive operations shall be conducted or maintained on any Lot and nothing shall be constructed, reconstructed or kept on any Lot which may constitute an annoyance or nuisance to the neighborhood.

e. No animals or livestock of any kind shall be allowed or maintained on any Lot, except that dogs, domestic cats, or other household domestic pets may be kept, provided that they are not kept for commercial purposes. No poultry of any kind or description shall be allowed or maintained on any Lot at any time for any purpose.

f. No trailer, mobile home, modular home, basement house, tent, garage, barn, or other outbuilding shall be erected or used as either a temporary or permanent residence.

g. The Declarant, or their assigns, or the Committee, or its designees, reserve the right to enter upon any lot for the purpose of cutting grass, trimming trees and shrubs or generally cleaning up such Lot if the same reasonably requires, charging the expense thereof to the Owner thereof, which shall become a lien on the Lot until paid in full.

h. No sign of any kind shall be displayed on any lot greater than 4 X 4 ft and any such sign shall be in good taste. The Declarant and Builders may use signs of a greater magnitude so long as approve by the Committee. The use of flags shall be permitted by Builder and Declarant. In addition, a builder who is constructing more than house in the Development may have a model home where the garage may be used as a sales office.

i. All yard areas and landscape easements must be maintained in a neat and orderly fashion.

j. The minimum square feet of any residential building on any Lot shall be 1,850 square feet, exclusive of any square footage attributable to porches and garages.

k. Any Lot whereon a residential building is constructed must include, at a minimum, an attached, covered two-car garage. Front, side, and rear entry garages are permissible.

l. All Owners shall be required to install and maintain an operational garage door opener, and all garage doors shall remain closed, except for actual ingress or egress therein.

There shall be no detached garages or other accessory buildings constructed or located on the Lots without written approval from Committee.

m. Exterior building materials may be brick, stone, hardy plank, or any combination thereof. Exterior building materials may not be vinyl; provided, however, that vinyl and/or aluminum may be used on facia and soffit areas.

n. Foundations may be slab or crawlspace.

o. Any structure which is preassembled or already constructed and which the Owner of a Lot desires to move onto such Lot must receive the prior unanimous approval of the Committee, which approval may be withheld on the subjective grounds that the structure does not conform to the character and general atmosphere of the Development, even though said structure may meet all minimum square footage and other requirements.

p. The Builder shall be responsible for the expense of constructing sidewalks on each lot as well as the planting of trees one each lot as require by the City Planner.

q. No building shall be constructed or maintained on any Lot (i) in any reserved drainage utility or landscape easement area; or (ii) closer to the street than the setback line as shown on the recorded Plat, unless authorized by the Committee and Board of Zoning Appeals where applicable.

r. Once any construction has commenced, it shall proceed diligently. Owner is responsible for maintaining a neat and orderly construction site.

s. The only fences which shall be permitted on lots shall be those erected with the express prior written approval of the Committee, which is charged to ensure that said fences conform to the general character and atmosphere of the neighborhood, and shall be a minimum of four (4) feet tall and a maximum of five (5) feet tall. The Committee may require, as a condition of approval, the use of hedges or other greenery as screening for the fence. All fences must be maintained in good repair, and landowners agree to abide by reasonable requests for repairs and maintenance as may be made by the Committee. Any fences on the said lots shall be made of black aluminum, brick, or white PVC and shall not exceed beyond the rear corner of the building on the Lot. Wooden fences are not permitted in the Development. All fences facing the street should be built with the finished side facing the street.

(i) On all Lots except corner Lots, no fence shall be permitted between the front of the building or setback line and the street. On all corner Lots, no fence shall be permitted between either building or setback line and either street. In the event an Owner

incorporates any utility, landscape or drainage easement shown on the recorded Plat, within the boundaries of a fence, the inclusion of this area shall be done in such a manner so as not to interfere with any drainage on or other use of said easement.

t. All driveway enhances from the street to each Lot shall conform to the following standards: Except for houses with side entry garages, the entrances from the street to each Lot shall be sixteen (16) feet in width with a concrete apron running back three (3) feet from the entrance at street and tapering back to no less than twelve (12) feet in width to garage entry. For side entry garages, the driveway must be of a minimum width of twenty-five (25) feet in width. The driveway, including any turn around area, must be constructed of concrete. A temporary gravel drive shall be constructed from the street to the side of the proposed dwelling before or at the time construction of said dwelling is commenced.

u. No dwelling shall be constructed on any Lot closer than the minimum setback reflected on the Plat.

v. All dwellings constructed on any Lot shall have a full masonry or slab foundation.

w. All swimming pools are to be of in-ground construction. No above-ground swimming pools are allowed.

x. No Owner of a Lot may construct or place any dwelling, outbuilding, clothes line, fence or any other structure, pen or enclosure, on such Lot without the prior written approval by the Committee of the elevation or exterior design, colors, location and building material. Playground sets and trampolines are permitted without obtaining approval from the Committee so long as they are reasonably maintained and placed behind the home. It is the intent of these restrictions that the Committee shall ensure a uniform, aesthetically pleasing subdivision without the utilization of garish colors or architectural designs. The Committee is empowered to waive provision of these restrictions for good cause shown; provided, however, that this power shall not extend to reducing the minimum square footage as specified in paragraph 9 hereof.

y. All equipment, garbage cans, service yards, woodpiles or storage piles shall be kept screened by adequate planting or fencing so as to conceal from the view of neighboring houses and streets. All rubbish, trash or garbage shall be regularly removed from the Lots and shall not be allowed to accumulate thereon.

z. No exterior television or radio antennae of any sort or satellite reception dishes shall be placed, allowed, or maintained upon the front roof of any dwelling or upon the front

or side yard of any Lot, and no antenna or satellite dish shall exceed the height of the peak of the roof lines of the dwelling on any Lot.

aa. No boat, trailer, all-terrain vehicle, or motor home or other recreational vehicle of any kind shall be kept other than in garage or in the rear yard, screened from the view of neighbors and streets. No commercial vehicle of any kind shall be kept other than in garage, rear yard or other screened from the view of the neighbors and streets. No abandoned vehicles shall be stored on any Lot.

bb. No building material of any kind or character shall be placed or stored upon any of the Lots until the Owner of such Lot is ready to commence construction of improvements. Building materials shall not be placed or stored on such Lot.

cc. Sales trailers or model homes with flags and signs shall be permitted as an aide to any builder and/ or developer in the sale of new homes and/or Lots. Use of garage in model home as sales center will be permitted.

dd. No basketball goals will be permitted in the side or front yards.

ee. All setbacks must meet governmental restrictions.

ff. All mailboxes must be the uniform design established by the Declarant.

gg. Owners are responsible to ensure sidewalks are installed by the builder of any homes within the Development in accordance with the standards adopted by the Declarant, and trees are planted according to City requirements.

hh. The Declarant or its assigns reserves the right to enter upon any Lot for the purpose of cutting grass and cleaning up such Lot if the same reasonably requires, charging the expense thereof to the Owner of such Lot, which expense shall be come a lien upon the Lot.

ii. Children of residents or their guests shall not be permitted in drainage ditches during wet weather.

jj. Roof pitch must be no less than 6/12 (i.e., 26.57 degrees).

kk. Exposed metal fireplace chimneys are prohibited.

ll. No outside clotheslines or other apparatus for the drying of clothes shall be permitted.

mm. Owners are prohibited from obstructing the free flow of storm surface water drainage and/or diverting, and/or changing such drainage flow in any manner resulting in damage or hazard to any other Lot and/or Owner.

2. Maintenance.

a. All Lots, together with the exterior of all Improvements located thereon, shall be maintained in a neat and attractive condition by their respective Owners.

b. In the event any Owner shall fail to maintain the Improvements situated upon his Lot in a manner satisfactory to the Association, the Association may, upon the vote of at least two-thirds of the Board of Directors and after ten (10) days' notice in writing to the offending Owner during which time said Owner has continued to fail to commence the correction of the matter in question, enter upon said Lot and perform the maintenance of the Improvements itself. The cost of such maintenance shall be added to and become a part of the Assessment to which such Lot is subject and the Owner of such Lot shall be personally liable for the cost thereof.

3. Further Use Restrictions.

a. No Owner shall use its Lot in such a manner as to create a nuisance. No Owner shall commit waste upon any Lot.

b. No wrecked vehicle or vehicles in a non-functional condition or vehicles without proper registration shall be parked on any Lot or upon any of the Common Areas. No house trailers, mobile homes, or modular homes shall be permitted within the Development.

c. No animals, livestock, poultry of any kind shall be raised, bred, pastured or maintained on any Lot except household pets which shall be kept in reasonable numbers as pets for the sole pleasure of the occupants, but not for any other purpose or use. No such household pets shall be permitted to the extent they become a nuisance to Owners of neighboring Lots. No pets shall be permitted outside the boundaries of the Owner's Lot unless accompanied by their Owner and on a leash. The Board of Directors, or any individual resident, may take appropriate measures to insure compliance with this provision, including without limitation, having the animal picked up by the appropriate governmental authorities.

d. No Owner shall cause or allow any use of his Lot that results in noise which disturbs the peace and quiet of the Development. This restriction includes, without limitation, dogs whose loud and frequent barking, whining or howling disturbs other Owners, exterior music

systems or public address systems, and other noise sources which disturb other Owners' ability to peacefully possess and enjoy their Lots.

e. No Owner shall permit or cause the escape of such quantities of dense smoke, soot, cinders, noxious acids, fumes, dust, or gases as to interfere with the use and enjoyment by other Owners of their Lots.

f. No house or other structure on any Lot shall be used for any business or purpose. Each Owner shall refrain from any act or use of his Lot which could reasonably cause embarrassment or discomfort or annoyance to the neighborhood. No noxious, offensive or illegal activity shall be carried out upon any Lot.

g. Each Owner shall observe all governmental building codes, health restrictions, zoning restrictions and other regulations applicable to his Lot. In the event of any conflict between any provision of such governmental code, regulation or restriction and any provision of this Declaration, the more restrictive provision shall apply.

h. Preassembled structures for residential purposes shall not be permitted even though they may meet the minimum square footage requirements and all other requirements.

i. The pursuit of hobbies or other inherently dangerous activities including without limitation the assembly and disassembly of motor vehicles or other mechanical devises, the shooting of firearms, fireworks, or other pyrotechnic devices of any type or size, and other such activities shall not be allowed upon any Lot.

ARTICLE VIII
EASEMENTS

1. General. A perpetual easement as shown on the Plat is reserved on each Lot for the construction and maintenance of utilities, such as drainage, electricity, gas, water main, sewage, etc., and no structure of any kind shall be erected or maintained upon or over said easement. It is understood and agreed that all easements granted herein, or by deed, or identified in the recorded Plat, may be used to service additional subdivision sections within all sections of the Development.

2. Emergency. There is hereby reserved without further assent or permit, a general easement to all policemen and security guards employed by Declarant or Association, firemen, ambulance personnel, garbage collectors, mailmen, utility personnel, delivery service personnel and all similar persons to enter upon the Development or any portion thereof which is now or hereafter made subject to this Declaration in the performance of their respective duties.

3. Easements Over Common Areas. The Plat designates certain areas for roads, utilities, drainage, Common Areas, and recreational areas. The easements so designated on the Plat encumber the Lots as shown on the Plat and are hereby established as perpetual and irrevocable easements. Said easements are granted and reserved for the use and benefit in common of all owners in the Development and their agents, servants, family members and invitees. No Owner shall have the right to restrict, impede or take any action in any way to prohibit or limit the use in common by all Owners of said easements. However, use of the easements and Common Areas shall be subject to and governed by provision of this Declaration and the by-laws, rules and regulations of the Association.

4. Easements for Utilities. All Lots and Common Areas in the Development shall be subject to the easements for installation of utilities and drainage facilities that are reserved and shown on the recorded Plat and as set forth herein or as required by later amendments. Within these easements, no structure, planting or other material shall be placed or permitted to remain which may interfere with the installation and maintenance of utilities, or which may change the direction or flow of drainage channels in the easements, or which may obstruct or retard the flow of water through drainage channels and easements.

5. Association Functions. There is hereby reserved to Declarant, any successor to Declarant, and the Association, or the duly authorized agents, representatives and managers of the Association, such easements as are necessary to perform the duties and obligations of the Association as are set forth in the Declaration and any other Trotwood & Foster Association Documents.

6. Ingress and Egress. In addition, there is reserved to Declarant for the use and benefit of any adjoining property that has been added as a new section to the Development or is intended to be added as a new section, a right of ingress and egress over the streets, a right to attach to and use sewer and utility easements and such other easements as may be necessary to develop said property or as are provided for the Development and the Declarant according to this Article VIII.

7. Covenants Running with Land. Each of the easements provided for in this Declaration shall be deemed to have been established upon the recordation of this Declaration and shall thenceforth be deemed to be covenants running with the land for the use and benefit of the Lots, and Common Areas as the case may be, superior to all other encumbrances applied against or in favor of any portion of the properties which is the subject of this Declaration.

8. Subject to Prior Utility Easements. Notwithstanding anything herein expressed or implied to the contrary, this Declaration shall be subject to all easements heretofore or hereafter

granted by Declarant for ingress or egress and for the installation and maintenance of utilities, sewers, television cables, drainage, and similar facilities that are necessary or appropriate for the development of the properties.

9. Utility Easements, Duties and Rights. The rights and duties of the Owners of Lots with respect to sanitary sewers and water, electricity, television cables, gas and telephone, shall be governed by the following:

a. Whenever sanitary sewer house connections and/or water house connections or electricity, television, gas or telephone lines are installed within the properties, which connections or any portion thereof lie in or upon Lots owned by others, then the Owners of the Lot served by said connections, shall have the right, and are hereby granted, an easement to the full extent necessary therefor, to enter upon said Lots or to have the utility company enter upon the Lots within such other Lot(s) in or upon which said connections, or any portion thereof lie, to repair, replace and generally maintain said connections as and when the same may be necessary.

b. When sanitary sewer house connections and/or water house connections or electricity, television cables, gas or telephone lines are installed within the properties, which connections serve more than one Lot, the Owner of each Lot served by said connections shall be entitled to full use and enjoyment of such portions of said connections as service his Lot.

ARTICLE IX
INSURANCE

1. Casualty Insurance. The Association shall keep all insurable improvements and fixtures on the Common Areas insured against loss and damage by fire for the full insurable replacement cost thereof, and shall obtain insurance against such other hazards and casualties as the Association may deem desirable as well as a general liability insurance policy covering all Common Areas with coverage of at least One Million Dollars ($1,000,000.00) for bodily injury or property damage for any single occurrence as well as coverage for any legal liability that results from lawsuits related to employment contracts in which the Association is a party. All policies shall provide that they may not be cancelled or substantially modified without ten (10) days written notice to all insureds including the mortgagees if any. The Association shall also insure any other property whether real or personal, owned by the Association, against loss or damage by fire or casualty and such other hazards as the Association my deed desirable, with the Association as the owner and beneficiary of such insurance. All casualty, liability and fidelity bond coverage shall be in such manner and is such amount as required by the Federal Nation Mortgage Association (FNMA), and their requirements thereto as set forth in Sections 501-504, FNMA Lending Guide, are adopted herein by reference. Any insurance coverage with respect to the Common Areas or otherwise shall be written in the name of, and the proceeds thereof, shall be payable to the

Association. Insurance proceeds shall be used by the Association for the repair or replacement of the property for which the insurance was carried. Premiums for all such insurance carried by the Association are common expenses included in the common Assessments made by the Association.

2. Replacement or Repair of Property. In the event of damage to or destruction of any part of the Common Areas and/or Improvements thereon, the Association shall repair or replace same from the insurance proceeds available. If such insurance proceeds are insufficient to cover the cost of repair or replacement of the property damaged or destroyed, the Association may make a Special Assessment against all owners to cover the additional cost of repair or replacement not covered by the insurance proceeds, in addition to any other Assessments made against such Owner.

3. Other Insurance. The Association may also maintain and pay for insurance policies or bonds that are appropriate for the protection and benefit of the Association, Members of the Board of Directors and any standing Committee, tenants or guest, including, but without limitations, workers' compensation, malicious mischief, and performance of fidelity bonds.

4. Annual Review of Policies. All insurance policies shall be reviewed at least annually by the Board of Directors in or order to ascertain whether the coverage contained in the policies is sufficient to make any necessary repairs or replacement of property which may be damaged or destroyed.

5. Hazard, Flood, Homeowners and Fire Insurance. Each Owner shall obtain and maintain in effect fire and appropriate damage and physical loss insurance, all in an amount equal to the then current full replacement value of each residence and improvement owned by such Owner, which may be established from time to time by the Board of Directors or the Association by resolution. Such additional insurance requirements may be set for the in agreements or other undertakings which the Board of Directors or Association may enter into with or for the benefit of holders or insurers of mortgages secured upon portions of the properties.

6. Obligation to Repair and Restore.

a. Subject only to the rights of an institutional holder of the first mortgage lien on any damaged Lot, insurance proceeds from any insurance policy covering such Lot shall be first applied to the repair, restoration, or replacement of such Lot. Each Owner shall be responsible for the repair, restoration, or replacement of each Lot owned by such Owner pursuant to the terms hereof. Any such repair, restoration or replacement shall (subject to advances and changes in construction techniques and materials generally used in such construction and in currently generally accepted design criteria) be generally harmonious with the other Lots in the Development, and reconstruction must be consistent with plans approved by the Committee. Such repair and restoration will be commenced as soon as possible.

b. If the proceeds of insurance are insufficient to pay for the cost of repair, restoration, or replacement of a residence or improvement, the Owner of such Lot shall be responsible for the payment of any such deficiency necessary to complete the repair, restoration or replacement.

7. Association Rights. If any Owner fails to obtain the insurance required in this Article, or fails to pay the premiums therefor when and as required or fails to otherwise perform the obligations of an Owner under this Article, the Association may (but shall not be obligated to in any manner) obtain such insurance, make such payments for any such Owner, and/or perform such obligations, and add the cost of such payments or performance, as a Special Assessment, to the Assessments of such Owner and enforce the payment of the Assessment in a like manner as an Annual Assessment.

8. Notice to First Mortgagees. In the event of substantial damage to or destruction of any part of the Common Areas, the institutional holder of any first deed of trust or mortgage on a Lot will be entitled to timely written notice of any such damage or destruction and no provision of any document establishing the Development will entitle the Owner of a Lot or other party to priority over such institutional holder with respect to the distribution to such Lot of any insurance proceeds.

ARTICLE X
EXTERIOR MAINTENANCE

1. Maintenance of, repairs to and replacements to the Common Areas shall be the responsibility of and shall be furnished by the Association. The cost of maintenance of, repairs to and replacements to the Common Areas shall be part of the common expenses, subject to the By-Laws, Rules and Regulation of the Association. If, due to the act or neglect of an Owner, or of his agent, servant, tenant, family member, invitee, licensee or household pet, damage shall be caused to the Common Areas, to the sidewalks, or to a Lot owned by others, or maintenance, repair or replacement are required which would otherwise be a common expense, then such Owner shall pay for such damage or such maintenance, repair or replacements, as may be determined by the Association, to the extent not covered by the Association's insurance or sufficient proceeds are not collected from the insurance carrier or to the extent any such claim raises insurance premiums.

In addition to the utility and maintenance easements as may appear on the Plat, the authorized representatives to the Association, Board of Directors or of a managing agent appointed by and with approval of the Board of Directors, shall be entitled to reasonable access to the individual Lots as may be required in connection with the preservation of any individual Lot in the event of an emergency, or in connection with maintenance of, repairs or replacements of the

Common Areas or any equipment, facilities or fixtures affecting or serving other Lots and the Common Areas or to make any alteration required by any governmental authority.

2. It will be the responsibility of each Owner of a Lot to maintain their own mailbox in keeping with the specific design approved by the Declarant.

3. Each Owner of a Lot is responsible for all exterior maintenance on his own Lot. Each Owner shall repair, maintain or replace all exteriors on any building in a good and workman like manner. Additionally, all landscaping, plants, shrubs, driveways, walks, yards, sidewalk adjacent to the street, etc., shall be maintained in a neat, orderly condition and in a good state of repair and maintenance. All exterior maintenance, including painting, shall be done in the color, method and design that is suitable and approved by the Committee. The Committee can base its decisions solely on esthetic considerations.

ARTICLE XI
ANNEXATION AND/OR ADDITION OF OTHER AREA TO PROPERTY

1. General. Declarant or its successors and assigns, shall be allowed to annex additional property by way of sections to the Development without the consent of the Association or its Members over any mortgagees or other lien holders (other than those holding mortgages a lien on the real property being annexed) by the recordation of an amendment to this Declaration as provided herein. Upon such annexation, the Association shall take whatever measures are necessary to add such annexed property and lots into the Development on an equal basis with the original Lots included hereunder.

2. Membership in Association. Owners of additional property annexed by way of sections to the Development (the "New Members") shall become Members of the Association obtaining all rights due Members of the Association and becoming liable for all Assessments and fees as set forth herein and/or in the supplemental Declaration and the Association shall take such measures necessary to evidence the admittance of such New Members as Members in the Association.

3. Common Areas. All Common Areas in any annexed property will be deeded to the Association in fee simple to be held in accordance with this Declaration.

ARTICLE XII
GENERAL PROVISIONS

1. Duration. The covenants, conditions an restrictions contained herein shall be appurtenant to and run with the land and shall be binding upon all Owners and parties hereinafter

having an interest in any of the Development, and all parties claiming under them, until January 1, 2055, at which time they shall be automatically extended for successive periods of ten (10) years each, unless a majority of the votes attributable to Lots in the Development are cast in favor of a proposition to change, amend or revoke the restrictions in whole or in part at a duly called meeting of the Association within the final one (1) year of the term of this Declaration, as it may have been extended. Each purchaser or subsequent grantee of any interest in any property now or hereafter made subject to this Declaration, by acceptance of a deed or other conveyance therefor, thereby agrees that the covenants, conditions and restrictions of this Declaration may be extended as provided in this Article XIII, Section 1.

2. Amendment. Any amendment of the Declaration, other than an amendment incorporating new property by way of sections to the Development as detailed in Article XI which may be done without an affirmative vote, will require the affirmative vote of at least two-thirds (2/3) of the Votes entitled to be cast by the Members of the Association, (both Class A and Class B) at a duly called meeting of the Association at which a quorum is present. Any such amendment shall not become effective until the instrument evidencing such change has been filed of record. Every purchaser or subsequent grantee of any interest in any property now or hereafter made subject to this Declaration by acceptance of a deed or other conveyance therefor, thereby agrees that the covenants, conditions and restrictions of this Declaration may be amended as provided herein.

3. Enforcement. All restrictions herein may be enforced by Declarant, its successors and assigns until the termination of the Class B Membership, or by the Association acting by and through its Board of Directors, or by the Committee, by proceeding at law or in equity against the Person violating or attempting to violate any covenant, condition and/or restriction, either to restrain the violation thereof or to recover money damages, together with reasonable attorneys' fees and court costs. Furthermore, after the termination of Declarant's Class B Membership in the Association, in the event the Association fails to act to enforce any restriction contained herein, any Owner of any Lot may enforce these restrictions as aforesaid against any other Owner. Notwithstanding the foregoing, the covenants contained in Article VIII hereof regarding the Declarant's option to purchase Lots shall be enforceable only by Declarant and not by its successors or assigns unless said rights are specifically assigned thereby Declarant in writing.

4. Partial Invalidity. Any invalidation of any one or more of these restrictions by judgment, court order, or statute, for failure on the part of Declarant or its successors or assigns to enforce any said restrictions, shall in no way affect any of the other provisions hereof or be deemed as a waiver of the right to enforce such restrictions at any time after the violation thereof. Invalidation of any one or more of these restrictions by judgment or court order shall neither affect any of the other provisions not expressly held to be void nor the provisions so void in circumstances or applications other than those expressly invalidated, and all such remaining

provisions shall remain in full force and effect together with the provisions ruled upon as they apply to circumstances other than those expressly invalidated.

5. Abatement. In the event that any Owner violates any of the terms or conditions of this Declaration and fails to cure the same within ten (10) days after written notice thereof, then Declarant, in addition to any other rights and remedies provided for herein, shall have the express right, privilege and license to enter upon any Lot to take any reasonable action to cure such violation, and all reasonable costs thereof shall be at the expense of the Owner of such Lot and shall be payable upon demand by Declarant, including reasonable attorneys' fees.

6. Notice. All notices required or permitted hereunder shall be in writing and effective when deposited in the U.S. mail, postage prepaid, addressed to any Owner at the address of the Lot owned by such Owner, and, if to Declarant, addressed to the Declarant as follows:

Brightland Homes of Tennessee, LLC
Barton Creek Plaza III
3815 South Capital of Texas Highway, Suite 275
Austin, Texas 78704

Attention: John Winniford
Email: jwinniford@brightlandhomes.com
and
Attention: Kent Mitchell
Telephone: 512.330.9366
Email: kmitchell@brightlandhomes.com
and
Attention: Chris Lynch
Telephone: 512.330.9755
Email: clynch@brightlandhomes.com

or such other address as Declarant may, by notice to each of the Owners, designate.

7. Headings and Binding Effect. Headings have been inserted only for convenience and are in no way to be construed as defining, limiting, extending or otherwise modifying or adding to the particular paragraphs to which they refer. The covenants, agreements and right set forth herein shall be binding upon and inure to the benefit of the respective heirs, executors, successors and assigns of the Declarant and all person claiming by, through or under Declarant.

8. Exoneration of Declarant. Each Owner of any Lot in the Development, or any other party having an interest in any portion of the Development, expressly agrees that no duty or

obligation is imposed upon Declarant to enforce or attempt to enforce any of the covenants or restriction contained herein, nor shall Declarant be subject to any liability of any kind or nature whatsoever resulting out of any claim by any third-party asserting that Declarant failed to enforce the same.

[Remainder of Page Intentionally Left Blank – Signature Page Follows]

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IN WITNESS WHEREOF, the Declarant has caused this Declaration of Protective Covenants, Conditions and Restrictions to be duly executed this ____ day of _____, 2024.

BRIGHTLAND HOMES OF TENNESSEE, LLC,
a Delaware limited liability company

By: Brightland Homes, Ltd.,
a Texas limited partnership, sole Member

By: Brightland Homes I, Inc.,
a Texas corporation, General Partner

By: _____
John S. Winniford,
President and CEO

STATE OF TENNESSEE
COUNTY OF

Before me, the undersigned authority, a Notary Public in and for the State and County aforesaid, John S. Winniford, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who, upon his/her oath, acknowledged himself/herself to be President and CEO of Brightland Homes of Tennessee, LLC, the within named Declarant, and he/she as such officer, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the limited liability company by himself/herself as such officer.

WITNESS MY HAND and official seal at my office on this the _____ day of _____, 2024.

_____
Notary Public

My commission expires: _____

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EXHIBIT "A"
LEGAL DESCRIPTION

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EXHIBIT "B"

BY-LAWS
OF
[_____]

ARTICLE I
DEFINITIONS

The following words, when used herein, shall have the following meanings:

Section 1. "Association" shall mean [_____], a Tennessee not-for-profit corporation, its successors and assigns, which has as its members all owners of Lots in the Property. "Charter" shall mean the Articles of Incorporation of the Association as filed with the Office of the Secretary of State for Tennessee.

Section 2. "Board of Directors" shall mean the Board of Directors of the Association as described in Article IV hereof.

Section 3. "Declaration" shall mean the instrument headed "Declaration of Covenants, Conditions and Restrictions of Trotwood & Foster" recorded simultaneously herewith in the Register's Office for Maury County, Tennessee, as subsequently amended.

Section 4. "Declarant" shall have the meaning given it in the Declaration.

Section 5. "Member" shall mean and refer to those persons entitled to membership in the Association as provided in the Declaration.

Section 6. "Common Areas" shall have the meaning given it in the Declaration.

Section 7. "Lot" shall have the meaning given it in the Declaration.

Section 8. "Owner" shall have the meaning given it in the Declaration.

Section 9. "Plat" shall have the meaning given it in the Declaration.

Section 10. "Development" shall have the meaning given it in the Declaration.

ARTICLE II
NAME AND LOCATION

The name of the Association is [_____]. The principal office of the Association shall be located at [_____] or at such other place as may be designated by the Board of Directors. Meetings of members and directors may be held at such places within the State of Tennessee, County of Maury, as may be designated by the Board of Directors.

ARTICLE II
MEETING OF MEMBERS

Section 1. Annual Meetings. The first regular annual meeting of the Members may be held, subject to the terms hereof on any day, at the option of the Board of Directors; provided, however, that the first meeting may (if necessary to comply with Federal Regulations) be held no later than the earlier of the following events: (a) Four (4) months after all the Lots have been sold by the Declarant or (b) Three (3) years following conveyance of the first Lot by the Declarant. Each subsequent regular annual meeting of the Members shall be held within fifteen (15) days of the anniversary of the first regular annual meeting each year thereafter at such time as set by the Board of Directors.

Section 2. Special Meetings. Special meetings of the Members may be called at any time by the president or by the Board of Directors, or upon written request of the Members who are entitled to vote one-fourth (1/4) of all of the votes of the Class A membership.

Section 3. Notice of Meetings. Written notice of each meeting of the Members shall be given by, or at the direction of, the secretary or person authorized to call the meeting, by mailing a copy of such notice, postage prepaid, at least fifteen (15) days before such meeting to each Member entitled to vote at the meeting, addressed to the Member's address last appearing on the books of the Association, or supplied by such Member to the Association for the purpose of notice. Such notice shall specify the place, day and hour of the meeting, and, in the case of a special meeting, the purpose of the meeting.

Section 4. Quorum. The presence at the meeting of Members entitled to cast, or of proxies entitled to cast, fifty percent (50%) of the votes of each class of membership shall constitute a quorum for any action except as otherwise provided in the Charter, the Declaration, or these Bylaws. If, however, such quorum shall not be present or represented at any meeting, the Members entitled to vote at the meeting shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum as aforesaid shall be present or be represented. Further, as provided in the Declaration, if a quorum is not present a subsequent meeting may be called and the required quorum shall be reduced by half at such meeting and such procedure may be repeated until a quorum is established although in no event may the required quorum be less than 10% of the total number of eligible votes.

Section 5. Proxies. At all meetings of Members, each Member may vote in person or by proxy. All proxies shall be in writing and filed with the secretary. Every proxy shall be revocable and shall automatically cease upon conveyance by the Member of his Lot.

Section 6. Action Taken Without A Meeting. The Members shall have the right to take any action in the absence of a meeting which they could take at a meeting by obtaining the written consent of the number of Members which would otherwise be required to approve such action. For instance, if an action required the approval of Members holding three-fourths (3/4ths) of the total votes, then a writing signed by Members holding three-fourths (3/4ths) of the total votes of all Members would be effective as if such approval was given at a meeting duly called for such

purpose. Any action so approved shall have the same effect as though taken at a properly called meeting of the Members.

ARTICLE IV
BOARD OF DIRECTORS

Section 1. Number. The affairs of the Association shall be managed by a Board of Directors. The initial Board of Directors of the Association shall consist of three (3) persons, who need not be Members of the Association, who shall be appointed by the Declarant and who shall serve until all Lots in the Development are sold. Thereafter, the Board of Directors shall consist of five (5) directors each of whom must individually be a Member of the Association or be an owner, officer, trustee, or otherwise affiliated with a Member of the Association.

Section 2. Term of Office. Persons on the Board of Directors shall be elected for terms of two (2) years or until their successor is elected.

Section 3. Removal. Any director may be removed from the Board of Directors, with or without cause, by a majority vote of the Members of the Association, or in the case of the initial Board of Directors, by the Declarant. In the event of death, resignation or removal of a director, his successor shall be selected by the remaining Members of the Board of Directors, or in the case of the initial Board of Directors, by the Declarant, and shall serve for the unexpired term of his predecessor.

Section 4. Compensation. No director shall receive compensation from any service he may render to the Association; provided, however, any director may be reimbursed for his actual expenses incurred in the performance of his duties.

Section 5. Action Taken Without a Meeting. The directors shall have the right to take any action in the absence of a meeting which they could take at a meeting by obtaining the written approval of all the directors. Any action so approved shall have the same effect as though taken at a meeting of the directors.

ARTICLE V
NOMINATION AND ELECTION OF DIRECTORS

Section 1. Nomination. The Declarant shall name the directors for the initial Board of Directors. Thereafter, nomination for election to the Board of Directors shall be made from the floor at the annual meeting of the Association.

Section 2. Election. Election to the Board of Directors shall be by secret written ballot. At such election the Members or their proxies may cast, in respect to each vacancy, as many votes as they are entitled to exercise under the provisions of the Declaration. The persons receiving the largest number of votes shall be elected. Cumulative voting is not permitted.

ARTICLE VI
MEETING OF DIRECTORS

Section 1. Regular Meetings. Regular meetings of the Board of Directors shall be held at intervals established by the Board of Directors upon at least three (3) days' written notice, (or without notice if the time and place has been previously fixed by the Board of Directors), at such place and hour as may be fixed from time to time by resolution of the Board of Directors. Should said meeting fall upon a legal holiday, then that meeting shall be held at the same time on the next day which is not a legal holiday.

Section 2. Special Meetings. Special meetings of the Board of Directors shall be held when called by the president of the Association, or by any two directors, after not less than three (3) days' written notice to each director.

Section 3. Quorum. A majority of the number of directors shall constitute a quorum for the transaction of business. Every act or decision done or made by a majority of the directors present at a duly held meeting at which a quorum is present shall be regarded as the act of the Board of Directors.

ARTICLE VII
POWERS AND DUTIES

Section 1. Powers. The Board of Directors shall have power to:

(a) Adopt and publish rules and regulations governing the use of the Common Areas and facilities, and the personal conduct of the Members and their guests thereon, and to establish, assess and collect penalties and fines for the infraction thereof;

(b) Suspend the voting rights and right to use recreational facilities of a Member during any period in which such Member shall be in default in the payment of any assessment levied by the Association. Such rights may also be suspended until after the payment of reasonable financial assessments made after notice and hearing, for a period not to exceed 60 days for infraction of published rules and regulations;

(c) Exercise for the Association all powers, duties and authority vested in or delegated to this Association and not reserved to the membership by other provisions of these Bylaws, the Charter or the Declaration;

(d) Declare the office of a member of the Board of Directors to be vacant in the event such member shall be absent from three (3) consecutive regular meetings of the Board of Directors.

(e) Employ a manager, an independent contractor, or such other employees as they deem necessary, and to prescribe their duties.

Section 2. Duties. It shall be the duty of the Board of Directors to:

(a) Cause to be kept a complete record of all its acts and corporate affairs and to present a statement thereof to the Members at the annual meeting of the Members, or at any special meeting when such statement is requested in writing by one-fourth (1/4) of the Class A Members who are entitled to vote.

(b) Supervise all officers, agents and employees of the Association, and to see that their duties are properly performed;

(c) As more fully provided in the Declaration, to:

(1) Fix the amount of the annual assessment against each Lot at least thirty (30) days in advance of each annual assessment period; and

(2) Send written notice of each assessment to every Owner subject thereto at least thirty (30) days in advance of each annual assessment period; and

(3) Foreclose the lien against any property for which Assessments are not paid within thirty (30) days after due date or to bring an action at law against the Owner personally obligated to pay the same.

(d) Issue, or to cause an appropriate officer to issue, upon demand by any person, a certificate setting forth whether any assessment has been paid. A reasonable charge may be made by the Board of Directors for the issuance of these certificates. If a certificate states an assessment has been paid, such certificate shall be conclusive evidence of such payment;

(e) Procure and maintain adequate liability, hazard, and other insurance on property owned by the Association;

(f) Cause all officers or employees having fiscal responsibilities to be bonded, as required by the Declaration;

(g) Cause the Common Areas to be maintained.

(h) Exercise all discretion as provided in the Declaration regarding enforcement of all terms, restrictions and provisions contained in the Declaration and to take any and all enforcement actions as may be required pursuant thereto. Whenever discretion is granted to the Board of Directors to act upon any matter as required under the Declaration of these Bylaws, such discretion may be exercised by the president of the Association although any such action by the president shall be subject to change upon review by the Board of Directors.

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ARTICLE VIII
OFFICERS AND THEIR DUTIES

Section 1. Enumeration of Officers. The officers of this Association shall be a president, a vice-president, a treasurer, and a secretary, and such other officers as the Board of Directors may from time to time by resolution create.

Section 2. Election of Officers. The election of officers shall take place at the first meeting of the Board of Directors following each annual meeting of the Members.

Section 3. Term. The officers of the Association shall be elected annually by the Board of Directors and each shall hold office for one year unless he shall sooner resign, or shall be removed, or otherwise disqualified to serve.

Section 4. Special Appointments. The Board of Directors may elect such other officers as the affairs of the Association may require each of whom shall hold office for such period, have such authority, and perform such duties as the Board of Directors may, from time to time, determine.

Section 5. Resignation and Removal. Any officer may be removed from office with or without cause by the Board of Directors. Any officer may resign at any time by giving written notice to the Board of Directors, the president or the secretary. Such resignation shall take effect on the date of receipt of such notice or at any later time specified therein, and unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective.

Section 6. Vacancies. A vacancy in any office may be filled by appointment by the Board of Directors. The officer appointed to such vacancy shall serve for the remainder of the term of the officer he replaces.

Section 7. Multiple Offices. The offices of secretary and treasurer may be held by the same person. No person shall simultaneously hold more than one of any of the other offices except in the case of special offices created pursuant to Section 4 of this Article.

Section 8. Duties. The duties of the officers are as follows:

(a) President. The president shall preside at all meetings of the Board of Directors; shall see that orders and resolutions of the Board of Directors are carried out; shall sign all leases, mortgages, deeds and other written instruments and shall co-sign all checks and promissory notes.

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(b) Vice-President. The vice-president shall act in the place and stead of the president in the event of his absence, inability or refusal to act, and shall exercise and discharge such other duties as may be required of him by the Board of Directors.

(c) Secretary. The secretary shall record the votes and keep the minutes of all meetings and proceedings of the Board of Directors and the Members; serve notice of meetings of the Board of Directors and of the Members; keep appropriate current records showing the Members of the Association together with their addresses, and shall perform such other duties as required by the Board of Directors.

(d) Treasurer. The treasurer shall receive and deposit in appropriate bank accounts all monies of the Association and shall disburse such funds as directed by resolution of the Board of Directors; shall together with another officer sign all checks and promissory notes of the Association; keep proper books of account; cause an annual audit of the Association's books to be made by a public accountant at the completion of each fiscal year; and shall prepare an annual budget and a statement of income and expenditures to be presented to the membership at its regular annual meeting, and deliver a copy of each to the Members.

ARTICLE IX
COMMITTEES

The Board of Directors shall appoint an Architectural Review Committee, as provided in the Declaration. In addition, the Board of Directors shall appoint other committees as deemed appropriate in carrying out its purpose.

ARTICLE X
BOOKS AND RECORDS

The books, records, papers of the Association and the Declaration, Charter and Bylaws shall be available for inspection by any Member or to the holder, guarantor or insurer of any first mortgage at the principal office of the Association, during normal business hours where copies may be purchased at reasonable cost.

ARTICLE XI
ASSESSMENTS

As more fully provided in the Declaration, each member is obligated to pay to the Association annual and special assessments as well as any other amounts assesses against an Owner by the Association which are secured by a continuing lien upon the property against which the assessment is made. Any assessments which are not paid when due shall be delinquent. If the

assessment is not paid within thirty (30) days after the due date, the assessment shall be subject to a late charge in an amount established by the Board of Directors and shall bear interest from the date of delinquency at the maximum rate allowed by applicable law. The Association may bring an action at law against the Owner personally obligated to pay the same or foreclose the lien against the Lot, and interest, costs, and reasonable attorney's fees of any such action shall be added to the amount of such assessment. No Owner may waive or otherwise escape liability for the assessments provided for herein by non-use of the Common Areas or abandonment of his Lot.

ARTICLE XII
AMENDMENTS

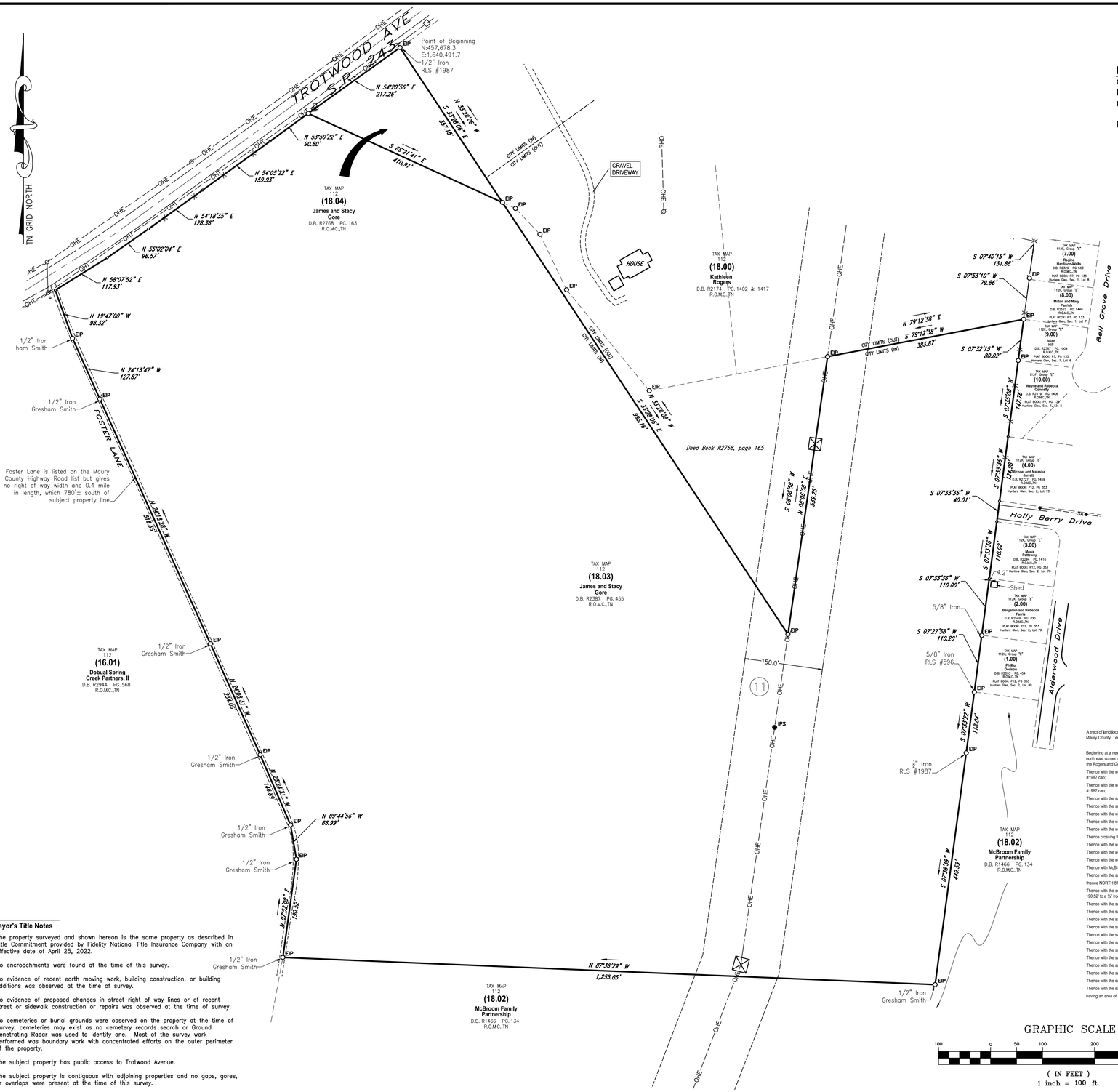
Section 1. These Bylaws may be amended, at a regular or special meeting of the Members, by a vote of a majority of a quorum of Members present in person, or by proxy.

Section 2. In the case of any conflict between the Charter and these Bylaws, the Charter shall control; and in the case of any conflict between the Declaration and these Bylaws, the Declaration shall control.

ARTICLE XIII
MISCELLANEOUS

The fiscal year of the Association shall begin on the first day of January and end on the 31st day of December of every year, except that the first fiscal year shall begin on the date of incorporation.

DRAFT



PROPERTY DATA:

Current Zoning -
INSIDE CITY LIMITS (COLUMBIA) - CD-3
OUTSIDE CITY LIMITS (MAURY COUNTY) - A-2

Parcel ID: Tax Map 112, 018.03, & 018.04

Fidelity National Title Insurance Company
Commitment Number - 20220859CTN
Effective - May 04, 2022 @ 8:00 A.M.

Schedule B , Section II Items

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears in the public record are noted as the dated of this survey.
2. Items not of public record were not addressed as part of this survey.
3. Encroachments, encumbrances, violations, variations, or adverse circumstances were not found during the course of this survey.
4. Items not of public record were not addressed as part of this survey.
5. Liens were not addressed as part of this survey.
6. Taxes were not addressed as part of this survey.
7. Taxes were not addressed as part of this survey.
8. Taxes were not addressed as part of this survey.
9. Taxes were not addressed as part of this survey.
10. Application for greenbelt Assessment of record in Book R2392, page 218 affects the subject property.
11. 150 foot TVA easement in Deed Book R2387, page 455 affects the subject property.
12. Acreage of the property is as shown hereon.

Items addressed on the survey are labeled with the corresponding number circled. (#)

Surveyor's Title Notes

1. The property surveyed and shown hereon is the same property as described in Title Commitment provided by Fidelity National Title Insurance Company with an effective date of April 25, 2022.
2. No encroachments were found at the time of this survey.
3. No evidence of recent earth moving work, building construction, or building additions was observed at the time of survey.
4. No evidence of proposed changes in street right of way lines or of recent street or sidewalk construction or repairs was observed at the time of survey.
5. No cemeteries or burial grounds were observed on the property at the time of Survey, cemeteries may exist as no cemetery records search or Ground Penetrating Radar was used to identify one. Most of the survey work performed was boundary work with concentrated efforts on the outer perimeter of the property.
6. The subject property has public access to Trotwood Avenue.
7. The subject property is contiguous with adjoining properties and no gaps, gores, or overlaps were present at the time of this survey.

Legend

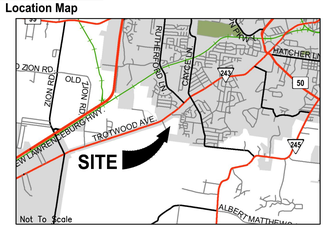
EIP Iron Rod Found	Bench Mark	Catch Basin	Electric Riser	Power Pole	Adjoining Property Line	Edge of Water	OHE— Overhead Electric Line
IPS Iron Rod Set	Stake Found	Curb Inlet	Telephone Riser	Flag Pole	Subject Property Line	Ditch / Creek Centerline	OHT— Overhead Telephone Line
I.P.F. Iron Pipe Found	Fire Hydrant	Storm Pipe	Telephone Booth	Guy Wire	Easement Line	Minor Contour Line	UG— Underground Utility Line
AXLE Axle Found	Water Meter	Cable Manhole	Gas Meter	Mailbox	Building Setback Line	Index Contour Line	UGC— Underground Cable Line
Fence Post	Water Valve	Electric Manhole	Gas Valve	Parking Block	Centerline	G— Gas Line	UGE— Underground Electric Line
CCM Concrete Monument Existing	Water Reducer	Telephone Manhole	Light Pole	Satellite Dish	Edge of Pavement	SA— Sanitary Sewer Line	UGT— Underground Telephone Line
P.K.F. PK Nail Found	Clean Out	Water Manhole	Power Pole	Handicap Parking	Edge of Gravel	W— Water Line	FM— Forced Main Line
P.K.S. PK Nail Set	Sanitary Sewer Manhole	Electric Meter	Telephone Pole	Water Spigot	Fence Line	ST— Storm Sewer Line	
R.R.S.F. Railroad Spike Found	Storm Sewer Manhole	Cable Riser	Guy Pole	Bollard	Landscape	OH— Overhead Utility Line	
R.R.S.S. Railroad Spike Set					Woods / Tree line	OHC— Overhead Cable Line	

Evergreen Tree
Deciduous Tree
Bush
Sign

GRAPHIC SCALE

100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

Location Map



Surveyor's Notes

1. All distances were measured with E.D.M. equipment and have been adjusted for temperature and pressure, portions of the survey were done utilizing a Carlson BRX7, utilizing Base and Rover.
2. The property (Boundary) Line Survey exceeds the minimum requirements of an Urban Land Survey Category IV as per Standards of Practice adopted by the State Board of Examiners for Land Surveyors for the State of Tennessee, and the precision of the unadjusted survey is greater than 1 foot in 10,000 feet.
3. Information concerning site utility services and appurtenances shown hereon is based on visible evidence noted during the survey, information provided by utility representatives or information shown on original construction plans by other. Information and location of service lines on site should be considered approximate and there may be underground utility lines that are not shown on the survey. Owner(s) and contractor(s) should assume responsibility of locating all underground utility service lines prior to any construction, excavation or any disturbance of the existing ground elevation to avoid hazard of unnecessary expense.
4. Information concerning major utilities or appurtenances shown hereon are based on visible evidence noted during the survey or information provided by utility representatives. Verification of existence, size, location, depth and availability of service should be confirmed by local utility agencies.
5. The property shown hereon is located within the City of Columbia, TN. All matters pertaining to construction, use location of improvements, signage, parking, noise, vibration, emissions, fire hazards, radiation, illumination, setback provisions, etc., are subject to the City of Columbia's Zoning Regulation as interpreted and regulated by the Department of Planning and Codes.
6. The area of the parcel is as shown hereon.
7. This property currently identified as Tax Map No. 112, Parcel No. 018.03 & 018.04, Maury County. For designation shown thus ( ) indicates Parcel Numbers for said map.
8. Plat reference: n/a
9. Deed reference: Deed Book R2387, Page 455, Deed Book 2768, Page 163
10. Bearings based on: Tennessee State Plane, Fipzone 4100.
11. This drawing was prepared in accordance with our field survey notes. It shows improvements as they exist to the best of our knowledge, but is not guaranteed to be correct in each and every detail.
12. This survey was prepared from current deeds of record and title search as provided by others and noted hereon.
13. This survey was prepared for the exclusive use of the person, persons, or entity, if any, named on the certification hereon. Said certificate does not extend to any unnamed person without an express re-certification by the surveyor naming said person.
14. The certification as provided on this survey, is purely a statement of professional opinion based on knowledge, information and belief, based on existing field evidence and documentary evidence provided by others.
15. The certification is not an expressed or implied warranty or guarantee.
16. This property as shown hereon is not located in a Special Flood Hazard Area as shown on F.E.M.A. Flood Insurance Rate Map, Community Panel No. 47119C0280E, dated April 16, 2007, (Zone 'X'), as scaled graphically.

Gore Property

A tract of land located in Maury County, Tennessee. Being the James and Stacy Gore property as recorded in Deed Book R2387, page 455 and Deed Book R2768, page 163, in Maury County, Tennessee, and being more particularly described as follows.

Beginning at a new established north west corner of Kathleen Rogers property as recorded in Deed Book R2174, page 1402 and 1417, said point being the north new established north east corner of James and Stacy Gore as recorded in Deed Book R2387, page 455, said point lying NORTH 54°20'56" EAST a distance of 217.26' from the original corner of the Rogers and Gore tracts of land, and lying on the south margin of Trotwood Avenue;
Thence with the west line of Kathleen Rogers property as recorded in Deed Book R2174, page 1402, SOUTH 33°28'06" EAST a distance of 357.15' to a ½" iron pin found with RLS #1987 cap;
Thence with the west line of Kathleen Rogers property as recorded in Deed Book R2768, page 165, SOUTH 33°28'06" EAST a distance of 995.16' to a ½" iron pin found with RLS #1987 cap;
Thence with the same, NORTH 08°08'58" EAST a distance of 539.25' to a ½" iron pin found with RLS #1987 cap;
Thence with the same, NORTH 79°12'38" EAST a distance of 383.87' to a ½" iron pin found;
Thence with the west line of Hunters Glen, Section 1, Lot 6, as recorded in Plat Book P7, page 133, SOUTH 07°32'15" WEST a distance of 80.02' to ½" iron pin found;
Thence with the west line of Hunters Glen, Section 1, Lot 5, as recorded in Plat Book P7, page 133, SOUTH 07°35'08" WEST a distance of 147.76' to a1/2" iron pin found;
Thence with the west line of Hunters Glen, Section 2, Lot 73, as recorded in Plat Book P12, page 353, SOUTH 07°33'36" WEST a distance of 124.98' to a ½" iron pin found;
Thence crossing the terminus of Holly Berry Drive, SOUTH 07°33'36" WEST a distance of 40.01' to a ½" iron pin found;
Thence with the west line of Hunters Glen, Section 2, Lot 78, as recorded in Plat Book P12, page 353, SOUTH 07°33'36" WEST a distance of 110.02' to a ½" iron pin found;
Thence with the west line of Hunters Glen, Section 2, Lot 79, as recorded in Plat Book P12, page 353, SOUTH 07°33'36" WEST a distance of 110.00' to a ½" iron pin found;
Thence with the west line of Hunters Glen, Section 2, Lot 80, as recorded in Plat Book P12, page 353, SOUTH 07°27'58" WEST a distance of 110.20' to a ½" iron pin found;
Thence with McBroom Family Partnership as recorded in Deed Book R1466, page 134, SOUTH 07°33'22" WEST a distance of 118.04' to a ½" iron pin found with RLS #1987 cap;
Thence with the same, SOUTH 07°28'39" WEST a distance of 449.59' to a ½" iron pin with Gresham Smith cap;
thence NORTH 87°36'29" WEST a distance of 1,255.05' to a ½" iron pin with Gresham Smith cap in the center of Foster Lane;
Thence with the center of Foster Lane and the east line of Dobsual Spring Creek Partners, II as recorded in Deed Book R2944, page 568, NORTH 07°52'09" EAST a distance of 190.52' to a ½" iron pin with Gresham Smith cap;
Thence with the same, NORTH 09°44'56" WEST a distance of 66.99' to a ½" iron pin with Gresham Smith cap;
Thence with the same, NORTH 23°24'31" WEST a distance of 146.89' to a ½" iron pin with Gresham Smith cap;
Thence with the same, NORTH 24°08'31" WEST a distance of 234.05' to a ½" iron pin with Gresham Smith cap;
Thence with the same, NORTH 24°18'28" WEST a distance of 516.35' to a ½" iron pin with Gresham Smith cap;
Thence with the same, NORTH 24°13'47" WEST a distance of 127.87' to a fir1/2"gresham smith;
Thence with the same, NORTH 19°47'00" WEST a distance of 98.32' to a calc;
Thence with the south margin of Trotwood Avenue, NORTH 58°07'52" EAST a distance of 117.93' a ½" iron pin found;
Thence with the same, NORTH 55°02'04" EAST a distance of 96.57' a ½" iron pin found;
Thence with the same, NORTH 54°18'35" EAST a distance of 128.36' a ½" iron pin found;
Thence with the same, NORTH 54°05'22" EAST a distance of 159.93' a ½" iron pin found;
Thence with the same, NORTH 53°50'22" EAST a distance of 90.80' to a ½" iron pin found with RLS #1335 cap;
Thence with the same, NORTH 54°20'56" EAST a distance of 217.26', which is the point of beginning,
having an area of 1,990,592 square feet, 45.70 acres.

ALTA/NSPS Surveyor's Certification

The undersigned hereby certifies to Lennar of Tennessee,Fairview Town Center, LLC, and Doma Title Insurance, Inc.:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1,2,3,4,6b,7a,8,9,10,11a,13,14,16,17,18, and 19 of Table A thereof. The field work was completed in June of 2024.

Allen B. O'Leary, TN RLS #1987

6-20-24
Date

ALLEN B. O'LEARY — REGISTERED LAND SURVEYOR — AGRICULTURE & SURVEYING — TENNESSEE NO. 1987

©2024

WES E NGINEERS & S URVEYORS
CIVIL ENGINEERS & LAND SURVEYORS
2486 NASHVILLE HIGHWAY
COLUMBIA, TN 38401
PHONE: (931) 388-2329
www.wesengineers.com
ENGINEERS & SURVEYORS

Client
BRIGHTLAND HOMES OF TN
3815 S. Capital of Texas Hwy, Suite 275
Austin, TX 78704
512-330-9366

A.L.T.A./NSP.S. LAND TITLE SURVEY
GORE PROPERTY
COLUMBIA, TN 38401

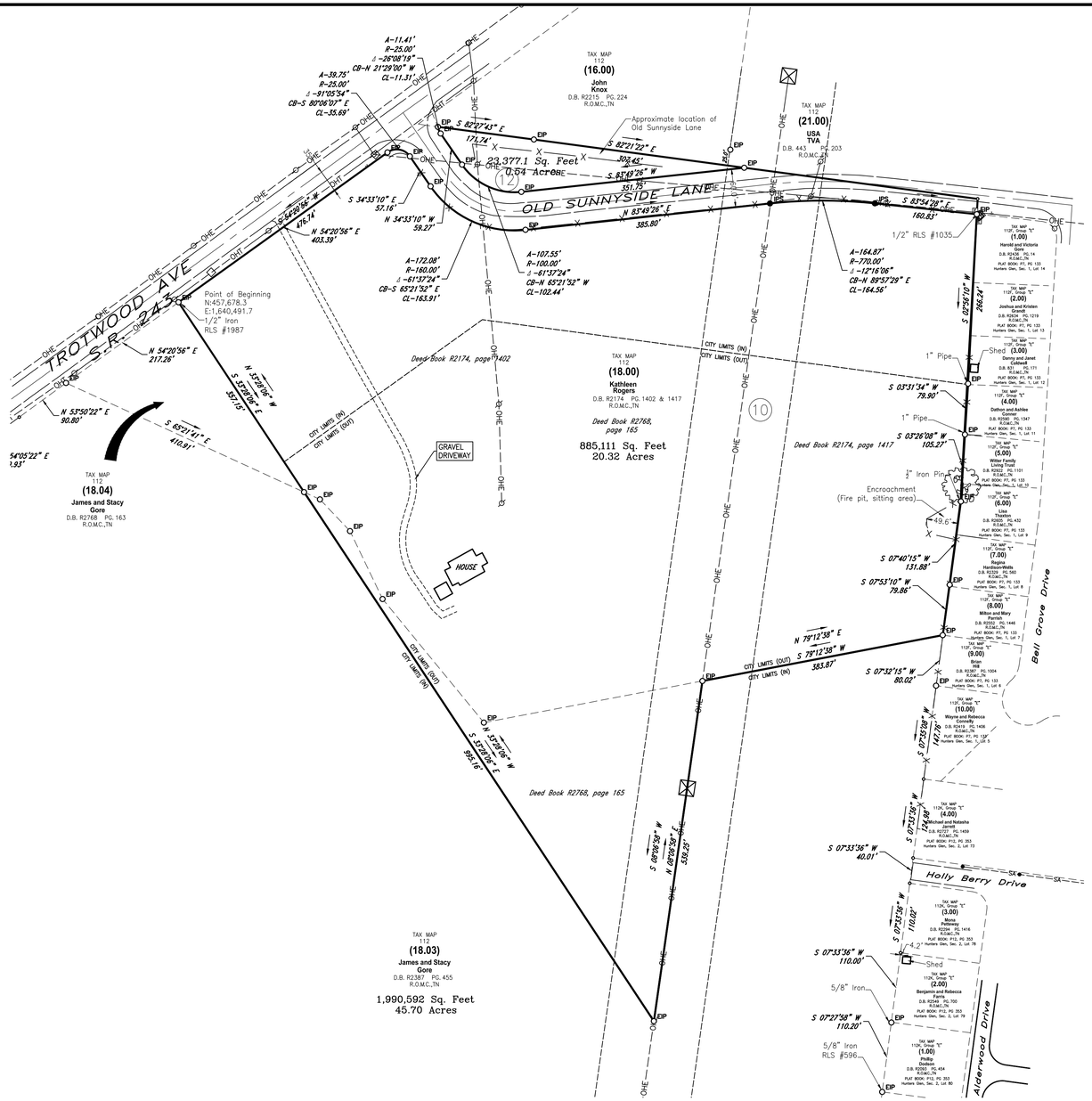
DATE	REVISIONS

Drawn: AO
Checked:
Approved:
Date: 06/20/2024

Job. no. 24540
Scale: Vertical: 1" = 100'
Horizontal:

1 of 1

FILE: J:\WES_Engineers_Surveyors 2024\24540 - Trotwood - Brightland\Dwg\Survey\01 - Survey\24540 Trotwood Survey.dwg



PROPERTY DATA:

Current Zoning -
INSIDE CITY LIMITS (COLUMBIA) - CD-3
OUTSIDE CITY LIMITS (MAURY COUNTY) - A-2

Parcel ID: Tax Map 112, 018.00

Fidelity National Title Insurance Company
Commitment Number - 20220860CTN
Effective - April 25, 2022 @ 8:00 A.M.

Schedule B , Section II Items

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears in the public record are noted as the dated of this survey.
2. Items not of public record were not addressed as part of this survey.
3. Encroachments, encumbrances, violations, variations, or adverse circumstances were not found during the course of this survey.
4. Items not of public record were not addressed as part of this survey.
5. Liens were not addressed as part of this survey.
6. Taxes were not addressed as part of this survey.
7. Taxes were not addressed as part of this survey.
8. Taxes were not addressed as part of this survey.
9. Application for greenbelt Assessment of record in Book R2177, page 653 affects the subject property.
10. 150 foot TVA easement in Deed Book 469, page 388, this deed is the mineral rights as noted in #11 below.
11. Title to all oil, gas, mineral and gravel rights in Deed Book 469, page 388 affects the subject property.
12. The 60' right of way of Old Sunnyside Lane is as shown hereon.

Items addressed on the survey are labeled with the corresponding number circled. (#)

Rogers Property

A tract of land located in Maury County, Tennessee. Being a portion of the Kathleen Rogers property as recorded in Deed Book R2174, page 1402 and 1417 and Deed Book R2768, page 165, in Maury County, Tennessee, and being more particularly described as follows.

Beginning at a new established north west corner of Kathleen Rogers property as recorded in Deed Book R2174, page 1402 and 1417, said point being the north new established north east corner of James and Stacy Gore as recorded in Deed Book R2387, page 455, said point lying NORTH 54°20'56" EAST a distance of 217.26' from the original corner of the Rogers and Gore tracts of land, and lying on the south margin of Trotwood Avenue;

Thence with the south margin of Trotwood Avenue, NORTH 54°20'56" EAST a distance of 403.39' to a ½" iron pin found with RLS #1987 cap;

Thence with the same and the southerly margin of Old Sunnyside Lane and with a curve turning to the right with an arc length of 39.75', with a radius of 25.00', with a chord bearing of SOUTH 80°06'07" EAST, with a chord length of 35.69', to a ½" iron pin found with RLS #1987 cap;

Thence with the same, SOUTH 34°33'10" EAST a distance of 57.16' to a ½" iron pin found with RLS #1987 cap;

Thence with the same and with a curve turning to the left with an arc length of 172.08', with a radius of 160.00', with a chord bearing of SOUTH 65°21'52" EAST, with a chord length of 163.91', to a ½" iron pin found with RLS #1987 cap;

Thence with the same, NORTH 83°49'26" EAST a distance of 385.80' to an iron pin set;

Thence with the same and with a curve turning to the right with an arc length of 164.87', with a radius of 770.00', with a chord bearing of NORTH 89°57'29" EAST, with a chord length of 164.56', to a ½" iron pin found with RLS #1987 cap;

Thence with the same, SOUTH 83°54'28" EAST a distance of 160.83' to a ½" iron pin found with RLS #1035 cap;

Thence with the west line of Hunters Glen, Section 1, Lots 12-14, as recorded in Plat Book P7, page 133, SOUTH 02°56'10" WEST a distance of 266.24' to a 1" iron pipe found;

Thence with the west line of Hunters Glen, Section 1, Lots 11, as recorded in Plat Book P7, page 133, SOUTH 03°31'34" WEST a distance of 79.90' to a 1" iron pipe found;

Thence with the west line of Hunters Glen, Section 1, Lots 9-10, as recorded in Plat Book P7, page 133, SOUTH 03°26'08" WEST a distance of 105.27' to a ½" iron pin found;

Thence with the west line of Hunters Glen, Section 1, Lots 8-9, as recorded in Plat Book P7, page 133, SOUTH 07°40'15" WEST a distance of 131.88' to a 1" iron pin;

Thence with the west line of Hunters Glen, Section 1, Lots 7, as recorded in Plat Book P7, page 133, SOUTH 07°53'10" WEST a distance of 79.86' to ½" iron pin found;

Thence with the northerly line of James and Stacy Gore as recorded in Deed Book R2387, page 455, SOUTH 79°12'38" WEST a distance of 383.87' to a ½" iron pin found with RLS #1987 cap;

Thence with the west line of Gore and generally in the center of the TVA lines, SOUTH 08°06'58" WEST a distance of 539.25' to a ½" iron pin found with RLS #1987 cap;

Thence leaving the TVA lines and with the easterly line of Gore, NORTH 33°28'06" WEST a distance of 995.16' to a ½" iron pin found with RLS #1987 cap;

Thence continuing with Gore's east line, NORTH 33°28'06" WEST a distance of 357.15', which is the point of beginning, having an area of 885,111 square feet, 20.32 acres.

Rogers north of Old Sunnyside Lane

A tract of land located in Maury County, Tennessee. Being a portion of the Kathleen Rogers property as recorded in Deed Book R2174, page 1402 and 1417, and other property after land Maury County, Tennessee, and being more particularly described as follows.

Beginning at the north east corner of Kathleen Rogers property as recorded in Deed Book R2174, page 1402 and 1417, said point being the north west corner of John Knox as recorded in Deed Book R2215, page 224,said point lying SOUTH 67°57'40" EAST a distance of 59.13' from the centerline intersection of Trotwood Avenue and Old Sunnyside Lane;

Thence with the south line of John Knox as recorded in Deed Book R2215, page 224, SOUTH 82°27'43" EAST a distance of 151.93' to an iron pin set;

Thence with the same, SOUTH 82°21'22" EAST a distance of 307.45' to an iron pin set;

Thence with the same, SOUTH 82°21'39" EAST a distance of 25.48' to an iron pin set;

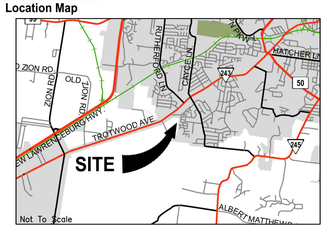
Thence with the same, SOUTH 83°49'26" WEST a distance of 351.75' to an iron pin set;

Thence with the north margin of Old Sunnyside Lane and with a curve turning to the right with an arc length of 107.55', with a radius of 100.00', with a chord bearing of NORTH 65°21'52" WEST, with a chord length of 102.44', to an iron pin set;

Thence with the same, NORTH 34°33'10" WEST a distance of 59.27' to an iron pin set;

Thence with the same and with a curve turning to the right with an arc length of 11.41', with a radius of 25.00', with a chord bearing of NORTH 21°29'00" WEST, with a chord length of 11.31', which is the point of beginning, having an area of 23,377.1 square feet, 0.54 acres.

Location Map



Surveyor's Notes

1. All distances were measured with E.D.M. equipment and have been adjusted for temperature and pressure, portions of the survey were done utilizing a Carlson BRX7, utilizing Base and Rover.
2. The property (Boundary) Line Survey exceeds the minimum requirements of an Urban Land Survey Category IV as per Stands of Practice adopted by the State Board of Examiners for Land Surveyors for the State of Tennessee, and the precision of the unadjusted survey is greater than 1 foot in 10,000 feet.
3. Information concerning site utility services and appurtenances shown hereon is based on visible evidence noted during the survey, information provided by utility representatives or information shown on original construction plans by other. Information and location of service lines on site should be considered approximate and there may be underground utility lines that are not shown on the survey. Owner(s) and contractor(s) should assume responsibility of locating all underground utility service lines prior to any construction, excavation or any disturbance of the existing ground elevation to avoid hazard of unnecessary expense.
4. Information concerning major utilities or appurtenances shown hereon are based on visible evidence noted during the survey or information provided by utility representatives. Verification of existence, size, location, depth and availability of service should be confirmed by local utility agencies.
5. The property shown hereon is located within the City of Columbia, TN. All matters pertaining to construction, use location of improvements, signage, parking, noise, vibration, emissions, fire hazards, radiation, illumination, setback provisions, etc., are subject to the City of Columbia's Zoning Regulation as interpreted and regulated by the Department of Planning and Codes.
6. The area of the parcel is as shown hereon.
7. This property currently identified as Tax Map No. 112, Parcel No. 018.00, Maury County. For designation shown thus ( ) indicates Parcel Numbers for said map.
8. Plat reference: n/a
9. Deed reference: Deed Book R2174, Page 1402, Deed Book R2768, Page 165
10. Bearings based on: Tennessee State Plane, Fipzone 4100.
11. This drawing was prepared in accordance with our field survey notes. It shows improvements as they exist to the best of our knowledge, but is not guaranteed to be correct in each and every detail.
12. This survey was prepared from current deeds of record and title search as provided by others and noted hereon.
13. This survey was prepared for the exclusive use of the person, persons, or entity, if any, named on the certification hereon. Said certificate does not extend to any unnamed person without an express re-certification by the surveyor naming said person.
14. The certification as provided on this survey, is purely a statement of professional opinion based on knowledge, information and belief, based on existing field evidence and documentary evidence provided by others.
15. The certification is not an expressed or implied warranty or guarantee.
16. This property as shown hereon is not located in a Special Flood Hazard Area as shown on F.E.M.A. Flood Insurance Rate Map, Community Panel No. 47119C0280E, dated April 16, 2007, (Zone "X"), as scaled graphically.

Surveyor's Title Notes

1. The property surveyed and shown hereon is the same property as described in Title Commitment provided by Fidelity National Title Insurance Company with an effective date of April 25, 2022.
2. The fence and sitting area as noted on the east side of property and shown on this survey.
3. No evidence of recent earth moving work, building construction, or building additions was observed at the time of survey.
4. No evidence of proposed changes in street right of way lines or of recent street or sidewalk construction or repairs was observed at the time of survey.
5. No cemeteries or burial grounds were observed on the property at the time of Survey, cemeteries may exist as no cemetery records search or Ground Penetrating Radar was used to identify one. Most of the survey work performed was boundary work with concentrated efforts on the outer perimeter of the property.
6. The subject property has public access to Trotwood Avenue and Old Sunnyside Lane.
7. The subject property is contiguous with adjoining properties and no gaps, gores, or overlaps were present at the time of this survey.

Legend

- EIP Iron Rod Found
- IPS Iron Rod Set
- I.P.F. Iron Pipe Found
- AXLE Axle Found
- Fence Post
- ECM Concrete Monument Existing
- P.K.F. PK Nail Found
- P.K.S. PK Nail Set
- R.R.S.F. Railroad Spike Found
- R.R.S.S. Railroad Spike Set
- Bench Mark
- Stake Found
- Fire Hydrant
- Water Meter
- Water Valve
- Water Reducer
- Clean Out
- Sanitary Sewer Manhole
- Storm Sewer Manhole
- Catch Basin
- Curb Inlet
- Storm Pipe
- Cable Manhole
- Electric Manhole
- Telephone Manhole
- Water Manhole
- Electric Meter
- Cable Riser
- Electric Riser
- Telephone Riser
- Telephone Booth
- Gas Meter
- Gas Valve
- Light Pole
- Power Pole
- Telephone Pole
- Guy Pole
- Power Pole
- Flag Pole
- Guy Wire
- Mailbox
- Parking Block
- Satellite Dish
- Handicap Parking
- Water Spigot
- Ballard
- Evergreen Tree
- Deciduous Tree
- Bush
- Sign
- Adjoining Property Line
- Subject Property Line
- Easement Line
- Building Setback Line
- Centerline
- Edge of Pavement
- Edge of Gravel
- Fence Line
- Landscape
- Woods / Tree line
- Edge of Water
- Ditch / Creek Centerline
- Minor Contour Line
- Index Contour Line
- G Gas Line
- SA Sanitary Sewer Line
- W Water Line
- ST Storm Sewer Line
- OH Overhead Utility Line
- OHC Overhead Cable Line
- OHE Overhead Electric Line
- OHT Overhead Telephone Line
- UG Underground Utility Line
- UGC Underground Cable Line
- UGE Underground Electric Line
- UGT Underground Telephone Line
- FM Forced Main Line

GRAPHIC SCALE

100 0 50 100 200 400

(IN FEET)
1 inch = 100 ft.

ALTA/NSPS Surveyor's Certification

The undersigned hereby certifies to Lennar of Tennessee,Fairview Town Center, LLC, and Doma Title Insurance, Inc.:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1,2,3,4,6b,7a,8,9,10,11a,13,14,16,17,18, and 19 of Table A thereof. The field work was completed in March of 2024.

Allen B. O'Leary, TN RLS #1987

6-20-24
Date

ALLEN B. O'LEARY — REGISTERED LAND SURVEYOR — AGRICULTURE — TENNESSEE NO. 1987

©2024

WES Engineers & Surveyors
CIVIL ENGINEERS & LAND SURVEYORS
2486 NASHVILLE HIGHWAY
COLUMBIA, TN 38401
PHONE: (931) 388-2329
www.wesengineers.com
WES ENGINEERS & SURVEYORS

Client
BRIGHTLAND HOMES OF TN
3815 S. Capital of Texas Hwy, Suite 275
Austin, TX 78704
512-330-9366

A.L.T.A./N.S.P.S. LAND TITLE SURVEY
ROGERS PROPERTY
COLUMBIA, TN 38401

REVISIONS	DATE

Drawn: AO
Checked:
Approved:
Date: 06/20/2024.

Job. no. 24540
Scale: Vertical: 1" = 100'
Horizontal:

1 of 1

FILE: J:_WES_Engineers_Surveyors 2024\24540 - Trotwood - Brightland\Dwg\Survey\01 - Survey\24540 Trotwood Survey.dwg

BK/PG: R3063/998-1003
25005971

6 PGS:AL-EASEMENT	
NANCY BATCH: 350675	04/29/2025 - 11:25 AM
VALUE	0.00
MORTGAGE TAX	0.00
TRANSFER TAX	0.00
RECORDING FEE	30.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	0.00
TOTAL AMOUNT	32.00

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

File:

Prepared by T. Jake Wolaver, Esq.
Wolaver & Carter
809 S. Main Street Suite 100
Columbia, TN 38401

EASEMENT DEED

This instrument is entered this 23rd day of April, 2025, by and between **Dobual Spring Creek Partners II**, FIRST PARTY, and **Nomau Partners, LLC**, SECOND PARTY.

WITNESSETH:

WHEREAS, said FIRST PARTY is the owner of a certain tract of land in the Ninth (9th) Civil District of Maury County, Tennessee, the same being the land conveyed to it by deed of record in Book R2944, Page 568, Register's Office of Maury County, Tennessee; and

WHEREAS, SECOND PARTY is acquiring an adjacent/neighboring parcel of land from James Gore and Stacy Gore, described in deed of record in Book R2387, Page 455, Register's Office of Maury County, Tennessee, both of which deeds are hereby referenced for greater certainty of description; and

WHEREAS, it is necessary for SECOND PARTY to go upon a portion of the property of FIRST PARTY in order to install, maintain and repair a roadway, a forced main sewer line, and other improvements as deemed necessary by SECOND PARTY, across and upon said property of FIRST PARTY, as described herein.

NOW, THEREFORE, said FIRST PARTY, for a good and valuable consideration in hand paid, does hereby give, grant and convey unto SECOND PARTY a perpetual right to construct improvements upon the property described below, and to go upon said lands whenever the same is reasonably necessary for the purpose of installing, inspecting, maintaining and

repairing said improvements. The easement conferred upon SECOND PARTY includes the rights of ingress and egress over and upon the described property. In constructing, maintaining and repairing any such improvements, SECOND PARTY shall remove all surplus earth, and restore the land and any improvements thereon to their prior condition, and interfere as little as is reasonably possible with any plants, fence or other improvements upon the land of the FIRST PARTY. The permanent easement granted to SECOND PARTY shall lie upon the property described as follows:

> Beginning at a point in the west line of James & Stacy Gore (DB R2387, pg. 455) and the east line of Doubal Spring Creek Partners (DB R2944, pg. 568), said point being located N 07°51'18" E , 149.81' from an iron pin found, being the southwest corner of Gore; thence leaving Gore and with a new severance line, the following calls: N 16°26'41" W , 105.96'; thence with a curve turning to the left with a radius of 222.50', an arc length of 30.46', with a chord bearing of N 20°22'01" W , and a chord length of 30.44'; thence N 24°17'22" W , 564.48'; thence with a curve turning to the right with a radius of 277.50', an arc length of 79.85', with a chord bearing of N 16°02'47" W , and a chord length of 79.57'; thence N 07°48'12" W , 47.06' to a point in the west line of Gore and the east line of Doubal Spring Creek Partners; thence with the west line of Gore, the following calls: thence S 24°18'28" E , 343.34'; thence S 24°06'33" E , 234.02'; thence S 23°29'25" E , 146.94'; thence S 09°41'12" E , 66.95'; thence S 07°51'18" W , 40.89' to the Point of Beginning. Containing 0.42 Acres, as surveyed by T-Square Surveying, J. Mark Cantrell, RLS #1859, dated 4-7-2025.

To facilitate the construction of these improvements, FIRST PARTY also grants SECOND PARTY a temporary construction easement over the land described as follows:

> Beginning at a point in the west line of James & Stacy Gore (DB R2387, pg. 455) and the east line of Doubal Spring Creek Partners (DB R2944, pg. 568); thence with the west line of Gore, S 07°23'31" W , 61.86'; thence leaving Gore and proceeding through the lands of Doubal Spring Creek Partners, the following calls: N 16°26'41" W , 162.54'; thence with a curve turning to the left with a radius of 197.50', an arc length of 27.04', with a chord bearing of N 20°22'01" W , and a chord length of 27.02'; thence N 24°17'22" W , 564.48'; thence with a curve turning to the right with a radius of 302.50', an arc length of 87.04', with a chord bearing of N 16°02'47" W , and a chord length of 86.74'; thence N 07°48'12" W , 45.87'; thence N 65°41'32" E , 24.31' to a point in the west line of Gore; thence with the west line

of Gore, S 24°18'28" E , 5.96'; thence leaving Gore and proceeding through the lands of Doubal Spring Creek Partners, the following calls: S 07°48'12" E , 47.06'; thence with a curve turning to the left with a radius of 277.50', an arc length of 79.85', with a chord bearing of S 16°02'47" E , and a chord length of 79.57'; thence S 24°17'22" E , 564.48'; thence with a curve turning to the right with a radius of 222.50', an arc length of 30.46', with a chord bearing of S 20°22'01" E , and a chord length of 30.44'; thence S 16°26'41" E , 105.96' to the Point of Beginning. Containing 0.49 Acres, as surveyed by T-Square Surveying, J. Mark Cantrell, RLS #1859, dated 4-7-2025.

Being part of Map 112 Parcel 16.01

Being also known as 0 Trotwood Ave., Columbia, Tennessee.

TO HAVE AND TO HOLD said right and easement to SECOND PARTY and its successors in title; it being agreed that the right and easement hereby granted runs with the land is appurtenant to the property being acquired by SECOND PARTY. This instrument shall bind the successors and assigns of both parties. It is anticipated that some or all of the improvements to be constructed may be dedicated to the City of Columbia, Tennessee, for public use. FIRST PARTY will cooperate as needed to complete any such dedication.

As partial consideration for the grant of easements set forth herein, SECOND PARTY agrees and binds itself as follows:

1) It will replace the trees being removed on the Dobaul property located outside the county right-of-way at a 1:1 ratio (one new 2" tree for every existing tree removed greater than 6" in diameter);

2) It will remove all tree stumps from trees that are removed;

3) It will notify the landowner at least thirty (30) days in advance of beginning grading activities. Grading activities on the Dobaul property are expected to last 180 days from the commencement of operations, but may be extended due to unfavorable weather conditions;

4) It will provide topsoil replacement to a depth of 6 inches;

5) It will provide seed and straw to establish new ground cover immediately upon completion of grading activities; and

6) It will provide sewer easement access to the sewer being proposed along Foster Lane upon completion of the construction.

IN TESTIMONY WHEREOF, the parties hereunto have set their signatures the day and year first above written.

FIRST PARTY:

Dobual Spring Creek Partners II

By: _____
Name: Allen P Halliday
Title: Managing Member

GRANTEE:

Nomau Partners, LLC

By: _____
Name: G. Nelson Crowe II
Title: Co-Manager

STATE OF TENNESSEE
COUNTY OF Shelby

Personally appeared before me, the undersigned, Allen Halliday, with whom I am personally acquainted, and who acknowledged under oath that he/she executed the within instrument for the purposes therein contained, and who further acknowledged that he/she is the Managing Member of Dobual Spring Creek Partners II.

WITNESS my hand, at office, this 23 day of April, 2025.

My Commission Expires:
06/06/2028

Notary Public

DREW HANCOCK
STATE OF TENNESSEE NOTARY PUBLIC
COMM. EXP. 06-06-2028
SHELBY COUNTY

§

STATE OF TENNESSEE
COUNTY OF Maury

Personally appeared before me, the undersigned, G Nelson Crowe, with whom I am personally acquainted, and who acknowledged under oath that he/she executed the within instrument for the purposes therein contained, and who further acknowledged that he/she is the Co-Manager of Nomau Partners, LLC.

WITNESS my hand, at office, this 28 day of April, 2025.

My Commission Expires:
9/22/26

Kay Therese Hosford
Notary Public

STATE OF TENNESSEE - MAURY COUNTY

I hereby affirm that the actual consideration for this transfer or value of the property transferred, whichever is greater is $0.00.

Kimberly L. Matney
Affiant

Subscribed and sworn to before me, this 28 day of April, 2025.

My commission expires:
9/22/26

Kay Therese Hosford
Notary Public

https://mtlawgroup-my.sharepoint.com/personal/jwolaver_mtlawgroup_net/documents/easement deed dobual.row.docx

T-SQUARE ENGINEERING
CIVIL-SITE | TRAFFIC | WASTEWATER

111 Southeast Parkway Court
Franklin, TN 37064
615.678.8212

www.T2-eng.com

May 19th, 2025

City of Columbia

Comment Response Letter – Trotwood Avenue and Foster Lane Subdivision

Engineering

1. Subject to construction plans and TIS
   Acknowledged.
2. Road improvements subject to TDOT approval
   Acknowledged.
3. Provide signed survey
   ALTA provided.
4. Foster Ln show as major local with 65 ft minimum ROW width.
   Foster Lane is now 65' minimum ROW.
5. Holly Berry Drive: remove parking. Provide 55' ROW, 4 ft grass strip and 5 ft sidewalk to tie into existing roadway section.
   Section has been updated.
6. ROW widths and parking
   Parking has been addressed.
7. Show Trotwood Ave ROW as dedication of ROW.
   Dedication shown on C-2.0.
8. Remove ST-HWD1 and tie ST-D1A to ST-HWE3 to eliminate concentrated outfall onto adjoining property.
   This violate' s TDOT's policy of adding any additional water to the TDOT ROW. Dobual has signed a grading agreement. Post-development runoff to his property is less than predevelopment runoff.
9. There is some offsite grading and work proposed on property to the SW (Dubual). Provide off-site grading agreement.
   Agreement provided.
10. Many lots are not suitable for slab-on-grade foundations. If that is the intent, revise proposed grading for those lots.
    Preliminary grading has been provided.

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Franklin, TN 37064
615.678.8212
www.T2-eng.com

11. We have no documentation showing existing ROW on Foster Lane. Provide documentation of existing ROW or add Dubual as a signature for ROW dedication.
    All new ROW is proposed on our property.
12. Advisory Note: existing roadway will be required to remain open for usage during construction of roadway improvements to Foster Lane.
    Acknowledged.
13. Remove street trees within 50 ft of intersection corners.
    Trees removed from within 50 ft of intersection corners, reflected on L-1.0.
14. Alpha Avenue: continue 65 ROW section for entire length and run sidewalk straight along the non-parked portions.
    ROW revised.
15. Gamma Grove between Sigma and Delta: Provide 65 ROW width to intersection and run sidewalk straight along the non-parked portion.
    ROW cannot be adjusted without losing lot 74. Per ESS, the ROW provided is appropriate for this section.
16. Grading within TVA easement subject to TVA approval
    Acknowledged.
17. Beta Bend east of Delta: provide ROW transition and parking opposite of each other.
    Parking & ROW revised.
18. ROW/section transitions generally should be done in a manner to maintain the minimum required grass strip.
    Transitions revised as best as possible.
19. Beta Bend: Remove parking and section transition in front of OS1 stormwater area and the space adjacent to lot 89 to maintain the minimum required grass strip.
    Transitions & parking revised as best as possible.

Planning

20. Mail Kiosk is being placed on an Open Space lot (OS-2) that does meet lot standards per the CD-3 standards.
    Kiosk relocated to Green:1.
21. Provide parking calculation for each identified civic space (1 space per 5,000 SF)

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615.678.8212
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Calculation provided on C-2.7.

22. Provide Note that SDP will comply with all CD-3 site, private landscaping and design standards.
    Note provided on C-2.0.
23. Correct street cross-section diagram to note 55' suburban. Section has it highlighted as urban.
    Naming updated.
24. ADA compliance is required at mail kiosk for access.
    Yes.
25. Site plan indicates cul-de-sac that requires a waiver. It is noted that there is a future stub out for connectivity to the property at the west. This shall be labeled as a temporary cul-de-sac and when connection is made to future development cul-de-sac will be removed by developer.
    Note provided on C-2.0.
26. Provide radius that each civic space playground is at least 1300' from any lot.
    Radius already provided on C-2.0.
27. Elevations will be reviewed at time of building permit that is required to adhere to all CD-3 standards. At time of this review, elevations shall not be reviewed for compliance.
    Note has been provided on C-2.0.
28. A Development Parcel of more than 10 acres requires a Pedestrian Shed of at least a main civic space of a green, square, or plaza type within 800 ft of the center of a pedestrian shed.
    Radius has been added to C-2.7.
29. Street trees are required along Foster.
    Trees added along Foster Lane, reflected on L-1.0.

Fire

30. Advisory note: Columbia Fire & Rescue now has a tanker truck in place and a mutual aid agreement with Maury County Fire to bring additional tanker trucks to the scene. Columbia Fire & Rescue will be able to supply an additional 600 gpm. The water letter states CPWS can provide 500gpm, so there will be 1,100gpm available. As long as all homes stay under 3,600sqft, no fire sprinklers will be required.
    Great, thanks.

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615.678.8212

www.T2-eng.com

Maury County E911

31. Maury County 911 will need an updated copy of this preliminary plat with street names correctly labeled. cgideon@maury911.org
    Names provided on C-2.0.

Maury County Schools

32. Woodard Elementary, Whitthorne Middle, Central High School
    The development combined with current neighborhoods and additional approved developments in these zones may require either new construction or realignment of school zones to accommodate new students.
    *Due to numbers, MCPS will be rezoning all Columbia and Spring Hill elementary schools for the 25/26 SY.
    Acknowledged.

Columbia Power

33. Columbia Power System has an existing power line near your proposed development. We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction. Unfortunately, due to current supply chain challenges, no timeframe can be guaranteed regarding the availability of meters or transformers appropriate for your development.
    Acknowledged.

Building

34. No comments.
    Acknowledged.

Police

35. No comments provided.
    Acknowledged.

Public Works

36. No comments.

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615.678.8212
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Acknowledged.

City Attorney

37. No comments provided.
    Acknowledged.

ATT

38. ATT intends to serve
    Acknowledged.

Columbia Water

39. A water availability letter was issued February 18, 2025, it remains valid for 120 days. The availability of capacity to serve is based on a determination by the Fire Marshal of the fire flow requirements and the information submitted on the Water Service Availability Request application. The current CPWS system is only able to support a minimum fire flow of 500 gpm in this development until additional capital improvements in the Southside distribution area are completed. Any off-site improvements detailed in the availability letter are the responsibility of the developer/owner. All public water system improvements are subject to the preparation and approval of detailed construction plans prepared in accordance with CPWS and Tennessee Department of Environment and Conservation requirements.
    All fees have been paid to formally reserve water capacity.

Atmos Energy

40. No comments provided.
    Acknowledged.

Maury County Highway Dept.

41. No comments.
    Acknowledged.

Duck River Electric Membership Corp

42. Specify beneficiary of ROW acquisition along Foster Lane and confirm Foster Lane will be transferred to the City of Columbia for ROW ownership and

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Franklin, TN 37064
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maintenance. Upon confirmation of the above, the Maury County Highway Department will work to remove Foster Lane from the Official Road List.
Foster Lane will become a City road. All infrastructure is located on this property.

Wastewater

43. No comment.
Acknowledged.

CITY OF
COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, May 13, 2025

ITEM NO.
25-0136

DESCRIPTION: Trotwood Avenue and Foster Lane

COMMENTS:

Engineering

1. Subject to construction plans and TIS
2. Road improvements subject to TDOT approval
3. Provide signed survey
4. Foster Ln show as major local with 65 ft minimum ROW width.
5. Holly Berry Drive: remove parking. Provide 55' ROW, 4 ft grass strip and 5 foot sidewalk to tie into existing roadway section.
6. ROW widths and parking
7. Show Trotwood Ave ROW as dedication of ROW.
8. Remove ST-HWD1 and tie ST-D1A to ST-HWE3 to eliminate concentrated outfall onto adjoining property.
9. There is some offsite grading and work proposed on property to the SW (Dubual). Provide off-site grading agreement.
10. Many lots are not suitable for slab-on-grade foundations. If that is the intent, revised proposed grading for those lots.
11. We have no documentation showing existing ROW on Foster Lane. Provide documentation of existing ROW or add Dubual as a signature for ROW dedication.
12. Advisory Note: existing roadway will be required to remain open for usage during construction of roadway improvements to Foster Lane.
13. Remove street trees within 50 ft. of intersection corners.
14. Alpha Avenue: continue 65 ROW section for entire length and run sidewalk straight along the non-parked portions.
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18. ROW/section transitions generally should be done in a manner to maintain the minimum required grass strip.
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COLUMBIA, TN 38401
PHONE: (931) 560-1560
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Planning

20. Mail Kiosk is being placed on an Open Space lot (OS-2) that does meet lot standards per the CD-3 standards.
21. Provide parking calculation for each identified civic space (1 space per 5,000 SF)
22. Provide Note that SDP will comply with all CD-3 site, private landscaping and design standards.
23. Correct street cross-section diagram to note 55' suburban. Section has it highlighted as urban.
24. ADA compliance is required at mail kiosk for access.
25. Site plan indicates cul-de-sac that requires a waiver. It is noted that there is a future stub out for connectivity to the property at the west. This shall be labeled as a temporary cul-de-sac and when connection is made to future development cul-de-sac will be removed by developer.
26. Provide radius that each civic space playground is at least 1300' from any lot.
27. Elevations will be reviewed at time of building permit that is required to adhere to all CD-3 standards. At time of this review, elevations shall not be reviewed for compliance.
28. A Development Parcel of more than 10 acres requires a Pedestrian Shed of at least a main civic space of a green, square, or plaza type within 800 ft of the center of a pedestrian shed.
29. Street trees are required along Foster.

Fire

30. Advisory note: Columbia Fire & Rescue now has a tanker truck in place and a mutual aid agreement with Maury County Fire to bring additional tanker trucks to the scene. Columbia Fire & Rescue will be able to supply an additional 600gpm. The water letter states CPWS can provide 500gpm, so there will be 1,100gpm available. As long as all homes stay under 3,600sqft, no fire sprinklers will be required.

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    The development combined with current neighborhoods and additional approved developments in these zones may require either new construction of realignment

of school zones to accommodate new students.
* Due to numbers, MCPS will be rezoning all Columbia and Spring Hill elementary schools for the 25/26 SY.

Columbia Power

33. Columbia Power System has an existing power line near your proposed development. We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction.
Unfortunately, due to current supply chain challenges, no timeframe can be guaranteed regarding the availability of meters or transformers appropriate for your development.

Building

34. No comments.

Police

35. No comments provided.

Public Works

36. No comments.

City Attorney

37. No comments provided.

ATT

38. ATT INTENDS TO SERVE

Columbia Water

39. A water availability letter was issued on February 18, 2025, it remains valid for 120 days. The availability of capacity to serve is based on a determination
by the Fire Marshal of fire flow requirements and the information submitted on the Water Service Availability Request application. The current CPWS system is only able to support a minimum fire flow of 500 gpm in this development until additional capital

improvements in the Southside distribution area are completed. Any off-site improvements detailed in the availability letter are the responsibility of the developer/owner. All public water system improvements are subject to the preparation and approval of detailed construction plans prepared in accordance with CPWS and Tennessee Department of Environment and Conservation requirements.

Atmos Energy

40. No comments provided.

Maury County Highway Dept.

41. No comments.

Duck River Electric Membership Corp

42. Specify beneficiary of ROW acquisition along Foster Lane and confirm Foster Lane will be transferred to the City of Columbia for ROW ownership and maintenance. Upon confirmation of the above, the Maury County Highway Department will work to remove Foster Lane from the Official Road List.

Wastewater

43. No comment.

Resubmittal Guidelines

Please provide a comment response letter as well as digital copies of revised plans and supporting documentation. Submit all required documents electronically through the online portal: columbia.onlama.com. If the files are oversized, please provide a file sharing link.

Please contact the case planner identified in the Planning Comments with any questions about the review process.
Please contact pkeltner@columbiatn.gov or srichardson@columbiatn.gov if you encounter difficulties with the online portal.
You will receive an invoice for required advertising and mailing fees. All fees must be paid by the Friday following resubmittal in order advance to the Planning Commission agenda.

NOTE: All resubmittals must demonstrate compliance with city standards prior to Planning Commission review. Requests which do not adhere to regulations and/or remain unresponsive to technical comments will not be forwarded to the next agenda until such items are amended.

CITY OF
COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

Final Plat applications which are not ready to proceed to Planning Commission following the first resubmittal deadline will be added to the following DRC agenda to confirm the status of required infrastructure and utilities. Applications which remain incomplete following two resubmittal deadlines will be closed.

TROTWOOD FOSTER SUBDIVISION

SITE DEVELOPMENT PLAN & PRELIMINARY PLAT

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

MAP 112, PARCEL 018.03

ENGINEER:
T-SQUARE ENGINEERING
ALLISON COROLLA, PE
111 SOUTHEAST PARKWAY COURT
FRANKLIN, TN 37064
(615)678-8212

SURVEYOR:
T-SQUARE SURVEYING
111 SOUTHEAST PARKWAY COURT
FRANKLIN, TN 37064
(615)678-8212

DEVELOPER:
NELSON CROWE
NELSON@FORTUNALLC.NET

WATER:
COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TN 38401
(931)388-4833

POWER:
COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TN 38401
(931)388-4833

SEWER:
COLUMBIA WASTEWATER
1244 TREATMENT PLANT ROAD
COLUMBIA, TN 38401
(931)560-1001



SITE VICINITY MAP
N.T.S.

Sheet Schedule

C-0.0	COVER SHEET
C-1.0	EXISTING CONDITIONS
C-2.0	SITE DEVELOPMENT PLAN & PRELIMINARY PLAT
C-2.1	DETAILED SITE PLAN
C-2.2	DETAILED SITE PLAN
C-2.3	DETAILED SITE PLAN
C-2.4	DETAILED SITE PLAN
C-2.5	PARCEL TABLES
C-2.6	PARCEL TABLES
C-2.7	CIVIC SPACE PLAN
C-2.8	SITE DETAILS
C-2.9	SITE DETAILS
C-2.10	RESOURCE PROTECTION PLAN
C-3.0	INITIAL EROSION CONTROL PLAN
C-3.1	TEMPORARY EROSION CONTROL PLAN
C-3.2	FINAL EROSION CONTROL PLAN
C-3.3	EROSION CONTROL DETAILS
C-5.0	GRADING PLAN
C-5.1	DRAINAGE PLAN
C-5.2	GRADING & DRAINAGE DETAILS
C-5.3	GRADING & DRAINAGE DETAILS
C-6.0	FOSTER LANE PLAN AND PROFILE
C-6.1	ALPHA AVENUE & SIGMA PASS PLAN AND PROFILE
C-6.2	BETA BEND PLAN AND PROFILE
C-6.3	BETA BEND PLAN AND PROFILE
C-6.4	BETA BEND PLAN AND PROFILE
C-6.5	GAMMA GROVE PLAN AND PROFILE
C-6.6	GAMMA GROVE PLAN & PROFILE
C-6.7	DELTA DRIVE PLAN & PROFILE
C-6.8	CUL-DE-SAC & HOLLY BERRY DRIVE PLAN & PROFILE
C-7.0	UTILITY PLAN

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

COVER SHEET
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

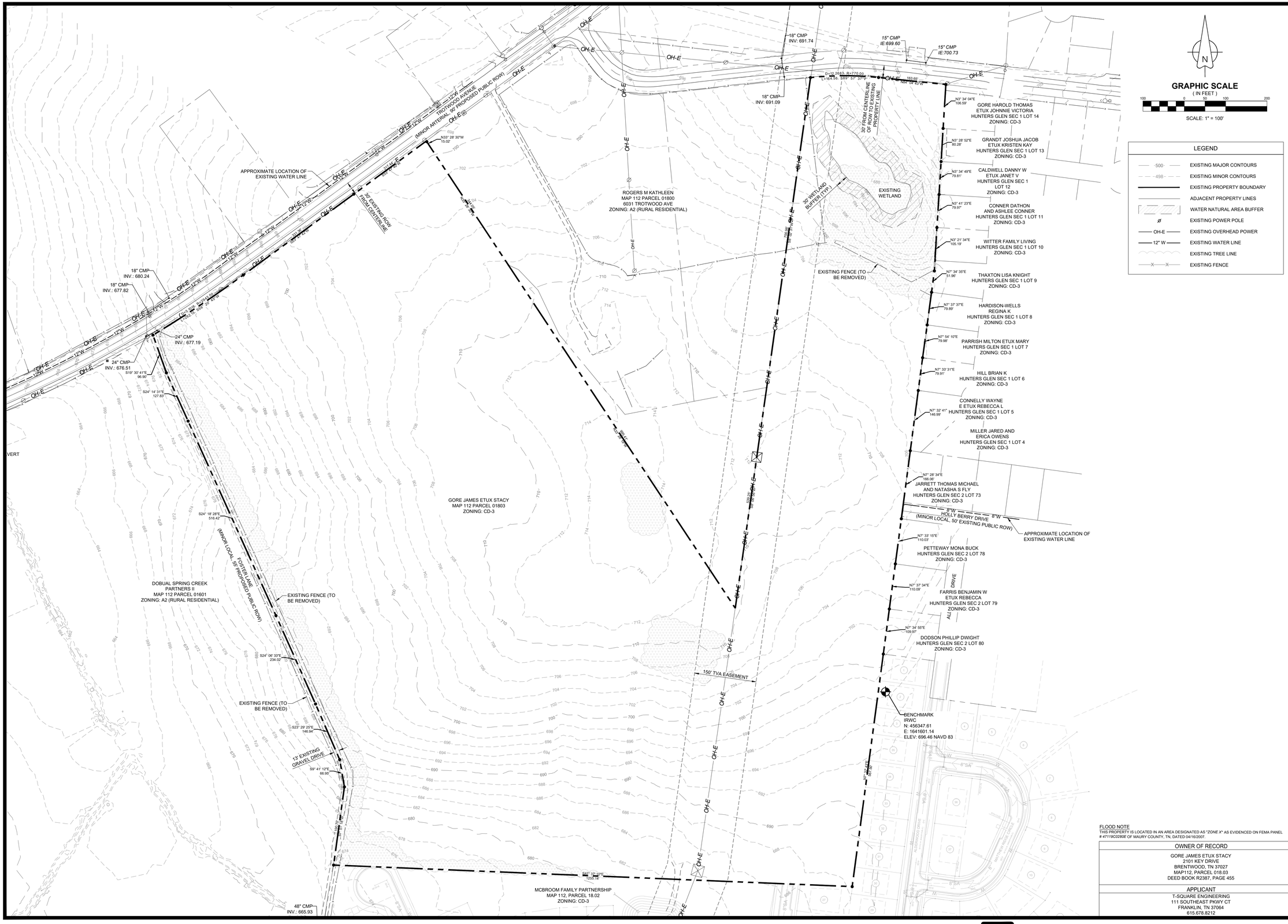
ALLISON B. COROLLA
REGISTERED ENGINEER
No. 127389
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-0.0

T-SQUARE ENGINEERING

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowe)\Production\24-0314 1- Site Plan.dwg, 4/15/2025 8:37:52 AM



FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

EXISTING CONDITIONS

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

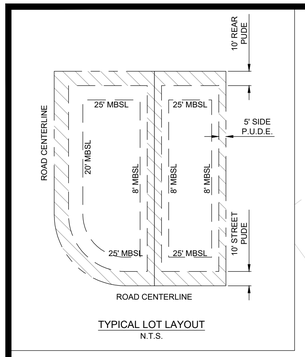
TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
LICENSED PROFESSIONAL ENGINEER
AGRICULTURE
No. 127399
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-1.0

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowe)\Production\24-0314 1- Site Plan.dwg, 4/15/2025 8:37:56 AM



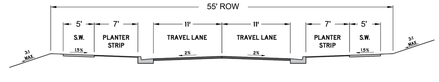
TYPICAL LOT LAYOUT
N.T.S.

SITE DATA	
PROJECT NAME	TROTWOOD FOSTER SUBDIVISION
PROJECT NUMBER	24-0314
ADDRESS	TROTWOOD AVENUE
PARCEL ID	MAP 112 PARCEL 018.03
EXISTING ZONING	CIVIC DISTRICT 3
PROPOSED ZONING	CIVIC DISTRICT 3
EXISTING SITE AREA	51.14 AC
ROW RESERVATION	0.75 AC
PROPOSED SITE AREA	50.52 AC
PROPOSED LOTS	119
PROPOSED DENSITY	2.36 UNITS/ACRE
BUILDING HEIGHT	3 STORIES MAXIMUM
LOT WIDTH	65' MINIMUM
SETBACKS	
FRONT	25' (PRIMARY); 20' (SECONDARY)
SIDE	8'
REAR	25'
CIVIC SPACE	
REQUIRED CIVIC SPACE	2.53 AC (5%)
PLAYGROUND 1	0.20 AC
PLAYGROUND 2	0.68 AC
GREEN	2.42 AC
PROVIDED CIVIC SPACE	3.30 AC (7%)

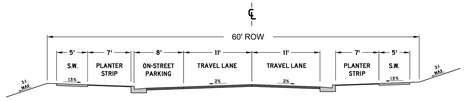
GRAPHIC SCALE
(IN FEET)
100 0 50 100 200
SCALE: 1" = 100'

LEGEND	
	PROPOSED LOT LINES
(00)	PROPOSED LOT NUMBER
	PROPOSED BUILDING SETBACK
8" W	PROPOSED WATER LINE
	PROPOSED WATER SERVICE
	PROPOSED FIRE HYDRANT ASSEMBLY
S	PROPOSED SANITARY MANHOLE
	PROPOSED SANITARY SERVICE
	PROPOSED STORM INLET
	PROPOSED HEADWALL
D	PROPOSED STORM MANHOLE

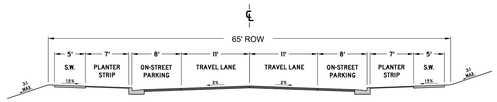
NOTES
- ALL HOMES TO HAVE A 2-CAR GARAGE, MEETING PARKING REQUIREMENTS
- PLAYGROUND SETUP SHOWN FOR GRAPHIC PURPOSES ONLY; FULL PLAYGROUND DIMENSIONS AND DETAILS WILL BE PROVIDED WITH CONSTRUCTION PLANS
- NO STRUCTURE ENCROACHMENT IS ALLOWED ON ANY LOT WITHIN A TVA EASEMENT



URBAN NEIGHBORHOOD STREET
PARALLEL PARKING BOTH SIDES
55' R.O.W.
TYPICAL SECTION
N.T.S.



URBAN NEIGHBORHOOD STREET
PARALLEL PARKING BOTH SIDES
60' R.O.W.
TYPICAL SECTION
N.T.S.



URBAN NEIGHBORHOOD STREET
PARALLEL PARKING BOTH SIDES
65' R.O.W.
TYPICAL SECTION
N.T.S.

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

SITE DEVELOPMENT PLAN & PRELIMINARY PLAT
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLLA
REGISTERED
LICENSED
ARCHITECTURE
No. 127380
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

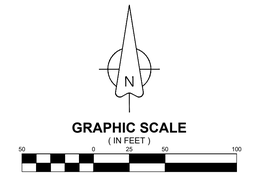
SHEET
C-2.0

T-SQUARE ENGINEERING

P:\Projects\202424-0314 (Trotwood Avenue - Tyler Roig & Nelson Crowe)\Production\24-0314 1- Site Plan.dwg, 4/15/2025 8:38:02 AM

SITE DATA	
PROJECT NAME	TROTWOOD FOSTER SUBDIVISION
PROJECT NUMBER	24-0314
ADDRESS	TROTWOOD AVENUE
PARCEL ID	MAP 112 PARCEL 018.03
EXISTING ZONING	CIVIC DISTRICT 3
PROPOSED ZONING	CIVIC DISTRICT 3
EXISTING SITE AREA	51.14 AC
ROW RESERVATION	0.75 AC
PROPOSED SITE AREA	50.52 AC
PROPOSED LOTS	119
PROPOSED DENSITY	2.36 UNITS/ACRE
BUILDING HEIGHT	3 STORIES MAXIMUM
LOT WIDTH	65' MINIMUM
SETBACKS	
FRONT	25' (PRIMARY); 20' (SECONDARY)
SIDE	8'
REAR	25'
CIVIC SPACE	
REQUIRED CIVIC SPACE	2.53 AC (5%)
PLAYGROUND 1	0.20 AC
PLAYGROUND 2	0.68 AC
GREEN	2.42 AC
PROVIDED CIVIC SPACE	3.30 AC (7%)





LEGEND	
	PROPOSED LOT LINES
(00)	PROPOSED LOT NUMBER
	PROPOSED BUILDING SETBACK
8" W	PROPOSED WATER LINE
	PROPOSED WATER SERVICE
	PROPOSED FIRE HYDRANT ASSEMBLY
S	PROPOSED SANITARY MANHOLE
	PROPOSED SANITARY SERVICE
	PROPOSED STORM INLET
	PROPOSED HEADWALL
D	PROPOSED STORM MANHOLE

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
1	9642.75	0.22
2	12724.12	0.29
3	14819.35	0.34
4	16915.28	0.39
5	17588.75	0.40
6	21185.82	0.49
7	22247.96	0.51
8	23282.63	0.53
9	10901.91	0.25
10	11839.06	0.27
11	15564.15	0.36
12	13417.50	0.31
13	10740.85	0.25
14	10000.00	0.23
15	10000.00	0.23
16	10000.00	0.23
17	10000.00	0.23
18	10000.00	0.23
19	10000.00	0.23
20	10010.28	0.23

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
21	11133.43	0.26
22	10521.71	0.24
23	9120.00	0.21
24	9120.00	0.21
25	9120.00	0.21
26	9119.71	0.21
27	10828.35	0.25
28	10080.98	0.23
29	10080.94	0.23
30	10080.86	0.23
31	10080.77	0.23
32	10080.69	0.23
33	10080.61	0.23
34	10080.53	0.23
35	10080.45	0.23
36	10080.37	0.23
37	10080.28	0.23
38	10080.20	0.23
39	12465.69	0.29
40	16092.59	0.37

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
41	14491.38	0.33
42	13489.60	0.31
43	13914.92	0.32
44	13864.56	0.32
45	13814.20	0.32
46	13763.84	0.32
47	13713.49	0.31
48	13663.13	0.31
49	13614.13	0.31
50	13570.47	0.31
51	13527.35	0.31
52	13485.50	0.31
53	9644.62	0.22
54	9597.09	0.22
55	9574.20	0.22
56	9572.15	0.22
57	9577.53	0.22
58	9583.66	0.22
59	10996.18	0.25
60	11020.85	0.25

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
61	10258.72	0.24
62	10256.77	0.24
63	10258.41	0.24
64	10257.53	0.24
65	10254.64	0.24
66	10251.74	0.24
67	10248.84	0.24
68	10245.95	0.24
69	10242.68	0.24
70	10650.39	0.24
71	18189.29	0.42
72	16436.56	0.38
73	15177.55	0.35
74	16363.60	0.38
75	10740.88	0.25
76	10740.87	0.25
77	10000.00	0.23
78	10000.00	0.23
79	10000.00	0.23
80	10000.00	0.23

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
81	10000.00	0.23
82	10000.00	0.23
83	10000.00	0.23
84	10000.00	0.23
85	10000.00	0.23
86	10000.00	0.23
87	10000.00	0.23
88	10740.88	0.25
89	9999.72	0.23
90	10000.00	0.23
91	10000.00	0.23
92	10000.00	0.23
93	10000.00	0.23
94	10000.00	0.23
95	10000.00	0.23
96	10000.00	0.23
97	10000.00	0.23
98	10000.00	0.23
99	10000.00	0.23
100	10740.88	0.25

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
101	10740.87	0.25
102	10000.00	0.23
103	15770.50	0.36
104	10595.40	0.24
105	10595.40	0.24
106	9852.50	0.23
107	10000.00	0.23
108	10000.00	0.23
109	10000.00	0.23
110	10000.00	0.23
111	10000.00	0.23
112	10740.88	0.25
113	9950.17	0.23
114	16363.90	0.38
115	12002.37	0.28
116	11048.00	0.25
117	11160.07	0.26
118	11136.01	0.26
119	10684.98	0.25

Open Space Areas		
PARCEL	SQ. FT.	ACRE
GREEN SPACE:1	105367.96	2.42
OS:1	59202.02	1.36
OS:2	1000.00	0.02
OS:3	158660.92	3.64
OS:4	15283.34	0.35
OS:5	18059.42	0.41
PLAYGROUND:1	8652.85	0.20
PLAYGROUND:2	29569.83	0.68

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

DETAILED SITE PLAN

MAP 112, PARCEL 018.03

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
REGISTERED ENGINEER
No. 127369
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-2.1

T-SQUARE ENGINEERING

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowell)\Production\24-0314 1- Site Plan.dwg, 4/15/2025 8:38:18 AM

SITE DATA	
PROJECT NAME	TROTWOOD FOSTER SUBDIVISION
PROJECT NUMBER	24-0314
ADDRESS	TROTWOOD AVENUE
PARCEL ID	MAP 112 PARCEL 018.03
EXISTING ZONING	CIVIC DISTRICT 3
PROPOSED ZONING	CIVIC DISTRICT 3
EXISTING SITE AREA	51.14 AC
ROW RESERVATION	0.75 AC
PROPOSED SITE AREA	50.52 AC
PROPOSED LOTS	119
PROPOSED DENSITY	2.36 UNITS/ACRE
BUILDING HEIGHT	3 STORIES MAXIMUM
LOT WIDTH	65' MINIMUM
SETBACKS	
FRONT	25' (PRIMARY); 20' (SECONDARY)
SIDE	8'
REAR	25'
CIVIC SPACE	
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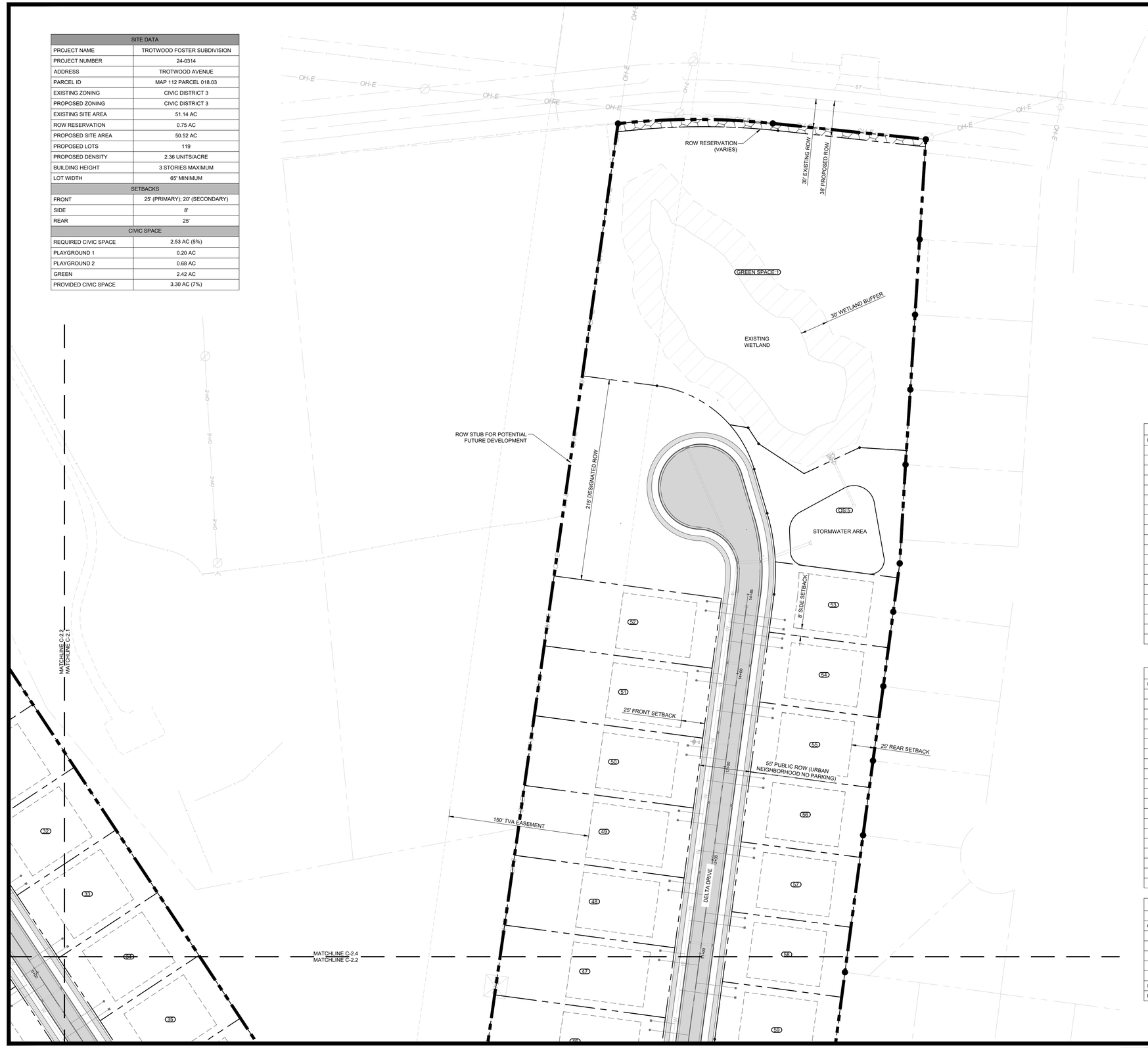

N

GRAPHIC SCALE
(IN FEET)
50 0 25 50 100
SCALE: 1" = 50'

LEGEND	
	PROPOSED LOT LINES
00	PROPOSED LOT NUMBER
	PROPOSED BUILDING SETBACK
8" W	PROPOSED WATER LINE
	PROPOSED WATER SERVICE
	PROPOSED FIRE HYDRANT ASSEMBLY
S	PROPOSED SANITARY MANHOLE
	PROPOSED SANITARY SERVICE
	PROPOSED STORM INLET
	PROPOSED HEADWALL
	PROPOSED STORM MANHOLE

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
1	9642.75	0.22
2	12724.12	0.29
3	14819.35	0.34
4	16915.28	0.39
5	17588.75	0.40
6	21185.82	0.49
7	22247.96	0.51
8	23282.63	0.53
9	10901.91	0.25
10	11839.06	0.27
11	15564.15	0.36
12	13417.50	0.31
13	10740.85	0.25
14	10000.00	0.23
15	10000.00	0.23
16	10000.00	0.23
17	10000.00	0.23
18	10000.00	0.23
19	10000.00	0.23
20	10010.28	0.23

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PARCEL	SQ. FT.	ACRES
21	11133.43	0.26
22	10521.71	0.24
23	9120.00	0.21
24	9120.00	0.21
25	9120.00	0.21
26	9119.71	0.21
27	10828.35	0.25
28	10080.98	0.23
29	10080.94	0.23
30	10080.86	0.23
31	10080.77	0.23
32	10080.69	0.23
33	10080.61	0.23
34	10080.53	0.23
35	10080.45	0.23
36	10080.37	0.23
37	10080.28	0.23
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50	13570.47	0.31
51	13527.35	0.31
52	13485.50	0.31
53	9644.62	0.22
54	9597.09	0.22
55	9574.20	0.22
56	9572.15	0.22
57	9577.53	0.22
58	9583.66	0.22
59	10996.18	0.25
60	11020.85	0.25

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PARCEL	SQ. FT.	ACRES
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68	10245.95	0.24
69	10242.68	0.24
70	10650.39	0.24
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89	9999.72	0.23
90	10000.00	0.23
91	10000.00	0.23
92	10000.00	0.23
93	10000.00	0.23
94	10000.00	0.23
95	10000.00	0.23
96	10000.00	0.23
97	10000.00	0.23
98	10000.00	0.23
99	10000.00	0.23
100	10740.88	0.25

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101	10740.87	0.25
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105	10595.40	0.24
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108	10000.00	0.23
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112	10740.88	0.25
113	9950.17	0.23
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115	12002.37	0.28
116	11048.00	0.25
117	11160.07	0.26
118	11136.01	0.26
119	10684.98	0.25

Open Space Areas		
PARCEL	SQ. FT.	ACRE
GREEN SPACE:1	105367.96	2.42
OS:1	59202.02	1.36
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OS:4	15283.34	0.35
OS:5	18059.42	0.41
PLAYGROUND:1	8652.85	0.20
PLAYGROUND:2	29569.83	0.68

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY
2101 KEY DRIVE
BRENTWOOD, TN 37027
MAP112, PARCEL 018.03
DEED BOOK R2387, PAGE 455

APPLICANT
T-SQUARE ENGINEERING
111 SOUTHEAST PKWY CT
FRANKLIN, TN 37064
615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

DETAILED SITE PLAN
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
REGISTERED LANDSCAPE ARCHITECT
No. 127799
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-2.2

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowe)\Production\24-0314 1- Site Plan.dwg, 4/15/2025 8:38:33 AM

SITE DATA	
PROJECT NAME	TROTWOOD FOSTER SUBDIVISION
PROJECT NUMBER	24-0314
ADDRESS	TROTWOOD AVENUE
PARCEL ID	MAP 112 PARCEL 018.03
EXISTING ZONING	CIVIC DISTRICT 3
PROPOSED ZONING	CIVIC DISTRICT 3
EXISTING SITE AREA	51.14 AC
ROW RESERVATION	0.75 AC
PROPOSED SITE AREA	50.52 AC
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SETBACKS	
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SIDE	8'
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CIVIC SPACE	
REQUIRED CIVIC SPACE	2.53 AC (5%)
PLAYGROUND 1	0.20 AC
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GREEN	2.42 AC
PROVIDED CIVIC SPACE	3.30 AC (7%)



N

GRAPHIC SCALE
(IN FEET)
50 0 25 50 100
SCALE: 1" = 50'

LEGEND

- PROPOSED LOT LINES
- (100) PROPOSED LOT NUMBER
- PROPOSED BUILDING SETBACK
- 8" W PROPOSED WATER LINE
- PROPOSED WATER SERVICE
- PROPOSED FIRE HYDRANT ASSEMBLY
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY SERVICE
- PROPOSED STORM INLET
- PROPOSED HEADWALL
- PROPOSED STORM MANHOLE

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
1	9642.75	0.22
2	12724.12	0.29
3	14819.35	0.34
4	16915.28	0.39
5	17588.75	0.40
6	21185.82	0.49
7	22247.96	0.51
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12	13417.50	0.31
13	10740.85	0.25
14	10000.00	0.23
15	10000.00	0.23
16	10000.00	0.23
17	10000.00	0.23
18	10000.00	0.23
19	10000.00	0.23
20	10010.28	0.23

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
21	11133.43	0.26
22	10521.71	0.24
23	9120.00	0.21
24	9120.00	0.21
25	9120.00	0.21
26	9119.71	0.21
27	10828.35	0.25
28	10080.98	0.23
29	10080.94	0.23
30	10080.86	0.23
31	10080.77	0.23
32	10080.69	0.23
33	10080.61	0.23
34	10080.53	0.23
35	10080.45	0.23
36	10080.37	0.23
37	10080.28	0.23
38	10080.20	0.23
39	12465.69	0.29
40	16092.59	0.37

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
41	14491.38	0.33
42	13489.60	0.31
43	13914.92	0.32
44	13864.56	0.32
45	13814.20	0.32
46	13763.84	0.32
47	13713.49	0.31
48	13663.13	0.31
49	13614.13	0.31
50	13570.47	0.31
51	13527.35	0.31
52	13485.50	0.31
53	9644.62	0.22
54	9597.09	0.22
55	9574.20	0.22
56	9572.15	0.22
57	9577.53	0.22
58	9583.66	0.22
59	10996.18	0.25
60	11020.85	0.25

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
61	10258.72	0.24
62	10256.77	0.24
63	10258.41	0.24
64	10257.53	0.24
65	10254.64	0.24
66	10251.74	0.24
67	10248.84	0.24
68	10245.95	0.24
69	10242.68	0.24
70	10650.39	0.24
71	18189.29	0.42
72	16436.56	0.38
73	15177.55	0.35
74	16363.60	0.38
75	10740.88	0.25
76	10740.87	0.25
77	10000.00	0.23
78	10000.00	0.23
79	10000.00	0.23
80	10000.00	0.23

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
81	10000.00	0.23
82	10000.00	0.23
83	10000.00	0.23
84	10000.00	0.23
85	10000.00	0.23
86	10000.00	0.23
87	10000.00	0.23
88	10740.88	0.25
89	9999.72	0.23
90	10000.00	0.23
91	10000.00	0.23
92	10000.00	0.23
93	10000.00	0.23
94	10000.00	0.23
95	10000.00	0.23
96	10000.00	0.23
97	10000.00	0.23
98	10000.00	0.23
99	10000.00	0.23
100	10740.88	0.25

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
101	10740.87	0.25
102	10000.00	0.23
103	15770.50	0.36
104	10595.40	0.24
105	10595.40	0.24
106	9852.50	0.23
107	10000.00	0.23
108	10000.00	0.23
109	10000.00	0.23
110	10000.00	0.23
111	10000.00	0.23
112	10740.88	0.25
113	9950.17	0.23
114	16363.90	0.38
115	12002.37	0.28
116	11048.00	0.25
117	11160.07	0.26
118	11136.01	0.26
119	10684.98	0.25

Open Space Areas		
PARCEL	SQ. FT.	ACRE
GREEN SPACE:1	105367.96	2.42
OS:1	59202.02	1.36
OS:2	1000.00	0.02
OS:3	158660.92	3.64
OS:4	15283.34	0.35
OS:5	18059.42	0.41
PLAYGROUND:1	8652.85	0.20
PLAYGROUND:2	29569.83	0.68

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD

GORE JAMES ETUX STACY
2101 KEY DRIVE
BRENTWOOD, TN 37027
MAP112, PARCEL 018.03
DEED BOOK R2387, PAGE 455

APPLICANT

T-SQUARE ENGINEERING
111 SOUTHEAST PKWY CT
FRANKLIN, TN 37064
615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

DETAILED SITE PLAN

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

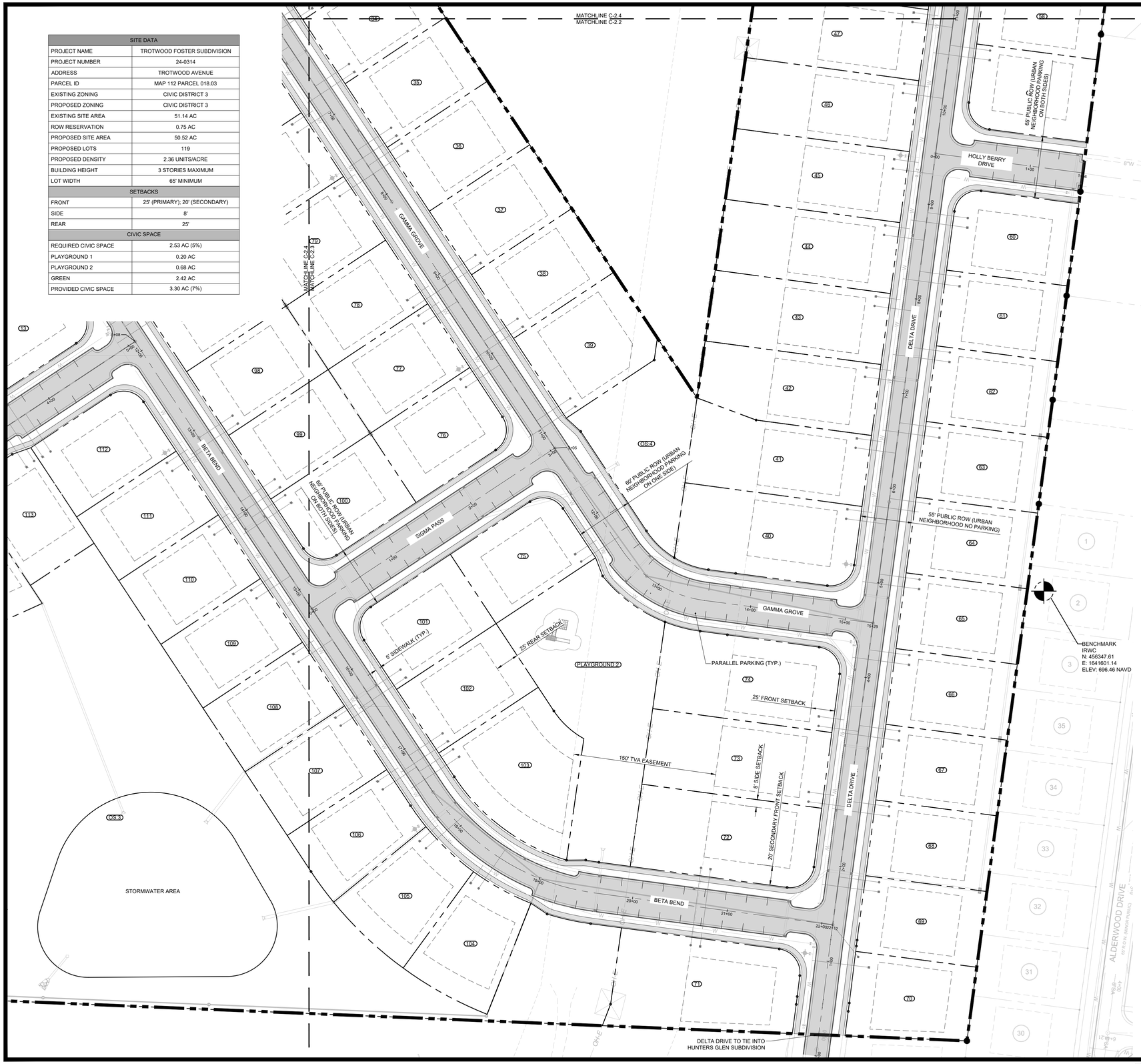
ALLISON B. COROLLA
ARCHITECTURE
No. 127380
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-2.3

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Roig & Nelson Crowe)\Production\24-0314 1- Site Plan.dwg, 4/15/2025 8:38:43 AM

SITE DATA	
PROJECT NAME	TROTWOOD FOSTER SUBDIVISION
PROJECT NUMBER	24-0314
ADDRESS	TROTWOOD AVENUE
PARCEL ID	MAP 112 PARCEL 018.03
EXISTING ZONING	CIVIC DISTRICT 3
PROPOSED ZONING	CIVIC DISTRICT 3
EXISTING SITE AREA	51.14 AC
ROW RESERVATION	0.75 AC
PROPOSED SITE AREA	50.52 AC
PROPOSED LOTS	119
PROPOSED DENSITY	2.36 UNITS/ACRE
BUILDING HEIGHT	3 STORIES MAXIMUM
LOT WIDTH	65' MINIMUM
SETBACKS	
FRONT	25' (PRIMARY); 20' (SECONDARY)
SIDE	8'
REAR	25'
CIVIC SPACE	
REQUIRED CIVIC SPACE	2.53 AC (5%)
PLAYGROUND 1	0.20 AC
PLAYGROUND 2	0.68 AC
GREEN	2.42 AC
PROVIDED CIVIC SPACE	3.30 AC (7%)



N

GRAPHIC SCALE
(IN FEET)
50 0 25 50 100
SCALE: 1" = 50'

LEGEND	
	PROPOSED LOT LINES
(00)	PROPOSED LOT NUMBER
	PROPOSED BUILDING SETBACK
8" W	PROPOSED WATER LINE
	PROPOSED WATER SERVICE
	PROPOSED FIRE HYDRANT ASSEMBLY
S	PROPOSED SANITARY MANHOLE
	PROPOSED SANITARY SERVICE
	PROPOSED STORM INLET
	PROPOSED HEADWALL
	PROPOSED STORM MANHOLE

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
1	9642.75	0.22
2	12724.12	0.29
3	14819.35	0.34
4	16915.28	0.39
5	17588.75	0.40
6	21185.82	0.49
7	22247.96	0.51
8	23282.63	0.53
9	10901.91	0.25
10	11839.06	0.27
11	15564.15	0.36
12	13417.50	0.31
13	10740.85	0.25
14	10000.00	0.23
15	10000.00	0.23
16	10000.00	0.23
17	10000.00	0.23
18	10000.00	0.23
19	10000.00	0.23
20	10010.28	0.23

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
21	11133.43	0.26
22	10521.71	0.24
23	9120.00	0.21
24	9120.00	0.21
25	9120.00	0.21
26	9119.71	0.21
27	10828.35	0.25
28	10080.98	0.23
29	10080.94	0.23
30	10080.86	0.23
31	10080.77	0.23
32	10080.69	0.23
33	10080.61	0.23
34	10080.53	0.23
35	10080.45	0.23
36	10080.37	0.23
37	10080.28	0.23
38	10080.20	0.23
39	12465.69	0.29
40	16092.59	0.37

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
41	14491.38	0.33
42	13489.60	0.31
43	13914.92	0.32
44	13864.56	0.32
45	13814.20	0.32
46	13763.84	0.32
47	13713.49	0.31
48	13663.13	0.31
49	13614.13	0.31
50	13570.47	0.31
51	13527.35	0.31
52	13485.50	0.31
53	9644.62	0.22
54	9597.09	0.22
55	9574.20	0.22
56	9572.15	0.22
57	9577.53	0.22
58	9583.66	0.22
59	10996.18	0.25
60	11020.85	0.25

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
61	10258.72	0.24
62	10256.77	0.24
63	10258.41	0.24
64	10257.53	0.24
65	10254.64	0.24
66	10251.74	0.24
67	10248.84	0.24
68	10245.95	0.24
69	10242.68	0.24
70	10650.39	0.24
71	18189.29	0.42
72	16436.56	0.38
73	15177.55	0.35
74	16363.60	0.38
75	10740.88	0.25
76	10740.87	0.25
77	10000.00	0.23
78	10000.00	0.23
79	10000.00	0.23
80	10000.00	0.23

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
81	10000.00	0.23
82	10000.00	0.23
83	10000.00	0.23
84	10000.00	0.23
85	10000.00	0.23
86	10000.00	0.23
87	10000.00	0.23
88	10740.88	0.25
89	9999.72	0.23
90	10000.00	0.23
91	10000.00	0.23
92	10000.00	0.23
93	10000.00	0.23
94	10000.00	0.23
95	10000.00	0.23
96	10000.00	0.23
97	10000.00	0.23
98	10000.00	0.23
99	10000.00	0.23
100	10740.88	0.25

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
101	10740.87	0.25
102	10000.00	0.23
103	15770.50	0.36
104	10595.40	0.24
105	10595.40	0.24
106	9852.50	0.23
107	10000.00	0.23
108	10000.00	0.23
109	10000.00	0.23
110	10000.00	0.23
111	10000.00	0.23
112	10740.88	0.25
113	9950.17	0.23
114	16363.90	0.38
115	12002.37	0.28
116	11048.00	0.25
117	11160.07	0.26
118	11136.01	0.26
119	10684.98	0.25

Open Space Areas		
PARCEL	SQ. FT.	ACRE
GREEN SPACE:1	105367.96	2.42
OS:1	59202.02	1.36
OS:2	1000.00	0.02
OS:3	158660.92	3.64
OS:4	15283.34	0.35
OS:5	18059.42	0.41
PLAYGROUND:1	8652.85	0.20
PLAYGROUND:2	29569.83	0.68

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

DETAILED SITE PLAN

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLLA
REGISTERED ENGINEER
AGRICULTURE
CIVIL
No. 127369
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-2.4

T-SQUARE ENGINEERING

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PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
1	9642.75	0.22
2	12724.12	0.29
3	14819.35	0.34
4	16915.28	0.39
5	17588.75	0.40
6	21185.82	0.49
7	22247.96	0.51
8	23282.63	0.53
9	10901.91	0.25
10	11839.06	0.27
11	15564.15	0.36
12	13417.50	0.31
13	10740.85	0.25
14	10000.00	0.23
15	10000.00	0.23
16	10000.00	0.23
17	10000.00	0.23
18	10000.00	0.23
19	10000.00	0.23
20	10010.28	0.23

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
21	11133.43	0.26
22	10521.71	0.24
23	9120.00	0.21
24	9120.00	0.21
25	9120.00	0.21
26	9119.71	0.21
27	10828.35	0.25
28	10080.98	0.23
29	10080.94	0.23
30	10080.86	0.23
31	10080.77	0.23
32	10080.69	0.23
33	10080.61	0.23
34	10080.53	0.23
35	10080.45	0.23
36	10080.37	0.23
37	10080.28	0.23
38	10080.20	0.23
39	12465.69	0.29
40	16092.59	0.37

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
41	14491.38	0.33
42	13489.60	0.31
43	13914.92	0.32
44	13864.56	0.32
45	13814.20	0.32
46	13763.84	0.32
47	13713.49	0.31
48	13663.13	0.31
49	13614.13	0.31
50	13570.47	0.31
51	13527.35	0.31
52	13485.50	0.31
53	9644.62	0.22
54	9597.09	0.22
55	9574.20	0.22
56	9572.15	0.22
57	9577.53	0.22
58	9583.66	0.22
59	10996.18	0.25
60	11020.85	0.25

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
61	10258.72	0.24
62	10256.77	0.24
63	10258.41	0.24
64	10257.53	0.24
65	10254.64	0.24
66	10251.74	0.24
67	10248.84	0.24
68	10245.95	0.24
69	10242.68	0.24
70	10650.39	0.24
71	18189.29	0.42
72	16436.56	0.38
73	15177.55	0.35
74	16363.60	0.38
75	10740.88	0.25
76	10740.87	0.25
77	10000.00	0.23
78	10000.00	0.23
79	10000.00	0.23
80	10000.00	0.23

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
81	10000.00	0.23
82	10000.00	0.23
83	10000.00	0.23
84	10000.00	0.23
85	10000.00	0.23
86	10000.00	0.23
87	10000.00	0.23
88	10740.88	0.25
89	9999.72	0.23
90	10000.00	0.23
91	10000.00	0.23
92	10000.00	0.23
93	10000.00	0.23
94	10000.00	0.23
95	10000.00	0.23
96	10000.00	0.23
97	10000.00	0.23
98	10000.00	0.23
99	10000.00	0.23
100	10740.88	0.25

PARCEL AREA TABLE		
PARCEL	SQ. FT.	ACRES
101	10740.87	0.25
102	10000.00	0.23
103	15770.50	0.36
104	10595.40	0.24
105	10595.40	0.24
106	9852.50	0.23
107	10000.00	0.23
108	10000.00	0.23
109	10000.00	0.23
110	10000.00	0.23
111	10000.00	0.23
112	10740.88	0.25
113	9950.17	0.23
114	16363.90	0.38
115	12002.37	0.28
116	11048.00	0.25
117	11160.07	0.26
118	11136.01	0.26
119	10684.98	0.25

Open Space Areas		
PARCEL	SQ. FT.	ACRE
GREEN SPACE:1	105367.96	2.42
OS:1	59202.02	1.36
OS:2	1000.00	0.02
OS:3	158660.92	3.64
OS:4	15283.34	0.35
OS:5	18059.42	0.41
PLAYGROUND:1	8652.85	0.20
PLAYGROUND:2	29569.83	0.68

N

GRAPHIC SCALE
(IN FEET)
100 0 50 100 200
SCALE: 1" = 100'

TROTWOOD FOSTER SUBDIVISION

PARCEL TABLES

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

ALLISON B. COROLLA
LICENSED PROFESSIONAL ENGINEER
No. 127369
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-2.5

T-SQUARE ENGINEERING

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crown)\Production\24-0314 1- Site Plan.dwg, 4/15/2025 8:39:11 AM

Parcel Line Table		
Line #	Length	Direction
L1	75.00	S32° 11' 18.63"E
L2	127.73	S57° 48' 41.37"W
L3	75.02	N33° 28' 21.99"W
L4	2.48	S32° 11' 18.63"E
L5	129.41	N57° 48' 41.37"E
L6	116.19	N33° 28' 21.99"W
L7	80.00	S33° 28' 21.99"E
L8	18.74	S33° 28' 21.99"E
L9	48.30	S7° 48' 11.66"E
L10	149.33	S75° 07' 54.30"W
L11	61.26	S33° 28' 21.99"E
L12	44.44	S33° 28' 21.99"E
L13	80.00	S7° 48' 11.66"E
L14	192.22	S82° 11' 48.34"W
L15	35.56	S33° 28' 21.99"E
L16	53.20	S33° 28' 21.99"E
L17	77.73	S7° 48' 11.66"E
L18	230.67	N82° 11' 48.34"E
L19	26.80	S33° 28' 21.99"E
L20	12.74	S33° 28' 21.99"E
L21	46.81	S24° 17' 21.94"E
L22	256.21	N65° 42' 38.06"E
L23	67.26	S33° 28' 21.99"E
L24	13.78	S33° 28' 21.99"E
L25	80.00	S24° 17' 21.94"E
L26	271.63	N65° 42' 38.06"E
L27	66.22	S33° 28' 21.99"E
L28	80.00	S33° 28' 21.99"E
L29	80.00	S24° 17' 21.94"E
L30	284.57	N65° 42' 38.06"E
L31	80.00	S33° 28' 21.99"E
L32	15.86	S33° 28' 22.30"E
L33	80.00	S24° 17' 21.94"E
L34	135.90	S65° 42' 38.06"W
L35	80.00	N24° 49' 17.90"W
L36	62.00	S24° 17' 21.94"E
L37	136.65	S65° 42' 38.06"W
L38	92.00	S24° 49' 17.90"E
L39	20.62	N79° 44' 48.53"E
L40	92.50	N65° 42' 38.06"E
L41	80.00	S65° 42' 38.06"W
L42	169.22	S32° 00' 32.35"E
L43	13.79	N56° 31' 40.65"E
L44	61.19	N65° 42' 38.06"E
L45	64.87	N56° 31' 40.65"E
L46	20.62	N42° 29' 30.70"E
L47	87.00	N33° 28' 22.37"W
L48	64.14	N33° 28' 22.37"W
L49	125.00	S56° 31' 40.65"W
L50	62.00	N33° 28' 21.99"W
L51	100.00	N56° 31' 40.65"E
L52	125.00	S56° 31' 40.65"W
L53	80.00	N33° 28' 21.99"W
L54	125.00	S56° 31' 40.65"W
L55	80.00	N33° 28' 21.99"W
L56	125.00	S56° 31' 40.65"W
L57	80.00	N33° 28' 21.99"W
L58	125.00	N56° 31' 40.65"E
L59	80.00	N33° 28' 21.99"W
L60	125.00	S56° 31' 40.65"W
L61	80.00	N33° 28' 21.99"W
L62	125.00	N56° 31' 40.65"E
L63	80.00	N33° 28' 21.99"W
L64	126.47	N56° 31' 40.65"E
L65	58.91	N33° 28' 21.99"W
L66	156.72	S56° 31' 40.65"W
L67	39.37	N8° 01' 13.43"W
L68	81.12	S32° 11' 18.63"E
L69	466.91	S53° 53' 49.37"W
L70	40.55	N33° 28' 29.62"W
L71	13.50	N56° 31' 40.65"E
L72	20.92	N52° 25' 25.25"E
L73	109.00	S55° 07' 47.88"E
L74	13.50	S56° 31' 40.65"W
L75	114.00	N33° 28' 20.53"W
L76	80.00	S56° 31' 40.65"W
L77	114.00	N33° 28' 20.53"W
L78	80.00	N56° 31' 40.65"E
L79	80.00	S56° 31' 40.65"W
L80	114.00	N33° 28' 20.53"W

Parcel Line Table		
Line #	Length	Direction
L81	80.00	N56° 31' 40.65"E
L82	80.00	S56° 31' 40.65"W
L83	114.00	N33° 28' 20.53"W
L84	80.00	N56° 31' 40.65"E
L85	79.99	S56° 31' 40.65"W
L86	114.00	N33° 28' 29.62"W
L87	80.00	N56° 31' 40.65"E
L88	62.00	S33° 28' 21.99"E
L89	101.00	S56° 31' 40.65"W
L90	87.00	N33° 28' 48.57"W
L91	80.00	S33° 28' 21.99"E
L92	126.01	N56° 31' 40.65"E
L93	42.51	N33° 28' 29.62"W
L94	37.49	N33° 28' 19.35"W
L95	80.00	S33° 28' 21.99"E
L96	126.01	N56° 31' 40.65"E
L97	80.00	N33° 28' 19.35"W
L98	80.00	S33° 28' 21.99"E
L99	126.01	N56° 31' 40.65"E
L100	80.00	N33° 28' 19.35"W
L101	80.00	S33° 28' 21.99"E
L102	126.01	N56° 31' 40.65"E
L103	80.00	N33° 28' 19.35"W
L104	80.00	S33° 28' 21.99"E
L105	126.01	S56° 31' 40.65"W
L106	80.00	N33° 28' 19.35"W
L107	80.00	S33° 28' 21.99"E
L108	126.01	N56° 31' 40.65"E
L109	80.00	N33° 28' 19.35"W
L110	80.00	S33° 28' 21.99"E
L111	126.01	N56° 31' 40.65"E
L112	80.00	N33° 28' 19.35"W
L113	80.00	S33° 28' 21.99"E
L114	126.01	S56° 31' 40.65"W
L115	80.00	N33° 28' 19.35"W
L116	80.00	S33° 28' 21.99"E
L117	126.01	N56° 31' 40.65"E
L118	80.00	N33° 28' 19.35"W
L119	80.00	S33° 28' 21.99"E
L120	126.00	N56° 31' 40.65"E
L121	80.00	N33° 28' 19.35"W
L122	80.00	S33° 28' 21.99"E
L123	126.00	S56° 31' 40.65"W
L124	80.00	N33° 28' 19.35"W
L125	100.00	S33° 28' 23.51"E
L126	126.00	N56° 31' 40.65"E
L127	82.60	N33° 28' 19.35"W
L128	20.62	S47° 30' 25.14"E
L129	110.55	S56° 31' 40.65"W
L130	23.27	S8° 07' 02.03"W
L131	75.33	N33° 28' 19.35"W
L132	124.85	S33° 28' 21.99"E
L133	96.99	S82° 22' 17.17"E
L134	79.23	S8° 07' 02.03"W
L135	187.21	S82° 22' 17.17"E
L136	61.99	N7° 36' 09.50"E
L137	89.74	S8° 07' 02.03"W
L138	66.08	N69° 28' 59.12"W
L139	122.00	N82° 22' 17.17"W
L140	75.00	N7° 36' 09.50"E
L141	60.26	S8° 07' 02.03"W
L142	185.87	N82° 22' 17.18"W
L143	75.00	N7° 36' 09.50"E
L144	75.00	S8° 06' 56.07"W
L145	185.20	N82° 22' 17.18"W
L146	75.00	N7° 36' 09.50"E
L147	75.00	S8° 06' 56.07"W
L148	184.53	N82° 22' 17.18"W
L149	75.00	N7° 36' 09.50"E
L150	75.00	S8° 06' 56.07"W
L151	183.85	N82° 22' 17.18"W
L152	75.00	N7° 36' 09.50"E
L153	75.00	S8° 06' 56.07"W
L154	183.18	S82° 22' 17.18"E
L155	75.00	N7° 36' 09.50"E
L156	75.00	S8° 06' 56.07"W
L157	182.51	N82° 22' 17.18"W
L158	75.00	N7° 36' 09.50"E
L159	75.00	S8° 06' 56.07"W
L160	181.84	N82° 22' 17.18"W

Parcel Line Table		
Line #	Length	Direction
L161	75.00	N7° 36' 09.50"E
L162	28.97	S8° 06' 56.07"W
L163	46.03	S8° 02' 30.70"W
L164	181.23	S82° 22' 17.18"E
L165	75.00	N7° 36' 09.50"E
L166	75.00	S8° 02' 30.70"W
L167	180.65	N82° 22' 17.18"W
L168	75.00	N7° 36' 09.50"E
L169	75.00	S8° 02' 30.70"W
L170	180.08	S82° 22' 17.18"E
L171	75.00	N7° 36' 09.50"E
L172	75.00	S8° 02' 30.70"W
L173	179.54	N82° 22' 17.18"W
L174	75.00	N7° 37' 42.82"E
L175	80.07	S82° 22' 17.07"E
L176	261.95	S8° 02' 30.70"W
L177	157.70	S83° 45' 32.16"E
L178	98.63	N3° 34' 04.26"E
L179	80.28	N3° 28' 52.49"E
L180	79.81	N3° 31' 21.10"E
L181	64.86	N3° 44' 50.17"E
L182	48.97	S16° 24' 32.60"E
L183	19.90	N80° 37' 48.29"W
L184	20.23	N33° 02' 12.86"W
L185	57.86	N56° 38' 52.28"W
L186	65.28	S64° 53' 55.86"W
L187	49.92	N86° 28' 22.82"W
L188	15.11	N3° 44' 50.17"E
L189	105.12	N3° 21' 33.93"E
L190	15.56	S7° 34' 35.45"W
L191	40.45	S7° 33' 43.36"W
L192	131.39	N82° 31' 31.73"W
L193	36.40	N7° 34' 35.40"E
L194	38.60	N7° 37' 36.91"E
L195	75.00	S7° 36' 09.50"W
L196	128.01	S82° 31' 25.95"E
L197	41.29	N7° 37' 36.91"E
L198	33.71	N7° 54' 10.32"E
L199	75.00	S7° 36' 09.50"W
L200	127.82	S82° 31' 25.95"E
L201	46.27	N7° 54' 10.32"E
L202	28.73	N7° 33' 31.43"E
L203	75.00	S7° 36' 09.50"W
L204	127.60	S82° 31' 25.95"E
L205	51.18	N7° 33' 31.43"E
L206	23.82	N7° 32' 40.54"E
L207	75.00	S7° 36' 09.50"W
L208	127.66	S82° 31' 25.95"E
L209	75.00	N7° 32' 40.54"E
L210	75.00	S7° 36' 09.50"W
L211	127.74	S82° 31' 25.95"E
L212	48.17	N7° 32' 40.54"E
L213	26.83	N7° 28' 34.05"E
L214	61.94	S7° 36' 09.50"W
L215	127.85	N82° 31' 25.95"W
L216	87.00	N7° 28' 34.05"E
L217	102.98	S82° 31' 25.95"E
L218	62.06	S7° 36' 09.50"W
L219	103.24	N82° 31' 25.95"W
L220	87.00	N7° 33' 55.88"E
L221	80.00	S7° 36' 09.50"W
L222	128.24	S82° 31' 25.95"E
L223	10.25	N7° 33' 14.67"E
L224	69.75	N7° 37' 34.37"E
L225	80.00	S7° 36' 09.50"W
L226	128.22	S82° 31' 25.95"E
L227	40.34	N7° 37' 34.37"E
L228	39.66	N7° 34' 54.86"E
L229	80.00	S7° 36' 09.50"W
L230	128.22	S82° 31' 25.95"E
L231	70.32	N7° 34' 54.86"E
L232	9.68	N7° 37' 42.83"E
L233	80.00	S7° 36' 09.50"W
L234	128.24	S82° 31' 25.95"E
L235	80.00	N7° 37' 42.83"E
L236	80.00	S7° 36' 09.50"W
L237	128.20	S82° 31' 25.95"E
L238	80.00	N7° 37' 42.83"E
L239	80.00	S7° 36' 09.50"W
L240	128.16	S82° 31' 25.95"E

Parcel Line Table		
Line #	Length	Direction
L241	80.00	N7° 37' 42.83"E
L242	80.00	S7° 36' 09.50"W
L243	128.13	S82° 31' 25.95"E
L244	80.00	N7° 37' 42.83"E
L245	80.00	S7° 36' 09.50"W
L246	128.09	S82° 31' 25.95"E
L247	80.00	N7° 37' 42.83"E
L248	5.56	S7° 03' 55.60"W
L249	68.12	S7° 36' 09.50"W
L250	128.06	S82° 31' 25.95"E
L251	80.00	N7° 37' 42.83"E
L252	25.85	S7° 33' 22.26"W
L253	54.52	S7° 03' 55.60"W
L254	127.94	N82° 31' 25.95"W
L255	77.82	N7° 37' 42.83"E
L256	127.86	S87° 37' 09.97"E
L257	24.14	S20° 59' 59.93"W
L258	80.79	S8° 07' 02.03"W
L259	166.84	N82° 22' 17.17"W
L260	22.13	N7° 03' 55.60"E
L261	30.83	N7° 33' 22.26"E
L262	199.25	S87° 37' 09.97"E
L263	32.58	N82° 22' 17.17"W
L264	20.44	N56° 23' 59.71"W
L265	125.00	N21° 31' 59.35"E
L266	125.00	N36° 08' 21.82"E
L267	125.00	N50° 44' 44.30"E
L268	45.27	S33° 28' 21.99"E
L269	125.00	N56° 31' 40.65"E
L270	45.27	N33° 28' 21.99"W
L271	80.00	S33° 28' 21.99"E
L272	125.00	S56° 31' 40.65"W
L273	80.00	N33° 28' 21.99"W
L274	80.00	S33° 28' 21.99"E
L275	125.00	N56° 31' 40.65"E
L276	80.00	N33° 28' 21.99"W
L277	80.00	S33° 28' 21.99"E
L278	125.00	N56° 31' 40.65"E
L279	80.00	N33° 28' 21.99"W
L280	80.00	S33° 28' 21.99"E
L281	125.00	N56° 31' 40.65"E
L282	80.00	N33° 28' 21.99"W
L283	80.00	S33° 28' 21.99"E
L284	80.00	S33° 28' 21.99"E
L285	125.00	N56° 31' 40.65"E
L286	80.00	N33° 28' 21.99"W
L287	87.00	S33° 28' 21.99"E
L288	100.00	S56° 31' 40.65"W
L289	62.00	N33° 28' 21.99"W
L290	20.62	S70° 33' 50.97"W
L291	60.00	S56° 31' 40.65"W
L292	125.00	S33° 28' 21.99"E
L293	80.00	S56° 31' 38.01"W
L294	18.67	S56° 31' 40.65"W
L295	19.83	S51° 06' 15.07"W
L296	25.00	S24° 17' 21.94"E
L297	40.00	S65° 42' 38.06"W
L298	62.00	S24° 17' 21.94"E
L299	136.38	N65° 42' 38.06"E
L300	22.69	N33° 28' 21.99"W
L301	40.00	N65° 42' 38.06"E
L302	25.00	N24° 17' 21.94"W
L303	114.50	S65° 42' 38.06"W
L304	62.00	S24° 17' 21.94"E
L305	38.67	S24° 17' 21.94"E
L306	139.50	S65° 42' 38.06"W
L307	41.26	N24° 17' 21.94"W
L308	74.74	S16° 26' 40.65"E
L309	139.51	S72° 06' 34.69"W
L310	71.73	N16° 26' 40.65"W
L311	48.25	N16° 26' 40.65"W
L312	139.54	N72° 06' 36.20"E
L313	80.00	S16° 26' 40.65"E
L314	137.28	N72° 06' 36.20"E
L315	1.34	N24° 17' 19.35"W
L316	26.20	S16° 26' 40.65"E
L317	41.57	S24° 17' 19.35"E
L318	132.82	S72° 05' 33.72"W
L319	80.41	N24° 17' 19.35"W
L320	55.54	S24° 17' 19.35"E

Parcel Line Table		
Line #	Length	Direction
L321	727.57	S87° 37' 09.97"E
L322	258.59	S8° 07' 02.03"W
L323	28.85	N82° 22' 17.17"W
L324	97.01	N82° 22' 17.17"W
L325	62.01	N7° 36' 09.50"E
L326	258.59	S8° 07' 02.03"W
L327	189.36	N82° 22' 17.17"W
L328	80.00	N7° 36' 09.50"E
L329	258.59	S8° 07' 02.03"W
L330	190.08	N82° 22' 17.17"W
L331	61.99	N7° 36' 09.50"E
L332	165.85	S82° 22' 17.17"E
L333	33.14	N82° 22' 17.17"W
L334	20.11	S89° 41' 07.71"W
L335	128.50	N8° 07' 02.03"E
L336	29.68	S33° 28' 21.99"E
L337	125.00	N56° 31' 40.65"E
L338	109.68	N33° 28' 21.99"W
L339	80.00	S33° 28' 21.99"E
L340	125.00	N56° 31' 40.65"E
L341	109.68	N33° 28' 21.99"W
L342	62.00	S33° 28' 21.99"E
L343	100.00	S56° 31' 40.65"W
L344	87.00	S33° 28' 21.99"E
L345	100.00	S56° 31' 40.65"W
L346	62.00	N33° 28' 21.99"W
L347	125.00	N56° 31' 40.65"E
L348	20.46	S21° 09' 27.35"E
L349	100.00	N56° 31' 40.65"E
L350	62.00	S33° 28' 21.99"E
L351	125.00	N56° 31' 40.65"E
L352	87.00	N33° 28' 21.99"W
L353	80.00	S33° 28' 21.99"E
L354	125.00	N56° 31' 40.65"E
L355	80.00	S33° 28' 21.99"E
L356	80.00	S33° 28' 21.99"E
L357	125.00	S56° 31' 40.65"W
L358	80.00	N33° 28' 21.99"W
L359	80.00	S33° 28' 21.99"E
L360	125.00	N56° 31' 40.65"E
L361	80.00	N33° 28' 21.99"W
L362	80.00	S33° 28' 21.99"E
L363	125.00	N56° 31' 40.65"E
L364	80.00	S33° 28' 21.99"E
L365	80.00	S33° 28' 21.99"E
L366	125.00	S56° 31' 40.65"W
L367	80.00	S33° 28' 21.99"E
L368	80.00	S33° 28' 21.99"E
L369	125.00	N56° 31' 40.65"E
L370	80.00	S33° 28' 21.99"E
L371	80.00	S33° 28' 21.99"E
L372	125.00	N56° 31' 40.65"E
L373	80.00	N33° 28' 21.99"W
L374	80.00	S33° 28' 21.99"E
L375	125.00	N56° 31' 40.65"E
L376	80.00	S33° 28' 21.99"E
L377	80.00	S33° 28' 21.99"E
L378	125.00	N56° 31' 40.65"E
L379	80.00	S33° 28' 21.99"E
L380	80.00	S33° 28' 21.99"E
L381	125.00	N56° 31' 40.65"E
L382	80.00	N33° 28' 21.99"W
L383	74.50	S33° 28' 21.99"E
L384	124.84	S56° 31' 40.65"W
L385	80.00	N33° 28' 21.99"W
L386	30.82	S11° 48' 34.51"E
L387	27.50	S56° 31' 40.65"W
L388	87.00	N33° 28' 21.99"W
L389	100.00	S56° 31' 40.65"W
L390	62.00	N33° 28' 21.99"W
L391	125.00	N56° 31' 40.65"E
L392	80.00	N33° 28' 21.99"W
L393	125.00	N56° 31' 40.65"E
L394	80.00	N33° 28' 21.99"W
L395	125.00	N56° 31' 40.65"E
L396	80.00	N33° 28' 21.99"W
L397	125.00	N56° 31' 40.65"E
L398	80.00	N33° 28' 21.99"W
L399	125.00	N56° 31' 40.65"E
L400	80.00	N33° 28' 21.99"W

Parcel Line Table		
Line #	Length	Direction
L401	125.00	N56° 31' 40.65"E
L402	80.00	N33° 28' 21.99"W
L403	125.00	S56° 31' 40.65"W
L404	80.00	N33° 28' 21.99"W
L405	125.00	N56° 31' 40.65"E
L406	80.00	N33° 28' 21.99"W
L407	125.00	N56° 31' 40.65"E
L408	80.00	N33° 28' 21.99"W
L409	125.00	S56° 31' 40.65"W
L410	80.00	N33° 28' 21.99"W
L411	125.00	N56° 31' 40.65"E
L412	80.00	N33° 28' 21.99"W
L413	125.00	N56° 31' 40.65"E
L414	62.00	N33° 28' 21.99"W
L415	100.00	N56° 31' 40.65"E

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	70.28	232.50	17.32	S23° 31' 42"E	70.02
C2	28.67	232.50	7.07	S11° 20' 09"E	28.65
C3	30.71	222.50	7.91	S11° 45' 25"E	30.68
C4	39.27	25.00	90.00	S69° 17' 22"E	35.36
C5	26.44	165.00	9.18	N61° 07' 09"E	26.42
C6	39.27	25.00	90.00	N11° 31' 39"E	35.36
C7	21.16	152.50	7.95	N29° 29' 55"W	21.14
C8	46.59	152.50	17.50	N16° 46' 21"W	46.41
C9	78.11	157.50	28.41	N20° 39' 46"E	77.31
C10	51.01	2095.00	1.40	S56° 08' 24"W	51.01
C11	219.59	6697.71	1.88	S54° 30' 11"W	219.58
C12	37.64	152.50	14.14	N49° 27' 26"E	37.54
C13	100.74	266.50	21.66	S45° 41' 56"W	100.14
C14	39.27	25.00	90.00	S11° 31' 39"W	35.36
C15	40.76	92.50	25.25	S46° 05' 45"E	40.43
C16	38.19	92.50	23.65	S70° 32' 43"E	37.91
C17	39.28	25.00	90.03	N52° 36' 56"E	35.36
C18	89.58	125.00	41.06	S61° 50' 27"E	87.68
C19	153.49	727.50	12.09	S89° 48' 12"E	153.21
C20	54.33	125.00	24.90	S28° 51' 35"E	53.90
C21	52.47	216.50	13.89	S9° 27' 59"E	52.34
C22	34.74	216.50	9.19	S2° 04' 24"W	34.70
C23	39.33	25.00	90.13	S37° 27' 38"E	35.39
C24	39.21	25.00	89.87	S52° 32' 22"W	35.32
C25	6.31	673.50	0.54	S7° 20' 03"W	6.31
C26	8.80	1027.50	0.49	S7° 18' 39"W	8.80
C27	39.02	25.00	89.44	N37° 39' 11"W	35.18
C28	8.33	972.50	0.49	N7° 18' 39"E	8.33
C29	46.73	275.00	9.74	N77° 30' 11"W	46.68
C30	100.70	395.00	14.61	S61° 09' 49"E	100.42
C31	68.83	270.00	14.61	N61° 09' 49"W	68.64
C32	100.70	395.00	14.61	S46° 33' 27"E	100.42
C33	68.83	270.00	14.61	N46° 33' 27"W	68.64
C34	39.86	395.00	5.78	S36° 21' 49"E	39.84
C35	27.25	270.00	5.78	N36° 21' 49"W	27.23
C36	39.27	25.00	90.00	N78° 28' 21"W	35.36
C37	35.26	220.00	9.18	S61° 07' 09"W	35.22
C38	39.27	25.00	90.00	S20° 42' 38"W	35.36
C39	32.73	277.50	6.76	S20° 54' 37"E	32.71
C40	6.74	411.15	0.94	N23° 30' 35"W	6.74
C41	38.98	411.15	5.43	N20° 19' 26"W	38.97
C42	5.26	277.50	1.09	S16° 59' 16"E	5.26
C43	8.27	409.50	1.16	N17° 01' 23"W	8.27
C46	38.06	157.50	13.85	N75° 26' 55"W	37.97
C47	39.26	25.00	89.97	N37° 23' 04"W	35.35
C48	39.28	25.00	90.03	N52° 36' 56"E	35.36
C49	13.98	210.00	3.81	N80° 27' 51"W	13.98
C50	149.46	215.00	39.83	S53° 23' 18"E	146.47
C51	43.25	90.00	27.53	N47° 14' 22"W	42.83
C52	39.27	25.00	90.00	S11° 31' 39"W	35.36
C53	39.27	25.00	90.00	N78° 28' 21"W	35.36
C54	82.20	157.50	29.90	S53° 34' 28"E	81.27
C55	39.27	25.00	90.00	S78° 28' 21"E	35.36
C56	5.50	97.50	3.23	S31° 51' 20"E	5.50
C57	110.33	92.50	68.34	S22° 21' 33"W	103.90
C58	39.27	25.00	90.00	N78° 28' 21"W	35.36
C59	39.27	25.00	90.00	N11° 31' 39"E	35.36

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

PARCEL TABLES

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
LICENSED PROFESSIONAL ENGINEER
No. 127399
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-2.6

T-SQUARE ENGINEERING

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowell)\Production\24-0314 1- Site Plan.dwg, 4/15/2025 8:39:22 AM



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GRAPHIC SCALE
(IN FEET)

100 0 50 100 200

SCALE: 1" = 100'

LEGEND
PROPOSED LOT LINES
PROPOSED LOT NUMBER
WATER NATURAL AREA BUFFER
DESIGNATED CIVIC SPACE

SITE DATA	
PROJECT NAME	TROTWOOD FOSTER SUBDIVISION
PROJECT NUMBER	24-0314
ADDRESS	TROTWOOD AVENUE
PARCEL ID	MAP 112 PARCEL 018.03
EXISTING ZONING	CIVIC DISTRICT 3
PROPOSED ZONING	CIVIC DISTRICT 3
EXISTING SITE AREA	51.14 AC
ROW RESERVATION	0.75 AC
PROPOSED SITE AREA	50.52 AC
PROPOSED LOTS	119
PROPOSED DENSITY	2.36 UNITS/ACRE
BUILDING HEIGHT	3 STORIES MAXIMUM
LOT WIDTH	65' MINIMUM
SETBACKS	
FRONT	25' (PRIMARY); 20' (SECONDARY)
SIDE	8'
REAR	25'
CIVIC SPACE	
REQUIRED CIVIC SPACE	2.53 AC (5%)
PLAYGROUND 1	0.20 AC
PLAYGROUND 2	0.68 AC
GREEN	2.42 AC
PROVIDED CIVIC SPACE	3.30 AC (7%)

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

CIVIC SPACE PLAN

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLLA
REGISTERED ENGINEER
AGRICULTURE
CIVIL
No. 127369
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-2.7

T-SQUARE ENGINEERING

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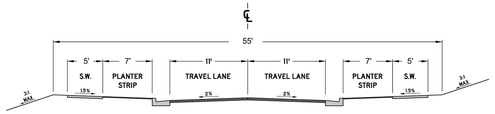
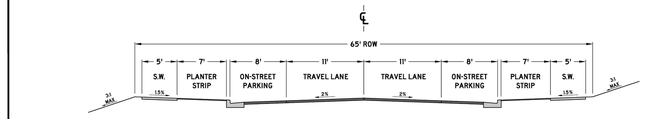


NOTES:

1. ONLY PERMITTED WITHIN THE APPLICABLE ZONING DISTRICTS
2. ONLY PERMITTED ON MINOR LOCAL AND MAJOR LOCAL ROADWAY CLASSIFICATIONS
3. PAVEMENT SECTION SHALL FOLLOW THE CORRESPONDING ROADWAY CLASSIFICATION'S STANDARD DETAIL
4. CURB AND GUTTER, SEE SD-01
5. EXTRUDED CURB, SEE SD-02
6. DECORATIVE LIGHT BASES SHALL BE BETWEEN 18" AND 24" BEHIND THE BACK OF CURB.
7. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED
8. DIMENSIONS REFLECT A MINIMUM STANDARD
9. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

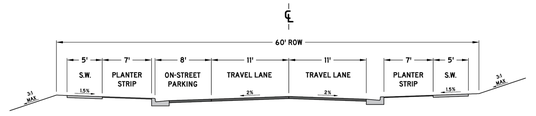
CITY OF COLUMBIA DEVELOPMENT SERVICES DEPARTMENT ENGINEERING DIVISION	CHARACTER DISTRICT STREET URBAN NEIGHBORHOOD NO PARALLEL PARKING (NTS)	DATE 7/1/2024
STANDARD DETAILS		DS-12



NOTES:

1. ONLY PERMITTED WITHIN THE APPLICABLE ZONING DISTRICTS
2. ONLY PERMITTED ON MINOR LOCAL AND MAJOR LOCAL ROADWAY CLASSIFICATIONS
3. PAVEMENT SECTION SHALL FOLLOW THE CORRESPONDING ROADWAY CLASSIFICATION'S STANDARD DETAIL
4. CURB AND GUTTER, SEE SD-01
5. EXTRUDED CURB, SEE SD-02
6. DECORATIVE LIGHT BASES SHALL BE BETWEEN 18" AND 24" BEHIND THE BACK OF CURB.
7. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED
8. DIMENSIONS REFLECT A MINIMUM STANDARD
9. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

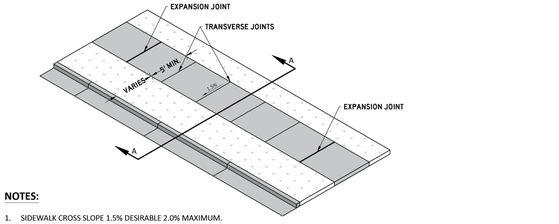
CITY OF COLUMBIA DEVELOPMENT SERVICES DEPARTMENT ENGINEERING DIVISION	CHARACTER DISTRICT STREET URBAN NEIGHBORHOOD PARALLEL PARKING BOTH SIDES (NTS)	DATE 7/1/2024
STANDARD DETAILS		DS-18

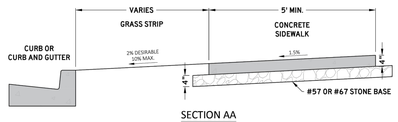


NOTES:

1. ONLY PERMITTED WITHIN THE APPLICABLE ZONING DISTRICTS
2. ONLY PERMITTED ON MINOR LOCAL AND MAJOR LOCAL ROADWAY CLASSIFICATIONS
3. PAVEMENT SECTION SHALL FOLLOW THE CORRESPONDING ROADWAY CLASSIFICATION'S STANDARD DETAIL
4. CURB AND GUTTER, SEE SD-01
5. EXTRUDED CURB, SEE SD-02
6. DECORATIVE LIGHT BASES SHALL BE BETWEEN 18" AND 24" BEHIND THE BACK OF CURB.
7. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED
8. DIMENSIONS REFLECT A MINIMUM STANDARD
9. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA DEVELOPMENT SERVICES DEPARTMENT ENGINEERING DIVISION	CHARACTER DISTRICT STREET URBAN NEIGHBORHOOD STREET PARALLEL PARKING ONE SIDE (NTS)	DATE 7/1/2024
STANDARD DETAILS		DS-11



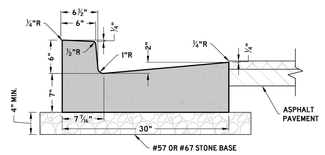


SECTION AA

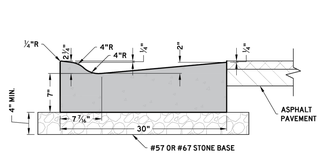
NOTES:

1. SIDEWALK CROSS SLOPE 1.5% DESIRABLE 2.0% MAXIMUM.
2. SIDEWALK GRADE SHALL FOLLOW THE ROAD GRADE WHERE POSSIBLE.
3. 4" MIN. THICK #57 OR # 67 STONE BASE
4. 4" MIN. THICKNESS CLASS A 3000 PSI CONCRETE WITH FIBER REINFORCEMENT, BROOM FINISHED.
5. EXPANSION JOINTS SHALL BE AS FOLLOWS:
   - 5.1. 1/2 INCH THICK
   - 5.2. A MAXIMUM SPACING OF 25 FEET
   - 5.3. AT TANGENTS OF ALL RADII OF CURVES
   - 5.4. BETWEEN CURBS AND ANY RIGID OBJECTS
   - 5.5. ALIGNED WITH ADJACENT EXPANSION JOINTS
   - 5.6. RUBBERIZED EXPANSION JOINT FILLER (AASHTO M153, TYPE 1)
   - 5.7. POLYPROPYLENE FOAM JOINT FILLER (ASTM D8139)
6. PROVIDE TRANSVERSE JOINTS AS NEARLY AS SQUARE AS PRACTICABLE. ON SIDEWALKS GREATER THAN 8 FEET IN WIDTH, PROVIDE A LONGITUDINAL JOINT ALONG THE CENTERLINE OF THE SIDEWALK.
7. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA DEVELOPMENT SERVICES DEPARTMENT ENGINEERING DIVISION	CONCRETE SIDEWALK (NTS)	DATE 6/9/2022
STANDARD DETAILS		SD-10



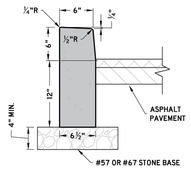
6-30 CONCRETE CURB AND GUTTER



LOWERED CONCRETE CURB AND GUTTER

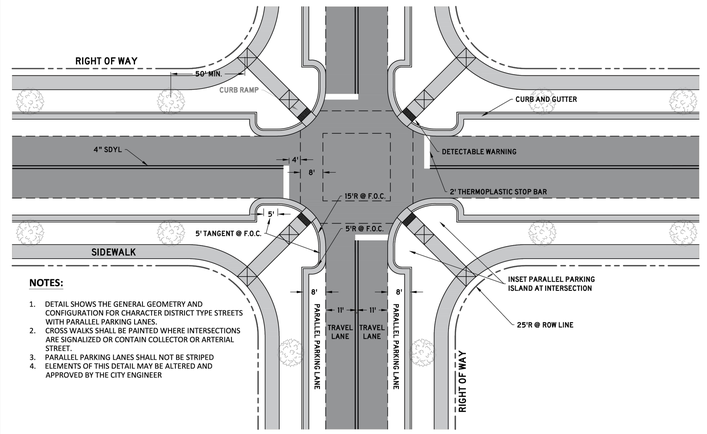
NOTES:

1. BASED ON TDOT STANDARD DRAWING RP-VC-11
2. ONLY PERMITTED IN APPLICABLE ROADWAY SECTIONS
3. 4" MIN. THICK #57 OR # 67 STONE BASE
4. CLASS A 3000 PSI CONCRETE
5. EXPANSION JOINTS SHALL BE AS FOLLOWS:
   - 5.1. 1/2 INCH THICK
   - 5.2. A MAXIMUM SPACING OF 100 FEET
   - 5.3. AT TANGENTS OF ALL RADII OF CURVES
   - 5.4. BETWEEN CURBS AND ANY RIGID OBJECTS
   - 5.5. ALIGNED WITH ADJACENT EXPANSION JOINTS
   - 5.6. RUBBERIZED EXPANSION JOINT FILLER (AASHTO M153, TYPE 1)
   - 5.7. POLYPROPYLENE FOAM JOINT FILLER (ASTM D8139)
6. CONTRACTION JOINTS SHALL BE AS FOLLOWS:
   - 6.1. A MAXIMUM SPACING OF 10 FEET
   - 6.2. A MINIMUM SPACING OF 6 FEET
   - 6.3. 1/4 INCH DEPTH, EITHER SAWCUT OR HAND GROOVED.
7. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER



VERTICAL POST CURB

CITY OF COLUMBIA DEVELOPMENT SERVICES DEPARTMENT ENGINEERING DIVISION	CURB AND GUTTER AND POST CURB (NTS)	DATE 6/9/2022
STANDARD DETAILS		SD-01



NOTES:

1. DETAIL SHOWS THE GENERAL GEOMETRY AND CONFIGURATION FOR CHARACTER DISTRICT TYPE STREETS WITH PARALLEL PARKING LANES.
2. CROSS WALKS SHALL BE PAINTED WHERE INTERSECTIONS ARE SIGNALIZED OR CONTAIN COLLECTOR OR ARTERIAL STREET.
3. PARALLEL PARKING LANES SHALL NOT BE STRIPED
4. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA DEVELOPMENT SERVICES DEPARTMENT ENGINEERING DIVISION	INTERSECTION CONFIGURATION AND GEOMETRY (NTS)	DATE 6/9/2022
STANDARD DETAILS		SD-07

TROTWOOD FOSTER SUBDIVISION

SITE DETAILS

MAP 112, PARCEL 018.03

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

NO.	DATE	REVISIONS

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

ALLISON B. COROLLA
REGISTERED
AGRICULTURE
No. 127389
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-2.8

T-SQUARE ENGINEERING

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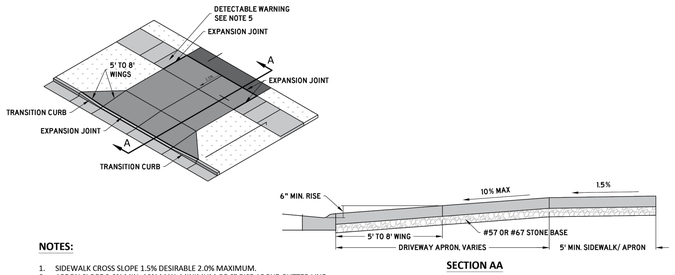
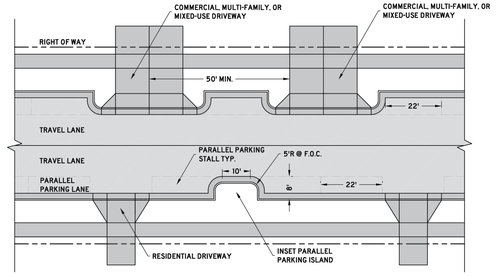


SECTION AA

NOTES:

1. SIDEWALK CROSS SLOPE 1.5% DESIRABLE 2.0% MAXIMUM.
2. APRON SLOPE 2.0% MIN. 10% MAX. MINIMUM OF 6" RISE ABOVE GUTTER LINE.
3. 4" MIN. THICK #57 OR # 67 STONE BASE
4. CLASS A 3000 PSI CONCRETE WITH FIBER REINFORCEMENT
   4.1. 6" MIN. THICKNESS RESIDENTIAL.
   4.2. 8" MIN. THICKNESS COMMERCIAL, MULTI-FAMILY, AND MIXED-USE.
5. EXPANSION JOINTS SHALL BE AS FOLLOWS:
   5.1. 1/2 INCH THICK.
   5.2. RUBBERIZED EXPANSION JOINT FILLER (AASHTO M153, TYPE 1).
   5.3. POLYPROPYLENE FOAM JOINT FILLER (ASTM D8139).
6. DETECTABLE WARNINGS WHERE DRIVEWAY IS STOP CONTROLLED.
7. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA DEVELOPMENT SERVICES DEPARTMENT ENGINEERING DIVISION	DRIVEWAY APRON (NTS)	DATE 6/9/2022
STANDARD DETAILS		SD-12



NOTES:

1. ONLY PERMITTED WITHIN THE APPLICABLE ZONING DISTRICTS
2. PARKING ISLANDS SHALL BE PROVIDED EVERY 220 FEET AT MINIMUM.
3. PARKING ISLANDS SHALL BE PROVIDED AT EVERY INTERSECTION.
4. COMMERCIAL, MULTI-FAMILY, AND MIXED-USE DRIVEWAYS SHALL REQUIRE PARKING ISLANDS ADJACENT TO THE DRIVEWAY.
5. RESIDENTIAL DRIVEWAYS SHALL NOT REQUIRE PARKING ISLANDS ADJACENT TO THE DRIVEWAY, BUT SHALL BE LOCATED BETWEEN PARKING STALLS WHERE PRACTICABLE.
6. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA DEVELOPMENT SERVICES DEPARTMENT ENGINEERING DIVISION	INSET PARALLEL PARKING AND ISLANDS (NTS)	DATE 6/9/2022
STANDARD DETAILS		SD-06

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

SITE DETAILS
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLLA
REGISTERED LANDSCAPE ARCHITECT
No. 127360
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-2.9

T-SQUARE ENGINEERING

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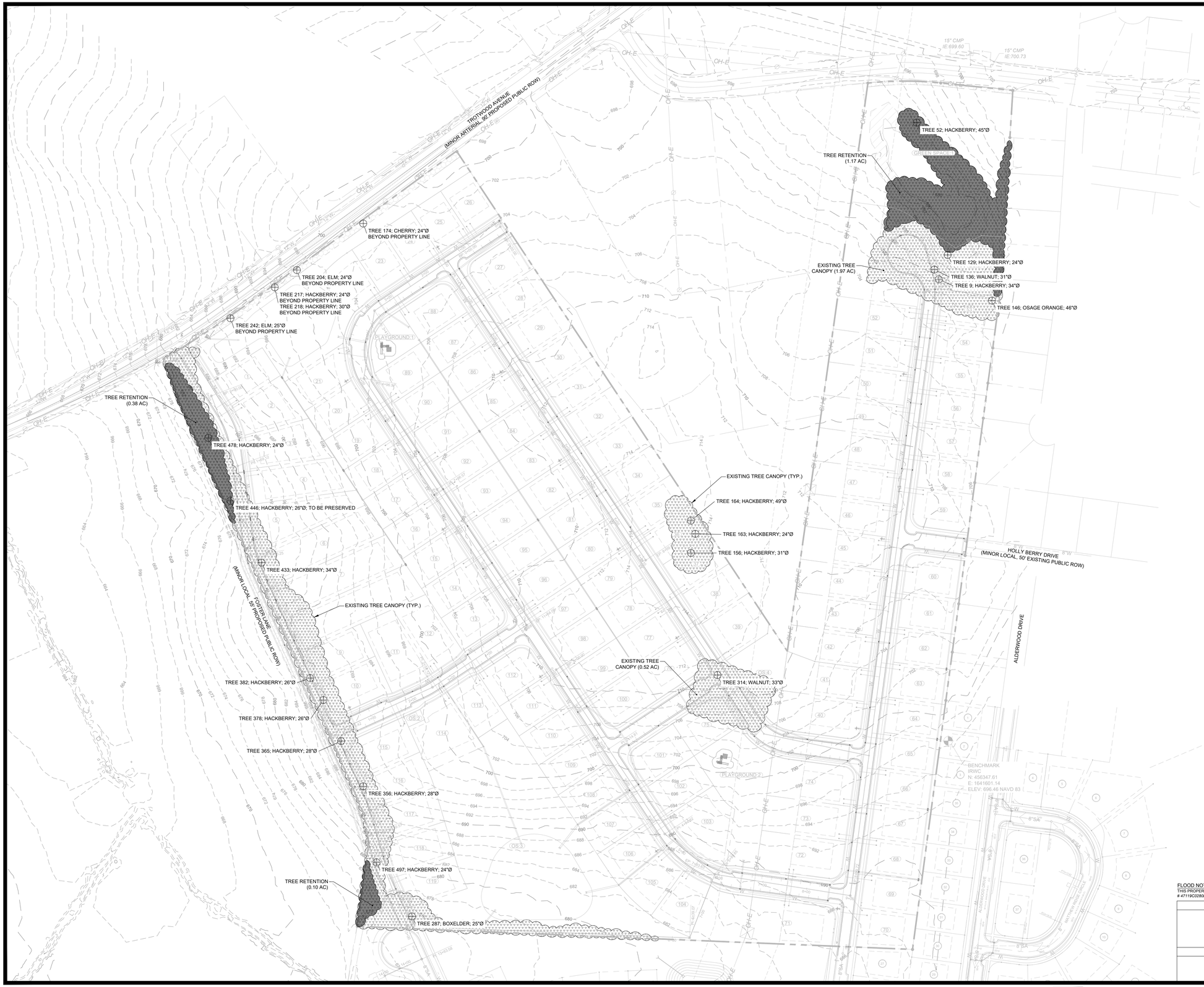

N

GRAPHIC SCALE
(IN FEET)
100 0 50 100 200
SCALE: 1" = 100'

LEGEND	
500	EXISTING MAJOR CONTOURS
498	EXISTING MINOR CONTOURS
	EXISTING PROPERTY BOUNDARY
	PROPOSED LOT LINES
	WATER NATURAL AREA BUFFER
	EXISTING TREE CANOPY
	PROPOSED TREE CANOPY RETENTION

TREE CANOPY RETENTION
- EXISTING CANOPY: 5.38 ACRES (<19% DEVELOPMENT)
- REQUIRED RETENTION: 2.91 (54%)
- PROPOSED RETENTION: 1.65 ACRES (31%)
- PROPOSED TREE REPLACEMENT (80 TREES PER ACRE OF CANOPY DISTURBED): 101 TREES

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

RESOURCE PROTECTION PLAN
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLL
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 127369
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-2.10

T-SQUARE ENGINEERING

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GRAPHIC SCALE
(IN FEET)

100 0 50 100 200

SCALE: 1" = 100'

LEGEND

500	EXISTING MAJOR CONTOURS
498	EXISTING MINOR CONTOURS
LOD	PROPOSED LIMITS OF DISTURBANCE
SF	PROPOSED SILT FENCE
	TREE PROTECTION FENCING
	PROPOSED CONSTRUCTION EXIT
	PROPOSED CONCRETE WASHOUT

GENERAL EROSION NOTES:

A. ALL STORMWATER IS TO BE TREATED THROUGH VARIOUS EPSC MEASURES BEFORE IT REACHES THE PERMANENT STORM INFRASTRUCTURE. ALL PIPES TO REMAIN CLEAN DURING CONSTRUCTION.

B. THIS SITE DISTURBANCE IS APPROXIMATELY 49.5 ACRES AND DOES REQUIRE A SWPPP. THE STORMWATER CONTROLS SHOWN ON THIS PLAN AND IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE IMPLEMENTED PRIOR TO ANY LAND DISTURBANCE.

C. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN THESE MATERIALS AND STORM WATER THAT IS DISCHARGED FROM THE SITE.

C. THE SITE SHALL HAVE READILY AVAILABLE SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

D. DUST CONTROL ON THE SITE SHALL BE MINIMIZED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

E. NO RUBBISH, TRASH, GARBAGE, OR OTHER SUCH MATERIALS SHALL BE DISCHARGED INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

F. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN SHALL BE INITIATED AS SOON AS PRACTICAL.

G. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.

H. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.

I. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.

J. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

K. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

L. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL STABILIZATION. FINAL STABILIZATION HAS OCCURRED WHEN ALL SOIL DISTURBING ACTIVITIES ARE COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN EMPLOYED.

MAINTENANCE:

A. ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN AND SWPPP SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF THE SITE. DURING CONSTRUCTION THE FOLLOWING ITEMS SHALL BE CHECKED TWICE WEEKLY.

A.A. INLET/OUTLET PROTECTION DEVICES AND BARRIERS SHALL BE FIXED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR SHALL BE REPLACED IF THEY SHOW SIGNS OF DETERIORATION. BASED ON INSPECTIONS, EPSC MUST BE REPAIRED, REPLACED, OR MODIFIED WITHIN 7 DAYS.

A.B. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED.

A.C. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE THIRD TO ONE HALF THE HEIGHT OF THE SILT FENCE.

A.D. THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0260E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

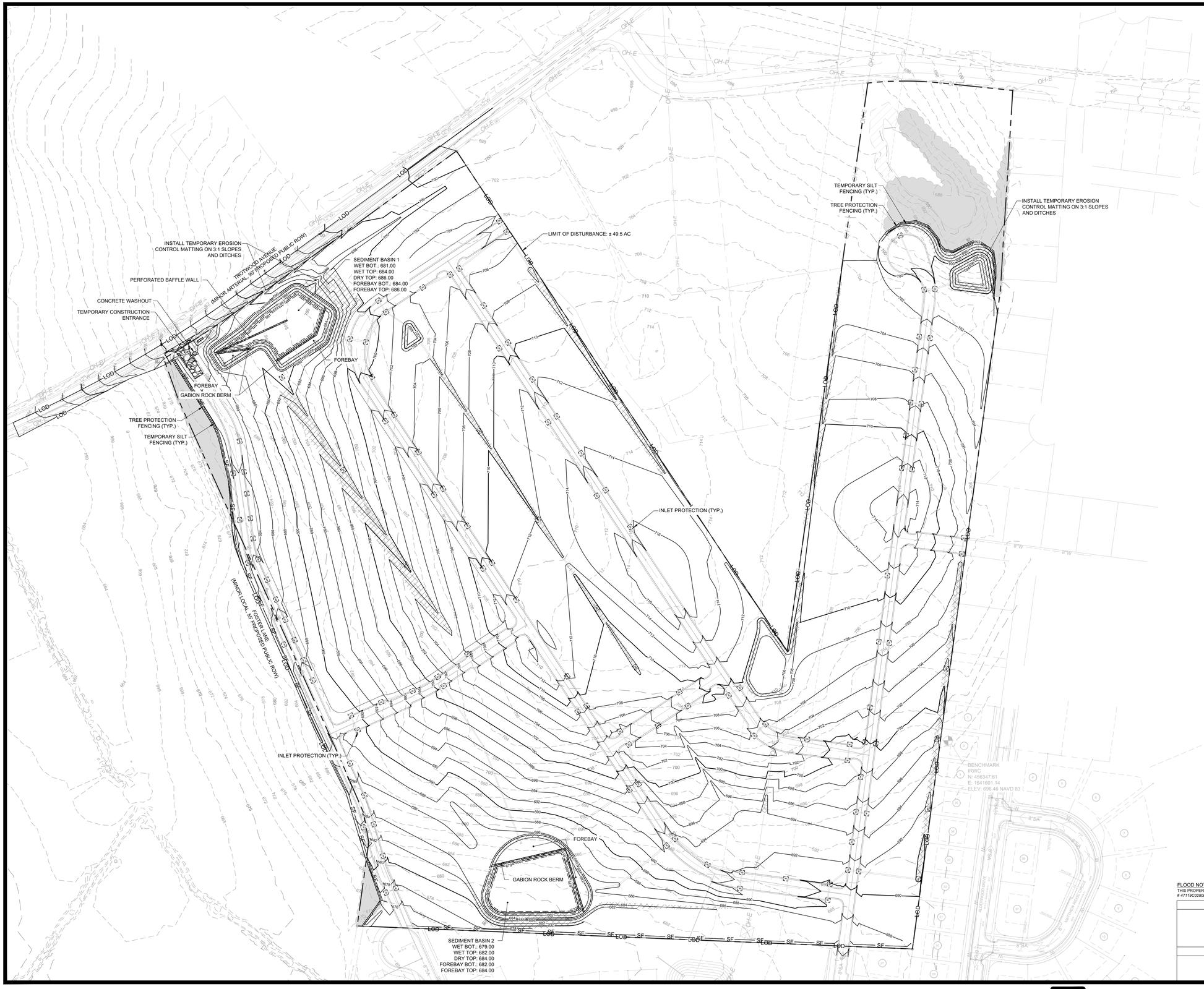
INITIAL EROSION CONTROL PLAN
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
REGISTERED ENGINEER
AGREEMENT
No. 127389
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-3.0



N

GRAPHIC SCALE

(IN FEET)

100 0 50 100 200

SCALE: 1" = 100'

LEGEND

- EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- PROPOSED LIMITS OF DISTURBANCE
- PROPOSED SILT FENCE
- TREE PROTECTION FENCING
- PROPOSED CONSTRUCTION EXIT
- PROPOSED CONCRETE WASHOUT
- PROPOSED INLET PROTECTION

GENERAL EROSION NOTES:

A. ALL STORMWATER IS TO BE TREATED THROUGH VARIOUS EPSC MEASURES BEFORE IT REACHES THE PERMANENT STORM INFRASTRUCTURE. ALL PIPES TO REMAIN CLEAN DURING CONSTRUCTION.

B. THIS SITE DISTURBANCE IS APPROXIMATELY 49.5 ACRES AND DOES REQUIRE A SWPPP. THE STORMWATER CONTROLS SHOWN ON THIS PLAN AND IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE IMPLEMENTED PRIOR TO ANY LAND DISTURBANCE.

C. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN THESE MATERIALS AND STORM WATER THAT IS DISCHARGED FROM THE SITE.

C. THE SITE SHALL HAVE READILY AVAILABLE SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

D. DUST CONTROL ON THE SITE SHALL BE MINIMIZED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

E. NO RUBBISH, TRASH, GARBAGE, OR OTHER SUCH MATERIALS SHALL BE DISCHARGED INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

F. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN SHALL BE INITIATED AS SOON AS PRACTICAL.

G. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.

H. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.

I. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.

J. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

K. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

L. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL STABILIZATION. FINAL STABILIZATION HAS OCCURRED WHEN ALL SOIL DISTURBING ACTIVITIES ARE COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN EMPLOYED.

MAINTENANCE:

A. ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN AND SWPPP SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL FINAL STABILIZATION OF THE SITE. DURING CONSTRUCTION THE FOLLOWING ITEMS SHALL BE CHECKED TWICE WEEKLY.

A.A. INLET/OUTLET PROTECTION DEVICES AND BARRIERS SHALL BE FIXED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR SHALL BE REPLACED IF THEY SHOW SIGNS OF DETERIORATION. BASED ON INSPECTIONS, EPSC MUST BE REPAIRED, REPLACED, OR MODIFIED WITHIN 7 DAYS.

A.B. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDED AS NEEDED.

A.C. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE THIRD TO ONE HALF THE HEIGHT OF THE SILT FENCE.

A.D. THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS		
NO.	DATE	

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

TEMPORARY EROSION CONTROL PLAN

MAP 112, PARCEL 018.03

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
LICENSED PROFESSIONAL ENGINEER
No. 127380
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-3.1

T-SQUARE ENGINEERING

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N

GRAPHIC SCALE
(IN FEET)

100 0 50 100 200

SCALE: 1" = 100'

LEGEND

- 500 — EXISTING MAJOR CONTOURS
- 498 — EXISTING MINOR CONTOURS
- 500 — PROPOSED MAJOR CONTOURS
- 498 — PROPOSED MINOR CONTOURS
- PROPOSED PERMANENT SEEDING
- PROPOSED EROSION CONTROL MAT

GENERAL EROSION NOTES:

A. ALL STORMWATER IS TO BE TREATED THROUGH VARIOUS EPSC MEASURES BEFORE IT REACHES THE PERMANENT STORM INFRASTRUCTURE. ALL PIPES TO REMAIN CLEAN DURING CONSTRUCTION.

B. THIS SITE DISTURBANCE IS APPROXIMATELY 49.5 ACRES AND DOES REQUIRE A SWPPP. THE STORMWATER CONTROLS SHOWN ON THIS PLAN AND IN THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE IMPLEMENTED PRIOR TO ANY LAND DISTURBANCE.

C. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DISPOSED OF IN A MANNER THAT PREVENTS CONTACT BETWEEN THESE MATERIALS AND STORM WATER THAT IS DISCHARGED FROM THE SITE.

C. THE SITE SHALL HAVE READILY AVAILABLE SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

D. DUST CONTROL ON THE SITE SHALL BE MINIMIZED BY SPRAYING WATER ON DRY AREAS OF THE SITE. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

E. NO RUBBISH, TRASH, GARBAGE, OR OTHER SUCH MATERIALS SHALL BE DISCHARGED INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

F. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN SHALL BE INITIATED AS SOON AS PRACTICAL.

G. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 21 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.

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J. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

K. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

L. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER FINAL STABILIZATION. FINAL STABILIZATION HAS OCCURRED WHEN ALL SOIL DISTURBING ACTIVITIES ARE COMPLETED AND A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OF THE COVER FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES HAS BEEN EMPLOYED.

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A.D. THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # *47119C0280E* OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

PERMANENT EROSION CONTROL PLAN
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
REGISTERED PROFESSIONAL ENGINEER
AGRICULTURE
No. 127390
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-3.2

T-SQUARE ENGINEERING

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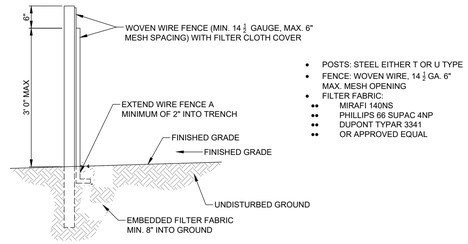
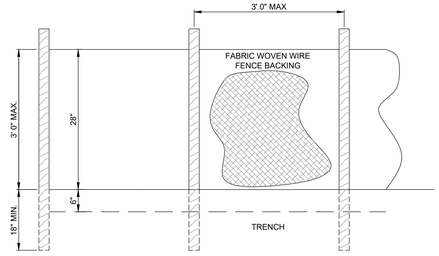




1. WOVEN WIRE CE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE EROSION CONTROL PLAN. COLLECTED MATERIAL SHALL BE REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE OR WHEN TOP LINE IS NOT VISIBLE.
5. J-HOOK METHOD IS REQUIRED WHEN CROSSING CONTOURS PERPENDICULARLY.

TYPE "C" SEDIMENT/SILT FENCE
N.T.S

Manufactured by:
Agri Drain CORPORATION
PO Box 458 · 1462 340th Street · Adair, Iowa 50002
Phone: 1-800-232-4742 · Fax: 1-800-282-3353
www.agridrain.com · email: info@agridrain.com

Anti-Seep Collars

Keep your pipe from being washed out.

- The Anti-Seep Collar works with any smoothwall pipe or corrugated plastic tubing.
- 1/16" gum rubber.
- Easy to install.
- Tan floating stock has superior resilience, elongation, and tear strength.
- Resistant to water, most salts, mild acids, and many other chemicals.
- Wood frame.
- Economical to buy.

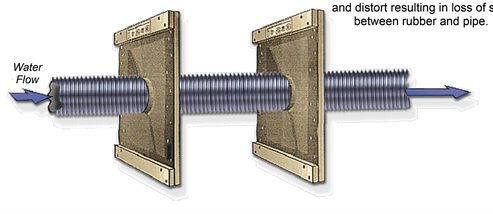
Anti-Seep Flanges—
1/16" Gum Rubber
with Wood Frame



ASC02 .....2' x 2'
ASC03 .....3' x 3'
ASC04 .....4' x 4'
ASC05 .....5' x 5'
ASC06 .....6' x 6'

Recommended Anti-Seep Collar

Pipe Size	Item#
3"	ASC02
4", 5", 6", 8", 10", 12"	ASC03
15", 18", 24"	ASC04
30", 36"	ASC05
42", 48", 60"	ASC06

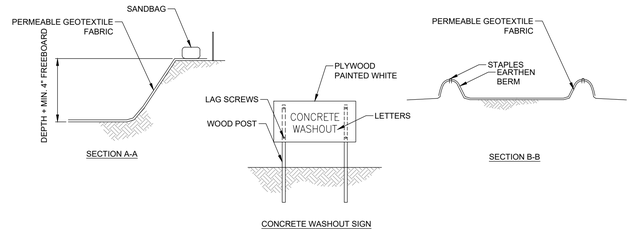


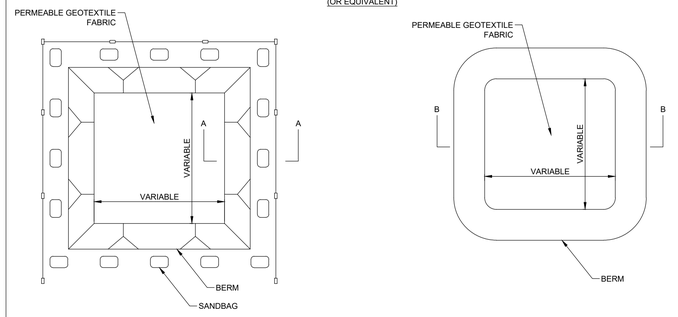
Directions for Using The Anti-Seep Collar

1. Unroll the Anti-Seep Collar and align the boards to form a square. Attach metal brackets to the corner of the boards with the screws provided. Attach the rubber to the frame with the nails provided.
2. ***IMPORTANT—Cut a round hole** in the center of the rubber that is smaller than the pipe size (approx. 33% smaller). This will allow the rubber to stretch over the pipe when the Anti-Seep Collar is installed on the pipe. This will provide a tight seal between the pipe and the Anti-Seep Collar.

   ***Cutting an "X" or slit will cause the rubber to tear.**
3. Slip the pipe through the Anti-Seep Collar, inspect the seal between the pipe and the Anti-Seep Collar, carefully backfill, and compact with suitable soil.

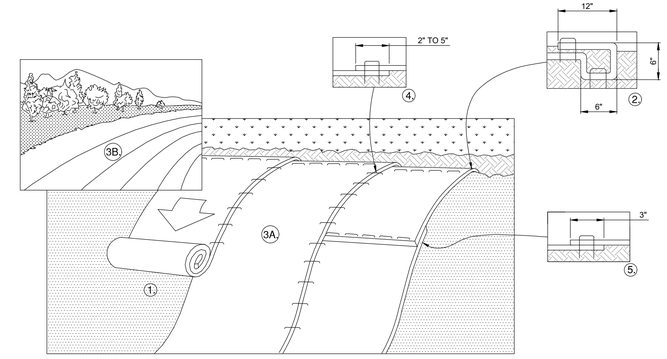
CAUTION: Excessive compaction or downward pressure on wooden frame will cause rubber to stretch and distort resulting in loss of seal between rubber and pipe.





NOTES:
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. SIGNAGE IDENTIFYING THE CONCRETE WASHOUT AREA SHALL BE INSTALLED WITHIN 5FT.OF THE WASHOUT FACILITY.

CONCRETE WASHOUT
N.T.S



1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
   1.1. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5 CM-12.5 CM) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5 CM) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30 CM) APART ACROSS ENTIRE BLANKET WIDTH.

NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BEE NECESSARY TO PROPERLY SECURE THE BLANKETS.

EROSION CONTROL MATTING DETAIL
N.T.S

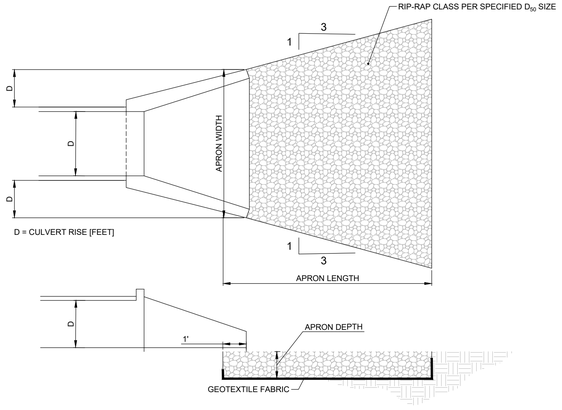
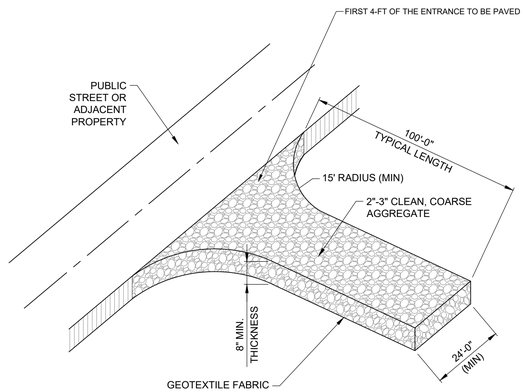


Table 10.1. Example Riprap Classes and Apron Dimensions

Class	D_{50} (mm)	D_{50} (in)	Apron Length[1]	Apron Depth
1	125	5	4D	$3.5D_{50}$
2	150	6	4D	$3.3D_{50}$
3	250	10	5D	$2.4D_{50}$
4	350	14	6D	$2.2D_{50}$
5	500	20	7D	$2.0D_{50}$
6	550	22	8D	$2.0D_{50}$

[1]D is the culvert rise.

OUTLET PROTECTION
DESIGNED TO THE 100-YR STORM PER HEC-11 STANDARDS
N.T.S



ISOMETRIC VIEW

CONSTRUCTION ENTRANCE
N.T.S.

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

EROSION CONTROL DETAILS
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORCORAN
AGRICULTURE
No. 127380
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-3.3

T-SQUARE ENGINEERING

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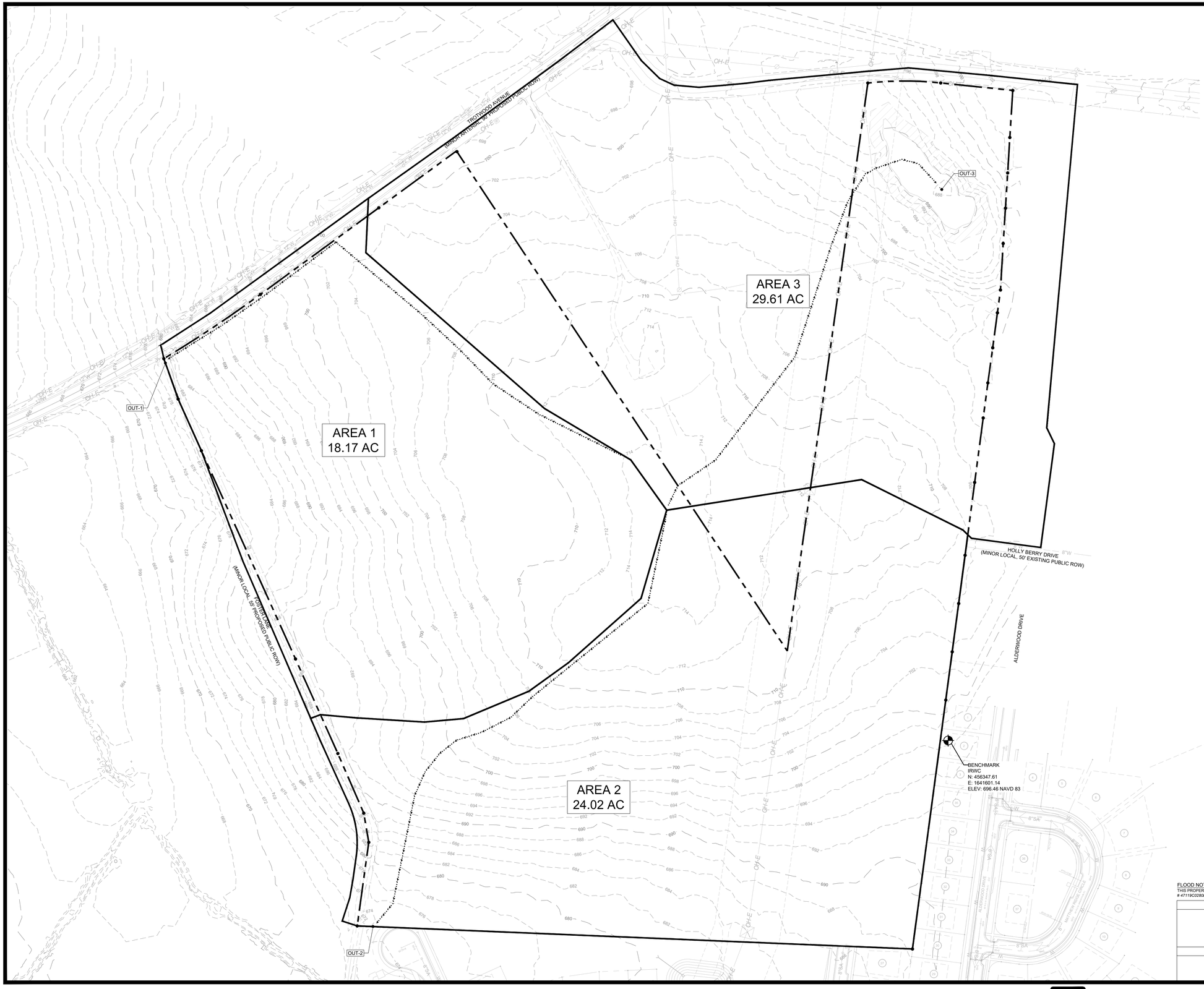

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GRAPHIC SCALE
(IN FEET)
100 0 50 100 200
SCALE: 1" = 100'

LEGEND	
500	EXISTING MAJOR CONTOURS
498	EXISTING MINOR CONTOURS
	PREDEVELOPMENT DRAINAGE BASIN
	PREDEVELOPMENT FLOW PATH
AREA 1 3.00 AC	PREDEVELOPMENT DRAINAGE AREA

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0293E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
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APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

PREDEVELOPMENT
STORMWATER PLAN
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
REGISTERED ENGINEER
No. 127389
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-4.0

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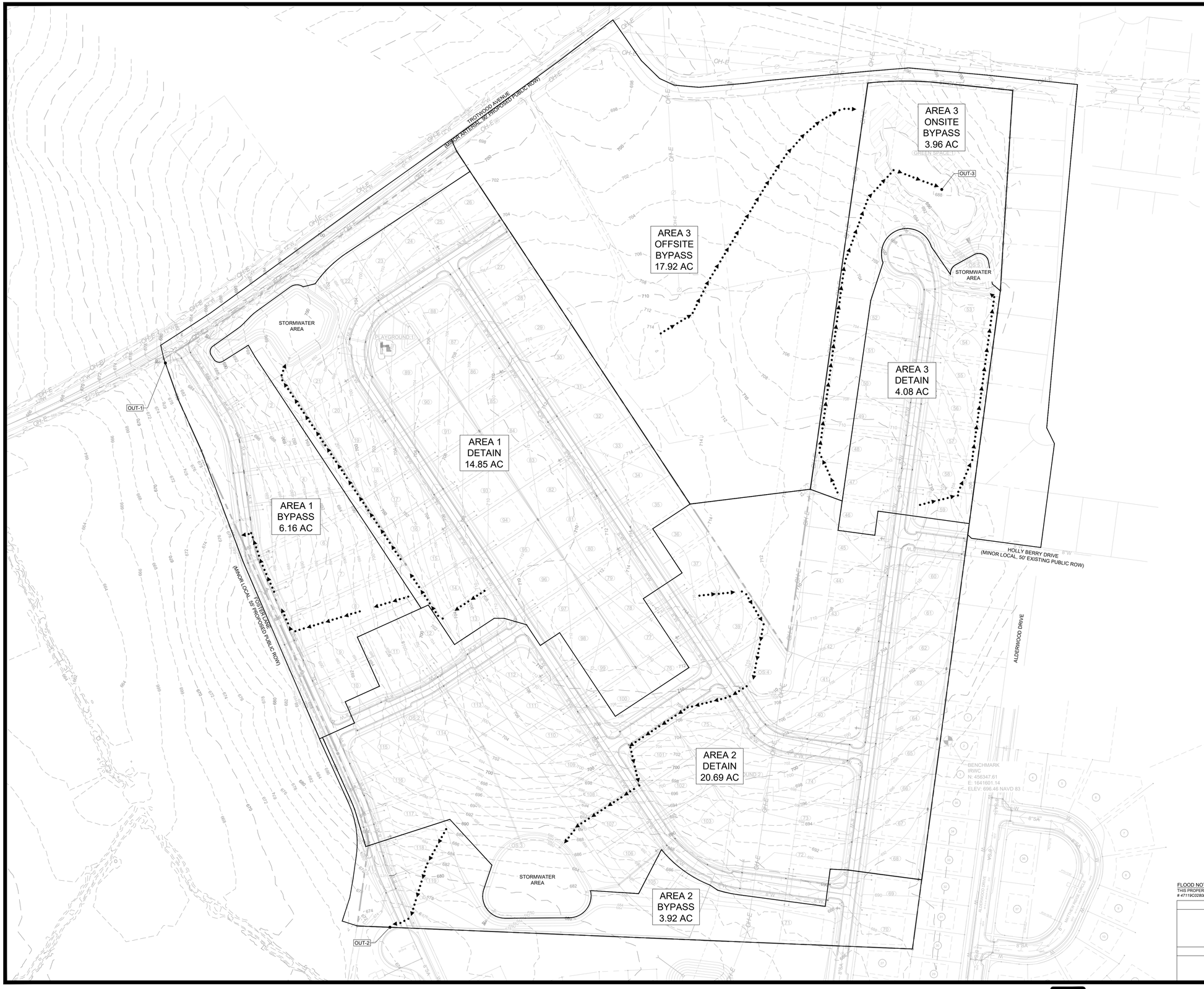

GRAPHIC SCALE
(IN FEET)
100 0 50 100 200
SCALE: 1" = 100'

LEGEND	
500	EXISTING MAJOR CONTOURS
498	EXISTING MINOR CONTOURS
500	PROPOSED MAJOR CONTOURS
498	PROPOSED MINOR CONTOURS
	POSTDEVELOPMENT DRAINAGE BASIN
	POSTDEVELOPMENT FLOW PATH
AREA 1 3.00 AC	POSTDEVELOPMENT DRAINAGE AREA

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TROTWOOD FOSTER SUBDIVISION

POSTDEVELOPMENT
STORMWATER PLAN
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

ALLISON B. CORDELL
REGISTERED
AGRICULTURE
No. 127390
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-4.1

T-SQUARE ENGINEERING

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N

GRAPHIC SCALE
(IN FEET)
100 0 50 100 200
SCALE: 1" = 100'

LEGEND	
500	EXISTING MAJOR CONTOURS
498	EXISTING MINOR CONTOURS
500	PROPOSED MAJOR CONTOURS
498	PROPOSED MINOR CONTOURS
688.30	PROPOSED SPOT ELEVATION
1.0%	PROPOSED SLOPE

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS		
NO.	DATE	

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

GRADING PLAN

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

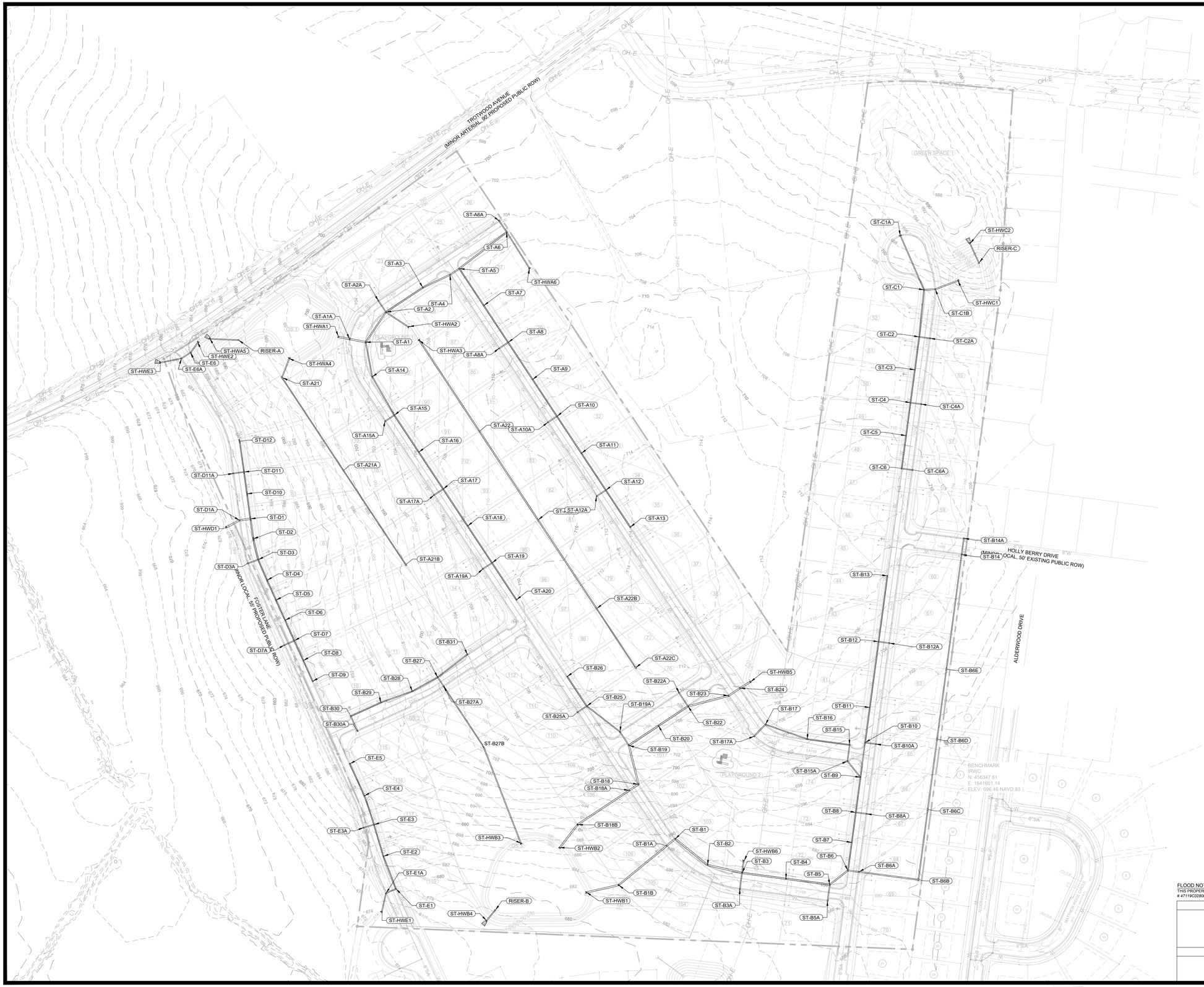
ALLISON B. COROLLA
REGISTERED ENGINEER
No. 127389
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-5.0

T-SQUARE ENGINEERING

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Roig & Nelson Crowe)\Production\24-0314 5- Grading and Drainage Plan.dwg, 4/15/2025 8:41:26 AM



N

GRAPHIC SCALE
(IN FEET)

100 0 50 100 200

SCALE: 1" = 100'

LEGEND	
500	EXISTING MAJOR CONTOURS
498	EXISTING MINOR CONTOURS
500	PROPOSED MAJOR CONTOURS
498	PROPOSED MINOR CONTOURS
	PROPOSED STORM INLET
	PROPOSED HEADWALL
	PROPOSED AREA DRAIN
	PROPOSED STORM PIPE

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AN AREA DESIGNATED AS "ZONE X" AS EVIDENCED ON FEMA PANEL # 47119C0280E OF MAURY COUNTY, TN, DATED 04/16/2007.

OWNER OF RECORD
GORE JAMES ETUX STACY 2101 KEY DRIVE BRENTWOOD, TN 37027 MAP112, PARCEL 018.03 DEED BOOK R2387, PAGE 455
APPLICANT
T-SQUARE ENGINEERING 111 SOUTHEAST PKWY CT FRANKLIN, TN 37064 615.678.8212

REVISIONS		
NO.	DATE	

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

DRAINAGE PLAN

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
REGISTERED ENGINEER
AGRICULTURE
COLUMBIA
No. 127389
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-5.1

T-SQUARE ENGINEERING

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowe)\Production\24-0314 5- Grading and Drainage Plan.dwg, 4/15/2025 8:41:37 AM

STRUCTURE TABLE
STORM A

STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
ST-A1	SINGLE INLET	RIM = 698.51 FG = 698.51	INV. IN = 693.99 INV. IN = 693.99	INV. OUT =693.99
ST-A1A	DOUBLE INLET	RIM = 698.51 FG = 698.51	INV. IN = 693.62	INV. OUT =693.62
ST-A2	SINGLE INLET	RIM = 700.75 FG = 700.75	INV. IN = 696.04 INV. IN = 696.04 INV. IN = 696.04	INV. OUT =696.04
ST-A2A	SINGLE INLET	RIM = 700.87 FG = 700.87		INV. OUT =696.35
ST-A3	SINGLE INLET	RIM = 704.48 FG = 704.48	INV. IN = 698.04	INV. OUT =698.04
ST-A4	SINGLE INLET	RIM = 705.06 FG = 705.06	INV. IN = 698.38	INV. OUT =698.38
ST-A5	SINGLE INLET	RIM = 705.06 FG = 705.06	INV. IN = 698.50 INV. IN = 698.50	INV. OUT =698.50
ST-A6	SINGLE INLET	RIM = 703.17 FG = 703.17	INV. IN = 699.17 INV. IN = 699.17	INV. OUT =699.17
ST-A6A	SINGLE INLET	RIM = 703.29 FG = 703.29		INV. OUT =699.32
ST-A7	SINGLE INLET	RIM = 706.76 FG = 706.76	INV. IN = 702.39	INV. OUT =702.39
ST-A8	SINGLE INLET	RIM = 709.03 FG = 709.03	INV. IN = 703.89 INV. IN = 703.89	INV. OUT =703.89
ST-A8A	SINGLE INLET	RIM = 709.03 FG = 709.03		INV. OUT =704.14
ST-A9	SINGLE INLET	RIM = 711.25 FG = 711.25	INV. IN = 706.89	INV. OUT =706.89
ST-A10	SINGLE INLET	RIM = 712.39 FG = 712.39	INV. IN = 707.89 INV. IN = 707.89	INV. OUT =707.89
ST-A10A	SINGLE INLET	RIM = 712.39 FG = 712.39		INV. OUT =708.14
ST-A11	SINGLE INLET	RIM = 713.39 FG = 713.39	INV. IN = 709.39	INV. OUT =709.39
ST-A12	SINGLE INLET	RIM = 714.39 FG = 714.39	INV. IN = 710.39 INV. IN = 710.39	INV. OUT =710.39
ST-A12A	SINGLE INLET	RIM = 714.39 FG = 714.39		INV. OUT =710.64
ST-A13	SINGLE INLET	RIM = 715.39 FG = 715.39		INV. OUT =711.39
ST-A14	SINGLE INLET	RIM = 700.19 FG = 700.19	INV. IN = 696.14	INV. OUT =696.14
ST-A15	SINGLE INLET	RIM = 702.08 FG = 702.08	INV. IN = 697.64 INV. IN = 697.64	INV. OUT =697.64
ST-A15A	SINGLE INLET	RIM = 702.08 FG = 702.08		INV. OUT =698.14
ST-A16	SINGLE INLET	RIM = 704.08 FG = 704.08	INV. IN = 700.04	INV. OUT =700.04
ST-A17	SINGLE INLET	RIM = 706.08 FG = 706.08	INV. IN = 702.04 INV. IN = 702.04	INV. OUT =702.04
ST-A17A	SINGLE INLET	RIM = 706.08 FG = 706.08		INV. OUT =702.16
ST-A18	SINGLE INLET	RIM = 708.08 FG = 708.08	INV. IN = 704.04	INV. OUT =704.04
ST-A19	SINGLE INLET	RIM = 710.08 FG = 710.08	INV. IN = 706.04 INV. IN = 706.04	INV. OUT =706.04
ST-A19A	SINGLE INLET	RIM = 710.08 FG = 710.08		INV. OUT =706.16
ST-A20	SINGLE INLET	RIM = 712.08 FG = 712.08		INV. OUT =708.04
ST-A21	3 X 6 DROP GRATE	RIM = 688.37 FG = 688.37	INV. IN = 684.34	INV. OUT =684.34
ST-A21A	3 X 6 DROP GRATE	RIM = 694.26 FG = 694.26	INV. IN = 690.63	INV. OUT =690.63
ST-A21B	3 X 6 DROP GRATE	RIM = 699.60 FG = 699.60		INV. OUT =695.73
ST-A22	3 X 6 DROP GRATE	RIM = 707.06 FG = 707.06	INV. IN = 699.60	INV. OUT =699.60
ST-A22A	3 X 6 DROP GRATE	RIM = 710.01 FG = 710.01	INV. IN = 700.80	INV. OUT =700.80
ST-A22B	3 X 6 DROP GRATE	RIM = 708.40 FG = 708.40	INV. IN = 702.00	INV. OUT =702.00
ST-A22C	3 X 6 DROP GRATE	RIM = 706.80 FG = 706.80		INV. OUT =702.80
ST-HWA1	HEADWALL		INV. IN = 692.50	
ST-HWA2	HEADWALL			INV. OUT =697.50
ST-HWA3	HEADWALL		INV. IN = 698.37	
ST-HWA4	HEADWALL		INV. IN = 683.75	
ST-HWA6	HEADWALL			INV. OUT =704.50

PIPE TABLE
STORM A

NAME	SIZE	LENGTH	SLOPE
ST-A1 TO ST-A1A	30" RCP	35.78	1.00%
ST-A1A TO ST-HWA1	30" RCP	23.22	4.55%
ST-A2 TO ST-A1	24" RCP	80.71	2.50%
ST-A2A TO ST-A2	18" RCP	29.77	1.00%
ST-A3 TO ST-A2	24" RCP	98.82	2.00%
ST-A4 TO ST-A3	24" RCP	66.91	0.50%
ST-A5 TO ST-A4	24" RCP	23.76	0.50%
ST-A6 TO ST-A5	24" RCP	133.63	0.50%
ST-A6A TO ST-A6	18" RCP	29.76	0.50%
ST-A7 TO ST-A5	18" RCP	98.90	3.89%
ST-A8 TO ST-A7	18" RCP	98.79	1.50%
ST-A8A TO ST-A8	18" RCP	23.77	1.00%
ST-A9 TO ST-A8	18" RCP	98.85	3.00%
ST-A10 TO ST-A9	18" RCP	98.77	1.00%
ST-A10A TO ST-A10	18" RCP	23.77	1.00%
ST-A11 TO ST-A10	18" RCP	98.79	1.50%
ST-A12 TO ST-A11	18" RCP	98.77	1.00%
ST-A12A TO ST-A12	18" RCP	23.76	1.00%
ST-A13 TO ST-A12	18" RCP	98.77	1.00%
ST-A14 TO ST-A1	18" RCP	78.39	2.70%
ST-A15 TO ST-A14	18" RCP	98.56	1.50%
ST-A15A TO ST-A15	18" RCP	23.79	2.00%
ST-A16 TO ST-A15	18" RCP	98.82	2.40%
ST-A17 TO ST-A16	18" RCP	98.81	2.00%
ST-A17A TO ST-A17	18" RCP	23.76	0.50%
ST-A18 TO ST-A17	18" RCP	98.81	2.00%
ST-A19 TO ST-A18	18" RCP	98.81	2.00%
ST-A19A TO ST-A19	18" RCP	23.76	0.50%
ST-A20 TO ST-A19	18" RCP	98.81	2.00%
ST-A21 TO ST-HWA4	18" RCP	44.64	1.30%
ST-A21A TO ST-A21	18" RCP	250.32	2.50%
ST-A21B TO ST-A21A	18" RCP	253.66	2.00%
ST-A22 TO ST-HWA3	24" RCP	244.43	0.50%
ST-A22A TO ST-A22	24" RCP	238.77	0.50%
ST-A22B TO ST-A22A	24" RCP	238.77	0.50%
ST-A22C TO ST-A22B	18" RCP	158.76	0.50%
ST-HWA2 TO ST-A2	18" RCP	59.31	2.43%
ST-HWA6 TO ST-A6	18" RCP	93.46	5.61%

STRUCTURE TABLE
STORM B

STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
ST-B1	SINGLE INLET	RIM = 693.38 FG = 693.38	INV. IN = 683.14	INV. OUT =683.14
ST-B1A	SINGLE INLET	RIM = 693.38 FG = 693.38	INV. IN = 683.01	INV. OUT =683.01
ST-B1B	MANHOLE	RIM = 685.92 FG = 685.92	INV. IN = 682.31	INV. OUT =682.31
ST-B2	SINGLE INLET	RIM = 692.37 FG = 692.37	INV. IN = 683.61	INV. OUT =683.61
ST-B3	SINGLE INLET	RIM = 691.38 FG = 691.38	INV. IN = 684.01 INV. IN = 684.01 INV. IN = 684.01	INV. OUT =684.01
ST-B3A	SINGLE INLET	RIM = 691.38 FG = 691.38		INV. OUT =684.38
ST-B4	SINGLE INLET	RIM = 690.37 FG = 690.37	INV. IN = 684.51	INV. OUT =684.51
ST-B5	SINGLE INLET	RIM = 689.47 FG = 689.47	INV. IN = 685.01 INV. IN = 685.01	INV. OUT =685.01
ST-B5A	SINGLE INLET	RIM = 689.47 FG = 689.47		INV. OUT =685.20
ST-B6	SINGLE INLET	RIM = 691.05 FG = 691.05	INV. IN = 685.57 INV. IN = 685.57	INV. OUT =685.57
ST-B6A	SINGLE INLET	RIM = 690.98 FG = 690.98	INV. IN = 685.70	INV. OUT =685.70
ST-B6B	3 X 6 DROP GRATE	RIM = 689.59 FG = 689.59	INV. IN = 686.38	INV. OUT =686.38
ST-B6C	3 X 6 DROP GRATE	RIM = 691.01 FG = 691.01	INV. IN = 687.18	INV. OUT =687.18
ST-B6D	3 X 6 DROP GRATE	RIM = 695.68 FG = 695.68	INV. IN = 688.78	INV. OUT =688.78
ST-B6E	3 X 6 DROP GRATE	RIM = 701.08 FG = 701.08	INV. IN = 690.38	INV. OUT =690.38
ST-B7	SINGLE INLET	RIM = 692.89 FG = 692.89	INV. IN = 688.71	INV. OUT =688.71
ST-B8	SINGLE INLET	RIM = 694.94 FG = 694.94	INV. IN = 690.77 INV. IN = 690.77	INV. OUT =690.77
ST-B8A	SINGLE INLET	RIM = 694.94 FG = 694.94		INV. OUT =691.02
ST-B9	SINGLE INLET	RIM = 697.34 FG = 697.34	INV. IN = 693.17 INV. IN = 693.17	INV. OUT =693.17
ST-B10	SINGLE INLET	RIM = 699.71 FG = 699.71	INV. IN = 695.54 INV. IN = 695.54	INV. OUT =695.54
ST-B10A	SINGLE INLET	RIM = 699.71 FG = 699.71		INV. OUT =695.67
ST-B11	SINGLE INLET	RIM = 702.11 FG = 702.11	INV. IN = 697.94	INV. OUT =697.94
ST-B12	SINGLE INLET	RIM = 706.61 FG = 706.61	INV. IN = 702.44 INV. IN = 702.44	INV. OUT =702.44
ST-B12A	SINGLE INLET	RIM = 706.61 FG = 706.61		INV. OUT =702.57
ST-B13	SINGLE INLET	RIM = 711.11 FG = 711.11		INV. OUT =703.19
ST-B14	SINGLE INLET	RIM = 706.43 FG = 706.43	INV. IN = 695.60	INV. OUT =695.60
ST-B14A	SINGLE INLET	RIM = 706.43 FG = 706.43		INV. OUT =696.71
ST-B15	SINGLE INLET	RIM = 699.01 FG = 699.01	INV. IN = 695.01	INV. OUT =695.01
ST-B15A	SINGLE INLET	RIM = 699.01 FG = 699.01	INV. IN = 694.83	INV. OUT =694.83
ST-B16	SINGLE INLET	RIM = 701.30 FG = 701.30	INV. IN = 697.14	INV. OUT =697.14
ST-B17	SINGLE INLET	RIM = 705.25 FG = 705.25	INV. IN = 701.13	INV. OUT =701.13
ST-B17A	SINGLE INLET	RIM = 705.24 FG = 705.24		INV. OUT =701.32
ST-B18	SINGLE INLET	RIM = 697.42 FG = 697.42	INV. IN = 693.00	INV. OUT =693.00
ST-B18A	SINGLE INLET	RIM = 697.42 FG = 697.42	INV. IN = 692.38	INV. OUT =692.38
ST-B18B	MANHOLE	RIM = 689.94 FG = 689.94	INV. IN = 684.76	INV. OUT =684.76
ST-B19	SINGLE INLET	RIM = 703.16 FG = 703.16	INV. IN = 697.74 INV. IN = 697.74	INV. OUT =697.74
ST-B19A	SINGLE INLET	RIM = 703.16 FG = 703.16	INV. IN = 697.93	INV. OUT =697.93
ST-B20	SINGLE INLET	RIM = 705.76 FG = 705.76	INV. IN = 700.94	INV. OUT =700.94
ST-B22	SINGLE INLET	RIM = 708.54 FG = 708.54	INV. IN = 703.74 INV. IN = 703.74	INV. OUT =703.74
ST-B22A	SINGLE INLET	RIM = 708.54 FG = 708.54		INV. OUT =704.11
ST-B23	SINGLE INLET	RIM = 708.98 FG = 708.98	INV. IN = 704.21	INV. OUT =704.21
ST-B24	SINGLE INLET	RIM = 708.98 FG = 708.98	INV. IN = 704.37	INV. OUT =704.37
ST-B25	SINGLE INLET	RIM = 708.11 FG = 708.11	INV. IN = 702.66 INV. IN = 702.66	INV. OUT =702.66
ST-B25A	SINGLE INLET	RIM = 708.11 FG = 708.11		INV. OUT =702.91
ST-B26	SINGLE INLET	RIM = 711.78 FG = 711.78		INV. OUT =705.86
ST-B27	SINGLE INLET	RIM = 701.23 FG = 701.23	INV. IN = 682.76 INV. IN = 697.52	INV. OUT =682.76
ST-B27A	SINGLE INLET	RIM = 701.23 FG = 701.23	INV. IN = 682.63	INV. OUT =682.63
ST-B27B	MANHOLE	RIM = 696.28 FG = 696.28	INV. IN = 681.82	INV. OUT =681.82
ST-B28	SINGLE INLET	RIM = 697.58 FG = 697.58	INV. IN = 683.09	INV. OUT =683.09
ST-B29	SINGLE INLET	RIM = 693.42 FG = 693.42	INV. IN = 683.46	INV. OUT =683.46

STRUCTURE TABLE
STORM B

STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
ST-B30	SINGLE INLET	RIM = 689.37 FG = 689.37	INV. IN = 683.84	INV. OUT =683.84
ST-B30A	SINGLE INLET	RIM = 689.37 FG = 689.37		INV. OUT =684.02
ST-B31	SINGLE INLET	RIM = 705.68 FG = 705.68		INV. OUT =702.22
ST-HWB1	HEADWALL		INV. IN = 681.94	
ST-HWB2	HEADWALL		INV. IN = 682.16	
ST-HWB3	HEADWALL		INV. IN = 680.65	
ST-HWB5	HEADWALL			INV. OUT =704.50
ST-HWB6	HEADWALL			INV. OUT =690.50

PIPE TABLE
STORM B

NAME	SIZE	LENGTH	SLOPE
ST-B1 TO ST-B1A	30" RCP	23.77	0.50%
ST-B1A TO ST-B1B	30" RCP	137.39	0.50%
ST-B1B TO ST-HWB1	30" RCP	70.97	0.50%
ST-B2 TO ST-B1	30" RCP	92.54	0.50%
ST-B3 TO ST-B2	30" RCP	78.73	0.50%
ST-B3A TO ST-B3	18" RCP	35.77	1.00%
ST-B4 TO ST-B3	30" RCP	98.77	0.50%
ST-B5 TO ST-B4	30" RCP	98.77	0.50%
ST-B5A TO ST-B5	18" RCP	35.76	0.50%
ST-B6 TO ST-B5	24" RCP	50.18	1.07%
ST-B6A TO ST-B6	24" RCP	23.76	0.50%
ST-B6B TO ST-B6A	24" RCP	134.32	0.50%
ST-B6C TO ST-B6B	18" RCP	158.78	0.50%
ST-B6D TO ST-B6C	18" RCP	158.78	1.00%
ST-B6E TO ST-B6D	18" RCP	158.78	1.00%
ST-B7 TO ST-B6	18" RCP	62.67	4.93%
ST-B8 TO ST-B7	18" RCP	67.34	3.00%
ST-B8A TO ST-B8	18" RCP	23.77	1.00%
ST-B9 TO ST-B8	18" RCP	78.84	3.00%
ST-B10 TO ST-B9	18" RCP	77.84	3.00%
ST-B10A TO ST-B10	18" RCP	23.76	0.50%
ST-B11 TO ST-B10	18" RCP	78.84	3.00%
ST-B12 TO ST-B11	18" RCP	148.88	3.00%
ST-B12A TO ST-B12	18" RCP	23.76	0.50%
ST-B13 TO ST-B12	18" RCP	148.76	0.50%
ST-B14 TO ST-B6E	18" RCP	259.84	2.00%
ST-B14A TO ST-B14	18" RCP	35.82	3.00%
ST-B15 TO ST-B15A	18" RCP	35.76	0.50%
ST-B15A TO ST-B9	18" RCP	45.00	3.54%
ST-B16 TO ST-B15	18" RCP	95.55	2.20%
ST-B17 TO ST-B16	18" RCP	98.80	3.99%
ST-B17A TO ST-B17	18" RCP	35.76	0.50%
ST-B18 TO ST-B18A	30" RCP	23.83	2.50%
ST-B18A TO ST-B18B	30" RCP	137.75	5.44%
ST-B18B TO ST-HWB2	30" RCP	62.39	4.00%
ST-B19 TO ST-B18	30" RCP	89.60	5.23%
ST-B19A TO ST-B19	18" RCP	35.76	0.50%
ST-B20 TO ST-B19	30" RCP	78.94	4.00%
ST-B22 TO ST-B20	30" RCP	78.91	3.50%
ST-B22A TO ST-B22	18" RCP	35.77	1.00%
ST-B23 TO ST-B22	30" RCP	93.37	0.50%
ST-B24 TO ST-B23	30" RCP	29.77	0.50%
ST-B25 TO ST-B19A	18" RCP	93.40	5.00%
ST-B25A TO ST-B25	18" RCP	23.77	1.00%
ST-B26 TO ST-B25	18" RCP	78.89	4.00%
ST-B27 TO ST-B27A	18" RCP	23.76	0.50%
ST-B27A TO ST-B27B	18" RCP	160.08	0.50%
ST-B27B TO ST-HWB3	18" RCP	231.85	0.50%
ST-B28 TO ST-B27	18" RCP	64.14	0.50%
ST-B29 TO ST-B28	18" RCP	73.75	0.50%
ST-B30 TO ST-B29	18" RCP	73.76	0.50%
ST-B30A TO ST-B30	18" RCP	35.76	0.50%
ST-B31 TO ST-B27	18" RCP	83.83	5.54%
ST-HWB5 TO ST-B24	30" RCP	25.56	0.50%
ST-HWB6 TO ST-B3	18" RCP	25.98	24.38%

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

GRADING & DRAINAGE DETAILS

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALISON B. CORDELL
REGISTERED ENGINEER
AGRICULTURE
No. 127799
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-5.2

T-SQUARE ENGINEERING

P:\Projects\2024\24-0314 (Trotwood Avenue - Tyler Ring & Nelson Crowe)\Production\24-0314 5- Grading and Drainage Plan.dwg, 4/15/2025 8:41:46 AM

STRUCTURE TABLE STORM C				
STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
ST-C1	SINGLE INLET	RIM = 700.26 FG = 700.26	INV. IN = 693.77 INV. IN = 693.77	INV. OUT =695.44
ST-C1A	DOUBLE INLET	RIM = 698.75 FG = 698.75		INV. OUT =694.44
ST-C1B	SINGLE INLET	RIM = 700.19 FG = 700.19	INV. IN = 693.77	INV. OUT =693.77
ST-C2	SINGLE INLET	RIM = 702.92 FG = 702.92	INV. IN = 694.30 INV. IN = 694.30	INV. OUT =694.30
ST-C2A	SINGLE INLET	RIM = 702.92 FG = 702.92		INV. OUT =694.42
ST-C3	SINGLE INLET	RIM = 705.20 FG = 705.20	INV. IN = 701.04	INV. OUT =701.04
ST-C4	SINGLE INLET	RIM = 707.48 FG = 707.48	INV. IN = 703.29 INV. IN = 703.29	INV. OUT =703.29
ST-C4A	SINGLE INLET	RIM = 707.48 FG = 707.48		INV. OUT =703.54
ST-C5	SINGLE INLET	RIM = 709.76 FG = 709.76	INV. IN = 705.54	INV. OUT =705.54
ST-C6	SINGLE INLET	RIM = 712.03 FG = 712.03	INV. IN = 707.79	INV. OUT =707.79
ST-C6A	SINGLE INLET	RIM = 712.03 FG = 712.03		INV. OUT =708.04
ST-HWC1	HEADWALL		INV. IN = 693.50	

PIPE TABLE STORM C			
NAME	SIZE	LENGTH	SLOPE
ST-C1 TO ST-C1B	24" RCP	24.35	6.58%
ST-C1A TO ST-C1	18" RCP	132.56	0.50%
ST-C1B TO ST-HWC1	24" RCP	52.96	0.50%
ST-C2 TO ST-C1	18" RCP	105.59	0.50%
ST-C2A TO ST-C2	18" RCP	23.76	0.50%
ST-C3 TO ST-C2	18" RCP	74.22	8.99%
ST-C4 TO ST-C3	18" RCP	73.84	3.00%
ST-C4A TO ST-C4	18" RCP	23.77	1.00%
ST-C5 TO ST-C4	18" RCP	73.84	3.00%
ST-C6 TO ST-C5	18" RCP	73.84	3.00%
ST-C6A TO ST-C6	18" RCP	23.77	1.00%

STRUCTURE TABLE BYPASS				
STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
ST-E1	SINGLE INLET	RIM = 677.33 FG = 677.33	INV. IN = 672.86	INV. OUT =672.86
ST-E1A	SINGLE INLET	RIM = 677.32 FG = 677.32	INV. IN = 672.74	INV. OUT =672.74
ST-E2	SINGLE INLET	RIM = 680.52 FG = 680.52	INV. IN = 673.24	INV. OUT =673.24
ST-E3	SINGLE INLET	RIM = 683.41 FG = 683.41	INV. IN = 675.53 INV. IN = 679.60	INV. OUT =675.53
ST-E3A	SINGLE INLET	RIM = 683.41 FG = 683.41		INV. OUT =679.85
ST-E4	SINGLE INLET	RIM = 685.28 FG = 685.28	INV. IN = 677.03	INV. OUT =677.03
ST-E5	SINGLE INLET	RIM = 686.89 FG = 686.89		INV. OUT =679.28
ST-E6	SINGLE INLET	RIM = 681.48 FG = 681.48	INV. IN = 678.06	INV. OUT =678.06
ST-E6A	SINGLE INLET	RIM = 681.48 FG = 681.48	INV. IN = 677.93	INV. OUT =677.93
ST-HWE1	HEADWALL		INV. IN = 672.50	
ST-HWE2	HEADWALL			INV. OUT =678.20
ST-HWE3	HEADWALL		INV. IN = 677.69	

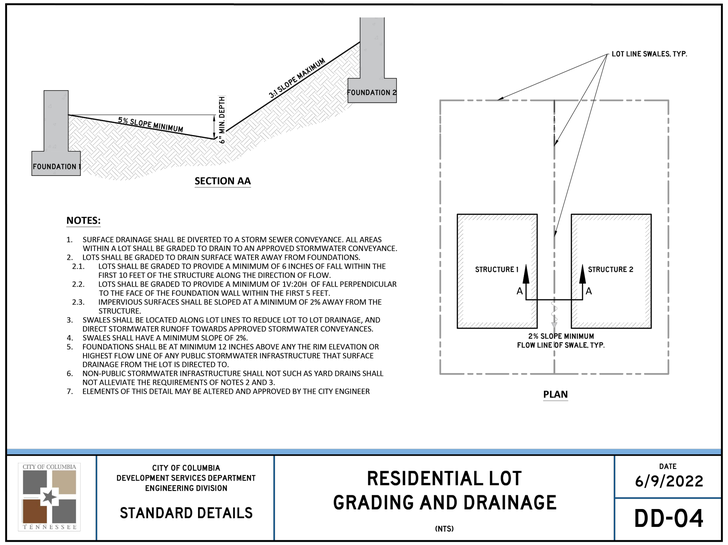
PIPE TABLE BYPASS			
NAME	SIZE	LENGTH	SLOPE
ST-E1 TO ST-E1A	18" RCP	23.70	0.50%
ST-E1A TO ST-HWE1	18" RCP	39.24	0.57%
ST-E2 TO ST-E1	18" RCP	77.39	0.48%
ST-E3 TO ST-E2	18" RCP	73.49	3.07%
ST-E3A TO ST-E3	18" RCP	23.77	1.00%
ST-E4 TO ST-E3	18" RCP	67.56	2.18%
ST-E5 TO ST-E4	18" RCP	78.03	2.84%
ST-E6 TO ST-E6A	18" RCP	23.76	0.50%
ST-E6A TO ST-HWE3	18" RCP	45.45	0.50%
ST-HWE2 TO ST-E6	18" RCP	26.19	0.50%

STRUCTURE TABLE STORM D				
STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
ST-D1	TRIPLE INLET	RIM = 682.75 FG = 682.75	INV. IN = 678.28 INV. IN = 678.28	INV. OUT =678.28
ST-D1A	SINGLE INLET	RIM = 682.75 FG = 682.75	INV. IN = 678.16	INV. OUT =678.16
ST-D2	TRIPLE INLET	RIM = 683.12 FG = 683.12	INV. IN = 678.50	INV. OUT =678.50
ST-D3	SINGLE INLET	RIM = 683.91 FG = 683.91	INV. IN = 679.30 INV. IN = 679.30	INV. OUT =679.30
ST-D3A	SINGLE INLET	RIM = 683.91 FG = 683.91		INV. OUT =679.42
ST-D4	DOUBLE INLET	RIM = 684.71 FG = 684.71	INV. IN = 680.27	INV. OUT =680.27
ST-D5	DOUBLE INLET	RIM = 685.48 FG = 685.48	INV. IN = 681.25	INV. OUT =681.25
ST-D6	SINGLE INLET	RIM = 686.26 FG = 686.26	INV. IN = 682.23	INV. OUT =682.23
ST-D7	SINGLE INLET	RIM = 687.05 FG = 687.05	INV. IN = 683.21 INV. IN = 683.21	INV. OUT =683.21
ST-D7A	SINGLE INLET	RIM = 687.05 FG = 687.05		INV. OUT =683.34
ST-D8	SINGLE INLET	RIM = 687.82 FG = 687.82	INV. IN = 683.71	INV. OUT =683.71
ST-D9	SINGLE INLET	RIM = 688.61 FG = 688.61		INV. OUT =684.21
ST-D10	TRIPLE INLET	RIM = 683.16 FG = 683.16	INV. IN = 678.56	INV. OUT =678.56
ST-D11	TRIPLE INLET	RIM = 683.66 FG = 683.66	INV. IN = 678.81 INV. IN = 678.81	INV. OUT =678.81
ST-D11A	SINGLE INLET	RIM = 683.66 FG = 683.66		INV. OUT =678.93
ST-D12	TRIPLE INLET	RIM = 684.35 FG = 684.35		INV. OUT =679.16
ST-HWD1	HEADWALL		INV. IN = 678.00	

PIPE TABLE STORM D			
NAME	SIZE	LENGTH	SLOPE
ST-D1 TO ST-D1A	30" RCP	23.77	0.50%
ST-D1A TO ST-HWD1	30" RCP	31.03	0.50%
ST-D2 TO ST-D1	24" RCP	44.74	0.47%
ST-D3 TO ST-D2	24" RCP	46.93	1.66%
ST-D3A TO ST-D3	18" RCP	23.76	0.50%
ST-D4 TO ST-D3	18" RCP	49.20	1.92%
ST-D5 TO ST-D4	18" RCP	48.05	1.99%
ST-D6 TO ST-D5	18" RCP	48.60	1.97%
ST-D7 TO ST-D6	18" RCP	49.47	1.93%
ST-D7A TO ST-D7	18" RCP	23.80	0.50%
ST-D8 TO ST-D7	18" RCP	48.07	1.01%
ST-D9 TO ST-D8	18" RCP	49.96	0.98%
ST-D10 TO ST-D1	18" RCP	55.56	0.50%
ST-D11 TO ST-D10	18" RCP	48.76	0.50%
ST-D11A TO ST-D11	18" RCP	23.76	0.50%
ST-D12 TO ST-D11	18" RCP	68.71	0.50%

STRUCTURE TABLE OUTLETS			
STRUCTURE NAME	DESCRIPTION	PIPES IN	PIPES OUT
RISER-A	RISER		INV. OUT =681.00
RISER-B	RISER		INV. OUT =679.00
RISER-C	RISER		INV. OUT =693.25
ST-HWA5	HEADWALL	INV. IN = 680.45	
ST-HWB4	HEADWALL	INV. IN = 678.70	
ST-HWC2	HEADWALL	INV. IN = 691.32	

PIPE TABLE OUTLETS			
NAME	SIZE	LENGTH	SLOPE
RISER-A TO ST-HWA5	18" RCP	60.64	0.86%
RISER-B TO ST-HWB4	18" RCP	27.89	1.00%
RISER-C TO ST-HWC2	18" RCP	46.29	4.00%



NOTES:

1. SURFACE DRAINAGE SHALL BE DIVERTED TO A STORM SEWER CONVEYANCE. ALL AREAS WITHIN A LOT SHALL BE GRADED TO DRAIN TO AN APPROVED STORMWATER CONVEYANCE.
2. LOTS SHALL BE GRADED TO DRAIN SURFACE WATER AWAY FROM FOUNDATIONS.
   - 2.1. LOTS SHALL BE GRADED TO PROVIDE A MINIMUM OF 6 INCHES OF FALL WITHIN THE FIRST 10 FEET OF THE STRUCTURE ALONG THE DIRECTION OF FLOW.
   - 2.2. LOTS SHALL BE GRADED TO PROVIDE A MINIMUM OF 1V:20H OF FALL PERPENDICULAR TO THE FACE OF THE FOUNDATION WALL WITHIN THE FIRST 5 FEET.
   - 2.3. IMPERVIOUS SURFACES SHALL BE SLOPED AT A MINIMUM OF 2% AWAY FROM THE STRUCTURE.
3. SWALES SHALL BE LOCATED ALONG LOT LINES TO REDUCE LOT TO LOT DRAINAGE, AND DIRECT STORMWATER RUNOFF TOWARDS APPROVED STORMWATER CONVEYANCES.
4. SWALES SHALL HAVE A MINIMUM SLOPE OF 2%.
5. FOUNDATIONS SHALL BE AT MINIMUM 12 INCHES ABOVE ANY THE RIM ELEVATION OR HIGHEST FLOW LINE OF ANY PUBLIC STORMWATER INFRASTRUCTURE THAT SURFACE DRAINAGE FROM THE LOT IS DIRECTED TO.
6. NON-PUBLIC STORMWATER INFRASTRUCTURE SHALL NOT SUCH AS YARD DRAINS SHALL NOT ALLEVIATE THE REQUIREMENTS OF NOTES 2 AND 3.
7. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA TENNESSEE	CITY OF COLUMBIA DEVELOPMENT SERVICES DEPARTMENT ENGINEERING DIVISION STANDARD DETAILS	RESIDENTIAL LOT GRADING AND DRAINAGE (NTS)	DATE 6/9/2022 DD-04

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

GRADING & DRAINAGE DETAILS

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
REGISTERED ENGINEER
AGRICULTURE
No. 127390
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-5.3

T-SQUARE ENGINEERING

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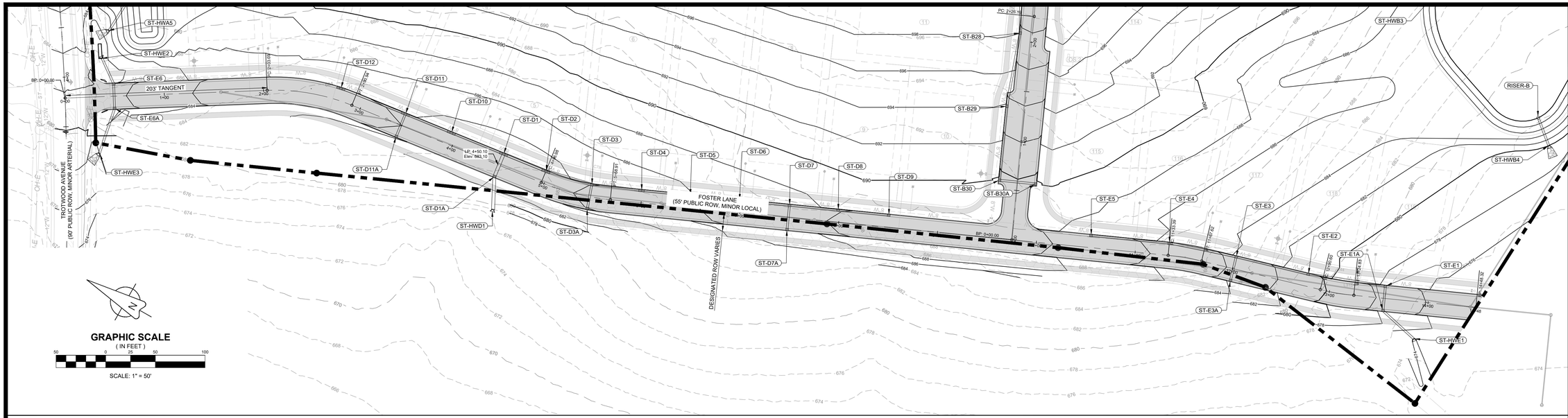

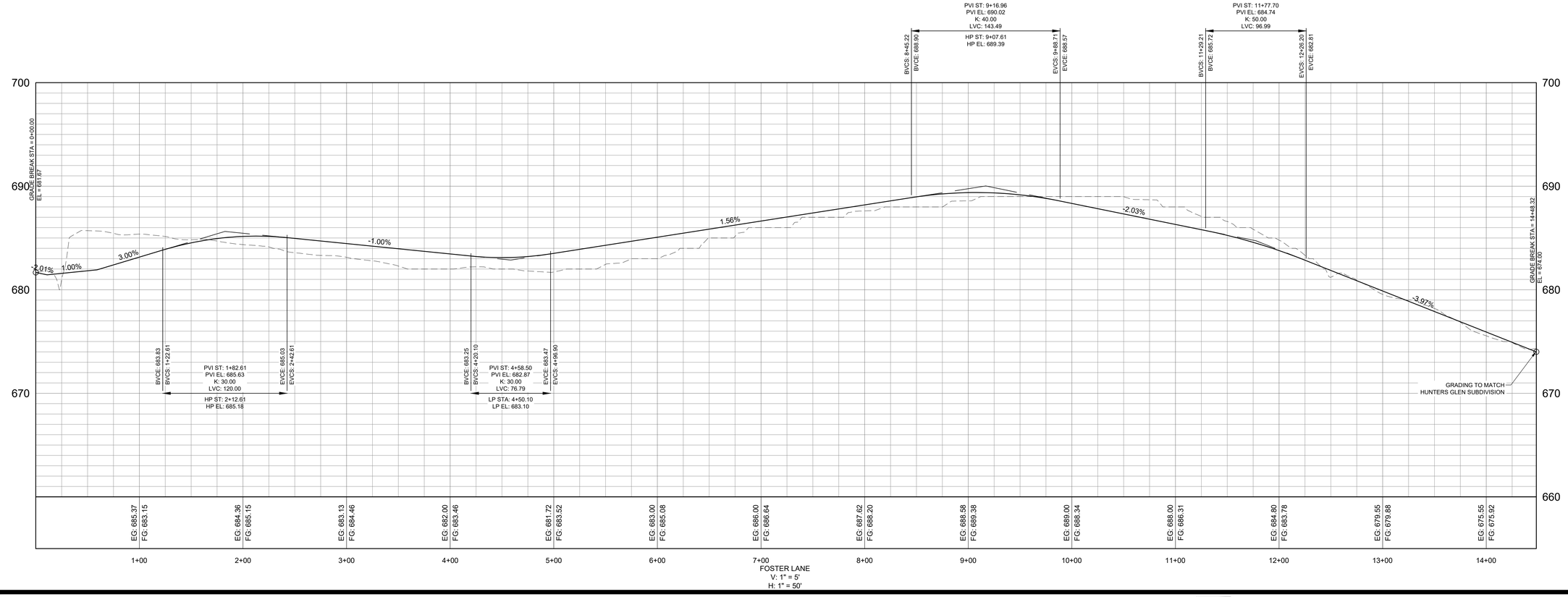

TROTWOOD FOSTER SUBDIVISION

FOSTER LANE
PLAN AND PROFILE
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

NO.	DATE	REVISIONS

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

ALLISON B. CORCORAN
LICENSED PROFESSIONAL ENGINEER
AGRICULTURE
No. 127380
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-6.0

T-SQUARE ENGINEERING

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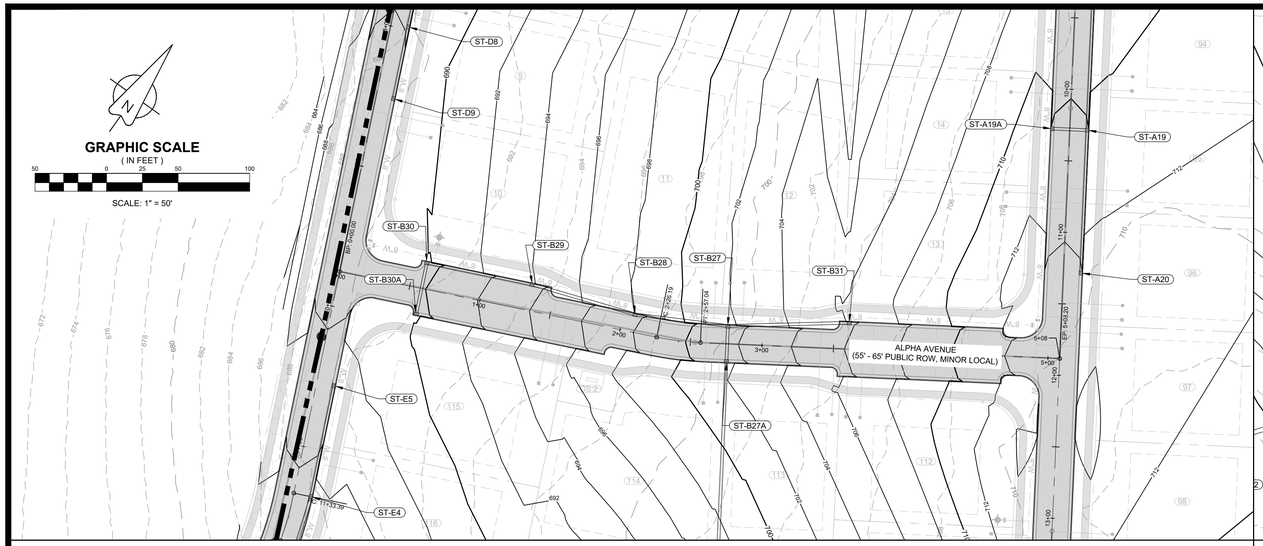

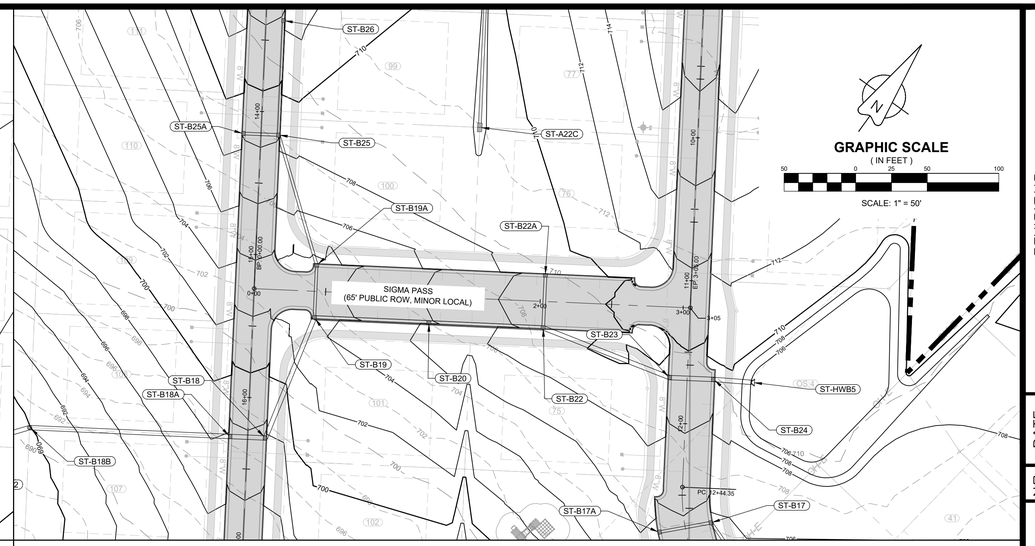

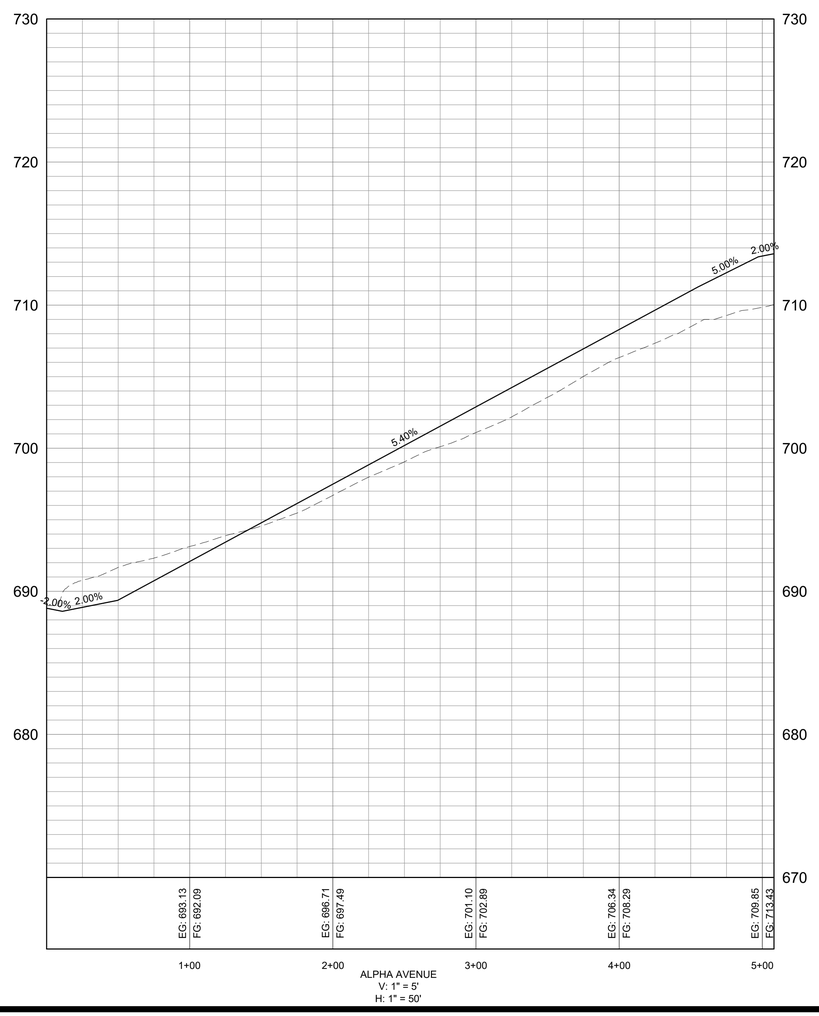

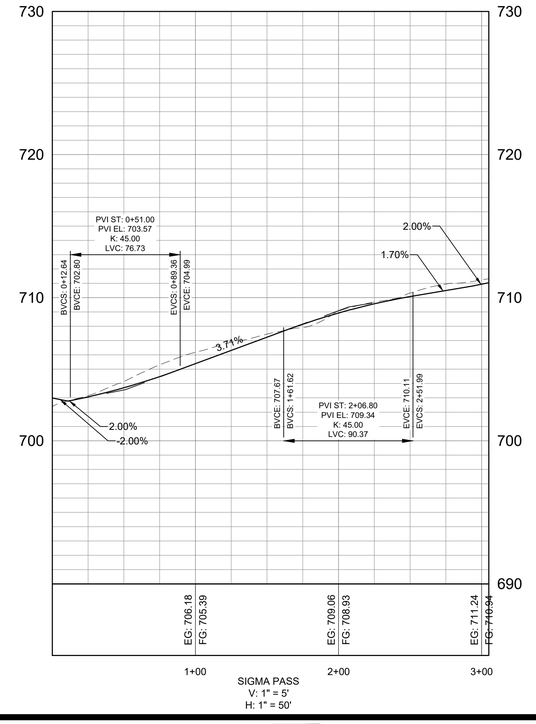

REVISIONS

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REVIEWER: ABC

ALPHA AVENUE AND SIGMA PASS
PLAN AND PROFILE
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. CORDELL
LICENSED PROFESSIONAL ENGINEER
AGRICULTURE
No. 127399
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-6.1

T-SQUARE ENGINEERING

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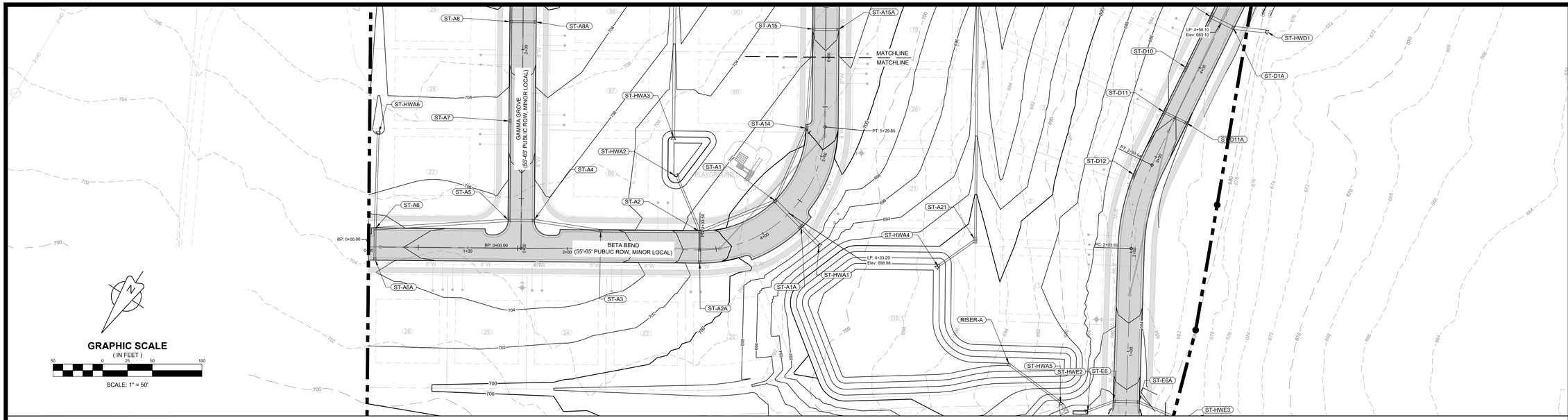

REVISIONS

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DATE: 04/21/2025
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DRAWN BY: T-SQUARE
REVIEWER: ABC

TROTWOOD FOSTER SUBDIVISION

BETA BEND
PLAN AND PROFILE
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

ALLISON B. CORDELL
REGISTERED ENGINEER
No. 127369
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-6.2

T-SQUARE ENGINEERING

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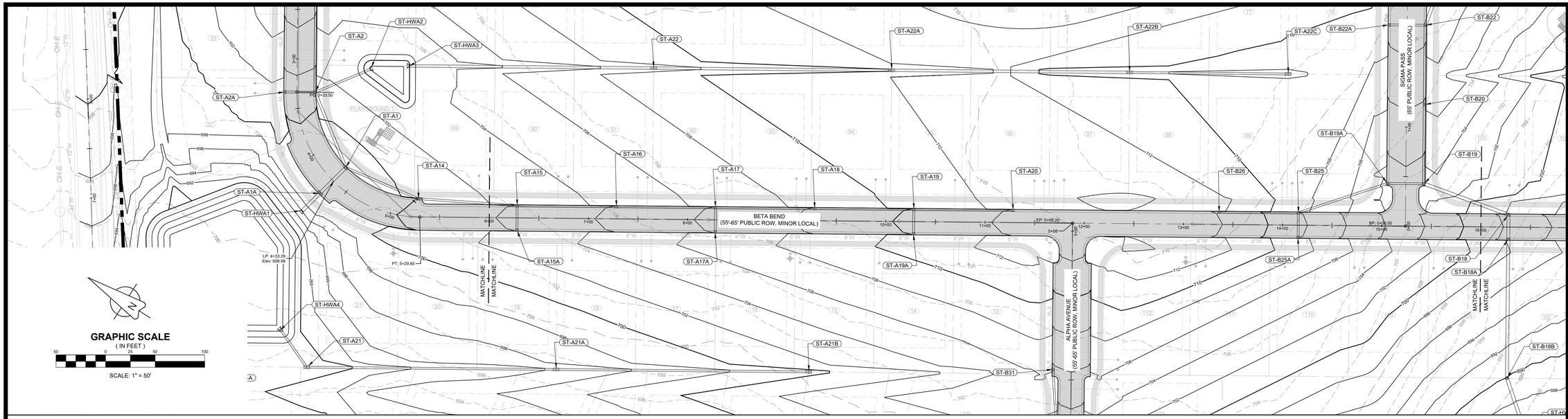

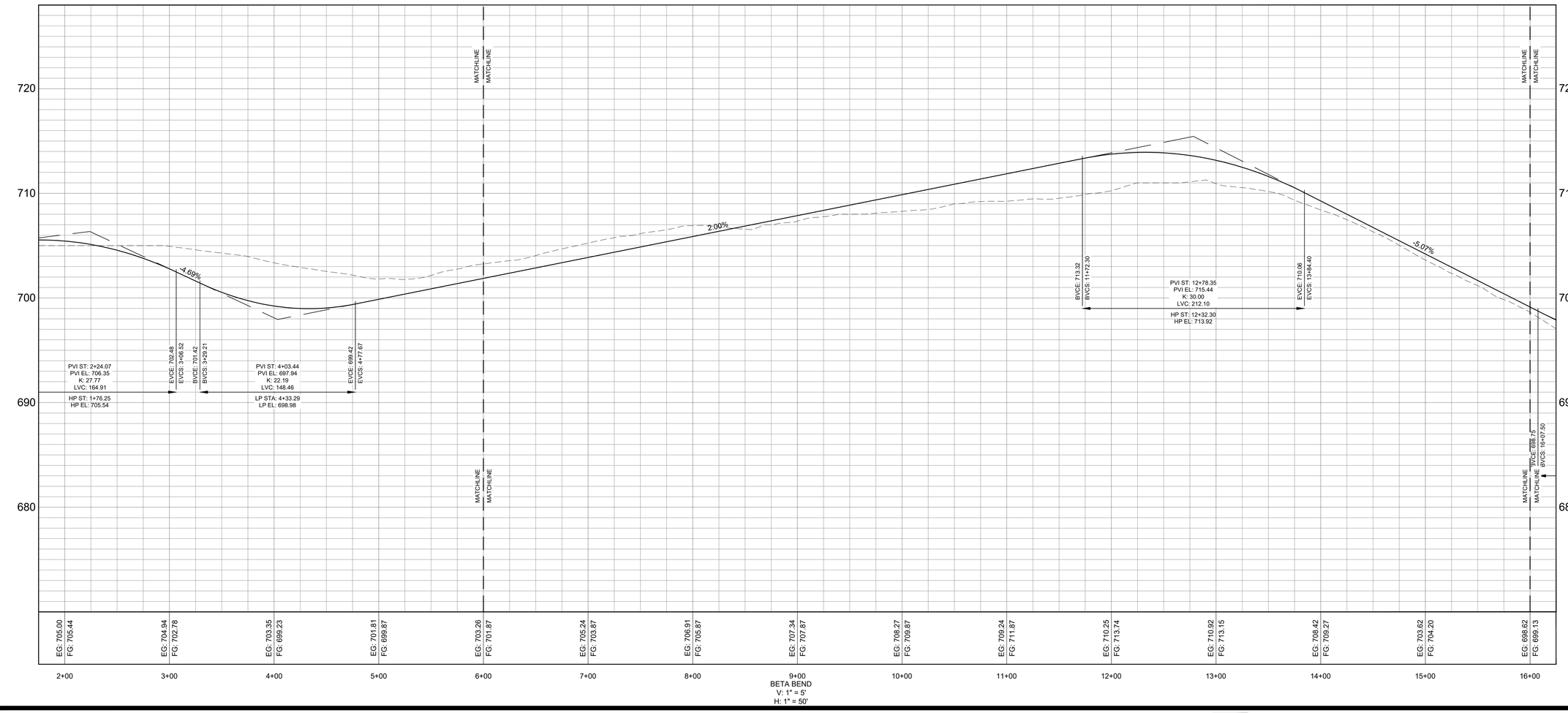

REVISIONS		
NO.	DATE	

DATE: 04/21/2025
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REVIEWER: ABC

BETA BEND
PLAN AND PROFILE
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLLA
REGISTERED ENGINEER
AGREEMENT
No. 127599
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-6.3

T-SQUARE ENGINEERING

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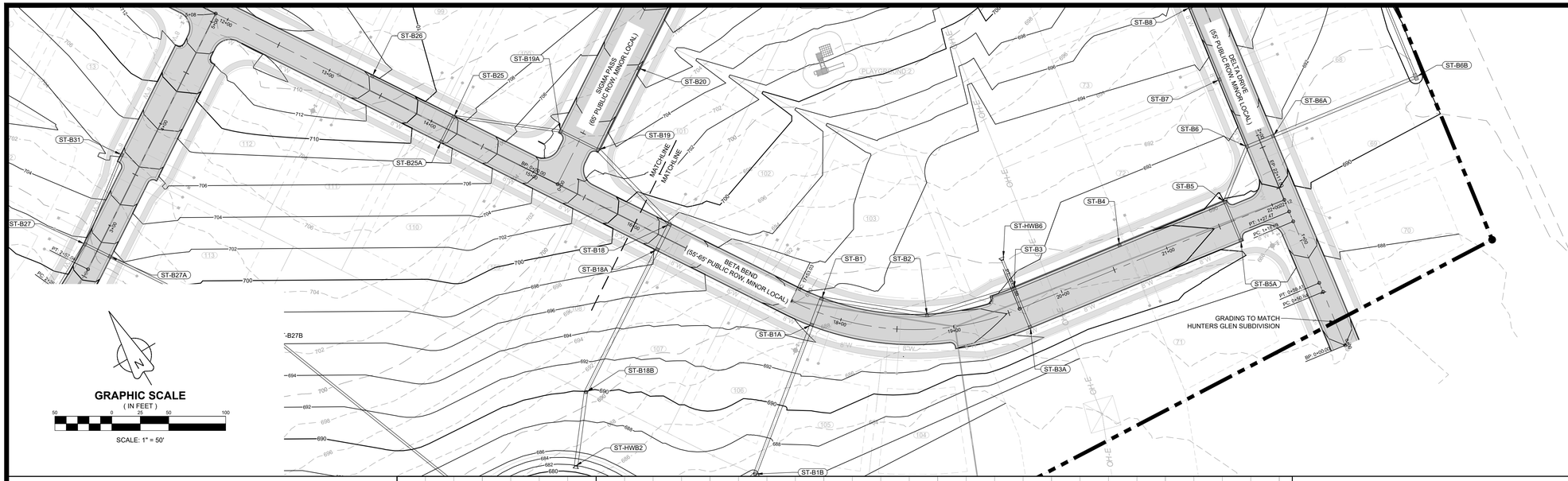

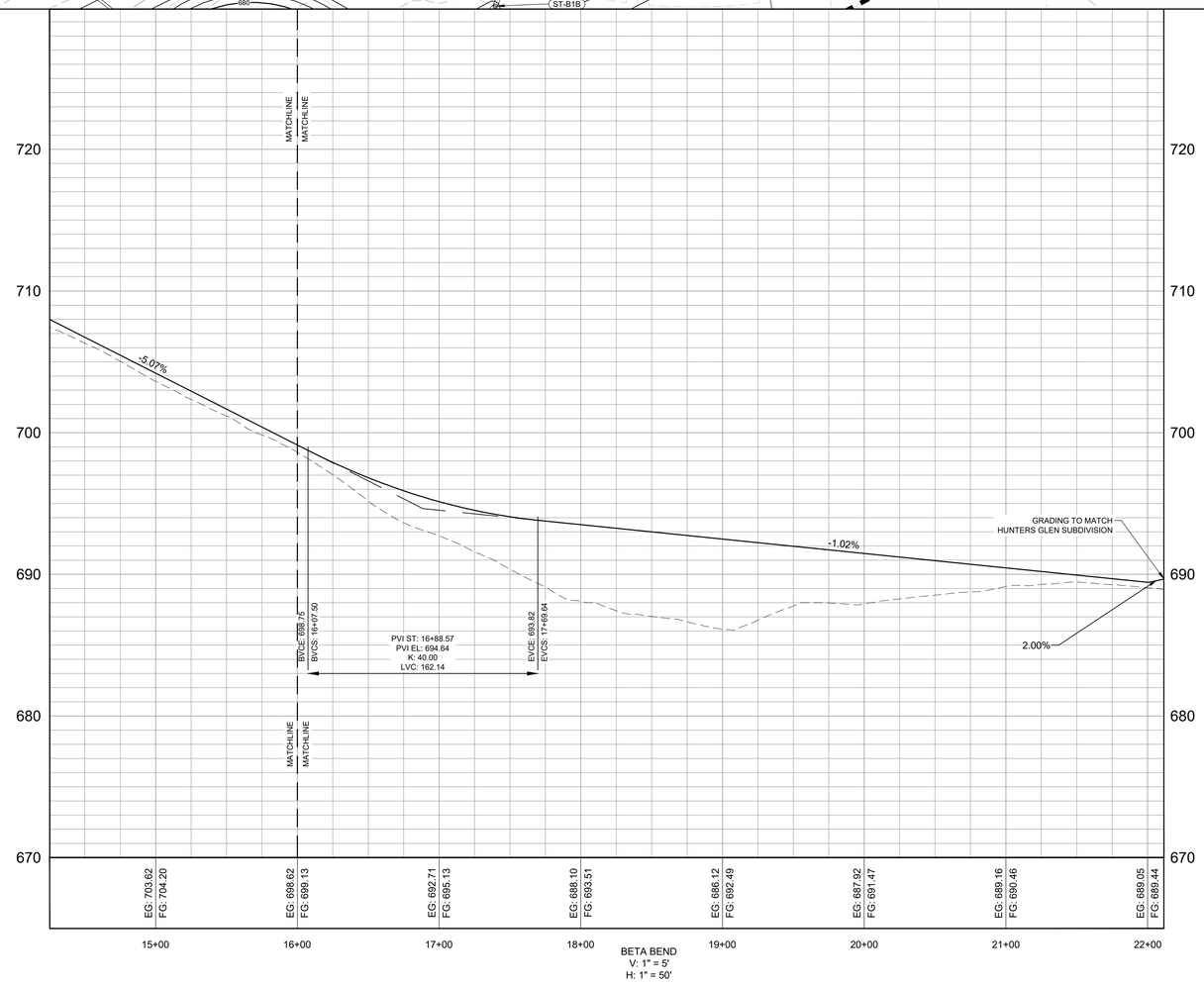

TROTWOOD FOSTER SUBDIVISION

REVISIONS

NO.	DATE

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SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

BETA BEND
PLAN AND PROFILE
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

ALLISON B. CORDELL
REGISTERED ENGINEER
No. 127369
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-6.4

T-SQUARE ENGINEERING

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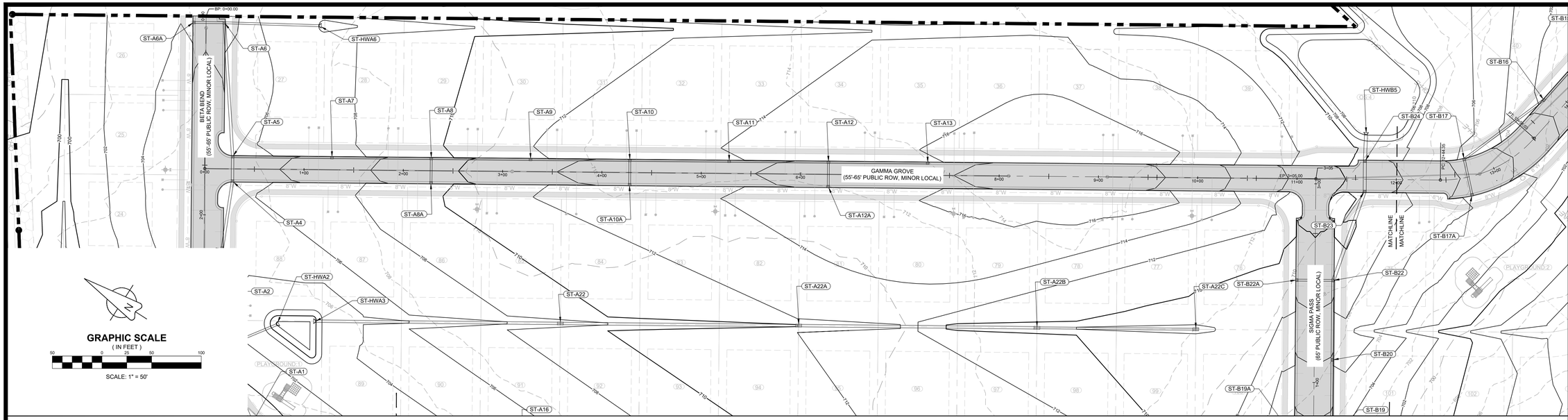

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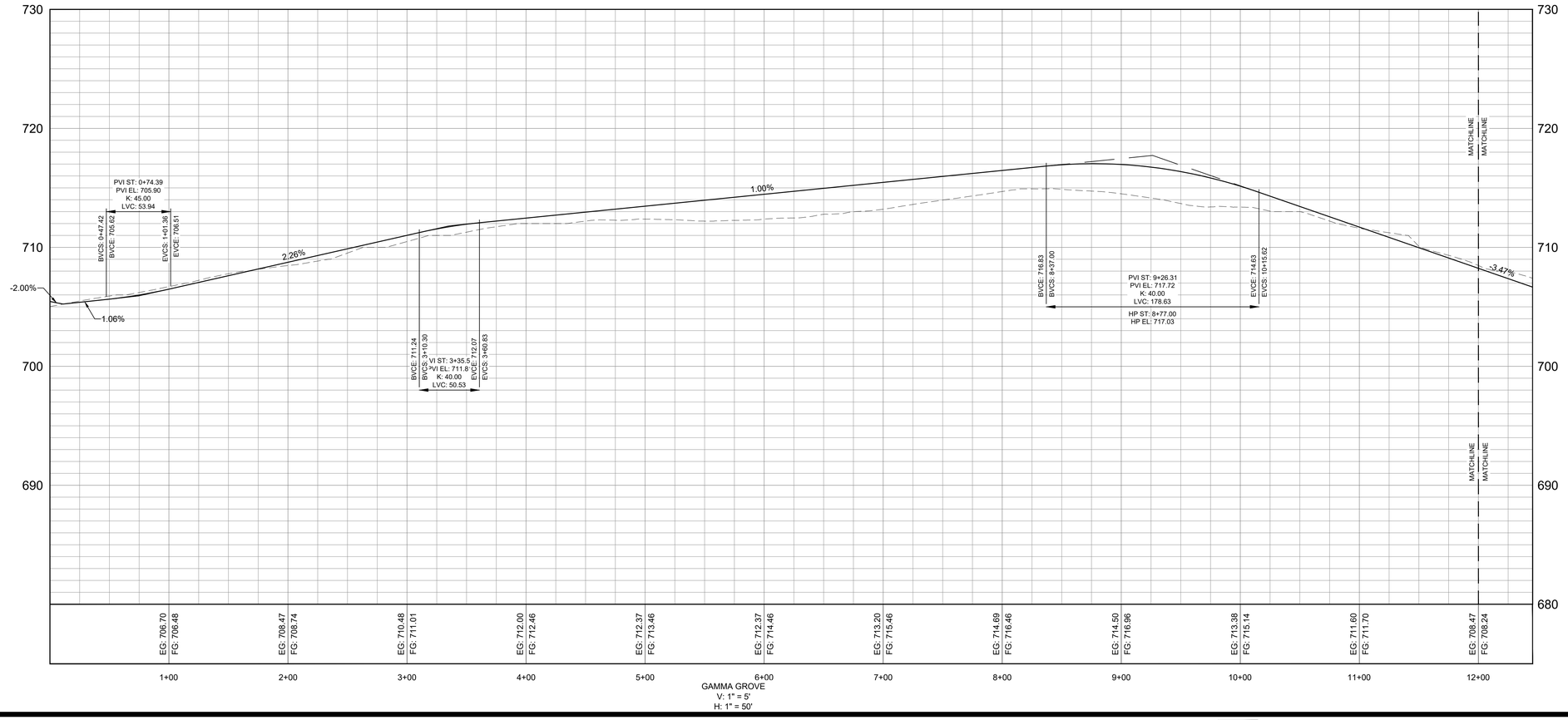

TROTWOOD FOSTER SUBDIVISION

GAMMA GROVE
PLAN AND PROFILE
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

NO.	DATE	REVISIONS

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

ALLISON B. COROLLA
REGISTERED ENGINEER
AGRICULTURE
CIVIL
No. 127369
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-6.5

T-SQUARE ENGINEERING

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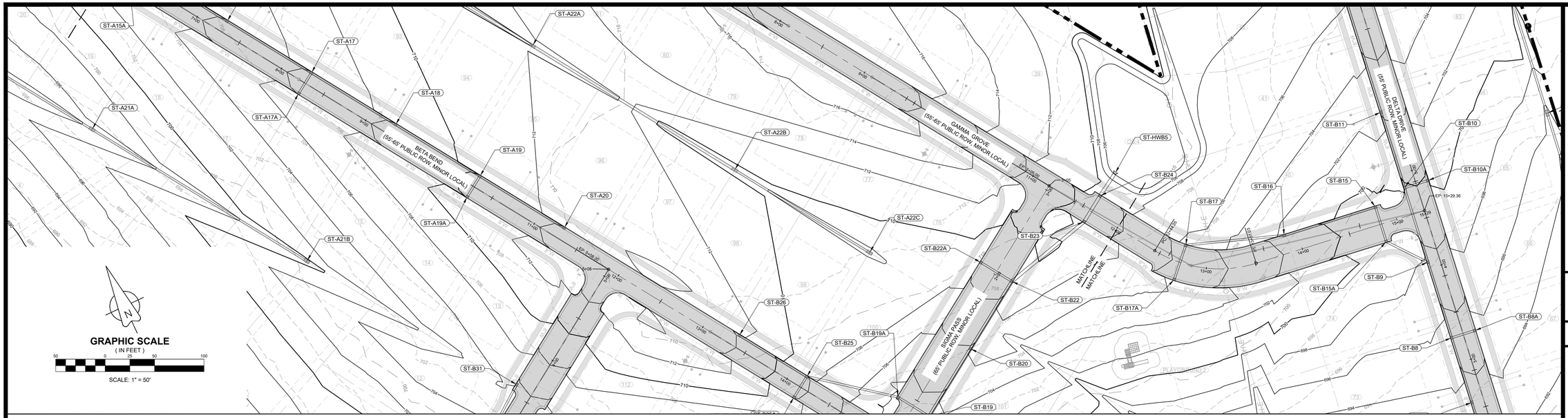

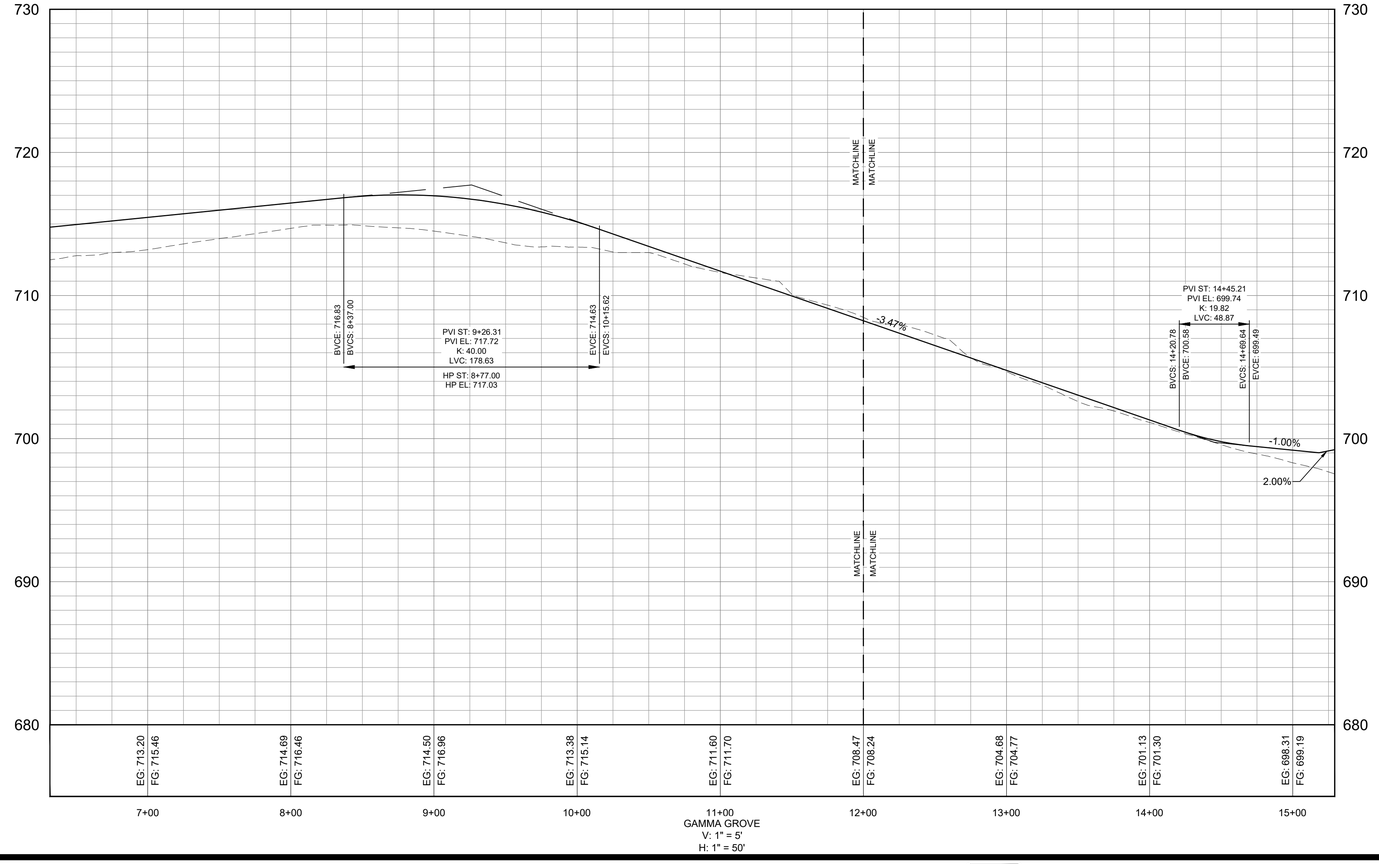

TROTWOOD FOSTER SUBDIVISION

GAMMA GROVE

PLAN AND PROFILE

MAP 112, PARCEL 018.03

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

NO.	DATE	REVISIONS

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

ALLISON B. COROLLA
REGISTERED ENGINEER
AGRICULTURE
CIVIL
No. 127369
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-6.6

T-SQUARE ENGINEERING

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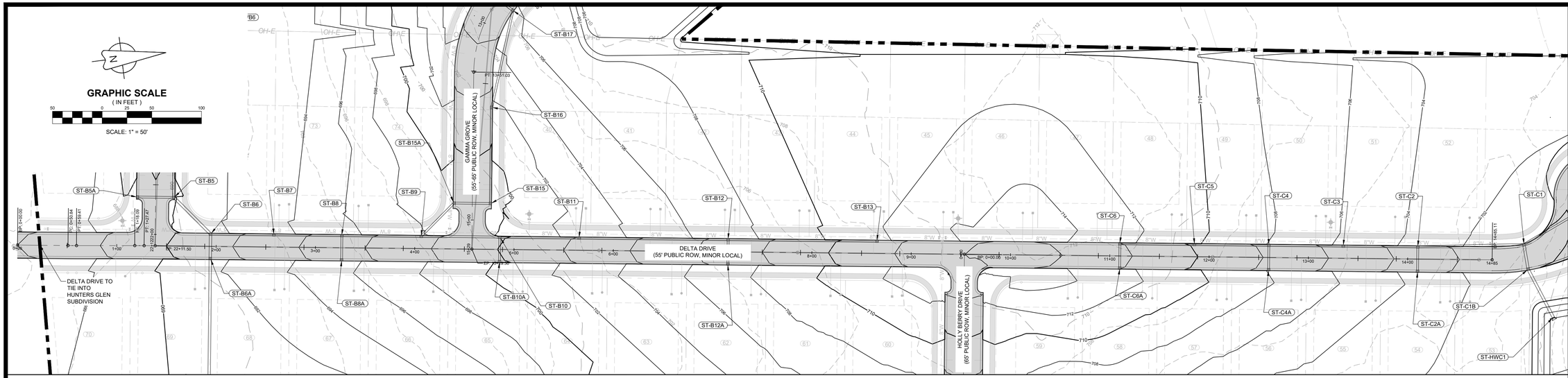

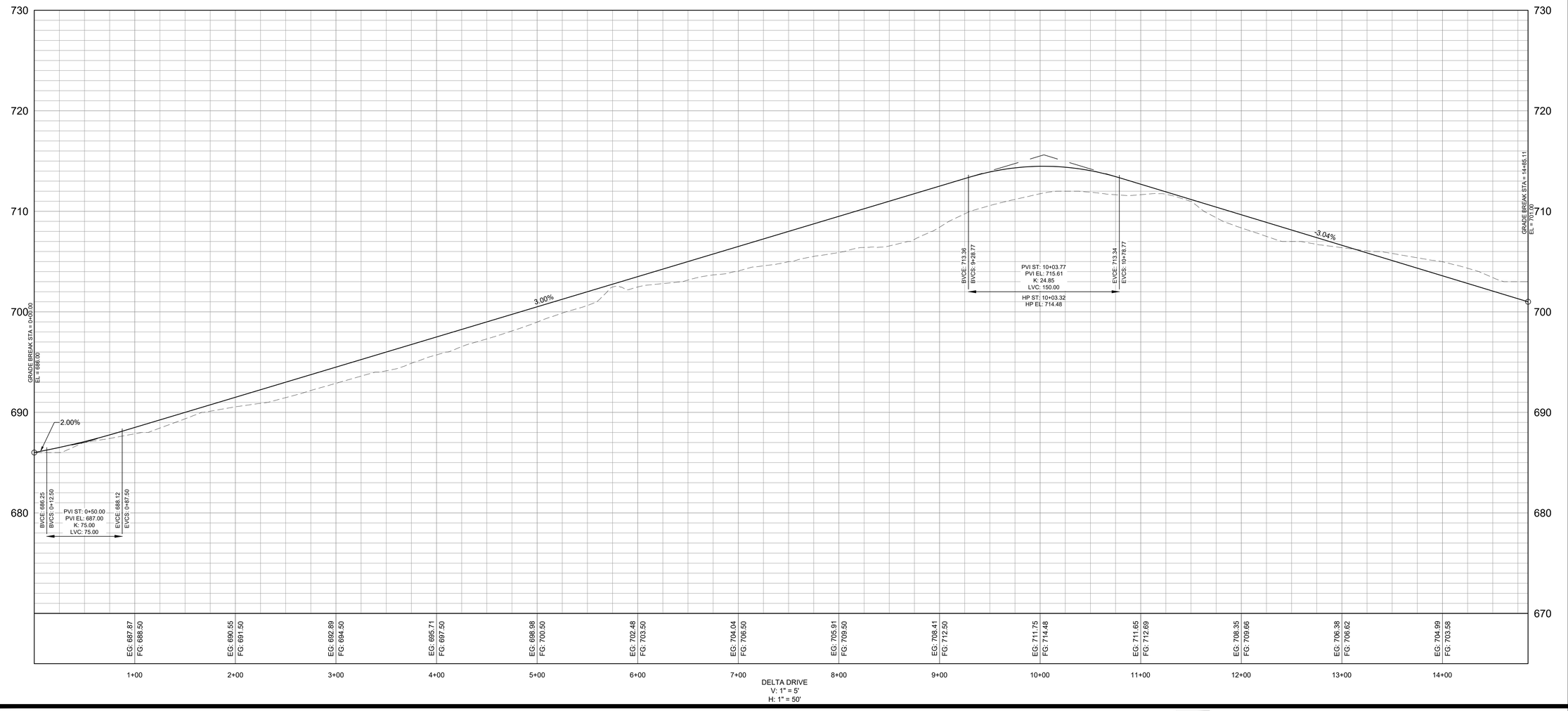

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

DELTA DRIVE
PLAN AND PROFILE
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

FOSTER SUBDIVISION
TROTWOOD FO

ALLISON B. CORDELL
LICENSED PROFESSIONAL ENGINEER
No. 127369
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-6.7

T-SQUARE ENGINEERING

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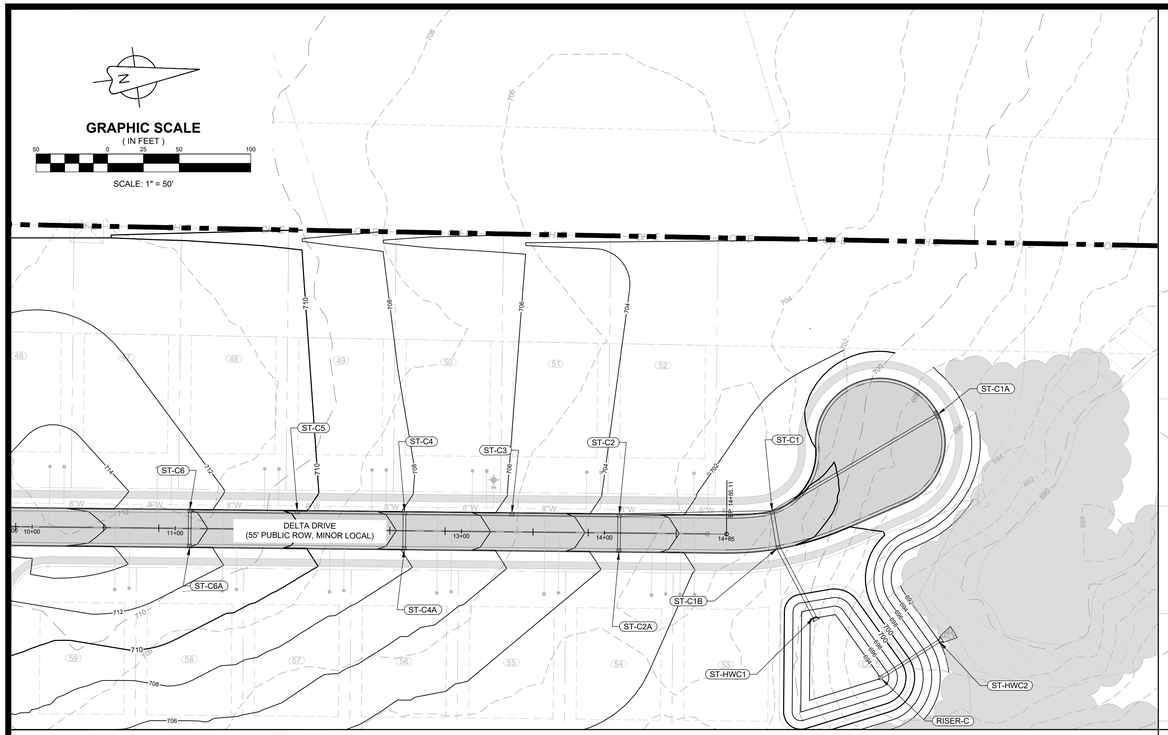

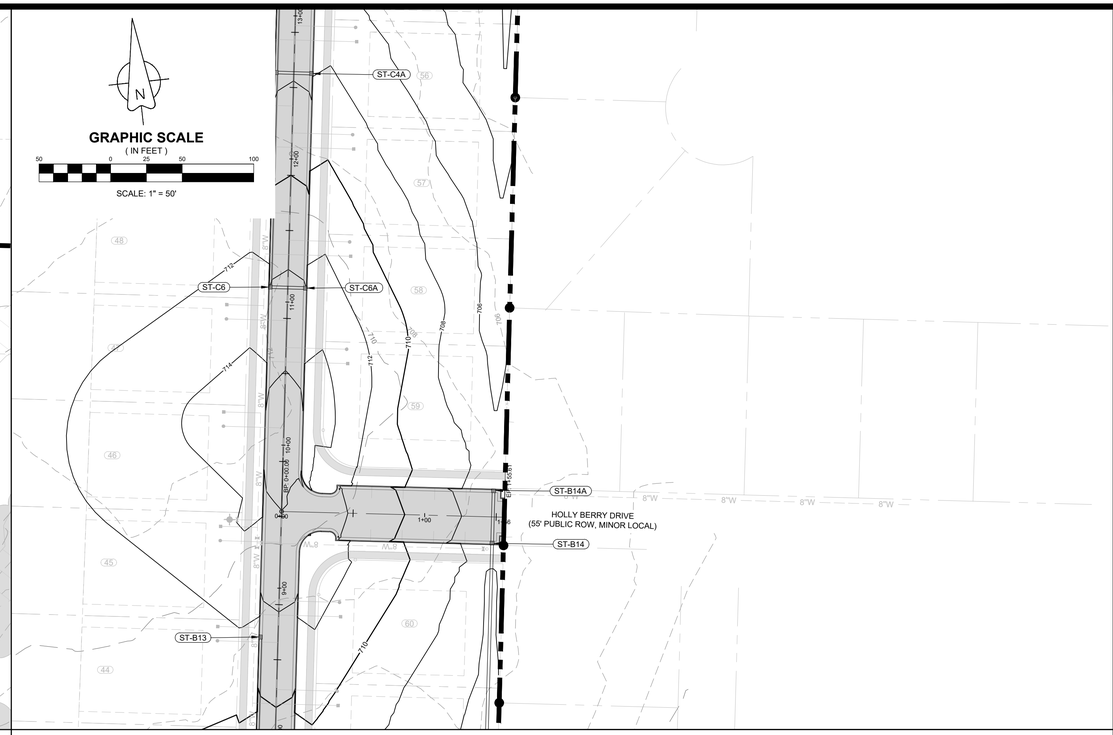

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

CUL-DE-SAC AND HOLLY BERRY DRIVE
PLAN AND PROFILE
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD FOSTER SUBDIVISION

ALLISON B. COROLL
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 127369
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
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T-SQUARE ENGINEERING

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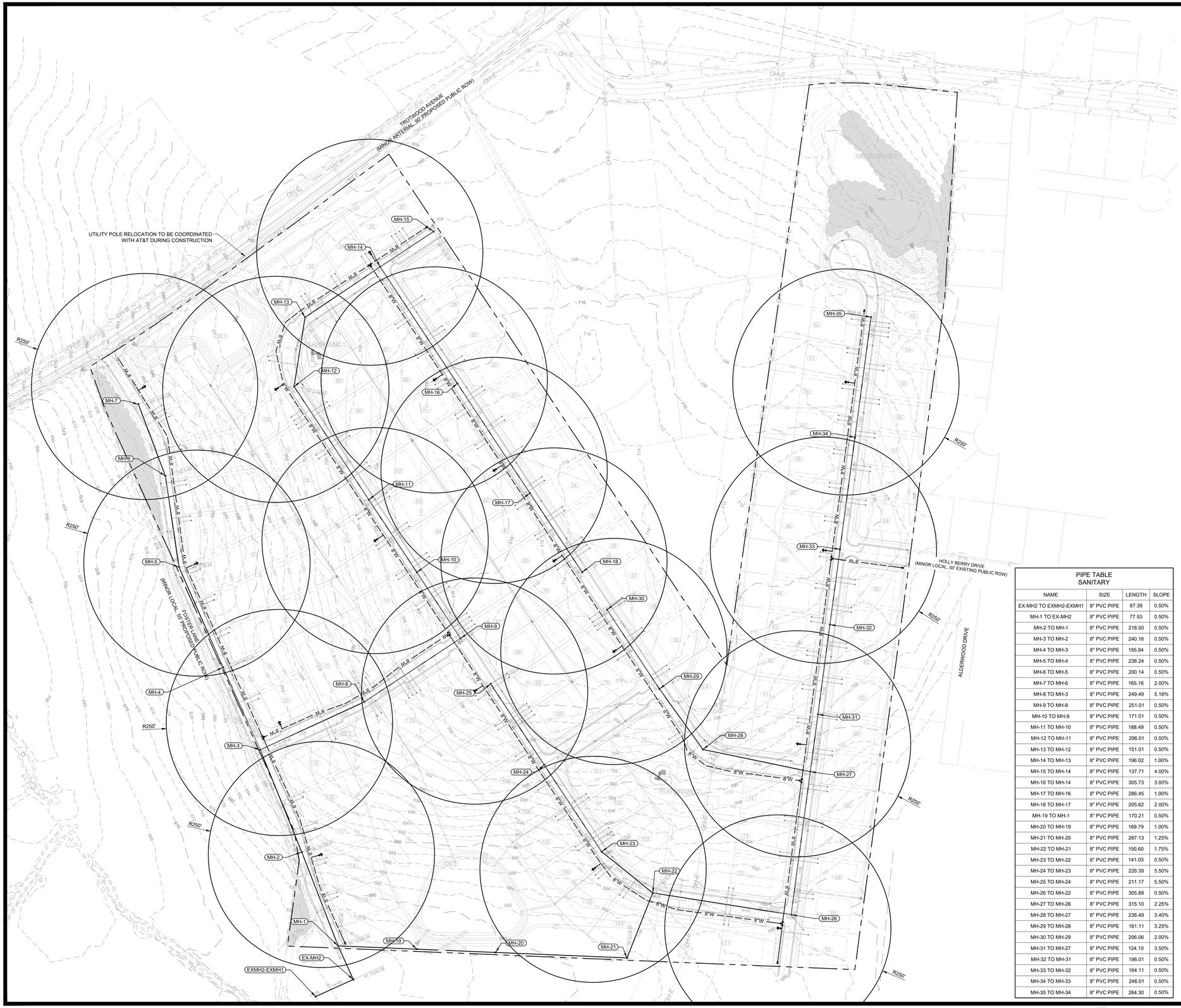

GRAPHIC SCALE
(IN FEET)

100 0 50 100 200

SCALE: 1" = 100'

LEGEND

- PROPOSED ACCESS EASEMENT
- PROPOSED DRAINAGE EASEMENT
- PROPOSED UTILITY EASEMENT
- 8" W — PROPOSED WATER LINE
- PROPOSED WATER SERVICE
- PROPOSED FIRE HYDRANT ASSEMBLY
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY SERVICE
- PROPOSED STORM INLET
- PROPOSED HEADWALL

STRUCTURE TABLE
SANITARY

STRUCTURE NAME	DESCRIPTION	DETAILS	PIPES IN	PIPES OUT
EX-MH2	SANITARY MANHOLE	RIM = 674.45 FG = 674.45	INV. IN = 669.38	INV. OUT =669.18
EXMH2-EXMH1	SANITARY MANHOLE	RIM = 673.39 FG = 673.39	INV. IN = 668.72	
MH-1	SANITARY MANHOLE	RIM = 674.81 FG = 674.81	INV. IN = 669.99 INV. IN = 669.99	INV. OUT =669.79
MH-2	SANITARY MANHOLE	RIM = 683.06 FG = 683.06	INV. IN = 671.30	INV. OUT =671.10
MH-3	SANITARY MANHOLE	RIM = 688.82 FG = 688.82	INV. IN = 672.72 INV. IN = 672.72	INV. OUT =672.52
MH-4	SANITARY MANHOLE	RIM = 687.81 FG = 687.81	INV. IN = 673.92	INV. OUT =673.72
MH-5	SANITARY MANHOLE	RIM = 684.03 FG = 684.03	INV. IN = 675.33	INV. OUT =675.13
MH-6	SANITARY MANHOLE	RIM = 684.17 FG = 684.17	INV. IN = 676.55	INV. OUT =676.35
MH-7	SANITARY MANHOLE	RIM = 684.66 FG = 684.66		INV. OUT =679.93
MH-8	SANITARY MANHOLE	RIM = 700.36 FG = 700.36	INV. IN = 685.97	INV. OUT =685.77
MH-9	SANITARY MANHOLE	RIM = 713.59 FG = 713.59	INV. IN = 687.45	INV. OUT =687.25
MH-10	SANITARY MANHOLE	RIM = 710.13 FG = 710.13	INV. IN = 688.53	INV. OUT =688.33
MH-11	SANITARY MANHOLE	RIM = 706.29 FG = 706.29	INV. IN = 689.69	INV. OUT =689.49
MH-12	SANITARY MANHOLE	RIM = 700.29 FG = 700.29	INV. IN = 691.39	INV. OUT =691.19
MH-13	SANITARY MANHOLE	RIM = 700.41 FG = 700.41	INV. IN = 692.36	INV. OUT =692.16
MH-14	SANITARY MANHOLE	RIM = 705.45 FG = 705.45	INV. IN = 694.56 INV. IN = 694.56	INV. OUT =694.36
MH-15	SANITARY MANHOLE	RIM = 703.71 FG = 703.71		INV. OUT =700.22
MH-16	SANITARY MANHOLE	RIM = 711.22 FG = 711.22	INV. IN = 704.05	INV. OUT =703.85
MH-17	SANITARY MANHOLE	RIM = 714.46 FG = 714.46	INV. IN = 707.15	INV. OUT =706.95
MH-18	SANITARY MANHOLE	RIM = 716.55 FG = 716.55		INV. OUT =711.34
MH-19	SANITARY MANHOLE	RIM = 677.75 FG = 677.75	INV. IN = 671.06	INV. OUT =670.86
MH-20	SANITARY MANHOLE	RIM = 678.58 FG = 678.58	INV. IN = 673.00	INV. OUT =672.80
MH-21	SANITARY MANHOLE	RIM = 681.57 FG = 681.57	INV. IN = 676.84	INV. OUT =676.64
MH-22	SANITARY MANHOLE	RIM = 692.48 FG = 692.48	INV. IN = 679.74 INV. IN = 679.74	INV. OUT =679.54
MH-23	SANITARY MANHOLE	RIM = 694.01 FG = 694.01	INV. IN = 680.67	INV. OUT =680.47
MH-24	SANITARY MANHOLE	RIM = 702.99 FG = 702.99	INV. IN = 693.52	INV. OUT =693.32
MH-25	SANITARY MANHOLE	RIM = 712.93 FG = 712.93		INV. OUT =705.33
MH-26	SANITARY MANHOLE	RIM = 689.66 FG = 689.66	INV. IN = 681.49	INV. OUT =681.29
MH-27	SANITARY MANHOLE	RIM = 699.23 FG = 699.23	INV. IN = 688.87 INV. IN = 688.87	INV. OUT =688.67
MH-28	SANITARY MANHOLE	RIM = 705.30 FG = 705.30	INV. IN = 697.31	INV. OUT =697.11
MH-29	SANITARY MANHOLE	RIM = 711.04 FG = 711.04	INV. IN = 702.87	INV. OUT =702.67
MH-30	SANITARY MANHOLE	RIM = 716.90 FG = 716.90		INV. OUT =707.07
MH-31	SANITARY MANHOLE	RIM = 703.07 FG = 703.07	INV. IN = 693.55	INV. OUT =693.35
MH-32	SANITARY MANHOLE	RIM = 709.07 FG = 709.07	INV. IN = 694.75	INV. OUT =694.55
MH-33	SANITARY MANHOLE	RIM = 713.98 FG = 713.98	INV. IN = 695.79	INV. OUT =695.59
MH-34	SANITARY MANHOLE	RIM = 709.55 FG = 709.55	INV. IN = 697.24	INV. OUT =697.04
MH-35	SANITARY MANHOLE	RIM = 701.40 FG = 701.40		INV. OUT =698.58

PIPE TABLE
SANITARY

NAME	SIZE	LENGTH	SLOPE
EX-MH2 TO EXMH2-EXMH1	8" PVC PIPE	87.39	0.50%
MH-1 TO EX-MH2	8" PVC PIPE	77.53	0.50%
MH-2 TO MH-1	8" PVC PIPE	218.50	0.50%
MH-3 TO MH-2	8" PVC PIPE	240.16	0.50%
MH-4 TO MH-3	8" PVC PIPE	195.94	0.50%
MH-5 TO MH-4	8" PVC PIPE	238.24	0.50%
MH-6 TO MH-5	8" PVC PIPE	200.14	0.50%
MH-7 TO MH-6	8" PVC PIPE	165.16	2.00%
MH-8 TO MH-3	8" PVC PIPE	249.49	5.16%
MH-9 TO MH-8	8" PVC PIPE	251.01	0.50%
MH-10 TO MH-9	8" PVC PIPE	171.01	0.50%
MH-11 TO MH-10	8" PVC PIPE	188.49	0.50%
MH-12 TO MH-11	8" PVC PIPE	296.01	0.50%
MH-13 TO MH-12	8" PVC PIPE	151.01	0.50%
MH-14 TO MH-13	8" PVC PIPE	196.02	1.00%
MH-15 TO MH-14	8" PVC PIPE	137.71	4.00%
MH-16 TO MH-14	8" PVC PIPE	305.73	3.00%
MH-17 TO MH-16	8" PVC PIPE	286.45	1.00%
MH-18 TO MH-17	8" PVC PIPE	205.62	2.00%
MH-19 TO MH-1	8" PVC PIPE	170.21	0.50%
MH-20 TO MH-19	8" PVC PIPE	169.79	1.00%
MH-21 TO MH-20	8" PVC PIPE	287.13	1.25%
MH-22 TO MH-21	8" PVC PIPE	150.60	1.75%
MH-23 TO MH-22	8" PVC PIPE	141.03	0.50%
MH-24 TO MH-23	8" PVC PIPE	226.39	5.50%
MH-25 TO MH-24	8" PVC PIPE	211.17	5.50%
MH-26 TO MH-22	8" PVC PIPE	305.88	0.50%
MH-27 TO MH-26	8" PVC PIPE	315.10	2.25%
MH-28 TO MH-27	8" PVC PIPE	238.49	3.40%
MH-29 TO MH-28	8" PVC PIPE	161.11	3.25%
MH-30 TO MH-29	8" PVC PIPE	206.06	2.00%
MH-31 TO MH-27	8" PVC PIPE	124.10	3.50%
MH-32 TO MH-31	8" PVC PIPE	196.01	0.50%
MH-33 TO MH-32	8" PVC PIPE	164.11	0.50%
MH-34 TO MH-33	8" PVC PIPE	246.01	0.50%
MH-35 TO MH-34	8" PVC PIPE	264.30	0.50%

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 04/21/2025
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: ABC

TROTWOOD FOSTER SUBDIVISION

UTILITY PLAN

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

ALLISON B. CORDELL
REGISTERED
LANDSCAPE
ARCHITECT
No. 1273
STATE OF TENNESSEE
04/21/2025

PROJECT
24-0314

SHEET
C-7.0

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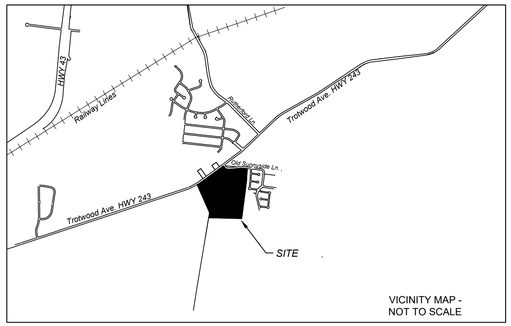


VICINITY MAP -
NOT TO SCALE

UTILITY DISCLAIMER:

Gresham Smith/Land surveyor does not guarantee accuracy of underground utility locations. Underground utilities shall not be relied upon without verification from proper utility authority having jurisdiction. Gresham Smith has not physically located the underground utilities, above grade and underground utilities shown were taken from visible appurtenances at the site, public records and /or maps prepared by others. Gresham Smith makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. Gresham Smith further does not warrant that the underground utilities are in the exact location indicated. Therefore reliance upon size and location of utilities shown shall be done so with this circumstance considered. Detailed verification of existence, location and depth must be made prior to any decisions relative thereto are made. Availability and cost of service should be confirmed with the appropriate utility authority. In Tennessee, it is a requirement, per "The Underground Utility Damage Prevention Act", that anyone who engages in excavation must notify all known underground utility owners, no less than three (3) or more than then (10) working days prior to the date of their intent to excavate and also to avoid any possible hazard or conflict. TENNESSEE ONE CALL 811.

GENERAL NOTES

1. The property described and depicted hereon is **a portion** of the property described in the Commitment for Title Insurance issued by Fidelity National Title Insurance Company Commitment Number 20220860CTN with a Commitment Date of April 25, 2022 at 8:00 A.M.; and Commitment Number 20220859CTN with a Commitment Date of May 4,2022 at 8:00 a.m., and that all easements, covenants and restrictions referenced in said title commitment or apparent from a physical inspection of the site or otherwise known to me have been located hereon or otherwise noted as not located on said portion.
2. Said described property is located within an area having a Zone Designation X (areas determined to be outside the 0.2% annual chance floodplain) by the Federal Emergency Management Agency (FEMA), on Flood Insurance Rate Map No. 47119C0280E, with an effective date of April 16, 2007 for Community No. 475423 & 470123, in Maury County, State of Tennessee, which is the most current Flood Insurance Rate Map available at the time of survey.
3. No title opinion is expressed or implied.
4. The lines of the adjoiner's indicated hereon have not been surveyed and have been graphically depicted from a compilation of record data and GIS data.
5. This survey has been signed, sealed and dated digitally.
6. Utility lines shown hereon shall be considered approximate.
7. A portion of Old Sunnyside Lane was observed within the deeded subject property with no formal dedication or easement document known to Surveyor. Recovered monuments, possession, and adjacent plat right-of-ways indicate a 60' width, as shown hereon.
8. A portion of Foster Lane was observed along deeded subject property. Surveyor is uncertain if this is public right-of-way. Deed to parcel 17.00 (Record Book 2758, Page 851) calls for a 30' width. Prescriptive rights may exist.
9. A right-of-way width of 60' was assumed for Trotwood avenue (SR 243), based on recovered monuments and existing possession. No plans where available from TDOT at time of survey.

PARCEL DATA TABLE

PARCEL ID	OWNER	ADDRESS	LEGAL REFERENCE
MAP 112, PARCEL 18	KATHLEEN M. RODGERS	6031 TROTWOOD AVE, TN 38401	RECORD BOOK 2174, PAGE 1417, R.O.M.C.,TN
MAP 112, PARCEL 018.04	JAMES AND STACY GORE	0 TROTWOOD AVE, TN 38401	RECORD BOOK 2768, PAGE 163, R.O.M.C.,TN
MAP 112, PARCEL 018.05	KATHLEEN M. RODGERS	0 TROTWOOD AVE, TN 38401	RECORD BOOK 2768, PAGE 165, R.O.M.C.,TN
MAP 112, PARCEL 018.03	JAMES AND STACY GORE	0 TROTWOOD AVE, TN 38401	RECORD BOOK 2387, PAGE 455, R.O.M.C.,TN

PARCEL 18 TRACT 1	*449,744.274 SQ/FT*	*10.324 AC*
PARCEL 18 TRACT 1 REMNANT	*11,977.451 SQ/FT*	*0.275 AC*
PARCEL 18 TRACT 2	*329,822.723 SQ/FT*	*7.567 AC*
PARCEL 18 TRACT 2 REMNANT	*9,474.556 SQ/FT*	*0.217 AC*
PARCEL 18.03 TRACT I	*1,951,579.498 SQ/FT*	*44.802 AC*
PARCEL 18.04 TRACT II	*38,993.582 SQ/FT*	*0.895 AC*
PARCEL 18.05 (EXCLUDED FROM TITLE)	*108,084.002 SQ/FT*	*2.481 AC*

LEGEND

Benchmark	Water Meter
(Set) 1/2" Diameter Rebar with Gresham Smith Cap	Water Valve
(Found) Property Corner	Fire Hydrant
Property Line	Sewer Manhole
Adjacent Property Line	Sewer Clean-Out
Easement Line	Power Pole
W Water Line	Guy Wire
SAN Sewer Line	Light Pole
G Gas Line	Mailbox Mailbox
OHE Overhead Electric Line	Fence (chainlink/woven wire)
UGE Underground Electric Line	Fence (wood rail / privacy)
UGF Underground Fiber Line	Sign - single post
Electric Pull Box / Telephone Pedestal	Sign - double post

SCHEDULE B, PART II
Exceptions from Fidelity National Title Insurance Company
Commitment No. 20220860CTN
Commitment Date: April 35, 2022, at 08:00AM

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I-Requirements are met. **NONE KNOWN TO SURVEYOR AT TIME OF SURVEY.**
2. Rights or claims of parties in possession not shown by the public records. **RIGHTS OR CLAIMS NOT A SURVEY MATTER.**
3. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. **IMPROVEMENTS EXIST ALONG AN NEAR PROPERTY LINES AS SHOWN HEREON.**
4. Easements, or claims of easements, not shown by the public records. **SEE GENERAL NOTE NO. 7.**
5. Any lien, or right to a lien, for services, labor, or material heretofore or hereafter furnished, imposed by law and not shown by the public records. **NOT A SURVEY MATTER.**
6. Taxes or special assessments which are not shown as existing liens by the public records. **NOT A SURVEY MATTER.**
7. If improvements are completed after January 1 of any year, and the law, pursuant to TCA 67-5-509 and TCA 67-5-603, requires supplemental assessment for the year in which improvements are completed, the company assumes no liability for taxes assessed by correction or supplemental assessment. **NOT A SURVEY MATTER.**
8. Taxes for the year 2021, a lien due and payable, and now delinquent. **NOT A SURVEY MATTER.**
9. Application for Greenbelt assessment - Agricultural of record in Book R2177, Page 653, in the Register's Office for Maury County, Tennessee. NOTE: The land has been classified as Greenbelt for assessment, levy and collection purposes and may be subjected to substantial rollback taxes as defined in Tennessee Code Annotated, Section 67-5-1001. **NOT A SURVEY MATTER.**
10. 150' TVA easement of record in Book 469, Page 388, in the Register's Office for Maury County, Tennessee. **DOCUMENT NOT PROVIDED TO SURVEYOR.**
11. Title to all oil, gas, minerals and gravel within and underlying the premises together with all mining rights and other rights, privileges, and immunities relating thereto, including but not limited to mineral rights as referenced in Book 469, page 388, in the Register's Office for Maury County, Tennessee. **SUBSURFACE RIGHTS ARE NOT A SURVEY MATTER.**
12. 60 feet right of Way of Old Sunnyside Lane. **AFFECTS SUBJECT PROPERTY, NO FORMAL DEDICATION DOCUMENT PROVIDED TO OR FOUND BY SURVEYOR.**
13. Acreage content of the subject property is not hereby insured. Reference to acreage is left in the description merely for convenience in identifying the tract. **ACREAGE AS SHOWN HEREON.**
14. No insurance is offered to title to that portion of the premises embraced within the bounds of any roads, streets, or highways. **ROAD, STREETS, HIGHWAYS AND TRAVELED WAYS AS SHOWN HEREON.**

DESCRIPTION PER COMMITMENT NO. 20220860CTN

Land situated in Maury County, Tennessee:

Tract 1:

Being and lying in the 9th Civil District of Maury County, Tennessee and lying East of Trotwood Avenue and North and South of old Sunnyside Lane, and being more particularly described as follows:
Beginning at an iron pin found in the intersection of the East R.O.W. of Trotwood Avenue and in the North of old Sunnyside Lane; said iron pin found being the Northwest corner of Celia Ridley and the Southwest corner of Tillman Knox; thence leaving said road with South boundary of Knox, South 82 degrees, 27 minutes, 43 seconds East for a distance of 171.74 feet to an iron pin set; said iron pin set being the true point of beginning, and the Northwest corner of the tract being described;
thence continuing with Knox, South 82 degrees, 27 minutes, 43 seconds East, passing an iron pin found and the Southeast corner of Knox, and the Southwest corner of TVA at 307.41 feet, in all a distance of 705.51 feet to a point in old Sunnyside lane; said point being the Northeast corner of the tract being described;
thence leaving said road, South 03 degrees, 33 minutes, 39 seconds West passing an iron pin set and the Northwest corner of hunters glen section 1 subdivision, lot 14 at 24.08 feet, and an iron pin found at 130.67 feet, in all a distance of 210.86 feet to an iron pin found; said iron pin found being the Southwest corner of lot 13 and Northwest corner of lot 12 of said subdivision;
thence with lots 12-9, South 03 degrees, 28 minutes, 28 seconds West for a distance of 264.98 feet to an iron pin found;
thence South 07 degrees, 34 minutes, 20 seconds West for a distance of 52.00 feet to an iron pin found; said iron pin found being the Southwest corner of lot 9, and Northwest corner of lot 8;
thence with lots 8 and 7, South 07 degrees, 49 minutes, 28 seconds West for a distance of 159.55 feet to an iron pin found; said iron pin found being the Southeast corner of the tract being described, the Southwest corner of lot 7, Northwest corner of lot 6, and the Northeast corner of Campbell Ridley;
thence with North boundary of Ridley, South 79 degrees, 10 minutes, 20 seconds West for a distance of 562.64 feet to an iron pin set; said iron pin set being the Southwest corner of the tract being described;
thence with a new Ridley division line, North 05 degrees, 45 minutes, 40 seconds West for a distance of 887.29 feet to the true point of beginning and containing 11.35 acres as surveyed by Kenneth Carroll, RLS Tennessee license number 1335, November 7, 2011. Being a portion of the same property conveyed to Kathleen M. Rogers, an unmarried by Warranty Deed from Celia James Ridley, an unmarried person and Campbell P. Ridley, Jr. of record in Book R2174, page 1417, Register's Office for Maury County, Tennessee, dated December 20, 2011 and recorded on December 30, 2011.

Tract 2:
Being and lying in the 9th Civil District of Maury County, Tennessee and lying East of and adjacent to Trotwood Avenue and North and South of Old Sunnyside lane, and being more particularly described as follows:

Beginning at an iron pin found in the intersection of the East R.O.W. of Trotwood Avenue and in the North of Old Sunnyside Lane; said iron pin found being the Northwest corner of the tract being described and the Southwest corner of Tillman Knox;
thence leaving said road with South boundary of Knox, South 82 degrees,27 minutes,43 seconds East for a distance of 171.74 feet to an iron pin set; said iron pin set being the Northeast corner of the tract being described;
thence leaving Knox with a new Ridley division line, South 05 degrees, 45 minutes, 40 seconds East for a distance of 887.29 feet to an iron pin set; said iron pin set being the Southeast corner of the tract being described, and the North boundary of Campbell Ridley; thence leaving said division line with North boundary of Campbell Ridley, South 79 degrees 10 minutes 20 seconds West for a distance of 170.07 feet to an iron pin set; thence North 39 degrees, 24 minutes, 06 seconds West for a distance of 250.84 feet to an iron pin set;
thence North 25 degrees, 35 minutes, 04 seconds West for a distance of 118.14 feet to an iron pin set;
thence North 43 degrees, 31 minutes, 44 seconds West for a distance of 68.58 feet to an iron pin set; thence North 65 degrees 23 minutes 45 seconds West for a distance of 438.35 feet to an iron pin set on the East R.O.W. of Trotwood Avenue; said iron pin set being the Southwest corner of the tract being described, and the Northwest corner of Ridley;
thence with East of said road, North 54 degrees 19 minutes 40 seconds East for a distance of 693.95 feet to the point of beginning and containing 9.00 acres as surveyed by Kenneth Carroll, RLS Tennessee license number 1335, November 7, 2011.

Being a portion of the same property conveyed to Kathy M. Rogers, an unmarried person by Warranty Deed from Celia James Ridley, an unmarried person and Campbell P. Ridley, Jr. of record in Book R2174, page 1402, Register's Office for Maury County, Tennessee, dated December 2-0, 2011 and recorded on December 30, 2011.

DESCRIPTION PER COMMITMENT NO. 20220859CTN

Tract I:

Being and lying in the Ninth Civil District of Maury County, Tennessee and lying southeast of and adjacent to Trotwood Avenue, and the east of and adjacent to Foster Lane, being more particularly described as follows:

Beginning at a point in the intersection of the center of Foster Lane and the South right-of-way of Trotwood Avenue; said point being the Western most Northwest corner of the tract being described, and the Northeast corner of Dobual Spring Creek Partners; thence with South right-of-way of Trotwood Avenue, North 58 degrees 05 minutes 48 seconds East for a distance of 117.93 feet;
thence North 55 degrees 0 minutes 00 seconds East for a distance of 96.57 feet;
thence North 54 degrees 16 minutes 31 seconds East for a distance of 128.36 feet;
thence North 54 degrees 03 minutes 18 seconds East for a distance of 159.93 feet;
thence North 53 degrees 48 minutes 18 seconds East for a distance of 90.80 feet to a iron pin found; said iron pin found being the Northern most Northwest corner of the tract being described, and the Southwest corner of Kathleen Rogers;
thence leaving said road with Rogers, South 65 degrees 23 minutes 45 seconds East for a distance of 438.37 feet to a iron pin found;
thence South 43 degrees 30 minutes 58 seconds East for a distance of 68.54 feet to a iron pin found;
thence South 25 degrees 35 minutes 04seconds East for a distance of 118.14 feet to a iron pin found;
thence South 39 degrees 24 minutes 06 seconds East for a distance of 250.84 feet to a iron pin found;
thence North 79 degrees 10 minutes 51 seconds East for a distance of 170.07 feet to a iron pin found;
thence North 79 degrees 10 minutes 51 seconds East, passing the center of a TVA Line at 175.46 feet, in all a distance of 562.94 feet to a iron pin found; said iron pin found being the Northeast corner of the tract being described, the Southeast corner of Rogers, and the Southwest corner of Lot 7 and the Northwest corner of Lot 6 of Hunters Glen SubdivisionSection 1;
thence with Lot 6, South 07 degrees 32 minutes 54 seconds West for a distance of 79.95 feet to a iron pin found; said iron pin found being the Southwest corner of Lot 6, and the Northwest corner of lot 5;
thence with Lot 5, South 07 degrees 31 minutes 24 seconds West for a distance of 147.83 feet to a iron pin found; said iron pin found being the Southwest corner of lot 5, and the Northwest corner of Lot 73 of Hunters Glen Subdivision, Section 2;
thence with Lot 73, South 07 degrees 31 minutes 24 seconds West for a distance of 124.98 feet to a iron pin found on the North right-of-way of Holly Berry Drive; said iron pin found being the Southwest corner of Lot 73;
thence crossing Holly Berry Drive, South 07 degrees 31minutes 24 seconds West for a distance of 40.01 feet to a iron pin found on the South right-of-way of said road; said iron pin found being the Northwest corner of Lot 78 of Hunters Glenn Subdivision Section 2;
thence with lot 78, South 07 degrees 31 minutes 24 seconds West for a distance of 110.02 feet to a iron pin found; said iron pin found being the Southwest corner of Lot 78, and the Northwest corner of lot 79;
thence with lot 79, South 07 degrees 31 minutes 24 seconds West for a distance of 110.00 feet to a iron pin found; said iron pin found being the Southwest corner of lot 79, and the Northwest corner of Lot 80;
thence with Lot 80, South 07 degrees 33 minutes 00 seconds West for a distance of 110.26 feet to a iron pin found; said iron pin found being the Southwest corner of Lot 80, and the Northern most Northwest corner of McBroom Family Partnership;
thence with McBroom Family Partnership, South 07 degrees 29 minutes 46 seconds West for a distance of 567.43 feet to a iron pin found; said iron pin found being the Southeast corner of the tract being described;
thence continuing with McBroom, North 87degrees 40 minutes 39 seconds West , passing the center of a TVA line at 384.70 feet, in all a distance of 1256.56 feet to a iron pin found in the center of Foster Lane; said iron pin found being the Southwest corner of the tract being described, the western most Northwest corner of McBroom Family Partnership, and the east boundary of Dobual Spring Creek Partners;
thence with center of Foster Lane and east boundary of Dobual Spring Creek Partners, North 07 degrees 49 minutes 54 seconds East for a distance of 190.70 feet to a point;
thence North 09 degrees 42 minutes 36 seconds West for a distance of 66.95 feet to a point;
thence North 23 degrees 30 minutes 49 seconds West for a distance of 146.94 feet to a point;
thence North 24 degrees 07 minutes 57 seconds West for a distance of 234.02 feet to a point;
thence North 24 degrees 19 minutes 52 seconds West for a distance of 516.42 feet to a point,
thence North 24 degrees 15 minutes 55 seconds West for a distance of 127.83 feet to a point;
thence North 19 degrees 32 minutes 05 seconds West for a distance of 98.88 feet to the point of beginning and containing 47.33 acres as surveyed by Kenneth Carroll, R.L.S. Tennessee License Number 1335, August 3, 2016.

Less and except that portion of the above property conveyed to Kathy M. Rogers by the Quitclaim Deed of record in Book R2768, Page 165, in the Register's Office Maury County, Tennessee.

Being a portion of the same property conveyed to James Gore and wife, Stacy Gore, by the Warranty Deed of record in Book R2387, Page 455, in the Register's Office for Maury County, Tennessee.

Tract II:

A tract of land located in Maury County, Tennessee. Being a portion of the Kathleen Rogers property as recorded in Deed Book R2174, page 1402 and 1417, Maury County, Tennessee, and being more particularly described as follows.

Beginning at an iron pin found with RLS No. 1335 cap at the Northwest corner of Kathleen Rogers property as recorded in Deed Book R2174, page 1402 and 1417, said point being the Northeast corner of James and Stacy Gore as recorded in Deed Book R2387, page 455;
Thence with the South margin of Trotwood Avenue, North 54 degrees 20 minutes 56 seconds East a distance of 217.26' to an iron pin set;
Thence severing the property of Kathleen Rogers, South 33 degrees 28 minutes 06 seconds East a distance of 357.15' to an iron pin set;
Thence with the east line of James and Stacy Gore as recorded in Deed Book R2387, page 455, North 65 degrees 21 minutes 41 seconds West a distance of 410.91' which is the point of beginning, having an area of 38,768.9 square feet, 0.89 acres.

Being the same property conveyed to James Gore and Stacy Gore, husband and wife, by the Quitclaim Deed of record in Book R2768, page 163, in the Register's Office for Maury County, Tennessee.

GPS NOTE

1. GPS field procedure-Real-Time Kinematic with Online Position User Service
2. Relative Positional Precision= <0.07 feet between tested pairs
3. Dates of Survey-06/17/22 thru 07/08/22
4. Horizontal Datum-Nad-83 (2011), Epoch-2010
   Vertical Datum-NAVD 88 (Geoid computed)
5. Fixed Control Stations- DJ9560 TN36 TDOT DISTRICT 36 CORS ARP
   DM3531 TN30 TDOT DISTRICT 30 CORS ARP
   DM4145 TN39 TDOT DISTRICT 39 CORS ARP
6. Geoid Model-Geoid 18
7. Combined Grid Factor- 0.9999910
   GPS observations were scaled by the inverse factor to achieve ground distances.

SCHEDULE B, PART II
Exceptions from Fidelity National Title Insurance Company
Commitment No. 20220859CTN
Commitment Date: May 04, 2022, at 08:00AM

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I-Requirements are met. **NONE KNOWN TO SURVEYOR AT TIME OF SURVEY. SEE GENERAL NOTE NO. 7 & 8.**
2. Rights or claims of parties in possession not shown by the public records. **RIGHTS OR CLAIMS NOT A SURVEY MATTER.**
3. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. **IMPROVEMENTS EXIST ALONG AN NEAR PROPERTY LINES AS SHOWN HEREON.**
4. Easements, or claims of easements, not shown by the public records. **SEE GENERAL NOTE NO. 7 & 8.**
5. Any lien, or right to a lien, for services, labor, or material heretofore or hereafter furnished, imposed by law and not shown by the public records. **NOT A SURVEY MATTER.**
6. Taxes or special assessments which are not shown as existing liens by the public records. **NOT A SURVEY MATTER.**
7. If improvements are completed after January 1 of any year, and the law, pursuant to TCA 67-5-509 and TCA 67-5-603, requires supplemental assessment for the year in which improvements are completed, the company assumes no liability for taxes assessed by correction or supplemental assessment. **NOT A SURVEY MATTER.**
8. Taxes for the year 2021, a lien due and payable, and now delinquent. **NOT A SURVEY MATTER.**
9. Taxes for the year 2022, a lien not yet due and payable. **NOT A SURVEY MATTER.**
10. Application for Greenbelt assessment - Agricultural of record in Book R2392, Page 218, in theRegister's Office for Maury County, Tennessee. **NOT A SURVEY MATTER.**
11. 150' TVA line right-of-way as referenced in the Warranty Deed of record in Book R2387, Page 455, in the Register's Office for Maury County, Tennessee. **AFFECTS SUBJECT PROPERTY, AS SHOWN HEREON.**
12. Acreage content of the subject property is not hereby insured. Reference to acreage is left in the description merely for convenience in identifying the tract. **AS SHOWN HEREON.**

TABLE A - ITEM NOTES

Item 1- Found or set, as shown on survey. No corners were set along the proposed partition(s).

Item 2 - Current parcel addresses as shown in table on survey.

Item 3 - See General Note 2

Item 4 - As shown hereon.

Item 5- As shown hereon. Contours shown at 1 foot intervals based on field run and lidar data provided by Precision Products. Relative to NAVD 88 (Geoid 18 computed).

Item 6(a)- No Zoning Report provided at time of survey.

Item 8- Substantial features as shown hereon.

Item 11a- Underground utilities shown per field markings and observed evidence. Minimal utility markings were witnessed at time of survey. See utility disclaimer as shown hereon.

Item 13- Adjoining owners as shown within graphic portion of this work. Information taken from *Real Estate Assessment Data* acquired from the State of Tennessee Comptroller of the Treasury

Item 14- Subject properties exist at multiple intersecting streets, as shown hereon.

Item 15- See Item 5.

Item 16- At the time of survey, no active construction was being conducted.

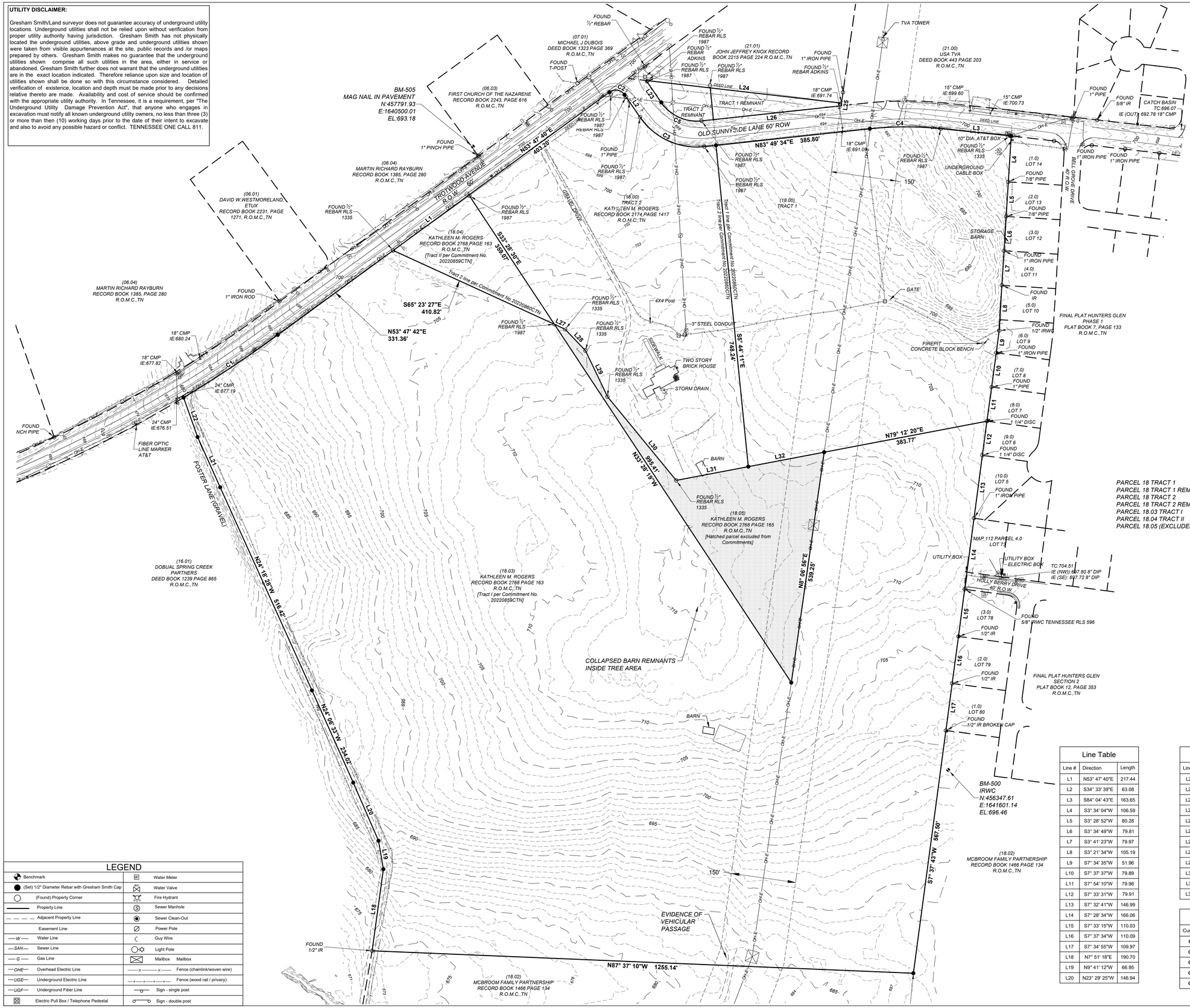
Item 17- No information was provided to this surveyor concerning proposed changes in street right of way lines.

Item 18 - No offsite easements were provided to surveyor.

To: ••••••

UTILITY DISCLAIMER:

Gresham Smith/Land surveyor does not guarantee accuracy of underground utility locations. Underground utilities shall not be relied upon without verification from proper utility authority having jurisdiction. Gresham Smith has not physically located the underground utilities, above grade and underground utilities shown were taken from visible appurtenances at the site, public records and /or maps prepared by others. Gresham Smith makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. Gresham Smith further does not warrant that the underground utilities are in the exact location indicated. Therefore reliance upon size and location of utilities shown shall be done so with this circumstance considered. Detailed verification of existence, location and depth must be made prior to any decisions relative thereto are made. Availability and cost of service should be confirmed with the appropriate utility authority. In Tennessee, it is a requirement, per "The Underground Utility Damage Prevention Act", that anyone who engages in excavation must notify all known underground utility owners, no less than three (3) or more than then (10) working days prior to the date of their intent to excavate and also to avoid any possible hazard or conflict. TENNESSEE ONE CALL 811.



PARCEL 18 TRACT 1	449,744.274 SQ/FT	10.324 AC
PARCEL 18 TRACT 1 REMNANT	11,977.451 SQ/FT	0.275 AC
PARCEL 18 TRACT 2	329,622.723 SQ/FT	7.567 AC
PARCEL 18 TRACT 2 REMNANT	9,474.556 SQ/FT	0.217 AC
PARCEL 18.03 TRACT I	1,951,579.498 SQ/FT	44.802 AC
PARCEL 18.04 TRACT II	38,993.582 SQ/FT	0.895 AC
PARCEL 18.05 (EXCLUDED FROM TITLE)	108,084.002 SQ/FT	2.481 AC

Line Table

Line #	Direction	Length
L1	N53° 47' 40"E	217.44
L2	S34° 33' 39"E	63.08
L3	S84° 04' 43"E	163.65
L4	S3° 34' 04"W	106.59
L5	S3° 28' 52"W	80.28
L6	S3° 34' 49"W	79.81
L7	S3° 41' 23"W	79.97
L8	S3° 21' 34"W	105.19
L9	S7° 34' 35"W	51.96
L10	S7° 37' 37"W	79.89
L11	S7° 54' 10"W	79.98
L12	S7° 33' 31"W	79.91
L13	S7° 32' 41"W	146.99
L14	S7° 28' 34"W	166.06
L15	S7° 33' 15"W	110.03
L16	S7° 37' 34"W	110.09
L17	S7° 34' 55"W	109.97
L18	N7° 51' 18"E	190.70
L19	N9° 41' 12"W	66.95
L20	N23° 29' 25"W	146.94

Line Table

Line #	Direction	Length
L21	N24° 14' 31"W	127.83
L22	N19° 30' 41"W	96.90
L23	N34° 33' 39"W	61.95
L24	S83° 25' 17"E	455.64
L25	S8° 03' 36"W	6.45
L26	S83° 49' 34"W	325.36
L27	S65° 07' 32"E	27.54
L28	S43° 29' 42"E	68.55
L29	S25° 30' 57"E	118.20
L30	S39° 23' 09"E	250.83
L31	N79° 12' 20"E	170.07
L32	N79° 12' 20"E	178.98

Curve Table

Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	262.22	2945.00	5°06'06"	N56° 20' 45"E	262.13
C2	39.99	25.00	91°38'41"	S80° 23' 00"E	35.86
C3	172.06	160.00	61°36'50"	S65° 25' 12"E	163.89
C4	164.87	770.00	12°16'06"	N89° 57' 37"E	164.56
C5	107.54	100.00	61°36'50"	N65° 25' 12"W	102.43

LEGEND

Benchmark	Water Meter
(Set) 1/2" Diameter Rebar with Gresham Smith Cap	Water Valve
(Found) Property Corner	Fire Hydrant
Property Line	Sewer Manhole
Adjacent Property Line	Sewer Clean-Out
Easement Line	Power Pole
—W— Water Line	Guy Wire
—SAN— Sewer Line	Light Pole
—G— Gas Line	Mailbox Mailbox
—OHE— Overhead Electric Line	Fence (chainlink/woven wire)
—UGE— Underground Electric Line	Fence (wood rail / privacy)
—UGF— Underground Fiber Line	Sign - single post
Electric Pull Box / Telephone Pedestal	Sign - double post

Gresham Smith

GreshamSmith.com

222 Second Avenue South
Suite 1400
Nashville, TN 37201

615.770.8100

TROTWOOD GROVE

BEING PARCELS 18.00, 18.03, 18.04 & 18.05 OF TAX MAP 112

9TH CIVIL DISTRICT
COLUMBIA, MAURY COUNTY, TENNESSEE

CHRISTOPHER LYLE GOETZ
REGISTERED LAND SURVEYOR
AGRICULTURE
OWNER
7/22/2022
TENNESSEE NO. 2660

PRELIMINARY FOR REVIEW ONLY

Christopher Lyle Goetz, TN RLS 2660
Survey Manager, Gresham Smith
[P] chris.goetz@greshamsmith.com

Revision

No.	Date	Description

ALTA/NSPS LAND TITLE SURVEY

2 of 2

Project Number: 45709.01
JULY 22, 2022

This Line Is 3 Inches When Printed Full Size

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This instrument prepared by:
Bradley Arant Boult Cummings LLP
1221 Broadway, Suite 2400
Nashville, Tennessee 37203

DECLARATION OF PROTECTIVE COVENANTS, CONDITIONS & RESTRICTIONS OF TROTWOOD & FOSTER

THIS DECLARATION OF PROTECTIVE COVENANTS, CONDITIONS & RESTRICTIONS (the "Declaration") is executed this ____ day of _____, 2024, by BRIGHTLAND HOMES OF TENNESSEE, LLC, a Delaware limited liability company (the "Declarant").

WITNESSETH:

WHEREAS**,** the Declarant is the owner of certain real property located in Maury County, Tennessee, more particularly described on Exhibit A attached hereto and incorporated herein by reference, and desires to create thereon a residential development to be known as Trotwood & Foster (the "Development") for the mutual benefit of the future residents of the Development; and

WHEREAS, Declarant desires to provide for the protection and preservation of the values, amenities, desirability and attractiveness of the Development; and

WHEREAS, it is in the best interest of the Declarant, as well as to the mutual benefit, interest and advantage of each and every person or other entity hereafter acquiring any of the property within the Development that certain covenants, conditions, easements, assessments, liens and restrictions governing and regulating the use and occupancy of the same be established, fixed, set forth and declared to be covenants running with the land which shall be binding on all parties having or acquiring in the future any right, title or interest in and to all or any portion of the Development, and which shall inure to the benefit of each present and future owner; and

WHEREAS, Declarant further desires to establish for Declarant's benefit and for the mutual benefit, interest and advantage of each and every person or other entity hereafter acquiring any of the property within the Development, certain rights, easements, privileges, obligations, restrictions, covenants, liens, assessments, and regulations governing the use and occupancy of the Development and the maintenance, protection and administration of the common use facilities thereof, all of which are declared to be in furtherance of a plan to promote and protect the operative aspects of residency or occupancy in the Development and on all portions thereof, and are intended to be covenants running with the land which shall be binding on all parties having or acquiring in the future any right, title or interest in and to all or any portion of the Development, and which shall inure to the benefit of each present and future owner; and

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WHEREAS, the Declarant has caused, or will cause, to be incorporated under the laws of the State of Tennessee a non-profit corporation having as its members owners of Lots (as defined hereinafter) within the Development for the purpose of exercising the aforementioned functions.

NOW, THEREFORE, Declarant, as legal title holder of the Development, as owner of the above-referenced Lots, for the purposes set forth above, declares as follows:

ARTICLE I
DEFINITIONS

The following words when used in this Declaration, or any amendment hereto, shall have the following meanings:

1. "Annual Assessments" shall mean and refer to the assessments described in Article V.

2. "Assessments" shall mean and refer to any Annual Assessments, Special Assessments, supplemental landscape assessments, or any other charges by the Association against one or more Lots owned by an Owner together with costs of enforcement and reasonable attorneys' fees incurred by the Association in connection therewith, and shall additionally include, to the extent authorized by the provisions herein, interest thereon.

3. "Association" shall mean and refer to [_____], a not-for-profit corporation to be organized and existing under the laws of the State of Tennessee, its successors and assigns.

4. "Board of Directors" shall mean and refer to the Board of Directors of the Association.

5. "By-Laws" shall mean and refer to the By-Laws of the Association attached hereto as Exhibit B and made a part hereof as the same may be amended from time to time.

6. "Committee" shall mean the Architectural Control Committee established pursuant to Article V hereof.

7. "Common Areas" shall mean and refer to all facilities within the Development used in common by the Owners, including without limitation, all recreational facilities, entranceway, gates, boundary walls and fences, median areas, drainage facilities, entrance ways and signs, any playground areas, and any areas lying within or adjacent to the roads which are desirable for the Association to maintain and landscape. The Common Areas shall be owned by the Association in fee or for a term of years, but for the non-exclusive use, benefit and enjoyment of the Owners

subject to the provisions of this Declaration, and will be shown as Common Areas on the Plat of the Development placed of record now and/or in the future.

8. "Declaration" shall mean and refer to this Declaration of Protective Covenants, Conditions and Restrictions applicable to the Development and which shall be recorded in the Office of the Register of Deeds for Maury County, Tennessee.

9. "Declarant" shall mean and refer to Brightland Homes of Tennessee, LLC, a Delaware limited liability company, having its principal place of business at 3815 South Capital of Texas Highway, Suite 275, Austin, Texas 78704, and its successors and assigns.

10. "Development" shall mean and refer to the property as shown on Exhibit A hereto and incorporated herein by reference, and shall be deemed to incorporate any future property annexed under this Declaration.

11. "Engineer" shall mean the architect or engineer engaged by Declarant and identified on the Plat.

12. "Improvements" shall mean any building, building addition, outbuilding, garage, detached structure, swimming pool, recreational facility, driveway, parking area, walkway, wall, fence, or utility service, or such other improvement or structure constructed or located upon all or any portion of the Development. It is intended that this definition of "Improvements" be broad in scope and is intended to encompass any man-made alteration of the condition of the Lot or Common Areas from and after the date of this Declaration.

13. "Lot" shall mean and refer to any plot of land within the Development to be used for single family residential purposes and so designated on the Plat.

14. "Majority of Owners" shall mean and refer to the holders of more than fifty (50%) percent of the total Votes of the Members.

15. "Member" shall mean and refer to any person or persons who shall be an Owner, and as such, shall be a Member of the Association. "Class A Members" shall mean and refer to any Owner, other than the Declarant, and "Class B Member" shall mean the Declarant or its successors and assigns.

16. "Mortgage" shall mean and refer to any holder of a first priority deed of trust encumbering one or more Lots.

17. "Owner" shall mean and refer to the record owner, whether one or more persons or entities, of the fee interest in any Lot within the Development, excluding however those parties having such interest merely as a security interest for the performance of an obligation.

18. “Plat” shall mean and refer to the Final Plat of Trotwood & Foster, of record in the Register's Office for Maury County, Tennessee, as the same may be amended or supplemented from time to time, and any additional property later annexed thereto.

19. “Person” shall mean and refer to a natural person, as well as a corporation, partnership, firm, association, trust or other legal entity. The use of the masculine pronoun shall include the neuter and feminine, and the use of the singular shall include the plural where the context so requires.

20. "Plans" shall mean the detailed plans prepared for construction of any Improvement which shall comply with the provisions of Article V, Section 4 hereof.

21. "Special Assessments" shall mean additional assessments of Owners made from time to time by the Board of Directors pursuant to Article IV, Section 2.

22. “Vote” or "Votes" shall mean the vote or votes in the affairs of the Association to which each Member is entitled unless stated otherwise in this document.

ARTICLE II
PROPERTY SUBJECT TO THIS DECLARATION

1. Definition of Property Subject to this Declaration. The real property located in Maury County, Tennessee, more particularly described on Exhibit A attached hereto and incorporated herein by references, is and shall be held, transferred, sold, conveyed and occupied subject to this Declaration. The Lots and Common Areas shown on the Plat are made subject to this Declaration. The Declarant, as the legal title holder in fee of the Development, hereby submits and subjects the Development to the provisions of this Declaration and By-Laws. The covenants, conditions and restrictions contained herein shall constitute covenants running with the land and shall be binding on all parties now owning or hereafter having or acquiring any right, title or interest in any Lots or any portion of the Development, and shall inure to the benefit of each Owner hereof. Every Person hereafter acquiring a Lot or any portion of the Development, by acceptance of a deed thereof, shall accept such interest subject to the terms and conditions of this Declaration, and by acceptance of the same shall be deemed to have consented to and be bound by the covenants, conditions and restrictions of this Declaration.

ARTICLE III
ASSOCIATION MEMBERSHIP AND VOTING RIGHTS

1. Members. Every person who is an Owner of record of a fee interest in any Lot which is included in the Development shall be a Member of the Association. Membership in the Association is appurtenant to and may not be separated from ownership of any Lot.

2. Classes of Membership. The Association shall have two classes of membership:

a. Class A Members shall be all Owners of lots, except for the Declarant, prior to the termination of the Class B Membership. If, however, Declarant owns one or more Lots upon or after the termination of its Class B Membership, then Declarant shall become a Class A Member.

b. The Class B Member shall be the Declarant, its successors or assigns. The Class B Membership shall terminate and cease upon specific written termination by Declarant or its successor or assignee (its successor or assignee may include any Builder(s) owning more than 10 lots in the Development), or the last to occur of (i) Declarant ceasing to be an owner of any lots within the Development and (ii) fifteen years from the date hereof.

3. Voting and Voting Rights. The voting rights of the Members shall be appurtenant to their ownership of Lots. The two Classes of Members shall have the following voting rights:

a. The Class B Member shall have control over the Development until all Lots are sold. Each Class A Member shall be entitled to cast one vote for each Lot owned by such Member. When two or more persons hold an interest (other than a leasehold or security interest) in a Lot, all such Persons shall be Members, but the Votes attributable to such Lot shall be exercised by one of such Persons as proxy and nominee for all such Members and in no event shall more than one Member be entitled to cast the Vote attributable to any one Lot. Furthermore, neither the Declarant nor any other Person dealing with the Development shall have any duty to inquire as to the authorization of the Member casting the Vote for any such Lot, but shall be entitled to rely upon the evidence of voting as conclusive evidence of such Member's authority to cast the Vote attributable to such Lot.

b. Any Member who is delinquent in the payment of any charges or Assessments duly levied by the Association against a Lot owned by such Member shall not be entitled to vote until all such charges, together with reasonable penalties and interest thereon as the Board of Directors may impose, have been paid to the Association.

4. Manner of Voting. Except as specifically provided elsewhere herein, the Board of Directors shall have the authority to regulate the procedural rules governing the voting of

Members, the acceptance of proxies from Members, the validity of voice votes, ballot votes, or other manners of voting, and any regulation of the solicitation of votes or proxies.

5. Organization.

a. The Association is a non-profit Tennessee corporation charged with the duties and invested with the powers prescribed by law and set forth in the Articles, By-Laws and this Declaration (collectively, the "Trotwood & Foster Association Documents"). Neither the Articles nor the By-Laws shall, for any reason, be amended or otherwise changed or interpreted so as to be inconsistent with this Declaration. In the event of any such inconsistency, the provisions of this Declaration shall prevail. The officers and directors of the Association shall be required to be either (i) Members of the Association; or (ii) officers, directors, agents, representatives or employees of Declarant or a successor to Declarant.

b. The Board of Directors of the Association, and such officers as the Board of Directors may elect or appoint, shall conduct the affairs of the Association in accordance with the Trotwood & Foster Association Documents. The Board of Directors shall, except to the extent approval by the Members shall be required by the By-Laws or by this Declaration, act on behalf of the Association in the implementation of this Declaration.

6. Powers, Authority, and Duties of the Association. The Association shall have all of the powers of a non-profit corporation organized under the laws of the State of Tennessee, subject only to such limitations upon the exercise of such powers as are expressly set forth in the Articles, the By-Laws, or this Declaration. The Association shall have the power to do any and all lawful things which may be authorized, required or permitted to be done by the Association under this Declaration, the Articles and By-Laws, and to do and perform any and all acts which may be necessary or proper for or incidental to the exercise of any of the express powers of the Association, including the following which are listed without intent to limit the foregoing grant, for the benefit of the Owners and for the maintenance, administration and improvement of the Lots. In addition to the aforementioned obligations, duties and functions, the Association shall have the obligations, duties and functions (subject to the provisions of the Trotwood & Foster Association Documents and applicable law), to do and perform the following:

a. To levy Assessments and other charges on the Owners of Lots and to enforce payment of such Assessments and other charges, all in accordance with the provisions of this Declaration;

b. To enforce, in the name of the Association, on its own behalf or on behalf of any Owner or Owners who consent thereto, to commence and maintain actions and suits to

restrain and enjoin any breach or threatened breach of this Declaration and to enforce, by mandatory injunction or otherwise, all the provisions of the Declaration, Articles and By-Laws;

c. To grant and convey to any third-party easements and rights-of-way in, on, over or under the Common Areas for the purpose of constructing, erecting, operating or maintaining thereon, therein, or thereunder, (i) overhead or underground lines, cables, wires, conduit or other devices for the transmission of electricity and for lighting, heating, power, telephone, television cables, radio and audio antennae facilities and for other appropriate purposes; (ii) public sewers, storm water drains and pipes, water system, sprinkling systems, water, heating and gas lines or pipes; and (iii) any similar public or quasi-public improvements or facilities;

d. To employ the services of any Person as manager, together with employees, to manage, conduct and perform the business, obligations and duties of the Association as may be directed by the Board of Directors and to enter into contracts for such purpose. Such manager and employees shall have the right of ingress and egress over such portion of the properties as is reasonably necessary for the purpose of performing such business, duties and obligations;

e. To execute and cause to be recorded from time to time agreements in favor of holders or insurers of mortgages secured upon the Development or any portion thereof. Such agreements may condition specified action, relevant to this instrument, of the activities of the Association upon approval by a specified group or number of mortgage holders or insurers. Actions and activities which may be so conditioned by such agreement may include, but shall not be limited to, the following: (i) any act or omission which seeks to abandon, partition, subdivide, encumber, sell or transfer the Common Areas or any other real estate or improvements owned, directly or indirectly, by the Association for the benefit of any lots; (ii) any change in the method of determining the obligations, Assessments, dues or other charges which may be levied against the owners of lots; (iii) any act or omission which may change, waive or abandon any scheme or regulations, or enforcement thereof, pertaining to the architectural design, exterior appearance or exterior maintenance and improvements erected upon the properties, driveways, or the upkeep of lawns or plantings located upon the properties; (iv) any failure to maintain specified fire and extended coverage insurance on insurable portions of the Common Areas; (v) any use of hazard insurance proceeds for losses to any improvement erected upon the Common Areas for other than the repair, replacement or reconstruction of such improvements; (vi) any failure to maintain kinds of insurance and amounts, from and covering risks as specified by such mortgage holders or insurers; and/or (vii) any decision to permit holders of specified mortgages on lots to jointly or singly pay taxes or other charges which are in default which may have become a charge against the Common Areas, to pay overdue premiums on hazard insurance lapse of any such policy for such property and any decision to permit mortgagees making any such payments to recover the amount thereof from the Association;

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f. Without liability to any Owner of a Lot, to cause its agents, independent contractors, and employees after reasonable notice, or without notice in the event of an emergency, to enter upon any Lot for the purpose of enforcing any of the rights and powers granted to the Association in the Trotwood & Foster Association Documents, and for the purpose of maintaining or repairing any portion of the properties if for any reason whatsoever the Owner thereof fails to maintain it in good condition and repair and so as to present an attractive exterior or appearance as required by this Declaration, or as reasonably required to promote or protect the general health, safety and welfare of the residents and users of the Lots and Common Areas;

g. To contract and pay for or otherwise provide for the maintenance, restoration and repair of all Improvements of whatsoever kind and for whatsoever purpose from time to time located upon or within the Common Areas or as required for exterior maintenance, sidewalks or lot clean-up in the event owner fails to maintain as required;

h. To obtain, maintain and pay for such insurance policies or bonds, whether or not required by any provision of this Declaration or any By-Laws, as the Association shall deem to be appropriate for the protection or benefit of the Association, the Board of Directors, the Members of any standing committee, their tenants or guests, including, but without limitation, fire and extended insurance coverage covering the Common Areas, liability insurance, workers compensation insurance, and performance of fidelity bonds;

i. To contract and pay for, or otherwise provide for, utility services, including, without limitation, water, sewer, garbage, electrical, telephone and gas services;

j. To contract and pay for, or otherwise provide for the construction, reconstruction, repair, replacement or refinishing of any roads, drives or other paved areas upon any portion of the Development not dedicated to any governmental unit and on the Lots in the event any Owner fail to keep such paved area maintained and repaired;

k. To contract and pay for, or otherwise provide for, fire, security and such other protective services as the Association shall from time to time deem appropriate for the benefit of the Lots, the Owners and their guests;

l. To contract and pay for, or otherwise provide for, such materials, supplies, furniture, equipment and labor as and to the extent the Association deems necessary.

m. To pay and discharge any and all liens from time to time placed or imposed upon any Common Areas on account of any work done or performed by the Association and the fulfillment of any of its obligations and duties of maintenance, repair, operation or administration; and

n. To represent the Owners in any condemnation proceedings or in negotiations, settlements and agreements with the condemning authority or acquisition of any of the Common Areas or any part thereof. In the event of a taking or acquisition of part or all of the Common Areas by any condemning authority, the award or proceeds of settlement shall be paid to the Association for the use and benefit of the Owners of the Lots and their mortgagees as their interests may appear. All Owners, by the acceptance of a Deed conveying a Lot, irrevocably constitute and appoint the Association their true and lawful attorney in their name, place and stead for the purpose of dealing with any condemning authority in any condemnation proceeding. Title to the Lots is declared and expressly made subject to such irrevocable appointment of the power of attorney. Any distribution of funds in connection with the condemnation of any part of the Common Areas shall be made on a reasonable and equitable basis by the Board of Directors or by a special committee appointed by the Board of Directors for that purpose.

ARTICLE IV
PROPERTY RIGHTS

1. Owners' Easement of Enjoyment. Every Owner, in addition to a perpetual unrestricted right of ingress and egress to his own Lot which passes with title, shall have the right and easement to drain surface waters to the retention area shown on the plats which shall be appurtenant to and shall pass with the title to every Lot, subject to the following provisions:

a. The right of the Association to manage the use of any retention areas and maintain their use as retention areas;

b. The right of the Association to suspend the voting rights of an Owner for any period in which any assessment against his lot remains unpaid; and for a period not to exceed sixty (60) days after notice and hearing as may be provided for in the By-Laws or rules for an infraction of its published rules and regulations; and

c. The right of the Association to dedicate or transfer any part of the Common Areas to any public agency, authority, or utility for the purpose of providing utilities, streets, or any similar purpose.

2. Land Use. No Lot shall be used except for single-family residential purposes.

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ARTICLE V
ASSESSMENTS

1. Annual Assessments. The Board of Directors shall have the power and authority to levy annual assessments against the Lots within the Development (the "Annual Assessments"). Annual Assessments shall be used to provide funds for such purposes as the Board of Directors shall determine to be for the benefit of the Development, including, without limitation, the improvement, maintenance, operation and security of the Development and Common Areas, payment of taxes and insurance thereon, payment of utility bills thereon (including water for sprinkler systems), payment of reasonable costs to provide attractive seasonable landscaping of the Common Areas, street maintenance costs, the repair, replacement and additions that may be necessary to the Common Areas and the cost of labor, equipment, materials, management and supervision thereof. The Board of Directors shall have the right, but not the obligation, to use the Annual Assessments to provide supplemental landscaping, maintenance within Lots, and to provide garbage and trash collection and disposal, if needed, to supplement that provided by public authority. The Board of Directors shall fix the amount of Annual Assessment each year by preparing an annual budget for the services to be provided by the Association in the coming year, and allocating said amount among the Lots equally.

2. Special Assessments. In addition to the Annual Assessments authorized herein, the Board of Directors may levy a special assessment (the "Special Assessment") applicable to a particular year, provided that any such Special Assessment shall have the affirmative Votes of not less than fifty percent (50%) of the total Votes within the Association at a meeting of all Members which shall be held after not less than five (5) days' written notice of the date, time and purpose for said meeting, at which a quorum shall be present. Special Assessments shall be due and payable on the date which is fixed by the resolution authorizing such Special Assessment.

3. Exempt Property. The Assessments and any liens created under this Article shall not apply to the Common Areas. All property within the Development which is dedicated to and accepted by a public authority, which is granted to or used by a utility company, or is designated as part of the Common Areas shall be exempt from such Assessments.

4. Property Owned by Declarant and Builders. Declarant and all Builders of homes within the Development are exempt from all Annual Assessments and Special Assessments, provided, however, that the Builders shall pay an initial capital contribution in an amount to be set by the Declarant.

5. Payment of Assessments. The Board of Directors shall have the power and authority to determine the payment method for any Assessments. Unless provided otherwise by the Board of Directors, each Owner shall pay its Annual Assessment on or before the first of April

of the year to which said assessment relates, and the Board of Directors shall fix the amount of the Annual Assessment and send a notice thereof to each Owner on or before the first of February of each such year. The Board of Directors shall have the power and authority to require quarterly or monthly payments of installments of the Annual Assessments from such Owners as the Board of Directors deems suitable, or may require all Annual Assessments to be paid on a quarterly or monthly basis, at its determination.

6. Commencement. The requirement for an Owner to pay Annual Assessments for a Lot shall commence the date in which the Owner acquires title to the Lot. Assessments on Lots that first become subject to Assessments during a calendar year shall be prorated on a calendar year basis for the remainder of such calendar year.

7. Records of Assessments. The Association shall cause to be maintained in the office of the Association a record of all Lots and Assessments applicable thereto which shall be open to inspection by any Owner. Written notice of any Assessment shall be mailed to every Owner of the Lot subject to such Assessment. The Association shall, upon demand and payment of a reasonable charge, furnish to any Owner a certificate in writing signed by an officer of the Association setting forth whether the Assessments against the Owner's Lot have been paid, and if not, the amount then due and owing. Absent manifest error, such certificate shall be deemed conclusive evidence to third parties as to the status of Assessments against any Lot within the Development.

8. Creation of Lien and Personal Obligations for Assessments. Each Owner of any Lot shall, by its acceptance of a deed thereof, whether or not it shall be so expressed in any such deed or other conveyance, be deemed to covenant and agree to all the terms and conditions of this Declaration and promises to pay to the Association all Assessments which may be due from an Owner from time to time. All Assessments, together with interest thereon and cost of collection thereof shall be a continuing lien upon the Lot against which such Assessment is levied as of the effective date of each such Assessment. Each such Assessment, together with such interest thereon and cost of collection therefor as are hereinafter provided, shall also consist of the personal obligation of the Person who was Owner of such Lot at the time when the same fell due. In the event a Lot is owned by more than one Member, all of such Members shall be jointly and severally liable for the entire Assessment then due.

9. Effect of Non-Payment of Assessment. If any Assessment hereunder is not paid upon the due date, or if any similar charge otherwise agreed to be paid by Owners in this Declaration is not paid when due, then such Assessment shall be delinquent and shall accrue interest thereon at the highest rate then permissible under the laws of the State of Tennessee commencing upon the due date. If such Assessment is not paid within thirty (30) days after the due date, then the Association may bring an action at law against the Owner personally, and/or at its option, foreclose the lien against the Lot by court action or trustee sale as hereinafter provided,

and there shall be added to the amount of such Assessment all reasonable attorneys' fees and costs incurred by the Association in any such action, and in the event a judgment is obtained, such judgment shall include interest on the Assessment as indicated above.

10. Enforcement of Lien by Trustee's Sale. For and in consideration of the privileges and protection granted in this Declaration, and the mutual enjoyment and use of the Common Areas, and for the express purpose of securing the payment of the Assessment described above, in order to avoid unnecessary court proceedings or delays for the enforcement of the liens described above, each Owner by accepting a deed to a Lot for their heirs, successors and assigns, does hereby transfer and convey in trust unto Thomas N. Jones, Trustee, his successors and assigns ("Trustee") each such Lot deeded to such Owner with the appurtenances, estate, title and interest thereto belonging to the Trustee in accordance with the following:

a. Each Owner agrees to pay all Assessments provided herein when due and upon demand of said Trustee or the Association, to pay, discharge, or remove any and all liens except a first mortgage or deed of trust lien which may hereafter be placed against said Lot which would adversely affect the lien granted herein, and in case the Trustee or his successors of the Association shall hereafter be required to appear in any court or tribunal to enforce, or defend the title to, or possession of, or costs and expenses of such appearance or proceedings, together with a reasonable attorneys' fees, shall be allowed and be payable by said Owner upon demand of the Trustee or the Association, and upon failure to do any of these things then said Trustee or Association may do any or all of said things, and the amounts so paid shall bear interest from the date of payment at the highest rate then permitted by the laws of the State of Tennessee and shall be and become a part of the indebtedness secured hereby.

b. If any Assessment, together with interest thereon, is not paid promptly when due or within a period of cure allowed above, or if after said Owner fails to pay any other sums due as above provided, or further, fail to reimburse the Trustee or Association within thirty (30) days from the date of the Trustee's or Association's payment of such sums, this trust conveyance shall remain in full force and effect, and the said Trustee or his successor in trust is hereby authorized and empowered, upon giving twenty (20) days' notice by three (3) publications in any daily or weekly newspaper published in Maury County, Tennessee, to sell said Lot at the front door of the Courthouse in said County to the highest bidder for cash at public outcry, free from the equity of redemption, statutory rights of redemption, homestead, dower, and all other exemptions of any kind which are hereby expressly waived; and the said Trustee or his successor in trust, is authorized and empowered to execute and deliver a deed to the purchaser at such foreclosure sale. The Association may bid at any sale under this trust conveyance. The Trustee may at any time after default and the payment of any of the above-described indebtedness enter and take possession of said Lot and shall only account for the net rents actually received by said Trustee. It is further agreed that in the event the Trustee fails, before

selling said Lot as herein provided, to enter and take possession hereof, the purchaser shall be entitled to immediate possession of said Lot upon delivery to him by the Trustee of a deed for said Lot. In case of sale hereunder, the proceeds shall be applied by the Trustee as follows:

i. to the payment of all costs, charges and expenses of executing such conveyance and enforcing said lien as herein provided, together with reasonable attorneys' fees for advice or for instituting and defending any litigation which may arise on account of the execution of this conveyance or the enforcement of said lien, together with the expenses and costs of any such litigation;

ii. to the payment of all taxes which may be unpaid upon said Lot;

iii. to the payment of all unpaid Assessments herein secured; and

iv. the residue, if any, to be paid to the order of said Owner(s) or their representatives or assigns.

c. In the event of the death, absence, inability, or refusal to act of said Trustee at any time when action of the foregoing powers and trusts may be authorized, or for any other reason, the lawful owner and holder of said lien is hereby authorized and empowered to name and appoint a successor in trust (the "Successor Trustee") to execute this trust by an instrument in writing to be recorded in the Register's Office for Maury County, Tennessee, and title therein conveyed to the above-named Trustee shall be vested in said Successor Trustee. The Trustee is authorized to appoint an attorney-in-fact to conduct in his stead and on his behalf and with the same power possessed by said Trustee as granted herein any and all foreclosure sales authorized above.

11. Priority of Lien. The lien described in this Article shall be subordinate to the lien of any mortgagee under a recorded first mortgage or deed of trust encumbering any such Lot. In the event any mortgagee becomes the Owner of such Lot after foreclosure thereof, or conveyance by deed in lieu of foreclosure, trustee's deed, or the like, such mortgagee shall become subject to the lien reserved herein for the purpose of securing all Assessments becoming due from and after the date such mortgagee accepts a deed to said Lot.

12. Mortgagee Protection Clause. No breach of the covenants, conditions, or restrictions herein contained for the enforcement of any lien provisions herein shall defeat or render invalid the lien of any prior mortgage given in good faith and for value, but said covenants, conditions and restrictions shall be binding upon and effective against any Owner whose title is derived through foreclosure or other judicial sale or in lieu of such of any prior mortgage.

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13. Each Owner shall indemnify and hold harmless each of the other Owners and the Association from any liability arising from the claim of any lien claimant or judgment debtor against the Lot of any other Owner or of the Common Areas. The Association or any affected Owner may enforce this obligation, which includes reasonable costs and attorneys' fees, in the manner of a Special Assessment or by action at law including all rights granted to the Association under Article V.

14. Notwithstanding the prior provisions of this Article V, the Declarant shall be exempt from all Assessments unless Declarant constructs a residence on any Lot in which case Declarant shall be subject to the same Assessments as other Owners within the Development.

ARTICLE VI
ARCHITECTURAL CONTROL COMMITTEE

1. Designation of Committee. The Association shall have an Architectural Control Committee (the "Committee"), which shall consist of three Members who shall be natural persons. The Members of the Committee shall be appointed and be subject to removal at any time by the Declarant until the termination of the Class B Membership, and thereafter by the Association's Board of Directors. The Committee shall designate an individual as its Secretary, and all communications with the Committee shall be conducted through the Secretary.

2. Approval of Plans and Architectural Review Committee. No construction, reconstruction, remodeling, alteration or addition to any structure, building, fence, wall, driveway, path or other improvement of any nature on any Lot shall be constructed or undertaken without obtaining the prior written approval of the Committee as to the intended location of same and as to its plans and specifications showing the nature, shape, height, materials and such other specifics as may be required including its architectural style. The Committee shall have full authority to review and act upon requests for approvals of such requests. As a prerequisite to consideration for such approval, and prior to the beginning of the contemplated work, the applicant must submit a set of plans and specifications with a written request for their approval. The Committee may withhold approval for any reason including purely aesthetic considerations. In the event the Committee fails to approve or disapprove the plans for design and location within ten (10) days after they have been submitted, approval will not be required and this section will be deemed to have been fully complied with. Upon approval being given, construction shall commence within sixty (60) days thereafter, and shall be processed to completion promptly and in strict compliance with the approved plans; otherwise the approval shall be void. Each Owner acknowledges that the decor, color scheme, landscaping, and design of the Lot has been selected in such a manner as to be consistent and harmonious with other Lots and residences in the Development and agrees to maintain and perpetuate the visual harmony of the Development.

3. Design Criteria. In carrying out the functions of the Committee, and in order to insure uniformity of quality of the Improvements located within the Development, the Committee may prepare, but is not required to, a statement of design criteria which shall be observed in the construction of all Improvements within the Development (the "Design Criteria"). If prepared, the Declarant and, after the termination of the Class B Membership, the Association, reserves the right to modify and amend the Design Criteria from time to time as it deems appropriate based upon changes and innovations in construction methods and techniques.

4. Limited Effect of Approval of Plans. The approval of the Committee of an Owner's plans for the construction of Improvements upon any Lot is not intended to be an approval of the structural stability, integrity or design of a completed improvement of the safety of any component therein but is required solely for the purpose of insuring compliance with the covenants contained herein and further to insure the harmonious and orderly architectural and aesthetic development and improvement of the Lots contained within the Development. Notice is hereby given therefore to any future occupant of any completed Improvement and all invitees, visitors and other persons who may from time to time enter or go on or about such completed Improvements, that no permission or approval granted by the Committee, the Declarant or the Association with respect to the construction of Improvements pursuant to this Declaration shall constitute or be construed as an approval of the structural stability of any building, structure or other Improvement and no liability shall accrue to the Declarant, the Committee or to the Association in the event that any such construction shall subsequently prove to be defective.

ARTICLE VII
IMPROVEMENT, SETBACK AND USE RESTRICTIONS

1. Improvement Restrictions. In addition to the requirements of Article VI above concerning compliance with the architectural review authority of the Committee, the following restrictions apply to Improvements;

a. Minimum setback requirements on the Plat shall be observed. The Declarant reserves the right to approve the location of each residence upon the Lot and to relocate the same, within the setback lines and/or building areas established by the Plat, in such manner as it shall be deemed, in its sole discretion, to be in the best interests of the overall Development and in furtherance of the goals set forth herein.

b. No Lot may be used for any purpose except for the construction and maintenance of a single-family residential building. No more than one single-family residential building may be constructed or maintained on any one Lot.

c. No Lot shall be re-subdivided, and all Lots shall remain as shown on the recorded Plat. A slight variance in the property lines may be made by adjacent owners, but not for the purpose of subdividing into more Lots.

d. No noxious or offensive operations shall be conducted or maintained on any Lot and nothing shall be constructed, reconstructed or kept on any Lot which may constitute an annoyance or nuisance to the neighborhood.

e. No animals or livestock of any kind shall be allowed or maintained on any Lot, except that dogs, domestic cats, or other household domestic pets may be kept, provided that they are not kept for commercial purposes. No poultry of any kind or description shall be allowed or maintained on any Lot at any time for any purpose.

f. No trailer, mobile home, modular home, basement house, tent, garage, barn, or other outbuilding shall be erected or used as either a temporary or permanent residence.

g. The Declarant, or their assigns, or the Committee, or its designees, reserve the right to enter upon any lot for the purpose of cutting grass, trimming trees and shrubs or generally cleaning up such Lot if the same reasonably requires, charging the expense thereof to the Owner thereof, which shall become a lien on the Lot until paid in full.

h. No sign of any kind shall be displayed on any lot greater than 4 X 4 ft and any such sign shall be in good taste. The Declarant and Builders may use signs of a greater magnitude so long as approve by the Committee. The use of flags shall be permitted by Builder and Declarant. In addition, a builder who is constructing more than house in the Development may have a model home where the garage may be used as a sales office.

i. All yard areas and landscape easements must be maintained in a neat and orderly fashion.

j. The minimum square feet of any residential building on any Lot shall be 1,850 square feet, exclusive of any square footage attributable to porches and garages.

k. Any Lot whereon a residential building is constructed must include, at a minimum, an attached, covered two-car garage. Front, side, and rear entry garages are permissible.

l. All Owners shall be required to install and maintain an operational garage door opener, and all garage doors shall remain closed, except for actual ingress or egress therein.

There shall be no detached garages or other accessory buildings constructed or located on the Lots without written approval from Committee.

m. Exterior building materials may be brick, stone, hardy plank, or any combination thereof. Exterior building materials may not be vinyl; provided, however, that vinyl and/or aluminum may be used on facia and soffit areas.

n. Foundations may be slab or crawlspace.

o. Any structure which is preassembled or already constructed and which the Owner of a Lot desires to move onto such Lot must receive the prior unanimous approval of the Committee, which approval may be withheld on the subjective grounds that the structure does not conform to the character and general atmosphere of the Development, even though said structure may meet all minimum square footage and other requirements.

p. The Builder shall be responsible for the expense of constructing sidewalks on each lot as well as the planting of trees one each lot as require by the City Planner.

q. No building shall be constructed or maintained on any Lot (i) in any reserved drainage utility or landscape easement area; or (ii) closer to the street than the setback line as shown on the recorded Plat, unless authorized by the Committee and Board of Zoning Appeals where applicable.

r. Once any construction has commenced, it shall proceed diligently. Owner is responsible for maintaining a neat and orderly construction site.

s. The only fences which shall be permitted on lots shall be those erected with the express prior written approval of the Committee, which is charged to ensure that said fences conform to the general character and atmosphere of the neighborhood, and shall be a minimum of four (4) feet tall and a maximum of five (5) feet tall. The Committee may require, as a condition of approval, the use of hedges or other greenery as screening for the fence. All fences must be maintained in good repair, and landowners agree to abide by reasonable requests for repairs and maintenance as may be made by the Committee. Any fences on the said lots shall be made of black aluminum, brick, or white PVC and shall not exceed beyond the rear corner of the building on the Lot. Wooden fences are not permitted in the Development. All fences facing the street should be built with the finished side facing the street.

(i) On all Lots except corner Lots, no fence shall be permitted between the front of the building or setback line and the street. On all corner Lots, no fence shall be permitted between either building or setback line and either street. In the event an Owner

incorporates any utility, landscape or drainage easement shown on the recorded Plat, within the boundaries of a fence, the inclusion of this area shall be done in such a manner so as not to interfere with any drainage on or other use of said easement.

t. All driveway enhances from the street to each Lot shall conform to the following standards: Except for houses with side entry garages, the entrances from the street to each Lot shall be sixteen (16) feet in width with a concrete apron running back three (3) feet from the entrance at street and tapering back to no less than twelve (12) feet in width to garage entry. For side entry garages, the driveway must be of a minimum width of twenty-five (25) feet in width. The driveway, including any turn around area, must be constructed of concrete. A temporary gravel drive shall be constructed from the street to the side of the proposed dwelling before or at the time construction of said dwelling is commenced.

u. No dwelling shall be constructed on any Lot closer than the minimum setback reflected on the Plat.

v. All dwellings constructed on any Lot shall have a full masonry or slab foundation.

w. All swimming pools are to be of in-ground construction. No above-ground swimming pools are allowed.

x. No Owner of a Lot may construct or place any dwelling, outbuilding, clothes line, fence or any other structure, pen or enclosure, on such Lot without the prior written approval by the Committee of the elevation or exterior design, colors, location and building material. Playground sets and trampolines are permitted without obtaining approval from the Committee so long as they are reasonably maintained and placed behind the home. It is the intent of these restrictions that the Committee shall ensure a uniform, aesthetically pleasing subdivision without the utilization of garish colors or architectural designs. The Committee is empowered to waive provision of these restrictions for good cause shown; provided, however, that this power shall not extend to reducing the minimum square footage as specified in paragraph 9 hereof.

y. All equipment, garbage cans, service yards, woodpiles or storage piles shall be kept screened by adequate planting or fencing so as to conceal from the view of neighboring houses and streets. All rubbish, trash or garbage shall be regularly removed from the Lots and shall not be allowed to accumulate thereon.

z. No exterior television or radio antennae of any sort or satellite reception dishes shall be placed, allowed, or maintained upon the front roof of any dwelling or upon the front

or side yard of any Lot, and no antenna or satellite dish shall exceed the height of the peak of the roof lines of the dwelling on any Lot.

aa. No boat, trailer, all-terrain vehicle, or motor home or other recreational vehicle of any kind shall be kept other than in garage or in the rear yard, screened from the view of neighbors and streets. No commercial vehicle of any kind shall be kept other than in garage, rear yard or other screened from the view of the neighbors and streets. No abandoned vehicles shall be stored on any Lot.

bb. No building material of any kind or character shall be placed or stored upon any of the Lots until the Owner of such Lot is ready to commence construction of improvements. Building materials shall not be placed or stored on such Lot.

cc. Sales trailers or model homes with flags and signs shall be permitted as an aide to any builder and/ or developer in the sale of new homes and/or Lots. Use of garage in model home as sales center will be permitted.

dd. No basketball goals will be permitted in the side or front yards.

ee. All setbacks must meet governmental restrictions.

ff. All mailboxes must be the uniform design established by the Declarant.

gg. Owners are responsible to ensure sidewalks are installed by the builder of any homes within the Development in accordance with the standards adopted by the Declarant, and trees are planted according to City requirements.

hh. The Declarant or its assigns reserves the right to enter upon any Lot for the purpose of cutting grass and cleaning up such Lot if the same reasonably requires, charging the expense thereof to the Owner of such Lot, which expense shall be come a lien upon the Lot.

ii. Children of residents or their guests shall not be permitted in drainage ditches during wet weather.

jj. Roof pitch must be no less than 6/12 (i.e., 26.57 degrees).

kk. Exposed metal fireplace chimneys are prohibited.

ll. No outside clotheslines or other apparatus for the drying of clothes shall be permitted.

mm. Owners are prohibited from obstructing the free flow of storm surface water drainage and/or diverting, and/or changing such drainage flow in any manner resulting in damage or hazard to any other Lot and/or Owner.

2. Maintenance.

a. All Lots, together with the exterior of all Improvements located thereon, shall be maintained in a neat and attractive condition by their respective Owners.

b. In the event any Owner shall fail to maintain the Improvements situated upon his Lot in a manner satisfactory to the Association, the Association may, upon the vote of at least two-thirds of the Board of Directors and after ten (10) days' notice in writing to the offending Owner during which time said Owner has continued to fail to commence the correction of the matter in question, enter upon said Lot and perform the maintenance of the Improvements itself. The cost of such maintenance shall be added to and become a part of the Assessment to which such Lot is subject and the Owner of such Lot shall be personally liable for the cost thereof.

3. Further Use Restrictions.

a. No Owner shall use its Lot in such a manner as to create a nuisance. No Owner shall commit waste upon any Lot.

b. No wrecked vehicle or vehicles in a non-functional condition or vehicles without proper registration shall be parked on any Lot or upon any of the Common Areas. No house trailers, mobile homes, or modular homes shall be permitted within the Development.

c. No animals, livestock, poultry of any kind shall be raised, bred, pastured or maintained on any Lot except household pets which shall be kept in reasonable numbers as pets for the sole pleasure of the occupants, but not for any other purpose or use. No such household pets shall be permitted to the extent they become a nuisance to Owners of neighboring Lots. No pets shall be permitted outside the boundaries of the Owner's Lot unless accompanied by their Owner and on a leash. The Board of Directors, or any individual resident, may take appropriate measures to insure compliance with this provision, including without limitation, having the animal picked up by the appropriate governmental authorities.

d. No Owner shall cause or allow any use of his Lot that results in noise which disturbs the peace and quiet of the Development. This restriction includes, without limitation, dogs whose loud and frequent barking, whining or howling disturbs other Owners, exterior music

systems or public address systems, and other noise sources which disturb other Owners' ability to peacefully possess and enjoy their Lots.

e. No Owner shall permit or cause the escape of such quantities of dense smoke, soot, cinders, noxious acids, fumes, dust, or gases as to interfere with the use and enjoyment by other Owners of their Lots.

f. No house or other structure on any Lot shall be used for any business or purpose. Each Owner shall refrain from any act or use of his Lot which could reasonably cause embarrassment or discomfort or annoyance to the neighborhood. No noxious, offensive or illegal activity shall be carried out upon any Lot.

g. Each Owner shall observe all governmental building codes, health restrictions, zoning restrictions and other regulations applicable to his Lot. In the event of any conflict between any provision of such governmental code, regulation or restriction and any provision of this Declaration, the more restrictive provision shall apply.

h. Preassembled structures for residential purposes shall not be permitted even though they may meet the minimum square footage requirements and all other requirements.

i. The pursuit of hobbies or other inherently dangerous activities including without limitation the assembly and disassembly of motor vehicles or other mechanical devises, the shooting of firearms, fireworks, or other pyrotechnic devices of any type or size, and other such activities shall not be allowed upon any Lot.

ARTICLE VIII
EASEMENTS

1. General. A perpetual easement as shown on the Plat is reserved on each Lot for the construction and maintenance of utilities, such as drainage, electricity, gas, water main, sewage, etc., and no structure of any kind shall be erected or maintained upon or over said easement. It is understood and agreed that all easements granted herein, or by deed, or identified in the recorded Plat, may be used to service additional subdivision sections within all sections of the Development.

2. Emergency. There is hereby reserved without further assent or permit, a general easement to all policemen and security guards employed by Declarant or Association, firemen, ambulance personnel, garbage collectors, mailmen, utility personnel, delivery service personnel and all similar persons to enter upon the Development or any portion thereof which is now or hereafter made subject to this Declaration in the performance of their respective duties.

3. Easements Over Common Areas. The Plat designates certain areas for roads, utilities, drainage, Common Areas, and recreational areas. The easements so designated on the Plat encumber the Lots as shown on the Plat and are hereby established as perpetual and irrevocable easements. Said easements are granted and reserved for the use and benefit in common of all owners in the Development and their agents, servants, family members and invitees. No Owner shall have the right to restrict, impede or take any action in any way to prohibit or limit the use in common by all Owners of said easements. However, use of the easements and Common Areas shall be subject to and governed by provision of this Declaration and the by-laws, rules and regulations of the Association.

4. Easements for Utilities. All Lots and Common Areas in the Development shall be subject to the easements for installation of utilities and drainage facilities that are reserved and shown on the recorded Plat and as set forth herein or as required by later amendments. Within these easements, no structure, planting or other material shall be placed or permitted to remain which may interfere with the installation and maintenance of utilities, or which may change the direction or flow of drainage channels in the easements, or which may obstruct or retard the flow of water through drainage channels and easements.

5. Association Functions. There is hereby reserved to Declarant, any successor to Declarant, and the Association, or the duly authorized agents, representatives and managers of the Association, such easements as are necessary to perform the duties and obligations of the Association as are set forth in the Declaration and any other Trotwood & Foster Association Documents.

6. Ingress and Egress. In addition, there is reserved to Declarant for the use and benefit of any adjoining property that has been added as a new section to the Development or is intended to be added as a new section, a right of ingress and egress over the streets, a right to attach to and use sewer and utility easements and such other easements as may be necessary to develop said property or as are provided for the Development and the Declarant according to this Article VIII.

7. Covenants Running with Land. Each of the easements provided for in this Declaration shall be deemed to have been established upon the recordation of this Declaration and shall thenceforth be deemed to be covenants running with the land for the use and benefit of the Lots, and Common Areas as the case may be, superior to all other encumbrances applied against or in favor of any portion of the properties which is the subject of this Declaration.

8. Subject to Prior Utility Easements. Notwithstanding anything herein expressed or implied to the contrary, this Declaration shall be subject to all easements heretofore or hereafter

granted by Declarant for ingress or egress and for the installation and maintenance of utilities, sewers, television cables, drainage, and similar facilities that are necessary or appropriate for the development of the properties.

9. Utility Easements, Duties and Rights. The rights and duties of the Owners of Lots with respect to sanitary sewers and water, electricity, television cables, gas and telephone, shall be governed by the following:

a. Whenever sanitary sewer house connections and/or water house connections or electricity, television, gas or telephone lines are installed within the properties, which connections or any portion thereof lie in or upon Lots owned by others, then the Owners of the Lot served by said connections, shall have the right, and are hereby granted, an easement to the full extent necessary therefor, to enter upon said Lots or to have the utility company enter upon the Lots within such other Lot(s) in or upon which said connections, or any portion thereof lie, to repair, replace and generally maintain said connections as and when the same may be necessary.

b. When sanitary sewer house connections and/or water house connections or electricity, television cables, gas or telephone lines are installed within the properties, which connections serve more than one Lot, the Owner of each Lot served by said connections shall be entitled to full use and enjoyment of such portions of said connections as service his Lot.

ARTICLE IX
INSURANCE

1. Casualty Insurance. The Association shall keep all insurable improvements and fixtures on the Common Areas insured against loss and damage by fire for the full insurable replacement cost thereof, and shall obtain insurance against such other hazards and casualties as the Association may deem desirable as well as a general liability insurance policy covering all Common Areas with coverage of at least One Million Dollars ($1,000,000.00) for bodily injury or property damage for any single occurrence as well as coverage for any legal liability that results from lawsuits related to employment contracts in which the Association is a party. All policies shall provide that they may not be cancelled or substantially modified without ten (10) days written notice to all insureds including the mortgagees if any. The Association shall also insure any other property whether real or personal, owned by the Association, against loss or damage by fire or casualty and such other hazards as the Association my deed desirable, with the Association as the owner and beneficiary of such insurance. All casualty, liability and fidelity bond coverage shall be in such manner and is such amount as required by the Federal Nation Mortgage Association (FNMA), and their requirements thereto as set forth in Sections 501-504, FNMA Lending Guide, are adopted herein by reference. Any insurance coverage with respect to the Common Areas or otherwise shall be written in the name of, and the proceeds thereof, shall be payable to the

Association. Insurance proceeds shall be used by the Association for the repair or replacement of the property for which the insurance was carried. Premiums for all such insurance carried by the Association are common expenses included in the common Assessments made by the Association.

2. Replacement or Repair of Property. In the event of damage to or destruction of any part of the Common Areas and/or Improvements thereon, the Association shall repair or replace same from the insurance proceeds available. If such insurance proceeds are insufficient to cover the cost of repair or replacement of the property damaged or destroyed, the Association may make a Special Assessment against all owners to cover the additional cost of repair or replacement not covered by the insurance proceeds, in addition to any other Assessments made against such Owner.

3. Other Insurance. The Association may also maintain and pay for insurance policies or bonds that are appropriate for the protection and benefit of the Association, Members of the Board of Directors and any standing Committee, tenants or guest, including, but without limitations, workers' compensation, malicious mischief, and performance of fidelity bonds.

4. Annual Review of Policies. All insurance policies shall be reviewed at least annually by the Board of Directors in or order to ascertain whether the coverage contained in the policies is sufficient to make any necessary repairs or replacement of property which may be damaged or destroyed.

5. Hazard, Flood, Homeowners and Fire Insurance. Each Owner shall obtain and maintain in effect fire and appropriate damage and physical loss insurance, all in an amount equal to the then current full replacement value of each residence and improvement owned by such Owner, which may be established from time to time by the Board of Directors or the Association by resolution. Such additional insurance requirements may be set for the in agreements or other undertakings which the Board of Directors or Association may enter into with or for the benefit of holders or insurers of mortgages secured upon portions of the properties.

6. Obligation to Repair and Restore.

a. Subject only to the rights of an institutional holder of the first mortgage lien on any damaged Lot, insurance proceeds from any insurance policy covering such Lot shall be first applied to the repair, restoration, or replacement of such Lot. Each Owner shall be responsible for the repair, restoration, or replacement of each Lot owned by such Owner pursuant to the terms hereof. Any such repair, restoration or replacement shall (subject to advances and changes in construction techniques and materials generally used in such construction and in currently generally accepted design criteria) be generally harmonious with the other Lots in the Development, and reconstruction must be consistent with plans approved by the Committee. Such repair and restoration will be commenced as soon as possible.

b. If the proceeds of insurance are insufficient to pay for the cost of repair, restoration, or replacement of a residence or improvement, the Owner of such Lot shall be responsible for the payment of any such deficiency necessary to complete the repair, restoration or replacement.

7. Association Rights. If any Owner fails to obtain the insurance required in this Article, or fails to pay the premiums therefor when and as required or fails to otherwise perform the obligations of an Owner under this Article, the Association may (but shall not be obligated to in any manner) obtain such insurance, make such payments for any such Owner, and/or perform such obligations, and add the cost of such payments or performance, as a Special Assessment, to the Assessments of such Owner and enforce the payment of the Assessment in a like manner as an Annual Assessment.

8. Notice to First Mortgagees. In the event of substantial damage to or destruction of any part of the Common Areas, the institutional holder of any first deed of trust or mortgage on a Lot will be entitled to timely written notice of any such damage or destruction and no provision of any document establishing the Development will entitle the Owner of a Lot or other party to priority over such institutional holder with respect to the distribution to such Lot of any insurance proceeds.

ARTICLE X
EXTERIOR MAINTENANCE

1. Maintenance of, repairs to and replacements to the Common Areas shall be the responsibility of and shall be furnished by the Association. The cost of maintenance of, repairs to and replacements to the Common Areas shall be part of the common expenses, subject to the By-Laws, Rules and Regulation of the Association. If, due to the act or neglect of an Owner, or of his agent, servant, tenant, family member, invitee, licensee or household pet, damage shall be caused to the Common Areas, to the sidewalks, or to a Lot owned by others, or maintenance, repair or replacement are required which would otherwise be a common expense, then such Owner shall pay for such damage or such maintenance, repair or replacements, as may be determined by the Association, to the extent not covered by the Association's insurance or sufficient proceeds are not collected from the insurance carrier or to the extent any such claim raises insurance premiums.

In addition to the utility and maintenance easements as may appear on the Plat, the authorized representatives to the Association, Board of Directors or of a managing agent appointed by and with approval of the Board of Directors, shall be entitled to reasonable access to the individual Lots as may be required in connection with the preservation of any individual Lot in the event of an emergency, or in connection with maintenance of, repairs or replacements of the

Common Areas or any equipment, facilities or fixtures affecting or serving other Lots and the Common Areas or to make any alteration required by any governmental authority.

2. It will be the responsibility of each Owner of a Lot to maintain their own mailbox in keeping with the specific design approved by the Declarant.

3. Each Owner of a Lot is responsible for all exterior maintenance on his own Lot. Each Owner shall repair, maintain or replace all exteriors on any building in a good and workman like manner. Additionally, all landscaping, plants, shrubs, driveways, walks, yards, sidewalk adjacent to the street, etc., shall be maintained in a neat, orderly condition and in a good state of repair and maintenance. All exterior maintenance, including painting, shall be done in the color, method and design that is suitable and approved by the Committee. The Committee can base its decisions solely on esthetic considerations.

ARTICLE XI
ANNEXATION AND/OR ADDITION OF OTHER AREA TO PROPERTY

1. General. Declarant or its successors and assigns, shall be allowed to annex additional property by way of sections to the Development without the consent of the Association or its Members over any mortgagees or other lien holders (other than those holding mortgages a lien on the real property being annexed) by the recordation of an amendment to this Declaration as provided herein. Upon such annexation, the Association shall take whatever measures are necessary to add such annexed property and lots into the Development on an equal basis with the original Lots included hereunder.

2. Membership in Association. Owners of additional property annexed by way of sections to the Development (the "New Members") shall become Members of the Association obtaining all rights due Members of the Association and becoming liable for all Assessments and fees as set forth herein and/or in the supplemental Declaration and the Association shall take such measures necessary to evidence the admittance of such New Members as Members in the Association.

3. Common Areas. All Common Areas in any annexed property will be deeded to the Association in fee simple to be held in accordance with this Declaration.

ARTICLE XII
GENERAL PROVISIONS

1. Duration. The covenants, conditions an restrictions contained herein shall be appurtenant to and run with the land and shall be binding upon all Owners and parties hereinafter

having an interest in any of the Development, and all parties claiming under them, until January 1, 2055, at which time they shall be automatically extended for successive periods of ten (10) years each, unless a majority of the votes attributable to Lots in the Development are cast in favor of a proposition to change, amend or revoke the restrictions in whole or in part at a duly called meeting of the Association within the final one (1) year of the term of this Declaration, as it may have been extended. Each purchaser or subsequent grantee of any interest in any property now or hereafter made subject to this Declaration, by acceptance of a deed or other conveyance therefor, thereby agrees that the covenants, conditions and restrictions of this Declaration may be extended as provided in this Article XIII, Section 1.

2. Amendment. Any amendment of the Declaration, other than an amendment incorporating new property by way of sections to the Development as detailed in Article XI which may be done without an affirmative vote, will require the affirmative vote of at least two-thirds (2/3) of the Votes entitled to be cast by the Members of the Association, (both Class A and Class B) at a duly called meeting of the Association at which a quorum is present. Any such amendment shall not become effective until the instrument evidencing such change has been filed of record. Every purchaser or subsequent grantee of any interest in any property now or hereafter made subject to this Declaration by acceptance of a deed or other conveyance therefor, thereby agrees that the covenants, conditions and restrictions of this Declaration may be amended as provided herein.

3. Enforcement. All restrictions herein may be enforced by Declarant, its successors and assigns until the termination of the Class B Membership, or by the Association acting by and through its Board of Directors, or by the Committee, by proceeding at law or in equity against the Person violating or attempting to violate any covenant, condition and/or restriction, either to restrain the violation thereof or to recover money damages, together with reasonable attorneys' fees and court costs. Furthermore, after the termination of Declarant's Class B Membership in the Association, in the event the Association fails to act to enforce any restriction contained herein, any Owner of any Lot may enforce these restrictions as aforesaid against any other Owner. Notwithstanding the foregoing, the covenants contained in Article VIII hereof regarding the Declarant's option to purchase Lots shall be enforceable only by Declarant and not by its successors or assigns unless said rights are specifically assigned thereby Declarant in writing.

4. Partial Invalidity. Any invalidation of any one or more of these restrictions by judgment, court order, or statute, for failure on the part of Declarant or its successors or assigns to enforce any said restrictions, shall in no way affect any of the other provisions hereof or be deemed as a waiver of the right to enforce such restrictions at any time after the violation thereof. Invalidation of any one or more of these restrictions by judgment or court order shall neither affect any of the other provisions not expressly held to be void nor the provisions so void in circumstances or applications other than those expressly invalidated, and all such remaining

provisions shall remain in full force and effect together with the provisions ruled upon as they apply to circumstances other than those expressly invalidated.

5. Abatement. In the event that any Owner violates any of the terms or conditions of this Declaration and fails to cure the same within ten (10) days after written notice thereof, then Declarant, in addition to any other rights and remedies provided for herein, shall have the express right, privilege and license to enter upon any Lot to take any reasonable action to cure such violation, and all reasonable costs thereof shall be at the expense of the Owner of such Lot and shall be payable upon demand by Declarant, including reasonable attorneys' fees.

6. Notice. All notices required or permitted hereunder shall be in writing and effective when deposited in the U.S. mail, postage prepaid, addressed to any Owner at the address of the Lot owned by such Owner, and, if to Declarant, addressed to the Declarant as follows:

Brightland Homes of Tennessee, LLC
Barton Creek Plaza III
3815 South Capital of Texas Highway, Suite 275
Austin, Texas 78704

Attention: John Winniford
Email: jwinniford@brightlandhomes.com
and
Attention: Kent Mitchell
Telephone: 512.330.9366
Email: kmitchell@brightlandhomes.com
and
Attention: Chris Lynch
Telephone: 512.330.9755
Email: clynch@brightlandhomes.com

or such other address as Declarant may, by notice to each of the Owners, designate.

7. Headings and Binding Effect. Headings have been inserted only for convenience and are in no way to be construed as defining, limiting, extending or otherwise modifying or adding to the particular paragraphs to which they refer. The covenants, agreements and right set forth herein shall be binding upon and inure to the benefit of the respective heirs, executors, successors and assigns of the Declarant and all person claiming by, through or under Declarant.

8. Exoneration of Declarant. Each Owner of any Lot in the Development, or any other party having an interest in any portion of the Development, expressly agrees that no duty or

obligation is imposed upon Declarant to enforce or attempt to enforce any of the covenants or restriction contained herein, nor shall Declarant be subject to any liability of any kind or nature whatsoever resulting out of any claim by any third-party asserting that Declarant failed to enforce the same.

[Remainder of Page Intentionally Left Blank – Signature Page Follows]

DRAFT

IN WITNESS WHEREOF, the Declarant has caused this Declaration of Protective Covenants, Conditions and Restrictions to be duly executed this ____ day of _____, 2024.

BRIGHTLAND HOMES OF TENNESSEE, LLC,
a Delaware limited liability company

By: Brightland Homes, Ltd.,
a Texas limited partnership, sole Member

By: Brightland Homes I, Inc.,
a Texas corporation, General Partner

By: _____
John S. Winniford,
President and CEO

STATE OF TENNESSEE
COUNTY OF

Before me, the undersigned authority, a Notary Public in and for the State and County aforesaid, John S. Winniford, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who, upon his/her oath, acknowledged himself/herself to be President and CEO of Brightland Homes of Tennessee, LLC, the within named Declarant, and he/she as such officer, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the limited liability company by himself/herself as such officer.

WITNESS MY HAND and official seal at my office on this the _____ day of _____, 2024.

_____
Notary Public

My commission expires: _____

DRAFT

EXHIBIT "A"
LEGAL DESCRIPTION

DRAFT

EXHIBIT "B"

BY-LAWS
OF
[_____]

ARTICLE I
DEFINITIONS

The following words, when used herein, shall have the following meanings:

Section 1. "Association" shall mean [_____], a Tennessee not-for-profit corporation, its successors and assigns, which has as its members all owners of Lots in the Property. "Charter" shall mean the Articles of Incorporation of the Association as filed with the Office of the Secretary of State for Tennessee.

Section 2. "Board of Directors" shall mean the Board of Directors of the Association as described in Article IV hereof.

Section 3. "Declaration" shall mean the instrument headed "Declaration of Covenants, Conditions and Restrictions of Trotwood & Foster" recorded simultaneously herewith in the Register's Office for Maury County, Tennessee, as subsequently amended.

Section 4. "Declarant" shall have the meaning given it in the Declaration.

Section 5. "Member" shall mean and refer to those persons entitled to membership in the Association as provided in the Declaration.

Section 6. "Common Areas" shall have the meaning given it in the Declaration.

Section 7. "Lot" shall have the meaning given it in the Declaration.

Section 8. "Owner" shall have the meaning given it in the Declaration.

Section 9. "Plat" shall have the meaning given it in the Declaration.

Section 10. "Development" shall have the meaning given it in the Declaration.

ARTICLE II
NAME AND LOCATION

The name of the Association is [_____]. The principal office of the Association shall be located at [_____] or at such other place as may be designated by the Board of Directors. Meetings of members and directors may be held at such places within the State of Tennessee, County of Maury, as may be designated by the Board of Directors.

ARTICLE II
MEETING OF MEMBERS

Section 1. Annual Meetings. The first regular annual meeting of the Members may be held, subject to the terms hereof on any day, at the option of the Board of Directors; provided, however, that the first meeting may (if necessary to comply with Federal Regulations) be held no later than the earlier of the following events: (a) Four (4) months after all the Lots have been sold by the Declarant or (b) Three (3) years following conveyance of the first Lot by the Declarant. Each subsequent regular annual meeting of the Members shall be held within fifteen (15) days of the anniversary of the first regular annual meeting each year thereafter at such time as set by the Board of Directors.

Section 2. Special Meetings. Special meetings of the Members may be called at any time by the president or by the Board of Directors, or upon written request of the Members who are entitled to vote one-fourth (1/4) of all of the votes of the Class A membership.

Section 3. Notice of Meetings. Written notice of each meeting of the Members shall be given by, or at the direction of, the secretary or person authorized to call the meeting, by mailing a copy of such notice, postage prepaid, at least fifteen (15) days before such meeting to each Member entitled to vote at the meeting, addressed to the Member's address last appearing on the books of the Association, or supplied by such Member to the Association for the purpose of notice. Such notice shall specify the place, day and hour of the meeting, and, in the case of a special meeting, the purpose of the meeting.

Section 4. Quorum. The presence at the meeting of Members entitled to cast, or of proxies entitled to cast, fifty percent (50%) of the votes of each class of membership shall constitute a quorum for any action except as otherwise provided in the Charter, the Declaration, or these Bylaws. If, however, such quorum shall not be present or represented at any meeting, the Members entitled to vote at the meeting shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum as aforesaid shall be present or be represented. Further, as provided in the Declaration, if a quorum is not present a subsequent meeting may be called and the required quorum shall be reduced by half at such meeting and such procedure may be repeated until a quorum is established although in no event may the required quorum be less than 10% of the total number of eligible votes.

Section 5. Proxies. At all meetings of Members, each Member may vote in person or by proxy. All proxies shall be in writing and filed with the secretary. Every proxy shall be revocable and shall automatically cease upon conveyance by the Member of his Lot.

Section 6. Action Taken Without A Meeting. The Members shall have the right to take any action in the absence of a meeting which they could take at a meeting by obtaining the written consent of the number of Members which would otherwise be required to approve such action. For instance, if an action required the approval of Members holding three-fourths (3/4ths) of the total votes, then a writing signed by Members holding three-fourths (3/4ths) of the total votes of all Members would be effective as if such approval was given at a meeting duly called for such

purpose. Any action so approved shall have the same effect as though taken at a properly called meeting of the Members.

ARTICLE IV
BOARD OF DIRECTORS

Section 1. Number. The affairs of the Association shall be managed by a Board of Directors. The initial Board of Directors of the Association shall consist of three (3) persons, who need not be Members of the Association, who shall be appointed by the Declarant and who shall serve until all Lots in the Development are sold. Thereafter, the Board of Directors shall consist of five (5) directors each of whom must individually be a Member of the Association or be an owner, officer, trustee, or otherwise affiliated with a Member of the Association.

Section 2. Term of Office. Persons on the Board of Directors shall be elected for terms of two (2) years or until their successor is elected.

Section 3. Removal. Any director may be removed from the Board of Directors, with or without cause, by a majority vote of the Members of the Association, or in the case of the initial Board of Directors, by the Declarant. In the event of death, resignation or removal of a director, his successor shall be selected by the remaining Members of the Board of Directors, or in the case of the initial Board of Directors, by the Declarant, and shall serve for the unexpired term of his predecessor.

Section 4. Compensation. No director shall receive compensation from any service he may render to the Association; provided, however, any director may be reimbursed for his actual expenses incurred in the performance of his duties.

Section 5. Action Taken Without a Meeting. The directors shall have the right to take any action in the absence of a meeting which they could take at a meeting by obtaining the written approval of all the directors. Any action so approved shall have the same effect as though taken at a meeting of the directors.

ARTICLE V
NOMINATION AND ELECTION OF DIRECTORS

Section 1. Nomination. The Declarant shall name the directors for the initial Board of Directors. Thereafter, nomination for election to the Board of Directors shall be made from the floor at the annual meeting of the Association.

Section 2. Election. Election to the Board of Directors shall be by secret written ballot. At such election the Members or their proxies may cast, in respect to each vacancy, as many votes as they are entitled to exercise under the provisions of the Declaration. The persons receiving the largest number of votes shall be elected. Cumulative voting is not permitted.

ARTICLE VI
MEETING OF DIRECTORS

Section 1. Regular Meetings. Regular meetings of the Board of Directors shall be held at intervals established by the Board of Directors upon at least three (3) days' written notice, (or without notice if the time and place has been previously fixed by the Board of Directors), at such place and hour as may be fixed from time to time by resolution of the Board of Directors. Should said meeting fall upon a legal holiday, then that meeting shall be held at the same time on the next day which is not a legal holiday.

Section 2. Special Meetings. Special meetings of the Board of Directors shall be held when called by the president of the Association, or by any two directors, after not less than three (3) days' written notice to each director.

Section 3. Quorum. A majority of the number of directors shall constitute a quorum for the transaction of business. Every act or decision done or made by a majority of the directors present at a duly held meeting at which a quorum is present shall be regarded as the act of the Board of Directors.

ARTICLE VII
POWERS AND DUTIES

Section 1. Powers. The Board of Directors shall have power to:

(a) Adopt and publish rules and regulations governing the use of the Common Areas and facilities, and the personal conduct of the Members and their guests thereon, and to establish, assess and collect penalties and fines for the infraction thereof;

(b) Suspend the voting rights and right to use recreational facilities of a Member during any period in which such Member shall be in default in the payment of any assessment levied by the Association. Such rights may also be suspended until after the payment of reasonable financial assessments made after notice and hearing, for a period not to exceed 60 days for infraction of published rules and regulations;

(c) Exercise for the Association all powers, duties and authority vested in or delegated to this Association and not reserved to the membership by other provisions of these Bylaws, the Charter or the Declaration;

(d) Declare the office of a member of the Board of Directors to be vacant in the event such member shall be absent from three (3) consecutive regular meetings of the Board of Directors.

(e) Employ a manager, an independent contractor, or such other employees as they deem necessary, and to prescribe their duties.

Section 2. Duties. It shall be the duty of the Board of Directors to:

(a) Cause to be kept a complete record of all its acts and corporate affairs and to present a statement thereof to the Members at the annual meeting of the Members, or at any special meeting when such statement is requested in writing by one-fourth (1/4) of the Class A Members who are entitled to vote.

(b) Supervise all officers, agents and employees of the Association, and to see that their duties are properly performed;

(c) As more fully provided in the Declaration, to:

(1) Fix the amount of the annual assessment against each Lot at least thirty (30) days in advance of each annual assessment period; and

(2) Send written notice of each assessment to every Owner subject thereto at least thirty (30) days in advance of each annual assessment period; and

(3) Foreclose the lien against any property for which Assessments are not paid within thirty (30) days after due date or to bring an action at law against the Owner personally obligated to pay the same.

(d) Issue, or to cause an appropriate officer to issue, upon demand by any person, a certificate setting forth whether any assessment has been paid. A reasonable charge may be made by the Board of Directors for the issuance of these certificates. If a certificate states an assessment has been paid, such certificate shall be conclusive evidence of such payment;

(e) Procure and maintain adequate liability, hazard, and other insurance on property owned by the Association;

(f) Cause all officers or employees having fiscal responsibilities to be bonded, as required by the Declaration;

(g) Cause the Common Areas to be maintained.

(h) Exercise all discretion as provided in the Declaration regarding enforcement of all terms, restrictions and provisions contained in the Declaration and to take any and all enforcement actions as may be required pursuant thereto. Whenever discretion is granted to the Board of Directors to act upon any matter as required under the Declaration of these Bylaws, such discretion may be exercised by the president of the Association although any such action by the president shall be subject to change upon review by the Board of Directors.

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ARTICLE VIII
OFFICERS AND THEIR DUTIES

Section 1. Enumeration of Officers. The officers of this Association shall be a president, a vice-president, a treasurer, and a secretary, and such other officers as the Board of Directors may from time to time by resolution create.

Section 2. Election of Officers. The election of officers shall take place at the first meeting of the Board of Directors following each annual meeting of the Members.

Section 3. Term. The officers of the Association shall be elected annually by the Board of Directors and each shall hold office for one year unless he shall sooner resign, or shall be removed, or otherwise disqualified to serve.

Section 4. Special Appointments. The Board of Directors may elect such other officers as the affairs of the Association may require each of whom shall hold office for such period, have such authority, and perform such duties as the Board of Directors may, from time to time, determine.

Section 5. Resignation and Removal. Any officer may be removed from office with or without cause by the Board of Directors. Any officer may resign at any time by giving written notice to the Board of Directors, the president or the secretary. Such resignation shall take effect on the date of receipt of such notice or at any later time specified therein, and unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective.

Section 6. Vacancies. A vacancy in any office may be filled by appointment by the Board of Directors. The officer appointed to such vacancy shall serve for the remainder of the term of the officer he replaces.

Section 7. Multiple Offices. The offices of secretary and treasurer may be held by the same person. No person shall simultaneously hold more than one of any of the other offices except in the case of special offices created pursuant to Section 4 of this Article.

Section 8. Duties. The duties of the officers are as follows:

(a) President. The president shall preside at all meetings of the Board of Directors; shall see that orders and resolutions of the Board of Directors are carried out; shall sign all leases, mortgages, deeds and other written instruments and shall co-sign all checks and promissory notes.

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(b) Vice-President. The vice-president shall act in the place and stead of the president in the event of his absence, inability or refusal to act, and shall exercise and discharge such other duties as may be required of him by the Board of Directors.

(c) Secretary. The secretary shall record the votes and keep the minutes of all meetings and proceedings of the Board of Directors and the Members; serve notice of meetings of the Board of Directors and of the Members; keep appropriate current records showing the Members of the Association together with their addresses, and shall perform such other duties as required by the Board of Directors.

(d) Treasurer. The treasurer shall receive and deposit in appropriate bank accounts all monies of the Association and shall disburse such funds as directed by resolution of the Board of Directors; shall together with another officer sign all checks and promissory notes of the Association; keep proper books of account; cause an annual audit of the Association's books to be made by a public accountant at the completion of each fiscal year; and shall prepare an annual budget and a statement of income and expenditures to be presented to the membership at its regular annual meeting, and deliver a copy of each to the Members.

ARTICLE IX
COMMITTEES

The Board of Directors shall appoint an Architectural Review Committee, as provided in the Declaration. In addition, the Board of Directors shall appoint other committees as deemed appropriate in carrying out its purpose.

ARTICLE X
BOOKS AND RECORDS

The books, records, papers of the Association and the Declaration, Charter and Bylaws shall be available for inspection by any Member or to the holder, guarantor or insurer of any first mortgage at the principal office of the Association, during normal business hours where copies may be purchased at reasonable cost.

ARTICLE XI
ASSESSMENTS

As more fully provided in the Declaration, each member is obligated to pay to the Association annual and special assessments as well as any other amounts assesses against an Owner by the Association which are secured by a continuing lien upon the property against which the assessment is made. Any assessments which are not paid when due shall be delinquent. If the

assessment is not paid within thirty (30) days after the due date, the assessment shall be subject to a late charge in an amount established by the Board of Directors and shall bear interest from the date of delinquency at the maximum rate allowed by applicable law. The Association may bring an action at law against the Owner personally obligated to pay the same or foreclose the lien against the Lot, and interest, costs, and reasonable attorney's fees of any such action shall be added to the amount of such assessment. No Owner may waive or otherwise escape liability for the assessments provided for herein by non-use of the Common Areas or abandonment of his Lot.

ARTICLE XII
AMENDMENTS

Section 1. These Bylaws may be amended, at a regular or special meeting of the Members, by a vote of a majority of a quorum of Members present in person, or by proxy.

Section 2. In the case of any conflict between the Charter and these Bylaws, the Charter shall control; and in the case of any conflict between the Declaration and these Bylaws, the Declaration shall control.

ARTICLE XIII
MISCELLANEOUS

The fiscal year of the Association shall begin on the first day of January and end on the 31st day of December of every year, except that the first fiscal year shall begin on the date of incorporation.

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ELEVATION A

3/32" = 1'-0"



ELEVATION B

3/32" = 1'-0"



ELEVATION C

3/32" = 1'-0"



ELEVATION D

3/32" = 1'-0"

REVISION LOG

SHEET LIST

NO.	TITLE
A0.00	COVER SHEET
A1.00	ELEVATION A - FIRST FLOOR PLAN
A1.01	ELEVATION A - SECOND FLOOR PLAN
A1.02	ELEVATION A - EXTERIOR ELEVATIONS
A1.03	ELEVATION A - EXTERIOR ELEVATIONS
A1.04	ELEVATION A - ROOF PLAN
A2.01	ELEVATION B - PARTIAL FLOOR PLANS
A2.02	ELEVATION B - EXTERIOR ELEVATIONS
A2.03	ELEVATION B - EXTERIOR ELEVATIONS
A2.04	ELEVATION B - ROOF PLAN
A3.01	ELEVATION C - PARTIAL FLOOR PLANS
A3.02	ELEVATION C - EXTERIOR ELEVATIONS
A3.03	ELEVATION C - EXTERIOR ELEVATIONS
A3.04	ELEVATION C - ROOF
A4.01	ELEVATION D - PARTIAL FLOOR PLANS
A4.02	ELEVATION D - EXTERIOR ELEVATIONS
A4.03	ELEVATION D - EXTERIOR ELEVATIONS
A4.04	ELEVATION D - ROOF
A7.00	PLAN OPTIONS
A7.01	PLAN OPTIONS
A7.02	PLAN OPTIONS
A7.03	PLAN OPTIONS
A7.04	PLAN OPTIONS
A7.05	PLAN OPTIONS
A7.06	PLAN OPTIONS
A7.07	PLAN OPTIONS
A7.08	PLAN OPTIONS
A7.09	PLAN OPTIONS
A7.10	PLAN OPTIONS
A7.11	PLAN OPTIONS
A7.12	PLAN OPTIONS
A7.13	PLAN OPTIONS
A7.14	PLAN OPTIONS
A7.15	PLAN OPTIONS
A7.16	PLAN OPTIONS
A7.17	PLAN OPTIONS
A7.18	PLAN OPTIONS
AD1.00	DETAILS
AI1.00	INTERIOR ELEVATIONS
AI1.01	INTERIOR ELEVATIONS
E1.00	ELEVATION A - FIRST FLOOR ELECTRICAL PLAN
E1.01	ELEVATION A - SECOND FLOOR ELECTRICAL PLAN
E2.00	ELEVATION B - PARTIAL ELECTRICAL PLANS
E3.00	ELEVATION C - PARTIAL ELECTRICAL PLANS
E4.00	ELEVATION D - PARTIAL ELECTRICAL PLANS
E7.00	PLAN OPTIONS
E7.01	PLAN OPTIONS
SF1.00	FOUNDATION - ELEVATION A
SF4.00	FOUNDATION - ELEVATION D
SF7.00	PLAN OPTIONS

PLAN OPTIONS

- ELEVATION **A**
- ELEVATION **B**
- ELEVATION **C**
- ELEVATION **D**
- OPT. SIDE LOAD GARAGE
- OPT. EXTENDED PATIO
- OPT. REAR COVERED PORCH
- OPT. PORCH FIREPLACE
- OPT. GREAT ROOM SLIDER
- OPT. GREAT ROOM COFFERED CEILING
- OPT. FIREPLACE BUILT-INS
- OPT. STUDY COFFERED CEILLING
- OPT. 1/2 BATH VANITY
- OPT. LAUNDRY SINK
- OPT. LAUNDRY DOOR
- OPT. OWNERS BATH 1
- OPT. OWNERS BATH 2
- OPT. OWNERS CLOSET SHELVES
- OPT. OWNERS BEDROOM TRAY CEILINGS
- OPT. KITCHEN ISLAND
- OPT. DOUBLE OVEN
- OPT. ISLAND MIRCOWAVE
- OPT. BEDROOM 6

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PLAN NO.

3510

ISSUE DATE	04-17-2024
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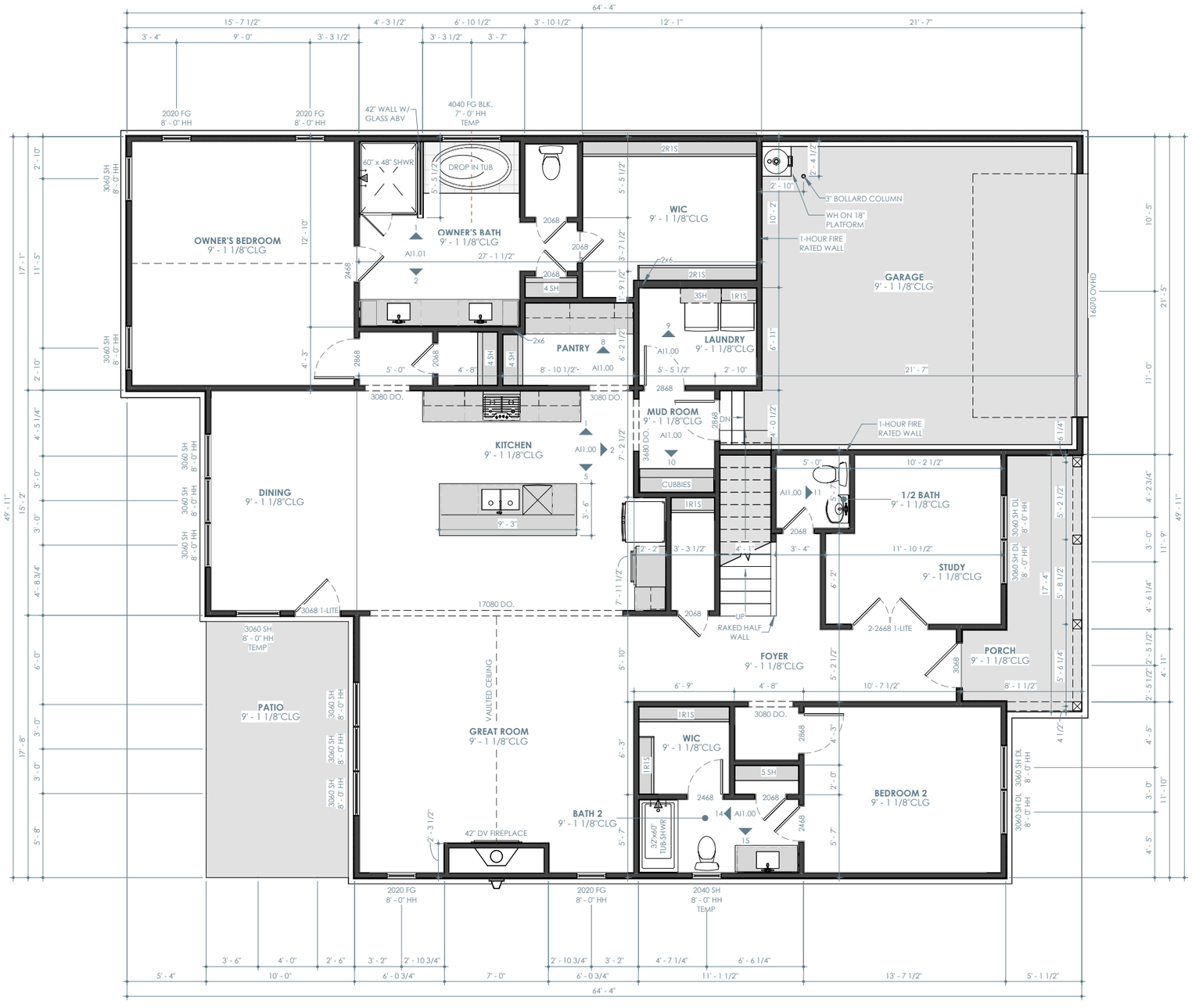
SCALE	As indicated

SHEET NAME

COVER SHEET

SHEET NO.

A0.00



ELEVATION A - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION A - A/C LIVING	
FIRST FLOOR	2028 SF
SECOND FLOOR	1466 SF
TOTAL	3493 SF

ELEVATION A - LIVING	
FIRST FLOOR	2230 SF
SECOND FLOOR	1403 SF
TOTAL	3633 SF

TOTAL UNDER ROOF	4382 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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SHEET NAME

ELEVATION A - FIRST FLOOR PLAN

SHEET NO.

A1.00



ELEVATION A -SECOND FLOOR PLAN

1/8" = 1'-0"

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SHEET NAME

ELEVATION A - SECOND FLOOR PLAN

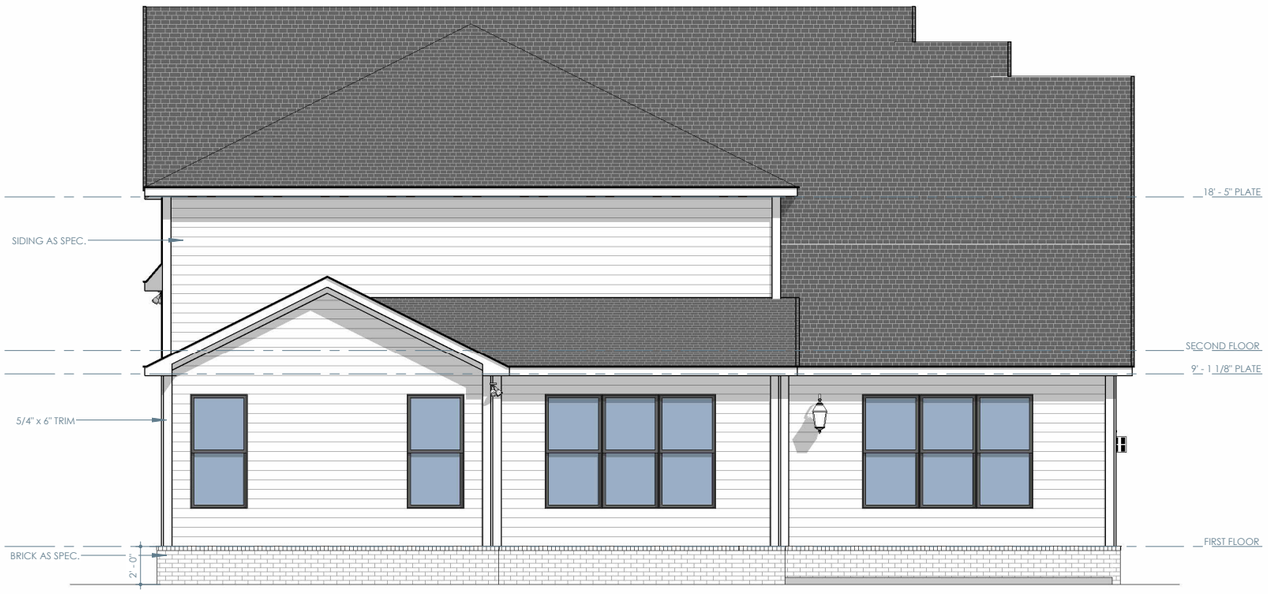
SHEET NO.

A1.01



ELEVATION A - FRONT

1/8" = 1'-0"



ELEVATION A - REAR

1/8" = 1'-0"

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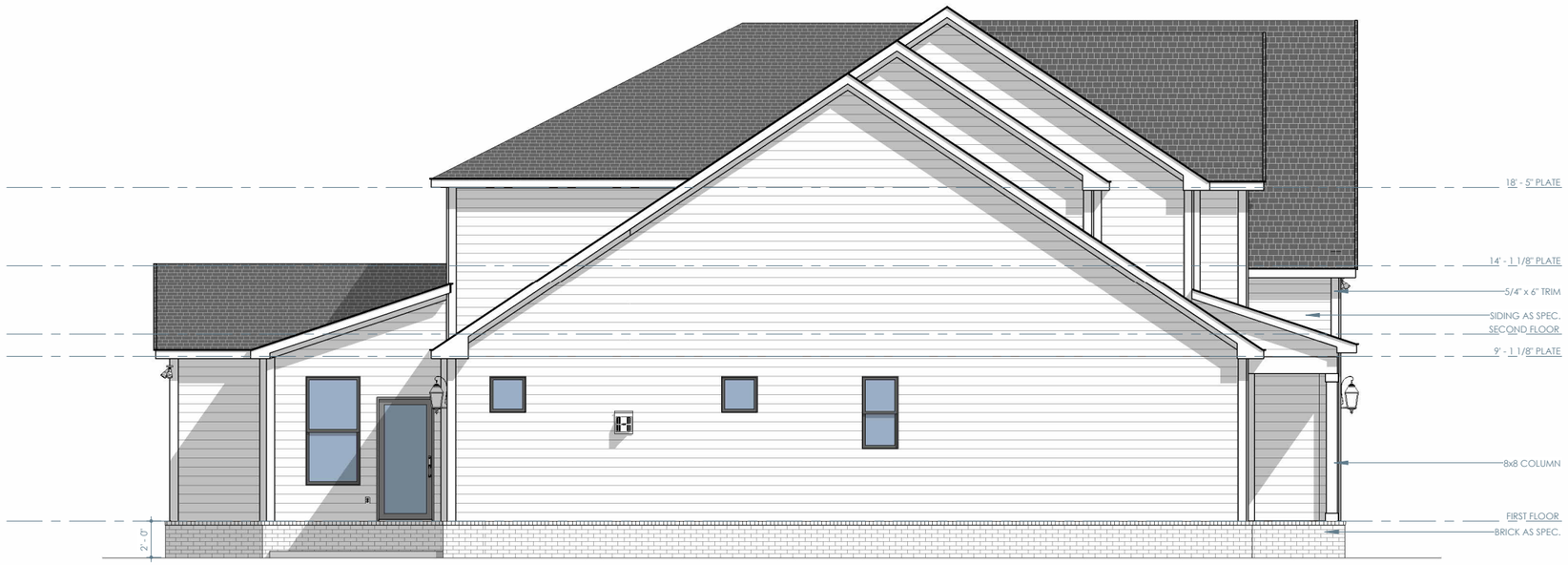
SHEET NAME

ELEVATION A - EXTERIOR ELEVATIONS

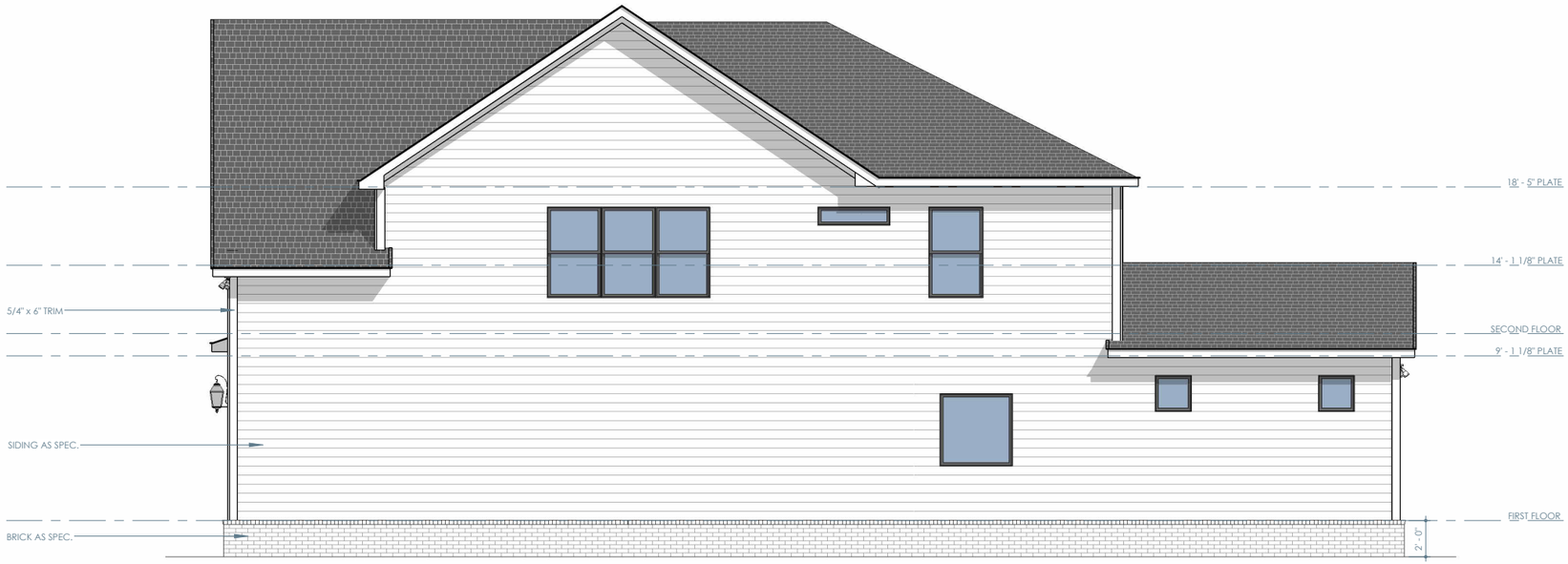
SHEET NO.

A1.02



ELEVATION A - LEFT

1/8" = 1'-0"



ELEVATION A - RIGHT

1/8" = 1'-0"

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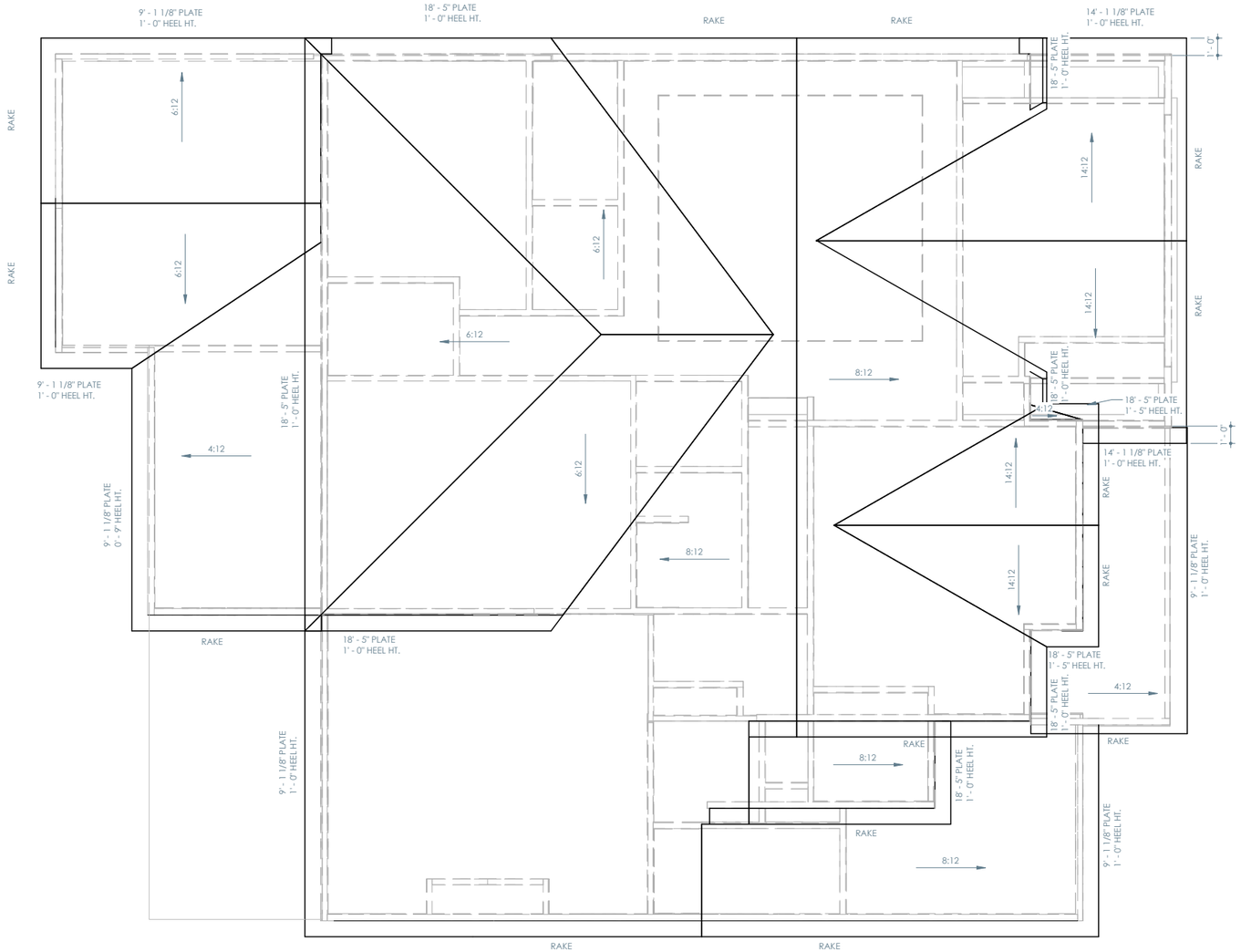
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - EXTERIOR ELEVATIONS

SHEET NO.

A1.03



ELEVATION A - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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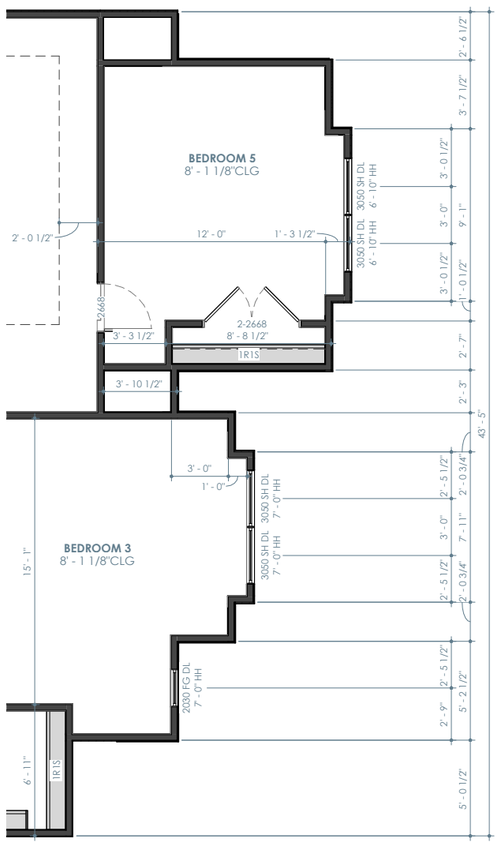
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - ROOF PLAN

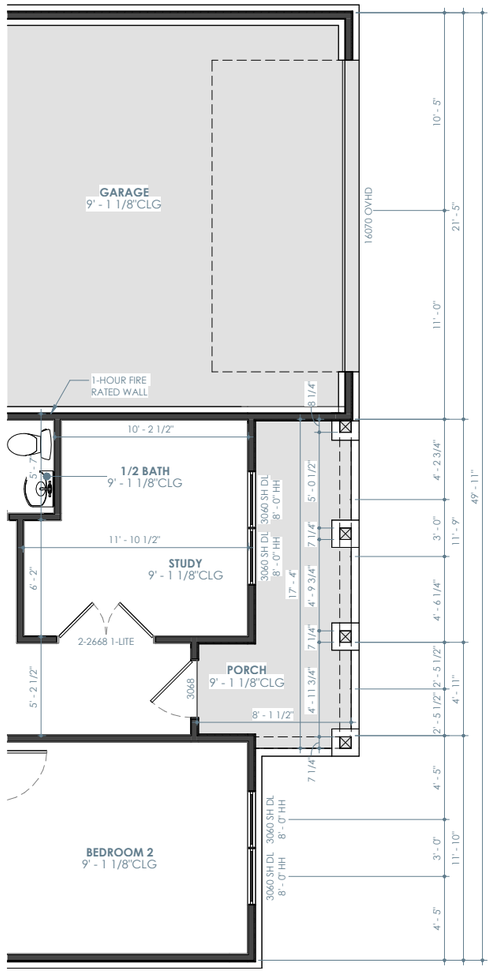
SHEET NO.

A1.04



ELEVATION B - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION B - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION B - LIVING	
FIRST FLOOR	2230 SF
SECOND FLOOR	1419 SF
TOTAL	3648 SF

ELEVATION B - NON-LIVING	
GARAGE	469 SF
PORCH	96 SF
PATIO	177 SF
TOTAL	741 SF
TOTAL UNDER ROOF	4390 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - PARTIAL FLOOR PLANS

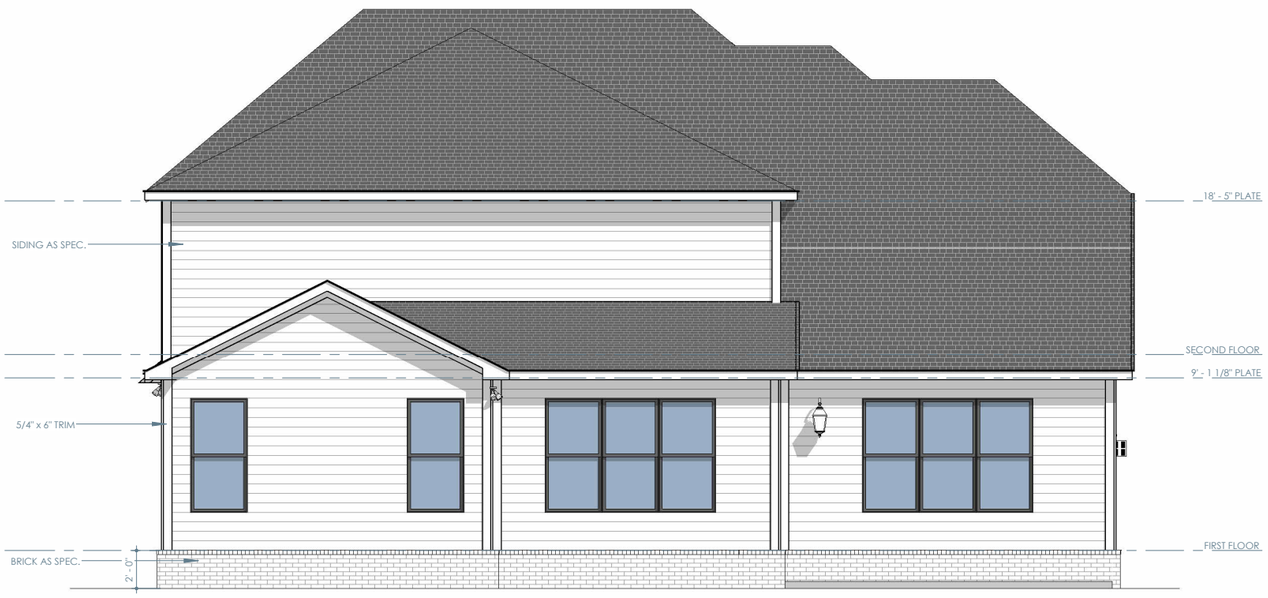
SHEET NO.

A2.01



ELEVATION B - FRONT

1/8" = 1'-0"



ELEVATION B - REAR

1/8" = 1'-0"

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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - EXTERIOR ELEVATIONS

SHEET NO.

A2.02



ELEVATION B - LEFT

1/8" = 1'-0"



ELEVATION B - RIGHT

1/8" = 1'-0"

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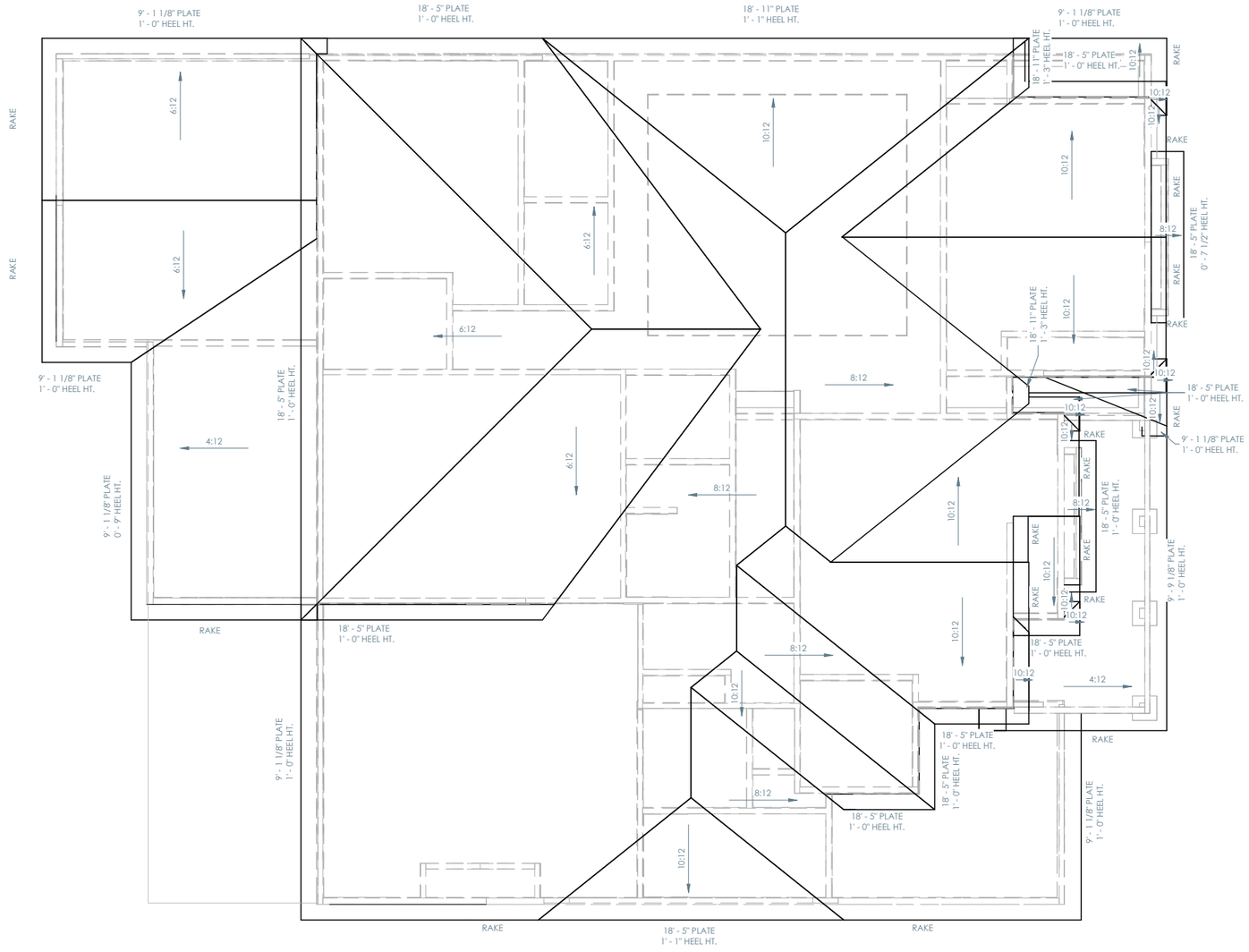
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - EXTERIOR ELEVATIONS

SHEET NO.

A2.03



ELEVATION B - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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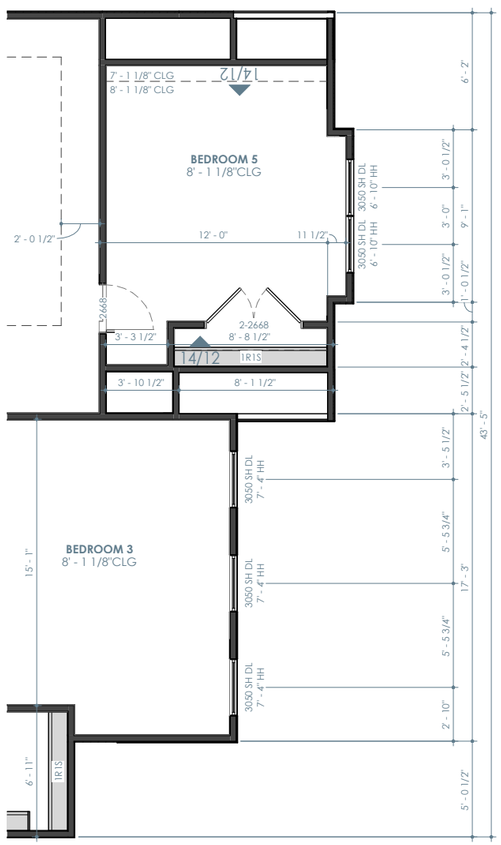
SHEET NAME

ELEVATION B - ROOF PLAN

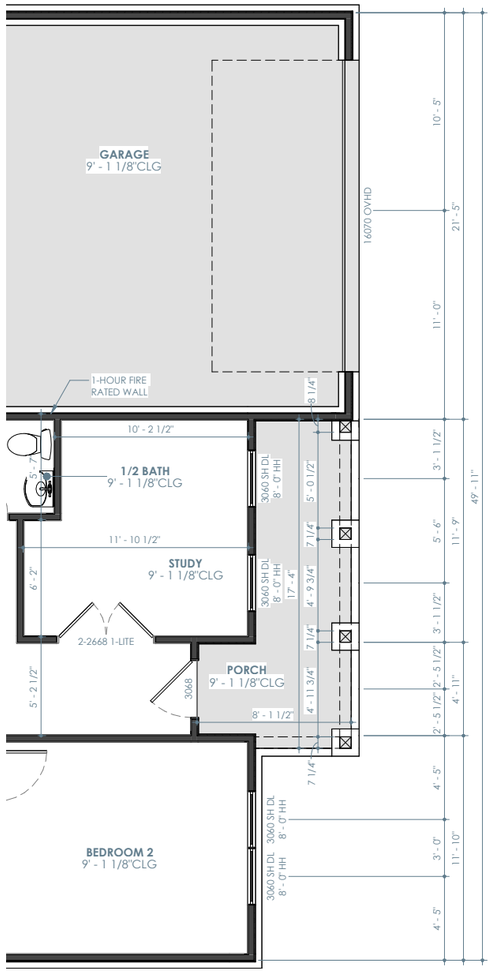
SHEET NO.

A2.04



ELEVATION C - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION C - FIRST FLOOR PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

ELEVATION C - LIVING	
FIRST FLOOR	2230 SF
SECOND FLOOR	1428 SF
TOTAL	3657 SF

ELEVATION C - NON-LIVING	
GARAGE	469 SF
PORCH	96 SF
PATIO	177 SF
TOTAL	741 SF
TOTAL UNDER ROOF	4399 SF

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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - PARTIAL FLOOR PLANS

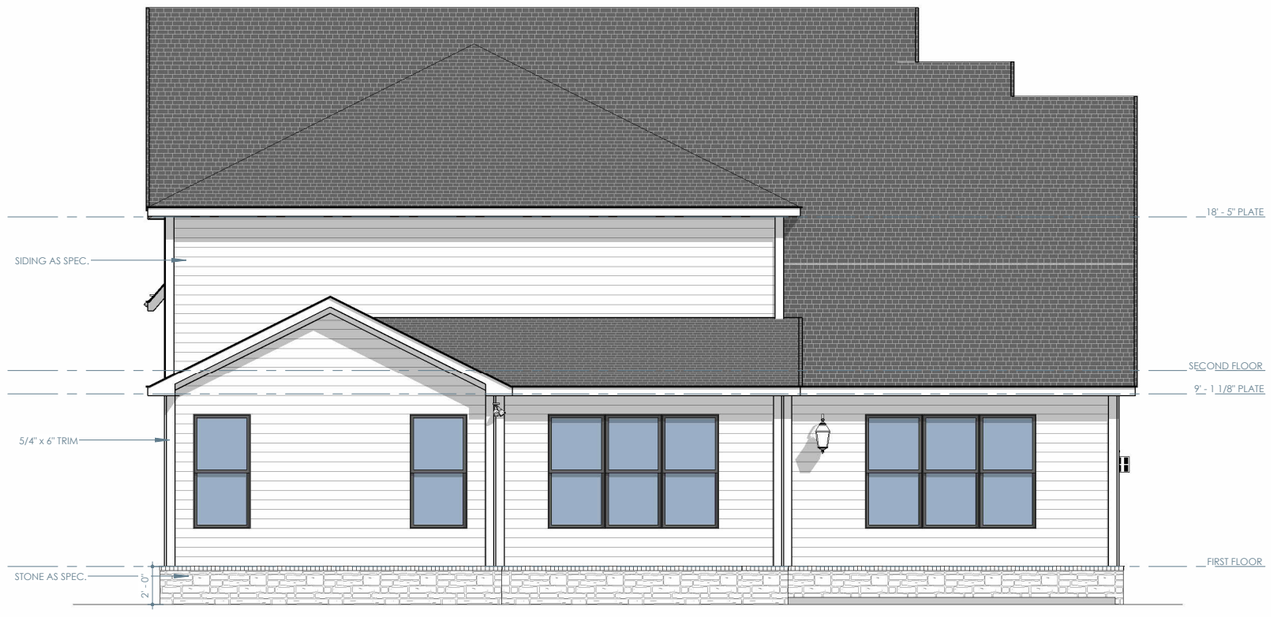
SHEET NO.

A3.01



ELEVATION C - FRONT

1/8" = 1'-0"



ELEVATION C - REAR

1/8" = 1'-0"

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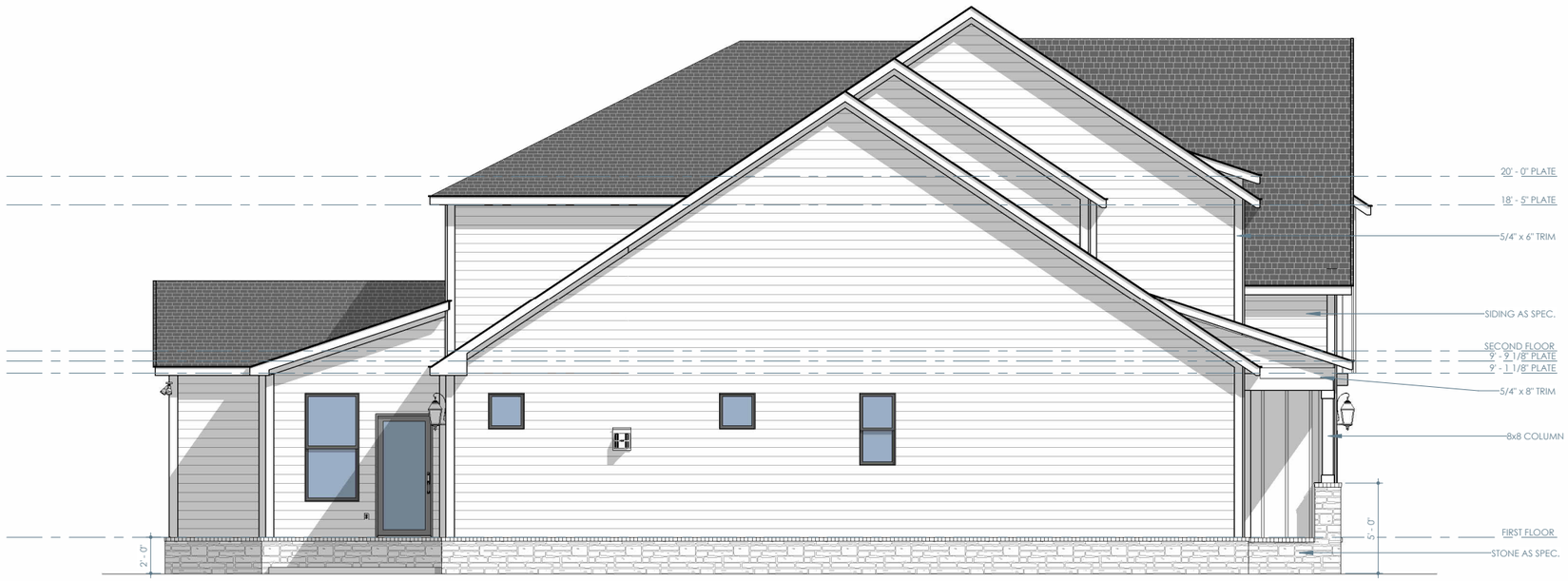
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - EXTERIOR ELEVATIONS

SHEET NO.

A3.02



ELEVATION C - LEFT

1/8" = 1'-0"



ELEVATION C - RIGHT

1/8" = 1'-0"

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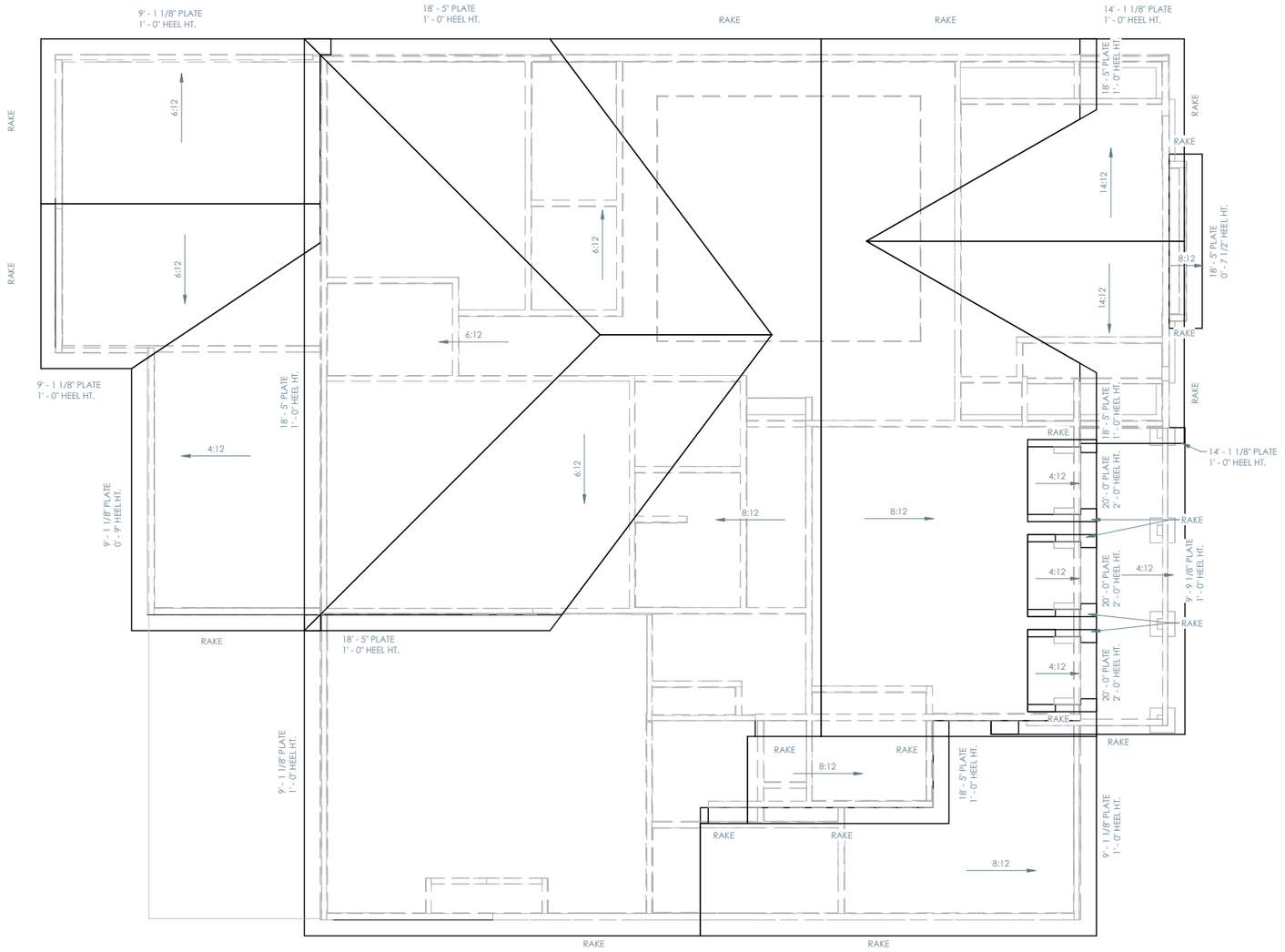
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - EXTERIOR ELEVATIONS

SHEET NO.

A3.03



ELEVATION C - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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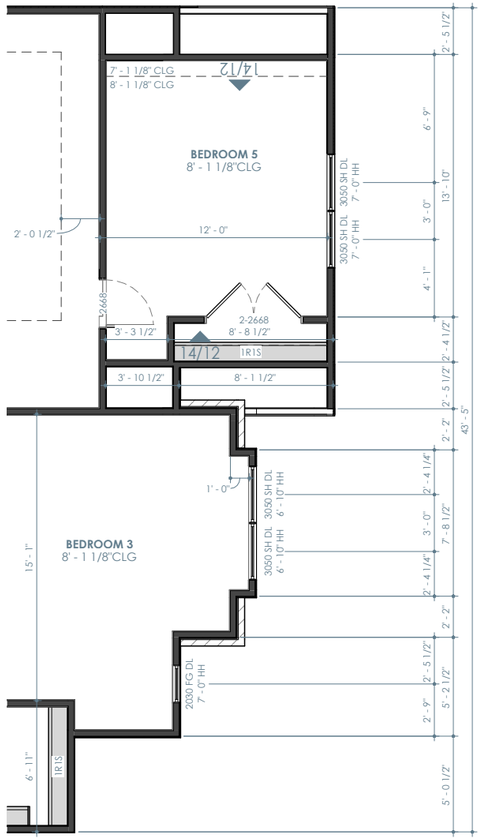
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - ROOF

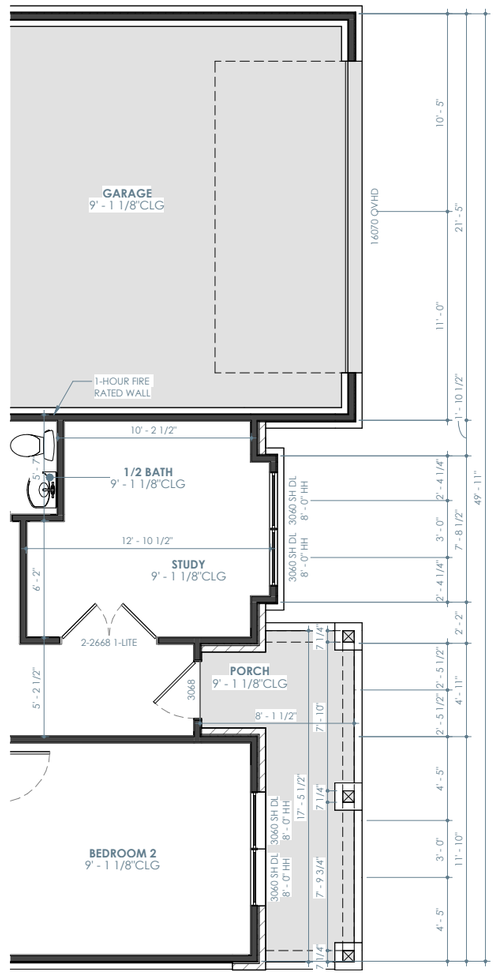
SHEET NO.

A3.04



ELEVATION D - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION D- FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION D - LIVING	
FIRST FLOOR	2249 SF
SECOND FLOOR	1416 SF
TOTAL	3665 SF

ELEVATION D - NON-LIVING	
GARAGE	469 SF
PORCH	93 SF
PATIO	177 SF
TOTAL	739 SF
TOTAL UNDER ROOF	4403 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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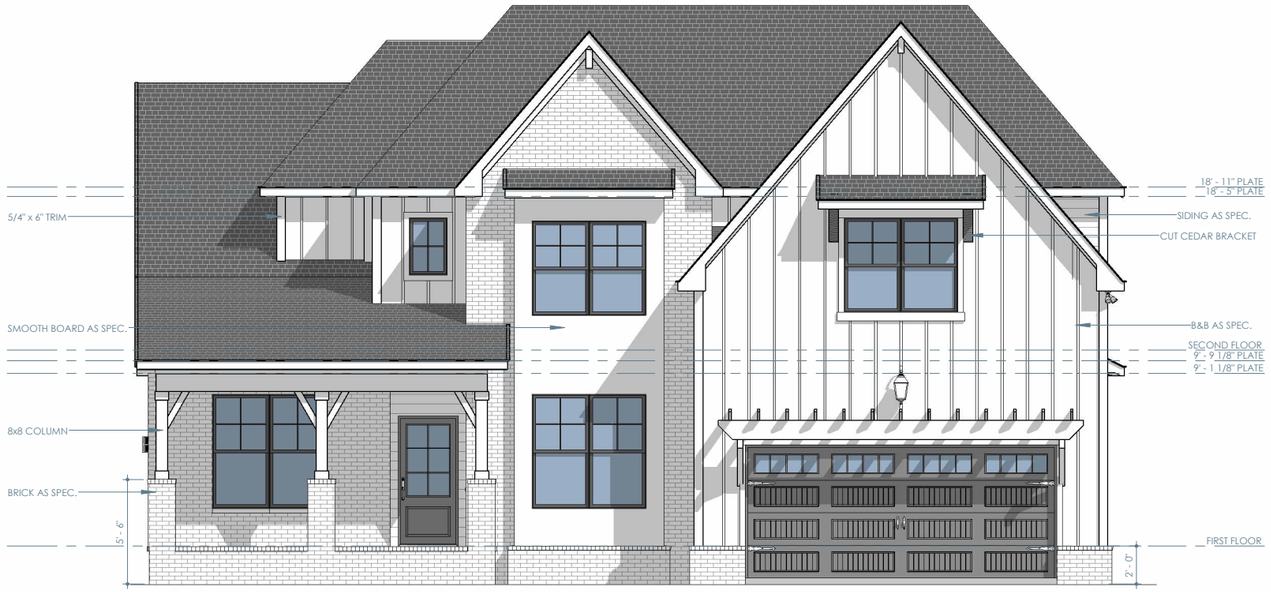
ELEVATION D - PARTIAL FLOOR PLANS

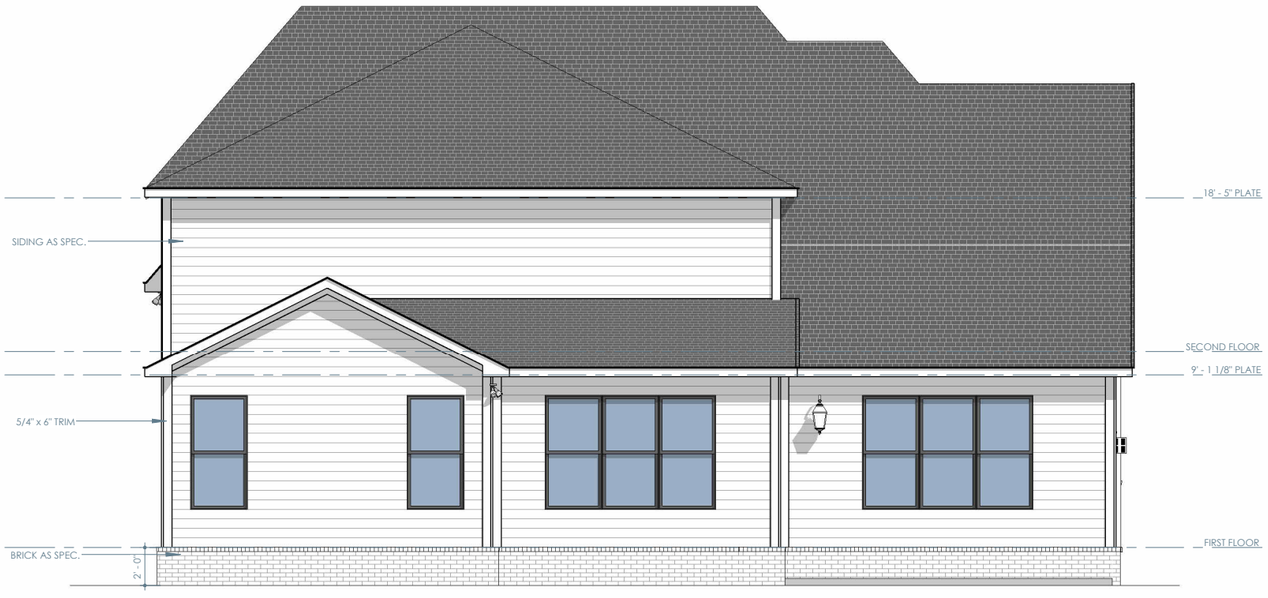
SHEET NO.

A4.01



ELEVATION D - FRONT

1/8" = 1'-0"



ELEVATION D - REAR

1/8" = 1'-0"

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SHEET NAME

ELEVATION D - EXTERIOR ELEVATIONS

SHEET NO.

A4.02



ELEVATION D - LEFT

1/8" = 1'-0"



ELEVATION D - RIGHT

1/8" = 1'-0"

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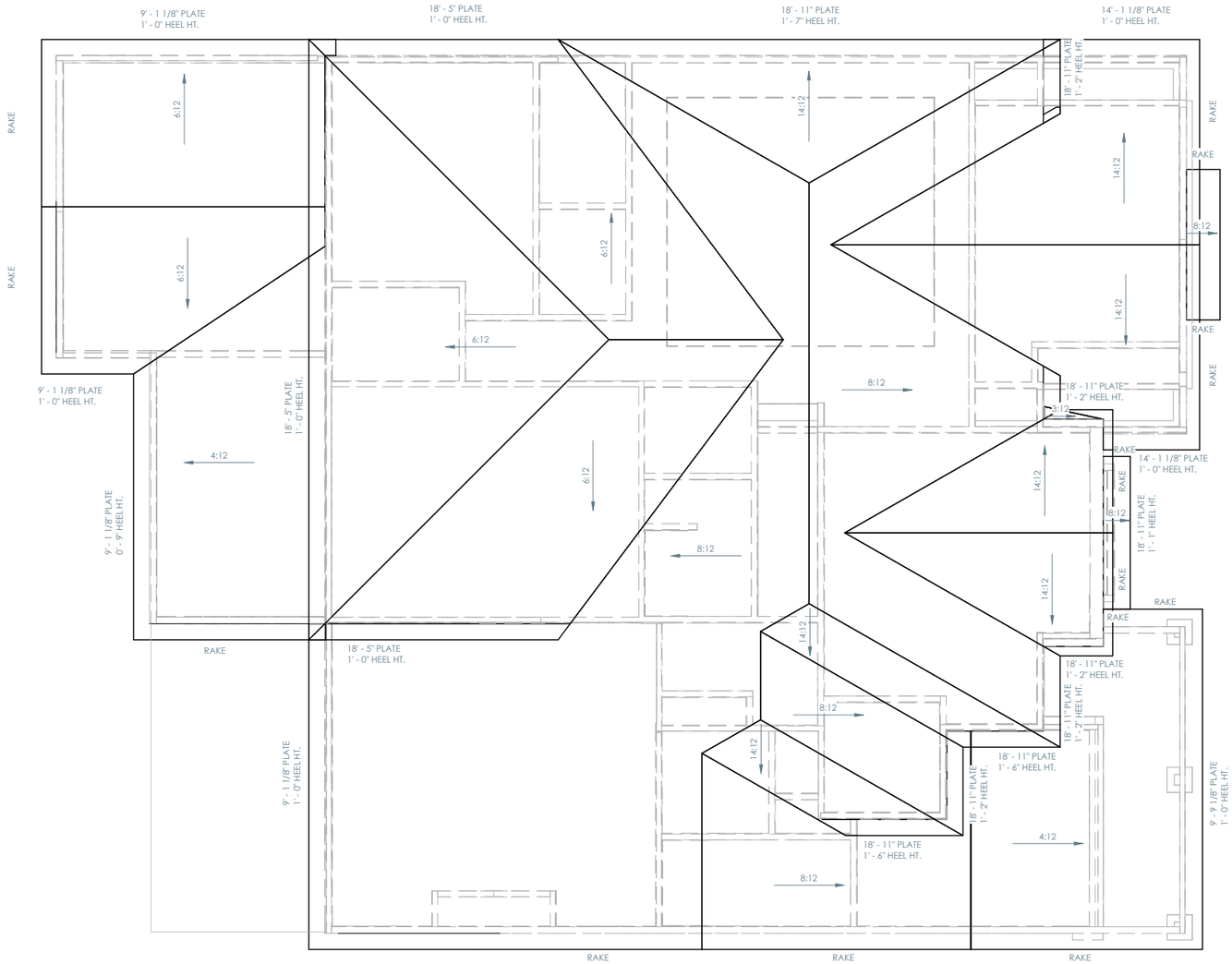
SHEET NAME

ELEVATION D - EXTERIOR ELEVATIONS

SHEET NO.

A4.03



ELEVATION D - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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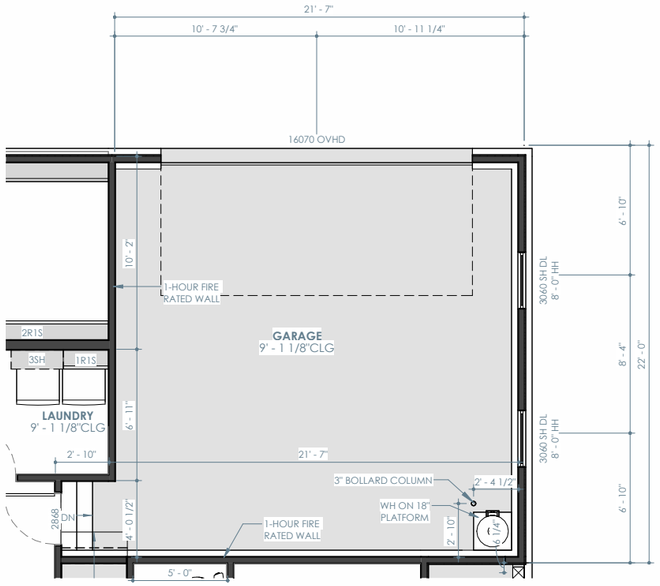
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - ROOF

SHEET NO.

A4.04



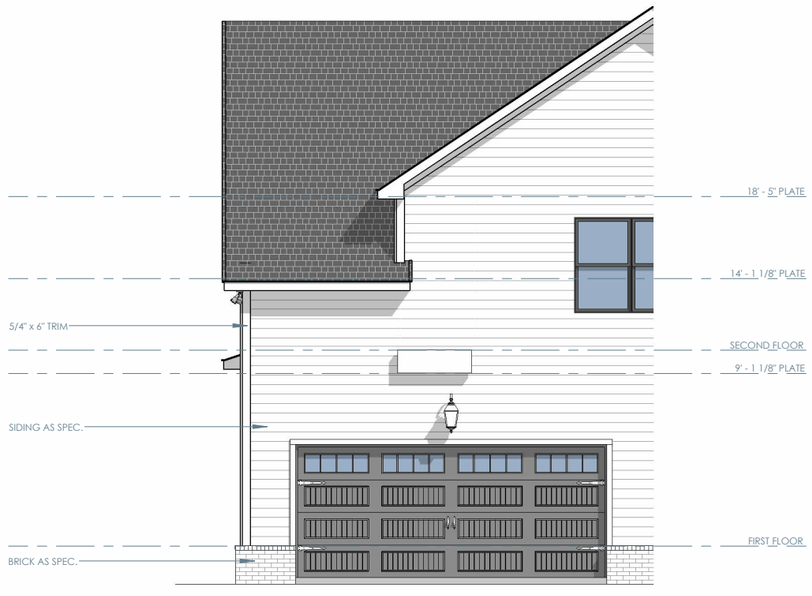
OPT. SIDE LOAD GARAGE - FIRST FLOOR PLAN

1/8" = 1'-0"



ELEVATION A - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



ELEVATION A - OPT. SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"

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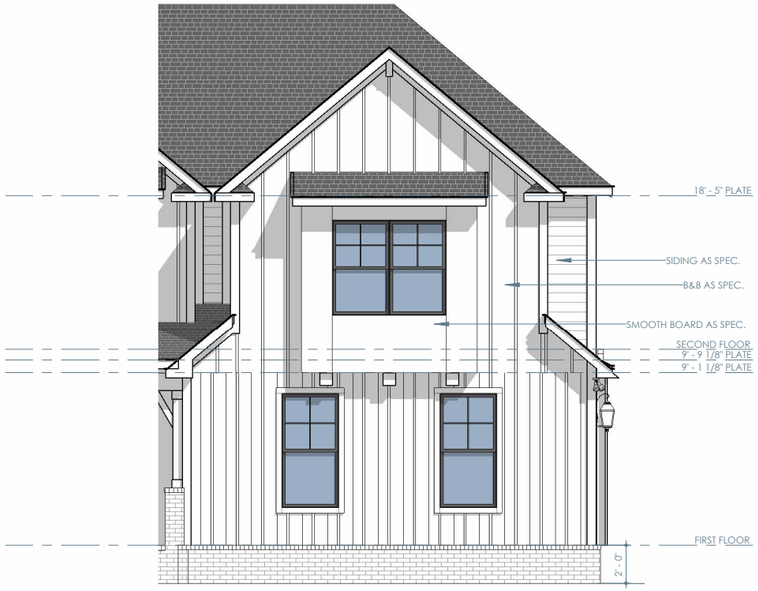
PLAN OPTIONS

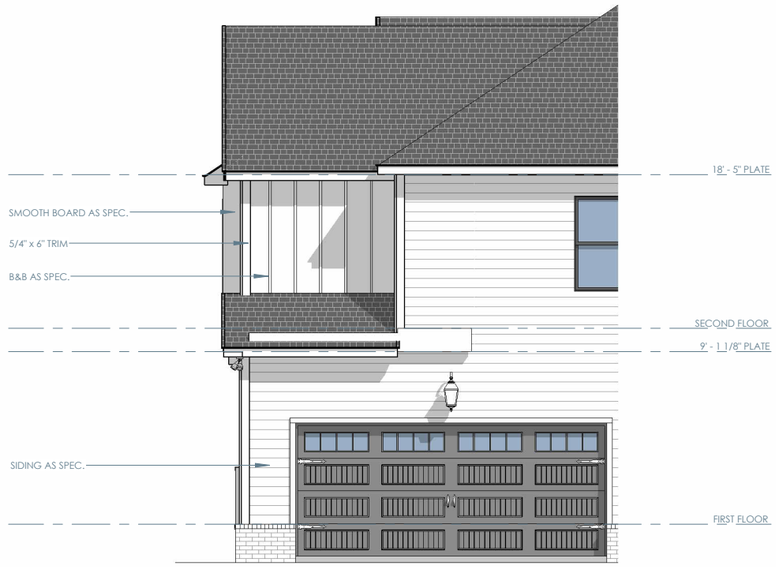
SHEET NO.

A7.00



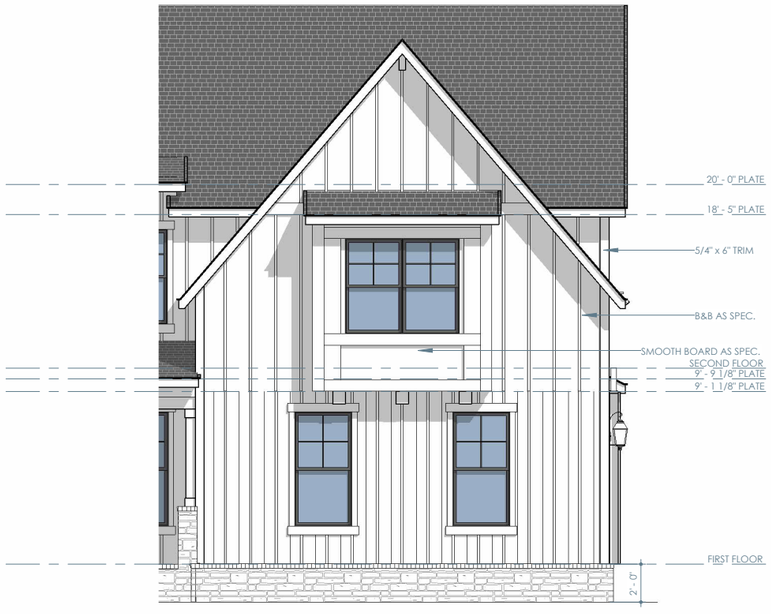
ELEVATION B - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



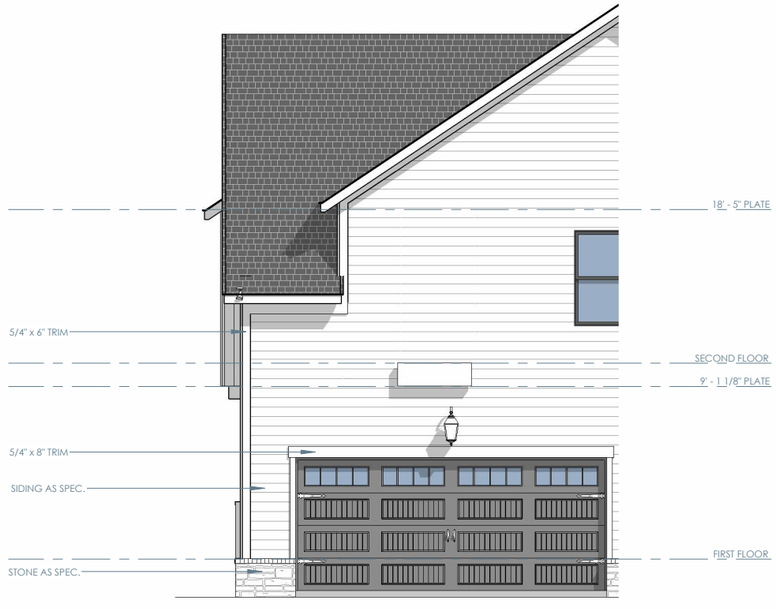
ELEVATION B - OPT. SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"



ELEVATION C - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



ELEVATION C - OPT. SIDE LOAD GARAGE RIGHT

1/8" = 1'-0"

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PLAN OPTIONS

SHEET NO.

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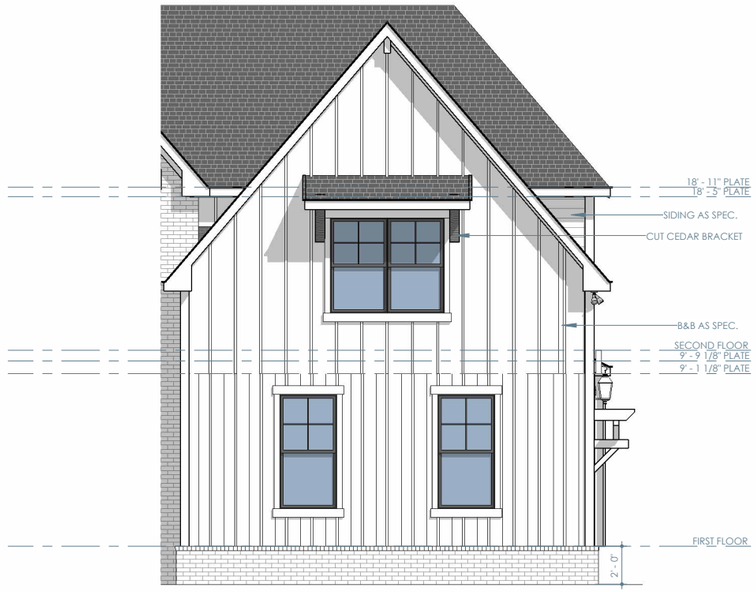
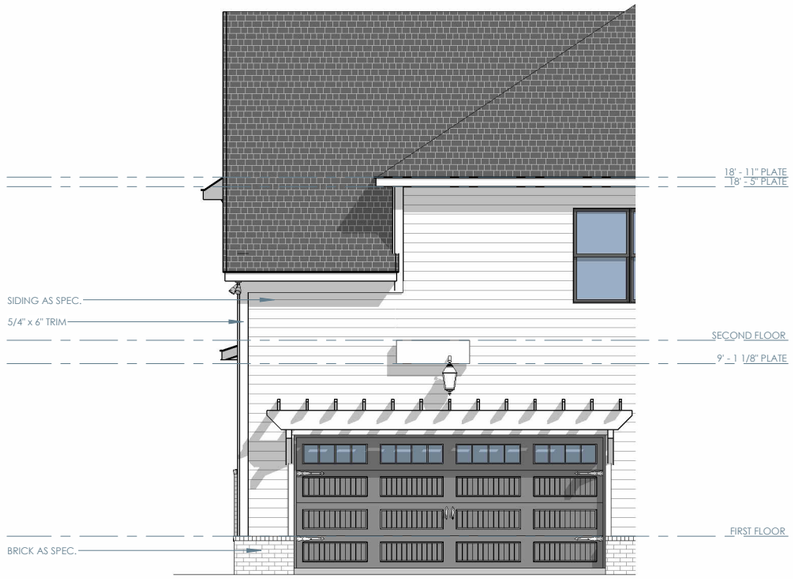


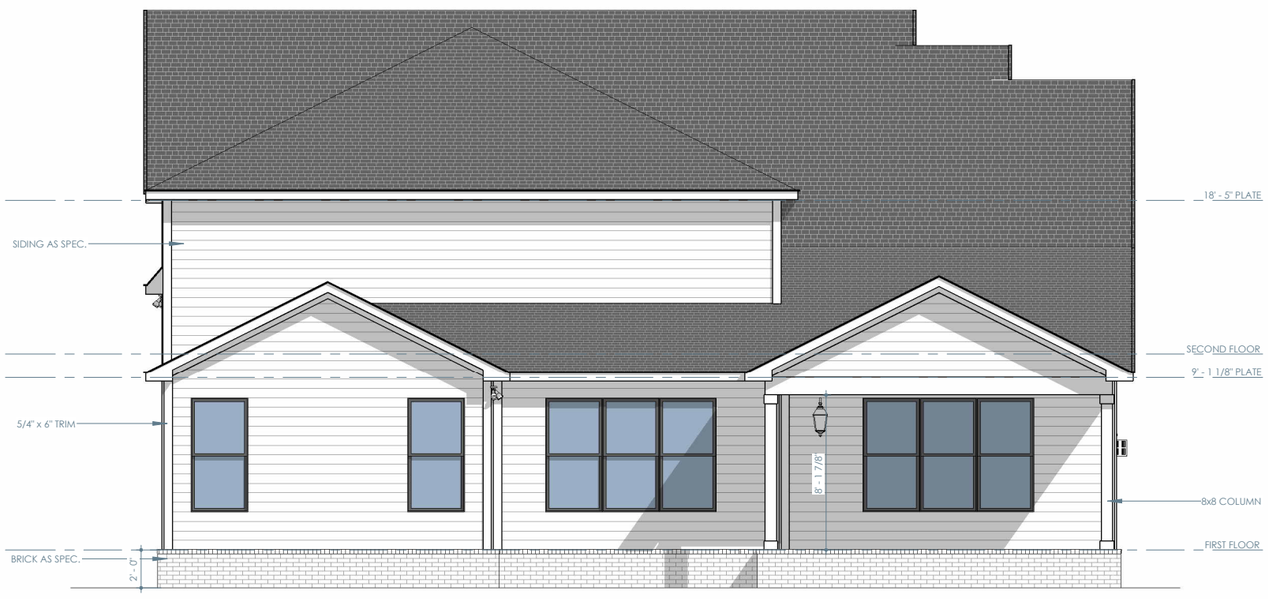
ELEVATION D - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



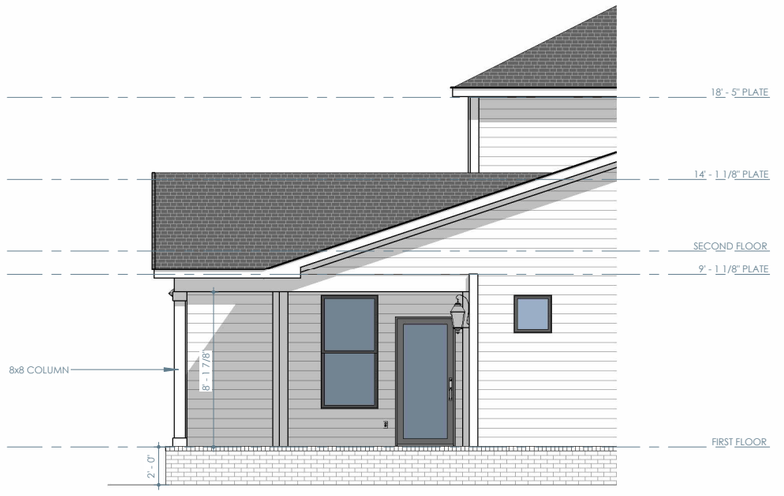
ELEVATION D - OPT. SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"



OPT. EXTENDED PATIO - REAR

1/8" = 1'-0"



OPT. EXTENDED PATIO - LEFT

1/8" = 1'-0"

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SHEET NO.

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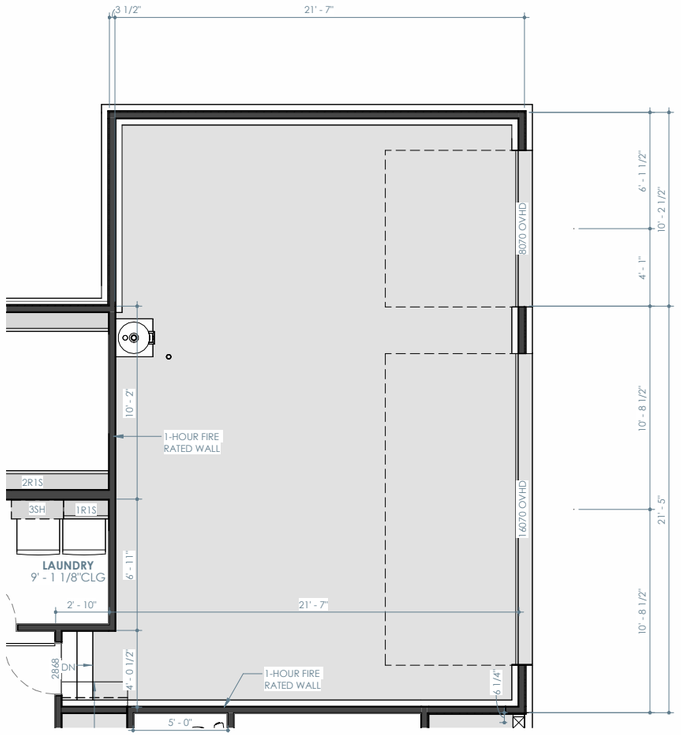
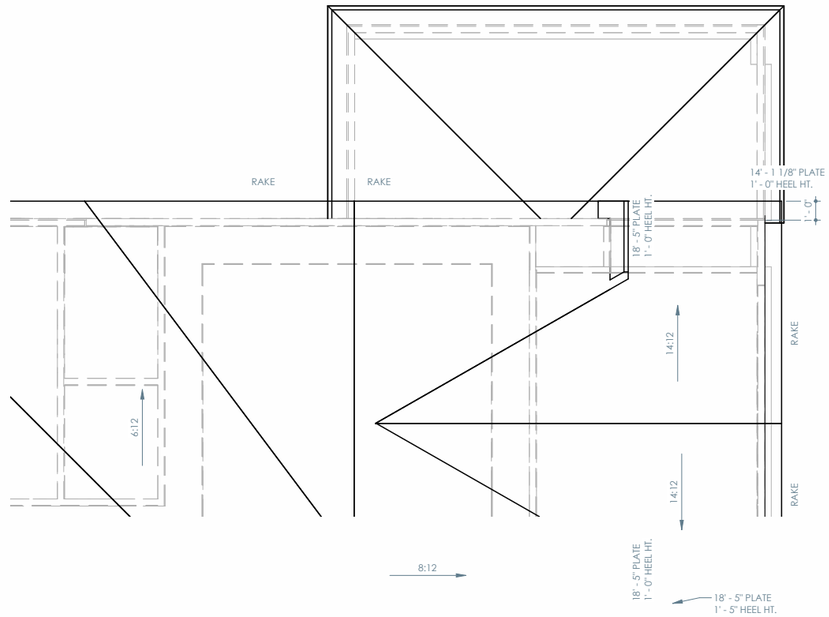


OPT. 3 CAR GARAGE - FIRST FLOOR PLAN

1/8" = 1'-0"



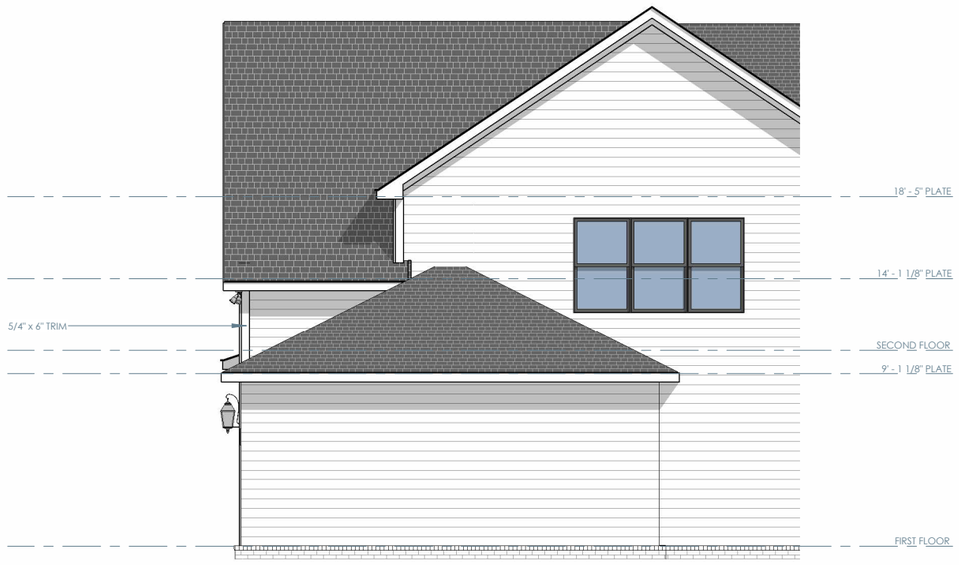
OPT. 3 CAR GARAGE - ELEV A - ROOF PLAN

1/8" = 1'-0"



OPT. 3 CAR GARAGE - ELEVATION A - FRONT

1/8" = 1'-0"



OPT. 3 CAR GARAGE - ELEVATION A - RIGHT

1/8" = 1'-0"

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A7.03



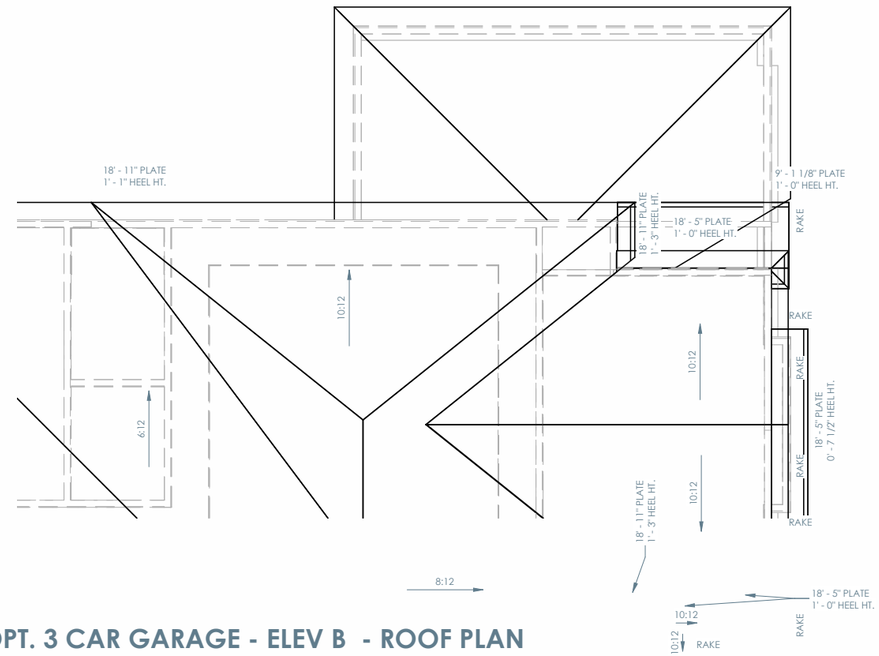
OPT. 3 CAR GARAGE - ELEVATION B - FRONT

1/8" = 1'-0"



OPT. 3 CAR GARAGE - ELEVATION B - RIGHT

1/8" = 1'-0"



OPT. 3 CAR GARAGE - ELEV B - ROOF PLAN

1/8" = 1'-0"

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SHEET NAME

PLAN OPTIONS

SHEET NO.

A7.04



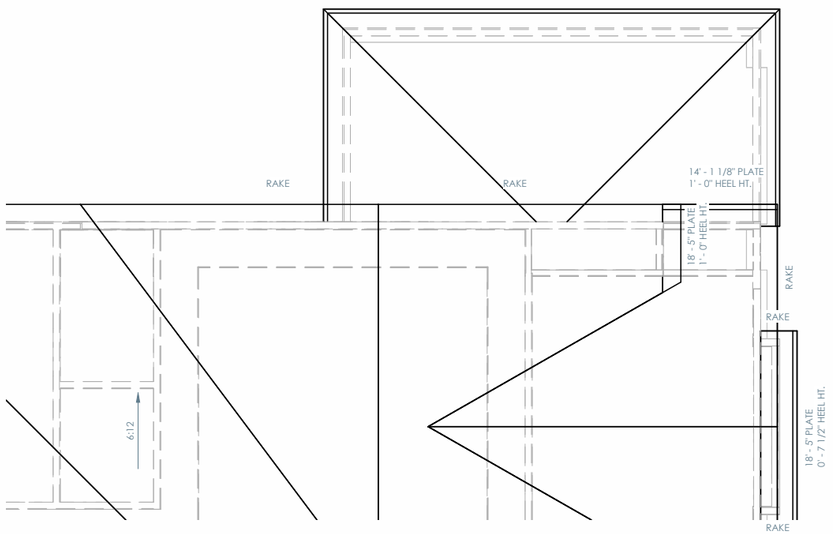
OPT. 3 CAR GARAGE - ELEVATION C - FRONT

1/8" = 1'-0"



OPT. 3 CAR GARAGE - ELEVATION C - RIGHT

1/8" = 1'-0"



OPT. 3 CAR GARAGE - ELEV C - ROOF PLAN

1/8" = 1'-0"

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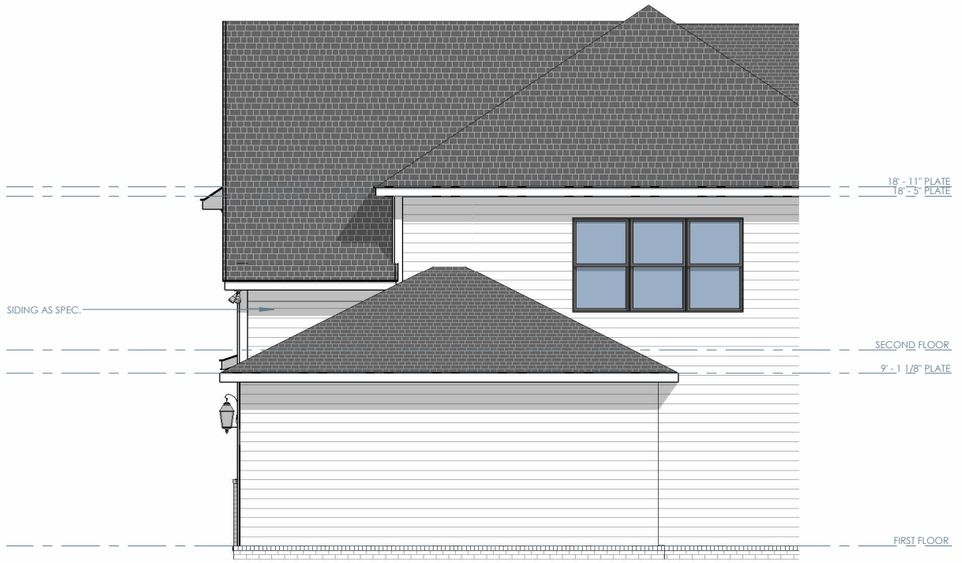
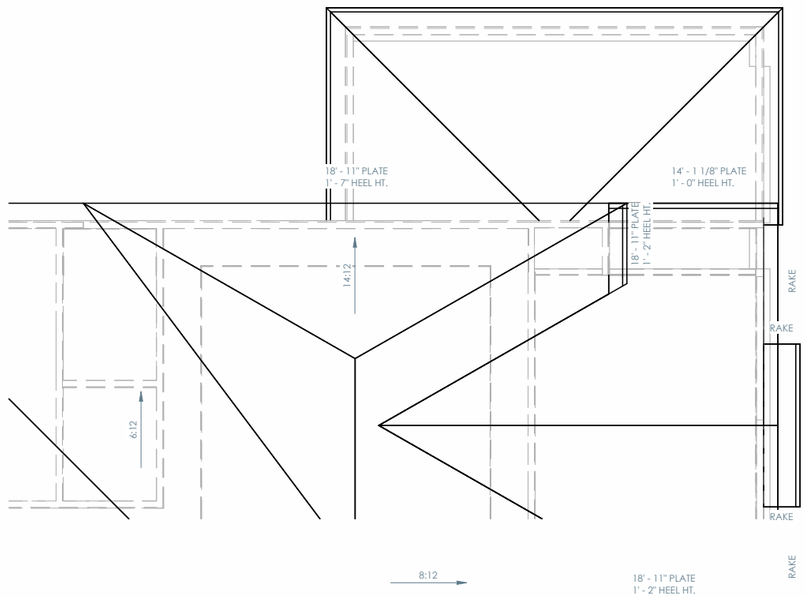
OPT. 3 CAR GARAGE - ELEVATION D - FRONT

1/8" = 1'-0"



OPT. 3 CAR GARAGE - ELEVATION D - RIGHT

1/8" = 1'-0"



OPT. 3 CAR GARAGE - ELEV D - ROOF PLAN

1/8" = 1'-0"

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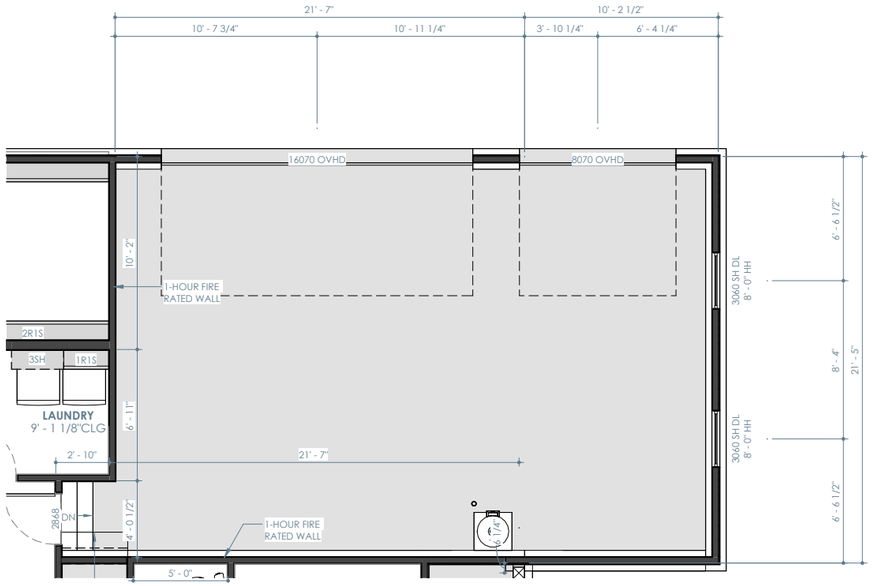
SHEET NAME

PLAN OPTIONS

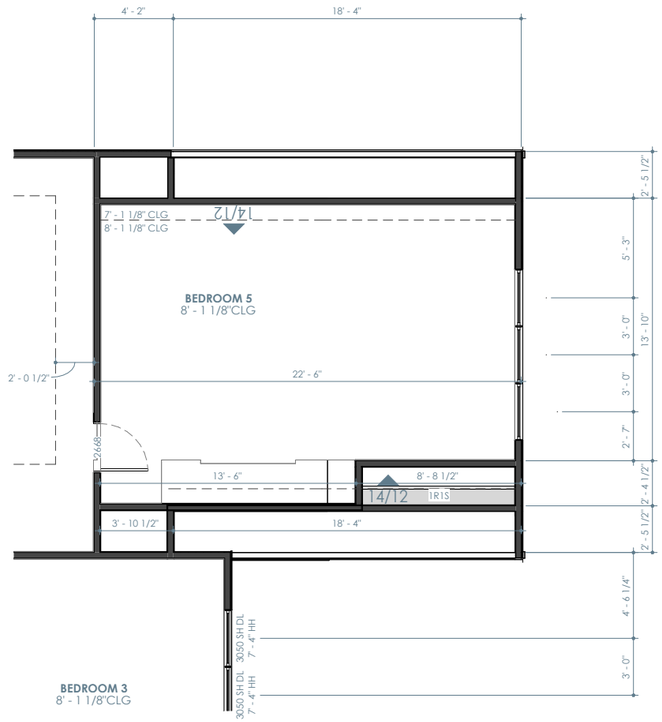
SHEET NO.

A7.06



OPT. 3 CAR SIDE LOAD GARAGE - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. 3 CAR SIDE LOAD GARAGE - SECOND FLOOR PLAN

1/8" = 1'-0"

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SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

SHEET NO.

A7.07



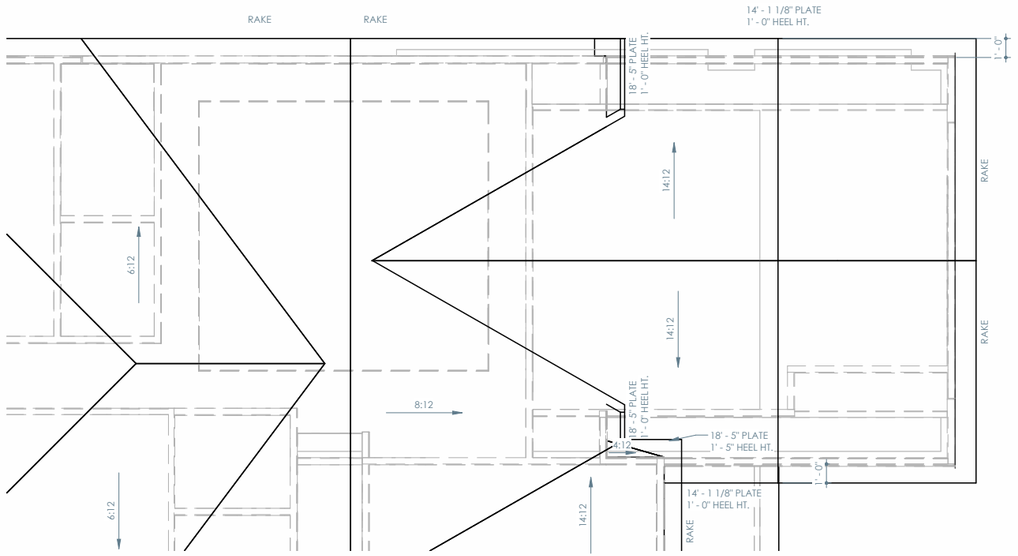
OPT. 3 CAR SIDE LOAD GARAGE - ELEVATION A - FRONT

1/8" = 1'-0"



OPT. 3 CAR SIDE LOAD GARAGE - ELEVATION A - RIGHT

1/8" = 1'-0"



OPT. 3 CAR SIDE LOAD GARAGE - ROOF PLAN

1/8" = 1'-0"

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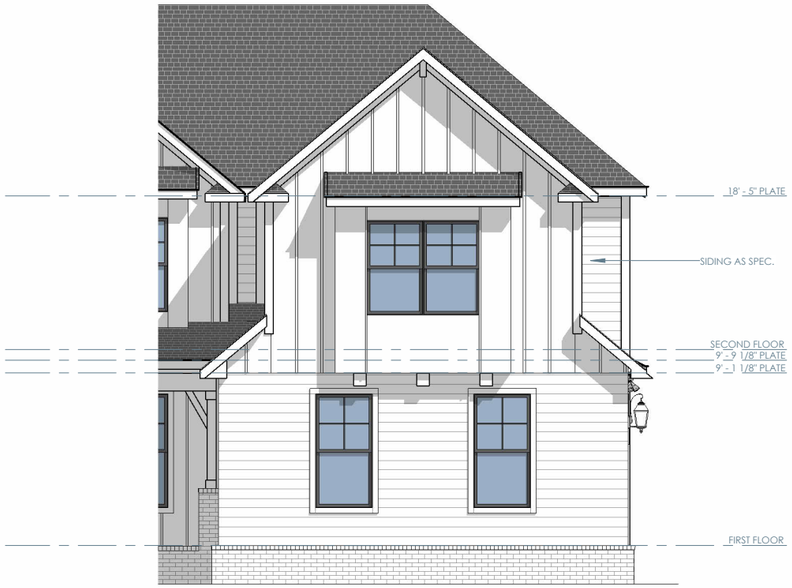
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

SHEET NO.

A7.08



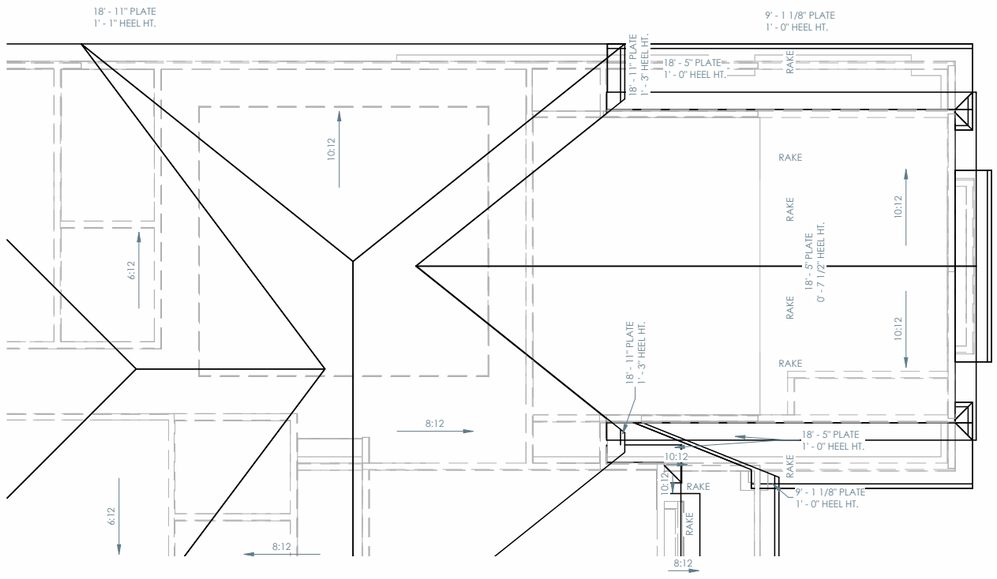
OPT. 3 CAR SIDE LOAD GARAGE - ELEVATION B - FRONT

1/8" = 1'-0"



OPT. 3 CAR SIDE LOAD GARAGE - ELEVATION B - RIGHT

1/8" = 1'-0"



OPT. 3 CAR SIDE LOAD GARAGE - ROOF PLAN

1/8" = 1'-0"

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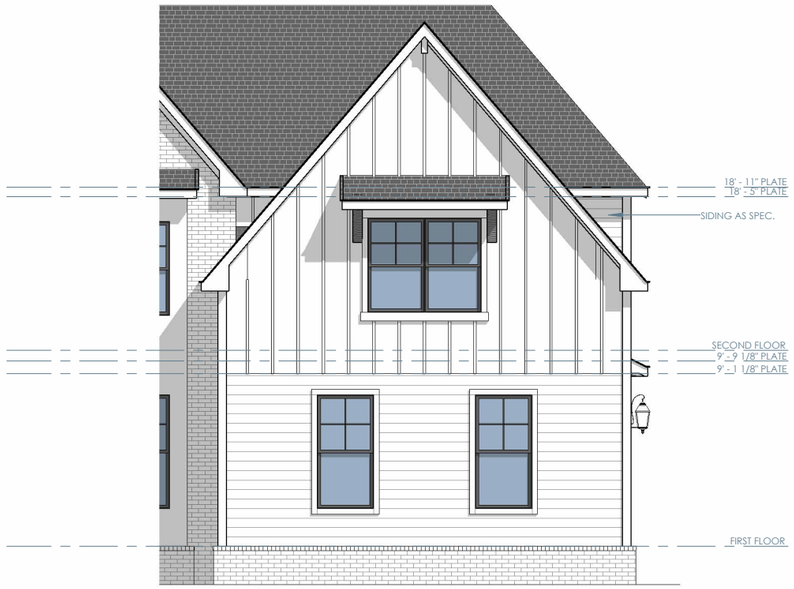
PLAN OPTIONS

SHEET NO.

A7.09



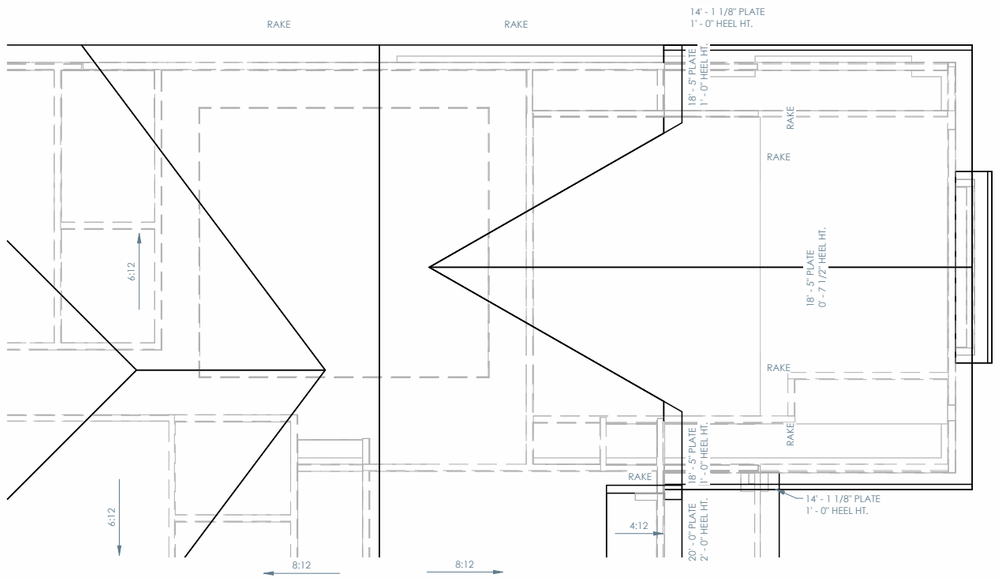
OPT. 3 CAR SIDE LOAD GARAGE - ELEVATION C - FRONT

1/8" = 1'-0"



OPT. 3 CAR SIDE LOAD GARAGE - ELEVATION C - RIGHT

1/8" = 1'-0"



OPT. 3 CAR SIDE LOAD GARAGE - ROOF PLAN

1/8" = 1'-0"

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SHEET NO.

A7.10



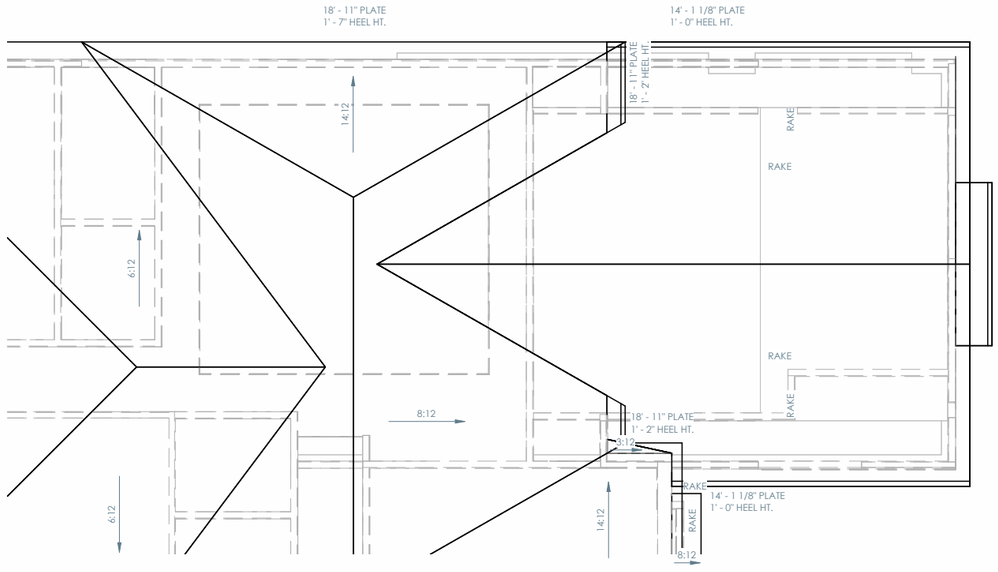
OPT. 3 CAR SIDE LOAD GARAGE - ELEVATION D - FRONT

1/8" = 1'-0"



OPT. 3 CAR SIDE LOAD GARAGE - ELEVATION D - RIGHT

1/8" = 1'-0"



OPT. 3 CAR SIDE LOAD GARAGE - ROOF PLAN

1/8" = 1'-0"

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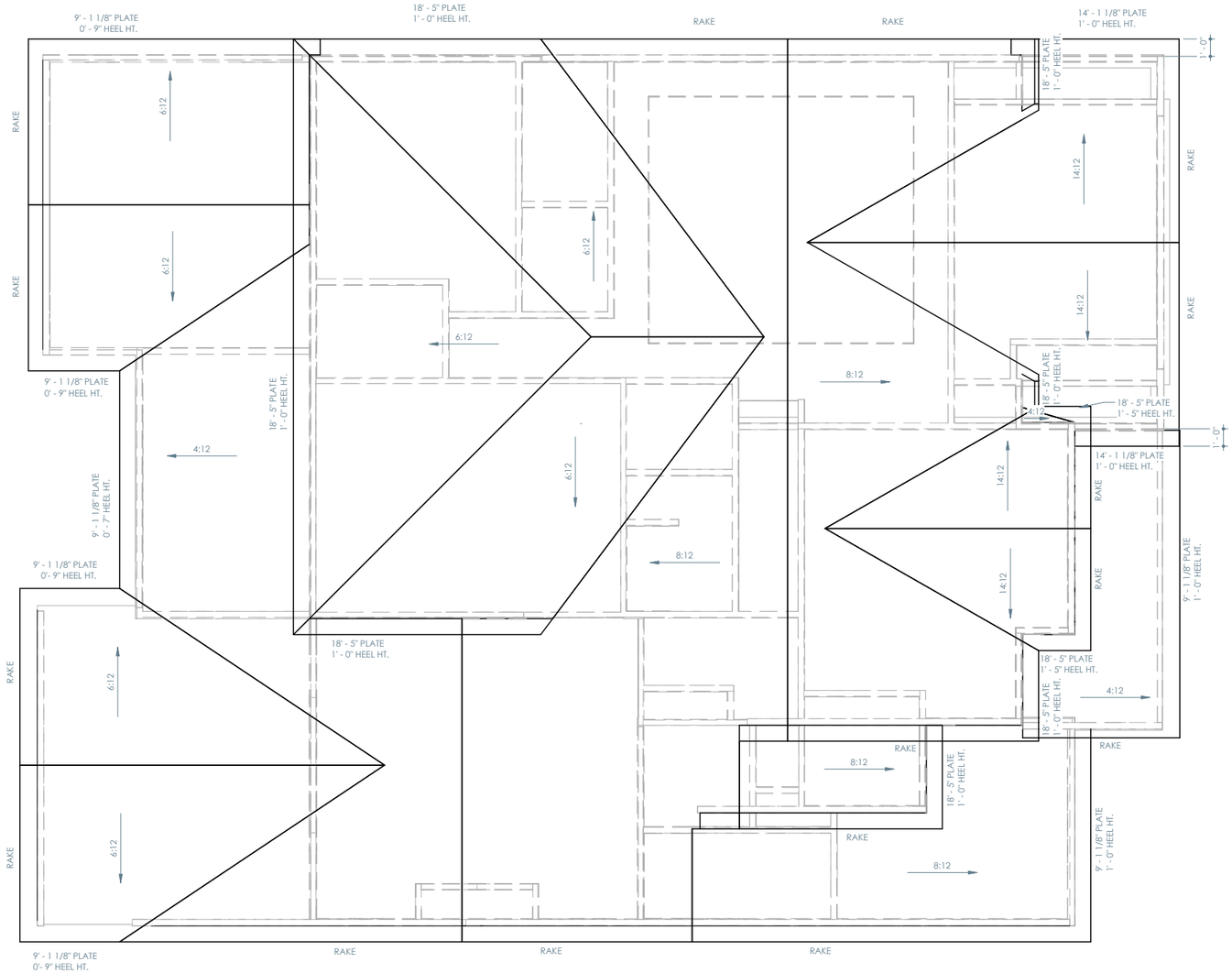
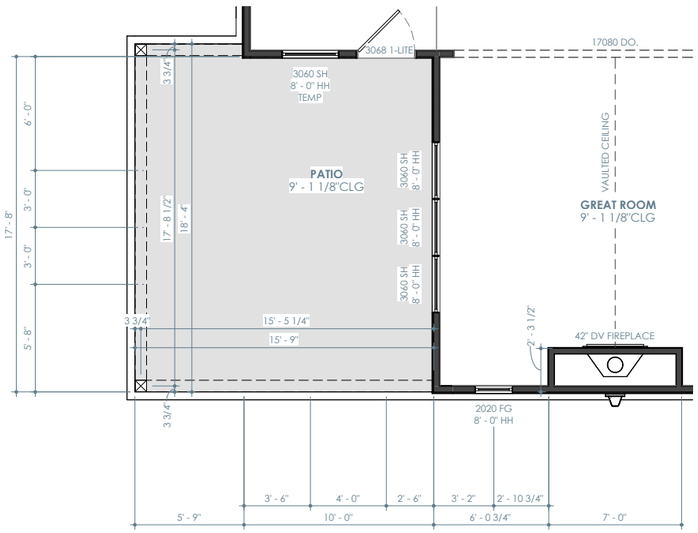
SHEET NO.

A7.11



OPT. EXTENDED PATIO - ROOF PLAN

1/8" = 1'-0"



OPT. EXTENDED PATIO - FIRST FLOOR PLAN

1/8" = 1'-0"

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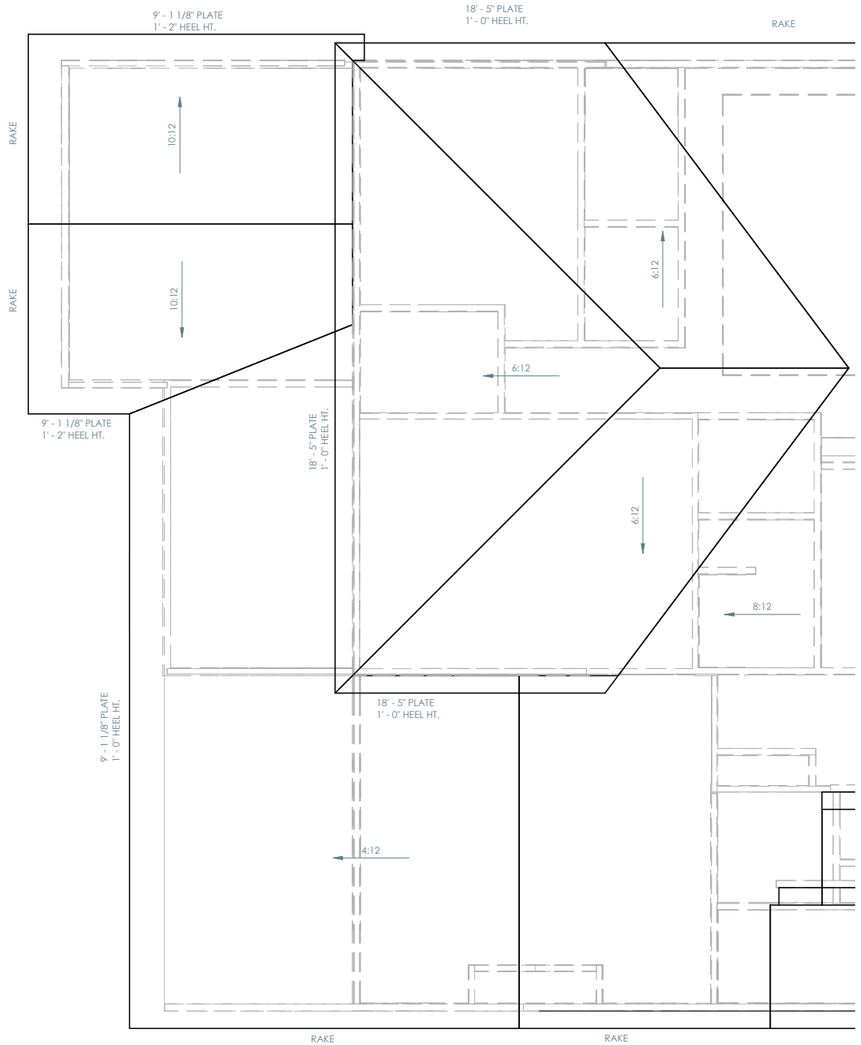
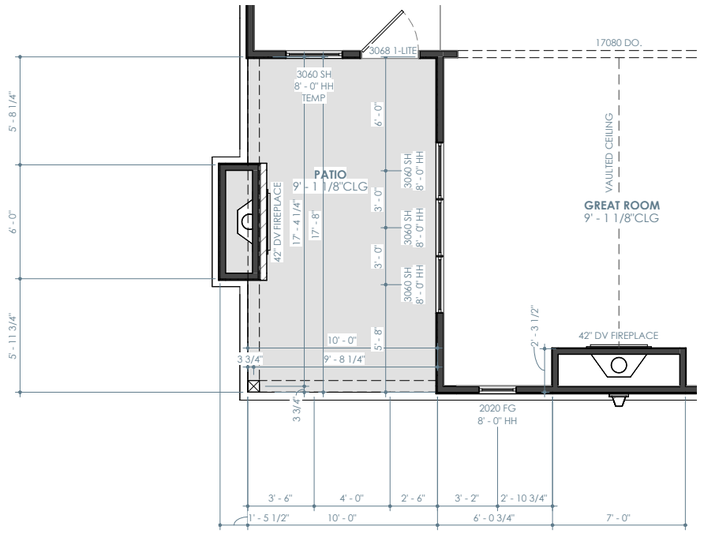
SHEET NO.

A7.12



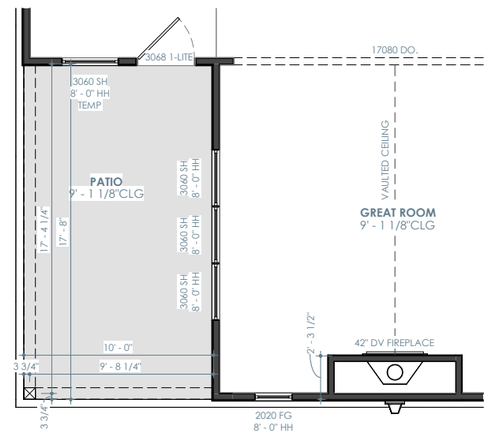
OPT. COVERED PATIO - ROOF PLAN

1/8" = 1'-0"



OPT. REAR COVERED PORCH W/ OPT. PORCH FIREPLACE - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. REAR COVERED PORCH- FIRST FLOOR PLAN

1/8" = 1'-0"

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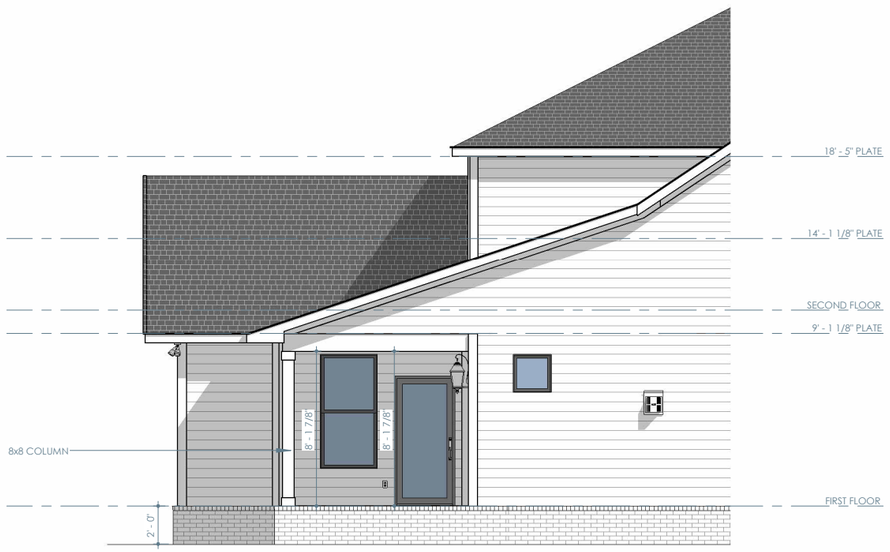
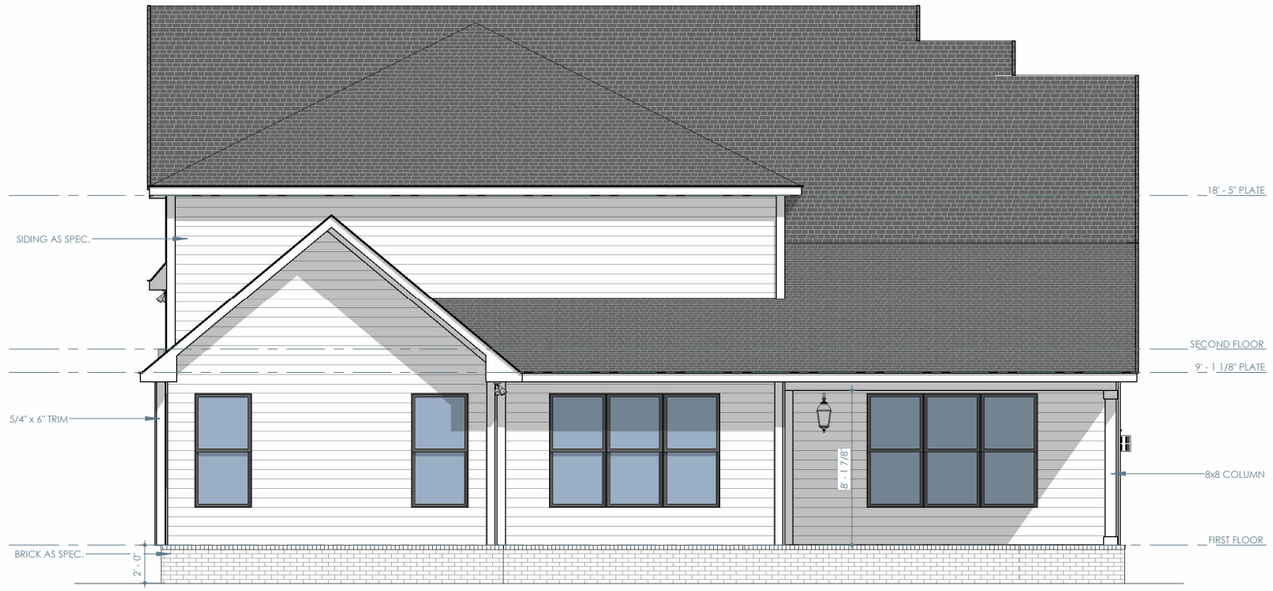
SHEET NO.

A7.13



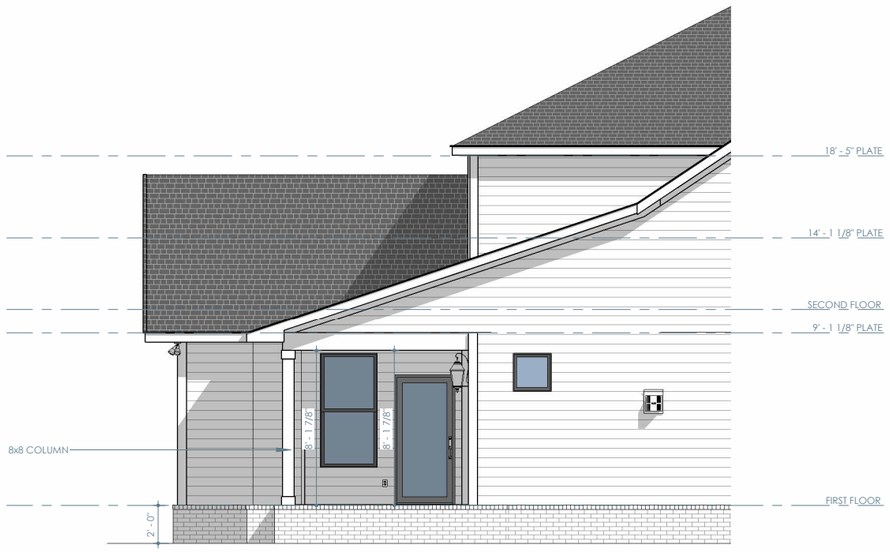
OPT. REAR COVERED PORCH - LEFT

1/8" = 1'-0"



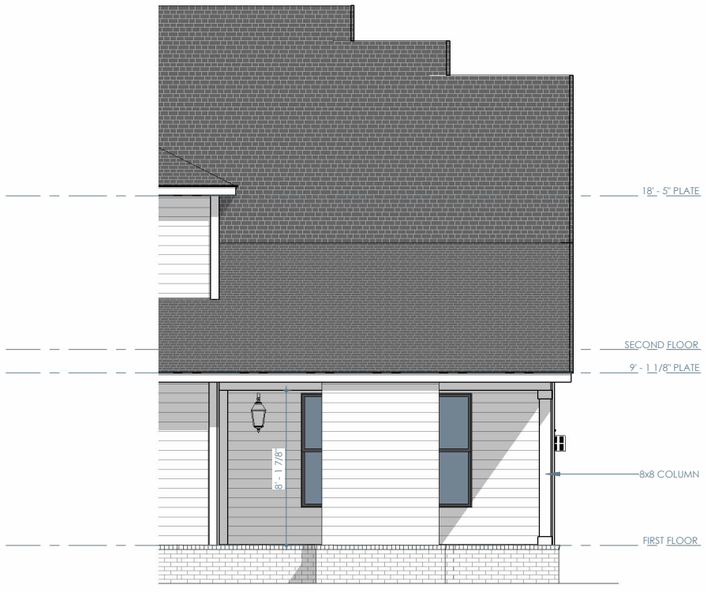
OPT. REAR COVERED PORCH - REAR

1/8" = 1'-0"



OPT. REAR COVERED PORCH W/ OPT. PORCH FIREPLACE - LEFT

1/8" = 1'-0"



OPT. REAR COVERED PORCH W/ OPT. PORCH FIREPLACE - REAR

1/8" = 1'-0"

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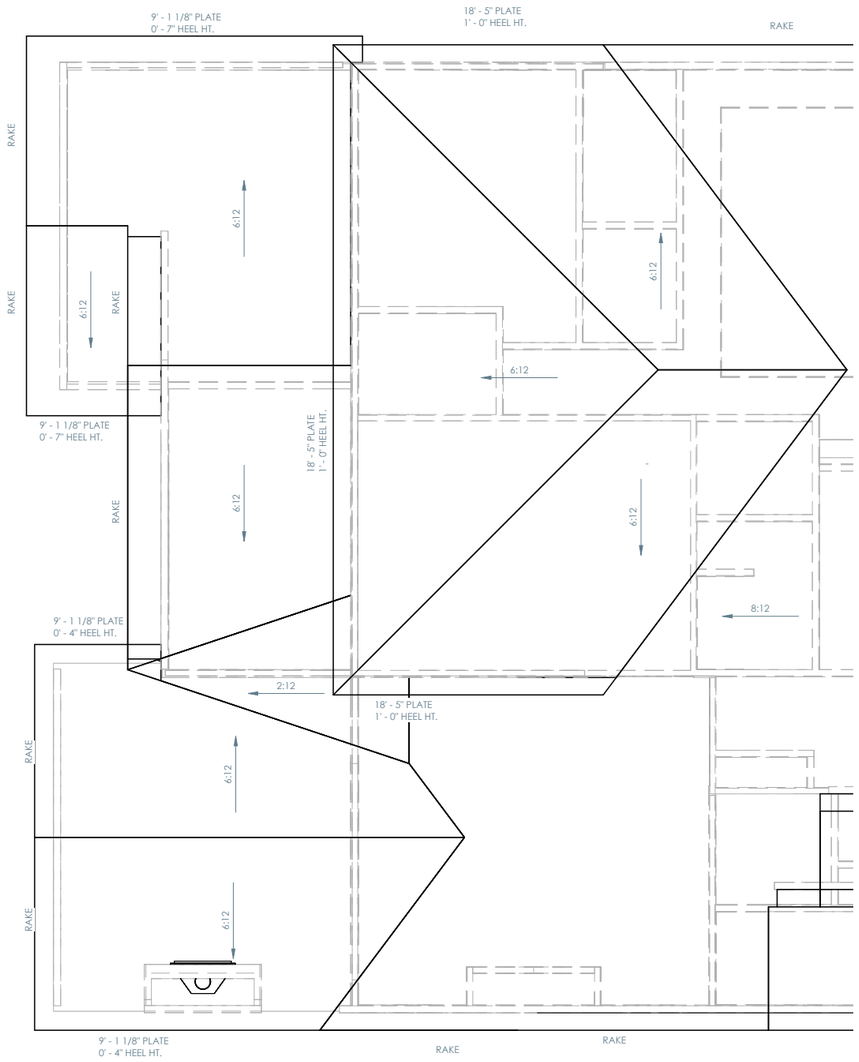
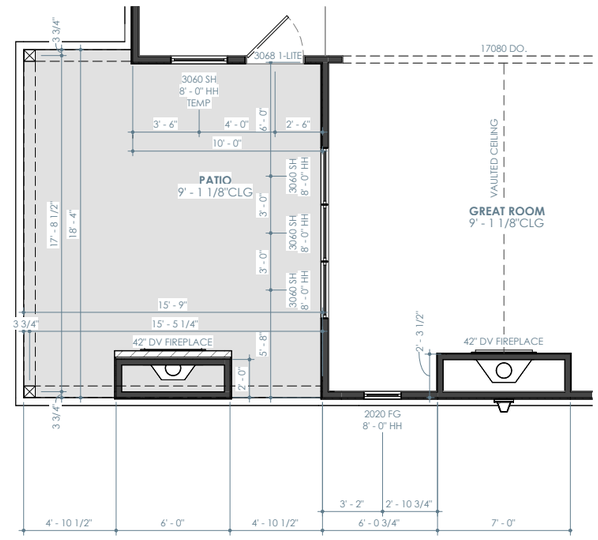
SHEET NO.

A7.14



OPT. EXTENDED PATIO
W/ REAR COVERED PORCH
W/ OPT. PORCH FIREPLACE - ROOF PLAN

1/8" = 1'-0"



OPT. EXTENDED PATIO
W/ REAR COVERED PORCH
W/ OPT. PORCH FIREPLACE - FIRST FLOOR PLAN

1/8" = 1'-0"

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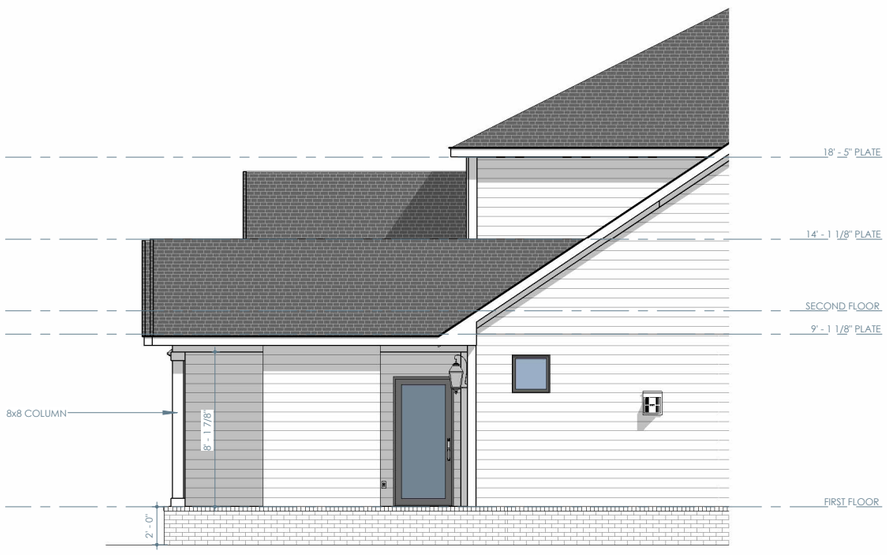
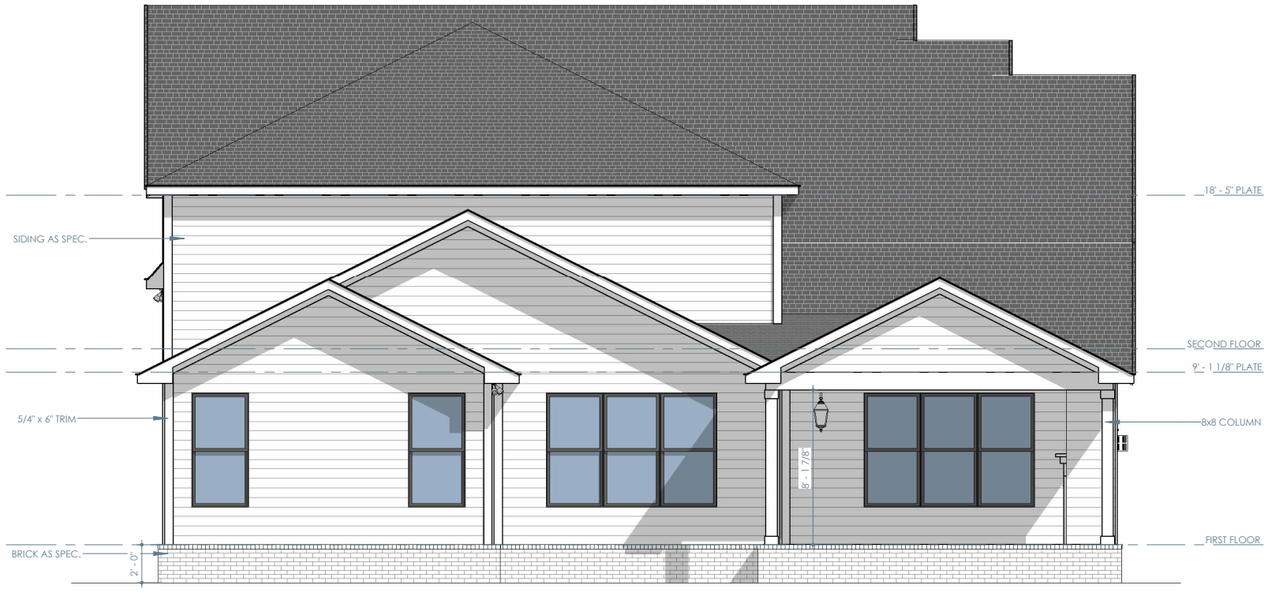
SHEET NO.

A7.15



OPT. EXTENDED PATIO
W/ REAR COVERED PORCH
W/ OPT. PORCH FIREPLACE - LEFT

1/8" = 1'-0"



OPT. EXTENDED PATIO
W/ REAR COVERED PORCH
W/ OPT. PORCH FIREPLACE - REAR

1/8" = 1'-0"

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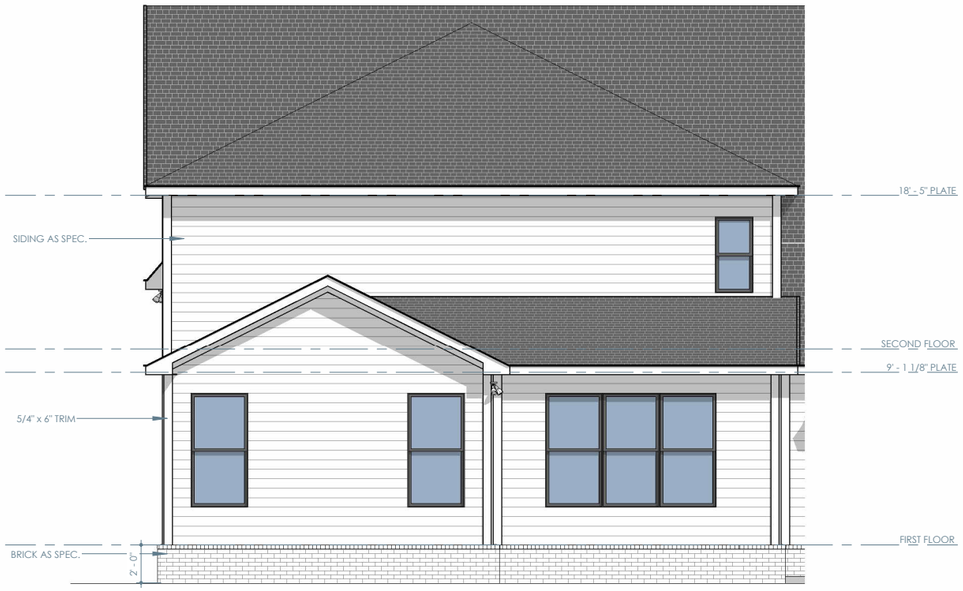
SHEET NAME

PLAN OPTIONS

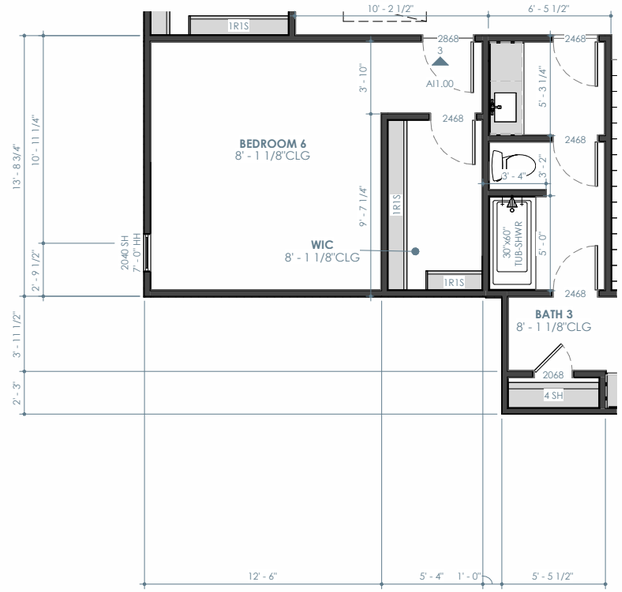
SHEET NO.

A7.16



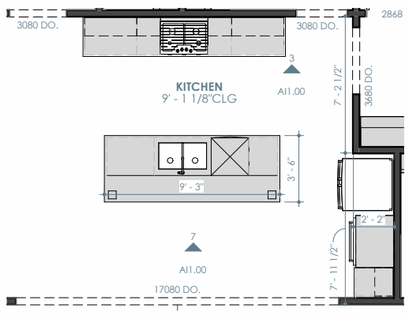
OPT. BEDROOM 6 - REAR

1/8" = 1'-0"



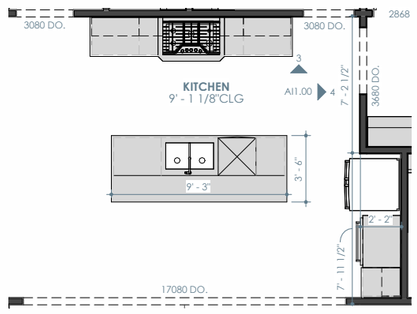
OPT. BEDROOM 6 - SECOND FLOOR PLAN

1/8" = 1'-0"



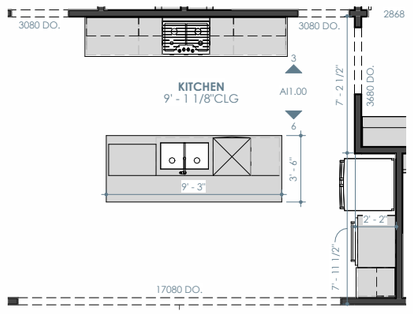
OPT. ISLAND - FIRST FLOOR PLAN

1/8" = 1'-0"



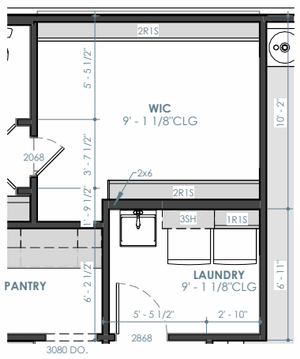
OPT. DOUBLE OVEN - FIRST FLOOR PLAN

1/8" = 1'-0"



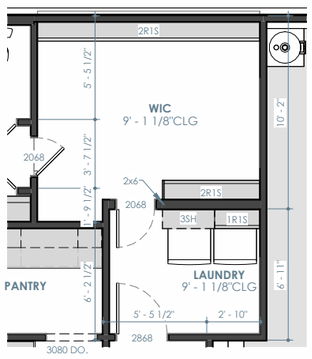
OPT. ISLAND MICROWAVE - FIRST FLOOR PLAN

1/8" = 1'-0"



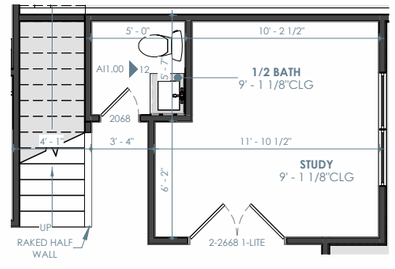
OPT. LAUNDRY SINK - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. LAUNDRY DOOR - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. 1/2 BATH VANITY - FIRST FLOOR PLAN

1/8" = 1'-0"

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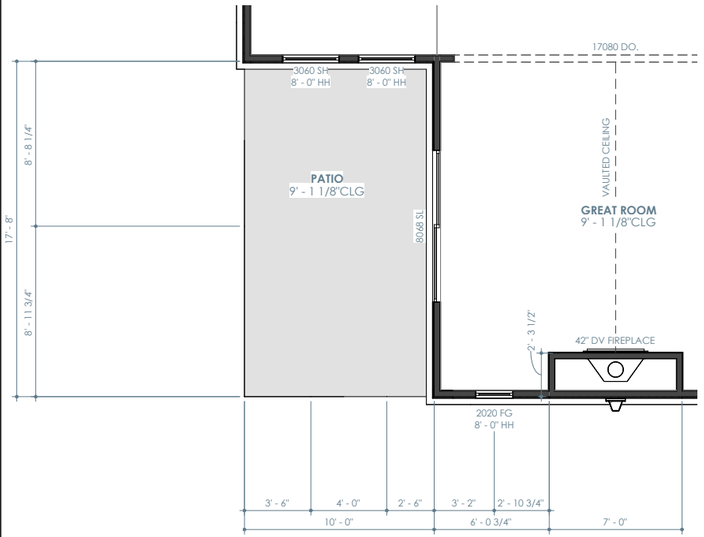
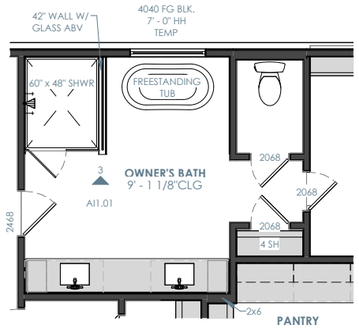


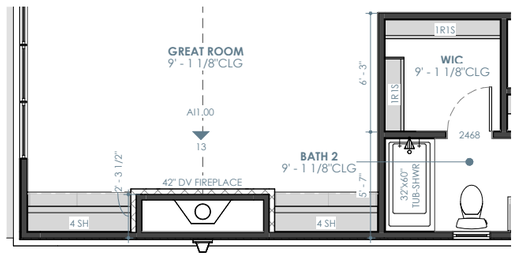
OPT. GREAT ROOM SLIDER - FIRST FLOOR PLAN

1/8" = 1'-0"



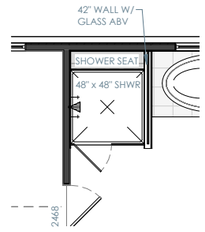
OPT. FREE STANDING TUB

1/8" = 1'-0"



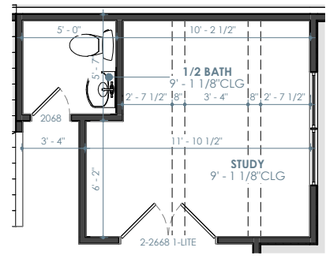
OPT. FIREPLACE BUILT-INS - FIRST FLOOR PLAN

1/8" = 1'-0"



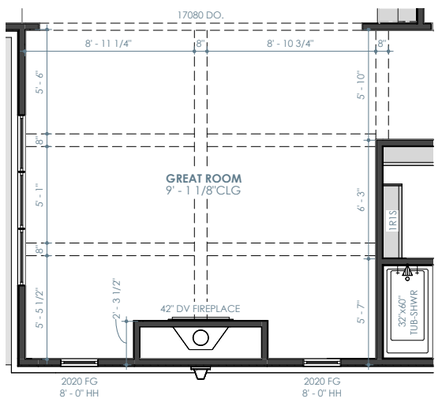
OPT. SHOWER SEAT

1/8" = 1'-0"



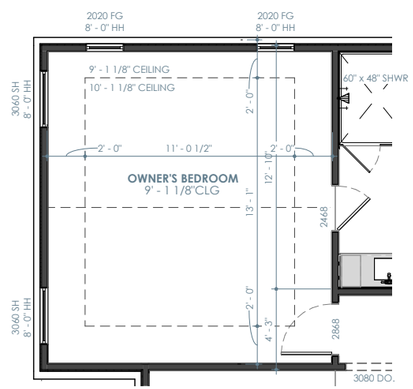
OPT. STUDY COFFERED CEILING - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. GREAT ROOM COFFERED CEILING - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. OWNERS BEDROOM TRAY CIELING - FIRST FLOOR PLAN

1/8" = 1'-0"

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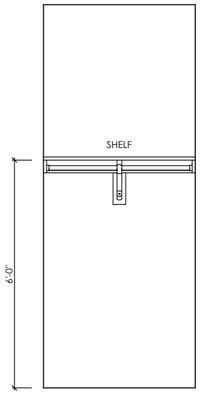
ISSUE DATE	04-17-2024
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

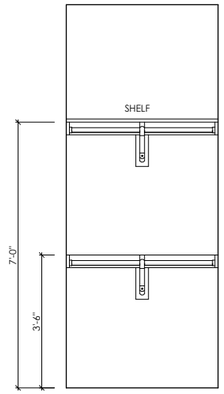
PLAN OPTIONS

SHEET NO.

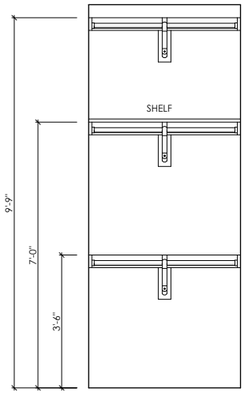
A7.18



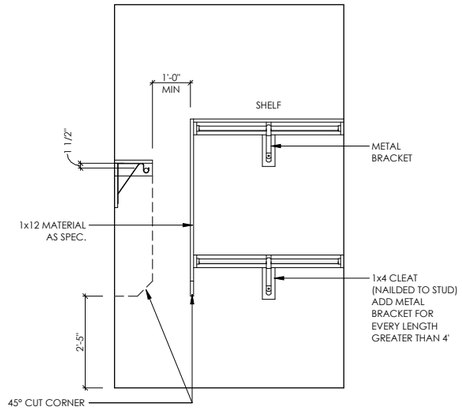
1R1S



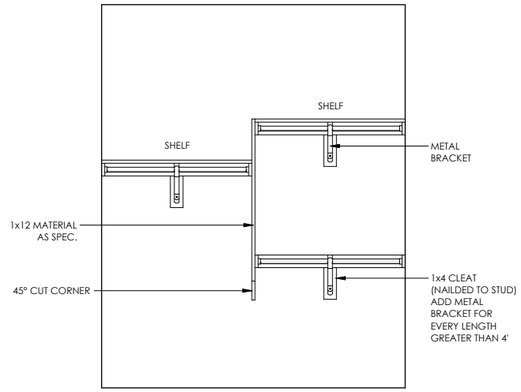
2R1S



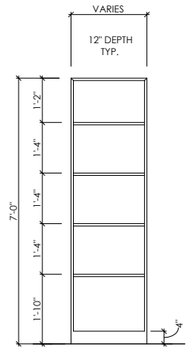
3R1S



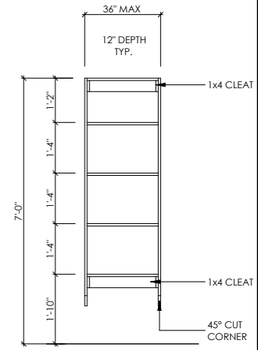
CLOSET CORNER DETAIL



1R1S TO 2R1S TRANSITION DETAIL



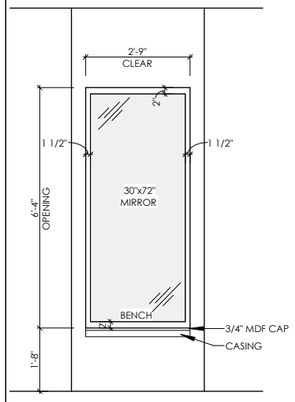
5SH



5SH
(SUSPENDED)

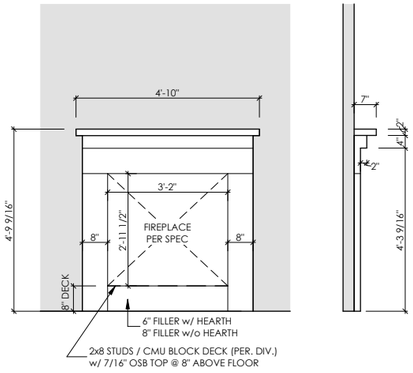
1 CLOSET DETAILS

1/4" = 1'-0"



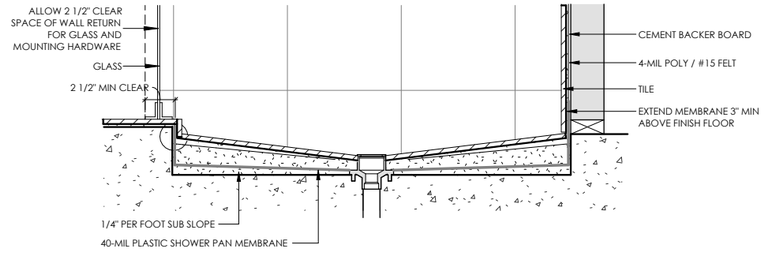
2 CLOSET BENCH

1/4" = 1'-0"



3 FIREPLACE DETAIL

1/4" = 1'-0"



4 MUD PAN SHOWER

3/4" = 1'-0"

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ISSUE DATE 04-17-2024

DRAWN BY STT

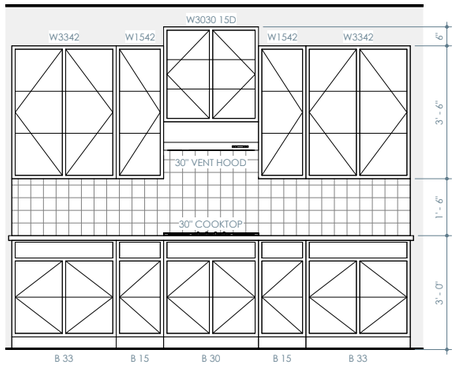
SCALE As indicated

SHEET NAME

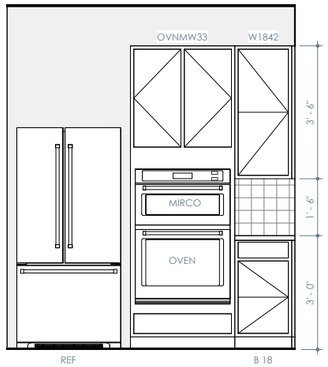
DETAILS

SHEET NO.

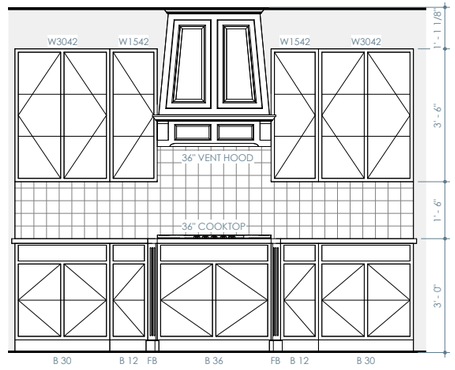
AD1.00



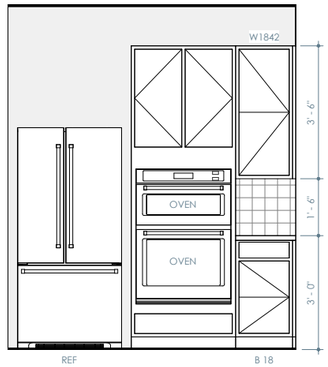
1 KITCHEN
1/4" = 1'-0"



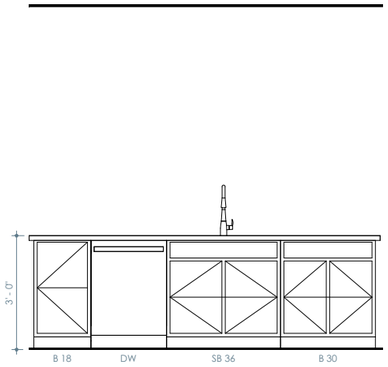
2 KITCHEN
1/4" = 1'-0"



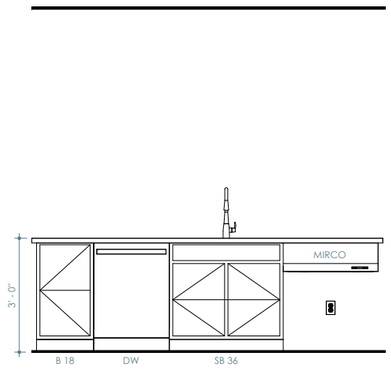
3 OPT. DOUBLE OVEN
1/4" = 1'-0"



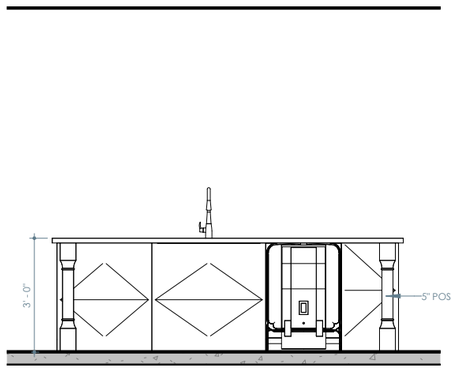
4 OPT. DOUBLE OVEN
1/4" = 1'-0"



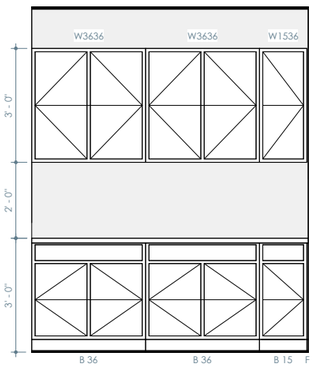
5 ISLAND
1/4" = 1'-0"



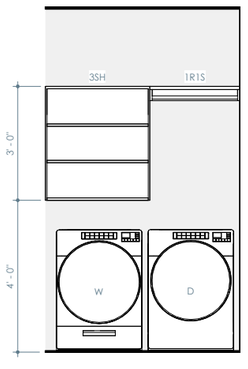
6 OPT. ISLAND MICROWAVE
1/4" = 1'-0"



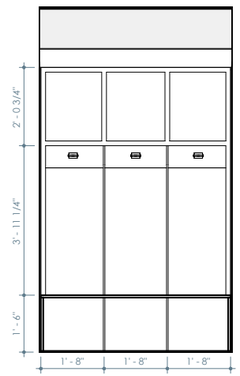
7 OPT. ISLAND
1/4" = 1'-0"



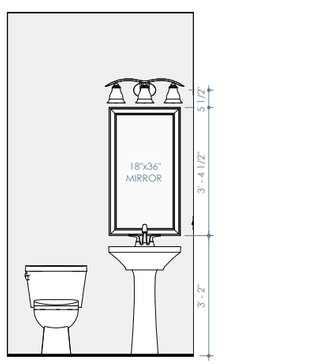
8 PANTRY
1/4" = 1'-0"



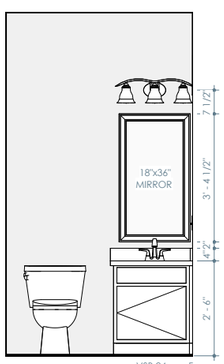
9 LAUNDRY
1/4" = 1'-0"



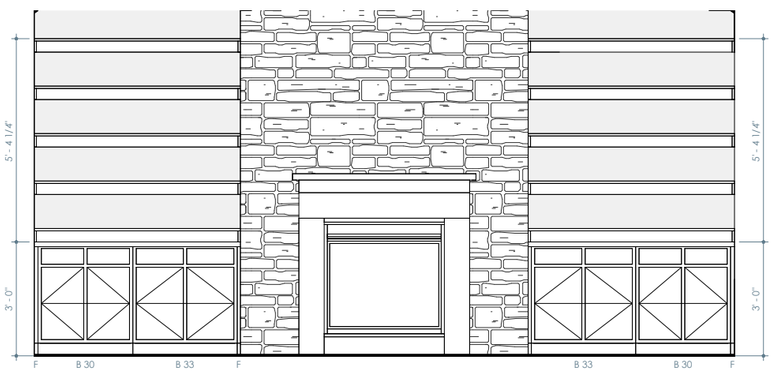
10 CUBBIES
1/4" = 1'-0"



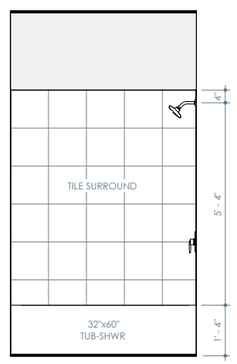
11 1/2 BATH
1/4" = 1'-0"



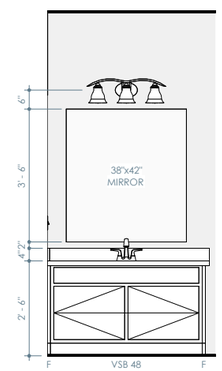
12 OPT. 1/2 BATH VANITY
1/4" = 1'-0"



13 OPT. FIREPLACE BUILT-INS
1/4" = 1'-0"



14 BATH 2
1/4" = 1'-0"



15 BATH 2
1/4" = 1'-0"

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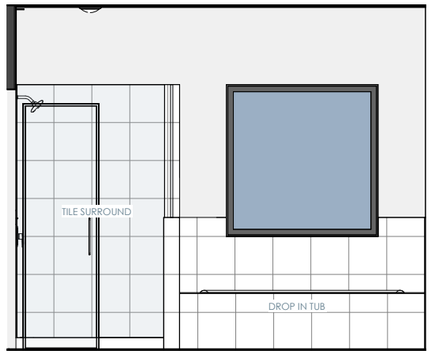
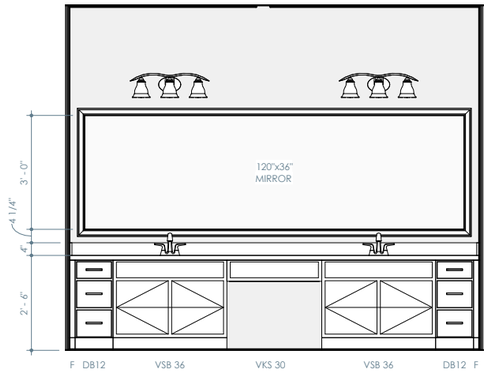
DRAWN BY	STT
SCALE	1/4" = 1'-0"

SHEET NAME
INTERIOR ELEVATIONS

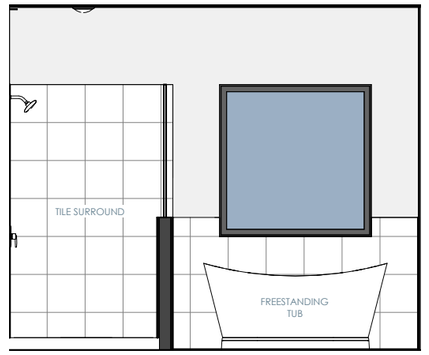
SHEET NO.
AI1.00



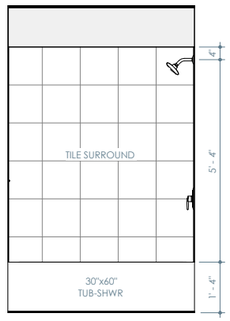
1 OWNER'S BATH
1/4" = 1'-0"



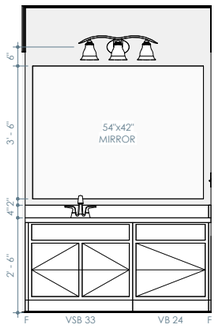
2 OWNER'S BATH
1/4" = 1'-0"



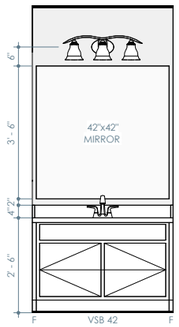
3 OPT. FREE STANDING TUB
1/4" = 1'-0"



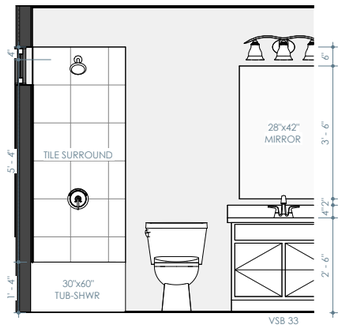
5 BATH 3
1/4" = 1'-0"



6 BATH 3
1/4" = 1'-0"



7 BATH 3
1/4" = 1'-0"



8 BATH 4
1/4" = 1'-0"

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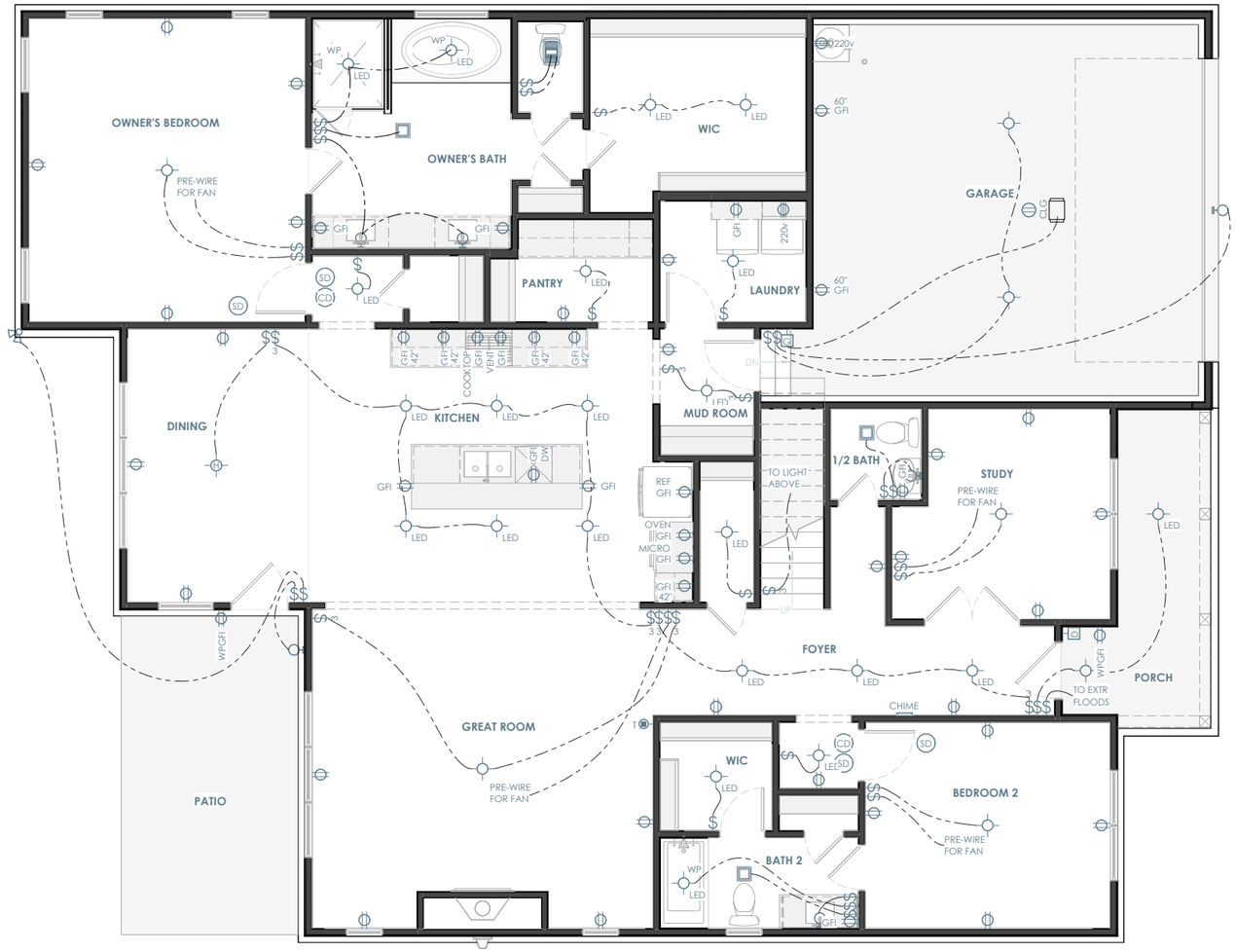
SHEET NAME

INTERIOR ELEVATIONS

SHEET NO.

AI1.01



ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- 3 THREE WAY SWITCH
- 4 FOUR WAY SWITCH
- D SINGLE POLE DIMMER SWITCH
- OS OCCUPANT SENSOR SWITCH
- R RHEOSTAT SWITCH
- P PRESSURE SWITCH
- G GARAGE DOOR SWITCH
- D DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- LED SUFRACE MOUNT LED LIGHT FIXTURE
- KEY KEYLESS LIGHT FIXTURE
- H HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- UNDER / OVER CABINET LIGHT
- 1x4 FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

POWER

- DUPLEX OUTLET
- QUAD OUTLET
- SWITCHED DUPLEX OUTLET
- GFI GROUND FAULT CIRCUIT INTERRUPTER
- SURFACE MOUNT DUPLEX OUTLET
- GFI SURFACE MOUNT GROUND FAULT INTERRUPTER
- FLR FLOOR OUTLET
- CLG OVERHEAD OUTLET
- 220v 220 VOLT OUTLET

COMMUNICATION

- PH PHONE OUTLET
- DATA DATA OUTLET
- 5.1 SS SURROUND SOUND OUTLET
- TV TV OUTLET
- S SUB SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SD SMOKE ALARM
- CD CARBON DETECTOR

EQUIPMENT

- PANEL ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

ELECTRICAL PLAN NOTES

INFORMATION AND LAYOUTS SHOWN ON DRAWINGS ARE ONLY SCHEMATIC IN DESIGN

- PROVIDE LIGHT IN EACH CRAWLSPACE AND ATTIC
- GAS AND 220 OUTLETS SHOWN FOR LOCATION PURPOSES ONLY, AND SUBJECT TO CHANGE PER SUBDIVISION/CITY/CODE REQUIREMENT

KITCHEN
- 24" MAX SEPARATION FOR OUTLETS LOCATED AT KITCHEN COUNTERTOPS
- RECEPTACLES AT COUNTER SPACE 12" OR WIDER.
- GFCI OUTLETS REQUIRED AT KITCHEN COUNTERTOPS
- 1 OUTLET PROVIDED PER ISLAND MINIMUM

BATHROOMS
- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES
- OUTLETS IN ALL LIVING SPACES SHALL BE PROVIDED AT 6' MAX FROM OPENING OR DOOR AND MINIMUM 12' BETWEEN EACH RECEPTACLE
- PROVIDE OUTLET ON ANY WALL LARGER THAN 2' BETWEEN OPENINGS AND DOORS
- FLOOR PLUGS AS REQUIRED

OTHER AREAS
- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
- PROVIDE AT LEAST 1 OUTLET PER 10' OF HALLWAY RUN

LIGHTING
- LIGHTING FIXTURES LOCATED IN CLOSETS: SURFACE MOUNT FIXTURE ARE NOT TO BE WITHIN 1'-0" OF SHELF OR HANGING SPACE MEASURED HORIZONTALLY. RECESSED FIXTURES NOT TO BE WITHIN 6" OF ANY SHELF OR HANGING SPACE

SMOKE DETECTORS
- ADDITIONAL SMOKE DETECTOR REQUIRED AT EACH END OF ROOMS/HALLWAYS GREATER THAN 30' IN LENGTH
- DO NOT INSTALL DETECTORS WITHIN 3' OF AN AIR VENT OR RETURN
- KEEP ALL SMOKE DETECTORS A MINIMUM OF 36" FROM BATHROOM DOOR, KITCHEN COOKING APPLIANCES AND LAUNDRY/UTILITY (WHERE A WASHER AND DRYER IS PLACED)
- DO NOT INSTALL NEAR FLUORESCENT LIGHTS
- DO NOT INSTALL WITHIN 36" OF TIP OF PADDLE FOR CEILING FAN
- INSTALL SMOKE DETECTOR ON SLOPED, PEAKED OR CATHEDRAL CEILINGS AT OR WITHIN 3' OF HIGHEST POINT (MEASURED HORIZONTALLY)
- SMOKE ALARMS IN ROOMS WITH CEILING SLOPES GREATER THAN 1 FOOT IN 8 FEET HORIZONTALLY SHALL BE LOCATED ON THE HIGHEST SIDE OF ROOM

ELEVATION A - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

Brightland HOMES

PROJECT NAME

BRADFORD

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PLAN NO.

3510

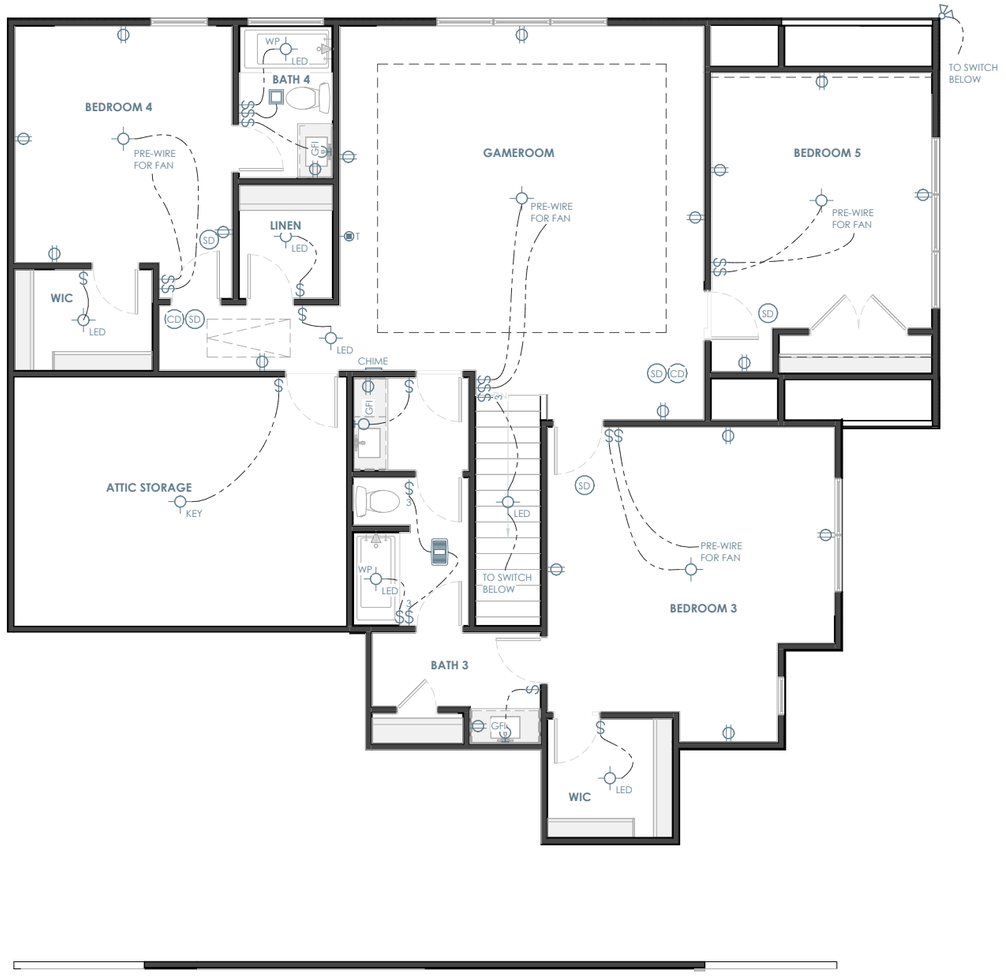
ISSUE DATE	04-17-2024
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - FIRST FLOOR ELECTRICAL PLAN

SHEET NO.

E1.00



ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- 3 THREE WAY SWITCH
- 4 FOUR WAY SWITCH
- D SINGLE POLE DIMMER SWITCH
- OS OCCUPANT SENSOR SWITCH
- R RHEOSTAT SWITCH
- P PRESSURE SWITCH
- G GARAGE DOOR SWITCH
- D DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- LED SUFRACE MOUNT LED LIGHT FIXTURE
- KEY KEYLESS LIGHT FIXTURE
- H HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- UNDER / OVER CABINET LIGHT
- 1x4 FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

POWER

- DUPLEX OUTLET
- QUAD OUTLET
- SWITCHED DUPLEX OUTLET
- GFI GROUND FAULT CIRCUIT INTERRUPTER
- SURFACE MOUNT DUPLEX OUTLET
- GFI SURFACE MOUNT GROUND FAULT INTERRUPTER
- FLR FLOOR OUTLET
- CLG OVERHEAD OUTLET
- 220v 220 VOLT OUTLET

COMMUNICATION

- PH PHONE OUTLET
- DATA DATA OUTLET
- 5.1 SS SURROUND SOUND OUTLET
- TV TV OUTLET
- S SUB SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SD SMOKE ALARM
- CD CARBON DETECTOR

EQUIPMENT

- PANEL ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

ELECTRICAL PLAN NOTES

INFORMATION AND LAYOUTS SHOWN ON DRAWINGS ARE ONLY SCHEMATIC IN DESIGN

- PROVIDE LIGHT IN EACH CRAWLSPACE AND ATTIC
- GAS AND 220 OUTLETS SHOWN FOR LOCATION PURPOSES ONLY, AND SUBJECT TO CHANGE PER SUBDIVISION/CITY/CODE REQUIREMENT

KITCHEN
- 24" MAX SEPARATION FOR OUTLETS LOCATED AT KITCHEN COUNTERTOPS
- RECEPTACLES AT COUNTER SPACE 12" OR WIDER.
- GFCI OUTLETS REQUIRED AT KITCHEN COUNTERTOPS
- 1 OUTLET PROVIDED PER ISLAND MINIMUM

BATHROOMS
- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES
- OUTLETS IN ALL LIVING SPACES SHALL BE PROVIDED AT 6' MAX FROM OPENING OR DOOR AND MINIMUM 12' BETWEEN EACH RECEPTACLE
- PROVIDE OUTLET ON ANY WALL LARGER THAN 2' BETWEEN OPENINGS AND DOORS
- FLOOR PLUGS AS REQUIRED

OTHER AREAS
- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
- PROVIDE AT LEAST 1 OUTLET PER 10' OF HALLWAY RUN

LIGHTING
- LIGHTING FIXTURES LOCATED IN CLOSETS: SURFACE MOUNT FIXTURE ARE NOT TO BE WITHIN 1'-0" OF SHELF OR HANGING SPACE MEASURED HORIZONTALLY, RECESSED FIXTURES NOT TO BE WITHIN 6" OF ANY SHELF OR HANGING SPACE

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ELEVATION A - SECOND FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

Brightland HOMES

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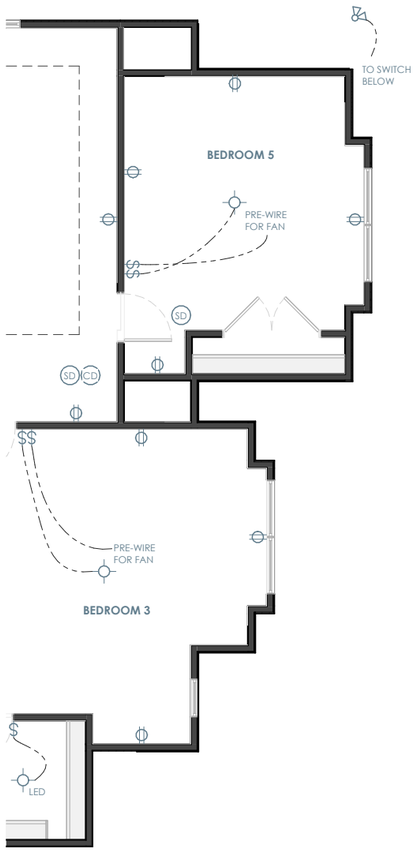
SHEET NAME

ELEVATION A - SECOND FLOOR ELECTRICAL PLAN

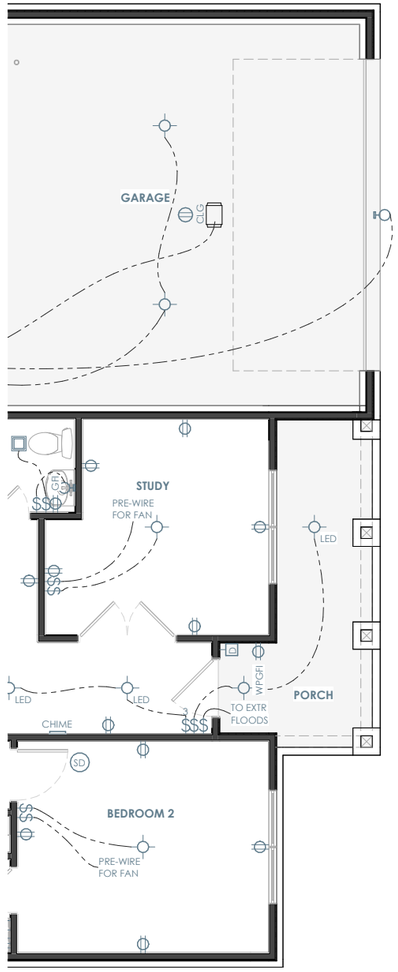
SHEET NO.

E1.01



ELEVATION B - SECOND FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



ELEVATION B - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- 3 THREE WAY SWITCH
- 4 FOUR WAY SWITCH
- D SINGLE POLE DIMMER SWITCH
- OS OCCUPANT SENSOR SWITCH
- R RHEOSTAT SWITCH
- P PRESSURE SWITCH
- G GARAGE DOOR SWITCH
- D DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- LED SUFRACE MOUNT LED LIGHT FIXTURE
- KEY KEYLESS LIGHT FIXTURE
- H HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- UNDER / OVER CABINET LIGHT
- 1x4 FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

POWER

- DUPLEX OUTLET
- QUAD OUTLET
- SWITCHED DUPLEX OUTLET
- GFI GROUND FAULT CIRCUIT INTERRUPTER
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COMMUNICATION

- PH PHONE OUTLET
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- 5.1 SS SURROUND SOUND OUTLET
- TV TV OUTLET
- S SUB SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SD SMOKE ALARM
- CD CARBON DETECTOR

EQUIPMENT

- PANEL ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

ELECTRICAL PLAN NOTES

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- GFCI OUTLETS REQUIRED AT KITCHEN COUNTERTOPS
- 1 OUTLET PROVIDED PER ISLAND MINIMUM

BATHROOMS

- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES

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- FLOOR PLUGS AS REQUIRED

OTHER AREAS

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LIGHTING

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3510

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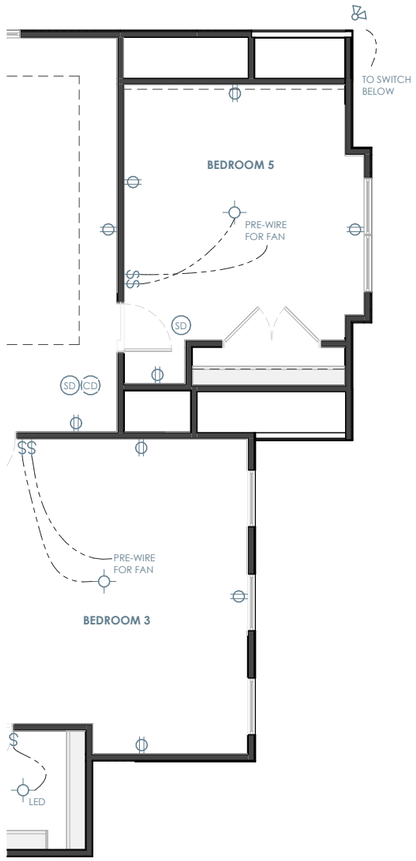
SHEET NAME

ELEVATION B - PARTIAL ELECTRICAL PLANS

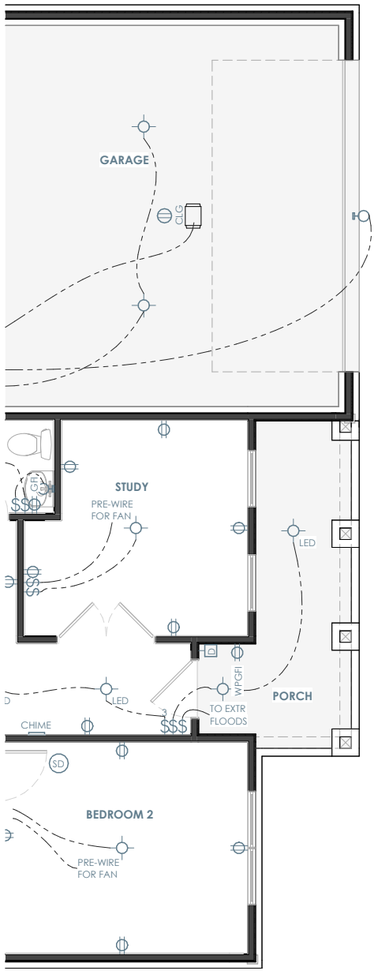
SHEET NO.

E2.00



ELEVATION C - SECOND FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



ELEVATION C - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- 3 THREE WAY SWITCH
- 4 FOUR WAY SWITCH
- D SINGLE POLE DIMMER SWITCH
- OS OCCUPANT SENSOR SWITCH
- R RHEOSTAT SWITCH
- P PRESSURE SWITCH
- G GARAGE DOOR SWITCH
- D DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- LED SUFRACE MOUNT LED LIGHT FIXTURE
- KEY KEYLESS LIGHT FIXTURE
- H HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
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- UNDER / OVER CABINET LIGHT
- 1x4 FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

POWER

- DUPLEX OUTLET
- QUAD OUTLET
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- GFI GROUND FAULT CIRCUIT INTERRUPTER
- SURFACE MOUNT DUPLEX OUTLET
- GFI SURFACE MOUNT GROUND FAULT INTERRUPTER
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- CLG OVERHEAD OUTLET
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COMMUNICATION

- PH PHONE OUTLET
- DATA DATA OUTLET
- 5.1 SS SURROUND SOUND OUTLET
- TV TV OUTLET
- S SUB SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SD SMOKE ALARM
- CD CARBON DETECTOR

EQUIPMENT

- PANEL ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

ELECTRICAL PLAN NOTES

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LIGHTING
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Brightland HOMES

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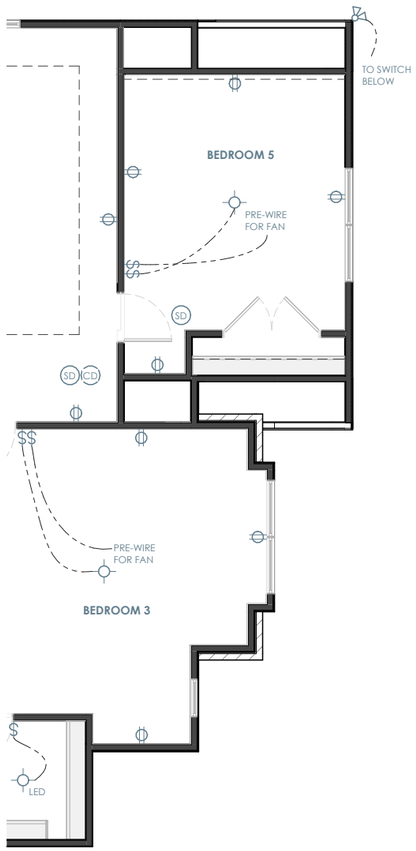
SHEET NAME

ELEVATION C - PARTIAL ELECTRICAL PLANS

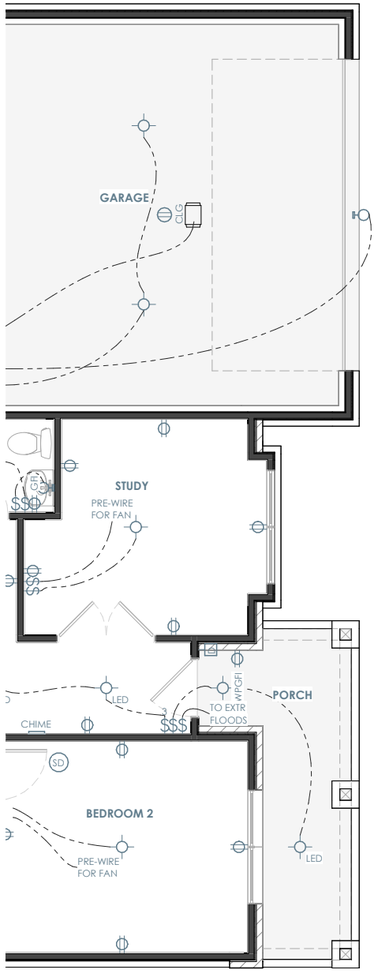
SHEET NO.

E3.00



ELEVATION D - SECOND FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



ELEVATION D - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- 3 THREE WAY SWITCH
- 4 FOUR WAY SWITCH
- D SINGLE POLE DIMMER SWITCH
- OS OCCUPANT SENSOR SWITCH
- R RHEOSTAT SWITCH
- P PRESSURE SWITCH
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LIGHTING

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- H HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
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- UNDER / OVER CABINET LIGHT
- 1x4 FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

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- DUPLEX OUTLET
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- DATA DATA OUTLET
- 5.1 SS SURROUND SOUND OUTLET
- TV TV OUTLET
- S SUB SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SD SMOKE ALARM
- CD CARBON DETECTOR

EQUIPMENT

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- THERMOSTAT
- DOOR BELL CHIME
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- FLOOR PLUGS AS REQUIRED

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SHEET NAME

ELEVATION D - PARTIAL ELECTRICAL PLANS

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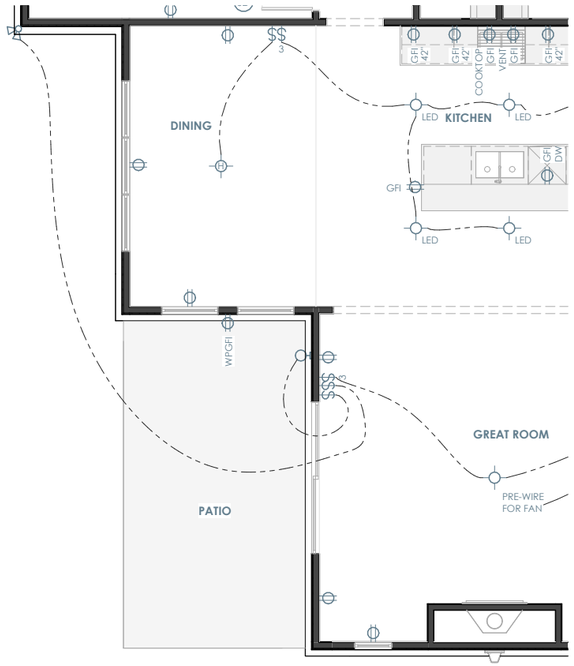
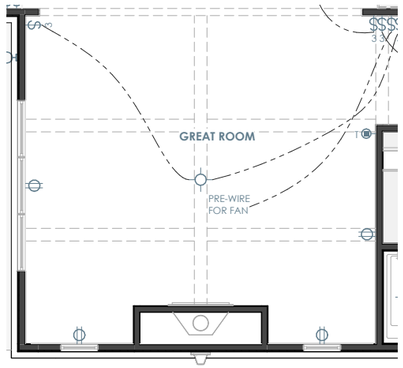
E4.00



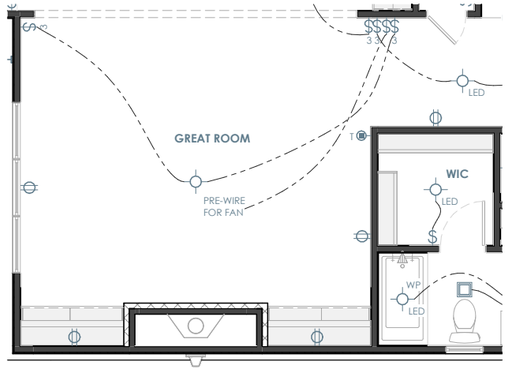
OPT. GREAT ROOM SLIDER - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



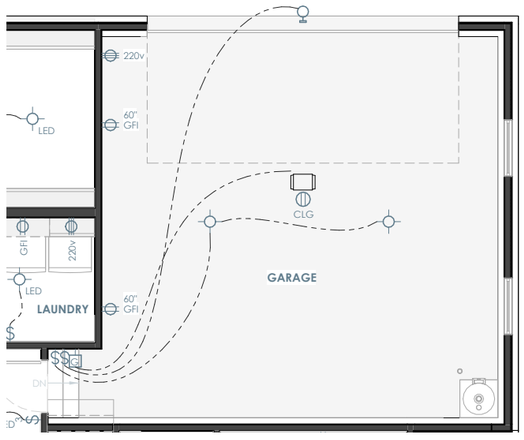
OPT. GREAT ROOM COFFERED CEILING - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



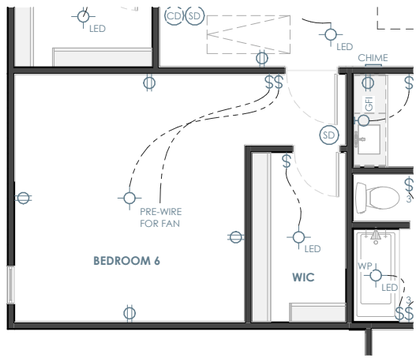
OPT. FIREPLACE BUILT-INS - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



OPT. SIDE LOAD GARAGE - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



OPT. BEDROOM 6 - SECOND FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



OPT. OWNERS BEDROOM TRAY CEILING - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

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PLAN NO.

3510

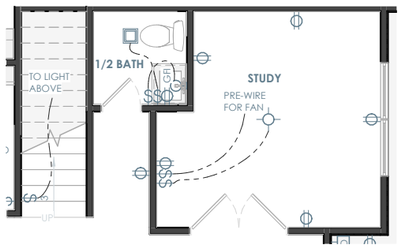
ISSUE DATE	04-17-2024
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

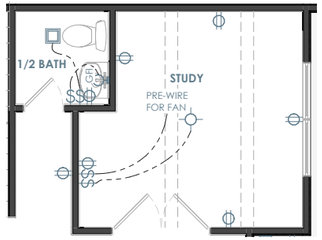
SHEET NO.

E7.00



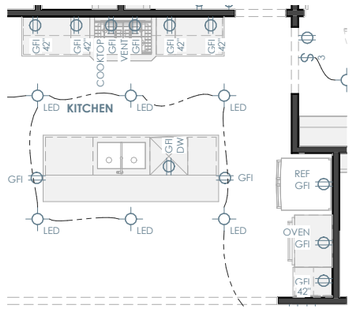
OPT. 1/2 BATH VANITY - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



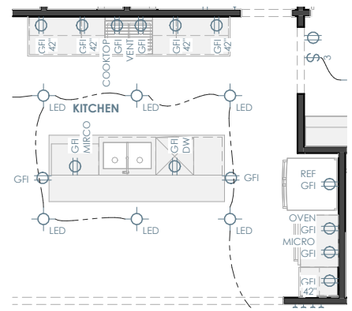
OPT. STUDY COFFERED CEILING - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



OPT. DOUBLE OVEN - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



OPT. ISLAND MICROWAVE - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



OPT. LAUNDRY SINK - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

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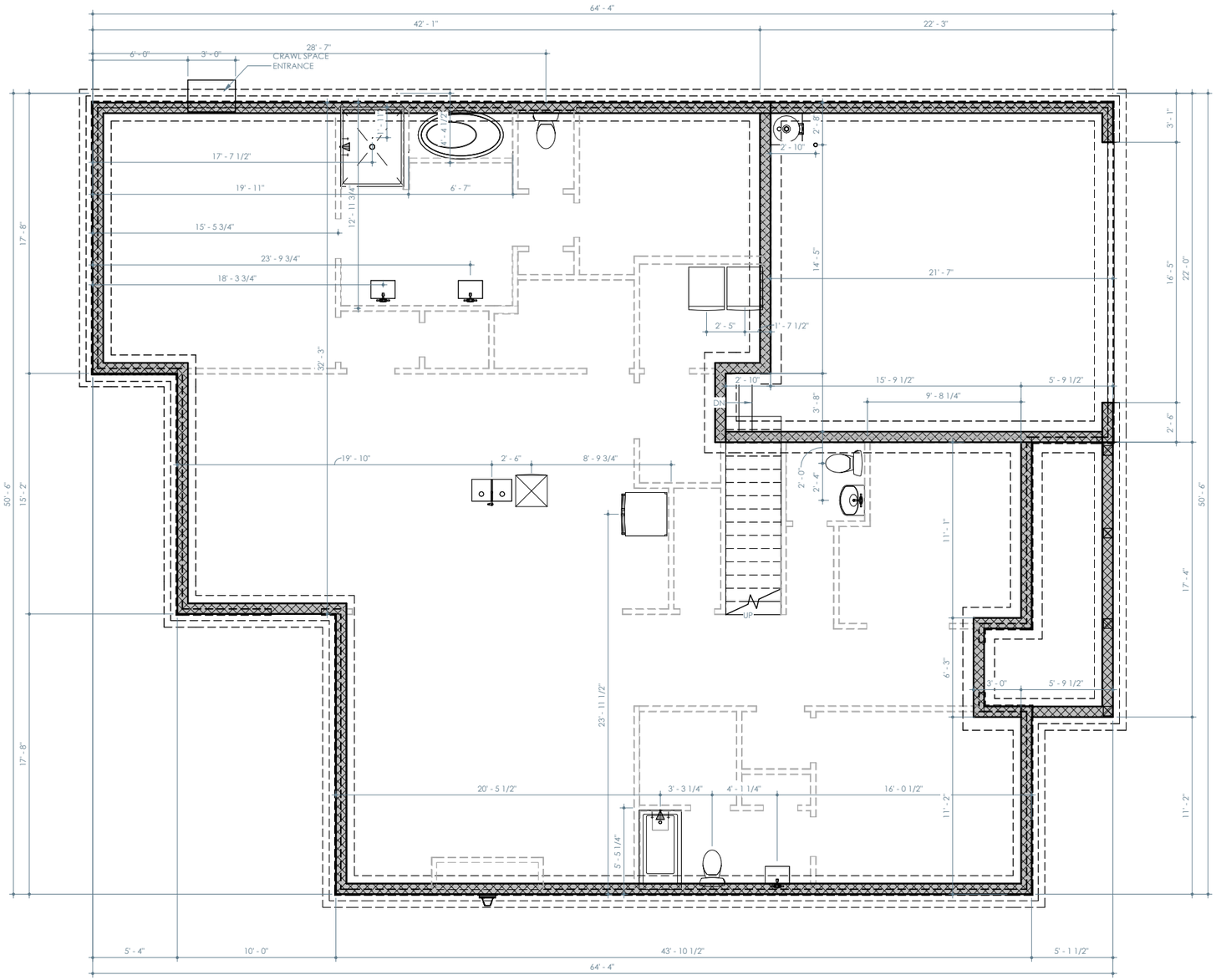
SHEET NAME

PLAN OPTIONS

SHEET NO.

E7.01



ELEVATION A - FOUNDATION PLAN (SIMILAR FOR ELEVATIONS B & C)

1/8" = 1'-0"

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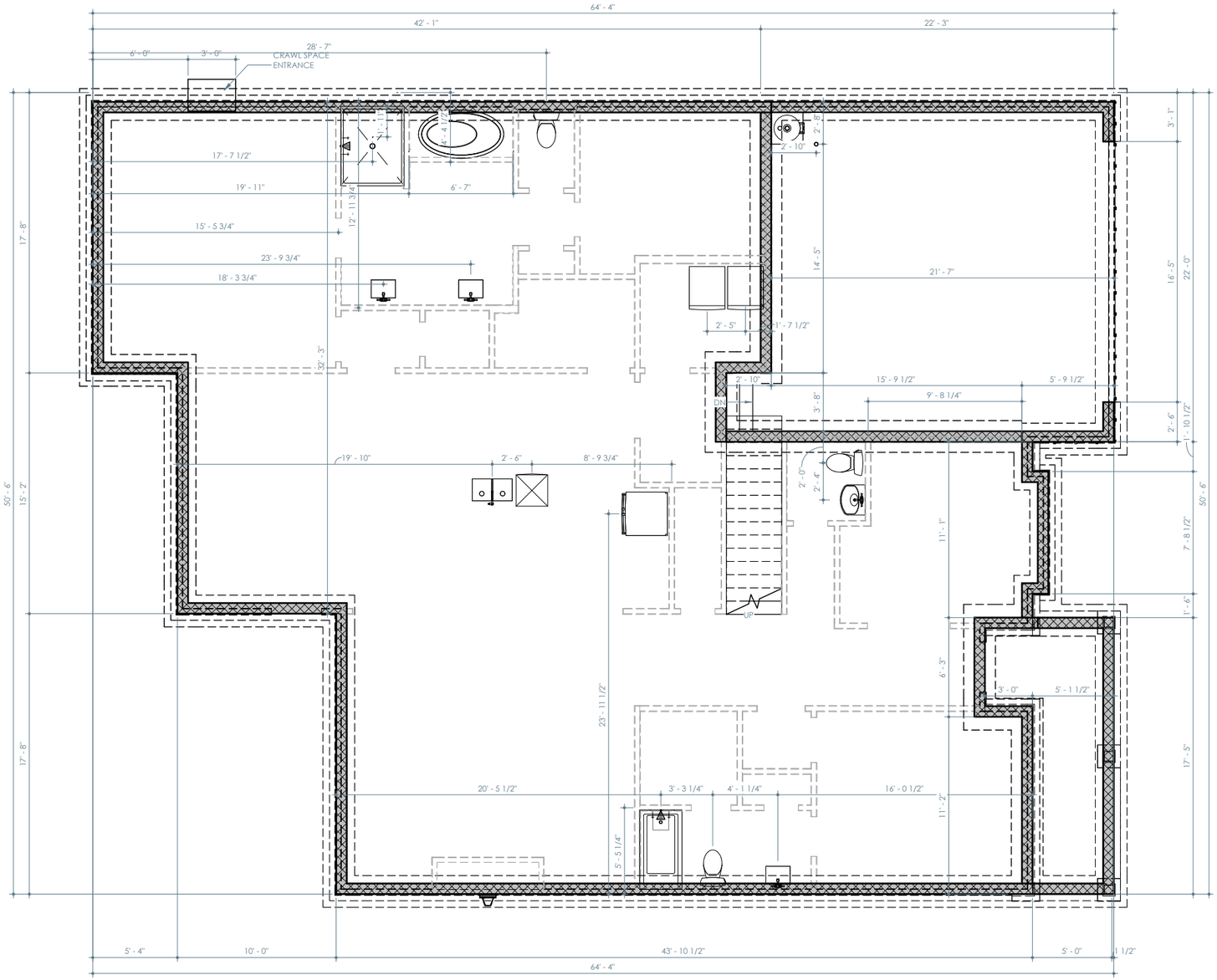
ISSUE DATE	04-17-2024
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

FOUNDATION - ELEVATION A

SHEET NO.

SF1.00



ELEVATION D - FOUNDATION PLAN

1/8" = 1'-0"

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PLAN NO.

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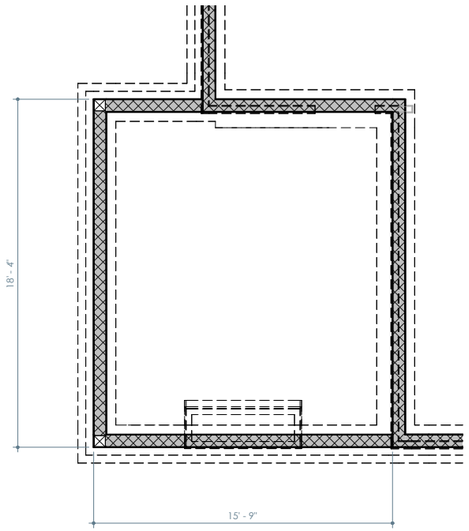
ISSUE DATE	04-17-2024
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

FOUNDATION - ELEVATION D

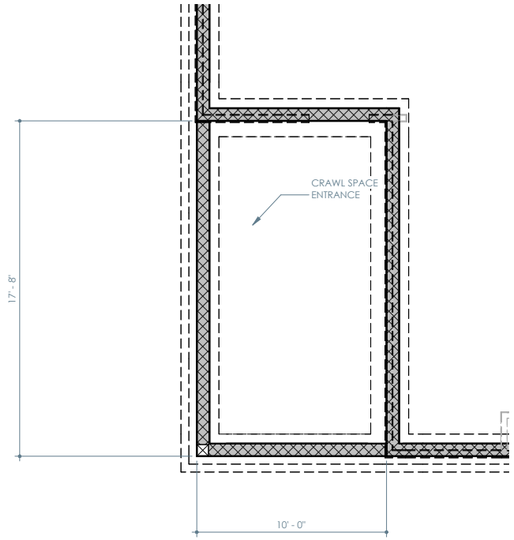
SHEET NO.

SF4.00



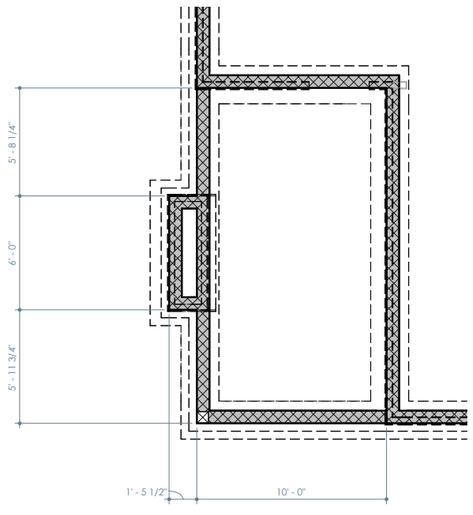
OPT. EXTENDED PATIO
W/ REAR COVERED PORCH - FOUNDATION PLAN

1/8" = 1'-0"



OPT. COVERED PATIO - FOUNDATION PLAN

1/8" = 1'-0"



OPT. REAR COVERED PORCH
W/ PORCH FIREPLACE - FOUNDATION PLAN

1/8" = 1'-0"

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SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

SHEET NO.

SF7.00



ELEVATION A



ELEVATION B



ELEVATION C



ELEVATION D

REVISION LOG

SHEET LIST

SHEET NO.	SHEET NAME	SHEET NO.	SHEET NAME
A0.00	COVER	A4.02	ELEVATION D - ROOF PLAN
A1.01	SLAB FOUNDATION PLAN	A5.00	OPTIONS
A1.02	FIRST FLOOR PLAN	A5.01	OPTIONS
A1.03	FIRST FLOOR ELECTRICAL PLAN	A5.02	OPTIONS
A1.04	ELEVATION A - EXTERIOR ELEVATIONS	A5.03	OPTIONS
A1.05	ELEVATION A - EXTERIOR ELEVATIONS	A5.04	OPTIONS
A1.06	ELEVATION A - EXTERIOR ELEVATIONS	A5.05	OPTIONS
A1.07	ELEVATION A - ROOF PLAN	A5.06	OPTIONS
A2.00	ELEVATION B - EXTERIOR ELEVATIONS	A5.07	OPTIONS
A2.01	ELEVATION B - EXTERIOR ELEVATIONS	A5.08	OPTIONS
A2.02	ELEVATION B - ROOF PLAN	A5.09	OPTIONS
A3.00	ELEVATION C - EXTERIOR ELEVATIONS	A5.10	OPTIONS
A3.01	ELEVATION C - ROOF PLAN	A5.11	OPTIONS
A4.00	ELEVATION D - EXTERIOR ELEVATIONS	A6.00	INTERIOR ELEVATIONS
A4.01	ELEVATION D - EXTERIOR ELEVATIONS	A7.00	DETAIL SHEET

PLAN OPTIONS

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PLAN NO.

2370 (237)

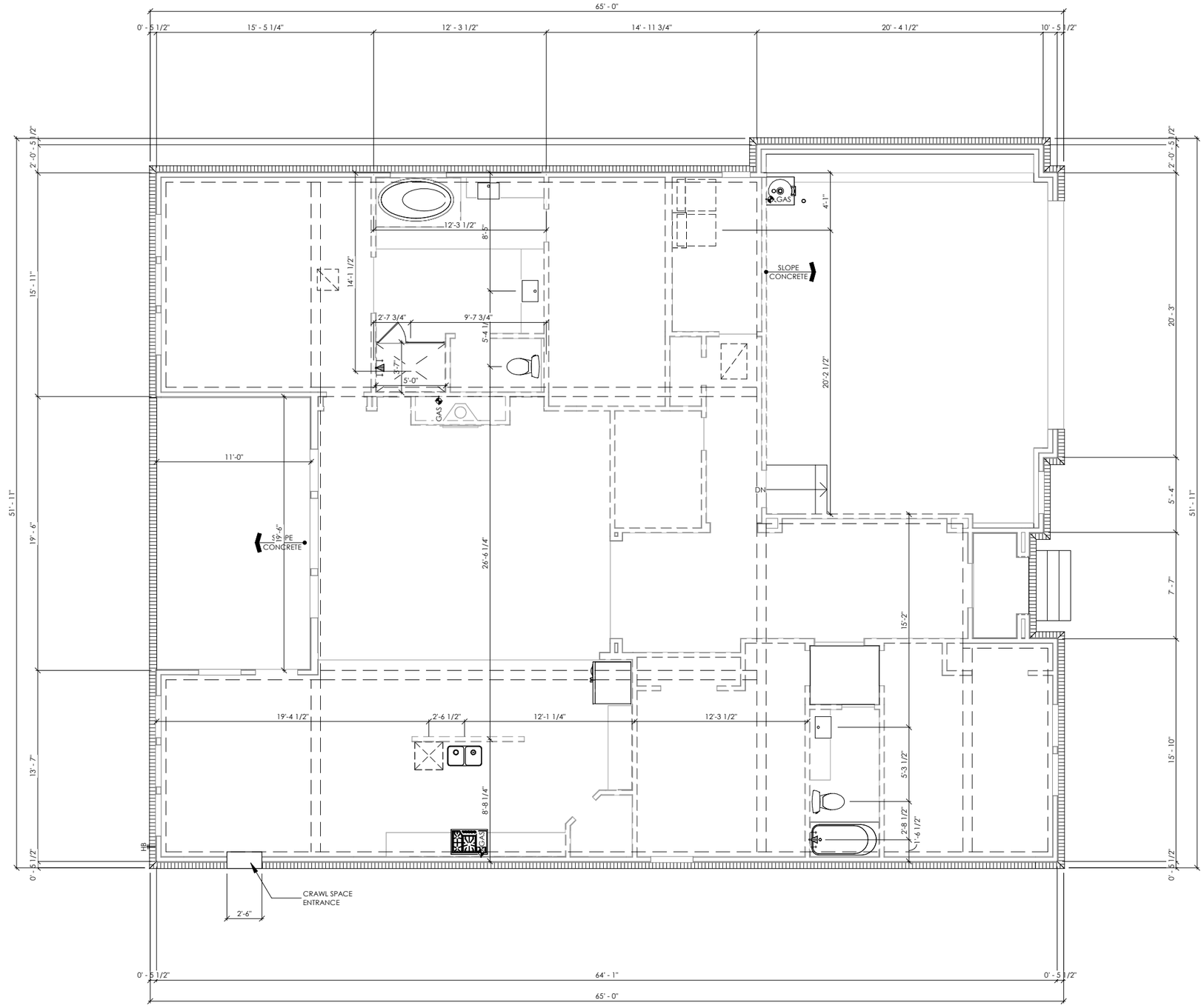
ISSUE DATE	8/1/2023
DRAWN BY	JLA
SCALE	1/16" = 1'-0"

SHEET NAME

COVER

SHEET NO.

A0.00



SLAB FOUNDAITON PLAN

1/8" = 1'-0"

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ISSUE DATE	8/1/2023
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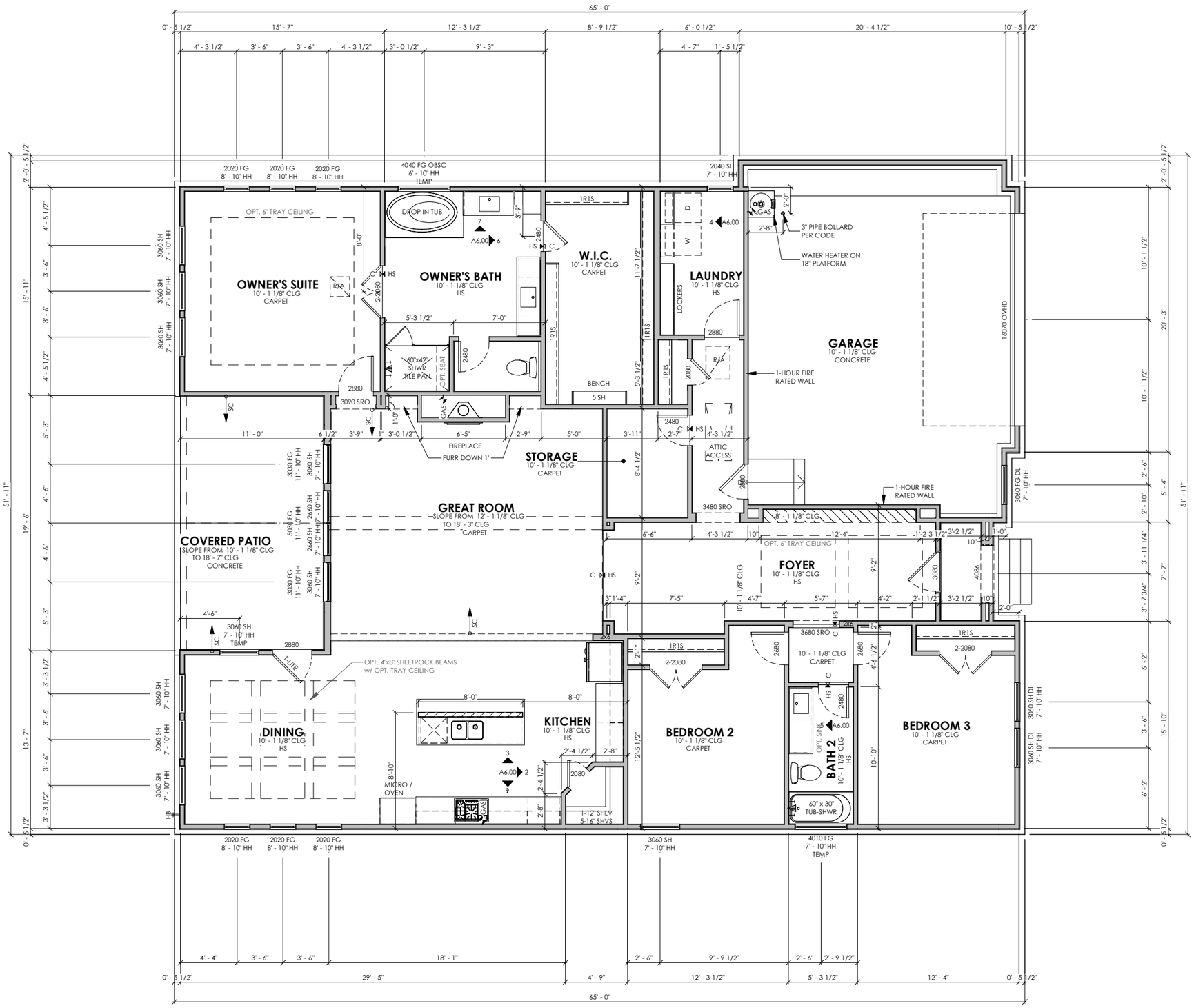
SCALE	1/8" = 1'-0"

SHEET NAME

SLAB FOUNDATION PLAN

SHEET NO.

A1.01



ELEVATION A - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION A - LIVING SPACE

FIRST FLOOR	2369 SF
TOTAL	2369 SF

ELEVATION A - NON-LIVING

GARAGE	546 SF
PORCH	31 SF
PATIO	215 SF
TOTAL	791 SF
TOTAL UNDER ROOF	3160 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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2370 (237)

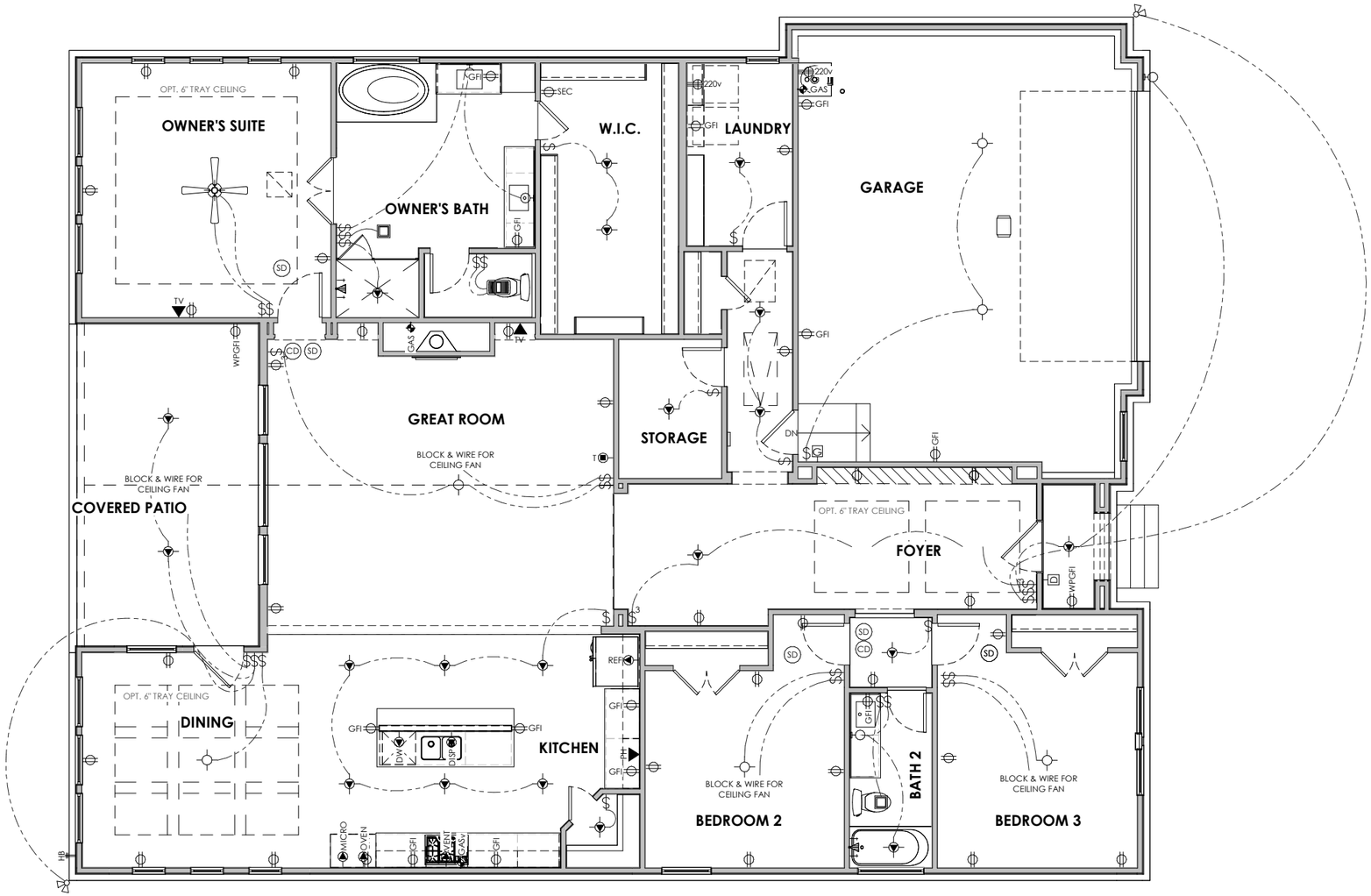
ISSUE DATE	8/1/2023
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

FIRST FLOOR PLAN

SHEET NO.

A1.02



ELEVATION A - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

ELECTRICAL LEGEND

- OUTLET
- SWITCHED OUTLET (SW)
- 220v OUTLET (220v)
- CEILING OUTLET (CLG)
- FLOOR OUTLET (FLR)
- PHONE OUTLET (PH)
- SURROUND SOUND OUTLET (5.1 SS)
- TV OUTLET (TV)
- SWITCH
- 3 WAY SWITCH (3)
- 4 WAY SWITCH (4)
- WALL LIGHT
- SURFACE MOUNT LIGHT
- HANGING LIGHT (H)
- LED DISK
- GFCI OUTLET (GFI)
- WEATHERPROOF GFCI OUTLET (WPGFI)
- EQUIPMENT SPECIFIC OUTLET (EQUIP)
- THERMOSTAT (T)
- SPEAKER (S)
- SMOKE DETECTOR (SD)
- CARBON DETECTOR (CD)
- PRESSURE SWITCH (P)
- DIMMER SWITCH (D)
- RECESSED CAN
- RECESSED EYEBALL
- PENDANT LIGHT
- UNDER/OVER CABINET LIGHT
- EXHAUST FAN
- FLOURESCENT LIGHT BOX
- CEILING FAN
- CEILING FAN w/ LIGHT KIT

ELECTRICAL NOTES

INFORMATION AND LAYOUTS SHOWN ON DRAWINGS ARE ONLY SCHEMATIC IN DESIGN ALL ELECTRICAL TO BE INSTALLED PER CODE AND/OR LOCAL AMENDMENTS TO THE SPECIFICATIONS REQUIRED

SCAN FOR ADDITIONAL INFORMATION ON ELECTRICAL LEGEND SYMBOLS AND NOTES

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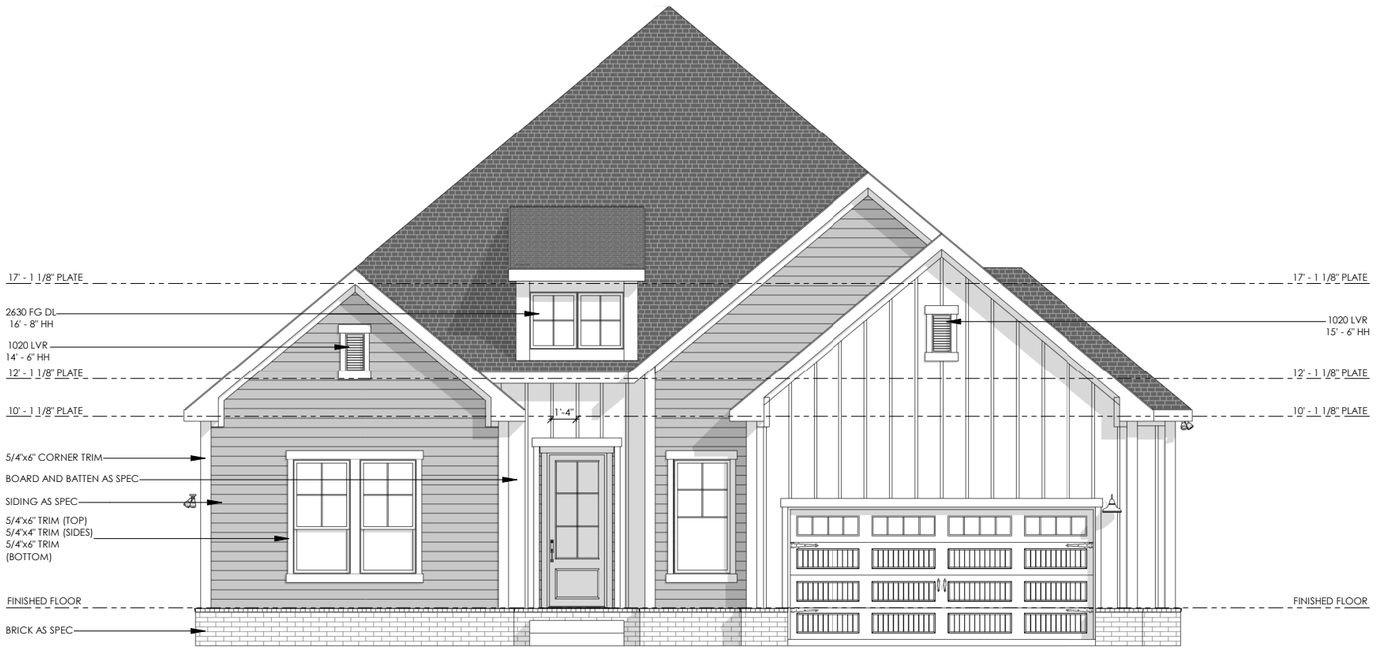
SCALE	1/8" = 1'-0"

SHEET NAME

FIRST FLOOR ELECTRICAL PLAN

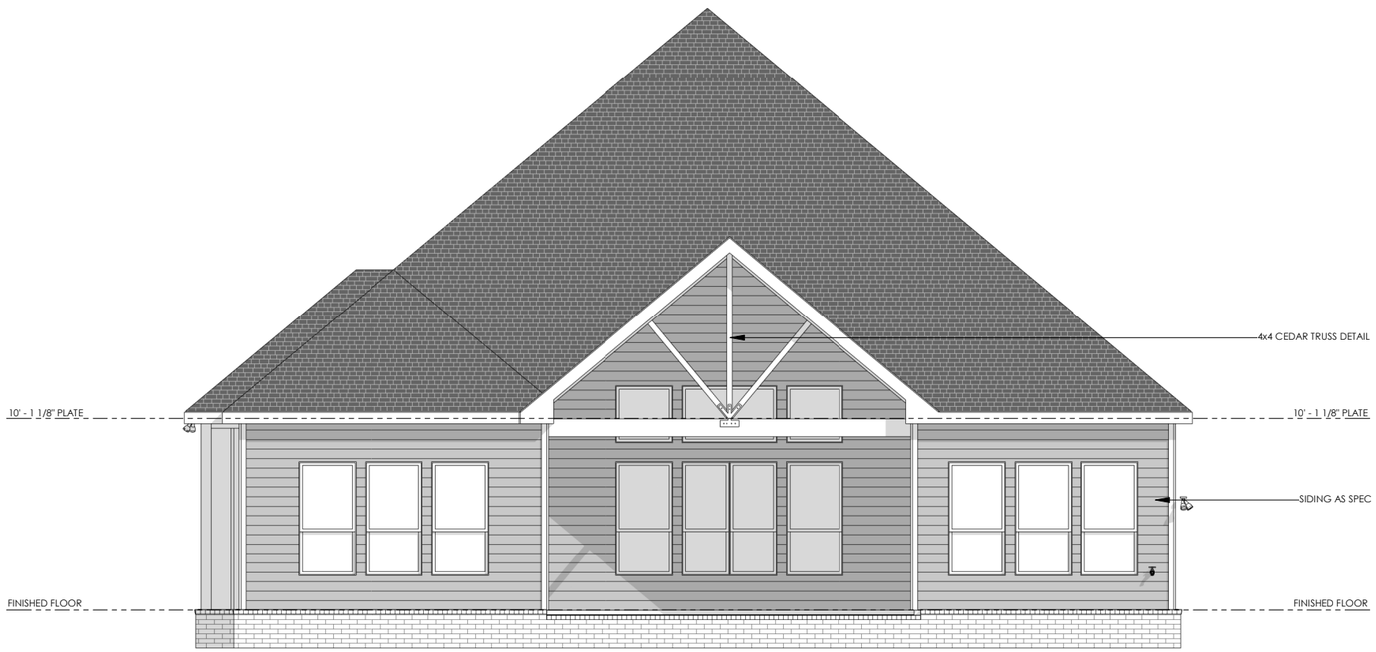
SHEET NO.

A1.03



ELEVATION A - FRONT ELEVATION

1/8" = 1'-0"



ELEVATION A - REAR ELEVATION

1/8" = 1'-0"

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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - EXTERIOR ELEVATIONS

SHEET NO.

A1.04



ELEVATION A - OPT. STONE FRONT ELEVATION

1/8" = 1'-0"

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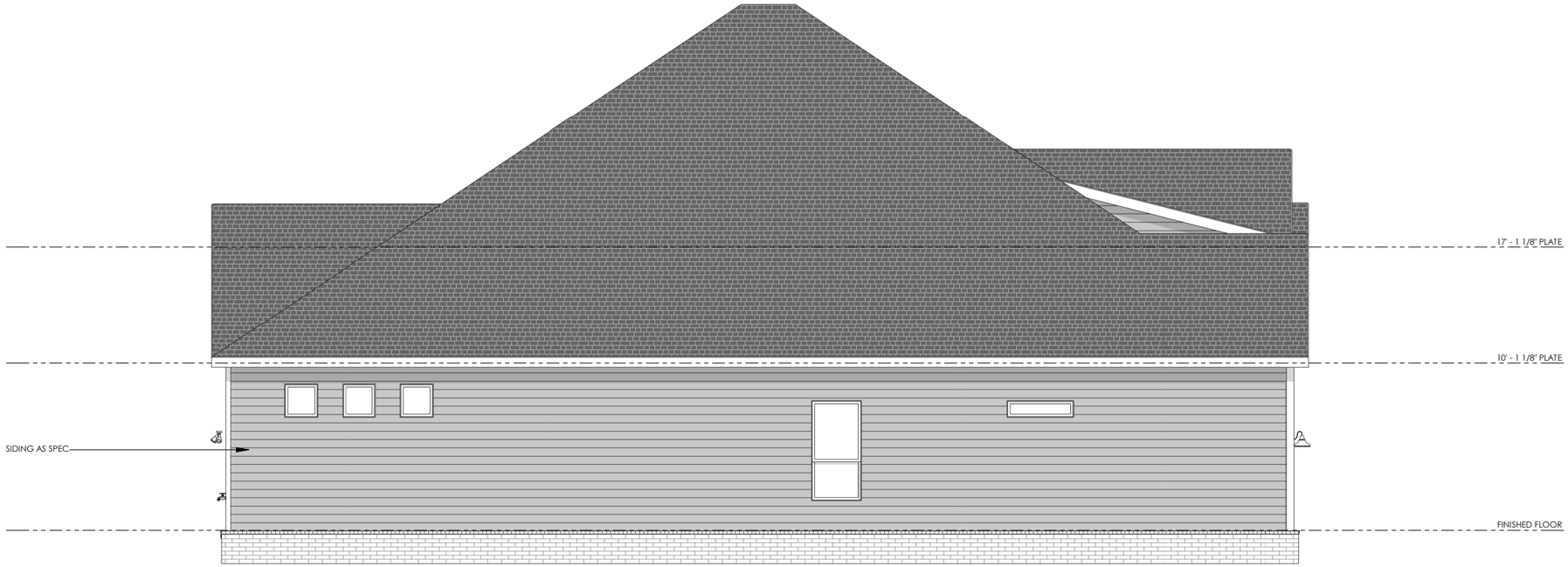
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - EXTERIOR ELEVATIONS

SHEET NO.

A1.05



ELEVATION A - LEFT ELEVATION

1/8" = 1'-0"



ELEVATION A - RIGHT ELEVATION

1/8" = 1'-0"

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ISSUE DATE	8/1/2023
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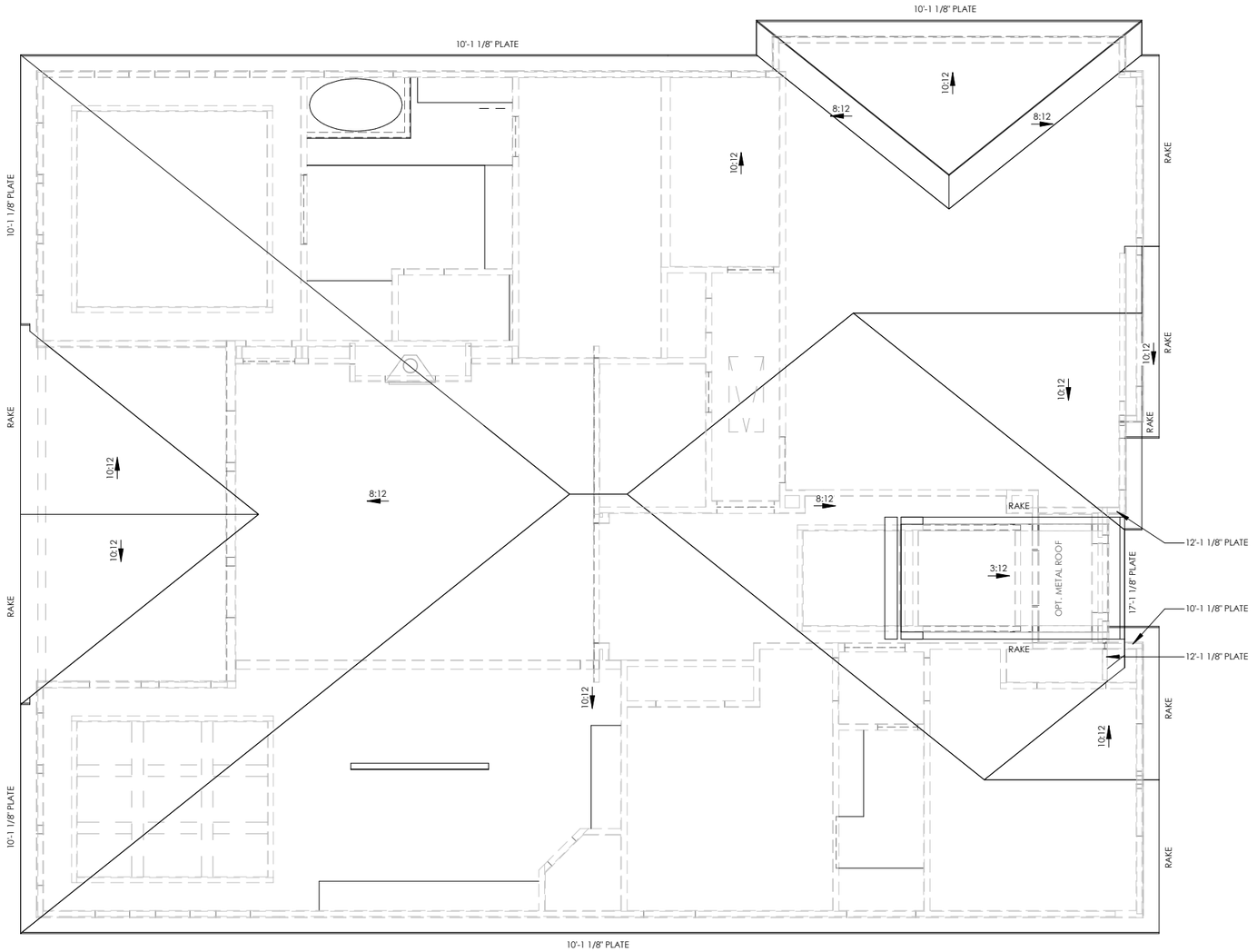
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - EXTERIOR ELEVATIONS

SHEET NO.

A1.06



ELEVATION A - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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PLAN NO.

2370 (237)

ISSUE DATE	8/1/2023
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - ROOF PLAN

SHEET NO.

A1.07

ELEVATION B - LIVING SPACE	
FIRST FLOOR	2369 SF
TOTAL	2369 SF

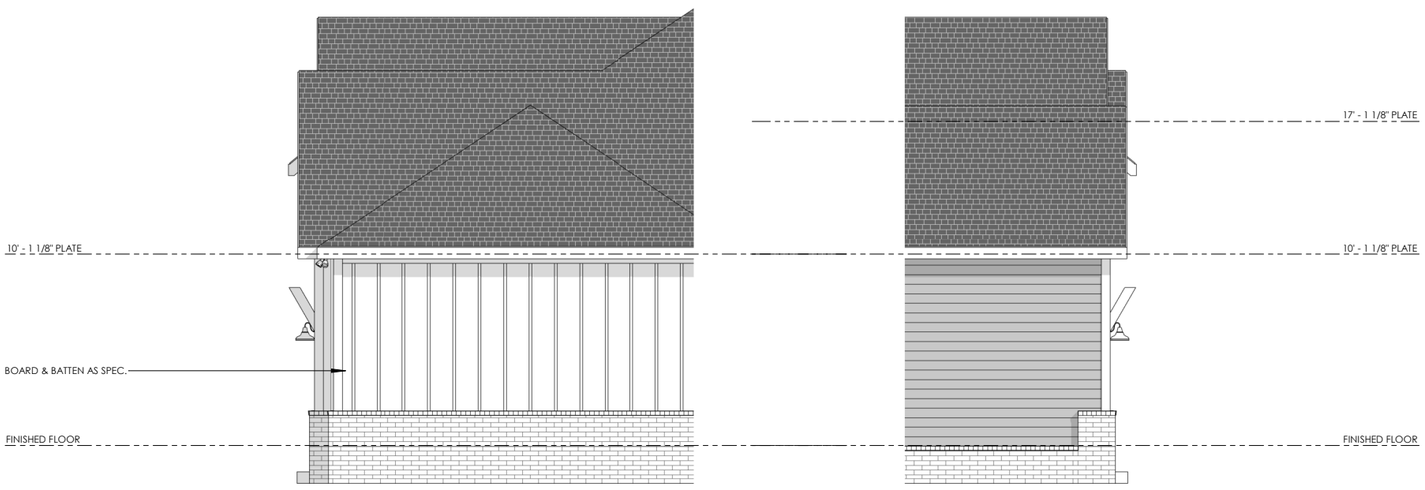
ELEVATION B - NON-LIVING	
GARAGE	519 SF
PORCH	61 SF
PATIO	215 SF
TOTAL	795 SF

TOTAL UNDER ROOF	3164 SF



ELEVATION B - FRONT ELEVATION

1/8" = 1'-0"

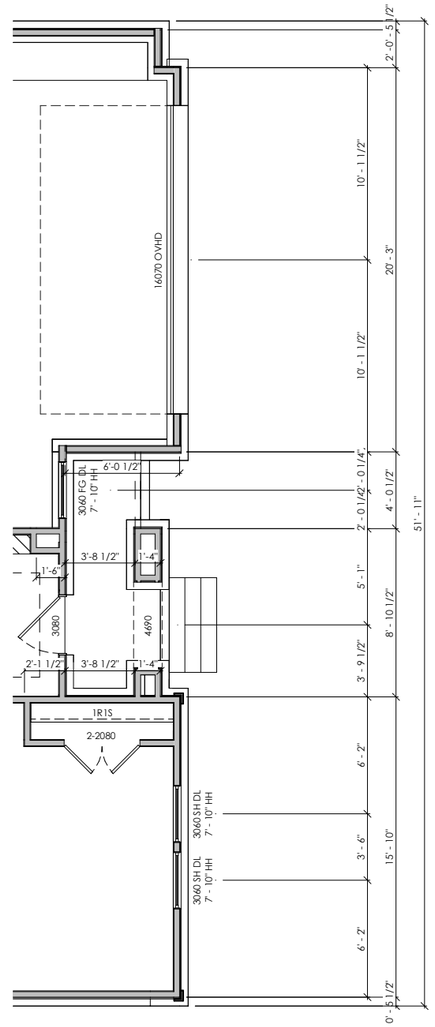


ELEVATION B - RIGHT ELEVATION

1/8" = 1'-0"

ELEVATION B - LEFT ELEVATION

1/8" = 1'-0"



ELEVATION B - FIRST FLOOR PLAN

1/8" = 1'-0"

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - EXTERIOR ELEVATIONS

SHEET NO.

A2.00



ELEVAITON B - OPT. STONE - FRONT

1/8" = 1'-0"

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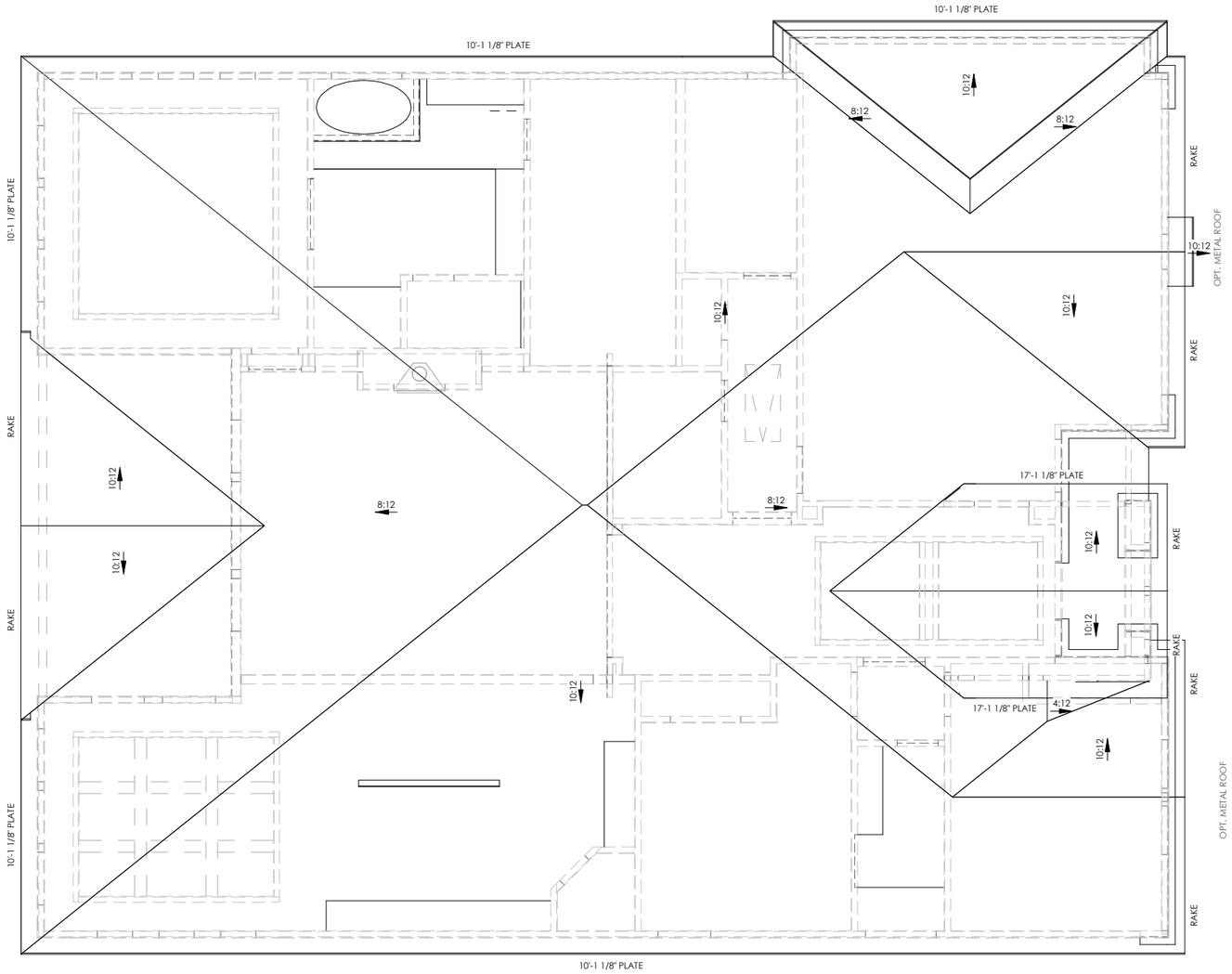
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - EXTERIOR ELEVATIONS

SHEET NO.

A2.01



ELEVATION B - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - ROOF PLAN

SHEET NO.

A2.02

ELEVATION C - LIVING SPACE	
FIRST FLOOR	2380 SF
TOTAL	2380 SF

ELEVATION C - NON-LIVING	
PORCH	31 SF
PATIO	215 SF
TOTAL	245 SF
TOTAL UNDER ROOF	3172 SF

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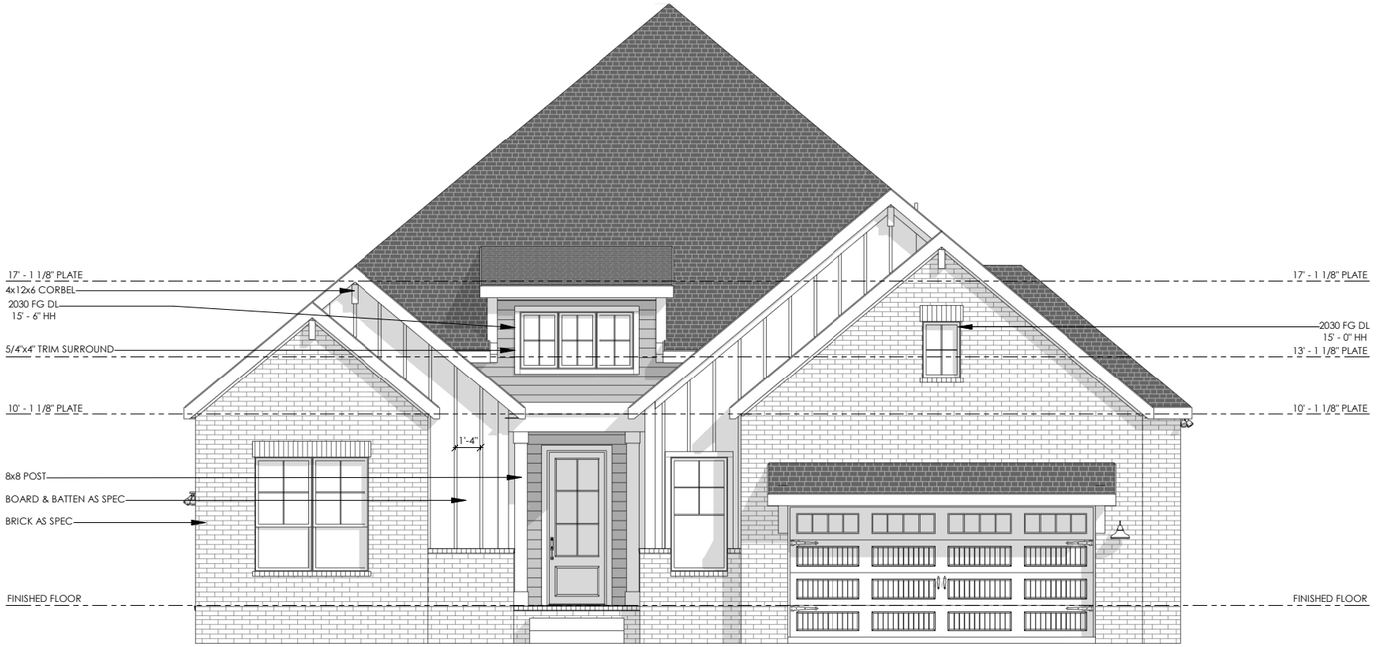
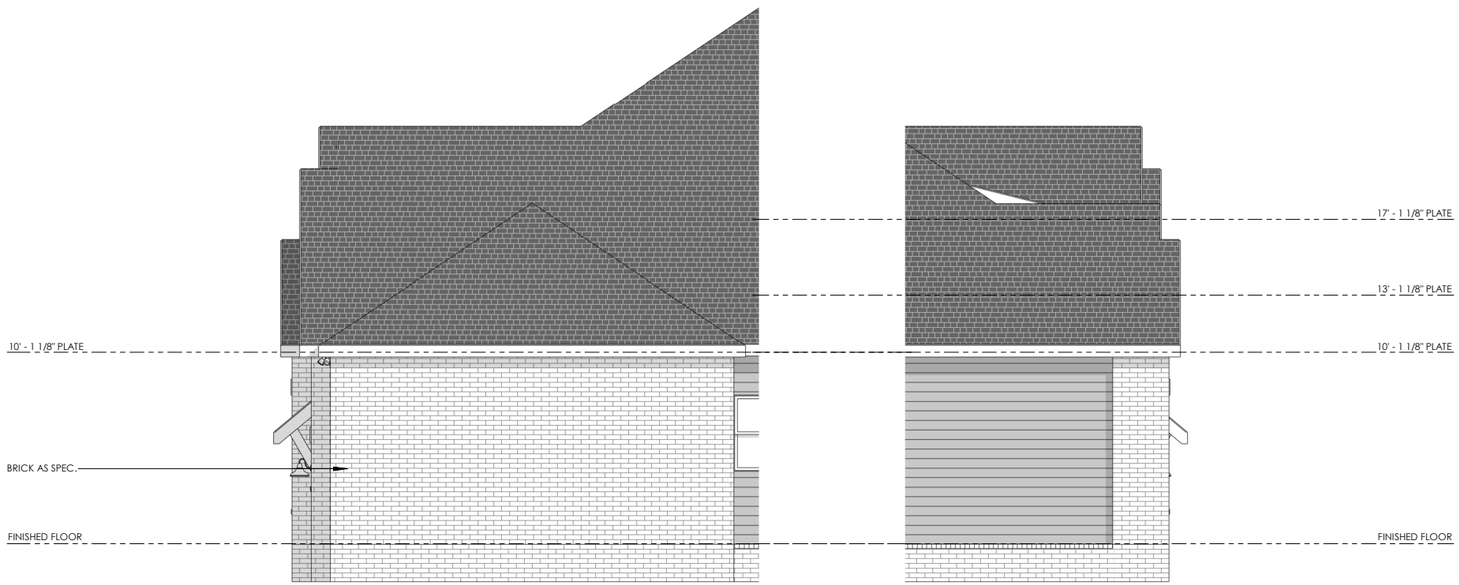


ELEVATION C - FRONT ELEVATION

1/8" = 1'-0"

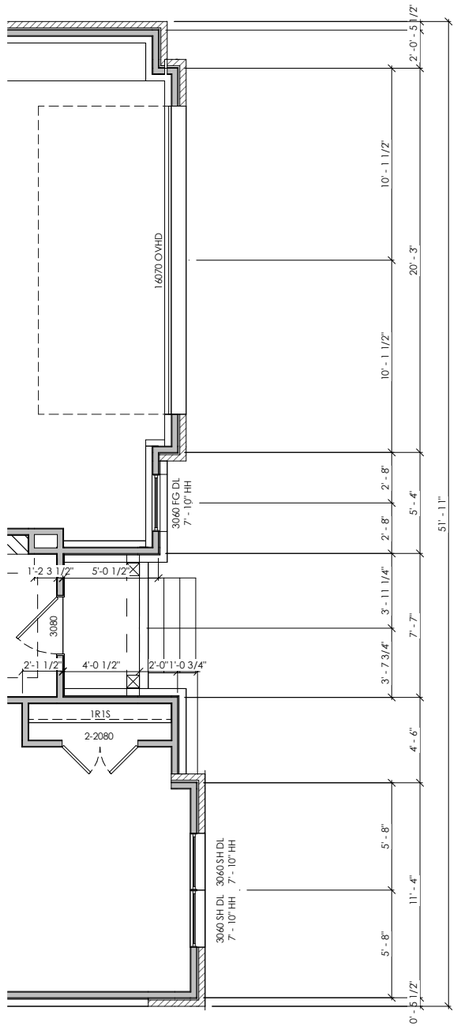


ELEVATION C - RIGHT ELEVATION

1/8" = 1'-0"

ELEVATION C - RIGHT ELEVATION

1/8" = 1'-0"



ELEVATION C - FIRST FLOOR PLAN

1/8" = 1'-0"

FLOOR PLAN NOTES

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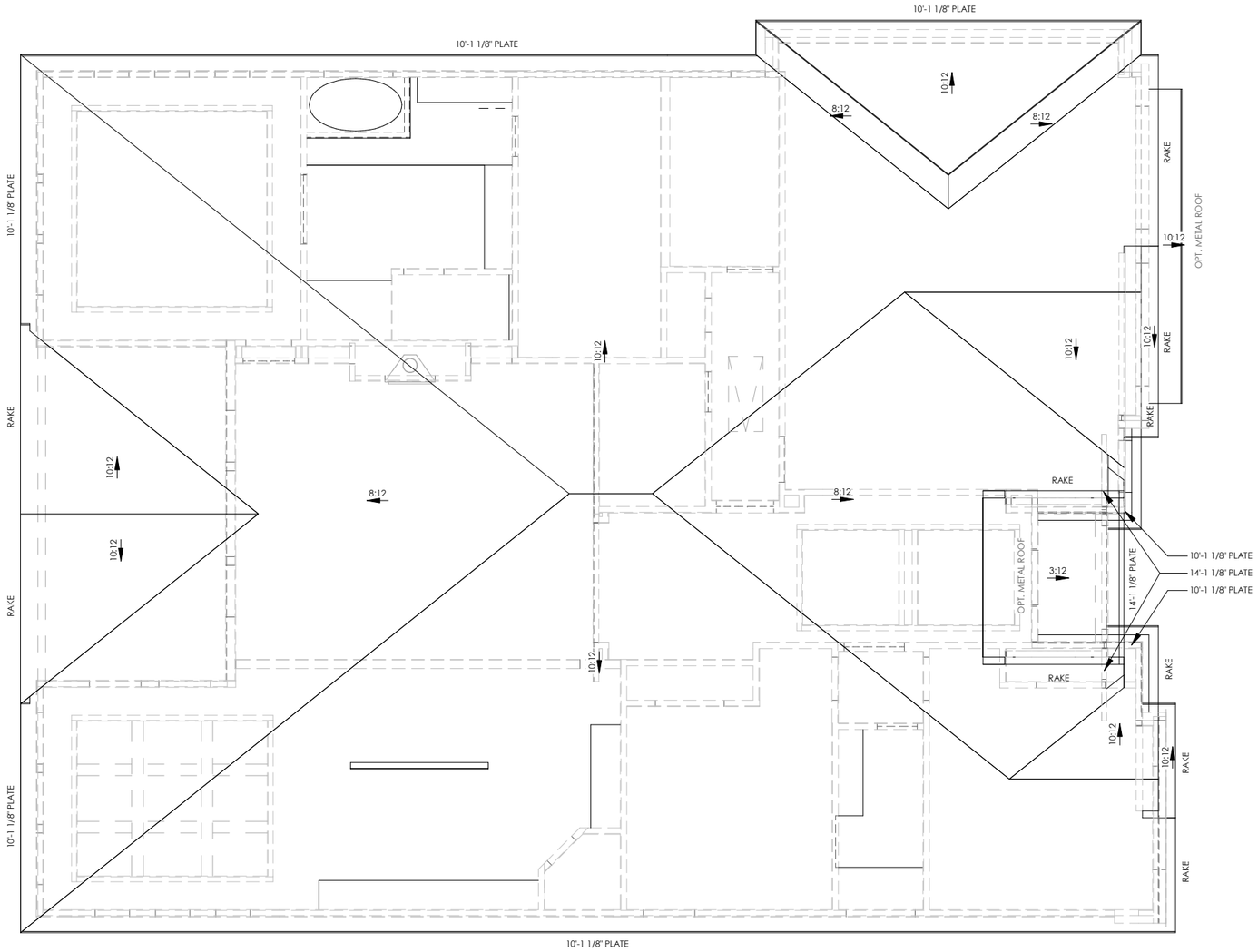
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - EXTERIOR ELEVATIONS

SHEET NO.

A3.00



ELEVATION C - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - ROOF PLAN

SHEET NO.

A3.01



ELEVATION D - FRONT

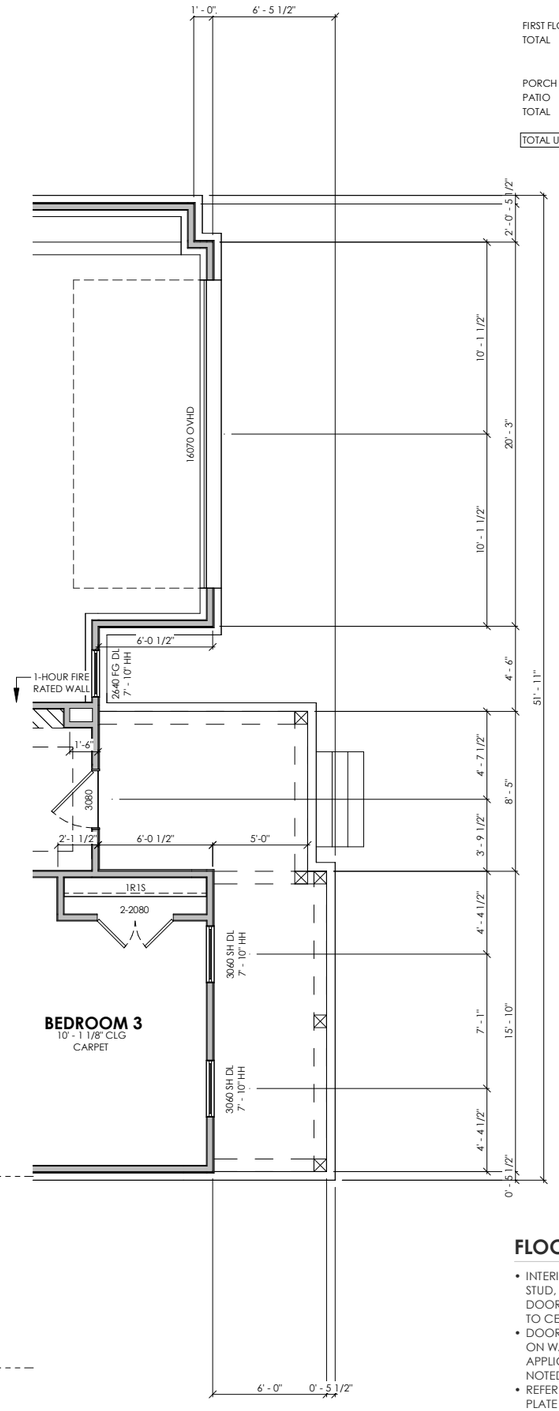
1/8" = 1'-0"

ELEVATION D - LEFT

1/8" = 1'-0"

ELEVATION D - RIGHT

1/8" = 1'-0"



ELEVATION D - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION D - LIVING SPACE

FIRST FLOOR	2380 SF
TOTAL	2380 SF

ELEVATION D - NON-LIVING

PORCH	31 SF
PATIO	215 SF
TOTAL	245 SF

TOTAL UNDER ROOF	3172 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - EXTERIOR ELEVATIONS

SHEET NO.

A4.00



ELEVATION D - OPT. STONE - FRONT

1/8" = 1'-0"

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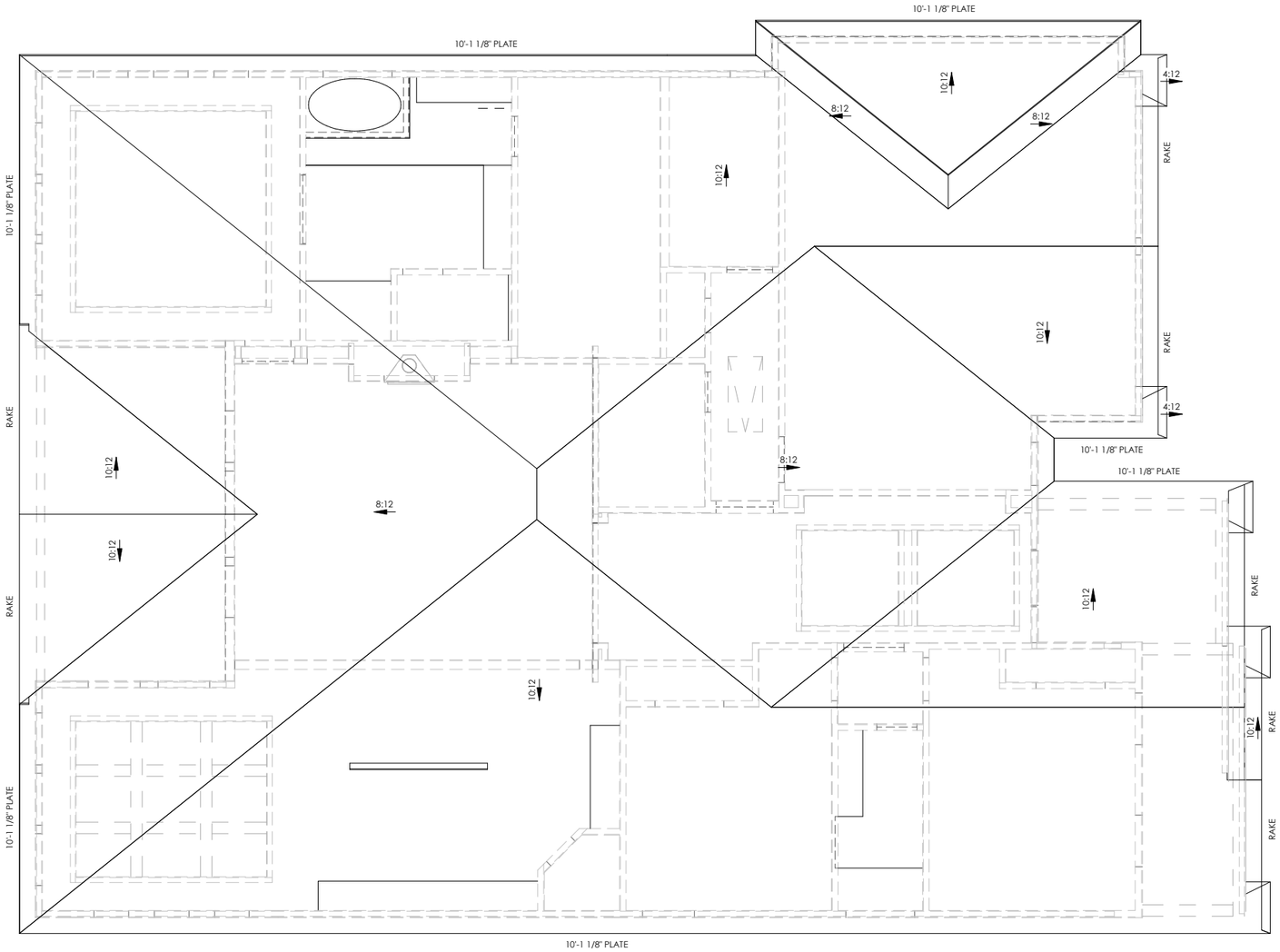
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - EXTERIOR ELEVATIONS

SHEET NO.

A4.01



ELEVATION D - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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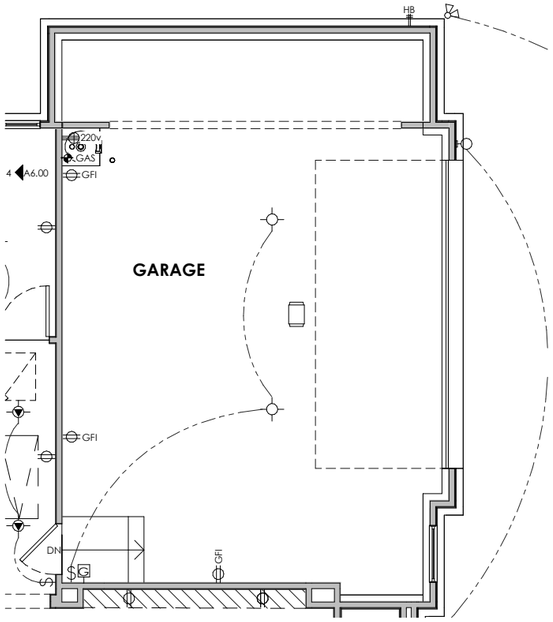
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - ROOF PLAN

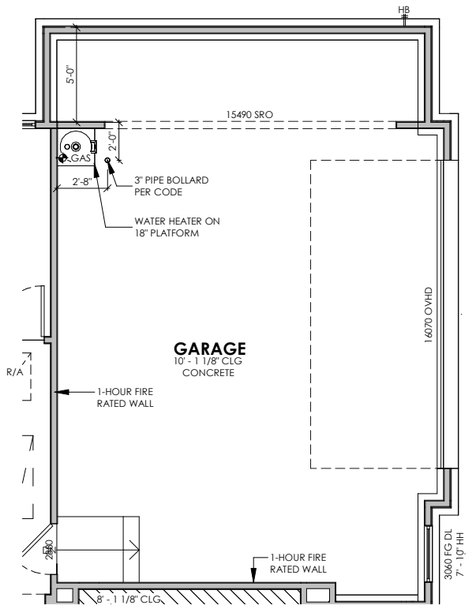
SHEET NO.

A4.02



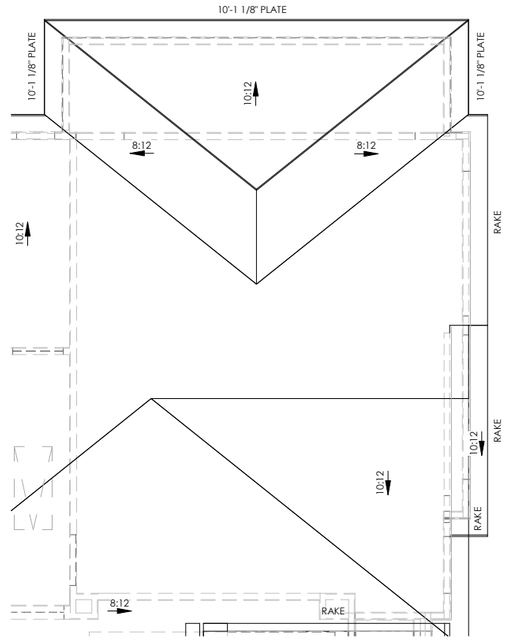
OPT. 1/2 CAR GARAGE ELECTRICAL PLAN

1/8" = 1'-0"



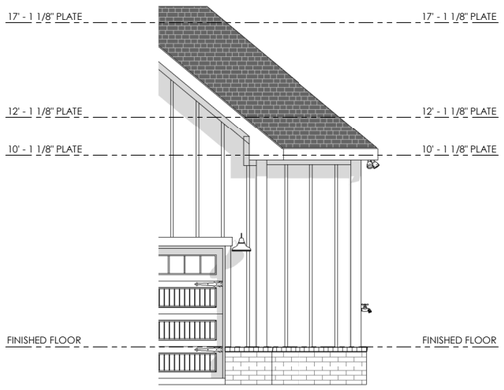
OPT. 1/2 CAR GARAGE FIRST FLOOR PLAN

1/8" = 1'-0"



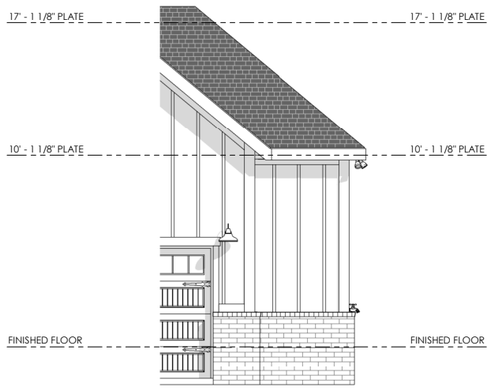
OPT. 1/2 CAR GARAGE ROOF PLAN - A

1/8" = 1'-0"



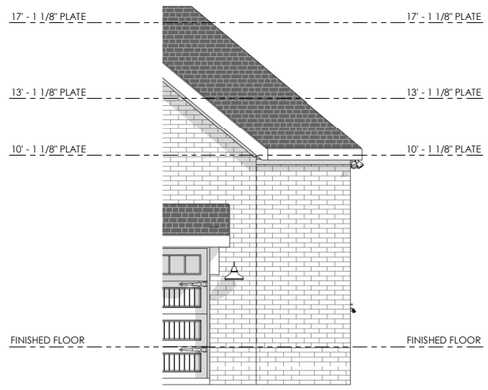
ELEVATION A & D - OPT. 1/2 CAR FRONT

1/8" = 1'-0"



ELEVATION B - OPT. 1/2 CAR FRONT

1/8" = 1'-0"



ELEVATION C - OPT. 1/2 CAR FRONT

1/8" = 1'-0"

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2370 (237)

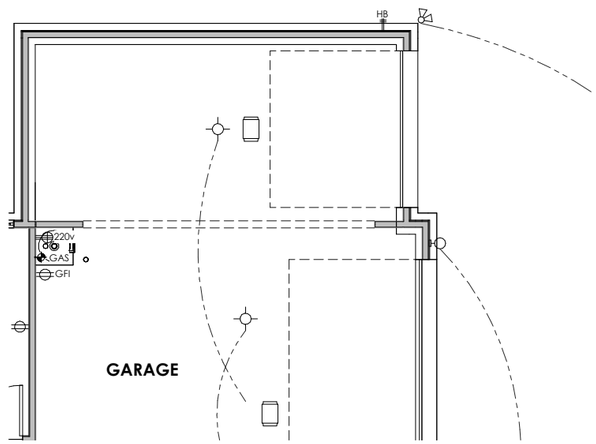
ISSUE DATE	8/1/2023
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

OPTIONS

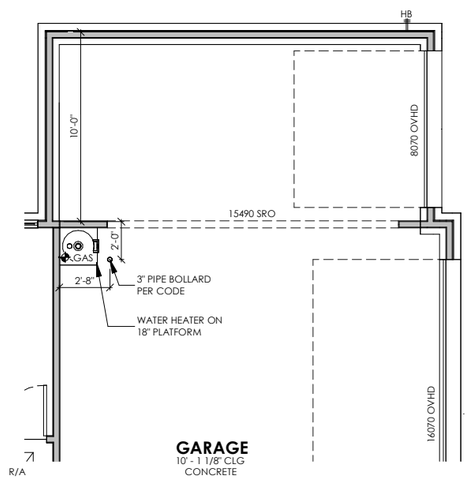
SHEET NO.

A5.00



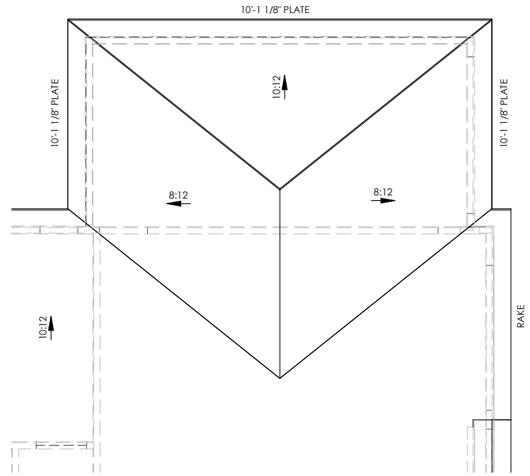
OPT. 3 CAR GARAGE ELECTRICAL PLAN

1/8" = 1'-0"



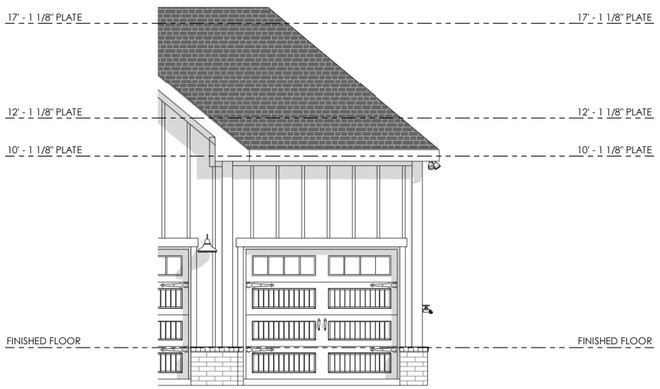
OPT. 3 CAR GARAGE FIRST FLOOR PLAN

1/8" = 1'-0"



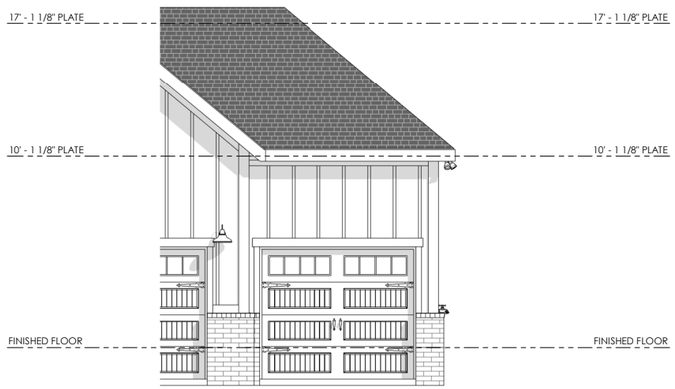
OPT. 3 CAR GARAGE ROOF PLAN

1/8" = 1'-0"



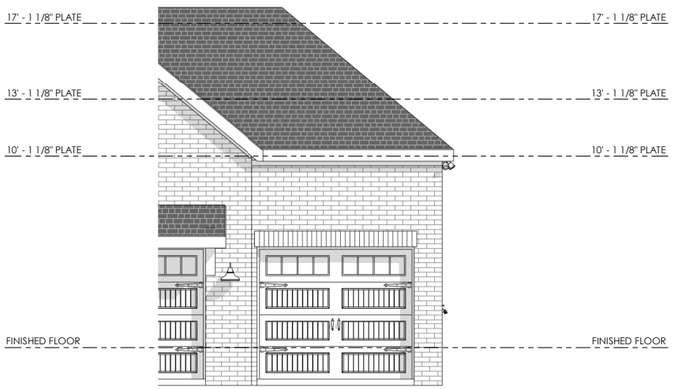
ELEVATION A & D - OPT. 3 CAR FRONT

1/8" = 1'-0"



ELEVATION B - OPT. 3 CAR FRONT

1/8" = 1'-0"



ELEVATION C - OPT. 3 CAR FRONT

1/8" = 1'-0"

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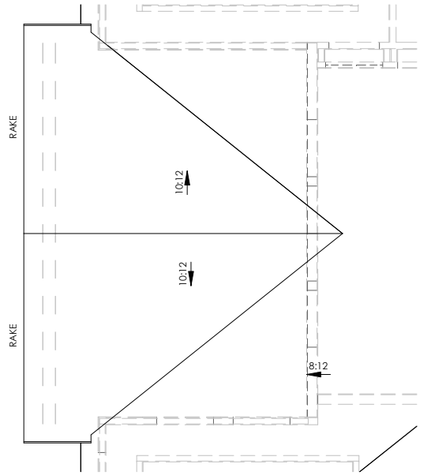
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

OPTIONS

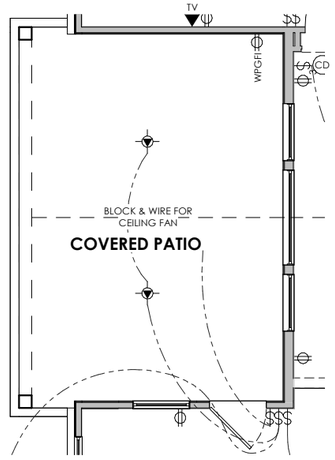
SHEET NO.

A5.01



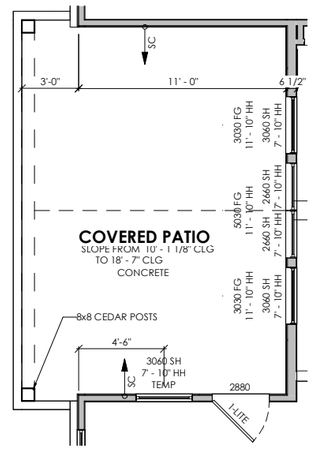
OPT. EXTENDED PATIO ROOF PLAN

1/8" = 1'-0"



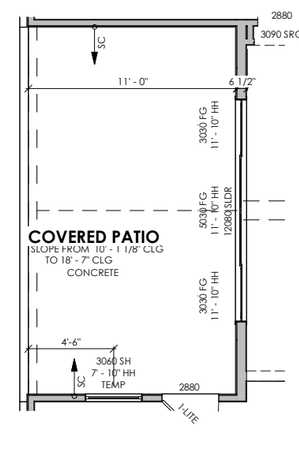
OPT. EXTENDED PATIO - ELECTRICAL

1/8" = 1'-0"



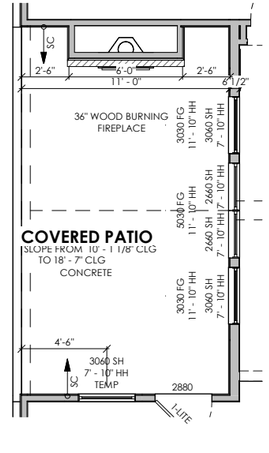
OPT. EXTENDED PATIO - FLOOR PLAN

1/8" = 1'-0"



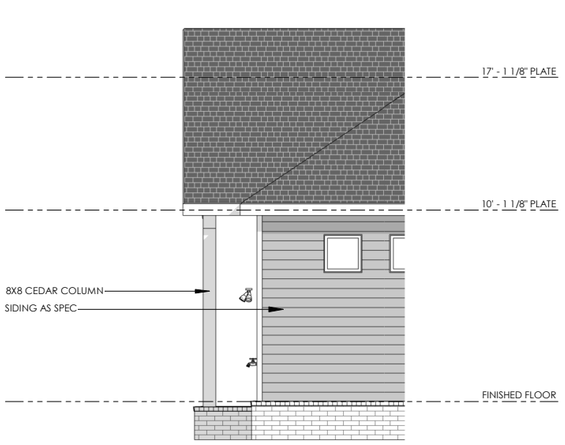
OPT. SLIDING DOOR

1/8" = 1'-0"



OPT. OUTDOOR FIREPLACE

1/8" = 1'-0"



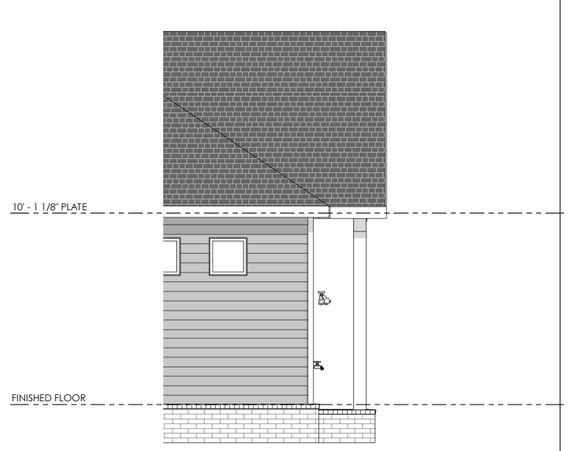
OPT. EXTENDED PATIO - LEFT

1/8" = 1'-0"



OPT. EXTENDED PATIO - REAR

1/8" = 1'-0"



OPT. EXTENDED PATIO - RIGHT

1/8" = 1'-0"

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PLAN NO.

2370 (237)

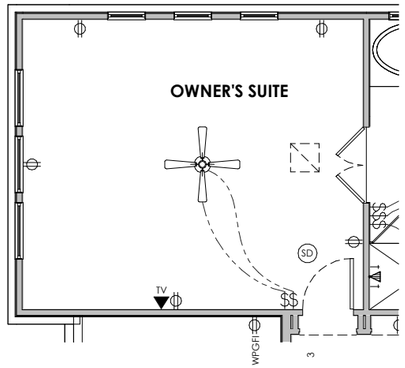
ISSUE DATE	8/1/2023
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

OPTIONS

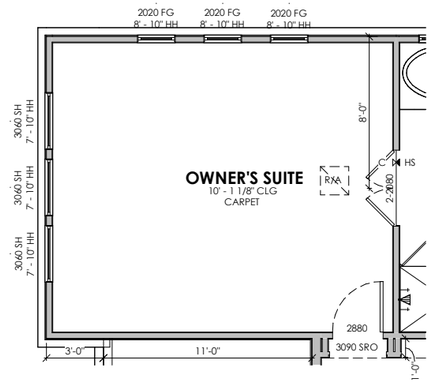
SHEET NO.

A5.02



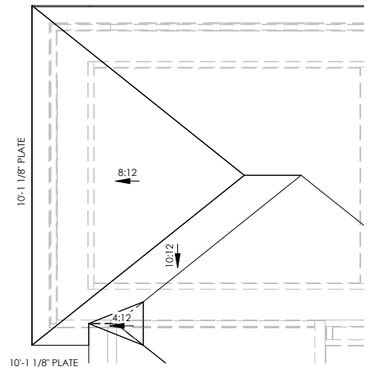
OPT. MASTER EXTENSION - ELECTRICAL

1/8" = 1'-0"



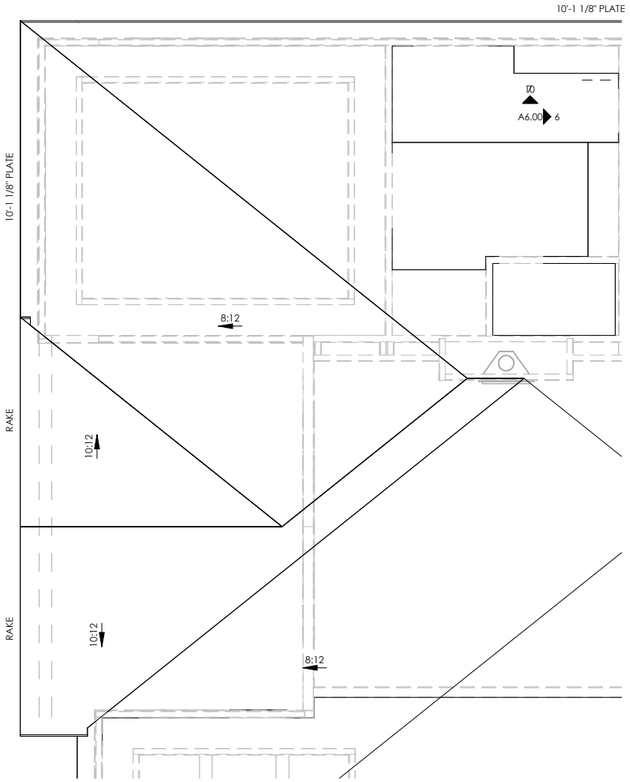
OPT. MASTER EXTENSION - FLOOR PLAN

1/8" = 1'-0"



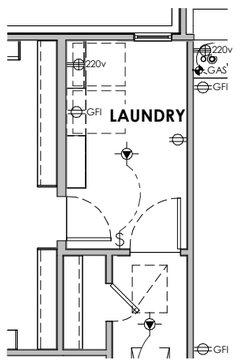
OPT. MASTER EXTENSION - ROOF PLAN

1/8" = 1'-0"



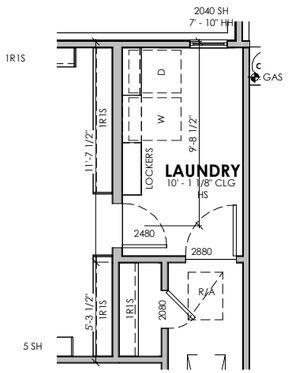
OPT. MASTER EXTENSION & OPT. PATIO 2 - ROOF PLAN

1/8" = 1'-0"



OPT. UTILITY DOOR - ELECTRICAL

1/8" = 1'-0"



OPT. UTILITY DOOR - FLOOR PLAN

1/8" = 1'-0"

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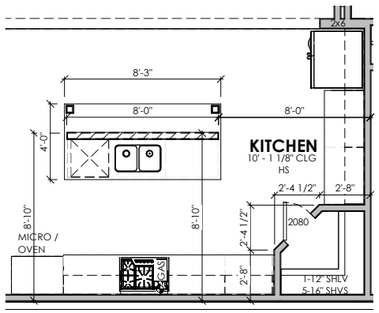
SHEET NAME

OPTIONS

SHEET NO.

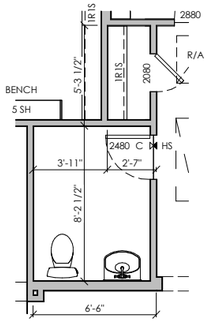
A5.03



1R1S

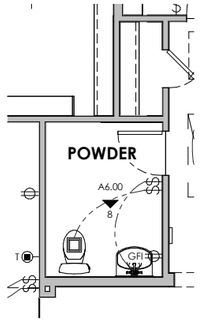
OPT. ISLAND 2 - FLOOR PLAN

1/8" = 1'-0"



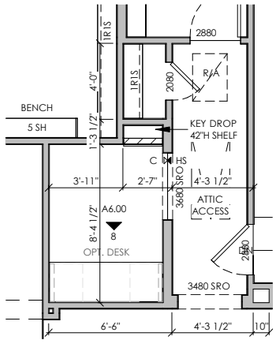
OPT. POWDER

1/8" = 1'-0"



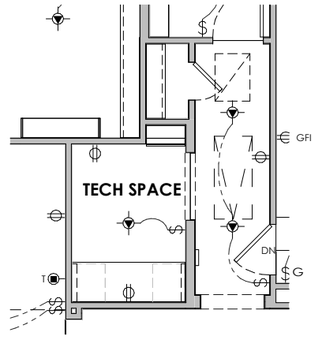
OPT. POWDER - ELECTRICAL

1/8" = 1'-0"



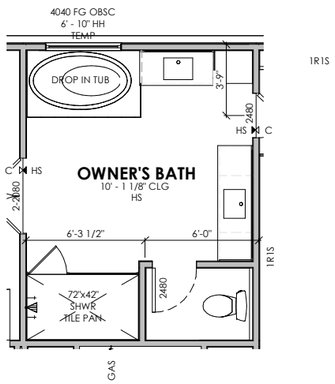
OPT. TECH SPACE

1/8" = 1'-0"



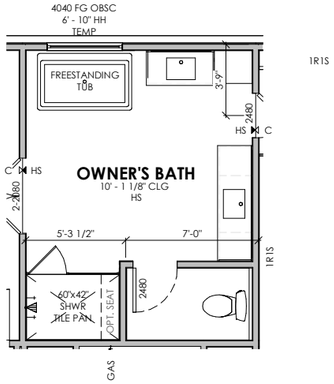
OPT. TECH SPACE - ELECTRICAL

1/8" = 1'-0"



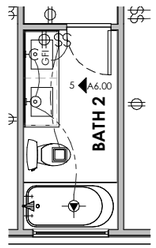
OPT. ENLARGED SHOWER

1/8" = 1'-0"



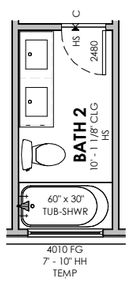
OPT. FREESTANDING TUB

1/8" = 1'-0"



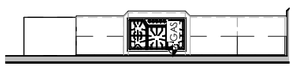
OPT. BATH 2 SINK

1/8" = 1'-0"



OPT. BATH 2 SINK

1/8" = 1'-0"



OPT. KITCHEN

1/8" = 1'-0"

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PLAN NO.
2370 (237)

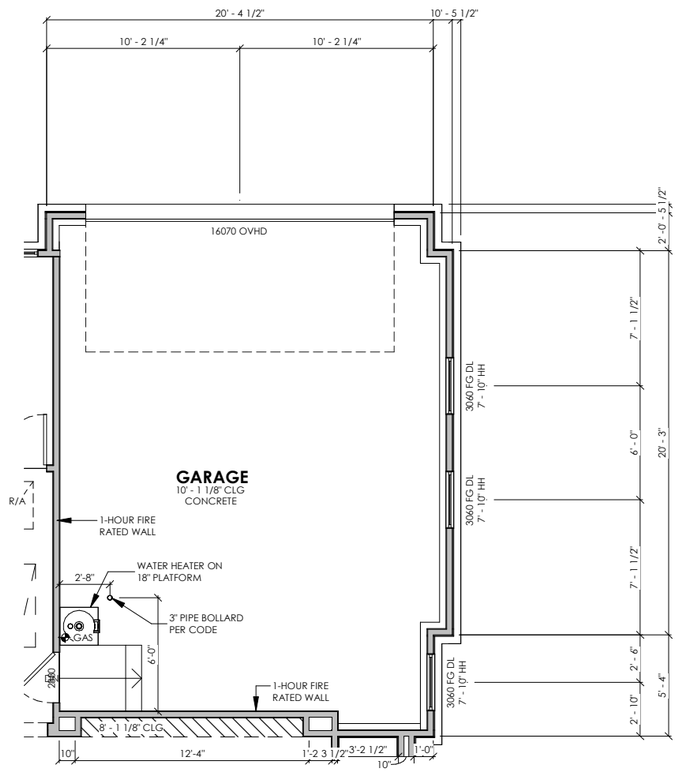
ISSUE DATE	8/1/2023
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME
OPTIONS

SHEET NO.
A5.04

OPT. SIDE LOAD GARAGE - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



OPT. SIDE LOAD GARAGE - FIRST FLOOR PLAN

1/8" = 1'-0"

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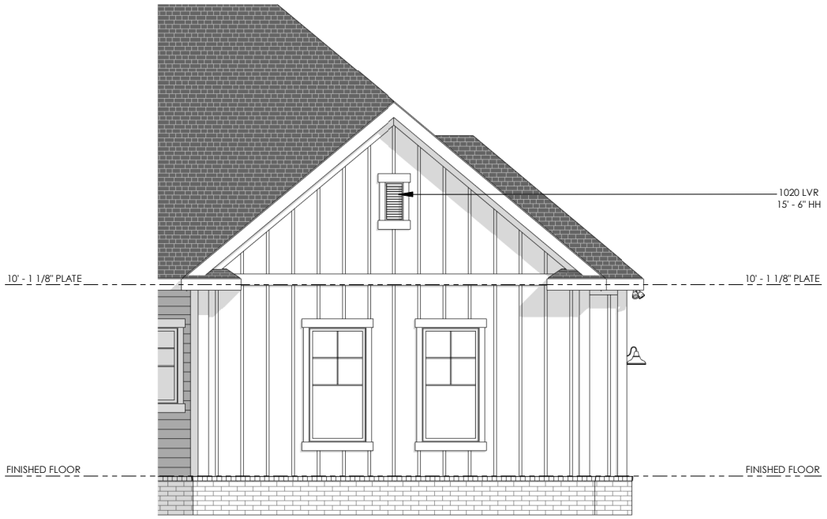
ISSUE DATE	8/1/2023
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

OPTIONS

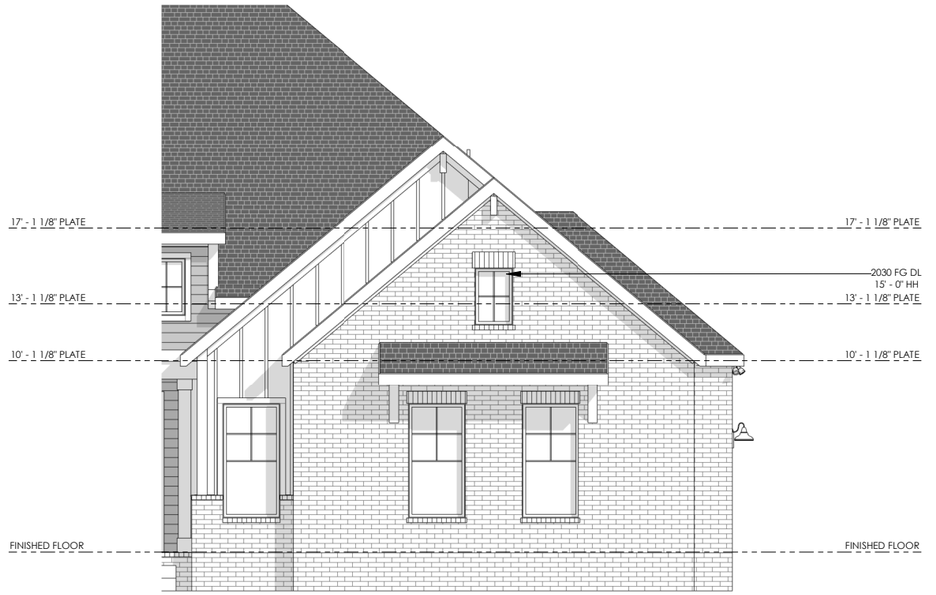
SHEET NO.

A5.05



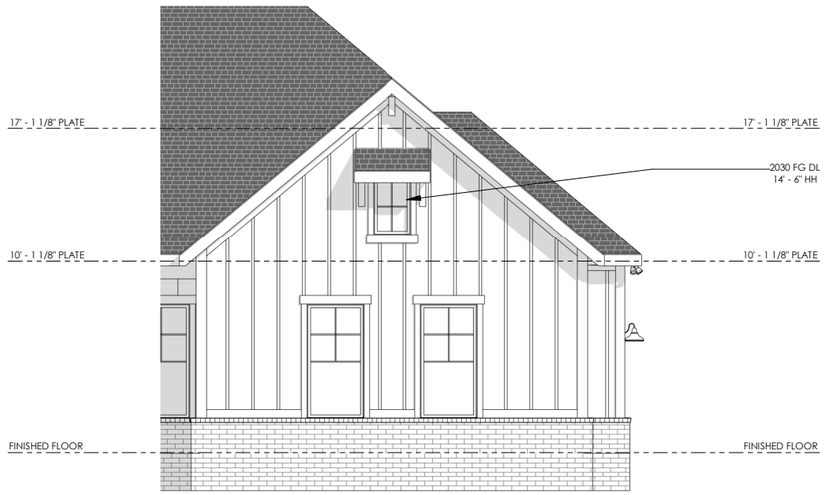
ELEVATION D - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



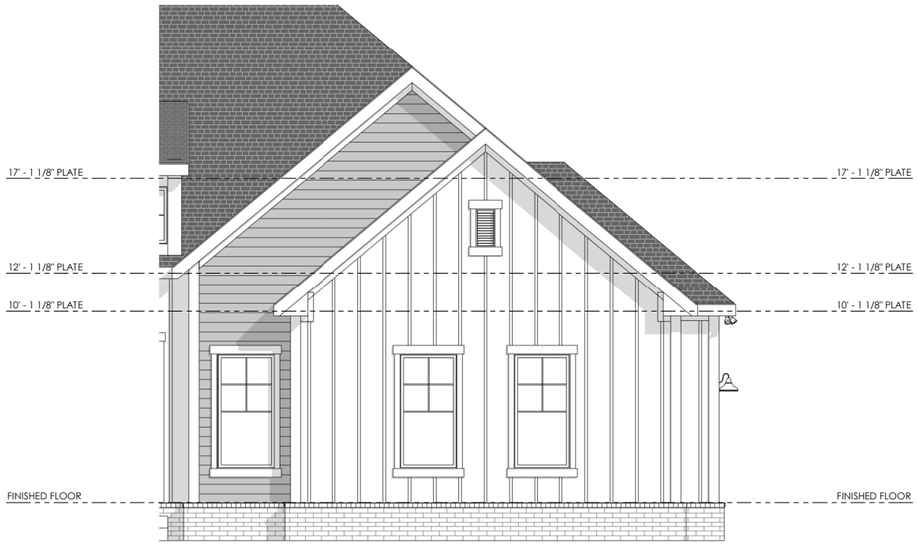
ELEVATION C - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



ELEVATION B - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



ELEVATION A - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"

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2370 (237)

ISSUE DATE	8/1/2023
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

OPTIONS

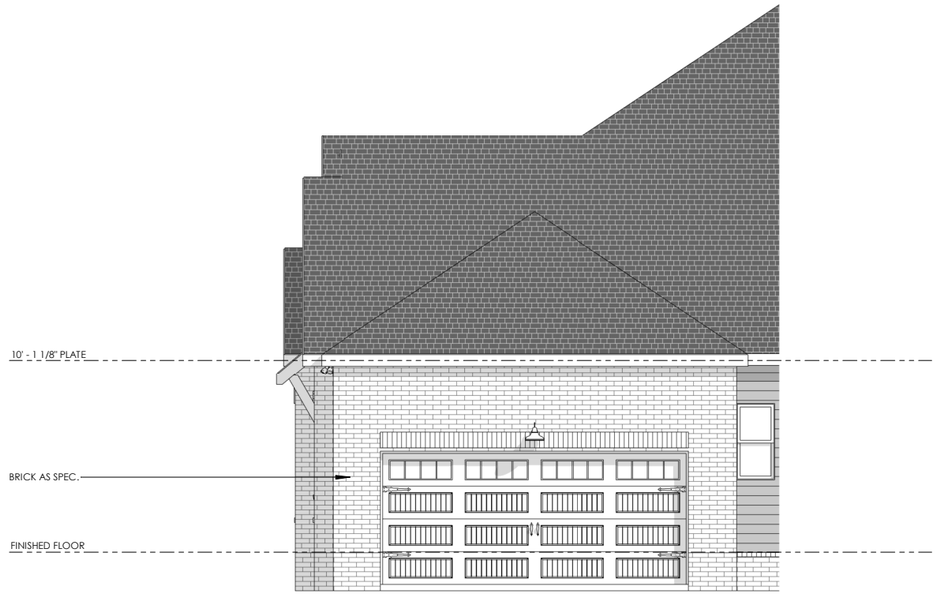
SHEET NO.

A5.06



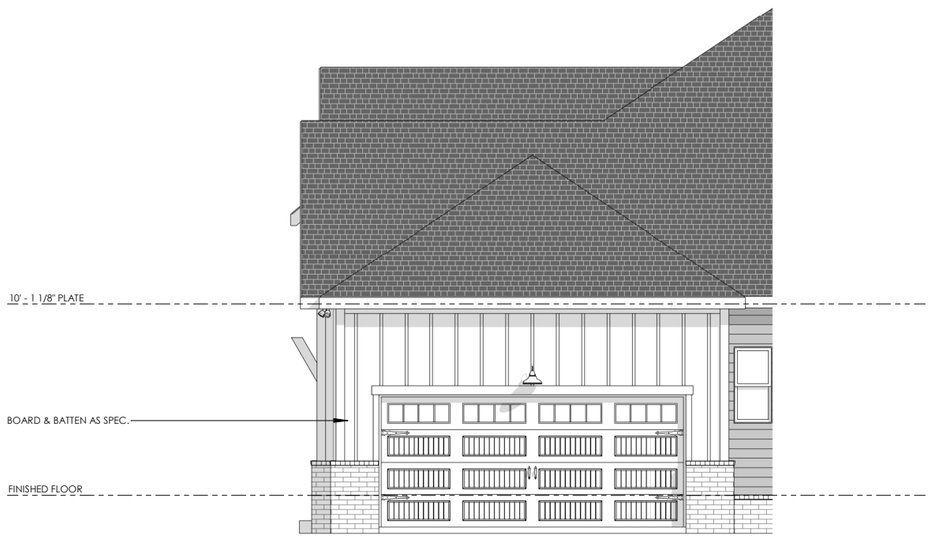
ELEVATION D - OPT. SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"



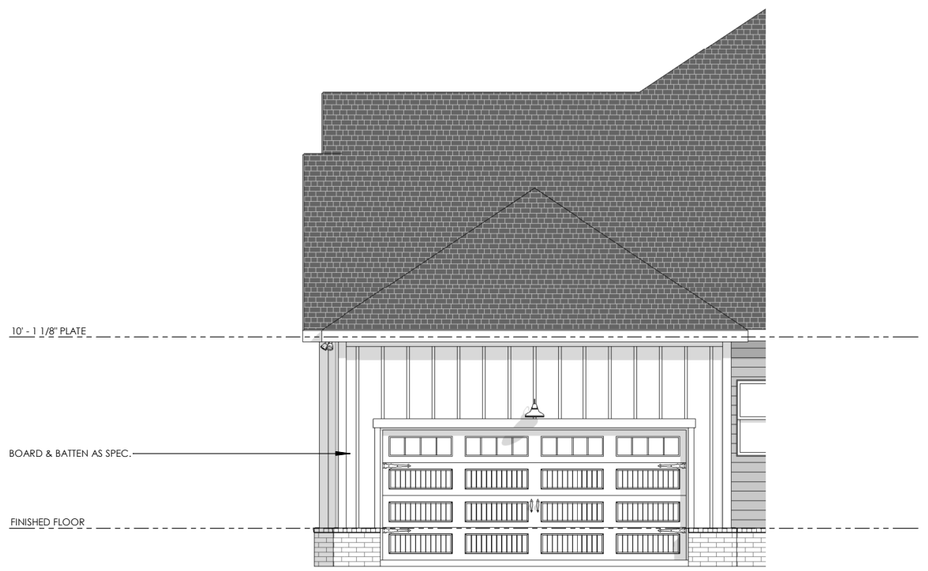
ELEVATION C - OPT. SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"



ELEVATION B - OPT. SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"



ELEVATION A - OPT. SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"

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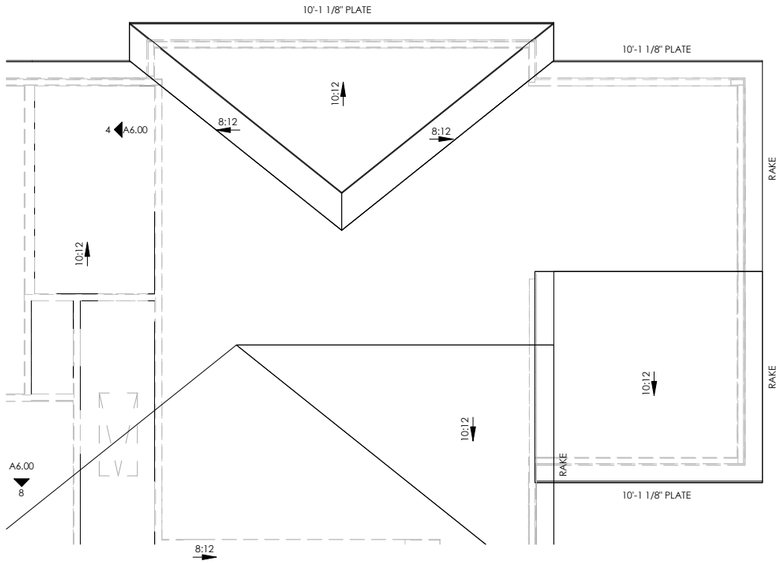
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

OPTIONS

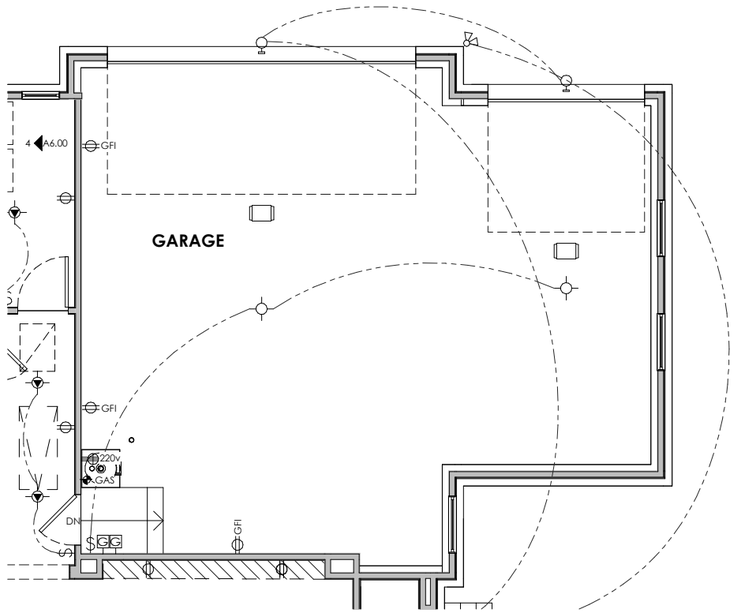
SHEET NO.

A5.07



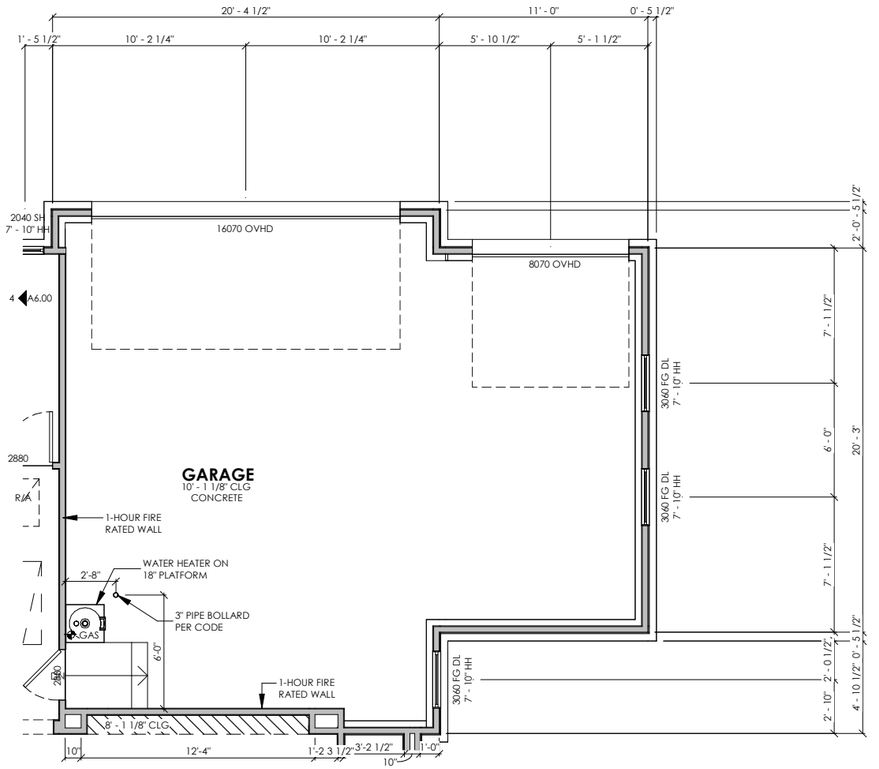
OPT. 3 CAR SIDE LOAD GARAGE - ROOF PLAN

1/8" = 1'-0"



OPT. 3 CAR SIDE LOAD GARAGE - ELECTRICAL PLAN

1/8" = 1'-0"



OPT. 3 CAR SIDE LOAD GARAGE - FLOOR PLAN

1/8" = 1'-0"

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ISSUE DATE	8/1/2023
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

OPTIONS

SHEET NO.

A5.08



D - OPT. 3 CAR SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"



C - OPT. 3 CAR SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"



B - OPT. 3 CAR SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"



A - OPT. 3 CAR SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"

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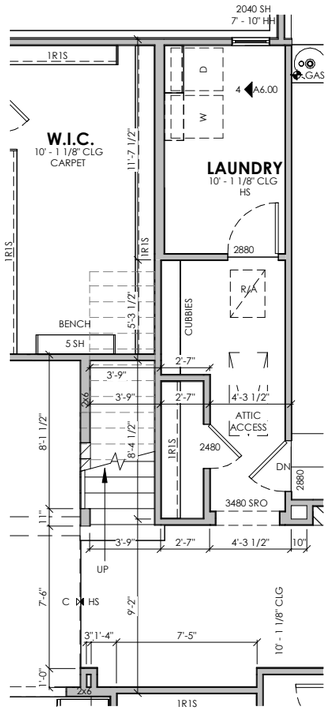
SCALE	1/8" = 1'-0"

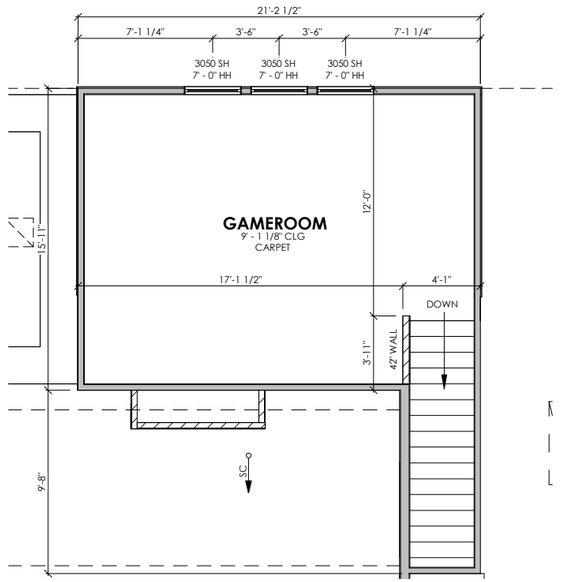
SHEET NAME

OPTIONS

SHEET NO.

A5.09





OPT. GAMEROOM - 2ND FLOOR PLAN

1/8" = 1'-0"

OPT. GAMEROOM - LIVING SPACE

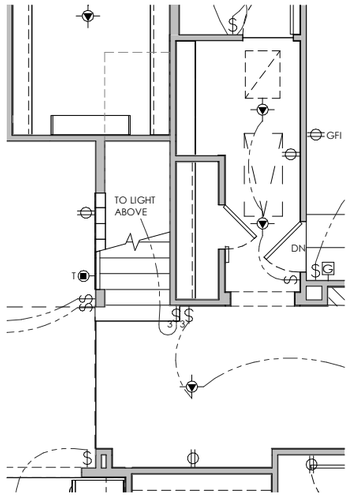
FIRST FLOOR	2369 SF
SECOND FLOOR	338 SF
TOTAL	2706 SF

OPT. GAMEROOM - NON-LIVING

GARAGE	546 SF
PORCH	31 SF
PATIO	215 SF
TOTAL	791 SF

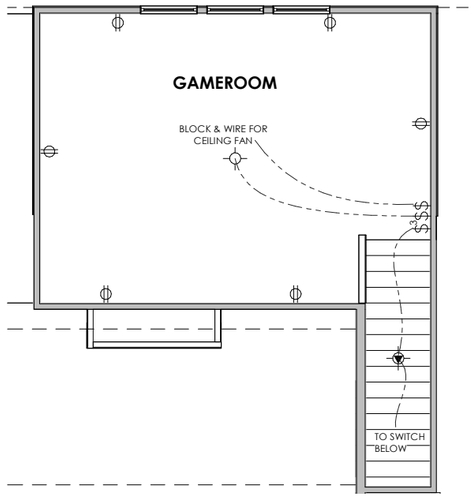
OPT. GAMEROOM - 1ST FLOOR PLAN

1/8" = 1'-0"



OPT. GAMEROOM - 1ST FLOOR ELEC. PLAN

1/8" = 1'-0"



OPT. GAMEROOM - 2ND FLOOR ELEC. PLAN

1/8" = 1'-0"

PROJECT NAME

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PLAN NO.

2370 (237)

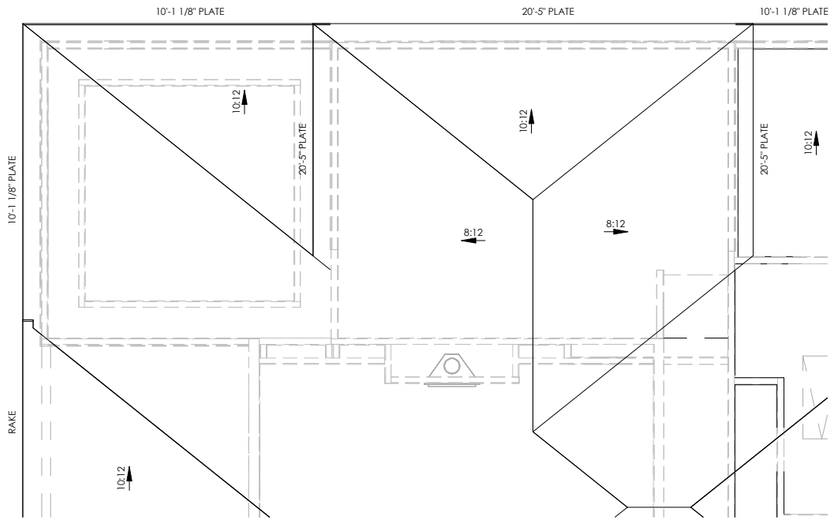
ISSUE DATE	8/1/2023
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

OPTIONS

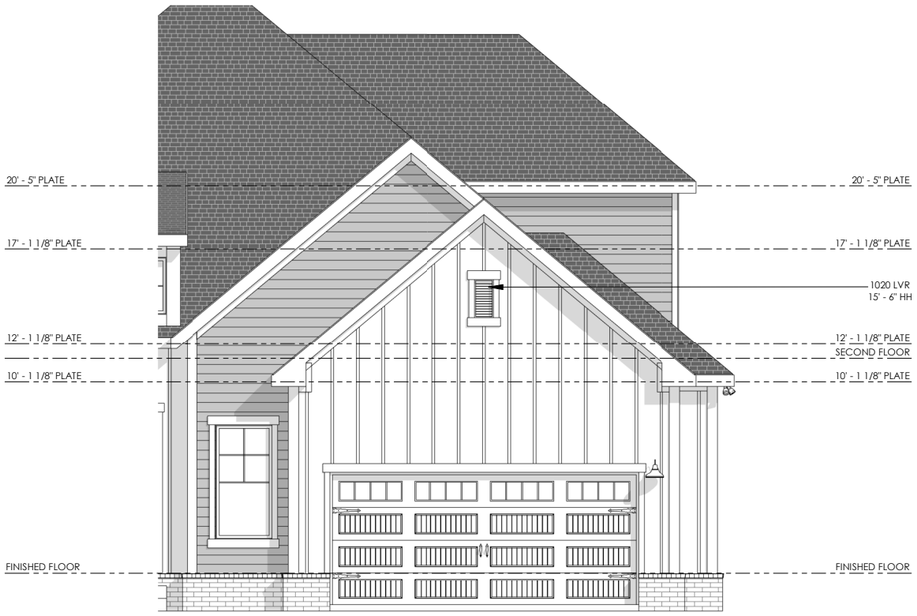
SHEET NO.

A5.10



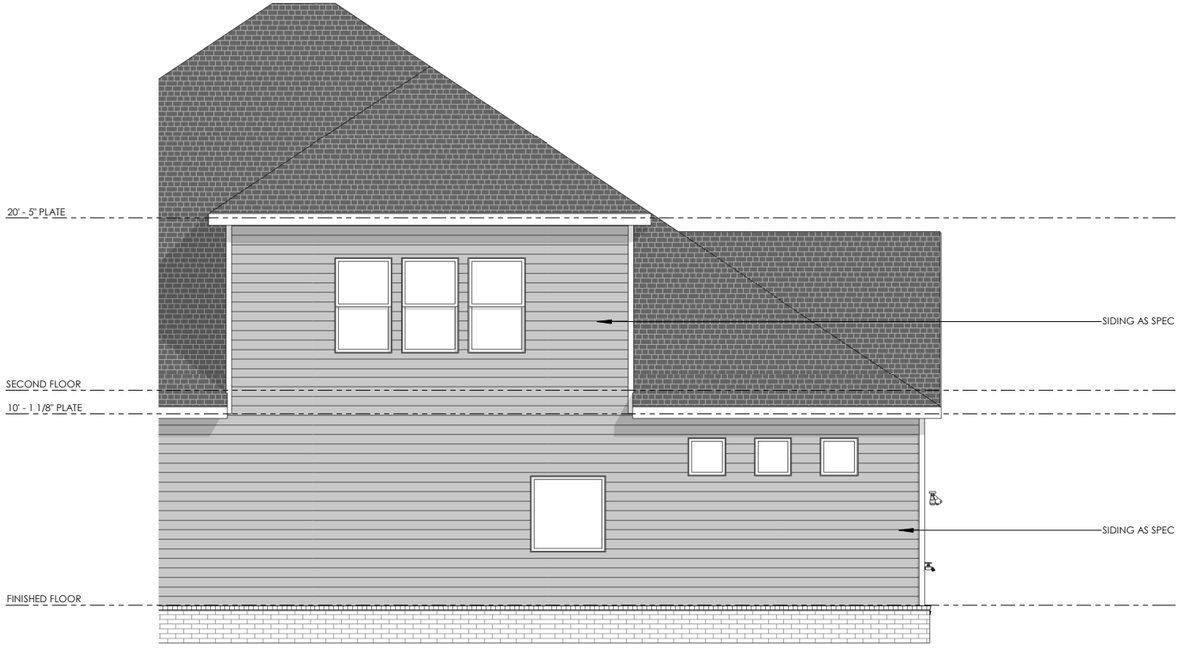
OPT. GAMEROOM - ROOF PLAN

1/8" = 1'-0"



ELEVATION A - OPT. GAMEROOM - FRONT

1/8" = 1'-0"



ELEVATION A - OPT. GAMEROOM - RIGHT

1/8" = 1'-0"

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PLAN NO.

2370 (237)

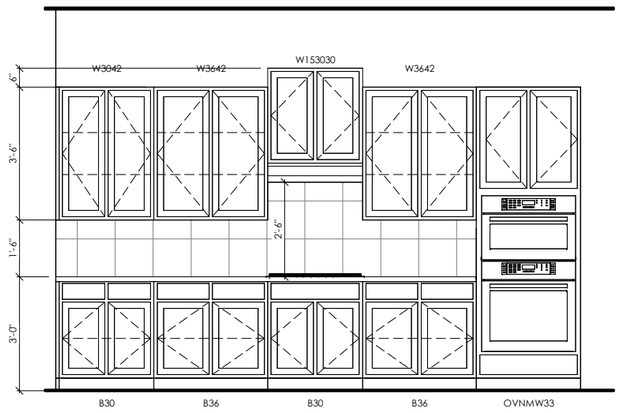
ISSUE DATE	8/1/2023
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

OPTIONS

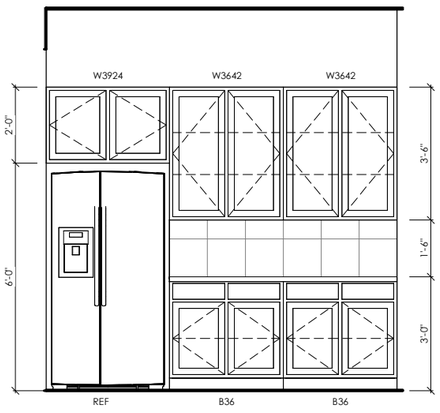
SHEET NO.

A5.11



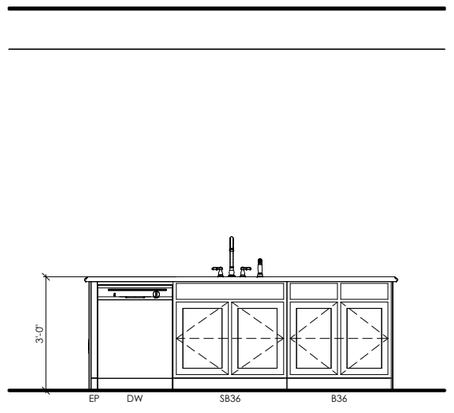
KITCHEN

1/4" = 1'-0"



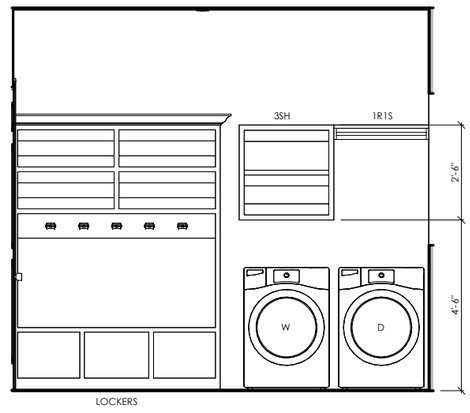
KITCHEN

1/4" = 1'-0"



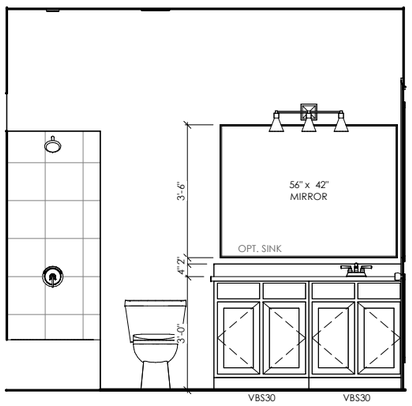
KITCHEN

1/4" = 1'-0"



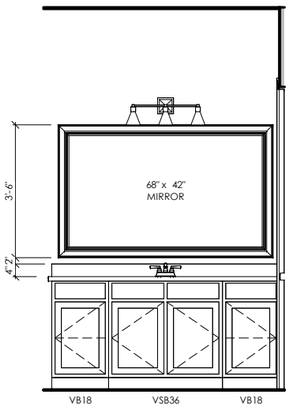
LAUNDRY

1/4" = 1'-0"



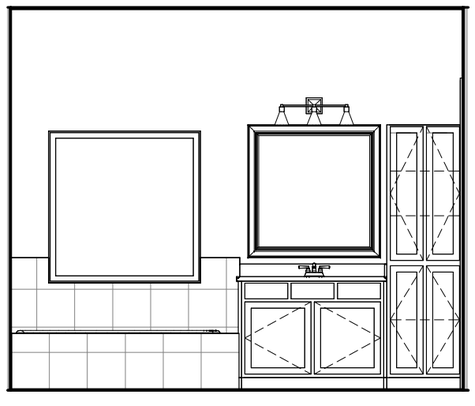
BATH 2

1/4" = 1'-0"



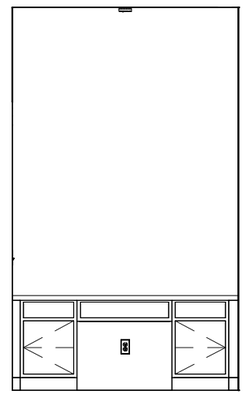
OWNER'S BATH

1/4" = 1'-0"



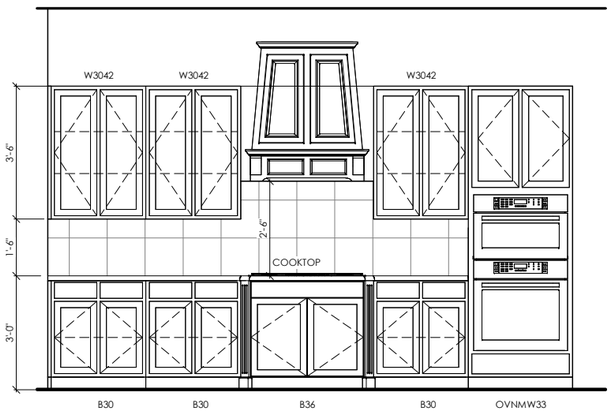
OWNER'S BATH

1/4" = 1'-0"



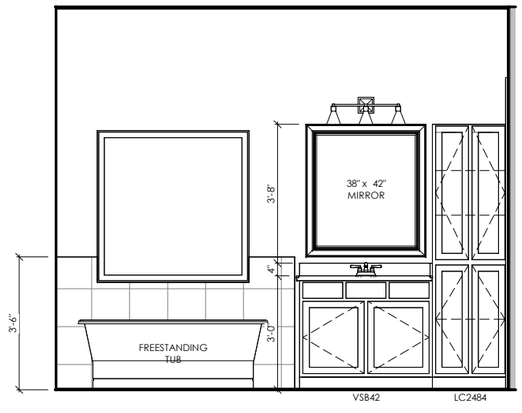
OPT. DESK

1/4" = 1'-0"



OPT. KITCHEN

1/4" = 1'-0"



OPT. FREESTANDING TUB

1/4" = 1'-0"

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PLAN NO.

2370 (237)

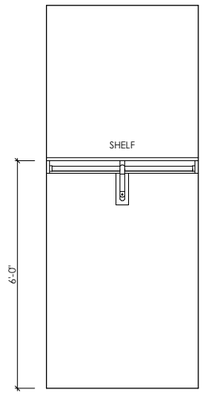
ISSUE DATE	8/1/2023
DRAWN BY	JLA
SCALE	1/4" = 1'-0"

SHEET NAME

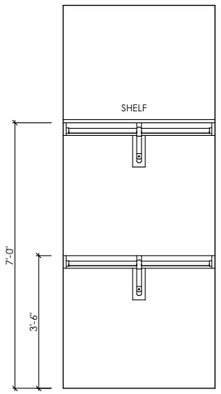
INTERIOR ELEVATIONS

SHEET NO.

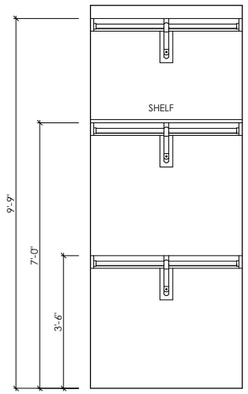
A6.00



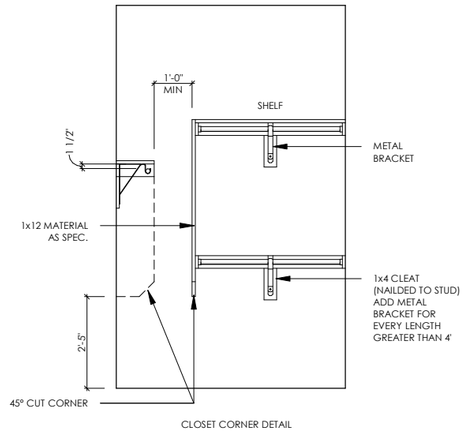
1R1S



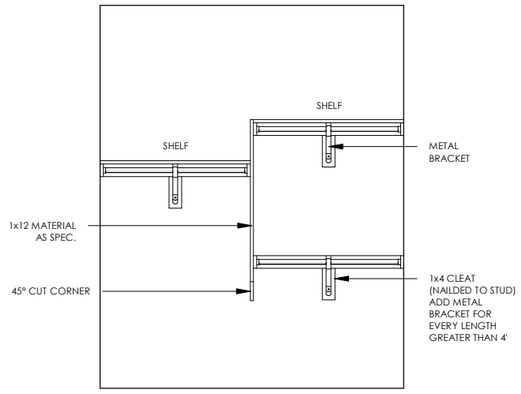
2R1S



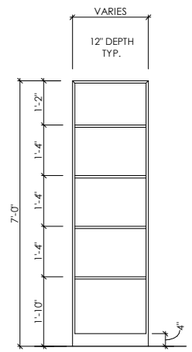
3R1S



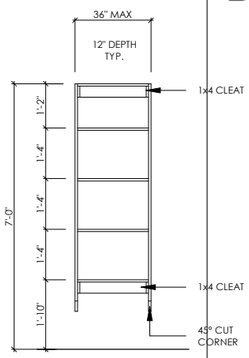
CLOSET CORNER DETAIL



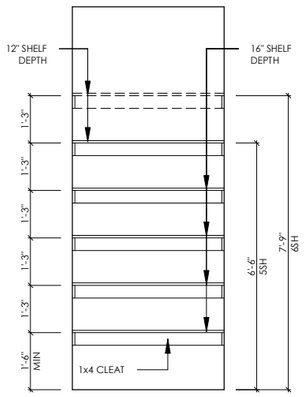
1R1S TO 2R1S TRANSITION DETAIL



5SH

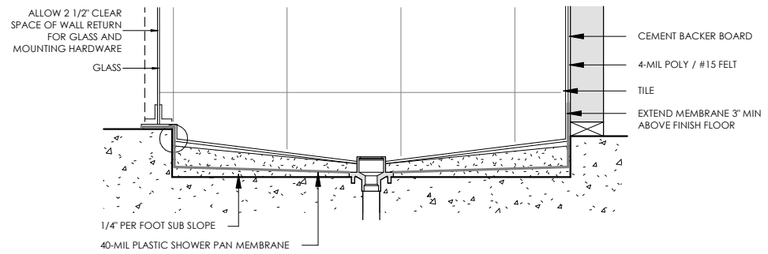


5SH (SUSPENDED)



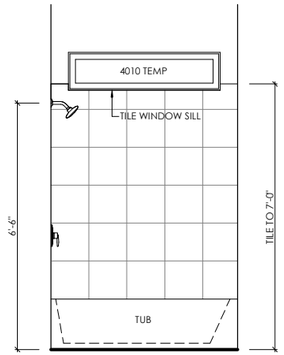
CLOSET DETAILS

1/4" = 1'-0"



MUD PAN SHOWER

3/4" = 1'-0"



TYP. TUB/SHWR W/ WINDOW

1/4" = 1'-0"

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PROJECT NAME

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PLAN NO.

2370 (237)

ISSUE DATE	8/1/2023
DRAWN BY	JLA
SCALE	As indicated

SHEET NAME

DETAIL SHEET

SHEET NO.

A7.00



ELEVATION A



ELEVATION B



ELEVATION C



ELEVATION D

REVISION LOG

SHEET LIST

NO.	TITLE
A0.00	COVER SHEET
A1.00	ELEVATION A - FIRST FLOOR PLAN
A1.01	ELEVATION A - SECOND FLOOR PLAN
A1.02	ELEVATION A - EXTERIOR ELEVATIONS
A1.03	ELEVATION A - EXTERIOR ELEVATIONS
A1.04	ELEVATION A - EXTERIOR ELEVATIONS
A1.05	ELEVATION A - EXTERIOR ELEVATIONS
A1.06	ELEVATION A - ROOF PLAN
A1.07	ELEVATION A - SECTIONS
A2.01	ELEVATION B - PARTIAL FLOOR PLANS
A2.02	ELEVATION B - EXTERIOR ELEVATIONS
A2.03	ELEVATION B - EXTERIOR ELEVATIONS
A2.04	ELEVATION B - EXTERIOR ELEVATIONS
A2.05	ELEVATION B - EXTERIOR ELEVATIONS
A2.06	ELEVATION B - ROOF PLAN
A3.01	ELEVATION C - PARTIAL FLOOR PLANS
A3.02	ELEVATION C - EXTERIOR ELEVATIONS
A3.03	ELEVATION C - EXTERIOR ELEVATIONS
A3.04	ELEVATION C - EXTERIOR ELEVATIONS
A3.05	ELEVATION C - EXTERIOR ELEVATIONS
A3.06	ELEVATION C - ROOF PLAN
A4.01	ELEVATION D - PARTIAL FLOOR PLANS
A4.02	ELEVATION D - EXTERIOR ELEVATIONS
A4.03	ELEVATION D - EXTERIOR ELEVATIONS
A4.04	ELEVATION D - EXTERIOR ELEVATIONS
A4.05	ELEVATION D - EXTERIOR ELEVATIONS
A4.06	ELEVATION D - ROOF PLAN
A7.00	PLAN OPTIONS
A7.01	PLAN OPTIONS
A7.02	PLAN OPTIONS
A7.03	PLAN OPTIONS
A7.04	PLAN OPTIONS
A7.05	PLAN OPTIONS
A7.06	PLAN OPTIONS
A7.07	PLAN OPTIONS
A7.08	PLAN OPTIONS
A7.09	PLAN OPTIONS
A7.10	PLAN OPTIONS
A7.11	PLAN OPTIONS
A7.12	PLAN OPTIONS
AD1.00	DETAILS
E1.00	ELEVATION A - FIRST FLOOR ELECTRICAL
E1.01	ELEVATION A - SECOND FLOOR ELECTRICAL
E2.00	ELEVATION B - PARTIAL ELECTRICAL PLANS
E3.00	ELEVATION C - PARTIAL ELECTRICAL PLANS
E4.00	ELEVATION D - PARTIAL ELECTRICAL PLANS
E7.00	PLAN OPTIONS
E7.01	PLAN OPTIONS
E7.02	PLAN OPTIONS
SF1.00	FOUNDATION - ELEVATION A

PLAN OPTIONS

- ☐ ELEVATION **A**
- ☐ ELEVATION **B**
- ☐ ELEVATION **C**
- ☐ ELEVATION **D**
- ☐ **00STN000** - OPT. STONE
- ☐ **BED4BATH3** - OPT. BEDROOM 4 BATH 3
- ☐ **BED5BATH4** - OPT. BEDROOM 5 BATH 4
- ☐ **DR000IN8** - OPT. 8' INTERIOR DOORS
- ☐ **DR000PT8** - OPT. 8' PATIO DOOR
- ☐ **EXECUTV** - OPT. EXECUTIVE PACKAGE
- ☐ **FREESTUB** - OPT. FREESTANDING TUB
- ☐ **GARGE1/2** - OPT. HALF CAR GARAGE
- ☐ **GARGE3** - OPT. 3 CAR GARAGE
- ☐ **GARGE3SL** - OPT. 3 CAR SIDE LOAD GARAGE
- ☐ **GARGSDLD** - OPT. SIDE LOAD GARAGE
- ☐ **ISLAND2** - OPT. ISLAND
- ☐ **KITCHEN2** - OPT. KITCHEN
- ☐ **LAV2BTH2** - OPT. BATH 3 SINK
- ☐ **MBEDENT** - OPT. OWNERS ENTRY
- ☐ **MEDIARM** - OPT. MEDIA
- ☐ **PATIO2** - OPT. COVERED PATIO
- ☐ **PL0MB201** - OPT. ENLARGED SHOWER
- ☐ **REAREXT** - OPT. 3' REAR EXTENSION
- ☐ **SHWRSEAT** - OPT. SHOWER SEAT
- ☐ **STUDY1** - OPT. STUDY

Gehan HOMES
HAPPINESS LIVES HERE

PROJECT NAME
CUMBERLAND

PREMIER SERIES

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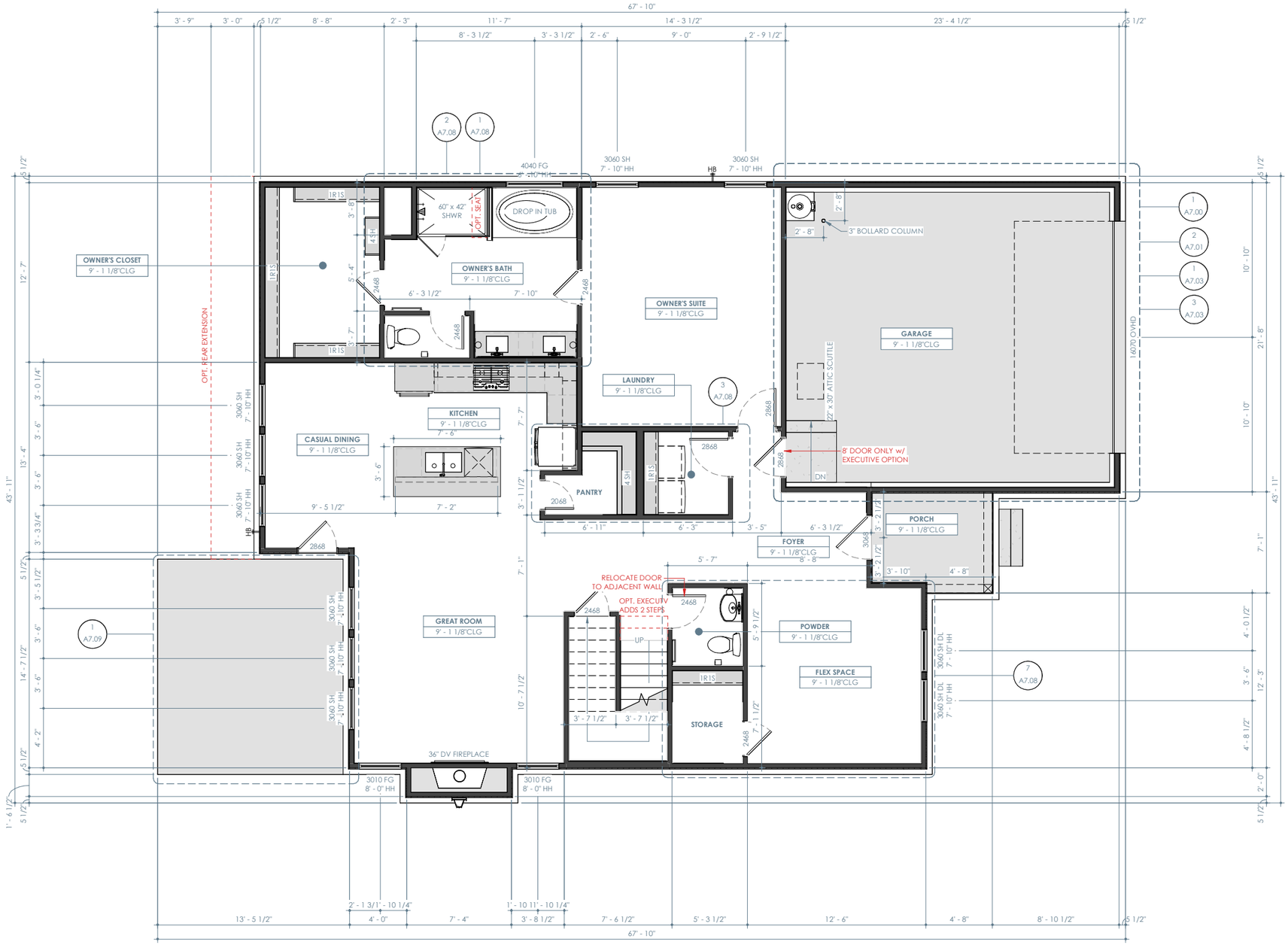
PLAN NO.
2550 (255)

ISSUE DATE	11-08-202
DRAWN BY	JLA
SCALE	As indicated

SHEET NAME
COVER SHEET

SHEET NO.
A0.00



ELEVATION A - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION A - LIVING	
FIRST FLOOR	1581 SF
SECOND FLOOR	971 SF
TOTAL	2553 SF
GARAGE	505 SF
PORCH	58 SF
PATIO	196 SF
TOTAL	758 SF
TOTAL UNDER ROOF	3311 SF

OPTIONAL AREAS	
OPT. HALF CAR GARAGE	115 SF
OPT. 3 CAR GARAGE	230 SF
OPT. 3 CAR SIDE LOAD GARAGE	217 SF
OPT. REAR EXTENSION - FIRST FLOOR	78 SF
OPT. MEDIA / OPT. BEDROOM 5 BATH 4	306 SF
OPT. REAR EXTENSION w/ OPT. MEDIA / OPT. BEDROOM 5 BATH 4	37 SF
OPT. REAR EXTENSION - SECOND FLOOR	41 SF

EXECUTIVE OPTION

- FIRST & SECOND FLOOR PLATE MOVES UP 1'
- RAISE WINDOWS ON FIRST FLOOR UP 1'
- 8' TALL INTERIOR / EXTERIOR DOORS ON FIRST FLOOR
- ADDS 2 RISERS AT STAIRS

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS AND CEILING SLOPES
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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PLAN NO.

2550 (255)

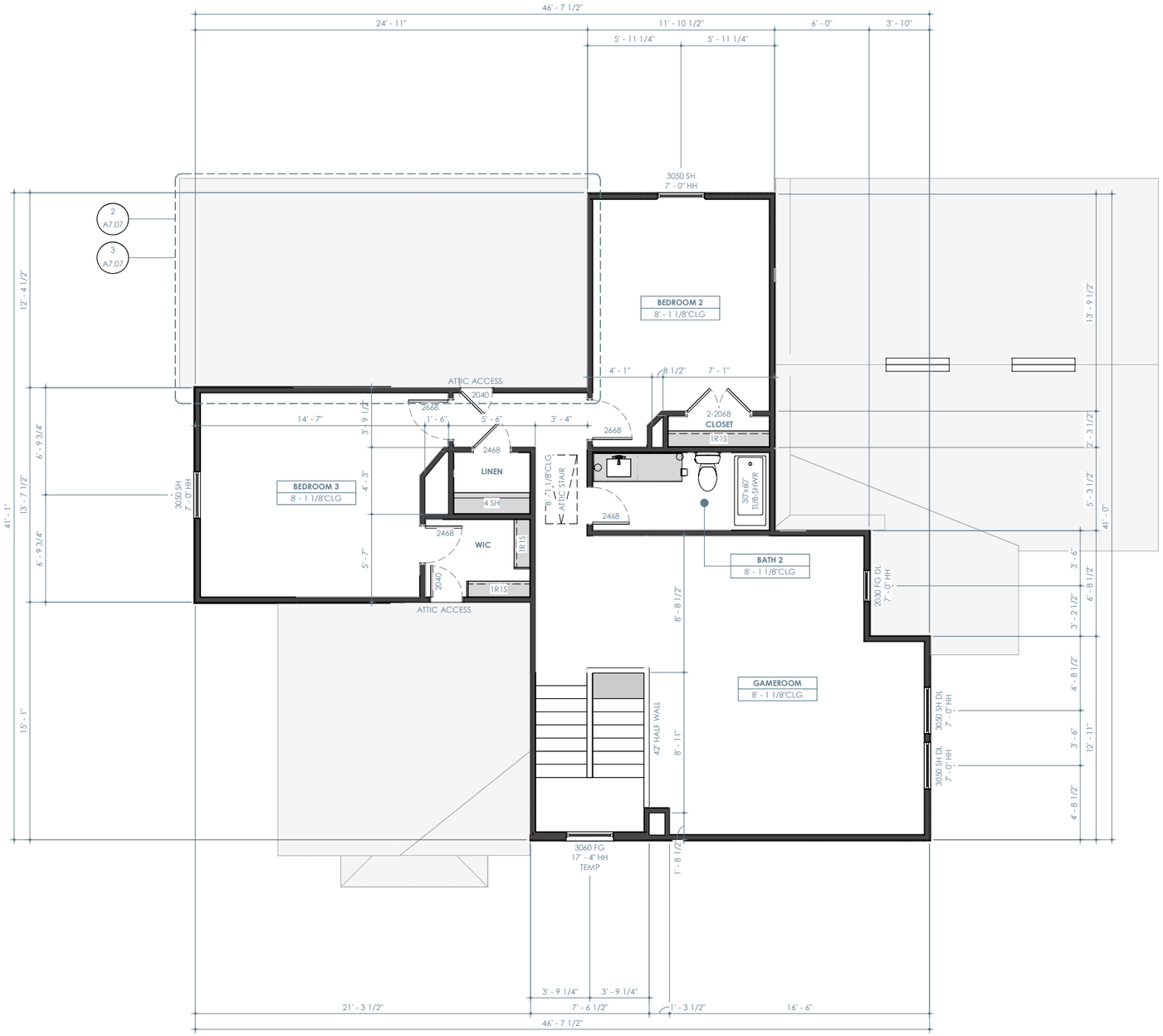
ISSUE DATE	11-08-202
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - FIRST FLOOR PLAN

SHEET NO.

A1.00



ELEVATION A - SECOND FLOOR PLAN

1/8" = 1'-0"

EXECUTIVE OPTION

- FIRST & SECOND FLOOR PLATE MOVES UP 1"
- RAISE WINDOWS ON FIRST FLOOR UP 1"
- 8' TALL INTERIOR / EXTERIOR DOORS ON FIRST FLOOR
- ADDS 2 RISERS AT STAIRS

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS AND CEILING SLOPES
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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PLAN NO.

2550 (255)

ISSUE DATE	11-08-202
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - SECOND FLOOR PLAN

SHEET NO.

A1.01



ELEVATION A - FRONT

1/8" = 1'-0"



ELEVATION A - REAR

1/8" = 1'-0"

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2550 (255)

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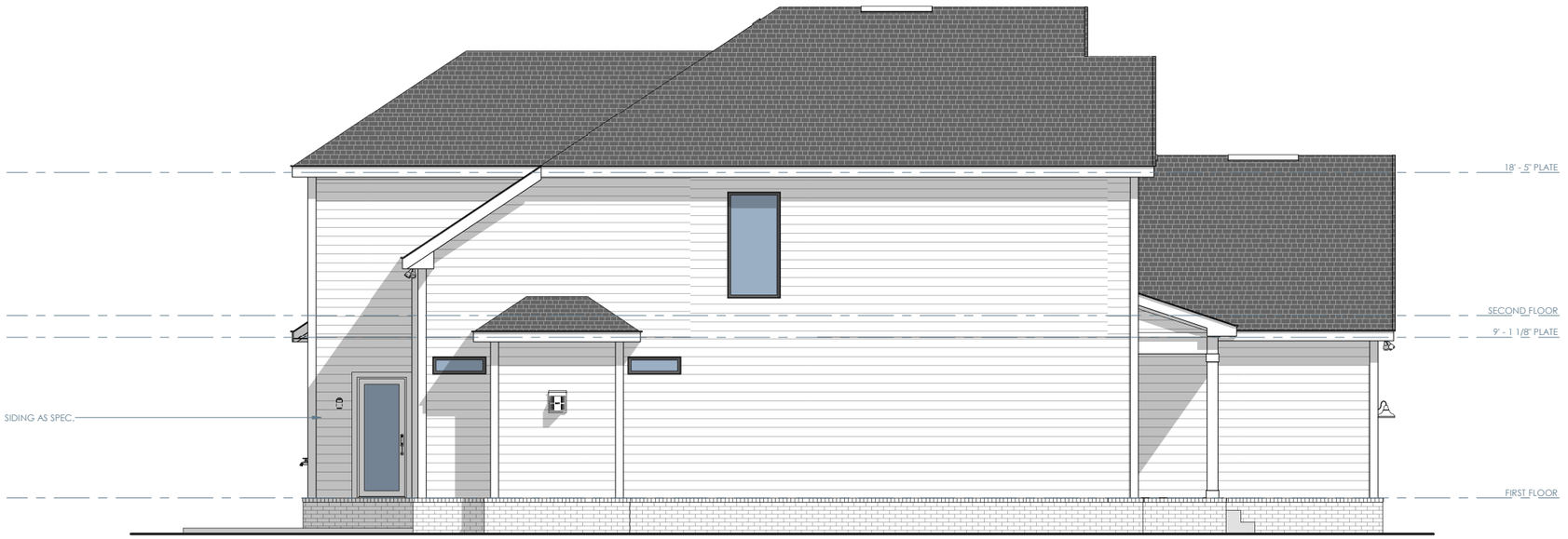
SCALE	1/8" = 1'-0"

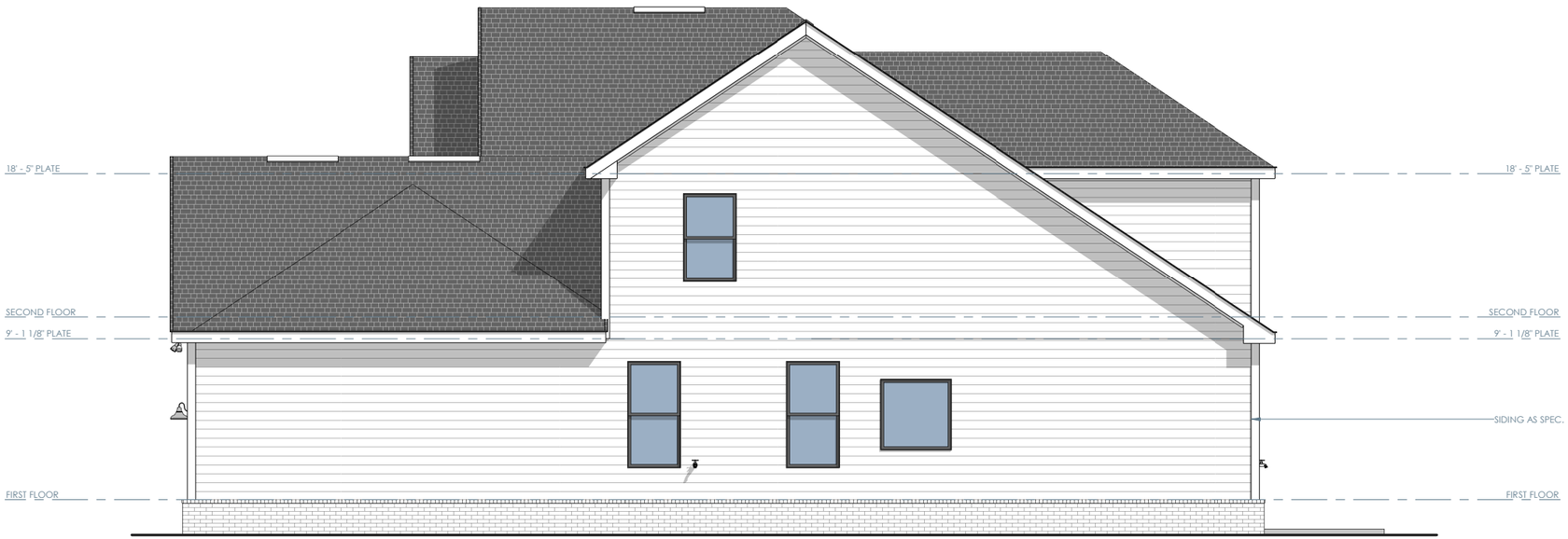
SHEET NAME
ELEVATION A - EXTERIOR ELEVATIONS

SHEET NO.
A1.02



ELEVATION A - LEFT

1/8" = 1'-0"



ELEVATION A - RIGHT

1/8" = 1'-0"

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2550 (255)

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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - EXTERIOR ELEVATIONS

SHEET NO.

A1.03



EXECUTV

ELEVATION A - OPT. EXECUTIVE - FRONT

1/8" = 1'-0"



EXECUTV

ELEVATION A - OPT. EXECUTIVE - REAR

1/8" = 1'-0"

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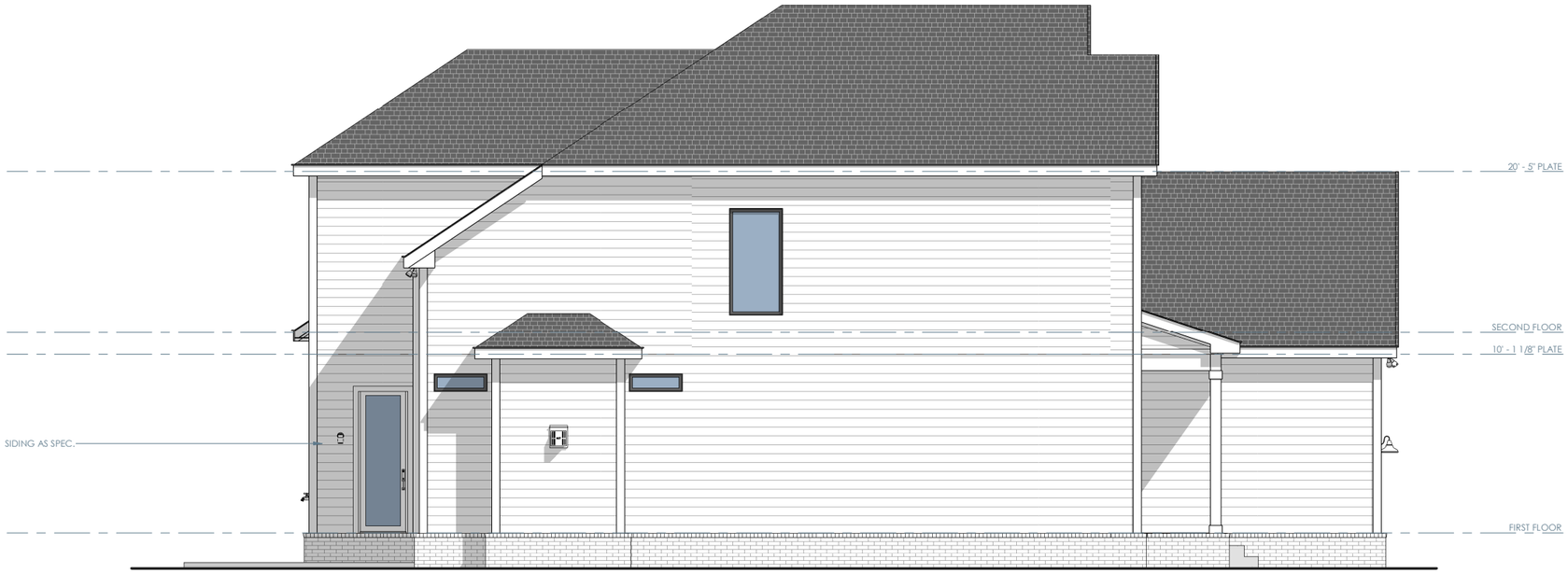
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - EXTERIOR ELEVATIONS

SHEET NO.

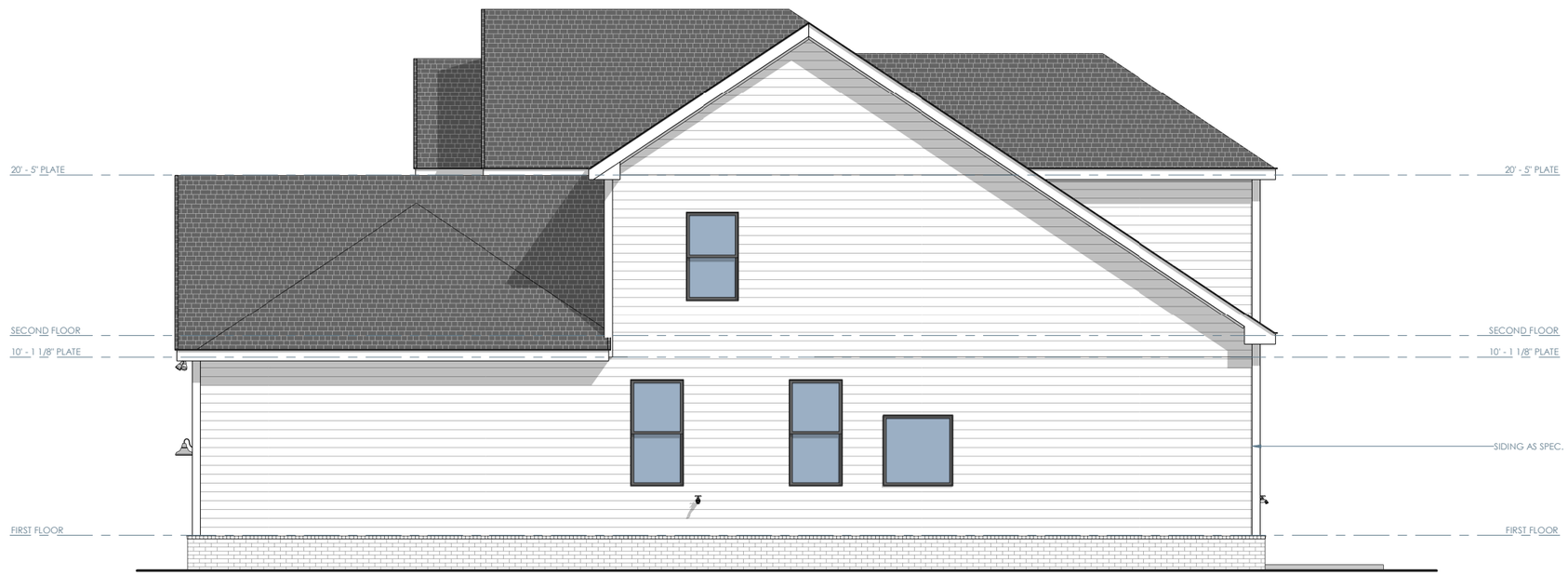
A1.04



EXECUTV

ELEVATION A - OPT. EXECUTIVE - LEFT

1/8" = 1'-0"



EXECUTV

ELEVATION A - OPT. EXECUTIVE - REAR

1/8" = 1'-0"

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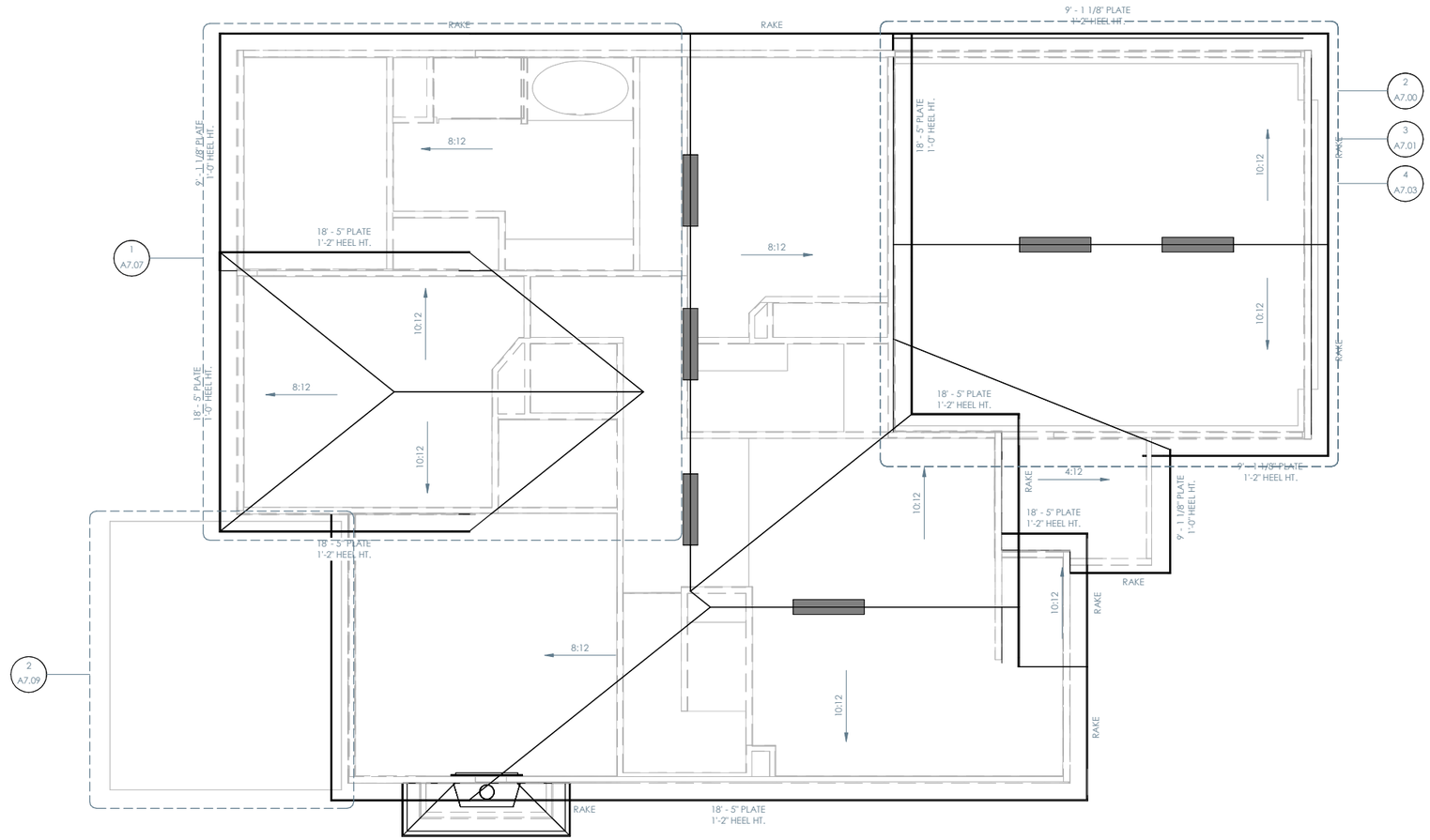
SHEET NAME

ELEVATION A - EXTERIOR ELEVATIONS

SHEET NO.

A1.05



ELEVATION A - ROOF PLAN

1/8" = 1'-0"

ZONE 1	
ATTIC AREA (FT²)	1322
REQUIRED ATTIC VENTILATION (IN²)	635
REQUIRED LOWER VENTILATION (IN²)	318
REQUIRED UPPER VENTILATION (IN²)	317
NUMBER OF VENTS	
AIRHAWK 50 - LOWER (50 NFA)	1
AIRHAWK 50 - UPPER (50 NFA)	1
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
TOTAL PROVIDED LOWER VENTILATION (IN²)	50 NFA
TOTAL PROVIDED UPPER ATTIC VENTILATION (IN²)	50 NFA

ZONE 2	
ATTIC AREA (FT²)	469
REQUIRED ATTIC VENTILATION (IN²)	226
REQUIRED LOWER VENTILATION (IN²)	113
REQUIRED UPPER VENTILATION (IN²)	113
NUMBER OF VENTS	
AIRHAWK 50 - LOWER (50 NFA)	0
AIRHAWK 50 - UPPER (50 NFA)	0
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
TOTAL PROVIDED LOWER VENTILATION (IN²)	0 NFA
TOTAL PROVIDED UPPER ATTIC VENTILATION (IN²)	0 NFA

VENTILATION PROVIDED

VENT TYPE	QTY	TOTAL PROPOSED VENTILATION
ZONE 1		
HIGH		
4' Ridge Vent	4	384 in²
		384 in²
ZONE 2		
HIGH		
4' Ridge Vent	2	192 in²
		192 in²

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2' PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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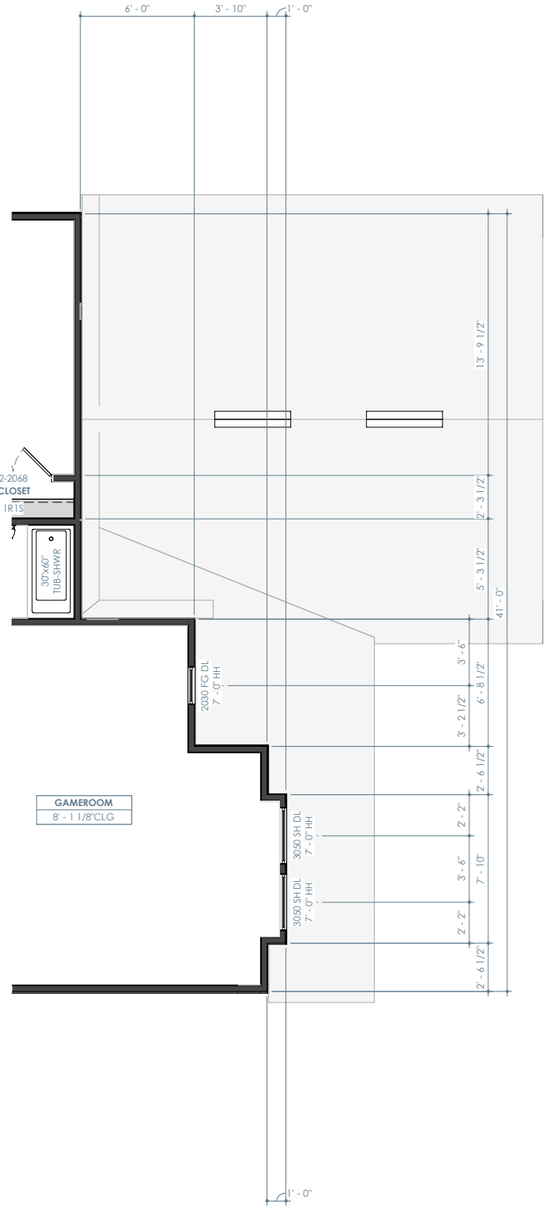
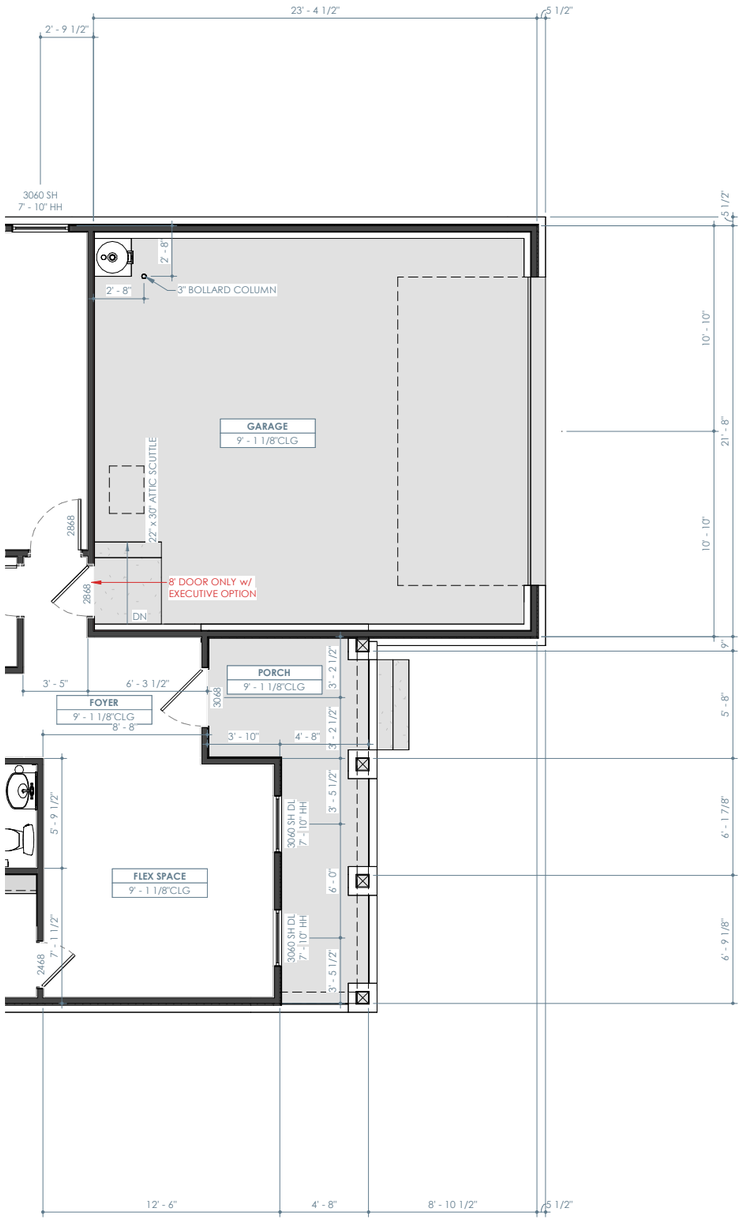
SHEET NAME
ELEVATION A - ROOF PLAN

SHEET NO.
A1.06



ELEVATION B - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION B - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION B - LIVING	
FIRST FLOOR	1581 SF
SECOND FLOOR	971 SF
TOTAL	2553 SF
GARAGE	505 SF
PORCH	115 SF
PATIO	196 SF
TOTAL	816 SF
TOTAL UNDER ROOF	3368 SF

OPTIONAL AREAS	
OPT. HALF CAR GARAGE	115 SF
OPT. 3 CAR GARAGE	230 SF
OPT. 3 CAR SIDE LOAD GARAGE	217 SF
OPT. REAR EXTENSION - FIRST FLOOR	78 SF
OPT. MEDIA / OPT. BEDROOM 5 BATH 4	306 SF
OPT. REAR EXTENSION w/ OPT. MEDIA / OPT. BEDROOM 5 BATH 4	37 SF
OPT. REAR EXTENSION - SECOND FLOOR	41 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
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- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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ISSUE DATE	11-08-202
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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - PARTIAL FLOOR PLANS

SHEET NO.

A2.01



ELEVATION B - FRONT

1/8" = 1'-0"

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2550 (255)

ISSUE DATE	11-08-202
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

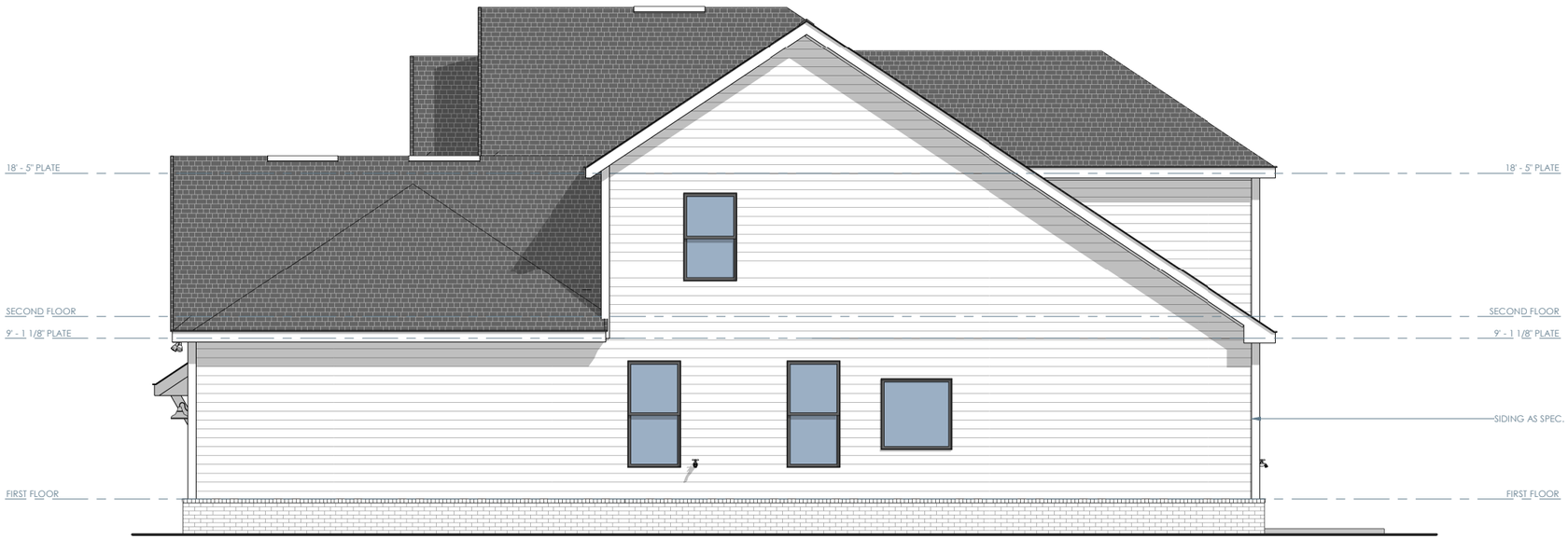
SHEET NAME
ELEVATION B - EXTERIOR ELEVATIONS

SHEET NO.
A2.02



ELEVATION B - LEFT

1/8" = 1'-0"



ELEVATION B - RIGHT

1/8" = 1'-0"

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ISSUE DATE	11-08-202
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME
ELEVATION B - EXTERIOR ELEVATIONS

SHEET NO.
A2.03



EXECUTV

ELEVATION B - OPT. EXECUTIVE - FRONT

1/8" = 1'-0"



EXECUTV

ELEVATION B - OPT. EXECUTIVE - REAR

1/8" = 1'-0"

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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - EXTERIOR ELEVATIONS

SHEET NO.

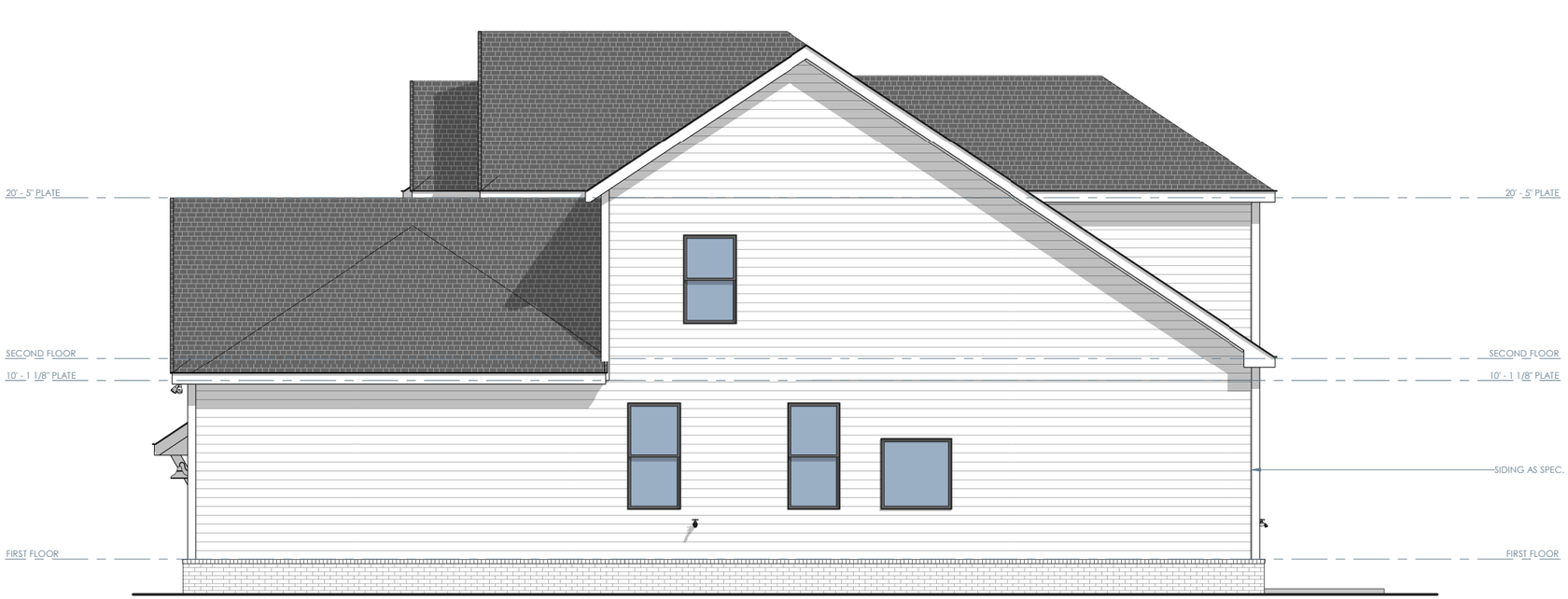
A2.04



EXECUTV

ELEVATION B - OPT. EXECUTIVE - LEFT

1/8" = 1'-0"



EXECUTV

ELEVATION B - OPT. EXECUTIVE - RIGHT

1/8" = 1'-0"

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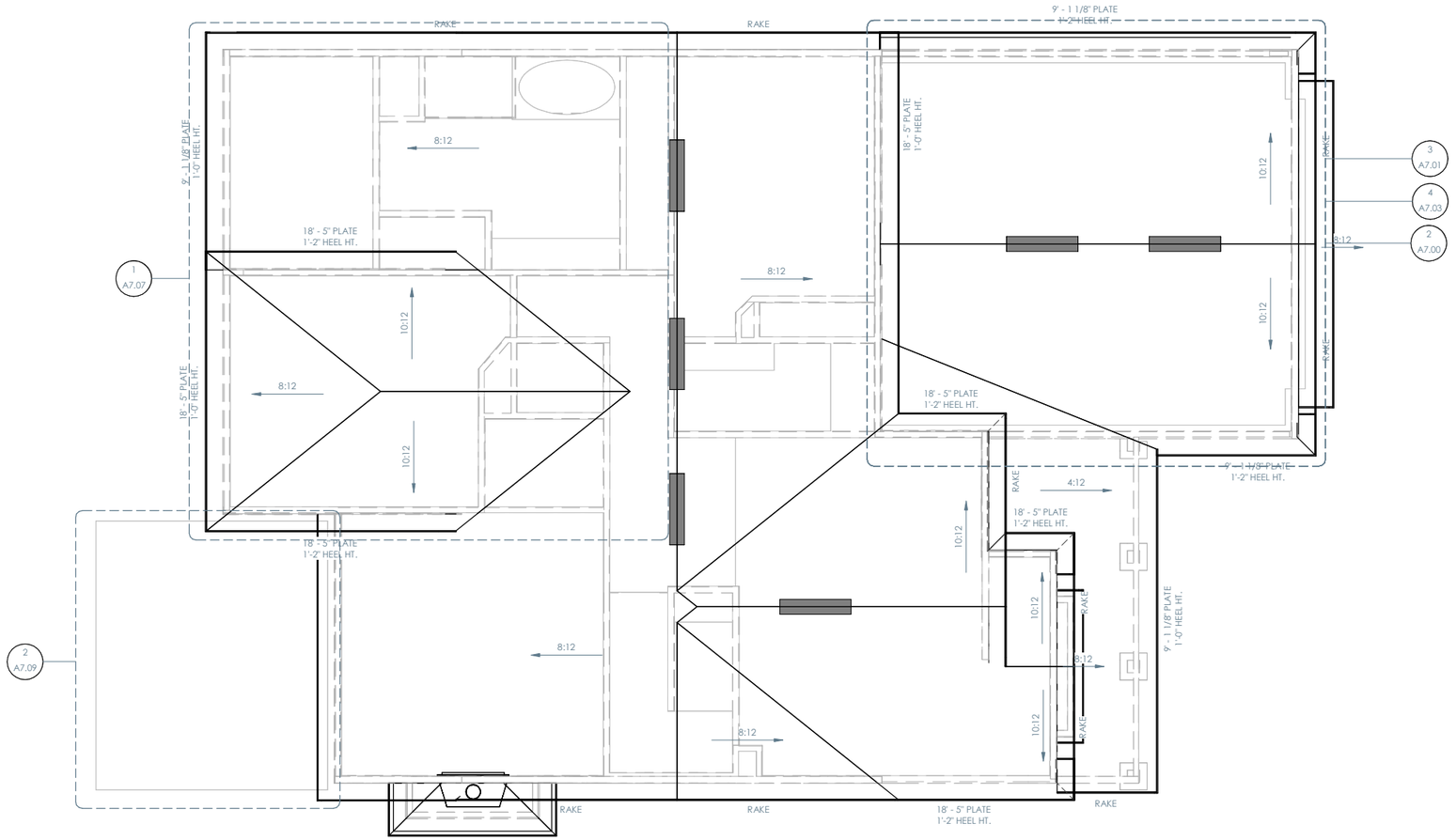
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - EXTERIOR ELEVATIONS

SHEET NO.

A2.05



ELEVATION B - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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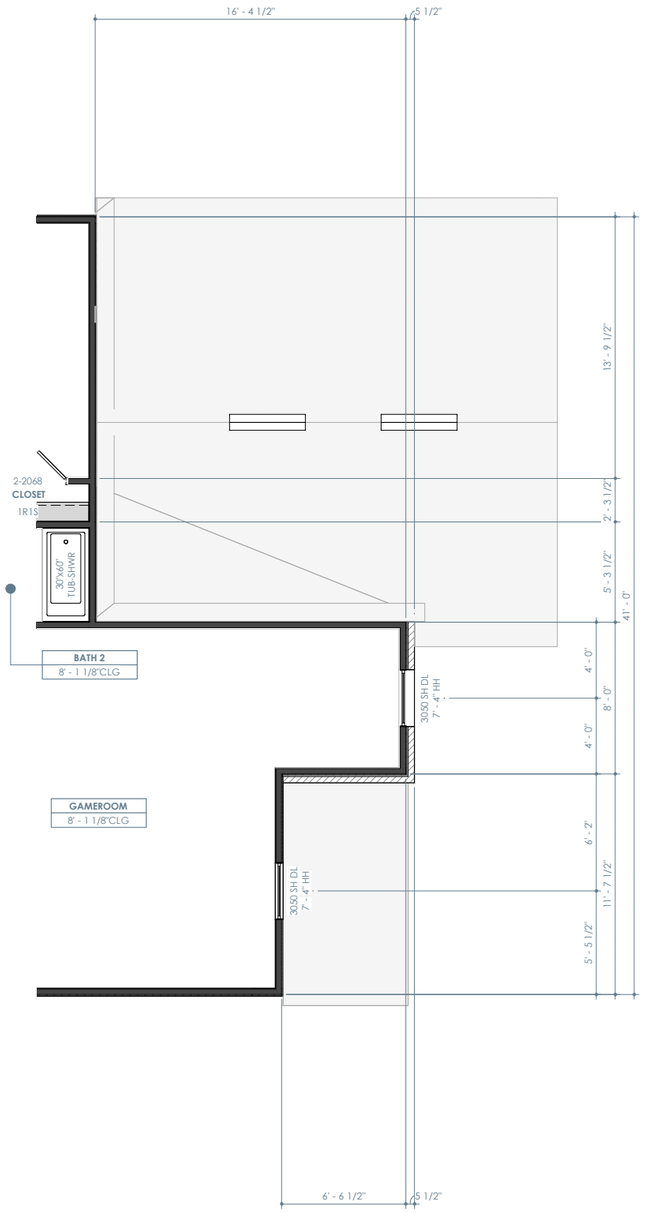
SCALE	1/8" = 1'-0"

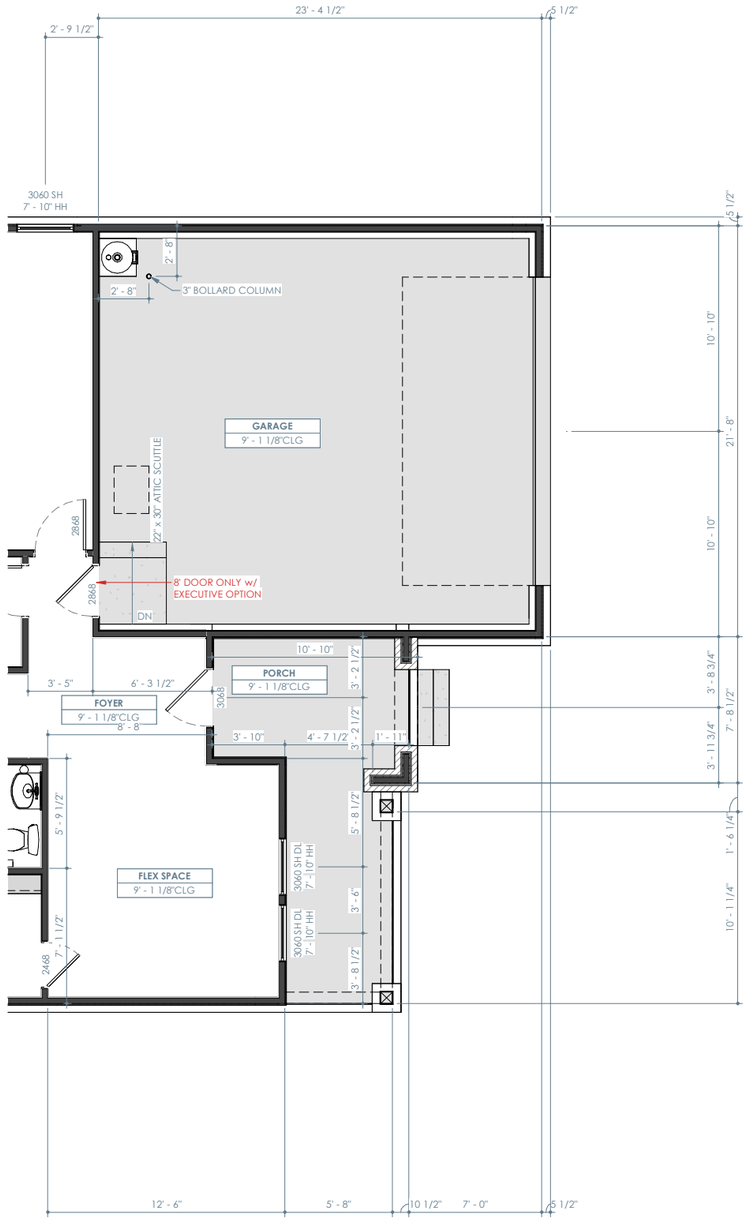
SHEET NAME
ELEVATION B - ROOF PLAN

SHEET NO.
A2.06



ELEVATION C - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION C - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION C - LIVING	
FIRST FLOOR	1581 SF
SECOND FLOOR	971 SF
TOTAL	2553 SF
GARAGE	505 SF
PORCH	141 SF
PATIO	196 SF
TOTAL	842 SF
TOTAL UNDER ROOF	3394 SF

OPTIONAL AREAS	
OPT. HALF CAR GARAGE	115 SF
OPT. 3 CAR GARAGE	230 SF
OPT. 3 CAR SIDE LOAD GARAGE	217 SF
OPT. REAR EXTENSION - FIRST FLOOR	78 SF
OPT. MEDIA / OPT. BEDROOM 5 BATH 4	306 SF
OPT. REAR EXTENSION w/ OPT. MEDIA / OPT. BEDROOM 5 BATH 4	37 SF
OPT. REAR EXTENSION - SECOND FLOOR	41 SF

FLOOR PLAN NOTES

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- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS AND CEILING SLOPES
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - PARTIAL FLOOR PLANS

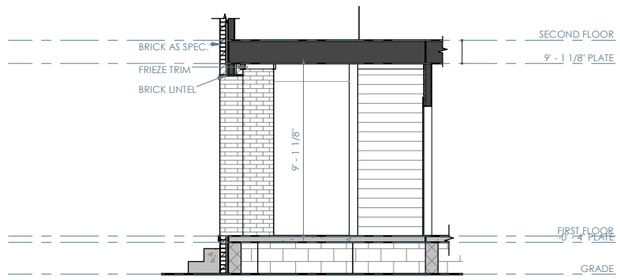
SHEET NO.

A3.01



ELEVATION C - FRONT

1/8" = 1'-0"



PORCH SECTION

1/8" = 1'-0"



00STN000

ELEVATION C - OPT. STONE - FRONT

1/8" = 1'-0"

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2550 (255)

ISSUE DATE	11-08-202
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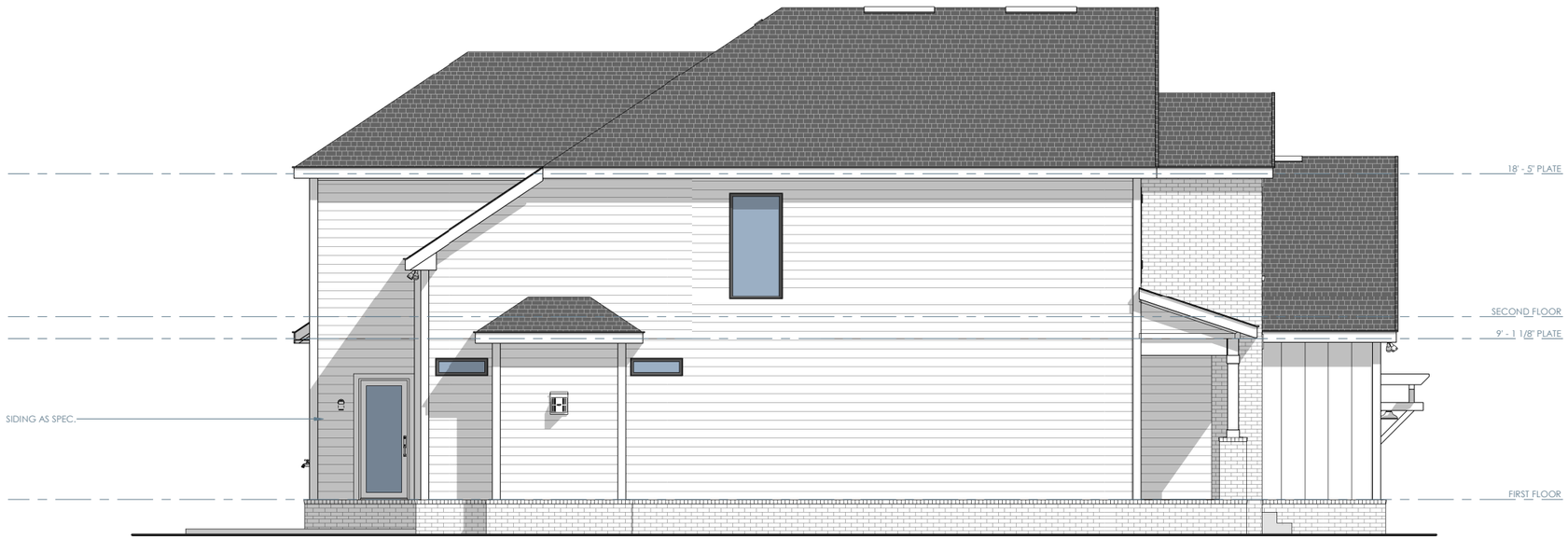
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - EXTERIOR ELEVATIONS

SHEET NO.

A3.02



ELEVATION C - LEFT

1/8" = 1'-0"



ELEVATION C - RIGHT

1/8" = 1'-0"

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SCALE	1/8" = 1'-0"

SHEET NAME
ELEVATION C - EXTERIOR ELEVATIONS

SHEET NO.
A3.03



EXECUTV

ELEVATION C - OPT. EXECUTIVE - FRONT

1/8" = 1'-0"



EXECUTV

ELEVATION C - OPT. EXECUTIVE - REAR

1/8" = 1'-0"

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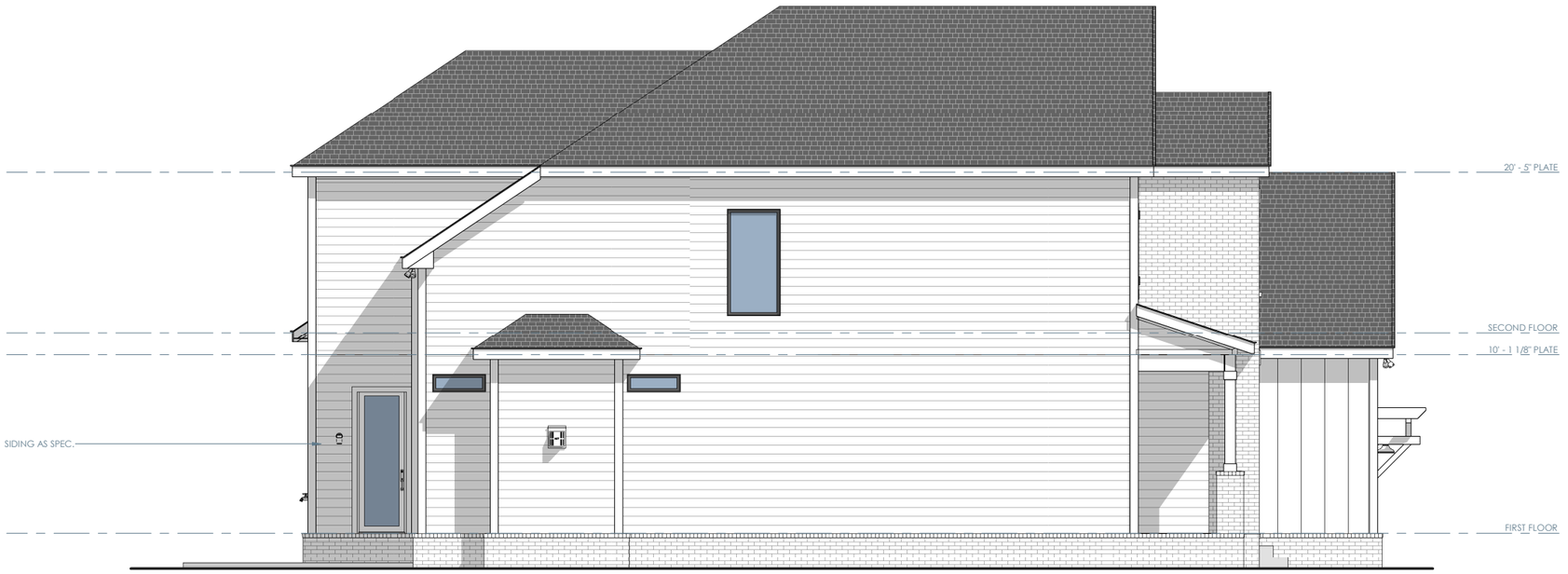
SHEET NAME

ELEVATION C - EXTERIOR ELEVATIONS

SHEET NO.

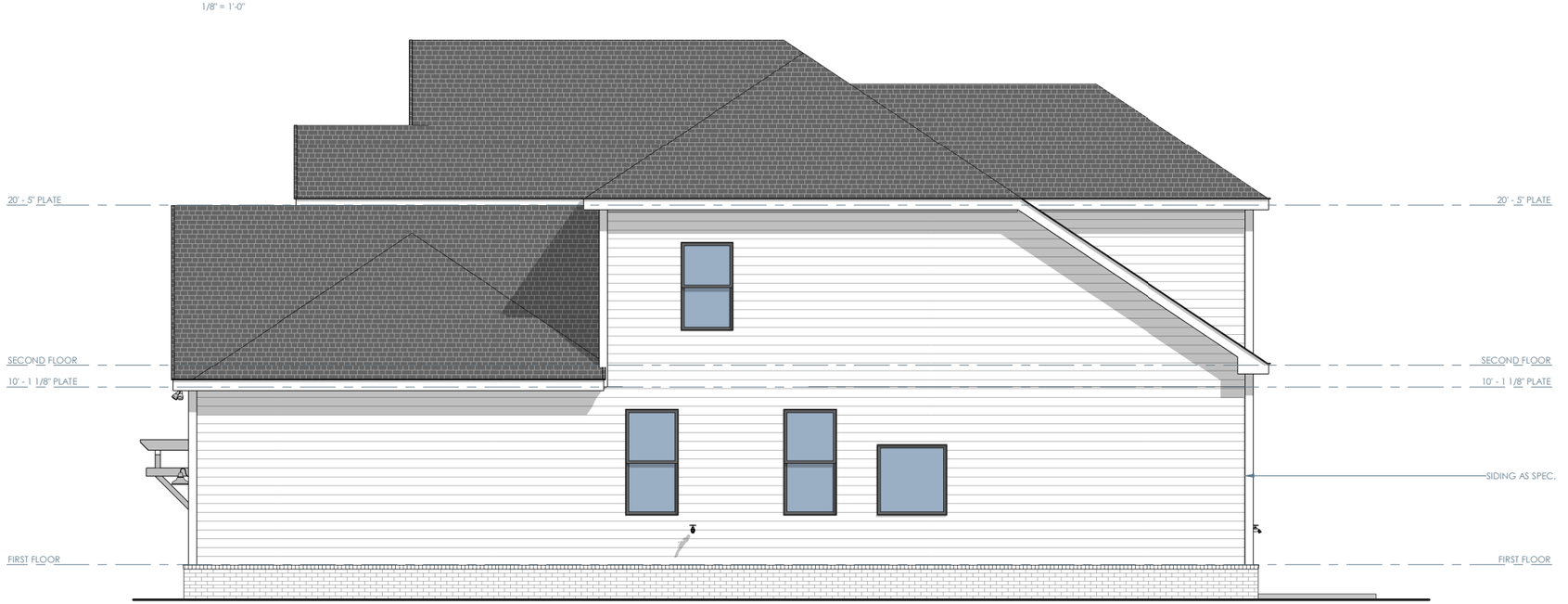
A3.04



EXECUTV

ELEVATION C - OPT. EXECUTIVE - LEFT

1/8" = 1'-0"



EXECUTV

ELEVATION C - OPT. EXECUTIVE - RIGHT

1/8" = 1'-0"

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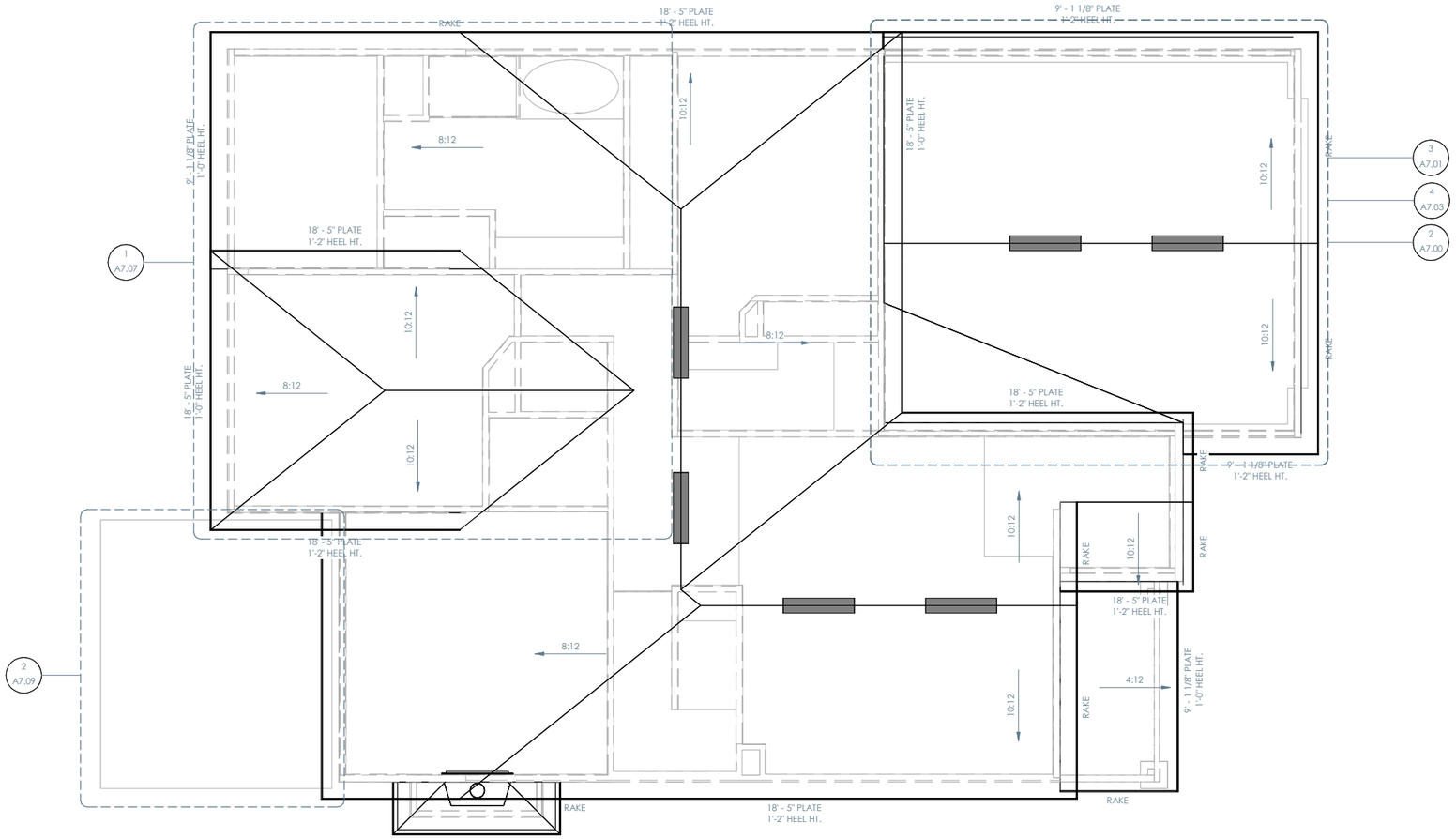
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - EXTERIOR ELEVATIONS

SHEET NO.

A3.05



ELEVATION C - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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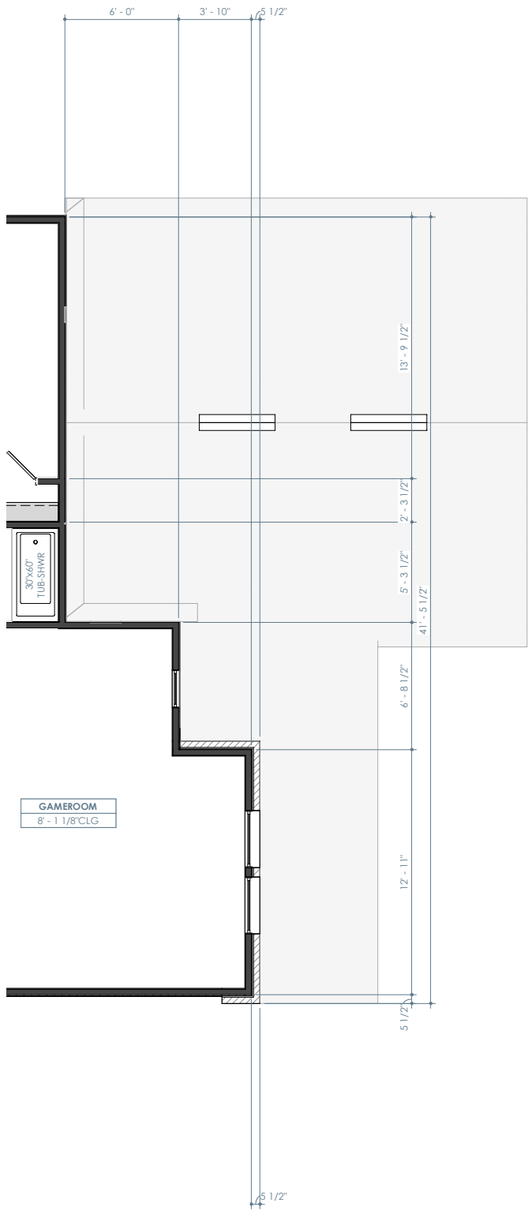
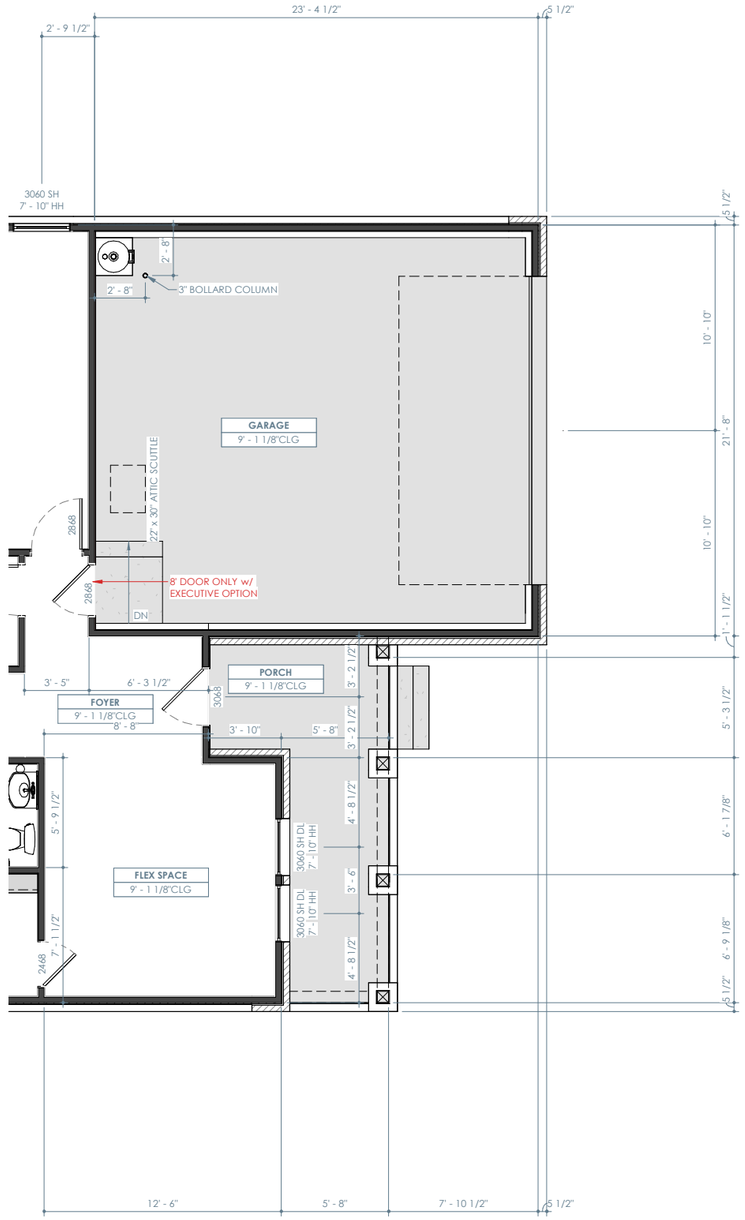
SHEET NAME
ELEVATION C - ROOF PLAN

SHEET NO.
A3.06



ELEVATION D - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION D - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION D - LIVING	
FIRST FLOOR	1581 SF
SECOND FLOOR	971 SF
TOTAL	2553 SF
GARAGE	505 SF
PORCH	134 SF
PATIO	196 SF
TOTAL	835 SF
TOTAL UNDER ROOF	3388 SF

OPTIONAL AREAS	
OPT. HALF CAR GARAGE	115 SF
OPT. 3 CAR GARAGE	230 SF
OPT. 3 CAR SIDE LOAD GARAGE	217 SF
OPT. REAR EXTENSION - FIRST FLOOR	78 SF
OPT. MEDIA / OPT. BEDROOM 5 BATH 4	306 SF
OPT. REAR EXTENSION w/ OPT. MEDIA / OPT. BEDROOM 5 BATH 4	37 SF
OPT. REAR EXTENSION - SECOND FLOOR	41 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS AND CEILING SLOPES
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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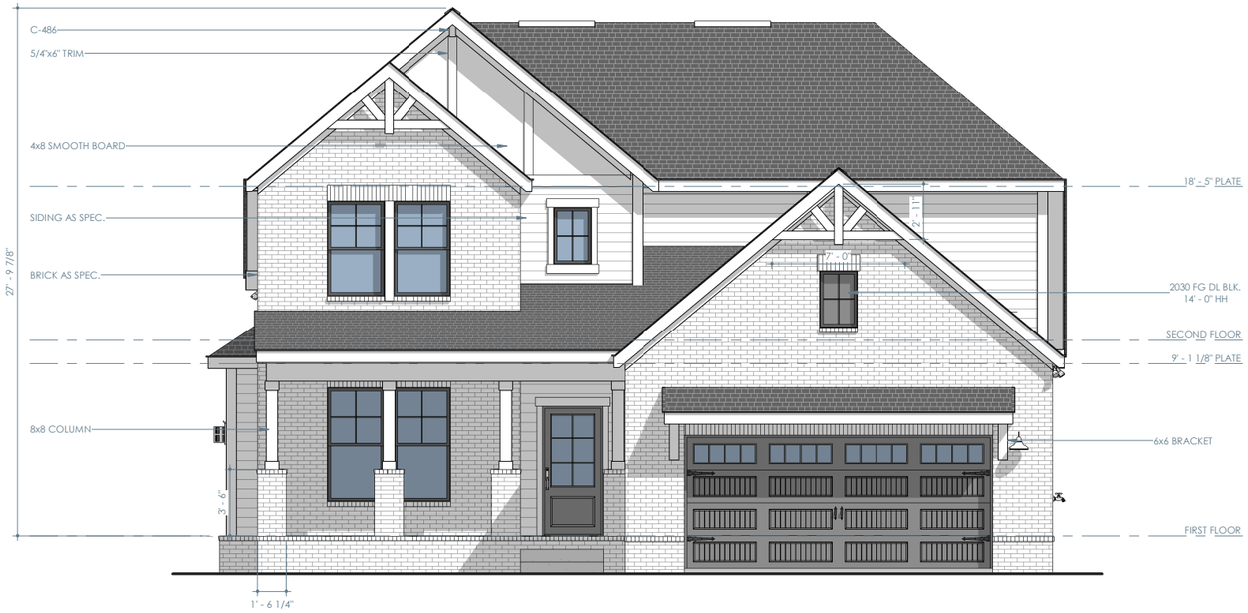
SHEET NAME

ELEVATION D - PARTIAL FLOOR PLANS

SHEET NO.

A4.01



ELEVATION D - FRONT

1/8" = 1'-0"



00STN000

ELEVATION D - OPT. STONE - FRONT

1/8" = 1'-0"

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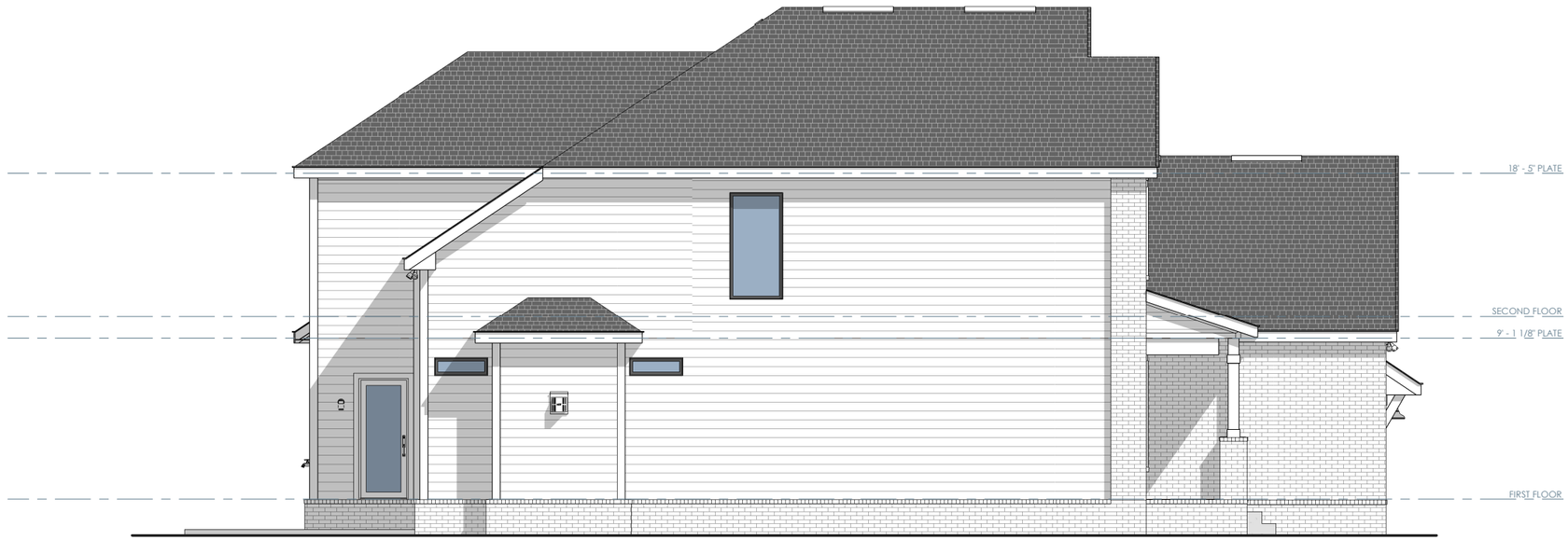
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - EXTERIOR ELEVATIONS

SHEET NO.

A4.02



ELEVATION D - LEFT

1/8" = 1'-0"



ELEVATION D - RIGHT

1/8" = 1'-0"

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SCALE	1/8" = 1'-0"

SHEET NAME
ELEVATION D - EXTERIOR ELEVATIONS

SHEET NO.
A4.03



EXECUTV

ELEVATION D - OPT. EXECUTIVE - FRONT

1/8" = 1'-0"



EXECUTV

ELEVATION D - OPT. EXECUTIVE - REAR

1/8" = 1'-0"

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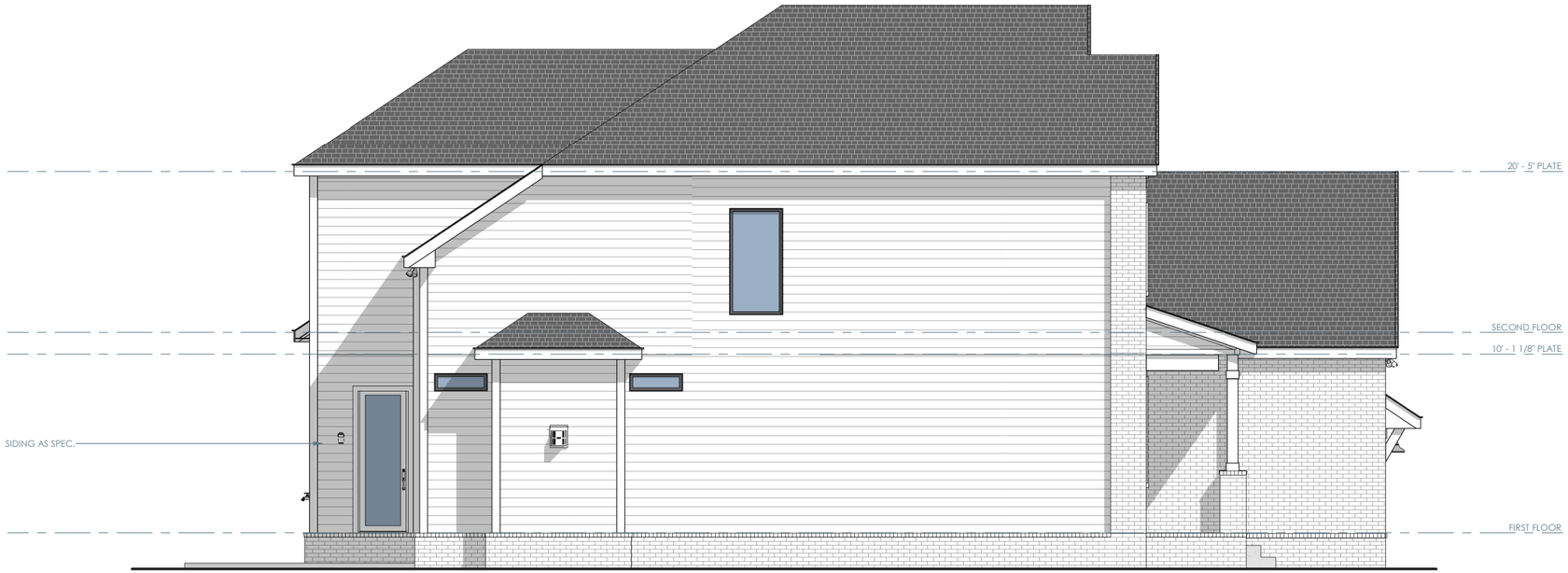
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - EXTERIOR ELEVATIONS

SHEET NO.

A4.04



EXECUTV

ELEVATION D - OPT. EXECUTIVE - LEFT

1/8" = 1'-0"



EXECUTV

ELEVATION D - OPT. EXECUTIVE - RIGHT

1/8" = 1'-0"

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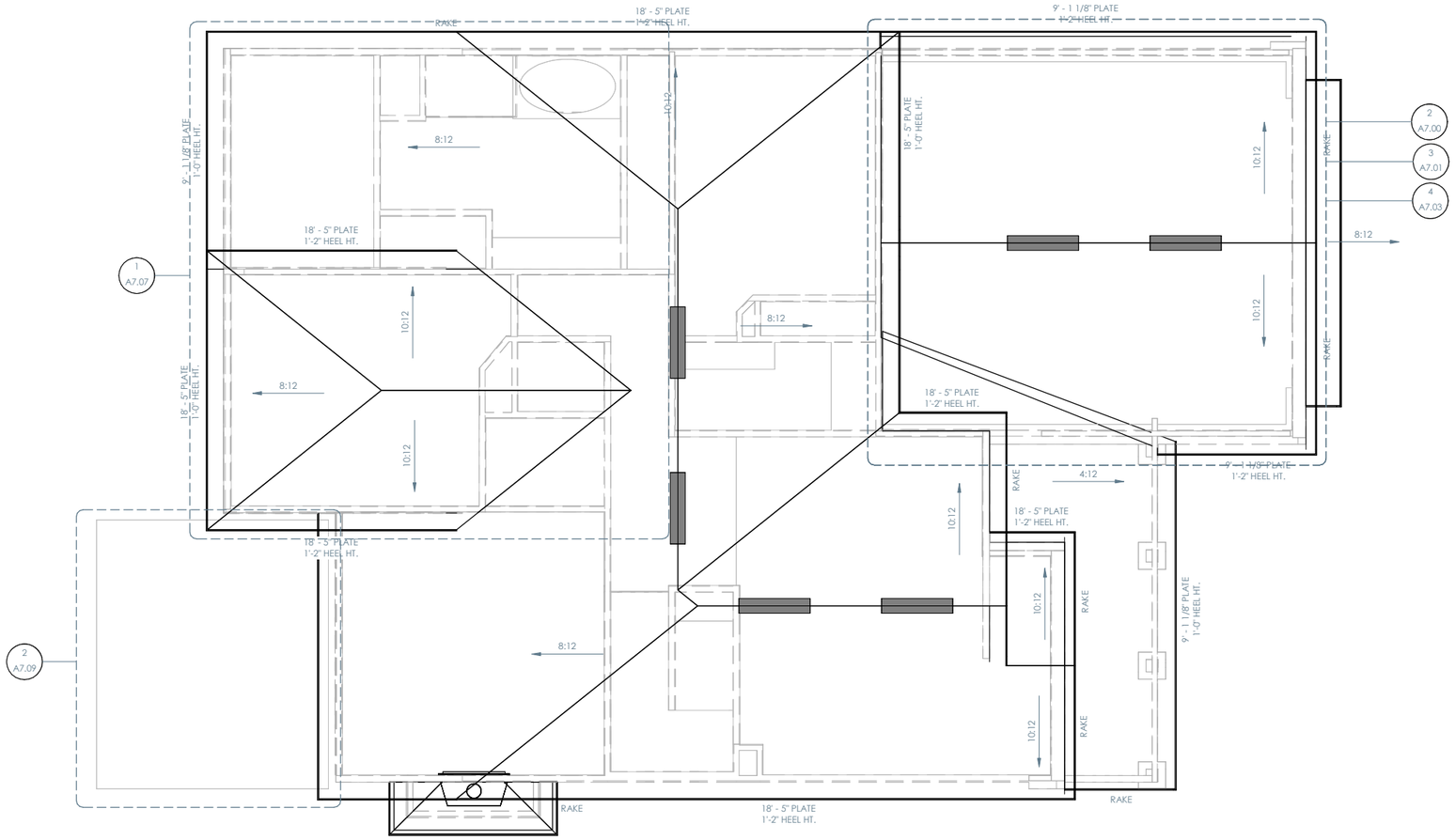
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - EXTERIOR ELEVATIONS

SHEET NO.

A4.05



ELEVATION D - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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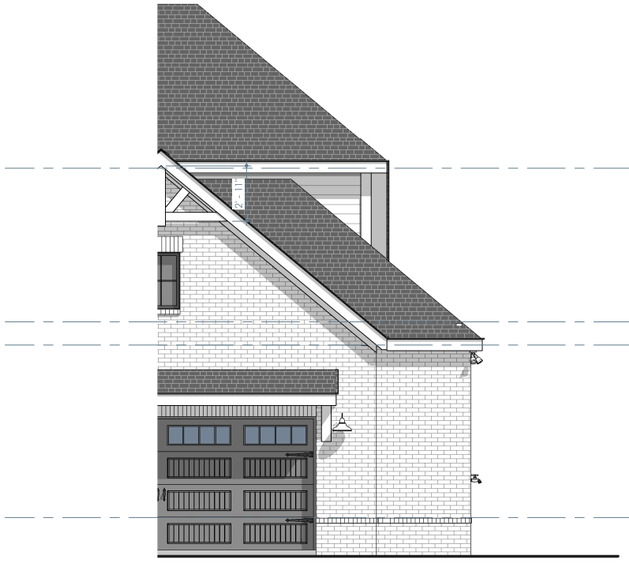
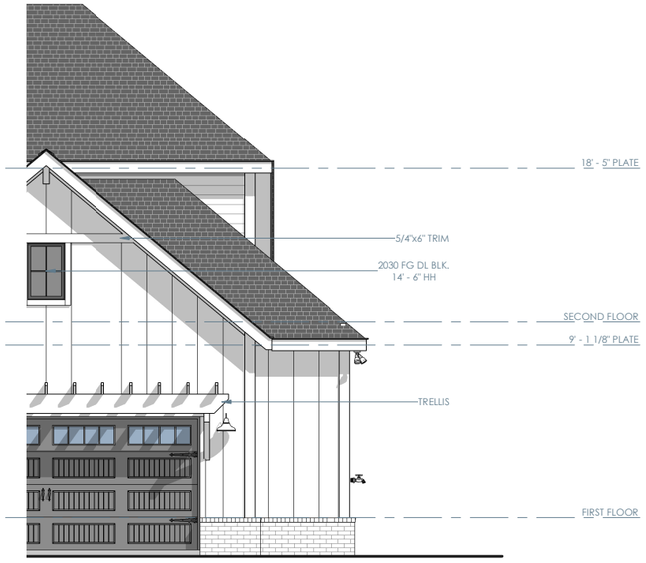
SCALE	1/8" = 1'-0"

SHEET NAME
ELEVATION D - ROOF PLAN

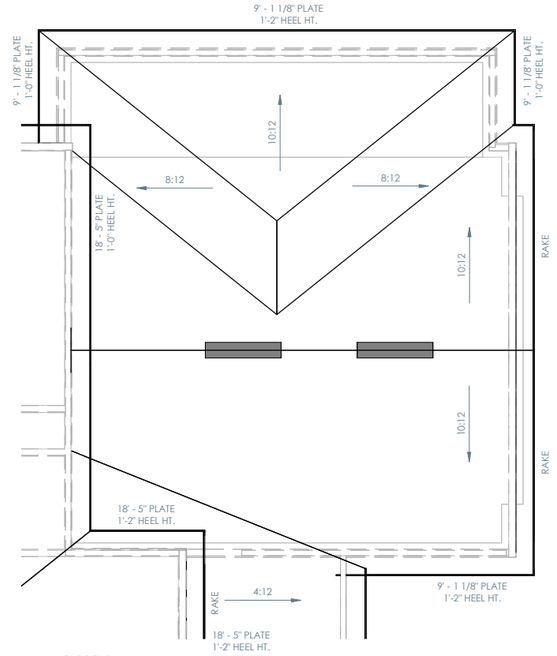
SHEET NO.
A4.06



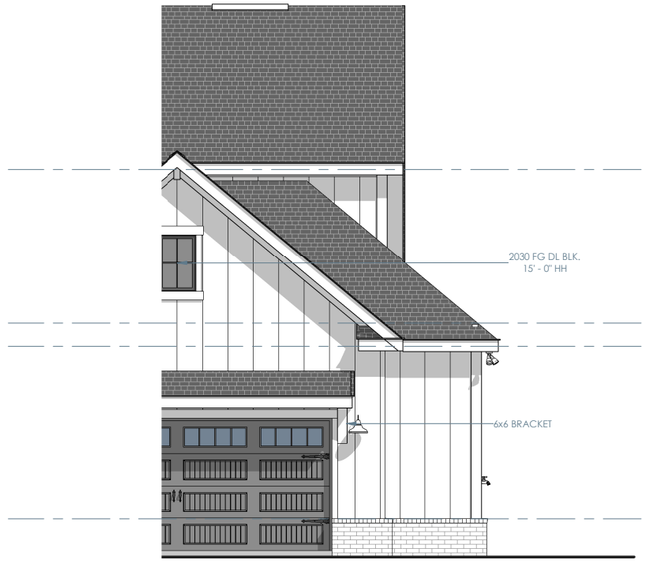
GARGE1/2
ELEVATION D - OPT. HALF CAR GARAGE - FRONT
1/8" = 1'-0"



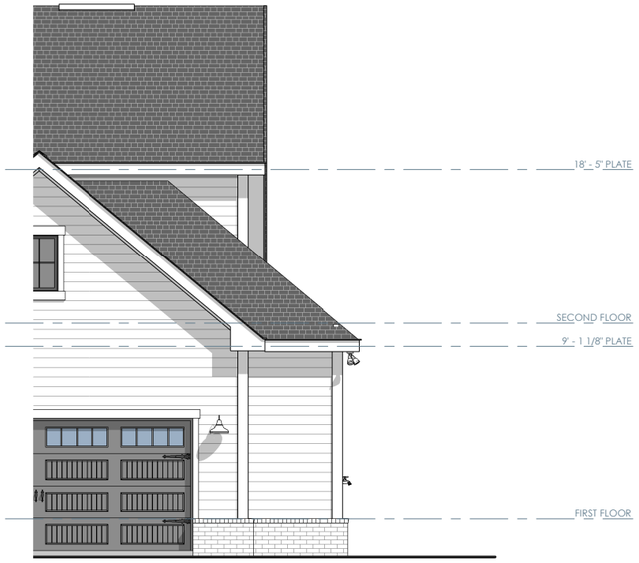
GARGE1/2
ELEVATION C - OPT. HALF CAR GARAGE - FRONT
1/8" = 1'-0"



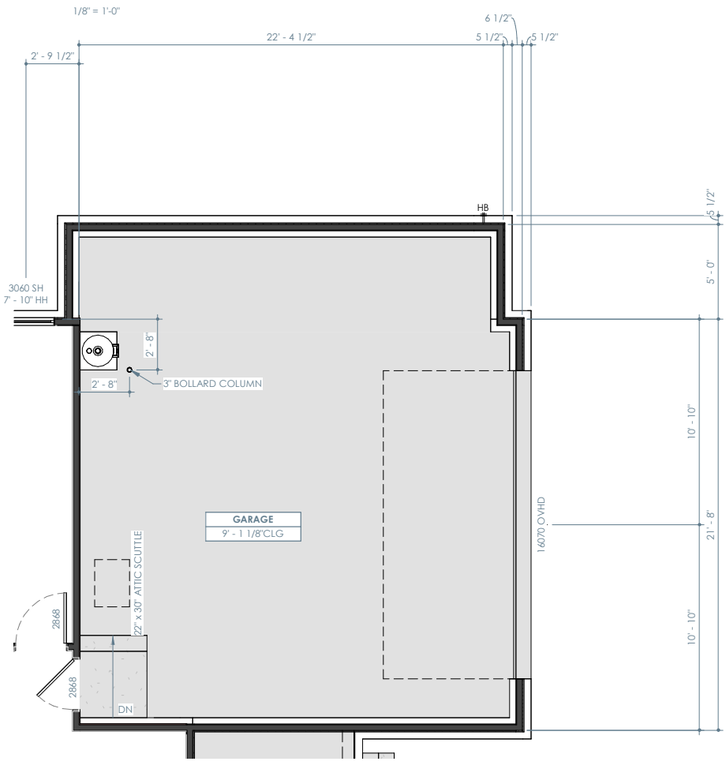
GARGE1/2
OPT. HALF CAR GARGE - ROOF PLAN
1/8" = 1'-0"



GARGE1/2
ELEVATION B - OPT. HALF CAR GARAGE - FRONT
1/8" = 1'-0"



GARGE1/2
ELEVATION A - OPT. HALF CAR GARAGE - FRONT
1/8" = 1'-0"



GARGE1/2
OPT. HALF CAR GARAGE FLOOR PLAN
1/8" = 1'-0"

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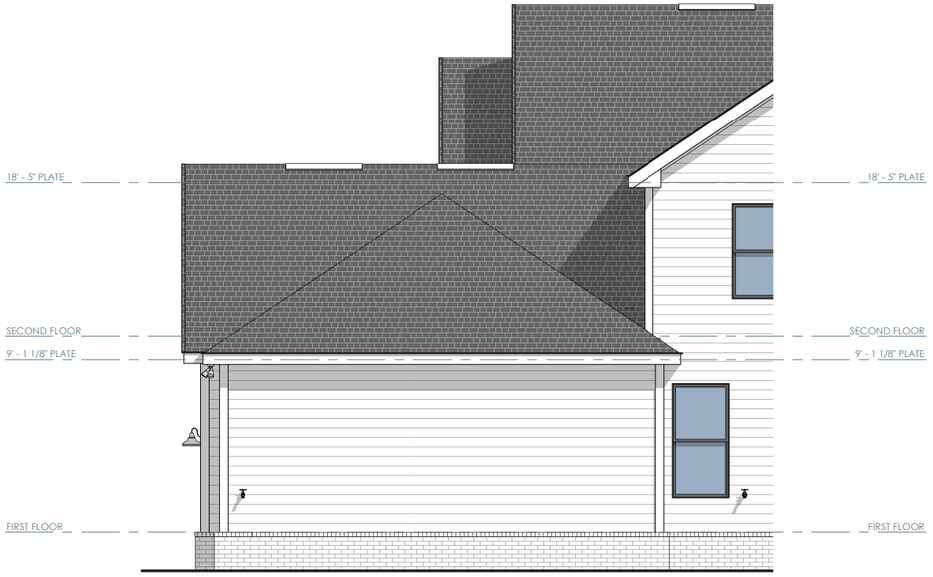
SHEET NAME
PLAN OPTIONS

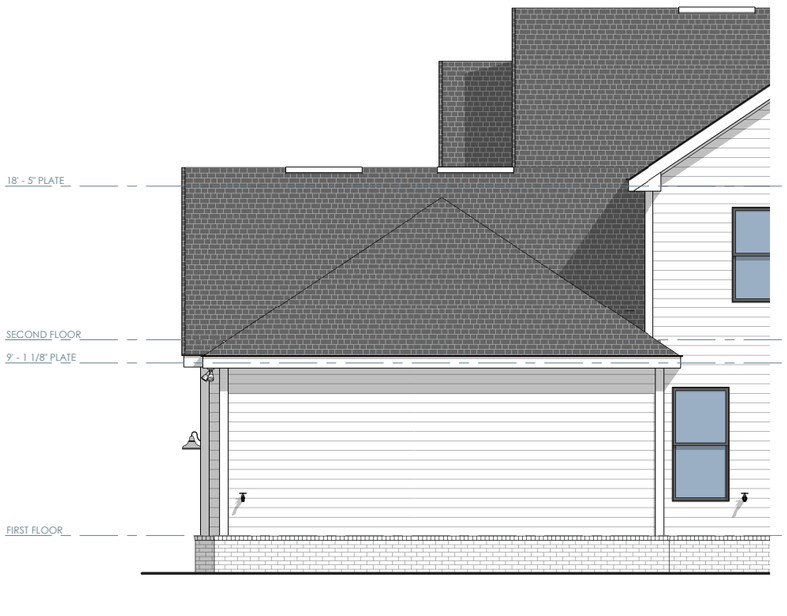
SHEET NO.
A7.00



GARGE1/2

OPT. HALF CAR GARAGE - RIGHT

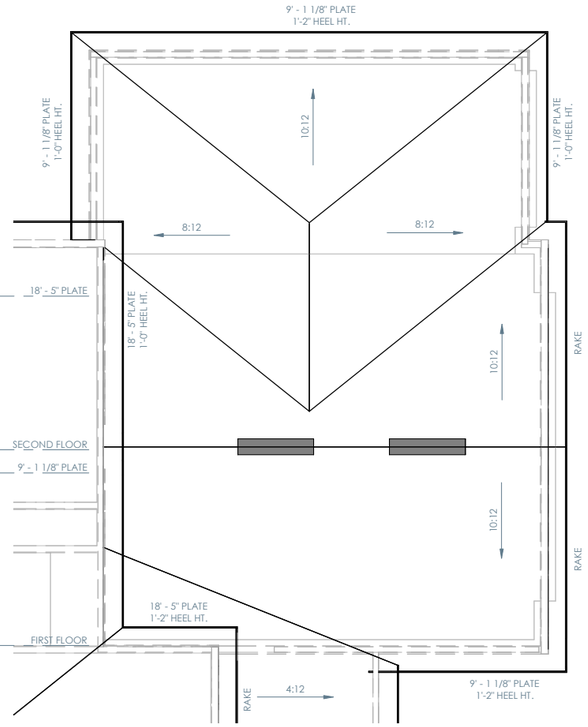
1/8" = 1'-0"



GARGE3

OPT. 3 CAR GARAGE - RIGHT

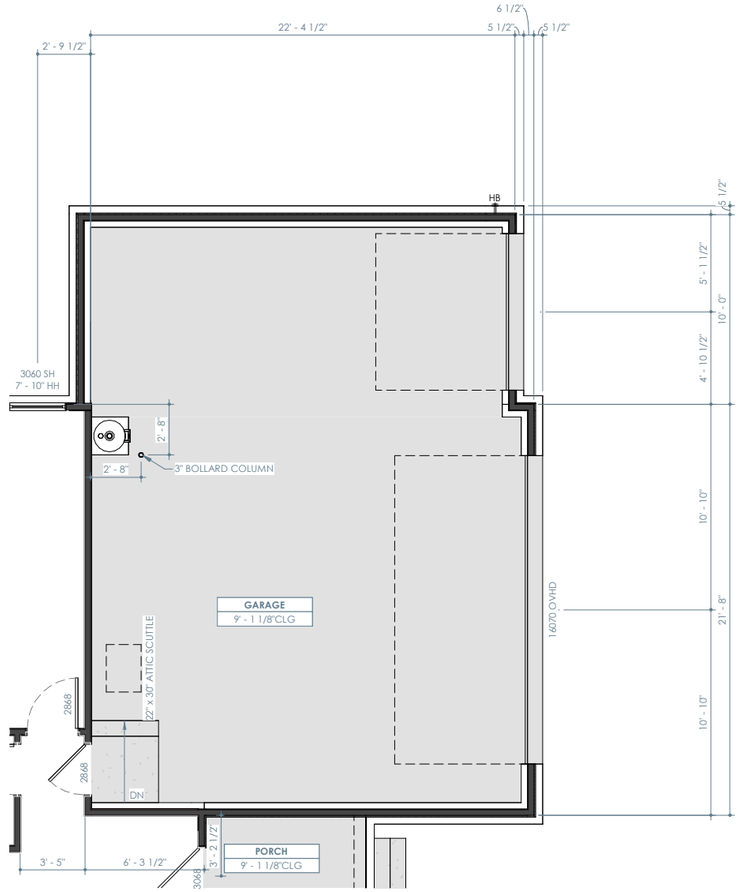
1/8" = 1'-0"



GARGE3

OPT. 3 CAR GARAGE - ROOF PLAN

1/8" = 1'-0"



GARGE3

OPT. 3 CAR GARAGE - FLOOR PLAN

1/8" = 1'-0"

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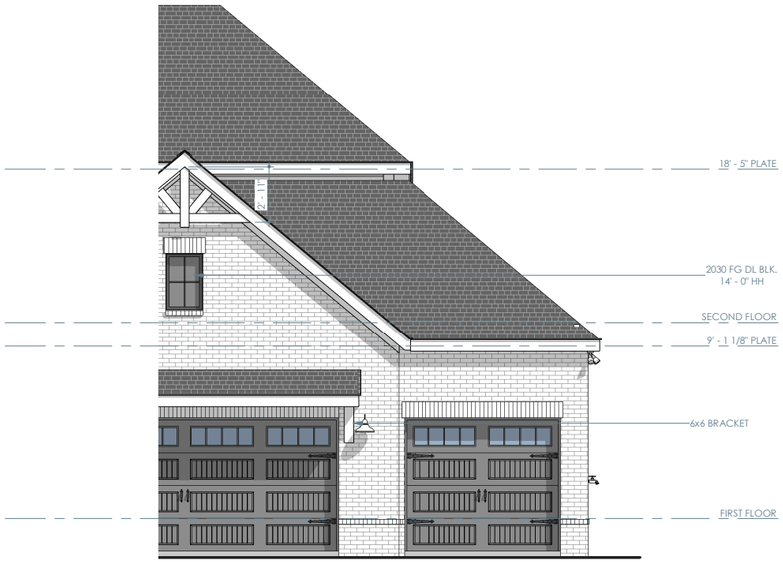
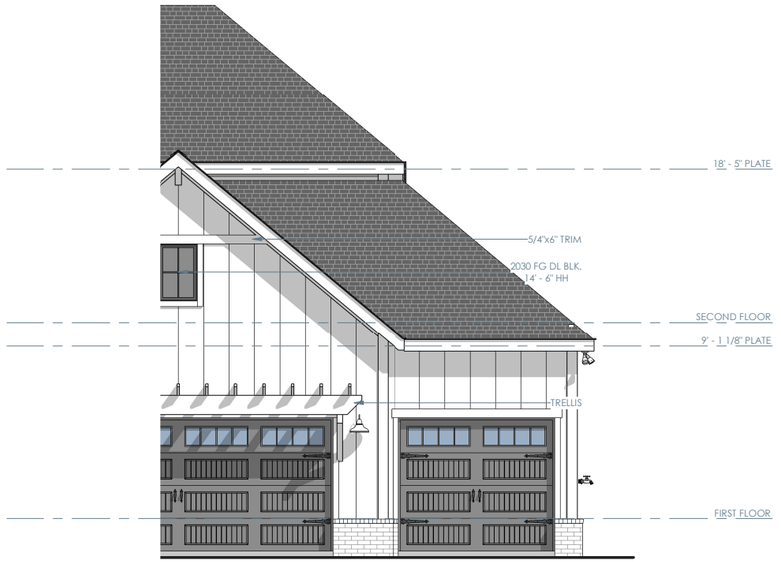
A7.01



GARGE3

ELEVATION D - OPT. 3 CAR GARAGE - FRONT

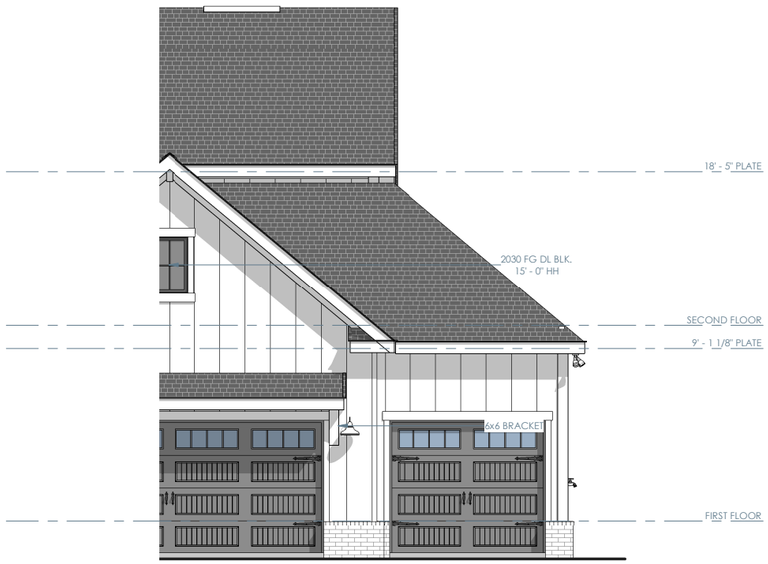
1/8" = 1'-0"



GARGE3

ELEVATION C - OPT. 3 CAR GARAGE - FRONT

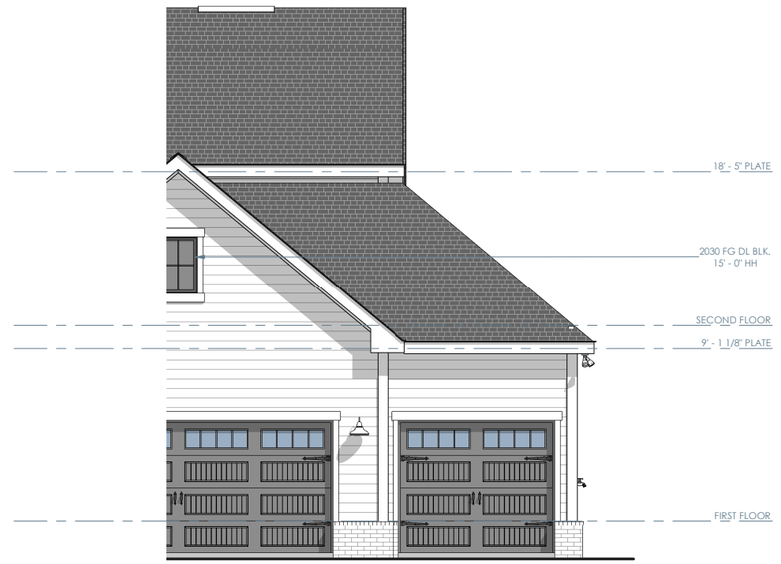
1/8" = 1'-0"



GARGE3

ELEVATION B - OPT. 3 CAR GARAGE - FRONT

1/8" = 1'-0"



GARGE3

ELEVATION A - OPT. 3 CAR GARAGE - FRONT

1/8" = 1'-0"

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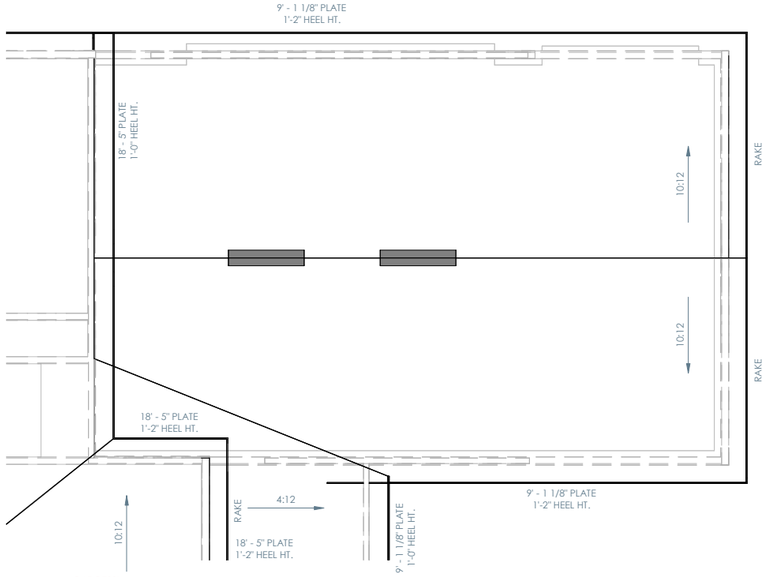
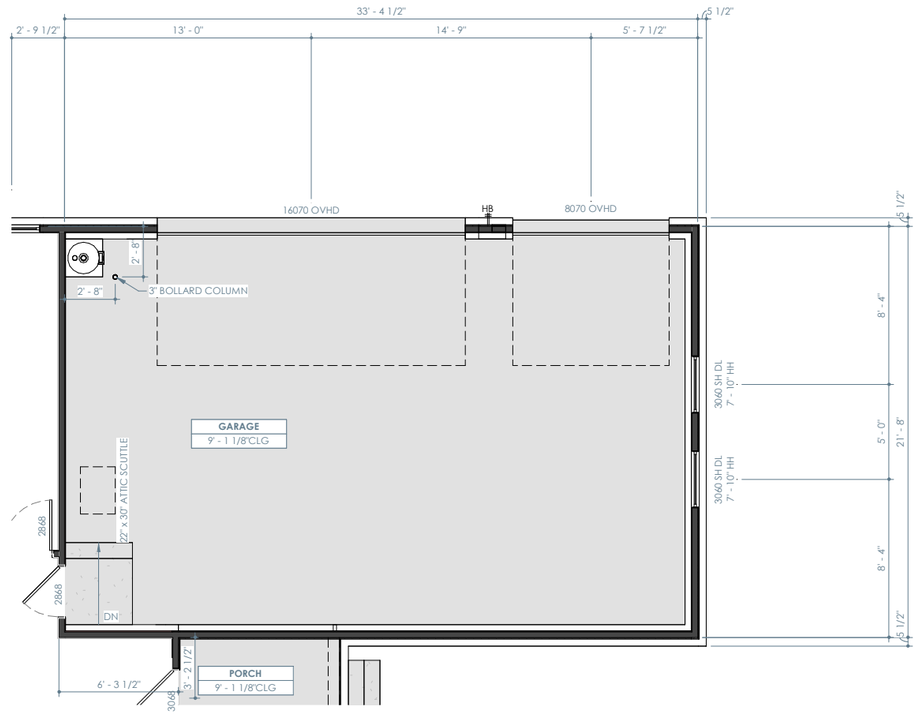


GARGE3SL

OPT. 3 CAR SIDE LOAD GARAGE - ROOF PLAN

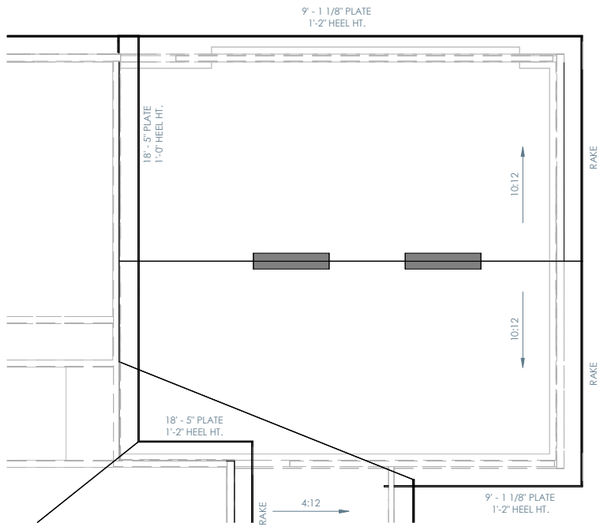
1/8" = 1'-0"



GARGE3SL

OPT. 3 CAR SIDE LOAD GARAGE - FLOOR PLAN

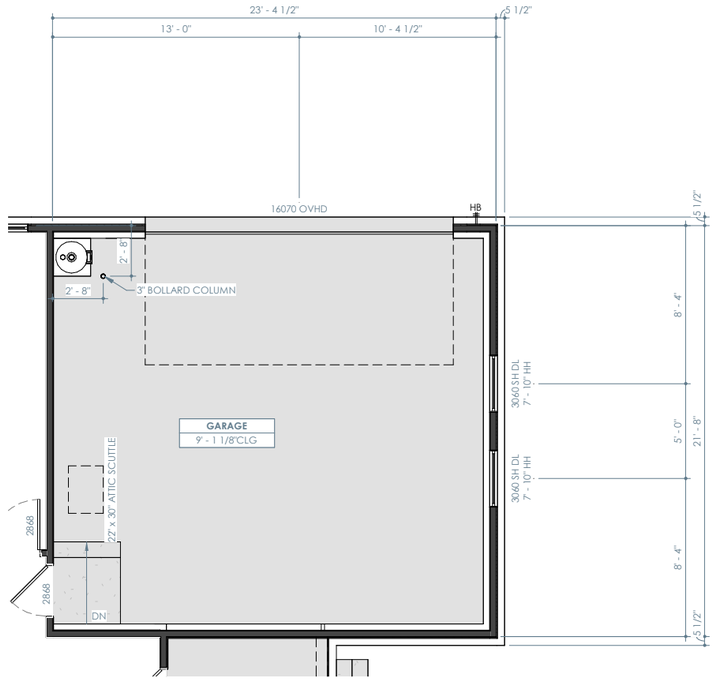
1/8" = 1'-0"



GARGSDLD

OPT. SIDE LOAD GARAGE - ROOF PLAN

1/8" = 1'-0"



GARGSDLD

OPT. SIDE LOAD GARAGE - FLOOR PLAN

1/8" = 1'-0"

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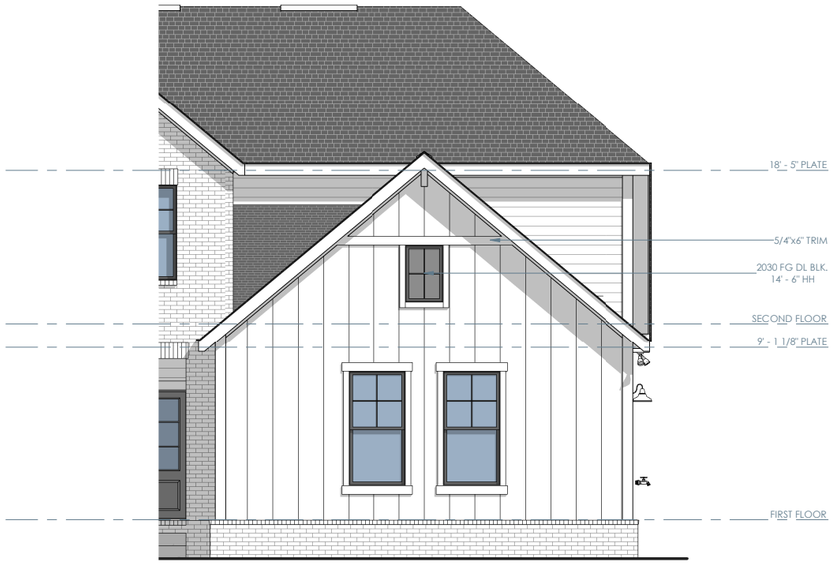
A7.03



GARGSDLD & GARGE3SL

ELEVATION D - OPT. SIDE LOAD GARAGE / OPT. 3 CAR SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



GARGSDLD & GARGE3SL

ELEVATION C - OPT. SIDE LOAD GARAGE / OPT. 3 CAR SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



GARGSDLD & GARGE3SL

ELEVATION B - OPT. SIDE LOAD GARAGE / OPT. 3 CAR SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



GARGSDLD & GARGE3SL

ELEVATION A - OPT. SIDE LOAD GARAGE / OPT. 3 CAR SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"

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SHEET NAME

PLAN OPTIONS

SHEET NO.

A7.04



GARGSDLD

ELEVATION A - OPT. SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"



GARGSDLD

ELEVATION B - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



GARGSDLD

ELEVATION C - OPT. SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"



GARGSDLD

ELEVATION D - OPT. SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"

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SHEET NAME

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SHEET NO.

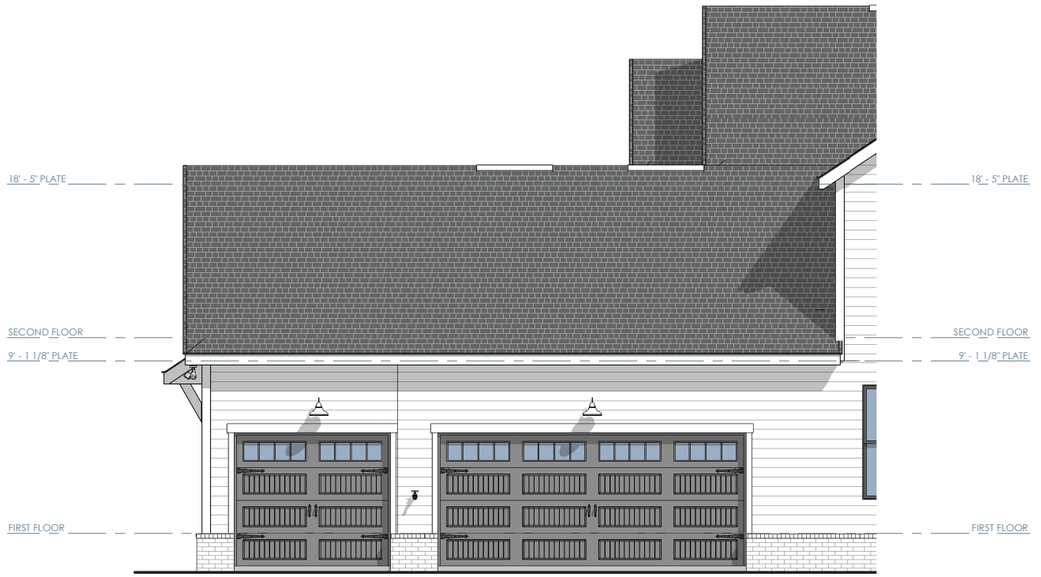
A7.05



GARGE3SL

ELEVATION A - OPT. 3 CAR SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"



GARGE3SL

ELEVATION B - OPT. 3 CAR SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"



GARGE3SL

ELEVATION C - OPT. 3 CAR SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"



GARGE3SL

ELEVATION D - OPT. 3 CAR SIDE LOAD GARAGE - RIGHT

1/8" = 1'-0"

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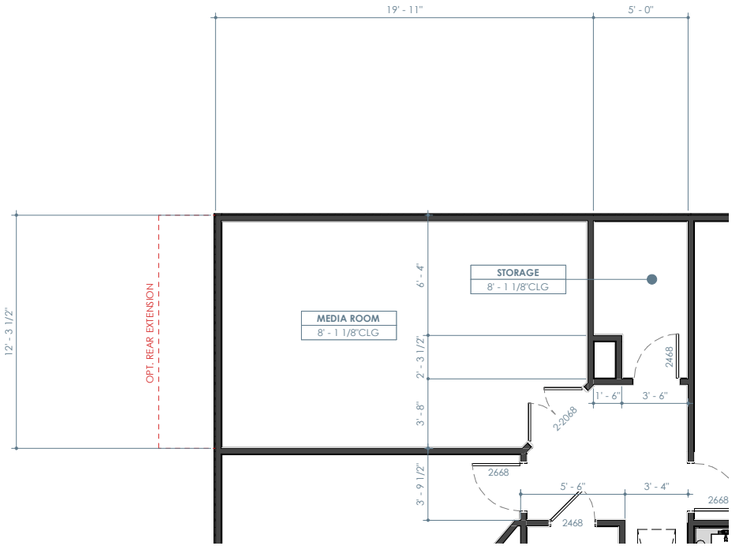
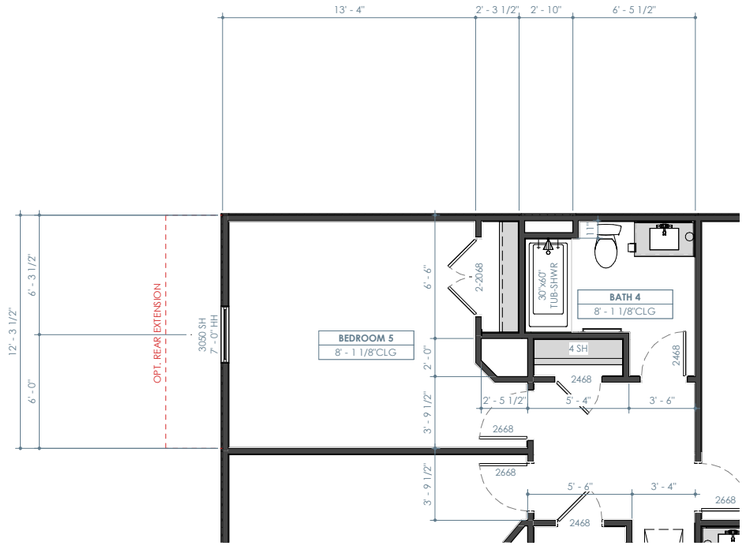


MEDIARM

OPT. MEDIA ROOM - FLOOR PLAN

1/8" = 1'-0"



BEDSBTH4

OPT. BEDROOM 5 w/ BATH 4 - FLOOR PLAN

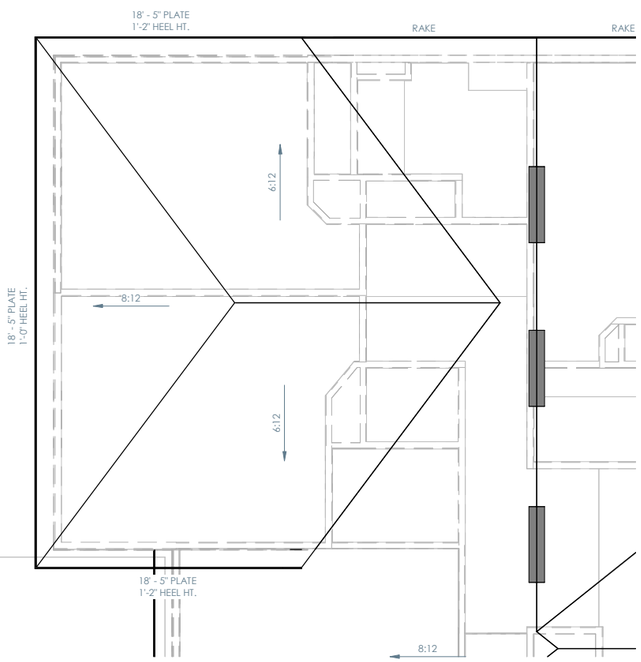
1/8" = 1'-0"



BEDSBTH4

OPT. BEDROOM 5 w/ BATH 4 / OPT. MEDIA - REAR

1/8" = 1'-0"



BEDSBTH4

OPT. BEDROOM 5 w/ BATH 4 / OPT. MEDIA - ROOF PLAN

1/8" = 1'-0"

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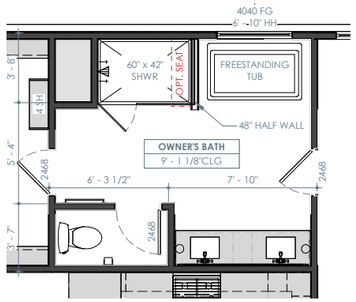
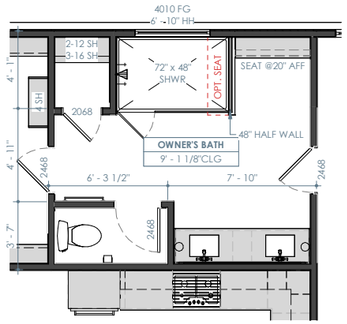
A7.07



FREESTUB

1 OPT. FREESTANDING TUB - FLOOR PLAN

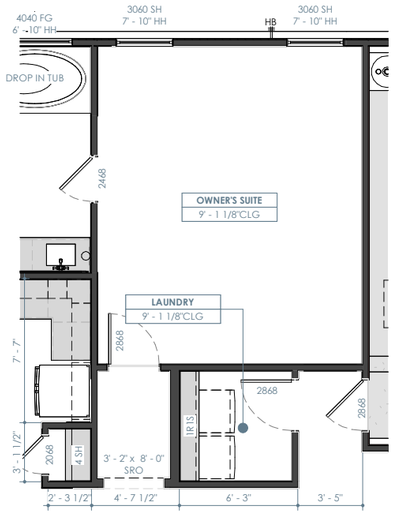
1/8" = 1'-0"



PLOMB201

2 OPT. ENLARGED SHOWER - FLOOR PLAN

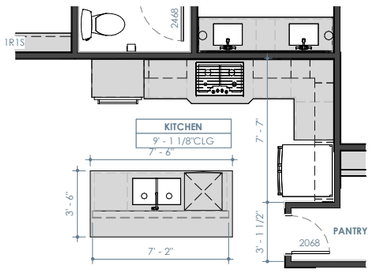
1/8" = 1'-0"



MBEDENT

3 OPT. OWNER'S ENTRY - FLOOR PLAN

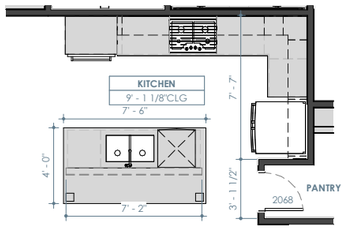
1/8" = 1'-0"



KITCHEN2

4 OPT. KITCHEN - FLOOR PLAN

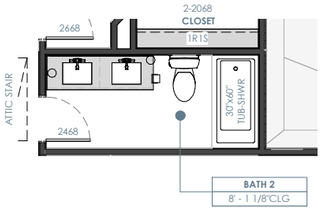
1/8" = 1'-0"



ISLAND2

5 OPT. ISLAND - FLOOR PLAN

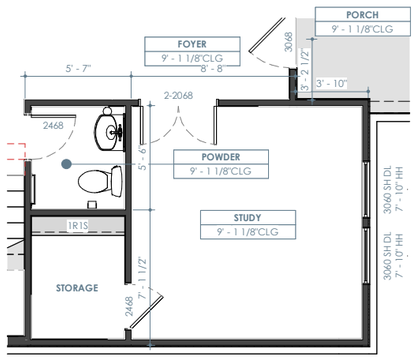
1/8" = 1'-0"



LAV2BTH3

6 OPT. BATH 2 SINK - FLOOR PLAN

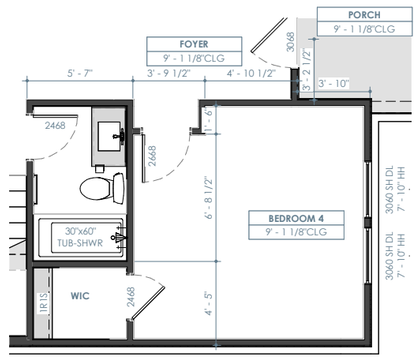
1/8" = 1'-0"



STUDY1

7 OPT. STUDY - FLOOR PLAN

1/8" = 1'-0"



BED4BTH3

8 OPT. BEDROOM 4 BATH 3 - FLOOR PLAN

1/8" = 1'-0"

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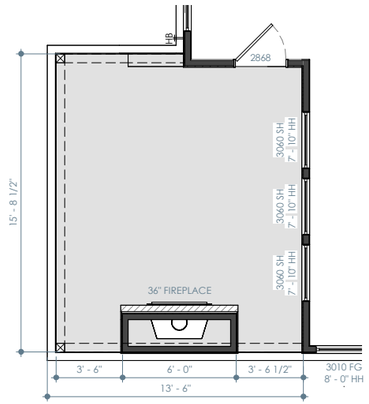
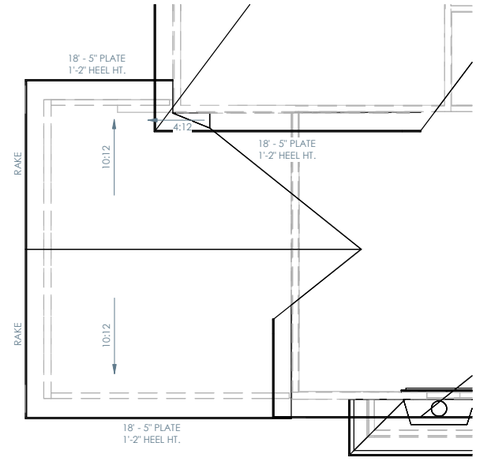


FP0D3611 / FP0D4211

OPT. OUTDOOR FIREPLACE - FLOOR PLAN

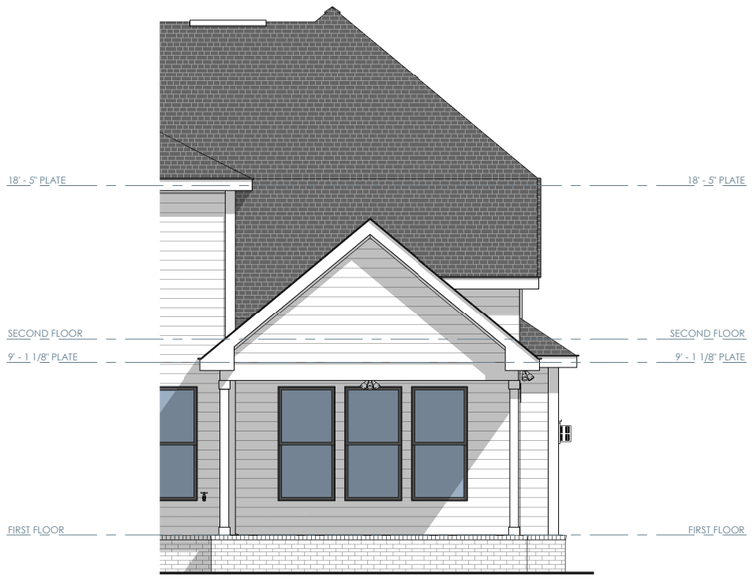
1/8" = 1'-0"



PATIO2

OPT. COVERED PATIO - ROOF PLAN

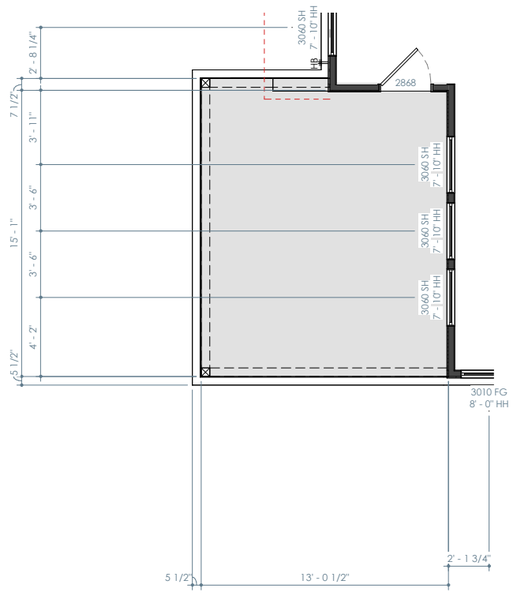
1/8" = 1'-0"



PATIO2

OPT. COVERED PAITO - REAR

1/8" = 1'-0"



PATIO2

OPT. COVERED PATIO - FLOOR PLAN

1/8" = 1'-0"

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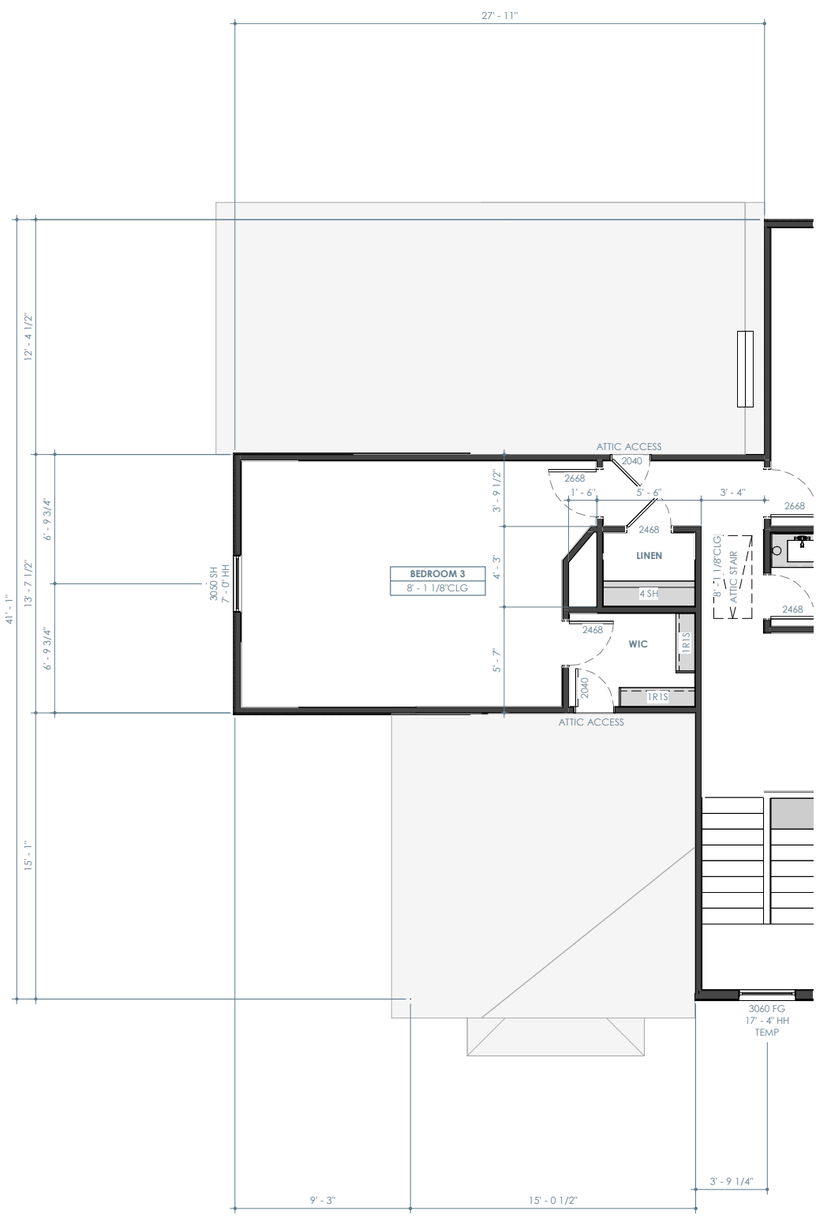
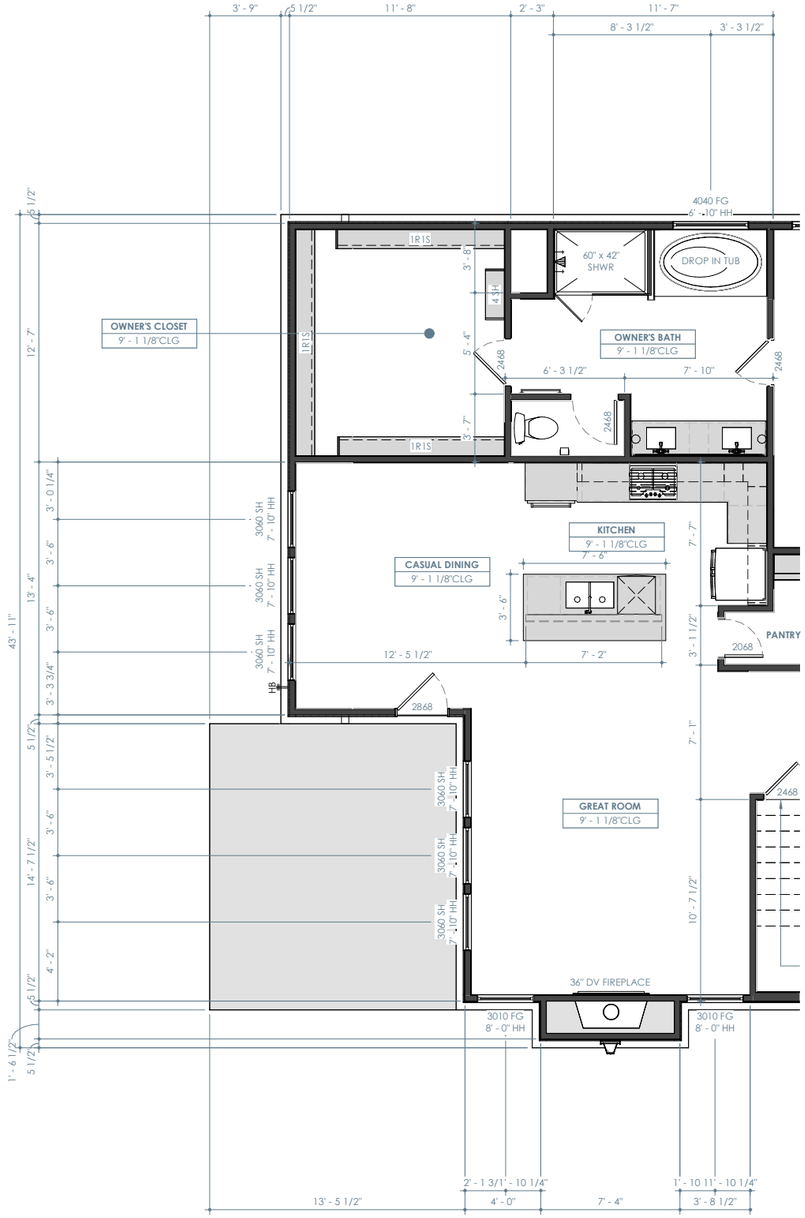


OPT. REAR EXTENSION - SECOND FLOOR PLAN

1/8" = 1'-0"



OPT. REAR EXTENSION - FIRST FLOOR PLAN

1/8" = 1'-0"

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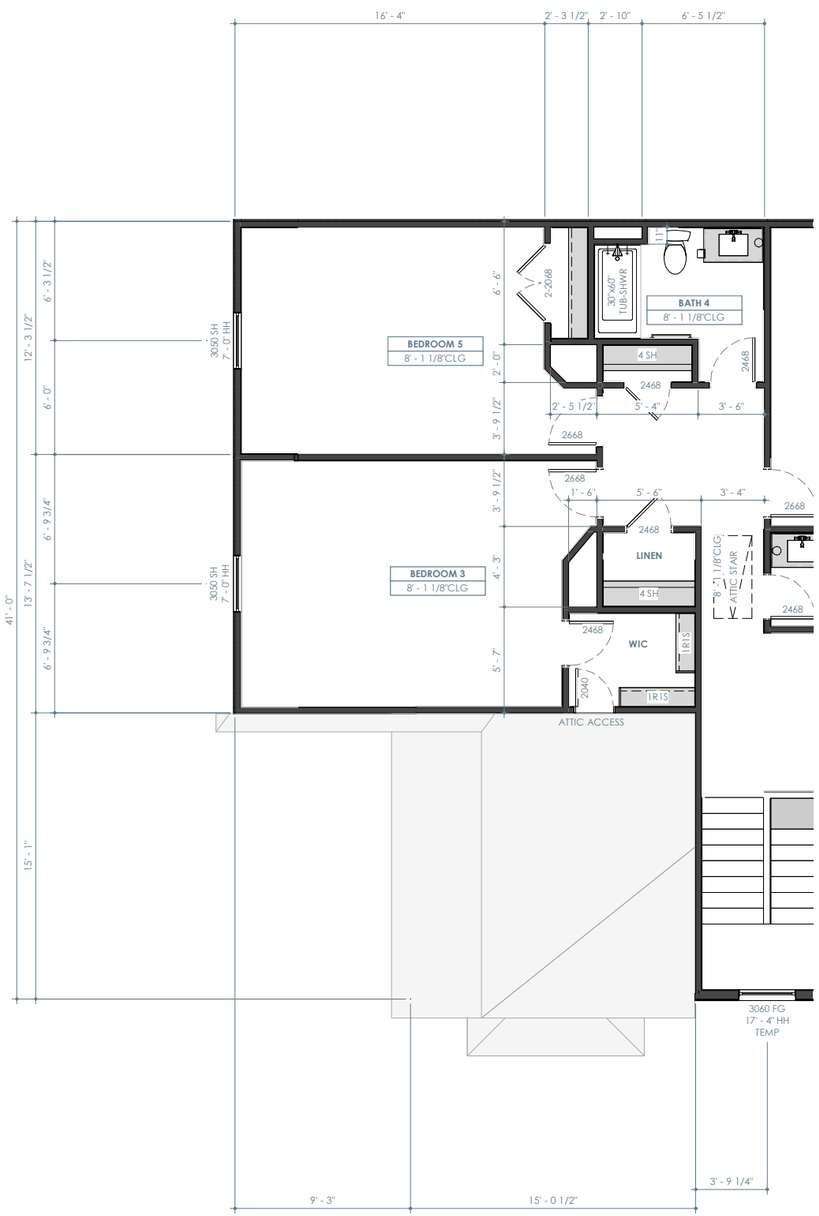
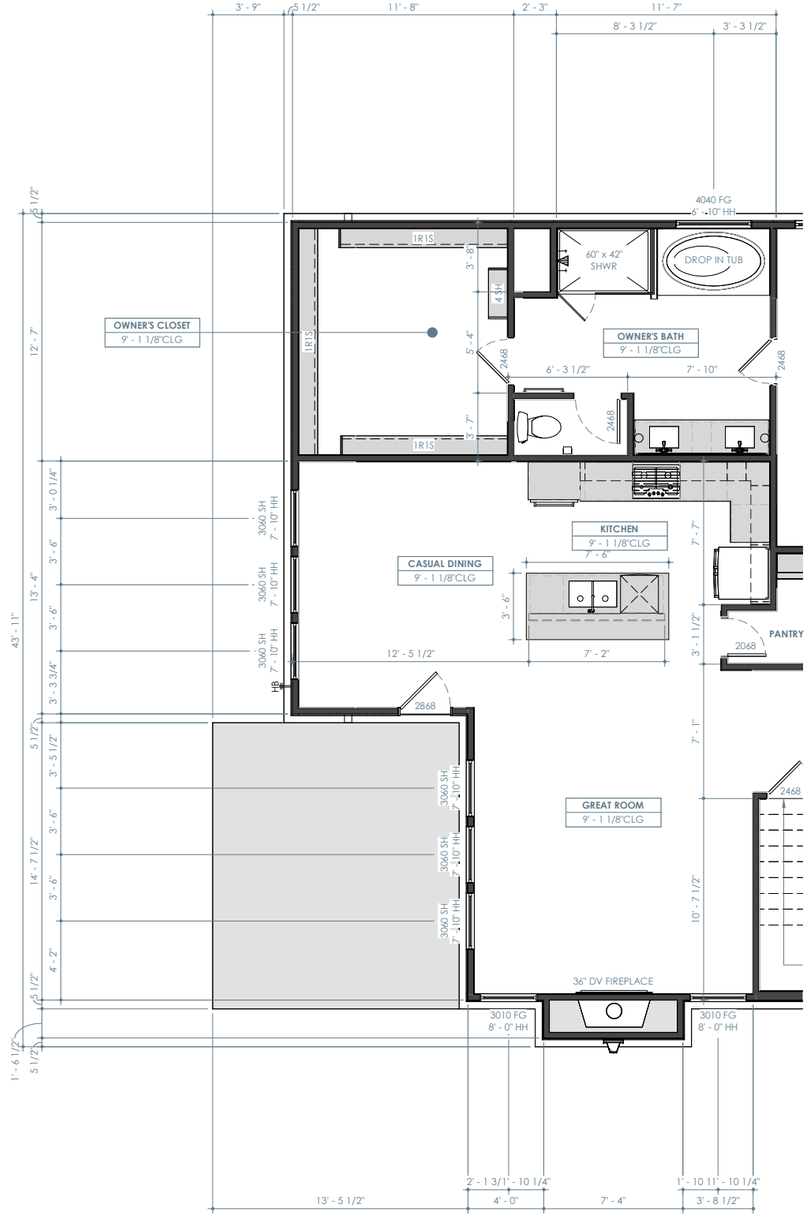
SHEET NO.

A7.10



OPT. REAR EXTENSION W/ OPT. BED5BTH4 - SECOND FLOOR PLAN

1/8" = 1'-0"



OPT. REAR EXTENSION W/ OPT. BED5BTH4- FIRST FLOOR PLAN

1/8" = 1'-0"

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PLAN NO.

2550 (255)

ISSUE DATE	11-08-202
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

SHEET NO.

A7.11



OPT. REAR EXTENSION - REAR

1/8" = 1'-0"



OPT. REAR EXTENSION - RIGHT

1/8" = 1'-0"

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DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

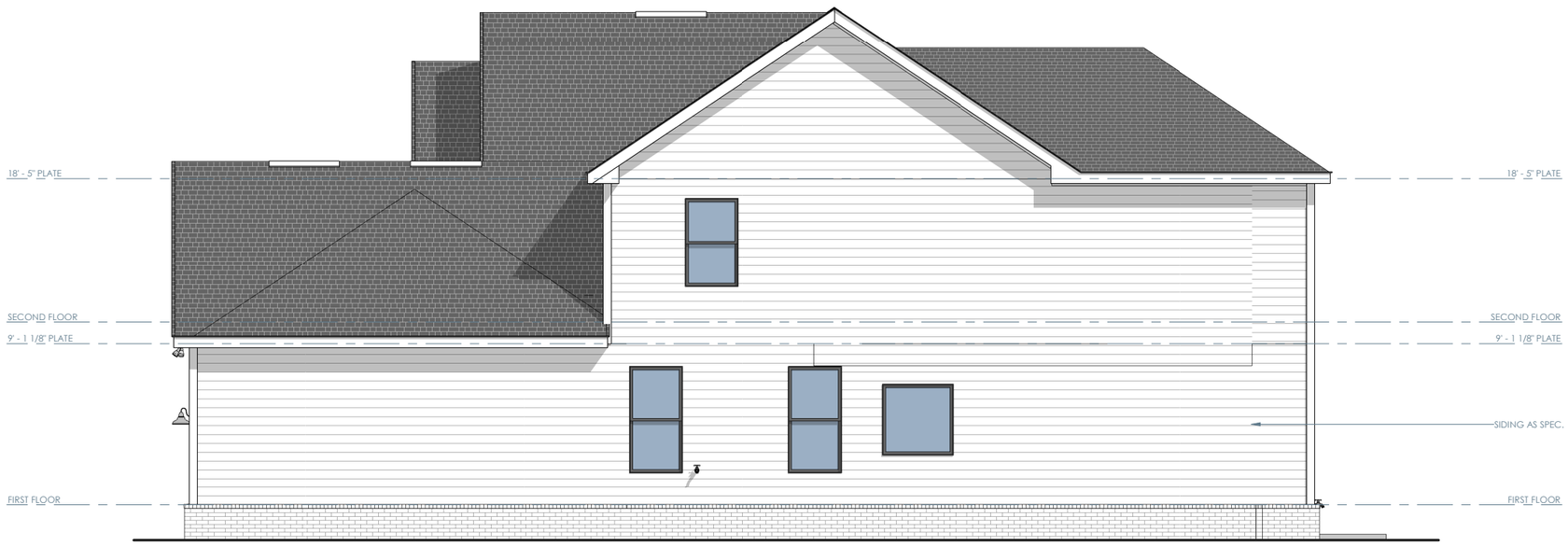
SHEET NO.

A7.12



OPT. REAR EXTENSION W/ OPT. BED5BTH4 - REAR

1/8" = 1'-0"



OPT. REAR EXTENSION W/ OPT. BED5BTH4 - RIGHT

1/8" = 1'-0"

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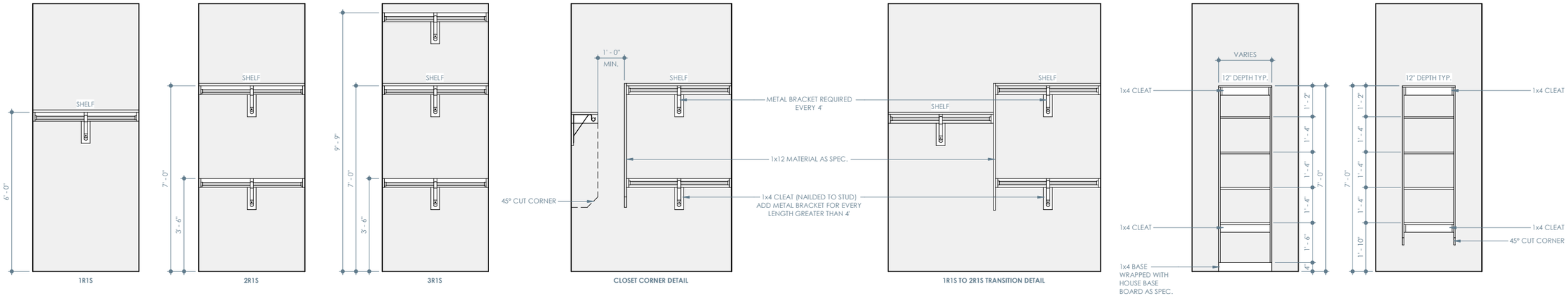
PLAN NO.
2550 (255)

ISSUE DATE	11-08-202
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

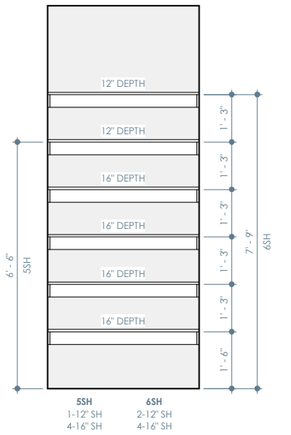
SHEET NAME
PLAN OPTIONS

SHEET NO.
A7.13



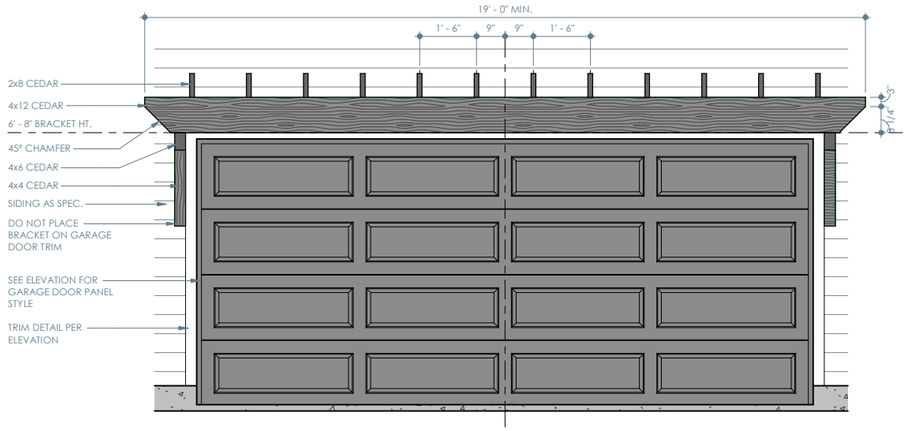
1 CLOSET DETAILS

1/4" = 1'-0"



2 LINEN / PANTRY DETAIL

1/4" = 1'-0"



3 TRELLIS DETAIL

1/4" = 1'-0"

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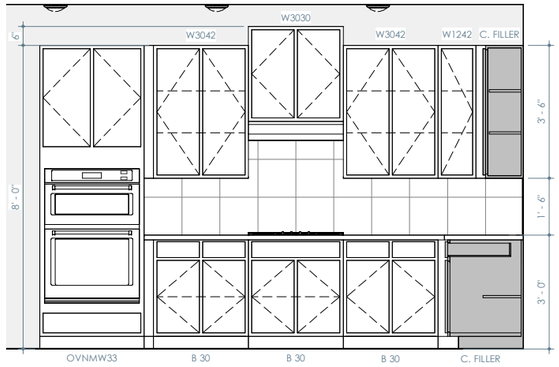
DRAWN BY	JLA
SCALE	1/4" = 1'-0"

SHEET NAME

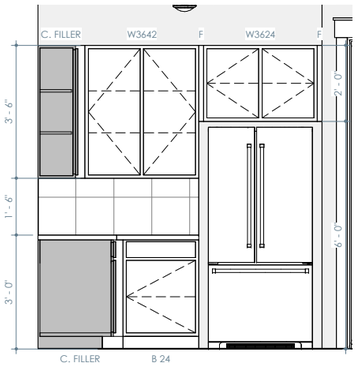
DETAILS

SHEET NO.

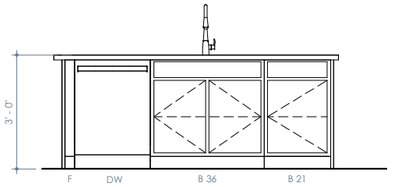
AD1.00



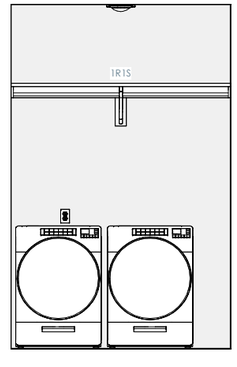
1 KITCHEN
1/4" = 1'-0"



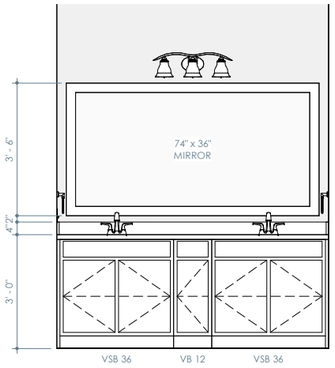
2 KITCHEN
1/4" = 1'-0"



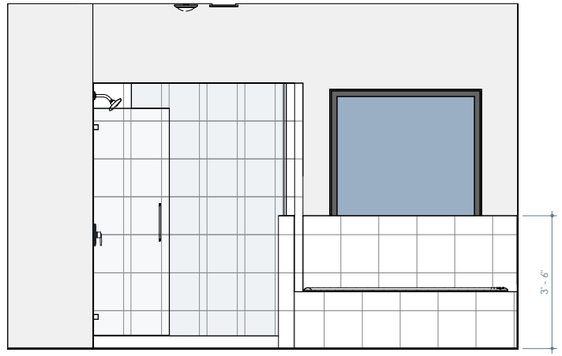
3 KITCHEN
1/4" = 1'-0"



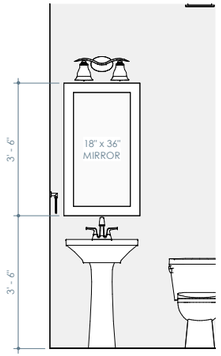
4 LAUNDRY
1/4" = 1'-0"



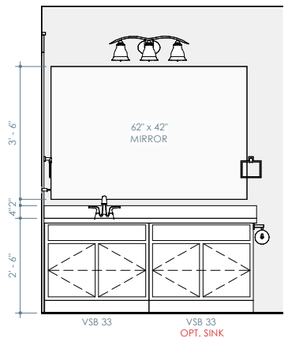
5 OWNER'S BATH
1/4" = 1'-0"



6 OWNER'S BATH
1/4" = 1'-0"



7 POWDER
1/4" = 1'-0"



8 BATH 2
1/4" = 1'-0"

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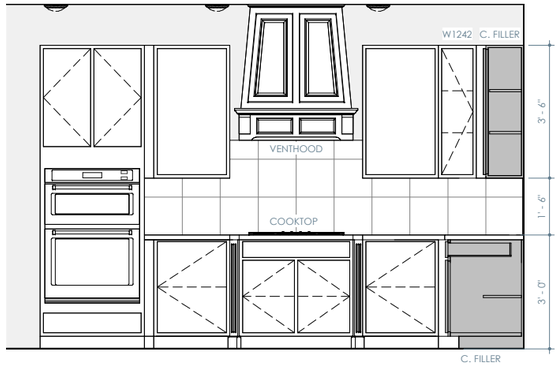
PLAN NO.
2550 (255)

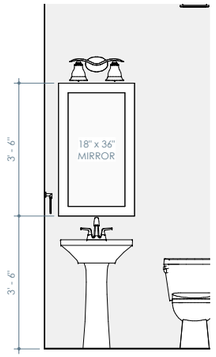
ISSUE DATE	11-08-202
DRAWN BY	JLA
SCALE	1/4" = 1'-0"

SHEET NAME
INTERIOR ELEVATIONS

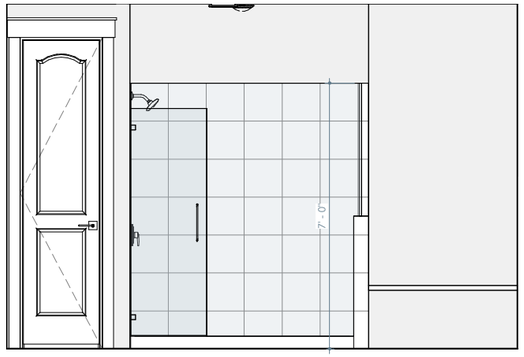
SHEET NO.
AI1.00



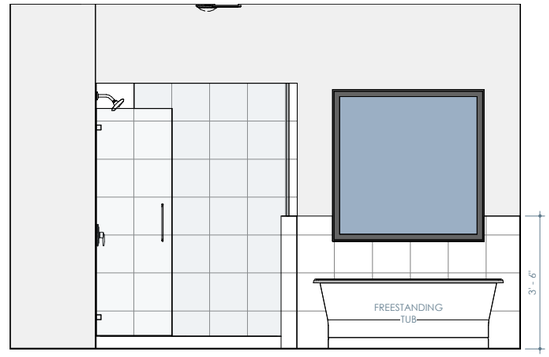
KITCHEN2
1 OPT. KITCHEN
1/4" = 1'-0"



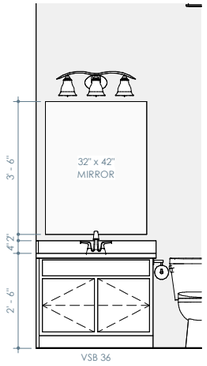
STUDY1
2 OPT. STUDY - POWDER
1/4" = 1'-0"



PLOMB201
3 OPT. ENLARGED SHOWER
1/4" = 1'-0"



FREESTUB
4 OPT. FREESTANDING TUB
1/4" = 1'-0"



5 OPT. BEDROOM 4 BATH 3
1/4" = 1'-0"

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2550 (255)

ISSUE DATE	11-08-202
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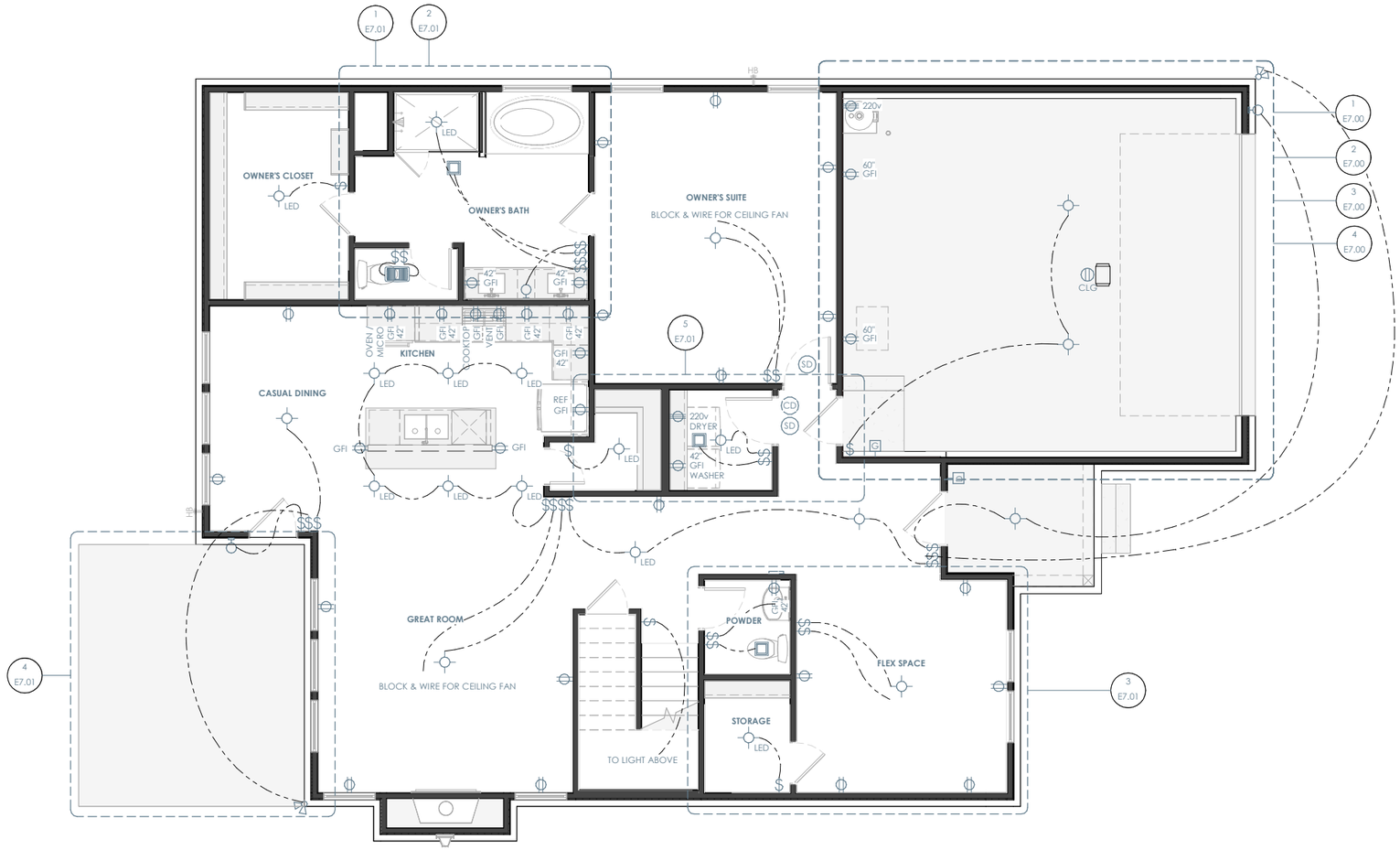
SHEET NAME
INTERIOR ELEVATIONS

SHEET NO.
AI1.02



ELEVATION A - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

ELECTRICAL NOTES

INFORMATION AND LAYOUTS SHOWN ON DRAWINGS ARE ONLY SCHEMATIC IN DESIGN

- PROVIDE LIGHT IN EACH CRAWLSPACE AND ATTIC
- GAS AND 220 OUTLETS SHOWN FOR LOCATION PURPOSES ONLY, AND SUBJECT TO CHANGE PER SUBDIVISION/CITY/CODE REQUIREMENT

KITCHEN
- 24" MAX SEPERATION FOR OUTLETS LOCATED AT KITCHEN COUNTERTOPS
- RECEPTACLES AT COUNTER SPACE 12" OR WIDER.
- GFCI OUTLETS REQUIRED AT KITCHEN COUTERTOPS
- 1 OUTLET PROVIDED PER ISLAND MINIMUM

BATHROOMS
- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES
- OUTLETS IN ALL LIVING SPACES SHALL BE PROVIDED AT 6' MAX FROM OPENING OR DOOR AND MINIMUM 12' BETWEEN EACH RECEPTACLE
- PROVIDE OUTLET ON ANY WALL LARGER THAN 2' BETWEEN OPENINGS AND DOORS
- FLOOR PLUGS AS REQUIRED

OTHER AREAS
- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
- PROVIDE AT LEAST 1 OUTLET PER 10' OF HALLWAY RUN

LIGHTING
- LIGHTING FIXTURES LOCATED IN CLOSETS: SURFACE MOUNT FIXTURE ARE NOT TO BE WITHIN 1'-0" OF SHELF OR HANGING SPACE MEASURED HORIZONTALLY. RECESSED FIXTURES NOT TO BE WITHIN 6" OF ANY SHELF OR HANGING SPACE

SMOKE DETECTORS
- ADDITIONAL SMOKE DETECTOR REQUIRED AT EACH END OF ROOMS/HALLWAYS GREATER THAN 30' IN LENGTH
- DO NOT INSTALL DETECTORS WITHIN 3' OF AN AIR VENT OR RETURN
- KEEP ALL SMOKE DETECTORS A MINIMUM OF 36" FROM BATHROOM DOOR, KITCHEN COOKING APPLIANCES AND LAUNDRY/UTILITY (WHERE A WASHER AND DRYER IS PLACED)
- DO NOT INSTALL NEAR FLUORESCENT LIGHTS
- DO NOT INSTALL WITHIN 36" OF TIP OF PADDLE FOR CEILING FAN
- INSTALL SMOKE DETECTOR ON SLOPED, PEAKED OR CATHEDRAL CEILINGS AT OR WITHIN 3' OF HIGHEST POINT (MEASURED HORIZONTALLY)
- SMOKE ALARMS IN ROOMS WITH CEILING SLOPES GREATER THAN 1 FOOT IN 8 FEET HORIZONTALLY SHALL BE LOCATED ON THE HIGHEST SIDE OF ROOM

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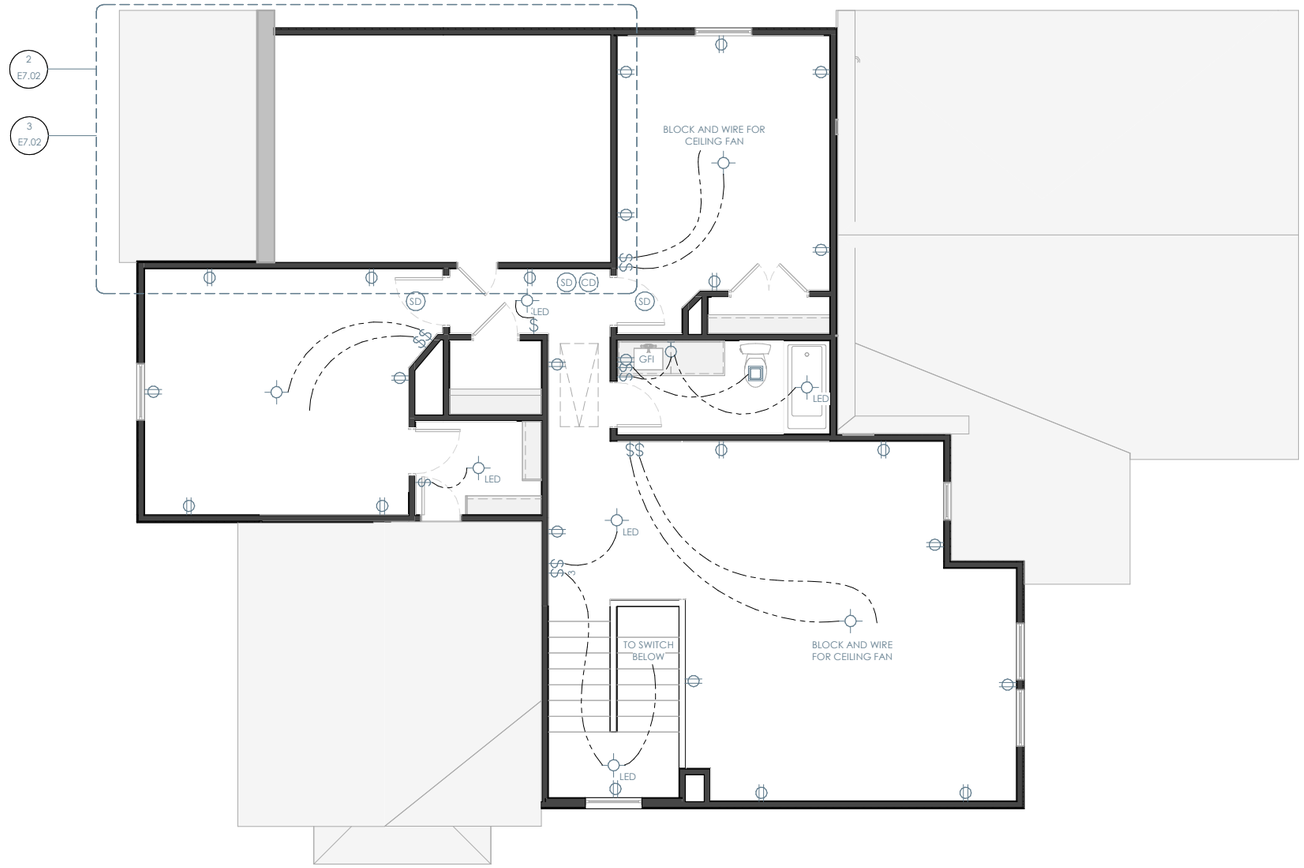
SCALE	1/8" = 1'-0"

SHEET NAME
ELEVATION A - FIRST FLOOR ELECTRICAL

SHEET NO.
E1.00



ELEVATION A - SECOND FLOOR ELECTRICAL

1/8" = 1'-0"

ELECTRICAL NOTES

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- GFCI OUTLETS REQUIRED AT KITCHEN COUTERTOPS
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BATHROOMS
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- FLOOR PLUGS AS REQUIRED

OTHER AREAS
- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
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LIGHTING
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- DO NOT INSTALL WITHIN 36" OF TIP OF PADDLE FOR CEILING FAN
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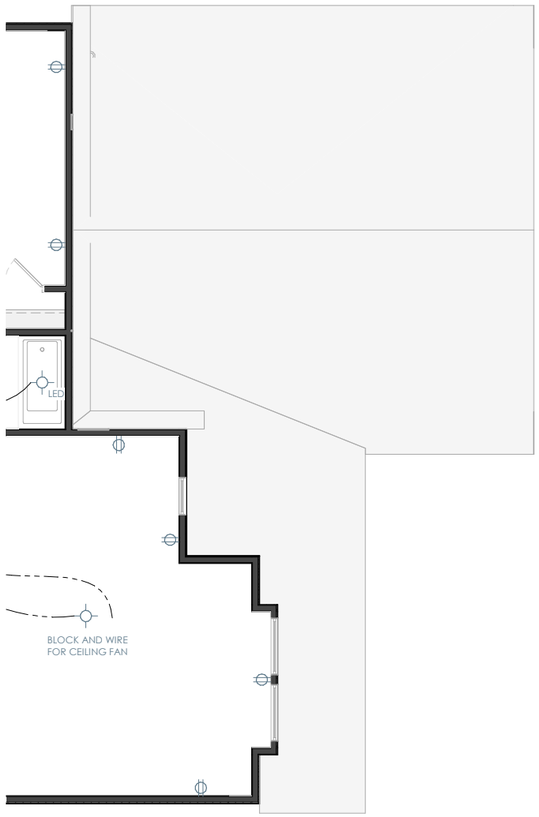
SCALE	1/8" = 1'-0"

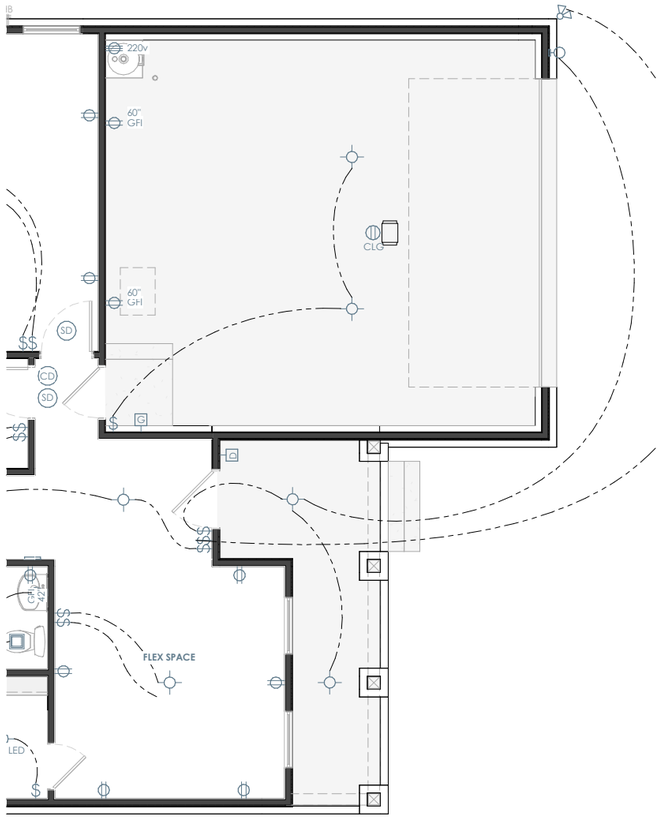
SHEET NAME
ELEVATION A - SECOND FLOOR ELECTRICAL

SHEET NO.
E1.01



ELEVATION B - SECOND FLOOR ELECTRICAL

1/8" = 1'-0"



ELEVATION B -FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

ELECTRICAL NOTES

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- GFCI OUTLETS REQUIRED AT KITCHEN COUTERTOPS
- 1 OUTLET PROVIDED PER ISLAND MINIMUM

BATHROOMS
- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES
- OUTLETS IN ALL LIVING SPACES SHALL BE PROVIDED AT 6' MAX FROM OPENING OR DOOR AND MINIMUM 12' BETWEEN EACH RECEPTACLE
- PROVIDE OUTLET ON ANY WALL LARGER THAN 2' BETWEEN OPENINGS AND DOORS
- FLOOR PLUGS AS REQUIRED

OTHER AREAS
- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
- PROVIDE AT LEAST 1 OUTLET PER 10' OF HALLWAY RUN

LIGHTING
- LIGHTING FIXTURES LOCATED IN CLOSETS: SURFACE MOUNT FIXTURE ARE NOT TO BE WITHIN 1'-0" OF SHELF OR HANGING SPACE MEASURED HORIZONTALLY, RECESSED FIXTURES NOT TO BE WITHIN 6" OF ANY SHELF OR HANGING SPACE

SMOKE DETECTORS
- ADDITIONAL SMOKE DETECTOR REQUIRED AT EACH END OF ROOMS/HALLWAYS GREATER THAN 30' IN LENGTH
- DO NOT INSTALL DETECTORS WITHIN 3' OF AN AIR VENT OR RETURN
- KEEP ALL SMOKE DETECTORS A MINIMUM OF 36" FROM BATHROOM DOOR, KITCHEN COOKING APPLIANCES AND LAUNDRY/UTILITY (WHERE A WASHER AND DRYER IS PLACED)
- DO NOT INSTALL NEAR FLUORESCENT LIGHTS
- DO NOT INSTALL WITHIN 36" OF TIP OF PADDLE FOR CEILING FAN
- INSTALL SMOKE DETECTOR ON SLOPED, PEAKED OR CATHEDRAL CEILINGS AT OR WITHIN 3' OF HIGHEST POINT (MEASURED HORIZONTALLY)
- SMOKE ALARMS IN ROOMS WITH CEILING SLOPES GREATER THAN 1 FOOT IN 8 FEET HORIZONTALLY SHALL BE LOCATED ON THE HIGHEST SIDE OF ROOM

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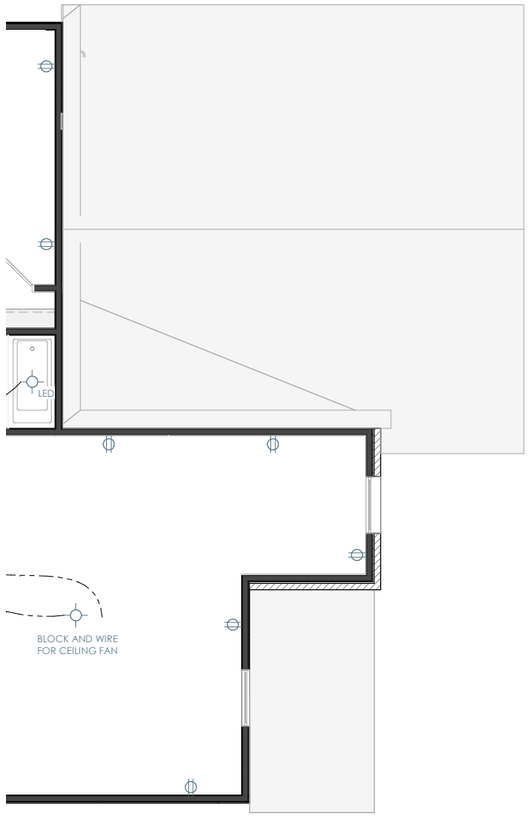
PLAN NO.
2550 (255)

ISSUE DATE	11-08-202
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

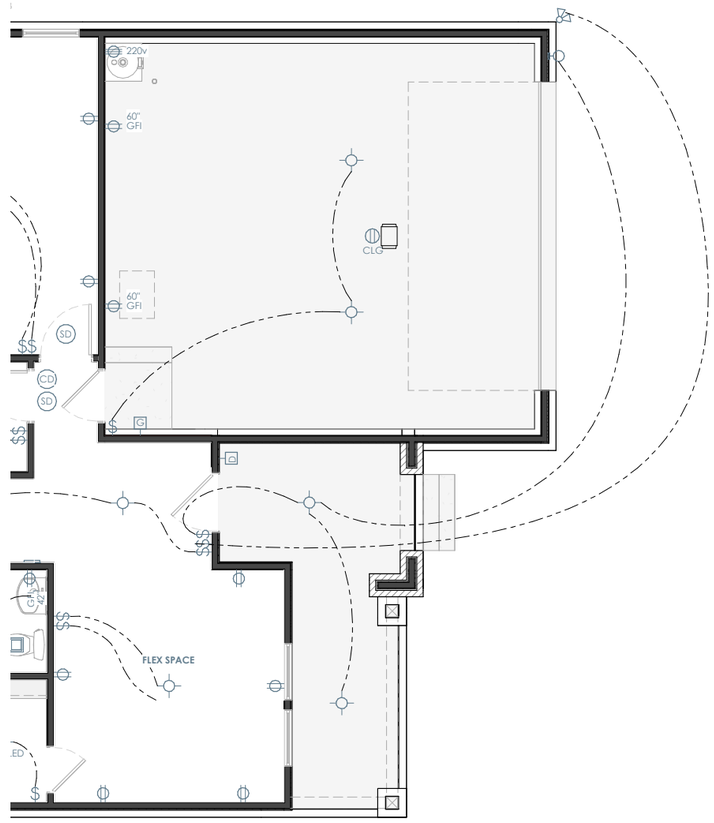
SHEET NAME
ELEVATION B - PARTIAL ELECTRICAL PLANS

SHEET NO.
E2.00



ELEVATION C - SECOND FLOOR ELECTRICAL

1/8" = 1'-0"



ELEVATION C - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

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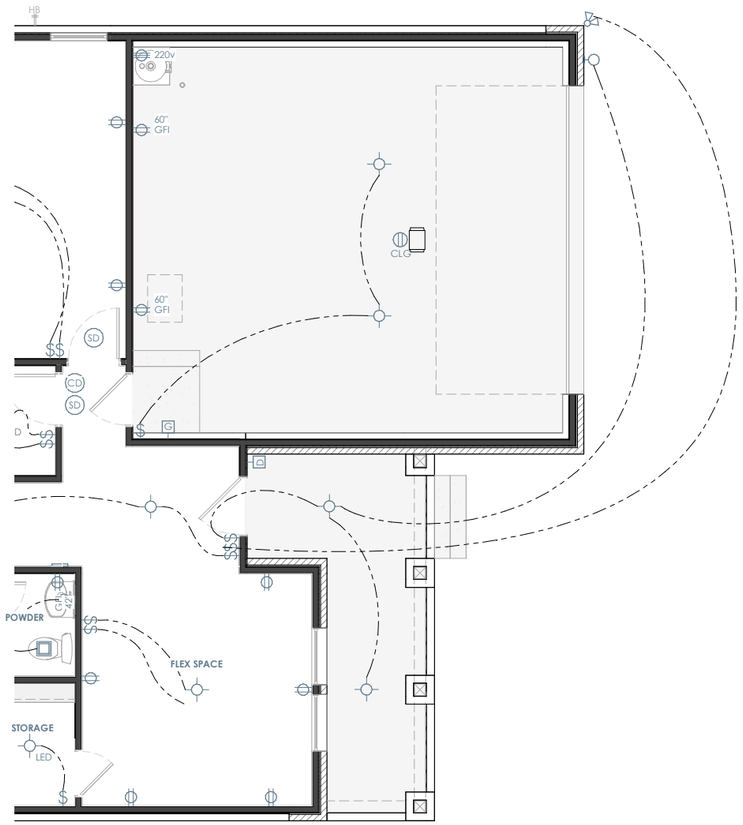
ISSUE DATE	11-08-202
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - PARTIAL ELECTRICAL PLANS

SHEET NO.

E3.00



ELEVATION D - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

ELECTRICAL NOTES

INFORMATION AND LAYOUTS SHOWN ON DRAWINGS ARE ONLY SCHEMATIC IN DESIGN

- PROVIDE LIGHT IN EACH CRAWLSPACE AND ATTIC
- GAS AND 220 OUTLETS SHOWN FOR LOCATION PURPOSES ONLY. AND SUBJECT TO CHANGE PER SUBDIVISION/CITY/CODE REQUIREMENT

KITCHEN
- 24" MAX SEPERATION FOR OUTLETS LOCATED AT KITCHEN COUNTERTOPS
- RECEPTACLES AT COUNTER SPACE 12" OR WIDER.
- GFCI OUTLETS REQUIRED AT KITCHEN COUTERTOPS
- 1 OUTLET PROVIDED PER ISLAND MINIMUM

BATHROOMS
- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES
- OUTLETS IN ALL LIVING SPACES SHALL BE PROVIDED AT 6' MAX FROM OPENING OR DOOR AND MINIMUM 12' BETWEEN EACH RECEPTACLE
- PROVIDE OUTLET ON ANY WALL LARGER THAN 2' BETWEEN OPENINGS AND DOORS
- FLOOR PLUGS AS REQUIRED

OTHER AREAS
- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
- PROVIDE AT LEAST 1 OUTLET PER 10' OF HALLWAY RUN

LIGHTING
- LIGHTING FIXTURES LOCATED IN CLOSETS: SURFACE MOUNT FIXTURE ARE NOT TO BE WITHIN 1'-0" OF SHELF OR HANGING SPACE MEASURED HORIZONTALLY. RECESSED FIXTURES NOT TO BE WITHIN 6" OF ANY SHELF OR HANGING SPACE

SMOKE DETECTORS
- ADDITIONAL SMOKE DETECTOR REQUIRED AT EACH END OF ROOMS/HALLWAYS GREATER THAN 30' IN LENGTH
- DO NOT INSTALL DETECTORS WITHIN 3' OF AN AIR VENT OR RETURN
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- SMOKE ALARMS IN ROOMS WITH CEILING SLOPES GREATER THAN 1 FOOT IN 8 FEET HORIZONTALLY SHALL BE LOCATED ON THE HIGHEST SIDE OF ROOM

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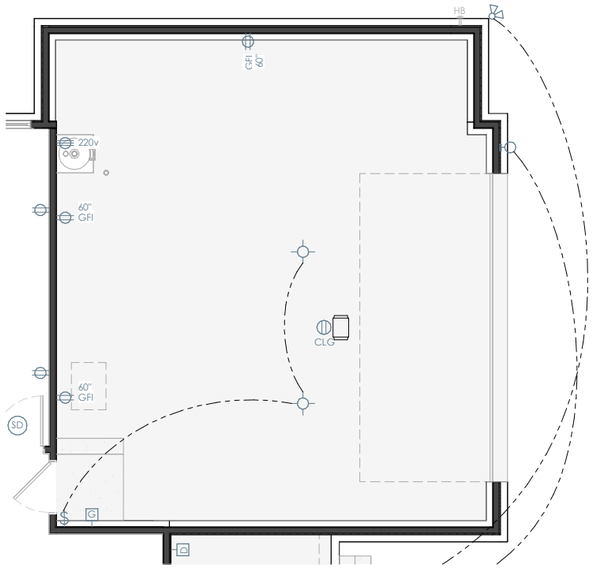
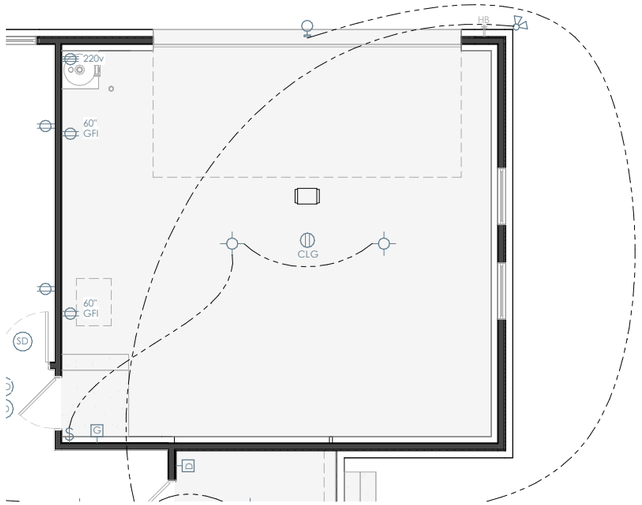
SHEET NAME
ELEVATION D - PARTIAL ELECTRICAL PLANS

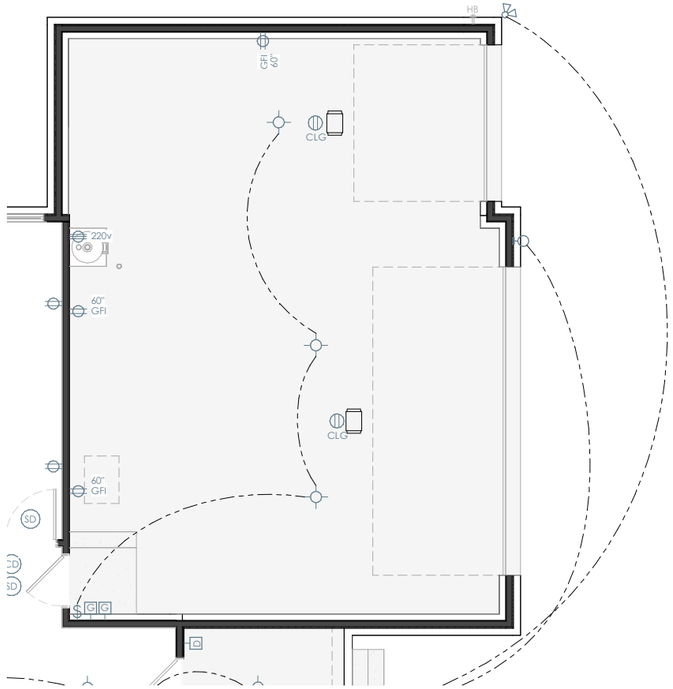
SHEET NO.
E4.00



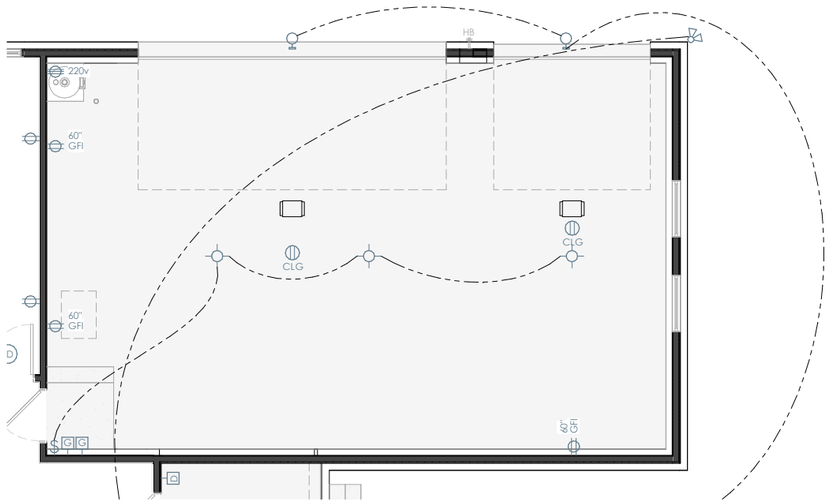
GARGE1/2
1 OPT. HALF CAR GARAGE - ELECTRICAL PLAN
1/8" = 1'-0"



GARGSDLD
3 OPT. SIDE LOAD GARAGE - ELECTRICAL PLAN
1/8" = 1'-0"



GARGE3
2 OPT. 3 CAR GARAGE - ELECTRICAL PLAN
1/8" = 1'-0"



GARGE3SL
4 OPT. 3 CAR SIDE LOAD GARAGE - ELECTRICAL PLAN
1/8" = 1'-0"

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ISSUE DATE	11-08-202
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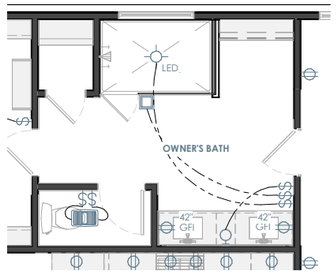
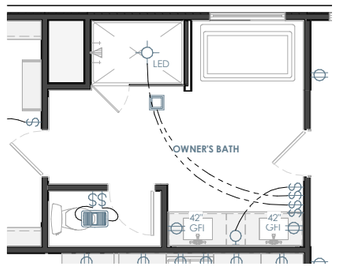
SCALE	1/8" = 1'-0"

SHEET NAME
PLAN OPTIONS

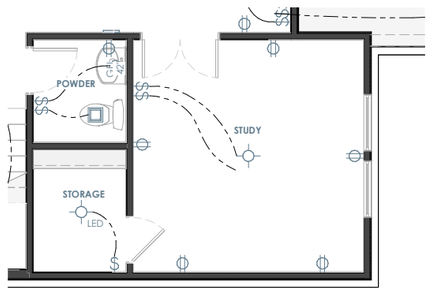
SHEET NO.
E7.00



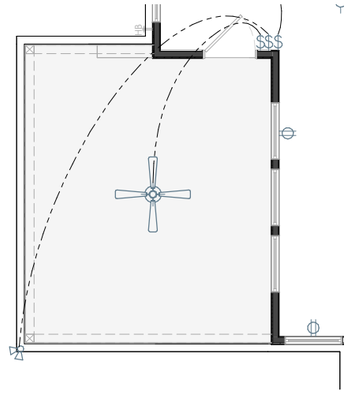
PL0MB201
1 OPT. ENLARGED SHOWER - ELECTRICAL PLAN
1/8" = 1'-0"



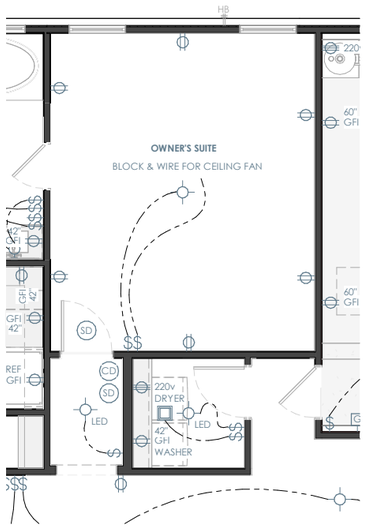
FREESTUB
2 OPT. FREESTANDING TUB - ELECTRICAL PLAN
1/8" = 1'-0"



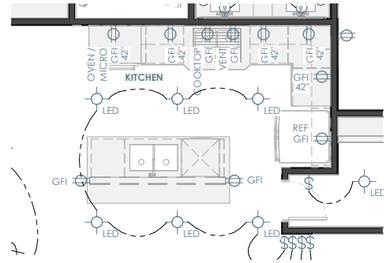
STUDY1
3 OPT. STUDY - ELECTRICAL PLAN
1/8" = 1'-0"



PATIO2
4 OPT. COVERED PATIO - ELECTRICAL PLAN
1/8" = 1'-0"



MBEDENT
5 OPT. OWNER'S ENTRY - ELECTRICAL PLAN
1/8" = 1'-0"



KITCHEN2
6 OPT. KITCHEN - ELECTRICAL PLAN
1/8" = 1'-0"

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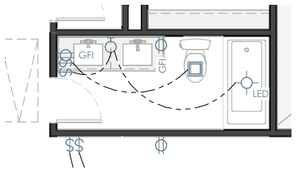
SCALE	1/8" = 1'-0"

SHEET NAME
PLAN OPTIONS

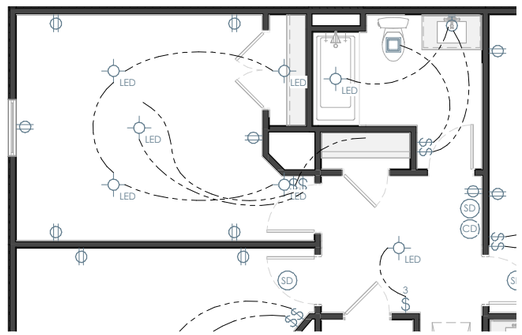
SHEET NO.
E7.01



LAV2BTH3

1 OPT. BATH 2 SINK - ELECTRICAL PLAN

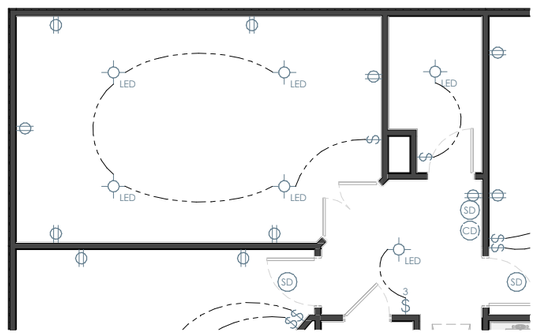
1/8" = 1'-0"



BED5BTH4

2 OPT. BEDROOM 5 w/ BATH 4 - ELECTRICAL PLAN

1/8" = 1'-0"



MEDIARM

3 OPT. MEDIA ROOM - ELECTRICAL PLAN

1/8" = 1'-0"

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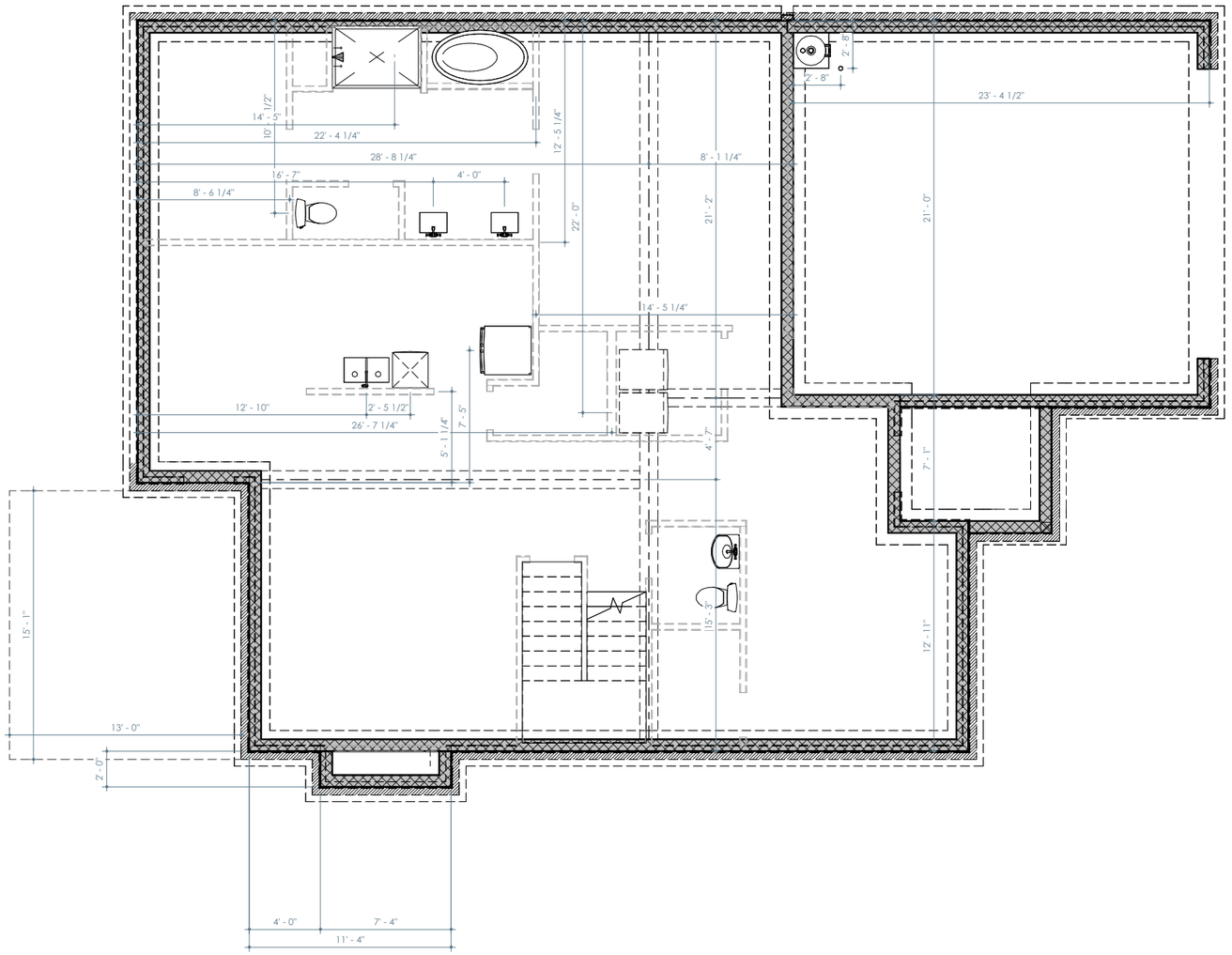
2550 (255)

ISSUE DATE	11-08-202
DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME
PLAN OPTIONS

SHEET NO.
E7.02



ELEVATION A - FOUNDATION PLAN

1/8" = 1'-0"

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DRAWN BY	JLA
SCALE	1/8" = 1'-0"

SHEET NAME

FOUNDATION - ELEVATION A

SHEET NO.

SF1.00



ELEVATION A

3/32" = 1'-0"



ELEVATION B

3/32" = 1'-0"



ELEVATION C

3/32" = 1'-0"



ELEVATION D

3/32" = 1'-0"

REVISION LOG

SHEET LIST

NO.	TITLE
A0.00	COVER SHEET
A1.00	ELEVATION A - FIRST FLOOR PLAN
A1.01	ELEVATION A - SECOND FLOOR PLAN
A1.02	ELEVATION A - EXTERIOR ELEVATIONS
A1.03	ELEVATION A - EXTERIOR ELEVATIONS
A1.04	ELEVATION A - ROOF PLAN
A2.00	ELEVATION B - PARTIAL FLOOR PLANS
A2.01	ELEVATION B - EXTERIOR ELEVATIONS
A2.02	ELEVATION B - EXTERIOR ELEVATIONS
A2.03	ELEVATION B - ROOF PLAN
A3.00	ELEVATION C - PARTIAL FLOOR PLANS
A3.01	ELEVATION C - EXTERIOR ELEVATIONS
A3.02	ELEVATION C - EXTERIOR ELEVATIONS
A3.03	ELEVATION C - ROOF PLAN
A4.00	ELEVATION D - PARTIAL FLOOR PLANS
A4.01	ELEVATION D - EXTERIOR ELEVATIONS
A4.02	ELEVATION D - EXTERIOR ELEVATIONS
A4.03	ELEVATION D - ROOF PLAN
A7.00	PLAN OPTIONS
A7.01	PLAN OPTIONS
A7.02	PLAN OPTIONS

NO.	TITLE
A7.03	PLAN OPTIONS
A7.04	PLAN OPTIONS
A7.05	PLAN OPTIONS
A7.06	PLAN OPTIONS
A7.07	PLAN OPTIONS
A7.08	PLAN OPTIONS
A7.09	PLAN OPTIONS
AD1.00	DETAILS
AI1.00	INTERIOR ELEVATIONS
AI1.01	INTERIOR ELEVATIONS
E1.00	ELEVATION A - FIRST FLOOR ELECTRICAL PLAN
E1.01	ELEVATION A - SECOND FLOOR ELECTRICAL PLAN
E2.00	ELEVATION B - PARTIAL ELECTRICAL PLANS
E3.00	ELEVATION C - PARTIAL ELECTRICAL PLANS
E4.00	ELEVATION D - PARTIAL ELECTRICAL PLANS
E7.00	PLAN OPTIONS
E7.01	PLAN OPTIONS
SF1.00	FOUNDATION - ELEVATION A
SF7.00	PLAN OPTIONS

PLAN OPTIONS

ELEVATION A	36" COOKTOP RANGE W/ BUMP OUT AND VENT HOOD
ELEVATION B	COFFERED CEILING @ OWNER'S BEDROOM
ELEVATION C	SHOWER SEAT @ OWNER'S BATH
ELEVATION D	FREESTANDING TUB ILO DROP IN TUB
3 CAR GARAGE	SINK @ UTILITY
SIDE ENTRY GARAGE	CABINETS @ UTILITY
COVERED PATIO	DOOR @ UTILITY
FIREPLACE @ COVERED PORCH	STUDY W/ BREAKFAST NOOK
GARAGE SERVICE DOOR @ 3 CAR GARAGE	CABINETS @ POCKET OFFICE
METAL ROOF (ELEV. B, C, & D)	SINK @ BATH 3
ISLAND 1	SLIDER @ GREAT ROOM

Brightland HOMES

PROJECT NAME

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PLAN NO.

2970

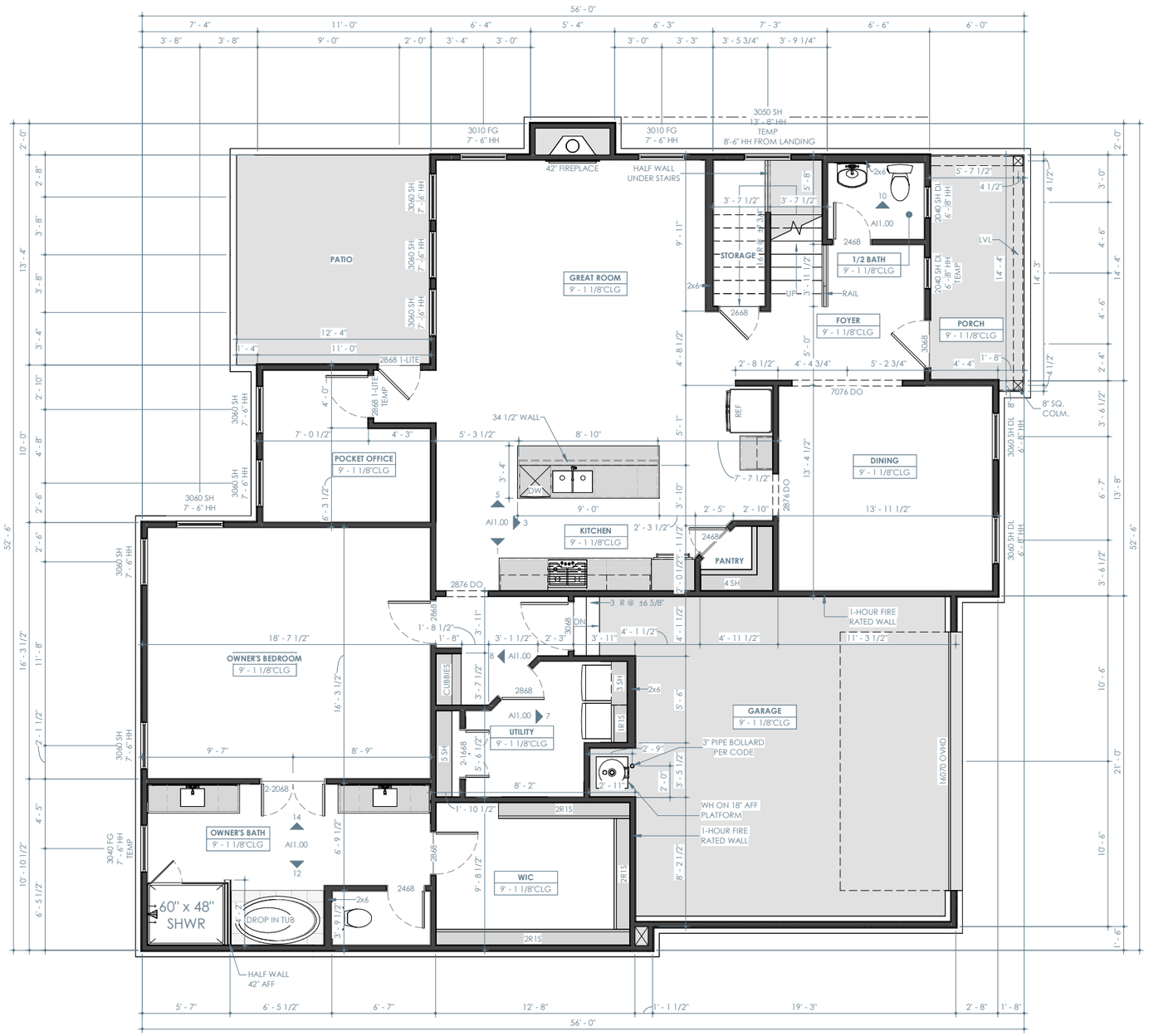
ISSUE DATE	10/06/2023
DRAWN BY	SST
SCALE	As indicated

SHEET NAME

COVER SHEET

SHEET NO.

A0.00



ELEVATION A - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION A - A/C LIVING	
Not Placed	0 SF
FIRST FLOOR	1631 SF
SECOND FLOOR	1250 SF
TOTAL	2881 SF

ELEVATION A - LIVING	
FIRST FLOOR	1834 SF
SECOND FLOOR	1325 SF
TOTAL	3159 SF
TOTAL UNDER ROOF	3862 SF

ELEVATION A - NON-LIVING	
GARAGE	452 SF
PORCH	87 SF
PATIO	164 SF
TOTAL	703 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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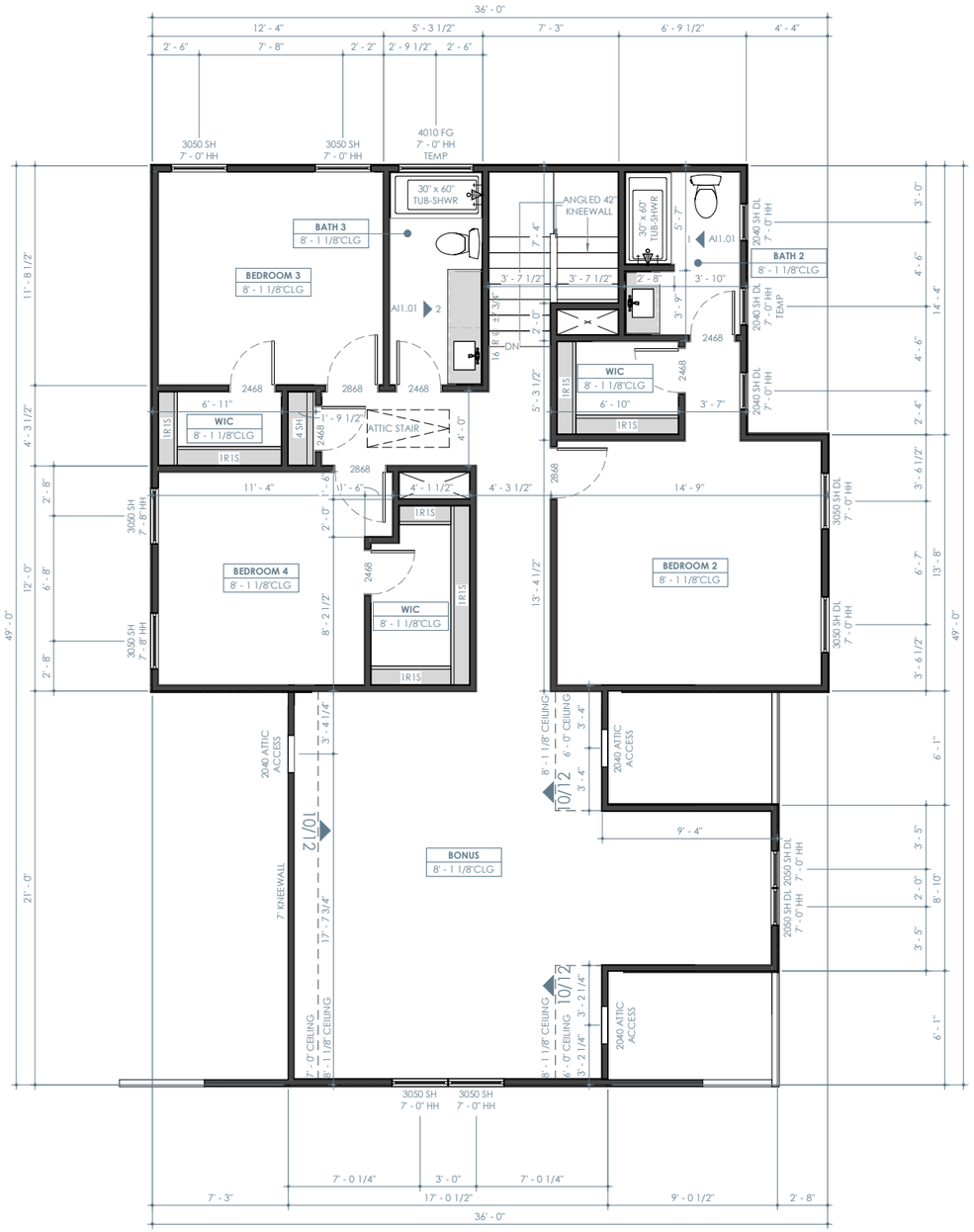
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - FIRST FLOOR PLAN

SHEET NO.

A1.00



ELEVATION A - SECOND FLOOR PLAN

1/8" = 1'-0"

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
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- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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PLAN NO.

2970

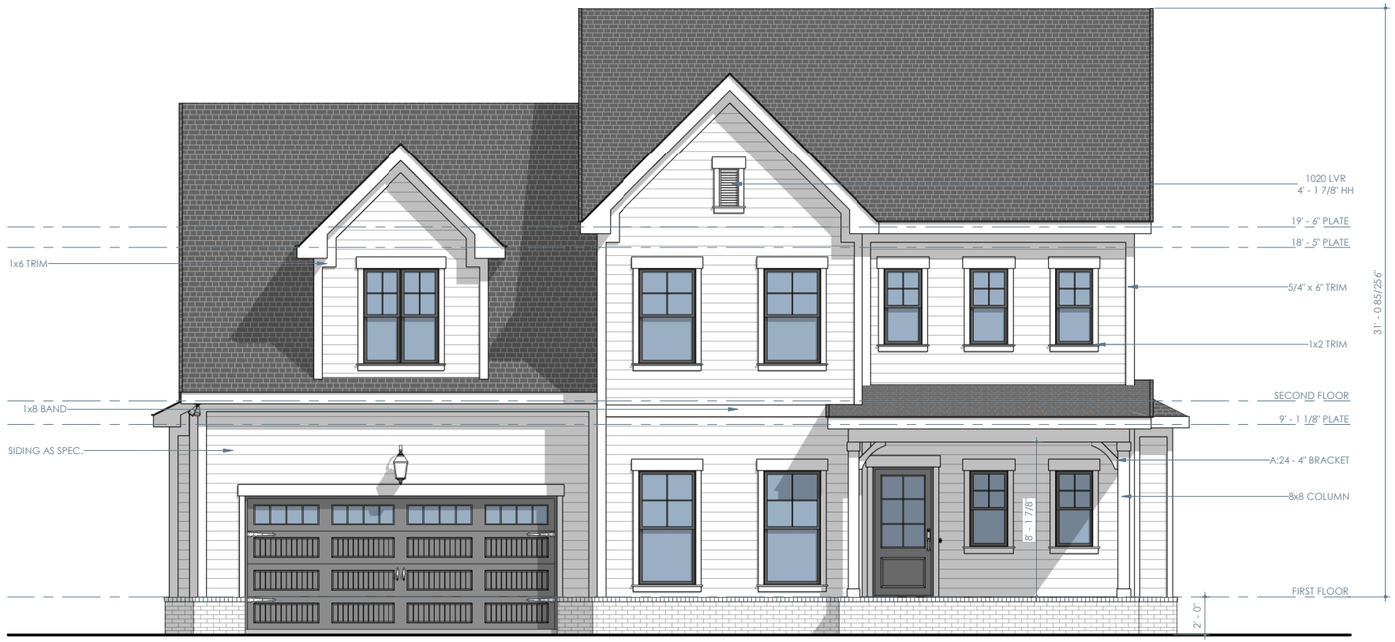
ISSUE DATE	10/06/2023
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - SECOND FLOOR PLAN

SHEET NO.

A1.01



ELEVATION A - FRONT

1/8" = 1'-0"



ELEVATION A - REAR

1/8" = 1'-0"

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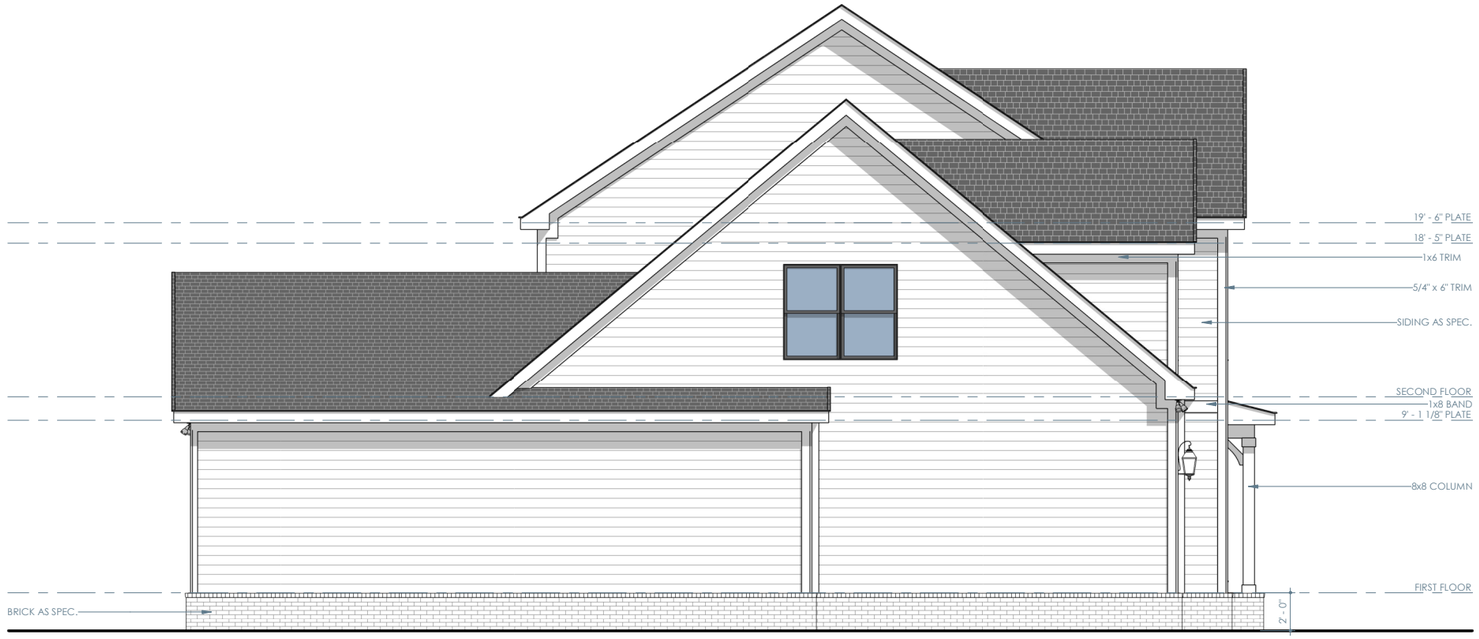
SHEET NAME

ELEVATION A - EXTERIOR ELEVATIONS

SHEET NO.

A1.02



ELEVATION A - LEFT

1/8" = 1'-0"



ELEVATION A - RIGHT

1/8" = 1'-0"

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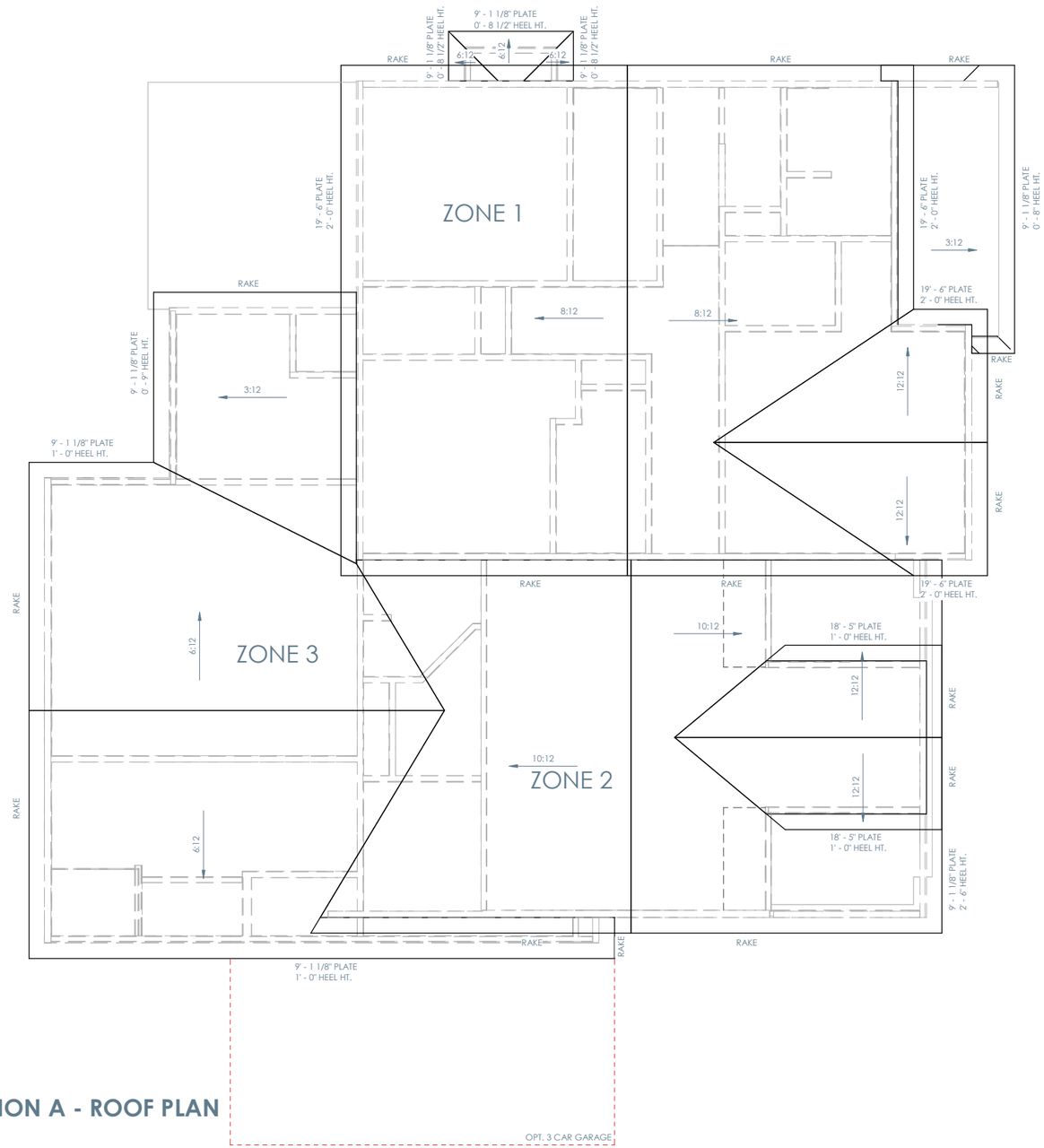
SHEET NAME

ELEVATION A - EXTERIOR ELEVATIONS

SHEET NO.

A1.03



ELEVATION A - ROOF PLAN

1/8" = 1'-0"

ATTIC VENTILATION - ZONE 1

ATTIC AREA (FT²)	965
REQUIRED ATTIC VENTILATION (IN²)	464
REQUIRED LOWER VENTILATION (IN²)	232
REQUIRED UPPER VENTILATION (IN²)	232

NUMBER OF VENTS

AIRHAWK 50 - LOWER (50 NFA)	0
AIRHAWK 50 - UPPER (50 NFA)	0
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
PERFORATED SOFFIT VENT (9 NFA) PER LF	38 LF
RIDGE VENT (18 NFA) PER LF	16 LF
OFF RIDGE VENT (35 NFA) PER LF	0 LF

VENTILATION PROVIDED

TOTAL LOWER VENTILATION (IN²)	342 NFA
TOTAL UPPER VENTILATION (IN²)	288 NFA

ATTIC VENTILATION - ZONE 2

ATTIC AREA (FT²)	523
REQUIRED ATTIC VENTILATION (IN²)	252
REQUIRED LOWER VENTILATION (IN²)	126
REQUIRED UPPER VENTILATION (IN²)	126

NUMBER OF VENTS

AIRHAWK 50 - LOWER (50 NFA)	0
AIRHAWK 50 - UPPER (50 NFA)	0
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
PERFORATED SOFFIT VENT (9 NFA) PER LF	30 LF
RIDGE VENT (18 NFA) PER LF	8 LF
OFF RIDGE VENT (35 NFA) PER LF	0 LF

VENTILATION PROVIDED

TOTAL LOWER VENTILATION (IN²)	270 NFA
TOTAL UPPER VENTILATION (IN²)	144 NFA

ATTIC VENTILATION - ZONE 3

ATTIC AREA (FT²)	737
REQUIRED ATTIC VENTILATION (IN²)	354
REQUIRED LOWER VENTILATION (IN²)	177
REQUIRED UPPER VENTILATION (IN²)	177

NUMBER OF VENTS

AIRHAWK 50 - LOWER (50 NFA)	0
AIRHAWK 50 - UPPER (50 NFA)	0
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
PERFORATED SOFFIT VENT (9 NFA) PER LF	39 LF
RIDGE VENT (18 NFA) PER LF	12 LF
OFF RIDGE VENT (35 NFA) PER LF	0 LF

VENTILATION PROVIDED

TOTAL LOWER VENTILATION (IN²)	351 NFA
TOTAL UPPER VENTILATION (IN²)	216 NFA

*ALL VENTS TO EXHAUST TO EXTERIOR

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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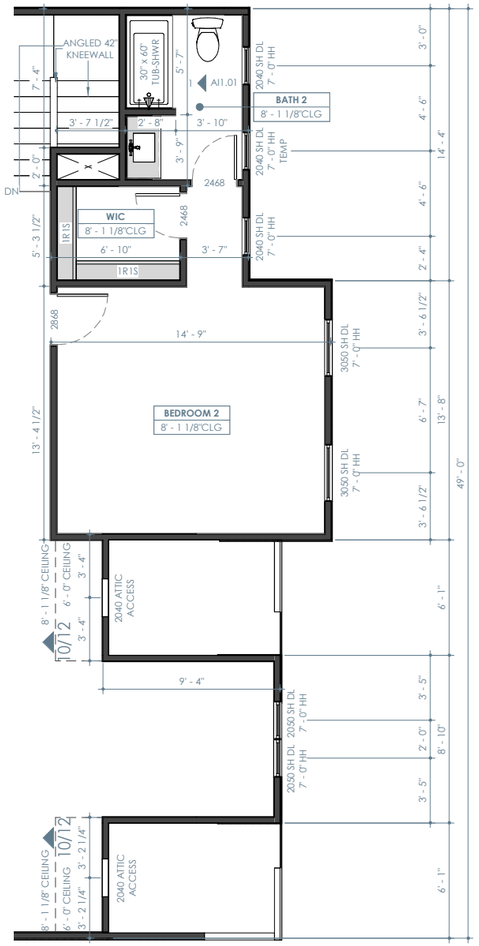
SHEET NAME

ELEVATION A - ROOF PLAN

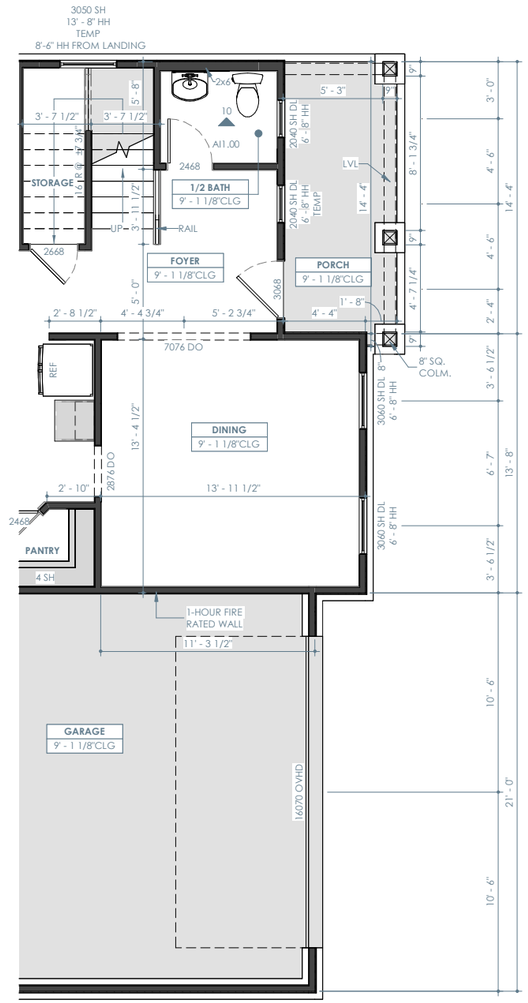
SHEET NO.

A1.04



ELEVATION B - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION B - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION B - LIVING	
FIRST FLOOR	1834 SF
SECOND FLOOR	1325 SF
TOTAL	3159 SF

ELEVATION B - NON-LIVING	
GARAGE	452 SF
PORCH	87 SF
PATIO	164 SF
TOTAL	703 SF

TOTAL UNDER ROOF	3862 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
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SHEET NAME

ELEVATION B - PARTIAL FLOOR PLANS

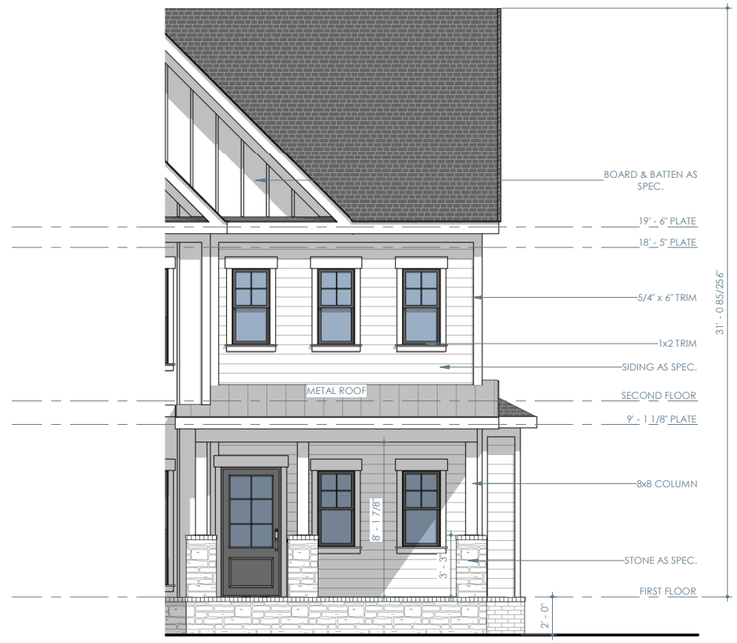
SHEET NO.

A2.00



ELEVATION B - FRONT

1/8" = 1'-0"



ELEVATION B - OPT. METAL ROOF - FRONT

1/8" = 1'-0"



ELEVATION B - REAR

1/8" = 1'-0"

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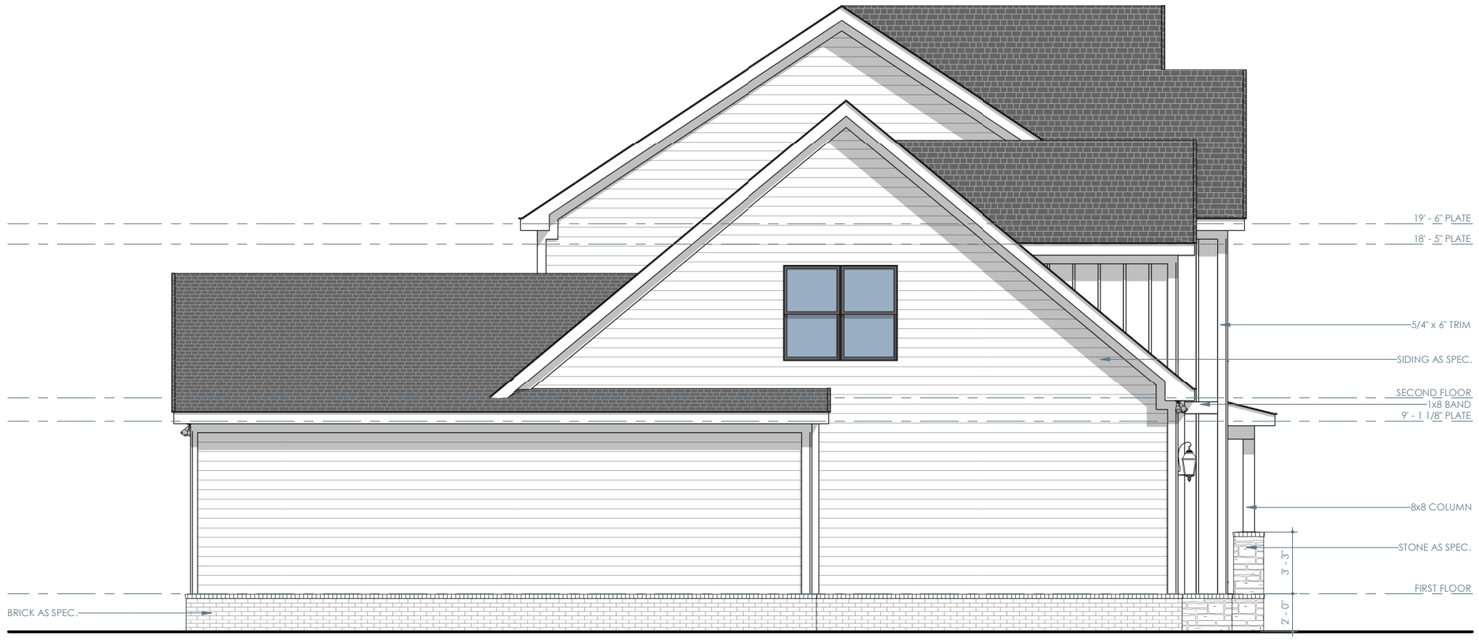
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - EXTERIOR ELEVATIONS

SHEET NO.

A2.01



ELEVATION B - LEFT

1/8" = 1'-0"



ELEVATION B - RIGHT

1/8" = 1'-0"

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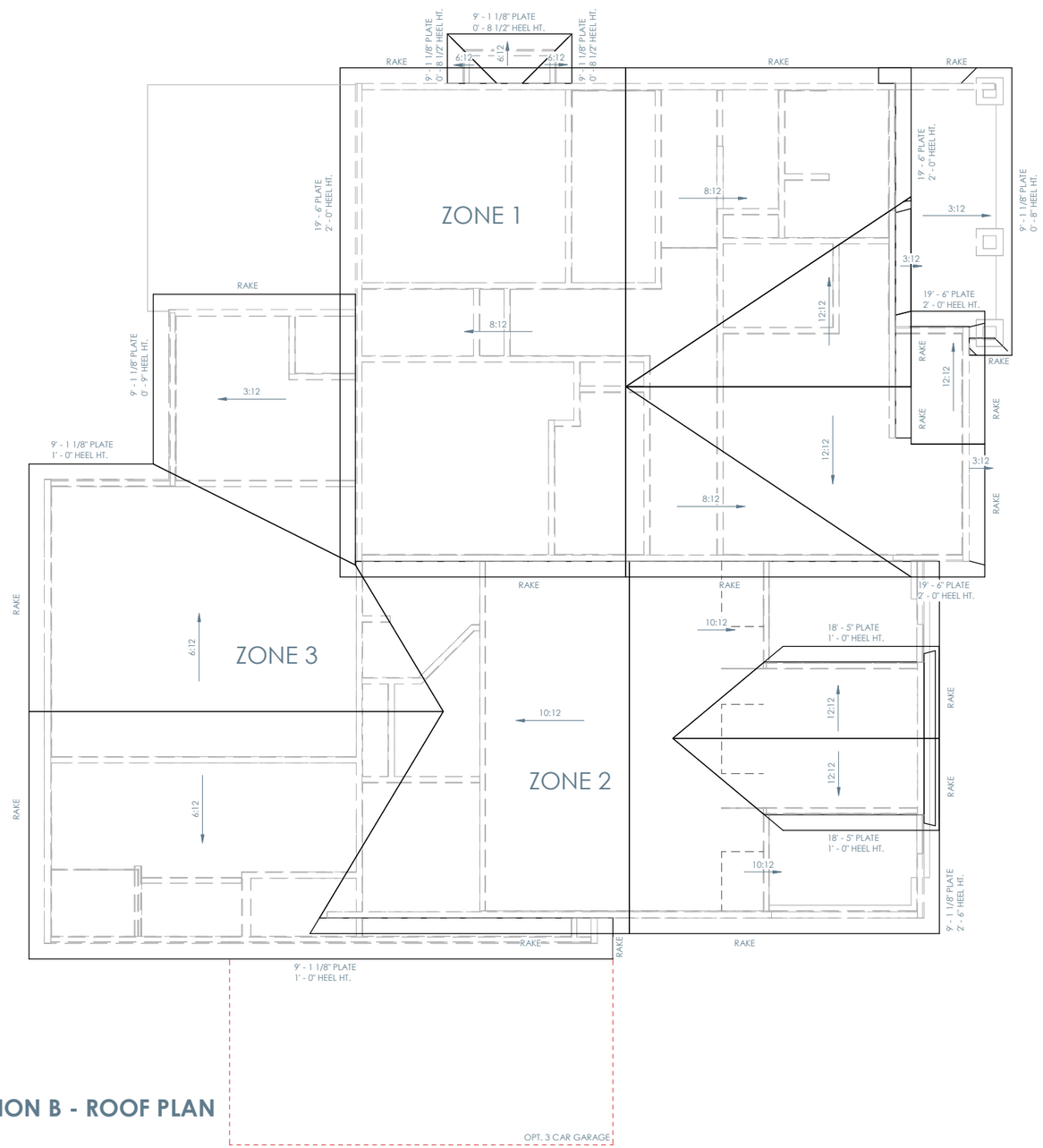
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - EXTERIOR ELEVATIONS

SHEET NO.

A2.02



ELEVATION B - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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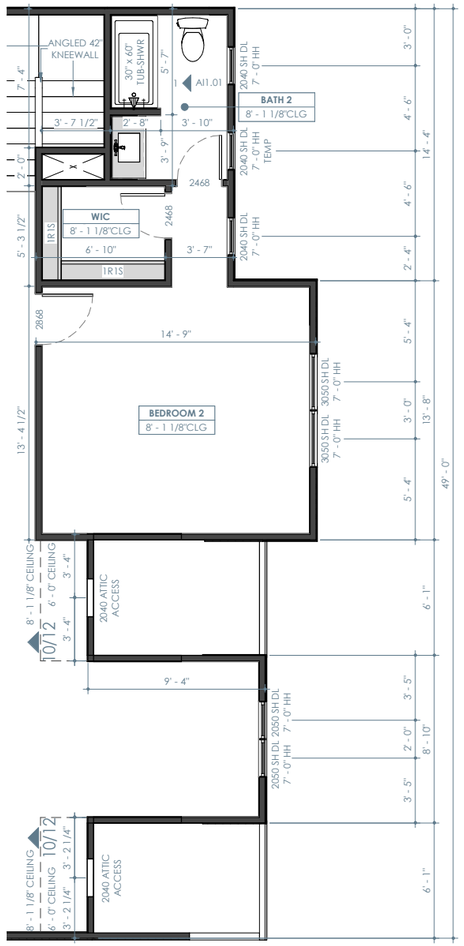
SHEET NAME

ELEVATION B - ROOF PLAN

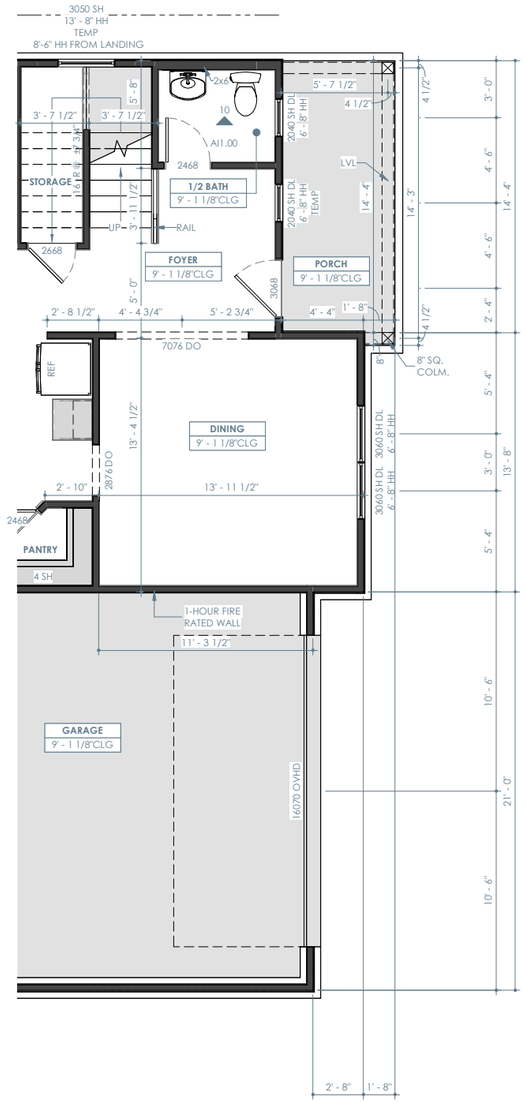
SHEET NO.

A2.03



ELEVATION C - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION C - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION C - LIVING	
FIRST FLOOR	1834 SF
SECOND FLOOR	1325 SF
TOTAL	3159 SF

ELEVATION C - NON-LIVING	
GARAGE	452 SF
PORCH	87 SF
PATIO	164 SF
TOTAL	703 SF

TOTAL UNDER ROOF	3862 SF

FLOOR PLAN NOTES

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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - PARTIAL FLOOR PLANS

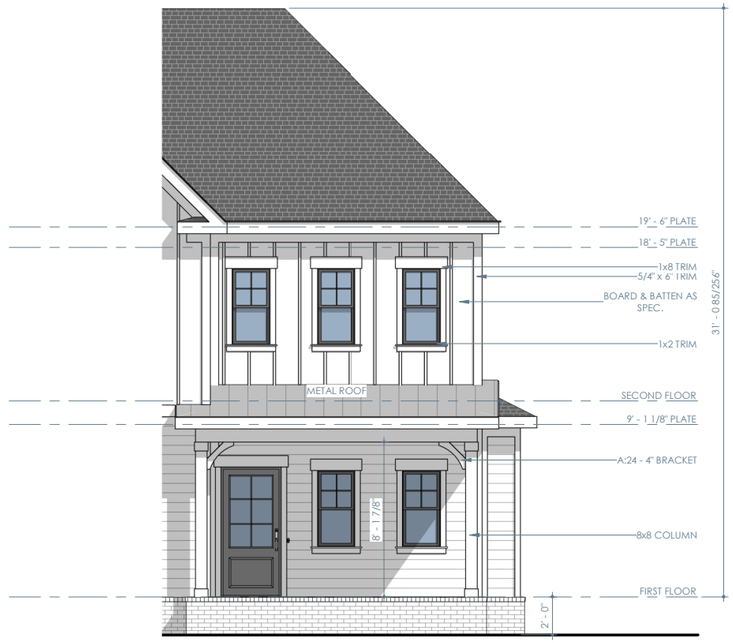
SHEET NO.

A3.00



ELEVATION C - FRONT

1/8" = 1'-0"



ELEVATION C - OPT. METAL ROOF - FRONT

1/8" = 1'-0"



ELEVATION C - REAR

1/8" = 1'-0"

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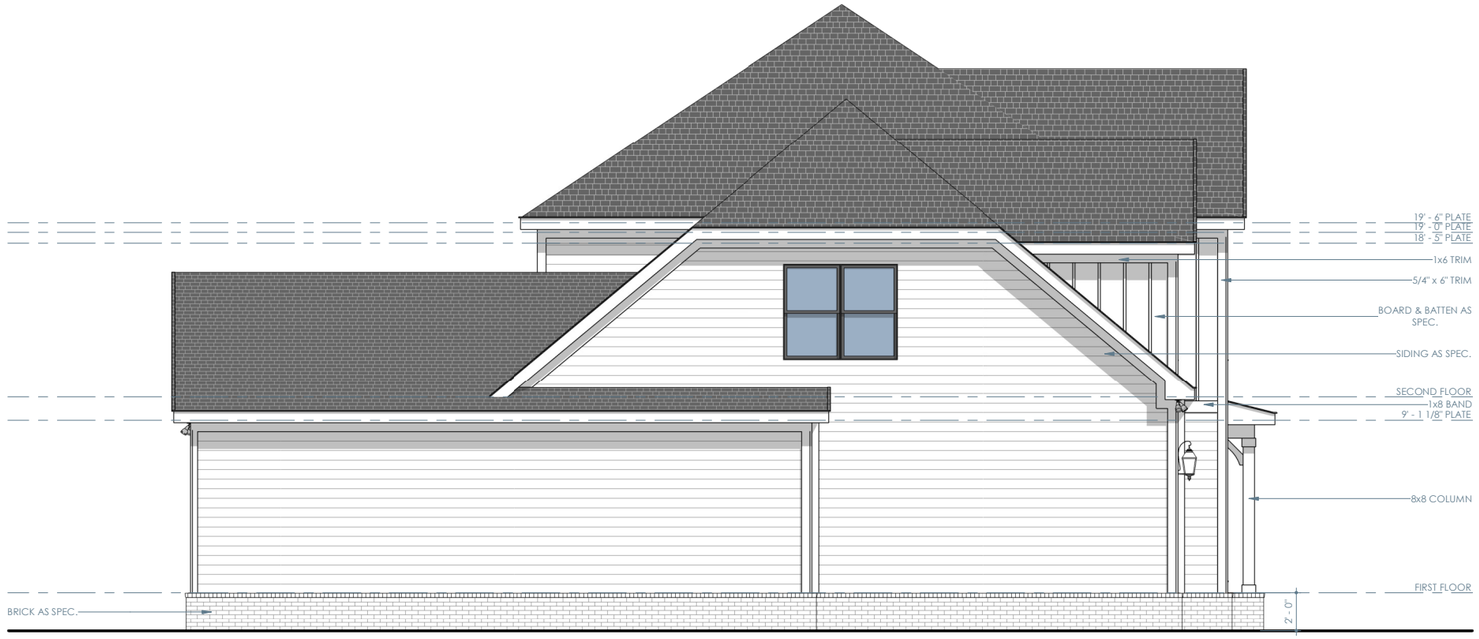
SHEET NAME

ELEVATION C - EXTERIOR ELEVATIONS

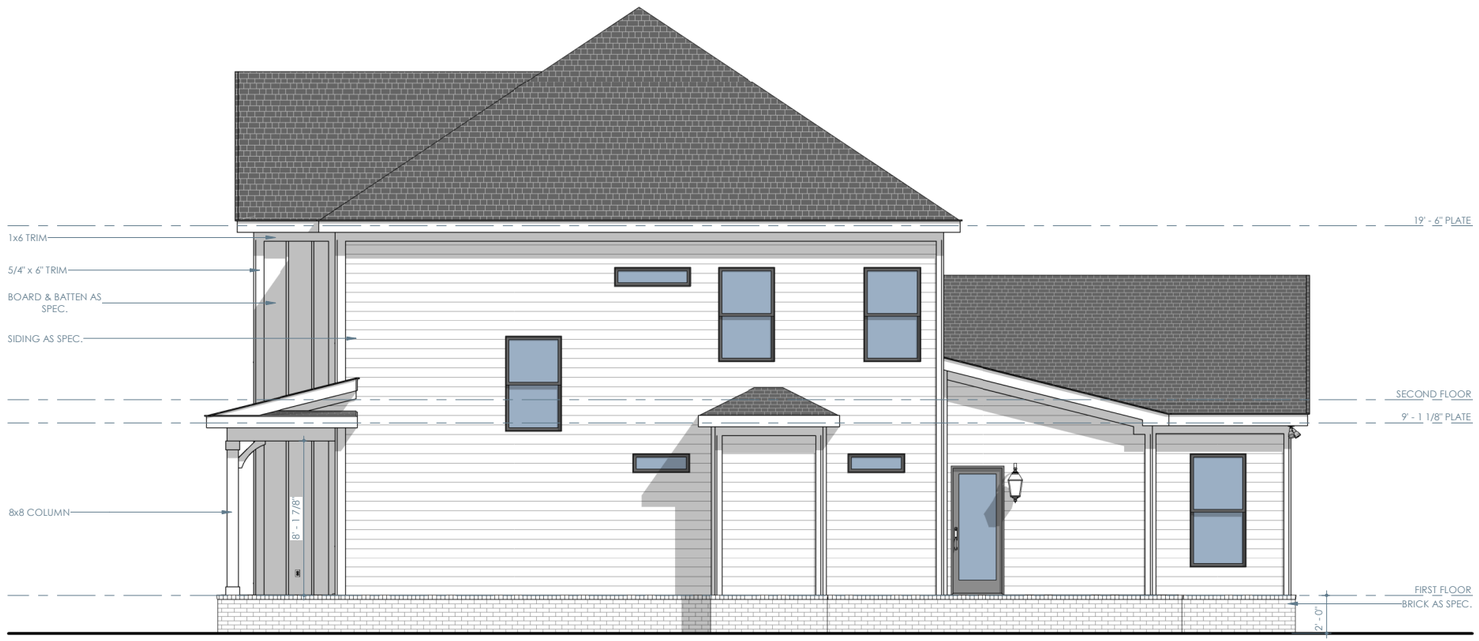
SHEET NO.

A3.01



ELEVATION C - LEFT

1/8" = 1'-0"



ELEVATION C - RIGHT

1/8" = 1'-0"

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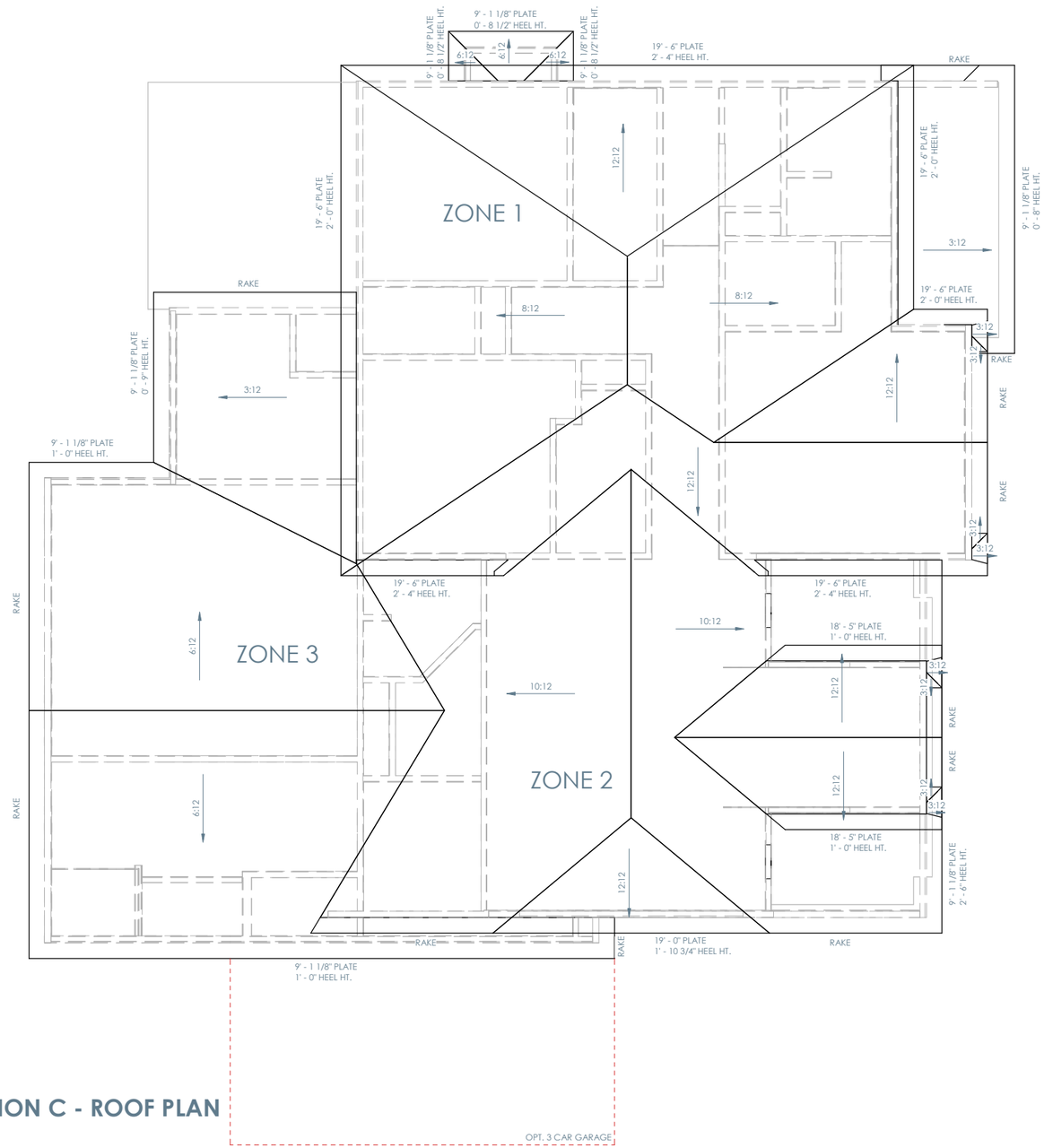
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - EXTERIOR ELEVATIONS

SHEET NO.

A3.02



ELEVATION C - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
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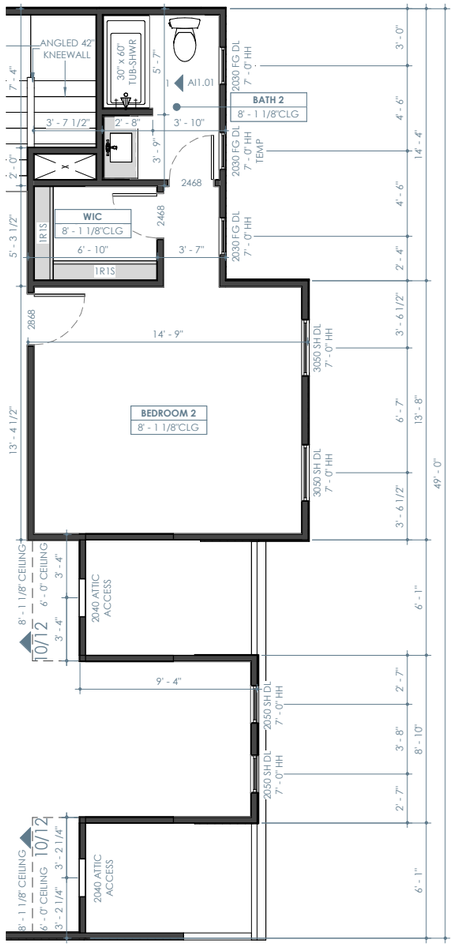
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - ROOF PLAN

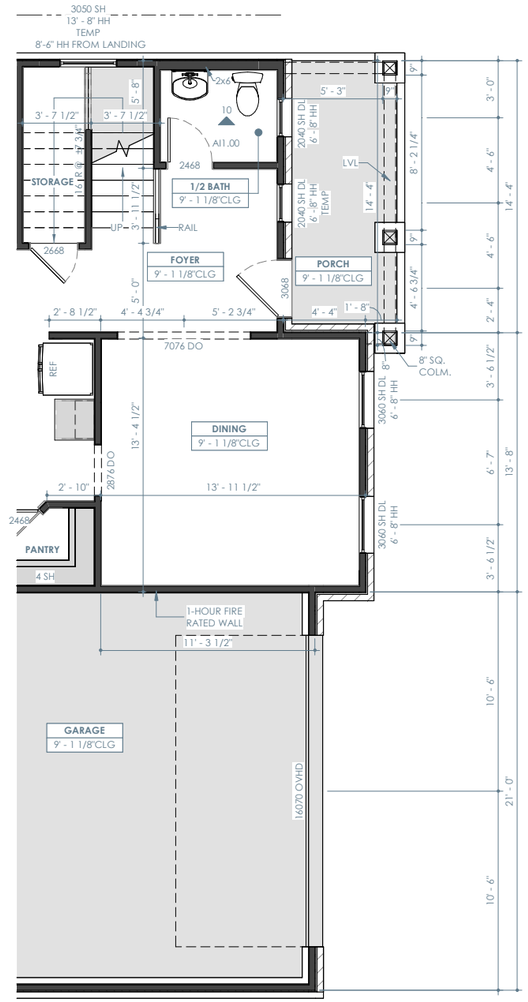
SHEET NO.

A3.03



ELEVATION D - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION D - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION D - LIVING	
FIRST FLOOR	1850 SF
SECOND FLOOR	1325 SF
TOTAL	3175 SF

ELEVATION D - NON-LIVING	
GARAGE	461 SF
PORCH	78 SF
PATIO	164 SF
TOTAL	704 SF

TOTAL UNDER ROOF	3879 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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2970

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DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - PARTIAL FLOOR PLANS

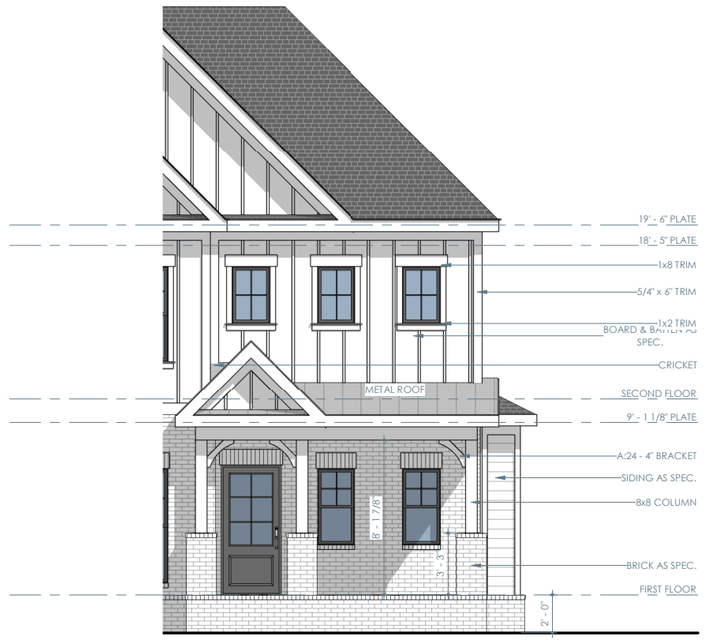
SHEET NO.

A4.00



ELEVATION D - FRONT

1/8" = 1'-0"



ELEVATION D - OPT. METAL ROOF - FRONT

1/8" = 1'-0"



ELEVATION D - REAR

1/8" = 1'-0"

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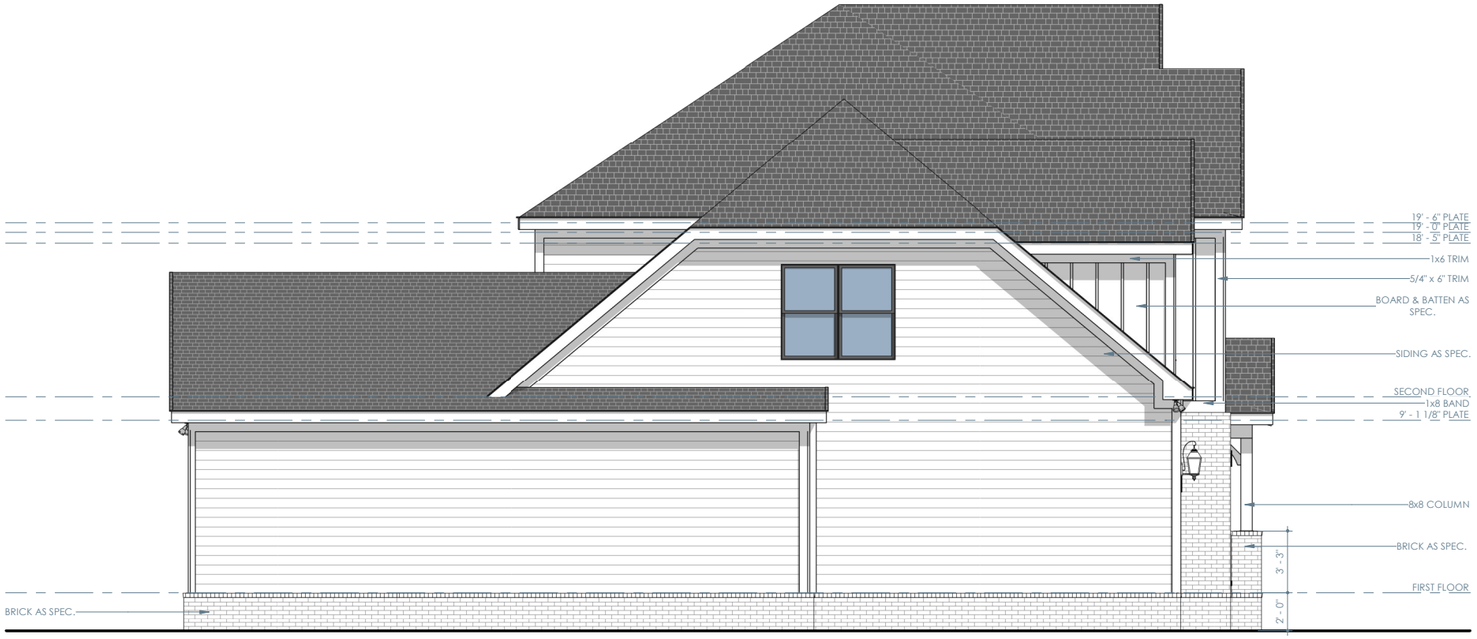
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - EXTERIOR ELEVATIONS

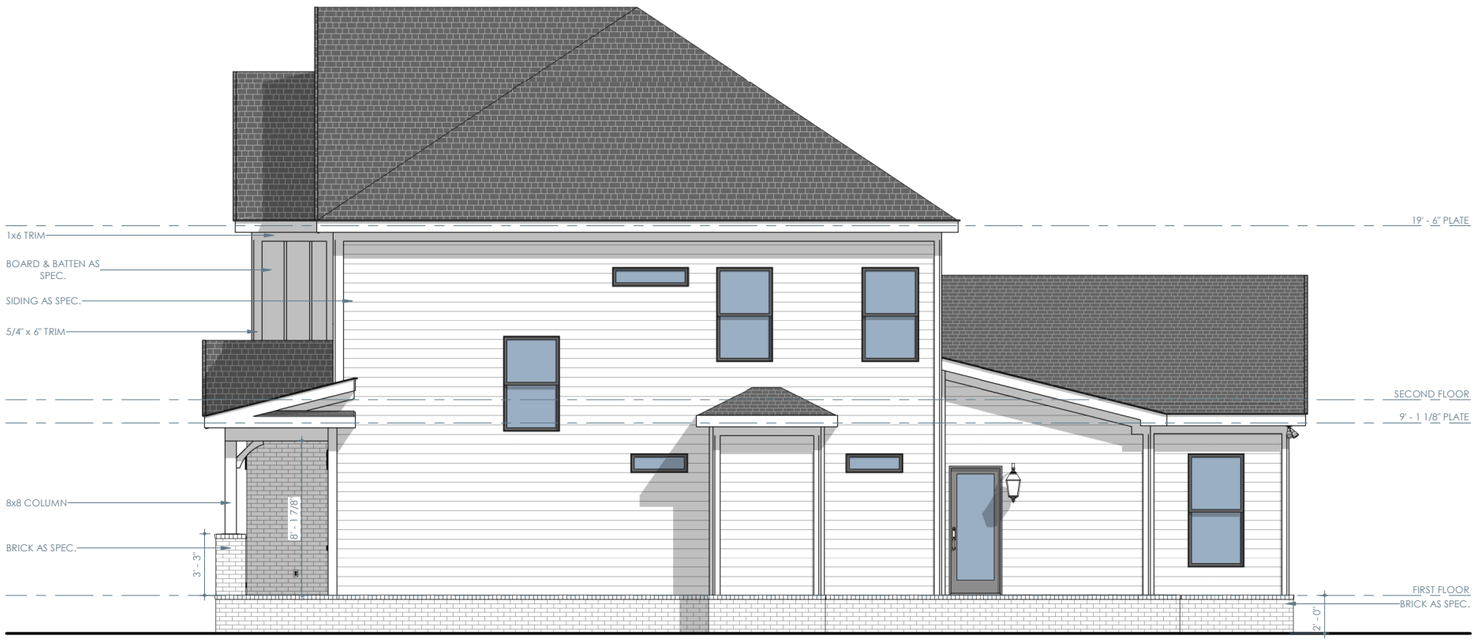
SHEET NO.

A4.01



ELEVATION D - LEFT

1/8" = 1'-0"



ELEVATION D - RIGHT

1/8" = 1'-0"

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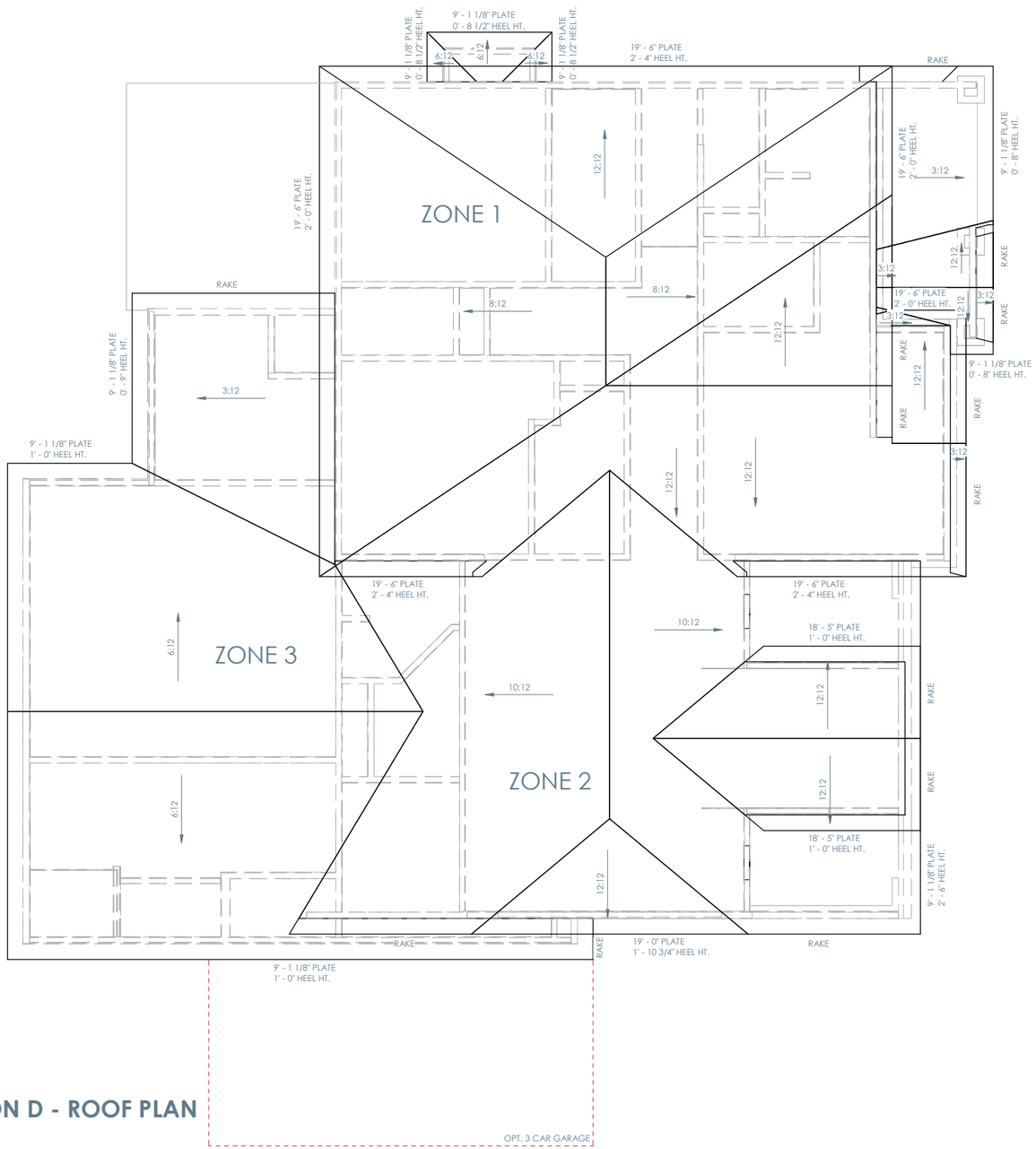
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - EXTERIOR ELEVATIONS

SHEET NO.

A4.02



ELEVATION D - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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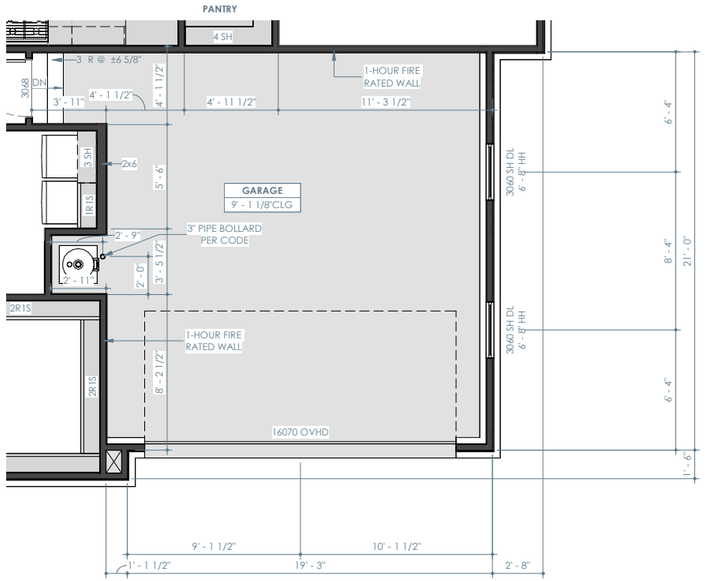
SHEET NAME

ELEVATION D - ROOF PLAN

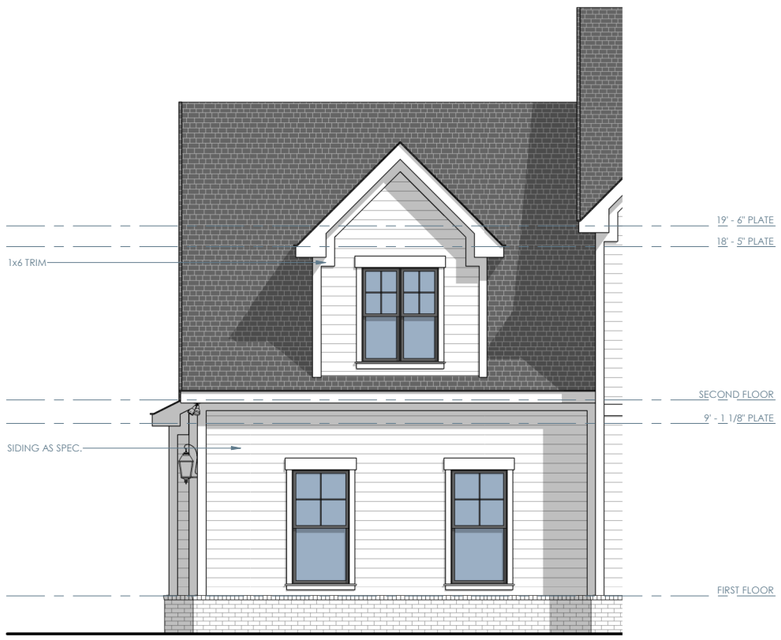
SHEET NO.

A4.03



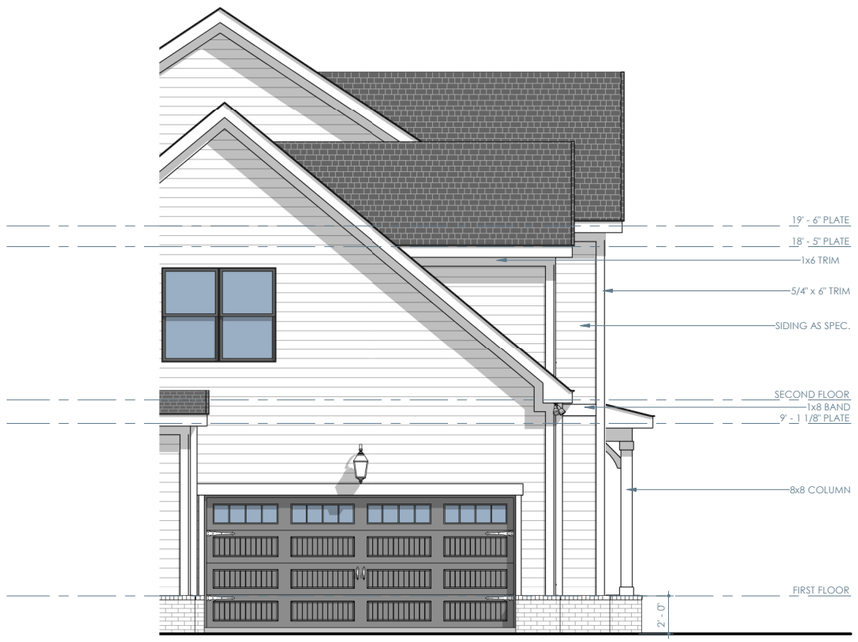
OPT. SIDE ENTRY GARAGE - FIRST FLOOR PLAN

1/8" = 1'-0"



ELEVATION A - OPT. SIDE ENTRY GARAGE - FRONT

1/8" = 1'-0"



ELEVATION A - OPT. SIDE ENTRY GARAGE - LEFT

1/8" = 1'-0"

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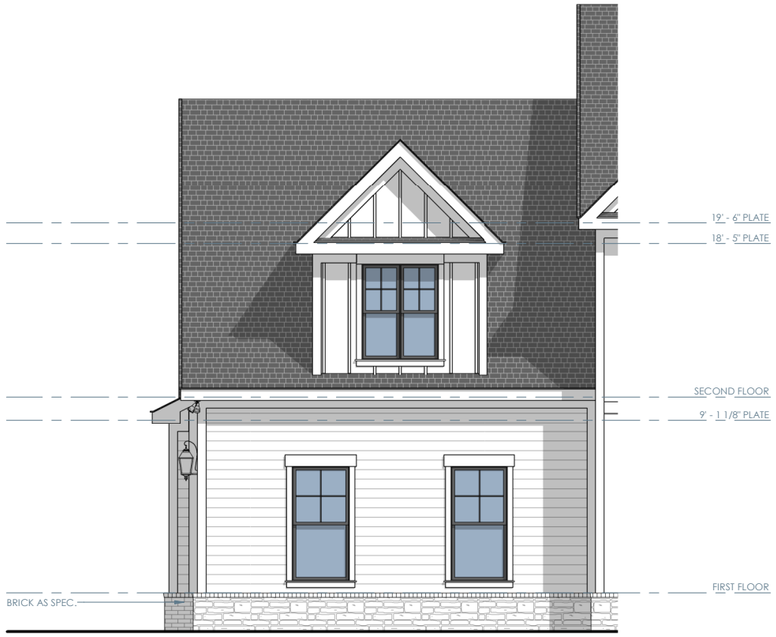
SHEET NAME

PLAN OPTIONS

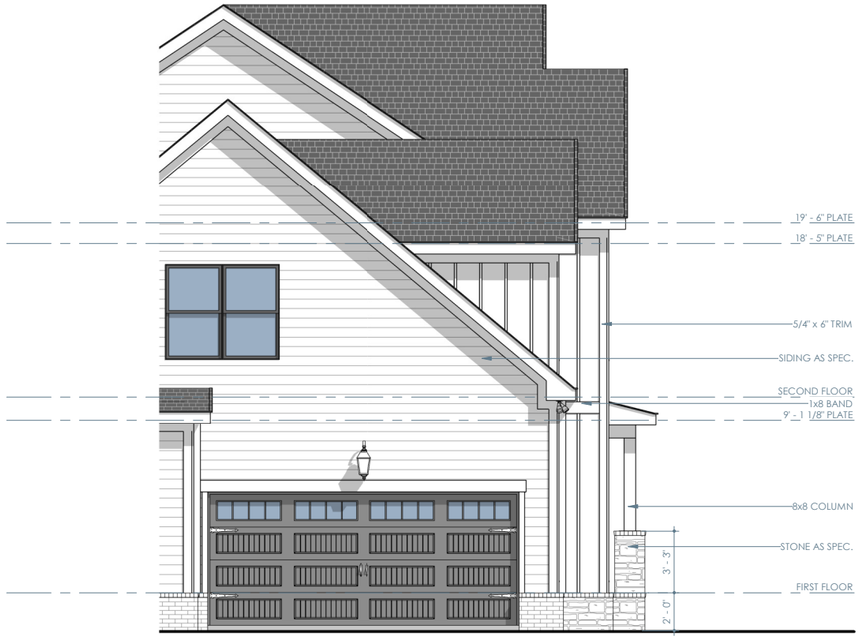
SHEET NO.

A7.00



ELEVATION B - OPT. SIDE ENTRY GARAGE - FRONT

1/8" = 1'-0"



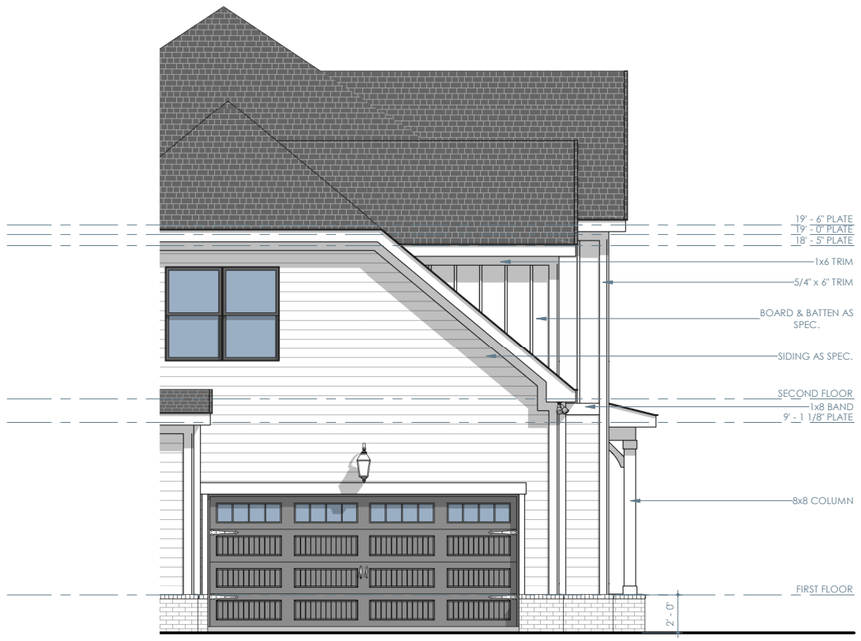
ELEVATION B - OPT. SIDE ENTRY GARAGE - LEFT

1/8" = 1'-0"



ELEVATION C - OPT. SIDE ENTRY GARAGE - FRONT

1/8" = 1'-0"



ELEVATION C - OPT. SIDE ENTRY GARAGE - LEFT

1/8" = 1'-0"

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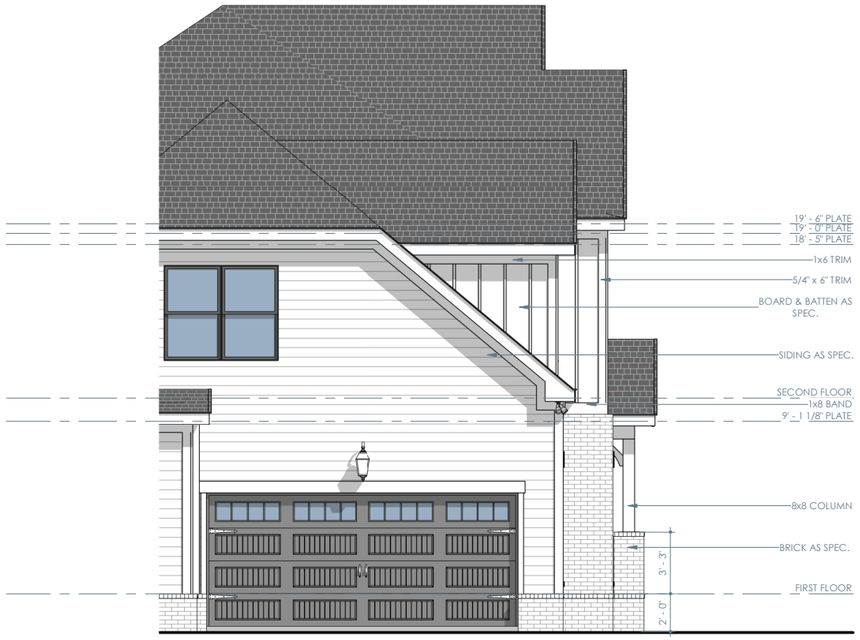
SHEET NO.

A7.01



ELEVATION D - OPT. SIDE ENTRY - FRONT

1/8" = 1'-0"



ELEVATION D - OPT. SIDE ENTRY GARAGE - LEFT

1/8" = 1'-0"

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SCALE	1/8" = 1'-0"

SHEET NAME

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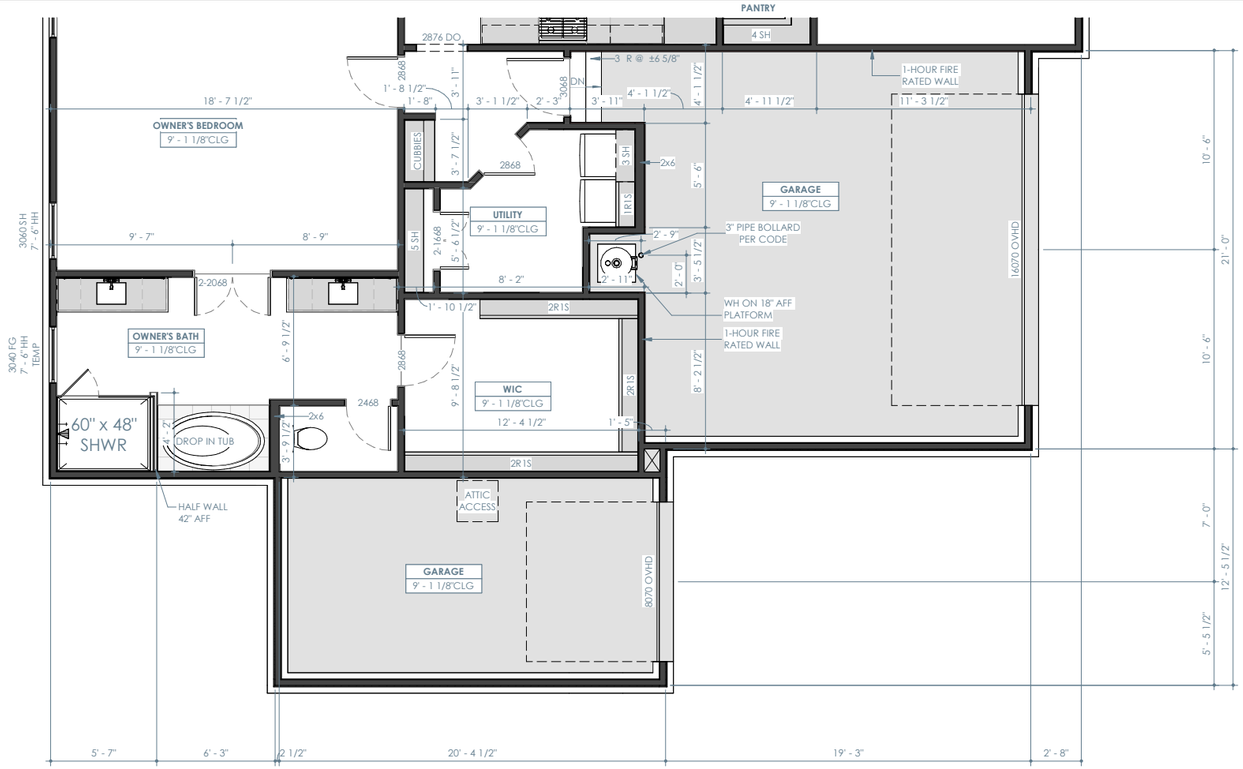
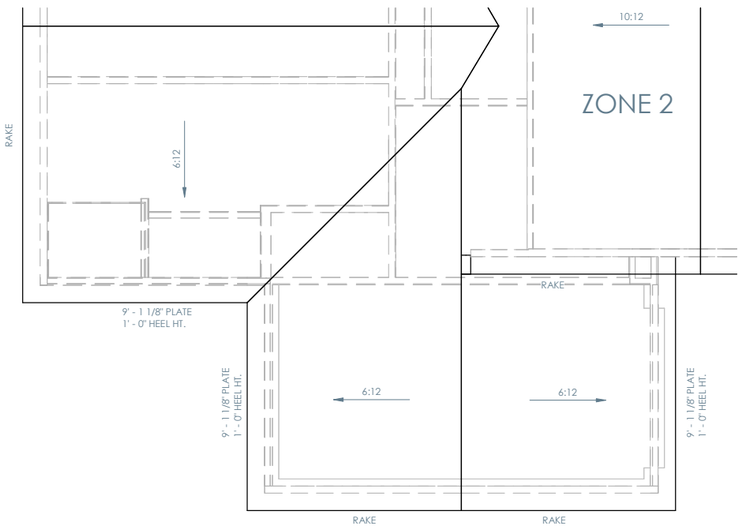
SHEET NO.

A7.02



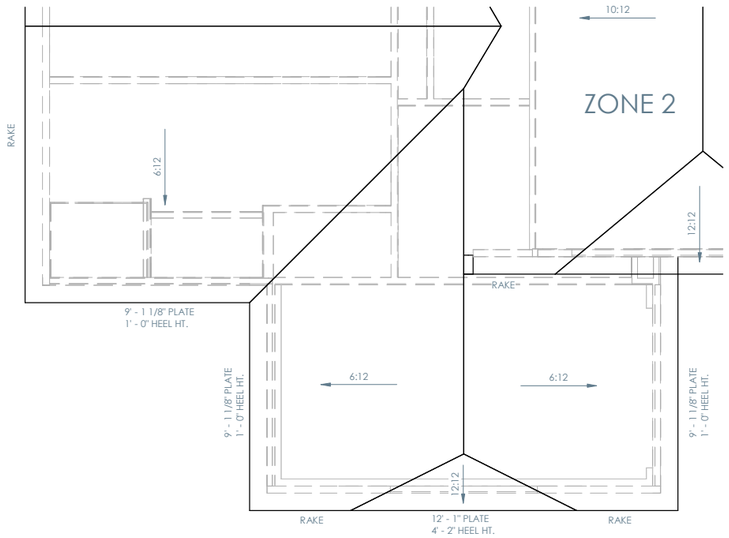
OPT. 3 CAR GARAGE - FIRST FLOOR PLAN

1/8" = 1'-0"



ELEVATION A - OPT. 3 CAR GARAGE - ROOF PLAN (SIMILAR FOR ELEVATION B)

1/8" = 1'-0"



ELEVATION C - OPT. 3 CAR GARAGE - ROOF PLAN (SIMILAR FOR ELEVATION D)

1/8" = 1'-0"

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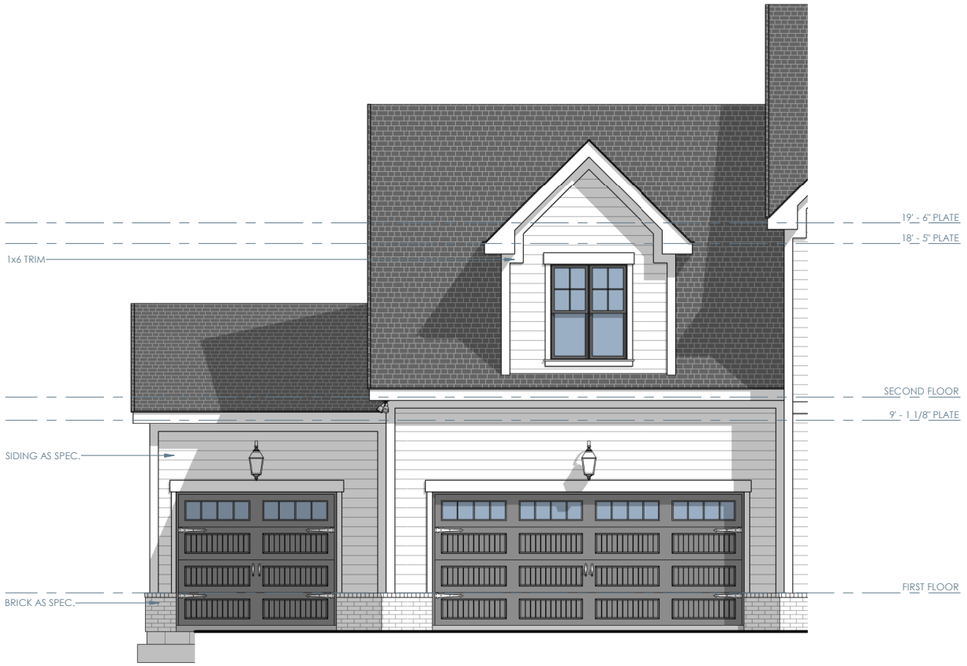
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

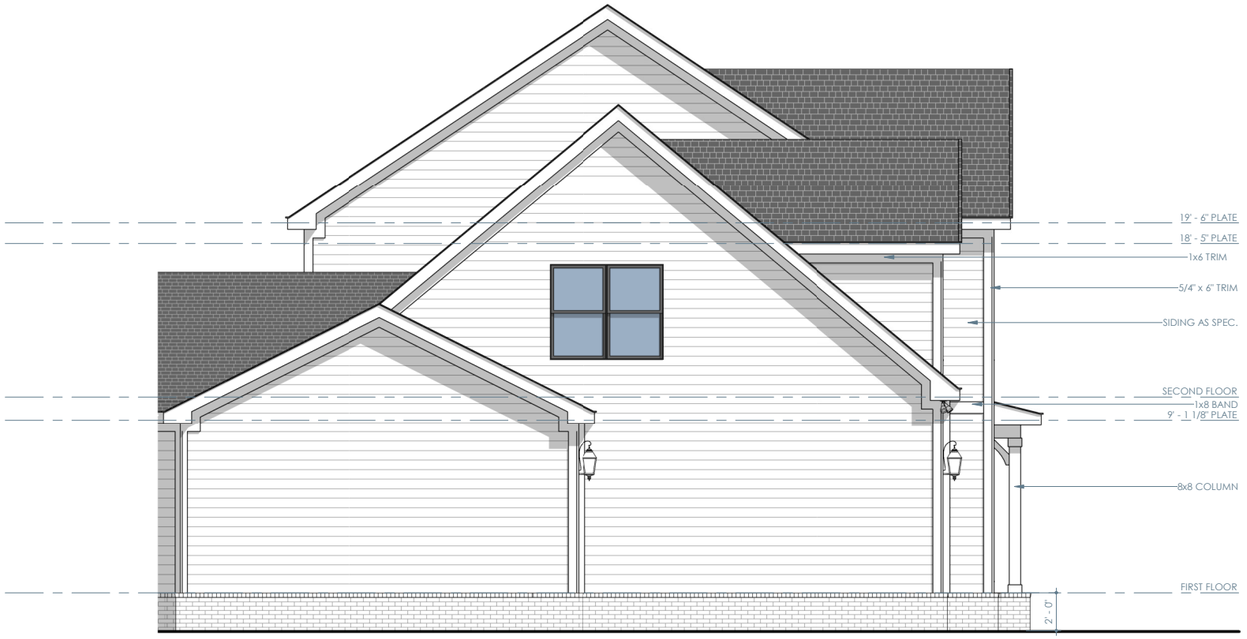
SHEET NO.

A7.03



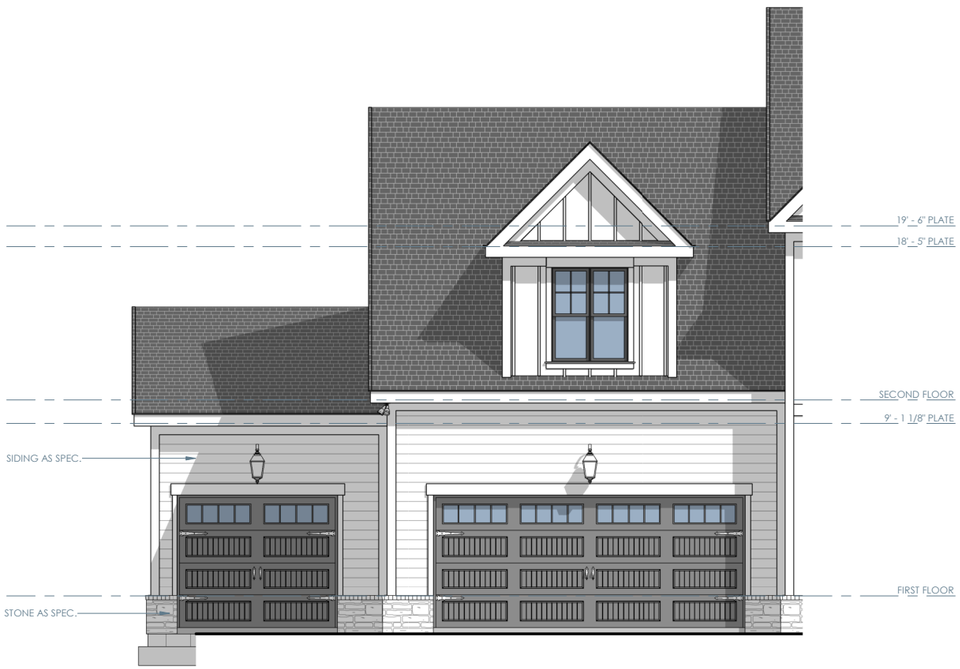
ELEVATION A - OPT. 3 CAR GARAGE - FRONT

1/8" = 1'-0"



ELEVATION A - OPT. 3 CAR GARAGE - LEFT

1/8" = 1'-0"



ELEVATION B - OPT. 3 CAR GARAGE - FRONT

1/8" = 1'-0"



ELEVATION B - OPT. 3 CAR GARAGE - LEFT

1/8" = 1'-0"

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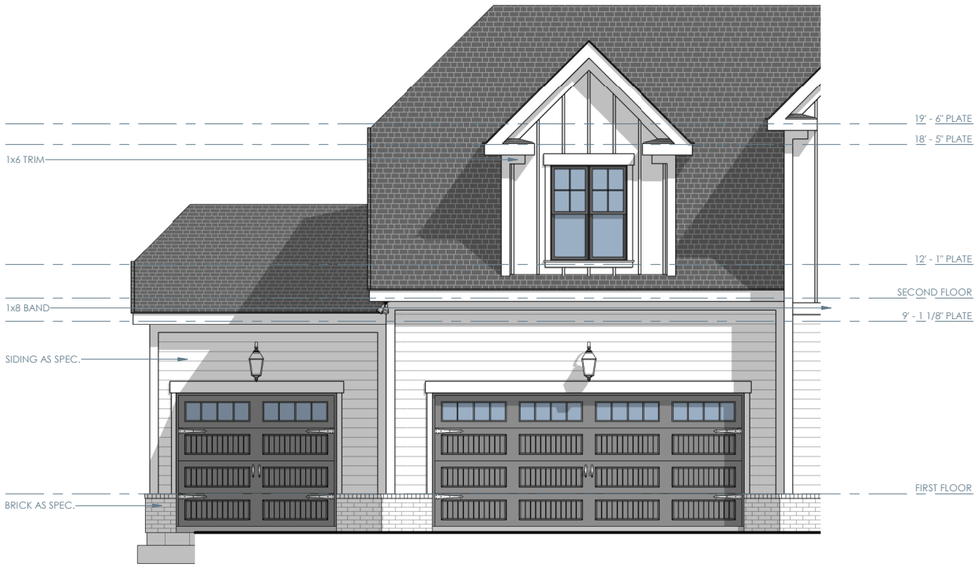
SHEET NAME

PLAN OPTIONS

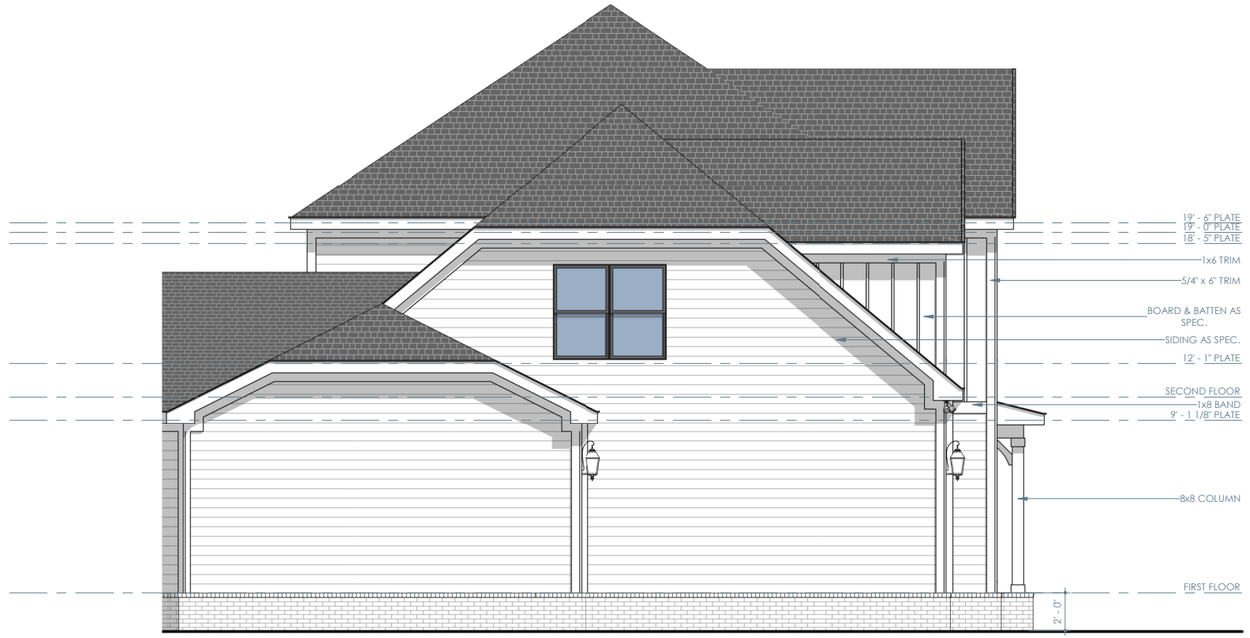
SHEET NO.

A7.04



ELEVATION C - OPT. 3 CAR GARAGE - FRONT

1/8" = 1'-0"



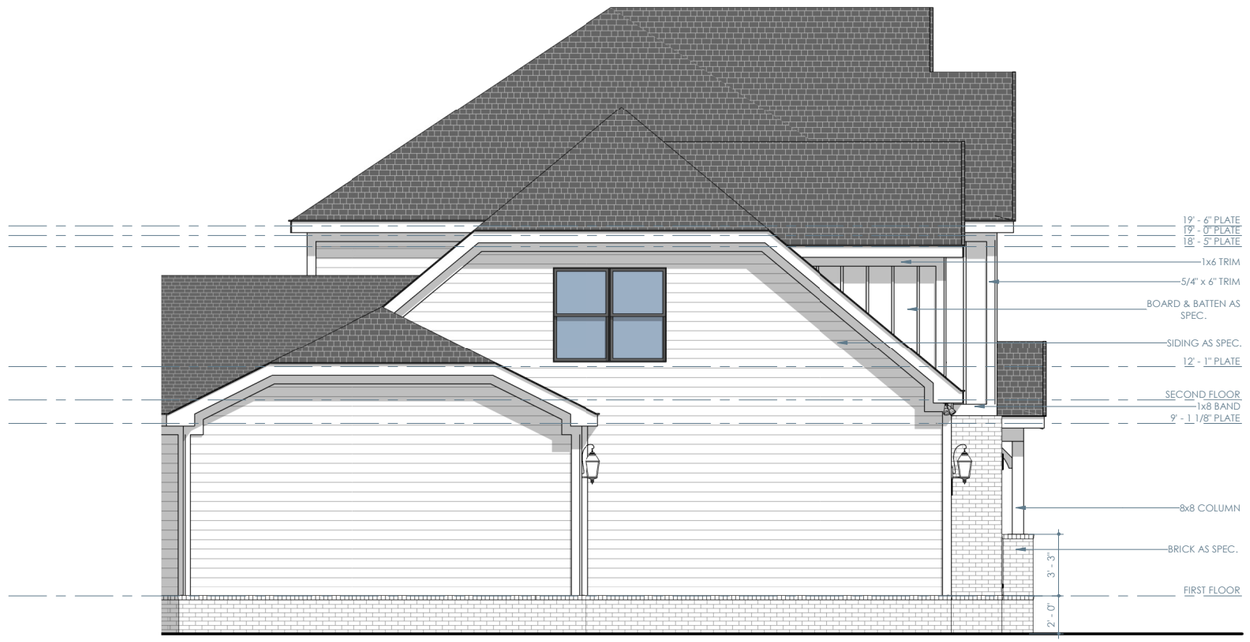
ELEVATION C - OPT. 3 CAR GARAGE - LEFT

1/8" = 1'-0"



ELEVATION D - OPT. 3 CAR GARAGE - FRONT

1/8" = 1'-0"



ELEVATION D - OPT. 3 CAR GARAGE - LEFT

1/8" = 1'-0"

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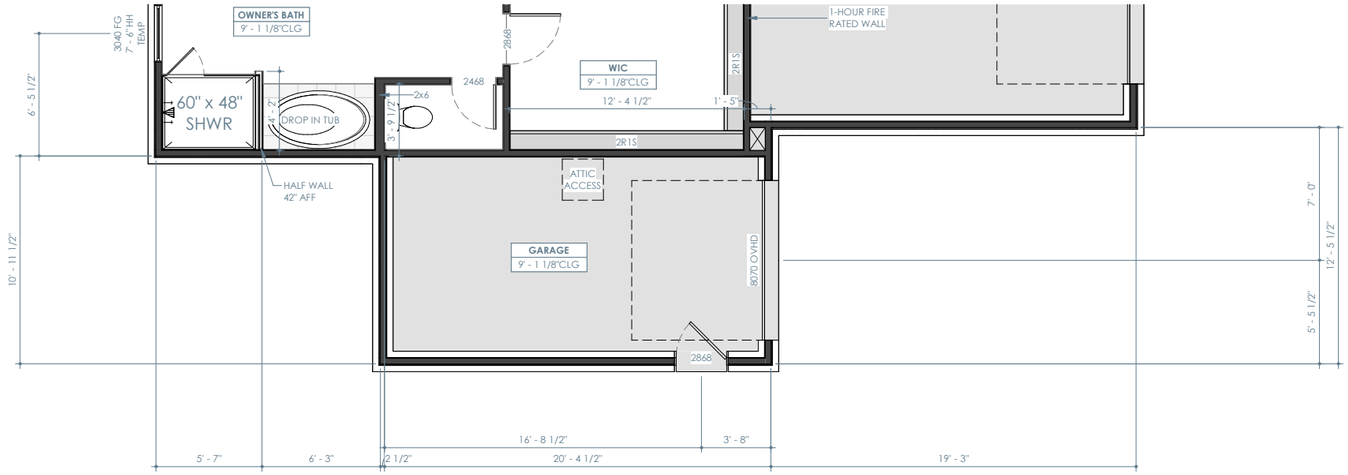
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

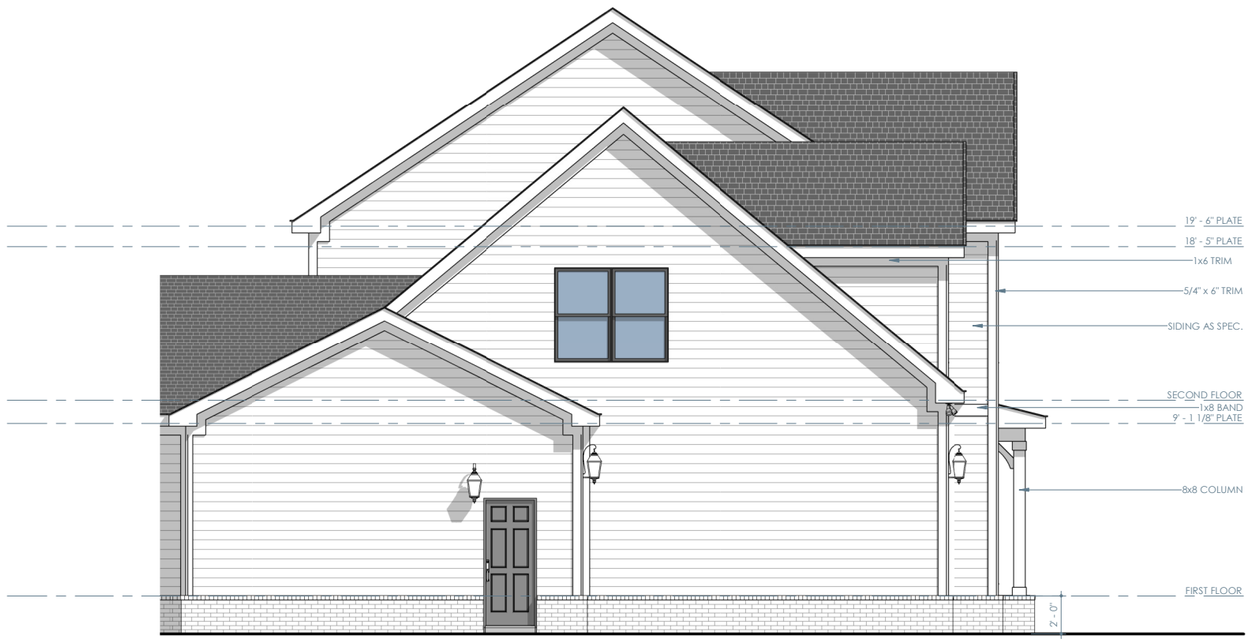
SHEET NO.

A7.05



OPT. SERVICE DOOR @ 3 CAR GARAGE - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. GARAGE SERVICE DOOR @ 3 CAR GARAGE - LEFT

1/8" = 1'-0"

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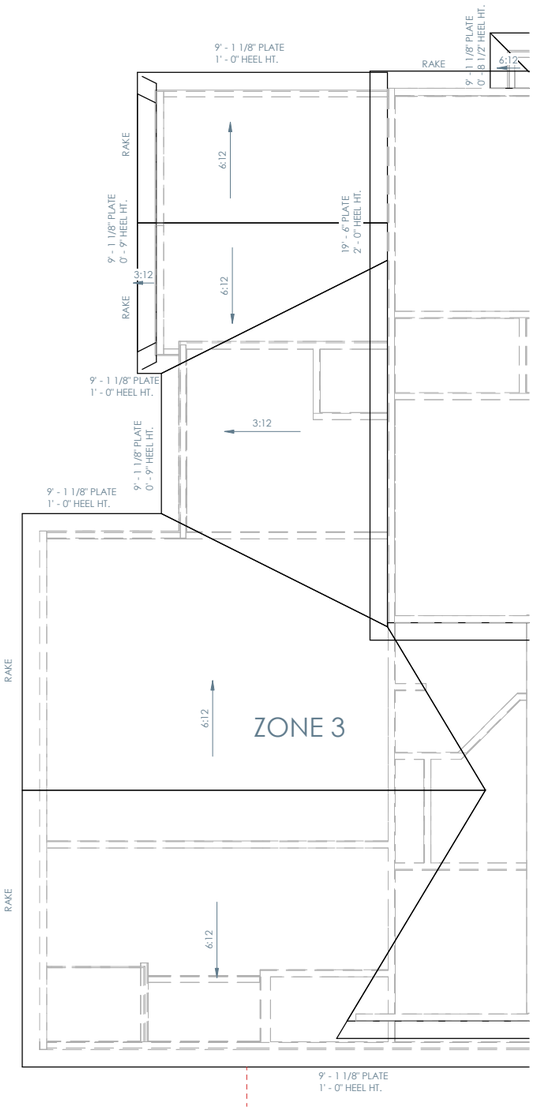
SHEET NAME

PLAN OPTIONS

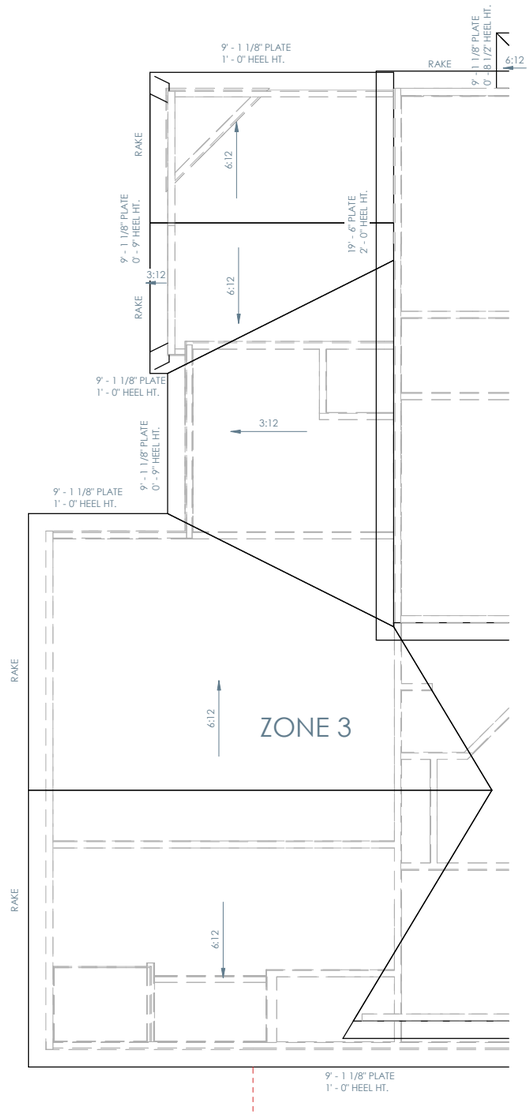
SHEET NO.

A7.06



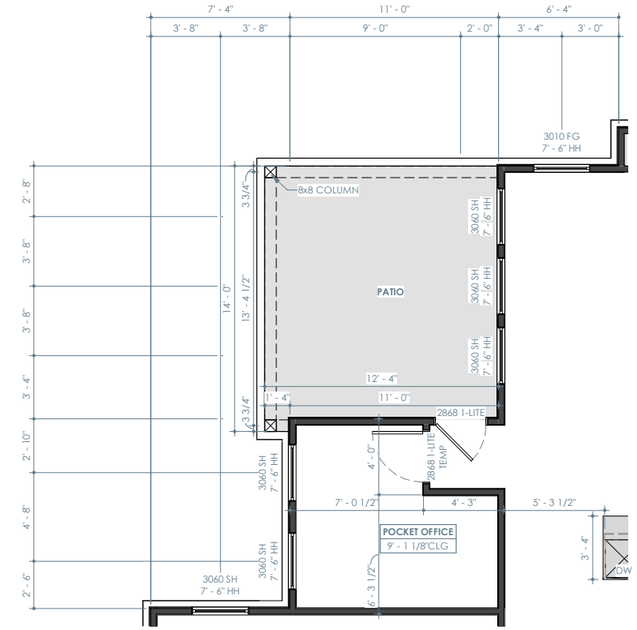
OPT. COVERED PATIO - ROOF PLAN

1/8" = 1'-0"



OPT. FIREPLACE @ COVERED PORCH - ROOF PLAN

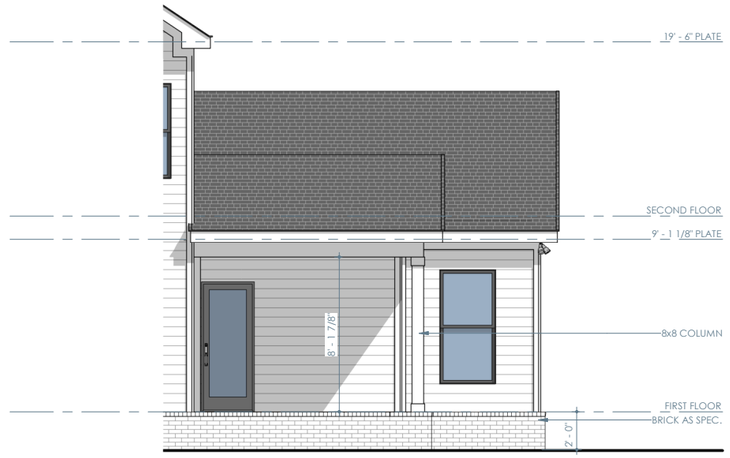
1/8" = 1'-0"


7' - 4"
11' - 0"
6' - 4"
3' - 8"
3' - 8"
9' - 0"
2' - 0"
3' - 4"
3' - 0"
3010 FG
7' - 6" HH
8x8 COLUMN
PATIO
3060 SH
7' - 6" HH
14' - 0"
13' - 4 1/2"
12' - 4"
11' - 0"
2868 1-LITE
2868 1-LITE TEMP
7' - 0 1/2"
4' - 3"
5' - 3 1/2"
POCKET OFFICE
9' - 1 1/8" CLG
3' - 4"
6' - 3 1/2"
2' - 6"
4' - 8"
2' - 10"
3' - 8"
2' - 8"
3' - 4"
3' - 8"
3' - 8"
3' - 4"
3' - 8"
3' - 8"
3' - 4"
3' - 8"
3



OPT. COVERED PATIO - REAR

1/8" = 1'-0"



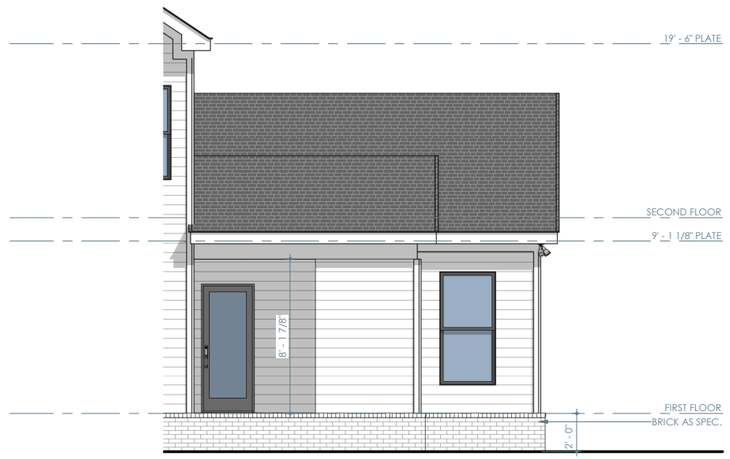
OPT. COVERED PATIO - RIGHT

1/8" = 1'-0"



OPT. FIREPLACE @ COVERED PORCH - REAR

1/8" = 1'-0"



OPT. FIREPLACE @ COVERED PORCH - RIGHT

1/8" = 1'-0"

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PROJECT NAME

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PLAN NO.

2970

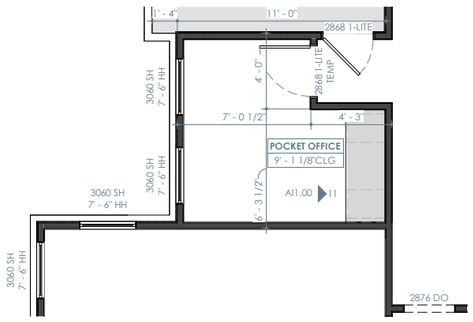
ISSUE DATE	10/06/2023
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

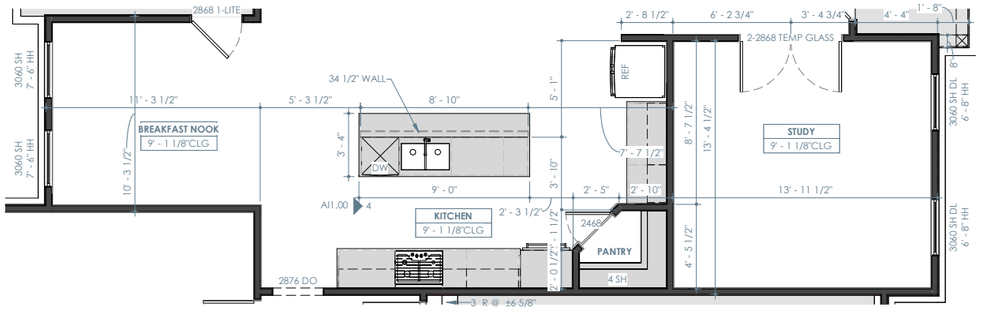
SHEET NO.

A7.08



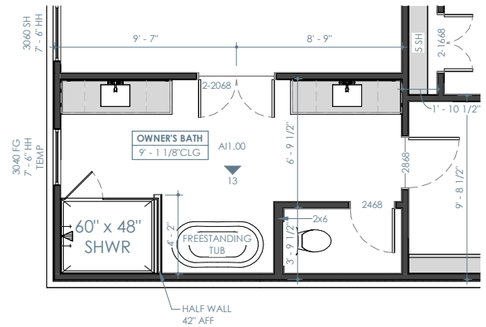
OPT. CABINETS @ POCKET OFFICE - FIRST FLOOR PLAN

1/8" = 1'-0"



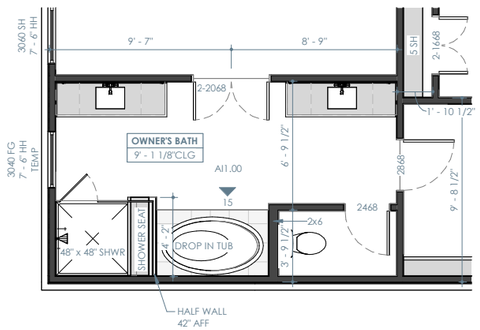
OPT. STUDY W/ BREAKFAST NOOK - FIRST FLOOR PLAN

1/8" = 1'-0"



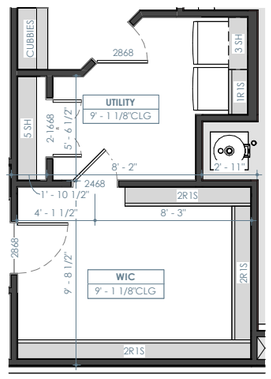
OPT. FREESTANDING TUB ILO DROP IN TUB - FIRST FLOOR PLAN

1/8" = 1'-0"



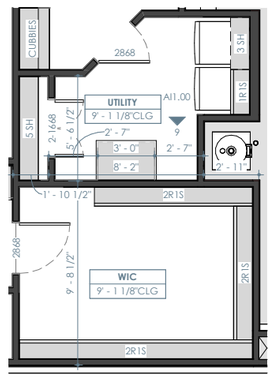
OPT. SHOWER SEAT @ OWNER'S BATH - FIRST FLOOR PLAN

1/8" = 1'-0"



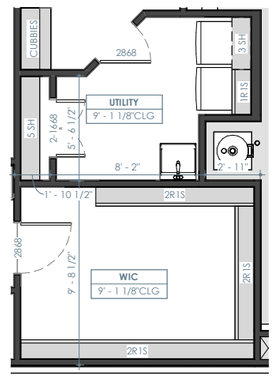
OPT. DOOR @ UTILITY - FIRST FLOOR PLAN

1/8" = 1'-0"



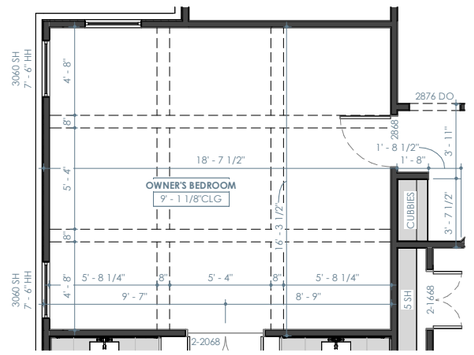
OPT. CABINETS @ UTILITY - FIRST FLOOR PLAN

1/8" = 1'-0"



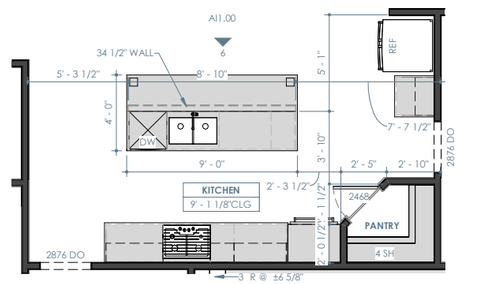
OPT. SINK @ UTILITY - FIRST FLOOR PLAN

1/8" = 1'-0"



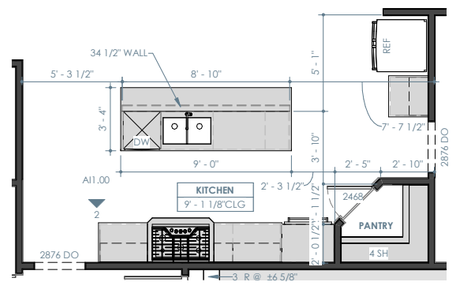
OPT. COFFERED CEILING @ OWNER'S BEDROOM - FIRST FLOOR PLAN

1/8" = 1'-0"



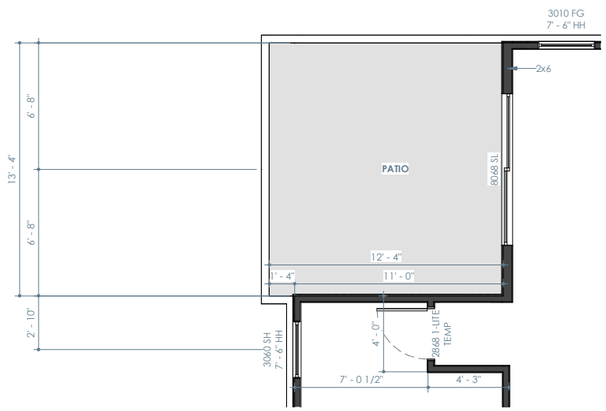
OPT. ISLAND 1 - FIRST FLOOR PLAN

1/8" = 1'-0"



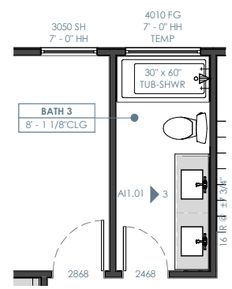
OPT. 36" COOKTOP RANGE W/ BUMP OUT AND VENT HOOD - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. SLIDER @ GREAT ROOM - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. SINK @ BATH 3 - SECOND FLOOR PLAN

1/8" = 1'-0"

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PLAN NO.

2970

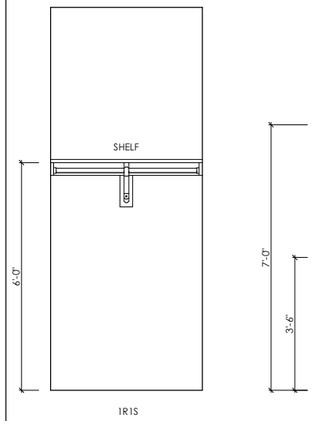
ISSUE DATE	10/06/2023
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

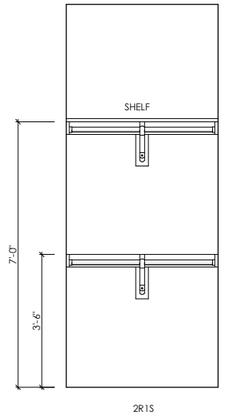
PLAN OPTIONS

SHEET NO.

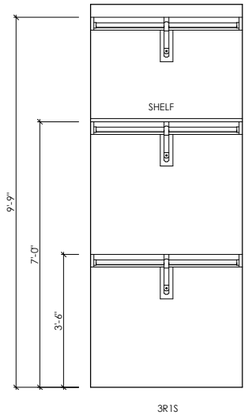
A7.09



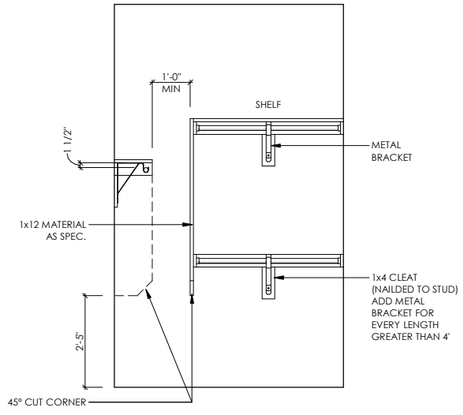
1R1S



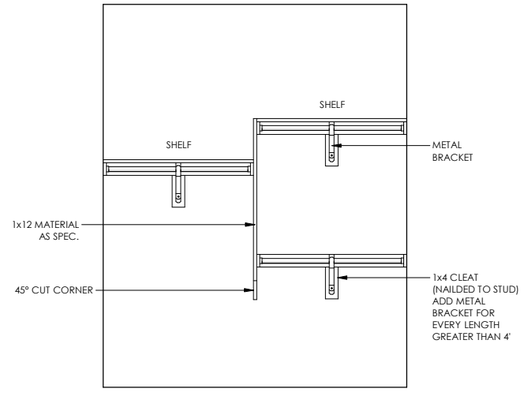
2R1S



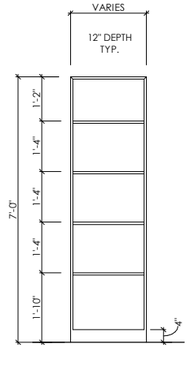
3R1S



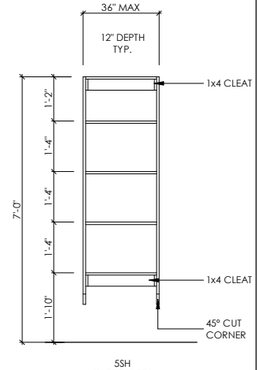
CLOSET CORNER DETAIL



1R1S TO 2R1S TRANSITION DETAIL



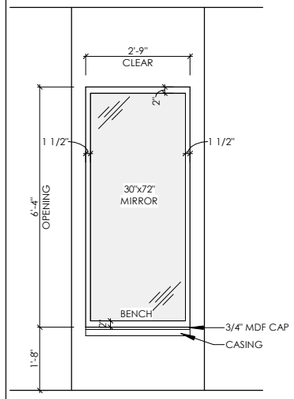
5SH



5SH
(SUSPENDED)

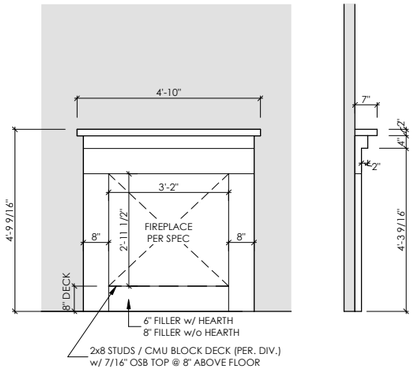
1 CLOSET DETAILS

1/4" = 1'-0"



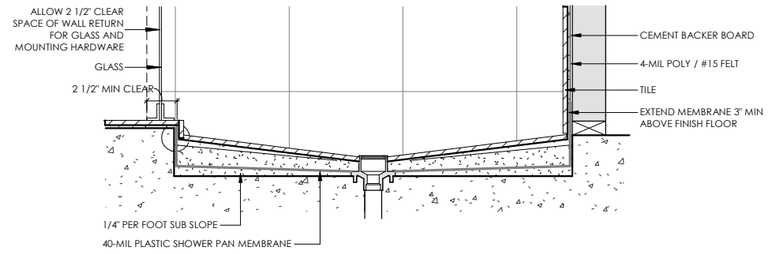
2 CLOSET BENCH

1/4" = 1'-0"



3 FIREPLACE DETAIL

1/4" = 1'-0"



4 MUD PAN SHOWER

3/4" = 1'-0"

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PLAN NO.

2970

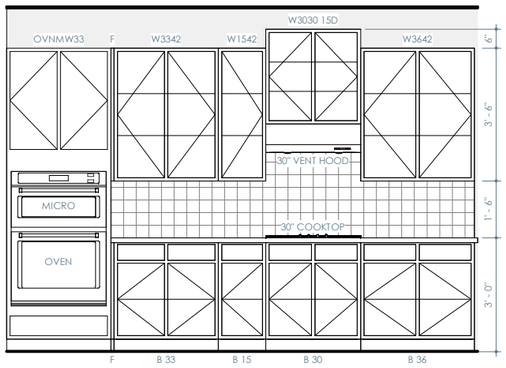
ISSUE DATE	10/06/2023
DRAWN BY	SST
SCALE	As indicated

SHEET NAME

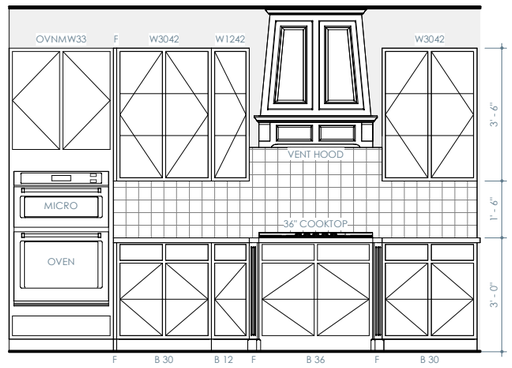
DETAILS

SHEET NO.

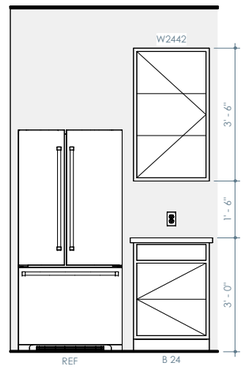
AD1.00



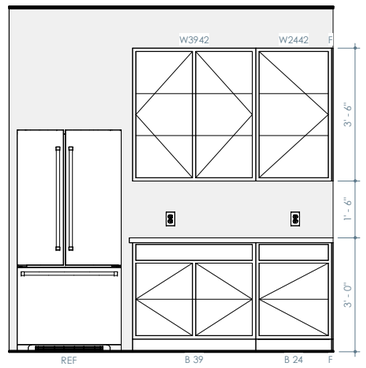
1 KITCHEN
1/4" = 1'-0"



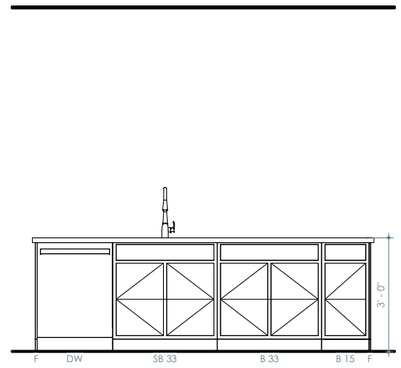
2 OPT. 36" COOKTOP RANGE W/ BUMP OUT AND VENT HOOD
1/4" = 1'-0"



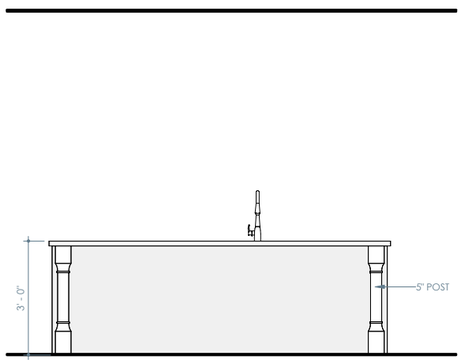
3 KITCHEN
1/4" = 1'-0"



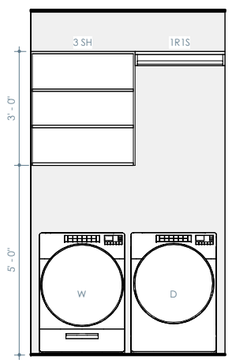
4 KITCHEN W/ OPT. STUDY
1/4" = 1'-0"



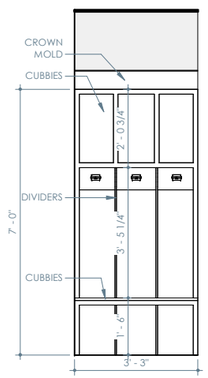
5 ISLAND
1/4" = 1'-0"



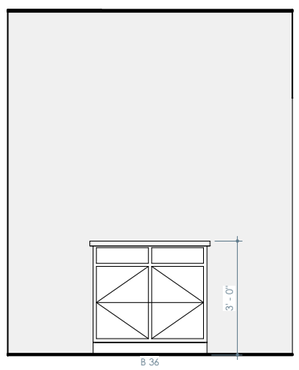
6 OPT. ISLAND
1/4" = 1'-0"



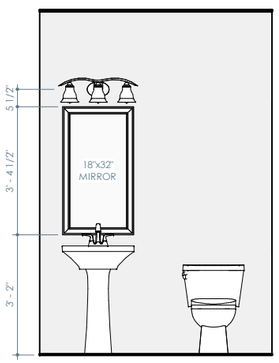
7 UTILITY
1/4" = 1'-0"



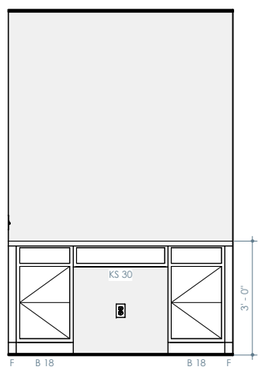
8 CUBBIES
1/4" = 1'-0"



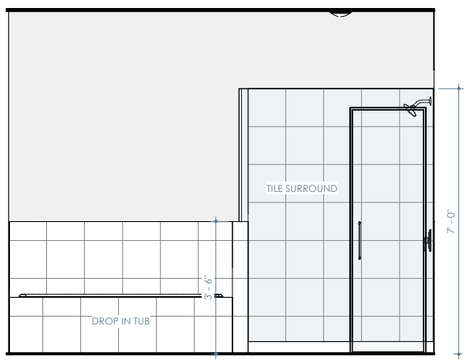
9 OPT. CABINETS @ UTILITY
1/4" = 1'-0"



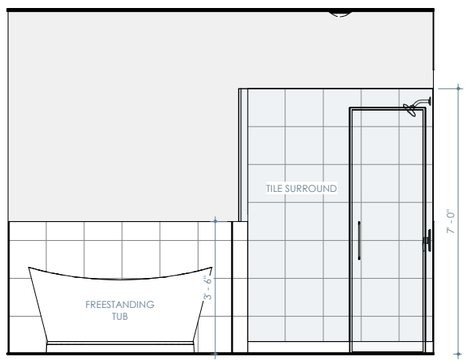
10 1/2 BATH
1/4" = 1'-0"



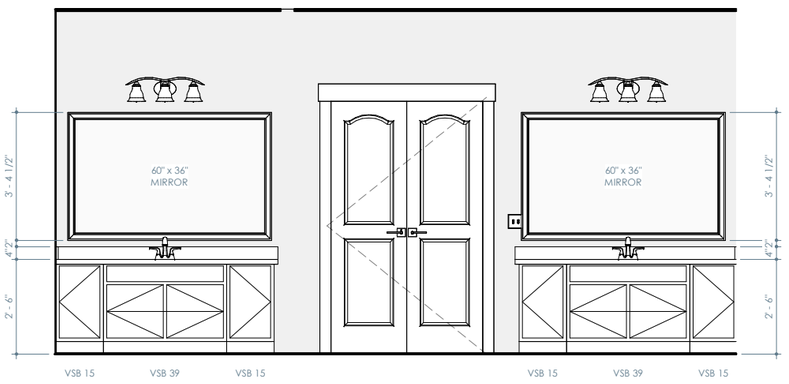
11 OPT. CABINETS @ POCKET OFFICE
1/4" = 1'-0"



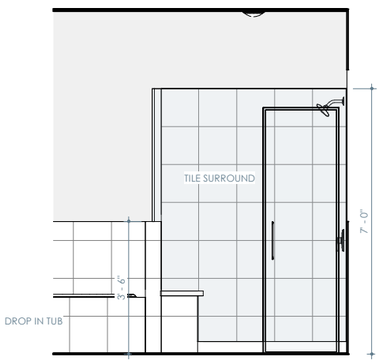
12 OWNER'S BATH
1/4" = 1'-0"



13 OPT. FREESTANDING TUB ILO DROP IN TUB
1/4" = 1'-0"



14 OWNER'S BATH
1/4" = 1'-0"



15 OPT. SHOWER SEAT @ OWNER'S BATH
1/4" = 1'-0"

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PLAN NO.
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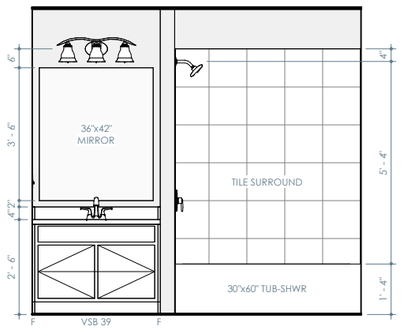
ISSUE DATE	10/06/2023
DRAWN BY	SST
SCALE	1/4" = 1'-0"

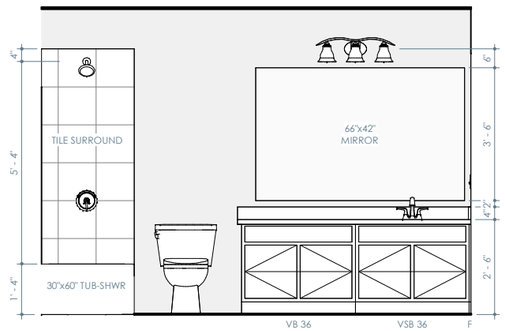
SHEET NAME
INTERIOR ELEVATIONS

SHEET NO.
AI1.00



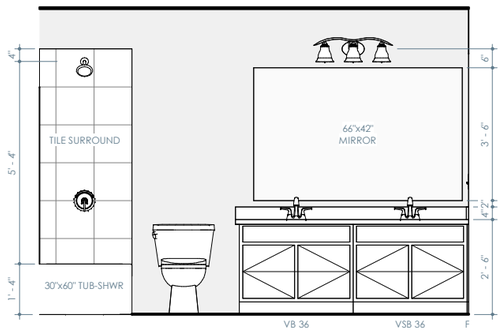
1 BATH 2

1/4" = 1'-0"



2 BATH 3

1/4" = 1'-0"



3 OPT. SINK @ BATH 3

1/4" = 1'-0"

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PROJECT NAME

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PLAN NO.

2970

ISSUE DATE	10/06/2023
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SCALE	1/4" = 1'-0"

SHEET NAME

INTERIOR ELEVATIONS

SHEET NO.

AI1.01



ELEVATION A - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- THREE WAY SWITCH
- FOUR WAY SWITCH
- SINGLE POLE DIMMER SWITCH
- OCCUPANT SENSOR SWITCH
- RHEOSTAT SWITCH
- PRESSURE SWITCH
- GARAGE DOOR SWITCH
- DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- SUFRACE MOUNT LED LIGHT FIXTURE
- KEYLESS LIGHT FIXTURE
- HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- UNDER / OVER CABINET LIGHT
- 1x4 FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

POWER

- DUPLEX OUTLET
- QUAD OUTLET
- SWITCHED DUPLEX OUTLET
- GROUND FAULT CIRCUIT INTERRUPTER
- SURFACE MOUNT DUPLEX OUTLET
- SURFACE MOUNT GROUND FAULT INTERRUPTER
- FLOOR OUTLET
- OVERHEAD OUTLET
- 220 VOLT OUTLET

COMMUNICATION

- PHONE OUTLET
- DATA OUTLET
- SURROUND SOUND OUTLET
- TV OUTLET
- SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SMOKE ALARM
- CARBON DETECTOR

EQUIPMENT

- ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

ELECTRICAL PLAN NOTES

INFORMATION AND LAYOUTS SHOWN ON DRAWINGS ARE ONLY SCHEMATIC IN DESIGN

- PROVIDE LIGHT IN EACH CRAWLSPACE AND ATTIC
- GAS AND 220 OUTLETS SHOWN FOR LOCATION PURPOSES ONLY, AND SUBJECT TO CHANGE PER SUBDIVISION/CITY/CODE REQUIREMENT

KITCHEN
- 24" MAX SEPARATION FOR OUTLETS LOCATED AT KITCHEN COUNTERTOPS
- RECEPTACLES AT COUNTER SPACE 12" OR WIDER.
- GFCI OUTLETS REQUIRED AT KITCHEN COUNTERTOPS
- 1 OUTLET PROVIDED PER ISLAND MINIMUM

BATHROOMS
- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES
- OUTLETS IN ALL LIVING SPACES SHALL BE PROVIDED AT 6' MAX FROM OPENING OR DOOR AND MINIMUM 12' BETWEEN EACH RECEPTACLE
- PROVIDE OUTLET ON ANY WALL LARGER THAN 2' BETWEEN OPENINGS AND DOORS
- FLOOR PLUGS AS REQUIRED

OTHER AREAS
- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
- PROVIDE AT LEAST 1 OUTLET PER 10' OF HALLWAY RUN

LIGHTING
- LIGHTING FIXTURES LOCATED IN CLOSETS: SURFACE MOUNT FIXTURE ARE NOT TO BE WITHIN 1'-0" OF SHELF OR HANGING SPACE MEASURED HORIZONTALLY. RECESSED FIXTURES NOT TO BE WITHIN 6" OF ANY SHELF OR HANGING SPACE

SMOKE DETECTORS
- ADDITIONAL SMOKE DETECTOR REQUIRED AT EACH END OF ROOMS/HALLWAYS GREATER THAN 30' IN LENGTH
- DO NOT INSTALL DETECTORS WITHIN 3' OF AN AIR VENT OR RETURN
- KEEP ALL SMOKE DETECTORS A MINIMUM OF 36" FROM BATHROOM DOOR, KITCHEN COOKING APPLIANCES AND LAUNDRY/UTILITY (WHERE A WASHER AND DRYER IS PLACED)
- DO NOT INSTALL NEAR FLUORESCENT LIGHTS
- DO NOT INSTALL WITHIN 36" OF TIP OF PADDLE FOR CEILING FAN
- INSTALL SMOKE DETECTOR ON SLOPED, PEAKED OR CATHEDRAL CEILINGS AT OR WITHIN 3' OF HIGHEST POINT (MEASURED HORIZONTALLY)
- SMOKE ALARMS IN ROOMS WITH CEILING SLOPES GREATER THAN 1 FOOT IN 8 FEET HORIZONTALLY SHALL BE LOCATED ON THE HIGHEST SIDE OF ROOM

Brightland HOMES

PROJECT NAME

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PLAN NO.

2970

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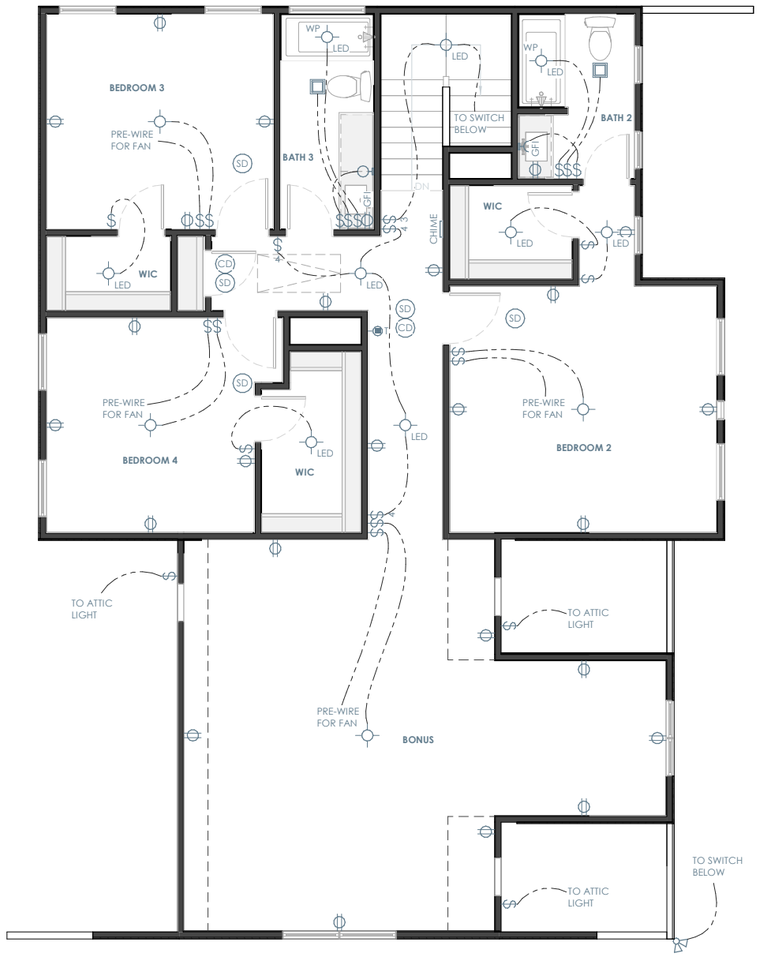
SHEET NAME

ELEVATION A - FIRST FLOOR ELECTRICAL PLAN

SHEET NO.

E1.00



ELEVATION A - SECOND FLOOR ELECTRICAL

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- THREE WAY SWITCH
- FOUR WAY SWITCH
- SINGLE POLE DIMMER SWITCH
- OCCUPANT SENSOR SWITCH
- RHEOSTAT SWITCH
- PRESSURE SWITCH
- GARAGE DOOR SWITCH
- DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- SUFRACE MOUNT LED LIGHT FIXTURE
- KEYLESS LIGHT FIXTURE
- HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- UNDER / OVER CABINET LIGHT
- 1x4 FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

POWER

- DUPLEX OUTLET
- QUAD OUTLET
- SWITCHED DUPLEX OUTLET
- GROUND FAULT CIRCUIT INTERRUPTER
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- SURFACE MOUNT GROUND FAULT INTERRUPTER
- FLOOR OUTLET
- OVERHEAD OUTLET
- 220 VOLT OUTLET

COMMUNICATION

- PHONE OUTLET
- DATA OUTLET
- SURROUND SOUND OUTLET
- TV OUTLET
- SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SMOKE ALARM
- CARBON DETECTOR

EQUIPMENT

- ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

ELECTRICAL PLAN NOTES

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KITCHEN

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- RECEPTACLES AT COUNTER SPACE 12" OR WIDER.
- GFCI OUTLETS REQUIRED AT KITCHEN COUNTERTOPS
- 1 OUTLET PROVIDED PER ISLAND MINIMUM

BATHROOMS

- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES

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- FLOOR PLUGS AS REQUIRED

OTHER AREAS

- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
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LIGHTING

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SMOKE DETECTORS

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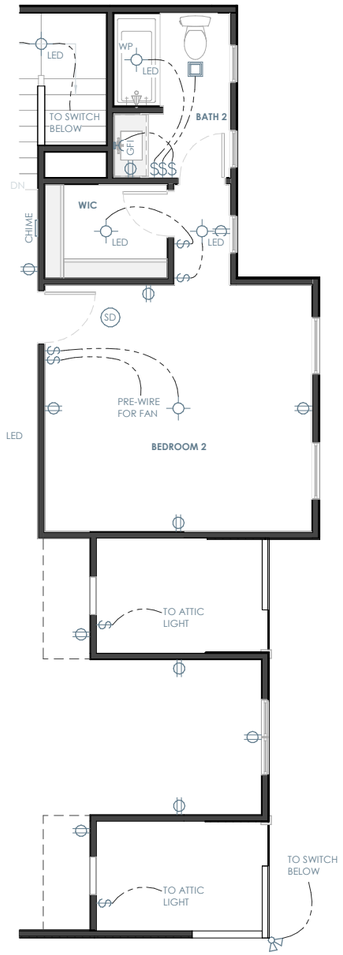
SHEET NAME

ELEVATION A - SECOND FLOOR ELECTRICAL PLAN

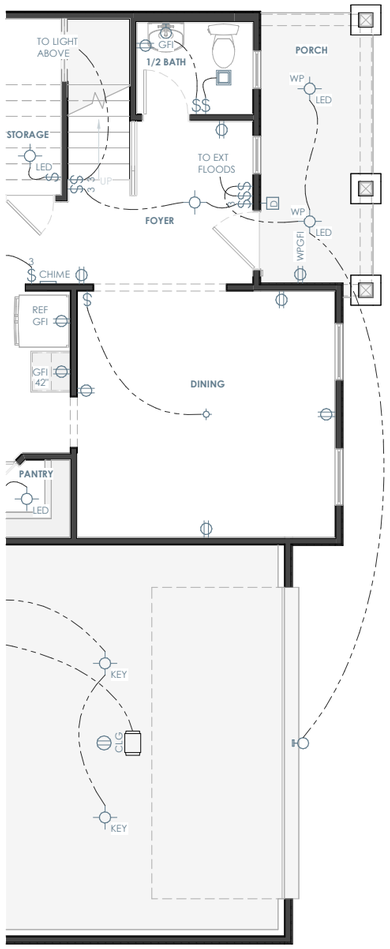
SHEET NO.

E1.01



ELEVATION B - SECOND FLOOR ELECTRICAL

1/8" = 1'-0"



ELEVATION B - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- 3 THREE WAY SWITCH
- 4 FOUR WAY SWITCH
- D SINGLE POLE DIMMER SWITCH
- OS OCCUPANT SENSOR SWITCH
- R RHEOSTAT SWITCH
- P PRESSURE SWITCH
- G GARAGE DOOR SWITCH
- D DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- LED SUFRACE MOUNT LED LIGHT FIXTURE
- KEY KEYLESS LIGHT FIXTURE
- H HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
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- UNDER / OVER CABINET LIGHT
- 1x4 FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

POWER

- DUPLEX OUTLET
- QUAD OUTLET
- SWITCHED DUPLEX OUTLET
- GFI GROUND FAULT CIRCUIT INTERRUPTER
- SURFACE MOUNT DUPLEX OUTLET
- GFI SURFACE MOUNT GROUND FAULT INTERRUPTER
- FLR FLOOR OUTLET
- CLG OVERHEAD OUTLET
- 220v 220 VOLT OUTLET

COMMUNICATION

- PH PHONE OUTLET
- DATA DATA OUTLET
- 5.1 SS SURROUND SOUND OUTLET
- TV TV OUTLET
- S SUB SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SD SMOKE ALARM
- CD CARBON DETECTOR

EQUIPMENT

- PANEL ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

ELECTRICAL PLAN NOTES

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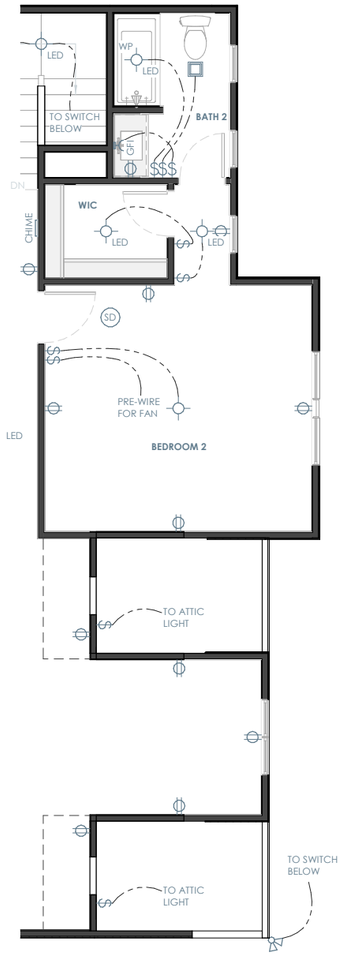
SHEET NAME

ELEVATION B - PARTIAL ELECTRICAL PLANS

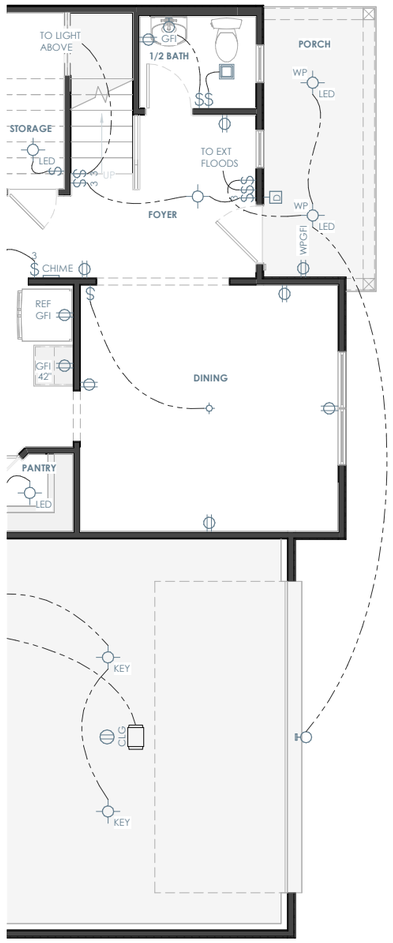
SHEET NO.

E2.00



ELEVATION C - SECOND FLOOR ELECTRICAL

1/8" = 1'-0"



ELEVATION C - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

- $ — SINGLE POLE SWITCH
- $ 3 — THREE WAY SWITCH
- $ 4 — FOUR WAY SWITCH
- $ D — SINGLE POLE DIMMER SWITCH
- $ OS — OCCUPANT SENSOR SWITCH
- $ R — RHEOSTAT SWITCH
- $ P — PRESSURE SWITCH
- G — GARAGE DOOR SWITCH
- D — DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- LED — SUFRACE MOUNT LED LIGHT FIXTURE
- KEY — KEYLESS LIGHT FIXTURE
- HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- UNDER / OVER CABINET LIGHT
- 1x4 — FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

POWER

- DUPLEX OUTLET
- QUAD OUTLET
- SWITCHED DUPLEX OUTLET
- GFI — GROUND FAULT CIRCUIT INTERRUPTER
- SURFACE MOUNT DUPLEX OUTLET
- GFI — SURFACE MOUNT GROUND FAULT INTERRUPTER
- FLR — FLOOR OUTLET
- CLG — OVERHEAD OUTLET
- 220v — 220 VOLT OUTLET

COMMUNICATION

- PH — PHONE OUTLET
- DATA — DATA OUTLET
- 5.1 SS — SURROUND SOUND OUTLET
- TV — TV OUTLET
- S SUB — SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SD — SMOKE ALARM
- CD — CARBON DETECTOR

EQUIPMENT

- PANEL — ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

ELECTRICAL PLAN NOTES

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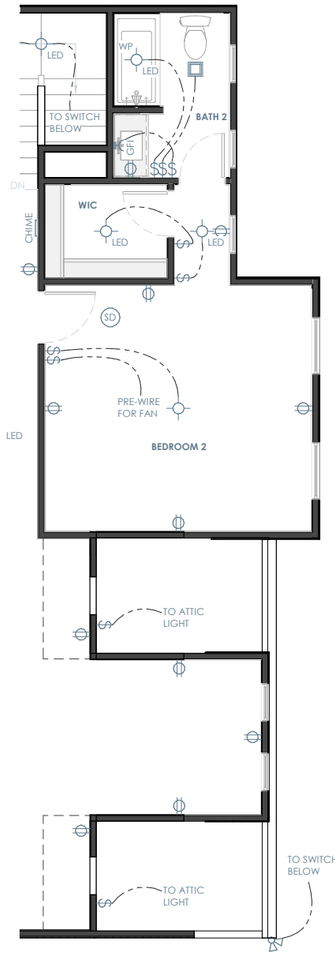
SHEET NAME

ELEVATION C - PARTIAL ELECTRICAL PLANS

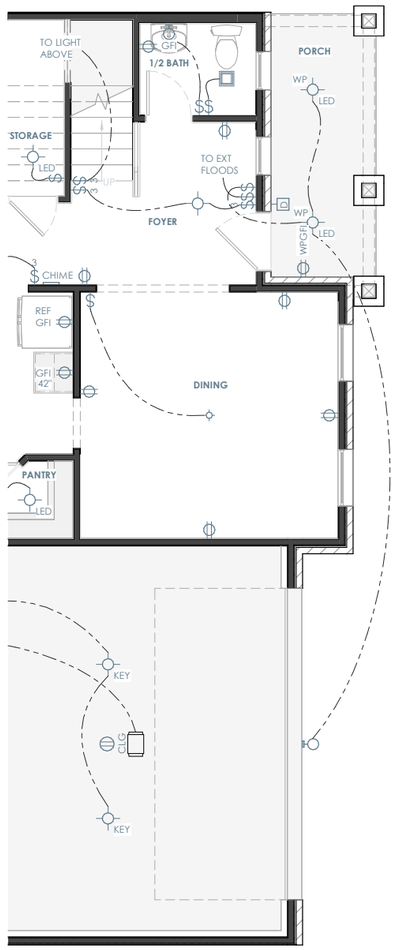
SHEET NO.

E3.00



ELEVATION D - SECOND FLOOR ELECTRICAL

1/8" = 1'-0"



ELEVATION D - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
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- LED SUFRACE MOUNT LED LIGHT FIXTURE
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- HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
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- UNDER / OVER CABINET LIGHT
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- CEILING FAN
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- CD CARBON DETECTOR

EQUIPMENT

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- EXHAUST FAN

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INFORMATION AND LAYOUTS SHOWN ON DRAWINGS ARE ONLY SCHEMATIC IN DESIGN

- PROVIDE LIGHT IN EACH CRAWLSPACE AND ATTIC
- GAS AND 220 OUTLETS SHOWN FOR LOCATION PURPOSES ONLY, AND SUBJECT TO CHANGE PER SUBDIVISION/CITY/CODE REQUIREMENT

KITCHEN

- 24" MAX SEPARATION FOR OUTLETS LOCATED AT KITCHEN COUNTERTOPS
- RECEPTACLES AT COUNTER SPACE 12" OR WIDER.
- GFCI OUTLETS REQUIRED AT KITCHEN COUNTERTOPS
- 1 OUTLET PROVIDED PER ISLAND MINIMUM

BATHROOMS

- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES

- OUTLETS IN ALL LIVING SPACES SHALL BE PROVIDED AT 6' MAX FROM OPENING OR DOOR AND MINIMUM 12' BETWEEN EACH RECEPTACLE
- PROVIDE OUTLET ON ANY WALL LARGER THAN 2' BETWEEN OPENINGS AND DOORS
- FLOOR PLUGS AS REQUIRED

OTHER AREAS

- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
- PROVIDE AT LEAST 1 OUTLET PER 10' OF HALLWAY RUN

LIGHTING

- LIGHTING FIXTURES LOCATED IN CLOSETS: SURFACE MOUNT FIXTURE ARE NOT TO BE WITHIN 1'-0" OF SHELF OR HANGING SPACE MEASURED HORIZONTALLY. RECESSED FIXTURES NOT TO BE WITHIN 6" OF ANY SHELF OR HANGING SPACE

SMOKE DETECTORS

- ADDITIONAL SMOKE DETECTOR REQUIRED AT EACH END OF ROOMS/HALLWAYS GREATER THAN 30' IN LENGTH
- DO NOT INSTALL DETECTORS WITHIN 3' OF AN AIR VENT OR RETURN
- KEEP ALL SMOKE DETECTORS A MINIMUM OF 36" FROM BATHROOM DOOR, KITCHEN COOKING APPLIANCES AND LAUNDRY/UTILITY (WHERE A WASHER AND DRYER IS PLACED)
- DO NOT INSTALL NEAR FLUORESCENT LIGHTS
- DO NOT INSTALL WITHIN 36" OF TIP OF PADDLE FOR CEILING FAN
- INSTALL SMOKE DETECTOR ON SLOPED, PEAKED OR CATHEDRAL CEILINGS AT OR WITHIN 3' OF HIGHEST POINT (MEASURED HORIZONTALLY)
- SMOKE ALARMS IN ROOMS WITH CEILING SLOPES GREATER THAN 1 FOOT IN 8 FEET HORIZONTALLY SHALL BE LOCATED ON THE HIGHEST SIDE OF ROOM

Brightland HOMES

PROJECT NAME

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PLAN NO.

2970

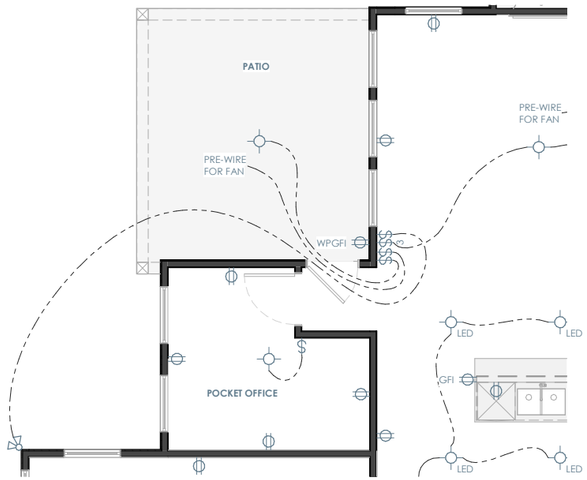
ISSUE DATE	10/06/2023
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - PARTIAL ELECTRICAL PLANS

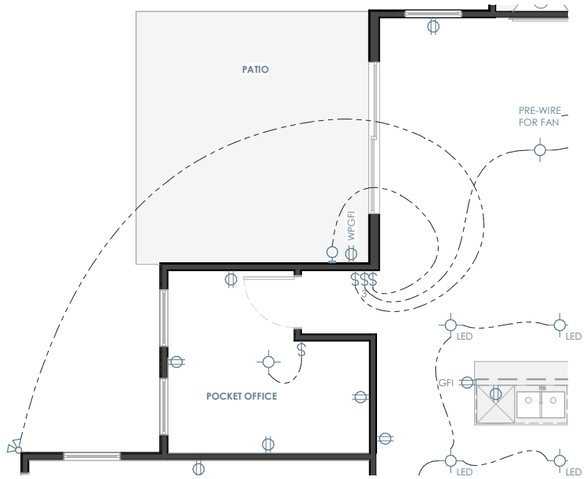
SHEET NO.

E4.00



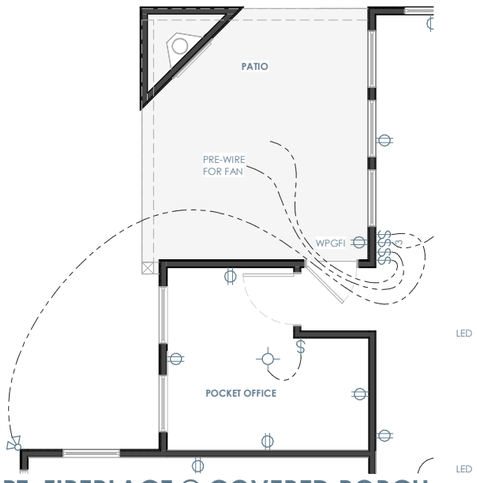
OPT. COVERED PATIO - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



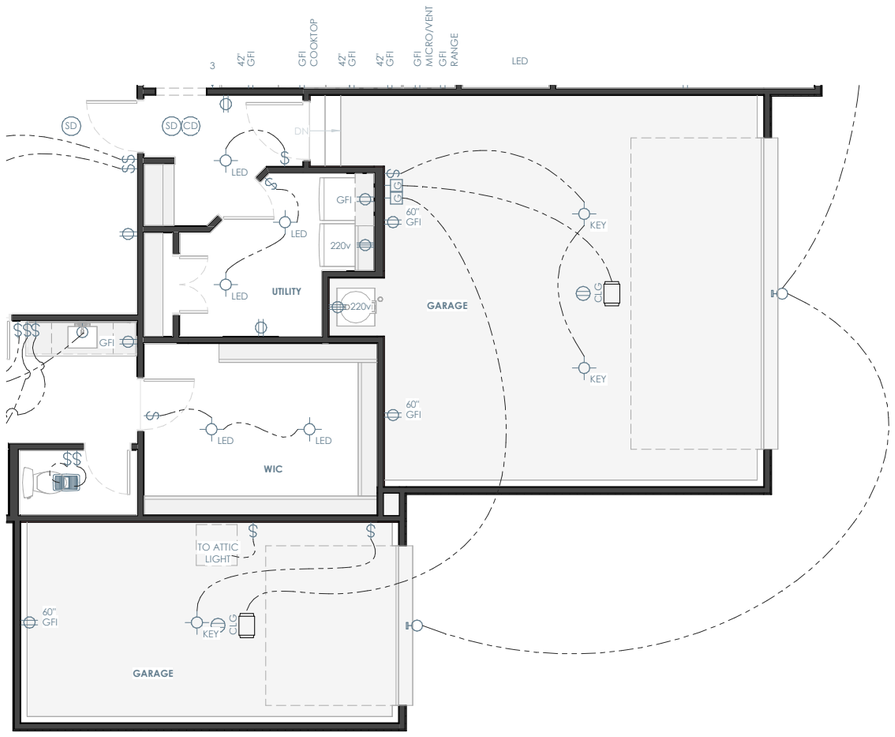
OPT. SLIDER @ GREAT ROOM - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



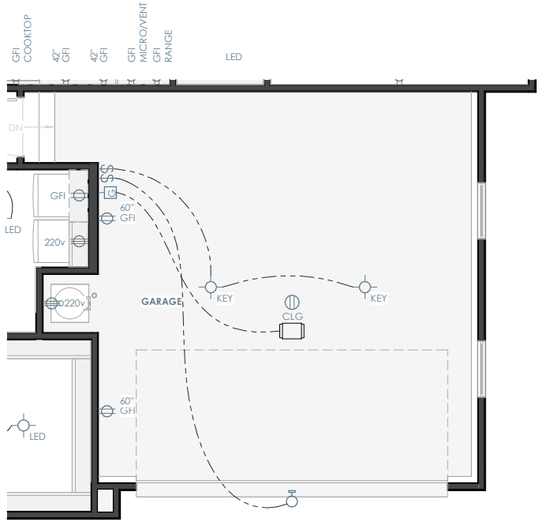
OPT. FIREPLACE @ COVERED PORCH - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



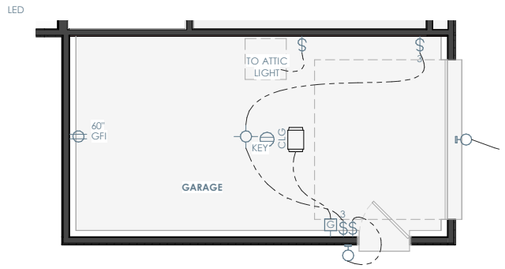
OPT. 3 CAR GARAGE - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



OPT. SIDE ENTRY GARAGE - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



OPT. GARAGE SERVICE DOOR @ 3 CAR GARAGE - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

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PLAN NO.

2970

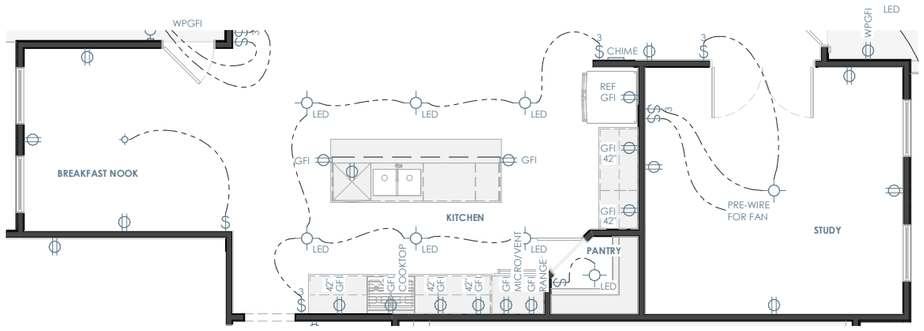
ISSUE DATE	10/06/2023
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

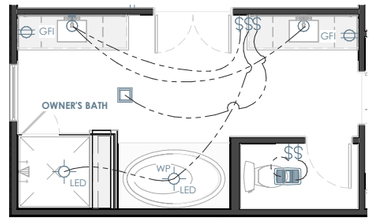
SHEET NO.

E7.00



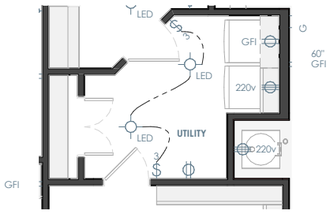
OPT. STUDY W/ BREAKFAST NOOK - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



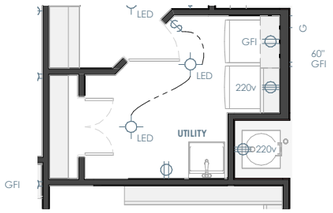
OPT. SHOWER SEAT @ OWNER'S BATH - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



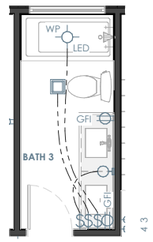
OPT. DOOR @ UTILITY - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



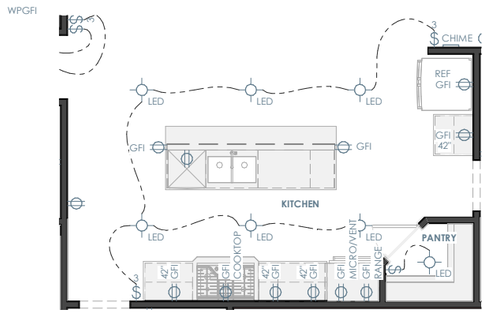
OPT. SINK @ UTILITY - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



OPT. SINK @ BATH 3 - SECOND FLOOR ELECTRICAL

1/8" = 1'-0"



OPT. 36" COOKTOP RANGE W/ BUMP OUT & VENT HOOD ABOVE - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

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PLAN NO.

2970

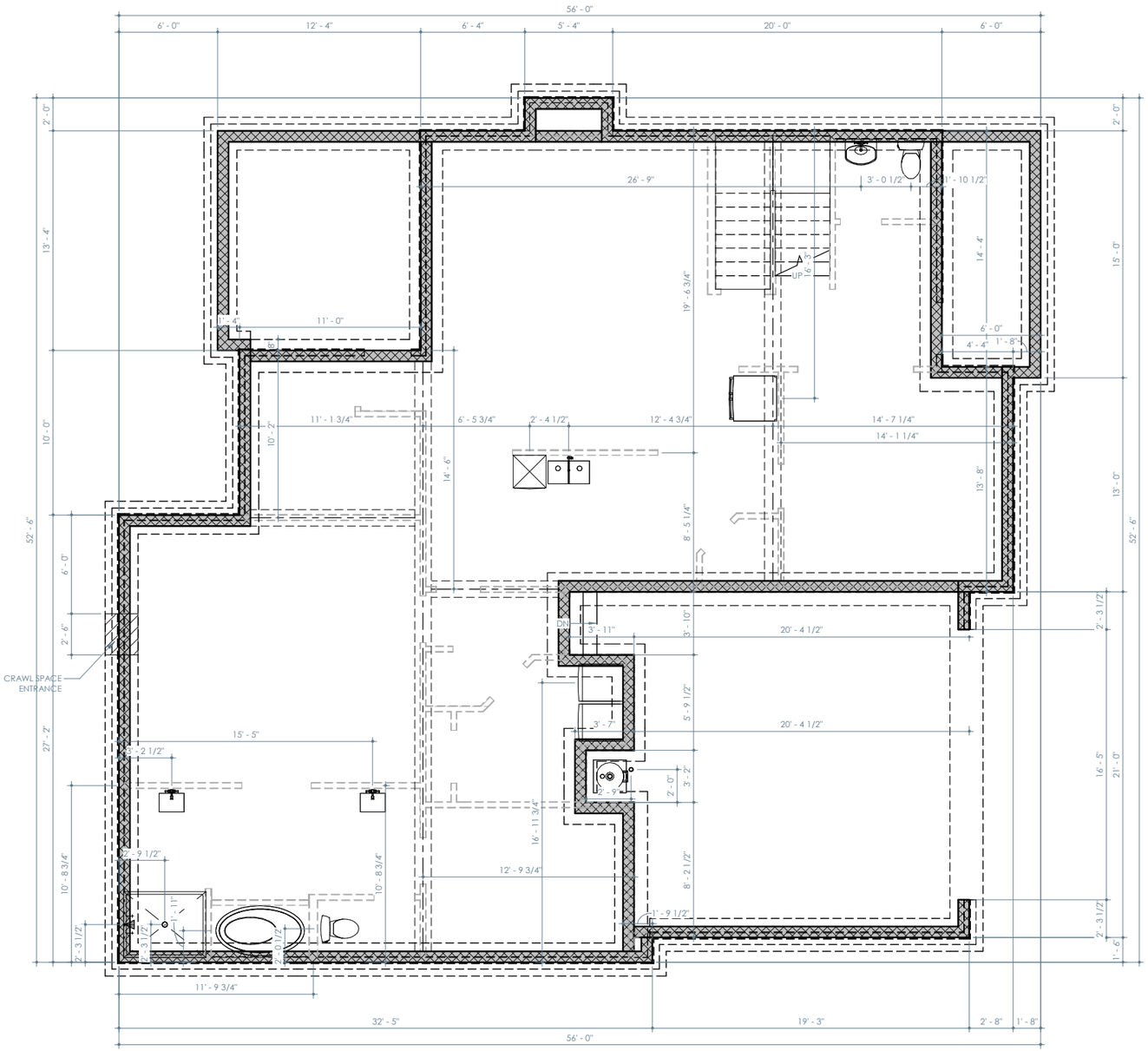
ISSUE DATE	10/06/2023
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

SHEET NO.

E7.01



ELEVATION A - FOUNDATION PLAN

1/8" = 1'-0"

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2970

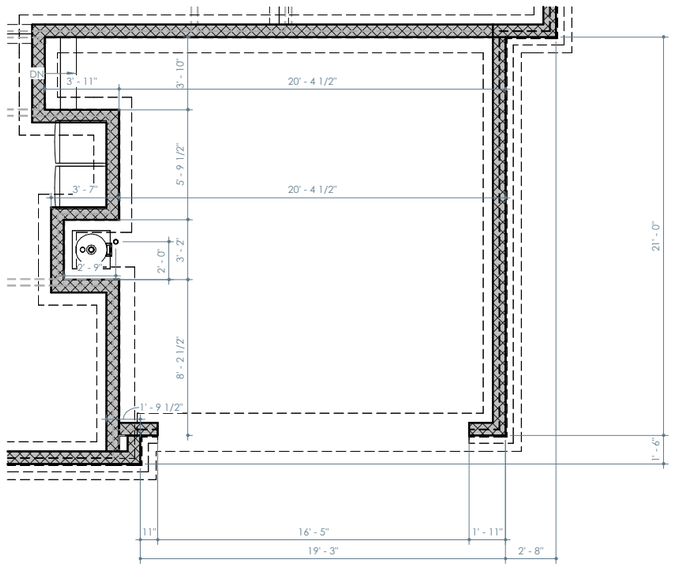
ISSUE DATE	10/06/2023
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

FOUNDATION - ELEVATION A

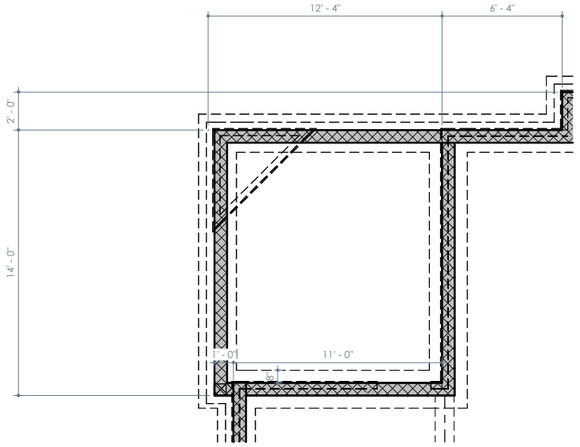
SHEET NO.

SF1.00



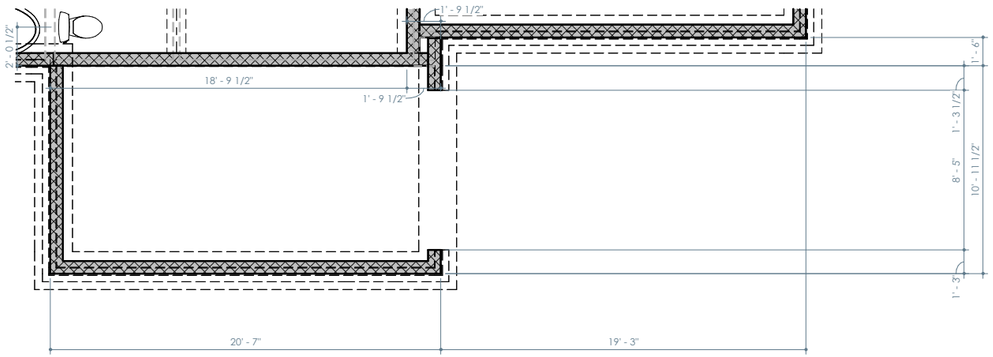
OPT. SIDE ENTRY GARAGE - FOUNDATION PLAN

1/8" = 1'-0"



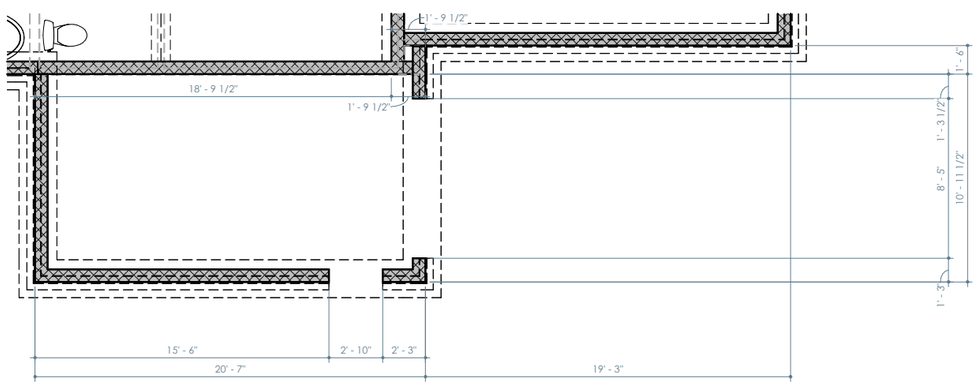
OPT. FIREPLACE @ COVERED PORCH - FOUNDATION PLAN

1/8" = 1'-0"



OPT. 3 CAR GARAGE - FOUNDATION PLAN

1/8" = 1'-0"



OPT. GARAGE SERVICE DDOOR @ 3 CAR GARAGE - FOUNDATION PLAN

1/8" = 1'-0"

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PLAN NO.

2970

ISSUE DATE	10/06/2023
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

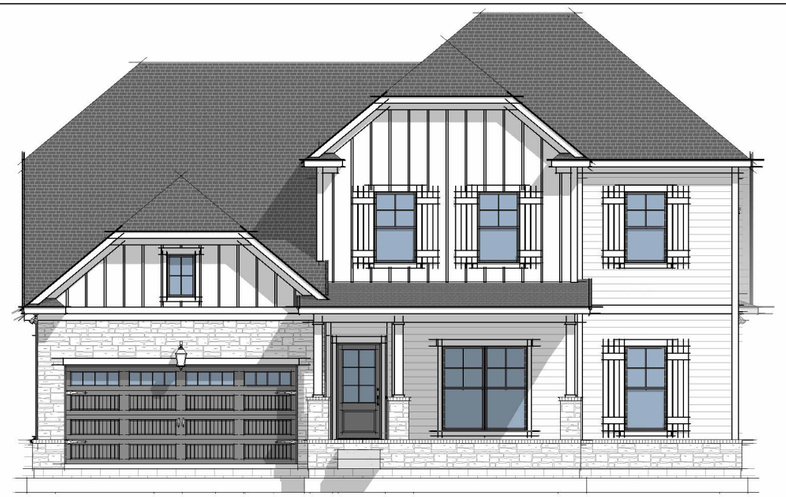
SHEET NO.

SF7.00



ELEVATION A

3/32" = 1'-0"



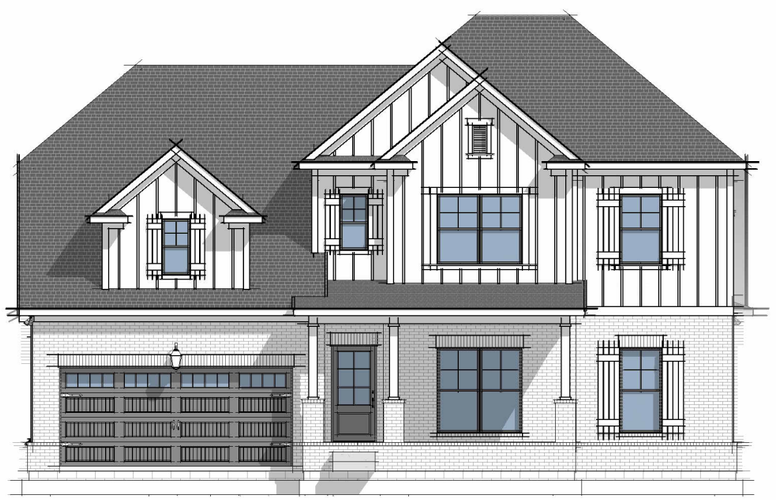
ELEVATION B

3/32" = 1'-0"



ELEVATION C

3/32" = 1'-0"



ELEVATION D

3/32" = 1'-0"

REVISION LOG

SHEET LIST

NO.	TITLE
A0.00	COVER SHEET
A1.00	ELEVATION A - FIRST FLOOR PLAN
A1.01	ELEVATION A - SECOND FLOOR PLAN
A1.02	ELEVATION A - EXTERIOR ELEVATIONS
A1.03	ELEVATION A - EXTERIOR ELEVATIONS
A1.04	ELEVATION A - ROOF PLAN
A2.01	ELEVATION B - PARTIAL FLOOR PLANS
A2.02	ELEVATION B - EXTERIOR ELEVATIONS
A2.03	ELEVATION B - EXTERIOR ELEVATIONS
A2.04	ELEVATION B - ROOF PLAN
A3.01	ELEVATION C - PARTIAL FLOOR PLANS
A3.02	ELEVATION C - EXTERIOR ELEVATIONS
A3.03	ELEVATION C - EXTERIOR ELEVATIONS
A3.04	ELEVATION C - ROOF
A4.01	ELEVATION D - PARTIAL FLOOR PLANS
A4.02	ELEVATION D - EXTERIOR ELEVATIONS
A4.03	ELEVATION D - EXTERIOR ELEVATIONS
A4.04	ELEVATION D - ROOF
A7.00	PLAN OPTIONS
A7.01	PLAN OPTIONS
A7.02	PLAN OPTIONS
A7.03	PLAN OPTIONS
A7.04	PLAN OPTIONS
A7.05	PLAN OPTIONS
A7.06	PLAN OPTIONS
A7.07	PLAN OPTIONS
A7.08	PLAN OPTIONS
A7.09	PLAN OPTIONS
A7.10	PLAN OPTION
A7.11	PLAN OPTIONS
A7.12	PLAN OPTIONS
A7.13	PLAN OPTIONS
A7.14	PLAN OPTIONS
A7.15	PLAN OPTIONS
A7.16	PLAN OPTIONS
A7.17	PLAN OPTIONS
A7.18	PLAN OPTIONS
AD1.00	DETAILS
AI1.00	INTERIOR ELEVATIONS
AI1.01	INTERIOR ELEVATIONS
E1.00	ELEVATION A - FIRST FLOOR ELECTRICAL PLAN
E1.01	ELEVATION A - SECOND FLOOR ELECTRICAL PLAN
E2.00	ELEVATION B - PARTIAL ELECTRICAL PLANS
E3.00	ELEVATION C - PARTIAL ELECTRICAL PLANS
E4.00	ELEVATION D - PARTIAL ELECTRICAL PLANS
E7.00	PLAN OPTIONS
E7.01	PLAN OPTIONS
SF1.00	FOUNDATION - ELEVATION A
SF7.00	PLAN OPTIONS

PLAN OPTIONS

ELEVATION **A**	OPT. UTILITY CABINETS	OPT. BEDROOM 4 W/ BATH 4
ELEVATION **B**	OPT. UTILITY REFRIGERATOR	OPT. TRANSOM AT FRONT DOOR
ELEVATION **C**	OPT. OWNERS BATH 1	
ELEVATION **D**	OPT. GREAT ROOM SLIDER DOOR	
OPT. EXCECUTIVE	OPT. OWNERS BATH SHOWER SEAT	
OPT. 3' OWNERS BEDROOM EXTENSION	OPT. EXTENDED KITCHEN ISLAND W/LEGS	
OPT. 3 CAR GARAGE	OPT. 36" COOKTOP RANGE W/ BUMPOUT & VENT HOOD ABOVE	
OPT. SIDE LOAD GARAGE	OPT. DINING ILO STUDY	
OPT. REAR COVERED PORCH	OPT. ISLAND MIRCOWAVE	
OPT. PORCH FIREPLACE	OPT. BEDROOM 5 ILO STUDY	
OPT. TWO 8' SINGLE GARAGE DOORS ILO 2 CAR GARAGE DOOR	OPT. FIREPLACE BUILT-INS	
OPT. CORNER FIREPLACE	OPT. CRAFTSMAN FRONT DOOR	
OPT. OWNERS BEDROOM COFFERED CEILLING	OPT. 1/2 BATH VANITY	

Brightland HOMES

PROJECT NAME

NATCHEZ

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PLAN NO.

3050

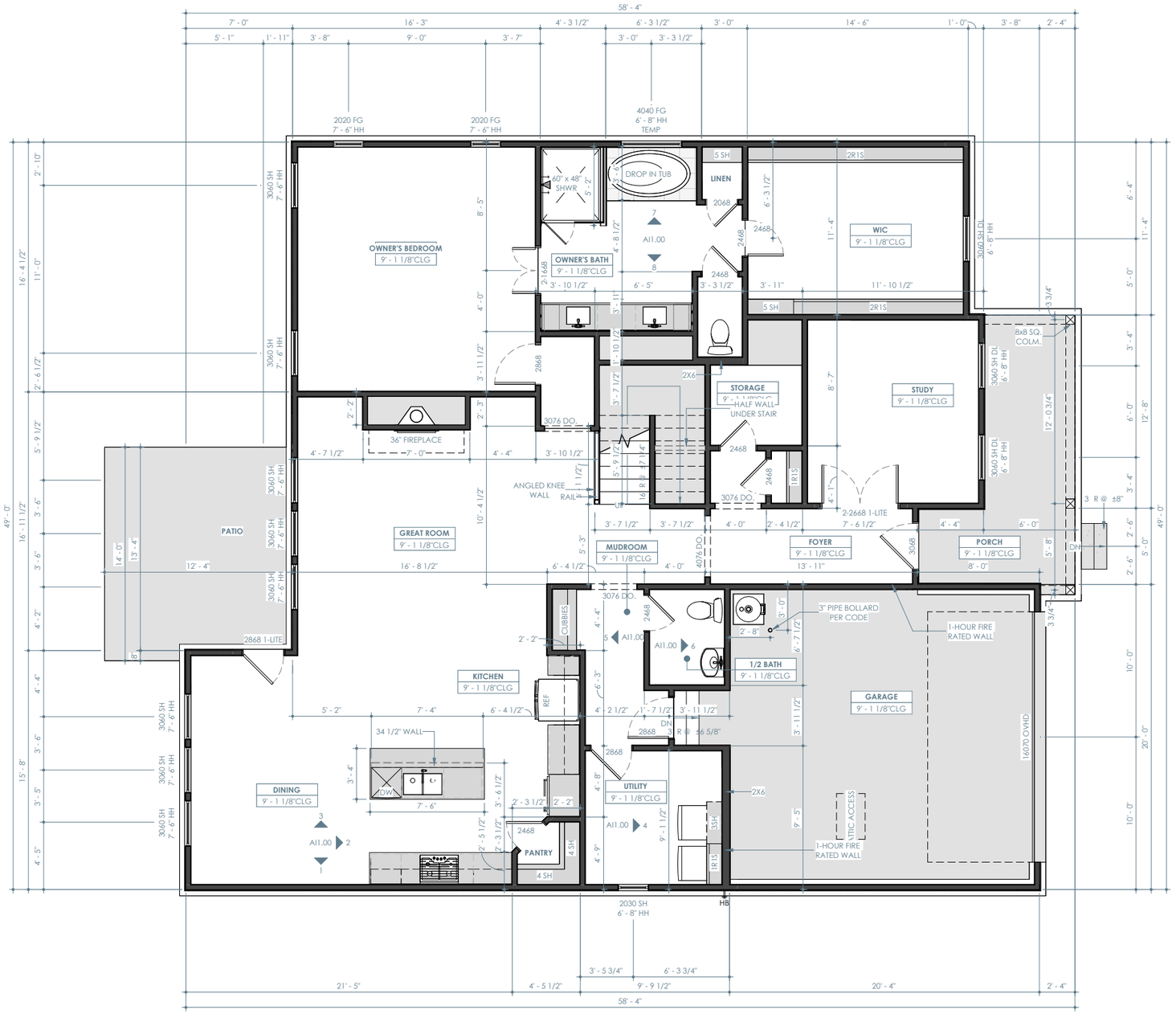
ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	As indicated

SHEET NAME

COVER SHEET

SHEET NO.

A0.00



ELEVATION A - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION A - A/C LIVING	
FIRST FLOOR	1749 SF
SECOND FLOOR	987 SF
TOTAL	2736 SF

ELEVATION A - LIVING	
FIRST FLOOR	1955 SF
SECOND FLOOR	1095 SF
TOTAL	3049 SF

TOTAL UNDER ROOF	3763 SF

ELEVATION A - NON-LIVING	
GARAGE	417 SF
PORCH	129 SF
PATIO	168 SF
TOTAL	714 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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PROJECT NAME

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PLAN NO.

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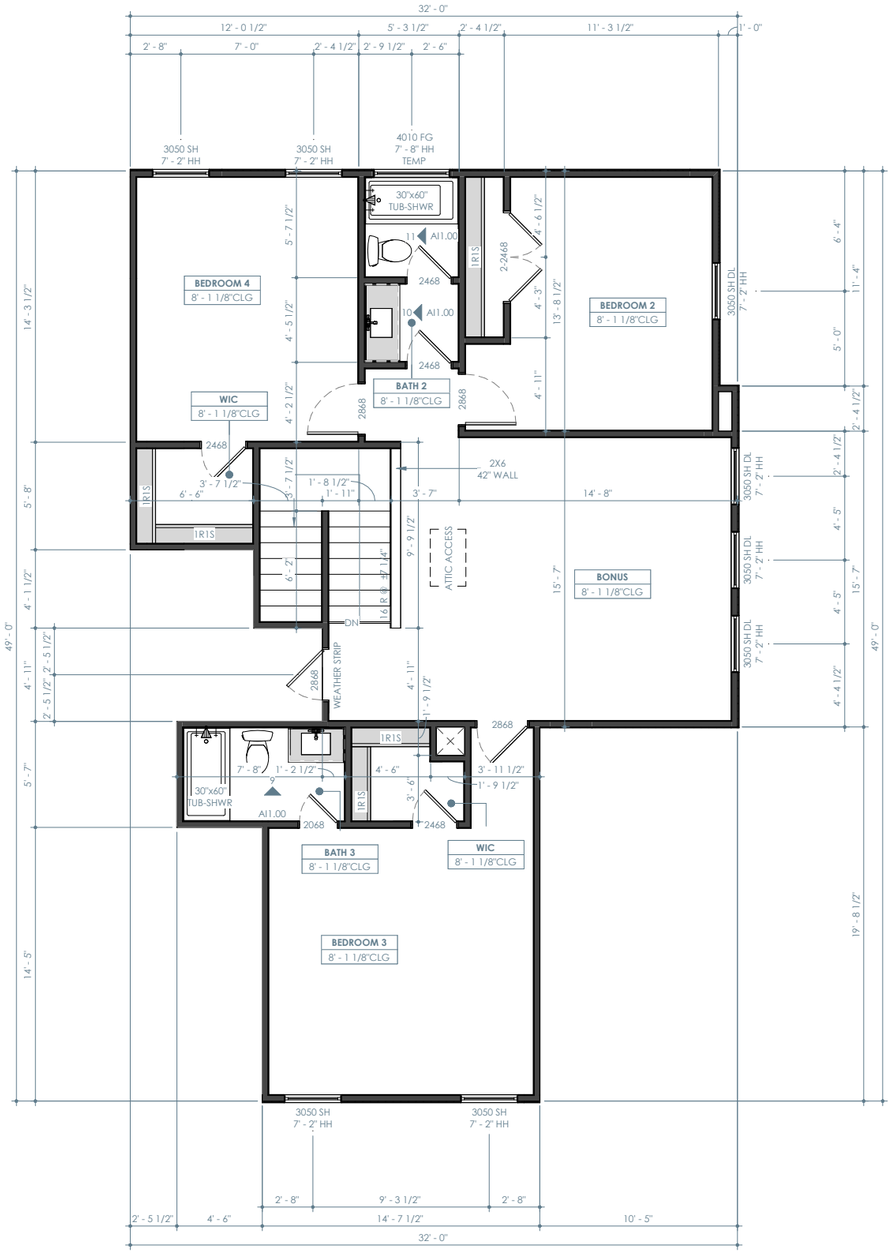
ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - FIRST FLOOR PLAN

SHEET NO.

A1.00



ELEVATION A - SECOND FLOOR PLAN

1/8" = 1'-0"

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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PROJECT INFO

ADDRESS
15725 Dallas Pkwy #300, Addison, TX 75001

COMMUNITY
GEHAN CORP OFFICE

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PLAN NO.

3050

ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - SECOND FLOOR PLAN

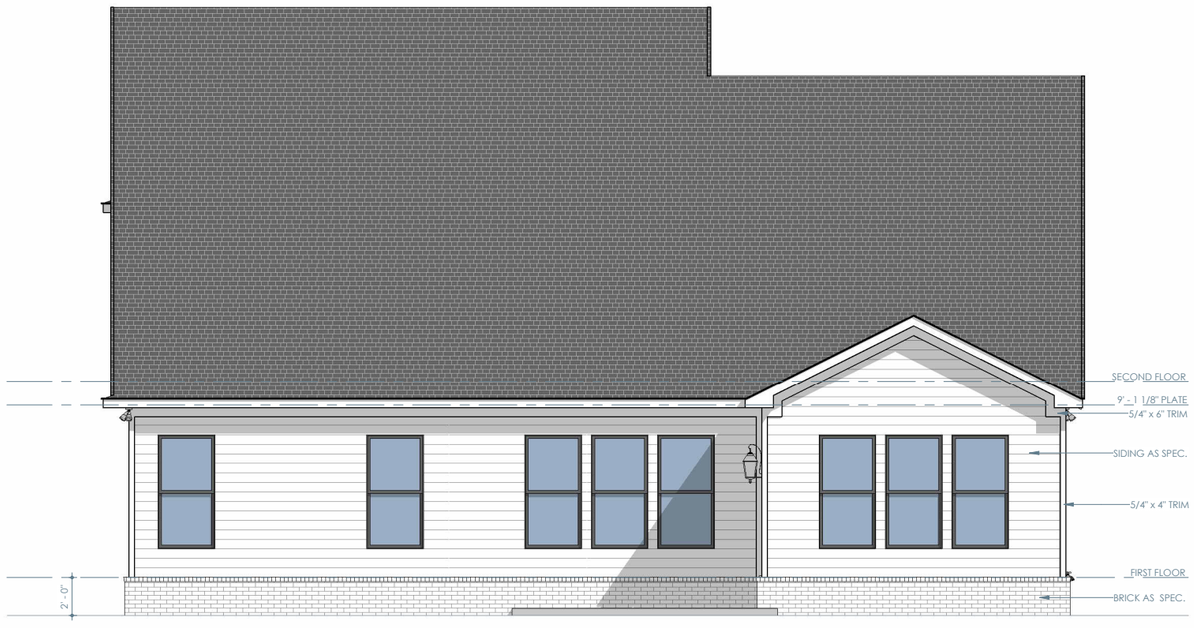
SHEET NO.

A1.01



ELEVATION A - FRONT

1/8" = 1'-0"



ELEVATION A - REAR

1/8" = 1'-0"

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PLAN NO.

3050

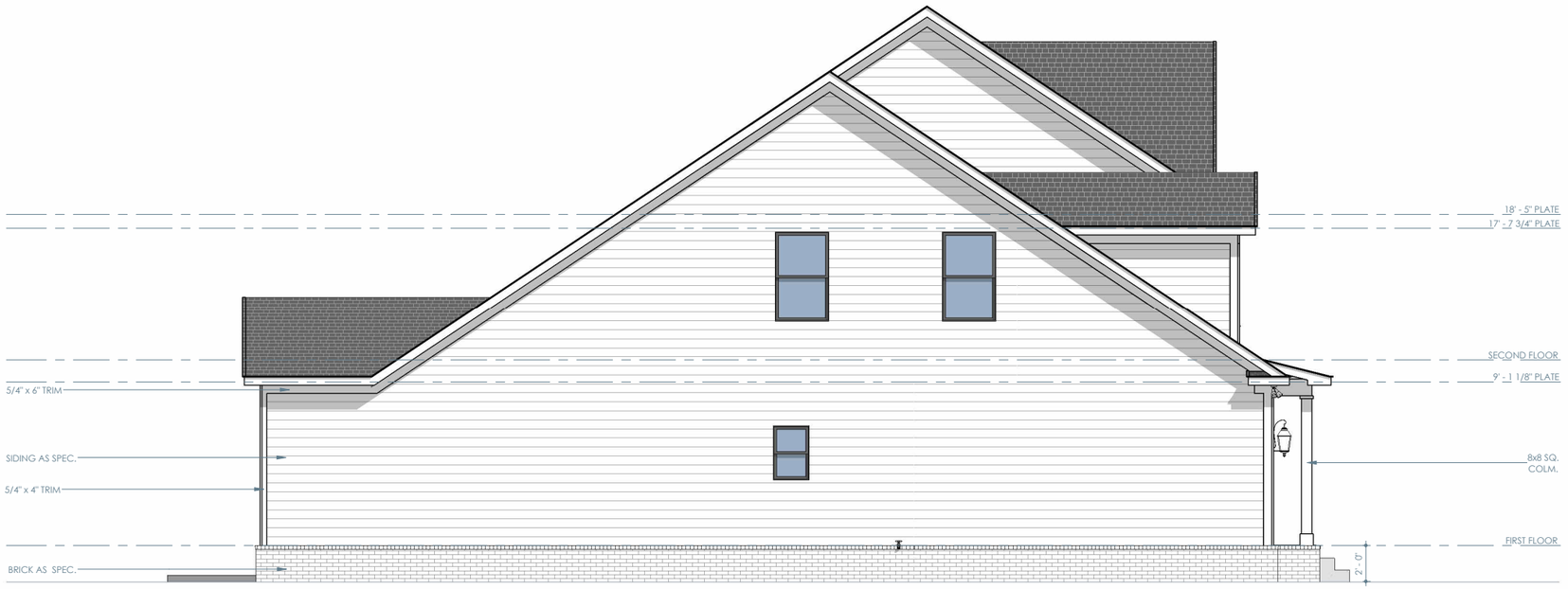
ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - EXTERIOR ELEVATIONS

SHEET NO.

A1.02



ELEVATION A - LEFT

1/8" = 1'-0"



ELEVATION A - RIGHT

1/8" = 1'-0"

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PROJECT NAME

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PLAN NO.

3050

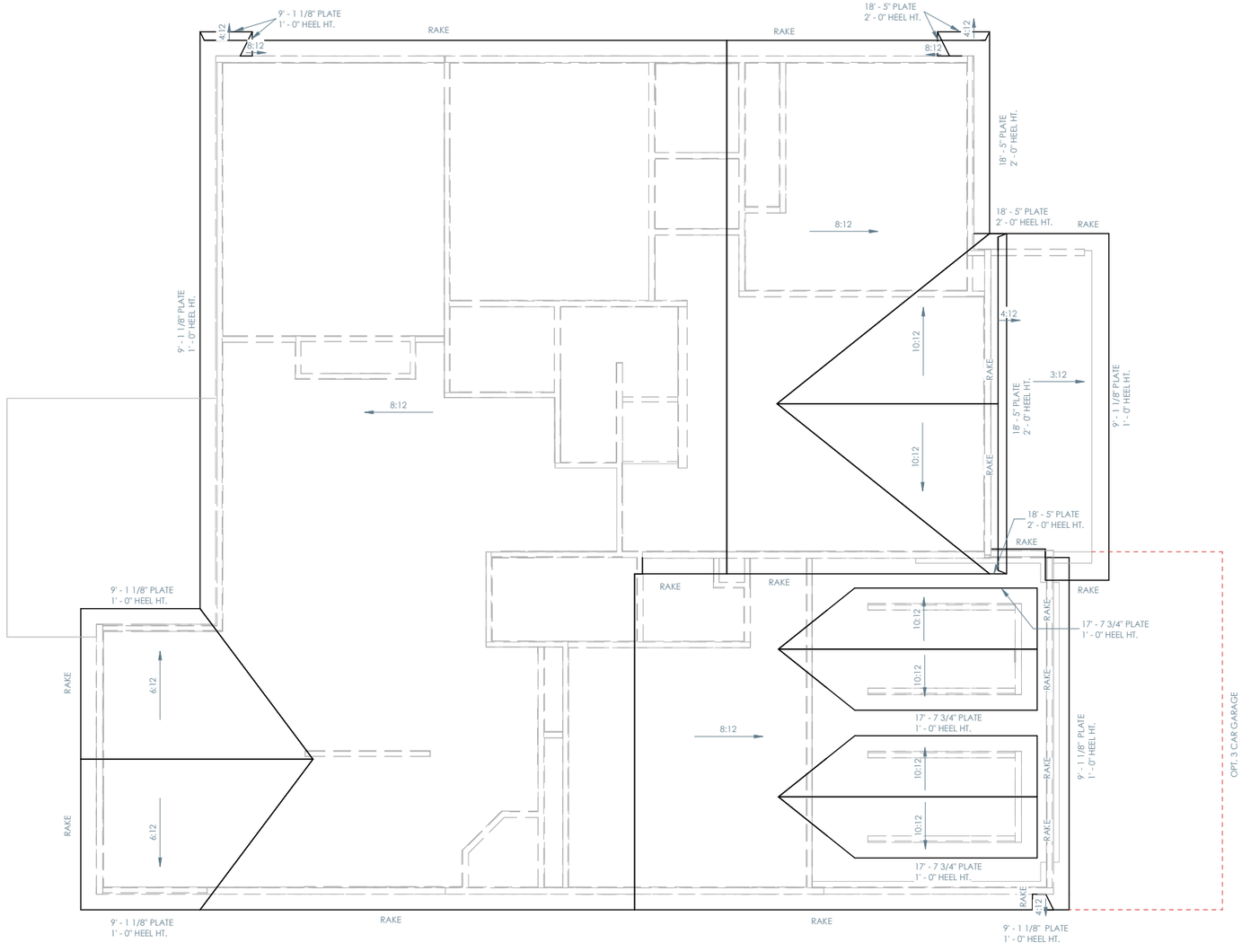
ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - EXTERIOR ELEVATIONS

SHEET NO.

A1.03



ELEVATION A - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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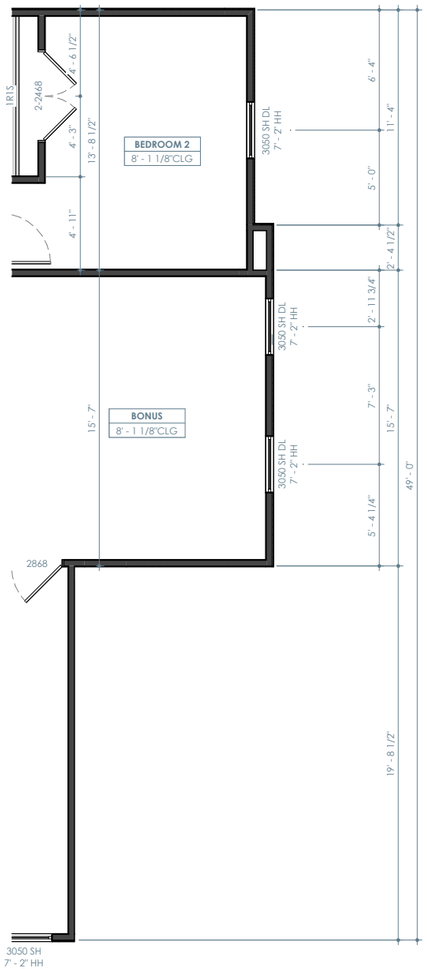
ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - ROOF PLAN

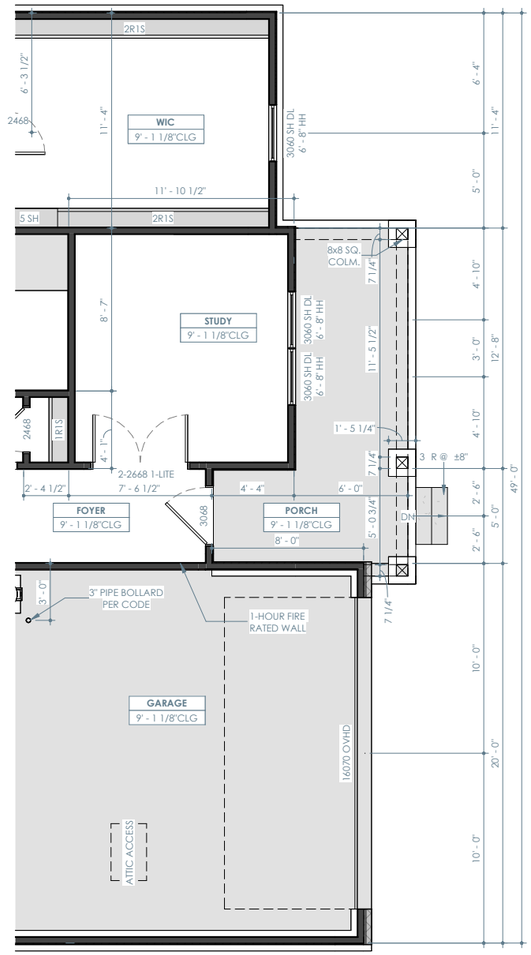
SHEET NO.

A1.04



ELEVATION B - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION B - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION B - A/C LIVING

ELEVATION B - LIVING

ELEVATION B - NON-LIVING

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - PARTIAL FLOOR PLANS

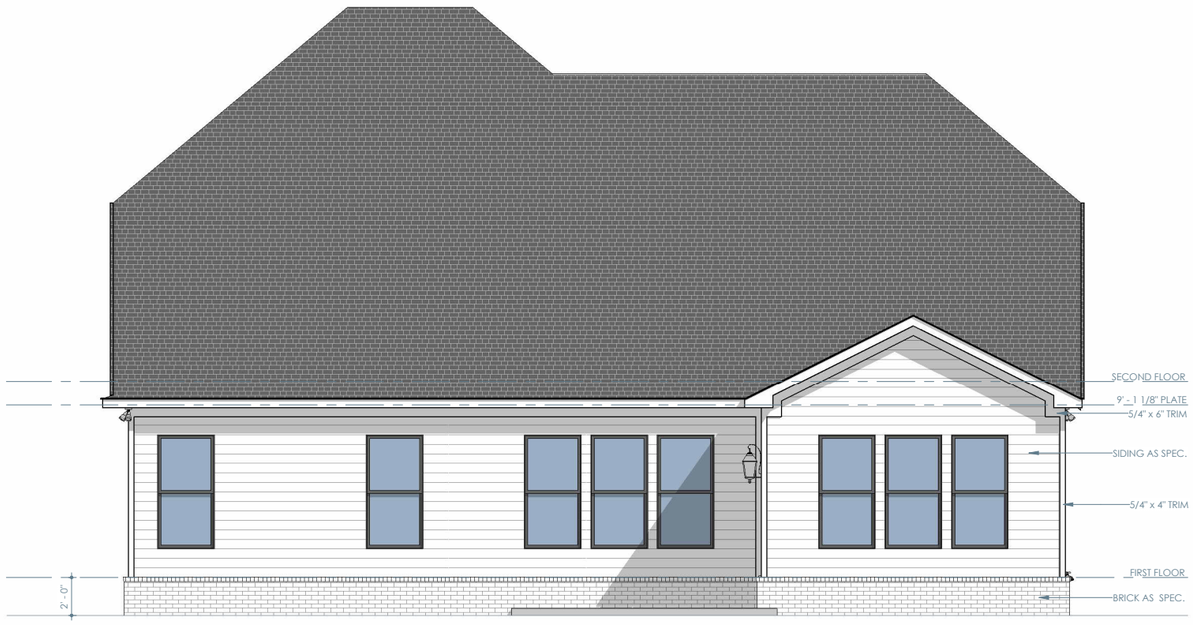
SHEET NO.

A2.01



ELEVATION B - FRONT

1/8" = 1'-0"



ELEVATION B - REAR

1/8" = 1'-0"

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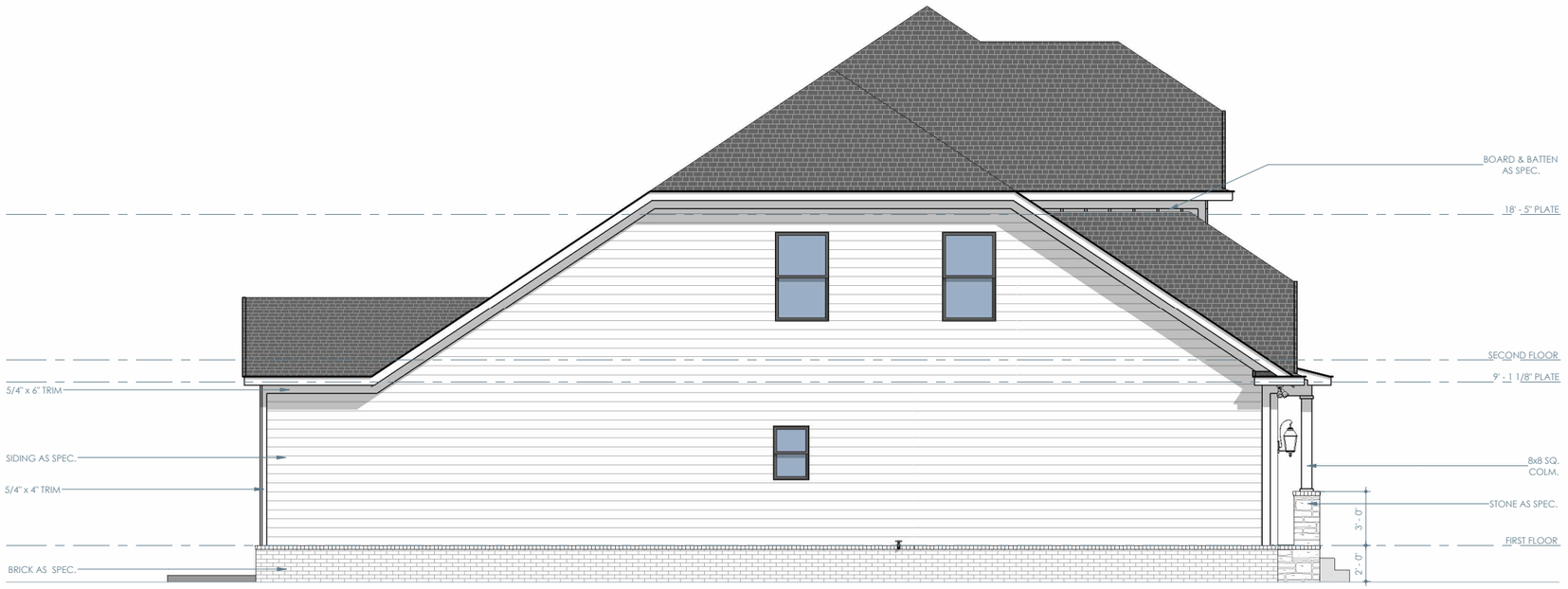
ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - EXTERIOR ELEVATIONS

SHEET NO.

A2.02



ELEVATION B - LEFT

1/8" = 1'-0"



ELEVATION B - RIGHT

1/8" = 1'-0"

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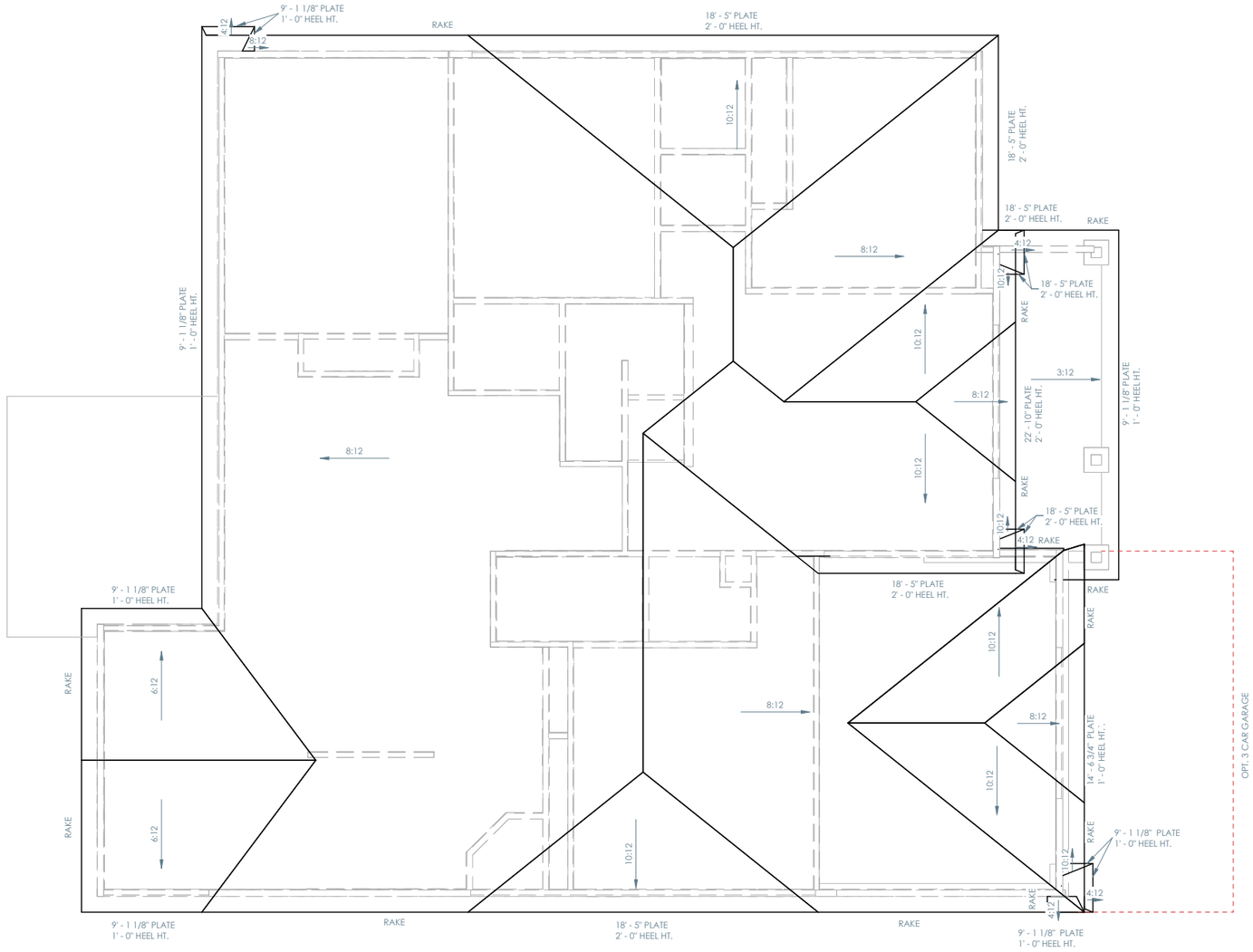
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - EXTERIOR ELEVATIONS

SHEET NO.

A2.03



ELEVATION B - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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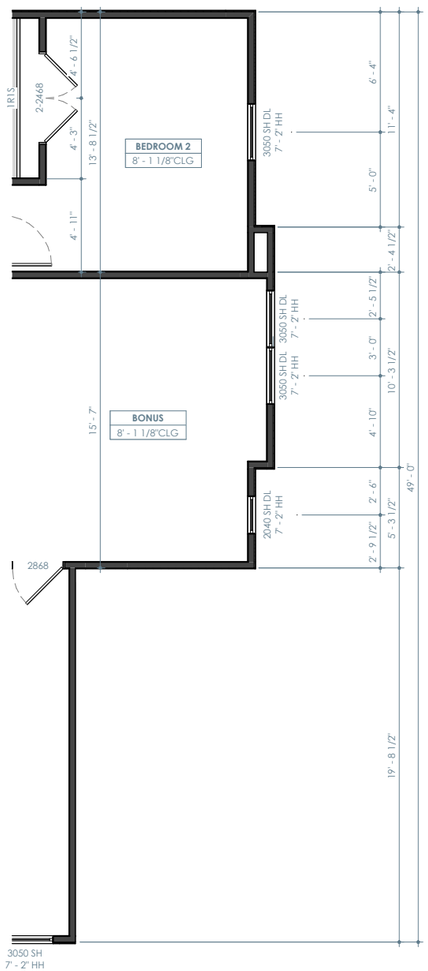
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - ROOF PLAN

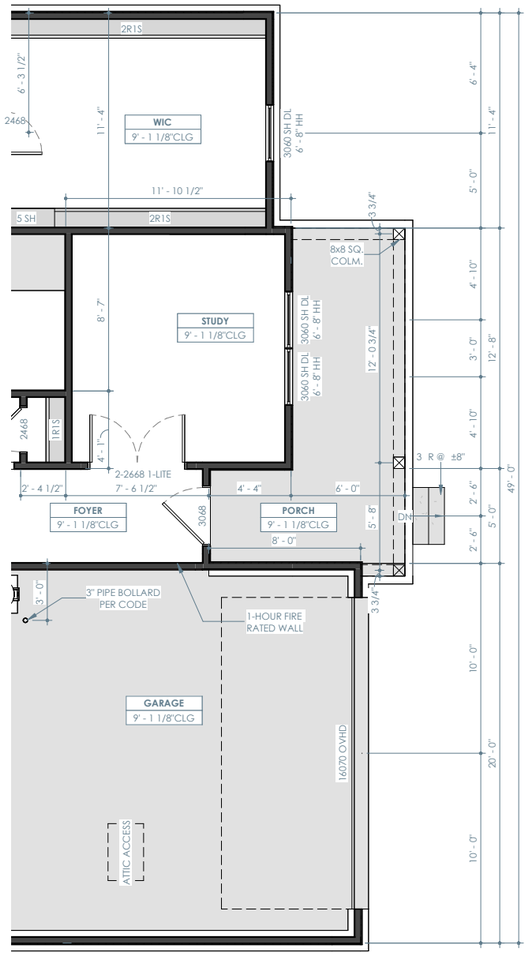
SHEET NO.

A2.04



ELEVATION C - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION C - FIRST FLOOR PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

ELEVATION C - A/C LIVING	
FIRST FLOOR	1749 SF
SECOND FLOOR	981 SF
TOTAL	2730 SF

ELEVATION C - LIVING	
FIRST FLOOR	1955 SF
SECOND FLOOR	1089 SF
TOTAL	3044 SF

TOTAL UNDER ROOF	3758 SF

ELEVATION C - NON-LIVING	
GARAGE	417 SF
PORCH	129 SF
PATIO	168 SF
TOTAL	714 SF

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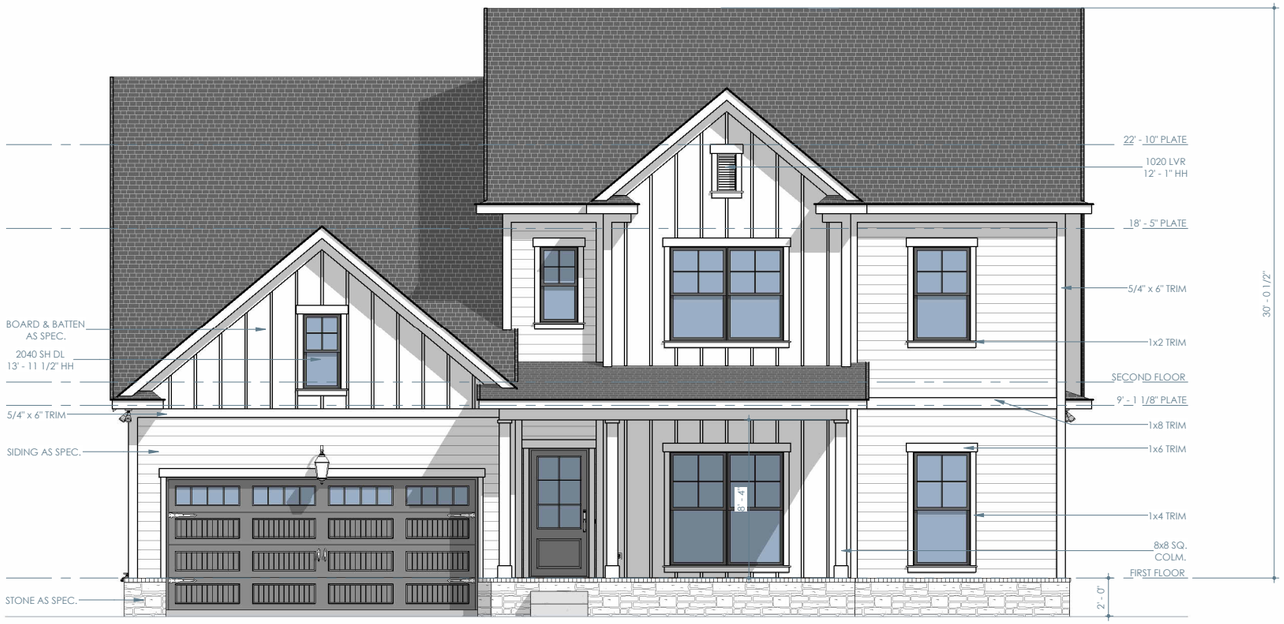
ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - PARTIAL FLOOR PLANS

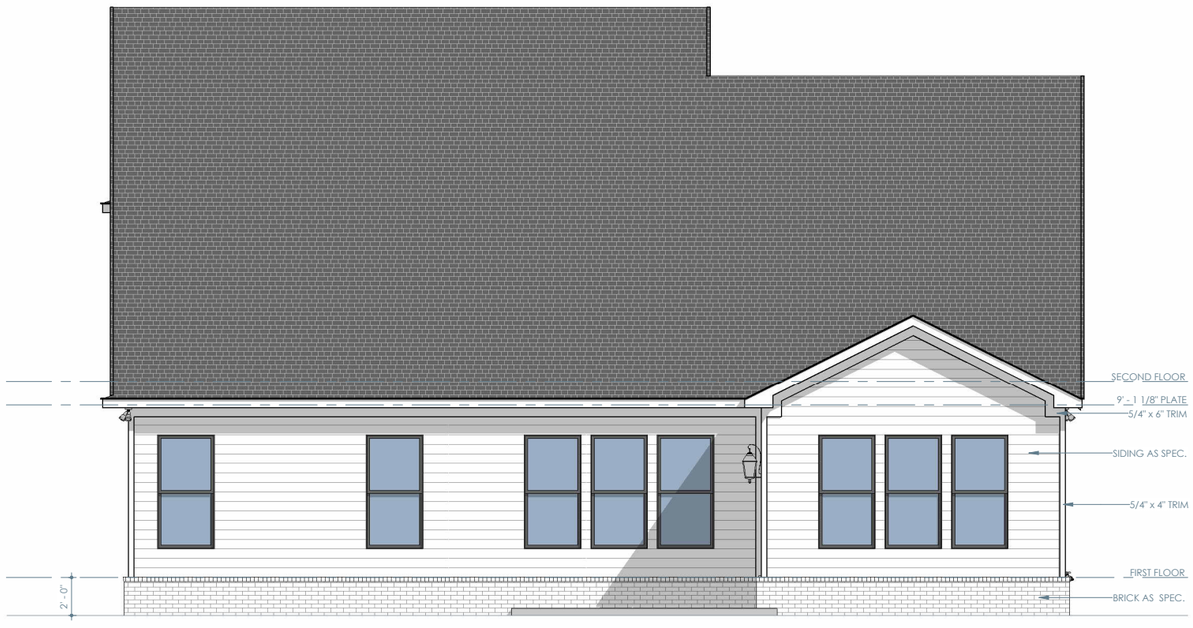
SHEET NO.

A3.01



ELEVATION C - FRONT

1/8" = 1'-0"



ELEVATION C - REAR

1/8" = 1'-0"

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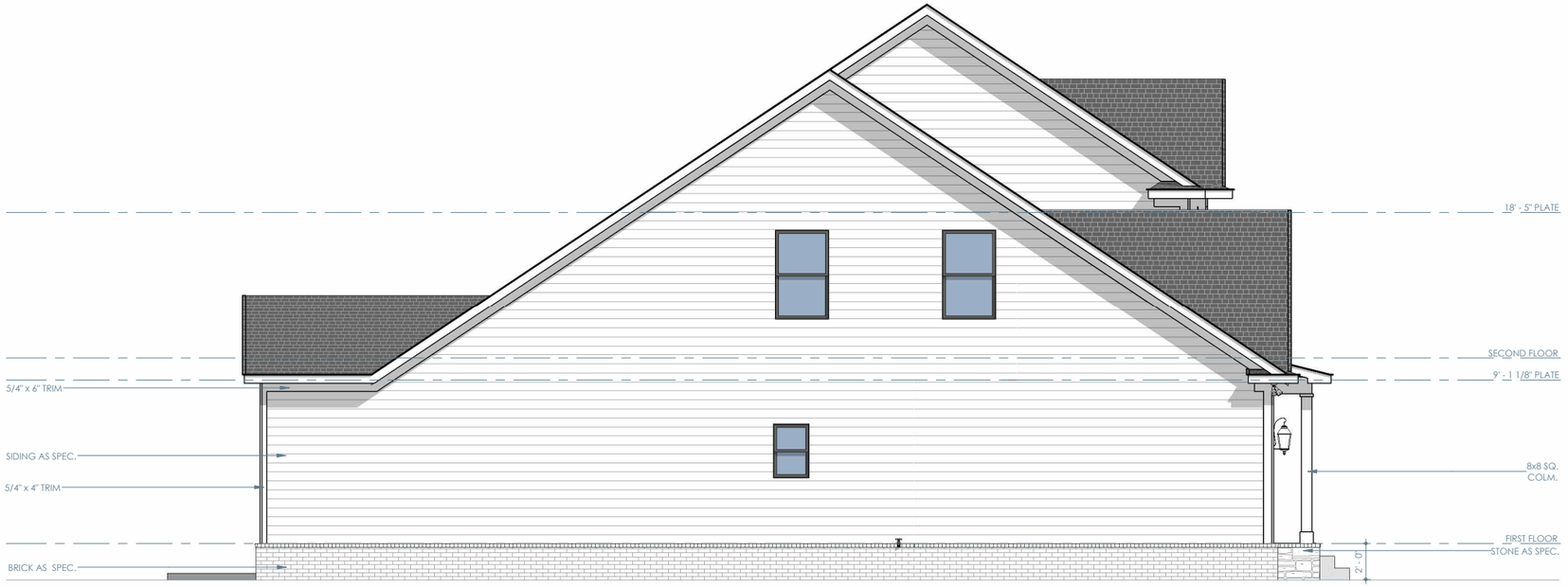
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - EXTERIOR ELEVATIONS

SHEET NO.

A3.02



ELEVATION C - LEFT

1/8" = 1'-0"



ELEVATION C - RIGHT

1/8" = 1'-0"

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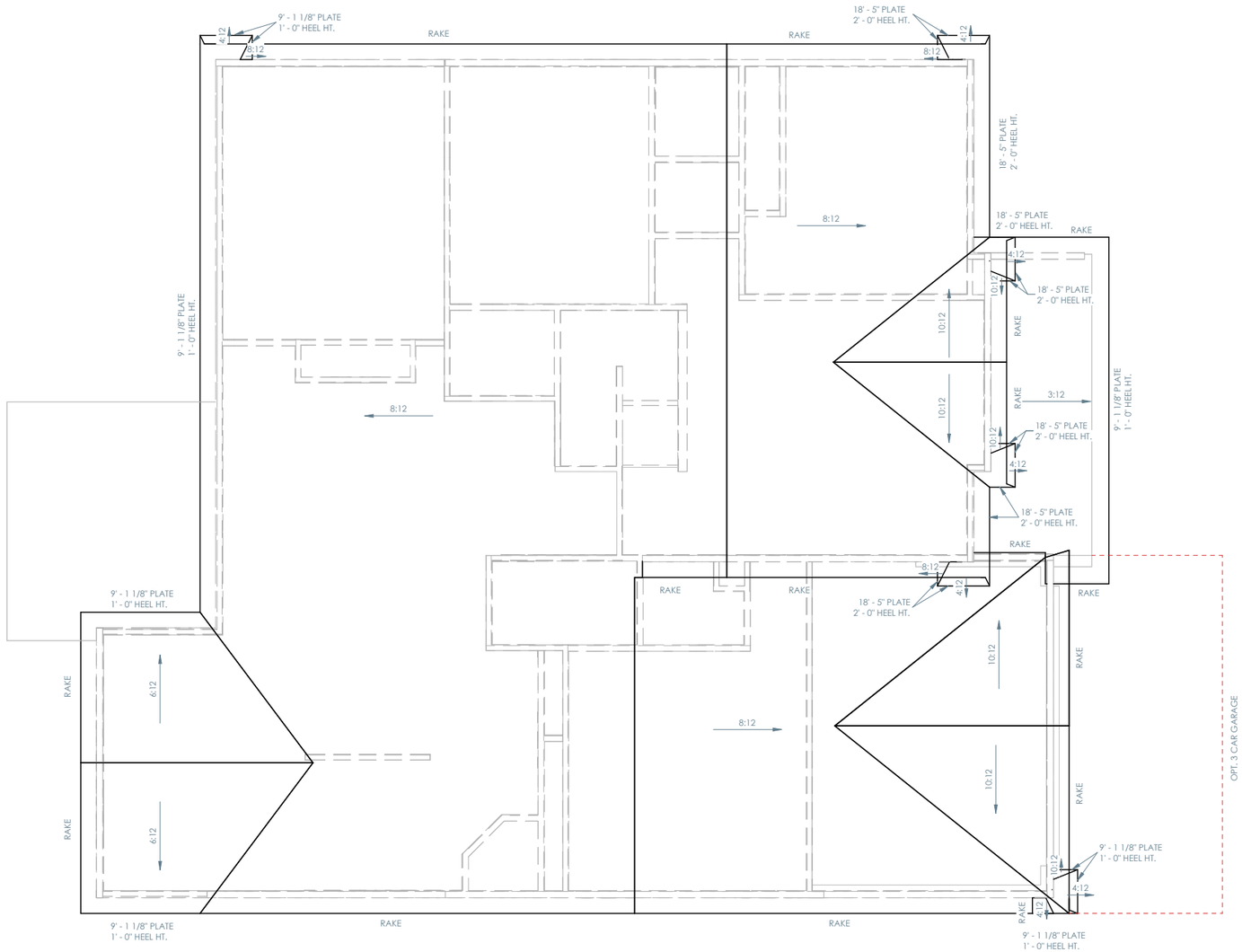
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - EXTERIOR ELEVATIONS

SHEET NO.

A3.03



ELEVATION C - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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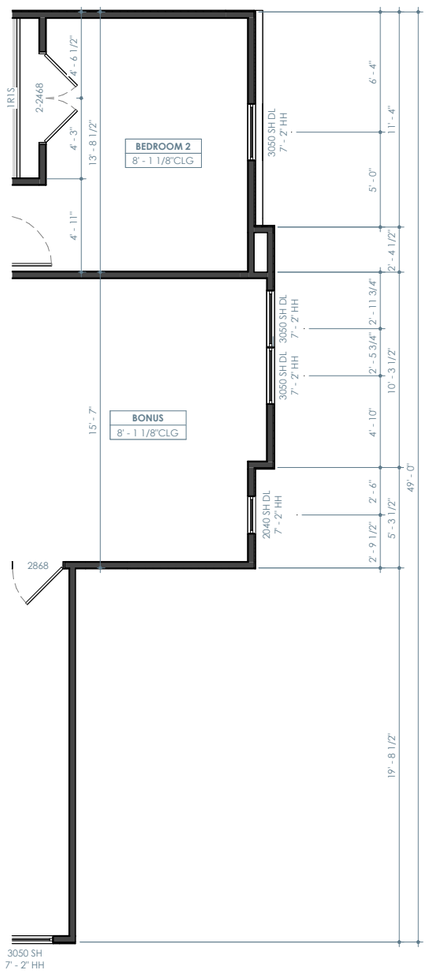
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - ROOF

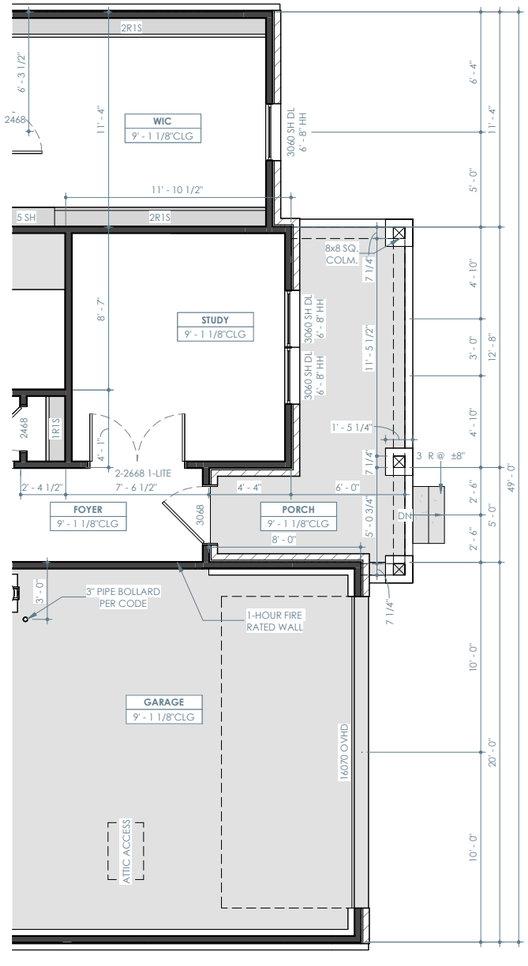
SHEET NO.

A3.04



ELEVATION D - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION D- FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION D - A/C LIVING	
FIRST FLOOR	1749 SF
SECOND FLOOR	981 SF
TOTAL	2730 SF

ELEVATION D - LIVING	
FIRST FLOOR	1971 SF
SECOND FLOOR	1089 SF
TOTAL	3060 SF

TOTAL UNDER ROOF	3772 SF

ELEVATION D - NON-LIVING	
GARAGE	429 SF
PORCH	115 SF
PATIO	168 SF
TOTAL	712 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - PARTIAL FLOOR PLANS

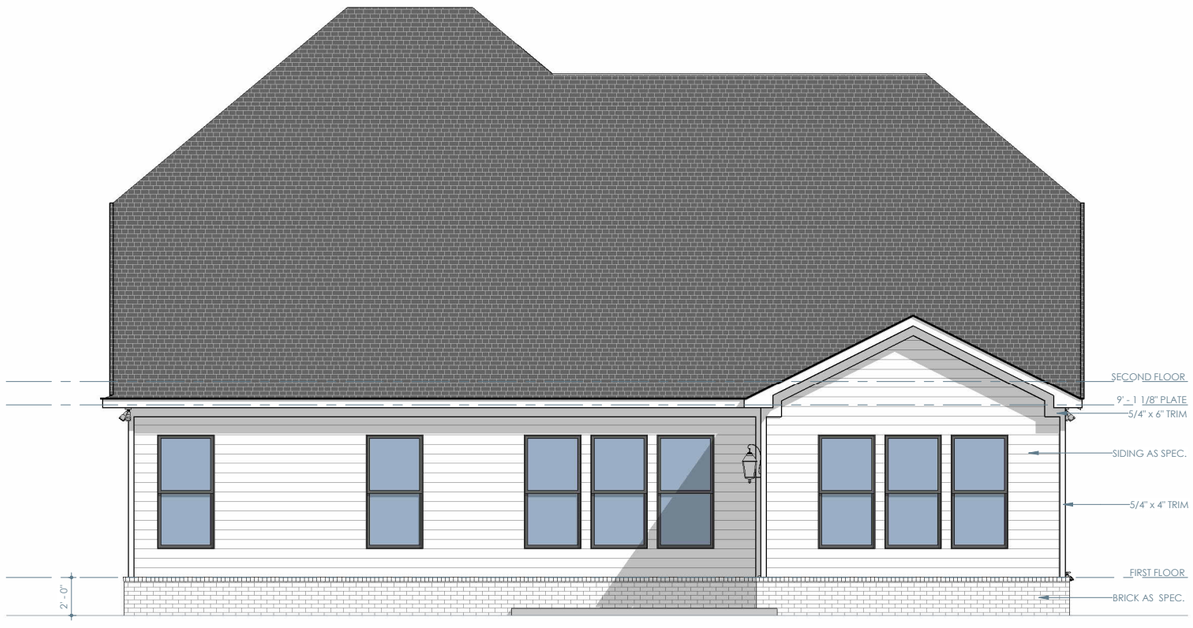
SHEET NO.

A4.01



ELEVATION D - FRONT

1/8" = 1'-0"



ELEVATION D - REAR

1/8" = 1'-0"

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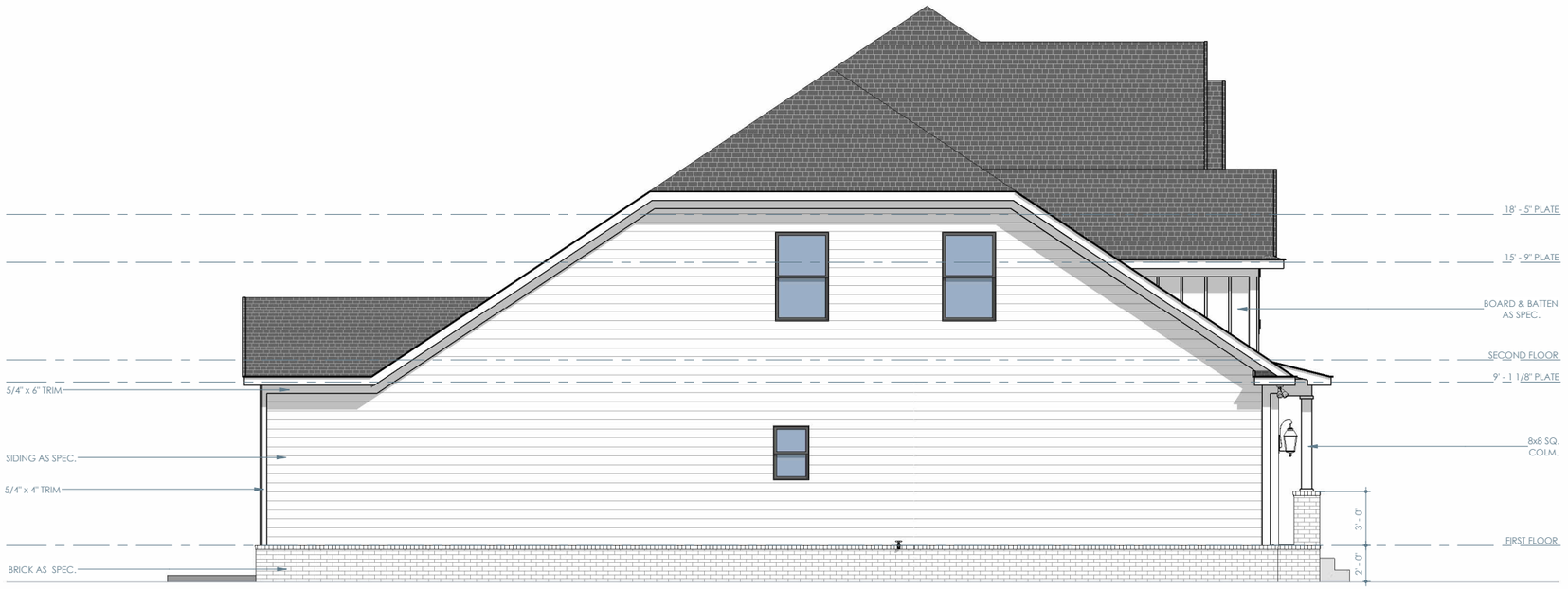
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - EXTERIOR ELEVATIONS

SHEET NO.

A4.02



ELEVATION D - LEFT

1/8" = 1'-0"



ELEVATION D - RIGHT

1/8" = 1'-0"

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PLAN NO.

3050

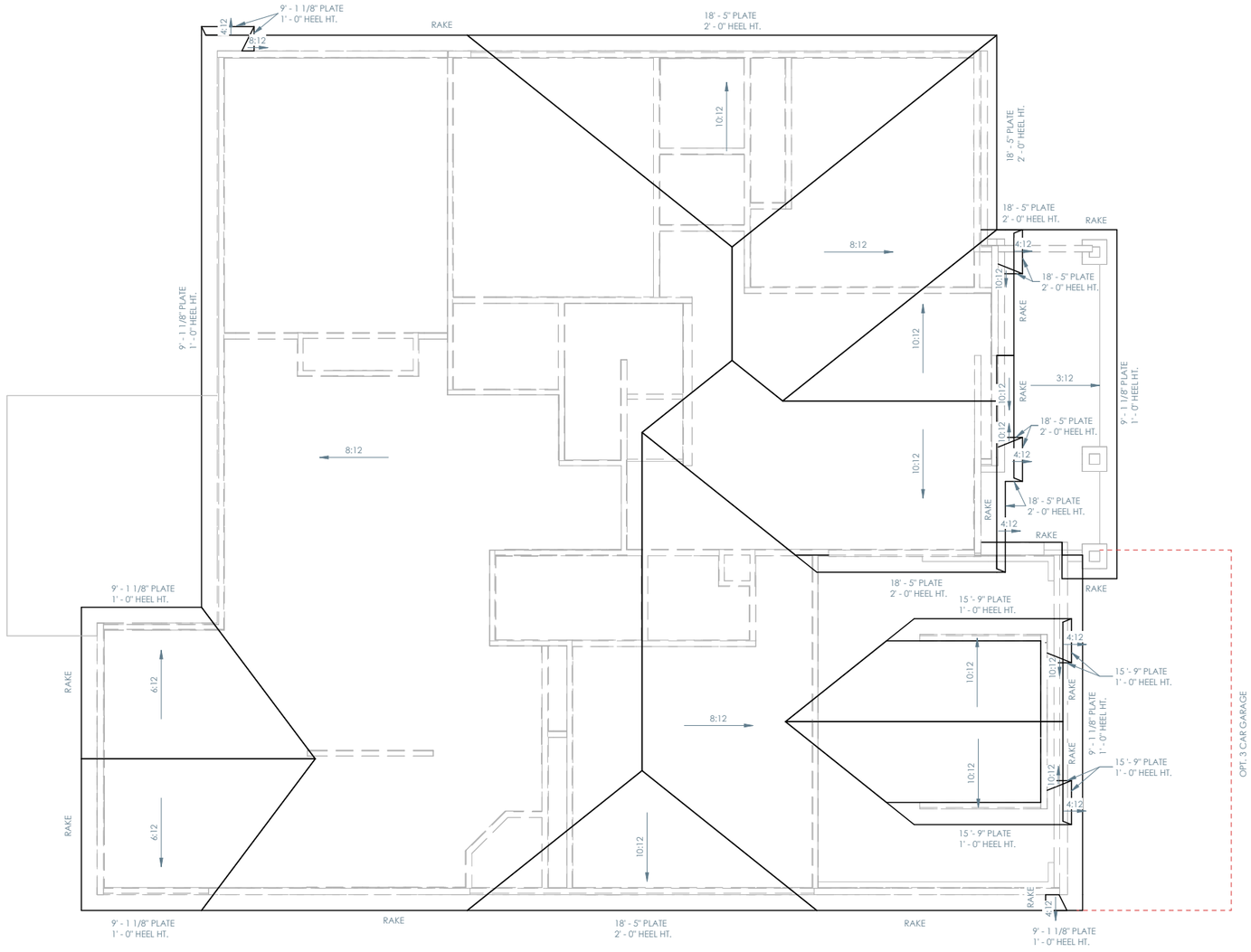
ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - EXTERIOR ELEVATIONS

SHEET NO.

A4.03



ELEVATION D - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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ISSUE DATE	03/07/2024
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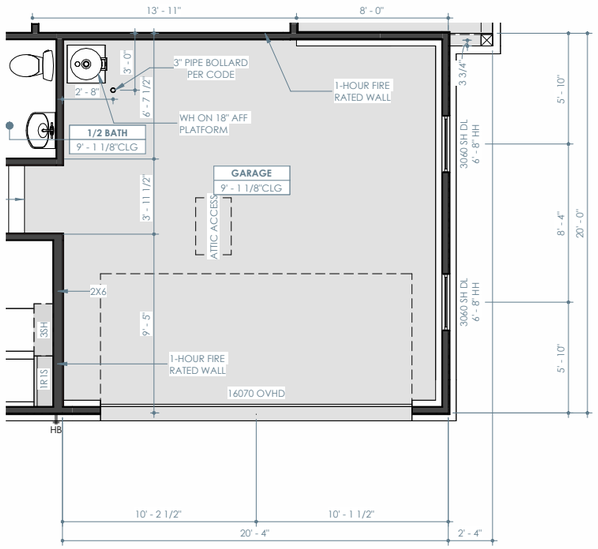
SHEET NAME

ELEVATION D - ROOF

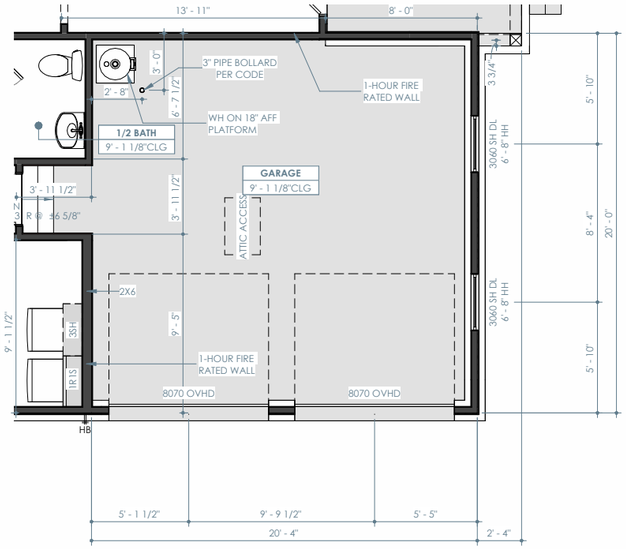
SHEET NO.

A4.04



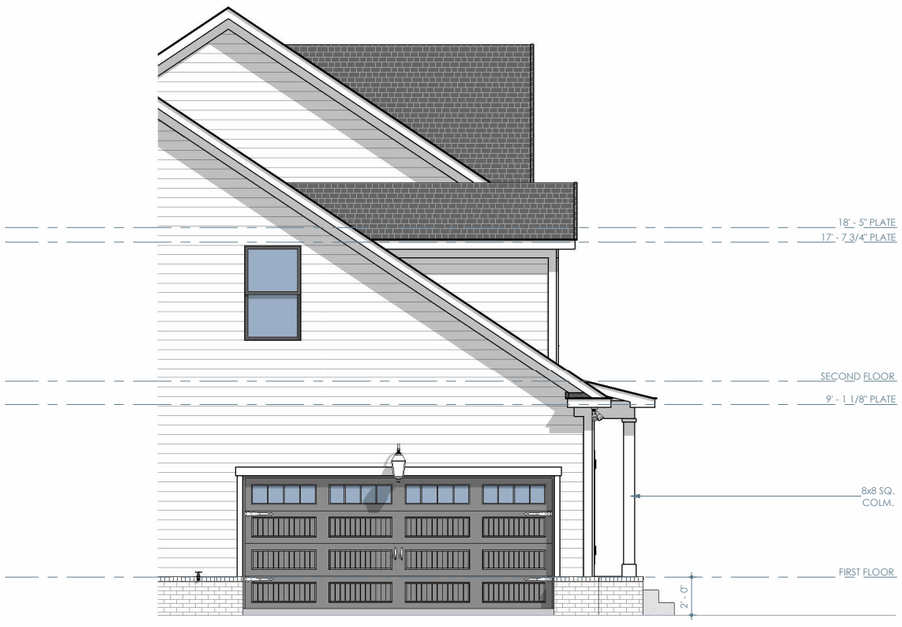
OPT. SIDE LOAD GARAGE - FIRST FLOOR PLAN

1/8" = 1'-0"



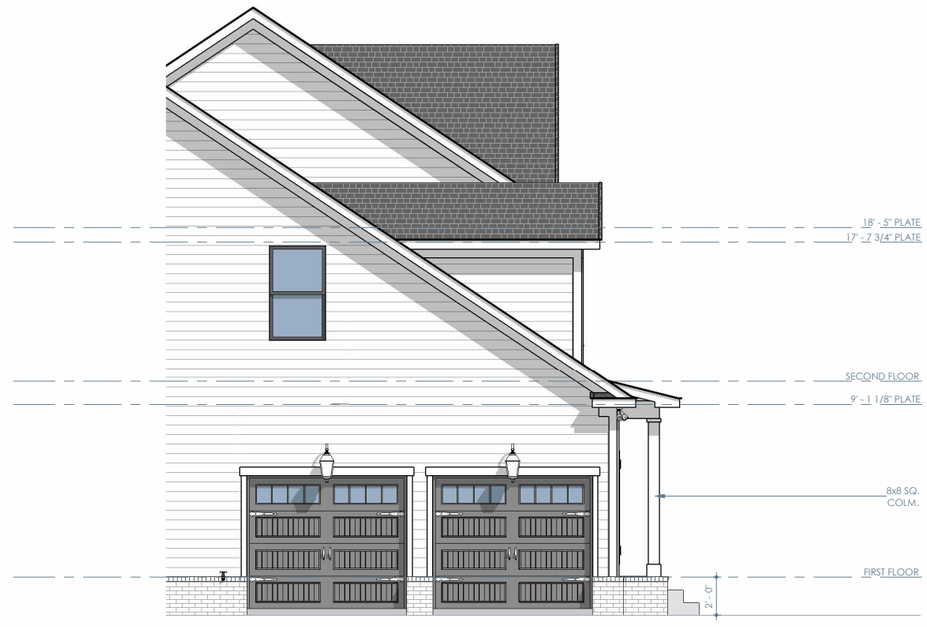
OPT. SIDE LOAD GARAGE & TWO 8' DOORS - FIRST FLOOR PLAN

1/8" = 1'-0"



ELEVATION A - OPT. SIDE LOAD GARAGE - LEFT

1/8" = 1'-0"



ELEVATION A - OPT. SIDE LOAD GARAGE & TWO 8' DOORS - LEFT

1/8" = 1'-0"

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ISSUE DATE	03/07/2024
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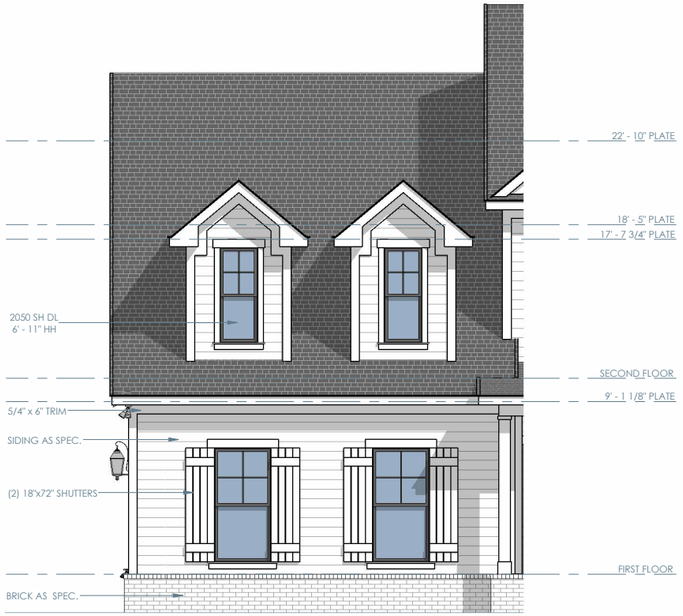
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

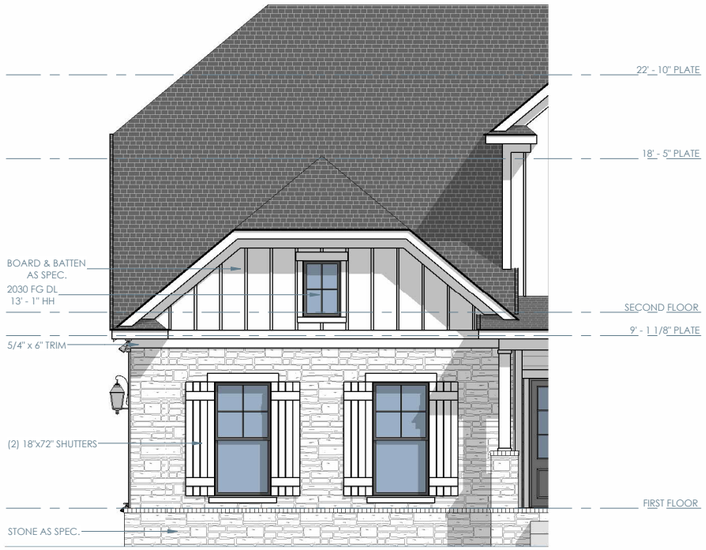
SHEET NO.

A7.00



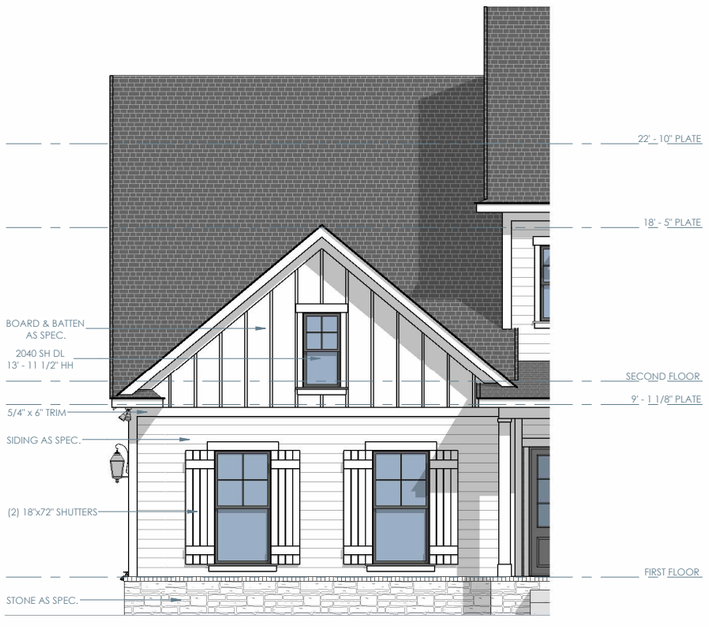
ELEVATION A - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



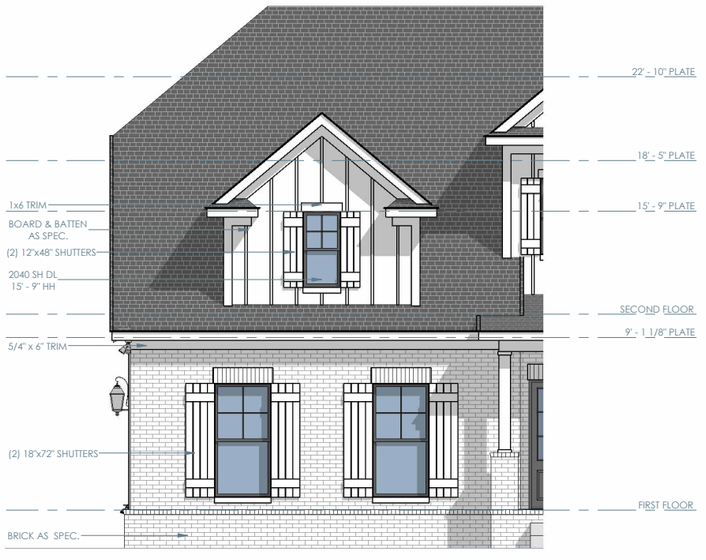
ELEVATION B - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



ELEVATION C - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



ELEVATION D - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"

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ISSUE DATE	03/07/2024
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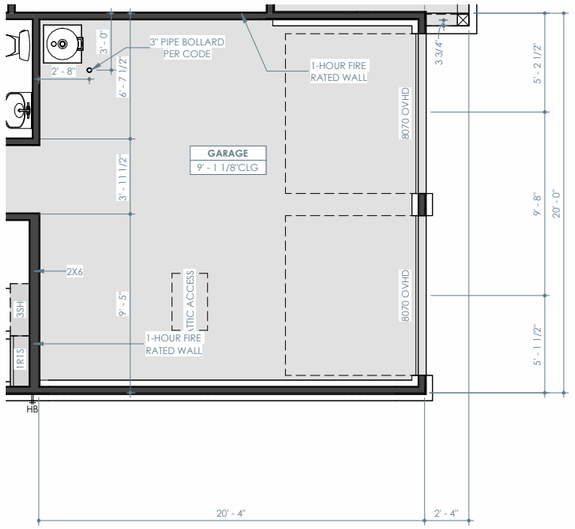
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

SHEET NO.

A7.01



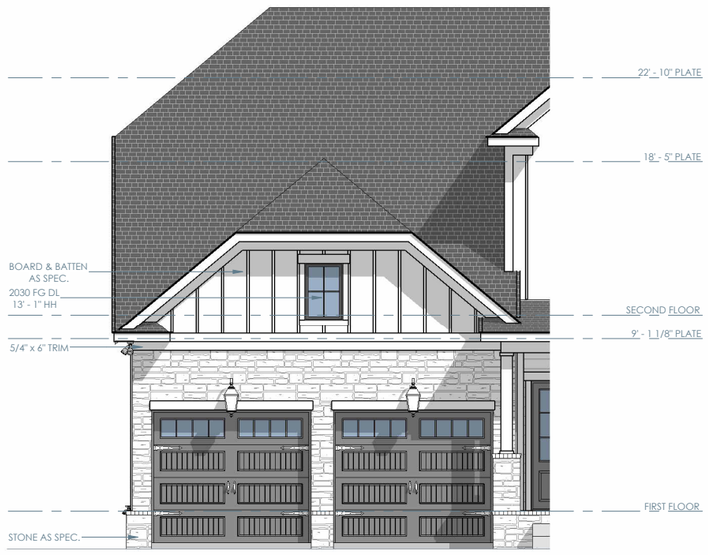
OPT. TWO 8' GARAGE DOORS - FIRST FLOOR PLAN

1/8" = 1'-0"



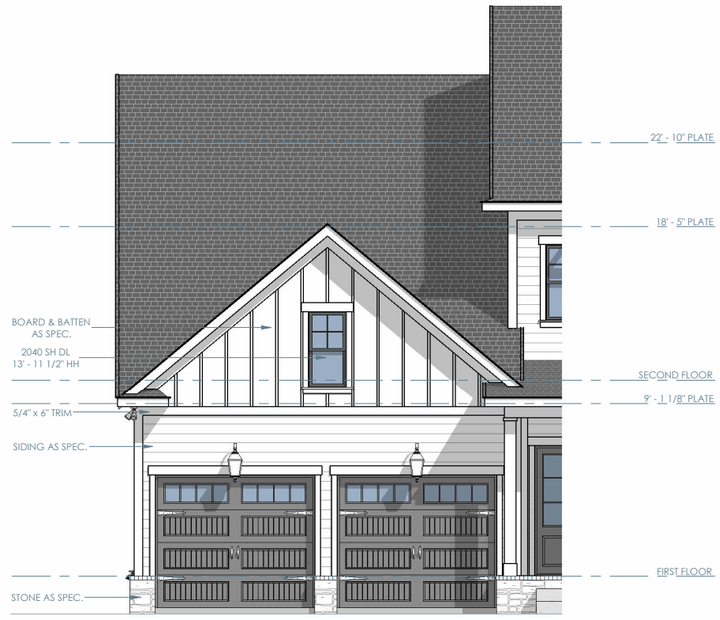
ELEVATION A - OPT. TWO 8' GARAGE DOORS - FRONT

1/8" = 1'-0"



ELEVATION B - OPT. TWO 8' GARAGE DOORS - FRONT

1/8" = 1'-0"



ELEVATION C - OPT. TWO 8' GARAGE DOORS - FRONT

1/8" = 1'-0"

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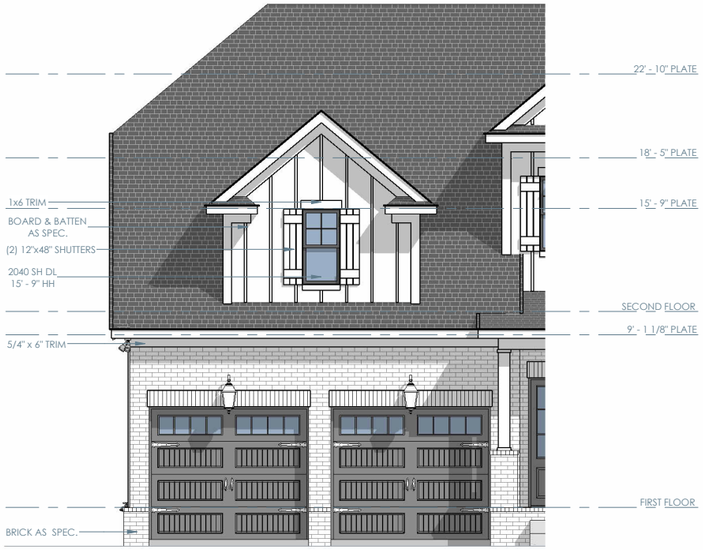
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

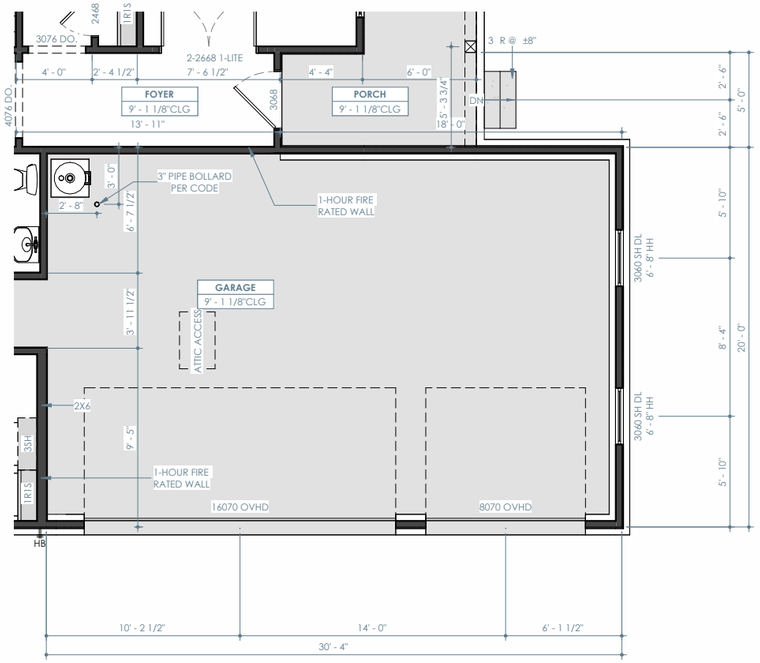
SHEET NO.

A7.02



ELEVATION D - OPT. TWO 8' GARAGE DOORS - FRONT

1/8" = 1'-0"



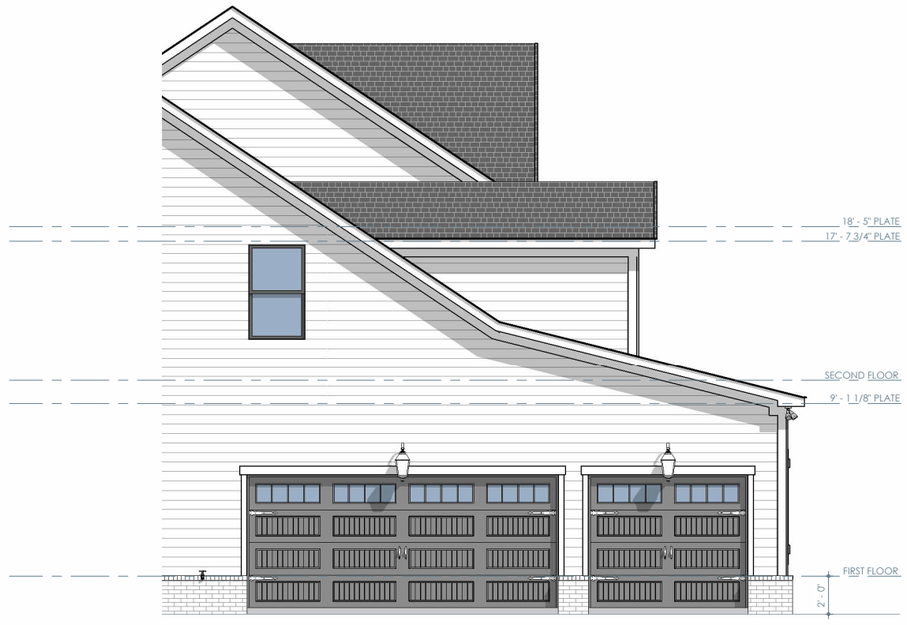
OPT. 3 CAR GARAGE - FIRST FLOOR PLAN

1/8" = 1'-0"



ELEVATION A - OPT. 3 CAR GARAGE - FRONT

1/8" = 1'-0"



ELEVATION A - OPT. 3 CAR GARAGE - LEFT

1/8" = 1'-0"

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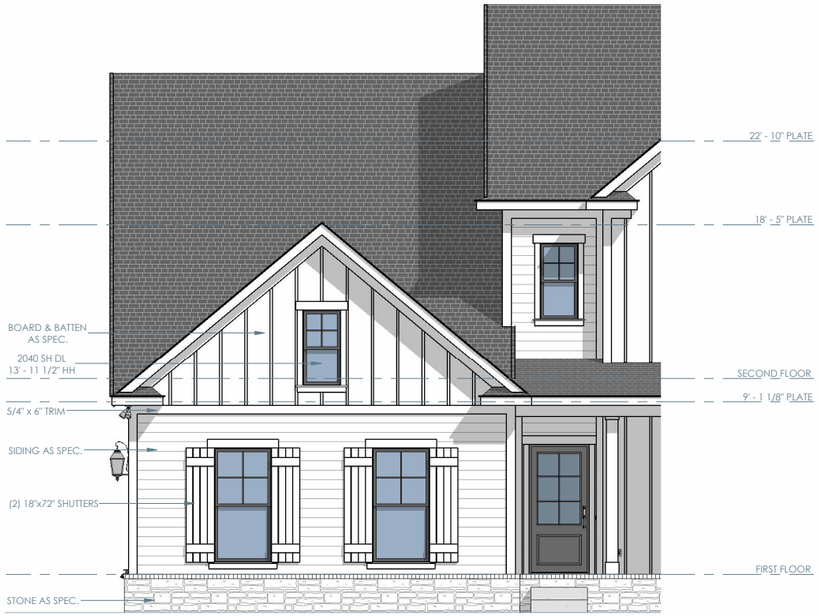
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

SHEET NO.

A7.03



ELEVATION C - OPT. 3 CAR GARAGE - FRONT

1/8" = 1'-0"



ELEVATION D - OPT. 3 CAR GARAGE - FRONT

1/8" = 1'-0"



ELEVATION B - OPT. 3 CAR GARAGE - FRONT

1/8" = 1'-0"

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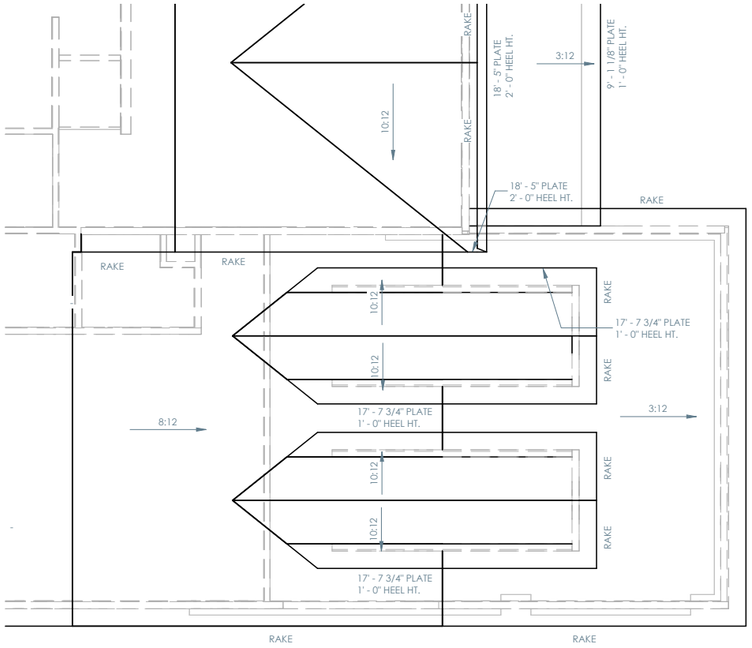
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

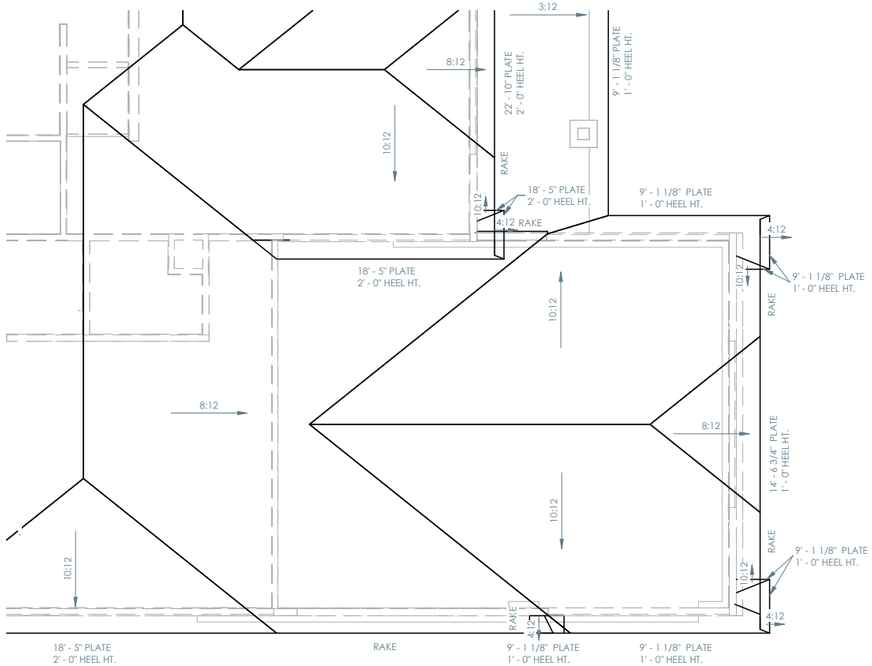
SHEET NO.

A7.04



ELEVATION A - OPT. 3 CAR GARAGE - ROOF PLAN

1/8" = 1'-0"



ELEVATION B - OPT. 3 CAR GARAGE - ROOF PLAN

1/8" = 1'-0"

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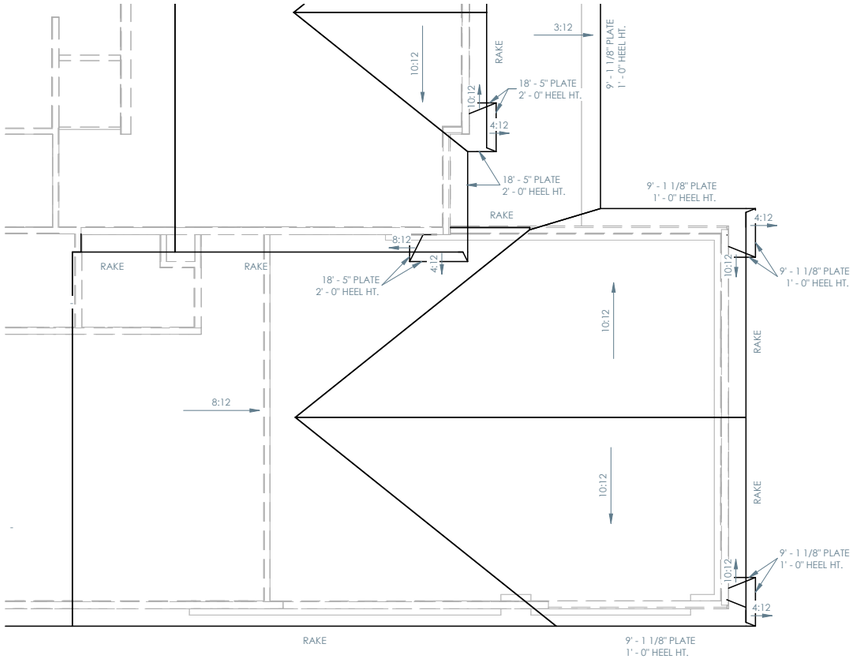
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

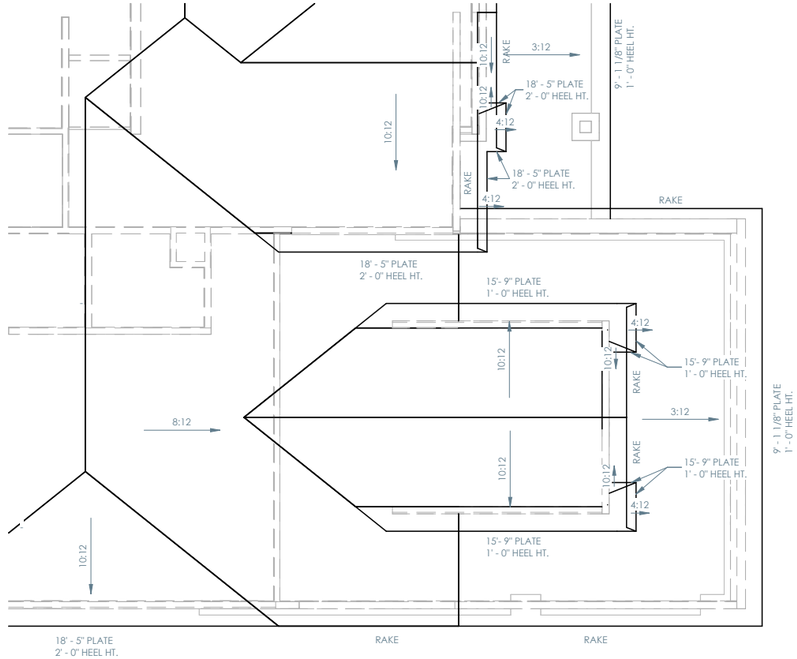
SHEET NO.

A7.05



ELEVATION C - OPT. 3 CAR GARAGE - ROOF PLAN

1/8" = 1'-0"



ELEVATION D - OPT. 3 CAR GARAGE - ROOF PLAN

1/8" = 1'-0"

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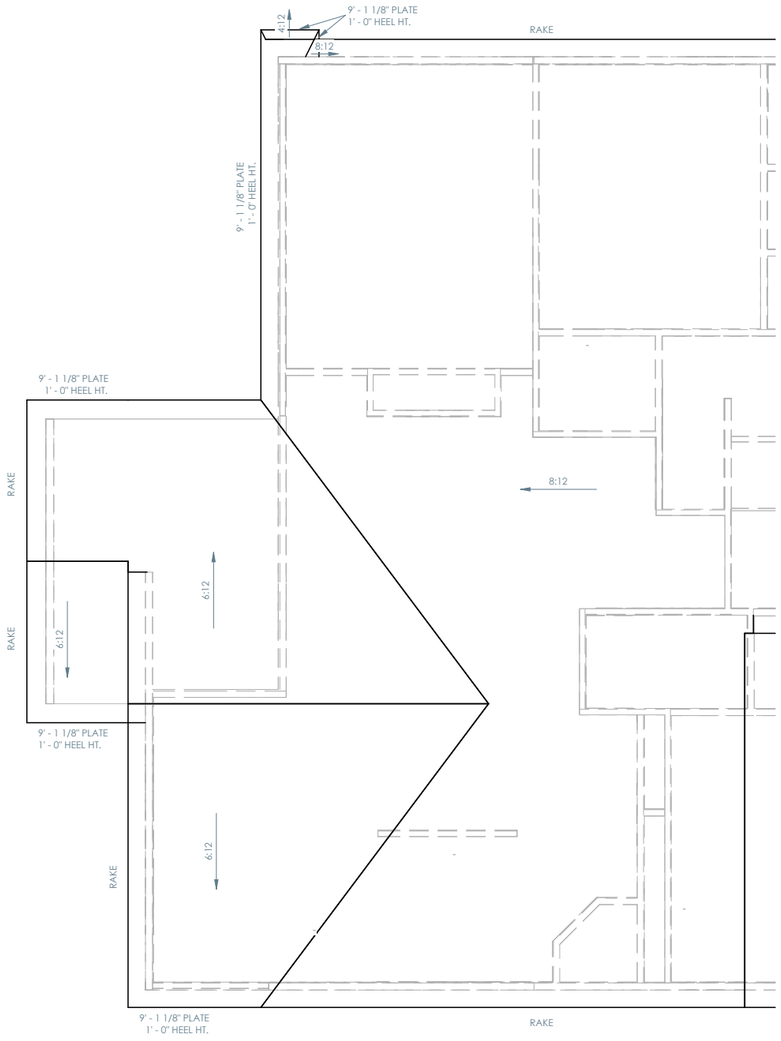
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

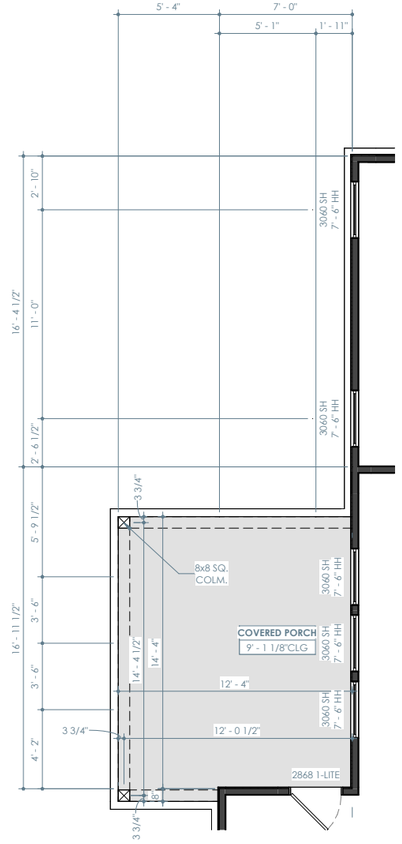
SHEET NO.

A7.06



OPT. REAR COVERED PORCH - ROOF PLAN

1/8" = 1'-0"



OPT. REAR COVERED PORCH - FIRST FLOOR PLAN

1/8" = 1'-0"

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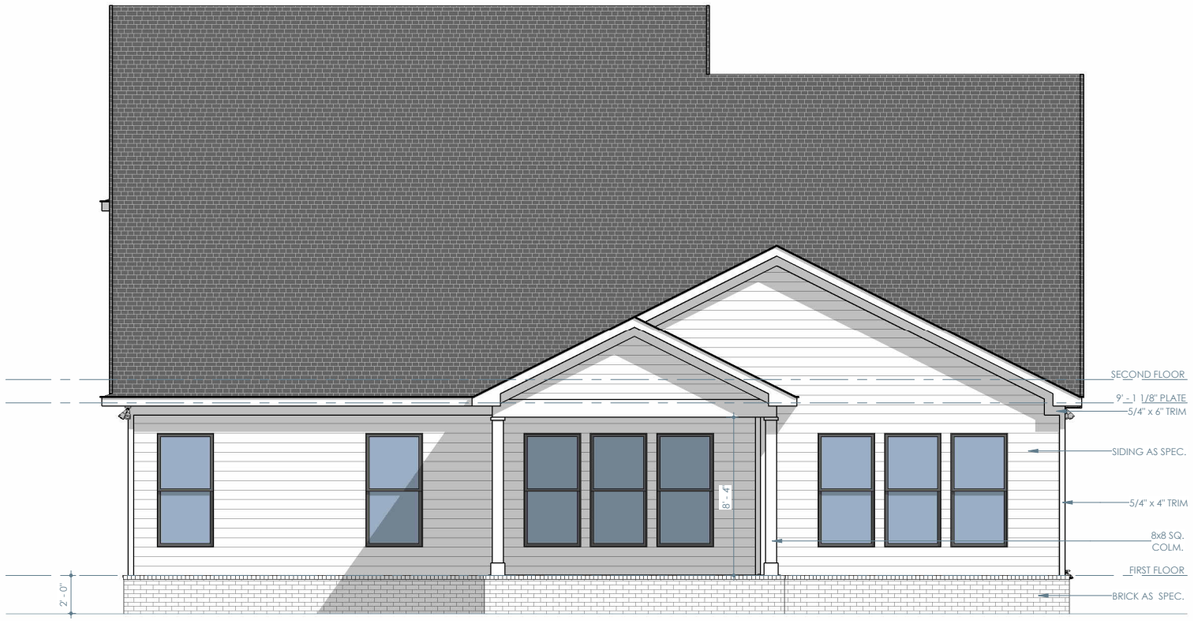
ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

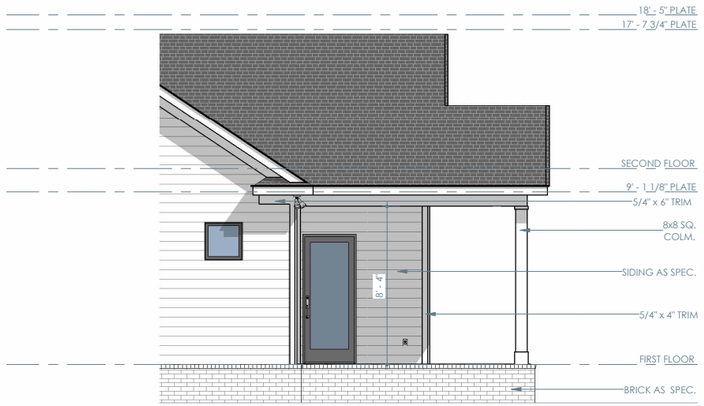
SHEET NO.

A7.07



OPT. REAR COVERED PORCH - REAR

1/8" = 1'-0"



OPT. REAR COVERED PORCH - RIGHT

1/8" = 1'-0"

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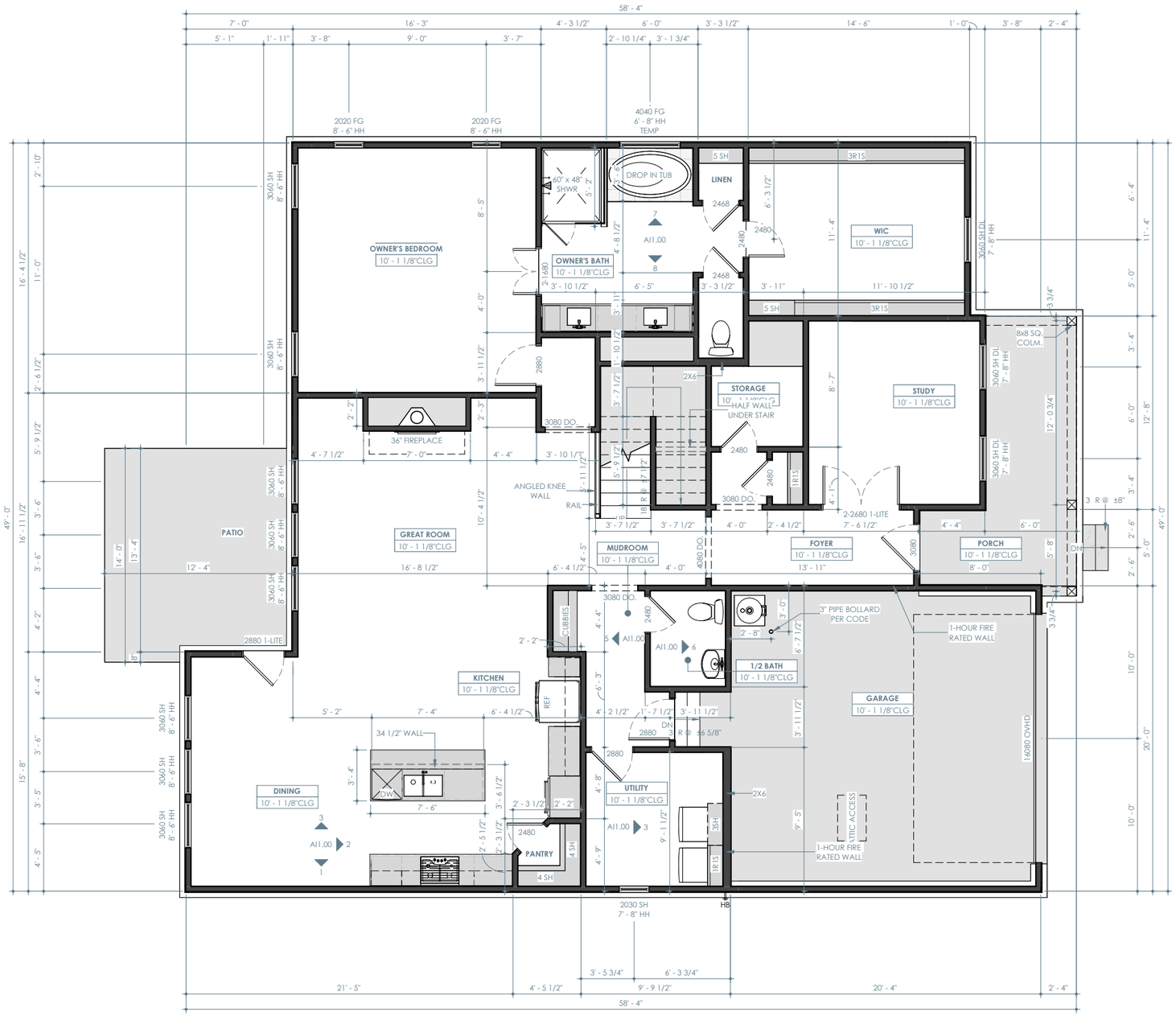
ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

SHEET NO.

A7.08



ELEVATION A W/ EXECUTIVE OPTION - FIRST FLOOR PLAN

1/8" = 1'-0"

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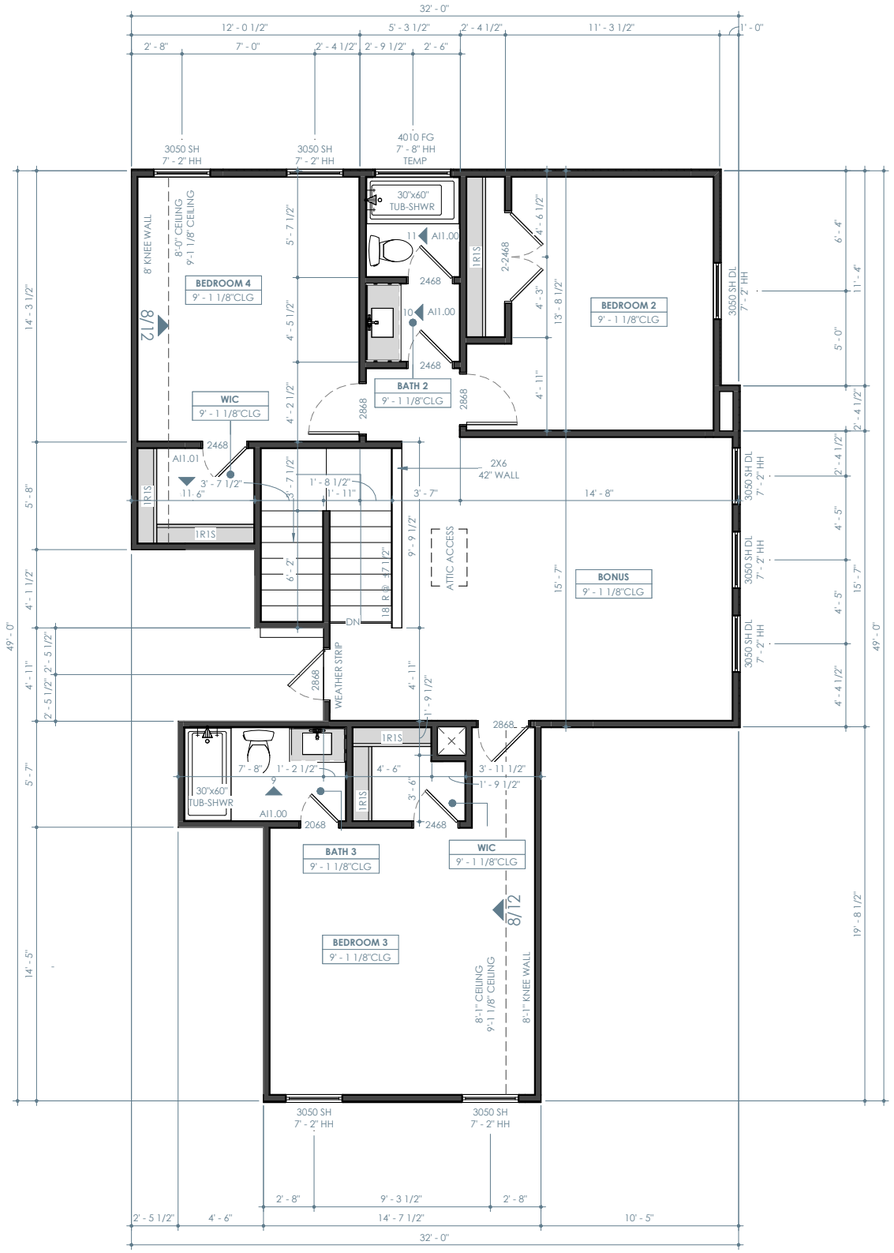
ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

SHEET NO.

A7.09



ELEVATION A W/ EXECUTIVE OPTION - SECOND FLOOR PLAN

1/8" = 1'-0"

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PLAN NO.

3050

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SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTION

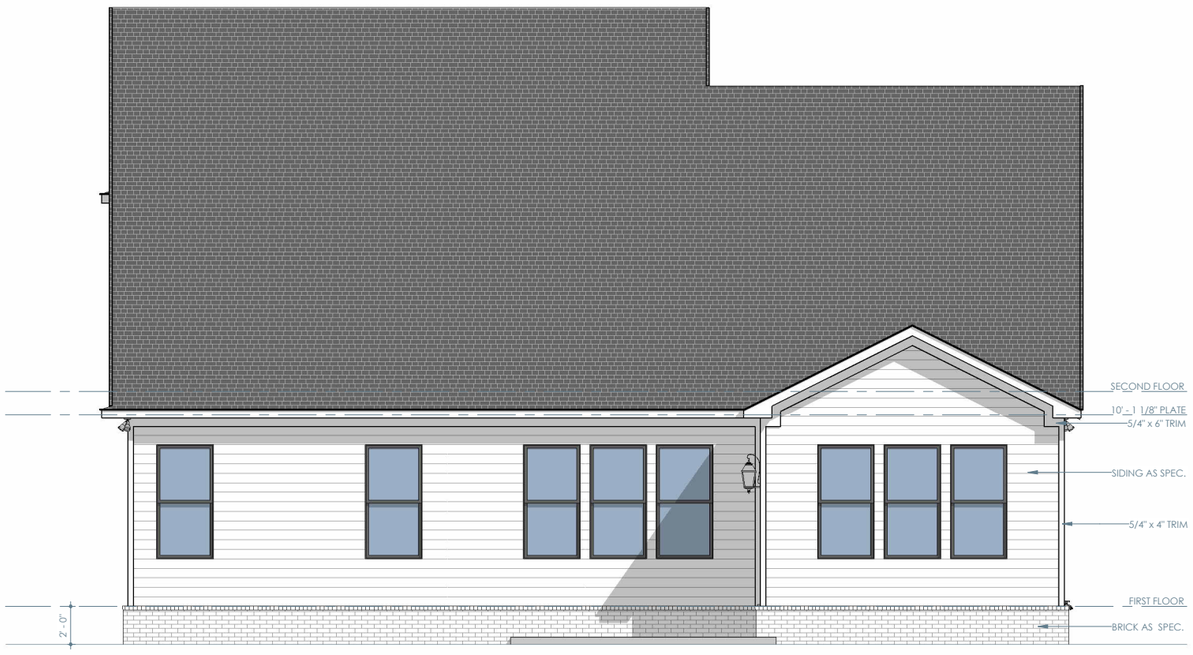
SHEET NO.

A7.10



ELEVATION A W/ EXECUTIVE OPTION - FRONT

1/8" = 1'-0"



ELEVATION A W/ EXECUTIVE OPTION - REAR

1/8" = 1'-0"

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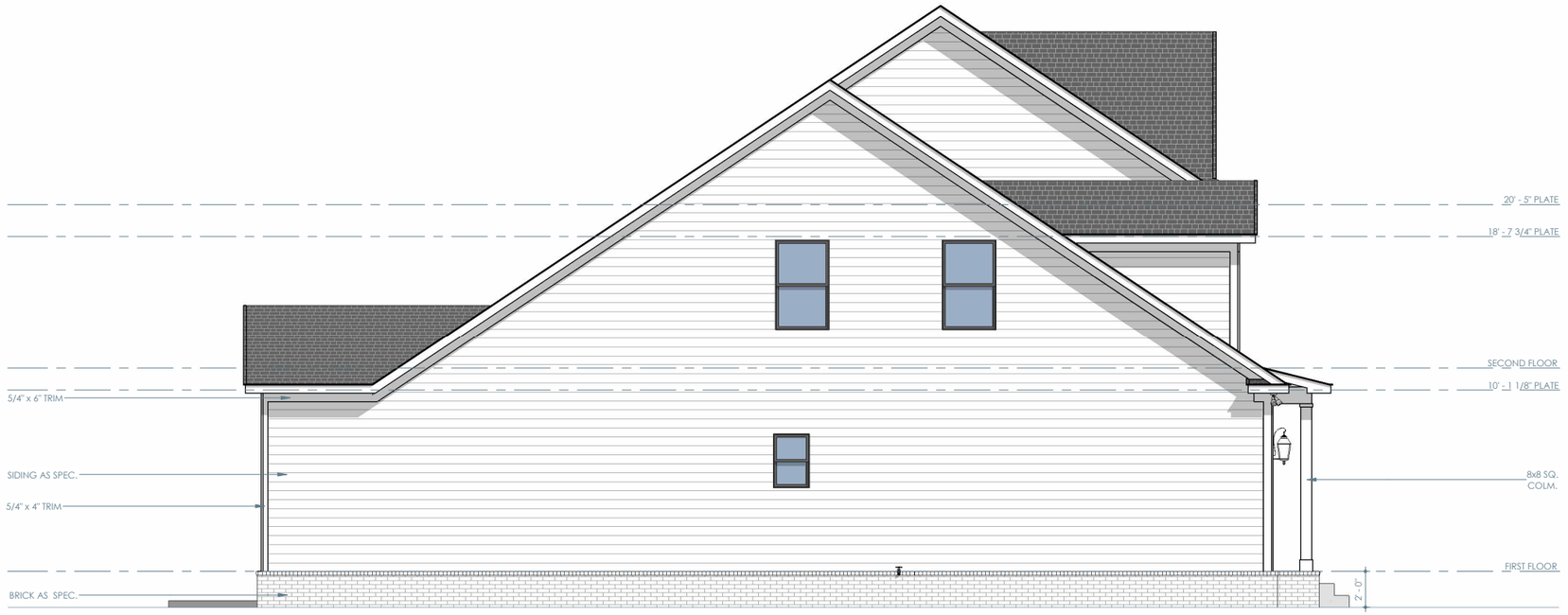
SHEET NAME

PLAN OPTIONS

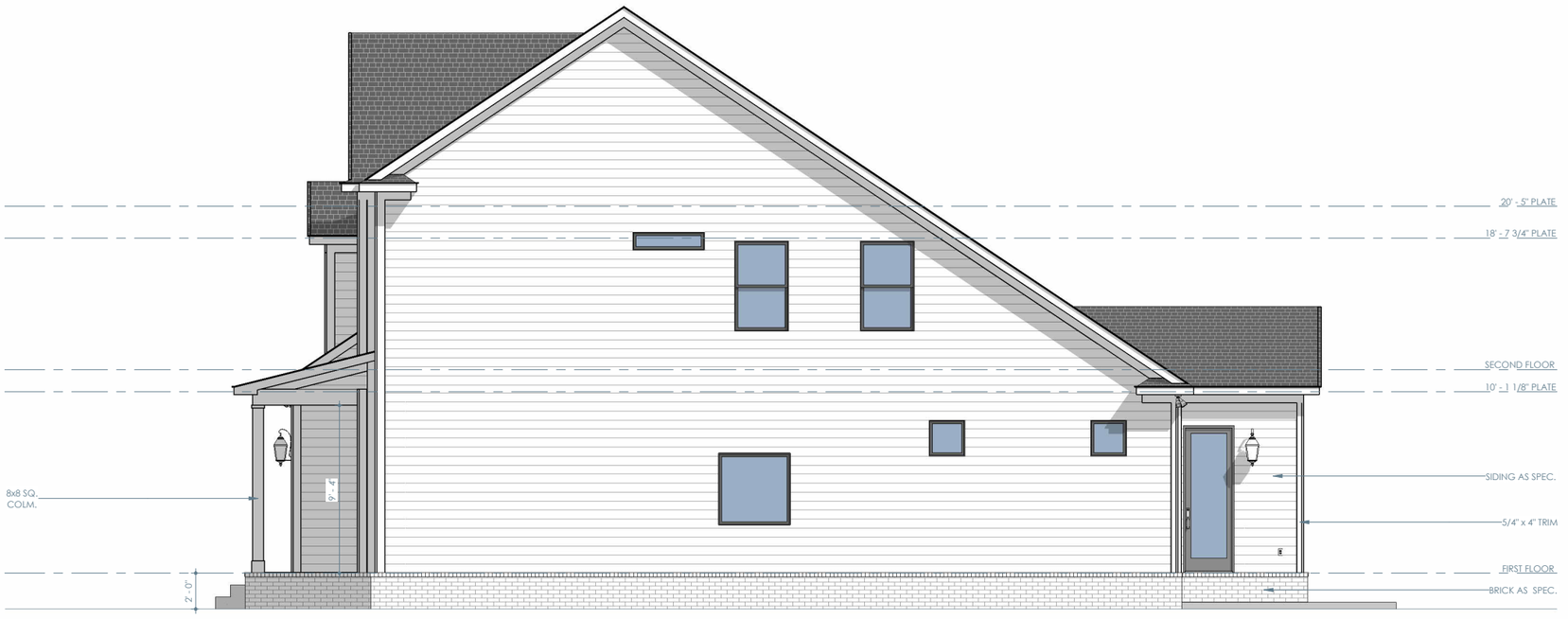
SHEET NO.

A7.11



ELEVATION A W/ EXECUTIVE OPTION - LEFT

1/8" = 1'-0"



ELEVATION A W/ EXECUTIVE OPTION - RIGHT

1/8" = 1'-0"

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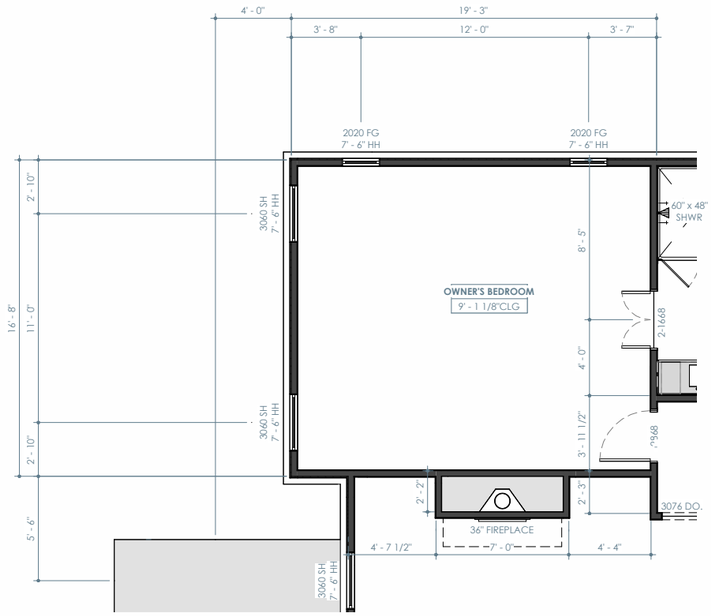
SHEET NAME

PLAN OPTIONS

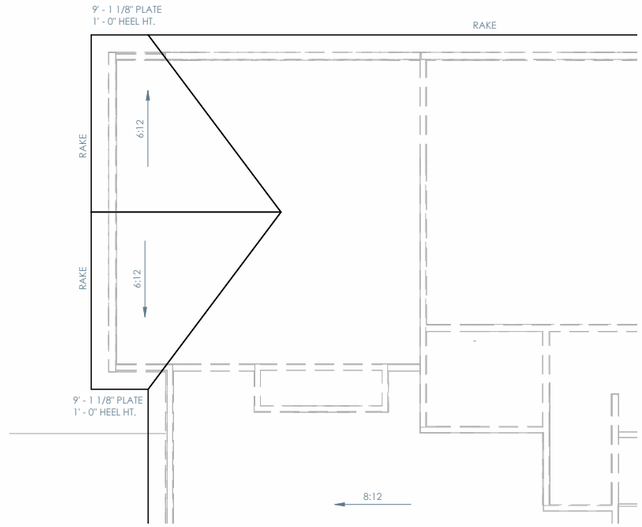
SHEET NO.

A7.12



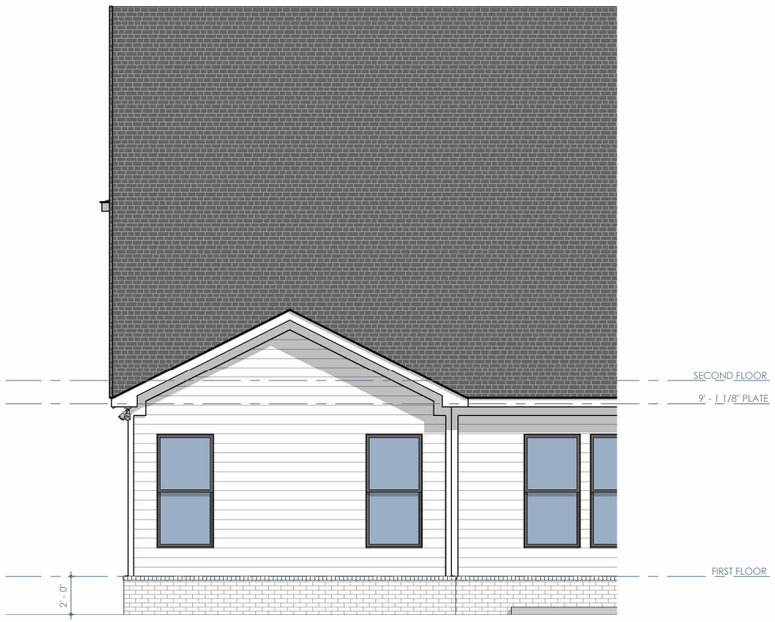
OPT. 3' OWNERS BEDROOM EXTENSION - FIRST FLOOR PLAN

1/8" = 1'-0"



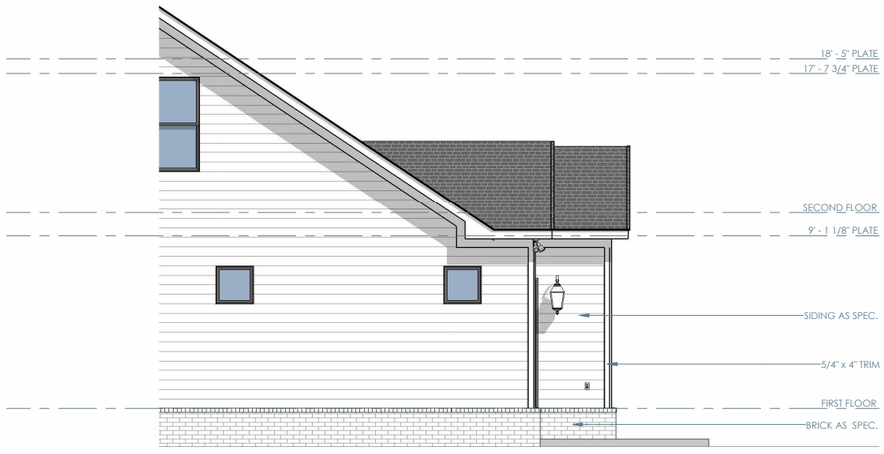
OPT. 3' OWNERS BEDROOM EXTENSION - ROOF PLAN

1/8" = 1'-0"



OPT. 3' OWNERS BEDROOM EXTENSION - REAR

1/8" = 1'-0"



OPT. 3' OWNERS BEDROOM EXTENSION - RIGHT

1/8" = 1'-0"

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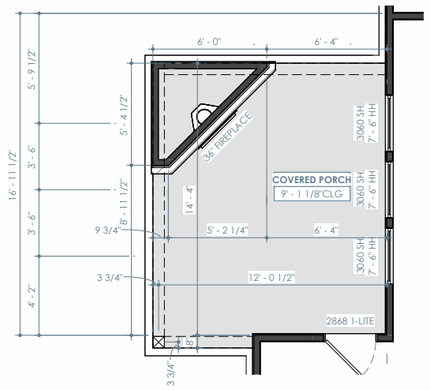
SHEET NAME

PLAN OPTIONS

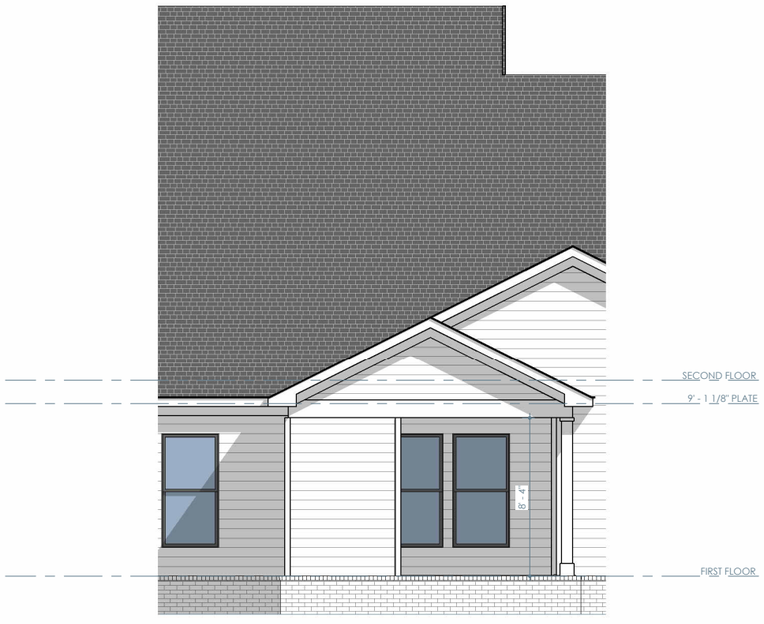
SHEET NO.

A7.13



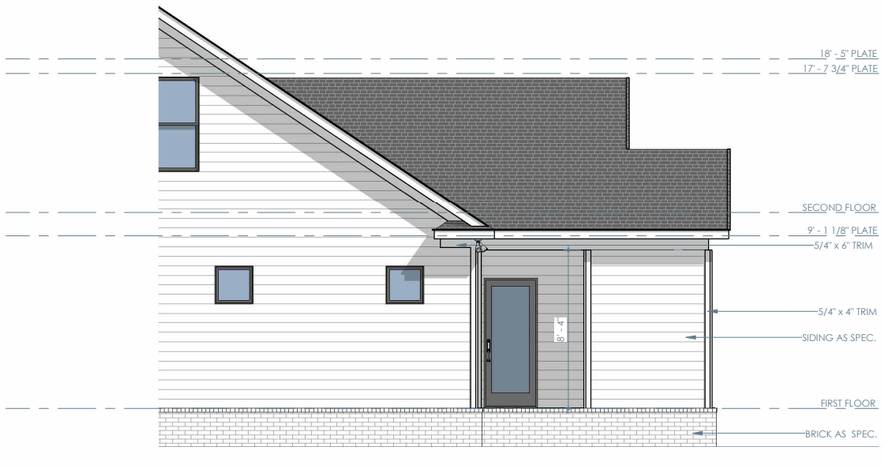
OPT. PORCH FIREPLACE - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. PORCH FIREPLACE - REAR

1/8" = 1'-0"



OPT. PORCH FIREPLACE - RIGHT

1/8" = 1'-0"

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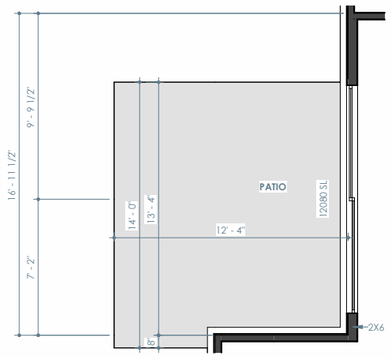
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

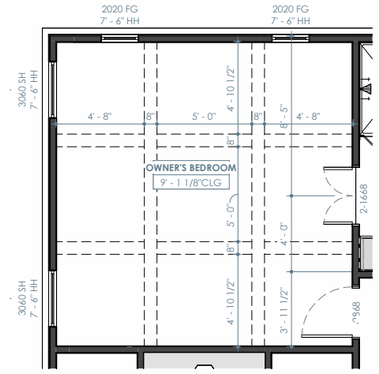
SHEET NO.

A7.14



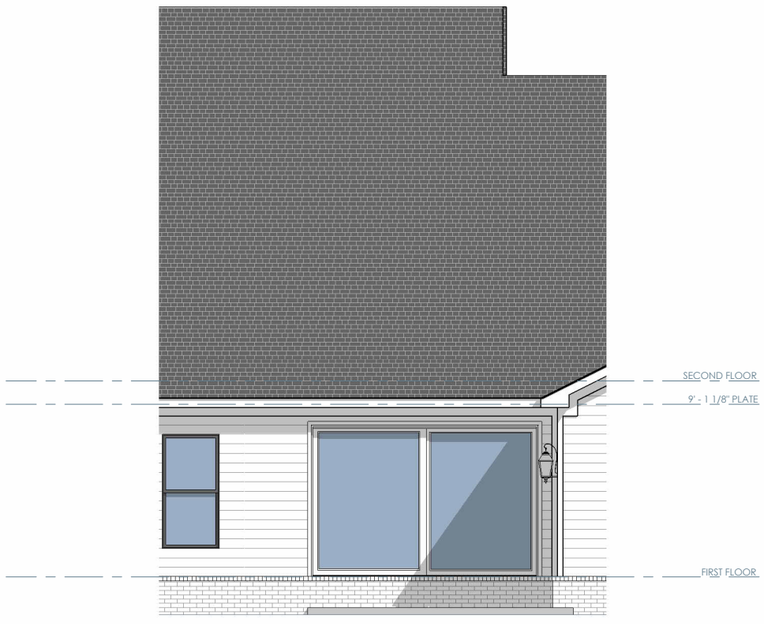
OPT. GREAT ROOM SLIDER DOOR - FIRST FLOOR PLAN

1/8" = 1'-0"



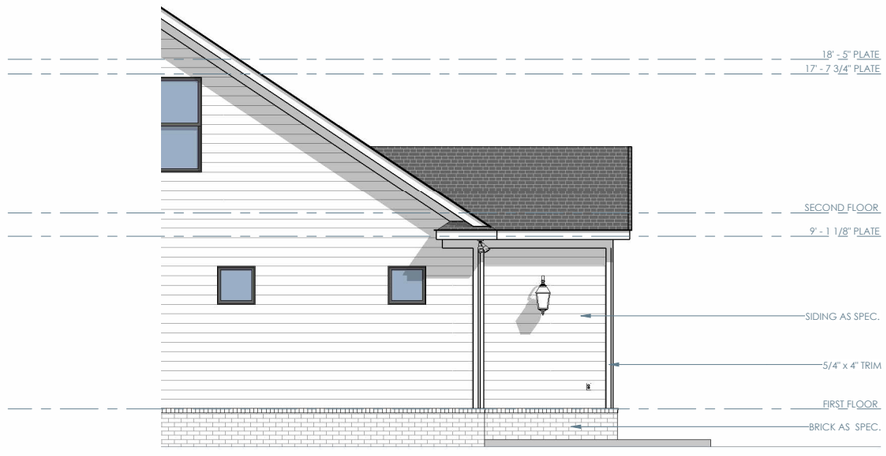
OPT. OWNER'S BEDROOM COFFERED CEILING - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. GREAT ROOM SLIDER DOOR - REAR

1/8" = 1'-0"



OPT. GREAT ROOM SLIDER DOOR - RIGHT

1/8" = 1'-0"

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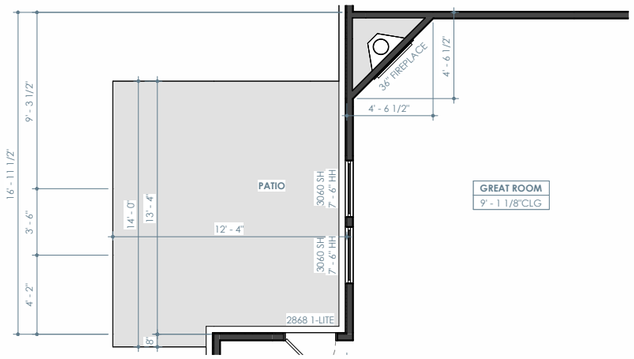
SHEET NO.

A7.15



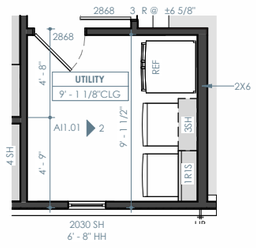
OPT. CORNER FIREPLACE - FIRST FLOOR PLAN

1/8" = 1'-0"



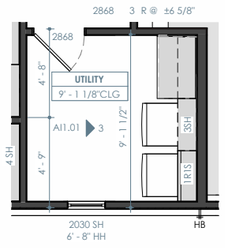
OPT. CORNER FIREPLACE - REAR

1/8" = 1'-0"



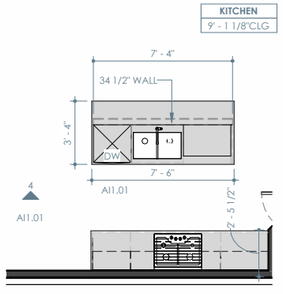
OPT. UTILITY REFRIGERATOR - FIRST FLOOR PLAN

1/8" = 1'-0"



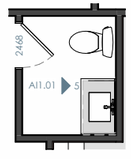
OPT. UTILITY CABINETS - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. ISLAND MICROWAVE - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. 1/2 BATH VANITY - FIRST FLOOR PLAN

1/8" = 1'-0"

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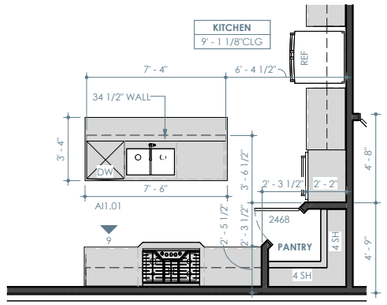
SHEET NAME

PLAN OPTIONS

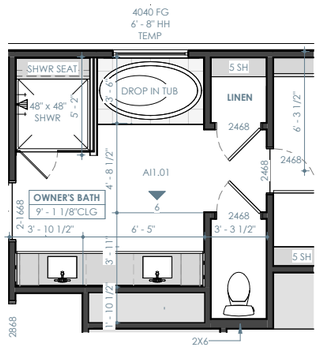
SHEET NO.

A7.16



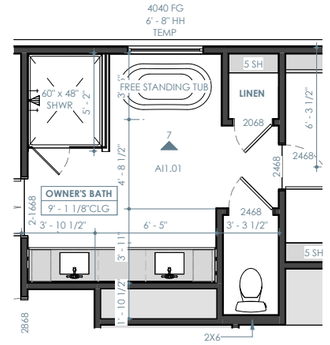
OPT. 36" COOKTOP RANGE W/BUMPOUT & VENT HOOD - FIRST FLOOR PLAN

1/8" = 1'-0"



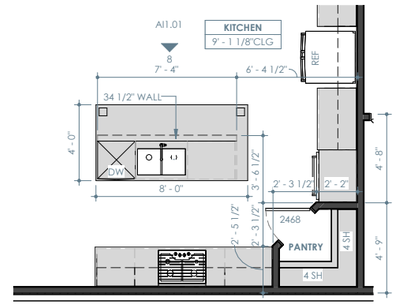
OPT. OWNER'S BATH SHOWER SEAT - FIRST FLOOR PLAN

1/8" = 1'-0"



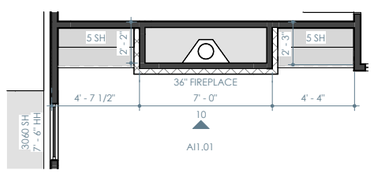
OPT. FREE STANDING TUB - FIRST FLOOR PLAN

1/8" = 1'-0"



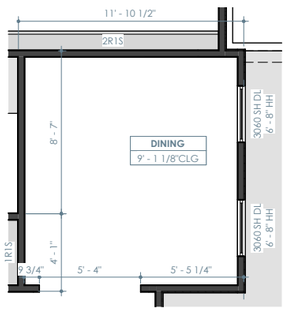
OPT. EXTENDED KITCHEN ISLAND W/ LEGS - FIRST FLOOR PLAN

1/8" = 1'-0"



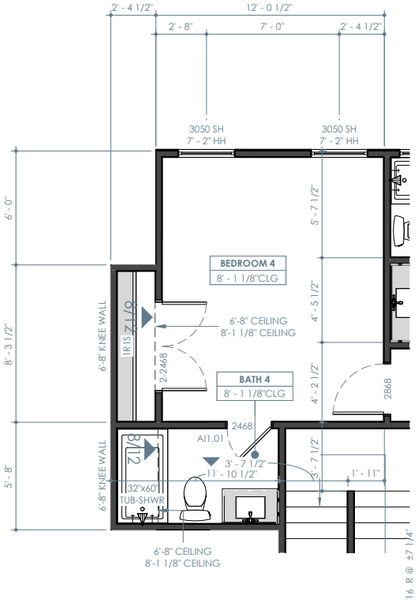
OPT. BUILT-INS FIREPLACE - FIRST FLOOR PLAN

1/8" = 1'-0"



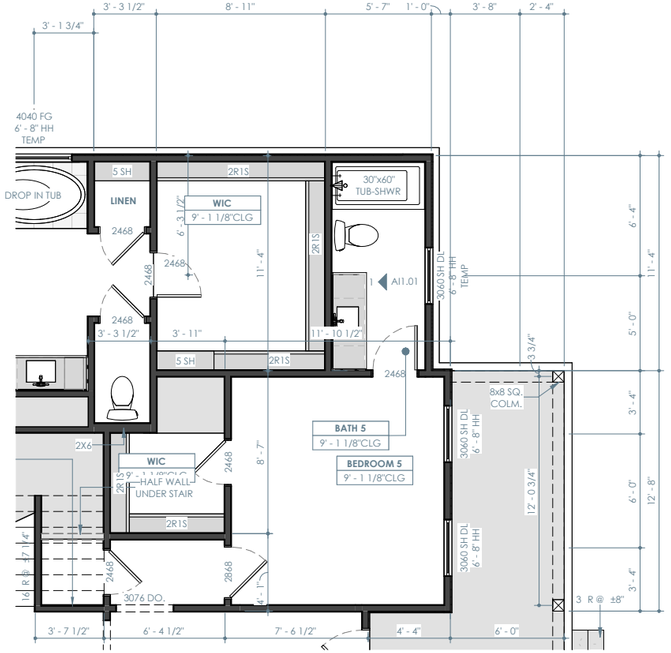
OPT. DINING - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. BEDROOM 4 W/ BATH 4 - SECOND FLOOR PLAN

1/8" = 1'-0"



OPT. BEDROOM 5 - FIRST FLOOR PLAN

1/8" = 1'-0"

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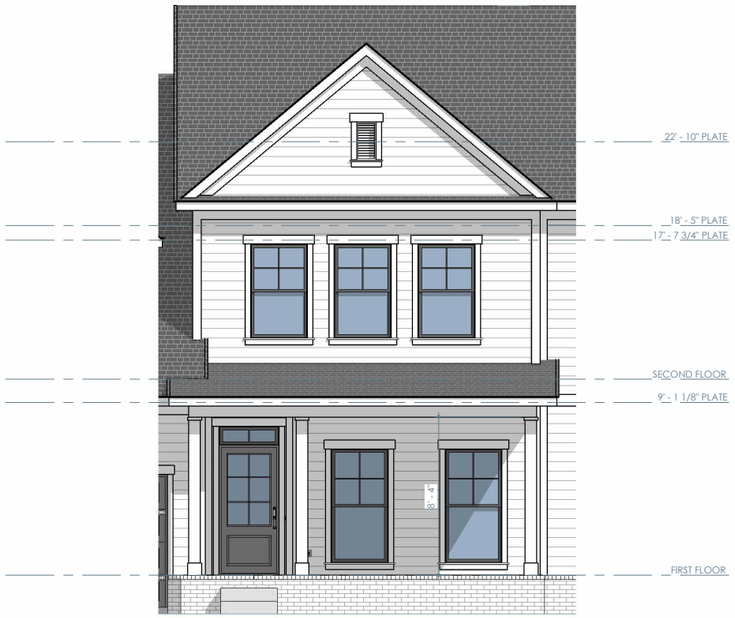
SHEET NO.

A7.17



OPT. TRANSOM AT FRONT DOOR - ELEVATION A

1/8" = 1'-0"



OPT. CRAFTSMAN AT FRONT DOOR - ELEVATION A

1/8" = 1'-0"

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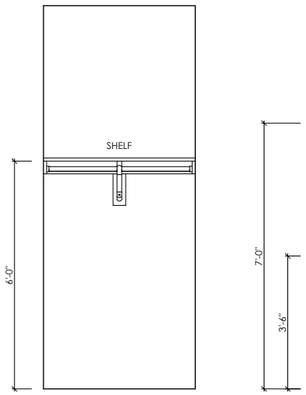
SHEET NAME

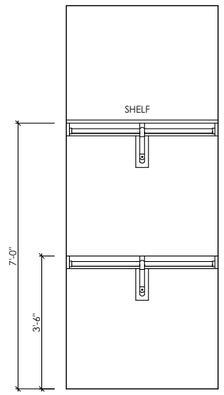
PLAN OPTIONS

SHEET NO.

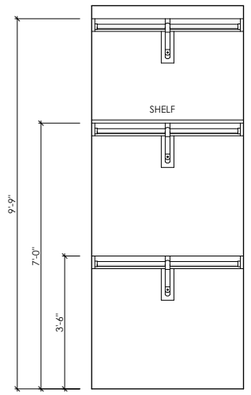
A7.18



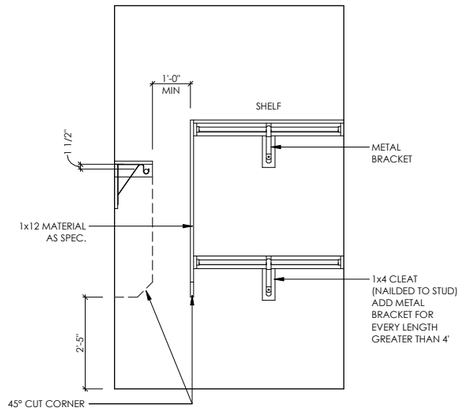
1R1S



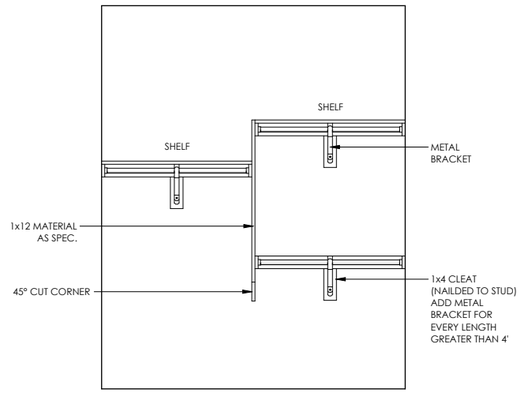
2R1S



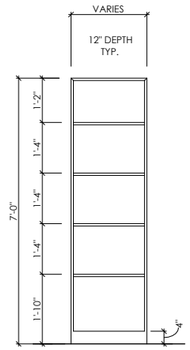
3R1S



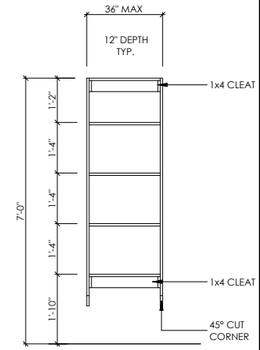
CLOSET CORNER DETAIL



1R1S TO 2R1S TRANSITION DETAIL



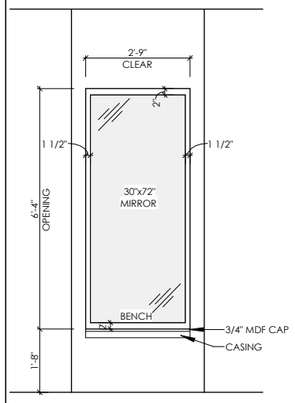
5SH



5SH
(SUSPENDED)

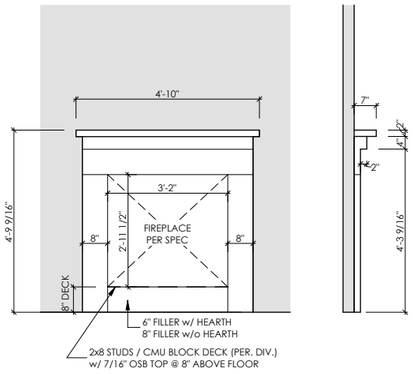
1 CLOSET DETAILS

1/4" = 1'-0"



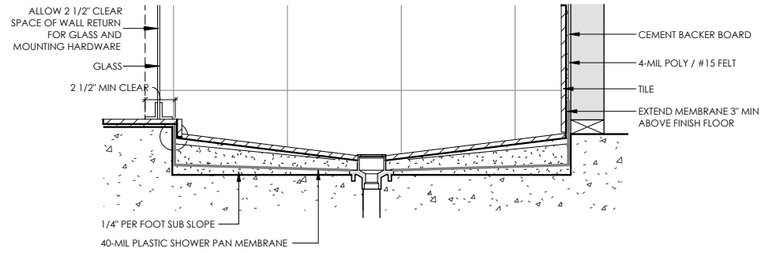
2 CLOSET BENCH

1/4" = 1'-0"



3 FIREPLACE DETAIL

1/4" = 1'-0"



4 MUD PAN SHOWER

3/4" = 1'-0"

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PLAN NO.

3050

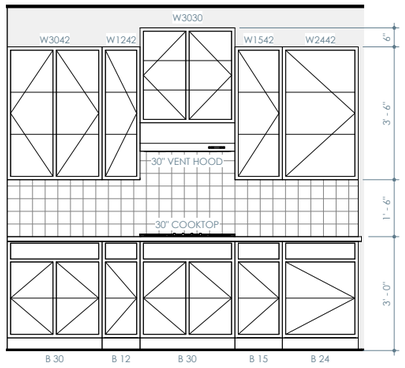
ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	As indicated

SHEET NAME

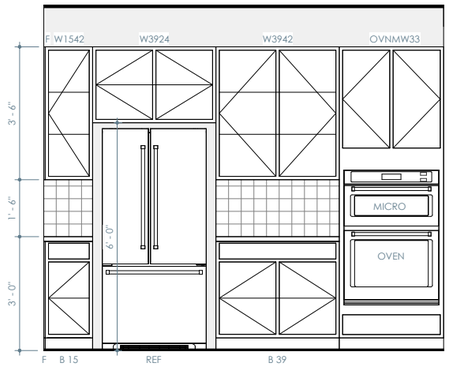
DETAILS

SHEET NO.

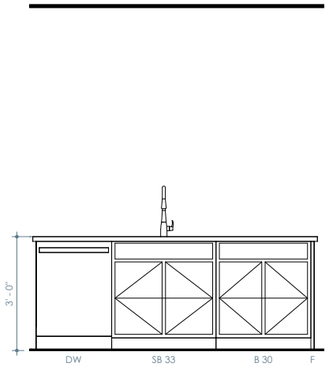
AD1.00



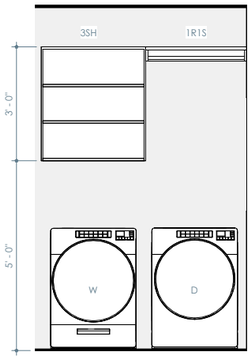
1 KITCHEN
1/4" = 1'-0"



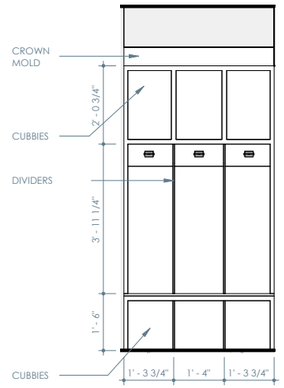
2 KITCHEN
1/4" = 1'-0"



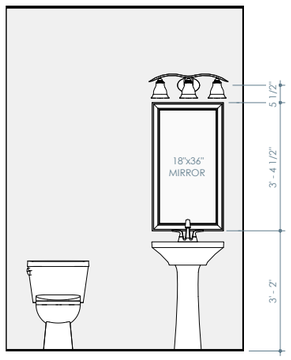
3 KITCHEN
1/4" = 1'-0"



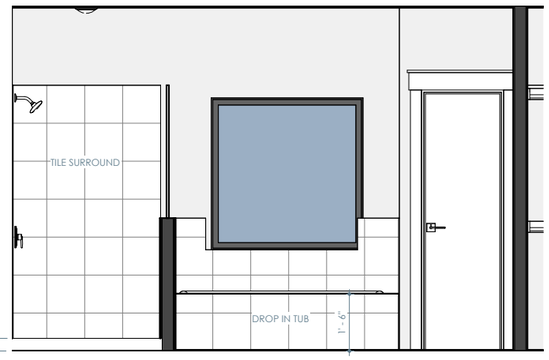
4 UTILITY
1/4" = 1'-0"



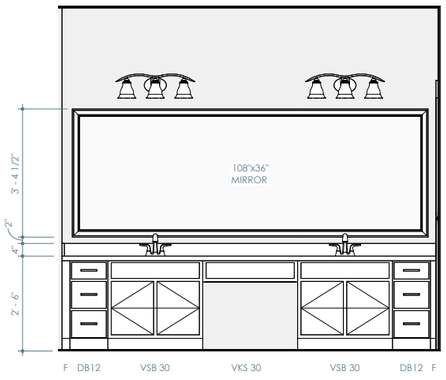
5 CUBBIES
1/4" = 1'-0"



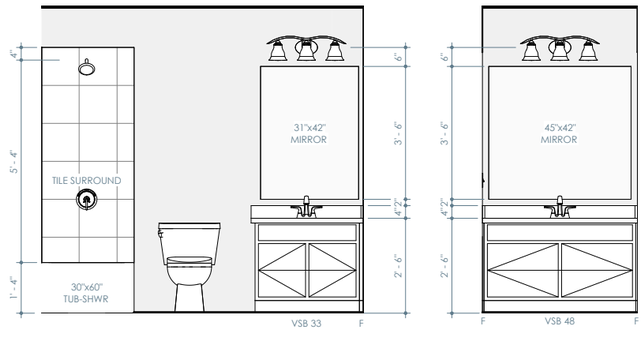
6 1/2 BATH
1/4" = 1'-0"



7 OWNER'S BATH
1/4" = 1'-0"

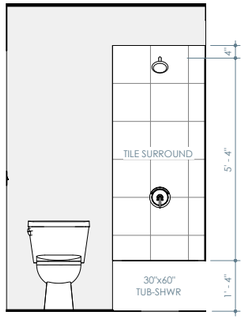


8 OWNER'S BATH
1/4" = 1'-0"



9 BATH 3
1/4" = 1'-0"

10 BATH 2
1/4" = 1'-0"



11 BATH 2
1/4" = 1'-0"

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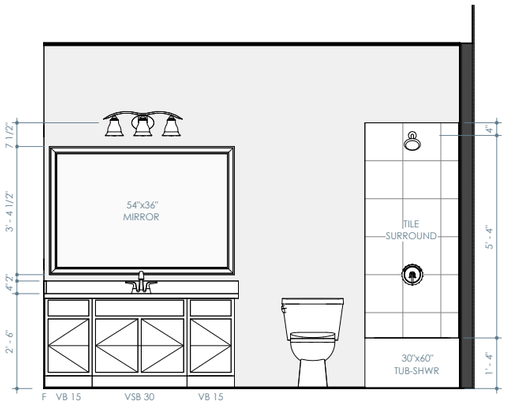
PLAN NO.
3050

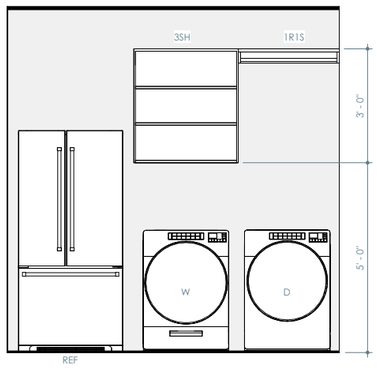
ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/4" = 1'-0"

SHEET NAME
INTERIOR ELEVATIONS

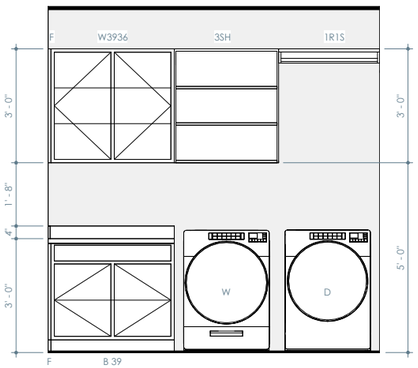
SHEET NO.
AI1.00



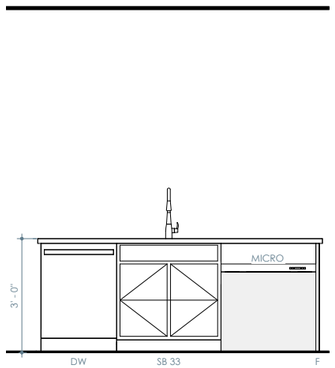
1 OPT. BATH 5
1/4" = 1'-0"



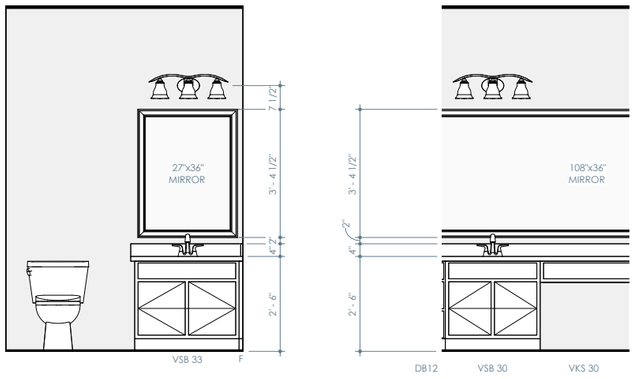
2 OPT. UTILITY REFRIGERATOR
1/4" = 1'-0"



3 OPT. UTILITY CABINETS
1/4" = 1'-0"

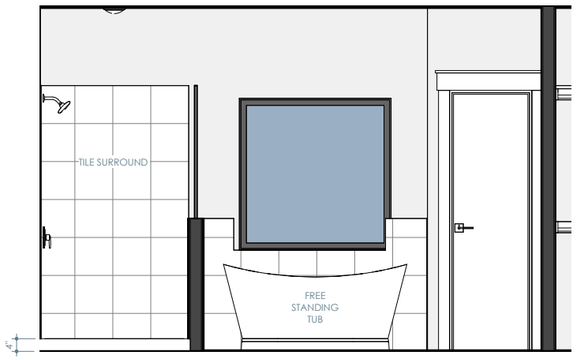


4 OPT. ISLAND MICROWAVE
1/4" = 1'-0"

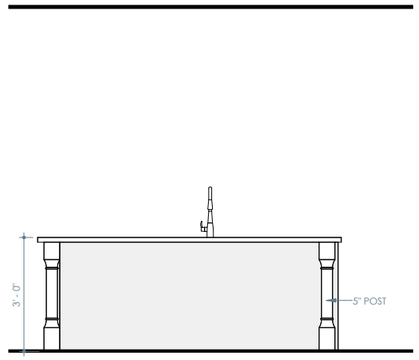


5 OPT. 1/2 BATH VANITY
1/4" = 1'-0"

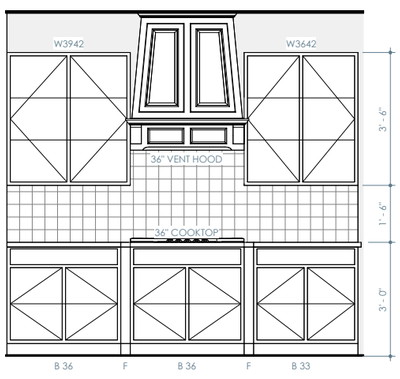
6 OWNER'S BATH
1/4" = 1'-0"



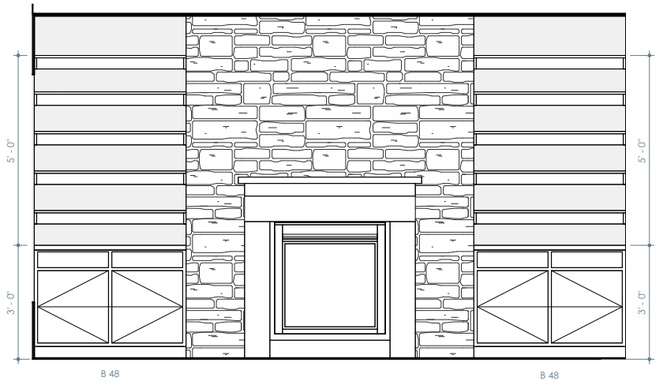
7 OWNER'S BATH
1/4" = 1'-0"



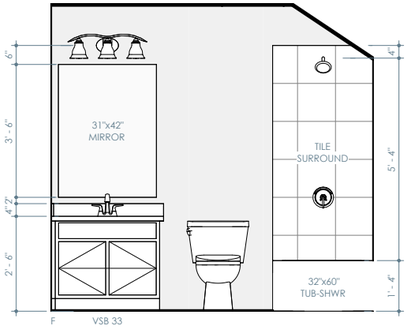
8 OPT. EXTENDED ISLAND W/ LEGS
1/4" = 1'-0"



9 OPT. 36" COOKTOP RANGE W/BUMPOUT & VENT HOOD
1/4" = 1'-0"



10 OPT. BUILT-INS FIREPLACE
1/4" = 1'-0"



11 OPT. BATH 4
1/4" = 1'-0"

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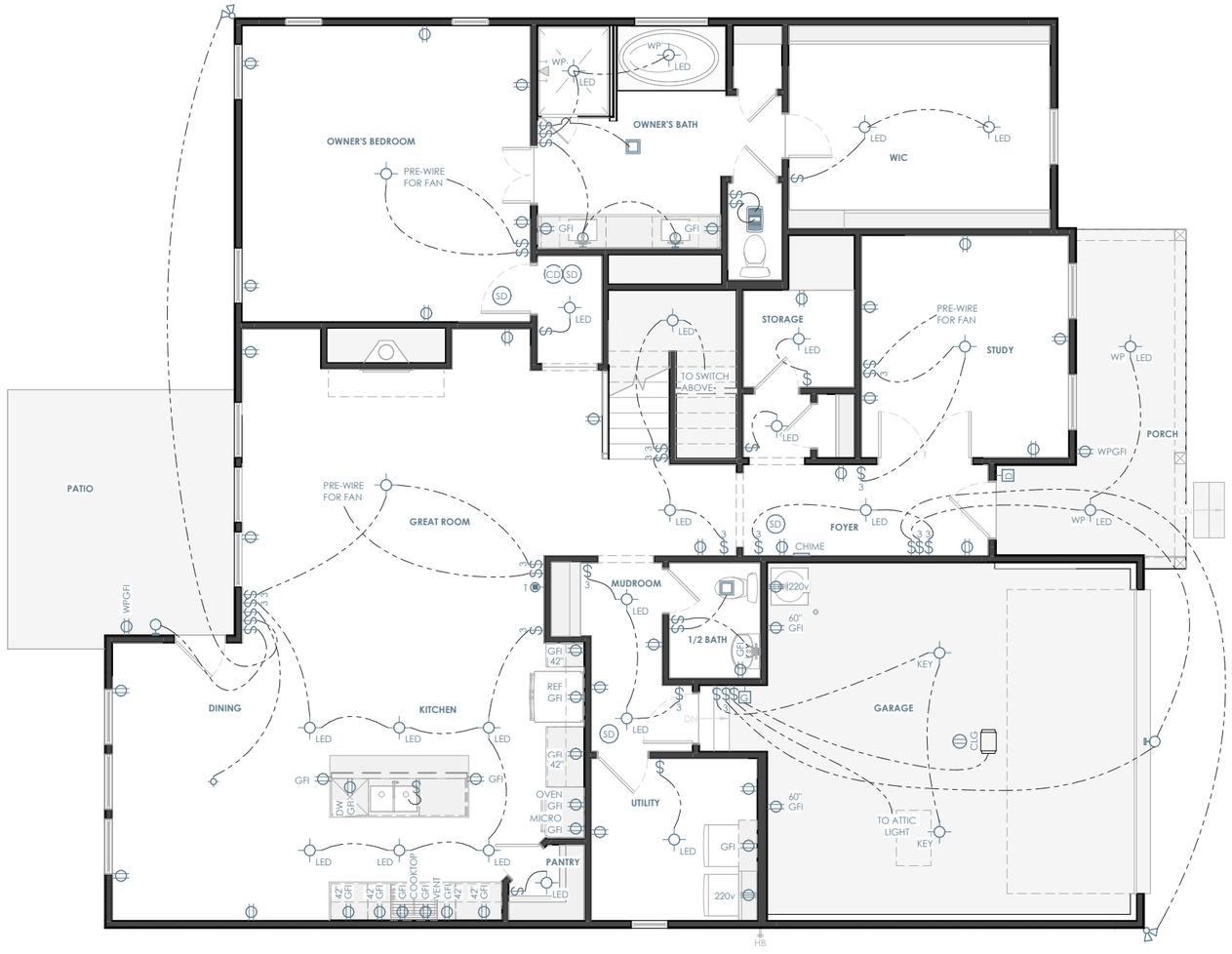
PLAN NO.
3050

ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/4" = 1'-0"

SHEET NAME
INTERIOR ELEVATIONS

SHEET NO.
AI1.01



ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- 3 THREE WAY SWITCH
- 4 FOUR WAY SWITCH
- D SINGLE POLE DIMMER SWITCH
- OS OCCUPANT SENSOR SWITCH
- R RHEOSTAT SWITCH
- P PRESSURE SWITCH
- G GARAGE DOOR SWITCH
- D DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- LED SUFRACE MOUNT LED LIGHT FIXTURE
- KEY KEYLESS LIGHT FIXTURE
- H HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- UNDER / OVER CABINET LIGHT
- 1x4 FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

POWER

- DUPLEX OUTLET
- QUAD OUTLET
- SWITCHED DUPLEX OUTLET
- GFI GROUND FAULT CIRCUIT INTERRUPTER
- SURFACE MOUNT DUPLEX OUTLET
- GFI SURFACE MOUNT GROUND FAULT INTERRUPTER
- FLR FLOOR OUTLET
- CLG OVERHEAD OUTLET
- 220v 220 VOLT OUTLET

COMMUNICATION

- PH PHONE OUTLET
- DATA DATA OUTLET
- 5.1 SS SURROUND SOUND OUTLET
- TV TV OUTLET
- S SUB SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SD SMOKE ALARM
- CD CARBON DETECTOR

EQUIPMENT

- PANEL ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

ELECTRICAL PLAN NOTES

INFORMATION AND LAYOUTS SHOWN ON DRAWINGS ARE ONLY SCHEMATIC IN DESIGN

- PROVIDE LIGHT IN EACH CRAWLSPACE AND ATTIC
- GAS AND 220 OUTLETS SHOWN FOR LOCATION PURPOSES ONLY, AND SUBJECT TO CHANGE PER SUBDIVISION/CITY/CODE REQUIREMENT

KITCHEN
- 24" MAX SEPARATION FOR OUTLETS LOCATED AT KITCHEN COUNTERTOPS
- RECEPTACLES AT COUNTER SPACE 12" OR WIDER.
- GFCI OUTLETS REQUIRED AT KITCHEN COUNTERTOPS
- 1 OUTLET PROVIDED PER ISLAND MINIMUM

BATHROOMS
- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES
- OUTLETS IN ALL LIVING SPACES SHALL BE PROVIDED AT 6' MAX FROM OPENING OR DOOR AND MINIMUM 12' BETWEEN EACH RECEPTACLE
- PROVIDE OUTLET ON ANY WALL LARGER THAN 2' BETWEEN OPENINGS AND DOORS
- FLOOR PLUGS AS REQUIRED

OTHER AREAS
- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
- PROVIDE AT LEAST 1 OUTLET PER 10' OF HALLWAY RUN

LIGHTING
- LIGHTING FIXTURES LOCATED IN CLOSETS: SURFACE MOUNT FIXTURE ARE NOT TO BE WITHIN 1'-0" OF SHELF OR HANGING SPACE MEASURED HORIZONTALLY. RECESSED FIXTURES NOT TO BE WITHIN 6" OF ANY SHELF OR HANGING SPACE

SMOKE DETECTORS
- ADDITIONAL SMOKE DETECTOR REQUIRED AT EACH END OF ROOMS/HALLWAYS GREATER THAN 30' IN LENGTH
- DO NOT INSTALL DETECTORS WITHIN 3' OF AN AIR VENT OR RETURN
- KEEP ALL SMOKE DETECTORS A MINIMUM OF 36" FROM BATHROOM DOOR, KITCHEN COOKING APPLIANCES AND LAUNDRY/UTILITY (WHERE A WASHER AND DRYER IS PLACED)
- DO NOT INSTALL NEAR FLUORESCENT LIGHTS
- DO NOT INSTALL WITHIN 36" OF TIP OF PADDLE FOR CEILING FAN
- INSTALL SMOKE DETECTOR ON SLOPED, PEAKED OR CATHEDRAL CEILINGS AT OR WITHIN 3' OF HIGHEST POINT (MEASURED HORIZONTALLY)
- SMOKE ALARMS IN ROOMS WITH CEILING SLOPES GREATER THAN 1 FOOT IN 8 FEET HORIZONTALLY SHALL BE LOCATED ON THE HIGHEST SIDE OF ROOM

ELEVATION A - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

Brightland HOMES

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PLAN NO.
3050

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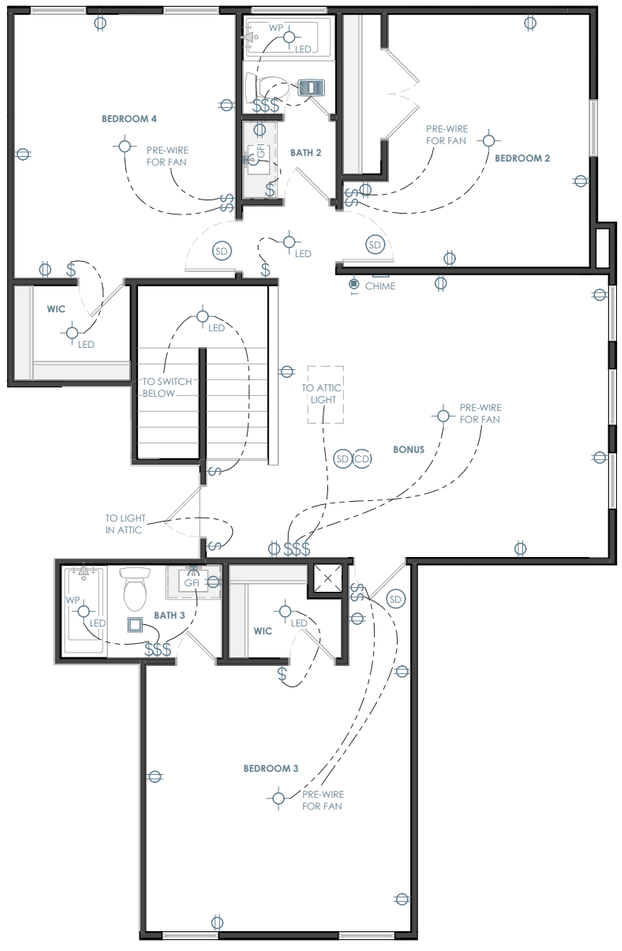
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME
ELEVATION A - FIRST FLOOR ELECTRICAL PLAN

SHEET NO.
E1.00



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- 1 OUTLET PROVIDED PER ISLAND MINIMUM

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- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES
- OUTLETS IN ALL LIVING SPACES SHALL BE PROVIDED AT 6' MAX FROM OPENING OR DOOR AND MINIMUM 12' BETWEEN EACH RECEPTACLE
- PROVIDE OUTLET ON ANY WALL LARGER THAN 2' BETWEEN OPENINGS AND DOORS
- FLOOR PLUGS AS REQUIRED

OTHER AREAS
- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
- PROVIDE AT LEAST 1 OUTLET PER 10' OF HALLWAY RUN

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SMOKE DETECTORS
- ADDITIONAL SMOKE DETECTOR REQUIRED AT EACH END OF ROOMS/HALLWAYS GREATER THAN 30' IN LENGTH
- DO NOT INSTALL DETECTORS WITHIN 3' OF AN AIR VENT OR RETURN
- KEEP ALL SMOKE DETECTORS A MINIMUM OF 36" FROM BATHROOM DOOR, KITCHEN COOKING APPLIANCES AND LAUNDRY/UTILITY (WHERE A WASHER AND DRYER IS PLACED)
- DO NOT INSTALL NEAR FLUORESCENT LIGHTS
- DO NOT INSTALL WITHIN 36" OF TIP OF PADDLE FOR CEILING FAN
- INSTALL SMOKE DETECTOR ON SLOPED, PEAKED OR CATHEDRAL CEILINGS AT OR WITHIN 3' OF HIGHEST POINT (MEASURED HORIZONTALLY)
- SMOKE ALARMS IN ROOMS WITH CEILING SLOPES GREATER THAN 1 FOOT IN 8 FEET HORIZONTALLY SHALL BE LOCATED ON THE HIGHEST SIDE OF ROOM

ELEVATION A - SECOND FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

Brightland HOMES

PROJECT NAME

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PLAN NO.

3050

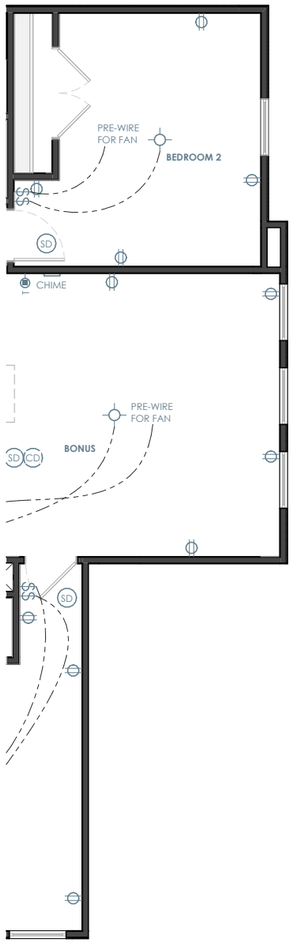
ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - SECOND FLOOR ELECTRICAL PLAN

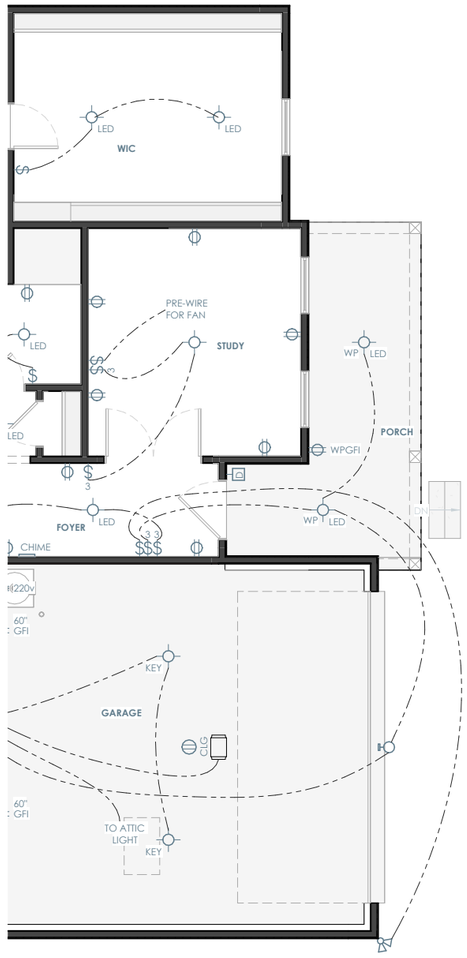
SHEET NO.

E1.01



ELEVATION B - SECOND FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



ELEVATION B - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- 3 THREE WAY SWITCH
- 4 FOUR WAY SWITCH
- D SINGLE POLE DIMMER SWITCH
- OS OCCUPANT SENSOR SWITCH
- R RHEOSTAT SWITCH
- P PRESSURE SWITCH
- G GARAGE DOOR SWITCH
- D DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- LED SUFRACE MOUNT LED LIGHT FIXTURE
- KEY KEYLESS LIGHT FIXTURE
- H HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- UNDER / OVER CABINET LIGHT
- 1x4 FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

POWER

- DUPLEX OUTLET
- QUAD OUTLET
- SWITCHED DUPLEX OUTLET
- GFI GROUND FAULT CIRCUIT INTERRUPTER
- SURFACE MOUNT DUPLEX OUTLET
- GFI SURFACE MOUNT GROUND FAULT INTERRUPTER
- FLR FLOOR OUTLET
- CLG OVERHEAD OUTLET
- 220v 220 VOLT OUTLET

COMMUNICATION

- PH PHONE OUTLET
- DATA DATA OUTLET
- 5.1 SS SURROUND SOUND OUTLET
- TV TV OUTLET
- S SUB SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SD SMOKE ALARM
- CD CARBON DETECTOR

EQUIPMENT

- PANEL ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

ELECTRICAL PLAN NOTES

INFORMATION AND LAYOUTS SHOWN ON DRAWINGS ARE ONLY SCHEMATIC IN DESIGN

- PROVIDE LIGHT IN EACH CRAWLSPACE AND ATTIC
- GAS AND 220 OUTLETS SHOWN FOR LOCATION PURPOSES ONLY, AND SUBJECT TO CHANGE PER SUBDIVISION/CITY/CODE REQUIREMENT

KITCHEN
- 24" MAX SEPARATION FOR OUTLETS LOCATED AT KITCHEN COUNTERTOPS
- RECEPTACLES AT COUNTER SPACE 12" OR WIDER.
- GFCI OUTLETS REQUIRED AT KITCHEN COUNTERTOPS
- 1 OUTLET PROVIDED PER ISLAND MINIMUM

BATHROOMS
- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES
- OUTLETS IN ALL LIVING SPACES SHALL BE PROVIDED AT 6' MAX FROM OPENING OR DOOR AND MINIMUM 12' BETWEEN EACH RECEPTACLE
- PROVIDE OUTLET ON ANY WALL LARGER THAN 2' BETWEEN OPENINGS AND DOORS
- FLOOR PLUGS AS REQUIRED

OTHER AREAS
- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
- PROVIDE AT LEAST 1 OUTLET PER 10' OF HALLWAY RUN

LIGHTING
- LIGHTING FIXTURES LOCATED IN CLOSETS: SURFACE MOUNT FIXTURE ARE NOT TO BE WITHIN 1'-0" OF SHELF OR HANGING SPACE MEASURED HORIZONTALLY. RECESSED FIXTURES NOT TO BE WITHIN 6" OF ANY SHELF OR HANGING SPACE

SMOKE DETECTORS
- ADDITIONAL SMOKE DETECTOR REQUIRED AT EACH END OF ROOMS/HALLWAYS GREATER THAN 30' IN LENGTH
- DO NOT INSTALL DETECTORS WITHIN 3' OF AN AIR VENT OR RETURN
- KEEP ALL SMOKE DETECTORS A MINIMUM OF 36" FROM BATHROOM DOOR, KITCHEN COOKING APPLIANCES AND LAUNDRY/UTILITY (WHERE A WASHER AND DRYER IS PLACED)
- DO NOT INSTALL NEAR FLUORESCENT LIGHTS
- DO NOT INSTALL WITHIN 36" OF TIP OF PADDLE FOR CEILING FAN
- INSTALL SMOKE DETECTOR ON SLOPED, PEAKED OR CATHEDRAL CEILINGS AT OR WITHIN 3' OF HIGHEST POINT (MEASURED HORIZONTALLY)
- SMOKE ALARMS IN ROOMS WITH CEILING SLOPES GREATER THAN 1 FOOT IN 8 FEET HORIZONTALLY SHALL BE LOCATED ON THE HIGHEST SIDE OF ROOM

Brightland HOMES

PROJECT NAME
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PLAN NO.
3050

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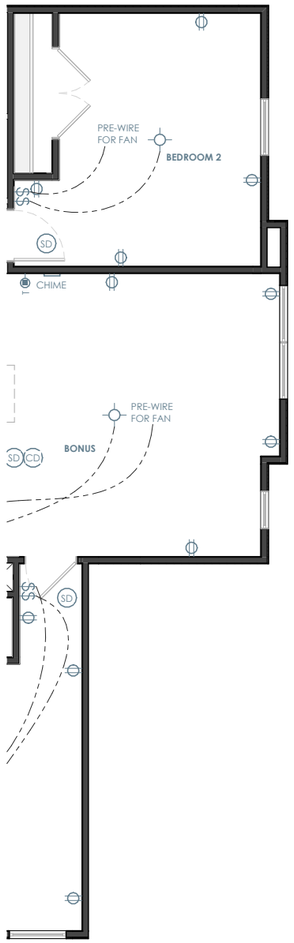
SCALE	1/8" = 1'-0"

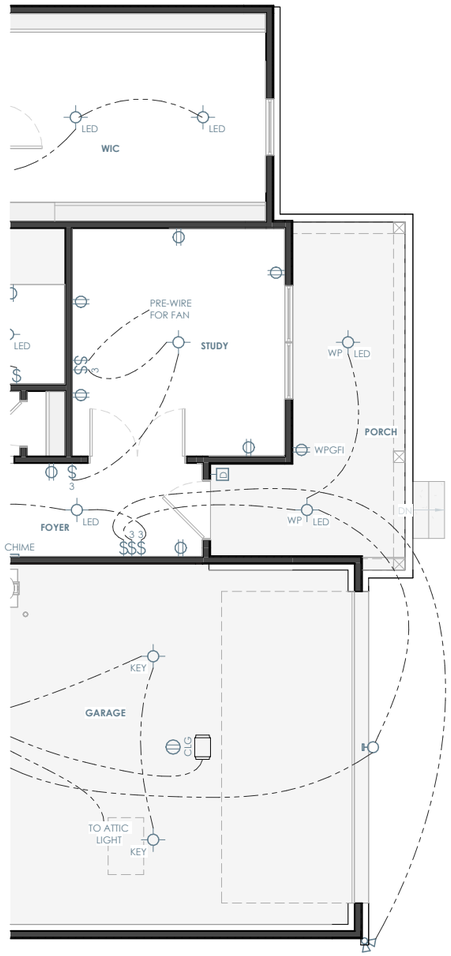
SHEET NAME
ELEVATION B - PARTIAL ELECTRICAL PLANS

SHEET NO.
E2.00



ELEVATION C - SECOND FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



ELEVATION C - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- THREE WAY SWITCH
- FOUR WAY SWITCH
- SINGLE POLE DIMMER SWITCH
- OCCUPANT SENSOR SWITCH
- RHEOSTAT SWITCH
- PRESSURE SWITCH
- GARAGE DOOR SWITCH
- DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- SUFRACE MOUNT LED LIGHT FIXTURE
- KEYLESS LIGHT FIXTURE
- HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- UNDER / OVER CABINET LIGHT
- 1x4 FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

POWER

- DUPLEX OUTLET
- QUAD OUTLET
- SWITCHED DUPLEX OUTLET
- GROUND FAULT CIRCUIT INTERRUPTER
- SURFACE MOUNT DUPLEX OUTLET
- SURFACE MOUNT GROUND FAULT INTERRUPTER
- FLOOR OUTLET
- OVERHEAD OUTLET
- 220 VOLT OUTLET

COMMUNICATION

- PHONE OUTLET
- DATA OUTLET
- SURROUND SOUND OUTLET
- TV OUTLET
- SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SMOKE ALARM
- CARBON DETECTOR

EQUIPMENT

- ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

ELECTRICAL PLAN NOTES

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PLAN NO.

3050

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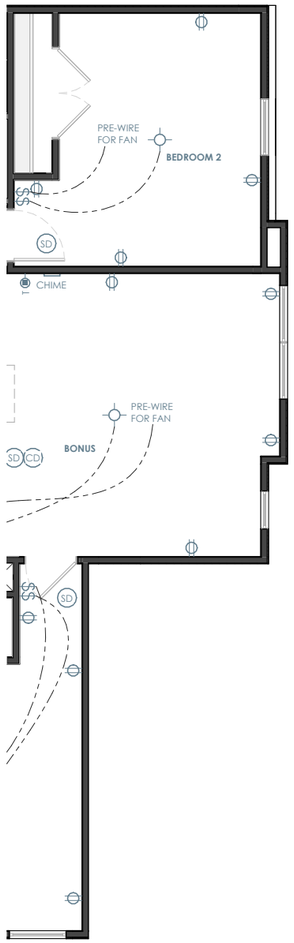
SHEET NAME

ELEVATION C - PARTIAL ELECTRICAL PLANS

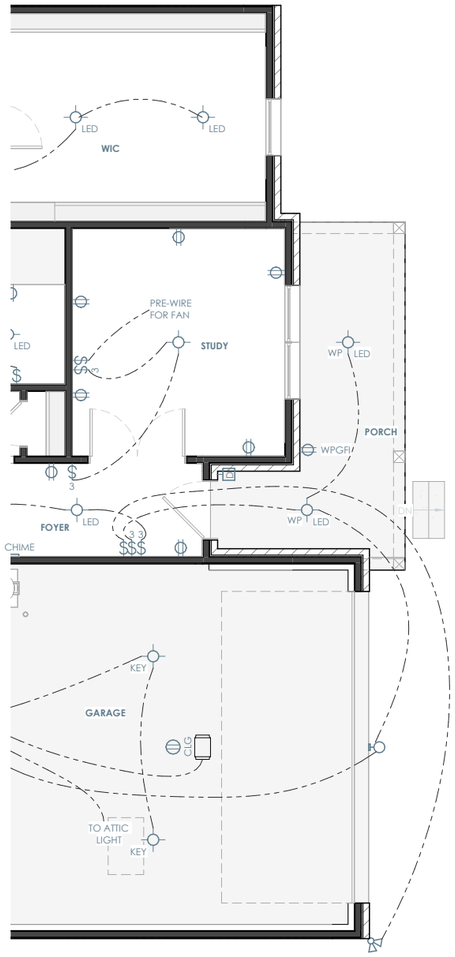
SHEET NO.

E3.00



ELEVATION D - SECOND FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



ELEVATION D - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

ELECTRICAL LEGEND

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PLAN NO.
3050

ISSUE DATE	03/07/2024
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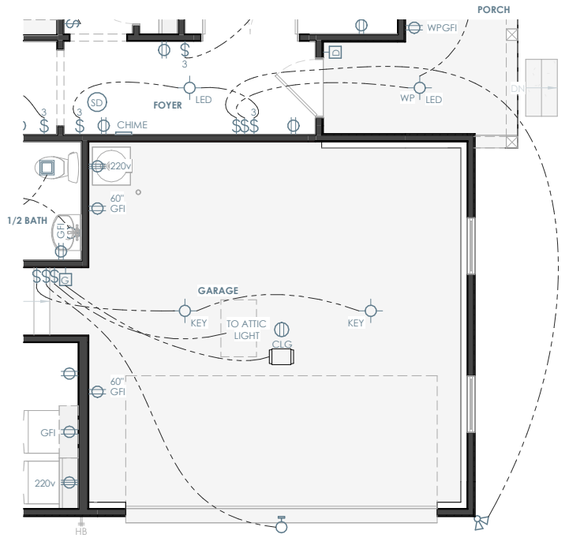
SCALE	1/8" = 1'-0"

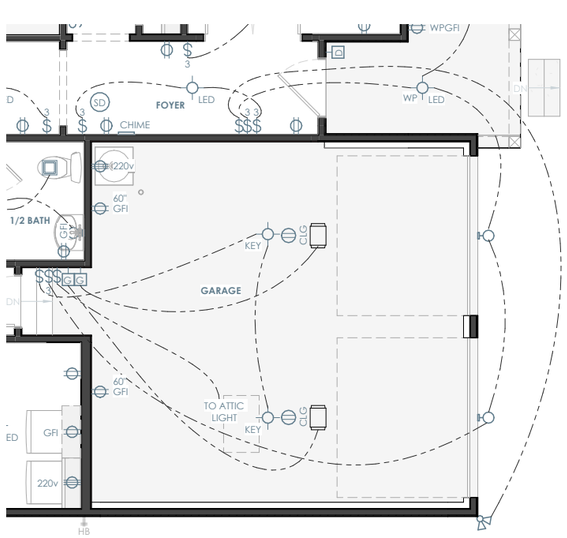
SHEET NAME
ELEVATION D - PARTIAL ELECTRICAL PLANS

SHEET NO.
E4.00



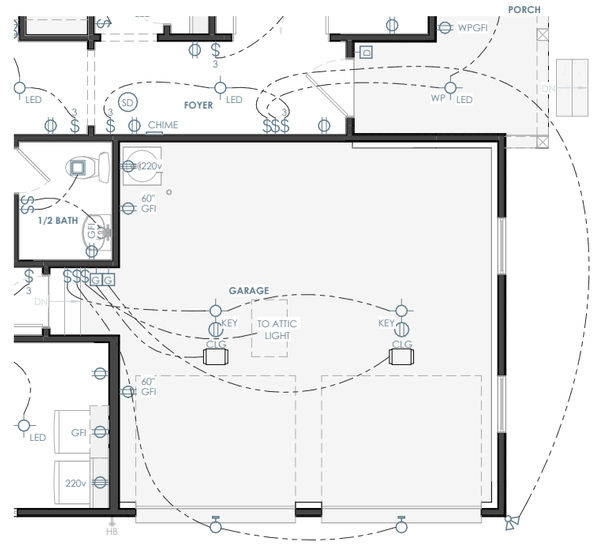
OPT. SIDE LOAD GARAGE - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



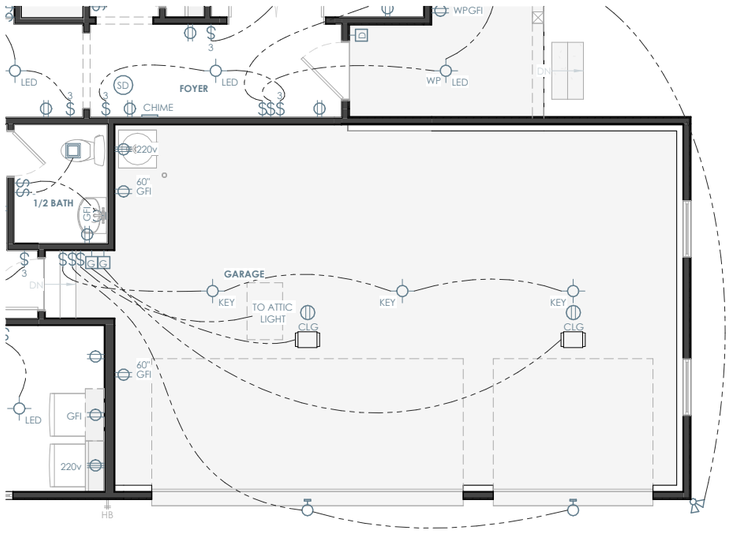
OPT. TWO 8' GARAGE DOORS - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



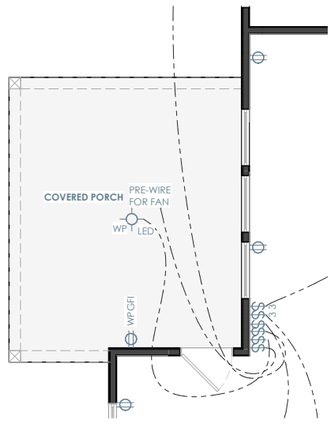
OPT. SIDE LOAD GARAGE & TWO 8' DOORS - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



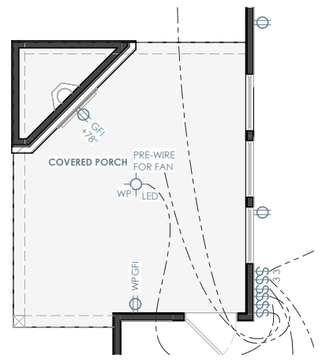
OPT. 3 CAR GARAGE - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



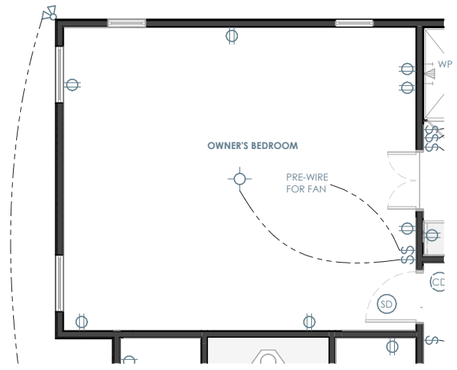
OPT. REAR COVERED PORCH - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



OPT. PORCH FIRE PLACE - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



OPT. 3' OWNERS BEDROOM EXTENSION - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

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PLAN NO.

3050

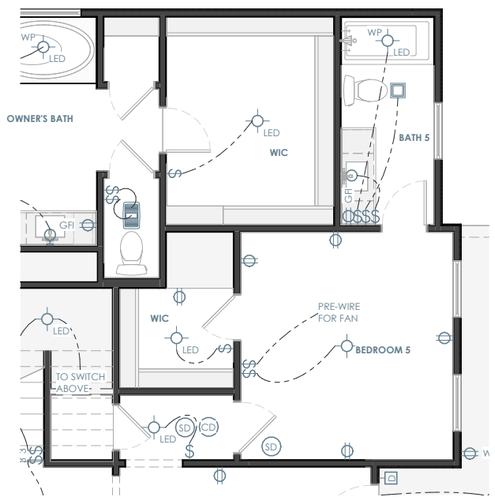
ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

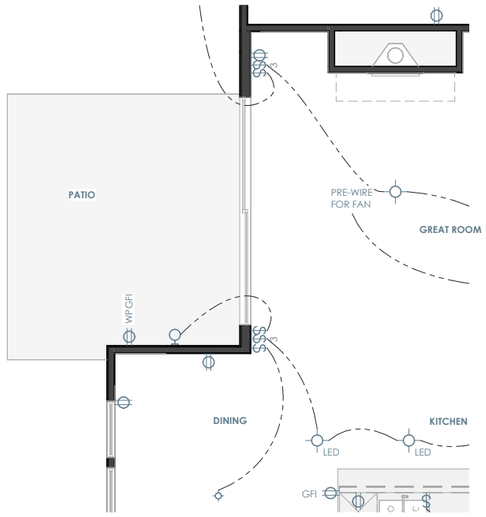
SHEET NO.

E7.00



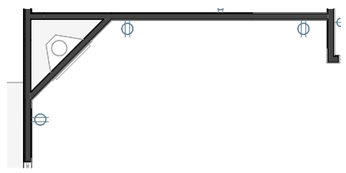
OPT. BEDROOM 5 - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



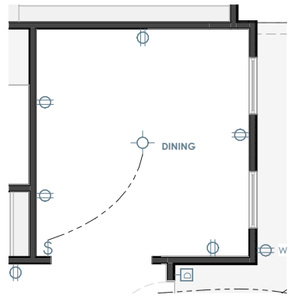
OPT. GREAT ROOM SLIDER DOOR - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



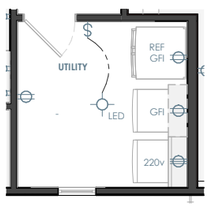
OPT. CORNER FIREPLACE - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



OPT. DINING - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



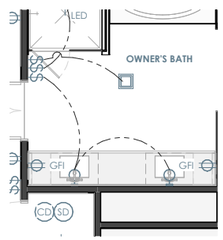
OPT. UTILITY REFRIGERATOR - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



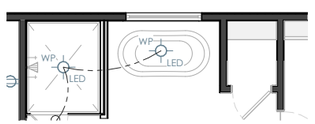
OPT. ISLAND MICROWAVE - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



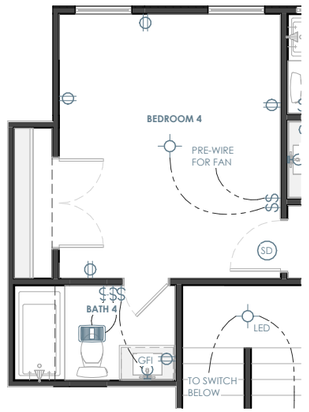
OPT. OWNER'S BATH SHOWER SEAT - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



OPT. FREE STANDING TUB - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



OPT. BEDROOM 4 W/ BATH 4 - SECOND FLOOR ELECTRICAL

1/8" = 1'-0"

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PLAN NO.

3050

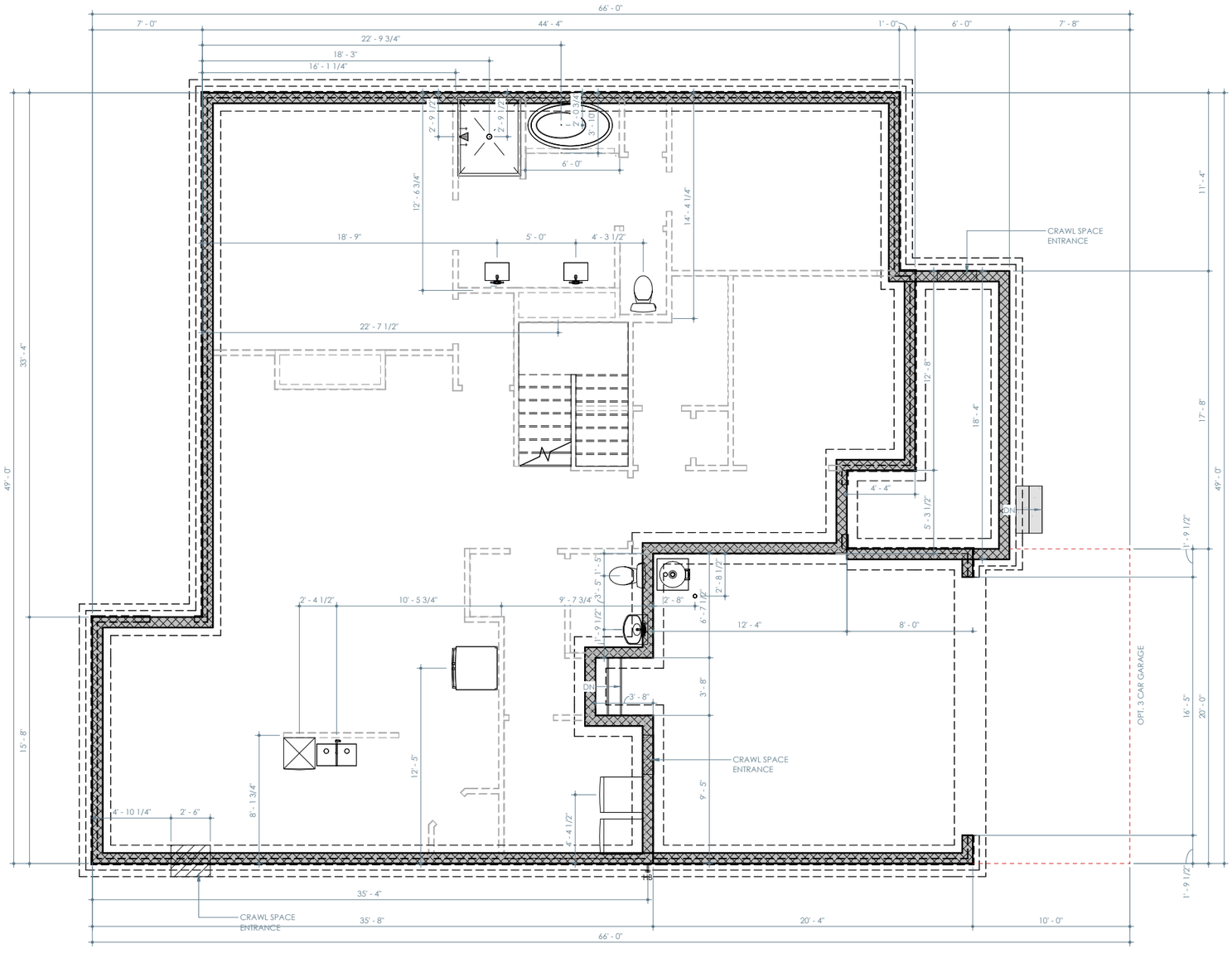
ISSUE DATE	03/07/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

SHEET NO.

E7.01



ELEVATION A - FOUNDATION PLAN (SIMILAR FOR ELEVATIONS B, C & D)

1/8" = 1'-0"

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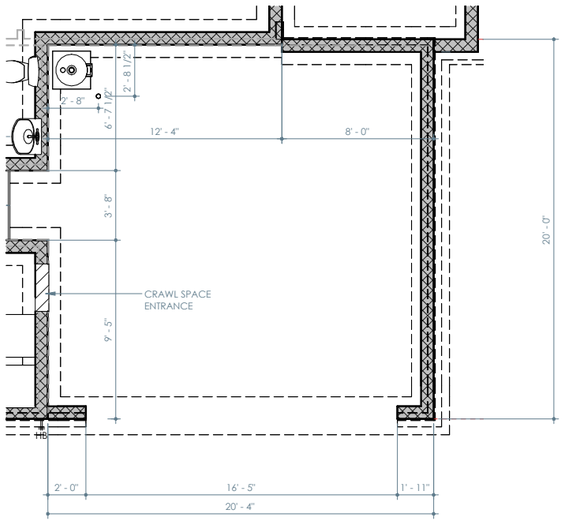
SCALE	1/8" = 1'-0"

SHEET NAME

FOUNDATION - ELEVATION A

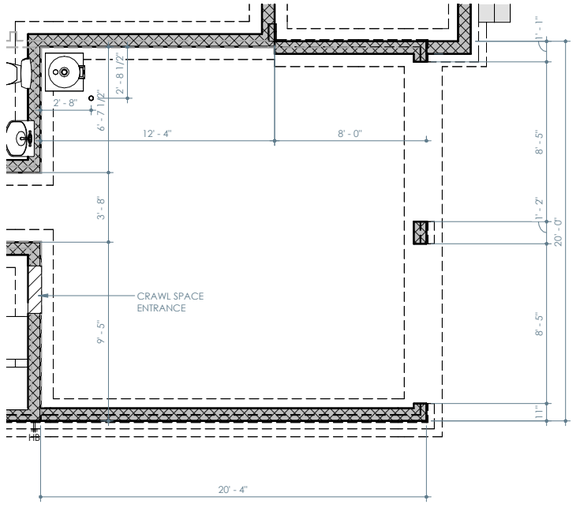
SHEET NO.

SF1.00



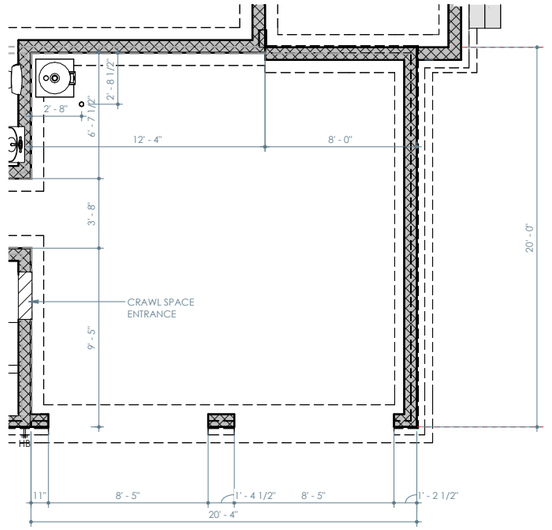
OPT. SIDE LOAD GARAGE - FOUNDATION PLAN

1/8" = 1'-0"



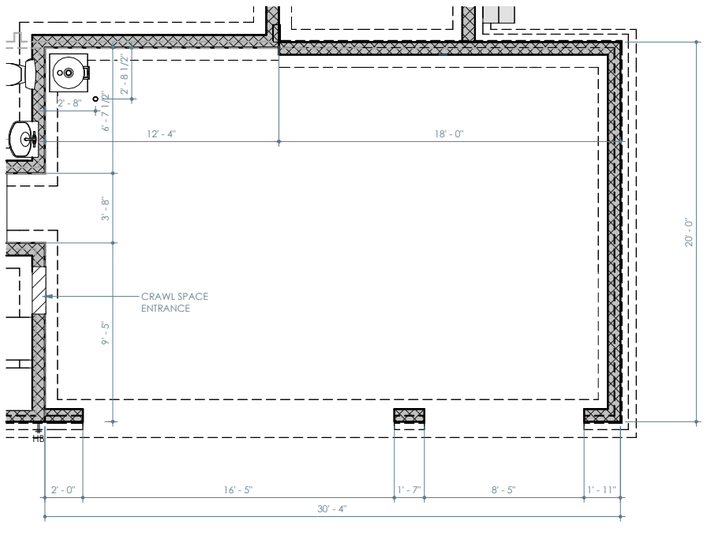
OPT. TWO 8' GARAGE DOORS - FOUNDATION PLAN

1/8" = 1'-0"



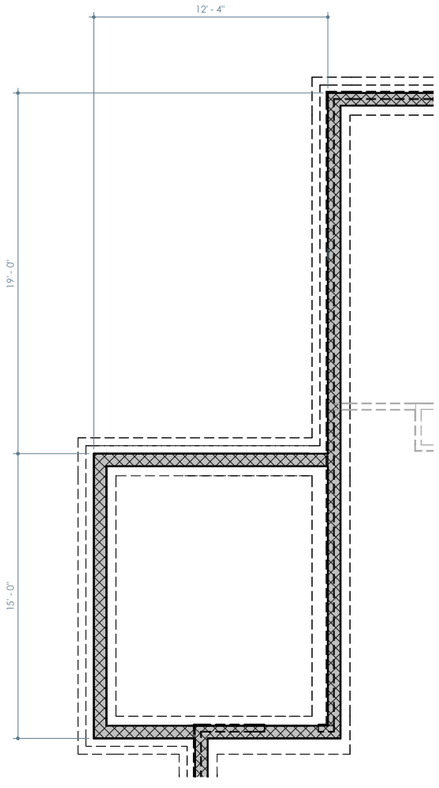
OPT. SIDE LOAD GARAGE & TWO 8' DOORS - FOUNDATION PLAN

1/8" = 1'-0"



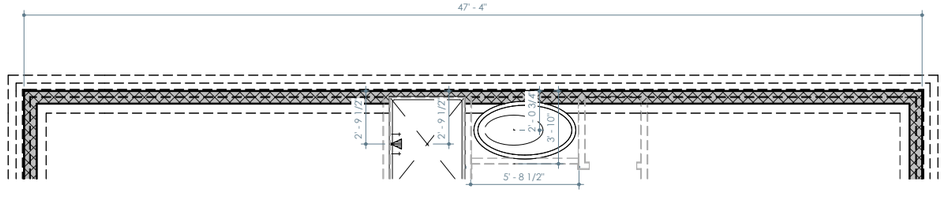
OPT. 3 CAR GARAGE - FOUNDATION PLAN

1/8" = 1'-0"



OPT. REAR COVERED PORCH - FOUNDATION PLAN

1/8" = 1'-0"



OPT. 3' OWNER'S BEDROOM EXTENSION - FOUNDATION PLAN

1/8" = 1'-0"

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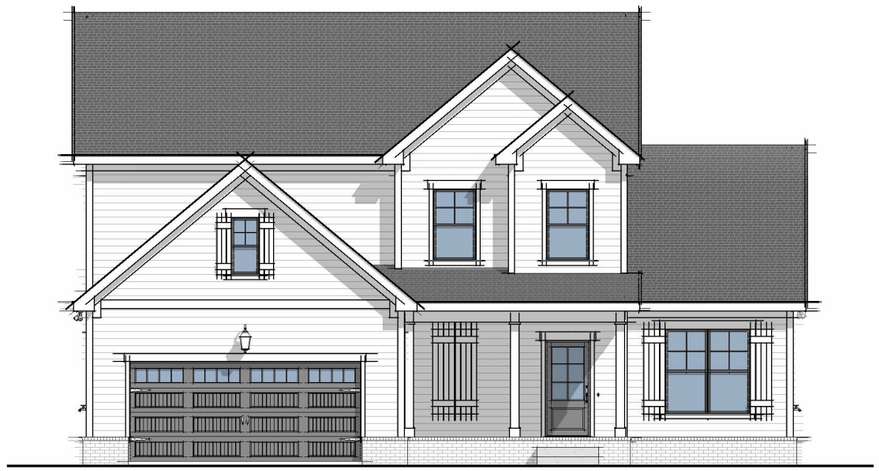
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

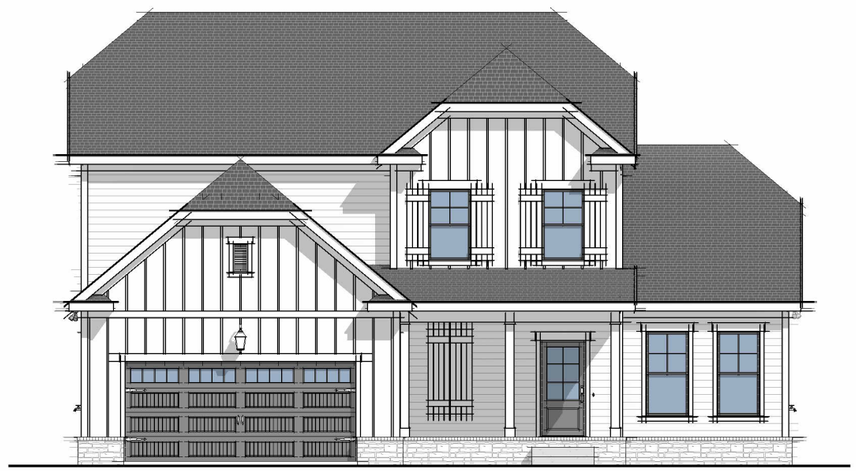
SHEET NO.

SF7.00



ELEVATION A

3/32" = 1'-0"



ELEVATION B

3/32" = 1'-0"



ELEVATION C

3/32" = 1'-0"



ELEVATION D

3/32" = 1'-0"

REVISION LOG

SHEET LIST

NO.	TITLE
A0.00	COVER SHEET
A1.00	ELEVATION A - FIRST FLOOR PLAN
A1.01	ELEVATION A - SECOND FLOOR PLAN
A1.02	ELEVATION A - EXTERIOR ELEVATIONS
A1.03	ELEVATION A - EXTERIOR ELEVATIONS
A1.04	ELEVATION A - ROOF PLAN
A2.00	ELEVATION B - PARTIAL FLOOR PLANS
A2.01	ELEVATION B - EXTERIOR ELEVATIONS
A2.02	ELEVATION B - EXTERIOR ELEVATIONS
A2.03	ELEVATION B - ROOF PLAN
A3.00	ELEVATION C - PARTIAL FLOOR PLANS
A3.01	ELEVATION C - EXTERIOR ELEVATIONS
A3.02	ELEVATION C - EXTERIOR ELEVATIONS
A3.03	ELEVATION C - ROOF PLAN
A4.00	ELEVATION D - PARTIAL FLOOR PLANS
A4.01	ELEVATION D - EXTERIOR ELEVATIONS
A4.02	ELEVATION D - EXTERIOR ELEVATIONS
A4.03	ELEVATION D - ROOF PLAN
A7.00	PLAN OPTIONS
A7.01	PLAN OPTIONS
A7.02	PLAN OPTIONS
A7.03	PLAN OPTIONS
A7.04	PLAN OPTIONS
A7.05	PLAN OPTIONS
A7.06	PLAN OPTIONS
A7.07	PLAN OPTIONS
AD1.00	DETAILS
AI1.00	INTERIOR ELEVATIONS
AI1.01	INTERIOR ELEVATIONS
E1.00	ELEVATION A - FIRST FLOOR ELECTRICAL PLAN
E1.01	ELEVATION A - SECOND FLOOR ELECTRICAL PLAN
E2.00	ELEVATION B - PARTIAL ELECTRICAL PLANS
E3.00	ELEVATION C - PARTIAL ELECTRICAL PLANS
E4.00	ELEVATION D - PARTIAL ELECTRICAL PLANS
E7.00	PLAN OPTIONS
E7.01	PLAN OPTIONS
SF1.00	FOUNDATION - ELEVATION A
SF7.00	PLAN OPTIONS

PLAN OPTIONS

ELEVATION A	36" COOKTOP RANGE W/ BUMP OUT & VENT HOOD ABOVE	SHELVES @ BATH 3
ELEVATION B	ISLAND MICROWAVE	
ELEVATION C	DOUBLE OVEN	
ELEVATION D	SLIDER @ GREAT ROOM	
3 CAR GARAGE	BUILT-INS @ FIREPLACE	
SIDE ENTRY GARAGE	DINING ILO STUDY	
FIREPLACE @ COVERED PORCH	DOOR @ LAUNDRY	
3' EXPANDED DINING ROOM	CABINETS @ LAUNDRY	
FRONT DOOR CRAFTSMAN DOOR	FRIDGE @ LAUNDRY	
FRONT DOOR SIDELIGHT	SHOWER SEAT @ OWNER'S BATH	
FRONT DOOR TRANSOM	FREESTANDING TUB ILO DROP IN TUB	
CHEF'S KITCHEN	BONUS ROOM	

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PLAN NO.

3160

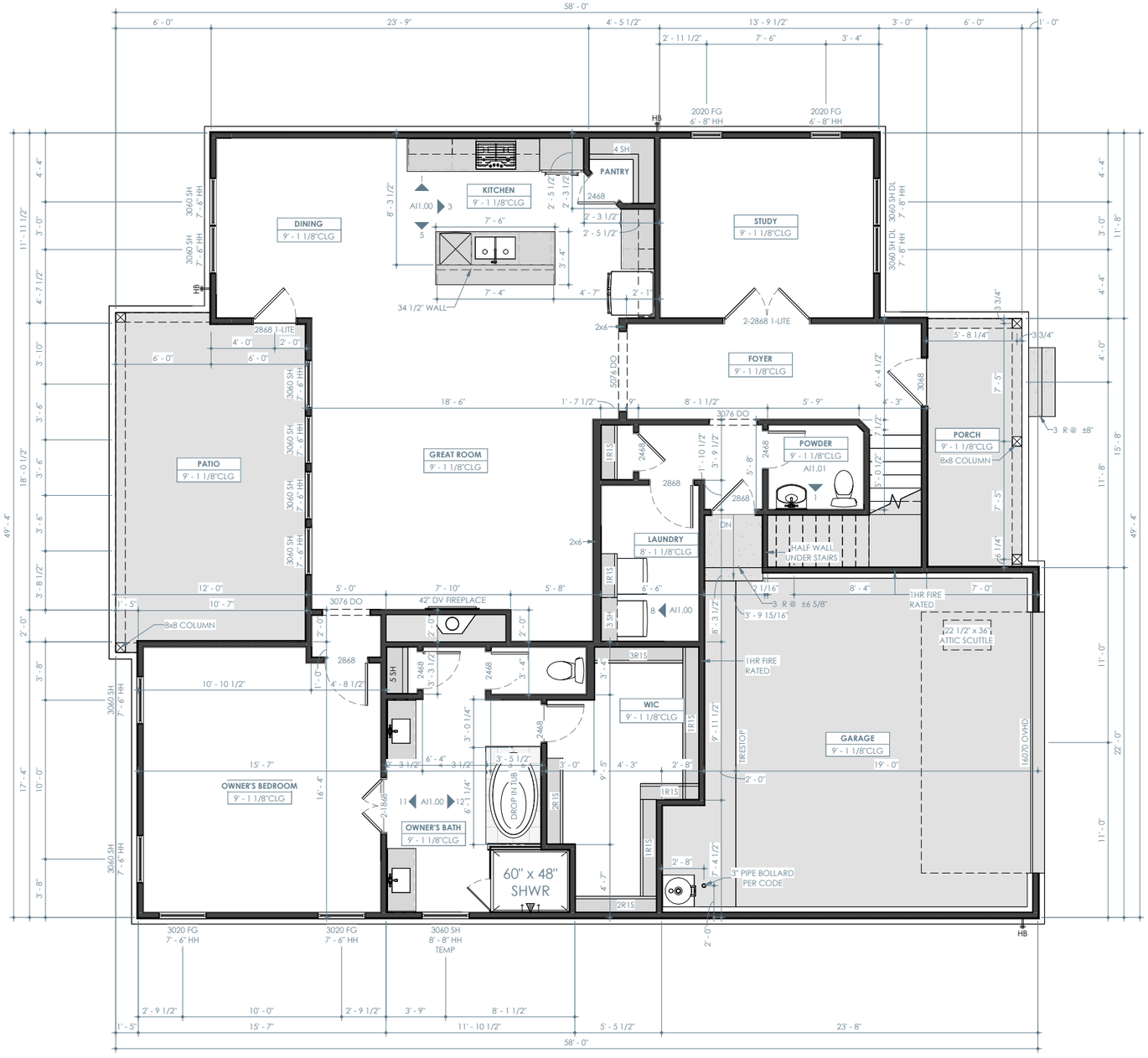
ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	As indicated

SHEET NAME

COVER SHEET

SHEET NO.

A0.00



ELEVATION A - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION A - A/C LIVING	
Not Placed	0 SF
FIRST FLOOR	1624 SF
SECOND FLOOR	1269 SF
TOTAL	2893 SF

ELEVATION A - LIVING	
FIRST FLOOR	1802 SF
SECOND FLOOR	1403 SF
TOTAL	3205 SF

TOTAL UNDER ROOF	4041 SF

ELEVATION A - NON-LIVING	
GARAGE	496 SF
PORCH	94 SF
PATIO	245 SF
TOTAL	836 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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PLAN NO.

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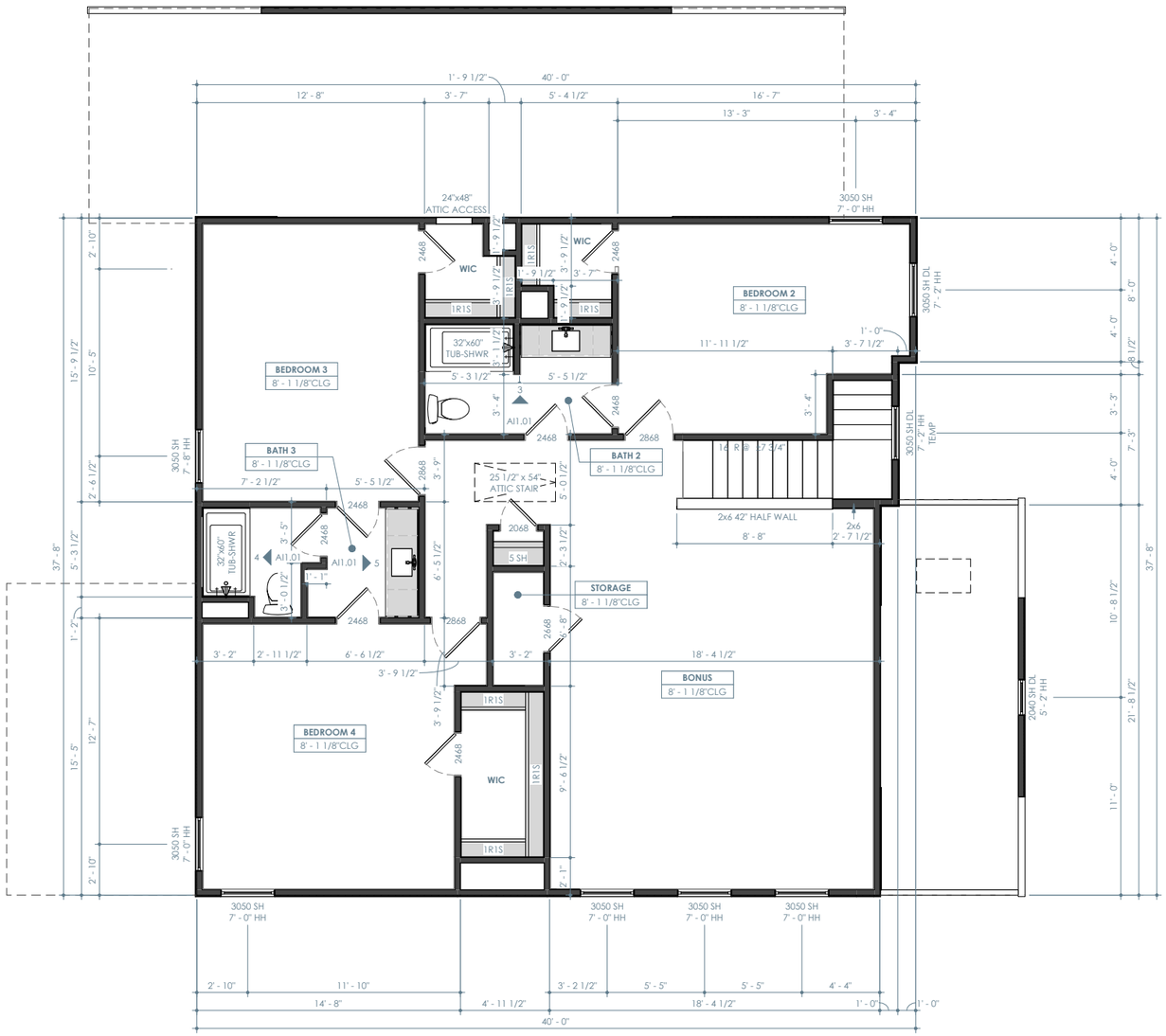
ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - FIRST FLOOR PLAN

SHEET NO.

A1.00



ELEVATION A - SECOND FLOOR PLAN

1/8" = 1'-0"

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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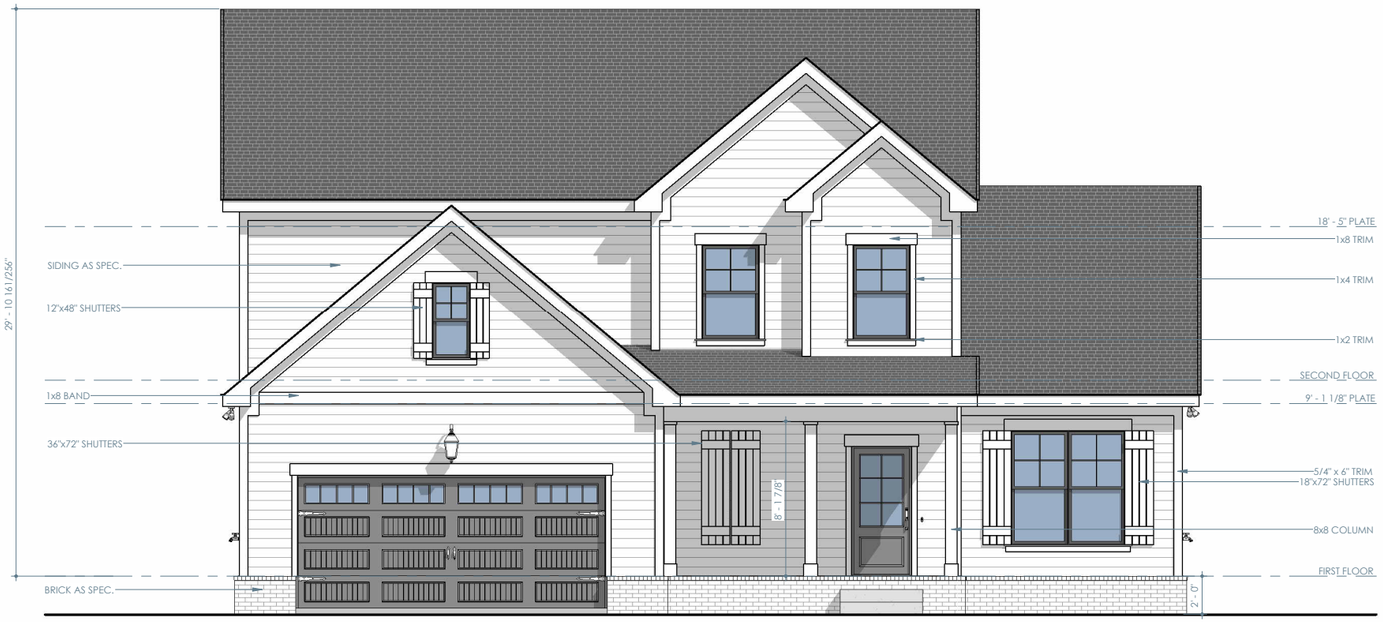
ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - SECOND FLOOR PLAN

SHEET NO.

A1.01



ELEVATION A - FRONT

1/8" = 1'-0"



ELEVATION A - REAR

1/8" = 1'-0"

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ISSUE DATE	03/08/2024
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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - EXTERIOR ELEVATIONS

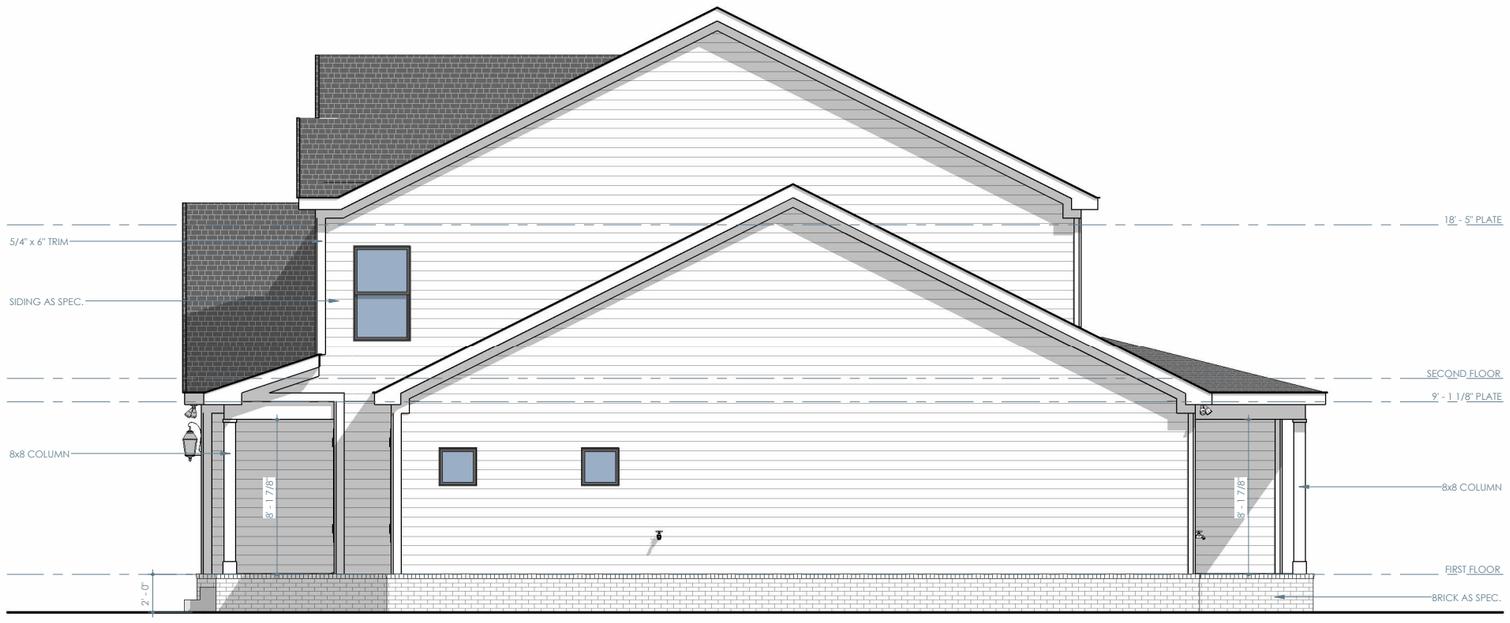
SHEET NO.

A1.02



ELEVATION A - LEFT

1/8" = 1'-0"



ELEVATION A - RIGHT

1/8" = 1'-0"

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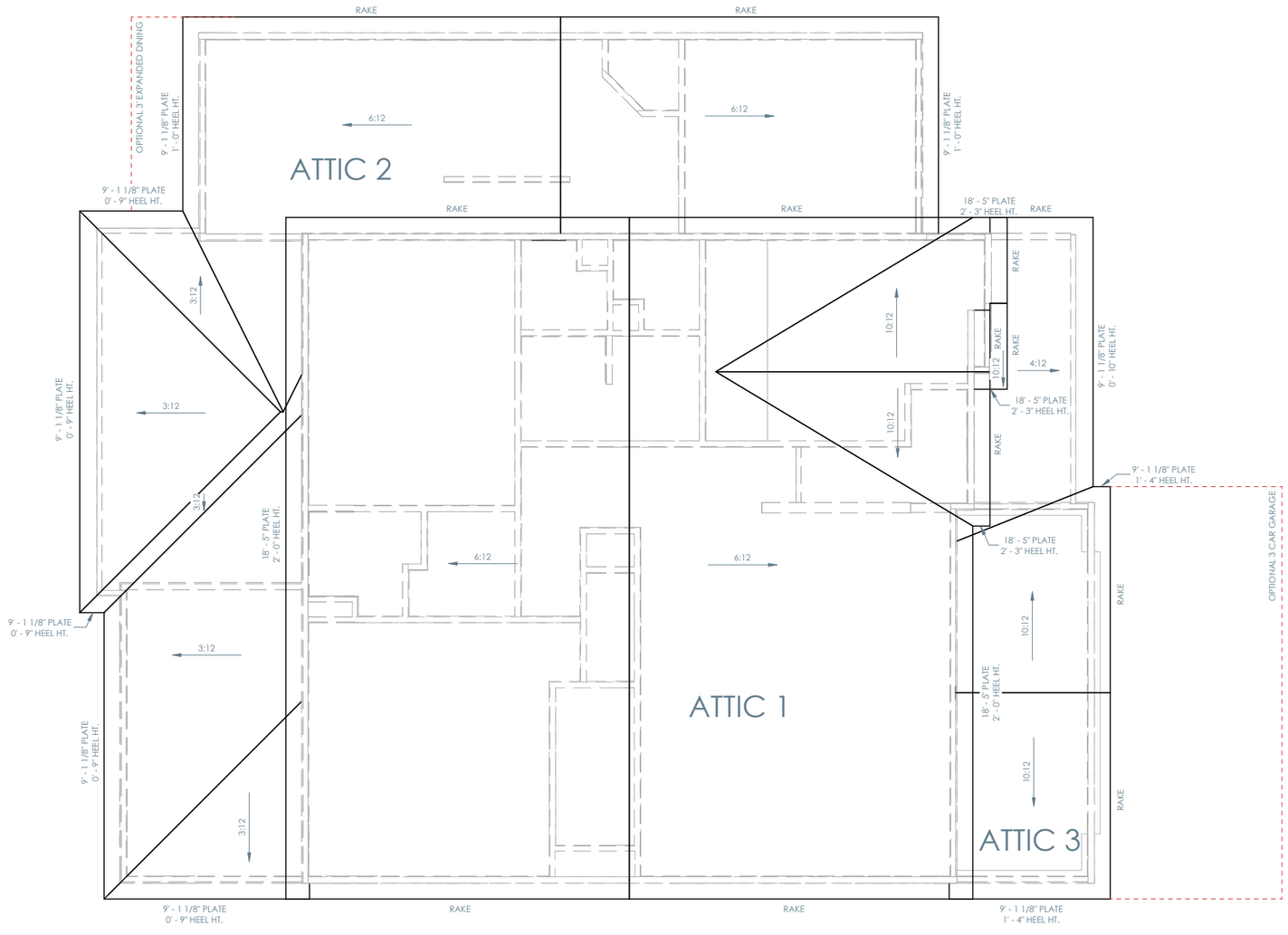
ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - EXTERIOR ELEVATIONS

SHEET NO.

A1.03



ELEVATION A - ROOF PLAN

1/8" = 1'-0"

ATTIC VENTILATION - ATTIC 1

ATTIC AREA (FT²)	1381
REQUIRED ATTIC VENTILATION (IN²)	663
REQUIRED LOWER VENTILATION (IN²)	332
REQUIRED UPPER VENTILATION (IN²)	331

NUMBER OF VENTS

AIRHAWK 50 - LOWER (50 NFA)	0
AIRHAWK 50 - UPPER (50 NFA)	0
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
PERFORATED SOFFIT VENT (9 NFA) PER LF	62 LF
RIDGE VENT (18 NFA) PER LF	24 LF
OFF RIDGE VENT (35 NFA) PER LF	0 LF

VENTILATION PROVIDED

TOTAL LOWER VENTILATION (IN²)	558 NFA
TOTAL UPPER VENTILATION (IN²)	432 NFA

ATTIC VENTILATION - ATTIC 2

ATTIC AREA (FT²)	864
REQUIRED ATTIC VENTILATION (IN²)	415
REQUIRED LOWER VENTILATION (IN²)	208
REQUIRED UPPER VENTILATION (IN²)	207

NUMBER OF VENTS

AIRHAWK 50 - LOWER (50 NFA)	0
AIRHAWK 50 - UPPER (50 NFA)	4
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
PERFORATED SOFFIT VENT (9 NFA) PER LF	77 LF
RIDGE VENT (18 NFA) PER LF	4 LF
OFF RIDGE VENT (35 NFA) PER LF	0 LF

VENTILATION PROVIDED

TOTAL LOWER VENTILATION (IN²)	693 NFA
TOTAL UPPER VENTILATION (IN²)	272 NFA

ATTIC VENTILATION - ATTIC 3

ATTIC AREA (FT²)	219
REQUIRED ATTIC VENTILATION (IN²)	106
REQUIRED LOWER VENTILATION (IN²)	53
REQUIRED UPPER VENTILATION (IN²)	53

NUMBER OF VENTS

AIRHAWK 50 - LOWER (50 NFA)	0
AIRHAWK 50 - UPPER (50 NFA)	2
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
PERFORATED SOFFIT VENT (9 NFA) PER LF	24 LF
RIDGE VENT (18 NFA) PER LF	0 LF
OFF RIDGE VENT (35 NFA) PER LF	0 LF

VENTILATION PROVIDED

TOTAL LOWER VENTILATION (IN²)	216 NFA
TOTAL UPPER VENTILATION (IN²)	100 NFA

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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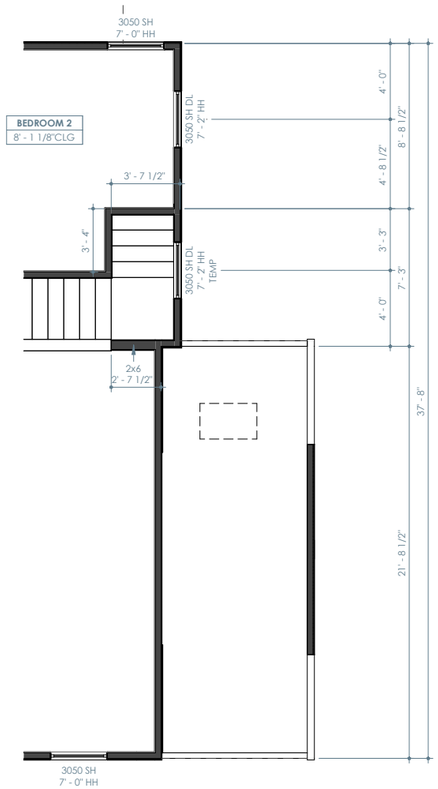
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - ROOF PLAN

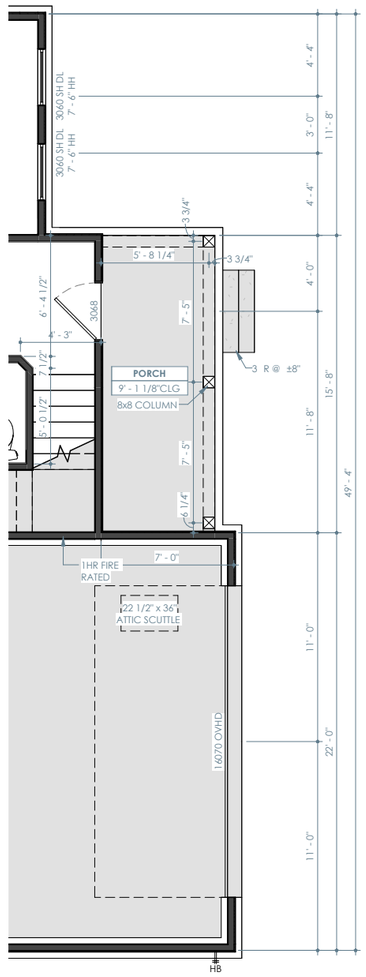
SHEET NO.

A1.04



ELEVATION B - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION B - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION B - LIVING	
FIRST FLOOR	1802 SF
SECOND FLOOR	1395 SF
TOTAL	3197 SF

ELEVATION B - NON-LIVING	
GARAGE	496 SF
PORCH	94 SF
PATIO	245 SF
TOTAL	836 SF

TOTAL UNDER ROOF	4033 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

Brightland HOMES

PROJECT NAME

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PLAN NO.

3160

ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - PARTIAL FLOOR PLANS

SHEET NO.

A2.00



ELEVATION B - FRONT

1/8" = 1'-0"



ELEVATION B - REAR

1/8" = 1'-0"

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PLAN NO.

3160

ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - EXTERIOR ELEVATIONS

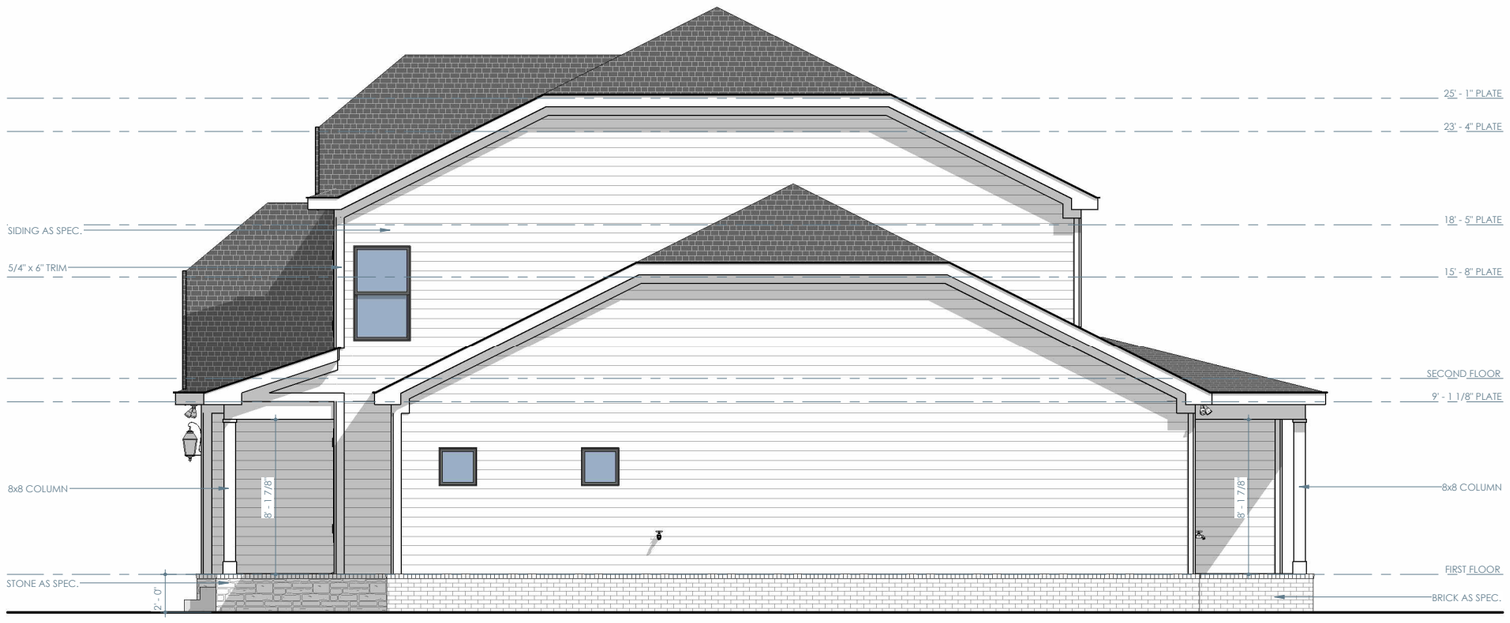
SHEET NO.

A2.01



ELEVATION B - LEFT

1/8" = 1'-0"



ELEVATION B - RIGHT

1/8" = 1'-0"

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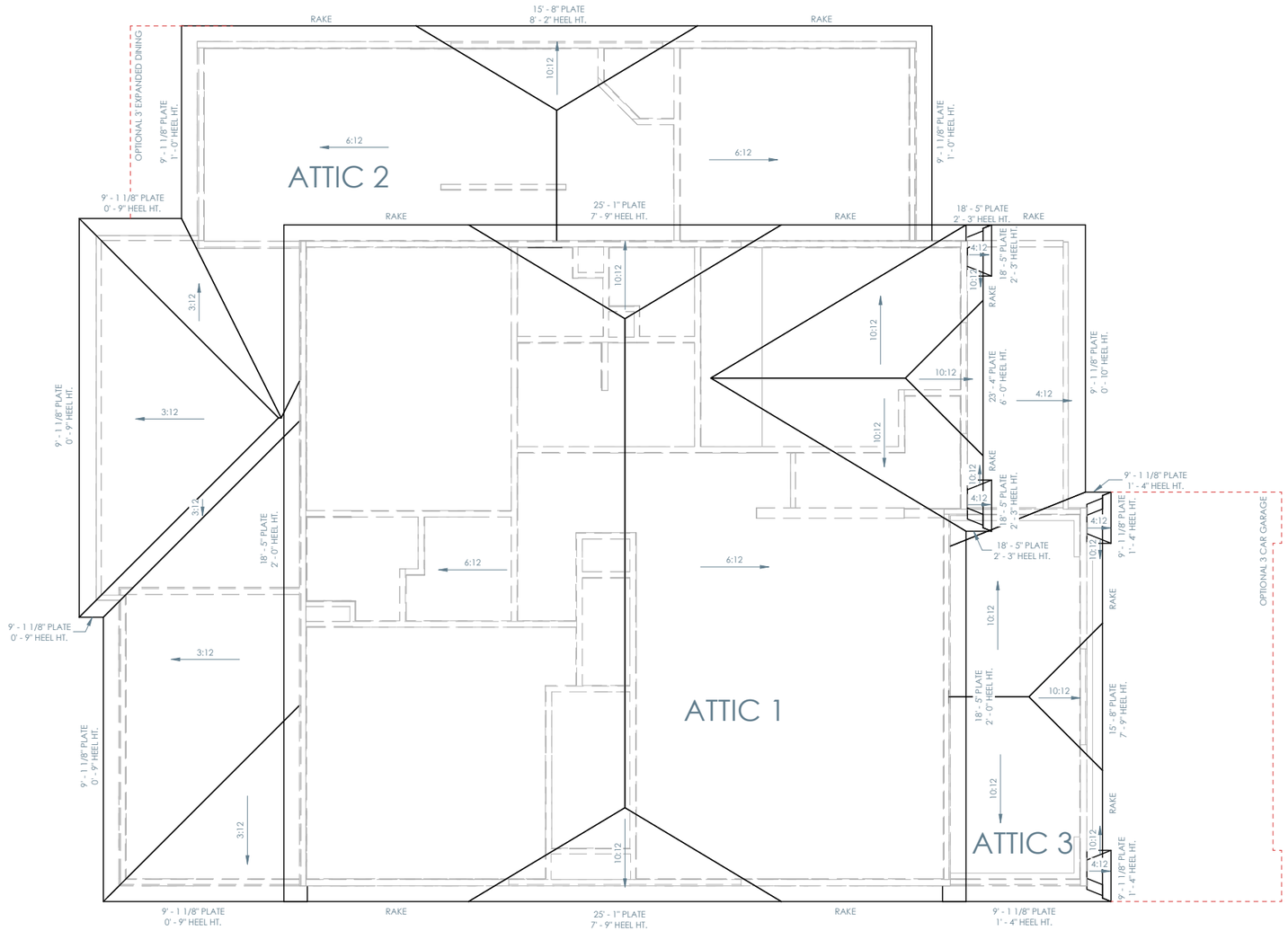
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - EXTERIOR ELEVATIONS

SHEET NO.

A2.02



ELEVATION B - ROOF PLAN

1/8" = 1'-0"

ATTIC VENTILATION - ATTIC 1

ATTIC AREA (FT²)	1381
REQUIRED ATTIC VENTILATION (IN²)	663
REQUIRED LOWER VENTILATION (IN²)	332
REQUIRED UPPER VENTILATION (IN²)	331

NUMBER OF VENTS

AIRHAWK 50 - LOWER (50 NFA)	0
AIRHAWK 50 - UPPER (50 NFA)	0
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
PERFORATED SOFFIT VENT (9 NFA) PER LF	62 LF
RIDGE VENT (18 NFA) PER LF	24 LF
OFF RIDGE VENT (35 NFA) PER LF	0 LF

VENTILATION PROVIDED

TOTAL LOWER VENTILATION (IN²)	558 NFA
TOTAL UPPER VENTILATION (IN²)	432 NFA

ATTIC VENTILATION - ATTIC 2

ATTIC AREA (FT²)	864
REQUIRED ATTIC VENTILATION (IN²)	415
REQUIRED LOWER VENTILATION (IN²)	208
REQUIRED UPPER VENTILATION (IN²)	207

NUMBER OF VENTS

AIRHAWK 50 - LOWER (50 NFA)	0
AIRHAWK 50 - UPPER (50 NFA)	4
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
PERFORATED SOFFIT VENT (9 NFA) PER LF	77 LF
RIDGE VENT (18 NFA) PER LF	4 LF
OFF RIDGE VENT (35 NFA) PER LF	0 LF

VENTILATION PROVIDED

TOTAL LOWER VENTILATION (IN²)	693 NFA
TOTAL UPPER VENTILATION (IN²)	272 NFA

ATTIC VENTILATION - ATTIC 3

ATTIC AREA (FT²)	219
REQUIRED ATTIC VENTILATION (IN²)	106
REQUIRED LOWER VENTILATION (IN²)	53
REQUIRED UPPER VENTILATION (IN²)	53

NUMBER OF VENTS

AIRHAWK 50 - LOWER (50 NFA)	0
AIRHAWK 50 - UPPER (50 NFA)	2
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
PERFORATED SOFFIT VENT (9 NFA) PER LF	24 LF
RIDGE VENT (18 NFA) PER LF	0 LF
OFF RIDGE VENT (35 NFA) PER LF	0 LF

VENTILATION PROVIDED

TOTAL LOWER VENTILATION (IN²)	216 NFA
TOTAL UPPER VENTILATION (IN²)	100 NFA

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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ISSUE DATE	03/08/2024
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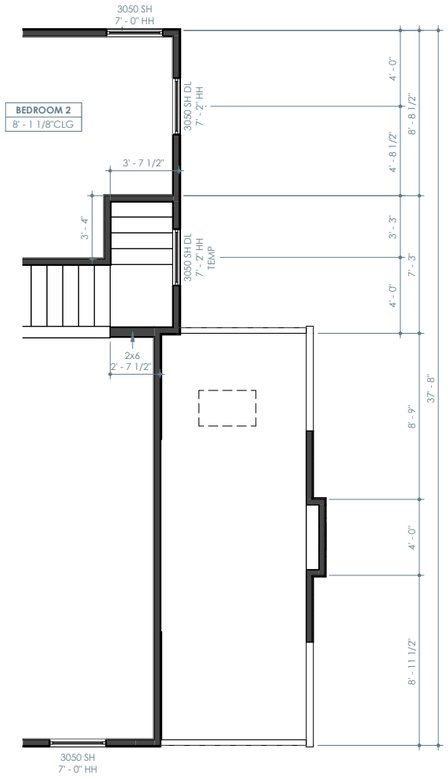
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - ROOF PLAN

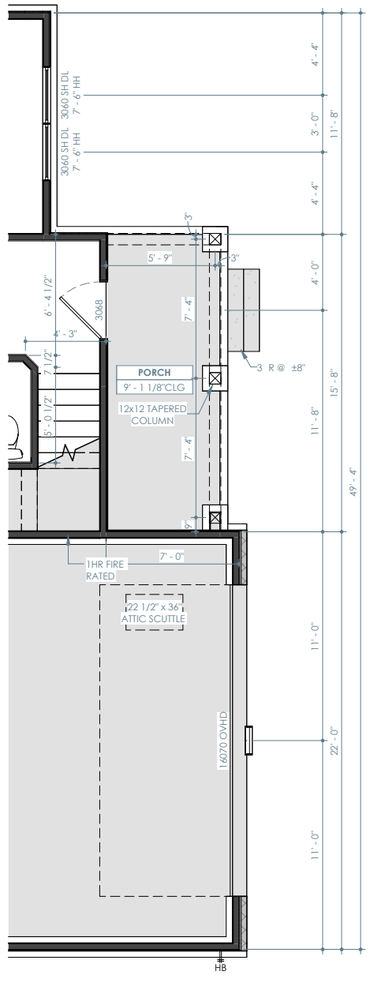
SHEET NO.

A2.03



ELEVATION C - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION C - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION C - LIVING	
FIRST FLOOR	1802 SF
SECOND FLOOR	1395 SF
TOTAL	3197 SF

ELEVATION C - NON-LIVING	
GARAGE	496 SF
PORCH	94 SF
PATIO	245 SF
TOTAL	836 SF

TOTAL UNDER ROOF	4033 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
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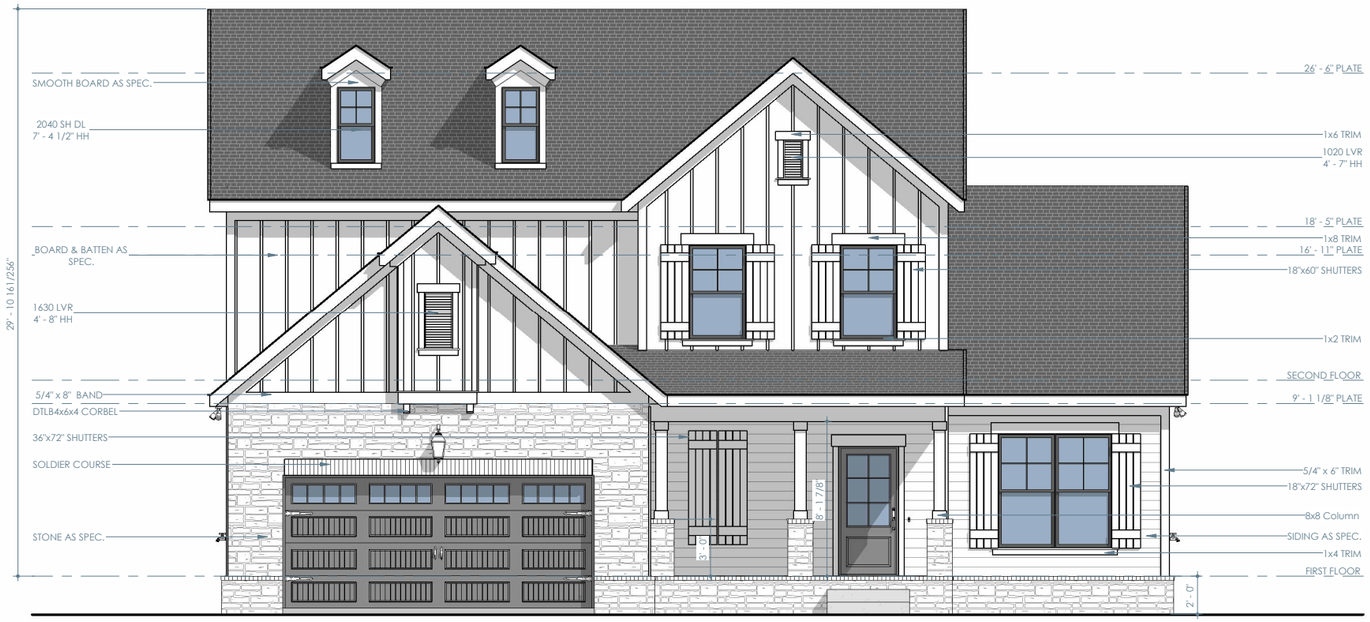
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - PARTIAL FLOOR PLANS

SHEET NO.

A3.00



ELEVATION C - FRONT

1/8" = 1'-0"



ELEVATION C - REAR

1/8" = 1'-0"

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DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - EXTERIOR ELEVATIONS

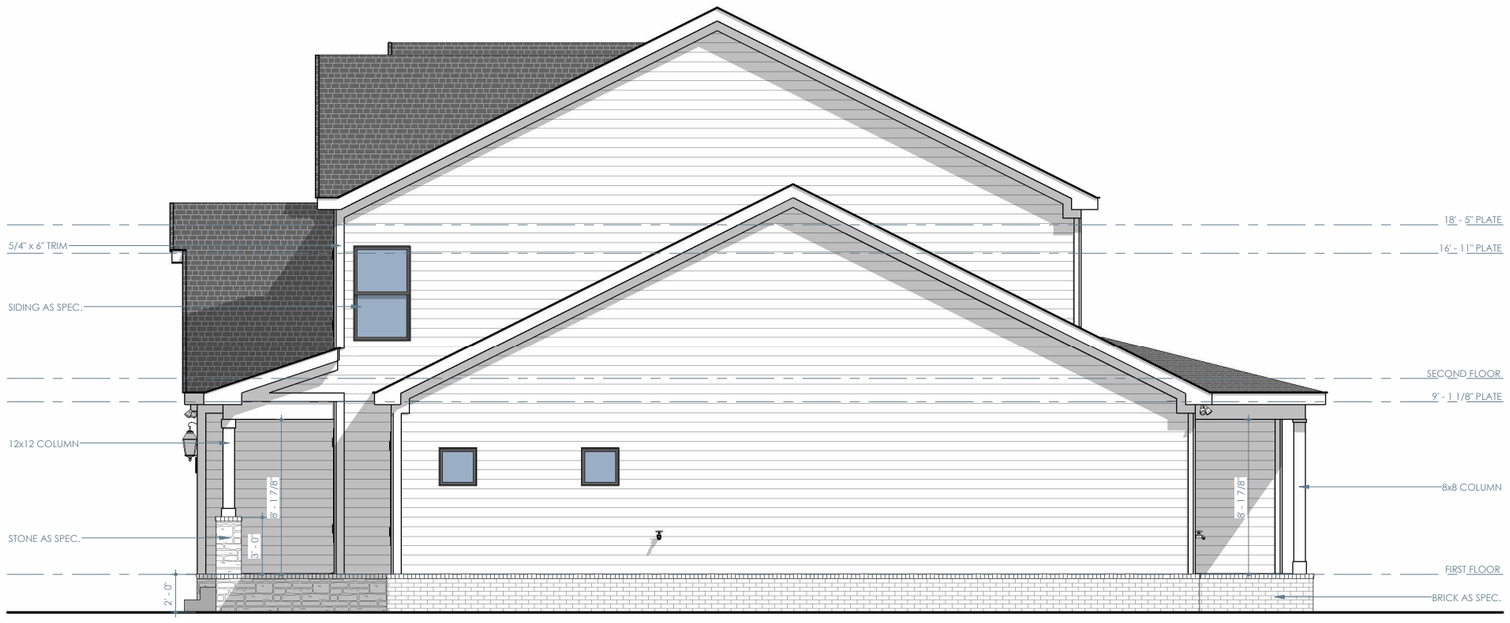
SHEET NO.

A3.01



ELEVATION C - LEFT

1/8" = 1'-0"



ELEVATION C - RIGHT

1/8" = 1'-0"

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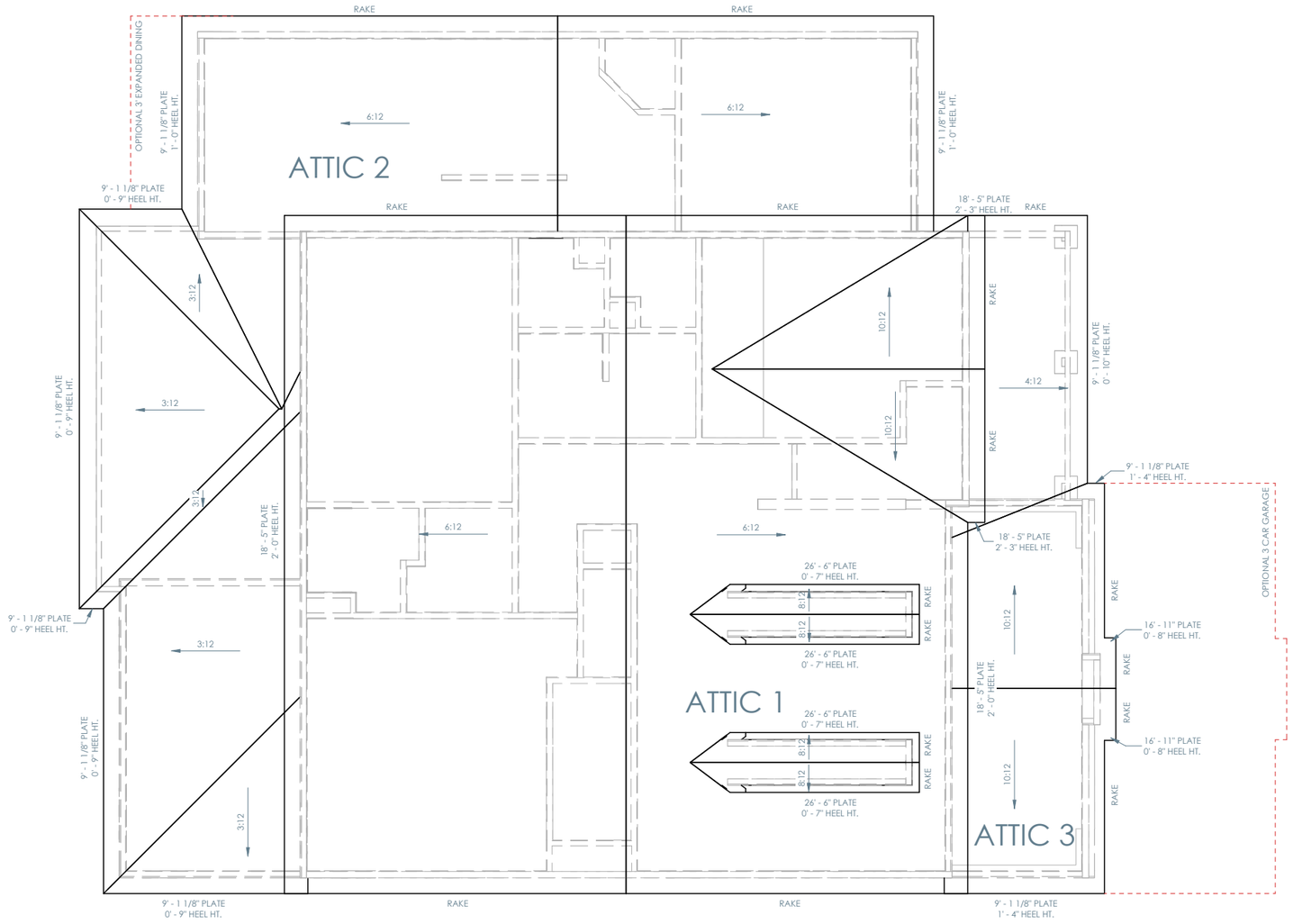
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - EXTERIOR ELEVATIONS

SHEET NO.

A3.02



ELEVATION C - ROOF PLAN

1/8" = 1'-0"

ATTIC VENTILATION - ATTIC 1

ATTIC AREA (FT²)	1381
REQUIRED ATTIC VENTILATION (IN²)	663
REQUIRED LOWER VENTILATION (IN²)	332
REQUIRED UPPER VENTILATION (IN²)	331

NUMBER OF VENTS

AIRHAWK 50 - LOWER (50 NFA)	0
AIRHAWK 50 - UPPER (50 NFA)	0
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
PERFORATED SOFFIT VENT (9 NFA) PER LF	62 LF
RIDGE VENT (18 NFA) PER LF	24 LF
OFF RIDGE VENT (35 NFA) PER LF	0 LF

VENTILATION PROVIDED

TOTAL LOWER VENTILATION (IN²)	558 NFA
TOTAL UPPER VENTILATION (IN²)	432 NFA

ATTIC VENTILATION - ATTIC 2

ATTIC AREA (FT²)	864
REQUIRED ATTIC VENTILATION (IN²)	415
REQUIRED LOWER VENTILATION (IN²)	208
REQUIRED UPPER VENTILATION (IN²)	207

NUMBER OF VENTS

AIRHAWK 50 - LOWER (50 NFA)	0
AIRHAWK 50 - UPPER (50 NFA)	4
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
PERFORATED SOFFIT VENT (9 NFA) PER LF	77 LF
RIDGE VENT (18 NFA) PER LF	4 LF
OFF RIDGE VENT (35 NFA) PER LF	0 LF

VENTILATION PROVIDED

TOTAL LOWER VENTILATION (IN²)	693 NFA
TOTAL UPPER VENTILATION (IN²)	272 NFA

ATTIC VENTILATION - ATTIC 3

ATTIC AREA (FT²)	219
REQUIRED ATTIC VENTILATION (IN²)	106
REQUIRED LOWER VENTILATION (IN²)	53
REQUIRED UPPER VENTILATION (IN²)	53

NUMBER OF VENTS

AIRHAWK 50 - LOWER (50 NFA)	0
AIRHAWK 50 - UPPER (50 NFA)	2
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
PERFORATED SOFFIT VENT (9 NFA) PER LF	24 LF
RIDGE VENT (18 NFA) PER LF	0 LF
OFF RIDGE VENT (35 NFA) PER LF	0 LF

VENTILATION PROVIDED

TOTAL LOWER VENTILATION (IN²)	216 NFA
TOTAL UPPER VENTILATION (IN²)	100 NFA

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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ISSUE DATE	03/08/2024
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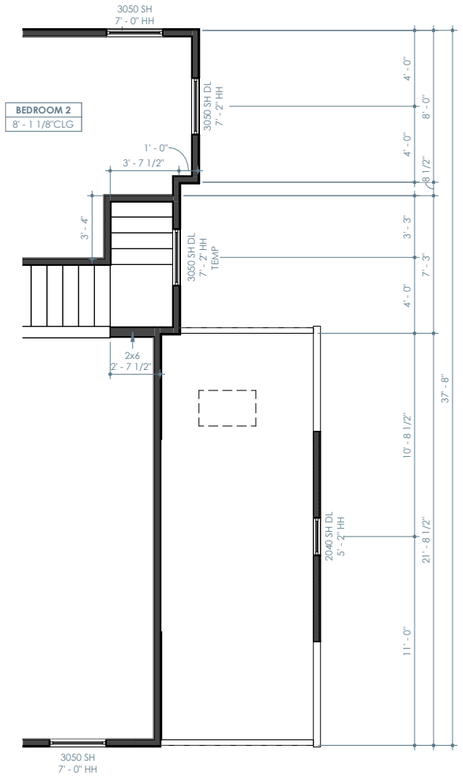
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - ROOF PLAN

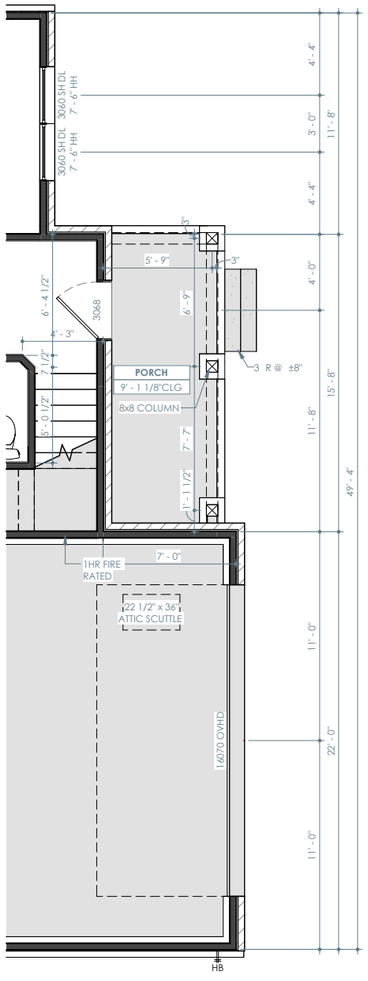
SHEET NO.

A3.03



ELEVATION D - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION D - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION D - LIVING

FIRST FLOOR	1815 SF
SECOND FLOOR	1403 SF
TOTAL	3218 SF

ELEVATION D - NON-LIVING

GARAGE	510 SF
PORCH	84 SF
PATIO	245 SF
TOTAL	840 SF

TOTAL UNDER ROOF	4058 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - PARTIAL FLOOR PLANS

SHEET NO.

A4.00



ELEVATION D - FRONT

1/8" = 1'-0"



ELEVATION D - REAR

1/8" = 1'-0"

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DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - EXTERIOR ELEVATIONS

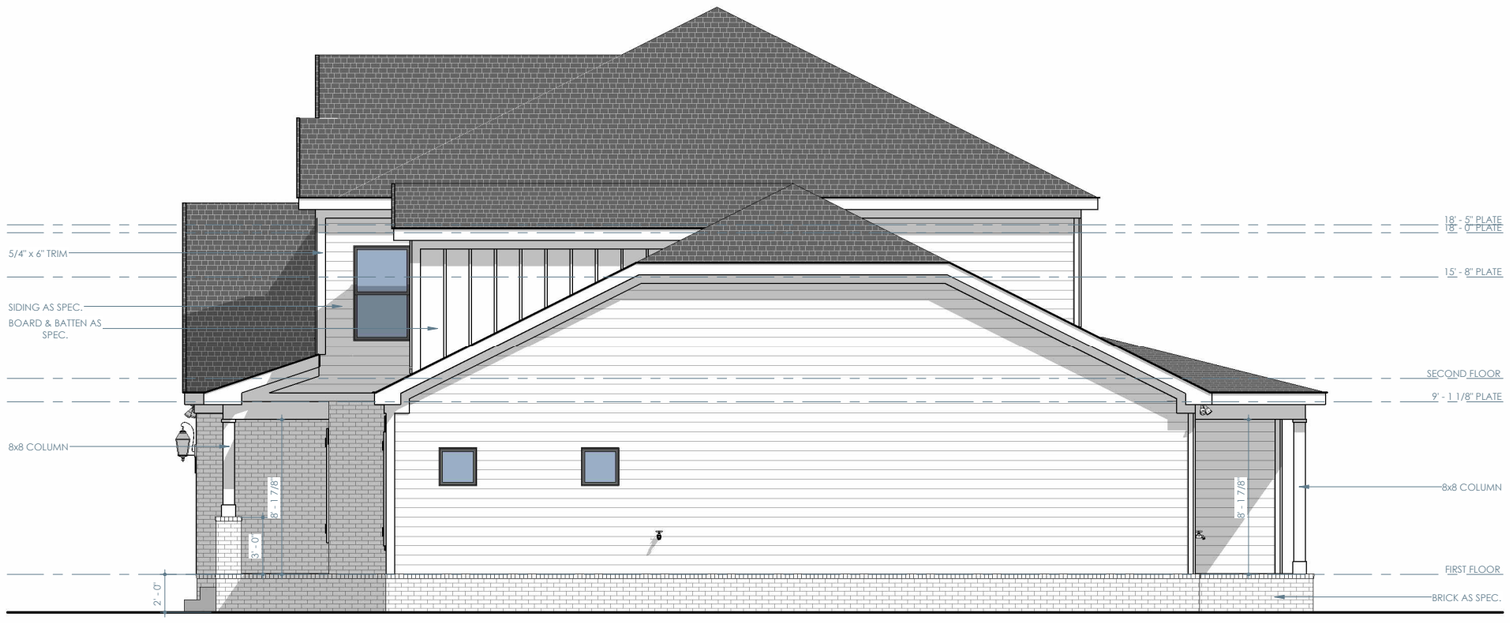
SHEET NO.

A4.01



ELEVATION D - LEFT

1/8" = 1'-0"



ELEVATION D - RIGHT

1/8" = 1'-0"

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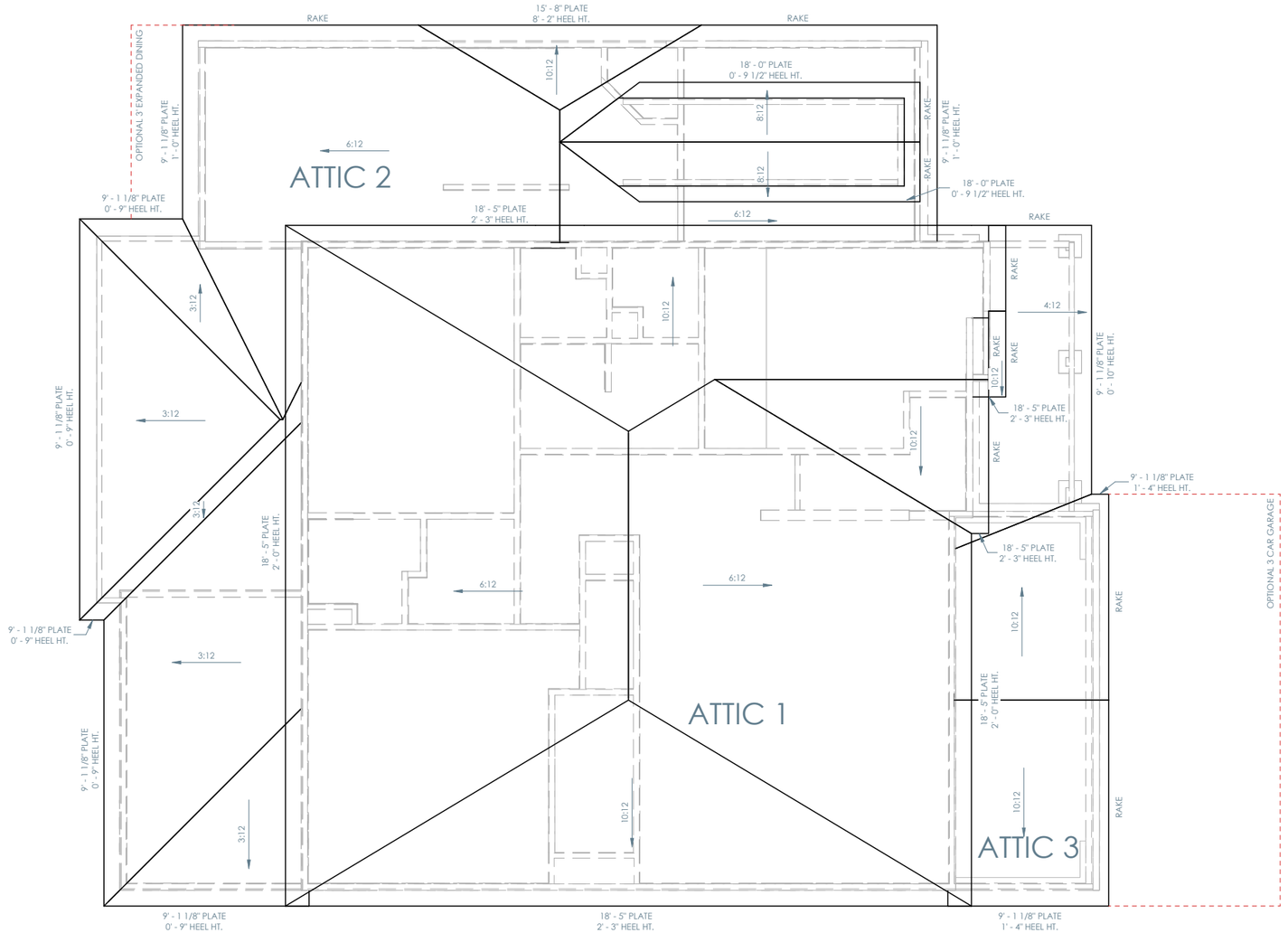
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - EXTERIOR ELEVATIONS

SHEET NO.

A4.02



ELEVATION D - ROOF PLAN

1/8" = 1'-0"

ATTIC VENTILATION - ATTIC 1

ATTIC AREA (FT²)	1381
REQUIRED ATTIC VENTILATION (IN²)	663
REQUIRED LOWER VENTILATION (IN²)	332
REQUIRED UPPER VENTILATION (IN²)	331

NUMBER OF VENTS

AIRHAWK 50 - LOWER (50 NFA)	0
AIRHAWK 50 - UPPER (50 NFA)	0
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
PERFORATED SOFFIT VENT (9 NFA) PER LF	62 LF
RIDGE VENT (18 NFA) PER LF	24 LF
OFF RIDGE VENT (35 NFA) PER LF	0 LF

VENTILATION PROVIDED

TOTAL LOWER VENTILATION (IN²)	558 NFA
TOTAL UPPER VENTILATION (IN²)	432 NFA

ATTIC VENTILATION - ATTIC 2

ATTIC AREA (FT²)	864
REQUIRED ATTIC VENTILATION (IN²)	415
REQUIRED LOWER VENTILATION (IN²)	208
REQUIRED UPPER VENTILATION (IN²)	207

NUMBER OF VENTS

AIRHAWK 50 - LOWER (50 NFA)	0
AIRHAWK 50 - UPPER (50 NFA)	4
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
PERFORATED SOFFIT VENT (9 NFA) PER LF	77 LF
RIDGE VENT (18 NFA) PER LF	4 LF
OFF RIDGE VENT (35 NFA) PER LF	0 LF

VENTILATION PROVIDED

TOTAL LOWER VENTILATION (IN²)	693 NFA
TOTAL UPPER VENTILATION (IN²)	272 NFA

ATTIC VENTILATION - ATTIC 3

ATTIC AREA (FT²)	219
REQUIRED ATTIC VENTILATION (IN²)	106
REQUIRED LOWER VENTILATION (IN²)	53
REQUIRED UPPER VENTILATION (IN²)	53

NUMBER OF VENTS

AIRHAWK 50 - LOWER (50 NFA)	0
AIRHAWK 50 - UPPER (50 NFA)	2
EDGE VENTS - LOWER (36 NFA)	0
ROSS 150 - UPPER (150 NFA)	0
PERFORATED SOFFIT VENT (9 NFA) PER LF	24 LF
RIDGE VENT (18 NFA) PER LF	0 LF
OFF RIDGE VENT (35 NFA) PER LF	0 LF

VENTILATION PROVIDED

TOTAL LOWER VENTILATION (IN²)	216 NFA
TOTAL UPPER VENTILATION (IN²)	100 NFA

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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PLAN NO.

3160

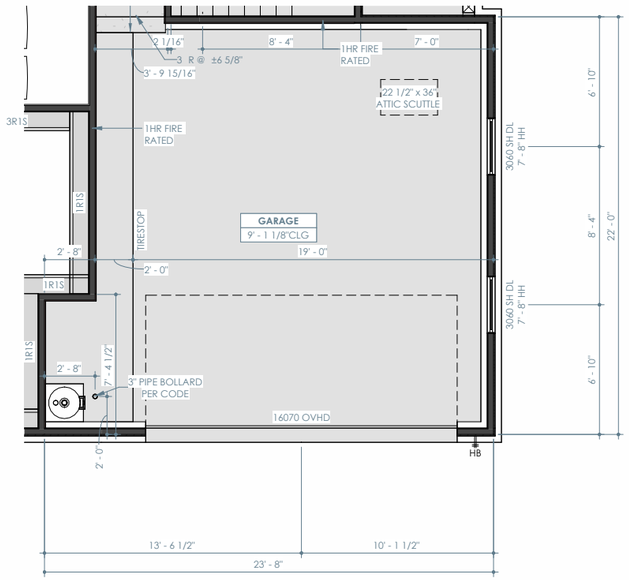
ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - ROOF PLAN

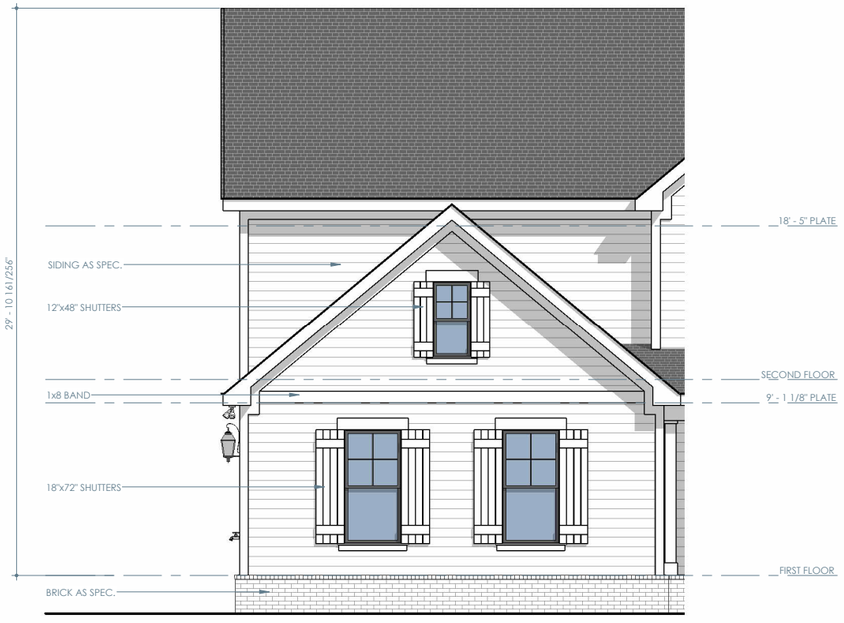
SHEET NO.

A4.03



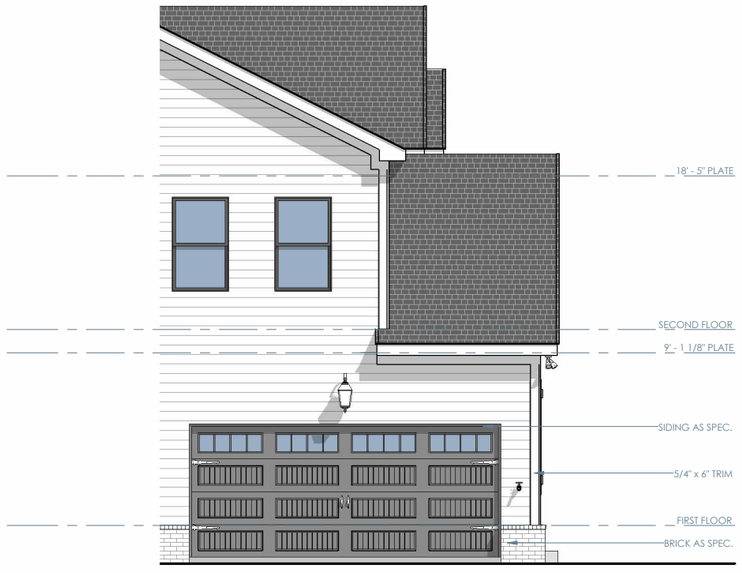
OPT. SIDE ENTRY GARAGE - FIRST FLOOR PLAN

1/8" = 1'-0"



ELEVATION A - OPT. SIDE ENTRY GARAGE - FRONT

1/8" = 1'-0"



ELEVATION A - OPT. SIDE ENTRY GARAGE - LEFT

1/8" = 1'-0"

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ISSUE DATE	03/08/2024
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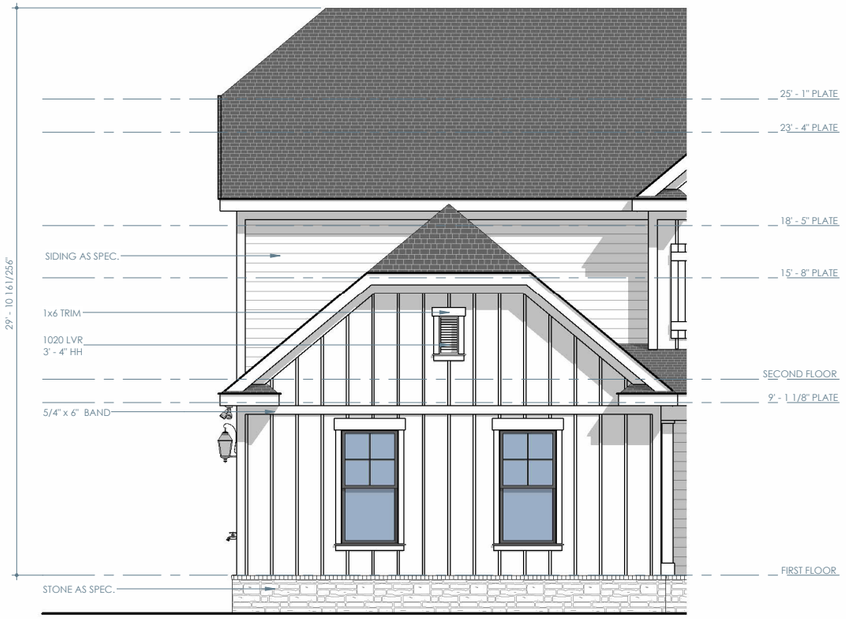
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

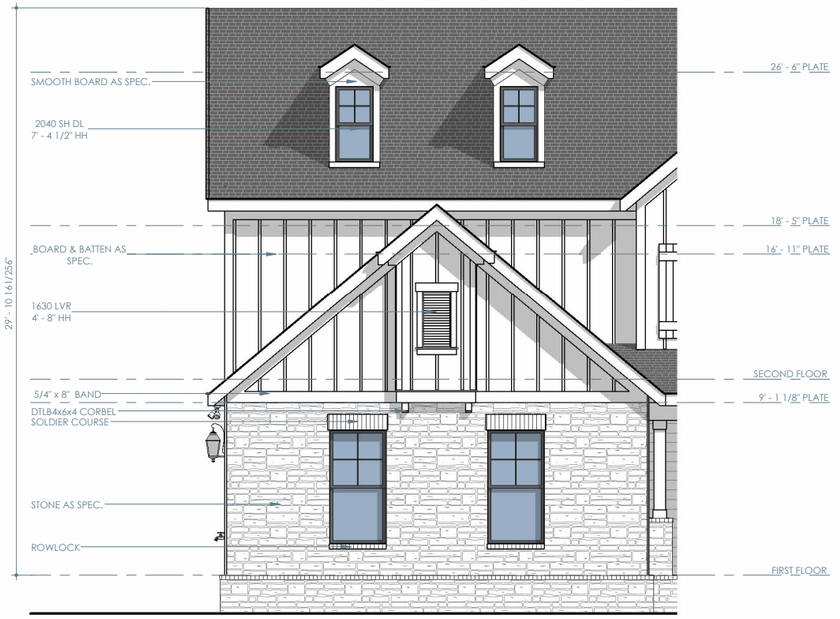
SHEET NO.

A7.00



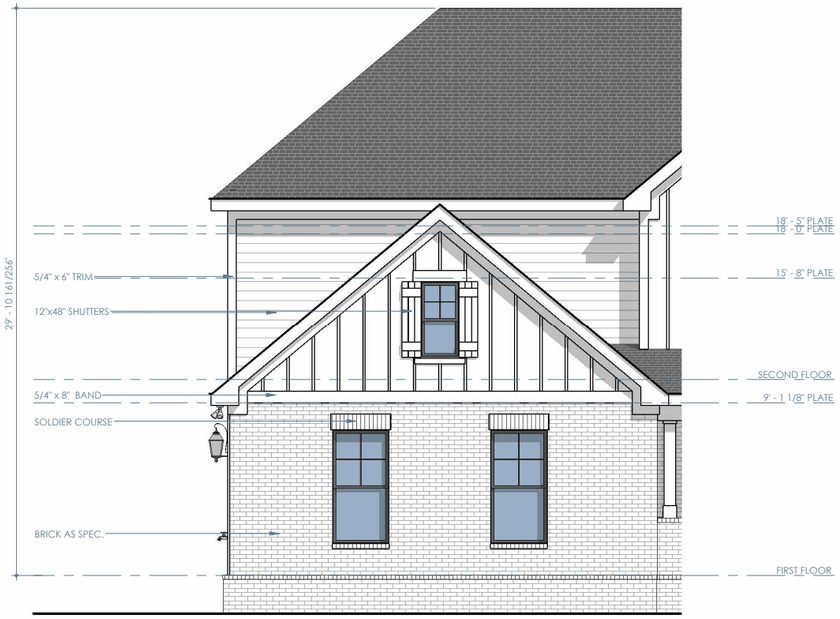
ELEVATION B - OPT. SIDE ENTRY GARAGE - FRONT

1/8" = 1'-0"



ELEVATION C - OPT. SIDE ENTRY GARAGE - FRONT

1/8" = 1'-0"



ELEVATION D - OPT. SIDE ENTRY GARAGE - FRONT

1/8" = 1'-0"

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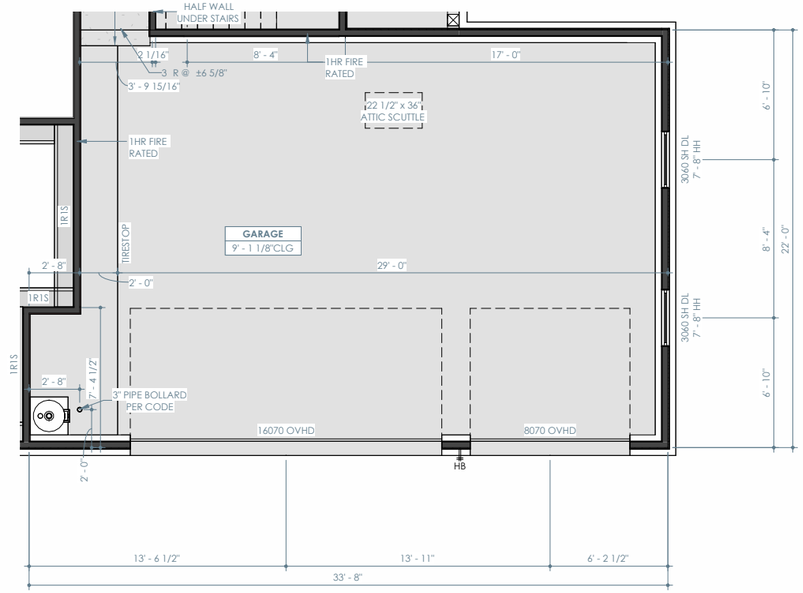
SHEET NAME

PLAN OPTIONS

SHEET NO.

A7.01



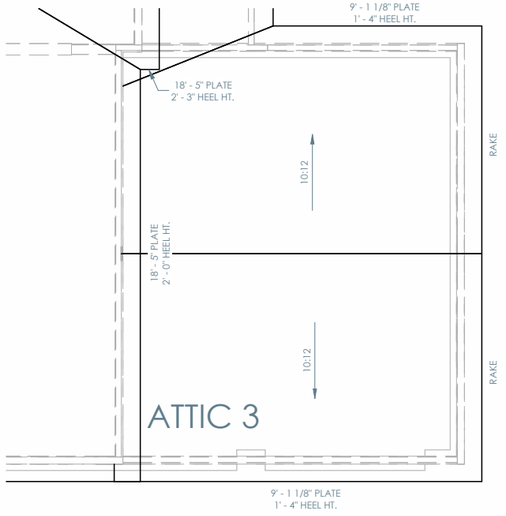
OPT. 3 CAR GARAGE - FIRST FLOOR PLAN

1/8" = 1'-0"



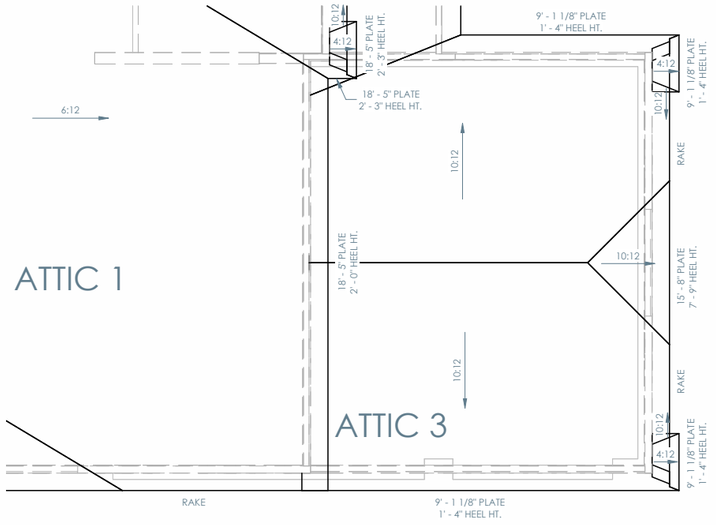
ELEVATION A - OPT. 3 CAR GARAGE - LEFT

1/8" = 1'-0"



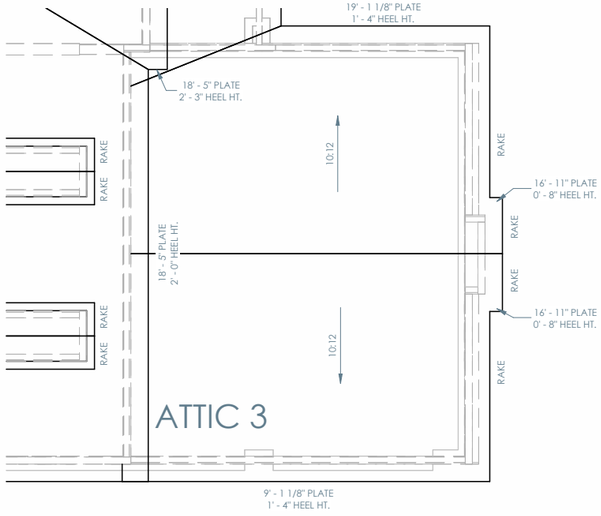
ELEVATION A - OPT. 3 CAR GARAGE - ROOF PLAN (SIMILAR FOR ELEVATION D)

1/8" = 1'-0"



ELEVATION B - OPT. 3 CAR GARAGE - ROOF PLAN

1/8" = 1'-0"



ELEVATION C - OPT. 3 CAR GARAGE - ROOF PLAN

1/8" = 1'-0"

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ISSUE DATE	03/08/2024
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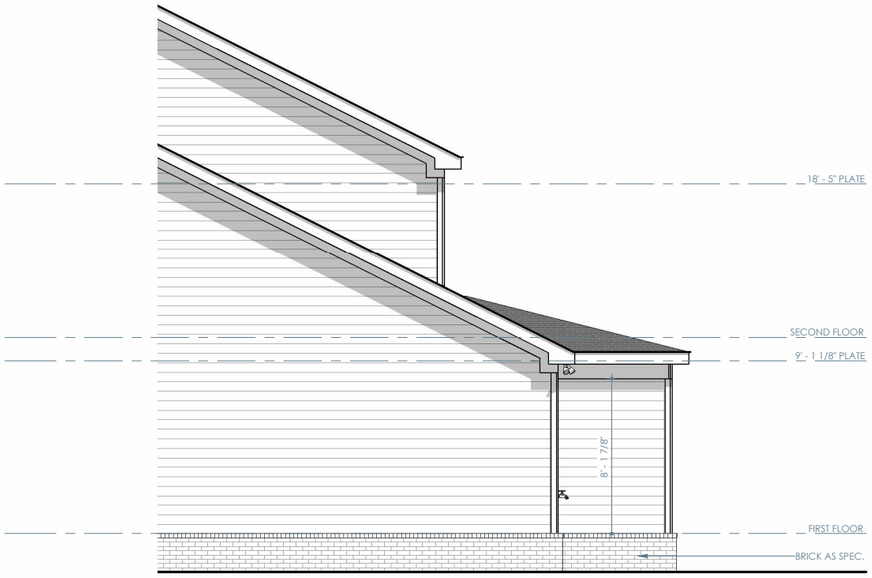
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

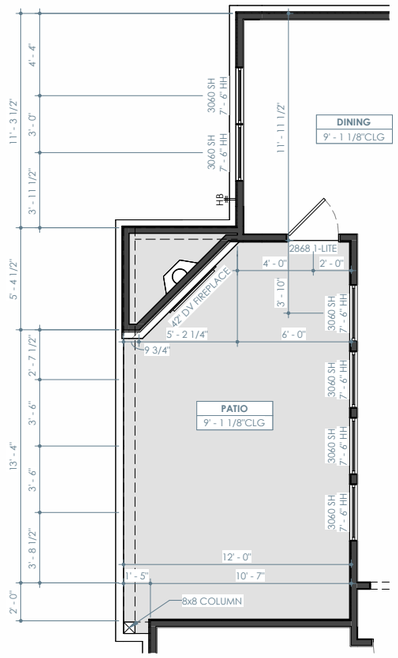
SHEET NO.

A7.02



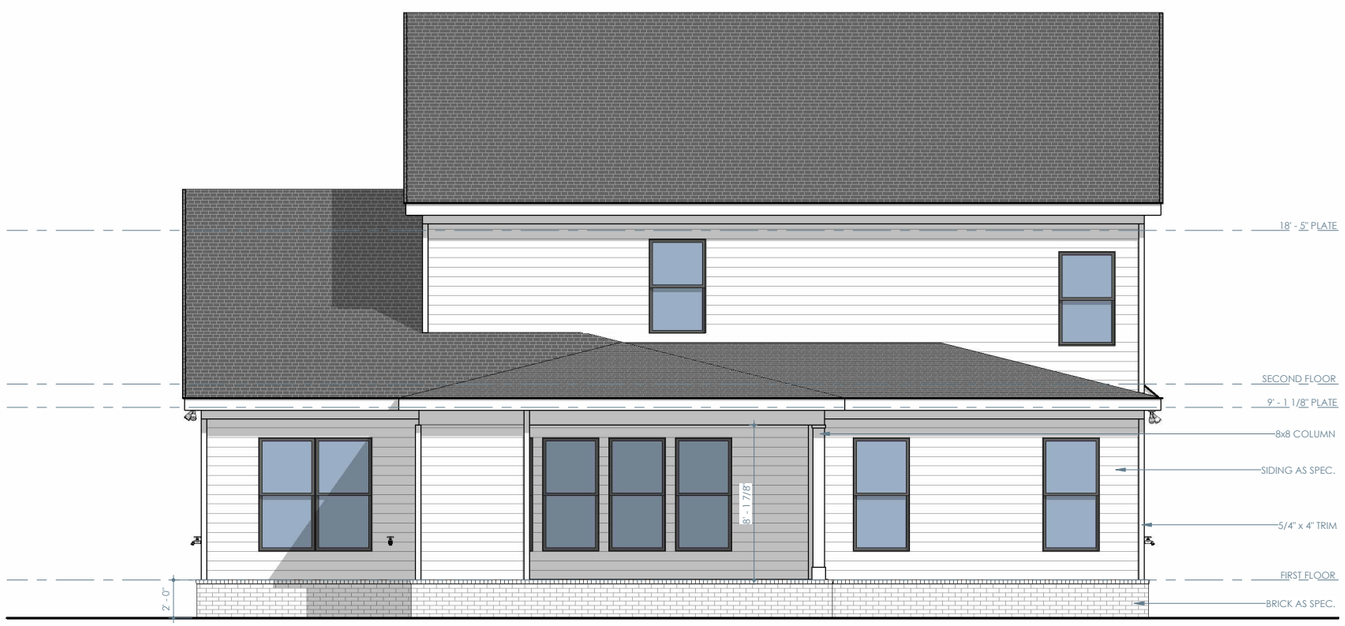
OPT. FIREPLACE @ COVERED PORCH - RIGHT

1/8" = 1'-0"



OPT. FIREPLACE @ COVERED PORCH - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. FIREPLACE @ COVERED PORCH - REAR

1/8" = 1'-0"

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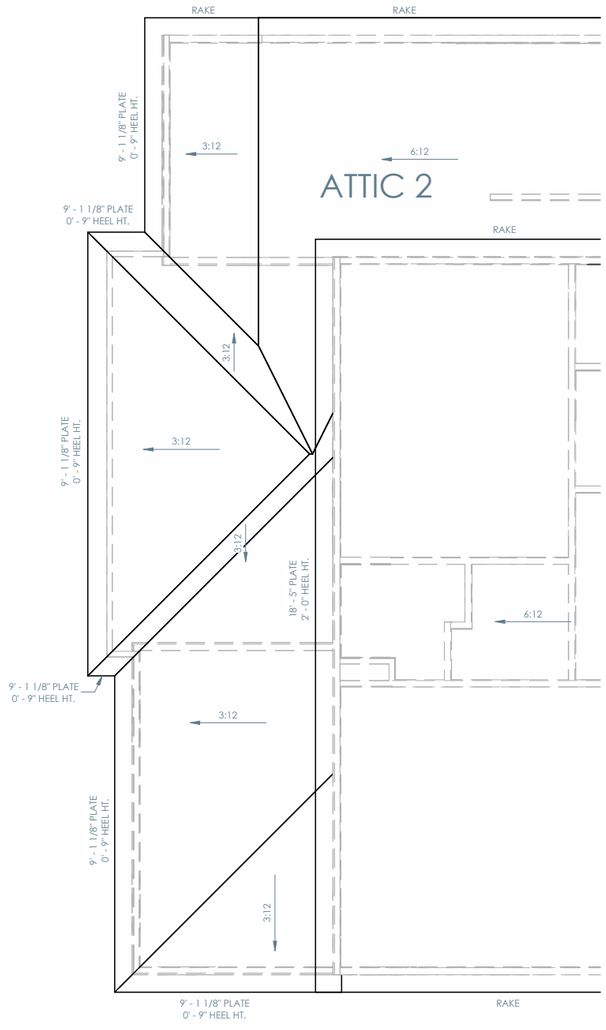
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

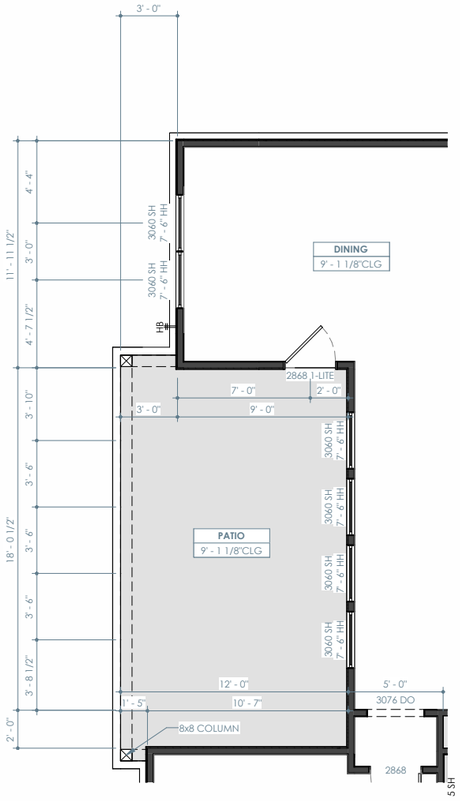
SHEET NO.

A7.03



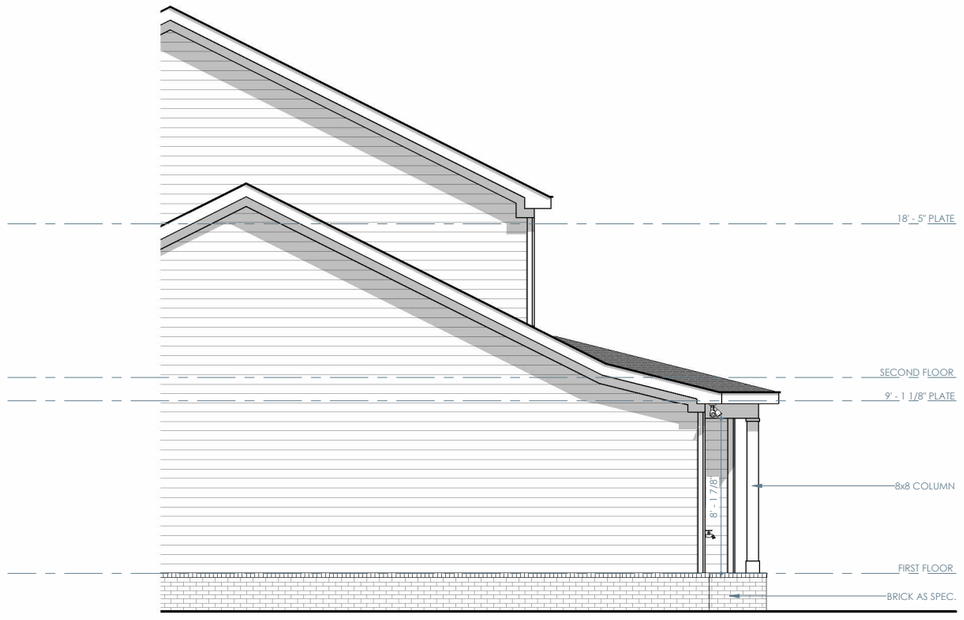
OPT. 3' EXPANDED DINING ROOM - ROOF PLAN

1/8" = 1'-0"



OPT. 3' EXPANDED DINING ROOM - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. 3' EXPANDED DINING ROOM - RIGHT

1/8" = 1'-0"

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SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

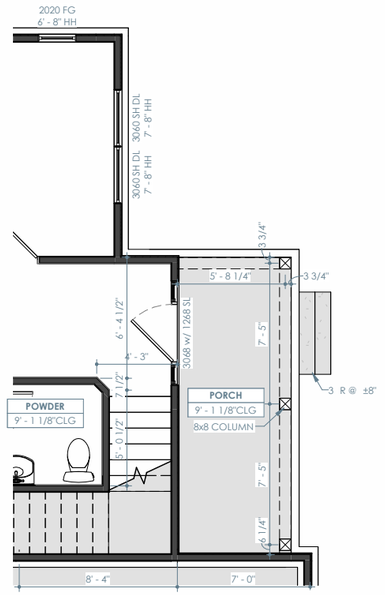
SHEET NO.

A7.04



OPT. FRONT DOOR SIDELIGHT - FRONT

1/8" = 1'-0"



OPT. FRONT DOOR SIDELIGHT - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. FRONT DOOR CRAFTSMAN DOOR - FRONT

1/8" = 1'-0"



OPT. FRONT DOOR TRANSOM - FRONT

1/8" = 1'-0"

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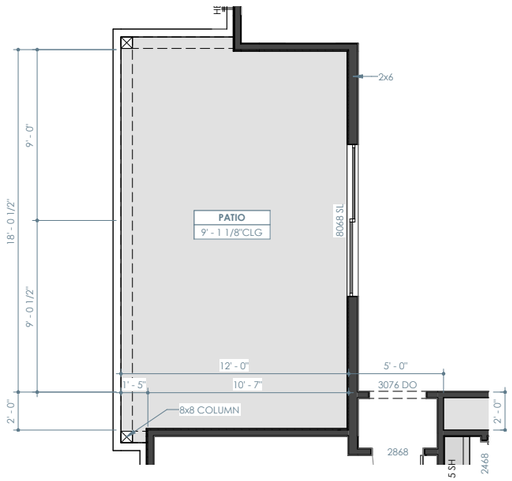
ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

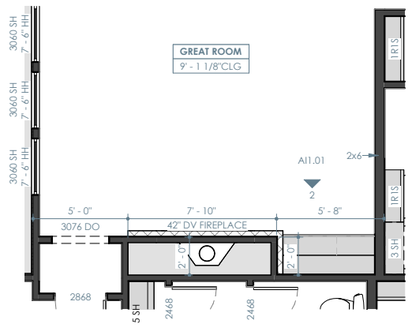
SHEET NO.

A7.05



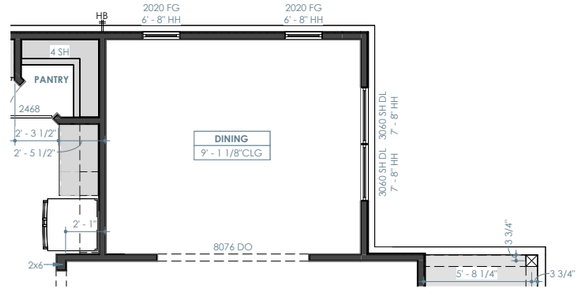
OPT. SLIDER @ GREAT ROOM - FIRST FLOOR PLAN

1/8" = 1'-0"



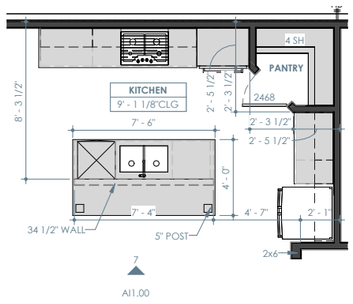
OPT. BUILT-INS @ FIREPLACE - FIRST FLOOR PLAN

1/8" = 1'-0"



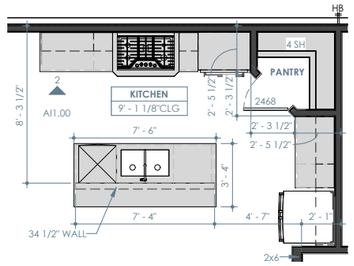
OPT. DINING ILO STUDY - FIRST FLOOR PLAN

1/8" = 1'-0"



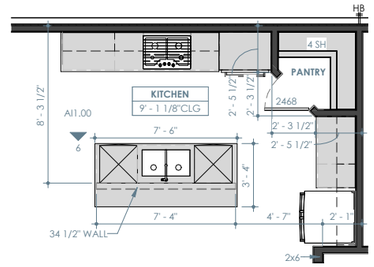
OPT. CHEF'S KITCHEN - FIRST FLOOR PLAN

1/8" = 1'-0"



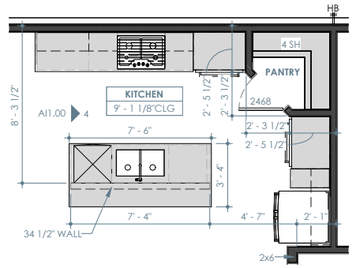
OPT. 36" COOKTOP RANGE W/ BUMP OUT & VENT HOOD ABOVE - FIRST FLOOR PLAN

1/8" = 1'-0"



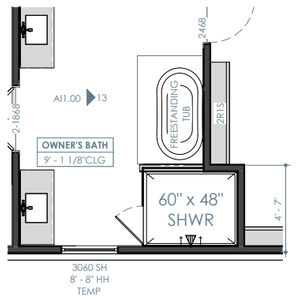
OPT. ISLAND MICROWAVE - FIRST FLOOR PLAN

1/8" = 1'-0"



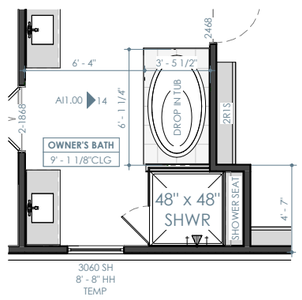
OPT. DOUBLE OVEN - FIRST FLOOR PLAN

1/8" = 1'-0"



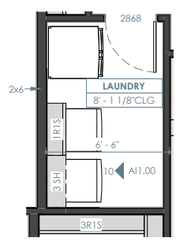
OPT. FREESTANDING TUB ILO DROP IN TUB - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. SHOWER SEAT @ OWNER'S BATH - FIRST FLOOR PLAN

1/8" = 1'-0"



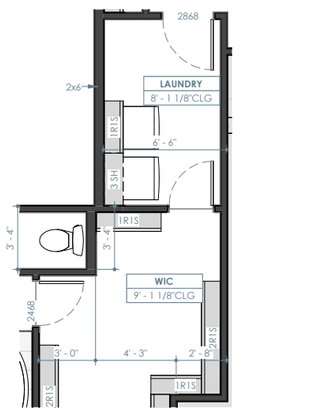
OPT. FRIDGE @ LAUNDRY - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. CABINETS @ LAUNDRY - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. DOOR @ LAUNDRY - FIRST FLOOR PLAN

1/8" = 1'-0"

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PROJECT NAME

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PLAN NO.

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ISSUE DATE	03/08/2024
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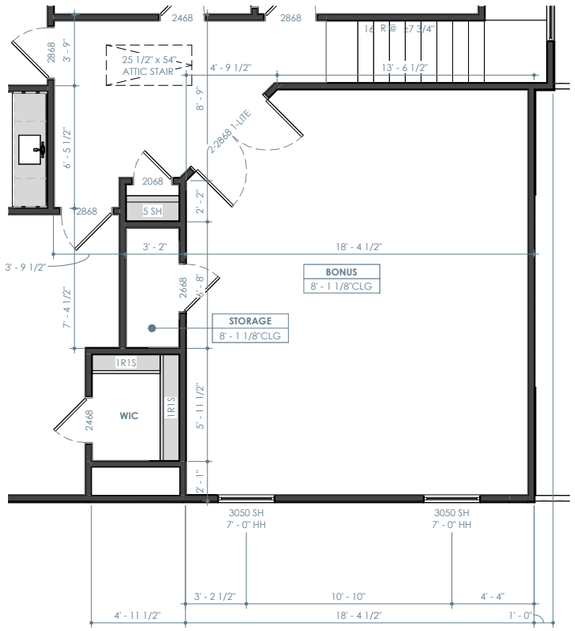
SHEET NAME

PLAN OPTIONS

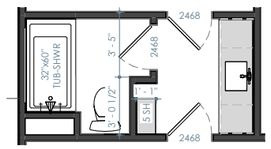
SHEET NO.

A7.06



OPT. BONUS ROOM - SECOND FLOOR PLAN

1/8" = 1'-0"



OPT. SHELVES @ BATH 3 - SECOND FLOOR PLAN

1/8" = 1'-0"

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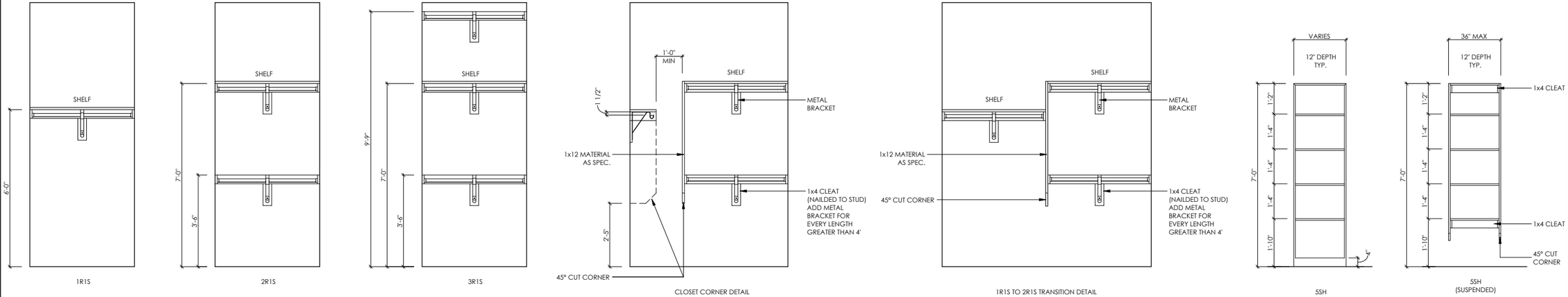
ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

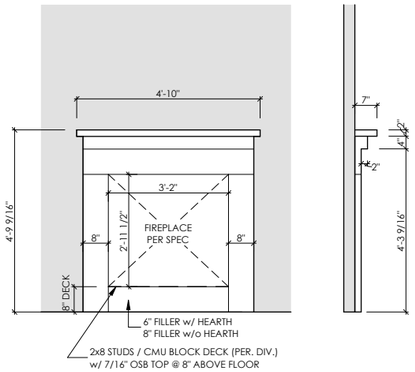
SHEET NO.

A7.07



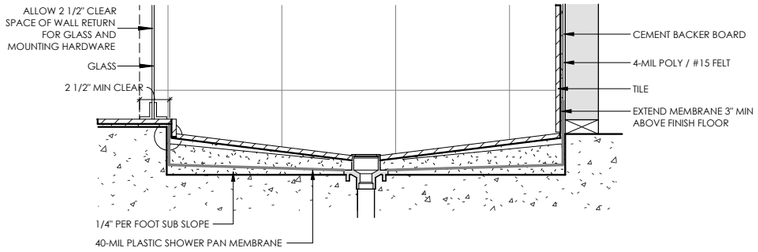
1 CLOSET DETAILS

1/4" = 1'-0"



2 FIREPLACE DETAIL

1/4" = 1'-0"



3 MUD PAN SHOWER

3/4" = 1'-0"

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PLAN NO.

3160

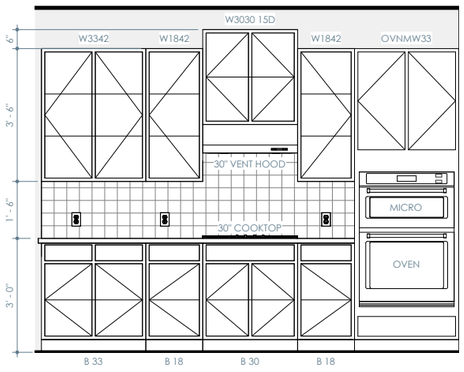
ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	As indicated

SHEET NAME

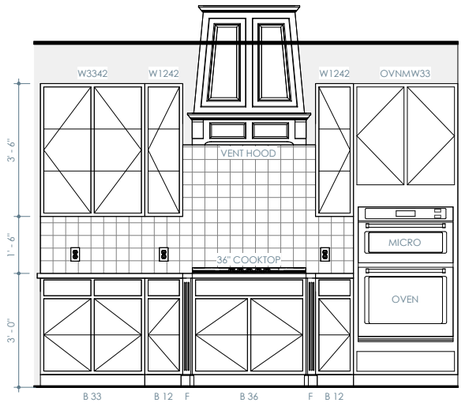
DETAILS

SHEET NO.

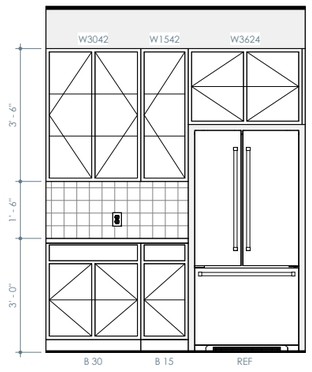
AD1.00



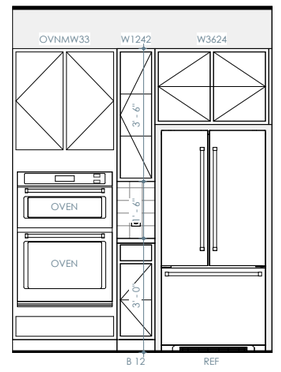
1 KITCHEN
1/4" = 1'-0"



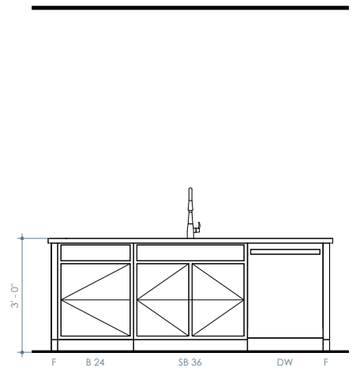
2 OPT. 36" COOKTOP RANGE W/ BUMP OUT & VENT HOOD ABOVE
1/4" = 1'-0"



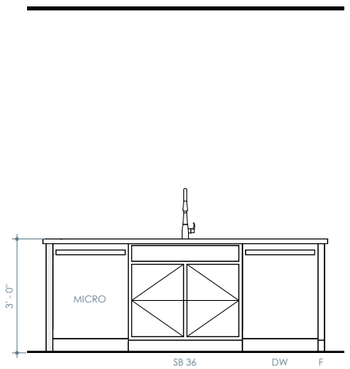
3 KITCHEN
1/4" = 1'-0"



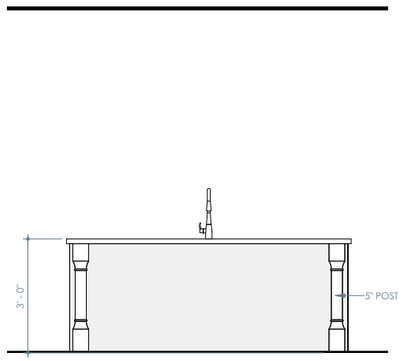
4 OPT. DOUBLE OVEN
1/4" = 1'-0"



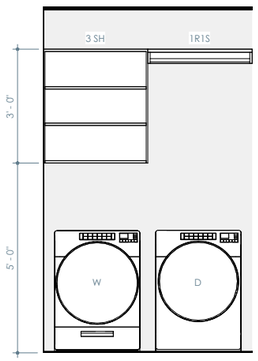
5 ISLAND
1/4" = 1'-0"



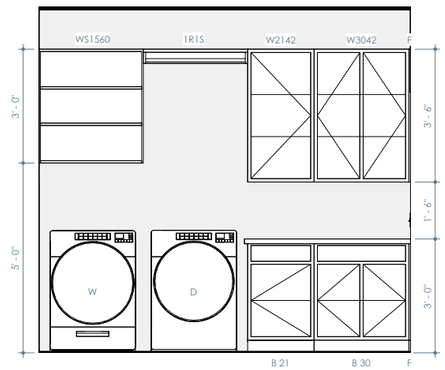
6 OPT. ISLAND MICROWAVE
1/4" = 1'-0"



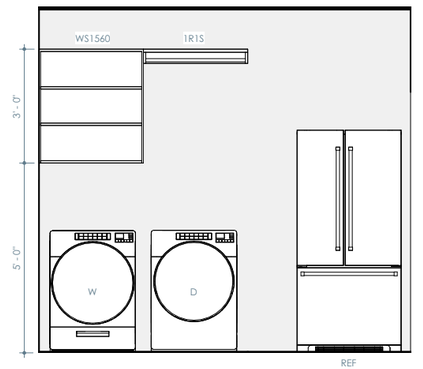
7 OPT. CHEF'S KITCHEN
1/4" = 1'-0"



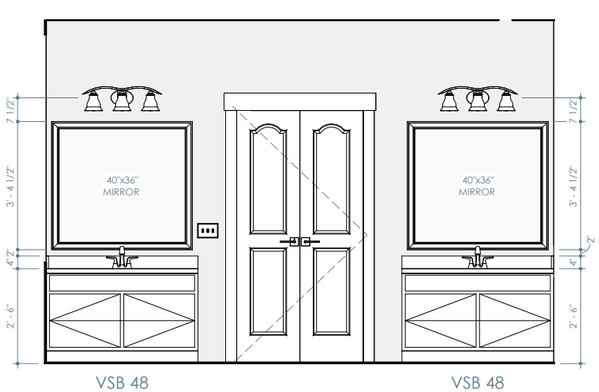
8 LAUNDRY
1/4" = 1'-0"



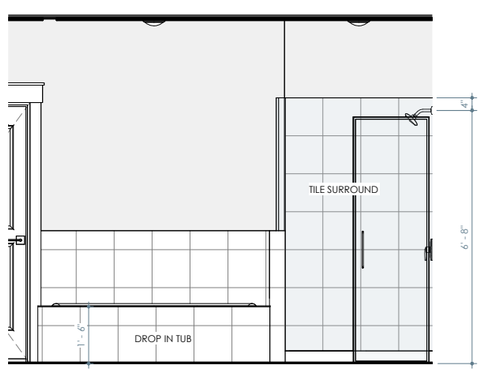
9 OPT. CABINETS @ LAUNDRY
1/4" = 1'-0"



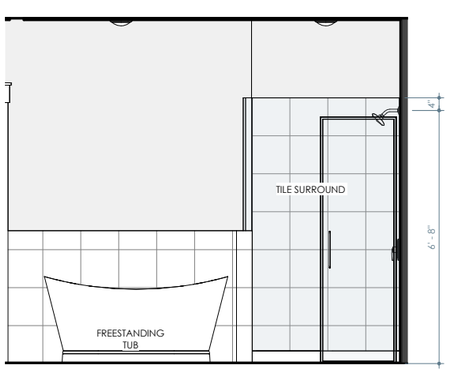
10 OPT. FRIDGE @ LAUNDRY
1/4" = 1'-0"



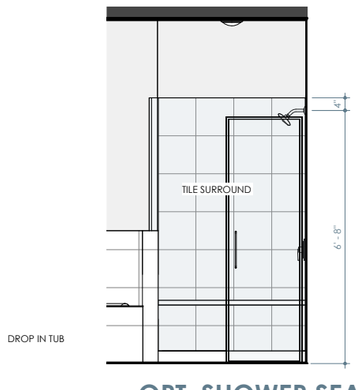
11 OWNER'S BATH
1/4" = 1'-0"



12 OWNER'S BATH
1/4" = 1'-0"



13 OPT. FREESTANDING TUB ILO DROP IN TUB
1/4" = 1'-0"



14 OPT. SHOWER SEAT @ OWNER'S BATH
1/4" = 1'-0"

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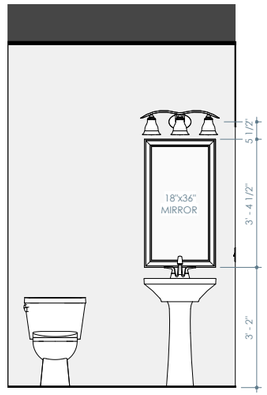
PLAN NO.
3160

ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/4" = 1'-0"

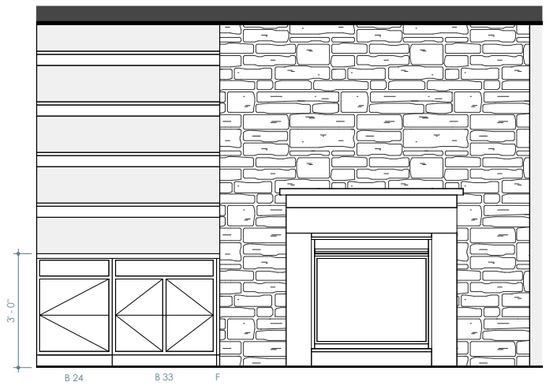
SHEET NAME
INTERIOR ELEVATIONS

SHEET NO.
AI1.00



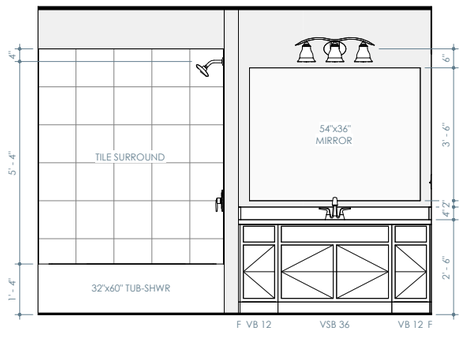
1 POWDER

1/4" = 1'-0"



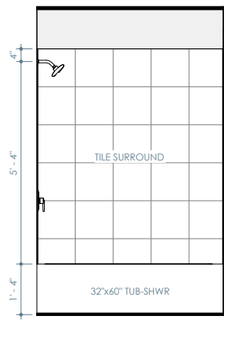
2 OPT. BUILT-INS @ FIREPLACE

1/4" = 1'-0"



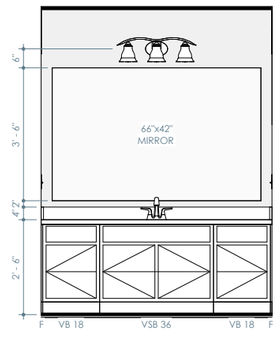
3 BATH 2

1/4" = 1'-0"



4 BATH 3

1/4" = 1'-0"



5 BATH 3

1/4" = 1'-0"

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PLAN NO.

3160

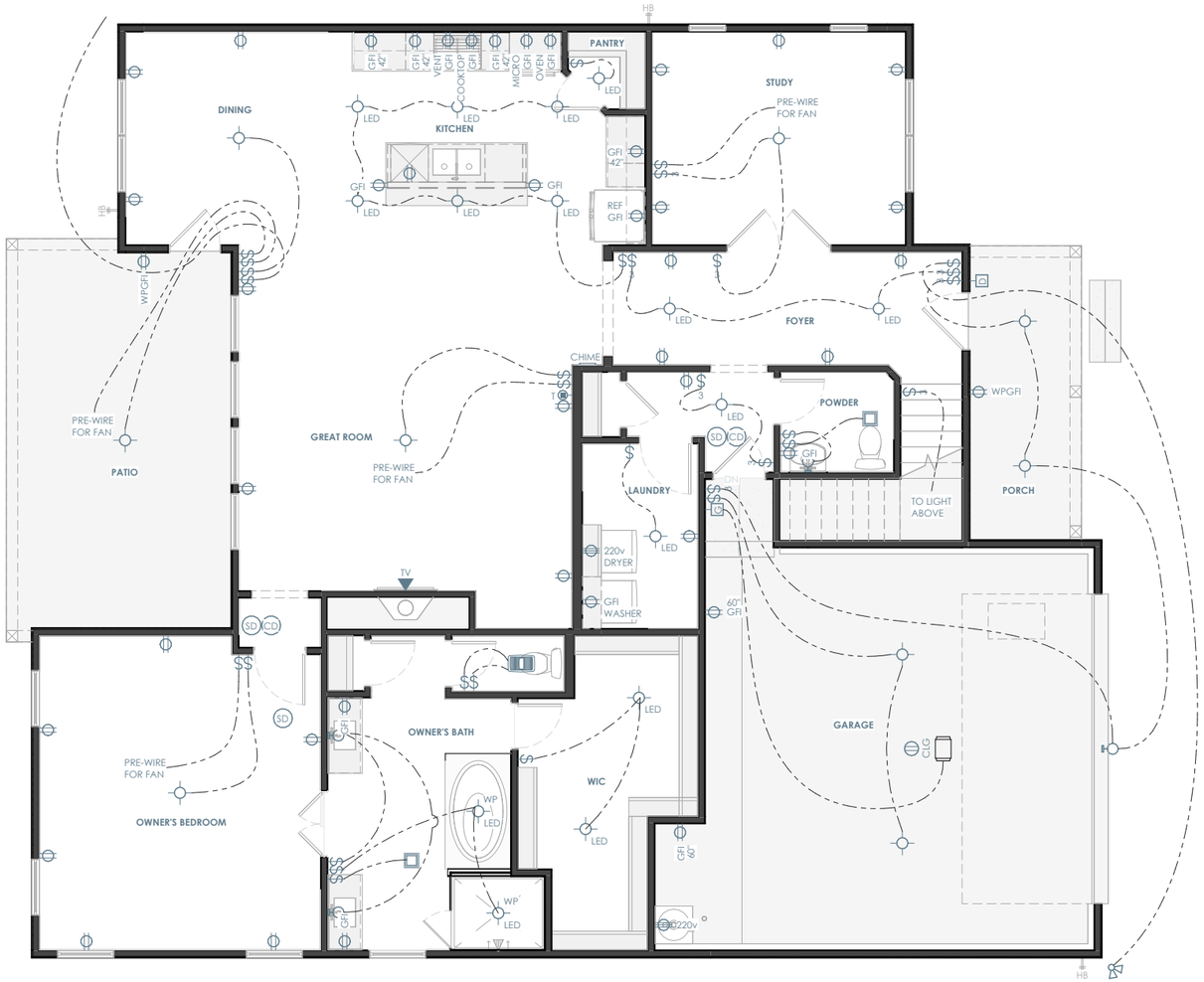
ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/4" = 1'-0"

SHEET NAME

INTERIOR ELEVATIONS

SHEET NO.

AI1.01



ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- THREE WAY SWITCH
- FOUR WAY SWITCH
- SINGLE POLE DIMMER SWITCH
- OCCUPANT SENSOR SWITCH
- RHEOSTAT SWITCH
- PRESSURE SWITCH
- GARAGE DOOR SWITCH
- DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- SUFRACE MOUNT LED LIGHT FIXTURE
- KEYLESS LIGHT FIXTURE
- HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- UNDER / OVER CABINET LIGHT
- FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

POWER

- DUPLEX OUTLET
- QUAD OUTLET
- SWITCHED DUPLEX OUTLET
- GROUND FAULT CIRCUIT INTERRUPTER
- SURFACE MOUNT DUPLEX OUTLET
- SURFACE MOUNT GROUND FAULT INTERRUPTER
- FLOOR OUTLET
- OVERHEAD OUTLET
- 220 VOLT OUTLET

COMMUNICATION

- PHONE OUTLET
- DATA OUTLET
- SURROUND SOUND OUTLET
- TV OUTLET
- SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SMOKE ALARM
- CARBON DETECTOR

EQUIPMENT

- ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

ELECTRICAL PLAN NOTES

INFORMATION AND LAYOUTS SHOWN ON DRAWINGS ARE ONLY SCHEMATIC IN DESIGN

- PROVIDE LIGHT IN EACH CRAWLSPACE AND ATTIC
- GAS AND 220 OUTLETS SHOWN FOR LOCATION PURPOSES ONLY, AND SUBJECT TO CHANGE PER SUBDIVISION/CITY/CODE REQUIREMENT

KITCHEN
- 24" MAX SEPARATION FOR OUTLETS LOCATED AT KITCHEN COUNTERTOPS
- RECEPTACLES AT COUNTER SPACE 12" OR WIDER.
- GFCI OUTLETS REQUIRED AT KITCHEN COUNTERTOPS
- 1 OUTLET PROVIDED PER ISLAND MINIMUM

BATHROOMS
- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES
- OUTLETS IN ALL LIVING SPACES SHALL BE PROVIDED AT 6' MAX FROM OPENING OR DOOR AND MINIMUM 12' BETWEEN EACH RECEPTACLE
- PROVIDE OUTLET ON ANY WALL LARGER THAN 2' BETWEEN OPENINGS AND DOORS
- FLOOR PLUGS AS REQUIRED

OTHER AREAS
- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
- PROVIDE AT LEAST 1 OUTLET PER 10' OF HALLWAY RUN

LIGHTING
- LIGHTING FIXTURES LOCATED IN CLOSETS: SURFACE MOUNT FIXTURE ARE NOT TO BE WITHIN 1'-0" OF SHELF OR HANGING SPACE MEASURED HORIZONTALLY. RECESSED FIXTURES NOT TO BE WITHIN 6" OF ANY SHELF OR HANGING SPACE

SMOKE DETECTORS
- ADDITIONAL SMOKE DETECTOR REQUIRED AT EACH END OF ROOMS/HALLWAYS GREATER THAN 30' IN LENGTH
- DO NOT INSTALL DETECTORS WITHIN 3' OF AN AIR VENT OR RETURN
- KEEP ALL SMOKE DETECTORS A MINIMUM OF 36" FROM BATHROOM DOOR, KITCHEN COOKING APPLIANCES AND LAUNDRY/UTILITY (WHERE A WASHER AND DRYER IS PLACED)
- DO NOT INSTALL NEAR FLUORESCENT LIGHTS
- DO NOT INSTALL WITHIN 36" OF TIP OF PADDLE FOR CEILING FAN
- INSTALL SMOKE DETECTOR ON SLOPED, PEAKED OR CATHEDRAL CEILINGS AT OR WITHIN 3' OF HIGHEST POINT (MEASURED HORIZONTALLY)
- SMOKE ALARMS IN ROOMS WITH CEILING SLOPES GREATER THAN 1 FOOT IN 8 FEET HORIZONTALLY SHALL BE LOCATED ON THE HIGHEST SIDE OF ROOM

ELEVATION A - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

Brightland HOMES

PROJECT NAME

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PLAN NO.

3160

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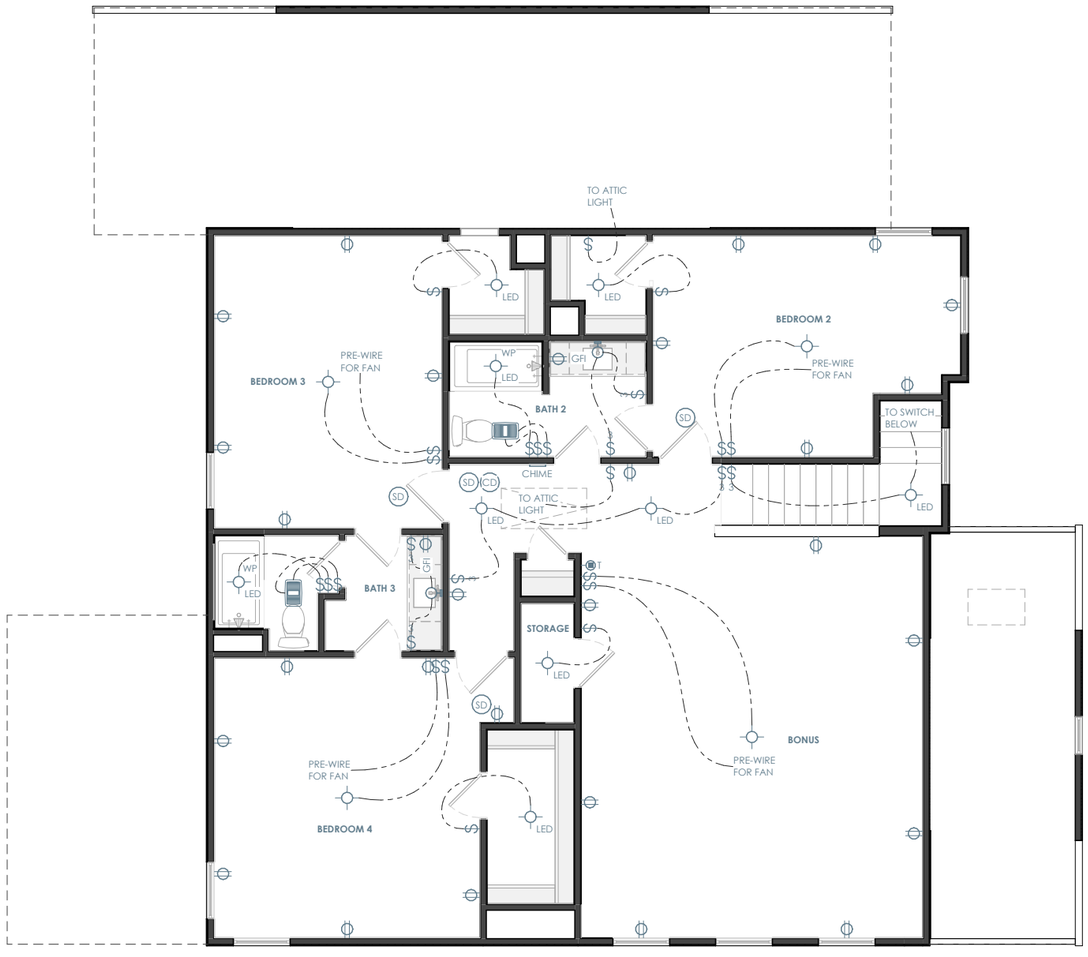
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - FIRST FLOOR ELECTRICAL PLAN

SHEET NO.

E1.00



ELEVATION A - SECOND FLOOR ELECTRICAL

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

$	SINGLE POLE SWITCH
$ 3	THREE WAY SWITCH
$ 4	FOUR WAY SWITCH
$ D	SINGLE POLE DIMMER SWITCH
$ OS	OCCUPANT SENSOR SWITCH
$ R	RHEOSTAT SWITCH
$ P	PRESSURE SWITCH
G	GARAGE DOOR SWITCH
D	DOOR BELL BUTTON
	PHOTOCELL SENSOR SWITCH

LIGHTING

	SURFACE MOUNT LIGHT FIXTURE
LED	SUFRACE MOUNT LED LIGHT FIXTURE
KEY	KEYLESS LIGHT FIXTURE
	HANGING LIGHT FIXTURE
	PENDANT LIGHT FIXTURE
	RECESSED LIGHT FIXTURE
	RECESSED EYEBALL FIXTURE
	WALL MOUNTED LIGHT FIXTURE
	UNDER / OVER CABINET LIGHT
1x4	FLOURESCENT LIGHT FIXTURE
	CEILING FAN
	CEILING FAN w/ LIGHT FIXTURE

POWER

	DUPLEX OUTLET
	QUAD OUTLET
	SWITCHED DUPLEX OUTLET
GFI	GROUND FAULT CIRCUIT INTERRUPTER
	SURFACE MOUNT DUPLEX OUTLET
GFI	SURFACE MOUNT GROUND FAULT INTERRUPTER
FLR	FLOOR OUTLET
CLG	OVERHEAD OUTLET
220v	220 VOLT OUTLET

COMMUNICATION

PH	PHONE OUTLET
DATA	DATA OUTLET
5.1 SS	SURROUND SOUND OUTLET
TV	TV OUTLET
S SUB	SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

SD	SMOKE ALARM
CD	CARBON DETECTOR

EQUIPMENT

PANEL	ELECTRICAL PANEL
T	THERMOSTAT
	DOOR BELL CHIME
	EXHAUST FAN

ELECTRICAL PLAN NOTES

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- 1 OUTLET PROVIDED PER ISLAND MINIMUM

BATHROOMS
- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES
- OUTLETS IN ALL LIVING SPACES SHALL BE PROVIDED AT 6' MAX FROM OPENING OR DOOR AND MINIMUM 12' BETWEEN EACH RECEPTACLE
- PROVIDE OUTLET ON ANY WALL LARGER THAN 2' BETWEEN OPENINGS AND DOORS
- FLOOR PLUGS AS REQUIRED

OTHER AREAS
- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
- PROVIDE AT LEAST 1 OUTLET PER 10' OF HALLWAY RUN

LIGHTING
- LIGHTING FIXTURES LOCATED IN CLOSETS: SURFACE MOUNT FIXTURE ARE NOT TO BE WITHIN 1'-0" OF SHELF OR HANGING SPACE MEASURED HORIZONTALLY. RECESSED FIXTURES NOT TO BE WITHIN 6" OF ANY SHELF OR HANGING SPACE

SMOKE DETECTORS
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- DO NOT INSTALL DETECTORS WITHIN 3' OF AN AIR VENT OR RETURN
- KEEP ALL SMOKE DETECTORS A MINIMUM OF 36" FROM BATHROOM DOOR, KITCHEN COOKING APPLIANCES AND LAUNDRY/UTILITY (WHERE A WASHER AND DRYER IS PLACED)
- DO NOT INSTALL NEAR FLUORESCENT LIGHTS
- DO NOT INSTALL WITHIN 36" OF TIP OF PADDLE FOR CEILING FAN
- INSTALL SMOKE DETECTOR ON SLOPED, PEAKED OR CATHEDRAL CEILINGS AT OR WITHIN 3' OF HIGHEST POINT (MEASURED HORIZONTALLY)
- SMOKE ALARMS IN ROOMS WITH CEILING SLOPES GREATER THAN 1 FOOT IN 8 FEET HORIZONTALLY SHALL BE LOCATED ON THE HIGHEST SIDE OF ROOM

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PROJECT NAME
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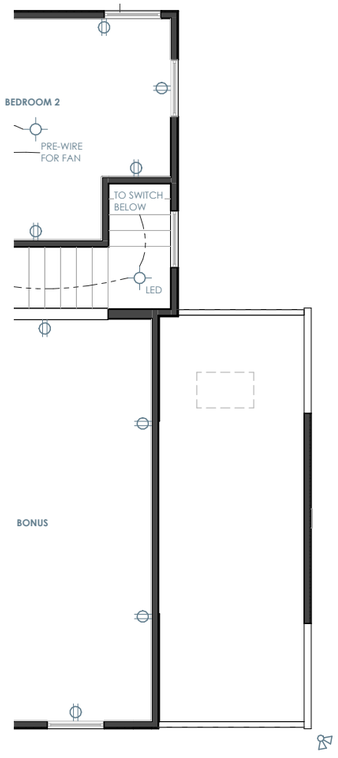
PLAN NO.
3160

ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

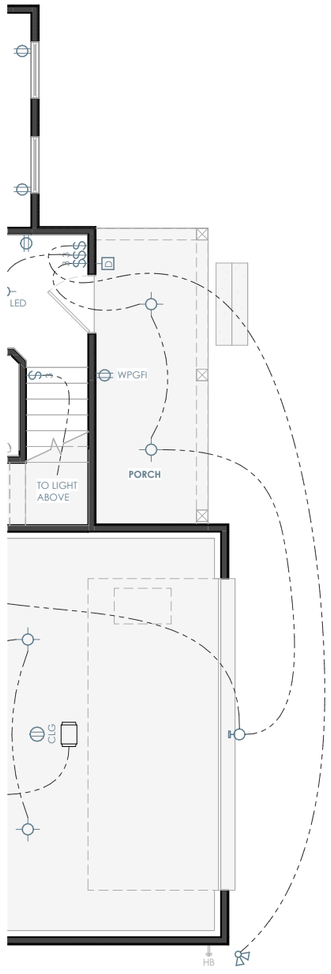
SHEET NAME
ELEVATION A - SECOND FLOOR ELECTRICAL PLAN

SHEET NO.
E1.01



ELEVATION B - SECOND FLOOR ELECTRICAL

1/8" = 1'-0"



ELEVATION B - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- THREE WAY SWITCH
- FOUR WAY SWITCH
- SINGLE POLE DIMMER SWITCH
- OCCUPANT SENSOR SWITCH
- RHEOSTAT SWITCH
- PRESSURE SWITCH
- GARAGE DOOR SWITCH
- DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- SUFRACE MOUNT LED LIGHT FIXTURE
- KEYLESS LIGHT FIXTURE
- HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- UNDER / OVER CABINET LIGHT
- FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

POWER

- DUPLEX OUTLET
- QUAD OUTLET
- SWITCHED DUPLEX OUTLET
- GROUND FAULT CIRCUIT INTERRUPTER
- SURFACE MOUNT DUPLEX OUTLET
- SURFACE MOUNT GROUND FAULT INTERRUPTER
- FLOOR OUTLET
- OVERHEAD OUTLET
- 220 VOLT OUTLET

COMMUNICATION

- PHONE OUTLET
- DATA OUTLET
- SURROUND SOUND OUTLET
- TV OUTLET
- SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SMOKE ALARM
- CARBON DETECTOR

EQUIPMENT

- ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

ELECTRICAL PLAN NOTES

INFORMATION AND LAYOUTS SHOWN ON DRAWINGS ARE ONLY SCHEMATIC IN DESIGN

- PROVIDE LIGHT IN EACH CRAWLSPACE AND ATTIC
- GAS AND 220 OUTLETS SHOWN FOR LOCATION PURPOSES ONLY, AND SUBJECT TO CHANGE PER SUBDIVISION/CITY/CODE REQUIREMENT

KITCHEN
- 24" MAX SEPARATION FOR OUTLETS LOCATED AT KITCHEN COUNTERTOPS
- RECEPTACLES AT COUNTER SPACE 12" OR WIDER.
- GFCI OUTLETS REQUIRED AT KITCHEN COUNTERTOPS
- 1 OUTLET PROVIDED PER ISLAND MINIMUM

BATHROOMS
- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES
- OUTLETS IN ALL LIVING SPACES SHALL BE PROVIDED AT 6' MAX FROM OPENING OR DOOR AND MINIMUM 12' BETWEEN EACH RECEPTACLE
- PROVIDE OUTLET ON ANY WALL LARGER THAN 2' BETWEEN OPENINGS AND DOORS
- FLOOR PLUGS AS REQUIRED

OTHER AREAS
- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
- PROVIDE AT LEAST 1 OUTLET PER 10' OF HALLWAY RUN

LIGHTING
- LIGHTING FIXTURES LOCATED IN CLOSETS: SURFACE MOUNT FIXTURE ARE NOT TO BE WITHIN 1'-0" OF SHELF OR HANGING SPACE MEASURED HORIZONTALLY. RECESSED FIXTURES NOT TO BE WITHIN 6" OF ANY SHELF OR HANGING SPACE

SMOKE DETECTORS
- ADDITIONAL SMOKE DETECTOR REQUIRED AT EACH END OF ROOMS/HALLWAYS GREATER THAN 30' IN LENGTH
- DO NOT INSTALL DETECTORS WITHIN 3' OF AN AIR VENT OR RETURN
- KEEP ALL SMOKE DETECTORS A MINIMUM OF 36" FROM BATHROOM DOOR, KITCHEN COOKING APPLIANCES AND LAUNDRY/UTILITY (WHERE A WASHER AND DRYER IS PLACED)
- DO NOT INSTALL NEAR FLUORESCENT LIGHTS
- DO NOT INSTALL WITHIN 36" OF TIP OF PADDLE FOR CEILING FAN
- INSTALL SMOKE DETECTOR ON SLOPED, PEAKED OR CATHEDRAL CEILINGS AT OR WITHIN 3' OF HIGHEST POINT (MEASURED HORIZONTALLY)
- SMOKE ALARMS IN ROOMS WITH CEILING SLOPES GREATER THAN 1 FOOT IN 8 FEET HORIZONTALLY SHALL BE LOCATED ON THE HIGHEST SIDE OF ROOM

Brightland HOMES

PROJECT NAME

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PLAN NO.

3160

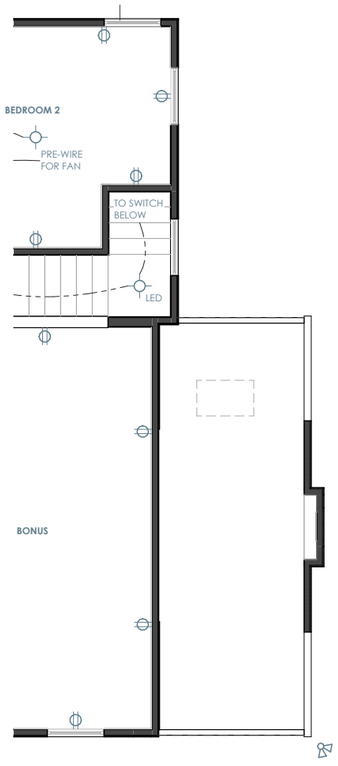
ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - PARTIAL ELECTRICAL PLANS

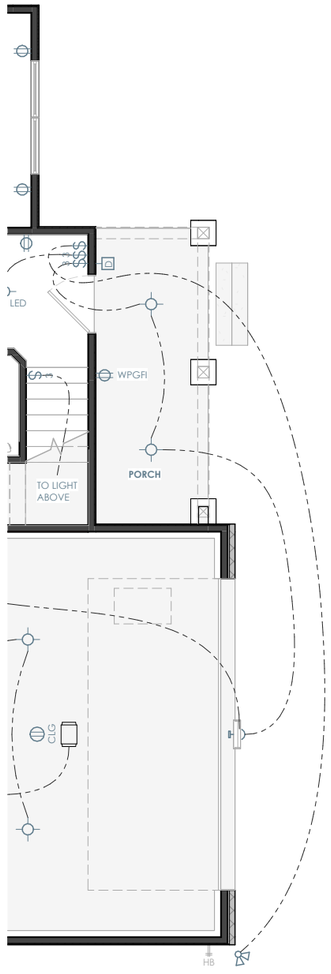
SHEET NO.

E2.00



ELEVATION C - SECOND FLOOR ELECTRICAL

1/8" = 1'-0"



ELEVATION C - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- THREE WAY SWITCH
- FOUR WAY SWITCH
- SINGLE POLE DIMMER SWITCH
- OCCUPANT SENSOR SWITCH
- RHEOSTAT SWITCH
- PRESSURE SWITCH
- GARAGE DOOR SWITCH
- DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- SUFRACE MOUNT LED LIGHT FIXTURE
- KEYLESS LIGHT FIXTURE
- HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
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POWER

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- SURFACE MOUNT GROUND FAULT INTERRUPTER
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- DATA OUTLET
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- TV OUTLET
- SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SMOKE ALARM
- CARBON DETECTOR

EQUIPMENT

- ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

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PLAN NO.

3160

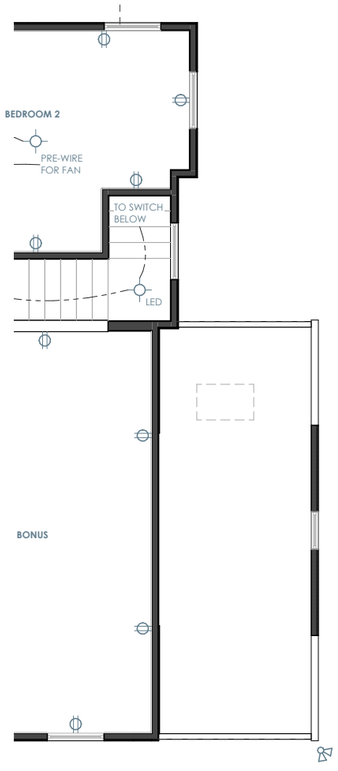
ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - PARTIAL ELECTRICAL PLANS

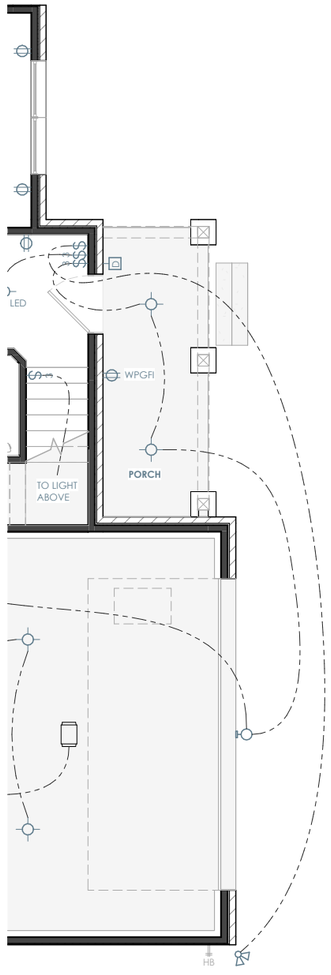
SHEET NO.

E3.00



ELEVATON D - SECOND FLOOR ELECTRICAL

1/8" = 1'-0"



ELEVATION D - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

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- THREE WAY SWITCH
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- CARBON DETECTOR

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- THERMOSTAT
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PLAN NO.

3160

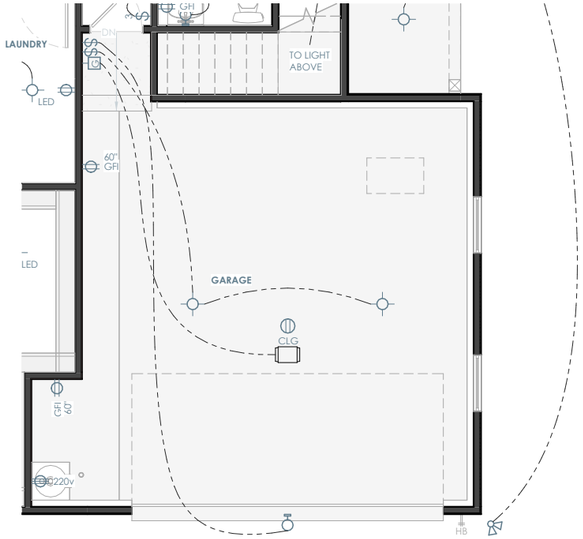
ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - PARTIAL ELECTRICAL PLANS

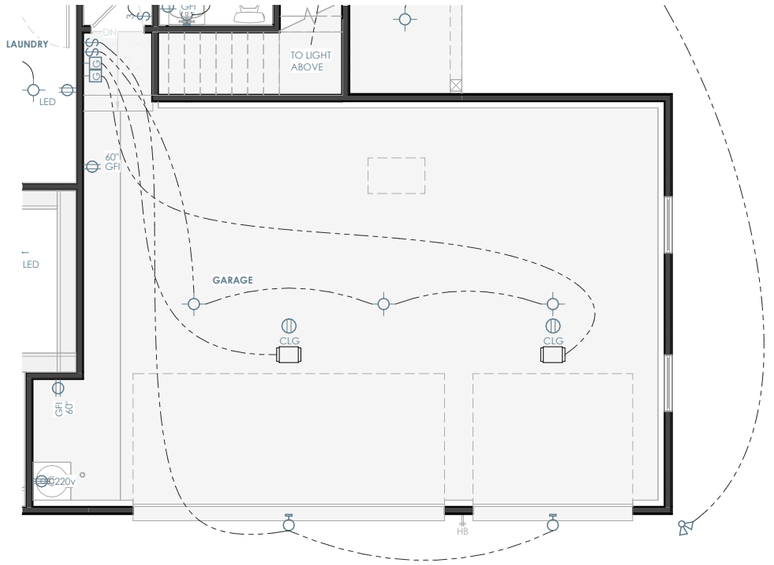
SHEET NO.

E4.00



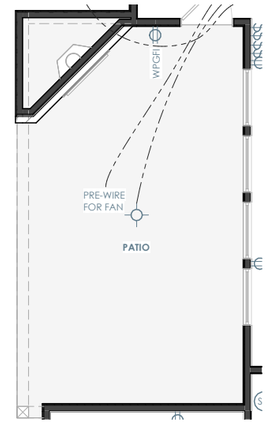
OPT. SIDE ENTRY GARAGE - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



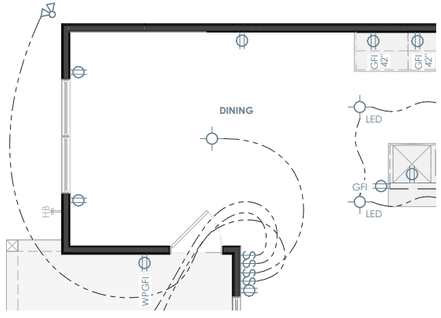
OPT. 3 CAR GARAGE - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



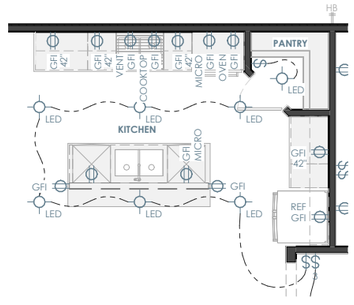
OPT. FIREPLACE @ COVERED PORCH - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



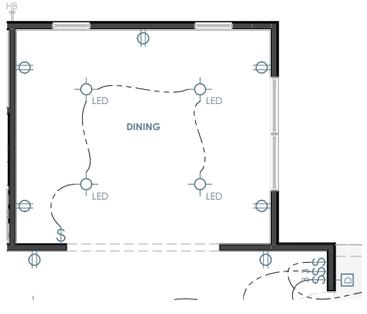
OPT. 3' EXPANDED DINING - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



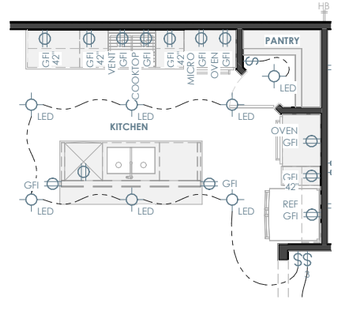
OPT. ISLAND MICROWAVE - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



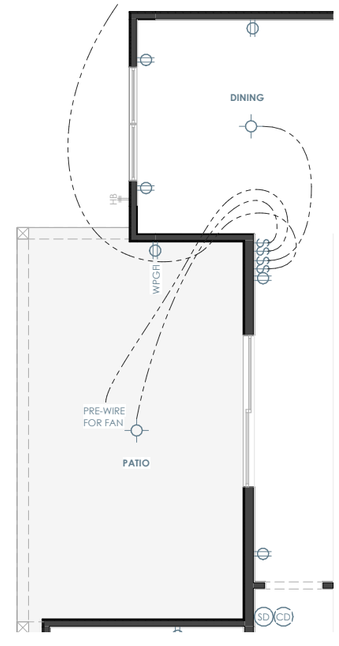
OPT. DINING ILO STUDY - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



OPT. DOUBLE OVEN - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



OPT. SILDER @ GREAT ROOM - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

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3160

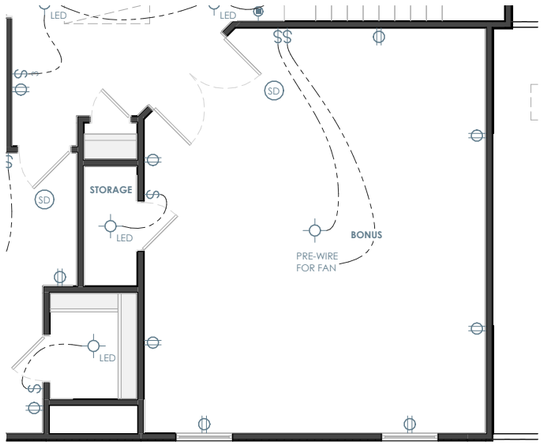
ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

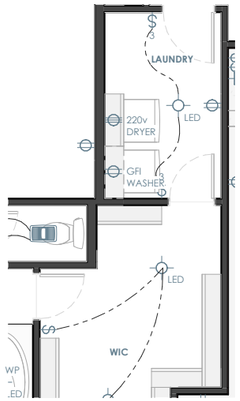
SHEET NO.

E7.00



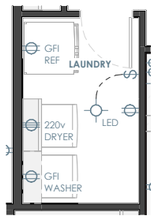
OPT. BONUS ROOM - SECOND FLOOR ELECTRICAL

1/8" = 1'-0"



OPT. DOOR @ LAUNDRY - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"



OPT. FRIDGE @ LAUNDRY - FIRST FLOOR ELECTRICAL

1/8" = 1'-0"

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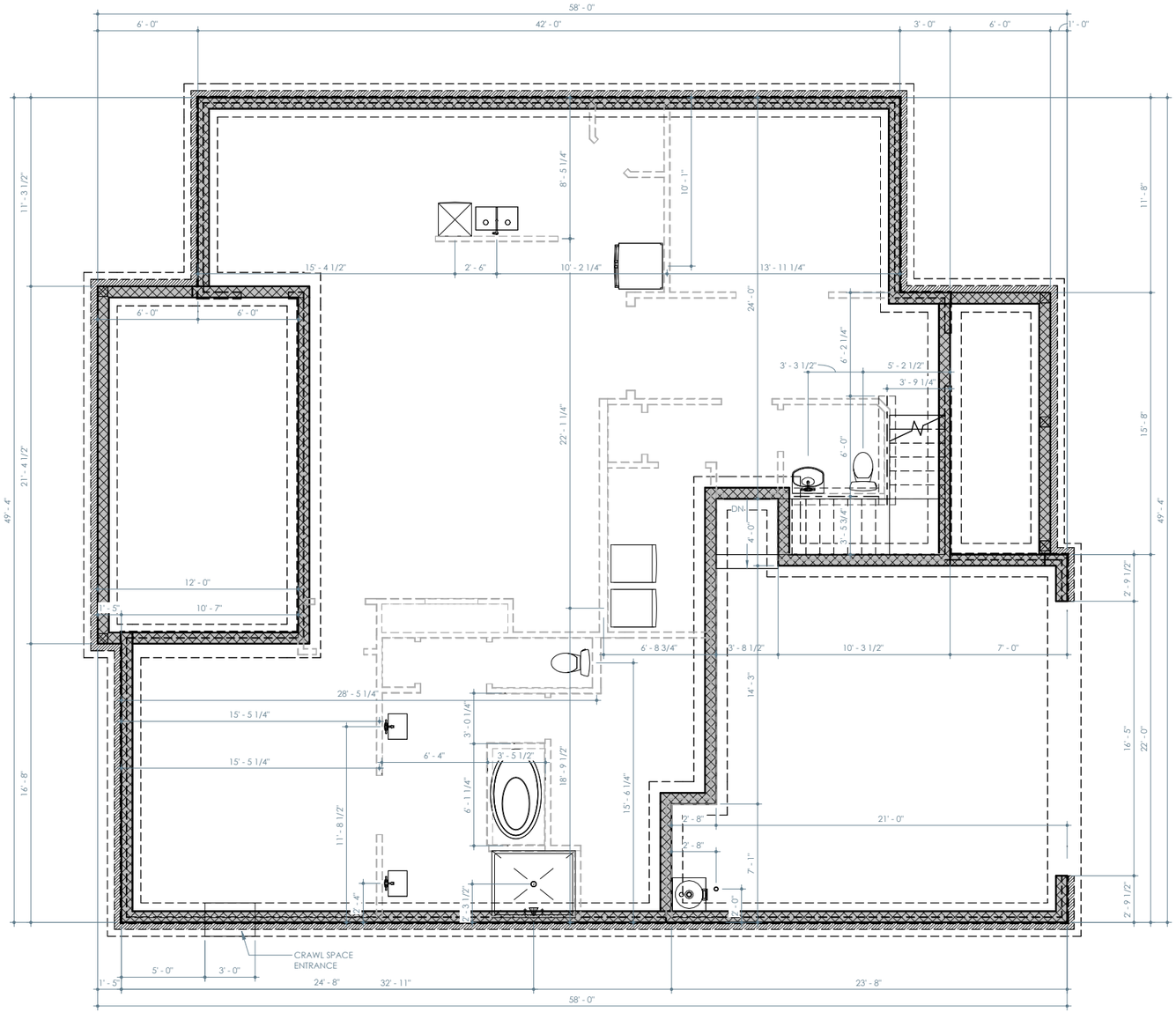
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

SHEET NO.

E7.01



ELEVATION A - FOUNDATION PLAN

1/8" = 1'-0"

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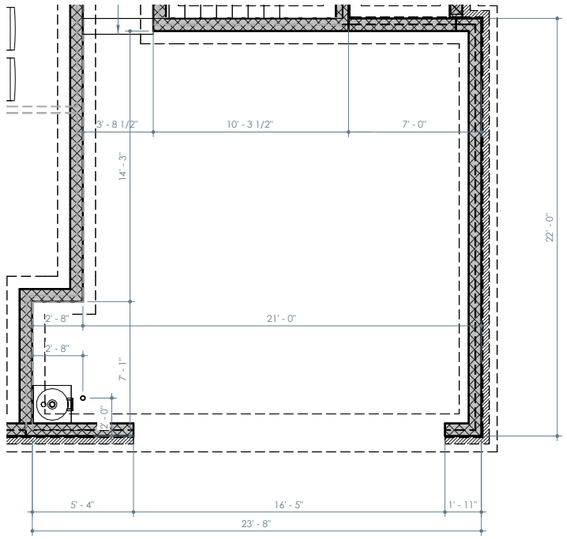
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

FOUNDATION - ELEVATION A

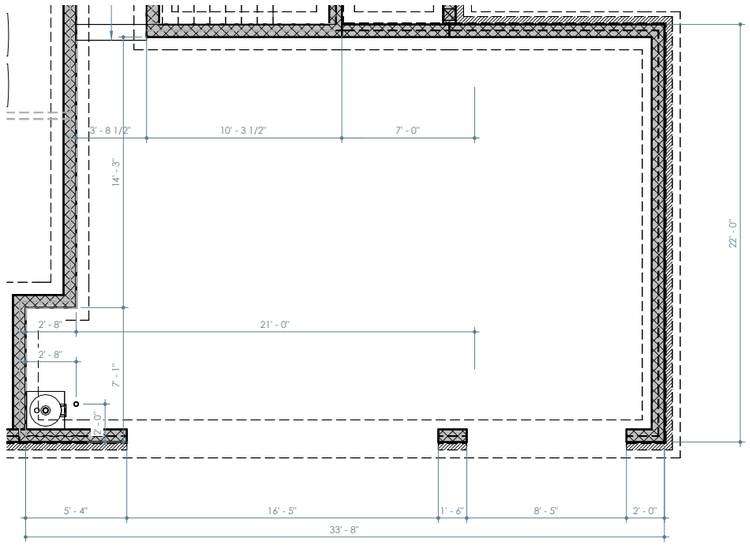
SHEET NO.

SF1.00



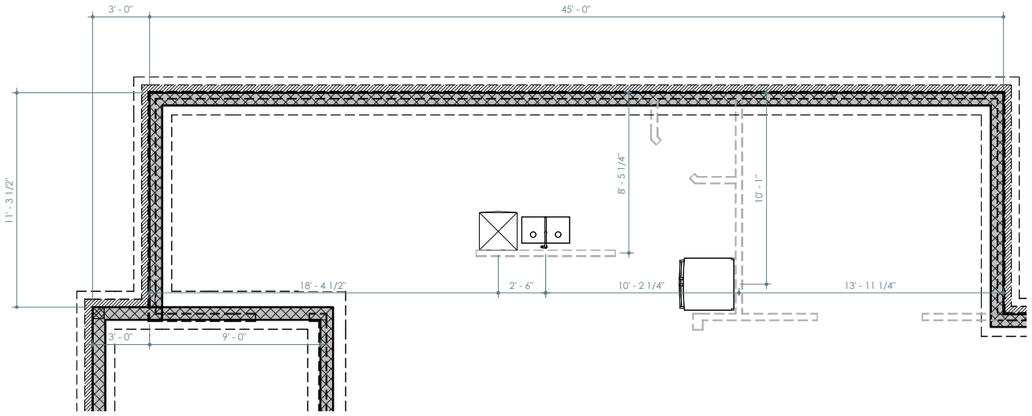
OPT. SIDE ENTRY GARAGE - FOUNDATION PLAN

1/8" = 1'-0"



OPT. 3 CAR GARAGE - FOUNDATION PLAN

1/8" = 1'-0"



OPT. 3' EXTENDED DINING - FOUNDATION PLAN

1/8" = 1'-0"

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PROJECT NAME

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PLAN NO.

3160

ISSUE DATE	03/08/2024
DRAWN BY	SST
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

SHEET NO.

SF7.00



ELEVATION A

3/32" = 1'-0"



ELEVATION B

3/32" = 1'-0"



ELEVATION C

3/32" = 1'-0"



ELEVATION D

3/32" = 1'-0"

REVISION LOG

SHEET LIST

NO.	TITLE
A-0.00	COVER SHEET
A-1.00	ELEVATION A - FIRST FLOOR PLAN
A-1.01	ELEVATION A - SECOND FLOOR PLAN
A-1.02	ELEVATION A - EXTERIOR ELEVATIONS
A-1.03	ELEVATION A - EXTERIOR ELEVATIONS
A-1.04	ELEVATION A - ROOF PLAN
A-2.01	ELEVATION B - PARTIAL FLOOR PLANS
A-2.02	ELEVATION B - EXTERIOR ELEVATIONS
A-2.03	ELEVATION B - EXTERIOR ELEVATIONS
A-2.04	ELEVATION B - ROOF PLAN
A-3.01	ELEVATION C - PARTIAL FLOOR PLANS
A-3.02	ELEVATION C - EXTERIOR ELEVATIONS
A-3.03	ELEVATION C - EXTERIOR ELEVATIONS
A-3.04	ELEVATION C - ROOF PLAN
A-4.01	ELEVATION D - PARTIAL FLOOR PLANS
A-4.02	ELEVATION D - EXTERIOR ELEVATIONS
A-4.03	ELEVATION D - EXTERIOR ELEVATIONS
A-4.04	ELEVATION D - ROOF PLAN
A-7.00	PLAN OPTIONS
A-7.01	PLAN OPTIONS
A-7.02	PLAN OPTIONS
A-7.03	PLAN OPTIONS
A-7.04	PLAN OPTIONS
A-7.05	PLAN OPTIONS
A-7.06	PLAN OPTIONS
A-7.07	PLAN OPTIONS
A-7.08	PLAN OPTIONS
A-7.09	PLAN OPTIONS
A-7.10	PLAN OPTIONS
A-7.11	PLAN OPTIONS
A-7.12	PLAN OPTIONS
AD-1.00	DETAILS
AI1.00	INTERIOR ELEVATIONS
AI1.01	INTERIOR ELEVATIONS
E-1.00	ELEVATION A - FIRST FLOOR ELECTRICAL PLAN
E-1.01	ELEVATION A - SECOND FLOOR ELECTRICAL PLAN
E-2.00	ELEVATION B - PARTIAL ELECTRICAL PLANS
E-3.00	ELEVATION C - PARTIAL ELECTRICAL PLANS
E-4.00	ELEVATION D - PARTIAL ELECTRICAL PLANS
E-7.00	PLAN OPTIONS
E-7.01	PLAN OPTIONS
SF-1.00	FOUNDATION - ELEVATION A
SF-7.00	PLAN OPTIONS

PLAN OPTIONS

ELEVATION A	OPT. LAUNDRY CABINETS
ELEVATION B	OPT. GREAT ROOM SLIDER DOOR
ELEVATION C	OPT. BEDROOM 5
ELEVATION D	OPT. ISLAND MICROWAVE
OPT. EXECUTIVE OPTION	OPT. SHOWER SEAT @ OWNERS BATH
OPT. 3 CAR GARAGE	OPT. OWNER'S BATH 1
OPT. SIDE LOAD GARAGE	OPT. LINEN CABINET
OPT. REAR COVERED PORCH	OPT. BATH 3 ADDITIONAL SINK
OPT. PORCH FIREPLACE	OPT. EXTENDED ISLAND W/ LEGS
OPT. GUEST BEDROOM	OPT. 36" COOKTOP RANGE W/ BUMPOUT & VENT HOOD ABOVE
OPT. 1/2 BATH VANITY	OPT. RECESSED FIREPLACE
OPT. COFFERED CEILING AT FOYER	

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PLAN NO.

3470

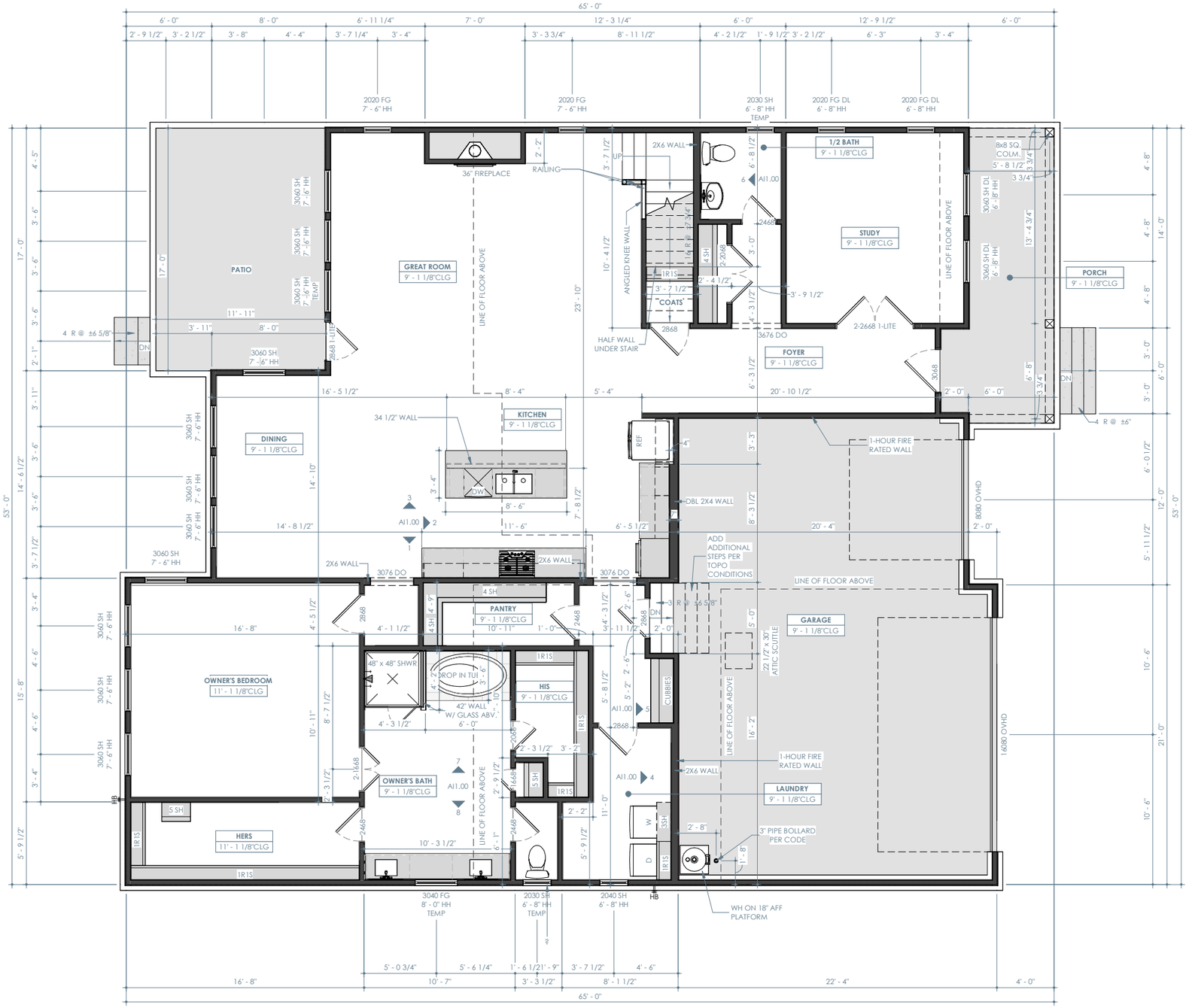
ISSUE DATE	10/06/2023
DRAWN BY	STT
SCALE	3/32" = 1'-0"

SHEET NAME

COVER SHEET

SHEET NO.

A-0.00



ELEVATION A - FIRST FLOOR PLAN

1/8" = 1'-0"

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

ELEVATION A - A/C LIVING

FIRST FLOOR	1896 SF
SECOND FLOOR	1260 SF
TOTAL	3156 SF

ELEVATION A - LIVING

FIRST FLOOR	2114 SF
SECOND FLOOR	1344 SF
TOTAL	3458 SF

TOTAL UNDER ROOF	4525 SF

ELEVATION A - NON-LIVING

GARAGE	718 SF
PORCH	136 SF
PATIO	213 SF
TOTAL	1067 SF

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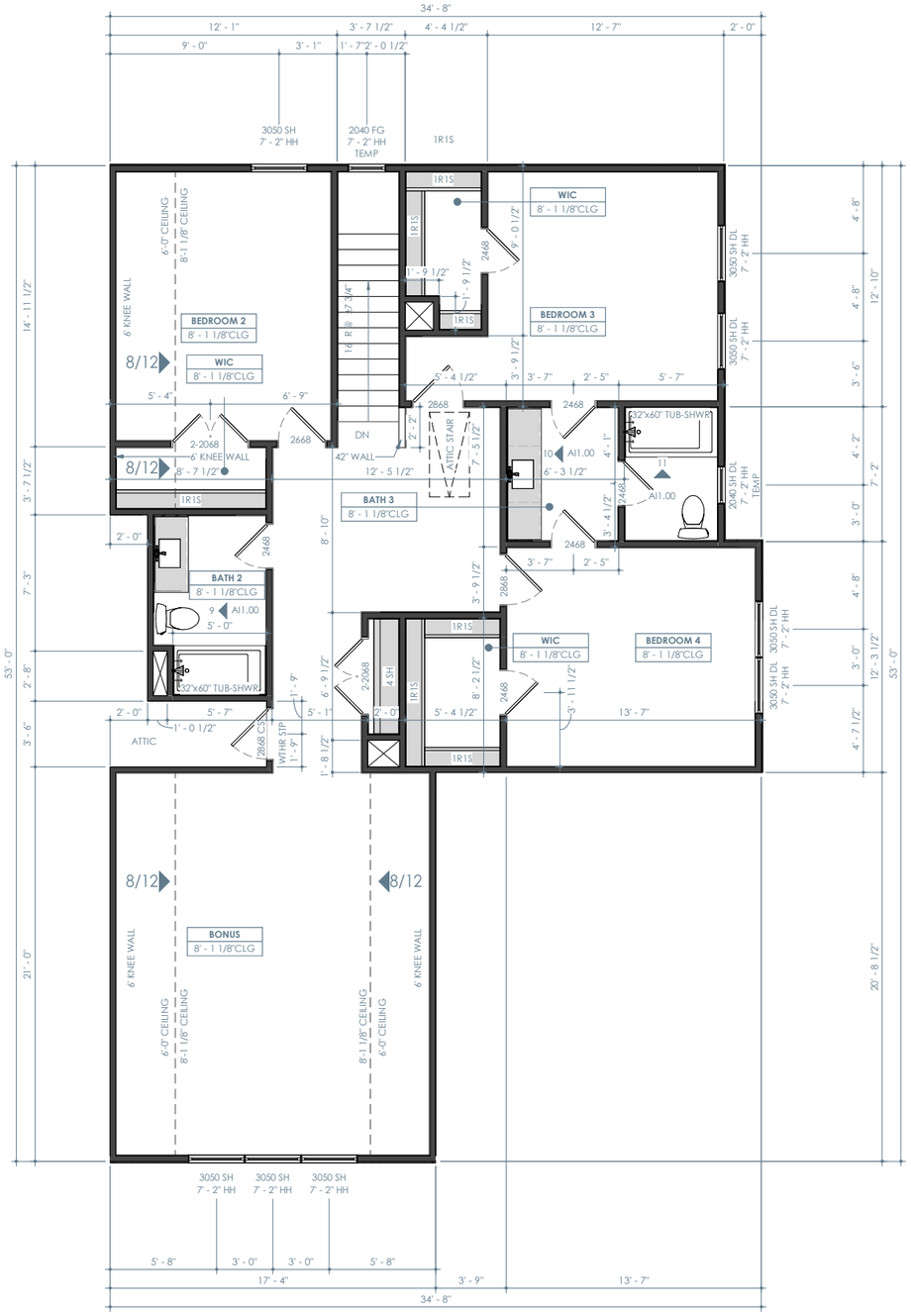
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - FIRST FLOOR PLAN

SHEET NO.

A-1.00



ELEVATION A - SECOND FLOOR PLAN

1/8" = 1'-0"

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - SECOND FLOOR PLAN

SHEET NO.

A-1.01



ELEVATION A - FRONT

1/8" = 1'-0"



ELEVATION A - REAR

1/8" = 1'-0"

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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - EXTERIOR ELEVATIONS

SHEET NO.

A-1.02



ELEVATION A - LEFT

1/8" = 1'-0"



ELEVATION A - RIGHT

1/8" = 1'-0"

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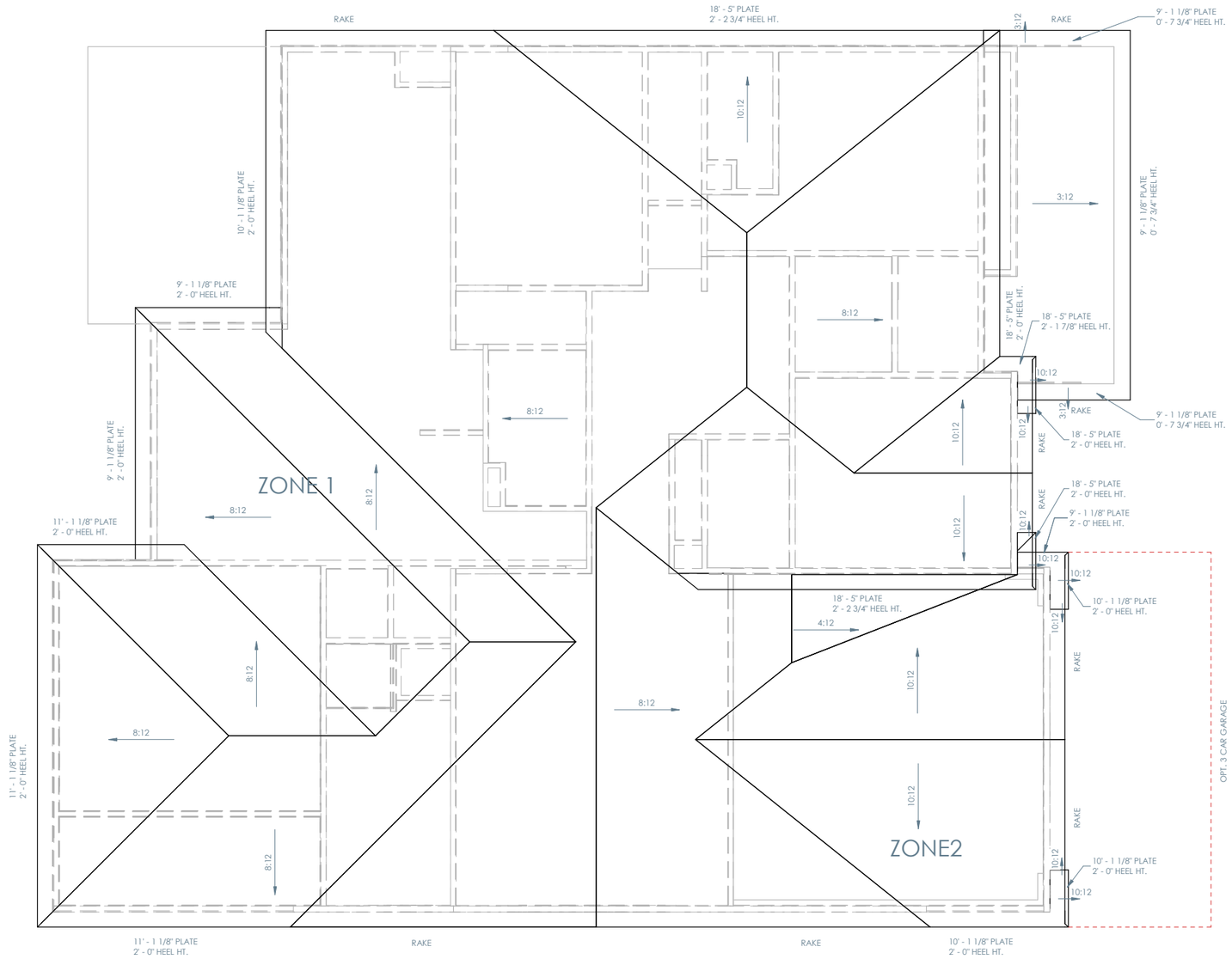
ISSUE DATE	10/06/2023
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - EXTERIOR ELEVATIONS

SHEET NO.

A-1.03



ELEVATION A - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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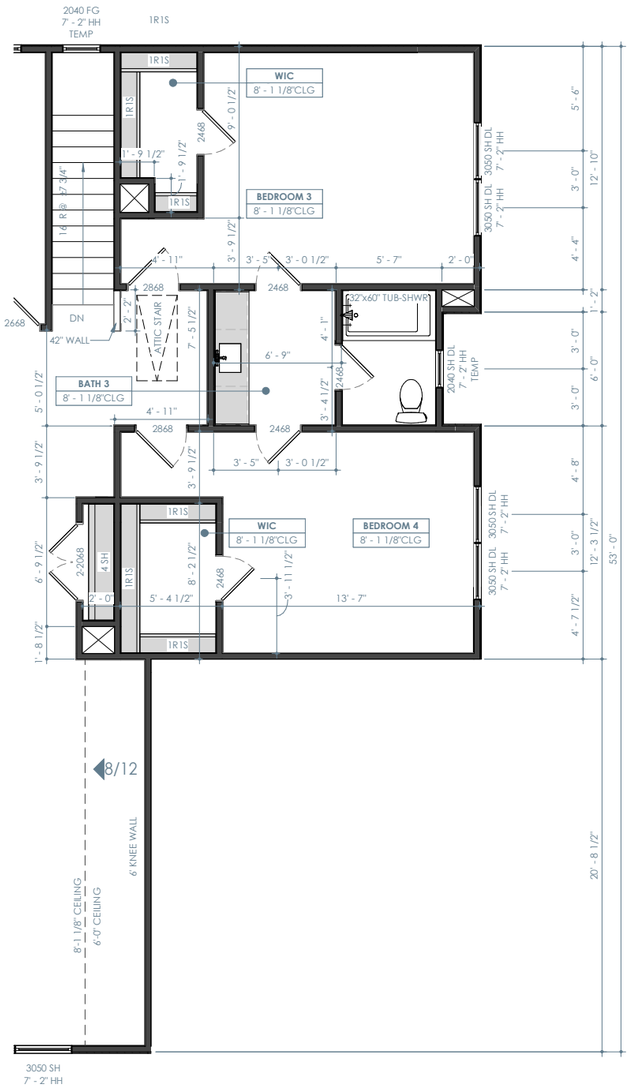
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION A - ROOF PLAN

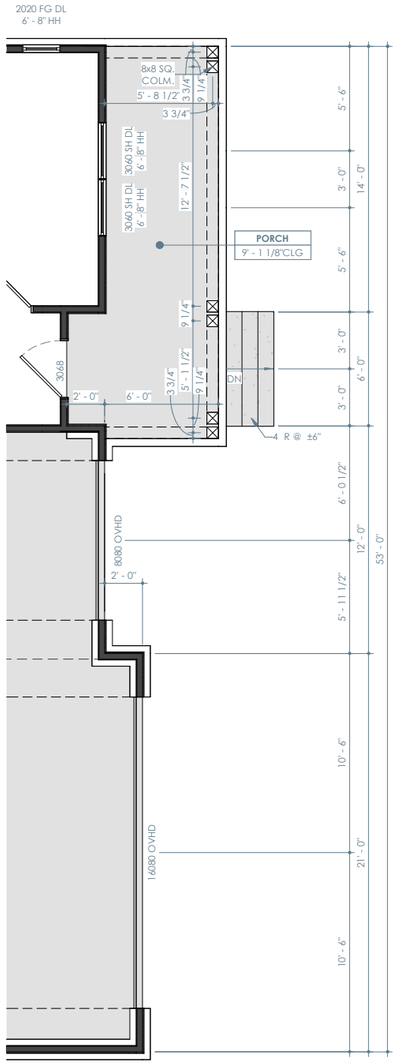
SHEET NO.

A-1.04



ELEVATION B - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION B - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION B - A/C LIVING

FIRST FLOOR	1896 SF
SECOND FLOOR	1282 SF
TOTAL	3178 SF

ELEVATION B - LIVING

FIRST FLOOR	2114 SF
SECOND FLOOR	1372 SF
TOTAL	3486 SF

TOTAL UNDER ROOF	4553 SF

ELEVATION B - NON-LIVING

GARAGE	718 SF
PORCH	136 SF
PATIO	213 SF
TOTAL	1067 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
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PLAN NO.

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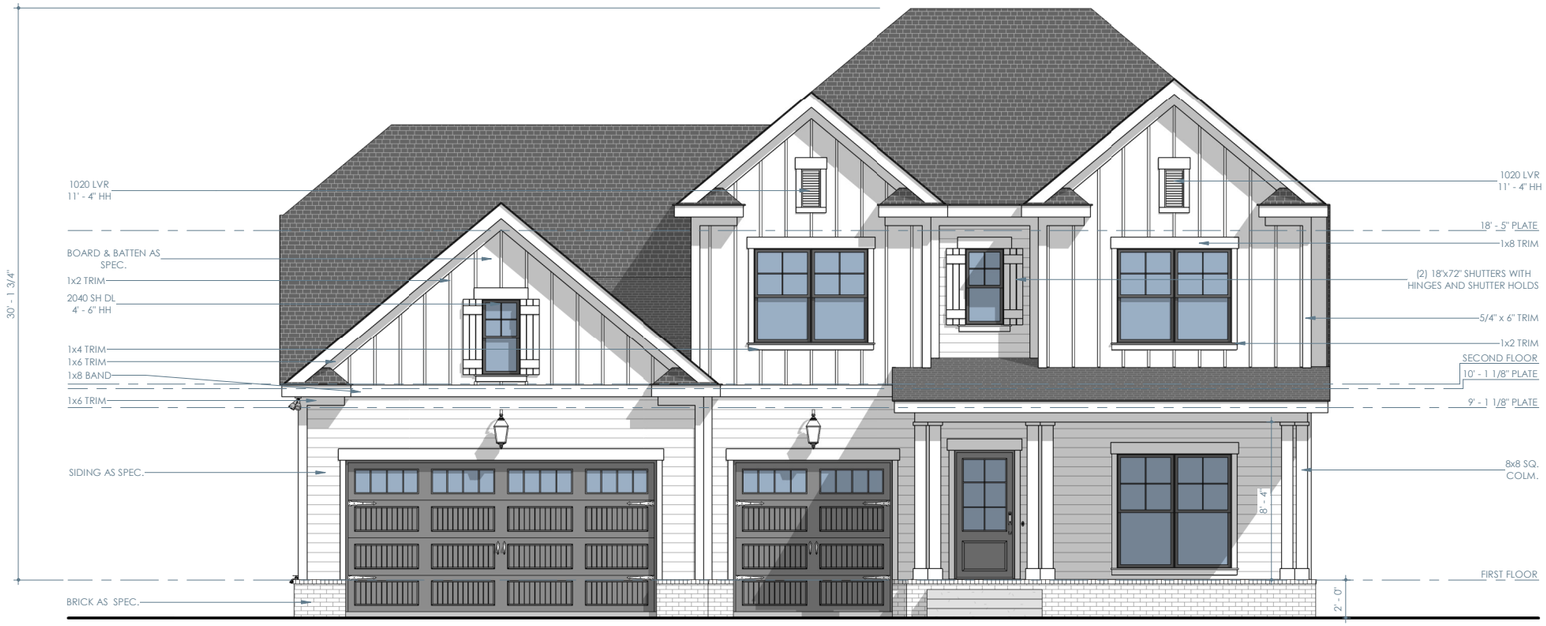
ISSUE DATE	10/06/2023
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - PARTIAL FLOOR PLANS

SHEET NO.

A-2.01



ELEVATION B - FRONT

1/8" = 1'-0"



ELEVATION B - REAR

1/8" = 1'-0"

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ISSUE DATE	10/06/2023
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - EXTERIOR ELEVATIONS

SHEET NO.

A-2.02



ELEVATION B - LEFT

1/8" = 1'-0"



ELEVATION B - RIGHT

1/8" = 1'-0"

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PLAN NO.

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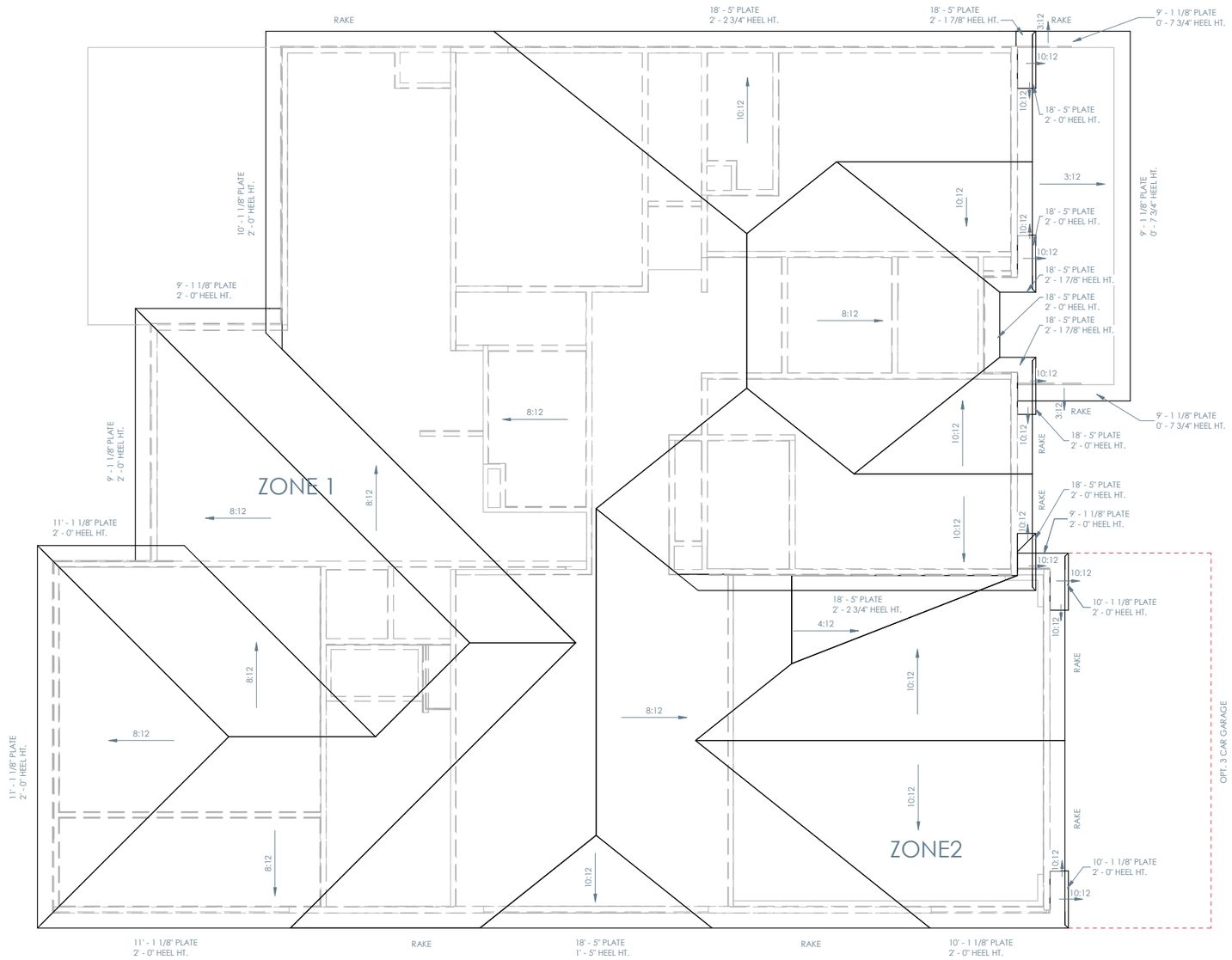
ISSUE DATE	10/06/2023
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - EXTERIOR ELEVATIONS

SHEET NO.

A-2.03



ELEVATION B - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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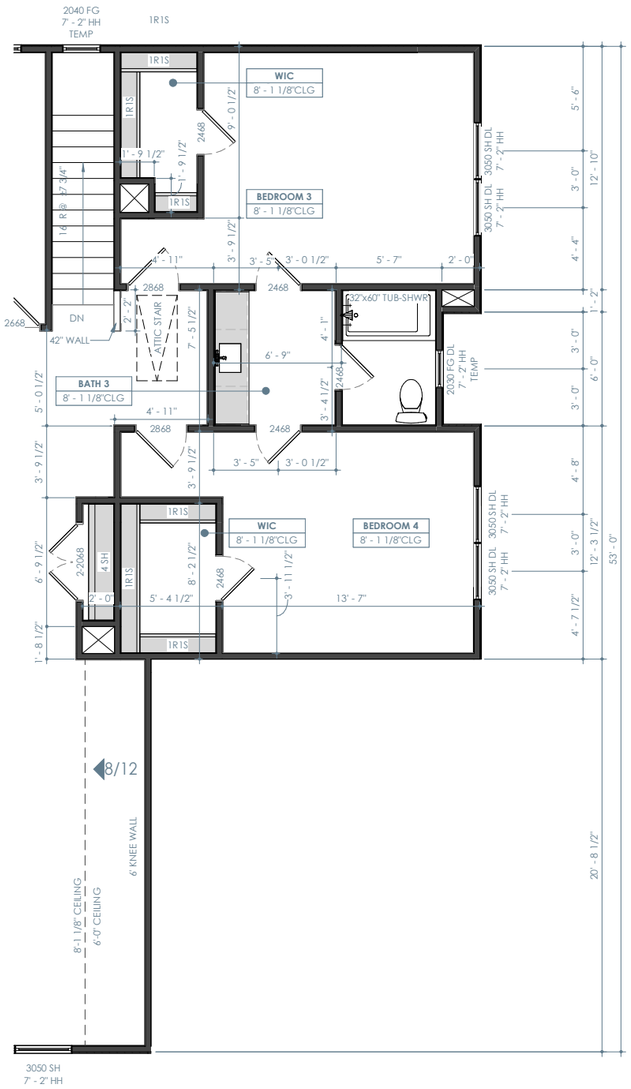
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION B - ROOF PLAN

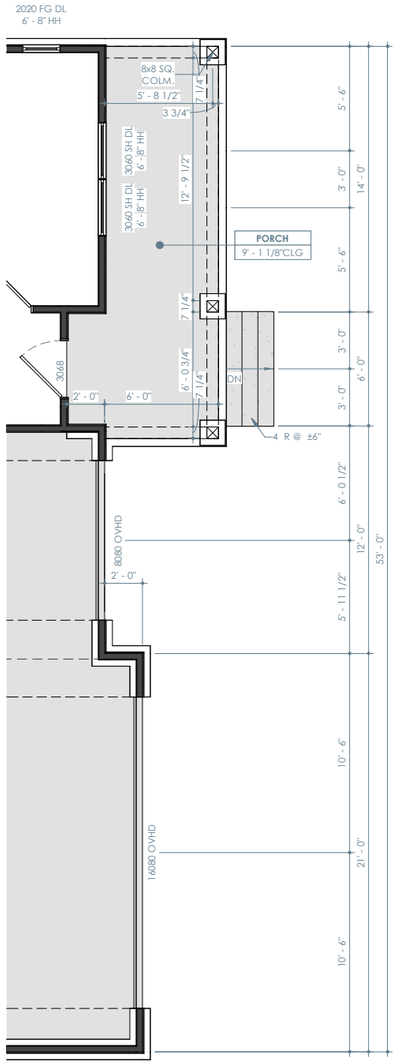
SHEET NO.

A-2.04



ELEVATION C - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION C - FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION C - A/C LIVING

FIRST FLOOR	1896 SF
SECOND FLOOR	1282 SF
TOTAL	3178 SF

ELEVATION C - LIVING

FIRST FLOOR	2114 SF
SECOND FLOOR	1372 SF
TOTAL	3486 SF

TOTAL UNDER ROOF	4553 SF

ELEVATION C - NON-LIVING

GARAGE	718 SF
PORCH	136 SF
PATIO	213 SF
TOTAL	1067 SF

FLOOR PLAN NOTES

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PROJECT NAME

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ISSUE DATE	10/06/2023
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - PARTIAL FLOOR PLANS

SHEET NO.

A-3.01



ELEVATION C - FRONT

1/8" = 1'-0"



ELEVATION C - REAR

1/8" = 1'-0"

Brightland HOMES

PROJECT NAME

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ISSUE DATE	10/06/2023
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - EXTERIOR ELEVATIONS

SHEET NO.

A-3.02



ELEVATION C - LEFT

1/8" = 1'-0"



ELEVATION C - RIGHT

1/8" = 1'-0"

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PROJECT NAME

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PLAN NO.

3470

ISSUE DATE	10/06/2023
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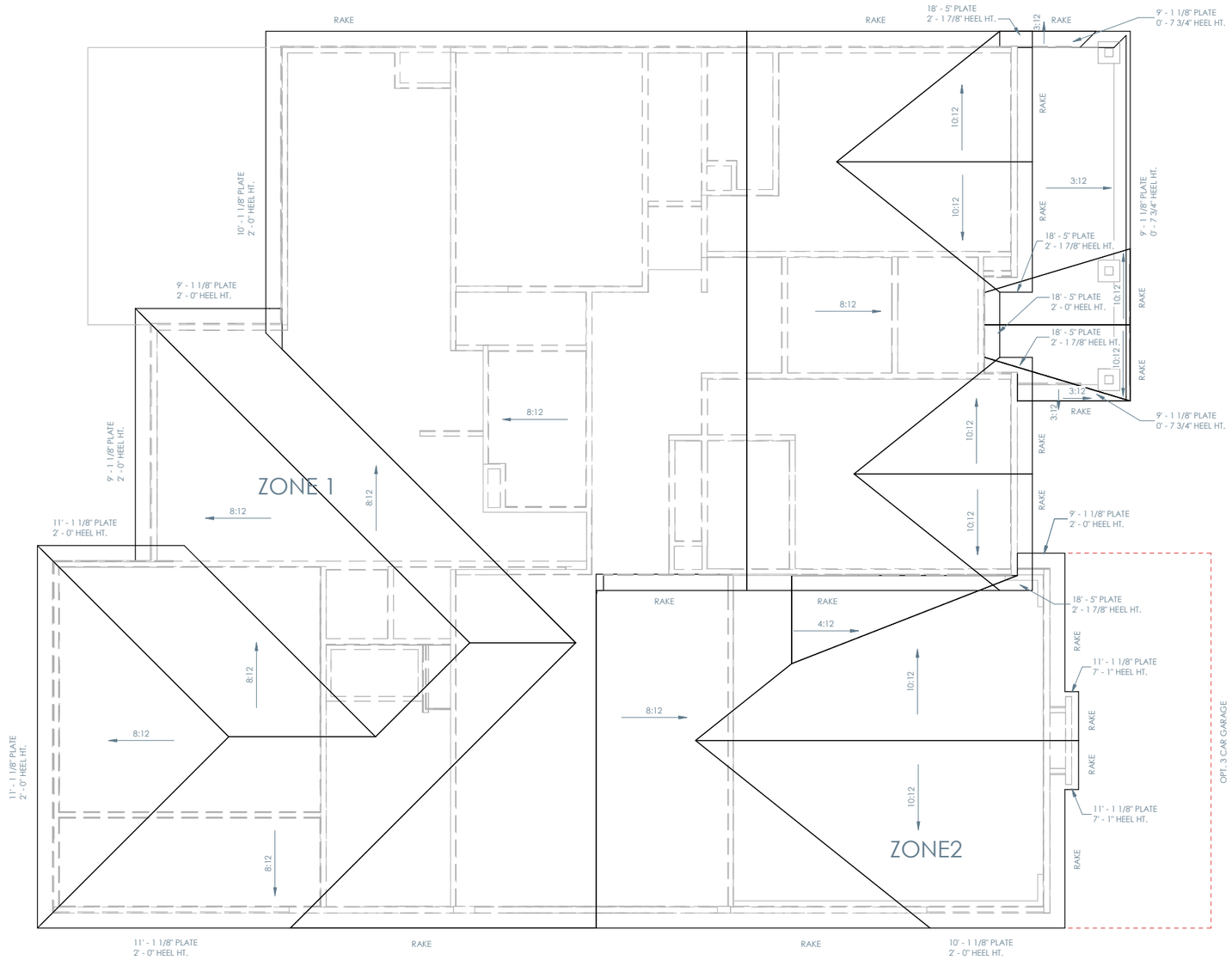
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - EXTERIOR ELEVATIONS

SHEET NO.

A-3.03



ELEVATION C - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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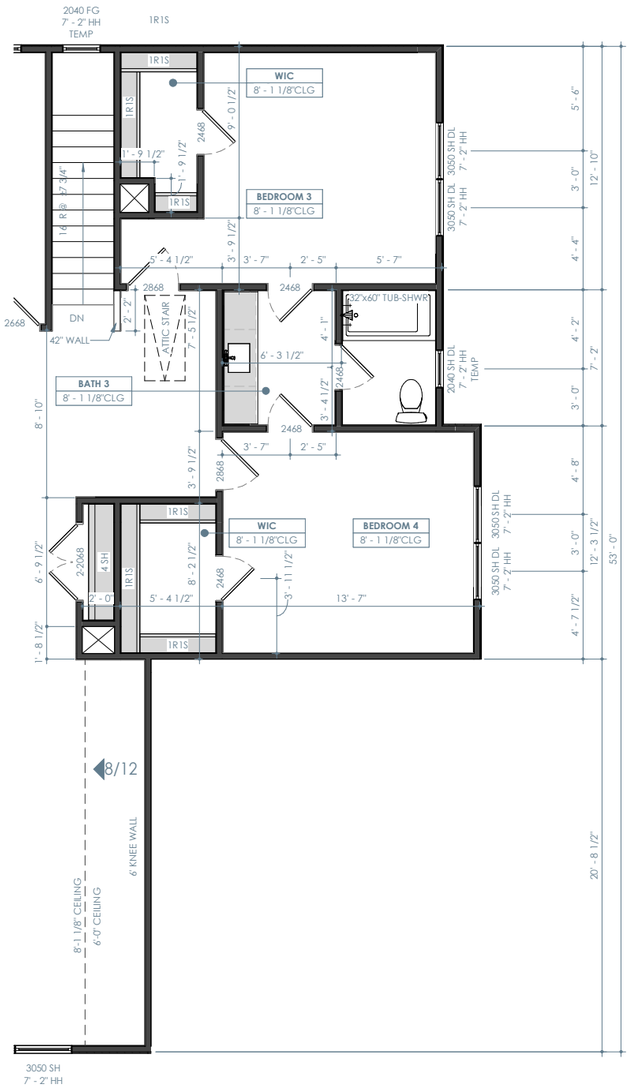
SHEET NAME

ELEVATION C - ROOF PLAN

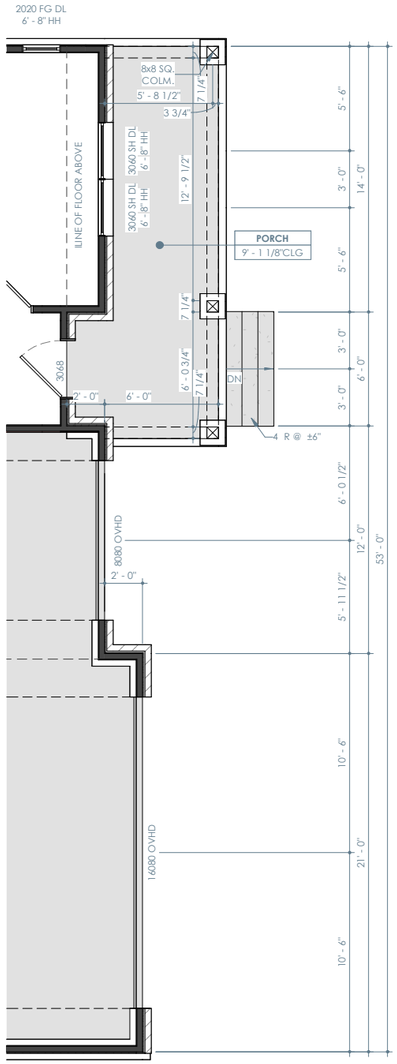
SHEET NO.

A-3.04



ELEVATION D - SECOND FLOOR PLAN

1/8" = 1'-0"



ELEVATION D- FIRST FLOOR PLAN

1/8" = 1'-0"

ELEVATION D - A/C LIVING

FIRST FLOOR	1896 SF
SECOND FLOOR	1260 SF
TOTAL	3156 SF

ELEVATION D - LIVING

FIRST FLOOR	2124 SF
SECOND FLOOR	1344 SF
TOTAL	3468 SF

TOTAL UNDER ROOF	4540 SF

ELEVATION D - NON-LIVING

GARAGE	734 SF
PORCH	125 SF
PATIO	213 SF
TOTAL	1072 SF

FLOOR PLAN NOTES

- INTERIOR DIMENSIONS ARE TO FACE OF STUD, UNLESS NOTED OTHERWISE. WINDOWS DOORS AND OPENINGS ARE DIMENSIONED TO CENTER OF ROUGH OPENINGS.
- DOORS TO BE PLACED CENTERED IN SPACE / ON WALL. ALL DOOR JAMBS TO BE 5", WHERE APPLICABLE FROM NEAREST WALL UNLESS NOTED OTHERWISE.
- REFER TO ELEVATIONS AND ROOF PLANS FOR PLATE HEIGHTS
- ALL ANGLES OTHER THAN 90° ARE TO BE 45° ANGLES UNLESS NOTED OTHERWISE
- ALL OPENINGS TO BE CENTERED ON WALL UNLESS NOTED OTHERWISE
- WATER HEATER ON 18" HIGH PLATFORM. REQUIRED LOCATION MAY VARY. BUILDER IS TO VERIFY LOCATION

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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - PARTIAL FLOOR PLANS

SHEET NO.

A-4.01



ELEVATION D - FRONT

1/8" = 1'-0"



ELEVATION D - REAR

1/8" = 1'-0"

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SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - EXTERIOR ELEVATIONS

SHEET NO.

A-4.02



ELEVATION D - LEFT

1/8" = 1'-0"



ELEVATION D - RIGHT

1/8" = 1'-0"

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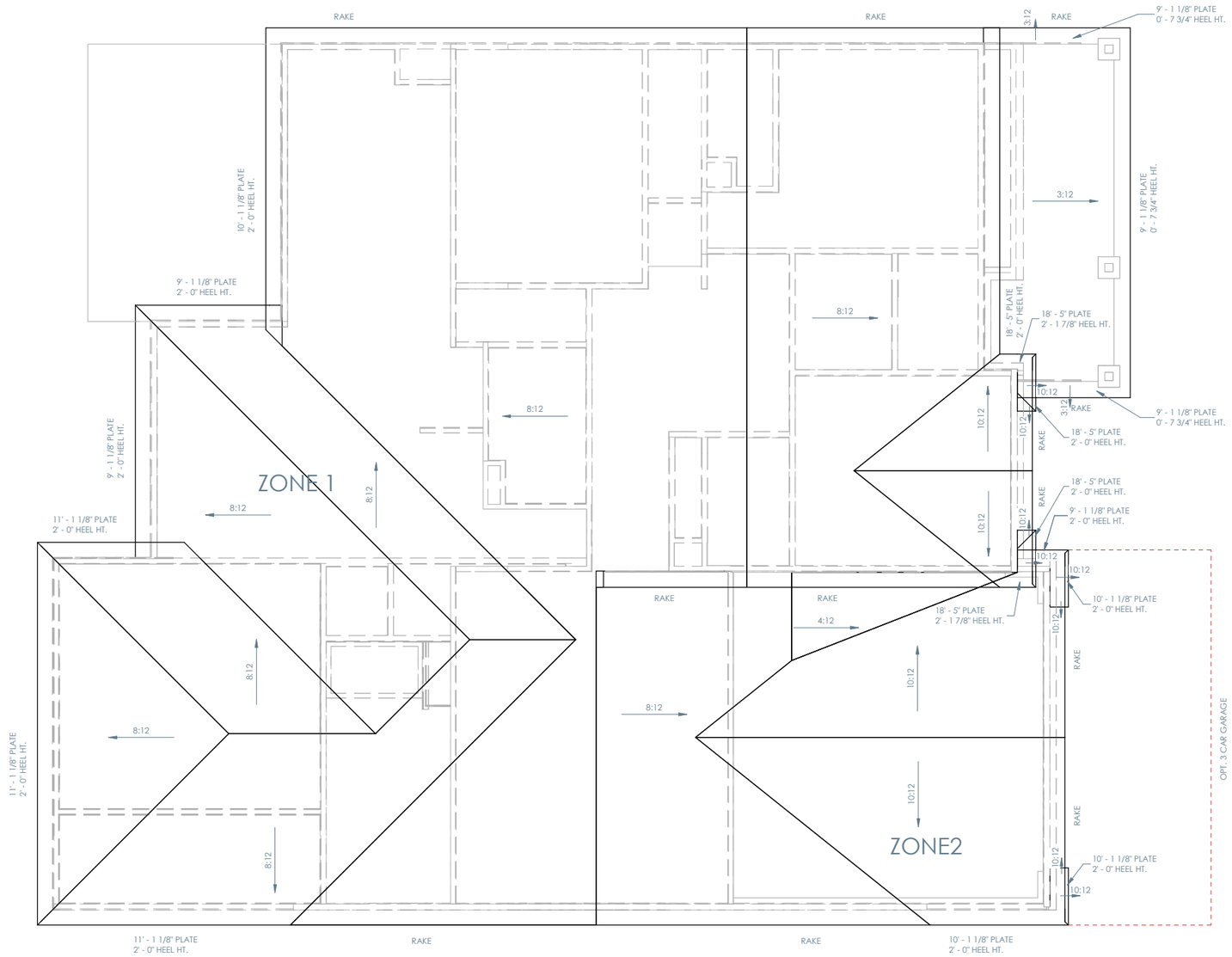
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - EXTERIOR ELEVATIONS

SHEET NO.

A-4.03



ELEVATION D - ROOF PLAN

1/8" = 1'-0"

ROOF NOTES

- ALL RAKE AND EAVE DIMENSIONS ARE NOTED ON PLANS, DETAILS AND/OR SECTIONS
- SADDLES TO EXTEND 1 1/2" PAST CHIMNEY
- ALL ROOF OVERHANGS 1'-0" FROM STUD UNLESS NOTED OTHERWISE

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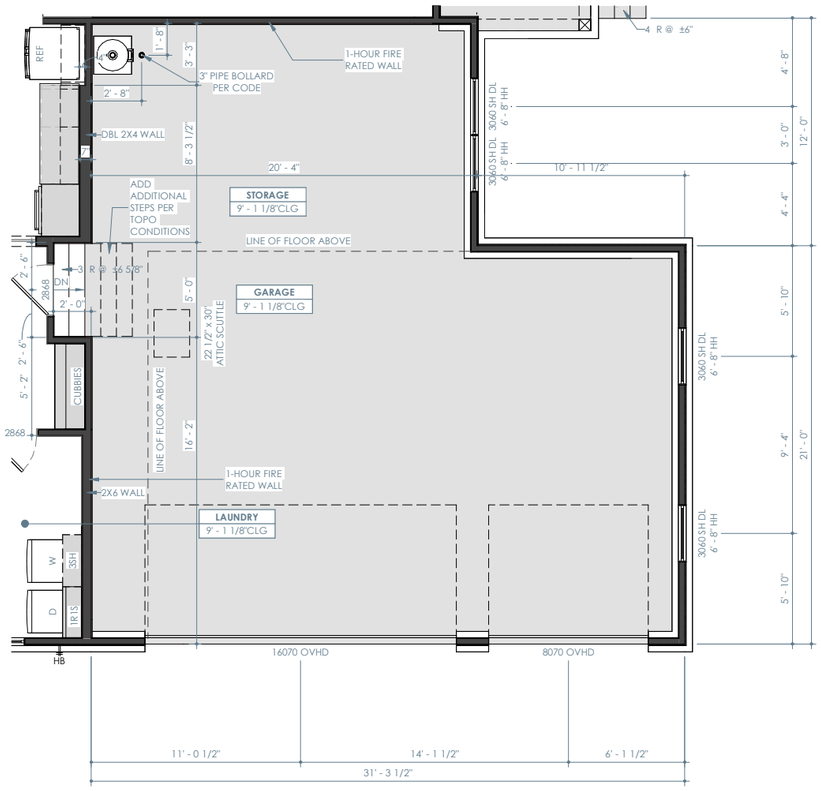
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION D - ROOF PLAN

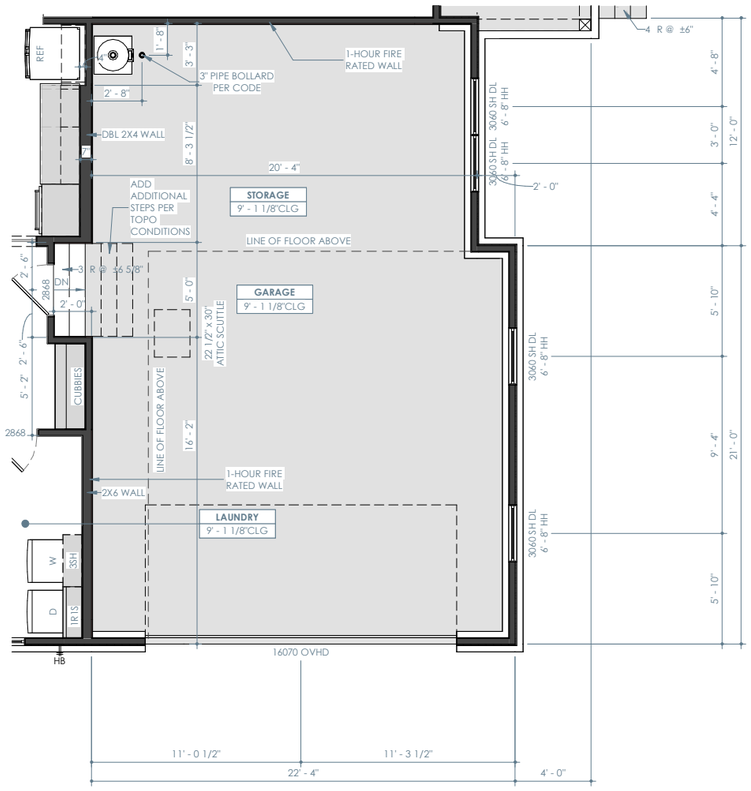
SHEET NO.

A-4.04



OPT. 3 CAR GARAGE - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. SIDE LOAD GARAGE - FIRST FLOOR PLAN

1/8" = 1'-0"

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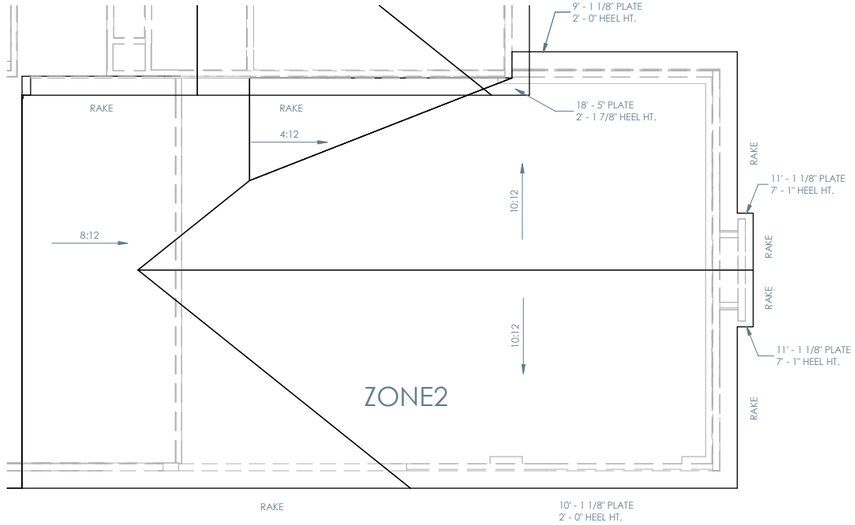
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

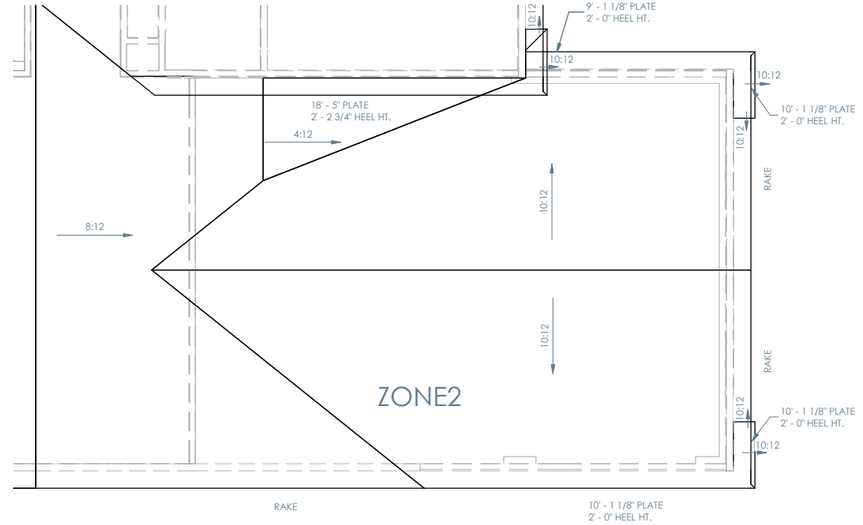
SHEET NO.

A-7.00



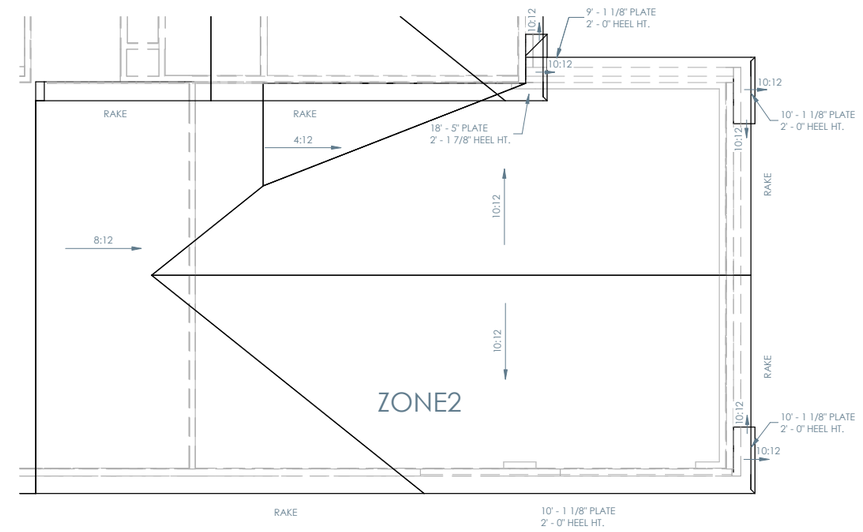
ELEVATION C - OPT. 3 CAR GARAGE - ROOF PLAN

1/8" = 1'-0"



ELEVATION A - OPT. 3 CAR GARAGE - ROOF PLAN (SIMILAR FOR ELEVATION B)

1/8" = 1'-0"



ELEVATION D - OPT. 3 CAR GARAGE - ROOF PLAN

1/8" = 1'-0"

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SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

SHEET NO.

A-7.01



ELEVATION A - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



ELEVATION C - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



ELEVATION B - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"



ELEVATION D - OPT. SIDE LOAD GARAGE - FRONT

1/8" = 1'-0"

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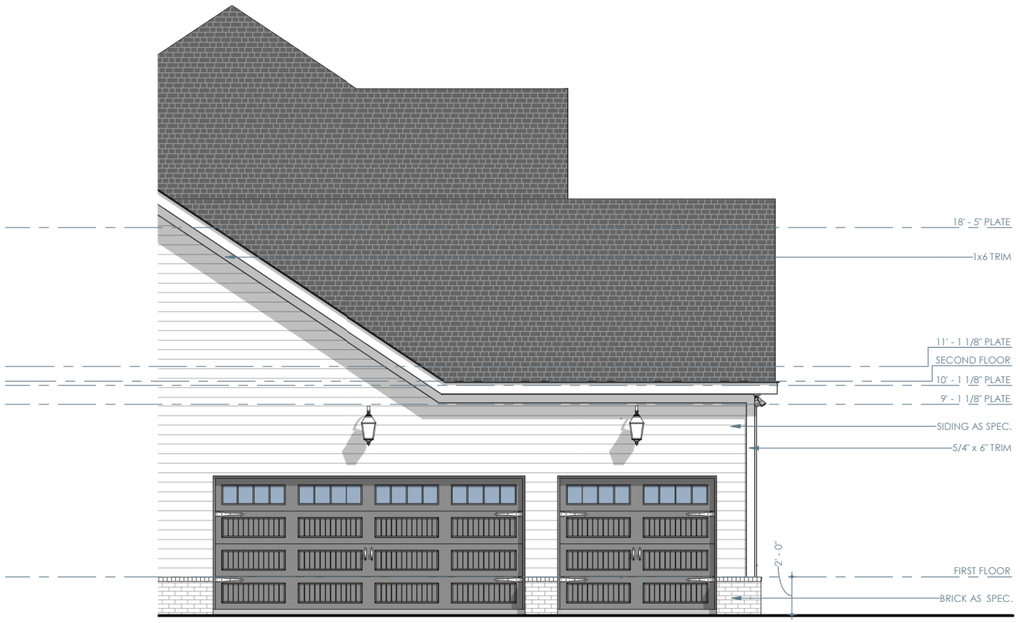
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

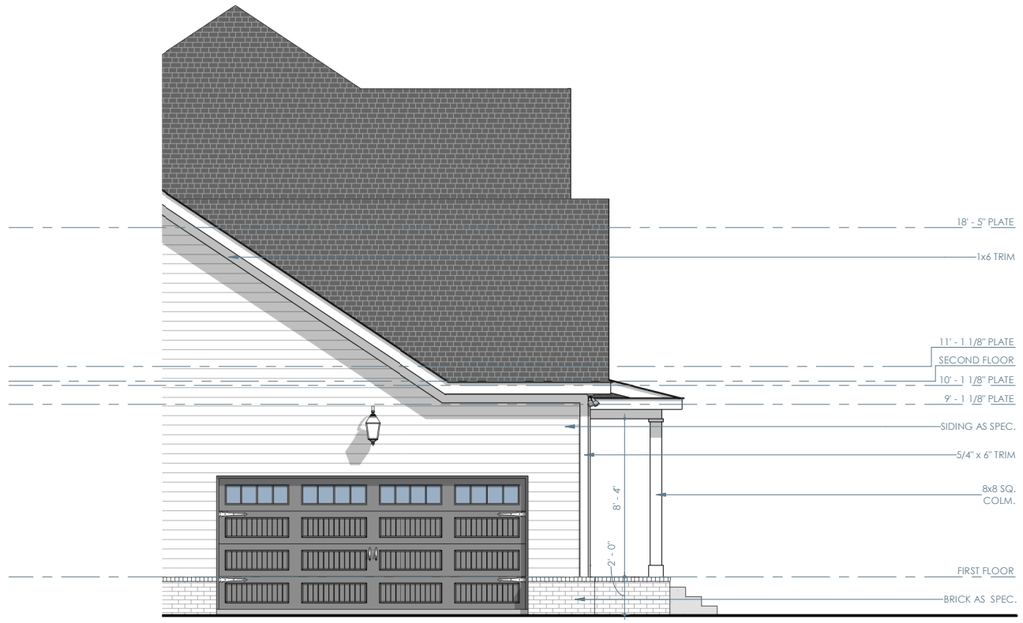
SHEET NO.

A-7.02



OPT. 3 CAR GARAGE - LEFT

1/8" = 1'-0"



OPT. SIDE LOAD GARAGE - LEFT

1/8" = 1'-0"

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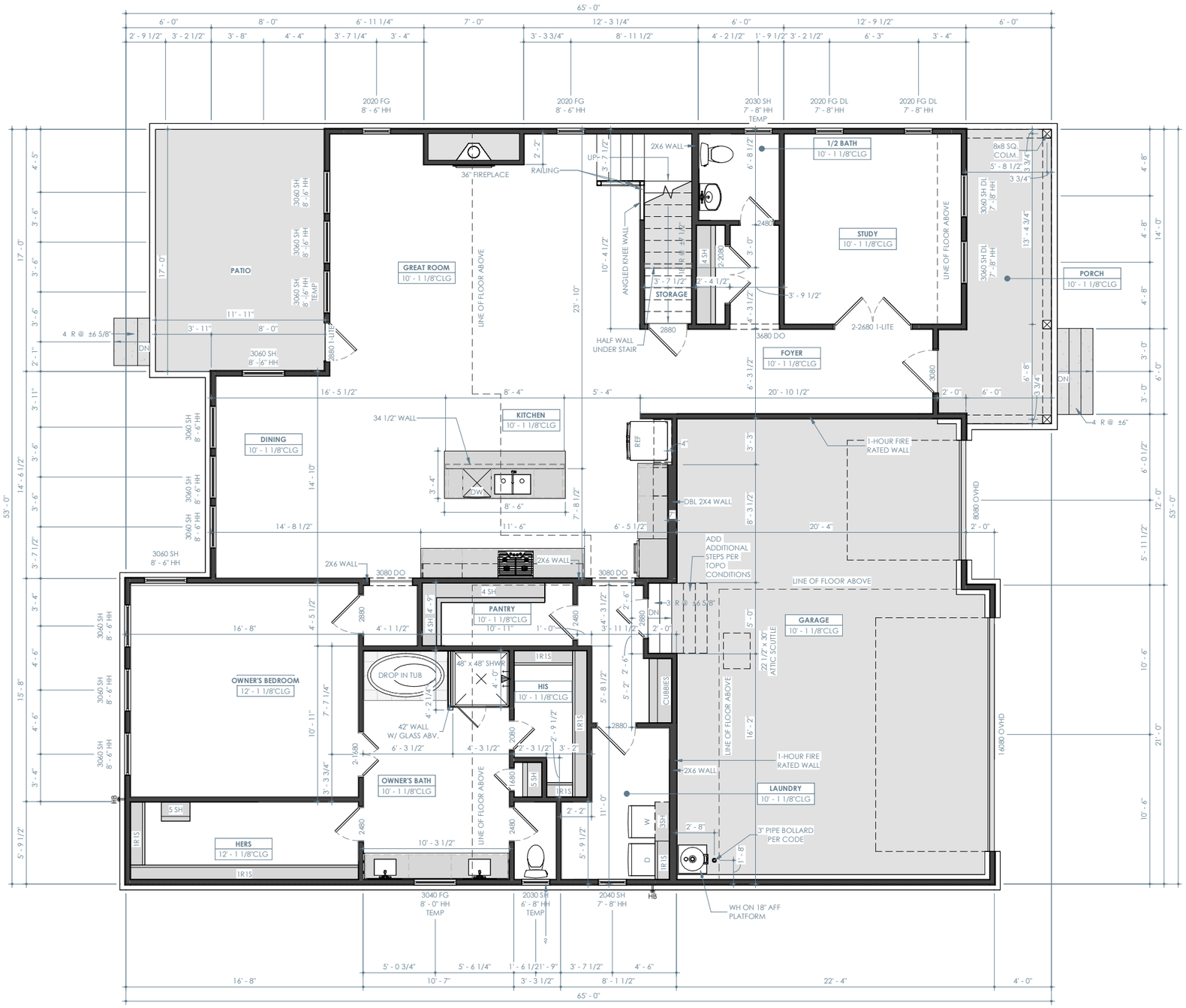
SHEET NAME

PLAN OPTIONS

SHEET NO.

A-7.03



OPT. EXECUTIVE PACKAGE - FIRST FLOOR PLAN

1/8" = 1'-0"

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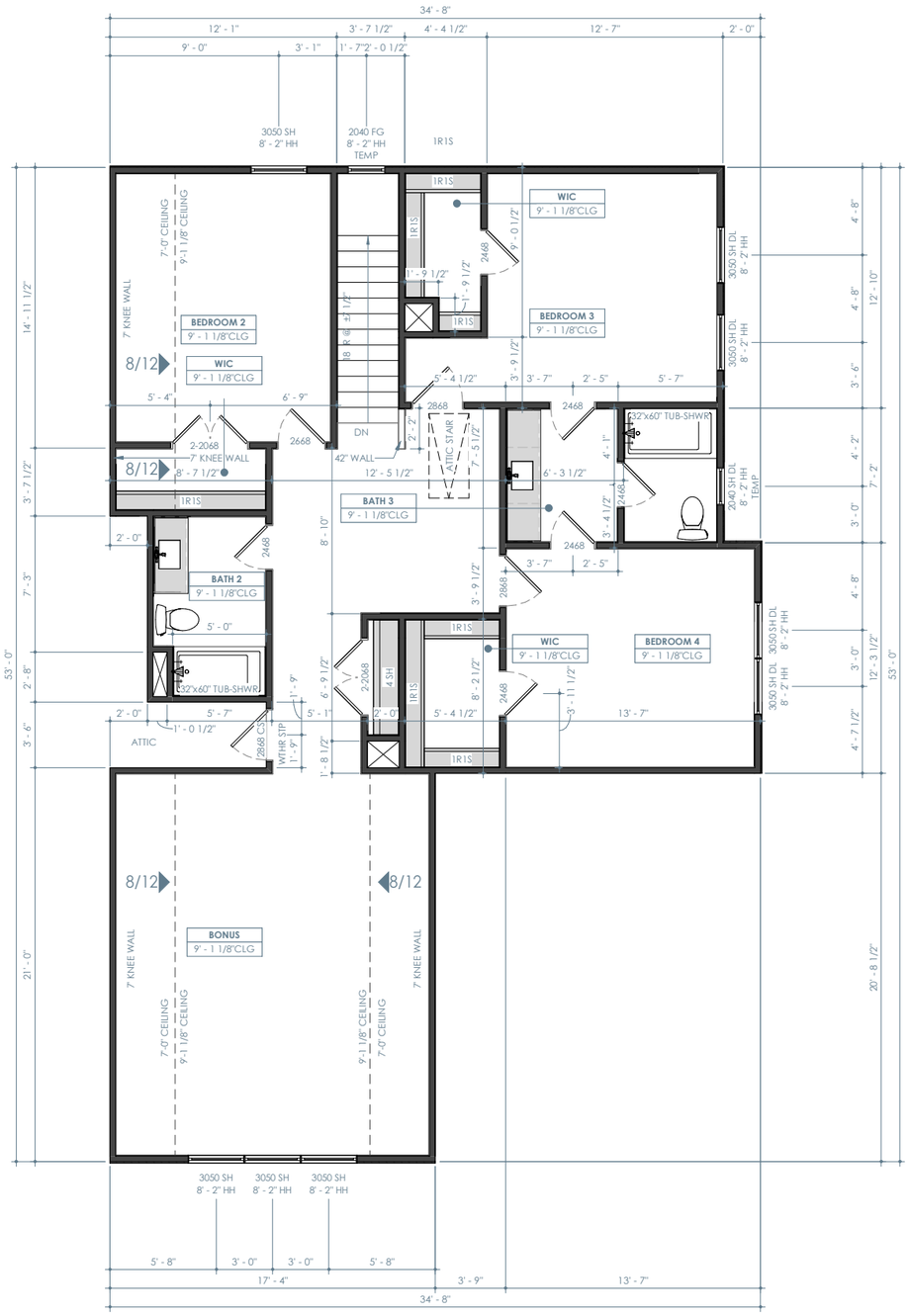
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

SHEET NO.

A-7.04



OPT. EXECUTIVE PACKAGE - SECOND FLOOR PLAN

1/8" = 1'-0"

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SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

SHEET NO.

A-7.05



ELEVATION A - OPT. EXECUTIVE PACKAGE - FRONT

1/8" = 1'-0"



ELEVATION A - OPT. EXECUTIVE PACKAGE - REAR

1/8" = 1'-0"

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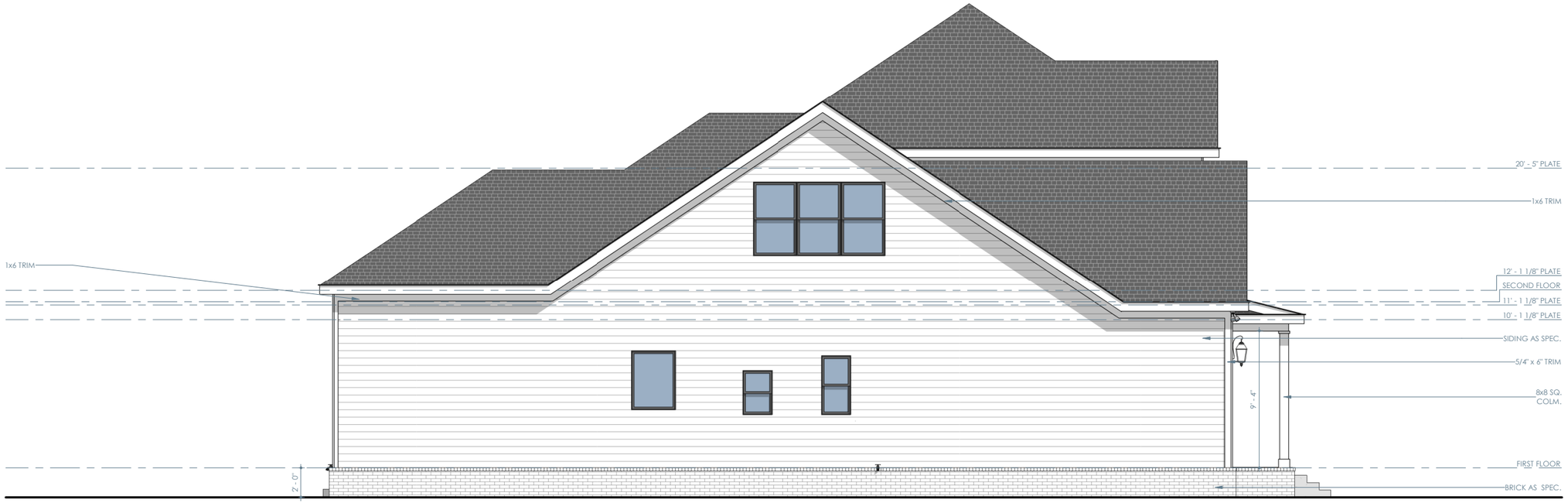
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

SHEET NO.

A-7.06



ELEVATION A - OPT. EXECUTIVE PACKAGE - LEFT

1/8" = 1'-0"



ELEVATION A - OPT. EXECUTIVE PACKAGE - RIGHT

1/8" = 1'-0"

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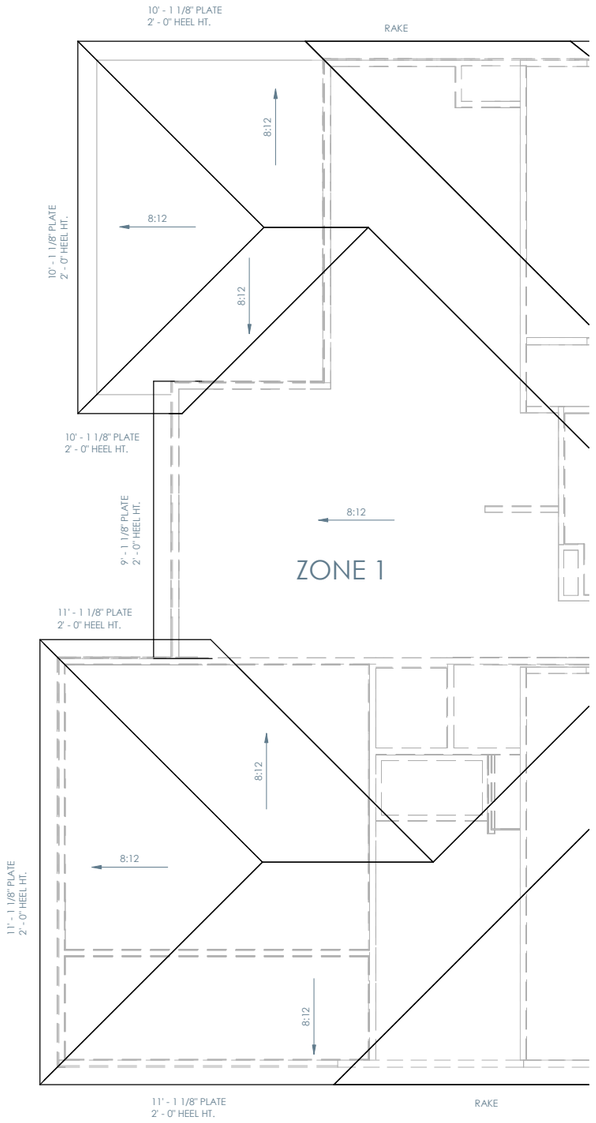
SHEET NAME

PLAN OPTIONS

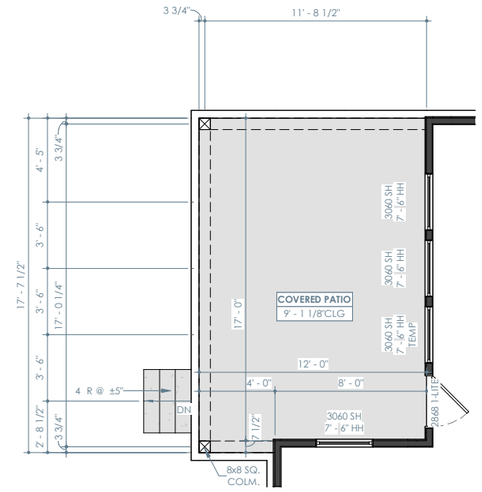
SHEET NO.

A-7.07



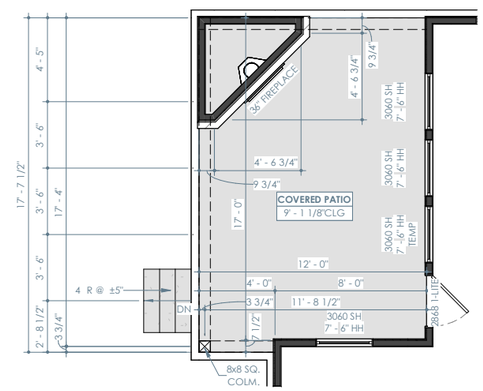
OPT. REAR COVERED PORCH - ROOF PLAN

1/8" = 1'-0"



OPT. REAR COVERED PORCH - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. PORCH FIREPLACE - FIRST FLOOR PLAN

1/8" = 1'-0"

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ISSUE DATE	10/06/2023
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

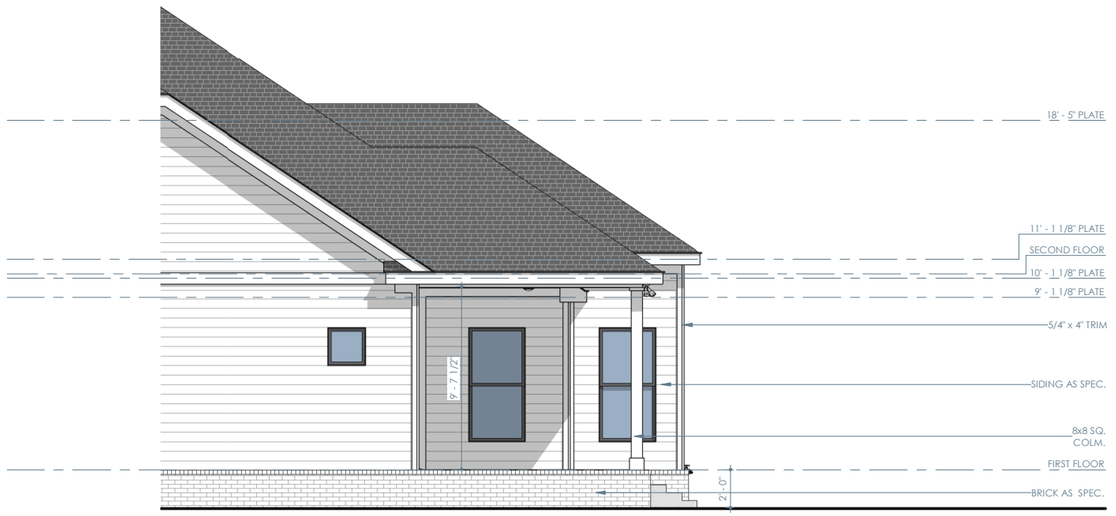
SHEET NO.

A-7.08



OPT. REAR COVERED PORCH - REAR

1/8" = 1'-0"



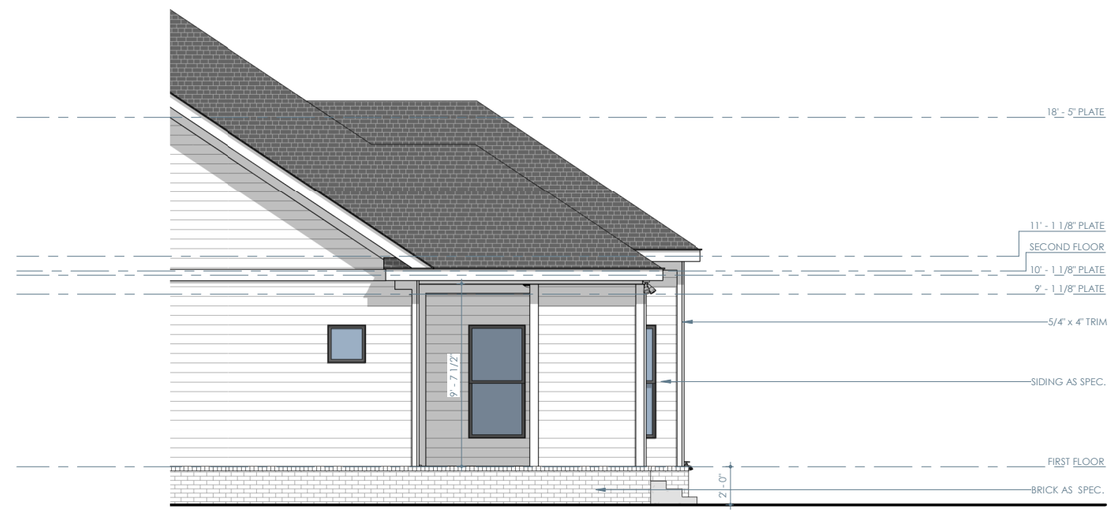
OPT. REAR COVERED PORCH - RIGHT

1/8" = 1'-0"



OPT. PORCH FIREPLACE - REAR

1/8" = 1'-0"



OPT. PORCH FIREPLACE - RIGHT

1/8" = 1'-0"

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PLAN NO.

3470

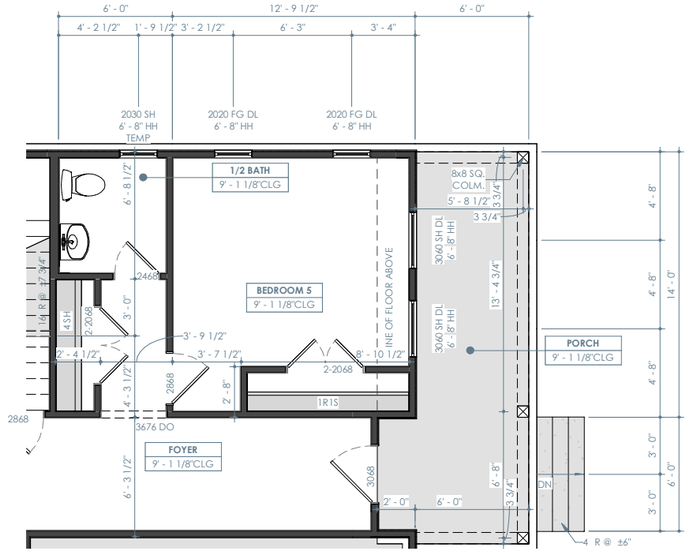
ISSUE DATE	10/06/2023
DRAWN BY	STT
SCALE	1/8" = 1'-0"

SHEET NAME

PLAN OPTIONS

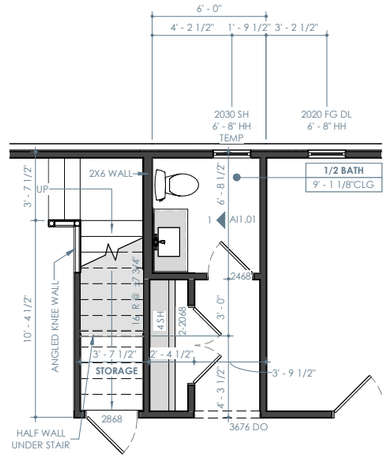
SHEET NO.

A-7.09



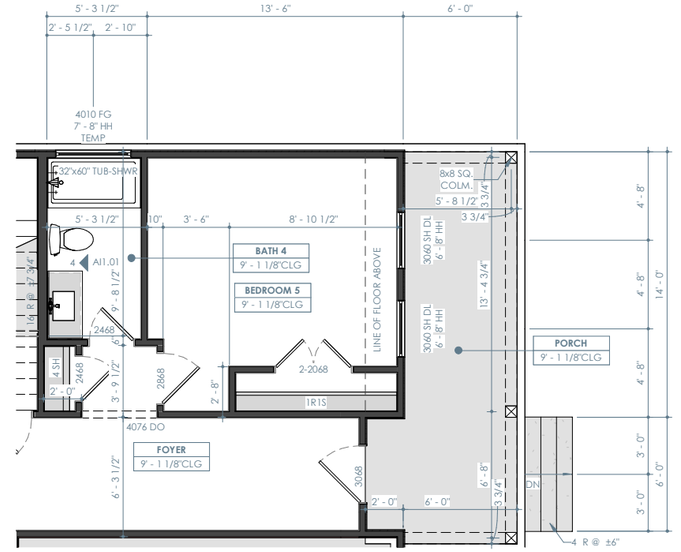
OPT. BEDROOM 5 - FIRST FLOOR PLAN

1/8" = 1'-0"



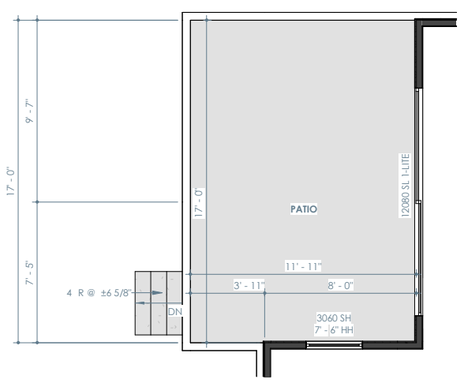
OPT. 1/2 BATH VANITY - FIRST FLOOR PLAN

1/8" = 1'-0"



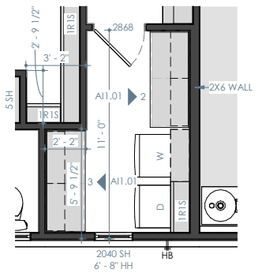
OPT. GUEST BEDROOM - FIRST FLOOR PLAN

1/8" = 1'-0"



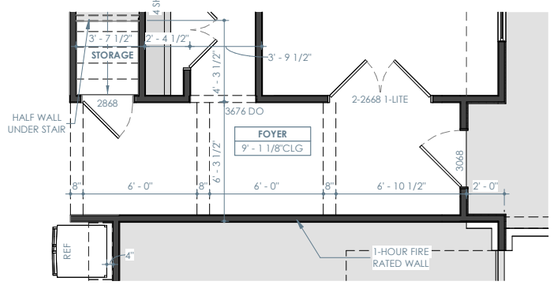
OPT. GREAT ROOM SLIDER DOOR - FIRST FLOOR PLAN

1/8" = 1'-0"



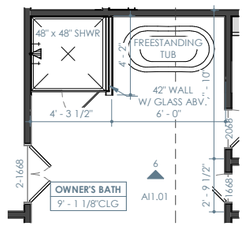
OPT. LAUNDRY CABINETS - FIRST FLOOR PLAN

1/8" = 1'-0"



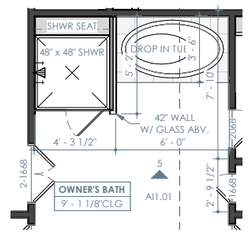
OPT. COFFERED CEILING AT FOYER - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. OWNER'S BATH 1 - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. SHOWER SEAT @ OWNERS BATH - FIRST FLOOR PLAN

1/8" = 1'-0"

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PLAN NO.

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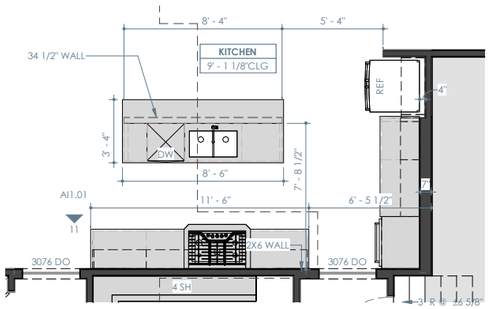
SHEET NAME

PLAN OPTIONS

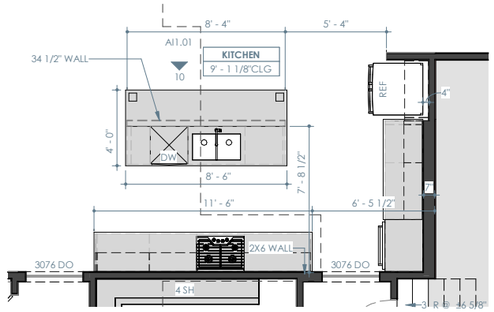
SHEET NO.

A-7.10



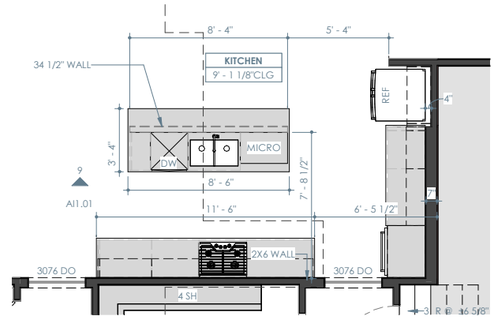
OPT. 36" COOKTOP RANGE W/ BUMPOUT & VENT HOOD ABOVE - FIRST FLOOR PLAN

1/8" = 1'-0"



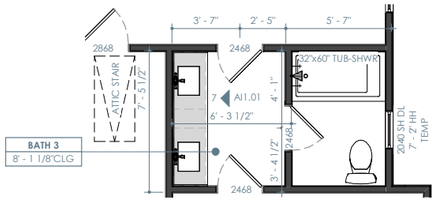
OPT. EXTEND ISLAND W/ LEGS - FIRST FLOOR PLAN

1/8" = 1'-0"



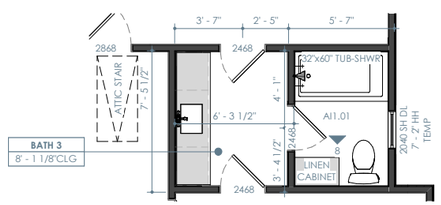
OPT. ISLAND MICROWAVE - FIRST FLOOR PLAN

1/8" = 1'-0"



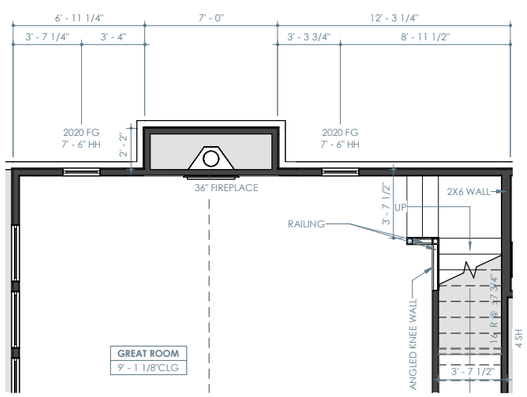
OPT. BATH 3 ADDITIONAL SINK - SECOND FLOOR PLAN

1/8" = 1'-0"



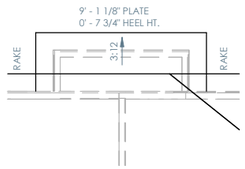
OPT. LINEN CABINETS - SECOND FLOOR PLAN

1/8" = 1'-0"



OPT. RECESSED FIREPLACE - FIRST FLOOR PLAN

1/8" = 1'-0"



OPT. RECESSED FIREPLACE - ROOF PLAN

1/8" = 1'-0"

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PLAN NO.

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ISSUE DATE	10/06/2023
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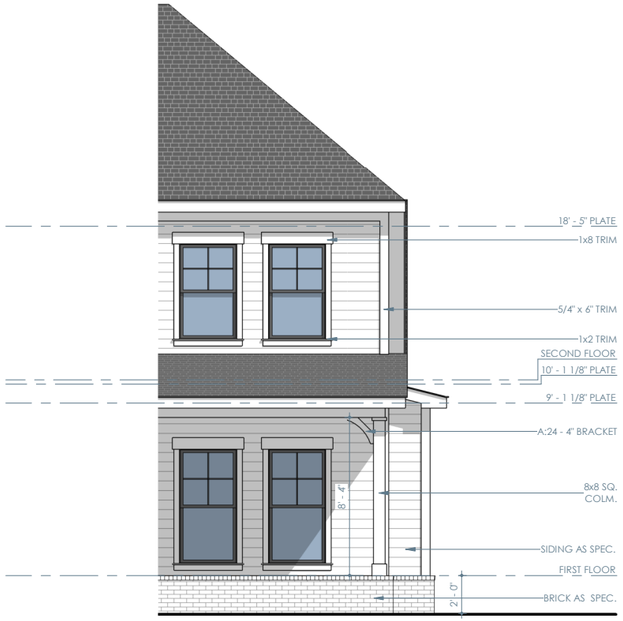
SHEET NAME

PLAN OPTIONS

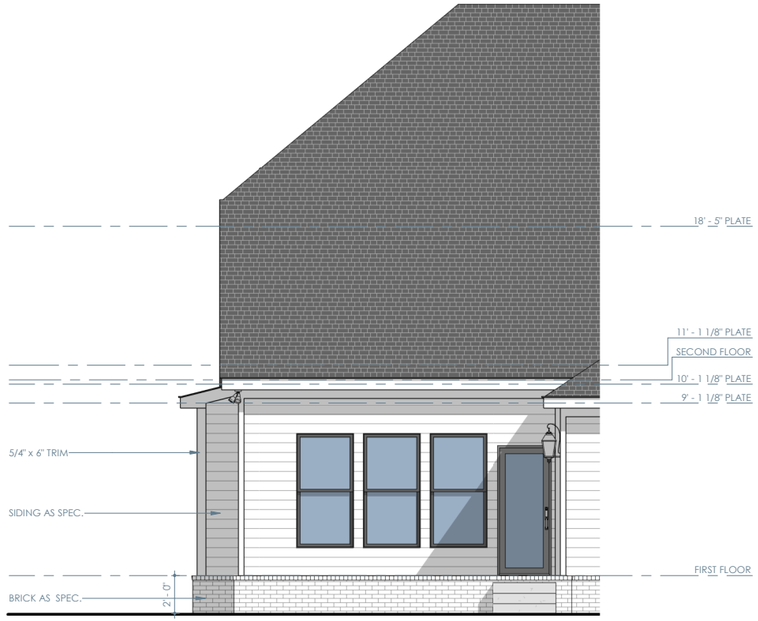
SHEET NO.

A-7.11



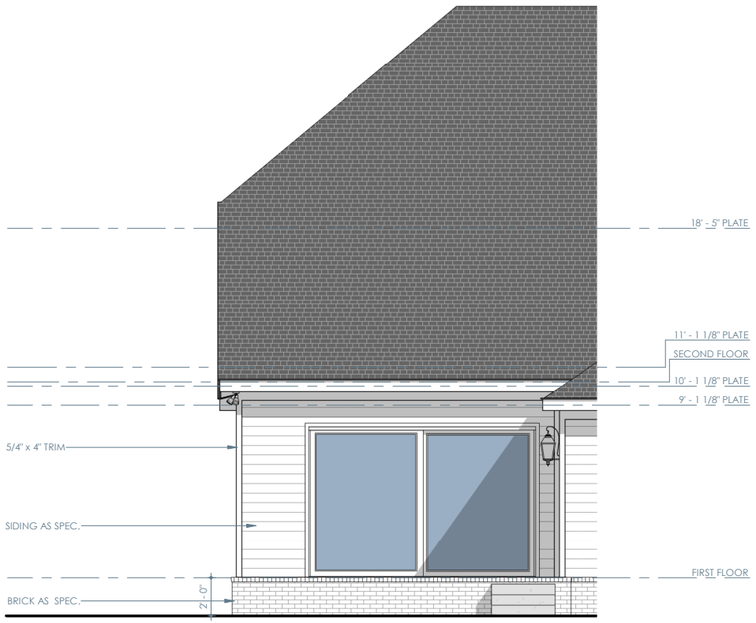
OPT. RECESSED FIREPLACE - FRONT

1/8" = 1'-0"



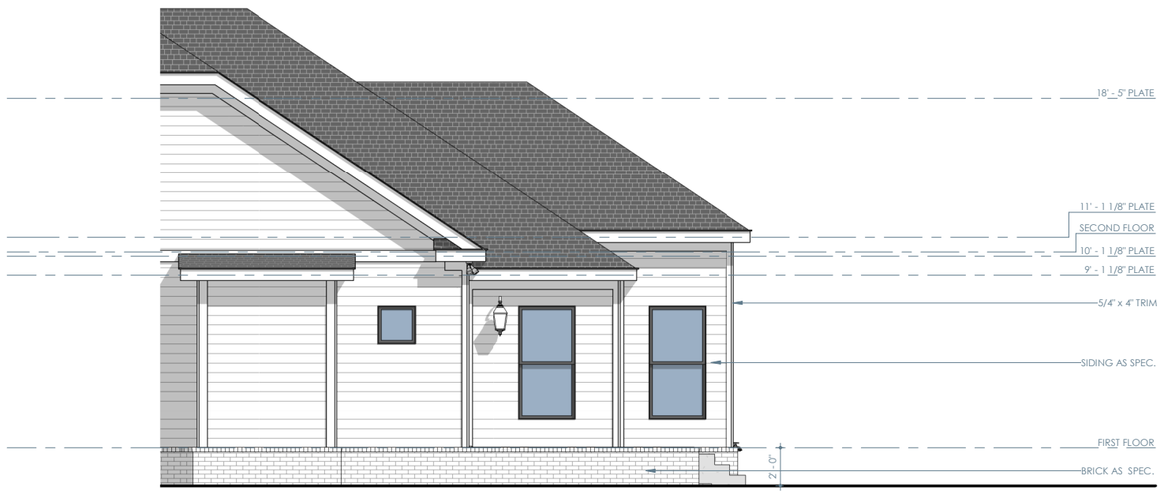
OPT. RECESSED FIREPLACE - REAR

1/8" = 1'-0"



OPT. GREAT ROOM SLIDER - REAR

1/8" = 1'-0"



OPT. RECESSED FIREPLACE - RIGHT

1/8" = 1'-0"

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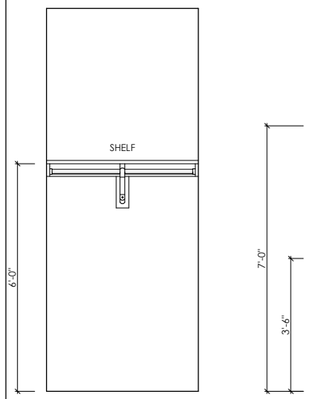
SCALE	1/8" = 1'-0"

SHEET NAME

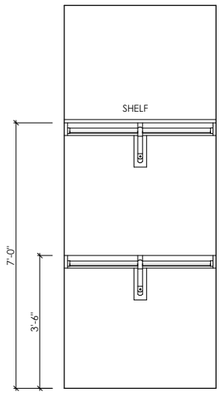
PLAN OPTIONS

SHEET NO.

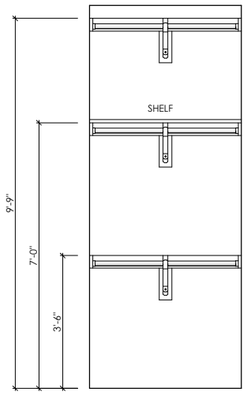
A-7.12



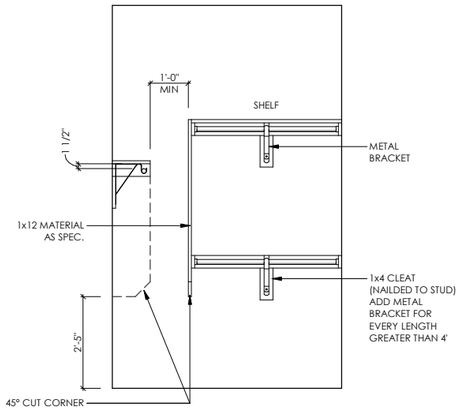
1R1S



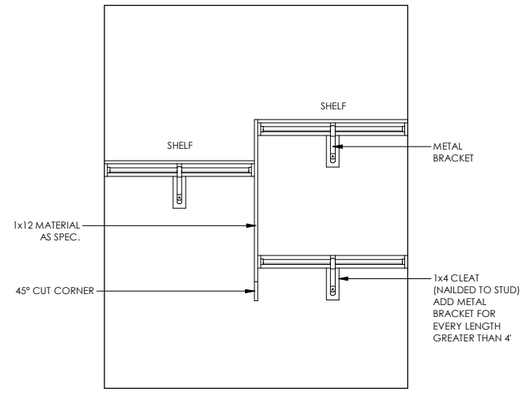
2R1S



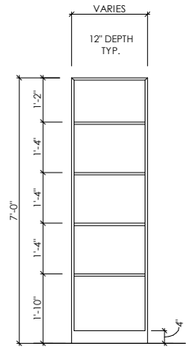
3R1S



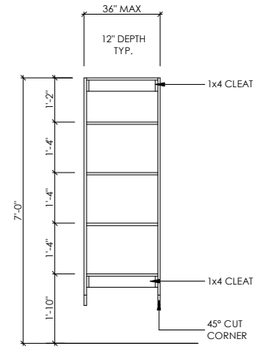
CLOSET CORNER DETAIL



1R1S TO 2R1S TRANSITION DETAIL



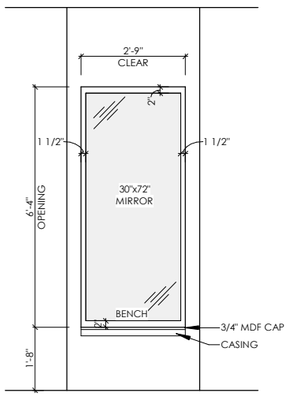
5SH



5SH
(SUSPENDED)

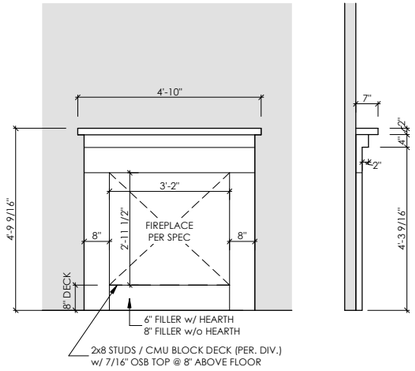
1 CLOSET DETAILS

1/4" = 1'-0"



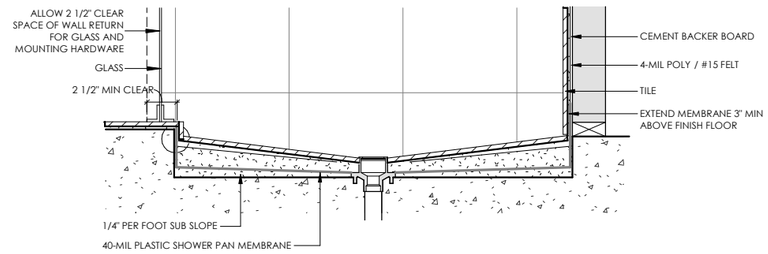
2 CLOSET BENCH

1/4" = 1'-0"



3 FIREPLACE DETAIL

1/4" = 1'-0"



4 MUD PAN SHOWER

3/4" = 1'-0"

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ISSUE DATE	10/06/2023
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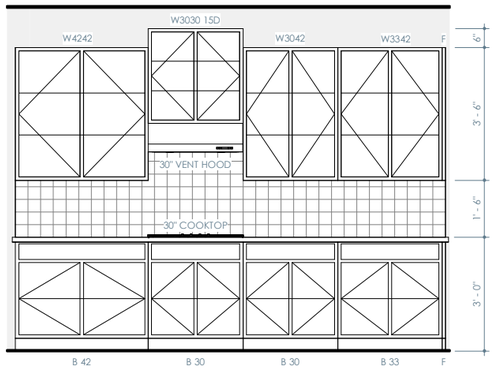
SCALE	As indicated

SHEET NAME

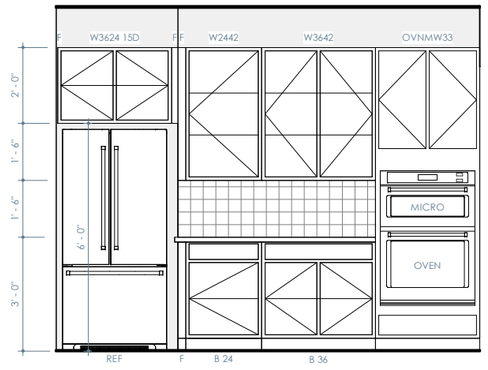
DETAILS

SHEET NO.

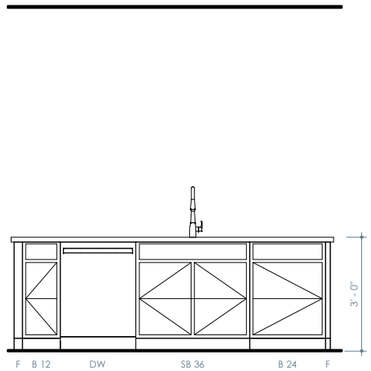
AD-1.00



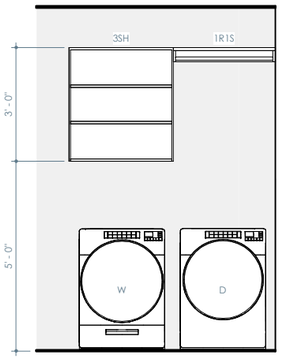
1 KITCHEN
1/4" = 1'-0"



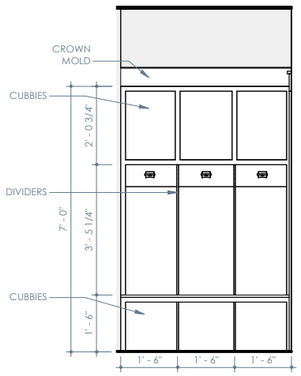
2 KITCHEN
1/4" = 1'-0"



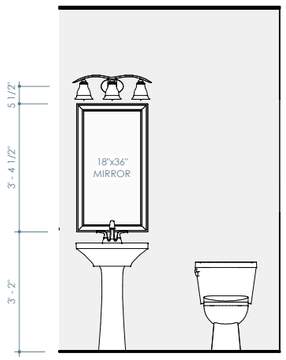
3 ISLAND
1/4" = 1'-0"



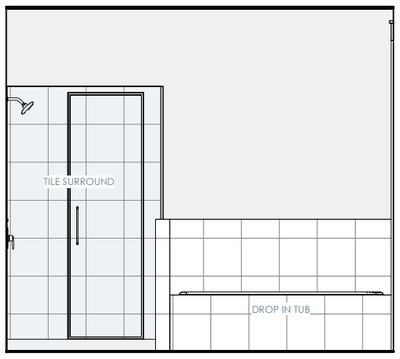
4 LAUNDRY
1/4" = 1'-0"



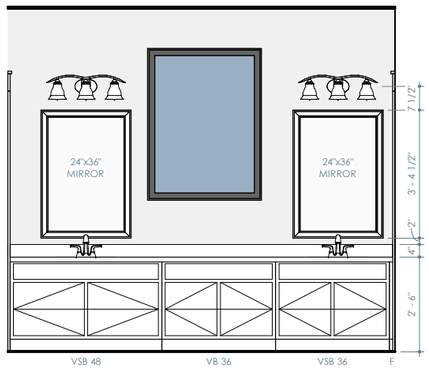
5 CUBBIES
1/4" = 1'-0"



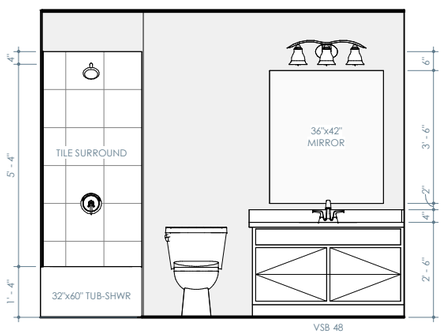
6 1/2 BATH
1/4" = 1'-0"



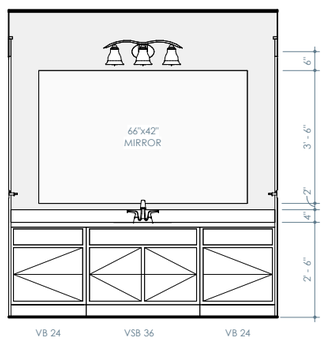
7 OWNER'S BATH
1/4" = 1'-0"



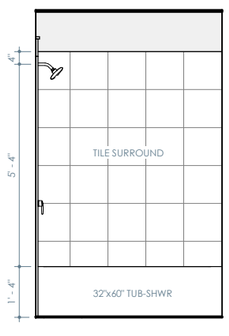
8 OWNER'S BATH
1/4" = 1'-0"



9 BATH 2
1/4" = 1'-0"



10 BATH 3
1/4" = 1'-0"



11 BATH 3
1/4" = 1'-0"

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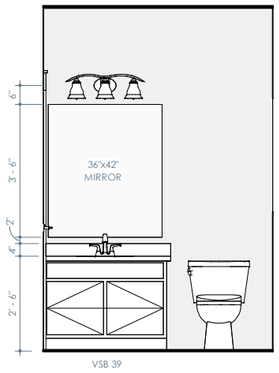
PLAN NO.
3470

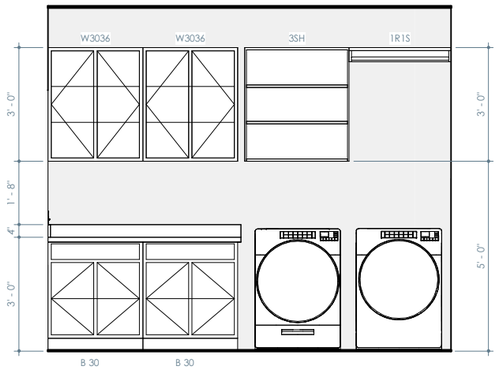
ISSUE DATE	10/06/2023
DRAWN BY	STT
SCALE	1/4" = 1'-0"

SHEET NAME
INTERIOR ELEVATIONS

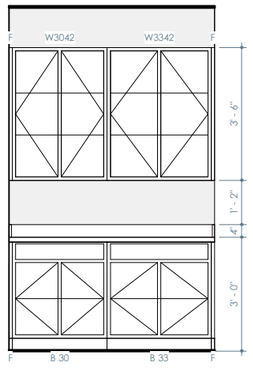
SHEET NO.
AI1.00



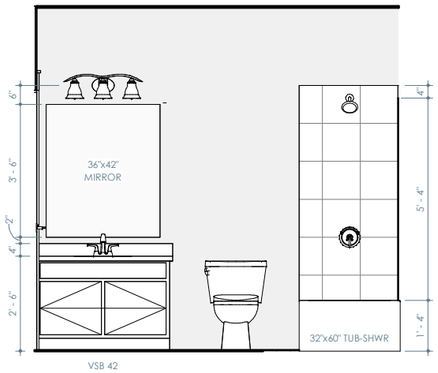
1 OPT. 1/2 BATH VANITY
1/4" = 1'-0"



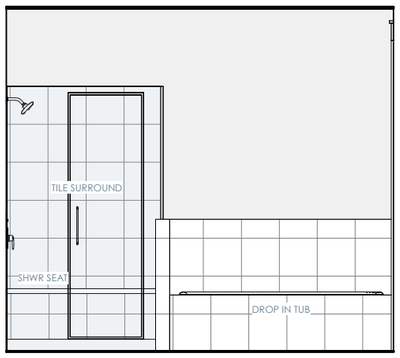
2 OPT. LAUNCHY CABINETS
1/4" = 1'-0"



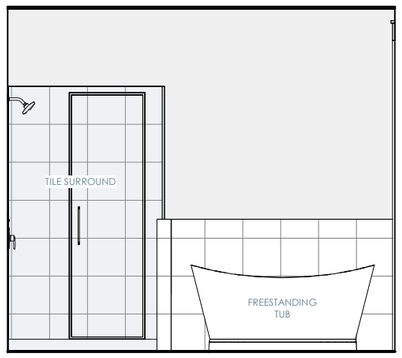
3 OPT. LAUNCHY CABINETS
1/4" = 1'-0"



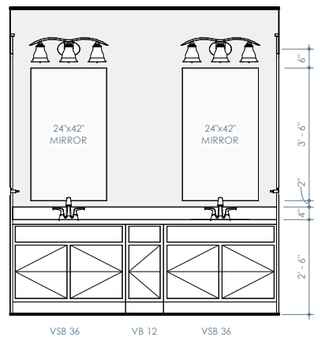
4 OPT. BATH 4
1/4" = 1'-0"



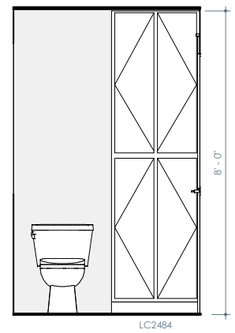
5 OPT. SHOWER SEAT @ OWNER'S BATH
1/4" = 1'-0"



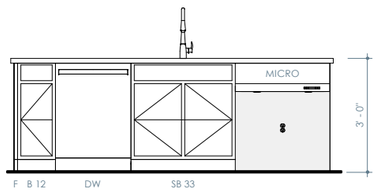
6 OPT. FREE STANDING TUB
1/4" = 1'-0"



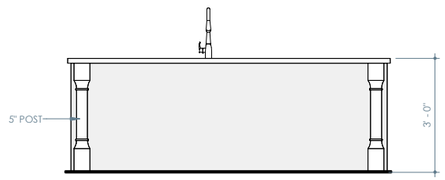
7 OPT. BATH 3 ADDITIONAL SINK
1/4" = 1'-0"



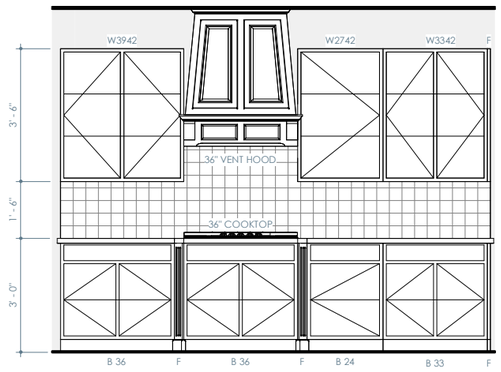
8 OPT. LINEN CABINET
1/4" = 1'-0"



9 OPT. ISLAND MICROWAVE
1/4" = 1'-0"



10 OPT. EXTENDED ISLAND W/ LEGS
1/4" = 1'-0"



11 OPT. 36" COOK TOP RANGE W/ BUMPOUT & VENT HOOD ABOVE
1/4" = 1'-0"

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PROJECT NAME
ROAN

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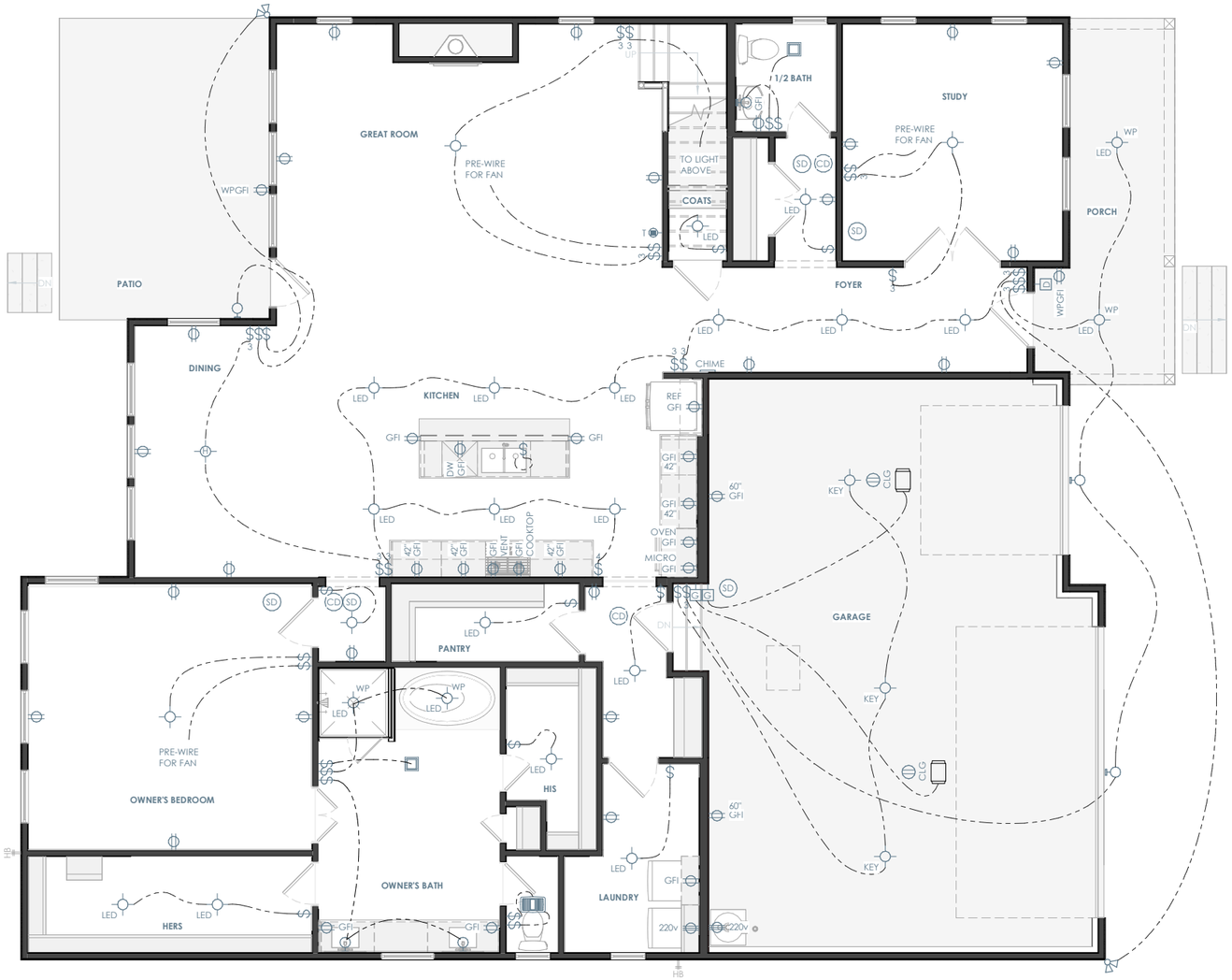
SHEET NAME
INTERIOR ELEVATIONS

SHEET NO.
AI1.01



ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- THREE WAY SWITCH
- FOUR WAY SWITCH
- SINGLE POLE DIMMER SWITCH
- OCCUPANT SENSOR SWITCH
- RHEOSTAT SWITCH
- PRESSURE SWITCH
- GARAGE DOOR SWITCH
- DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- SUFRACE MOUNT LED LIGHT FIXTURE
- KEYLESS LIGHT FIXTURE
- HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- UNDER / OVER CABINET LIGHT
- FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

POWER

- DUPLEX OUTLET
- QUAD OUTLET
- SWITCHED DUPLEX OUTLET
- GROUND FAULT CIRCUIT INTERRUPTER
- SURFACE MOUNT DUPLEX OUTLET
- SURFACE MOUNT GROUND FAULT INTERRUPTER
- FLOOR OUTLET
- OVERHEAD OUTLET
- 220 VOLT OUTLET

COMMUNICATION

- PHONE OUTLET
- DATA OUTLET
- SURROUND SOUND OUTLET
- TV OUTLET
- SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SMOKE ALARM
- CARBON DETECTOR

EQUIPMENT

- ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

ELECTRICAL PLAN NOTES

INFORMATION AND LAYOUTS SHOWN ON DRAWINGS ARE ONLY SCHEMATIC IN DESIGN

- PROVIDE LIGHT IN EACH CRAWLSPACE AND ATTIC
- GAS AND 220 OUTLETS SHOWN FOR LOCATION PURPOSES ONLY, AND SUBJECT TO CHANGE PER SUBDIVISION/CITY/CODE REQUIREMENT

KITCHEN
- 24" MAX SEPARATION FOR OUTLETS LOCATED AT KITCHEN COUNTERTOPS
- RECEPTACLES AT COUNTER SPACE 12" OR WIDER.
- GFCI OUTLETS REQUIRED AT KITCHEN COUNTERTOPS
- 1 OUTLET PROVIDED PER ISLAND MINIMUM

BATHROOMS
- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES
- OUTLETS IN ALL LIVING SPACES SHALL BE PROVIDED AT 6' MAX FROM OPENING OR DOOR AND MINIMUM 12' BETWEEN EACH RECEPTACLE
- PROVIDE OUTLET ON ANY WALL LARGER THAN 2' BETWEEN OPENINGS AND DOORS
- FLOOR PLUGS AS REQUIRED

OTHER AREAS
- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
- PROVIDE AT LEAST 1 OUTLET PER 10' OF HALLWAY RUN

LIGHTING
- LIGHTING FIXTURES LOCATED IN CLOSETS: SURFACE MOUNT FIXTURE ARE NOT TO BE WITHIN 1'-0" OF SHELF OR HANGING SPACE MEASURED HORIZONTALLY. RECESSED FIXTURES NOT TO BE WITHIN 6" OF ANY SHELF OR HANGING SPACE

SMOKE DETECTORS
- ADDITIONAL SMOKE DETECTOR REQUIRED AT EACH END OF ROOMS/HALLWAYS GREATER THAN 30' IN LENGTH
- DO NOT INSTALL DETECTORS WITHIN 3' OF AN AIR VENT OR RETURN
- KEEP ALL SMOKE DETECTORS A MINIMUM OF 36" FROM BATHROOM DOOR, KITCHEN COOKING APPLIANCES AND LAUNDRY/UTILITY (WHERE A WASHER AND DRYER IS PLACED)
- DO NOT INSTALL NEAR FLUORESCENT LIGHTS
- DO NOT INSTALL WITHIN 36" OF TIP OF PADDLE FOR CEILING FAN
- INSTALL SMOKE DETECTOR ON SLOPED, PEAKED OR CATHEDRAL CEILINGS AT OR WITHIN 3' OF HIGHEST POINT (MEASURED HORIZONTALLY)
- SMOKE ALARMS IN ROOMS WITH CEILING SLOPES GREATER THAN 1 FOOT IN 8 FEET HORIZONTALLY SHALL BE LOCATED ON THE HIGHEST SIDE OF ROOM

ELEVATION A - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

Brightland HOMES

PROJECT NAME
ROAN

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3470

ISSUE DATE	10/06/2023
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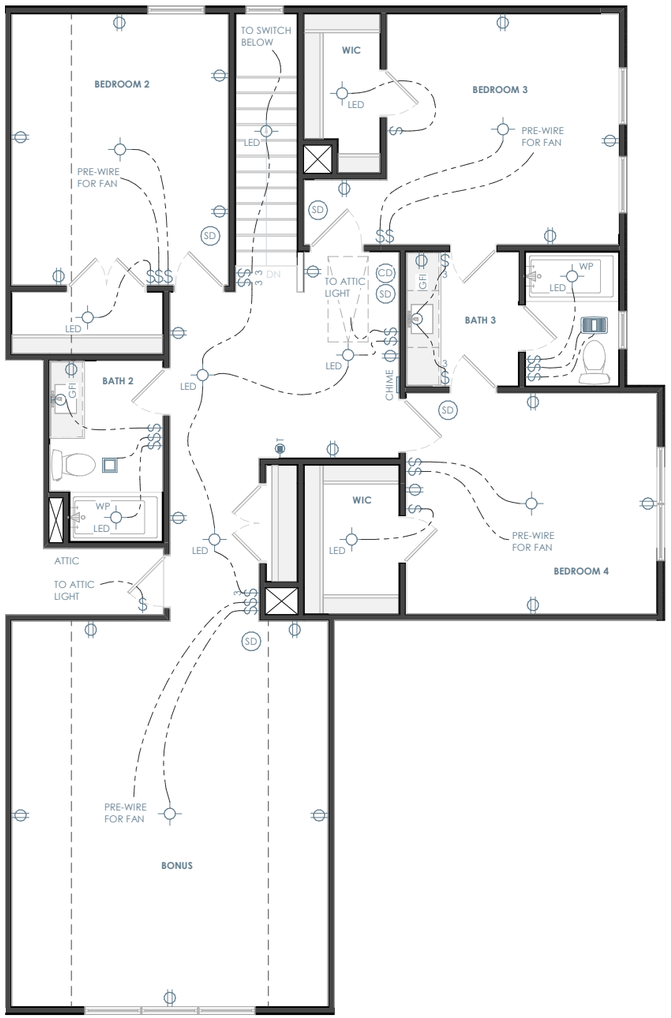
SCALE	1/8" = 1'-0"

SHEET NAME
ELEVATION A - FIRST FLOOR ELECTRICAL PLAN

SHEET NO.
E-1.00



ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- 3 THREE WAY SWITCH
- 4 FOUR WAY SWITCH
- D SINGLE POLE DIMMER SWITCH
- OS OCCUPANT SENSOR SWITCH
- R RHEOSTAT SWITCH
- P PRESSURE SWITCH
- G GARAGE DOOR SWITCH
- D DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- LED SUFRACE MOUNT LED LIGHT FIXTURE
- KEY KEYLESS LIGHT FIXTURE
- HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- UNDER / OVER CABINET LIGHT
- 1x4 FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

POWER

- DUPLEX OUTLET
- QUAD OUTLET
- SWITCHED DUPLEX OUTLET
- GFI GROUND FAULT CIRCUIT INTERRUPTER
- SURFACE MOUNT DUPLEX OUTLET
- GFI SURFACE MOUNT GROUND FAULT INTERRUPTER
- FLR FLOOR OUTLET
- CLG OVERHEAD OUTLET
- 220v 220 VOLT OUTLET

COMMUNICATION

- PH PHONE OUTLET
- DATA DATA OUTLET
- 5.1 SS SURROUND SOUND OUTLET
- TV TV OUTLET
- S SUB SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SD SMOKE ALARM
- CD CARBON DETECTOR

EQUIPMENT

- PANEL ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

ELECTRICAL PLAN NOTES

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ELEVATION A - SECOND FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

Brightland HOMES

PROJECT NAME
ROAN

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3470

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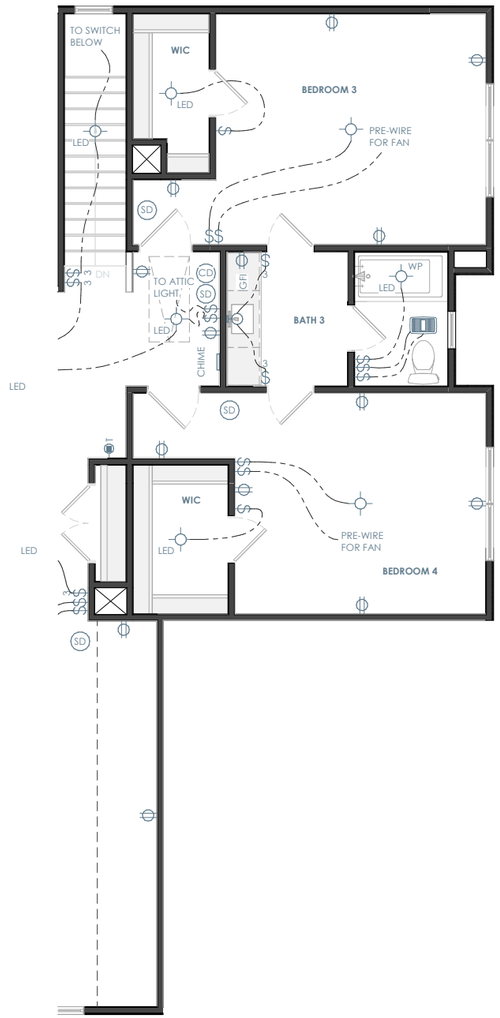
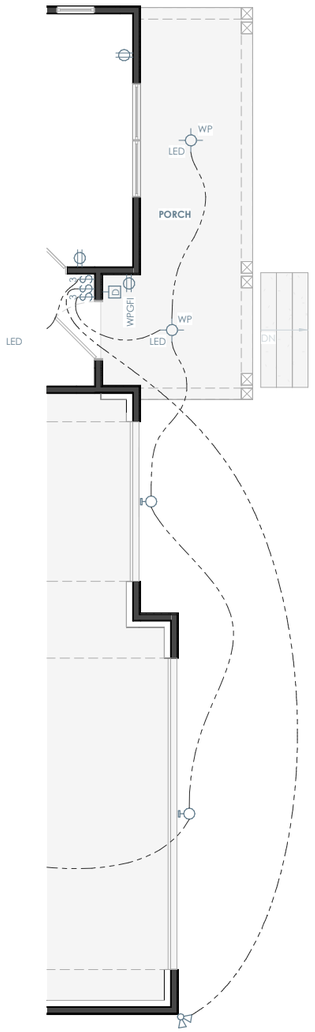
SHEET NAME
ELEVATION A - SECOND FLOOR ELECTRICAL PLAN

SHEET NO.
E-1.01



ELEVATION B - SECOND FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



ELEVATION B - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- 3 THREE WAY SWITCH
- 4 FOUR WAY SWITCH
- D SINGLE POLE DIMMER SWITCH
- OS OCCUPANT SENSOR SWITCH
- R RHEOSTAT SWITCH
- P PRESSURE SWITCH
- G GARAGE DOOR SWITCH
- D DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- LED SUFRACE MOUNT LED LIGHT FIXTURE
- KEY KEYLESS LIGHT FIXTURE
- HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
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- UNDER / OVER CABINET LIGHT
- 1x4 FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

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- QUAD OUTLET
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- FLR FLOOR OUTLET
- CLG OVERHEAD OUTLET
- 220v 220 VOLT OUTLET

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- PH PHONE OUTLET
- DATA DATA OUTLET
- 5.1 SS SURROUND SOUND OUTLET
- TV TV OUTLET
- S SUB SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SD SMOKE ALARM
- CD CARBON DETECTOR

EQUIPMENT

- PANEL ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

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PLAN NO.
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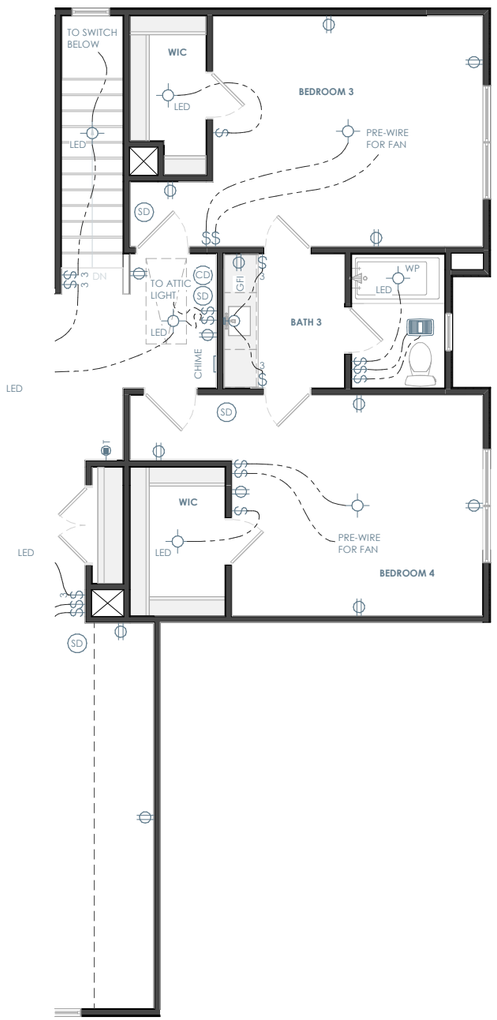
ISSUE DATE	10/06/2023
DRAWN BY	STT
SCALE	1/8" = 1'-0"

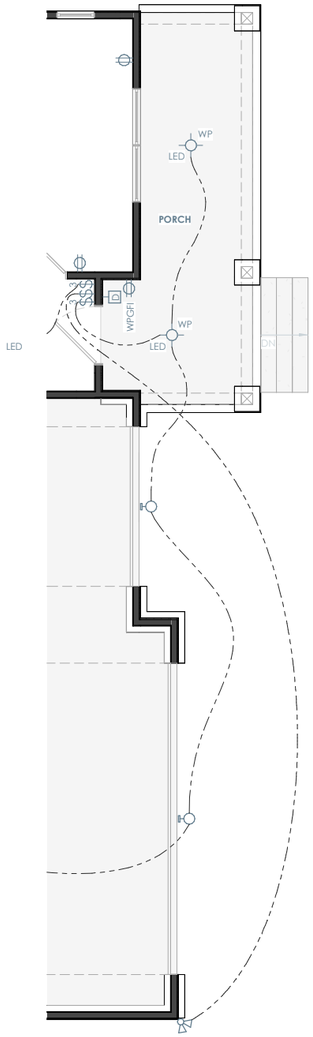
SHEET NAME
ELEVATION B - PARTIAL ELECTRICAL PLANS

SHEET NO.
E-2.00



ELEVATION C - SECOND FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



ELEVATION C - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- 3 THREE WAY SWITCH
- 4 FOUR WAY SWITCH
- D SINGLE POLE DIMMER SWITCH
- OS OCCUPANT SENSOR SWITCH
- R RHEOSTAT SWITCH
- P PRESSURE SWITCH
- G GARAGE DOOR SWITCH
- D DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- LED SUFRACE MOUNT LED LIGHT FIXTURE
- KEY KEYLESS LIGHT FIXTURE
- HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- UNDER / OVER CABINET LIGHT
- 1x4 FLOURESCENT LIGHT FIXTURE
- CEILING FAN
- CEILING FAN w/ LIGHT FIXTURE

POWER

- DUPLEX OUTLET
- QUAD OUTLET
- SWITCHED DUPLEX OUTLET
- GFI GROUND FAULT CIRCUIT INTERRUPTER
- SURFACE MOUNT DUPLEX OUTLET
- GFI SURFACE MOUNT GROUND FAULT INTERRUPTER
- FLR FLOOR OUTLET
- CLG OVERHEAD OUTLET
- 220v 220 VOLT OUTLET

COMMUNICATION

- PH PHONE OUTLET
- DATA DATA OUTLET
- 5.1 SS SURROUND SOUND OUTLET
- TV TV OUTLET
- S SUB SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SD SMOKE ALARM
- CD CARBON DETECTOR

EQUIPMENT

- PANEL ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
- EXHAUST FAN

ELECTRICAL PLAN NOTES

INFORMATION AND LAYOUTS SHOWN ON DRAWINGS ARE ONLY SCHEMATIC IN DESIGN

- PROVIDE LIGHT IN EACH CRAWLSPACE AND ATTIC
- GAS AND 220 OUTLETS SHOWN FOR LOCATION PURPOSES ONLY. AND SUBJECT TO CHANGE PER SUBDIVISION/CITY/CODE REQUIREMENT

KITCHEN

- 24" MAX SEPARATION FOR OUTLETS LOCATED AT KITCHEN COUNTERTOPS
- RECEPTACLES AT COUNTER SPACE 12" OR WIDER.
- GFCI OUTLETS REQUIRED AT KITCHEN COUNTERTOPS
- 1 OUTLET PROVIDED PER ISLAND MINIMUM

BATHROOMS

- BATHROOMS GFCI OUTLETS TO BE INSTALLED WITHIN 36" OF EACH SINK BASIN AND 1 PER SINK

LIVING SPACES

- OUTLETS IN ALL LIVING SPACES SHALL BE PROVIDED AT 6' MAX FROM OPENING OR DOOR AND MINIMUM 12' BETWEEN EACH RECEPTACLE
- PROVIDE OUTLET ON ANY WALL LARGER THAN 2' BETWEEN OPENINGS AND DOORS
- FLOOR PLUGS AS REQUIRED

OTHER AREAS

- OUTDOOR OUTLETS TO BE PROVIDED AT FRONT AND REAR OF HOUSE, WEATHERPROOFED AND GFCI PROTECTED.
- PROVIDE AT LEAST 1 OUTLET PER 10' OF HALLWAY RUN

LIGHTING

- LIGHTING FIXTURES LOCATED IN CLOSETS: SURFACE MOUNT FIXTURE ARE NOT TO BE WITHIN 1'-0" OF SHELF OR HANGING SPACE MEASURED HORIZONTALLY. RECESSED FIXTURES NOT TO BE WITHIN 6" OF ANY SHELF OR HANGING SPACE

SMOKE DETECTORS

- ADDITIONAL SMOKE DETECTOR REQUIRED AT EACH END OF ROOMS/HALLWAYS GREATER THAN 30' IN LENGTH
- DO NOT INSTALL DETECTORS WITHIN 3' OF AN AIR VENT OR RETURN
- KEEP ALL SMOKE DETECTORS A MINIMUM OF 36" FROM BATHROOM DOOR, KITCHEN COOKING APPLIANCES AND LAUNDRY/UTILITY (WHERE A WASHER AND DRYER IS PLACED)
- DO NOT INSTALL NEAR FLUORESCENT LIGHTS
- DO NOT INSTALL WITHIN 36" OF TIP OF PADDLE FOR CEILING FAN
- INSTALL SMOKE DETECTOR ON SLOPED, PEAKED OR CATHEDRAL CEILINGS AT OR WITHIN 3' OF HIGHEST POINT (MEASURED HORIZONTALLY)
- SMOKE ALARMS IN ROOMS WITH CEILING SLOPES GREATER THAN 1 FOOT IN 8 FEET HORIZONTALLY SHALL BE LOCATED ON THE HIGHEST SIDE OF ROOM

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ISSUE DATE	10/06/2023
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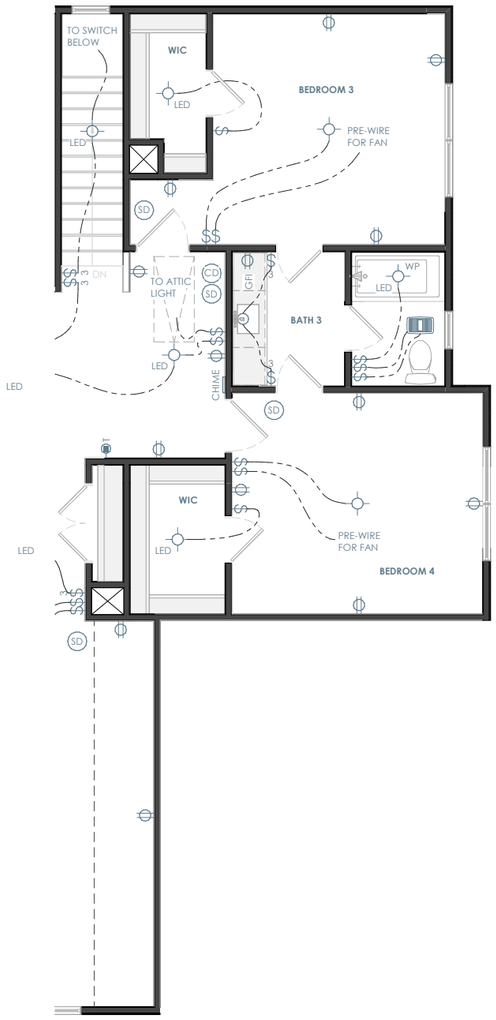
SCALE	1/8" = 1'-0"

SHEET NAME

ELEVATION C - PARTIAL ELECTRICAL PLANS

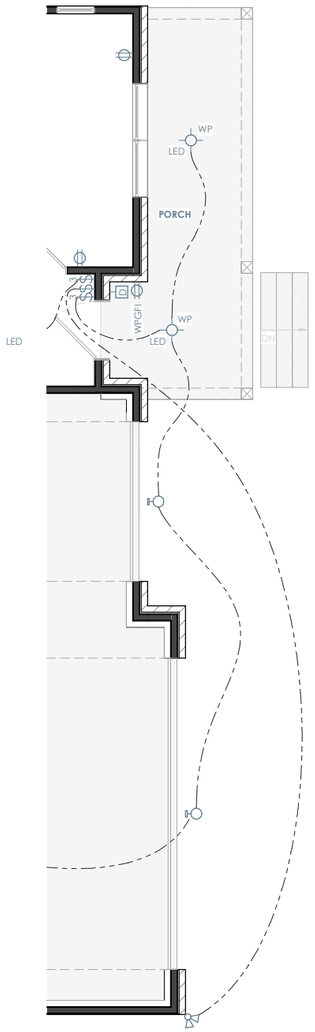
SHEET NO.

E-3.00



ELEVATION D - SECOND FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



ELEVATION D - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

ELECTRICAL LEGEND

SWITCHES

- SINGLE POLE SWITCH
- THREE WAY SWITCH
- FOUR WAY SWITCH
- SINGLE POLE DIMMER SWITCH
- OCCUPANT SENSOR SWITCH
- RHEOSTAT SWITCH
- PRESSURE SWITCH
- GARAGE DOOR SWITCH
- DOOR BELL BUTTON
- PHOTOCELL SENSOR SWITCH

LIGHTING

- SURFACE MOUNT LIGHT FIXTURE
- SUFRACE MOUNT LED LIGHT FIXTURE
- KEYLESS LIGHT FIXTURE
- HANGING LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- RECESSED LIGHT FIXTURE
- RECESSED EYEBALL FIXTURE
- WALL MOUNTED LIGHT FIXTURE
- UNDER / OVER CABINET LIGHT
- 1x4 FLOURESCENT LIGHT FIXTURE
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- CEILING FAN w/ LIGHT FIXTURE

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- DUPLEX OUTLET
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- GROUND FAULT CIRCUIT INTERRUPTER
- SURFACE MOUNT DUPLEX OUTLET
- SURFACE MOUNT GROUND FAULT INTERRUPTER
- FLOOR OUTLET
- OVERHEAD OUTLET
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- PHONE OUTLET
- DATA OUTLET
- SURROUND SOUND OUTLET
- TV OUTLET
- SPEAKER (DESIGNATION BELOW)

FIRE SAFETY & SECURITY

- SMOKE ALARM
- CARBON DETECTOR

EQUIPMENT

- ELECTRICAL PANEL
- THERMOSTAT
- DOOR BELL CHIME
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- SMOKE ALARMS IN ROOMS WITH CEILING SLOPES GREATER THAN 1 FOOT IN 8 FEET HORIZONTALLY SHALL BE LOCATED ON THE HIGHEST SIDE OF ROOM

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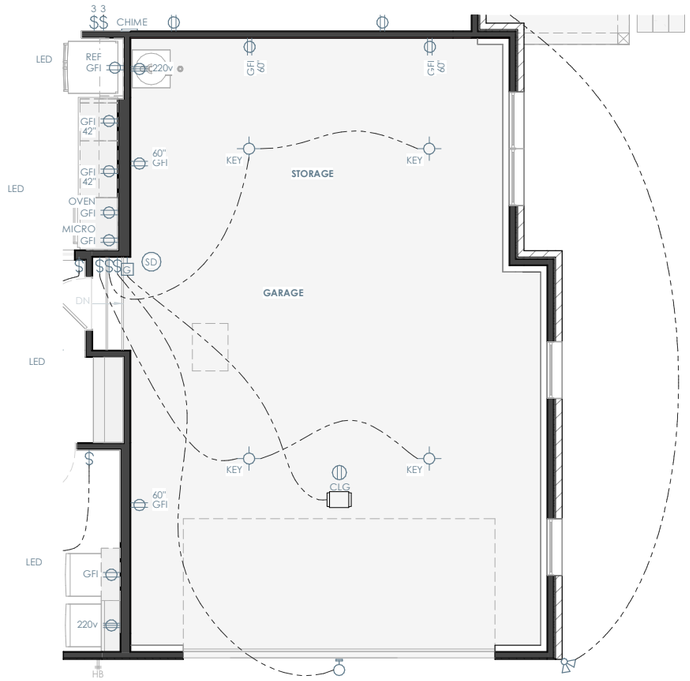
SHEET NAME

ELEVATION D - PARTIAL ELECTRICAL PLANS

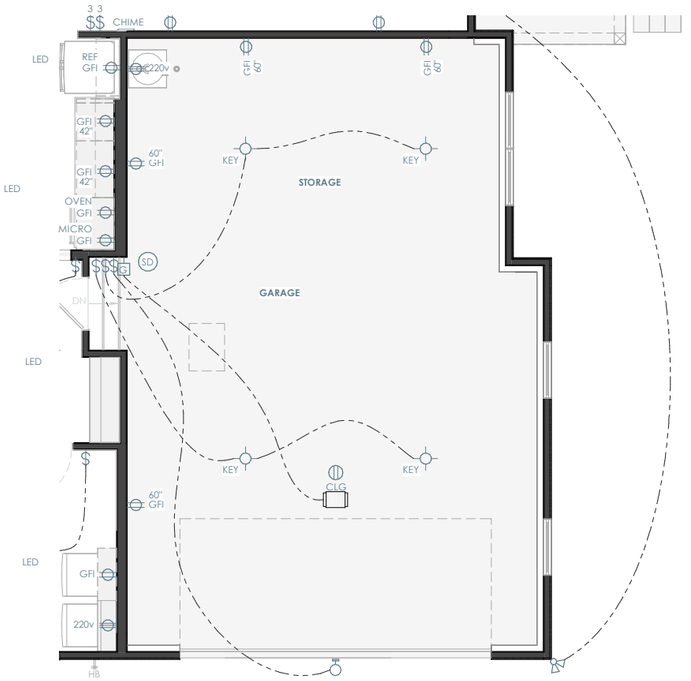
SHEET NO.

E-4.00



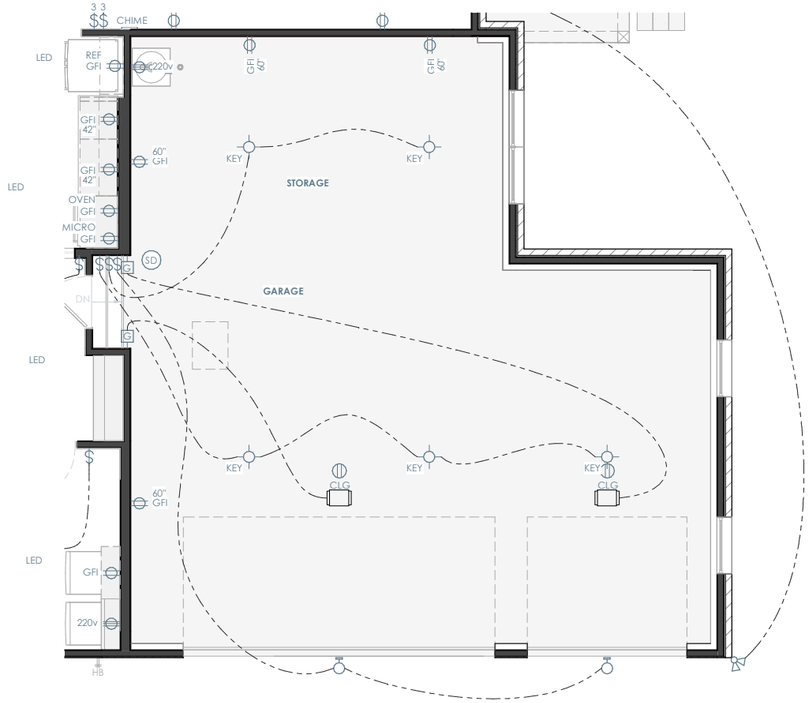
ELEVATION D - OPT. SIDE LOAD GARAGE - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



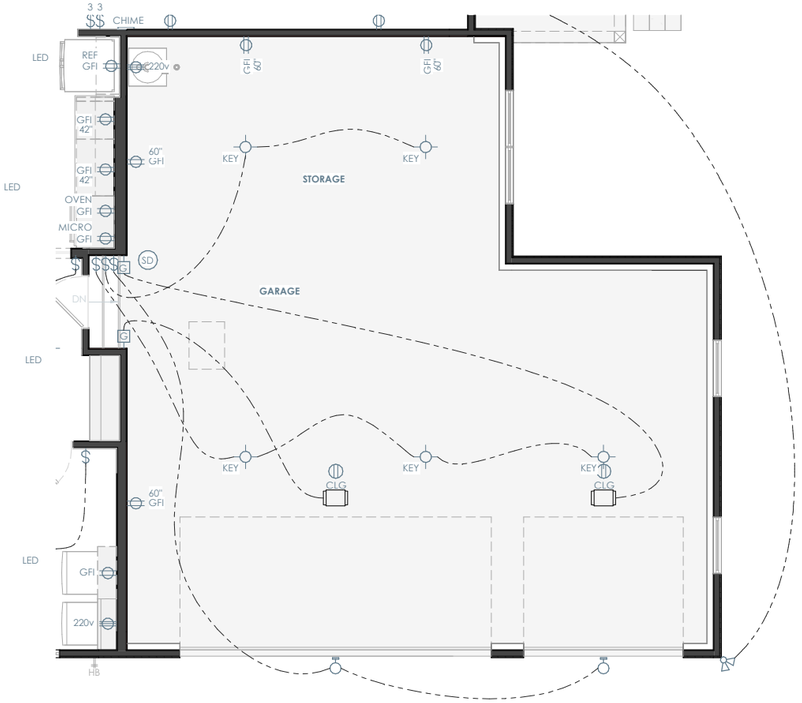
ELEVATION A - OPT. SIDE LOAD GARAGE - FIRST FLOOR ELECTRICAL PLAN (SIMILAR FOR ELEVATIONS B & C)

1/8" = 1'-0"



ELEVATION D - OPT. 3 CAR GARAGE - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



ELEVATION A - OPT. 3 CAR GARAGE - FIRST FLOOR ELECTRICAL PLAN (SIMILAR FOR ELEVATIONS B & C)

1/8" = 1'-0"

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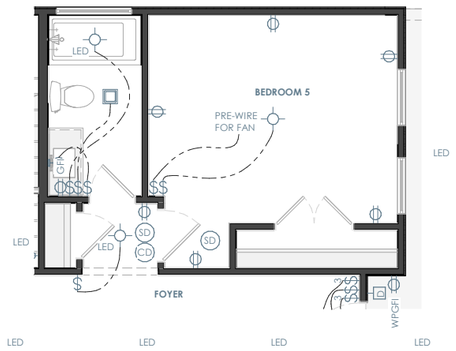
SHEET NAME

PLAN OPTIONS

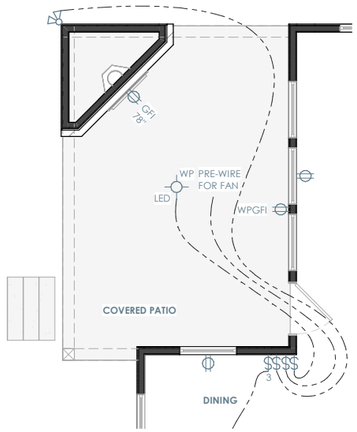
SHEET NO.

E-7.00



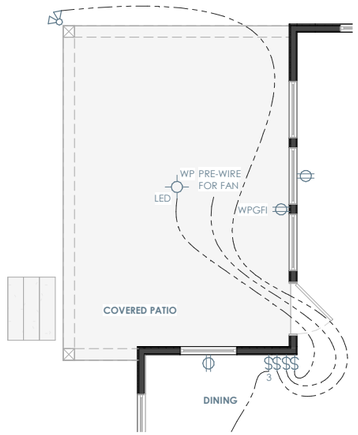
OPT. GUEST BEDROOM - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



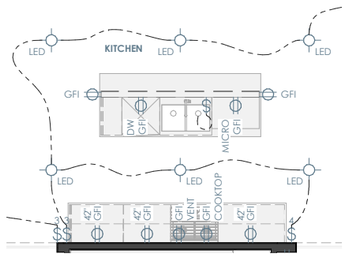
OPT. PORCH FIREPLACE - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



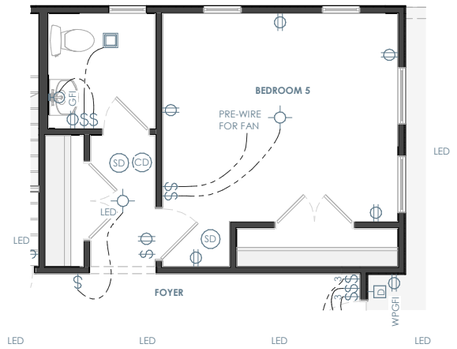
OPT. REAR COVERED PORCH - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



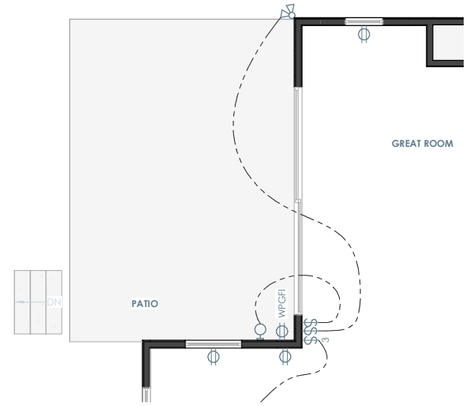
OPT. ISLAND MICROWAVE - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



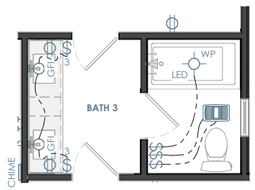
OPT. BEDROOM 5 - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



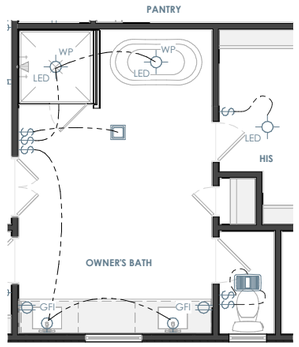
OPT. GREAT ROOM SLIDER - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



OPT. BATH 3 ADDITIONAL SINK - SECOND FLOOR ELECTRICAL PLAN

1/8" = 1'-0"



OPT. OWNERS BATH 1 - FIRST FLOOR ELECTRICAL PLAN

1/8" = 1'-0"

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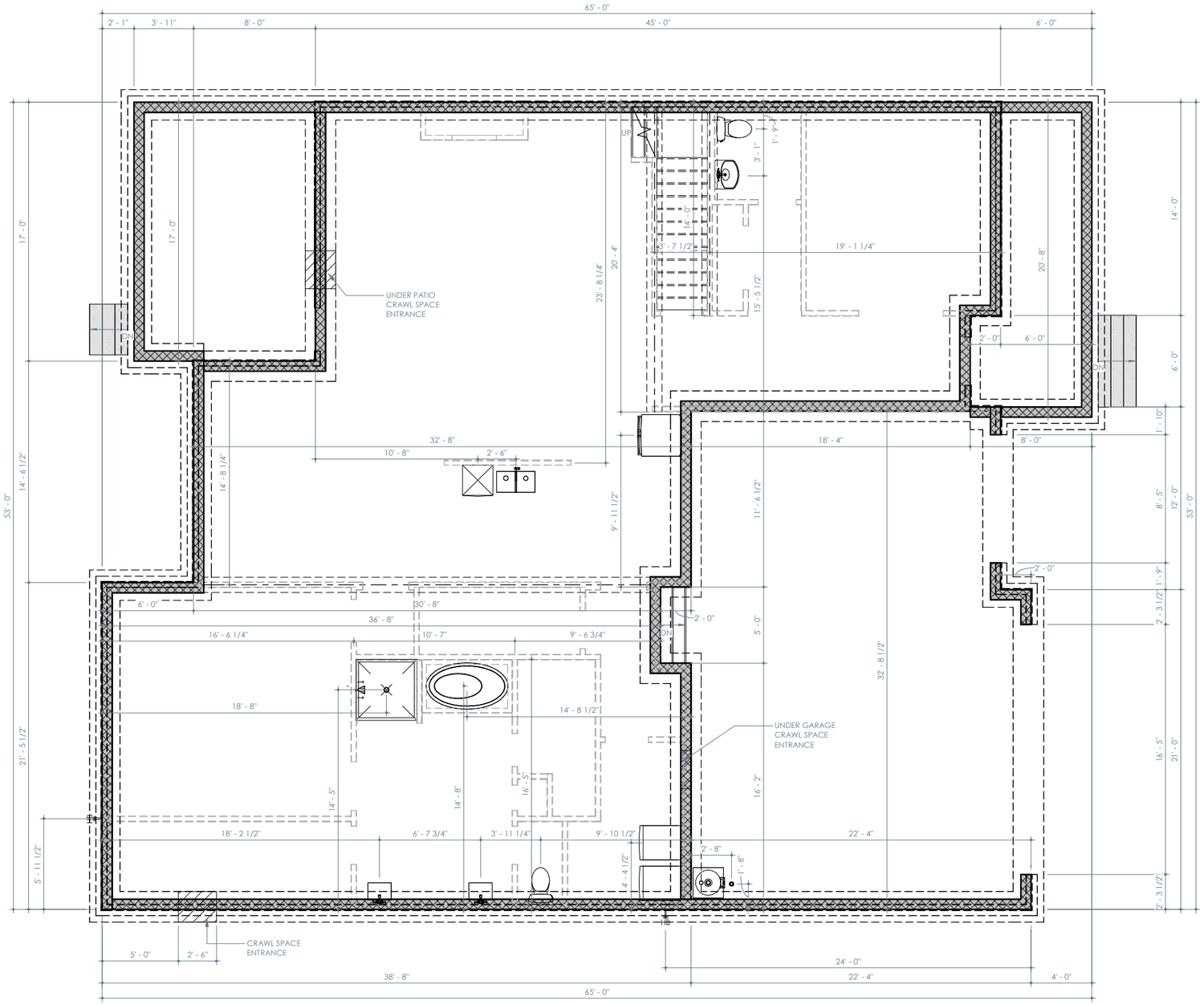
SHEET NAME
PLAN OPTIONS

SHEET NO.
E-7.01



ELEVATION A - FOUNDATION PLAN
(SIMILAR FOR ELEVATIONS B, C & D)

1/8" = 1'-0"

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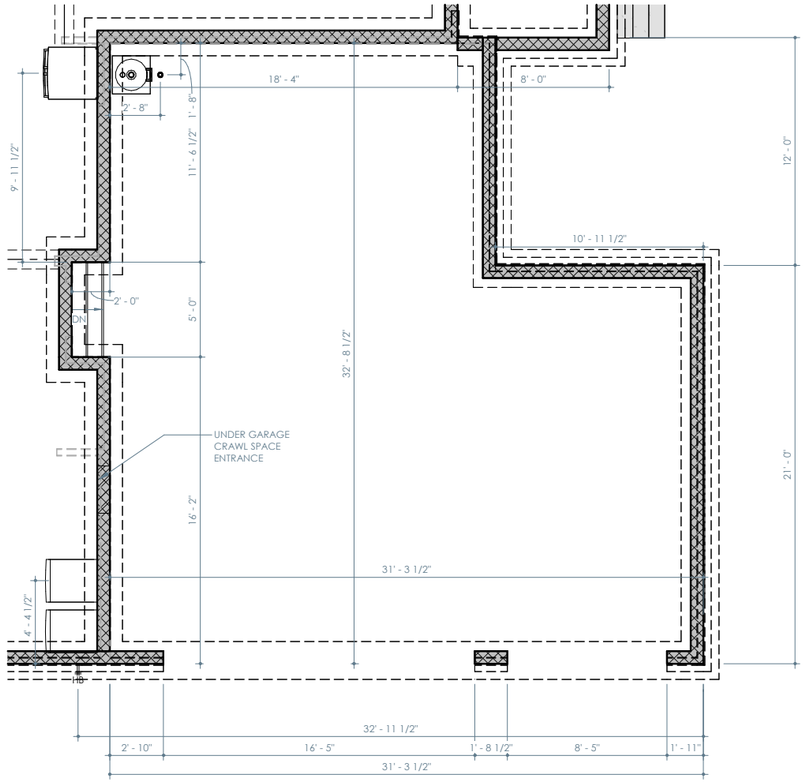
SHEET NAME

FOUNDATION - ELEVATION A

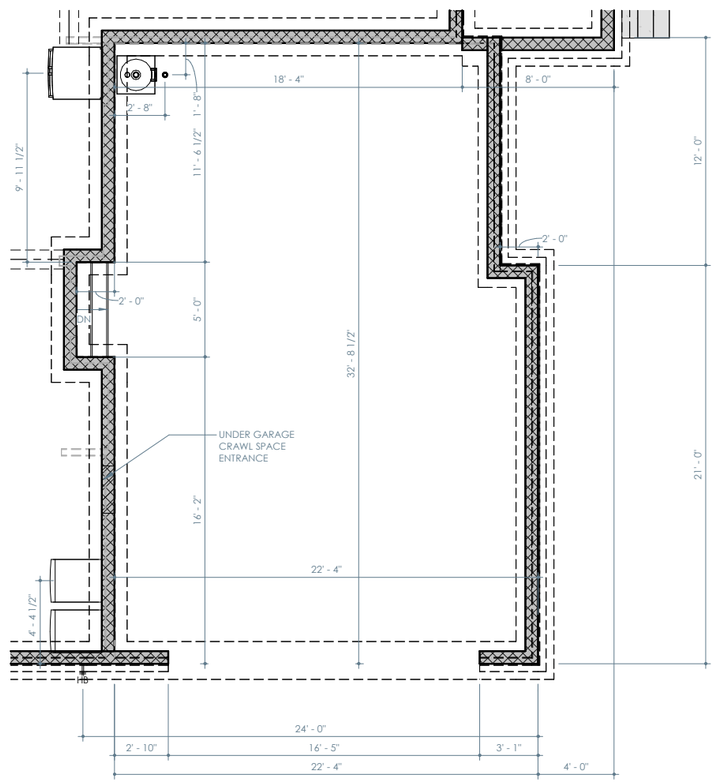
SHEET NO.

SF-1.00



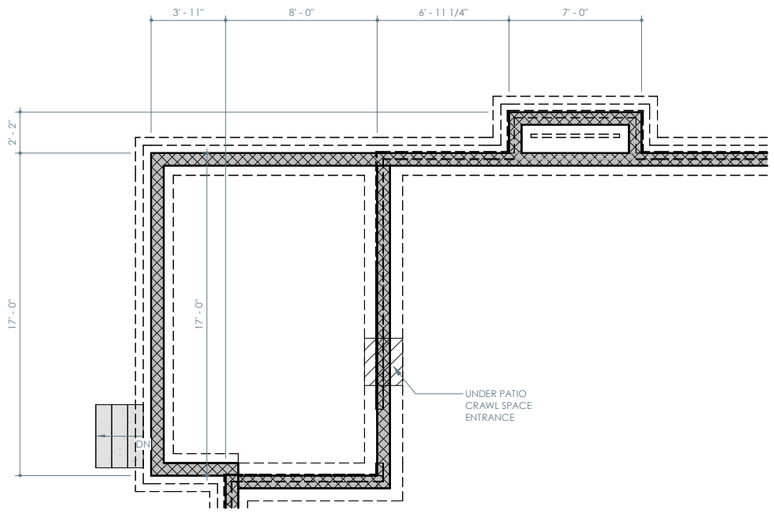
OPT. 3 CAR GARAGE - FOUNDATION PLAN

1/8" = 1'-0"



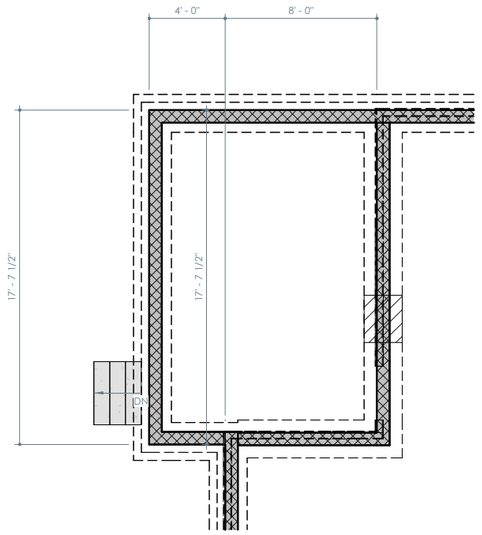
OPT. SIDE LOAD GARAGE - FOUNDATION PLAN

1/8" = 1'-0"



OPT. RECESSED FIREPLACE - FOUNDATION PLAN

1/8" = 1'-0"



OPT. REAR COVERED PORCH - FOUNDATION PLAN

1/8" = 1'-0"

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PLAN OPTIONS

SHEET NO.

SF-7.00

111 SE PKWY CT
FRANKLIN, TN 37064
615.678.8212

WWW.T2-ENG.COM

Playground Examples

** Please see the below examples of playgrounds that may be similar to those found in this subdivision. Note that these are only for reference but are indicative of the options of playgrounds that will be provided.




Fun With MATH!







T-SQUARE
CIVIL-SITE | TRAFFIC |

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FRANKLIN, TN 37064
615.678.8212

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4/21/2025

City of Columbia
700 North Garden Street
Columbia, Tennessee 38401

RE: Trotwood Foster Subdivision Site Development Plan & Preliminary Plat

Staff,

Please find included in this submittal the Site Development Plan and Preliminary Plat application. The property is on the south side of Trotwood Avenue, to the east of Foster Lane.

This development includes 119 single-family homes to be developed within the CD-3 zoning specifications. This zoning complies with the Comprehensive Plan, adopted February 2024. The Future Land Use classification is Suburban Neighborhood, which is compatible with CD-3 Neighborhood zoning. The proposed subdivision is expected to break ground as soon as all necessary approvals/permits are obtained. This could be as early as October of 2025.

We are requesting a variance from section 5.2.2.E to be able to utilize a cul-de-sac on this property due to the location of existing natural features (wooded area and an existing pond). These features prevent the connection of the roadway to Old Sunnyside Lane. The cul-de-sac meets all engineering requirements.

We are also requesting a variance on the civic space frontage requirements, Section 5.3.3.C. The natural area with the wooded area and pond prevent a thoroughfare from traversing the property, which would allow us to meet the 50% thoroughfare frontage requirement. Currently, the Green civic space is approximately 1,250 LF, with 328 LF of thoroughfare frontage (26%). We feel that it is important to maintain the integrity of the natural features of this property, hence the request.

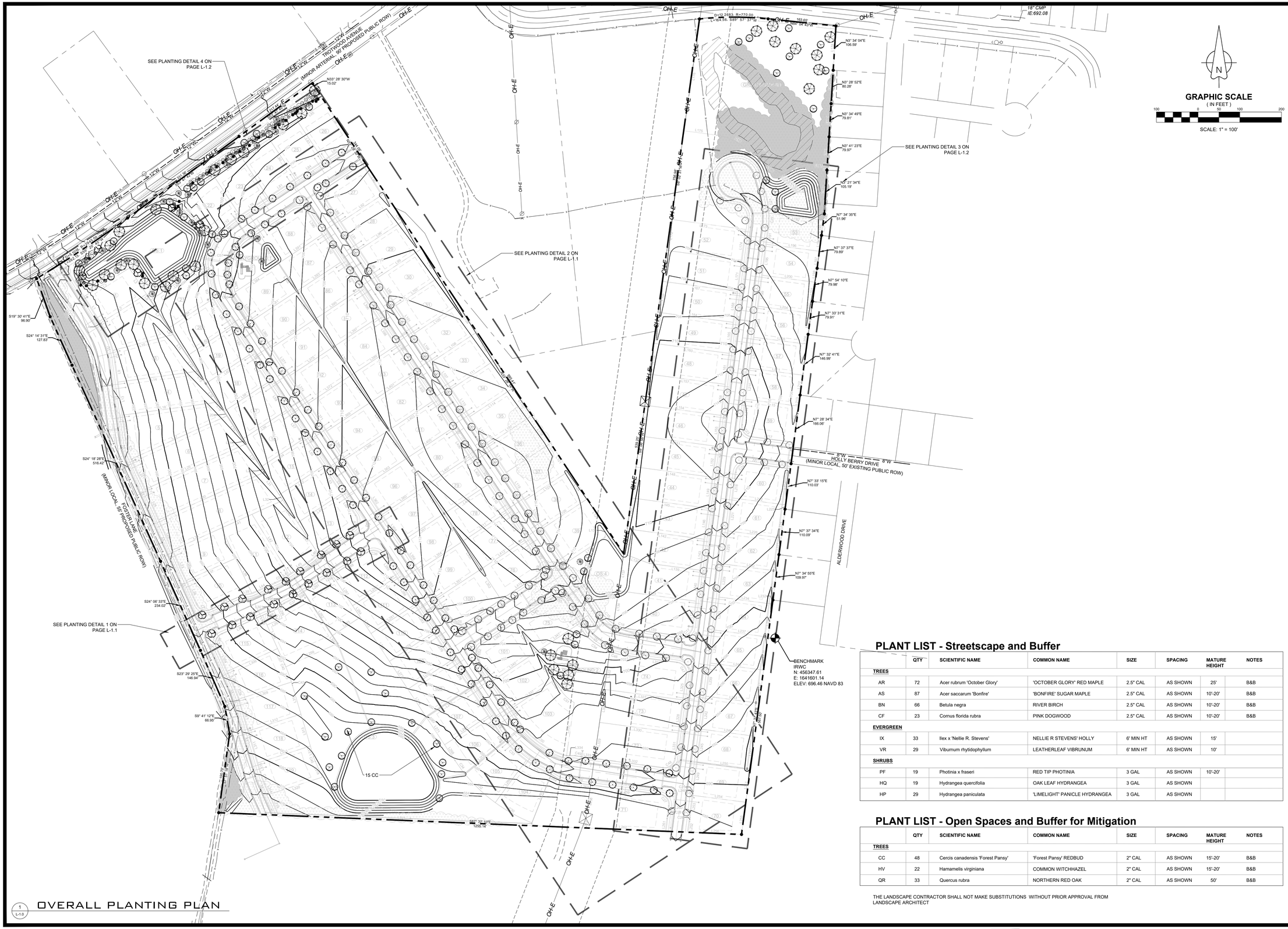
In kind, we request a variance from Section 5.3.3.A stipulating that a Green, Square, or Plaza must be within 800’ of the geographic center of the pedestrian shed. Neither a Square or a Plaza are permitted Civic Space types within CD-3 zoning, requiring a Green to be utilized. A Green “shall consist of lawn and trees, naturalistically disposed…” We feel that the best location for this Civic Space is around the existing natural water and wooded features of the property. By including the existing pond and trees within the Green, we are able to maintain the environmental integrity of these features that we feel are a valuable asset to this community.

Aside from the forementioned requests, we believe this Site Development Plan and Preliminary Plat are in full accordance with the 2022 Zoning Ordinance, effective July 14, 2022.

Thank you for accepting this submittal. Please contact Allison Corolla at T-Square Engineering with comments.

Thank you for your review,

Allison Corolla, PE
T-Square Engineering, Inc.



1 L-1.0 OVERALL PLANTING PLAN

PLANT LIST - Streetscape and Buffer

	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	MATURE HEIGHT	NOTES
TREES							
AR	72	Acer rubrum 'October Glory'	'OCTOBER GLORY' RED MAPLE	2.5" CAL	AS SHOWN	25'	B&B
AS	87	Acer saccarum 'Bonfire'	'BONFIRE' SUGAR MAPLE	2.5" CAL	AS SHOWN	10'-20'	B&B
BN	66	Betula negra	RIVER BIRCH	2.5" CAL	AS SHOWN	10'-20'	B&B
CF	23	Cornus florida rubra	PINK DOGWOOD	2.5" CAL	AS SHOWN	10'-20'	B&B
EVERGREEN							
IX	33	Ilex x 'Nellie R. Stevens'	NELLIE R STEVENS' HOLLY	6' MIN HT	AS SHOWN	15'	
VR	29	Viburnum rhytidophyllum	LEATHERLEAF VIBRUNUM	6' MIN HT	AS SHOWN	10'	
SHRUBS							
PF	19	Photinia x fraseri	RED TIP PHOTINIA	3 GAL	AS SHOWN	10'-20'	
HQ	19	Hydrangea quercifolia	OAK LEAF HYDRANGEA	3 GAL	AS SHOWN		
HP	29	Hydrangea paniculata	'LIMELIGHT' PANICLE HYDRANGEA	3 GAL	AS SHOWN		

PLANT LIST - Open Spaces and Buffer for Mitigation

	QTY	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	MATURE HEIGHT	NOTES
TREES							
CC	48	Cercis canadensis 'Forest Pansy'	'Forest Pansy' REDBUD	2" CAL	AS SHOWN	15'-20'	B&B
HV	22	Hamamelis virginiana	COMMON WITCHHAZEL	2" CAL	AS SHOWN	15'-20'	B&B
QR	33	Quercus rubra	NORTHERN RED OAK	2" CAL	AS SHOWN	50'	B&B

THE LANDSCAPE CONTRACTOR SHALL NOT MAKE SUBSTITUTIONS WITHOUT PRIOR APPROVAL FROM LANDSCAPE ARCHITECT

REVISIONS

NO.	DATE

DATE: 03/17/2025
SCALE: AS SHOWN
DRAWN BY: CES
REVIEWER: CES

LANDSCAPE PLAN

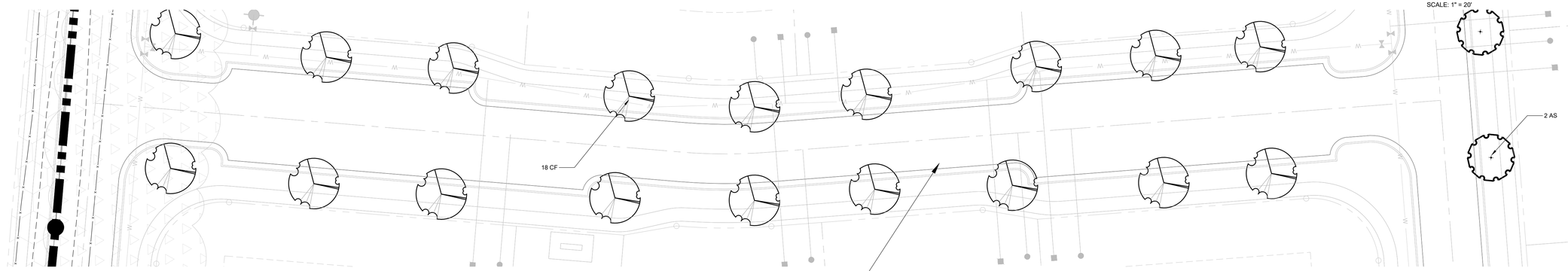
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD AVENUE

PROJECT 24-0314

SHEET L-1.0

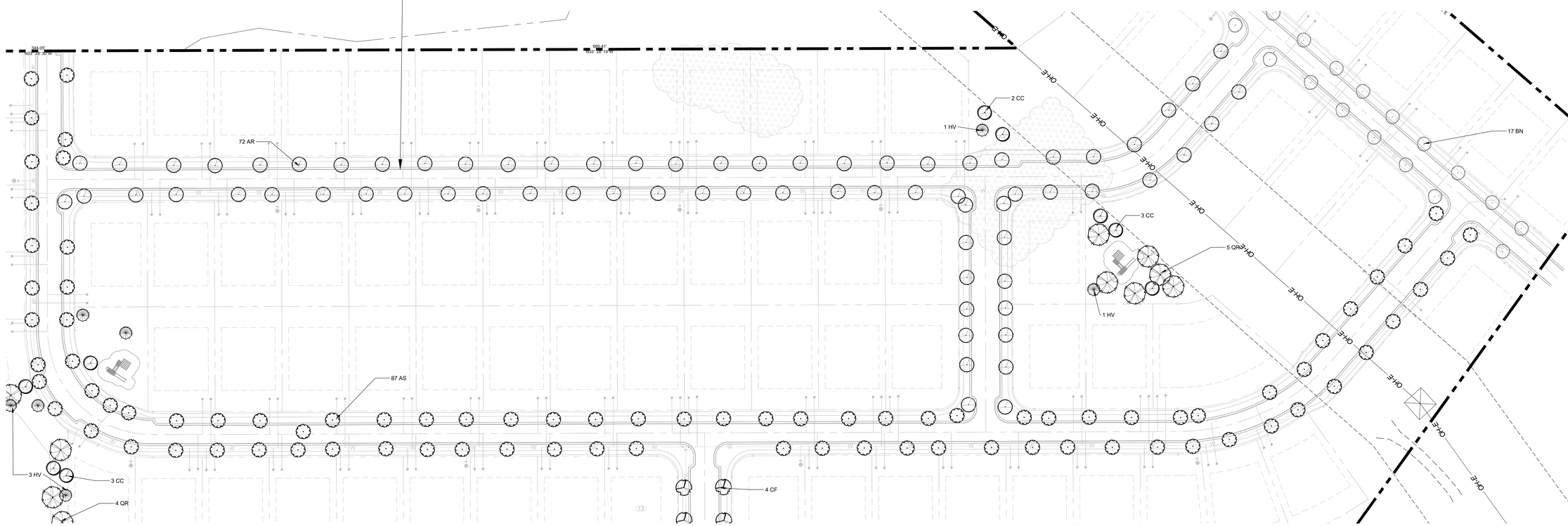
T-SQUARE ENGINEERING



3 L-1.1 PLANTING DETAIL 1

GRAPHIC SCALE
(IN FEET)
20 0 10 20 40
SCALE: 1" = 20'

NOTE: ALL STREETTREE PLANTING LOCATIONS ARE SHOWN APPROXIMATE. CONTRACTOR MUST LOCATE ALL UTILITIES PRIOR TO COMMENCING DIGGING PLANTING HOLES. ALL UTILITIES MUST BE AVOIDED.



4 L-1.1 PLANTING DETAIL 2

GRAPHIC SCALE
(IN FEET)
60 0 30 60 120
SCALE: 1" = 60'

REVISIONS

NO.	DATE

DATE: 03/17/2025
SCALE: AS SHOWN
DRAWN BY: CES
REVIEWER: CES

LANDSCAPE PLAN DETAILS

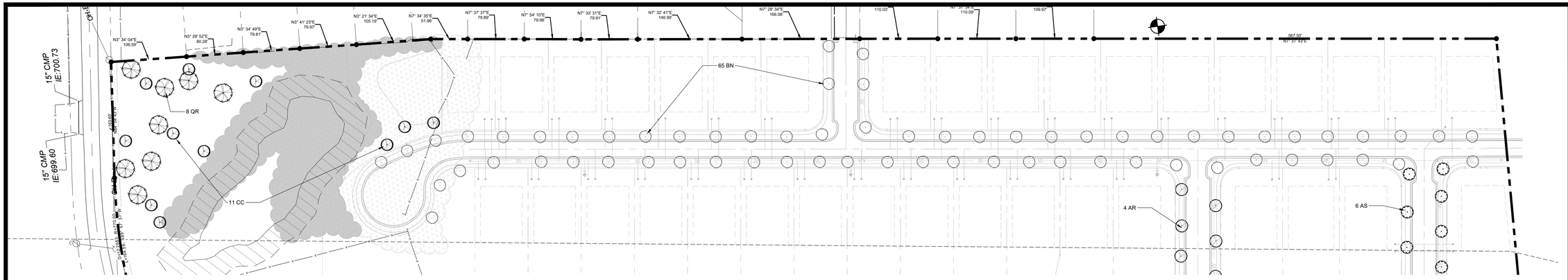
MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD AVENUE

PROJECT
24-0314

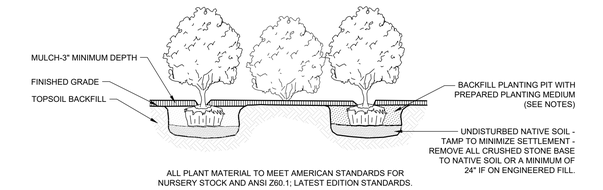
SHEET
L-1.1

T-SQUARE ENGINEERING



GENERAL NOTES:

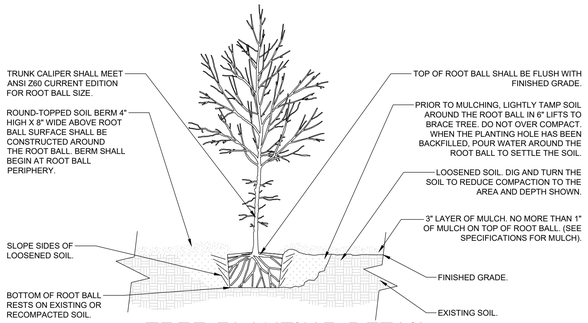
1. UTILITY SERVICES MAY EXIST ON SITE. THE LOCATION OF ALL SURFACE AND UNDERGROUND UTILITIES, RIGHT-OF-WAYS, EASEMENTS, ETC., SHALL BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES FROM DAMAGE DURING CONSTRUCTION AND TO REPAIR ANY DAMAGE WHICH SHOULD OCCUR TO THE SATISFACTION OF THE OWNER AND UTILITY COMPANIES. COMMENCEMENT OF PROJECT INSTALLATION INDICATES ACKNOWLEDGMENT OF AND ACCEPTANCE BY THE CONTRACTOR OF EXISTING CONDITIONS.
2. ACTUAL AS-BUILT AND/OR EXISTING SITE CONDITIONS MAY VARY AS SHOWN ON THIS PLAN.
3. DAMAGE BY CONTRACTOR TO UNDISTURBED AREAS OUTSIDE THE LIMITS OF CONSTRUCTION SHALL BE REPAIRED BY CONTRACTOR TO THE SATISFACTION OF THE OWNER.
4. CONTRACTOR IS RESPONSIBLE FOR CONDUCTING SITE INSPECTION PRIOR TO BIDDING WORK, TO DETERMINE SITE CONDITIONS AND AREAS TO BE IMPROVED. SUBMISSION OF BID INDICATES CONTRACTOR HAS VERIFIED SITE CONDITIONS AND PLANT MATERIAL QUANTITIES.
5. FINAL ACCEPTANCE: THE LANDSCAPE ARCHITECT OR THE OWNER'S REPRESENTATIVE WILL PROVIDE THE FINAL INSPECTION. SHOULD THE INSPECTION FIND WORK INCOMPLETE, THE CONTRACTOR SHALL REMEDY THE DEFICIENCIES.
6. IF THE SUBSTANTIAL COMPLETION OR FINAL INSPECTION REQUIRE REINSPECTION BY LANDSCAPE ARCHITECT DUE TO FAILURE OF WORK TO COMPLY WITH CONTRACTOR'S CLAIMS ON INITIAL INSPECTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPENSATING THE LANDSCAPE ARCHITECT FOR REINSPECTION SERVICES AT THE RATE OF TWO HUNDRED TWENTY FIVE DOLLARS ($225) PER HOUR PER PERSON PLUS ALL RELATED TRAVEL EXPENSES FOR EACH REQUESTED REINSPECTION TRIP.
7. AFTER FINAL ACCEPTANCE AND PRIOR TO END OF WARRANTY PERIOD, CONTRACTOR SHALL REPLACE ALL PLANT MATERIAL THAT HAS DIED OR HAS DEFECTS, INCLUDING UNSATISFACTORY GROWTH, IN THE OPINION OF THE OWNER.
8. DURING LANDSCAPE INSTALLATION KEEP PAVEMENTS CLEAN AND WORK AREA IN ORDERLY CONDITION. THE PROJECT SITE SHALL BE LEFT IN A CLEAN CONDITION AT THE END OF EVERY WORK DAY.
9. CONTRACTOR TO REPAIR ANY PAVEMENTS, CURBS, AND OTHER IMPROVEMENTS DAMAGED AS A RESULT OF LANDSCAPE INSTALLATION ACTIVITY
10. THE LOCATION OF ALL PLANT MATERIALS SHOWN ON THE PLAN SHALL BE FIELD LOCATED AND STAKED/FLAGGED BY THE CONTRACTOR AND APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE BEFORE THE DIGGING OF PLANTING HOLES. PLANTING SHALL BE LOCATED WHERE SHOWN ON THE DRAWINGS OR WHERE FIELD LOCATED BY THE LANDSCAPE ARCHITECT.
11. PROVIDE ONLY PLANTS THAT ARE FREE FROM DISEASES AND PESTS, AND THAT COMPLY WITH THE LATEST EDITION OF PUBLICATION ANSI Z60.1, AMERICAN STANDARDS FOR NURSERY STOCK", BY THE AMERICAN ASSOCIATION OF NURSERYMEN. DIMENSIONS FOR HEIGHTS, SPREAD, AND TRUNK SPECIFIED ON THE MATERIAL SCHEDULE IS A GENERAL GUIDE FOR THE MINIMUM DESIRED SIZE OF EACH PLANT.
12. DO NOT MAKE SUBSTITUTIONS REGARDING PLANT SIZES OR SPECIES WITHOUT WRITTEN PERMISSION FROM THE OWNER OR LANDSCAPE ARCHITECT.
13. REMOVE ALL METAL BASKETS, STRINGS AND OTHER TIES FROM TREES.
14. FERTILIZE ALL PLANTS WITH 16-16-16 SLOW RELEASE FERTILIZER AT THE RATE OF: 3 POUNDS PER CUBIC YARD OF SOIL MIX. 3 POUNDS PER 100 SF OF BED FOR SHRUBS
15. PLANTS DESIGNATED "B&B" IN THE PLANT LIST SHALL BE BALLED AND BURLAPPED. THEY SHALL BE DUG WITH FIRM, NATURAL BALLS OF EARTH OF SUFFICIENT DIAMETER AND DEPTH TO ENCOMPASS THE FIBROUS AND FEEDING ROOT SYSTEM NECESSARY FOR FULL RECOVERY OF THE PLANT. BALLS SHALL BE FIRMLY WRAPPED WITH BURLAP OR SIMILAR MATERIAL AND BOUND WITH TWINE OR CORD.
16. ONLY "HEMP" BURLAP AND TWINE SHALL BE USED. NO TREATED OR PRESERVED BURLAP OR TWINE IS ALLOWED. ALL HEMP TWINE ATTACHED TO THE TREE TRUNK IS TO BE REMOVED AFTER PLANTING. AT A MINIMUM THE TOP ONE-THIRD OF THE ROOT BALL IS TO HAVE ALL BURLAP AND TWINE REMOVED. IF ROOTS ARE GIRDLING OR CIRCLING THEY MUST BE LOOSENED OR CUT.
17. THE BALLS OF "B&B" PLANTS WHICH CANNOT BE PLANTED IMMEDIATELY ON DELIVERY SHALL BE COVERED WITH MOIST SOIL OR MULCH, OR OTHER PROTECTION FROM DRYING WINDS AND SUN. ALL PLANTS INSTALLED OR STORED SHALL BE WATERED BY CONTRACTOR AS NECESSARY UNTIL FINAL ACCEPTANCE.
18. FOLD DOWN OR CUT THE BURLAP FROM THE TOP 1/3 OF THE BALL OR TO THE WIDEST TOP EDGE OF THE BALL IN ORDER TO EXPOSE THE TOP PLANE OF THE BALL. REMOVE ALL NAILS, STAPLES, ETC USED TO HOLD THE BALL TOGETHER.
19. TREE BALLS SHALL HAVE A MINIMUM DIAMETER IN FEET EQUAL TO 10" FOR EACH CALIPER INCH OF THE TREE.
20. ALL PLANTS SHALL BE HANDLED SO THAT ROOTS ARE ADEQUATELY PROTECTED AT ALL TIMES. DURING SHIPMENT, THE ENTIRE PLANT SHALL BE PROTECTED BY TARPAULINS OR OTHER SUITABLE COVERING. PLANT MATERIAL SUFFERING FROM WIND BURN OR OTHER WIND DAMAGE IS NOT ACCEPTABLE.
21. NO PLANT SHALL BE BOUND WITH ROPE OR WIRE IN A MANNER THAT DAMAGES THE BARK, BREAKS BRANCHES, OR DESTROYS ITS NATURAL SHAPE. NO PLANT MATERIAL REQUIRED TO BE BALLED AND BURLAPPED SHALL BE ACCEPTED IF THE BALL IS CRACKED OR BROKEN EITHER BEFORE OR DURING THE PROCESS OF PLANTING, OR WHEN REQUIRED BURLAP, STAVES, ROPES OR PLATFORM HAVE BEEN REMOVED.
22. ANY SERIES OF TREES OR SHRUBS TO BE PLACED IN A PARTICULAR ARRANGEMENT WILL BE FIELD CHECKED FOR ACCURACY BY THE OWNER. ANY PLANTS INCORRECTLY ARRANGED SHALL BE RELOCATED WITH THE OWNER'S APPROVAL.
23. PRE-EMERGENT HERBICIDE (TREFLAN OR EQUIVALENT) SHALL BE APPLIED (ACCORDING TO MANUFACTURER'S INSTRUCTIONS) TO ALL PLANT BEDS, PRIOR TO PLANTING, FOR NOXIOUS WEED CONTROL.
24. ALL PLANTING BEDS AND TREE AND SHRUB PLANTINGS SHALL RECEIVE A MINIMUM 3" DEEP SHREDDED HARDWOOD MULCH LAYER.
25. CONTRACTOR IS RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL INSTALLED PLANT MATERIAL, INCLUDING GRASS AREAS, UNTIL FINAL ACCEPTANCE BY OWNER. WATER ALL PLANT MATERIAL AT TIME OF PLANTING.
26. ALL PLANT MATERIAL IS TO BE GUARANTEED FOR ONE (1) YEAR. GUARANTEE PERIOD STARTS FROM DATE OF FINAL ACCEPTANCE.
27. OWNER RETAINS THE RIGHT TO INSPECT TREES AND SHRUBS FOR SIZE AND CONDITION OR ROOT BALL, INSECTS, INJURIES, AND LATENT DEFECTS AND TO REJECT UNSATISFACTORY OR DEFECTIVE MATERIAL AT ANY TIME DURING PROGRESS OF WORK. REMOVE REJECTED MATERIAL IMMEDIATELY FROM THE PROJECT SITE.
28. REPLACEMENTS SHALL CLOSELY MATCH ADJACENT SPECIMENS OF THE SAME SPECIES AND SHALL CONFORM TO THE STANDARDS FOR PLANT MATERIALS SPECIFIED. ALL REPLACED MATERIAL SHALL IMMEDIATELY BE REMOVED FROM THE SITE AND ALL NECESSARY REPAIRS TO PLANTS, GRADES, LAWN AREAS, PAVING, AND OTHER AREAS DAMAGED DURING REPLACEMENT SHALL BE MADE AT NO COST TO THE OWNER.
29. ONLY ONE REPLACEMENT PER TREE, SHRUB, OR PLANT WILL BE REQUIRED AT THE END OF THE WARRANTY PERIOD, EXCEPT FOR LOSSES OR REPLACEMENTS DUE TO FAILURE TO COMPLY WITH THE SPECIFIED REQUIREMENTS.



ALL PLANT MATERIAL TO MEET AMERICAN STANDARDS FOR NURSERY STOCK AND ANSI Z60.1; LATEST EDITION STANDARDS.

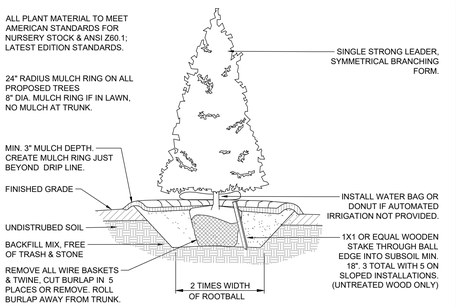
SHRUB PLANTING IN GROUP DETAIL

NOT TO SCALE



TREE PLANTING DETAIL

NOT TO SCALE



EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

2 L-1.2 PLANTING DETAIL 4

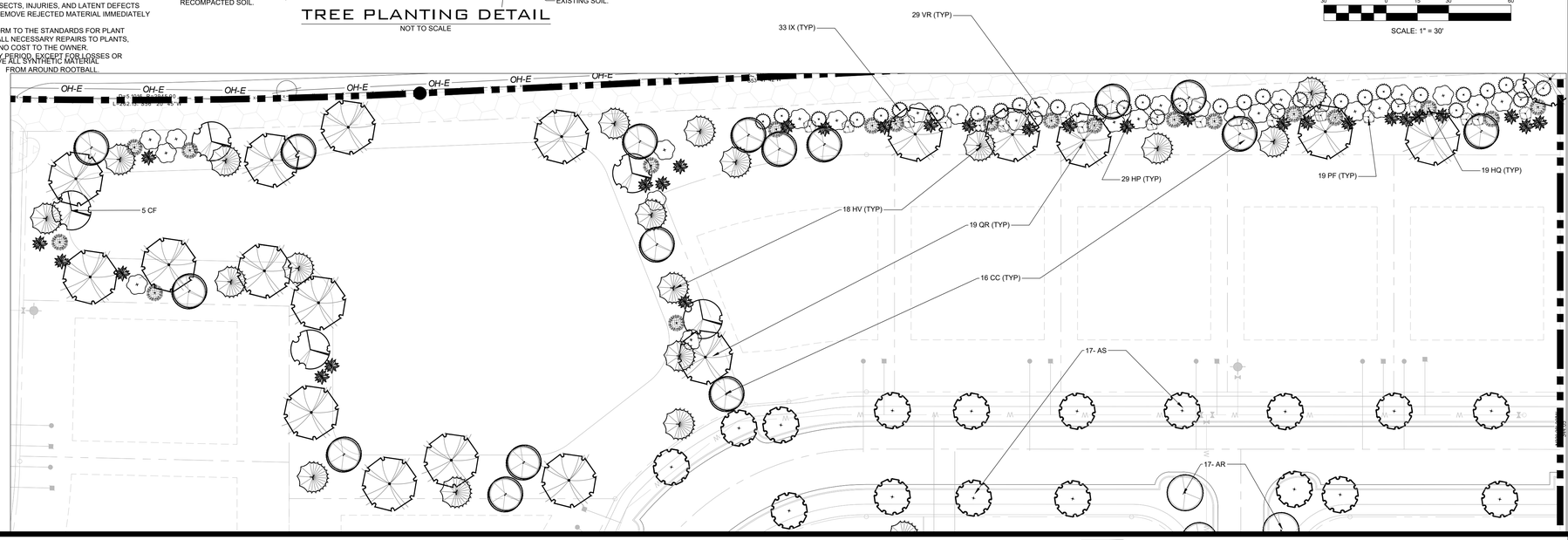
1 L-1.2 PLANTING DETAIL 3

SEEDING NOTES:

1. SEEDBED PREPARATION: LOOSEN SUBGRADE OF TURF AREAS TO A MINIMUM DEPTH OF 2 INCHES. REMOVE STONES MEASURING OVER 1-1/2 INCHES IN ANY DIMENSION. REMOVE STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEOUS MATTER. ADD TOPSOIL AND MIX THOROUGHLY INTO UPPER 3 INCHES OF TOPSOIL. IF SUBGRADE HAS BECOME COMPACTED DURING CONSTRUCTION, SCARIFY OR OTHERWISE BREAKUP THE COMPACTED SURFACE BEFORE SEEDBED PREPARATION.
2. MIN 1/2" OF TOPSOIL (IMPORTED OR SITE GENERATED) SHALL BE PROVIDED ON ALL AREAS TO BE SEEDED, INSTALLED AND STABILIZED PRIOR TO SEEDING. TOPSOIL SHALL BE CLEAN, FRIABLE SOIL WITH LANDSCAPE INDUSTRY ACCEPTABLE LEVELS OF ORGANIC MATERIAL. UNDER NO CIRCUMSTANCES SHALL SUBGRADE OR "B"-HORIZON SOIL BE USED AS TOPSOIL. CONTRACTOR IS ADVISED TO VERIFY WITH THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE ACCEPTABILITY OF TOPSOIL PRIOR TO PLACEMENT. UNACCEPTABLE SOILS USED AS TOPSOIL SHALL BE REMOVED AND REPLACED AT CONTRACTOR'S EXPENSE.
3. FERTILIZER: APPLY AGRICULTURAL LIME AT THE RATE OF 50 POUNDS PER 1000 SF. APPLY 10 POUNDS 10-10-10 ANALYSIS FERTILIZER (OR EQUIVALENT) PER 1000 SF. SPREAD LIME AND FERTILIZER UNIFORMLY OVER ALL AREAS AND MIX THOROUGHLY WITH THE SOIL.
4. FINE GRADE ALL DISTURBED LAWN AREAS TO SMOOTH, EVEN SURFACE WITH LOOSE, UNIFORMLY FINE TEXTURE, ROLL, RAKE, AND DRAG LAWN AREAS, REMOVE RIDGES AND FILL DEPRESSIONS, AS REQUIRED TO MEET FINISH GRADES.
5. GRASS SEED: PROVIDE FRESH, CLEAN, NEW-CROP SEED COMPLYING WITH TOLERANCE FOR PURITY AND GERMINATION ESTABLISHED BY OFFICIAL SEED ANALYSIS OF NORTH AMERICA.
6. SEED ALL DISTURBED AREAS. PRIOR TO INSTALLATION, CONTRACTOR SHOULD CONSULT WITH OWNER TO DETERMINE EXTENT OF SEEDING OPERATIONS.
7. REPAIR AND RESEED ALL ERODED OR DISTURBED SEEDED AREAS WHERE VEGETATIVE COVER HAS NOT BEEN ESTABLISHED.
8. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF SEEDED AREAS UNTIL 95% GRASS COVER IS ESTABLISHED.



GRAPHIC SCALE
(IN FEET)
30 0 15 30 60
SCALE: 1" = 30'



NO.	DATE

REVISIONS

DATE: 03/17/2025
SCALE: AS SHOWN
DRAWN BY: CES
REVIEWER: CES

LANDSCAPE PLAN DETAILS

MAP 112, PARCEL 018.03
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

TROTWOOD AVENUE

PROJECT
24-0314

SHEET
L-1.2

T-SQUARE ENGINEERING

PICK UP:

Prepared by T. Jake Wolaver, Esq.
Wolaver & Carter
809 S. Main Street Suite 100
Columbia, TN 38401

BK/PG: R3061/999-1003
25005483

5 PGS:AL-EASEMENT	
NANCY BATCH: 350293	04/21/2025 - 12:38 PM
VALUE	0.00
MORTGAGE TAX	0.00
TRANSFER TAX	0.00
RECORDING FEE	25.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	0.00
TOTAL AMOUNT	27.00

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

EASEMENT DEED

This instrument is entered this 18th day of April, 2025, by and between Edwin W Halliday Jr., as trustee of the **Edwin W. Halliday Family Trust**, FIRST PARTY, and **Nomau Partners, LLC**, SECOND PARTY.

W I T N E S S E T H:

WHEREAS, said FIRST PARTY is the owner of a certain tract of land in the Ninth (9th) Civil District of Maury County, Tennessee, the same being the land conveyed to it by deed of record in Book R2900, Page 1354, Register's Office of Maury County, Tennessee; and

WHEREAS, SECOND PARTY is acquiring an adjacent parcel of land from James Gore and Stacy Gore, described in deed of record in Book R2387, Page 455, Register's Office of Maury County, Tennessee, both of which deeds are hereby referred to for greater certainty of description; and

WHEREAS, it is necessary for SECOND PARTY to go upon a portion of the property of FIRST PARTY in order to install, maintain and repair a forced main sewer line across and upon said property of FIRST PARTY.

NOW, THEREFORE, said FIRST PARTY, for a good and valuable consideration in hand paid, does hereby give, grant and convey unto SECOND PARTY a perpetual right to construct a forced main sewer line on the property described below, and to go upon said lands whenever the same is reasonably necessary for the purpose of installing, inspecting, maintaining

and repairing said sewer line. In constructing, maintaining and repairing said sewer line, said SECOND PARTY shall remove all surplus earth, and restore the land and any improvements thereon to their prior condition, and interfere as little as is reasonably possible with any plants, fence or other improvements upon the land of the FIRST PARTY. Said permanent easement being upon the property described as follows:

> Beginning at a point in the east line of John Maher Builders Inc (DB R2758, pg. 851), being the southwest corner of Leatherwood Estates, Section 1 (PB 5, pg. 315); thence with the south line of Leatherwood Estates, the following calls: S 83°13'21" E , 283.66'; thence S 83°36'21" E , 188.04'; thence leaving Leatherwood Estates and proceeding through the lands of Edwin W Halliday Jr (DB R2900, pg. 1354), the following calls: S 06°23'39" W , 20.00'; thence N 83°36'21" W , 188.11'; thence N 83°13'21" W , 283.79'; thence N 83°01'47" W , 19.02'; thence N 04°05'39" E , 20.03' to a point in the east line of John Maher Builders Inc; thence with the east line of John Maher Builders Inc, S 83°01'47" E , 20.03' to the Point of Beginning. Containing 0.23 Acres.
>
> Being part of Map 125, Parcel 004.00
>
> Being a portion of the property designated as 3374 Campbellsville Pike, Columbia, Tennessee.

In furtherance of the construction of the described improvements, FIRST PARTY also grants to SECOND PARTY a temporary construction easement extending twenty feet (20') beyond the perimeter of above-described property on all sides. This temporary easement shall terminate upon the completion of construction of the sewer line.

TO HAVE AND TO HOLD said right and easement to SECOND PARTY and its successors in title; it being agreed that the right and easement hereby granted runs with the land is appurtenant to the property being acquired by SECOND PARTY. This instrument shall bind the successors and assigns of both parties.

As partial consideration for the grant of easements set forth herein, SECOND PARTY agrees and binds itself as follows:

1) It will install a new woven metal wire fence that is approximately 1200 feet long or compensate the FIRST PARTY to have the work completed.

IN TESTIMONY WHEREOF, FIRST PARTY has hereunto set their signatures the day and year first above written.

GRANTOR:

Edwin W. Halliday Family Trust

By: Edwin W. Halliday, Jr.
Name: Edwin W. Halliday, Jr.
Title: Trustee

GRANTEE:

Nomau Partners, LLC

By:
Name: G. Nelson Crowe
Title: Co-Manager

STATE OF TENNESSEE
COUNTY OF MAURY

Personally appeared before me, the undersigned, Edwin W. Halliday, Jr., with whom I am personally acquainted, and who acknowledged under oath that he/she executed the within instrument for the purposes therein contained, and who further acknowledged that he/she is the trustee of the Edwin W. Halliday Family Trust.

WITNESS my hand, at office, this 18th day of April, 2025.

My Commission Expires:
March 20, 2029

Notary Public

STATE OF TENNESSEE
COUNTY OF MAURY

Personally appeared before me, the undersigned, G. Nelson Crowe, with whom I am personally acquainted, and who acknowledged under oath that he/she executed the within instrument for the purposes therein contained, and who further acknowledged that he/she is the Co-manager of Nomau Partners, LLC.

WITNESS my hand, at office, this 21 day of April, 2025.

My Commission Expires:
9/22/26

Notary Public

STATE OF TENNESSEE - MAURY COUNTY

I hereby affirm that the actual consideration for this transfer or value of the property transferred, whichever is greater is $0.00.

KAY THREE HOSFORD
NOTARY PUBLIC
STATE OF TENNESSEE
MAURY COUNTY
My Commission Expires 09-22-2026

Affiant

Subscribed and sworn to before me, this 21 day of April, 2025.

My commission expires:
9/22/26

Notary Public

X:\JAKE\Client Folders\Crowe, Nelson Nomau Partners\Easement Deeds\Easement Deed Halliday.doc

File Middle TN Law Group

This instrument prepared by:
K. Brian Hay, Attorney at Law
104 W 6th St, Ste. 200
Columbia, TN 38401

BK/PG: R3061/230-249
25005372

20 PGS:AL-AGREEMENT	
JANE BATCH: 350207	04/17/2025 - 02:50 PM
VALUE	0.00
MORTGAGE TAX	0.00
TRANSFER TAX	0.00
RECORDING FEE	100.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	0.00
TOTAL AMOUNT	102.00

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

MUTUAL FORCE MAIN SEWER EASEMENTS AND IMPROVEMENTS AGREEMENT

THIS MUTUAL FORCE MAIN SEWER EASEMENTS AND IMPROVEMENTS AGREEMENT (the "Agreement") effective this 17 day April, 2025, by and between MCBROOM FAMILY PARTNERSHIP, a Tennessee general partnership ("McBroom"), JOHN MAHER BUILDERS INC., a Tennessee corporation ("Maher"), , NOMAU PARTNERS, LLC, a Tennessee limited liability company ("NoMau"), and shall be binding upon the successors and assigns of all those parties;

WHEREAS, McBroom owns 53.5+/- acres on Hunters Glen Drive, in Columbia (Maury County), Tennessee acquired by deed of record in Book R1466 at page 134, Register's Office of Maury County, Tennessee, and being all of Tax Parcel #112-018.02 (the "McBroom Property");

WHEREAS, Maher owns 85.711+/- acres on an unimproved roadway known as Foster Lane, in Columbia (Maury County), Tennessee acquired by deed of record in Book R2758 at page 851, Register's Office of Maury County, Tennessee, and being all of Tax Parcel #112-017.00 (the "Maher Property");

WHEREAS, NoMau is under contract to purchase 44.9+/- acres on Trotwood Avenue, in Columbia (Maury County), Tennessee, described in deed of record in Book R2387 at page 455, Register's Office of Maury County, Tennessee, and being all of Tax Parcel #112-018.03 (the "Gore Property");

WHEREAS, it is to the mutual benefit of all the parties to this Agreement to provide for the construction of a shared sewer force main system, including but not limited to pumpstation and lines, along with necessary temporary construction easements and non-exclusive permanent easements (collectively the "Force Main Improvements") acceptable by dedication to the City of Columbia Wastewater System (the "City") to facilitate residential subdivision development of the Gore Property, McBroom Property and Maher Property;

WHEREAS, McBroom and NoMau are nearing City approval of their respective subdivision developments and at least initially, in equal shares, wish to jointly fund the documentation of and the construction of the Force Main Improvements but subject to the requirement of reimbursement, in equal shares, by Maher to McBroom and NoMau in the event Maher (or the owner of the Maher Property) wishes to later develop the Maher Property and connect to the Force Main Improvements;

WHEREAS, relative to the Force Main Improvements, the parties to this Agreement wish to provide a framework for the mutual obligations and benefits of the parties to each other and to give notice to the world that the obligations and benefits set forth herein shall "run with the land" of the McBroom Property, Maher Property, and Gore Property and be binding upon and beneficial to any and all successors and/or assigns of same;

NOW, THEREFORE, in consideration of One Dollar ($1.00), the mutual covenants and agreements herein contained and other good and valuable consideration, the receipt, value and sufficiency of which is hereby acknowledged, the parties hereby covenant and agree as follows:

SECTION 1. Construction.

1.1 Construction and Management. Subject to the reimbursement provisions set forth in this Agreement, NoMau and McBroom agree to equally share the costs and expenses of the construction and maintenance of the Force Main Improvements. NoMau has agreed to, using all reasonable efforts and in good faith with contractors agreed upon by the parties, coordinate the construction of and construct the Force Main Improvements in a good and workmanlike manner upon the "McBroom Easement Area," as more particularly described on **Exhibit A-1** attached hereto; the "Maher Easement Area," as more particularly described on **Exhibit A-2** attached hereto; and the "Halliday Easement Area," as more particularly described on **Exhibit A-3** attached hereto. NoMau, as well as its contractors, subcontractors, civil and soils engineers, agents, employees, and representatives shall have the right to enter upon the applicable properties, as described herein, of the parties to this Agreement as NoMau deems necessary to construct and complete the Force Main Improvements, including the right to use reasonable portions of the adjoining properties subject to this Agreement for storage and staging. NoMau and McBroom agree to instruct their respective civil engineers (Webb Engineers & Surveyors for McBroom and T Square Engineering for NoMau to regularly coordinate the Force Main Improvements construction engineering with each other to avoid conflicting designs or inefficient construction or operation of same.

1.2 Costs. The owners, their successors and/or assigns, of the McBroom Property and Gore Property are obligated to each other to cooperate and share equally in the payment, construction (including but not limited to any post-completion warranty work), and grant of easements necessary to construct the Force Main Improvements to City specifications which, upon completion, shall be offered and dedicated to the City for acceptance and maintenance thereafter. To that end, NoMau agrees to escrow 1/2 of the cost of construction of the Force Main Improvements upon the finalization and acceptance of a contract to construct the Force Main Improvements pursuant to the plans approved by the City of Columbia. Within ten (10) days of the posting of these funds in escrow and providing evidence to McBroom, McBroom shall provide a letter of credit from an organizational bank/lender which evidences its ability to pay its portion of the project. Maher (or the then owner of the Maher Property) agrees to cooperate and join in with the owners of the McBroom Property and the Gore Property in the dedication and conveyance of same to the City. Notwithstanding any provision to the contrary contained within this Agreement, neither NoMau nor McBroom shall be obligated construct or to share in the costs of the development of the sewer improvements described herein until and unless that party receives preliminary plat approval from the City of Columbia, Tennessee (or other appropriate governmental body), in substantially the same form in which they are currently being presented.

1.3 Bonds. Pursuant to applicable ordinances of the City, NoMau will post any required bond, letter of credit, and/or other similar security (as applicable, "Warranty Bond"), as an improvement assurance to the City concerning the workmanship and condition of the Force Main Improvements, if required by the City. The cost of any such Warranty Bond will also be shared equally by the owners, their successors and/or assigns, of the McBroom Property and Gore Property, subject to their rights of equal share reimbursement from Maher set forth herein.

1.4 Reimbursement Payments. NoMau, as builder of the Force Main Improvements, shall have the right to periodic reimbursement payments ("Reimbursement Payments") from McBroom for its equal share of costs of the documentation, construction and any necessary post-completion warranty work thereof, but not more often than once per month and being payable in an amount equal to its equal share of the actual

costs incurred attributable to the documentation, construction and any necessary post-completion warranty work for the Force Main Improvements provided NoMau provides reasonably detailed documentary evidence to McBroom of the amount to be paid ("Reimbursement Payment Request"). The Reimbursement Payment Request shall be made in the form of an electronic mail addressed to a designated representative of McBroom. McBroom shall have five (5) business days from the date of receipt of the Reimbursement Payment Request to either pay same or provide NoMau its written objection to payment of such Reimbursement Payment ("Reimbursement Payment Objection Period"). Any written objection shall state with specificity the basis of the objection, and the actions that must be taken for the objection to be withdrawn. McBroom and NoMau shall, in good faith, attempt to resolve any disputes regarding an objection to payment within five (5) business days after NoMau's receipt of the written objection ("Reimbursement Payment Resolution Period"). After expiration of the Resolution Payment Objection Period, and if McBroom has not timely submitted to NoMau its written objection to the payment of such Reimbursement Payment, McBroom is directed to immediately pay to NoMau the full amount of its equal share of such costs evidenced by the Reimbursement Payment Request. Notwithstanding the foregoing or anything else contained herein this Agreement to the contrary, in the event the owner of the Maher Property eventually obtains City approval of annexation and subdivision of the Maher Property such that connection to the Force Main Improvements is necessary, then Maher shall be obligated to promptly reimburse McBroom and NoMau such that all costs of documentation, construction and post-completion warranty are borne in equal one-third (1/3rd) shares by McBroom, NoMau and Maher. For purposes of clarity, and notwithstanding any provision to the contrary contained within this Agreement, the owner of the Maher Property shall not be obligated to share in the costs of the development of the sewer improvements described herein until and unless the owner of the Maher Property receives: (i) approval of annexation and subdivision of the Maher Property satisfactory to the owner of the Maher Property, in its sole discretion, and (ii) preliminary plat approval from the City of Columbia, Tennessee (or other appropriate governmental body), in substantially the same form in which the owner of the Maher Property presents such plat (the "Maher Property Contingency"). If the parties cannot reach an amicable resolution to any disagreement arising from the duties set forth in this Agreement, the parties consent to binding Arbitration under the terms of the American Arbitration Associations rules established for the construction industry. NoMau may continue construction while the case is pending if it chooses. The prevailing party shall be entitled to the reimbursement of all costs of the arbitration, including attorneys' fees, and shall be entitled to interest at a rate of ten percent (10%) per annum to accrue on any arbitration award. No party shall be entitled to any benefit from the sewer system to be constructed until it has paid its fair share of the costs of construction, and any party shall be entitled to an injunction to prevent a connection to said sewer system (whether owned privately or by the City of Columbia) until all disputes are resolved and any obligated amounts are paid in full with interest.

SECTION 2. Easements.

2.1 Grant of Easements. Maher and McBroom hereby grant permanent mutual non-exclusive easements to install, operate, repair and reinstall if necessary, the Force Main Improvements, to each other and Gore, on and over the easement areas described in collective Exhibit A attached hereto. Further, Maher and McBroom hereby grant a fifteen (15) foot wide temporary mutual construction easements on either side (and either end) of said permanent easement to each other provided they own such adjoining property. To have and to hold said easements with the estate, title and interest thereto belonging to said grantees, their heirs and assigns, forever; and said grantors do covenant with the grantees that grantors are, relative to their respective tracts, each lawfully seized and possessed of said easement and the underlying fee, have good rights to convey said easements, and the same is unencumbered, except as herein set out; and grantors do further, relative to their respective tracts, covenant and bind themselves and their heirs, successors and

representatives, to warrant and forever defend the title to said easements to grantees, their heirs, successors and/or assigns, against the lawful claims of all persons whomsoever. The aforementioned temporary construction easements shall automatically terminate upon completion and final acceptance by the City of the Force Main Improvements. The parties to this Agreement will cooperate to obtain any necessary easements across the Halliday property as described in Exhibit A-3. It is hereby expressly agreed that the effectiveness of this Agreement shall be contingent upon the execution and recording of an easement for the construction and maintenance of the Force Main Improvements over, under and across the Halliday Easement Area (the "Halliday Contingency"), which easement shall be recorded immediately prior to any of the other mutual and reciprocal easements described herein.

SECTION 3. Nature of Easements and Rights Granted

3.1 Nature and Effect of Easements. Each and all of the easements, covenants, restrictions and provisions contained in this Agreement:

(a) Are made for the direct, mutual and reciprocal benefit of the parties thereto;

(b) Create mutual equitable servitudes upon each tract in favor of the other tract;

(c) Constitute covenants running with the land; and

(d) Shall bind every person or entity having any fee, leasehold or other interest in any portion of the applicable tracts at any time or from time to time to the extent that such portion is affected or bound by the easement, covenant, restriction, or provision.

3.2 Transfer of Title. The acceptance of any transfer or conveyance of title from any party hereto or its respective heirs, representatives, successors or assigns of all or any part of its interest in its property shall be deemed to:

(a) Require the prospective grantee to agree not to use, occupy or allow any lessee or occupant of such applicable properties to use or occupy said properties in any manner which would constitute a violation or breach of any of the easements and covenants contained herein; and

(b) Require the prospective grantee to assume and agree to perform each and all of the obligations of the conveying party under this Agreement with respect to any such property which will be conveyed to each grantee.

The parties contemplate that NoMau may assign its rights to this Agreement to a third-party in conjunction with a subsequent sale of the Gore Property. NoMau may not assign this Agreement until i) it has placed the funds in escrow as contemplated above; and ii) its successor has obtained such permits and bonds necessary to ensure that construction of the Force Main Improvements are completed.

SECTION 4. Maintenance

4.1 Maintenance. Until the Force Main Improvements are completed and accepted by the City (or during any post-completion, post-acceptance Warranty Bond period), the owners of the McBroom Property and Gore Property (and if and when applicable, the owner of the Maher Property) shall share equally in the costs of maintenance of the Force Main Improvements; provided that the contribution paid by the owner of the Maher Property, if applicable and depending upon the timing of satisfaction of the Maher Property Contingency, shall be paid in the form of reimbursement of such one-third (1/3rd) share of the owner of the Maher Property.

SECTION 5. Mutual Indemnification

5.1 Indemnification. Each party to this Agreement shall indemnify and hold each other harmless from any liability, loss, damage, expense, claim or demand (including but not limited to court costs and reasonable attorney's fees) arising out of the acts or omissions of a party hereto, or its agents, contractors, employees or other parties conducting activities on the Force Main Improvements including but not limited to the temporary construction easements. Such indemnity obligation shall survive the completion or termination of this Agreement. Each owner shall give the other owner(s) prompt and timely notice of any claim made or suit or action commenced which, in any way, could result in indemnification hereunder.

5.2 Liability Insurance. The respective owners of the Maher Property, McBroom Property and Gore Property shall obtain and maintain comprehensive public liability insurance covering injuries to persons and property on, in or about its tract, with a single limit of not less than Five Hundred Thousand Dollars and 00/100 Dollars ($500,000.00), naming the other tract owner(s) as insureds. All such policies of insurance shall be issued by solvent and responsible insurance companies authorized to do business in the State of Tennessee.

SECTION 6. Duration and Termination

6.1 Duration. The easements, covenants, restrictions and other provisions of this Agreement shall be of perpetual duration.

6.2 Amendment. This Agreement, or any easement, covenant, restriction or undertaking contained herein, may be terminated, extended or amended by the recording of the appropriate document (or memorandum of same) in the Register's Office of Maury County, Tennessee, which document must be executed by all of the applicable owners affected thereby, as of the date of such document.

SECTION 7. Recording

A fully executed counterpart of this Agreement shall be recorded in the Register's Office of Maury County, Tennessee.

SECTION 8. Benefit

This Agreement shall inure to the benefit of, and be binding upon, the parties hereto and their respective heirs, executors, administrators, representatives, successors and assigns.

SECTION 9. Waiver

No waiver of any breach of any of the easements, covenants and/or agreements herein contained shall be construed as, or constitute, a waiver of any other breach or a waiver, acquiescence in or consent to any further or succeeding breach of the same or any other covenant and/or agreement.

SECTION 10. Severability

If any term or provision of this Agreement shall, to any extent, be held invalid or unenforceable, the remaining terms and provisions of this Agreement shall not be affected thereby, but each remaining term and provision shall be valid and enforced to the fullest extent permitted by law.

SECTION 11. Applicable Law and Attorney Fees

This Agreement shall be construed and enforced in accordance with the laws of Tennessee. If any party brings or commences any legal action or proceeding to enforce any of the terms of this Agreement (or for damages by reason of an alleged breach of this Agreement), the prevailing party in such action shall be entitled to recovery of all costs and expenses of litigation, including reasonable attorney's fees.

SECTION 12. Counterparts

This Agreement may be executed in any number of separate counterparts, each of which shall be deemed an original and all of which together shall constitute the same instrument. Signatures and initials required in this Agreement or as required in documents related to this Agreement may be executed via "wet" original handwritten signature or initials, or via electronic signature or mark, which shall be binding on the parties as originals, and the executed signature pages may be delivered using pdf or similar file type transmitted via electronic mail, cloud based server, c-signature technology, or other similar electronic means, and any such transmittal shall constitute delivery of the executed document for all purposes of this Agreement. Notwithstanding the foregoing, given this Agreement and any amendment thereto must be recorded in the Maury County, Tennessee Register of Deeds office, "wet" original handwritten signatures properly acknowledged and authenticated by a notary public are required.

(counterpart signature pages follow)

IN WITNESS WHEREOF, the parties hereto have executed this Agreement effective as of the day and year first above written.

McBroom:

MCBROOM FAMILY PARTNERSHIP,
a Tennessee general partnership

By: _____
Randy E. McBroom, General Partner

By: _____
Linda McBroom Walker, General Partner

STATE OF TENNESSEE
COUNTY OF MAURY

Before me, the undersigned, a Notary Public in and for the aforesaid state and county, personally appeared **Randy E. McBroom and Linda McBroom Walker** to me known to be the person(s) described therein (or who proved to me to be the same on a satisfactory basis) and who acknowledged themselves to be the **General Partners of McBroom Family Partnership**, a Tennessee general partnership, being authorized to execute the foregoing instrument for the purposes therein contained by signing the name of the general partnership by themselves as such General Partners.

Witness my hand and seal at office in the aforesaid state and county this 17th day of April, 2025.

_____
Notary Public
My Commission Expires: 6/26/27

(SEAL)



IN WITNESS WHEREOF, the parties hereto have executed this Agreement effective as of the day and year first above written.

Maher:

JOHN MAHER BUILDERS INC.,
a Tennessee corporation

By: _____ CEO

Name: John Maher

Title: Chief Executive Officer

STATE OF TENNESSEE
COUNTY OF Maury

Before me, the undersigned, a Notary Public in and for the aforesaid state and county, personally appeared **John Maher** to me known to be the person(s) described therein (or who proved to me to be the same on a satisfactory basis) and who acknowledged him or herself to be the Chief Executive Officer **of John Maher Builders Inc., a Tennessee corporation,** being authorized to execute the foregoing instrument for the purposes therein contained by signing the name of the corporation by him or herself as such Chief Executive Officer.

Witness my hand and seal at office in the aforesaid state and county this 17th day of April, 2025.

_____
Notary Public
My Commission Expires: 3-20-29

(SEAL)

JOHN HILL
STATE OF TENNESSEE
NOTARY PUBLIC
MAURY COUNTY

IN WITNESS WHEREOF, the parties hereto have executed this Agreement effective as of the day and year first above written.

NoMau:

NOMAU PARTNERS, LLC,
a Tennessee limited liability company

By: _____

Name: G. Nelson Crowe

Title: Co- Manager

KAY THERESE HOSFORD
STATE OF TENNESSEE NOTARY PUBLIC
MAURY COUNTY
My Commission Expires 09-22-2026

STATE OF TENNESSEE
COUNTY OF Maury

Before me, the undersigned, a Notary Public in and for the aforesaid state and county, personally appeared G Nelson Crowe to me known to be the person(s) described therein (or who proved to me to be the same on a satisfactory basis) and who acknowledged him or herself to be the Co-Manager **of NOMAU PARTNERS, LLC, a Tennessee limited liability company,** being authorized to execute the foregoing instrument for the purposes therein contained by signing the name of the limited liability company by him or herself as such Co-manager.

Witness my hand and seal at office in the aforesaid state and county this 17 day of April, 2025.

Kay Therese Hosford (SEAL)
Notary Public
My Commission Expires:

EXHIBIT A-1 (5 pages)

McBroom Easement Area
Sanitary Sewer Easement

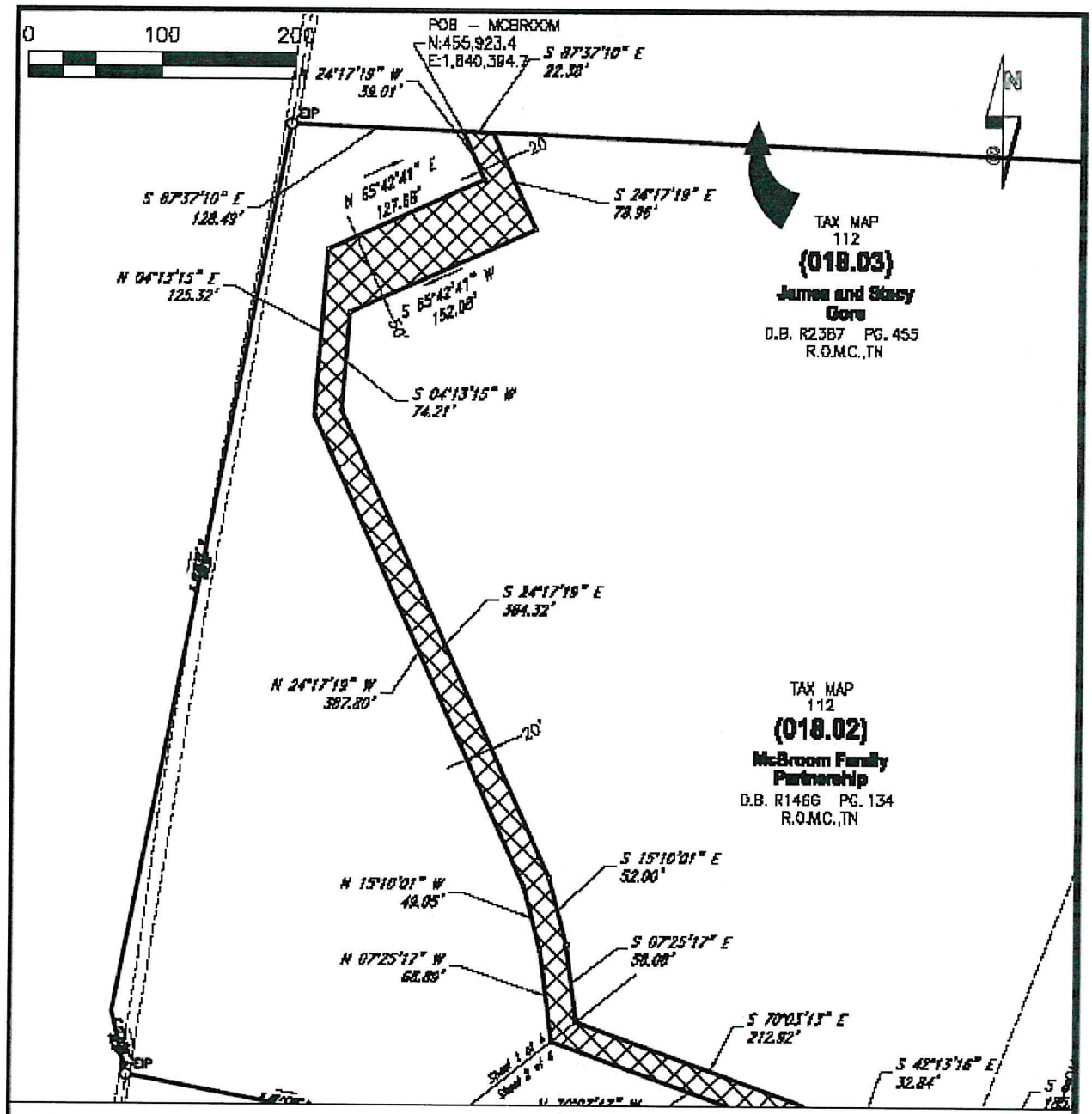
A tract of land located in Maury County, Tennessee. A portion of parcel 018.02 as shown on Tax Map 112, the McBroom Family Partnership property as recorded in Deed Book R1466, page 134, and being more particularly described as follows.

Beginning at an iron pin set having a Tennessee State Plane Coordinate N-455,923.4, E-1,640,394.7 (TDOT CORS), said point lying SOUTH 87°37'10" EAST a distance of 128.49' from the north west corner of the McBroom Family Partnership property as recorded in Deed Book R1466, page 134, also being the south west corner of James and Stacy Gore as recorded in Deed Book R2387, page 455, and lying in the center of Foster Lane;
Thence with the south line of James and Stacy Gore as recorded in Deed Book R2387, page 455, SOUTH 87°37'10" EAST a distance of 22.38';
Thence severing the property of McBroom, SOUTH 24°17'19" EAST a distance of 78.96';
Thence with the same, SOUTH 65°42'41" WEST a distance of 152.08';
Thence with the same, SOUTH 04°13'15" WEST a distance of 74.21';
Thence with the same, SOUTH 24°17'19" EAST a distance of 384.32';
Thence with the same, SOUTH 15°10'01" EAST a distance of 52.00';
Thence with the same, SOUTH 07°25'17" EAST a distance of 58.08';
Thence with the same, SOUTH 70°03'13" EAST a distance of 212.92';
Thence with the same, SOUTH 42°13'16" EAST a distance of 32.84';
Thence with the same, SOUTH 81°32'59" EAST a distance of 185.37';
Thence with the same, SOUTH 60°49'18" EAST a distance of 92.47';
Thence with the same, SOUTH 80°54'30" EAST a distance of 1709.73';
Thence with the same, SOUTH 72°44'50" EAST a distance of 70.44' to a point on the north line of John Maher Builders, Inc as recorded in Deed Book R2758, page 851;
Thence with the north line of John Maher Builders, Inc., NORTH 80°54'30" WEST a distance of 1,810.35';
Thence severing the McBroom property, NORTH 60°49'18" WEST a distance of 63.24';
Thence with the same, NORTH 81°32'59" WEST a distance of 188.86';
Thence with the same, NORTH 42°13'16" WEST a distance of 35.03';
Thence with the same, NORTH 70°03'13" WEST a distance of 220.13';
Thence with the same, NORTH 07°25'17" WEST a distance of 68.89';
Thence with the same, NORTH 15°10'01" WEST a distance of 49.05';
Thence with the same, NORTH 24°17'19" WEST a distance of 387.80';
Thence with the same, NORTH 04°13'15" EAST a distance of 125.32';
Thence with the same, NORTH 65°42'41" EAST a distance of 127.68';
Thence with the same, NORTH 24°17'19" WEST a distance of 39.01', which is the point of beginning, having an area of 48,080 square feet, 1.10 acres.

This parcel is subject to any and all easements, restrictions, and/or right of ways either by record and/or prescription that a complete and accurate title search may reveal. No title search was provided to the surveyor at the time of this survey.

Note: The above property description is based on information gathered during the course of an actual field survey conducted by W.E.S. – ENGINEERS AND SURVEYORS – Job #17608, under the direction of Allen B. O'Leary, Tennessee Registered Land Surveyor Number 1987. All iron pins set are ½" Rebar, with a plastic cap stamped "W.E.S, RLS 1987". All deeds referenced above are of record in the Register's Office of Maury County, Tennessee. The above property description was prepared under my direction on this the 30TH day of January 2025.

Allen B. O'Leary
TN R.L.S. No. 1987



MAP SHOWING

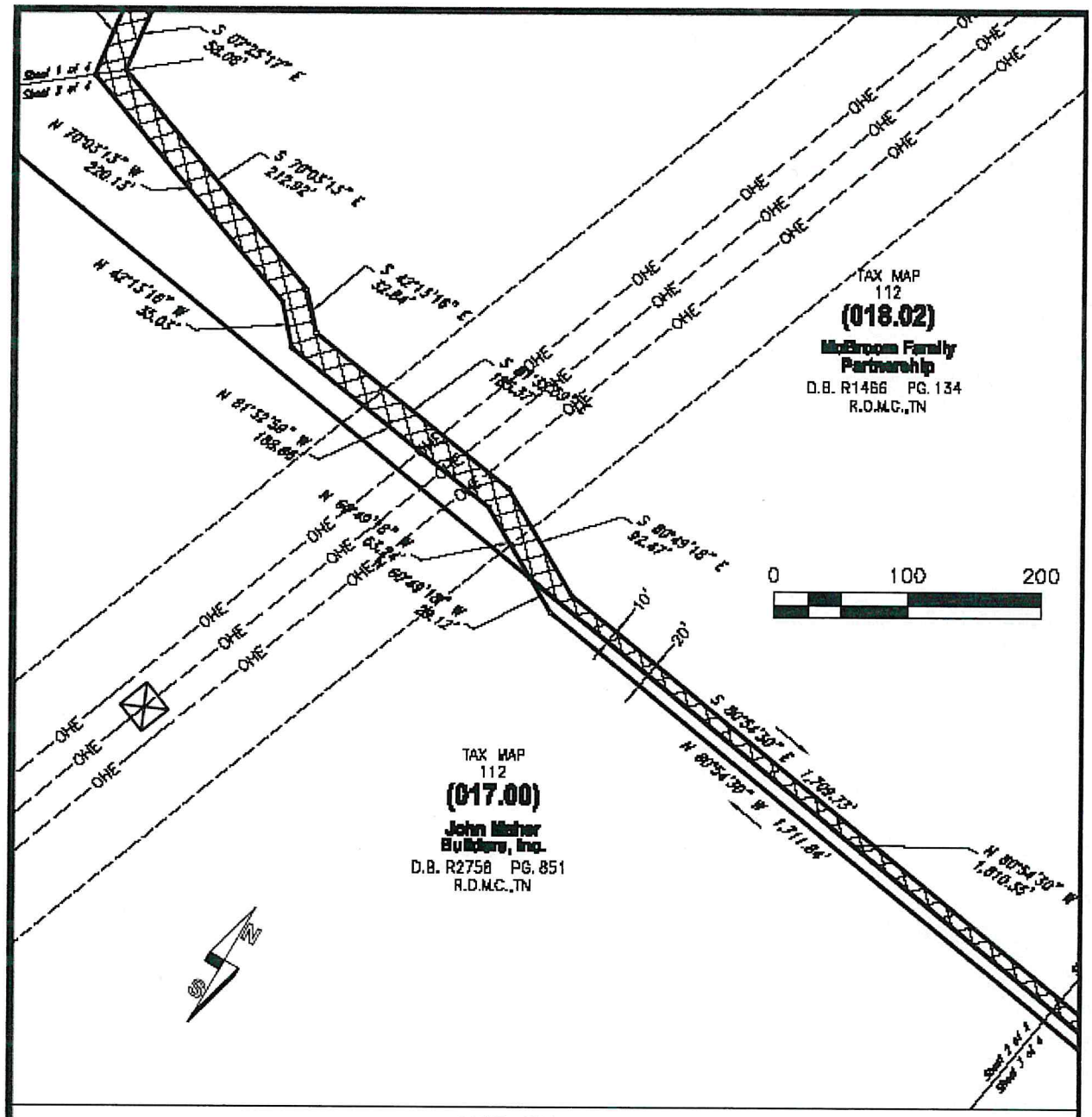
1 OF 4

SANITARY SEWER EASEMENT

TO THE CITY OF COLUMBIA, TENNESSEE
MAURY COUNTY, TENNESSEE
FROM

McBROOM FAMILY PARTNERSHIP

PROJECT NO.: TROTWOOD	EASEMENT NO.: 1		SYSTEM: SANITARY
SCALE: 1"=100'	PARCEL NO.: 018.02	DATE: 1-29-25	BY: W.E.S.



MAP SHOWING 2 OF 4

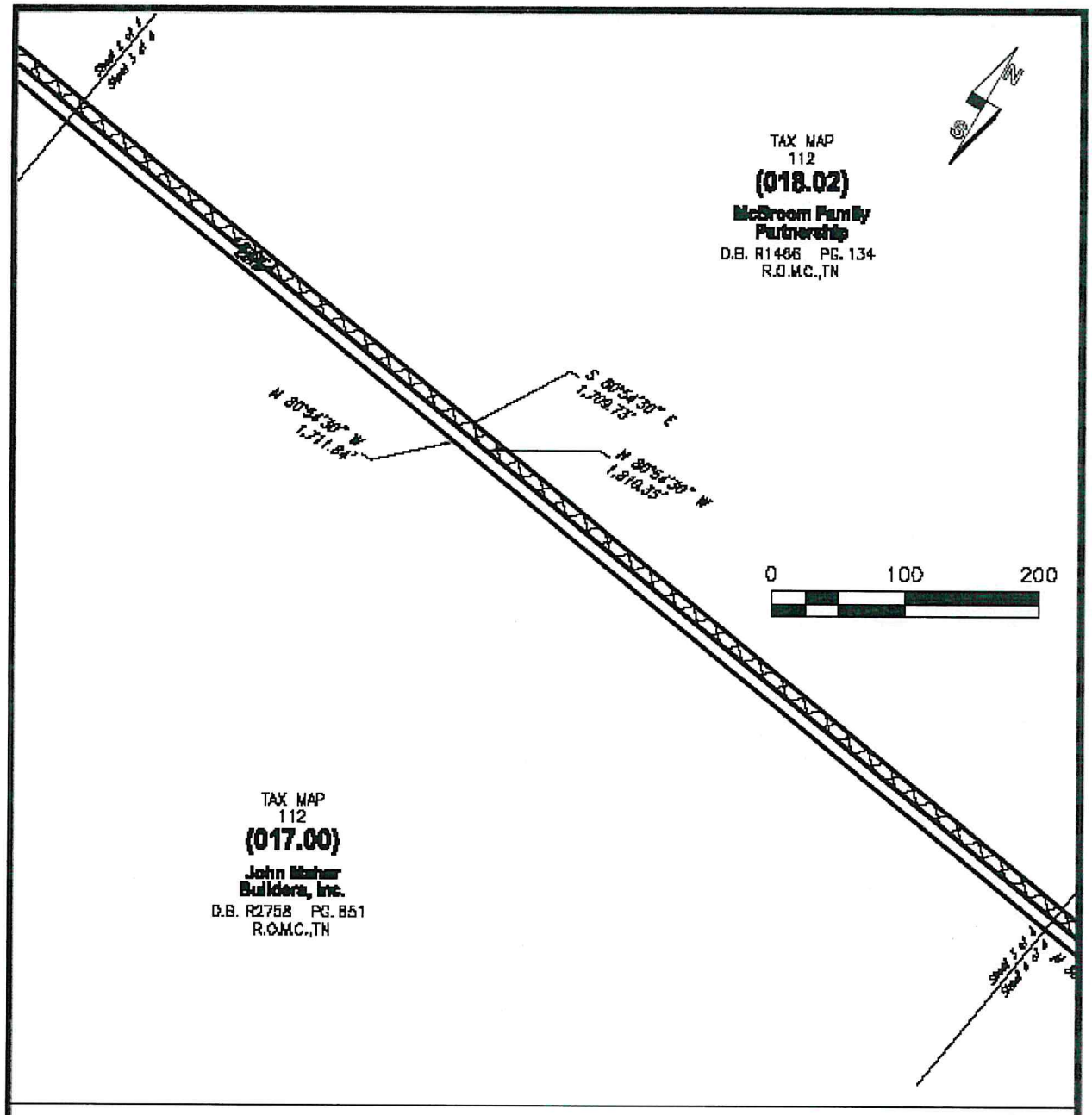
SANITARY SEWER EASEMENT

TO THE CITY OF COLUMBIA, TENNESSEE
MAURY COUNTY, TENNESSEE
FROM

McBROOM FAMILY PARTNERSHIP

PROJECT NO.: TROTWOOD	EASEMENT NO.: 1	SYSTEM: SANITARY

SCALE: 1"=100'	PARCEL NO.: 018.02	DATE: 1-29-25	BY: W.E.S.



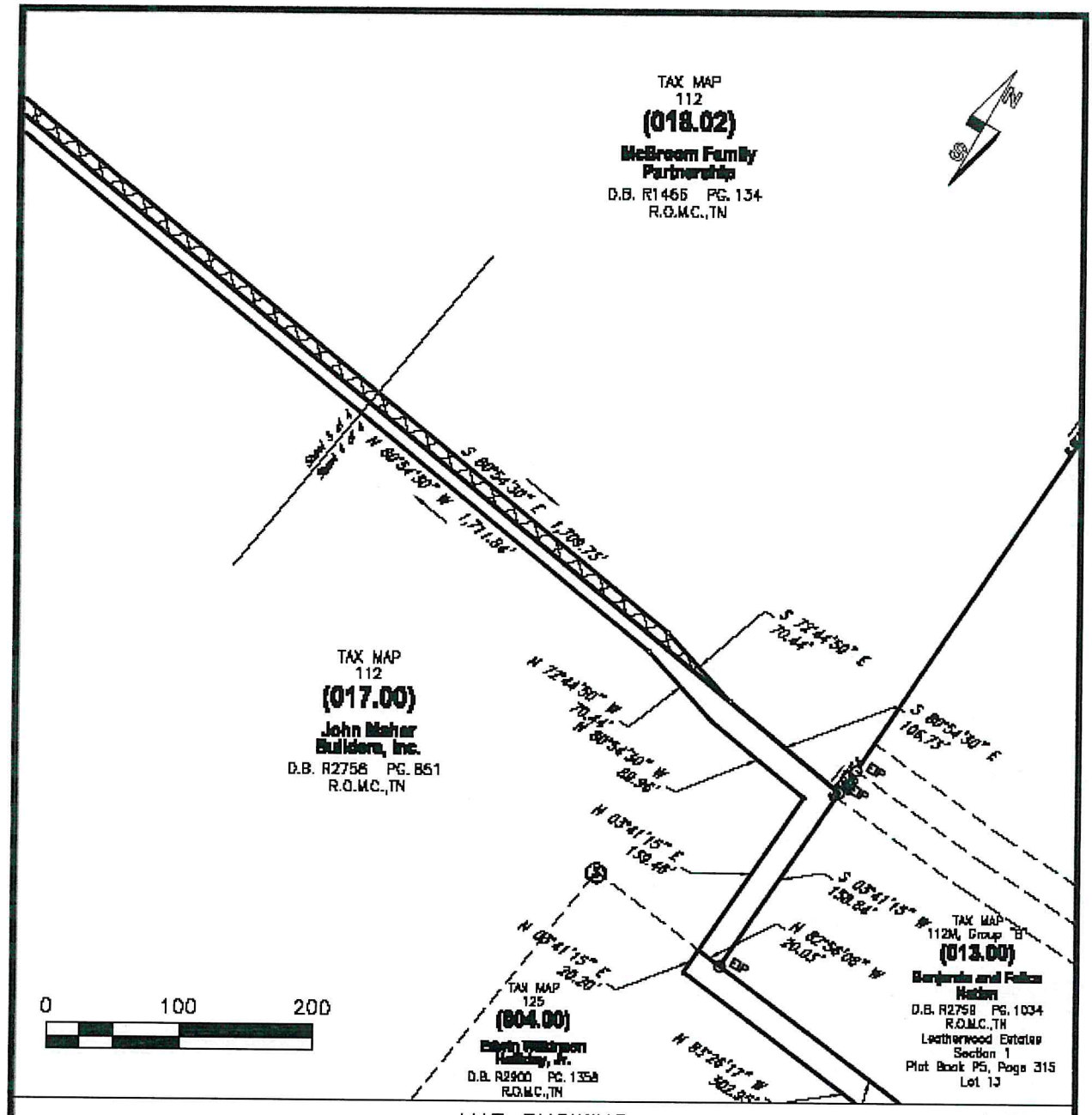
MAP SHOWING 3 OF 4

SANITARY SEWER EASEMENT

TO THE CITY OF COLUMBIA, TENNESSEE
MAURY COUNTY, TENNESSEE
FROM

McBROOM FAMILY PARTNERSHIP

PROJECT NO.: TROTWOOD	EASEMENT NO.: 1	SYSTEM: SANITARY	
SCALE: 1"=100'	PARCEL NO.: 018.02	DATE: 1-29-25	BY: W.E.S.



MAP SHOWING 4 OF 4

SANITARY SEWER EASEMENT

TO THE CITY OF COLUMBIA, TENNESSEE
MAURY COUNTY, TENNESSEE
FROM

McBROOM FAMILY PARTNERSHIP

PROJECT NO.: TROTWOOD	EASEMENT NO.: 1	SYSTEM: SANITARY

SCALE: 1"=100'	PARCEL NO.: 018.02	DATE: 1-29-25	BY: W.E.S.

EXHIBIT A-2 (4 pages)

Maher Easement Area
Sanitary Sewer Easement

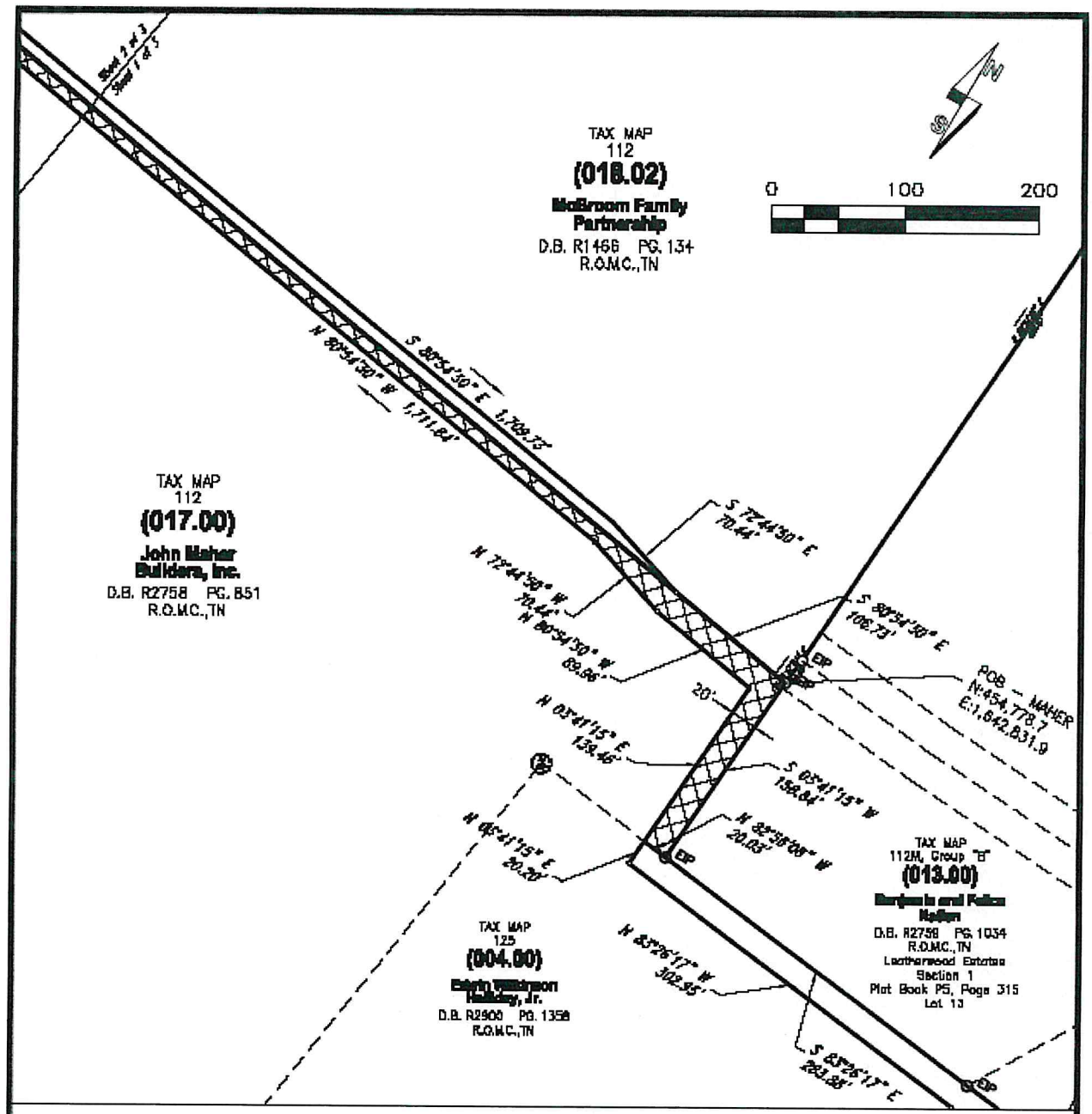
A tract of land located in Maury County, Tennessee. A portion of parcel 017.00 as shown on Tax Map 112, the John Maher Builders, Inc. property as recorded in Deed Book R2758, page 851, and being more particularly described as follows.

Beginning at a 5/8" iron pin found with RLS #596 cap at the north east corner of John Maher Builders, Inc. property as recorded in Deed Book R2758, page 851 having a Tennessee State Plane Coordinate N-454,778.7, E-1,642,831.9 (TDOT CORS), said point being the southeast corner of McBroom Family Partnership property as recorded in Deed Book R1466, page 134;
Thence with the west line of Benjamin and Felice Nation as recorded in Deed Book R2759, page 1034, and being Lot 13, Leatherwood Estates, Section 1 as recorded in Plat Book P5, page 315, SOUTH 03°41'15" WEST a distance of 158.84' to a 1"X1" angle iron found;
Thence severing the property of Maher, NORTH 82°56'08" WEST a distance of 20.03';
Thence with the same, NORTH 03°41'15" EAST a distance of 139.46';
Thence with the same, NORTH 80°54'30" WEST a distance of 89.96';
Thence with the same, NORTH 72°44'50" WEST a distance of 70.44';
Thence with the same, NORTH 80°54'30" WEST a distance of 1,711.84';
Thence with the same, NORTH 60°49'18" WEST a distance of 29.12';
Thence with the south line of McBroom Family Partnership property as recorded in Deed Book R1466, page 134, SOUTH 80°54'30" EAST a distance of 1,810.35';
Thence with the same SOUTH 80°54'30" EAST a distance of 106.73'; which is the point of beginning, having an area of 23,265 square feet, 0.53 acres.

This parcel is subject to any and all easements, restrictions, and/or right of ways either by record and/or prescription that a complete and accurate title search may reveal. No title search was provided to the surveyor at the time of this survey.

Note: The above property description is based on information gathered during the course of an actual field survey conducted by W.E.S. – ENGINEERS AND SURVEYORS – Job #17608, under the direction of Allen B. O'Leary, Tennessee Registered Land Surveyor Number 1987. All iron pins set are ½" Rebar, with a plastic cap stamped "W.E.S, RLS 1987". All deeds referenced above are of record in the Register's Office of Maury County, Tennessee. The above property description was prepared under my direction on this the 30TH day of January 2025.

Allen B. O'Leary
TN R.L.S. No. 1987



MAP SHOWING 1 OF 3

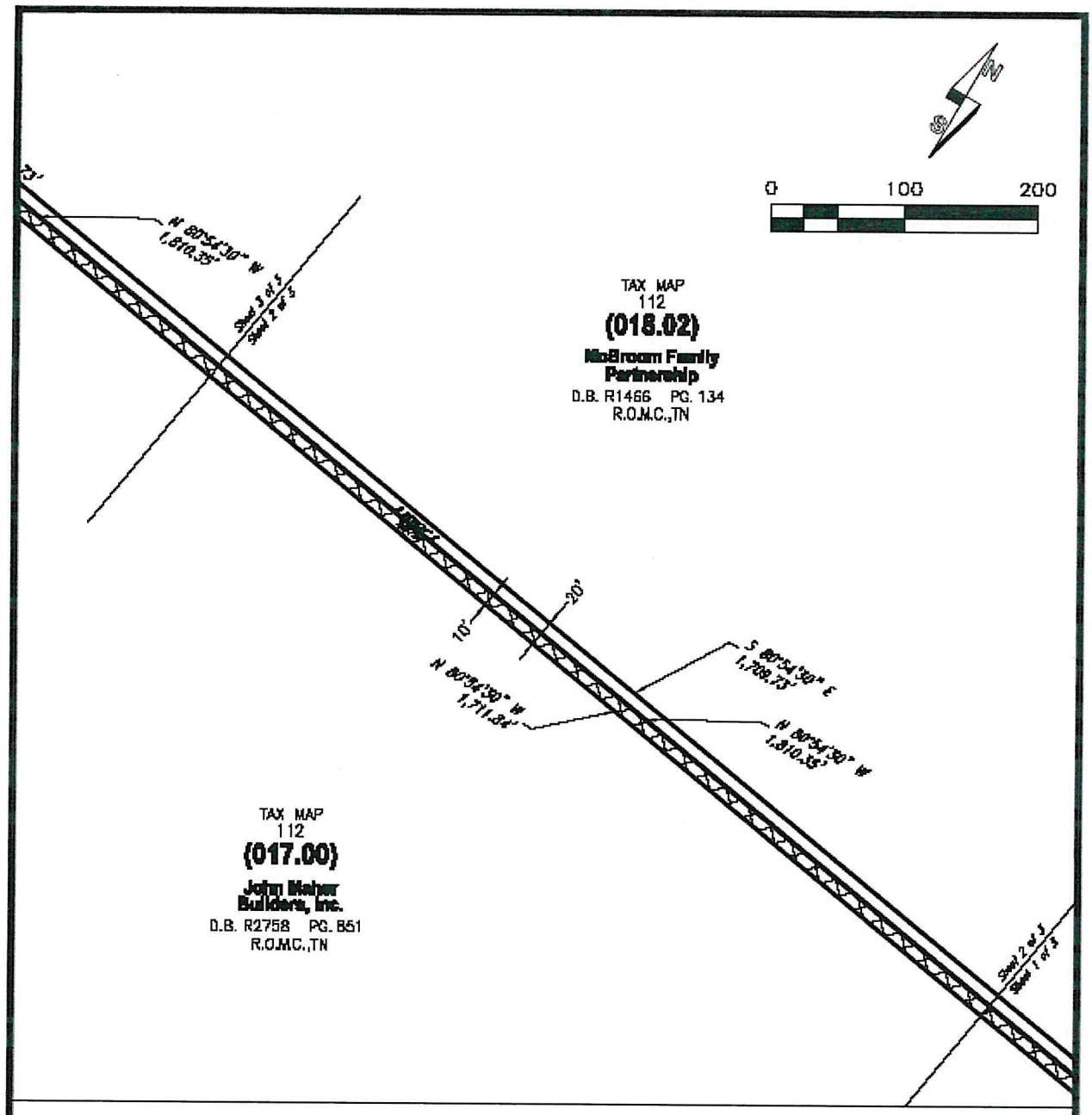
SANITARY SEWER EASEMENT

TO THE CITY OF COLUMBIA, TENNESSEE
MAURY COUNTY, TENNESSEE
FROM

JOHN MAHER BUILDERS, INC.

PROJECT NO.: TROTWOOD	EASEMENT NO.: 1	SYSTEM: SANITARY

SCALE: 1"=100'	PARCEL NO.: 017.00	DATE: 1-29-25	BY: W.E.S.



MAP SHOWING 2 OF 3

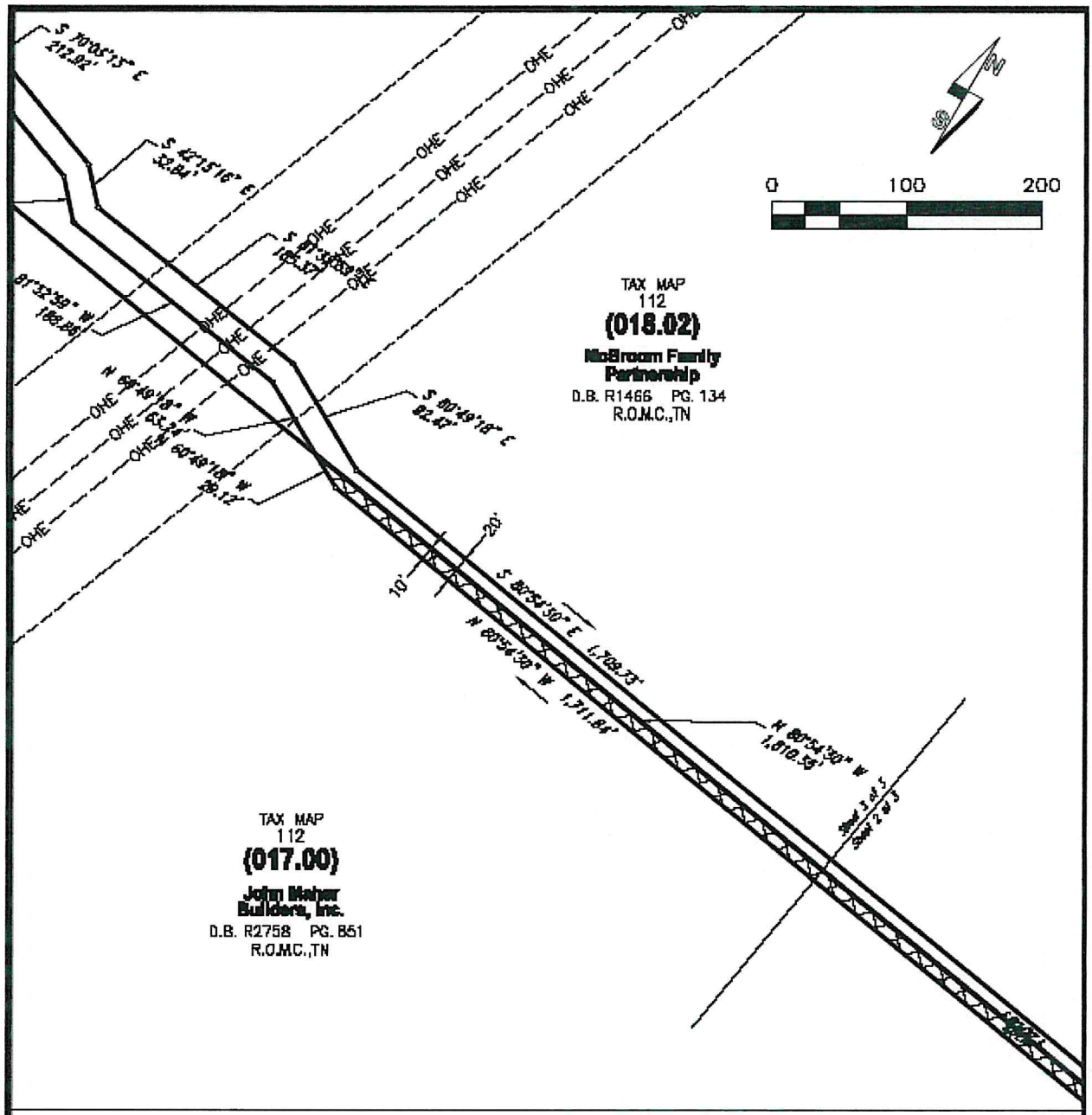
SANITARY SEWER EASEMENT

TO THE CITY OF COLUMBIA, TENNESSEE
MAURY COUNTY, TENNESSEE
FROM

JOHN MAHER BUILDERS, INC.

PROJECT NO.: TROTWOOD	EASEMENT NO.: 1	SYSTEM: SANITARY

SCALE: 1"=100'	PARCEL NO.: 017.00	DATE: 1-29-25	BY: W.E.S.



MAP SHOWING 3 OF 3

SANITARY SEWER EASEMENT

TO THE CITY OF COLUMBIA, TENNESSEE
MAURY COUNTY, TENNESSEE
FROM

JOHN MAHER BUILDERS, INC.

PROJECT NO.: TROTWOOD	EASEMENT NO.: 1	SYSTEM: SANITARY	
SCALE: 1"=100'	PARCEL NO.: 017.00	DATE: 1-29-25	BY: W.E.S.

EXHIBIT A-3 (2 pages)

Halliday Easement Area

Sanitary Sewer Easement

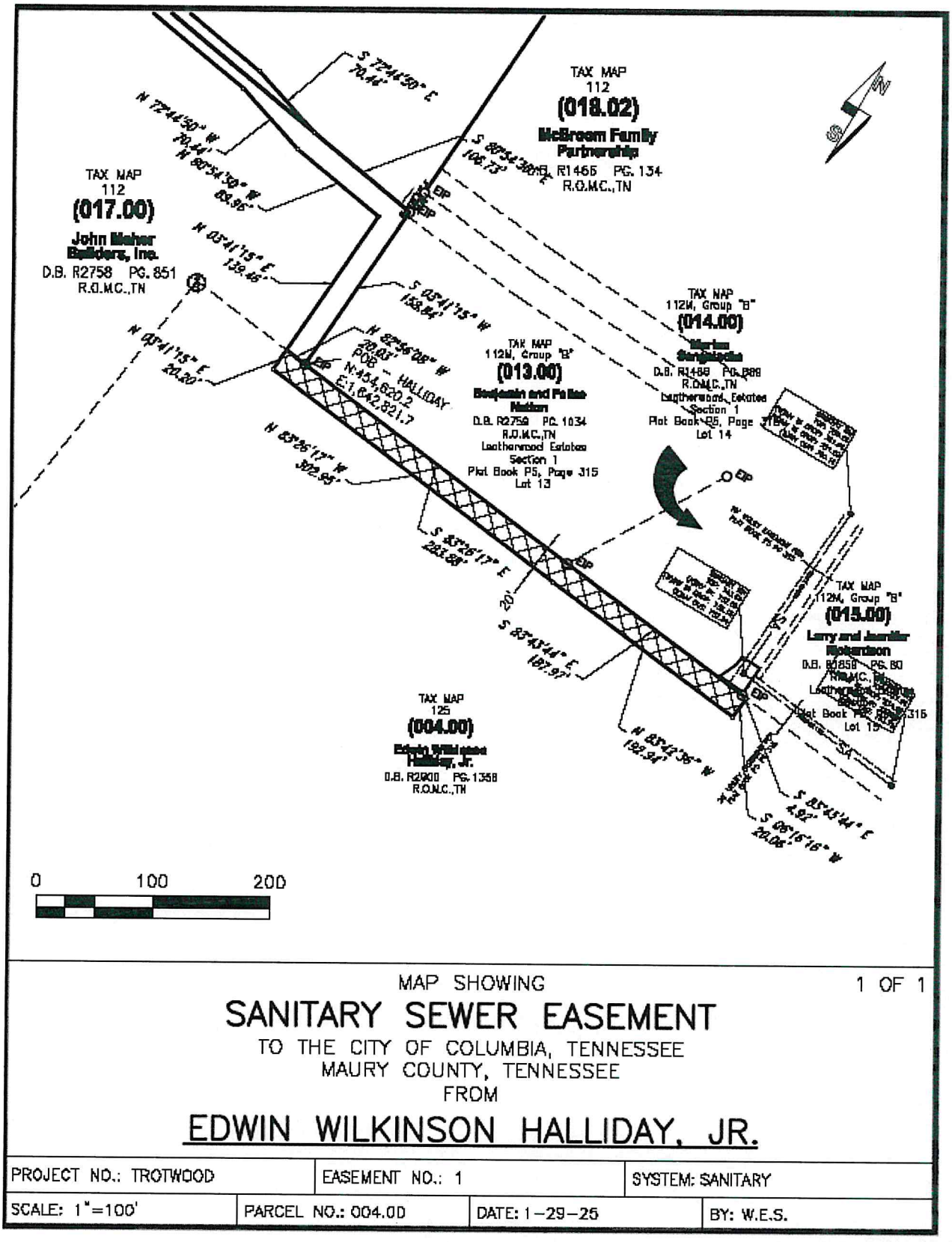
A tract of land located in Maury County, Tennessee. A portion of parcel 004.00 as shown on Tax Map 125, the Edwin Wilkinson Halliday, Jr. property as recorded in Deed Book R2900, page 1358, and being more particularly described as follows.

Beginning at a 1" by 1" found angle iron the north east corner of John Maher Builders, Inc. property as recorded in Deed Book R2758, page 851 having a Tennessee State Plane Coordinate N-454,778.7, E-1,642,831.9 (TDOT CORS), said point being the southeast corner of McBroom Family Partnership property as recorded in Deed Book R1466, page 134;
Thence with the south line of Benjamin and Felice Nation as recorded in Deed Book R2759, page 1034, and being Lot 13, Leatherwood Estates, Section 1 as recorded in Plat Book P5, page 315, SOUTH 83°26'17" EAST a distance of 283.88' to a 1" iron pipe found;
Thence with the south line of Marion Sengstacke as recorded in Deed Book R1486, page 889, and being Lot 14, Leatherwood Estates, Section 1 as recorded in Plat Book P5, page 315, SOUTH 83°43'44" EAST a distance of 187.97' to a ½" iron pipe found;
Thence with the south line of Larry and Jennifer Richardson as recorded in Deed Book R1859, page 80, and being Lot 15, Leatherwood Estates, Section 1 as recorded in Plat Book P5, page 315, SOUTH 83°43'44" EAST a distance of 4.92';
Thence severing the property of Halliday, SOUTH 06°16'16" WEST a distance of 20.06';
Thence with the same, NORTH 83°42'36" WEST a distance of 192.94';
Thence with the same, NORTH 83°26'17" WEST a distance of 302.95';
Thence with the same, NORTH 03°41'15" EAST a distance of 20.20';
Thence with the same, SOUTH 82°56'08" EAST a distance of 20.03', which is the point of beginning, having an area of 9,935 square feet, 0.23 acres.

This parcel is subject to any and all easements, restrictions, and/or right of ways either by record and/or prescription that a complete and accurate title search may reveal. No title search was provided to the surveyor at the time of this survey.

Note: The above property description is based on information gathered during the course of an actual field survey conducted by W.E.S. – ENGINEERS AND SURVEYORS – Job #17608, under the direction of Allen B. O'Leary, Tennessee Registered Land Surveyor Number 1987. All iron pins set are ½" Rebar, with a plastic cap stamped "W.E.S, RLS 1987". All deeds referenced above are of record in the Register's Office of Maury County, Tennessee. The above property description was prepared under my direction on this the 30TH day of January 2025.

Allen B. O'Leary
TN R.L.S. No. 1987



MAP SHOWING

1 OF 1

SANITARY SEWER EASEMENT

TO THE CITY OF COLUMBIA, TENNESSEE
MAURY COUNTY, TENNESSEE
FROM

EDWIN WILKINSON HALLIDAY, JR.

PROJECT NO.: TROTWOOD	EASEMENT NO.: 1	SYSTEM: SANITARY

SCALE: 1"=100'	PARCEL NO.: 004.00	DATE: 1-29-25	BY: W.E.S.

February 18, 2025

Ms. Allison Corolla
T-Square Engineering
111 Southeast Parkway Court
Franklin, TN 37064
Sent via email: ***Allison.Corolla@T2-Eng.com***

RE: **Water Availability Letter** Expires: 6/18/2025
Trotwood-Foster Subdivision – 124 Units
Tax Map 112, Parcels 18.03 & 18.00
Columbia, Maury County, TN

Dear Ms. Corolla:

Columbia Power & Water Systems ("the Utility"/CPWS) is a municipal corporation authorized to provide water services in accordance with State law. CPWS has adopted rules, regulations, and standard operation procedures, prescribing the conditions under which CPWS will furnish water service. In addition, certain State laws delegate authority to the Tennessee Department of Environment and Conservation (TDEC), various Planning Commissions, and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Water service will be made available on a first-come, first-served basis, subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies. Water service is subject to availability of all CPWS furnished equipment and materials appropriate for the development and provided the applicant complies with all rules and regulations of CPWS and conditions set out herein.

We have received your application for water availability to serve a proposed residential development consisting of 124 single-family residential units South of Trotwood Avenue at Foster Lane. CPWS has performed field measurements and water system hydraulic model analysis of the projected water demands for the proposed development.

Based on updated modeling requirements from TDEC, CPWS has determined that the existing system is <u>not</u> able to provide 1,000 gallons per minute (gpm) fire flow in the proposed development without adverse effects in the surrounding area. However, the existing system is able to meet a 500 gpm fire flow requirement – which would typically require new development to incorporate fire sprinklers in the structures, according to Fire Flow Requirements letter submitted with your water service application. As such, CPWS can provide water for the proposed development according to the following criteria and requirements:

- Public water main infrastructure must be connected to the existing 12-inch water main located on Trotwood Avenue and the existing 8-inch water main on Holly Berry Drive.
- An adjacent development project (Hunters Glen Phase 4) is also in preliminary planning and design, which is expected to have roadway and water infrastructure connections at the southern end of this proposed development. Coordination with the Hunters Glen Phase 4 development for infrastructure planning will be required as part of water system design.
- The current CPWS system is only able to support a minimum fire flow of 500 gpm within the development until (planned) additional improvements in the Southside distribution area are completed.
- According to the Fire Flow Requirements Letter (dated 4/4/2024) this will require buildings to be sprinklered until the system can meet a 1,000 gpm minimum fire flow.
- Separate fire and domestic meters with backflow devices will be required to serve the proposed Project.

All of the above requirements up to and including the meter(s) are to be constructed and paid for by the Applicant and dedicated to CPWS once complete. No construction of water infrastructure shall be initiated until final construction plans have been approved by CPWS (including TDEC approval).

Please be aware that CPWS Distribution System Master Planning includes improvements in this area to support a higher level of service and growth, including the ability to support larger fire flow demands. If the developer is interested in accelerating those system improvements by direct participation - including construction – we welcome a meeting to discuss.

This Water Availability Letter will expire in one-hundred twenty (120) days unless vested by payment of water service fees and impact fees for the proposed project. If the Applicant elects to pay only a portion of the impact fees due for the proposed development, then the vesting will only apply to the portion for which impact fees were paid. Any request for water availability after the expiration date of this letter will be considered a new application.

Once you have received this Water Availability Letter, next steps in the process to vest water service from CPWS are as follows:

- Remit to CPWS new water service fees for plan review, TDEC coordination, and inspection as follows:

  $1,500 + $370 per SFU equivalent

- Applicant will prepare design drawings for review and approval by CPWS for construction of the proposed water system improvements.
  - Provide design drawings in AutoCAD and .pdf format for CPWS review of proposed development. Include design drawings for grading, drainage, roadway improvements, buried (wet and dry) utilities, water systems, and surface improvements.

  - CPWS will submit proposed improvements design to TDEC for review and approval.
  - Once comments received from TDEC have been addressed and approved, CPWS will approve the Construction Drawings for the proposed water system improvements.
- As an option, the applicant may request CPWS design the water infrastructure to support the proposed development project. Under this option, the applicant will:
  - Provide site base CAD files in DWG format, including roads, lot lines, existing and proposed contours, and other existing and proposed utilities, for use in development of water construction drawings.
  - CPWS will then develop design drawings for the water system improvements and submit to TDEC for review and approval.
- Current water service fees due prior to CPWS review of design plans are listed in the table below. *Note that payment of Water Service Fees will extend the expiration of this Water Availability Letter for one year, while the applicant is working with CPWS on design and review of the improvement drawings*.

Water Service Fees	SFUs	Total
$1,500 + 370 per SFU	124	**$47,380**

- Upon Construction Drawing approval by CPWS, applicant may then pay Impact Fees and schedule the pre-construction meeting. Pre-construction meeting will be canceled and re-scheduled unless all impact fees are paid at least 48 hours prior, or surety is provided in lieu of full payment.
- Water meters will be ordered by CPWS once meter fees are paid by the Applicant.
  - Meter fees are subject to change based on final design and the prevailing Board-approved rates at time of payment.
  - If surety is provided in lieu of payment, meters are not ordered until fees are paid and may result in extended lead-times.
  - Note that meter fees are charged at time of purchase, based on price of meter at that time.
- Applicants will be charged Impact Fees and Meter Fees in effect at time of payment. Please see CPWS website for schedule of impact fees and timing of planned fee escalations. Anticipated meter costs and impact fees for this project are according to the following table:

Impact Fees and Meter Costs	Number	$ / Unit	Total
3/4" Service Meter Cost	124	Current Price	Deferred
1" Fire Meter Cost	124	Current Price	Deferred
Current Impact Fee for 3/4" Service Meter	124	$5,000	$620,000.00
Estimate of Fees Due Prior to Pre-Construction Meeting =			**$620,000.00**

- After the pre-construction meeting, CPWS will then issue a formal Notice to Proceed. No construction of water improvements may take place prior to the Notice to Proceed.
- Applicant is required to construct all public water infrastructure per CPWS standard specifications and provide CPWS personnel unregulated access to the site to inspect the construction of the water infrastructure. No construction of water improvements may take place without a CPWS inspector present.

Please feel free to contact me at 931-388-4833 x7655 or Matt.Wheeler@cpws.com if you have questions or would like to discuss.

Sincerely,



Matthew J. Wheeler, P.E.
Vice President of Water Resources, CPWS

cc: Nelson Crow, Developer
Bart Anderson, CPWS
Eric King, Inflo Design Group
File 24-019

T-SQUARE
CIVIL-SITE | TRAFFIC |

111 SE PKWY CT
FRANKLIN, TN 37064
615.678.8212

WWW.T2-ENG.COM

4/21/2025

City of Columbia
700 North Garden Street
Columbia, Tennessee 38401

RE: Trotwood Foster Subdivision Site Development Plan & Preliminary Plat

Staff,

Please find included in this submittal the Site Development Plan and Preliminary Plat application. The property is on the south side of Trotwood Avenue, to the east of Foster Lane.

This development includes 119 single-family homes to be developed within the CD-3 zoning specifications. This zoning complies with the Comprehensive Plan, adopted February 2024. The Future Land Use classification is Suburban Neighborhood, which is compatible with CD-3 Neighborhood zoning. The proposed subdivision is expected to break ground as soon as all necessary approvals/permits are obtained. This could be as early as October of 2025.

We are requesting a variance from section 5.2.2.E to be able to utilize a cul-de-sac on this property due to the location of existing natural features (wooded area and an existing pond). These features prevent the connection of the roadway to Old Sunnyside Lane. The cul-de-sac meets all engineering requirements.

We are also requesting a variance on the civic space frontage requirements, Section 5.3.3.C. The natural area with the wooded area and pond prevent a thoroughfare from traversing the property, which would allow us to meet the 50% thoroughfare frontage requirement. Currently, the Green civic space is approximately 1,250 LF, with 328 LF of thoroughfare frontage (26%). We feel that it is important to maintain the integrity of the natural features of this property, hence the request.

In kind, we request a variance from Section 5.3.3.A stipulating that a Green, Square, or Plaza must be within 800’ of the geographic center of the pedestrian shed. Neither a Square or a Plaza are permitted Civic Space types within CD-3 zoning, requiring a Green to be utilized. A Green “shall consist of lawn and trees, naturalistically disposed…” We feel that the best location for this Civic Space is around the existing natural water and wooded features of the property. By including the existing pond and trees within the Green, we are able to maintain the environmental integrity of these features that we feel are a valuable asset to this community.

Aside from the forementioned requests, we believe this Site Development Plan and Preliminary Plat are in full accordance with the 2022 Zoning Ordinance, effective July 14, 2022.

Thank you for accepting this submittal. Please contact Allison Corolla at T-Square Engineering with comments.

Thank you for your review,

Allison Corolla, PE
T-Square Engineering, Inc.

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

Preliminary Plat, Site Development Plan, and PUD Checklist

Development: Trotwood Foster Subdivision

This checklist shall be completed, and included with the submittal documents. If the submittal does not contain a completed checklist, it shall be deemed incomplete. All below listed items shall be included in the submittal documents and plans, as well as any further information required by the City of Columbia to evaluate compliance and to perform a full and complete review. See Zoning Ordinance Article 8 and Subdivision Regulations.

General

- ☑ Name of development
- ☑ Contact info for the owner and licensed design professional(s) preparing plan: name, address, email, phone
- ☑ Plan sealed by a design professional licensed in the State of Tennessee.
- ☑ North Arrow, legend, and site vicinity map
- ☑ Graphic Scale: between 1 in. = 10 ft. and 1 in. =100 ft.
- ☑ Survey stamped by a State of Tennessee Licensed Professional Land Surveyor, with all project boundaries including bearings and angles to the nearest hundredth, utilities, and existing streets and rights-of-way.
- ☑ Note referencing Tennessee State Plane Coordinate System, NAD 83 Datum
- ☑ All property boundaries, existing easements, and encumbrances
- ☑ Parcel identification, owner, and deed and plat references of adjoining properties
- ☑ Proposed phasing and timetable for all phases of development
- ☑ Traffic Impact Study, as required.
- ☑ The substance of all existing and proposed covenants, easements, or other restrictions.

Lots and Land-Use

- ☑ The size of total property to be developed in square feet and acres
- ☑ Lot numbers of all proposed lots, with dimensions, locations, and square footage
- ☑ A tabulation of the land area to be devoted to various uses and activities and overall densities.
- ☑ Typical lot layout depicting proposed setbacks, yards, and easements, where applicable

Structures

- ❑ Location and approximate dimensions of all existing and proposed structures.
- ❑ Location of all earth retaining structures, with approximate top and bottom of wall elevations.
- ❑ Existing and intended use of all buildings and structures on site, including the number of dwelling units and density, where applicable

N/A

- ❑ Location, type, and size of proposed signs
- ❑ Approximate height, bulk, and the utilization of structures including activities and the number of living units.

CITY OF COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
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COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

Grading, Drainage, and Storm

- ☑ Existing conditions and contours at vertical intervals of not more than two (2) feet
- ☑ General proposed contours at vertical intervals of not more than two (2) feet
- ❑ FEMA Special Flood Hazard Area (SFHA), 100-year Floodplain (F-P), and Floodway (F-W) boundaries with elevations and the exact location of the nearest benchmark. Indicate the Flood Insurance Rate Map (FIRM) panel number, its effective date, and flood insurance zones N/A
- ☑ Location and dimension of aquatic buffer zones
- ☑ General layout of the proposed storm drainage system including surface and subsurface drainage systems, areas for detention, and water quality devices.
- ☑ Identification of all critical lots

Streets, Parking, and Pedestrian Elements

- ☑ Proposed street and alley rights-of-way, typical sections, widths, classification, names, and proposed ownership and maintenance responsibility
- ☑ Proposed connections to existing and proposed streets (including classification) located outside the development
- ☑ Proposed improvements as identified in the Traffic Impact Study, as required
- ☑ Existing and proposed sidewalks, trails, and other pedestrian elements
- ☑ Existing and proposed on-street and off-street parking and loading areas
- ☑ Summary of all provided and required parking

Landscaping, Open Space, and Amenities

- ☑ Natural features on site including, but not limited to, wetlands, streams, ponds, springs, sinkholes, wells, rock outcroppings, excessive slopes, and forested areas
- ☑ Landscaped areas and buffers with details on proposed plantings, existing vegetation, and other features.
- ☑ The location and size of all common open space, parkland dedications, and dedications and reservations of land for public uses.
- ☑ Any amenity features and structures for private or public benefit.
- ☑ Location, dimension, and materials of fences and walls
- ☑ Tree Canopy retention

Utilities

- ☑ General layout and location of existing and proposed utilities and utility features including, but not limited to potable water, fire hydrants, sanitary sewer, storm sewer, and power and communication facilities.
- ☑ Acknowledgement from water, sewer, and power utility providers that the proposed development may be adequately served with existing infrastructure, or if improvements are required to adequately serve the development, a general statement of the improvements.

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PUD Specific Items

- ❑ List of all deviations from PUD Standards requested
- ❑ The nature of the landholder's interest in the land proposed to be developed and a written statement of concurrence from all parties having a beneficial interest in the affected property.
- ❑ Location and approximate dimensions of all existing and proposed structures including approximate height, bulk, and the utilization of structures including activities and the number of living units. Include architectural renderings of all proposed structures with materials listed.

N/A

- ❑ The substance of covenants, grants of easements or other restrictions to be imposed upon the use of the land, buildings and structures including proposed easements for public utilities on the property or documentation of off-site easements.
- ❑ Exterior lighting plan.

If the application is deemed incomplete by the Zoning Administrator, a written request shall be made within ten days after the original submittal, for further information. In such case the application shall be held in abeyance until deemed complete for final review. No plan shall be formally presented for Planning Commission action until such plan is found complete, compliant with City standards, and ready for review.

Checklist Completed By:

Allison Corolla	*Allison Corolla*	03/17/2025
Print Name	Signature	Date

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

PLANNING COMMISSION
PROJECT DEVELOPMENT APPLICATION

SUBMITTAL REQUIREMENTS

Final Plat: * *1 hard copy of all materials for submittal + PDF copy on a USB flash drive (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"
All Others: * Please submit the Application online at City of Columbia | Permitting (onlama.com)

ADDRESS/LOCATION	Trotwood Avenue & Foster Lane		
	TAX MAP: 112	GROUP:	PARCEL: 18.03
SUMMARY OF NATURE OF REQUEST AND WORK	This application is for the Site Development Plan and Preliminary Plat approval of 119 single-family homes in the CD-3 district.		

DATE OF PRE-APPLICATION CONFERENCE	03/17/2025	*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
❑ Comprehensive Plan Amendment ❑ Annexation ❑ Rezoning ☒ Preliminary Plat ❑ Final Plat ❑ PUD Preliminary Master Plan ❑ PUD Final Site Plan ☒ Site Development Plan ❑ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations:** ❑ Annexation Permission Form **Annexations/Rezoning/Plan Amendments:** ❑ Requested Zone Listed ❑ Statement of Compliance with Comprehensive Plan ❑ Concept Plan **Preliminary Plats/Site Development Plans:** ☒ Plans and/or Plats conforming to City standards with signed and completed check list **All Annexations/Rezoning/Preliminary Plats/Site Development Plans and PUDS:** ☒ Receipt of Payment for Pre-Application Meeting ☒ Written Legal Description copy ☒ Columbia Water System Availability Letter ☒ Columbia Waste Water Department Will Serve Letter

	Plats/PUDs: ☒ Project Name (include Sections & Phases) Trotwood Foster Subdivision ☒ Total Number of Lots/Residential Units 119 ☐ Square Footage of Non-Residential Floor Space ☒ Total acreage 51.20

Applications and all required submittals must be filed with the Department of Development Services prior to the established deadline. Both the applicant and property owner (if different from applicant) must sign the application. Any requests to defer or move the item to future meeting dates must be requested by the resubmittal date listed on the Planning Commission schedule.

APPLICANT

All communications go to the Applicant's email that is provided.

NAME	Allison Corolla	PHONE	615.678.8212
ADDRESS	111 SE PKWY CT, Franklin, TN 37064	EMAIL	Allison.Corolla@T2-Eng.com

PROPERTY OWNER NAME		PHONE	
ADDRESS		EMAIL	

If owner is not a natural person, documentation must be provided showing signing authority on behalf of the entity. If multiple persons are listed as owners in the records of the Maury County Assessor, all owners must sign or the signatory must provide documentation of authority to apply on behalf of record owner (i.e., Power of Attorney or notarized Letter of Authorization). In filling out this application, I attest that (1) I am familiar with the rules, regulations, and procedures of the City of Columbia & (2) all information contained herein is accurate & true to the best of my knowledge.

Allison Corolla	*Allison Corolla*	03/17/2025
APPLICANT NAME	APPLICANT SIGNATURE	DATE
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE

Hampshire Pike Steadfast Preliminary Plat/ Site Development Plan

Project #:	25-0137	Location:	Map 089 Parcel 041.15
Applicant:	Colton Dorris	Case Type(s):	Preliminary Plat/ SDP
Staff Planner:	Charles Rush/ Austin Brass, AICP	Proposed Use:	Mixed Use/ Townhomes

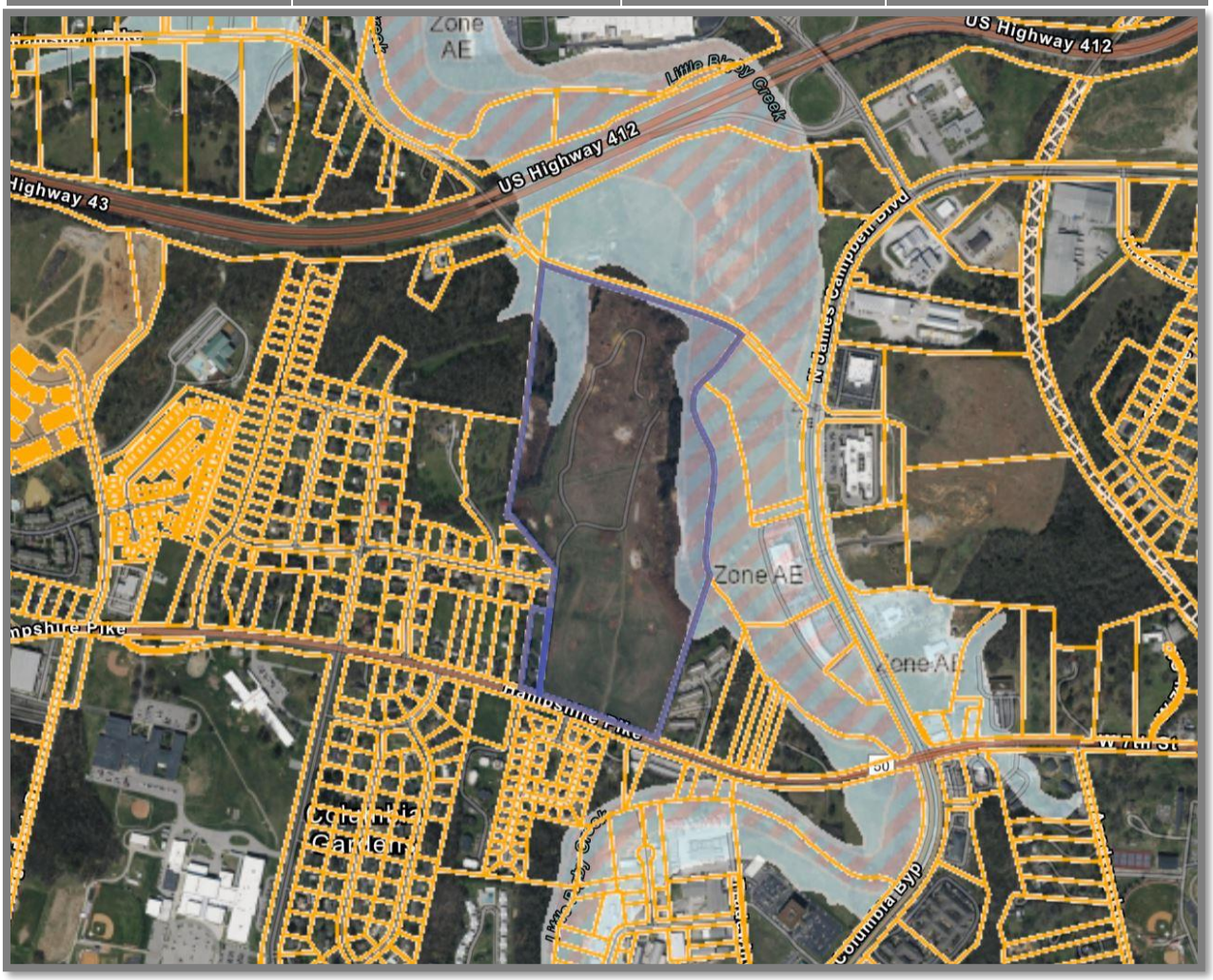
PROJECT SUMMARY

The applicant seeks approval of a Preliminary Plat and Site Development Plan approval for a 32.60-acre development parcel within a CD-4 Character District. The plan proposes the construction of 143 townhomes. The proposal also includes the establishment of a new urban neighborhood street section and necessary infrastructure, including civic spaces.

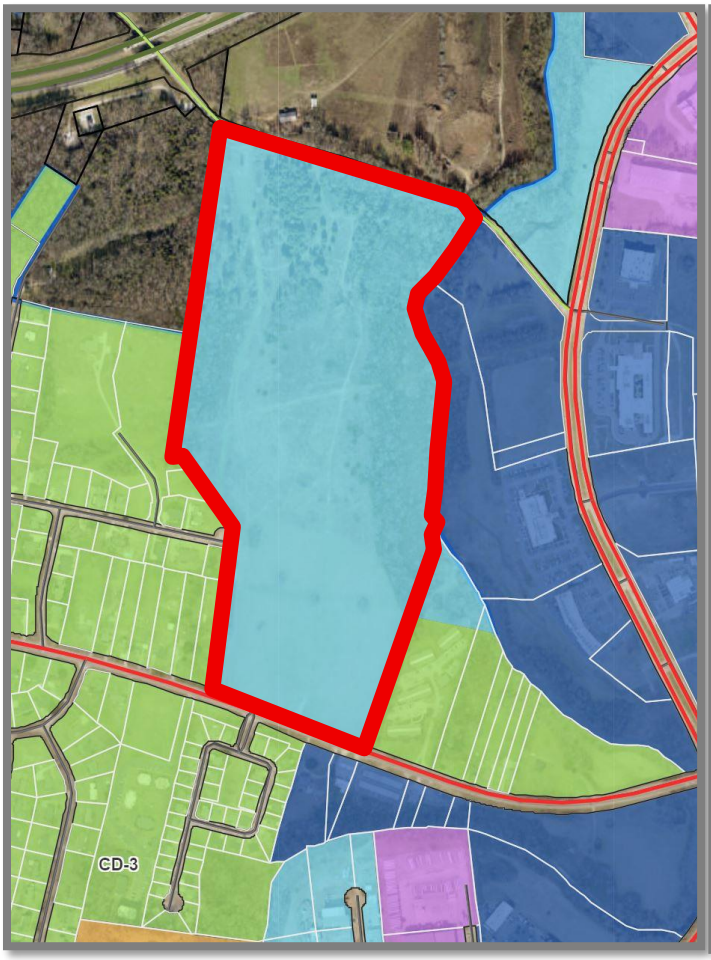
- The Planning Commission approved a Preliminary Plat and Public ROW (22-0131) within an MRC Zoning District on July 13, 2022. This Preliminary Plat included 11 single-family lots and 7 additional lots. A Multi-Family Site Plan was approved in association with this request on a 24-acre lot. All MRC zoning is now classified as a CD-4 Character District after the adoption of the current Zoning Ordinance in July of 2022.
- This Preliminary Plat and Site Development plan introduces 143 townhomes that were previously shown as a vacant parcel with the previous approval of Preliminary Plat (22-0131).
- The site development plan will be required to provide architectural elevations to adhere to all CD-4 standards upon approval of subsequent building permits.
- The Planning Commission is the **decision-making authority** for the Site Development Plan and Preliminary Plat.
- Any approval should be conditioned on the timely submittal of "as-approved" plans, which reflect the substance of the plans approved by the Planning Commission, as determined by the Zoning Administrator and the City Engineer.
- Templates are provided at the end of the report to assist the Planning Commission in crafting properly formatted motions.

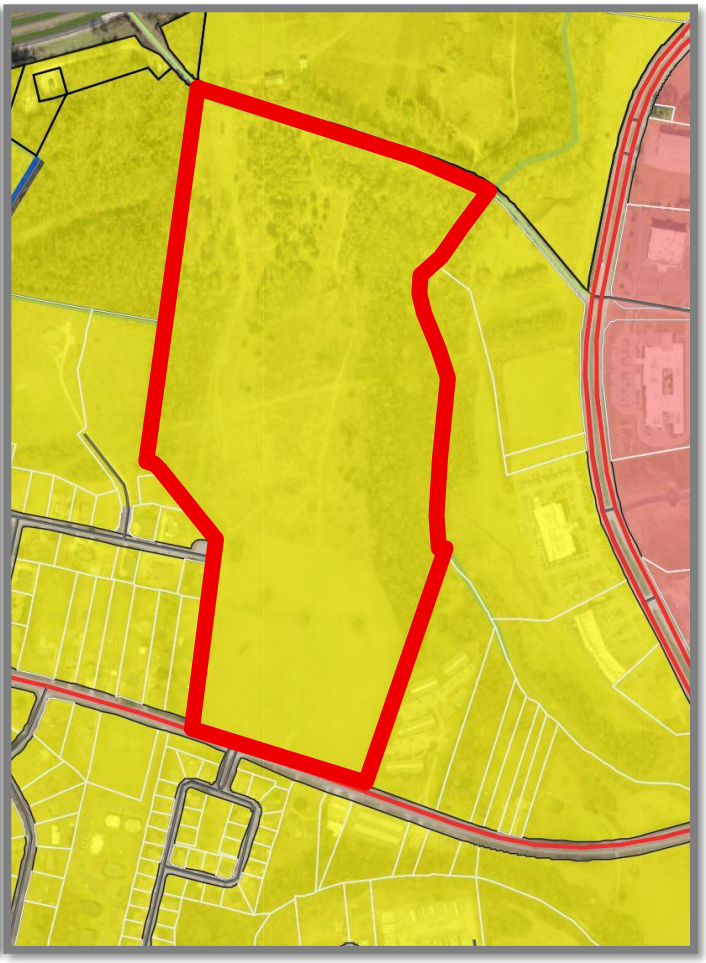
SITE INFORMATION

CURRENT ZONING	EXISTING USE	EXISTING IMP.	LAND AREA
CD-4	Vacant Land	Townhomes	+ /- 32.60 acres



FUTURE LAND USE MAP (Suburban Neighborhoods)	ZONING MAP (CD-4)





SITE CONTEXT/ADJACENT PROPERTIES			
	Future Land Use	Zoning	Current Use
Subject Property	Suburban Neighborhoods	CD-4	Vacant
North	Suburban Neighborhoods	County	Single-Family Home/Vacant
South	Suburban Neighborhoods	CD-3	Single-Family Homes
East	Suburban Neighborhoods	CD-3, CD-4, CD-4C	Apartments/Commercial
West	Suburban Neighborhoods	CD-3	Single-Family Homes

CONSISTENCY WITH CONNECT COLUMBIA

Suburban Neighborhoods:

The intent of the Suburban Neighborhoods (SN) future land use is to enhance existing suburban areas and create new neighborhoods that will improve the quality of life in Columbia. Where appropriate, the SN future land use area also establishes mixed-use and commercial centers which serve residents' retail needs and provide a wider range of housing options. Each development parcel should add to Columbia's existing sense of place and extend the established form and pattern to create a more interconnected community. Future development should emphasize connectivity and continuity of the city as whole. The density and intensity of residential development increases in proximity to areas under the CCUV future land use classification. In the same way, density and intensity decrease in proximity to areas under the Rural Transition (RT) future land use classification. New development enhances pedestrian infrastructure with sidewalks and other multimodal routes. Public frontages may include sidewalks and street trees. Over time, new and infill development connects neighborhoods and community anchors such as libraries, neighborhood centers, health facilities, retail uses, parks, and schools.

Implementing Standards:
General Development Pattern: Mixed Uses & Isolated Uses
Density (density unites per ace): 4 - 24 du/ac
Building Height: 1 - 4 stories
Open Space Elements: Civic Spaces, Parks & Greenways

CONFORMITY WITH ZONING ORDINANCE

Lots, Building Sites & Bulk Standards:

- **The proposed Site Development and Preliminary plat conforms to the bulk standards of the Ordinance within an CD-4 Character District. Described below are the building types proposed for this Site Development Plan. A mix of building types are required for development parcels.**
    - The Zoning Ordinance permits commercial buildings, and townhomes and is required to conform to the uses as outlined in **§ 4.3.1 C** of the Zoning Ordinance. A preliminary plat has been included with this site development plan that proposes a lot division for the creation of 143 townhomes.
    - All buildings enfront an urban neighborhood throughfare type as required per the Zoning Ordinance.
    - Building sites are dedicated towards civic spaces.
    - Staff prepared the tables below to demonstrate how the proposed development conforms to the bulk and design standards of the Zoning Ordinance. Table 1 describes applicable bulk standards per **§ 4.3.1-C** (building, lot & building site standards) of the Zoning Ordinance for a CD-4-character district in which the subject property is zoned.

Table 1 (CD-4) Urban Center Character Districts Bulk Standards		
Bulk Standards:	**Required**	**Proposed**
Minimum Lot/ Building Site Width Minimum and Maximum:	Townhomes/18-36 ft.	All townhome sites are 20-24 ft. with a max of 5 townhomes in each row and no overall building site exceeded 120 ft.
Lot/Building Enfrontment:	Facades must have main entrance in principle of building frontage	All lots/ building sites enfront a thoroughfare street section with principal entrance enfronting this section.
Building Height:	3 stories maximum	2 story townhomes.

Frontage Buildout:	60% minimum	All buildings have at least a 60% minimum frontage building as calculated on the site plan per building site widths.
Parking:	1.5 spaces per dwelling unit/ 1 per 5000 sq ft of open space	*See parking subsection below with applicant parking summary*
Setbacks:	**Principal Buildings** **Front:** – 6 ft. minimum/ 20 ft. maximum **Side:** – 0 ft. min between individual townhomes/ otherwise 6ft. min **Rear:** 3ft min.	**Principal Buildings** **Front:** – 6ft. **Side:** - 0 ft. internal to townhomes/ 6 ft. on external units to building site lines. **Rear:** - 6 ft. *Single Family Homes Vested Under Previous Zoning Ordinance.

Architecture:

- Staff will determine Conformity with the prescriptive design standards of the Ordinance at the time of building permit. It is noted on this preliminary plat/ development plan that, *This Plan follows the design and façade standards of **Table 4.3.1-D** (p. 78-85) and T**able 4.3.8 B** (p. 212) of the City Zoning Ordinance 4400. Conformity will be confirmed at building permit.*

Building Type Mix:

TABLE 5.1.10 BUILDING TYPE MIX

District	Building Types	Permitted Min/Max Building Type Mix Frontage Width of Total Building Frontage Width
CD-2	--------	NR
CD-3L	--------	NR
CD-3	--------	NR
CD-4	Total of House, Duplex, Townhouse, Small Multifamily & Large Multifamily	85% max, with Large Multifamily ≤ 20% of Total CD-4 Frontage width
	Total of Live/Work, Commercial, Mixed Use & Flex	15% min

- The Zoning Ordinance requires a variety of building types and land uses for CD-4 zoned sites over 10 acres. Section 5.1.10 requires 15% of total building frontage be a minimum 15% of total building frontage be Live/Work, Commercial, Mixed Use or Flex buildings, while **§ 5.1.11** sets a maximum residential land use at 85% of total frontages of the site. This site development plan indicates 15% (600 linear ft.) of total frontages to be dedicated to

Commercial uses, while 85% (3,432 linear ft.) dedicated to residential only uses (Townhomes) adhering to this code requirement.

	**Commercial Building** A small- to medium-sized attached or detached non-Residential Building, typically designed to facilitate pedestrian-oriented Retail / Personal Service / Repair / Art / Artisan Uses and Office Uses.	CD-4 & -4C CD-5 & -5C SD-INT PUD-MU
	**Townhouse** A Principal Building in a collection of very narrow- to medium-sized attached Buildings on contiguous Lots or Building Sites with a Rearyard (or Sideyard if an end unit), which collection consists of side-by-side Dwelling Units with individual entries facing the Thoroughfare or Internal Drive. Each Building occupies the full Frontage Line of its Lot or Building Site and shares at least one Party Wall with another Building of the same type.	CD-4 & -4C CD-5 & -5C SD-LI PUD-R PUD-MU

Civic Spaces:

The Zoning Ordinance requires at least 5% gross acreage be designated as Civic Space(s). According to **Table 5.3.3-A** of the Zoning Code, certain Civic Space types are applicable per district. As per the site development plan, 34% of the site is allocated as civic space, which includes green, playground, and natural area. The natural civic space features a primitive walking trail. The playground civic space is located with the center of the development that consists of playground equipment with a 16 x 24 pavilion shelter. A ring is shown indicated that the playground is located within a 1300' distance of all residential uses within the development site.

Main Civic Space:

The Zoning Ordinance requires a Main Civic Space that consists of a Square, Plaza or Green with that is located within 800ft of the geographic center of a pedestrian shed. Each development parcel requires a pedestrian shed of either a Standard or Linear Shed. The applicant has chosen to base the location of a Main Civic Space (Green) in the form of a Linear Shed utilizing the existing street section that bisects this development parcel. It has been demonstrated the radius of the linear pedestrian shed of ¼ mile from each side of the corridor with a Civic Space Green within 800' of the geographic center of the corridor.

Project Buffering/Landscaping:

- Street trees have also been provided, adhering to the requirement of one tree for every fifty linear feet of an Urban Neighborhood Street section (Zoning Ordinance **Table 5.2.2.G-1**).

Thoroughfare Standards/ Façade Enfrontment:

- **This Development Plan and Preliminary Plat conforms to the standard for block formation and network connectivity when utilizing a 65' Neighborhood Street section.**

    - Section **5.2.2.E** requires that all Thoroughfares terminate at other Thoroughfares or Internal Drives, forming a network. This site development plan provides the required street section utilizing a CD-4 Neighborhood Street section where townhomes are enfronting that consists of a 65' ROW including street parking, a planter strip, and a 5' sidewalk on both sides of the street section. Furthermore, this Site Development Plan utilizes an existing 60' ROW that has been already plated under a previous Zoning Ordinance that is currently serving as the primary access road that interconnects the property.

Parking:

As per the Site Development Plan, parking is provided for townhome units with a requirement of 1.5 spaces per unit, as required by **§ 4.3.12** of the Zoning Ordinance.

Per the zoning Ordinance, you round down for parking.

Townhomes (are 1.5 rounds to 1) 1 x 143 = 143 x .30 (you are allowed to over park by 30%) = 42.9 round down to 42 + 143 = 185 max allowed townhome parking spaces are allowed. 143 minimum spaces are needed for the townhomes, and they meet these requirements by having each townhome unit include a garage.

The parking shown is for general use.

Civic Parking (1 per 5,000) is 4 x.30 = 5 max parking spaces for Civic.

Single-family parking is under a previous zoning ordinance and should not be counted since they are vested under 3638.

REVIEW PROCESS

The Development Review Committee reviewed the proposed Preliminary Plat/Site Development Plan at its April 2025 meeting, as directed by section **8.3.7** of the Zoning Ordinance. Technical comments are provided in the agenda package and summarized above.

The Planning Commission is the Decision-Making Authority for all Site Development Plans that

include one or more Development Parcels under **§ 8.5.6.D.3**.[1]

Sections **8.5.6. I** establish the criteria for review of a Site Development Plan.

I. Review Criteria.

1. The criteria to be applied by the Zoning Administrator in reviewing a Development Plan and application shall be whether such Plan and application comply with the applicable conditions, standards, and requirements of this Ordinance, all applicable previously approved Plans, such as earlier Development Plans, the Comprehensive Plan and all other applicable Land Use Plans.

2. With respect to a Development Plan the Planning Commission shall rely on all conditions, standards, and requirements of Articles 1-5 and Article 7 of this Ordinance and the Planning Commission shall review the Plan and application for compliance with all other conditions, standards, and requirements of this Ordinance, including without limitation those of Article 6 (Supplemental Standards) , and compliance with all applicable previously approved Plans, such as earlier Development Plans, the Comprehensive Plan and all other applicable Land Use Plans. Additionally, in the case of Development in a Special District, the Planning Commission shall determine:

a. Whether the Development design and Development intensity are appropriate for and tailored to the unique characteristics of the site, such as significant wooded areas, specimen trees, wetlands, steep slopes, floodplains, and zoning of or existing Development on Adjacent property;

b. Whether the proposed access and circulation are adequate with respect to traffic patterns, traffic control measures, and street pavement areas,

[1] [1] Development Parcel: a parcel of land: (1) which, either alone or together with one or more other parcels under a common Development scheme, program or plan, is ten (10) or more gross acres; (2) with respect to the Development of which any new Thoroughfare, Internal Drive, or extension or change of the design of any existing Thoroughfare or Internal Drive is required or will be made or proposed; or (3) with respect to which any District assignment or any Thoroughfare or Internal Drive or alignment thereof is proposed to be made or changed by a Zoning Map or Zoning Map amendment. (§ 9.3, p. 490)

with provisions for maintaining traffic flows and reducing any negative effects of traffic on nearby properties;

c. Compliance with site construction requirements;

d. Adequacy of stormwater facilities, water supply, sanitary sewer service, fire protection, street signs, and street lighting as evidenced by conformance with City standards, specifications and guidelines; and

e. Compliance with requirements for Easements or dedications.

Section **2.2.6** of the Subdivision Regulations establishes the review criteria for approval of Preliminary Plats.

A. Recommendations and final action on a Preliminary Plat shall be based on consideration of the following criteria:

1. *Whether the proposed Preliminary Plat complies with the applicable zoning district and overlay districts;*
2. *Whether the proposed Preliminary Plat is consistent with all standards of these Subdivision Regulations and other related codes and ordinances enforced by the City; and*
3. *Whether the CMPC determines that the particular site is suitable for the type of platting and development proposed.*

In the event of a denial, **§ 2.2.5** of the Subdivision Regulations requires the Planning Commission to identify the specific parts of applicable plans and regulations with which the plat does not comply.

SUMMARY OF DEVELOPMENT REVIEW COMMITTEE COMMENTS

The DRC reviewed this proposal at its April 2025 meeting. A full list of comments, and the applicant's responses, is provided in the agenda packet. Some key comments are noted below.

- **Engineering** noted that the new alignment of Street B will be required to meet new throughfare street sections with parkin on one side. The applicant responded that Street B has been changed to a 5' ROW with parallel parking in various areas along the street.
- **Planning** noted clarification that a pedestrian shed is 800' of all units and that street trees would be required for townhomes that have been introduced along plated connector road. The applicant responded with a linear pedestrian shed using the connector road and the addition of street trees where requested.
- **Wastewater** noted that improvements to the existing sanitary sewer infrastructure may be required in the area to satisfactorily convey the flow from the development.
- **Columbia Water** indicated that the water availability letter was issued on **March 1, 2025,** and remains valid for 120 days. The availability of capacity to serve is based on a determination by the Fire Marshal of fire flow requirements and the information submitted on the Water Service Availability Request application.

SAMPLE MOTIONS

Approve:
Move to find, based on the information presented by the applicant and the analysis provided by city staff, that the criteria listed in sections **8.5.6.I** and K of the City of Columbia Zoning Ordinance, and Section **2.2.6** of the Subdivision Regulations, have been satisfied and approve the Site Development Plan and Preliminary Plat as presented *[, subject to technical comments and other conditions presented by planning staff*].

Approve Subject of Conditions:
Move to find, based on the information presented by the applicant and the analysis provided by city staff, that the criteria listed in sections **8.5.6.I** and **K** of the City of Columbia Zoning Ordinance, and Section **2.2.6** of the Subdivision Regulations, have been satisfied and approve the Site Development Plan and Preliminary Plat subject to the following conditions: [*list conditions of approval crafted by Planning Commission*].

Deny:
Move to deny the Site Development Plan and Preliminary Plat having found, based on the information presented by the applicant and the analysis provided by city staff, that the criteria listed in sections **8.5.6.I** and K of the City of Columbia Zoning Ordinance and Section **2.2.6** of the Subdivision Regulations are not satisfied [*list specific reasons for denial*].

Defer:
Move to find that there is insufficient information to make a decision, defer the matter to the next regularly scheduled meeting of the Planning Commission, and request that the [*applicant/staff*] provide: [*list additional information*] for review at that future meeting.

SITE DEVELOPMENT PLAN SUBMITTAL

HAMPSHIRE PIKE TOWNHOMES

1242 HAMPSHIRE PIKE
COLUMBIA, TN

INITIAL SUBMITTAL: 4/21/2025
RESUBMITTAL: 5/19/2025
RESUBMITTAL: 5/28/2025

EXISTING PROPERTY SUMMARY

PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN
MAP AND PARCEL ID:	MAP 089, PARCEL 04103 000
U.S. FEMA FIRM PANEL:	47119C0280E DATED 04/16/2007
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT

GENERAL DEVELOPMENT NOTES

1. ALL DEVELOPMENT WITHIN THE BOUNDARIES OF THIS PLAN MEETS THE REQUIREMENTS OF ANSI 117.1, 2009 EDITION AND THE FAIR HOUSING ACT.

   U.S. Justice Department:
   http://www.justice.gov/crt/housinig/fairhousing/about_fairhousingact.htm

2. PART OF THE SUBJECT PROPERTY IS LOCATED IN AREAS DESIGNATED AS "ZONE AE" (AREAS DETERMINED TO BE OUTSIDE THE 0.2 % ANNUAL CHANCE FLOODPLAIN) AS NOTED ON THE CURRENT FEMA FIRM COMMUNITY PANEL 47119C0280E.

3. PART OF THE SUBJECT PROPERTY IS LOCATED IN AREAS DESIGNATED AS "ZONE X" (AREAS DETERMINED TO BE OF MINIMAL FLOOD HAZARD) AS NOTED ON THE CURRENT FEMA FIRM COMMUNITY PANEL 47119C0280E



VICINITY MAP
NOT TO SCALE

COUNCIL DISTRICT WARD 4
COUNCIL MEMBER KENNY MARSHALL
CITY OF COLUMBIA
MAURY COUNTY, TN

SHEET INDEX

SHEET	SHEET TITLE
C0-00	COVER
--	SURVEY
C1-00	EXISTING CONDITIONS
C2-00	SITE LAYOUT - OVERALL
C2-10	SITE LAYOUT - ENLARGEMENT
C2-11	SITE LAYOUT - ENLARGEMENT
C2-20	PARCEL TABLES
C3-00	PEDESTRIAN CORRIDOR EXHIBIT
C4-00	GRADING AND DRAINAGE PLAN - OVERALL
C4-10	GRADING AND DRAINAGE PLAN - ENLARGEMENT
C4-20	GRADING AND DRAINAGE PLAN - ENLARGEMENT
C5-00	ROADWAY SECTIONS
C6-10	UTILITY PLAN - ENLARGEMENT
C6-20	UTILITY PLAN - ENLARGEMENT
L1-00	LANDSCAPE PLAN
L1-10	LANDSCAPE PLAN - ENLARGEMENT
L1-11	LANDSCAPE PLAN - ENLARGEMENT
L1-50	LANDSCAPE DETAILS
A1-01	ARCHITECTURAL FLOOR PLANS
A1-02	ARCHITECTURAL ELEVATION LINEWORK
A1-03	ARCHITECTURAL ELEVATION RENDERING

PROJECT DESIGN TEAM

CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
10 LEA AVENUE, SUITE 400
NASHVILLE, TENNESSEE 37210
PHONE: (629) 401.4768
CONTACT: COLTON DORRIS, P.E.

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATES, INC.
10 LEA AVENUE, SUITE 400
NASHVILLE, TN 37210
PHONE: (615) 823-2209
CONTACT: JOSH ROWLAND, PLA

SURVEY
WILSON & ASSOCIATES, P.C.
108 BEASLEY DRIVE
FRANKLIN, TN 37064
PHONE: (615) 794-2275
CONTACT: JOEY C. WILSON II, PLS

OWNER / DEVELOPER
STEADFAST COMPANIES
18100 VON KARMAN AVE., SUITE 500
IRVINE, CALIFORNIA 92612
PHONE: 949.518.2001
CONTACT: CHASE EMERY

PLANS PREPARED BY
Kimley»Horn
10 Lea Avenue, Suite 400, Nashville, TN 37210
Main: (615) 564-2701 | www.kimley-horn.com

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PLAN REVISIONS

REVISION NO.	DATE	REMARKS

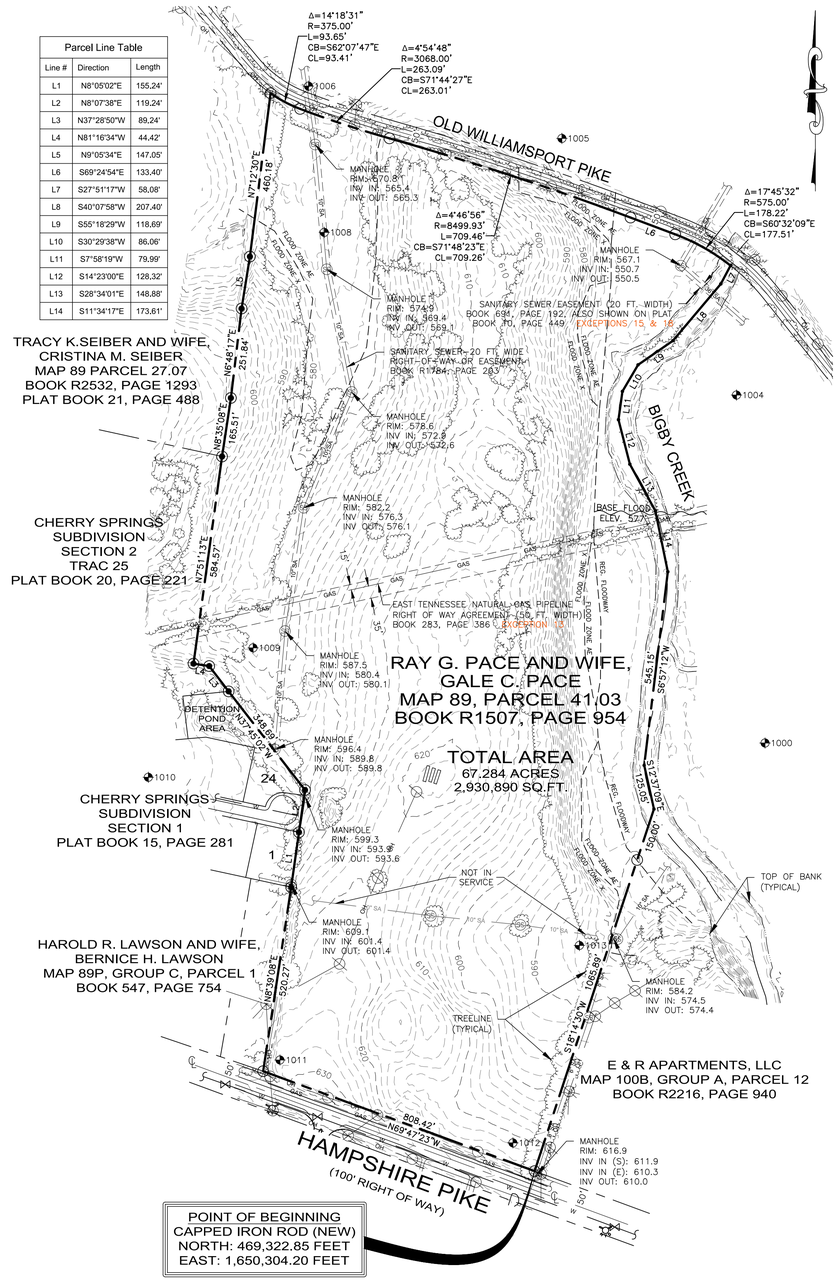
FILE NUMBER	SHEET NUMBER	TOTAL SHEETS
118332003	C0-00	21

ENGINEER'S SEAL

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
CIVIL
COMMERCE
STATE OF TENNESSEE
05/28/2025

811 Know what's below. Call before you dig.

Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\C0-00 COVER.dwg C0-00 COVER May 28, 2025 3:34pm by: william.irby



SCHEDULE B-II EXCEPTIONS:

1. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I-REQUIREMENTS ARE MET. NOT A SURVEY MATTER
2. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT SHOWN BY THE PUBLIC RECORDS. NONE OBSERVED DURING SURVEY
3. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND. NONE OBSERVED DURING SURVEY
4. EASEMENTS, OR CLAIMS OF EASEMENTS, NOT SHOWN BY THE PUBLIC RECORDS. NONE OBSERVED DURING SURVEY
5. ANY LIEN, OR RIGHT TO A LIEN, FOR SERVICES, LABOR, OR MATERIAL HERETOFORE OR HEREAFTER FURNISHED, IMPOSED BY LAW, AND NOT SHOWN BY THE PUBLIC RECORDS. NOT A SURVEY MATTER
6. TAXES OR SPECIAL ASSESSMENTS WHICH ARE NOT SHOWN AS EXISTING LIENS BY THE PUBLIC RECORDS. NOT A SURVEY MATTER
7. IF IMPROVEMENTS ARE COMPLETED AFTER JANUARY 1 OF ANY YEAR, AND THE LAW, PURSUANT TO TCA 67-5-509 AND TCA 67-5-603, REQUIRES SUPPLEMENTAL ASSESSMENT FOR THE YEAR IN WHICH IMPROVEMENTS ARE COMPLETED, THE COMPANY ASSUMES NO LIABILITY FOR TAXES ASSESSED BY CORRECTION OR SUPPLEMENTAL ASSESSMENT. NOT A SURVEY MATTER
8. TAXES FOR THE YEAR 2021, A LIEN NOT YET DUE AND PAYABLE. NOT A SURVEY MATTER
9. SEWER EASEMENTS AS SET FORTH IN DEED OF RECORD IN BOOK R2188, PAGE 249, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT THE SURVEYED PROPERTY
10. TITLE TO THAT PORTION OF THE SUBJECT PROPERTY WITHIN THE BOUNDS OF THE RIGHT OF WAY FOR OLD WILLIAMSPORT PIKE AND N JAMES M. CAMPBELL BOULEVARD. OLD WILLIAMSPORT PIKE RIGHT OF WAY IS SHOWN CORRECTLY ON SURVEY. JAMES M. CAMPBELL BOULEVARD DOES NOT AFFECT SURVEYED PROPERTY.
11. EASEMENT TO SOUTHERN CITY POWER COMPANY OF RECORD IN BOOK 149, PAGE 365, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. THE LOCATION OF THIS EASEMENT IS POORLY DESCRIBED; HOWEVER ALL EXISTING OVERHEAD LINES ARE SHOWN ON THE SURVEY.
12. GRANT OF TRANSMISSION LINE EASEMENTS OF RECORD IN BOOK 232, PAGE 575, BOOK 232, PAGE 577, AND BOOK 232, PAGE 597, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
13. RIGHT OF WAY AGREEMENT TO EAST TENNESSEE NATURAL GAS COMPANY OF RECORD IN BOOK 283, PAGE 386, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. AFFECTS PROPERTY AS SHOWN ON SURVEY
14. RIGHT OF WAY AND EASEMENT TO MAURY COUNTY OF RECORD IN BOOK 425, PAGE 91 AND BOOK 427, PAGE 473, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
15. SEWER EASEMENT OF RECORD IN BOOK 691, PAGE 192, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. AFFECTS PROPERTY AS SHOWN ON SURVEY
16. INSPECTION AND MAINTENANCE AGREEMENT OF PRIVATE STORMWATER MANAGEMENT FACILITIES OF RECORD IN BOOK R2254, PAGE 125, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
17. SEWER EASEMENTS OF RECORD IN BOOK 375, PAGE 243; BOOK 375, PAGE 245; BOOK 383, PAGE 7; BOOK 383, PAGE 26; AND BOOK 383, PAGE 28, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
18. SUBJECT TO ALL MATTERS SHOWN ON THE PLAN OF RECORD IN PLAT BOOK P10, PAGE 449, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. AFFECTS PROPERTY AS SHOWN ON SURVEY
19. APPLICATION FOR GREENBELT ASSESSMENT - AGRICULTURAL OF RECORD IN BOOK R2211, PAGE 848, IN THE REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. NOT A SURVEY MATTER
20. THE LAND HAS BEEN CLASSIFIED AS GREENBELT FOR ASSESSMENT, LEVY AND COLLECTION PURPOSES AND MAY BE SUBJECTED TO SUBSTANTIAL ROLLBACK TAXES AS DEFINED IN TENNESSEE CODE ANNOTATED, SECTION 67-5-1001. NOT A SURVEY MATTER
21. WATER (RIPARIAN RIGHTS) - BLANKET MATTERS - BIGBY CREEK IS ACCURATELY SHOWN ON SURVEY - NOT PLOTTABLE MATTERS

(a) THE RIGHTS OF UPPER AND LOWER RIPARIAN OWNERS TO THE FREE AND UNOBSTRUCTED FLOW OF THE WATER OF LITTLE BIGBY CREEK WITHOUT DIMINUTION OR POLLUTION AND THE CONSEQUENCE OF ANY PAST OR FUTURE CHANGE IN THE LOCATION OF LITTLE BIGBY CREEK.

(b) RIPARIAN RIGHTS INCIDENT TO PREMISES.

(c) RIGHTS OF UPPER AND LOWER RIPARIAN OWNERS IN AND TO THE WATERS OF LITTLE BIGBY CREEK CROSSING OR ADJOINING THE PROPERTY, AND THE NATURAL FLOW THEREOF, FREE FROM DIMINUTION OR POLLUTION.

(d) ANY ENLARGEMENT OR LOSS OF LAND BY REASON OF AVULSION, ACCRETION, OR RELICTION, AND QUESTIONS OF OWNERSHIP CAUSED BY SUBSEQUENT REBUILDING OR REFORMATION OF LAND.

22. ACREAGE CONTENT OF THE SUBJECT PROPERTY IS NOT HEREBY INSURED. REFERENCE TO ACREAGE IS LEFT IN THE DESCRIPTION MERELY FOR CONVENIENCE IN IDENTIFYING THE TRACT. AREAS NOTED ON SURVEY ARE ACCURATE AND CORRECT.

LEGAL DESCRIPTION (FROM SURVEY)

A PARCEL OF LAND LYING IN MAURY COUNTY, TENNESSEE, JUST EAST OF COLUMBIA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOW:

BEGINNING AT A CAPPED IRON ROD SET IN THE NORTHERN MARGIN OF HAMPSHIRE PIKE (STATE ROUTE 50/99) AT THE SOUTHWESTERN CORNER OF THE E & R APARTMENTS, LLC PROPERTY, BOOK R2216, PAGE 940, REGISTER'S OFFICE MAURY COUNTY (HEREAFTER ROMC), SAID ROD BEING LOCATED AT TENNESSEE STATE PLANE COORDINATES NORTH: 469,322.85 FEET AND EAST: 1,650,304.20 FEET, NAD83(2011); THENCE ALONG THE NORTHERN MARGIN OF SAID HAMPSHIRE PIKE, RUNNING PARALLEL TO AND 50 FEET FROM THE CENTERLINE OF SAME, NORTH 69°47'23" WEST, 808.42 FEET TO A CAPPED IRON ROD SET AT THE SOUTHEASTERN CORNER OF THE HAROLD R. LAWSON AND WIFE, BERNICE H. LAWSON PROPERTY, BOOK 547, PAGE 754, ROMC; THENCE LEAVING SAID HAMPSHIRE PIKE AND ALONG THE EASTERN BOUNDARY OF SAID LAWSON PROPERTY, NORTH 8°39'08" EAST, 520.27 FEET TO A CAPPED IRON ROD FOUND AT THE SOUTHEASTERN CORNER OF LOT 1 IN THE CHERRY SPRINGS SUBDIVISION, SECTION 1, PLAT BOOK 15, PAGE 281, ROMC; THENCE ALONG THE EASTERN AND NORTHEASTERN BOUNDARY OF SAID SUBDIVISION SECTION THE FOLLOWING THREE (3) CALLS:

NORTH 8°05'02" EAST, 155.24 FEET TO AN IRON ROD FOUND;

NORTH 8°07'38" EAST, 119.24 FEET TO A CAPPED IRON ROD FOUND;

AND NORTH 37°45'02" WEST, 348.69 FEET TO A CAPPED IRON ROD FOUND AT THE EASTERNMOST CORNER OF TRACT 25 IN THE CHERRY SPRINGS SUBDIVISION, SECTION 2, PLAT BOOK 20, PAGE 221, ROMC; THENCE ALONG THE EASTERN BOUNDARY OF SAID TRACT 25 THE FOLLOWING THREE (3) CALLS:

NORTH 37°28'50" WEST, 89.24 FEET TO AN IRON ROD FOUND;

NORTH 81°16'34" WEST, 44.42 FEET TO AN IRON ROD FOUND;

AND NORTH 7°51'13" EAST, 584.57 FEET TO AN IRON PIPE FOUND AT THE NORTHEASTERN CORNER OF SAID TRACT 25 AND THE SOUTHEASTERN CORNER OF THE TRACY K. SEIBER AND WIFE, CRISTINA M. SEIBER PROPERTY, BOOK R2532, PAGE 1293, ROMC; THENCE ALONG THE EASTERN BOUNDARY OF SAID SEIBER PROPERTY THE FOLLOWING FOUR (4) CALLS:

NORTH 8°35'08" EAST, 165.51 FEET TO AN IRON PIPE FOUND;

NORTH 6°48'17" EAST, 251.84 FEET TO AN IRON PIPE FOUND;

NORTH 9°05'34" EAST, 147.05 FEET TO AN IRON PIPE FOUND;

AND NORTH 7°12'30" EAST, 460.18 FEET TO A CAPPED IRON ROD SET IN THE SOUTHERN MARGIN OF OLD WILLIAMSPORT PIKE AND A POINT ON THE ARC OF A CIRCULAR CURVE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 375.00 FEET, TO WHICH A RADIAL LINE BEARS SOUTH 35°01'29" WEST; THENCE ALONG THE SOUTHERN MARGIN OF SAID OLD WILLIAMSPORT PIKE, RUNNING PARALLEL TO AND 25 FEET FROM THE CENTERLINE OF SAME, THROUGH A CENTRAL ANGLE OF 14°18'31" AN ARC DISTANCE OF 93.65 FEET (CHORD: SOUTH 62°07'47" EAST, 93.41 FEET) TO A CAPPED IRON ROD SET AT A POINT OF COMPOUND CURVATURE, SAID CURVE IS CONCAVE NORTHERLY, HAVING A RADIUS OF 3,068.00 FEET; THENCE CONTINUING ALONG THE NORTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 4°54'48" AN ARC DISTANCE OF 263.09 FEET (CHORD: SOUTH 71°44'27" EAST, 263.01 FEET) TO A CAPPED IRON ROD SET AT A POINT OF REVERSE CURVATURE, SAID CURVE IS CONCAVE SOUTHERLY, HAVING A RADIUS OF 8,499.93 FEET; THENCE CONTINUING ALONG THE NORTHERN MARGIN OF SAID WILLIAMSPORT PIKE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 4°46'56" AN ARC DISTANCE OF 709.46 FEET (CHORD: NORTH 71°48'23" EAST, 709.26 FEET) TO A CAPPED IRON ROD SET AT THE POINT OF TANGENT; THENCE CONTINUING ALONG THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE SOUTH 69°24'54" EAST, 133.40 FEET TO A CAPPED IRON ROD SET AT THE POINT OF CURVATURE OF A CIRCULAR CURVE, CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 575.00 FEET; THENCE CONTINUING ALONG THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 17°45'32" AN ARC DISTANCE OF 178.22 FEET (CHORD: SOUTH 60°32'09" EAST, 177.51 FEET) TO THE INTERSECTION OF THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND THE CENTER OF BIGBY CREEK; THENCE LEAVING SAID WILLIAMSPORT PIKE AND RUNNING ALONG THE CENTER OF BIGBY CREEK, APPROXIMATED HEREIN BY A SERIES OF STRAIGHT LINES, THE FOLLOWING TEN (10) CALLS:

SOUTH 27°51'17" WEST, 58.08 FEET;

SOUTH 40°07'58" WEST, 207.40 FEET;

SOUTH 55°18'29" WEST, 118.69 FEET;

SOUTH 30°29'38" WEST, 86.06 FEET;

SOUTH 7°58'19" WEST, 79.99 FEET;

SOUTH 14°23'00" EAST, 128.32 FEET;

SOUTH 28°34'01" EAST, 148.88 FEET;

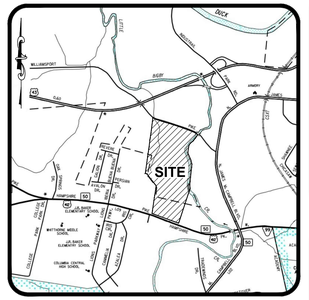
SOUTH 11°34'17" EAST, 173.61 FEET;

SOUTH 6°57'12" WEST, 545.15 FEET;

AND SOUTH 12°37'09" EAST, 125.05 FEET TO THE NORTHWESTERN CORNER OF THE AFOREMENTIONED E & R APARTMENTS, LLC PROPERTY; THENCE LEAVING SAID BIGBY CREEK AND ALONG THE WESTERN BOUNDARY OF SAID E & R APARTMENTS, LLC PROPERTY, SOUTH 18°14'30" WEST (PASSING THROUGH A CAPPED IRON ROD SET AT 150.00 FEET) A TOTAL DISTANCE OF 1,065.89 FEET TO THE POINT OF BEGINNING; CONTAINING 67.284 ACRES OR 2,930,890 SQUARE FEET, AND BEING THE ALL OF THE RAY G. PACE AND WIFE, GALE C. PACE PROPERTY, BOOK R1507, PAGE 954, ROMC, AND A PORTION OF PARCEL 41.03 ON MAURY COUNTY TAX MAP 89.

GENERAL NOTES:

1. THE PURPOSE OF THIS SURVEY IS: ALTA/NSPS LAND TITLE SURVEY
2. THE ADDRESS OF THIS PROPERTY IS: HAMPSHIRE PIKE, COLUMBIA, TN 38401
3. SUBJECT PROPERTY IS PRESENTLY IDENTIFIED AS PART OF PARCEL 41.03, ON MAURY COUNTY TAX MAP 89. SAID PARCEL IS FURTHER IDENTIFIED AS ALL OF THE PROPERTY DESCRIBED IN DEED BOOK R1507, PAGE 954, REGISTERS OFFICE OF MAURY COUNTY, TENNESSEE.
4. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY.
5. EVERY DOCUMENT OF RECORD REVIEWED AND CONSIDERED AS A PART OF THIS SURVEY IS NOTED HEREON. ONLY THE DOCUMENTS NOTED HEREON WERE SUPPLIED TO THE SURVEYOR. OTHER DOCUMENTS OF RECORD MAY EXIST THAT WOULD AFFECT THIS PARCEL.
6. THE WORD "CERTIFY" IS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THE FACTS OF THE SURVEY AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESSED OR IMPLIED. DECLARATION IS MADE TO THE SPECIFIALLY NAMED PARTIES AND IS NOT TRANSFERABLE TO ADDITIONAL PERSONS, INSTITUTIONS OR SUBSEQUENT OWNERS OF THE SUBJECT PROPERTY.
7. THIS SURVEY WAS CONDUCTED WITH THE BENEFIT OF A TITLE REPORT ISSUED BY CHICAGO TITLE INSURANCE COMPANY, COMMITMENT NO. 20211350CTN, DATED AUGUST 25, 2021, AT 8:00AM AND IS SUBJECT TO ITS FINDINGS. THERE MAY BE OTHER IMPROVEMENTS OR ENCUMBRANCES THAT AFFECT THE PROPERTY SINCE THE ISSUANCE OF THE REPORT.
8. BEARINGS SHOWN HEREON ARE BASED ON THE TENNESSEE STATE PLANE COORDINATE SYSTEM NAD83(2011). ELEVATIONS SHOWN HEREON ARE BASED ON NAVD88(GEOID03).
9. ALL CORNERS SHOWN ON THE FACE OF THE SURVEY ARE MARKED EITHER FOUND OR SET. ANY MISSING CORNERS ARE MARKED WITH AN IRON ROD AND CAP BEARING THIS SURVEYORS COMPANY NAME.
10. UTILITIES SHOWN HEREON WERE COMPILED FROM VISIBLE STRUCTURES AT THE SITE, INFORMATION FROM PLANS, AND PHYSICAL MARKINGS AND COMBINED TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. IN ADDITION, IN SOME JURISDICTIONS, 811 OR OTHER SIMILAR UTILITY LOCATE REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN INCOMPLETE RESPONSE. THIS SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THIS SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. VERIFICATION OF EXISTENCE, LOCATIONS, AND DEPTH SHOULD BE MADE BEFORE CONDUCTING ANY EXCAVATION IN THE VICINITY OF THE UTILITY.
11. PORTIONS OF THIS PROPERTY ARE LYING WITHIN ZONE "AE" AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NOS. 47119C0165E AND 47119C0280E, WITH EFFECTIVE DATES OF APRIL 16, 2007, WHICH MAKE UP A PART OF THE NATIONAL FLOOD INSURANCE PROGRAM. BASE FLOOD ELEVATION FOR THIS PROPERTY IS 577 FEET. ZONE "AE" IS AN AREA WHERE BASE FLOOD ELEVATIONS HAVE BEEN DETERMINED. ZONE "X" IS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. THE FLOOD ZONES AND FLOOD WAY SHOWN ARE SCALED FROM MAPS.
12. I HEREBY CERTIFY THAT THIS IS A CATEGORY IV SURVEY AND WAS CONDUCTED IN ACCORDANCE WITH RULE 0820-03.11 (GLOBAL POSITION SYSTEMS SURVEYS) ACCORDING TO THE CURRENT TENNESSEE MINIMUM STANDARDS OF PRACTICE AS PROMULGATED BY THE TENNESSEE STATE BOARD OF EXAMINERS FOR LAND SURVEYORS. THIS SURVEY WAS CONDUCTED WITH DUAL-FREQUENCY RTK GPS BASED ON AN OPUS-CORRECTED AUTONOMOUS SOLUTION UTILIZING A BASE AND ROVER.
    a. POSITIONAL ACCURACY: 0.08'
    b. DATE OF SURVEY: 09/29/21
    c. HORIZONTAL ZONE/DATUM: TN-4100/NAD83(2011) - TENNESSEE STATE PLANE COORDINATES.
    d. OCCUPATIONS FOR CONTROL POINTS ARE 3 MINUTES EACH, SIDE SHOTS ARE 3 SECONDS.
    e. VERTICAL DATUM: NAVD88 (GEOID03, GRID 7 REVISED)
    f. NO COMBINED GRID FACTORS WERE USED.
13. THE CONTOURS SHOWN HEREON WERE DERIVED FROM LIDAR DATA [POST PROCESSED KINEMATIC (PPK) USING STATE PLANE COORDINATES AND VERTICAL DATUM NAVD88 (GEOID03], AND INCLUDE SEVERAL DIFFERENT LAND-COVER CLASSES WHICH HAVE BEEN COMPILED TO MEET OR EXCEED THE NATIONAL MAP ACCURACY STANDARDS (NMAS) OF A 2 FOOT EQUIVALENT CONTOUR INTERVAL AT 95 PERCENT CONFIDENCE LEVEL. THIS MEETS OR EXCEEDS A VERTICAL ACCURACY EQUAL TO NATIONAL STANDARDS FOR SPATIAL DATA ACCURACY (NSSDA) = 1.9600*.61(RMSE(Z)) (NORMALLY DISTRIBUTED ERROR) = 1.19 FT, AS SET FORTH BY THE AMERICAN SOCIETY FOR PHOTOGRAMMETRY AND REMOTE SENSING (ASPRS) VERSION 1.0. RANDOM SHOTS TAKEN ACROSS THE SITE YIELD AN ACTUAL VERTICAL ACCURACY OF +/- 0.12 FT.
14. THERE WAS NO EVIDENCE OF RECENT EARTH MOVING AT THE TIME OF SURVEY.
15. THERE ARE NO KNOWN CHANGES TO THE STREET ROW AT THE TIME OF SURVEY.
16. THERE WAS NO EVIDENCE OF DELINEATED WETLANDS AT THE TIME OF SURVEY.
17. THERE WAS NO EVIDENCE OF ENCROACHMENTS AT THE TIME OF SURVEY.
18. THIS IS A VACANT TRACT OF LAND.



VICINITY MAP
NOT TO SCALE

CERTIFICATION OF SURVEY FOR ALTA/NSPS LAND TITLE SURVEYS

TO: (I) STEADFAST DEVELOPMENT HOLDING, INC., AND (II) CHICAGO TITLE INSURANCE COMPANY.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 8, 11(OBSERVED), 13, 14, 16, 17, 18, AND 19, OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON 9/29/21.

JOEY C. WILSON II, PE, RLS
TN PE NO. 106976 10/01/21
TN RLS NO. 2089

CONTROL TABLE

1000	N 470,519.69'	E 1,650,948.26'	EL 579.36'	IP (BASE)
1004	N 471,492.35'	E 1,650,868.58'	EL 565.23'	TARGET IP
1005	N 472,209.82'	E 1,650,380.55'	EL 566.50'	TARGET IP
1006	N 472,356.06'	E 1,649,672.27'	EL 569.39'	TARGET IP
1008	N 471,947.16'	E 1,649,716.44'	EL 573.51'	TARGET IP
1009	N 470,785.61'	E 1,649,517.39'	EL 587.61'	TARGET IP
1010	N 470,423.81'	E 1,649,224.57'	EL 616.98'	TARGET IP
1011	N 469633.46'	E 1,649,592.57'	EL 627.59'	TARGET IP
1012	N 469,401.83'	E 1,650,243.63'	EL 611.36'	TARGET IP
1013	N 469,953.75'	E 1,650,429.46'	EL 584.70'	TARGET IP

PROJECT CONTROL: TENNESSEE STATE PLANE COORDINATES. NAD83(2011), NAVD88(GEOID03 GRID 7 REVISED). NO DATUM ADJUSTMENT.

200 0 100 200 400
GRAPHIC SCALE: 1" = 200'

LEGEND

IRON PIN FOUND	BENCH MARK	ELECTRIC METER-BOX	EVERGREEN TREE	UNDERGROUND ELEC	UGE
IRON PIN SET	WATER METER	ELECTRIC MH	DECIDUOUS TREE	OVERHEAD ELEC	OH
FENCE POST FOUND	WATER VALVE	LIGHT POLE	HANDICAP PARKING	GAS	GAS
FENCE POST SET	FIRE HYDRANT	UTILITY POLE	SIGN	COMMUNICATIONS	COM
CONC. MON. FOUND	SANITARY SEWER MH	GUY ANCHOR	TURN LANE MARKING	BOUNDARY	
CONC. MON. SET	SANITARY SEWER CO	COMMUNICATION BOX	MAIL BOX	CENTERLINE	
PK FOUND	AREA DRAIN	COMMUNICATION MH	CEMETERY	FENCE	X
PK SET	CURB INLET	GAS METER	SANITARY SEWER	8" SA	WATER FEATURE	
NON MONUMENTED POINT	STORM MH	GAS VALVE	WATER	4" W	TREE LINE	

NO.	DATE	COMMENT

108 Beasley Drive
Franklin, TN
37064
615.794.2275

WILSON&ASSOCIATES, P.C.
Engineering/Surveying/Environmental

JOEY C. WILSON II
LAND SURVEYOR
REGISTERED
AGRICULTURE
COMMERCE
10/01/21
TENNESSEE NO. 2089

ALTA/NSPS LAND TITLE SURVEY

MAP 89, PARCEL 41.03 (PART)
HAMPSHIRE PIKE - COLUMBIA
MAURY COUNTY, TENNESSEE

FOR: STEADFAST DEVELOPMENT HOLDINGS, INC.

DRAWN BY:	JEC
APPVD. BY:	JCW II
DATE	10/01/2021
PROJ. No.	21-1752
SCALE:	1" = 200'

SHEET No.
1 OF 1

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Drawing name: K:\NSH_LDEV\116332003 - steadfast hampshire pike\4-CAD\hampshire pike townhomes\plansheets\C1-00 EXISTING CONDITIONS.dwg C1-00 EXISTING CONDITIONS May 28, 2025 3:35pm by william.fry


HAMPSHIRE PIKE
(100' RIGHT OF WAY)
POINT OF BEGINNING
CAPPED IRON ROD (NEW)
NORTH: 469,322.85 FEET
EAST: 1,650,304.20 FEET
E & R APARTMENTS, LLC
MAP 100B, GROUP A, PARCEL 12
BOOK R2216, PAGE 940
HAROLD R. LAWSON AND WIFE,
BERNICE H. LAWSON
MAP 89P, GROUP C, PARCEL 1
BOOK 547, PAGE 754
CHERRY SPRINGS
SUBDIVISION
SECTION 1
PLAT BOOK 15, PAGE 281
CHERRY SPRINGS
SUBDIVISION
SECTION 2
TRACT B
PLAT BOOK 21, PAGE 22
TRACY K SEIBER AND WIFE,
CRISTYN M. SEIBER
MAP 89P, PARCEL 2.07
BOOK R2884, PAGE 1293
PLAT BOOK P1, PAGE 488
RAY G. PACE AND WIFE,
GALE C. PACE
MAP 89, PARCEL 41.03
BOOK R1507, PAGE 954
TOTAL AREA
67.284 ACRES
2,930,850 SQ.FT.
FLOODPLAIN
4.2 AC.
FLOODPLAIN
3.9 AC.
FLOODPLAIN
4.7 AC.
TEMPORARY
SEDIMENT BASIN
FROM PREVIOUS
DEVELOPMENT
BIGBY CREEK
OLD WILLIAMSPORT PIKE
OLD WILLIAMSPORT
PIKE
TOP OF BANK
(TYPICAL)
EAST TENNESSEE NATURAL GAS CO.
EASEMENT (VARIABLE WIDTH)
BOOK 383, PAGE 386
EXCEPTION 13
BOOK 383, PAGE 386
EXCEPTIONS 14 & 15
BOOK 383, PAGE 386
EXCEPTIONS 15 & 16
BOOK 383, PAGE 386
EXCEPTIONS 16 & 17
BOOK 383, PAGE 386
EXCEPTIONS 17 & 18
BOOK 383, PAGE 386
EXCEPTIONS 18 & 19
BOOK 383, PAGE 386
EXCEPTIONS

HATCHED AREA INCLUDED IN PREVIOUS PRELIMINARY PLAT / DEVELOPMENT PLAN APPROVALS, NOT INCLUDED IN THE OVERALL DEVELOPMENT PLAN CALCULATIONS ASSOCIATED WITH THIS DEVELOPMENT APPLICATION, INCLUDING THE MULTIFAMILY PARCEL, 11 SINGLE FAMILY LOTS, STREETS A, B, AND C

CULDESAC FOR WOODLAND CROSSINGS TO BE REMOVED ONCE CONNECTION HAS BEEN MADE

PROPOSED SEGMENTAL RETAINING WALL. MAX HEIGHT 7'

1300' PLAYGROUND COVERAGE

PROPERTY LINE TYP.

FUTURE COMMERCIAL PAD 1.55 AC

FUTURE COMMERCIAL PAD 1.09 AC

FUTURE COMMERCIAL PAD 1.19 AC

HAMPSHIRE PIKE | PRINCIPAL ARTERIAL

22-0131 - HAMPSHIRE PIKE DEVELOPMENT - PRELIMINARY PLAT

SEE SHEET C2-10 FOR ENLARGEMENT

SEE SHEET C2-11 FOR ENLARGEMENT

CIVIC SPACE - GREEN 0.53 AC

DEDICATED CIVIC SPACE PARKING

CIVIC SPACE - NATURAL AREA 10.44 AC

NATURE FOOT PATH (GRAVEL)

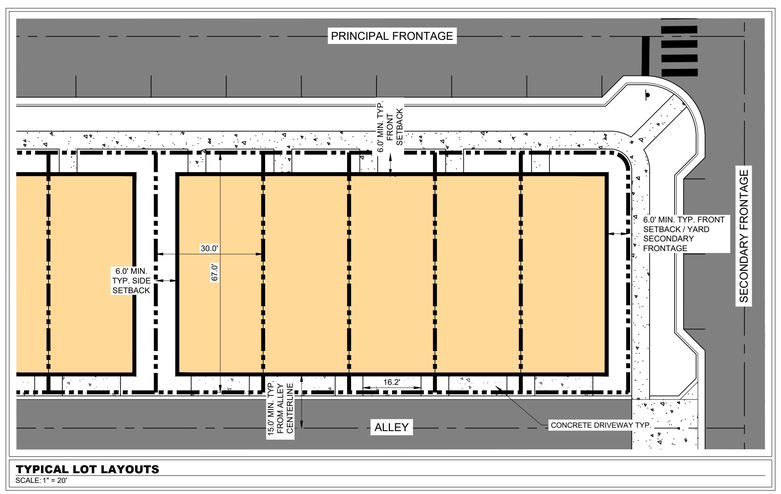
EXISTING SEGMENTAL RETAINING WALL. MAX HEIGHT 7'

WATER QUALITY POND TYP.

FUTURE COMMERCIAL PAD 0.64 AC

OLD WILLIAMSPORT PIKE | MINOR ARTERIAL

HATCHED AREA EXCLUDED FROM ALL AREA, ENFRONTMENT, AND DENSITY TOTALS



TYPICAL LOT LAYOUTS
SCALE: 1" = 20'

SITE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE TOWNHOMES
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	TOWN HOMES
SITE AREA (AC):	32.60 AC
SITE AREA (SF):	1,420,129 SF
DENSITY	
PROPOSED:	
TOWNHOMES (24' x 56' TYP.):	143 DU
*SF LOTS (96' x 115' TYP.):	11 DU
TOTAL UNITS:	**154 DU**
**DENSITY:	4.39 UNITS/ACRE
MIN. LOT SIZE:	1,608 SF
UNITS FRONTING PEDESTRIAN PATH:	12 UNITS (8%)
TYPICAL LOT SETBACKS:	
MIN. FRONT SETBACK:	6 FT
MIN. SIDE SETBACK:	6 FT
MIN. REAR SETBACK:	15 FT FROM ALLEY C.L.
REQUIRED CIVIC USE SPACE:	5% OF TOTAL AREA 1.63 AC
PROVIDED CIVIC USE SPACE:	34% OF TOTAL AREA 10.97 AC
CIVIC SPACE LIST:	
GREEN:	0.53 AC
NATURAL AREA:	10.44 AC
REQUIRED PARKING:	
TOWNHOMES	286 SPACES (2 PER DU)
SF LOTS:	22 SPACES (2 PER DU)
CIVIC SPACE:	4 SPACES (1 PER 5000 SF)
TOTAL REQUIRED:	**312 SPACES**
PROPOSED PARKING:	
GARAGE PARKING:	308 SPACES
DRIVEWAY PARKING:	22 SPACES
TOTAL DU PARKING:	**330 SPACES**
ON-STREET PARKING:	161 SPACES
TOTAL PARKING PROVIDED:	**491 SPACES**

*SF LOTS INCLUDED IN 22-0131 - HAMPSHIRE PIKE MIXED USE DEVELOPMENT - PRELIMINARY PLAT
**SF LOTS EXCLUDED FROM DENSITY AND FRONTAGE CALCULATIONS

SITE LAYOUT NOTES

- ALL DRIVEWAYS FOR TOWNHOMES ARE REQUIRED TO BE A MINIMUM WIDTH OF 10'. ALL PROPOSED TOWNHOME DRIVEWAYS MEET THIS STANDARD.
- ALL COMMERCIAL DEVELOPMENT WILL BE CONSTRUCTED TO THE STANDARDS OF CD-4 DISTRICT PER ZONING ORDINANCE 4400

THOROUGHFARE ENFRONTMENT

TOTAL BUILDING ENFRONTMENT:	4,032 LF*
RESIDENTIAL ENFRONTMENT: (143 DU x 24 LF)	3,432 LF (85%)
COMMERCIAL ENFRONTMENT:	600 LF (15%)
CIVIC SPACE ENFRONTMENT GREEN ENFRONTMENT	345 LF

*REQUIRED FRONTAGE MIX: 85% MAX RESIDENTIAL, 15% MIN COMMERCIAL

ENFRONTMENT LINETYPE LEGEND

- COMMERCIAL ENFRONTMENT
- RESIDENTIAL ENFRONTMENT
- CIVIC SPACE ENFRONTMENT

COORDINATES ARE NAD83. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 50 100 200

NORTH

Kimley»Horn
10 Lea Avenue, Suite 400 Nashville, TN 37210
Main: 615.564.2701 | www.kimley-horn.com

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS — REGISTERED ENGINEER — AGRICULTURE — CIVIL — COMMERCE — No. 134111 — STATE OF TENNESSEE
05/28/2025

No.	DATE	BY	REVISIONS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	05/28/2025
KIMLEY-HORN PROJECT NO.	118332003

SITE LAYOUT - OVERALL

SHEET NUMBER
C2-00

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Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\C2-00 SITE LAYOUT - OVERALL.dwg C2-00 SITE LAYOUT - OVERALL May 28, 2025 3:36pm by: william.irby



SITE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE TOWNHOMES
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
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EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	TOWN HOMES
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SITE AREA (SF):	1,420,129 SF
DENSITY	
PROPOSED:	
TOWNHOMES (24' x 56' TYP.):	143 DU
*SF LOTS (66' x 115' TYP.):	11 DU
TOTAL UNITS:	**154 DU**
**DENSITY:	4.39 UNITS/ACRE
MIN. LOT SIZE:	1,608 SF
UNITS FRONTING PEDESTRIAN PATH:	12 UNITS (8%)
TYPICAL LOT SETBACKS:	
MIN. FRONT SETBACK:	6 FT
MIN. SIDE SETBACK:	6 FT
MIN. REAR SETBACK:	15 FT FROM ALLEY C.L.
REQUIRED CIVIC USE SPACE:	5% OF TOTAL AREA 1.63 AC
PROVIDED CIVIC USE SPACE:	34% OF TOTAL AREA 10.97 AC
CIVIC SPACE LIST:	
GREEN:	0.53 AC
NATURAL AREA:	10.44 AC
REQUIRED PARKING:	
TOWNHOMES	286 SPACES (2 PER DU)
SF LOTS:	22 SPACES (2 PER DU)
CIVIC SPACE:	4 SPACES (1 PER 5000 SF)
TOTAL REQUIRED:	**312 SPACES**
PROPOSED PARKING:	
GARAGE PARKING:	308 SPACES
DRIVEWAY PARKING:	22 SPACES
TOTAL DU PARKING:	**330 SPACES**
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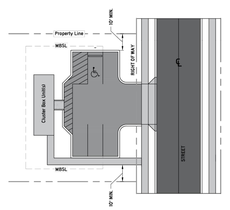
TOTAL PARKING PROVIDED:	**491 SPACES**

*SF LOTS INCLUDED IN 22-0131 - HAMPSHIRE PIKE MIXED USE DEVELOPMENT - PRELIMINARY PLAT
**SF LOTS EXCLUDED FROM DENSITY AND FRONTAGE CALCULATIONS

NOTES:

FOR 75 OR LESS CBU'S AT A SINGLE LOCATION
1. CLUSTER BOX UNITS (CBU'S) SHALL MEET USPS STANDARDS
2. CBU'S MAY BE LOCATED WITHIN THE RIGHT OF WAY
3. CBU'S SHALL BE PLACED ADJACENT TO CURB AND/OR SIDEWALK.
4. CBU'S SHOULD BE PLACED ALONG MINOR LOCAL ROADWAYS OR EQUIVALENT. FOR PLACEMENT ALONG COLLECTOR AND ARTERIAL ROADWAYS, FOLLOW THE STANDARDS BELOW. "FOR MORE THAN 75 CBU'S AT A SINGLE LOCATION".

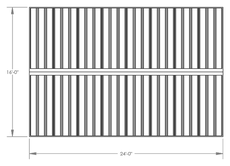
FOR MORE THAN 75 CBU'S AT A SINGLE LOCATION.
1. CBU'S SHALL MEET USPS STANDARDS
2. CBU'S SHALL BE LOCATED OUTSIDE OF THE RIGHT OF WAY WITHIN A COMMON OR OPEN SPACE LOT
3. CBU'S SHALL NOT BE PLACED WITHIN ANY EASEMENTS
4. CBU'S AND APPURTENANT BUILDING PAD(S) SHALL BE CONSIDERED A PRINCIPLE STRUCTURE AND SHALL ADHERE TO SETBACK REQUIREMENTS
5. ACCESS AND DRIVEWAYS TO MEET ZONING CODE AND ACCESS MANAGEMENT
6. PARKING SHALL BE PROVIDED WITH A MINIMUM OF 2 PARKING STALLS PLUS 1 STALL PER 25 MAIL UNITS OR PORTION THEREOF ABOVE THE FIRST 25 MAIL UNITS, WITH A MAXIMUM OF TWICE THE REQUIRED
7. PARKING AND SIDEWALKS SHALL HAVE A 10 FT. MINIMUM BUFFER FROM ANY PROPERTY LINE
8. PARKING SHALL ADHERE TO LAYOUT AND INTERIOR LANDSCAPING REQUIREMENTS PER THE ZONING CODE
9. PARKING SHALL BE CLEARLY LABELED AS SHORT TERM PARKING AND CANNOT BE CONSIDERED REQUIRED PARKING FOR ANOTHER USE
10. WHEEL STOPS OR CURBING SHALL BE PROVIDED FOR ALL PARKING STALLS
11. ADEQUATE LIGHTING SHALL BE PROVIDED.
12. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER



CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION
STANDARD DETAILS

MAIL CLUSTER BOX UNITS
(NTS)

DATE: 6/9/2022
MD-03



01 POLIGON SHELTER 16' X 24'
NTS
DETAIL-FILE



PRODUCT SPECIFICATIONS

MANUFACTURER: **KOMPAN**
PRODUCT: **YELLOWSTONE WITH SHADE**
SIZE: **237"X17'10"X15'9"**
COLOR: **TBD**
OPTIONS: **N/A**
DETAIL NOTE: **INSTALL PER MANUFACTURER SPECIFICATIONS**
QUANTITY: **1**

CONTACT: **615.426.8760**
WEBSITE: **https://www.kompan.com/en/us**

02 PLAY STRUCTURE
NTS
DETAIL-FILE



NOTES:
RETAINING WALL BRICK VENEER TO MATCH PROPOSED ARCHITECTURE
AMERISTAR 4' ORNAMENTAL MONTAGE FENCE WITH BLACK FINISH TO BE MOUNTED ON RETAINING WALLS

03 BRICK RETAINING WALL WITH AMERISTAR FENCE
NTS

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

Kimley»Horn
10 Lea Avenue, Suite 400 Nashville, TN 37210
Main: 615.564.2701 | www.kimley-horn.com

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 139151
STATE OF TENNESSEE
05/28/2025

No.	REVISIONS	DATE	BY
1			
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9			
10			

DESIGNED BY: ___
DRAWN BY: ___
CHECKED BY: ___
DATE: 05/28/2025
KIMLEY-HORN PROJECT NO. 118332003

SITE LAYOUT - ENLARGEMENT

SHEET NUMBER
C2-10

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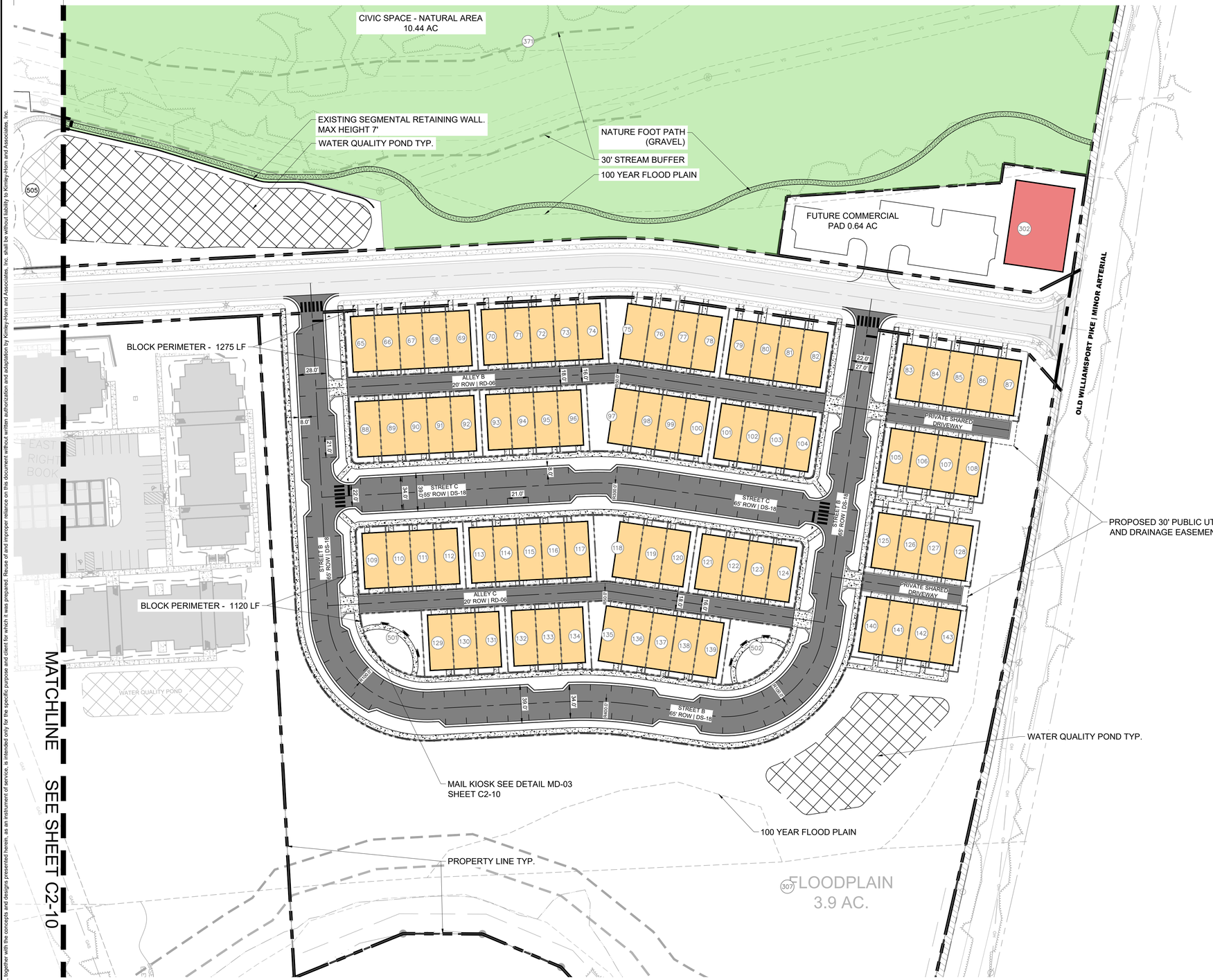

SITE DATA TABLE

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SITE AREA (SF):	1,420,129 SF
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PROPOSED:	
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*SF LOTS (96' x 115' TYP.):	11 DU
TOTAL UNITS:	**154 DU**
**DENSITY:	4.39 UNITS/ACRE
MIN. LOT SIZE:	1,608 SF
UNITS FRONTING	
PEDESTRIAN PATH:	12 UNITS (8%)
TYPICAL LOT SETBACKS:	
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MIN. REAR SETBACK:	15 FT FROM ALLEY C.L.
REQUIRED CIVIC USE SPACE:	5% OF TOTAL AREA 1.63 AC
PROVIDED CIVIC USE SPACE:	34% OF TOTAL AREA 10.97 AC
CIVIC SPACE LIST:	
GREEN:	0.53 AC
NATURAL AREA:	10.44 AC
REQUIRED PARKING:	
TOWNHOMES	286 SPACES (2 PER DU)
SF LOTS:	22 SPACES (2 PER DU)
CIVIC SPACE:	4 SPACES (1 PER 5000 SF)
TOTAL REQUIRED:	**312 SPACES**
PROPOSED PARKING:	
GARAGE PARKING:	308 SPACES
DRIVEWAY PARKING:	22 SPACES
TOTAL DU PARKING:	**330 SPACES**
ON-STREET PARKING:	161 SPACES
TOTAL PARKING PROVIDED:	**491 SPACES**

*SF LOTS INCLUDED IN 22-0131 - HAMPSHIRE PIKE MIXED USE DEVELOPMENT - PRELIMINARY PLAT
**SF LOTS EXCLUDED FROM DENSITY AND FRONTAGE CALCULATIONS

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 138838
STATE OF TENNESSEE
05/28/2025

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DRAWN BY: ___
CHECKED BY: ___
DATE: 05/28/2025
KIMLEY-HORN PROJECT NO. 118332003

SITE LAYOUT - ENLARGEMENT

SHEET NUMBER
C2-11

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Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\C2-10 SITE LAYOUT - ENLARGEMENT.dwg C2-11 May 28, 2025 3:37pm by: william.irby

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PARCEL AREA TABLE			PARCEL AREA TABLE			PARCEL AREA TABLE			PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.
1	0.05	2217	21	0.04	1944	46	0.04	1947	72	0.04	1608
2	0.04	1931	22	0.04	1944	47	0.04	1944	73	0.04	1608
3	0.06	2430	23	0.04	1944	48	0.04	1947	74	0.05	2009
4	0.07	2882	24	0.07	3244	49	0.07	3019	75	0.06	2781
5	0.04	1931	30	0.07	2973	50	0.06	2430	76	0.04	1690
6	0.04	1946	31	0.04	1953	51	0.04	1944	77	0.04	1704
7	0.06	2433	32	0.04	1948	52	0.04	1944	78	0.05	2130
8	0.06	2516	33	0.04	1949	53	0.04	1944	79	0.05	2130
9	0.04	1944	34	0.07	2839	54	0.06	2430	80	0.04	1704
10	0.04	1944	35	0.07	2964	55	0.06	2430	81	0.04	1704
11	0.06	2430	36	0.04	1945	56	0.04	1944	82	0.05	2130
12	0.06	2732	37	0.04	1943	57	0.04	1944	83	0.05	2130
13	0.04	1946	38	0.04	1948	58	0.04	1944	84	0.04	1704
14	0.04	1946	39	0.06	2694	65	0.05	2010	85	0.04	1704
15	0.06	2816	40	0.06	2430	66	0.04	1608	86	0.04	1704
16	0.06	2431	41	0.04	1944	67	0.04	1608	87	0.05	2129
17	0.04	1944	42	0.04	1944	68	0.04	1608	88	0.05	2005
18	0.04	1944	43	0.04	1944	69	0.05	2010	89	0.04	1608
19	0.06	2430	44	0.06	2430	70	0.05	2010	90	0.04	1608
20	0.06	2430	45	0.07	3014	71	0.04	1608	91	0.04	1608

PARCEL AREA TABLE			PARCEL AREA TABLE			PARCEL AREA TABLE			PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.
92	0.05	2010	112	0.05	2010	132	0.05	2035	304	1.09	47304
93	0.05	2010	113	0.05	2010	133	0.04	1607	305	24.84	1081843
94	0.04	1608	114	0.04	1608	134	0.05	2020	371	10.43	454299
95	0.04	1608	115	0.04	1608	135	0.06	2481	400	4.32	188089
96	0.05	2010	116	0.04	1608	136	0.04	1614	500	0.05	1992
97	0.07	3229	117	0.05	2009	137	0.04	1608	501	0.07	3136
98	0.04	1610	118	0.07	3021	138	0.04	1608	502	0.07	3143
99	0.04	1608	119	0.04	1608	139	0.05	2009			
100	0.05	2010	120	0.05	2010	140	0.05	2021			
101	0.05	2010	121	0.05	2010	141	0.04	1608			
102	0.04	1608	122	0.04	1608	142	0.04	1608			
103	0.04	1608	123	0.04	1608	143	0.05	2010			
104	0.05	2005	124	0.05	2005	200	0.31	13685			
105	0.05	2010	125	0.05	2010	201	0.33	14351			
106	0.04	1608	126	0.04	1608	202	0.38	16470			
107	0.04	1608	127	0.04	1608	203	0.29	12467			
108	0.05	2010	128	0.05	2010	204	0.25	10831			
109	0.05	2005	129	0.05	2009	300	1.55	67509			
110	0.04	1608	130	0.04	1606	302	0.64	27678			
111	0.04	1608	131	0.05	2031	303	1.19	51985			

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
ARCHITECTURE
COMMERCE
No. 139981
STATE OF TENNESSEE
05/28/2025

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KIMLEY-HORN PROJECT NO. 118332003

PARCEL TABLES

SHEET NUMBER
C2-20

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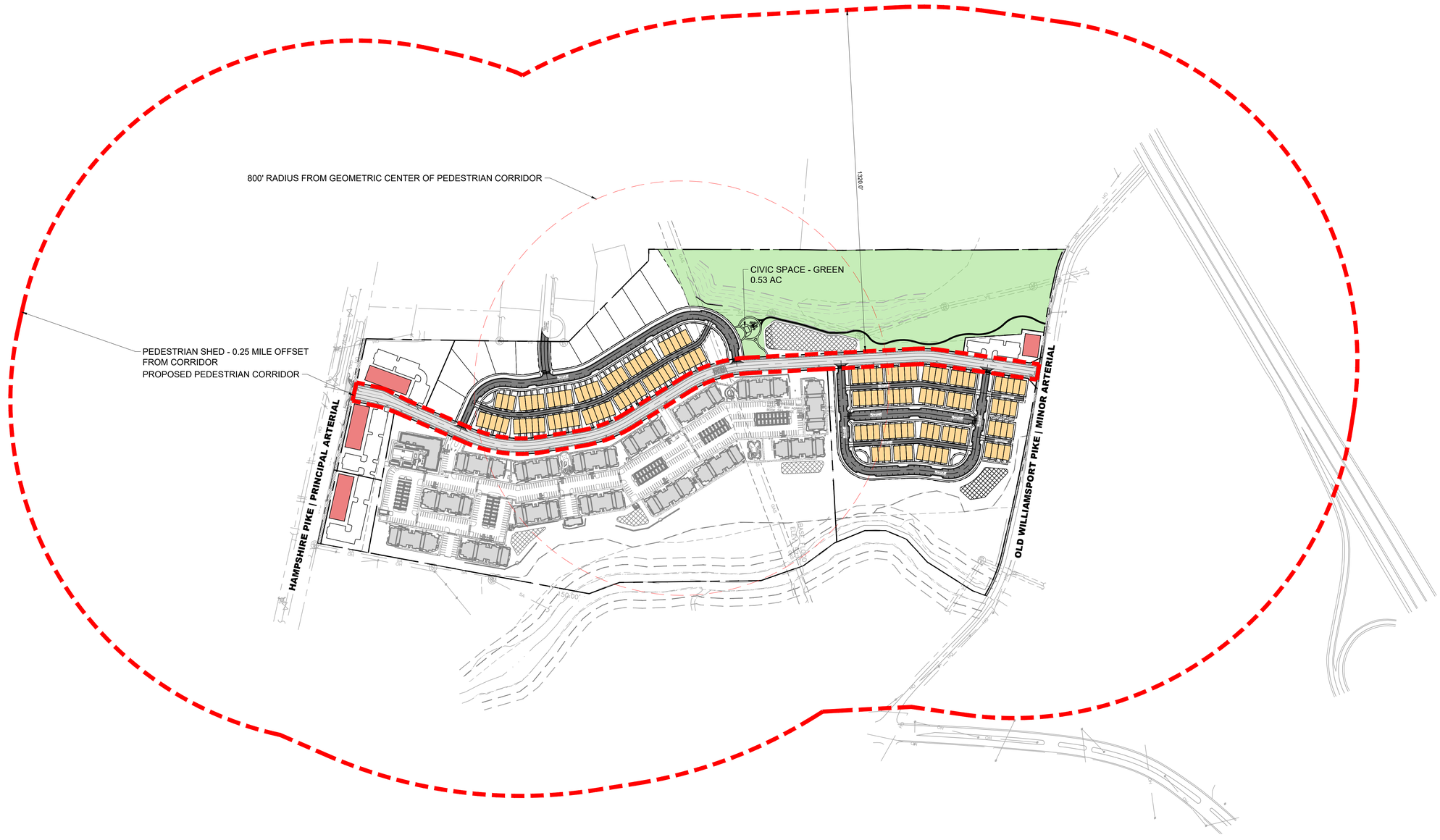

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GRAPHIC SCALE IN FEET
0 100 200 400

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

DOLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
CIVIL
No. 139611
STATE OF TENNESSEE
05/28/2025

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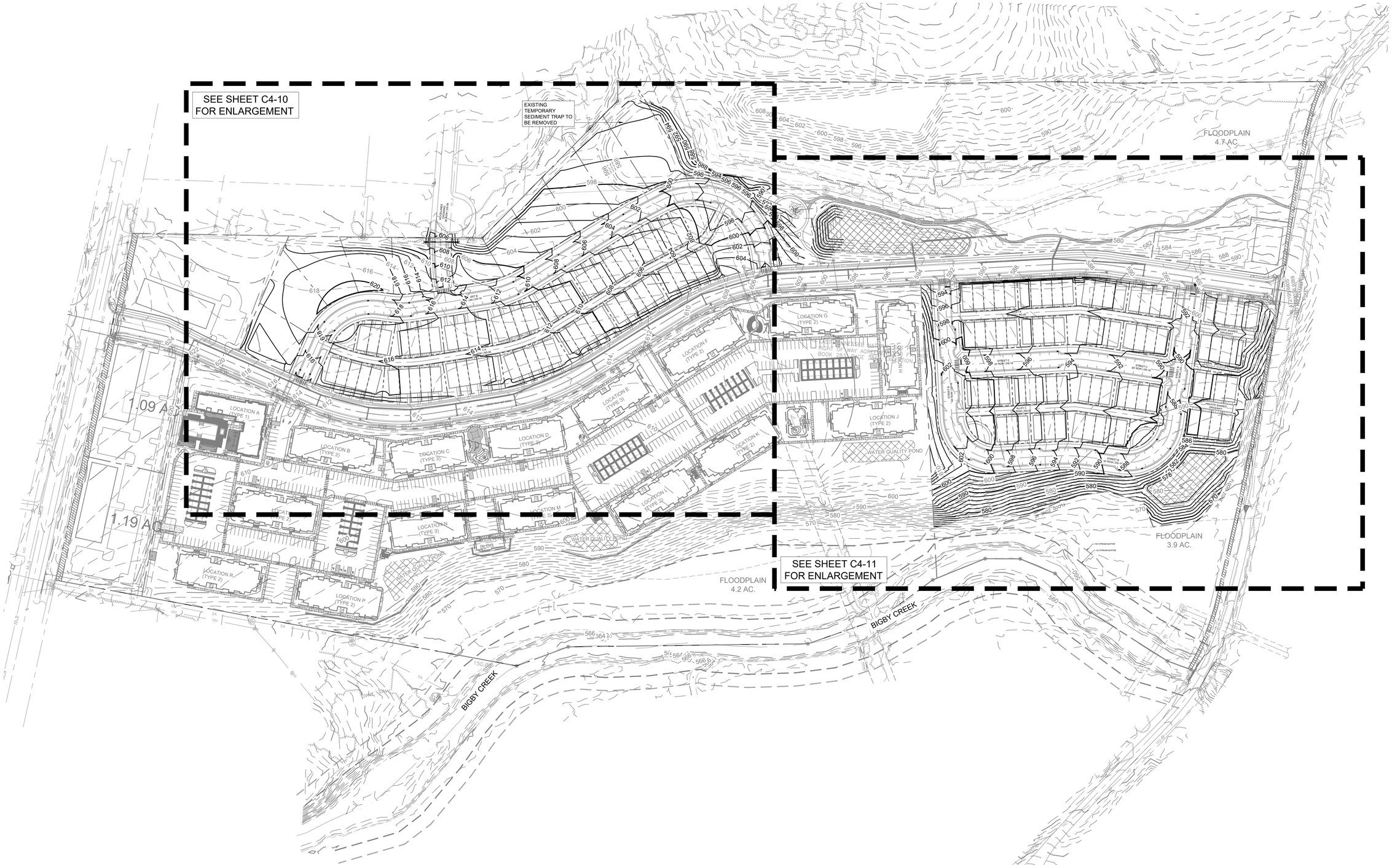
KIMLEY-HORN PROJECT NO.	118332003

PEDESTRIAN CORRIDOR EXHIBIT

SHEET NUMBER
C3-00



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GRAPHIC SCALE IN FEET
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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 128698
STATE OF TENNESSEE
05/28/2025

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KIMLEY-HORN PROJECT NO. 118332003

GRADING AND DRAINAGE PLAN - OVERALL

SHEET NUMBER

C4-00

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Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\C4-00 GRADING AND DRAINAGE PLAN - OVERALL.dwg C4-00 GRADING AND DRAINAGE PLAN - OVERALL May 28, 2025 3:38pm by: william.irby

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EXISTING TEMPORARY SEDIMENT TRAP TO BE REMOVED

CHERRY SPRINGS SUBDIVISION SECTION 1 PLAT BOOK 15, PAGE 281

ON AND WIFE, LAWSON C, PARCEL 1 AGE 754

MANHOLE RIM: 599.3 INV IN: 593.9 OUT: 593.6

WOODLANDS CROSSING 50' ROW | DS-06

MANHOLE RIM: 609.1 INV IN: 601.4 INV OUT: 601.4

STREET B 50' ROW | DS-18

ALLEY A 20' ROW | RD-06

AVELY RIDGE WAY (60' ROW)

MANHOLE RIM: 587.5 INV IN: 580.4 INV OUT: SMALL

MANHOLE RIM: 582.2 INV IN: 576.3 INV OUT: 576.1

MATCHLINE SEE SHEET C2-11

LOCATION A (TYPE 1)

LOCATION B (TYPE 2)

LOCATION C (TYPE 3)

LOCATION D (TYPE 3)

LOCATION E (TYPE 3)

LOCATION F (TYPE 3)

LOCATION K (TYPE 3)

EAST TENNESSEE RIGHT OF WAY BOOK 283, P.

SITE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE TOWNHOMES
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	TOWN HOMES
SITE AREA (AC):	32.60 AC
SITE AREA (SF):	1,420,129 SF
DENSITY	
PROPOSED:	
TOWNHOMES (24' x 56' TYP.):	143 DU
*SF LOTS (66' x 115' TYP.):	11 DU
TOTAL UNITS:	**154 DU**
**DENSITY:	4.39 UNITS/ACRE
MIN. LOT SIZE:	1,608 SF
UNITS FRONTING PEDESTRIAN PATH:	12 UNITS (8%)
TYPICAL LOT SETBACKS:	
MIN. FRONT SETBACK:	6 FT
MIN. SIDE SETBACK:	6 FT
MIN. REAR SETBACK:	15 FT FROM ALLEY C.L.
REQUIRED CIVIC USE SPACE:	5% OF TOTAL AREA 1.63 AC
PROVIDED CIVIC USE SPACE:	34% OF TOTAL AREA 10.97 AC
CIVIC SPACE LIST:	
GREEN:	0.53 AC
NATURAL AREA:	10.44 AC
REQUIRED PARKING:	
TOWNHOMES	286 SPACES (2 PER DU)
SF LOTS:	22 SPACES (2 PER DU)
CIVIC SPACE:	4 SPACES (1 PER 5000 SF)
TOTAL REQUIRED:	**312 SPACES**
PROPOSED PARKING:	
GARAGE PARKING:	308 SPACES
DRIVEWAY PARKING:	22 SPACES
TOTAL DU PARKING:	**330 SPACES**
ON-STREET PARKING:	161 SPACES
TOTAL PARKING PROVIDED:	**491 SPACES**

*SF LOTS INCLUDED IN 22-0131 - HAMPSHIRE PIKE MIXED USE DEVELOPMENT - PRELIMINARY PLAT
**SF LOTS EXCLUDED FROM DENSITY AND FRONTAGE CALCULATIONS

UTILITY NOTES

1. WATER, SEWER, AND POWER UTILITY PROVIDERS ARE ABLE TO SERVE THE SITE. ANY IMPROVEMENTS NEEDED ARE LISTED IN AVAILABILITY LETTERS INCLUDED IN THIS SUBMITTAL.

FEMA FLOOD NOTES

1. FIRM PANEL: 47119C0280E & 47119C0165E
2. EFFECTIVE DATE: 4/16/2007

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 25 50 100

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

DALTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
No. 129618
STATE OF TENNESSEE
05/28/2025

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DRAWN BY:	WSI
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DATE:	05/28/2025
KIMLEY-HORN PROJECT NO.	118332003

GRADING AND DRAINAGE PLAN - ENLARGEMENT

SHEET NUMBER
C4-10



SITE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE TOWNHOMES
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	TOWN HOMES
SITE AREA (AC):	32.60 AC
SITE AREA (SF):	1,420,129 SF
DENSITY	
PROPOSED:	
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UNITS FRONTING PEDESTRIAN PATH:	12 UNITS (8%)
TYPICAL LOT SETBACKS:	
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MIN. REAR SETBACK:	15 FT FROM ALLEY C.L.
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GREEN:	0.53 AC
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SF LOTS:	22 SPACES (2 PER DU)
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GARAGE PARKING:	308 SPACES
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TOTAL DU PARKING:	**330 SPACES**
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TOTAL PARKING PROVIDED:	**491 SPACES**

*SF LOTS INCLUDED IN 22-0131 - HAMPSHIRE PIKE MIXED USE DEVELOPMENT - PRELIMINARY PLAT
**SF LOTS EXCLUDED FROM DENSITY AND FRONTAGE CALCULATIONS

UTILITY NOTES

1. WATER, SEWER, AND POWER UTILITY PROVIDERS ARE ABLE TO SERVE THE SITE. ANY IMPROVEMENTS NEEDED ARE LISTED IN AVAILABILITY LETTERS INCLUDED IN THIS SUBMITTAL.

FEMA FLOOD NOTES

1. FIRM PANEL: 47119C0280E & 47119C0165E
2. EFFECTIVE DATE: 4/16/2007

COORDINATES ARE NAD83.
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GRAPHIC SCALE IN FEET
0 25 50 100

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

DOLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
CIVIL
COMMERCE
No. 139611
STATE OF TENNESSEE
05/28/2025

No.	REVISIONS	DATE	BY
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DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	05/28/2025
KIMLEY-HORN PROJECT NO.	118332003

GRADING AND DRAINAGE PLAN - ENLARGEMENT

SHEET NUMBER
C4-20

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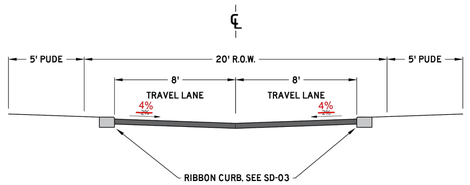
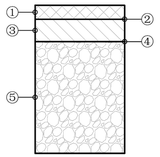


PAVEMENT SCHEDULE	
①	SURFACE @ 1.5" THICK 411-0110 ASPHALT CONCRETE MIX (PG64-22) (ACS) GRADING D (SURFACE), OR 307-0110 ASPHALT CONCRETE MIX (PG64-22) (ACS) GRADING C-W (SURFACE)
②	TACK COAT (GENERAL USE) 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) 10.05 - 0.10 GAL/SY)
③	BIT. BINDER @ 2" THICK 307-0108 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HW) GRADING B-M2
④	PRIME COAT 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) (0.30-0.35 GAL/SY) 402-02 AGGREGATE FOR COVER MATERIAL (PC) (8-12 LB/SY)
⑤	MINERAL AGGREGATE BASE @ 8" THICK 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D



NOTES:

1. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED
2. DIMENSIONS REFLECT A MINIMUM STANDARD
3. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA TENNESSEE

CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

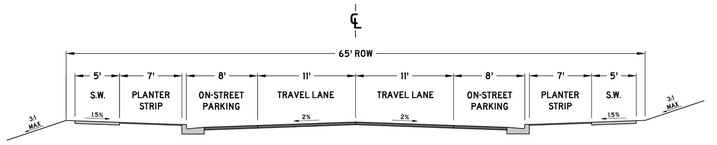
STANDARD DETAILS

ALLEY

(NTS)

DATE
6/9/2022

RD-06



NOTES:

1. ONLY PERMITTED WITHIN THE APPLICABLE ZONING DISTRICTS
2. ONLY PERMITTED ON MINOR LOCAL AND MAJOR LOCAL ROADWAY CLASSIFICATIONS
3. PAVEMENT SECTION SHALL FOLLOW THE CORRESPONDING ROADWAY CLASSIFICATION'S STANDARD DETAIL
4. CURB AND GUTTER, SEE SD-01
5. EXTRUDED CURB, SEE SD-02
6. DECORATIVE LIGHT BASES SHALL BE BETWEEN 18" AND 24" BEHIND THE BACK OF CURB.
7. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED
8. DIMENSIONS REFLECT A MINIMUM STANDARD
9. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA TENNESSEE

CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

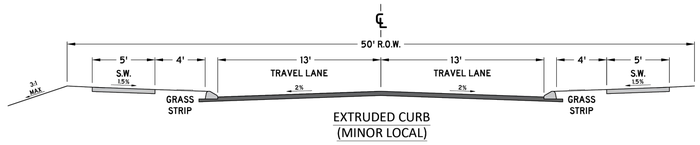
STANDARD DETAILS

**CHARACTER DISTRICT STREET
SUBURBAN NEIGHBORHOOD
PARALLEL PARKING BOTH SIDES**

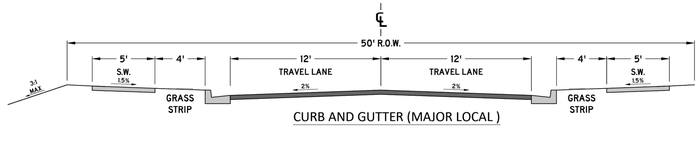
(NTS)

DATE
7/1/2024

DS-10



EXTRUDED CURB
(MINOR LOCAL)



CURB AND GUTTER (MAJOR LOCAL)

NOTES:

1. ONLY PERMITTED WITHIN THE APPLICABLE ZONING DISTRICTS
2. ONLY PERMITTED ON MINOR LOCAL AND MAJOR LOCAL ROADWAY CLASSIFICATIONS
3. PAVEMENT SECTION SHALL FOLLOW THE CORRESPONDING ROADWAY CLASSIFICATION'S STANDARD DETAIL
4. CURB AND GUTTER, SEE SD-01
5. EXTRUDED CURB, SEE SD-02
6. DECORATIVE LIGHT BASES SHALL BE BETWEEN 18" AND 24" BEHIND THE BACK OF CURB.
7. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED
8. DIMENSIONS REFLECT A MINIMUM STANDARD
9. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA TENNESSEE

CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

STANDARD DETAILS

**CHARACTER DISTRICT STREET
LARGE LOT NEIGHBORHOOD**

(NTS)

DATE
7/1/2024

DS-06

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORAIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 139611
STATE OF TENNESSEE
05/28/2025

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DATE: 05/28/2025
KIMLEY-HORN PROJECT NO. 118332003

ROADWAY SECTIONS

SHEET NUMBER
C5-00

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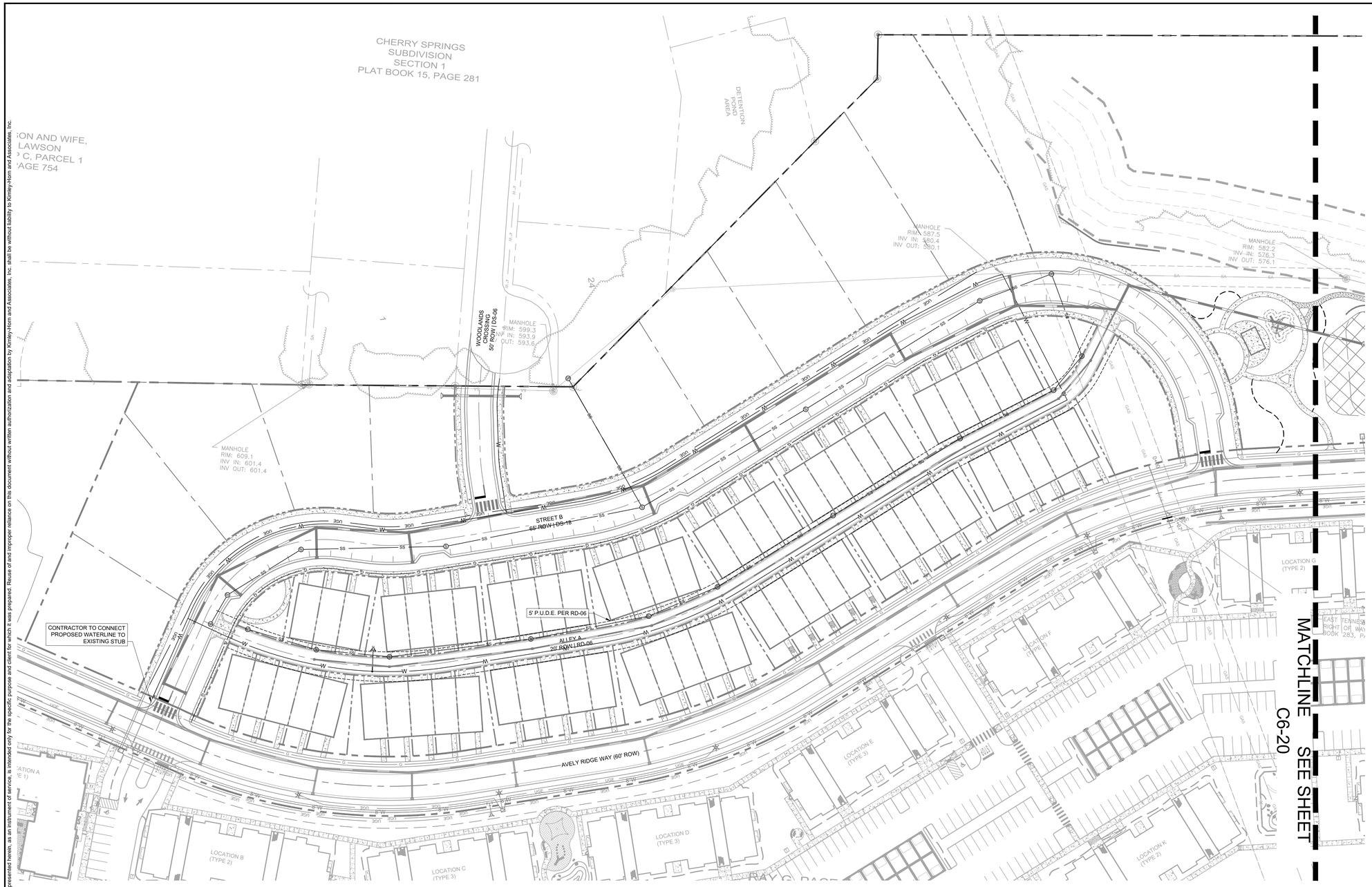

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

COLTON L. DOBRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 130698
STATE OF TENNESSEE
05/28/2025

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DATE:	05/28/2025

KIMLEY-HORN PROJECT NO. 118332003

UTILITY PLAN - ENLARGEMENT

SHEET NUMBER
C6-10

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DATE: 05/28/2025
KIMLEY-HORN PROJECT NO. 116332003

SHEET NUMBER: C6-20

UTILITY PLAN - ENLARGEMENT

COTTON L. ROBERTS
REGISTERED ENGINEER
STATE OF TENNESSEE
05/28/2025

HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

Kimley»Horn
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LANDSCAPE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE TOWNHOMES
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	X
SITE AREA (AC):	32.60
BUILDING AREA (SF):	#050
BUILDING PERMIT:	#091
GRADING PERMIT:	#092

LANDSCAPE REQUIREMENTS

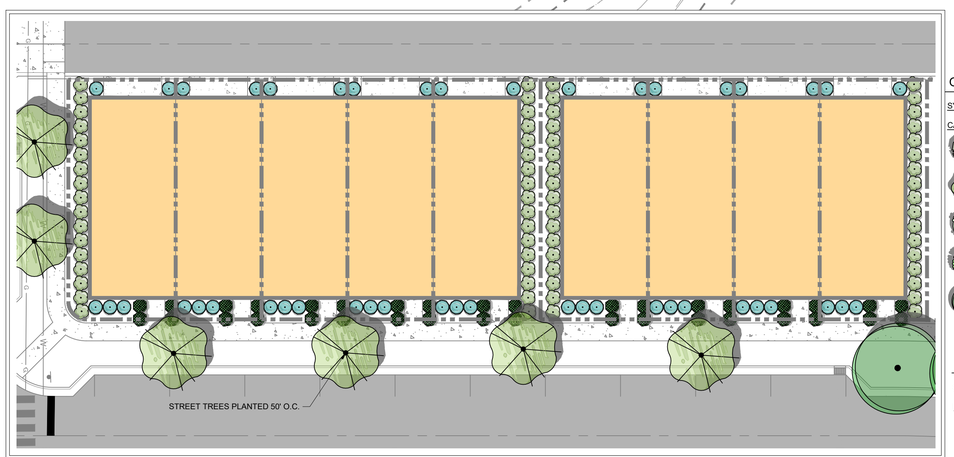
REQUIRED BUFFERS:
LANDSCAPE BUFFERS ARE NOT REQUIRED.

STREET TREE REQUIRMENT:
STREET TREES TO BE PLANTED 50 LF ON CENTER WITH EVEN SPACING.

TREE CANOPY COVER RETENTION

EXISTING TREE CANOPY:	+/- 56% (18.32 AC) OF TOTAL DEVELOPMENT
REQUIRED RETENTION:	45% (8.24 AC) MIN. OF TOTAL TREE CANOPY
PROPOSED RETENTION:	62% (11.37 AC) OF TOTAL TREE CANOPY





TYPICAL FOUNDATION PLANTING
SCALE: 1" = 20'

OVERALL PLANT SCHEDULE

SYMBOL	CODE		BOTANICAL NAME	COMMON NAME	SPACING	SIZE	ROOT	CONDITION
CANOPY TREES								
	AT	13	ACER BUERGERIANUM 'STREETWISE'	STREETWISE TRIDENT MAPLE	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	AA	56	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	GT	6	GLEDITSIA TRIACANTHOS INERMIS	THORNLESS HONEY LOCUST	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	QH	51	QUERCUS LYRATA 'QLFTB'	HIGHBEAM® OVERCUP OAK	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	UJ	45	ULMUS AMERICANA 'JEFFERSON'	JEFFERSON AMERICAN ELM	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED

FOUNDATION PLANT SCHEDULE

SYMBOL	CODE		BOTANICAL NAME	COMMON NAME	SPACING	SIZE	ROOT	CONDITION
EVERGREEN SHRUBS								
	AX	68	AZALEA X 'AMELIA ROSE'	AMELIA ROSE AZALEA	AS SHOWN	18" MIN. HT.	3 GAL.	MATCHED, FULL, FREE OF WEEDS
	BS	36	BUXUS SEMPERVIRENS	COMMON BOXWOOD	AS SHOWN	18" MIN. HT.	3 GAL.	MATCHED, FULL, FREE OF WEEDS
	TD	45	TAXUS CUSPIDATA 'DENSA'	DENSE JAPANESE YEW	AS SHOWN	18" MIN. HT.	3 GAL.	MATCHED, FULL, FREE OF WEEDS

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ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

JOSHUA LEWIS ROWLAND
REGISTERED
AGRICULTURE
LANDSCAPE ARCHITECT
05/28/2025

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DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	05/28/2025
KIMLEY-HORN PROJECT NO.	118332003

LANDSCAPE PLAN

SHEET NUMBER
L1-00

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LANDSCAPE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE TOWNHOMES
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	X
SITE AREA (AC):	32.60
BUILDING AREA (SF):	#050
BUILDING PERMIT:	#091
GRADING PERMIT:	#092

LANDSCAPE REQUIREMENTS

REQUIRED BUFFERS:
LANDSCAPE BUFFERS ARE NOT REQUIRED.

STREET TREE REQUIRMENT:
STREET TREES TO BE PLANTED 50 LF ON CENTER WITH EVEN SPACING.

TREE CANOPY COVER RETENTION

EXISTING TREE CANOPY:	+/- 56% (18.32 AC) OF TOTAL DEVELOPMENT
REQUIRED RETENTION:	45% (8.24 AC) MIN. OF TOTAL TREE CANOPY
PROPOSED RETENTION:	62% (11.37 AC) OF TOTAL TREE CANOPY

PLANT SCHEDULE L1-10

SYMBOL	CODE		BOTANICAL NAME	COMMON NAME	SPACING	SIZE	ROOT	CONDITION
CANOPY TREES								
	AT	9	ACER BUERGERIANUM 'STREETWISE'	STREETWISE TRIDENT MAPLE	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	AA	21	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	GT	4	GLEDITSIA TRIACANTHOS INERMIS	THORNLESS HONEY LOCUST	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	QH	24	QUERCUS LYRATA 'QLFTB'	HIGHBEAM® OVERCUP OAK	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	UJ	26	ULMUS AMERICANA 'JEFFERSON'	JEFFERSON AMERICAN ELM	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

JOSHUA LEWIS ROWLAND
REGISTERED
XVI
AGRICULTURE
COMMERCE
LANDSCAPE ARCHITECT
05/28/2025

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LANDSCAPE PLAN - ENLARGEMENT

SHEET NUMBER
L1-10

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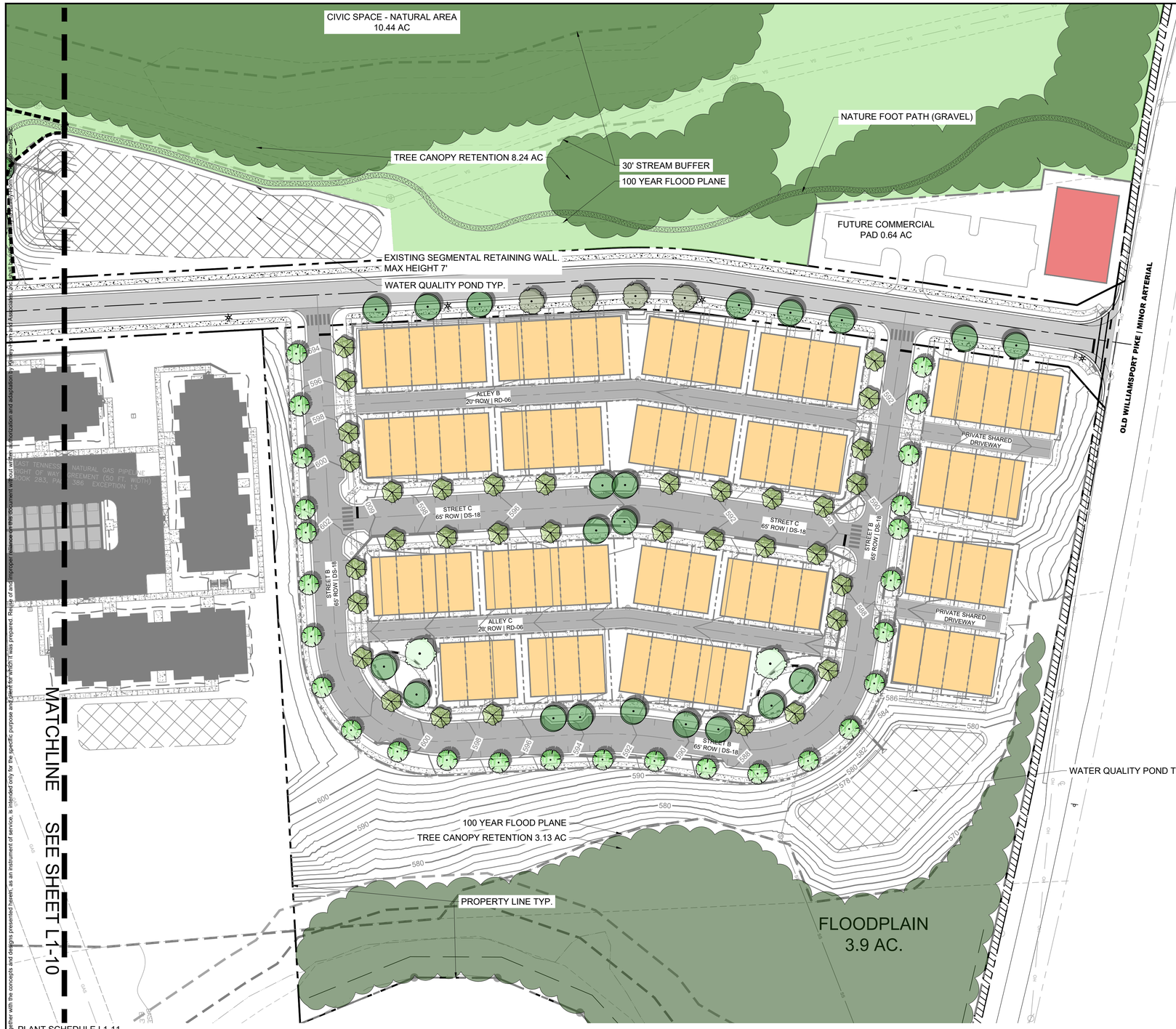

LANDSCAPE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE TOWNHOMES
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
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PLANT SCHEDULE L1-11

SYMBOL	CODE		BOTANICAL NAME	COMMON NAME	SPACING	SIZE	ROOT	CONDITION
CANOPY TREES								
	AT	4	ACER BUERGERIANUM 'STREETWISE'	STREETWISE TRIDENT MAPLE	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	AA	35	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	GT	2	GLEDITSIA TRIACANTHOS INERMIS	THORNLESS HONEY LOCUST	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	QH	27	QUERCUS LYRATA 'QLFTB'	HIGHBEAM® OVERCUP OAK	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	QV	11	QUERCUS VIRGINIANA 'JEFFERSON'	JEFFERSON AMERICAN ELM	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

JOSHUA LEWIS ROWLAND
REGISTERED
LANDSCAPE ARCHITECT
05/28/2025

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KIMLEY-HORN PROJECT NO.	118332003

LANDSCAPE PLAN - ENLARGEMENT

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L1-11

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GENERAL LANDSCAPE SPECIFICATIONS AND NOTES

1.01 SCOPE OF WORK

A. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS, AS INCLUDED IN THE PLANT LIST, AND AS HEREIN SPECIFIED.

B. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER.

C. THE CONTRACTOR SHALL CONTACT THE OWNER AND TENNESSEE ONE CALL AT (615) 351-1111, TWO (2) FULL BUSINESS DAYS PRIOR TO THE BEGINNING OF WORK.

D. THE CITY MUST APPROVE ALL WORK HOURS AND LANE CLOSURE REQUESTS AT LEAST TWO (2) FULL WORKING DAYS IN ADVANCE OF THE START OF ANY SUCH WORK ON A LOCATION BY LOCATION BASIS. THE INDIVIDUAL(S) INSTALLING THE MAINTENANCE OF TRAFFIC SETUP SHALL HAVE COMPLETED A TDOT APPROVED WORK ZONE TRAFFIC CONTROL TRAINING COURSE. DOCUMENTATION SHALL BE FURNISHED TO THE CITY AT THE PRE-CONSTRUCTION MEETING OR PRIOR TO START OF WORK.

E. ALL LANDSCAPE MATERIAL SHALL BE INSTALLED AND MAINTAINED IN A MANNER WHEREBY TRAFFIC CONTROL SIGNAGE AND DEVICES ARE VISIBLE TO MOTORISTS AND PEDESTRIANS.

1.02 PROTECTION OF EXISTING STRUCTURES

A. ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AND AT NO COST TO THE OWNER.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL NECESSARY BMP DEVICES ACCORDING TO TDOT, COUNTY, OR CITY STANDARDS THROUGH THE DURATION OF ALL CONSTRUCTION ACTIVITIES.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION. THE OWNER AND DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF ANY SUCH INFORMATION OR DATA, AND THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA, FOR LOCATING ALL UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THE COST OF COMPLIANCE WITH THIS SECTION WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

1.03 PROTECTION OF EXISTING PLANT MATERIALS OUTSIDE LIMIT OF WORK

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE, CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC. THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRIP-LINE AND SPILLING OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP-LINE. NO MATERIALS SHALL BE BURNED ON SITE. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/OR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF ONE HUNDRED DOLLARS ($100) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES. CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER.

1.04 MATERIALS

A. GENERAL

MATERIAL SAMPLES LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL, ON SITE OR AS DETERMINED BY THE LANDSCAPE ARCHITECT. UPON APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

MATERIAL	SAMPLE SIZE
MULCH	ONE (1) CUBIC FOOT
TOPSOIL MIX	ONE (1) CUBIC FOOT
PLANTS	ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY)

B. PLANT MATERIALS

1. PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS AS SET FORTH IN ANSI Z60.1-2014-AMERICAN STANDARD FOR NURSERY STOCK. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, SOUND, WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS. INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER. WHERE ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY WITH APPROVAL FROM OWNER OR LANDSCAPE ARCHITECT. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE LANDSCAPE ARCHITECT.
2. MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE GROUND OR ACROSS THE NORMAL SPREAD OF BRANCHES WITH THE PLANTS IN THEIR NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER. IF THE USE OF LARGER PLANTS IS APPROVED, THE ROOTBALL OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.
3. INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY; SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.

1.05 SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOIL MIX)

A. SOIL MIXTURE (PLANTING MEDIUM FOR PLANT PITS) SHALL CONSIST OF ⅓ LOOSE COMPOST (NO GREATER THAN 1" SIV), ⅓ PEAT AND ⅓ SAND, AS DESCRIBED BELOW.

B. TOPSOIL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT PITS SHALL BE FERTILE, FRIABLE, AND OF A LOAMY CHARACTER; REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER; FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER AND A PH BETWEEN 5.5 AND 7.0 - SUBMIT SAMPLE AND PH TESTING RESULTS FOR APPROVAL.

C. SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND. CONTRACTOR SHALL SUBMIT RESULTS OF SOIL TESTS FOR TOPSOIL AND SAND PROPOSED FOR APPROVAL BY THE OWNER.

D. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE, AT WHICH POINT THE CONTRACTOR SHALL CONTACT OWNER'S REPRESENTATIVE TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING.

E. CONTRACTOR TO SUBMIT SAMPLES OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.

1.06 WATER

A. WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC. IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.

** WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.*

1.07 FERTILIZER

A. CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED.

** FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.*

1.08 MULCH

A. MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A DEPTH OF THREE (3) INCHES FOR ALL PLANTINGS UNLESS OTHERWISE NOTED. MULCH AT ALL PLANTING BEDS SHALL BE TRIPLE SHREDDED HARDWOOD.

1.09 DIGGING AND HANDLING

A. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT.

B. BALLED AND BURLAPPED PLANTS (B&B) SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS SHALL NOT BE HANDLED BY STEMS.

C. EXCAVATION OF TREE PITS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB-BASES. ALL TREES SHALL BE PLANTED AS INDICATED ON DRAWINGS. COORDINATE WITH PLANTING DETAILS FOR EXACT DEPTH OF PLANTING SOIL.

1.10 CONTAINER GROWN STOCK

A. ALL TREES SPECIFIED SHALL BE BALL AND BURLAP, UNLESS OTHERWISE APPROVED BY LANDSCAPE ARCHITECT.

B. ALL SHRUB SPECIES SHALL BE CONTAINER GROWN.

C. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION.

D. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG ENOUGH FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.

E. PLANT ROOTS BOUND IN CONTAINERS ARE NOT ACCEPTABLE.

1.11 MATERIALS LIST

A. QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED FOR CLARIFICATION PRIOR TO BIDDING OR INSTALLATION. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE.

1.12 FINE GRADING

A. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN DISTURBED DURING CONSTRUCTION.

B. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH. CONTRACTOR SHALL FINE GRADE BY HAND AND/OR WITH ALL EQUIPMENT NECESSARY INCLUDING A GRADING TRACTOR WITH FRONT-END LOADER FOR TRANSPORTING SOIL WITHIN THE SITE.

C. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES, IF APPLICABLE.

1.13 PLANTING PROCEDURES

A. CLEANING UP BEFORE COMMENCING WORK: THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER DAILY. ALL MORTAR, CEMENT, AND TOXIC MATERIAL SHALL BE REMOVED FROM THE SURFACE OF ALL PLANT BEDS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL WHICH WILL IN ANY WAY ADVERSELY AFFECT THE PLANT GROWTH, CONTRACTOR SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.

B. SUBGRADE EXCAVATION: THE CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL LANDSCAPE PLANTING AREAS TO A MINIMUM DEPTH OF 36" AT TREES AND 18" AT SHRUBS AND PERENNIALS. CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISH GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36", AND DEEP EXCAVATION BY THE CONTRACTOR AND POSITIVE DRAINAGE CANNOT BE ACHIEVED, THE CONTRACTOR SHALL UTILIZE PLANTING DETAIL THAT ADDRESSES POOR DRAINAGE.

C. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CONTACT TENNESSEE ONE CALL AT (615) 351-1111 TO LOCATE ALL UTILITIES.

D. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS HEREIN SPECIFIED AND REQUIRED. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.

E. GENERAL: COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. CONFORM TO ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE. UPON ARRIVAL AT THE SITE, PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ON-SITE SHALL NOT REMAIN UNPLANTED OR APPROPRIATELY HEALED IN FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES WORKMANLIKE METHODS CUSTOMARY IN GOOD HORTICULTURAL PRACTICES SHALL BE EXERCISED.

F. THE WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.

G. ALL PLANTING PITS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH ANSI Z60.1-2014 - AMERICAN STANDARD FOR NURSERY STOCK, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, AND BACK FILLED WITH THE PREPARED PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION 1.05. TEST ALL TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW, FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMAN.

H. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES.

I. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION 1.05 OF THESE SPECIFICATIONS.

J. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACK FILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).

K. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. MATERIALS INSTALLED SHALL MEET MINIMUM SPECIMEN REQUIREMENTS OR QUANTITIES SHOW ON PLANS, WHICHEVER IS GREATER. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 12", REMOVE AND DISPOSE ALL DEBRIS. COORDINATE WITH PLANTING DETAILS FOR EXACT DEPTH. MIX TOP 4" OF THE PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION 1.05. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.

L. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAIVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE PROJECT LANDSCAPE ARCHITECT IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE PROJECT LANDSCAPE ARCHITECT IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.

M. HERBICIDE WEED CONTROL: ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S PRECAUTIONS AND SPECIFICATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER (AS ALLOWED BY JURISDICTIONAL AUTHORITY).

1.14 LAWN SODDING

A. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.

B. LAWN BED PREPARATION: ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS BY MEANS OF A SOD CUTTER TO A DEPTH OF THREE (3) INCHES, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE.

C. SOIL PREPARATION: PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY.

D. SODDING

1. THE CONTRACTOR SHALL SOD ALL DISTURBED AREAS WITHIN THE CONTRACT LIMITS NOT COVERED BY HARDSCAPE OR VEGETATIVE MATERIAL, UNLESS SPECIFICALLY NOTED OTHERWISE.
2. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.
3. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE.

E. LAWN MAINTENANCE

1. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS (LARGER THAN 12"X12") UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING RE-GRADING IF NECESSARY).
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD/LAWN UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.

1.15 CLEANUP

A. UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE BROOM-CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S REPRESENTATIVE.

1.16 PLANT MATERIAL MAINTENANCE

A. ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.

1.17 FINAL INSPECTION AND ACCEPTANCE OF WORK

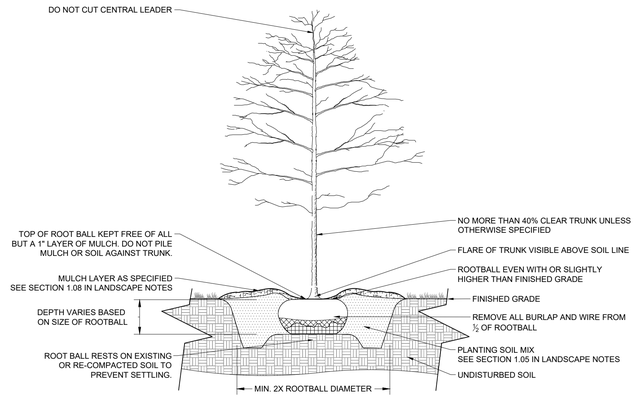
A. FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE LANDSCAPE ARCHITECT OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.

1.18 WARRANTY

A. THE LIFE AND SATISFACTORY CONDITION OF ALL PLANT MATERIAL INSTALLED (INCLUDING SOD) BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTIED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.

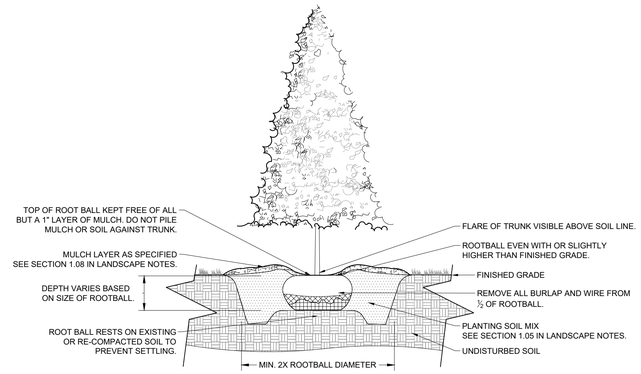
B. REPLACEMENT: ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION DURING THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED WITHIN TEN (10) DAYS OF NOTICE, OR BETWEEN SEPTEMBER-NOVEMBER, MARCH-MAY. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED, PLANTED AND MULCHED AS SPECIFIED AT NO ADDITIONAL COST TO THE OWNER.

C. IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE MAINTENANCE, THE CONTRACTOR IS ENCOURAGED TO VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE (1) YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER, AND SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH. IT IS SUGGESTED SUCH SITE VISITS SHALL BE CONDUCTED A MINIMUM OF ONCE PER MONTH FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ACCEPTANCE.



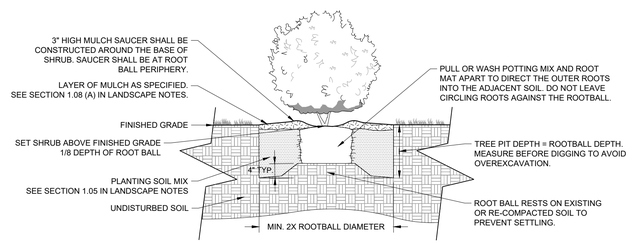
2 B&B TREE PLANTING

NOT TO SCALE



3 EVERGREEN TREE PLANTING

NOT TO SCALE



4 CONTAINER SHRUB PLANTING

NOT TO SCALE

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE ~~REFERENCED~~ TO THE NAVD 1988.

Kimley»Horn
10 Lea Avenue, Suite 400 Nashville, TN 37210
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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

JOSHUA LEWIS ROWLAND REGISTERED 331 LANDSCAPE ARCHITECT TENNESSEE

No.	REVISIONS	DATE	BY
1

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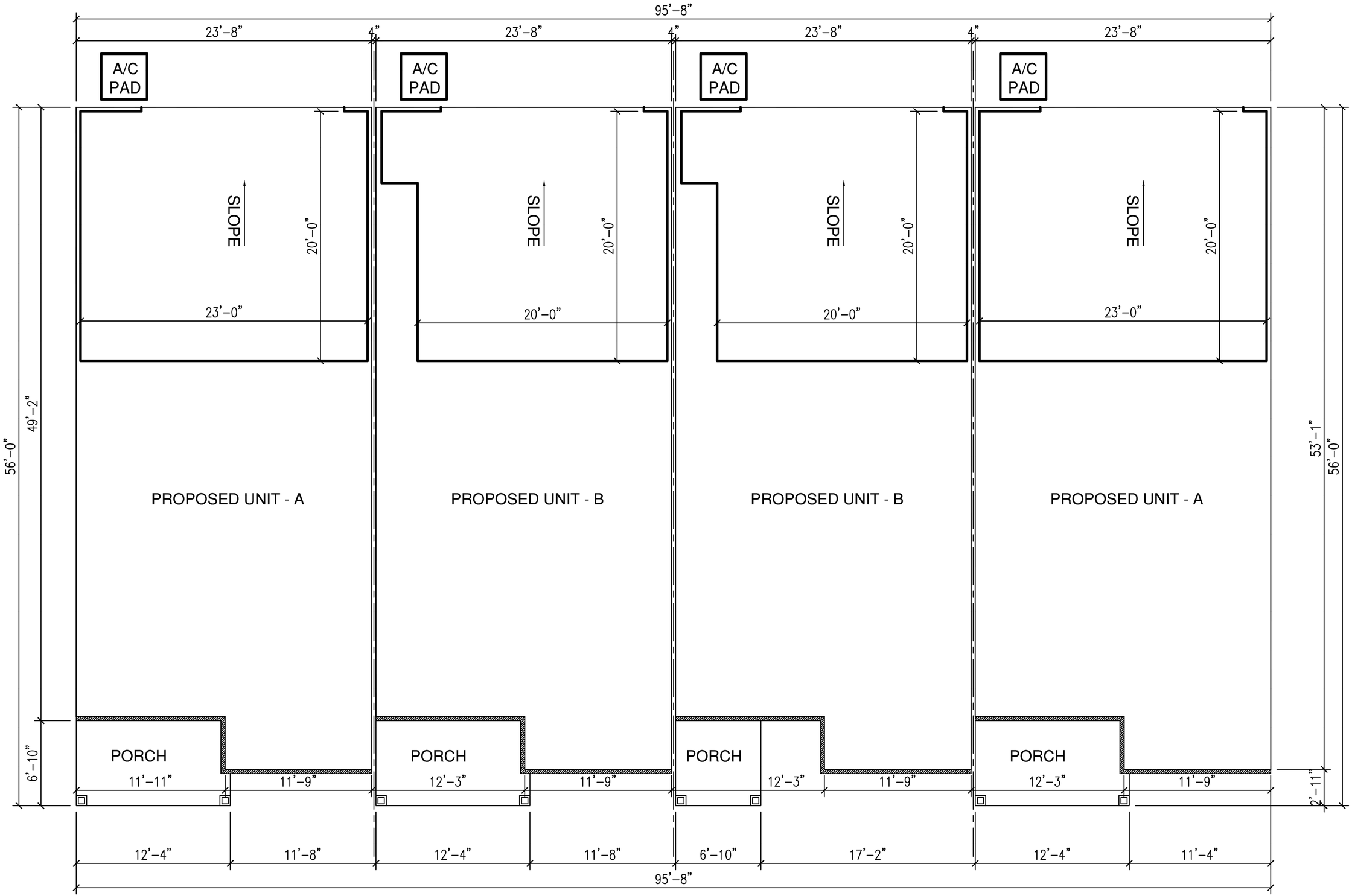

Building A - 4 Units

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

DRAFT
PRELIMINARY PLANS
FOR REVIEW ONLY

No.	REVISIONS	DATE	BY
1			
2			
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7			
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9			
10			

DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	05/28/2025
KIMLEY-HORN PROJECT NO.	118332003

ARCHITECTURAL FLOOR PLANS

SHEET NUMBER
A1-01

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Front Elevation



Right Elevation



Rear Elevation



Left Elevation

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

DRAFT

PRELIMINARY PLANS

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No.	REVISIONS	DATE	BY
1			
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DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	05/28/2025
KIMLEY-HORN PROJECT NO. 118332003	

ARCHITECTURAL ELEVATION LINEWORK

SHEET NUMBER

A1-02

Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\A1-00 ARCHITECTURAL ELEVATIONS.dwg A1-02 ARCHITECTURAL ELEVATIONS May 28, 2025 3:42pm by: william.irby

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

DRAFT

PRELIMINARY PLANS

FOR REVIEW ONLY

No.	REVISIONS	DATE	BY
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DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	05/28/2025

KIMLEY-HORN PROJECT NO. 118332003

ARCHITECTURAL ELEVATION RENDERING

SHEET NUMBER

A1-03

Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\A1-00 ARCHITECTURAL ELEVATIONS.dwg A1-03 ARCHITECTURAL ELEVATION - RENDERING May 28, 2025 3:42pm by: william.irby

Kimley»Horn

Staff Comment Response Letter

To:	City of Columbia Development Review Committee
From:	William Irby and Colton Dorris, PE
	Kimley-Horn and Associates, Inc.
Date:	May 28th, 2025
Subject:	Hampshire Pike Steadfast Mixed Use - Townhomes

Please see the below responses to comments on the Hampshire Pike Steadfast Mixed Use - Townhomes provided to Kimley-Horn on Tuesday, May 28th, 2025. The original comments are listed below with our responses listed in Red.

Planning

- Provide Clarification that pedestrian shed is within 800' of all units. Resubmittal shows a linear pedestrian shed with units not within the required radius
  Comment omitted per correspondence with Austin Brass.

- Provide page with detail of retaining wall. Note cladding requirements for a CD-4 district.
  Retaining wall with brick cladding precedent detail with note that requires all brick to cladding to match proposed architecture (Sheet C2-10). Since the proposed retaining wall max height is 7' an Ameristar fence has been specified to be installed on top.

- Landscaping required (street trees) for townhomes that have been introduced along platted connector road at NE quadrant of property.
  Street trees added in landscape strip between BOC and edge of sidewalk due to utility restriction is front setback of units.

- Note commercial will be constructed under standards of a CD-4 district with ZO 4400.
  Driveway width requirement note changed to Site Layout Notes on sheet C2-00. Commercial construction standard note added to site layout notes.

SITE DEVELOPMENT PLAN SUBMITTAL

HAMPSHIRE PIKE TOWNHOMES

1242 HAMPSHIRE PIKE
COLUMBIA, TN

INITIAL SUBMITTAL: 4/21/2025
RESUBMITTAL 5/19/2025

EXISTING PROPERTY SUMMARY

PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN
MAP AND PARCEL ID:	MAP 089, PARCEL 04103 000
U.S. FEMA FIRM PANEL:	47119C0280E DATED 04/16/2007
EXISTING ZONING: EXISTING LAND USE:	CD-4 VACANT

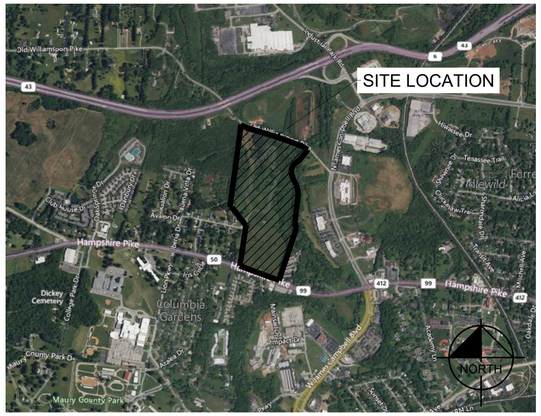
GENERAL DEVELOPMENT NOTES

1. ALL DEVELOPMENT WITHIN THE BOUNDARIES OF THIS PLAN MEETS THE REQUIREMENTS OF ANSI 117.1, 2009 EDITION AND THE FAIR HOUSING ACT.

   U.S. Justice Department:
   http://www.justice.gov/crt/housinig/fairhousing/about_fairhousingact.htm

2. PART OF THE SUBJECT PROPERTY IS LOCATED IN AREAS DESIGNATED AS "ZONE AE" (AREAS DETERMINED TO BE OUTSIDE THE 0.2 % ANNUAL CHANCE FLOODPLAIN) AS NOTED ON THE CURRENT FEMA FIRM COMMUNITY PANEL 47119C0280E.

3. PART OF THE SUBJECT PROPERTY IS LOCATED IN AREAS DESIGNATED AS "ZONE X" (AREAS DETERMINED TO BE OF MINIMAL FLOOD HAZARD) AS NOTED ON THE CURRENT FEMA FIRM COMMUNITY PANEL 47119C0280E



VICINITY MAP
NOT TO SCALE

COUNCIL DISTRICT WARD 4
COUNCIL MEMBER KENNY MARSHALL
CITY OF COLUMBIA
MAURY COUNTY, TN

SHEET INDEX

SHEET	SHEET TITLE
C0-00	COVER
--	SURVEY
C1-00	EXISTING CONDITIONS
C2-00	SITE LAYOUT - OVERALL
C2-10	SITE LAYOUT - ENLARGEMENT
C2-11	SITE LAYOUT - ENLARGEMENT
C2-20	PARCEL TABLES
C3-00	PEDESTRIAN CORRIDOR EXHIBIT
C4-00	GRADING AND DRAINAGE PLAN - OVERALL
C4-10	GRADING AND DRAINAGE PLAN - ENLARGEMENT
C4-20	GRADING AND DRAINAGE PLAN - ENLARGEMENT
C5-00	ROADWAY SECTIONS
C6-10	UTILITY PLAN - ENLARGEMENT
C6-20	UTILITY PLAN - ENLARGEMENT
L1-00	LANDSCAPE PLAN
L1-10	LANDSCAPE PLAN - ENLARGEMENT
L1-11	LANDSCAPE PLAN - ENLARGEMENT
L1-50	LANDSCAPE DETAILS
A1-01	ARCHITECTURAL FLOOR PLANS
A1-02	ARCHITECTURAL ELEVATION LINEWORK
A1-03	ARCHITECTURAL ELEVATION RENDERING

PROJECT DESIGN TEAM

CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
10 LEA AVENUE, SUITE 400
NASHVILLE, TENNESSEE 37210
PHONE: (629) 401.4768
CONTACT: COLTON DORRIS, P.E.

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATES, INC.
10 LEA AVENUE, SUITE 400
NASHVILLE, TN 37210
PHONE: (615) 823-2209
CONTACT: JOSH ROWLAND, PLA

SURVEY
WILSON & ASSOCIATES, P.C.
108 BEASLEY DRIVE
FRANKLIN, TN 37064
PHONE: (615) 794-2275
CONTACT: JOEY C. WILSON II, PLS

OWNER / DEVELOPER

STEADFAST COMPANIES
18100 VON KARMAN AVE., SUITE 500
IRVINE, CALIFORNIA 92612
PHONE: 949.518.2001
CONTACT: CHASE EMERY

PLANS PREPARED BY

Kimley»Horn

10 Lea Avenue, Suite 400, Nashville, TN 37210
Main: (615) 564-2701 | www.kimley-horn.com

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PLAN REVISIONS

REVISION NO.	DATE	REMARKS

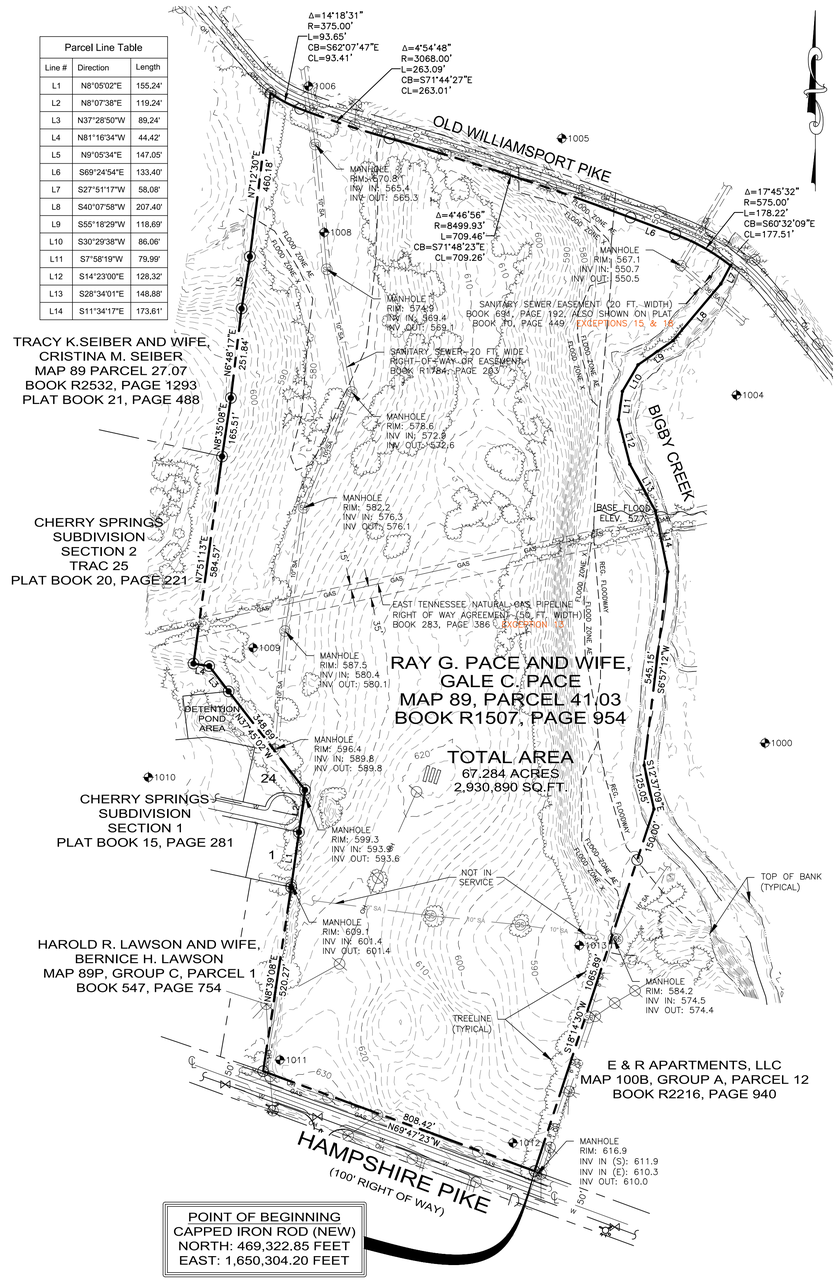
FILE NUMBER	SHEET NUMBER	TOTAL SHEETS
118332003	C0-00	21

ENGINEER'S SEAL

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 129446
STATE OF TENNESSEE
05/19/2025

811 Know what's below. Call before you dig.

Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\C0-00 COVER.dwg C0-00 COVER May 19, 2025 3:10pm by: Jacob.Patterson



SCHEDULE B-II EXCEPTIONS:

1. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I-REQUIREMENTS ARE MET. NOT A SURVEY MATTER
2. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT SHOWN BY THE PUBLIC RECORDS. NONE OBSERVED DURING SURVEY
3. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND. NONE OBSERVED DURING SURVEY
4. EASEMENTS, OR CLAIMS OF EASEMENTS, NOT SHOWN BY THE PUBLIC RECORDS. NONE OBSERVED DURING SURVEY
5. ANY LIEN, OR RIGHT TO A LIEN, FOR SERVICES, LABOR, OR MATERIAL HERETOFORE OR HEREAFTER FURNISHED, IMPOSED BY LAW, AND NOT SHOWN BY THE PUBLIC RECORDS. NOT A SURVEY MATTER
6. TAXES OR SPECIAL ASSESSMENTS WHICH ARE NOT SHOWN AS EXISTING LIENS BY THE PUBLIC RECORDS. NOT A SURVEY MATTER
7. IF IMPROVEMENTS ARE COMPLETED AFTER JANUARY 1 OF ANY YEAR, AND THE LAW, PURSUANT TO TCA 67-5-509 AND TCA 67-5-603, REQUIRES SUPPLEMENTAL ASSESSMENT FOR THE YEAR IN WHICH IMPROVEMENTS ARE COMPLETED, THE COMPANY ASSUMES NO LIABILITY FOR TAXES ASSESSED BY CORRECTION OR SUPPLEMENTAL ASSESSMENT. NOT A SURVEY MATTER
8. TAXES FOR THE YEAR 2021, A LIEN NOT YET DUE AND PAYABLE. NOT A SURVEY MATTER
9. SEWER EASEMENTS AS SET FORTH IN DEED OF RECORD IN BOOK R2188, PAGE 249, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT THE SURVEYED PROPERTY
10. TITLE TO THAT PORTION OF THE SUBJECT PROPERTY WITHIN THE BOUNDS OF THE RIGHT OF WAY FOR OLD WILLIAMSPORT PIKE AND N JAMES M. CAMPBELL BOULEVARD. OLD WILLIAMSPORT PIKE RIGHT OF WAY IS SHOWN CORRECTLY ON SURVEY. JAMES M. CAMPBELL BOULEVARD DOES NOT AFFECT SURVEYED PROPERTY.
11. EASEMENT TO SOUTHERN CITY POWER COMPANY OF RECORD IN BOOK 149, PAGE 365, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. THE LOCATION OF THIS EASEMENT IS POORLY DESCRIBED; HOWEVER ALL EXISTING OVERHEAD LINES ARE SHOWN ON THE SURVEY.
12. GRANT OF TRANSMISSION LINE EASEMENTS OF RECORD IN BOOK 232, PAGE 575, BOOK 232, PAGE 577, AND BOOK 232, PAGE 597, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
13. RIGHT OF WAY AGREEMENT TO EAST TENNESSEE NATURAL GAS COMPANY OF RECORD IN BOOK 283, PAGE 386, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. AFFECTS PROPERTY AS SHOWN ON SURVEY
14. RIGHT OF WAY AND EASEMENT TO MAURY COUNTY OF RECORD IN BOOK 425, PAGE 91 AND BOOK 427, PAGE 473, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
15. SEWER EASEMENT OF RECORD IN BOOK 691, PAGE 192, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. AFFECTS PROPERTY AS SHOWN ON SURVEY
16. INSPECTION AND MAINTENANCE AGREEMENT OF PRIVATE STORMWATER MANAGEMENT FACILITIES OF RECORD IN BOOK R2254, PAGE 125, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
17. SEWER EASEMENTS OF RECORD IN BOOK 375, PAGE 243; BOOK 375, PAGE 245; BOOK 383, PAGE 7; BOOK 383, PAGE 26; AND BOOK 383, PAGE 28, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
18. SUBJECT TO ALL MATTERS SHOWN ON THE PLAN OF RECORD IN PLAT BOOK P10, PAGE 449, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. AFFECTS PROPERTY AS SHOWN ON SURVEY
19. APPLICATION FOR GREENBELT ASSESSMENT - AGRICULTURAL OF RECORD IN BOOK R2211, PAGE 848, IN THE REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. NOT A SURVEY MATTER
20. THE LAND HAS BEEN CLASSIFIED AS GREENBELT FOR ASSESSMENT, LEVY AND COLLECTION PURPOSES AND MAY BE SUBJECTED TO SUBSTANTIAL ROLLBACK TAXES AS DEFINED IN TENNESSEE CODE ANNOTATED, SECTION 67-5-1001. NOT A SURVEY MATTER
21. WATER (RIPARIAN RIGHTS) - BLANKET MATTERS - BIGBY CREEK IS ACCURATELY SHOWN ON SURVEY - NOT PLOTTABLE MATTERS

(a) THE RIGHTS OF UPPER AND LOWER RIPARIAN OWNERS TO THE FREE AND UNOBSTRUCTED FLOW OF THE WATER OF LITTLE BIGBY CREEK WITHOUT DIMINUTION OR POLLUTION AND THE CONSEQUENCE OF ANY PAST OR FUTURE CHANGE IN THE LOCATION OF LITTLE BIGBY CREEK.

(b) RIPARIAN RIGHTS INCIDENT TO PREMISES.

(c) RIGHTS OF UPPER AND LOWER RIPARIAN OWNERS IN AND TO THE WATERS OF LITTLE BIGBY CREEK CROSSING OR ADJOINING THE PROPERTY, AND THE NATURAL FLOW THEREOF, FREE FROM DIMINUTION OR POLLUTION.

(d) ANY ENLARGEMENT OR LOSS OF LAND BY REASON OF AVULSION, ACCRETION, OR RELICTION, AND QUESTIONS OF OWNERSHIP CAUSED BY SUBSEQUENT REBUILDING OR REFORMATION OF LAND.

22. ACREAGE CONTENT OF THE SUBJECT PROPERTY IS NOT HEREBY INSURED. REFERENCE TO ACREAGE IS LEFT IN THE DESCRIPTION MERELY FOR CONVENIENCE IN IDENTIFYING THE TRACT. AREAS NOTED ON SURVEY ARE ACCURATE AND CORRECT.

LEGAL DESCRIPTION (FROM SURVEY)

A PARCEL OF LAND LYING IN MAURY COUNTY, TENNESSEE, JUST EAST OF COLUMBIA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOW:

BEGINNING AT A CAPPED IRON ROD SET IN THE NORTHERN MARGIN OF HAMPSHIRE PIKE (STATE ROUTE 50/99) AT THE SOUTHWESTERN CORNER OF THE E & R APARTMENTS, LLC PROPERTY, BOOK R2216, PAGE 940, REGISTER'S OFFICE MAURY COUNTY (HEREAFTER ROMC), SAID ROD BEING LOCATED AT TENNESSEE STATE PLANE COORDINATES NORTH: 469,322.85 FEET AND EAST: 1,650,304.20 FEET, NAD83(2011); THENCE ALONG THE NORTHERN MARGIN OF SAID HAMPSHIRE PIKE, RUNNING PARALLEL TO AND 50 FEET FROM THE CENTERLINE OF SAME, NORTH 69°47'23" WEST, 808.42 FEET TO A CAPPED IRON ROD SET AT THE SOUTHEASTERN CORNER OF THE HAROLD R. LAWSON AND WIFE, BERNICE H. LAWSON PROPERTY, BOOK 547, PAGE 754, ROMC; THENCE LEAVING SAID HAMPSHIRE PIKE AND ALONG THE EASTERN BOUNDARY OF SAID LAWSON PROPERTY, NORTH 8°39'08" EAST, 520.27 FEET TO A CAPPED IRON ROD FOUND AT THE SOUTHEASTERN CORNER OF LOT 1 IN THE CHERRY SPRINGS SUBDIVISION, SECTION 1, PLAT BOOK 15, PAGE 281, ROMC; THENCE ALONG THE EASTERN AND NORTHEASTERN BOUNDARY OF SAID SUBDIVISION SECTION THE FOLLOWING THREE (3) CALLS:

NORTH 8°05'02" EAST, 155.24 FEET TO AN IRON ROD FOUND;

NORTH 8°07'38" EAST, 119.24 FEET TO A CAPPED IRON ROD FOUND;

AND NORTH 37°45'02" WEST, 348.69 FEET TO A CAPPED IRON ROD FOUND AT THE EASTERNMOST CORNER OF TRACT 25 IN THE CHERRY SPRINGS SUBDIVISION, SECTION 2, PLAT BOOK 20, PAGE 221, ROMC; THENCE ALONG THE EASTERN BOUNDARY OF SAID TRACT 25 THE FOLLOWING THREE (3) CALLS:

NORTH 37°28'50" WEST, 89.24 FEET TO AN IRON ROD FOUND;

NORTH 81°16'34" WEST, 44.42 FEET TO AN IRON ROD FOUND;

AND NORTH 7°51'13" EAST, 584.57 FEET TO AN IRON PIPE FOUND AT THE NORTHEASTERN CORNER OF SAID TRACT 25 AND THE SOUTHEASTERN CORNER OF THE TRACY K. SEIBER AND WIFE, CRISTINA M. SEIBER PROPERTY, BOOK R2532, PAGE 1293, ROMC; THENCE ALONG THE EASTERN BOUNDARY OF SAID SEIBER PROPERTY THE FOLLOWING FOUR (4) CALLS:

NORTH 8°35'08" EAST, 165.51 FEET TO AN IRON PIPE FOUND;

NORTH 6°48'17" EAST, 251.84 FEET TO AN IRON PIPE FOUND;

NORTH 9°05'34" EAST, 147.05 FEET TO AN IRON PIPE FOUND;

AND NORTH 7°12'30" EAST, 460.18 FEET TO A CAPPED IRON ROD SET IN THE SOUTHERN MARGIN OF OLD WILLIAMSPORT PIKE AND A POINT ON THE ARC OF A CIRCULAR CURVE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 375.00 FEET, TO WHICH A RADIAL LINE BEARS SOUTH 35°01'29" WEST; THENCE ALONG THE SOUTHERN MARGIN OF SAID OLD WILLIAMSPORT PIKE, RUNNING PARALLEL TO AND 25 FEET FROM THE CENTERLINE OF SAME, THROUGH A CENTRAL ANGLE OF 14°18'31" AN ARC DISTANCE OF 93.65 FEET (CHORD: SOUTH 62°07'47" EAST, 93.41 FEET) TO A CAPPED IRON ROD SET AT A POINT OF COMPOUND CURVATURE, SAID CURVE IS CONCAVE NORTHERLY, HAVING A RADIUS OF 3,068.00 FEET; THENCE CONTINUING ALONG THE NORTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 4°54'48" AN ARC DISTANCE OF 263.09 FEET (CHORD: SOUTH 71°44'27" EAST, 263.01 FEET) TO A CAPPED IRON ROD SET AT A POINT OF REVERSE CURVATURE, SAID CURVE IS CONCAVE SOUTHERLY, HAVING A RADIUS OF 8,499.93 FEET; THENCE CONTINUING ALONG THE NORTHERN MARGIN OF SAID WILLIAMSPORT PIKE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 4°46'56" AN ARC DISTANCE OF 709.46 FEET (CHORD: NORTH 71°48'23" EAST, 709.26 FEET) TO A CAPPED IRON ROD SET AT THE POINT OF TANGENT; THENCE CONTINUING ALONG THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE SOUTH 69°24'54" EAST, 133.40 FEET TO A CAPPED IRON ROD SET AT THE POINT OF CURVATURE OF A CIRCULAR CURVE, CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 575.00 FEET; THENCE CONTINUING ALONG THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 17°45'32" AN ARC DISTANCE OF 178.22 FEET (CHORD: SOUTH 60°32'09" EAST, 177.51 FEET) TO THE INTERSECTION OF THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND THE CENTER OF BIGBY CREEK; THENCE LEAVING SAID WILLIAMSPORT PIKE AND RUNNING ALONG THE CENTER OF BIGBY CREEK, APPROXIMATED HEREIN BY A SERIES OF STRAIGHT LINES, THE FOLLOWING TEN (10) CALLS:

SOUTH 27°51'17" WEST, 58.08 FEET;

SOUTH 40°07'58" WEST, 207.40 FEET;

SOUTH 55°18'29" WEST, 118.69 FEET;

SOUTH 30°29'38" WEST, 86.06 FEET;

SOUTH 7°58'19" WEST, 79.99 FEET;

SOUTH 14°23'00" EAST, 128.32 FEET;

SOUTH 28°34'01" EAST, 148.88 FEET;

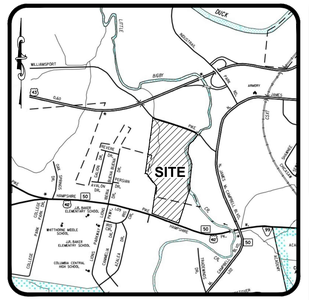
SOUTH 11°34'17" EAST, 173.61 FEET;

SOUTH 6°57'12" WEST, 545.15 FEET;

AND SOUTH 12°37'09" EAST, 125.05 FEET TO THE NORTHWESTERN CORNER OF THE AFOREMENTIONED E & R APARTMENTS, LLC PROPERTY; THENCE LEAVING SAID BIGBY CREEK AND ALONG THE WESTERN BOUNDARY OF SAID E & R APARTMENTS, LLC PROPERTY, SOUTH 18°14'30" WEST (PASSING THROUGH A CAPPED IRON ROD SET AT 150.00 FEET) A TOTAL DISTANCE OF 1,065.89 FEET TO THE POINT OF BEGINNING; CONTAINING 67.284 ACRES OR 2,930,890 SQUARE FEET, AND BEING THE ALL OF THE RAY G. PACE AND WIFE, GALE C. PACE PROPERTY, BOOK R1507, PAGE 954, ROMC, AND A PORTION OF PARCEL 41.03 ON MAURY COUNTY TAX MAP 89.

GENERAL NOTES:

1. THE PURPOSE OF THIS SURVEY IS: ALTA/NSPS LAND TITLE SURVEY
2. THE ADDRESS OF THIS PROPERTY IS: HAMPSHIRE PIKE, COLUMBIA, TN 38401
3. SUBJECT PROPERTY IS PRESENTLY IDENTIFIED AS PART OF PARCEL 41.03, ON MAURY COUNTY TAX MAP 89. SAID PARCEL IS FURTHER IDENTIFIED AS ALL OF THE PROPERTY DESCRIBED IN DEED BOOK R1507, PAGE 954, REGISTERS OFFICE OF MAURY COUNTY, TENNESSEE.
4. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY.
5. EVERY DOCUMENT OF RECORD REVIEWED AND CONSIDERED AS A PART OF THIS SURVEY IS NOTED HEREON. ONLY THE DOCUMENTS NOTED HEREON WERE SUPPLIED TO THE SURVEYOR. OTHER DOCUMENTS OF RECORD MAY EXIST THAT WOULD AFFECT THIS PARCEL.
6. THE WORD "CERTIFY" IS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THE FACTS OF THE SURVEY AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESSED OR IMPLIED. DECLARATION IS MADE TO THE SPECIFIALLY NAMED PARTIES AND IS NOT TRANSFERABLE TO ADDITIONAL PERSONS, INSTITUTIONS OR SUBSEQUENT OWNERS OF THE SUBJECT PROPERTY.
7. THIS SURVEY WAS CONDUCTED WITH THE BENEFIT OF A TITLE REPORT ISSUED BY CHICAGO TITLE INSURANCE COMPANY, COMMITMENT NO. 20211350CTN, DATED AUGUST 25, 2021, AT 8:00AM AND IS SUBJECT TO ITS FINDINGS. THERE MAY BE OTHER IMPROVEMENTS OR ENCUMBRANCES THAT AFFECT THE PROPERTY SINCE THE ISSUANCE OF THE REPORT.
8. BEARINGS SHOWN HEREON ARE BASED ON THE TENNESSEE STATE PLANE COORDINATE SYSTEM NAD83(2011). ELEVATIONS SHOWN HEREON ARE BASED ON NAVD88(GEOID03).
9. ALL CORNERS SHOWN ON THE FACE OF THE SURVEY ARE MARKED EITHER FOUND OR SET. ANY MISSING CORNERS ARE MARKED WITH AN IRON ROD AND CAP BEARING THIS SURVEYORS COMPANY NAME.
10. UTILITIES SHOWN HEREON WERE COMPILED FROM VISIBLE STRUCTURES AT THE SITE, INFORMATION FROM PLANS, AND PHYSICAL MARKINGS AND COMBINED TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. IN ADDITION, IN SOME JURISDICTIONS, 811 OR OTHER SIMILAR UTILITY LOCATE REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN INCOMPLETE RESPONSE. THIS SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THIS SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. VERIFICATION OF EXISTENCE, LOCATIONS, AND DEPTH SHOULD BE MADE BEFORE CONDUCTING ANY EXCAVATION IN THE VICINITY OF THE UTILITY.
11. PORTIONS OF THIS PROPERTY ARE LYING WITHIN ZONE "AE" AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NOS. 47119C0165E AND 47119C0280E, WITH EFFECTIVE DATES OF APRIL 16, 2007, WHICH MAKE UP A PART OF THE NATIONAL FLOOD INSURANCE PROGRAM. BASE FLOOD ELEVATION FOR THIS PROPERTY IS 577 FEET. ZONE "AE" IS AN AREA WHERE BASE FLOOD ELEVATIONS HAVE BEEN DETERMINED. ZONE "X" IS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. THE FLOOD ZONES AND FLOOD WAY SHOWN ARE SCALED FROM MAPS.
12. I HEREBY CERTIFY THAT THIS IS A CATEGORY IV SURVEY AND WAS CONDUCTED IN ACCORDANCE WITH RULE 0820-03.11 (GLOBAL POSITION SYSTEMS SURVEYS) ACCORDING TO THE CURRENT TENNESSEE MINIMUM STANDARDS OF PRACTICE AS PROMULGATED BY THE TENNESSEE STATE BOARD OF EXAMINERS FOR LAND SURVEYORS. THIS SURVEY WAS CONDUCTED WITH DUAL-FREQUENCY RTK GPS BASED ON AN OPUS-CORRECTED AUTONOMOUS SOLUTION UTILIZING A BASE AND ROVER.
    a. POSITIONAL ACCURACY: 0.08'
    b. DATE OF SURVEY: 09/29/21
    c. HORIZONTAL ZONE/DATUM: TN-4100/NAD83(2011) - TENNESSEE STATE PLANE COORDINATES.
    d. OCCUPATIONS FOR CONTROL POINTS ARE 3 MINUTES EACH, SIDE SHOTS ARE 3 SECONDS.
    e. VERTICAL DATUM: NAVD88 (GEOID03, GRID 7 REVISED)
    f. NO COMBINED GRID FACTORS WERE USED.
13. THE CONTOURS SHOWN HEREON WERE DERIVED FROM LIDAR DATA [POST PROCESSED KINEMATIC (PPK) USING STATE PLANE COORDINATES AND VERTICAL DATUM NAVD88 (GEOID03], AND INCLUDE SEVERAL DIFFERENT LAND-COVER CLASSES WHICH HAVE BEEN COMPILED TO MEET OR EXCEED THE NATIONAL MAP ACCURACY STANDARDS (NMAS) OF A 2 FOOT EQUIVALENT CONTOUR INTERVAL AT 95 PERCENT CONFIDENCE LEVEL. THIS MEETS OR EXCEEDS A VERTICAL ACCURACY EQUAL TO NATIONAL STANDARDS FOR SPATIAL DATA ACCURACY (NSSDA) = 1.9600*.61(RMSE(Z)) (NORMALLY DISTRIBUTED ERROR) = 1.19 FT, AS SET FORTH BY THE AMERICAN SOCIETY FOR PHOTOGRAMMETRY AND REMOTE SENSING (ASPRS) VERSION 1.0. RANDOM SHOTS TAKEN ACROSS THE SITE YIELD AN ACTUAL VERTICAL ACCURACY OF +/- 0.12 FT.
14. THERE WAS NO EVIDENCE OF RECENT EARTH MOVING AT THE TIME OF SURVEY.
15. THERE ARE NO KNOWN CHANGES TO THE STREET ROW AT THE TIME OF SURVEY.
16. THERE WAS NO EVIDENCE OF DELINEATED WETLANDS AT THE TIME OF SURVEY.
17. THERE WAS NO EVIDENCE OF ENCROACHMENTS AT THE TIME OF SURVEY.
18. THIS IS A VACANT TRACT OF LAND.



VICINITY MAP
NOT TO SCALE

CERTIFICATION OF SURVEY FOR ALTA/NSPS LAND TITLE SURVEYS

TO: (I) STEADFAST DEVELOPMENT HOLDING, INC., AND (II) CHICAGO TITLE INSURANCE COMPANY.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 8, 11(OBSERVED), 13, 14, 16, 17, 18, AND 19, OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON 9/29/21.

JOEY C. WILSON II, PE, RLS
TN PE NO. 106976 10/01/21
TN RLS NO. 2089

CONTROL TABLE

1000	N 470,519.69'	E 1,650,948.26'	EL 579.36'	IP (BASE)
1004	N 471,492.35'	E 1,650,868.58'	EL 565.23'	TARGET IP
1005	N 472,209.82'	E 1,650,380.55'	EL 566.50'	TARGET IP
1006	N 472,356.06'	E 1,649,672.27'	EL 569.39'	TARGET IP
1008	N 471,947.16'	E 1,649,716.44'	EL 573.51'	TARGET IP
1009	N 470,785.61'	E 1,649,517.39'	EL 587.61'	TARGET IP
1010	N 470,423.81'	E 1,649,224.57'	EL 616.98'	TARGET IP
1011	N 469633.46'	E 1,649,592.57'	EL 627.59'	TARGET IP
1012	N 469,401.83'	E 1,650,243.63'	EL 611.36'	TARGET IP
1013	N 469,953.75'	E 1,650,429.46'	EL 584.70'	TARGET IP

PROJECT CONTROL: TENNESSEE STATE PLANE COORDINATES. NAD83(2011), NAVD88(GEOID03 GRID 7 REVISED). NO DATUM ADJUSTMENT.

200 0 100 200 400
GRAPHIC SCALE: 1" = 200'

LEGEND

IRON PIN FOUND	BENCH MARK	ELECTRIC METER-BOX	EVERGREEN TREE	UNDERGROUND ELEC	UGE
IRON PIN SET	WATER METER	ELECTRIC MH	DECIDUOUS TREE	OVERHEAD ELEC	OH
FENCE POST FOUND	WATER VALVE	LIGHT POLE	HANDICAP PARKING	GAS	GAS
FENCE POST SET	FIRE HYDRANT	UTILITY POLE	SIGN	COMMUNICATIONS	COM
CONC. MON. FOUND	SANITARY SEWER MH	GUY ANCHOR	TURN LANE MARKING	BOUNDARY	
CONC. MON. SET	SANITARY SEWER CO	COMMUNICATION BOX	MAIL BOX	CENTERLINE	
PK FOUND	AREA DRAIN	COMMUNICATION MH	CEMETERY	FENCE	X
PK SET	CURB INLET	GAS METER	SANITARY SEWER 8" SA	WATER FEATURE	
NON MONUMENTED POINT	STORM MH	GAS VALVE	WATER 4" W	TREE LINE	

NO.	DATE	COMMENT

108 Beasley Drive
Franklin, TN
37064
615.794.2275

WILSON&ASSOCIATES, P.C.
Engineering/Surveying/Environmental

JOEY C. WILSON II
REGISTERED LAND SURVEYOR
TENNESSEE
NO. 2089
10/01/21

ALTA/NSPS LAND TITLE SURVEY
MAP 89, PARCEL 41.03 (PART)
HAMPSHIRE PIKE - COLUMBIA
MAURY COUNTY, TENNESSEE
FOR: STEADFAST DEVELOPMENT HOLDINGS, INC.

DRAWN BY:	JEC
APPVD. BY:	JCW II
DATE	10/01/2021
PROJ. No.	21-1752
SCALE:	1" = 200'
SHEET No.	1 OF 1

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Drawing name: K:\NSH_LDEV\116332003 - steadfast hampshire pike\4-CAD\hampshire pike townhomes\plansheets\C1-00 EXISTING CONDITIONS.dwg C1-00 EXISTING CONDITIONS May 19, 2025 3:16pm by Jacob Patterson


HAMPSHIRE PIKE
(100' RIGHT OF WAY)
POINT OF BEGINNING
CAPPED IRON ROD (NEW)
NORTH: 469,322.85 FEET
EAST: 1,650,304.20 FEET
E & R APARTMENTS, LLC.
MAP 100B, GROUP A, PARCEL 12
BOOK R2216, PAGE 940
HAROLD R. LAWSON AND WIFE,
BERNICE H. LAWSON
MAP 89P, GROUP C, PARCEL 1
BOOK 547, PAGE 754
CHERRY SPRINGS
SUBDIVISION
SECTION 1
PLAT BOOK 15, PAGE 281
CHERRY SPRINGS
SUBDIVISION
SECTION 2
TRACT B
PLAT BOOK 21, PAGE 22
TRACY K SEIBER AND WIFE,
CRISTYN M. SEIBER
MAP 89P, PARCEL 2.07
BOOK R2824, PAGE 1293
PLAT BOOK P1, PAGE 488
RAY G. PACE AND WIFE,
GALE C. PACE
MAP 89, PARCEL 41.03
BOOK R1507, PAGE 954
TOTAL AREA
67.284 ACRES
2,930,850 SQ.FT.
FLOODPLAIN
4.2 AC.
FLOODPLAIN
3.9 AC.
FLOODPLAIN
4.7 AC.
TEMPORARY SEDIMENT BASIN FROM PREVIOUS DEVELOPMENT
BIGBY CREEK
OLD WILLIAMSPORT PIKE
OLD WILLIAMSPORT PIKE
TOP OF BANK (TYPICAL)
EAST TENNESSEE NATURAL GAS CO.
BOOK 383, PAGE 386
EXCEPTION 13
BOOK R2824, PAGE 1293
EXCEPTIONS 1 & 2
BOOK 383, PAGE 386
EXCEPTIONS 1 & 2

HATCHED AREA INCLUDED IN PREVIOUS PRELIMINARY PLAT / DEVELOPMENT PLAN APPROVALS, NOT INCLUDED IN THE OVERALL DEVELOPMENT PLAN CALCULATIONS ASSOCIATED WITH THIS DEVELOPMENT APPLICATION, INCLUDING THE MULTIFAMILY PARCEL, 11 SINGLE FAMILY LOTS, STREETS A, B, AND C

CULDESAC FOR WOODLAND CROSSINGS TO BE REMOVED ONCE CONNECTION HAS BEEN MADE

PROPOSED SEGMENTAL RETAINING WALL. MAX HEIGHT 7'

1300' PLAYGROUND COVERAGE

PROPERTY LINE TYP.

FUTURE COMMERCIAL PAD 1.55 AC

FUTURE COMMERCIAL PAD 1.09 AC

FUTURE COMMERCIAL PAD 1.19 AC

HAMPSHIRE PIKE | PRINCIPAL ARTERIAL

22-0131 - HAMPSHIRE PIKE DEVELOPMENT - PRELIMINARY PLAT

SEE SHEET C2-10 FOR ENLARGEMENT

SEE SHEET C2-11 FOR ENLARGEMENT

CIVIC SPACE - GREEN 0.53 AC

DEDICATED CIVIC SPACE PARKING

CIVIC SPACE - NATURAL AREA 10.44 AC

NATURE FOOT PATH (GRAVEL)

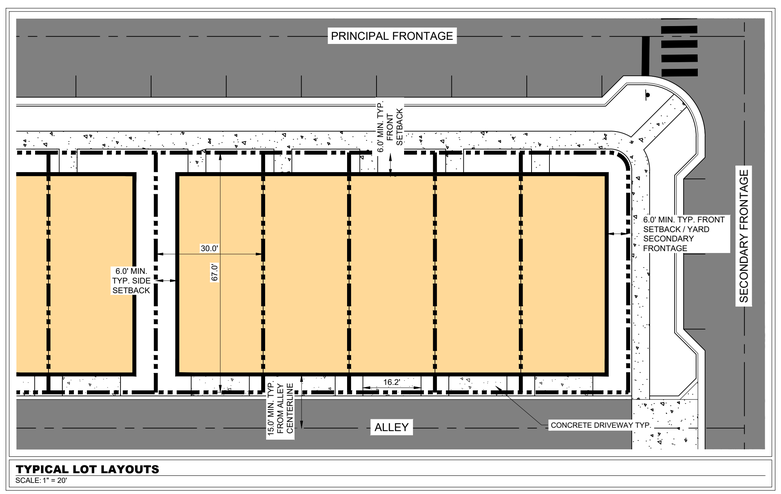
EXISTING SEGMENTAL RETAINING WALL. MAX HEIGHT 7'

WATER QUALITY POND TYP.

FUTURE COMMERCIAL PAD 0.64 AC

OLD WILLIAMSPORT PIKE | MINOR ARTERIAL

HATCHED AREA EXCLUDED FROM ALL AREA, ENFRONTMENT, AND DENSITY TOTALS



TYPICAL LOT LAYOUTS
SCALE:1" = 20'

SITE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE TOWNHOMES
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	TOWN HOMES
SITE AREA (AC):	32.60 AC
SITE AREA (SF):	1,420,129 SF
DENSITY	
PROPOSED:	
TOWNHOMES (24' x 56' TYP.):	143 DU
*SF LOTS (66' x 115' TYP.):	11 DU
TOTAL UNITS:	**154 DU**
**DENSITY:	4.39 UNITS/ACRE
MIN. LOT SIZE:	1,608 SF
UNITS FRONTING PEDESTRIAN PATH:	12 UNITS (8%)
TYPICAL LOT SETBACKS:	
MIN. FRONT SETBACK:	6 FT
MIN. SIDE SETBACK:	6 FT
MIN. REAR SETBACK:	15 FT FROM ALLEY C.L.
REQUIRED CIVIC USE SPACE:	5% OF TOTAL AREA 1.63 AC
PROVIDED CIVIC USE SPACE:	34% OF TOTAL AREA 10.97 AC
CIVIC SPACE LIST:	
GREEN:	0.53 AC
NATURAL AREA:	10.44 AC
REQUIRED PARKING:	
TOWNHOMES	286 SPACES (2 PER DU)
SF LOTS:	22 SPACES (2 PER DU)
CIVIC SPACE:	4 SPACES (1 PER 5000 SF)
TOTAL REQUIRED:	**312 SPACES**
PROPOSED PARKING:	
GARAGE PARKING:	308 SPACES
DRIVEWAY PARKING:	22 SPACES
TOTAL DU PARKING:	**330 SPACES**
ON-STREET PARKING:	161 SPACES
TOTAL PARKING PROVIDED:	**491 SPACES**

*SF LOTS INCLUDED IN 22-0131 - HAMPSHIRE PIKE MIXED USE DEVELOPMENT - PRELIMINARY PLAT
**SF LOTS EXCLUDED FROM DENSITY AND FRONTAGE CALCULATIONS

DRIVEWAY WIDTH REQUIREMENT

ALL DRIVEWAYS FOR TOWNHOMES ARE REQUIRED TO BE A MINIMUM WIDTH OF 10'. ALL PROPOSED TOWNHOME DRIVEWAYS MEET THIS STANDARD.

THOROUGHFARE ENFRONTMENT

TOTAL BUILDING ENFRONTMENT:	4,032 LF*
RESIDENTIAL ENFRONTMENT: (143 DU x 24 LF)	3,432 LF (85%)
COMMERCIAL ENFRONTMENT:	600 LF (15%)
CIVIC SPACE ENFRONTMENT GREEN ENFRONTMENT	345 LF

*REQUIRED FRONTAGE MIX: 85% MAX RESIDENTIAL, 15% MIN COMMERCIAL

ENFRONTMENT LINETYPE LEGEND

- COMMERCIAL ENFRONTMENT
- RESIDENTIAL ENFRONTMENT
- CIVIC SPACE ENFRONTMENT

COORDINATES ARE NAD83. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 50 100 200

NORTH

Kimley»Horn
10 Lea Avenue, Suite 400 Nashville, TN 37210
Main: 615.564.2701 | www.kimley-horn.com

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
No. 139848
STATE OF TENNESSEE
05/19/2025

No.	REVISIONS	DATE	BY
1			
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DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	05/19/2025
KIMLEY-HORN PROJECT NO.	118332003

SITE LAYOUT - OVERALL

SHEET NUMBER
C2-00

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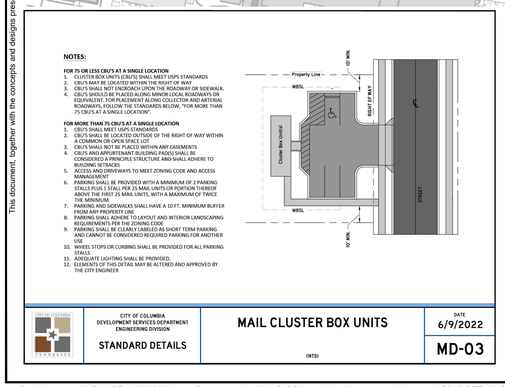
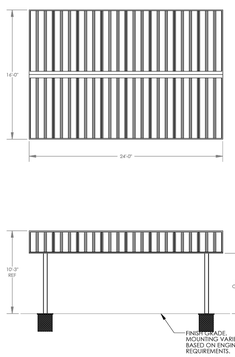
Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\C2-00 SITE LAYOUT - OVERALL.dwg C2-00 SITE LAYOUT - OVERALL May 19, 2025 3:10pm by: Jacob.Patterson







01 POLIGON SHELTER 16' X 24'
NTS
DETAIL-FILE

PRODUCT SPECIFICATIONS

MANUFACTURER: **KOMPAN**
PRODUCT: **YELLOWSTONE WITH SHADE**
SIZE: **23'7"X17'10"X15'9"**
COLOR: **TBD**
OPTIONS: **N/A**
DETAIL NOTE: **INSTALL PER MANUFACTURER SPECIFICATIONS**
QUANTITY: **1**

CONTACT: **615.426.8760**
WEBSITE: **https://www.kompan.com/en/us**

02 PLAY STRUCTURE
NTS
DETAIL-FILE

SITE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE TOWNHOMES
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
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SITE AREA (SF):	1,420,129 SF
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**SF LOTS EXCLUDED FROM DENSITY AND FRONTAGE CALCULATIONS

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIR
REGISTERED ENGINEER
AGRICULTURE
ARCHITECTURE
COMMERCE
No. 129048
STATE OF TENNESSEE
05/19/2025

No.	REVISIONS	DATE	BY
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DESIGNED BY: ___
DRAWN BY: ___
CHECKED BY: ___
DATE: 05/19/2025
KIMLEY-HORN PROJECT NO. 118332003

SITE LAYOUT - ENLARGEMENT

SHEET NUMBER
C2-10

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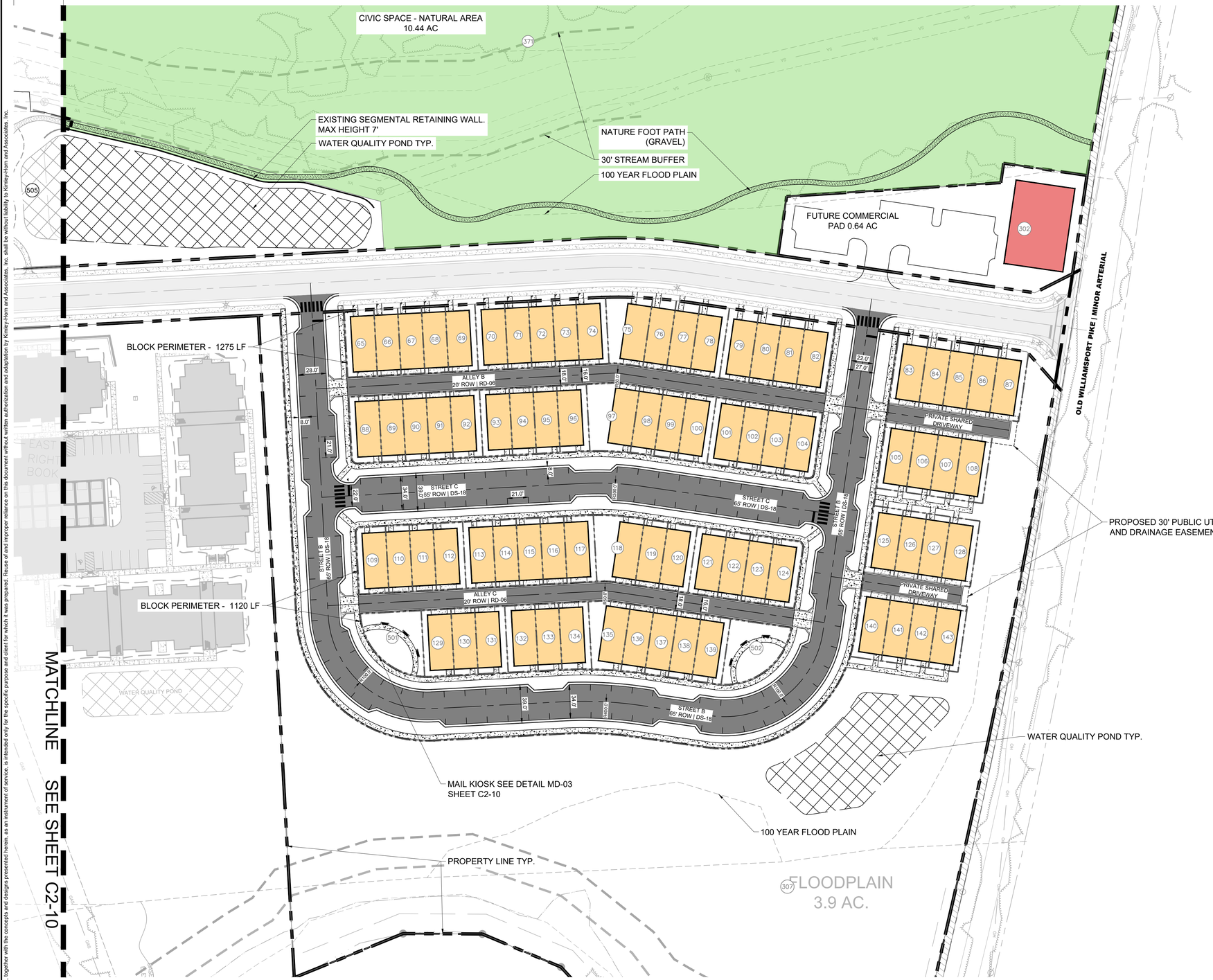

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GRAPHIC SCALE IN FEET
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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
ARCHITECTURE
COMMERCE
No. 139035
STATE OF TENNESSEE
05/19/2025

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KIMLEY-HORN PROJECT NO. 118332003

SITE LAYOUT - ENLARGEMENT

SHEET NUMBER
C2-11

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PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.
1	0.05	2217
2	0.04	1931
3	0.06	2430
4	0.07	2882
5	0.04	1931
6	0.04	1946
7	0.06	2433
8	0.06	2516
9	0.04	1944
10	0.04	1944
11	0.06	2430
12	0.06	2732
13	0.04	1946
14	0.04	1946
15	0.06	2816
16	0.06	2431
17	0.04	1944
18	0.04	1944
19	0.06	2430
20	0.06	2430

PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.
21	0.04	1944
22	0.04	1944
23	0.04	1944
24	0.07	3244
30	0.07	2973
31	0.04	1953
32	0.04	1948
33	0.04	1949
34	0.07	2839
35	0.07	2964
36	0.04	1945
37	0.04	1943
38	0.04	1948
39	0.06	2694
40	0.06	2430
41	0.04	1944
42	0.04	1944
43	0.04	1944
44	0.06	2430
45	0.07	3014

PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.
46	0.04	1947
47	0.04	1944
48	0.04	1947
49	0.07	3019
50	0.06	2430
51	0.04	1944
52	0.04	1944
53	0.04	1944
54	0.06	2430
55	0.06	2430
56	0.04	1944
57	0.04	1944
58	0.04	1944
65	0.05	2010
66	0.04	1608
67	0.04	1608
68	0.04	1608
69	0.05	2010
70	0.05	2010
71	0.04	1608

PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.
72	0.04	1608
73	0.04	1608
74	0.05	2009
75	0.06	2781
76	0.04	1690
77	0.04	1704
78	0.05	2130
79	0.05	2130
80	0.04	1704
81	0.04	1704
82	0.05	2130
83	0.05	2130
84	0.04	1704
85	0.04	1704
86	0.04	1704
87	0.05	2129
88	0.05	2005
89	0.04	1608
90	0.04	1608
91	0.04	1608

PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.
92	0.05	2010
93	0.05	2010
94	0.04	1608
95	0.04	1608
96	0.05	2010
97	0.07	3229
98	0.04	1610
99	0.04	1608
100	0.05	2010
101	0.05	2010
102	0.04	1608
103	0.04	1608
104	0.05	2005
105	0.05	2010
106	0.04	1608
107	0.04	1608
108	0.05	2010
109	0.05	2005
110	0.04	1608
111	0.04	1608

PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.
112	0.05	2010
113	0.05	2010
114	0.04	1608
115	0.04	1608
116	0.04	1608
117	0.05	2009
118	0.07	3021
119	0.04	1608
120	0.05	2010
121	0.05	2010
122	0.04	1608
123	0.04	1608
124	0.05	2005
125	0.05	2010
126	0.04	1608
127	0.04	1608
128	0.05	2010
129	0.05	2009
130	0.04	1606
131	0.05	2031

PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.
132	0.05	2035
133	0.04	1607
134	0.05	2020
135	0.06	2481
136	0.04	1614
137	0.04	1608
138	0.04	1608
139	0.05	2009
140	0.05	2021
141	0.04	1608
142	0.04	1608
143	0.05	2010
200	0.31	13685
201	0.33	14351
202	0.38	16470
203	0.29	12467
204	0.25	10831
300	1.55	67509
302	0.64	27678
303	1.19	51985

PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.
304	1.09	47304
305	24.84	1081843
371	10.43	454299
400	4.32	188089
500	0.05	1992
501	0.07	3136
502	0.07	3143

COORDINATES ARE NAD83.
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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 139035
STATE OF TENNESSEE
05/19/2025

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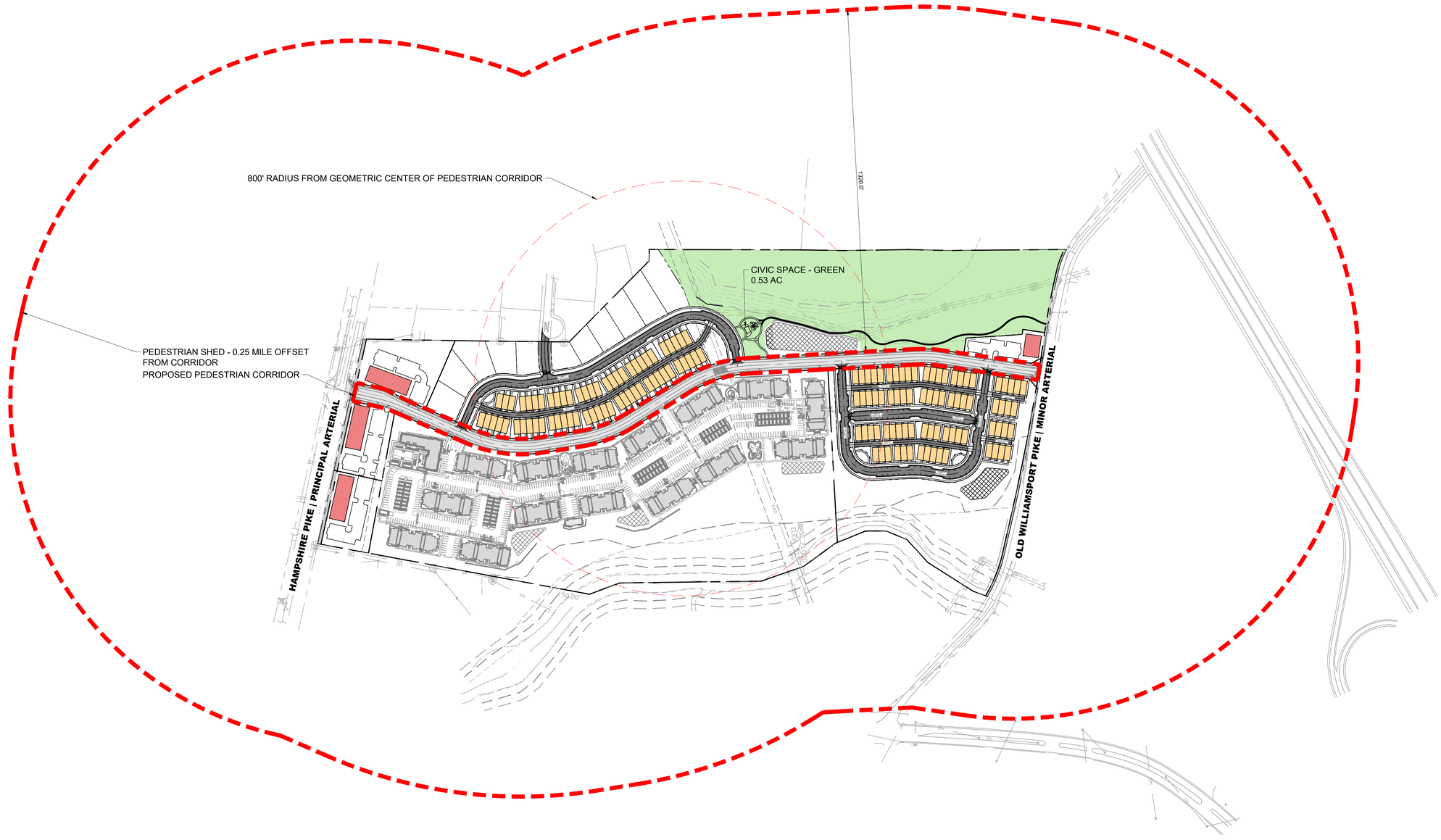
DRAWN BY: ___
CHECKED BY: ___
DATE: 05/19/2025
KIMLEY-HORN PROJECT NO. 118332003

PARCEL TABLES

SHEET NUMBER
C2-20



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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
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COMMERCE
No. 139698
STATE OF TENNESSEE
05/19/2025

No.	REVISIONS	DATE	BY
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DESIGNED BY:	WSI
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KIMLEY-HORN PROJECT NO. 118332003

PEDESTRIAN CORRIDOR EXHIBIT

SHEET NUMBER
C3-00

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Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\C3-00 PEDESTRIAN SHED EXHIBIT - OVERALL.dwg C3-00 PEDESTRIAN CORRIDOR EXHIBIT May 19, 2025 3:11pm by: Jacob.Patterson

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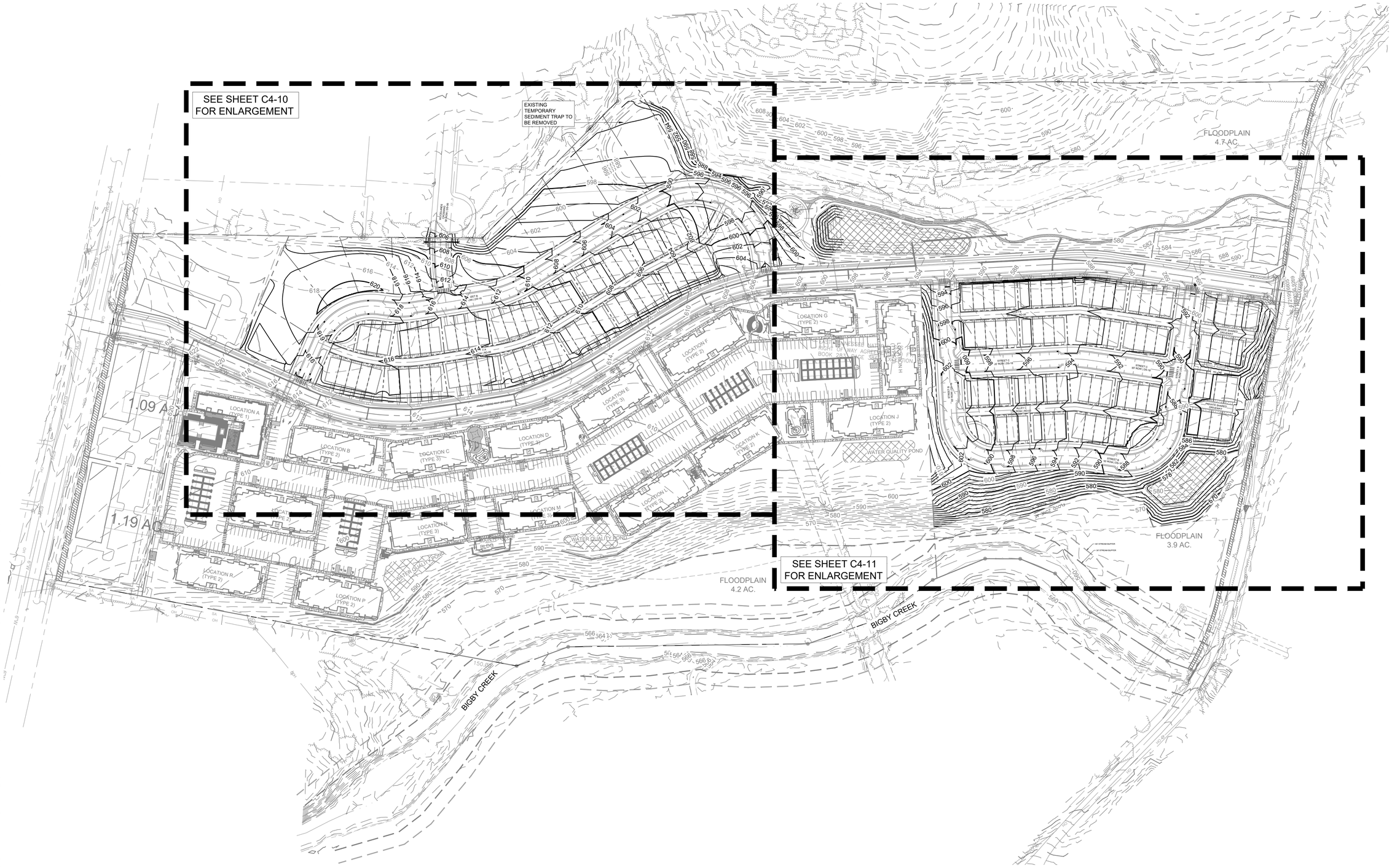

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 139441
STATE OF TENNESSEE
05/19/2025

No.	REVISIONS	DATE	BY
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DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	05/19/2025
KIMLEY-HORN PROJECT NO.	118332003

GRADING AND DRAINAGE PLAN - OVERALL

SHEET NUMBER
C4-00

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EXISTING TEMPORARY SEDIMENT TRAP TO BE REMOVED

CHERRY SPRINGS SUBDIVISION SECTION 1 PLAT BOOK 15, PAGE 281

ON AND WIFE, LAWSON C, PARCEL 1 AGE 754

MANHOLE RIM: 599.3 INV IN: 593.9 OUT: 593.6

WOODLANDS CROSSING 50' ROW | DS-06

MANHOLE RIM: 609.1 INV IN: 601.4 INV OUT: 601.4

STREET B 50' ROW | DS-18

ALLEY A 20' ROW | RD-06

AVELY RIDGE WAY (60' ROW)

MANHOLE RIM: 587.5 INV IN: 580.4 INV OUT: SMALL

MANHOLE RIM: 582.2 INV IN: 576.3 INV OUT: 576.1

MATCHLINE SEE SHEET C2-11

LOCATION A (TYPE 1)

LOCATION B (TYPE 2)

LOCATION C (TYPE 3)

LOCATION D (TYPE 3)

LOCATION E (TYPE 3)

LOCATION F (TYPE 3)

LOCATION K (TYPE 3)

EAST TENNESSEE RIGHT OF WAY BOOK 283, P.

SITE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE TOWNHOMES
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
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TOTAL PARKING PROVIDED:	**491 SPACES**

*SF LOTS INCLUDED IN 22-0131 - HAMPSHIRE PIKE MIXED USE DEVELOPMENT - PRELIMINARY PLAT
**SF LOTS EXCLUDED FROM DENSITY AND FRONTAGE CALCULATIONS

UTILITY NOTES

1. WATER, SEWER, AND POWER UTILITY PROVIDERS ARE ABLE TO SERVE THE SITE. ANY IMPROVEMENTS NEEDED ARE LISTED IN AVAILABILITY LETTERS INCLUDED IN THIS SUBMITTAL.

FEMA FLOOD NOTES

1. FIRM PANEL: 47119C0280E & 47119C0165E
2. EFFECTIVE DATE: 4/16/2007

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

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10 Lea Avenue, Suite 400 Nashville, TN 37210
Main: 615.564.2701 | www.kimley-horn.com
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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 131111
STATE OF TENNESSEE
05/19/2025

No.	REVISIONS	DATE	BY
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DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	05/19/2025
KIMLEY-HORN PROJECT NO.	118332003

GRADING AND DRAINAGE PLAN - ENLARGEMENT

SHEET NUMBER
C4-10



SITE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE TOWNHOMES
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	TOWN HOMES
SITE AREA (AC):	32.60 AC
SITE AREA (SF):	1,420,129 SF
DENSITY	
PROPOSED:	
TOWNHOMES (24' x 56' TYP.):	143 DU
*SF LOTS (66' x 115' TYP.):	11 DU
TOTAL UNITS:	**154 DU**
**DENSITY:	4.39 UNITS/ACRE
MIN. LOT SIZE:	1,608 SF
UNITS FRONTING PEDESTRIAN PATH:	12 UNITS (8%)
TYPICAL LOT SETBACKS:	
MIN. FRONT SETBACK:	6 FT
MIN. SIDE SETBACK:	6 FT
MIN. REAR SETBACK:	15 FT FROM ALLEY C.L.
REQUIRED CIVIC USE SPACE:	5% OF TOTAL AREA 1.63 AC
PROVIDED CIVIC USE SPACE:	34% OF TOTAL AREA 10.97 AC
CIVIC SPACE LIST:	
GREEN:	0.53 AC
NATURAL AREA:	10.44 AC
REQUIRED PARKING:	
TOWNHOMES	286 SPACES (2 PER DU)
SF LOTS:	22 SPACES (2 PER DU)
CIVIC SPACE:	4 SPACES (1 PER 5000 SF)
TOTAL REQUIRED:	**312 SPACES**
PROPOSED PARKING:	
GARAGE PARKING:	308 SPACES
DRIVEWAY PARKING:	22 SPACES
TOTAL DU PARKING:	**330 SPACES**
ON-STREET PARKING:	161 SPACES
TOTAL PARKING PROVIDED:	**491 SPACES**

*SF LOTS INCLUDED IN 22-0131 - HAMPSHIRE PIKE MIXED USE DEVELOPMENT - PRELIMINARY PLAT
**SF LOTS EXCLUDED FROM DENSITY AND FRONTAGE CALCULATIONS

UTILITY NOTES

1. WATER, SEWER, AND POWER UTILITY PROVIDERS ARE ABLE TO SERVE THE SITE. ANY IMPROVEMENTS NEEDED ARE LISTED IN AVAILABILITY LETTERS INCLUDED IN THIS SUBMITTAL.

FEMA FLOOD NOTES

1. FIRM PANEL: 47119C0280E & 47119C0165E
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GRAPHIC SCALE IN FEET
0 25 50 100

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

COLTON L. DOBBINS
REGISTERED ENGINEER
AGRICULTURE
No. 139555
STATE OF TENNESSEE
05/19/2025

No.	REVISIONS	DATE	BY
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DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	05/19/2025
KIMLEY-HORN PROJECT NO.	118332003

GRADING AND DRAINAGE PLAN - ENLARGEMENT

SHEET NUMBER
C4-20

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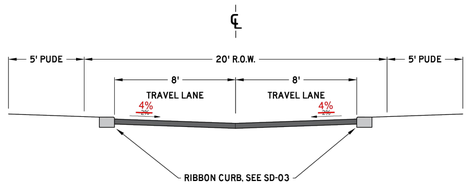
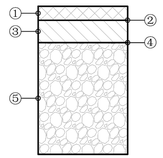


PAVEMENT SCHEDULE	
①	SURFACE @ 1.5" THICK 411-0110 ASPHALT CONCRETE MIX (PG64-22) (ACS) GRADING D (SURFACE), OR 307-0110 ASPHALT CONCRETE MIX (PG64-22) (ACS) GRADING C-W (SURFACE)
②	TACK COAT (GENERAL USE) 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) 10.05 - 0.10 GAL/SY)
③	BIT. BINDER @ 2" THICK 307-0108 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HW) GRADING B-M2
④	PRIME COAT 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) (0.30-0.35 GAL/SY) 402-02 AGGREGATE FOR COVER MATERIAL (PC) (8-12 LB/SY)
⑤	MINERAL AGGREGATE BASE @ 8" THICK 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D



NOTES:

1. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED
2. DIMENSIONS REFLECT A MINIMUM STANDARD
3. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA TENNESSEE

CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

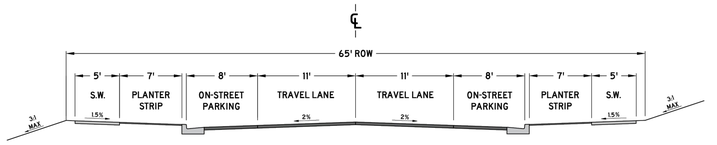
STANDARD DETAILS

ALLEY

(NTS)

DATE
6/9/2022

RD-06



NOTES:

1. ONLY PERMITTED WITHIN THE APPLICABLE ZONING DISTRICTS
2. ONLY PERMITTED ON MINOR LOCAL AND MAJOR LOCAL ROADWAY CLASSIFICATIONS
3. PAVEMENT SECTION SHALL FOLLOW THE CORRESPONDING ROADWAY CLASSIFICATION'S STANDARD DETAIL
4. CURB AND GUTTER, SEE SD-01
5. EXTRUDED CURB, SEE SD-02
6. DECORATIVE LIGHT BASES SHALL BE BETWEEN 18" AND 24" BEHIND THE BACK OF CURB.
7. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED
8. DIMENSIONS REFLECT A MINIMUM STANDARD
9. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA TENNESSEE

CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

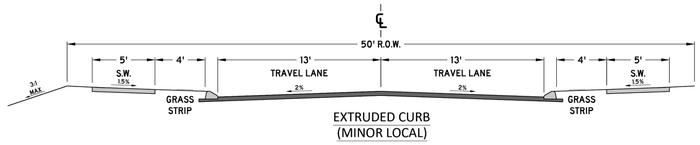
STANDARD DETAILS

**CHARACTER DISTRICT STREET
SUBURBAN NEIGHBORHOOD
PARALLEL PARKING BOTH SIDES**

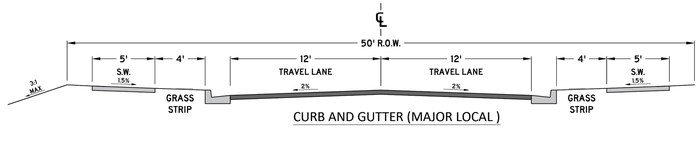
(NTS)

DATE
7/1/2024

DS-10



EXTRUDED CURB
(MINOR LOCAL)



CURB AND GUTTER (MAJOR LOCAL)

NOTES:

1. ONLY PERMITTED WITHIN THE APPLICABLE ZONING DISTRICTS
2. ONLY PERMITTED ON MINOR LOCAL AND MAJOR LOCAL ROADWAY CLASSIFICATIONS
3. PAVEMENT SECTION SHALL FOLLOW THE CORRESPONDING ROADWAY CLASSIFICATION'S STANDARD DETAIL
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5. EXTRUDED CURB, SEE SD-02
6. DECORATIVE LIGHT BASES SHALL BE BETWEEN 18" AND 24" BEHIND THE BACK OF CURB.
7. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED
8. DIMENSIONS REFLECT A MINIMUM STANDARD
9. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA TENNESSEE

CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

STANDARD DETAILS

**CHARACTER DISTRICT STREET
LARGE LOT NEIGHBORHOOD**

(NTS)

DATE
7/1/2024

DS-06

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DOBBINS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 139935
STATE OF TENNESSEE
05/19/2025

No.	REVISIONS	DATE	BY
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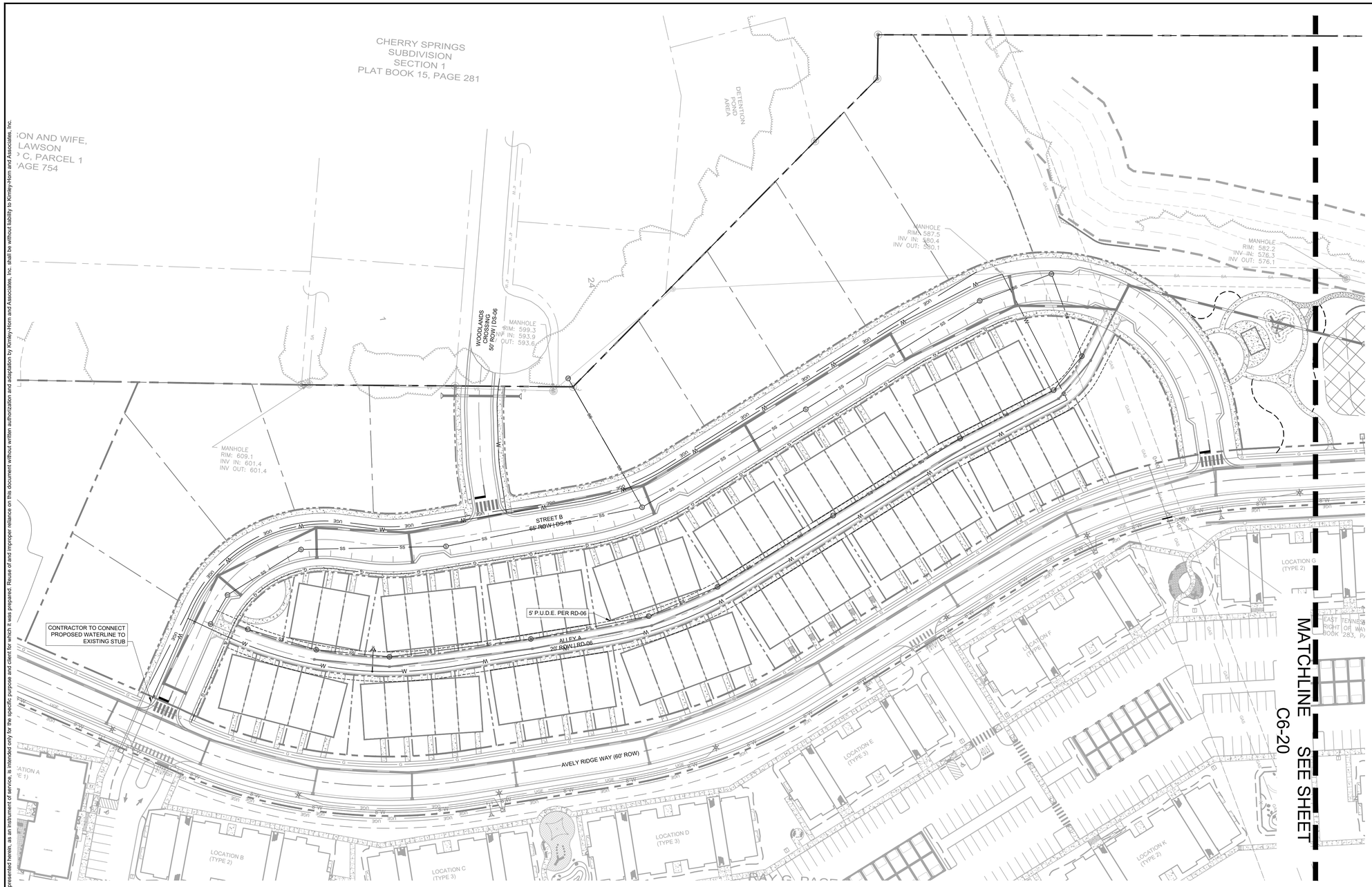
DESIGNED BY: ___
DRAWN BY: ___
CHECKED BY: ___
DATE: 05/19/2025
KIMLEY-HORN PROJECT NO. 118332003

ROADWAY SECTIONS

SHEET NUMBER
C5-00



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ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 120056
STATE OF TENNESSEE
05/19/2025

No.	REVISIONS	DATE	BY
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DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	05/19/2025

KIMLEY-HORN PROJECT NO. 118332003

UTILITY PLAN - ENLARGEMENT

SHEET NUMBER
C6-10

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Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\C6-10 UTILITY PLAN - ENLARGEMENT.dwg C6-10 UTILITY PLAN - ENLARGEMENT May 19, 2025 3:13pm by: Jacob.Patterson

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GRAPHIC SCALE IN FEET
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COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

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DESIGNED BY: WSB
DRAWN BY: CLD
CHECKED BY: WSB
DATE: 05/19/2025
KIMLEY»HORN PROJECT NO. 116332003

UTILITY PLAN - ENLARGEMENT
SHEET NUMBER C6-20

STATE OF TENNESSEE
COLTON L. THOMPSON
REGISTERED ENGINEER
055-23-22529

HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

Kimley»Horn
10 Lea Avenue, Suite 400 Nashville, TN 37210
Main: 615.564.2701 | www.kimley-horn.com
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LANDSCAPE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE TOWNHOMES
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	X
SITE AREA (AC):	32.60
BUILDING AREA (SF):	#050
BUILDING PERMIT:	#091
GRADING PERMIT:	#092

LANDSCAPE REQUIREMENTS

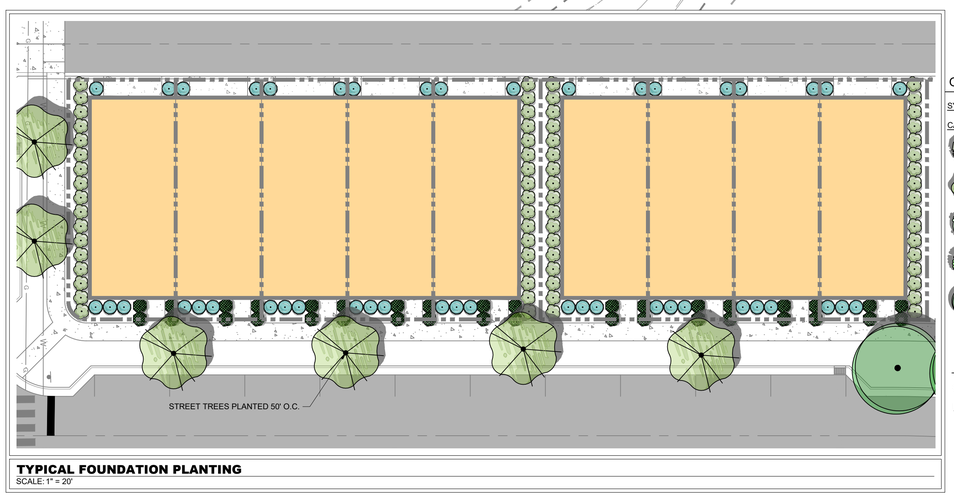
REQUIRED BUFFERS:
LANDSCAPE BUFFERS ARE NOT REQUIRED.

STREET TREE REQUIRMENT:
STREET TREES TO BE PLANTED 50 LF ON CENTER WITH EVEN SPACING.

TREE CANOPY COVER RETENTION

EXISTING TREE CANOPY:	+/- 56% (18.32 AC) OF TOTAL DEVELOPMENT
REQUIRED RETENTION:	45% (8.24 AC) MIN. OF TOTAL TREE CANOPY
PROPOSED RETENTION:	62% (11.37 AC) OF TOTAL TREE CANOPY





TYPICAL FOUNDATION PLANTING
SCALE: 1" = 20'

OVERALL PLANT SCHEDULE

SYMBOL	CODE		BOTANICAL NAME	COMMON NAME	SPACING	SIZE	ROOT	CONDITION
CANOPY TREES								
	AT	9	ACER BUERGERIANUM 'STREETWISE'	STREETWISE TRIDENT MAPLE	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	AA	56	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	GT	6	GLEDITSIA TRIACANTHOS INERMIS	THORNLESS HONEY LOCUST	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	QH	51	QUERCUS LYRATA 'QLFTB'	HIGHBEAM® OVERCUP OAK	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	UJ	39	ULMUS AMERICANA 'JEFFERSON'	JEFFERSON AMERICAN ELM	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED

FOUNDATION PLANT SCHEDULE

SYMBOL	CODE		BOTANICAL NAME	COMMON NAME	SPACING	SIZE	ROOT	CONDITION
EVERGREEN SHRUBS								
	AX	68	AZALEA X 'AMELIA ROSE'	AMELIA ROSE AZALEA	AS SHOWN	18" MIN. HT.	3 GAL.	MATCHED, FULL, FREE OF WEEDS
	BS	36	BUXUS SEMPERVIRENS	COMMON BOXWOOD	AS SHOWN	18" MIN. HT.	3 GAL.	MATCHED, FULL, FREE OF WEEDS
	TD	45	TAXUS CUSPIDATA 'DENSA'	DENSE JAPANESE YEW	AS SHOWN	18" MIN. HT.	3 GAL.	MATCHED, FULL, FREE OF WEEDS

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 50 100 200

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

JOSHUA LEWIS ROWLAND
REGISTERED
LANDSCAPE ARCHITECT
05/19/2025

No.	REVISIONS	DATE	BY
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KIMLEY-HORN PROJECT NO.	118332003

LANDSCAPE PLAN

SHEET NUMBER
L1-00

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LANDSCAPE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE TOWNHOMES
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	X
SITE AREA (AC):	32.60
BUILDING AREA (SF):	#050
BUILDING PERMIT:	#091
GRADING PERMIT:	#092

LANDSCAPE REQUIREMENTS

REQUIRED BUFFERS:
LANDSCAPE BUFFERS ARE NOT REQUIRED.

STREET TREE REQUIRMENT:
STREET TREES TO BE PLANTED 50 LF ON CENTER WITH EVEN SPACING.

TREE CANOPY COVER RETENTION

EXISTING TREE CANOPY:	+/- 56% (18.32 AC) OF TOTAL DEVELOPMENT
REQUIRED RETENTION:	45% (8.24 AC) MIN. OF TOTAL TREE CANOPY
PROPOSED RETENTION:	62% (11.37 AC) OF TOTAL TREE CANOPY

PLANT SCHEDULE L1-10

SYMBOL	CODE		BOTANICAL NAME	COMMON NAME	SPACING	SIZE	ROOT	CONDITION
CANOPY TREES								
	AT	9	ACER BUERGERIANUM 'STREETWISE'	STREETWISE TRIDENT MAPLE	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5` CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	AA	21	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5` CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	GT	4	GLEDITSIA TRIACANTHOS INERMIS	THORNLESS HONEY LOCUST	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5` CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	QH	24	QUERCUS LYRATA 'QLFTB'	HIGHBEAM® OVERCUP OAK	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5` CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	UJ	26	ULMUS AMERICANA 'JEFFERSON'	JEFFERSON AMERICAN ELM	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5` CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED

COORDINATES ARE NAD83.
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GRAPHIC SCALE IN FEET
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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

JOSHUA LEWIS ROWLAND
REGISTERED
AGRICULTURE
COMMERCE
TENNESSEE, USA
LANDSCAPE ARCHITECT
05/19/2025

No.	DATE	REVISIONS	BY
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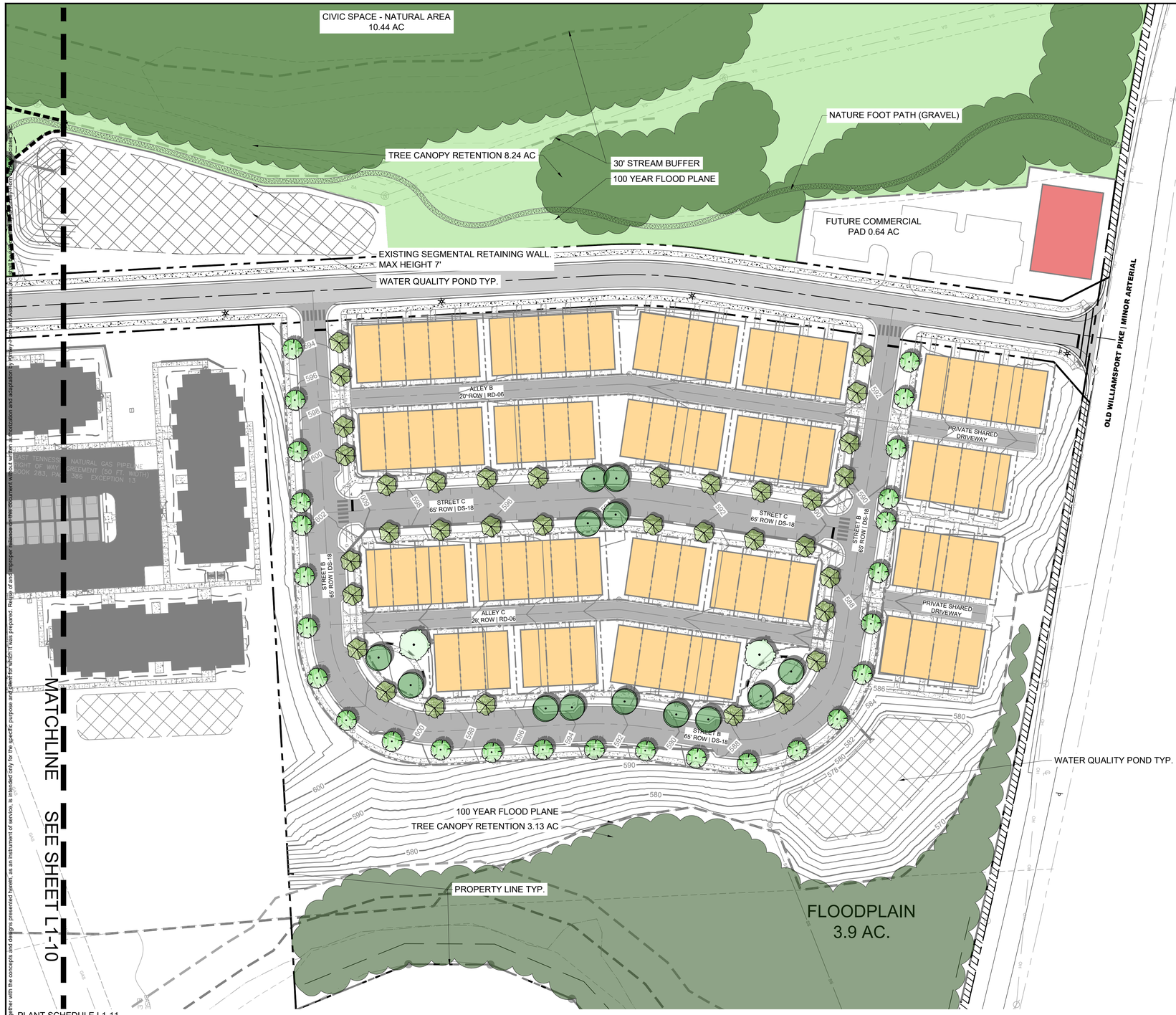
DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	05/19/2025
KIMLEY-HORN PROJECT NO.	118332003

LANDSCAPE PLAN - ENLARGEMENT

SHEET NUMBER
L1-10



LANDSCAPE DATA TABLE

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STREET TREES TO BE PLANTED 50 LF ON CENTER WITH EVEN SPACING.

TREE CANOPY COVER RETENTION

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PLANT SCHEDULE L1-11

SYMBOL	CODE		BOTANICAL NAME	COMMON NAME	SPACING	SIZE	ROOT	CONDITION
CANOPY TREES								
	AA	35	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	GT	2	GLEDITSIA TRIACANTHOS INERMIS	THORNLESS HONEY LOCUST	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	QH	27	QUERCUS LYRATA 'QLFTB'	HIGHBEAM® OVERCUP OAK	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	UJ	13	ULMUS AMERICANA 'JEFFERSON'	JEFFERSON AMERICAN ELM	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
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Kimley»Horn
10 Lea Avenue, Suite 400 Nashville, TN 37210
Main: 615.564.2701 | www.kimley-horn.com

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

JOSHUA LEWIS ROWLAND
REGISTERED
XVI
AGRICULTURE
COMMERCE
LANDSCAPE ARCHITECT
05/19/2025

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DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	05/19/2025
KIMLEY-HORN PROJECT NO.	118332003

LANDSCAPE PLAN - ENLARGEMENT

SHEET NUMBER
L1-11

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Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\L1-10 LANDSCAPE PLAN - ENLARGEMENT.dwg L1-11 LANDSCAPE PLAN - ENLARGEMENT May 19, 2025 3:10pm by: william.irby

GENERAL LANDSCAPE SPECIFICATIONS AND NOTES

1.01 SCOPE OF WORK

A. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS, AS INCLUDED IN THE PLANT LIST, AND AS HEREIN SPECIFIED.

B. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER.

C. THE CONTRACTOR SHALL CONTACT THE OWNER AND TENNESSEE ONE CALL AT (615) 351-1111, TWO (2) FULL BUSINESS DAYS PRIOR TO THE BEGINNING OF WORK.

D. THE CITY MUST APPROVE ALL WORK HOURS AND LANE CLOSURE REQUESTS AT LEAST TWO (2) FULL WORKING DAYS IN ADVANCE OF THE START OF ANY SUCH WORK ON A LOCATION BY LOCATION BASIS. THE INDIVIDUAL(S) INSTALLING THE MAINTENANCE OF TRAFFIC SETUP SHALL HAVE COMPLETED A TDOT APPROVED WORK ZONE TRAFFIC CONTROL TRAINING COURSE. DOCUMENTATION SHALL BE FURNISHED TO THE CITY AT THE PRE-CONSTRUCTION MEETING OR PRIOR TO START OF WORK.

E. ALL LANDSCAPE MATERIAL SHALL BE INSTALLED AND MAINTAINED IN A MANNER WHEREBY TRAFFIC CONTROL SIGNAGE AND DEVICES ARE VISIBLE TO MOTORISTS AND PEDESTRIANS.

1.02 PROTECTION OF EXISTING STRUCTURES

A. ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AND AT NO COST TO THE OWNER.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL NECESSARY BMP DEVICES ACCORDING TO TDOT, COUNTY, OR CITY STANDARDS THROUGH THE DURATION OF ALL CONSTRUCTION ACTIVITIES.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION. THE OWNER AND DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF ANY SUCH INFORMATION OR DATA, AND THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA, FOR LOCATING ALL UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THE COST OF COMPLIANCE WITH THIS SECTION WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

1.03 PROTECTION OF EXISTING PLANT MATERIALS OUTSIDE LIMIT OF WORK

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE, CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC. THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRIP-LINE AND SPILLING OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP-LINE. NO MATERIALS SHALL BE BURNED ON SITE. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/OR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF ONE HUNDRED DOLLARS ($100) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES. CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER.

1.04 MATERIALS

A. GENERAL

MATERIAL SAMPLES LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL, ON SITE OR AS DETERMINED BY THE LANDSCAPE ARCHITECT. UPON APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

MATERIAL	SAMPLE SIZE
MULCH	ONE (1) CUBIC FOOT
TOPSOIL MIX	ONE (1) CUBIC FOOT
PLANTS	ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY)

B. PLANT MATERIALS

1. PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS AS SET FORTH IN ANSI Z60.1-2014-AMERICAN STANDARD FOR NURSERY STOCK. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, SOUND, WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS. INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER. WHERE ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY WITH APPROVAL FROM OWNER OR LANDSCAPE ARCHITECT. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE LANDSCAPE ARCHITECT.
2. MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE GROUND OR ACROSS THE NORMAL SPREAD OF BRANCHES WITH THE PLANTS IN THEIR NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER. IF THE USE OF LARGER PLANTS IS APPROVED, THE ROOTBALL OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.
3. INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY; SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.

1.05 SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOIL MIX)

A. SOIL MIXTURE (PLANTING MEDIUM FOR PLANT PITS) SHALL CONSIST OF ⅓ LOOSE COMPOST (NO GREATER THAN 1" SIV), ⅓ PEAT AND ⅓ SAND, AS DESCRIBED BELOW.

B. TOPSOIL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT PITS SHALL BE FERTILE, FRIABLE, AND OF A LOAMY CHARACTER; REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER; FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER AND A PH BETWEEN 5.5 AND 7.0 - SUBMIT SAMPLE AND PH TESTING RESULTS FOR APPROVAL.

C. SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND. CONTRACTOR SHALL SUBMIT RESULTS OF SOIL TESTS FOR TOPSOIL AND SAND PROPOSED FOR APPROVAL BY THE OWNER.

D. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE, AT WHICH POINT THE CONTRACTOR SHALL CONTACT OWNER'S REPRESENTATIVE TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING.

E. CONTRACTOR TO SUBMIT SAMPLES OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.

1.06 WATER

A. WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC. IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.

** WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.*

1.07 FERTILIZER

A. CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED.

** FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.*

1.08 MULCH

A. MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A DEPTH OF THREE (3) INCHES FOR ALL PLANTINGS UNLESS OTHERWISE NOTED. MULCH AT ALL PLANTING BEDS SHALL BE TRIPLE SHREDDED HARDWOOD.

1.09 DIGGING AND HANDLING

A. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT.

B. BALLED AND BURLAPPED PLANTS (B&B) SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS SHALL NOT BE HANDLED BY STEMS.

C. EXCAVATION OF TREE PITS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB-BASES. ALL TREES SHALL BE PLANTED AS INDICATED ON DRAWINGS. COORDINATE WITH PLANTING DETAILS FOR EXACT DEPTH OF PLANTING SOIL.

1.10 CONTAINER GROWN STOCK

A. ALL TREES SPECIFIED SHALL BE BALL AND BURLAP, UNLESS OTHERWISE APPROVED BY LANDSCAPE ARCHITECT.

B. ALL SHRUB SPECIES SHALL BE CONTAINER GROWN.

C. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION.

D. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG ENOUGH FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.

E. PLANT ROOTS BOUND IN CONTAINERS ARE NOT ACCEPTABLE.

1.11 MATERIALS LIST

A. QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED FOR CLARIFICATION PRIOR TO BIDDING OR INSTALLATION. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE.

1.12 FINE GRADING

A. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN DISTURBED DURING CONSTRUCTION.

B. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH. CONTRACTOR SHALL FINE GRADE BY HAND AND/OR WITH ALL EQUIPMENT NECESSARY INCLUDING A GRADING TRACTOR WITH FRONT-END LOADER FOR TRANSPORTING SOIL WITHIN THE SITE.

C. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES, IF APPLICABLE.

1.13 PLANTING PROCEDURES

A. CLEANING UP BEFORE COMMENCING WORK: THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER DAILY. ALL MORTAR, CEMENT, AND TOXIC MATERIAL SHALL BE REMOVED FROM THE SURFACE OF ALL PLANT BEDS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL WHICH WILL IN ANY WAY ADVERSELY AFFECT THE PLANT GROWTH, CONTRACTOR SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.

B. SUBGRADE EXCAVATION: THE CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL LANDSCAPE PLANTING AREAS TO A MINIMUM DEPTH OF 36" AT TREES AND 18" AT SHRUBS AND PERENNIALS. CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISH GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36", AND DEEP EXCAVATION BY THE CONTRACTOR AND POSITIVE DRAINAGE CANNOT BE ACHIEVED, THE CONTRACTOR SHALL UTILIZE PLANTING DETAIL THAT ADDRESSES POOR DRAINAGE.

C. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CONTACT TENNESSEE ONE CALL AT (615) 351-1111 TO LOCATE ALL UTILITIES.

D. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS HEREIN SPECIFIED AND REQUIRED. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.

E. GENERAL: COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. CONFORM TO ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE. UPON ARRIVAL AT THE SITE, PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ON-SITE SHALL NOT REMAIN UNPLANTED OR APPROPRIATELY HEALED IN FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES WORKMANLIKE METHODS CUSTOMARY IN GOOD HORTICULTURAL PRACTICES SHALL BE EXERCISED.

F. THE WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.

G. ALL PLANTING PITS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH ANSI Z60.1-2014 - AMERICAN STANDARD FOR NURSERY STOCK, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, AND BACK FILLED WITH THE PREPARED PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION 1.05. TEST ALL TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW, FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMAN.

H. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES.

I. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION 1.05 OF THESE SPECIFICATIONS.

J. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACK FILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).

K. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. MATERIALS INSTALLED SHALL MEET MINIMUM SPECIMEN REQUIREMENTS OR QUANTITIES SHOW ON PLANS, WHICHEVER IS GREATER. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 12", REMOVE AND DISPOSE ALL DEBRIS. COORDINATE WITH PLANTING DETAILS FOR EXACT DEPTH. MIX TOP 4" OF THE PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION 1.05. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.

L. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAIVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE PROJECT LANDSCAPE ARCHITECT IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE PROJECT LANDSCAPE ARCHITECT IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.

M. HERBICIDE WEED CONTROL: ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S PRECAUTIONS AND SPECIFICATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER (AS ALLOWED BY JURISDICTIONAL AUTHORITY).

1.14 LAWN SODDING

A. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.

B. LAWN BED PREPARATION: ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS BY MEANS OF A SOD CUTTER TO A DEPTH OF THREE (3) INCHES, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE.

C. SOIL PREPARATION: PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY.

D. SODDING

1. THE CONTRACTOR SHALL SOD ALL DISTURBED AREAS WITHIN THE CONTRACT LIMITS NOT COVERED BY HARDSCAPE OR VEGETATIVE MATERIAL, UNLESS SPECIFICALLY NOTED OTHERWISE.
2. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.
3. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE.

E. LAWN MAINTENANCE

1. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS (LARGER THAN 12"X12") UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING RE-GRADING IF NECESSARY).
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD/LAWN UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.

1.15 CLEANUP

A. UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE BROOM-CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S REPRESENTATIVE.

1.16 PLANT MATERIAL MAINTENANCE

A. ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.

1.17 FINAL INSPECTION AND ACCEPTANCE OF WORK

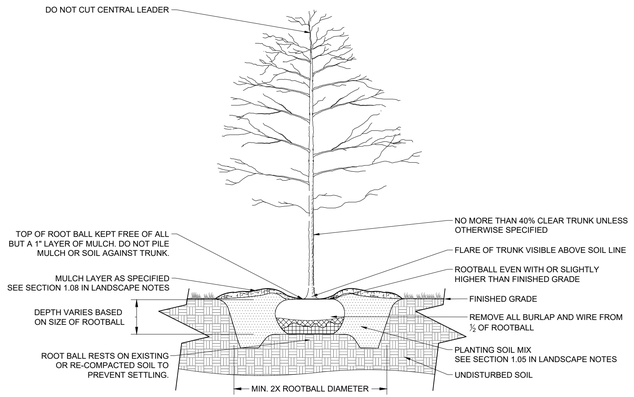
A. FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE LANDSCAPE ARCHITECT OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.

1.18 WARRANTY

A. THE LIFE AND SATISFACTORY CONDITION OF ALL PLANT MATERIAL INSTALLED (INCLUDING SOD) BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTIED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.

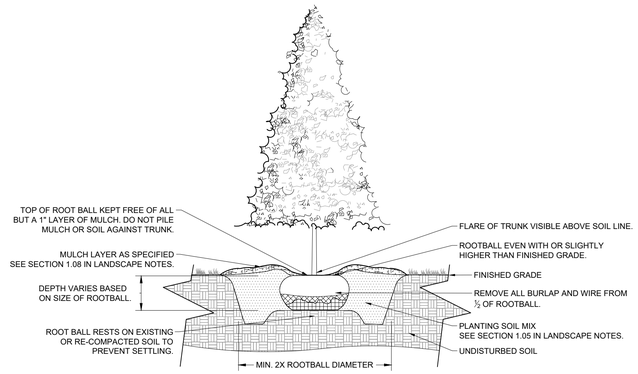
B. REPLACEMENT: ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION DURING THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED WITHIN TEN (10) DAYS OF NOTICE, OR BETWEEN SEPTEMBER-NOVEMBER, MARCH-MAY. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED, PLANTED AND MULCHED AS SPECIFIED AT NO ADDITIONAL COST TO THE OWNER.

C. IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE MAINTENANCE, THE CONTRACTOR IS ENCOURAGED TO VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE (1) YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER, AND SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH. IT IS SUGGESTED SUCH SITE VISITS SHALL BE CONDUCTED A MINIMUM OF ONCE PER MONTH FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ACCEPTANCE.



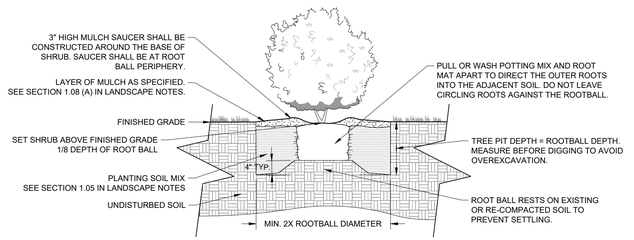
2 B&B TREE PLANTING

NOT TO SCALE



3 EVERGREEN TREE PLANTING

NOT TO SCALE



4 CONTAINER SHRUB PLANTING

NOT TO SCALE

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE ~~REFERENCED~~ TO THE NAVD 1988.

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

JOSHUA LEWIS ROWLAND — REGISTERED — TENNESSEE — LANDSCAPE ARCHITECT — 05/19/2025

No.	REVISIONS	DATE	BY

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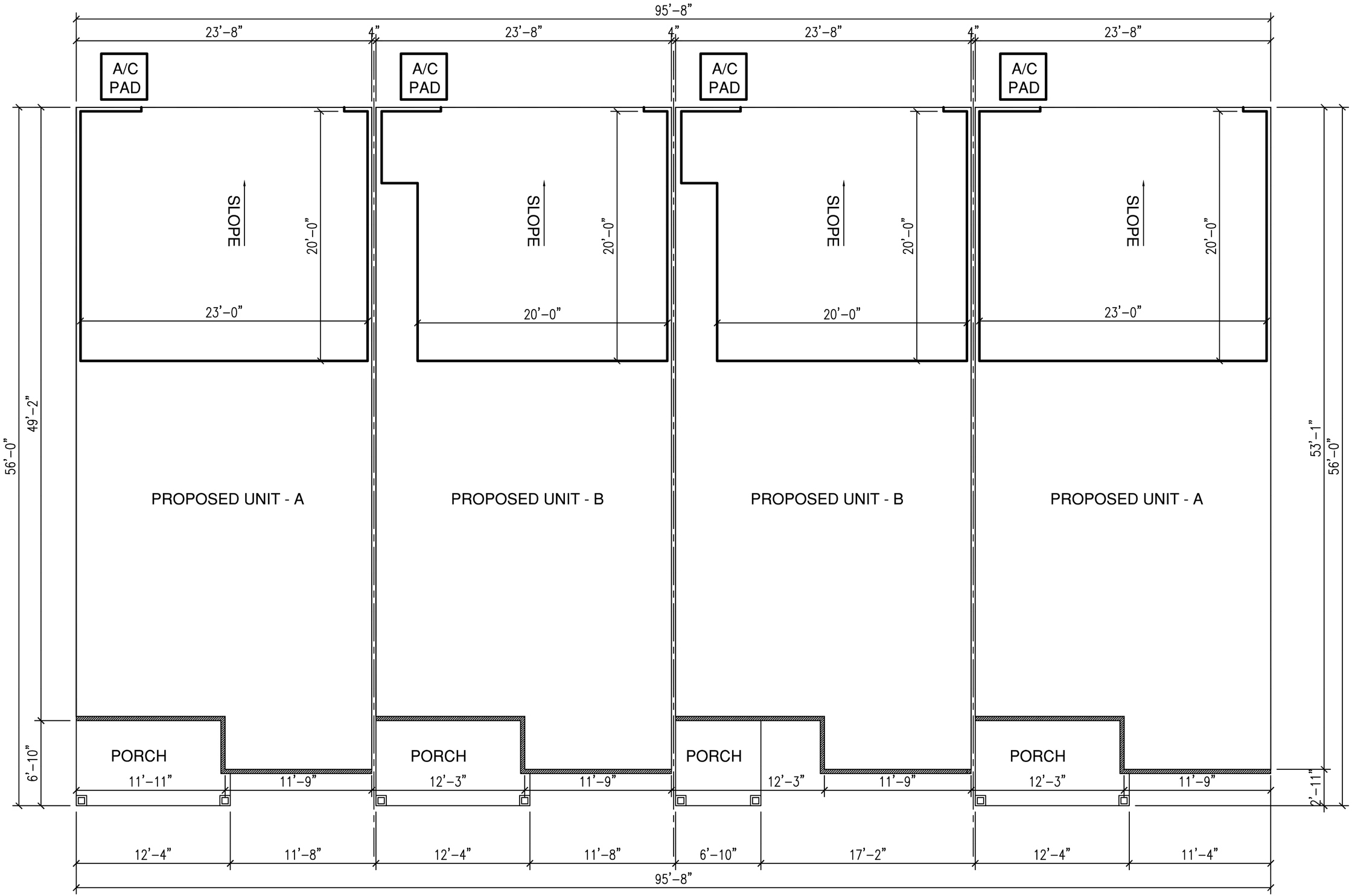

Building A - 4 Units

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

DRAFT
PRELIMINARY PLANS
FOR REVIEW ONLY

No.	REVISIONS	DATE	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	05/19/2025
KIMLEY-HORN PROJECT NO.	118332003

ARCHITECTURAL FLOOR PLANS

SHEET NUMBER
A1-01



Front Elevation



Right Elevation



Rear Elevation



Left Elevation

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

DRAFT
PRELIMINARY PLANS
FOR REVIEW ONLY

No.	REVISIONS	DATE	BY
1			
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DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	05/19/2025
KIMLEY-HORN PROJECT NO. 118332003	

ARCHITECTURAL ELEVATION LINEWORK

SHEET NUMBER
A1-02

Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\A1-00 ARCHITECTURAL ELEVATIONS.dwg A1-02 ARCHITECTURAL ELEVATIONS May 19, 2025 3:10pm by: william.irby

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

DRAFT

PRELIMINARY PLANS

FOR REVIEW ONLY

No.	REVISIONS	DATE	BY
1			
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DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	05/19/2025

KIMLEY-HORN PROJECT NO. 118332003

ARCHITECTURAL ELEVATION RENDERING

SHEET NUMBER

A1-03

Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\A1-00 ARCHITECTURAL ELEVATIONS.dwg A1-03 ARCHITECTURAL ELEVATION - RENDERING May 19, 2025 3:10pm by: william.irby

PRELIMINARY PLAT

HAMPSHIRE PIKE TOWNHOMES

1242 HAMPSHIRE PIKE
COLUMBIA, TN

INITIAL SUBMITTAL: 5/19/2025

EXISTING PROPERTY SUMMARY

PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN
MAP AND PARCEL ID:	MAP 089, PARCEL 04103 000
U.S. FEMA FIRM PANEL:	47119C0280E DATED 04/16/2007
EXISTING ZONING: EXISTING LAND USE:	CD-4 VACANT

GENERAL DEVELOPMENT NOTES

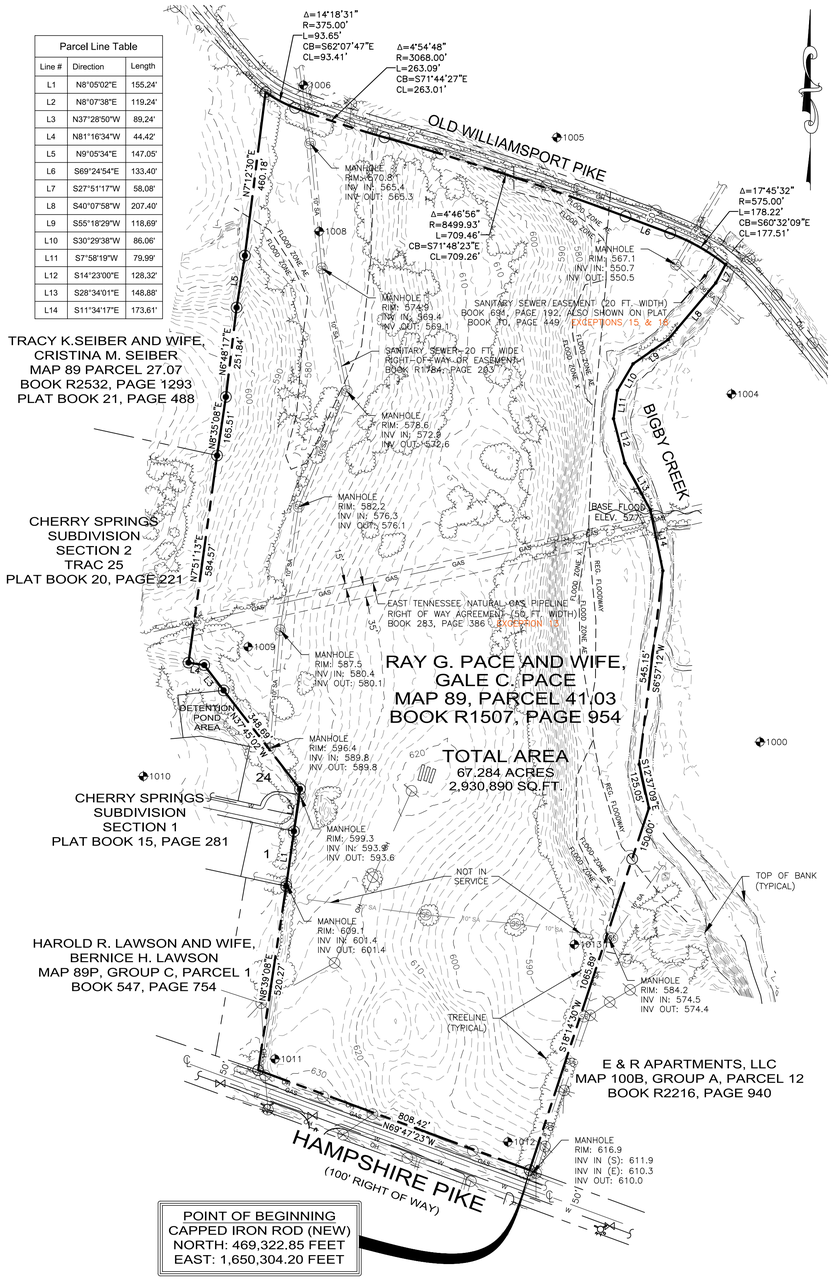
1. ALL DEVELOPMENT WITHIN THE BOUNDARIES OF THIS PLAN MEETS THE REQUIREMENTS OF ANSI 117.1, 2009 EDITION AND THE FAIR HOUSING ACT.

   U.S. Justice Department:
   http://www.justice.gov/crt/housinig/fairhousing/about_fairhousingact.htm

2. PART OF THE SUBJECT PROPERTY IS LOCATED IN AREAS DESIGNATED AS "ZONE AE" (AREAS DETERMINED TO BE OUTSIDE THE 0.2 % ANNUAL CHANCE FLOODPLAIN) AS NOTED ON THE CURRENT FEMA FIRM COMMUNITY PANEL 47119C0280E.

3. PART OF THE SUBJECT PROPERTY IS LOCATED IN AREAS DESIGNATED AS "ZONE X" (AREAS DETERMINED TO BE OF MINIMAL FLOOD HAZARD) AS NOTED ON THE CURRENT FEMA FIRM COMMUNITY PANEL 47119C0280E


SITE LOCATION
Old Williamsport Pike
Hampshire Pike
Columbia Gardens
Dickey Cemetery
Maury County Park
Maury County Park Dr
Woodward Dr
Arleen Dr
Tennessee Trl
Hillcrest Dr
Ferrell Ave
Alice Ave
Academy Rd
Oakland Dr
Bear Creek Pike
Mooresville Pike
Columbia Ave
Nashville Pike
Bear Creek Pk
Bear Creek Pk Ln
Mooresville Pk
Mooresville Pk Ln
Mooresville Pk Cir
Mooresville Pk Ct
Mooresville Pk Dr
Mooresville Pk Trl
Mooresville Pk Way
Mooresville Pk Pl
Mooresville Pk Ter



Parcel Line Table		
Line #	Direction	Length
L1	N8°05'02"E	155.24'
L2	N8°07'38"E	119.24'
L3	N37°28'50"W	89.24'
L4	N81°16'34"W	44.42'
L5	N9°05'34"E	147.05'
L6	S69°24'54"E	133.40'
L7	S27°51'17"W	58.08'
L8	S40°07'58"W	207.40'
L9	S55°18'29"W	118.69'
L10	S30°29'38"W	86.06'
L11	S7°58'19"W	79.99'
L12	S14°23'00"E	128.32'
L13	S28°34'01"E	148.88'
L14	S11°34'17"E	173.61'

SCHEDULE B-II EXCEPTIONS:

1. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I-REQUIREMENTS ARE MET. NOT A SURVEY MATTER
2. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT SHOWN BY THE PUBLIC RECORDS. NONE OBSERVED DURING SURVEY
3. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND. NONE OBSERVED DURING SURVEY
4. EASEMENTS, OR CLAIMS OF EASEMENTS, NOT SHOWN BY THE PUBLIC RECORDS. NONE OBSERVED DURING SURVEY
5. ANY LIEN, OR RIGHT TO A LIEN, FOR SERVICES, LABOR, OR MATERIAL HERETOFORE OR HEREAFTER FURNISHED, IMPOSED BY LAW, AND NOT SHOWN BY THE PUBLIC RECORDS. NOT A SURVEY MATTER
6. TAXES OR SPECIAL ASSESSMENTS WHICH ARE NOT SHOWN AS EXISTING LIENS BY THE PUBLIC RECORDS. NOT A SURVEY MATTER
7. IF IMPROVEMENTS ARE COMPLETED AFTER JANUARY 1 OF ANY YEAR, AND THE LAW, PURSUANT TO TCA 67-5-509 AND TCA 67-5-603, REQUIRES SUPPLEMENTAL ASSESSMENT FOR THE YEAR IN WHICH IMPROVEMENTS ARE COMPLETED, THE COMPANY ASSUMES NO LIABILITY FOR TAXES ASSESSED BY CORRECTION OR SUPPLEMENTAL ASSESSMENT. NOT A SURVEY MATTER
8. TAXES FOR THE YEAR 2021, A LIEN NOT YET DUE AND PAYABLE. NOT A SURVEY MATTER
9. SEWER EASEMENTS AS SET FORTH IN DEED OF RECORD IN BOOK R2188, PAGE 249, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT THE SURVEYED PROPERTY
10. TITLE TO THAT PORTION OF THE SUBJECT PROPERTY WITHIN THE BOUNDS OF THE RIGHT OF WAY FOR OLD WILLIAMSPORT PIKE AND N JAMES M. CAMPBELL BOULEVARD. OLD WILLIAMSPORT PIKE RIGHT OF WAY IS SHOWN CORRECTLY ON SURVEY. JAMES M. CAMPBELL BOULEVARD DOES NOT AFFECT SURVEYED PROPERTY.
11. EASEMENT TO SOUTHERN CITY POWER COMPANY OF RECORD IN BOOK 149, PAGE 365, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. THE LOCATION OF THIS EASEMENT IS POORLY DESCRIBED; HOWEVER ALL EXISTING OVERHEAD LINES ARE SHOWN ON THE SURVEY.
12. GRANT OF TRANSMISSION LINE EASEMENTS OF RECORD IN BOOK 232, PAGE 575, BOOK 232, PAGE 577, AND BOOK 232, PAGE 597, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
13. RIGHT OF WAY AGREEMENT TO EAST TENNESSEE NATURAL GAS COMPANY OF RECORD IN BOOK 283, PAGE 386, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. AFFECTS PROPERTY AS SHOWN ON SURVEY
14. RIGHT OF WAY AND EASEMENT TO MAURY COUNTY OF RECORD IN BOOK 425, PAGE 91 AND BOOK 427, PAGE 473, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
15. SEWER EASEMENT OF RECORD IN BOOK 691, PAGE 192, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. AFFECTS PROPERTY AS SHOWN ON SURVEY
16. INSPECTION AND MAINTENANCE AGREEMENT OF PRIVATE STORMWATER MANAGEMENT FACILITIES OF RECORD IN BOOK R2254, PAGE 125, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
17. SEWER EASEMENTS OF RECORD IN BOOK 375, PAGE 243; BOOK 375, PAGE 245; BOOK 383, PAGE 7; BOOK 383, PAGE 26; AND BOOK 383, PAGE 28, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
18. SUBJECT TO ALL MATTERS SHOWN ON THE PLAN OF RECORD IN PLAT BOOK P10, PAGE 449, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. AFFECTS PROPERTY AS SHOWN ON SURVEY
19. APPLICATION FOR GREENBELT ASSESSMENT - AGRICULTURAL OF RECORD IN BOOK R2211, PAGE 848, IN THE REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. NOT A SURVEY MATTER
20. THE LAND HAS BEEN CLASSIFIED AS GREENBELT FOR ASSESSMENT, LEVY AND COLLECTION PURPOSES AND MAY BE SUBJECTED TO SUBSTANTIAL ROLLBACK TAXES AS DEFINED IN TENNESSEE CODE ANNOTATED, SECTION 67-5-1001. NOT A SURVEY MATTER
21. WATER (RIPARIAN RIGHTS) - BLANKET MATTERS - BIGBY CREEK IS ACCURATELY SHOWN ON SURVEY - NOT PLOTTABLE MATTERS

(a) THE RIGHTS OF UPPER AND LOWER RIPARIAN OWNERS TO THE FREE AND UNOBSTRUCTED FLOW OF THE WATER OF LITTLE BIGBY CREEK WITHOUT DIMINUTION OR POLLUTION AND THE CONSEQUENCE OF ANY PAST OR FUTURE CHANGE IN THE LOCATION OF LITTLE BIGBY CREEK.

(b) RIPARIAN RIGHTS INCIDENT TO PREMISES.

(c) RIGHTS OF UPPER AND LOWER RIPARIAN OWNERS IN AND TO THE WATERS OF LITTLE BIGBY CREEK CROSSING OR ADJOINING THE PROPERTY, AND THE NATURAL FLOW THEREOF, FREE FROM DIMINUTION OR POLLUTION.

(d) ANY ENLARGEMENT OR LOSS OF LAND BY REASON OF AVULSION, ACCRETION, OR RELICTION, AND QUESTIONS OF OWNERSHIP CAUSED BY SUBSEQUENT REBUILDING OR REFORMATION OF LAND.

22. ACREAGE CONTENT OF THE SUBJECT PROPERTY IS NOT HEREBY INSURED. REFERENCE TO ACREAGE IS LEFT IN THE DESCRIPTION MERELY FOR CONVENIENCE IN IDENTIFYING THE TRACT. AREAS NOTED ON SURVEY ARE ACCURATE AND CORRECT.

LEGAL DESCRIPTION (FROM SURVEY)

A PARCEL OF LAND LYING IN MAURY COUNTY, TENNESSEE, JUST EAST OF COLUMBIA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOW:

BEGINNING AT A CAPPED IRON ROD SET IN THE NORTHERN MARGIN OF HAMPSHIRE PIKE (STATE ROUTE 50/99) AT THE SOUTHWESTERN CORNER OF THE E & R APARTMENTS, LLC PROPERTY, BOOK R2216, PAGE 940, REGISTER'S OFFICE MAURY COUNTY (HEREAFTER ROMC), SAID ROD BEING LOCATED AT TENNESSEE STATE PLANE COORDINATES NORTH: 469,322.85 FEET AND EAST: 1,650,304.20 FEET, NAD83(2011); THENCE ALONG THE NORTHERN MARGIN OF SAID HAMPSHIRE PIKE, RUNNING PARALLEL TO AND 50 FEET FROM THE CENTERLINE OF SAME, NORTH 69°47'23" WEST, 808.42 FEET TO A CAPPED IRON ROD SET AT THE SOUTHEASTERN CORNER OF THE HAROLD R. LAWSON AND WIFE, BERNICE H. LAWSON PROPERTY, BOOK 547, PAGE 754, ROMC; THENCE LEAVING SAID HAMPSHIRE PIKE AND ALONG THE EASTERN BOUNDARY OF SAID LAWSON PROPERTY, NORTH 8°39'08" EAST, 520.27 FEET TO A CAPPED IRON ROD FOUND AT THE SOUTHEASTERN CORNER OF LOT 1 IN THE CHERRY SPRINGS SUBDIVISION, SECTION 1, PLAT BOOK 15, PAGE 281, ROMC; THENCE ALONG THE EASTERN AND NORTHEASTERN BOUNDARY OF SAID SUBDIVISION SECTION THE FOLLOWING THREE (3) CALLS:

NORTH 8°05'02" EAST, 155.24 FEET TO AN IRON ROD FOUND;

NORTH 8°07'38" EAST, 119.24 FEET TO A CAPPED IRON ROD FOUND;

AND NORTH 37°45'02" WEST, 348.69 FEET TO A CAPPED IRON ROD FOUND AT THE EASTERNMOST CORNER OF TRACT 25 IN THE CHERRY SPRINGS SUBDIVISION, SECTION 2, PLAT BOOK 20, PAGE 221, ROMC; THENCE ALONG THE EASTERN BOUNDARY OF SAID TRACT 25 THE FOLLOWING THREE (3) CALLS:

NORTH 37°28'50" WEST, 89.24 FEET TO AN IRON ROD FOUND;

NORTH 81°16'34" WEST, 44.42 FEET TO AN IRON ROD FOUND;

AND NORTH 7°51'13" EAST, 584.57 FEET TO AN IRON PIPE FOUND AT THE NORTHEASTERN CORNER OF SAID TRACT 25 AND THE SOUTHEASTERN CORNER OF THE TRACY K. SEIBER AND WIFE, CRISTINA M. SEIBER PROPERTY, BOOK R2532, PAGE 1293, ROMC; THENCE ALONG THE EASTERN BOUNDARY OF SAID SEIBER PROPERTY THE FOLLOWING FOUR (4) CALLS:

NORTH 8°35'08" EAST, 165.51 FEET TO AN IRON PIPE FOUND;

NORTH 6°48'17" EAST, 251.84 FEET TO AN IRON PIPE FOUND;

NORTH 9°05'34" EAST, 147.05 FEET TO AN IRON PIPE FOUND;

AND NORTH 7°12'30" EAST, 460.18 FEET TO A CAPPED IRON ROD SET IN THE SOUTHERN MARGIN OF OLD WILLIAMSPORT PIKE AND A POINT ON THE ARC OF A CIRCULAR CURVE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 375.00 FEET, TO WHICH A RADIAL LINE BEARS SOUTH 35°01'29" WEST; THENCE ALONG THE SOUTHERN MARGIN OF SAID OLD WILLIAMSPORT PIKE, RUNNING PARALLEL TO AND 25 FEET FROM THE CENTERLINE OF SAME, THROUGH A CENTRAL ANGLE OF 14°18'31" AN ARC DISTANCE OF 93.65 FEET (CHORD: SOUTH 62°07'47" EAST, 93.41 FEET) TO A CAPPED IRON ROD SET AT A POINT OF COMPOUND CURVATURE, SAID CURVE IS CONCAVE NORTHERLY, HAVING A RADIUS OF 3,068.00 FEET; THENCE CONTINUING ALONG THE NORTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 4°54'48" AN ARC DISTANCE OF 263.09 FEET (CHORD: SOUTH 71°44'27" EAST, 263.01 FEET) TO A CAPPED IRON ROD SET AT A POINT OF REVERSE CURVATURE, SAID CURVE IS CONCAVE SOUTHERLY, HAVING A RADIUS OF 8,499.93 FEET; THENCE CONTINUING ALONG THE NORTHERN MARGIN OF SAID WILLIAMSPORT PIKE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 4°46'56" AN ARC DISTANCE OF 709.46 FEET (CHORD: NORTH 71°48'23" EAST, 709.26 FEET) TO A CAPPED IRON ROD SET AT THE POINT OF TANGENT; THENCE CONTINUING ALONG THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE SOUTH 69°24'54" EAST, 133.40 FEET TO A CAPPED IRON ROD SET AT THE POINT OF CURVATURE OF A CIRCULAR CURVE, CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 575.00 FEET; THENCE CONTINUING ALONG THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 17°45'32" AN ARC DISTANCE OF 178.22 FEET (CHORD: SOUTH 60°32'09" EAST, 177.51 FEET) TO THE INTERSECTION OF THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND THE CENTER OF BIGBY CREEK; THENCE LEAVING SAID WILLIAMSPORT PIKE AND RUNNING ALONG THE CENTER OF BIGBY CREEK, APPROXIMATED HEREIN BY A SERIES OF STRAIGHT LINES, THE FOLLOWING TEN (10) CALLS:

SOUTH 27°51'17" WEST, 58.08 FEET;

SOUTH 40°07'58" WEST, 207.40 FEET;

SOUTH 55°18'29" WEST, 118.69 FEET;

SOUTH 30°29'38" WEST, 86.06 FEET;

SOUTH 7°58'19" WEST, 79.99 FEET;

SOUTH 14°23'00" EAST, 128.32 FEET;

SOUTH 28°34'01" EAST, 148.88 FEET;

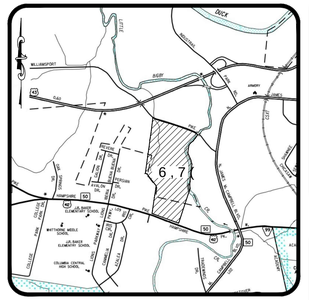
SOUTH 11°34'17" EAST, 173.61 FEET;

SOUTH 6°57'12" WEST, 545.15 FEET;

AND SOUTH 12°37'09" EAST, 125.05 FEET TO THE NORTHWESTERN CORNER OF THE AFOREMENTIONED E & R APARTMENTS, LLC PROPERTY; THENCE LEAVING SAID BIGBY CREEK AND ALONG THE WESTERN BOUNDARY OF SAID E & R APARTMENTS, LLC PROPERTY, SOUTH 18°14'30" WEST (PASSING THROUGH A CAPPED IRON ROD SET AT 150.00 FEET) A TOTAL DISTANCE OF 1,065.89 FEET TO THE POINT OF BEGINNING; CONTAINING 67.284 ACRES OR 2,930,890 SQUARE FEET, AND BEING THE ALL OF THE RAY G. PACE AND WIFE, GALE C. PACE PROPERTY, BOOK R1507, PAGE 954, ROMC, AND A PORTION OF PARCEL 41.03 ON MAURY COUNTY TAX MAP 89.

GENERAL NOTES:

1. THE PURPOSE OF THIS SURVEY IS: ALTA/NSPS LAND TITLE SURVEY
2. THE ADDRESS OF THIS PROPERTY IS: HAMPSHIRE PIKE, COLUMBIA, TN 38401
3. SUBJECT PROPERTY IS PRESENTLY IDENTIFIED AS PART OF PARCEL 41.03, ON MAURY COUNTY TAX MAP 89. SAID PARCEL IS FURTHER IDENTIFIED AS ALL OF THE PROPERTY DESCRIBED IN DEED BOOK R1507, PAGE 954, REGISTERS OFFICE OF MAURY COUNTY, TENNESSEE.
4. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY.
5. EVERY DOCUMENT OF RECORD REVIEWED AND CONSIDERED AS A PART OF THIS SURVEY IS NOTED HEREON. ONLY THE DOCUMENTS NOTED HEREON WERE SUPPLIED TO THE SURVEYOR. OTHER DOCUMENTS OF RECORD MAY EXIST THAT WOULD AFFECT THIS PARCEL.
6. THE WORD "CERTIFY" IS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THE FACTS OF THE SURVEY AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESSED OR IMPLIED. DECLARATION IS MADE TO THE SPECIFIALLY NAMED PARTIES AND IS NOT TRANSFERABLE TO ADDITIONAL PERSONS, INSTITUTIONS OR SUBSEQUENT OWNERS OF THE SUBJECT PROPERTY.
7. THIS SURVEY WAS CONDUCTED WITH THE BENEFIT OF A TITLE REPORT ISSUED BY CHICAGO TITLE INSURANCE COMPANY, COMMITMENT NO. 20211350CTN, DATED AUGUST 25, 2021, AT 8:00AM AND IS SUBJECT TO ITS FINDINGS. THERE MAY BE OTHER IMPROVEMENTS OR ENCUMBRANCES THAT AFFECT THE PROPERTY SINCE THE ISSUANCE OF THE REPORT.
8. BEARINGS SHOWN HEREON ARE BASED ON THE TENNESSEE STATE PLANE COORDINATE SYSTEM NAD83(2011). ELEVATIONS SHOWN HEREON ARE BASED ON NAVD88(GEOID03).
9. ALL CORNERS SHOWN ON THE FACE OF THE SURVEY ARE MARKED EITHER FOUND OR SET. ANY MISSING CORNERS ARE MARKED WITH AN IRON ROD AND CAP BEARING THIS SURVEYORS COMPANY NAME.
10. UTILITIES SHOWN HEREON WERE COMPILED FROM VISIBLE STRUCTURES AT THE SITE, INFORMATION FROM PLANS, AND PHYSICAL MARKINGS AND COMBINED TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. IN ADDITION, IN SOME JURISDICTIONS, 811 OR OTHER SIMILAR UTILITY LOCATE REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN INCOMPLETE RESPONSE. THIS SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THIS SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. VERIFICATION OF EXISTENCE, LOCATIONS, AND DEPTH SHOULD BE MADE BEFORE CONDUCTING ANY EXCAVATION IN THE VICINITY OF THE UTILITY.
11. PORTIONS OF THIS PROPERTY ARE LYING WITHIN ZONE "AE" AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NOS. 47119C0165E AND 47119C0280E, WITH EFFECTIVE DATES OF APRIL 16, 2007, WHICH MAKE UP A PART OF THE NATIONAL FLOOD INSURANCE PROGRAM. BASE FLOOD ELEVATION FOR THIS PROPERTY IS 577 FEET. ZONE "AE" IS AN AREA WHERE BASE FLOOD ELEVATIONS HAVE BEEN DETERMINED. ZONE "X" IS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. THE FLOOD ZONES AND FLOOD WAY SHOWN ARE SCALED FROM MAPS.
12. I HEREBY CERTIFY THAT THIS IS A CATEGORY IV SURVEY AND WAS CONDUCTED IN ACCORDANCE WITH RULE 0820-03.11 (GLOBAL POSITION SYSTEMS SURVEYS) ACCORDING TO THE CURRENT TENNESSEE MINIMUM STANDARDS OF PRACTICE AS PROMULGATED BY THE TENNESSEE STATE BOARD OF EXAMINERS FOR LAND SURVEYORS. THIS SURVEY WAS CONDUCTED WITH DUAL-FREQUENCY RTK GPS BASED ON AN OPUS-CORRECTED AUTONOMOUS SOLUTION UTILIZING A BASE AND ROVER.
    a. POSITIONAL ACCURACY: 0.08'
    b. DATE OF SURVEY: 09/29/21
    c. HORIZONTAL ZONE/DATUM: TN-4100/NAD83(2011) - TENNESSEE STATE PLANE COORDINATES.
    d. OCCUPATIONS FOR CONTROL POINTS ARE 3 MINUTES EACH, SIDE SHOTS ARE 3 SECONDS.
    e. VERTICAL DATUM: NAVD88 (GEOID03, GRID 7 REVISED)
    f. NO COMBINED GRID FACTORS WERE USED.
13. THE CONTOURS SHOWN HEREON WERE DERIVED FROM LIDAR DATA [POST PROCESSED KINEMATIC (PPK) USING STATE PLANE COORDINATES AND VERTICAL DATUM NAVD88 (GEOID03], AND INCLUDE SEVERAL DIFFERENT LAND-COVER CLASSES WHICH HAVE BEEN COMPILED TO MEET OR EXCEED THE NATIONAL MAP ACCURACY STANDARDS (NMAS) OF A 2 FOOT EQUIVALENT CONTOUR INTERVAL AT 95 PERCENT CONFIDENCE LEVEL. THIS MEETS OR EXCEEDS A VERTICAL ACCURACY EQUAL TO NATIONAL STANDARDS FOR SPATIAL DATA ACCURACY (NSSDA) = 1.9600*.61(RMSE(Z)) (NORMALLY DISTRIBUTED ERROR) = 1.19 FT, AS SET FORTH BY THE AMERICAN SOCIETY FOR PHOTOGRAMMETRY AND REMOTE SENSING (ASPRS) VERSION 1.0. RANDOM SHOTS TAKEN ACROSS THE SITE YIELD AN ACTUAL VERTICAL ACCURACY OF +/- 0.12 FT.
14. THERE WAS NO EVIDENCE OF RECENT EARTH MOVING AT THE TIME OF SURVEY.
15. THERE ARE NO KNOWN CHANGES TO THE STREET ROW AT THE TIME OF SURVEY.
16. THERE WAS NO EVIDENCE OF DELINEATED WETLANDS AT THE TIME OF SURVEY.
17. THERE WAS NO EVIDENCE OF ENCROACHMENTS AT THE TIME OF SURVEY.
18. THIS IS A VACANT TRACT OF LAND.



9,&,1,7< 0$3
NOT TO SCALE

CERTIFICATION OF SURVEY FOR ALTA/NSPS LAND TITLE SURVEYS

TO: (I) STEADFAST DEVELOPMENT HOLDING, INC., AND (II) CHICAGO TITLE INSURANCE COMPANY.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1, 2, 3, 4, 8, 11(OBSERVED), 13, 14, 16, 17, 18, AND 19, OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON 9/29/21.

JOEY C. WILSON II, PE, RLS
TN PE NO. 106976 10/01/21
TN RLS NO. 2089

NO.	DATE	COMMENT

108 Beasley Drive
Franklin, TN
37064
615.794.2275

WILSON&ASSOCIATES, P.C.
Engineering/Surveying/Environmental

JOEY C. WILSON II
LAND SURVEYOR
REGISTERED
AGRICULTURE
COMMERCE
10/01/21
TENNESSEE NO. 2089

ALTA/NSPS LAND TITLE SURVEY

MAP 89, PARCEL 41.03 (PART)
HAMPSHIRE PIKE - COLUMBIA
MAURY COUNTY, TENNESSEE

FOR: STEADFAST DEVELOPMENT HOLDINGS, INC.

DRAWN BY:	JEC
APPVD. BY:	JCW II
DATE	10/01/2021
PROJ. No.	21-1752
SCALE:	1" = 200'
SHEET No.	1 OF 1

&21752/ 7$%/(

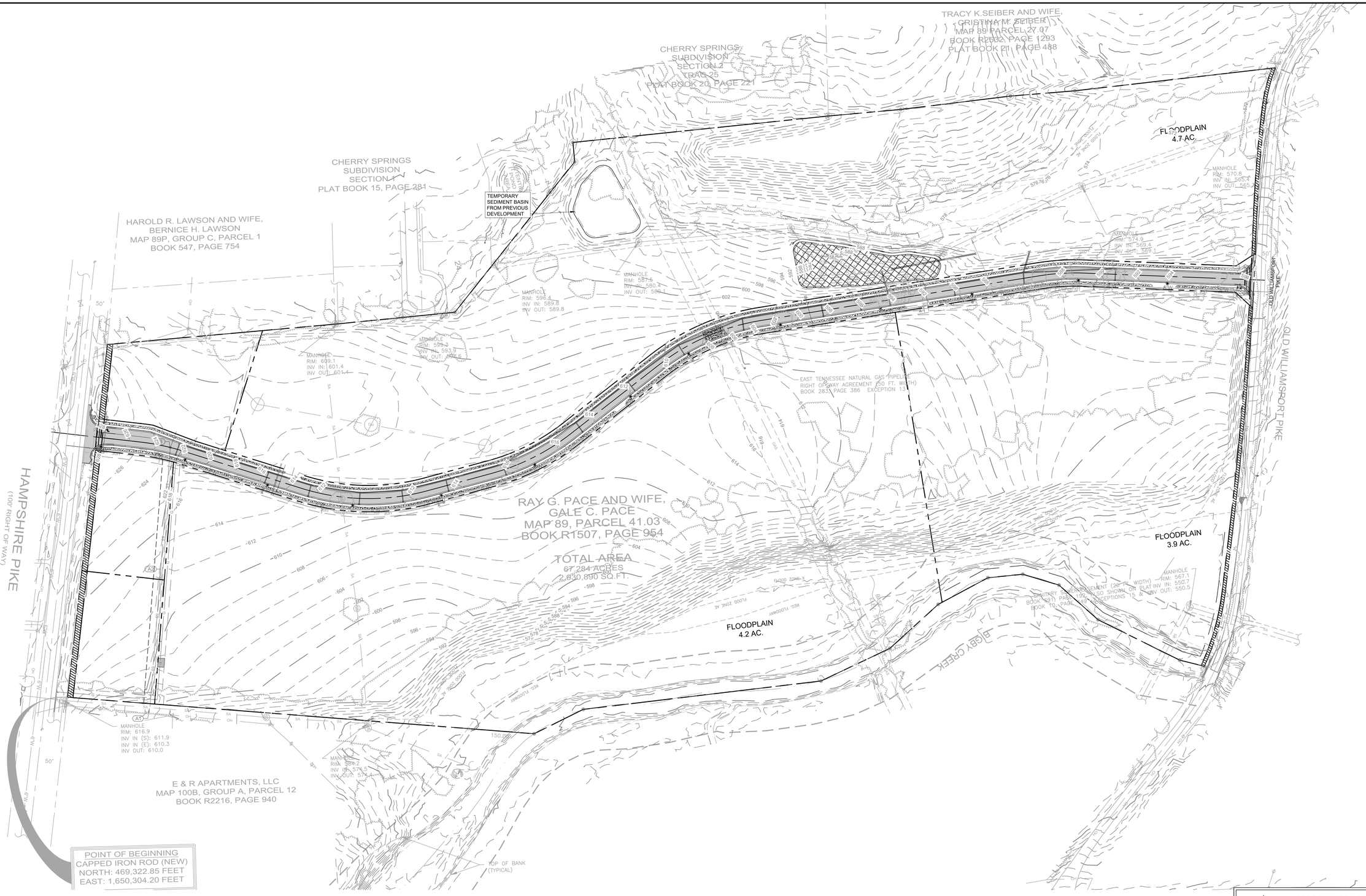
1000	N 470,519.69'	E 1,650,948.26'	EL 579.36'	IP (BASE)
1004	N 471,492.35'	E 1,650,868.58'	EL 565.23'	TARGET IP
1005	N 472,209.82'	E 1,650,380.55'	EL 566.50'	TARGET IP
1006	N 472,356.06'	E 1,649,672.27'	EL 569.39'	TARGET IP
1008	N 471,947.16'	E 1,649,716.44'	EL 573.51'	TARGET IP
1009	N 470,785.61'	E 1,649,517.39'	EL 587.61'	TARGET IP
1010	N 470,423.81'	E 1,649,224.57'	EL 616.98'	TARGET IP
1011	N 469633.46'	E 1,649,592.57'	EL 627.59'	TARGET IP
1012	N 469,401.83'	E 1,650,243.63'	EL 611.36'	TARGET IP
1013	N 469,953.75'	E 1,650,429.46'	EL 584.70'	TARGET IP

PROJECT CONTROL: TENNESSEE STATE PLANE COORDINATES. NAD83(2011), NAVD88(GEOID03 GRID 7 REVISED). NO DATUM ADJUSTMENT.

200 0 100 200 400
GRAPHIC SCALE: 1" = 200'

/(*(1'

IRON PIN FOUND	BENCH MARK	ELECTRIC METER-BOX	EVERGREEN TREE	UNDERGROUND ELEC	UGE
IRON PIN SET	WATER METER	ELECTRIC MH	DECIDUOUS TREE	OVERHEAD ELEC	OH
FENCE POST FOUND	WATER VALVE	LIGHT POLE	HANDICAP PARKING	GAS	GAS
FENCE POST SET	FIRE HYDRANT	UTILITY POLE	SIGN	COMMUNICATIONS	COM
CONC. MON. FOUND	SANITARY SEWER MH	GUY ANCHOR	TURN LANE MARKING	BOUNDARY	
CONC. MON. SET	SANITARY SEWER CO	COMMUNICATION BOX	MAIL BOX	CENTERLINE	
PK FOUND	AREA DRAIN	COMMUNICATION MH	CEMETERY	FENCE	X
PK SET	CURB INLET	GAS METER	SANITARY SEWER	8" SA	WATER FEATURE	
NON MONUMENTED POINT	STORM MH	GAS VALVE	WATER	4" W	TREE LINE	



COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 50 100 200

NORTH

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 130038
STATE OF TENNESSEE
05/19/2025

No.	REVISIONS	DATE	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	03/17/2025

KIMLEY-HORN PROJECT NO.
118332003

EXISTING CONDITIONS

SHEET NUMBER
C1-00

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Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes - preliminary plat\plansheets\C1-00 EXISTING CONDITIONS.dwg C1-00 EXISTING CONDITIONS May 19, 2025 3:13pm by: colton.dorris

HATCHED AREA INCLUDED IN PREVIOUS PRELIMINARY PLAT / DEVELOPMENT PLAN APPROVALS, NOT INCLUDED IN THE OVERALL DEVELOPMENT PLAN CALCULATIONS ASSOCIATED WITH THIS DEVELOPMENT APPLICATION, INCLUDING THE MULTIFAMILY PARCEL, 11 SINGLE FAMILY LOTS, STREETS A, B, AND C

SEE SHEET C2-10 FOR ENLARGEMENT

SEE SHEET C2-11 FOR ENLARGEMENT

1300' PLAYGROUND COVERAGE

PROPERTY LINE TYP.

FUTURE COMMERCIAL PAD 1.55 AC

HAMPSHIRE PIKE / PRINCIPAL ARTERIAL

22-0131 - HAMPSHIRE PIKE DEVELOPMENT - PRELIMINARY PLAT

CIVIC SPACE - POCKET PARK A 0.05 AC

FUTURE COMMERCIAL PAD 1.09 AC

FUTURE COMMERCIAL PAD 1.19 AC

CIVIC SPACE - NATURAL AREA 10.45 AC

NATURE FOOT PATH (GRAVEL)

RETAINING WALL TYP.

WATER QUALITY POND TYP.

FUTURE COMMERCIAL PAD 0.64 AC

OLD WILLIAMSPORT PIKE / MINOR ARTERIAL

CIVIC SPACE - POCKET PARK C 0.07 AC

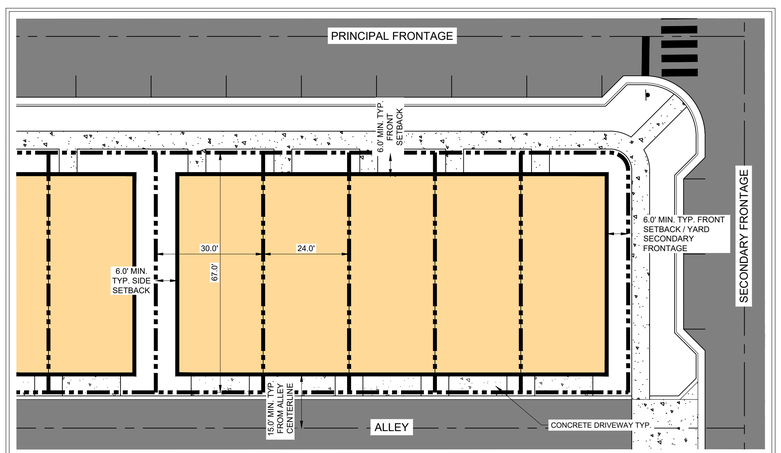
CIVIC SPACE - POCKET PARK D 0.07 AC

WATER QUALITY POND TYP.

PROPERTY LINE TYP.

1300' PLAYGROUND COVERAGE

HATCHED AREA EXCLUDED FROM ALL AREA, ENFRONTMENT, AND DENSITY TOTALS



TYPICAL LOT LAYOUTS
SCALE: 1" = 20'

SITE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE TOWNHOMES
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	TOWN HOMES
SITE AREA (AC):	32.60 AC
SITE AREA (SF):	1,420,129 SF
DENSITY	
PROPOSED:	
TOWNHOMES (24' x 56' TYP.):	143 DU
*SF LOTS (96' x 115' TYP.):	11 DU
TOTAL UNITS:	**154 DU**
**DENSITY:	4.39 UNITS/ACRE
MIN. LOT SIZE:	1,608 SF
UNITS FRONTING PEDESTRIAN PATH:	12 UNITS (8%)
TYPICAL LOT SETBACKS:	
MIN. FRONT SETBACK:	6 FT
MIN. SIDE SETBACK:	6 FT
MIN. REAR SETBACK:	15 FT FROM ALLEY C.L.
REQUIRED CIVIC USE SPACE:	5% OF TOTAL AREA 1.63 AC
PROVIDED CIVIC USE SPACE:	36% OF TOTAL AREA 11.64 AC
CIVIC SPACE LIST:	
POCKET PARK A:	0.05 AC
POCKET PARK B:	1.00 AC
POCKET PARK C:	0.07 AC
POCKET PARK D:	0.07 AC
NATURAL AREA:	10.45 AC
REQUIRED PARKING:	
TOWNHOMES	286 SPACES
SF LOTS:	22 SPACES
TOTAL REQUIRED:	**308 SPACES (2 PER DU)**
PROPOSED PARKING:	
GARAGE PARKING:	308 SPACES
DRIVEWAY PARKING:	22 SPACES
TOTAL DU PARKING:	**330 SPACES**
ON-STREET PARKING:	102 SPACES
TOTAL PARKING PROVIDED:	**432 SPACES**

*SF LOTS INCLUDED IN 22-0131 - HAMPSHIRE PIKE MIXED USE DEVELOPMENT - PRELIMINARY PLAT
**SF LOTS EXCLUDED FROM DENSITY AND FRONTAGE CALCULATIONS

BUILDING FRONTAGE REQUIREMENTS

TOTAL BUILDING FRONTAGE:	4,032 LF*
RESIDENTIAL FRONTAGE: (143 DU x 24 LF)	3,432 LF (85%)
COMMERCIAL FRONTAGE:	600 LF (15%)

*REQUIRED FRONTAGE MIX: 85% MAX RESIDENTIAL, 15% MIN COMMERCIAL

ENFRONTMENT LINETYPE LEGEND

COMMERCIAL ENFRONTMENT

RESIDENTIAL ENFRONTMENT

COORDINATES ARE NAD83. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 50 100 200

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS — REGISTERED ENGINEER — AGRICULTURE — CIVIL — COMMERCE — STATE OF TENNESSEE
03/19/2025

No.	REVISIONS	DATE	BY
1			
2			
3			
4			
5			
6			
7			
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9			
10			

DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	03/17/2025
KIMLEY-HORN PROJECT NO.	118332003

PRELIMINARY PLAT - OVERALL

SHEET NUMBER
C2-00

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Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes - preliminary plat\plansheets\C2-00 SITE LAYOUT - OVERALL.dwg C2-00 SITE LAYOUT - OVERALL May 19, 2025 3:32pm by: colton.dorris



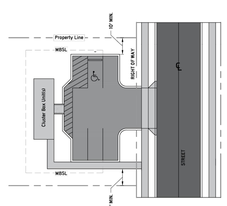
PARCEL AREA TABLE			PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.
1	0.05	2217	21	0.04	1944
2	0.04	1931	22	0.04	1944
3	0.06	2430	23	0.04	1944
4	0.07	2882	24	0.07	3244
5	0.04	1931	30	0.07	2973
6	0.04	1946	31	0.04	1953
7	0.06	2433	32	0.04	1948
8	0.06	2516	33	0.04	1949
9	0.04	1944	34	0.07	2839
10	0.04	1944	35	0.07	2964
11	0.06	2430	36	0.04	1945
12	0.06	2732	37	0.04	1943
13	0.04	1946	38	0.04	1948
14	0.04	1946	39	0.06	2694
15	0.06	2816	40	0.06	2430
16	0.06	2431	41	0.04	1944
17	0.04	1944	42	0.04	1944
18	0.04	1944	43	0.04	1944
19	0.06	2430	44	0.06	2430
20	0.06	2430	45	0.07	3014

PARCEL AREA TABLE			PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.
46	0.04	1947	503	0.08	3699
47	0.04	1944	504	0.21	8975
48	0.04	1947	505	1.37	59655
49	0.07	3019			
50	0.06	2430			
51	0.04	1944			
52	0.04	1944			
53	0.04	1944			
54	0.06	2430			
55	0.06	2430			
56	0.04	1944			
57	0.04	1944			
58	0.04	1944			
200	0.31	13685			
201	0.33	14351			
202	0.38	16470			
203	0.29	12467			
204	0.25	10831			
371	10.43	454299			
500	0.05	1992			

NOTES:

FOR 75 OR LESS CBU'S AT A SINGLE LOCATION
1. CLUSTER BOX UNITS (CBU'S) SHALL MEET USPS STANDARDS.
2. CBU'S MAY BE LOCATED WITHIN THE RIGHT OF WAY
3. CBU'S SHALL NOT BE PLACED WITHIN ANY PATH OR SIDEWALK.
4. CBU'S SHOULD BE PLACED ALONG MINOR LOCAL ROADWAYS OR EQUIVALENT. FOR PLACEMENT ALONG COLLECTOR AND ARTERIAL ROADWAYS, FOLLOW THE STANDARDS BELOW, "FOR MORE THAN 75 CBU'S AT A SINGLE LOCATION".

FOR MORE THAN 75 CBU'S AT A SINGLE LOCATION
1. CBU'S SHALL MEET USPS STANDARDS
2. CBU'S SHALL BE LOCATED OUTSIDE OF THE RIGHT OF WAY WITHIN A COMMON OR OPEN SPACE LOT
3. CBU'S SHALL NOT BE PLACED WITHIN ANY EASEMENTS
4. CBU'S AND APPURTENANT BUILDING PAD(S) SHALL BE CONSIDERED A PRINCIPLE STRUCTURE AND SHALL ADHERE TO SETBACK REQUIRMENTS
5. ACCESS AND DRIVEWAYS TO MEET ZONING CODE AND ACCESS MANAGEMENT
6. PARKING SHALL BE PROVIDED WITH A MINIMUM OF 2 PARKING STALLS PLUS 1 STALL PER 25 MAIL UNITS OR PORTION THEREOF ABOVE THE FIRST 25 MAIL UNITS, WITH A MAXIMUM OF TWICE THE REQUIRED
7. PARKING AND SIDEWALKS SHALL HAVE A 10 FT. MINIMUM BUFFER FROM ANY PROPERTY LINE
8. PARKING SHALL ADHERE TO LAYOUT AND INTERIOR LANDSCAPING REQUIREMENTS PER THE ZONING CODE
9. PARKING SHALL BE CLEARLY LABELED AS SHORT TERM PARKING AND CANNOT BE CONSIDERED REQUIRED PARKING FOR ANOTHER USE
10. WHEEL STOPS OR CURBING SHALL BE PROVIDED FOR ALL PARKING STALLS
11. ADEQUATE LIGHTING SHALL BE PROVIDED.
12. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER



CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

STANDARD DETAILS

MAIL CLUSTER BOX UNITS

(NTS)

DATE 6/9/2022

MD-03

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
STATE OF TENNESSEE
05/19/2025

No.	REVISIONS	DATE	BY
1			
2			
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DESIGNED BY: ___
DRAWN BY:
CHECKED BY: ___
DATE: 03/17/2025
KIMLEY-HORN PROJECT NO. 118332003

PRELIMINARY PLAT - ENLARGEMENT

SHEET NUMBER
C2-10

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CIVIC SPACE - NATURAL AREA
10.45 AC

RETAINING WALL TYP.

WATER QUALITY POND TYP.

NATURE FOOT PATH
(GRAVEL)

30' STREAM BUFFER

100 YEAR FLOOD PLAIN

FUTURE COMMERCIAL
PAD 0.64 AC

OLD WILLIAMSPORT PIKE | MINOR ARTERIAL

ALLEY B
20' ROW | RD-06

ALLEY C
20' ROW | RD-06

STREET B
65' ROW | DS-18

STREET C
65' ROW | DS-18

PRIVATE SHARED DRIVEWAY

PRIVATE SHARED DRIVEWAY

CIVIC SPACE - POCKET PARK C
0.07 AC

MAIL KIOSK SEE DETAIL MD-03
SHEET C2-10

CIVIC SPACE - POCKET PARK D
0.07 AC

WATER QUALITY POND TYP.

100 YEAR FLOOD PLAIN

PROPERTY LINE TYP.

FLOODPLAIN
3.9 AC.

WATER QUALITY POND

MATCHLINE SEE SHEET C2-10

PARCEL AREA TABLE			PARCEL AREA TABLE			PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.
65	0.05	2010	85	0.04	1704	105	0.05	2010
66	0.04	1608	86	0.04	1704	106	0.04	1608
67	0.04	1608	87	0.05	2129	107	0.04	1608
68	0.04	1608	88	0.05	2005	108	0.05	2010
69	0.05	2010	89	0.04	1608	109	0.05	2005
70	0.05	2010	90	0.04	1608	110	0.04	1608
71	0.04	1608	91	0.04	1608	111	0.04	1608
72	0.04	1608	92	0.05	2010	112	0.05	2010
73	0.04	1608	93	0.05	2010	113	0.05	2010
74	0.05	2009	94	0.04	1608	114	0.04	1608
75	0.06	2781	95	0.04	1608	115	0.04	1608
76	0.04	1690	96	0.05	2010	116	0.04	1608
77	0.04	1704	97	0.07	3229	117	0.05	2009
78	0.05	2130	98	0.04	1610	118	0.07	3021
79	0.05	2130	99	0.04	1608	119	0.04	1608
80	0.04	1704	100	0.05	2010	120	0.05	2010
81	0.04	1704	101	0.05	2010	121	0.05	2010
82	0.05	2130	102	0.04	1608	122	0.04	1608
83	0.05	2130	103	0.04	1608	123	0.04	1608
84	0.04	1704	104	0.05	2005	124	0.05	2005

PARCEL AREA TABLE			PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.
125	0.05	2010	502	0.07	3143
126	0.04	1608			
127	0.04	1608			
128	0.05	2010			
129	0.05	2009			
130	0.04	1606			
131	0.05	2031			
132	0.05	2035			
133	0.04	1607			
134	0.05	2020			
135	0.06	2481			
136	0.04	1614			
137	0.04	1608			
138	0.04	1608			
139	0.05	2009			
140	0.05	2021			
141	0.04	1608			
142	0.04	1608			
143	0.05	2010			
501	0.07	3136			

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 139933
STATE OF TENNESSEE
05/19/2025

No.	REVISIONS	DATE	BY
1			
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DESIGNED BY: ___
DRAWN BY: ___
CHECKED BY: ___
DATE: 03/17/2025
KIMLEY-HORN PROJECT NO. 118332003

PRELIMINARY PLAT - ENLARGEMENT

SHEET NUMBER
C2-11

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Kimley»Horn

MEMORANDUM

To: City of Columbia

From: Colton Dorris, PE
Josh Rowland, PLA
Kimley-Horn and Associates, Inc.

Date: May 19, 2025

Subject: ***Steadfast Companies – Hampshire Pike Mixed Use – Public Improvement Commitment Letter***

This commitment letter details the proposed phasing of public improvement commitments to be made by Steadfast Companies as part of the Hampshire Pike Mixed Use development proposed at Map 089, Parcel 04103 000. A preliminary plat was approved for this project on July 13, 2022.

A traffic impact analysis (TIA) was prepared for the project. The TIA assumes the full project buildout will consist of multifamily housing (625 units), single-family detached housing (39 units), and general office/retail space (15,000 square feet). Final development densities are anticipated to be lower than those assumed for the TIA.

The TIA identifies the following onsite public improvements to support this development:

Public Street A (Minor Collector Road)

Public Street A will be constructed to City of Columbia public street standards for minor collectors. Public Street A will connect Hampshire Pike to Old Williamsport Pike. Public Street A has been constructed.

Public Street B (Residential Local Road)

Public Street B will be constructed to City of Columbia public street standards for residential local roads. Public Street B will connect Public Street A to existing Woodland Crossing to the west, and will loop back to Public Street A. Public Street B will be constructed with the Hampshire Pike Townhome development submitted as Item 25-0137.

The TIA identifies the following offsite public improvements to support this development:

To be completed prior to C.O. of the dwelling unit or development square footage that causes the total trip generation of the development to exceed one of the following thresholds: 2,810 Daily trips, 163 AM Peak Hour trips, OR 181 PM Peak Hour trips:

Hampshire Pike at Site Driveway A

- Complete road widening, installation of new traffic signal, and installation of associated signs and pavement markings in accordance with the approved plans dated November 22, 2023.

To be completed prior to C.O. of the dwelling unit or development square footage that causes the total trip generation of the development to exceed one of the following thresholds: 3,747 Daily trips, 218 AM Peak Hour trips, OR 242 PM Peak Hour trips:

Old Williamsport Pike at Site Driveway B

- Complete road widening and installation of associated signs and pavement markings in accordance with the approved plans dated November 22, 2023.

James Campbell Boulevard at Old Williamsport Pike

- Construct a northbound left-turn lane and associated pavement markings in accordance with the approved plans dated November 22, 2023.

James Campbell Boulevard at Industrial Park Road

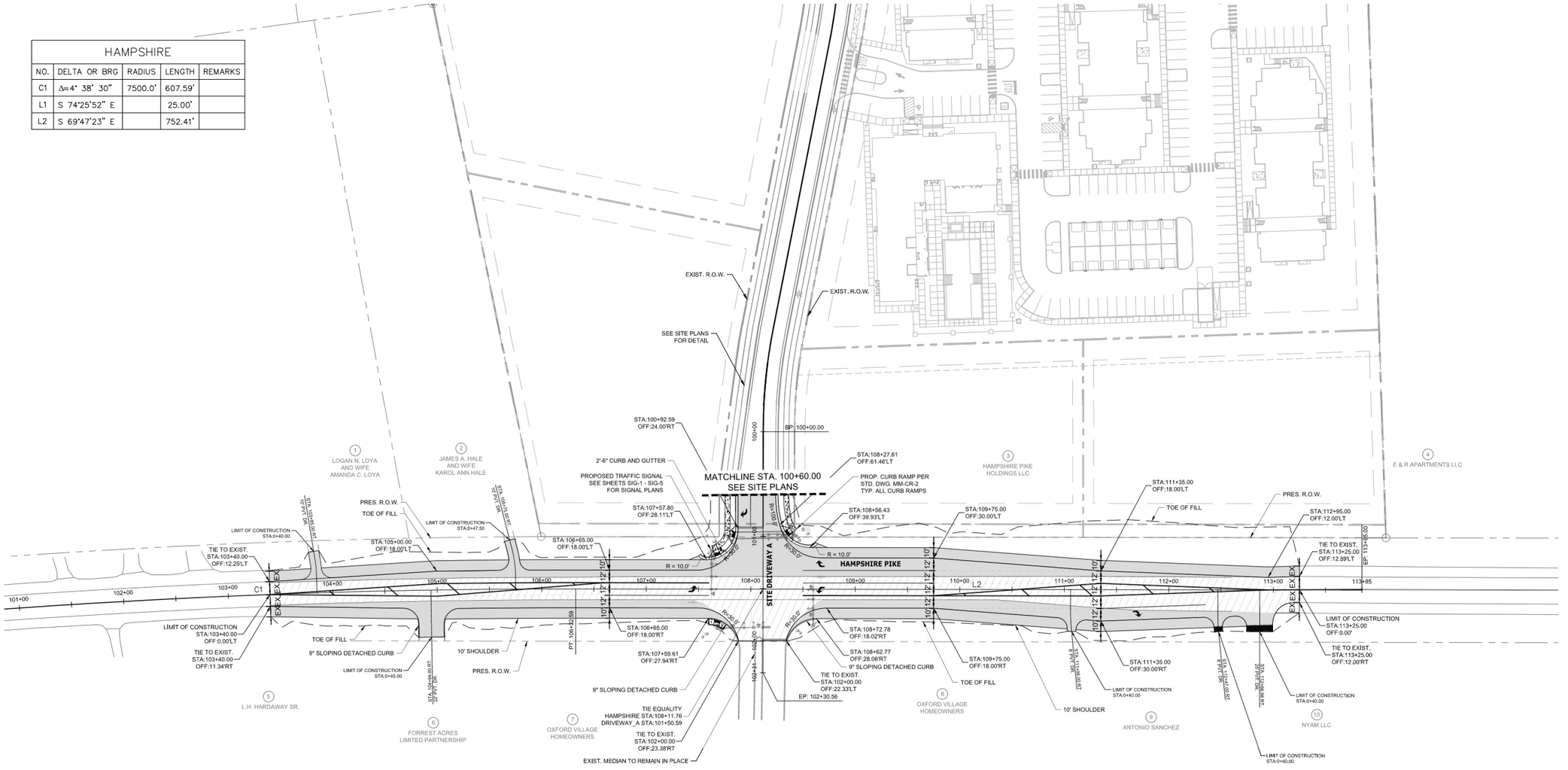
- Restripe the southbound shared through/left-turn lane along Industrial Park Road to provide a shared left/through/right-turn lane in accordance with the approved plans dated November 22, 2023.

James Campbell Boulevard at Hampshire Pike

- Reconstruct north leg median nose and south leg median nose and install associated signage and pavement markings in accordance with the approved plans dated November 22, 2023.

These offsite improvements are depicted in the attached exhibits. The approved plans dated November 22, 2023 illustrate the full extent of improvements required at each location.

HAMPSHIRE				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C1	Δ=4° 38' 30"	7500.0'	607.59'	
L1	S 74°25'52" E		25.00'	
L2	S 69°47'23" E		752.41'	



BOXTITLE

- ASPHALT PAVEMENT MILL AND OVERLAY
- FULL DEPTH ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- CONCRETE DRIVEWAY
- GRASS

PERMIT REVIEW ONLY

GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

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Kimley»Horn
10 Lea Avenue, Nashville, TN 37210
Main: 615.564.2701 | www.kimley-horn.com
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HAMPSHIRE PIKE MIXED USE OFFSITE ROADWAY IMPROVEMENTS
STEADFAST COMPANIES
COLUMBIA, TN

BEN J. VONDENBRINK — REGISTERED ENGINEER — AGRICULTURE — 125719 — 11-9-23 — STATE OF TENNESSEE

No.	REVISIONS	DATE	BY
1			
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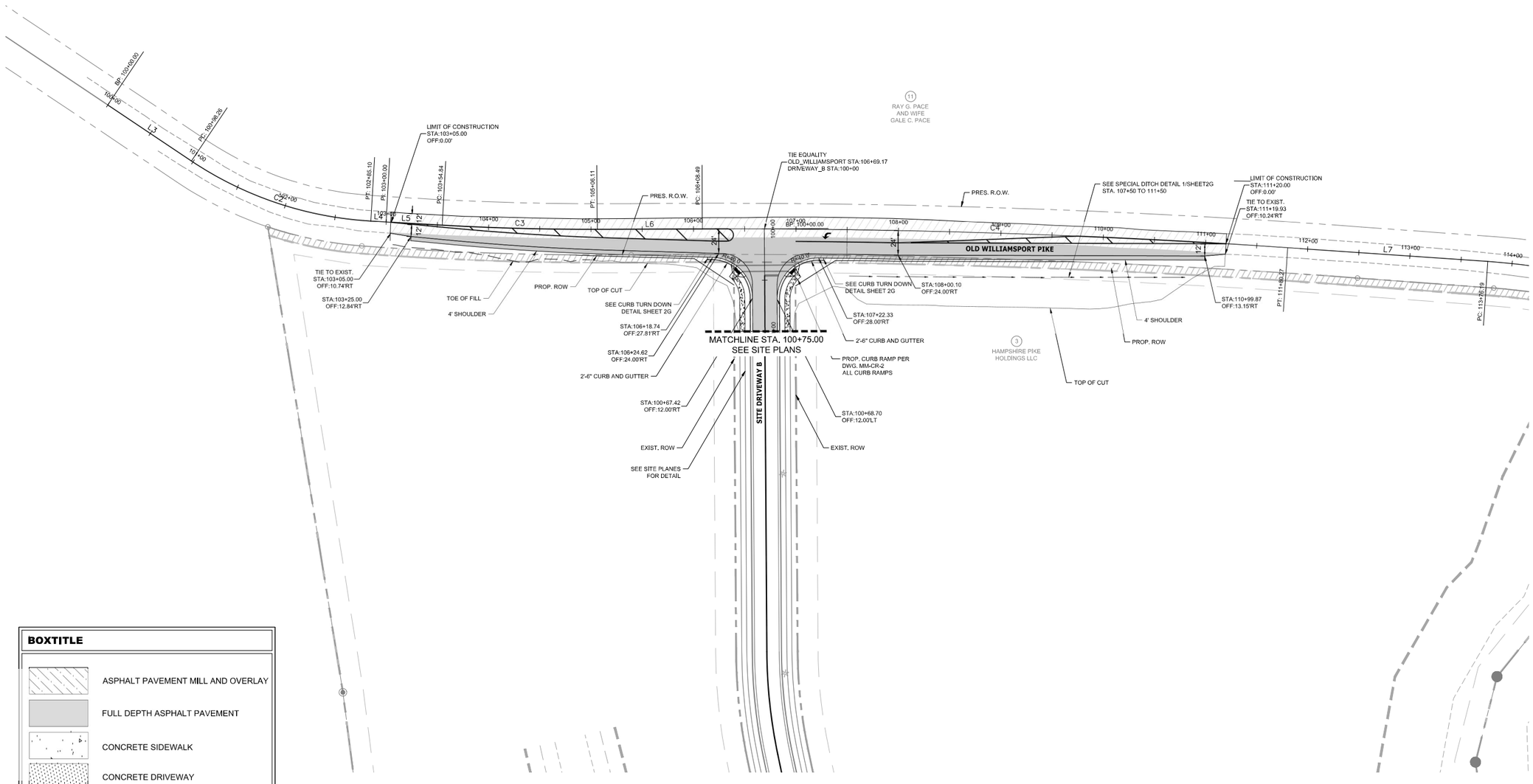
10			

DESIGNED BY:	BJV
DRAWN BY:	EJBF
CHECKED BY:	LEE
DATE:	11/09/2023
KIMLEY-HORN PROJECT NO.	118332003

PROPOSED LAYOUT

SHEET NUMBER
4A

OLD_WILLIAMSPORT				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C2	Δ=30° 35' 12"	350.0'	186.84'	
C3	Δ=3° 28' 00"	2500.0'	151.27'	
C4	Δ=4° 05' 42"	8000.0'	571.78'	
L3	S 39°47'17" E		98.26'	
L4	S 70°22'29" E		14.90'	
L5	S 70°22'29" E		54.84'	
L6	S 73°50'29" E		102.38'	
L7	S 69°44'47" E		195.92'	



BOXTITLE

- ASPHALT PAVEMENT MILL AND OVERLAY
- FULL DEPTH ASPHALT PAVEMENT
- CONCRETE SIDEWALK
- CONCRETE DRIVEWAY
- GRASS

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GRAPHIC SCALE IN FEET
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COLUMBIA, TN

BENJ. VONDENBRINK
REGISTERED ENGINEER
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LICENSE
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DESIGNED BY:	BJV
DRAWN BY:	EJBF
CHECKED BY:	LEE
DATE:	11/09/2023
KIMLEY-HORN PROJECT NO.	118332003

PROPOSED LAYOUT

SHEET NUMBER
5A

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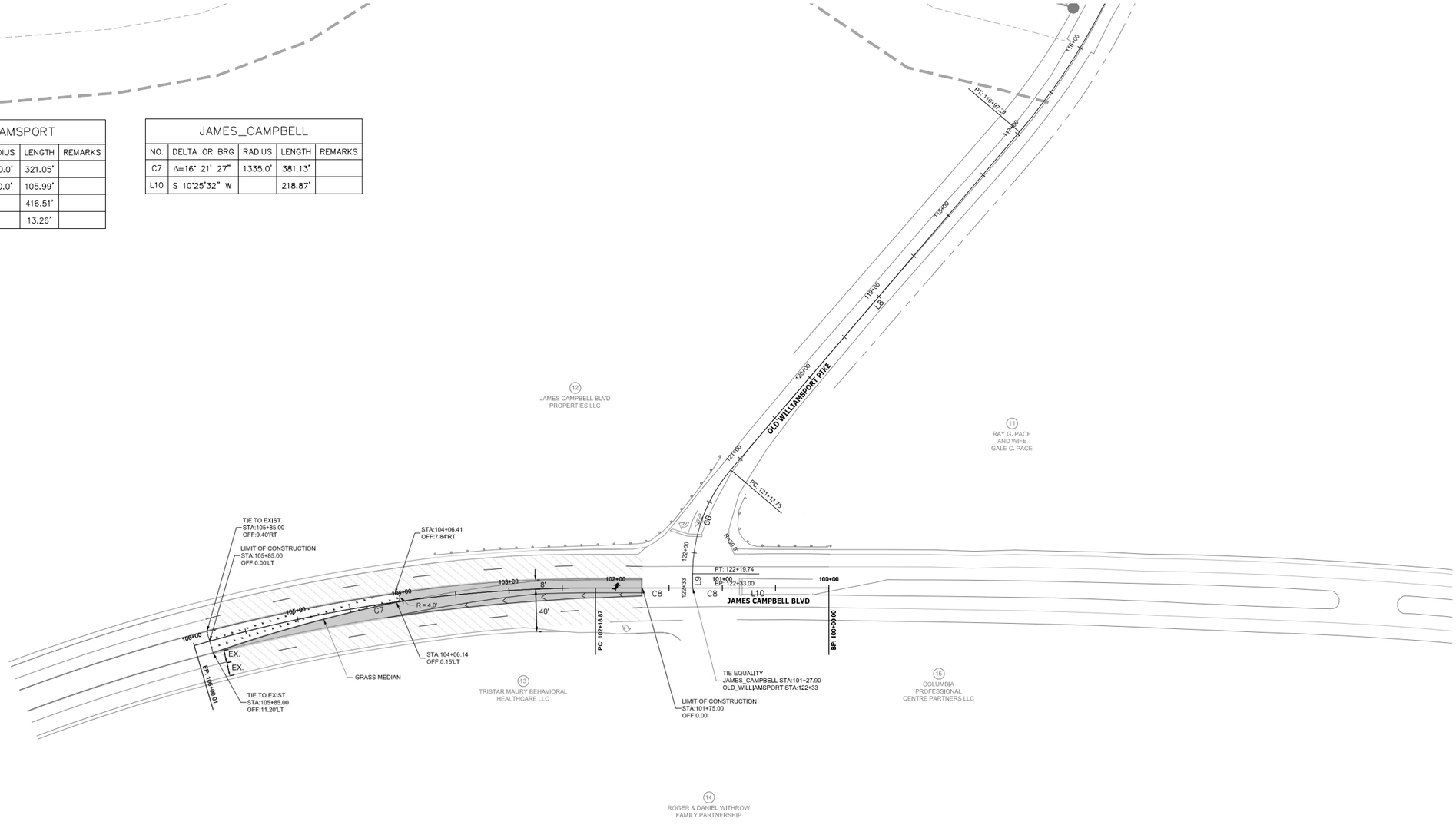
OLD_WILLIAMSPORT				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C5	Δ=30° 39' 28"	600.0'	321.05'	
C6	Δ=40° 29' 06"	150.0'	105.99'	
L8	S 39°05'19" E		416.51'	
L9	S 79°34'25" E		13.26'	

JAMES_CAMPBELL				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C7	Δ=16° 21' 27"	1335.0'	381.13'	
L10	S 10°25'32" W		218.87'	



BOXTITLE

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- FULL DEPTH ASPHALT PAVEMENT
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STEADFAST COMPANIES
COLUMBIA, TN

BEN J. VONDENBRINK
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AGRICULTURE
11-9-23
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STATE OF TENNESSEE

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DESIGNED BY:	BJV
DRAWN BY:	EJBF
CHECKED BY:	LEE
DATE:	11/09/2023

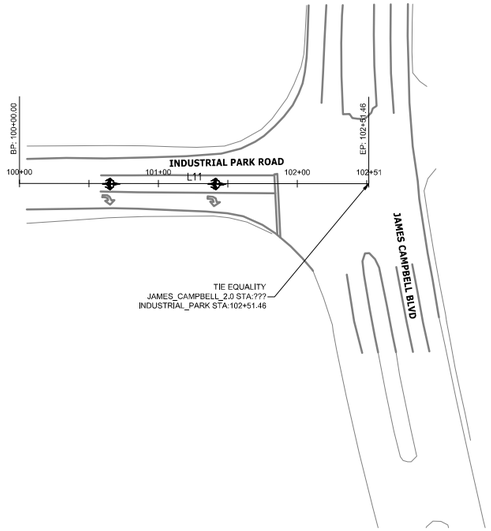
KIMLEY-HORN PROJECT NO. 118332003

PROPOSED LAYOUT

SHEET NUMBER
6A

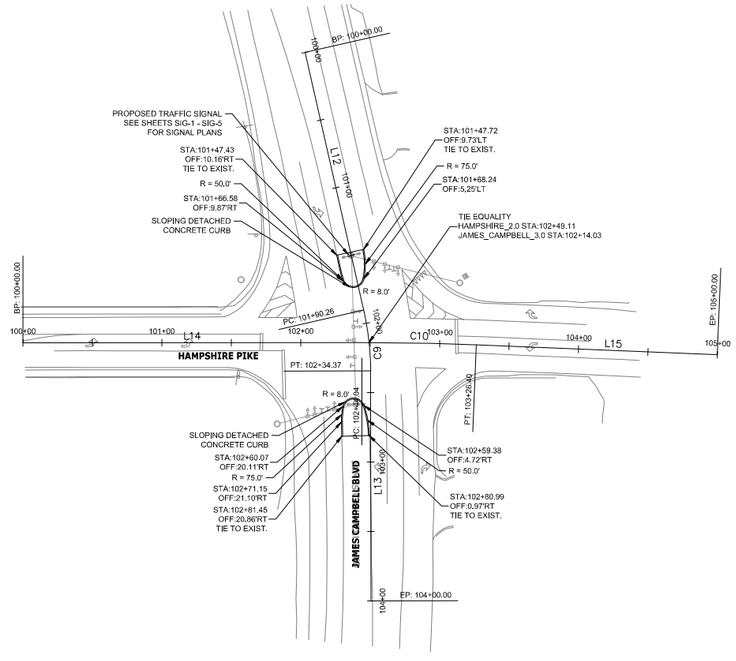
INDUSTRIAL_PARK				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
L11	S 28°25'26" E		251.46'	

JAMES_CAMPBELL_2.0				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C8	Δ=???	???'	218.87'	



HAMPSHIRE_2.0				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C10	Δ=2° 21' 35"	2000.0'	82.37'	
L14	N 76°06'57" E		244.04'	
L15	N 78°28'32" E		173.60'	

JAMES_CAMPBELL_3.0				
NO.	DELTA OR BRG	RADIUS	LENGTH	REMARKS
C9	Δ=12° 38' 12"	200.0'	44.11'	
L12	S 26°39'07" E		190.26'	
L13	S 13°58'13" E		165.63'	



BOXTITLE

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STEADFAST COMPANIES
COLUMBIA, TN

BEN J. VONDENBRINK
REGISTERED PROFESSIONAL ENGINEER
AGRICULTURE
COMMERCE
No. 125719
STATE OF TENNESSEE
11-9-23

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DESIGNED BY:	BJV
DRAWN BY:	EJBF
CHECKED BY:	LEE
DATE:	11/09/2023

KIMLEY-HORN PROJECT NO.
118332003

PROPOSED LAYOUT

SHEET NUMBER
7A

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A PARCEL OF LAND LYING IN MAURY COUNTY, TENNESSEE, JUST EAST OF COLUMBIA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOW:

BEGINNING AT A CAPPED IRON ROD SET IN THE NORTHERN MARGIN OF HAMPSHIRE PIKE (STATE ROUTE 50/99) AT THE SOUTHWESTERN CORNER OF THE E & R APARTMENTS, LLC PROPERTY, BOOK R2216, PAGE 940, REGISTER'S OFFICE MAURY COUNTY (HEREAFTER ROMC), SAID ROD BEING LOCATED AT TENNESSEE STATE PLANE COORDINATES NORTH: 469,322.85 FEET AND EAST: 1,650,304.20 FEET, NAD83(2011); THENCE ALONG THE NORTHERN MARGIN OF SAID HAMPSHIRE PIKE, RUNNING PARALLEL TO AND 50 FEET FROM THE CENTERLINE OF SAME, NORTH 69°47'23" WEST, 808.42 FEET TO A CAPPED IRON ROD SET AT THE SOUTHEASTERN CORNER OF THE HAROLD R. LAWSON AND WIFE, BERNICE H. LAWSON PROPERTY, BOOK 547, PAGE 754, ROMC; THENCE LEAVING SAID HAMPSHIRE PIKE AND ALONG THE EASTERN BOUNDARY OF SAID LAWSON PROPERTY, NORTH 8°39'08" EAST, 520.27 FEET TO A CAPPED IRON ROD FOUND AT THE SOUTHEASTERN CORNER OF LOT 1 IN THE CHERRY SPRINGS SUBDIVISION, SECTION 1, PLAT BOOK 15, PAGE 281, ROMC; THENCE ALONG THE EASTERN AND NORTHEASTERN BOUNDARY OF SAID SUBDIVISION SECTION THE FOLLOWING THREE (3) CALLS:

NORTH 8°05'02" EAST, 155.24 FEET TO AN IRON ROD FOUND;

NORTH 8°07'38" EAST, 119.24 FEET TO A CAPPED IRON ROD FOUND;

AND NORTH 37°45'02" WEST, 348.69 FEET TO A CAPPED IRON ROD FOUND AT THE EASTERNMOST CORNER OF TRACT 25 IN THE CHERRY SPRINGS SUBDIVISION, SECTION 2, PLAT BOOK 20, PAGE 221, ROMC; THENCE ALONG THE EASTERN BOUNDARY OF SAID TRACT 25 THE FOLLOWING THREE (3) CALLS:

NORTH 37°28'50" WEST, 89.24 FEET TO AN IRON ROD FOUND;

NORTH 81°16'34" WEST, 44.42 FEET TO AN IRON ROD FOUND;

AND NORTH 7°51'13" EAST, 584.57 FEET TO AN IRON PIPE FOUND AT THE NORTHEASTERN CORNER OF SAID TRACT 25 AND THE SOUTHEASTERN CORNER OF THE TRACY K. SEIBER AND WIFE, CRISTINA M. SEIBER PROPERTY, BOOK R2532, PAGE 1293, ROMC;

THENCE ALONG THE EASTERN BOUNDARY OF SAID SEIBER PROPERTY THE FOLLOWING FOUR (4) CALLS:

NORTH 8°35'08" EAST, 165.51 FEET TO AN IRON PIPE FOUND;

NORTH 6°48'17" EAST, 251.84 FEET TO AN IRON PIPE FOUND;

NORTH 9°05'34" EAST, 147.05 FEET TO AN IRON PIPE FOUND;

AND NORTH 7°12'30" EAST, 460.18 FEET TO A CAPPED IRON ROD SET IN THE SOUTHERN MARGIN OF OLD WILLIAMSPORT PIKE AND A POINT ON THE ARC OF A CIRCULAR CURVE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 375.00 FEET, TO WHICH A RADIAL LINE BEARS SOUTH 35°01'29" WEST; THENCE ALONG THE SOUTHERN MARGIN OF SAID OLD WILLIAMSPORT PIKE, RUNNING PARALLEL TO AND 25 FEET FROM THE CENTERLINE OF SAME, THROUGH A CENTRAL ANGLE OF 14°18'31" AN ARC DISTANCE OF 93.65 FEET (CHORD: SOUTH 62°07'47" EAST, 93.41 FEET) TO A CAPPED IRON ROD SET AT A POINT OF COMPOUND CURVATURE, SAID CURVE IS CONCAVE NORTHERLY, HAVING A RADIUS OF 3,068.00 FEET; THENCE CONTINUING ALONG THE NORTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 4°54'48" AN ARC DISTANCE OF 263.09 FEET (CHORD: SOUTH 71°44'27" EAST, 263.01 FEET) TO A CAPPED IRON ROD SET AT A POINT OF REVERSE CURVATURE, SAID CURVE IS CONCAVE SOUTHERLY, HAVING A RADIUS OF 8,499.93 FEET; THENCE CONTINUING ALONG THE NORTHERN MARGIN OF SAID WILLIAMSPORT PIKE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 4°46'56" AN ARC DISTANCE OF 709.46 FEET (CHORD: NORTH 71°48'23" EAST, 709.26 FEET) TO A CAPPED IRON ROD SET AT THE POINT OF TANGENT; THENCE CONTINUING ALONG THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE SOUTH 69°24'54" EAST, 133.40 FEET TO A CAPPED IRON ROD SET AT THE POINT OF CURVATURE OF A CIRCULAR CURVE, CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 575.00 FEET; THENCE CONTINUING ALONG THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 17°45'32" AN ARC DISTANCE OF 178.22 FEET (CHORD: SOUTH 60°32'09" EAST, 177.51 FEET) TO THE INTERSECTION OF THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND THE CENTER OF BIGBY CREEK; THENCE LEAVING SAID

WILLIAMSPORT PIKE AND RUNNING ALONG THE CENTER OF BIGBY CREEK, APPROXIMATED HEREIN BY A SERIES OF STRAIGHT LINES, THE FOLLOWING TEN (10) CALLS:

SOUTH 27°51'17" WEST, 58.08 FEET;

SOUTH 40°07'58" WEST, 207.40 FEET;

SOUTH 55°18'29" WEST, 118.69 FEET;

SOUTH 30°29'38" WEST, 86.06 FEET;

SOUTH 7°58'19" WEST, 79.99 FEET;

SOUTH 14°23'00" EAST, 128.32 FEET;

SOUTH 28°34'01" EAST, 148.88 FEET;

SOUTH 11°34'17" EAST, 173.61 FEET;

SOUTH 6°57'12" WEST, 545.15 FEET;

AND SOUTH 12°37'09" EAST, 125.05 FEET TO THE NORTHWESTERN CORNER OF THE AFOREMENTIONED E & R APARTMENTS, LLC PROPERTY; THENCE LEAVING SAID BIGBY CREEK AND ALONG THE WESTERN BOUNDARY OF SAID E & R APARTMENTS, LLC PROPERTY, SOUTH 18°14'30" WEST (PASSING THROUGH A CAPPED IRON ROD SET AT 150.00 FEET) A TOTAL DISTANCE OF 1,065.89 FEET TO THE POINT OF BEGINNING; CONTAINING 67.284 ACRES OR 2,930,890 SQUARE FEET, AND BEING THE ALL OF THE RAY G. PACE AND WIFE, GALE C. PACE PROPERTY, BOOK R1507, PAGE 954, ROMC, AND A PORTION OF PARCEL 41.03 ON MAURY COUNTY TAX MAP 89.

CITY OF
COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560

PLANNING COMMISSION
PROJECT DEVELOPMENT APPLICATION

SUBMITTAL REQUIREMENTS

Please submit scanned copy of the application online at City of Columbia | Permitting (onlama.com)
If there is no access to a computer, please submit all pertinent information on a flash drive as well as provide one hard copy. Additional fee may apply.

ADDRESS/LOCATION			
	TAX MAP: 089	GROUP:	PARCEL: 04103 000
SUMMARY OF NATURE OF REQUEST AND WORK	Site development plan submittal for a 32.60 AC 154 Town home development with a CD-4 zoning.		

DATE OF PRE-APPLICATION CONFERENCE		*Pre-application meetings are scheduled for Wednesdays. Concept plan/fee due the Friday before the meeting.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
☐ Comprehensive Plan Amendment ☐ Annexation ☑ Rezoning ☑ Preliminary Plat ☐ Final Plat ☐ PUD Preliminary Master Plan ☑ PUD Final Site Plan ☑ Site Development Plan ☐ ARC Alternative Compliance ☐ As Approved Plans ☐ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations:** ☐ Annexation Permission Form **Annexations/Rezoning/Plan Amendments:** ☐ Requested Zone Listed ☐ Statement of Compliance with Comprehensive Plan ☐ Concept Plan **Preliminary Plats/Site Development Plans:** ☑ Plans and/or Plats conforming to City standards with signed and completed check list **All Annexations/Rezoning/Preliminary Plats/Site Development Plans and PUDS:** ☑ Receipt of Payment for Pre-Application Meeting ☑ Written Legal Description copy ☑ Columbia Water System Availability Letter ☑ Columbia Waste Water Department Will Serve Letter

Rev. 3/5/2025

	Plats/PUDs: ❑ Project Name (include Sections & Phases) ❑ Total Number of Lots/Residential Units ❑ Square Footage of Non-Residential Floor Space ❑ Total acreage

Applications and all required submittals must be filed with the Department of Development Services prior to the established deadline. Both the applicant and property owner (if different from applicant) must sign the application. Any requests to defer or move the item to future meeting dates must be requested by the resubmittal date listed on the Planning Commission schedule.

APPLICANT
All communications will go to the Applicant's email that is provided.

NAME	Colton Dorris	PHONE	629.401.4768
ADDRESS	10 Lea Avenue, Suite 400	EMAIL	colton.dorris@kimley-horn.com

PROPERTY OWNER NAME	Chase Emery	PHONE	949.518.2001
ADDRESS	18100 Von Karman Avenue, Suite 500, Irvine CA 92612	EMAIL	Chase.emery@steadfastco.com

If owner is not a natural person, documentation must be provided showing signing authority on behalf of the entity. If multiple persons are listed as owners in the records of the Maury County Assessor, all owners must sign or the signatory must provide documentation of authority to apply on behalf of record owner (i.e., Power of Attorney or notarized Letter of Authorization). In filling out this application, I attest that (1) I am familiar with the rules, regulations, and procedures of the City of Columbia & (2) all information contained herein is accurate & true to the best of my knowledge.

Colton Dorris		5/19/2025
APPLICANT NAME	APPLICANT SIGNATURE	DATE
Hampshire Pike Holdings, LLC Dinesh Davar, Authorized Signer	Dinesh Davar (May 19, 2025 10:27 PDT)	05/19/2025
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE

HampshirePike_Townhomes_Application

Final Audit Report 2025-05-19

Created:	2025-05-19
By:	Jacklyn White (Jacklyn.White@SteadfastCo.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAt7ASGgnwvh07HFxmtsvApYqYcqhGZU4y

"HampshirePike_Townhomes_Application" History

Document created by Jacklyn White (Jacklyn.White@SteadfastCo.com)
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Document emailed to Dinesh Davar (dinesh.davar@steadfastco.com) for signature
2025-05-19 - 4:32:33 PM GMT

Email viewed by Dinesh Davar (dinesh.davar@steadfastco.com)
2025-05-19 - 5:26:23 PM GMT- IP address: 68.5.175.209

Document e-signed by Dinesh Davar (dinesh.davar@steadfastco.com)
Signature Date: 2025-05-19 - 5:27:09 PM GMT - Time Source: server- IP address: 68.5.175.209

Agreement completed.
2025-05-19 - 5:27:09 PM GMT

Kimley»Horn

Staff Comment Response Letter

To:	City of Columbia Development Review Committee
From:	William Irby and Colton Dorris, PE
	Kimley-Horn and Associates, Inc.
Date:	May 19th, 2025
Subject:	Hampshire Pike Steadfast Mixed Use - Townhomes

Please see the below responses to comments on the Kirkpatrick Wheeler PMDP provided to Kimley-Horn on Thursday, May 15th, 2025. The original comments are listed below with our responses listed in Red.

Planning

- Submit most current application dated 3/5/2025 found on website at https://www.columbiatn.gov/218/Zoning-and-Planning
  Acknowledged

- Complete all applicable sections for Site Plan and Preliminary Plan on application.
  New application completed.

- Provide calculation percentage of townhomes that front pedestrian paths.
  The calculation for percentage of townhomes that enfront pedestrian paths is shown in the site data table. 8% (12 Units) of the proposed townhomes enfront pedestrian paths.

- Show typical footprint of garage with minimum standard of 10' x 20' per vehicles to confirm parking ration
  Architectural floor plan sheet added to set. Shows how garage sizing meets the 10' x 20' minimum standard per vehicle.

- Driveways for townhomes are required to be 10' minimum width. Please note that drives will meet standards.
  Driveway width requirement note added to sheet C2-00. Typical driveway width dimension added to typical lot layout.

- Civic Space uses require a parking ratio of 1 per 5,000 square feet of gross land area. Please delineate parking spaces that are dedicated.
  Civic space parking requirement added to the site data table. The dedicated parking spaces for the Green are called out on C2-00 Site Layout Overall.

- Site development plan requires a main civic space type of a green, square, or plaza within 800' of a linear pedestrian shed. Please provide detail sheet of these required civic space types within a ¼ mile radius of a pedestrian shed 5.3.3.
  Sheet C3-00 Pedestrian Corridor exhibit has been added to the sheet set. This sheet shows Avely Ridge Way as a pedestrian corridor and shows how the Green is located within 800' of the geometric center of the pedestrian corridor.

- Provide thoroughfare enfrontment calculation to ensure all civic space is located on a lot or building site equal to the lot width of the character district.
  Civic space enfrontment line type added to C2-00 and civic space enfrontment calculation added to thoroughfare enfrontment notes.

- Show retaining wall height and materials.
  Existing and proposed site retaining walls height and materials noted on site layout sheets.

- Provide landscape plan that includes street section requirement of Ordinance 4400.
  The landscape plan includes street trees that are planted 50' O.C.

- Final plat for overall development needs to be recorded prior to townhome platting.
  Acknowledged

- Provide block perimeter calculations to ensure no blocks exceed 2400ft. see example 9.3.B-2 for example in zoning ordinance.
  Block perimeter lengths added to the Site Layout enlargement sheets.

Engineering

- The new alignment of Street B will be required to meet new thoroughfare street sections with parking on one side. See cul-de-sac detail as well.
  Street B has been changed to have a 65' ROW (DS-18) with parallel parking in various areas along the street..

- Subject to construction plans and TIS
  The attached revised Offsite Improvements Commitment Letter has been revised to include triggers for trip generation in additional to triggers for COs.

- Concrete is not an approved street pavement material. Therefore, the cul-de-sac should be removed from the gas line easement if concrete will be required by the gas company for any roadway within their easement.
  Concrete has been removed from the Street B plan.

- Inlets shall be located a minimum of every one hundred fifty (150) feet of alley.
  Storm infrastructure, including inlets a minimum of every 150', have been added to the proposed alleys.

- Update public improvement commitment letter to provide new triggers for improvements that are not specific only to the multi-family.
  The attached revised Offsite Improvements Commitment Letter has been revised to include triggers for trip generation in additional to triggers for COs.

- Woodland Crossings cul-de-sac to be removed once connection made.
  This note has been added to the existing culdesac on both C2-00 and C2-10.

- The maximum slope of all cut and fill slopes shall not exceed three to one (3H:1V)
  The maximum slope of all proposed grading areas is 3:1.

- Rear access driveways (north of street B) cannot be alleys because they dead end. Update linework to exclude them from the ROW. Label as private shared driveway and encompass in easement (PUDAE).
  ROW has been updated so that these two driveways are excluded from ROW. Sheet C2-11 now shows 30' Public Utility Drainage Easements tacked onto each of these driveways.

Maury County E911

- Preliminary plat will need to be provided to Maury County 911. Send to cgideon@maury911.org
  Preliminary Plat has been sent to Crystal at Maury County E911.

Maury County Schools

- Baker Elementary School, Whitthorne Middle, Central High School. The development combined with current neighborhoods and additional approved developments in these zones may require either new construction of realignment of school zones to accommodate new students.
  *Due to numbers, MCPS will be rezoning all Columbia and Spring Hill elementary schools for the 25/26 SY.
  Acknowledged.

Columbia Power

- Columbia Power System has an existing power line near your proposed development. We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction. Unfortunately, due to current supply chain challenges, no time frame can be guaranteed regarding the availability of meters or transformers appropriate for your development.
  Acknowledged.

Columbia Water

- A water availability letter was issued on March 1, 2025, it remains valid for 120 days. The availability of capacity to serve is based on a determination by the Fire Marshal of fire flow requirements and the information submitted on the Water Service Availability Request application.
  Acknowledged.

- Any off-site improvements detailed in the availability letter are the responsibility of the developer/owner.
  Acknowledged.

- All public water system improvements are subject to the preparation and approval of detailed construction plans prepared in accordance with CPWS and Tennessee Department of Environment and Conservation requirements.
  Acknowledged.

CITY OF
COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, May 13, 2025

ITEM NO.
25-0137

DESCRIPTION: Hampshire Pike Steadfast Mixed Use

COMMENTS:

Planning

1. The lead staff person for this case is Robert Archibald, Principal Planner. Please contact rarchibald@columbiatn.gov with questions about the development review process or technical comments. The case planner should be copied on all communication with other city staff.
2. At resubmittal, please provide a response letter addressing each comment along with any revised plans. If the nature of the comment does not warrant a response, or the comment was previously addressed, please simply note that the information has been acknowledged. Any documents or additional information that you want to present to the Planning Commission should be included in your resubmittal.
3. Submit most current application dated 3/5/2025 found on website at https://www.columbiatn.gov/218/Zoning-and-Planning.
4. Complete all applicable sections for Site Plan and Preliminary Plat on application.
5. Provide calculation percentage of townhomes that front pedestrian paths.
6. Show typical footprint of garage with minimum standard of 10'x20' per vehicle to confirm parking ratio.
7. Driveways for townhomes are required to be 10' minimum width. Please note that drives will meet standards.
8. Civic Space uses require a parking ratio of 1 per 5,000 square feet of gross land area. Please delineate parking spaces that are dedicated.
9. Site development plan requires a main civic space type of a green, square, or plaza within 800 ft of a linear pedestrian shed. Please provide detail sheet of these required civic space types within a ¼ mile radius of a pedestrian shed 5.3.3.
10. Provide thoroughfare enfrontment calculations for to ensure all civic space is located on a lot or building site equal to the lot width of the character district.
11. Show open space ratios in lot tabulation.
12. Show retaining wall height and materials.
13. Provide Landscape Plan that includes street section requirements of Ordinance 4400.
14. Final Plat for overall development needs to be recorded prior to towhome platting.
15. Provide block peremiter calculations to ensure no blocks exceed 2400 ft. see 9.3.B-2 for example in Zoning Ordinance.

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

16. Provide wavier or provide justification for prohibited cul-de-sac under ZO 4400 Street Standard.
17. Provide detial on how lots are being adjusted from previous approval in ZO 3638.
18. Provide Clarification that pedestrian shed is within 800' of all units. Resubmittal shows a linear pedestrian shed with units not within the required radius.
19. Provide page with detail of retaining wall. Note cladding requirements for a CD-4 district.
20. Landscaping required (street trees) for townhomes that have been introduced along platted connector road at NE quadrant of property.
21. Note commercial will be constructed under standards of a CD-4 district with ZO 4400.

Engineering

22. The new alignment of Street B will be required to meet new thoroughfare street sections with parking on one side. See culdesac detail as well.
23. Subject to construction plans and TIS
24. Concrete is not an approved street pavement material. Therefore, the culdesac should be removed from the gas line easement if concrete will be required by the gas company for any roadway within their easement.
25. Inlets shall be located a minimum of every one hundred fifty (150) feet of alley.
26. Update public improvement commitment letter to provide new triggers for improvements that are not specific only to the multi-family.
27. Woodland Crossings culdesac to be removed once connection made.
28. The maximum slope of all cut and fill slopes shall not exceed three-to-one (3H:1V).
29. Rear access driveways (north of street B) cannot be alleys because they dead end. Update linework to exclude them from the ROW. Lable as private shared driveway and encompass in easement (PUDAE).
30.

Fire

31. No comments

Maury County E911

32. Preliminary plat will need to be provided to Maury County 911. Send to cgideon@maury911.org

Maury County Schools

33. Baker Elementary School, Whitthorne Middle, Central High School
    The development combined with current neighborhoods and additional approved developments in these zones may require either new construction of realignment of school zones to accomodate new students.
    * Due to numbers, MCPS will be rezoning all Columbia and Spring Hill elementary schools for the 25/26 SY.
34.

Columbia Power

35. Columbia Power System has an existing power line near your proposed development. We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction.
    Unfortunately, due to current supply chain challenges, no timeframe can be guaranteed regarding the availability of meters or transformers appropriate for your development.

Building

36. No comments.

Police

37. No comments provided.

Public Works

38. No comments.

City Attorney

39. No comments provided.

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
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Duck River Electric Membership Corp

40. No comments.

ATT

41. ATT INTENDS TO SERVE

Columbia Water

42. A water availability letter was issued on March 1, 2025, it remains valid for 120 days. The availability of capacity to serve is based on a determination by the Fire Marshal of fire flow requirements and the information submitted on the Water Service Availability Request application. Any off-site improvements detailed in the availability letter are the responsibility of the developer/owner. All public water system improvements are subject to the preparation and approval of detailed construction plans prepared in accordance with CPWS and Tennessee Department of Environment and Conservation requirements.

Wastewater

43. No comments.

Atmos Energy

44. No comments provided.

Maury County Highway Dept.

45.

CITY OF
COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

Resubmittal Guidelines

Please provide a comment response letter as well as digital copies of revised plans and supporting documentation. Submit all required documents electronically through the online portal: columbia.onlama.com. If the files are oversized, please provide a file sharing link.

Please contact the case planner identified in the Planning Comments with any questions about the review process.

Please contact pkeltner@columbiatn.gov or msanders@columbiatn.gov if you encounter difficulties with the online portal.

You will receive an invoice for required advertising and mailing fees. All fees must be paid by the Friday following resubmittal in order advance to the Planning Commission agenda.

NOTE: All resubmittals must demonstrate compliance with city standards prior to Planning Commission review. Requests which do not adhere to regulations and/or remain unresponsive to technical comments will not be forwarded to the next agenda until such items are amended. Final Plat applications which are not ready to proceed to Planning Commission following the first resubmittal deadline will be added to the following DRC agenda to confirm the status of required infrastructure and utilities. Applications which remain incomplete following two resubmittal deadlines will be closed.

SITE DEVELOPMENT PLAN SUBMITTAL

HAMPSHIRE PIKE

1242 HAMPSHIRE PIKE
COLUMBIA, TN

INITIAL SUBMITTAL: 4/21/2025

EXISTING PROPERTY SUMMARY

PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN
MAP AND PARCEL ID:	MAP 089, PARCEL 04103 000
U.S. FEMA FIRM PANEL:	47119C0280E DATED 04/16/2007
EXISTING ZONING: EXISTING LAND USE:	CD-4 VACANT

GENERAL DEVELOPMENT NOTES

1. ALL DEVELOPMENT WITHIN THE BOUNDARIES OF THIS PLAN MEETS THE REQUIREMENTS OF ANSI 117.1, 2009 EDITION AND THE FAIR HOUSING ACT.

   U.S. Justice Department:
   http://www.justice.gov/crt/housinig/fairhousing/about_fairhousingact.htm

2. PART OF THE SUBJECT PROPERTY IS LOCATED IN AREAS DESIGNATED AS "ZONE AE" (AREAS DETERMINED TO BE OUTSIDE THE 0.2 % ANNUAL CHANCE FLOODPLAIN) AS NOTED ON THE CURRENT FEMA FIRM COMMUNITY PANEL 47119C0280E.

3. PART OF THE SUBJECT PROPERTY IS LOCATED IN AREAS DESIGNATED AS "ZONE X" (AREAS DETERMINED TO BE OF MINIMAL FLOOD HAZARD) AS NOTED ON THE CURRENT FEMA FIRM COMMUNITY PANEL 47119C0280E



VICINITY MAP
NOT TO SCALE

COUNCIL DISTRICT WARD 4
COUNCIL MEMBER KENNY MARSHALL
CITY OF COLUMBIA
MAURY COUNTY, TN

Sheet List Table

Sheet Number	Sheet Title
C0-00	COVER
--	SURVEY
C1-00	EXISTING CONDITIONS
C2-00	SITE LAYOUT - OVERALL
C2-10	SITE LAYOUT - ENLARGEMENT
C2-11	SITE LAYOUT - ENLARGEMENT
C4-00	GRADING AND DRAINAGE PLAN - OVERALL
C4-10	GRADING AND DRAINAGE PLAN - ENLARGEMENT
C4-20	GRADING AND DRAINAGE PLAN - ENLARGEMENT
C5-00	ROADWAY SECTIONS
C6-10	UTILITY PLAN - ENLARGEMENT
C6-20	UTILITY PLAN - ENLARGEMENT
L1-00	LANDSCAPE PLAN
L1-10	LANDSCAPE PLAN - ENLARGEMENT
L1-11	LANDSCAPE PLAN - ENLARGEMENT
L1-50	LANDSCAPE DETAILS
A1-00	ARCHITECTURAL ELEVATION - RENDERING

PROJECT DESIGN TEAM

CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
10 LEA AVENUE, SUITE 400
NASHVILLE, TENNESSEE 37210
PHONE: (629) 401.4768
CONTACT: COLTON DORRIS, P.E.

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATES, INC.
10 LEA AVENUE, SUITE 400
NASHVILLE, TN 37210
PHONE: (615) 823-2209
CONTACT: JOSH ROWLAND, PLA

SURVEY
WILSON & ASSOCIATES, P.C.
108 BEASLEY DRIVE
FRANKLIN, TN 37064
PHONE: (615) 794-2275
CONTACT: JOEY C. WILSON II, PLS

OWNER / DEVELOPER

STEADFAST COMPANIES
18100 VON KARMAN AVE., SUITE 500
IRVINE, CALIFORNIA 92612
PHONE: 949.518.2001
CONTACT: CHASE EMERY

PLANS PREPARED BY

Kimley»Horn
10 Lea Avenue, Suite 400, Nashville, TN 37210
Main: (615) 564-2701 | www.kimley-horn.com

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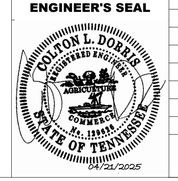
PLAN REVISIONS

REVISION NO.	DATE	REMARKS

ENGINEER'S SEAL

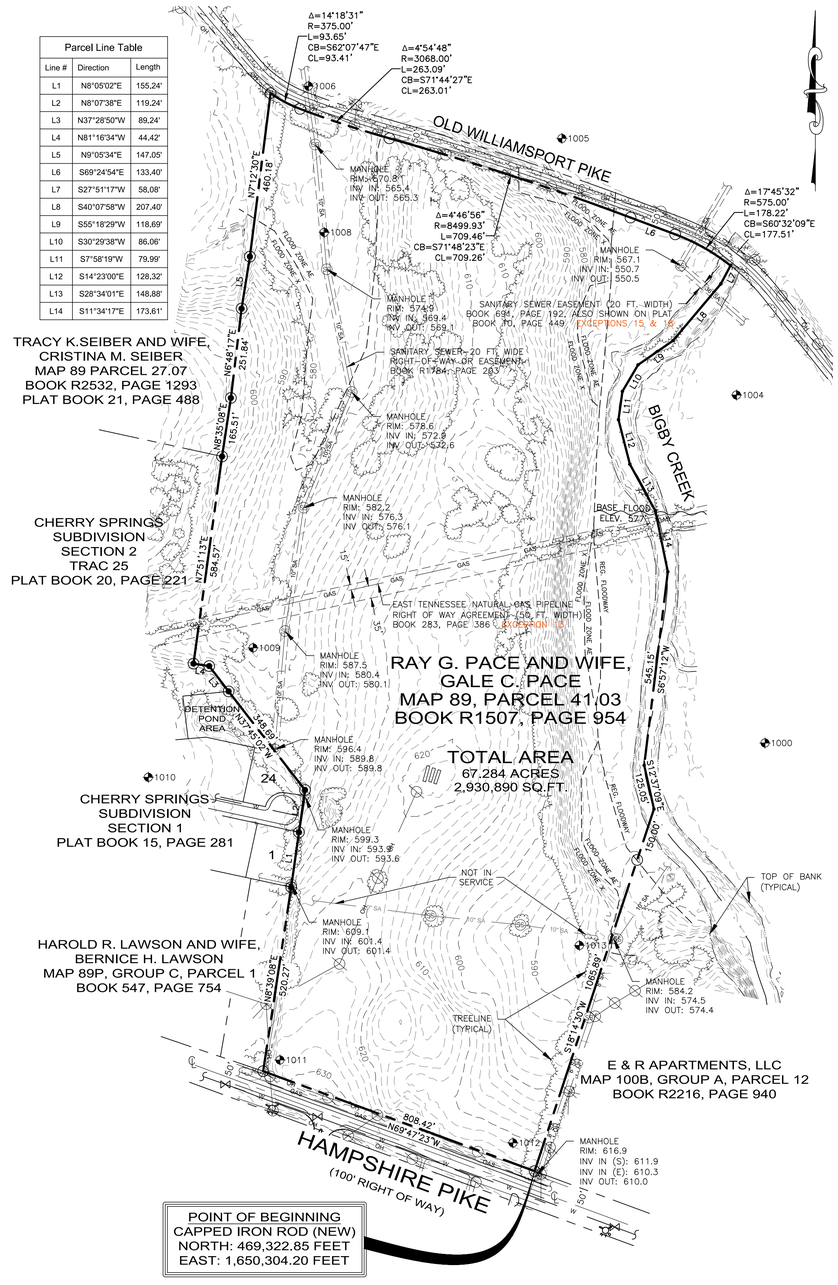


FILE NUMBER	SHEET NUMBER	TOTAL SHEETS
118332003	C0-00	18

811 Know what's below. Call before you dig.

Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\C0-00 COVER.dwg C0-00 COVER Apr 21, 2025 8:21am by: Jacob.Patterson

HAMPSHIRE PIKE - SITE DEVELOPMENT PLAN



SCHEDULE B-II EXCEPTIONS:

1. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I-REQUIREMENTS ARE MET. NOT A SURVEY MATTER
2. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT SHOWN BY THE PUBLIC RECORDS. NONE OBSERVED DURING SURVEY
3. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND. NONE OBSERVED DURING SURVEY
4. EASEMENTS, OR CLAIMS OF EASEMENTS, NOT SHOWN BY THE PUBLIC RECORDS. NONE OBSERVED DURING SURVEY
5. ANY LIEN, OR RIGHT TO A LIEN, FOR SERVICES, LABOR, OR MATERIAL HERETOFORE OR HEREAFTER FURNISHED, IMPOSED BY LAW, AND NOT SHOWN BY THE PUBLIC RECORDS. NOT A SURVEY MATTER
6. TAXES OR SPECIAL ASSESSMENTS WHICH ARE NOT SHOWN AS EXISTING LIENS BY THE PUBLIC RECORDS. NOT A SURVEY MATTER
7. IF IMPROVEMENTS ARE COMPLETED AFTER JANUARY 1 OF ANY YEAR, AND THE LAW, PURSUANT TO TCA 67-5-509 AND TCA 67-5-603, REQUIRES SUPPLEMENTAL ASSESSMENT FOR THE YEAR IN WHICH IMPROVEMENTS ARE COMPLETED, THE COMPANY ASSUMES NO LIABILITY FOR TAXES ASSESSED BY CORRECTION OR SUPPLEMENTAL ASSESSMENT. NOT A SURVEY MATTER
8. TAXES FOR THE YEAR 2021, A LIEN NOT YET DUE AND PAYABLE. NOT A SURVEY MATTER
9. SEWER EASEMENTS AS SET FORTH IN DEED OF RECORD IN BOOK R2188, PAGE 249, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT THE SURVEYED PROPERTY
10. TITLE TO THAT PORTION OF THE SUBJECT PROPERTY WITHIN THE BOUNDS OF THE RIGHT OF WAY FOR OLD WILLIAMSPORT PIKE AND N JAMES M. CAMPBELL BOULEVARD. OLD WILLIAMSPORT PIKE RIGHT OF WAY IS SHOWN CORRECTLY ON SURVEY. JAMES M. CAMPBELL BOULEVARD DOES NOT AFFECT SURVEYED PROPERTY.
11. EASEMENT TO SOUTHERN CITY POWER COMPANY OF RECORD IN BOOK 149, PAGE 365, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. THE LOCATION OF THIS EASEMENT IS POORLY DESCRIBED; HOWEVER ALL EXISTING OVERHEAD LINES ARE SHOWN ON THE SURVEY.
12. GRANT OF TRANSMISSION LINE EASEMENTS OF RECORD IN BOOK 232, PAGE 575, BOOK 232, PAGE 577, AND BOOK 232, PAGE 597, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
13. RIGHT OF WAY AGREEMENT TO EAST TENNESSEE NATURAL GAS COMPANY OF RECORD IN BOOK 283, PAGE 386, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. AFFECTS PROPERTY AS SHOWN ON SURVEY
14. RIGHT OF WAY AND EASEMENT TO MAURY COUNTY OF RECORD IN BOOK 425, PAGE 91 AND BOOK 427, PAGE 473, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
15. SEWER EASEMENT OF RECORD IN BOOK 691, PAGE 192, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. AFFECTS PROPERTY AS SHOWN ON SURVEY
16. INSPECTION AND MAINTENANCE AGREEMENT OF PRIVATE STORMWATER MANAGEMENT FACILITIES OF RECORD IN BOOK R2254, PAGE 125, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
17. SEWER EASEMENTS OF RECORD IN BOOK 375, PAGE 243; BOOK 375, PAGE 245; BOOK 383, PAGE 7; BOOK 383, PAGE 26; AND BOOK 383, PAGE 28, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
18. SUBJECT TO ALL MATTERS SHOWN ON THE PLAN OF RECORD IN PLAT BOOK P10, PAGE 449, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. AFFECTS PROPERTY AS SHOWN ON SURVEY
19. APPLICATION FOR GREENBELT ASSESSMENT - AGRICULTURAL OF RECORD IN BOOK R2211, PAGE 848, IN THE REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. NOT A SURVEY MATTER
20. THE LAND HAS BEEN CLASSIFIED AS GREENBELT FOR ASSESSMENT, LEVY AND COLLECTION PURPOSES AND MAY BE SUBJECTED TO SUBSTANTIAL ROLLBACK TAXES AS DEFINED IN TENNESSEE CODE ANNOTATED, SECTION 67-5-1001. NOT A SURVEY MATTER
21. WATER (RIPARIAN RIGHTS) - BLANKET MATTERS - BIGBY CREEK IS ACCURATELY SHOWN ON SURVEY - NOT PLOTTABLE MATTERS

(a) THE RIGHTS OF UPPER AND LOWER RIPARIAN OWNERS TO THE FREE AND UNOBSTRUCTED FLOW OF THE WATER OF LITTLE BIGBY CREEK WITHOUT DIMINUTION OR POLLUTION AND THE CONSEQUENCE OF ANY PAST OR FUTURE CHANGE IN THE LOCATION OF LITTLE BIGBY CREEK.

(b) RIPARIAN RIGHTS INCIDENT TO PREMISES.

(c) RIGHTS OF UPPER AND LOWER RIPARIAN OWNERS IN AND TO THE WATERS OF LITTLE BIGBY CREEK CROSSING OR ADJOINING THE PROPERTY, AND THE NATURAL FLOW THEREOF, FREE FROM DIMINUTION OR POLLUTION.

(d) ANY ENLARGEMENT OR LOSS OF LAND BY REASON OF AVULSION, ACCRETION, OR RELICTION, AND QUESTIONS OF OWNERSHIP CAUSED BY SUBSEQUENT REBUILDING OR REFORMATION OF LAND.

22. ACREAGE CONTENT OF THE SUBJECT PROPERTY IS NOT HEREBY INSURED. REFERENCE TO ACREAGE IS LEFT IN THE DESCRIPTION MERELY FOR CONVENIENCE IN IDENTIFYING THE TRACT. AREAS NOTED ON SURVEY ARE ACCURATE AND CORRECT.

LEGAL DESCRIPTION (FROM SURVEY)

A PARCEL OF LAND LYING IN MAURY COUNTY, TENNESSEE, JUST EAST OF COLUMBIA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOW:

BEGINNING AT A CAPPED IRON ROD SET IN THE NORTHERN MARGIN OF HAMPSHIRE PIKE (STATE ROUTE 50/99) AT THE SOUTHWESTERN CORNER OF THE E & R APARTMENTS, LLC PROPERTY, BOOK R2216, PAGE 940, REGISTER'S OFFICE MAURY COUNTY (HEREAFTER ROMC), SAID ROD BEING LOCATED AT TENNESSEE STATE PLANE COORDINATES NORTH: 469,322.85 FEET AND EAST: 1,650,304.20 FEET, NAD83(2011); THENCE ALONG THE NORTHERN MARGIN OF SAID HAMPSHIRE PIKE, RUNNING PARALLEL TO AND 50 FEET FROM THE CENTERLINE OF SAME, NORTH 69°47'23" WEST, 808.42 FEET TO A CAPPED IRON ROD SET AT THE SOUTHEASTERN CORNER OF THE HAROLD R. LAWSON AND WIFE, BERNICE H. LAWSON PROPERTY, BOOK 547, PAGE 754, ROMC; THENCE LEAVING SAID HAMPSHIRE PIKE AND ALONG THE EASTERN BOUNDARY OF SAID LAWSON PROPERTY, NORTH 8°39'08" EAST, 520.27 FEET TO A CAPPED IRON ROD FOUND AT THE SOUTHEASTERN CORNER OF LOT 1 IN THE CHERRY SPRINGS SUBDIVISION, SECTION 1, PLAT BOOK 15, PAGE 281, ROMC; THENCE ALONG THE EASTERN AND NORTHEASTERN BOUNDARY OF SAID SUBDIVISION SECTION THE FOLLOWING THREE (3) CALLS:

NORTH 8°05'02" EAST, 155.24 FEET TO AN IRON ROD FOUND;

NORTH 8°07'38" EAST, 119.24 FEET TO A CAPPED IRON ROD FOUND;

AND NORTH 37°45'02" WEST, 348.69 FEET TO A CAPPED IRON ROD FOUND AT THE EASTERNMOST CORNER OF TRACT 25 IN THE CHERRY SPRINGS SUBDIVISION, SECTION 2, PLAT BOOK 20, PAGE 221, ROMC; THENCE ALONG THE EASTERN BOUNDARY OF SAID TRACT 25 THE FOLLOWING THREE (3) CALLS:

NORTH 37°28'50" WEST, 89.24 FEET TO AN IRON ROD FOUND;

NORTH 81°16'34" WEST, 44.42 FEET TO AN IRON ROD FOUND;

AND NORTH 7°51'13" EAST, 584.57 FEET TO AN IRON PIPE FOUND AT THE NORTHEASTERN CORNER OF SAID TRACT 25 AND THE SOUTHEASTERN CORNER OF THE TRACY K. SEIBER AND WIFE, CRISTINA M. SEIBER PROPERTY, BOOK R2532, PAGE 1293, ROMC; THENCE ALONG THE EASTERN BOUNDARY OF SAID SEIBER PROPERTY THE FOLLOWING FOUR (4) CALLS:

NORTH 8°35'08" EAST, 165.51 FEET TO AN IRON PIPE FOUND;

NORTH 6°48'17" EAST, 251.84 FEET TO AN IRON PIPE FOUND;

NORTH 9°05'34" EAST, 147.05 FEET TO AN IRON PIPE FOUND;

AND NORTH 7°12'30" EAST, 460.18 FEET TO A CAPPED IRON ROD SET IN THE SOUTHERN MARGIN OF OLD WILLIAMSPORT PIKE AND A POINT ON THE ARC OF A CIRCULAR CURVE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 375.00 FEET, TO WHICH A RADIAL LINE BEARS SOUTH 35°01'29" WEST; THENCE ALONG THE SOUTHERN MARGIN OF SAID OLD WILLIAMSPORT PIKE, RUNNING PARALLEL TO AND 25 FEET FROM THE CENTERLINE OF SAME, THROUGH A CENTRAL ANGLE OF 14°18'31" AN ARC DISTANCE OF 93.65 FEET (CHORD: SOUTH 62°07'47" EAST, 93.41 FEET) TO A CAPPED IRON ROD SET AT A POINT OF COMPOUND CURVATURE, SAID CURVE IS CONCAVE NORTHERLY, HAVING A RADIUS OF 3,068.00 FEET; THENCE CONTINUING ALONG THE NORTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 4°54'48" AN ARC DISTANCE OF 263.09 FEET (CHORD: SOUTH 71°44'27" EAST, 263.01 FEET) TO A CAPPED IRON ROD SET AT A POINT OF REVERSE CURVATURE, SAID CURVE IS CONCAVE SOUTHERLY, HAVING A RADIUS OF 8,499.93 FEET; THENCE CONTINUING ALONG THE NORTHERN MARGIN OF SAID WILLIAMSPORT PIKE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 4°46'56" AN ARC DISTANCE OF 709.46 FEET (CHORD: NORTH 71°48'23" EAST, 709.26 FEET) TO A CAPPED IRON ROD SET AT THE POINT OF TANGENT; THENCE CONTINUING ALONG THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE SOUTH 69°24'54" EAST, 133.40 FEET TO A CAPPED IRON ROD SET AT THE POINT OF CURVATURE OF A CIRCULAR CURVE, CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 575.00 FEET; THENCE CONTINUING ALONG THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 17°45'32" AN ARC DISTANCE OF 178.22 FEET (CHORD: SOUTH 60°32'09" EAST, 177.51 FEET) TO THE INTERSECTION OF THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND THE CENTER OF BIGBY CREEK; THENCE LEAVING SAID WILLIAMSPORT PIKE AND RUNNING ALONG THE CENTER OF BIGBY CREEK, APPROXIMATED HEREIN BY A SERIES OF STRAIGHT LINES, THE FOLLOWING TEN (10) CALLS:

SOUTH 27°51'17" WEST, 58.08 FEET;

SOUTH 40°07'58" WEST, 207.40 FEET;

SOUTH 55°18'29" WEST, 118.69 FEET;

SOUTH 30°29'38" WEST, 86.06 FEET;

SOUTH 7°58'19" WEST, 79.99 FEET;

SOUTH 14°23'00" EAST, 128.32 FEET;

SOUTH 28°34'01" EAST, 148.88 FEET;

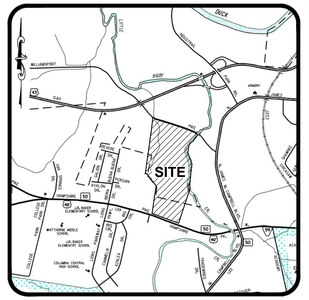
SOUTH 11°34'17" EAST, 173.61 FEET;

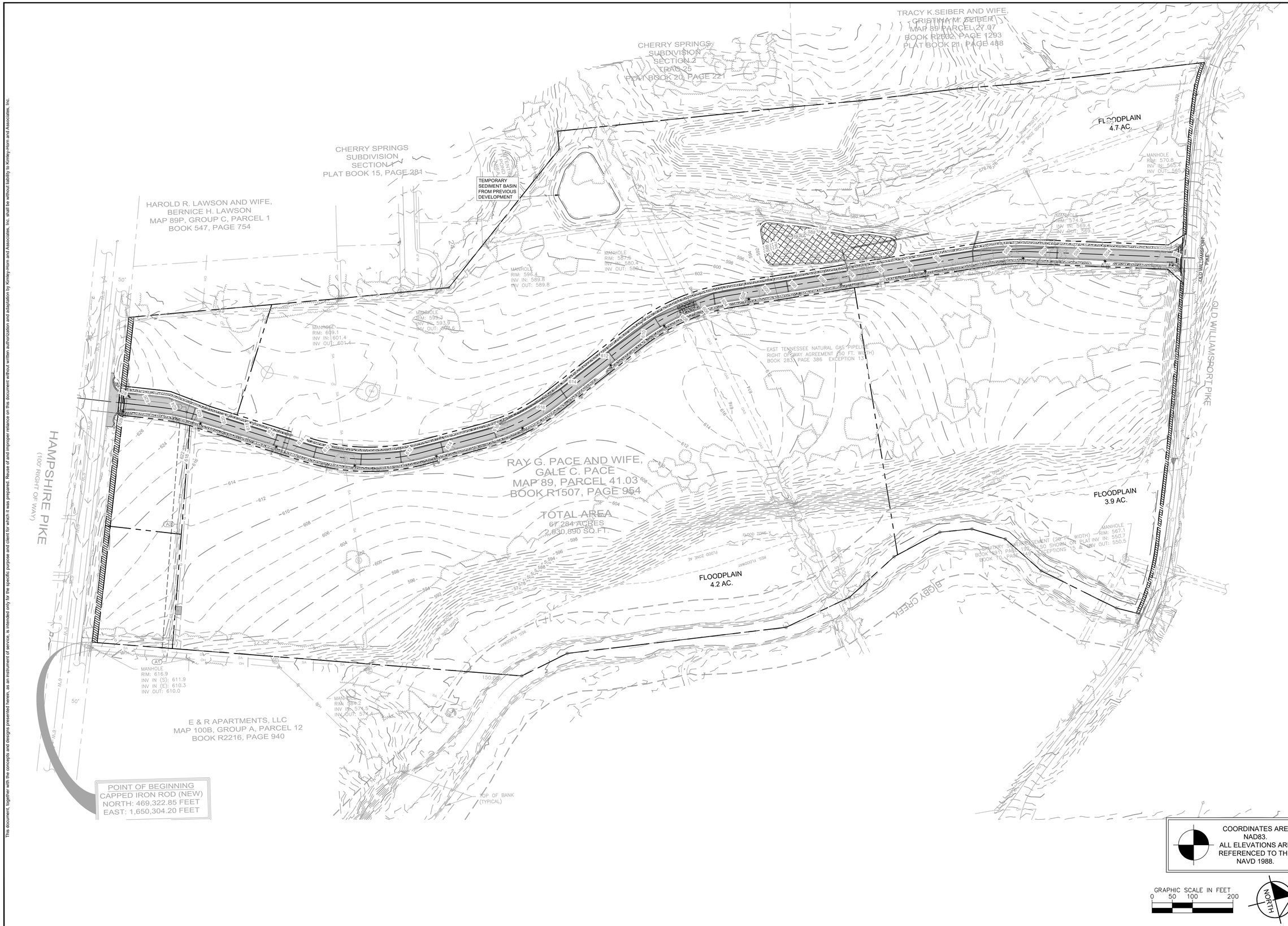
SOUTH 6°57'12" WEST, 545.15 FEET;

AND SOUTH 12°37'09" EAST, 125.05 FEET TO THE NORTHWESTERN CORNER OF THE AFOREMENTIONED E & R APARTMENTS, LLC PROPERTY; THENCE LEAVING SAID BIGBY CREEK AND ALONG THE WESTERN BOUNDARY OF SAID E & R APARTMENTS, LLC PROPERTY, SOUTH 18°14'30" WEST (PASSING THROUGH A CAPPED IRON ROD SET AT 150.00 FEET) A TOTAL DISTANCE OF 1,065.89 FEET TO THE POINT OF BEGINNING; CONTAINING 67.284 ACRES OR 2,930,890 SQUARE FEET, AND BEING THE ALL OF THE RAY G. PACE AND WIFE, GALE C. PACE PROPERTY, BOOK R1507, PAGE 954, ROMC, AND A PORTION OF PARCEL 41.03 ON MAURY COUNTY TAX MAP 89.

GENERAL NOTES:

1. THE PURPOSE OF THIS SURVEY IS: ALTA/NSPS LAND TITLE SURVEY
2. THE ADDRESS OF THIS PROPERTY IS: HAMPSHIRE PIKE, COLUMBIA, TN 38401
3. SUBJECT PROPERTY IS PRESENTLY IDENTIFIED AS PART OF PARCEL 41.03, ON MAURY COUNTY TAX MAP 89. SAID PARCEL IS FURTHER IDENTIFIED AS ALL OF THE PROPERTY DESCRIBED IN DEED BOOK R1507, PAGE 954, REGISTERS OFFICE OF MAURY COUNTY, TENNESSEE.
4. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY.
5. EVERY DOCUMENT OF RECORD REVIEWED AND CONSIDERED AS A PART OF THIS SURVEY IS NOTED HEREON. ONLY THE DOCUMENTS NOTED HEREON WERE SUPPLIED TO THE SURVEYOR. OTHER DOCUMENTS OF RECORD MAY EXIST THAT WOULD AFFECT THIS PARCEL.
6. THE WORD "CERTIFY" IS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THE FACTS OF THE SURVEY AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESSED OR IMPLIED. DECLARATION IS MADE TO THE SPECIFIALLY NAMED PARTIES AND IS NOT TRANSFERABLE TO ADDITIONAL PERSONS, INSTITUTIONS OR SUBSEQUENT OWNERS OF THE SUBJECT PROPERTY.
7. THIS SURVEY WAS CONDUCTED WITH THE BENEFIT OF A TITLE REPORT ISSUED BY CHICAGO TITLE INSURANCE COMPANY, COMMITMENT NO. 20211350CTN, DATED AUGUST 25, 2021, AT 8:00AM AND IS SUBJECT TO ITS FINDINGS. THERE MAY BE OTHER IMPROVEMENTS OR ENCUMBRANCES THAT AFFECT THE PROPERTY SINCE THE ISSUANCE OF THE REPORT.
8. BEARINGS SHOWN HEREON ARE BASED ON THE TENNESSEE STATE PLANE COORDINATE SYSTEM NAD83(2011). ELEVATIONS SHOWN HEREON ARE BASED ON NAVD88(GEOID03).
9. ALL CORNERS SHOWN ON THE FACE OF THE SURVEY ARE MARKED EITHER FOUND OR SET. ANY MISSING CORNERS ARE MARKED WITH AN IRON ROD AND CAP BEARING THIS SURVEYORS COMPANY NAME.
10. UTILITIES SHOWN HEREON WERE COMPILED FROM VISIBLE STRUCTURES AT THE SITE, INFORMATION FROM PLANS, AND PHYSICAL MARKINGS AND COMBINED TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. IN ADDITION, IN SOME JURISDICTIONS, 811 OR OTHER SIMILAR UTILITY LOCATE REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN INCOMPLETE RESPONSE. THIS SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THIS SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. VERIFICATION OF EXISTENCE, LOCATIONS, AND DEPTH SHOULD BE MADE BEFORE CONDUCTING ANY EXCAVATION IN THE VICINITY OF THE UTILITY.
11. PORTIONS OF THIS PROPERTY ARE LYING WITHIN ZONE "AE" AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NOS. 47119C0165E AND 47119C0280E, WITH EFFECTIVE DATES OF APRIL 16, 2007, WHICH MAKE UP A PART OF THE NATIONAL FLOOD INSURANCE PROGRAM. BASE FLOOD ELEVATION FOR THIS PROPERTY IS 577 FEET. ZONE "AE" IS AN AREA WHERE BASE FLOOD ELEVATIONS HAVE BEEN DETERMINED. ZONE "X" IS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. THE FLOOD ZONES AND FLOOD WAY SHOWN ARE SCALED FROM MAPS.
12. I HEREBY CERTIFY THAT THIS IS A CATEGORY IV SURVEY AND WAS CONDUCTED IN ACCORDANCE WITH RULE 0820-03.11 (GLOBAL POSITION SYSTEMS SURVEYS) ACCORDING TO THE CURRENT TENNESSEE MINIMUM STANDARDS OF PRACTICE AS PROMULGATED BY THE TENNESSEE STATE BOARD OF EXAMINERS FOR LAND SURVEYORS. THIS SURVEY WAS CONDUCTED WITH DUAL-FREQUENCY RTK GPS BASED ON AN OPUS-CORRECTED AUTONOMOUS SOLUTION UTILIZING A BASE AND ROVER.
    a. POSITIONAL ACCURACY: 0.08'
    b. DATE OF SURVEY: 09/29/21
    c. HORIZONTAL ZONE/DATUM: TN-4100/NAD83(2011) - TENNESSEE STATE PLANE COORDINATES.
    d. OCCUPATIONS FOR CONTROL POINTS ARE 3 MINUTES EACH, SIDE SHOTS ARE 3 SECONDS.
    e. VERTICAL DATUM: NAVD88 (GEOID03, GRID 7 REVISED)
    f. NO COMBINED GRID FACTORS WERE USED.
13. THE CONTOURS SHOWN HEREON WERE DERIVED FROM LIDAR DATA [POST PROCESSED KINEMATIC (PPK) USING STATE PLANE COORDINATES AND VERTICAL DATUM NAVD88 (GEOID03], AND INCLUDE SEVERAL DIFFERENT LAND-COVER CLASSES WHICH HAVE BEEN COMPILED TO MEET OR EXCEED THE NATIONAL MAP ACCURACY STANDARDS (NMAS) OF A 2 FOOT EQUIVALENT CONTOUR INTERVAL AT 95 PERCENT CONFIDENCE LEVEL. THIS MEETS OR EXCEEDS A VERTICAL ACCURACY EQUAL TO NATIONAL STANDARDS FOR SPATIAL DATA ACCURACY (NSSDA) = 1.9600*.61(RMSE(Z)) (NORMALLY DISTRIBUTED ERROR) = 1.19 FT, AS SET FORTH BY THE AMERICAN SOCIETY FOR PHOTOGRAMMETRY AND REMOTE SENSING (ASPRS) VERSION 1.0. RANDOM SHOTS TAKEN ACROSS THE SITE YIELD AN ACTUAL VERTICAL ACCURACY OF +/- 0.12 FT.
14. THERE WAS NO EVIDENCE OF RECENT EARTH MOVING AT THE TIME OF SURVEY.
15. THERE ARE NO KNOWN CHANGES TO THE STREET ROW AT THE TIME OF SURVEY.
16. THERE WAS NO EVIDENCE OF DELINEATED WETLANDS AT THE TIME OF SURVEY.
17. THERE WAS NO EVIDENCE OF ENCROACHMENTS AT THE TIME OF SURVEY.
18. THIS IS A VACANT TRACT OF LAND.


SITE
WILLIAMSPORT
OLD WILLIAMSPORT PIKE
HAMPSHIRE PIKE
N JAMES M CAMPBELL BLVD
BIGBY CREEK
MAURY REGIONAL HOSPITAL
COLUMBIA CENTRAL HIGH SCHOOL
COLUMBIA CENTRAL JR HIGH SCHOOL
W NEELY'S BEND RD
W 7TH ST
W 5TH ST
W 2ND ST
W 1ST ST
S MAIN ST
S GARDEN ST
S JAMES M CAMPBELL BLVD
S HIGH ST
S GARDEN ST
S MAIN ST
S JACKSON ST
S ELM ST
S CHERRY ST
S CHURCH ST
S MAURY



COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 50 100 200

NORTH

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Main: 615.564.2701 | www.kimley-horn.com

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 130058
STATE OF TENNESSEE
04/21/2025

No.	REVISIONS	DATE	BY
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DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	03/17/2025

KIMLEY-HORN PROJECT NO.
118332003

EXISTING CONDITIONS

SHEET NUMBER
C1-00

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Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\C1-00 EXISTING CONDITIONS.dwg C1-00 EXISTING CONDITIONS Apr 21, 2025 8:22am by: Jacob.Patterson

HATCHED AREA INCLUDED IN PREVIOUS PRELIMINARY PLAT / DEVELOPMENT PLAN APPROVALS, NOT INCLUDED IN THE OVERALL DEVELOPMENT PLAN CALCULATIONS ASSOCIATED WITH THIS DEVELOPMENT APPLICATION, INCLUDING THE MULTIFAMILY PARCEL, 11 SINGLE FAMILY LOTS, STREETS A, B, AND C

SEE SHEET C2-10 FOR ENLARGEMENT

SEE SHEET C2-11 FOR ENLARGEMENT

1300' PLAYGROUND COVERAGE

CIVIC SPACE - NATURAL AREA
10.45 AC

CIVIC SPACE - POCKET PARK B
1.00 AC

NATURE FOOT PATH (GRAVEL)

RETAINING WALL TYP.

WATER QUALITY POND TYP.

PROPERTY LINE TYP.

FUTURE COMMERCIAL
PAD 1.55 AC

FUTURE COMMERCIAL
PAD 0.64 AC

HAMPSHIRE PIKE | PRINCIPAL ARTERIAL

OLD WILLIAMSPORT PIKE | MINOR ARTERIAL

22-0131 - HAMPSHIRE PIKE
DEVELOPMENT - PRELIMINARY PLAT

CIVIC SPACE - POCKET PARK A
0.05 AC

FUTURE COMMERCIAL
PAD 1.09 AC

FUTURE COMMERCIAL
PAD 1.19 AC

22-0131 - HAMPSHIRE PIKE
DEVELOPMENT - PRELIMINARY PLAT

CIVIC SPACE - POCKET PARK C
0.07 AC

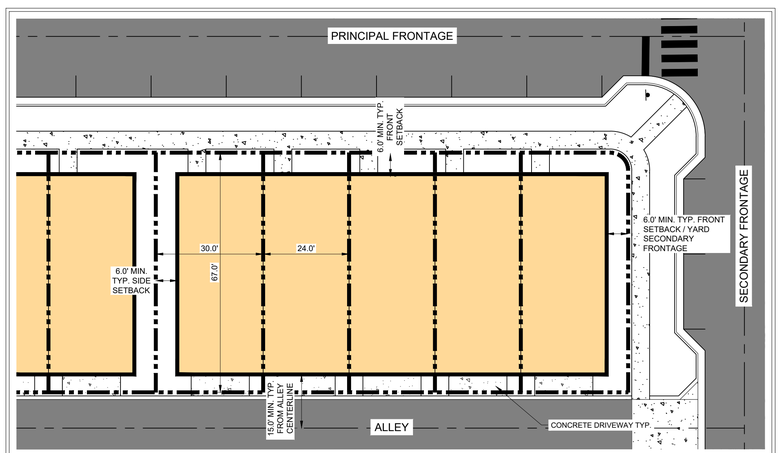
CIVIC SPACE - POCKET PARK D
0.07 AC

WATER QUALITY POND TYP.

PROPERTY LINE TYP.

1300' PLAYGROUND COVERAGE

HATCHED AREA EXCLUDED FROM ALL AREA, ENFRONTMENT, AND DENSITY TOTALS



TYPICAL LOT LAYOUTS
SCALE: 1" = 20'

SITE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	TOWN HOMES
SITE AREA (AC):	32.60 AC
SITE AREA (SF):	1,420,129 SF
DENSITY	
PROPOSED:	
TOWNHOMES (24' x 56' TYP.):	143 DU
*SF LOTS (96' x 115' TYP.):	11 DU
TOTAL UNITS:	**154 DU**
**DENSITY:	4.39 UNITS/ACRE
MIN. LOT SIZE:	1,608 SF
UNITS FRONTING PEDESTRIAN PATH:	12 UNITS (8%)
TYPICAL LOT SETBACKS:	
MIN. FRONT SETBACK:	6 FT
MIN. SIDE SETBACK:	6 FT
MIN. REAR SETBACK:	15 FT FROM ALLEY C.L.
REQUIRED CIVIC USE SPACE:	5% OF TOTAL AREA 1.63 AC
PROVIDED CIVIC USE SPACE:	36% OF TOTAL AREA 11.64 AC
CIVIC SPACE LIST:	
POCKET PARK A:	0.05 AC
POCKET PARK B:	1.00 AC
POCKET PARK C:	0.07 AC
POCKET PARK D:	0.07 AC
NATURAL AREA:	10.45 AC
REQUIRED PARKING:	
TOWNHOMES	286 SPACES
SF LOTS:	22 SPACES
TOTAL REQUIRED:	**308 SPACES (2 PER DU)**
PROPOSED PARKING:	
GARAGE PARKING:	308 SPACES
DRIVEWAY PARKING:	22 SPACES
TOTAL DU PARKING:	**330 SPACES**
ON-STREET PARKING:	102 SPACES
TOTAL PARKING PROVIDED:	**432 SPACES**

*SF LOTS INCLUDED IN 22-0131 - HAMPSHIRE PIKE MIXED USE DEVELOPMENT - PRELIMINARY PLAT
**SF LOTS EXCLUDED FROM DENSITY AND FRONTAGE CALCULATIONS

BUILDING FRONTAGE REQUIREMENTS

TOTAL BUILDING FRONTAGE:	4,032 LF*
RESIDENTIAL FRONTAGE: (143 DU x 24 LF)	3,432 LF (85%)
COMMERCIAL FRONTAGE:	600 LF (15%)

*REQUIRED FRONTAGE MIX: 85% MAX RESIDENTIAL, 15% MIN COMMERCIAL

ENFRONTMENT LINETYPE LEGEND

COMMERCIAL ENFRONTMENT

RESIDENTIAL ENFRONTMENT

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 50 100 200

NORTH

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
ARCHITECTURE
COMMERCE
No. 139844
STATE OF TENNESSEE
04/21/2025

No.	DATE	BY	REVISIONS
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DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	03/17/2025
KIMLEY-HORN PROJECT NO.	118332003

SITE LAYOUT - OVERALL

SHEET NUMBER
C2-00

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Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\C2-00 SITE LAYOUT - OVERALL.dwg C2-00 SITE LAYOUT - OVERALL Apr 21, 2025 8:22am by: Jacob.Patterson

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SITE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	TOWN HOMES
SITE AREA (AC):	32.60 AC
SITE AREA (SF):	1,420,129 SF
DENSITY	
PROPOSED:	
TOWNHOMES (24' x 56' TYP.):	143 DU
*SF LOTS (66' x 115' TYP.):	11 DU
TOTAL UNITS:	**154 DU**
**DENSITY:	4.39 UNITS/ACRE
MIN. LOT SIZE:	1,608 SF
UNITS FRONTING	
PEDESTRIAN PATH:	12 UNITS (8%)
TYPICAL LOT SETBACKS:	
MIN. FRONT SETBACK:	6 FT
MIN. SIDE SETBACK:	6 FT
MIN. REAR SETBACK:	15 FT FROM ALLEY C.L.
REQUIRED CIVIC USE SPACE:	5% OF TOTAL AREA 1.63 AC
PROVIDED CIVIC USE SPACE:	36% OF TOTAL AREA 11.64 AC
CIVIC SPACE LIST:	
POCKET PARK A:	0.05 AC
POCKET PARK B:	1.00 AC
POCKET PARK C:	0.07 AC
POCKET PARK D:	0.07 AC
NATURAL AREA:	10.45 AC
REQUIRED PARKING:	
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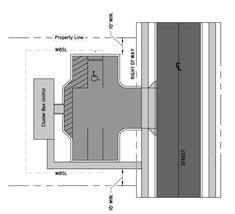
*SF LOTS INCLUDED IN 22-0131 - HAMPSHIRE PIKE MIXED USE DEVELOPMENT - PRELIMINARY PLAT
**SF LOTS EXCLUDED FROM DENSITY AND FRONTAGE CALCULATIONS

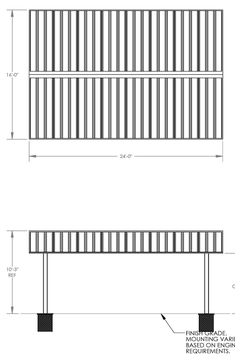
NOTES:

FOR 75 OR LESS CBU'S AT A SINGLE LOCATION
1. CLUSTER BOX UNITS (CBU'S) SHALL MEET USPS STANDARDS.
2. CBU'S MAY BE LOCATED WITHIN THE RIGHT OF WAY.
3. CBU'S SHALL NOT BE PLACED WITHIN ANY EASEMENTS OR SIDEWALK.
4. CBU'S SHOULD BE PLACED ALONG MINOR LOCAL ROADWAYS OR EQUIVALENT. FOR PLACEMENT ALONG COLLECTOR AND ARTERIAL ROADWAYS, FOLLOW THE STANDARDS BELOW. "FOR MORE THAN 75 CBU'S AT A SINGLE LOCATION".

FOR MORE THAN 75 CBU'S AT A SINGLE LOCATION:
1. CBU'S SHALL MEET USPS STANDARDS
2. CBU'S SHALL BE LOCATED OUTSIDE OF THE RIGHT OF WAY WITHIN A COMMON OR OPEN SPACE LOT
3. CBU'S SHALL NOT BE PLACED WITHIN ANY EASEMENTS
4. CBU'S AND APPURTENANT BUILDING PAD(S) SHALL BE CONSIDERED A PRINCIPLE STRUCTURE AND SHALL ADHERE TO SETBACK REQUIREMENTS
5. ACCESS AND DRIVEWAYS TO MEET ZONING CODE AND ACCESS MANAGEMENT
6. PARKING SHALL BE PROVIDED WITH A MINIMUM OF 2 PARKING STALLS PLUS 1 STALL PER 25 MAIL UNITS OR PORTION THEREOF ABOVE THE FIRST 25 MAIL UNITS, WITH A MAXIMUM OF TWICE THE REQUIRED
7. PARKING AND SIDEWALKS SHALL HAVE A 10'FT. MINIMUM BUFFER FROM ANY PROPERTY LINE
8. PARKING SHALL ADHERE TO LAYOUT AND INTERIOR LANDSCAPING REQUIREMENTS PER THE ZONING CODE
9. PARKING SHALL BE CLEARLY LABELED AS SHORT TERM PARKING AND CANNOT BE CONSIDERED REQUIRED PARKING FOR ANOTHER USE
10. WHEEL STOPS OR CURBING SHALL BE PROVIDED FOR ALL PARKING STALLS
11. ADEQUATE LIGHTING SHALL BE PROVIDED.
12. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER



CITY OF COLUMBIA DEVELOPMENT SERVICES DEPARTMENT ENGINEERING DIVISION	MAIL CLUSTER BOX UNITS	DATE	6/9/2022
STANDARD DETAILS	(NTS)		MD-03



01 POLIGON SHELTER 16' X 24'
NTS
DETAIL-FILE

PRODUCT SPECIFICATIONS

MANUFACTURER: **KOMPAN**
PRODUCT: **YELLOWSTONE WITH SHADE**
SIZE: **23'7"X17'10"X15'9"**
COLOR: **TBD**
OPTIONS: **N/A**
DETAIL NOTE: **INSTALL PER MANUFACTURER SPECIFICATIONS**
QUANTITY: **1**

CONTACT: **615.426.8760**
WEBSITE: **https://www.kompan.com/en/us**

02 PLAY STRUCTURE
NTS
DETAIL-FILE

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS REGISTERED ENGINEER AGRICULTURE COMMERCE No. 139448 STATE OF TENNESSEE
04/21/2025

No.	REVISIONS	DATE	BY
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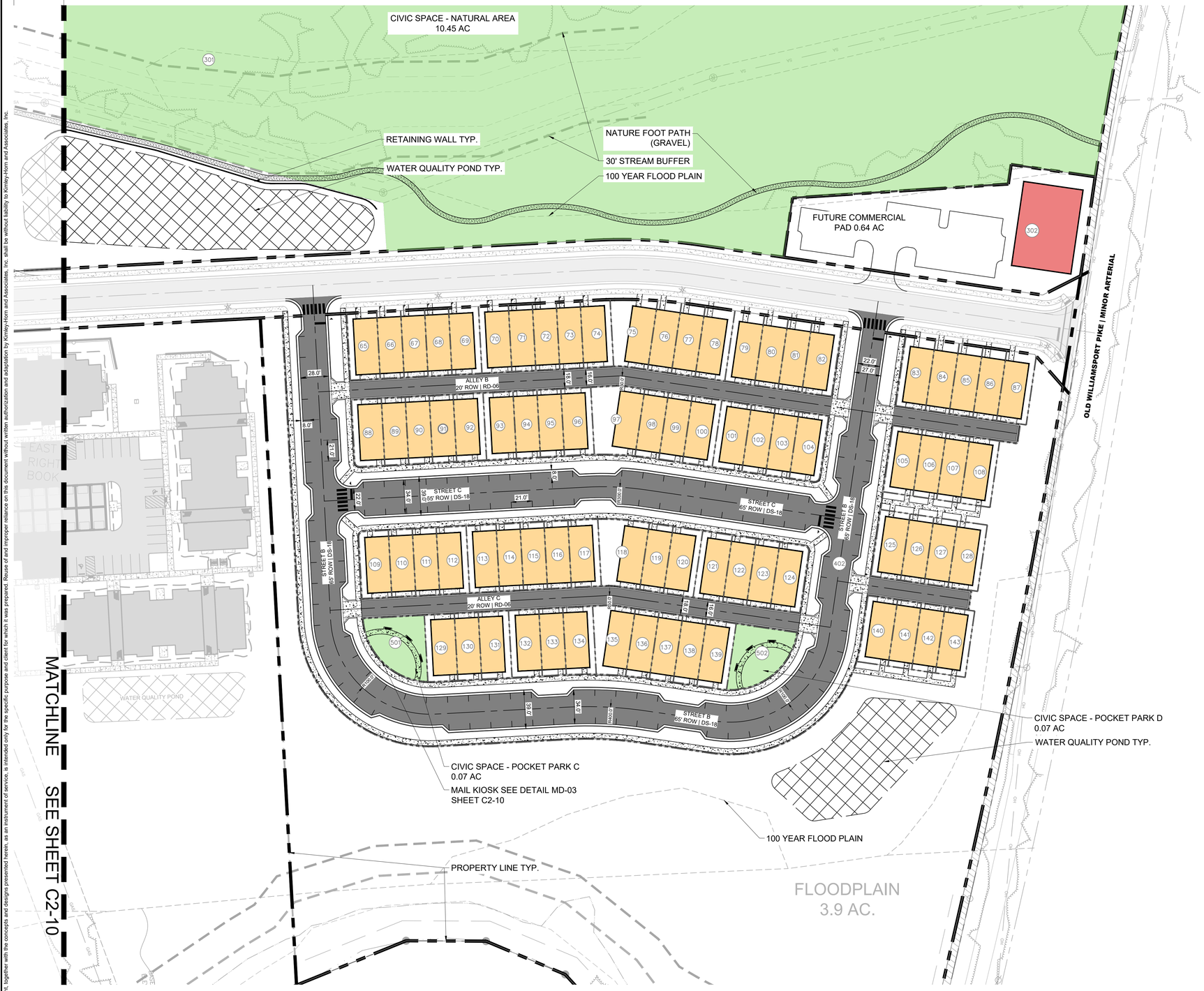
DESIGNED BY: ___
DRAWN BY: ___
CHECKED BY: ___
DATE: 03/17/2025
KIMLEY-HORN PROJECT NO. 118332003

SITE LAYOUT - ENLARGEMENT

SHEET NUMBER
C2-10

Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\C2-10 SITE LAYOUT - ENLARGEMENT.dwg C2-10 Apr 21, 2025 8:23am by: Jacob.Patterson



SITE DATA TABLE

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EXISTING LAND USE:	VACANT
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SITE AREA (SF):	1,420,129 SF
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PROPOSED:	
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*SF LOTS (96' x 115' TYP.):	11 DU
TOTAL UNITS:	**154 DU**
**DENSITY:	4.39 UNITS/ACRE
MIN. LOT SIZE:	1,608 SF
UNITS FRONTING	
PEDESTRIAN PATH:	12 UNITS (8%)
TYPICAL LOT SETBACKS:	
MIN. FRONT SETBACK:	6 FT
MIN. SIDE SETBACK:	6 FT
MIN. REAR SETBACK:	15 FT FROM ALLEY C.L.
REQUIRED CIVIC USE SPACE:	5% OF TOTAL AREA 1.63 AC
PROVIDED CIVIC USE SPACE:	36% OF TOTAL AREA 11.64 AC
CIVIC SPACE LIST:	
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POCKET PARK B:	1.00 AC
POCKET PARK C:	0.07 AC
POCKET PARK D:	0.07 AC
NATURAL AREA:	10.45 AC
REQUIRED PARKING:	
TOWNHOMES	286 SPACES
SF LOTS:	22 SPACES
TOTAL REQUIRED:	**308 SPACES (2 PER DU)**
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TOTAL DU PARKING:	**330 SPACES**
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*SF LOTS INCLUDED IN 22-0131 - HAMPSHIRE PIKE MIXED USE DEVELOPMENT - PRELIMINARY PLAT
**SF LOTS EXCLUDED FROM DENSITY AND FRONTAGE CALCULATIONS

COORDINATES ARE NAD83.
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GRAPHIC SCALE IN FEET
0 25 50 100

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 139698
STATE OF TENNESSEE
04/21/2025

No.	REVISIONS	DATE	BY
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DESIGNED BY: ___
DRAWN BY: ___
CHECKED BY: ___
DATE: 03/17/2025
KIMLEY-HORN PROJECT NO. 118332003

SITE LAYOUT - ENLARGEMENT

SHEET NUMBER
C2-11

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Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\C2-10 SITE LAYOUT - ENLARGEMENT.dwg C2-11 Apr 21, 2025 8:23am by: Jacob.Patterson

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PARCEL AREA TABLE			PARCEL AREA TABLE			PARCEL AREA TABLE			PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.
1	0.05	2217	21	0.04	1944	41	0.04	1944	61	0.05	1984
2	0.04	1931	22	0.04	1944	42	0.04	1944	62	0.05	2034
3	0.06	2430	23	0.04	1944	43	0.04	1944	63	0.05	2120
4	0.07	2882	24	0.06	2430	44	0.06	2430	64	0.07	3092
5	0.04	1931	25	0.06	2430	45	0.07	3014	65	0.05	2010
6	0.04	1946	26	0.04	1944	46	0.04	1947	66	0.04	1608
7	0.06	2433	27	0.04	1944	47	0.04	1944	67	0.04	1608
8	0.06	2516	28	0.04	1944	48	0.04	1947	68	0.04	1608
9	0.04	1944	29	0.07	3121	49	0.07	3019	69	0.05	2010
10	0.04	1944	30	0.07	2973	50	0.06	2430	70	0.05	2010
11	0.06	2430	31	0.04	1953	51	0.04	1944	71	0.04	1608
12	0.06	2732	32	0.04	1948	52	0.04	1944	72	0.04	1608
13	0.04	1946	33	0.04	1949	53	0.04	1944	73	0.04	1608
14	0.04	1946	34	0.07	2839	54	0.06	2430	74	0.05	2009
15	0.06	2816	35	0.07	2964	55	0.06	2430	75	0.06	2781
16	0.06	2431	36	0.04	1945	56	0.04	1944	76	0.04	1690
17	0.04	1944	37	0.04	1943	57	0.04	1944	77	0.04	1704
18	0.04	1944	38	0.04	1948	58	0.04	1944	78	0.05	2130
19	0.06	2430	39	0.06	2694	59	0.06	2430	79	0.05	2130
20	0.06	2430	40	0.06	2430	60	0.06	2628	80	0.04	1704

PARCEL AREA TABLE			PARCEL AREA TABLE			PARCEL AREA TABLE			PARCEL AREA TABLE			PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.
81	0.04	1704	101	0.05	2010	121	0.05	2010	141	0.04	1608	400	4.31	187695
82	0.05	2130	102	0.04	1608	122	0.04	1608	142	0.04	1608	401	1.96	85441
83	0.05	2130	103	0.04	1608	123	0.04	1608	143	0.05	2010	402	3.02	131626
84	0.04	1704	104	0.05	2005	124	0.05	2005	200	0.35	15148	500	0.05	1992
85	0.04	1704	105	0.05	2010	125	0.05	2010	201	0.36	15502	501	0.07	3136
86	0.04	1704	106	0.04	1608	126	0.04	1608	202	0.40	17569	502	0.07	3143
87	0.05	2129	107	0.04	1608	127	0.04	1608	203	0.31	13637			
88	0.05	2005	108	0.05	2010	128	0.05	2010	204	0.28	12115			
89	0.04	1608	109	0.05	2005	129	0.05	2009	205	0.26	11498			
90	0.04	1608	110	0.04	1608	130	0.04	1606	206	0.28	12080			
91	0.04	1608	111	0.04	1608	131	0.05	2031	207	0.34	14605			
92	0.05	2010	112	0.05	2010	132	0.05	2035	208	0.39	16822			
93	0.05	2010	113	0.05	2010	133	0.04	1607	209	0.44	19035			
94	0.04	1608	114	0.04	1608	134	0.05	2020	210	0.52	22855			
95	0.04	1608	115	0.04	1608	135	0.06	2481	300	1.55	67509			
96	0.05	2010	116	0.04	1608	136	0.04	1614	301	12.36	538239			
97	0.07	3229	117	0.05	2009	137	0.04	1608	302	0.64	27678			
98	0.04	1610	118	0.07	3021	138	0.04	1608	303	1.19	51985			
99	0.04	1608	119	0.04	1608	139	0.05	2009	304	1.09	47304			
100	0.05	2010	120	0.05	2010	140	0.05	2021	305	30.38	1323371			

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
No. 139035
STATE OF TENNESSEE
04/21/2025

No.	REVISIONS	DATE	BY
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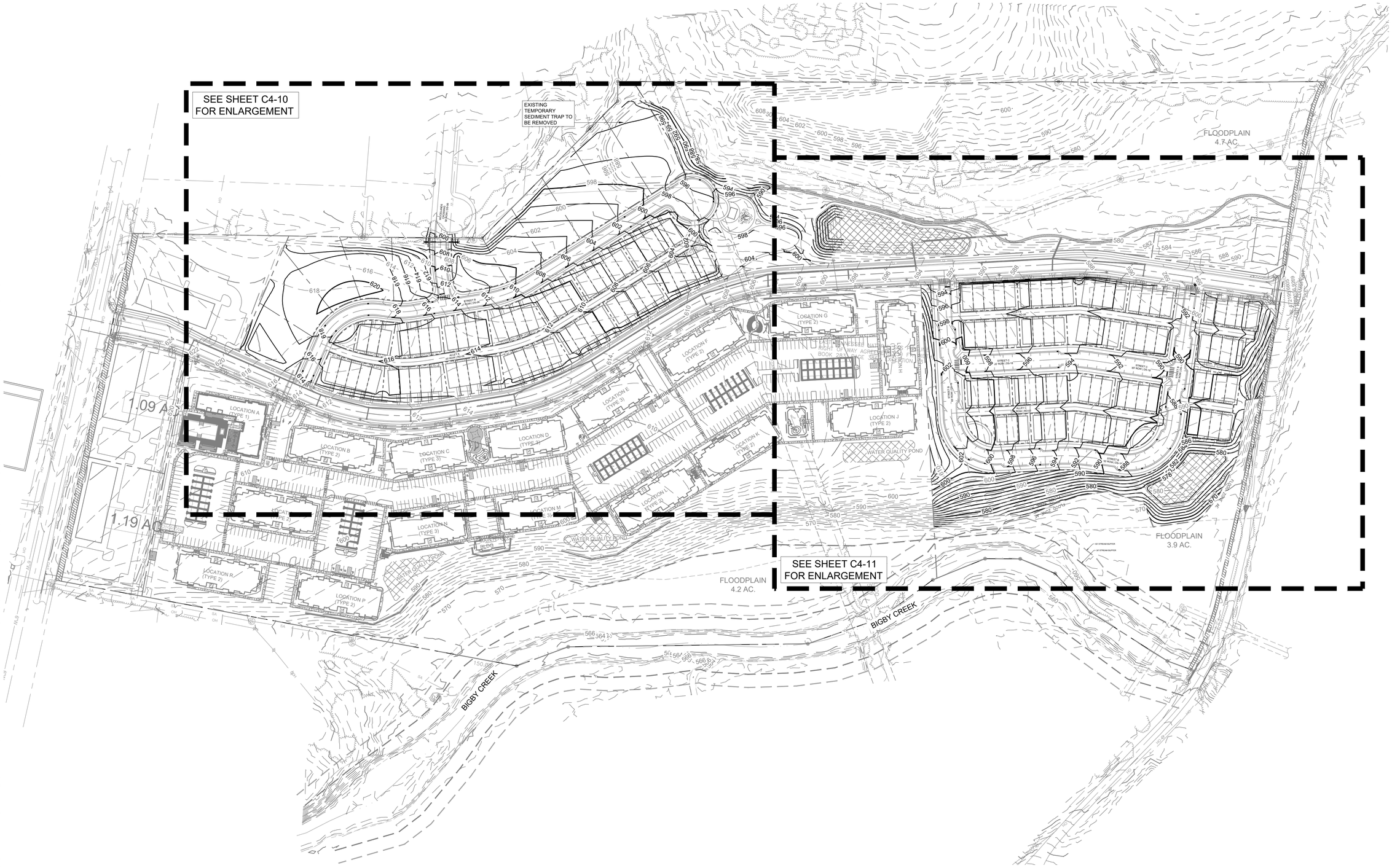
DRAWN BY: ___
CHECKED BY: ___
DATE: 03/17/2025
KIMLEY-HORN PROJECT NO. 118332003

PARCEL TABLES

SHEET NUMBER
C2-20



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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 139933
STATE OF TENNESSEE
04/21/2025

No	REVISIONS	DATE	BY
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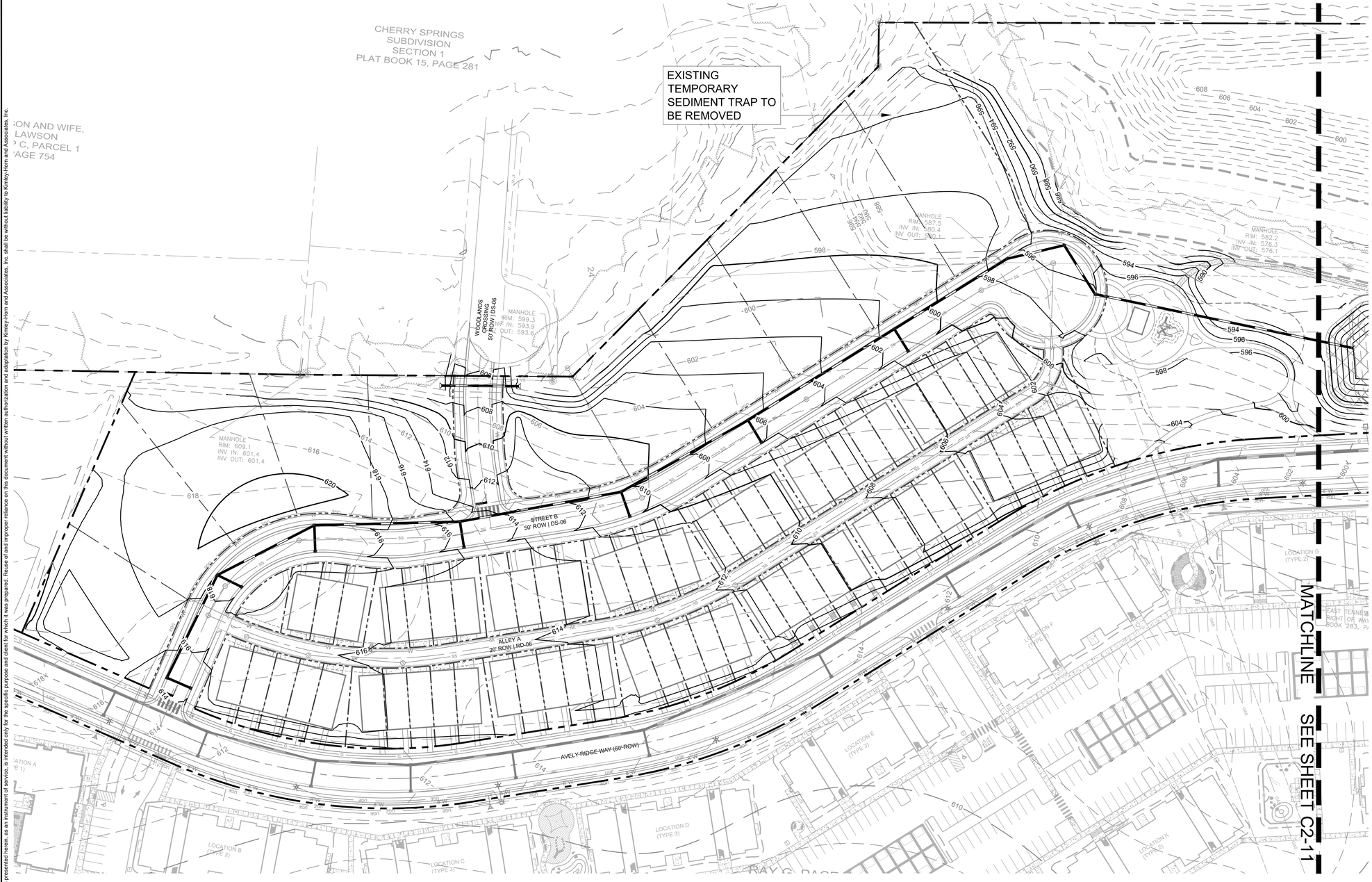
DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	03/17/2025
KIMLEY-HORN PROJECT NO.	118332003

GRADING AND DRAINAGE PLAN - OVERALL

SHEET NUMBER
C4-00

Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\C4-00 GRADING AND DRAINAGE PLAN - OVERALL.dwg C4-00 GRADING AND DRAINAGE PLAN - OVERALL Apr 21, 2025 8:23am by: Jacob.Patterson



SITE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	TOWN HOMES
SITE AREA (AC):	32.60 AC
SITE AREA (SF):	1,420,129 SF
DENSITY	
PROPOSED:	
TOWNHOMES (24' x 56' TYP.):	143 DU
*SF LOTS (66' x 115' TYP.):	11 DU
TOTAL UNITS:	**154 DU**
**DENSITY:	4.39 UNITS/ACRE
MIN. LOT SIZE:	1,608 SF
UNITS FRONTING	
PEDESTRIAN PATH:	12 UNITS (8%)
TYPICAL LOT SETBACKS:	
MIN. FRONT SETBACK:	6 FT
MIN. SIDE SETBACK:	6 FT
MIN. REAR SETBACK:	15 FT FROM ALLEY C.L.
REQUIRED CIVIC USE SPACE:	5% OF TOTAL AREA 1.63 AC
PROVIDED CIVIC USE SPACE:	36% OF TOTAL AREA 11.64 AC
CIVIC SPACE LIST:	
POCKET PARK A:	0.05 AC
POCKET PARK B:	1.00 AC
POCKET PARK C:	0.07 AC
POCKET PARK D:	0.07 AC
NATURAL AREA:	10.45 AC
REQUIRED PARKING:	
TOWNHOMES	286 SPACES
SF LOTS:	22 SPACES
TOTAL REQUIRED:	**308 SPACES (2 PER DU)**
PROPOSED PARKING:	
GARAGE PARKING:	308 SPACES
DRIVEWAY PARKING:	22 SPACES
TOTAL DU PARKING:	**330 SPACES**
ON-STREET PARKING:	102 SPACES
TOTAL PARKING PROVIDED:	**432 SPACES**

*SF LOTS INCLUDED IN 22-0131 - HAMPSHIRE PIKE MIXED USE DEVELOPMENT - PRELIMINARY PLAT
**SF LOTS EXCLUDED FROM DENSITY AND FRONTAGE CALCULATIONS

UTILITY NOTES

1. WATER, SEWER, AND POWER UTILITY PROVIDERS ARE ABLE TO SERVE THE SITE. ANY IMPROVEMENTS NEEDED ARE LISTED IN AVAILABILITY LETTERS INCLUDED IN THIS SUBMITTAL.

FEMA FLOOD NOTES

1. FIRM PANEL: 47119C0280E & 47119C0165E
2. EFFECTIVE DATE: 4/16/2007

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 25 50 100

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCIAL
No. 129611
STATE OF TENNESSEE
04/21/2025

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DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	03/17/2025
KIMLEY-HORN PROJECT NO.	118332003

GRADING AND DRAINAGE PLAN - ENLARGEMENT

SHEET NUMBER
C4-10

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SITE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	TOWN HOMES
SITE AREA (AC):	32.60 AC
SITE AREA (SF):	1,420,129 SF
DENSITY	
PROPOSED:	
TOWNHOMES (24' x 56' TYP.):	143 DU
*SF LOTS (66' x 115' TYP.):	11 DU
TOTAL UNITS:	**154 DU**
**DENSITY:	4.39 UNITS/ACRE
MIN. LOT SIZE:	1,608 SF
UNITS FRONTING	
PEDESTRIAN PATH:	12 UNITS (8%)
TYPICAL LOT SETBACKS:	
MIN. FRONT SETBACK:	6 FT
MIN. SIDE SETBACK:	6 FT
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POCKET PARK A:	0.05 AC
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POCKET PARK D:	0.07 AC
NATURAL AREA:	10.45 AC
REQUIRED PARKING:	
TOWNHOMES	286 SPACES
SF LOTS:	22 SPACES
TOTAL REQUIRED:	**308 SPACES (2 PER DU)**
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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 139111
STATE OF TENNESSEE
04/21/2025

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DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	03/17/2025
KIMLEY-HORN PROJECT NO.	118332003

GRADING AND DRAINAGE PLAN - ENLARGEMENT

SHEET NUMBER
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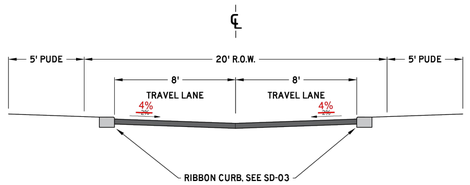
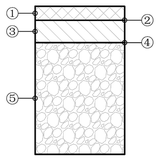


PAVEMENT SCHEDULE	
①	SURFACE @ 1.5" THICK 411-0110 ASPHALT CONCRETE MIX (PG64-22) (ACS) GRADING D (SURFACE), OR 307-0110 ASPHALT CONCRETE MIX (PG64-22) (ACS) GRADING C-W (SURFACE)
②	TACK COAT (GENERAL USE) 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) 10.05 - 0.10 GAL/SY)
③	BIT. BINDER @ 2" THICK 307-0108 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HW) GRADING B-M2
④	PRIME COAT 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) (0.30-0.35 GAL/SY) 402-02 AGGREGATE FOR COVER MATERIAL (PC) (8-12 LB/SY)
⑤	MINERAL AGGREGATE BASE @ 8" THICK 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D



NOTES:

1. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED
2. DIMENSIONS REFLECT A MINIMUM STANDARD
3. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA TENNESSEE

CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

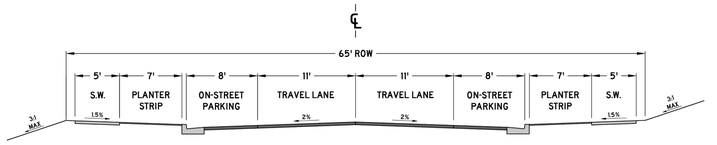
STANDARD DETAILS

ALLEY

(NTS)

DATE
6/9/2022

RD-06



NOTES:

1. ONLY PERMITTED WITHIN THE APPLICABLE ZONING DISTRICTS
2. ONLY PERMITTED ON MINOR LOCAL AND MAJOR LOCAL ROADWAY CLASSIFICATIONS
3. PAVEMENT SECTION SHALL FOLLOW THE CORRESPONDING ROADWAY CLASSIFICATION'S STANDARD DETAIL
4. CURB AND GUTTER, SEE SD-01
5. EXTRUDED CURB, SEE SD-02
6. DECORATIVE LIGHT BASES SHALL BE BETWEEN 18" AND 24" BEHIND THE BACK OF CURB.
7. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED
8. DIMENSIONS REFLECT A MINIMUM STANDARD
9. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA TENNESSEE

CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

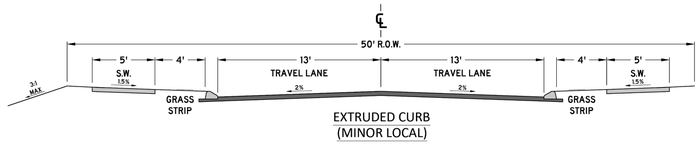
STANDARD DETAILS

CHARACTER DISTRICT STREET
SUBURBAN NEIGHBORHOOD
PARALLEL PARKING BOTH SIDES

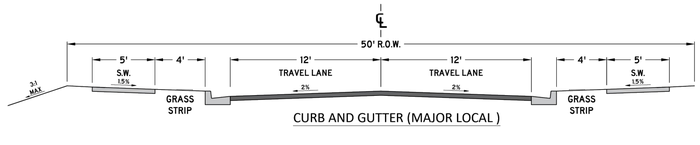
(NTS)

DATE
7/1/2024

DS-10



EXTRUDED CURB
(MINOR LOCAL)



CURB AND GUTTER (MAJOR LOCAL)

NOTES:

1. ONLY PERMITTED WITHIN THE APPLICABLE ZONING DISTRICTS
2. ONLY PERMITTED ON MINOR LOCAL AND MAJOR LOCAL ROADWAY CLASSIFICATIONS
3. PAVEMENT SECTION SHALL FOLLOW THE CORRESPONDING ROADWAY CLASSIFICATION'S STANDARD DETAIL
4. CURB AND GUTTER, SEE SD-01
5. EXTRUDED CURB, SEE SD-02
6. DECORATIVE LIGHT BASES SHALL BE BETWEEN 18" AND 24" BEHIND THE BACK OF CURB.
7. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED
8. DIMENSIONS REFLECT A MINIMUM STANDARD
9. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA TENNESSEE

CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

STANDARD DETAILS

CHARACTER DISTRICT STREET
LARGE LOT NEIGHBORHOOD

(NTS)

DATE
7/1/2024

DS-06

COORDINATES ARE NAD83.
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HAMPSHIRE PIKE
TOWNHOMES AND
SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 130033
STATE OF TENNESSEE
04/21/2025

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ROADWAY SECTIONS

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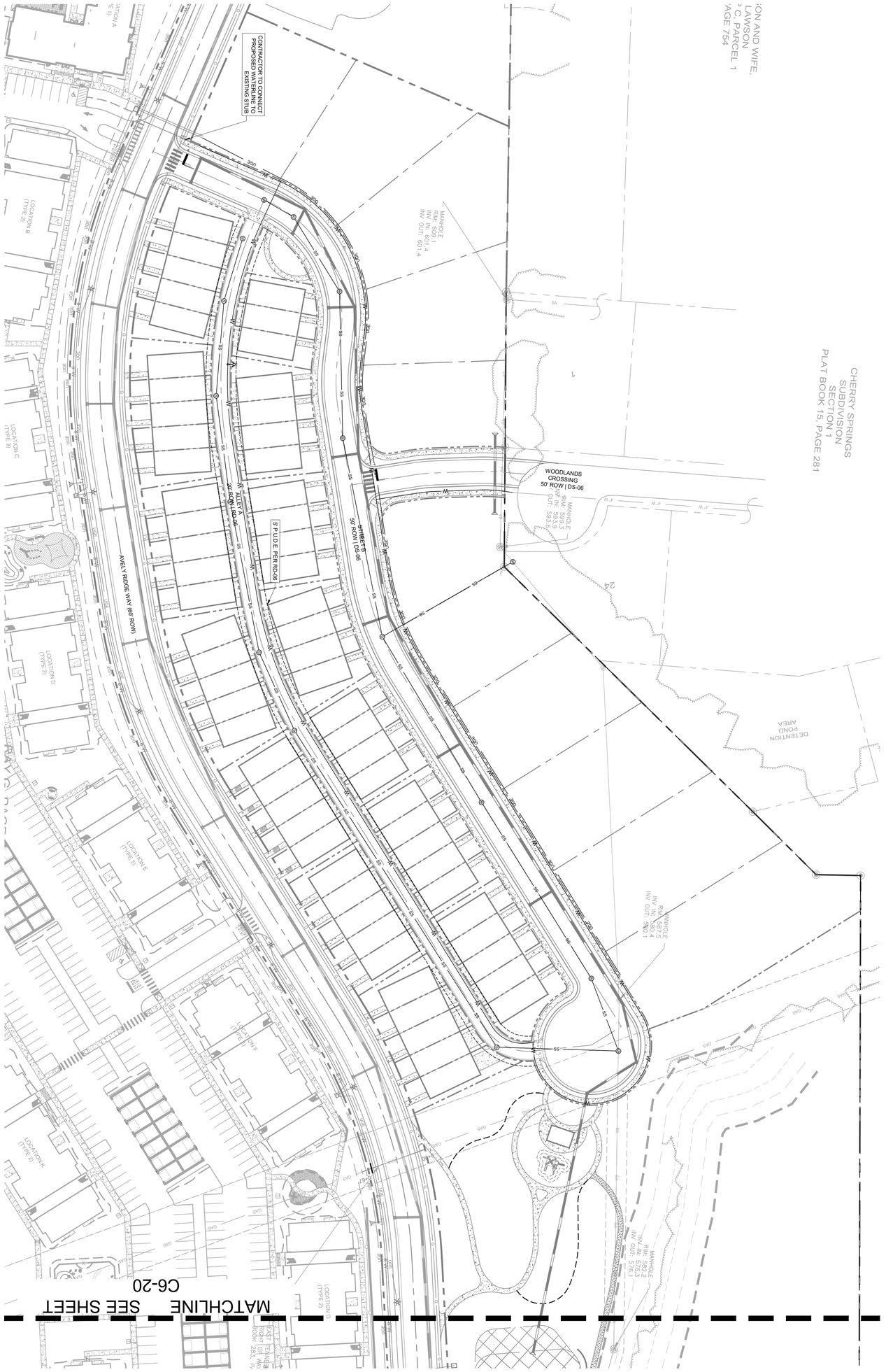
Drawing name: K:\NSH_LDEV\116332003 - steadfast hampshire pike\4-CAD\hampshire pike townhomes\plansheets\C6-10 UTILITY PLAN- ENLARGEMENT.dwg C6-10 UTILITY PLAN- ENLARGEMENT Apr 21, 2025 8:24am by: Jacob Patterson



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DATE: 03/17/2025
KIMLEY»HORN PROJECT NO. 116332003

UTILITY PLAN - ENLARGEMENT

SHEET NUMBER C6-10

HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

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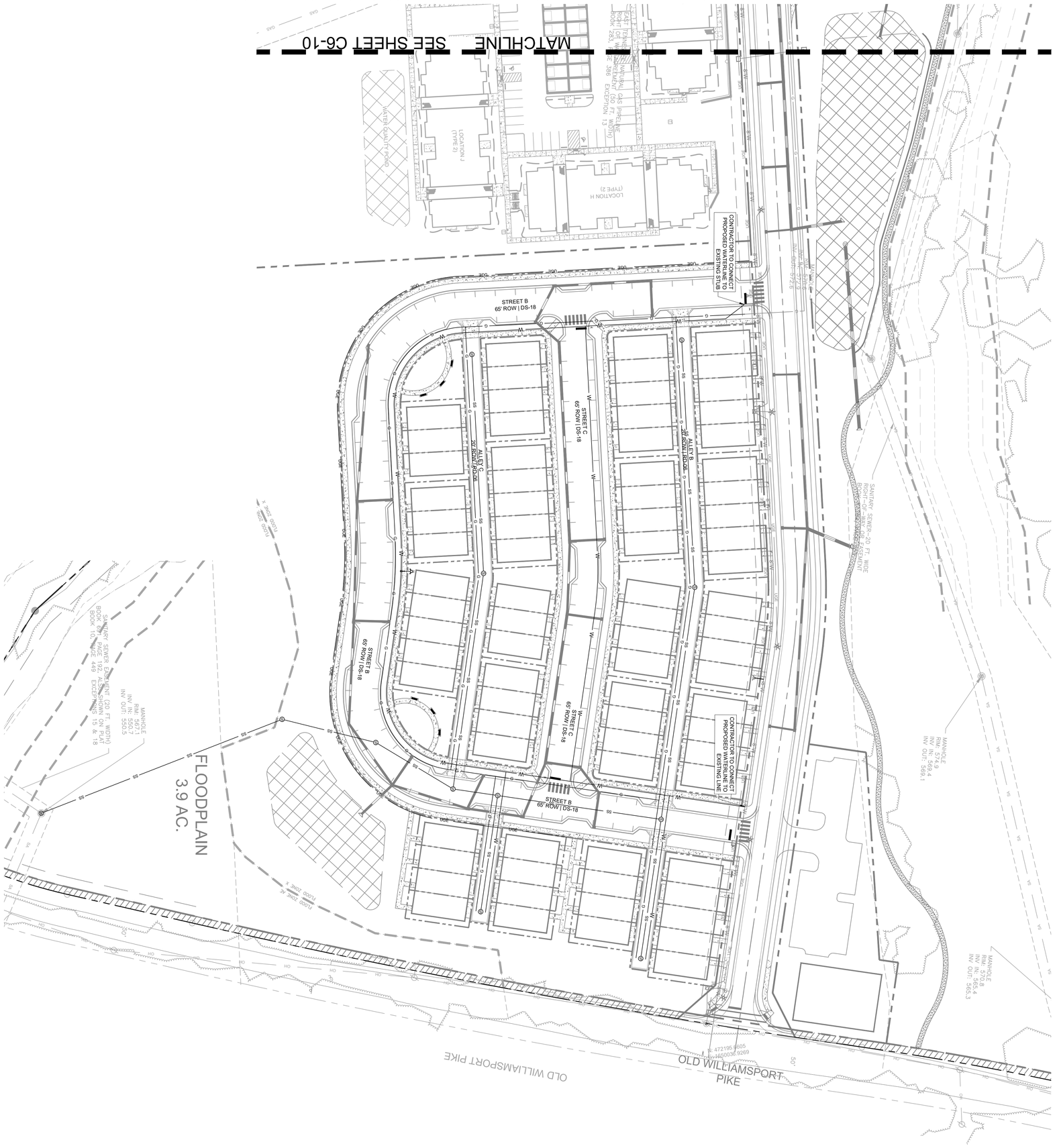

GRAPHIC SCALE IN FEET
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UTILITY PLAN - ENLARGEMENT

SHEET NUMBER C6-20

COLTON L. PROSSER — STATE OF TENNESSEE — REGISTERED ENGINEER — 042752 — 2025.04.21

HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

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LANDSCAPE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	X
SITE AREA (AC):	32.60
BUILDING AREA (SF):	#050
BUILDING PERMIT:	#091
GRADING PERMIT:	#092

LANDSCAPE REQUIREMENTS

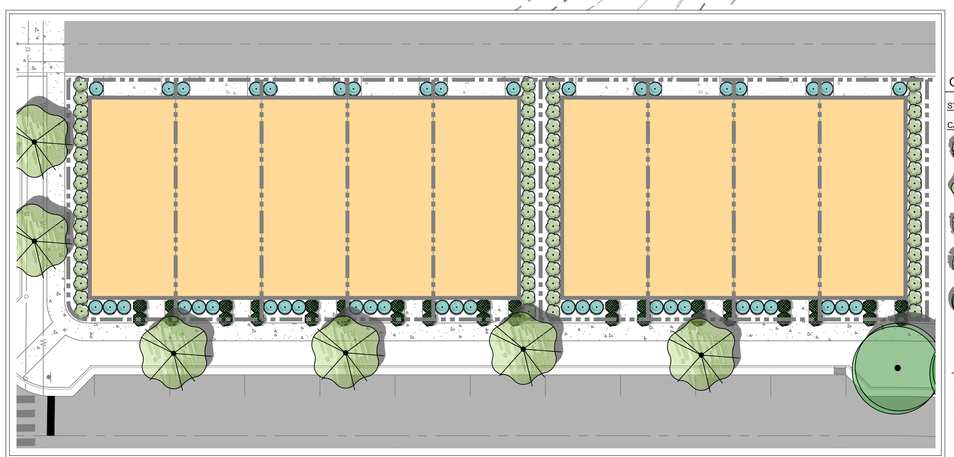
REQUIRED BUFFERS:
LANDSCAPE BUFFERS ARE NOT REQUIRED.

STREET TREE REQUIRMENT:
STREET TREES TO BE PLANTED 50 LF ON CENTER WITH EVEN SPACING.

TREE CANOPY COVER RETENTION

EXISTING TREE CANOPY:	+/- 56% (18.32 AC) OF TOTAL DEVELOPMENT
REQUIRED RETENTION:	45% (8.24 AC) MIN. OF TOTAL TREE CANOPY
PROPOSED RETENTION:	62% (11.37 AC) OF TOTAL TREE CANOPY





TYPICAL FOUNDATION PLANTING
SCALE: 1" = 20'

OVERALL PLANT SCHEDULE

SYMBOL	CODE		BOTANICAL NAME	COMMON NAME	SPACING	SIZE	ROOT	CONDITION
CANOPY TREES								
	AT	19	ACER BUERGERIANUM 'STREETWISE'	STREETWISE TRIDENT MAPLE	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	AA	35	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	GT	9	GLEDITSIA TRIACANTHOS INERMIS	THORNLESS HONEY LOCUST	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	QH	29	QUERCUS LYRATA 'QLFTB'	HIGHBEAM® OVERCUP OAK	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	UJ	47	ULMUS AMERICANA 'JEFFERSON'	JEFFERSON AMERICAN ELM	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED

FOUNDATION PLANT SCHEDULE

SYMBOL	CODE		BOTANICAL NAME	COMMON NAME	SPACING	SIZE	ROOT	CONDITION
EVERGREEN SHRUBS								
	AX	68	AZALEA X 'AMELIA ROSE'	AMELIA ROSE AZALEA	AS SHOWN	18" MIN. HT.	3 GAL.	MATCHED, FULL, FREE OF WEEDS
	BS	36	BUXUS SEMPERVIRENS	COMMON BOXWOOD	AS SHOWN	18" MIN. HT.	3 GAL.	MATCHED, FULL, FREE OF WEEDS
	TD	45	TAXUS CUSPIDATA 'DENSA'	DENSE JAPANESE YEW	AS SHOWN	18" MIN. HT.	3 GAL.	MATCHED, FULL, FREE OF WEEDS

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 50 100 200

NORTH

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

JOSHUA LEWIS ROWLAND
REGISTERED
LANDSCAPE ARCHITECT
03/17/2025

No.	REVISIONS	DATE	BY
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DATE: 03/17/2025
KIMLEY-HORN PROJECT NO. 118332003

LANDSCAPE PLAN

SHEET NUMBER
L1-00

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LANDSCAPE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	X
SITE AREA (AC):	32.60
BUILDING AREA (SF):	#050
BUILDING PERMIT:	#091
GRADING PERMIT:	#092

LANDSCAPE REQUIREMENTS

REQUIRED BUFFERS:
LANDSCAPE BUFFERS ARE NOT REQUIRED.

STREET TREE REQUIRMENT:
STREET TREES TO BE PLANTED 50 LF ON CENTER WITH EVEN SPACING.

TREE CANOPY COVER RETENTION

EXISTING TREE CANOPY:	+/- 56% (18.32 AC) OF TOTAL DEVELOPMENT
REQUIRED RETENTION:	45% (8.24 AC) MIN. OF TOTAL TREE CANOPY
PROPOSED RETENTION:	62% (11.37 AC) OF TOTAL TREE CANOPY

PLANT SCHEDULE L1-10

SYMBOL	CODE		BOTANICAL NAME	COMMON NAME	SPACING	SIZE	ROOT	CONDITION
CANOPY TREES								
	AT	19	ACER BUERGERIANUM 'STREETWISE'	STREETWISE TRIDENT MAPLE	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	GT	7	GLEDITSIA TRIACANTHOS INERMIS	THORNLESS HONEY LOCUST	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	QH	2	QUERCUS LYRATA 'QLFTB'	HIGHBEAM® OVERCUP OAK	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	UJ	34	ULMUS AMERICANA 'JEFFERSON'	JEFFERSON AMERICAN ELM	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
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NORTH

Kimley»Horn
10 Lea Avenue, Suite 400 Nashville, TN 37210
Main: 615.564.2701 | www.kimley-horn.com
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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

JOSHUA LEWIS ROWLAND
REGISTERED
LANDSCAPE ARCHITECT
03/17/2025

No.	REVISIONS	DATE	BY
1			
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DESIGNED BY:	#096
DRAWN BY:	#097
CHECKED BY:	#098
DATE:	03/17/2025
KIMLEY-HORN PROJECT NO.	118332003

LANDSCAPE PLAN - ENLARGEMENT

SHEET NUMBER
L1-10

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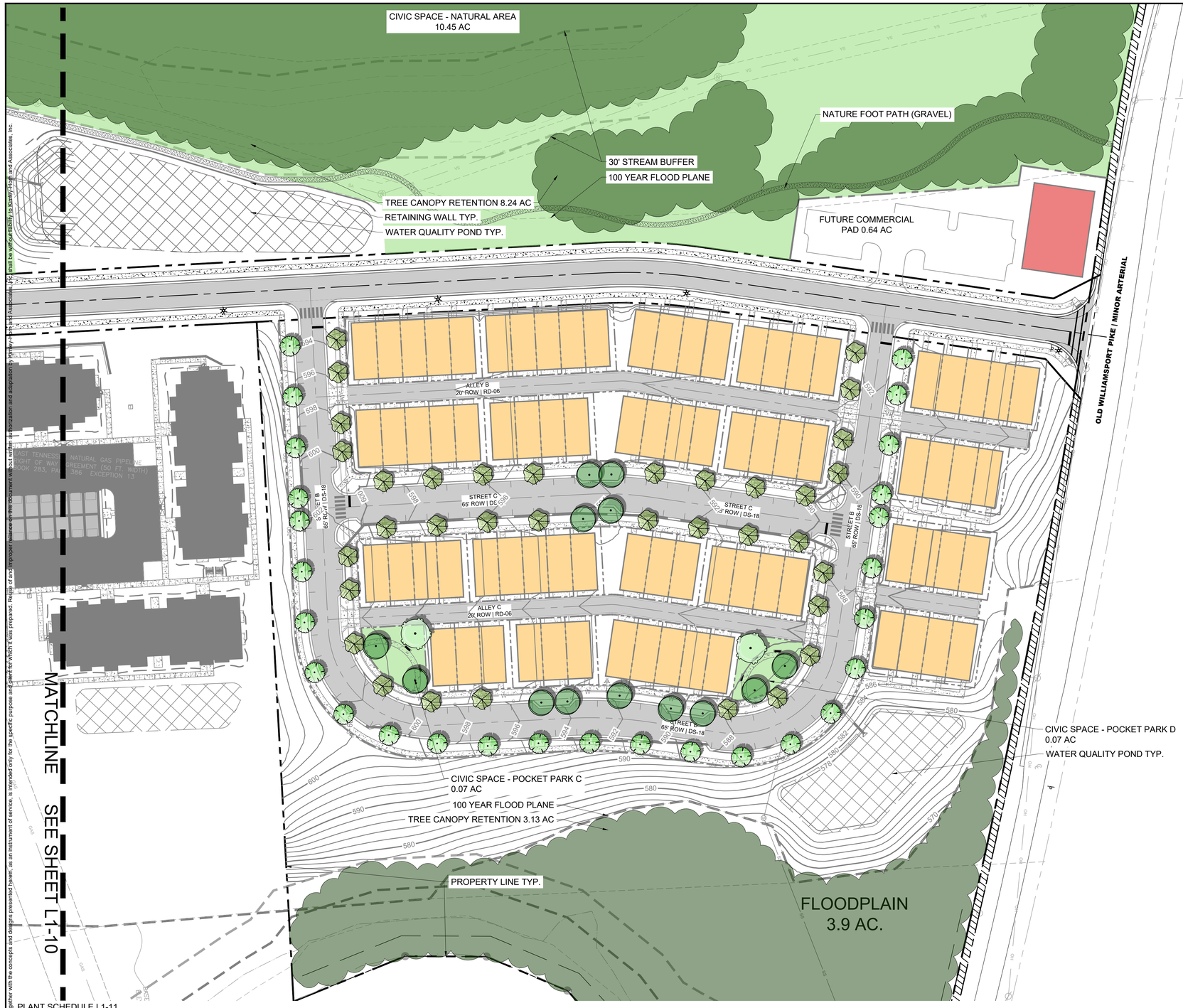

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PLANT SCHEDULE L1-11

SYMBOL	CODE		BOTANICAL NAME	COMMON NAME	SPACING	SIZE	ROOT	CONDITION
CANOPY TREES								
	AA	35	ACER RUBRUM 'AUTUMN FLAME'	AUTUMN FLAME RED MAPLE	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	GT	2	GLEDITSIA TRIACANTHOS INERMIS	THORNLESS HONEY LOCUST	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	QH	27	QUERCUS LYRATA 'QLFTB'	HIGHBEAM® OVERCUP OAK	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED
	UJ	13	ULMUS AMERICANA 'JEFFERSON'	JEFFERSON AMERICAN ELM	AS SHOWN	2.5" CAL. 12'-14' MIN. HT.	B&B	5' CLEAR, STRAIGHT LEADER, FULL CANOPY, MATCHED

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
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LANDSCAPE PLAN - ENLARGEMENT

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GENERAL LANDSCAPE SPECIFICATIONS AND NOTES

1.01 SCOPE OF WORK

A. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS, AS INCLUDED IN THE PLANT LIST, AND AS HEREIN SPECIFIED.

B. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER.

C. THE CONTRACTOR SHALL CONTACT THE OWNER AND TENNESSEE ONE CALL AT (615) 351-1111, TWO (2) FULL BUSINESS DAYS PRIOR TO THE BEGINNING OF WORK.

D. THE CITY MUST APPROVE ALL WORK HOURS AND LANE CLOSURE REQUESTS AT LEAST TWO (2) FULL WORKING DAYS IN ADVANCE OF THE START OF ANY SUCH WORK ON A LOCATION BY LOCATION BASIS. THE INDIVIDUAL(S) INSTALLING THE MAINTENANCE OF TRAFFIC SETUP SHALL HAVE COMPLETED A TDOT APPROVED WORK ZONE TRAFFIC CONTROL TRAINING COURSE. DOCUMENTATION SHALL BE FURNISHED TO THE CITY AT THE PRE-CONSTRUCTION MEETING OR PRIOR TO START OF WORK.

E. ALL LANDSCAPE MATERIAL SHALL BE INSTALLED AND MAINTAINED IN A MANNER WHEREBY TRAFFIC CONTROL SIGNAGE AND DEVICES ARE VISIBLE TO MOTORISTS AND PEDESTRIANS.

1.02 PROTECTION OF EXISTING STRUCTURES

A. ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER AND AT NO COST TO THE OWNER.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL NECESSARY BMP DEVICES ACCORDING TO TDOT, COUNTY, OR CITY STANDARDS THROUGH THE DURATION OF ALL CONSTRUCTION ACTIVITIES.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION. THE OWNER AND DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF ANY SUCH INFORMATION OR DATA, AND THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA, FOR LOCATING ALL UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF, AND REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK. THE COST OF COMPLIANCE WITH THIS SECTION WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.

1.03 PROTECTION OF EXISTING PLANT MATERIALS OUTSIDE LIMIT OF WORK

A. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE, CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC. THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRIP-LINE AND SPILLING OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP-LINE. NO MATERIALS SHALL BE BURNED ON SITE. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/OR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF ONE HUNDRED DOLLARS ($100) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES. CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER.

1.04 MATERIALS

A. GENERAL

MATERIAL SAMPLES LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL, ON SITE OR AS DETERMINED BY THE LANDSCAPE ARCHITECT. UPON APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.

MATERIAL	SAMPLE SIZE
MULCH	ONE (1) CUBIC FOOT
TOPSOIL MIX	ONE (1) CUBIC FOOT
PLANTS	ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY)

B. PLANT MATERIALS

1. PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS AS SET FORTH IN ANSI Z60.1-2014-AMERICAN STANDARD FOR NURSERY STOCK. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, SOUND, WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS. INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER. WHERE ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY WITH APPROVAL FROM OWNER OR LANDSCAPE ARCHITECT. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE LANDSCAPE ARCHITECT.
2. MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE GROUND OR ACROSS THE NORMAL SPREAD OF BRANCHES WITH THE PLANTS IN THEIR NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER. IF THE USE OF LARGER PLANTS IS APPROVED, THE ROOTBALL OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.
3. INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY; SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.

1.05 SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOIL MIX)

A. SOIL MIXTURE (PLANTING MEDIUM FOR PLANT PITS) SHALL CONSIST OF ⅓ LOOSE COMPOST (NO GREATER THAN 1" SIV), ⅓ PEAT AND ⅓ SAND, AS DESCRIBED BELOW.

B. TOPSOIL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT PITS SHALL BE FERTILE, FRIABLE, AND OF A LOAMY CHARACTER; REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER; FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER AND A PH BETWEEN 5.5 AND 7.0 - SUBMIT SAMPLE AND PH TESTING RESULTS FOR APPROVAL.

C. SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND. CONTRACTOR SHALL SUBMIT RESULTS OF SOIL TESTS FOR TOPSOIL AND SAND PROPOSED FOR APPROVAL BY THE OWNER.

D. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE, AT WHICH POINT THE CONTRACTOR SHALL CONTACT OWNER'S REPRESENTATIVE TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING.

E. CONTRACTOR TO SUBMIT SAMPLES OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.

1.06 WATER

A. WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TANKS, HOSES, SPRINKLERS, ETC. IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.

** WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.*

1.07 FERTILIZER

A. CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED.

** FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.*

1.08 MULCH

A. MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A DEPTH OF THREE (3) INCHES FOR ALL PLANTINGS UNLESS OTHERWISE NOTED. MULCH AT ALL PLANTING BEDS SHALL BE TRIPLE SHREDDED HARDWOOD.

1.09 DIGGING AND HANDLING

A. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT.

B. BALLED AND BURLAPPED PLANTS (B&B) SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS SHALL NOT BE HANDLED BY STEMS.

C. EXCAVATION OF TREE PITS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB-BASES. ALL TREES SHALL BE PLANTED AS INDICATED ON DRAWINGS. COORDINATE WITH PLANTING DETAILS FOR EXACT DEPTH OF PLANTING SOIL.

1.10 CONTAINER GROWN STOCK

A. ALL TREES SPECIFIED SHALL BE BALL AND BURLAP, UNLESS OTHERWISE APPROVED BY LANDSCAPE ARCHITECT.

B. ALL SHRUB SPECIES SHALL BE CONTAINER GROWN.

C. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION.

D. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG ENOUGH FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.

E. PLANT ROOTS BOUND IN CONTAINERS ARE NOT ACCEPTABLE.

1.11 MATERIALS LIST

A. QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE OWNER'S REPRESENTATIVE SHALL BE NOTIFIED FOR CLARIFICATION PRIOR TO BIDDING OR INSTALLATION. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE.

1.12 FINE GRADING

A. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN DISTURBED DURING CONSTRUCTION.

B. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH. CONTRACTOR SHALL FINE GRADE BY HAND AND/OR WITH ALL EQUIPMENT NECESSARY INCLUDING A GRADING TRACTOR WITH FRONT-END LOADER FOR TRANSPORTING SOIL WITHIN THE SITE.

C. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS. AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEER'S PLANS FOR FINAL GRADES, IF APPLICABLE.

1.13 PLANTING PROCEDURES

A. CLEANING UP BEFORE COMMENCING WORK: THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTIONABLE MATTER DAILY. ALL MORTAR, CEMENT, AND TOXIC MATERIAL SHALL BE REMOVED FROM THE SURFACE OF ALL PLANT BEDS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL WHICH WILL IN ANY WAY ADVERSELY AFFECT THE PLANT GROWTH, CONTRACTOR SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.

B. SUBGRADE EXCAVATION: THE CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL LANDSCAPE PLANTING AREAS TO A MINIMUM DEPTH OF 36" AT TREES AND 18" AT SHRUBS AND PERENNIALS. CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISH GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36", AND DEEP EXCAVATION BY THE CONTRACTOR AND POSITIVE DRAINAGE CANNOT BE ACHIEVED, THE CONTRACTOR SHALL UTILIZE PLANTING DETAIL THAT ADDRESSES POOR DRAINAGE.

C. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CONTACT TENNESSEE ONE CALL AT (615) 351-1111 TO LOCATE ALL UTILITIES.

D. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS HEREIN SPECIFIED AND REQUIRED. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.

E. GENERAL: COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. CONFORM TO ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE. UPON ARRIVAL AT THE SITE, PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ON-SITE SHALL NOT REMAIN UNPLANTED OR APPROPRIATELY HEALED IN FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES WORKMANLIKE METHODS CUSTOMARY IN GOOD HORTICULTURAL PRACTICES SHALL BE EXERCISED.

F. THE WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.

G. ALL PLANTING PITS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH ANSI Z60.1-2014 - AMERICAN STANDARD FOR NURSERY STOCK, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, AND BACK FILLED WITH THE PREPARED PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION 1.05. TEST ALL TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE. TREES SHALL BE SET PLUMB AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW, FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMAN.

H. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES.

I. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION 1.05 OF THESE SPECIFICATIONS.

J. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACK FILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).

K. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. MATERIALS INSTALLED SHALL MEET MINIMUM SPECIMEN REQUIREMENTS OR QUANTITIES SHOW ON PLANS, WHICHEVER IS GREATER. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 12", REMOVE AND DISPOSE ALL DEBRIS. COORDINATE WITH PLANTING DETAILS FOR EXACT DEPTH. MIX TOP 4" OF THE PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION 1.05. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.

L. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAIVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE PROJECT LANDSCAPE ARCHITECT IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE PROJECT LANDSCAPE ARCHITECT IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.

M. HERBICIDE WEED CONTROL: ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S PRECAUTIONS AND SPECIFICATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER (AS ALLOWED BY JURISDICTIONAL AUTHORITY).

1.14 LAWN SODDING

A. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.

B. LAWN BED PREPARATION: ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS BY MEANS OF A SOD CUTTER TO A DEPTH OF THREE (3) INCHES, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NOT MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE.

C. SOIL PREPARATION: PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. WET PREPARED AREA THOROUGHLY.

D. SODDING

1. THE CONTRACTOR SHALL SOD ALL DISTURBED AREAS WITHIN THE CONTRACT LIMITS NOT COVERED BY HARDSCAPE OR VEGETATIVE MATERIAL, UNLESS SPECIFICALLY NOTED OTHERWISE.
2. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER HARDSCAPE ELEMENTS, PAVED AND PLANTED AREAS. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZE INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.
3. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE.

E. LAWN MAINTENANCE

1. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS (LARGER THAN 12"X12") UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING RE-GRADING IF NECESSARY).
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD/LAWN UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.

1.15 CLEANUP

A. UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE BROOM-CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S REPRESENTATIVE.

1.16 PLANT MATERIAL MAINTENANCE

A. ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.

1.17 FINAL INSPECTION AND ACCEPTANCE OF WORK

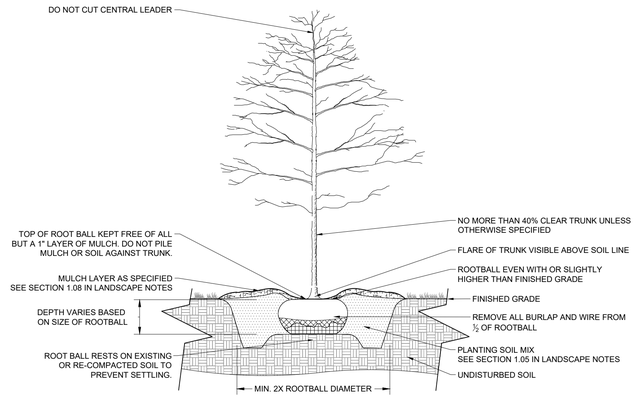
A. FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE LANDSCAPE ARCHITECT OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.

1.18 WARRANTY

A. THE LIFE AND SATISFACTORY CONDITION OF ALL PLANT MATERIAL INSTALLED (INCLUDING SOD) BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTIED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTABILITY BY THE OWNER'S REPRESENTATIVE.

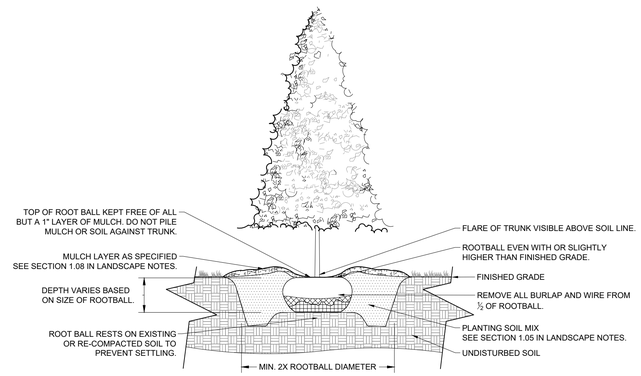
B. REPLACEMENT: ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION DURING THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED WITHIN TEN (10) DAYS OF NOTICE, OR BETWEEN SEPTEMBER-NOVEMBER, MARCH-MAY. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED, PLANTED AND MULCHED AS SPECIFIED AT NO ADDITIONAL COST TO THE OWNER.

C. IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE MAINTENANCE, THE CONTRACTOR IS ENCOURAGED TO VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE (1) YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER, AND SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH. IT IS SUGGESTED SUCH SITE VISITS SHALL BE CONDUCTED A MINIMUM OF ONCE PER MONTH FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ACCEPTANCE.



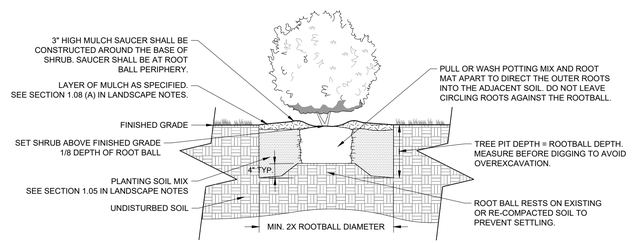
2 B&B TREE PLANTING

NOT TO SCALE



3 EVERGREEN TREE PLANTING

NOT TO SCALE



4 CONTAINER SHRUB PLANTING

NOT TO SCALE

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE ~~REFERENCED~~ TO THE NAVD 1988.

Kimley»Horn
10 Lea Avenue, Suite 400 Nashville, TN 37210
Main: 615.564.2701 | www.kimley-horn.com
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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

JOSHUA LEWIS ROWLAND REGISTERED LANDSCAPE ARCHITECT 03/17/2025

No.	REVISIONS	DATE	BY
1

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COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

DRAFT
PRELIMINARY PLANS
FOR REVIEW ONLY

No.	REVISIONS	DATE	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

DESIGNED BY: ___
DRAWN BY: ___
CHECKED BY: ___
DATE: 03/17/2025
KIMLEY-HORN PROJECT NO. 118332003

ARCHITECTURAL ELEVATION - RENDERING

SHEET NUMBER
A1-00

Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\A1-00 ARCHITECTURAL ELEVATIONS.dwg A1-05 ARCHITECTURAL ELEVATION - RENDERING Mar 17, 2025 3:12pm by: Jacob.Patterson

PRELIMINARY PLAT

HAMPSHIRE PIKE

1242 HAMPSHIRE PIKE
COLUMBIA, TN

INITIAL SUBMITTAL: 4/21/2025

EXISTING PROPERTY SUMMARY

PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN
MAP AND PARCEL ID:	MAP 089, PARCEL 04103 000
U.S. FEMA FIRM PANEL:	47119C0280E DATED 04/16/2007
EXISTING ZONING: EXISTING LAND USE:	CD-4 VACANT

GENERAL DEVELOPMENT NOTES

1. ALL DEVELOPMENT WITHIN THE BOUNDARIES OF THIS PLAN MEETS THE REQUIREMENTS OF ANSI 117.1, 2009 EDITION AND THE FAIR HOUSING ACT.

   U.S. Justice Department:
   http://www.justice.gov/crt/housinig/fairhousing/about_fairhousingact.htm

2. PART OF THE SUBJECT PROPERTY IS LOCATED IN AREAS DESIGNATED AS "ZONE AE" (AREAS DETERMINED TO BE OUTSIDE THE 0.2 % ANNUAL CHANCE FLOODPLAIN) AS NOTED ON THE CURRENT FEMA FIRM COMMUNITY PANEL 47119C0280E.

3. PART OF THE SUBJECT PROPERTY IS LOCATED IN AREAS DESIGNATED AS "ZONE X" (AREAS DETERMINED TO BE OF MINIMAL FLOOD HAZARD) AS NOTED ON THE CURRENT FEMA FIRM COMMUNITY PANEL 47119C0280E



VICINITY MAP
NOT TO SCALE

COUNCIL DISTRICT WARD 4
COUNCIL MEMBER KENNY MARSHALL
CITY OF COLUMBIA
MAURY COUNTY, TN

PROJECT DESIGN TEAM

CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
10 LEA AVENUE, SUITE 400
NASHVILLE, TENNESSEE 37210
PHONE: (629) 401.4768
CONTACT: COLTON DORRIS, P.E.

LANDSCAPE ARCHITECT
KIMLEY-HORN AND ASSOCIATES, INC.
10 LEA AVENUE, SUITE 400
NASHVILLE, TN 37210
PHONE: (615) 823-2209
CONTACT: JOSH ROWLAND, PLA

SURVEY
WILSON & ASSOCIATES, P.C.
108 BEASLEY DRIVE
FRANKLIN, TN 37064
PHONE: (615) 794-2275
CONTACT: JOEY C. WILSON II, PLS

OWNER / DEVELOPER
STEADFAST COMPANIES
18100 VON KARMAN AVE., SUITE 500
IRVINE, CALIFORNIA 92612
PHONE: 949.518.2001
CONTACT: CHASE EMERY

PLANS PREPARED BY
Kimley»Horn
10 Lea Avenue, Suite 400, Nashville, TN 37210
Main: (615) 564-2701 | www.kimley-horn.com

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PLAN REVISIONS

REVISION NO.	DATE	REMARKS

ENGINEER'S SEAL

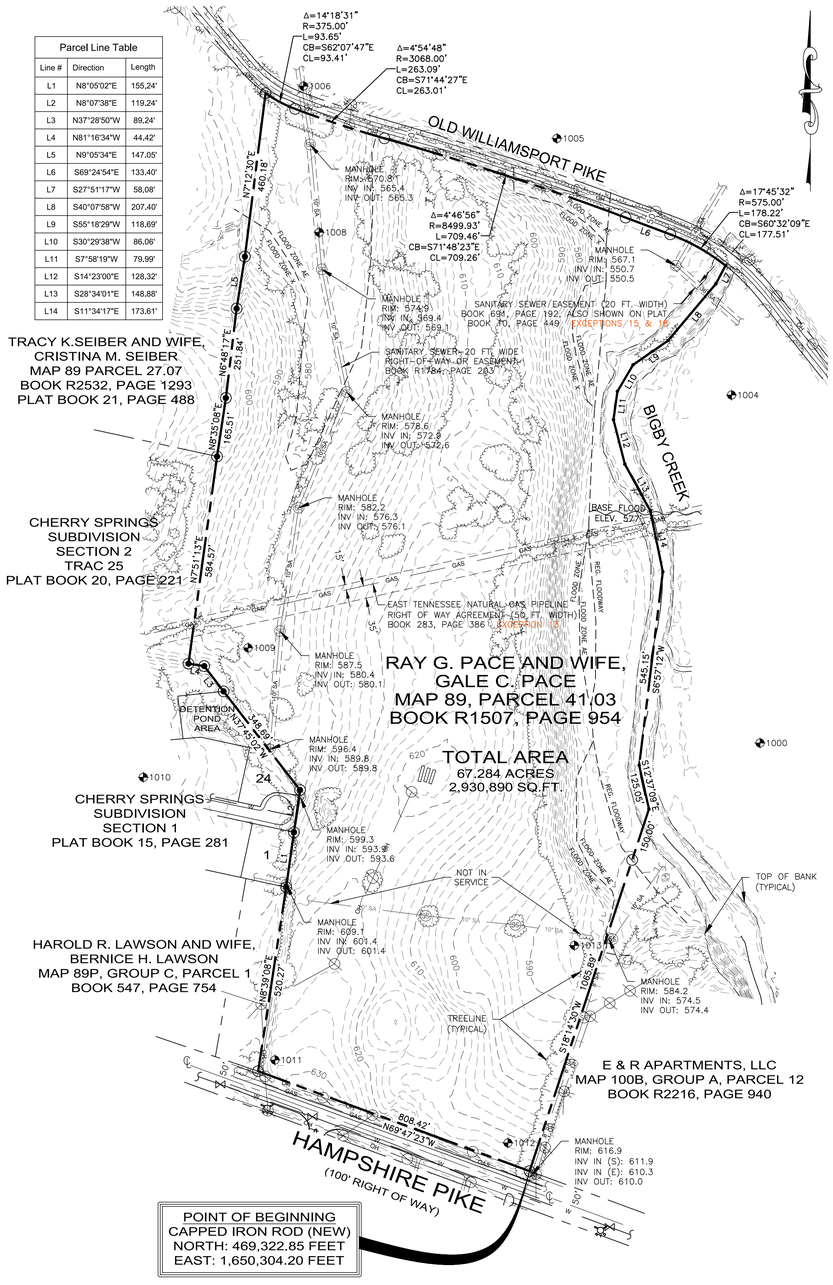
COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
No. 120611
STATE OF TENNESSEE
04/24/2025

FILE NUMBER	SHEET NUMBER	TOTAL SHEETS
118332003	C0-00	6

811 Know what's below. Call before you dig.

Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes - preliminary plat\plansheets\C0-00 COVER.dwg C0-00 COVER Apr 24, 2025 9:54am by: colton.dorris

Parcel Line Table		
Line #	Direction	Length
L1	N8°05'02"E	155.24'
L2	N8°07'38"E	119.24'
L3	N37°28'50"W	89.24'
L4	N81°16'34"W	44.42'
L5	N9°05'34"E	147.05'
L6	S69°24'54"E	133.40'
L7	S27°51'17"W	58.08'
L8	S40°07'58"W	207.40'
L9	S55°18'29"W	118.69'
L10	S30°29'38"W	86.06'
L11	S7°58'19"W	79.99'
L12	S14°23'00"E	128.32'
L13	S28°34'01"E	148.88'
L14	S11°34'17"E	173.61'



SCHEDULE B-II EXCEPTIONS:

1. ANY DEFECT, LIEN, ENCUMBRANCE, ADVERSE CLAIM, OR OTHER MATTER THAT APPEARS FOR THE FIRST TIME IN THE PUBLIC RECORDS OR IS CREATED, ATTACHES, OR IS DISCLOSED BETWEEN THE COMMITMENT DATE AND THE DATE ON WHICH ALL OF THE SCHEDULE B, PART I-REQUIREMENTS ARE MET. NOT A SURVEY MATTER
2. RIGHTS OR CLAIMS OF PARTIES IN POSSESSION NOT SHOWN BY THE PUBLIC RECORDS. NONE OBSERVED DURING SURVEY
3. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND. NONE OBSERVED DURING SURVEY
4. EASEMENTS, OR CLAIMS OF EASEMENTS, NOT SHOWN BY THE PUBLIC RECORDS. NONE OBSERVED DURING SURVEY
5. ANY LIEN, OR RIGHT TO A LIEN, FOR SERVICES, LABOR, OR MATERIAL HERETOFORE OR HEREAFTER FURNISHED, IMPOSED BY LAW, AND NOT SHOWN BY THE PUBLIC RECORDS. NOT A SURVEY MATTER
6. TAXES OR SPECIAL ASSESSMENTS WHICH ARE NOT SHOWN AS EXISTING LIENS BY THE PUBLIC RECORDS. NOT A SURVEY MATTER
7. IF IMPROVEMENTS ARE COMPLETED AFTER JANUARY 1 OF ANY YEAR, AND THE LAW, PURSUANT TO TCA 67-5-509 AND TCA 67-5-603, REQUIRES SUPPLEMENTAL ASSESSMENT FOR THE YEAR IN WHICH IMPROVEMENTS ARE COMPLETED, THE COMPANY ASSUMES NO LIABILITY FOR TAXES ASSESSED BY CORRECTION OR SUPPLEMENTAL ASSESSMENT. NOT A SURVEY MATTER
8. TAXES FOR THE YEAR 2021, A LIEN NOT YET DUE AND PAYABLE. NOT A SURVEY MATTER
9. SEWER EASEMENTS AS SET FORTH IN DEED OF RECORD IN BOOK R2188, PAGE 249, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT THE SURVEYED PROPERTY
10. TITLE TO THAT PORTION OF THE SUBJECT PROPERTY WITHIN THE BOUNDS OF THE RIGHT OF WAY FOR OLD WILLIAMSPORT PIKE AND N JAMES M. CAMPBELL BOULEVARD. OLD WILLIAMSPORT PIKE RIGHT OF WAY IS SHOWN CORRECTLY ON SURVEY. JAMES M. CAMPBELL BOULEVARD DOES NOT AFFECT SURVEYED PROPERTY.
11. EASEMENT TO SOUTHERN CITY POWER COMPANY OF RECORD IN BOOK 149, PAGE 365, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. THE LOCATION OF THIS EASEMENT IS POORLY DESCRIBED; HOWEVER ALL EXISTING OVERHEAD LINES ARE SHOWN ON THE SURVEY.
12. GRANT OF TRANSMISSION LINE EASEMENTS OF RECORD IN BOOK 232, PAGE 575, BOOK 232, PAGE 577, AND BOOK 232, PAGE 597, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
13. RIGHT OF WAY AGREEMENT TO EAST TENNESSEE NATURAL GAS COMPANY OF RECORD IN BOOK 283, PAGE 386, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. AFFECTS PROPERTY AS SHOWN ON SURVEY
14. RIGHT OF WAY AND EASEMENT TO MAURY COUNTY OF RECORD IN BOOK 425, PAGE 91 AND BOOK 427, PAGE 473, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
15. SEWER EASEMENT OF RECORD IN BOOK 691, PAGE 192, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. AFFECTS PROPERTY AS SHOWN ON SURVEY
16. INSPECTION AND MAINTENANCE AGREEMENT OF PRIVATE STORMWATER MANAGEMENT FACILITIES OF RECORD IN BOOK R2254, PAGE 125, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
17. SEWER EASEMENTS OF RECORD IN BOOK 375, PAGE 243; BOOK 375, PAGE 245; BOOK 383, PAGE 7; BOOK 383, PAGE 26; AND BOOK 383, PAGE 28, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. DOES NOT AFFECT SURVEYED PROPERTY
18. SUBJECT TO ALL MATTERS SHOWN ON THE PLAN OF RECORD IN PLAT BOOK P10, PAGE 449, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. AFFECTS PROPERTY AS SHOWN ON SURVEY
19. APPLICATION FOR GREENBELT ASSESSMENT - AGRICULTURAL OF RECORD IN BOOK R2211, PAGE 848, IN THE REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE. NOT A SURVEY MATTER
20. THE LAND HAS BEEN CLASSIFIED AS GREENBELT FOR ASSESSMENT, LEVY AND COLLECTION PURPOSES AND MAY BE SUBJECTED TO SUBSTANTIAL ROLLBACK TAXES AS DEFINED IN TENNESSEE CODE ANNOTATED, SECTION 67-5-1001. NOT A SURVEY MATTER
21. WATER (RIPARIAN RIGHTS) - BLANKET MATTERS - BIGBY CREEK IS ACCURATELY SHOWN ON SURVEY - NOT PLOTTABLE MATTERS

(a) THE RIGHTS OF UPPER AND LOWER RIPARIAN OWNERS TO THE FREE AND UNOBSTRUCTED FLOW OF THE WATER OF LITTLE BIGBY CREEK WITHOUT DIMINUTION OR POLLUTION AND THE CONSEQUENCE OF ANY PAST OR FUTURE CHANGE IN THE LOCATION OF LITTLE BIGBY CREEK.

(b) RIPARIAN RIGHTS INCIDENT TO PREMISES.

(c) RIGHTS OF UPPER AND LOWER RIPARIAN OWNERS IN AND TO THE WATERS OF LITTLE BIGBY CREEK CROSSING OR ADJOINING THE PROPERTY, AND THE NATURAL FLOW THEREOF, FREE FROM DIMINUTION OR POLLUTION.

(d) ANY ENLARGEMENT OR LOSS OF LAND BY REASON OF AVULSION, ACCRETION, OR RELICTION, AND QUESTIONS OF OWNERSHIP CAUSED BY SUBSEQUENT REBUILDING OR REFORMATION OF LAND.

22. ACREAGE CONTENT OF THE SUBJECT PROPERTY IS NOT HEREBY INSURED. REFERENCE TO ACREAGE IS LEFT IN THE DESCRIPTION MERELY FOR CONVENIENCE IN IDENTIFYING THE TRACT. AREAS NOTED ON SURVEY ARE ACCURATE AND CORRECT.

LEGAL DESCRIPTION (FROM SURVEY)

A PARCEL OF LAND LYING IN MAURY COUNTY, TENNESSEE, JUST EAST OF COLUMBIA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOW:

BEGINNING AT A CAPPED IRON ROD SET IN THE NORTHERN MARGIN OF HAMPSHIRE PIKE (STATE ROUTE 50/99) AT THE SOUTHWESTERN CORNER OF THE E & R APARTMENTS, LLC PROPERTY, BOOK R2216, PAGE 940, REGISTER'S OFFICE MAURY COUNTY (HEREAFTER ROMC), SAID ROD BEING LOCATED AT TENNESSEE STATE PLANE COORDINATES NORTH: 469,322.85 FEET AND EAST: 1,650,304.20 FEET, NAD83(2011); THENCE ALONG THE NORTHERN MARGIN OF SAID HAMPSHIRE PIKE, RUNNING PARALLEL TO AND 50 FEET FROM THE CENTERLINE OF SAME, NORTH 69°47'23" WEST, 808.42 FEET TO A CAPPED IRON ROD SET AT THE SOUTHEASTERN CORNER OF THE HAROLD R. LAWSON AND WIFE, BERNICE H. LAWSON PROPERTY, BOOK 547, PAGE 754, ROMC; THENCE LEAVING SAID HAMPSHIRE PIKE AND ALONG THE EASTERN BOUNDARY OF SAID LAWSON PROPERTY, NORTH 8°39'08" EAST, 520.27 FEET TO A CAPPED IRON ROD FOUND AT THE SOUTHEASTERN CORNER OF LOT 1 IN THE CHERRY SPRINGS SUBDIVISION, SECTION 1, PLAT BOOK 15, PAGE 281, ROMC; THENCE ALONG THE EASTERN AND NORTHEASTERN BOUNDARY OF SAID SUBDIVISION SECTION THE FOLLOWING THREE (3) CALLS:

NORTH 8°05'02" EAST, 155.24 FEET TO AN IRON ROD FOUND;

NORTH 8°07'38" EAST, 119.24 FEET TO A CAPPED IRON ROD FOUND;

AND NORTH 37°45'02" WEST, 348.69 FEET TO A CAPPED IRON ROD FOUND AT THE EASTERNMOST CORNER OF TRACT 25 IN THE CHERRY SPRINGS SUBDIVISION, SECTION 2, PLAT BOOK 20, PAGE 221, ROMC; THENCE ALONG THE EASTERN BOUNDARY OF SAID TRACT 25 THE FOLLOWING THREE (3) CALLS:

NORTH 37°28'50" WEST, 89.24 FEET TO AN IRON ROD FOUND;

NORTH 81°16'34" WEST, 44.42 FEET TO AN IRON ROD FOUND;

AND NORTH 7°51'13" EAST, 584.57 FEET TO AN IRON PIPE FOUND AT THE NORTHEASTERN CORNER OF SAID TRACT 25 AND THE SOUTHEASTERN CORNER OF THE TRACY K. SEIBER AND WIFE, CRISTINA M. SEIBER PROPERTY, BOOK R2532, PAGE 1293, ROMC; THENCE ALONG THE EASTERN BOUNDARY OF SAID SEIBER PROPERTY THE FOLLOWING FOUR (4) CALLS:

NORTH 8°35'08" EAST, 165.51 FEET TO AN IRON PIPE FOUND;

NORTH 6°48'17" EAST, 251.84 FEET TO AN IRON PIPE FOUND;

NORTH 9°05'34" EAST, 147.05 FEET TO AN IRON PIPE FOUND;

AND NORTH 7°12'30" EAST, 460.18 FEET TO A CAPPED IRON ROD SET IN THE SOUTHERN MARGIN OF OLD WILLIAMSPORT PIKE AND A POINT ON THE ARC OF A CIRCULAR CURVE, CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 375.00 FEET, TO WHICH A RADIAL LINE BEARS SOUTH 35°01'29" WEST; THENCE ALONG THE SOUTHERN MARGIN OF SAID OLD WILLIAMSPORT PIKE, RUNNING PARALLEL TO AND 25 FEET FROM THE CENTERLINE OF SAME, THROUGH A CENTRAL ANGLE OF 14°18'31" AN ARC DISTANCE OF 93.65 FEET (CHORD: SOUTH 62°07'47" EAST, 93.41 FEET) TO A CAPPED IRON ROD SET AT A POINT OF COMPOUND CURVATURE, SAID CURVE IS CONCAVE NORTHERLY, HAVING A RADIUS OF 3,068.00 FEET; THENCE CONTINUING ALONG THE NORTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 4°54'48" AN ARC DISTANCE OF 263.09 FEET (CHORD: SOUTH 71°44'27" EAST, 263.01 FEET) TO A CAPPED IRON ROD SET AT A POINT OF REVERSE CURVATURE, SAID CURVE IS CONCAVE SOUTHERLY, HAVING A RADIUS OF 8,499.93 FEET; THENCE CONTINUING ALONG THE NORTHERN MARGIN OF SAID WILLIAMSPORT PIKE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 4°46'56" AN ARC DISTANCE OF 709.46 FEET (CHORD: NORTH 71°48'23" EAST, 709.26 FEET) TO A CAPPED IRON ROD SET AT THE POINT OF TANGENT; THENCE CONTINUING ALONG THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE SOUTH 69°24'54" EAST, 133.40 FEET TO A CAPPED IRON ROD SET AT THE POINT OF CURVATURE OF A CIRCULAR CURVE, CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 575.00 FEET; THENCE CONTINUING ALONG THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 17°45'32" AN ARC DISTANCE OF 178.22 FEET (CHORD: SOUTH 60°32'09" EAST, 177.51 FEET) TO THE INTERSECTION OF THE SOUTHERN MARGIN OF SAID WILLIAMSPORT PIKE AND THE CENTER OF BIGBY CREEK; THENCE LEAVING SAID WILLIAMSPORT PIKE AND RUNNING ALONG THE CENTER OF BIGBY CREEK, APPROXIMATED HEREIN BY A SERIES OF STRAIGHT LINES, THE FOLLOWING TEN (10) CALLS:

SOUTH 27°51'17" WEST, 58.08 FEET;

SOUTH 40°07'58" WEST, 207.40 FEET;

SOUTH 55°18'29" WEST, 118.69 FEET;

SOUTH 30°29'38" WEST, 86.06 FEET;

SOUTH 7°58'19" WEST, 79.99 FEET;

SOUTH 14°23'00" EAST, 128.32 FEET;

SOUTH 28°34'01" EAST, 148.88 FEET;

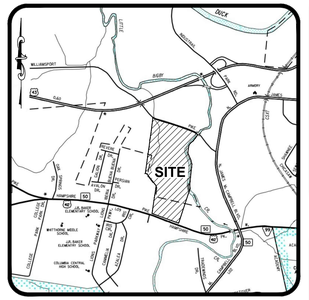
SOUTH 11°34'17" EAST, 173.61 FEET;

SOUTH 6°57'12" WEST, 545.15 FEET;

AND SOUTH 12°37'09" EAST, 125.05 FEET TO THE NORTHWESTERN CORNER OF THE AFOREMENTIONED E & R APARTMENTS, LLC PROPERTY; THENCE LEAVING SAID BIGBY CREEK AND ALONG THE WESTERN BOUNDARY OF SAID E & R APARTMENTS, LLC PROPERTY, SOUTH 18°14'30" WEST (PASSING THROUGH A CAPPED IRON ROD SET AT 150.00 FEET) A TOTAL DISTANCE OF 1,065.89 FEET TO THE POINT OF BEGINNING; CONTAINING 67.284 ACRES OR 2,930,890 SQUARE FEET, AND BEING THE ALL OF THE RAY G. PACE AND WIFE, GALE C. PACE PROPERTY, BOOK R1507, PAGE 954, ROMC, AND A PORTION OF PARCEL 41.03 ON MAURY COUNTY TAX MAP 89.

GENERAL NOTES:

1. THE PURPOSE OF THIS SURVEY IS: ALTA/NSPS LAND TITLE SURVEY
2. THE ADDRESS OF THIS PROPERTY IS: HAMPSHIRE PIKE, COLUMBIA, TN 38401
3. SUBJECT PROPERTY IS PRESENTLY IDENTIFIED AS PART OF PARCEL 41.03, ON MAURY COUNTY TAX MAP 89. SAID PARCEL IS FURTHER IDENTIFIED AS ALL OF THE PROPERTY DESCRIBED IN DEED BOOK R1507, PAGE 954, REGISTERS OFFICE OF MAURY COUNTY, TENNESSEE.
4. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY.
5. EVERY DOCUMENT OF RECORD REVIEWED AND CONSIDERED AS A PART OF THIS SURVEY IS NOTED HEREON. ONLY THE DOCUMENTS NOTED HEREON WERE SUPPLIED TO THE SURVEYOR. OTHER DOCUMENTS OF RECORD MAY EXIST THAT WOULD AFFECT THIS PARCEL.
6. THE WORD "CERTIFY" IS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THE FACTS OF THE SURVEY AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESSED OR IMPLIED. DECLARATION IS MADE TO THE SPECIFIALLY NAMED PARTIES AND IS NOT TRANSFERABLE TO ADDITIONAL PERSONS, INSTITUTIONS OR SUBSEQUENT OWNERS OF THE SUBJECT PROPERTY.
7. THIS SURVEY WAS CONDUCTED WITH THE BENEFIT OF A TITLE REPORT ISSUED BY CHICAGO TITLE INSURANCE COMPANY, COMMITMENT NO. 20211350CTN, DATED AUGUST 25, 2021, AT 8:00AM AND IS SUBJECT TO ITS FINDINGS. THERE MAY BE OTHER IMPROVEMENTS OR ENCUMBRANCES THAT AFFECT THE PROPERTY SINCE THE ISSUANCE OF THE REPORT.
8. BEARINGS SHOWN HEREON ARE BASED ON THE TENNESSEE STATE PLANE COORDINATE SYSTEM NAD83(2011). ELEVATIONS SHOWN HEREON ARE BASED ON NAVD88(GEOID03).
9. ALL CORNERS SHOWN ON THE FACE OF THE SURVEY ARE MARKED EITHER FOUND OR SET. ANY MISSING CORNERS ARE MARKED WITH AN IRON ROD AND CAP BEARING THIS SURVEYORS COMPANY NAME.
10. UTILITIES SHOWN HEREON WERE COMPILED FROM VISIBLE STRUCTURES AT THE SITE, INFORMATION FROM PLANS, AND PHYSICAL MARKINGS AND COMBINED TO DEVELOP A VIEW OF THE UNDERGROUND UTILITIES. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. IN ADDITION, IN SOME JURISDICTIONS, 811 OR OTHER SIMILAR UTILITY LOCATE REQUESTS FROM SURVEYORS MAY BE IGNORED OR RESULT IN AN INCOMPLETE RESPONSE. THIS SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THIS SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. VERIFICATION OF EXISTENCE, LOCATIONS, AND DEPTH SHOULD BE MADE BEFORE CONDUCTING ANY EXCAVATION IN THE VICINITY OF THE UTILITY.
11. PORTIONS OF THIS PROPERTY ARE LYING WITHIN ZONE "AE" AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NOS. 47119C0165E AND 47119C0280E, WITH EFFECTIVE DATES OF APRIL 16, 2007, WHICH MAKE UP A PART OF THE NATIONAL FLOOD INSURANCE PROGRAM. BASE FLOOD ELEVATION FOR THIS PROPERTY IS 577 FEET. ZONE "AE" IS AN AREA WHERE BASE FLOOD ELEVATIONS HAVE BEEN DETERMINED. ZONE "X" IS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. THE FLOOD ZONES AND FLOOD WAY SHOWN ARE SCALED FROM MAPS.
12. I HEREBY CERTIFY THAT THIS IS A CATEGORY IV SURVEY AND WAS CONDUCTED IN ACCORDANCE WITH RULE 0820-03.11 (GLOBAL POSITION SYSTEMS SURVEYS) ACCORDING TO THE CURRENT TENNESSEE MINIMUM STANDARDS OF PRACTICE AS PROMULGATED BY THE TENNESSEE STATE BOARD OF EXAMINERS FOR LAND SURVEYORS. THIS SURVEY WAS CONDUCTED WITH DUAL-FREQUENCY RTK GPS BASED ON AN OPUS-CORRECTED AUTONOMOUS SOLUTION UTILIZING A BASE AND ROVER.
    a. POSITIONAL ACCURACY: 0.08'
    b. DATE OF SURVEY: 09/29/21
    c. HORIZONTAL ZONE/DATUM: TN-4100/NAD83(2011) - TENNESSEE STATE PLANE COORDINATES.
    d. OCCUPATIONS FOR CONTROL POINTS ARE 3 MINUTES EACH, SIDE SHOTS ARE 3 SECONDS.
    e. VERTICAL DATUM: NAVD88 (GEOID03, GRID 7 REVISED)
    f. NO COMBINED GRID FACTORS WERE USED.
13. THE CONTOURS SHOWN HEREON WERE DERIVED FROM LIDAR DATA [POST PROCESSED KINEMATIC (PPK) USING STATE PLANE COORDINATES AND VERTICAL DATUM NAVD88 (GEOID03], AND INCLUDE SEVERAL DIFFERENT LAND-COVER CLASSES WHICH HAVE BEEN COMPILED TO MEET OR EXCEED THE NATIONAL MAP ACCURACY STANDARDS (NMAS) OF A 2 FOOT EQUIVALENT CONTOUR INTERVAL AT 95 PERCENT CONFIDENCE LEVEL. THIS MEETS OR EXCEEDS A VERTICAL ACCURACY EQUAL TO NATIONAL STANDARDS FOR SPATIAL DATA ACCURACY (NSSDA) = 1.9600*.61(RMSE(Z)) (NORMALLY DISTRIBUTED ERROR) = 1.19 FT, AS SET FORTH BY THE AMERICAN SOCIETY FOR PHOTOGRAMMETRY AND REMOTE SENSING (ASPRS) VERSION 1.0. RANDOM SHOTS TAKEN ACROSS THE SITE YIELD AN ACTUAL VERTICAL ACCURACY OF +/- 0.12 FT.
14. THERE WAS NO EVIDENCE OF RECENT EARTH MOVING AT THE TIME OF SURVEY.
15. THERE ARE NO KNOWN CHANGES TO THE STREET ROW AT THE TIME OF SURVEY.
16. THERE WAS NO EVIDENCE OF DELINEATED WETLANDS AT THE TIME OF SURVEY.
17. THERE WAS NO EVIDENCE OF ENCROACHMENTS AT THE TIME OF SURVEY.
18. THIS IS A VACANT TRACT OF LAND.


SITE
WILLIAMSPORT
OLD WILLIAMSPORT PIKE
HAMPSHIRE PIKE
N JAMES M CAMPBELL BLVD
BIGBY CREEK
MAURY REGIONAL HOSPITAL
ST JOHN'S EPISCOPAL CHURCH
ANDREW JACKSON ELEMENTARY SCHOOL
MAURY ELEMENTARY SCHOOL
COLUMBIA CENTRAL HIGH SCHOOL
J.E. BACA ELEMENTARY SCHOOL
MATTHEW WELLS DRIVE
MAURY
MAURY
MAURY

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Drawing name: K:\NSH_LDEV\116332003 - steadfast hampshire pike\4-CAD\hampshire pike townhomes - preliminary plat\plan sheets\C1-00 EXISTING CONDITIONS.dwg C1-00 EXISTING CONDITIONS Apr 24, 2025 9:54am by cotton.dorris



GRAPHIC SCALE IN FEET
0 50 100 200

NORTH

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

No.	REVISIONS	DATE	BY
1			
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DESIGNED BY: WSB
DRAWN BY: CLD
CHECKED BY: WSB
DATE: 03/17/2025
KIMLEY-HORN PROJECT NO. 116332003

EXISTING CONDITIONS

SHEET NUMBER
C1-00

COTTON L. DORRIS
REGISTERED LANDSCAPE ARCHITECT
STATE OF TENNESSEE
04-24-2025

HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

Kimley»Horn
10 Lea Avenue, Suite 400 Nashville, TN 37210
Main: 615.564.2701 | www.kimley-horn.com
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HATCHED AREA INCLUDED IN PREVIOUS PRELIMINARY PLAT / DEVELOPMENT PLAN APPROVALS, NOT INCLUDED IN THE OVERALL DEVELOPMENT PLAN CALCULATIONS ASSOCIATED WITH THIS DEVELOPMENT APPLICATION, INCLUDING THE MULTIFAMILY PARCEL, 11 SINGLE FAMILY LOTS, STREETS A, B, AND C

SEE SHEET C2-10 FOR ENLARGEMENT

SEE SHEET C2-11 FOR ENLARGEMENT

1300' PLAYGROUND COVERAGE

HAMPSHIRE PIKE / PRINCIPAL ARTERIAL

PROPERTY LINE TYP.

FUTURE COMMERCIAL PAD 1.55 AC

CIVIC SPACE - POCKET PARK B 1.00 AC

22-0131 - HAMPSHIRE PIKE DEVELOPMENT - PRELIMINARY PLAT

CIVIC SPACE - POCKET PARK A 0.05 AC

FUTURE COMMERCIAL PAD 1.09 AC

FUTURE COMMERCIAL PAD 1.19 AC

22-0131 - HAMPSHIRE PIKE DEVELOPMENT - PRELIMINARY PLAT

CIVIC SPACE - NATURAL AREA 10.45 AC

NATURE FOOT PATH (GRAVEL)

RETAINING WALL TYP.

WATER QUALITY POND TYP.

FUTURE COMMERCIAL PAD 0.64 AC

OLD WILLIAMSPORT PIKE / MINOR ARTERIAL

CIVIC SPACE - POCKET PARK C 0.07 AC

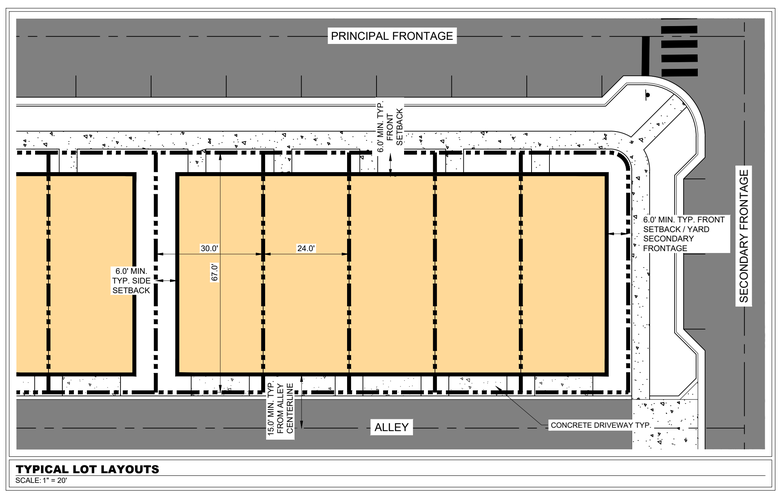
CIVIC SPACE - POCKET PARK D 0.07 AC

WATER QUALITY POND TYP.

PROPERTY LINE TYP.

1300' PLAYGROUND COVERAGE

HATCHED AREA EXCLUDED FROM ALL AREA, ENFRONTMENT, AND DENSITY TOTALS



TYPICAL LOT LAYOUTS
SCALE: 1" = 20'

SITE DATA TABLE

PROJECT NAME:	HAMPSHIRE PIKE
PROPERTY ADDRESS:	1242 HAMPSHIRE PIKE COLUMBIA, TN 38401
MAP AND PARCEL ID:	MAP 089 PARCEL 04103 000
EXISTING ZONING:	CD-4
EXISTING LAND USE:	VACANT
PROPOSED LAND USE:	TOWN HOMES
SITE AREA (AC):	32.60 AC
SITE AREA (SF):	1,420,129 SF
DENSITY	
PROPOSED:	
TOWNHOMES (24' x 56' TYP.):	143 DU
*SF LOTS (96' x 115' TYP.):	11 DU
TOTAL UNITS:	**154 DU**
**DENSITY:	4.39 UNITS/ACRE
MIN. LOT SIZE:	1,608 SF
UNITS FRONTING PEDESTRIAN PATH:	12 UNITS (8%)
TYPICAL LOT SETBACKS:	
MIN. FRONT SETBACK:	6 FT
MIN. SIDE SETBACK:	6 FT
MIN. REAR SETBACK:	15 FT FROM ALLEY C.L.
REQUIRED CIVIC USE SPACE:	5% OF TOTAL AREA 1.63 AC
PROVIDED CIVIC USE SPACE:	36% OF TOTAL AREA 11.64 AC
CIVIC SPACE LIST:	
POCKET PARK A:	0.05 AC
POCKET PARK B:	1.00 AC
POCKET PARK C:	0.07 AC
POCKET PARK D:	0.07 AC
NATURAL AREA:	10.45 AC
REQUIRED PARKING:	
TOWNHOMES	286 SPACES
SF LOTS:	22 SPACES
TOTAL REQUIRED:	**308 SPACES (2 PER DU)**
PROPOSED PARKING:	
GARAGE PARKING:	308 SPACES
DRIVEWAY PARKING:	22 SPACES
TOTAL DU PARKING:	**330 SPACES**
ON-STREET PARKING:	102 SPACES
TOTAL PARKING PROVIDED:	**432 SPACES**

*SF LOTS INCLUDED IN 22-0131 - HAMPSHIRE PIKE MIXED USE DEVELOPMENT - PRELIMINARY PLAT
**SF LOTS EXCLUDED FROM DENSITY AND FRONTAGE CALCULATIONS

BUILDING FRONTAGE REQUIREMENTS

TOTAL BUILDING FRONTAGE:	4,032 LF*
RESIDENTIAL FRONTAGE: (143 DU x 24 LF)	3,432 LF (85%)
COMMERCIAL FRONTAGE:	600 LF (15%)

*REQUIRED FRONTAGE MIX: 85% MAX RESIDENTIAL, 15% MIN COMMERCIAL

ENFRONTMENT LINETYPE LEGEND

COMMERCIAL ENFRONTMENT

RESIDENTIAL ENFRONTMENT

COORDINATES ARE NAD83. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 50 100 200

NORTH

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
ARCHITECTURE
COMMERCE
No. 125945
STATE OF TENNESSEE
04/24/2025

No.	DATE	BY	REVISIONS
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DESIGNED BY:	WSI
DRAWN BY:	WSI
CHECKED BY:	CLD
DATE:	03/17/2025
KIMLEY-HORN PROJECT NO.	118332003

PRELIMINARY PLAT - OVERALL

SHEET NUMBER
C2-00

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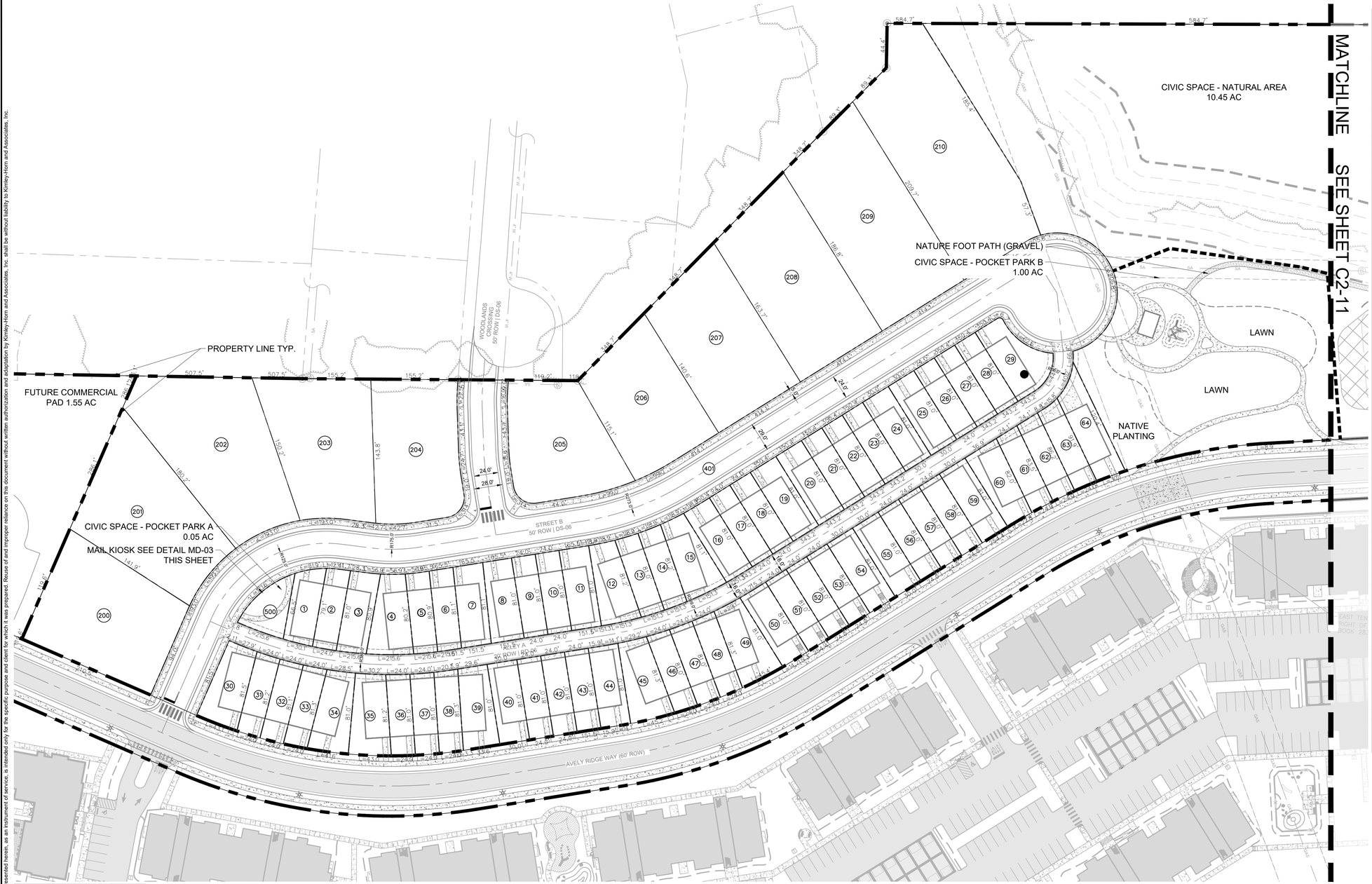
Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes - preliminary plat\plansheets\C2-00 SITE LAYOUT - OVERALL.dwg C2-00 SITE LAYOUT - OVERALL Apr 24, 2025 9:55am by: colton.dorris



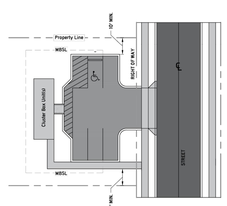
NOTES:

FOR 75 OR LESS CBU'S AT A SINGLE LOCATION

1. CLUSTER BOX UNITS (CBU'S) SHALL MEET USPS STANDARDS.
2. CBU'S MAY BE LOCATED WITHIN THE RIGHT OF WAY
3. CBU'S SHALL BE LOCATED OUTSIDE OF THE PEDESTRIAN OR SIDEWALK.
4. CBU'S SHOULD BE PLACED ALONG MINOR LOCAL ROADWAYS OR EQUIVALENT. FOR PLACEMENT ALONG COLLECTOR AND ARTERIAL ROADWAYS, FOLLOW THE STANDARDS BELOW, "FOR MORE THAN 75 CBU'S AT A SINGLE LOCATION".

FOR MORE THAN 75 CBU'S AT A SINGLE LOCATION

1. CBU'S SHALL MEET USPS STANDARDS
2. CBU'S SHALL BE LOCATED OUTSIDE OF THE RIGHT OF WAY WITHIN A COMMON OR OPEN SPACE LOT
3. CBU'S SHALL NOT BE PLACED WITHIN ANY EASEMENTS
4. CBU'S AND APPURTENANT BUILDING PAD(S) SHALL BE CONSIDERED A PRINCIPLE STRUCTURE AND SHALL ADHERE TO BUILDING SETBACKS
5. ACCESS AND DRIVEWAYS TO MEET ZONING CODE AND ACCESS MANAGEMENT
6. PARKING SHALL BE PROVIDED WITH A MINIMUM OF 2 PARKING STALLS PLUS 1 STALL PER 25 MAIL UNITS OR PORTION THEREOF ABOVE THE FIRST 25 MAIL UNITS, WITH A MAXIMUM OF TWICE THE REQUIRED
7. PARKING AND SIDEWALKS SHALL HAVE A 10 FT. MINIMUM BUFFER FROM ANY PROPERTY LINE
8. PARKING SHALL ADHERE TO LAYOUT AND INTERIOR LANDSCAPING REQUIREMENTS PER THE ZONING CODE
9. PARKING SHALL BE CLEARLY LABELED AS SHORT TERM PARKING AND CANNOT BE CONSIDERED REQUIRED PARKING FOR ANOTHER USE
10. WHEEL STOPS OR CURBING SHALL BE PROVIDED FOR ALL PARKING STALLS
11. ADEQUATE LIGHTING SHALL BE PROVIDED.
12. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER



CITY OF COLUMBIA
DEVELOPMENT SERVICES DEPARTMENT
ENGINEERING DIVISION

STANDARD DETAILS

MAIL CLUSTER BOX UNITS

(NTS)

DATE 6/9/2022

MD-03

PARCEL AREA TABLE			PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.
1	0.05	2217	21	0.04	1944
2	0.04	1931	22	0.04	1944
3	0.06	2430	23	0.04	1944
4	0.07	2882	24	0.06	2430
5	0.04	1931	25	0.06	2430
6	0.04	1946	26	0.04	1944
7	0.06	2433	27	0.04	1944
8	0.06	2516	28	0.04	1944
9	0.04	1944	29	0.07	3121
10	0.04	1944	30	0.07	2973
11	0.06	2430	31	0.04	1953
12	0.06	2732	32	0.04	1948
13	0.04	1946	33	0.04	1949
14	0.04	1946	34	0.07	2839
15	0.06	2816	35	0.07	2964
16	0.06	2431	36	0.04	1945
17	0.04	1944	37	0.04	1943
18	0.04	1944	38	0.04	1948
19	0.06	2430	39	0.06	2694
20	0.06	2430	40	0.06	2430

PARCEL AREA TABLE			PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.
41	0.04	1944	61	0.05	1984
42	0.04	1944	62	0.05	2034
43	0.04	1944	63	0.05	2120
44	0.06	2430	64	0.07	3092
45	0.07	3014	200	0.35	15148
46	0.04	1947	201	0.36	15502
47	0.04	1944	202	0.40	17569
48	0.04	1947	203	0.31	13637
49	0.07	3019	204	0.28	12115
50	0.06	2430	205	0.26	11498
51	0.04	1944	206	0.28	12080
52	0.04	1944	207	0.34	14605
53	0.04	1944	208	0.39	16822
54	0.06	2430	209	0.44	19035
55	0.06	2430	210	0.52	22855
56	0.04	1944	500	0.05	1992
57	0.04	1944			
58	0.04	1944			
59	0.06	2430			
60	0.06	2628			

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY

COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 129008
STATE OF TENNESSEE
04/24/2025

No.	REVISIONS	DATE	BY
1			
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DESIGNED BY: ___
DRAWN BY: ___
CHECKED BY: ___
DATE: 03/17/2025
KIMLEY-HORN PROJECT NO. 118332003

PRELIMINARY PLAT - ENLARGEMENT

SHEET NUMBER
C2-10

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CIVIC SPACE - NATURAL AREA
10.45 AC

RETAINING WALL TYP.

WATER QUALITY POND TYP.

NATURE FOOT PATH
(GRAVEL)

30' STREAM BUFFER

100 YEAR FLOOD PLAIN

FUTURE COMMERCIAL
PAD 0.64 AC

OLD WILLIAMSPORT PIKE | MINOR ARTERIAL

STREET C
65' ROW | DS-18

ALLEY B
20' ROW | RD-06

ALLEY C
20' ROW | RD-06

STREET B
65' ROW | DS-18

WATER QUALITY POND

CIVIC SPACE - POCKET PARK C
0.07 AC

MAIL KIOSK SEE DETAIL MD-03
SHEET C2-10

CIVIC SPACE - POCKET PARK D
0.07 AC

WATER QUALITY POND TYP.

100 YEAR FLOOD PLAIN

PROPERTY LINE TYP.

FLOODPLAIN
3.9 AC.

MATCHLINE SEE SHEET C2-10

PARCEL AREA TABLE			PARCEL AREA TABLE			PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.
65	0.05	2010	85	0.04	1704	105	0.05	2010
66	0.04	1608	86	0.04	1704	106	0.04	1608
67	0.04	1608	87	0.05	2129	107	0.04	1608
68	0.04	1608	88	0.05	2005	108	0.05	2010
69	0.05	2010	89	0.04	1608	109	0.05	2005
70	0.05	2010	90	0.04	1608	110	0.04	1608
71	0.04	1608	91	0.04	1608	111	0.04	1608
72	0.04	1608	92	0.05	2010	112	0.05	2010
73	0.04	1608	93	0.05	2010	113	0.05	2010
74	0.05	2009	94	0.04	1608	114	0.04	1608
75	0.06	2781	95	0.04	1608	115	0.04	1608
76	0.04	1690	96	0.05	2010	116	0.04	1608
77	0.04	1704	97	0.07	3229	117	0.05	2009
78	0.05	2130	98	0.04	1610	118	0.07	3021
79	0.05	2130	99	0.04	1608	119	0.04	1608
80	0.04	1704	100	0.05	2010	120	0.05	2010
81	0.04	1704	101	0.05	2010	121	0.05	2010
82	0.05	2130	102	0.04	1608	122	0.04	1608
83	0.05	2130	103	0.04	1608	123	0.04	1608
84	0.04	1704	104	0.05	2005	124	0.05	2005

PARCEL AREA TABLE			PARCEL AREA TABLE		
LOT NO.	ACRES	SQ. FT.	LOT NO.	ACRES	SQ. FT.
125	0.05	2010	502	0.07	3143
126	0.04	1608			
127	0.04	1608			
128	0.05	2010			
129	0.05	2009			
130	0.04	1606			
131	0.05	2031			
132	0.05	2035			
133	0.04	1607			
134	0.05	2020			
135	0.06	2481			
136	0.04	1614			
137	0.04	1608			
138	0.04	1608			
139	0.05	2009			
140	0.05	2021			
141	0.04	1608			
142	0.04	1608			
143	0.05	2010			
501	0.07	3136			

COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

COLTON L. DORRIS
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 132888
STATE OF TENNESSEE
04/24/2025

No.	REVISIONS	DATE	BY
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DESIGNED BY: ___
DRAWN BY: ___
CHECKED BY: ___
DATE: 03/17/2025
KIMLEY-HORN PROJECT NO. 118332003

PRELIMINARY PLAT - ENLARGEMENT

SHEET NUMBER
C2-11

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Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes - preliminary plat\plansheets\C2-10 SITE LAYOUT - ENLARGEMENT.dwg C2-11 Apr 24, 2025 9:55am by: colton.dorris

PRELIMINARY PLAT SUBMITTAL

HAMPSHIRE PIKE MIXED USE

HAMPSHIRE PIKE
COLUMBIA, TN

PRELIMINARY PLAT SUBMITTAL: 5/16/2022
PRELIMINARY PLAT RESUBMITTAL: 6/21/2022

SITE DATA TABLE

SITE ADDRESS	HAMPSHIRE PIKE COLUMBIA, TN, 38401	
TAX MAP	MAP 089 PARCEL 04103 000	
OVERALL AREA	EXISTING	PROPOSED
SITE AREA	67.28 AC	61.39 AC
DEDICATED ROW AREA	N/A	5.89 AC
IMPERVIOUS AREA	0.00 AC	15.68 AC
PERVIOUS AREA	67.28 AC	51.60 AC
DISTURBED AREA	48.79 AC	
BUILDING SETBACKS	REQUIRED	PROVIDED
FRONT	20 FT	VARIES
REAR	20 FT	VARIES
SIDE	10 FT	VARIES

EXISTING AND PROPOSED LOT INFORMATION

LOT NUMBER	ACREAGE (AC)	SQUARE FOOTAGE (SF)	LOT USE
EXISTING LOT	67.28	2,930,900	--
ON-SITE ROW DEDICATION	5.43	236,540	--
HAMPSHIRE PIKE ROW DEDICATION	0.22	9,583	--
OLD WILLIAMSPORT ROW DEDICATION	0.23	10,019	--
LOT A	1.55	67,581	COMMERCIAL
LOT B	1.29	56,392	COMMERCIAL
LOT C	1.57	68,313	COMMERCIAL
LOT D	24.01	1,045,757	MULTIFAMILY
LOT E	13.07	569,202	VACANT
LOT F	4.56	198,414	VACANT
LOT G	12.11	527,438	VACANT
LOT 1	0.35	15,213	SINGLE FAMILY
LOT 2	0.37	16,091	SINGLE FAMILY
LOT 3	0.41	18,013	SINGLE FAMILY
LOT 4	0.28	12,244	SINGLE FAMILY
LOT 5	0.23	9,837	SINGLE FAMILY
LOT 6	0.31	13,624	SINGLE FAMILY
LOT 7	0.22	9,583	SINGLE FAMILY
LOT 8	0.31	13,585	SINGLE FAMILY
LOT 9	0.37	15,986	SINGLE FAMILY
LOT 10	0.32	13,754	SINGLE FAMILY
LOT 11	0.45	19,427	SINGLE FAMILY

EXISTING PROPERTY SUMMARY

PROPERTY ADDRESS:	HAMPSHIRE PIKE COLUMBIA, TN
MAP AND PARCEL ID:	MAP 089, PARCEL 04103 000
U.S. FEMA FIRM PANEL:	47119C0280E DATED 4/16/2007
EXISTING ZONING:	MRC
EXISTING LAND USE:	UNDEVELOPED



VICINITY MAP
NOT TO SCALE

CITY OF COLUMBIA
MAURY COUNTY, TN

SHEET INDEX

Sheet Number	Sheet Title
C0-00	COVER
X1-00	ALTA NSPS LAND TITLE SURVEY
C1-01	SLOPE ANALYSIS
C2-00	SITE LAYOUT
C2-01	ALIGNMENT GEOMETRY
C4-00	GRADING AND DRAINAGE PLAN
C4-01	PHASING PLAN
C6-00	UTILITY PLAN

OWNER / DEVELOPER

STEADFAST COMPANIES

STEADFAST COMPANIES
18100 VON KARMAN AVENUE, SUITE 500
IRVINE,CA, 92612
PHONE: (949) 518-2191
CONTACT: PATRICK WOEPSE

PROJECT DESIGN TEAM

CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
10 LEA AVENUE, SUITE 400
NASHVILLE, TENNESSEE 37210
PHONE: (615) 564-2701
CONTACT: KELLEY FRANK, P.E.
EMAIL: KELLEY.FRANK@KIMLEY-HORN.COM

SURVEY
WILSON & ASSOCIATES, P.C.
108 BEASLEY DRIVE
FRANKLIN, TN 37064
PHONE: (615) 794-2275
CONTACT: JOEY C. WILSON II, P.E. RLS

PERMITTING / UTILITY CONTACTS

BUILDING DEPT.
CITY OF COLUMBIA
DEVELOPMENT SERVICES
700 N GARDEN ST,
COLUMBIA, TN 38401
PHONE: (931) 560-1500
CONTACT: PAUL KELTNER
EMAIL: PAUL@COLUMBIATN.COM

STORMWATER
CITY OF COLUMBIA
700 N GARDEN STREET,
COLUMBIA, TN 38401
PHONE: (931) 560-1500
CONTACT: DOUGLAS TONEY
EMAIL: DTONEY@COLUMBIATN.COM

WATER
COLUMBIA POWER AND WATER SYSTEMS
201 PICKENS LANE,
COLUMBIA, TN 38401
PHONE: (931) 375-7649
CONTACT: JERMAINE COOPER
EMAIL: JERMAINE.COOPER@CPWS.COM

SANITARY SEWER
CITY OF COLUMBIA WASTEWATER DEPARTMENT
700 N GARDEN STREET,
COLUMBIA, TN 38401
PHONE: (931) 560-1500
CONTACT: RYAN FILIPKOWSKI
EMAIL: RFILIPKOWSKI@COLUMBIATN.COM

PLANNING AND ZONING
CITY OF COLUMBIA PLANNING DEPARTMENT
700 N GARDEN STREET,
COLUMBIA, TN 38401
PHONE: (931) 560-1500
CONTACT: KEVIN MCCARTHY
EMAIL: KMCCARTHY@COLUMBIATN.COM

FIRE CHIEF
CITY OF COLUMBIA FIRE AND RESCUE
1000 S GARDEN ST,
COLUMBIA, TN 38401
PHONE: (931) 560-1700
CONTACT: TY COBB
EMAIL: TCOBB@COLUMBIATN.COM

TDOT
TENNESSEE DEPARTMENT OF TRANSPORTATION
REGION 3 TRAFFIC ENGINEER
660 CENTENNIAL BLVD
NASHVILLE, TN 37243
PHONE: (615) 350-4300

NATURAL GAS
ATMOS ENERGY
810 CRESCENT CENTER DR, #600,
FRANKLIN, TN 37064
PHONE: (615) 509-4051
CONTACT: ABBY DAVIS
EMAIL: ABBY.DAVIS@ATMOSENERGY.COM

TELECOMMUNICATIONS
AT&T
904 S HIGH STREET,
COLUMBIA, TN 38401
PHONE: (931) 380-3448
CONTACT: BRIAN GOMEZ
EMAIL: BG3893@ATT.COM

ELECTRIC
COLUMBIA POWER AND WATER SYSTEMS
201 PICKENS LANE,
COLUMBIA, TN 38401
PHONE: (931) 375-7649
CONTACT: JERMAINE COOPER
EMAIL: JERMAINE.COOPER@CPWS.COM

PLANS PREPARED BY

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PLAN REVISIONS

REVISION NO.	DATE	REMARKS

FILE NUMBER	SHEET NUMBER	TOTAL SHEETS
118332003	C0-00	8

ENGINEER'S SEAL

KELLEY FRANK — REGISTERED ENGINEER — STATE OF TENNESSEE — 122094
6/21/2022

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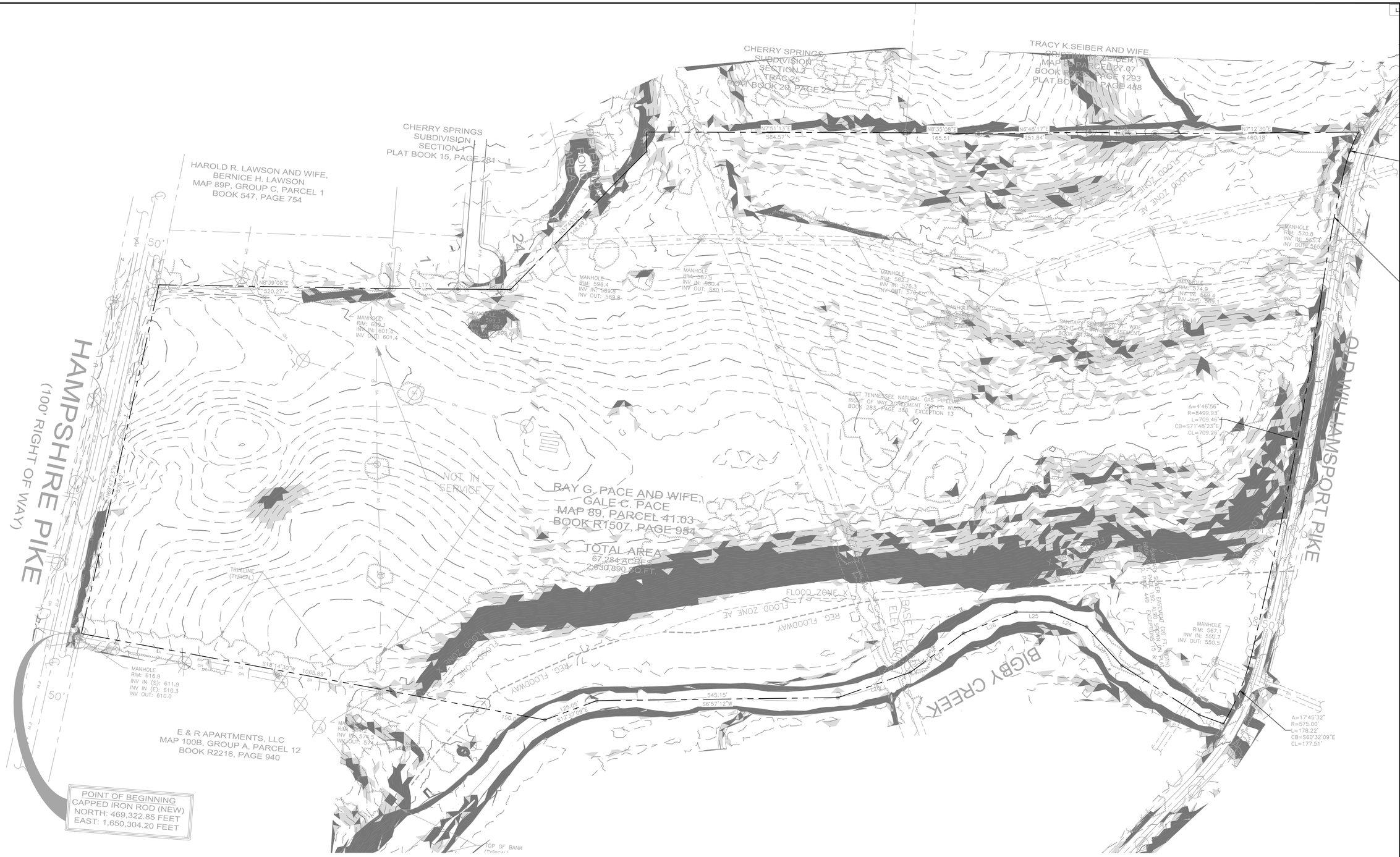
811 Know what's below. Call before you dig.

Drawing name: K:\NSH_LDEV\118332003 - Steadfast Hampshire Pike\4-CADD\PlanSheets\C0-00 COVER.dwg C0-00 COVER Jun 21, 2022 2:22pm by: Blake.Pfenning



SITE SLOPE TABLE

	14% - 19.99%
	20% and above

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HAMPSHIRE PIKE MIXED USE PRELIMINARY PLAT

COLUMBIA, TN

KELLEY FRANK REGISTERED ENGINEER AGRICULTURE COMMERCE No. 122094 STATE OF TENNESSEE

6/21/2022

No.	REVISIONS	DATE	BY
1			
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DESIGNED BY:	KKF
DRAWN BY:	CLD
CHECKED BY:	KKF
DATE:	6/21/2022

KIMLEY-HORN PROJECT NO. 118332003

SLOPE ANALYSIS

SHEET NUMBER

C1-01

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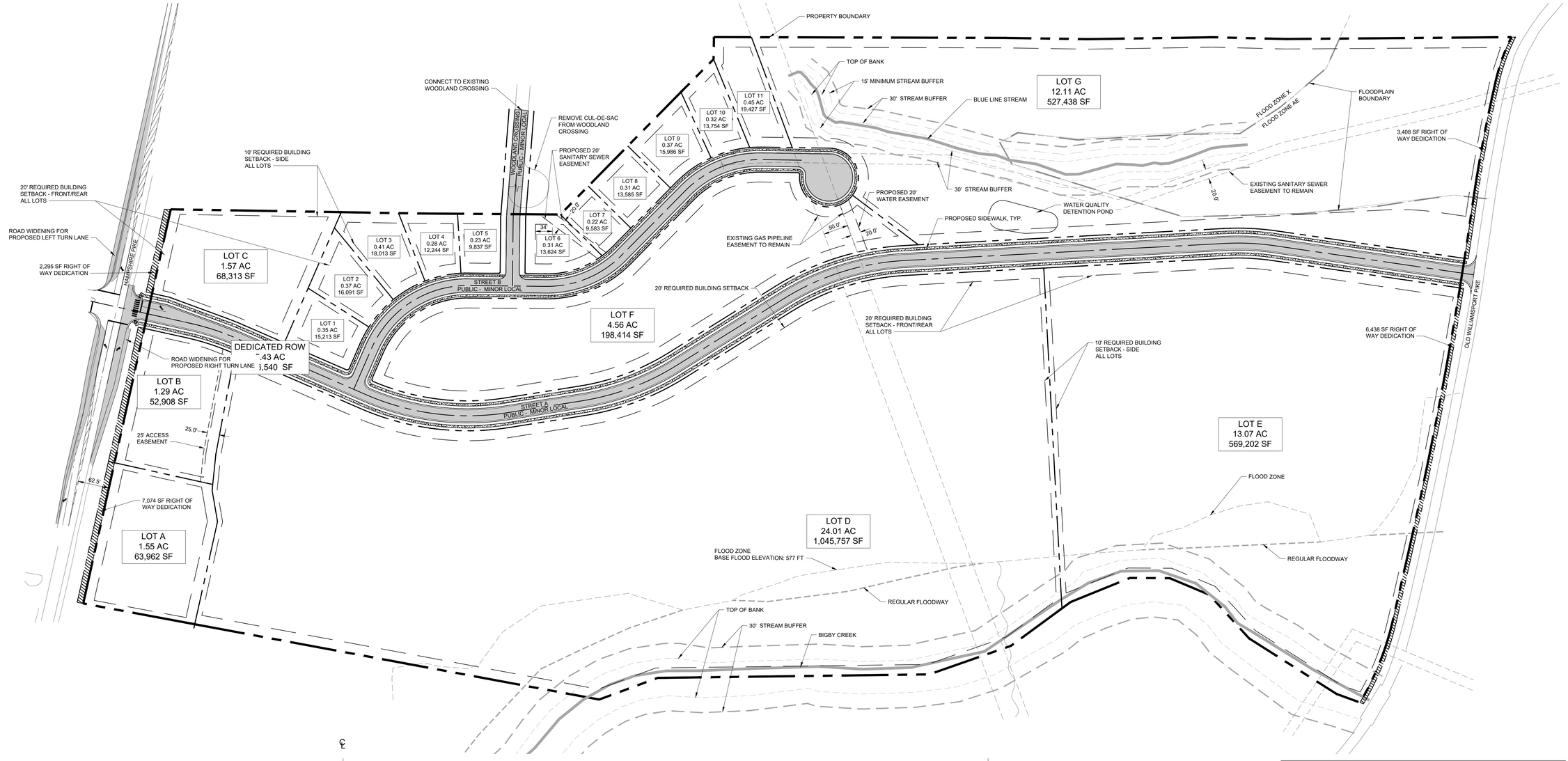
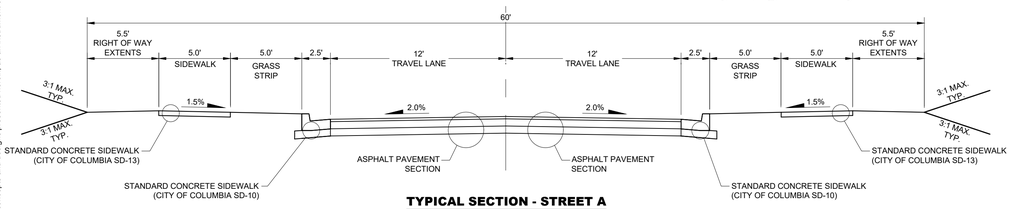
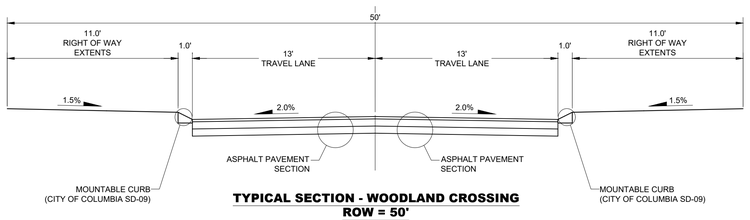
Drawing name: K:\NSH_LDEV\118332003 - Steadfast Hampshire Pike\4-CADD\PlanSheets\C1-00 EXISTING CONDITIONS.dwg C1-01 SLOPE ANALYSIS Jun 21, 2022 2:22pm by: Blake.Pfenning

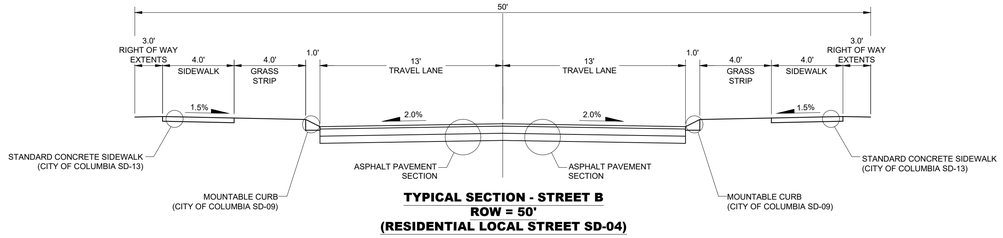




TYPICAL SECTION - STREET A
ROW = 60'
(MINOR COLLECTOR SD-03)



TYPICAL SECTION - WOODLAND CROSSING
ROW = 50'



TYPICAL SECTION - STREET B
ROW = 50'
(RESIDENTIAL LOCAL STREET SD-04)

EXISTING AND PROPOSED LOT INFORMATION

LOT NUMBER	ACREAGE (AC)	SQUARE FOOTAGE (SF)	LOT USE
EXISTING LOT	67.28	2,930,900	--
ON-SITE ROW DEDICATION	5.44	237,159	--
HAMPSHIRE PIKE ROW DEDICATION	0.22	9,583	--
OLD WILLIAMSPORT ROW DEDICATION	0.23	10,019	--
LOT A	1.55	67,581	COMMERCIAL
LOT B	1.29	56,392	COMMERCIAL
LOT C	1.64	71,603	COMMERCIAL
LOT D	24.01	1,045,757	MULTIFAMILY
LOT E	13.07	569,202	VACANT
LOT F	4.56	198,414	VACANT
LOT G	12.11	527,438	VACANT
LOT 1	0.35	15,213	SINGLE FAMILY
LOT 2	0.37	16,091	SINGLE FAMILY
LOT 3	0.41	18,013	SINGLE FAMILY
LOT 4	0.28	12,244	SINGLE FAMILY
LOT 5	0.23	9,837	SINGLE FAMILY
LOT 6	0.31	13,624	SINGLE FAMILY
LOT 7	0.22	9,583	SINGLE FAMILY
LOT 8	0.31	13,585	SINGLE FAMILY
LOT 9	0.37	15,986	SINGLE FAMILY
LOT 10	0.32	13,754	SINGLE FAMILY
LOT 11	0.45	19,427	SINGLE FAMILY

US FEMA FIRM PANEL

U.S. FEMA FIRM PANEL: 47119C0280E DATED 4/16/2007

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GRAPHIC SCALE IN FEET
0 50 100 200

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HAMPSHIRE PIKE MIXED USE
PRELIMINARY PLAT
COLUMBIA, TN

KELLEY FRANK FOSTER — REGISTERED ENGINEER — STATE OF TENNESSEE — 120984 — CIVIL
6/21/2022

No.	REVISIONS	DATE	BY
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DESIGNED BY: KKF
DRAWN BY: CLD
CHECKED BY: KKF
DATE: 6/21/2022
KIMLEY-HORN PROJECT NO. 118332003

SITE LAYOUT

SHEET NUMBER
C2-00

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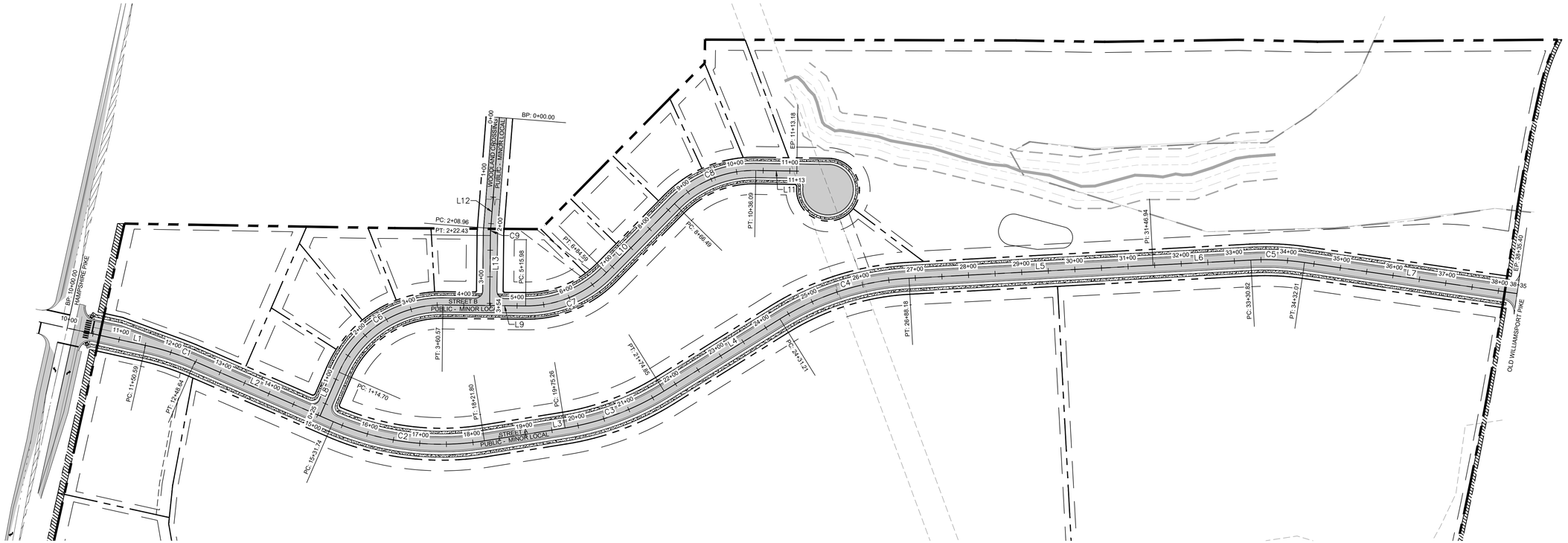

PUBLIC STREET A			
NO.	DELTA OR BRG	RADIUS	LENGTH
C1	Δ=11° 00' 53"	510.0'	98.04'
C2	Δ=32° 35' 10"	510.0'	290.06'
C3	Δ=22° 51' 58"	500.1'	199.59'
C4	Δ=28° 52' 06"	510.0'	256.96'
C5	Δ=11° 22' 08"	510.0'	101.20'
L1	N 20°12'37" E		150.59'
L2	N 31°13'30" E		283.10'
L3	N 1°21'41" W		153.47'
L4	N 24°13'39" W		256.36'
L5	N 4°38'28" E		458.77'
L6	N 4°38'28" E		183.87'
L7	N 16°00'35" E		403.39'

PUBLIC STREET B			
NO.	DELTA OR BRG	RADIUS	LENGTH
C6	Δ=67° 05' 00"	210.0'	245.87'
C7	Δ=46° 00' 14"	210.0'	168.61'
C8	Δ=46° 16' 20"	210.0'	169.60'
L8	N 58°46'30" W		89.70'
L9	N 8°18'30" E		155.41'
L10	N 37°41'44" W		181.90'
L11	N 8°34'35" E		77.09'

WOODLAND CROSSING			
NO.	DELTA OR BRG	RADIUS	LENGTH
C9	Δ=3° 51' 37"	200.0'	13.48'
L12	S 77°49'53" E		208.96'
L13	S 81°41'30" E		131.53'

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HAMPSHIRE PIKE MIXED USE PRELIMINARY PLAT

COLUMBIA, TN

KELLEY FRANK
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 122094
STATE OF TENNESSEE
6/21/2022

No.	REVISIONS	DATE	BY
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DESIGNED BY:	KKF
DRAWN BY:	CLD
CHECKED BY:	KKF
DATE:	6/21/2022
KIMLEY-HORN PROJECT NO. 118332003	

ALIGNMENT GEOMETRY

SHEET NUMBER
C2-01

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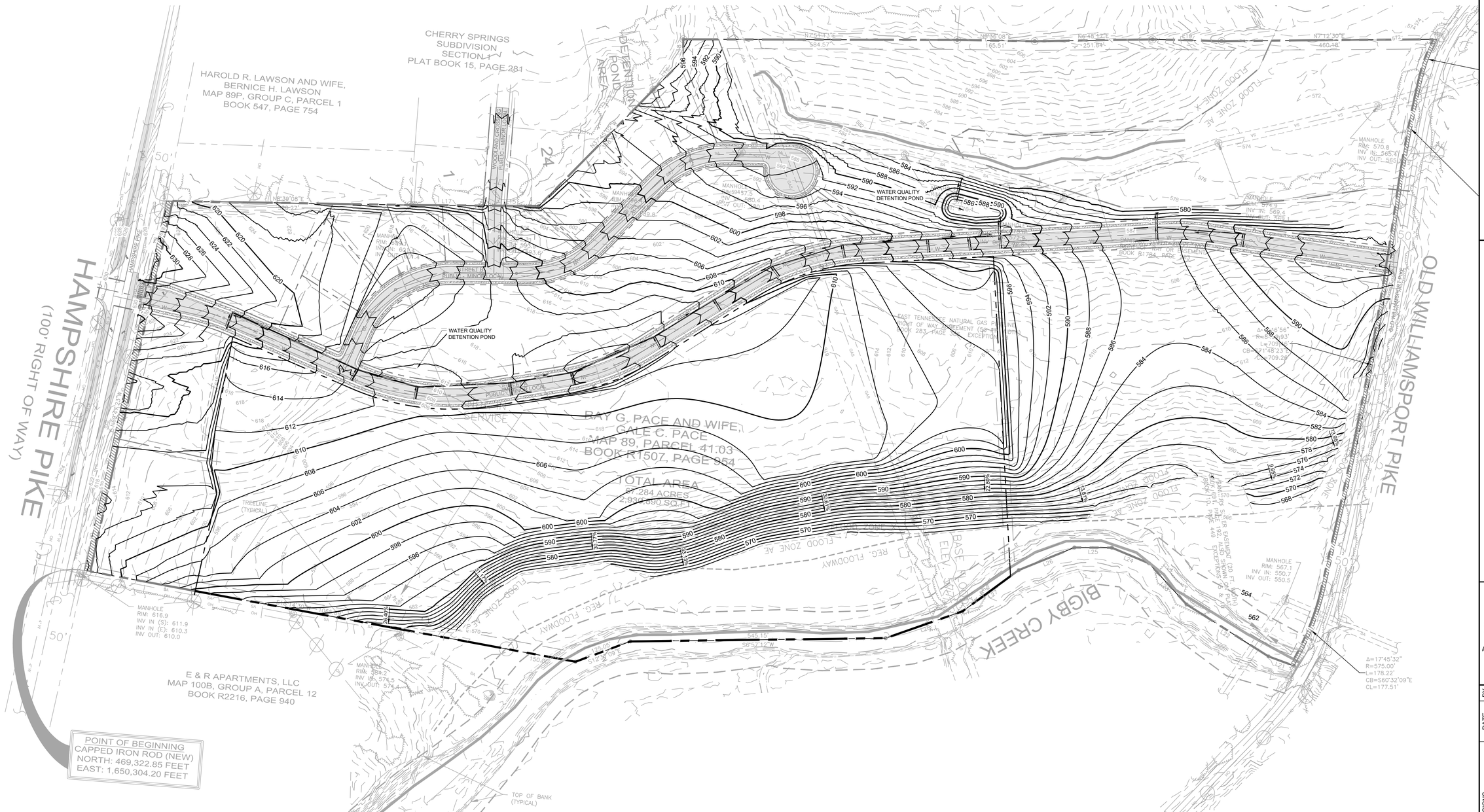
Drawing name: K:\NSH_LDEV\118332003 - Steadfast Hampshire Pike\4-CADD\PlanSheets\C2-01 ALIGNMENT AND PROFILE.dwg C2-01 ALIGNMENT GEOMETRY Jun 21, 2022 2:23pm by: Blake.Pfenning



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HAMPSHIRE PIKE MIXED USE PRELIMINARY PLAT

COLUMBIA, TN

KELLEY FRANK REGISTERED ENGINEER AGRICULTURE COMMERCE No. 122094 STATE OF TENNESSEE

6/21/2022

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KIMLEY-HORN PROJECT NO. 118332003

GRADING AND DRAINAGE PLAN

SHEET NUMBER

C4-00

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PHASING NARRATIVE

PHASE 1: THE INITIAL PHASE WILL CONSIST OF THE ADDITION OF THE SPINE ROAD THAT WILL CONNECT HAMPSHIRE PIKE TO OLD WILLIAMSPORT PIKE. MASS GRADING FOR THE PROPOSED APARTMENT BUILDING SITE WILL ALSO BE INCLUDED IN THIS PHASE. PUBLIC WATER, SANITARY SEWER, AND STORM INFRASTRUCTURE WILL ALSO BE INCLUDED IN THIS PHASE. PHASE 1 WILL INCLUDE CONSTRUCTION OF EASTBOUND AND WESTBOUND LEFT TURN LANES ALONG HAMPSHIRE PIKE AT THE SPINE ROAD, AS WELL AS A WESTBOUND LEFT TURN LANE AT THE SPINE ROAD. TRAFFIC SIGNAL CONSTRUCTION WILL NOT OCCUR UNTIL THE END OF PHASE 3 OR UPON SATISFACTION OF TRAFFIC SIGNAL WARRANTS BASED UPON ACTUAL VEHICLE VOLUMES, WHICHEVER OCCURS FIRST. AREA OF DISTURBANCE: ± 26.9 ACRES

PHASE 2: PHASE 2 WILL CONSIST OF THE CONSTRUCTION OF THE SINGLE FAMILY LOCAL RESIDENTIAL ROAD. WOODLANDS CROSSING WILL ALSO BE EXTENDED TO INTERSECT WITH THE NEW ROAD. THE LOTS ADJACENT TO THE NEW ROAD WILL BE GRADED, AND ALL PUBLIC UTILITIES WILL BE INSTALLED. AREA OF DISTURBANCE: ± 10.3 ACRES. PHASE 2 WILL ALSO INCLUDE MASS GRADING OF THE REMAINING UNDISTURBED AREA ON THE NORTHEAST CORNER OF THE SITE. AREA OF DISTURBANCE: ± 8.4 ACRES

TRAFFIC IMPROVEMENTS INCLUDED IN PHASE 2: THE CONSTRUCTION OF A NORTHBOUND LEFT TURN LANE ON JAMES CAMPBELL BLVD AT THE INTERSECTION OF OLD WILLIAMSPORT PIKE, AND THE RESTRIPING OF THE SOUTHBOUND SHARED THROUGH/LEFT TURN LANE ALONG INDUSTRIAL PARK ROAD AT THE JAMES CAMPBELL INTERSECTION.

PHASE 3: MASS GRADING OF THE THREE FUTURE COMMERCIAL LOTS ADJACENT TO HAMPSHIRE PIKE. THE TRAFFIC SIGNAL AT THE HAMPSHIRE PIKE ENTRANCE WILL ALSO BE CONSTRUCTED AT THE END OF THIS PHASE. AREA OF DISTURBANCE: ± 4.5 ACRES

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HAMPSHIRE PIKE MIXED USE
PRELIMINARY PLAT
COLUMBIA, TN

KELLEY FRANK KOELLER
REGISTERED ENGINEER
AGRICULTURE
No. 120981
STATE OF TENNESSEE
6/21/2022

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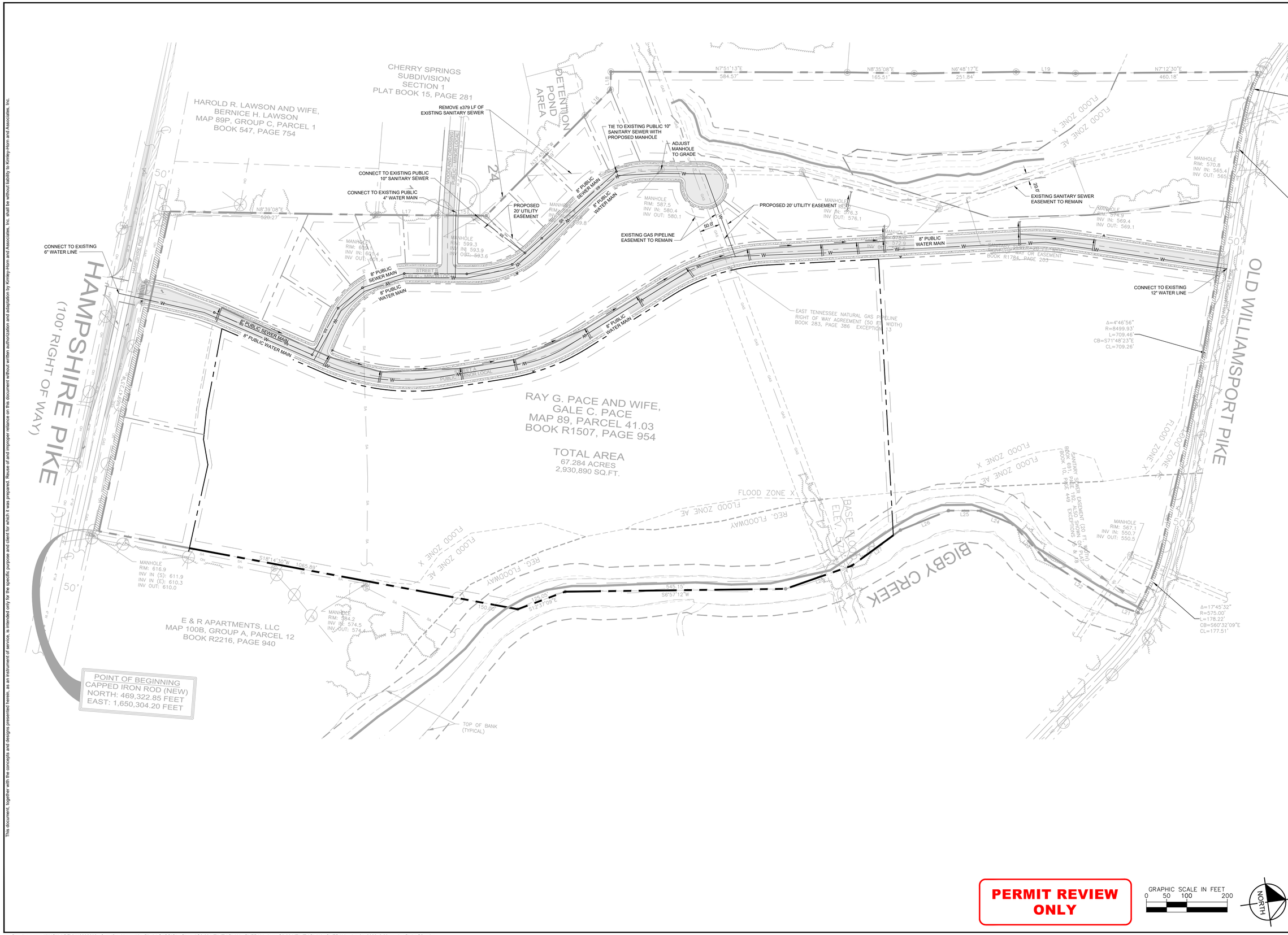
PHASING PLAN

SHEET NUMBER
C4-01



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HAMPSHIRE PIKE MIXED USE PRELIMINARY PLAT

COLUMBIA, TN

KELLEY FRANK REGISTERED ENGINEER STATE OF TENNESSEE No. 122094

6/21/2022

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UTILITY PLAN

SHEET NUMBER

C6-00

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COORDINATES ARE NAD83.
ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

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HAMPSHIRE PIKE TOWNHOMES AND SINGLE-FAMILY
COLUMBIA, TN

DRAFT
PRELIMINARY PLANS
FOR REVIEW ONLY

No.	REVISIONS	DATE	BY
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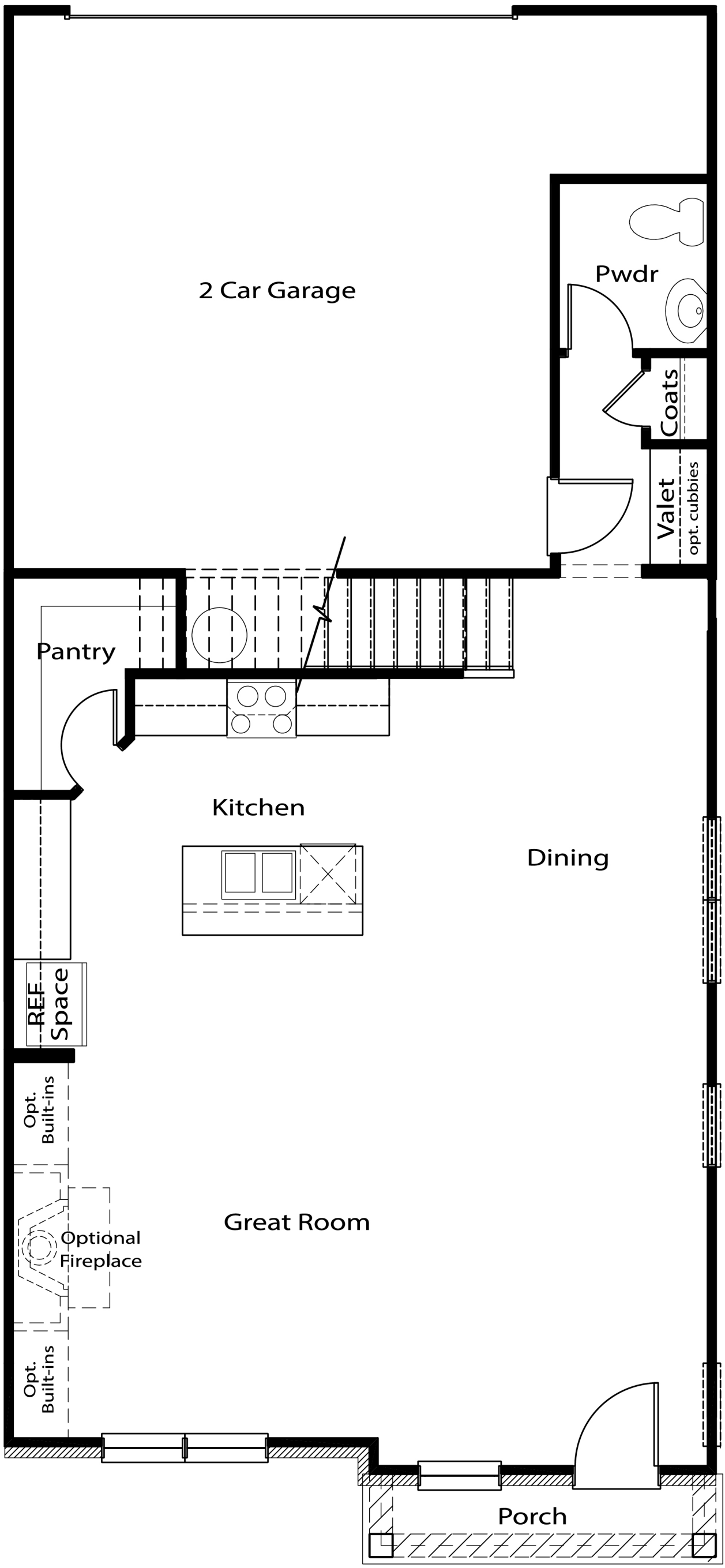
DESIGNED BY: ___
DRAWN BY: ___
CHECKED BY: ___
DATE: 03/17/2025
KIMLEY-HORN PROJECT NO. 118332003

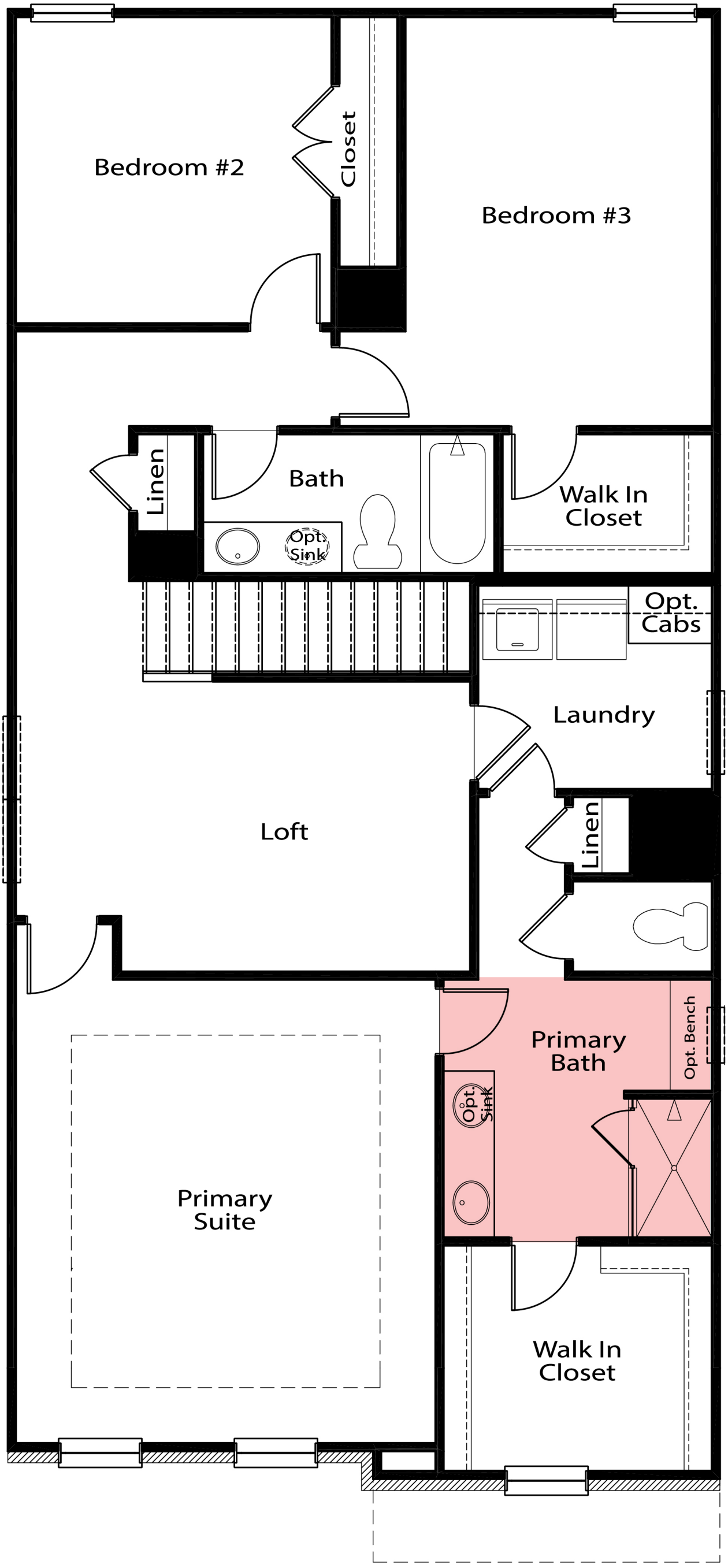
ARCHITECTURAL ELEVATION - RENDERING

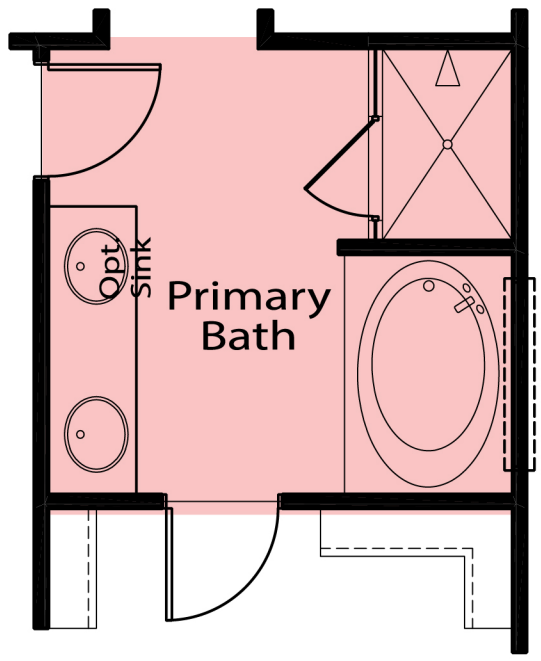
SHEET NUMBER
A1-00

Drawing name: K:\NSH_LDEV\118332003 - steadfast hampshire pike\4-CADD\hampshire pike townhomes\plansheets\A1-00 ARCHITECTURAL ELEVATIONS.dwg A1-05 ARCHITECTURAL ELEVATION - RENDERING Mar 17, 2025 3:12pm by: Jacob.Patterson

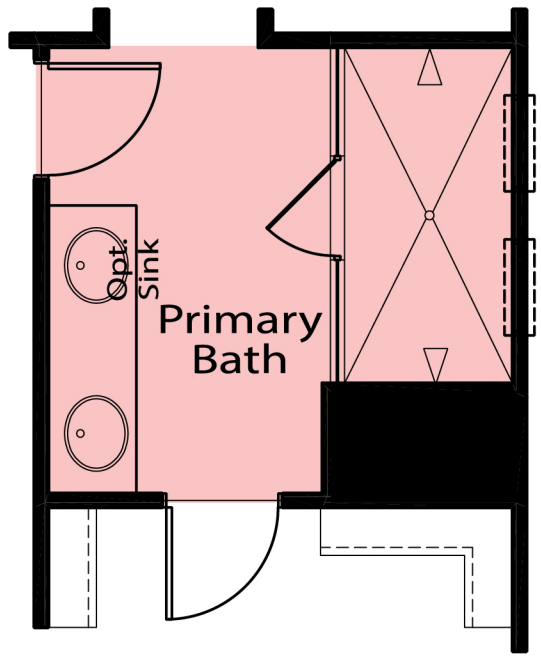


First Floor - Slab





Opt. Primary Bath #1 with Tub



Opt. Primary Bath #2 with Enlarged Shower

Second Floor

Traffic Impact Analysis

Steadfast Hampshire Pike

October 2021 (Revision #5 – July 2022)

FOR SUBMITTAL TO:

City of Columbia, Tennessee

PREPARED FOR:

Steadfast Development Holdings, Inc.

Kimley»Horn

Traffic Impact Analysis

Hampshire Pike Mixed-Use

FOR SUBMITTAL TO:

City of Columbia, Tennessee

PREPARED FOR:

Steadfast Development Holdings, Inc.

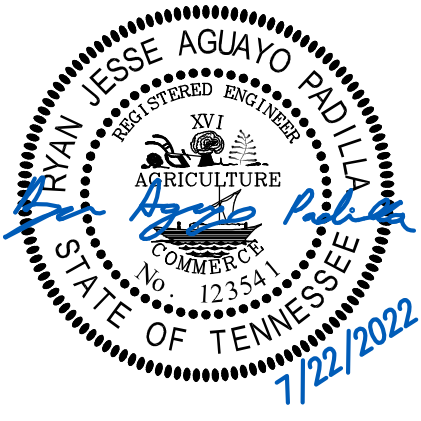
PREPARED BY:

Kimley»Horn

10 Lea Avenue, Suite 400

Nashville, Tennessee 37210

615.564.2701



October 2021 (Revision #5 – July 2022)

Project Number 118332003

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1.0 EXECUTIVE SUMMARY

Revision #5 of this TIA updated the recommendations to reflect Planning Commission comments provided July 13, 2022 and input from City Staff.

This Traffic Impact Analysis has been performed for a proposed development located within the City of Columbia in Maury County, Tennessee. The approximate 67.59-acre proposed development is located south of Old Williamsport Pike, west of James Campbell Boulevard and north of Hampshire Pike (SR 50). The anticipated completion of this development is year 2025.

The proposed development consists of:

- Single-Family Detached Housing – 39 units
- Multifamily Housing (Low-Rise) – 625 units
- General Office Building – 10,000 s.f.
- Shopping Center – 5,000 s.f.

The current development plan shown in Appendix A shows 360 multifamily units and 11 single-family lots. For analysis purposes, the densities shown about were considered for evaluation to estimate the ultimate build-out of the proposed development. Final development densities are anticipated to be lower than those assumed for this TIA.

The study intersections are:

1. Hampshire Pike (SR 50) at Lion Parkway/Iberia Drive (signalized)
2. Hampshire Pike (SR 50) at James Campbell Boulevard (signalized)
3. James Campbell Boulevard at Old Williamsport Pike (unsignalized)
4. James Campbell Boulevard at Industrial Park Road (signalized)
5. Hampshire Pike (SR 50) at Site Driveway A (unsignalized)
6. Old Williamsport Pike at Site Driveway B (unsignalized)

Related to the proposed development, the following mitigation improvements will improve traffic operations under the Future 2025 scenario and are to be constructed by the proposed development:

Hampshire Pike (SR 50) at James Campbell Boulevard

- Reconstruct north leg median nose with an 8' radius to reduce median length by approximately 13 feet to better facilitate vehicle turning movements. Relocate existing wood pole with dual arm luminaire and reconnect traffic signal span wire. Reconstruct south leg median nose with an 8' radius to reduce median length by approximately 15 feet to better facilitate vehicle turning movements.
    - *This improvement was added based on input from City staff and Planning Commission.*

James Campbell Boulevard at Old Williamsport Pike

- Construct a northbound left-turn lane with 100 feet of storage.

James Campbell Boulevard at Industrial Park Road

- Restripe the southbound shared through/left-turn lane along Industrial Park Road to provide a shared left/through/right-turn lane. Adjust signal timings as necessary after lane modifications.

Hampshire Pike at Driveway A

- Construct a westbound right-turn lane along Hampshire Pike with 125 feet of storage.
- Construct an eastbound left-turn lane along Hampshire Pike with 100 feet of storage.
- Construct a westbound left-turn lane along Hampshire Pike with 100 feet of storage.
- Construct Driveway A with three (3) lanes for vehicular movement: one (1) lane for vehicle ingress and two (2) for vehicle egress.
- Construct a traffic signal with protected-permitted left-turn phasing on all approaches.
- Install signs and pavement markings in accordance with the standards provided in the *Manual on Uniform Traffic Control Devices* (MUTCD).

Old Williamsport Pike at Site Driveway B

- Construct Site Driveway B with two (2) lanes for vehicular movement: one (1) lane for vehicle ingress and one (1) for vehicle egress.
- Provide STOP control along the northbound approach of Site Driveway B.
- Construct a westbound left-turn lane along Old Williamsport Pike with 100 feet of storage.
- Provide adequate intersection sight distance in accordance with the criteria provided in *A Policy on Geometric Design of Highways and Streets*.

Unrelated to the proposed development, the following improvements are proposed to improve operations under the Background 2025 scenario and not proposed to be constructed as part of this development:

Hampshire Pike at Lion Parkway/Iberia Drive

- Construct one (1) eastbound right-turn lane.
    - Adjust signal timings as necessary after lane modifications.
- Provide an overlap phase for the northbound right-turn movement.
- *Development traffic is not anticipated to utilize this turning movement and this improvement does not mitigate impacts from development traffic. This improvement may be planned by local jurisdictions to be implemented in the future. See section 10.3 in the report for additional information.*

Hampshire Pike at James Campbell Boulevard

- Construct one (1) southbound right-turn lane.
    - Adjust signal timings as necessary after lane modifications.
- Provide right-turn overlap phases for the northbound, southbound, and westbound approaches
- *Due to ROW, waterway, and retaining wall constraints, this improvement is recommended to be planned by local jurisdictions. See section 10.3 in the report for additional information.*

2.0 INTRODUCTION

The proposed development is located within the City of Columbia in Maury County, Tennessee. The 69.8-acre proposed development is located south of Old Williamsport Pike, west of James Campbell Boulevard and north of Hampshire Pike (SR 50). The anticipated completion of this development is year 2025.

The proposed development consists of:

- Single-Family Detached Housing – 39 units
- Multifamily Housing (Low-Rise) – 625 units
- General Office Building – 10,000 s.f.
- Shopping Center – 5,000 s.f.

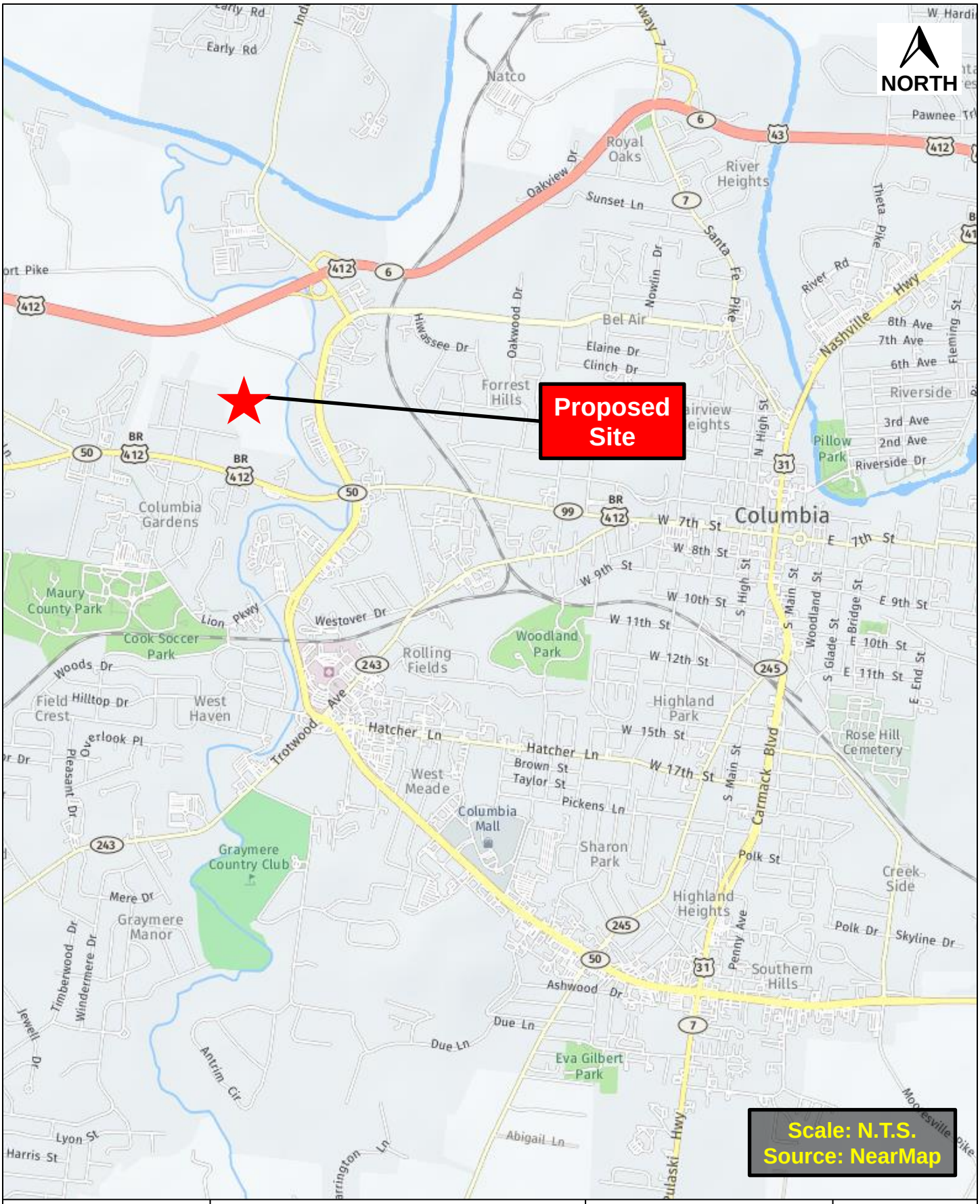
After the October 2021 submittal of this TIA, the multi-family unit count has been reduced to 480 units and the single-family detached housing reduced to 34 units. The TIA capacity analysis has not been updated and reflects the previous densities as a conservative measure.

The study intersections are:

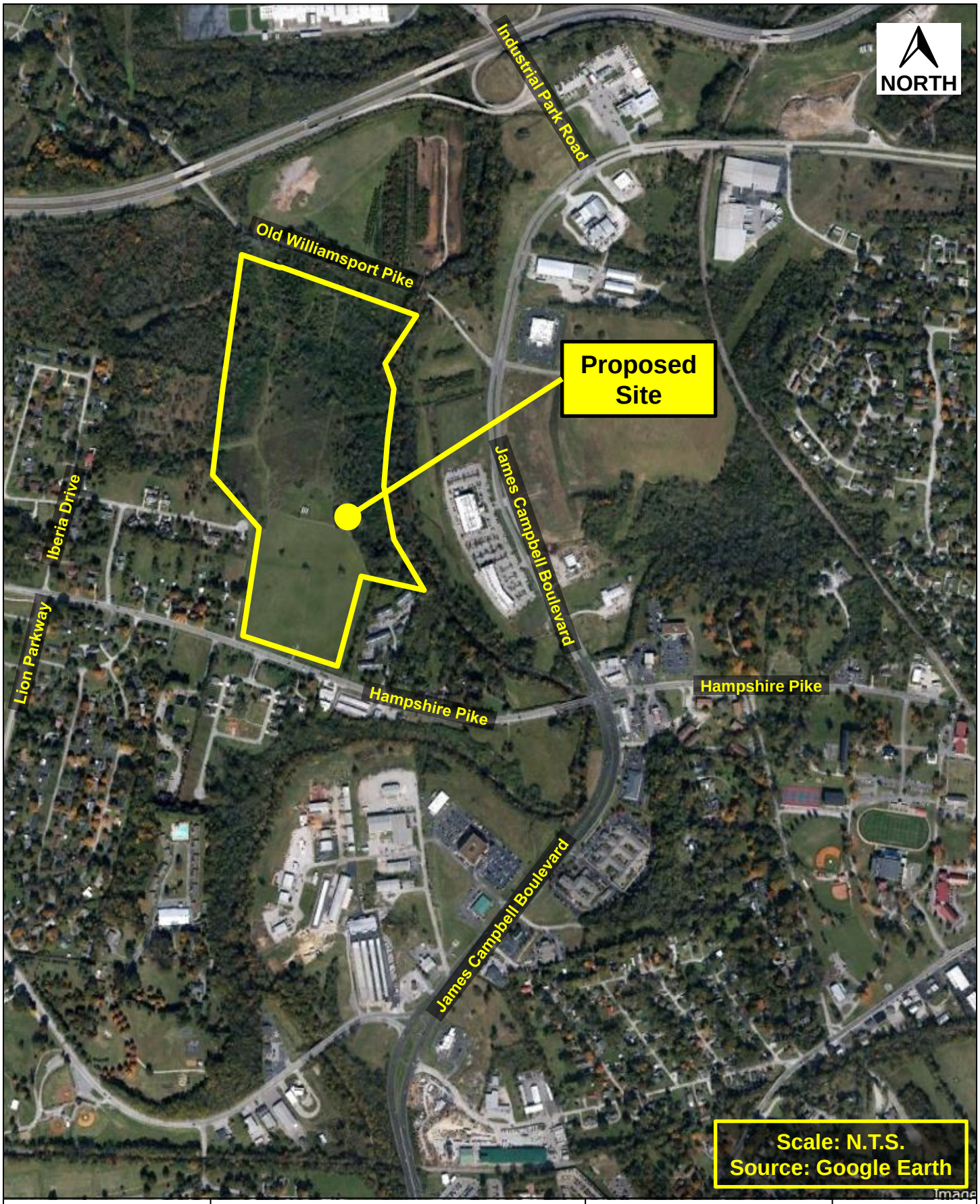
1. Hampshire Pike (SR 50) at Lion Parkway/Iberia Drive (signalized)
2. Hampshire Pike (SR 50) at James Campbell Boulevard (signalized)
3. James Campbell Boulevard at Old Williamsport Pike (unsignalized)
4. James Campbell Boulevard at Industrial Park Road (signalized)
5. Hampshire Pike (SR 50) at Site Driveway A (unsignalized)
6. Old Williamsport Pike at Site Driveway B (unsignalized)

The Project Location of the proposed development is illustrated in **Figure 1** and **Figure 2**.

The proposed site plan for the development is provided in **Appendix A**.



Kimley»Horn	Hampshire Pike Mixed-Use Traffic Impact Analysis	Project Location (Zoom Out)	Figure 1



Kimley»Horn	Hampshire Pike Mixed-Use Traffic Impact Analysis	Project Location (Zoom In)	Figure 2

3.0 EXISTING CONDITIONS

3.1 Study Intersections

The study intersections and existing traffic control are summarized in **Table 1**.

Table 1 – Study Intersections

Intersection	Existing Traffic Control
1. Hampshire Pike (SR 50) at Lion Parkway/Iberia Drive	Signalized
2. Hampshire Pike (SR 50) at James Campbell Boulevard	Signalized
3. James Campbell Boulevard at Old Williamsport Pike	Unsignalized
4. James Campbell Boulevard at Industrial Park Road	Signalized
5. Hampshire Pike at Site Driveway A	Unsignalized
6. Old Williamsport Pike at Site Driveway B	Unsignalized

For signalized intersections, the existing signal timings were obtained from the City of Columbia, Tennessee. These existing signal timings were incorporated into the traffic analysis.

Photographs depicting the study intersections are provided in **Appendix B**.

3.2 Roadway Network

Roadway geometry and posted speed limits were obtained by field inventory. Functional classifications for the roadways were obtained from the Functional Classification Maps provided by the Tennessee Department of Transportation. Additionally, the functional classifications as defined by City of Columbia were obtained from the *Connect Columbia: Columbia's Transportation Plan.* This roadway network information is summarized in **Table 2**.

Table 2 – Roadway Network				
Roadway	**Number of Lanes**	**Posted Speed Limit (mph)**	**TDOT Classification**	**City of Columbia Classification**
Hampshire Pike (US 412/SR 50/SR 99)	2	40	Principal Arterial	Principal Arterial
James Campbell Boulevard	4	45	Minor Arterial	Minor Arterial
Old Williamsport Pike	2	35	Local Street	Local Street
Industrial Park Road	2	45	Major Collector	Minor Arterial
Lion Parkway	2	20	Major Collector	Collector
Iberia Drive	2	25	Local Street	Local Street
Oxford Village Drive	2	25	Local Street	Local Street

3.3 Pedestrian/Bicycle Network

Currently, there are no sidewalks or bike provided along any of the study roadways in the network. Additionally, there are no crosswalks or pedestrian signal heads provided at any of the study intersections.

3.4 Transit Network

The Mule Town Trolley Green Line (West) travels along Hampshire Pike in the vicinity of the proposed development. The Green Line (West) provides a transit connection between Columbia State Community College, Columbia City Hall, Riverwalk Park, and other locations in the southwest Columbia area. There are additional transfer points that connect to the Blue Line (North), Red Line (South), and Purple Line (East). The nearest bus stop is located at the Oak View Apartments directly south of Driveway A.

3.5 Traffic Data

Annualized average daily traffic (AADT) volumes were obtained from TDOT along roads in proximity to the proposed development. **Table 3** provides a summary of the AADT. From 2017 to 2019 in the vicinity of the proposed development, the aggregate traffic volumes have experienced a growth of approximately 0.6% per year; from 2009 to 2019, approximately 1.0% per year.

Table 3 – TDOT Traffic History

Year	Station 60000147 Hampshire Pike (SR 50) West of Oxford Village Circle	Station 60000097 Old Williamsport Pike West of James Campbell Blvd	Station 60000233 James Campbell Blvd North of Hampshire Pike
2010	10,412	1,099	16,404
2011	11,720	900	14,554
2012	11,187	956	14,998
2013	11,184	985	14,489
2014	11,425	1,094	14,682
2015	10,318	737	14,905
2016	11,390	897	14,944
2017	11,940	1,154	17,257
2018	11,555	1,128	16,501
2019	12,187	1,148	17,547
2020*	13,534	1,021	16,244

**Excluded from growth calculations due to atypical traffic patterns caused by the COVID-19 pandemic.*

Weekday morning and afternoon peak period turning movement counts were performed to determine the volume of vehicles and pedestrians at the study intersections. The traffic data was collected on Tuesday, September 14, 2021. The volumes were collected in 15-minute intervals to determine the AM and PM peak hour volumes as well as the peak hour factors.

Intersection peak hours are summarized in **Table 4**.

Table 4 – Intersection Peak Hours		
Intersection	**AM Peak Hour**	**PM Peak Hour**
Hampshire Pike (SR 50) at Lion Parkway/Iberia Drive	7:00 – 8:00	4:45 – 5:45
Hampshire Pike (SR 50) at James Campbell Boulevard	7:15 – 8:15	3:00 – 4:00
James Campbell Boulevard at Old Williamsport Pike	7:00 – 8:00	4:30 – 5:30
James Campbell Boulevard at Industrial Park Road	7:00 – 8:00	4:30 – 5:30

At the intersection of Hampshire Pike and James Campbell Boulevard, data collection video confirmed that the traffic signal operated with protected-permitted left-turn on all approaches.

Two (2) 24-hour tube counts were also collected: one (1) on Hampshire Pike west of Oxford Village Circle and one (1) on Industrial Park Road south of Highway 412 EB Exit Ramp. The daily (24-hour), AM peak hour, and PM peak hour traffic data from the tube counts are summarized in **Table 5**.

Table 5 – 24-Hour Tube Counts			
Location	**Daily (24-Hour)**	**AM Peak Hour**	**PM Peak Hour**
Hampshire Pike West of Oxford Village Circle	12,712	1,136	1,140
Industrial Park Road South of Hwy 412 EB Exit Ramp	15,693	1,679	1,352

Because traffic patterns were potentially still impacted by the COVID-19 pandemic during the traffic count collection dates, AM and PM peak hour turning movement counts were calibrated based on a comparison of current and historical average daily traffic (ADT) counts. ADTs collected by Tennessee DOT (TDOT) in 2019 were grown at 2.5% per year to the current year 2021 then compared to the ADT collected in 2021. A **calibration factor of 1.1** was chosen for both the AM and PM peak hours. The ADT comparison is shown below in **Table 6**.

Table 6 – ADT Comparison					
Location	**TOD**	**2019 TDOT ADT**	**Projected 2021 TDOT ADT**	**2021 Collected ADT**	**Calibration Factor**
Hampshire Pike West of Oxford Village Circle	Daily	13,517	14,556	12,712	1.15
	AM Peak	1,162	1,251	1,136	1.10
	PM Peak	1,147	1,235	1,104	1.12
Industrial Park Road South of Hwy 412 EB Exit Ramp	Daily	15,004	16,159	15,693	1.03
	AM Peak	1,379	1,485	1,679	0.88
	PM Peak	1,272	1,370	1,342	1.02

The Existing 2021 Intersection Geometry is documented in **Figure 3**, and the Existing 2021 Peak Hour Traffic Volumes are included in **Figure 4**. The AADT data as well as the peak hour turning movement counts are provided in **Appendix C**.

LEGEND

- Existing Intersection Geometry
- Existing STOP Control
- Existing Traffic Signal Control

Figure 3

Existing 2021 Intersection Geometry

Hampshire Pike Mixed-Use Traffic Impact Analysis

Kimley»Horn

NORTH

NOT TO SCALE

LEGEND

- Turning Movement
- XX AM Peak Hour Traffic Volumes
- (XX) PM Peak Hour Traffic Volumes

Figure 4

Existing 2021 Peak Hour Traffic Volumes

Hampshire Pike Mixed-Use Traffic Impact Analysis

Kimley»Horn

NORTH

NOT TO SCALE

4.0 BACKGROUND CONDITIONS

The Background 2025 conditions are the forecasted traffic conditions, without the proposed development. This includes background traffic growth, traffic associated with other planned / approved developments, and anticipated transportation infrastructure improvements.

4.1 Background Traffic Growth

Historical traffic data from the TDOT count stations was used to evaluate historic traffic trends and determine an appropriate growth rate for the study area. Based on review of the TDOT historical data, an annual growth rate of 2.5% was applied to the existing traffic volumes.

4.2 Other Future Developments

These planned / approved developments are not currently generating traffic, but the traffic associated with each of these developments has been incorporated:

- Williamsport Pike Development

4.3 Future Transportation Infrastructure Improvements

No future transportation infrastructure improvements were identified.

The Background 2025 Peak Hour Traffic Volumes are included in **Figure 5**.

LEGEND

- → Turning Movement
- XX AM Peak Hour Traffic Volumes
- (XX) PM Peak Hour Traffic Volumes

Industrial Park Road

984 (720)
7 (0)
121 (53)

4

53 (76)
290 (304)
0 (2)

James Campbell Blvd

(792) 495
(314) 278
(3) 11

(8) 2
(7) 7
(3) 1

3

11 (35)
1,237 (993)
23 (3)

4 (20)
0 (0)
10 (38)

Old Williamsport Pike

(9) 10
(0) 0
(24) 123

(52) 23
(1,049) 771
(3) 39

Iberia Dr

1

8 (1)
8 (2)
11 (1)

0 (2)
480 (804)
204 (63)

2

218 (264)
768 (711)
241 (113)

112 (162)
224 (257)
104 (100)

Hampshire Pike

(4) 1
(502) 582
(385) 486

(362) 265
(3) 2
(51) 171

(231) 239
(243) 272
(239) 267

(315) 209
(639) 495
(92) 108

Lion Pkwy

James Campbell Blvd

NORTH

NOT TO SCALE

Figure 5

Background 2025 Peak Hour Traffic Volumes

Hampshire Pike Mixed-Use Traffic Impact Analysis

Kimley»Horn

5.0 VEHICLE CIRCULATION AND PARKING

5.1 Site Access and Vehicle Circulation

The proposed development will provide two (2) driveways, which will be connected within the development to promote internal vehicle circulation. An additional driveway is proposed to tie into the existing cul-de-sac at Woodland Crossing. However, in order to perform a more conservative analysis, it is not considered in this analysis.

Below is a description of the vehicular access:

- Driveway A – Located along Hampshire Pike, directly across from Oxford Village Circle. The driveway is proposed to be full-movement.
- Driveway B – Located along Old Williamsport Pike, approximately 1,350 feet west of James Campbell Boulevard. The driveway is proposed to be full-movement.

Although the additional connection to Woodland Crossing was not analyzed, it would help to alleviate traffic demand at Driveway A and Driveway B. Additionally, this connection would provide signalized access to the site, allowing for easier left-turn ingress and egress movements and would likely decrease delay at the other proposed driveways.

6.0 PROJECT TRAFFIC

Project traffic is the magnitude of vehicle trips forecasted to be generated by the proposed development. This project traffic is calculated and dispersed throughout the road network and onto the study intersections by using trip generation, trip distribution, and trip assignment.

6.1 Trip Generation

The proposed development will consist of:

- Single-Family Detached Housing – 39 units
- Multifamily Housing (Low-Rise) – 625 units
- General Office Building – 10,000 s.f.
- Shopping Center – 5,000 s.f.

Traffic expected to be generated by the proposed development was calculated using equations provided in the *Trip Generation Manual, 10th Edition*, published by the Institute of Transportation Engineers (ITE). These calculations result in the gross trips generated by the site prior to reductions.

Internal capture (or mixed-use) represents the concept that trips generated by individual land uses within a site may remain internal to the site. Mixed-use vehicle trip reductions were taken according to the *ITE Trip Generation Handbook, 3rd Edition*. Total internal capture and vehicle trip reduction between the proposed land uses is expected to be 2.7% for the weekday, 2.3% for the AM peak hour, and 3.2% for the PM peak hour.

Alternative modes of transportation include pedestrians, bicyclists, and transit users. Alternate mode reductions account for the notion that some site-generated trips will occur by a means other than automobile. Alternative mode reduction was not considered for the proposed development.

A pass-by trip occurs when a proposed development diverts traffic that is already traveling on a street adjacent to the site. The pass-by reductions were taken according to the *ITE Trip Generation Handbook, 3rd Edition*.

The trip generation for the proposed development is summarized in **Table 7**.

Table 7 – Trip Generation

ITE Land Use	Density	Daily	AM Peak Hour			PM Peak Hour		
			Total	Enter	Exit	Total	Enter	Exit
Single-Family Detached Housing (LUC 210)	39 d.u.	437	32	8	24	41	26	15
Multifamily Housing (Low-Rise) (LUC 220)	625 d.u.	4,684	272	63	209	302	190	112
General Office Building (LUC 710)	10,000 s.f.	114	36	31	5	13	2	11
Shopping Center (LUC 820)	5,000 s.f.	189	5	3	2	19	9	10
Gross Trips		**5,424**	**345**	**105**	**240**	**375**	**227**	**148**
Internal Capture Reduction		*- 148*	*- 8*	*- 4*	*- 4*	*- 12*	*- 6*	*- 6*
Driveway Volumes		**5,276**	**337**	**101**	**236**	**363**	**221**	**142**
Pass-By Reduction		*- 45*	*0*	*0*	*0*	*-4*	*-2*	*-2*
New Trips		**5,231**	**337**	**101**	**236**	**359**	**219**	**140**

d.u. = dwelling units ---------- s.f. = square feet

6.2 Trip Distribution and Assignment

Trip distribution has been forecasted by evaluating the existing traffic patterns, considering the internal vehicle circulation and driveway configuration of the proposed development, and reviewing the surrounding land uses and considering how they will interact with the proposed development. The trip distribution along the roadway network is forecasted to be:

Residential Trip Distribution:

- 65% to/from the north along Industrial Park Road
- 10% to/from the south along James Campbell Boulevard
- 10% to/from the west along Hampshire Pike
- 5% to/from the east along James Campbell Boulevard
- 10% to/from the east along Hampshire Pike

Non-Residential Trip Distribution:

- 10% to/from the north along Industrial Park Road
- 15% to/from the south along James Campbell Boulevard
- 35% to/from the west along Hampshire Pike
- 5% to/from the east along James Campbell Boulevard
- 30% to/from the east along Hampshire Pike

The Trip Distribution for residential uses is illustrated in **Figure 6** and for non-residential uses in **Figure 7**; and the Project Trips for the proposed development are summarized in **Figure 8**.

Pass-by reductions for the PM peak hour were assumed to be split evenly coming from the west and east on Hampshire Pike at Driveway A. Thus, one trip comes from the east and departs to the west on Hampshire Pike and one trip comes from the west and departs to the east. No AM peak hour pass-by trip reductions were applied.

Worksheets that illustrate the trip generation for the proposed development and the volume worksheets for each of the study intersections are provided in **Appendix D**.

LEGEND

- Turning Movement
- XX% IN / Entering Trip Distribution
- (XX%) OUT / Exiting Trip Distribution

Figure 6

Residential Trip Distribution

Hampshire Pike Mixed-Use
Traffic Impact Analysis

Kimley»Horn

NORTH

NOT TO SCALE

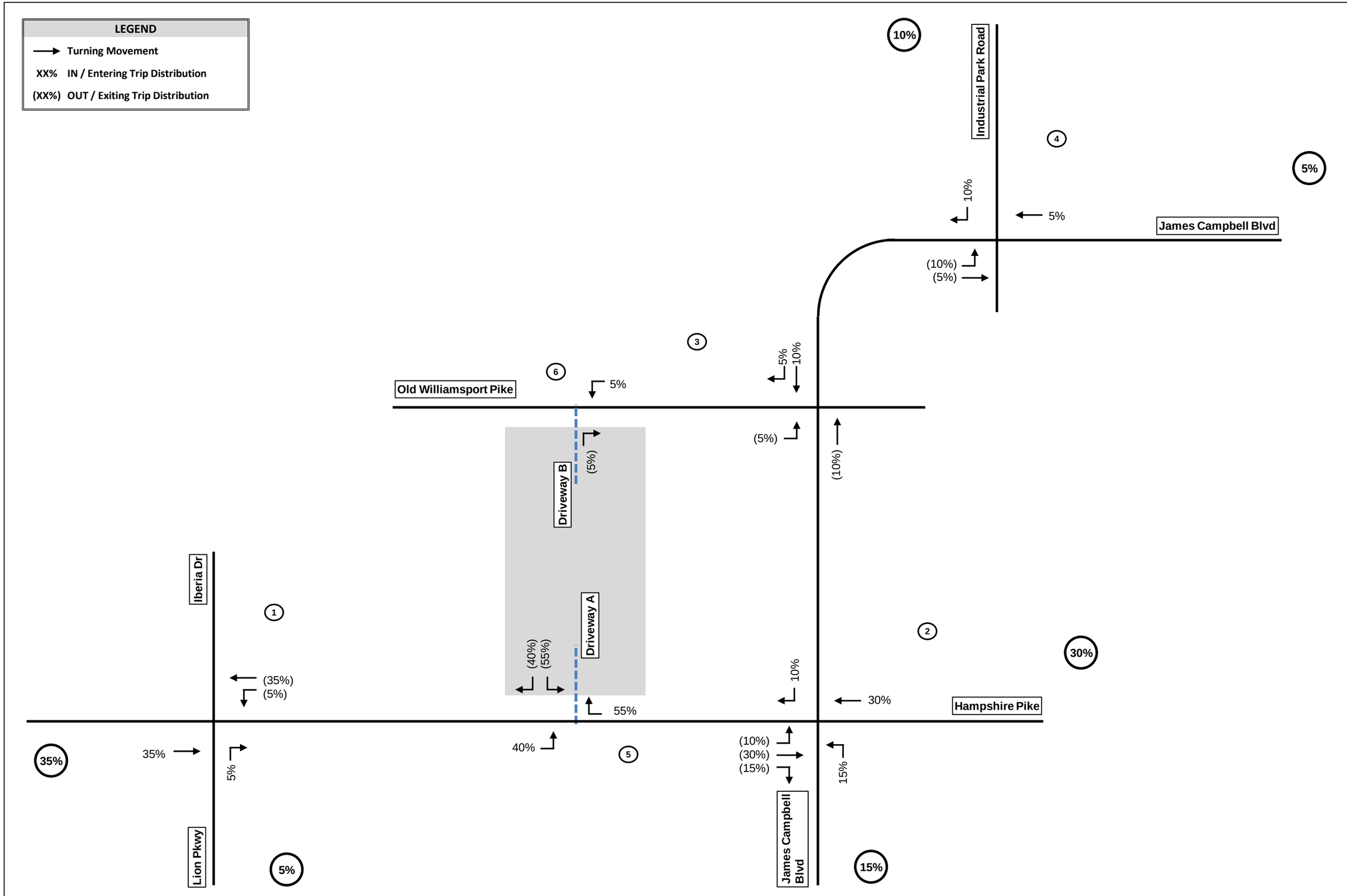


Figure 7

Non- Residential Trip Distribution

Hampshire Pike Mixed-Use Traffic Impact Analysis

Kimley»Horn

NORTH

NOT TO SCALE

LEGEND

- → Turning Movement
- XX AM Peak Hour Project Trips
- (XX) PM Peak Hour Project Trips

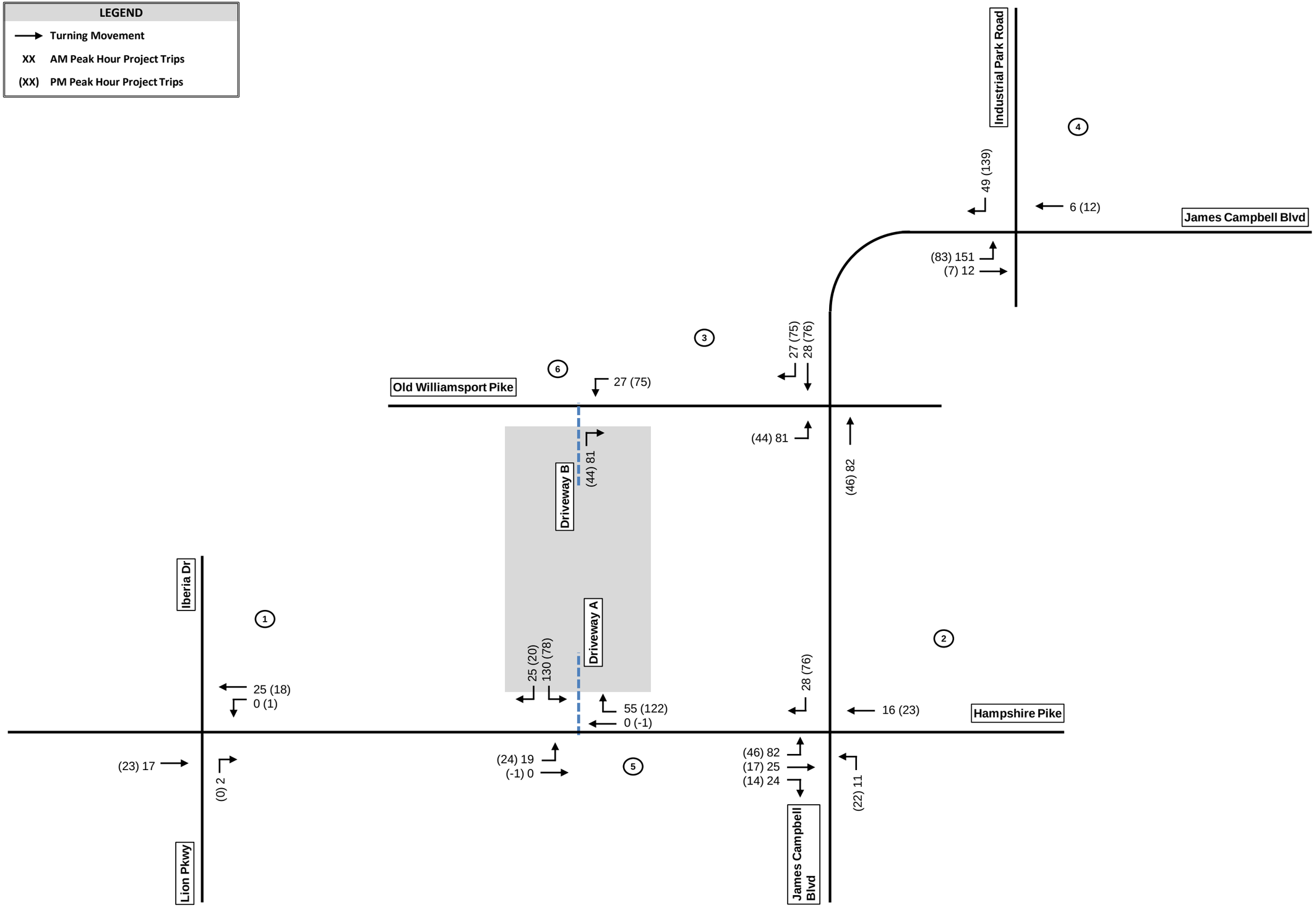


Figure 8

Project Trips

Hampshire Pike Mixed-Use
Traffic Impact Analysis

Kimley»Horn

NORTH

NOT TO SCALE

7.0 FUTURE CONDITIONS

The Future 2025 conditions are defined as the forecasted traffic conditions on the roadway network in the year 2025, with the proposed development. This includes background traffic growth, traffic associated with other planned or approved private developments, future transportation infrastructure improvements, and trips generated by the proposed development.

The Future 2025 Peak Hour Traffic Volumes are shown in **Figure 9**.

LEGEND

- → Turning Movement
- XX AM Peak Hour Traffic Volumes
- (XX) PM Peak Hour Traffic Volumes

Figure 9

Future 2025 Peak Hour Traffic Volumes

Hampshire Pike Mixed-Use Traffic Impact Analysis

Kimley»Horn

NORTH

NOT TO SCALE

8.0 TURN LANE EVALUATION

National Cooperative Highway Research Program (NCHRP) Report 457, "Evaluating Intersection Improvements: An Engineering Study Guide", was used to evaluate if left-turn and/or right-turn lanes should be implemented along the major road at a two-way stop-controlled intersection. From within the NCHRP Report 457, the following methodology were applied to perform these evaluations:

- Figure 2-5 ("Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection")
- Figure 2-6 ("Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection")

Turn lane evaluations were performed for:

- Hampshire Pike at Driveway A
- Old Williamsport Pike at Driveway B
- James Campbell Boulevard at Old Williamsport Pike (left-turn warrant)

The results of the turn-lane warrants, based on the NCHRP Report 457, are summarized in **Table 8** (for left-turn lanes) and in **Table 9** (for right-turn lanes). The calculations are provided in **Appendix E**.

Table 8 – Left-Turn Lane Evaluation (NCHRP Report 457)			
Turning Movement	**Analysis Scenario**	**AM Peak Hour**	**PM Peak Hour**
Eastbound Left-Turn Hampshire Pike at Driveway A	Future 2025	WARRANTED	WARRANTED
Westbound Left-Turn Old Williamsport Pike at Driveway B	Future 2025	Not Warranted	Not Warranted
Northbound Left-Turn James Campbell Boulevard at Old Williamsport Pike	Future 2025	WARRANTED	WARRANTED

A left-turn lane is warranted for the Future 2025 scenario, during the AM peak hour and PM peak hour, for Driveway A and James Campbell Boulevard at Old Williamsport Pike. Providing a left-turn lane will reduce the possibility of a 'left-turn movement' motorist causing significant delay to 'through movement' motorists behind them at this location.

A left-turn lane is not warranted for the Future 2025 scenario, during the AM peak hour and the PM peak hour, for Driveway B. At this location, a 'left-turn movement' vehicle is unlikely to cause significant delay to a 'through movement' motorist behind them.

Table 9 – Right-Turn Lane Evaluation (NCHRP Report 457)			
Turning Movement	**Analysis Scenario**	**AM Peak Hour**	**PM Peak Hour**
Westbound Right-Turn Hampshire Pike at Driveway A	Future 2025	WARRANTED	WARRANTED
Eastbound Right-Turn Old Williamsport Pike at Driveway B	Future 2025	Not Warranted	Not Warranted

A right-turn lane is warranted for the Future 2025 scenario, during the AM peak hour and PM peak hour, for Driveway A. Providing a right-turn lane will reduce the possibility of a 'right-turn movement' motorist causing significant delay to 'through movement' motorists behind them at this location.

A right-turn lane is not warranted for the Future 2025 scenario, during the AM peak hour and the PM peak hour, for Driveway B. At this location, a 'right-turn movement' vehicle is unlikely to cause significant delay to a 'through movement' motorist behind them.

Per the request of Volkert, Inc., left-turn lane warrant analysis based on the methodology provided in the TDOT Highway System Access Manual was prepared as well. This methodology is based on the AASHTO Green Book 7th Edition, Section 9.7.3 and is replicated in Figures 3-15, 3-16, and 3-17 in the Highway System Access Manual. The left-turn lane warrant analysis is summarized below:

- Hampshire Pike at Driveway A (Left-Turn Warrant for Urban and Suburban Arterials (Unsignalized))
    - Left-turn lane is warranted.
- Old Williamsport Pike at Driveway B (Left-Turn Warrant for Two-Lane Rural Roadway, Three-Leg Intersection)
    - Left-turn lane is warranted.
- James Campbell Boulevard at Old Williamsport Pike
    - Left-turn lane is warranted.

9.0 TRAFFIC SIGNAL WARRANT ANALYSIS

Preliminary traffic signal warrant analysis was performed using the methodology provided in Chapter 4C of the *Manual on Uniform Traffic Control Devices* (MUTCD), 2009 Edition published by the Federal Highway Administration (FHWA). The *MUTCD* provides the following standard, among others, regarding justification for traffic control signals:

"The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal." (Source: *MUTCD 2009*, Section 4C.01, Paragraph 03)

According to the MUTCD, the investigation of the need for a traffic control signal shall include an analysis of the applicable factors contained in the following traffic signal warrants and other factors related to existing operation and safety at the study location:

- Warrant 1, Eight-Hour Vehicular Volume
- Warrant 2, Four-Hour Vehicular Volume
- Warrant 3, Peak Hour
- Warrant 4, Pedestrian Volume
- Warrant 5, School Crossing
- Warrant 6, Coordinated Signal System
- Warrant 7, Crash Experience
- Warrant 8, Roadway Network
- Warrant 9, Intersection Near a Grade Crossing

Warrant 1 (Eight Hour Vehicular Volume) Condition 1A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic signal. Warrant 1 Condition 1B is intended for application where Condition 1A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. If both Condition 1A and Condition 1B are 80% satisfied, Warrant 1C would be satisfied.

Warrant 2 (Four Hour Vehicular Volume) is intended to be applied at locations where the volume of intersecting traffic is the principal reason to consider installing a traffic signal.

Warrant 3 (Peak Hour) is intended for use at locations where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.

Warrant 4 (Pedestrian Volume) is intended for application where the traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street.

A traffic signal was evaluated for the intersection of Hampshire Parkway at Site Driveway A.

The results of the preliminary traffic signal warrant analysis based upon vehicular traffic volumes are summarized in **Table 10**.

Table 10 – Preliminary Traffic Signal Warrant Analysis

Location	Warrant	Hours Required	Future 2025
Hampshire Pike at Site Driveway A	1A	8	0 / 8 (Not Met)
	1B	8	6 / 8 (Not Met)
	1C	8	2 / 8 (Not Met)
	2	4	5 / 4 (MET)
	3	1	1 / 1 (MET)
	4	1	N/A

For the traffic signal warrant analysis, 24-hour tube count data was collected on September 14, 2021 for Hampshire Pike west of Oxford Village Circle. Driveway A traffic volumes were used as the higher volume approach based on Future 2025 peak hour traffic volumes. In addition, right-turning vehicles from Driveway A were removed from the calculations due to the proposed dedicated left-turn lane and shared through/right-turn lane configuration of Driveway A.

Proposed development eight-hour trip generations were prepared utilizing ITE daily trip generation and distribution data. However, pass-by and internal capture reductions were not applied to the trip generation estimates. Complete traffic signal warrant data and calculations are provided in **Appendix C** and **Appendix D**.

10.0 CAPACITY ANALYSIS

10.1 Intersection Capacity Analysis

The *Highway Capacity Manual (HCM) 6th Edition* provides insight and guidance on control delay, level of service (LOS), signalized intersection LOS, and unsignalized intersection LOS.

Control Delay:

"Control delay – the delay brought about by the presence of a traffic control device – is the principal HCM service measure for evaluating LOS at signalized and unsignalized intersections. Control delay includes delay when vehicles slow in advance of an intersection, time spent stopped on an intersection approach, time spent as vehicles move up in the queue, and time needed for vehicles to accelerate to their desired speed." (Source: *Highway Capacity Manual 6th Edition*, Chapter 4)

LOS:

"LOS is a quantitative stratification of a performance measure or measures representing quality of service. The measures used to determine LOS for transportation system elements are called service measures. The HCM defines six levels of service, ranging from A to F, for each service measure or combination of service measures. LOS A represents the best operating conditions from the traveler's perspective and LOS F the worst. For cost, environmental impact, and other reasons, roadways are typically designed not to provide LOS A conditions during peak periods but instead to provide some lower LOS that balances individual travelers' desires against society's desires and financial resources. Nevertheless, during low-volume periods of the day, a system element may operate at LOS A." (Source: *Highway Capacity Manual 6th Edition*, Chapter 5)

Signalized Intersection LOS:

- Control delay alone is used to characterize LOS for the entire intersection or an approach
- Control delay and volume-to-capacity ratio are used to characterize LOS for a lane group.
- Delay quantifies the increase in travel time due to traffic signal control. It is also a surrogate measure of driver discomfort and fuel consumption.
- The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group.

The LOS criteria for signalized intersections are summarized in **Table 11**.

Table 11– Signalized Intersection Level of Service

LOS	Control Delay (seconds/vehicle)	Comments
A	≤ 10	LOS A describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If LOS A is the result of favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
B	> 10 – 20	LOS B describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.
C	> 20 – 35	LOS C describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
D	> 35 – 55	LOS D describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.
E	> 55 – 80	LOS E describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.
F	> 80	LOS F describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Source: *Highway Capacity Manual 6th Edition*, Chapter 19

Unsignalized (two-way stop-controlled) intersection LOS:

- For motor vehicles, LOS is determined for each minor-street movement (or shared movement), as well as the major-street left turns.
- LOS is not defined for the intersection as a whole or for major-street approaches.
- The LOS criteria for unsignalized intersections differ somewhat from the criteria for signalized intersections, primarily because user perceptions differ among transportation facility types. The expectation is that a signalized intersection is designed to carry higher traffic volumes and will present greater delay than an unsignalized intersection. Unsignalized intersections are also associated with more uncertainty for users, as delays are less predictable than they are at signals.

The LOS criteria for unsignalized intersections are summarized in **Table 12**.

Table 12 – Unsignalized Intersection Level of Service

LOS	Control Delay (seconds/vehicle)	Comments
A	0 – 10	Usually no conflicting traffic
B	> 10 – 15	Occasionally some delay due to conflicting traffic
C	> 15 – 25	Delay noticeable to vehicles, but not inconveniencing
D	> 25 – 35	Delay noticeable and irritating, increased likelihood of risk taking
E	> 35 – 50	Delay approaches tolerance level, risk-taking behavior likely
F	> 50	Delay exceeds tolerance level, high likelihood of vehicle risk taking

Source: *Highway Capacity Manual 6th Edition*, Chapter 20

For existing roadways, municipalities typically consider LOS A through LOS D as the range of acceptable overall intersection operations, while LOS E and LOS F are generally considered unacceptable. Roadway laneage, traffic signalization, or other improvements are normally required at those intersections which operate within the range of unacceptable LOS.

The operating conditions were analyzed for the weekday AM and PM peak hours using the *Synchro 11* software which uses the methodologies contained in the *Highway Capacity Manual 6th Edition*. The following intersections were analyzed:

- Hampshire Pike (SR 50) at Lion Parkway/Iberia Drive (signalized)
- Hampshire Pike (SR 50) at James Campbell Boulevard (signalized)
- James Campbell Boulevard at Old Williamsport Pike (unsignalized)
- James Campbell Boulevard at Industrial Park Road (signalized)
- Hampshire Pike (SR 50) at Site Driveway A/Oxford Village Circle (unsignalized)
- Old Williamsport Pike at Site Driveway B (unsignalized)

Additionally, unsignalized intersections were analyzed for the weekday AM and PM peak hours using the *Highway Capacity Software (HCS) 7* which also uses the methodologies contained in the *Highway Capacity Manual 6th Edition*. The following intersections were analyzed in *HCS 7* in addition to *Synchro 10*:

- James Campbell Boulevard at Old Williamsport Pike (unsignalized)
- Hampshire Pike (SR 50) at Site Driveway A/Oxford Village Circle (unsignalized)
- Old Williamsport Pike at Site Driveway B (unsignalized)

Intersection capacity analyses were conducted for the following conditions within the study area:

- Existing 2021 Conditions
- Background 2025 Conditions
- Future 2025 Conditions

A summary of the *Synchro 11* capacity analyses for the AM peak hour and PM peak hour are provided in **Table 13** and **Table 14**, respectively. A summary of the *HCS 7* capacity analyses for the AM peak hour and PM peak hour are provided in **Table 15** and **Table 16**, respectively. The intersection capacity analysis reports are included in **Appendix F**.

Table 13 – *Synchro 11* Intersection Capacity Analysis Results – AM Peak Hour

Intersection	Approach	Existing 2021 Conditions	Background 2025 Conditions	Future 2025 Conditions
Hampshire Pike at Lion Parkway /Iberia Drive (Signalized)	Eastbound	B (17.5)	C (24.9)	C (25.6)
	Westbound	B (10.8)	B (15.6)	C (16.3)
	Northbound	D (39.9)	D (41.5)	D (41.0)
	Southbound	C (31.7)	C (30.6)	C (30.6)
	Overall	B (19.2)	C (24.5)	C (24.9)
Hampshire Pike at James Campbell Boulevard (Signalized)	Eastbound	C (32.1)	D (43.5)	D (50.7)
	Westbound	C (27.1)	D (35.7)	D (44.1)
	Northbound	E (62.5)	E (68.0)	E (68.7)
	Southbound	E (65.4)	E (73.9)	E (74.0)
	Overall	D (52.0)	E (59.9)	E (62.5)
James Campbell Boulevard at Old Williamsport Pike (Unsignalized)	Eastbound STOP	C (18.6)	C (22.5)	F (126.3)
	Westbound STOP	C (23.0)	D (29.7)	D (33.4)
	Northbound Left-Turn	B (13.8)	C (15.6)	C (16.3)
	Southbound Left-Turn	A (9.5)	B (10.0)	B (10.5)
James Campbell Boulevard at Industrial Park Road (Signalized)	Eastbound	A (9.4)	B (10.9)	C (21.6)
	Westbound	B (18.8)	C (22.1)	C (32.3)
	Northbound	F (93.9)	F (92.1)	F (92.1)
	Southbound	D (35.1)	D (35.8)	C (23.0)
	Overall	C (22.2)	C (23.9)	C (24.1)
Hampshire Pike at Driveway A	Eastbound Left-Turn	--	--	A (9.5)
	Westbound Left-Turn*	--	--	A (9.7)
	Northbound STOP*	--	--	E (49.3)
	Southbound STOP	--	--	F (610.1)
Old Williamsport Pike at Driveway B	Westbound Left-Turn	--	--	A (7.6)
	Northbound STOP	--	--	A (9.4)

**Turning movements associated with the Oxford Village Circle development were conservatively assumed to be 10 vehicles per movement based on trip generation for 46 multi-family (low-rise) apartments*

Table 14 – *Synchro 10* Intersection Capacity Analysis Results – PM Peak Hour				
Intersection	**Approach**	**Existing 2021 Conditions**	**Background 2025 Conditions**	**Future 2025 Conditions**
Hampshire Pike at Lion Parkway /Iberia Drive (Signalized)	Eastbound	C (20.5)	C (23.5)	C (24.2)
	Westbound	B (19.7)	C (28.7)	C (30.1)
	Northbound	F (158.9)	F (249.5)	F (249.5)
	Southbound	C (31.8)	C (31.8)	D (31.8)
	Overall	D (49.1)	E (70.1)	E (70.1)
Hampshire Pike at James Campbell Boulevard (Signalized)	Eastbound	D (35.3)	D (50.5)	E (60.9)
	Westbound	C (31.9)	D (45.2)	E (55.3)
	Northbound	D (51.8)	E (56.2)	E (58.0)
	Southbound	E (62.7)	E (73.8)	E (74.0)
	Overall	D (49.1)	E (58.9)	E (63.4)
James Campbell Boulevard at Old Williamsport Pike (Unsignalized)	Eastbound STOP	C (16.9)	C (21.4)	F (84.7)
	Westbound STOP	D (30.1)	E (47.6)	F (60.0)
	Northbound Left-Turn	B (10.7)	B (11.9)	B (13.2)
	Southbound Left-Turn	B (14.1)	C (15.9)	C (16.5)
James Campbell Boulevard at Industrial Park Road (Signalized)	Eastbound	B (11.0)	C (23.4)	D (35.3)
	Westbound	C (21.3)	C (32.7)	D (48.6)
	Northbound	F (84.8)	F (86.5)	F (86.9)
	Southbound	C (22.8)	B (16.5)	B (10.9)
	Overall	B (15.9)	C (23.9)	C (31.4)
Hampshire Pike at Driveway A	Eastbound Left-Turn	--	--	B (10.8)
	Westbound Left-Turn*	--	--	A (8.8)
	Northbound STOP*	--	--	E (46.6)
	Southbound STOP	--	--	F (201.1)
Old Williamsport Pike at Driveway B	Westbound Left-Turn	--	--	A (7.4)
	Northbound STOP	--	--	A (8.6)

**Turning movements associated with the Oxford Village Circle development were conservatively assumed to be 10 vehicles per movement based on trip generation for 46 multi-family (low-rise) apartments*

Table 15 – *HCS 7* Intersection Capacity Analysis Results – AM Peak Hour				
Intersection	**Approach**	**Existing 2021 Conditions**	**Background 2025 Conditions**	**Future 2028 Conditions**
James Campbell Boulevard at Old Williamsport Pike (Unsignalized)	Eastbound STOP	C (21.9)	D (29.9)	F (648.3)
	Westbound STOP	F (53.0)	F (97.5)	F (130.2)
	Northbound Left-Turn	B (13.8)	C (15.6)	C (16.3)
	Southbound Left-Turn	A (9.5)	B (10.0)	B (10.5)
Hampshire Pike at Driveway A	Eastbound Left-Turn	--	--	A (9.5)
	Westbound Left-Turn*	--	--	A (9.7)
	Northbound STOP*	--	--	E (49.6)
	Southbound STOP	--	--	F (691.4)
Old Williamsport Pike at Driveway B	Westbound Left-Turn	--	--	A (7.6)
	Northbound STOP	--	--	A (9.4)

**Turning movements associated with the Oxford Village Circle development were conservatively assumed to be 10 vehicles per movement based on trip generation for 46 multi-family (low-rise) apartments*

Table 16 – *HCS 7* Intersection Capacity Analysis Results – PM Peak Hour				
Intersection	**Approach**	**Existing 2021 Conditions**	**Background 2025 Conditions**	**Future 2028 Conditions**
James Campbell Boulevard at Old Williamsport Pike (Unsignalized)	Eastbound STOP	D (27.1)	E (46.6)	F (611.7)
	Westbound STOP	F (90.0)	F (256.5)	F (380.9)
	Northbound Left-Turn	B (10.7)	B (11.9)	B (13.2)
	Southbound Left-Turn	B (14.1)	C (15.9)	C (16.5)
Hampshire Pike at Driveway A	Eastbound Left-Turn	--	--	B (10.8)
	Westbound Left-Turn*	--	--	A (8.8)
	Northbound STOP*	--	--	E (47.8)
	Southbound STOP	--	--	F (323.7)
Old Williamsport Pike at Driveway B	Westbound Left-Turn	--	--	A (7.4)
	Northbound STOP	--	--	A (8.6)

**Turning movements associated with the Oxford Village Circle development were conservatively assumed to be 10 vehicles per movement based on trip generation for 46 multi-family (low-rise) apartments*

The minor street approaches at the unsignalized intersection of James Campbell Boulevard at Old Williamsport Pike currently operate and are projected to operate at low levels-of-service for both the background and future conditions. The intersection geometry currently provides separate right-turn lanes for both minor street approaches. Low LOS for minor street approaches is not uncommon, as vehicles may experience a delay turning onto a major roadway.

10.2 Queuing Analysis

The *Highway Capacity Manual 6th Edition* provides insight and guidance regarding the back of queue for both signalized and unsignalized intersections.

Signalized:

"The back-of-queue position is the position of the vehicle stopped farthest from the stop line during the cycle as a consequence of the display of a red signal indication. The back-of-queue size depends on the arrival pattern of vehicles and on the number of vehicles that do not clear the intersection during the previous cycle." (Source: *Highway Capacity Manual 6th Edition*, Chapter 19)

Unsignalized:

"Queue length is an important consideration at unsignalized intersections. Theoretical studies and empirical observations have demonstrated that the probability distribution of queue lengths for any minor movement at an unsignalized intersection is a function of the capacity of the movement and the volume of traffic being served during the analysis period." (Source: *Highway Capacity Manual 6th Edition*, Chapter 20)

A queuing analysis was performed using the *Synchro 10* software to evaluate and determine the forecasted 50th percentile queue lengths and 95th percentile queue lengths. The queue lengths are summarized in **Table 17** and **Table 18**, respectively. The 50th and 95th percentile queuing reports are included in **Appendix F**.

Table 17 – Queue Length Results – AM Peak Hour

Intersection		Existing Storage Length	50th Percentile			95th Percentile		
			Exist. 2021	Back. 2025	Future 2025	Exist. 2021	Back. 2025	Future 2025
Hampshire Pike at Lion Parkway /Iberia Drive	Eastbound Left-Turn	300	0	0	0	2	2	2
	Eastbound Right-Turn/Thru	--	688	1,066	1,093	1,062	1,409	1,437
	Westbound Left-Turn	215	85	100	100	161	175	175
	Westbound Right-Turn/Thru	--	119	181	195	249	331	356
	Northbound Left-Turn/Thru	--	163	184	184	268	329	329
	Northbound Right-Turn	150	0	0	0	49	52	52
	Southbound	--	10	10	10	30	33	33
Hampshire Pike at James Campbell Boulevard	Eastbound Left-Turn	180	120	176	252	183	245	340
	Eastbound Right-Turn/Thru	--	411	588	716	640	895	1,016
	Westbound Left-Turn	100	59	69	72	101	134	135
	Westbound	--	161	215	240	258	311	332
	Westbound Right-Turn	140	16	28	29	67	84	84
	Northbound Left-Turn	120	189	238	258	295	391	419
	Northbound	--	216	259	266	288	328	328
	Northbound Right-Turn	130	15	24	25	64	78	78
	Southbound Left-Turn	150	232	294	305	418	487	487
	Southbound Right-Turn/Thru	--	471	685	744	664	836	870
James Campbell Boulevard at Industrial Park Road	Eastbound Left-Turn	140	82	107	172	250	388	842
	Eastbound Right-Turn/Thru	--	19	24	25	57	68	72
	Westbound	--	56	67	69	114	130	133
	Northbound	--	5	6	6	23	25	25
	Southbound Left-Turn/Thru	130	75	84	84	144	157	157
	Southbound Right-Turn	--	468	670	747	754	995	1,086

NOTE: All numbers represent distance in feet

Table 18 – Queue Length Results – PM Peak Hour

Intersection		Existing Storage Length	50th Percentile			95th Percentile		
			Exist. 2021	Back. 2025	Future 2025	Exist. 2021	Back. 2025	Future 2025
Hampshire Pike at Lion Parkway /Iberia Drive	Eastbound Left-Turn	300	1	1	1	3	3	3
	Eastbound Right-Turn/Thru	--	304	499	532	451	782	929
	Westbound Left-Turn	215	10	12	12	21	23	23
	Westbound Right-Turn/Thru	--	175	292	305	335	565	591
	Northbound Left-Turn/Thru	--	354	457	457	537	653	653
	Northbound Right-Turn	150	0	0	0	23	28	28
	Southbound	--	2	2	2	13	13	13
Hampshire Pike at James Campbell Boulevard	Eastbound Left-Turn	180	123	172	213	175	233	283
	Eastbound Right-Turn/Thru	--	368	507	560	497	732	815
	Westbound Left-Turn	100	61	68	68	98	105	105
	Westbound	--	179	256	296	264	356	391
	Westbound Right-Turn	140	31	61	71	89	128	137
	Northbound Left-Turn	120	320	473	548	515	671	730
	Northbound	--	270	328	344	363	424	424
	Northbound Right-Turn	130	4	12	12	45	57	57
	Southbound Left-Turn	150	114	131	135	178	196	196
	Southbound Right-Turn/Thru	--	455	677	803	577	804	894
James Campbell Boulevard at Industrial Park Road	Eastbound Left-Turn	140	112	174	265	606	956	1,097
	Eastbound Right-Turn/Thru	--	15	18	19	52	62	63
	Westbound	--	49	62	64	105	128	133
	Northbound	--	8	9	9	33	36	36
	Southbound Left-Turn/Thru	130	28	31	31	72	77	77
	Southbound Right-Turn	--	49	185	425	218	532	775

NOTE: All numbers represent distance in feet

The queue analyses demonstrate significant queuing for vehicles making a northbound left-turn and southbound left-turn at the intersection of Hampshire Pike at James Campbell Boulevard. This is likely due to the high volume of vehicles turning for each movement that must be served by a protected-only left-turn phase.

10.3 Analysis with Improvements

An alternate traffic analysis was performed for the intersections of Hampshire Pike at Lion Parkway/Iberia Drive, Hampshire Pike at James Campbell Boulevard, and James Campbell Boulevard at Industrial Park Road. These improvements were identified due to the Level of Service (LOS) based on the Background 2025 scenario.

- Hampshire Pike at Lion Parkway/Iberia Drive
    - Construct one (1) eastbound right-turn lane.
        - Adjust signal timings as necessary after lane modifications.
    - Provide an overlap phase for the northbound right-turn movement.
    - *Development traffic is not anticipated to utilize this turning movement and this improvement does not mitigate impacts from development traffic. This improvement may be planned by local jurisdictions to be implemented in the future.*

- Hampshire Pike at James Campbell Boulevard
    - Construct one (1) southbound right-turn lane.
        - Adjust signal timings as necessary after lane modifications.
    - Provide right-turn overlap phases for the northbound, southbound, and westbound approaches
    - *Due to ROW, waterway, and retaining wall constraints, this improvement is recommended to be planned by local jurisdictions.*

- James Campbell Boulevard at Industrial Park Road
    - Restripe the southbound shared through/left-turn lane along Industrial Park Road to provide a shared left/through/right-turn lane
        - Adjust signal timings as necessary after lane modifications.

Additional driveway improvements were identified due to LOS based on the Future 2025 scenario.

- Hampshire Pike at Driveway A
    - Construct one (1) eastbound left-turn lane.
    - Construct one (1) westbound right-turn lane.
    - Construct one (1) southbound left-turn lane.
    - Traffic signal with protected-permitted left-turn phasing on all approaches.

- James Campbell Boulevard at Old Williamson Pike
    - Construct one (1) northbound left-turn lane

A summary of the Synchro capacity analyses with these improvements are provided in **Table 19** and **Table 20** for the Background 2025 and Future 2025 scenarios. A summary of the HCS capacity analyses with these improvements are provided in **Table 21** and **Table 22** for the Background 2025 and Future 2025 scenarios.

Table 19 – *Synchro 10* Intersection Capacity Analysis Results – With Improvements – AM Peak Hour			
Intersection	**Approach**	**Background 2025 Conditions**	**Future 2025 Conditions**
Hampshire Pike at Lion Parkway /Iberia Drive (Signalized)	Eastbound	C (24.9)	C (25.6)
	Westbound	B (15.3)	B (15.6)
	Northbound	D (41.5)	D (41.0)
	Southbound	C (30.6)	C (30.6)
	Overall	C (24.5)	C (24.6)
Hampshire Pike at James Campbell Boulevard (Signalized)	Eastbound	D (43.5)	D (50.7)
	Westbound	D (35.7)	D (44.1)
	Northbound	E (68.0)	E (68.7)
	Southbound	E (73.9)	E (74.0)
	Overall	E (59.9)	E (62.5)
James Campbell Boulevard at Old Williamsport Pike (Unsignalized)	Eastbound STOP		F (105.4)
	Westbound STOP		D (31.8)
	Northbound Left-Turn		C (16.3)
	Southbound Left-Turn		B (10.5)
James Campbell Boulevard at Industrial Park Road (Signalized)	Eastbound	B (10.9)	C (21.6)
	Westbound	C (22.1)	C (32.3)
	Northbound	F (92.1)	F (92.1)
	Southbound	D (35.8)	C (23.0)*
	Overall	C (23.9)	C (24.1)*
Hampshire Pike at Driveway A	Eastbound	--	C (23.6)
	Westbound	--	B (19.7)
	Northbound	--	D (46.8)
	Southbound	--	D (41.8)
	Overall	--	C (23.8)

**Adding volume to a movement that experience lower delay can adjust the weighting of that movement in the LOS and delay calculations.*

Table 20 – *Synchro 10* Intersection Capacity Analysis Results – With Improvements – PM Peak Hour			
Intersection	**Approach**	**Background 2025 Conditions**	**Future 2025 Conditions**
Hampshire Pike at Lion Parkway /Iberia Drive (Signalized)	Eastbound	C (23.4)	C (24.1)
	Westbound	B (17.0)	B (16.7)
	Northbound	F (249.5)	F (249.5)
	Southbound	C (31.8)	C (31.8)
	Overall	E (64.9)	E (64.1)*
Hampshire Pike at James Campbell Boulevard (Signalized)	Eastbound	D (50.5)	E (60.9)
	Westbound	D (45.2)	E (55.3)
	Northbound	E (56.2)	E (58.0)
	Southbound	E (73.8)	E (74.0)
	Overall	E (58.9)	E (63.4)
James Campbell Boulevard at Old Williamsport Pike (Unsignalized)	Eastbound STOP		F (51.3)
	Westbound STOP		E (42.8)
	Northbound Left-Turn		B (13.2)
	Southbound Left-Turn		C (16.5)
James Campbell Boulevard at Industrial Park Road (Signalized)	Eastbound	C (23.4)	D (35.3)
	Westbound	C (32.7)	D (48.6)
	Northbound	F (86.5)	F (86.9)
	Southbound	B (16.5)	B (10.9)*
	Overall	C (23.9)	C (31.4)
Hampshire Pike at Driveway A	Eastbound	--	A (1.9)
	Westbound	--	B (17.6)
	Northbound	--	D (51.9)
	Southbound	--	D (47.7)
	Overall	--	B (14.4)

**Adding volume to a movement that experience lower delay can adjust the weighting of that movement in the LOS and delay calculations.*

The signalized intersection of Hampshire Pike at Lion Parkway/Iberia Drive is projected to operate at LOS E after improvements which is due to the high delay experienced by the northbound approach. However, because the opposing volume from the southbound approach is minimal, this is likely an unrealistic result and a limitation of the capacity analysis software. Additionally, field observations confirmed that the northbound left-turn queue typically cleared every cycle during the PM peak.

The signalized intersection of Hampshire Pike at James Campbell Boulevard is projected to operate at LOS E after improvements. Due to the physical constraints at the intersection such as the stream and bridge structure to the west and business and driveway locations to the east, this intersection should continue to be monitored for additional background improvements and/or conduct a more focused study of the intersection.

The Future 2025 Intersection Geometry is illustrated in **Figure 10**.

LEGEND

- Existing Intersection Geometry
- Background Intersection Geometry
- Future Intersection Geometry
- Existing Traffic Signal Control
- Future Traffic Signal Control
- Existing Stop Control
- Future Stop Control

Industrial Park Road

James Campbell Blvd

Old Williamsport Pike

Driveway B

Driveway A

Iberia Dr

Hampshire Pike

Hampshire Pike

James Campbell Blvd

1 2 3 4 5 6

Figure 10

Future 2025 Intersection Geometry

Hampshire Pike Mixed-Use
Traffic Impact Analysis

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11.0 INTERSECTION SIGHT DISTANCE

Intersection sight distance has been measured using methodology provided in Chapter 3.2 and Chapter 9.5 of *A Policy on Geometric Design of Highways and Streets, 6th Edition (2011)*, published by the American Association of State Highways and Transportation Officials (AASHTO). This methodology is also consistent with TDOT Standard Roadway Drawings for Intersection Sight Distance. The height of the driver's eye is considered to be 3.5 feet above the road surface, and the object height is also considered to be 3.5 feet. The location of the driver on the minor road is considered to be a minimum of 14.5 feet from the edge of traveled way along the major road.

Hampshire Pike a two (2) lane undivided roadway with a posted speed limit of 40 MPH; the minimum intersection sight distance is:

- 445 feet, using passenger vehicle as the design vehicle.

Old Williamsport Pike a two (2) lane undivided roadway with a posted speed limit of 35 MPH; the minimum intersection sight distance is:

- 390 feet, using passenger vehicle as the design vehicle.

The following field measurements were obtained for intersection sight distance:

- Hampshire Pike at Driveway A
    - Looking to the left (east), intersection sight distance is greater than 800 feet.
    - Looking to the right (west), intersection sight distance is greater than 1,000 feet.
- Old Williamsport Pike at Driveway B
    - Looking left (to the west) the intersection sight distance is greater than 450 feet.
    - Looking right (to the east) the intersection sight distance is greater than 700 feet.

12.0 RECOMMENDATIONS

Related to the proposed development, the following mitigation improvements will improve traffic operations under the Future 2025 scenario and are to be constructed by the proposed development:

Hampshire Pike (SR 50) at James Campbell Boulevard

- Reconstruct north leg median nose with an 8' radius to reduce median length by approximately 13 feet to better facilitate vehicle turning movements. Relocate existing wood pole with dual arm luminaire and reconnect traffic signal span wire. Reconstruct south leg median nose with an 8' radius to reduce median length by approximately 15 feet to better facilitate vehicle turning movements.
    - *This improvement was added based on input from City staff and Planning Commission.*

James Campbell Boulevard at Old Williamsport Pike

- Construct a northbound left-turn lane with 100 feet of storage.

James Campbell Boulevard at Industrial Park Road

- Restripe the southbound shared through/left-turn lane along Industrial Park Road to provide a shared left/through/right-turn lane. Adjust signal timings as necessary after lane modifications.

Hampshire Pike at Driveway A

- Construct a westbound right-turn lane along Hampshire Pike with 125 feet of storage.
- Construct an eastbound left-turn lane along Hampshire Pike with 100 feet of storage.
- Construct a westbound left-turn lane along Hampshire Pike with 100 feet of storage.
- Construct Driveway A with three (3) lanes for vehicular movement: one (1) lane for vehicle ingress and two (2) for vehicle egress.
- Construct a traffic signal with protected-permitted left-turn phasing on all approaches.
- Install signs and pavement markings in accordance with the standards provided in the *Manual on Uniform Traffic Control Devices* (MUTCD).

Old Williamsport Pike at Site Driveway B

- Construct Site Driveway B with two (2) lanes for vehicular movement: one (1) lane for vehicle ingress and one (1) for vehicle egress.
- Provide STOP control along the northbound approach of Site Driveway B.
- Construct a westbound left-turn lane along Old Williamsport Pike with 100 feet of storage.
- Provide adequate intersection sight distance in accordance with the criteria provided in *A Policy on Geometric Design of Highways and Streets*.

Unrelated to the proposed development, the following improvements are proposed to improve operations under the Background 2025 scenario and not proposed to be constructed as part of this development:

Hampshire Pike at Lion Parkway/Iberia Drive

- Construct one (1) eastbound right-turn lane.
    - Adjust signal timings as necessary after lane modifications.
- Provide an overlap phase for the northbound right-turn movement.
- *Development traffic is not anticipated to utilize this turning movement and this improvement does not mitigate impacts from development traffic. This improvement may be planned by local jurisdictions to be implemented in the future. See section 10.3 in the report for additional information.*

Hampshire Pike at James Campbell Boulevard

- Construct one (1) southbound right-turn lane.
    - Adjust signal timings as necessary after lane modifications.
- Provide right-turn overlap phases for the northbound, southbound, and westbound approaches
- *Due to ROW, waterway, and retaining wall constraints, this improvement is recommended to be planned by local jurisdictions. See section 10.3 in the report for additional information.*

Appendix A

Site Plan

SITE DEVELOPMENT PLAN SUBMITTAL

HAMPSHIRE PIKE MIXED USE

HAMPSHIRE PIKE
COLUMBIA, TENNESSEE

SITE DEVELOPMENT PLAN SUBMITTAL REQUIREMENTS

SITE DATA TABLE		
SITE ADDRESS	HAMPSHIRE PIKE COLUMBIA, TENNESSEE, 38401	
TAX MAP	MAP 089 PARCEL 04103 000	
OVERALL AREA	EXISTING	PROPOSED
SITE AREA	24.01 AC AC	24.01 AC AC
DISTURBED AREA	N/A	19.3 AC
IMPERVIOUS AREA	0 AC	8.56 AC
PERVIOUS AREA	24.01 AC	15.45 AC
BUILDING DATA	REQUIRED	PROVIDED
UNIT DENSITY	15 DUA	
TOTAL UNITS	360 UNITS	
BUILDING SETBACKS	REQUIRED	PROVIDED
FRONT: NORTH	20 FT	20 FT
REAR: SOUTH	20 FT	20 FT
SIDE: EAST	10 FT	5 FT
SIDE: WEST	10 FT	5 FT
MINIMUM BUILDING SEPARATION	20 FT	34'

EXISTING PROPERTY SUMMARY	
PROPERTY ADDRESS:	HAMPSHIRE PIKE COLUMBIA, TENNESSEE
MAP AND PARCEL ID:	MAP 089, PARCEL 04103 000
U.S. FEMA FIRM PANEL:	47119C0280E DATED 4/16/2007
EXISTING ZONING:	MRC
EXISTING LAND USE:	MULTIFAMILY

SITE DATA TABLE

PROJECT NAME:	STEADFAST - HAMPSHIRE PIKE
PARCEL ADDRESS:	HAMPSHIRE PIKE COLUMBIA, TENNESSEE
TAX MAP AND PARCEL NUMBER:	MAP 089, PARCEL 4103
ZONING:	MRC
LAND USE:	MULTI-FAMILY
SITE ACREAGE:	24.01 AC (1,045,757 SF)
PROPOSED BUILDING SF:	# SF
- CLUBHOUSE (1)	9,188 SF
- LONG APARTMENT BUILDING: (12)	9,864 SF
- SHORT APARTMENT BUILDING: (3)	8,949 SF
PROPOSED BUILDING HEIGHT:	45' HT MAX
PARKING REQUIRED: 1.5 SPACES PER 2 BEDROOMS	
- 1 BEDROOM UNITS / BEDROOMS =	108 UNITS / 108 BEDROOMS
- 2 BEDROOM UNITS / BEDROOMS =	180 UNITS / 360 BEDROOMS
- 3 BEDROOM UNITS / BEDROOMS =	72 UNITS / 216 BEDROOMS
- TOTAL UNITS / BEDROOMS =	360 UNITS / 684 BEDROOMS
TOTAL PARKING REQUIRED:	513 TOTAL SPACES 9 ADA SPACES
TOTAL PARKING PROVIDED:	530 TOTAL SPACES 519 STANDARD SPACES 11 ACCESSIBLE SPACE
PROPERTY SETBACKS:	20' FRONT / STREET 10' SIDE 20' REAR
OPEN SPACE:	64.4% (673,160 SF)
LOT BUILDING COVERAGE:	14.76% (154,403 SF)
IMPERVIOUS SITE AREA:	35.6% (372,716 SF)



VICINITY MAP
NOT TO SCALE

CITY OF COLUMBIA
MAURY COUNTY, TENNESSEE

Sheet List Table	
Sheet Number	Sheet Title
C0-00	COVER
C1-00	EXISTING CONDITIONS
C1-01	MASS GRADING
C2-00	SITE LAYOUT - OVERALL
C3-00	GRADING AND DRAINAGE PLAN - OVERALL
C4-00	UTILITY PLAN - OVERALL
A1.0	ARCHITECTURAL ELEVATIONS

PROJECT DESIGN TEAM

ARCHITECT
CBTWO ARCHITECTS
500 LIBERTY ST. SE, SUITE 100
SALEM, OREGON 97301
PHONE: (503) 480-8700
CONTACT: KIRK SUND, A.I.A.

CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
10 LEA AVENUE, SUITE 400
NASHVILLE, TENNESSEE 37210
PHONE: (615) 564-2701
CONTACT: KELLEY FRANK, P.E.
COLTON DORRIS, E.I.

SURVEY
WILSON & ASSOCIATES, P.C.
108 BEASLEY DRIVE
FRANKLIN, TN 37064
PHONE: (615) 794-2275
CONTACT: JOEY C. WILSON II, PLS

ENVIRONMENTAL
BDY NATURAL SCIENCES CONSULTANTS
2607 WESTWOOD DRIVE
NASHVILLE, TENNESSEE
PHONE: (615)460-9797
CONTACT: SAMUEL K. PARISH, PG, CPESC

PERMITTING / UTILITY CONTACTS

BUILDING DEPT.
CITY OF COLUMBIA
DEVELOPMENT SERVICES
700 N GARDEN ST,
COLUMBIA, TN 38401
PHONE: (931) 560-1500
CONTACT: PAUL KELTNER
EMAIL: PAUL@COLUMBIATN.COM

STORMWATER
CITY OF COLUMBIA
700 N GARDEN STREET,
COLUMBIA, TN 38401
PHONE: (931) 560-1500
CONTACT: DOUGLAS TONEY
EMAIL: DTONEY@COLUMBIATN.COM

WATER
COLUMBIA POWER AND WATER SYSTEMS
201 PICKENS LANE,
COLUMBIA, TN 38401
PHONE: (931) 375-7649
CONTACT: JERMAINE COOPER
EMAIL: JERMAINE.COOPER@CPWS.COM

SANITARY SEWER
CITY OF COLUMBIA WASTEWATER DEPARTMENT
700 N GARDEN STREET,
COLUMBIA, TN 38401
PHONE: (931) 560-1500
CONTACT: RYAN FILIPKOWSKI
EMAIL: RFILIPKOWSKI@COLUMBIATN.COM

PLANNING AND ZONING
CITY OF COLUMBIA PLANNING DEPARTMENT
700 N GARDEN STREET,
COLUMBIA, TN 38401
PHONE: (931) 560-1500
CONTACT: KEVIN MCCARTHY
EMAIL: KMCCARTHY@COLUMBIATN.COM

FIRE CHIEF
CITY OF COLUMBIA FIRE AND RESCUE
1000 S GARDEN ST,
COLUMBIA, TN 38401
PHONE: (931) 560-1700
CONTACT: TY COBB
EMAIL: TCOBB@COLUMBIATN.COM

TDOT
TENNESSEE DEPARTMENT OF TRANSPORTATION
REGION 3 TRAFFIC ENGINEER
660 CENTENNIAL BLVD
NASHVILLE, TN 37243
PHONE: (615) 350-4300

NATURAL GAS
ATMOS ENERGY
810 CRESCENT CENTER DR, #600,
FRANKLIN, TN 37064
PHONE: (615) 509-4051
CONTACT: ABBY DAVIS
EMAIL: ABBY.DAVIS@ATMOSENERGY.COM

TELECOMMUNICATIONS
AT&T
904 S HIGH STREET,
COLUMBIA, TN 38401
PHONE: (931) 380-3448
CONTACT: BRIAN GOMEZ
EMAIL: BG3893@ATT.COM

ELECTRIC
COLUMBIA POWER AND WATER SYSTEMS
201 PICKENS LANE,
COLUMBIA, TN 38401
PHONE: (931) 375-7649
CONTACT: JERMAINE COOPER
EMAIL: JERMAINE.COOPER@CPWS.COM

OWNER / DEVELOPER

STEADFAST COMPANIES
18100 VON KARMAN AVE., SUITE 500
IRVINE,CALIFORNIA, 92612
PHONE: 949.518.2191
CONTACT: PATRICK WOEPSE

PLANS PREPARED BY

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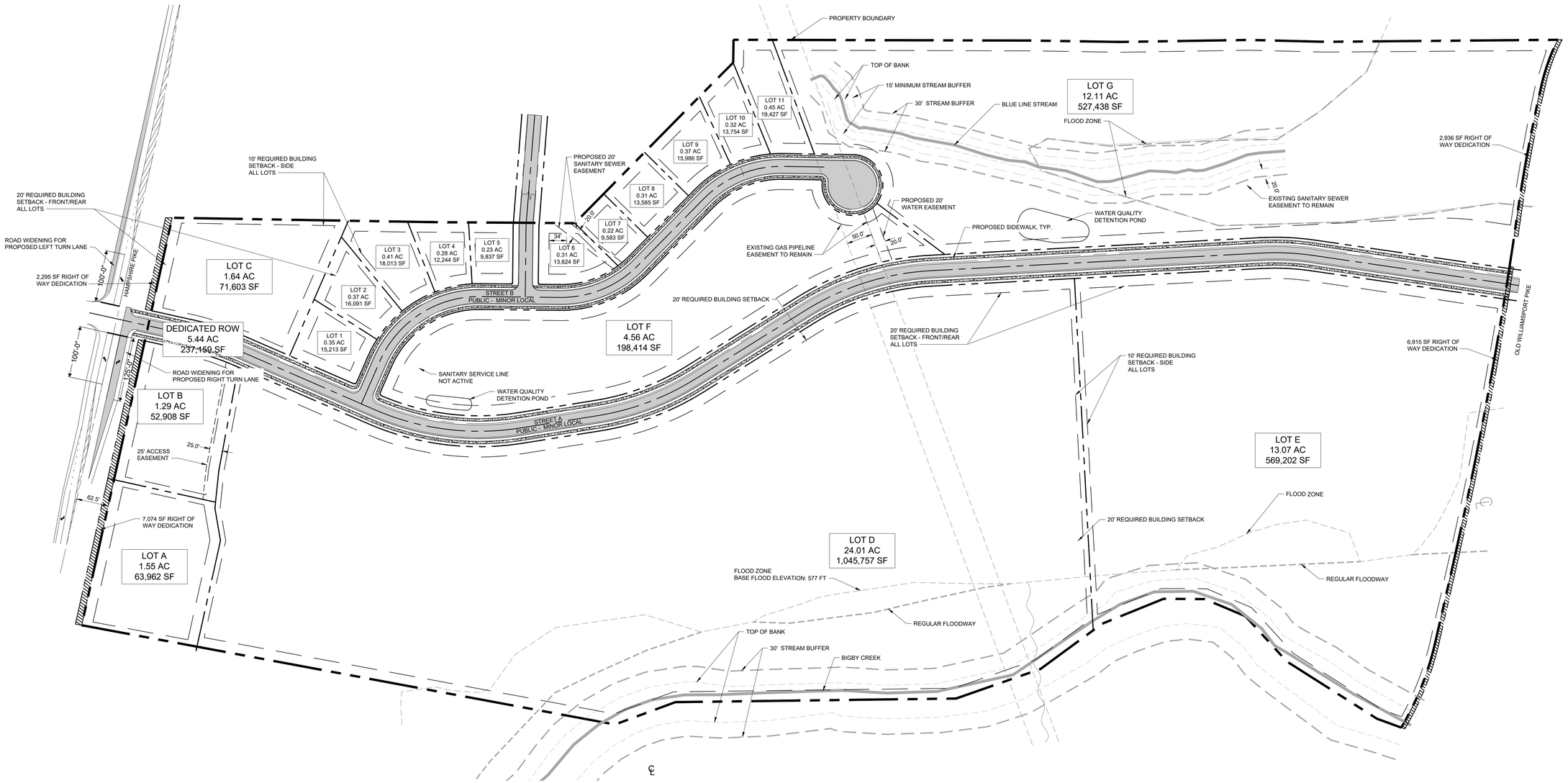
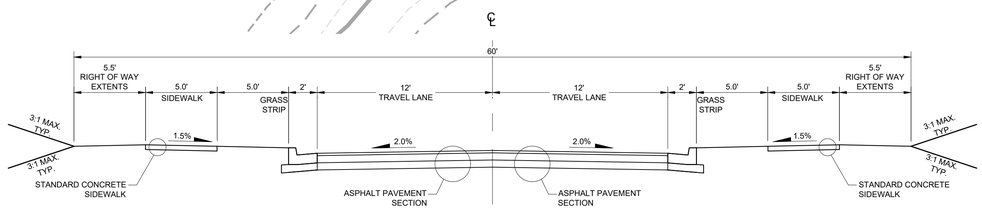
PLAN REVISIONS		
REVISION NO.	DATE	REMARKS

FILE NUMBER	SHEET NUMBER	TOTAL SHEETS
118332003	C0-00	7

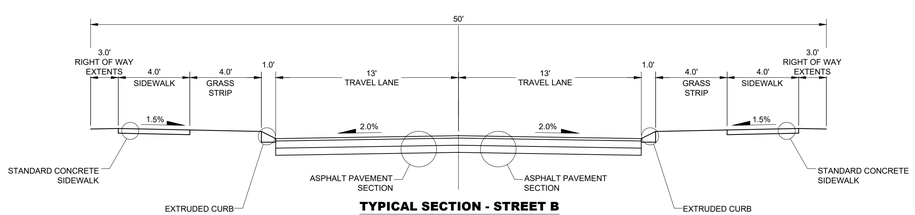
PROJECT NAME - SET DESCRIPTION

Drawing name: K:\NSH_LDEV\118332003 - Steadfast Hampshire Pike\4-CADD\PlanSheets - MF\C0-00 COVER.dwg C0-00 COVER Jun 21, 2022 10:11am by: Colton.Dorris





TYPICAL SECTION - STREET A
ROW = 60'



TYPICAL SECTION - STREET B
ROW = 50'

EXISTING AND PROPOSED LOT INFORMATION

LOT NUMBER	ACREAGE (AC)	SQUARE FOOTAGE (SF)	LOT USE
EXISTING LOT	67.28	2,930,900	--
DEDICATED ROW	5.44	237,159	--
LOT A	1.55	67,581	COMMERCIAL
LOT B	1.29	56,392	COMMERCIAL
LOT C	1.64	71,603	COMMERCIAL
LOT D	24.01	1,045,757	MULTIFAMILY
LOT E	13.07	569,202	VACANT
LOT F	4.56	198,414	VACANT
LOT G	12.11	527,438	VACANT
LOT 1	0.35	15,213	SINGLE FAMILY
LOT 2	0.37	16,091	SINGLE FAMILY
LOT 3	0.41	18,013	SINGLE FAMILY
LOT 4	0.28	12,244	SINGLE FAMILY
LOT 5	0.23	9,837	SINGLE FAMILY
LOT 6	0.31	13,624	SINGLE FAMILY
LOT 7	0.22	9,583	SINGLE FAMILY
LOT 8	0.31	13,585	SINGLE FAMILY
LOT 9	0.37	15,986	SINGLE FAMILY
LOT 10	0.32	13,754	SINGLE FAMILY
LOT 11	0.45	19,427	SINGLE FAMILY

US FEMA FIRM PANEL

U.S. FEMA FIRM PANEL: 47119C0280E DATED 4/16/2007

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HAMPSHIRE PIKE MIXED USE
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DRAWN BY:	CLD
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SITE LAYOUT

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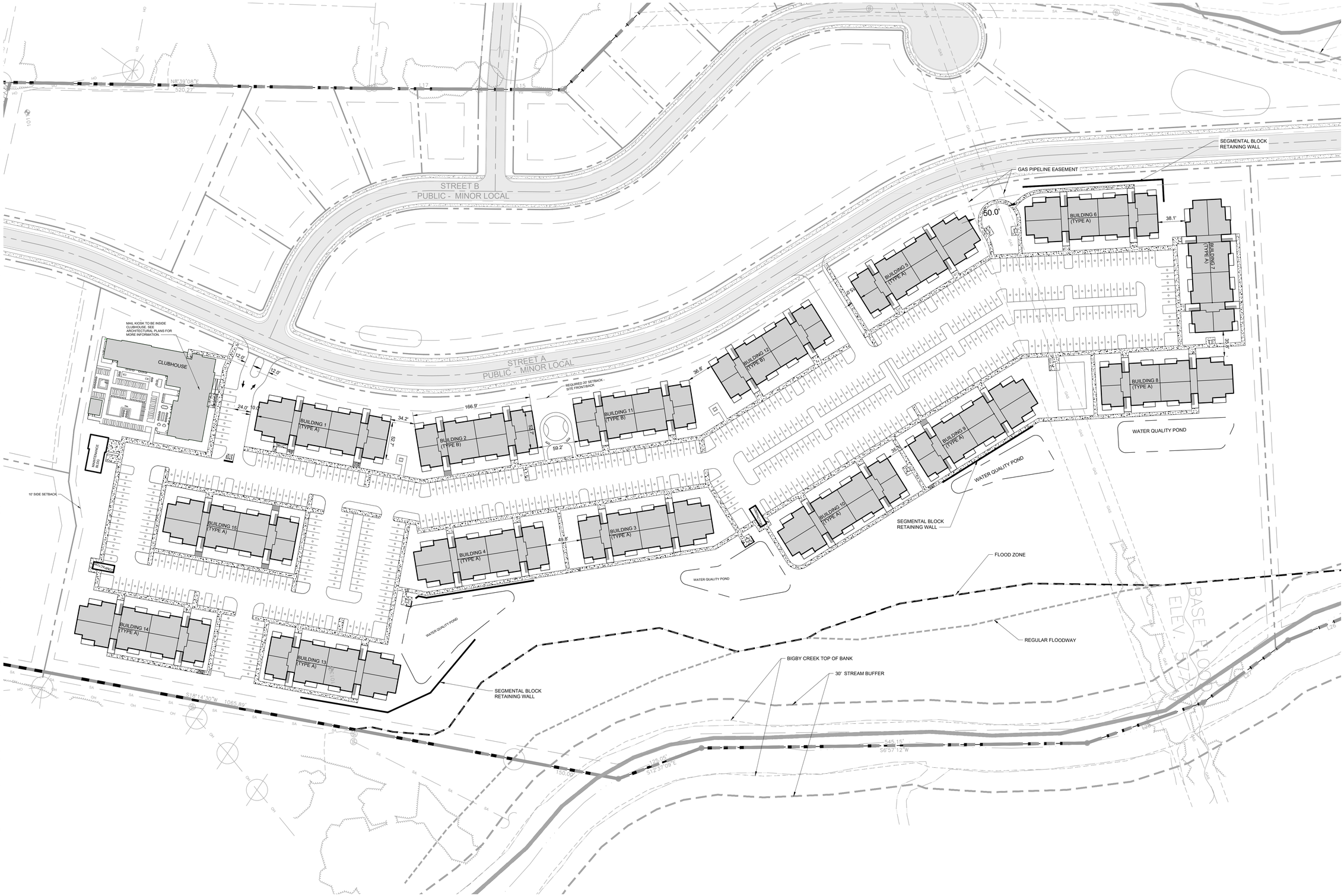

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SITE LAYOUT - OVERALL

SHEET NUMBER
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Drawing name: K:\NSH_LDEV\118332003 - Steadfast Hampshire Pike\4-CADD\PlanSheets - MF\C2-00 SITE LAYOUT - OVERALL.dwg C2-00 SITE LAYOUT - OVERALL Jun 20, 2022 12:02pm by: Colton.Dorris

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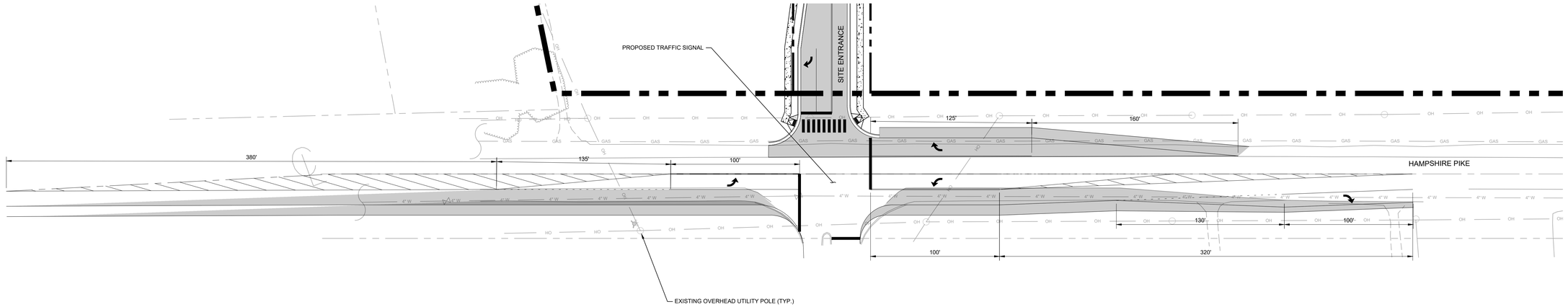

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DRAWN BY:	AIM
CHECKED BY:	RAP
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TRAFFIC SIGNAL PLAN - HAMPSHIRE PIKE AT SITE ENTRANCE

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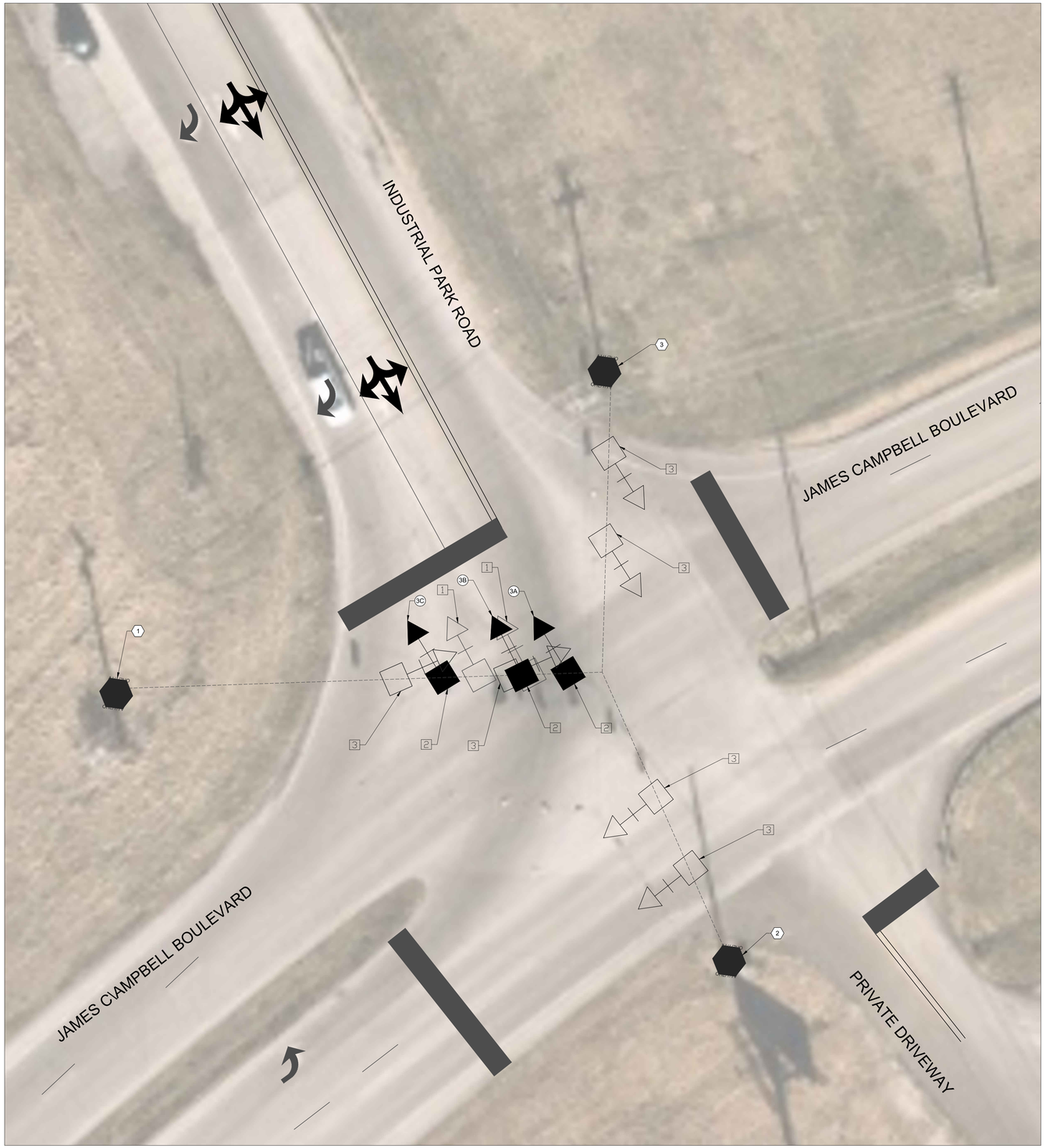

SIGNAL HEAD ASSEMBLIES

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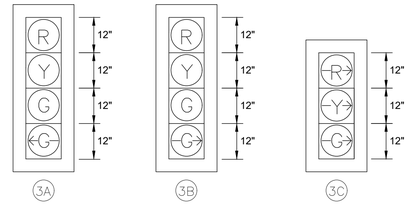
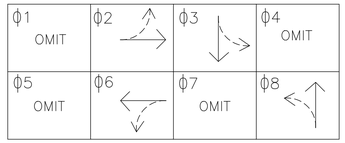


PHASING DIAGRAM



CONSTRUCTION NOTES

1. REMOVE EXISTING SIGNAL HEAD
2. INSTALL SIGNAL HEAD AND REQUIRED CONDUCTOR
3. RETAIN EXISTING SIGNAL HEAD

LEGEND

- EXISTING SIGNAL POLE
- EXISTING SIGNAL HEAD
- PROPOSED SIGNAL HEAD
- EXISTING CONDUIT

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DRAWN BY:	AIM
CHECKED BY:	RAP
DATE:	5/16/2022

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TRAFFIC SIGNAL PLAN - JAMES CAMPBELL BLVD AT INDUSTRIAL WAY

SHEET NUMBER
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Drawing name: K:\NSH_LDEV\116332003 - Steadfast Hampshire Phase\4-CAD\Plan\Sheets\T1-00 TRAFFIC SIGNAL PLAN.dwg T3-00 TRAFFIC SIGNAL PLAN Jun 21, 2022 1:37pm by Kelley.Frank



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0 10 20 40

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JAMES CAMPBELL BLVD AT OLD WILLIAMSPORT PIKE

SHEET NUMBER
T3-00

KIMLEY-HORN PROJECT NO.
116332003

DATE
5/16/2022

CHECKED BY: RAP
DRAWN BY: AMF
DESIGNED BY: RAP

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HAMPSHIRE PIKE MIXED USE PRELIMINARY PLAT

COLUMBIA, TN

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GRAPHIC SCALE IN FEET
0 10 20 40

NORTH

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10 Lea Avenue, Nashville, TN 37210
Main: 615.564.2701 | www.kimley-horn.com
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HAMPSHIRE PIKE MIXED USE
PRELIMINARY PLAT
COLUMBIA, TN

No.	REVISIONS	DATE	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

DESIGNED BY:	RAP
DRAWN BY:	AIM
CHECKED BY:	RAP
DATE:	6/21/2022

KIMLEY-HORN PROJECT NO.
118332003

HAMPSHIRE PIKE AT JAMES CAMPBELL BLVD

SHEET NUMBER
T4-00

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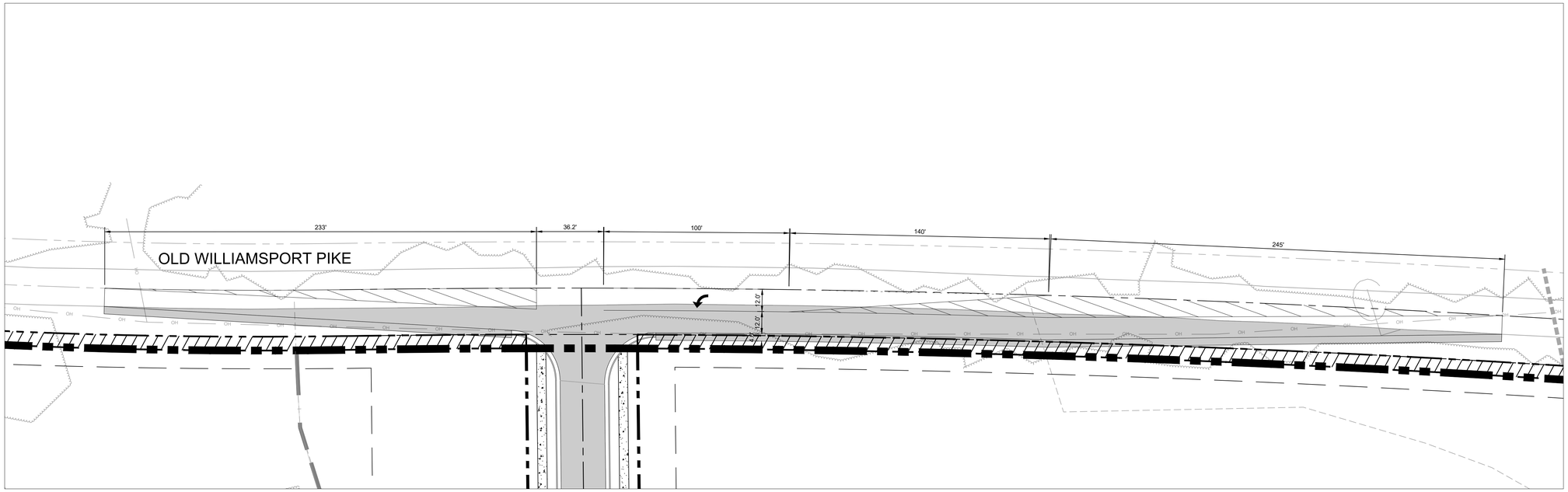

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GRAPHIC SCALE IN FEET
0 15 30 60

NORTH

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HAMPSHIRE PIKE MIXED USE
PRELIMINARY PLAT
COLUMBIA, TN

No.	REVISIONS	DATE	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

DESIGNED BY:	RAP
DRAWN BY:	AIM
CHECKED BY:	RAP
DATE:	6/21/2022
KIMLEY-HORN PROJECT NO.	118332003

OLD WILLIAMSPORT PIKE AT SITE ENTRANCE

SHEET NUMBER
T5-00

Appendix B

Photos

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 1 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 1



Comments:

Photo No. 2



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 2 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 3



Comments:

Photo No. 4



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 3 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 5



Comments:

Photo No. 6



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 4 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 7



Comments:

Photo No. 8



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 5 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 9



Comments:

Photo No. 10



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 6 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 11



Comments:

Photo No. 12



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 7 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 13



Comments:

Photo No. 14



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 8 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 15



Comments:

Photo No. 16



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 9 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 17



Comments:

Photo No. 18



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 10 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 19



Comments:

Photo No. 20



Comments:

Site Name: Hampshire Pike Mixed-Use

Photo No. 21

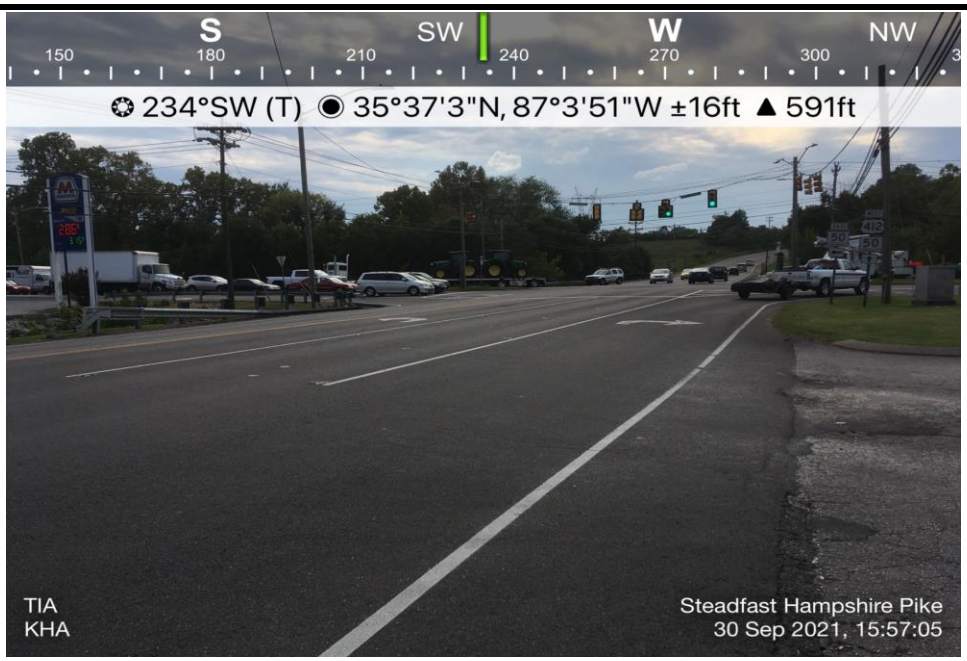

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Photo No. 22



Comments:

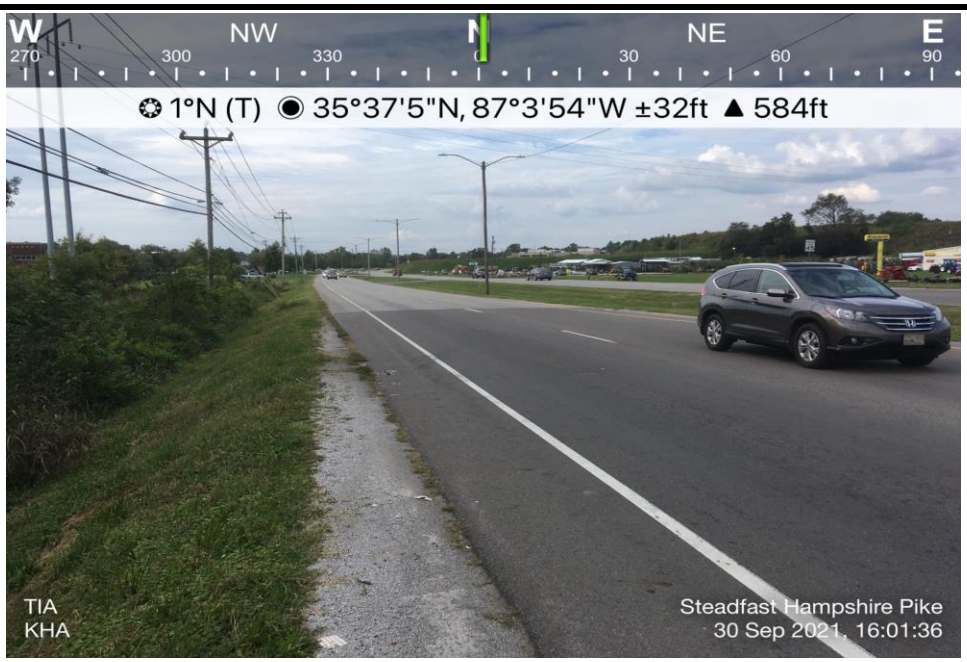
Site Name: Hampshire Pike Mixed-Use

Photo No. 23



Comments:

Photo No. 24



Comments:

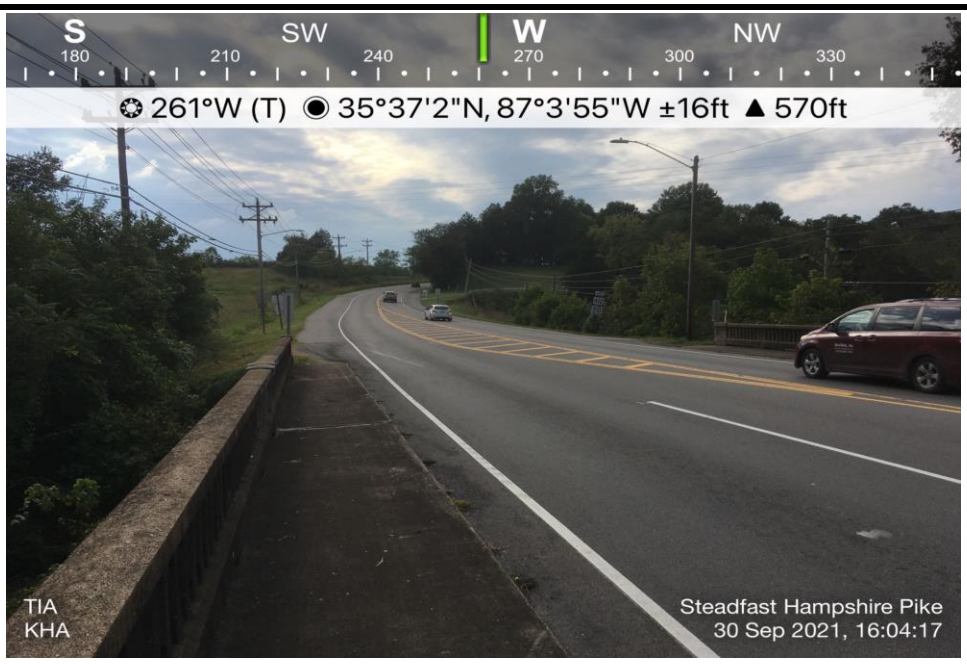
Site Name: Hampshire Pike Mixed-Use

Photo No. 25



Comments:

Photo No. 26



Comments:

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214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 14 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 27



Comments:

Photo No. 28



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 15 of 20

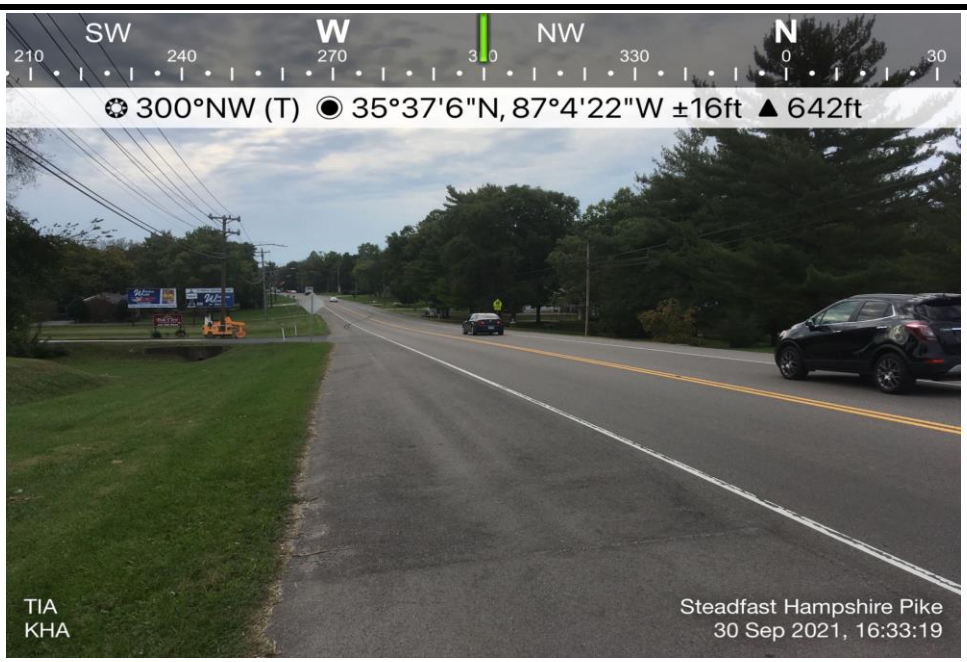
Site Name: Hampshire Pike Mixed-Use

Photo No. 29



Comments:

Photo No. 30



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 16 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 31



Comments:

Photo No. 32



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

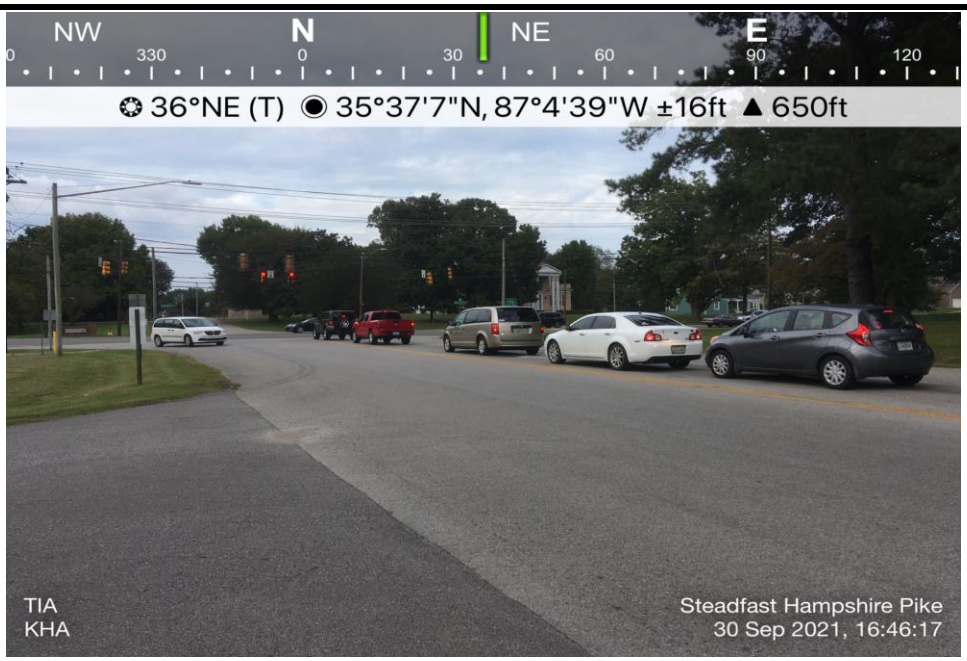
Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 17 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 33



Comments:

Photo No. 34



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 18 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 35



Comments:

Photo No. 36



Comments:

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214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 19 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 37



Comments:

Photo No. 38



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 20 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 39



Comments:

Photo No. 40



Comments:

Appendix C

Traffic Data

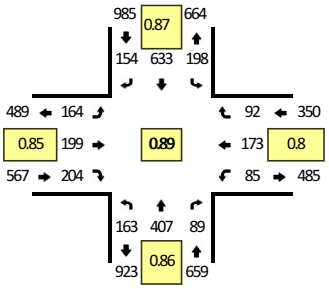
Type of peak hour being reported: Intersection Peak

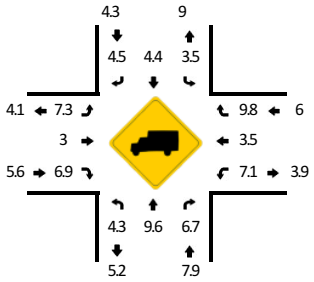
Method for determining peak hour: Total Entering Volume

LOCATION: N James Campbell Blvd -- Hampshire Pike
CITY/STATE: Columbia, TN

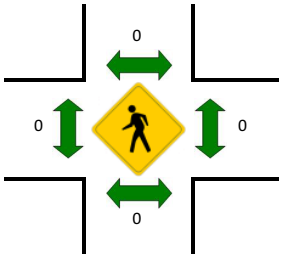
QC JOB #: 15562401
DATE: Tue, Sep 14 2021

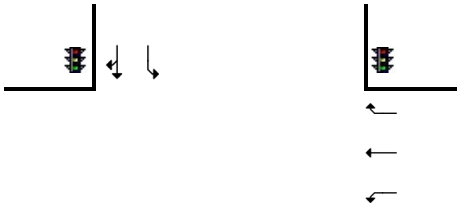
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

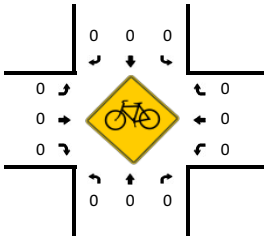


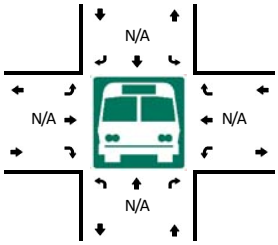


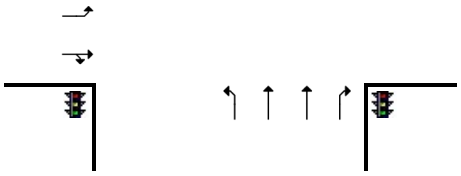
Quality Counts
DATA THAT DRIVES COMMUNITIES

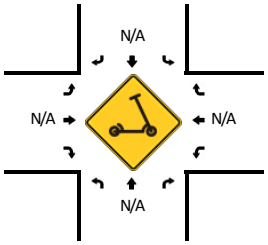












15-Min Count Period Beginning At	N James Campbell Blvd (Northbound)				N James Campbell Blvd (Southbound)				Hampshire Pike (Eastbound)				Hampshire Pike (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	19	78	2	0	11	90	13	0	18	21	36	0	6	10	5	0	309	
6:45 AM	11	83	9	0	16	98	30	0	28	32	38	0	7	23	14	0	389	
7:00 AM	28	91	17	0	19	111	48	0	31	42	33	0	7	23	20	0	470	
7:15 AM	49	86	17	0	50	154	58	1	38	47	60	0	15	48	16	0	639	1807
7:30 AM	41	117	34	0	70	175	39	0	50	49	37	0	23	54	32	0	721	2219
7:45 AM	39	120	25	1	47	179	31	0	55	51	60	0	31	37	37	0	713	2543
8:00 AM	33	84	13	0	30	125	26	0	21	52	47	0	16	34	7	0	488	2561
8:15 AM	26	105	14	0	25	134	20	0	23	36	23	0	16	17	15	0	454	2376

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	164	468	136	0	280	700	156	0	200	196	148	0	92	216	128	0	2884
Heavy Trucks	0	60	16		16	24	8		36	4	4		8	4	24		204
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 9/20/2021 10:10 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

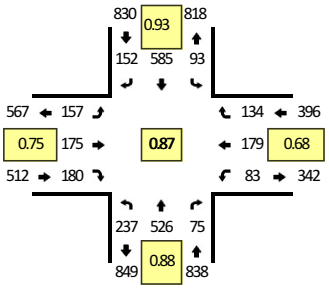
Type of peak hour being reported: Intersection Peak

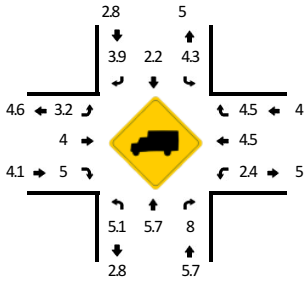
Method for determining peak hour: Total Entering Volume

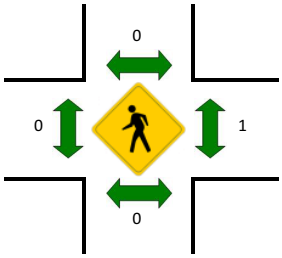
LOCATION: N James Campbell Blvd -- Hampshire Pike
CITY/STATE: Columbia, TN

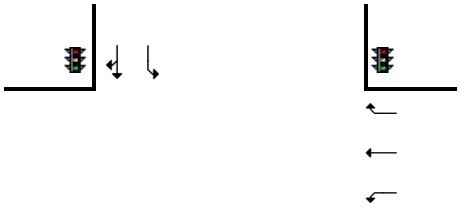
QC JOB #: 15562402
DATE: Tue, Sep 14 2021

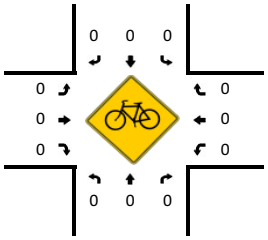
Peak-Hour: 3:00 PM -- 4:00 PM
Peak 15-Min: 3:00 PM -- 3:15 PM

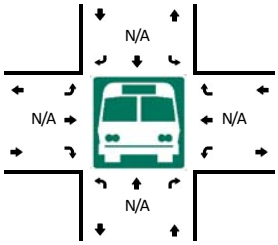


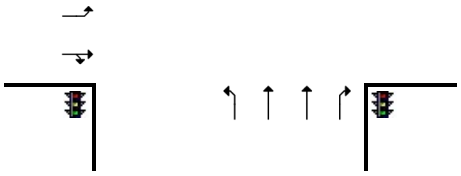


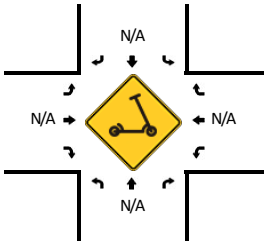












15-Min Count Period Beginning At	N James Campbell Blvd (Northbound)				N James Campbell Blvd (Southbound)				Hampshire Pike (Eastbound)				Hampshire Pike (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	53	129	24	0	26	159	35	0	58	59	54	0	28	46	71	0	742	
3:15 PM	54	134	19	0	16	127	47	0	49	49	58	0	18	37	28	0	636	
3:30 PM	61	110	17	0	29	162	31	1	35	46	44	0	20	45	21	0	622	
3:45 PM	68	153	15	1	21	137	39	0	15	21	24	0	17	51	14	0	576	2576
4:00 PM	59	134	20	0	17	112	44	0	29	40	33	0	25	56	18	0	587	2421
4:15 PM	68	127	18	1	17	150	42	1	21	36	25	0	16	35	29	0	586	2371
4:30 PM	60	131	14	0	27	130	29	1	26	39	45	0	20	52	29	0	603	2352
4:45 PM	55	145	15	0	34	132	51	0	19	44	40	0	23	45	17	0	620	2396
5:00 PM	58	150	19	0	22	171	42	1	24	38	51	0	23	44	28	0	671	2480
5:15 PM	71	148	16	0	21	126	28	0	20	37	39	0	15	56	31	0	608	2502
5:30 PM	63	132	13	1	18	137	32	0	24	34	29	0	11	51	18	0	563	2462
5:45 PM	74	114	11	0	10	110	52	0	22	36	23	0	14	41	16	0	523	2365

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	212	516	96	0	104	636	140	0	232	236	216	0	112	184	284	0	2968
Heavy Trucks	12	12	4		8	12	8		8	12	8		8	16	20		128
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

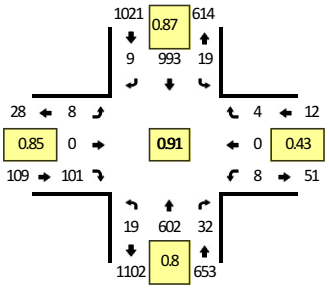
Report generated on 9/20/2021 10:10 AM

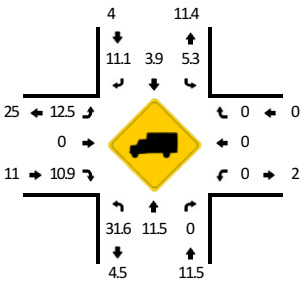
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

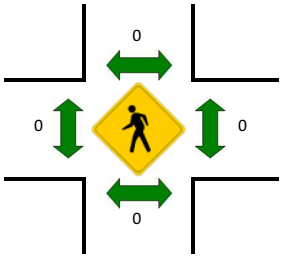
LOCATION: N James Campbell Blvd -- Old Williamsport Pike | **QC JOB #:** 15562403
CITY/STATE: Columbia, TN | **DATE:** Tue, Sep 14 2021

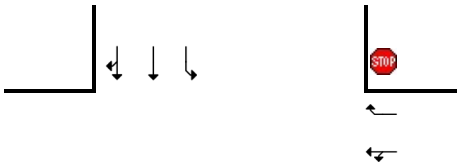
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

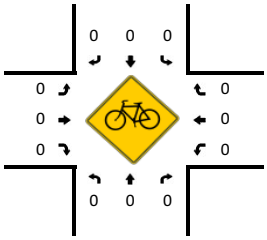


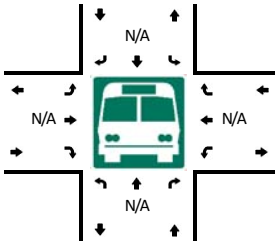


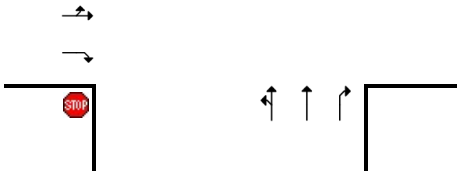
Quality Counts
DATA THAT DRIVES COMMUNITIES

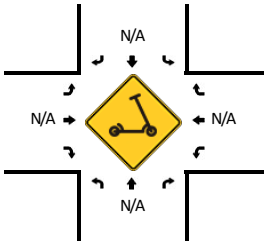












15-Min Count Period Beginning At	N James Campbell Blvd (Northbound)				N James Campbell Blvd (Southbound)				Old Williamsport Pike (Eastbound)				Old Williamsport Pike (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	4	92	5	0	3	124	6	0	2	0	4	0	0	0	1	0	241	
6:45 AM	6	110	3	1	4	167	4	0	3	2	6	0	1	0	1	0	308	
7:00 AM	3	137	4	0	0	177	2	0	6	0	16	0	1	0	0	0	346	
7:15 AM	8	123	5	0	7	279	2	0	0	0	32	0	4	0	3	0	463	1358
7:30 AM	4	153	12	0	4	287	1	0	0	0	28	0	1	0	1	0	491	1608
7:45 AM	4	189	11	0	8	250	4	0	2	0	25	0	2	0	0	0	495	1795
8:00 AM	4	87	9	0	8	175	3	0	1	0	10	0	3	0	0	0	300	1749
8:15 AM	4	117	16	1	11	178	2	0	3	0	12	0	1	0	0	0	345	1631

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	756	44	0	32	1000	16	0	8	0	100	0	8	0	0	0	1980
Heavy Trucks	4	80	0		0	36	0		0	0	8		0	0	0		128
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

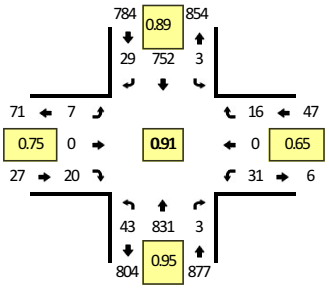
Comments:

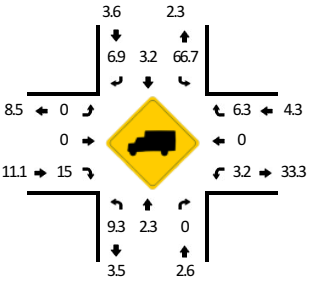
Report generated on 9/20/2021 10:10 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

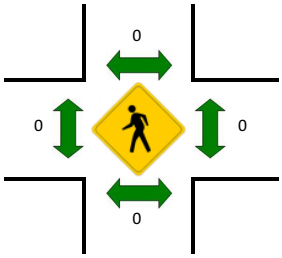
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

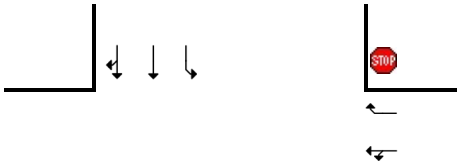
LOCATION: N James Campbell Blvd -- Old Williamsport Pike | **QC JOB #:** 15562404
CITY/STATE: Columbia, TN | **DATE:** Tue, Sep 14 2021

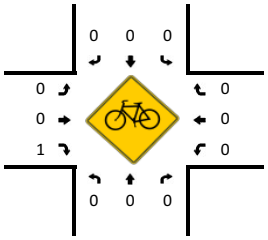
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

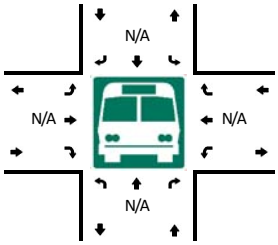


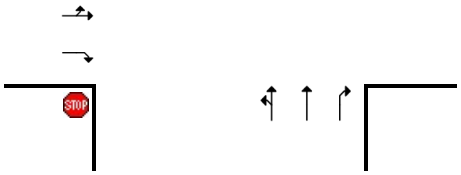


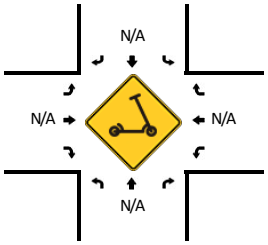












15-Min Count Period Beginning At	N James Campbell Blvd (Northbound)				N James Campbell Blvd (Southbound)				Old Williamsport Pike (Eastbound)				Old Williamsport Pike (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	10	215	8	0	3	208	6	0	2	0	8	0	7	0	4	0	471	
3:15 PM	12	196	10	1	2	171	7	0	1	1	4	0	9	0	4	0	418	
3:30 PM	9	178	4	0	2	219	7	0	11	0	10	0	7	0	3	0	450	
3:45 PM	9	179	6	0	2	166	2	0	4	0	6	0	6	0	13	0	393	1732
4:00 PM	15	184	1	0	4	160	4	0	2	0	6	0	8	0	6	0	390	1651
4:15 PM	11	175	2	0	0	182	2	0	6	0	5	0	6	0	5	0	394	1627
4:30 PM	8	203	1	0	3	186	2	0	1	0	5	0	7	0	5	0	421	1598
4:45 PM	13	203	1	1	0	189	12	0	1	0	4	0	8	0	6	0	438	1643
5:00 PM	9	221	0	0	0	212	9	0	3	0	6	0	14	0	4	0	478	1731
5:15 PM	12	204	1	0	0	165	6	0	2	0	5	0	2	0	1	0	398	1735
5:30 PM	9	172	1	0	0	195	4	0	2	0	5	0	6	0	3	0	397	1711
5:45 PM	10	148	1	0	0	163	4	0	2	0	1	0	1	0	0	0	330	1603

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	36	884	0	0	0	848	36	0	12	0	24	0	56	0	16	0	1912
Heavy Trucks	8	20	0		0	16	0		0	0	8		4	0	0		56
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 9/20/2021 10:10 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

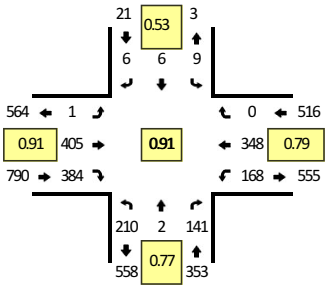
Type of peak hour being reported: Intersection Peak

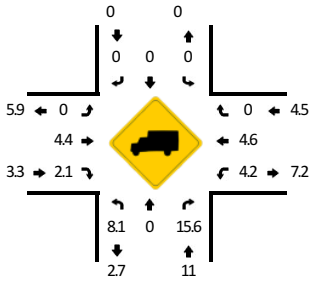
Method for determining peak hour: Total Entering Volume

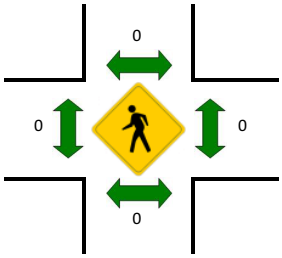
LOCATION: Iberia Dr/Lion Pkwy -- Hampshire Pike
CITY/STATE: Columbia, TN

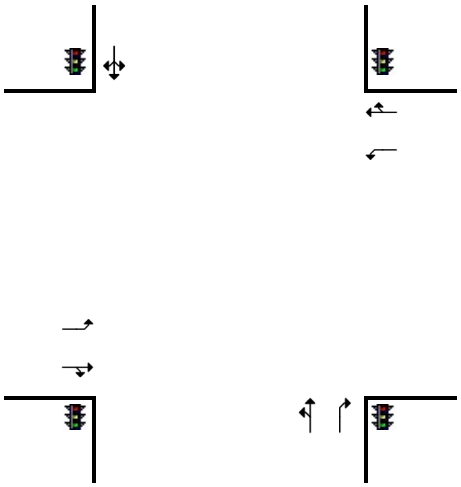
QC JOB #: 15562405
DATE: Tue, Sep 14 2021

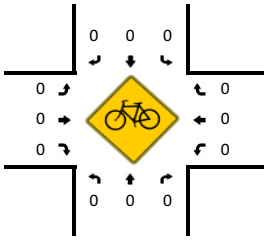
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

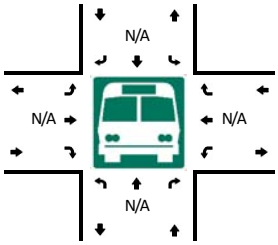


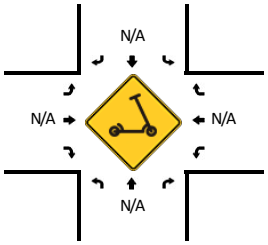












15-Min Count Period Beginning At	Iberia Dr/Lion Pkwy (Northbound)				Iberia Dr/Lion Pkwy (Southbound)				Hampshire Pike (Eastbound)				Hampshire Pike (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	8	0	2	0	1	0	0	0	0	68	47	0	6	34	0	0	166	
6:45 AM	15	0	8	0	0	0	1	0	0	88	72	0	31	42	0	0	257	
7:00 AM	53	0	35	0	1	0	0	0	0	85	110	0	38	59	0	0	381	
7:15 AM	53	0	21	0	1	2	2	0	0	98	118	0	50	113	0	0	458	1262
7:30 AM	56	0	59	0	5	2	3	0	1	96	93	0	49	97	0	0	461	1557
7:45 AM	48	2	26	0	2	2	1	0	0	126	63	0	31	79	0	0	380	1680
8:00 AM	31	0	20	0	2	6	0	0	1	84	43	0	13	82	1	0	283	1582
8:15 AM	31	1	9	0	0	0	0	0	0	80	51	0	8	51	1	0	232	1356

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	224	0	236	0	20	8	12	0	4	384	372	0	196	388	0	0	1844
Heavy Trucks	16	0	40		0	0	0		0	8	16		8	8	0		96
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

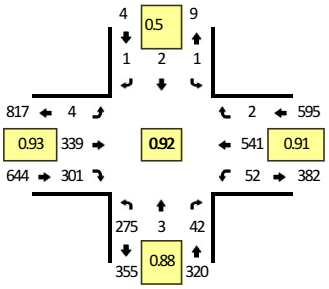
Report generated on 9/20/2021 10:10 AM

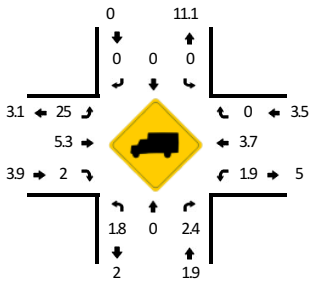
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

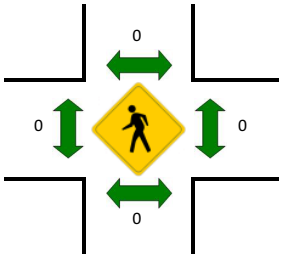
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

LOCATION: Iberia Dr/Lion Pkwy -- Hampshire Pike | **QC JOB #:** 15562406
CITY/STATE: Columbia, TN | **DATE:** Tue, Sep 14 2021

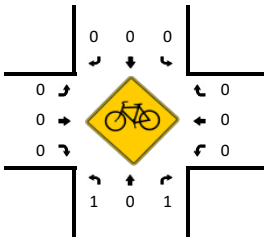
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

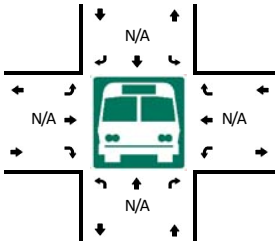


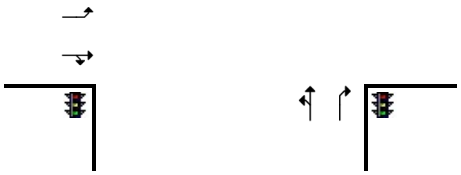


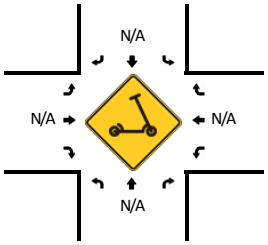












15-Min Count Period Beginning At	Iberia Dr/Lion Pkwy (Northbound)				Iberia Dr/Lion Pkwy (Southbound)				Hampshire Pike (Eastbound)				Hampshire Pike (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	62	3	50	0	0	1	0	0	1	121	60	0	15	130	2	0	445	
3:15 PM	70	3	43	0	3	4	0	0	0	105	42	0	23	103	1	0	397	
3:30 PM	83	1	21	0	0	2	0	0	0	90	56	0	11	117	0	0	381	
3:45 PM	51	1	4	0	2	3	1	0	0	55	49	0	15	138	0	0	319	1542
4:00 PM	79	0	12	0	0	0	1	0	1	82	54	0	7	152	2	0	390	1487
4:15 PM	81	3	9	0	2	2	3	0	2	78	48	0	5	138	2	0	373	1463
4:30 PM	64	1	11	0	1	1	0	0	1	84	48	0	5	133	0	0	349	1431
4:45 PM	65	2	6	0	1	0	0	0	2	87	75	0	14	129	1	0	382	1494
5:00 PM	73	1	17	0	0	0	0	0	0	85	69	0	13	125	0	0	383	1487
5:15 PM	74	0	11	0	0	1	1	0	1	88	84	0	12	152	0	0	424	1538
5:30 PM	63	0	8	0	0	1	0	0	1	79	73	0	13	135	1	0	374	1563
5:45 PM	60	0	6	0	0	1	1	0	1	80	75	0	19	127	1	0	371	1552

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	296	0	44	0	0	4	4	0	4	352	336	0	48	608	0	0	1696
Heavy Trucks	8	0	0		0	0	0		0	16	12		0	20	0		56
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

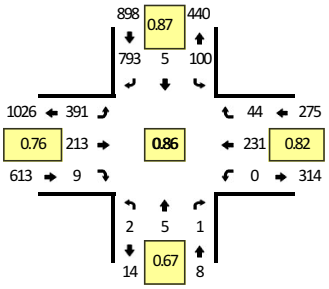
Comments:

Report generated on 9/20/2021 10:10 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

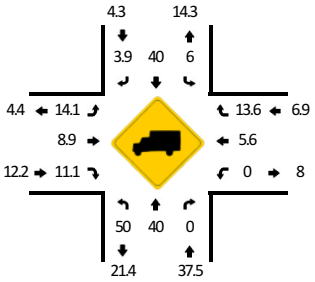
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

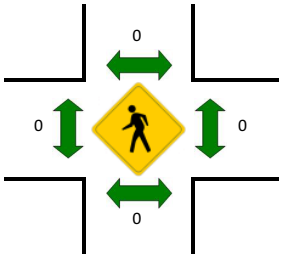
LOCATION: Industrial Park Rd -- N James Campbell Blvd | **QC JOB #:** 15562407
CITY/STATE: Columbia, TN | **DATE:** Tue, Sep 14 2021

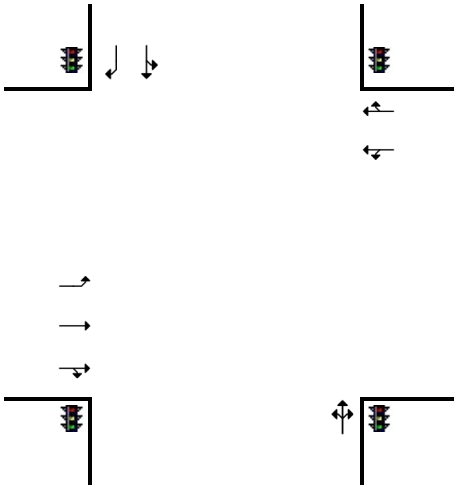
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

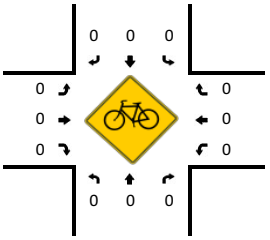


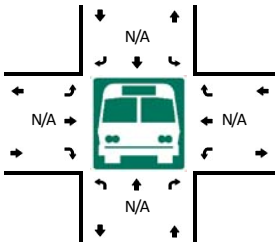


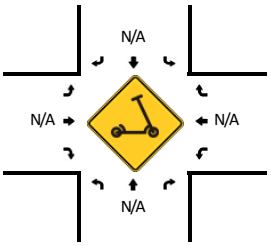












15-Min Count Period Beginning At	Industrial Park Rd (Northbound)				Industrial Park Rd (Southbound)				N James Campbell Blvd (Eastbound)				N James Campbell Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	0	1	0	0	12	1	111	0	68	19	1	0	0	24	8	0	245	
6:45 AM	0	2	0	0	13	0	140	0	81	33	0	0	0	37	6	0	312	
7:00 AM	0	0	0	0	19	1	124	0	97	44	3	0	0	52	12	0	352	
7:15 AM	0	2	1	0	18	0	218	0	76	45	1	0	0	73	11	0	445	1354
7:30 AM	1	1	0	0	27	2	230	0	88	57	0	0	0	60	8	0	474	1583
7:45 AM	1	2	0	0	36	2	221	0	130	67	5	0	0	46	13	0	523	1794
8:00 AM	1	0	1	0	21	0	148	0	56	37	0	0	0	39	8	0	311	1753
8:15 AM	0	0	1	0	17	0	154	0	68	46	0	0	1	38	4	0	329	1637

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	8	0	0	144	8	884	0	520	268	20	0	0	184	52	0	2092
Heavy Trucks	0	4	0		8	0	32		76	8	4		0	8	8		148
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

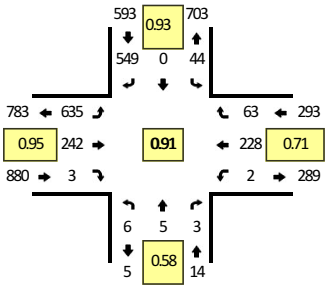
Comments:

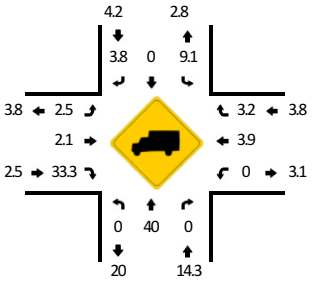
Report generated on 9/20/2021 10:10 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

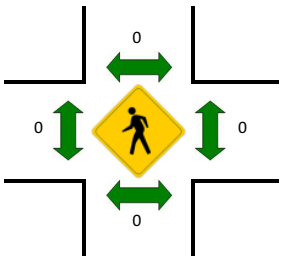
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

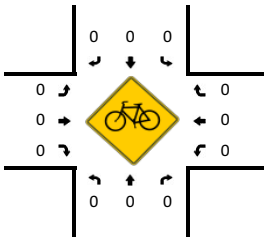
LOCATION: Industrial Park Rd -- N James Campbell Blvd | **QC JOB #:** 15562408
CITY/STATE: Columbia, TN | **DATE:** Tue, Sep 14 2021

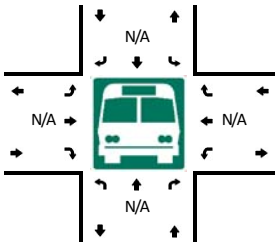
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

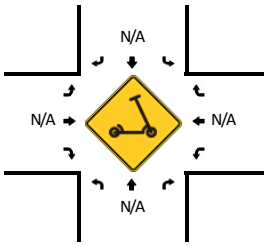












15-Min Count Period Beginning At	Industrial Park Rd (Northbound)				Industrial Park Rd (Southbound)				N James Campbell Blvd (Eastbound)				N James Campbell Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	3	3	0	0	16	0	142	0	144	76	0	0	1	67	18	0	470	
3:15 PM	1	0	0	0	17	0	132	0	141	66	0	0	1	49	20	0	427	
3:30 PM	0	1	0	0	19	0	152	0	129	61	0	0	0	70	7	0	439	
3:45 PM	0	1	0	0	11	0	128	0	146	51	0	0	0	50	8	0	395	1731
4:00 PM	0	1	1	0	16	0	119	0	147	52	0	1	1	46	13	0	397	1658
4:15 PM	0	1	1	0	11	0	142	0	130	50	0	0	0	44	11	0	390	1621
4:30 PM	0	0	1	0	9	0	144	0	156	61	1	0	1	48	18	0	439	1621
4:45 PM	1	4	0	0	12	0	147	0	158	54	0	0	0	53	10	0	439	1665
5:00 PM	3	1	2	0	10	0	138	0	161	69	1	0	1	80	22	0	488	1756
5:15 PM	2	0	0	0	13	0	120	0	160	58	1	0	0	47	13	0	414	1780
5:30 PM	0	4	0	0	6	0	141	0	130	42	1	0	0	58	11	0	393	1734
5:45 PM	0	0	0	0	8	0	102	0	112	45	0	0	0	47	7	0	321	1616

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	4	8	0	40	0	552	0	644	276	4	0	4	320	88	0	1952
Heavy Trucks	0	0	0		0	0	12		8	8	4		0	16	4		52
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 9/20/2021 10:10 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir **QC JOB #:** 15562409

SPECIFIC LOCATION: **DIRECTION:** EB

CITY/STATE: Columbia, TN **DATE:** Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		2				2			2	
12:15 AM		7				7			7	
12:30 AM		1				1			1	
12:45 AM		4				4			4	
01:00 AM		0				0			0	
01:15 AM		2				2			2	
01:30 AM		0				0			0	
01:45 AM		2				2			2	
02:00 AM		2				2			2	
02:15 AM		2				2			2	
02:30 AM		0				0			0	
02:45 AM		3				3			3	
03:00 AM		0				0			0	
03:15 AM		4				4			4	
03:30 AM		1				1			1	
03:45 AM		9				9			9	
04:00 AM		7				7			7	
04:15 AM		13				13			13	
04:30 AM		7				7			7	
04:45 AM		25				25			25	
05:00 AM		18				18			18	
05:15 AM		21				21			21	
05:30 AM		39				39			39	
05:45 AM		36				36			36	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		44				44			44	
06:15 AM		64				64			64	
06:30 AM		78				78			78	
06:45 AM		101				101			101	
07:00 AM		122				122			122	
07:15 AM		128				128			128	
07:30 AM		166				166			166	
07:45 AM		**172**				**172**			**172**	
08:00 AM		110				110			110	
08:15 AM		92				92			92	
08:30 AM		102				102			102	
08:45 AM		104				104			104	
09:00 AM		101				101			101	
09:15 AM		97				97			97	
09:30 AM		102				102			102	
09:45 AM		94				94			94	
10:00 AM		88				88			88	
10:15 AM		80				80			80	
10:30 AM		98				98			98	
10:45 AM		89				89			89	
11:00 AM		102				102			102	
11:15 AM		95				95			95	
11:30 AM		90				90			90	
11:45 AM		92				92			92	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		106				106			106	
12:15 PM		84				84			84	
12:30 PM		118				118			118	
12:45 PM		106				106			106	
01:00 PM		74				74			74	
01:15 PM		103				103			103	
01:30 PM		84				84			84	
01:45 PM		88				88			88	
02:00 PM		94				94			94	
02:15 PM		113				113			113	
02:30 PM		110				110			110	
02:45 PM		166				166			166	
03:00 PM		**172**				**172**			**172**	
03:15 PM		158				158			158	
03:30 PM		121				121			121	
03:45 PM		64				64			64	
04:00 PM		100				100			100	
04:15 PM		95				95			95	
04:30 PM		100				100			100	
04:45 PM		94				94			94	
05:00 PM		106				106			106	
05:15 PM		106				106			106	
05:30 PM		92				92			92	
05:45 PM		90				90			90	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		88				88			88	
06:15 PM		88				88			88	
06:30 PM		75				75			75	
06:45 PM		66				66			66	
07:00 PM		68				68			68	
07:15 PM		74				74			74	
07:30 PM		65				65			65	
07:45 PM		34				34			34	
08:00 PM		54				54			54	
08:15 PM		42				42			42	
08:30 PM		29				29			29	
08:45 PM		31				31			31	
09:00 PM		28				28			28	
09:15 PM		40				40			40	
09:30 PM		25				25			25	
09:45 PM		14				14			14	
10:00 PM		20				20			20	
10:15 PM		16				16			16	
10:30 PM		18				18			18	
10:45 PM		14				14			14	
11:00 PM		7				7			7	
11:15 PM		8				8			8	
11:30 PM		13				13			13	
11:45 PM		7				7			7	
Day Total		6084				6084			6084	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak 15-min Vol		7:45 AM 172				7:45 AM 172			7:45 AM 172	
PM Peak 15-min Vol		3:00 PM 172				3:00 PM 172			3:00 PM 172	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir | **QC JOB #:** 15562409

SPECIFIC LOCATION: | **DIRECTION:** EB, WB

CITY/STATE: Columbia, TN | **DATE:** Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		8				8			8	
12:15 AM		18				18			18	
12:30 AM		9				9			9	
12:45 AM		11				11			11	
01:00 AM		1				1			1	
01:15 AM		6				6			6	
01:30 AM		5				5			5	
01:45 AM		3				3			3	
02:00 AM		4				4			4	
02:15 AM		4				4			4	
02:30 AM		4				4			4	
02:45 AM		7				7			7	
03:00 AM		1				1			1	
03:15 AM		10				10			10	
03:30 AM		5				5			5	
03:45 AM		16				16			16	
04:00 AM		11				11			11	
04:15 AM		22				22			22	
04:30 AM		13				13			13	
04:45 AM		33				33			33	
05:00 AM		23				23			23	
05:15 AM		37				37			37	
05:30 AM		57				57			57	
05:45 AM		64				64			64	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		67				67			67	
06:15 AM		102				102			102	
06:30 AM		120				120			120	
06:45 AM		175				175			175	
07:00 AM		234				234			234	
07:15 AM		288				288			288	
07:30 AM		**326**				**326**			**326**	
07:45 AM		288				288			288	
08:00 AM		214				214			214	
08:15 AM		159				159			159	
08:30 AM		183				183			183	
08:45 AM		182				182			182	
09:00 AM		187				187			187	
09:15 AM		175				175			175	
09:30 AM		182				182			182	
09:45 AM		170				170			170	
10:00 AM		174				174			174	
10:15 AM		138				138			138	
10:30 AM		178				178			178	
10:45 AM		175				175			175	
11:00 AM		176				176			176	
11:15 AM		175				175			175	
11:30 AM		184				184			184	
11:45 AM		198				198			198	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		202				202			202	
12:15 PM		192				192			192	
12:30 PM		203				203			203	
12:45 PM		195				195			195	
01:00 PM		184				184			184	
01:15 PM		207				207			207	
01:30 PM		178				178			178	
01:45 PM		190				190			190	
02:00 PM		200				200			200	
02:15 PM		247				247			247	
02:30 PM		294				294			294	
02:45 PM		292				292			292	
03:00 PM		**326**				**326**			**326**	
03:15 PM		295				295			295	
03:30 PM		251				251			251	
03:45 PM		232				232			232	
04:00 PM		264				264			264	
04:15 PM		245				245			245	
04:30 PM		242				242			242	
04:45 PM		246				246			246	
05:00 PM		255				255			255	
05:15 PM		275				275			275	
05:30 PM		246				246			246	
05:45 PM		243				243			243	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		204				204			204	
06:15 PM		206				206			206	
06:30 PM		172				172			172	
06:45 PM		164				164			164	
07:00 PM		185				185			185	
07:15 PM		176				176			176	
07:30 PM		149				149			149	
07:45 PM		103				103			103	
08:00 PM		124				124			124	
08:15 PM		92				92			92	
08:30 PM		71				71			71	
08:45 PM		85				85			85	
09:00 PM		66				66			66	
09:15 PM		68				68			68	
09:30 PM		58				58			58	
09:45 PM		29				29			29	
10:00 PM		45				45			45	
10:15 PM		42				42			42	
10:30 PM		34				34			34	
10:45 PM		32				32			32	
11:00 PM		20				20			20	
11:15 PM		19				19			19	
11:30 PM		28				28			28	
11:45 PM		14				14			14	
Day Total		12712				12712			12712	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak 15-min Vol		7:30 AM 326				7:30 AM 326			7:30 AM 326	
PM Peak 15-min Vol		3:00 PM 326				3:00 PM 326			3:00 PM 326	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir **QC JOB #:** 15562409

SPECIFIC LOCATION: **DIRECTION:** WB

CITY/STATE: Columbia, TN **DATE:** Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		6				6			6	
12:15 AM		11				11			11	
12:30 AM		8				8			8	
12:45 AM		7				7			7	
01:00 AM		1				1			1	
01:15 AM		4				4			4	
01:30 AM		5				5			5	
01:45 AM		1				1			1	
02:00 AM		2				2			2	
02:15 AM		2				2			2	
02:30 AM		4				4			4	
02:45 AM		4				4			4	
03:00 AM		1				1			1	
03:15 AM		6				6			6	
03:30 AM		4				4			4	
03:45 AM		7				7			7	
04:00 AM		4				4			4	
04:15 AM		9				9			9	
04:30 AM		6				6			6	
04:45 AM		8				8			8	
05:00 AM		5				5			5	
05:15 AM		16				16			16	
05:30 AM		18				18			18	
05:45 AM		28				28			28	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		23				23			23	
06:15 AM		38				38			38	
06:30 AM		42				42			42	
06:45 AM		74				74			74	
07:00 AM		112				112			112	
07:15 AM		**160**				**160**			**160**	
07:30 AM		160				160			160	
07:45 AM		116				116			116	
08:00 AM		104				104			104	
08:15 AM		67				67			67	
08:30 AM		81				81			81	
08:45 AM		78				78			78	
09:00 AM		86				86			86	
09:15 AM		78				78			78	
09:30 AM		80				80			80	
09:45 AM		76				76			76	
10:00 AM		86				86			86	
10:15 AM		58				58			58	
10:30 AM		80				80			80	
10:45 AM		86				86			86	
11:00 AM		74				74			74	
11:15 AM		80				80			80	
11:30 AM		94				94			94	
11:45 AM		106				106			106	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		96				96			96	
12:15 PM		108				108			108	
12:30 PM		85				85			85	
12:45 PM		89				89			89	
01:00 PM		110				110			110	
01:15 PM		104				104			104	
01:30 PM		94				94			94	
01:45 PM		102				102			102	
02:00 PM		106				106			106	
02:15 PM		134				134			134	
02:30 PM		**184**				**184**			**184**	
02:45 PM		126				126			126	
03:00 PM		154				154			154	
03:15 PM		137				137			137	
03:30 PM		130				130			130	
03:45 PM		168				168			168	
04:00 PM		164				164			164	
04:15 PM		150				150			150	
04:30 PM		142				142			142	
04:45 PM		152				152			152	
05:00 PM		149				149			149	
05:15 PM		169				169			169	
05:30 PM		154				154			154	
05:45 PM		153				153			153	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		116				116			116	
06:15 PM		118				118			118	
06:30 PM		97				97			97	
06:45 PM		98				98			98	
07:00 PM		117				117			117	
07:15 PM		102				102			102	
07:30 PM		84				84			84	
07:45 PM		69				69			69	
08:00 PM		70				70			70	
08:15 PM		50				50			50	
08:30 PM		42				42			42	
08:45 PM		54				54			54	
09:00 PM		38				38			38	
09:15 PM		28				28			28	
09:30 PM		33				33			33	
09:45 PM		15				15			15	
10:00 PM		25				25			25	
10:15 PM		26				26			26	
10:30 PM		16				16			16	
10:45 PM		18				18			18	
11:00 PM		13				13			13	
11:15 PM		11				11			11	
11:30 PM		15				15			15	
11:45 PM		7				7			7	
Day Total		6628				6628			6628	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak 15-min Vol		7:15 AM 160				7:15 AM 160			7:15 AM 160	
PM Peak 15-min Vol		2:30 PM 184				2:30 PM 184			2:30 PM 184	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp **QC JOB #:** 15562410

SPECIFIC LOCATION: **DIRECTION:** NB

CITY/STATE: Columbia, TN **DATE:** Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		7				7			7	
12:15 AM		10				10			10	
12:30 AM		5				5			5	
12:45 AM		3				3			3	
01:00 AM		2				2			2	
01:15 AM		4				4			4	
01:30 AM		1				1			1	
01:45 AM		0				0			0	
02:00 AM		3				3			3	
02:15 AM		3				3			3	
02:30 AM		3				3			3	
02:45 AM		1				1			1	
03:00 AM		0				0			0	
03:15 AM		4				4			4	
03:30 AM		2				2			2	
03:45 AM		12				12			12	
04:00 AM		15				15			15	
04:15 AM		14				14			14	
04:30 AM		8				8			8	
04:45 AM		26				26			26	
05:00 AM		36				36			36	
05:15 AM		44				44			44	
05:30 AM		50				50			50	
05:45 AM		50				50			50	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		70				70			70	
06:15 AM		74				74			74	
06:30 AM		84				84			84	
06:45 AM		97				97			97	
07:00 AM		121				121			121	
07:15 AM		200				200			200	
07:30 AM		**256**				**256**			**256**	
07:45 AM		224				224			224	
08:00 AM		120				120			120	
08:15 AM		100				100			100	
08:30 AM		86				86			86	
08:45 AM		89				89			89	
09:00 AM		128				128			128	
09:15 AM		90				90			90	
09:30 AM		93				93			93	
09:45 AM		85				85			85	
10:00 AM		90				90			90	
10:15 AM		100				100			100	
10:30 AM		63				63			63	
10:45 AM		98				98			98	
11:00 AM		86				86			86	
11:15 AM		104				104			104	
11:30 AM		104				104			104	
11:45 AM		132				132			132	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		104				104			104	
12:15 PM		113				113			113	
12:30 PM		98				98			98	
12:45 PM		112				112			112	
01:00 PM		120				120			120	
01:15 PM		135				135			135	
01:30 PM		112				112			112	
01:45 PM		128				128			128	
02:00 PM		134				134			134	
02:15 PM		132				132			132	
02:30 PM		157				157			157	
02:45 PM		164				164			164	
03:00 PM		190				190			190	
03:15 PM		179				179			179	
03:30 PM		154				154			154	
03:45 PM		176				176			176	
04:00 PM		162				162			162	
04:15 PM		164				164			164	
04:30 PM		193				193			193	
04:45 PM		200				200			200	
05:00 PM		**202**				**202**			**202**	
05:15 PM		176				176			176	
05:30 PM		152				152			152	
05:45 PM		124				124			124	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		111				111			111	
06:15 PM		96				96			96	
06:30 PM		98				98			98	
06:45 PM		89				89			89	
07:00 PM		126				126			126	
07:15 PM		108				108			108	
07:30 PM		88				88			88	
07:45 PM		72				72			72	
08:00 PM		74				74			74	
08:15 PM		81				81			81	
08:30 PM		46				46			46	
08:45 PM		41				41			41	
09:00 PM		37				37			37	
09:15 PM		45				45			45	
09:30 PM		34				34			34	
09:45 PM		29				29			29	
10:00 PM		26				26			26	
10:15 PM		23				23			23	
10:30 PM		17				17			17	
10:45 PM		12				12			12	
11:00 PM		21				21			21	
11:15 PM		14				14			14	
11:30 PM		10				10			10	
11:45 PM		6				6			6	
Day Total		7882				7882			7882	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak 15-min Vol		7:30 AM 256				7:30 AM 256			7:30 AM 256	
PM Peak 15-min Vol		5:00 PM 202				5:00 PM 202			5:00 PM 202	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		15				15			15	
12:15 AM		12				12			12	
12:30 AM		17				17			17	
12:45 AM		5				5			5	
01:00 AM		10				10			10	
01:15 AM		8				8			8	
01:30 AM		2				2			2	
01:45 AM		4				4			4	
02:00 AM		4				4			4	
02:15 AM		5				5			5	
02:30 AM		5				5			5	
02:45 AM		5				5			5	
03:00 AM		2				2			2	
03:15 AM		11				11			11	
03:30 AM		8				8			8	
03:45 AM		20				20			20	
04:00 AM		19				19			19	
04:15 AM		26				26			26	
04:30 AM		24				24			24	
04:45 AM		44				44			44	
05:00 AM		50				50			50	
05:15 AM		71				71			71	
05:30 AM		87				87			87	
05:45 AM		104				104			104	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
		14 Sep 21								
06:00 AM		137				137			137	
06:15 AM		175				175			175	
06:30 AM		208				208			208	
06:45 AM		255				255			255	
07:00 AM		269				269			269	
07:15 AM		431				431			431	
07:30 AM		**503**				**503**			**503**	
07:45 AM		476				476			476	
08:00 AM		298				298			298	
08:15 AM		270				270			270	
08:30 AM		216				216			216	
08:45 AM		227				227			227	
09:00 AM		236				236			236	
09:15 AM		195				195			195	
09:30 AM		191				191			191	
09:45 AM		217				217			217	
10:00 AM		196				196			196	
10:15 AM		206				206			206	
10:30 AM		163				163			163	
10:45 AM		191				191			191	
11:00 AM		201				201			201	
11:15 AM		206				206			206	
11:30 AM		193				193			193	
11:45 AM		254				254			254	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		202				202			202	
12:15 PM		224				224			224	
12:30 PM		214				214			214	
12:45 PM		228				228			228	
01:00 PM		220				220			220	
01:15 PM		227				227			227	
01:30 PM		231				231			231	
01:45 PM		257				257			257	
02:00 PM		264				264			264	
02:15 PM		282				282			282	
02:30 PM		313				313			313	
02:45 PM		313				313			313	
03:00 PM		351				351			351	
03:15 PM		337				337			337	
03:30 PM		327				327			327	
03:45 PM		317				317			317	
04:00 PM		303				303			303	
04:15 PM		320				320			320	
04:30 PM		350				350			350	
04:45 PM		**369**				**369**			**369**	
05:00 PM		356				356			356	
05:15 PM		316				316			316	
05:30 PM		298				298			298	
05:45 PM		259				259			259	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
		14 Sep 21								
06:00 PM		215				215			215	
06:15 PM		198				198			198	
06:30 PM		196				196			196	
06:45 PM		167				167			167	
07:00 PM		194				194			194	
07:15 PM		174				174			174	
07:30 PM		140				140			140	
07:45 PM		130				130			130	
08:00 PM		112				112			112	
08:15 PM		127				127			127	
08:30 PM		82				82			82	
08:45 PM		80				80			80	
09:00 PM		66				66			66	
09:15 PM		75				75			75	
09:30 PM		60				60			60	
09:45 PM		53				53			53	
10:00 PM		64				64			64	
10:15 PM		55				55			55	
10:30 PM		35				35			35	
10:45 PM		22				22			22	
11:00 PM		37				37			37	
11:15 PM		24				24			24	
11:30 PM		21				21			21	
11:45 PM		16				16			16	
Day Total		15693				15693			15693	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak 15-min Vol		7:30 AM 503				7:30 AM 503			7:30 AM 503	
PM Peak 15-min Vol		4:45 PM 369				4:45 PM 369			4:45 PM 369	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		8				8			8	
12:15 AM		2				2			2	
12:30 AM		12				12			12	
12:45 AM		2				2			2	
01:00 AM		8				8			8	
01:15 AM		4				4			4	
01:30 AM		1				1			1	
01:45 AM		4				4			4	
02:00 AM		1				1			1	
02:15 AM		2				2			2	
02:30 AM		2				2			2	
02:45 AM		4				4			4	
03:00 AM		2				2			2	
03:15 AM		7				7			7	
03:30 AM		6				6			6	
03:45 AM		8				8			8	
04:00 AM		4				4			4	
04:15 AM		12				12			12	
04:30 AM		16				16			16	
04:45 AM		18				18			18	
05:00 AM		14				14			14	
05:15 AM		27				27			27	
05:30 AM		37				37			37	
05:45 AM		54				54			54	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		67				67			67	
06:15 AM		101				101			101	
06:30 AM		124				124			124	
06:45 AM		158				158			158	
07:00 AM		148				148			148	
07:15 AM		231				231			231	
07:30 AM		247				247			247	
07:45 AM		**252**				**252**			**252**	
08:00 AM		178				178			178	
08:15 AM		170				170			170	
08:30 AM		130				130			130	
08:45 AM		138				138			138	
09:00 AM		108				108			108	
09:15 AM		105				105			105	
09:30 AM		98				98			98	
09:45 AM		132				132			132	
10:00 AM		106				106			106	
10:15 AM		106				106			106	
10:30 AM		100				100			100	
10:45 AM		93				93			93	
11:00 AM		115				115			115	
11:15 AM		102				102			102	
11:30 AM		89				89			89	
11:45 AM		122				122			122	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		98				98			98	
12:15 PM		111				111			111	
12:30 PM		116				116			116	
12:45 PM		116				116			116	
01:00 PM		100				100			100	
01:15 PM		92				92			92	
01:30 PM		119				119			119	
01:45 PM		129				129			129	
02:00 PM		130				130			130	
02:15 PM		150				150			150	
02:30 PM		156				156			156	
02:45 PM		149				149			149	
03:00 PM		161				161			161	
03:15 PM		158				158			158	
03:30 PM		**173**				**173**			**173**	
03:45 PM		141				141			141	
04:00 PM		141				141			141	
04:15 PM		156				156			156	
04:30 PM		157				157			157	
04:45 PM		169				169			169	
05:00 PM		154				154			154	
05:15 PM		140				140			140	
05:30 PM		146				146			146	
05:45 PM		135				135			135	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		104				104			104	
06:15 PM		102				102			102	
06:30 PM		98				98			98	
06:45 PM		78				78			78	
07:00 PM		68				68			68	
07:15 PM		66				66			66	
07:30 PM		52				52			52	
07:45 PM		58				58			58	
08:00 PM		38				38			38	
08:15 PM		46				46			46	
08:30 PM		36				36			36	
08:45 PM		39				39			39	
09:00 PM		29				29			29	
09:15 PM		30				30			30	
09:30 PM		26				26			26	
09:45 PM		24				24			24	
10:00 PM		38				38			38	
10:15 PM		32				32			32	
10:30 PM		18				18			18	
10:45 PM		10				10			10	
11:00 PM		16				16			16	
11:15 PM		10				10			10	
11:30 PM		11				11			11	
11:45 PM		10				10			10	
Day Total		7811				7811			7811	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak 15-min Vol		7:45 AM 252				7:45 AM 252			7:45 AM 252	
PM Peak 15-min Vol		3:30 PM 173				3:30 PM 173			3:30 PM 173	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		14				14			14	
01:00 AM		4				4			4	
02:00 AM		7				7			7	
03:00 AM		14				14			14	
04:00 AM		52				52			52	
05:00 AM		114				114			114	
06:00 AM		287				287			287	
07:00 AM		**588**				**588**			**588**	
08:00 AM		408				408			408	
09:00 AM		394				394			394	
10:00 AM		355				355			355	
11:00 AM		379				379			379	
12:00 PM		414				414			414	
01:00 PM		349				349			349	
02:00 PM		483				483			483	
03:00 PM		**515**				**515**			**515**	
04:00 PM		389				389			389	
05:00 PM		394				394			394	
06:00 PM		317				317			317	
07:00 PM		241				241			241	
08:00 PM		156				156			156	
09:00 PM		107				107			107	
10:00 PM		68				68			68	
11:00 PM		35				35			35	
Day Total		6084				6084			6084	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 588				7:00 AM 588			7:00 AM 588	
PM Peak Volume		3:00 PM 515				3:00 PM 515			3:00 PM 515	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		46				46			46	
01:00 AM		15				15			15	
02:00 AM		19				19			19	
03:00 AM		32				32			32	
04:00 AM		79				79			79	
05:00 AM		181				181			181	
06:00 AM		464				464			464	
07:00 AM		**1136**				**1136**			**1136**	
08:00 AM		738				738			738	
09:00 AM		714				714			714	
10:00 AM		665				665			665	
11:00 AM		733				733			733	
12:00 PM		792				792			792	
01:00 PM		759				759			759	
02:00 PM		1033				1033			1033	
03:00 PM		**1104**				**1104**			**1104**	
04:00 PM		997				997			997	
05:00 PM		1019				1019			1019	
06:00 PM		746				746			746	
07:00 PM		613				613			613	
08:00 PM		372				372			372	
09:00 PM		221				221			221	
10:00 PM		153				153			153	
11:00 PM		81				81			81	
Day Total		12712				12712			12712	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 1136				7:00 AM 1136			7:00 AM 1136	
PM Peak Volume		3:00 PM 1104				3:00 PM 1104			3:00 PM 1104	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		32				32			32	
01:00 AM		11				11			11	
02:00 AM		12				12			12	
03:00 AM		18				18			18	
04:00 AM		27				27			27	
05:00 AM		67				67			67	
06:00 AM		177				177			177	
07:00 AM		**548**				**548**			**548**	
08:00 AM		330				330			330	
09:00 AM		320				320			320	
10:00 AM		310				310			310	
11:00 AM		354				354			354	
12:00 PM		378				378			378	
01:00 PM		410				410			410	
02:00 PM		550				550			550	
03:00 PM		589				589			589	
04:00 PM		608				608			608	
05:00 PM		**625**				**625**			**625**	
06:00 PM		429				429			429	
07:00 PM		372				372			372	
08:00 PM		216				216			216	
09:00 PM		114				114			114	
10:00 PM		85				85			85	
11:00 PM		46				46			46	
Day Total		6628				6628			6628	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 548				7:00 AM 548			7:00 AM 548	
PM Peak Volume		5:00 PM 625				5:00 PM 625			5:00 PM 625	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		25				25			25	
01:00 AM		7				7			7	
02:00 AM		10				10			10	
03:00 AM		18				18			18	
04:00 AM		63				63			63	
05:00 AM		180				180			180	
06:00 AM		325				325			325	
07:00 AM		**801**				**801**			**801**	
08:00 AM		395				395			395	
09:00 AM		396				396			396	
10:00 AM		351				351			351	
11:00 AM		426				426			426	
12:00 PM		427				427			427	
01:00 PM		495				495			495	
02:00 PM		587				587			587	
03:00 PM		699				699			699	
04:00 PM		**719**				**719**			**719**	
05:00 PM		654				654			654	
06:00 PM		394				394			394	
07:00 PM		394				394			394	
08:00 PM		242				242			242	
09:00 PM		145				145			145	
10:00 PM		78				78			78	
11:00 PM		51				51			51	
Day Total		7882				7882			7882	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 801				7:00 AM 801			7:00 AM 801	
PM Peak Volume		4:00 PM 719				4:00 PM 719			4:00 PM 719	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		49				49			49	
01:00 AM		24				24			24	
02:00 AM		19				19			19	
03:00 AM		41				41			41	
04:00 AM		113				113			113	
05:00 AM		312				312			312	
06:00 AM		775				775			775	
07:00 AM		**1679**				**1679**			**1679**	
08:00 AM		1011				1011			1011	
09:00 AM		839				839			839	
10:00 AM		756				756			756	
11:00 AM		854				854			854	
12:00 PM		868				868			868	
01:00 PM		935				935			935	
02:00 PM		1172				1172			1172	
03:00 PM		1332				1332			1332	
04:00 PM		**1342**				**1342**			**1342**	
05:00 PM		1229				1229			1229	
06:00 PM		776				776			776	
07:00 PM		638				638			638	
08:00 PM		401				401			401	
09:00 PM		254				254			254	
10:00 PM		176				176			176	
11:00 PM		98				98			98	
Day Total		15693				15693			15693	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 1679				7:00 AM 1679			7:00 AM 1679	
PM Peak Volume		4:00 PM 1342				4:00 PM 1342			4:00 PM 1342	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		24				24			24	
01:00 AM		17				17			17	
02:00 AM		9				9			9	
03:00 AM		23				23			23	
04:00 AM		50				50			50	
05:00 AM		132				132			132	
06:00 AM		450				450			450	
07:00 AM		**878**				**878**			**878**	
08:00 AM		616				616			616	
09:00 AM		443				443			443	
10:00 AM		405				405			405	
11:00 AM		428				428			428	
12:00 PM		441				441			441	
01:00 PM		440				440			440	
02:00 PM		585				585			585	
03:00 PM		**633**				**633**			**633**	
04:00 PM		623				623			623	
05:00 PM		575				575			575	
06:00 PM		382				382			382	
07:00 PM		244				244			244	
08:00 PM		159				159			159	
09:00 PM		109				109			109	
10:00 PM		98				98			98	
11:00 PM		47				47			47	
Day Total		7811				7811			7811	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 878				7:00 AM 878			7:00 AM 878	
PM Peak Volume		3:00 PM 633				3:00 PM 633			3:00 PM 633	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

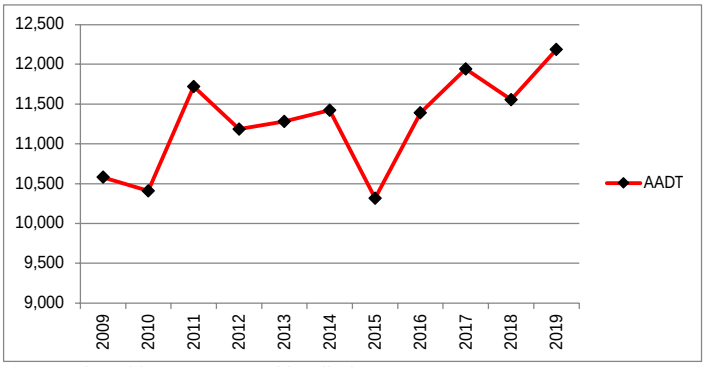
Appendix D

Trip Generation

Volume Worksheets

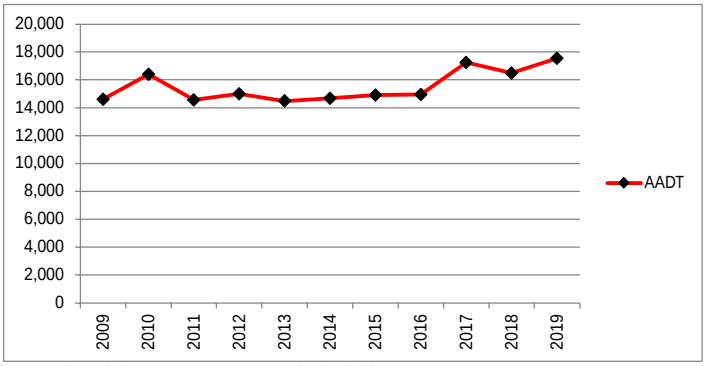
Annual Average Daily Traffic (AADT) from the Tennessee Department of Transportation (TDOT)

Station	000147
Route	Hampshire Pike
Location	Columbia
2009	10,581
2010	10,412
2011	11,720
2012	11,187
2013	11,284
2014	11,425
2015	10,318
2016	11,390
2017	11,940
2018	11,555
2019	12,187



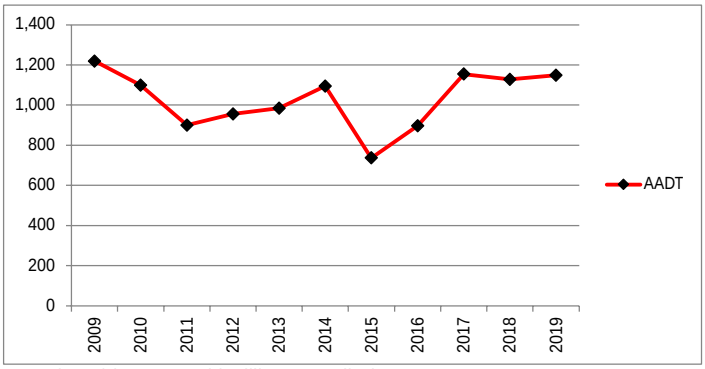
Annual Growth for Last Three (3) Years --- Hampshire Pike is 0.7%
Annual Growth for Last Ten (10) Years --- Hampshire Pike is 1.6%

Station	000233
Route	James Campbell Blvd
Location	Columbia
2009	14,605
2010	16,404
2011	14,554
2012	14,998
2013	14,489
2014	14,682
2015	14,905
2016	14,944
2017	17,257
2018	16,501
2019	17,547



Annual Growth for Last Three (3) Years --- James Campbell Blvd is 0.6%
Annual Growth for Last Ten (10) Years --- James Campbell Blvd is 0.7%

Station	000097
Route	Old Williamsport Pike
Location	Columbia
2009	1,219
2010	1,099
2011	900
2012	956
2013	985
2014	1,094
2015	737
2016	897
2017	1,154
2018	1,128
2019	1,148



Annual Growth for Last Three (3) Years --- Old Williamsport Pike is -0.2%
Annual Growth for Last Ten (10) Years --- Old Williamsport Pike is 0.4%

TOTAL	
2008	26,405
2009	27,915
2010	27,174
2011	27,141
2012	26,758
2013	27,201
2014	25,960
2015	27,231
2016	30,351
2017	29,184
2018	30,882

Annual Growth for Last Three (3) Years --- is 0.6%
Annual Growth for Last Ten (10) Years --- is 1%

Trip Generation - Hampshir Pike Mixed-Use

ITE Code	Land Use	Setting/Location	Density		Daily	AM Peak Hour			PM Peak Hour		
						Total	Enter	Exit	Total	Enter	Exit
210	Single-Family Detached Housing	General Urban/Suburban	39	d.u.	437	32	8	24	41	26	15
220	Multifamily Housing (Low-Rise)	General Urban/Suburban	625	d.u.	4,684	272	63	209	302	190	112
710	General Office Building	General Urban/Suburban	10,000	s.f.	114	36	31	5	13	2	11
820	Shopping Center (Average Rate)	General Urban/Suburban	5,000	s.f.	189	5	3	2	19	9	10
GROSS TRIPS					5,424	345	105	240	375	227	148
Gross Trips - Before Reductions					5,424	345	105	240	375	227	148
Residential					5,121	304	71	233	343	216	127
Office					114	36	31	5	13	2	11
Retail					189	5	3	2	19	9	10
Reduction - Internal Capture					-148	-8	-4	-4	-12	-6	-6
Residential					-50	-2	0	-2	-5	-3	-2
Office					-42	-3	-2	-1	-2	-1	-1
Retail					-56	-3	-2	-1	-5	-2	-3
Restaurant					0	0	0	0	0	0	0
Reduction - Pass-By			AM	PM	-45	0	0	0	-4	-2	-2
820	Shopping Center	General Urban/Suburban	34%	34%	-45	0	0	0	-4	-2	-2
NEW TRIPS					5,231	337	101	236	359	219	140
Residential					5,071	302	71	231	338	213	125
Non-Residential					160	35	30	5	21	6	15
DRIVEWAY VOLUMES					5,276	337	101	236	363	221	142

INTERSECTION VOLUME WORKSHEET

Hampshire Pike at Lion Parkway/Iberia Drive

AM PEAK HOUR

Description	Hampshire Pike Eastbound				Hampshire Pike Westbound				Lion Parkway Northbound				Iberia Drive Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 AM Volumes	0	1	405	384	0	168	348	0	0	210	2	141	0	9	6	6	1680
Existing Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	2	4	2	2	4	5	2	2	8	2	16	2	2	2	2	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	1	446	422	0	185	383	0	0	231	2	155	0	10	7	7	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	0	46	44	0	19	40	0	0	24	0	16	0	1	1	1	192
Williamsport Pike Development			90	20			57			10							177
Background 2025 AM Volumes	0	1	582	486	0	204	480	0	0	265	2	171	0	11	8	8	2218
Future Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Residential Trip Distribution IN			10%														
Residential Trip Distribution OUT							10%										
Residential Project Trips	0	0	7	0	0	0	23	0	0	0	0	0	0	0	0	0	30
Non-Residential Trip Distribution IN			35%									5%					
Non-Residential Trip Distribution OUT						5%	35%										
Non-Residential Project Trips	0	0	11	0	0	0	2	0	0	0	0	2	0	0	0	0	15
Project Trips (unbalanced)	0	0	18	0	0	0	25	0	0	0	0	2	0	0	0	0	45
Balancing Adjustment			-1														
Pass-By Adjustment																	
Project Trips	0	0	17	0	0	0	25	0	0	0	0	2	0	0	0	0	44
Future 2025 AM Volumes	0	1	599	486	0	204	505	0	0	265	2	173	0	11	8	8	2262
% from Existing	0.0%	100.0%	67.6%	79.0%	0.0%	82.4%	68.9%	0.0%	0.0%	79.2%	100.0%	81.5%	0.0%	81.8%	75.0%	75.0%	74.3%
% from Background Growth	0.0%	0.0%	29.5%	21.0%	0.0%	17.6%	26.1%	0.0%	0.0%	20.8%	0.0%	17.3%	0.0%	18.2%	25.0%	25.0%	23.8%
% from Project Trips	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	1.9%

INTERSECTION VOLUME WORKSHEET

Hampshire Pike at Lion Parkway/Iberia Drive

PM PEAK HOUR

Description	Hampshire Pike Eastbound				Hampshire Pike Westbound				Lion Parkway Northbound				Iberia Drive Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 PM Volumes	0	4	339	301	0	52	541	2	0	275	3	42	0	1	2	1	1563
Existing Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	25	5	2	2	2	4	2	2	2	2	2	2	2	2	2	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	4	373	331	0	57	595	2	0	303	3	46	0	1	2	1	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	0	39	34	0	6	62	0	0	32	0	5	0	0	0	0	178
Williamsport Pike Development			90	20			147			27							284
Background 2025 PM Volumes	0	4	502	385	0	63	804	2	0	362	3	51	0	1	2	1	2180
Future Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Residential Trip Distribution IN			10%														
Residential Trip Distribution OUT							10%										
Residential Project Trips	0	0	21	0	0	0	13	0	0	0	0	0	0	0	0	0	34
Non-Residential Trip Distribution IN			35%									5%					
Non-Residential Trip Distribution OUT						5%	35%										
Non-Residential Project Trips	0	0	2	0	0	1	5	0	0	0	0	0	0	0	0	0	8
Project Trips (unbalanced)	0	0	23	0	0	1	18	0	0	0	0	0	0	0	0	0	42
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	0	23	0	0	1	18	0	0	0	0	0	0	0	0	0	42
Future 2025 PM Volumes	0	4	525	385	0	64	822	2	0	362	3	51	0	1	2	1	2222
% from Existing	0.0%	100.0%	64.6%	78.2%	0.0%	81.3%	65.8%	100.0%	0.0%	76.0%	100.0%	82.4%	0.0%	100.0%	100.0%	100.0%	70.3%
% from Background Growth	0.0%	0.0%	31.0%	21.8%	0.0%	17.2%	32.0%	0.0%	0.0%	24.0%	0.0%	17.6%	0.0%	0.0%	0.0%	0.0%	27.8%
% from Project Trips	0.0%	0.0%	4.4%	0.0%	0.0%	1.6%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%

INTERSECTION VOLUME WORKSHEET

James Campbell Boulevard at Hampshire Pike

AM PEAK HOUR

Description	Hampshire Pike Eastbound				Hampshire Pike Westbound				James Campbell Boulevard Northbound				James Campbell Boulevard Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 AM Volumes	0	164	199	204	0	85	173	92	0	163	407	89	0	198	633	154	2561
Existing Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
Conflicting Pedestrians																	
Heavy Vehicle %	2	7	3	7	2	7	4	10	2	4	10	7	2	4	4	5	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	180	219	224	0	94	190	101	0	179	448	98	0	218	696	169	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	19	23	23	0	10	20	11	0	19	47	10	0	23	72	18	295
Williamsport Pike Development		40	30	20			14			11						31	146
Background 2025 AM Volumes	0	239	272	267	0	104	224	112	0	209	495	108	0	241	768	218	3257
Future Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
Residential Trip Distribution IN							10%			10%						35%	
Residential Trip Distribution OUT		35%	10%	10%													
Residential Project Trips	0	81	23	23	0	0	7	0	0	7	0	0	0	0	0	25	166
Non-Residential Trip Distribution IN							30%			15%						10%	
Non-Residential Trip Distribution OUT		10%	30%	15%													
Non-Residential Project Trips	0	1	2	1	0	0	9	0	0	5	0	0	0	0	0	3	21
Project Trips (unbalanced)	0	82	25	24	0	0	16	0	0	12	0	0	0	0	0	28	187
Balancing Adjustment			-1							-1							
Pass-By Adjustment																	
Project Trips	0	82	24	24	0	0	16	0	0	11	0	0	0	0	0	28	185
Future 2025 AM Volumes	0	321	296	291	0	104	240	112	0	220	495	108	0	241	768	246	3442
% from Existing	0.0%	51.1%	67.2%	70.1%	0.0%	81.7%	72.1%	82.1%	0.0%	74.1%	82.2%	82.4%	0.0%	82.2%	82.4%	62.6%	74.4%
% from Background Growth	0.0%	23.4%	24.7%	21.6%	0.0%	18.3%	21.3%	17.9%	0.0%	20.9%	17.8%	17.6%	0.0%	17.8%	17.6%	26.0%	20.2%
% from Project Trips	0.0%	25.5%	8.1%	8.2%	0.0%	0.0%	6.7%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.4%	5.4%

INTERSECTION VOLUME WORKSHEET

James Campbell Boulevard at Hampshire Pike

PM PEAK HOUR

Description	Hampshire Pike Eastbound				Hampshire Pike Westbound				James Campbell Boulevard Northbound				James Campbell Boulevard Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 PM Volumes	0	157	175	180	0	83	179	134	0	237	526	75	0	93	585	152	2576
Existing Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	
Conflicting Pedestrians		0		0		0		0		0		1		1		0	
Heavy Vehicle %	2	3	4	5	2	2	5	5	2	5	6	8	2	4	2	4	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	173	193	198	0	91	197	147	0	261	579	83	0	102	644	167	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	18	20	21	0	9	20	15	0	27	60	9	0	11	67	17	294
Williamsport Pike Development		40	30	20			40			27						80	237
Background 2025 PM Volumes	0	231	243	239	0	100	257	162	0	315	639	92	0	113	711	264	3366
Future Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	
Residential Trip Distribution IN							10%			10%						35%	
Residential Trip Distribution OUT		35%	10%	10%													
Residential Project Trips	0	44	13	13	0	0	21	0	0	21	0	0	0	0	0	75	187
Non-Residential Trip Distribution IN							30%			15%						10%	
Non-Residential Trip Distribution OUT		10%	30%	15%													
Non-Residential Project Trips	0	2	5	2	0	0	2	0	0	1	0	0	0	0	0	1	13
Project Trips (unbalanced)	0	46	18	15	0	0	23	0	0	22	0	0	0	0	0	76	200
Balancing Adjustment			-1	-1													
Pass-By Adjustment																	
Project Trips	0	46	17	14	0	0	23	0	0	22	0	0	0	0	0	76	198
Future 2025 PM Volumes	0	277	260	253	0	100	280	162	0	337	639	92	0	113	711	340	3564
% from Existing	0.0%	56.7%	67.3%	71.1%	0.0%	83.0%	63.9%	82.7%	0.0%	70.3%	82.3%	81.5%	0.0%	82.3%	82.3%	44.7%	72.3%
% from Background Growth	0.0%	26.7%	26.2%	23.3%	0.0%	17.0%	27.9%	17.3%	0.0%	23.1%	17.7%	18.5%	0.0%	17.7%	17.7%	32.9%	22.2%
% from Project Trips	0.0%	16.6%	6.5%	5.5%	0.0%	0.0%	8.2%	0.0%	0.0%	6.5%	0.0%	0.0%	0.0%	0.0%	0.0%	22.4%	5.6%

INTERSECTION VOLUME WORKSHEET

James Campbell Boulevard at Old Williamsport Pike

AM PEAK HOUR

Description	Old Williamsport Pike Eastbound				Old Williamsport Pike Westbound				James Campbell Boulevard Northbound				James Campbell Boulevard Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 AM Volumes	0	8	0	101	0	8	0	4	0	19	602	32	0	19	993	9	1795
Existing Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	13	2	11	2	2	2	2	2	32	12	2	2	5	4	11	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	9	0	111	0	9	0	4	0	21	662	35	0	21	1092	10	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	1	0	12	0	1	0	0	0	2	69	4	0	2	114	1	206
Williamsport Pike Development											40				31		71
Background 2025 AM Volumes	0	10	0	123	0	10	0	4	0	23	771	39	0	23	1237	11	2251
Future Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Residential Trip Distribution IN															35%	35%	
Residential Trip Distribution OUT		35%									35%						
Residential Project Trips	0	81	0	0	0	0	0	0	0	0	81	0	0	0	25	25	212
Non-Residential Trip Distribution IN															10%	5%	
Non-Residential Trip Distribution OUT		5%									10%						
Non-Residential Project Trips	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	2	6
Project Trips (unbalanced)	0	81	0	0	0	0	0	0	0	0	82	0	0	0	28	27	218
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	81	0	0	0	0	0	0	0	0	82	0	0	0	28	27	218
Future 2025 AM Volumes	0	91	0	123	0	10	0	4	0	23	853	39	0	23	1265	38	2469
% from Existing	0.0%	8.8%	0.0%	82.1%	0.0%	80.0%	0.0%	100.0%	0.0%	82.6%	70.6%	82.1%	0.0%	82.6%	78.5%	23.7%	72.7%
% from Background Growth	0.0%	2.2%	0.0%	17.9%	0.0%	20.0%	0.0%	0.0%	0.0%	17.4%	19.8%	17.9%	0.0%	17.4%	19.3%	5.3%	18.5%
% from Project Trips	0.0%	89.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.6%	0.0%	0.0%	0.0%	2.2%	71.1%	8.8%

INTERSECTION VOLUME WORKSHEET

James Campbell Boulevard at Old Williamsport Pike

PM PEAK HOUR

Description	Old Williamsport Pike Eastbound				Old Williamsport Pike Westbound				James Campbell Boulevard Northbound				James Campbell Boulevard Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 PM Volumes	0	7	0	20	0	31	0	16	0	43	831	3	0	3	752	29	1735
Existing Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	2	2	15	2	3	2	6	2	9	2	2	2	67	3	7	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	8	0	22	0	34	0	18	0	47	914	3	0	3	827	32	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	1	0	2	0	4	0	2	0	5	95	0	0	0	86	3	198
Williamsport Pike Development											40				80		120
Background 2025 PM Volumes	0	9	0	24	0	38	0	20	0	52	1049	3	0	3	993	35	2226
Future Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Residential Trip Distribution IN															35%	35%	
Residential Trip Distribution OUT		35%									35%						
Residential Project Trips	0	44	0	0	0	0	0	0	0	0	44	0	0	0	75	75	238
Non-Residential Trip Distribution IN															10%	5%	
Non-Residential Trip Distribution OUT		5%									10%						
Non-Residential Project Trips	0	1	0	0	0	0	0	0	0	0	2	0	0	0	1	0	4
Project Trips (unbalanced)	0	45	0	0	0	0	0	0	0	0	46	0	0	0	76	75	242
Balancing Adjustment		-1															
Pass-By Adjustment																	
Project Trips	0	44	0	0	0	0	0	0	0	0	46	0	0	0	76	75	241
Future 2025 PM Volumes	0	53	0	24	0	38	0	20	0	52	1095	3	0	3	1069	110	2467
% from Existing	0.0%	13.2%	0.0%	83.3%	0.0%	81.6%	0.0%	80.0%	0.0%	82.7%	75.9%	100.0%	0.0%	100.0%	70.3%	26.4%	70.3%
% from Background Growth	0.0%	3.8%	0.0%	16.7%	0.0%	18.4%	0.0%	20.0%	0.0%	17.3%	19.9%	0.0%	0.0%	0.0%	22.5%	5.5%	19.9%
% from Project Trips	0.0%	83.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	0.0%	7.1%	68.2%	9.8%

INTERSECTION VOLUME WORKSHEET

James Campbell Boulevard at Industrial Park Road

AM PEAK HOUR

Description	James Campbell Boulevard Eastbound				James Campbell Boulevard Westbound				Industrial Park Road Northbound				Industrial Park Road Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 AM Volumes	0	391	213	9	0	0	231	44	0	2	5	1	0	100	5	793	1794
Existing Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	14	9	11	2	2	6	14	2	50	40	2	2	6	40	4	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	430	234	10	0	0	254	48	0	2	6	1	0	110	6	872	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	45	24	1	0	0	26	5	0	0	1	0	0	11	1	91	205
Williamsport Pike Development		20	20				10									21	71
Background 2025 AM Volumes	0	495	278	11	0	0	290	53	0	2	7	1	0	121	7	984	2249
Future Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	
Residential Trip Distribution IN							5%									65%	
Residential Trip Distribution OUT		65%	5%														
Residential Project Trips	0	150	12	0	0	0	4	0	0	0	0	0	0	0	0	46	212
Non-Residential Trip Distribution IN							5%									10%	
Non-Residential Trip Distribution OUT		10%	5%														
Non-Residential Project Trips	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	3	6
Project Trips (unbalanced)	0	151	12	0	0	0	6	0	0	0	0	0	0	0	0	49	218
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	151	12	0	0	0	6	0	0	0	0	0	0	0	0	49	218
Future 2025 AM Volumes	0	646	290	11	0	0	296	53	0	2	7	1	0	121	7	1033	2467
% from Existing	0.0%	60.5%	73.4%	81.8%	0.0%	0.0%	78.0%	83.0%	0.0%	100.0%	71.4%	100.0%	0.0%	82.6%	71.4%	76.8%	72.7%
% from Background Growth	0.0%	16.1%	22.4%	18.2%	0.0%	0.0%	19.9%	17.0%	0.0%	0.0%	28.6%	0.0%	0.0%	17.4%	28.6%	18.5%	18.4%
% from Project Trips	0.0%	23.4%	4.1%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.7%	8.8%

INTERSECTION VOLUME WORKSHEET

James Campbell Boulevard at Industrial Park Road

PM PEAK HOUR

Description	James Campbell Boulevard Eastbound				James Campbell Boulevard Westbound				Industrial Park Road Northbound				Industrial Park Road Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 PM Volumes	0	635	242	3	0	2	228	63	0	6	5	3	0	44	0	549	1780
Existing Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	3	2	33	2	2	4	3	2	2	40	2	2	9	2	4	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	699	266	3	0	2	251	69	0	7	6	3	0	48	0	604	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	73	28	0	0	0	26	7	0	1	1	0	0	5	0	63	204
Williamsport Pike Development		20	20				27									53	120
Background 2025 PM Volumes	0	792	314	3	0	2	304	76	0	8	7	3	0	53	0	720	2282
Future Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Residential Trip Distribution IN							5%									65%	
Residential Trip Distribution OUT		65%	5%														
Residential Project Trips	0	81	6	0	0	0	11	0	0	0	0	0	0	0	0	138	236
Non-Residential Trip Distribution IN							5%									10%	
Non-Residential Trip Distribution OUT		10%	5%														
Non-Residential Project Trips	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	4
Project Trips (unbalanced)	0	83	7	0	0	0	11	0	0	0	0	0	0	0	0	139	240
Balancing Adjustment							1										
Pass-By Adjustment																	
Project Trips	0	83	7	0	0	0	12	0	0	0	0	0	0	0	0	139	241
Future 2025 PM Volumes	0	875	321	3	0	2	316	76	0	8	7	3	0	53	0	859	2523
% from Existing	0.0%	72.6%	75.4%	100.0%	0.0%	100.0%	72.2%	82.9%	0.0%	75.0%	71.4%	100.0%	0.0%	83.0%	0.0%	63.9%	70.6%
% from Background Growth	0.0%	17.9%	22.4%	0.0%	0.0%	0.0%	24.1%	17.1%	0.0%	25.0%	28.6%	0.0%	0.0%	17.0%	0.0%	19.9%	19.9%
% from Project Trips	0.0%	9.5%	2.2%	0.0%	0.0%	0.0%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.2%	9.6%

INTERSECTION VOLUME WORKSHEET

Hampshire Pike at Oxford Village Circle/Site Driveway A

AM PEAK HOUR

Description	Hampshire Pike Eastbound				Hampshire Pike Westbound				Oxford Village Circle Northbound				Site Driveway A Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 AM Volumes	0	0	555	10	0	10	516	0	0	10	0	10	0	0	0	0	1111
Existing Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	2	7	2	2	2	5	2	2	2	2	2	2	2	2	2	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	0	611	11	0	11	568	0	0	11	0	11	0	0	0	0	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	0	64	1	0	1	59	0	0	1	0	1	0	0	0	0	127
Williamsport Pike Development			90				57										147
Background 2025 AM Volumes	0	0	765	12	0	12	684	0	0	12	0	12	0	0	0	0	1497
Future Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Residential Trip Distribution IN		10%						55%									
Residential Trip Distribution OUT														55%		10%	
Residential Project Trips	0	7	0	0	0	0	0	39	0	0	0	0	0	127	0	23	196
Non-Residential Trip Distribution IN		40%						55%									
Non-Residential Trip Distribution OUT														55%		40%	
Non-Residential Project Trips	0	12	0	0	0	0	0	17	0	0	0	0	0	3	0	2	34
Project Trips (unbalanced)	0	19	0	0	0	0	0	56	0	0	0	0	0	130	0	25	230
Balancing Adjustment								-1									
Pass-By Adjustment																	
Project Trips	0	19	0	0	0	0	0	55	0	0	0	0	0	130	0	25	229
Future 2025 AM Volumes	0	19	765	12	0	12	684	55	0	12	0	12	0	130	0	25	1726
% from Existing	0.0%	0.0%	72.5%	83.3%	0.0%	83.3%	75.4%	0.0%	0.0%	83.3%	0.0%	83.3%	0.0%	0.0%	0.0%	0.0%	64.4%
% from Background Growth	0.0%	0.0%	27.5%	16.7%	0.0%	16.7%	24.6%	0.0%	0.0%	16.7%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	22.4%
% from Project Trips	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	13.3%

INTERSECTION VOLUME WORKSHEET

Hampshire Pike at Oxford Village Circle/Site Driveway A

PM PEAK HOUR

Description	Hampshire Pike Eastbound				Hampshire Pike Westbound				Oxford Village Circle Northbound				Site Driveway A Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 PM Volumes	0	0	382	10	0	10	595	0	0	10	0	10	0	0	0	0	1017
Existing Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	2	5	2	2	2	4	2	2	2	2	2	2	2	2	2	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	0	420	11	0	11	655	0	0	11	0	11	0	0	0	0	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	0	44	1	0	1	68	0	0	1	0	1	0	0	0	0	116
Williamsport Pike Development			90				147										237
Background 2025 PM Volumes	0	0	554	12	0	12	870	0	0	12	0	12	0	0	0	0	1472
Future Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Residential Trip Distribution IN		10%						55%									
Residential Trip Distribution OUT														55%		10%	
Residential Project Trips	0	21	0	0	0	0	0	117	0	0	0	0	0	69	0	13	220
Non-Residential Trip Distribution IN		40%						55%									
Non-Residential Trip Distribution OUT														55%		40%	
Non-Residential Project Trips	0	2	0	0	0	0	0	3	0	0	0	0	0	8	0	6	19
Project Trips (unbalanced)	0	23	0	0	0	0	0	120	0	0	0	0	0	77	0	19	239
Balancing Adjustment								1									
Pass-By Adjustment		1	-1				-1	1						1		1	
Project Trips	0	24	-1	0	0	0	-1	122	0	0	0	0	0	78	0	20	242
Future 2025 PM Volumes	0	24	553	12	0	12	869	122	0	12	0	12	0	78	0	20	1714
% from Existing	0.0%	0.0%	69.1%	83.3%	0.0%	83.3%	68.5%	0.0%	0.0%	83.3%	0.0%	83.3%	0.0%	0.0%	0.0%	0.0%	59.3%
% from Background Growth	0.0%	0.0%	31.1%	16.7%	0.0%	16.7%	31.6%	0.0%	0.0%	16.7%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	26.5%
% from Project Trips	0.0%	100.0%	-0.2%	0.0%	0.0%	0.0%	-0.1%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	14.1%

INTERSECTION VOLUME WORKSHEET

Old Williamsport Pike at Site Driveway B

AM PEAK HOUR

Description	Old Williamsport Pike Eastbound				Old Williamsport Pike Westbound				Site Driveway B Northbound				Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 AM Volumes	0	0	109	0	0	0	28	0	0	0	0	0	0	0	0	0	137
Existing Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	2	11	2	2	2	25	2	2	2	2	2	2	2	2	2	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	0	120	0	0	0	31	0	0	0	0	0	0	0	0	0	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	0	12	0	0	0	3	0	0	0	0	0	0	0	0	0	15
Williamsport Pike Development																	0
Background 2025 AM Volumes	0	0	132	0	0	0	34	0	0	0	0	0	0	0	0	0	166
Future Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Residential Trip Distribution IN						35%											
Residential Trip Distribution OUT												35%					
Residential Project Trips	0	0	0	0	0	25	0	0	0	0	0	81	0	0	0	0	106
Non-Residential Trip Distribution IN						5%											
Non-Residential Trip Distribution OUT												5%					
Non-Residential Project Trips	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Project Trips (unbalanced)	0	0	0	0	0	27	0	0	0	0	0	81	0	0	0	0	108
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	0	0	0	0	27	0	0	0	0	0	81	0	0	0	0	108
Future 2025 AM Volumes	0	0	132	0	0	27	34	0	0	0	0	81	0	0	0	0	274
% from Existing	0.0%	0.0%	82.6%	0.0%	0.0%	0.0%	82.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%
% from Background Growth	0.0%	0.0%	17.4%	0.0%	0.0%	0.0%	17.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.6%
% from Project Trips	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	39.4%

INTERSECTION VOLUME WORKSHEET

Old Williamsport Pike at Site Driveway B

PM PEAK HOUR

Description	Old Williamsport Pike Eastbound				Old Williamsport Pike Westbound				Site Driveway B Northbound				Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 PM Volumes	0	0	27	0	0	0	72	0	0	0	0	0	0	0	0	0	99
Existing Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	2	12	2	2	2	8	2	2	2	2	2	2	2	2	2	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	0	30	0	0	0	79	0	0	0	0	0	0	0	0	0	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	0	3	0	0	0	8	0	0	0	0	0	0	0	0	0	11
Williamsport Pike Development																	0
Background 2025 PM Volumes	0	0	33	0	0	0	87	0	0	0	0	0	0	0	0	0	120
Future Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Residential Trip Distribution IN						35%											
Residential Trip Distribution OUT												35%					
Residential Project Trips	0	0	0	0	0	75	0	0	0	0	0	44	0	0	0	0	119
Non-Residential Trip Distribution IN						5%											
Non-Residential Trip Distribution OUT												5%					
Non-Residential Project Trips	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Project Trips (unbalanced)	0	0	0	0	0	75	0	0	0	0	0	45	0	0	0	0	120
Balancing Adjustment												-1					
Pass-By Adjustment																	
Project Trips	0	0	0	0	0	75	0	0	0	0	0	44	0	0	0	0	119
Future 2025 PM Volumes	0	0	33	0	0	75	87	0	0	0	0	44	0	0	0	0	239
% from Existing	0.0%	0.0%	81.8%	0.0%	0.0%	0.0%	82.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	41.4%
% from Background Growth	0.0%	0.0%	18.2%	0.0%	0.0%	0.0%	17.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.8%
% from Project Trips	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	49.8%

QUALITY COUNTS REPORT

Type: Volume Data
Location: Hampshire Pike West of Oxford Village Cir
Specific Location:
City/State: Columbia TN
QCJobNo: 15562409
Date:
Direction: EB/ WB
Comments:

2025 Growth Factor =	1.104

Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Background 2025
		14-Sep-21								
12:00 AM		46				46			46	
1:00 AM		15				15			15	
2:00 AM		19				19			19	
3:00 AM		32				32			32	
4:00 AM		79				79			79	
5:00 AM		181				181			181	
6:00 AM		464				464			464	
7:00 AM		1136				1136			1136	1254
8:00 AM		738				738			738	815
9:00 AM		714				714			714	788
10:00 AM		665				665			665	734
11:00 AM		733				733			733	809
12:00 PM		792				792			792	874
1:00 PM		759				759			759	838
2:00 PM		1033				1033			1033	1140
3:00 PM		1104				1104			1104	1219
4:00 PM		997				997			997	1101
5:00 PM		1019				1019			1019	1125
6:00 PM		746				746			746	824
7:00 PM		613				613			613	
8:00 PM		372				372			372	
9:00 PM		221				221			221	
10:00 PM		153				153			153	
11:00 PM		81				81			81	
Day Total		12712				12712			12712	
ADT		12712				12712			12712	

%Weekday Average	100.00%				
%Week Average	100.00%		100.00%		
AM Peak	7:00 AM		7:00 AM		7:00 AM
Volume	1136		1136		1136
PM Peak	3:00 PM		3:00 PM		3:00 PM
Volume	1104		1104		1104

Intersection 5 - Hapshire Pike at Oxford Village Circle/Site Driveway A, Daily Trip Generation Calculations

Single Family Detached Housing
Daily 437
Enter 219
Exit 218

Int 5	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Enter	0%	10%	0%	0%	0%	0%	0%	55%	0%	0%	0%	0%	0%	0%	0%	0%
Exit	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	55%	0%	10%

Hourly Trip Gen	Enter	Exit	START TIME	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
				EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
6.5%	25%	75%	7:00	0	1	0	0	0	0	0	4	0	0	0	0	0	12	0	2
6.2%	25%	75%	8:00	0	1	0	0	0	0	0	4	0	0	0	0	0	11	0	2
4.6%	25%	75%	9:00	0	0	0	0	0	0	0	3	0	0	0	0	0	8	0	1
4.9%	50%	50%	10:00	0	1	0	0	0	0	0	6	0	0	0	0	0	6	0	1
5.3%	50%	50%	11:00	0	1	0	0	0	0	0	6	0	0	0	0	0	6	0	1
5.7%	50%	50%	12:00	0	1	0	0	0	0	0	7	0	0	0	0	0	7	0	1
6.1%	50%	50%	13:00	0	1	0	0	0	0	0	7	0	0	0	0	0	7	0	1
6.6%	50%	50%	14:00	0	1	0	0	0	0	0	8	0	0	0	0	0	8	0	1
7.5%	50%	50%	15:00	0	2	0	0	0	0	0	9	0	0	0	0	0	9	0	2
8.9%	63%	37%	16:00	0	2	0	0	0	0	0	14	0	0	0	0	0	8	0	1
8.7%	63%	37%	17:00	0	2	0	0	0	0	0	13	0	0	0	0	0	8	0	1
7.2%	63%	37%	18:00	0	2	0	0	0	0	0	11	0	0	0	0	0	6	0	1

Total

START TIME	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
7:00	0	12	0	0	0	0	0	47	0	0	0	0	0	141	0	25
8:00	0	11	0	0	0	0	0	45	0	0	0	0	0	129	0	25
9:00	0	8	0	0	0	0	0	31	0	0	0	0	0	86	0	16
10:00	0	12	0	0	0	0	0	57	0	0	0	0	0	57	0	12
11:00	0	16	0	0	0	0	0	68	0	0	0	0	0	68	0	16
12:00	0	17	0	0	0	0	0	71	0	0	0	0	0	71	0	17
13:00	0	17	0	0	0	0	0	69	0	0	0	0	0	69	0	17
14:00	0	18	0	0	0	0	0	83	0	0	0	0	0	83	0	18
15:00	0	21	0	0	0	0	0	95	0	0	0	0	0	95	0	21
16:00	0	29	0	0	0	0	0	148	0	0	0	0	0	73	0	19
17:00	0	34	0	0	0	0	0	173	0	0	0	0	0	84	0	21
18:00	0	29	0	0	0	0	0	148	0	0	0	0	0	68	0	15

Major Street Sum	Minor Street Less RT Volumes
59	141
56	129
39	86
69	57
84	68
88	71
86	69
101	83
116	95
177	73
207	84
177	68

General Office Building
Daily 114
Enter 57
Exit 57

Int 5	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Enter	0%	40%	0%	0%	0%	0%	0%	55%	0%	0%	0%	0%	0%	0%	0%	0%
Exit	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	55%	0%	40%

Hourly Trip Gen	Enter	Exit	START TIME	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
				EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
7.0%	86%	14%	7:00	0	3	0	0	0	0	0	4	0	0	0	0	0	1	0	0
8.8%	86%	14%	8:00	0	3	0	0	0	0	0	5	0	0	0	0	0	1	0	1
5.4%	86%	14%	9:00	0	2	0	0	0	0	0	3	0	0	0	0	0	0	0	0
5.9%	50%	50%	10:00	0	1	0	0	0	0	0	2	0	0	0	0	0	2	0	1
8.4%	50%	50%	11:00	0	2	0	0	0	0	0	3	0	0	0	0	0	3	0	2
10.4%	50%	50%	12:00	0	2	0	0	0	0	0	3	0	0	0	0	0	3	0	2
8.2%	50%	50%	13:00	0	2	0	0	0	0	0	3	0	0	0	0	0	3	0	2
7.5%	50%	50%	14:00	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	2
7.4%	50%	50%	15:00	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	2
10.1%	16%	84%	16:00	0	1	0	0	0	0	0	1	0	0	0	0	0	5	0	4
10.4%	16%	84%	17:00	0	1	0	0	0	0	0	1	0	0	0	0	0	5	0	4
2.4%	16%	84%	18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1

Shopping Center (Fitted Curve Equation)
Daily 189
Enter 95
Exit 94

Int 4	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Enter	0%	40%	0%	0%	0%	0%	0%	55%	0%	0%	0%	0%	0%	0%	0%	0%
Exit	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	55%	0%	40%

Hourly Trip Gen	Enter	Exit	START TIME	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
				EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
1.1%	62%	38%	7:00	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2.0%	62%	38%	8:00	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	1
3.6%	62%	38%	9:00	0	2	0	0	0	0	0	2	0	0	0	0	0	1	0	1
5.6%	50%	50%	10:00	0	2	0	0	0	0	0	3	0	0	0	0	0	3	0	2
8.3%	50%	50%	11:00	0	3	0	0	0	0	0	4	0	0	0	0	0	4	0	3
10.0%	50%	50%	12:00	0	4	0	0	0	0	0	5	0	0	0	0	0	5	0	4
9.3%	50%	50%	13:00	0	4	0	0	0	0	0	5	0	0	0	0	0	5	0	4
9.0%	50%	50%	14:00	0	3	0	0	0	0	0	5	0	0	0	0	0	5	0	3
8.8%	50%	50%	15:00	0	3	0	0	0	0	0	5	0	0	0	0	0	5	0	3
9.2%	48%	52%	16:00	0	3	0	0	0	0	0	5	0	0	0	0	0	5	0	4
9.3%	48%	52%	17:00	0	3	0	0	0	0	0	5	0	0	0	0	0	5	0	4
8.0%	48%	52%	18:00	0	3	0	0	0	0	0	4	0	0	0	0	0	4	0	3

Int 5	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Enter	0%	10%	0%	0%	0%	0%	0%	55%	0%	0%	0%	0%	0%	0%	0%	0%
Exit	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	55%	0%	10%

Multifamily Housing (Low-Rise)
Daily 4,684
Enter 2342
Exit 2342

Hourly Trip Gen	Enter	Exit	START TIME	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
				EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
6.5%	23%	77%	7:00	0	7	0	0	0	0	0	38	0	0	0	0	0	128	0	23
5.8%	23%	77%	8:00	0	6	0	0	0	0	0	35	0	0	0	0	0	116	0	21
3.9%	23%	77%	9:00	0	4	0	0	0	0	0	23	0	0	0	0	0	77	0	14
3.6%	50%	50%	10:00	0	8	0	0	0	0	0	46	0	0	0	0	0	46	0	8
4.3%	50%	50%	11:00	0	10	0	0	0	0	0	55	0	0	0	0	0	55	0	10
4.3%	50%	50%	12:00	0	10	0	0	0	0	0	56	0	0	0	0	0	56	0	10
4.2%	50%	50%	13:00	0	10	0	0	0	0	0	54	0	0	0	0	0	54	0	10
5.2%	50%	50%	14:00	0	12	0	0	0	0	0	68	0	0	0	0	0	68	0	12
6.1%	50%	50%	15:00	0	14	0	0	0	0	0	79	0	0	0	0	0	79	0	14
7.9%	63%	27%	16:00	0	23	0	0	0	0	0	128	0	0	0	0	0	55	0	10
9.5%	63%	27%	17:00	0	28	0	0	0	0	0	154	0	0	0	0	0	66	0	12
8.2%	63%	27%	18:00	0	24	0	0	0	0	0	133	0	0	0	0	0	57	0	10

TRAFFIC SIGNAL WARRANT ANALYSIS

City/County:	**Columbia**	85th-percentile speed on the major street exceeds 40 mph? (Y or N)	**N**		
State:	**TN**	Isolated community with a population of less than 10,000? (Y or N)	**N**	Analyzed by:	RAP
Date:	**5/16/2022**	Apply 56% warrant to Warrant 1, Combination Warrant? (Y or N)	**N**	Analyzed by:	Kimley-Horn
Major Street:	**Hampshire Pike**	Approach Lanes - Major? (1 or 2)	**1**		
Minor Street:	**Driveway A**	Approach Lanes - Minor? (1 or 2)	**1**		

24-Hour Volume Summary	Major Street Total of Both Approaches	Minor Street Higher Volume Approach	Warrant 1, Condition A 100% Major Street	Warrant 1, Condition A 100% Minor Street	Warrant 1, Condition B 100% Major Street	Warrant 1, Condition B 100% Minor Street	Warrant 1, Combination Warrant 80% Major Street	Warrant 1, Combination Warrant 80% Minor Street	Warrant 1, Combination Warrant 80% Major Street	Warrant 1, Combination Warrant 80% Minor Street	Warrant 2 100% Figure 4C-1	Warrant 3, Condition A 100% Minor Delay	Warrant 3, Condition A 100% Minor Volume	Warrant 3, Condition A 100% Total Intrsctn	Warrant 3, Condition B 100% Figure 4C-3
12:00 AM TO 01:00 AM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
01:00 AM TO 02:00 AM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
02:00 AM TO 03:00 AM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
03:00 AM TO 04:00 AM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
04:00 AM TO 05:00 AM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
05:00 AM TO 06:00 AM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
06:00 AM TO 07:00 AM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
07:00 AM TO 08:00 AM	1313	141	263%	94%	**175%**	**188%**	**328%**	**118%**	**219%**	**235%**	**176%**				**109%**
08:00 AM TO 09:00 AM	871	129	174%	86%	**116%**	**172%**	**218%**	**108%**	**145%**	**215%**	**100%**				50%
09:00 AM TO 10:00 AM	827	86	165%	57%	**110%**	**115%**	207%	72%	**138%**	**143%**	61%				31%
10:00 AM TO 11:00 AM	803	57	161%	38%	107%	76%	201%	48%	134%	95%	38%				20%
11:00 AM TO 12:00 PM	893	68	179%	45%	119%	91%	223%	57%	**149%**	**113%**	56%				27%
12:00 PM TO 01:00 PM	962	71	192%	47%	128%	95%	241%	59%	**160%**	**118%**	66%				33%
01:00 PM TO 02:00 PM	924	69	185%	46%	123%	92%	231%	58%	**154%**	**115%**	60%				29%
02:00 PM TO 03:00 PM	1241	83	248%	55%	**165%**	**111%**	310%	69%	**207%**	**138%**	**104%**				58%
03:00 PM TO 04:00 PM	1335	95	267%	63%	**178%**	**127%**	334%	79%	**223%**	**158%**	**119%**				75%
04:00 PM TO 05:00 PM	1278	73	256%	49%	170%	97%	320%	61%	**213%**	**122%**	91%				54%
05:00 PM TO 06:00 PM	1332	84	266%	56%	**178%**	**112%**	333%	70%	**222%**	**140%**	**105%**				66%
06:00 PM TO 07:00 PM	1001	68	200%	45%	133%	91%	250%	57%	**167%**	**113%**	68%				34%
07:00 PM TO 08:00 PM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
08:00 PM TO 09:00 PM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
09:00 PM TO 10:00 PM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
10:00 PM TO 11:00 PM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
11:00 PM TO 12:00 AM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
Source:	MUTCD, 2009 Edition		Threshold 500	150	Threshold 750	75	Threshold 400	120	Threshold 600	60	MUTCD Figure 4C-1 and 4C-2	Warranting Volumes			MUTCD Figure 4C-3 and 4C-4
Created By:	Kimley-Horn and Associates, Inc.		Summary TOTAL	0	Summary TOTAL	6	Summary TOTAL	2	Summary TOTAL	11	Summary TOTAL	**5**	Summary TOTAL		Summary TOTAL	**1**
			Met?	NO	Met?	NO	TOTAL	2	Met?	NO	Met?	**YES**	Met?		Met?	**YES**

COMMENTS/NOTES:	COMMENTS/NOTES:
Future 2025	

Appendix E

Turn Lane Evaluations

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

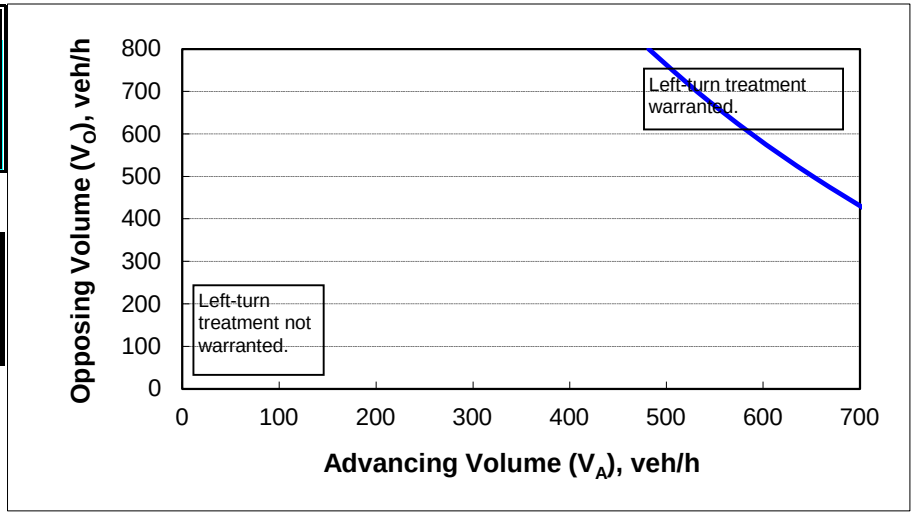
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	40
Percent of left-turns in advancing volume (V_A), %:	2%
Advancing volume (V_A), veh/h:	796
Opposing volume (V_O), veh/h:	684

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	540
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

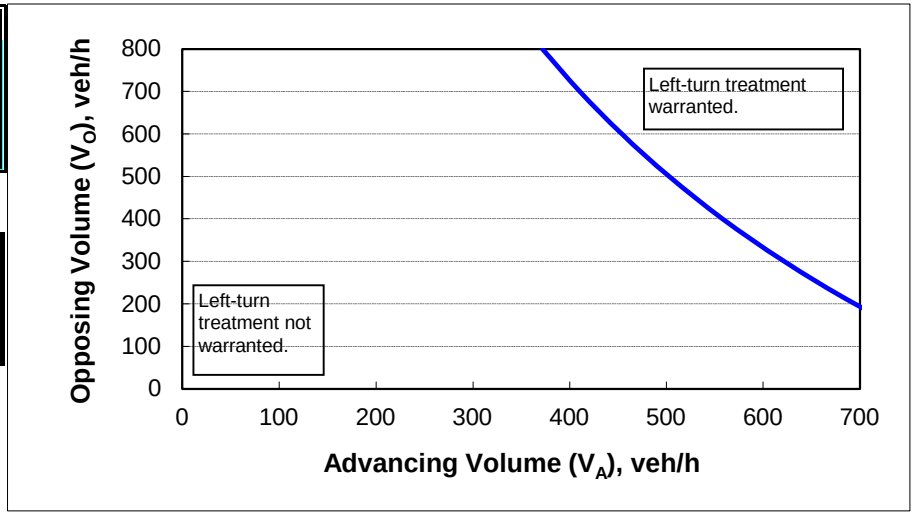
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	40
Percent of left-turns in advancing volume (V_A), %:	4%
Advancing volume (V_A), veh/h:	589
Opposing volume (V_O), veh/h:	869

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	348
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

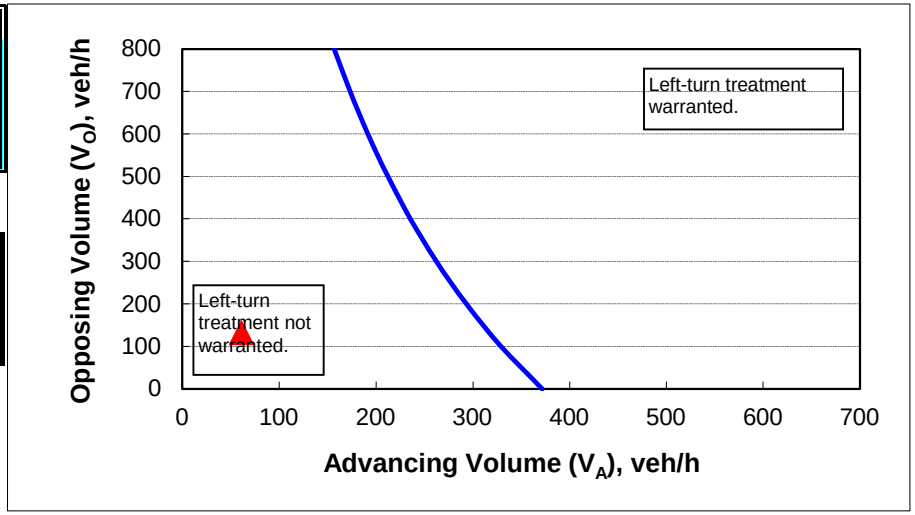
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	44%
Advancing volume (V_A), veh/h:	61
Opposing volume (V_O), veh/h:	132

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	317
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

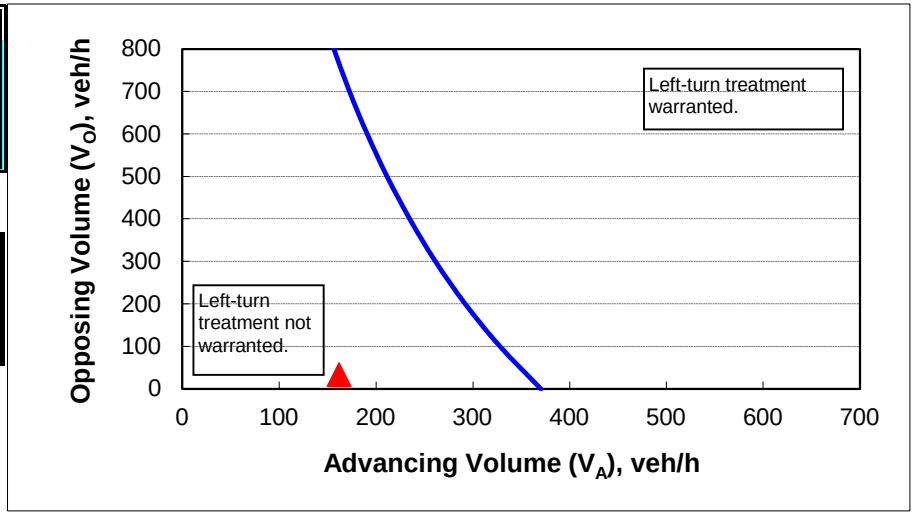
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	46%
Advancing volume (V_A), veh/h:	162
Opposing volume (V_O), veh/h:	33

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	356
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadw ay

Variable	Value
Major-road speed, mph:	40
Major-road volume (one direction), veh/h:	751
Right-turn volume, veh/h:	55

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	30
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Add right-turn bay.	

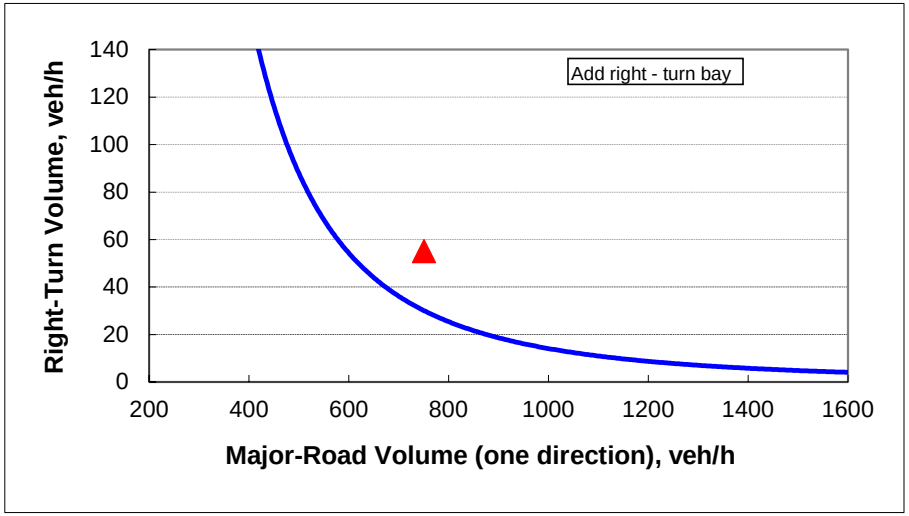


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadw ay

Variable	Value
Major-road speed, mph:	40
Major-road volume (one direction), veh/h:	1003
Right-turn volume, veh/h:	122

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	14
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Add right-turn bay.	

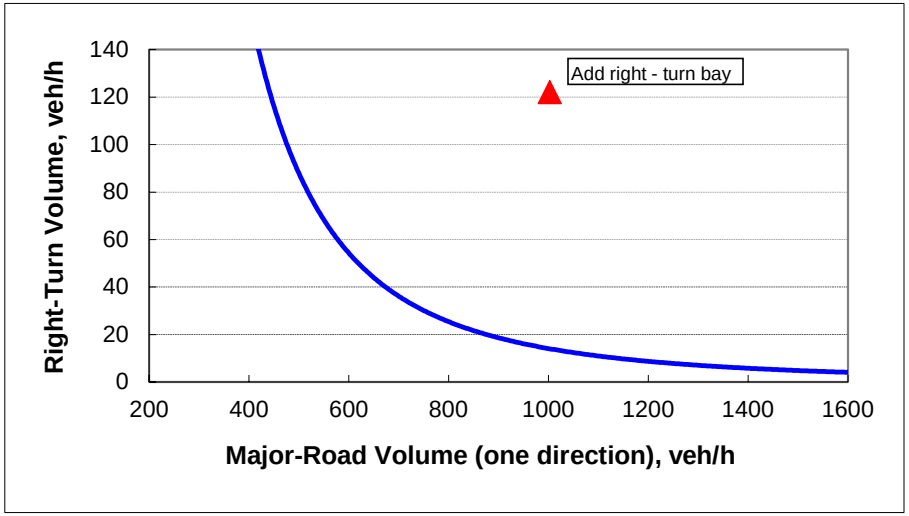


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadw ay

Variable	Value
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	132
Right-turn volume, veh/h:	0

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	30
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

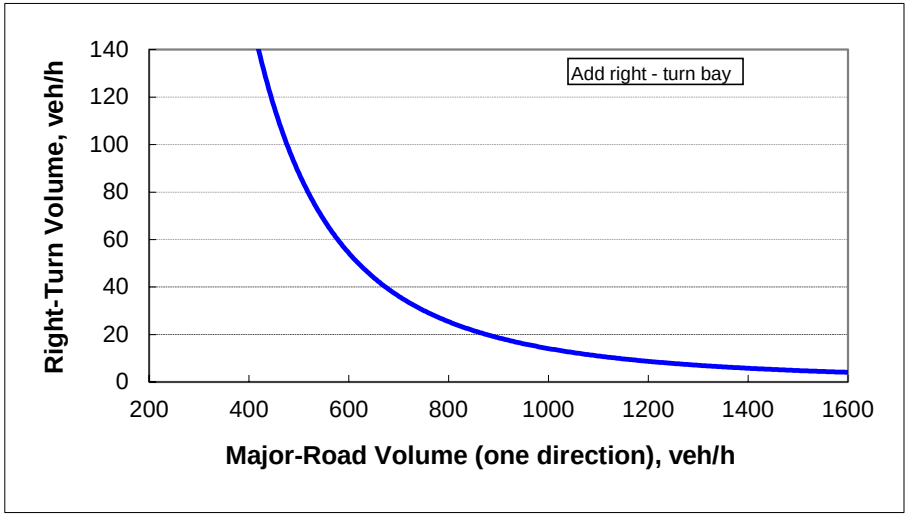


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadw ay

Variable	Value
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	33
Right-turn volume, veh/h:	0

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	4029918
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

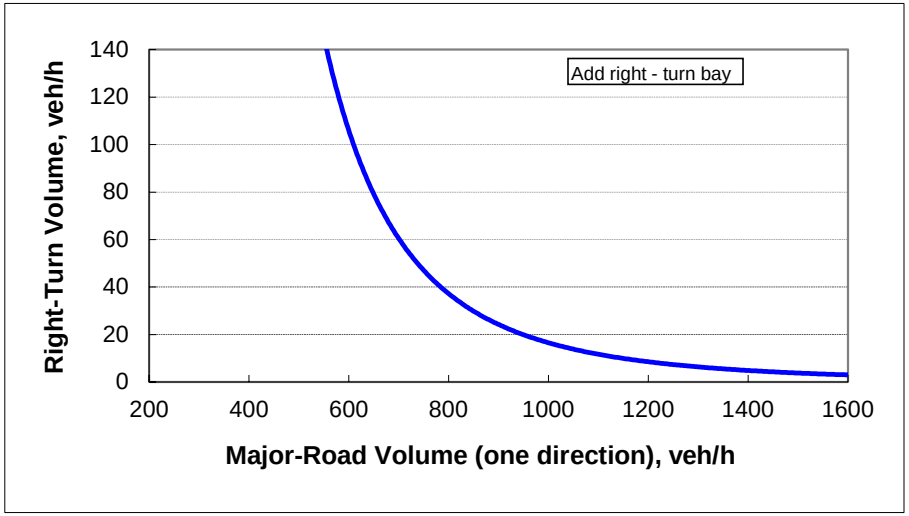


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

4-lane roadway

INPUT

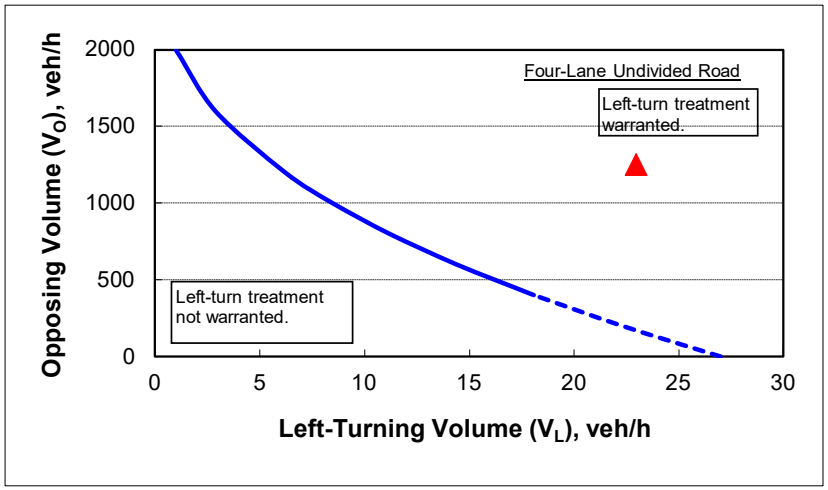
Variable	Value
Left-turning volume (V_L), veh/h:	23
Advancing volume (V_A), veh/h:	833
Opposing volume (V_O), veh/h:	1248

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

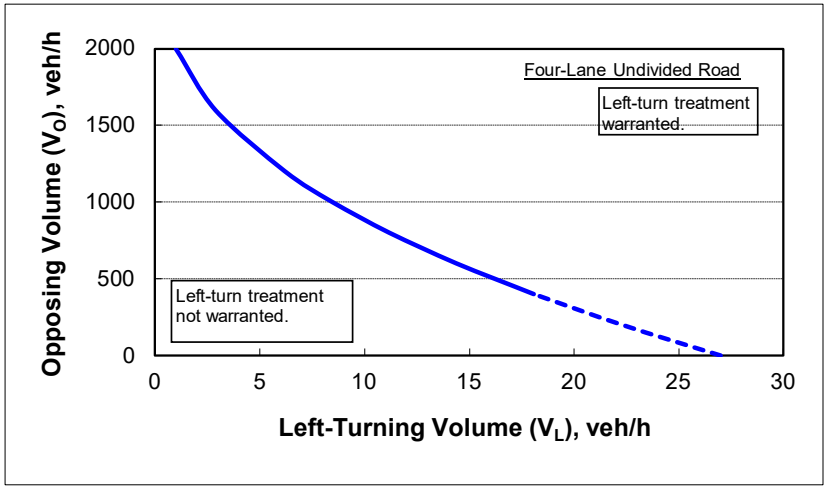
4-lane roadway

INPUT

Variable	Value
Left-turning volume (V_L), veh/h:	52
Advancing volume (V_A), veh/h:	1104
Opposing volume (V_O), veh/h:	1028

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

4-lane roadway

INPUT

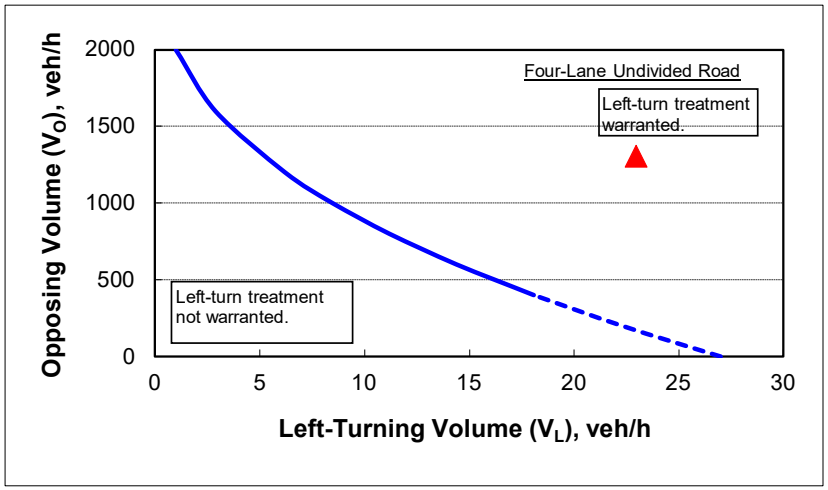
Variable	Value
Left-turning volume (V_L), veh/h:	23
Advancing volume (V_A), veh/h:	915
Opposing volume (V_O), veh/h:	1303

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

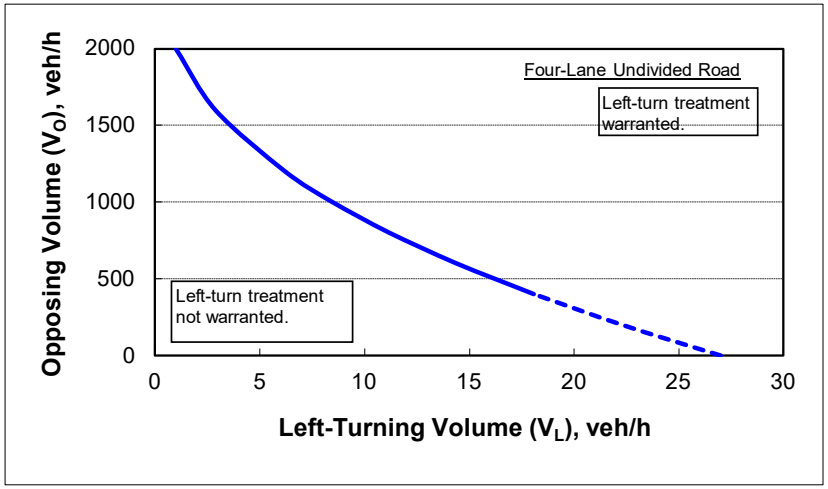
4-lane roadway

INPUT

Variable	Value
Left-turning volume (V_L), veh/h:	52
Advancing volume (V_A), veh/h:	1150
Opposing volume (V_O), veh/h:	1179

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

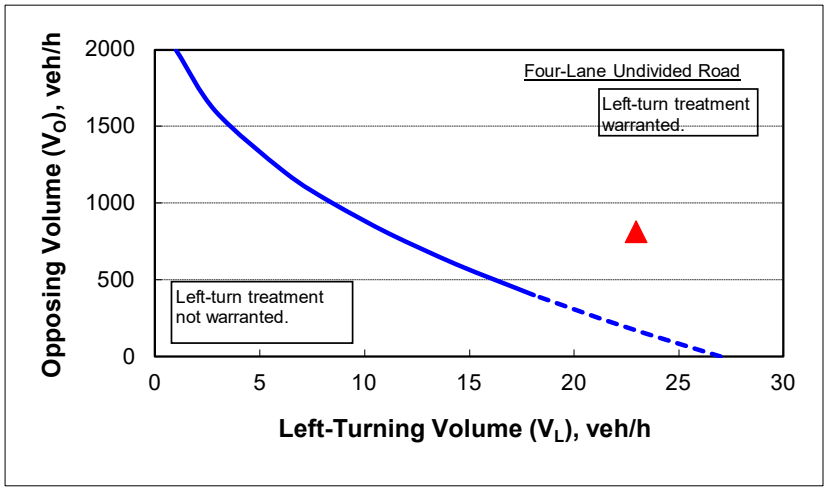
4-lane roadway

INPUT

Variable	Value
Left-turning volume (V_L), veh/h:	23
Advancing volume (V_A), veh/h:	1271
Opposing volume (V_O), veh/h:	810

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

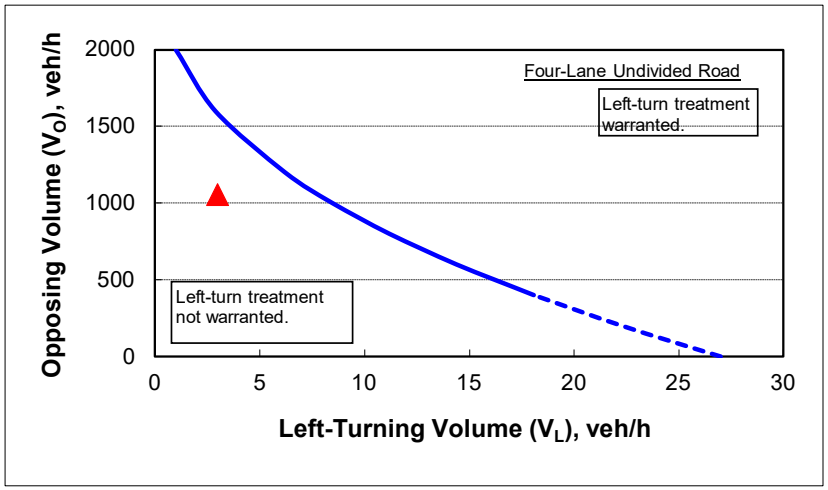
4-lane roadway

INPUT

Variable	Value
Left-turning volume (V_L), veh/h:	3
Advancing volume (V_A), veh/h:	1031
Opposing volume (V_O), veh/h:	1052

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

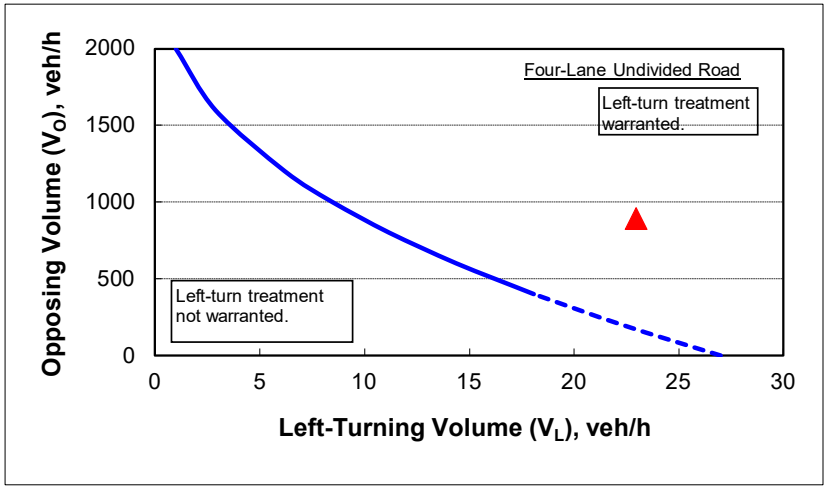
4-lane roadway

INPUT

Variable	Value
Left-turning volume (V_L), veh/h:	23
Advancing volume (V_A), veh/h:	1326
Opposing volume (V_O), veh/h:	892

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

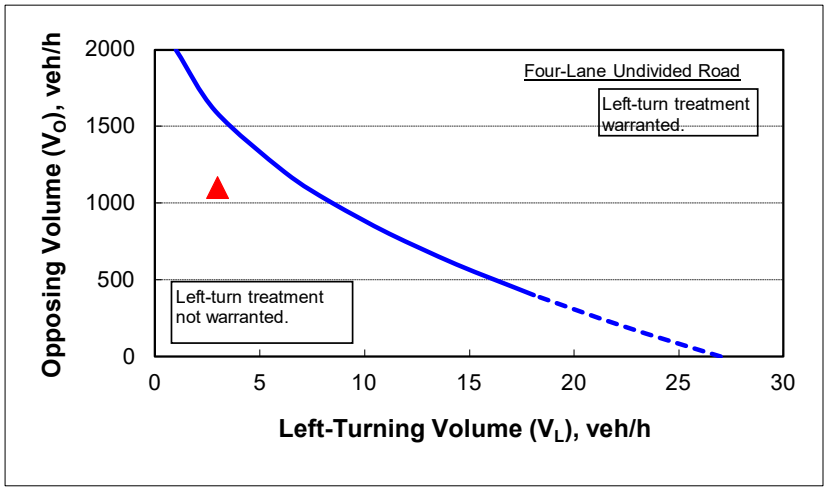
4-lane roadway

INPUT

Variable	Value
Left-turning volume (V_L), veh/h:	3
Advancing volume (V_A), veh/h:	1182
Opposing volume (V_O), veh/h:	1098

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0

Appendix F

Capacity Analyses and

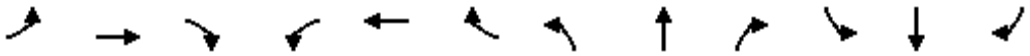
Queue Analyses



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1	490	464	203	421	256	170	27
v/c Ratio	0.00	0.50	0.44	0.39	0.35	0.86	0.27	0.07
Control Delay	15.0	19.8	3.0	9.8	10.0	64.2	3.9	22.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.0	19.8	3.0	9.8	10.0	64.2	3.9	22.1
Queue Length 50th (ft)	0	206	0	47	119	163	0	10
Queue Length 95th (ft)	4	346	55	89	201	#249	37	30
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	511	972	1059	541	1188	367	646	463
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.50	0.44	0.38	0.35	0.70	0.26	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	446	422	185	383	0	231	2	155	10	7	7
Future Volume (veh/h)	1	446	422	185	383	0	231	2	155	10	7	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1841	1826	1870	1781	1870	1663	1870	1870	1870
Adj Flow Rate, veh/h	1	490	227	203	421	0	254	2	43	11	8	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	4	2	4	5	2	8	2	16	2	2	2
Cap, veh/h	568	952	820	440	1152	0	347	2	472	72	41	3
Arrive On Green	0.52	0.52	0.52	0.07	0.63	0.00	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	966	1841	1585	1753	1826	0	1055	8	1409	73	157	12
Grp Volume(v), veh/h	1	490	227	203	421	0	256	0	43	20	0	0
Grp Sat Flow(s),veh/h/ln	966	1841	1585	1753	1826	0	1064	0	1409	242	0	0
Q Serve(g_s), s	0.1	18.4	8.5	5.4	11.6	0.0	0.0	0.0	2.2	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.1	18.4	8.5	5.4	11.6	0.0	25.4	0.0	2.2	25.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.55		0.05
Lane Grp Cap(c), veh/h	568	952	820	440	1152	0	349	0	472	117	0	0
V/C Ratio(X)	0.00	0.51	0.28	0.46	0.37	0.00	0.73	0.00	0.09	0.17	0.00	0.00
Avail Cap(c_a), veh/h	568	952	820	498	1152	0	393	0	516	165	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.2	16.7	14.3	11.9	9.3	0.0	37.8	0.0	23.9	31.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.0	0.8	0.3	0.9	0.0	4.9	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.7	3.0	1.9	4.4	0.0	6.9	0.0	0.7	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.3	18.7	15.1	12.2	10.2	0.0	42.6	0.0	24.0	31.7	0.0	0.0
LnGrp LOS	B	B	B	B	B	A	D	A	C	C	A	A
Approach Vol, veh/h		718			624			299			20	
Approach Delay, s/veh		17.5			10.8			39.9			31.7	
Approach LOS		B			B			D			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		72.3		32.7	11.9	60.3		32.7				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		63.0		31.0	10.9	47.6		31.0				
Max Q Clear Time (g_c+I1), s		13.6		27.4	7.4	20.4		27.7				
Green Ext Time (p_c), s		5.7		0.4	0.1	8.1		0.0				

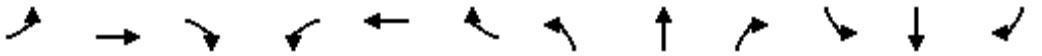
Intersection Summary												
HCM 6th Ctrl Delay			19.2									
HCM 6th LOS			B									



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	202	498	106	213	113	201	503	110	245	782	190
v/c Ratio	0.38	0.67	0.36	0.30	0.13	0.85	0.70	0.21	0.87	0.89	0.28
Control Delay	24.3	38.7	26.1	37.0	3.0	95.1	60.8	13.9	91.6	68.3	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.3	38.7	26.1	37.0	3.0	95.1	60.8	13.9	91.6	68.3	8.8
Queue Length 50th (ft)	117	390	58	156	0	204	247	20	248	403	26
Queue Length 95th (ft)	176	536	97	245	30	#309	318	69	#349	490	77
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	640	741	299	700	946	287	786	519	344	964	867
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.67	0.35	0.30	0.12	0.70	0.64	0.21	0.71	0.81	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	219	224	94	190	101	179	448	98	218	696	169
Future Volume (veh/h)	180	219	224	94	190	101	179	448	98	218	696	169
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1856	1796	1796	1841	1752	1841	1752	1796	1841	1841	1826
Adj Flow Rate, veh/h	202	246	227	106	213	56	201	503	43	245	782	81
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	3	7	7	4	10	4	10	7	4	4	5
Cap, veh/h	538	389	359	330	747	828	223	729	408	267	877	514
Arrive On Green	0.08	0.44	0.44	0.05	0.41	0.41	0.13	0.22	0.22	0.15	0.25	0.25
Sat Flow, veh/h	1711	888	820	1711	1841	1485	1753	3328	1522	1753	3497	1547
Grp Volume(v), veh/h	202	0	473	106	213	56	201	503	43	245	782	81
Grp Sat Flow(s),veh/h/ln	1711	0	1708	1711	1841	1485	1753	1664	1522	1753	1749	1547
Q Serve(g_s), s	9.9	0.0	31.9	5.3	11.5	2.6	16.8	20.6	3.2	20.4	32.0	5.5
Cycle Q Clear(g_c), s	9.9	0.0	31.9	5.3	11.5	2.6	16.8	20.6	3.2	20.4	32.0	5.5
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	538	0	749	330	747	828	223	729	408	267	877	514
V/C Ratio(X)	0.38	0.00	0.63	0.32	0.29	0.07	0.90	0.69	0.11	0.92	0.89	0.16
Avail Cap(c_a), veh/h	802	0	749	338	747	828	296	808	444	355	991	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.8	0.0	32.3	26.3	29.6	15.1	63.8	53.3	40.9	62.0	53.6	34.9
Incr Delay (d2), s/veh	0.2	0.0	4.0	0.2	1.0	0.2	20.8	2.2	0.1	20.9	9.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	13.8	2.2	5.3	0.9	8.6	8.7	1.2	10.5	14.9	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.9	0.0	36.4	26.5	30.6	15.2	84.6	55.5	41.0	82.9	63.1	35.0
LnGrp LOS	C	A	D	C	C	B	F	E	D	F	E	D
Approach Vol, veh/h		675			375			747			1108	
Approach Delay, s/veh		32.1			27.1			62.5			65.4	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	70.0	28.5	37.5	17.1	65.2	23.8	42.2
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	65.0	30.0	36.0	35.0	38.0	25.0	42.0
Max Q Clear Time (g_c+I1), s	7.3	33.9	22.4	22.6	11.9	13.5	18.8	34.0
Green Ext Time (p_c), s	0.0	1.9	0.1	2.6	0.2	0.8	0.1	3.2

Intersection Summary	
HCM 6th Ctrl Delay	52.0
HCM 6th LOS	D

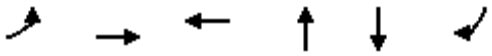
Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	111	9	0	4	21	662	35	21	1092	10
Future Vol, veh/h	9	0	111	9	0	4	21	662	35	21	1092	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	-	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	13	2	11	2	2	2	32	12	2	5	4	11
Mvmt Flow	10	0	122	10	0	4	23	727	38	23	1200	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1662	2063	606	1419	2030	364	1211	0	0	765	0	0
Stage 1	1252	1252	-	773	773	-	-	-	-	-	-	-
Stage 2	410	811	-	646	1257	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.54	7.12	7.54	6.54	6.94	4.74	-	-	4.2	-	-
Critical Hdwy Stg 1	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.02	3.41	3.52	4.02	3.32	2.52	-	-	2.25	-	-
Pot Cap-1 Maneuver	57	54	419	97	57	633	430	-	-	825	-	-
Stage 1	166	242	-	358	407	-	-	-	-	-	-	-
Stage 2	561	391	-	427	241	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	51	48	419	62	50	633	430	-	-	825	-	-
Mov Cap-2 Maneuver	120	147	-	163	143	-	-	-	-	-	-	-
Stage 1	150	235	-	324	369	-	-	-	-	-	-	-
Stage 2	505	354	-	294	234	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.6	23	1	0.2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	430	-	-	120	419	163	633	825	-	-
HCM Lane V/C Ratio	0.054	-	-	0.082	0.291	0.061	0.007	0.028	-	-
HCM Control Delay (s)	13.8	0.6	-	37.7	17.1	28.5	10.7	9.5	-	-
HCM Lane LOS	B	A	-	E	C	D	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.3	1.2	0.2	0	0.1	-	-

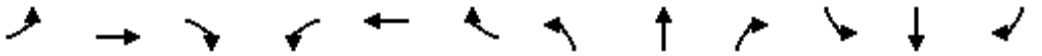


Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	500	284	351	10	581	568
v/c Ratio	0.67	0.12	0.23	0.16	1.63	0.71
Control Delay	11.3	5.2	19.7	54.1	322.4	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.3	5.2	19.7	54.1	322.4	15.8
Queue Length 50th (ft)	109	25	64	6	~521	155
Queue Length 95th (ft)	216	50	140	24	#769	212
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	955	2342	1526	63	356	1113
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.12	0.23	0.16	1.63	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	430	234	10	0	254	48	2	6	1	110	6	872
Future Volume (veh/h)	430	234	10	0	254	48	2	6	1	110	6	872
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1767	1737	1870	1811	1693	1159	1307	1870	1811	1307	1841
Adj Flow Rate, veh/h	500	272	9	0	295	46	2	7	0	0	0	813
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	14	9	11	2	6	14	50	40	2	6	40	4
Cap, veh/h	737	2266	75	0	1368	211	3	11	0	0	212	1082
Arrive On Green	0.18	0.68	0.68	0.00	0.46	0.46	0.01	0.01	0.00	0.00	0.00	0.16
Sat Flow, veh/h	1612	3316	109	0	3078	461	287	1006	0	0	1307	3120
Grp Volume(v), veh/h	500	137	144	0	168	173	9	0	0	0	0	813
Grp Sat Flow(s),veh/h/ln	1612	1678	1747	0	1721	1728	1293	0	0	0	1307	1560
Q Serve(g_s), s	17.0	3.1	3.2	0.0	6.5	6.7	0.8	0.0	0.0	0.0	0.0	18.0
Cycle Q Clear(g_c), s	17.0	3.1	3.2	0.0	6.5	6.7	0.8	0.0	0.0	0.0	0.0	18.0
Prop In Lane	1.00		0.06	0.00		0.27	0.22		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	737	1147	1194	0	788	791	14	0	0	0	212	1082
V/C Ratio(X)	0.68	0.12	0.12	0.00	0.21	0.22	0.64	0.00	0.00	0.00	0.00	0.75
Avail Cap(c_a), veh/h	1177	1147	1194	0	788	791	58	0	0	0	212	1082
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	10.0	6.1	6.1	0.0	18.1	18.2	54.8	0.0	0.0	0.0	0.0	32.1
Incr Delay (d2), s/veh	1.1	0.2	0.2	0.0	0.6	0.6	39.2	0.0	0.0	0.0	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	1.0	1.0	0.0	2.6	2.7	0.4	0.0	0.0	0.0	0.0	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	6.3	6.3	0.0	18.7	18.8	93.9	0.0	0.0	0.0	0.0	35.1
LnGrp LOS	B	A	A	A	B	B	F	A	A	A	A	D
Approach Vol, veh/h		781			341			9			813	
Approach Delay, s/veh		9.4			18.8			93.9			35.1	
Approach LOS		A			B			F			D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	25.1	56.9		23.0		82.0		6.2				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	19.0	8.7		20.0		5.2		2.8				
Green Ext Time (p_c), s	1.6	1.3		0.0		1.5		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		22.2	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	611	11	11	568	0	11	0	11	0	0	0
Future Vol, veh/h	0	611	11	11	568	0	11	0	11	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	100	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	7	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	0	671	12	12	624	0	12	0	12	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	624	0	0	683	0	0	1325	1325	677	1331	1331	624
Stage 1	-	-	-	-	-	-	677	677	-	648	648	-
Stage 2	-	-	-	-	-	-	648	648	-	683	683	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	957	-	-	910	-	-	133	156	453	132	154	485
Stage 1	-	-	-	-	-	-	443	452	-	459	466	-
Stage 2	-	-	-	-	-	-	459	466	-	439	449	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	957	-	-	910	-	-	131	153	453	126	151	485
Mov Cap-2 Maneuver	-	-	-	-	-	-	131	153	-	126	151	-
Stage 1	-	-	-	-	-	-	443	452	-	459	457	-
Stage 2	-	-	-	-	-	-	450	457	-	427	449	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.2	25.1	0
HCM LOS			D	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	203	957	-	-	910	-	-	-	-
HCM Lane V/C Ratio	0.119	-	-	-	0.013	-	-	-	-
HCM Control Delay (s)	25.1	0	-	-	9	0	-	0	0
HCM Lane LOS	D	A	-	-	A	A	-	A	A
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	120	0	0	31	0	0
Future Vol, veh/h	120	0	0	31	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	11	2	2	25	2	2
Mvmt Flow	132	0	0	34	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	132	0	166	132
Stage 1	-	-	-	-	132	-
Stage 2	-	-	-	-	34	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1453	-	824	917
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	988	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1453	-	824	917
Mov Cap-2 Maneuver	-	-	-	-	824	-
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	988	-

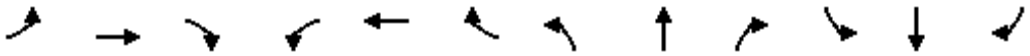
Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1453	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	4	405	360	62	649	332	50	4
v/c Ratio	0.01	0.40	0.34	0.11	0.56	0.89	0.08	0.01
Control Delay	16.5	18.6	2.8	10.0	16.3	66.3	5.7	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.5	18.6	2.8	10.0	16.3	66.3	5.7	24.8
Queue Length 50th (ft)	1	179	0	17	274	244	0	2
Queue Length 95th (ft)	8	299	51	40	446	337	23	10
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	304	1014	1045	589	1153	461	672	586
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.40	0.34	0.11	0.56	0.72	0.07	0.01

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	373	331	57	595	2	303	3	46	1	2	1
Future Volume (veh/h)	4	373	331	57	595	2	303	3	46	1	2	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1530	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	405	185	62	647	2	329	3	13	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	25	5	2	2	4	2	2	2	2	2	2	2
Cap, veh/h	271	900	781	413	1039	3	274	2	599	40	62	0
Arrive On Green	0.49	0.49	0.49	0.04	0.57	0.57	0.34	0.34	0.34	0.34	0.34	0.00
Sat Flow, veh/h	640	1826	1585	1781	1834	6	628	6	1585	0	182	0
Grp Volume(v), veh/h	4	405	185	62	0	649	332	0	13	3	0	0
Grp Sat Flow(s),veh/h/ln	640	1826	1585	1781	0	1840	633	0	1585	182	0	0
Q Serve(g_s), s	0.5	17.3	8.0	2.0	0.0	28.3	0.0	0.0	0.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	20.0	17.3	8.0	2.0	0.0	28.3	41.0	0.0	0.6	41.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.33		0.00
Lane Grp Cap(c), veh/h	271	900	781	413	0	1042	276	0	599	102	0	0
V/C Ratio(X)	0.01	0.45	0.24	0.15	0.00	0.62	1.20	0.00	0.02	0.03	0.00	0.00
Avail Cap(c_a), veh/h	271	900	781	504	0	1042	276	0	599	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.1	19.8	17.5	14.5	0.0	17.4	43.9	0.0	23.4	31.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	1.6	0.7	0.1	0.0	2.8	120.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	7.5	3.0	0.8	0.0	12.0	17.7	0.0	0.2	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.2	21.5	18.2	14.6	0.0	20.2	164.2	0.0	23.4	31.8	0.0	0.0
LnGrp LOS	C	C	B	B	A	C	F	A	C	C	A	A
Approach Vol, veh/h		594			711			345			3	
Approach Delay, s/veh		20.5			19.7			158.9			31.8	
Approach LOS		C			B			F			C	

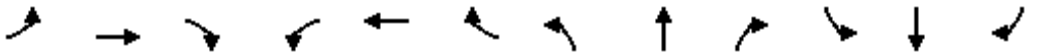
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		74.0		46.0	8.9	65.1		46.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		68.0		41.0	10.5	53.0		41.0				
Max Q Clear Time (g_c+I1), s		30.3		43.0	4.0	22.0		43.0				
Green Ext Time (p_c), s		9.8		0.0	0.0	6.7		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			49.1									
HCM 6th LOS			D									



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	199	450	105	226	169	300	666	95	117	740	192
v/c Ratio	0.41	0.67	0.37	0.37	0.21	0.89	0.59	0.16	0.73	0.89	0.29
Control Delay	28.5	41.9	30.8	43.1	5.8	86.6	44.2	6.6	92.0	69.7	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	41.9	30.8	43.1	5.8	86.6	44.2	6.6	92.0	69.7	11.5
Queue Length 50th (ft)	121	350	60	175	9	295	285	3	116	375	37
Queue Length 95th (ft)	185	487	103	273	51	394	354	38	181	458	88
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	548	676	288	609	852	427	1242	610	233	903	753
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.67	0.36	0.37	0.20	0.70	0.54	0.16	0.50	0.82	0.25

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	193	198	91	197	147	261	579	83	102	644	167
Future Volume (veh/h)	173	193	198	91	197	147	261	579	83	102	644	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1841	1826	1870	1826	1826	1826	1811	1781	1841	1870	1841
Adj Flow Rate, veh/h	199	222	203	105	226	69	300	666	32	117	740	89
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	3	4	5	2	5	5	5	6	8	4	2	4
Cap, veh/h	488	351	321	322	660	682	322	1143	573	139	829	493
Arrive On Green	0.08	0.40	0.40	0.05	0.36	0.36	0.18	0.33	0.33	0.08	0.23	0.23
Sat Flow, veh/h	1767	885	810	1781	1826	1547	1739	3441	1507	1753	3554	1557
Grp Volume(v), veh/h	199	0	425	105	226	69	300	666	32	117	740	89
Grp Sat Flow(s),veh/h/ln	1767	0	1695	1781	1826	1547	1739	1721	1507	1753	1777	1557
Q Serve(g_s), s	10.0	0.0	29.5	5.4	13.2	3.8	24.8	23.4	2.0	9.6	29.5	6.1
Cycle Q Clear(g_c), s	10.0	0.0	29.5	5.4	13.2	3.8	24.8	23.4	2.0	9.6	29.5	6.1
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	488	0	673	322	660	682	322	1143	573	139	829	493
V/C Ratio(X)	0.41	0.00	0.63	0.33	0.34	0.10	0.93	0.58	0.06	0.84	0.89	0.18
Avail Cap(c_a), veh/h	644	0	673	322	660	682	440	1272	629	240	924	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	0.0	35.5	29.3	34.0	23.9	58.7	40.4	28.7	66.4	54.2	36.2
Incr Delay (d2), s/veh	0.2	0.0	4.5	0.2	1.4	0.3	19.6	0.6	0.0	5.2	10.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	12.8	2.3	6.1	1.4	12.4	9.8	0.7	4.4	14.1	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.3	0.0	39.9	29.6	35.4	24.2	78.2	40.9	28.7	71.6	64.5	36.4
LnGrp LOS	C	A	D	C	D	C	E	D	C	E	E	D
Approach Vol, veh/h		624			400			998			946	
Approach Delay, s/veh		35.3			31.9			51.8			62.7	
Approach LOS		D			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	63.0	17.6	53.5	17.2	57.8	32.0	39.1
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	58.0	20.0	54.0	25.0	40.0	37.0	38.0
Max Q Clear Time (g_c+I1), s	7.4	31.5	11.6	25.4	12.0	15.2	26.8	31.5
Green Ext Time (p_c), s	0.0	1.7	0.0	4.5	0.1	0.8	0.2	2.6

Intersection Summary	
HCM 6th Ctrl Delay	49.1
HCM 6th LOS	D

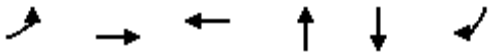
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	22	34	0	18	47	914	3	3	827	32
Future Vol, veh/h	8	0	22	34	0	18	47	914	3	3	827	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	-	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	15	3	2	6	9	2	2	67	3	7
Mvmt Flow	9	0	24	37	0	20	52	1004	3	3	909	35

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1539	2044	472	1569	2058	502	944	0	0	1007	0	0
Stage 1	933	933	-	1108	1108	-	-	-	-	-	-	-
Stage 2	606	1111	-	461	950	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	7.2	7.56	6.54	7.02	4.28	-	-	5.44	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.45	3.53	4.02	3.36	2.29	-	-	2.87	-	-
Pot Cap-1 Maneuver	79	56	505	74	54	504	681	-	-	398	-	-
Stage 1	286	343	-	222	284	-	-	-	-	-	-	-
Stage 2	451	283	-	547	337	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	65	46	505	61	44	504	681	-	-	398	-	-
Mov Cap-2 Maneuver	158	146	-	141	137	-	-	-	-	-	-	-
Stage 1	236	340	-	183	235	-	-	-	-	-	-	-
Stage 2	358	234	-	517	334	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.9	30.1	1.3	0
HCM LOS	C	D		

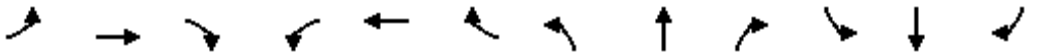
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	681	-	-	158	505	141	504	398	-	-
HCM Lane V/C Ratio	0.076	-	-	0.056	0.048	0.265	0.039	0.008	-	-
HCM Control Delay (s)	10.7	0.8	-	29.1	12.5	39.5	12.4	14.1	-	-
HCM Lane LOS	B	A	-	D	B	E	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.1	1	0.1	0	-	-



Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	768	295	354	18	358	359
v/c Ratio	0.84	0.12	0.32	0.24	0.90	0.40
Control Delay	18.8	5.6	30.7	53.7	45.1	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	5.6	30.7	53.7	45.1	3.6
Queue Length 50th (ft)	205	26	84	10	100	23
Queue Length 95th (ft)	461	55	169	36	#291	58
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	1050	2528	1120	76	431	1083
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.12	0.32	0.24	0.83	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	699	266	3	2	251	69	7	6	3	48	0	604
Future Volume (veh/h)	699	266	3	2	251	69	7	6	3	48	0	604
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1411	1870	1841	1856	1870	1307	1870	1767	1870	1841
Adj Flow Rate, veh/h	768	292	2	2	276	57	8	7	0	0	0	352
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	33	2	4	3	2	40	2	9	2	4
Cap, veh/h	909	2622	18	36	1153	233	11	10	0	0	198	1189
Arrive On Green	0.28	0.72	0.72	0.41	0.41	0.41	0.02	0.02	0.00	0.00	0.00	0.11
Sat Flow, veh/h	1767	3618	25	3	2835	572	679	594	0	0	1870	3120
Grp Volume(v), veh/h	768	143	151	178	0	157	15	0	0	0	0	352
Grp Sat Flow(s),veh/h/ln	1767	1777	1866	1838	0	1572	1273	0	0	0	1870	1560
Q Serve(g_s), s	24.1	2.5	2.5	0.0	0.0	6.9	1.2	0.0	0.0	0.0	0.0	8.3
Cycle Q Clear(g_c), s	24.1	2.5	2.5	6.7	0.0	6.9	1.2	0.0	0.0	0.0	0.0	8.3
Prop In Lane	1.00		0.01	0.01		0.36	0.53		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	909	1288	1352	782	0	639	21	0	0	0	198	1189
V/C Ratio(X)	0.84	0.11	0.11	0.23	0.00	0.24	0.70	0.00	0.00	0.00	0.00	0.30
Avail Cap(c_a), veh/h	1281	1288	1352	782	0	639	61	0	0	0	321	1394
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	9.7	4.3	4.3	20.4	0.0	20.5	51.3	0.0	0.0	0.0	0.0	22.6
Incr Delay (d2), s/veh	3.8	0.2	0.2	0.7	0.0	0.9	33.5	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	0.8	0.8	2.9	0.0	2.5	0.6	0.0	0.0	0.0	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	4.5	4.5	21.1	0.0	21.4	84.8	0.0	0.0	0.0	0.0	22.8
LnGrp LOS	B	A	A	C	A	C	F	A	A	A	A	C
Approach Vol, veh/h		1062			335			15			352	
Approach Delay, s/veh		11.0			21.3			84.8			22.8	
Approach LOS		B			C			F			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	33.4	48.6		16.1		82.0		6.8				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	26.1	8.9		10.3		4.5		3.2				
Green Ext Time (p_c), s	2.8	1.3		0.8		1.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		15.9	
HCM 6th LOS		B	

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	420	11	11	655	0	11	0	11	0	0	0
Future Vol, veh/h	0	420	11	11	655	0	11	0	11	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	100	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	5	2	2	4	2	2	2	2	2	2	2
Mvmt Flow	0	457	12	12	712	0	12	0	12	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	712	0	0	469	0	0	1199	1199	463	1205	1205	712
Stage 1	-	-	-	-	-	-	463	463	-	736	736	-
Stage 2	-	-	-	-	-	-	736	736	-	469	469	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	888	-	-	1093	-	-	162	185	599	161	184	432
Stage 1	-	-	-	-	-	-	579	564	-	411	425	-
Stage 2	-	-	-	-	-	-	411	425	-	575	561	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	888	-	-	1093	-	-	160	182	599	156	181	432
Mov Cap-2 Maneuver	-	-	-	-	-	-	160	182	-	156	181	-
Stage 1	-	-	-	-	-	-	579	564	-	411	417	-
Stage 2	-	-	-	-	-	-	404	417	-	564	561	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	20.7	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	253	888	-	-	1093	-	-	-	-
HCM Lane V/C Ratio	0.095	-	-	-	0.011	-	-	-	-
HCM Control Delay (s)	20.7	0	-	-	8.3	0	-	0	0
HCM Lane LOS	C	A	-	-	A	A	-	A	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	30	0	0	79	0	0
Future Vol, veh/h	30	0	0	79	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	12	2	2	8	2	2
Mvmt Flow	33	0	0	87	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	33	0	120	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	87	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1579	-	876	1041
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	936	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1579	-	876	1041
Mov Cap-2 Maneuver	-	-	-	-	876	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	936	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

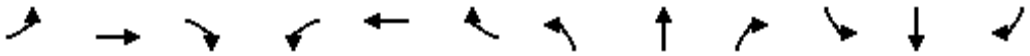
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1579	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1	640	534	224	527	293	188	30
v/c Ratio	0.00	0.70	0.50	0.59	0.46	0.90	0.29	0.07
Control Delay	16.0	26.5	3.4	15.0	12.3	67.9	4.8	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	26.5	3.4	15.0	12.3	67.9	4.8	21.4
Queue Length 50th (ft)	0	338	0	60	181	184	6	10
Queue Length 95th (ft)	4	504	58	98	268	#321	46	33
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	439	920	1062	401	1146	366	675	460
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.70	0.50	0.56	0.46	0.80	0.28	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	582	486	204	480	0	265	2	171	11	8	8
Future Volume (veh/h)	1	582	486	204	480	0	265	2	171	11	8	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1841	1826	1870	1781	1870	1663	1870	1870	1870
Adj Flow Rate, veh/h	1	640	243	224	527	0	291	2	66	12	9	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	4	2	4	5	2	8	2	16	2	2	2
Cap, veh/h	452	876	754	333	1096	0	372	2	531	64	36	2
Arrive On Green	0.48	0.48	0.48	0.08	0.60	0.00	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	876	1841	1585	1753	1826	0	1030	7	1409	37	123	8
Grp Volume(v), veh/h	1	640	243	224	527	0	293	0	66	22	0	0
Grp Sat Flow(s),veh/h/ln	876	1841	1585	1753	1826	0	1037	0	1409	167	0	0
Q Serve(g_s), s	0.1	29.3	10.0	6.5	17.0	0.0	0.0	0.0	3.2	0.4	0.0	0.0
Cycle Q Clear(g_c), s	4.1	29.3	10.0	6.5	17.0	0.0	29.6	0.0	3.2	30.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.55		0.05
Lane Grp Cap(c), veh/h	452	876	754	333	1096	0	374	0	531	102	0	0
V/C Ratio(X)	0.00	0.73	0.32	0.67	0.48	0.00	0.78	0.00	0.12	0.22	0.00	0.00
Avail Cap(c_a), veh/h	452	876	754	372	1096	0	374	0	531	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.6	22.1	17.0	18.1	11.8	0.0	36.5	0.0	21.4	30.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.3	1.1	2.9	1.5	0.0	9.5	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.0	3.7	2.6	6.6	0.0	8.3	0.0	1.1	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.6	27.5	18.2	21.1	13.3	0.0	46.0	0.0	21.4	30.6	0.0	0.0
LnGrp LOS	B	C	B	C	B	A	D	A	C	C	A	A
Approach Vol, veh/h		884			751			359			22	
Approach Delay, s/veh		24.9			15.6			41.5			30.6	
Approach LOS		C			B			D			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		69.0		36.0	13.1	55.9		36.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		63.0		31.0	10.9	47.6		31.0				
Max Q Clear Time (g_c+I1), s		19.0		31.6	8.5	31.3		32.0				
Green Ext Time (p_c), s		7.6		0.0	0.1	8.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		24.5
HCM 6th LOS		C

Notes

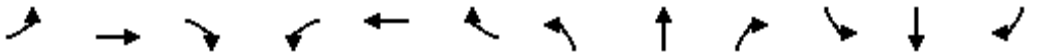
User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	269	606	117	252	126	235	556	121	271	863	245
v/c Ratio	0.55	0.85	0.59	0.41	0.15	0.92	0.73	0.23	0.91	0.95	0.33
Control Delay	29.0	51.8	38.8	44.1	4.6	103.8	63.0	16.0	97.2	77.1	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	51.8	38.8	44.1	4.6	103.8	63.0	16.0	97.2	77.1	9.7
Queue Length 50th (ft)	169	549	66	204	6	244	288	29	277	470	45
Queue Length 95th (ft)	235	#733	106	307	42	#391	355	81	#417	#588	99
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	583	716	202	621	876	277	765	530	332	930	878
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.85	0.58	0.41	0.14	0.85	0.73	0.23	0.82	0.93	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	272	267	104	224	112	209	495	108	241	768	218
Future Volume (veh/h)	239	272	267	104	224	112	209	495	108	241	768	218
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1856	1796	1796	1841	1752	1841	1752	1796	1841	1841	1826
Adj Flow Rate, veh/h	269	306	275	117	252	64	235	556	55	271	863	125
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	3	7	7	4	10	4	10	7	4	4	5
Cap, veh/h	493	373	335	223	651	771	255	782	435	291	916	578
Arrive On Green	0.11	0.41	0.41	0.05	0.35	0.35	0.15	0.24	0.24	0.17	0.26	0.26
Sat Flow, veh/h	1711	901	809	1711	1841	1485	1753	3328	1522	1753	3497	1547
Grp Volume(v), veh/h	269	0	581	117	252	64	235	556	55	271	863	125
Grp Sat Flow(s),veh/h/ln	1711	0	1710	1711	1841	1485	1753	1664	1522	1753	1749	1547
Q Serve(g_s), s	15.3	0.0	47.3	6.9	16.1	3.4	20.8	24.1	4.2	23.9	37.9	8.6
Cycle Q Clear(g_c), s	15.3	0.0	47.3	6.9	16.1	3.4	20.8	24.1	4.2	23.9	37.9	8.6
Prop In Lane	1.00		0.47	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	493	0	708	223	651	771	255	782	435	291	916	578
V/C Ratio(X)	0.55	0.00	0.82	0.52	0.39	0.08	0.92	0.71	0.13	0.93	0.94	0.22
Avail Cap(c_a), veh/h	684	0	708	223	651	771	279	782	435	335	936	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	40.8	35.2	38.0	18.9	66.2	55.1	41.5	64.6	56.7	33.5
Incr Delay (d2), s/veh	0.3	0.0	10.3	1.1	1.7	0.2	31.3	3.0	0.1	28.4	16.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	21.6	2.9	7.6	1.2	11.4	10.3	1.6	12.8	18.5	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	0.0	51.1	36.3	39.7	19.1	97.5	58.1	41.6	93.0	73.7	33.7
LnGrp LOS	C	A	D	D	D	B	F	E	D	F	E	C
Approach Vol, veh/h		850			433			846			1259	
Approach Delay, s/veh		43.5			35.7			68.0			73.9	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	70.0	32.0	41.9	22.5	60.5	27.8	46.1
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	65.0	30.0	36.0	35.0	38.0	25.0	42.0
Max Q Clear Time (g_c+I1), s	8.9	49.3	25.9	26.1	17.3	18.1	22.8	39.9
Green Ext Time (p_c), s	0.0	2.2	0.1	2.5	0.2	0.9	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	59.9
HCM 6th LOS	E

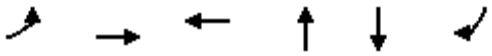
Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	123	10	0	4	23	771	39	23	1237	11
Future Vol, veh/h	10	0	123	10	0	4	23	771	39	23	1237	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	-	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	13	2	11	2	2	2	32	12	2	5	4	11
Mvmt Flow	11	0	135	11	0	4	25	847	43	25	1359	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1889	2355	686	1627	2318	424	1371	0	0	890	0	0
Stage 1	1415	1415	-	897	897	-	-	-	-	-	-	-
Stage 2	474	940	-	730	1421	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.54	7.12	7.54	6.54	6.94	4.74	-	-	4.2	-	-
Critical Hdwy Stg 1	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.02	3.41	3.52	4.02	3.32	2.52	-	-	2.25	-	-
Pot Cap-1 Maneuver	38	35	370	68	37	579	365	-	-	739	-	-
Stage 1	131	202	-	301	357	-	-	-	-	-	-	-
Stage 2	512	340	-	380	201	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	33	29	370	38	31	579	365	-	-	739	-	-
Mov Cap-2 Maneuver	90	116	-	123	112	-	-	-	-	-	-	-
Stage 1	113	195	-	260	308	-	-	-	-	-	-	-
Stage 2	439	293	-	233	194	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.5	29.7	1.4	0.2
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	365	-	-	90	370	123	579	739	-	-
HCM Lane V/C Ratio	0.069	-	-	0.122	0.365	0.089	0.008	0.034	-	-
HCM Control Delay (s)	15.6	1	-	50.5	20.2	37.1	11.3	10	-	-
HCM Lane LOS	C	A	-	F	C	E	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.4	1.6	0.3	0	0.1	-	-

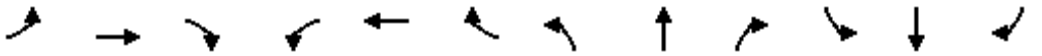


Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	576	336	399	11	652	641
v/c Ratio	0.76	0.14	0.31	0.17	1.83	0.74
Control Delay	14.2	5.4	26.4	54.0	406.2	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.2	5.4	26.4	54.0	406.2	16.2
Queue Length 50th (ft)	135	30	87	7	~625	209
Queue Length 95th (ft)	265	59	184	26	#885	226
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	933	2342	1297	64	357	1103
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.14	0.31	0.17	1.83	0.58

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	495	278	11	0	290	53	2	7	1	121	7	984
Future Volume (veh/h)	495	278	11	0	290	53	2	7	1	121	7	984
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1767	1737	1870	1811	1693	1159	1307	1870	1811	1307	1841
Adj Flow Rate, veh/h	576	323	11	0	337	50	2	8	0	0	0	997
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	14	9	11	2	6	14	50	40	2	6	40	4
Cap, veh/h	736	2261	77	0	1258	185	3	12	0	0	211	1204
Arrive On Green	0.22	0.68	0.68	0.00	0.42	0.42	0.01	0.01	0.00	0.00	0.00	0.16
Sat Flow, veh/h	1612	3312	113	0	3100	442	259	1035	0	0	1307	3120
Grp Volume(v), veh/h	576	163	171	0	191	196	10	0	0	0	0	997
Grp Sat Flow(s),veh/h/ln	1612	1678	1746	0	1721	1731	1294	0	0	0	1307	1560
Q Serve(g_s), s	21.0	3.8	3.8	0.0	8.1	8.3	0.9	0.0	0.0	0.0	0.0	18.0
Cycle Q Clear(g_c), s	21.0	3.8	3.8	0.0	8.1	8.3	0.9	0.0	0.0	0.0	0.0	18.0
Prop In Lane	1.00		0.06	0.00		0.26	0.20		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	736	1146	1192	0	719	724	15	0	0	0	211	1204
V/C Ratio(X)	0.78	0.14	0.14	0.00	0.27	0.27	0.65	0.00	0.00	0.00	0.00	0.83
Avail Cap(c_a), veh/h	1112	1146	1192	0	719	724	58	0	0	0	211	1204
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	11.3	6.2	6.2	0.0	21.2	21.2	54.8	0.0	0.0	0.0	0.0	30.9
Incr Delay (d2), s/veh	2.1	0.3	0.3	0.0	0.9	0.9	37.3	0.0	0.0	0.0	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	1.2	1.3	0.0	3.3	3.4	0.4	0.0	0.0	0.0	0.0	12.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	6.5	6.5	0.0	22.1	22.2	92.1	0.0	0.0	0.0	0.0	35.8
LnGrp LOS	B	A	A	A	C	C	F	A	A	A	A	D
Approach Vol, veh/h		910			387			10			997	
Approach Delay, s/veh		10.9			22.1			92.1			35.8	
Approach LOS		B			C			F			D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	29.4	52.6		23.0		82.0		6.3				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	23.0	10.3		20.0		5.8		2.9				
Green Ext Time (p_c), s	1.9	1.4		0.0		1.9		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			23.9									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	765	12	12	684	0	12	0	12	0	0	0
Future Vol, veh/h	0	765	12	12	684	0	12	0	12	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	100	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	7	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	0	841	13	13	752	0	13	0	13	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	752	0	0	854	0	0	1626	1626	848	1632	1632	752
Stage 1	-	-	-	-	-	-	848	848	-	778	778	-
Stage 2	-	-	-	-	-	-	778	778	-	854	854	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	858	-	-	785	-	-	82	102	361	81	101	410
Stage 1	-	-	-	-	-	-	356	378	-	389	407	-
Stage 2	-	-	-	-	-	-	389	407	-	353	375	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	858	-	-	785	-	-	80	99	361	76	98	410
Mov Cap-2 Maneuver	-	-	-	-	-	-	80	99	-	76	98	-
Stage 1	-	-	-	-	-	-	356	378	-	389	396	-
Stage 2	-	-	-	-	-	-	378	396	-	340	375	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.2	39.3	0
HCM LOS			E	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	131	858	-	-	785	-	-	-	-
HCM Lane V/C Ratio	0.201	-	-	-	0.017	-	-	-	-
HCM Control Delay (s)	39.3	0	-	-	9.7	0	-	0	0
HCM Lane LOS	E	A	-	-	A	A	-	A	A
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	132	0	0	34	0	0
Future Vol, veh/h	132	0	0	34	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	11	2	2	25	2	2
Mvmt Flow	145	0	0	37	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	145	0	182	145
Stage 1	-	-	-	-	145	-
Stage 2	-	-	-	-	37	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1437	-	807	902
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	985	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1437	-	807	902
Mov Cap-2 Maneuver	-	-	-	-	807	-
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	985	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

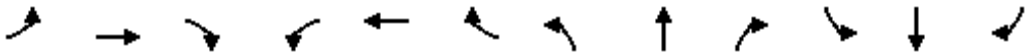
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1437	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	4	546	418	68	876	396	55	4
v/c Ratio	0.03	0.58	0.41	0.17	0.81	0.93	0.08	0.01
Control Delay	18.2	24.7	3.1	11.8	27.5	69.1	5.3	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	24.7	3.1	11.8	27.5	69.1	5.3	23.8
Queue Length 50th (ft)	2	307	0	22	537	284	0	2
Queue Length 95th (ft)	9	442	55	43	753	#463	24	10
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	134	942	1024	438	1083	461	734	585
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.58	0.41	0.16	0.81	0.86	0.07	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	502	385	63	804	2	362	3	51	1	2	1
Future Volume (veh/h)	4	502	385	63	804	2	362	3	51	1	2	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1530	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	546	197	68	874	2	393	3	17	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	25	5	2	2	4	2	2	2	2	2	2	2
Cap, veh/h	149	898	780	324	1040	2	274	2	601	40	62	0
Arrive On Green	0.49	0.49	0.49	0.04	0.57	0.57	0.34	0.34	0.34	0.34	0.34	0.00
Sat Flow, veh/h	518	1826	1585	1781	1836	4	628	5	1585	0	182	0
Grp Volume(v), veh/h	4	546	197	68	0	876	396	0	17	3	0	0
Grp Sat Flow(s),veh/h/ln	518	1826	1585	1781	0	1840	633	0	1585	182	0	0
Q Serve(g_s), s	0.8	26.0	8.7	2.2	0.0	47.3	0.0	0.0	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	39.0	26.0	8.7	2.2	0.0	47.3	41.0	0.0	0.8	41.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.33		0.00
Lane Grp Cap(c), veh/h	149	898	780	324	0	1043	276	0	601	102	0	0
V/C Ratio(X)	0.03	0.61	0.25	0.21	0.00	0.84	1.43	0.00	0.03	0.03	0.00	0.00
Avail Cap(c_a), veh/h	149	898	780	413	0	1043	276	0	601	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	41.4	22.1	17.7	16.5	0.0	21.5	43.9	0.0	23.4	31.8	0.0	0.0
Incr Delay (d2), s/veh	0.3	3.1	0.8	0.1	0.0	8.2	215.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	11.3	3.2	0.8	0.0	20.9	25.0	0.0	0.3	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.7	25.2	18.5	16.6	0.0	29.7	259.2	0.0	23.4	31.8	0.0	0.0
LnGrp LOS	D	C	B	B	A	C	F	A	C	C	A	A
Approach Vol, veh/h		747			944			413			3	
Approach Delay, s/veh		23.5			28.7			249.5			31.8	
Approach LOS		C			C			F			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		74.0		46.0	9.0	65.0		46.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		68.0		41.0	10.5	53.0		41.0				
Max Q Clear Time (g_c+I1), s		49.3		43.0	4.2	41.0		43.0				
Green Ext Time (p_c), s		10.5		0.0	0.0	5.6		0.0				

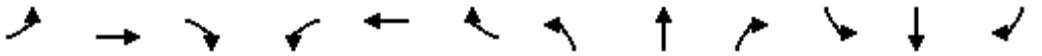
Intersection Summary												
HCM 6th Ctrl Delay			70.1									
HCM 6th LOS			E									



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	266	554	115	295	186	362	734	106	130	817	303
v/c Ratio	0.65	0.86	0.64	0.57	0.26	0.95	0.60	0.16	0.78	0.96	0.42
Control Delay	37.4	58.4	48.8	54.5	12.0	95.7	44.4	8.1	98.5	82.0	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	58.4	48.8	54.5	12.0	95.7	44.4	8.1	98.5	82.0	13.2
Queue Length 50th (ft)	183	514	72	267	41	373	327	10	135	450	77
Queue Length 95th (ft)	248	#681	#121	372	92	#532	396	47	200	#553	140
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	449	641	180	521	755	403	1219	643	220	853	777
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.86	0.64	0.57	0.25	0.90	0.60	0.16	0.59	0.96	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	243	239	100	257	162	315	639	92	113	711	264
Future Volume (veh/h)	231	243	239	100	257	162	315	639	92	113	711	264
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1841	1826	1870	1826	1826	1826	1811	1781	1841	1870	1841
Adj Flow Rate, veh/h	266	279	250	115	295	100	362	734	45	130	817	163
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	3	4	5	2	5	5	5	6	8	4	2	4
Cap, veh/h	409	330	296	197	544	594	380	1264	621	151	855	555
Arrive On Green	0.12	0.37	0.37	0.04	0.30	0.30	0.22	0.37	0.37	0.09	0.24	0.24
Sat Flow, veh/h	1767	895	802	1781	1826	1547	1739	3441	1508	1753	3554	1557
Grp Volume(v), veh/h	266	0	529	115	295	100	362	734	45	130	817	163
Grp Sat Flow(s),veh/h/ln	1767	0	1696	1781	1826	1547	1739	1721	1508	1753	1777	1557
Q Serve(g_s), s	16.0	0.0	45.0	7.0	21.3	6.7	32.3	27.0	2.8	11.5	35.6	11.8
Cycle Q Clear(g_c), s	16.0	0.0	45.0	7.0	21.3	6.7	32.3	27.0	2.8	11.5	35.6	11.8
Prop In Lane	1.00		0.47	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	409	0	626	197	544	594	380	1264	621	151	855	555
V/C Ratio(X)	0.65	0.00	0.85	0.58	0.54	0.17	0.95	0.58	0.07	0.86	0.96	0.29
Avail Cap(c_a), veh/h	486	0	626	197	544	594	409	1264	621	223	859	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	0.0	45.5	41.0	46.2	31.9	60.6	40.0	28.0	71.0	58.9	36.4
Incr Delay (d2), s/veh	1.3	0.0	13.2	2.9	3.8	0.6	30.5	0.7	0.0	14.2	20.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	20.9	3.3	10.2	2.6	17.2	11.4	1.0	5.7	18.1	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.2	0.0	58.8	43.9	50.1	32.5	91.1	40.7	28.1	85.2	79.4	36.7
LnGrp LOS	C	A	E	D	D	C	F	D	C	F	E	D
Approach Vol, veh/h		795			510			1141			1110	
Approach Delay, s/veh		50.5			45.2			56.2			73.8	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	63.0	19.5	62.8	23.1	51.9	39.4	42.9
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	58.0	20.0	54.0	25.0	40.0	37.0	38.0
Max Q Clear Time (g_c+I1), s	9.0	47.0	13.5	29.0	18.0	23.3	34.3	37.6
Green Ext Time (p_c), s	0.0	1.7	0.0	5.0	0.1	1.1	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	58.9
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	2.5

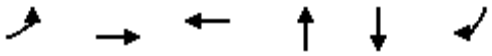
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	24	38	0	20	52	1049	3	3	993	35
Future Vol, veh/h	9	0	24	38	0	20	52	1049	3	3	993	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	-	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	15	3	2	6	9	2	2	67	3	7
Mvmt Flow	10	0	26	42	0	22	57	1153	3	3	1091	38

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1807	2386	565	1819	2402	577	1129	0	0	1156	0	0
Stage 1	1116	1116	-	1267	1267	-	-	-	-	-	-	-
Stage 2	691	1270	-	552	1135	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	7.2	7.56	6.54	7.02	4.28	-	-	5.44	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.45	3.53	4.02	3.36	2.29	-	-	2.87	-	-
Pot Cap-1 Maneuver	50	34	437	48	33	450	576	-	-	335	-	-
Stage 1	221	281	-	177	238	-	-	-	-	-	-	-
Stage 2	401	237	-	483	275	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	37	24	437	~ 35	24	450	576	-	-	335	-	-
Mov Cap-2 Maneuver	108	106	-	99	98	-	-	-	-	-	-	-
Stage 1	160	278	-	128	172	-	-	-	-	-	-	-
Stage 2	276	171	-	450	273	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.4	47.6	2	0
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	576	-	-	108	437	99	450	335	-	-
HCM Lane V/C Ratio	0.099	-	-	0.092	0.06	0.422	0.049	0.01	-	-
HCM Control Delay (s)	11.9	1.5	-	41.7	13.8	65.6	13.4	15.9	-	-
HCM Lane LOS	B	A	-	E	B	F	B	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.3	0.2	1.8	0.2	0	-	-

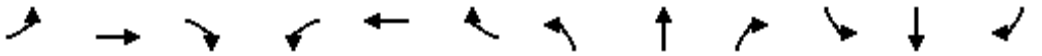
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	870	348	420	20	430	419
v/c Ratio	0.93	0.14	0.61	0.27	0.97	0.40
Control Delay	35.2	6.1	42.9	56.0	56.7	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.2	6.1	42.9	56.0	56.7	4.6
Queue Length 50th (ft)	375	32	130	11	145	37
Queue Length 95th (ft)	#789	64	203	39	#390	109
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	955	2463	683	74	444	1078
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.14	0.61	0.27	0.97	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	792	314	3	2	304	76	8	7	3	53	0	720
Future Volume (veh/h)	792	314	3	2	304	76	8	7	3	53	0	720
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1411	1870	1841	1856	1870	1307	1870	1767	1870	1841
Adj Flow Rate, veh/h	870	345	2	2	334	64	9	8	0	0	0	529
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	33	2	4	3	2	40	2	9	2	4
Cap, veh/h	911	2547	15	34	845	159	12	11	0	0	244	1553
Arrive On Green	0.37	0.70	0.70	0.29	0.29	0.29	0.02	0.02	0.00	0.00	0.00	0.13
Sat Flow, veh/h	1767	3622	21	3	2872	541	674	599	0	0	1870	3120
Grp Volume(v), veh/h	870	169	178	213	0	187	17	0	0	0	0	529
Grp Sat Flow(s),veh/h/ln	1767	1777	1867	1838	0	1578	1273	0	0	0	1870	1560
Q Serve(g_s), s	34.8	3.4	3.4	0.0	0.0	10.2	1.4	0.0	0.0	0.0	0.0	11.1
Cycle Q Clear(g_c), s	34.8	3.4	3.4	10.0	0.0	10.2	1.4	0.0	0.0	0.0	0.0	11.1
Prop In Lane	1.00		0.01	0.01		0.34	0.53		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	911	1249	1312	574	0	464	24	0	0	0	244	1553
V/C Ratio(X)	0.96	0.14	0.14	0.37	0.00	0.40	0.72	0.00	0.00	0.00	0.00	0.34
Avail Cap(c_a), veh/h	1094	1249	1312	574	0	464	59	0	0	0	311	1665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	14.6	5.3	5.3	30.5	0.0	30.5	52.8	0.0	0.0	0.0	0.0	16.4
Incr Delay (d2), s/veh	16.0	0.2	0.2	1.8	0.0	2.6	33.8	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	1.1	1.1	4.6	0.0	4.1	0.7	0.0	0.0	0.0	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	5.5	5.5	32.3	0.0	33.1	86.5	0.0	0.0	0.0	0.0	16.5
LnGrp LOS	C	A	A	C	A	C	F	A	A	A	A	B
Approach Vol, veh/h		1217			400			17			529	
Approach Delay, s/veh		23.4			32.7			86.5			16.5	
Approach LOS		C			C			F			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	44.2	37.8		19.1		82.0		7.0				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	36.8	12.2		13.1		5.4		3.4				
Green Ext Time (p_c), s	2.9	1.3		1.0		1.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		23.9	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	554	12	12	870	0	12	0	12	0	0	0
Future Vol, veh/h	0	554	12	12	870	0	12	0	12	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	100	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	5	2	2	4	2	2	2	2	2	2	2
Mvmt Flow	0	602	13	13	946	0	13	0	13	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	946	0	0	615	0	0	1581	1581	609	1587	1587	946
Stage 1	-	-	-	-	-	-	609	609	-	972	972	-
Stage 2	-	-	-	-	-	-	972	972	-	615	615	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	725	-	-	965	-	-	88	109	495	87	108	317
Stage 1	-	-	-	-	-	-	482	485	-	304	331	-
Stage 2	-	-	-	-	-	-	304	331	-	479	482	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	725	-	-	965	-	-	86	106	495	83	105	317
Mov Cap-2 Maneuver	-	-	-	-	-	-	86	106	-	83	105	-
Stage 1	-	-	-	-	-	-	482	485	-	304	322	-
Stage 2	-	-	-	-	-	-	295	322	-	466	482	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	34.7	0
HCM LOS			D	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	147	725	-	-	965	-	-	-	-
HCM Lane V/C Ratio	0.177	-	-	-	0.014	-	-	-	-
HCM Control Delay (s)	34.7	0	-	-	8.8	0	-	0	0
HCM Lane LOS	D	A	-	-	A	A	-	A	A
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	33	0	0	87	0	0
Future Vol, veh/h	33	0	0	87	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	12	2	2	8	2	2
Mvmt Flow	36	0	0	96	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	36	0	132	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	96	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1575	-	862	1037
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	928	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1575	-	862	1037
Mov Cap-2 Maneuver	-	-	-	-	862	-
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	928	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

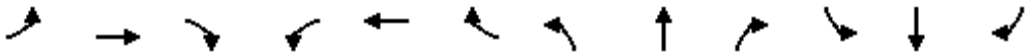
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1575	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1	658	534	224	555	293	190	30
v/c Ratio	0.00	0.72	0.50	0.62	0.48	0.90	0.29	0.07
Control Delay	16.0	27.4	3.4	15.9	12.7	67.9	5.4	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	27.4	3.4	15.9	12.7	67.9	5.4	21.4
Queue Length 50th (ft)	0	353	0	60	195	184	11	10
Queue Length 95th (ft)	4	526	58	98	288	#321	51	33
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	427	919	1062	387	1146	366	670	460
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.72	0.50	0.58	0.48	0.80	0.28	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	599	486	204	505	0	265	2	173	11	8	8
Future Volume (veh/h)	1	599	486	204	505	0	265	2	173	11	8	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1841	1826	1870	1781	1870	1663	1870	1870	1870
Adj Flow Rate, veh/h	1	658	243	224	555	0	291	2	75	12	9	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	4	2	4	5	2	8	2	16	2	2	2
Cap, veh/h	432	876	754	323	1096	0	372	2	531	64	36	2
Arrive On Green	0.48	0.48	0.48	0.08	0.60	0.00	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	854	1841	1585	1753	1826	0	1030	7	1409	37	123	8
Grp Volume(v), veh/h	1	658	243	224	555	0	293	0	75	22	0	0
Grp Sat Flow(s),veh/h/ln	854	1841	1585	1753	1826	0	1037	0	1409	167	0	0
Q Serve(g_s), s	0.1	30.6	10.0	6.5	18.3	0.0	0.0	0.0	3.7	0.4	0.0	0.0
Cycle Q Clear(g_c), s	5.4	30.6	10.0	6.5	18.3	0.0	29.6	0.0	3.7	30.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.55		0.05
Lane Grp Cap(c), veh/h	432	876	754	323	1096	0	374	0	531	102	0	0
V/C Ratio(X)	0.00	0.75	0.32	0.69	0.51	0.00	0.78	0.00	0.14	0.22	0.00	0.00
Avail Cap(c_a), veh/h	432	876	754	362	1096	0	374	0	531	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.4	22.5	17.0	18.8	12.1	0.0	36.5	0.0	21.5	30.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.9	1.1	3.6	1.7	0.0	9.5	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.7	3.7	2.6	7.2	0.0	8.3	0.0	1.2	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.4	28.4	18.2	22.5	13.7	0.0	46.0	0.0	21.6	30.6	0.0	0.0
LnGrp LOS	B	C	B	C	B	A	D	A	C	C	A	A
Approach Vol, veh/h		902			779			368			22	
Approach Delay, s/veh		25.6			16.3			41.0			30.6	
Approach LOS		C			B			D			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		69.0		36.0	13.1	55.9		36.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		63.0		31.0	10.9	47.6		31.0				
Max Q Clear Time (g_c+I1), s		20.3		31.6	8.5	32.6		32.0				
Green Ext Time (p_c), s		8.1		0.0	0.1	7.9		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			24.9									
HCM 6th LOS			C									

Notes

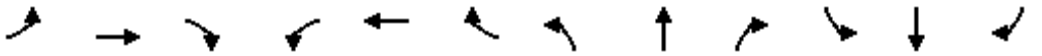
User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	361	660	117	270	126	247	556	121	271	863	276
v/c Ratio	0.73	0.93	0.74	0.50	0.16	0.94	0.72	0.23	0.91	0.95	0.34
Control Delay	36.0	62.3	55.9	52.0	6.5	107.5	62.5	16.0	97.8	78.0	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	62.3	55.9	52.0	6.5	107.5	62.5	16.0	97.8	78.0	8.3
Queue Length 50th (ft)	243	633	66	236	11	258	288	29	277	470	47
Queue Length 95th (ft)	327	#874	#163	354	51	#419	355	81	#417	#588	97
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	552	711	160	541	810	275	769	534	329	923	885
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.93	0.73	0.50	0.16	0.90	0.72	0.23	0.82	0.93	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	321	296	291	104	240	112	220	495	108	241	768	246
Future Volume (veh/h)	321	296	291	104	240	112	220	495	108	241	768	246
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1856	1796	1796	1841	1752	1841	1752	1796	1841	1841	1826
Adj Flow Rate, veh/h	361	333	302	117	270	64	247	556	55	271	863	149
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	3	7	7	4	10	4	10	7	4	4	5
Cap, veh/h	498	368	334	179	563	700	266	801	443	291	912	644
Arrive On Green	0.16	0.41	0.41	0.05	0.31	0.31	0.15	0.24	0.24	0.17	0.26	0.26
Sat Flow, veh/h	1711	896	813	1711	1841	1485	1753	3328	1522	1753	3497	1547
Grp Volume(v), veh/h	361	0	635	117	270	64	247	556	55	271	863	149
Grp Sat Flow(s),veh/h/ln	1711	0	1709	1711	1841	1485	1753	1664	1522	1753	1749	1547
Q Serve(g_s), s	22.3	0.0	55.2	7.5	18.9	3.8	22.0	24.1	4.2	24.2	38.3	9.9
Cycle Q Clear(g_c), s	22.3	0.0	55.2	7.5	18.9	3.8	22.0	24.1	4.2	24.2	38.3	9.9
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	498	0	702	179	563	700	266	801	443	291	912	644
V/C Ratio(X)	0.72	0.00	0.91	0.65	0.48	0.09	0.93	0.69	0.12	0.93	0.95	0.23
Avail Cap(c_a), veh/h	611	0	702	179	563	700	277	801	443	332	928	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	0.0	43.8	40.8	44.7	23.1	66.3	54.8	41.3	65.2	57.4	29.9
Incr Delay (d2), s/veh	2.3	0.0	17.4	6.6	2.9	0.3	34.0	2.6	0.1	29.0	17.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	0.0	26.2	3.5	9.1	1.4	12.2	10.2	1.6	13.0	18.8	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	0.0	61.2	47.4	47.6	23.4	100.3	57.4	41.4	94.2	75.2	30.1
LnGrp LOS	C	A	E	D	D	C	F	E	D	F	E	C
Approach Vol, veh/h		996			451			858			1283	
Approach Delay, s/veh		50.7			44.1			68.7			74.0	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	70.0	32.3	43.1	29.6	53.4	29.1	46.3
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	65.0	30.0	36.0	35.0	38.0	25.0	42.0
Max Q Clear Time (g_c+I1), s	9.5	57.2	26.2	26.1	24.3	20.9	24.0	40.3
Green Ext Time (p_c), s	0.0	1.8	0.1	2.5	0.3	0.9	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	62.5
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	11.8

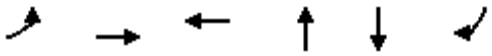
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	91	0	123	10	0	4	23	853	39	23	1265	38
Future Vol, veh/h	91	0	123	10	0	4	23	853	39	23	1265	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	-	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	13	2	11	2	2	2	32	12	2	5	4	11
Mvmt Flow	100	0	135	11	0	4	25	937	43	25	1390	42

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1980	2491	716	1732	2469	469	1432	0	0	980	0	0
Stage 1	1461	1461	-	987	987	-	-	-	-	-	-	-
Stage 2	519	1030	-	745	1482	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.54	7.12	7.54	6.54	6.94	4.74	-	-	4.2	-	-
Critical Hdwy Stg 1	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.02	3.41	3.52	4.02	3.32	2.52	-	-	2.25	-	-
Pot Cap-1 Maneuver	~ 32	29	353	56	30	541	343	-	-	682	-	-
Stage 1	122	192	-	265	324	-	-	-	-	-	-	-
Stage 2	481	309	-	372	187	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 27	23	353	29	24	541	343	-	-	682	-	-
Mov Cap-2 Maneuver	~ 81	105	-	108	100	-	-	-	-	-	-	-
Stage 1	102	185	-	222	272	-	-	-	-	-	-	-
Stage 2	400	259	-	221	180	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	126.3	33.4	1.6	0.2
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	343	-	-	81	353	108	541	682	-	-
HCM Lane V/C Ratio	0.074	-	-	1.235	0.383	0.102	0.008	0.037	-	-
HCM Control Delay (s)	16.3	1.3	-	268	21.4	42.1	11.7	10.5	-	-
HCM Lane LOS	C	A	-	F	C	E	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	7.4	1.7	0.3	0	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

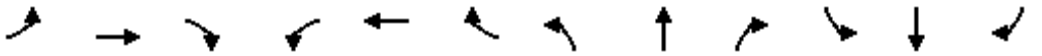


Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	751	350	406	11	677	673
v/c Ratio	0.89	0.15	0.49	0.17	1.87	0.65
Control Delay	27.4	5.4	37.6	54.0	423.1	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	5.4	37.6	54.0	423.1	9.7
Queue Length 50th (ft)	273	32	126	7	~653	117
Queue Length 95th (ft)	#578	61	187	26	#916	257
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	900	2342	836	64	363	1102
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.15	0.49	0.17	1.87	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	646	290	11	0	296	53	2	7	1	121	7	1033
Future Volume (veh/h)	646	290	11	0	296	53	2	7	1	121	7	1033
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1767	1737	1870	1811	1693	1159	1307	1870	1811	1307	1841
Adj Flow Rate, veh/h	751	337	11	0	344	48	2	8	0	0	0	1092
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	14	9	11	2	6	14	50	40	2	6	40	4
Cap, veh/h	801	2265	74	0	927	128	3	12	0	0	211	1555
Arrive On Green	0.34	0.68	0.68	0.00	0.31	0.31	0.01	0.01	0.00	0.00	0.00	0.16
Sat Flow, veh/h	1612	3317	108	0	3127	420	259	1035	0	0	1307	3120
Grp Volume(v), veh/h	751	170	178	0	194	198	10	0	0	0	0	1092
Grp Sat Flow(s),veh/h/ln	1612	1678	1747	0	1721	1735	1294	0	0	0	1307	1560
Q Serve(g_s), s	33.0	4.0	4.0	0.0	9.8	10.0	0.9	0.0	0.0	0.0	0.0	18.0
Cycle Q Clear(g_c), s	33.0	4.0	4.0	0.0	9.8	10.0	0.9	0.0	0.0	0.0	0.0	18.0
Prop In Lane	1.00		0.06	0.00		0.24	0.20		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	801	1146	1193	0	526	530	15	0	0	0	211	1555
V/C Ratio(X)	0.94	0.15	0.15	0.00	0.37	0.37	0.65	0.00	0.00	0.00	0.00	0.70
Avail Cap(c_a), veh/h	995	1146	1193	0	526	530	58	0	0	0	211	1555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	14.8	6.2	6.2	0.0	30.3	30.3	54.8	0.0	0.0	0.0	0.0	21.5
Incr Delay (d2), s/veh	13.8	0.3	0.3	0.0	2.0	2.0	37.3	0.0	0.0	0.0	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	1.3	1.3	0.0	4.2	4.3	0.4	0.0	0.0	0.0	0.0	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	6.5	6.5	0.0	32.2	32.3	92.1	0.0	0.0	0.0	0.0	23.0
LnGrp LOS	C	A	A	A	C	C	F	A	A	A	A	C
Approach Vol, veh/h		1099			392			10			1092	
Approach Delay, s/veh		21.6			32.3			92.1			23.0	
Approach LOS		C			C			F			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	42.0	40.0		23.0		82.0		6.3				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	35.0	12.0		20.0		6.0		2.9				
Green Ext Time (p_c), s	2.5	1.3		0.0		1.9		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			24.1									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	47

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	765	12	12	684	55	12	0	12	130	0	25
Future Vol, veh/h	19	765	12	12	684	55	12	0	12	130	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	100	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	7	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	21	841	13	13	752	60	13	0	13	143	0	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	812	0	0	854	0	0	1712	1728	848	1674	1674	752
Stage 1	-	-	-	-	-	-	890	890	-	778	778	-
Stage 2	-	-	-	-	-	-	822	838	-	896	896	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	814	-	-	785	-	-	71	88	361	~ 76	95	410
Stage 1	-	-	-	-	-	-	337	361	-	389	407	-
Stage 2	-	-	-	-	-	-	368	382	-	335	359	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	814	-	-	785	-	-	63	83	361	~ 70	90	410
Mov Cap-2 Maneuver	-	-	-	-	-	-	63	83	-	~ 70	90	-
Stage 1	-	-	-	-	-	-	328	352	-	379	394	-
Stage 2	-	-	-	-	-	-	333	370	-	314	350	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	49.3	$ 514
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	107	814	-	-	785	-	-	70	410
HCM Lane V/C Ratio	0.246	0.026	-	-	0.017	-	-	2.041	0.067
HCM Control Delay (s)	49.3	9.5	-	-	9.7	0	-	$ 610.1	14.4
HCM Lane LOS	E	A	-	-	A	A	-	F	B
HCM 95th %tile Q(veh)	0.9	0.1	-	-	0.1	-	-	13.2	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	132	0	27	34	0	81
Future Vol, veh/h	132	0	27	34	0	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	11	2	2	25	2	2
Mvmt Flow	145	0	30	37	0	89

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	145	0	242	145
Stage 1	-	-	-	-	145	-
Stage 2	-	-	-	-	97	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1437	-	746	902
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	927	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1437	-	730	902
Mov Cap-2 Maneuver	-	-	-	-	730	-
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	908	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.3	9.4
HCM LOS			A

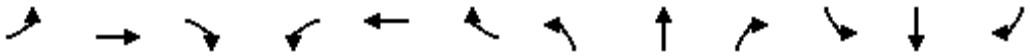
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	902	-	-	1437	-
HCM Lane V/C Ratio	0.099	-	-	0.021	-
HCM Control Delay (s)	9.4	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	4	571	418	70	895	396	55	4
v/c Ratio	0.03	0.61	0.41	0.19	0.83	0.93	0.08	0.01
Control Delay	18.5	25.6	3.1	11.9	28.7	69.1	5.3	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	25.6	3.1	11.9	28.7	69.1	5.3	23.8
Queue Length 50th (ft)	2	328	0	23	561	284	0	2
Queue Length 95th (ft)	9	471	55	44	#813	#463	24	10
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	123	941	1023	420	1083	461	734	585
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.61	0.41	0.17	0.83	0.86	0.07	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	525	385	64	822	2	362	3	51	1	2	1
Future Volume (veh/h)	4	525	385	64	822	2	362	3	51	1	2	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1530	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	571	196	70	893	2	393	3	17	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	25	5	2	2	4	2	2	2	2	2	2	2
Cap, veh/h	139	898	779	309	1040	2	274	2	601	40	62	0
Arrive On Green	0.49	0.49	0.49	0.04	0.57	0.57	0.34	0.34	0.34	0.34	0.34	0.00
Sat Flow, veh/h	508	1826	1585	1781	1836	4	628	5	1585	0	182	0
Grp Volume(v), veh/h	4	571	196	70	0	895	396	0	17	3	0	0
Grp Sat Flow(s),veh/h/ln	508	1826	1585	1781	0	1840	633	0	1585	182	0	0
Q Serve(g_s), s	0.8	27.8	8.6	2.2	0.0	49.2	0.0	0.0	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	41.0	27.8	8.6	2.2	0.0	49.2	41.0	0.0	0.8	41.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.33		0.00
Lane Grp Cap(c), veh/h	139	898	779	309	0	1043	276	0	601	102	0	0
V/C Ratio(X)	0.03	0.64	0.25	0.23	0.00	0.86	1.43	0.00	0.03	0.03	0.00	0.00
Avail Cap(c_a), veh/h	139	898	779	398	0	1043	276	0	601	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.1	22.6	17.7	17.0	0.0	21.9	43.9	0.0	23.4	31.8	0.0	0.0
Incr Delay (d2), s/veh	0.4	3.4	0.8	0.1	0.0	9.2	215.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	12.2	3.2	0.9	0.0	22.0	25.0	0.0	0.3	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.4	26.0	18.5	17.1	0.0	31.1	259.2	0.0	23.4	31.8	0.0	0.0
LnGrp LOS	D	C	B	B	A	C	F	A	C	C	A	A
Approach Vol, veh/h		771			965			413			3	
Approach Delay, s/veh		24.2			30.1			249.5			31.8	
Approach LOS		C			C			F			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		74.0		46.0	9.0	65.0		46.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		68.0		41.0	10.5	53.0		41.0				
Max Q Clear Time (g_c+I1), s		51.2		43.0	4.2	43.0		43.0				
Green Ext Time (p_c), s		9.9		0.0	0.0	5.1		0.0				

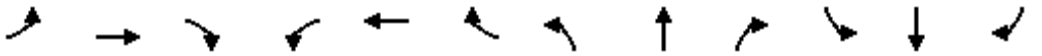
Intersection Summary		
HCM 6th Ctrl Delay		70.1
HCM 6th LOS		E



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	318	590	115	322	186	387	734	106	130	817	391
v/c Ratio	0.82	0.93	0.79	0.67	0.28	0.98	0.59	0.16	0.78	0.97	0.53
Control Delay	48.8	68.6	67.5	61.2	13.3	100.6	44.0	8.0	99.4	84.5	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	68.6	67.5	61.2	13.3	100.6	44.0	8.0	99.4	84.5	22.0
Queue Length 50th (ft)	227	569	72	309	47	406	327	10	135	450	171
Queue Length 95th (ft)	301	#764	#148	409	96	#590	396	47	200	#553	255
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	409	633	146	480	716	398	1244	653	217	841	756
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.93	0.79	0.67	0.26	0.97	0.59	0.16	0.60	0.97	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	277	260	253	100	280	162	337	639	92	113	711	340
Future Volume (veh/h)	277	260	253	100	280	162	337	639	92	113	711	340
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1841	1826	1870	1826	1826	1826	1811	1781	1841	1870	1841
Adj Flow Rate, veh/h	318	299	266	115	322	101	387	734	45	130	817	273
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	3	4	5	2	5	5	5	6	8	4	2	4
Cap, veh/h	397	326	290	160	485	544	402	1296	634	150	844	589
Arrive On Green	0.14	0.36	0.36	0.04	0.27	0.27	0.23	0.38	0.38	0.09	0.24	0.24
Sat Flow, veh/h	1767	898	799	1781	1826	1547	1739	3441	1508	1753	3554	1557
Grp Volume(v), veh/h	318	0	565	115	322	101	387	734	45	130	817	273
Grp Sat Flow(s),veh/h/ln	1767	0	1697	1781	1826	1547	1739	1721	1508	1753	1777	1557
Q Serve(g_s), s	20.4	0.0	50.9	7.0	25.2	7.2	35.2	27.0	2.9	11.7	36.4	21.2
Cycle Q Clear(g_c), s	20.4	0.0	50.9	7.0	25.2	7.2	35.2	27.0	2.9	11.7	36.4	21.2
Prop In Lane	1.00		0.47	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	397	0	615	160	485	544	402	1296	634	150	844	589
V/C Ratio(X)	0.80	0.00	0.92	0.72	0.66	0.19	0.96	0.57	0.07	0.86	0.97	0.46
Avail Cap(c_a), veh/h	425	0	615	160	485	544	402	1296	634	219	844	589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	48.7	47.7	52.4	36.0	60.8	39.5	27.7	72.2	60.4	37.5
Incr Delay (d2), s/veh	8.9	0.0	21.0	12.4	7.0	0.8	34.8	0.6	0.0	15.4	23.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.0	24.7	3.9	12.4	2.8	19.1	11.4	1.0	5.8	18.8	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	0.0	69.7	60.1	59.4	36.8	95.7	40.1	27.7	87.6	83.8	38.1
LnGrp LOS	D	A	E	E	E	D	F	D	C	F	F	D
Approach Vol, veh/h		883			538			1166			1220	
Approach Delay, s/veh		60.9			55.3			58.0			74.0	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	63.0	19.7	65.3	27.5	47.5	42.0	43.0
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	58.0	20.0	54.0	25.0	40.0	37.0	38.0
Max Q Clear Time (g_c+I1), s	9.0	52.9	13.7	29.0	22.4	27.2	37.2	38.4
Green Ext Time (p_c), s	0.0	1.2	0.0	5.0	0.1	1.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	63.4
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	5.3

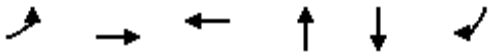
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	0	24	38	0	20	52	1095	3	3	1069	110
Future Vol, veh/h	53	0	24	38	0	20	52	1095	3	3	1069	110
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	-	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	15	3	2	6	9	2	2	67	3	7
Mvmt Flow	58	0	26	42	0	22	57	1203	3	3	1175	121

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1958	2562	648	1911	2619	602	1296	0	0	1206	0	0
Stage 1	1242	1242	-	1317	1317	-	-	-	-	-	-	-
Stage 2	716	1320	-	594	1302	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	7.2	7.56	6.54	7.02	4.28	-	-	5.44	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.45	3.53	4.02	3.36	2.29	-	-	2.87	-	-
Pot Cap-1 Maneuver	~ 38	26	383	~ 41	24	433	494	-	-	316	-	-
Stage 1	185	245	-	165	225	-	-	-	-	-	-	-
Stage 2	387	225	-	456	229	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 26	17	383	~ 28	15	433	494	-	-	316	-	-
Mov Cap-2 Maneuver	83	89	-	84	78	-	-	-	-	-	-	-
Stage 1	120	243	-	107	146	-	-	-	-	-	-	-
Stage 2	239	146	-	421	227	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	84.7	60	2.6	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	494	-	-	83	383	84	433	316	-	-
HCM Lane V/C Ratio	0.116	-	-	0.702	0.069	0.497	0.051	0.01	-	-
HCM Control Delay (s)	13.2	2.1	-	116.2	15.1	84.3	13.8	16.5	-	-
HCM Lane LOS	B	A	-	F	C	F	B	C	-	-
HCM 95th %tile Q(veh)	0.4	-	-	3.4	0.2	2.1	0.2	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

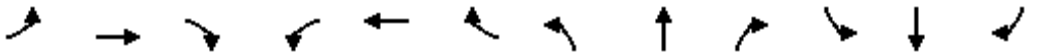


Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	962	356	433	20	502	500
v/c Ratio	1.02	0.14	0.69	0.27	1.04	0.46
Control Delay	57.0	6.1	46.2	56.0	72.1	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.0	6.1	46.2	56.0	72.1	6.0
Queue Length 50th (ft)	511	33	135	11	~198	61
Queue Length 95th (ft)	#960	66	211	39	#454	165
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	940	2464	627	74	483	1076
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.14	0.69	0.27	1.04	0.46

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	875	321	3	2	316	76	8	7	3	53	0	859
Future Volume (veh/h)	875	321	3	2	316	76	8	7	3	53	0	859
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1411	1870	1841	1856	1870	1307	1870	1767	1870	1841
Adj Flow Rate, veh/h	962	353	2	2	347	64	9	8	0	0	0	648
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	33	2	4	3	2	40	2	9	2	4
Cap, veh/h	970	2537	14	34	548	100	12	11	0	0	251	1881
Arrive On Green	0.47	0.70	0.70	0.19	0.19	0.19	0.02	0.02	0.00	0.00	0.00	0.13
Sat Flow, veh/h	1767	3623	21	3	2890	525	674	599	0	0	1870	3120
Grp Volume(v), veh/h	962	173	182	220	0	193	17	0	0	0	0	648
Grp Sat Flow(s),veh/h/ln	1767	1777	1867	1838	0	1581	1273	0	0	0	1870	1560
Q Serve(g_s), s	49.9	3.5	3.5	0.0	0.0	12.2	1.4	0.0	0.0	0.0	0.0	11.3
Cycle Q Clear(g_c), s	49.9	3.5	3.5	12.0	0.0	12.2	1.4	0.0	0.0	0.0	0.0	11.3
Prop In Lane	1.00		0.01	0.01		0.33	0.53		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	970	1244	1307	382	0	300	24	0	0	0	251	1881
V/C Ratio(X)	0.99	0.14	0.14	0.58	0.00	0.64	0.72	0.00	0.00	0.00	0.00	0.34
Avail Cap(c_a), veh/h	970	1244	1307	382	0	300	59	0	0	0	310	1980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	19.4	5.4	5.4	40.5	0.0	40.6	53.0	0.0	0.0	0.0	0.0	10.8
Incr Delay (d2), s/veh	26.9	0.2	0.2	6.2	0.0	10.1	33.9	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.3	1.1	1.2	5.9	0.0	5.4	0.7	0.0	0.0	0.0	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	5.6	5.6	46.7	0.0	50.7	86.9	0.0	0.0	0.0	0.0	10.9
LnGrp LOS	D	A	A	D	A	D	F	A	A	A	A	B
Approach Vol, veh/h		1317			413			17			648	
Approach Delay, s/veh		35.3			48.6			86.9			10.9	
Approach LOS		D			D			F			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	55.4	26.6		19.5		82.0		7.0				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	51.9	14.2		13.3		5.5		3.4				
Green Ext Time (p_c), s	0.0	1.2		1.2		2.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		31.4	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	12.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	553	12	12	869	122	12	0	12	78	0	20
Future Vol, veh/h	24	553	12	12	869	122	12	0	12	78	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	100	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	5	2	2	4	2	2	2	2	2	2	2
Mvmt Flow	26	601	13	13	945	133	13	0	13	85	0	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1078	0	0	614	0	0	1709	1764	608	1637	1637	945
Stage 1	-	-	-	-	-	-	660	660	-	971	971	-
Stage 2	-	-	-	-	-	-	1049	1104	-	666	666	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	647	-	-	965	-	-	72	84	496	~ 81	101	318
Stage 1	-	-	-	-	-	-	452	460	-	304	331	-
Stage 2	-	-	-	-	-	-	275	287	-	449	457	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	647	-	-	965	-	-	63	78	496	~ 74	94	318
Mov Cap-2 Maneuver	-	-	-	-	-	-	63	78	-	~ 74	94	-
Stage 1	-	-	-	-	-	-	434	442	-	292	319	-
Stage 2	-	-	-	-	-	-	247	277	-	420	439	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	46.6	201.1
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	112	647	-	-	965	-	-	74	318
HCM Lane V/C Ratio	0.233	0.04	-	-	0.014	-	-	1.146	0.068
HCM Control Delay (s)	46.6	10.8	-	-	8.8	0	-	248.2	17.2
HCM Lane LOS	E	B	-	-	A	A	-	F	C
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0	-	-	6.4	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	33	0	75	87	0	44
Future Vol, veh/h	33	0	75	87	0	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	12	2	2	8	2	2
Mvmt Flow	36	0	82	96	0	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	36	0	296	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	260	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1575	-	695	1037
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	783	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1575	-	657	1037
Mov Cap-2 Maneuver	-	-	-	-	657	-
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	740	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.4	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1037	-	-	1575	-
HCM Lane V/C Ratio	0.047	-	-	0.052	-
HCM Control Delay (s)	8.6	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.2	-

HCS7 Two-Way Stop-Control Report

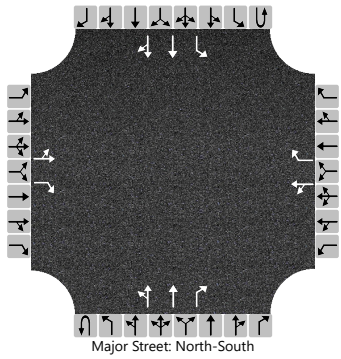
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2021
Time Analyzed	AM Peak Existing
Intersection Orientation	North-South
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	3
Jurisdiction	City of Columbia
East/West Street	Old Williamsport Pike
North/South Street	James Campbell Blvd
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	0	2	1	0	1	2	0
Configuration		LT		R		LT		R		LT	T	R		L	T	TR
Volume (veh/h)		9	0	111		9	0	4		21	662	35	0	21	1092	10
Percent Heavy Vehicles (%)		13	3	3		2	3	3		32			3	5		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.76	6.56	6.96		7.54	6.56	6.96		4.74				4.20		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.63	4.03	3.33		3.52	4.03	3.33		2.52				2.25		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		10		122		10		4		23				23		
Capacity, c (veh/h)		52		438		64		630		430				824		
v/c Ratio		0.19		0.28		0.16		0.01		0.05				0.03		
95% Queue Length, Q_{95} (veh)		0.6		1.1		0.5		0.0		0.2				0.1		
Control Delay (s/veh)		90.8		16.4		71.8		10.8		13.8				9.5		
Level of Service (LOS)		F		C		F		B		B				A		
Approach Delay (s/veh)		21.9				53.0				0.9				0.2		
Approach LOS		C				F										

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HCS7 Two-Way Stop-Control Report

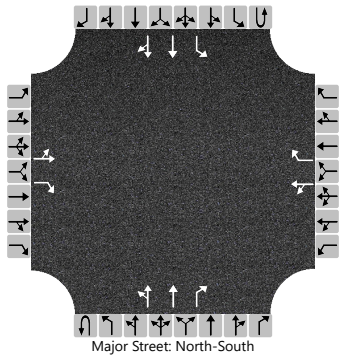
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2021
Time Analyzed	PM Peak Existing
Intersection Orientation	North-South
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	3
Jurisdiction	City of Columbia
East/West Street	Old Williamsport Pike
North/South Street	James Campbell Blvd
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	0	2	1	0	1	2	0
Configuration		LT		R		LT		R		LT	T	R		L	T	TR
Volume (veh/h)		8	0	22		34	0	18		47	914	3	0	3	827	32
Percent Heavy Vehicles (%)		2	3	3		3	3	3		9			3	67		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.54	6.56	6.96		7.56	6.56	6.96		4.28				5.44		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.52	4.03	3.33		3.53	4.03	3.33		2.29				2.87		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		9		24		37		20		52				3		
Capacity, c (veh/h)		65		536		61		512		681				398		
v/c Ratio		0.13		0.05		0.61		0.04		0.08				0.01		
95% Queue Length, Q_{95} (veh)		0.4		0.1		2.5		0.1		0.2				0.0		
Control Delay (s/veh)		68.4		12.0		131.1		12.3		10.7				14.1		
Level of Service (LOS)		F		B		F		B		B				B		
Approach Delay (s/veh)		27.1				90.0				1.3				0.0		
Approach LOS		D				F										

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HCS7 Two-Way Stop-Control Report

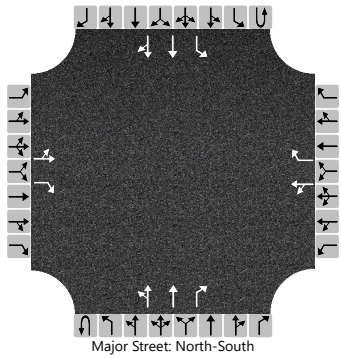
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2025
Time Analyzed	AM Peak No-Build
Intersection Orientation	North-South
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	3
Jurisdiction	City of Columbia
East/West Street	Old Williamsport Pike
North/South Street	James Campbell Blvd
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	0	2	1	0	1	2	0
Configuration		LT		R		LT		R		LT	T	R		L	T	TR
Volume (veh/h)		10	0	123		10	0	4		23	771	39	0	23	1237	11
Percent Heavy Vehicles (%)		13	3	3		2	3	3		32			3	5		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.76	6.56	6.96		7.54	6.56	6.96		4.74				4.20		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.63	4.03	3.33		3.52	4.03	3.33		2.52				2.25		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11		135		11		4		25				25		
Capacity, c (veh/h)		33		388		39		576		365				738		
v/c Ratio		0.33		0.35		0.28		0.01		0.07				0.03		
95% Queue Length, Q_{95} (veh)		1.1		1.5		0.9		0.0		0.2				0.1		
Control Delay (s/veh)		162.1		19.2		131.9		11.3		15.6				10.0		
Level of Service (LOS)		F		C		F		B		C				B		
Approach Delay (s/veh)		29.9				97.5				1.3				0.2		
Approach LOS		D				F										

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HCS7 Two-Way Stop-Control Report

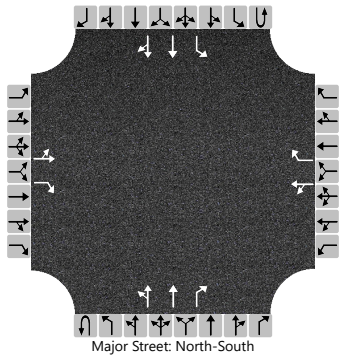
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2025
Time Analyzed	PM Peak No-Build
Intersection Orientation	North-South
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	3
Jurisdiction	City of Columbia
East/West Street	Old Williamsport Pike
North/South Street	James Campbell Blvd
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	0	2	1	0	1	2	0
Configuration		LT		R		LT		R		LT	T	R		L	T	TR
Volume (veh/h)		9	0	24		38	0	20		52	1049	3	0	3	993	35
Percent Heavy Vehicles (%)		2	3	3		3	3	3		9			3	67		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.54	6.56	6.96		7.56	6.56	6.96		4.28				5.44		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.52	4.03	3.33		3.53	4.03	3.33		2.29				2.87		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		10		26		42		22		57				3		
Capacity, c (veh/h)		37		466		35		458		575				335		
v/c Ratio		0.27		0.06		1.18		0.05		0.10				0.01		
95% Queue Length, Q_{95} (veh)		0.9		0.2		4.4		0.2		0.3				0.0		
Control Delay (s/veh)		135.7		13.2		384.6		13.3		11.9				15.9		
Level of Service (LOS)		F		B		F		B		B				C		
Approach Delay (s/veh)		46.6				256.5				2.0				0.0		
Approach LOS		E				F										

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HCS7 Two-Way Stop-Control Report

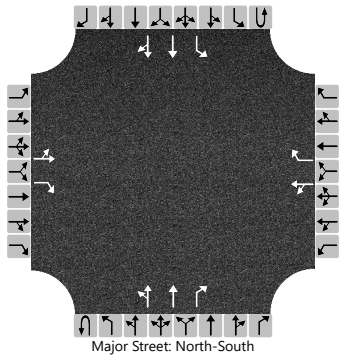
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2025
Time Analyzed	AM Peak-Build
Intersection Orientation	North-South
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	3
Jurisdiction	City of Columbia
East/West Street	Old Williamsport Pike
North/South Street	James Campbell Blvd
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	0	2	1	0	1	2	0
Configuration		LT		R		LT		R		LT	T	R		L	T	TR
Volume (veh/h)		91	0	123		10	0	4		23	853	39	0	23	1265	38
Percent Heavy Vehicles (%)		13	3	3		2	3	3		32			3	5		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.76	6.56	6.96		7.54	6.56	6.96		4.74				4.20		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.63	4.03	3.33		3.52	4.03	3.33		2.52				2.25		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		100		135		11		4		25				25		
Capacity, c (veh/h)		27		370		31		538		343				682		
v/c Ratio		3.67		0.36		0.36		0.01		0.07				0.04		
95% Queue Length, Q_{95} (veh)		12.2		1.6		1.1		0.0		0.2				0.1		
Control Delay (s/veh)		1497.2		20.2		177.6		11.7		16.3				10.5		
Level of Service (LOS)		F		C		F		B		C				B		
Approach Delay (s/veh)		648.3				130.2				1.5				0.2		
Approach LOS		F				F										

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HCS7 Two-Way Stop-Control Report

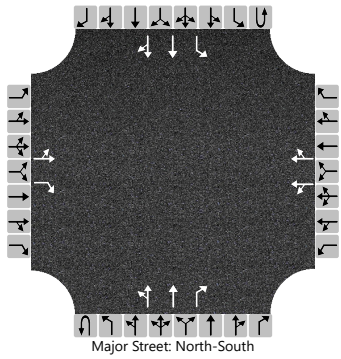
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2025
Time Analyzed	PM Peak-Build
Intersection Orientation	North-South
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	3
Jurisdiction	City of Columbia
East/West Street	Old Williamsport Pike
North/South Street	James Campbell Blvd
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	2	0	0	0	2	1	0	1	2	0
Configuration		LT		R		LT		TR		LT	T	R		L	T	TR
Volume (veh/h)		53	0	24		38	0	20		52	1095	3	0	3	1069	110
Percent Heavy Vehicles (%)		2	2	15		3	2	6		9			2	67		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No								No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.54	6.54	7.20		7.56	6.54	7.02		4.28				5.44		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.52	4.02	3.45		3.53	4.02	3.36		2.29				2.87		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		58		26		42		22		57				3		
Capacity, c (veh/h)		26		383		27		433		495				315		
v/c Ratio		2.23		0.07		1.52		0.05		0.12				0.01		
95% Queue Length, Q_{95} (veh)		7.1		0.2		4.9		0.2		0.4				0.0		
Control Delay (s/veh)		881.9		15.1		574.1		13.8		13.2				16.5		
Level of Service (LOS)		F		C		F		B		B				C		
Approach Delay (s/veh)		611.7				380.9				2.6				0.0		
Approach LOS		F				F										

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HCS7 Two-Way Stop-Control Report

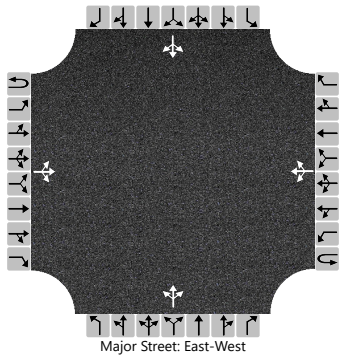
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2025
Time Analyzed	AM Peak Build
Intersection Orientation	East-West
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	5
Jurisdiction	City of Columbia
East/West Street	Hampshire Pike
North/South Street	Site Dwy A/Oxford Village
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		19	765	12		12	684	55		12	0	12		130	0	25
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		21				13					26				170	
Capacity, c (veh/h)		814				786					107				76	
v/c Ratio		0.03				0.02					0.25				2.25	
95% Queue Length, Q_{95} (veh)		0.1				0.1					0.9				15.9	
Control Delay (s/veh)		9.5				9.7					49.6				691.4	
Level of Service (LOS)		A				A					E				F	
Approach Delay (s/veh)	0.7				0.4				49.6				691.4			
Approach LOS									E				F			

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HCS7 Two-Way Stop-Control Report

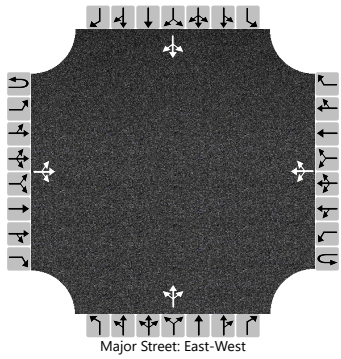
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2025
Time Analyzed	PM Peak Build
Intersection Orientation	East-West
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	5
Jurisdiction	City of Columbia
East/West Street	Hampshire Pike
North/South Street	Site Dwy A/Oxford Village
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		24	553	12		12	869	122		12	0	12		78	0	20
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		26				13					26				107	
Capacity, c (veh/h)		647				965					110				78	
v/c Ratio		0.04				0.01					0.24				1.37	
95% Queue Length, Q_{95} (veh)		0.1				0.0					0.9				8.4	
Control Delay (s/veh)		10.8				8.8					47.8				323.7	
Level of Service (LOS)		B				A					E				F	
Approach Delay (s/veh)		1.1				0.4				47.8				323.7		
Approach LOS										E				F		

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HCS7 Two-Way Stop-Control Report

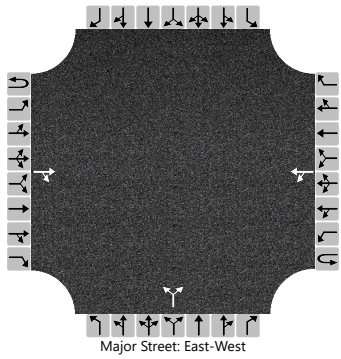
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2025
Time Analyzed	AM Peak Build
Intersection Orientation	East-West
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	6
Jurisdiction	City of Columbia
East/West Street	Old Williamsport Pike
North/South Street	Site Dwy B
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			132	0		27	34			0		81				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage				Undivided												

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						30					89					
Capacity, c (veh/h)						1437					902					
v/c Ratio						0.02					0.10					
95% Queue Length, Q_{95} (veh)						0.1					0.3					
Control Delay (s/veh)						7.6					9.4					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)						3.4				9.4						
Approach LOS										A						

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HCS7 Two-Way Stop-Control Report

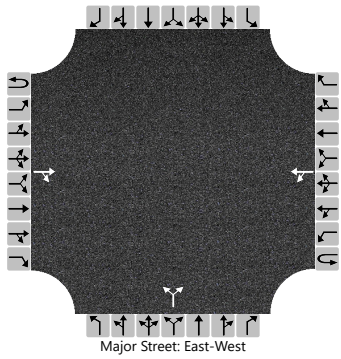
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2025
Time Analyzed	PM Peak Build
Intersection Orientation	East-West
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	6
Jurisdiction	City of Columbia
East/West Street	Old Williamsport Pike
North/South Street	Site Dwy B
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			33	0		75	87			0		44				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						82					48					
Capacity, c (veh/h)						1575					1036					
v/c Ratio						0.05					0.05					
95% Queue Length, Q_{95} (veh)						0.2					0.1					
Control Delay (s/veh)						7.4					8.6					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)					3.7				8.6							
Approach LOS					A											

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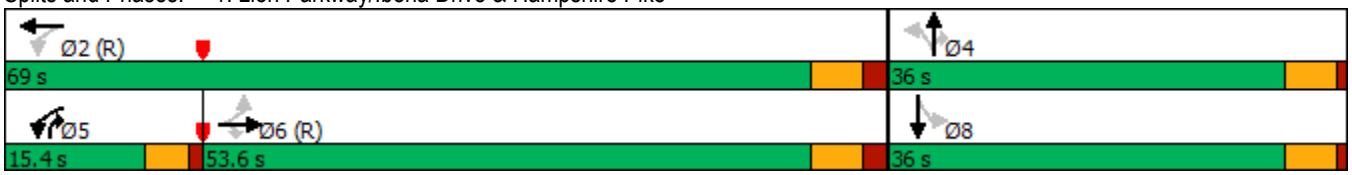
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	1	582	486	204	480	265	2	171	11	8
Future Volume (vph)	1	582	486	204	480	265	2	171	11	8
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA	pm+ov	Perm	NA
Protected Phases		6		5	2		4	5		8
Permitted Phases	6		6	2		4		4	8	
Detector Phase	6	6	6	5	2	4	4	5	8	8
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	9.5	21.0	10.0	10.0	9.5	10.0	10.0
Total Split (s)	53.6	53.6	53.6	15.4	69.0	36.0	36.0	15.4	36.0	36.0
Total Split (%)	51.0%	51.0%	51.0%	14.7%	65.7%	34.3%	34.3%	14.7%	34.3%	34.3%
Yellow Time (s)	4.0	4.0	4.0	3.5	4.0	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0		5.0	4.5		5.0
Lead/Lag	Lag	Lag	Lag	Lead				Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes		
Recall Mode	C-Max	C-Max	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	52.9	52.9	52.9	68.0	66.5		27.5	41.6		27.5
Actuated g/C Ratio	0.50	0.50	0.50	0.65	0.63		0.26	0.40		0.26
v/c Ratio	0.00	0.70	0.50	0.59	0.46		0.90	0.29		0.07
Control Delay	16.0	26.5	3.4	15.0	12.3		67.9	4.8		21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	16.0	26.5	3.4	15.0	12.3		67.9	4.8		21.4
LOS	B	C	A	B	B		E	A		C
Approach Delay		16.0			13.1		43.2			21.4
Approach LOS		B			B		D			C

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 20.5	Intersection LOS: C
Intersection Capacity Utilization 76.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Lion Parkway/Iberia Drive & Hampshire Pike

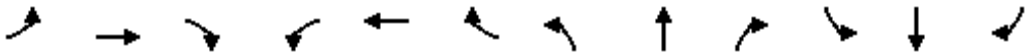




Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1	640	534	224	527	293	188	30
v/c Ratio	0.00	0.70	0.50	0.59	0.46	0.90	0.29	0.07
Control Delay	16.0	26.5	3.4	15.0	12.3	67.9	4.8	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	26.5	3.4	15.0	12.3	67.9	4.8	21.4
Queue Length 50th (ft)	0	338	0	60	181	184	6	10
Queue Length 95th (ft)	4	504	58	98	268	#321	46	33
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	439	920	1062	401	1146	366	675	460
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.70	0.50	0.56	0.46	0.80	0.28	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	582	486	204	480	0	265	2	171	11	8	8
Future Volume (veh/h)	1	582	486	204	480	0	265	2	171	11	8	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1841	1826	1870	1781	1870	1663	1870	1870	1870
Adj Flow Rate, veh/h	1	640	243	224	527	0	291	2	66	12	9	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	4	2	4	5	2	8	2	16	2	2	2
Cap, veh/h	452	876	754	333	1096	0	372	2	531	64	36	2
Arrive On Green	0.48	0.48	0.48	0.08	0.60	0.00	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	876	1841	1585	1753	1826	0	1030	7	1409	37	123	8
Grp Volume(v), veh/h	1	640	243	224	527	0	293	0	66	22	0	0
Grp Sat Flow(s),veh/h/ln	876	1841	1585	1753	1826	0	1037	0	1409	167	0	0
Q Serve(g_s), s	0.1	29.3	10.0	6.5	17.0	0.0	0.0	0.0	3.2	0.4	0.0	0.0
Cycle Q Clear(g_c), s	4.1	29.3	10.0	6.5	17.0	0.0	29.6	0.0	3.2	30.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.55		0.05
Lane Grp Cap(c), veh/h	452	876	754	333	1096	0	374	0	531	102	0	0
V/C Ratio(X)	0.00	0.73	0.32	0.67	0.48	0.00	0.78	0.00	0.12	0.22	0.00	0.00
Avail Cap(c_a), veh/h	452	876	754	372	1096	0	374	0	531	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.81	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.6	22.1	17.0	18.1	11.8	0.0	36.5	0.0	21.4	30.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.3	1.1	2.4	1.2	0.0	9.5	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.0	3.7	2.5	6.5	0.0	8.3	0.0	1.1	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.6	27.5	18.2	20.5	13.0	0.0	46.0	0.0	21.4	30.6	0.0	0.0
LnGrp LOS	B	C	B	C	B	A	D	A	C	C	A	A
Approach Vol, veh/h		884			751			359			22	
Approach Delay, s/veh		24.9			15.3			41.5			30.6	
Approach LOS		C			B			D			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		69.0		36.0	13.1	55.9		36.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		63.0		31.0	10.9	47.6		31.0				
Max Q Clear Time (g_c+I1), s		19.0		31.6	8.5	31.3		32.0				
Green Ext Time (p_c), s		7.6		0.0	0.1	8.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		24.3
HCM 6th LOS		C

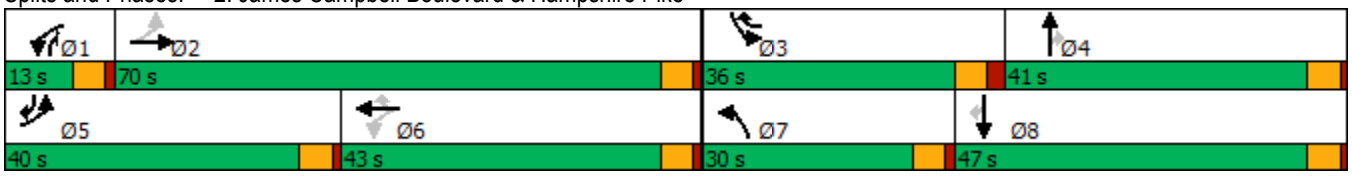
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	239	272	104	224	112	209	495	108	241	768	218
Future Volume (vph)	239	272	104	224	112	209	495	108	241	768	218
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	1	6	3	7	4	1	3	8	5
Permitted Phases	2		6		6			4			8
Detector Phase	5	2	1	6	3	7	4	1	3	8	5
Switch Phase											
Minimum Initial (s)	6.0	5.0	4.0	5.0	4.0	4.0	8.0	4.0	4.0	8.0	6.0
Minimum Split (s)	11.0	10.0	9.0	10.0	10.0	9.0	13.0	9.0	10.0	13.0	11.0
Total Split (s)	40.0	70.0	13.0	43.0	36.0	30.0	41.0	13.0	36.0	47.0	40.0
Total Split (%)	25.0%	43.8%	8.1%	26.9%	22.5%	18.8%	25.6%	8.1%	22.5%	29.4%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	6.0	5.0	5.0	5.0	6.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	None	None	None	None	None	None	None
Act Effct Green (s)	77.7	65.1	61.0	53.4	85.3	23.2	36.3	48.9	26.9	41.0	65.3
Actuated g/C Ratio	0.50	0.41	0.39	0.34	0.54	0.15	0.23	0.31	0.17	0.26	0.42
v/c Ratio	0.55	0.85	0.59	0.41	0.15	0.92	0.73	0.23	0.91	0.95	0.33
Control Delay	29.0	51.8	38.8	44.1	4.6	103.8	63.0	16.0	97.2	77.1	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	51.8	38.8	44.1	4.6	103.8	63.0	16.0	97.2	77.1	9.7
LOS	C	D	D	D	A	F	E	B	F	E	A
Approach Delay		44.8		32.8			67.2			69.1	
Approach LOS		D		C			E			E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 156.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 57.9	Intersection LOS: E
Intersection Capacity Utilization 85.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: James Campbell Boulevard & Hampshire Pike

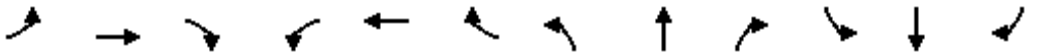




Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	269	606	117	252	126	235	556	121	271	863	245
v/c Ratio	0.55	0.85	0.59	0.41	0.15	0.92	0.73	0.23	0.91	0.95	0.33
Control Delay	29.0	51.8	38.8	44.1	4.6	103.8	63.0	16.0	97.2	77.1	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	51.8	38.8	44.1	4.6	103.8	63.0	16.0	97.2	77.1	9.7
Queue Length 50th (ft)	169	549	66	204	6	244	288	29	277	470	45
Queue Length 95th (ft)	235	#733	106	307	42	#391	355	81	#417	#588	99
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	583	716	202	621	876	277	765	530	332	930	878
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.85	0.58	0.41	0.14	0.85	0.73	0.23	0.82	0.93	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	272	267	104	224	112	209	495	108	241	768	218
Future Volume (veh/h)	239	272	267	104	224	112	209	495	108	241	768	218
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1856	1796	1796	1841	1752	1841	1752	1796	1841	1841	1826
Adj Flow Rate, veh/h	269	306	275	117	252	64	235	556	55	271	863	125
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	3	7	7	4	10	4	10	7	4	4	5
Cap, veh/h	493	373	335	223	651	771	255	782	435	291	916	578
Arrive On Green	0.11	0.41	0.41	0.05	0.35	0.35	0.15	0.24	0.24	0.17	0.26	0.26
Sat Flow, veh/h	1711	901	809	1711	1841	1485	1753	3328	1522	1753	3497	1547
Grp Volume(v), veh/h	269	0	581	117	252	64	235	556	55	271	863	125
Grp Sat Flow(s),veh/h/ln	1711	0	1710	1711	1841	1485	1753	1664	1522	1753	1749	1547
Q Serve(g_s), s	15.3	0.0	47.3	6.9	16.1	3.4	20.8	24.1	4.2	23.9	37.9	8.6
Cycle Q Clear(g_c), s	15.3	0.0	47.3	6.9	16.1	3.4	20.8	24.1	4.2	23.9	37.9	8.6
Prop In Lane	1.00		0.47	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	493	0	708	223	651	771	255	782	435	291	916	578
V/C Ratio(X)	0.55	0.00	0.82	0.52	0.39	0.08	0.92	0.71	0.13	0.93	0.94	0.22
Avail Cap(c_a), veh/h	684	0	708	223	651	771	279	782	435	335	936	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	40.8	35.2	38.0	18.9	66.2	55.1	41.5	64.6	56.7	33.5
Incr Delay (d2), s/veh	0.3	0.0	10.3	1.1	1.7	0.2	31.3	3.0	0.1	28.4	16.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	21.6	2.9	7.6	1.2	11.4	10.3	1.6	12.8	18.5	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	0.0	51.1	36.3	39.7	19.1	97.5	58.1	41.6	93.0	73.7	33.7
LnGrp LOS	C	A	D	D	D	B	F	E	D	F	E	C
Approach Vol, veh/h		850			433			846			1259	
Approach Delay, s/veh		43.5			35.7			68.0			73.9	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	70.0	32.0	41.9	22.5	60.5	27.8	46.1
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	65.0	30.0	36.0	35.0	38.0	25.0	42.0
Max Q Clear Time (g_c+I1), s	8.9	49.3	25.9	26.1	17.3	18.1	22.8	39.9
Green Ext Time (p_c), s	0.0	2.2	0.1	2.5	0.2	0.9	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	59.9
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	123	10	0	4	23	771	39	23	1237	11
Future Vol, veh/h	10	0	123	10	0	4	23	771	39	23	1237	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	100	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	13	2	11	2	2	2	32	12	2	5	4	11
Mvmt Flow	11	0	135	11	0	4	25	847	43	25	1359	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1889	2355	686	1627	2318	424	1371	0	0	890	0	0
Stage 1	1415	1415	-	897	897	-	-	-	-	-	-	-
Stage 2	474	940	-	730	1421	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.54	7.12	7.54	6.54	6.94	4.74	-	-	4.2	-	-
Critical Hdwy Stg 1	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.02	3.41	3.52	4.02	3.32	2.52	-	-	2.25	-	-
Pot Cap-1 Maneuver	38	35	370	68	37	579	365	-	-	739	-	-
Stage 1	131	202	-	301	357	-	-	-	-	-	-	-
Stage 2	512	340	-	380	201	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	35	32	370	40	33	579	365	-	-	739	-	-
Mov Cap-2 Maneuver	98	121	-	127	116	-	-	-	-	-	-	-
Stage 1	122	195	-	281	333	-	-	-	-	-	-	-
Stage 2	473	317	-	233	194	-	-	-	-	-	-	-

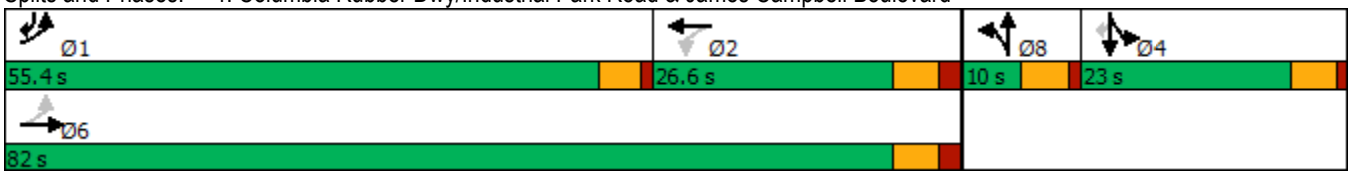
Approach	EB	WB	NB	SB
HCM Control Delay, s	22.2	28.9	0.9	0.2
HCM LOS	C	D		

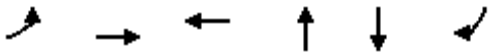
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	365	-	-	98	370	127	579	739	-	-
HCM Lane V/C Ratio	0.069	-	-	0.112	0.365	0.087	0.008	0.034	-	-
HCM Control Delay (s)	15.6	0.5	-	46.3	20.2	36	11.3	10	-	-
HCM Lane LOS	C	A	-	E	C	E	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.4	1.6	0.3	0	0.1	-	-

Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	495	278	290	7	7	984
Future Volume (vph)	495	278	290	7	7	984
Turn Type	pm+pt	NA	NA	NA	NA	pm+ov
Protected Phases	1	6	2	8	4	1
Permitted Phases	6					4
Detector Phase	1	6	2	8	4	1
Switch Phase						
Minimum Initial (s)	5.0	15.0	15.0	5.0	5.0	5.0
Minimum Split (s)	9.5	21.0	21.0	10.0	10.0	9.5
Total Split (s)	55.4	82.0	26.6	10.0	23.0	55.4
Total Split (%)	48.2%	71.3%	23.1%	8.7%	20.0%	48.2%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	3.5
All-Red Time (s)	1.0	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	5.0	5.0	4.5
Lead/Lag	Lead		Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	None	None
Act Effct Green (s)	77.6	76.1	41.9	5.0	18.0	52.7
Actuated g/C Ratio	0.73	0.71	0.39	0.05	0.17	0.49
v/c Ratio	0.76	0.14	0.31	0.17	1.83	0.74
Control Delay	14.2	5.4	26.4	54.0	406.2	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.2	5.4	26.4	54.0	406.2	16.2
LOS	B	A	C	D	F	B
Approach Delay		10.9	26.4	54.0	212.8	
Approach LOS		B	C	D	F	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 107	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.83	
Intersection Signal Delay: 113.3	Intersection LOS: F
Intersection Capacity Utilization 88.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Columbia Rubber Dwy/Industrial Park Road & James Campbell Boulevard



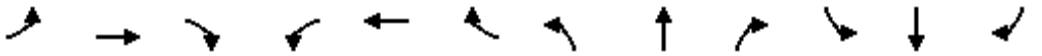


Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	576	336	399	11	652	641
v/c Ratio	0.76	0.14	0.31	0.17	1.83	0.74
Control Delay	14.2	5.4	26.4	54.0	406.2	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.2	5.4	26.4	54.0	406.2	16.2
Queue Length 50th (ft)	135	30	87	7	~625	209
Queue Length 95th (ft)	265	59	184	26	#885	226
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	933	2342	1297	64	357	1103
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.14	0.31	0.17	1.83	0.58

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	495	278	11	0	290	53	2	7	1	121	7	984
Future Volume (veh/h)	495	278	11	0	290	53	2	7	1	121	7	984
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1767	1737	1870	1811	1693	1159	1307	1870	1811	1307	1841
Adj Flow Rate, veh/h	576	323	11	0	337	50	2	8	0	0	0	997
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	14	9	11	2	6	14	50	40	2	6	40	4
Cap, veh/h	736	2261	77	0	1258	185	3	12	0	0	211	1204
Arrive On Green	0.22	0.68	0.68	0.00	0.42	0.42	0.01	0.01	0.00	0.00	0.00	0.16
Sat Flow, veh/h	1612	3312	113	0	3100	442	259	1035	0	0	1307	3120
Grp Volume(v), veh/h	576	163	171	0	191	196	10	0	0	0	0	997
Grp Sat Flow(s),veh/h/ln	1612	1678	1746	0	1721	1731	1294	0	0	0	1307	1560
Q Serve(g_s), s	21.0	3.8	3.8	0.0	8.1	8.3	0.9	0.0	0.0	0.0	0.0	18.0
Cycle Q Clear(g_c), s	21.0	3.8	3.8	0.0	8.1	8.3	0.9	0.0	0.0	0.0	0.0	18.0
Prop In Lane	1.00		0.06	0.00		0.26	0.20		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	736	1146	1192	0	719	724	15	0	0	0	211	1204
V/C Ratio(X)	0.78	0.14	0.14	0.00	0.27	0.27	0.65	0.00	0.00	0.00	0.00	0.83
Avail Cap(c_a), veh/h	1112	1146	1192	0	719	724	58	0	0	0	211	1204
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	11.3	6.2	6.2	0.0	21.2	21.2	54.8	0.0	0.0	0.0	0.0	30.9
Incr Delay (d2), s/veh	2.1	0.3	0.3	0.0	0.9	0.9	37.3	0.0	0.0	0.0	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	1.2	1.3	0.0	3.3	3.4	0.4	0.0	0.0	0.0	0.0	12.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	6.5	6.5	0.0	22.1	22.2	92.1	0.0	0.0	0.0	0.0	35.8
LnGrp LOS	B	A	A	A	C	C	F	A	A	A	A	D
Approach Vol, veh/h		910			387			10			997	
Approach Delay, s/veh		10.9			22.1			92.1			35.8	
Approach LOS		B			C			F			D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	29.4	52.6		23.0		82.0		6.3				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	23.0	10.3		20.0		5.8		2.9				
Green Ext Time (p_c), s	1.9	1.4		0.0		1.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		23.9	
HCM 6th LOS		C	

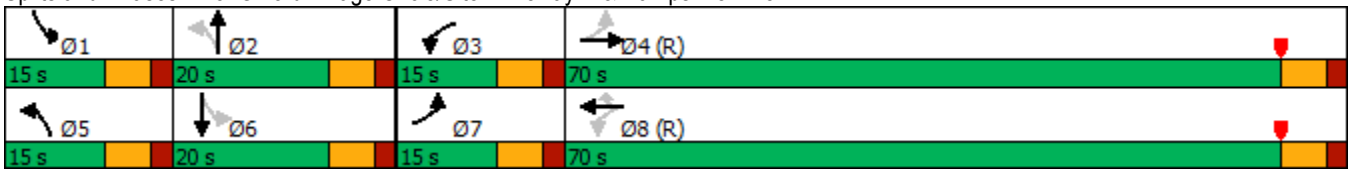
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	WBL	WBT	NBL	NBT	Ø1	Ø6	Ø7
Lane Configurations								
Traffic Volume (vph)	765	12	684	12	0			
Future Volume (vph)	765	12	684	12	0			
Turn Type	NA	pm+pt	NA	pm+pt	NA			
Protected Phases	4	3	8	5	2	1	6	7
Permitted Phases		8		2				
Detector Phase	4	3	8	5	2			
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	11.0	24.0	11.0	24.0	11.0	24.0	11.0
Total Split (s)	70.0	15.0	70.0	15.0	20.0	15.0	20.0	15.0
Total Split (%)	58.3%	12.5%	58.3%	12.5%	16.7%	13%	17%	13%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0			
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Max	None	C-Max	None	Max	None	Max	None
Act Effct Green (s)	83.8	88.7	88.7	19.3	19.3			
Actuated g/C Ratio	0.70	0.74	0.74	0.16	0.16			
v/c Ratio	0.69	0.04	0.56	0.07	0.02			
Control Delay	17.7	6.1	10.1	39.2	0.1			
Queue Delay	0.0	0.0	0.0	0.0	0.0			
Total Delay	17.7	6.1	10.1	39.2	0.1			
LOS	B	A	B	D	A			
Approach Delay	17.7		10.0		19.7			
Approach LOS	B		B		B			

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 103 (86%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 14.2	Intersection LOS: B
Intersection Capacity Utilization 55.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Oxford Village Circle/Site Driveway A & Hampshire Pike

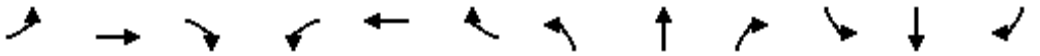




Lane Group	EBT	WBL	WBT	NBL	NBT
Lane Group Flow (vph)	854	13	752	13	13
v/c Ratio	0.69	0.04	0.56	0.07	0.02
Control Delay	17.7	6.1	10.1	39.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.7	6.1	10.1	39.2	0.1
Queue Length 50th (ft)	229	2	179	9	0
Queue Length 95th (ft)	#745	10	419	25	0
Internal Link Dist (ft)	1470		2278		194
Turn Bay Length (ft)		100			
Base Capacity (vph)	1238	357	1337	217	545
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.69	0.04	0.56	0.06	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	765	12	12	684	0	12	0	12	0	0	0
Future Volume (veh/h)	0	765	12	12	684	0	12	0	12	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1870	1870	1826	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	841	13	13	752	0	13	0	13	0	0	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	7	2	2	5	2	2	2	2	2	2	2
Cap, veh/h	432	1154	18	305	1312	1139	251	0	287	225	218	0
Arrive On Green	0.00	0.65	0.65	0.01	0.72	0.00	0.01	0.00	0.18	0.00	0.00	0.00
Sat Flow, veh/h	1781	1764	27	1781	1826	1585	1781	0	1585	1781	1870	0
Grp Volume(v), veh/h	0	0	854	13	752	0	13	0	13	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1791	1781	1826	1585	1781	0	1585	1781	1870	0
Q Serve(g_s), s	0.0	0.0	37.8	0.3	23.6	0.0	0.8	0.0	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	37.8	0.3	23.6	0.0	0.8	0.0	0.8	0.0	0.0	0.0
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	432	0	1172	305	1312	1139	251	0	287	225	218	0
V/C Ratio(X)	0.00	0.00	0.73	0.04	0.57	0.00	0.05	0.00	0.05	0.00	0.00	0.00
Avail Cap(c_a), veh/h	564	0	1172	413	1312	1139	359	0	287	357	218	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.77	0.82	0.82	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	13.7	12.7	8.1	0.0	43.9	0.0	40.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	3.1	0.0	1.5	0.0	0.1	0.0	0.3	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	15.1	0.1	8.8	0.0	0.3	0.0	0.3	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	16.8	12.8	9.6	0.0	44.0	0.0	40.8	0.0	0.0	0.0
LnGrp LOS	A	A	B	B	A	A	D	A	D	A	A	A
Approach Vol, veh/h		854			765			26			0	
Approach Delay, s/veh		16.8			9.6			42.4			0.0	
Approach LOS		B			A			D				

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	27.8	7.8	84.5	7.8	20.0	0.0	92.2
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	14.0	9.0	64.0	9.0	14.0	9.0	64.0
Max Q Clear Time (g_c+I1), s	0.0	2.8	2.3	39.8	2.8	0.0	0.0	25.6
Green Ext Time (p_c), s	0.0	0.0	0.0	7.2	0.0	0.0	0.0	6.5

Intersection Summary	
HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B

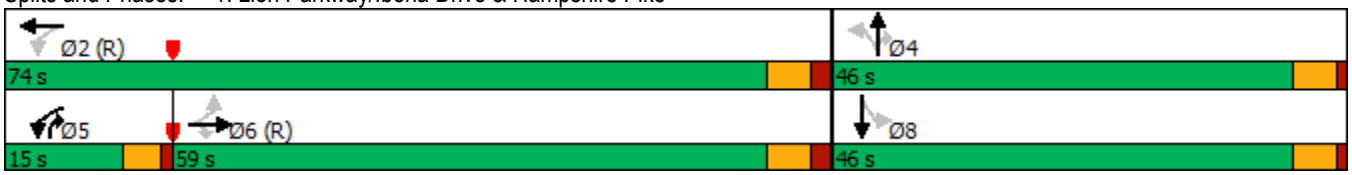
Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	4	502	385	63	804	362	3	51	1	2
Future Volume (vph)	4	502	385	63	804	362	3	51	1	2
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA	pm+ov	Perm	NA
Protected Phases		6		5	2		4	5		8
Permitted Phases	6		6	2		4		4	8	
Detector Phase	6	6	6	5	2	4	4	5	8	8
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	9.5	21.0	10.0	10.0	9.5	10.0	10.0
Total Split (s)	59.0	59.0	59.0	15.0	74.0	46.0	46.0	15.0	46.0	46.0
Total Split (%)	49.2%	49.2%	49.2%	12.5%	61.7%	38.3%	38.3%	12.5%	38.3%	38.3%
Yellow Time (s)	4.0	4.0	4.0	3.5	4.0	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0		5.0	4.5		5.0
Lead/Lag	Lag	Lag	Lag	Lead				Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes		
Recall Mode	C-Max	C-Max	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	62.5	62.5	62.5	72.7	71.2		37.8	48.9		37.8
Actuated g/C Ratio	0.52	0.52	0.52	0.61	0.59		0.32	0.41		0.32
v/c Ratio	0.03	0.58	0.41	0.17	0.81		0.93	0.08		0.01
Control Delay	18.2	24.7	3.1	13.0	23.0		69.1	5.3		23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	18.2	24.7	3.1	13.0	23.0		69.1	5.3		23.8
LOS	B	C	A	B	C		E	A		C
Approach Delay		15.3			22.3		61.4			23.8
Approach LOS		B			C		E			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 30 (25%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 26.9	Intersection LOS: C
Intersection Capacity Utilization 88.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: Lion Parkway/Iberia Drive & Hampshire Pike

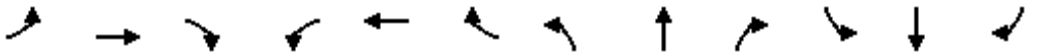




Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	4	546	418	68	876	396	55	4
v/c Ratio	0.03	0.58	0.41	0.17	0.81	0.93	0.08	0.01
Control Delay	18.2	24.7	3.1	13.0	23.0	69.1	5.3	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	24.7	3.1	13.0	23.0	69.1	5.3	23.8
Queue Length 50th (ft)	2	307	0	21	480	284	0	2
Queue Length 95th (ft)	9	442	55	m40	429	#463	24	10
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	134	942	1024	438	1083	461	734	585
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.58	0.41	0.16	0.81	0.86	0.07	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	502	385	63	804	2	362	3	51	1	2	1
Future Volume (veh/h)	4	502	385	63	804	2	362	3	51	1	2	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1530	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	546	197	68	874	2	393	3	17	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	25	5	2	2	4	2	2	2	2	2	2	2
Cap, veh/h	188	898	780	324	1040	2	274	2	601	40	62	0
Arrive On Green	0.49	0.49	0.49	0.05	0.75	0.75	0.34	0.34	0.34	0.34	0.34	0.00
Sat Flow, veh/h	518	1826	1585	1781	1836	4	628	5	1585	0	182	0
Grp Volume(v), veh/h	4	546	197	68	0	876	396	0	17	3	0	0
Grp Sat Flow(s),veh/h/ln	518	1826	1585	1781	0	1840	633	0	1585	182	0	0
Q Serve(g_s), s	0.7	26.0	8.7	2.2	0.0	38.4	0.0	0.0	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	30.1	26.0	8.7	2.2	0.0	38.4	41.0	0.0	0.8	41.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.33		0.00
Lane Grp Cap(c), veh/h	188	898	780	324	0	1043	276	0	601	102	0	0
V/C Ratio(X)	0.02	0.61	0.25	0.21	0.00	0.84	1.43	0.00	0.03	0.03	0.00	0.00
Avail Cap(c_a), veh/h	188	898	780	413	0	1043	276	0	601	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.71	0.00	0.71	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.3	22.1	17.7	16.3	0.0	11.1	43.9	0.0	23.4	31.8	0.0	0.0
Incr Delay (d2), s/veh	0.2	3.1	0.8	0.1	0.0	6.0	215.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	11.3	3.2	0.8	0.0	10.7	25.0	0.0	0.3	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.5	25.2	18.5	16.3	0.0	17.1	259.2	0.0	23.4	31.8	0.0	0.0
LnGrp LOS	C	C	B	B	A	B	F	A	C	C	A	A
Approach Vol, veh/h		747			944			413			3	
Approach Delay, s/veh		23.4			17.0			249.5			31.8	
Approach LOS		C			B			F			C	

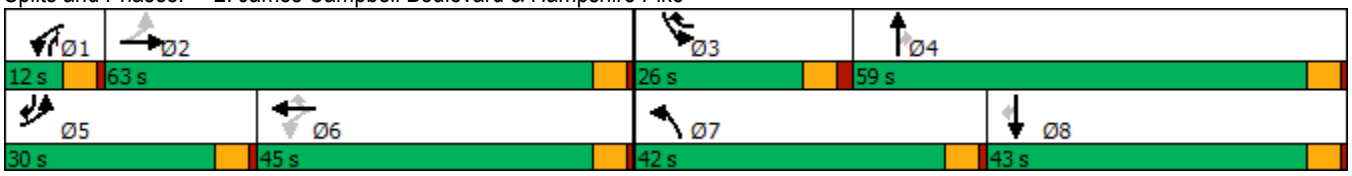
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		74.0		46.0	9.0	65.0		46.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		68.0		41.0	10.5	53.0		41.0				
Max Q Clear Time (g_c+I1), s		40.4		43.0	4.2	32.1		43.0				
Green Ext Time (p_c), s		13.3		0.0	0.0	7.8		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			64.9									
HCM 6th LOS			E									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	231	243	100	257	162	315	639	92	113	711	264
Future Volume (vph)	231	243	100	257	162	315	639	92	113	711	264
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	1	6	3	7	4	1	3	8	5
Permitted Phases	2		6		6			4			8
Detector Phase	5	2	1	6	3	7	4	1	3	8	5
Switch Phase											
Minimum Initial (s)	6.0	5.0	4.0	5.0	4.0	4.0	8.0	4.0	4.0	8.0	6.0
Minimum Split (s)	11.0	10.0	9.0	10.0	10.0	9.0	13.0	9.0	10.0	13.0	11.0
Total Split (s)	30.0	63.0	12.0	45.0	26.0	42.0	59.0	12.0	26.0	43.0	30.0
Total Split (%)	18.8%	39.4%	7.5%	28.1%	16.3%	26.3%	36.9%	7.5%	16.3%	26.9%	18.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	6.0	5.0	5.0	5.0	6.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	None	None	None	None	None	None	None
Act Effct Green (s)	70.0	58.1	52.4	45.5	65.7	34.9	56.5	63.4	15.2	37.8	62.3
Actuated g/C Ratio	0.44	0.37	0.33	0.29	0.42	0.22	0.36	0.40	0.10	0.24	0.40
v/c Ratio	0.65	0.86	0.64	0.57	0.26	0.95	0.60	0.16	0.78	0.96	0.42
Control Delay	37.4	58.4	48.8	54.5	12.0	95.7	44.4	8.1	98.5	82.0	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	58.4	48.8	54.5	12.0	95.7	44.4	8.1	98.5	82.0	13.2
LOS	D	E	D	D	B	F	D	A	F	F	B
Approach Delay		51.6		40.1			56.7			67.1	
Approach LOS		D		D			E			E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 157.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 56.4	Intersection LOS: E
Intersection Capacity Utilization 86.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: James Campbell Boulevard & Hampshire Pike

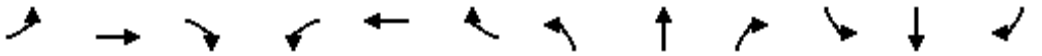




Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	266	554	115	295	186	362	734	106	130	817	303
v/c Ratio	0.65	0.86	0.64	0.57	0.26	0.95	0.60	0.16	0.78	0.96	0.42
Control Delay	37.4	58.4	48.8	54.5	12.0	95.7	44.4	8.1	98.5	82.0	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	58.4	48.8	54.5	12.0	95.7	44.4	8.1	98.5	82.0	13.2
Queue Length 50th (ft)	183	514	72	267	41	373	327	10	135	450	77
Queue Length 95th (ft)	248	#681	#121	372	92	#532	396	47	200	#553	140
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	449	641	180	521	755	403	1219	643	220	853	777
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.86	0.64	0.57	0.25	0.90	0.60	0.16	0.59	0.96	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	243	239	100	257	162	315	639	92	113	711	264
Future Volume (veh/h)	231	243	239	100	257	162	315	639	92	113	711	264
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1841	1826	1870	1826	1826	1826	1811	1781	1841	1870	1841
Adj Flow Rate, veh/h	266	279	250	115	295	100	362	734	45	130	817	163
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	3	4	5	2	5	5	5	6	8	4	2	4
Cap, veh/h	409	330	296	197	544	594	380	1264	621	151	855	555
Arrive On Green	0.12	0.37	0.37	0.04	0.30	0.30	0.22	0.37	0.37	0.09	0.24	0.24
Sat Flow, veh/h	1767	895	802	1781	1826	1547	1739	3441	1508	1753	3554	1557
Grp Volume(v), veh/h	266	0	529	115	295	100	362	734	45	130	817	163
Grp Sat Flow(s),veh/h/ln	1767	0	1696	1781	1826	1547	1739	1721	1508	1753	1777	1557
Q Serve(g_s), s	16.0	0.0	45.0	7.0	21.3	6.7	32.3	27.0	2.8	11.5	35.6	11.8
Cycle Q Clear(g_c), s	16.0	0.0	45.0	7.0	21.3	6.7	32.3	27.0	2.8	11.5	35.6	11.8
Prop In Lane	1.00		0.47	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	409	0	626	197	544	594	380	1264	621	151	855	555
V/C Ratio(X)	0.65	0.00	0.85	0.58	0.54	0.17	0.95	0.58	0.07	0.86	0.96	0.29
Avail Cap(c_a), veh/h	486	0	626	197	544	594	409	1264	621	223	859	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	0.0	45.5	41.0	46.2	31.9	60.6	40.0	28.0	71.0	58.9	36.4
Incr Delay (d2), s/veh	1.3	0.0	13.2	2.9	3.8	0.6	30.5	0.7	0.0	14.2	20.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	20.9	3.3	10.2	2.6	17.2	11.4	1.0	5.7	18.1	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.2	0.0	58.8	43.9	50.1	32.5	91.1	40.7	28.1	85.2	79.4	36.7
LnGrp LOS	C	A	E	D	D	C	F	D	C	F	E	D
Approach Vol, veh/h		795			510			1141			1110	
Approach Delay, s/veh		50.5			45.2			56.2			73.8	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	63.0	19.5	62.8	23.1	51.9	39.4	42.9
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	58.0	20.0	54.0	25.0	40.0	37.0	38.0
Max Q Clear Time (g_c+I1), s	9.0	47.0	13.5	29.0	18.0	23.3	34.3	37.6
Green Ext Time (p_c), s	0.0	1.7	0.0	5.0	0.1	1.1	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	58.9
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	24	38	0	20	52	1049	3	3	993	35
Future Vol, veh/h	9	0	24	38	0	20	52	1049	3	3	993	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	100	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	15	3	2	6	9	2	2	67	3	7
Mvmt Flow	10	0	26	42	0	22	57	1153	3	3	1091	38

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1807	2386	565	1819	2402	577	1129	0	0	1156	0	0
Stage 1	1116	1116	-	1267	1267	-	-	-	-	-	-	-
Stage 2	691	1270	-	552	1135	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	7.2	7.56	6.54	7.02	4.28	-	-	5.44	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.45	3.53	4.02	3.36	2.29	-	-	2.87	-	-
Pot Cap-1 Maneuver	50	34	437	48	33	450	576	-	-	335	-	-
Stage 1	221	281	-	177	238	-	-	-	-	-	-	-
Stage 2	401	237	-	483	275	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	44	30	437	~ 41	29	450	576	-	-	335	-	-
Mov Cap-2 Maneuver	133	123	-	118	111	-	-	-	-	-	-	-
Stage 1	199	278	-	159	214	-	-	-	-	-	-	-
Stage 2	344	214	-	450	273	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.4	38.3	1	0
HCM LOS	C	E		

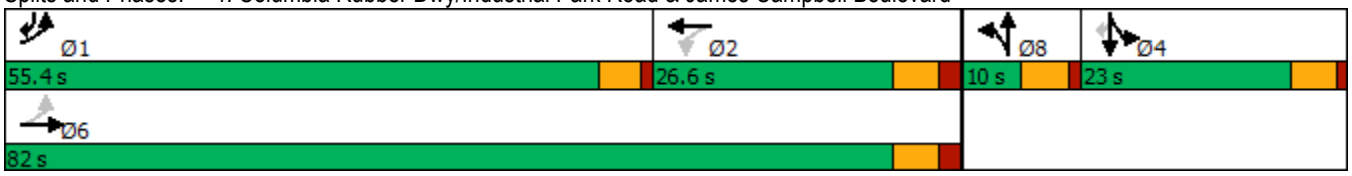
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	576	-	-	133	437	118	450	335	-	-
HCM Lane V/C Ratio	0.099	-	-	0.074	0.06	0.354	0.049	0.01	-	-
HCM Control Delay (s)	11.9	0.5	-	34.2	13.8	51.4	13.4	15.9	-	-
HCM Lane LOS	B	A	-	D	B	F	B	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.2	0.2	1.4	0.2	0	-	-

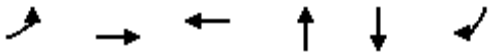
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	792	314	2	304	7	0	720
Future Volume (vph)	792	314	2	304	7	0	720
Turn Type	pm+pt	NA	Perm	NA	NA	NA	pm+ov
Protected Phases	1	6		2	8	4	1
Permitted Phases	6		2				4
Detector Phase	1	6	2	2	8	4	1
Switch Phase							
Minimum Initial (s)	5.0	15.0	15.0	15.0	5.0	5.0	5.0
Minimum Split (s)	9.5	21.0	21.0	21.0	10.0	10.0	9.5
Total Split (s)	55.4	82.0	26.6	26.6	10.0	23.0	55.4
Total Split (%)	48.2%	71.3%	23.1%	23.1%	8.7%	20.0%	48.2%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0	3.5
All-Red Time (s)	1.0	2.0	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0		6.0	5.0	5.0	4.5
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	Max	None	None	None
Act Effct Green (s)	77.7	76.2		22.6	5.0	18.0	72.1
Actuated g/C Ratio	0.71	0.70		0.21	0.05	0.17	0.66
v/c Ratio	0.93	0.14		0.61	0.27	0.97	0.40
Control Delay	35.2	6.1		42.9	56.0	56.7	4.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	35.2	6.1		42.9	56.0	56.7	4.6
LOS	D	A		D	E	E	A
Approach Delay		26.9		42.9	56.0	31.0	
Approach LOS		C		D	E	C	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 109	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 31.2	Intersection LOS: C
Intersection Capacity Utilization 89.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Columbia Rubber Dwy/Industrial Park Road & James Campbell Boulevard

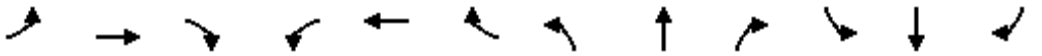




Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	870	348	420	20	430	419
v/c Ratio	0.93	0.14	0.61	0.27	0.97	0.40
Control Delay	35.2	6.1	42.9	56.0	56.7	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.2	6.1	42.9	56.0	56.7	4.6
Queue Length 50th (ft)	375	32	130	11	145	37
Queue Length 95th (ft)	#789	64	203	39	#390	109
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	955	2463	683	74	444	1078
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.14	0.61	0.27	0.97	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	792	314	3	2	304	76	8	7	3	53	0	720
Future Volume (veh/h)	792	314	3	2	304	76	8	7	3	53	0	720
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1411	1870	1841	1856	1870	1307	1870	1767	1870	1841
Adj Flow Rate, veh/h	870	345	2	2	334	64	9	8	0	0	0	529
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	33	2	4	3	2	40	2	9	2	4
Cap, veh/h	911	2547	15	34	845	159	12	11	0	0	244	1553
Arrive On Green	0.37	0.70	0.70	0.29	0.29	0.29	0.02	0.02	0.00	0.00	0.00	0.13
Sat Flow, veh/h	1767	3622	21	3	2872	541	674	599	0	0	1870	3120
Grp Volume(v), veh/h	870	169	178	213	0	187	17	0	0	0	0	529
Grp Sat Flow(s),veh/h/ln	1767	1777	1867	1838	0	1578	1273	0	0	0	1870	1560
Q Serve(g_s), s	34.8	3.4	3.4	0.0	0.0	10.2	1.4	0.0	0.0	0.0	0.0	11.1
Cycle Q Clear(g_c), s	34.8	3.4	3.4	10.0	0.0	10.2	1.4	0.0	0.0	0.0	0.0	11.1
Prop In Lane	1.00		0.01	0.01		0.34	0.53		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	911	1249	1312	574	0	464	24	0	0	0	244	1553
V/C Ratio(X)	0.96	0.14	0.14	0.37	0.00	0.40	0.72	0.00	0.00	0.00	0.00	0.34
Avail Cap(c_a), veh/h	1094	1249	1312	574	0	464	59	0	0	0	311	1665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	14.6	5.3	5.3	30.5	0.0	30.5	52.8	0.0	0.0	0.0	0.0	16.4
Incr Delay (d2), s/veh	16.0	0.2	0.2	1.8	0.0	2.6	33.8	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	1.1	1.1	4.6	0.0	4.1	0.7	0.0	0.0	0.0	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	5.5	5.5	32.3	0.0	33.1	86.5	0.0	0.0	0.0	0.0	16.5
LnGrp LOS	C	A	A	C	A	C	F	A	A	A	A	B
Approach Vol, veh/h		1217			400			17			529	
Approach Delay, s/veh		23.4			32.7			86.5			16.5	
Approach LOS		C			C			F			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	44.2	37.8		19.1		82.0		7.0				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	36.8	12.2		13.1		5.4		3.4				
Green Ext Time (p_c), s	2.9	1.3		1.0		1.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		23.9	
HCM 6th LOS		C	

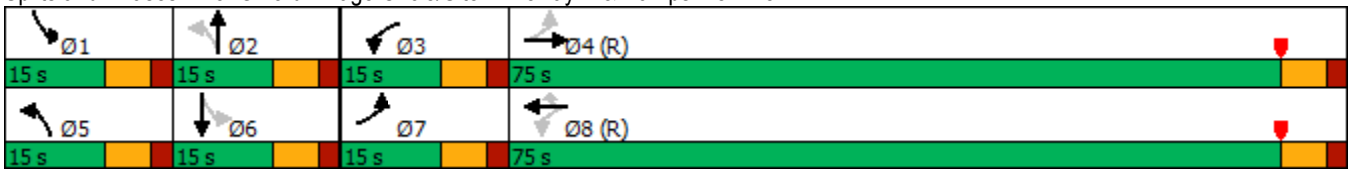
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	WBL	WBT	NBL	NBT	Ø1	Ø6	Ø7
Lane Configurations								
Traffic Volume (vph)	554	12	870	12	0			
Future Volume (vph)	554	12	870	12	0			
Turn Type	NA	pm+pt	NA	pm+pt	NA			
Protected Phases	4	3	8	5	2	1	6	7
Permitted Phases		8		2				
Detector Phase	4	3	8	5	2			
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	11.0	24.0	11.0	44.0	11.0	24.0	11.0
Total Split (s)	75.0	15.0	75.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	62.5%	12.5%	62.5%	12.5%	12.5%	13%	13%	13%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0			
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Max	None	C-Max	None	Max	None	Max	None
Act Effct Green (s)	88.8	93.6	93.6	14.4	14.4			
Actuated g/C Ratio	0.74	0.78	0.78	0.12	0.12			
v/c Ratio	0.46	0.02	0.66	0.09	0.02			
Control Delay	5.8	4.5	10.1	43.8	0.1			
Queue Delay	0.0	0.0	0.0	0.0	0.0			
Total Delay	5.8	4.5	10.1	43.8	0.1			
LOS	A	A	B	D	A			
Approach Delay	5.8		10.1		22.0			
Approach LOS	A		B		C			

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 103 (86%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 8.6	Intersection LOS: A
Intersection Capacity Utilization 60.0%	ICU Level of Service B
Analysis Period (min) 15	

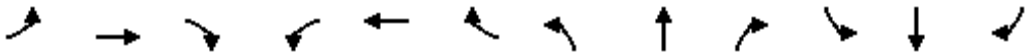
Splits and Phases: 5: Oxford Village Circle/Site Driveway A & Hampshire Pike





Lane Group	EBT	WBL	WBT	NBL	NBT
Lane Group Flow (vph)	615	13	946	13	13
v/c Ratio	0.46	0.02	0.66	0.09	0.02
Control Delay	5.8	4.5	10.1	43.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	5.8	4.5	10.1	43.8	0.1
Queue Length 50th (ft)	67	1	205	10	0
Queue Length 95th (ft)	117	8	557	27	0
Internal Link Dist (ft)	1470		2278		194
Turn Bay Length (ft)		100			
Base Capacity (vph)	1336	569	1425	170	583
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.46	0.02	0.66	0.08	0.02

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	554	12	12	870	0	12	0	12	0	0	0
Future Volume (veh/h)	0	554	12	12	870	0	12	0	12	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	602	13	13	946	0	13	0	13	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	5	2	2	4	2	2	2	2	2	2	2
Cap, veh/h	362	1239	27	648	1400	1205	192	0	221	167	140	0
Arrive On Green	0.00	1.00	1.00	0.01	0.76	0.00	0.01	0.00	0.14	0.00	0.00	0.00
Sat Flow, veh/h	1781	1781	38	1781	1841	1585	1781	0	1585	1781	1870	0
Grp Volume(v), veh/h	0	0	615	13	946	0	13	0	13	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1819	1781	1841	1585	1781	0	1585	1781	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	0.2	30.4	0.0	0.8	0.0	0.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.2	30.4	0.0	0.8	0.0	0.9	0.0	0.0	0.0
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	362	0	1265	648	1400	1205	192	0	221	167	140	0
V/C Ratio(X)	0.00	0.00	0.49	0.02	0.68	0.00	0.07	0.00	0.06	0.00	0.00	0.00
Avail Cap(c_a), veh/h	494	0	1265	755	1400	1205	300	0	221	299	140	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.83	0.70	0.70	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.5	7.1	0.0	48.3	0.0	44.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.1	0.0	1.9	0.0	0.1	0.0	0.5	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.4	0.1	10.7	0.0	0.4	0.0	0.4	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	1.1	4.5	8.9	0.0	48.4	0.0	45.3	0.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	D	A	A	A
Approach Vol, veh/h		615			959			26			0	
Approach Delay, s/veh		1.1			8.9			46.9			0.0	
Approach LOS		A			A			D				

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	22.8	7.8	89.5	7.8	15.0	0.0	97.2
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	9.0	9.0	69.0	9.0	9.0	9.0	69.0
Max Q Clear Time (g_c+I1), s	0.0	2.9	2.2	2.0	2.8	0.0	0.0	32.4
Green Ext Time (p_c), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	9.6

Intersection Summary	
HCM 6th Ctrl Delay	6.5
HCM 6th LOS	A

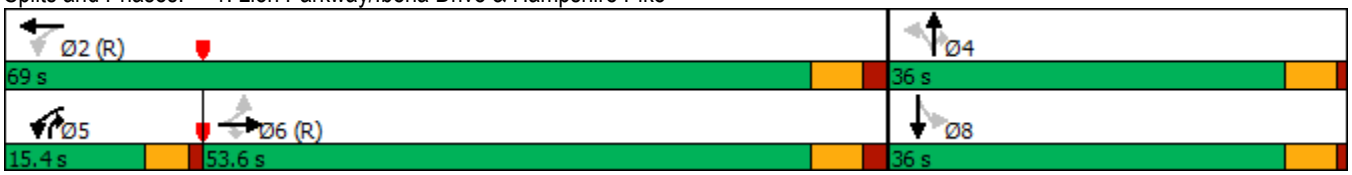
Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	1	599	486	204	505	265	2	173	11	8
Future Volume (vph)	1	599	486	204	505	265	2	173	11	8
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA	pm+ov	Perm	NA
Protected Phases		6		5	2		4	5		8
Permitted Phases	6		6	2		4		4	8	
Detector Phase	6	6	6	5	2	4	4	5	8	8
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	9.5	21.0	10.0	10.0	9.5	10.0	10.0
Total Split (s)	53.6	53.6	53.6	15.4	69.0	36.0	36.0	15.4	36.0	36.0
Total Split (%)	51.0%	51.0%	51.0%	14.7%	65.7%	34.3%	34.3%	14.7%	34.3%	34.3%
Yellow Time (s)	4.0	4.0	4.0	3.5	4.0	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0		5.0	4.5		5.0
Lead/Lag	Lag	Lag	Lag	Lead				Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes		
Recall Mode	C-Max	C-Max	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	52.9	52.9	52.9	68.0	66.5		27.5	41.6		27.5
Actuated g/C Ratio	0.50	0.50	0.50	0.65	0.63		0.26	0.40		0.26
v/c Ratio	0.00	0.72	0.50	0.62	0.48		0.90	0.29		0.07
Control Delay	16.0	27.4	3.4	15.9	12.7		67.9	5.4		21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	16.0	27.4	3.4	15.9	12.7		67.9	5.4		21.4
LOS	B	C	A	B	B		E	A		C
Approach Delay		16.6			13.6		43.3			21.4
Approach LOS		B			B		D			C

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 20.9	Intersection LOS: C
Intersection Capacity Utilization 77.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Lion Parkway/Iberia Drive & Hampshire Pike

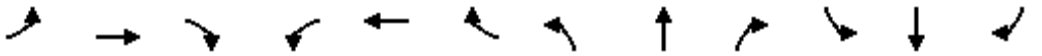




Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1	658	534	224	555	293	190	30
v/c Ratio	0.00	0.72	0.50	0.62	0.48	0.90	0.29	0.07
Control Delay	16.0	27.4	3.4	15.9	12.7	67.9	5.4	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	27.4	3.4	15.9	12.7	67.9	5.4	21.4
Queue Length 50th (ft)	0	353	0	60	195	184	11	10
Queue Length 95th (ft)	4	526	58	98	288	#321	51	33
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	427	919	1062	387	1146	366	670	460
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.72	0.50	0.58	0.48	0.80	0.28	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	599	486	204	505	0	265	2	173	11	8	8
Future Volume (veh/h)	1	599	486	204	505	0	265	2	173	11	8	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1841	1826	1870	1781	1870	1663	1870	1870	1870
Adj Flow Rate, veh/h	1	658	243	224	555	0	291	2	75	12	9	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	4	2	4	5	2	8	2	16	2	2	2
Cap, veh/h	432	876	754	323	1096	0	372	2	531	64	36	2
Arrive On Green	0.48	0.48	0.48	0.08	0.60	0.00	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	854	1841	1585	1753	1826	0	1030	7	1409	37	123	8
Grp Volume(v), veh/h	1	658	243	224	555	0	293	0	75	22	0	0
Grp Sat Flow(s),veh/h/ln	854	1841	1585	1753	1826	0	1037	0	1409	167	0	0
Q Serve(g_s), s	0.1	30.6	10.0	6.5	18.3	0.0	0.0	0.0	3.7	0.4	0.0	0.0
Cycle Q Clear(g_c), s	5.4	30.6	10.0	6.5	18.3	0.0	29.6	0.0	3.7	30.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.55		0.05
Lane Grp Cap(c), veh/h	432	876	754	323	1096	0	374	0	531	102	0	0
V/C Ratio(X)	0.00	0.75	0.32	0.69	0.51	0.00	0.78	0.00	0.14	0.22	0.00	0.00
Avail Cap(c_a), veh/h	432	876	754	362	1096	0	374	0	531	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.70	0.70	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.4	22.5	17.0	18.8	12.1	0.0	36.5	0.0	21.5	30.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.9	1.1	2.6	1.2	0.0	9.5	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.7	3.7	2.5	7.0	0.0	8.3	0.0	1.2	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.4	28.4	18.2	21.4	13.2	0.0	46.0	0.0	21.6	30.6	0.0	0.0
LnGrp LOS	B	C	B	C	B	A	D	A	C	C	A	A
Approach Vol, veh/h		902			779			368			22	
Approach Delay, s/veh		25.6			15.6			41.0			30.6	
Approach LOS		C			B			D			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		69.0		36.0	13.1	55.9		36.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		63.0		31.0	10.9	47.6		31.0				
Max Q Clear Time (g_c+I1), s		20.3		31.6	8.5	32.6		32.0				
Green Ext Time (p_c), s		8.1		0.0	0.1	7.9		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	24.6	
HCM 6th LOS	C	

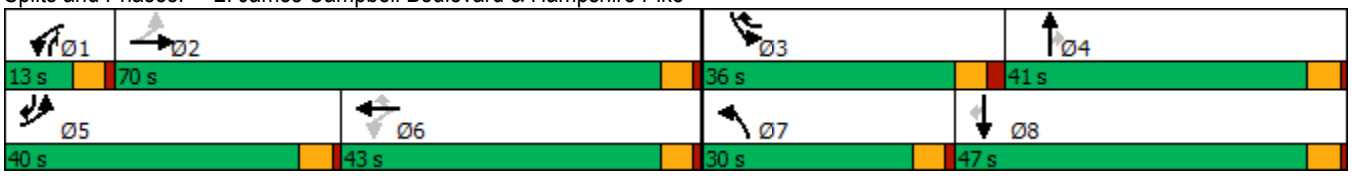
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	321	296	104	240	112	220	495	108	241	768	246
Future Volume (vph)	321	296	104	240	112	220	495	108	241	768	246
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	1	6	3	7	4	1	3	8	5
Permitted Phases	2		6		6			4			8
Detector Phase	5	2	1	6	3	7	4	1	3	8	5
Switch Phase											
Minimum Initial (s)	6.0	5.0	4.0	5.0	4.0	4.0	8.0	4.0	4.0	8.0	6.0
Minimum Split (s)	11.0	10.0	9.0	10.0	10.0	9.0	13.0	9.0	10.0	13.0	11.0
Total Split (s)	40.0	70.0	13.0	43.0	36.0	30.0	41.0	13.0	36.0	47.0	40.0
Total Split (%)	25.0%	43.8%	8.1%	26.9%	22.5%	18.8%	25.6%	8.1%	22.5%	29.4%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	6.0	5.0	5.0	5.0	6.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	None	None	None	None	None	None	None
Act Effct Green (s)	77.8	65.0	54.6	46.8	78.9	23.9	37.0	49.8	27.1	41.1	72.2
Actuated g/C Ratio	0.49	0.41	0.35	0.30	0.50	0.15	0.23	0.32	0.17	0.26	0.46
v/c Ratio	0.73	0.93	0.74	0.50	0.16	0.94	0.72	0.23	0.91	0.95	0.34
Control Delay	36.0	62.3	55.9	52.0	6.5	107.5	62.5	16.0	97.8	78.0	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	62.3	55.9	52.0	6.5	107.5	62.5	16.0	97.8	78.0	8.3
LOS	D	E	E	D	A	F	E	B	F	E	A
Approach Delay		53.0		41.7			68.4			68.1	
Approach LOS		D		D			E			E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 157.9	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 60.7	Intersection LOS: E
Intersection Capacity Utilization 89.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: James Campbell Boulevard & Hampshire Pike

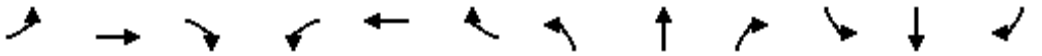




Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	361	660	117	270	126	247	556	121	271	863	276
v/c Ratio	0.73	0.93	0.74	0.50	0.16	0.94	0.72	0.23	0.91	0.95	0.34
Control Delay	36.0	62.3	55.9	52.0	6.5	107.5	62.5	16.0	97.8	78.0	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	62.3	55.9	52.0	6.5	107.5	62.5	16.0	97.8	78.0	8.3
Queue Length 50th (ft)	243	633	66	236	11	258	288	29	277	470	47
Queue Length 95th (ft)	327	#874	#163	354	51	#419	355	81	#417	#588	97
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	552	711	160	541	810	275	769	534	329	923	885
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.93	0.73	0.50	0.16	0.90	0.72	0.23	0.82	0.93	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	321	296	291	104	240	112	220	495	108	241	768	246
Future Volume (veh/h)	321	296	291	104	240	112	220	495	108	241	768	246
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1856	1796	1796	1841	1752	1841	1752	1796	1841	1841	1826
Adj Flow Rate, veh/h	361	333	302	117	270	64	247	556	55	271	863	149
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	3	7	7	4	10	4	10	7	4	4	5
Cap, veh/h	498	368	334	179	563	700	266	801	443	291	912	644
Arrive On Green	0.16	0.41	0.41	0.05	0.31	0.31	0.15	0.24	0.24	0.17	0.26	0.26
Sat Flow, veh/h	1711	896	813	1711	1841	1485	1753	3328	1522	1753	3497	1547
Grp Volume(v), veh/h	361	0	635	117	270	64	247	556	55	271	863	149
Grp Sat Flow(s),veh/h/ln	1711	0	1709	1711	1841	1485	1753	1664	1522	1753	1749	1547
Q Serve(g_s), s	22.3	0.0	55.2	7.5	18.9	3.8	22.0	24.1	4.2	24.2	38.3	9.9
Cycle Q Clear(g_c), s	22.3	0.0	55.2	7.5	18.9	3.8	22.0	24.1	4.2	24.2	38.3	9.9
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	498	0	702	179	563	700	266	801	443	291	912	644
V/C Ratio(X)	0.72	0.00	0.91	0.65	0.48	0.09	0.93	0.69	0.12	0.93	0.95	0.23
Avail Cap(c_a), veh/h	611	0	702	179	563	700	277	801	443	332	928	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	0.0	43.8	40.8	44.7	23.1	66.3	54.8	41.3	65.2	57.4	29.9
Incr Delay (d2), s/veh	2.3	0.0	17.4	6.6	2.9	0.3	34.0	2.6	0.1	29.0	17.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	0.0	26.2	3.5	9.1	1.4	12.2	10.2	1.6	13.0	18.8	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	0.0	61.2	47.4	47.6	23.4	100.3	57.4	41.4	94.2	75.2	30.1
LnGrp LOS	C	A	E	D	D	C	F	E	D	F	E	C
Approach Vol, veh/h		996			451			858			1283	
Approach Delay, s/veh		50.7			44.1			68.7			74.0	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	70.0	32.3	43.1	29.6	53.4	29.1	46.3
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	65.0	30.0	36.0	35.0	38.0	25.0	42.0
Max Q Clear Time (g_c+I1), s	9.5	57.2	26.2	26.1	24.3	20.9	24.0	40.3
Green Ext Time (p_c), s	0.0	1.8	0.1	2.5	0.3	0.9	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	62.5
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	9.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	91	0	123	10	0	4	23	853	39	23	1265	38
Future Vol, veh/h	91	0	123	10	0	4	23	853	39	23	1265	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	100	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	13	2	11	2	2	2	32	12	2	5	4	11
Mvmt Flow	100	0	135	11	0	4	25	937	43	25	1390	42

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1980	2491	716	1732	2469	469	1432	0	0	980	0	0
Stage 1	1461	1461	-	987	987	-	-	-	-	-	-	-
Stage 2	519	1030	-	745	1482	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.54	7.12	7.54	6.54	6.94	4.74	-	-	4.2	-	-
Critical Hdwy Stg 1	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.02	3.41	3.52	4.02	3.32	2.52	-	-	2.25	-	-
Pot Cap-1 Maneuver	~ 32	29	353	56	30	541	343	-	-	682	-	-
Stage 1	122	192	-	265	324	-	-	-	-	-	-	-
Stage 2	481	309	-	372	187	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 29	26	353	32	27	541	343	-	-	682	-	-
Mov Cap-2 Maneuver	~ 89	110	-	114	104	-	-	-	-	-	-	-
Stage 1	113	185	-	246	300	-	-	-	-	-	-	-
Stage 2	442	286	-	221	180	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	105.4	31.8	1	0.2
HCM LOS	F	D		

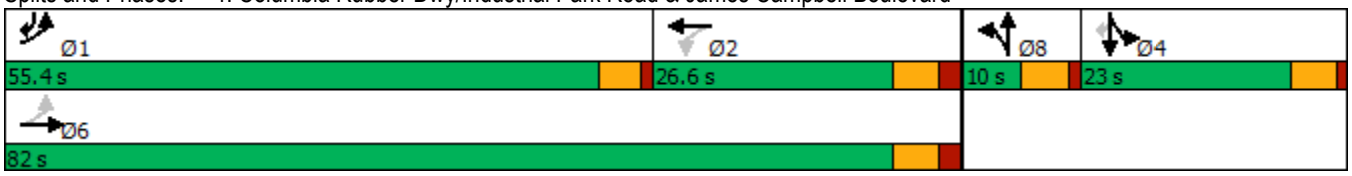
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	343	-	-	89	353	114	541	682	-	-
HCM Lane V/C Ratio	0.074	-	-	1.124	0.383	0.096	0.008	0.037	-	-
HCM Control Delay (s)	16.3	0.6	-	218.9	21.4	39.9	11.7	10.5	-	-
HCM Lane LOS	C	A	-	F	C	E	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	6.8	1.7	0.3	0	0.1	-	-

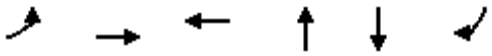
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	646	290	296	7	7	1033
Future Volume (vph)	646	290	296	7	7	1033
Turn Type	pm+pt	NA	NA	NA	NA	pm+ov
Protected Phases	1	6	2	8	4	1
Permitted Phases	6					4
Detector Phase	1	6	2	8	4	1
Switch Phase						
Minimum Initial (s)	5.0	15.0	15.0	5.0	5.0	5.0
Minimum Split (s)	9.5	21.0	21.0	10.0	10.0	9.5
Total Split (s)	55.4	82.0	26.6	10.0	23.0	55.4
Total Split (%)	48.2%	71.3%	23.1%	8.7%	20.0%	48.2%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	3.5
All-Red Time (s)	1.0	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	5.0	5.0	4.5
Lead/Lag	Lead		Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	None	None
Act Effct Green (s)	77.6	76.1	26.8	5.0	18.0	67.8
Actuated g/C Ratio	0.73	0.71	0.25	0.05	0.17	0.63
v/c Ratio	0.89	0.15	0.49	0.17	1.87	0.65
Control Delay	27.4	5.4	37.6	54.0	423.1	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	5.4	37.6	54.0	423.1	9.7
LOS	C	A	D	D	F	A
Approach Delay		20.4	37.6	54.0	217.0	
Approach LOS		C	D	D	F	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 107	
Natural Cycle: 140	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.87	
Intersection Signal Delay: 115.5	Intersection LOS: F
Intersection Capacity Utilization 97.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 4: Columbia Rubber Dwy/Industrial Park Road & James Campbell Boulevard



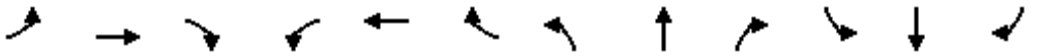


Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	751	350	406	11	677	673
v/c Ratio	0.89	0.15	0.49	0.17	1.87	0.65
Control Delay	27.4	5.4	37.6	54.0	423.1	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	5.4	37.6	54.0	423.1	9.7
Queue Length 50th (ft)	273	32	126	7	~653	117
Queue Length 95th (ft)	#578	61	187	26	#916	257
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	900	2342	836	64	363	1102
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.15	0.49	0.17	1.87	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	646	290	11	0	296	53	2	7	1	121	7	1033
Future Volume (veh/h)	646	290	11	0	296	53	2	7	1	121	7	1033
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1767	1737	1870	1811	1693	1159	1307	1870	1811	1307	1841
Adj Flow Rate, veh/h	751	337	11	0	344	48	2	8	0	0	0	1092
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	14	9	11	2	6	14	50	40	2	6	40	4
Cap, veh/h	801	2265	74	0	927	128	3	12	0	0	211	1555
Arrive On Green	0.34	0.68	0.68	0.00	0.31	0.31	0.01	0.01	0.00	0.00	0.00	0.16
Sat Flow, veh/h	1612	3317	108	0	3127	420	259	1035	0	0	1307	3120
Grp Volume(v), veh/h	751	170	178	0	194	198	10	0	0	0	0	1092
Grp Sat Flow(s),veh/h/ln	1612	1678	1747	0	1721	1735	1294	0	0	0	1307	1560
Q Serve(g_s), s	33.0	4.0	4.0	0.0	9.8	10.0	0.9	0.0	0.0	0.0	0.0	18.0
Cycle Q Clear(g_c), s	33.0	4.0	4.0	0.0	9.8	10.0	0.9	0.0	0.0	0.0	0.0	18.0
Prop In Lane	1.00		0.06	0.00		0.24	0.20		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	801	1146	1193	0	526	530	15	0	0	0	211	1555
V/C Ratio(X)	0.94	0.15	0.15	0.00	0.37	0.37	0.65	0.00	0.00	0.00	0.00	0.70
Avail Cap(c_a), veh/h	995	1146	1193	0	526	530	58	0	0	0	211	1555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	14.8	6.2	6.2	0.0	30.3	30.3	54.8	0.0	0.0	0.0	0.0	21.5
Incr Delay (d2), s/veh	13.8	0.3	0.3	0.0	2.0	2.0	37.3	0.0	0.0	0.0	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	1.3	1.3	0.0	4.2	4.3	0.4	0.0	0.0	0.0	0.0	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	6.5	6.5	0.0	32.2	32.3	92.1	0.0	0.0	0.0	0.0	23.0
LnGrp LOS	C	A	A	A	C	C	F	A	A	A	A	C
Approach Vol, veh/h		1099			392			10			1092	
Approach Delay, s/veh		21.6			32.3			92.1			23.0	
Approach LOS		C			C			F			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	42.0	40.0		23.0		82.0		6.3				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	35.0	12.0		20.0		6.0		2.9				
Green Ext Time (p_c), s	2.5	1.3		0.0		1.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		24.1	
HCM 6th LOS		C	

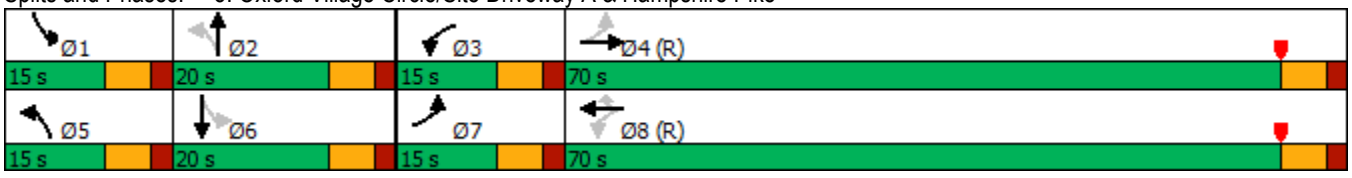
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	19	765	12	684	55	12	0	130	0
Future Volume (vph)	19	765	12	684	55	12	0	130	0
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	15.0	70.0	15.0	70.0	70.0	15.0	20.0	15.0	20.0
Total Split (%)	12.5%	58.3%	12.5%	58.3%	58.3%	12.5%	16.7%	12.5%	16.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	C-Max	None	Max	None	Max
Act Effct Green (s)	76.8	74.2	76.5	74.1	74.1	20.2	14.0	27.3	23.7
Actuated g/C Ratio	0.64	0.62	0.64	0.62	0.62	0.17	0.12	0.23	0.20
v/c Ratio	0.07	0.78	0.06	0.67	0.06	0.05	0.03	0.49	0.04
Control Delay	7.7	24.7	7.8	20.3	0.1	35.7	0.2	44.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	24.7	7.8	20.3	0.1	35.7	0.2	44.7	0.1
LOS	A	C	A	C	A	D	A	D	A
Approach Delay		24.3		18.6			17.9		37.6
Approach LOS		C		B			B		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 103 (86%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 22.9	Intersection LOS: C
Intersection Capacity Utilization 64.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: Oxford Village Circle/Site Driveway A & Hampshire Pike

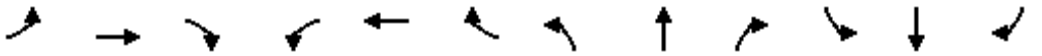




Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	21	854	13	752	60	13	13	143	27
v/c Ratio	0.07	0.78	0.06	0.67	0.06	0.05	0.03	0.49	0.04
Control Delay	7.7	24.7	7.8	20.3	0.1	35.7	0.2	44.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	24.7	7.8	20.3	0.1	35.7	0.2	44.7	0.1
Queue Length 50th (ft)	5	400	3	313	0	8	0	92	0
Queue Length 95th (ft)	14	#826	10	592	0	25	0	153	0
Internal Link Dist (ft)		1470		2278			194		449
Turn Bay Length (ft)	100		100		125				
Base Capacity (vph)	343	1096	271	1117	1029	293	413	291	603
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.78	0.05	0.67	0.06	0.04	0.03	0.49	0.04

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	765	12	12	684	55	12	0	12	130	0	25
Future Volume (veh/h)	19	765	12	12	684	55	12	0	12	130	0	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1870	1870	1826	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	841	13	13	752	60	13	0	13	143	0	27
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	7	2	2	5	2	2	2	2	2	2	2
Cap, veh/h	298	1047	16	231	1072	931	247	0	185	347	0	281
Arrive On Green	0.02	0.59	0.59	0.01	0.59	0.59	0.01	0.00	0.12	0.08	0.00	0.18
Sat Flow, veh/h	1781	1764	27	1781	1826	1585	1781	0	1585	1781	0	1585
Grp Volume(v), veh/h	21	0	854	13	752	60	13	0	13	143	0	27
Grp Sat Flow(s),veh/h/ln	1781	0	1791	1781	1826	1585	1781	0	1585	1781	0	1585
Q Serve(g_s), s	0.6	0.0	44.4	0.4	34.7	1.9	0.8	0.0	0.9	8.3	0.0	1.7
Cycle Q Clear(g_c), s	0.6	0.0	44.4	0.4	34.7	1.9	0.8	0.0	0.9	8.3	0.0	1.7
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	298	0	1063	231	1072	931	247	0	185	347	0	281
V/C Ratio(X)	0.07	0.00	0.80	0.06	0.70	0.06	0.05	0.00	0.07	0.41	0.00	0.10
Avail Cap(c_a), veh/h	394	0	1063	338	1072	931	355	0	185	347	0	281
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.00	0.75	0.79	0.79	0.79	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.5	0.0	18.9	17.7	17.4	10.6	45.6	0.0	47.2	40.9	0.0	41.3
Incr Delay (d2), s/veh	0.1	0.0	4.9	0.1	3.0	0.1	0.1	0.0	0.7	0.8	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	18.1	0.1	14.3	0.7	0.3	0.0	0.4	3.7	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.6	0.0	23.8	17.8	20.4	10.7	45.7	0.0	47.9	41.7	0.0	42.0
LnGrp LOS	B	A	C	B	C	B	D	A	D	D	A	D
Approach Vol, veh/h		875			825			26			170	
Approach Delay, s/veh		23.6			19.7			46.8			41.8	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	20.0	7.8	77.2	7.8	27.2	8.5	76.5
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	14.0	9.0	64.0	9.0	14.0	9.0	64.0
Max Q Clear Time (g_c+I1), s	10.3	2.9	2.4	46.4	2.8	3.7	2.6	36.7
Green Ext Time (p_c), s	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.7

Intersection Summary	
HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

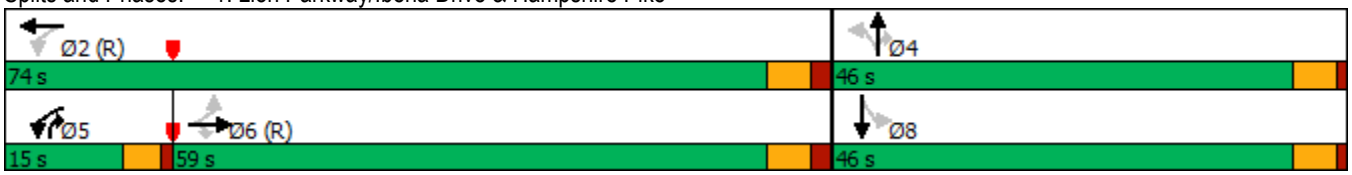
Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	4	525	385	64	822	362	3	51	1	2
Future Volume (vph)	4	525	385	64	822	362	3	51	1	2
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA	pm+ov	Perm	NA
Protected Phases		6		5	2		4	5		8
Permitted Phases	6		6	2		4		4	8	
Detector Phase	6	6	6	5	2	4	4	5	8	8
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	9.5	21.0	10.0	10.0	9.5	10.0	10.0
Total Split (s)	59.0	59.0	59.0	15.0	74.0	46.0	46.0	15.0	46.0	46.0
Total Split (%)	49.2%	49.2%	49.2%	12.5%	61.7%	38.3%	38.3%	12.5%	38.3%	38.3%
Yellow Time (s)	4.0	4.0	4.0	3.5	4.0	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0		5.0	4.5		5.0
Lead/Lag	Lag	Lag	Lag	Lead				Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes		
Recall Mode	C-Max	C-Max	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	62.4	62.4	62.4	72.7	71.2		37.8	49.0		37.8
Actuated g/C Ratio	0.52	0.52	0.52	0.61	0.59		0.32	0.41		0.32
v/c Ratio	0.03	0.61	0.41	0.19	0.83		0.93	0.08		0.01
Control Delay	18.5	25.6	3.1	17.8	30.0		69.1	5.3		23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	18.5	25.6	3.1	17.8	30.0		69.1	5.3		23.8
LOS	B	C	A	B	C		E	A		C
Approach Delay		16.1			29.1		61.4			23.8
Approach LOS		B			C		E			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 30 (25%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 29.8	Intersection LOS: C
Intersection Capacity Utilization 89.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: Lion Parkway/Iberia Drive & Hampshire Pike

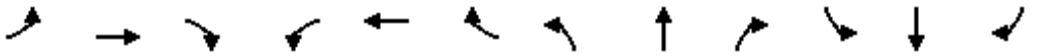




Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	4	571	418	70	895	396	55	4
v/c Ratio	0.03	0.61	0.41	0.19	0.83	0.93	0.08	0.01
Control Delay	18.5	25.6	3.1	17.8	30.0	69.1	5.3	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	25.6	3.1	17.8	30.0	69.1	5.3	23.8
Queue Length 50th (ft)	2	328	0	33	445	284	0	2
Queue Length 95th (ft)	9	471	55	m47	#587	#463	24	10
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	123	941	1023	420	1083	461	734	585
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.61	0.41	0.17	0.83	0.86	0.07	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	525	385	64	822	2	362	3	51	1	2	1
Future Volume (veh/h)	4	525	385	64	822	2	362	3	51	1	2	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1530	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	571	196	70	893	2	393	3	17	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	25	5	2	2	4	2	2	2	2	2	2	2
Cap, veh/h	176	898	779	309	1040	2	274	2	601	40	62	0
Arrive On Green	0.49	0.49	0.49	0.05	0.75	0.75	0.34	0.34	0.34	0.34	0.34	0.00
Sat Flow, veh/h	508	1826	1585	1781	1836	4	628	5	1585	0	182	0
Grp Volume(v), veh/h	4	571	196	70	0	895	396	0	17	3	0	0
Grp Sat Flow(s),veh/h/ln	508	1826	1585	1781	0	1840	633	0	1585	182	0	0
Q Serve(g_s), s	0.7	27.8	8.6	2.2	0.0	40.7	0.0	0.0	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	32.4	27.8	8.6	2.2	0.0	40.7	41.0	0.0	0.8	41.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.33		0.00
Lane Grp Cap(c), veh/h	176	898	779	309	0	1043	276	0	601	102	0	0
V/C Ratio(X)	0.02	0.64	0.25	0.23	0.00	0.86	1.43	0.00	0.03	0.03	0.00	0.00
Avail Cap(c_a), veh/h	176	898	779	398	0	1043	276	0	601	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.55	0.00	0.55	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.1	22.6	17.7	16.8	0.0	11.4	43.9	0.0	23.4	31.8	0.0	0.0
Incr Delay (d2), s/veh	0.2	3.4	0.8	0.1	0.0	5.3	215.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	12.2	3.2	0.9	0.0	11.1	25.0	0.0	0.3	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	26.0	18.5	16.8	0.0	16.7	259.2	0.0	23.4	31.8	0.0	0.0
LnGrp LOS	D	C	B	B	A	B	F	A	C	C	A	A
Approach Vol, veh/h		771			965			413			3	
Approach Delay, s/veh		24.1			16.7			249.5			31.8	
Approach LOS		C			B			F			C	

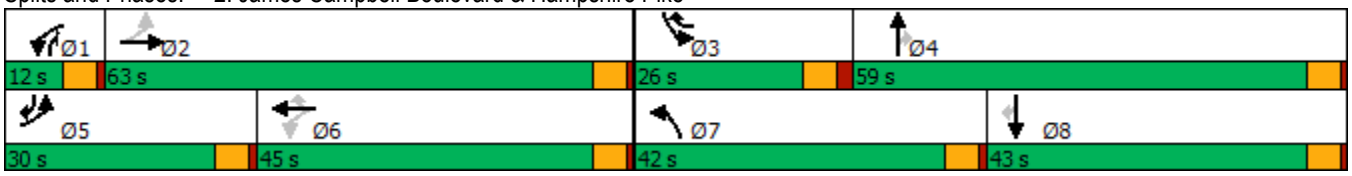
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		74.0		46.0	9.0	65.0		46.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		68.0		41.0	10.5	53.0		41.0				
Max Q Clear Time (g_c+I1), s		42.7		43.0	4.2	34.4		43.0				
Green Ext Time (p_c), s		13.1		0.0	0.0	7.6		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			64.1									
HCM 6th LOS			E									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	277	260	100	280	162	337	639	92	113	711	340
Future Volume (vph)	277	260	100	280	162	337	639	92	113	711	340
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	1	6	3	7	4	1	3	8	5
Permitted Phases	2		6		6			4			8
Detector Phase	5	2	1	6	3	7	4	1	3	8	5
Switch Phase											
Minimum Initial (s)	6.0	5.0	4.0	5.0	4.0	4.0	8.0	4.0	4.0	8.0	6.0
Minimum Split (s)	11.0	10.0	9.0	10.0	10.0	9.0	13.0	9.0	10.0	13.0	11.0
Total Split (s)	30.0	63.0	12.0	45.0	26.0	42.0	59.0	12.0	26.0	43.0	30.0
Total Split (%)	18.8%	39.4%	7.5%	28.1%	16.3%	26.3%	36.9%	7.5%	16.3%	26.9%	18.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	6.0	5.0	5.0	5.0	6.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	None	None	None	None	None	None	None
Act Effct Green (s)	70.0	58.0	49.4	42.4	62.8	36.8	58.4	65.4	15.4	38.0	65.6
Actuated g/C Ratio	0.44	0.36	0.31	0.27	0.39	0.23	0.37	0.41	0.10	0.24	0.41
v/c Ratio	0.82	0.93	0.79	0.67	0.28	0.98	0.59	0.16	0.78	0.97	0.53
Control Delay	48.8	68.6	67.5	61.2	13.3	100.6	44.0	8.0	99.4	84.5	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	68.6	67.5	61.2	13.3	100.6	44.0	8.0	99.4	84.5	22.0
LOS	D	E	E	E	B	F	D	A	F	F	C
Approach Delay		61.7		48.1			58.8			67.7	
Approach LOS		E		D			E			E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 159.8	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 60.7	Intersection LOS: E
Intersection Capacity Utilization 89.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: James Campbell Boulevard & Hampshire Pike

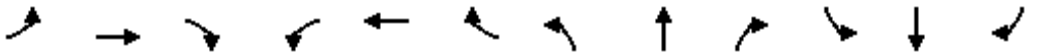




Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	318	590	115	322	186	387	734	106	130	817	391
v/c Ratio	0.82	0.93	0.79	0.67	0.28	0.98	0.59	0.16	0.78	0.97	0.53
Control Delay	48.8	68.6	67.5	61.2	13.3	100.6	44.0	8.0	99.4	84.5	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	68.6	67.5	61.2	13.3	100.6	44.0	8.0	99.4	84.5	22.0
Queue Length 50th (ft)	227	569	72	309	47	406	327	10	135	450	171
Queue Length 95th (ft)	301	#764	#148	409	96	#590	396	47	200	#553	255
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	409	633	146	480	716	398	1244	653	217	841	756
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.93	0.79	0.67	0.26	0.97	0.59	0.16	0.60	0.97	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	277	260	253	100	280	162	337	639	92	113	711	340
Future Volume (veh/h)	277	260	253	100	280	162	337	639	92	113	711	340
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1841	1826	1870	1826	1826	1826	1811	1781	1841	1870	1841
Adj Flow Rate, veh/h	318	299	266	115	322	101	387	734	45	130	817	273
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	3	4	5	2	5	5	5	6	8	4	2	4
Cap, veh/h	397	326	290	160	485	544	402	1296	634	150	844	589
Arrive On Green	0.14	0.36	0.36	0.04	0.27	0.27	0.23	0.38	0.38	0.09	0.24	0.24
Sat Flow, veh/h	1767	898	799	1781	1826	1547	1739	3441	1508	1753	3554	1557
Grp Volume(v), veh/h	318	0	565	115	322	101	387	734	45	130	817	273
Grp Sat Flow(s),veh/h/ln	1767	0	1697	1781	1826	1547	1739	1721	1508	1753	1777	1557
Q Serve(g_s), s	20.4	0.0	50.9	7.0	25.2	7.2	35.2	27.0	2.9	11.7	36.4	21.2
Cycle Q Clear(g_c), s	20.4	0.0	50.9	7.0	25.2	7.2	35.2	27.0	2.9	11.7	36.4	21.2
Prop In Lane	1.00		0.47	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	397	0	615	160	485	544	402	1296	634	150	844	589
V/C Ratio(X)	0.80	0.00	0.92	0.72	0.66	0.19	0.96	0.57	0.07	0.86	0.97	0.46
Avail Cap(c_a), veh/h	425	0	615	160	485	544	402	1296	634	219	844	589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	48.7	47.7	52.4	36.0	60.8	39.5	27.7	72.2	60.4	37.5
Incr Delay (d2), s/veh	8.9	0.0	21.0	12.4	7.0	0.8	34.8	0.6	0.0	15.4	23.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.0	24.7	3.9	12.4	2.8	19.1	11.4	1.0	5.8	18.8	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	0.0	69.7	60.1	59.4	36.8	95.7	40.1	27.7	87.6	83.8	38.1
LnGrp LOS	D	A	E	E	E	D	F	D	C	F	F	D
Approach Vol, veh/h		883			538			1166			1220	
Approach Delay, s/veh		60.9			55.3			58.0			74.0	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	63.0	19.7	65.3	27.5	47.5	42.0	43.0
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	58.0	20.0	54.0	25.0	40.0	37.0	38.0
Max Q Clear Time (g_c+I1), s	9.0	52.9	13.7	29.0	22.4	27.2	37.2	38.4
Green Ext Time (p_c), s	0.0	1.2	0.0	5.0	0.1	1.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	63.4
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	0	24	38	0	20	52	1095	3	3	1069	110
Future Vol, veh/h	53	0	24	38	0	20	52	1095	3	3	1069	110
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	100	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	15	3	2	6	9	2	2	67	3	7
Mvmt Flow	58	0	26	42	0	22	57	1203	3	3	1175	121

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1958	2562	648	1911	2619	602	1296	0	0	1206	0	0
Stage 1	1242	1242	-	1317	1317	-	-	-	-	-	-	-
Stage 2	716	1320	-	594	1302	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	7.2	7.56	6.54	7.02	4.28	-	-	5.44	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.45	3.53	4.02	3.36	2.29	-	-	2.87	-	-
Pot Cap-1 Maneuver	~ 38	26	383	~ 41	24	433	494	-	-	316	-	-
Stage 1	185	245	-	165	225	-	-	-	-	-	-	-
Stage 2	387	225	-	456	229	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 33	23	383	~ 35	21	433	494	-	-	316	-	-
Mov Cap-2 Maneuver	112	109	-	108	93	-	-	-	-	-	-	-
Stage 1	164	243	-	146	199	-	-	-	-	-	-	-
Stage 2	325	199	-	421	227	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	51.3	42.8	1.3	0
HCM LOS	F	E		

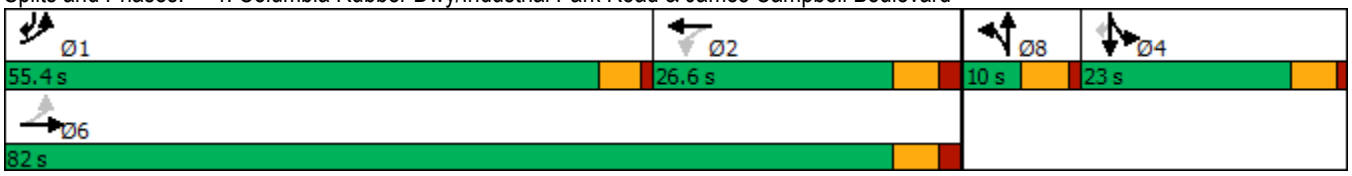
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	494	-	-	112	383	108	433	316	-	-
HCM Lane V/C Ratio	0.116	-	-	0.52	0.069	0.387	0.051	0.01	-	-
HCM Control Delay (s)	13.2	0.7	-	67.7	15.1	58	13.8	16.5	-	-
HCM Lane LOS	B	A	-	F	C	F	B	C	-	-
HCM 95th %tile Q(veh)	0.4	-	-	2.4	0.2	1.6	0.2	0	-	-

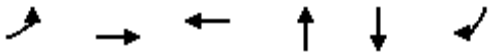
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	875	321	2	316	7	0	859
Future Volume (vph)	875	321	2	316	7	0	859
Turn Type	pm+pt	NA	Perm	NA	NA	NA	pm+ov
Protected Phases	1	6		2	8	4	1
Permitted Phases	6		2				4
Detector Phase	1	6	2	2	8	4	1
Switch Phase							
Minimum Initial (s)	5.0	15.0	15.0	15.0	5.0	5.0	5.0
Minimum Split (s)	9.5	21.0	21.0	21.0	10.0	10.0	9.5
Total Split (s)	55.4	82.0	26.6	26.6	10.0	23.0	55.4
Total Split (%)	48.2%	71.3%	23.1%	23.1%	8.7%	20.0%	48.2%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0	3.5
All-Red Time (s)	1.0	2.0	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0		6.0	5.0	5.0	4.5
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	Max	None	None	None
Act Effct Green (s)	77.7	76.2		20.6	5.0	18.0	74.0
Actuated g/C Ratio	0.71	0.70		0.19	0.05	0.17	0.68
v/c Ratio	1.02	0.14		0.69	0.27	1.04	0.46
Control Delay	57.0	6.1		46.2	56.0	72.1	6.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	57.0	6.1		46.2	56.0	72.1	6.0
LOS	E	A		D	E	E	A
Approach Delay		43.3		46.2	56.0	39.1	
Approach LOS		D		D	E	D	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 109	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 42.3	Intersection LOS: D
Intersection Capacity Utilization 96.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 4: Columbia Rubber Dwy/Industrial Park Road & James Campbell Boulevard



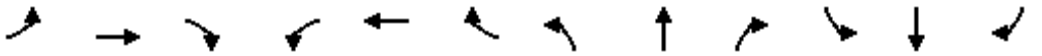


Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	962	356	433	20	502	500
v/c Ratio	1.02	0.14	0.69	0.27	1.04	0.46
Control Delay	57.0	6.1	46.2	56.0	72.1	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.0	6.1	46.2	56.0	72.1	6.0
Queue Length 50th (ft)	511	33	135	11	~198	61
Queue Length 95th (ft)	#960	66	211	39	#454	165
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	940	2464	627	74	483	1076
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.14	0.69	0.27	1.04	0.46

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	875	321	3	2	316	76	8	7	3	53	0	859
Future Volume (veh/h)	875	321	3	2	316	76	8	7	3	53	0	859
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1411	1870	1841	1856	1870	1307	1870	1767	1870	1841
Adj Flow Rate, veh/h	962	353	2	2	347	64	9	8	0	0	0	648
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	33	2	4	3	2	40	2	9	2	4
Cap, veh/h	970	2537	14	34	548	100	12	11	0	0	251	1881
Arrive On Green	0.47	0.70	0.70	0.19	0.19	0.19	0.02	0.02	0.00	0.00	0.00	0.13
Sat Flow, veh/h	1767	3623	21	3	2890	525	674	599	0	0	1870	3120
Grp Volume(v), veh/h	962	173	182	220	0	193	17	0	0	0	0	648
Grp Sat Flow(s),veh/h/ln	1767	1777	1867	1838	0	1581	1273	0	0	0	1870	1560
Q Serve(g_s), s	49.9	3.5	3.5	0.0	0.0	12.2	1.4	0.0	0.0	0.0	0.0	11.3
Cycle Q Clear(g_c), s	49.9	3.5	3.5	12.0	0.0	12.2	1.4	0.0	0.0	0.0	0.0	11.3
Prop In Lane	1.00		0.01	0.01		0.33	0.53		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	970	1244	1307	382	0	300	24	0	0	0	251	1881
V/C Ratio(X)	0.99	0.14	0.14	0.58	0.00	0.64	0.72	0.00	0.00	0.00	0.00	0.34
Avail Cap(c_a), veh/h	970	1244	1307	382	0	300	59	0	0	0	310	1980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	19.4	5.4	5.4	40.5	0.0	40.6	53.0	0.0	0.0	0.0	0.0	10.8
Incr Delay (d2), s/veh	26.9	0.2	0.2	6.2	0.0	10.1	33.9	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.3	1.1	1.2	5.9	0.0	5.4	0.7	0.0	0.0	0.0	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	5.6	5.6	46.7	0.0	50.7	86.9	0.0	0.0	0.0	0.0	10.9
LnGrp LOS	D	A	A	D	A	D	F	A	A	A	A	B
Approach Vol, veh/h		1317			413			17			648	
Approach Delay, s/veh		35.3			48.6			86.9			10.9	
Approach LOS		D			D			F			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	55.4	26.6		19.5		82.0		7.0				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	51.9	14.2		13.3		5.5		3.4				
Green Ext Time (p_c), s	0.0	1.2		1.2		2.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		31.4	
HCM 6th LOS		C	

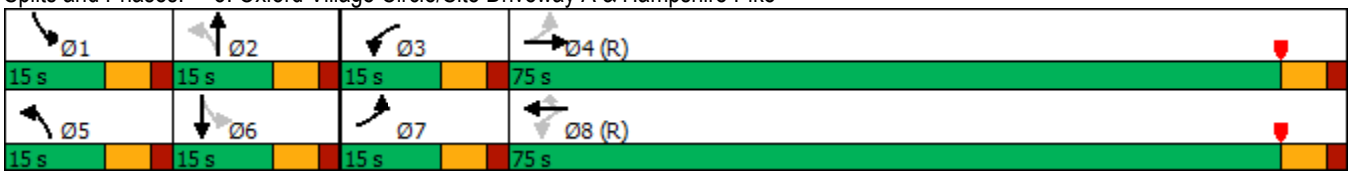
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	24	553	12	869	122	12	0	78	0
Future Volume (vph)	24	553	12	869	122	12	0	78	0
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	44.0	11.0	24.0
Total Split (s)	15.0	75.0	15.0	75.0	75.0	15.0	15.0	15.0	15.0
Total Split (%)	12.5%	62.5%	12.5%	62.5%	62.5%	12.5%	12.5%	12.5%	12.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	C-Max	None	Max	None	Max
Act Effct Green (s)	84.9	82.2	83.2	79.6	79.6	14.2	9.0	19.3	15.7
Actuated g/C Ratio	0.71	0.68	0.69	0.66	0.66	0.12	0.08	0.16	0.13
v/c Ratio	0.11	0.50	0.03	0.78	0.12	0.07	0.03	0.39	0.05
Control Delay	5.5	6.8	5.8	22.7	1.9	40.0	0.1	46.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.5	6.8	5.8	22.7	1.9	40.0	0.1	46.8	0.2
LOS	A	A	A	C	A	D	A	D	A
Approach Delay		6.8		20.0			20.0		37.3
Approach LOS		A		B			C		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 103 (86%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 16.4	Intersection LOS: B
Intersection Capacity Utilization 66.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: Oxford Village Circle/Site Driveway A & Hampshire Pike

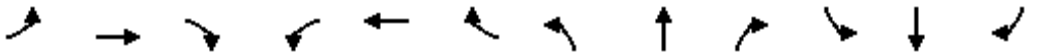




Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	26	614	13	945	133	13	13	85	22
v/c Ratio	0.11	0.50	0.03	0.78	0.12	0.07	0.03	0.39	0.05
Control Delay	5.5	6.8	5.8	22.7	1.9	40.0	0.1	46.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.5	6.8	5.8	22.7	1.9	40.0	0.1	46.8	0.2
Queue Length 50th (ft)	3	74	3	572	0	8	0	56	0
Queue Length 95th (ft)	m8	137	9	#854	24	26	0	103	0
Internal Link Dist (ft)		1470		2278			194		449
Turn Bay Length (ft)	100		100		125				
Base Capacity (vph)	276	1237	532	1212	1096	215	470	220	477
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.50	0.02	0.78	0.12	0.06	0.03	0.39	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	553	12	12	869	122	12	0	12	78	0	20
Future Volume (veh/h)	24	553	12	12	869	122	12	0	12	78	0	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	601	13	13	945	133	13	0	13	85	0	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	5	2	2	4	2	2	2	2	2	2	2
Cap, veh/h	263	1164	25	607	1186	1021	190	0	119	255	0	185
Arrive On Green	0.05	1.00	1.00	0.01	0.64	0.64	0.01	0.00	0.08	0.06	0.00	0.12
Sat Flow, veh/h	1781	1780	39	1781	1841	1585	1781	0	1585	1781	0	1585
Grp Volume(v), veh/h	26	0	614	13	945	133	13	0	13	85	0	22
Grp Sat Flow(s),veh/h/ln	1781	0	1819	1781	1841	1585	1781	0	1585	1781	0	1585
Q Serve(g_s), s	0.6	0.0	0.0	0.3	45.0	3.9	0.8	0.0	0.9	5.2	0.0	1.5
Cycle Q Clear(g_c), s	0.6	0.0	0.0	0.3	45.0	3.9	0.8	0.0	0.9	5.2	0.0	1.5
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	0	1189	607	1186	1021	190	0	119	255	0	185
V/C Ratio(X)	0.10	0.00	0.52	0.02	0.80	0.13	0.07	0.00	0.11	0.33	0.00	0.12
Avail Cap(c_a), veh/h	353	0	1189	714	1186	1021	298	0	119	288	0	185
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.00	0.81	0.61	0.61	0.61	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	0.0	7.0	15.6	8.3	50.1	0.0	51.8	46.6	0.0	47.5
Incr Delay (d2), s/veh	0.1	0.0	1.3	0.0	3.5	0.2	0.1	0.0	1.9	0.8	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	0.1	18.6	1.3	0.4	0.0	0.4	2.4	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3	0.0	1.3	7.0	19.1	8.4	50.2	0.0	53.6	47.4	0.0	48.8
LnGrp LOS	B	A	A	A	B	A	D	A	D	D	A	D
Approach Vol, veh/h		640			1091			26			107	
Approach Delay, s/veh		1.9			17.6			51.9			47.7	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	15.0	7.8	84.5	7.8	20.0	8.9	83.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	9.0	9.0	69.0	9.0	9.0	9.0	69.0
Max Q Clear Time (g_c+I1), s	7.2	2.9	2.3	2.0	2.8	3.5	2.6	47.0
Green Ext Time (p_c), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	8.5

Intersection Summary	
HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Traffic Impact Analysis

Steadfast Hampshire Pike

October 2021 (Revision #5 – July 2022)

FOR SUBMITTAL TO:

City of Columbia, Tennessee

PREPARED FOR:

Steadfast Development Holdings, Inc.

Kimley»Horn

Traffic Impact Analysis

Hampshire Pike Mixed-Use

FOR SUBMITTAL TO:

City of Columbia, Tennessee

PREPARED FOR:

Steadfast Development Holdings, Inc.

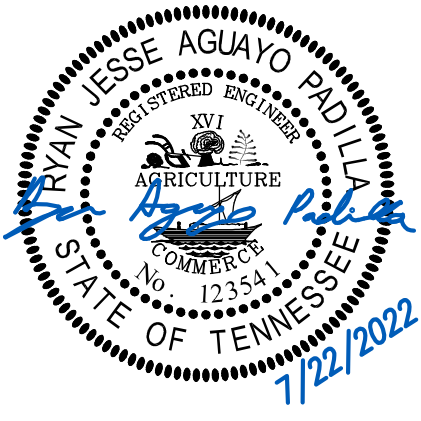
PREPARED BY:

Kimley»Horn

10 Lea Avenue, Suite 400

Nashville, Tennessee 37210

615.564.2701



October 2021 (Revision #5 – July 2022)

Project Number 118332003

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1.0 EXECUTIVE SUMMARY

Revision #5 of this TIA updated the recommendations to reflect Planning Commission comments provided July 13, 2022 and input from City Staff.

This Traffic Impact Analysis has been performed for a proposed development located within the City of Columbia in Maury County, Tennessee. The approximate 67.59-acre proposed development is located south of Old Williamsport Pike, west of James Campbell Boulevard and north of Hampshire Pike (SR 50). The anticipated completion of this development is year 2025.

The proposed development consists of:

- Single-Family Detached Housing – 39 units
- Multifamily Housing (Low-Rise) – 625 units
- General Office Building – 10,000 s.f.
- Shopping Center – 5,000 s.f.

The current development plan shown in Appendix A shows 360 multifamily units and 11 single-family lots. For analysis purposes, the densities shown about were considered for evaluation to estimate the ultimate build-out of the proposed development. Final development densities are anticipated to be lower than those assumed for this TIA.

The study intersections are:

1. Hampshire Pike (SR 50) at Lion Parkway/Iberia Drive (signalized)
2. Hampshire Pike (SR 50) at James Campbell Boulevard (signalized)
3. James Campbell Boulevard at Old Williamsport Pike (unsignalized)
4. James Campbell Boulevard at Industrial Park Road (signalized)
5. Hampshire Pike (SR 50) at Site Driveway A (unsignalized)
6. Old Williamsport Pike at Site Driveway B (unsignalized)

Related to the proposed development, the following mitigation improvements will improve traffic operations under the Future 2025 scenario and are to be constructed by the proposed development:

Hampshire Pike (SR 50) at James Campbell Boulevard

- Reconstruct north leg median nose with an 8' radius to reduce median length by approximately 13 feet to better facilitate vehicle turning movements. Relocate existing wood pole with dual arm luminaire and reconnect traffic signal span wire. Reconstruct south leg median nose with an 8' radius to reduce median length by approximately 15 feet to better facilitate vehicle turning movements.
    - *This improvement was added based on input from City staff and Planning Commission.*

James Campbell Boulevard at Old Williamsport Pike

- Construct a northbound left-turn lane with 100 feet of storage.

James Campbell Boulevard at Industrial Park Road

- Restripe the southbound shared through/left-turn lane along Industrial Park Road to provide a shared left/through/right-turn lane. Adjust signal timings as necessary after lane modifications.

Hampshire Pike at Driveway A

- Construct a westbound right-turn lane along Hampshire Pike with 125 feet of storage.
- Construct an eastbound left-turn lane along Hampshire Pike with 100 feet of storage.
- Construct a westbound left-turn lane along Hampshire Pike with 100 feet of storage.
- Construct Driveway A with three (3) lanes for vehicular movement: one (1) lane for vehicle ingress and two (2) for vehicle egress.
- Construct a traffic signal with protected-permitted left-turn phasing on all approaches.
- Install signs and pavement markings in accordance with the standards provided in the *Manual on Uniform Traffic Control Devices* (MUTCD).

Old Williamsport Pike at Site Driveway B

- Construct Site Driveway B with two (2) lanes for vehicular movement: one (1) lane for vehicle ingress and one (1) for vehicle egress.
- Provide STOP control along the northbound approach of Site Driveway B.
- Construct a westbound left-turn lane along Old Williamsport Pike with 100 feet of storage.
- Provide adequate intersection sight distance in accordance with the criteria provided in *A Policy on Geometric Design of Highways and Streets*.

Unrelated to the proposed development, the following improvements are proposed to improve operations under the Background 2025 scenario and not proposed to be constructed as part of this development:

Hampshire Pike at Lion Parkway/Iberia Drive

- Construct one (1) eastbound right-turn lane.
    - Adjust signal timings as necessary after lane modifications.
- Provide an overlap phase for the northbound right-turn movement.
- *Development traffic is not anticipated to utilize this turning movement and this improvement does not mitigate impacts from development traffic. This improvement may be planned by local jurisdictions to be implemented in the future. See section 10.3 in the report for additional information.*

Hampshire Pike at James Campbell Boulevard

- Construct one (1) southbound right-turn lane.
    - Adjust signal timings as necessary after lane modifications.
- Provide right-turn overlap phases for the northbound, southbound, and westbound approaches
- *Due to ROW, waterway, and retaining wall constraints, this improvement is recommended to be planned by local jurisdictions. See section 10.3 in the report for additional information.*

2.0 INTRODUCTION

The proposed development is located within the City of Columbia in Maury County, Tennessee. The 69.8-acre proposed development is located south of Old Williamsport Pike, west of James Campbell Boulevard and north of Hampshire Pike (SR 50). The anticipated completion of this development is year 2025.

The proposed development consists of:

- Single-Family Detached Housing – 39 units
- Multifamily Housing (Low-Rise) – 625 units
- General Office Building – 10,000 s.f.
- Shopping Center – 5,000 s.f.

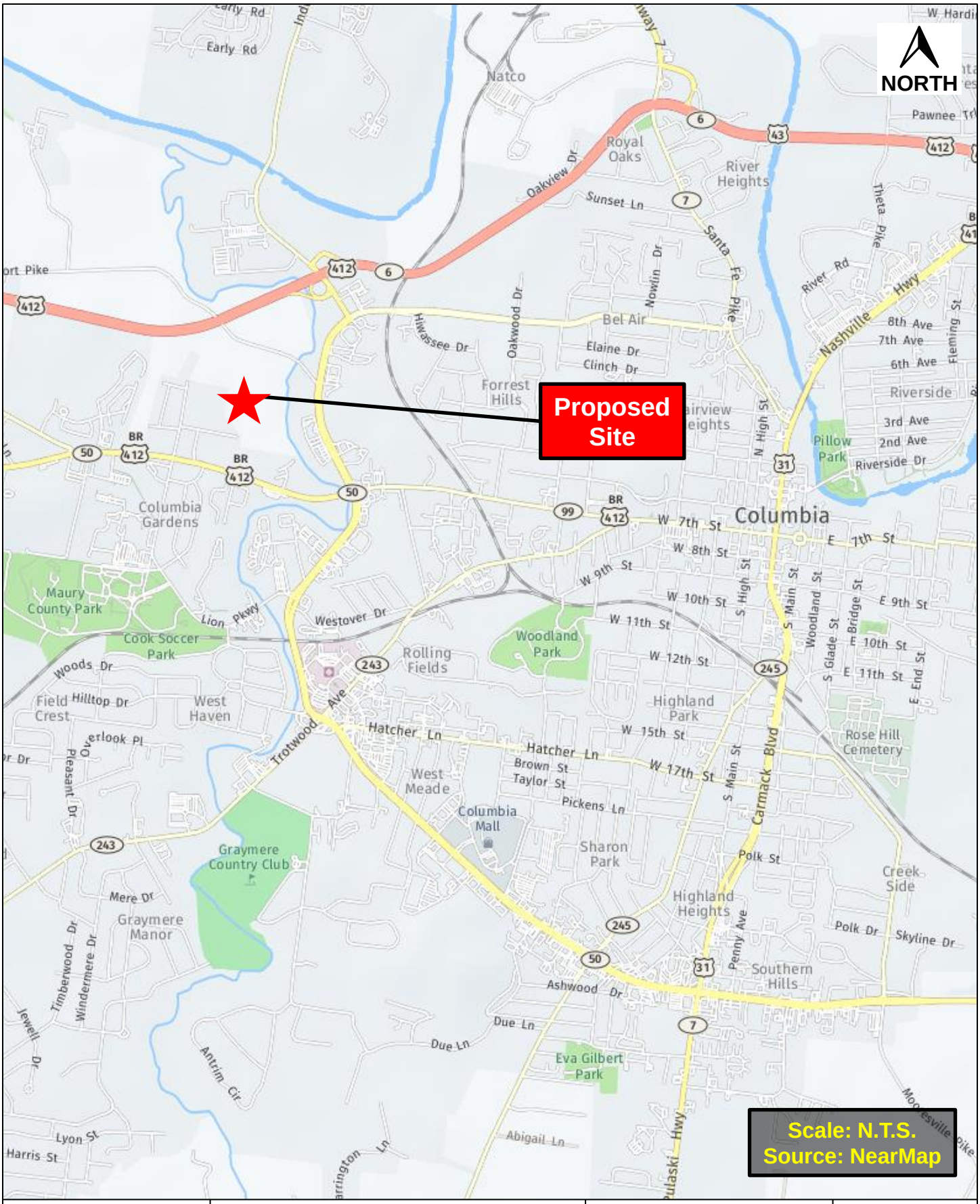
After the October 2021 submittal of this TIA, the multi-family unit count has been reduced to 480 units and the single-family detached housing reduced to 34 units. The TIA capacity analysis has not been updated and reflects the previous densities as a conservative measure.

The study intersections are:

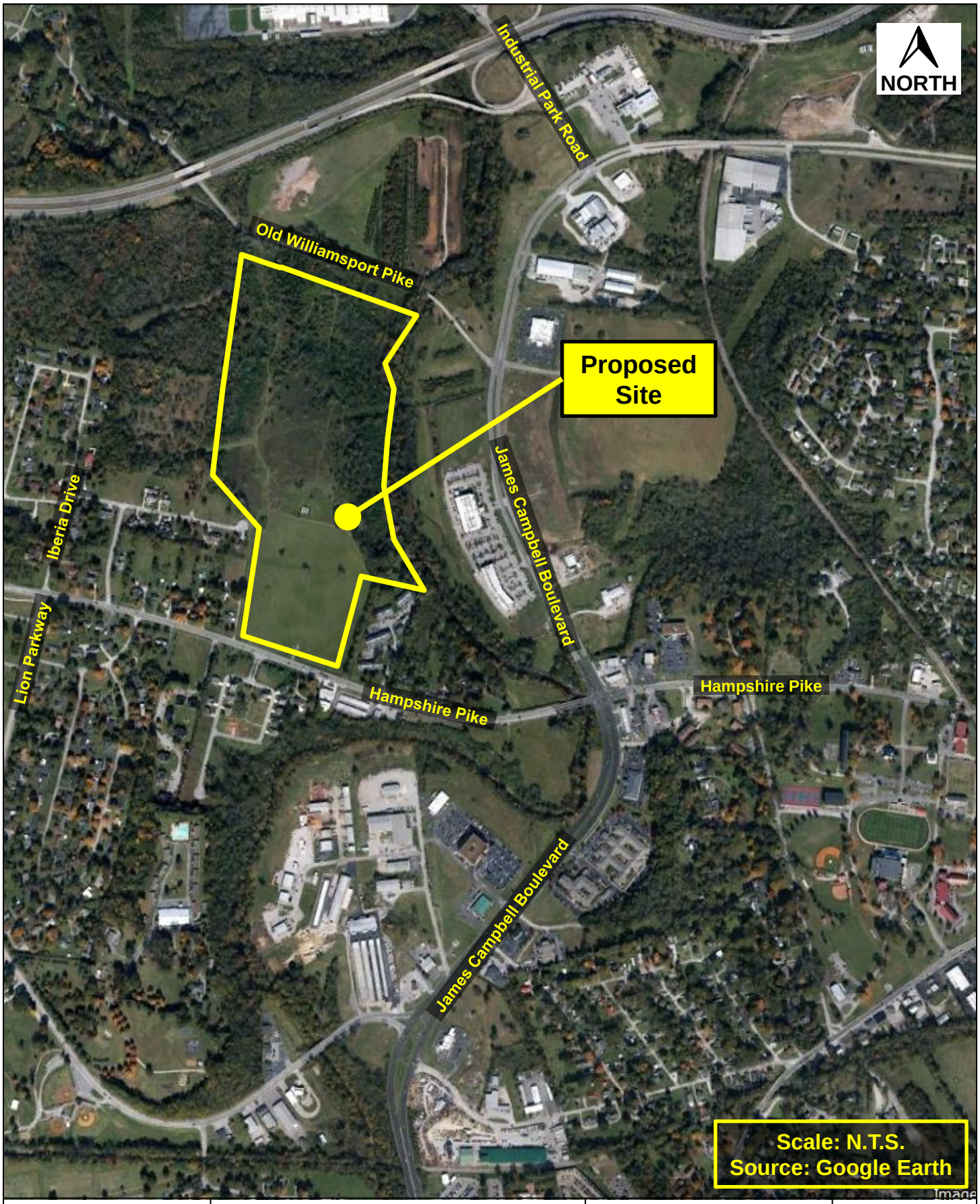
1. Hampshire Pike (SR 50) at Lion Parkway/Iberia Drive (signalized)
2. Hampshire Pike (SR 50) at James Campbell Boulevard (signalized)
3. James Campbell Boulevard at Old Williamsport Pike (unsignalized)
4. James Campbell Boulevard at Industrial Park Road (signalized)
5. Hampshire Pike (SR 50) at Site Driveway A (unsignalized)
6. Old Williamsport Pike at Site Driveway B (unsignalized)

The Project Location of the proposed development is illustrated in **Figure 1** and **Figure 2**.

The proposed site plan for the development is provided in **Appendix A**.



Kimley»Horn	Hampshire Pike Mixed-Use Traffic Impact Analysis	Project Location (Zoom Out)	Figure 1



Kimley»Horn	Hampshire Pike Mixed-Use Traffic Impact Analysis	Project Location (Zoom In)	Figure 2

3.0 EXISTING CONDITIONS

3.1 Study Intersections

The study intersections and existing traffic control are summarized in **Table 1**.

Table 1 – Study Intersections

Intersection	Existing Traffic Control
1. Hampshire Pike (SR 50) at Lion Parkway/Iberia Drive	Signalized
2. Hampshire Pike (SR 50) at James Campbell Boulevard	Signalized
3. James Campbell Boulevard at Old Williamsport Pike	Unsignalized
4. James Campbell Boulevard at Industrial Park Road	Signalized
5. Hampshire Pike at Site Driveway A	Unsignalized
6. Old Williamsport Pike at Site Driveway B	Unsignalized

For signalized intersections, the existing signal timings were obtained from the City of Columbia, Tennessee. These existing signal timings were incorporated into the traffic analysis.

Photographs depicting the study intersections are provided in **Appendix B**.

3.2 Roadway Network

Roadway geometry and posted speed limits were obtained by field inventory. Functional classifications for the roadways were obtained from the Functional Classification Maps provided by the Tennessee Department of Transportation. Additionally, the functional classifications as defined by City of Columbia were obtained from the *Connect Columbia: Columbia's Transportation Plan.* This roadway network information is summarized in **Table 2**.

Table 2 – Roadway Network				
Roadway	**Number of Lanes**	**Posted Speed Limit (mph)**	**TDOT Classification**	**City of Columbia Classification**
Hampshire Pike (US 412/SR 50/SR 99)	2	40	Principal Arterial	Principal Arterial
James Campbell Boulevard	4	45	Minor Arterial	Minor Arterial
Old Williamsport Pike	2	35	Local Street	Local Street
Industrial Park Road	2	45	Major Collector	Minor Arterial
Lion Parkway	2	20	Major Collector	Collector
Iberia Drive	2	25	Local Street	Local Street
Oxford Village Drive	2	25	Local Street	Local Street

3.3 Pedestrian/Bicycle Network

Currently, there are no sidewalks or bike provided along any of the study roadways in the network. Additionally, there are no crosswalks or pedestrian signal heads provided at any of the study intersections.

3.4 Transit Network

The Mule Town Trolley Green Line (West) travels along Hampshire Pike in the vicinity of the proposed development. The Green Line (West) provides a transit connection between Columbia State Community College, Columbia City Hall, Riverwalk Park, and other locations in the southwest Columbia area. There are additional transfer points that connect to the Blue Line (North), Red Line (South), and Purple Line (East). The nearest bus stop is located at the Oak View Apartments directly south of Driveway A.

3.5 Traffic Data

Annualized average daily traffic (AADT) volumes were obtained from TDOT along roads in proximity to the proposed development. **Table 3** provides a summary of the AADT. From 2017 to 2019 in the vicinity of the proposed development, the aggregate traffic volumes have experienced a growth of approximately 0.6% per year; from 2009 to 2019, approximately 1.0% per year.

Table 3 – TDOT Traffic History

Year	Station 60000147 Hampshire Pike (SR 50) West of Oxford Village Circle	Station 60000097 Old Williamsport Pike West of James Campbell Blvd	Station 60000233 James Campbell Blvd North of Hampshire Pike
2010	10,412	1,099	16,404
2011	11,720	900	14,554
2012	11,187	956	14,998
2013	11,184	985	14,489
2014	11,425	1,094	14,682
2015	10,318	737	14,905
2016	11,390	897	14,944
2017	11,940	1,154	17,257
2018	11,555	1,128	16,501
2019	12,187	1,148	17,547
2020*	13,534	1,021	16,244

**Excluded from growth calculations due to atypical traffic patterns caused by the COVID-19 pandemic.*

Weekday morning and afternoon peak period turning movement counts were performed to determine the volume of vehicles and pedestrians at the study intersections. The traffic data was collected on Tuesday, September 14, 2021. The volumes were collected in 15-minute intervals to determine the AM and PM peak hour volumes as well as the peak hour factors.

Intersection peak hours are summarized in **Table 4**.

Table 4 – Intersection Peak Hours		
Intersection	**AM Peak Hour**	**PM Peak Hour**
Hampshire Pike (SR 50) at Lion Parkway/Iberia Drive	7:00 – 8:00	4:45 – 5:45
Hampshire Pike (SR 50) at James Campbell Boulevard	7:15 – 8:15	3:00 – 4:00
James Campbell Boulevard at Old Williamsport Pike	7:00 – 8:00	4:30 – 5:30
James Campbell Boulevard at Industrial Park Road	7:00 – 8:00	4:30 – 5:30

At the intersection of Hampshire Pike and James Campbell Boulevard, data collection video confirmed that the traffic signal operated with protected-permitted left-turn on all approaches.

Two (2) 24-hour tube counts were also collected: one (1) on Hampshire Pike west of Oxford Village Circle and one (1) on Industrial Park Road south of Highway 412 EB Exit Ramp. The daily (24-hour), AM peak hour, and PM peak hour traffic data from the tube counts are summarized in **Table 5**.

Table 5 – 24-Hour Tube Counts			
Location	**Daily (24-Hour)**	**AM Peak Hour**	**PM Peak Hour**
Hampshire Pike West of Oxford Village Circle	12,712	1,136	1,140
Industrial Park Road South of Hwy 412 EB Exit Ramp	15,693	1,679	1,352

Because traffic patterns were potentially still impacted by the COVID-19 pandemic during the traffic count collection dates, AM and PM peak hour turning movement counts were calibrated based on a comparison of current and historical average daily traffic (ADT) counts. ADTs collected by Tennessee DOT (TDOT) in 2019 were grown at 2.5% per year to the current year 2021 then compared to the ADT collected in 2021. A **calibration factor of 1.1** was chosen for both the AM and PM peak hours. The ADT comparison is shown below in **Table 6**.

Table 6 – ADT Comparison					
Location	**TOD**	**2019 TDOT ADT**	**Projected 2021 TDOT ADT**	**2021 Collected ADT**	**Calibration Factor**
Hampshire Pike West of Oxford Village Circle	Daily	13,517	14,556	12,712	1.15
	AM Peak	1,162	1,251	1,136	1.10
	PM Peak	1,147	1,235	1,104	1.12
Industrial Park Road South of Hwy 412 EB Exit Ramp	Daily	15,004	16,159	15,693	1.03
	AM Peak	1,379	1,485	1,679	0.88
	PM Peak	1,272	1,370	1,342	1.02

The Existing 2021 Intersection Geometry is documented in **Figure 3**, and the Existing 2021 Peak Hour Traffic Volumes are included in **Figure 4**. The AADT data as well as the peak hour turning movement counts are provided in **Appendix C**.

LEGEND

- Existing Intersection Geometry
- Existing STOP Control
- Existing Traffic Signal Control

Figure 3

Existing 2021 Intersection Geometry

Hampshire Pike Mixed-Use Traffic Impact Analysis

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NORTH

NOT TO SCALE

LEGEND

- → Turning Movement
- XX AM Peak Hour Traffic Volumes
- (XX) PM Peak Hour Traffic Volumes

Figure 4

Existing 2021 Peak Hour Traffic Volumes

Hampshire Pike Mixed-Use Traffic Impact Analysis

Kimley»Horn

NORTH

NOT TO SCALE

4.0 BACKGROUND CONDITIONS

The Background 2025 conditions are the forecasted traffic conditions, without the proposed development. This includes background traffic growth, traffic associated with other planned / approved developments, and anticipated transportation infrastructure improvements.

4.1 Background Traffic Growth

Historical traffic data from the TDOT count stations was used to evaluate historic traffic trends and determine an appropriate growth rate for the study area. Based on review of the TDOT historical data, an annual growth rate of 2.5% was applied to the existing traffic volumes.

4.2 Other Future Developments

These planned / approved developments are not currently generating traffic, but the traffic associated with each of these developments has been incorporated:

- Williamsport Pike Development

4.3 Future Transportation Infrastructure Improvements

No future transportation infrastructure improvements were identified.

The Background 2025 Peak Hour Traffic Volumes are included in **Figure 5**.

LEGEND

- → Turning Movement
- XX AM Peak Hour Traffic Volumes
- (XX) PM Peak Hour Traffic Volumes

Industrial Park Road

984 (720)
7 (0)
121 (53)

4

53 (76)
290 (304)
0 (2)

James Campbell Blvd

(792) 495
(314) 278
(3) 11

(8) 2
(7) 7
(3) 1

3

11 (35)
1,237 (993)
23 (3)

4 (20)
0 (0)
10 (38)

Old Williamsport Pike

(9) 10
(0) 0
(24) 123

(52) 23
(1,049) 771
(3) 39

Iberia Dr

1

8 (1)
8 (2)
11 (1)

0 (2)
480 (804)
204 (63)

2

218 (264)
768 (711)
241 (113)

112 (162)
224 (257)
104 (100)

Hampshire Pike

(4) 1
(502) 582
(385) 486

(362) 265
(3) 2
(51) 171

(231) 239
(243) 272
(239) 267

(315) 209
(639) 495
(92) 108

Lion Pkwy

James Campbell Blvd

NORTH

NOT TO SCALE

Figure 5

Background 2025 Peak Hour Traffic Volumes

Hampshire Pike Mixed-Use Traffic Impact Analysis

Kimley»Horn

5.0 VEHICLE CIRCULATION AND PARKING

5.1 Site Access and Vehicle Circulation

The proposed development will provide two (2) driveways, which will be connected within the development to promote internal vehicle circulation. An additional driveway is proposed to tie into the existing cul-de-sac at Woodland Crossing. However, in order to perform a more conservative analysis, it is not considered in this analysis.

Below is a description of the vehicular access:

- Driveway A – Located along Hampshire Pike, directly across from Oxford Village Circle. The driveway is proposed to be full-movement.
- Driveway B – Located along Old Williamsport Pike, approximately 1,350 feet west of James Campbell Boulevard. The driveway is proposed to be full-movement.

Although the additional connection to Woodland Crossing was not analyzed, it would help to alleviate traffic demand at Driveway A and Driveway B. Additionally, this connection would provide signalized access to the site, allowing for easier left-turn ingress and egress movements and would likely decrease delay at the other proposed driveways.

6.0 PROJECT TRAFFIC

Project traffic is the magnitude of vehicle trips forecasted to be generated by the proposed development. This project traffic is calculated and dispersed throughout the road network and onto the study intersections by using trip generation, trip distribution, and trip assignment.

6.1 Trip Generation

The proposed development will consist of:

- Single-Family Detached Housing – 39 units
- Multifamily Housing (Low-Rise) – 625 units
- General Office Building – 10,000 s.f.
- Shopping Center – 5,000 s.f.

Traffic expected to be generated by the proposed development was calculated using equations provided in the *Trip Generation Manual, 10th Edition*, published by the Institute of Transportation Engineers (ITE). These calculations result in the gross trips generated by the site prior to reductions.

Internal capture (or mixed-use) represents the concept that trips generated by individual land uses within a site may remain internal to the site. Mixed-use vehicle trip reductions were taken according to the *ITE Trip Generation Handbook, 3rd Edition*. Total internal capture and vehicle trip reduction between the proposed land uses is expected to be 2.7% for the weekday, 2.3% for the AM peak hour, and 3.2% for the PM peak hour.

Alternative modes of transportation include pedestrians, bicyclists, and transit users. Alternate mode reductions account for the notion that some site-generated trips will occur by a means other than automobile. Alternative mode reduction was not considered for the proposed development.

A pass-by trip occurs when a proposed development diverts traffic that is already traveling on a street adjacent to the site. The pass-by reductions were taken according to the *ITE Trip Generation Handbook, 3rd Edition*.

The trip generation for the proposed development is summarized in **Table 7**.

Table 7 – Trip Generation

ITE Land Use	Density	Daily	AM Peak Hour			PM Peak Hour		
			Total	Enter	Exit	Total	Enter	Exit
Single-Family Detached Housing (LUC 210)	39 d.u.	437	32	8	24	41	26	15
Multifamily Housing (Low-Rise) (LUC 220)	625 d.u.	4,684	272	63	209	302	190	112
General Office Building (LUC 710)	10,000 s.f.	114	36	31	5	13	2	11
Shopping Center (LUC 820)	5,000 s.f.	189	5	3	2	19	9	10
Gross Trips		**5,424**	**345**	**105**	**240**	**375**	**227**	**148**
Internal Capture Reduction		*- 148*	*- 8*	*- 4*	*- 4*	*- 12*	*- 6*	*- 6*
Driveway Volumes		**5,276**	**337**	**101**	**236**	**363**	**221**	**142**
Pass-By Reduction		*- 45*	*0*	*0*	*0*	*-4*	*-2*	*-2*
New Trips		**5,231**	**337**	**101**	**236**	**359**	**219**	**140**

d.u. = dwelling units ---------- s.f. = square feet

6.2 Trip Distribution and Assignment

Trip distribution has been forecasted by evaluating the existing traffic patterns, considering the internal vehicle circulation and driveway configuration of the proposed development, and reviewing the surrounding land uses and considering how they will interact with the proposed development. The trip distribution along the roadway network is forecasted to be:

Residential Trip Distribution:

- 65% to/from the north along Industrial Park Road
- 10% to/from the south along James Campbell Boulevard
- 10% to/from the west along Hampshire Pike
- 5% to/from the east along James Campbell Boulevard
- 10% to/from the east along Hampshire Pike

Non-Residential Trip Distribution:

- 10% to/from the north along Industrial Park Road
- 15% to/from the south along James Campbell Boulevard
- 35% to/from the west along Hampshire Pike
- 5% to/from the east along James Campbell Boulevard
- 30% to/from the east along Hampshire Pike

The Trip Distribution for residential uses is illustrated in **Figure 6** and for non-residential uses in **Figure 7**; and the Project Trips for the proposed development are summarized in **Figure 8**.

Pass-by reductions for the PM peak hour were assumed to be split evenly coming from the west and east on Hampshire Pike at Driveway A. Thus, one trip comes from the east and departs to the west on Hampshire Pike and one trip comes from the west and departs to the east. No AM peak hour pass-by trip reductions were applied.

Worksheets that illustrate the trip generation for the proposed development and the volume worksheets for each of the study intersections are provided in **Appendix D**.

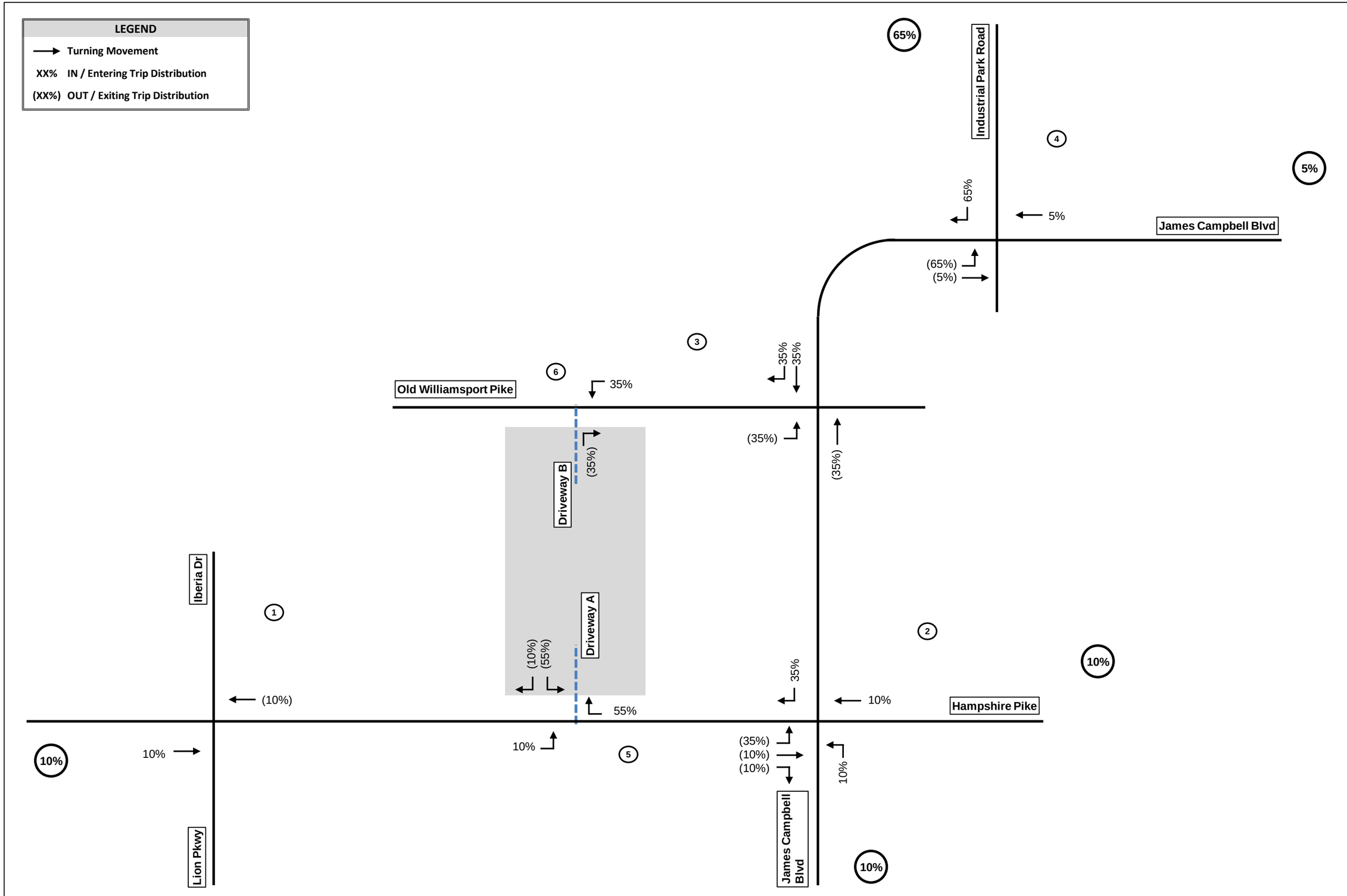

Figure 6

Residential Trip Distribution

Hampshire Pike Mixed-Use Traffic Impact Analysis

Kimley»Horn

NORTH

NOT TO SCALE

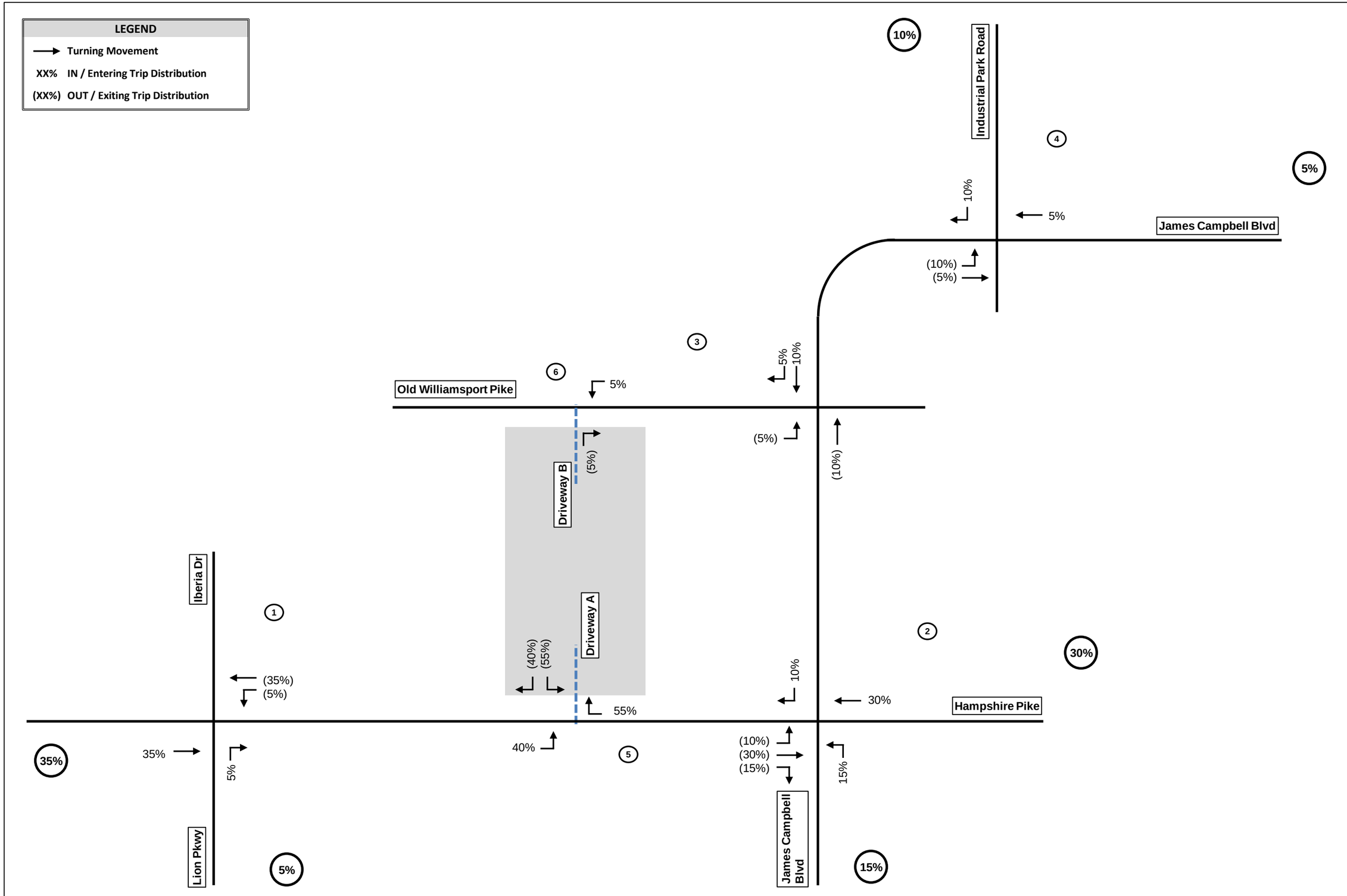

Figure 7

Non- Residential Trip Distribution

Hampshire Pike Mixed-Use Traffic Impact Analysis

Kimley»Horn

NORTH

NOT TO SCALE

LEGEND

- Turning Movement
- XX AM Peak Hour Project Trips
- (XX) PM Peak Hour Project Trips

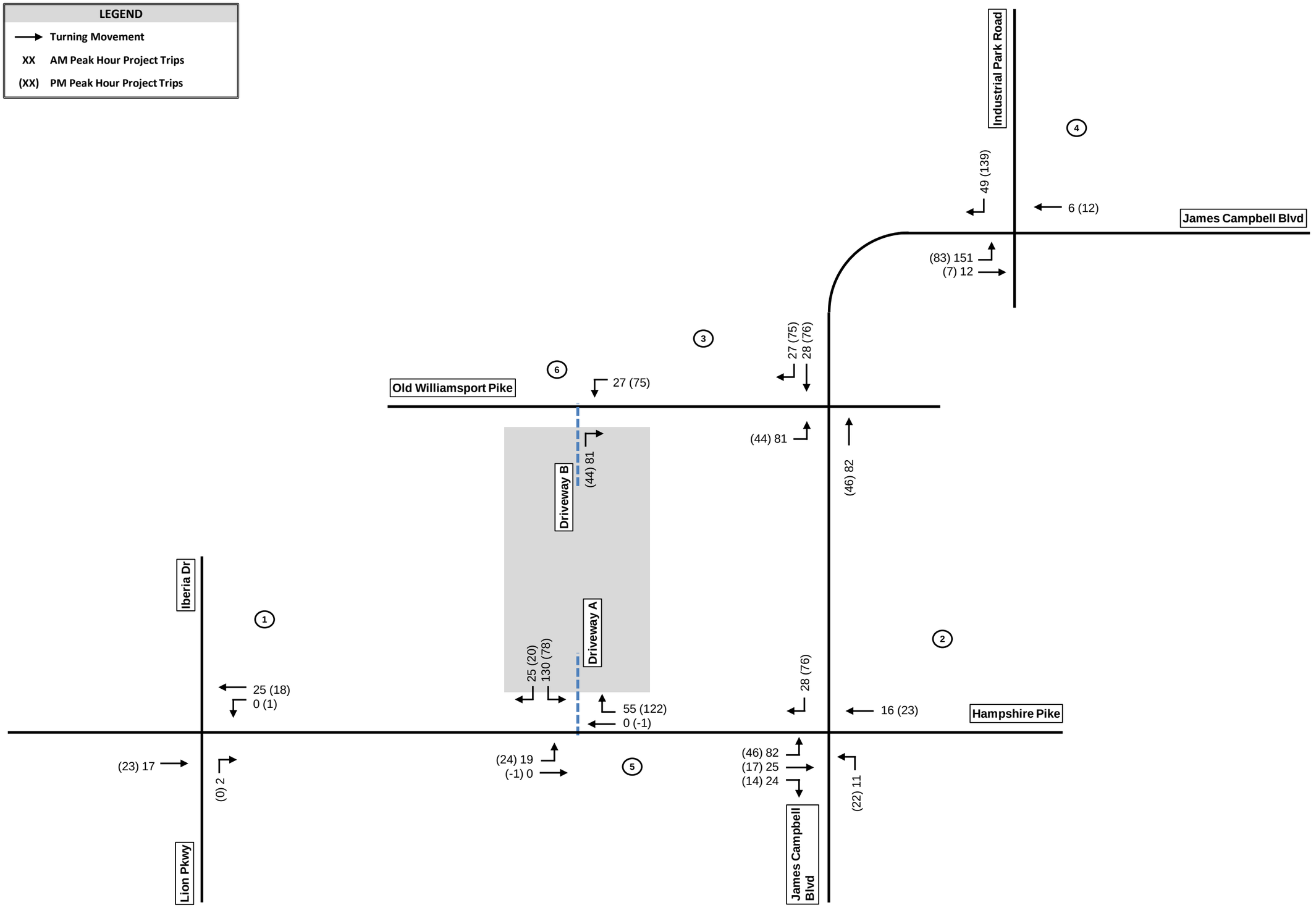

Figure 8

Project Trips

Hampshire Pike Mixed-Use
Traffic Impact Analysis

Kimley»Horn

NORTH

NOT TO SCALE

7.0 FUTURE CONDITIONS

The Future 2025 conditions are defined as the forecasted traffic conditions on the roadway network in the year 2025, with the proposed development. This includes background traffic growth, traffic associated with other planned or approved private developments, future transportation infrastructure improvements, and trips generated by the proposed development.

The Future 2025 Peak Hour Traffic Volumes are shown in **Figure 9**.

LEGEND

- → Turning Movement
- XX AM Peak Hour Traffic Volumes
- (XX) PM Peak Hour Traffic Volumes

NORTH

NOT TO SCALE

Kimley»Horn

Hampshire Pike Mixed-Use
Traffic Impact Analysis

Future 2025
Peak Hour
Traffic Volumes

Figure
9

8.0 TURN LANE EVALUATION

National Cooperative Highway Research Program (NCHRP) Report 457, "Evaluating Intersection Improvements: An Engineering Study Guide", was used to evaluate if left-turn and/or right-turn lanes should be implemented along the major road at a two-way stop-controlled intersection. From within the NCHRP Report 457, the following methodology were applied to perform these evaluations:

- Figure 2-5 ("Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection")
- Figure 2-6 ("Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection")

Turn lane evaluations were performed for:

- Hampshire Pike at Driveway A
- Old Williamsport Pike at Driveway B
- James Campbell Boulevard at Old Williamsport Pike (left-turn warrant)

The results of the turn-lane warrants, based on the NCHRP Report 457, are summarized in **Table 8** (for left-turn lanes) and in **Table 9** (for right-turn lanes). The calculations are provided in **Appendix E**.

Table 8 – Left-Turn Lane Evaluation (NCHRP Report 457)			
Turning Movement	**Analysis Scenario**	**AM Peak Hour**	**PM Peak Hour**
Eastbound Left-Turn Hampshire Pike at Driveway A	Future 2025	WARRANTED	WARRANTED
Westbound Left-Turn Old Williamsport Pike at Driveway B	Future 2025	Not Warranted	Not Warranted
Northbound Left-Turn James Campbell Boulevard at Old Williamsport Pike	Future 2025	WARRANTED	WARRANTED

A left-turn lane is warranted for the Future 2025 scenario, during the AM peak hour and PM peak hour, for Driveway A and James Campbell Boulevard at Old Williamsport Pike. Providing a left-turn lane will reduce the possibility of a 'left-turn movement' motorist causing significant delay to 'through movement' motorists behind them at this location.

A left-turn lane is not warranted for the Future 2025 scenario, during the AM peak hour and the PM peak hour, for Driveway B. At this location, a 'left-turn movement' vehicle is unlikely to cause significant delay to a 'through movement' motorist behind them.

Table 9 – Right-Turn Lane Evaluation (NCHRP Report 457)			
Turning Movement	**Analysis Scenario**	**AM Peak Hour**	**PM Peak Hour**
Westbound Right-Turn Hampshire Pike at Driveway A	Future 2025	WARRANTED	WARRANTED
Eastbound Right-Turn Old Williamsport Pike at Driveway B	Future 2025	Not Warranted	Not Warranted

A right-turn lane is warranted for the Future 2025 scenario, during the AM peak hour and PM peak hour, for Driveway A. Providing a right-turn lane will reduce the possibility of a 'right-turn movement' motorist causing significant delay to 'through movement' motorists behind them at this location.

A right-turn lane is not warranted for the Future 2025 scenario, during the AM peak hour and the PM peak hour, for Driveway B. At this location, a 'right-turn movement' vehicle is unlikely to cause significant delay to a 'through movement' motorist behind them.

Per the request of Volkert, Inc., left-turn lane warrant analysis based on the methodology provided in the TDOT Highway System Access Manual was prepared as well. This methodology is based on the AASHTO Green Book 7th Edition, Section 9.7.3 and is replicated in Figures 3-15, 3-16, and 3-17 in the Highway System Access Manual. The left-turn lane warrant analysis is summarized below:

- Hampshire Pike at Driveway A (Left-Turn Warrant for Urban and Suburban Arterials (Unsignalized))
    - Left-turn lane is warranted.
- Old Williamsport Pike at Driveway B (Left-Turn Warrant for Two-Lane Rural Roadway, Three-Leg Intersection)
    - Left-turn lane is warranted.
- James Campbell Boulevard at Old Williamsport Pike
    - Left-turn lane is warranted.

9.0 TRAFFIC SIGNAL WARRANT ANALYSIS

Preliminary traffic signal warrant analysis was performed using the methodology provided in Chapter 4C of the *Manual on Uniform Traffic Control Devices* (MUTCD), 2009 Edition published by the Federal Highway Administration (FHWA). The *MUTCD* provides the following standard, among others, regarding justification for traffic control signals:

"The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal." (Source: *MUTCD 2009*, Section 4C.01, Paragraph 03)

According to the MUTCD, the investigation of the need for a traffic control signal shall include an analysis of the applicable factors contained in the following traffic signal warrants and other factors related to existing operation and safety at the study location:

- Warrant 1, Eight-Hour Vehicular Volume
- Warrant 2, Four-Hour Vehicular Volume
- Warrant 3, Peak Hour
- Warrant 4, Pedestrian Volume
- Warrant 5, School Crossing
- Warrant 6, Coordinated Signal System
- Warrant 7, Crash Experience
- Warrant 8, Roadway Network
- Warrant 9, Intersection Near a Grade Crossing

Warrant 1 (Eight Hour Vehicular Volume) Condition 1A is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic signal. Warrant 1 Condition 1B is intended for application where Condition 1A is not satisfied and where the traffic volume on a major street is so heavy that traffic on a minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. If both Condition 1A and Condition 1B are 80% satisfied, Warrant 1C would be satisfied.

Warrant 2 (Four Hour Vehicular Volume) is intended to be applied at locations where the volume of intersecting traffic is the principal reason to consider installing a traffic signal.

Warrant 3 (Peak Hour) is intended for use at locations where traffic conditions are such that for a minimum of 1 hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street.

Warrant 4 (Pedestrian Volume) is intended for application where the traffic volume on a major street is so heavy that pedestrians experience excessive delay in crossing the major street.

A traffic signal was evaluated for the intersection of Hampshire Parkway at Site Driveway A.

The results of the preliminary traffic signal warrant analysis based upon vehicular traffic volumes are summarized in **Table 10**.

Table 10 – Preliminary Traffic Signal Warrant Analysis

Location	Warrant	Hours Required	Future 2025
Hampshire Pike at Site Driveway A	1A	8	0 / 8 (Not Met)
	1B	8	6 / 8 (Not Met)
	1C	8	2 / 8 (Not Met)
	2	4	5 / 4 (MET)
	3	1	1 / 1 (MET)
	4	1	N/A

For the traffic signal warrant analysis, 24-hour tube count data was collected on September 14, 2021 for Hampshire Pike west of Oxford Village Circle. Driveway A traffic volumes were used as the higher volume approach based on Future 2025 peak hour traffic volumes. In addition, right-turning vehicles from Driveway A were removed from the calculations due to the proposed dedicated left-turn lane and shared through/right-turn lane configuration of Driveway A.

Proposed development eight-hour trip generations were prepared utilizing ITE daily trip generation and distribution data. However, pass-by and internal capture reductions were not applied to the trip generation estimates. Complete traffic signal warrant data and calculations are provided in **Appendix C** and **Appendix D**.

10.0 CAPACITY ANALYSIS

10.1 Intersection Capacity Analysis

The *Highway Capacity Manual (HCM) 6th Edition* provides insight and guidance on control delay, level of service (LOS), signalized intersection LOS, and unsignalized intersection LOS.

Control Delay:

"Control delay – the delay brought about by the presence of a traffic control device – is the principal HCM service measure for evaluating LOS at signalized and unsignalized intersections. Control delay includes delay when vehicles slow in advance of an intersection, time spent stopped on an intersection approach, time spent as vehicles move up in the queue, and time needed for vehicles to accelerate to their desired speed." (Source: *Highway Capacity Manual 6th Edition*, Chapter 4)

LOS:

"LOS is a quantitative stratification of a performance measure or measures representing quality of service. The measures used to determine LOS for transportation system elements are called service measures. The HCM defines six levels of service, ranging from A to F, for each service measure or combination of service measures. LOS A represents the best operating conditions from the traveler's perspective and LOS F the worst. For cost, environmental impact, and other reasons, roadways are typically designed not to provide LOS A conditions during peak periods but instead to provide some lower LOS that balances individual travelers' desires against society's desires and financial resources. Nevertheless, during low-volume periods of the day, a system element may operate at LOS A." (Source: *Highway Capacity Manual 6th Edition*, Chapter 5)

Signalized Intersection LOS:

- Control delay alone is used to characterize LOS for the entire intersection or an approach
- Control delay and volume-to-capacity ratio are used to characterize LOS for a lane group.
- Delay quantifies the increase in travel time due to traffic signal control. It is also a surrogate measure of driver discomfort and fuel consumption.
- The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group.

The LOS criteria for signalized intersections are summarized in **Table 11**.

Table 11– Signalized Intersection Level of Service

LOS	Control Delay (seconds/vehicle)	Comments
A	≤ 10	LOS A describes operations with a control delay of 10 s/veh or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If LOS A is the result of favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.
B	> 10 – 20	LOS B describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.
C	> 20 – 35	LOS C describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.
D	> 35 – 55	LOS D describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.
E	> 55 – 80	LOS E describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.
F	> 80	LOS F describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Source: *Highway Capacity Manual 6th Edition*, Chapter 19

Unsignalized (two-way stop-controlled) intersection LOS:

- For motor vehicles, LOS is determined for each minor-street movement (or shared movement), as well as the major-street left turns.
- LOS is not defined for the intersection as a whole or for major-street approaches.
- The LOS criteria for unsignalized intersections differ somewhat from the criteria for signalized intersections, primarily because user perceptions differ among transportation facility types. The expectation is that a signalized intersection is designed to carry higher traffic volumes and will present greater delay than an unsignalized intersection. Unsignalized intersections are also associated with more uncertainty for users, as delays are less predictable than they are at signals.

The LOS criteria for unsignalized intersections are summarized in **Table 12**.

Table 12 – Unsignalized Intersection Level of Service

LOS	Control Delay (seconds/vehicle)	Comments
A	0 – 10	Usually no conflicting traffic
B	> 10 – 15	Occasionally some delay due to conflicting traffic
C	> 15 – 25	Delay noticeable to vehicles, but not inconveniencing
D	> 25 – 35	Delay noticeable and irritating, increased likelihood of risk taking
E	> 35 – 50	Delay approaches tolerance level, risk-taking behavior likely
F	> 50	Delay exceeds tolerance level, high likelihood of vehicle risk taking

Source: *Highway Capacity Manual 6th Edition*, Chapter 20

For existing roadways, municipalities typically consider LOS A through LOS D as the range of acceptable overall intersection operations, while LOS E and LOS F are generally considered unacceptable. Roadway laneage, traffic signalization, or other improvements are normally required at those intersections which operate within the range of unacceptable LOS.

The operating conditions were analyzed for the weekday AM and PM peak hours using the *Synchro 11* software which uses the methodologies contained in the *Highway Capacity Manual 6th Edition*. The following intersections were analyzed:

- Hampshire Pike (SR 50) at Lion Parkway/Iberia Drive (signalized)
- Hampshire Pike (SR 50) at James Campbell Boulevard (signalized)
- James Campbell Boulevard at Old Williamsport Pike (unsignalized)
- James Campbell Boulevard at Industrial Park Road (signalized)
- Hampshire Pike (SR 50) at Site Driveway A/Oxford Village Circle (unsignalized)
- Old Williamsport Pike at Site Driveway B (unsignalized)

Additionally, unsignalized intersections were analyzed for the weekday AM and PM peak hours using the *Highway Capacity Software (HCS) 7* which also uses the methodologies contained in the *Highway Capacity Manual 6th Edition*. The following intersections were analyzed in *HCS 7* in addition to *Synchro 10*:

- James Campbell Boulevard at Old Williamsport Pike (unsignalized)
- Hampshire Pike (SR 50) at Site Driveway A/Oxford Village Circle (unsignalized)
- Old Williamsport Pike at Site Driveway B (unsignalized)

Intersection capacity analyses were conducted for the following conditions within the study area:

- Existing 2021 Conditions
- Background 2025 Conditions
- Future 2025 Conditions

A summary of the *Synchro 11* capacity analyses for the AM peak hour and PM peak hour are provided in **Table 13** and **Table 14**, respectively. A summary of the *HCS 7* capacity analyses for the AM peak hour and PM peak hour are provided in **Table 15** and **Table 16**, respectively. The intersection capacity analysis reports are included in **Appendix F**.

Table 13 – *Synchro 11* Intersection Capacity Analysis Results – AM Peak Hour

Intersection	Approach	Existing 2021 Conditions	Background 2025 Conditions	Future 2025 Conditions
Hampshire Pike at Lion Parkway /Iberia Drive (Signalized)	Eastbound	B (17.5)	C (24.9)	C (25.6)
	Westbound	B (10.8)	B (15.6)	C (16.3)
	Northbound	D (39.9)	D (41.5)	D (41.0)
	Southbound	C (31.7)	C (30.6)	C (30.6)
	Overall	B (19.2)	C (24.5)	C (24.9)
Hampshire Pike at James Campbell Boulevard (Signalized)	Eastbound	C (32.1)	D (43.5)	D (50.7)
	Westbound	C (27.1)	D (35.7)	D (44.1)
	Northbound	E (62.5)	E (68.0)	E (68.7)
	Southbound	E (65.4)	E (73.9)	E (74.0)
	Overall	D (52.0)	E (59.9)	E (62.5)
James Campbell Boulevard at Old Williamsport Pike (Unsignalized)	Eastbound STOP	C (18.6)	C (22.5)	F (126.3)
	Westbound STOP	C (23.0)	D (29.7)	D (33.4)
	Northbound Left-Turn	B (13.8)	C (15.6)	C (16.3)
	Southbound Left-Turn	A (9.5)	B (10.0)	B (10.5)
James Campbell Boulevard at Industrial Park Road (Signalized)	Eastbound	A (9.4)	B (10.9)	C (21.6)
	Westbound	B (18.8)	C (22.1)	C (32.3)
	Northbound	F (93.9)	F (92.1)	F (92.1)
	Southbound	D (35.1)	D (35.8)	C (23.0)
	Overall	C (22.2)	C (23.9)	C (24.1)
Hampshire Pike at Driveway A	Eastbound Left-Turn	--	--	A (9.5)
	Westbound Left-Turn*	--	--	A (9.7)
	Northbound STOP*	--	--	E (49.3)
	Southbound STOP	--	--	F (610.1)
Old Williamsport Pike at Driveway B	Westbound Left-Turn	--	--	A (7.6)
	Northbound STOP	--	--	A (9.4)

**Turning movements associated with the Oxford Village Circle development were conservatively assumed to be 10 vehicles per movement based on trip generation for 46 multi-family (low-rise) apartments*

Table 14 – *Synchro 10* Intersection Capacity Analysis Results – PM Peak Hour				
Intersection	**Approach**	**Existing 2021 Conditions**	**Background 2025 Conditions**	**Future 2025 Conditions**
Hampshire Pike at Lion Parkway /Iberia Drive (Signalized)	Eastbound	C (20.5)	C (23.5)	C (24.2)
	Westbound	B (19.7)	C (28.7)	C (30.1)
	Northbound	F (158.9)	F (249.5)	F (249.5)
	Southbound	C (31.8)	C (31.8)	D (31.8)
	Overall	D (49.1)	E (70.1)	E (70.1)
Hampshire Pike at James Campbell Boulevard (Signalized)	Eastbound	D (35.3)	D (50.5)	E (60.9)
	Westbound	C (31.9)	D (45.2)	E (55.3)
	Northbound	D (51.8)	E (56.2)	E (58.0)
	Southbound	E (62.7)	E (73.8)	E (74.0)
	Overall	D (49.1)	E (58.9)	E (63.4)
James Campbell Boulevard at Old Williamsport Pike (Unsignalized)	Eastbound STOP	C (16.9)	C (21.4)	F (84.7)
	Westbound STOP	D (30.1)	E (47.6)	F (60.0)
	Northbound Left-Turn	B (10.7)	B (11.9)	B (13.2)
	Southbound Left-Turn	B (14.1)	C (15.9)	C (16.5)
James Campbell Boulevard at Industrial Park Road (Signalized)	Eastbound	B (11.0)	C (23.4)	D (35.3)
	Westbound	C (21.3)	C (32.7)	D (48.6)
	Northbound	F (84.8)	F (86.5)	F (86.9)
	Southbound	C (22.8)	B (16.5)	B (10.9)
	Overall	B (15.9)	C (23.9)	C (31.4)
Hampshire Pike at Driveway A	Eastbound Left-Turn	--	--	B (10.8)
	Westbound Left-Turn*	--	--	A (8.8)
	Northbound STOP*	--	--	E (46.6)
	Southbound STOP	--	--	F (201.1)
Old Williamsport Pike at Driveway B	Westbound Left-Turn	--	--	A (7.4)
	Northbound STOP	--	--	A (8.6)

**Turning movements associated with the Oxford Village Circle development were conservatively assumed to be 10 vehicles per movement based on trip generation for 46 multi-family (low-rise) apartments*

Table 15 – *HCS 7* Intersection Capacity Analysis Results – AM Peak Hour				
Intersection	**Approach**	**Existing 2021 Conditions**	**Background 2025 Conditions**	**Future 2028 Conditions**
James Campbell Boulevard at Old Williamsport Pike (Unsignalized)	Eastbound STOP	C (21.9)	D (29.9)	F (648.3)
	Westbound STOP	F (53.0)	F (97.5)	F (130.2)
	Northbound Left-Turn	B (13.8)	C (15.6)	C (16.3)
	Southbound Left-Turn	A (9.5)	B (10.0)	B (10.5)
Hampshire Pike at Driveway A	Eastbound Left-Turn	--	--	A (9.5)
	Westbound Left-Turn*	--	--	A (9.7)
	Northbound STOP*	--	--	E (49.6)
	Southbound STOP	--	--	F (691.4)
Old Williamsport Pike at Driveway B	Westbound Left-Turn	--	--	A (7.6)
	Northbound STOP	--	--	A (9.4)

**Turning movements associated with the Oxford Village Circle development were conservatively assumed to be 10 vehicles per movement based on trip generation for 46 multi-family (low-rise) apartments*

Table 16 – *HCS 7* Intersection Capacity Analysis Results – PM Peak Hour				
Intersection	**Approach**	**Existing 2021 Conditions**	**Background 2025 Conditions**	**Future 2028 Conditions**
James Campbell Boulevard at Old Williamsport Pike (Unsignalized)	Eastbound STOP	D (27.1)	E (46.6)	F (611.7)
	Westbound STOP	F (90.0)	F (256.5)	F (380.9)
	Northbound Left-Turn	B (10.7)	B (11.9)	B (13.2)
	Southbound Left-Turn	B (14.1)	C (15.9)	C (16.5)
Hampshire Pike at Driveway A	Eastbound Left-Turn	--	--	B (10.8)
	Westbound Left-Turn*	--	--	A (8.8)
	Northbound STOP*	--	--	E (47.8)
	Southbound STOP	--	--	F (323.7)
Old Williamsport Pike at Driveway B	Westbound Left-Turn	--	--	A (7.4)
	Northbound STOP	--	--	A (8.6)

**Turning movements associated with the Oxford Village Circle development were conservatively assumed to be 10 vehicles per movement based on trip generation for 46 multi-family (low-rise) apartments*

The minor street approaches at the unsignalized intersection of James Campbell Boulevard at Old Williamsport Pike currently operate and are projected to operate at low levels-of-service for both the background and future conditions. The intersection geometry currently provides separate right-turn lanes for both minor street approaches. Low LOS for minor street approaches is not uncommon, as vehicles may experience a delay turning onto a major roadway.

10.2 Queuing Analysis

The *Highway Capacity Manual 6th Edition* provides insight and guidance regarding the back of queue for both signalized and unsignalized intersections.

Signalized:

"The back-of-queue position is the position of the vehicle stopped farthest from the stop line during the cycle as a consequence of the display of a red signal indication. The back-of-queue size depends on the arrival pattern of vehicles and on the number of vehicles that do not clear the intersection during the previous cycle." (Source: *Highway Capacity Manual 6th Edition*, Chapter 19)

Unsignalized:

"Queue length is an important consideration at unsignalized intersections. Theoretical studies and empirical observations have demonstrated that the probability distribution of queue lengths for any minor movement at an unsignalized intersection is a function of the capacity of the movement and the volume of traffic being served during the analysis period." (Source: *Highway Capacity Manual 6th Edition*, Chapter 20)

A queuing analysis was performed using the *Synchro 10* software to evaluate and determine the forecasted 50th percentile queue lengths and 95th percentile queue lengths. The queue lengths are summarized in **Table 17** and **Table 18**, respectively. The 50th and 95th percentile queuing reports are included in **Appendix F**.

Table 17 – Queue Length Results – AM Peak Hour

Intersection		Existing Storage Length	50th Percentile			95th Percentile		
			Exist. 2021	Back. 2025	Future 2025	Exist. 2021	Back. 2025	Future 2025
Hampshire Pike at Lion Parkway /Iberia Drive	Eastbound Left-Turn	300	0	0	0	2	2	2
	Eastbound Right-Turn/Thru	--	688	1,066	1,093	1,062	1,409	1,437
	Westbound Left-Turn	215	85	100	100	161	175	175
	Westbound Right-Turn/Thru	--	119	181	195	249	331	356
	Northbound Left-Turn/Thru	--	163	184	184	268	329	329
	Northbound Right-Turn	150	0	0	0	49	52	52
	Southbound	--	10	10	10	30	33	33
Hampshire Pike at James Campbell Boulevard	Eastbound Left-Turn	180	120	176	252	183	245	340
	Eastbound Right-Turn/Thru	--	411	588	716	640	895	1,016
	Westbound Left-Turn	100	59	69	72	101	134	135
	Westbound	--	161	215	240	258	311	332
	Westbound Right-Turn	140	16	28	29	67	84	84
	Northbound Left-Turn	120	189	238	258	295	391	419
	Northbound	--	216	259	266	288	328	328
	Northbound Right-Turn	130	15	24	25	64	78	78
	Southbound Left-Turn	150	232	294	305	418	487	487
	Southbound Right-Turn/Thru	--	471	685	744	664	836	870
James Campbell Boulevard at Industrial Park Road	Eastbound Left-Turn	140	82	107	172	250	388	842
	Eastbound Right-Turn/Thru	--	19	24	25	57	68	72
	Westbound	--	56	67	69	114	130	133
	Northbound	--	5	6	6	23	25	25
	Southbound Left-Turn/Thru	130	75	84	84	144	157	157
	Southbound Right-Turn	--	468	670	747	754	995	1,086

NOTE: All numbers represent distance in feet

Table 18 – Queue Length Results – PM Peak Hour

Intersection		Existing Storage Length	50th Percentile			95th Percentile		
			Exist. 2021	Back. 2025	Future 2025	Exist. 2021	Back. 2025	Future 2025
Hampshire Pike at Lion Parkway /Iberia Drive	Eastbound Left-Turn	300	1	1	1	3	3	3
	Eastbound Right-Turn/Thru	--	304	499	532	451	782	929
	Westbound Left-Turn	215	10	12	12	21	23	23
	Westbound Right-Turn/Thru	--	175	292	305	335	565	591
	Northbound Left-Turn/Thru	--	354	457	457	537	653	653
	Northbound Right-Turn	150	0	0	0	23	28	28
	Southbound	--	2	2	2	13	13	13
Hampshire Pike at James Campbell Boulevard	Eastbound Left-Turn	180	123	172	213	175	233	283
	Eastbound Right-Turn/Thru	--	368	507	560	497	732	815
	Westbound Left-Turn	100	61	68	68	98	105	105
	Westbound	--	179	256	296	264	356	391
	Westbound Right-Turn	140	31	61	71	89	128	137
	Northbound Left-Turn	120	320	473	548	515	671	730
	Northbound	--	270	328	344	363	424	424
	Northbound Right-Turn	130	4	12	12	45	57	57
	Southbound Left-Turn	150	114	131	135	178	196	196
	Southbound Right-Turn/Thru	--	455	677	803	577	804	894
James Campbell Boulevard at Industrial Park Road	Eastbound Left-Turn	140	112	174	265	606	956	1,097
	Eastbound Right-Turn/Thru	--	15	18	19	52	62	63
	Westbound	--	49	62	64	105	128	133
	Northbound	--	8	9	9	33	36	36
	Southbound Left-Turn/Thru	130	28	31	31	72	77	77
	Southbound Right-Turn	--	49	185	425	218	532	775

NOTE: All numbers represent distance in feet

The queue analyses demonstrate significant queuing for vehicles making a northbound left-turn and southbound left-turn at the intersection of Hampshire Pike at James Campbell Boulevard. This is likely due to the high volume of vehicles turning for each movement that must be served by a protected-only left-turn phase.

10.3 Analysis with Improvements

An alternate traffic analysis was performed for the intersections of Hampshire Pike at Lion Parkway/Iberia Drive, Hampshire Pike at James Campbell Boulevard, and James Campbell Boulevard at Industrial Park Road. These improvements were identified due to the Level of Service (LOS) based on the Background 2025 scenario.

- Hampshire Pike at Lion Parkway/Iberia Drive
    - Construct one (1) eastbound right-turn lane.
        - Adjust signal timings as necessary after lane modifications.
    - Provide an overlap phase for the northbound right-turn movement.
    - *Development traffic is not anticipated to utilize this turning movement and this improvement does not mitigate impacts from development traffic. This improvement may be planned by local jurisdictions to be implemented in the future.*

- Hampshire Pike at James Campbell Boulevard
    - Construct one (1) southbound right-turn lane.
        - Adjust signal timings as necessary after lane modifications.
    - Provide right-turn overlap phases for the northbound, southbound, and westbound approaches
    - *Due to ROW, waterway, and retaining wall constraints, this improvement is recommended to be planned by local jurisdictions.*

- James Campbell Boulevard at Industrial Park Road
    - Restripe the southbound shared through/left-turn lane along Industrial Park Road to provide a shared left/through/right-turn lane
        - Adjust signal timings as necessary after lane modifications.

Additional driveway improvements were identified due to LOS based on the Future 2025 scenario.

- Hampshire Pike at Driveway A
    - Construct one (1) eastbound left-turn lane.
    - Construct one (1) westbound right-turn lane.
    - Construct one (1) southbound left-turn lane.
    - Traffic signal with protected-permitted left-turn phasing on all approaches.

- James Campbell Boulevard at Old Williamson Pike
    - Construct one (1) northbound left-turn lane

A summary of the Synchro capacity analyses with these improvements are provided in **Table 19** and **Table 20** for the Background 2025 and Future 2025 scenarios. A summary of the HCS capacity analyses with these improvements are provided in **Table 21** and **Table 22** for the Background 2025 and Future 2025 scenarios.

Table 19 – *Synchro 10* Intersection Capacity Analysis Results – With Improvements – AM Peak Hour			
Intersection	**Approach**	**Background 2025 Conditions**	**Future 2025 Conditions**
Hampshire Pike at Lion Parkway /Iberia Drive (Signalized)	Eastbound	C (24.9)	C (25.6)
	Westbound	B (15.3)	B (15.6)
	Northbound	D (41.5)	D (41.0)
	Southbound	C (30.6)	C (30.6)
	Overall	C (24.5)	C (24.6)
Hampshire Pike at James Campbell Boulevard (Signalized)	Eastbound	D (43.5)	D (50.7)
	Westbound	D (35.7)	D (44.1)
	Northbound	E (68.0)	E (68.7)
	Southbound	E (73.9)	E (74.0)
	Overall	E (59.9)	E (62.5)
James Campbell Boulevard at Old Williamsport Pike (Unsignalized)	Eastbound STOP		F (105.4)
	Westbound STOP		D (31.8)
	Northbound Left-Turn		C (16.3)
	Southbound Left-Turn		B (10.5)
James Campbell Boulevard at Industrial Park Road (Signalized)	Eastbound	B (10.9)	C (21.6)
	Westbound	C (22.1)	C (32.3)
	Northbound	F (92.1)	F (92.1)
	Southbound	D (35.8)	C (23.0)*
	Overall	C (23.9)	C (24.1)*
Hampshire Pike at Driveway A	Eastbound	--	C (23.6)
	Westbound	--	B (19.7)
	Northbound	--	D (46.8)
	Southbound	--	D (41.8)
	Overall	--	C (23.8)

**Adding volume to a movement that experience lower delay can adjust the weighting of that movement in the LOS and delay calculations.*

Table 20 – *Synchro 10* Intersection Capacity Analysis Results – With Improvements – PM Peak Hour			
Intersection	**Approach**	**Background 2025 Conditions**	**Future 2025 Conditions**
Hampshire Pike at Lion Parkway /Iberia Drive (Signalized)	Eastbound	C (23.4)	C (24.1)
	Westbound	B (17.0)	B (16.7)
	Northbound	F (249.5)	F (249.5)
	Southbound	C (31.8)	C (31.8)
	Overall	E (64.9)	E (64.1)*
Hampshire Pike at James Campbell Boulevard (Signalized)	Eastbound	D (50.5)	E (60.9)
	Westbound	D (45.2)	E (55.3)
	Northbound	E (56.2)	E (58.0)
	Southbound	E (73.8)	E (74.0)
	Overall	E (58.9)	E (63.4)
James Campbell Boulevard at Old Williamsport Pike (Unsignalized)	Eastbound STOP		F (51.3)
	Westbound STOP		E (42.8)
	Northbound Left-Turn		B (13.2)
	Southbound Left-Turn		C (16.5)
James Campbell Boulevard at Industrial Park Road (Signalized)	Eastbound	C (23.4)	D (35.3)
	Westbound	C (32.7)	D (48.6)
	Northbound	F (86.5)	F (86.9)
	Southbound	B (16.5)	B (10.9)*
	Overall	C (23.9)	C (31.4)
Hampshire Pike at Driveway A	Eastbound	--	A (1.9)
	Westbound	--	B (17.6)
	Northbound	--	D (51.9)
	Southbound	--	D (47.7)
	Overall	--	B (14.4)

**Adding volume to a movement that experience lower delay can adjust the weighting of that movement in the LOS and delay calculations.*

The signalized intersection of Hampshire Pike at Lion Parkway/Iberia Drive is projected to operate at LOS E after improvements which is due to the high delay experienced by the northbound approach. However, because the opposing volume from the southbound approach is minimal, this is likely an unrealistic result and a limitation of the capacity analysis software. Additionally, field observations confirmed that the northbound left-turn queue typically cleared every cycle during the PM peak.

The signalized intersection of Hampshire Pike at James Campbell Boulevard is projected to operate at LOS E after improvements. Due to the physical constraints at the intersection such as the stream and bridge structure to the west and business and driveway locations to the east, this intersection should continue to be monitored for additional background improvements and/or conduct a more focused study of the intersection.

The Future 2025 Intersection Geometry is illustrated in **Figure 10**.

LEGEND

- Existing Intersection Geometry
- Background Intersection Geometry
- Future Intersection Geometry
- Existing Traffic Signal Control
- Future Traffic Signal Control
- Existing Stop Control
- Future Stop Control

Industrial Park Road

James Campbell Blvd

Old Williamsport Pike

Driveway B

Driveway A

Iberia Dr

Hampshire Pike

Hampshire Pike

James Campbell Blvd

1 2 3 4 5 6

Figure 10

Future 2025 Intersection Geometry

Hampshire Pike Mixed-Use
Traffic Impact Analysis

Kimley»Horn

NORTH

NOT TO SCALE

11.0 INTERSECTION SIGHT DISTANCE

Intersection sight distance has been measured using methodology provided in Chapter 3.2 and Chapter 9.5 of *A Policy on Geometric Design of Highways and Streets, 6th Edition (2011)*, published by the American Association of State Highways and Transportation Officials (AASHTO). This methodology is also consistent with TDOT Standard Roadway Drawings for Intersection Sight Distance. The height of the driver's eye is considered to be 3.5 feet above the road surface, and the object height is also considered to be 3.5 feet. The location of the driver on the minor road is considered to be a minimum of 14.5 feet from the edge of traveled way along the major road.

Hampshire Pike a two (2) lane undivided roadway with a posted speed limit of 40 MPH; the minimum intersection sight distance is:

- 445 feet, using passenger vehicle as the design vehicle.

Old Williamsport Pike a two (2) lane undivided roadway with a posted speed limit of 35 MPH; the minimum intersection sight distance is:

- 390 feet, using passenger vehicle as the design vehicle.

The following field measurements were obtained for intersection sight distance:

- Hampshire Pike at Driveway A
    - Looking to the left (east), intersection sight distance is greater than 800 feet.
    - Looking to the right (west), intersection sight distance is greater than 1,000 feet.
- Old Williamsport Pike at Driveway B
    - Looking left (to the west) the intersection sight distance is greater than 450 feet.
    - Looking right (to the east) the intersection sight distance is greater than 700 feet.

12.0 RECOMMENDATIONS

Related to the proposed development, the following mitigation improvements will improve traffic operations under the Future 2025 scenario and are to be constructed by the proposed development:

Hampshire Pike (SR 50) at James Campbell Boulevard

- Reconstruct north leg median nose with an 8' radius to reduce median length by approximately 13 feet to better facilitate vehicle turning movements. Relocate existing wood pole with dual arm luminaire and reconnect traffic signal span wire. Reconstruct south leg median nose with an 8' radius to reduce median length by approximately 15 feet to better facilitate vehicle turning movements.
    - *This improvement was added based on input from City staff and Planning Commission.*

James Campbell Boulevard at Old Williamsport Pike

- Construct a northbound left-turn lane with 100 feet of storage.

James Campbell Boulevard at Industrial Park Road

- Restripe the southbound shared through/left-turn lane along Industrial Park Road to provide a shared left/through/right-turn lane. Adjust signal timings as necessary after lane modifications.

Hampshire Pike at Driveway A

- Construct a westbound right-turn lane along Hampshire Pike with 125 feet of storage.
- Construct an eastbound left-turn lane along Hampshire Pike with 100 feet of storage.
- Construct a westbound left-turn lane along Hampshire Pike with 100 feet of storage.
- Construct Driveway A with three (3) lanes for vehicular movement: one (1) lane for vehicle ingress and two (2) for vehicle egress.
- Construct a traffic signal with protected-permitted left-turn phasing on all approaches.
- Install signs and pavement markings in accordance with the standards provided in the *Manual on Uniform Traffic Control Devices* (MUTCD).

Old Williamsport Pike at Site Driveway B

- Construct Site Driveway B with two (2) lanes for vehicular movement: one (1) lane for vehicle ingress and one (1) for vehicle egress.
- Provide STOP control along the northbound approach of Site Driveway B.
- Construct a westbound left-turn lane along Old Williamsport Pike with 100 feet of storage.
- Provide adequate intersection sight distance in accordance with the criteria provided in *A Policy on Geometric Design of Highways and Streets*.

Unrelated to the proposed development, the following improvements are proposed to improve operations under the Background 2025 scenario and not proposed to be constructed as part of this development:

Hampshire Pike at Lion Parkway/Iberia Drive

- Construct one (1) eastbound right-turn lane.
    - Adjust signal timings as necessary after lane modifications.
- Provide an overlap phase for the northbound right-turn movement.
- *Development traffic is not anticipated to utilize this turning movement and this improvement does not mitigate impacts from development traffic. This improvement may be planned by local jurisdictions to be implemented in the future. See section 10.3 in the report for additional information.*

Hampshire Pike at James Campbell Boulevard

- Construct one (1) southbound right-turn lane.
    - Adjust signal timings as necessary after lane modifications.
- Provide right-turn overlap phases for the northbound, southbound, and westbound approaches
- *Due to ROW, waterway, and retaining wall constraints, this improvement is recommended to be planned by local jurisdictions. See section 10.3 in the report for additional information.*

Appendix A

Site Plan

SITE DEVELOPMENT PLAN SUBMITTAL

HAMPSHIRE PIKE MIXED USE

HAMPSHIRE PIKE
COLUMBIA, TENNESSEE

SITE DEVELOPMENT PLAN SUBMITTAL REQUIREMENTS

SITE DATA TABLE		
SITE ADDRESS	HAMPSHIRE PIKE COLUMBIA, TENNESSEE, 38401	
TAX MAP	MAP 089 PARCEL 04103 000	
OVERALL AREA	EXISTING	PROPOSED
SITE AREA	24.01 AC AC	24.01 AC AC
DISTURBED AREA	N/A	19.3 AC
IMPERVIOUS AREA	0 AC	8.56 AC
PERVIOUS AREA	24.01 AC	15.45 AC
BUILDING DATA	REQUIRED	PROVIDED
UNIT DENSITY	15 DUA	
TOTAL UNITS	360 UNITS	
BUILDING SETBACKS	REQUIRED	PROVIDED
FRONT: NORTH	20 FT	20 FT
REAR: SOUTH	20 FT	20 FT
SIDE: EAST	10 FT	5 FT
SIDE: WEST	10 FT	5 FT
MINIMUM BUILDING SEPARATION	20 FT	34'

EXISTING PROPERTY SUMMARY	
PROPERTY ADDRESS:	HAMPSHIRE PIKE COLUMBIA, TENNESSEE
MAP AND PARCEL ID:	MAP 089, PARCEL 04103 000
U.S. FEMA FIRM PANEL:	47119C0280E DATED 4/16/2007
EXISTING ZONING:	MRC
EXISTING LAND USE:	MULTIFAMILY

SITE DATA TABLE

PROJECT NAME:	STEADFAST - HAMPSHIRE PIKE
PARCEL ADDRESS:	HAMPSHIRE PIKE COLUMBIA, TENNESSEE
TAX MAP AND PARCEL NUMBER:	MAP 089, PARCEL 4103
ZONING:	MRC
LAND USE:	MULTI-FAMILY
SITE ACREAGE:	24.01 AC (1,045,757 SF)
PROPOSED BUILDING SF:	# SF
- CLUBHOUSE (1)	9,188 SF
- LONG APARTMENT BUILDING: (12)	9,864 SF
- SHORT APARTMENT BUILDING: (3)	8,949 SF
PROPOSED BUILDING HEIGHT:	45' HT MAX
PARKING REQUIRED: 1.5 SPACES PER 2 BEDROOMS	
- 1 BEDROOM UNITS / BEDROOMS =	108 UNITS / 108 BEDROOMS
- 2 BEDROOM UNITS / BEDROOMS =	180 UNITS / 360 BEDROOMS
- 3 BEDROOM UNITS / BEDROOMS =	72 UNITS / 216 BEDROOMS
- TOTAL UNITS / BEDROOMS =	360 UNITS / 684 BEDROOMS
TOTAL PARKING REQUIRED:	513 TOTAL SPACES 9 ADA SPACES
TOTAL PARKING PROVIDED:	530 TOTAL SPACES 519 STANDARD SPACES 11 ACCESSIBLE SPACE
PROPERTY SETBACKS:	20' FRONT / STREET 10' SIDE 20' REAR
OPEN SPACE:	64.4% (673,160 SF)
LOT BUILDING COVERAGE:	14.76% (154,403 SF)
IMPERVIOUS SITE AREA:	35.6% (372,716 SF)



VICINITY MAP
NOT TO SCALE

Sheet List Table	
Sheet Number	Sheet Title
C0-00	COVER
C1-00	EXISTING CONDITIONS
C1-01	MASS GRADING
C2-00	SITE LAYOUT - OVERALL
C3-00	GRADING AND DRAINAGE PLAN - OVERALL
C4-00	UTILITY PLAN - OVERALL
A1.0	ARCHITECTURAL ELEVATIONS

CITY OF COLUMBIA
MAURY COUNTY, TENNESSEE

PROJECT DESIGN TEAM

ARCHITECT
CBTWO ARCHITECTS
500 LIBERTY ST. SE, SUITE 100
SALEM, OREGON 97301
PHONE: (503) 480-8700
CONTACT: KIRK SUND, A.I.A.

CIVIL ENGINEER
KIMLEY-HORN AND ASSOCIATES, INC.
10 LEA AVENUE, SUITE 400
NASHVILLE, TENNESSEE 37210
PHONE: (615) 564-2701
CONTACT: KELLEY FRANK, P.E.
COLTON DORRIS, E.I.

SURVEY
WILSON & ASSOCIATES, P.C.
108 BEASLEY DRIVE
FRANKLIN, TN 37064
PHONE: (615) 794-2275
CONTACT: JOEY C. WILSON II, PLS

ENVIRONMENTAL
BDY NATURAL SCIENCES CONSULTANTS
2607 WESTWOOD DRIVE
NASHVILLE, TENNESSEE
PHONE: (615)460-9797
CONTACT: SAMUEL K. PARISH, PG, CPESC

PERMITTING / UTILITY CONTACTS

BUILDING DEPT.
CITY OF COLUMBIA
DEVELOPMENT SERVICES
700 N GARDEN ST,
COLUMBIA, TN 38401
PHONE: (931) 560-1500
CONTACT: PAUL KELTNER
EMAIL: PAUL@COLUMBIATN.COM

STORMWATER
CITY OF COLUMBIA
700 N GARDEN STREET,
COLUMBIA, TN 38401
PHONE: (931) 560-1500
CONTACT: DOUGLAS TONEY
EMAIL: DTONEY@COLUMBIATN.COM

WATER
COLUMBIA POWER AND WATER SYSTEMS
201 PICKENS LANE,
COLUMBIA, TN 38401
PHONE: (931) 375-7649
CONTACT: JERMAINE COOPER
EMAIL: JERMAINE.COOPER@CPWS.COM

SANITARY SEWER
CITY OF COLUMBIA WASTEWATER DEPARTMENT
700 N GARDEN STREET,
COLUMBIA, TN 38401
PHONE: (931) 560-1500
CONTACT: RYAN FILIPKOWSKI
EMAIL: RFILIPKOWSKI@COLUMBIATN.COM

PLANNING AND ZONING
CITY OF COLUMBIA PLANNING DEPARTMENT
700 N GARDEN STREET,
COLUMBIA, TN 38401
PHONE: (931) 560-1500
CONTACT: KEVIN MCCARTHY
EMAIL: KMCCARTHY@COLUMBIATN.COM

FIRE CHIEF
CITY OF COLUMBIA FIRE AND RESCUE
1000 S GARDEN ST,
COLUMBIA, TN 38401
PHONE: (931) 560-1700
CONTACT: TY COBB
EMAIL: TCOBB@COLUMBIATN.COM

TDOT
TENNESSEE DEPARTMENT OF TRANSPORTATION
REGION 3 TRAFFIC ENGINEER
660 CENTENNIAL BLVD
NASHVILLE, TN 37243
PHONE: (615) 350-4300

NATURAL GAS
ATMOS ENERGY
810 CRESCENT CENTER DR, #600,
FRANKLIN, TN 37064
PHONE: (615) 509-4051
CONTACT: ABBY DAVIS
EMAIL: ABBY.DAVIS@ATMOSENERGY.COM

TELECOMMUNICATIONS
AT&T
904 S HIGH STREET,
COLUMBIA, TN 38401
PHONE: (931) 380-3448
CONTACT: BRIAN GOMEZ
EMAIL: BG3893@ATT.COM

ELECTRIC
COLUMBIA POWER AND WATER SYSTEMS
201 PICKENS LANE,
COLUMBIA, TN 38401
PHONE: (931) 375-7649
CONTACT: JERMAINE COOPER
EMAIL: JERMAINE.COOPER@CPWS.COM

OWNER / DEVELOPER

STEADFAST COMPANIES
18100 VON KARMAN AVE., SUITE 500
IRVINE,CALIFORNIA, 92612
PHONE: 949.518.2191
CONTACT: PATRICK WOEPSE

PLANS PREPARED BY

Kimley»Horn
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ENGINEER'S SEAL

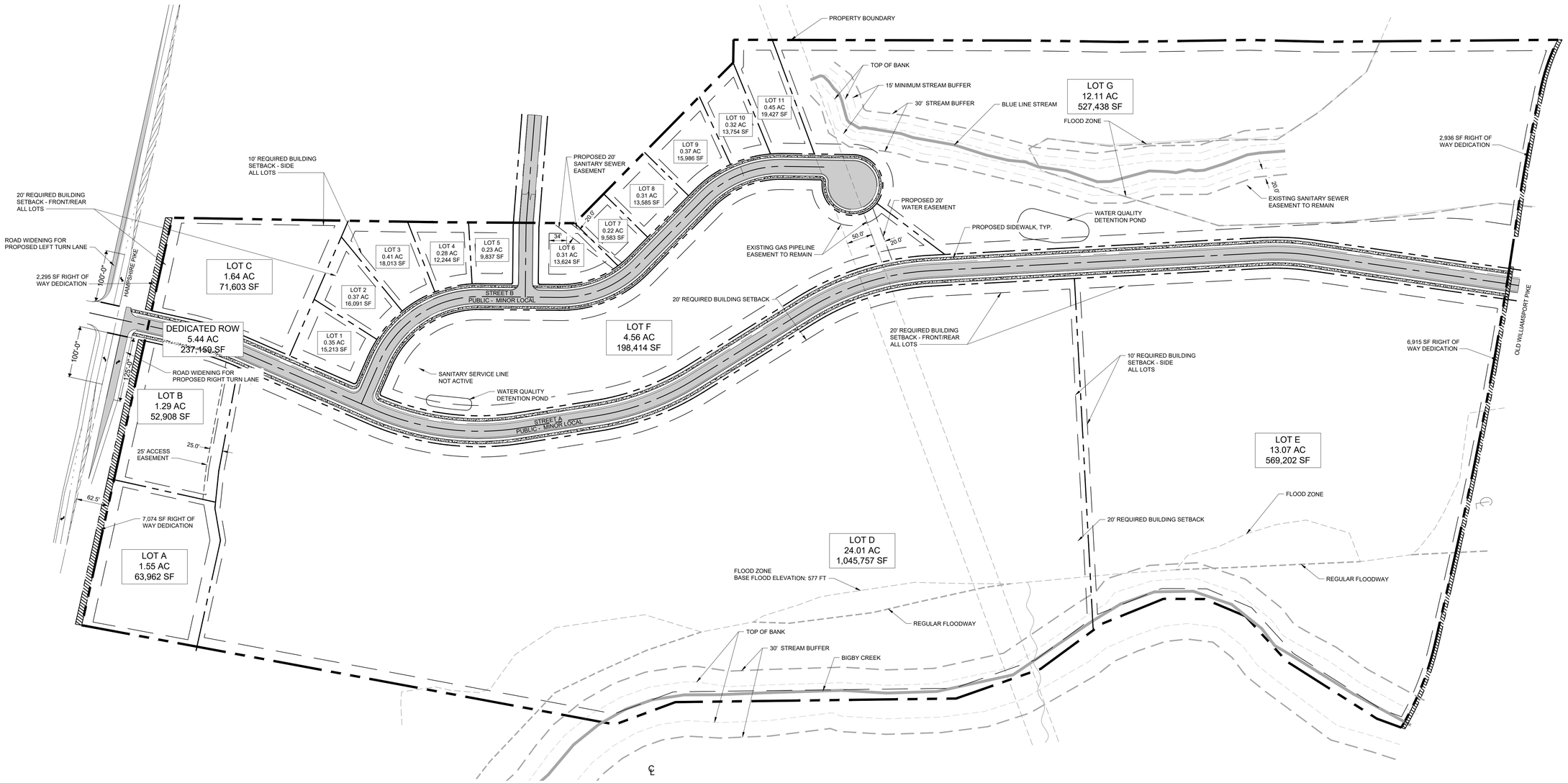
PLAN REVISIONS

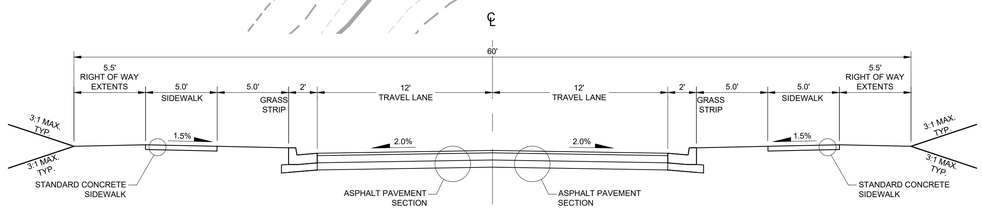
REVISION NO.	DATE	REMARKS

FILE NUMBER	SHEET NUMBER	TOTAL SHEETS
118332003	C0-00	7

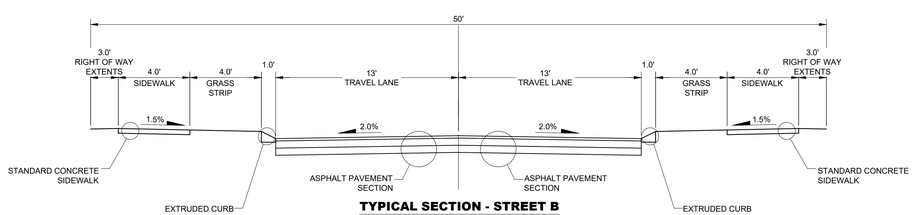
PROJECT NAME - SET DESCRIPTION

Drawing name: K:\NSH_LDEV\118332003 - Steadfast Hampshire Pike\4-CADD\PlanSheets - MF\C0-00 COVER.dwg C0-00 COVER Jun 21, 2022 10:11am by: Colton.Dorris





TYPICAL SECTION - STREET A
ROW = 60'



TYPICAL SECTION - STREET B
ROW = 50'

EXISTING AND PROPOSED LOT INFORMATION

LOT NUMBER	ACREAGE (AC)	SQUARE FOOTAGE (SF)	LOT USE
EXISTING LOT	67.28	2,930,900	--
DEDICATED ROW	5.44	237,159	--
LOT A	1.55	67,581	COMMERCIAL
LOT B	1.29	56,392	COMMERCIAL
LOT C	1.64	71,603	COMMERCIAL
LOT D	24.01	1,045,757	MULTIFAMILY
LOT E	13.07	569,202	VACANT
LOT F	4.56	198,414	VACANT
LOT G	12.11	527,438	VACANT
LOT 1	0.35	15,213	SINGLE FAMILY
LOT 2	0.37	16,091	SINGLE FAMILY
LOT 3	0.41	18,013	SINGLE FAMILY
LOT 4	0.28	12,244	SINGLE FAMILY
LOT 5	0.23	9,837	SINGLE FAMILY
LOT 6	0.31	13,624	SINGLE FAMILY
LOT 7	0.22	9,583	SINGLE FAMILY
LOT 8	0.31	13,585	SINGLE FAMILY
LOT 9	0.37	15,986	SINGLE FAMILY
LOT 10	0.32	13,754	SINGLE FAMILY
LOT 11	0.45	19,427	SINGLE FAMILY

US FEMA FIRM PANEL

U.S. FEMA FIRM PANEL: 47119C0280E DATED 4/16/2007

THE FEATURES SHOWN ON THIS PLAN ARE SCHEMATIC IN NATURE AND ARE TO BE USED FOR PRELIMINARY PLANNING PURPOSES ONLY. ALL FEATURES ARE SUBJECT TO CHANGE BASED ON CONTINUED DESIGN, REVIEW BY AUTHORITIES HAVING JURISDICTION, OR ANY OTHER EVENT OUT OF THE CONTROL OF THE ENGINEER

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HAMPSHIRE PIKE MIXED USE PRELIMINARY PLAT
COLUMBIA, TN

DRAFT
PRELIMINARY PLANS
FOR REVIEW ONLY

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1			
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DESIGNED BY:	KKF
DRAWN BY:	CLD
CHECKED BY:	KKF
DATE:	5/16/2022
KIMLEY-HORN PROJECT NO.	118332003

SITE LAYOUT

SHEET NUMBER
C2-00

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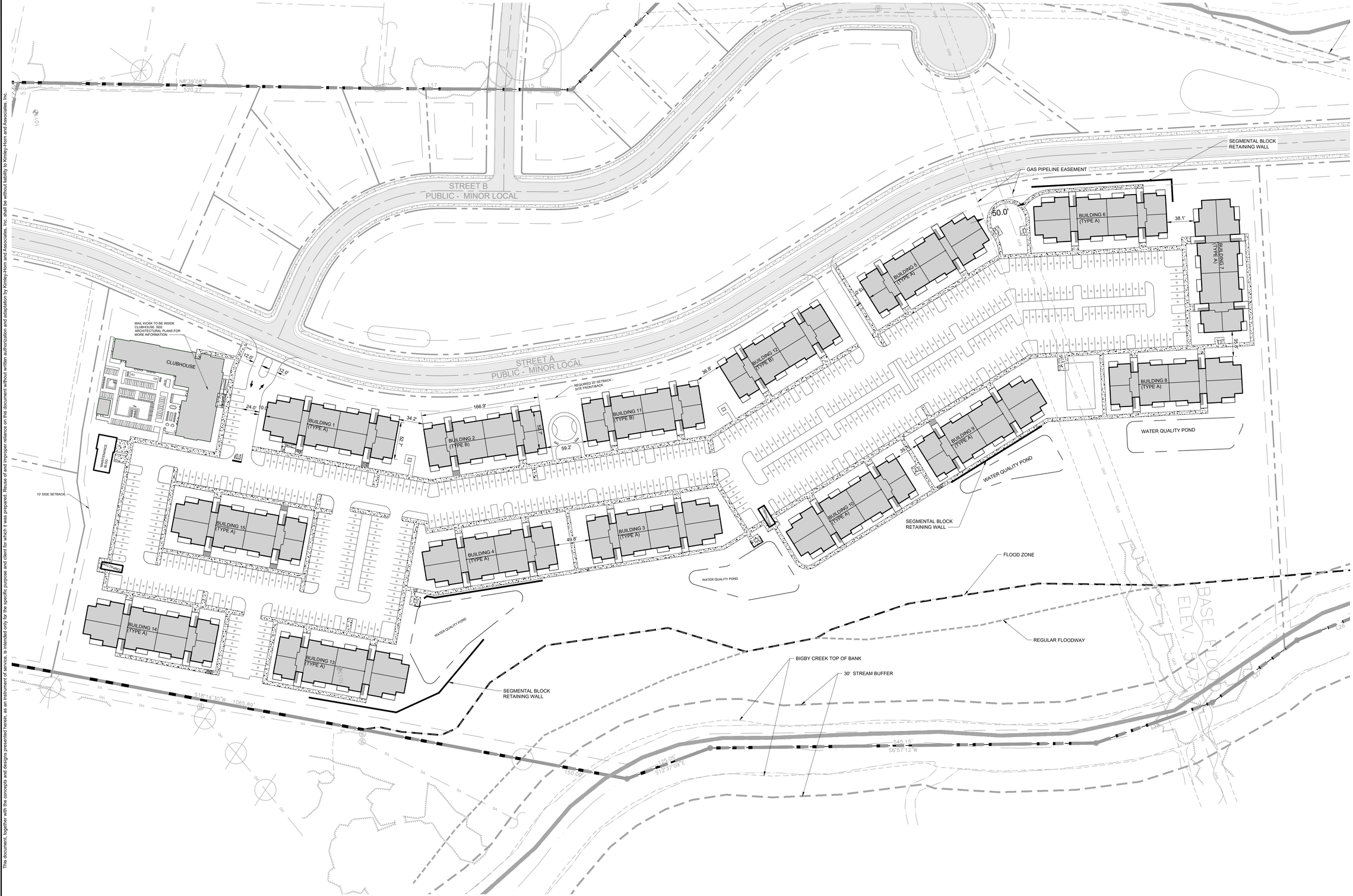

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HAMPSHIRE PIKE MIXED USE
PRELIMINARY PLAT
COLUMBIA, TN

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SITE LAYOUT - OVERALL

SHEET NUMBER
C2-00

Drawing name: K:\NSH_LDEV\118332003 - Steadfast Hampshire Pike\4-CADD\PlanSheets - MF\C2-00 SITE LAYOUT - OVERALL.dwg C2-00 SITE LAYOUT - OVERALL Jun 20, 2022 12:02pm by: Colton.Dorris

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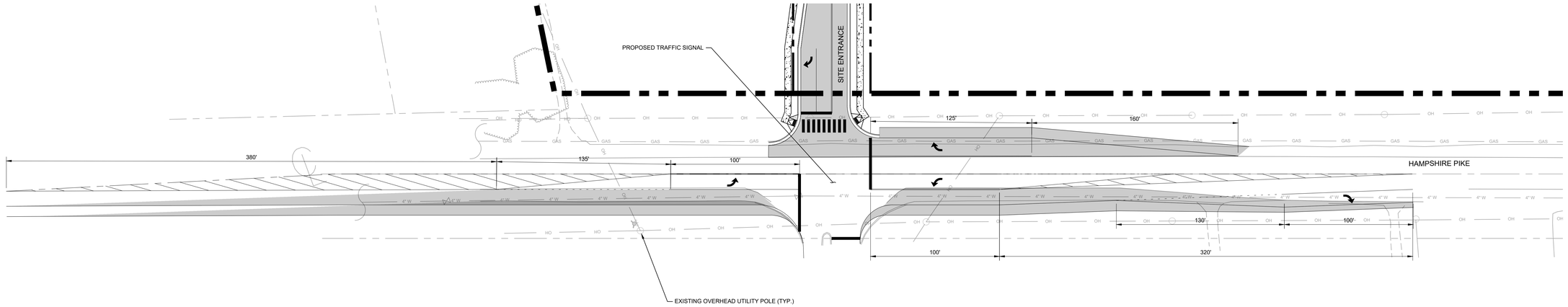

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HAMPSHIRE PIKE MIXED USE
PRELIMINARY PLAT
COLUMBIA, TN

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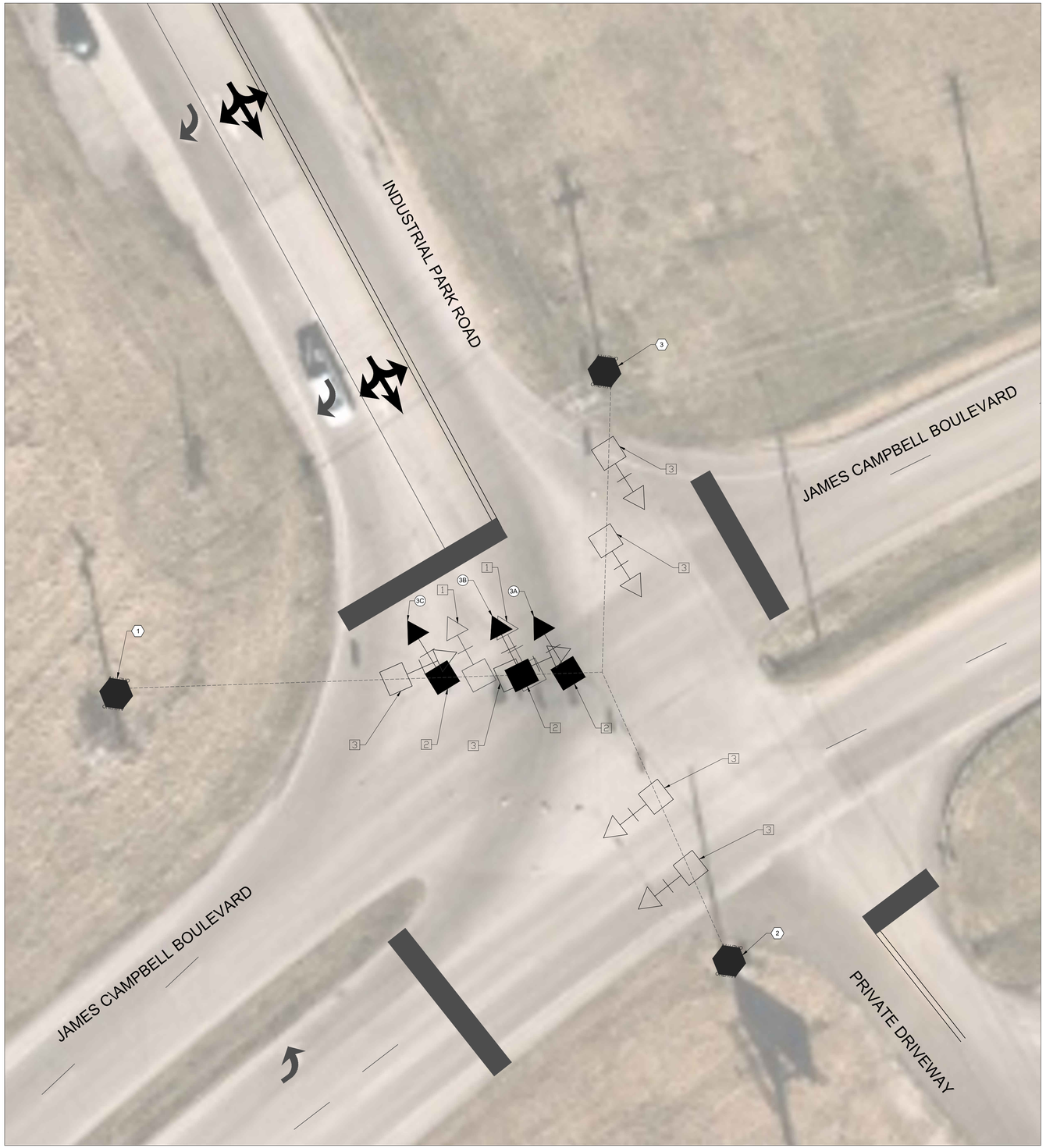
DESIGNED BY:	RAP
DRAWN BY:	AIM
CHECKED BY:	RAP
DATE:	5/16/2022

KIMLEY-HORN PROJECT NO. 118332003

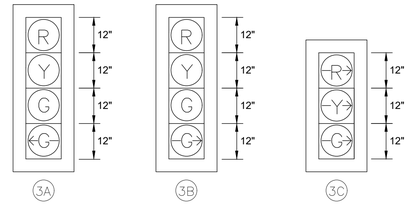
TRAFFIC SIGNAL PLAN - HAMPSHIRE PIKE AT SITE ENTRANCE

SHEET NUMBER
T1-00

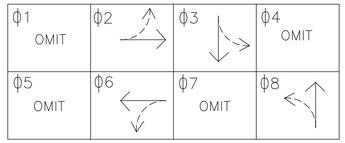


SIGNAL HEAD ASSEMBLIES

N.T.S.



PHASING DIAGRAM



CONSTRUCTION NOTES

1. REMOVE EXISTING SIGNAL HEAD
2. INSTALL SIGNAL HEAD AND REQUIRED CONDUCTOR
3. RETAIN EXISTING SIGNAL HEAD

LEGEND

- EXISTING SIGNAL POLE
- EXISTING SIGNAL HEAD
- PROPOSED SIGNAL HEAD
- EXISTING CONDUIT

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DESIGNED BY:	RAP
DRAWN BY:	AIM
CHECKED BY:	RAP
DATE:	5/16/2022

KIMLEY-HORN PROJECT NO. 118332003

TRAFFIC SIGNAL PLAN - JAMES CAMPBELL BLVD AT INDUSTRIAL WAY

SHEET NUMBER
T2-00

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Drawing name: K:\NSH_LDEV\116332003 - Steadfast Hampshire Pike\4-CAD\Plan\Sheets\T1-00 TRAFFIC SIGNAL PLAN.dwg T3-00 TRAFFIC SIGNAL PLAN Jun 21, 2022 1:37pm by Kelley Frank



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0 10 20 40

NORTH

JAMES CAMPBELL BLVD AT OLD WILLIAMSPORT PIKE

SHEET NUMBER
T3-00

KIMLEY-HORN PROJECT NO.
116332003

DATE
5/16/2022

CHECKED BY: RAP
DRAWN BY: AMF
DESIGNED BY: RAP

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HAMPSHIRE PIKE MIXED USE PRELIMINARY PLAT

COLUMBIA, TN

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HAMPSHIRE PIKE MIXED USE
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COLUMBIA, TN

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DESIGNED BY:	RAP
DRAWN BY:	AIM
CHECKED BY:	RAP
DATE:	6/21/2022

KIMLEY-HORN PROJECT NO.
118332003

HAMPSHIRE PIKE AT JAMES CAMPBELL BLVD

SHEET NUMBER
T4-00

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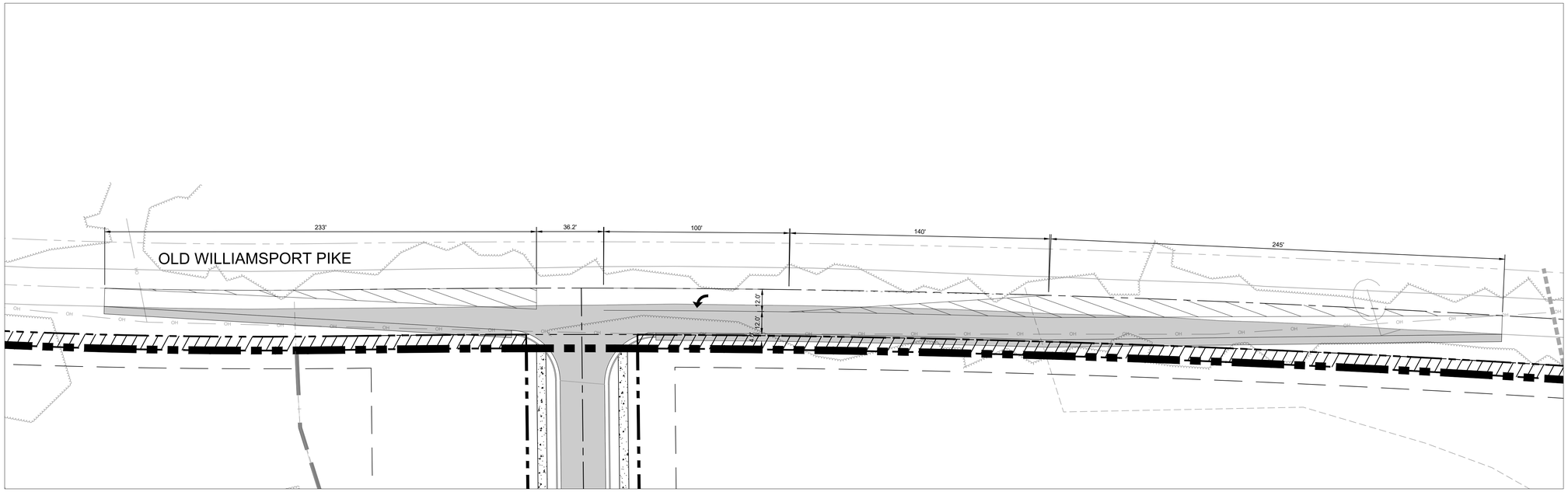

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HAMPSHIRE PIKE MIXED USE
PRELIMINARY PLAT
COLUMBIA, TN

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DESIGNED BY:	RAP
DRAWN BY:	AIM
CHECKED BY:	RAP
DATE:	6/21/2022
KIMLEY-HORN PROJECT NO.	118332003

OLD WILLIAMSPORT PIKE AT SITE ENTRANCE

SHEET NUMBER
T5-00

Appendix B

Photos

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 1 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 1



Comments:

Photo No. 2



Comments:

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Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 2 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 3



Comments:

Photo No. 4



Comments:

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Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 3 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 5



Comments:

Photo No. 6



Comments:

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214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 4 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 7



Comments:

Photo No. 8



Comments:

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214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 5 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 9



Comments:

Photo No. 10



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 6 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 11



Comments:

Photo No. 12



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 7 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 13



Comments:

Photo No. 14



Comments:

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214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 8 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 15



Comments:

Photo No. 16



Comments:

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Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 9 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 17



Comments:

Photo No. 18



Comments:

Kimley»Horn
214 Oceanside Drive
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Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 10 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 19



Comments:

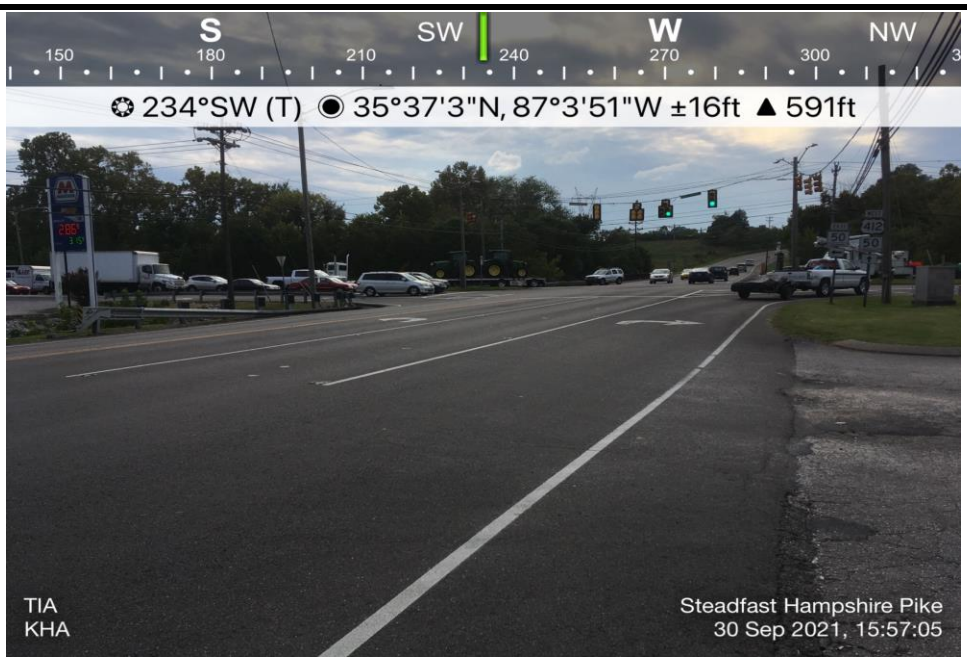
Photo No. 20



Comments:

Site Name: Hampshire Pike Mixed-Use

Photo No. 21



Comments:

Photo No. 22



Comments:

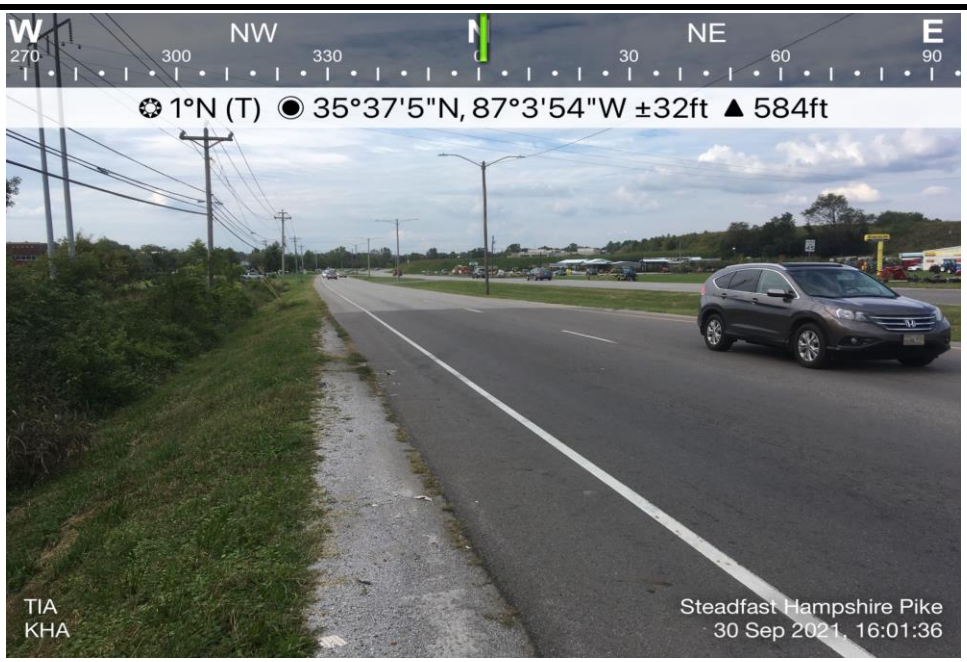
Site Name: Hampshire Pike Mixed-Use

Photo No. 23



Comments:

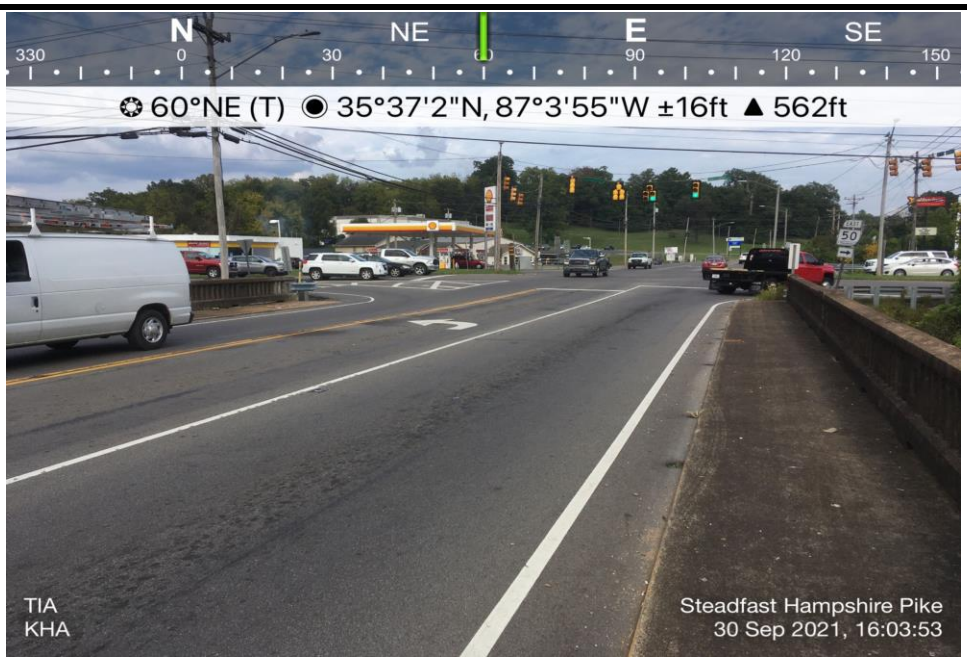
Photo No. 24



Comments:

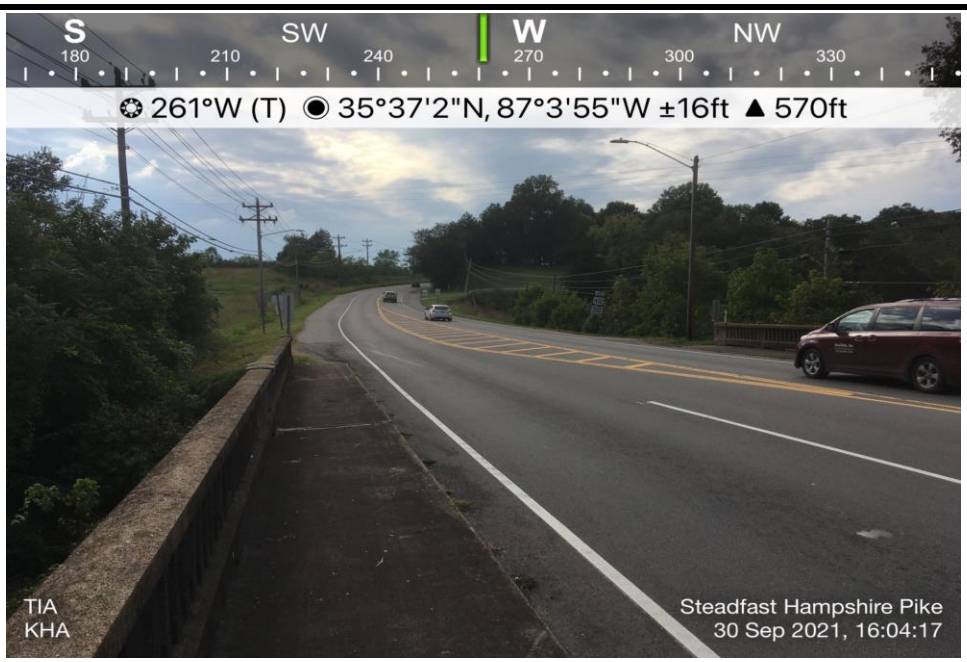
Site Name: Hampshire Pike Mixed-Use

Photo No. 25



Comments:

Photo No. 26



Comments:

Site Name: Hampshire Pike Mixed-Use

Photo No. 27



Comments:

Photo No. 28



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 15 of 20

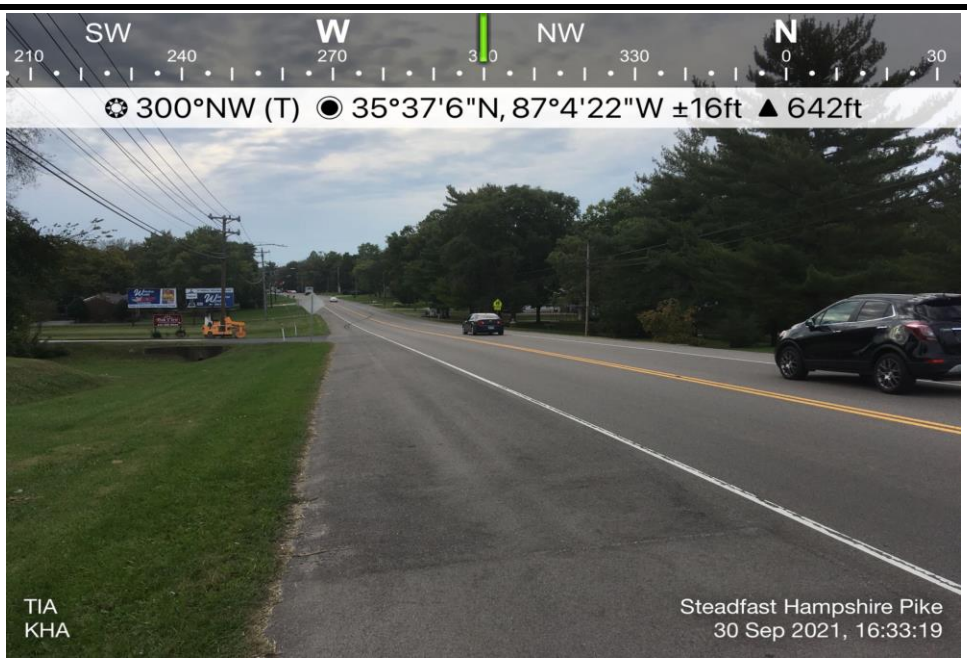
Site Name: Hampshire Pike Mixed-Use

Photo No. 29



Comments:

Photo No. 30



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 16 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 31



Comments:

Photo No. 32



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

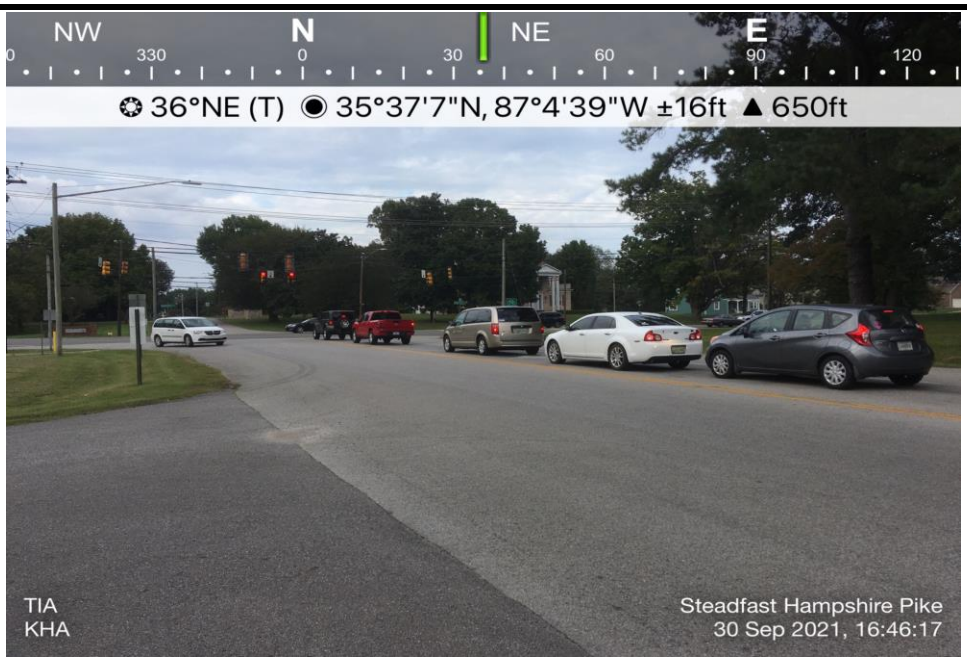
Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 17 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 33



Comments:

Photo No. 34



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 18 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 35



Comments:

Photo No. 36



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 19 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 37



Comments:

Photo No. 38



Comments:

Kimley»Horn
214 Oceanside Drive
Nashville, TN 37204

Steadfast

Photograph Sheet

KHA Job No.: 118332003
KHA Rep.: RAP
Date: September 30, 2021
Page: 20 of 20

Site Name: Hampshire Pike Mixed-Use

Photo No. 39



Comments:

Photo No. 40



Comments:

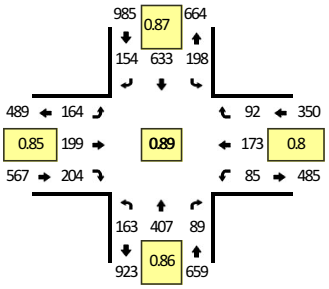
Appendix C

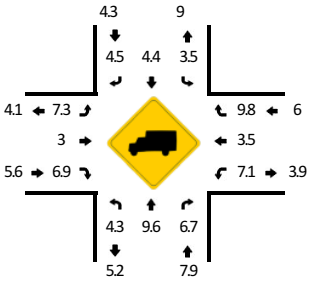
Traffic Data

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

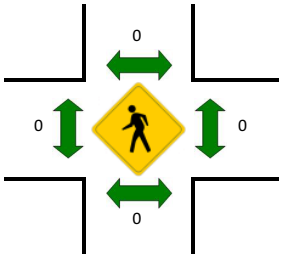
LOCATION: N James Campbell Blvd -- Hampshire Pike | **QC JOB #:** 15562401
CITY/STATE: Columbia, TN | **DATE:** Tue, Sep 14 2021

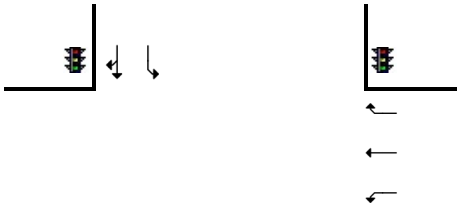
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

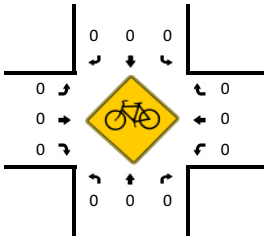


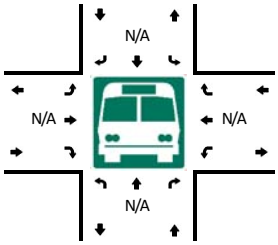


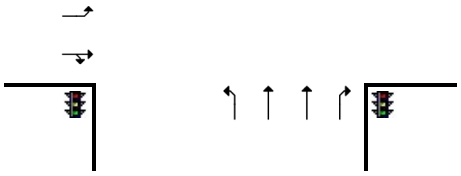
Quality Counts
DATA THAT DRIVES COMMUNITIES

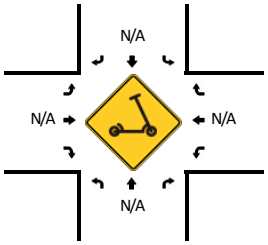












15-Min Count Period Beginning At	N James Campbell Blvd (Northbound)				N James Campbell Blvd (Southbound)				Hampshire Pike (Eastbound)				Hampshire Pike (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	19	78	2	0	11	90	13	0	18	21	36	0	6	10	5	0	309	
6:45 AM	11	83	9	0	16	98	30	0	28	32	38	0	7	23	14	0	389	
7:00 AM	28	91	17	0	19	111	48	0	31	42	33	0	7	23	20	0	470	
7:15 AM	49	86	17	0	50	154	58	1	38	47	60	0	15	48	16	0	639	1807
7:30 AM	41	117	34	0	70	175	39	0	50	49	37	0	23	54	32	0	721	2219
7:45 AM	39	120	25	1	47	179	31	0	55	51	60	0	31	37	37	0	713	2543
8:00 AM	33	84	13	0	30	125	26	0	21	52	47	0	16	34	7	0	488	2561
8:15 AM	26	105	14	0	25	134	20	0	23	36	23	0	16	17	15	0	454	2376

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	164	468	136	0	280	700	156	0	200	196	148	0	92	216	128	0	2884
Heavy Trucks	0	60	16		16	24	8		36	4	4		8	4	24		204
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 9/20/2021 10:10 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

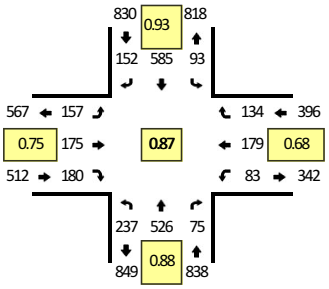
Type of peak hour being reported: Intersection Peak

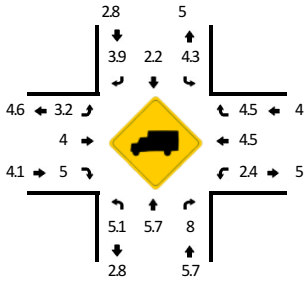
Method for determining peak hour: Total Entering Volume

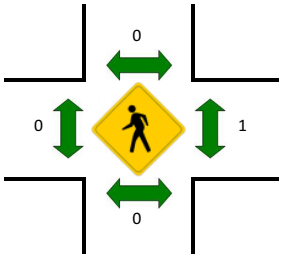
LOCATION: N James Campbell Blvd -- Hampshire Pike
CITY/STATE: Columbia, TN

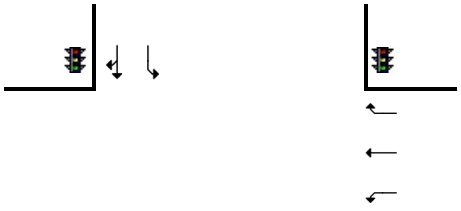
QC JOB #: 15562402
DATE: Tue, Sep 14 2021

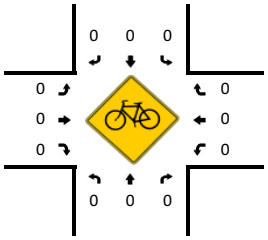
Peak-Hour: 3:00 PM -- 4:00 PM
Peak 15-Min: 3:00 PM -- 3:15 PM

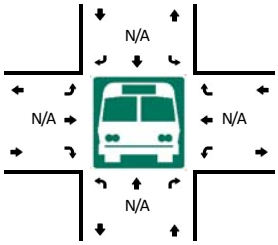


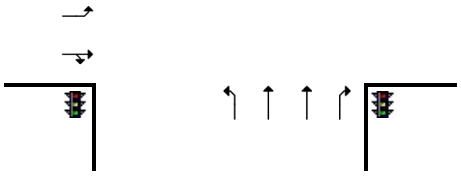


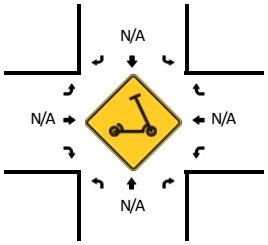












15-Min Count Period Beginning At	N James Campbell Blvd (Northbound)				N James Campbell Blvd (Southbound)				Hampshire Pike (Eastbound)				Hampshire Pike (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	53	129	24	0	26	159	35	0	58	59	54	0	28	46	71	0	742	
3:15 PM	54	134	19	0	16	127	47	0	49	49	58	0	18	37	28	0	636	
3:30 PM	61	110	17	0	29	162	31	1	35	46	44	0	20	45	21	0	622	
3:45 PM	68	153	15	1	21	137	39	0	15	21	24	0	17	51	14	0	576	2576
4:00 PM	59	134	20	0	17	112	44	0	29	40	33	0	25	56	18	0	587	2421
4:15 PM	68	127	18	1	17	150	42	1	21	36	25	0	16	35	29	0	586	2371
4:30 PM	60	131	14	0	27	130	29	1	26	39	45	0	20	52	29	0	603	2352
4:45 PM	55	145	15	0	34	132	51	0	19	44	40	0	23	45	17	0	620	2396
5:00 PM	58	150	19	0	22	171	42	1	24	38	51	0	23	44	28	0	671	2480
5:15 PM	71	148	16	0	21	126	28	0	20	37	39	0	15	56	31	0	608	2502
5:30 PM	63	132	13	1	18	137	32	0	24	34	29	0	11	51	18	0	563	2462
5:45 PM	74	114	11	0	10	110	52	0	22	36	23	0	14	41	16	0	523	2365

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	212	516	96	0	104	636	140	0	232	236	216	0	112	184	284	0	2968
Heavy Trucks	12	12	4		8	12	8		8	12	8		8	16	20		128
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

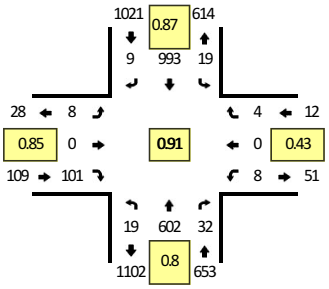
Report generated on 9/20/2021 10:10 AM

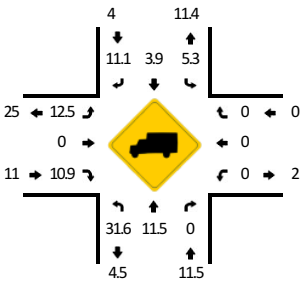
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

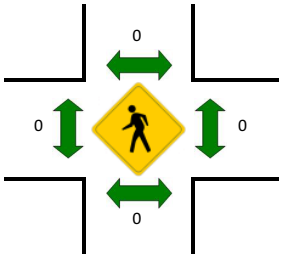
LOCATION: N James Campbell Blvd -- Old Williamsport Pike | **QC JOB #:** 15562403
CITY/STATE: Columbia, TN | **DATE:** Tue, Sep 14 2021

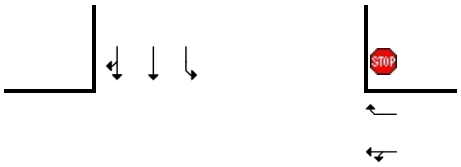
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

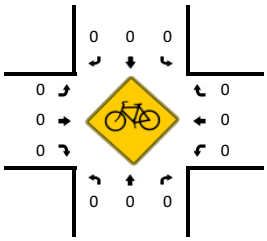


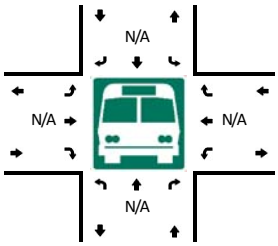


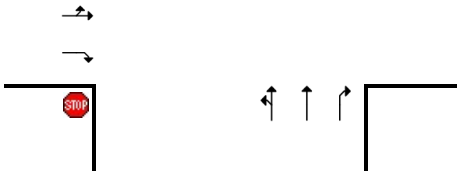
Quality Counts
DATA THAT DRIVES COMMUNITIES

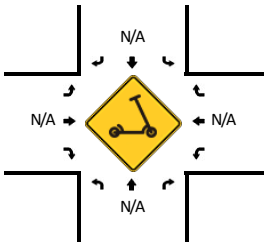












15-Min Count Period Beginning At	N James Campbell Blvd (Northbound)				N James Campbell Blvd (Southbound)				Old Williamsport Pike (Eastbound)				Old Williamsport Pike (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	4	92	5	0	3	124	6	0	2	0	4	0	0	0	1	0	241	
6:45 AM	6	110	3	1	4	167	4	0	3	2	6	0	1	0	1	0	308	
7:00 AM	3	137	4	0	0	177	2	0	6	0	16	0	1	0	0	0	346	
7:15 AM	8	123	5	0	7	279	2	0	0	0	32	0	4	0	3	0	463	1358
7:30 AM	4	153	12	0	4	287	1	0	0	0	28	0	1	0	1	0	491	1608
7:45 AM	4	189	11	0	8	250	4	0	2	0	25	0	2	0	0	0	495	1795
8:00 AM	4	87	9	0	8	175	3	0	1	0	10	0	3	0	0	0	300	1749
8:15 AM	4	117	16	1	11	178	2	0	3	0	12	0	1	0	0	0	345	1631

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	756	44	0	32	1000	16	0	8	0	100	0	8	0	0	0	1980
Heavy Trucks	4	80	0		0	36	0		0	0	8		0	0	0		128
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

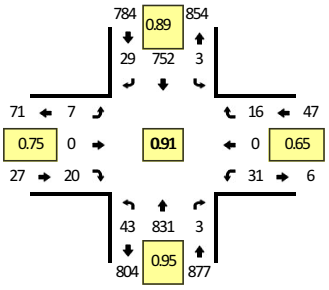
Comments:

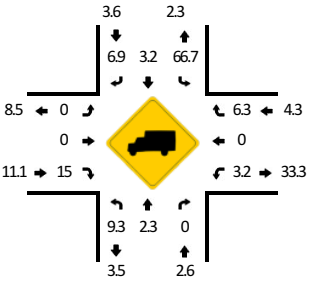
Report generated on 9/20/2021 10:10 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

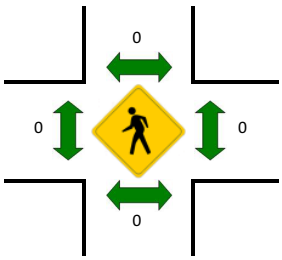
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

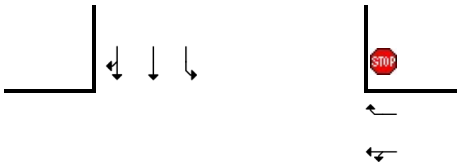
LOCATION: N James Campbell Blvd -- Old Williamsport Pike | **QC JOB #:** 15562404
CITY/STATE: Columbia, TN | **DATE:** Tue, Sep 14 2021

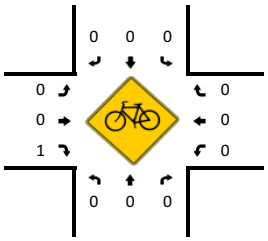
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

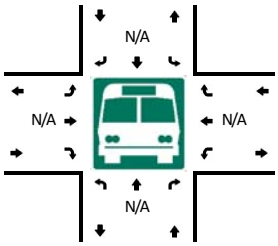


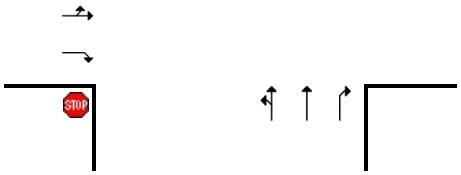


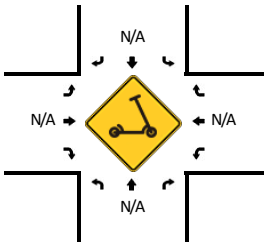












15-Min Count Period Beginning At	N James Campbell Blvd (Northbound)				N James Campbell Blvd (Southbound)				Old Williamsport Pike (Eastbound)				Old Williamsport Pike (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	10	215	8	0	3	208	6	0	2	0	8	0	7	0	4	0	471	
3:15 PM	12	196	10	1	2	171	7	0	1	1	4	0	9	0	4	0	418	
3:30 PM	9	178	4	0	2	219	7	0	11	0	10	0	7	0	3	0	450	
3:45 PM	9	179	6	0	2	166	2	0	4	0	6	0	6	0	13	0	393	1732
4:00 PM	15	184	1	0	4	160	4	0	2	0	6	0	8	0	6	0	390	1651
4:15 PM	11	175	2	0	0	182	2	0	6	0	5	0	6	0	5	0	394	1627
4:30 PM	8	203	1	0	3	186	2	0	1	0	5	0	7	0	5	0	421	1598
4:45 PM	13	203	1	1	0	189	12	0	1	0	4	0	8	0	6	0	438	1643
5:00 PM	9	221	0	0	0	212	9	0	3	0	6	0	14	0	4	0	478	1731
5:15 PM	12	204	1	0	0	165	6	0	2	0	5	0	2	0	1	0	398	1735
5:30 PM	9	172	1	0	0	195	4	0	2	0	5	0	6	0	3	0	397	1711
5:45 PM	10	148	1	0	0	163	4	0	2	0	1	0	1	0	0	0	330	1603

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	36	884	0	0	0	848	36	0	12	0	24	0	56	0	16	0	1912
Heavy Trucks	8	20	0		0	16	0		0	0	8		4	0	0		56
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 9/20/2021 10:10 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

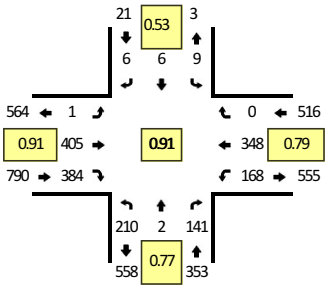
Type of peak hour being reported: Intersection Peak

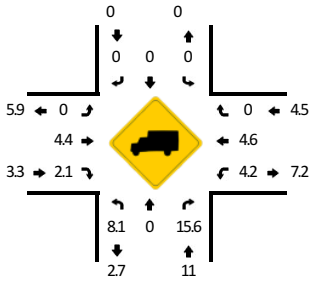
Method for determining peak hour: Total Entering Volume

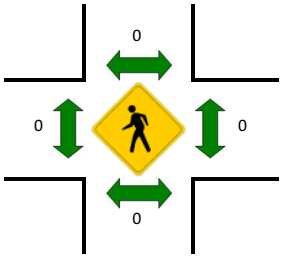
LOCATION: Iberia Dr/Lion Pkwy -- Hampshire Pike
CITY/STATE: Columbia, TN

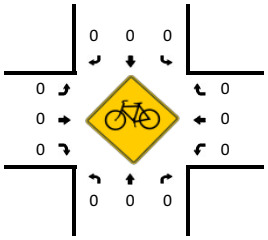
QC JOB #: 15562405
DATE: Tue, Sep 14 2021

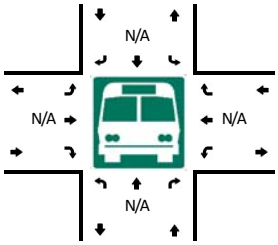
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

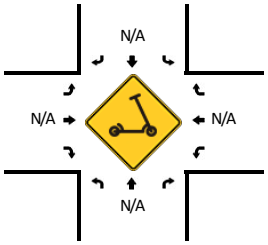












15-Min Count Period Beginning At	Iberia Dr/Lion Pkwy (Northbound)				Iberia Dr/Lion Pkwy (Southbound)				Hampshire Pike (Eastbound)				Hampshire Pike (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	8	0	2	0	1	0	0	0	0	68	47	0	6	34	0	0	166	
6:45 AM	15	0	8	0	0	0	1	0	0	88	72	0	31	42	0	0	257	
7:00 AM	53	0	35	0	1	0	0	0	0	85	110	0	38	59	0	0	381	
7:15 AM	53	0	21	0	1	2	2	0	0	98	118	0	50	113	0	0	458	1262
7:30 AM	56	0	59	0	5	2	3	0	1	96	93	0	49	97	0	0	461	1557
7:45 AM	48	2	26	0	2	2	1	0	0	126	63	0	31	79	0	0	380	1680
8:00 AM	31	0	20	0	2	6	0	0	1	84	43	0	13	82	1	0	283	1582
8:15 AM	31	1	9	0	0	0	0	0	0	80	51	0	8	51	1	0	232	1356

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	224	0	236	0	20	8	12	0	4	384	372	0	196	388	0	0	1844
Heavy Trucks	16	0	40		0	0	0		0	8	16		8	8	0		96
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 9/20/2021 10:10 AM

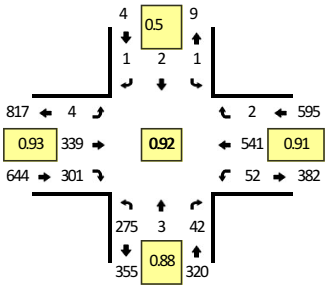
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

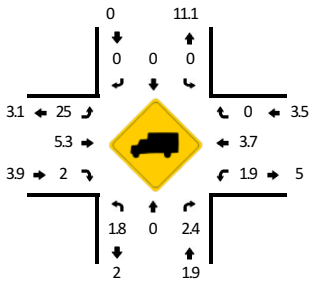
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

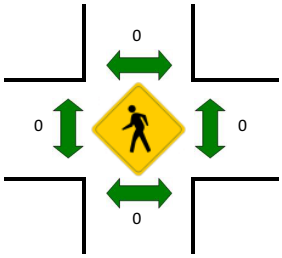
LOCATION: Iberia Dr/Lion Pkwy -- Hampshire Pike
CITY/STATE: Columbia, TN

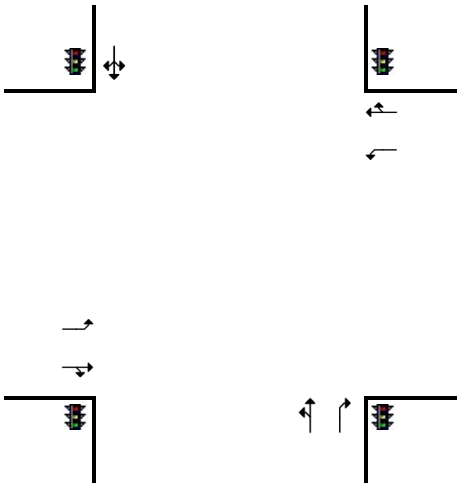
QC JOB #: 15562406
DATE: Tue, Sep 14 2021

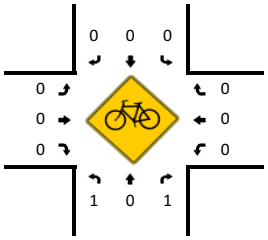
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

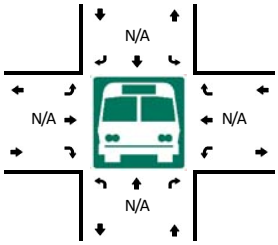


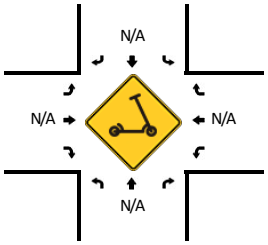












15-Min Count Period Beginning At	Iberia Dr/Lion Pkwy (Northbound)				Iberia Dr/Lion Pkwy (Southbound)				Hampshire Pike (Eastbound)				Hampshire Pike (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	62	3	50	0	0	1	0	0	1	121	60	0	15	130	2	0	445	
3:15 PM	70	3	43	0	3	4	0	0	0	105	42	0	23	103	1	0	397	
3:30 PM	83	1	21	0	0	2	0	0	0	90	56	0	11	117	0	0	381	
3:45 PM	51	1	4	0	2	3	1	0	0	55	49	0	15	138	0	0	319	1542
4:00 PM	79	0	12	0	0	0	1	0	1	82	54	0	7	152	2	0	390	1487
4:15 PM	81	3	9	0	2	2	3	0	2	78	48	0	5	138	2	0	373	1463
4:30 PM	64	1	11	0	1	1	0	0	1	84	48	0	5	133	0	0	349	1431
4:45 PM	65	2	6	0	1	0	0	0	2	87	75	0	14	129	1	0	382	1494
5:00 PM	73	1	17	0	0	0	0	0	0	85	69	0	13	125	0	0	383	1487
5:15 PM	74	0	11	0	0	1	1	0	1	88	84	0	12	152	0	0	424	1538
5:30 PM	63	0	8	0	0	1	0	0	1	79	73	0	13	135	1	0	374	1563
5:45 PM	60	0	6	0	0	1	1	0	1	80	75	0	19	127	1	0	371	1552

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	296	0	44	0	0	4	4	0	4	352	336	0	48	608	0	0	1696
Heavy Trucks	8	0	0		0	0	0		0	16	12		0	20	0		56
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

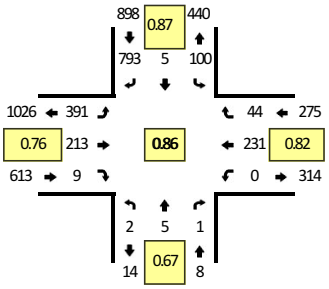
Report generated on 9/20/2021 10:10 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

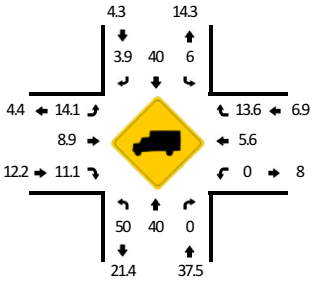
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

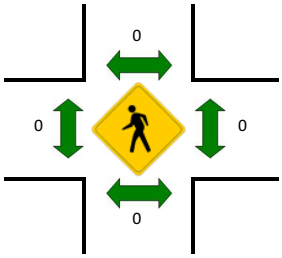
LOCATION: Industrial Park Rd -- N James Campbell Blvd | **QC JOB #:** 15562407
CITY/STATE: Columbia, TN | **DATE:** Tue, Sep 14 2021

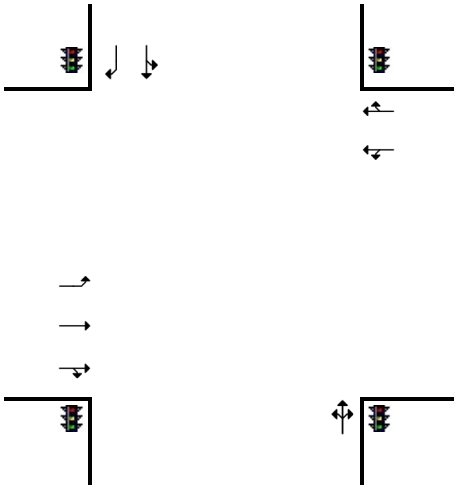
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

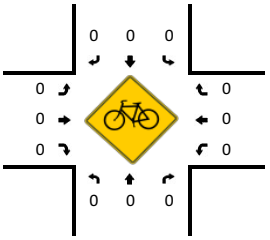


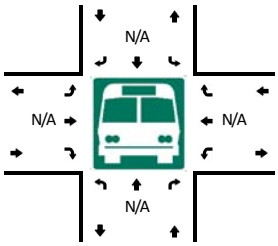


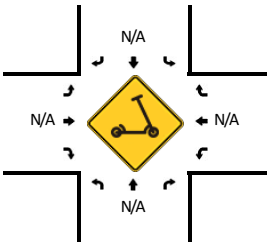












15-Min Count Period Beginning At	Industrial Park Rd (Northbound)				Industrial Park Rd (Southbound)				N James Campbell Blvd (Eastbound)				N James Campbell Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:30 AM	0	1	0	0	12	1	111	0	68	19	1	0	0	24	8	0	245	
6:45 AM	0	2	0	0	13	0	140	0	81	33	0	0	0	37	6	0	312	
7:00 AM	0	0	0	0	19	1	124	0	97	44	3	0	0	52	12	0	352	
7:15 AM	0	2	1	0	18	0	218	0	76	45	1	0	0	73	11	0	445	1354
7:30 AM	1	1	0	0	27	2	230	0	88	57	0	0	0	60	8	0	474	1583
7:45 AM	1	2	0	0	36	2	221	0	130	67	5	0	0	46	13	0	523	1794
8:00 AM	1	0	1	0	21	0	148	0	56	37	0	0	0	39	8	0	311	1753
8:15 AM	0	0	1	0	17	0	154	0	68	46	0	0	1	38	4	0	329	1637

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	8	0	0	144	8	884	0	520	268	20	0	0	184	52	0	2092
Heavy Trucks	0	4	0		8	0	32		76	8	4		0	8	8		148
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

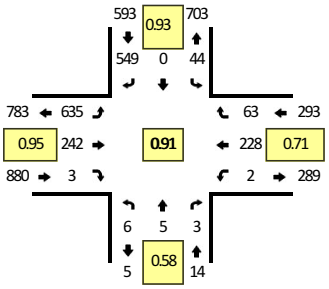
Comments:

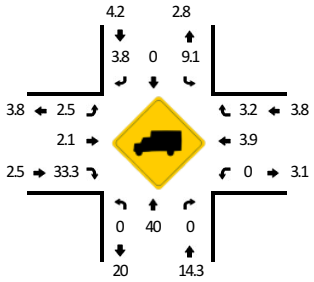
Report generated on 9/20/2021 10:10 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

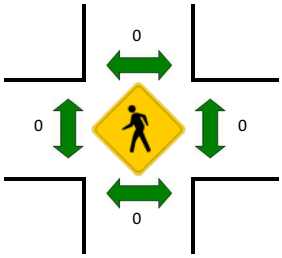
Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

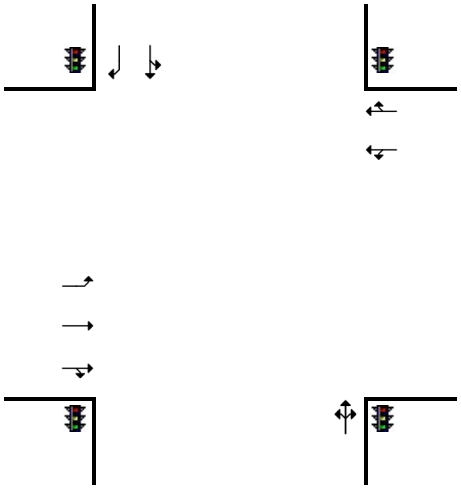
LOCATION: Industrial Park Rd -- N James Campbell Blvd | **QC JOB #:** 15562408
CITY/STATE: Columbia, TN | **DATE:** Tue, Sep 14 2021

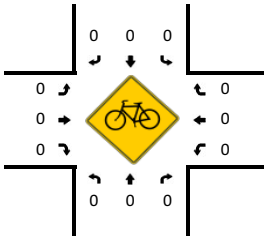
Peak-Hour: 4:30 PM -- 5:30 PM
Peak 15-Min: 5:00 PM -- 5:15 PM

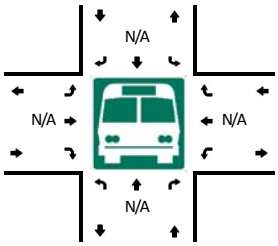


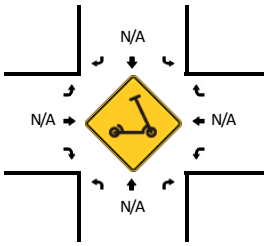












15-Min Count Period Beginning At	Industrial Park Rd (Northbound)				Industrial Park Rd (Southbound)				N James Campbell Blvd (Eastbound)				N James Campbell Blvd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:00 PM	3	3	0	0	16	0	142	0	144	76	0	0	1	67	18	0	470	
3:15 PM	1	0	0	0	17	0	132	0	141	66	0	0	1	49	20	0	427	
3:30 PM	0	1	0	0	19	0	152	0	129	61	0	0	0	70	7	0	439	
3:45 PM	0	1	0	0	11	0	128	0	146	51	0	0	0	50	8	0	395	1731
4:00 PM	0	1	1	0	16	0	119	0	147	52	0	1	1	46	13	0	397	1658
4:15 PM	0	1	1	0	11	0	142	0	130	50	0	0	0	44	11	0	390	1621
4:30 PM	0	0	1	0	9	0	144	0	156	61	1	0	1	48	18	0	439	1621
4:45 PM	1	4	0	0	12	0	147	0	158	54	0	0	0	53	10	0	439	1665
5:00 PM	3	1	2	0	10	0	138	0	161	69	1	0	1	80	22	0	488	1756
5:15 PM	2	0	0	0	13	0	120	0	160	58	1	0	0	47	13	0	414	1780
5:30 PM	0	4	0	0	6	0	141	0	130	42	1	0	0	58	11	0	393	1734
5:45 PM	0	0	0	0	8	0	102	0	112	45	0	0	0	47	7	0	321	1616

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	4	8	0	40	0	552	0	644	276	4	0	4	320	88	0	1952
Heavy Trucks	0	0	0		0	0	12		8	8	4		0	16	4		52
Buses																	
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scooters																	

Comments:

Report generated on 9/20/2021 10:10 AM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir **QC JOB #:** 15562409

SPECIFIC LOCATION: **DIRECTION:** EB

CITY/STATE: Columbia, TN **DATE:** Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		2				2			2	
12:15 AM		7				7			7	
12:30 AM		1				1			1	
12:45 AM		4				4			4	
01:00 AM		0				0			0	
01:15 AM		2				2			2	
01:30 AM		0				0			0	
01:45 AM		2				2			2	
02:00 AM		2				2			2	
02:15 AM		2				2			2	
02:30 AM		0				0			0	
02:45 AM		3				3			3	
03:00 AM		0				0			0	
03:15 AM		4				4			4	
03:30 AM		1				1			1	
03:45 AM		9				9			9	
04:00 AM		7				7			7	
04:15 AM		13				13			13	
04:30 AM		7				7			7	
04:45 AM		25				25			25	
05:00 AM		18				18			18	
05:15 AM		21				21			21	
05:30 AM		39				39			39	
05:45 AM		36				36			36	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		44				44			44	
06:15 AM		64				64			64	
06:30 AM		78				78			78	
06:45 AM		101				101			101	
07:00 AM		122				122			122	
07:15 AM		128				128			128	
07:30 AM		166				166			166	
07:45 AM		**172**				**172**			**172**	
08:00 AM		110				110			110	
08:15 AM		92				92			92	
08:30 AM		102				102			102	
08:45 AM		104				104			104	
09:00 AM		101				101			101	
09:15 AM		97				97			97	
09:30 AM		102				102			102	
09:45 AM		94				94			94	
10:00 AM		88				88			88	
10:15 AM		80				80			80	
10:30 AM		98				98			98	
10:45 AM		89				89			89	
11:00 AM		102				102			102	
11:15 AM		95				95			95	
11:30 AM		90				90			90	
11:45 AM		92				92			92	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		106				106			106	
12:15 PM		84				84			84	
12:30 PM		118				118			118	
12:45 PM		106				106			106	
01:00 PM		74				74			74	
01:15 PM		103				103			103	
01:30 PM		84				84			84	
01:45 PM		88				88			88	
02:00 PM		94				94			94	
02:15 PM		113				113			113	
02:30 PM		110				110			110	
02:45 PM		166				166			166	
03:00 PM		**172**				**172**			**172**	
03:15 PM		158				158			158	
03:30 PM		121				121			121	
03:45 PM		64				64			64	
04:00 PM		100				100			100	
04:15 PM		95				95			95	
04:30 PM		100				100			100	
04:45 PM		94				94			94	
05:00 PM		106				106			106	
05:15 PM		106				106			106	
05:30 PM		92				92			92	
05:45 PM		90				90			90	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		88				88			88	
06:15 PM		88				88			88	
06:30 PM		75				75			75	
06:45 PM		66				66			66	
07:00 PM		68				68			68	
07:15 PM		74				74			74	
07:30 PM		65				65			65	
07:45 PM		34				34			34	
08:00 PM		54				54			54	
08:15 PM		42				42			42	
08:30 PM		29				29			29	
08:45 PM		31				31			31	
09:00 PM		28				28			28	
09:15 PM		40				40			40	
09:30 PM		25				25			25	
09:45 PM		14				14			14	
10:00 PM		20				20			20	
10:15 PM		16				16			16	
10:30 PM		18				18			18	
10:45 PM		14				14			14	
11:00 PM		7				7			7	
11:15 PM		8				8			8	
11:30 PM		13				13			13	
11:45 PM		7				7			7	
Day Total		6084				6084			6084	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak 15-min Vol		7:45 AM 172				7:45 AM 172			7:45 AM 172	
PM Peak 15-min Vol		3:00 PM 172				3:00 PM 172			3:00 PM 172	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir **QC JOB #:** 15562409

SPECIFIC LOCATION: **DIRECTION:** EB, WB

CITY/STATE: Columbia, TN **DATE:** Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		8				8			8	
12:15 AM		18				18			18	
12:30 AM		9				9			9	
12:45 AM		11				11			11	
01:00 AM		1				1			1	
01:15 AM		6				6			6	
01:30 AM		5				5			5	
01:45 AM		3				3			3	
02:00 AM		4				4			4	
02:15 AM		4				4			4	
02:30 AM		4				4			4	
02:45 AM		7				7			7	
03:00 AM		1				1			1	
03:15 AM		10				10			10	
03:30 AM		5				5			5	
03:45 AM		16				16			16	
04:00 AM		11				11			11	
04:15 AM		22				22			22	
04:30 AM		13				13			13	
04:45 AM		33				33			33	
05:00 AM		23				23			23	
05:15 AM		37				37			37	
05:30 AM		57				57			57	
05:45 AM		64				64			64	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		67				67			67	
06:15 AM		102				102			102	
06:30 AM		120				120			120	
06:45 AM		175				175			175	
07:00 AM		234				234			234	
07:15 AM		288				288			288	
07:30 AM		**326**				**326**			**326**	
07:45 AM		288				288			288	
08:00 AM		214				214			214	
08:15 AM		159				159			159	
08:30 AM		183				183			183	
08:45 AM		182				182			182	
09:00 AM		187				187			187	
09:15 AM		175				175			175	
09:30 AM		182				182			182	
09:45 AM		170				170			170	
10:00 AM		174				174			174	
10:15 AM		138				138			138	
10:30 AM		178				178			178	
10:45 AM		175				175			175	
11:00 AM		176				176			176	
11:15 AM		175				175			175	
11:30 AM		184				184			184	
11:45 AM		198				198			198	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		202				202			202	
12:15 PM		192				192			192	
12:30 PM		203				203			203	
12:45 PM		195				195			195	
01:00 PM		184				184			184	
01:15 PM		207				207			207	
01:30 PM		178				178			178	
01:45 PM		190				190			190	
02:00 PM		200				200			200	
02:15 PM		247				247			247	
02:30 PM		294				294			294	
02:45 PM		292				292			292	
03:00 PM		**326**				**326**			**326**	
03:15 PM		295				295			295	
03:30 PM		251				251			251	
03:45 PM		232				232			232	
04:00 PM		264				264			264	
04:15 PM		245				245			245	
04:30 PM		242				242			242	
04:45 PM		246				246			246	
05:00 PM		255				255			255	
05:15 PM		275				275			275	
05:30 PM		246				246			246	
05:45 PM		243				243			243	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		204				204			204	
06:15 PM		206				206			206	
06:30 PM		172				172			172	
06:45 PM		164				164			164	
07:00 PM		185				185			185	
07:15 PM		176				176			176	
07:30 PM		149				149			149	
07:45 PM		103				103			103	
08:00 PM		124				124			124	
08:15 PM		92				92			92	
08:30 PM		71				71			71	
08:45 PM		85				85			85	
09:00 PM		66				66			66	
09:15 PM		68				68			68	
09:30 PM		58				58			58	
09:45 PM		29				29			29	
10:00 PM		45				45			45	
10:15 PM		42				42			42	
10:30 PM		34				34			34	
10:45 PM		32				32			32	
11:00 PM		20				20			20	
11:15 PM		19				19			19	
11:30 PM		28				28			28	
11:45 PM		14				14			14	
Day Total		12712				12712			12712	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak 15-min Vol		7:30 AM 326				7:30 AM 326			7:30 AM 326	
PM Peak 15-min Vol		3:00 PM 326				3:00 PM 326			3:00 PM 326	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir **QC JOB #:** 15562409

SPECIFIC LOCATION: **DIRECTION:** WB

CITY/STATE: Columbia, TN **DATE:** Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		6				6			6	
12:15 AM		11				11			11	
12:30 AM		8				8			8	
12:45 AM		7				7			7	
01:00 AM		1				1			1	
01:15 AM		4				4			4	
01:30 AM		5				5			5	
01:45 AM		1				1			1	
02:00 AM		2				2			2	
02:15 AM		2				2			2	
02:30 AM		4				4			4	
02:45 AM		4				4			4	
03:00 AM		1				1			1	
03:15 AM		6				6			6	
03:30 AM		4				4			4	
03:45 AM		7				7			7	
04:00 AM		4				4			4	
04:15 AM		9				9			9	
04:30 AM		6				6			6	
04:45 AM		8				8			8	
05:00 AM		5				5			5	
05:15 AM		16				16			16	
05:30 AM		18				18			18	
05:45 AM		28				28			28	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		23				23			23	
06:15 AM		38				38			38	
06:30 AM		42				42			42	
06:45 AM		74				74			74	
07:00 AM		112				112			112	
07:15 AM		**160**				**160**			**160**	
07:30 AM		160				160			160	
07:45 AM		116				116			116	
08:00 AM		104				104			104	
08:15 AM		67				67			67	
08:30 AM		81				81			81	
08:45 AM		78				78			78	
09:00 AM		86				86			86	
09:15 AM		78				78			78	
09:30 AM		80				80			80	
09:45 AM		76				76			76	
10:00 AM		86				86			86	
10:15 AM		58				58			58	
10:30 AM		80				80			80	
10:45 AM		86				86			86	
11:00 AM		74				74			74	
11:15 AM		80				80			80	
11:30 AM		94				94			94	
11:45 AM		106				106			106	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		96				96			96	
12:15 PM		108				108			108	
12:30 PM		85				85			85	
12:45 PM		89				89			89	
01:00 PM		110				110			110	
01:15 PM		104				104			104	
01:30 PM		94				94			94	
01:45 PM		102				102			102	
02:00 PM		106				106			106	
02:15 PM		134				134			134	
02:30 PM		**184**				**184**			**184**	
02:45 PM		126				126			126	
03:00 PM		154				154			154	
03:15 PM		137				137			137	
03:30 PM		130				130			130	
03:45 PM		168				168			168	
04:00 PM		164				164			164	
04:15 PM		150				150			150	
04:30 PM		142				142			142	
04:45 PM		152				152			152	
05:00 PM		149				149			149	
05:15 PM		169				169			169	
05:30 PM		154				154			154	
05:45 PM		153				153			153	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		116				116			116	
06:15 PM		118				118			118	
06:30 PM		97				97			97	
06:45 PM		98				98			98	
07:00 PM		117				117			117	
07:15 PM		102				102			102	
07:30 PM		84				84			84	
07:45 PM		69				69			69	
08:00 PM		70				70			70	
08:15 PM		50				50			50	
08:30 PM		42				42			42	
08:45 PM		54				54			54	
09:00 PM		38				38			38	
09:15 PM		28				28			28	
09:30 PM		33				33			33	
09:45 PM		15				15			15	
10:00 PM		25				25			25	
10:15 PM		26				26			26	
10:30 PM		16				16			16	
10:45 PM		18				18			18	
11:00 PM		13				13			13	
11:15 PM		11				11			11	
11:30 PM		15				15			15	
11:45 PM		7				7			7	
Day Total		6628				6628			6628	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak 15-min Vol		7:15 AM 160				7:15 AM 160			7:15 AM 160	
PM Peak 15-min Vol		2:30 PM 184				2:30 PM 184			2:30 PM 184	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp **QC JOB #:** 15562410

SPECIFIC LOCATION: **DIRECTION:** NB

CITY/STATE: Columbia, TN **DATE:** Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		7				7			7	
12:15 AM		10				10			10	
12:30 AM		5				5			5	
12:45 AM		3				3			3	
01:00 AM		2				2			2	
01:15 AM		4				4			4	
01:30 AM		1				1			1	
01:45 AM		0				0			0	
02:00 AM		3				3			3	
02:15 AM		3				3			3	
02:30 AM		3				3			3	
02:45 AM		1				1			1	
03:00 AM		0				0			0	
03:15 AM		4				4			4	
03:30 AM		2				2			2	
03:45 AM		12				12			12	
04:00 AM		15				15			15	
04:15 AM		14				14			14	
04:30 AM		8				8			8	
04:45 AM		26				26			26	
05:00 AM		36				36			36	
05:15 AM		44				44			44	
05:30 AM		50				50			50	
05:45 AM		50				50			50	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		70				70			70	
06:15 AM		74				74			74	
06:30 AM		84				84			84	
06:45 AM		97				97			97	
07:00 AM		121				121			121	
07:15 AM		200				200			200	
07:30 AM		**256**				**256**			**256**	
07:45 AM		224				224			224	
08:00 AM		120				120			120	
08:15 AM		100				100			100	
08:30 AM		86				86			86	
08:45 AM		89				89			89	
09:00 AM		128				128			128	
09:15 AM		90				90			90	
09:30 AM		93				93			93	
09:45 AM		85				85			85	
10:00 AM		90				90			90	
10:15 AM		100				100			100	
10:30 AM		63				63			63	
10:45 AM		98				98			98	
11:00 AM		86				86			86	
11:15 AM		104				104			104	
11:30 AM		104				104			104	
11:45 AM		132				132			132	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		104				104			104	
12:15 PM		113				113			113	
12:30 PM		98				98			98	
12:45 PM		112				112			112	
01:00 PM		120				120			120	
01:15 PM		135				135			135	
01:30 PM		112				112			112	
01:45 PM		128				128			128	
02:00 PM		134				134			134	
02:15 PM		132				132			132	
02:30 PM		157				157			157	
02:45 PM		164				164			164	
03:00 PM		190				190			190	
03:15 PM		179				179			179	
03:30 PM		154				154			154	
03:45 PM		176				176			176	
04:00 PM		162				162			162	
04:15 PM		164				164			164	
04:30 PM		193				193			193	
04:45 PM		200				200			200	
05:00 PM		**202**				**202**			**202**	
05:15 PM		176				176			176	
05:30 PM		152				152			152	
05:45 PM		124				124			124	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		111				111			111	
06:15 PM		96				96			96	
06:30 PM		98				98			98	
06:45 PM		89				89			89	
07:00 PM		126				126			126	
07:15 PM		108				108			108	
07:30 PM		88				88			88	
07:45 PM		72				72			72	
08:00 PM		74				74			74	
08:15 PM		81				81			81	
08:30 PM		46				46			46	
08:45 PM		41				41			41	
09:00 PM		37				37			37	
09:15 PM		45				45			45	
09:30 PM		34				34			34	
09:45 PM		29				29			29	
10:00 PM		26				26			26	
10:15 PM		23				23			23	
10:30 PM		17				17			17	
10:45 PM		12				12			12	
11:00 PM		21				21			21	
11:15 PM		14				14			14	
11:30 PM		10				10			10	
11:45 PM		6				6			6	
Day Total		7882				7882			7882	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak 15-min Vol		7:30 AM 256				7:30 AM 256			7:30 AM 256	
PM Peak 15-min Vol		5:00 PM 202				5:00 PM 202			5:00 PM 202	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		15				15			15	
12:15 AM		12				12			12	
12:30 AM		17				17			17	
12:45 AM		5				5			5	
01:00 AM		10				10			10	
01:15 AM		8				8			8	
01:30 AM		2				2			2	
01:45 AM		4				4			4	
02:00 AM		4				4			4	
02:15 AM		5				5			5	
02:30 AM		5				5			5	
02:45 AM		5				5			5	
03:00 AM		2				2			2	
03:15 AM		11				11			11	
03:30 AM		8				8			8	
03:45 AM		20				20			20	
04:00 AM		19				19			19	
04:15 AM		26				26			26	
04:30 AM		24				24			24	
04:45 AM		44				44			44	
05:00 AM		50				50			50	
05:15 AM		71				71			71	
05:30 AM		87				87			87	
05:45 AM		104				104			104	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
		14 Sep 21								
06:00 AM		137				137			137	
06:15 AM		175				175			175	
06:30 AM		208				208			208	
06:45 AM		255				255			255	
07:00 AM		269				269			269	
07:15 AM		431				431			431	
07:30 AM		**503**				**503**			**503**	
07:45 AM		476				476			476	
08:00 AM		298				298			298	
08:15 AM		270				270			270	
08:30 AM		216				216			216	
08:45 AM		227				227			227	
09:00 AM		236				236			236	
09:15 AM		195				195			195	
09:30 AM		191				191			191	
09:45 AM		217				217			217	
10:00 AM		196				196			196	
10:15 AM		206				206			206	
10:30 AM		163				163			163	
10:45 AM		191				191			191	
11:00 AM		201				201			201	
11:15 AM		206				206			206	
11:30 AM		193				193			193	
11:45 AM		254				254			254	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		202				202			202	
12:15 PM		224				224			224	
12:30 PM		214				214			214	
12:45 PM		228				228			228	
01:00 PM		220				220			220	
01:15 PM		227				227			227	
01:30 PM		231				231			231	
01:45 PM		257				257			257	
02:00 PM		264				264			264	
02:15 PM		282				282			282	
02:30 PM		313				313			313	
02:45 PM		313				313			313	
03:00 PM		351				351			351	
03:15 PM		337				337			337	
03:30 PM		327				327			327	
03:45 PM		317				317			317	
04:00 PM		303				303			303	
04:15 PM		320				320			320	
04:30 PM		350				350			350	
04:45 PM		**369**				**369**			**369**	
05:00 PM		356				356			356	
05:15 PM		316				316			316	
05:30 PM		298				298			298	
05:45 PM		259				259			259	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		215				215			215	
06:15 PM		198				198			198	
06:30 PM		196				196			196	
06:45 PM		167				167			167	
07:00 PM		194				194			194	
07:15 PM		174				174			174	
07:30 PM		140				140			140	
07:45 PM		130				130			130	
08:00 PM		112				112			112	
08:15 PM		127				127			127	
08:30 PM		82				82			82	
08:45 PM		80				80			80	
09:00 PM		66				66			66	
09:15 PM		75				75			75	
09:30 PM		60				60			60	
09:45 PM		53				53			53	
10:00 PM		64				64			64	
10:15 PM		55				55			55	
10:30 PM		35				35			35	
10:45 PM		22				22			22	
11:00 PM		37				37			37	
11:15 PM		24				24			24	
11:30 PM		21				21			21	
11:45 PM		16				16			16	
Day Total		15693				15693			15693	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak 15-min Vol		7:30 AM 503				7:30 AM 503			7:30 AM 503	
PM Peak 15-min Vol		4:45 PM 369				4:45 PM 369			4:45 PM 369	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 AM		8				8			8	
12:15 AM		2				2			2	
12:30 AM		12				12			12	
12:45 AM		2				2			2	
01:00 AM		8				8			8	
01:15 AM		4				4			4	
01:30 AM		1				1			1	
01:45 AM		4				4			4	
02:00 AM		1				1			1	
02:15 AM		2				2			2	
02:30 AM		2				2			2	
02:45 AM		4				4			4	
03:00 AM		2				2			2	
03:15 AM		7				7			7	
03:30 AM		6				6			6	
03:45 AM		8				8			8	
04:00 AM		4				4			4	
04:15 AM		12				12			12	
04:30 AM		16				16			16	
04:45 AM		18				18			18	
05:00 AM		14				14			14	
05:15 AM		27				27			27	
05:30 AM		37				37			37	
05:45 AM		54				54			54	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 AM		67				67			67	
06:15 AM		101				101			101	
06:30 AM		124				124			124	
06:45 AM		158				158			158	
07:00 AM		148				148			148	
07:15 AM		231				231			231	
07:30 AM		247				247			247	
07:45 AM		**252**				**252**			**252**	
08:00 AM		178				178			178	
08:15 AM		170				170			170	
08:30 AM		130				130			130	
08:45 AM		138				138			138	
09:00 AM		108				108			108	
09:15 AM		105				105			105	
09:30 AM		98				98			98	
09:45 AM		132				132			132	
10:00 AM		106				106			106	
10:15 AM		106				106			106	
10:30 AM		100				100			100	
10:45 AM		93				93			93	
11:00 AM		115				115			115	
11:15 AM		102				102			102	
11:30 AM		89				89			89	
11:45 AM		122				122			122	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
12:00 PM		98				98			98	
12:15 PM		111				111			111	
12:30 PM		116				116			116	
12:45 PM		116				116			116	
01:00 PM		100				100			100	
01:15 PM		92				92			92	
01:30 PM		119				119			119	
01:45 PM		129				129			129	
02:00 PM		130				130			130	
02:15 PM		150				150			150	
02:30 PM		156				156			156	
02:45 PM		149				149			149	
03:00 PM		161				161			161	
03:15 PM		158				158			158	
03:30 PM		**173**				**173**			**173**	
03:45 PM		141				141			141	
04:00 PM		141				141			141	
04:15 PM		156				156			156	
04:30 PM		157				157			157	
04:45 PM		169				169			169	
05:00 PM		154				154			154	
05:15 PM		140				140			140	
05:30 PM		146				146			146	
05:45 PM		135				135			135	
Day Total										
% Weekday Average										
% Week Average										
AM Peak 15-min Vol										
PM Peak 15-min Vol										

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday 15-min Traffic	Sat	Sun	Average Week 15-min Traffic	Average Week Profile
06:00 PM		104				104			104	
06:15 PM		102				102			102	
06:30 PM		98				98			98	
06:45 PM		78				78			78	
07:00 PM		68				68			68	
07:15 PM		66				66			66	
07:30 PM		52				52			52	
07:45 PM		58				58			58	
08:00 PM		38				38			38	
08:15 PM		46				46			46	
08:30 PM		36				36			36	
08:45 PM		39				39			39	
09:00 PM		29				29			29	
09:15 PM		30				30			30	
09:30 PM		26				26			26	
09:45 PM		24				24			24	
10:00 PM		38				38			38	
10:15 PM		32				32			32	
10:30 PM		18				18			18	
10:45 PM		10				10			10	
11:00 PM		16				16			16	
11:15 PM		10				10			10	
11:30 PM		11				11			11	
11:45 PM		10				10			10	
Day Total		7811				7811			7811	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak 15-min Vol		7:45 AM 252				7:45 AM 252			7:45 AM 252	
PM Peak 15-min Vol		3:30 PM 173				3:30 PM 173			3:30 PM 173	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: EB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		14				14			14	
01:00 AM		4				4			4	
02:00 AM		7				7			7	
03:00 AM		14				14			14	
04:00 AM		52				52			52	
05:00 AM		114				114			114	
06:00 AM		287				287			287	
07:00 AM		**588**				**588**			**588**	
08:00 AM		408				408			408	
09:00 AM		394				394			394	
10:00 AM		355				355			355	
11:00 AM		379				379			379	
12:00 PM		414				414			414	
01:00 PM		349				349			349	
02:00 PM		483				483			483	
03:00 PM		**515**				**515**			**515**	
04:00 PM		389				389			389	
05:00 PM		394				394			394	
06:00 PM		317				317			317	
07:00 PM		241				241			241	
08:00 PM		156				156			156	
09:00 PM		107				107			107	
10:00 PM		68				68			68	
11:00 PM		35				35			35	
Day Total		6084				6084			6084	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 588				7:00 AM 588			7:00 AM 588	
PM Peak Volume		3:00 PM 515				3:00 PM 515			3:00 PM 515	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: EB, WB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		46				46			46	
01:00 AM		15				15			15	
02:00 AM		19				19			19	
03:00 AM		32				32			32	
04:00 AM		79				79			79	
05:00 AM		181				181			181	
06:00 AM		464				464			464	
07:00 AM		**1136**				**1136**			**1136**	
08:00 AM		738				738			738	
09:00 AM		714				714			714	
10:00 AM		665				665			665	
11:00 AM		733				733			733	
12:00 PM		792				792			792	
01:00 PM		759				759			759	
02:00 PM		1033				1033			1033	
03:00 PM		**1104**				**1104**			**1104**	
04:00 PM		997				997			997	
05:00 PM		1019				1019			1019	
06:00 PM		746				746			746	
07:00 PM		613				613			613	
08:00 PM		372				372			372	
09:00 PM		221				221			221	
10:00 PM		153				153			153	
11:00 PM		81				81			81	
Day Total		12712				12712			12712	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 1136				7:00 AM 1136			7:00 AM 1136	
PM Peak Volume		3:00 PM 1104				3:00 PM 1104			3:00 PM 1104	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Hampshire Pike West of Oxford Village Cir
QC JOB #: 15562409
SPECIFIC LOCATION:
DIRECTION: WB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		32				32			32	
01:00 AM		11				11			11	
02:00 AM		12				12			12	
03:00 AM		18				18			18	
04:00 AM		27				27			27	
05:00 AM		67				67			67	
06:00 AM		177				177			177	
07:00 AM		**548**				**548**			**548**	
08:00 AM		330				330			330	
09:00 AM		320				320			320	
10:00 AM		310				310			310	
11:00 AM		354				354			354	
12:00 PM		378				378			378	
01:00 PM		410				410			410	
02:00 PM		550				550			550	
03:00 PM		589				589			589	
04:00 PM		608				608			608	
05:00 PM		**625**				**625**			**625**	
06:00 PM		429				429			429	
07:00 PM		372				372			372	
08:00 PM		216				216			216	
09:00 PM		114				114			114	
10:00 PM		85				85			85	
11:00 PM		46				46			46	
Day Total		6628				6628			6628	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 548				7:00 AM 548			7:00 AM 548	
PM Peak Volume		5:00 PM 625				5:00 PM 625			5:00 PM 625	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		25				25			25	
01:00 AM		7				7			7	
02:00 AM		10				10			10	
03:00 AM		18				18			18	
04:00 AM		63				63			63	
05:00 AM		180				180			180	
06:00 AM		325				325			325	
07:00 AM		**801**				**801**			**801**	
08:00 AM		395				395			395	
09:00 AM		396				396			396	
10:00 AM		351				351			351	
11:00 AM		426				426			426	
12:00 PM		427				427			427	
01:00 PM		495				495			495	
02:00 PM		587				587			587	
03:00 PM		699				699			699	
04:00 PM		**719**				**719**			**719**	
05:00 PM		654				654			654	
06:00 PM		394				394			394	
07:00 PM		394				394			394	
08:00 PM		242				242			242	
09:00 PM		145				145			145	
10:00 PM		78				78			78	
11:00 PM		51				51			51	
Day Total		7882				7882			7882	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 801				7:00 AM 801			7:00 AM 801	
PM Peak Volume		4:00 PM 719				4:00 PM 719			4:00 PM 719	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: NB, SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		49				49			49	
01:00 AM		24				24			24	
02:00 AM		19				19			19	
03:00 AM		41				41			41	
04:00 AM		113				113			113	
05:00 AM		312				312			312	
06:00 AM		775				775			775	
07:00 AM		**1679**				**1679**			**1679**	
08:00 AM		1011				1011			1011	
09:00 AM		839				839			839	
10:00 AM		756				756			756	
11:00 AM		854				854			854	
12:00 PM		868				868			868	
01:00 PM		935				935			935	
02:00 PM		1172				1172			1172	
03:00 PM		1332				1332			1332	
04:00 PM		**1342**				**1342**			**1342**	
05:00 PM		1229				1229			1229	
06:00 PM		776				776			776	
07:00 PM		638				638			638	
08:00 PM		401				401			401	
09:00 PM		254				254			254	
10:00 PM		176				176			176	
11:00 PM		98				98			98	
Day Total		15693				15693			15693	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 1679				7:00 AM 1679			7:00 AM 1679	
PM Peak Volume		4:00 PM 1342				4:00 PM 1342			4:00 PM 1342	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

Type of report: Tube Count - Volume Data

LOCATION: Industrial Park Rd South of Hwy 412 EB off Ramp
QC JOB #: 15562410
SPECIFIC LOCATION:
DIRECTION: SB
CITY/STATE: Columbia, TN
DATE: Sep 14 2021 - Sep 14 2021

Start Time	Mon	Tue 14 Sep 21	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profile
12:00 AM		24				24			24	
01:00 AM		17				17			17	
02:00 AM		9				9			9	
03:00 AM		23				23			23	
04:00 AM		50				50			50	
05:00 AM		132				132			132	
06:00 AM		450				450			450	
07:00 AM		**878**				**878**			**878**	
08:00 AM		616				616			616	
09:00 AM		443				443			443	
10:00 AM		405				405			405	
11:00 AM		428				428			428	
12:00 PM		441				441			441	
01:00 PM		440				440			440	
02:00 PM		585				585			585	
03:00 PM		**633**				**633**			**633**	
04:00 PM		623				623			623	
05:00 PM		575				575			575	
06:00 PM		382				382			382	
07:00 PM		244				244			244	
08:00 PM		159				159			159	
09:00 PM		109				109			109	
10:00 PM		98				98			98	
11:00 PM		47				47			47	
Day Total		7811				7811			7811	
% Weekday Average		100%								
% Week Average		100%				100%				
AM Peak Volume		7:00 AM 878				7:00 AM 878			7:00 AM 878	
PM Peak Volume		3:00 PM 633				3:00 PM 633			3:00 PM 633	

Comments:

Report generated on 9/17/2021 3:20 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
DATA THAT DRIVES COMMUNITIES

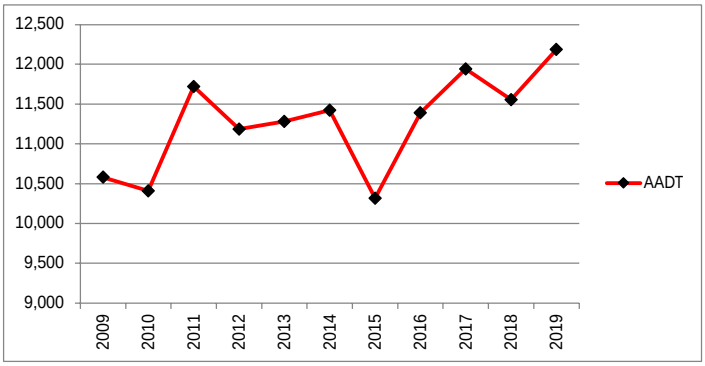
Appendix D

Trip Generation

Volume Worksheets

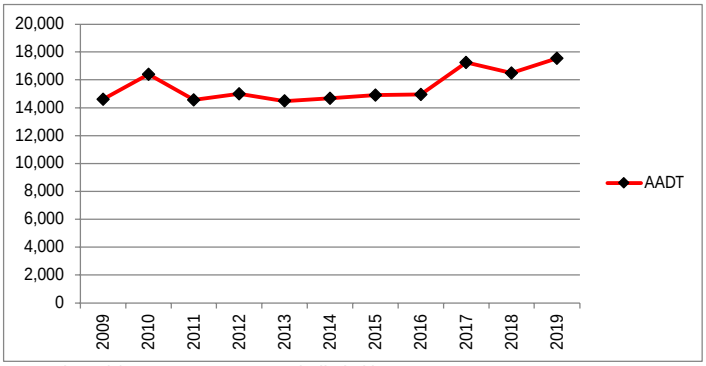
Annual Average Daily Traffic (AADT) from the Tennessee Department of Transportation (TDOT)

Station	000147
Route	Hampshire Pike
Location	Columbia
2009	10,581
2010	10,412
2011	11,720
2012	11,187
2013	11,284
2014	11,425
2015	10,318
2016	11,390
2017	11,940
2018	11,555
2019	12,187



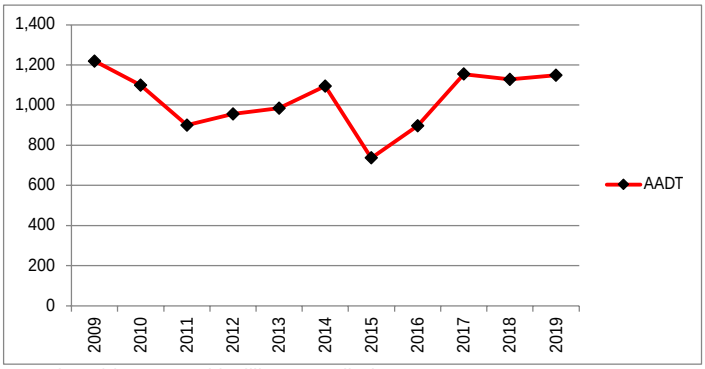
Annual Growth for Last Three (3) Years --- Hampshire Pike is 0.7%
Annual Growth for Last Ten (10) Years --- Hampshire Pike is 1.6%

Station	000233
Route	James Campbell Blvd
Location	Columbia
2009	14,605
2010	16,404
2011	14,554
2012	14,998
2013	14,489
2014	14,682
2015	14,905
2016	14,944
2017	17,257
2018	16,501
2019	17,547



Annual Growth for Last Three (3) Years --- James Campbell Blvd is 0.6%
Annual Growth for Last Ten (10) Years --- James Campbell Blvd is 0.7%

Station	000097
Route	Old Williamsport Pike
Location	Columbia
2009	1,219
2010	1,099
2011	900
2012	956
2013	985
2014	1,094
2015	737
2016	897
2017	1,154
2018	1,128
2019	1,148



Annual Growth for Last Three (3) Years --- Old Williamsport Pike is -0.2%
Annual Growth for Last Ten (10) Years --- Old Williamsport Pike is 0.4%

TOTAL	
2008	26,405
2009	27,915
2010	27,174
2011	27,141
2012	26,758
2013	27,201
2014	25,960
2015	27,231
2016	30,351
2017	29,184
2018	30,882

Annual Growth for Last Three (3) Years --- is 0.6%
Annual Growth for Last Ten (10) Years --- is 1%

Trip Generation - Hampshir Pike Mixed-Use

ITE Code	Land Use	Setting/Location	Density		Daily	AM Peak Hour			PM Peak Hour		
						Total	Enter	Exit	Total	Enter	Exit
210	Single-Family Detached Housing	General Urban/Suburban	39	d.u.	437	32	8	24	41	26	15
220	Multifamily Housing (Low-Rise)	General Urban/Suburban	625	d.u.	4,684	272	63	209	302	190	112
710	General Office Building	General Urban/Suburban	10,000	s.f.	114	36	31	5	13	2	11
820	Shopping Center (Average Rate)	General Urban/Suburban	5,000	s.f.	189	5	3	2	19	9	10
	GROSS TRIPS				5,424	345	105	240	375	227	148
	Gross Trips - Before Reductions				5,424	345	105	240	375	227	148
	Residential				5,121	304	71	233	343	216	127
	Office				114	36	31	5	13	2	11
	Retail				189	5	3	2	19	9	10
	Reduction - Internal Capture				-148	-8	-4	-4	-12	-6	-6
	Residential				-50	-2	0	-2	-5	-3	-2
	Office				-42	-3	-2	-1	-2	-1	-1
	Retail				-56	-3	-2	-1	-5	-2	-3
	Restaurant				0	0	0	0	0	0	0
	Reduction - Pass-By		AM	PM	-45	0	0	0	-4	-2	-2
820	Shopping Center	General Urban/Suburban	34%	34%	-45	0	0	0	-4	-2	-2
	NEW TRIPS				5,231	337	101	236	359	219	140
	Residential				5,071	302	71	231	338	213	125
	Non-Residential				160	35	30	5	21	6	15
	DRIVEWAY VOLUMES				5,276	337	101	236	363	221	142

INTERSECTION VOLUME WORKSHEET

Hampshire Pike at Lion Parkway/Iberia Drive

AM PEAK HOUR

Description	Hampshire Pike Eastbound				Hampshire Pike Westbound				Lion Parkway Northbound				Iberia Drive Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 AM Volumes	0	1	405	384	0	168	348	0	0	210	2	141	0	9	6	6	1680
Existing Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	2	4	2	2	4	5	2	2	8	2	16	2	2	2	2	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	1	446	422	0	185	383	0	0	231	2	155	0	10	7	7	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	0	46	44	0	19	40	0	0	24	0	16	0	1	1	1	192
Williamsport Pike Development			90	20			57			10							177
Background 2025 AM Volumes	0	1	582	486	0	204	480	0	0	265	2	171	0	11	8	8	2218
Future Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Residential Trip Distribution IN			10%														
Residential Trip Distribution OUT							10%										
Residential Project Trips	0	0	7	0	0	0	23	0	0	0	0	0	0	0	0	0	30
Non-Residential Trip Distribution IN			35%									5%					
Non-Residential Trip Distribution OUT						5%	35%										
Non-Residential Project Trips	0	0	11	0	0	0	2	0	0	0	0	2	0	0	0	0	15
Project Trips (unbalanced)	0	0	18	0	0	0	25	0	0	0	0	2	0	0	0	0	45
Balancing Adjustment			-1														
Pass-By Adjustment																	
Project Trips	0	0	17	0	0	0	25	0	0	0	0	2	0	0	0	0	44
Future 2025 AM Volumes	0	1	599	486	0	204	505	0	0	265	2	173	0	11	8	8	2262
% from Existing	0.0%	100.0%	67.6%	79.0%	0.0%	82.4%	68.9%	0.0%	0.0%	79.2%	100.0%	81.5%	0.0%	81.8%	75.0%	75.0%	74.3%
% from Background Growth	0.0%	0.0%	29.5%	21.0%	0.0%	17.6%	26.1%	0.0%	0.0%	20.8%	0.0%	17.3%	0.0%	18.2%	25.0%	25.0%	23.8%
% from Project Trips	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	0.0%	0.0%	1.9%

INTERSECTION VOLUME WORKSHEET

Hampshire Pike at Lion Parkway/Iberia Drive

PM PEAK HOUR

Description	Hampshire Pike Eastbound				Hampshire Pike Westbound				Lion Parkway Northbound				Iberia Drive Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 PM Volumes	0	4	339	301	0	52	541	2	0	275	3	42	0	1	2	1	1563
Existing Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	25	5	2	2	2	4	2	2	2	2	2	2	2	2	2	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	4	373	331	0	57	595	2	0	303	3	46	0	1	2	1	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	0	39	34	0	6	62	0	0	32	0	5	0	0	0	0	178
Williamsport Pike Development			90	20			147			27							284
Background 2025 PM Volumes	0	4	502	385	0	63	804	2	0	362	3	51	0	1	2	1	2180
Future Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Residential Trip Distribution IN			10%														
Residential Trip Distribution OUT							10%										
Residential Project Trips	0	0	21	0	0	0	13	0	0	0	0	0	0	0	0	0	34
Non-Residential Trip Distribution IN			35%									5%					
Non-Residential Trip Distribution OUT						5%	35%										
Non-Residential Project Trips	0	0	2	0	0	1	5	0	0	0	0	0	0	0	0	0	8
Project Trips (unbalanced)	0	0	23	0	0	1	18	0	0	0	0	0	0	0	0	0	42
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	0	23	0	0	1	18	0	0	0	0	0	0	0	0	0	42
Future 2025 PM Volumes	0	4	525	385	0	64	822	2	0	362	3	51	0	1	2	1	2222
% from Existing	0.0%	100.0%	64.6%	78.2%	0.0%	81.3%	65.8%	100.0%	0.0%	76.0%	100.0%	82.4%	0.0%	100.0%	100.0%	100.0%	70.3%
% from Background Growth	0.0%	0.0%	31.0%	21.8%	0.0%	17.2%	32.0%	0.0%	0.0%	24.0%	0.0%	17.6%	0.0%	0.0%	0.0%	0.0%	27.8%
% from Project Trips	0.0%	0.0%	4.4%	0.0%	0.0%	1.6%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%

INTERSECTION VOLUME WORKSHEET

James Campbell Boulevard at Hampshire Pike

AM PEAK HOUR

Description	Hampshire Pike Eastbound				Hampshire Pike Westbound				James Campbell Boulevard Northbound				James Campbell Boulevard Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 AM Volumes	0	164	199	204	0	85	173	92	0	163	407	89	0	198	633	154	2561
Existing Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
Conflicting Pedestrians																	
Heavy Vehicle %	2	7	3	7	2	7	4	10	2	4	10	7	2	4	4	5	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	180	219	224	0	94	190	101	0	179	448	98	0	218	696	169	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	19	23	23	0	10	20	11	0	19	47	10	0	23	72	18	295
Williamsport Pike Development		40	30	20			14			11						31	146
Background 2025 AM Volumes	0	239	272	267	0	104	224	112	0	209	495	108	0	241	768	218	3257
Future Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
Residential Trip Distribution IN							10%			10%						35%	
Residential Trip Distribution OUT		35%	10%	10%													
Residential Project Trips	0	81	23	23	0	0	7	0	0	7	0	0	0	0	0	25	166
Non-Residential Trip Distribution IN							30%			15%						10%	
Non-Residential Trip Distribution OUT		10%	30%	15%													
Non-Residential Project Trips	0	1	2	1	0	0	9	0	0	5	0	0	0	0	0	3	21
Project Trips (unbalanced)	0	82	25	24	0	0	16	0	0	12	0	0	0	0	0	28	187
Balancing Adjustment			-1							-1							
Pass-By Adjustment																	
Project Trips	0	82	24	24	0	0	16	0	0	11	0	0	0	0	0	28	185
Future 2025 AM Volumes	0	321	296	291	0	104	240	112	0	220	495	108	0	241	768	246	3442
% from Existing	0.0%	51.1%	67.2%	70.1%	0.0%	81.7%	72.1%	82.1%	0.0%	74.1%	82.2%	82.4%	0.0%	82.2%	82.4%	62.6%	74.4%
% from Background Growth	0.0%	23.4%	24.7%	21.6%	0.0%	18.3%	21.3%	17.9%	0.0%	20.9%	17.8%	17.6%	0.0%	17.8%	17.6%	26.0%	20.2%
% from Project Trips	0.0%	25.5%	8.1%	8.2%	0.0%	0.0%	6.7%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	11.4%	5.4%

INTERSECTION VOLUME WORKSHEET

James Campbell Boulevard at Hampshire Pike

PM PEAK HOUR

Description	Hampshire Pike Eastbound				Hampshire Pike Westbound				James Campbell Boulevard Northbound				James Campbell Boulevard Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 PM Volumes	0	157	175	180	0	83	179	134	0	237	526	75	0	93	585	152	2576
Existing Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	
Conflicting Pedestrians		0		0		0		0		0		1		1		0	
Heavy Vehicle %	2	3	4	5	2	2	5	5	2	5	6	8	2	4	2	4	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	173	193	198	0	91	197	147	0	261	579	83	0	102	644	167	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	18	20	21	0	9	20	15	0	27	60	9	0	11	67	17	294
Williamsport Pike Development		40	30	20			40			27						80	237
Background 2025 PM Volumes	0	231	243	239	0	100	257	162	0	315	639	92	0	113	711	264	3366
Future Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	
Residential Trip Distribution IN							10%			10%						35%	
Residential Trip Distribution OUT		35%	10%	10%													
Residential Project Trips	0	44	13	13	0	0	21	0	0	21	0	0	0	0	0	75	187
Non-Residential Trip Distribution IN							30%			15%						10%	
Non-Residential Trip Distribution OUT		10%	30%	15%													
Non-Residential Project Trips	0	2	5	2	0	0	2	0	0	1	0	0	0	0	0	1	13
Project Trips (unbalanced)	0	46	18	15	0	0	23	0	0	22	0	0	0	0	0	76	200
Balancing Adjustment			-1	-1													
Pass-By Adjustment																	
Project Trips	0	46	17	14	0	0	23	0	0	22	0	0	0	0	0	76	198
Future 2025 PM Volumes	0	277	260	253	0	100	280	162	0	337	639	92	0	113	711	340	3564
% from Existing	0.0%	56.7%	67.3%	71.1%	0.0%	83.0%	63.9%	82.7%	0.0%	70.3%	82.3%	81.5%	0.0%	82.3%	82.3%	44.7%	72.3%
% from Background Growth	0.0%	26.7%	26.2%	23.3%	0.0%	17.0%	27.9%	17.3%	0.0%	23.1%	17.7%	18.5%	0.0%	17.7%	17.7%	32.9%	22.2%
% from Project Trips	0.0%	16.6%	6.5%	5.5%	0.0%	0.0%	8.2%	0.0%	0.0%	6.5%	0.0%	0.0%	0.0%	0.0%	0.0%	22.4%	5.6%

INTERSECTION VOLUME WORKSHEET

James Campbell Boulevard at Old Williamsport Pike

AM PEAK HOUR

Description	Old Williamsport Pike Eastbound				Old Williamsport Pike Westbound				James Campbell Boulevard Northbound				James Campbell Boulevard Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 AM Volumes	0	8	0	101	0	8	0	4	0	19	602	32	0	19	993	9	1795
Existing Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	13	2	11	2	2	2	2	2	32	12	2	2	5	4	11	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	9	0	111	0	9	0	4	0	21	662	35	0	21	1092	10	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	1	0	12	0	1	0	0	0	2	69	4	0	2	114	1	206
Williamsport Pike Development											40				31		71
Background 2025 AM Volumes	0	10	0	123	0	10	0	4	0	23	771	39	0	23	1237	11	2251
Future Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Residential Trip Distribution IN															35%	35%	
Residential Trip Distribution OUT		35%									35%						
Residential Project Trips	0	81	0	0	0	0	0	0	0	0	81	0	0	0	25	25	212
Non-Residential Trip Distribution IN															10%	5%	
Non-Residential Trip Distribution OUT		5%									10%						
Non-Residential Project Trips	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	2	6
Project Trips (unbalanced)	0	81	0	0	0	0	0	0	0	0	82	0	0	0	28	27	218
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	81	0	0	0	0	0	0	0	0	82	0	0	0	28	27	218
Future 2025 AM Volumes	0	91	0	123	0	10	0	4	0	23	853	39	0	23	1265	38	2469
% from Existing	0.0%	8.8%	0.0%	82.1%	0.0%	80.0%	0.0%	100.0%	0.0%	82.6%	70.6%	82.1%	0.0%	82.6%	78.5%	23.7%	72.7%
% from Background Growth	0.0%	2.2%	0.0%	17.9%	0.0%	20.0%	0.0%	0.0%	0.0%	17.4%	19.8%	17.9%	0.0%	17.4%	19.3%	5.3%	18.5%
% from Project Trips	0.0%	89.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.6%	0.0%	0.0%	0.0%	2.2%	71.1%	8.8%

INTERSECTION VOLUME WORKSHEET

James Campbell Boulevard at Old Williamsport Pike

PM PEAK HOUR

Description	Old Williamsport Pike Eastbound				Old Williamsport Pike Westbound				James Campbell Boulevard Northbound				James Campbell Boulevard Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 PM Volumes	0	7	0	20	0	31	0	16	0	43	831	3	0	3	752	29	1735
Existing Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	2	2	15	2	3	2	6	2	9	2	2	2	67	3	7	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	8	0	22	0	34	0	18	0	47	914	3	0	3	827	32	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	1	0	2	0	4	0	2	0	5	95	0	0	0	86	3	198
Williamsport Pike Development											40				80		120
Background 2025 PM Volumes	0	9	0	24	0	38	0	20	0	52	1049	3	0	3	993	35	2226
Future Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Residential Trip Distribution IN															35%	35%	
Residential Trip Distribution OUT		35%									35%						
Residential Project Trips	0	44	0	0	0	0	0	0	0	0	44	0	0	0	75	75	238
Non-Residential Trip Distribution IN															10%	5%	
Non-Residential Trip Distribution OUT		5%									10%						
Non-Residential Project Trips	0	1	0	0	0	0	0	0	0	0	2	0	0	0	1	0	4
Project Trips (unbalanced)	0	45	0	0	0	0	0	0	0	0	46	0	0	0	76	75	242
Balancing Adjustment		-1															
Pass-By Adjustment																	
Project Trips	0	44	0	0	0	0	0	0	0	0	46	0	0	0	76	75	241
Future 2025 PM Volumes	0	53	0	24	0	38	0	20	0	52	1095	3	0	3	1069	110	2467
% from Existing	0.0%	13.2%	0.0%	83.3%	0.0%	81.6%	0.0%	80.0%	0.0%	82.7%	75.9%	100.0%	0.0%	100.0%	70.3%	26.4%	70.3%
% from Background Growth	0.0%	3.8%	0.0%	16.7%	0.0%	18.4%	0.0%	20.0%	0.0%	17.3%	19.9%	0.0%	0.0%	0.0%	22.5%	5.5%	19.9%
% from Project Trips	0.0%	83.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	0.0%	7.1%	68.2%	9.8%

INTERSECTION VOLUME WORKSHEET

James Campbell Boulevard at Industrial Park Road

AM PEAK HOUR

Description	James Campbell Boulevard Eastbound				James Campbell Boulevard Westbound				Industrial Park Road Northbound				Industrial Park Road Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 AM Volumes	0	391	213	9	0	0	231	44	0	2	5	1	0	100	5	793	1794
Existing Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	14	9	11	2	2	6	14	2	50	40	2	2	6	40	4	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	430	234	10	0	0	254	48	0	2	6	1	0	110	6	872	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	45	24	1	0	0	26	5	0	0	1	0	0	11	1	91	205
Williamsport Pike Development		20	20				10									21	71
Background 2025 AM Volumes	0	495	278	11	0	0	290	53	0	2	7	1	0	121	7	984	2249
Future Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	
Residential Trip Distribution IN							5%									65%	
Residential Trip Distribution OUT		65%	5%														
Residential Project Trips	0	150	12	0	0	0	4	0	0	0	0	0	0	0	0	46	212
Non-Residential Trip Distribution IN							5%									10%	
Non-Residential Trip Distribution OUT		10%	5%														
Non-Residential Project Trips	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	3	6
Project Trips (unbalanced)	0	151	12	0	0	0	6	0	0	0	0	0	0	0	0	49	218
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	151	12	0	0	0	6	0	0	0	0	0	0	0	0	49	218
Future 2025 AM Volumes	0	646	290	11	0	0	296	53	0	2	7	1	0	121	7	1033	2467
% from Existing	0.0%	60.5%	73.4%	81.8%	0.0%	0.0%	78.0%	83.0%	0.0%	100.0%	71.4%	100.0%	0.0%	82.6%	71.4%	76.8%	72.7%
% from Background Growth	0.0%	16.1%	22.4%	18.2%	0.0%	0.0%	19.9%	17.0%	0.0%	0.0%	28.6%	0.0%	0.0%	17.4%	28.6%	18.5%	18.4%
% from Project Trips	0.0%	23.4%	4.1%	0.0%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.7%	8.8%

INTERSECTION VOLUME WORKSHEET

James Campbell Boulevard at Industrial Park Road

PM PEAK HOUR

Description	James Campbell Boulevard Eastbound				James Campbell Boulevard Westbound				Industrial Park Road Northbound				Industrial Park Road Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 PM Volumes	0	635	242	3	0	2	228	63	0	6	5	3	0	44	0	549	1780
Existing Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	3	2	33	2	2	4	3	2	2	40	2	2	9	2	4	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	699	266	3	0	2	251	69	0	7	6	3	0	48	0	604	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	73	28	0	0	0	26	7	0	1	1	0	0	5	0	63	204
Williamsport Pike Development		20	20				27									53	120
Background 2025 PM Volumes	0	792	314	3	0	2	304	76	0	8	7	3	0	53	0	720	2282
Future Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Residential Trip Distribution IN							5%									65%	
Residential Trip Distribution OUT		65%	5%														
Residential Project Trips	0	81	6	0	0	0	11	0	0	0	0	0	0	0	0	138	236
Non-Residential Trip Distribution IN							5%									10%	
Non-Residential Trip Distribution OUT		10%	5%														
Non-Residential Project Trips	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	1	4
Project Trips (unbalanced)	0	83	7	0	0	0	11	0	0	0	0	0	0	0	0	139	240
Balancing Adjustment							1										
Pass-By Adjustment																	
Project Trips	0	83	7	0	0	0	12	0	0	0	0	0	0	0	0	139	241
Future 2025 PM Volumes	0	875	321	3	0	2	316	76	0	8	7	3	0	53	0	859	2523
% from Existing	0.0%	72.6%	75.4%	100.0%	0.0%	100.0%	72.2%	82.9%	0.0%	75.0%	71.4%	100.0%	0.0%	83.0%	0.0%	63.9%	70.6%
% from Background Growth	0.0%	17.9%	22.4%	0.0%	0.0%	0.0%	24.1%	17.1%	0.0%	25.0%	28.6%	0.0%	0.0%	17.0%	0.0%	19.9%	19.9%
% from Project Trips	0.0%	9.5%	2.2%	0.0%	0.0%	0.0%	3.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.2%	9.6%

INTERSECTION VOLUME WORKSHEET

Hampshire Pike at Oxford Village Circle/Site Driveway A

AM PEAK HOUR

Description	Hampshire Pike Eastbound				Hampshire Pike Westbound				Oxford Village Circle Northbound				Site Driveway A Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 AM Volumes	0	0	555	10	0	10	516	0	0	10	0	10	0	0	0	0	1111
Existing Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	2	7	2	2	2	5	2	2	2	2	2	2	2	2	2	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	0	611	11	0	11	568	0	0	11	0	11	0	0	0	0	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	0	64	1	0	1	59	0	0	1	0	1	0	0	0	0	127
Williamsport Pike Development			90				57										147
Background 2025 AM Volumes	0	0	765	12	0	12	684	0	0	12	0	12	0	0	0	0	1497
Future Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Residential Trip Distribution IN		10%						55%									
Residential Trip Distribution OUT														55%		10%	
Residential Project Trips	0	7	0	0	0	0	0	39	0	0	0	0	0	127	0	23	196
Non-Residential Trip Distribution IN		40%						55%									
Non-Residential Trip Distribution OUT														55%		40%	
Non-Residential Project Trips	0	12	0	0	0	0	0	17	0	0	0	0	0	3	0	2	34
Project Trips (unbalanced)	0	19	0	0	0	0	0	56	0	0	0	0	0	130	0	25	230
Balancing Adjustment								-1									
Pass-By Adjustment																	
Project Trips	0	19	0	0	0	0	0	55	0	0	0	0	0	130	0	25	229
Future 2025 AM Volumes	0	19	765	12	0	12	684	55	0	12	0	12	0	130	0	25	1726
% from Existing	0.0%	0.0%	72.5%	83.3%	0.0%	83.3%	75.4%	0.0%	0.0%	83.3%	0.0%	83.3%	0.0%	0.0%	0.0%	0.0%	64.4%
% from Background Growth	0.0%	0.0%	27.5%	16.7%	0.0%	16.7%	24.6%	0.0%	0.0%	16.7%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	22.4%
% from Project Trips	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	13.3%

INTERSECTION VOLUME WORKSHEET

Hampshire Pike at Oxford Village Circle/Site Driveway A

PM PEAK HOUR

Description	Hampshire Pike Eastbound				Hampshire Pike Westbound				Oxford Village Circle Northbound				Site Driveway A Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 PM Volumes	0	0	382	10	0	10	595	0	0	10	0	10	0	0	0	0	1017
Existing Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	2	5	2	2	2	4	2	2	2	2	2	2	2	2	2	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	0	420	11	0	11	655	0	0	11	0	11	0	0	0	0	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	0	44	1	0	1	68	0	0	1	0	1	0	0	0	0	116
Williamsport Pike Development			90				147										237
Background 2025 PM Volumes	0	0	554	12	0	12	870	0	0	12	0	12	0	0	0	0	1472
Future Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Residential Trip Distribution IN		10%						55%									
Residential Trip Distribution OUT														55%		10%	
Residential Project Trips	0	21	0	0	0	0	0	117	0	0	0	0	0	69	0	13	220
Non-Residential Trip Distribution IN		40%						55%									
Non-Residential Trip Distribution OUT														55%		40%	
Non-Residential Project Trips	0	2	0	0	0	0	0	3	0	0	0	0	0	8	0	6	19
Project Trips (unbalanced)	0	23	0	0	0	0	0	120	0	0	0	0	0	77	0	19	239
Balancing Adjustment								1									
Pass-By Adjustment		1	-1				-1	1						1		1	
Project Trips	0	24	-1	0	0	0	-1	122	0	0	0	0	0	78	0	20	242
Future 2025 PM Volumes	0	24	553	12	0	12	869	122	0	12	0	12	0	78	0	20	1714
% from Existing	0.0%	0.0%	69.1%	83.3%	0.0%	83.3%	68.5%	0.0%	0.0%	83.3%	0.0%	83.3%	0.0%	0.0%	0.0%	0.0%	59.3%
% from Background Growth	0.0%	0.0%	31.1%	16.7%	0.0%	16.7%	31.6%	0.0%	0.0%	16.7%	0.0%	16.7%	0.0%	0.0%	0.0%	0.0%	26.5%
% from Project Trips	0.0%	100.0%	-0.2%	0.0%	0.0%	0.0%	-0.1%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	14.1%

INTERSECTION VOLUME WORKSHEET

Old Williamsport Pike at Site Driveway B

AM PEAK HOUR

Description	Old Williamsport Pike Eastbound				Old Williamsport Pike Westbound				Site Driveway B Northbound				Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 AM Volumes	0	0	109	0	0	0	28	0	0	0	0	0	0	0	0	0	137
Existing Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	2	11	2	2	2	25	2	2	2	2	2	2	2	2	2	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	0	120	0	0	0	31	0	0	0	0	0	0	0	0	0	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	0	12	0	0	0	3	0	0	0	0	0	0	0	0	0	15
Williamsport Pike Development																	0
Background 2025 AM Volumes	0	0	132	0	0	0	34	0	0	0	0	0	0	0	0	0	166
Future Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Residential Trip Distribution IN						35%											
Residential Trip Distribution OUT												35%					
Residential Project Trips	0	0	0	0	0	25	0	0	0	0	0	81	0	0	0	0	106
Non-Residential Trip Distribution IN						5%											
Non-Residential Trip Distribution OUT												5%					
Non-Residential Project Trips	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Project Trips (unbalanced)	0	0	0	0	0	27	0	0	0	0	0	81	0	0	0	0	108
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	0	0	0	0	27	0	0	0	0	0	81	0	0	0	0	108
Future 2025 AM Volumes	0	0	132	0	0	27	34	0	0	0	0	81	0	0	0	0	274
% from Existing	0.0%	0.0%	82.6%	0.0%	0.0%	0.0%	82.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%
% from Background Growth	0.0%	0.0%	17.4%	0.0%	0.0%	0.0%	17.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.6%
% from Project Trips	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	39.4%

INTERSECTION VOLUME WORKSHEET

Old Williamsport Pike at Site Driveway B

PM PEAK HOUR

Description	Old Williamsport Pike Eastbound				Old Williamsport Pike Westbound				Site Driveway B Northbound				Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing 2021 PM Volumes	0	0	27	0	0	0	72	0	0	0	0	0	0	0	0	0	99
Existing Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Conflicting Pedestrians		0		0		0		0		0		0		0		0	
Heavy Vehicle %	2	2	12	2	2	2	8	2	2	2	2	2	2	2	2	2	
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	
Adjusted 2021 Volumes	0	0	30	0	0	0	79	0	0	0	0	0	0	0	0	0	
Annual Growth Rate	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	
Growth Factor	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	1.104	
Growth Trips	0	0	3	0	0	0	8	0	0	0	0	0	0	0	0	0	11
Williamsport Pike Development																	0
Background 2025 PM Volumes	0	0	33	0	0	0	87	0	0	0	0	0	0	0	0	0	120
Future Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Residential Trip Distribution IN						35%											
Residential Trip Distribution OUT												35%					
Residential Project Trips	0	0	0	0	0	75	0	0	0	0	0	44	0	0	0	0	119
Non-Residential Trip Distribution IN						5%											
Non-Residential Trip Distribution OUT												5%					
Non-Residential Project Trips	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Project Trips (unbalanced)	0	0	0	0	0	75	0	0	0	0	0	45	0	0	0	0	120
Balancing Adjustment												-1					
Pass-By Adjustment																	
Project Trips	0	0	0	0	0	75	0	0	0	0	0	44	0	0	0	0	119
Future 2025 PM Volumes	0	0	33	0	0	75	87	0	0	0	0	44	0	0	0	0	239
% from Existing	0.0%	0.0%	81.8%	0.0%	0.0%	0.0%	82.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	41.4%
% from Background Growth	0.0%	0.0%	18.2%	0.0%	0.0%	0.0%	17.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.8%
% from Project Trips	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	49.8%

QUALITY COUNTS REPORT

Type: Volume Data
Location: Hampshire Pike West of Oxford Village Cir
Specific Location:
City/State: Columbia TN
QCJobNo: 15562409
Date:
Direction: EB/ WB
Comments:

2025 Growth Factor =	1.104

Start Time	Mon	Tue	Wed	Thu	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Background 2025
		14-Sep-21								
12:00 AM		46				46			46	
1:00 AM		15				15			15	
2:00 AM		19				19			19	
3:00 AM		32				32			32	
4:00 AM		79				79			79	
5:00 AM		181				181			181	
6:00 AM		464				464			464	
7:00 AM		1136				1136			1136	1254
8:00 AM		738				738			738	815
9:00 AM		714				714			714	788
10:00 AM		665				665			665	734
11:00 AM		733				733			733	809
12:00 PM		792				792			792	874
1:00 PM		759				759			759	838
2:00 PM		1033				1033			1033	1140
3:00 PM		1104				1104			1104	1219
4:00 PM		997				997			997	1101
5:00 PM		1019				1019			1019	1125
6:00 PM		746				746			746	824
7:00 PM		613				613			613	
8:00 PM		372				372			372	
9:00 PM		221				221			221	
10:00 PM		153				153			153	
11:00 PM		81				81			81	
Day Total		12712				12712			12712	
ADT		12712				12712			12712	

%Weekday Average	100.00%		
%Week Average	100.00%	100.00%	
AM Peak	7:00 AM	7:00 AM	7:00 AM
Volume	1136	1136	1136
PM Peak	3:00 PM	3:00 PM	3:00 PM
Volume	1104	1104	1104

Intersection 5 - Hapshire Pike at Oxford Village Circle/Site Driveway A, Daily Trip Generation Calculations

Single Family Detached Housing
Daily 437
Enter 219
Exit 218

Int 5	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Enter	0%	10%	0%	0%	0%	0%	0%	55%	0%	0%	0%	0%	0%	0%	0%	0%
Exit	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	55%	0%	10%

Hourly Trip Gen	Enter	Exit	START TIME	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
				EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
6.5%	25%	75%	7:00	0	1	0	0	0	0	0	4	0	0	0	0	0	12	0	2
6.2%	25%	75%	8:00	0	1	0	0	0	0	0	4	0	0	0	0	0	11	0	2
4.6%	25%	75%	9:00	0	0	0	0	0	0	0	3	0	0	0	0	0	8	0	1
4.9%	50%	50%	10:00	0	1	0	0	0	0	0	6	0	0	0	0	0	6	0	1
5.3%	50%	50%	11:00	0	1	0	0	0	0	0	6	0	0	0	0	0	6	0	1
5.7%	50%	50%	12:00	0	1	0	0	0	0	0	7	0	0	0	0	0	7	0	1
6.1%	50%	50%	13:00	0	1	0	0	0	0	0	7	0	0	0	0	0	7	0	1
6.6%	50%	50%	14:00	0	1	0	0	0	0	0	8	0	0	0	0	0	8	0	1
7.5%	50%	50%	15:00	0	2	0	0	0	0	0	9	0	0	0	0	0	9	0	2
8.9%	63%	37%	16:00	0	2	0	0	0	0	0	14	0	0	0	0	0	8	0	1
8.7%	63%	37%	17:00	0	2	0	0	0	0	0	13	0	0	0	0	0	8	0	1
7.2%	63%	37%	18:00	0	2	0	0	0	0	0	11	0	0	0	0	0	6	0	1

Total

START TIME	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
7:00	0	12	0	0	0	0	0	47	0	0	0	0	0	141	0	25
8:00	0	11	0	0	0	0	0	45	0	0	0	0	0	129	0	25
9:00	0	8	0	0	0	0	0	31	0	0	0	0	0	86	0	16
10:00	0	12	0	0	0	0	0	57	0	0	0	0	0	57	0	12
11:00	0	16	0	0	0	0	0	68	0	0	0	0	0	68	0	16
12:00	0	17	0	0	0	0	0	71	0	0	0	0	0	71	0	17
13:00	0	17	0	0	0	0	0	69	0	0	0	0	0	69	0	17
14:00	0	18	0	0	0	0	0	83	0	0	0	0	0	83	0	18
15:00	0	21	0	0	0	0	0	95	0	0	0	0	0	95	0	21
16:00	0	29	0	0	0	0	0	148	0	0	0	0	0	73	0	19
17:00	0	34	0	0	0	0	0	173	0	0	0	0	0	84	0	21
18:00	0	29	0	0	0	0	0	148	0	0	0	0	0	68	0	15

Major Street Sum	Minor Street Less RT Volumes
59	141
56	129
39	86
69	57
84	68
88	71
86	69
101	83
116	95
177	73
207	84
177	68

General Office Building
Daily 114
Enter 57
Exit 57

Int 5	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Enter	0%	40%	0%	0%	0%	0%	0%	55%	0%	0%	0%	0%	0%	0%	0%	0%
Exit	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	55%	0%	40%

Hourly Trip Gen	Enter	Exit	START TIME	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
				EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
7.0%	86%	14%	7:00	0	3	0	0	0	0	0	4	0	0	0	0	0	1	0	0
8.8%	86%	14%	8:00	0	3	0	0	0	0	0	5	0	0	0	0	0	1	0	1
5.4%	86%	14%	9:00	0	2	0	0	0	0	0	3	0	0	0	0	0	0	0	0
5.9%	50%	50%	10:00	0	1	0	0	0	0	0	2	0	0	0	0	0	2	0	1
8.4%	50%	50%	11:00	0	2	0	0	0	0	0	3	0	0	0	0	0	3	0	2
10.4%	50%	50%	12:00	0	2	0	0	0	0	0	3	0	0	0	0	0	3	0	2
8.2%	50%	50%	13:00	0	2	0	0	0	0	0	3	0	0	0	0	0	3	0	2
7.5%	50%	50%	14:00	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	2
7.4%	50%	50%	15:00	0	2	0	0	0	0	0	2	0	0	0	0	0	2	0	2
10.1%	16%	84%	16:00	0	1	0	0	0	0	0	1	0	0	0	0	0	5	0	4
10.4%	16%	84%	17:00	0	1	0	0	0	0	0	1	0	0	0	0	0	5	0	4
2.4%	16%	84%	18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1

Shopping Center (Fitted Curve Equation)
Daily 189
Enter 95
Exit 94

Int 4	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Enter	0%	40%	0%	0%	0%	0%	0%	55%	0%	0%	0%	0%	0%	0%	0%	0%
Exit	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	55%	0%	40%

Hourly Trip Gen	Enter	Exit	START TIME	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
				EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
1.1%	62%	38%	7:00	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2.0%	62%	38%	8:00	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	1
3.6%	62%	38%	9:00	0	2	0	0	0	0	0	2	0	0	0	0	0	1	0	1
5.6%	50%	50%	10:00	0	2	0	0	0	0	0	3	0	0	0	0	0	3	0	2
8.3%	50%	50%	11:00	0	3	0	0	0	0	0	4	0	0	0	0	0	4	0	3
10.0%	50%	50%	12:00	0	4	0	0	0	0	0	5	0	0	0	0	0	5	0	4
9.3%	50%	50%	13:00	0	4	0	0	0	0	0	5	0	0	0	0	0	5	0	4
9.0%	50%	50%	14:00	0	3	0	0	0	0	0	5	0	0	0	0	0	5	0	3
8.8%	50%	50%	15:00	0	3	0	0	0	0	0	5	0	0	0	0	0	5	0	3
9.2%	48%	52%	16:00	0	3	0	0	0	0	0	5	0	0	0	0	0	5	0	4
9.3%	48%	52%	17:00	0	3	0	0	0	0	0	5	0	0	0	0	0	5	0	4
8.0%	48%	52%	18:00	0	3	0	0	0	0	0	4	0	0	0	0	0	4	0	3

Int 5	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Enter	0%	10%	0%	0%	0%	0%	0%	55%	0%	0%	0%	0%	0%	0%	0%	0%
Exit	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	55%	0%	10%

Multifamily Housing (Low-Rise)
Daily 4,684
Enter 2342
Exit 2342

Hourly Trip Gen	Enter	Exit	START TIME	Hampshire Pike				Hampshire Pike				Oxford Village Circle				Site Driveway A			
				EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
6.5%	23%	77%	7:00	0	7	0	0	0	0	0	38	0	0	0	0	0	128	0	23
5.8%	23%	77%	8:00	0	6	0	0	0	0	0	35	0	0	0	0	0	116	0	21
3.9%	23%	77%	9:00	0	4	0	0	0	0	0	23	0	0	0	0	0	77	0	14
3.6%	50%	50%	10:00	0	8	0	0	0	0	0	46	0	0	0	0	0	46	0	8
4.3%	50%	50%	11:00	0	10	0	0	0	0	0	55	0	0	0	0	0	55	0	10
4.3%	50%	50%	12:00	0	10	0	0	0	0	0	56	0	0	0	0	0	56	0	10
4.2%	50%	50%	13:00	0	10	0	0	0	0	0	54	0	0	0	0	0	54	0	10
5.2%	50%	50%	14:00	0	12	0	0	0	0	0	68	0	0	0	0	0	68	0	12
6.1%	50%	50%	15:00	0	14	0	0	0	0	0	79	0	0	0	0	0	79	0	14
7.9%	63%	27%	16:00	0	23	0	0	0	0	0	128	0	0	0	0	0	55	0	10
9.5%	63%	27%	17:00	0	28	0	0	0	0	0	154	0	0	0	0	0	66	0	12
8.2%	63%	27%	18:00	0	24	0	0	0	0	0	133	0	0	0	0	0	57	0	10

TRAFFIC SIGNAL WARRANT ANALYSIS

City/County:	**Columbia**	85th-percentile speed on the major street exceeds 40 mph? (Y or N)	**N**		
State:	**TN**	Isolated community with a population of less than 10,000? (Y or N)	**N**	Analyzed by:	RAP
Date:	**5/16/2022**	Apply 56% warrant to Warrant 1, Combination Warrant? (Y or N)	**N**	Analyzed by:	Kimley-Horn
Major Street:	**Hampshire Pike**	Approach Lanes - Major? (1 or 2)	**1**		
Minor Street:	**Driveway A**	Approach Lanes - Minor? (1 or 2)	**1**		

24-Hour Volume Summary	Major Street Total of Both Approaches	Minor Street Higher Volume Approach	Warrant 1, Condition A 100% Major Street	Warrant 1, Condition A 100% Minor Street	Warrant 1, Condition B 100% Major Street	Warrant 1, Condition B 100% Minor Street	Warrant 1, Combination Warrant 80% Major Street	Warrant 1, Combination Warrant 80% Minor Street	Warrant 1, Combination Warrant 80% Major Street	Warrant 1, Combination Warrant 80% Minor Street	Warrant 2 100% Figure 4C-1	Warrant 3, Condition A 100% Minor Delay	Warrant 3, Condition A 100% Minor Volume	Warrant 3, Condition A 100% Total Intrsctn	Warrant 3, Condition B 100% Figure 4C-3
12:00 AM TO 01:00 AM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
01:00 AM TO 02:00 AM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
02:00 AM TO 03:00 AM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
03:00 AM TO 04:00 AM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
04:00 AM TO 05:00 AM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
05:00 AM TO 06:00 AM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
06:00 AM TO 07:00 AM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
07:00 AM TO 08:00 AM	1313	141	263%	94%	**175%**	**188%**	**328%**	**118%**	**219%**	**235%**	**176%**				**109%**
08:00 AM TO 09:00 AM	871	129	174%	86%	**116%**	**172%**	**218%**	**108%**	**145%**	**215%**	**100%**				50%
09:00 AM TO 10:00 AM	827	86	165%	57%	**110%**	**115%**	207%	72%	**138%**	**143%**	61%				31%
10:00 AM TO 11:00 AM	803	57	161%	38%	107%	76%	201%	48%	134%	95%	38%				20%
11:00 AM TO 12:00 PM	893	68	179%	45%	119%	91%	223%	57%	**149%**	**113%**	56%				27%
12:00 PM TO 01:00 PM	962	71	192%	47%	128%	95%	241%	59%	**160%**	**118%**	66%				33%
01:00 PM TO 02:00 PM	924	69	185%	46%	123%	92%	231%	58%	**154%**	**115%**	60%				29%
02:00 PM TO 03:00 PM	1241	83	248%	55%	**165%**	**111%**	310%	69%	**207%**	**138%**	**104%**				58%
03:00 PM TO 04:00 PM	1335	95	267%	63%	**178%**	**127%**	334%	79%	**223%**	**158%**	**119%**				75%
04:00 PM TO 05:00 PM	1278	73	256%	49%	170%	97%	320%	61%	**213%**	**122%**	91%				54%
05:00 PM TO 06:00 PM	1332	84	266%	56%	**178%**	**112%**	333%	70%	**222%**	**140%**	**105%**				66%
06:00 PM TO 07:00 PM	1001	68	200%	45%	133%	91%	250%	57%	**167%**	**113%**	68%				34%
07:00 PM TO 08:00 PM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
08:00 PM TO 09:00 PM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
09:00 PM TO 10:00 PM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
10:00 PM TO 11:00 PM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
11:00 PM TO 12:00 AM			0%	0%	0%	0%	0%	0%	0%	0%	0%				0%
			Threshold		Threshold		Threshold		Threshold		MUTCD Figure	Warranting Volumes			MUTCD Figure
Source:	MUTCD, 2009 Edition		500	150	750	75	400	120	600	60	4C-1 and 4C-2				4C-3 and 4C-4
Created By:	Kimley-Horn and Associates, Inc.		Summary		Summary		Summary		Summary		Summary	Summary			Summary
			TOTAL	0	TOTAL	6	TOTAL	2	TOTAL	11	TOTAL **5**	TOTAL			TOTAL **1**
			Met?	NO	Met?	NO	TOTAL	2	Met?	NO	Met? **YES**	Met?			Met? **YES**

COMMENTS/NOTES:	COMMENTS/NOTES:
Future 2025	

Appendix E

Turn Lane Evaluations

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

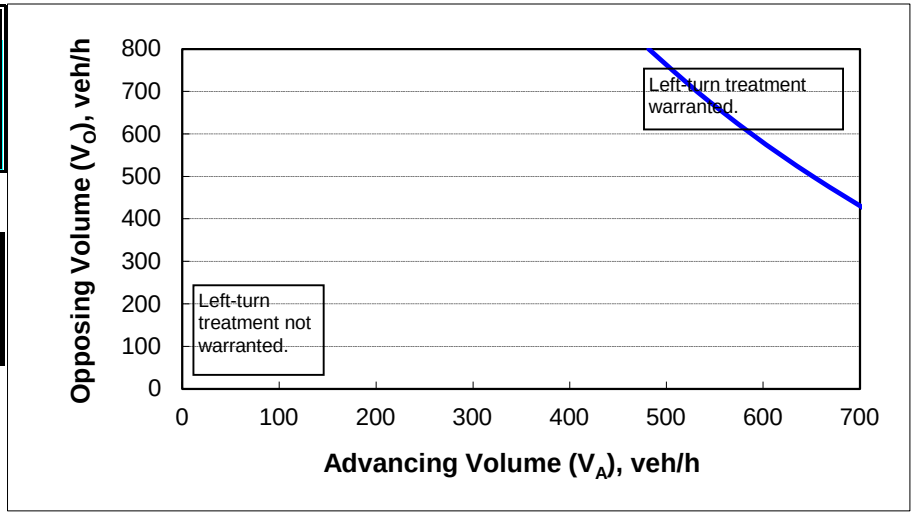
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	40
Percent of left-turns in advancing volume (V_A), %:	2%
Advancing volume (V_A), veh/h:	796
Opposing volume (V_O), veh/h:	684

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	540
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

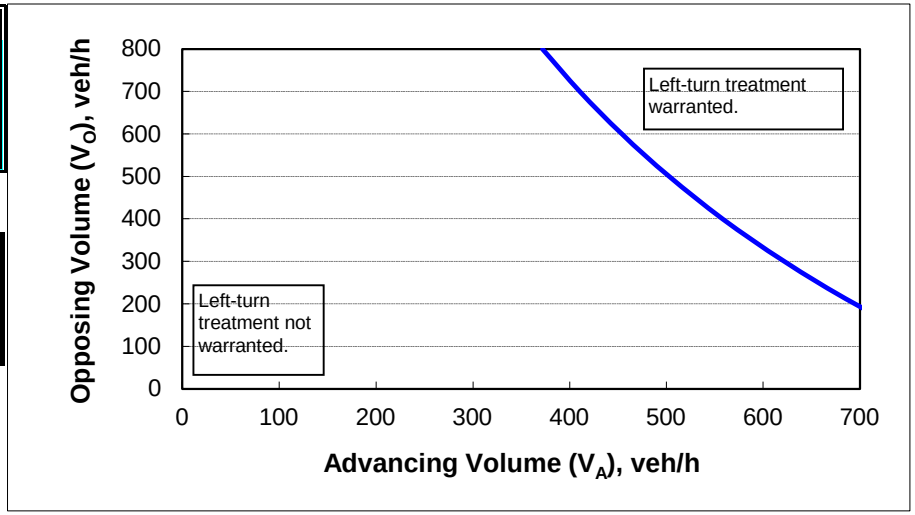
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	40
Percent of left-turns in advancing volume (V_A), %:	4%
Advancing volume (V_A), veh/h:	589
Opposing volume (V_O), veh/h:	869

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	348
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

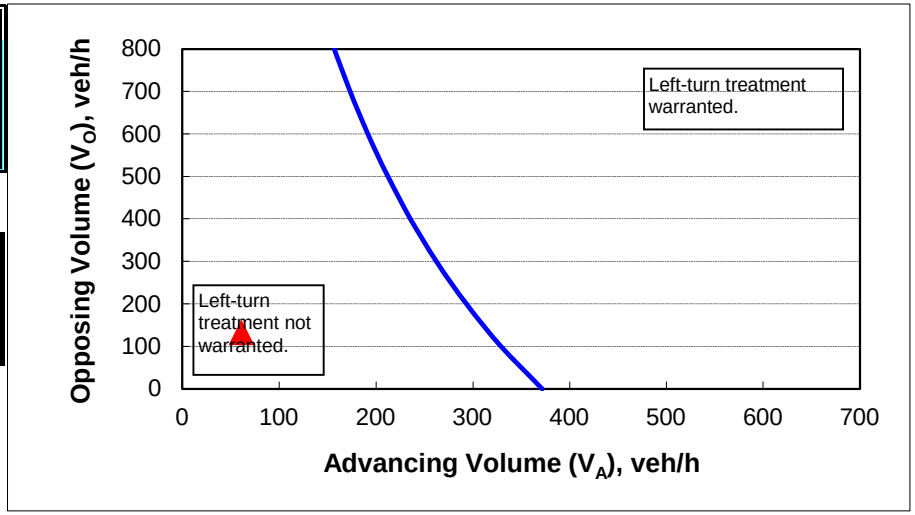
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	44%
Advancing volume (V_A), veh/h:	61
Opposing volume (V_O), veh/h:	132

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	317
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

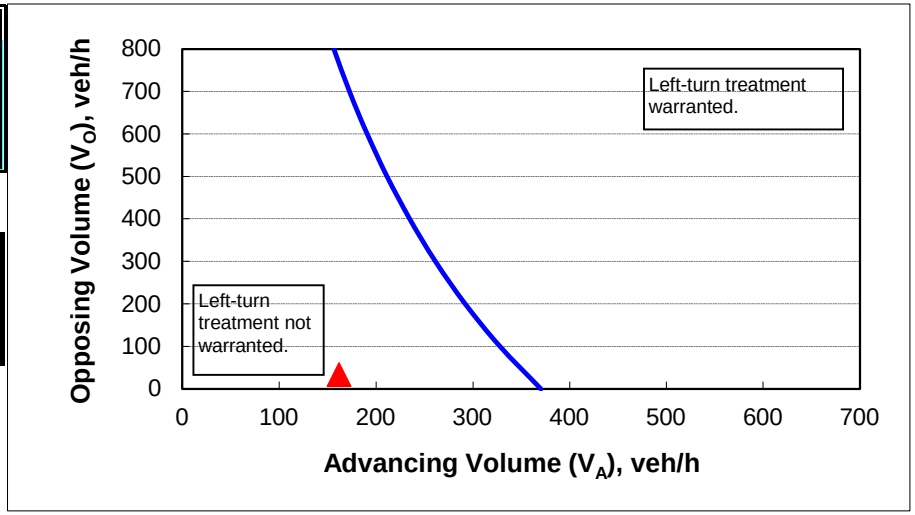
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	46%
Advancing volume (V_A), veh/h:	162
Opposing volume (V_O), veh/h:	33

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	356
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadw ay

Variable	Value
Major-road speed, mph:	40
Major-road volume (one direction), veh/h:	751
Right-turn volume, veh/h:	55

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	30
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Add right-turn bay.	

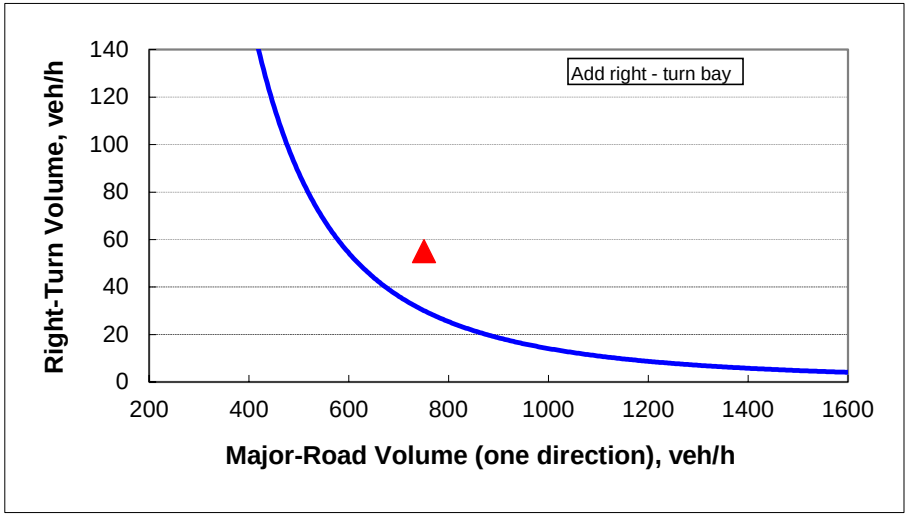


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadw ay

Variable	Value
Major-road speed, mph:	40
Major-road volume (one direction), veh/h:	1003
Right-turn volume, veh/h:	122

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	14
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Add right-turn bay.	

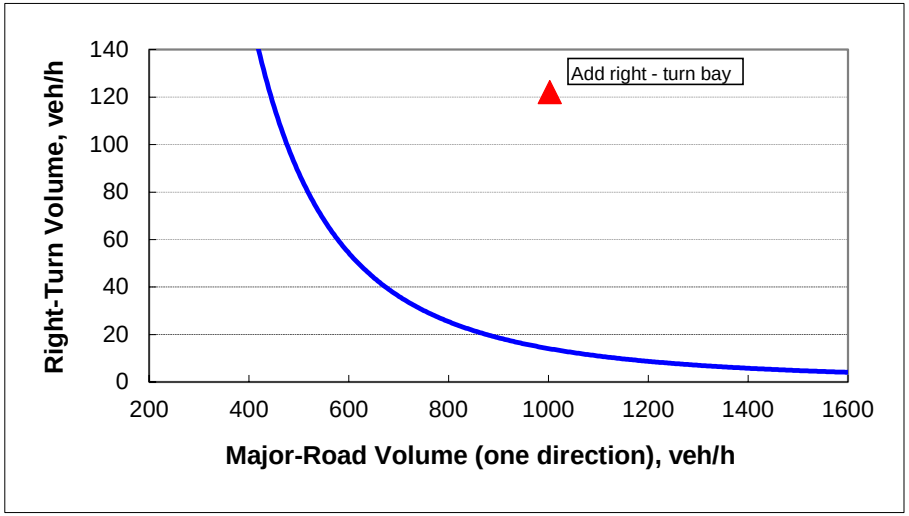


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadw ay

Variable	Value
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	132
Right-turn volume, veh/h:	0

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	30
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

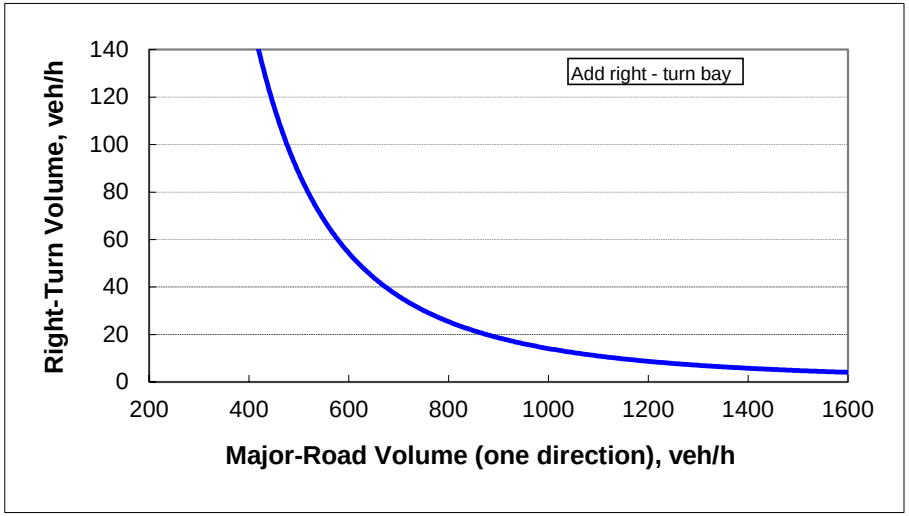


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadw ay

Variable	Value
Major-road speed, mph:	35
Major-road volume (one direction), veh/h:	33
Right-turn volume, veh/h:	0

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	4029918
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

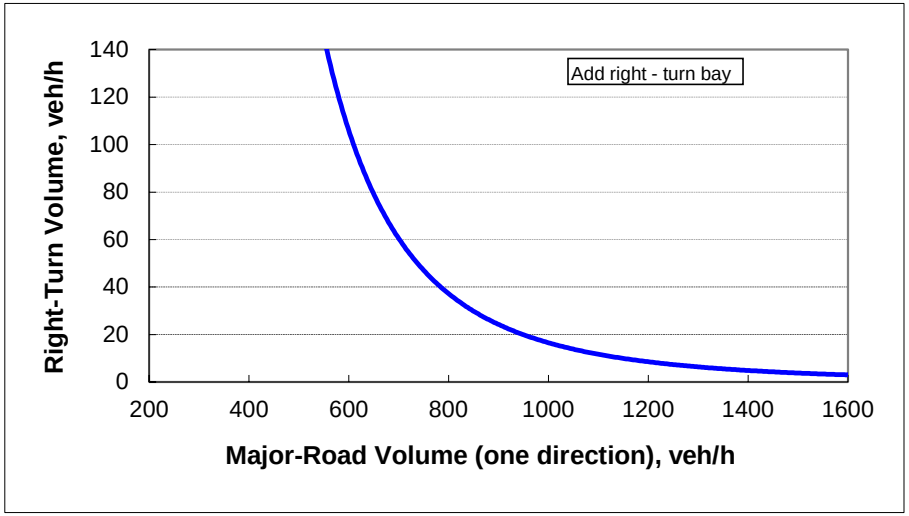


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

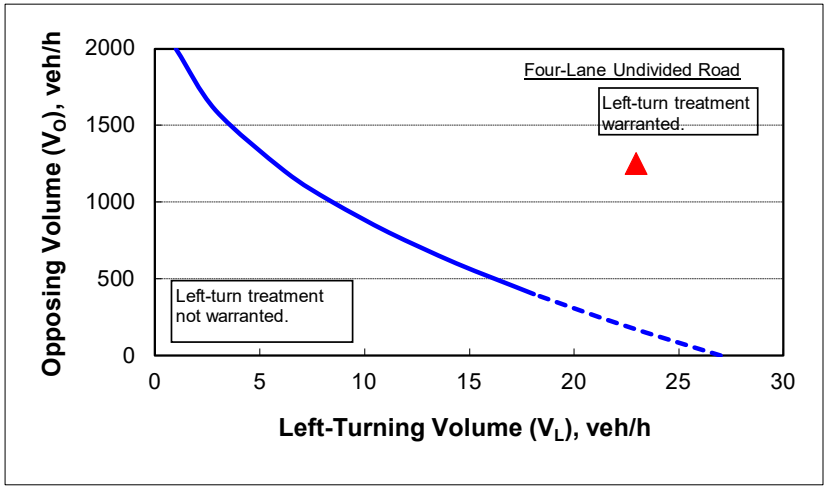
4-lane roadway

INPUT

Variable	Value
Left-turning volume (V_L), veh/h:	23
Advancing volume (V_A), veh/h:	833
Opposing volume (V_O), veh/h:	1248

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

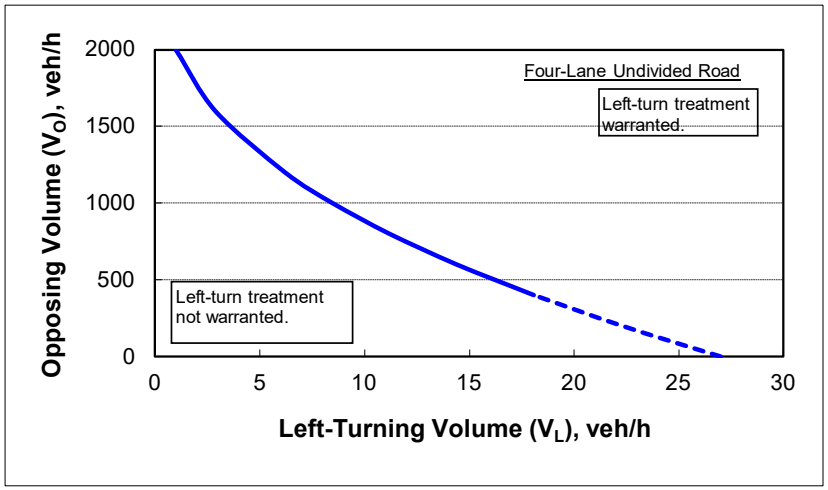
4-lane roadway

INPUT

Variable	Value
Left-turning volume (V_L), veh/h:	52
Advancing volume (V_A), veh/h:	1104
Opposing volume (V_O), veh/h:	1028

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

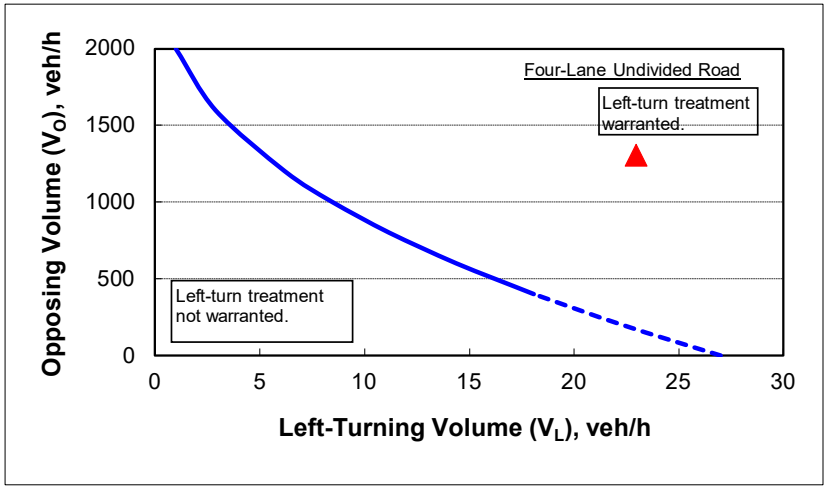
4-lane roadway

INPUT

Variable	Value
Left-turning volume (V_L), veh/h:	23
Advancing volume (V_A), veh/h:	915
Opposing volume (V_O), veh/h:	1303

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

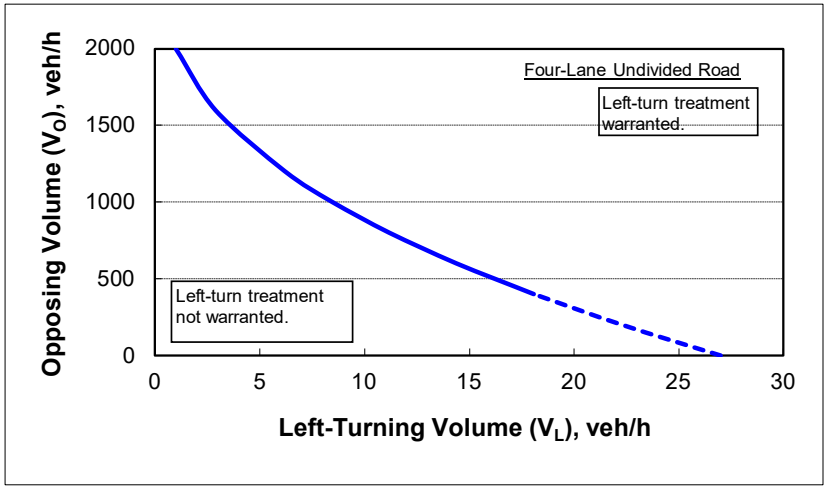
4-lane roadway

INPUT

Variable	Value
Left-turning volume (V_L), veh/h:	52
Advancing volume (V_A), veh/h:	1150
Opposing volume (V_O), veh/h:	1179

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

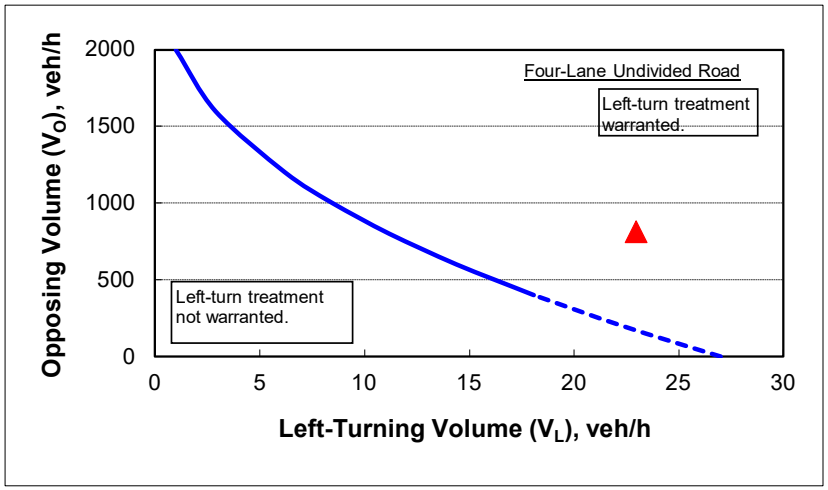
4-lane roadway

INPUT

Variable	Value
Left-turning volume (V_L), veh/h:	23
Advancing volume (V_A), veh/h:	1271
Opposing volume (V_O), veh/h:	810

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

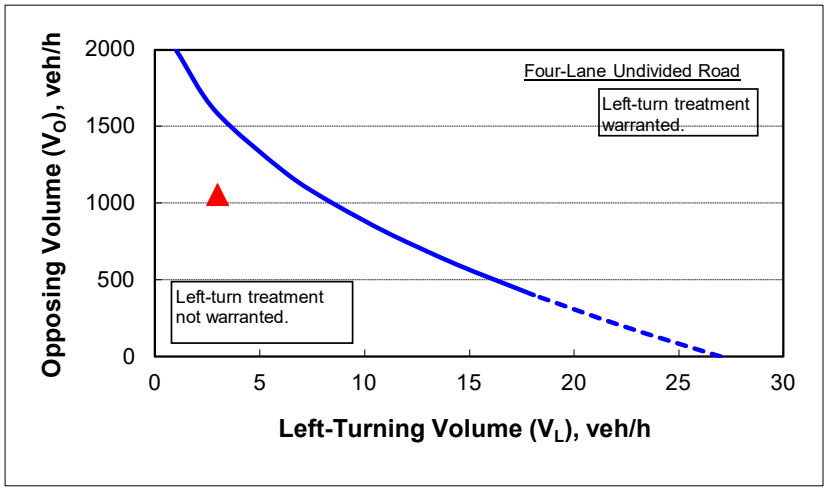
4-lane roadway

INPUT

Variable	Value
Left-turning volume (V_L), veh/h:	3
Advancing volume (V_A), veh/h:	1031
Opposing volume (V_O), veh/h:	1052

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

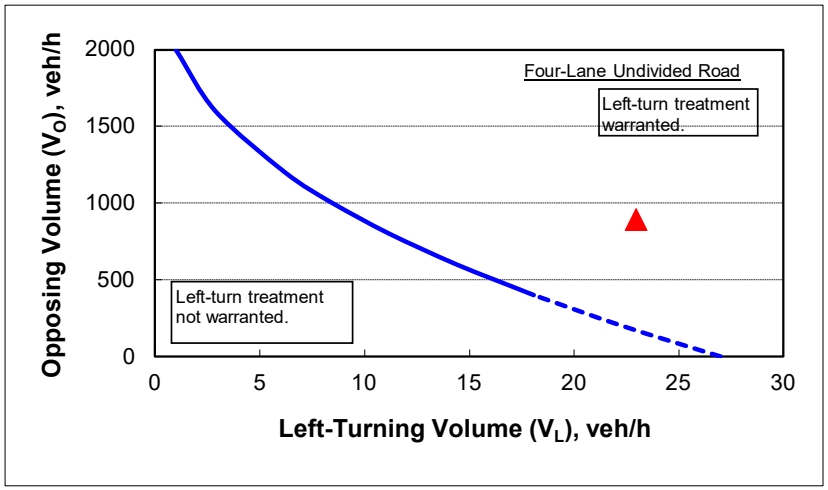
4-lane roadway

INPUT

Variable	Value
Left-turning volume (V_L), veh/h:	23
Advancing volume (V_A), veh/h:	1326
Opposing volume (V_O), veh/h:	892

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

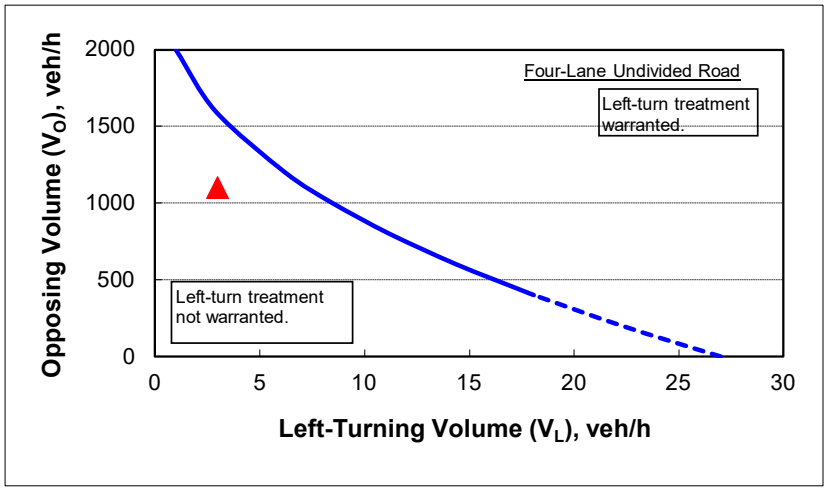
4-lane roadway

INPUT

Variable	Value
Left-turning volume (V_L), veh/h:	3
Advancing volume (V_A), veh/h:	1182
Opposing volume (V_O), veh/h:	1098

OUTPUT

Variable	Message
Opposing volume (V_O) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0

Appendix F

Capacity Analyses and

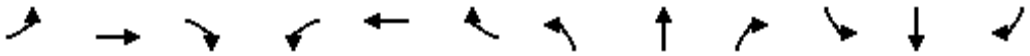
Queue Analyses



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1	490	464	203	421	256	170	27
v/c Ratio	0.00	0.50	0.44	0.39	0.35	0.86	0.27	0.07
Control Delay	15.0	19.8	3.0	9.8	10.0	64.2	3.9	22.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.0	19.8	3.0	9.8	10.0	64.2	3.9	22.1
Queue Length 50th (ft)	0	206	0	47	119	163	0	10
Queue Length 95th (ft)	4	346	55	89	201	#249	37	30
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	511	972	1059	541	1188	367	646	463
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.50	0.44	0.38	0.35	0.70	0.26	0.06

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	446	422	185	383	0	231	2	155	10	7	7
Future Volume (veh/h)	1	446	422	185	383	0	231	2	155	10	7	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1841	1826	1870	1781	1870	1663	1870	1870	1870
Adj Flow Rate, veh/h	1	490	227	203	421	0	254	2	43	11	8	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	4	2	4	5	2	8	2	16	2	2	2
Cap, veh/h	568	952	820	440	1152	0	347	2	472	72	41	3
Arrive On Green	0.52	0.52	0.52	0.07	0.63	0.00	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	966	1841	1585	1753	1826	0	1055	8	1409	73	157	12
Grp Volume(v), veh/h	1	490	227	203	421	0	256	0	43	20	0	0
Grp Sat Flow(s),veh/h/ln	966	1841	1585	1753	1826	0	1064	0	1409	242	0	0
Q Serve(g_s), s	0.1	18.4	8.5	5.4	11.6	0.0	0.0	0.0	2.2	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.1	18.4	8.5	5.4	11.6	0.0	25.4	0.0	2.2	25.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.55		0.05
Lane Grp Cap(c), veh/h	568	952	820	440	1152	0	349	0	472	117	0	0
V/C Ratio(X)	0.00	0.51	0.28	0.46	0.37	0.00	0.73	0.00	0.09	0.17	0.00	0.00
Avail Cap(c_a), veh/h	568	952	820	498	1152	0	393	0	516	165	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.2	16.7	14.3	11.9	9.3	0.0	37.8	0.0	23.9	31.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.0	0.8	0.3	0.9	0.0	4.9	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	7.7	3.0	1.9	4.4	0.0	6.9	0.0	0.7	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.3	18.7	15.1	12.2	10.2	0.0	42.6	0.0	24.0	31.7	0.0	0.0
LnGrp LOS	B	B	B	B	B	A	D	A	C	C	A	A
Approach Vol, veh/h		718			624			299			20	
Approach Delay, s/veh		17.5			10.8			39.9			31.7	
Approach LOS		B			B			D			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		72.3		32.7	11.9	60.3		32.7				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		63.0		31.0	10.9	47.6		31.0				
Max Q Clear Time (g_c+I1), s		13.6		27.4	7.4	20.4		27.7				
Green Ext Time (p_c), s		5.7		0.4	0.1	8.1		0.0				

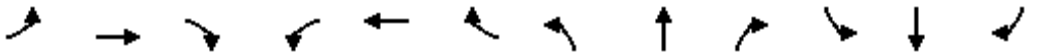
Intersection Summary												
HCM 6th Ctrl Delay			19.2									
HCM 6th LOS			B									



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	202	498	106	213	113	201	503	110	245	782	190
v/c Ratio	0.38	0.67	0.36	0.30	0.13	0.85	0.70	0.21	0.87	0.89	0.28
Control Delay	24.3	38.7	26.1	37.0	3.0	95.1	60.8	13.9	91.6	68.3	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.3	38.7	26.1	37.0	3.0	95.1	60.8	13.9	91.6	68.3	8.8
Queue Length 50th (ft)	117	390	58	156	0	204	247	20	248	403	26
Queue Length 95th (ft)	176	536	97	245	30	#309	318	69	#349	490	77
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	640	741	299	700	946	287	786	519	344	964	867
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.67	0.35	0.30	0.12	0.70	0.64	0.21	0.71	0.81	0.22

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	219	224	94	190	101	179	448	98	218	696	169
Future Volume (veh/h)	180	219	224	94	190	101	179	448	98	218	696	169
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1856	1796	1796	1841	1752	1841	1752	1796	1841	1841	1826
Adj Flow Rate, veh/h	202	246	227	106	213	56	201	503	43	245	782	81
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	3	7	7	4	10	4	10	7	4	4	5
Cap, veh/h	538	389	359	330	747	828	223	729	408	267	877	514
Arrive On Green	0.08	0.44	0.44	0.05	0.41	0.41	0.13	0.22	0.22	0.15	0.25	0.25
Sat Flow, veh/h	1711	888	820	1711	1841	1485	1753	3328	1522	1753	3497	1547
Grp Volume(v), veh/h	202	0	473	106	213	56	201	503	43	245	782	81
Grp Sat Flow(s),veh/h/ln	1711	0	1708	1711	1841	1485	1753	1664	1522	1753	1749	1547
Q Serve(g_s), s	9.9	0.0	31.9	5.3	11.5	2.6	16.8	20.6	3.2	20.4	32.0	5.5
Cycle Q Clear(g_c), s	9.9	0.0	31.9	5.3	11.5	2.6	16.8	20.6	3.2	20.4	32.0	5.5
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	538	0	749	330	747	828	223	729	408	267	877	514
V/C Ratio(X)	0.38	0.00	0.63	0.32	0.29	0.07	0.90	0.69	0.11	0.92	0.89	0.16
Avail Cap(c_a), veh/h	802	0	749	338	747	828	296	808	444	355	991	564
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.8	0.0	32.3	26.3	29.6	15.1	63.8	53.3	40.9	62.0	53.6	34.9
Incr Delay (d2), s/veh	0.2	0.0	4.0	0.2	1.0	0.2	20.8	2.2	0.1	20.9	9.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	13.8	2.2	5.3	0.9	8.6	8.7	1.2	10.5	14.9	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.9	0.0	36.4	26.5	30.6	15.2	84.6	55.5	41.0	82.9	63.1	35.0
LnGrp LOS	C	A	D	C	C	B	F	E	D	F	E	D
Approach Vol, veh/h		675			375			747			1108	
Approach Delay, s/veh		32.1			27.1			62.5			65.4	
Approach LOS		C			C			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	70.0	28.5	37.5	17.1	65.2	23.8	42.2
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	65.0	30.0	36.0	35.0	38.0	25.0	42.0
Max Q Clear Time (g_c+I1), s	7.3	33.9	22.4	22.6	11.9	13.5	18.8	34.0
Green Ext Time (p_c), s	0.0	1.9	0.1	2.6	0.2	0.8	0.1	3.2

Intersection Summary	
HCM 6th Ctrl Delay	52.0
HCM 6th LOS	D

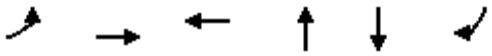
Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	111	9	0	4	21	662	35	21	1092	10
Future Vol, veh/h	9	0	111	9	0	4	21	662	35	21	1092	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	-	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	13	2	11	2	2	2	32	12	2	5	4	11
Mvmt Flow	10	0	122	10	0	4	23	727	38	23	1200	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1662	2063	606	1419	2030	364	1211	0	0	765	0	0
Stage 1	1252	1252	-	773	773	-	-	-	-	-	-	-
Stage 2	410	811	-	646	1257	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.54	7.12	7.54	6.54	6.94	4.74	-	-	4.2	-	-
Critical Hdwy Stg 1	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.02	3.41	3.52	4.02	3.32	2.52	-	-	2.25	-	-
Pot Cap-1 Maneuver	57	54	419	97	57	633	430	-	-	825	-	-
Stage 1	166	242	-	358	407	-	-	-	-	-	-	-
Stage 2	561	391	-	427	241	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	51	48	419	62	50	633	430	-	-	825	-	-
Mov Cap-2 Maneuver	120	147	-	163	143	-	-	-	-	-	-	-
Stage 1	150	235	-	324	369	-	-	-	-	-	-	-
Stage 2	505	354	-	294	234	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.6	23	1	0.2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	430	-	-	120	419	163	633	825	-	-
HCM Lane V/C Ratio	0.054	-	-	0.082	0.291	0.061	0.007	0.028	-	-
HCM Control Delay (s)	13.8	0.6	-	37.7	17.1	28.5	10.7	9.5	-	-
HCM Lane LOS	B	A	-	E	C	D	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.3	1.2	0.2	0	0.1	-	-

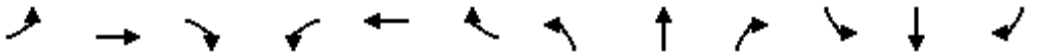


Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	500	284	351	10	581	568
v/c Ratio	0.67	0.12	0.23	0.16	1.63	0.71
Control Delay	11.3	5.2	19.7	54.1	322.4	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.3	5.2	19.7	54.1	322.4	15.8
Queue Length 50th (ft)	109	25	64	6	~521	155
Queue Length 95th (ft)	216	50	140	24	#769	212
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	955	2342	1526	63	356	1113
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.12	0.23	0.16	1.63	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	430	234	10	0	254	48	2	6	1	110	6	872
Future Volume (veh/h)	430	234	10	0	254	48	2	6	1	110	6	872
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1767	1737	1870	1811	1693	1159	1307	1870	1811	1307	1841
Adj Flow Rate, veh/h	500	272	9	0	295	46	2	7	0	0	0	813
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	14	9	11	2	6	14	50	40	2	6	40	4
Cap, veh/h	737	2266	75	0	1368	211	3	11	0	0	212	1082
Arrive On Green	0.18	0.68	0.68	0.00	0.46	0.46	0.01	0.01	0.00	0.00	0.00	0.16
Sat Flow, veh/h	1612	3316	109	0	3078	461	287	1006	0	0	1307	3120
Grp Volume(v), veh/h	500	137	144	0	168	173	9	0	0	0	0	813
Grp Sat Flow(s),veh/h/ln	1612	1678	1747	0	1721	1728	1293	0	0	0	1307	1560
Q Serve(g_s), s	17.0	3.1	3.2	0.0	6.5	6.7	0.8	0.0	0.0	0.0	0.0	18.0
Cycle Q Clear(g_c), s	17.0	3.1	3.2	0.0	6.5	6.7	0.8	0.0	0.0	0.0	0.0	18.0
Prop In Lane	1.00		0.06	0.00		0.27	0.22		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	737	1147	1194	0	788	791	14	0	0	0	212	1082
V/C Ratio(X)	0.68	0.12	0.12	0.00	0.21	0.22	0.64	0.00	0.00	0.00	0.00	0.75
Avail Cap(c_a), veh/h	1177	1147	1194	0	788	791	58	0	0	0	212	1082
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	10.0	6.1	6.1	0.0	18.1	18.2	54.8	0.0	0.0	0.0	0.0	32.1
Incr Delay (d2), s/veh	1.1	0.2	0.2	0.0	0.6	0.6	39.2	0.0	0.0	0.0	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	1.0	1.0	0.0	2.6	2.7	0.4	0.0	0.0	0.0	0.0	10.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	6.3	6.3	0.0	18.7	18.8	93.9	0.0	0.0	0.0	0.0	35.1
LnGrp LOS	B	A	A	A	B	B	F	A	A	A	A	D
Approach Vol, veh/h		781			341			9			813	
Approach Delay, s/veh		9.4			18.8			93.9			35.1	
Approach LOS		A			B			F			D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	25.1	56.9		23.0		82.0		6.2				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	19.0	8.7		20.0		5.2		2.8				
Green Ext Time (p_c), s	1.6	1.3		0.0		1.5		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		22.2	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	611	11	11	568	0	11	0	11	0	0	0
Future Vol, veh/h	0	611	11	11	568	0	11	0	11	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	100	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	7	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	0	671	12	12	624	0	12	0	12	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	624	0	0	683	0	0	1325	1325	677	1331	1331	624
Stage 1	-	-	-	-	-	-	677	677	-	648	648	-
Stage 2	-	-	-	-	-	-	648	648	-	683	683	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	957	-	-	910	-	-	133	156	453	132	154	485
Stage 1	-	-	-	-	-	-	443	452	-	459	466	-
Stage 2	-	-	-	-	-	-	459	466	-	439	449	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	957	-	-	910	-	-	131	153	453	126	151	485
Mov Cap-2 Maneuver	-	-	-	-	-	-	131	153	-	126	151	-
Stage 1	-	-	-	-	-	-	443	452	-	459	457	-
Stage 2	-	-	-	-	-	-	450	457	-	427	449	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.2	25.1	0
HCM LOS			D	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	203	957	-	-	910	-	-	-	-
HCM Lane V/C Ratio	0.119	-	-	-	0.013	-	-	-	-
HCM Control Delay (s)	25.1	0	-	-	9	0	-	0	0
HCM Lane LOS	D	A	-	-	A	A	-	A	A
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	120	0	0	31	0	0
Future Vol, veh/h	120	0	0	31	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	11	2	2	25	2	2
Mvmt Flow	132	0	0	34	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	132	0	166	132
Stage 1	-	-	-	-	132	-
Stage 2	-	-	-	-	34	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1453	-	824	917
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	988	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1453	-	824	917
Mov Cap-2 Maneuver	-	-	-	-	824	-
Stage 1	-	-	-	-	894	-
Stage 2	-	-	-	-	988	-

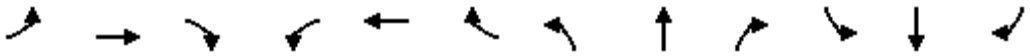
Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1453	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	4	405	360	62	649	332	50	4
v/c Ratio	0.01	0.40	0.34	0.11	0.56	0.89	0.08	0.01
Control Delay	16.5	18.6	2.8	10.0	16.3	66.3	5.7	24.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.5	18.6	2.8	10.0	16.3	66.3	5.7	24.8
Queue Length 50th (ft)	1	179	0	17	274	244	0	2
Queue Length 95th (ft)	8	299	51	40	446	337	23	10
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	304	1014	1045	589	1153	461	672	586
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.40	0.34	0.11	0.56	0.72	0.07	0.01

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	373	331	57	595	2	303	3	46	1	2	1
Future Volume (veh/h)	4	373	331	57	595	2	303	3	46	1	2	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1530	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	405	185	62	647	2	329	3	13	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	25	5	2	2	4	2	2	2	2	2	2	2
Cap, veh/h	271	900	781	413	1039	3	274	2	599	40	62	0
Arrive On Green	0.49	0.49	0.49	0.04	0.57	0.57	0.34	0.34	0.34	0.34	0.34	0.00
Sat Flow, veh/h	640	1826	1585	1781	1834	6	628	6	1585	0	182	0
Grp Volume(v), veh/h	4	405	185	62	0	649	332	0	13	3	0	0
Grp Sat Flow(s),veh/h/ln	640	1826	1585	1781	0	1840	633	0	1585	182	0	0
Q Serve(g_s), s	0.5	17.3	8.0	2.0	0.0	28.3	0.0	0.0	0.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	20.0	17.3	8.0	2.0	0.0	28.3	41.0	0.0	0.6	41.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.33		0.00
Lane Grp Cap(c), veh/h	271	900	781	413	0	1042	276	0	599	102	0	0
V/C Ratio(X)	0.01	0.45	0.24	0.15	0.00	0.62	1.20	0.00	0.02	0.03	0.00	0.00
Avail Cap(c_a), veh/h	271	900	781	504	0	1042	276	0	599	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.1	19.8	17.5	14.5	0.0	17.4	43.9	0.0	23.4	31.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	1.6	0.7	0.1	0.0	2.8	120.3	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	7.5	3.0	0.8	0.0	12.0	17.7	0.0	0.2	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.2	21.5	18.2	14.6	0.0	20.2	164.2	0.0	23.4	31.8	0.0	0.0
LnGrp LOS	C	C	B	B	A	C	F	A	C	C	A	A
Approach Vol, veh/h		594			711			345			3	
Approach Delay, s/veh		20.5			19.7			158.9			31.8	
Approach LOS		C			B			F			C	

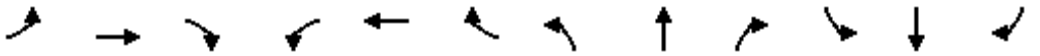
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		74.0		46.0	8.9	65.1		46.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		68.0		41.0	10.5	53.0		41.0				
Max Q Clear Time (g_c+I1), s		30.3		43.0	4.0	22.0		43.0				
Green Ext Time (p_c), s		9.8		0.0	0.0	6.7		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			49.1									
HCM 6th LOS			D									



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	199	450	105	226	169	300	666	95	117	740	192
v/c Ratio	0.41	0.67	0.37	0.37	0.21	0.89	0.59	0.16	0.73	0.89	0.29
Control Delay	28.5	41.9	30.8	43.1	5.8	86.6	44.2	6.6	92.0	69.7	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	41.9	30.8	43.1	5.8	86.6	44.2	6.6	92.0	69.7	11.5
Queue Length 50th (ft)	121	350	60	175	9	295	285	3	116	375	37
Queue Length 95th (ft)	185	487	103	273	51	394	354	38	181	458	88
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	548	676	288	609	852	427	1242	610	233	903	753
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.67	0.36	0.37	0.20	0.70	0.54	0.16	0.50	0.82	0.25

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	193	198	91	197	147	261	579	83	102	644	167
Future Volume (veh/h)	173	193	198	91	197	147	261	579	83	102	644	167
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1841	1826	1870	1826	1826	1826	1811	1781	1841	1870	1841
Adj Flow Rate, veh/h	199	222	203	105	226	69	300	666	32	117	740	89
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	3	4	5	2	5	5	5	6	8	4	2	4
Cap, veh/h	488	351	321	322	660	682	322	1143	573	139	829	493
Arrive On Green	0.08	0.40	0.40	0.05	0.36	0.36	0.18	0.33	0.33	0.08	0.23	0.23
Sat Flow, veh/h	1767	885	810	1781	1826	1547	1739	3441	1507	1753	3554	1557
Grp Volume(v), veh/h	199	0	425	105	226	69	300	666	32	117	740	89
Grp Sat Flow(s),veh/h/ln	1767	0	1695	1781	1826	1547	1739	1721	1507	1753	1777	1557
Q Serve(g_s), s	10.0	0.0	29.5	5.4	13.2	3.8	24.8	23.4	2.0	9.6	29.5	6.1
Cycle Q Clear(g_c), s	10.0	0.0	29.5	5.4	13.2	3.8	24.8	23.4	2.0	9.6	29.5	6.1
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	488	0	673	322	660	682	322	1143	573	139	829	493
V/C Ratio(X)	0.41	0.00	0.63	0.33	0.34	0.10	0.93	0.58	0.06	0.84	0.89	0.18
Avail Cap(c_a), veh/h	644	0	673	322	660	682	440	1272	629	240	924	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	0.0	35.5	29.3	34.0	23.9	58.7	40.4	28.7	66.4	54.2	36.2
Incr Delay (d2), s/veh	0.2	0.0	4.5	0.2	1.4	0.3	19.6	0.6	0.0	5.2	10.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	12.8	2.3	6.1	1.4	12.4	9.8	0.7	4.4	14.1	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.3	0.0	39.9	29.6	35.4	24.2	78.2	40.9	28.7	71.6	64.5	36.4
LnGrp LOS	C	A	D	C	D	C	E	D	C	E	E	D
Approach Vol, veh/h		624			400			998			946	
Approach Delay, s/veh		35.3			31.9			51.8			62.7	
Approach LOS		D			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	63.0	17.6	53.5	17.2	57.8	32.0	39.1
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	58.0	20.0	54.0	25.0	40.0	37.0	38.0
Max Q Clear Time (g_c+I1), s	7.4	31.5	11.6	25.4	12.0	15.2	26.8	31.5
Green Ext Time (p_c), s	0.0	1.7	0.0	4.5	0.1	0.8	0.2	2.6

Intersection Summary	
HCM 6th Ctrl Delay	49.1
HCM 6th LOS	D

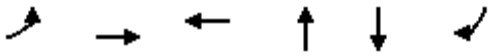
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	0	22	34	0	18	47	914	3	3	827	32
Future Vol, veh/h	8	0	22	34	0	18	47	914	3	3	827	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	-	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	15	3	2	6	9	2	2	67	3	7
Mvmt Flow	9	0	24	37	0	20	52	1004	3	3	909	35

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1539	2044	472	1569	2058	502	944	0	0	1007	0	0
Stage 1	933	933	-	1108	1108	-	-	-	-	-	-	-
Stage 2	606	1111	-	461	950	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	7.2	7.56	6.54	7.02	4.28	-	-	5.44	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.45	3.53	4.02	3.36	2.29	-	-	2.87	-	-
Pot Cap-1 Maneuver	79	56	505	74	54	504	681	-	-	398	-	-
Stage 1	286	343	-	222	284	-	-	-	-	-	-	-
Stage 2	451	283	-	547	337	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	65	46	505	61	44	504	681	-	-	398	-	-
Mov Cap-2 Maneuver	158	146	-	141	137	-	-	-	-	-	-	-
Stage 1	236	340	-	183	235	-	-	-	-	-	-	-
Stage 2	358	234	-	517	334	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.9	30.1	1.3	0
HCM LOS	C	D		

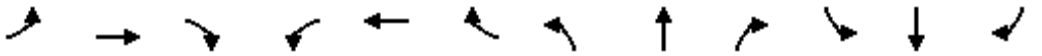
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	681	-	-	158	505	141	504	398	-	-
HCM Lane V/C Ratio	0.076	-	-	0.056	0.048	0.265	0.039	0.008	-	-
HCM Control Delay (s)	10.7	0.8	-	29.1	12.5	39.5	12.4	14.1	-	-
HCM Lane LOS	B	A	-	D	B	E	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.1	1	0.1	0	-	-



Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	768	295	354	18	358	359
v/c Ratio	0.84	0.12	0.32	0.24	0.90	0.40
Control Delay	18.8	5.6	30.7	53.7	45.1	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	5.6	30.7	53.7	45.1	3.6
Queue Length 50th (ft)	205	26	84	10	100	23
Queue Length 95th (ft)	461	55	169	36	#291	58
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	1050	2528	1120	76	431	1083
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.12	0.32	0.24	0.83	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	699	266	3	2	251	69	7	6	3	48	0	604
Future Volume (veh/h)	699	266	3	2	251	69	7	6	3	48	0	604
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1411	1870	1841	1856	1870	1307	1870	1767	1870	1841
Adj Flow Rate, veh/h	768	292	2	2	276	57	8	7	0	0	0	352
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	33	2	4	3	2	40	2	9	2	4
Cap, veh/h	909	2622	18	36	1153	233	11	10	0	0	198	1189
Arrive On Green	0.28	0.72	0.72	0.41	0.41	0.41	0.02	0.02	0.00	0.00	0.00	0.11
Sat Flow, veh/h	1767	3618	25	3	2835	572	679	594	0	0	1870	3120
Grp Volume(v), veh/h	768	143	151	178	0	157	15	0	0	0	0	352
Grp Sat Flow(s),veh/h/ln	1767	1777	1866	1838	0	1572	1273	0	0	0	1870	1560
Q Serve(g_s), s	24.1	2.5	2.5	0.0	0.0	6.9	1.2	0.0	0.0	0.0	0.0	8.3
Cycle Q Clear(g_c), s	24.1	2.5	2.5	6.7	0.0	6.9	1.2	0.0	0.0	0.0	0.0	8.3
Prop In Lane	1.00		0.01	0.01		0.36	0.53		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	909	1288	1352	782	0	639	21	0	0	0	198	1189
V/C Ratio(X)	0.84	0.11	0.11	0.23	0.00	0.24	0.70	0.00	0.00	0.00	0.00	0.30
Avail Cap(c_a), veh/h	1281	1288	1352	782	0	639	61	0	0	0	321	1394
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	9.7	4.3	4.3	20.4	0.0	20.5	51.3	0.0	0.0	0.0	0.0	22.6
Incr Delay (d2), s/veh	3.8	0.2	0.2	0.7	0.0	0.9	33.5	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	0.8	0.8	2.9	0.0	2.5	0.6	0.0	0.0	0.0	0.0	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	4.5	4.5	21.1	0.0	21.4	84.8	0.0	0.0	0.0	0.0	22.8
LnGrp LOS	B	A	A	C	A	C	F	A	A	A	A	C
Approach Vol, veh/h		1062			335			15			352	
Approach Delay, s/veh		11.0			21.3			84.8			22.8	
Approach LOS		B			C			F			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	33.4	48.6		16.1		82.0		6.8				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	26.1	8.9		10.3		4.5		3.2				
Green Ext Time (p_c), s	2.8	1.3		0.8		1.6		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		15.9	
HCM 6th LOS		B	

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	420	11	11	655	0	11	0	11	0	0	0
Future Vol, veh/h	0	420	11	11	655	0	11	0	11	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	100	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	5	2	2	4	2	2	2	2	2	2	2
Mvmt Flow	0	457	12	12	712	0	12	0	12	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	712	0	0	469	0	0	1199	1199	463	1205	1205	712
Stage 1	-	-	-	-	-	-	463	463	-	736	736	-
Stage 2	-	-	-	-	-	-	736	736	-	469	469	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	888	-	-	1093	-	-	162	185	599	161	184	432
Stage 1	-	-	-	-	-	-	579	564	-	411	425	-
Stage 2	-	-	-	-	-	-	411	425	-	575	561	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	888	-	-	1093	-	-	160	182	599	156	181	432
Mov Cap-2 Maneuver	-	-	-	-	-	-	160	182	-	156	181	-
Stage 1	-	-	-	-	-	-	579	564	-	411	417	-
Stage 2	-	-	-	-	-	-	404	417	-	564	561	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	20.7	0
HCM LOS			C	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	253	888	-	-	1093	-	-	-	-
HCM Lane V/C Ratio	0.095	-	-	-	0.011	-	-	-	-
HCM Control Delay (s)	20.7	0	-	-	8.3	0	-	0	0
HCM Lane LOS	C	A	-	-	A	A	-	A	A
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	30	0	0	79	0	0
Future Vol, veh/h	30	0	0	79	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	12	2	2	8	2	2
Mvmt Flow	33	0	0	87	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	33	0	120	33
Stage 1	-	-	-	-	33	-
Stage 2	-	-	-	-	87	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1579	-	876	1041
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	936	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1579	-	876	1041
Mov Cap-2 Maneuver	-	-	-	-	876	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	936	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

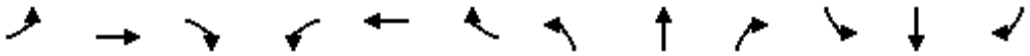
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1579	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1	640	534	224	527	293	188	30
v/c Ratio	0.00	0.70	0.50	0.59	0.46	0.90	0.29	0.07
Control Delay	16.0	26.5	3.4	15.0	12.3	67.9	4.8	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	26.5	3.4	15.0	12.3	67.9	4.8	21.4
Queue Length 50th (ft)	0	338	0	60	181	184	6	10
Queue Length 95th (ft)	4	504	58	98	268	#321	46	33
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	439	920	1062	401	1146	366	675	460
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.70	0.50	0.56	0.46	0.80	0.28	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	582	486	204	480	0	265	2	171	11	8	8
Future Volume (veh/h)	1	582	486	204	480	0	265	2	171	11	8	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1841	1826	1870	1781	1870	1663	1870	1870	1870
Adj Flow Rate, veh/h	1	640	243	224	527	0	291	2	66	12	9	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	4	2	4	5	2	8	2	16	2	2	2
Cap, veh/h	452	876	754	333	1096	0	372	2	531	64	36	2
Arrive On Green	0.48	0.48	0.48	0.08	0.60	0.00	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	876	1841	1585	1753	1826	0	1030	7	1409	37	123	8
Grp Volume(v), veh/h	1	640	243	224	527	0	293	0	66	22	0	0
Grp Sat Flow(s),veh/h/ln	876	1841	1585	1753	1826	0	1037	0	1409	167	0	0
Q Serve(g_s), s	0.1	29.3	10.0	6.5	17.0	0.0	0.0	0.0	3.2	0.4	0.0	0.0
Cycle Q Clear(g_c), s	4.1	29.3	10.0	6.5	17.0	0.0	29.6	0.0	3.2	30.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.55		0.05
Lane Grp Cap(c), veh/h	452	876	754	333	1096	0	374	0	531	102	0	0
V/C Ratio(X)	0.00	0.73	0.32	0.67	0.48	0.00	0.78	0.00	0.12	0.22	0.00	0.00
Avail Cap(c_a), veh/h	452	876	754	372	1096	0	374	0	531	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.6	22.1	17.0	18.1	11.8	0.0	36.5	0.0	21.4	30.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.3	1.1	2.9	1.5	0.0	9.5	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.0	3.7	2.6	6.6	0.0	8.3	0.0	1.1	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.6	27.5	18.2	21.1	13.3	0.0	46.0	0.0	21.4	30.6	0.0	0.0
LnGrp LOS	B	C	B	C	B	A	D	A	C	C	A	A
Approach Vol, veh/h		884			751			359			22	
Approach Delay, s/veh		24.9			15.6			41.5			30.6	
Approach LOS		C			B			D			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		69.0		36.0	13.1	55.9		36.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		63.0		31.0	10.9	47.6		31.0				
Max Q Clear Time (g_c+I1), s		19.0		31.6	8.5	31.3		32.0				
Green Ext Time (p_c), s		7.6		0.0	0.1	8.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		24.5
HCM 6th LOS		C

Notes

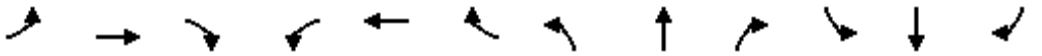
User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	269	606	117	252	126	235	556	121	271	863	245
v/c Ratio	0.55	0.85	0.59	0.41	0.15	0.92	0.73	0.23	0.91	0.95	0.33
Control Delay	29.0	51.8	38.8	44.1	4.6	103.8	63.0	16.0	97.2	77.1	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	51.8	38.8	44.1	4.6	103.8	63.0	16.0	97.2	77.1	9.7
Queue Length 50th (ft)	169	549	66	204	6	244	288	29	277	470	45
Queue Length 95th (ft)	235	#733	106	307	42	#391	355	81	#417	#588	99
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	583	716	202	621	876	277	765	530	332	930	878
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.85	0.58	0.41	0.14	0.85	0.73	0.23	0.82	0.93	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	272	267	104	224	112	209	495	108	241	768	218
Future Volume (veh/h)	239	272	267	104	224	112	209	495	108	241	768	218
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1856	1796	1796	1841	1752	1841	1752	1796	1841	1841	1826
Adj Flow Rate, veh/h	269	306	275	117	252	64	235	556	55	271	863	125
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	3	7	7	4	10	4	10	7	4	4	5
Cap, veh/h	493	373	335	223	651	771	255	782	435	291	916	578
Arrive On Green	0.11	0.41	0.41	0.05	0.35	0.35	0.15	0.24	0.24	0.17	0.26	0.26
Sat Flow, veh/h	1711	901	809	1711	1841	1485	1753	3328	1522	1753	3497	1547
Grp Volume(v), veh/h	269	0	581	117	252	64	235	556	55	271	863	125
Grp Sat Flow(s),veh/h/ln	1711	0	1710	1711	1841	1485	1753	1664	1522	1753	1749	1547
Q Serve(g_s), s	15.3	0.0	47.3	6.9	16.1	3.4	20.8	24.1	4.2	23.9	37.9	8.6
Cycle Q Clear(g_c), s	15.3	0.0	47.3	6.9	16.1	3.4	20.8	24.1	4.2	23.9	37.9	8.6
Prop In Lane	1.00		0.47	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	493	0	708	223	651	771	255	782	435	291	916	578
V/C Ratio(X)	0.55	0.00	0.82	0.52	0.39	0.08	0.92	0.71	0.13	0.93	0.94	0.22
Avail Cap(c_a), veh/h	684	0	708	223	651	771	279	782	435	335	936	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	40.8	35.2	38.0	18.9	66.2	55.1	41.5	64.6	56.7	33.5
Incr Delay (d2), s/veh	0.3	0.0	10.3	1.1	1.7	0.2	31.3	3.0	0.1	28.4	16.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	21.6	2.9	7.6	1.2	11.4	10.3	1.6	12.8	18.5	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	0.0	51.1	36.3	39.7	19.1	97.5	58.1	41.6	93.0	73.7	33.7
LnGrp LOS	C	A	D	D	D	B	F	E	D	F	E	C
Approach Vol, veh/h		850			433			846			1259	
Approach Delay, s/veh		43.5			35.7			68.0			73.9	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	70.0	32.0	41.9	22.5	60.5	27.8	46.1
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	65.0	30.0	36.0	35.0	38.0	25.0	42.0
Max Q Clear Time (g_c+I1), s	8.9	49.3	25.9	26.1	17.3	18.1	22.8	39.9
Green Ext Time (p_c), s	0.0	2.2	0.1	2.5	0.2	0.9	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	59.9
HCM 6th LOS	E

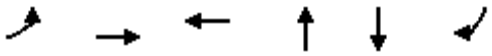
Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	123	10	0	4	23	771	39	23	1237	11
Future Vol, veh/h	10	0	123	10	0	4	23	771	39	23	1237	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	-	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	13	2	11	2	2	2	32	12	2	5	4	11
Mvmt Flow	11	0	135	11	0	4	25	847	43	25	1359	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1889	2355	686	1627	2318	424	1371	0	0	890	0	0
Stage 1	1415	1415	-	897	897	-	-	-	-	-	-	-
Stage 2	474	940	-	730	1421	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.54	7.12	7.54	6.54	6.94	4.74	-	-	4.2	-	-
Critical Hdwy Stg 1	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.02	3.41	3.52	4.02	3.32	2.52	-	-	2.25	-	-
Pot Cap-1 Maneuver	38	35	370	68	37	579	365	-	-	739	-	-
Stage 1	131	202	-	301	357	-	-	-	-	-	-	-
Stage 2	512	340	-	380	201	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	33	29	370	38	31	579	365	-	-	739	-	-
Mov Cap-2 Maneuver	90	116	-	123	112	-	-	-	-	-	-	-
Stage 1	113	195	-	260	308	-	-	-	-	-	-	-
Stage 2	439	293	-	233	194	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22.5	29.7	1.4	0.2
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	365	-	-	90	370	123	579	739	-	-
HCM Lane V/C Ratio	0.069	-	-	0.122	0.365	0.089	0.008	0.034	-	-
HCM Control Delay (s)	15.6	1	-	50.5	20.2	37.1	11.3	10	-	-
HCM Lane LOS	C	A	-	F	C	E	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.4	1.6	0.3	0	0.1	-	-

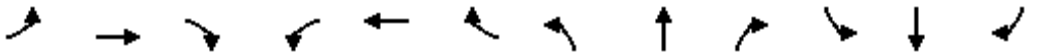


Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	576	336	399	11	652	641
v/c Ratio	0.76	0.14	0.31	0.17	1.83	0.74
Control Delay	14.2	5.4	26.4	54.0	406.2	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.2	5.4	26.4	54.0	406.2	16.2
Queue Length 50th (ft)	135	30	87	7	~625	209
Queue Length 95th (ft)	265	59	184	26	#885	226
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	933	2342	1297	64	357	1103
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.14	0.31	0.17	1.83	0.58

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	495	278	11	0	290	53	2	7	1	121	7	984
Future Volume (veh/h)	495	278	11	0	290	53	2	7	1	121	7	984
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1767	1737	1870	1811	1693	1159	1307	1870	1811	1307	1841
Adj Flow Rate, veh/h	576	323	11	0	337	50	2	8	0	0	0	997
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	14	9	11	2	6	14	50	40	2	6	40	4
Cap, veh/h	736	2261	77	0	1258	185	3	12	0	0	211	1204
Arrive On Green	0.22	0.68	0.68	0.00	0.42	0.42	0.01	0.01	0.00	0.00	0.00	0.16
Sat Flow, veh/h	1612	3312	113	0	3100	442	259	1035	0	0	1307	3120
Grp Volume(v), veh/h	576	163	171	0	191	196	10	0	0	0	0	997
Grp Sat Flow(s),veh/h/ln	1612	1678	1746	0	1721	1731	1294	0	0	0	1307	1560
Q Serve(g_s), s	21.0	3.8	3.8	0.0	8.1	8.3	0.9	0.0	0.0	0.0	0.0	18.0
Cycle Q Clear(g_c), s	21.0	3.8	3.8	0.0	8.1	8.3	0.9	0.0	0.0	0.0	0.0	18.0
Prop In Lane	1.00		0.06	0.00		0.26	0.20		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	736	1146	1192	0	719	724	15	0	0	0	211	1204
V/C Ratio(X)	0.78	0.14	0.14	0.00	0.27	0.27	0.65	0.00	0.00	0.00	0.00	0.83
Avail Cap(c_a), veh/h	1112	1146	1192	0	719	724	58	0	0	0	211	1204
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	11.3	6.2	6.2	0.0	21.2	21.2	54.8	0.0	0.0	0.0	0.0	30.9
Incr Delay (d2), s/veh	2.1	0.3	0.3	0.0	0.9	0.9	37.3	0.0	0.0	0.0	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	1.2	1.3	0.0	3.3	3.4	0.4	0.0	0.0	0.0	0.0	12.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	6.5	6.5	0.0	22.1	22.2	92.1	0.0	0.0	0.0	0.0	35.8
LnGrp LOS	B	A	A	A	C	C	F	A	A	A	A	D
Approach Vol, veh/h		910			387			10			997	
Approach Delay, s/veh		10.9			22.1			92.1			35.8	
Approach LOS		B			C			F			D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	29.4	52.6		23.0		82.0		6.3				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	23.0	10.3		20.0		5.8		2.9				
Green Ext Time (p_c), s	1.9	1.4		0.0		1.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		23.9	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	765	12	12	684	0	12	0	12	0	0	0
Future Vol, veh/h	0	765	12	12	684	0	12	0	12	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	100	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	7	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	0	841	13	13	752	0	13	0	13	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	752	0	0	854	0	0	1626	1626	848	1632	1632	752
Stage 1	-	-	-	-	-	-	848	848	-	778	778	-
Stage 2	-	-	-	-	-	-	778	778	-	854	854	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	858	-	-	785	-	-	82	102	361	81	101	410
Stage 1	-	-	-	-	-	-	356	378	-	389	407	-
Stage 2	-	-	-	-	-	-	389	407	-	353	375	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	858	-	-	785	-	-	80	99	361	76	98	410
Mov Cap-2 Maneuver	-	-	-	-	-	-	80	99	-	76	98	-
Stage 1	-	-	-	-	-	-	356	378	-	389	396	-
Stage 2	-	-	-	-	-	-	378	396	-	340	375	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.2	39.3	0
HCM LOS			E	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	131	858	-	-	785	-	-	-	-
HCM Lane V/C Ratio	0.201	-	-	-	0.017	-	-	-	-
HCM Control Delay (s)	39.3	0	-	-	9.7	0	-	0	0
HCM Lane LOS	E	A	-	-	A	A	-	A	A
HCM 95th %tile Q(veh)	0.7	0	-	-	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	132	0	0	34	0	0
Future Vol, veh/h	132	0	0	34	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	11	2	2	25	2	2
Mvmt Flow	145	0	0	37	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	145	0	182	145
Stage 1	-	-	-	-	145	-
Stage 2	-	-	-	-	37	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1437	-	807	902
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	985	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1437	-	807	902
Mov Cap-2 Maneuver	-	-	-	-	807	-
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	985	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

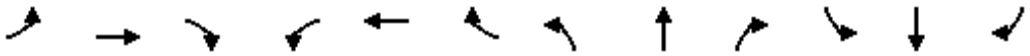
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1437	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	4	546	418	68	876	396	55	4
v/c Ratio	0.03	0.58	0.41	0.17	0.81	0.93	0.08	0.01
Control Delay	18.2	24.7	3.1	11.8	27.5	69.1	5.3	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	24.7	3.1	11.8	27.5	69.1	5.3	23.8
Queue Length 50th (ft)	2	307	0	22	537	284	0	2
Queue Length 95th (ft)	9	442	55	43	753	#463	24	10
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	134	942	1024	438	1083	461	734	585
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.58	0.41	0.16	0.81	0.86	0.07	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	502	385	63	804	2	362	3	51	1	2	1
Future Volume (veh/h)	4	502	385	63	804	2	362	3	51	1	2	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1530	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	546	197	68	874	2	393	3	17	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	25	5	2	2	4	2	2	2	2	2	2	2
Cap, veh/h	149	898	780	324	1040	2	274	2	601	40	62	0
Arrive On Green	0.49	0.49	0.49	0.04	0.57	0.57	0.34	0.34	0.34	0.34	0.34	0.00
Sat Flow, veh/h	518	1826	1585	1781	1836	4	628	5	1585	0	182	0
Grp Volume(v), veh/h	4	546	197	68	0	876	396	0	17	3	0	0
Grp Sat Flow(s),veh/h/ln	518	1826	1585	1781	0	1840	633	0	1585	182	0	0
Q Serve(g_s), s	0.8	26.0	8.7	2.2	0.0	47.3	0.0	0.0	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	39.0	26.0	8.7	2.2	0.0	47.3	41.0	0.0	0.8	41.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.33		0.00
Lane Grp Cap(c), veh/h	149	898	780	324	0	1043	276	0	601	102	0	0
V/C Ratio(X)	0.03	0.61	0.25	0.21	0.00	0.84	1.43	0.00	0.03	0.03	0.00	0.00
Avail Cap(c_a), veh/h	149	898	780	413	0	1043	276	0	601	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	41.4	22.1	17.7	16.5	0.0	21.5	43.9	0.0	23.4	31.8	0.0	0.0
Incr Delay (d2), s/veh	0.3	3.1	0.8	0.1	0.0	8.2	215.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	11.3	3.2	0.8	0.0	20.9	25.0	0.0	0.3	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.7	25.2	18.5	16.6	0.0	29.7	259.2	0.0	23.4	31.8	0.0	0.0
LnGrp LOS	D	C	B	B	A	C	F	A	C	C	A	A
Approach Vol, veh/h		747			944			413			3	
Approach Delay, s/veh		23.5			28.7			249.5			31.8	
Approach LOS		C			C			F			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		74.0		46.0	9.0	65.0		46.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		68.0		41.0	10.5	53.0		41.0				
Max Q Clear Time (g_c+I1), s		49.3		43.0	4.2	41.0		43.0				
Green Ext Time (p_c), s		10.5		0.0	0.0	5.6		0.0				

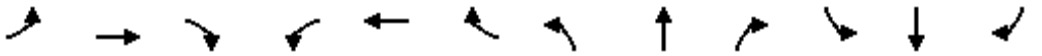
Intersection Summary												
HCM 6th Ctrl Delay			70.1									
HCM 6th LOS			E									



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	266	554	115	295	186	362	734	106	130	817	303
v/c Ratio	0.65	0.86	0.64	0.57	0.26	0.95	0.60	0.16	0.78	0.96	0.42
Control Delay	37.4	58.4	48.8	54.5	12.0	95.7	44.4	8.1	98.5	82.0	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	58.4	48.8	54.5	12.0	95.7	44.4	8.1	98.5	82.0	13.2
Queue Length 50th (ft)	183	514	72	267	41	373	327	10	135	450	77
Queue Length 95th (ft)	248	#681	#121	372	92	#532	396	47	200	#553	140
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	449	641	180	521	755	403	1219	643	220	853	777
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.86	0.64	0.57	0.25	0.90	0.60	0.16	0.59	0.96	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	243	239	100	257	162	315	639	92	113	711	264
Future Volume (veh/h)	231	243	239	100	257	162	315	639	92	113	711	264
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1841	1826	1870	1826	1826	1826	1811	1781	1841	1870	1841
Adj Flow Rate, veh/h	266	279	250	115	295	100	362	734	45	130	817	163
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	3	4	5	2	5	5	5	6	8	4	2	4
Cap, veh/h	409	330	296	197	544	594	380	1264	621	151	855	555
Arrive On Green	0.12	0.37	0.37	0.04	0.30	0.30	0.22	0.37	0.37	0.09	0.24	0.24
Sat Flow, veh/h	1767	895	802	1781	1826	1547	1739	3441	1508	1753	3554	1557
Grp Volume(v), veh/h	266	0	529	115	295	100	362	734	45	130	817	163
Grp Sat Flow(s),veh/h/ln	1767	0	1696	1781	1826	1547	1739	1721	1508	1753	1777	1557
Q Serve(g_s), s	16.0	0.0	45.0	7.0	21.3	6.7	32.3	27.0	2.8	11.5	35.6	11.8
Cycle Q Clear(g_c), s	16.0	0.0	45.0	7.0	21.3	6.7	32.3	27.0	2.8	11.5	35.6	11.8
Prop In Lane	1.00		0.47	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	409	0	626	197	544	594	380	1264	621	151	855	555
V/C Ratio(X)	0.65	0.00	0.85	0.58	0.54	0.17	0.95	0.58	0.07	0.86	0.96	0.29
Avail Cap(c_a), veh/h	486	0	626	197	544	594	409	1264	621	223	859	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	0.0	45.5	41.0	46.2	31.9	60.6	40.0	28.0	71.0	58.9	36.4
Incr Delay (d2), s/veh	1.3	0.0	13.2	2.9	3.8	0.6	30.5	0.7	0.0	14.2	20.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	20.9	3.3	10.2	2.6	17.2	11.4	1.0	5.7	18.1	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.2	0.0	58.8	43.9	50.1	32.5	91.1	40.7	28.1	85.2	79.4	36.7
LnGrp LOS	C	A	E	D	D	C	F	D	C	F	E	D
Approach Vol, veh/h		795			510			1141			1110	
Approach Delay, s/veh		50.5			45.2			56.2			73.8	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	63.0	19.5	62.8	23.1	51.9	39.4	42.9
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	58.0	20.0	54.0	25.0	40.0	37.0	38.0
Max Q Clear Time (g_c+I1), s	9.0	47.0	13.5	29.0	18.0	23.3	34.3	37.6
Green Ext Time (p_c), s	0.0	1.7	0.0	5.0	0.1	1.1	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	58.9
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	2.5

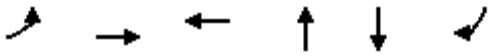
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	24	38	0	20	52	1049	3	3	993	35
Future Vol, veh/h	9	0	24	38	0	20	52	1049	3	3	993	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	-	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	15	3	2	6	9	2	2	67	3	7
Mvmt Flow	10	0	26	42	0	22	57	1153	3	3	1091	38

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1807	2386	565	1819	2402	577	1129	0	0	1156	0	0
Stage 1	1116	1116	-	1267	1267	-	-	-	-	-	-	-
Stage 2	691	1270	-	552	1135	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	7.2	7.56	6.54	7.02	4.28	-	-	5.44	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.45	3.53	4.02	3.36	2.29	-	-	2.87	-	-
Pot Cap-1 Maneuver	50	34	437	48	33	450	576	-	-	335	-	-
Stage 1	221	281	-	177	238	-	-	-	-	-	-	-
Stage 2	401	237	-	483	275	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	37	24	437	~ 35	24	450	576	-	-	335	-	-
Mov Cap-2 Maneuver	108	106	-	99	98	-	-	-	-	-	-	-
Stage 1	160	278	-	128	172	-	-	-	-	-	-	-
Stage 2	276	171	-	450	273	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.4	47.6	2	0
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	576	-	-	108	437	99	450	335	-	-
HCM Lane V/C Ratio	0.099	-	-	0.092	0.06	0.422	0.049	0.01	-	-
HCM Control Delay (s)	11.9	1.5	-	41.7	13.8	65.6	13.4	15.9	-	-
HCM Lane LOS	B	A	-	E	B	F	B	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.3	0.2	1.8	0.2	0	-	-

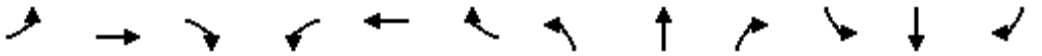
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	870	348	420	20	430	419
v/c Ratio	0.93	0.14	0.61	0.27	0.97	0.40
Control Delay	35.2	6.1	42.9	56.0	56.7	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.2	6.1	42.9	56.0	56.7	4.6
Queue Length 50th (ft)	375	32	130	11	145	37
Queue Length 95th (ft)	#789	64	203	39	#390	109
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	955	2463	683	74	444	1078
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.14	0.61	0.27	0.97	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	792	314	3	2	304	76	8	7	3	53	0	720
Future Volume (veh/h)	792	314	3	2	304	76	8	7	3	53	0	720
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1411	1870	1841	1856	1870	1307	1870	1767	1870	1841
Adj Flow Rate, veh/h	870	345	2	2	334	64	9	8	0	0	0	529
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	33	2	4	3	2	40	2	9	2	4
Cap, veh/h	911	2547	15	34	845	159	12	11	0	0	244	1553
Arrive On Green	0.37	0.70	0.70	0.29	0.29	0.29	0.02	0.02	0.00	0.00	0.00	0.13
Sat Flow, veh/h	1767	3622	21	3	2872	541	674	599	0	0	1870	3120
Grp Volume(v), veh/h	870	169	178	213	0	187	17	0	0	0	0	529
Grp Sat Flow(s),veh/h/ln	1767	1777	1867	1838	0	1578	1273	0	0	0	1870	1560
Q Serve(g_s), s	34.8	3.4	3.4	0.0	0.0	10.2	1.4	0.0	0.0	0.0	0.0	11.1
Cycle Q Clear(g_c), s	34.8	3.4	3.4	10.0	0.0	10.2	1.4	0.0	0.0	0.0	0.0	11.1
Prop In Lane	1.00		0.01	0.01		0.34	0.53		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	911	1249	1312	574	0	464	24	0	0	0	244	1553
V/C Ratio(X)	0.96	0.14	0.14	0.37	0.00	0.40	0.72	0.00	0.00	0.00	0.00	0.34
Avail Cap(c_a), veh/h	1094	1249	1312	574	0	464	59	0	0	0	311	1665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	14.6	5.3	5.3	30.5	0.0	30.5	52.8	0.0	0.0	0.0	0.0	16.4
Incr Delay (d2), s/veh	16.0	0.2	0.2	1.8	0.0	2.6	33.8	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	1.1	1.1	4.6	0.0	4.1	0.7	0.0	0.0	0.0	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	5.5	5.5	32.3	0.0	33.1	86.5	0.0	0.0	0.0	0.0	16.5
LnGrp LOS	C	A	A	C	A	C	F	A	A	A	A	B
Approach Vol, veh/h		1217			400			17			529	
Approach Delay, s/veh		23.4			32.7			86.5			16.5	
Approach LOS		C			C			F			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	44.2	37.8		19.1		82.0		7.0				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	36.8	12.2		13.1		5.4		3.4				
Green Ext Time (p_c), s	2.9	1.3		1.0		1.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		23.9	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	554	12	12	870	0	12	0	12	0	0	0
Future Vol, veh/h	0	554	12	12	870	0	12	0	12	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	100	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	5	2	2	4	2	2	2	2	2	2	2
Mvmt Flow	0	602	13	13	946	0	13	0	13	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	946	0	0	615	0	0	1581	1581	609	1587	1587	946
Stage 1	-	-	-	-	-	-	609	609	-	972	972	-
Stage 2	-	-	-	-	-	-	972	972	-	615	615	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	725	-	-	965	-	-	88	109	495	87	108	317
Stage 1	-	-	-	-	-	-	482	485	-	304	331	-
Stage 2	-	-	-	-	-	-	304	331	-	479	482	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	725	-	-	965	-	-	86	106	495	83	105	317
Mov Cap-2 Maneuver	-	-	-	-	-	-	86	106	-	83	105	-
Stage 1	-	-	-	-	-	-	482	485	-	304	322	-
Stage 2	-	-	-	-	-	-	295	322	-	466	482	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.1	34.7	0
HCM LOS			D	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	147	725	-	-	965	-	-	-	-
HCM Lane V/C Ratio	0.177	-	-	-	0.014	-	-	-	-
HCM Control Delay (s)	34.7	0	-	-	8.8	0	-	0	0
HCM Lane LOS	D	A	-	-	A	A	-	A	A
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	33	0	0	87	0	0
Future Vol, veh/h	33	0	0	87	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	12	2	2	8	2	2
Mvmt Flow	36	0	0	96	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	36	0	132	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	96	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1575	-	862	1037
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	928	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1575	-	862	1037
Mov Cap-2 Maneuver	-	-	-	-	862	-
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	928	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

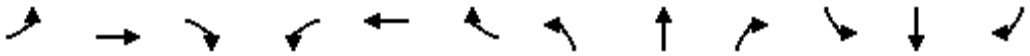
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1575	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1	658	534	224	555	293	190	30
v/c Ratio	0.00	0.72	0.50	0.62	0.48	0.90	0.29	0.07
Control Delay	16.0	27.4	3.4	15.9	12.7	67.9	5.4	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	27.4	3.4	15.9	12.7	67.9	5.4	21.4
Queue Length 50th (ft)	0	353	0	60	195	184	11	10
Queue Length 95th (ft)	4	526	58	98	288	#321	51	33
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	427	919	1062	387	1146	366	670	460
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.72	0.50	0.58	0.48	0.80	0.28	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	599	486	204	505	0	265	2	173	11	8	8
Future Volume (veh/h)	1	599	486	204	505	0	265	2	173	11	8	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1841	1826	1870	1781	1870	1663	1870	1870	1870
Adj Flow Rate, veh/h	1	658	243	224	555	0	291	2	75	12	9	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	4	2	4	5	2	8	2	16	2	2	2
Cap, veh/h	432	876	754	323	1096	0	372	2	531	64	36	2
Arrive On Green	0.48	0.48	0.48	0.08	0.60	0.00	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	854	1841	1585	1753	1826	0	1030	7	1409	37	123	8
Grp Volume(v), veh/h	1	658	243	224	555	0	293	0	75	22	0	0
Grp Sat Flow(s),veh/h/ln	854	1841	1585	1753	1826	0	1037	0	1409	167	0	0
Q Serve(g_s), s	0.1	30.6	10.0	6.5	18.3	0.0	0.0	0.0	3.7	0.4	0.0	0.0
Cycle Q Clear(g_c), s	5.4	30.6	10.0	6.5	18.3	0.0	29.6	0.0	3.7	30.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.55		0.05
Lane Grp Cap(c), veh/h	432	876	754	323	1096	0	374	0	531	102	0	0
V/C Ratio(X)	0.00	0.75	0.32	0.69	0.51	0.00	0.78	0.00	0.14	0.22	0.00	0.00
Avail Cap(c_a), veh/h	432	876	754	362	1096	0	374	0	531	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.4	22.5	17.0	18.8	12.1	0.0	36.5	0.0	21.5	30.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.9	1.1	3.6	1.7	0.0	9.5	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.7	3.7	2.6	7.2	0.0	8.3	0.0	1.2	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.4	28.4	18.2	22.5	13.7	0.0	46.0	0.0	21.6	30.6	0.0	0.0
LnGrp LOS	B	C	B	C	B	A	D	A	C	C	A	A
Approach Vol, veh/h		902			779			368			22	
Approach Delay, s/veh		25.6			16.3			41.0			30.6	
Approach LOS		C			B			D			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		69.0		36.0	13.1	55.9		36.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		63.0		31.0	10.9	47.6		31.0				
Max Q Clear Time (g_c+I1), s		20.3		31.6	8.5	32.6		32.0				
Green Ext Time (p_c), s		8.1		0.0	0.1	7.9		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			24.9									
HCM 6th LOS			C									

Notes

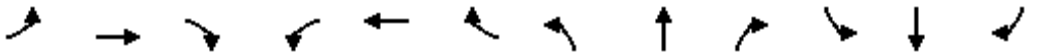
User approved volume balancing among the lanes for turning movement.



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	361	660	117	270	126	247	556	121	271	863	276
v/c Ratio	0.73	0.93	0.74	0.50	0.16	0.94	0.72	0.23	0.91	0.95	0.34
Control Delay	36.0	62.3	55.9	52.0	6.5	107.5	62.5	16.0	97.8	78.0	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	62.3	55.9	52.0	6.5	107.5	62.5	16.0	97.8	78.0	8.3
Queue Length 50th (ft)	243	633	66	236	11	258	288	29	277	470	47
Queue Length 95th (ft)	327	#874	#163	354	51	#419	355	81	#417	#588	97
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	552	711	160	541	810	275	769	534	329	923	885
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.93	0.73	0.50	0.16	0.90	0.72	0.23	0.82	0.93	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	321	296	291	104	240	112	220	495	108	241	768	246
Future Volume (veh/h)	321	296	291	104	240	112	220	495	108	241	768	246
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1856	1796	1796	1841	1752	1841	1752	1796	1841	1841	1826
Adj Flow Rate, veh/h	361	333	302	117	270	64	247	556	55	271	863	149
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	3	7	7	4	10	4	10	7	4	4	5
Cap, veh/h	498	368	334	179	563	700	266	801	443	291	912	644
Arrive On Green	0.16	0.41	0.41	0.05	0.31	0.31	0.15	0.24	0.24	0.17	0.26	0.26
Sat Flow, veh/h	1711	896	813	1711	1841	1485	1753	3328	1522	1753	3497	1547
Grp Volume(v), veh/h	361	0	635	117	270	64	247	556	55	271	863	149
Grp Sat Flow(s),veh/h/ln	1711	0	1709	1711	1841	1485	1753	1664	1522	1753	1749	1547
Q Serve(g_s), s	22.3	0.0	55.2	7.5	18.9	3.8	22.0	24.1	4.2	24.2	38.3	9.9
Cycle Q Clear(g_c), s	22.3	0.0	55.2	7.5	18.9	3.8	22.0	24.1	4.2	24.2	38.3	9.9
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	498	0	702	179	563	700	266	801	443	291	912	644
V/C Ratio(X)	0.72	0.00	0.91	0.65	0.48	0.09	0.93	0.69	0.12	0.93	0.95	0.23
Avail Cap(c_a), veh/h	611	0	702	179	563	700	277	801	443	332	928	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	0.0	43.8	40.8	44.7	23.1	66.3	54.8	41.3	65.2	57.4	29.9
Incr Delay (d2), s/veh	2.3	0.0	17.4	6.6	2.9	0.3	34.0	2.6	0.1	29.0	17.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	0.0	26.2	3.5	9.1	1.4	12.2	10.2	1.6	13.0	18.8	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	0.0	61.2	47.4	47.6	23.4	100.3	57.4	41.4	94.2	75.2	30.1
LnGrp LOS	C	A	E	D	D	C	F	E	D	F	E	C
Approach Vol, veh/h		996			451			858			1283	
Approach Delay, s/veh		50.7			44.1			68.7			74.0	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	70.0	32.3	43.1	29.6	53.4	29.1	46.3
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	65.0	30.0	36.0	35.0	38.0	25.0	42.0
Max Q Clear Time (g_c+I1), s	9.5	57.2	26.2	26.1	24.3	20.9	24.0	40.3
Green Ext Time (p_c), s	0.0	1.8	0.1	2.5	0.3	0.9	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	62.5
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	11.8

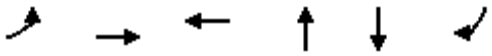
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	91	0	123	10	0	4	23	853	39	23	1265	38
Future Vol, veh/h	91	0	123	10	0	4	23	853	39	23	1265	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	-	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	13	2	11	2	2	2	32	12	2	5	4	11
Mvmt Flow	100	0	135	11	0	4	25	937	43	25	1390	42

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1980	2491	716	1732	2469	469	1432	0	0	980	0	0
Stage 1	1461	1461	-	987	987	-	-	-	-	-	-	-
Stage 2	519	1030	-	745	1482	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.54	7.12	7.54	6.54	6.94	4.74	-	-	4.2	-	-
Critical Hdwy Stg 1	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.02	3.41	3.52	4.02	3.32	2.52	-	-	2.25	-	-
Pot Cap-1 Maneuver	~ 32	29	353	56	30	541	343	-	-	682	-	-
Stage 1	122	192	-	265	324	-	-	-	-	-	-	-
Stage 2	481	309	-	372	187	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 27	23	353	29	24	541	343	-	-	682	-	-
Mov Cap-2 Maneuver	~ 81	105	-	108	100	-	-	-	-	-	-	-
Stage 1	102	185	-	222	272	-	-	-	-	-	-	-
Stage 2	400	259	-	221	180	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	126.3	33.4	1.6	0.2
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	343	-	-	81	353	108	541	682	-	-
HCM Lane V/C Ratio	0.074	-	-	1.235	0.383	0.102	0.008	0.037	-	-
HCM Control Delay (s)	16.3	1.3	-	268	21.4	42.1	11.7	10.5	-	-
HCM Lane LOS	C	A	-	F	C	E	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	7.4	1.7	0.3	0	0.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

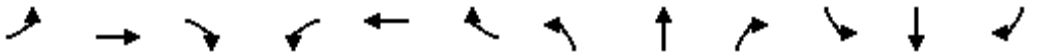


Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	751	350	406	11	677	673
v/c Ratio	0.89	0.15	0.49	0.17	1.87	0.65
Control Delay	27.4	5.4	37.6	54.0	423.1	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	5.4	37.6	54.0	423.1	9.7
Queue Length 50th (ft)	273	32	126	7	~653	117
Queue Length 95th (ft)	#578	61	187	26	#916	257
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	900	2342	836	64	363	1102
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.15	0.49	0.17	1.87	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	646	290	11	0	296	53	2	7	1	121	7	1033
Future Volume (veh/h)	646	290	11	0	296	53	2	7	1	121	7	1033
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1767	1737	1870	1811	1693	1159	1307	1870	1811	1307	1841
Adj Flow Rate, veh/h	751	337	11	0	344	48	2	8	0	0	0	1092
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	14	9	11	2	6	14	50	40	2	6	40	4
Cap, veh/h	801	2265	74	0	927	128	3	12	0	0	211	1555
Arrive On Green	0.34	0.68	0.68	0.00	0.31	0.31	0.01	0.01	0.00	0.00	0.00	0.16
Sat Flow, veh/h	1612	3317	108	0	3127	420	259	1035	0	0	1307	3120
Grp Volume(v), veh/h	751	170	178	0	194	198	10	0	0	0	0	1092
Grp Sat Flow(s),veh/h/ln	1612	1678	1747	0	1721	1735	1294	0	0	0	1307	1560
Q Serve(g_s), s	33.0	4.0	4.0	0.0	9.8	10.0	0.9	0.0	0.0	0.0	0.0	18.0
Cycle Q Clear(g_c), s	33.0	4.0	4.0	0.0	9.8	10.0	0.9	0.0	0.0	0.0	0.0	18.0
Prop In Lane	1.00		0.06	0.00		0.24	0.20		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	801	1146	1193	0	526	530	15	0	0	0	211	1555
V/C Ratio(X)	0.94	0.15	0.15	0.00	0.37	0.37	0.65	0.00	0.00	0.00	0.00	0.70
Avail Cap(c_a), veh/h	995	1146	1193	0	526	530	58	0	0	0	211	1555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	14.8	6.2	6.2	0.0	30.3	30.3	54.8	0.0	0.0	0.0	0.0	21.5
Incr Delay (d2), s/veh	13.8	0.3	0.3	0.0	2.0	2.0	37.3	0.0	0.0	0.0	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	1.3	1.3	0.0	4.2	4.3	0.4	0.0	0.0	0.0	0.0	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	6.5	6.5	0.0	32.2	32.3	92.1	0.0	0.0	0.0	0.0	23.0
LnGrp LOS	C	A	A	A	C	C	F	A	A	A	A	C
Approach Vol, veh/h		1099			392			10			1092	
Approach Delay, s/veh		21.6			32.3			92.1			23.0	
Approach LOS		C			C			F			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	42.0	40.0		23.0		82.0		6.3				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	35.0	12.0		20.0		6.0		2.9				
Green Ext Time (p_c), s	2.5	1.3		0.0		1.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		24.1	
HCM 6th LOS		C	

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	47

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	765	12	12	684	55	12	0	12	130	0	25
Future Vol, veh/h	19	765	12	12	684	55	12	0	12	130	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	100	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	7	2	2	5	2	2	2	2	2	2	2
Mvmt Flow	21	841	13	13	752	60	13	0	13	143	0	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	812	0	0	854	0	0	1712	1728	848	1674	1674	752
Stage 1	-	-	-	-	-	-	890	890	-	778	778	-
Stage 2	-	-	-	-	-	-	822	838	-	896	896	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	814	-	-	785	-	-	71	88	361	~ 76	95	410
Stage 1	-	-	-	-	-	-	337	361	-	389	407	-
Stage 2	-	-	-	-	-	-	368	382	-	335	359	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	814	-	-	785	-	-	63	83	361	~ 70	90	410
Mov Cap-2 Maneuver	-	-	-	-	-	-	63	83	-	~ 70	90	-
Stage 1	-	-	-	-	-	-	328	352	-	379	394	-
Stage 2	-	-	-	-	-	-	333	370	-	314	350	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.2	49.3	$ 514
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	107	814	-	-	785	-	-	70	410
HCM Lane V/C Ratio	0.246	0.026	-	-	0.017	-	-	2.041	0.067
HCM Control Delay (s)	49.3	9.5	-	-	9.7	0	-	$ 610.1	14.4
HCM Lane LOS	E	A	-	-	A	A	-	F	B
HCM 95th %tile Q(veh)	0.9	0.1	-	-	0.1	-	-	13.2	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	132	0	27	34	0	81
Future Vol, veh/h	132	0	27	34	0	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	11	2	2	25	2	2
Mvmt Flow	145	0	30	37	0	89

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	145	0	242	145
Stage 1	-	-	-	-	145	-
Stage 2	-	-	-	-	97	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1437	-	746	902
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	927	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1437	-	730	902
Mov Cap-2 Maneuver	-	-	-	-	730	-
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	908	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.3	9.4
HCM LOS			A

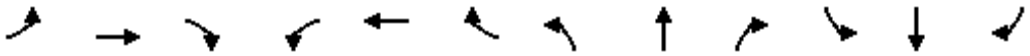
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	902	-	-	1437	-
HCM Lane V/C Ratio	0.099	-	-	0.021	-
HCM Control Delay (s)	9.4	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-



Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	4	571	418	70	895	396	55	4
v/c Ratio	0.03	0.61	0.41	0.19	0.83	0.93	0.08	0.01
Control Delay	18.5	25.6	3.1	11.9	28.7	69.1	5.3	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	25.6	3.1	11.9	28.7	69.1	5.3	23.8
Queue Length 50th (ft)	2	328	0	23	561	284	0	2
Queue Length 95th (ft)	9	471	55	44	#813	#463	24	10
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	123	941	1023	420	1083	461	734	585
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.61	0.41	0.17	0.83	0.86	0.07	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	525	385	64	822	2	362	3	51	1	2	1
Future Volume (veh/h)	4	525	385	64	822	2	362	3	51	1	2	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1530	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	571	196	70	893	2	393	3	17	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	25	5	2	2	4	2	2	2	2	2	2	2
Cap, veh/h	139	898	779	309	1040	2	274	2	601	40	62	0
Arrive On Green	0.49	0.49	0.49	0.04	0.57	0.57	0.34	0.34	0.34	0.34	0.34	0.00
Sat Flow, veh/h	508	1826	1585	1781	1836	4	628	5	1585	0	182	0
Grp Volume(v), veh/h	4	571	196	70	0	895	396	0	17	3	0	0
Grp Sat Flow(s),veh/h/ln	508	1826	1585	1781	0	1840	633	0	1585	182	0	0
Q Serve(g_s), s	0.8	27.8	8.6	2.2	0.0	49.2	0.0	0.0	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	41.0	27.8	8.6	2.2	0.0	49.2	41.0	0.0	0.8	41.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.33		0.00
Lane Grp Cap(c), veh/h	139	898	779	309	0	1043	276	0	601	102	0	0
V/C Ratio(X)	0.03	0.64	0.25	0.23	0.00	0.86	1.43	0.00	0.03	0.03	0.00	0.00
Avail Cap(c_a), veh/h	139	898	779	398	0	1043	276	0	601	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	43.1	22.6	17.7	17.0	0.0	21.9	43.9	0.0	23.4	31.8	0.0	0.0
Incr Delay (d2), s/veh	0.4	3.4	0.8	0.1	0.0	9.2	215.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	12.2	3.2	0.9	0.0	22.0	25.0	0.0	0.3	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.4	26.0	18.5	17.1	0.0	31.1	259.2	0.0	23.4	31.8	0.0	0.0
LnGrp LOS	D	C	B	B	A	C	F	A	C	C	A	A
Approach Vol, veh/h		771			965			413			3	
Approach Delay, s/veh		24.2			30.1			249.5			31.8	
Approach LOS		C			C			F			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		74.0		46.0	9.0	65.0		46.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		68.0		41.0	10.5	53.0		41.0				
Max Q Clear Time (g_c+I1), s		51.2		43.0	4.2	43.0		43.0				
Green Ext Time (p_c), s		9.9		0.0	0.0	5.1		0.0				

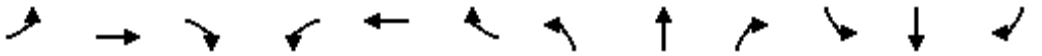
Intersection Summary												
HCM 6th Ctrl Delay			70.1									
HCM 6th LOS			E									



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	318	590	115	322	186	387	734	106	130	817	391
v/c Ratio	0.82	0.93	0.79	0.67	0.28	0.98	0.59	0.16	0.78	0.97	0.53
Control Delay	48.8	68.6	67.5	61.2	13.3	100.6	44.0	8.0	99.4	84.5	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	68.6	67.5	61.2	13.3	100.6	44.0	8.0	99.4	84.5	22.0
Queue Length 50th (ft)	227	569	72	309	47	406	327	10	135	450	171
Queue Length 95th (ft)	301	#764	#148	409	96	#590	396	47	200	#553	255
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	409	633	146	480	716	398	1244	653	217	841	756
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.93	0.79	0.67	0.26	0.97	0.59	0.16	0.60	0.97	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	277	260	253	100	280	162	337	639	92	113	711	340
Future Volume (veh/h)	277	260	253	100	280	162	337	639	92	113	711	340
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1841	1826	1870	1826	1826	1826	1811	1781	1841	1870	1841
Adj Flow Rate, veh/h	318	299	266	115	322	101	387	734	45	130	817	273
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	3	4	5	2	5	5	5	6	8	4	2	4
Cap, veh/h	397	326	290	160	485	544	402	1296	634	150	844	589
Arrive On Green	0.14	0.36	0.36	0.04	0.27	0.27	0.23	0.38	0.38	0.09	0.24	0.24
Sat Flow, veh/h	1767	898	799	1781	1826	1547	1739	3441	1508	1753	3554	1557
Grp Volume(v), veh/h	318	0	565	115	322	101	387	734	45	130	817	273
Grp Sat Flow(s),veh/h/ln	1767	0	1697	1781	1826	1547	1739	1721	1508	1753	1777	1557
Q Serve(g_s), s	20.4	0.0	50.9	7.0	25.2	7.2	35.2	27.0	2.9	11.7	36.4	21.2
Cycle Q Clear(g_c), s	20.4	0.0	50.9	7.0	25.2	7.2	35.2	27.0	2.9	11.7	36.4	21.2
Prop In Lane	1.00		0.47	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	397	0	615	160	485	544	402	1296	634	150	844	589
V/C Ratio(X)	0.80	0.00	0.92	0.72	0.66	0.19	0.96	0.57	0.07	0.86	0.97	0.46
Avail Cap(c_a), veh/h	425	0	615	160	485	544	402	1296	634	219	844	589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	48.7	47.7	52.4	36.0	60.8	39.5	27.7	72.2	60.4	37.5
Incr Delay (d2), s/veh	8.9	0.0	21.0	12.4	7.0	0.8	34.8	0.6	0.0	15.4	23.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.0	24.7	3.9	12.4	2.8	19.1	11.4	1.0	5.8	18.8	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	0.0	69.7	60.1	59.4	36.8	95.7	40.1	27.7	87.6	83.8	38.1
LnGrp LOS	D	A	E	E	E	D	F	D	C	F	F	D
Approach Vol, veh/h		883			538			1166			1220	
Approach Delay, s/veh		60.9			55.3			58.0			74.0	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	63.0	19.7	65.3	27.5	47.5	42.0	43.0
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	58.0	20.0	54.0	25.0	40.0	37.0	38.0
Max Q Clear Time (g_c+I1), s	9.0	52.9	13.7	29.0	22.4	27.2	37.2	38.4
Green Ext Time (p_c), s	0.0	1.2	0.0	5.0	0.1	1.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	63.4
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	5.3

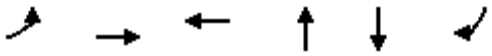
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	0	24	38	0	20	52	1095	3	3	1069	110
Future Vol, veh/h	53	0	24	38	0	20	52	1095	3	3	1069	110
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	-	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	15	3	2	6	9	2	2	67	3	7
Mvmt Flow	58	0	26	42	0	22	57	1203	3	3	1175	121

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1958	2562	648	1911	2619	602	1296	0	0	1206	0	0
Stage 1	1242	1242	-	1317	1317	-	-	-	-	-	-	-
Stage 2	716	1320	-	594	1302	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	7.2	7.56	6.54	7.02	4.28	-	-	5.44	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.45	3.53	4.02	3.36	2.29	-	-	2.87	-	-
Pot Cap-1 Maneuver	~ 38	26	383	~ 41	24	433	494	-	-	316	-	-
Stage 1	185	245	-	165	225	-	-	-	-	-	-	-
Stage 2	387	225	-	456	229	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 26	17	383	~ 28	15	433	494	-	-	316	-	-
Mov Cap-2 Maneuver	83	89	-	84	78	-	-	-	-	-	-	-
Stage 1	120	243	-	107	146	-	-	-	-	-	-	-
Stage 2	239	146	-	421	227	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	84.7	60	2.6	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	494	-	-	83	383	84	433	316	-	-
HCM Lane V/C Ratio	0.116	-	-	0.702	0.069	0.497	0.051	0.01	-	-
HCM Control Delay (s)	13.2	2.1	-	116.2	15.1	84.3	13.8	16.5	-	-
HCM Lane LOS	B	A	-	F	C	F	B	C	-	-
HCM 95th %tile Q(veh)	0.4	-	-	3.4	0.2	2.1	0.2	0	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

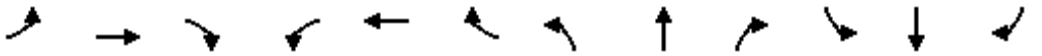


Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	962	356	433	20	502	500
v/c Ratio	1.02	0.14	0.69	0.27	1.04	0.46
Control Delay	57.0	6.1	46.2	56.0	72.1	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.0	6.1	46.2	56.0	72.1	6.0
Queue Length 50th (ft)	511	33	135	11	~198	61
Queue Length 95th (ft)	#960	66	211	39	#454	165
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	940	2464	627	74	483	1076
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.14	0.69	0.27	1.04	0.46

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	875	321	3	2	316	76	8	7	3	53	0	859
Future Volume (veh/h)	875	321	3	2	316	76	8	7	3	53	0	859
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1411	1870	1841	1856	1870	1307	1870	1767	1870	1841
Adj Flow Rate, veh/h	962	353	2	2	347	64	9	8	0	0	0	648
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	33	2	4	3	2	40	2	9	2	4
Cap, veh/h	970	2537	14	34	548	100	12	11	0	0	251	1881
Arrive On Green	0.47	0.70	0.70	0.19	0.19	0.19	0.02	0.02	0.00	0.00	0.00	0.13
Sat Flow, veh/h	1767	3623	21	3	2890	525	674	599	0	0	1870	3120
Grp Volume(v), veh/h	962	173	182	220	0	193	17	0	0	0	0	648
Grp Sat Flow(s),veh/h/ln	1767	1777	1867	1838	0	1581	1273	0	0	0	1870	1560
Q Serve(g_s), s	49.9	3.5	3.5	0.0	0.0	12.2	1.4	0.0	0.0	0.0	0.0	11.3
Cycle Q Clear(g_c), s	49.9	3.5	3.5	12.0	0.0	12.2	1.4	0.0	0.0	0.0	0.0	11.3
Prop In Lane	1.00		0.01	0.01		0.33	0.53		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	970	1244	1307	382	0	300	24	0	0	0	251	1881
V/C Ratio(X)	0.99	0.14	0.14	0.58	0.00	0.64	0.72	0.00	0.00	0.00	0.00	0.34
Avail Cap(c_a), veh/h	970	1244	1307	382	0	300	59	0	0	0	310	1980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	19.4	5.4	5.4	40.5	0.0	40.6	53.0	0.0	0.0	0.0	0.0	10.8
Incr Delay (d2), s/veh	26.9	0.2	0.2	6.2	0.0	10.1	33.9	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.3	1.1	1.2	5.9	0.0	5.4	0.7	0.0	0.0	0.0	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	5.6	5.6	46.7	0.0	50.7	86.9	0.0	0.0	0.0	0.0	10.9
LnGrp LOS	D	A	A	D	A	D	F	A	A	A	A	B
Approach Vol, veh/h		1317			413			17			648	
Approach Delay, s/veh		35.3			48.6			86.9			10.9	
Approach LOS		D			D			F			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	55.4	26.6		19.5		82.0		7.0				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	51.9	14.2		13.3		5.5		3.4				
Green Ext Time (p_c), s	0.0	1.2		1.2		2.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			31.4									
HCM 6th LOS			C									

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	12.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	553	12	12	869	122	12	0	12	78	0	20
Future Vol, veh/h	24	553	12	12	869	122	12	0	12	78	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	-	-	100	-	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	5	2	2	4	2	2	2	2	2	2	2
Mvmt Flow	26	601	13	13	945	133	13	0	13	85	0	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1078	0	0	614	0	0	1709	1764	608	1637	1637	945
Stage 1	-	-	-	-	-	-	660	660	-	971	971	-
Stage 2	-	-	-	-	-	-	1049	1104	-	666	666	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	647	-	-	965	-	-	72	84	496	~ 81	101	318
Stage 1	-	-	-	-	-	-	452	460	-	304	331	-
Stage 2	-	-	-	-	-	-	275	287	-	449	457	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	647	-	-	965	-	-	63	78	496	~ 74	94	318
Mov Cap-2 Maneuver	-	-	-	-	-	-	63	78	-	~ 74	94	-
Stage 1	-	-	-	-	-	-	434	442	-	292	319	-
Stage 2	-	-	-	-	-	-	247	277	-	420	439	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	46.6	201.1
HCM LOS			E	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	112	647	-	-	965	-	-	74	318
HCM Lane V/C Ratio	0.233	0.04	-	-	0.014	-	-	1.146	0.068
HCM Control Delay (s)	46.6	10.8	-	-	8.8	0	-	248.2	17.2
HCM Lane LOS	E	B	-	-	A	A	-	F	C
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0	-	-	6.4	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	3.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	33	0	75	87	0	44
Future Vol, veh/h	33	0	75	87	0	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	12	2	2	8	2	2
Mvmt Flow	36	0	82	96	0	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	36	0	296	36
Stage 1	-	-	-	-	36	-
Stage 2	-	-	-	-	260	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1575	-	695	1037
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	783	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1575	-	657	1037
Mov Cap-2 Maneuver	-	-	-	-	657	-
Stage 1	-	-	-	-	986	-
Stage 2	-	-	-	-	740	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.4	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1037	-	-	1575	-
HCM Lane V/C Ratio	0.047	-	-	0.052	-
HCM Control Delay (s)	8.6	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.2	-

HCS7 Two-Way Stop-Control Report

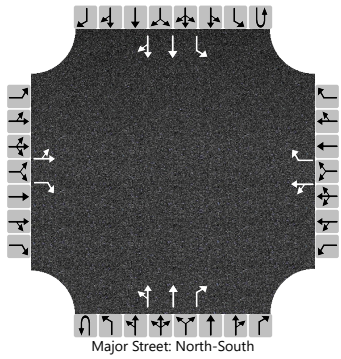
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2021
Time Analyzed	AM Peak Existing
Intersection Orientation	North-South
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	3
Jurisdiction	City of Columbia
East/West Street	Old Williamsport Pike
North/South Street	James Campbell Blvd
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	0	2	1	0	1	2	0
Configuration		LT		R		LT		R		LT	T	R		L	T	TR
Volume (veh/h)		9	0	111		9	0	4		21	662	35	0	21	1092	10
Percent Heavy Vehicles (%)		13	3	3		2	3	3		32			3	5		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.76	6.56	6.96		7.54	6.56	6.96		4.74				4.20		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.63	4.03	3.33		3.52	4.03	3.33		2.52				2.25		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		10		122		10		4		23				23		
Capacity, c (veh/h)		52		438		64		630		430				824		
v/c Ratio		0.19		0.28		0.16		0.01		0.05				0.03		
95% Queue Length, Q_{95} (veh)		0.6		1.1		0.5		0.0		0.2				0.1		
Control Delay (s/veh)		90.8		16.4		71.8		10.8		13.8				9.5		
Level of Service (LOS)		F		C		F		B		B				A		
Approach Delay (s/veh)		21.9				53.0				0.9				0.2		
Approach LOS		C				F										

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HCS7 Two-Way Stop-Control Report

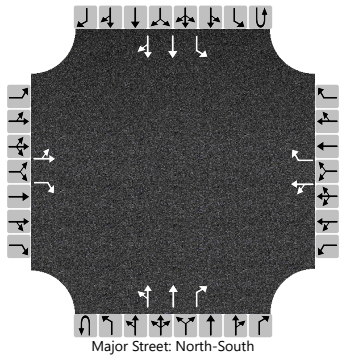
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2021
Time Analyzed	PM Peak Existing
Intersection Orientation	North-South
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	3
Jurisdiction	City of Columbia
East/West Street	Old Williamsport Pike
North/South Street	James Campbell Blvd
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	0	2	1	0	1	2	0
Configuration		LT		R		LT		R		LT	T	R		L	T	TR
Volume (veh/h)		8	0	22		34	0	18		47	914	3	0	3	827	32
Percent Heavy Vehicles (%)		2	3	3		3	3	3		9			3	67		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.54	6.56	6.96		7.56	6.56	6.96		4.28				5.44		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.52	4.03	3.33		3.53	4.03	3.33		2.29				2.87		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		9		24		37		20		52				3		
Capacity, c (veh/h)		65		536		61		512		681				398		
v/c Ratio		0.13		0.05		0.61		0.04		0.08				0.01		
95% Queue Length, Q_{95} (veh)		0.4		0.1		2.5		0.1		0.2				0.0		
Control Delay (s/veh)		68.4		12.0		131.1		12.3		10.7				14.1		
Level of Service (LOS)		F		B		F		B		B				B		
Approach Delay (s/veh)		27.1				90.0				1.3				0.0		
Approach LOS		D				F										

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HCS7 Two-Way Stop-Control Report

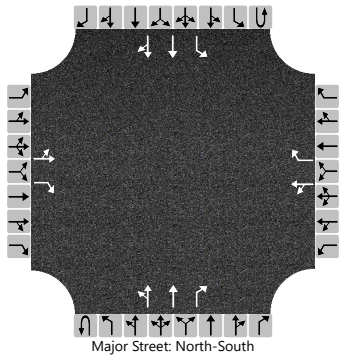
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2025
Time Analyzed	AM Peak No-Build
Intersection Orientation	North-South
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	3
Jurisdiction	City of Columbia
East/West Street	Old Williamsport Pike
North/South Street	James Campbell Blvd
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	0	2	1	0	1	2	0
Configuration		LT		R		LT		R		LT	T	R		L	T	TR
Volume (veh/h)		10	0	123		10	0	4		23	771	39	0	23	1237	11
Percent Heavy Vehicles (%)		13	3	3		2	3	3		32			3	5		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.76	6.56	6.96		7.54	6.56	6.96		4.74				4.20		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.63	4.03	3.33		3.52	4.03	3.33		2.52				2.25		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		11		135		11		4		25				25		
Capacity, c (veh/h)		33		388		39		576		365				738		
v/c Ratio		0.33		0.35		0.28		0.01		0.07				0.03		
95% Queue Length, Q_{95} (veh)		1.1		1.5		0.9		0.0		0.2				0.1		
Control Delay (s/veh)		162.1		19.2		131.9		11.3		15.6				10.0		
Level of Service (LOS)		F		C		F		B		C				B		
Approach Delay (s/veh)		29.9				97.5				1.3				0.2		
Approach LOS		D				F										

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HCS7 Two-Way Stop-Control Report

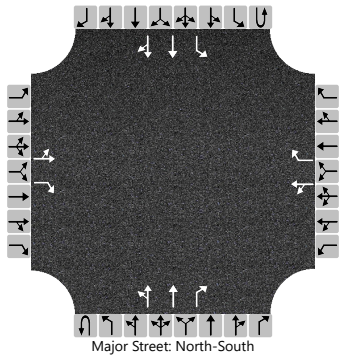
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2025
Time Analyzed	PM Peak No-Build
Intersection Orientation	North-South
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	3
Jurisdiction	City of Columbia
East/West Street	Old Williamsport Pike
North/South Street	James Campbell Blvd
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	0	2	1	0	1	2	0
Configuration		LT		R		LT		R		LT	T	R		L	T	TR
Volume (veh/h)		9	0	24		38	0	20		52	1049	3	0	3	993	35
Percent Heavy Vehicles (%)		2	3	3		3	3	3		9			3	67		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.54	6.56	6.96		7.56	6.56	6.96		4.28				5.44		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.52	4.03	3.33		3.53	4.03	3.33		2.29				2.87		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		10		26		42		22		57				3		
Capacity, c (veh/h)		37		466		35		458		575				335		
v/c Ratio		0.27		0.06		1.18		0.05		0.10				0.01		
95% Queue Length, Q_{95} (veh)		0.9		0.2		4.4		0.2		0.3				0.0		
Control Delay (s/veh)		135.7		13.2		384.6		13.3		11.9				15.9		
Level of Service (LOS)		F		B		F		B		B				C		
Approach Delay (s/veh)		46.6				256.5				2.0				0.0		
Approach LOS		E				F										

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HCS7 Two-Way Stop-Control Report

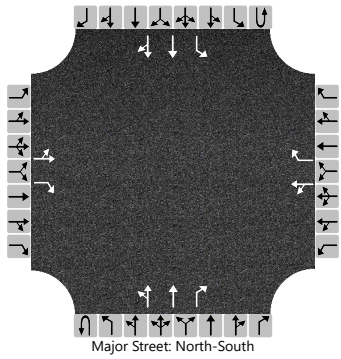
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2025
Time Analyzed	AM Peak-Build
Intersection Orientation	North-South
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	3
Jurisdiction	City of Columbia
East/West Street	Old Williamsport Pike
North/South Street	James Campbell Blvd
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	1	1	0	0	2	1	0	1	2	0
Configuration		LT		R		LT		R		LT	T	R		L	T	TR
Volume (veh/h)		91	0	123		10	0	4		23	853	39	0	23	1265	38
Percent Heavy Vehicles (%)		13	3	3		2	3	3		32			3	5		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No				No				No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.76	6.56	6.96		7.54	6.56	6.96		4.74				4.20		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.63	4.03	3.33		3.52	4.03	3.33		2.52				2.25		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		100		135		11		4		25				25		
Capacity, c (veh/h)		27		370		31		538		343				682		
v/c Ratio		3.67		0.36		0.36		0.01		0.07				0.04		
95% Queue Length, Q_{95} (veh)		12.2		1.6		1.1		0.0		0.2				0.1		
Control Delay (s/veh)		1497.2		20.2		177.6		11.7		16.3				10.5		
Level of Service (LOS)		F		C		F		B		C				B		
Approach Delay (s/veh)		648.3				130.2				1.5				0.2		
Approach LOS		F				F										

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HCS7 Two-Way Stop-Control Report

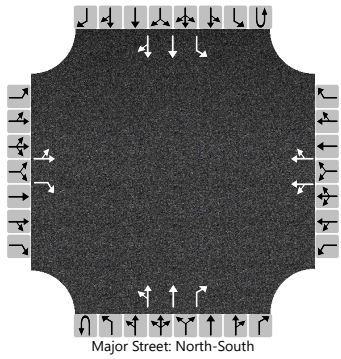
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2025
Time Analyzed	PM Peak-Build
Intersection Orientation	North-South
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	3
Jurisdiction	City of Columbia
East/West Street	Old Williamsport Pike
North/South Street	James Campbell Blvd
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	1		0	2	0	0	0	2	1	0	1	2	0
Configuration		LT		R		LT		TR		LT	T	R		L	T	TR
Volume (veh/h)		53	0	24		38	0	20		52	1095	3	0	3	1069	110
Percent Heavy Vehicles (%)		2	2	15		3	2	6		9			2	67		
Proportion Time Blocked																
Percent Grade (%)		0				0										
Right Turn Channelized		No								No						
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.5	6.5	6.9		7.5	6.5	6.9		4.1				4.1		
Critical Headway (sec)		7.54	6.54	7.20		7.56	6.54	7.02		4.28				5.44		
Base Follow-Up Headway (sec)		3.5	4.0	3.3		3.5	4.0	3.3		2.2				2.2		
Follow-Up Headway (sec)		3.52	4.02	3.45		3.53	4.02	3.36		2.29				2.87		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		58		26		42		22		57				3		
Capacity, c (veh/h)		26		383		27		433		495				315		
v/c Ratio		2.23		0.07		1.52		0.05		0.12				0.01		
95% Queue Length, Q_{95} (veh)		7.1		0.2		4.9		0.2		0.4				0.0		
Control Delay (s/veh)		881.9		15.1		574.1		13.8		13.2				16.5		
Level of Service (LOS)		F		C		F		B		B				C		
Approach Delay (s/veh)		611.7				380.9				2.6				0.0		
Approach LOS		F				F										

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HCS7 Two-Way Stop-Control Report

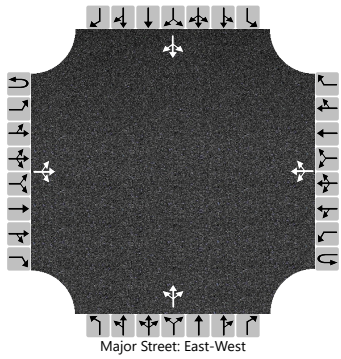
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2025
Time Analyzed	AM Peak Build
Intersection Orientation	East-West
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	5
Jurisdiction	City of Columbia
East/West Street	Hampshire Pike
North/South Street	Site Dwy A/Oxford Village
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		19	765	12		12	684	55		12	0	12		130	0	25
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		21				13					26				170	
Capacity, c (veh/h)		814				786					107				76	
v/c Ratio		0.03				0.02					0.25				2.25	
95% Queue Length, Q_{95} (veh)		0.1				0.1					0.9				15.9	
Control Delay (s/veh)		9.5				9.7					49.6				691.4	
Level of Service (LOS)		A				A					E				F	
Approach Delay (s/veh)	0.7				0.4				49.6				691.4			
Approach LOS									E				F			

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HCS7 Two-Way Stop-Control Report

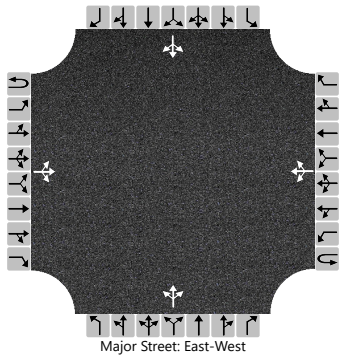
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2025
Time Analyzed	PM Peak Build
Intersection Orientation	East-West
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	5
Jurisdiction	City of Columbia
East/West Street	Hampshire Pike
North/South Street	Site Dwy A/Oxford Village
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	1	0
Configuration			LTR				LTR				LTR				LTR	
Volume (veh/h)		24	553	12		12	869	122		12	0	12		78	0	20
Percent Heavy Vehicles (%)		2				2				2	2	2		2	2	2
Proportion Time Blocked																
Percent Grade (%)										0				0		
Right Turn Channelized																
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1				4.1				7.1	6.5	6.2		7.1	6.5	6.2
Critical Headway (sec)		4.12				4.12				7.12	6.52	6.22		7.12	6.52	6.22
Base Follow-Up Headway (sec)		2.2				2.2				3.5	4.0	3.3		3.5	4.0	3.3
Follow-Up Headway (sec)		2.22				2.22				3.52	4.02	3.32		3.52	4.02	3.32

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		26				13					26				107	
Capacity, c (veh/h)		647				965					110				78	
v/c Ratio		0.04				0.01					0.24				1.37	
95% Queue Length, Q_{95} (veh)		0.1				0.0					0.9				8.4	
Control Delay (s/veh)		10.8				8.8					47.8				323.7	
Level of Service (LOS)		B				A					E				F	
Approach Delay (s/veh)		1.1				0.4				47.8				323.7		
Approach LOS										E				F		

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HCS7 Two-Way Stop-Control Report

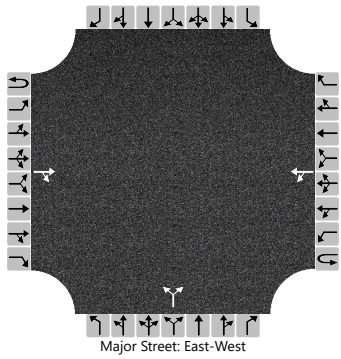
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2025
Time Analyzed	AM Peak Build
Intersection Orientation	East-West
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	6
Jurisdiction	City of Columbia
East/West Street	Old Williamsport Pike
North/South Street	Site Dwy B
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			132	0		27	34			0		81				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						30					89					
Capacity, c (veh/h)						1437					902					
v/c Ratio						0.02					0.10					
95% Queue Length, Q_{95} (veh)						0.1					0.3					
Control Delay (s/veh)						7.6					9.4					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)						3.4				9.4						
Approach LOS										A						

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HCS7 Two-Way Stop-Control Report

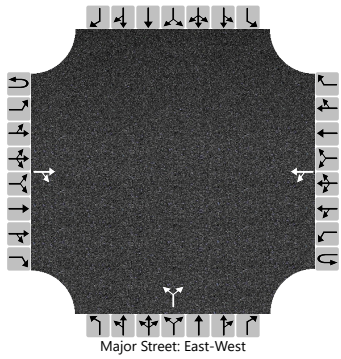
General Information

Analyst	Kimley-Horn
Agency/Co.	
Date Performed	9/28/2021
Analysis Year	2025
Time Analyzed	PM Peak Build
Intersection Orientation	East-West
Project Description	Steadfast Hampshire Pike

Site Information

Intersection	6
Jurisdiction	City of Columbia
East/West Street	Old Williamsport Pike
North/South Street	Site Dwy B
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			33	0		75	87			0		44				
Percent Heavy Vehicles (%)						2				2		2				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.12				6.42		6.22				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.22				3.52		3.32				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						82					48					
Capacity, c (veh/h)						1575					1036					
v/c Ratio						0.05					0.05					
95% Queue Length, Q_{95} (veh)						0.2					0.1					
Control Delay (s/veh)						7.4					8.6					
Level of Service (LOS)						A					A					
Approach Delay (s/veh)						3.7				8.6						
Approach LOS										A						

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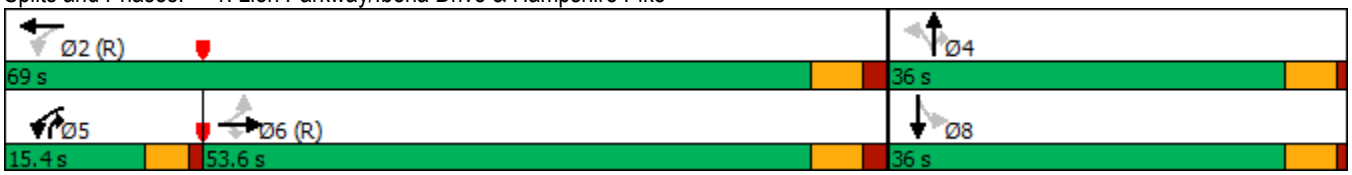
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	1	582	486	204	480	265	2	171	11	8
Future Volume (vph)	1	582	486	204	480	265	2	171	11	8
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA	pm+ov	Perm	NA
Protected Phases		6		5	2		4	5		8
Permitted Phases	6		6	2		4		4	8	
Detector Phase	6	6	6	5	2	4	4	5	8	8
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	9.5	21.0	10.0	10.0	9.5	10.0	10.0
Total Split (s)	53.6	53.6	53.6	15.4	69.0	36.0	36.0	15.4	36.0	36.0
Total Split (%)	51.0%	51.0%	51.0%	14.7%	65.7%	34.3%	34.3%	14.7%	34.3%	34.3%
Yellow Time (s)	4.0	4.0	4.0	3.5	4.0	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0		5.0	4.5		5.0
Lead/Lag	Lag	Lag	Lag	Lead				Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes		
Recall Mode	C-Max	C-Max	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	52.9	52.9	52.9	68.0	66.5		27.5	41.6		27.5
Actuated g/C Ratio	0.50	0.50	0.50	0.65	0.63		0.26	0.40		0.26
v/c Ratio	0.00	0.70	0.50	0.59	0.46		0.90	0.29		0.07
Control Delay	16.0	26.5	3.4	15.0	12.3		67.9	4.8		21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	16.0	26.5	3.4	15.0	12.3		67.9	4.8		21.4
LOS	B	C	A	B	B		E	A		C
Approach Delay		16.0			13.1		43.2			21.4
Approach LOS		B			B		D			C

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 20.5	Intersection LOS: C
Intersection Capacity Utilization 76.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Lion Parkway/Iberia Drive & Hampshire Pike

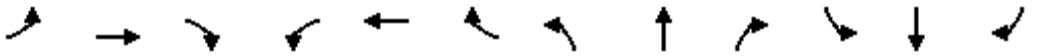




Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1	640	534	224	527	293	188	30
v/c Ratio	0.00	0.70	0.50	0.59	0.46	0.90	0.29	0.07
Control Delay	16.0	26.5	3.4	15.0	12.3	67.9	4.8	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	26.5	3.4	15.0	12.3	67.9	4.8	21.4
Queue Length 50th (ft)	0	338	0	60	181	184	6	10
Queue Length 95th (ft)	4	504	58	98	268	#321	46	33
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	439	920	1062	401	1146	366	675	460
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.70	0.50	0.56	0.46	0.80	0.28	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	582	486	204	480	0	265	2	171	11	8	8
Future Volume (veh/h)	1	582	486	204	480	0	265	2	171	11	8	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1841	1826	1870	1781	1870	1663	1870	1870	1870
Adj Flow Rate, veh/h	1	640	243	224	527	0	291	2	66	12	9	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	4	2	4	5	2	8	2	16	2	2	2
Cap, veh/h	452	876	754	333	1096	0	372	2	531	64	36	2
Arrive On Green	0.48	0.48	0.48	0.08	0.60	0.00	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	876	1841	1585	1753	1826	0	1030	7	1409	37	123	8
Grp Volume(v), veh/h	1	640	243	224	527	0	293	0	66	22	0	0
Grp Sat Flow(s),veh/h/ln	876	1841	1585	1753	1826	0	1037	0	1409	167	0	0
Q Serve(g_s), s	0.1	29.3	10.0	6.5	17.0	0.0	0.0	0.0	3.2	0.4	0.0	0.0
Cycle Q Clear(g_c), s	4.1	29.3	10.0	6.5	17.0	0.0	29.6	0.0	3.2	30.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.55		0.05
Lane Grp Cap(c), veh/h	452	876	754	333	1096	0	374	0	531	102	0	0
V/C Ratio(X)	0.00	0.73	0.32	0.67	0.48	0.00	0.78	0.00	0.12	0.22	0.00	0.00
Avail Cap(c_a), veh/h	452	876	754	372	1096	0	374	0	531	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.81	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.6	22.1	17.0	18.1	11.8	0.0	36.5	0.0	21.4	30.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.3	1.1	2.4	1.2	0.0	9.5	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.0	3.7	2.5	6.5	0.0	8.3	0.0	1.1	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.6	27.5	18.2	20.5	13.0	0.0	46.0	0.0	21.4	30.6	0.0	0.0
LnGrp LOS	B	C	B	C	B	A	D	A	C	C	A	A
Approach Vol, veh/h		884			751			359			22	
Approach Delay, s/veh		24.9			15.3			41.5			30.6	
Approach LOS		C			B			D			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		69.0		36.0	13.1	55.9		36.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		63.0		31.0	10.9	47.6		31.0				
Max Q Clear Time (g_c+I1), s		19.0		31.6	8.5	31.3		32.0				
Green Ext Time (p_c), s		7.6		0.0	0.1	8.1		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		24.3
HCM 6th LOS		C

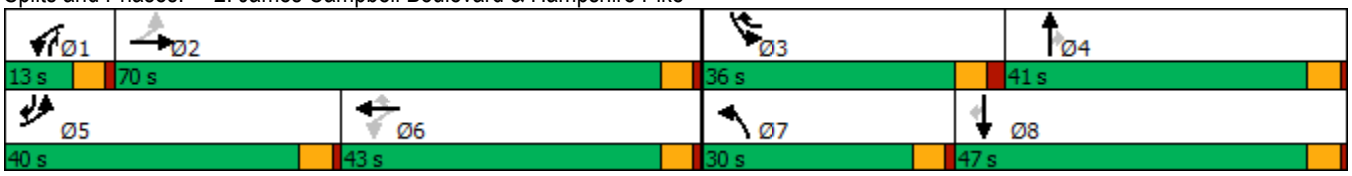
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	239	272	104	224	112	209	495	108	241	768	218
Future Volume (vph)	239	272	104	224	112	209	495	108	241	768	218
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	1	6	3	7	4	1	3	8	5
Permitted Phases	2		6		6			4			8
Detector Phase	5	2	1	6	3	7	4	1	3	8	5
Switch Phase											
Minimum Initial (s)	6.0	5.0	4.0	5.0	4.0	4.0	8.0	4.0	4.0	8.0	6.0
Minimum Split (s)	11.0	10.0	9.0	10.0	10.0	9.0	13.0	9.0	10.0	13.0	11.0
Total Split (s)	40.0	70.0	13.0	43.0	36.0	30.0	41.0	13.0	36.0	47.0	40.0
Total Split (%)	25.0%	43.8%	8.1%	26.9%	22.5%	18.8%	25.6%	8.1%	22.5%	29.4%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	6.0	5.0	5.0	5.0	6.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	None	None	None	None	None	None	None
Act Effct Green (s)	77.7	65.1	61.0	53.4	85.3	23.2	36.3	48.9	26.9	41.0	65.3
Actuated g/C Ratio	0.50	0.41	0.39	0.34	0.54	0.15	0.23	0.31	0.17	0.26	0.42
v/c Ratio	0.55	0.85	0.59	0.41	0.15	0.92	0.73	0.23	0.91	0.95	0.33
Control Delay	29.0	51.8	38.8	44.1	4.6	103.8	63.0	16.0	97.2	77.1	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	51.8	38.8	44.1	4.6	103.8	63.0	16.0	97.2	77.1	9.7
LOS	C	D	D	D	A	F	E	B	F	E	A
Approach Delay		44.8		32.8			67.2			69.1	
Approach LOS		D		C			E			E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 156.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 57.9	Intersection LOS: E
Intersection Capacity Utilization 85.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: James Campbell Boulevard & Hampshire Pike

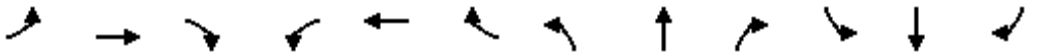




Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	269	606	117	252	126	235	556	121	271	863	245
v/c Ratio	0.55	0.85	0.59	0.41	0.15	0.92	0.73	0.23	0.91	0.95	0.33
Control Delay	29.0	51.8	38.8	44.1	4.6	103.8	63.0	16.0	97.2	77.1	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	51.8	38.8	44.1	4.6	103.8	63.0	16.0	97.2	77.1	9.7
Queue Length 50th (ft)	169	549	66	204	6	244	288	29	277	470	45
Queue Length 95th (ft)	235	#733	106	307	42	#391	355	81	#417	#588	99
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	583	716	202	621	876	277	765	530	332	930	878
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.85	0.58	0.41	0.14	0.85	0.73	0.23	0.82	0.93	0.28

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	272	267	104	224	112	209	495	108	241	768	218
Future Volume (veh/h)	239	272	267	104	224	112	209	495	108	241	768	218
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1856	1796	1796	1841	1752	1841	1752	1796	1841	1841	1826
Adj Flow Rate, veh/h	269	306	275	117	252	64	235	556	55	271	863	125
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	3	7	7	4	10	4	10	7	4	4	5
Cap, veh/h	493	373	335	223	651	771	255	782	435	291	916	578
Arrive On Green	0.11	0.41	0.41	0.05	0.35	0.35	0.15	0.24	0.24	0.17	0.26	0.26
Sat Flow, veh/h	1711	901	809	1711	1841	1485	1753	3328	1522	1753	3497	1547
Grp Volume(v), veh/h	269	0	581	117	252	64	235	556	55	271	863	125
Grp Sat Flow(s),veh/h/ln	1711	0	1710	1711	1841	1485	1753	1664	1522	1753	1749	1547
Q Serve(g_s), s	15.3	0.0	47.3	6.9	16.1	3.4	20.8	24.1	4.2	23.9	37.9	8.6
Cycle Q Clear(g_c), s	15.3	0.0	47.3	6.9	16.1	3.4	20.8	24.1	4.2	23.9	37.9	8.6
Prop In Lane	1.00		0.47	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	493	0	708	223	651	771	255	782	435	291	916	578
V/C Ratio(X)	0.55	0.00	0.82	0.52	0.39	0.08	0.92	0.71	0.13	0.93	0.94	0.22
Avail Cap(c_a), veh/h	684	0	708	223	651	771	279	782	435	335	936	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	40.8	35.2	38.0	18.9	66.2	55.1	41.5	64.6	56.7	33.5
Incr Delay (d2), s/veh	0.3	0.0	10.3	1.1	1.7	0.2	31.3	3.0	0.1	28.4	16.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	21.6	2.9	7.6	1.2	11.4	10.3	1.6	12.8	18.5	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.1	0.0	51.1	36.3	39.7	19.1	97.5	58.1	41.6	93.0	73.7	33.7
LnGrp LOS	C	A	D	D	D	B	F	E	D	F	E	C
Approach Vol, veh/h		850			433			846			1259	
Approach Delay, s/veh		43.5			35.7			68.0			73.9	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	70.0	32.0	41.9	22.5	60.5	27.8	46.1
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	65.0	30.0	36.0	35.0	38.0	25.0	42.0
Max Q Clear Time (g_c+I1), s	8.9	49.3	25.9	26.1	17.3	18.1	22.8	39.9
Green Ext Time (p_c), s	0.0	2.2	0.1	2.5	0.2	0.9	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	59.9
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	123	10	0	4	23	771	39	23	1237	11
Future Vol, veh/h	10	0	123	10	0	4	23	771	39	23	1237	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	100	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	13	2	11	2	2	2	32	12	2	5	4	11
Mvmt Flow	11	0	135	11	0	4	25	847	43	25	1359	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1889	2355	686	1627	2318	424	1371	0	0	890	0	0
Stage 1	1415	1415	-	897	897	-	-	-	-	-	-	-
Stage 2	474	940	-	730	1421	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.54	7.12	7.54	6.54	6.94	4.74	-	-	4.2	-	-
Critical Hdwy Stg 1	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.02	3.41	3.52	4.02	3.32	2.52	-	-	2.25	-	-
Pot Cap-1 Maneuver	38	35	370	68	37	579	365	-	-	739	-	-
Stage 1	131	202	-	301	357	-	-	-	-	-	-	-
Stage 2	512	340	-	380	201	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	35	32	370	40	33	579	365	-	-	739	-	-
Mov Cap-2 Maneuver	98	121	-	127	116	-	-	-	-	-	-	-
Stage 1	122	195	-	281	333	-	-	-	-	-	-	-
Stage 2	473	317	-	233	194	-	-	-	-	-	-	-

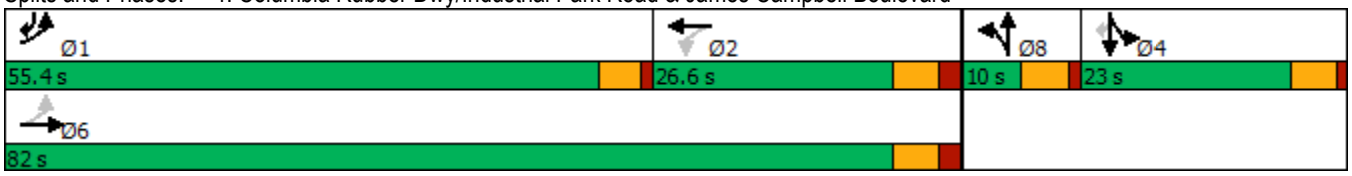
Approach	EB	WB	NB	SB
HCM Control Delay, s	22.2	28.9	0.9	0.2
HCM LOS	C	D		

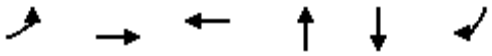
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	365	-	-	98	370	127	579	739	-	-
HCM Lane V/C Ratio	0.069	-	-	0.112	0.365	0.087	0.008	0.034	-	-
HCM Control Delay (s)	15.6	0.5	-	46.3	20.2	36	11.3	10	-	-
HCM Lane LOS	C	A	-	E	C	E	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.4	1.6	0.3	0	0.1	-	-

Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	495	278	290	7	7	984
Future Volume (vph)	495	278	290	7	7	984
Turn Type	pm+pt	NA	NA	NA	NA	pm+ov
Protected Phases	1	6	2	8	4	1
Permitted Phases	6					4
Detector Phase	1	6	2	8	4	1
Switch Phase						
Minimum Initial (s)	5.0	15.0	15.0	5.0	5.0	5.0
Minimum Split (s)	9.5	21.0	21.0	10.0	10.0	9.5
Total Split (s)	55.4	82.0	26.6	10.0	23.0	55.4
Total Split (%)	48.2%	71.3%	23.1%	8.7%	20.0%	48.2%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	3.5
All-Red Time (s)	1.0	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	5.0	5.0	4.5
Lead/Lag	Lead		Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	None	None
Act Effct Green (s)	77.6	76.1	41.9	5.0	18.0	52.7
Actuated g/C Ratio	0.73	0.71	0.39	0.05	0.17	0.49
v/c Ratio	0.76	0.14	0.31	0.17	1.83	0.74
Control Delay	14.2	5.4	26.4	54.0	406.2	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.2	5.4	26.4	54.0	406.2	16.2
LOS	B	A	C	D	F	B
Approach Delay		10.9	26.4	54.0	212.8	
Approach LOS		B	C	D	F	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 107	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.83	
Intersection Signal Delay: 113.3	Intersection LOS: F
Intersection Capacity Utilization 88.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Columbia Rubber Dwy/Industrial Park Road & James Campbell Boulevard



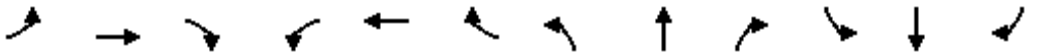


Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	576	336	399	11	652	641
v/c Ratio	0.76	0.14	0.31	0.17	1.83	0.74
Control Delay	14.2	5.4	26.4	54.0	406.2	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	14.2	5.4	26.4	54.0	406.2	16.2
Queue Length 50th (ft)	135	30	87	7	~625	209
Queue Length 95th (ft)	265	59	184	26	#885	226
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	933	2342	1297	64	357	1103
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.14	0.31	0.17	1.83	0.58

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	495	278	11	0	290	53	2	7	1	121	7	984
Future Volume (veh/h)	495	278	11	0	290	53	2	7	1	121	7	984
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1767	1737	1870	1811	1693	1159	1307	1870	1811	1307	1841
Adj Flow Rate, veh/h	576	323	11	0	337	50	2	8	0	0	0	997
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	14	9	11	2	6	14	50	40	2	6	40	4
Cap, veh/h	736	2261	77	0	1258	185	3	12	0	0	211	1204
Arrive On Green	0.22	0.68	0.68	0.00	0.42	0.42	0.01	0.01	0.00	0.00	0.00	0.16
Sat Flow, veh/h	1612	3312	113	0	3100	442	259	1035	0	0	1307	3120
Grp Volume(v), veh/h	576	163	171	0	191	196	10	0	0	0	0	997
Grp Sat Flow(s),veh/h/ln	1612	1678	1746	0	1721	1731	1294	0	0	0	1307	1560
Q Serve(g_s), s	21.0	3.8	3.8	0.0	8.1	8.3	0.9	0.0	0.0	0.0	0.0	18.0
Cycle Q Clear(g_c), s	21.0	3.8	3.8	0.0	8.1	8.3	0.9	0.0	0.0	0.0	0.0	18.0
Prop In Lane	1.00		0.06	0.00		0.26	0.20		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	736	1146	1192	0	719	724	15	0	0	0	211	1204
V/C Ratio(X)	0.78	0.14	0.14	0.00	0.27	0.27	0.65	0.00	0.00	0.00	0.00	0.83
Avail Cap(c_a), veh/h	1112	1146	1192	0	719	724	58	0	0	0	211	1204
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	11.3	6.2	6.2	0.0	21.2	21.2	54.8	0.0	0.0	0.0	0.0	30.9
Incr Delay (d2), s/veh	2.1	0.3	0.3	0.0	0.9	0.9	37.3	0.0	0.0	0.0	0.0	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	1.2	1.3	0.0	3.3	3.4	0.4	0.0	0.0	0.0	0.0	12.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	6.5	6.5	0.0	22.1	22.2	92.1	0.0	0.0	0.0	0.0	35.8
LnGrp LOS	B	A	A	A	C	C	F	A	A	A	A	D
Approach Vol, veh/h		910			387			10			997	
Approach Delay, s/veh		10.9			22.1			92.1			35.8	
Approach LOS		B			C			F			D	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	29.4	52.6		23.0		82.0		6.3				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	23.0	10.3		20.0		5.8		2.9				
Green Ext Time (p_c), s	1.9	1.4		0.0		1.9		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			23.9									
HCM 6th LOS			C									

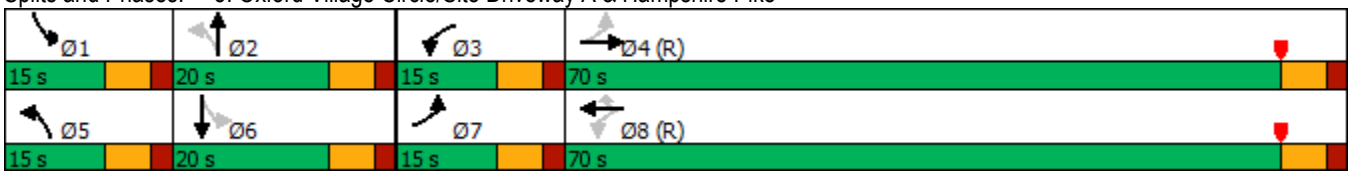
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	WBL	WBT	NBL	NBT	Ø1	Ø6	Ø7
Lane Configurations								
Traffic Volume (vph)	765	12	684	12	0			
Future Volume (vph)	765	12	684	12	0			
Turn Type	NA	pm+pt	NA	pm+pt	NA			
Protected Phases	4	3	8	5	2	1	6	7
Permitted Phases		8		2				
Detector Phase	4	3	8	5	2			
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	11.0	24.0	11.0	24.0	11.0	24.0	11.0
Total Split (s)	70.0	15.0	70.0	15.0	20.0	15.0	20.0	15.0
Total Split (%)	58.3%	12.5%	58.3%	12.5%	16.7%	13%	17%	13%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0			
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Max	None	C-Max	None	Max	None	Max	None
Act Effct Green (s)	83.8	88.7	88.7	19.3	19.3			
Actuated g/C Ratio	0.70	0.74	0.74	0.16	0.16			
v/c Ratio	0.69	0.04	0.56	0.07	0.02			
Control Delay	17.7	6.1	10.1	39.2	0.1			
Queue Delay	0.0	0.0	0.0	0.0	0.0			
Total Delay	17.7	6.1	10.1	39.2	0.1			
LOS	B	A	B	D	A			
Approach Delay	17.7		10.0		19.7			
Approach LOS	B		B		B			

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 103 (86%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 14.2	Intersection LOS: B
Intersection Capacity Utilization 55.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Oxford Village Circle/Site Driveway A & Hampshire Pike

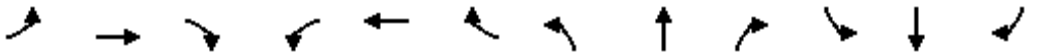




Lane Group	EBT	WBL	WBT	NBL	NBT
Lane Group Flow (vph)	854	13	752	13	13
v/c Ratio	0.69	0.04	0.56	0.07	0.02
Control Delay	17.7	6.1	10.1	39.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	17.7	6.1	10.1	39.2	0.1
Queue Length 50th (ft)	229	2	179	9	0
Queue Length 95th (ft)	#745	10	419	25	0
Internal Link Dist (ft)	1470		2278		194
Turn Bay Length (ft)		100			
Base Capacity (vph)	1238	357	1337	217	545
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.69	0.04	0.56	0.06	0.02

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	765	12	12	684	0	12	0	12	0	0	0
Future Volume (veh/h)	0	765	12	12	684	0	12	0	12	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1870	1870	1826	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	841	13	13	752	0	13	0	13	0	0	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	7	2	2	5	2	2	2	2	2	2	2
Cap, veh/h	432	1154	18	305	1312	1139	251	0	287	225	218	0
Arrive On Green	0.00	0.65	0.65	0.01	0.72	0.00	0.01	0.00	0.18	0.00	0.00	0.00
Sat Flow, veh/h	1781	1764	27	1781	1826	1585	1781	0	1585	1781	1870	0
Grp Volume(v), veh/h	0	0	854	13	752	0	13	0	13	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1791	1781	1826	1585	1781	0	1585	1781	1870	0
Q Serve(g_s), s	0.0	0.0	37.8	0.3	23.6	0.0	0.8	0.0	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	37.8	0.3	23.6	0.0	0.8	0.0	0.8	0.0	0.0	0.0
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	432	0	1172	305	1312	1139	251	0	287	225	218	0
V/C Ratio(X)	0.00	0.00	0.73	0.04	0.57	0.00	0.05	0.00	0.05	0.00	0.00	0.00
Avail Cap(c_a), veh/h	564	0	1172	413	1312	1139	359	0	287	357	218	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.77	0.82	0.82	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	13.7	12.7	8.1	0.0	43.9	0.0	40.5	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	3.1	0.0	1.5	0.0	0.1	0.0	0.3	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	15.1	0.1	8.8	0.0	0.3	0.0	0.3	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	16.8	12.8	9.6	0.0	44.0	0.0	40.8	0.0	0.0	0.0
LnGrp LOS	A	A	B	B	A	A	D	A	D	A	A	A
Approach Vol, veh/h		854			765			26			0	
Approach Delay, s/veh		16.8			9.6			42.4			0.0	
Approach LOS		B			A			D				

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	27.8	7.8	84.5	7.8	20.0	0.0	92.2
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	14.0	9.0	64.0	9.0	14.0	9.0	64.0
Max Q Clear Time (g_c+I1), s	0.0	2.8	2.3	39.8	2.8	0.0	0.0	25.6
Green Ext Time (p_c), s	0.0	0.0	0.0	7.2	0.0	0.0	0.0	6.5

Intersection Summary	
HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B

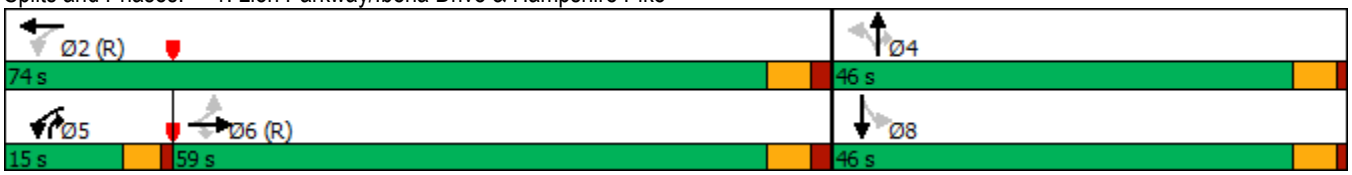
Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	4	502	385	63	804	362	3	51	1	2
Future Volume (vph)	4	502	385	63	804	362	3	51	1	2
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA	pm+ov	Perm	NA
Protected Phases		6		5	2		4	5		8
Permitted Phases	6		6	2		4		4	8	
Detector Phase	6	6	6	5	2	4	4	5	8	8
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	9.5	21.0	10.0	10.0	9.5	10.0	10.0
Total Split (s)	59.0	59.0	59.0	15.0	74.0	46.0	46.0	15.0	46.0	46.0
Total Split (%)	49.2%	49.2%	49.2%	12.5%	61.7%	38.3%	38.3%	12.5%	38.3%	38.3%
Yellow Time (s)	4.0	4.0	4.0	3.5	4.0	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0		5.0	4.5		5.0
Lead/Lag	Lag	Lag	Lag	Lead				Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes		
Recall Mode	C-Max	C-Max	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	62.5	62.5	62.5	72.7	71.2		37.8	48.9		37.8
Actuated g/C Ratio	0.52	0.52	0.52	0.61	0.59		0.32	0.41		0.32
v/c Ratio	0.03	0.58	0.41	0.17	0.81		0.93	0.08		0.01
Control Delay	18.2	24.7	3.1	13.0	23.0		69.1	5.3		23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	18.2	24.7	3.1	13.0	23.0		69.1	5.3		23.8
LOS	B	C	A	B	C		E	A		C
Approach Delay		15.3			22.3		61.4			23.8
Approach LOS		B			C		E			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 30 (25%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 26.9	Intersection LOS: C
Intersection Capacity Utilization 88.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: Lion Parkway/Iberia Drive & Hampshire Pike

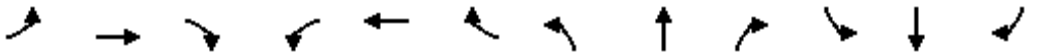




Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	4	546	418	68	876	396	55	4
v/c Ratio	0.03	0.58	0.41	0.17	0.81	0.93	0.08	0.01
Control Delay	18.2	24.7	3.1	13.0	23.0	69.1	5.3	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.2	24.7	3.1	13.0	23.0	69.1	5.3	23.8
Queue Length 50th (ft)	2	307	0	21	480	284	0	2
Queue Length 95th (ft)	9	442	55	m40	429	#463	24	10
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	134	942	1024	438	1083	461	734	585
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.58	0.41	0.16	0.81	0.86	0.07	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	502	385	63	804	2	362	3	51	1	2	1
Future Volume (veh/h)	4	502	385	63	804	2	362	3	51	1	2	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1530	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	546	197	68	874	2	393	3	17	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	25	5	2	2	4	2	2	2	2	2	2	2
Cap, veh/h	188	898	780	324	1040	2	274	2	601	40	62	0
Arrive On Green	0.49	0.49	0.49	0.05	0.75	0.75	0.34	0.34	0.34	0.34	0.34	0.00
Sat Flow, veh/h	518	1826	1585	1781	1836	4	628	5	1585	0	182	0
Grp Volume(v), veh/h	4	546	197	68	0	876	396	0	17	3	0	0
Grp Sat Flow(s),veh/h/ln	518	1826	1585	1781	0	1840	633	0	1585	182	0	0
Q Serve(g_s), s	0.7	26.0	8.7	2.2	0.0	38.4	0.0	0.0	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	30.1	26.0	8.7	2.2	0.0	38.4	41.0	0.0	0.8	41.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.33		0.00
Lane Grp Cap(c), veh/h	188	898	780	324	0	1043	276	0	601	102	0	0
V/C Ratio(X)	0.02	0.61	0.25	0.21	0.00	0.84	1.43	0.00	0.03	0.03	0.00	0.00
Avail Cap(c_a), veh/h	188	898	780	413	0	1043	276	0	601	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.71	0.00	0.71	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.3	22.1	17.7	16.3	0.0	11.1	43.9	0.0	23.4	31.8	0.0	0.0
Incr Delay (d2), s/veh	0.2	3.1	0.8	0.1	0.0	6.0	215.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	11.3	3.2	0.8	0.0	10.7	25.0	0.0	0.3	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.5	25.2	18.5	16.3	0.0	17.1	259.2	0.0	23.4	31.8	0.0	0.0
LnGrp LOS	C	C	B	B	A	B	F	A	C	C	A	A
Approach Vol, veh/h		747			944			413			3	
Approach Delay, s/veh		23.4			17.0			249.5			31.8	
Approach LOS		C			B			F			C	

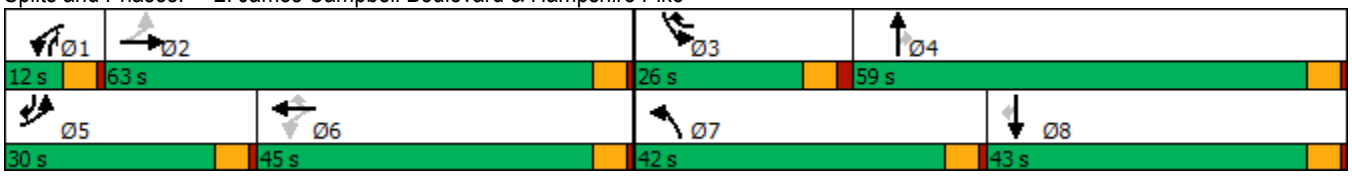
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		74.0		46.0	9.0	65.0		46.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		68.0		41.0	10.5	53.0		41.0				
Max Q Clear Time (g_c+I1), s		40.4		43.0	4.2	32.1		43.0				
Green Ext Time (p_c), s		13.3		0.0	0.0	7.8		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			64.9									
HCM 6th LOS			E									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	231	243	100	257	162	315	639	92	113	711	264
Future Volume (vph)	231	243	100	257	162	315	639	92	113	711	264
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	1	6	3	7	4	1	3	8	5
Permitted Phases	2		6		6			4			8
Detector Phase	5	2	1	6	3	7	4	1	3	8	5
Switch Phase											
Minimum Initial (s)	6.0	5.0	4.0	5.0	4.0	4.0	8.0	4.0	4.0	8.0	6.0
Minimum Split (s)	11.0	10.0	9.0	10.0	10.0	9.0	13.0	9.0	10.0	13.0	11.0
Total Split (s)	30.0	63.0	12.0	45.0	26.0	42.0	59.0	12.0	26.0	43.0	30.0
Total Split (%)	18.8%	39.4%	7.5%	28.1%	16.3%	26.3%	36.9%	7.5%	16.3%	26.9%	18.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	6.0	5.0	5.0	5.0	6.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	None	None	None	None	None	None	None
Act Effct Green (s)	70.0	58.1	52.4	45.5	65.7	34.9	56.5	63.4	15.2	37.8	62.3
Actuated g/C Ratio	0.44	0.37	0.33	0.29	0.42	0.22	0.36	0.40	0.10	0.24	0.40
v/c Ratio	0.65	0.86	0.64	0.57	0.26	0.95	0.60	0.16	0.78	0.96	0.42
Control Delay	37.4	58.4	48.8	54.5	12.0	95.7	44.4	8.1	98.5	82.0	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	58.4	48.8	54.5	12.0	95.7	44.4	8.1	98.5	82.0	13.2
LOS	D	E	D	D	B	F	D	A	F	F	B
Approach Delay		51.6		40.1			56.7			67.1	
Approach LOS		D		D			E			E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 157.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 56.4	Intersection LOS: E
Intersection Capacity Utilization 86.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: James Campbell Boulevard & Hampshire Pike

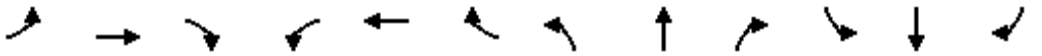




Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	266	554	115	295	186	362	734	106	130	817	303
v/c Ratio	0.65	0.86	0.64	0.57	0.26	0.95	0.60	0.16	0.78	0.96	0.42
Control Delay	37.4	58.4	48.8	54.5	12.0	95.7	44.4	8.1	98.5	82.0	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.4	58.4	48.8	54.5	12.0	95.7	44.4	8.1	98.5	82.0	13.2
Queue Length 50th (ft)	183	514	72	267	41	373	327	10	135	450	77
Queue Length 95th (ft)	248	#681	#121	372	92	#532	396	47	200	#553	140
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	449	641	180	521	755	403	1219	643	220	853	777
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.86	0.64	0.57	0.25	0.90	0.60	0.16	0.59	0.96	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	231	243	239	100	257	162	315	639	92	113	711	264
Future Volume (veh/h)	231	243	239	100	257	162	315	639	92	113	711	264
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1841	1826	1870	1826	1826	1826	1811	1781	1841	1870	1841
Adj Flow Rate, veh/h	266	279	250	115	295	100	362	734	45	130	817	163
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	3	4	5	2	5	5	5	6	8	4	2	4
Cap, veh/h	409	330	296	197	544	594	380	1264	621	151	855	555
Arrive On Green	0.12	0.37	0.37	0.04	0.30	0.30	0.22	0.37	0.37	0.09	0.24	0.24
Sat Flow, veh/h	1767	895	802	1781	1826	1547	1739	3441	1508	1753	3554	1557
Grp Volume(v), veh/h	266	0	529	115	295	100	362	734	45	130	817	163
Grp Sat Flow(s),veh/h/ln	1767	0	1696	1781	1826	1547	1739	1721	1508	1753	1777	1557
Q Serve(g_s), s	16.0	0.0	45.0	7.0	21.3	6.7	32.3	27.0	2.8	11.5	35.6	11.8
Cycle Q Clear(g_c), s	16.0	0.0	45.0	7.0	21.3	6.7	32.3	27.0	2.8	11.5	35.6	11.8
Prop In Lane	1.00		0.47	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	409	0	626	197	544	594	380	1264	621	151	855	555
V/C Ratio(X)	0.65	0.00	0.85	0.58	0.54	0.17	0.95	0.58	0.07	0.86	0.96	0.29
Avail Cap(c_a), veh/h	486	0	626	197	544	594	409	1264	621	223	859	556
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.9	0.0	45.5	41.0	46.2	31.9	60.6	40.0	28.0	71.0	58.9	36.4
Incr Delay (d2), s/veh	1.3	0.0	13.2	2.9	3.8	0.6	30.5	0.7	0.0	14.2	20.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	20.9	3.3	10.2	2.6	17.2	11.4	1.0	5.7	18.1	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.2	0.0	58.8	43.9	50.1	32.5	91.1	40.7	28.1	85.2	79.4	36.7
LnGrp LOS	C	A	E	D	D	C	F	D	C	F	E	D
Approach Vol, veh/h		795			510			1141			1110	
Approach Delay, s/veh		50.5			45.2			56.2			73.8	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	63.0	19.5	62.8	23.1	51.9	39.4	42.9
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	58.0	20.0	54.0	25.0	40.0	37.0	38.0
Max Q Clear Time (g_c+I1), s	9.0	47.0	13.5	29.0	18.0	23.3	34.3	37.6
Green Ext Time (p_c), s	0.0	1.7	0.0	5.0	0.1	1.1	0.1	0.2

Intersection Summary	
HCM 6th Ctrl Delay	58.9
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	0	24	38	0	20	52	1049	3	3	993	35
Future Vol, veh/h	9	0	24	38	0	20	52	1049	3	3	993	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	100	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	15	3	2	6	9	2	2	67	3	7
Mvmt Flow	10	0	26	42	0	22	57	1153	3	3	1091	38

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1807	2386	565	1819	2402	577	1129	0	0	1156	0	0
Stage 1	1116	1116	-	1267	1267	-	-	-	-	-	-	-
Stage 2	691	1270	-	552	1135	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	7.2	7.56	6.54	7.02	4.28	-	-	5.44	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.45	3.53	4.02	3.36	2.29	-	-	2.87	-	-
Pot Cap-1 Maneuver	50	34	437	48	33	450	576	-	-	335	-	-
Stage 1	221	281	-	177	238	-	-	-	-	-	-	-
Stage 2	401	237	-	483	275	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	44	30	437	~ 41	29	450	576	-	-	335	-	-
Mov Cap-2 Maneuver	133	123	-	118	111	-	-	-	-	-	-	-
Stage 1	199	278	-	159	214	-	-	-	-	-	-	-
Stage 2	344	214	-	450	273	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.4	38.3	1	0
HCM LOS	C	E		

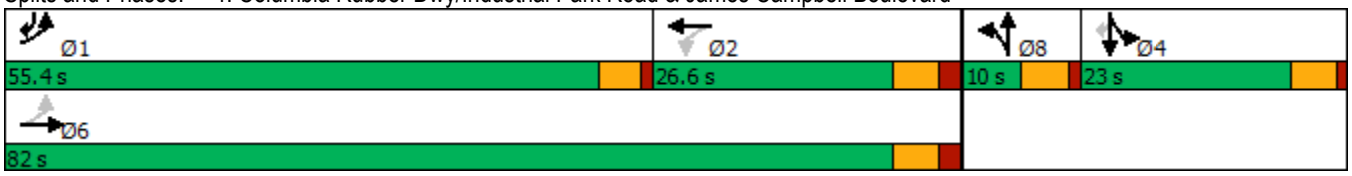
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	576	-	-	133	437	118	450	335	-	-
HCM Lane V/C Ratio	0.099	-	-	0.074	0.06	0.354	0.049	0.01	-	-
HCM Control Delay (s)	11.9	0.5	-	34.2	13.8	51.4	13.4	15.9	-	-
HCM Lane LOS	B	A	-	D	B	F	B	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.2	0.2	1.4	0.2	0	-	-

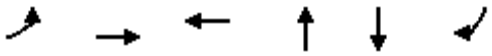
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	792	314	2	304	7	0	720
Future Volume (vph)	792	314	2	304	7	0	720
Turn Type	pm+pt	NA	Perm	NA	NA	NA	pm+ov
Protected Phases	1	6		2	8	4	1
Permitted Phases	6		2				4
Detector Phase	1	6	2	2	8	4	1
Switch Phase							
Minimum Initial (s)	5.0	15.0	15.0	15.0	5.0	5.0	5.0
Minimum Split (s)	9.5	21.0	21.0	21.0	10.0	10.0	9.5
Total Split (s)	55.4	82.0	26.6	26.6	10.0	23.0	55.4
Total Split (%)	48.2%	71.3%	23.1%	23.1%	8.7%	20.0%	48.2%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0	3.5
All-Red Time (s)	1.0	2.0	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0		6.0	5.0	5.0	4.5
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	Max	None	None	None
Act Effct Green (s)	77.7	76.2		22.6	5.0	18.0	72.1
Actuated g/C Ratio	0.71	0.70		0.21	0.05	0.17	0.66
v/c Ratio	0.93	0.14		0.61	0.27	0.97	0.40
Control Delay	35.2	6.1		42.9	56.0	56.7	4.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	35.2	6.1		42.9	56.0	56.7	4.6
LOS	D	A		D	E	E	A
Approach Delay		26.9		42.9	56.0	31.0	
Approach LOS		C		D	E	C	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 109	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 31.2	Intersection LOS: C
Intersection Capacity Utilization 89.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 4: Columbia Rubber Dwy/Industrial Park Road & James Campbell Boulevard

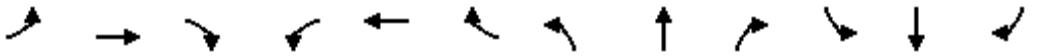




Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	870	348	420	20	430	419
v/c Ratio	0.93	0.14	0.61	0.27	0.97	0.40
Control Delay	35.2	6.1	42.9	56.0	56.7	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.2	6.1	42.9	56.0	56.7	4.6
Queue Length 50th (ft)	375	32	130	11	145	37
Queue Length 95th (ft)	#789	64	203	39	#390	109
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	955	2463	683	74	444	1078
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.14	0.61	0.27	0.97	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	792	314	3	2	304	76	8	7	3	53	0	720
Future Volume (veh/h)	792	314	3	2	304	76	8	7	3	53	0	720
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1411	1870	1841	1856	1870	1307	1870	1767	1870	1841
Adj Flow Rate, veh/h	870	345	2	2	334	64	9	8	0	0	0	529
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	33	2	4	3	2	40	2	9	2	4
Cap, veh/h	911	2547	15	34	845	159	12	11	0	0	244	1553
Arrive On Green	0.37	0.70	0.70	0.29	0.29	0.29	0.02	0.02	0.00	0.00	0.00	0.13
Sat Flow, veh/h	1767	3622	21	3	2872	541	674	599	0	0	1870	3120
Grp Volume(v), veh/h	870	169	178	213	0	187	17	0	0	0	0	529
Grp Sat Flow(s),veh/h/ln	1767	1777	1867	1838	0	1578	1273	0	0	0	1870	1560
Q Serve(g_s), s	34.8	3.4	3.4	0.0	0.0	10.2	1.4	0.0	0.0	0.0	0.0	11.1
Cycle Q Clear(g_c), s	34.8	3.4	3.4	10.0	0.0	10.2	1.4	0.0	0.0	0.0	0.0	11.1
Prop In Lane	1.00		0.01	0.01		0.34	0.53		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	911	1249	1312	574	0	464	24	0	0	0	244	1553
V/C Ratio(X)	0.96	0.14	0.14	0.37	0.00	0.40	0.72	0.00	0.00	0.00	0.00	0.34
Avail Cap(c_a), veh/h	1094	1249	1312	574	0	464	59	0	0	0	311	1665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	14.6	5.3	5.3	30.5	0.0	30.5	52.8	0.0	0.0	0.0	0.0	16.4
Incr Delay (d2), s/veh	16.0	0.2	0.2	1.8	0.0	2.6	33.8	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	1.1	1.1	4.6	0.0	4.1	0.7	0.0	0.0	0.0	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	5.5	5.5	32.3	0.0	33.1	86.5	0.0	0.0	0.0	0.0	16.5
LnGrp LOS	C	A	A	C	A	C	F	A	A	A	A	B
Approach Vol, veh/h		1217			400			17			529	
Approach Delay, s/veh		23.4			32.7			86.5			16.5	
Approach LOS		C			C			F			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	44.2	37.8		19.1		82.0		7.0				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	36.8	12.2		13.1		5.4		3.4				
Green Ext Time (p_c), s	2.9	1.3		1.0		1.9		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			23.9									
HCM 6th LOS			C									

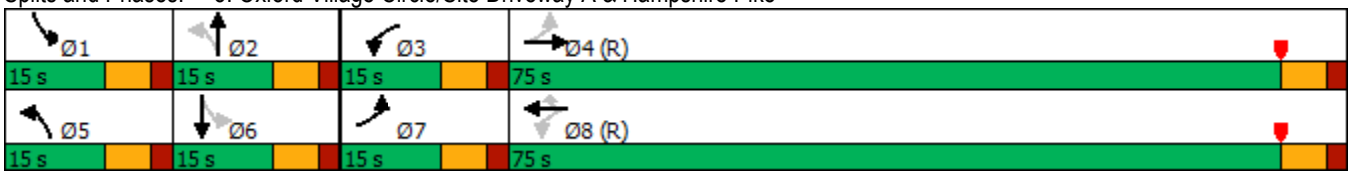
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBT	WBL	WBT	NBL	NBT	Ø1	Ø6	Ø7
Lane Configurations								
Traffic Volume (vph)	554	12	870	12	0			
Future Volume (vph)	554	12	870	12	0			
Turn Type	NA	pm+pt	NA	pm+pt	NA			
Protected Phases	4	3	8	5	2	1	6	7
Permitted Phases		8		2				
Detector Phase	4	3	8	5	2			
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	11.0	24.0	11.0	44.0	11.0	24.0	11.0
Total Split (s)	75.0	15.0	75.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	62.5%	12.5%	62.5%	12.5%	12.5%	13%	13%	13%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0			
Lead/Lag	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	C-Max	None	C-Max	None	Max	None	Max	None
Act Effct Green (s)	88.8	93.6	93.6	14.4	14.4			
Actuated g/C Ratio	0.74	0.78	0.78	0.12	0.12			
v/c Ratio	0.46	0.02	0.66	0.09	0.02			
Control Delay	5.8	4.5	10.1	43.8	0.1			
Queue Delay	0.0	0.0	0.0	0.0	0.0			
Total Delay	5.8	4.5	10.1	43.8	0.1			
LOS	A	A	B	D	A			
Approach Delay	5.8		10.1		22.0			
Approach LOS	A		B		C			

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 103 (86%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 8.6	Intersection LOS: A
Intersection Capacity Utilization 60.0%	ICU Level of Service B
Analysis Period (min) 15	

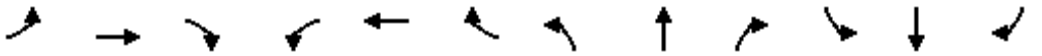
Splits and Phases: 5: Oxford Village Circle/Site Driveway A & Hampshire Pike





Lane Group	EBT	WBL	WBT	NBL	NBT
Lane Group Flow (vph)	615	13	946	13	13
v/c Ratio	0.46	0.02	0.66	0.09	0.02
Control Delay	5.8	4.5	10.1	43.8	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	5.8	4.5	10.1	43.8	0.1
Queue Length 50th (ft)	67	1	205	10	0
Queue Length 95th (ft)	117	8	557	27	0
Internal Link Dist (ft)	1470		2278		194
Turn Bay Length (ft)		100			
Base Capacity (vph)	1336	569	1425	170	583
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.46	0.02	0.66	0.08	0.02

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	554	12	12	870	0	12	0	12	0	0	0
Future Volume (veh/h)	0	554	12	12	870	0	12	0	12	0	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	602	13	13	946	0	13	0	13	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	5	2	2	4	2	2	2	2	2	2	2
Cap, veh/h	362	1239	27	648	1400	1205	192	0	221	167	140	0
Arrive On Green	0.00	1.00	1.00	0.01	0.76	0.00	0.01	0.00	0.14	0.00	0.00	0.00
Sat Flow, veh/h	1781	1781	38	1781	1841	1585	1781	0	1585	1781	1870	0
Grp Volume(v), veh/h	0	0	615	13	946	0	13	0	13	0	0	0
Grp Sat Flow(s),veh/h/ln	1781	0	1819	1781	1841	1585	1781	0	1585	1781	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	0.2	30.4	0.0	0.8	0.0	0.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.2	30.4	0.0	0.8	0.0	0.9	0.0	0.0	0.0
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	362	0	1265	648	1400	1205	192	0	221	167	140	0
V/C Ratio(X)	0.00	0.00	0.49	0.02	0.68	0.00	0.07	0.00	0.06	0.00	0.00	0.00
Avail Cap(c_a), veh/h	494	0	1265	755	1400	1205	300	0	221	299	140	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.83	0.70	0.70	0.00	1.00	0.00	1.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	4.5	7.1	0.0	48.3	0.0	44.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.1	0.0	1.9	0.0	0.1	0.0	0.5	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.4	0.1	10.7	0.0	0.4	0.0	0.4	0.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	1.1	4.5	8.9	0.0	48.4	0.0	45.3	0.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D	A	D	A	A	A
Approach Vol, veh/h		615			959			26			0	
Approach Delay, s/veh		1.1			8.9			46.9			0.0	
Approach LOS		A			A			D				

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	0.0	22.8	7.8	89.5	7.8	15.0	0.0	97.2
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	9.0	9.0	69.0	9.0	9.0	9.0	69.0
Max Q Clear Time (g_c+I1), s	0.0	2.9	2.2	2.0	2.8	0.0	0.0	32.4
Green Ext Time (p_c), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	9.6

Intersection Summary	
HCM 6th Ctrl Delay	6.5
HCM 6th LOS	A

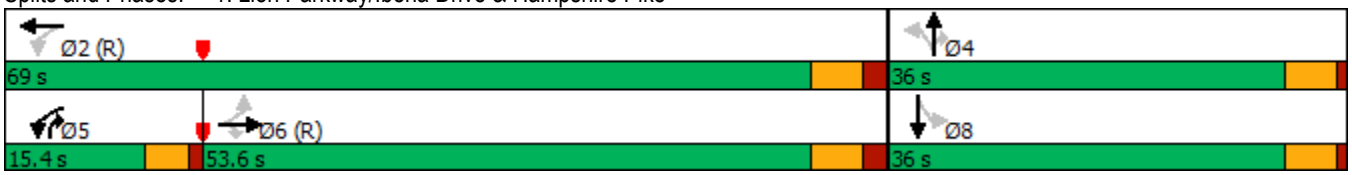
Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	1	599	486	204	505	265	2	173	11	8
Future Volume (vph)	1	599	486	204	505	265	2	173	11	8
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA	pm+ov	Perm	NA
Protected Phases		6		5	2		4	5		8
Permitted Phases	6		6	2		4		4	8	
Detector Phase	6	6	6	5	2	4	4	5	8	8
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	9.5	21.0	10.0	10.0	9.5	10.0	10.0
Total Split (s)	53.6	53.6	53.6	15.4	69.0	36.0	36.0	15.4	36.0	36.0
Total Split (%)	51.0%	51.0%	51.0%	14.7%	65.7%	34.3%	34.3%	14.7%	34.3%	34.3%
Yellow Time (s)	4.0	4.0	4.0	3.5	4.0	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0		5.0	4.5		5.0
Lead/Lag	Lag	Lag	Lag	Lead				Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes		
Recall Mode	C-Max	C-Max	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	52.9	52.9	52.9	68.0	66.5		27.5	41.6		27.5
Actuated g/C Ratio	0.50	0.50	0.50	0.65	0.63		0.26	0.40		0.26
v/c Ratio	0.00	0.72	0.50	0.62	0.48		0.90	0.29		0.07
Control Delay	16.0	27.4	3.4	15.9	12.7		67.9	5.4		21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	16.0	27.4	3.4	15.9	12.7		67.9	5.4		21.4
LOS	B	C	A	B	B		E	A		C
Approach Delay		16.6			13.6		43.3			21.4
Approach LOS		B			B		D			C

Intersection Summary	
Cycle Length: 105	
Actuated Cycle Length: 105	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 20.9	Intersection LOS: C
Intersection Capacity Utilization 77.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Lion Parkway/Iberia Drive & Hampshire Pike





Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	1	658	534	224	555	293	190	30
v/c Ratio	0.00	0.72	0.50	0.62	0.48	0.90	0.29	0.07
Control Delay	16.0	27.4	3.4	15.9	12.7	67.9	5.4	21.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.0	27.4	3.4	15.9	12.7	67.9	5.4	21.4
Queue Length 50th (ft)	0	353	0	60	195	184	11	10
Queue Length 95th (ft)	4	526	58	98	288	#321	51	33
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	427	919	1062	387	1146	366	670	460
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.72	0.50	0.58	0.48	0.80	0.28	0.07

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	599	486	204	505	0	265	2	173	11	8	8
Future Volume (veh/h)	1	599	486	204	505	0	265	2	173	11	8	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1841	1826	1870	1781	1870	1663	1870	1870	1870
Adj Flow Rate, veh/h	1	658	243	224	555	0	291	2	75	12	9	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	4	2	4	5	2	8	2	16	2	2	2
Cap, veh/h	432	876	754	323	1096	0	372	2	531	64	36	2
Arrive On Green	0.48	0.48	0.48	0.08	0.60	0.00	0.30	0.30	0.30	0.30	0.30	0.30
Sat Flow, veh/h	854	1841	1585	1753	1826	0	1030	7	1409	37	123	8
Grp Volume(v), veh/h	1	658	243	224	555	0	293	0	75	22	0	0
Grp Sat Flow(s),veh/h/ln	854	1841	1585	1753	1826	0	1037	0	1409	167	0	0
Q Serve(g_s), s	0.1	30.6	10.0	6.5	18.3	0.0	0.0	0.0	3.7	0.4	0.0	0.0
Cycle Q Clear(g_c), s	5.4	30.6	10.0	6.5	18.3	0.0	29.6	0.0	3.7	30.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.55		0.05
Lane Grp Cap(c), veh/h	432	876	754	323	1096	0	374	0	531	102	0	0
V/C Ratio(X)	0.00	0.75	0.32	0.69	0.51	0.00	0.78	0.00	0.14	0.22	0.00	0.00
Avail Cap(c_a), veh/h	432	876	754	362	1096	0	374	0	531	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.70	0.70	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.4	22.5	17.0	18.8	12.1	0.0	36.5	0.0	21.5	30.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.9	1.1	2.6	1.2	0.0	9.5	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.7	3.7	2.5	7.0	0.0	8.3	0.0	1.2	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.4	28.4	18.2	21.4	13.2	0.0	46.0	0.0	21.6	30.6	0.0	0.0
LnGrp LOS	B	C	B	C	B	A	D	A	C	C	A	A
Approach Vol, veh/h		902			779			368			22	
Approach Delay, s/veh		25.6			15.6			41.0			30.6	
Approach LOS		C			B			D			C	

Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		69.0		36.0	13.1	55.9		36.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		63.0		31.0	10.9	47.6		31.0				
Max Q Clear Time (g_c+I1), s		20.3		31.6	8.5	32.6		32.0				
Green Ext Time (p_c), s		8.1		0.0	0.1	7.9		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	24.6	
HCM 6th LOS	C	

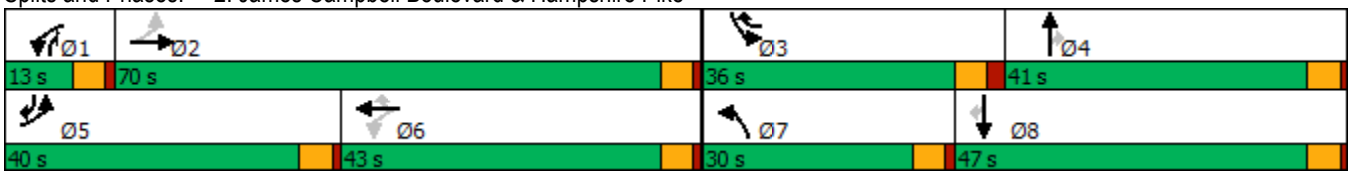
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	321	296	104	240	112	220	495	108	241	768	246
Future Volume (vph)	321	296	104	240	112	220	495	108	241	768	246
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	1	6	3	7	4	1	3	8	5
Permitted Phases	2		6		6			4			8
Detector Phase	5	2	1	6	3	7	4	1	3	8	5
Switch Phase											
Minimum Initial (s)	6.0	5.0	4.0	5.0	4.0	4.0	8.0	4.0	4.0	8.0	6.0
Minimum Split (s)	11.0	10.0	9.0	10.0	10.0	9.0	13.0	9.0	10.0	13.0	11.0
Total Split (s)	40.0	70.0	13.0	43.0	36.0	30.0	41.0	13.0	36.0	47.0	40.0
Total Split (%)	25.0%	43.8%	8.1%	26.9%	22.5%	18.8%	25.6%	8.1%	22.5%	29.4%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	6.0	5.0	5.0	5.0	6.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	None	None	None	None	None	None	None
Act Effct Green (s)	77.8	65.0	54.6	46.8	78.9	23.9	37.0	49.8	27.1	41.1	72.2
Actuated g/C Ratio	0.49	0.41	0.35	0.30	0.50	0.15	0.23	0.32	0.17	0.26	0.46
v/c Ratio	0.73	0.93	0.74	0.50	0.16	0.94	0.72	0.23	0.91	0.95	0.34
Control Delay	36.0	62.3	55.9	52.0	6.5	107.5	62.5	16.0	97.8	78.0	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	62.3	55.9	52.0	6.5	107.5	62.5	16.0	97.8	78.0	8.3
LOS	D	E	E	D	A	F	E	B	F	E	A
Approach Delay		53.0		41.7			68.4			68.1	
Approach LOS		D		D			E			E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 157.9	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 60.7	Intersection LOS: E
Intersection Capacity Utilization 89.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: James Campbell Boulevard & Hampshire Pike

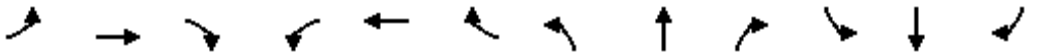




Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	361	660	117	270	126	247	556	121	271	863	276
v/c Ratio	0.73	0.93	0.74	0.50	0.16	0.94	0.72	0.23	0.91	0.95	0.34
Control Delay	36.0	62.3	55.9	52.0	6.5	107.5	62.5	16.0	97.8	78.0	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	62.3	55.9	52.0	6.5	107.5	62.5	16.0	97.8	78.0	8.3
Queue Length 50th (ft)	243	633	66	236	11	258	288	29	277	470	47
Queue Length 95th (ft)	327	#874	#163	354	51	#419	355	81	#417	#588	97
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	552	711	160	541	810	275	769	534	329	923	885
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.93	0.73	0.50	0.16	0.90	0.72	0.23	0.82	0.93	0.31

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	321	296	291	104	240	112	220	495	108	241	768	246
Future Volume (veh/h)	321	296	291	104	240	112	220	495	108	241	768	246
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1796	1856	1796	1796	1841	1752	1841	1752	1796	1841	1841	1826
Adj Flow Rate, veh/h	361	333	302	117	270	64	247	556	55	271	863	149
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	7	3	7	7	4	10	4	10	7	4	4	5
Cap, veh/h	498	368	334	179	563	700	266	801	443	291	912	644
Arrive On Green	0.16	0.41	0.41	0.05	0.31	0.31	0.15	0.24	0.24	0.17	0.26	0.26
Sat Flow, veh/h	1711	896	813	1711	1841	1485	1753	3328	1522	1753	3497	1547
Grp Volume(v), veh/h	361	0	635	117	270	64	247	556	55	271	863	149
Grp Sat Flow(s),veh/h/ln	1711	0	1709	1711	1841	1485	1753	1664	1522	1753	1749	1547
Q Serve(g_s), s	22.3	0.0	55.2	7.5	18.9	3.8	22.0	24.1	4.2	24.2	38.3	9.9
Cycle Q Clear(g_c), s	22.3	0.0	55.2	7.5	18.9	3.8	22.0	24.1	4.2	24.2	38.3	9.9
Prop In Lane	1.00		0.48	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	498	0	702	179	563	700	266	801	443	291	912	644
V/C Ratio(X)	0.72	0.00	0.91	0.65	0.48	0.09	0.93	0.69	0.12	0.93	0.95	0.23
Avail Cap(c_a), veh/h	611	0	702	179	563	700	277	801	443	332	928	650
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.0	0.0	43.8	40.8	44.7	23.1	66.3	54.8	41.3	65.2	57.4	29.9
Incr Delay (d2), s/veh	2.3	0.0	17.4	6.6	2.9	0.3	34.0	2.6	0.1	29.0	17.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	0.0	26.2	3.5	9.1	1.4	12.2	10.2	1.6	13.0	18.8	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.3	0.0	61.2	47.4	47.6	23.4	100.3	57.4	41.4	94.2	75.2	30.1
LnGrp LOS	C	A	E	D	D	C	F	E	D	F	E	C
Approach Vol, veh/h		996			451			858			1283	
Approach Delay, s/veh		50.7			44.1			68.7			74.0	
Approach LOS		D			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	70.0	32.3	43.1	29.6	53.4	29.1	46.3
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	8.0	65.0	30.0	36.0	35.0	38.0	25.0	42.0
Max Q Clear Time (g_c+I1), s	9.5	57.2	26.2	26.1	24.3	20.9	24.0	40.3
Green Ext Time (p_c), s	0.0	1.8	0.1	2.5	0.3	0.9	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	62.5
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	9.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	91	0	123	10	0	4	23	853	39	23	1265	38
Future Vol, veh/h	91	0	123	10	0	4	23	853	39	23	1265	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	100	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	13	2	11	2	2	2	32	12	2	5	4	11
Mvmt Flow	100	0	135	11	0	4	25	937	43	25	1390	42

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1980	2491	716	1732	2469	469	1432	0	0	980	0	0
Stage 1	1461	1461	-	987	987	-	-	-	-	-	-	-
Stage 2	519	1030	-	745	1482	-	-	-	-	-	-	-
Critical Hdwy	7.76	6.54	7.12	7.54	6.54	6.94	4.74	-	-	4.2	-	-
Critical Hdwy Stg 1	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.76	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.63	4.02	3.41	3.52	4.02	3.32	2.52	-	-	2.25	-	-
Pot Cap-1 Maneuver	~ 32	29	353	56	30	541	343	-	-	682	-	-
Stage 1	122	192	-	265	324	-	-	-	-	-	-	-
Stage 2	481	309	-	372	187	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 29	26	353	32	27	541	343	-	-	682	-	-
Mov Cap-2 Maneuver	~ 89	110	-	114	104	-	-	-	-	-	-	-
Stage 1	113	185	-	246	300	-	-	-	-	-	-	-
Stage 2	442	286	-	221	180	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	105.4	31.8	1	0.2
HCM LOS	F	D		

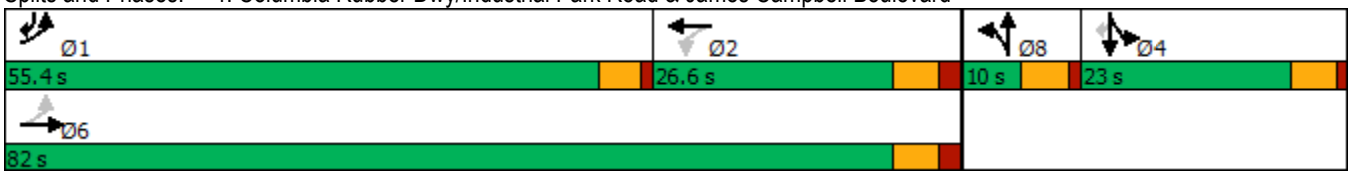
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	343	-	-	89	353	114	541	682	-	-
HCM Lane V/C Ratio	0.074	-	-	1.124	0.383	0.096	0.008	0.037	-	-
HCM Control Delay (s)	16.3	0.6	-	218.9	21.4	39.9	11.7	10.5	-	-
HCM Lane LOS	C	A	-	F	C	E	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	6.8	1.7	0.3	0	0.1	-	-

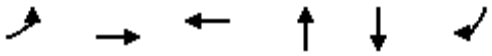
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	646	290	296	7	7	1033
Future Volume (vph)	646	290	296	7	7	1033
Turn Type	pm+pt	NA	NA	NA	NA	pm+ov
Protected Phases	1	6	2	8	4	1
Permitted Phases	6					4
Detector Phase	1	6	2	8	4	1
Switch Phase						
Minimum Initial (s)	5.0	15.0	15.0	5.0	5.0	5.0
Minimum Split (s)	9.5	21.0	21.0	10.0	10.0	9.5
Total Split (s)	55.4	82.0	26.6	10.0	23.0	55.4
Total Split (%)	48.2%	71.3%	23.1%	8.7%	20.0%	48.2%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	3.5
All-Red Time (s)	1.0	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	5.0	5.0	4.5
Lead/Lag	Lead		Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	None	None	None
Act Effct Green (s)	77.6	76.1	26.8	5.0	18.0	67.8
Actuated g/C Ratio	0.73	0.71	0.25	0.05	0.17	0.63
v/c Ratio	0.89	0.15	0.49	0.17	1.87	0.65
Control Delay	27.4	5.4	37.6	54.0	423.1	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	5.4	37.6	54.0	423.1	9.7
LOS	C	A	D	D	F	A
Approach Delay		20.4	37.6	54.0	217.0	
Approach LOS		C	D	D	F	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 107	
Natural Cycle: 140	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.87	
Intersection Signal Delay: 115.5	Intersection LOS: F
Intersection Capacity Utilization 97.4%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 4: Columbia Rubber Dwy/Industrial Park Road & James Campbell Boulevard



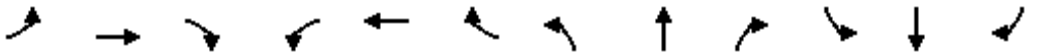


Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	751	350	406	11	677	673
v/c Ratio	0.89	0.15	0.49	0.17	1.87	0.65
Control Delay	27.4	5.4	37.6	54.0	423.1	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.4	5.4	37.6	54.0	423.1	9.7
Queue Length 50th (ft)	273	32	126	7	~653	117
Queue Length 95th (ft)	#578	61	187	26	#916	257
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	900	2342	836	64	363	1102
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.15	0.49	0.17	1.87	0.61

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	646	290	11	0	296	53	2	7	1	121	7	1033
Future Volume (veh/h)	646	290	11	0	296	53	2	7	1	121	7	1033
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1693	1767	1737	1870	1811	1693	1159	1307	1870	1811	1307	1841
Adj Flow Rate, veh/h	751	337	11	0	344	48	2	8	0	0	0	1092
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	14	9	11	2	6	14	50	40	2	6	40	4
Cap, veh/h	801	2265	74	0	927	128	3	12	0	0	211	1555
Arrive On Green	0.34	0.68	0.68	0.00	0.31	0.31	0.01	0.01	0.00	0.00	0.00	0.16
Sat Flow, veh/h	1612	3317	108	0	3127	420	259	1035	0	0	1307	3120
Grp Volume(v), veh/h	751	170	178	0	194	198	10	0	0	0	0	1092
Grp Sat Flow(s),veh/h/ln	1612	1678	1747	0	1721	1735	1294	0	0	0	1307	1560
Q Serve(g_s), s	33.0	4.0	4.0	0.0	9.8	10.0	0.9	0.0	0.0	0.0	0.0	18.0
Cycle Q Clear(g_c), s	33.0	4.0	4.0	0.0	9.8	10.0	0.9	0.0	0.0	0.0	0.0	18.0
Prop In Lane	1.00		0.06	0.00		0.24	0.20		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	801	1146	1193	0	526	530	15	0	0	0	211	1555
V/C Ratio(X)	0.94	0.15	0.15	0.00	0.37	0.37	0.65	0.00	0.00	0.00	0.00	0.70
Avail Cap(c_a), veh/h	995	1146	1193	0	526	530	58	0	0	0	211	1555
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	14.8	6.2	6.2	0.0	30.3	30.3	54.8	0.0	0.0	0.0	0.0	21.5
Incr Delay (d2), s/veh	13.8	0.3	0.3	0.0	2.0	2.0	37.3	0.0	0.0	0.0	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.8	1.3	1.3	0.0	4.2	4.3	0.4	0.0	0.0	0.0	0.0	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	6.5	6.5	0.0	32.2	32.3	92.1	0.0	0.0	0.0	0.0	23.0
LnGrp LOS	C	A	A	A	C	C	F	A	A	A	A	C
Approach Vol, veh/h		1099			392			10			1092	
Approach Delay, s/veh		21.6			32.3			92.1			23.0	
Approach LOS		C			C			F			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	42.0	40.0		23.0		82.0		6.3				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	35.0	12.0		20.0		6.0		2.9				
Green Ext Time (p_c), s	2.5	1.3		0.0		1.9		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		24.1	
HCM 6th LOS		C	

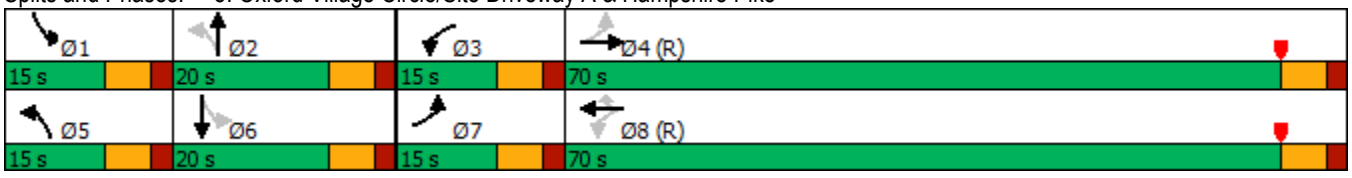
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	19	765	12	684	55	12	0	130	0
Future Volume (vph)	19	765	12	684	55	12	0	130	0
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	15.0	70.0	15.0	70.0	70.0	15.0	20.0	15.0	20.0
Total Split (%)	12.5%	58.3%	12.5%	58.3%	58.3%	12.5%	16.7%	12.5%	16.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	C-Max	None	Max	None	Max
Act Effct Green (s)	76.8	74.2	76.5	74.1	74.1	20.2	14.0	27.3	23.7
Actuated g/C Ratio	0.64	0.62	0.64	0.62	0.62	0.17	0.12	0.23	0.20
v/c Ratio	0.07	0.78	0.06	0.67	0.06	0.05	0.03	0.49	0.04
Control Delay	7.7	24.7	7.8	20.3	0.1	35.7	0.2	44.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	24.7	7.8	20.3	0.1	35.7	0.2	44.7	0.1
LOS	A	C	A	C	A	D	A	D	A
Approach Delay		24.3		18.6			17.9		37.6
Approach LOS		C		B			B		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 103 (86%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 22.9	Intersection LOS: C
Intersection Capacity Utilization 64.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: Oxford Village Circle/Site Driveway A & Hampshire Pike

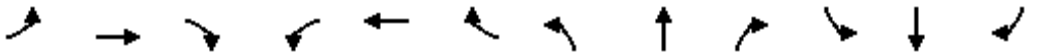




Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	21	854	13	752	60	13	13	143	27
v/c Ratio	0.07	0.78	0.06	0.67	0.06	0.05	0.03	0.49	0.04
Control Delay	7.7	24.7	7.8	20.3	0.1	35.7	0.2	44.7	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	24.7	7.8	20.3	0.1	35.7	0.2	44.7	0.1
Queue Length 50th (ft)	5	400	3	313	0	8	0	92	0
Queue Length 95th (ft)	14	#826	10	592	0	25	0	153	0
Internal Link Dist (ft)		1470		2278			194		449
Turn Bay Length (ft)	100		100		125				
Base Capacity (vph)	343	1096	271	1117	1029	293	413	291	603
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.78	0.05	0.67	0.06	0.04	0.03	0.49	0.04

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	765	12	12	684	55	12	0	12	130	0	25
Future Volume (veh/h)	19	765	12	12	684	55	12	0	12	130	0	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1870	1870	1826	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	841	13	13	752	60	13	0	13	143	0	27
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	7	2	2	5	2	2	2	2	2	2	2
Cap, veh/h	298	1047	16	231	1072	931	247	0	185	347	0	281
Arrive On Green	0.02	0.59	0.59	0.01	0.59	0.59	0.01	0.00	0.12	0.08	0.00	0.18
Sat Flow, veh/h	1781	1764	27	1781	1826	1585	1781	0	1585	1781	0	1585
Grp Volume(v), veh/h	21	0	854	13	752	60	13	0	13	143	0	27
Grp Sat Flow(s),veh/h/ln	1781	0	1791	1781	1826	1585	1781	0	1585	1781	0	1585
Q Serve(g_s), s	0.6	0.0	44.4	0.4	34.7	1.9	0.8	0.0	0.9	8.3	0.0	1.7
Cycle Q Clear(g_c), s	0.6	0.0	44.4	0.4	34.7	1.9	0.8	0.0	0.9	8.3	0.0	1.7
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	298	0	1063	231	1072	931	247	0	185	347	0	281
V/C Ratio(X)	0.07	0.00	0.80	0.06	0.70	0.06	0.05	0.00	0.07	0.41	0.00	0.10
Avail Cap(c_a), veh/h	394	0	1063	338	1072	931	355	0	185	347	0	281
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.00	0.75	0.79	0.79	0.79	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.5	0.0	18.9	17.7	17.4	10.6	45.6	0.0	47.2	40.9	0.0	41.3
Incr Delay (d2), s/veh	0.1	0.0	4.9	0.1	3.0	0.1	0.1	0.0	0.7	0.8	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	18.1	0.1	14.3	0.7	0.3	0.0	0.4	3.7	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.6	0.0	23.8	17.8	20.4	10.7	45.7	0.0	47.9	41.7	0.0	42.0
LnGrp LOS	B	A	C	B	C	B	D	A	D	D	A	D
Approach Vol, veh/h		875			825			26			170	
Approach Delay, s/veh		23.6			19.7			46.8			41.8	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	20.0	7.8	77.2	7.8	27.2	8.5	76.5
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	14.0	9.0	64.0	9.0	14.0	9.0	64.0
Max Q Clear Time (g_c+I1), s	10.3	2.9	2.4	46.4	2.8	3.7	2.6	36.7
Green Ext Time (p_c), s	0.0	0.0	0.0	5.7	0.0	0.0	0.0	5.7

Intersection Summary	
HCM 6th Ctrl Delay	23.8
HCM 6th LOS	C

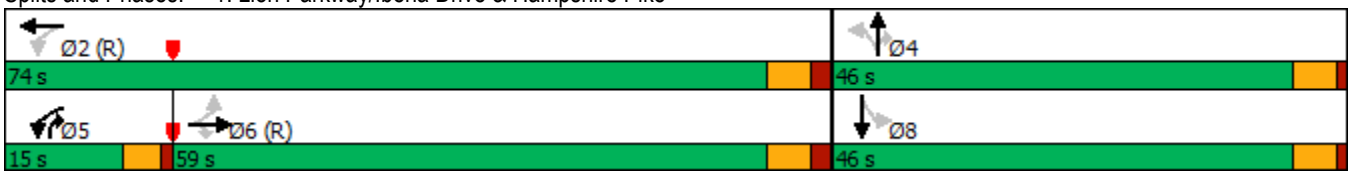
Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	4	525	385	64	822	362	3	51	1	2
Future Volume (vph)	4	525	385	64	822	362	3	51	1	2
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	NA	pm+ov	Perm	NA
Protected Phases		6		5	2		4	5		8
Permitted Phases	6		6	2		4		4	8	
Detector Phase	6	6	6	5	2	4	4	5	8	8
Switch Phase										
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	21.0	9.5	21.0	10.0	10.0	9.5	10.0	10.0
Total Split (s)	59.0	59.0	59.0	15.0	74.0	46.0	46.0	15.0	46.0	46.0
Total Split (%)	49.2%	49.2%	49.2%	12.5%	61.7%	38.3%	38.3%	12.5%	38.3%	38.3%
Yellow Time (s)	4.0	4.0	4.0	3.5	4.0	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	4.5	6.0		5.0	4.5		5.0
Lead/Lag	Lag	Lag	Lag	Lead				Lead		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				Yes		
Recall Mode	C-Max	C-Max	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	62.4	62.4	62.4	72.7	71.2		37.8	49.0		37.8
Actuated g/C Ratio	0.52	0.52	0.52	0.61	0.59		0.32	0.41		0.32
v/c Ratio	0.03	0.61	0.41	0.19	0.83		0.93	0.08		0.01
Control Delay	18.5	25.6	3.1	17.8	30.0		69.1	5.3		23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Delay	18.5	25.6	3.1	17.8	30.0		69.1	5.3		23.8
LOS	B	C	A	B	C		E	A		C
Approach Delay		16.1			29.1		61.4			23.8
Approach LOS		B			C		E			C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 30 (25%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.93	
Intersection Signal Delay: 29.8	Intersection LOS: C
Intersection Capacity Utilization 89.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: Lion Parkway/Iberia Drive & Hampshire Pike

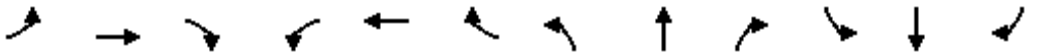




Lane Group	EBL	EBT	EBR	WBL	WBT	NBT	NBR	SBT
Lane Group Flow (vph)	4	571	418	70	895	396	55	4
v/c Ratio	0.03	0.61	0.41	0.19	0.83	0.93	0.08	0.01
Control Delay	18.5	25.6	3.1	17.8	30.0	69.1	5.3	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	25.6	3.1	17.8	30.0	69.1	5.3	23.8
Queue Length 50th (ft)	2	328	0	33	445	284	0	2
Queue Length 95th (ft)	9	471	55	m47	#587	#463	24	10
Internal Link Dist (ft)		874			1470	566		527
Turn Bay Length (ft)	200			200			200	
Base Capacity (vph)	123	941	1023	420	1083	461	734	585
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.61	0.41	0.17	0.83	0.86	0.07	0.01

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	525	385	64	822	2	362	3	51	1	2	1
Future Volume (veh/h)	4	525	385	64	822	2	362	3	51	1	2	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1530	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	4	571	196	70	893	2	393	3	17	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	25	5	2	2	4	2	2	2	2	2	2	2
Cap, veh/h	176	898	779	309	1040	2	274	2	601	40	62	0
Arrive On Green	0.49	0.49	0.49	0.05	0.75	0.75	0.34	0.34	0.34	0.34	0.34	0.00
Sat Flow, veh/h	508	1826	1585	1781	1836	4	628	5	1585	0	182	0
Grp Volume(v), veh/h	4	571	196	70	0	895	396	0	17	3	0	0
Grp Sat Flow(s),veh/h/ln	508	1826	1585	1781	0	1840	633	0	1585	182	0	0
Q Serve(g_s), s	0.7	27.8	8.6	2.2	0.0	40.7	0.0	0.0	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	32.4	27.8	8.6	2.2	0.0	40.7	41.0	0.0	0.8	41.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00	0.99		1.00	0.33		0.00
Lane Grp Cap(c), veh/h	176	898	779	309	0	1043	276	0	601	102	0	0
V/C Ratio(X)	0.02	0.64	0.25	0.23	0.00	0.86	1.43	0.00	0.03	0.03	0.00	0.00
Avail Cap(c_a), veh/h	176	898	779	398	0	1043	276	0	601	102	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.55	0.00	0.55	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	36.1	22.6	17.7	16.8	0.0	11.4	43.9	0.0	23.4	31.8	0.0	0.0
Incr Delay (d2), s/veh	0.2	3.4	0.8	0.1	0.0	5.3	215.2	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	12.2	3.2	0.9	0.0	11.1	25.0	0.0	0.3	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	26.0	18.5	16.8	0.0	16.7	259.2	0.0	23.4	31.8	0.0	0.0
LnGrp LOS	D	C	B	B	A	B	F	A	C	C	A	A
Approach Vol, veh/h		771			965			413			3	
Approach Delay, s/veh		24.1			16.7			249.5			31.8	
Approach LOS		C			B			F			C	

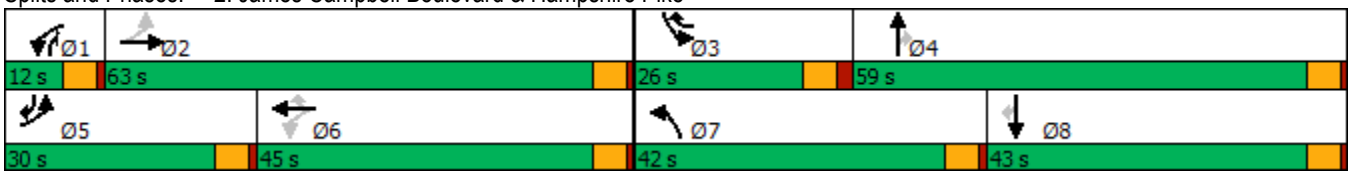
Timer - Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		74.0		46.0	9.0	65.0		46.0				
Change Period (Y+Rc), s		6.0		5.0	4.5	6.0		5.0				
Max Green Setting (Gmax), s		68.0		41.0	10.5	53.0		41.0				
Max Q Clear Time (g_c+I1), s		42.7		43.0	4.2	34.4		43.0				
Green Ext Time (p_c), s		13.1		0.0	0.0	7.6		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			64.1									
HCM 6th LOS			E									

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	277	260	100	280	162	337	639	92	113	711	340
Future Volume (vph)	277	260	100	280	162	337	639	92	113	711	340
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	1	6	3	7	4	1	3	8	5
Permitted Phases	2		6		6			4			8
Detector Phase	5	2	1	6	3	7	4	1	3	8	5
Switch Phase											
Minimum Initial (s)	6.0	5.0	4.0	5.0	4.0	4.0	8.0	4.0	4.0	8.0	6.0
Minimum Split (s)	11.0	10.0	9.0	10.0	10.0	9.0	13.0	9.0	10.0	13.0	11.0
Total Split (s)	30.0	63.0	12.0	45.0	26.0	42.0	59.0	12.0	26.0	43.0	30.0
Total Split (%)	18.8%	39.4%	7.5%	28.1%	16.3%	26.3%	36.9%	7.5%	16.3%	26.9%	18.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	6.0	5.0	5.0	5.0	6.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	None	Max	None	None	None	None	None	None	None
Act Effct Green (s)	70.0	58.0	49.4	42.4	62.8	36.8	58.4	65.4	15.4	38.0	65.6
Actuated g/C Ratio	0.44	0.36	0.31	0.27	0.39	0.23	0.37	0.41	0.10	0.24	0.41
v/c Ratio	0.82	0.93	0.79	0.67	0.28	0.98	0.59	0.16	0.78	0.97	0.53
Control Delay	48.8	68.6	67.5	61.2	13.3	100.6	44.0	8.0	99.4	84.5	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	68.6	67.5	61.2	13.3	100.6	44.0	8.0	99.4	84.5	22.0
LOS	D	E	E	E	B	F	D	A	F	F	C
Approach Delay		61.7		48.1			58.8			67.7	
Approach LOS		E		D			E			E	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 159.8	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 60.7	Intersection LOS: E
Intersection Capacity Utilization 89.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 2: James Campbell Boulevard & Hampshire Pike

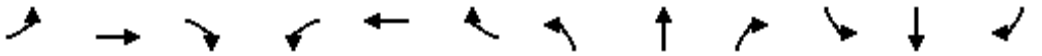




Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	318	590	115	322	186	387	734	106	130	817	391
v/c Ratio	0.82	0.93	0.79	0.67	0.28	0.98	0.59	0.16	0.78	0.97	0.53
Control Delay	48.8	68.6	67.5	61.2	13.3	100.6	44.0	8.0	99.4	84.5	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	68.6	67.5	61.2	13.3	100.6	44.0	8.0	99.4	84.5	22.0
Queue Length 50th (ft)	227	569	72	309	47	406	327	10	135	450	171
Queue Length 95th (ft)	301	#764	#148	409	96	#590	396	47	200	#553	255
Internal Link Dist (ft)		2278		1616			1532			2319	
Turn Bay Length (ft)	150		100		110	100		100	130		150
Base Capacity (vph)	409	633	146	480	716	398	1244	653	217	841	756
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.93	0.79	0.67	0.26	0.97	0.59	0.16	0.60	0.97	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	277	260	253	100	280	162	337	639	92	113	711	340
Future Volume (veh/h)	277	260	253	100	280	162	337	639	92	113	711	340
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1841	1826	1870	1826	1826	1826	1811	1781	1841	1870	1841
Adj Flow Rate, veh/h	318	299	266	115	322	101	387	734	45	130	817	273
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	3	4	5	2	5	5	5	6	8	4	2	4
Cap, veh/h	397	326	290	160	485	544	402	1296	634	150	844	589
Arrive On Green	0.14	0.36	0.36	0.04	0.27	0.27	0.23	0.38	0.38	0.09	0.24	0.24
Sat Flow, veh/h	1767	898	799	1781	1826	1547	1739	3441	1508	1753	3554	1557
Grp Volume(v), veh/h	318	0	565	115	322	101	387	734	45	130	817	273
Grp Sat Flow(s),veh/h/ln	1767	0	1697	1781	1826	1547	1739	1721	1508	1753	1777	1557
Q Serve(g_s), s	20.4	0.0	50.9	7.0	25.2	7.2	35.2	27.0	2.9	11.7	36.4	21.2
Cycle Q Clear(g_c), s	20.4	0.0	50.9	7.0	25.2	7.2	35.2	27.0	2.9	11.7	36.4	21.2
Prop In Lane	1.00		0.47	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	397	0	615	160	485	544	402	1296	634	150	844	589
V/C Ratio(X)	0.80	0.00	0.92	0.72	0.66	0.19	0.96	0.57	0.07	0.86	0.97	0.46
Avail Cap(c_a), veh/h	425	0	615	160	485	544	402	1296	634	219	844	589
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	48.7	47.7	52.4	36.0	60.8	39.5	27.7	72.2	60.4	37.5
Incr Delay (d2), s/veh	8.9	0.0	21.0	12.4	7.0	0.8	34.8	0.6	0.0	15.4	23.4	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.7	0.0	24.7	3.9	12.4	2.8	19.1	11.4	1.0	5.8	18.8	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.3	0.0	69.7	60.1	59.4	36.8	95.7	40.1	27.7	87.6	83.8	38.1
LnGrp LOS	D	A	E	E	E	D	F	D	C	F	F	D
Approach Vol, veh/h		883			538			1166			1220	
Approach Delay, s/veh		60.9			55.3			58.0			74.0	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	63.0	19.7	65.3	27.5	47.5	42.0	43.0
Change Period (Y+Rc), s	5.0	5.0	6.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	7.0	58.0	20.0	54.0	25.0	40.0	37.0	38.0
Max Q Clear Time (g_c+I1), s	9.0	52.9	13.7	29.0	22.4	27.2	37.2	38.4
Green Ext Time (p_c), s	0.0	1.2	0.0	5.0	0.1	1.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	63.4
HCM 6th LOS	E

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	53	0	24	38	0	20	52	1095	3	3	1069	110
Future Vol, veh/h	53	0	24	38	0	20	52	1095	3	3	1069	110
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	50	-	-	50	100	-	70	70	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	15	3	2	6	9	2	2	67	3	7
Mvmt Flow	58	0	26	42	0	22	57	1203	3	3	1175	121

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1958	2562	648	1911	2619	602	1296	0	0	1206	0	0
Stage 1	1242	1242	-	1317	1317	-	-	-	-	-	-	-
Stage 2	716	1320	-	594	1302	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	7.2	7.56	6.54	7.02	4.28	-	-	5.44	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.56	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.45	3.53	4.02	3.36	2.29	-	-	2.87	-	-
Pot Cap-1 Maneuver	~ 38	26	383	~ 41	24	433	494	-	-	316	-	-
Stage 1	185	245	-	165	225	-	-	-	-	-	-	-
Stage 2	387	225	-	456	229	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 33	23	383	~ 35	21	433	494	-	-	316	-	-
Mov Cap-2 Maneuver	112	109	-	108	93	-	-	-	-	-	-	-
Stage 1	164	243	-	146	199	-	-	-	-	-	-	-
Stage 2	325	199	-	421	227	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	51.3	42.8	1.3	0
HCM LOS	F	E		

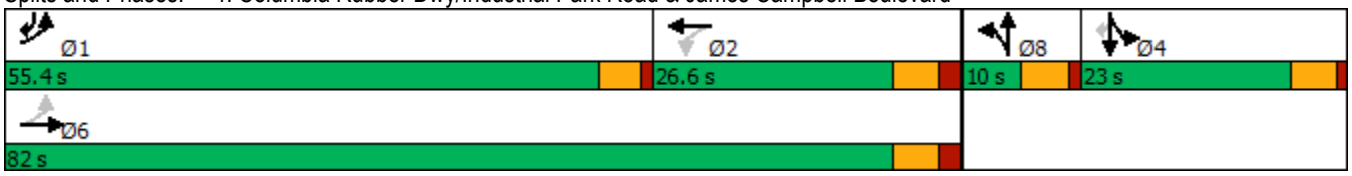
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	494	-	-	112	383	108	433	316	-	-
HCM Lane V/C Ratio	0.116	-	-	0.52	0.069	0.387	0.051	0.01	-	-
HCM Control Delay (s)	13.2	0.7	-	67.7	15.1	58	13.8	16.5	-	-
HCM Lane LOS	B	A	-	F	C	F	B	C	-	-
HCM 95th %tile Q(veh)	0.4	-	-	2.4	0.2	1.6	0.2	0	-	-

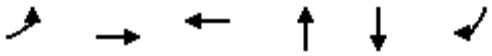
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	NBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	875	321	2	316	7	0	859
Future Volume (vph)	875	321	2	316	7	0	859
Turn Type	pm+pt	NA	Perm	NA	NA	NA	pm+ov
Protected Phases	1	6		2	8	4	1
Permitted Phases	6		2				4
Detector Phase	1	6	2	2	8	4	1
Switch Phase							
Minimum Initial (s)	5.0	15.0	15.0	15.0	5.0	5.0	5.0
Minimum Split (s)	9.5	21.0	21.0	21.0	10.0	10.0	9.5
Total Split (s)	55.4	82.0	26.6	26.6	10.0	23.0	55.4
Total Split (%)	48.2%	71.3%	23.1%	23.1%	8.7%	20.0%	48.2%
Yellow Time (s)	3.5	4.0	4.0	4.0	4.0	4.0	3.5
All-Red Time (s)	1.0	2.0	2.0	2.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0		6.0	5.0	5.0	4.5
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Max	Max	Max	None	None	None
Act Effct Green (s)	77.7	76.2		20.6	5.0	18.0	74.0
Actuated g/C Ratio	0.71	0.70		0.19	0.05	0.17	0.68
v/c Ratio	1.02	0.14		0.69	0.27	1.04	0.46
Control Delay	57.0	6.1		46.2	56.0	72.1	6.0
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0
Total Delay	57.0	6.1		46.2	56.0	72.1	6.0
LOS	E	A		D	E	E	A
Approach Delay		43.3		46.2	56.0	39.1	
Approach LOS		D		D	E	D	

Intersection Summary	
Cycle Length: 115	
Actuated Cycle Length: 109	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 42.3	Intersection LOS: D
Intersection Capacity Utilization 96.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 4: Columbia Rubber Dwy/Industrial Park Road & James Campbell Boulevard



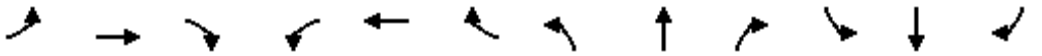


Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	962	356	433	20	502	500
v/c Ratio	1.02	0.14	0.69	0.27	1.04	0.46
Control Delay	57.0	6.1	46.2	56.0	72.1	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.0	6.1	46.2	56.0	72.1	6.0
Queue Length 50th (ft)	511	33	135	11	~198	61
Queue Length 95th (ft)	#960	66	211	39	#454	165
Internal Link Dist (ft)		1463	777	251	756	
Turn Bay Length (ft)	115					
Base Capacity (vph)	940	2464	627	74	483	1076
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.14	0.69	0.27	1.04	0.46

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	875	321	3	2	316	76	8	7	3	53	0	859
Future Volume (veh/h)	875	321	3	2	316	76	8	7	3	53	0	859
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1411	1870	1841	1856	1870	1307	1870	1767	1870	1841
Adj Flow Rate, veh/h	962	353	2	2	347	64	9	8	0	0	0	648
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	3	2	33	2	4	3	2	40	2	9	2	4
Cap, veh/h	970	2537	14	34	548	100	12	11	0	0	251	1881
Arrive On Green	0.47	0.70	0.70	0.19	0.19	0.19	0.02	0.02	0.00	0.00	0.00	0.13
Sat Flow, veh/h	1767	3623	21	3	2890	525	674	599	0	0	1870	3120
Grp Volume(v), veh/h	962	173	182	220	0	193	17	0	0	0	0	648
Grp Sat Flow(s),veh/h/ln	1767	1777	1867	1838	0	1581	1273	0	0	0	1870	1560
Q Serve(g_s), s	49.9	3.5	3.5	0.0	0.0	12.2	1.4	0.0	0.0	0.0	0.0	11.3
Cycle Q Clear(g_c), s	49.9	3.5	3.5	12.0	0.0	12.2	1.4	0.0	0.0	0.0	0.0	11.3
Prop In Lane	1.00		0.01	0.01		0.33	0.53		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	970	1244	1307	382	0	300	24	0	0	0	251	1881
V/C Ratio(X)	0.99	0.14	0.14	0.58	0.00	0.64	0.72	0.00	0.00	0.00	0.00	0.34
Avail Cap(c_a), veh/h	970	1244	1307	382	0	300	59	0	0	0	310	1980
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	19.4	5.4	5.4	40.5	0.0	40.6	53.0	0.0	0.0	0.0	0.0	10.8
Incr Delay (d2), s/veh	26.9	0.2	0.2	6.2	0.0	10.1	33.9	0.0	0.0	0.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.3	1.1	1.2	5.9	0.0	5.4	0.7	0.0	0.0	0.0	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	5.6	5.6	46.7	0.0	50.7	86.9	0.0	0.0	0.0	0.0	10.9
LnGrp LOS	D	A	A	D	A	D	F	A	A	A	A	B
Approach Vol, veh/h		1317			413			17			648	
Approach Delay, s/veh		35.3			48.6			86.9			10.9	
Approach LOS		D			D			F			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	55.4	26.6		19.5		82.0		7.0				
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0				
Max Green Setting (Gmax), s	50.9	20.6		18.0		76.0		5.0				
Max Q Clear Time (g_c+I1), s	51.9	14.2		13.3		5.5		3.4				
Green Ext Time (p_c), s	0.0	1.2		1.2		2.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		31.4	
HCM 6th LOS		C	

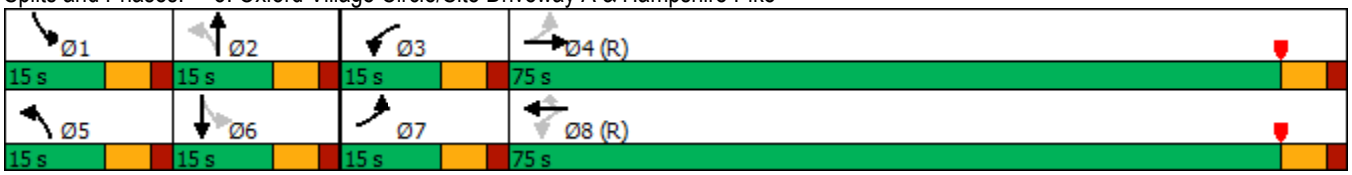
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	24	553	12	869	122	12	0	78	0
Future Volume (vph)	24	553	12	869	122	12	0	78	0
Turn Type	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases	4		8		8	2		6	
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.0	24.0	11.0	24.0	24.0	11.0	44.0	11.0	24.0
Total Split (s)	15.0	75.0	15.0	75.0	75.0	15.0	15.0	15.0	15.0
Total Split (%)	12.5%	62.5%	12.5%	62.5%	62.5%	12.5%	12.5%	12.5%	12.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	C-Max	None	Max	None	Max
Act Effct Green (s)	84.9	82.2	83.2	79.6	79.6	14.2	9.0	19.3	15.7
Actuated g/C Ratio	0.71	0.68	0.69	0.66	0.66	0.12	0.08	0.16	0.13
v/c Ratio	0.11	0.50	0.03	0.78	0.12	0.07	0.03	0.39	0.05
Control Delay	5.5	6.8	5.8	22.7	1.9	40.0	0.1	46.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.5	6.8	5.8	22.7	1.9	40.0	0.1	46.8	0.2
LOS	A	A	A	C	A	D	A	D	A
Approach Delay		6.8		20.0			20.0		37.3
Approach LOS		A		B			C		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 103 (86%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 16.4	Intersection LOS: B
Intersection Capacity Utilization 66.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 5: Oxford Village Circle/Site Driveway A & Hampshire Pike

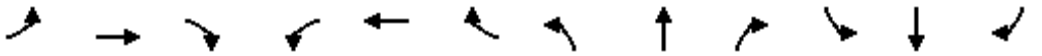




Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	26	614	13	945	133	13	13	85	22
v/c Ratio	0.11	0.50	0.03	0.78	0.12	0.07	0.03	0.39	0.05
Control Delay	5.5	6.8	5.8	22.7	1.9	40.0	0.1	46.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.5	6.8	5.8	22.7	1.9	40.0	0.1	46.8	0.2
Queue Length 50th (ft)	3	74	3	572	0	8	0	56	0
Queue Length 95th (ft)	m8	137	9	#854	24	26	0	103	0
Internal Link Dist (ft)		1470		2278			194		449
Turn Bay Length (ft)	100		100		125				
Base Capacity (vph)	276	1237	532	1212	1096	215	470	220	477
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.50	0.02	0.78	0.12	0.06	0.03	0.39	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	553	12	12	869	122	12	0	12	78	0	20
Future Volume (veh/h)	24	553	12	12	869	122	12	0	12	78	0	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1826	1870	1870	1841	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	601	13	13	945	133	13	0	13	85	0	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	5	2	2	4	2	2	2	2	2	2	2
Cap, veh/h	263	1164	25	607	1186	1021	190	0	119	255	0	185
Arrive On Green	0.05	1.00	1.00	0.01	0.64	0.64	0.01	0.00	0.08	0.06	0.00	0.12
Sat Flow, veh/h	1781	1780	39	1781	1841	1585	1781	0	1585	1781	0	1585
Grp Volume(v), veh/h	26	0	614	13	945	133	13	0	13	85	0	22
Grp Sat Flow(s),veh/h/ln	1781	0	1819	1781	1841	1585	1781	0	1585	1781	0	1585
Q Serve(g_s), s	0.6	0.0	0.0	0.3	45.0	3.9	0.8	0.0	0.9	5.2	0.0	1.5
Cycle Q Clear(g_c), s	0.6	0.0	0.0	0.3	45.0	3.9	0.8	0.0	0.9	5.2	0.0	1.5
Prop In Lane	1.00		0.02	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	0	1189	607	1186	1021	190	0	119	255	0	185
V/C Ratio(X)	0.10	0.00	0.52	0.02	0.80	0.13	0.07	0.00	0.11	0.33	0.00	0.12
Avail Cap(c_a), veh/h	353	0	1189	714	1186	1021	298	0	119	288	0	185
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.00	0.81	0.61	0.61	0.61	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	15.1	0.0	0.0	7.0	15.6	8.3	50.1	0.0	51.8	46.6	0.0	47.5
Incr Delay (d2), s/veh	0.1	0.0	1.3	0.0	3.5	0.2	0.1	0.0	1.9	0.8	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.4	0.1	18.6	1.3	0.4	0.0	0.4	2.4	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.3	0.0	1.3	7.0	19.1	8.4	50.2	0.0	53.6	47.4	0.0	48.8
LnGrp LOS	B	A	A	A	B	A	D	A	D	D	A	D
Approach Vol, veh/h		640			1091			26			107	
Approach Delay, s/veh		1.9			17.6			51.9			47.7	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	15.0	7.8	84.5	7.8	20.0	8.9	83.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	9.0	9.0	69.0	9.0	9.0	9.0	69.0
Max Q Clear Time (g_c+I1), s	7.2	2.9	2.3	2.0	2.8	3.5	2.6	47.0
Green Ext Time (p_c), s	0.0	0.0	0.0	5.0	0.0	0.0	0.0	8.5

Intersection Summary	
HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Kimley»Horn

MEMORANDUM

To: City of Columbia

From: Kelley Frank, PE
Josh Rowland, PLA
Kimley-Horn and Associates, Inc.

Date: August 17, 2022

Subject: ***Steadfast Companies – Hampshire Pike Mixed Use – Public Improvement Commitment Letter***

This commitment letter details the proposed project phasing and public improvement commitments to be made by Steadfast Companies as part of the Hampshire Pike Mixed Use development proposed at Map 089, Parcel 04103 000. A preliminary plat was approved for this project on July 13, 2022.

The first phase of development will consist of 360 multifamily units and a public minor collector road. A development plan for Phase 1 will be considered at Planning Commission on September 14, 2022. The second phase of development will consist of additional multifamily units, single-family detached units, and a residential local road. The third and final phase of development will consist of the retail and office space.

A traffic impact analysis (TIA) was prepared for the project. The TIA assumes the full project buildout will consist of multifamily housing (625 units), single-family detached housing (39 units), and general office/retail space (15,000 square feet). Final development densities are anticipated to be lower than those assumed for the TIA.

The TIA identifies the following onsite public improvements to support this development:

Public Street A (Minor Collector Road)

Public Street A will be constructed to City of Columbia public street standards for minor collectors with a 60’ right-of-way (SD-03). Public Street A will connect Hampshire Pike to Old Williamsport Pike. Public Street A will be constructed with Phase 1.

Public Street B (Residential Local Road)

Public Street B will be constructed to City of Columbia public street standards for residential local roads with a 50’ right-of-way (SD-04). Public Street B will connect Public Street A to a connection to existing Woodland Crossing to the west, and will terminate in a cul-de-sac. Public Street B will be constructed with Phase 2.

These onsite improvements are depicted in the attached exhibit.

The TIA identifies the following offsite public improvements to support this development. Offsite improvements will be constructed with Phase 1:

Hampshire Pike at Site Driveway A

- Construct a westbound right-turn lane along Hampshire Pike with 125 feet of storage.
- Construct an eastbound left-turn lane along Hampshire Pike with 100 feet of storage.
- Construct a westbound left-turn lane along Hampshire Pike with 100 feet of storage.
- Construct Driveway A with three (3) lanes for vehicular movement: one (1) lane for vehicle ingress and two (2) for vehicle egress.
- Construct a traffic signal with protected-permitted left-turn phasing on all approaches.
- Install signs and pavement markings in accordance with the standards provided in the *Manual on Uniform Traffic Control Devices* (MUTCD).

Old Williamsport Pike at Site Driveway B

- Construct Site Driveway B with two (2) lanes for vehicular movement: one (1) lane for vehicle ingress and one (1) for vehicle egress.
- Provide STOP control along the northbound approach of Site Driveway B.
- Construct a westbound left-turn lane along Old Williamsport Pike with 100 feet of storage.
- Provide adequate intersection sight distance in accordance with the criteria provided in *A Policy on Geometric Design of Highways and Streets*.

James Campbell Boulevard at Old Williamsport Pike

- Construct a northbound left-turn lane with 100 feet of storage.

James Campbell Boulevard at Industrial Park Road

- Restripe the southbound shared through/left-turn lane along Industrial Park Road to provide a shared left/through/right-turn lane. Adjust signal timings as necessary after lane modifications.

James Campbell Boulevard at Hampshire Pike

- Reconstruct north leg median nose with an 8’ radius to reduce median length by approximately 13 feet to better facilitate vehicle turning movements. Relocate existing wood pole with dual arm luminaire and reconnect traffic signal span wire.
- Reconstruct south leg median nose with an 8’ radius to reduce median length by approximately 15 feet to better facilitate vehicle turning movements.

These offsite improvements are depicted in the attached exhibits.

Drawing name: K:\NSH_LDEV\118332003 - Steadfast Hampshire Pike\4-CADD\Plansheets\C2-00 SITE LAYOUT - OVERALL.dwg C2-00 SITE LAYOUT - OVERALL Aug 16, 2022 7:55am by: Kelley,Frank

HAMPSHIRE PIKE MIXED USE
PRELIMINARY PLAT
COLUMBIA, TN

Kimley»Horn
10 Lea Avenue, Nashville, TN 37210
Main: 615.564.2701 | www.kimley-horn.com
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No.	REVISIONS	BY	DATE
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

DESIGNED BY: KKF
DRAWN BY: CLD
CHECKED BY: KKF
DATE: 6/27/2022
KIMLEY-HORN PROJECT NO. 118332003

SITE LAYOUT

SHEET NUMBER
C2-00

PERMIT REVIEW ONLY

NORTH

GRAPHIC SCALE IN FEET
0 50 100 200

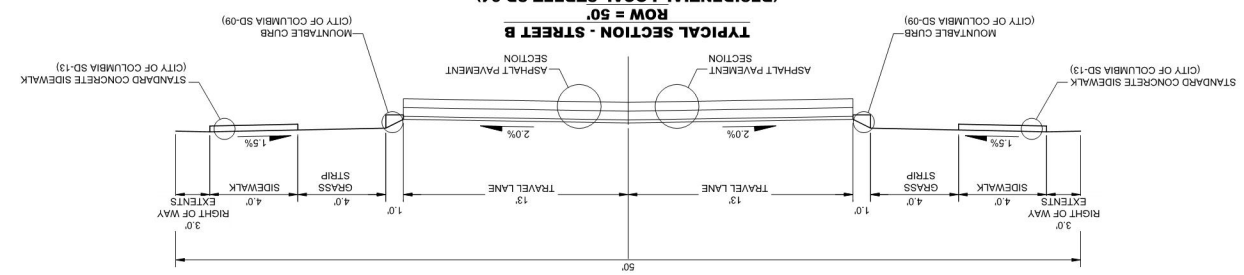
EXISTING AND PROPOSED LOT INFORMATION

LOT NUMBER	ACREAGE (AC)	SQUARE FOOTAGE (SF)	LOT USE
EXISTING LOT	67.28	2,930,900	--
ON-SITE ROW DEDICATION	5.44	237,159	--
HAMPSHIRE PIKE ROW DEDICATION	0.22	9,583	--
OLD WILLIAMSPORT ROW DEDICATION	0.23	10,019	--
LOT A	1.55	67,581	COMMERCIAL
LOT B	1.29	56,392	COMMERCIAL
LOT C	1.64	71,603	COMMERCIAL
LOT D	24.01	1,045,757	MULTI-FAMILY
LOT E	13.07	569,202	VACANT
LOT F	4.56	198,414	VACANT
LOT G	12.11	527,438	VACANT
LOT 1	0.35	15,213	SINGLE FAMILY
LOT 2	0.37	16,091	SINGLE FAMILY
LOT 3	0.41	18,013	SINGLE FAMILY
LOT 4	0.28	12,244	SINGLE FAMILY
LOT 5	0.23	9,857	SINGLE FAMILY
LOT 6	0.31	13,624	SINGLE FAMILY
LOT 7	0.22	9,583	SINGLE FAMILY
LOT 8	0.31	13,385	SINGLE FAMILY
LOT 9	0.37	15,986	SINGLE FAMILY
LOT 10	0.32	13,754	SINGLE FAMILY
LOT 11	0.45	19,427	SINGLE FAMILY

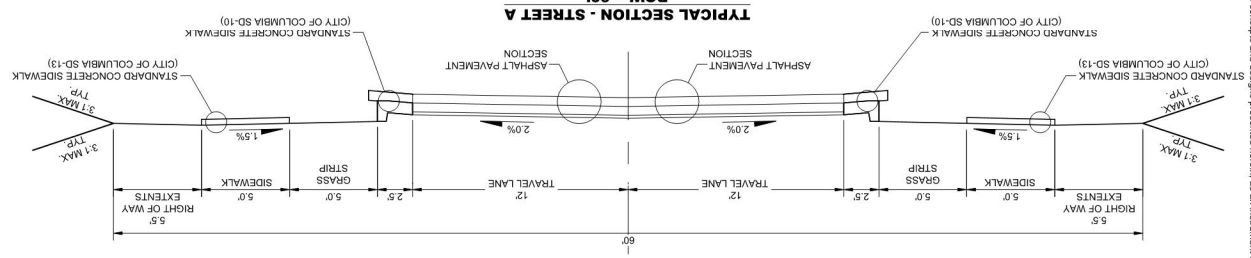
US FEMA FIRM PANEL

U.S. FEMA FIRM PANEL: 47119C0280E DATED 4/16/2007

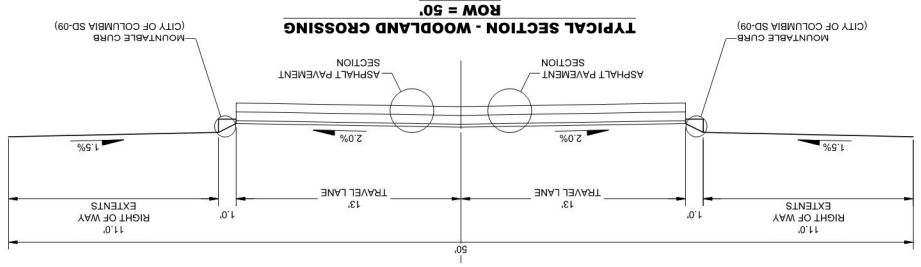
TYPICAL SECTION - STREET B
ROW = 50'
(RESIDENTIAL LOCAL STREET SD-04)

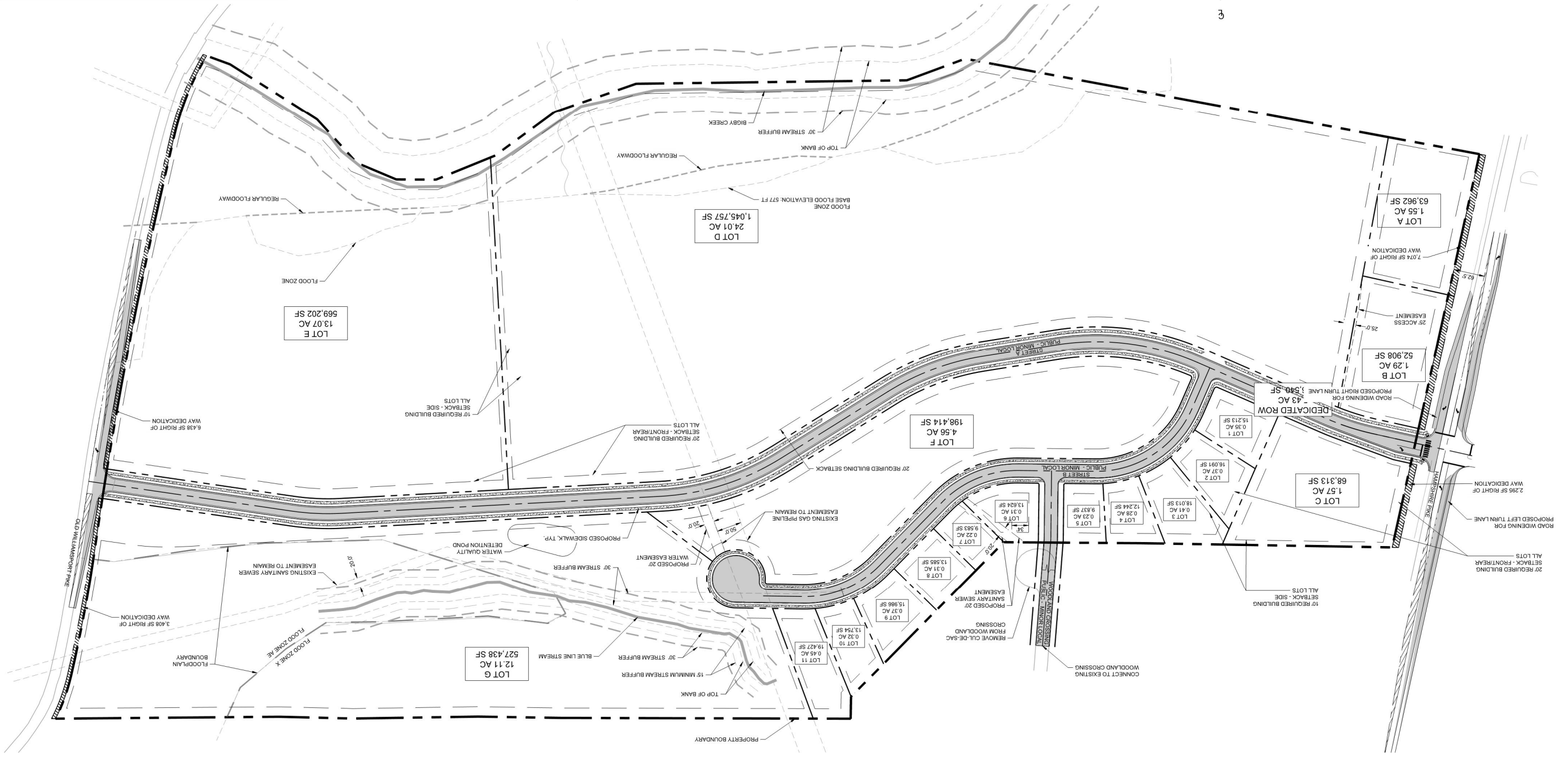


TYPICAL SECTION - STREET A
ROW = 60'
(MINOR COLLECTOR SD-03)



TYPICAL SECTION - WOODLAND CROSSING
ROW = 50'





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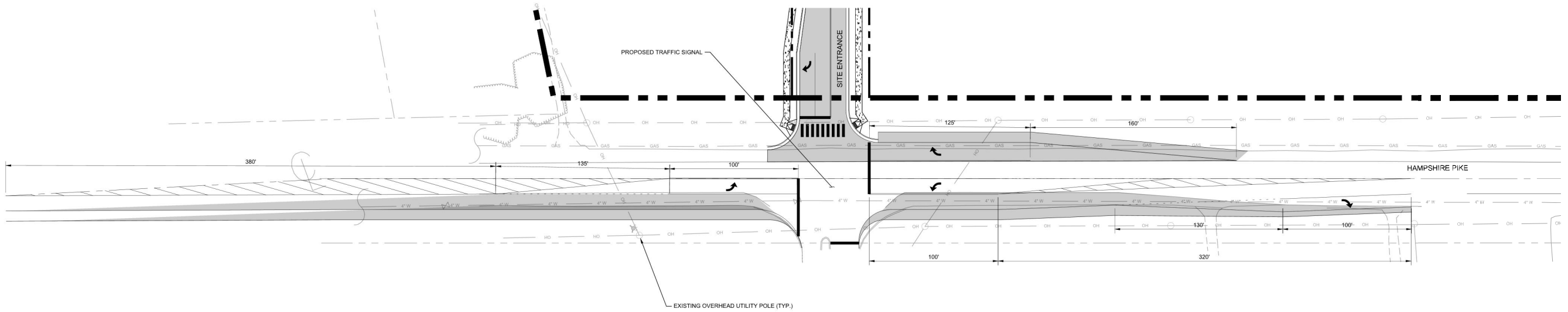

PERMIT REVIEW ONLY

GRAPHIC SCALE IN FEET
0 20 40 80

NORTH

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Main: 615.564.2701 | www.kimley-horn.com
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HAMPSHIRE PIKE MIXED USE
PRELIMINARY PLAT
COLUMBIA, TN

No.	REVISIONS	DATE	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

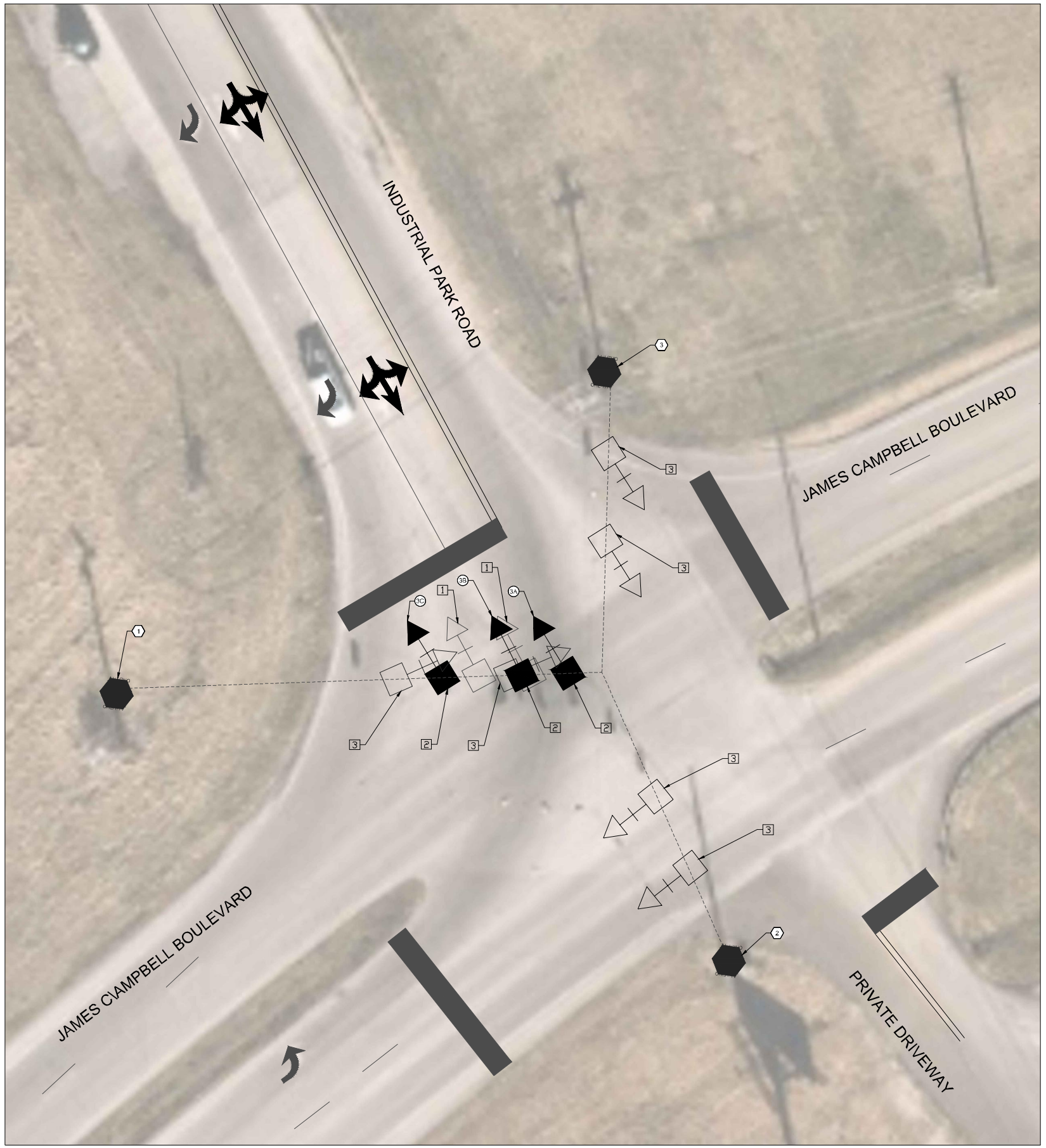
DESIGNED BY:	RAP
DRAWN BY:	ABM
CHECKED BY:	RAP
DATE:	5/16/2022

KIMLEY-HORN PROJECT NO.
118332003

TRAFFIC SIGNAL PLAN - HAMPSHIRE PIKE AT SITE ENTRANCE

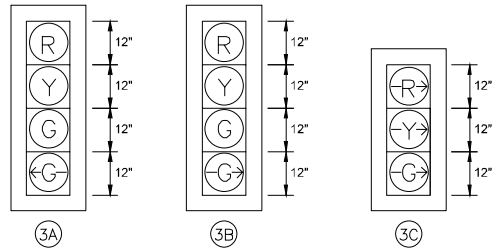
SHEET NUMBER
T1-00

Drawing name: K:\NSH_LDEV\118332003 - Steadfast Hampshire Pike\4-CADD\PlanSheets\T1-00 TRAFFIC SIGNAL PLAN.dwg T1-00 TRAFFIC SIGNAL PLAN Jun 21, 2022 1:37pm by: Kelley,Frank

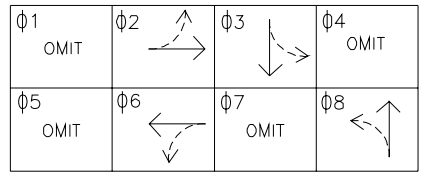


SIGNAL HEAD ASSEMBLIES

N.T.S.



PHASING DIAGRAM



CONSTRUCTION NOTES

1. REMOVE EXISTING SIGNAL HEAD
2. INSTALL SIGNAL HEAD AND REQUIRED CONDUCTOR
3. RETAIN EXISTING SIGNAL HEAD

LEGEND

- EXISTING SIGNAL POLE
- EXISTING SIGNAL HEAD
- PROPOSED SIGNAL HEAD
- EXISTING CONDUIT

PERMIT REVIEW ONLY

GRAPHIC SCALE IN FEET
0 2.5 5 10

NORTH

Kimley»Horn
10 Lea Avenue, Nashville, TN 37210
Main: 615.564.2701 | www.kimley-horn.com
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HAMPSHIRE PIKE MIXED USE
PRELIMINARY PLAT
COLUMBIA, TN

No.	REVISIONS	DATE	BY
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

DESIGNED BY:	RAP
DRAWN BY:	ABM
CHECKED BY:	RAP
DATE:	5/16/2022
KIMLEY-HORN PROJECT NO.	118332003

TRAFFIC SIGNAL PLAN - JAMES CAMPBELL BLVD AT INDUSTRIAL WAY

SHEET NUMBER
T2-00

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.



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PERMIT REVIEW ONLY

GRAPHIC SCALE IN FEET
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HAMPSHIRE PIKE MIXED USE PRELIMINARY PLAT

COLUMBIA, TN

No.	REVISIONS	DATE	BY
1			
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9			
10			

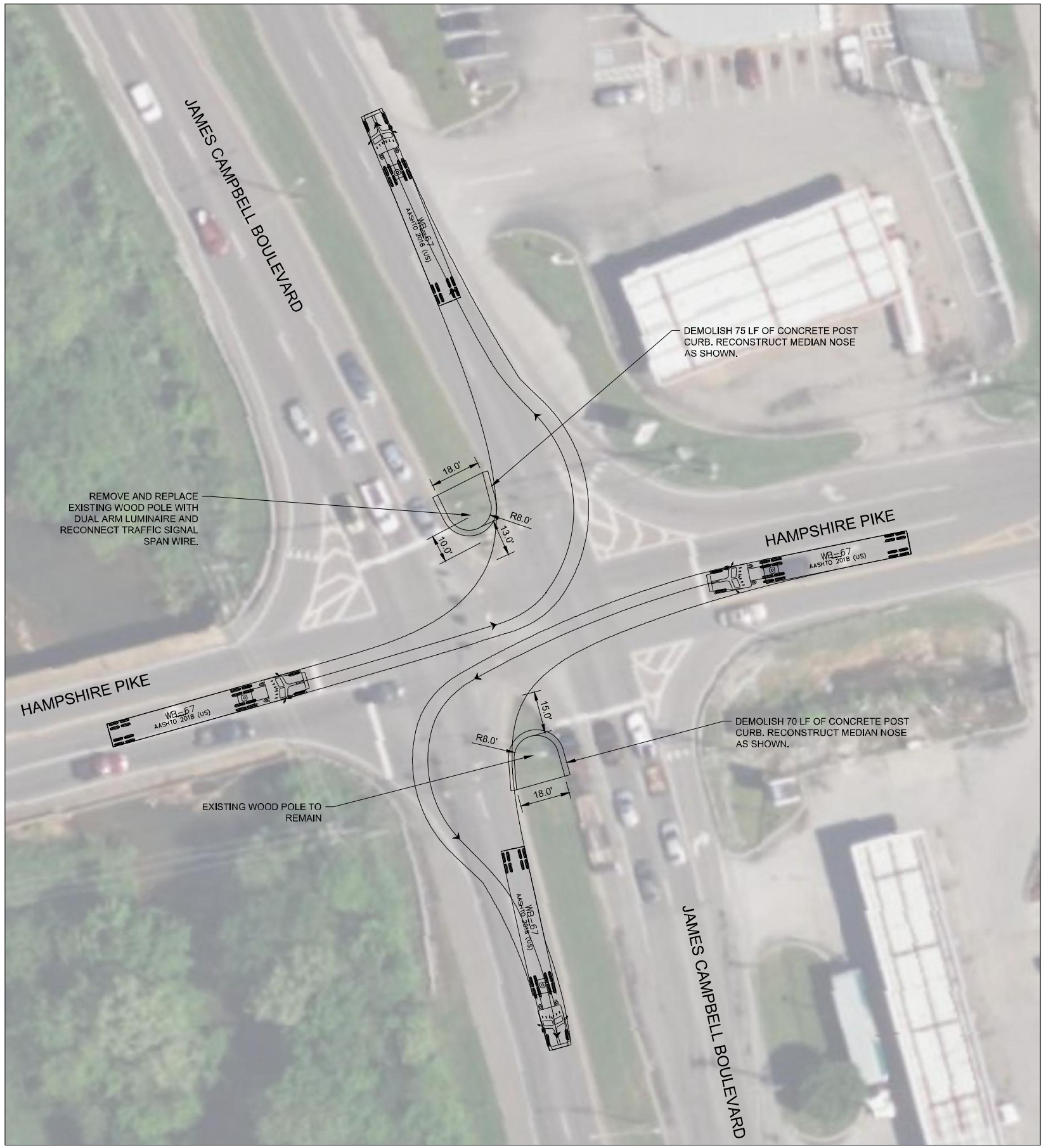
DESIGNED BY:	RAP
DRAWN BY:	ABM
CHECKED BY:	RAP
DATE:	5/16/2022

KIMLEY-HORN PROJECT NO.
118332003

JAMES CAMPBELL BLVD AT OLD WILLIAMSPORT PIKE

SHEET NUMBER
T3-00

Drawing name: K:\NSH_LDEV\118332003 - Steadfast Hampshire Pike\4-CADD\PlanSheets\T1-00 TRAFFIC SIGNAL PLAN.dwg T3-00 TRAFFIC SIGNAL PLAN Jun 21, 2022 1:37pm by: Kelley,Frank



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HAMPSHIRE PIKE MIXED USE
PRELIMINARY PLAT
COLUMBIA, TN

No.	REVISIONS	DATE	BY
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DESIGNED BY:	RAP
DRAWN BY:	ABM
CHECKED BY:	RAP
DATE:	6/21/2022
KIMLEY-HORN PROJECT NO.	118332003

HAMPSHIRE PIKE AT JAMES CAMPBELL BLVD

SHEET NUMBER
T4-00

Drawing name: K:\NSH_LDEV\118332003 - Steadfast Hampshire Pike\4-CADD\PlanSheets\T1-00 TRAFFIC SIGNAL PLAN.dwg T3-00 TRAFFIC SIGNAL PLAN (2) Jul 19, 2022 2:18pm by: Kelley,Frank

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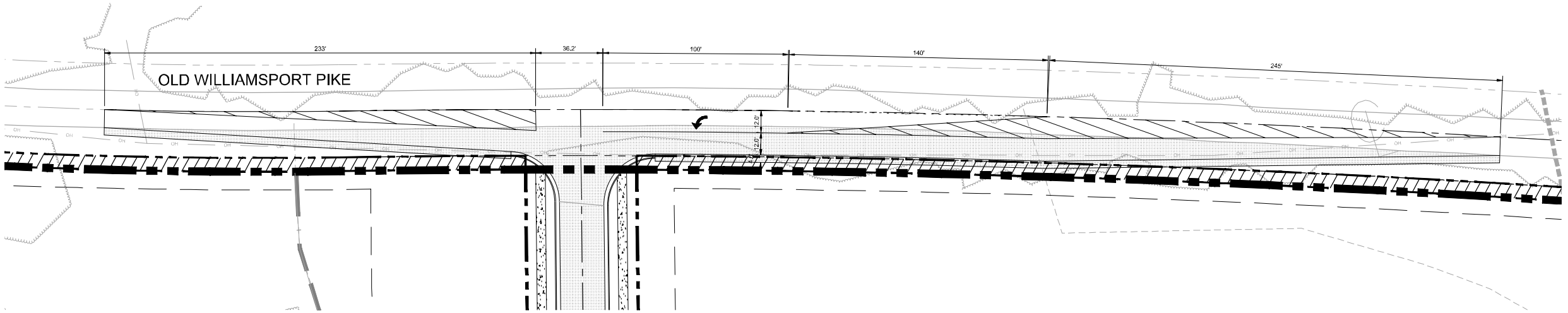

PERMIT REVIEW ONLY

GRAPHIC SCALE IN FEET
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NORTH

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HAMPSHIRE PIKE MIXED USE
PRELIMINARY PLAT
COLUMBIA, TN

No.	REVISIONS	DATE	BY
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DESIGNED BY:	RAP
DRAWN BY:	ABM
CHECKED BY:	RAP
DATE:	6/21/2022

KIMLEY-HORN PROJECT NO.
118332003

OLD WILLIAMSPORT PIKE AT SITE ENTRANCE

SHEET NUMBER
T5-00

March 21, 2025

Mr. Colton Dorris
Kimley-Horn
10 Lea Avenue, Suite 400
Nashville, TN 37210
Sent via email: *Colton.Dorris@kimley-horn.com*

RE: **Water Availability Letter** Expires: 7/19/2025
Steadfast Hampshire Pike – 155 Townhomes and Single Family Units
1242 Hampshire Pike
Columbia, *TN 38401*
Tax Map & Parcel #: 089 04103 000

Dear Mr. Dorris:

Columbia Power & Water Systems ("the Utility"/CPWS) is a municipal corporation authorized to provide water services in accordance with State law. CPWS has adopted rules, regulations, and standard operation procedures, prescribing the conditions under which CPWS will furnish water service. In addition, certain State laws delegate authority to the Tennessee Department of Environment and Conservation (TDEC), various Planning Commissions, and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Water service will be made available on a first-come, first-served basis, subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies. Water service is subject to availability of all CPWS furnished equipment and materials appropriate for the development and provided the applicant complies with all rules and regulations of CPWS and conditions set out herein.

The proposed development is a combination of single family homes and townhomes totaling 155 dwelling units. CPWS has evaluated the projected water demands for the proposed development in the water system hydraulic model and is able to provide domestic and fire protection service while maintaining state standards for level of service and pressures in this portion of the distribution system. CPWS can provide water for the proposed development according to the following criteria and requirements:

- Minimum size 8-inch water mains will be required within the development.
- Townhomes will be individually metered in gang-meter boxes.
- Separate irrigation meters with backflow devices will be required to serve the proposed Project.

All of the above requirements up to and including the meter(s) are to be constructed and paid for by the Applicant and dedicated to CPWS once complete. No construction of water infrastructure shall be initiated until final construction plans have been approved by CPWS (including TDEC approval).

This Water Availability Letter will expire in one-hundred twenty (120) days unless vested by payment of water service fees and impact fees for the proposed project. If the Applicant elects to pay only a portion of the impact fees due for the proposed development, then the vesting will only apply to the portion for which impact fees were paid. Any request for water availability after the expiration date of this letter will be considered a new application.

Once you have received this Water Availability Letter, next steps in the process to vest water service from CPWS are as follows:

- Remit to CPWS new water service fees for plan review, TDEC coordination, and inspection as follows: $1,500 + $370 per SFU equivalent
- Applicant will prepare design drawings for review and approval by CPWS for construction of the proposed water system improvements.
    - Provide design drawings in AutoCAD and .pdf format for CPWS review of proposed development. Include design drawings for grading, drainage, roadway improvements, buried (wet and dry) utilities, water systems, and surface improvements.
    - CPWS will submit proposed improvements design to TDEC for review and approval.
    - Once comments received from TDEC have been addressed and approved, CPWS will approve the Construction Drawings for the proposed water system improvements.
- As an option, the applicant may request CPWS design the public water system infrastructure to support the proposed development project. Under this option, the applicant will:
    - Provide site base CAD files in DWG format, including roads, lot lines, existing and proposed contours, and other existing and proposed utilities, for use in development of water construction drawings.
    - CPWS will then develop design drawings for the water main extension and submit to TDEC for review and approval.
- Current water service fees due prior to CPWS review of design plans are listed in the table below. *Note that payment of Water Service Fees will extend the expiration of this Water Availability Letter for one year, while the applicant is working with CPWS on design and review of the improvement drawings.*

Water Service Fees	SFUs	Total
$1,500 + 370 per SFU	155	**$58,850**

- Upon Construction Drawing approval by CPWS, applicant may then pay Impact Fees and Meter Fees and schedule the pre-construction meeting. Pre-construction meeting will be canceled and re-scheduled unless all impact fees are paid at least 48 hours prior, or surety is provided in lieu of full payment.
- Water meters will be ordered by CPWS once meter fees are paid by the Applicant.
    - Meter fees are subject to change based on final design and the prevailing Board-approved rates at time of payment.
    - If surety is provided in lieu of payment, meters are not ordered until fees are paid and may result in extended lead-times.
- Applicants will be charged Impact Fees and Meter Fees in effect at time of payment. Please see CPWS website for schedule of impact fees and timing of planned fee escalations. Anticipated meter costs and impact fees for this project are according to the following table:

Impact Fees and Meter Costs	Number	$ / Unit	Total
¾" Service Meter Cost	155	$540	$83,700
Current Impact Fee for ¾" Service Meter	155	$5,000	$775,000
Estimate of Fees Due Prior to Pre-Construction Meeting =			**$858,700**

- After the pre-construction meeting, CPWS will then issue a formal Notice to Proceed. No construction of water improvements may take place prior to the Notice to Proceed.
- Applicant is required to construct all public water infrastructure per CPWS standard specifications and provide CPWS personnel unregulated access to the site to inspect the construction of the water infrastructure. No construction of water improvements may take place without a CPWS inspector present.

Please feel free to contact me at 931-388-4833 x7655 or Matt.Wheeler@cpws.com if you have questions or would like to discuss.

Sincerely,



Matthew J. Wheeler, P.E.
Vice President of Water Resources, CPWS

cc: Bart Anderson, CPWS
Eric King, Inflo Design Group
File 22-029b

CPWS
Columbia Power & Water Systems

201 Pickens Lane
P.O. Box 379
Columbia, TN 38402

P 931.388.4833
F 931.388.5287
www.cpws.com

March 12, 2025

Colton Dorris
colton.dorris@kimley-horn.com

Re: Steadfast-Hampshire Pike
Being Tax map 089, Parcel 041.15

Dear Sir:

Columbia Power System has an existing power line near your proposed development.

We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction.

• **Unfortunately, due to current supply chain challenges, no timeframe can be guaranteed regarding the availability of meters or transformers appropriate for your development.**

Yours truly,

COLUMBIA POWER SYSTEM

Trevor Gilmer
Power Engineering Manager

kw

CITY OF COLUMBIA
TENNESSEE

WASTEWATER DEPARTMENT

24 March 2025

Colton Dorris
Kimley-Horn
10 Lea Ave, Suite 400
Nashville, TN 37210

RE: 1242 Hampshire Pike, Columbia, TN 38401; 143 townhomes and 11 single family residential units

Colton,

This letter serves as confirmation that the City of Columbia Wastewater Department has the available capacity to service the subject development. Any extension to the existing sewer infrastructure will be initiated by the owner/developer, reviewed by our department and approved by the State of Tennessee. The project must be advanced in accordance with local, state and federal rules, regulations and policies. Funding and construction of those improvements will remain the responsibility of the owner/developer. New customers will be required to pay all fees applicable at the time of connection. Any Final Plat approval and Dedication are both subject to installation and function, as determined by our Department. No detailed design plan for an extension of the sewer has been proposed at this time.

Donnie Boshers, Director
City of Columbia, TN
Wastewater Department

CITY OF
COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

Preliminary Plat, Site Development Plan, and PUD Checklist

Development: Hampshire Pike Townhomes

This checklist shall be completed, and included with the submittal documents. If the submittal does not contain a completed checklist, it shall be deemed incomplete. All below listed items shall be included in the submittal documents and plans, as well as any further information required by the City of Columbia to evaluate compliance and to perform a full and complete review. See Zoning Ordinance Article 8 and Subdivision Regulations.

General

- ☑ Name of development
- ☑ Contact info for the owner and licensed design professional(s) preparing plan: name, address, email, phone
- ☑ Plan sealed by a design professional licensed in the State of Tennessee.
- ☑ North Arrow, legend, and site vicinity map
- ☑ Graphic Scale: between 1 in. = 10 ft. and 1 in. =100 ft.
- ☑ Survey stamped by a State of Tennessee Licensed Professional Land Surveyor, with all project boundaries including bearings and angles to the nearest hundredth, utilities, and existing streets and rights-of-way.
- ☑ Note referencing Tennessee State Plane Coordinate System, NAD 83 Datum
- ☑ All property boundaries, existing easements, and encumbrances
- ☑ Parcel identification, owner, and deed and plat references of adjoining properties
- ☑ Proposed phasing and timetable for all phases of development
- ☑ Traffic Impact Study, as required.
- ☑ The substance of all existing and proposed covenants, easements, or other restrictions.

Lots and Land-Use

- ☑ The size of total property to be developed in square feet and acres
- ☑ Lot numbers of all proposed lots, with dimensions, locations, and square footage
- ☑ A tabulation of the land area to be devoted to various uses and activities and overall densities.
- ☑ Typical lot layout depicting proposed setbacks, yards, and easements, where applicable

Structures

- ☑ Location and approximate dimensions of all existing and proposed structures.
- ☑ Location of all earth retaining structures, with approximate top and bottom of wall elevations.
- ☑ Existing and intended use of all buildings and structures on site, including the number of dwelling units and density, where applicable
- ☑ Location, type, and size of proposed signs
- ☑ Approximate height, bulk, and the utilization of structures including activities and the number of living units.

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COLUMBIA, TN 38401
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FAX: (931) 560-1541

Grading, Drainage, and Storm

- ☑ Existing conditions and contours at vertical intervals of not more than two (2) feet
- ☑ General proposed contours at vertical intervals of not more than two (2) feet
- ☑ FEMA Special Flood Hazard Area (SFHA), 100-year Floodplain (F-P), and Floodway (F-W) boundaries with elevations and the exact location of the nearest benchmark. Indicate the Flood Insurance Rate Map (FIRM) panel number, its effective date, and flood insurance zones
- ☑ Location and dimension of aquatic buffer zones
- ☑ General layout of the proposed storm drainage system including surface and subsurface drainage systems, areas for detention, and water quality devices.
- N/A ☑ Identification of all critical lots

Streets, Parking, and Pedestrian Elements

- ☑ Proposed street and alley rights-of-way, typical sections, widths, classification, names, and proposed ownership and maintenance responsibility
- ☑ Proposed connections to existing and proposed streets (including classification) located outside the development
- N/A ☑ Proposed improvements as identified in the Traffic Impact Study, as required
- ☑ Existing and proposed sidewalks, trails, and other pedestrian elements
- ☑ Existing and proposed on-street and off-street parking and loading areas
- ☑ Summary of all provided and required parking

Landscaping, Open Space, and Amenities

- ☑ Natural features on site including, but not limited to, wetlands, streams, ponds, springs, sinkholes, wells, rock outcroppings, excessive slopes, and forested areas
- ☑ Landscaped areas and buffers with details on proposed plantings, existing vegetation, and other features.
- ☑ The location and size of all common open space, parkland dedications, and dedications and reservations of land for public uses.
- ☑ Any amenity features and structures for private or public benefit.
- ☑ Location, dimension, and materials of fences and walls
- ☑ Tree Canopy retention

Utilities

- ☑ General layout and location of existing and proposed utilities and utility features including, but not limited to potable water, fire hydrants, sanitary sewer, storm sewer, and power and communication facilities.
- ☑ Acknowledgement from water, sewer, and power utility providers that the proposed development may be adequately served with existing infrastructure, or if improvements are required to adequately serve the development, a general statement of the improvements.

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PUD Specific Items

- ❑ List of all deviations from PUD Standards requested
- ❑ The nature of the landholder's interest in the land proposed to be developed and a written statement of concurrence from all parties having a beneficial interest in the affected property.
- ❑ Location and approximate dimensions of all existing and proposed structures including approximate height, bulk, and the utilization of structures including activities and the number of living units. Include architectural renderings of all proposed structures with materials listed.
- ❑ The substance of covenants, grants of easements or other restrictions to be imposed upon the use of the land, buildings and structures including proposed easements for public utilities on the property or documentation of off-site easements.
- ❑ Exterior lighting plan.

If the application is deemed incomplete by the Zoning Administrator, a written request shall be made within ten days after the original submittal, for further information. In such case the application shall be held in abeyance until deemed complete for final review. No plan shall be formally presented for Planning Commission action until such plan is found complete, compliant with City standards, and ready for review.

Checklist Completed By:

COLTON DORRIS		3/13/2025
Print Name	Signature	Date

Hamsphire Pike Townhomes

To:	City of Columbia
From:	Colton Dorris, P.E.
	Kimley-Horn and Associates, Inc.
Date:	3/17/2025
Subject:	Project Overview and Phasing Narrative

This project consists of the construction of 143 townhomes, 11 single-family lots, and the public infrastructure necessary to facilitate the development.

The proposed Townhomes and Single-Family intends to be split into two phases. The southern portion, consisting of a cul-de-sac road, 11 single-family lots, and 64 townhomes will be built first. Construction is estimated to begin in the fall of 2025. The northern phase, consisting of an additional 79 townhomes is estimated to begin in the summer of 2026. The completion of construction is estimated to be 2028.

The commercial lots shown in the site plan will be built by others, and there is no way to determine the timeline of construction for these lots at this time. The multifamily parcel shown on the southeastern side of our site were approved for Site Development Plan in 2022, and at this time, construction is planned to begin by fall of 2027.

All dates provided above are estimates.

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
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PLANNING COMMISSION
PROJECT DEVELOPMENT APPLICATION

SUBMITTAL REQUIREMENTS

Final Plat: * *1 hard copy of all materials for submittal + PDF copy on a USB flash drive (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"

All Others: * Please submit the Application online at City of Columbia | Permitting (onlama.com)

ADDRESS/LOCATION	1242 Hamsphire Pike		
	TAX MAP: 089	GROUP: 04103	PARCEL: 000
SUMMARY OF NATURE OF REQUEST AND WORK	Site Development plan for 143 townhomes, 11 single-family lots, and the public infrastructure necessary to facilitate the development.		

DATE OF PRE-APPLICATION CONFERENCE		*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
❑ Comprehensive Plan Amendment ❑ Annexation ❑ Rezoning ❑ Preliminary Plat ❑ Final Plat ❑ PUD Preliminary Master Plan ❑ PUD Final Site Plan ☒ Site Development Plan ❑ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations:** ❑ Annexation Permission Form **Annexations/Rezoning/Plan Amendments:** ❑ Requested Zone Listed ❑ Statement of Compliance with Comprehensive Plan ❑ Concept Plan **Preliminary Plats/Site Development Plans:** ❑ Plans and/or Plats conforming to City standards with signed and completed check list **All Annexations/Rezoning/Preliminary Plats/Site Development Plans and PUDS:** ❑ Receipt of Payment for Pre-Application Meeting ❑ Written Legal Description copy ☒ Columbia Water System Availability Letter ☒ Columbia Waste Water Department Will Serve Letter

Rev. 2/7/2024

	Plats/PUDs: ❑ Project Name (include Sections & Phases) ❑ Total Number of Lots/Residential Units ❑ Square Footage of Non-Residential Floor Space ❑ Total acreage

Applications and all required submittals must be filed with the Department of Development Services prior to the established deadline. Both the applicant and property owner (if different from applicant) must sign the application. Any requests to defer or move the item to future meeting dates must be requested by the resubmittal date listed on the Planning Commission schedule.

APPLICANT
All communications go to the Applicant's email that is provided.

NAME	Colton Dorris	PHONE	629.401.4768
ADDRESS	10 Lea Avenue, Suite 400	EMAIL	colton.dorris@kimley-horn.com

PROPERTY OWNER NAME	Chase Emery	PHONE	949.518.2001
ADDRESS	18100 Von Karman Avenue, Suite 500, Irvine, CA 92612	EMAIL	Chase.emery@steadfastco.com

If owner is not a natural person, documentation must be provided showing signing authority on behalf of the entity. If multiple persons are listed as owners in the records of the Maury County Assessor, all owners must sign or the signatory must provide documentation of authority to apply on behalf of record owner (i.e., Power of Attorney or notarized Letter of Authorization). In filling out this application, I attest that (1) I am familiar with the rules, regulations, and procedures of the City of Columbia & (2) all information contained herein is accurate & true to the best of my knowledge.

Colton Dorris		3/17/2025
APPLICANT NAME	APPLICANT SIGNATURE	DATE
Rod Emery		3/17/25
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE

Rev. 2/7/2024

Hampshire Pk/Steadfast – Phase 1

Project #:	25-0205	**Location:**	089 41.15
Applicant:	Abigail Overstreet	**Case Type(s):**	Final Plat
Staff Planner:	Robert Archibald, Principal Planner	**Proposed Use:**	Mixed Use

PROJECT SUMMARY

The applicant is seeking approval for a Final Plat to establish eight lots and to dedicate a portion of right-of-way. These lots are part of a larger, multi-phase mixed-use development. The Planning Commission granted approval for a Preliminary Plat related to this development in October 2021 (21-0163). This prior approval has created a vested right to develop according to the MRC (Mixed Residential Commercial) district standards outlined in the previous Zoning Ordinance. This development is subject to Ordinance 3638, the pre-July 2022 zoning ordinance.

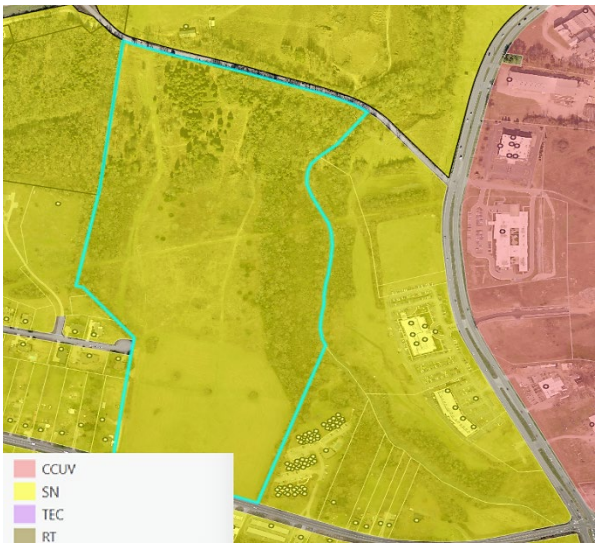
- The Final Plat conforms to the Preliminary Plat.
- The applicant has provided a financial surety in the amount of $535,000 to guarantee completion of infrastructure.
- The applicant has executed a development agreement in the format prescribed the Appendix B of the Subdivision Regulations.
- The applicant will record a stormwater maintenance agreement prior to recordation of the Final Plat.
- The DRC reviewed this proposal at its June 2025 meeting. Staff review included standard comments and requests for technical corrections. Full technical comments are provided in the agenda packet.
- Staff review included standard comments and requests for technical corrections.
- The Planning Commission is the **Decision-Making Authority** for the the Final Plat.
- Templates are provided at the end of the report to assist the Planning Commission in crafting properly formatted motions.

SITE INFORMATION

CURRENT ZONING	EXISTING USE	EXISTING IMP.	LAND AREA
CD-4	In Development	Mixed Residential/Commercial	+/-66.815 Acres



FUTURE LAND USE MAP	ZONING MAP





SITE CONTEXT/ADJACENT PROPERTIES			
	Future Land Use	Zoning	Current Use
Subject Property	Suburban Neighborhood	CD-4	Mixed Use
North	Suburban Neighborhood	Maury County	Undeveloped
South	Suburban Neighborhood	CD-3	Single-Family
East	Suburban Neighborhood	CD-3	Multi-Family/Commercial
West	City Center Urban Village	CD-3/Maury County	Single-Family/Undev.

The subject site is a large multiphase mixed-use development. The property is bounded on the north by undeveloped land currently not in the jurisdictional limits of Columbia. Established single-family residential units are to the south and west of this parcel. Adjacent to this site to the east is an established multi-family development.

CONFORMITY WITH ZONING ORDINANCE

The Final Plat conforms to the Preliminary Plat, the modified MRC standards of the applicable zoning ordinance (3638), and the Subdivision Regulations of the City of Columbia.

REVIEW PROCESS

The Development Review Committee evaluated the proposed Final Plat at its March 2025 meeting, as directed by section **8.3.7** of the Zoning Ordinance. Technical comments are provided in the agenda package and summarized above.

Section **8.5.24** of the Zoning Ordinance directs the Planning Commission to review Subdivision Plats for conformity with the standards of the Ordinance and the City Subdivision Regulations. The Ordinance indicates that all Preliminary and Final Plats must be prepared, submitted, reviewed and acted upon in accordance with the Subdivision Regulations.

The Planning Commission is the Decision-Making Authority for Final Plats under **§ 8.3.3.B.1** of the Zoning Ordinance and **§ 2.3** of the Subdivision Regulations.

Section **2.3.6** of the Subdivision Regulations establishes the review criteria for approval of Final Plats.

> *A. Recommendations and final action on a Final Plat shall be based on consideration of the following criteria:*
>
> > *1. Whether the proposed Final Plat complies with the applicable zoning district and overlay districts;*

2. Whether the proposed Final Plat is consistent with all standards of these Subdivision Regulations and other related codes and ordinances enforced by the City; and

3. Whether the proposed Final Plat meets all the requirements or conditions of any applicable development approvals, such as development plans or associated modification of standards.

In the event of a denial, **§ 2.3.5** of the Subdivision Regulations requires the Planning Commission to identify the specific parts of applicable plans and regulations with which the plat does not comply.

SAMPLE MOTIONS

Approve:

Move to approve the Final Plat as presented and find that the plat conforms to the applicable zoning ordinance, the Subdivision Regulations, and the Preliminary Plat [subject to remaining technical comments from staff].

Approve with Conditions:

Move to approve the Final Plat as presented and find that the plat conforms to the applicable zoning ordinance, the Subdivision Regulations, and the Preliminary Plat, subject to the following conditions: [list conditions of approval crafted by Planning Commission].

Defer for Continued Review:

Move to find that there is insufficient information to make a decision, defer the application for continued review, and request that the applicant provide: [list additional information] for review at the next regularly scheduled meeting of the Planning Commission.

Deny:

Move to find that the Final Plat as presented does not conform to the applicable zoning ordinance, the Subdivision Regulations, or the approved Preliminary Plat, and deny the request due to [list specific deficiencies].

LEGEND

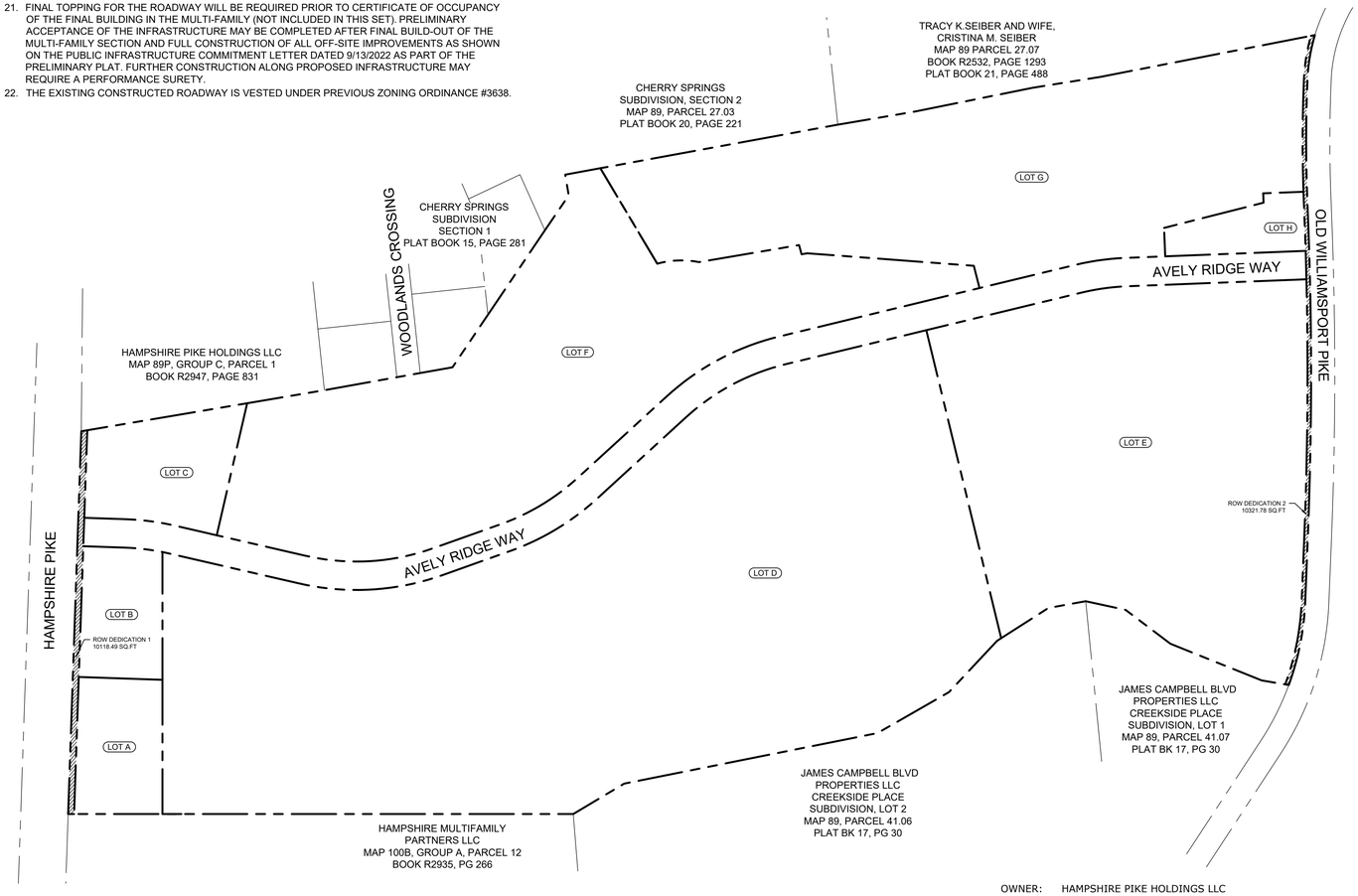
IRON PIN FOUND		FIRE HYDRANT		UTILITY POLE		PUBLIC UTIL. & DRAIN ESMT.	P.U.D.E.	BOUNDARY	
IRON PIN SET		SANITARY SEWER MH	SS	GUY ANCHOR		ADDRESSES	1234	CENTERLINE	
CONC. MON. FOUND		SANITARY SEWER CO	CO	COMMUNICATION BOX	C	HANDICAP SPACE		BUFFER	
CONC. MON. SET		AREA DRAIN		COMMUNICATION MH	C	SANITARY SEWER	8" SA — 8" SA	WATER FEATURE	
NON-MONUMENTED POINT		CURB INLET		GAS METER	G	WATER	4" W — 4" W	TREE LINE	
CONTROL POINT SET		STORM MH	ST	GAS VALVE		UNDERGROUND ELEC	UGE — UGE	R.O.W.	RIGHT OF WAY
BENCH MARK		ELECTRIC METER-BOX	E	EVERGREEN TREE		OVERHEAD ELEC	OHE — OHE	PVMT.	EDGE OF PAVEMENT
WATER METER	W	ELECTRIC MH	E	SIDEWALK		GAS	4" G — 4" G	PUDE	PUBLIC UTILITY AND DRAINAGE EASEMENT
WATER VALVE		LIGHT POLE		MIN. BUILDING SETBACK	M.B.S.L	COMMUNICATIONS	COM — COM	G.I.E.	GREEN INFRASTRUCTURE EASEMENT

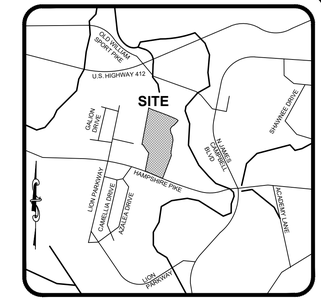
HATCH LEGEND

ROW DEDICATION

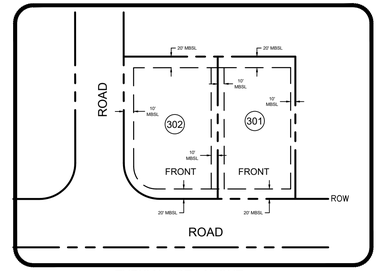
PLAT NOTES

1. THE PURPOSE OF THIS PLAT IS TO CREATE 8 LOTS AND DEDICATE RIGHT-OF-WAY.
2. SUBJECT PROPERTY IS PRESENTLY IDENTIFIED AS PARCEL 41.15, ON MAURY COUNTY TAX MAP 089. SAID PARCEL IS FURTHER IDENTIFIED AS THE PROPERTY DESCRIBED IN BOOK R2858, PAGE 105, REGISTERS OFFICE OF MAURY COUNTY, TENNESSEE.
3. THE PROPERTY SHOWN HEREON IS LOCATED WITHIN THE CITY OF COLUMBIA, MAURY COUNTY, TN. ALL MATTERS PERTAINING TO CONSTRUCTION, USE, LOCATION OF IMPROVEMENTS, SIGNAGE, PARKING, NOISE, VIBRATION, EMISSIONS, FIRE HAZARDS, RADIATION, ILLUMINATION, SETBACK PROVISIONS, ETC., ARE SUBJECT TO THE CITY OF COLUMBIA'S ZONING REGULATIONS AS INTERPRETED AND REGULATED BY THE DEPARTMENT OF DEVELOPMENT SERVICES.
4. EXISTING ZONING: CD-4
5. I HEREBY CERTIFY THAT THIS IS A CATEGORY IV SURVEY AND WAS CONDUCTED IN ACCORDANCE WITH RULE 0820-03.11 (GLOBAL POSITION SYSTEMS SURVEYS) ACCORDING TO THE CURRENT TENNESSEE MINIMUM STANDARDS OF PRACTICE AS PROMULGATED BY THE TENNESSEE STATE BOARD OF EXAMINERS FOR LAND SURVEYORS. THIS SURVEY WAS CONDUCTED WITH DUAL-FREQUENCY RTK GPS EQUIPMENT BASED ON THE TDOT CORPS NETWORK.
   a. POSITIONAL ACCURACY: 0.07'
   b. DATE OF SURVEY: 10-01-2021
   c. DATUM/EPOCH: TENNESSEE STATE PLANE (NAD83). OCCUPATIONS FOR CONTROL POINTS ARE 3 MINUTES EACH, SIDE SHOTS ARE 3 SECONDS.
   d. GEOID 3, ZONE 7 REVISED
6. NO COMBINED GRID FACTORS WERE USED.
7. BEARINGS SHOWN HEREON ARE BASED ON THE TENNESSEE STATE PLANE COORDINATE SYSTEM (NAD83). ELEVATIONS SHOWN HEREON ARE BASED ON NAVD88.
8. BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN ZONE "X" AND ZONE "AE" AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47119C0280E AND 47119C0165E, WITH AN EFFECTIVE DATE OF APRIL 16, 2007, WHICH MAKES UP A PART OF THE NATIONAL FLOOD INSURANCE PROGRAM. ZONE "X" IS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. ZONE "X" HAS TWO DESCRIPTIONS. PLEASE SEE FLOOD PLAIN MAP IF ZONE "X" IS SHADED. ***IF FIELD RUN CONTOURS ARE ESTABLISHED YOU MUST PLOT THE FLOOD LINE BASED ON BFE UNLESS THE PROPERTY IS IN ZONE A.
9. ALL CORNERS SHOWN ON THE FACE OF THE SURVEY WILL BE SET WITH 5/8 IRON ROD WITH CAP BEARING THIS SURVEYORS COMPANY NAME.
10. THE DEVELOPER ACKNOWLEDGES THAT ALL LOTS HAVE ADEQUATE BUILDING ENVELOPES AND NO VARIANCES WILL BE REQUIRED.
11. STORMWATER MAINTENANCE AGREEMENT RECORDED IN DEED BOOK ____, PAGES ____.
12. ALL STREETS AND ALLEYS ARE DESIGNATED AS PUBLIC RIGHT-OF-WAY; THE CITY OF COLUMBIA IS NOT RESPONSIBLE FOR THE REPLACEMENT OR REPAIR OF ANY PRIVATE STRUCTURES WITHIN PUBLIC EASEMENTS SHOULD THE STRUCTURES BE DISTURBED IN THE PROCESS OF THE CITY EXERCISING ITS EASEMENT RIGHTS.
13. DETENTION PONDS AND OUTLET STRUCTURES WITHIN PUBLIC DRAINAGE EASEMENTS ARE TO BE MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.
14. OPEN SPACE AREAS, ROADWAY MEDIANS, BRICK PEDESTRIAN CROSSWALKS, BIKE PATHS, SIDEWALKS OUTSIDE OF RIGHT-OF-WAYS, TRAILS AND DETENTION FACILITIES SHALL BE MAINTAINED BY THE HOME OWNER'S ASSOCIATION AND SHALL BE PUBLIC UTILITY, DRAINAGE AND ACCESS EASEMENTS.
15. WITHIN NEW DEVELOPMENTS AND FOR OFF-SITE LINES CONSTRUCTED AS A RESULT OF, OR TO PROVIDE SERVICE TO, THE NEW DEVELOPMENT, ALL UTILITIES, (INCLUDING CABLE TELEVISION, ELECTRICAL, NATURAL GAS, SEWER, TELEPHONE AND WATER LINES) SHALL BE PLACED UNDERGROUND.
16. MAINTENANCE OF ALL STORMWATER MANAGEMENT FEATURES SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER(S) OR HOA.
17. NO OBSTRUCTIONS OR ENCROACHMENTS WHICH IMPEDE THE FLOW OF STORMWATER SHALL BE PERMITTED WITHIN PUBLIC DRAINAGE EASEMENTS BETWEEN LOTS. THE CITY OF COLUMBIA IS NOT RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY ENCROACHMENTS THAT ARE DAMAGED OR REMOVED IN THE COURSE OF MAINTENANCE ACTIVITY WITHIN EASEMENTS.
18. THE CITY OF COLUMBIA WATER MANAGEMENT DEPARTMENT HAS UNRESTRICTED ACCESS TO ITS DOMESTIC WATER, SANITARY SEWER, RECLAIM WATER LINES OR SYSTEM IMPROVEMENTS LOCATED WITHIN ITS EXCLUSIVE EASEMENTS WITHIN THE DEVELOPMENT. IN THE EVENT LANDSCAPING, FENCING, CONCRETE OR OTHER STRUCTURES ARE INSTALLED OR PLACED WITHIN A CITY OF COLUMBIA EASEMENT, THE CITY OF COLUMBIA SHALL HAVE THE RIGHT TO REMOVE SUCH ENCROACHMENTS WITHIN THE EASEMENT AS MAY BE NECESSARY FOR THE CITY OF COLUMBIA TO REPAIR, MAINTAIN OR REPLACE ITS INFRASTRUCTURE WHICH IS NOW OR IN THE FUTURE MAY BE LOCATED WITHIN THE EASEMENT WITHOUT OBTAINING ANY FURTHER PERMISSION FROM THE PROPERTY OWNER OR HOA. THE PROPERTY OWNER OR HOA SHALL BE RESPONSIBLE FOR REPAIRING AND/OR REPLACING ANY SUCH LANDSCAPING, FENCING, CONCRETE, OR OTHER STRUCTURES REMOVED OR DISTURBED BY THE CITY OF COLUMBIA IN COMMON OPEN SPACE LOTS AND IN AREAS OWNED BY THE PROPERTY OWNER OR HOA AT NO EXPENSE TO THE CITY OF COLUMBIA. INDIVIDUAL HOMEOWNERS SHALL BE RESPONSIBLE FOR STRUCTURES REMOVED OR DISTURBED BY THE CITY OF COLUMBIA WITHIN AN EASEMENT ON THE HOMEOWNER'S LOT AT THE HOMEOWNER'S EXPENSE.
19. PUBLIC UTILITY AND DRAINAGE EASEMENTS (PUDE) SHALL BE REQUIRED AND BE TEN (10) FEET IN WIDTH ON ALL PROPERTY LINES PARALLEL AND ABUTTING PUBLIC ROADS OR RIGHTS-OF-WAY, AND FIVE (5) FEET IN WIDTH ON ALL INTERIOR LOT LINES, EXCEPT FOR INTERIOR LOT LINES WITH A ZERO LOT LINE OR A COMMON WALL ALONG A LOT LINE.
20. LOTS A, B, AND C SHALL NOT HAVE DIRECT VEHICULAR ACCESS TO HAMPSHIRE PIKE.
21. FINAL TOPPING FOR THE ROADWAY WILL BE REQUIRED PRIOR TO CERTIFICATE OF OCCUPANCY OF THE FINAL BUILDING IN THE MULTI-FAMILY (NOT INCLUDED IN THIS SET). PRELIMINARY ACCEPTANCE OF THE INFRASTRUCTURE MAY BE COMPLETED AFTER FINAL BUILD-OUT OF THE MULTI-FAMILY SECTION AND FULL CONSTRUCTION OF ALL OFF-SITE IMPROVEMENTS AS SHOWN ON THE PUBLIC INFRASTRUCTURE COMMITMENT LETTER DATED 9/13/2022 AS PART OF THE PRELIMINARY PLAT. FURTHER CONSTRUCTION ALONG PROPOSED INFRASTRUCTURE MAY REQUIRE A PERFORMANCE SURETY.
22. THE EXISTING CONSTRUCTED ROADWAY IS VESTED UNDER PREVIOUS ZONING ORDINANCE #3638.





VICINITY MAP
NOT TO SCALE



TYPICAL LOT LAYOUT
N.T.S.

Parcel Area Table		
Parcel #	Area (SF)	Area (AC)
LOT A	51983.49'	1.193
LOT B	47303.93'	1.086
LOT C	69305.44'	1.591
LOT D	1081847.58'	24.836
LOT E	526629.63'	12.090
LOT F	489022.37'	11.226
LOT G	451275.23'	10.360
LOT H	28107.47'	0.645

Additional ROW Dedication Area Table		
ROW #	Area (SF)	Area (AC)
ROW Dedication 1	10118.49'	0.232
ROW Dedication 2	10321.78'	0.237



GRAPHIC SCALE: 1" = 150'

OWNER: HAMPSHIRE PIKE HOLDINGS LLC
18100 VON KARMAN AVENUE,SUITE 500
IRVINE,CA,92612
949-518-2191

ENGINEER: KIMLEY-HORN AND ASSOCIATES, INC.
10 LEA AVENUE, SUITE 400
NASHVILLE, TN 37210
615-564-2701
KELLEY FRANK@KIMLEY-HORN.COM

SURVEYOR: SEAN ALAN MCGOWAN, PE, PS
WILSON & ASSOCIATES, P.C.
108 BEASLEY DRIVE
FRANKLIN, TN 37064
(615) 794-2176
SMCGOWAN@WILSONPC.COM

SEAN ALAN MCGOWAN — REGISTERED LAND SURVEYOR — AGRICULTURE — COMMERCE — TENNESSEE NO. 3516

WILSON & ASSOCIATES, P.C. Engineering/Surveying/Environmental

HAMPSHIRE PIKE

MIXED USE SUBDIVISION PHASE 1

CERTIFICATE OF APPROVAL OF WATER SYSTEM

I HEREBY CERTIFY THAT THE WATER SYSTEM(S) OUTLINED OR INDICATED ON THIS FINAL SUBDIVISION PLAT HAS/HAVE BEEN INSTALLED IN ACCORDANCE WITH CURRENT LOCAL AND STATE GOVERNMENT REQUIREMENTS, OR A SUFFICIENT BOND OR OTHER SURETY HAS BEEN FILED TO GUARANTEE SAID INSTALLATION.

NAME, TITLE, AGENCY OF AUTHORIZED APPROVING AGENT _____ DATE _____

CERTIFICATE OF COMPLIANCE

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE COLUMBIA SUBDIVISION REGULATIONS AND OTHER ADOPTED ORDINANCES AND POLICIES.

CITY ENGINEER _____ DATE _____
COLUMBIA, TENNESSEE

CERTIFICATE OF SURVEY ACCURACY

I (WE) HEREBY CERTIFY THAT TO THE BEST OF MY (OUR) KNOWLEDGE AND BELIEF THIS IS A TRUE AND ACCURATE SURVEY OF THE PROPERTY SHOWN HEREON; THAT THIS IS A CLASS "IV" LAND SURVEY AS DEFINED IN TITLE 62, CHAPTER 18, TENNESSEE CODE ANNOTATED, AND THAT THE RATIO OF PRECISION IS GREATER THAN OR EQUAL TO 1:10,000.

DATE _____

SEAN ALAN MCGOWAN, PE, PS, TENNESSEE RLS NO. 3516
WILSON & ASSOCIATES, P.C.
108 BEASLEY DRIVE, FRANKLIN, TN 37064
(615) 794-2176
SMCGOWAN@WILSONPC.COM

CERTIFICATE OF OWNERSHIP AND DEDICATION

I (WE) HEREBY CERTIFY THAT I AM (WE ARE) THE OWNER(S) OF THE PROPERTY SHOWN AND DESCRIBED HEREON AS EVIDENCED IN BOOK NUMBER R2858, PAGE 105, MAURY COUNTY REGISTERS OFFICE, AND THAT I (WE) HEREBY ADOPT THIS FINAL SUBDIVISION PLAT OF THE PROPERTY AS SHOWN HEREON AND DEDICATE ALL PUBLIC WAYS AND EASEMENTS AS NOTED WITH MY (OUR) FREE CONSENT.

OWNER _____ DATE _____

CERTIFICATE OF APPROVAL OF STREETS, DRAINAGE & UTILITIES

I HEREBY CERTIFY THAT THE STREETS, DRAINAGE, AND UTILITIES OUTLINED OR INDICATED ON THIS FINAL SUBDIVISION PLAT HAVE BEEN INSTALLED IN ACCORDANCE WITH CITY SPECIFICATIONS, OR A PERFORMANCE SURETY IN THE AMOUNT OF $_____ FOR STREETS AND DRAINAGE HAS BEEN POSTED WITH THE CITY OF COLUMBIA, TENNESSEE, TO ASSURE COMPLETION OF SUCH IMPROVEMENTS.

CITY ENGINEER _____ DATE _____
COLUMBIA, TENNESSEE

CERTIFICATE OF APPROVAL FOR SANITARY SEWER SYSTEM

I HEREBY CERTIFY THAT THE SANITARY SEWER SYSTEM OUTLINED OR INDICATED ON THIS FINAL SUBDIVISION PLAT HAS BEEN INSTALLED IN ACCORDANCE WITH THE CURRENT LOCAL AND STATE GOVERNMENT REQUIREMENTS, OR A SUFFICIENT BOND OR OTHER SURETY HAS BEEN FILED TO GUARANTEE SAID INSTALLATION.

DIRECTOR OF WASTEWATER DEPARTMENT _____ DATE _____
COLUMBIA, TENNESSEE

CERTIFICATE OF APPROVAL FOR RECORDING

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE CITY OF COLUMBIA SUBDIVISION REGULATIONS, WITH THE EXCEPTION OF SUCH VARIANCES, IF ANY, AS NOTED IN THE MINUTES OF THE COLUMBIA MUNICIPAL PLANNING COMMISSION, AND THAT IT HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE MAURY COUNTY REGISTER OF DEEDS.

SECRETARY, PLANNING COMMISSION _____ DATE _____
COLUMBIA, TENNESSEE

CERTIFICATE OF APPROVAL OF SUBDIVISION NAME & STREET NAMES

SUBDIVISION NAME AND STREET NAMES APPROVED BY THE CITY ENGINEERING DEPARTMENT AND BY E-911 MAURY COUNTY.

MAURY COUNTY E911 _____ DATE _____

RECORDING STAMP HERE

IF YOU CAN READ THIS YOU ARE HOLDING AN UNRECORDED COPY

FINAL SUBDIVISION PLAT

CITY OF COLUMBIA - MAURY COUNTY - TENNESSEE

TOTAL ACRES:	66.815	TOTAL NO. OF LOTS:	8
ACRES NEW RD/ST:	4.256 (ROW)	L.F. OF NEW RD/ST:	2749.5717
ACRES OPEN SPACE:	0.000	CIVIL DISTRICT:	3RD
DRAWN BY:	AS	CLOSURE ERROR:	SEE NOTE
SCALE:	1" = 150'	DATE:	06/16/2025

WA PROJECT NO. 21-1752 SHEET 1 OF 2

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	93.65'	375.01'	14° 18' 30"	S62° 07' 47"E	93.41'
C2	91.58'	382.51'	13° 43' 01"	S62° 25' 33"E	91.36'
C3	263.09'	3068.00'	4° 54' 48"	S71° 44' 27"E	263.01'
C4	239.00'	3075.58'	4° 27' 08"	S71° 30' 37"E	238.94'
C5	24.74'	3075.58'	0° 27' 39"	N73° 58' 01"W	24.74'
C6	100.14'	8492.39'	0° 40' 32"	N73° 51' 35"W	100.14'
C7	60.00'	8492.39'	0° 24' 17"	S73° 19' 10"E	60.00'
C8	709.46'	8499.93'	4° 46' 56"	S71° 48' 23"E	709.26'
C9	548.70'	8492.39'	3° 42' 07"	S71° 15' 58"E	548.60'
C11	177.29'	567.46'	17° 54' 01"	S60° 27' 56"E	176.57'
C12	103.81'	540.00'	11° 00' 53"	N25° 43' 03"E	103.65'
C13	79.66'	480.00'	9° 30' 30"	S24° 57' 52"W	79.57'
C14	12.62'	480.00'	1° 30' 23"	S30° 28' 19"W	12.62'
C15	307.12'	540.00'	32° 35' 10"	S14° 55' 55"W	303.00'
C16	272.99'	480.00'	32° 35' 10"	N14° 55' 55"E	269.33'
C17	215.51'	540.00'	22° 51' 58"	S12° 47' 40"E	214.08'
C18	191.56'	480.00'	22° 51' 58"	N12° 47' 40"W	190.29'
C19	241.85'	480.00'	28° 52' 06"	S9° 47' 36"E	239.30'
C20	272.08'	540.00'	28° 52' 06"	N9° 47' 36"W	269.21'
C21	89.07'	192.50'	26° 30' 41"	N16° 06' 38"E	88.28'
C22	107.15'	540.00'	11° 22' 08"	N10° 19' 31"E	106.97'
C23	95.24'	480.00'	11° 22' 08"	S10° 19' 31"W	95.09'
C25	178.22'	574.95'	17° 45' 37"	S60° 32' 09"E	177.51'

HATCH LEGEND

ROW DEDICATION

DETENTION POND

CHERRY SPRINGS SUBDIVISION, SECTION 2 MAP 89, PARCEL 27.03 PLAT BOOK 20, PAGE 221

TRACY K.SEIBER AND WIFE, CRISTINA M. SEIBER MAP 89 PARCEL 27.07 BOOK R2532, PAGE 1293 PLAT BOOK 21, PAGE 488

POB N:470741.49 E:1649350.82

N8°35'08"E 165.51'

N6°48'17"E 251.84'

N9°05'34"E 147.05'

N7°12'30"E 451.73'

S7°51'13"W 584.57'

509.31'

N17°26'30"E 234.55'

75.26'

N27°45'02"W 348.69'

CHERRY SPRINGS SUBDIVISION SECTION 1 PLAT BOOK 15, PAGE 281

WOODLANDS CROSSING (50' R.O.W.)

HAMPSHIRE PIKE HOLDINGS LLC MAP 89P, GROUP C, PARCEL 1 BOOK R2947, PAGE 831

N8°05'02"E 155.24'

S8°39'08"W 507.52'

342.21'

165.31'

HAMPSHIRE PIKE (100' R.O.W.)

N69°47'23"W 808.42'

N69°47'23"W 184.87'

N69°47'23"W 276.22'

N69°47'23"W 289.46'

S58°46'30"E 286.05'

S71°45'33"E 269.70'

S71°45'34"E 283.29'

S20°10'59"W 176.65'

ROW DEDICATION 1 10118.49 SQ.FT

LOT A

LOT B

LOT C

LOT D

LOT E

LOT F

LOT G

LOT H

25' ACCESS EASEMENT

EXISTING TO BE ABANDONED

20' SANITARY SEWER EASEMENT (TO BE ABANDONED)

20' PROPOSED UTILITY EASEMENT

20' SANITARY SEWER EASEMENT (TO BE ABANDONED)

AVELY RIDGE WAY (60' R.O.W.)

MAJOR LOOP

OLD WILLIAMSPORT PIKE (PUBLIC R.O.W. VARIES)

50' ROW (VARIES)

S4°01'02"W 216.46'

FLOODWAY BOUNDARY

N22°32'38"E 352.32'

N6°34'35"E 214.15'

S85°24'56"E 669.09'

S69°24'54"E 133.40'

S40°07'58"W 207.40'

N26°34'01"W 148.88'

S17°34'17"E 773.61'

S6°57'12"W 545.15'

S12°37'09"E 125.05'

N18°14'30"E 1053.38'

676.88'

150.00'

186.50'

40.00'

FLOOD ZONE X
FLOOD ZONE AE

REGULAR FLOODWAY

BASE FLOOD ELEVATION: 577'

BIGBY CREEK

WATER QUALITY DETENTION POND

RETAINING WALL

TOP OF BANK

30' STREAM BUFFER

40' STREAM BUFFER

20' SANITARY SEWER EASEMENT BOOK R1784, PAGE 297

SEE EASEMENT REVISION BOOK R1784, PAGE 297

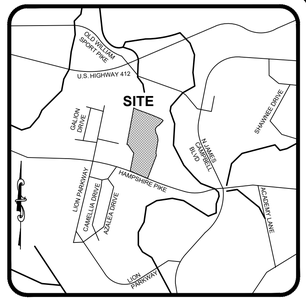
30' EAST TENNESSEE NATURAL GAS PIPELINE RIGHT OF WAY AGREEMENT BOOK 283, PAGE 386

ROW DEDICATION 2 10321.78 SQ.FT

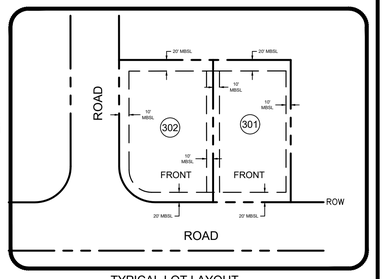
HAMPSHIRE MULTIFAMILY PARTNERS LLC MAP 100B, GROUP A, PARCEL 12 BOOK R2935, PG 266

JAMES CAMPBELL BLVD PROPERTIES LLC CREEKSIDE PLACE SUBDIVISION, LOT 2 MAP 89, PARCEL 41.06 PLAT BK 17, PG 30

JAMES CAMPBELL BLVD PROPERTIES LLC CREEKSIDE PLACE SUBDIVISION, LOT 1 MAP 89, PARCEL 41.07 PLAT BK 17, PG 30



VICINITY MAP
NOT TO SCALE



TYPICAL LOT LAYOUT
N.T.S.

Parcel Line Table		
Line #	Length	Direction
L2	7.63'	S27°51'17"W
L3	50.45'	S27°51'17"W
L4	118.69'	S55°18'29"W
L5	86.06'	S30°29'38"W
L6	79.99'	S7°58'19"W
L7	118.34'	S14°23'00"E
L8	9.97'	S14°23'00"E
L11	12.51'	S18°14'30"W
L12	12.76'	N8°39'08"E
L17	88.09'	N20°12'37"E
L18	88.09'	S20°12'37"W
L19	57.48'	S31°13'30"W
L20	57.48'	N31°13'30"E
L21	33.55'	N31°13'30"E
L22	225.63'	S31°13'30"W
L23	192.07'	N31°13'30"E
L24	151.47'	N1°21'41"W
L25	151.47'	S1°21'41"E
L26	254.36'	S24°13'39"E
L27	254.36'	N24°13'39"W
L28	304.68'	S4°38'28"W
L29	434.74'	N4°38'28"E

Parcel Line Table		
Line #	Length	Direction
L30	154.09'	S4°38'28"W
L31	24.03'	N4°38'28"E
L32	48.48'	S86°12'18"E
L33	12.28'	N8°34'35"E
L34	20.09'	S86°45'59"E
L36	183.87'	N4°38'28"E
L37	183.87'	S4°38'28"W
L38	83.84'	N16°00'35"E
L39	60.10'	S73°59'25"E
L40	379.71'	S16°00'35"W
L41	296.58'	N16°00'35"E
L42	19.80'	S73°59'35"E
L43	85.08'	S16°00'25"W

100 0 50 100 200

GRAPHIC SCALE: 1" = 100'

LEGEND

IRON PIN FOUND	FIRE HYDRANT	UTILITY POLE	PUBLIC UTIL. & DRAIN ESMT.	P.U.D.E.	BOUNDARY	
IRON PIN SET	SANITARY SEWER MH	GUY ANCHOR	ADDRESSES	1234	CENTERLINE	
CONC. MON. FOUND	SANITARY SEWER CO	COMMUNICATION BOX	HANDICAP SPACE		BUFFER	
CONC. MON. SET	AREA DRAIN	COMMUNICATION MH	SANITARY SEWER	8" SA	8" SA	WATER FEATURE	
NON-MONUMENTED POINT	CURB INLET	GAS METER	WATER	4" W	4" W	TREE LINE	
CONTROL POINT SET	STORM MH	GAS VALVE	UNDERGROUND ELEC	UGE	UGE	R.O.W.	RIGHT OF WAY
BENCH MARK	ELECTRIC METER-BOX	EVERGREEN TREE	OVERHEAD ELEC	OHE	OHE	PVMT.	EDGE OF PAVEMENT
WATER METER	ELECTRIC MH	SIDEWALK	GAS	4" G	4" G	PUDE	PUBLIC UTILITY AND DRAINAGE EASEMENT
WATER VALVE	LIGHT POLE	MIN. BUILDING SETBACK M.B.S.L	COMMUNICATIONS	COM	COM	G.I.E.	GREEN INFRASTRUCTURE EASEMENT

SEAN ALAN MCGOWAN REGISTERED LAND SURVEYOR AGRICULTURE COMMERCE TENNESSEE NO. 3516

WILSON & ASSOCIATES, P.C. Engineering/Surveying/Environmental

HAMPSHIRE PIKE

MIXED USE SUBDIVISION PHASE 1

RECORDING STAMP HERE

IF YOU CAN READ THIS YOU ARE HOLDING AN UNRECORDED COPY

FINAL SUBDIVISION PLAT

CITY OF COLUMBIA - MAURY COUNTY - TENNESSEE

TOTAL ACRES:	66.815	TOTAL NO. OF LOTS:	8
ACRES NEW RD/ST:	4.256 (ROW)	L.F. OF NEW RD/ST:	2749.5717
ACRES OPEN SPACE:	0.000	CIVIL DISTRICT:	3RD
DRAWN BY:	AS	CLOSURE ERROR:	SEE NOTE
SCALE:	1" = 100'	DATE:	06/16/2025

WA PROJECT NO. 21-1752 SHEET 2 OF 2

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

PLANNING COMMISSION
PROJECT DEVELOPMENT APPLICATION

SUBMITTAL REQUIREMENTS

Final Plat: * *1 hard copy of all materials for submittal + PDF copy on a USB flash drive (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"
All Others: * Please submit the Application online at City of Columbia | Permitting (onlama.com)

ADDRESS/LOCATION	Hampshire Pike, Columbia, TN		
	TAX MAP: 089	GROUP:	PARCEL: 41.15
SUMMARY OF NATURE OF REQUEST AND WORK	The purpose of this plat is to create 7 lots and dedicate right-of-way.		

DATE OF PRE-APPLICATION CONFERENCE	N/A	*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
❑ Comprehensive Plan Amendment ❑ Annexation ❑ Rezoning ❑ Preliminary Plat ☑ Final Plat ❑ PUD Preliminary Master Plan ❑ PUD Final Site Plan ❑ Site Development Plan ❑ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations:** ❑ Annexation Permission Form **Annexations/Rezoning/Plan Amendments:** ❑ Requested Zone Listed ❑ Statement of Compliance with Comprehensive Plan ❑ Concept Plan **Preliminary Plats/Site Development Plans:** ❑ Plans and/or Plats conforming to City standards with signed and completed check list **All Annexations/Rezoning/Preliminary Plats/Site Development Plans and PUDS:** ❑ Receipt of Payment for Pre-Application Meeting ❑ Written Legal Description copy ❑ Columbia Water System Availability Letter ❑ Columbia Waste Water Department Will Serve Letter

	Plats/PUDs: ☑ Project Name (include Sections & Phases) ☑ Total Number of Lots/Residential Units ☑ Square Footage of Non-Residential Floor Space ☑ Total acreage

Applications and all required submittals must be filed with the Department of Development Services prior to the established deadline. Both the applicant and property owner (if different from applicant) must sign the application. Any requests to defer or move the item to future meeting dates must be requested by the resubmittal date listed on the Planning Commission schedule.

APPLICANT
All communications go to the Applicant's email that is provided.

NAME	Abigail Overstreet	PHONE	615-749-0740
ADDRESS	108 Beasley Dr, Franklin, TN 37064	EMAIL	aoverstreet@wilsonpc.com

PROPERTY OWNER NAME	Hampshire Pike Holdings, LLC	PHONE	(949) 852-0700
ADDRESS	18100 Von Karman, Suite 500 Irvine, CA 92612	EMAIL	james.palda@steadfastco.com

If owner is not a natural person, documentation must be provided showing signing authority on behalf of the entity. If multiple persons are listed as owners in the records of the Maury County Assessor, all owners must sign or the signatory must provide documentation of authority to apply on behalf of record owner (i.e., Power of Attorney or notarized Letter of Authorization). In filling out this application, I attest that (1) I am familiar with the rules, regulations, and procedures of the City of Columbia & (2) all information contained herein is accurate & true to the best of my knowledge.

Abigail Overstreet	Abigail Overstreet	3/14/2025
APPLICANT NAME	APPLICANT SIGNATURE	DATE
Hampshire Pike Holdings, LLC Rod Emery, Authorized Signer	Rod Emery (Mar 17, 2025 13:22 PDT)	Mar 17, 2025
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE

21-1752 Hampshire Pike - Final Plat - Submittal Application

Final Audit Report 2025-03-17

Created:	2025-03-17
By:	Breana Finney (Breana.Finney@SteadfastCo.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAlMpDagpxplhKy8PvX-SVlsP8MHtXF6Hf

"21-1752 Hampshire Pike - Final Plat - Submittal Application" History

Document created by Breana Finney (Breana.Finney@SteadfastCo.com)
2025-03-17 - 6:38:59 PM GMT- IP address: 72.194.102.130

Document emailed to Rod Emery (Rod.Emery@SteadfastCo.com) for signature
2025-03-17 - 6:39:27 PM GMT

Email viewed by Rod Emery (Rod.Emery@SteadfastCo.com)
2025-03-17 - 8:22:21 PM GMT- IP address: 104.47.56.126

Document e-signed by Rod Emery (Rod.Emery@SteadfastCo.com)
Signature Date: 2025-03-17 - 8:22:53 PM GMT - Time Source: server- IP address: 204.2.198.46

Agreement completed.
2025-03-17 - 8:22:53 PM GMT

Hampshire Pike Resubmittal Letter

ITEM NO.
25-0205

DESCRIPTION: Hampshire Pk/Steadfast Ph 1

COMMENTS (Responses in RED)

Planning

1. The lead staff person for this case is Robert Archibald, Principal Planner. Please contact rarchibald@columbiatn.gov with questions about the development review process or technical comments. The case planner should be copied on all communication with other city staff. Acknowledged.
2. At resubmittal, please provide a response letter addressing each comment along with any revised plans. If the nature of the comment does not warrant a response, or the comment was previously addressed, please simply note that the information has been acknowledged. Any documents or additional information that you want to present to the Planning Commission should be included in your resubmittal. Completed.
3. Submit updated application found on website. Our application information is current.
4. Final Plat indicates Streets A & B that have not been constructed. Staff cannot support Final Plat as submitted. This has been removed from the plat as it is in a later phase of the development.
5. Preliminary Plat #25-0137 is currently being reviewed associated with this request that indicates new road configuration for Street A. Acknowledged.
6. Provide note that existing roadway that has been constructed is vested under previous Zoning Ordinance #3638. Cite previous zoning designation. Completed.
7. Show SFHA delineation on FP to include all flood zones associated with the development and BFEs. Completed.
8. Advisory note: All subdivision proposals shall be consistent with the need to minimize flood damage. Acknowledged.
9. Advisory note: All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located, and constructed to minimize or eliminate flood damage. Acknowledged.
10. Advisory note: All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards. Acknowledged.
11. Advisory note: No encroachments, including fill material, new structures or substantial improvements shall be located within areas of special flood hazard, unless by a Tennessee registered professional engineer provides certification demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community. The engineering certification should be supported by technical data that conforms to standard hydraulic engineering principles. Acknowledged.
12. Please explain phase 2? Why is this phase 2. Should be phase 1 This should be phase 1.

Engineering

1. Provide surety amount/calculations as Letter of Credit is required prior to resubmittal date. These have been delivered a couple weeks ago.
2. Asphalt binder and curbing shall be installed prior to resubmittal date. Acknowledged.
3. Grading shall substantially conform to approved construction plans (within 1 ft.) prior to resubmittal date. Acknowledged.
4. Install street signage (stop, street names) prior to resubmittal date. Stop signs and road signage will be installed this Wednesday, 6/18.
5. This project is not eligible for final plat. No infrastructure installed or construction plans approved for the Street A/ Street B Phase. These roads and lots have been removed as they should be a part of a later phase.

Wastewater

1. Lots 6-11 will not be allowed a building permit until the sanitary sewer is relocated. These lots have been removed from the plat.
2. Note the "proposed to be installed" and "existing to be abandoned" sanitary sewer with call outs. Completed.

Building

1. No comments. Acknowledged.

Police

1. No comments provided. Acknowledged.

City Attorney

1. No comments provided. Acknowledged.

Public Works

1. No comments. Acknowledged.

Columbia Power

1. Columbia Power System has an existing power line near your proposed development. We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction. Unfortunately, due to current supply chain challenges, no timeframe can be guaranteed regarding the availability of meters or transformers appropriate for your development. Acknowledged.

Fire

1. No comments. Acknowledged.

Columbia Water

1. Coordinate walk-through, Bacteria pressure testing with CPWS. Completed.
2. Provide a detailed list of water infrastructure cost including labor to CPWS Water Department in advance of plat signing for Deed Over form. Completed.
3. Water system must be complete and active at time of plat signing. Acknowledged.
4. When development moves forward on each lot a water availability letter will be required. Acknowledged.

Atmos Energy

1. No comments provided. Acknowledged.

Maury County E911

1. 911 must have all street names labeled correctly on plat at time of review. Acknowledged.
2. What are lots A,B, and C, do they belong in this development. If so why are they listed differently? These are lots being created with the plat. The other lots have been removed as this is only phase 1.
3. Make sure lot numbers do not change throughout phases from the approved preliminary plat. Acknowledged.
4. Avely Ridge Way is correct and reserved. Acknowledged.
5. Go to Maury911.org to review the fees for addresses per phase and any street names that need to be reserved. Acknowledged.
6. 911 will need approved over all layout to complete addressing scheme. Acknowledged.

Maury County Schools

1. Baker Elementary School, Whitthorne Middle, Central High School. The development combined with current neighborhoods and additional approved developments in these zones may require either new construction of realignment of school zones to accommodate new students. Acknowledged.

Duck River Electric Membership Corp

1. No comment. Acknowledged.

Maury County Highway Dept.

1. Specify beneficiary of ROW dedication along Old Williamsport Pike. Acknowledged.

ATT

1. No comment provided. Acknowledged.

CITY OF
COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, June 10, 2025

ITEM NO.
25-0205

DESCRIPTION: Hampshire Pk/Steadfast Ph 2

COMMENTS:

Fire

1. No comments

Engineering

2. Provide surety amount/calculations as Letter of Credit is required prior to resubmittal date.
3. Asphalt binder and curbing shall be installed prior to resubmittal date.
4. Grading shall substantially conform to approved construction plans (within 1 ft.) prior to resubmittal date.
5. Install street signage (stop, street names) prior to resubmittal date.
6. This project is not eligible for final plat. No infrastructure installed or construction plans approved for the Street A/ Street B Phase.

Planning

7. The lead staff person for this case is Robert Archibald, Principal Planner. Please contact rarchibald@columbiatn.gov with questions about the development review process or technical comments. The case planner should be copied on all communication with other city staff.
8. At resubmittal, please provide a response letter addressing each comment along with any revised plans. If the nature of the comment does not warrant a response, or the comment was previously addressed, please simply note that the information has been acknowledged. Any documents or additional information that you want to present to the Planning Commission should be included in your resubmittal.
9. Submit updated application found on website.
10. Final Plat indicates Streets A & B that have not been constructed. Staff cannot support Final Plat as submitted.

11. Preliminary Plat #25-0137 is currently being reviewed associated with this request that indicates new road configuration for Street A.
12. Provide note that existing roadway that has been constructed is vested under previous Zoning Ordinance #3638. Cite previous zoning designation.
13. Show SFHA delineation on FP to include all flood zones associated with the development and BFEs.
14. Advisory note: All subdivision proposals shall be consistent with the need to minimize flood damage.
15. Advisory note: All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located, and constructed to minimize or eliminate flood damage.
16. Advisory note: All subdivision proposals shall have adequate drainage provided to reduce exposure to flood hazards.
17. Advisory note: No encroachments, including fill material, new structures or substantial improvements shall be located within areas of special flood hazard, unless by a Tennessee registered professional engineer provides certification demonstrating that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one (1) foot at any point within the community. The engineering certification should be supported by technical data that conforms to standard hydraulic engineering principles.
18. Please explain phase 2? Why is this phase 2. Should be phase 1

Wastewater

19. Lots 6-11 will not be allowed a building permit until the sanitary sewer is relocated.
20. Note the "proposed to be installed" and "existing to be abandoned" sanitary sewer with call outs.

Building

21. No comments.

City Attorney

22. No comments provided.

Public Works

23. No comments.

Maury County E911

24. 1. 911 must have all street names labeled correctly on plat at time of review. 2. What are lots A,B, and C, do they belong in this development. If so why are they listed differently? 3. Make sure lot numbers do not change throughout phases from the approved preliminary plat. 4. Avely Ridge Way is correct and reserved. 5. Go to Maury911.org to review the fees for addresses per phase and any street names that need to be reserved. 6. 911 will need approved over all layout to complete addreessing scheme.

Maury County Schools

25. Baker Elementary School, Whitthorne Middle, Central High School
The development combined with current neighborhoods and additional approved developments in these zones may require either new construction of realignment of school zones to accomodate new students.

Columbia Water

26. Coordinate walk-through, Bacteria pressure testing with CPWS.

    Provide a detailed list of water infrastructure cost including labor to CPWS Water Department in advance of plat signing for Deed Over form.

    Water system must be complete and active at time of plat signing.

    When development moves forward on each lot a water availability letter will be required.

Police

27. No comments provided.

Duck River Electric Membership Corp

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

28. No comment.

Columbia Power

29. Columbia Power System has an existing power line near your proposed development. We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction.
    . Unfortunately, due to current supply chain challenges, no timeframe can be guaranteed regarding the availability of meters or transformers appropriate for your development.

Maury County Highway Dept.

30. Specify beneficiary of ROW dedication along Old Williamsport Pike.

ATT

31. No comment provided.

Atmos Energy

32. No comments provided.

Resubmittal Guidelines

Please provide a comment response letter as well as digital copies of revised plans and supporting documentation. Submit all required documents electronically through the online portal: columbia.onlama.com. If the files are oversized, please provide a file sharing link.

CITY OF
COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

Please contact the case planner identified in the Planning Comments with any questions about the review process.

Please contact pkeltner@columbiatn.gov or msanders@columbiatn.gov if you encounter difficulties with the online portal.

You will receive an invoice for required advertising and mailing fees. All fees must be paid by the Friday following resubmittal in order advance to the Planning Commission agenda.

NOTE: All resubmittals must demonstrate compliance with city standards prior to Planning Commission review. Requests which do not adhere to regulations and/or remain unresponsive to technical comments will not be forwarded to the next agenda until such items are amended. Final Plat applications which are not ready to proceed to Planning Commission following the first resubmittal deadline will be added to the following DRC agenda to confirm the status of required infrastructure and utilities. Applications which remain incomplete following two resubmittal deadlines will be closed.

LEGEND

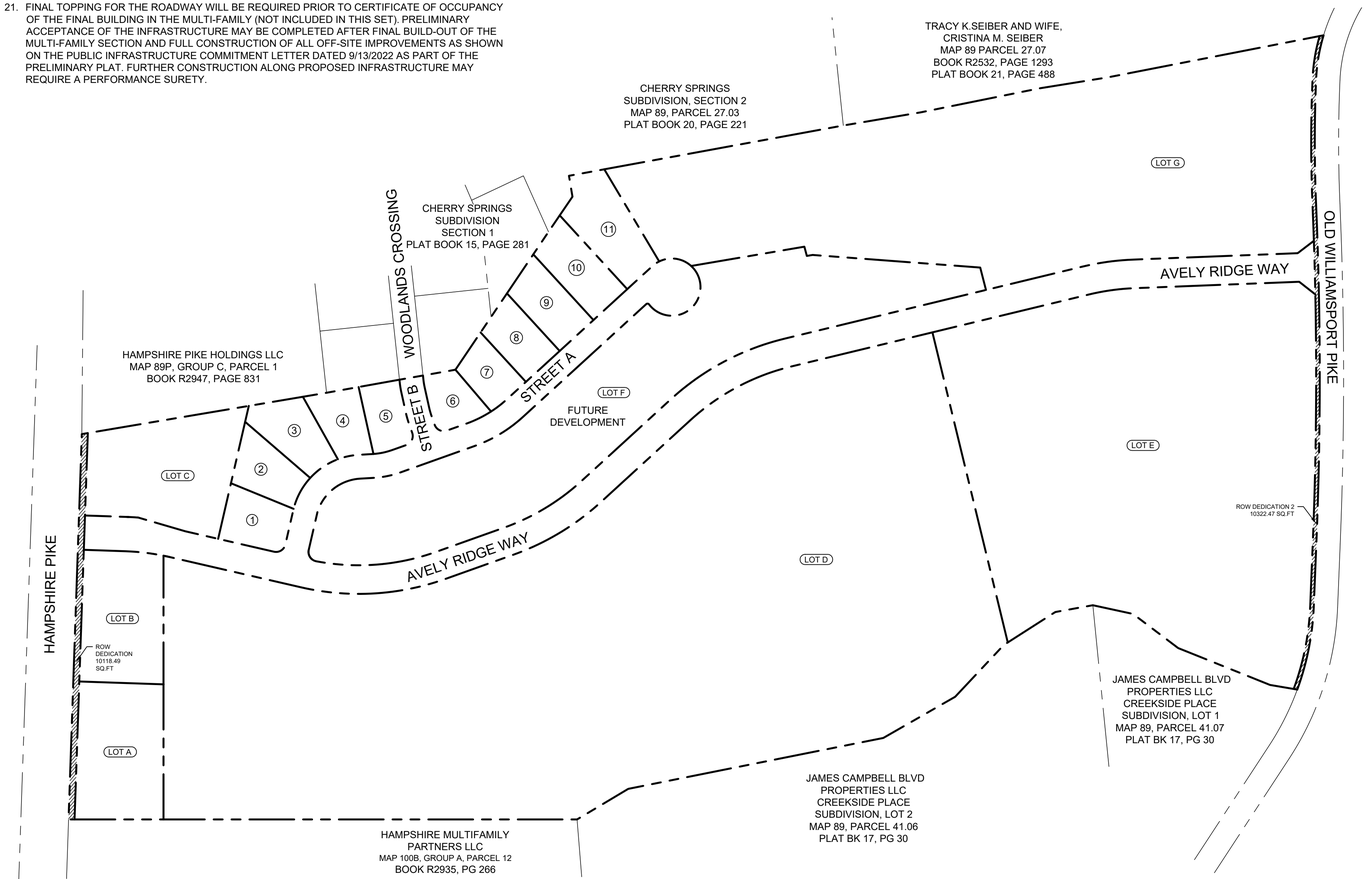
IRON PIN FOUND		FIRE HYDRANT		UTILITY POLE		PUBLIC UTIL. & DRAIN ESMT.	P.U.D.E.	BOUNDARY	
IRON PIN SET		SANITARY SEWER MH	SS	GUY ANCHOR		ADDRESSES	1234	CENTERLINE	
CONC. MON. FOUND		SANITARY SEWER CO	CO	COMMUNICATION BOX	C	HANDICAP SPACE		BUFFER	
CONC. MON. SET		AREA DRAIN		COMMUNICATION MH	C	SANITARY SEWER	8S SA / 8" SA	WATER FEATURE	
NON-MONUMENTED POINT		CURB INLET		GAS METER	G	WATER	4" W / 4" W	TREE LINE	
CONTROL POINT SET		STORM MH	ST	GAS VALVE		UNDERGROUND ELEC	UGE / UGE	R.O.W.	RIGHT OF WAY
BENCH MARK		ELECTRIC METER-BOX	E	EVERGREEN TREE		OVERHEAD ELEC	OHE / OHE	PVMT.	EDGE OF PAVEMENT
WATER METER	W	ELECTRIC MH	E	SIDEWALK		GAS	4" G / 4" G	PUDE	PUBLIC UTILITY AND DRAINAGE EASEMENT
WATER VALVE		LIGHT POLE		MIN. BUILDING SETBACK	M.B.S.L	COMMUNICATIONS	COM / COM	G.I.E.	GREEN INFRASTRUCTURE EASEMENT

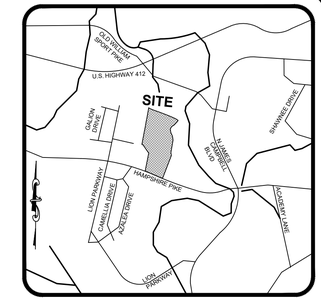
HATCH LEGEND

ROW DEDICATION

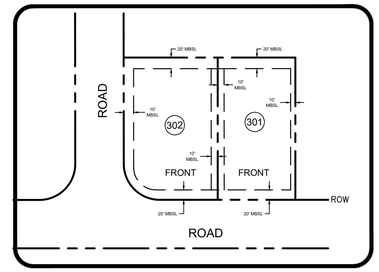
PLAT NOTES

1. THE PURPOSE OF THIS PLAT IS TO CREATE 18 LOTS AND DEDICATE RIGHT-OF-WAY.
2. SUBJECT PROPERTY IS PRESENTLY IDENTIFIED AS PARCEL 41.15, ON MAURY COUNTY TAX MAP 089. SAID PARCEL IS FURTHER IDENTIFIED AS THE PROPERTY DESCRIBED IN BOOK R2858, PAGE 105, REGISTERS OFFICE OF MAURY COUNTY, TENNESSEE.
3. THE PROPERTY SHOWN HEREON IS LOCATED WITHIN THE CITY OF COLUMBIA, MAURY COUNTY, TN. ALL MATTERS PERTAINING TO CONSTRUCTION, USE, LOCATION OF IMPROVEMENTS, SIGNAGE, PARKING, NOISE, VIBRATION, EMISSIONS, FIRE HAZARDS, RADIATION, ILLUMINATION, SETBACK PROVISIONS, ETC., ARE SUBJECT TO THE CITY OF COLUMBIA'S ZONING REGULATIONS AS INTERPRETED AND REGULATED BY THE DEPARTMENT OF DEVELOPMENT SERVICES.
4. EXISTING ZONING: CD-4
5. I HEREBY CERTIFY THAT THIS IS A CATEGORY IV SURVEY AND WAS CONDUCTED IN ACCORDANCE WITH RULE 0820-03.11 (GLOBAL POSITION SYSTEMS SURVEYS) ACCORDING TO THE CURRENT TENNESSEE MINIMUM STANDARDS OF PRACTICE AS PROMULGATED BY THE TENNESSEE STATE BOARD OF EXAMINERS FOR LAND SURVEYORS. THIS SURVEY WAS CONDUCTED WITH DUAL-FREQUENCY RTK GPS EQUIPMENT BASED ON THE TDOT CORPS NETWORK.
   a. POSITIONAL ACCURACY: 0.07'
   b. DATE OF SURVEY: 10-01-2021
   c. DATUM/EPOCH: TENNESSEE STATE PLANE (NAD83). OCCUPATIONS FOR CONTROL POINTS ARE 3 MINUTES EACH, SIDE SHOTS ARE 3 SECONDS.
   d. GEOID 3, ZONE 7 REVISED
6. NO COMBINED GRID FACTORS WERE USED.
7. BEARINGS SHOWN HEREON ARE BASED ON THE TENNESSEE STATE PLANE COORDINATE SYSTEM (NAD83). ELEVATIONS SHOWN HEREON ARE BASED ON NAVD88.
8. BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN ZONE "X" AND ZONE "AE" AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47119C0280E AND 47119C0165E, WITH AN EFFECTIVE DATE OF APRIL 16, 2007, WHICH MAKES UP A PART OF THE NATIONAL FLOOD INSURANCE PROGRAM. ZONE "X" IS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN. ZONE "X" HAS TWO DESCRIPTIONS. PLEASE SEE FLOOD PLAIN MAP IF ZONE "X" IS SHADED. ***IF FIELD RUN CONTOURS ARE ESTABLISHED YOU MUST PLOT THE FLOOD LINE BASED ON BFE UNLESS THE PROPERTY IS IN ZONE A.
9. ALL CORNERS SHOWN ON THE FACE OF THE SURVEY WILL BE SET WITH 5/8 IRON ROD WITH CAP BEARING THIS SURVEYORS COMPANY NAME.
10. THE DEVELOPER ACKNOWLEDGES THAT ALL LOTS HAVE ADEQUATE BUILDING ENVELOPES AND NO VARIANCES WILL BE REQUIRED.
11. STORMWATER MAINTENANCE AGREEMENT RECORDED IN DEED BOOK ____, PAGES ____.
12. ALL STREETS AND ALLEYS ARE DESIGNATED AS PUBLIC RIGHT-OF-WAY; THE CITY OF COLUMBIA IS NOT RESPONSIBLE FOR THE REPLACEMENT OR REPAIR OF ANY PRIVATE STRUCTURES WITHIN PUBLIC EASEMENTS SHOULD THE STRUCTURES BE DISTURBED IN THE PROCESS OF THE CITY EXERCISING ITS EASEMENT RIGHTS.
13. DETENTION PONDS AND OUTLET STRUCTURES WITHIN PUBLIC DRAINAGE EASEMENTS ARE TO BE MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.
14. OPEN SPACE AREAS, ROADWAY MEDIANS, BRICK PEDESTRIAN CROSSWALKS, BIKE PATHS, SIDEWALKS OUTSIDE OF RIGHT-OF-WAYS, TRAILS AND DETENTION FACILITIES SHALL BE MAINTAINED BY THE HOME OWNER'S ASSOCIATION AND SHALL BE PUBLIC UTILITY, DRAINAGE AND ACCESS EASEMENTS.
15. WITHIN NEW DEVELOPMENTS AND FOR OFF-SITE LINES CONSTRUCTED AS A RESULT OF, OR TO PROVIDE SERVICE TO, THE NEW DEVELOPMENT, ALL UTILITIES, (INCLUDING CABLE TELEVISION, ELECTRICAL, NATURAL GAS, SEWER, TELEPHONE AND WATER LINES) SHALL BE PLACED UNDERGROUND.
16. MAINTENANCE OF ALL STORMWATER MANAGEMENT FEATURES SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER(S) OR HOA.
17. NO OBSTRUCTIONS OR ENCROACHMENTS WHICH IMPEDE THE FLOW OF STORMWATER SHALL BE PERMITTED WITHIN PUBLIC DRAINAGE EASEMENTS BETWEEN LOTS. THE CITY OF COLUMBIA IS NOT RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY ENCROACHMENTS THAT ARE DAMAGED OR REMOVED IN THE COURSE OF MAINTENANCE ACTIVITY WITHIN EASEMENTS.
18. THE CITY OF COLUMBIA WATER MANAGEMENT DEPARTMENT HAS UNRESTRICTED ACCESS TO ITS DOMESTIC WATER, SANITARY SEWER, RECLAIM WATER LINES OR SYSTEM IMPROVEMENTS LOCATED WITHIN ITS EXCLUSIVE EASEMENTS WITHIN THE DEVELOPMENT. IN THE EVENT LANDSCAPING, FENCING, CONCRETE OR OTHER STRUCTURES ARE INSTALLED OR PLACED WITHIN A CITY OF COLUMBIA EASEMENT, THE CITY OF COLUMBIA SHALL HAVE THE RIGHT TO REMOVE SUCH ENCROACHMENTS WITHIN THE EASEMENT AS MAY BE NECESSARY FOR THE CITY OF COLUMBIA TO REPAIR, MAINTAIN OR REPLACE ITS INFRASTRUCTURE WHICH IS NOW OR IN THE FUTURE MAY BE LOCATED WITHIN THE EASEMENT WITHOUT OBTAINING ANY FURTHER PERMISSION FROM THE PROPERTY OWNER OR HOA. THE PROPERTY OWNER OR HOA SHALL BE RESPONSIBLE FOR REPAIRING AND/OR REPLACING ANY SUCH LANDSCAPING, FENCING, CONCRETE, OR OTHER STRUCTURES REMOVED OR DISTURBED BY THE CITY OF COLUMBIA IN COMMON OPEN SPACE LOTS AND IN AREAS OWNED BY THE PROPERTY OWNER OR HOA AT NO EXPENSE TO THE CITY OF COLUMBIA. INDIVIDUAL HOMEOWNERS SHALL BE RESPONSIBLE FOR STRUCTURES REMOVED OR DISTURBED BY THE CITY OF COLUMBIA WITHIN AN EASEMENT ON THE HOMEOWNER'S LOT AT THE HOMEOWNER'S EXPENSE.
19. PUBLIC UTILITY AND DRAINAGE EASEMENTS (PUDE) SHALL BE REQUIRED AND BE TEN (10) FEET IN WIDTH ON ALL PROPERTY LINES PARALLEL AND ABUTTING PUBLIC ROADS OR RIGHTS-OF-WAY, AND FIVE (5) FEET IN WIDTH ON ALL INTERIOR LOT LINES, EXCEPT FOR INTERIOR LOT LINES WITH A ZERO LOT LINE OR A COMMON WALL ALONG A LOT LINE.
20. LOTS A, B, AND C SHALL NOT HAVE DIRECT VEHICULAR ACCESS TO HAMPSHIRE PIKE.
21. FINAL TOPPING FOR THE ROADWAY WILL BE REQUIRED PRIOR TO CERTIFICATE OF OCCUPANCY OF THE FINAL BUILDING IN THE MULTI-FAMILY (NOT INCLUDED IN THIS SET). PRELIMINARY ACCEPTANCE OF THE INFRASTRUCTURE MAY BE COMPLETED AFTER FINAL BUILD-OUT OF THE MULTI-FAMILY SECTION AND FULL CONSTRUCTION OF ALL OFF-SITE IMPROVEMENTS AS SHOWN ON THE PUBLIC INFRASTRUCTURE COMMITMENT LETTER DATED 9/13/2022 AS PART OF THE PRELIMINARY PLAT. FURTHER CONSTRUCTION ALONG PROPOSED INFRASTRUCTURE MAY REQUIRE A PERFORMANCE SURETY.





VICINITY MAP
NOT TO SCALE



TYPICAL LOT LAYOUT
N.T.S.

Parcel Area Table		
Parcel #	Area (SF)	Area (AC)
LOT A	51983.31'	1.193
LOT B	47303.93'	1.086
LOT C	67507.00'	1.550
LOT D	1081848.95'	24.836
LOT E	526167.32'	12.079
LOT F	248322.75'	5.701
LOT G	478678.60'	10.989

Parcel Area Table		
Parcel #	Area (SF)	Area (AC)
1	15066.68'	0.346
2	15501.53'	0.356
3	17568.04'	0.403
4	13635.64'	0.313
5	12114.51'	0.278
6	11499.81'	0.264
7	12077.34'	0.277
8	14604.62'	0.335
9	16821.14'	0.386
10	19033.53'	0.437
11	25996.81'	0.597

Additional ROW Dedication Area Table		
ROW #	Area (SF)	Area (AC)
ROW DEDICATION 1	10118.49'	0.232
ROW DEDICATION 2	10322.47'	0.237



GRAPHIC SCALE: 1" = 150'

OWNER: HAMPSHIRE PIKE HOLDINGS LLC
18100 VON KARMAN AVENUE,SUITE 500
IRVINE,CA,92612
949-518-2191

ENGINEER: KIMLEY-HORN AND ASSOCIATES, INC.
10 LEA AVENUE, SUITE 400
NASHVILLE, TN 37210
615-564-2701
KELLEY FRANK@KIMLEY-HORN.COM

SURVEYOR: SEAN ALAN MCGOWAN, PE, PS
WILSON & ASSOCIATES, P.C.
108 BEASLEY DRIVE
FRANKLIN, TN 37064
(615) 794-2176
SMCGOWAN@WILSONPC.COM

SEAN ALAN MCGOWAN — REGISTERED LAND SURVEYOR — STATE OF TENNESSEE — AGRICULTURE — COMMERCE — TENNESSEE NO. 3516

WILSON & ASSOCIATES, P.C. Engineering/Surveying/Environmental

HAMPSHIRE PIKE

MIXED USE SUBDIVISION PHASE 2

CERTIFICATE OF APPROVAL OF WATER SYSTEM

I HEREBY CERTIFY THAT THE WATER SYSTEM(S) OUTLINED OR INDICATED ON THIS FINAL SUBDIVISION PLAT HAS/HAVE BEEN INSTALLED IN ACCORDANCE WITH CURRENT LOCAL AND STATE GOVERNMENT REQUIREMENTS, OR A SUFFICIENT BOND OR OTHER SURETY HAS BEEN FILED TO GUARANTEE SAID INSTALLATION.

NAME, TITLE, AGENCY OF AUTHORIZED APPROVING AGENT — DATE

CERTIFICATE OF COMPLIANCE

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE COLUMBIA SUBDIVISION REGULATIONS AND OTHER ADOPTED ORDINANCES AND POLICIES.

CITY ENGINEER, COLUMBIA, TENNESSEE — DATE

CERTIFICATE OF SURVEY ACCURACY

I (WE) HEREBY CERTIFY THAT TO THE BEST OF MY (OUR) KNOWLEDGE AND BELIEF THIS IS A TRUE AND ACCURATE SURVEY OF THE PROPERTY SHOWN HEREON; THAT THIS IS A CLASS "IV" LAND SURVEY AS DEFINED IN TITLE 62, CHAPTER 18, TENNESSEE CODE ANNOTATED, AND THAT THE RATIO OF PRECISION IS GREATER THAN OR EQUAL TO 1:10,000.

DATE

SEAN ALAN MCGOWAN, PE, PS, TENNESSEE RLS NO. 3516
WILSON & ASSOCIATES, P.C.
108 BEASLEY DRIVE, FRANKLIN, TN 37064
(615) 794-2176
SMCGOWAN@WILSONPC.COM

CERTIFICATE OF OWNERSHIP AND DEDICATION

I (WE) HEREBY CERTIFY THAT I AM (WE ARE) THE OWNER(S) OF THE PROPERTY SHOWN AND DESCRIBED HEREON AS EVIDENCED IN BOOK NUMBER R2858, PAGE 105, MAURY COUNTY REGISTERS OFFICE, AND THAT I (WE) HEREBY ADOPT THIS FINAL SUBDIVISION PLAT OF THE PROPERTY AS SHOWN HEREON AND DEDICATE ALL PUBLIC WAYS AND EASEMENTS AS NOTED WITH MY (OUR) FREE CONSENT.

OWNER — DATE

CERTIFICATE OF APPROVAL OF STREETS, DRAINAGE & UTILITIES

I HEREBY CERTIFY THAT THE STREETS, DRAINAGE, AND UTILITIES OUTLINED OR INDICATED ON THIS FINAL SUBDIVISION PLAT HAVE BEEN INSTALLED IN ACCORDANCE WITH CITY SPECIFICATIONS, OR A PERFORMANCE SURETY IN THE AMOUNT OF $_____ FOR STREETS AND DRAINAGE HAS BEEN POSTED WITH THE CITY OF COLUMBIA, TENNESSEE, TO ASSURE COMPLETION OF SUCH IMPROVEMENTS.

CITY ENGINEER, COLUMBIA, TENNESSEE — DATE

CERTIFICATE OF APPROVAL FOR SANITARY SEWER SYSTEM

I HEREBY CERTIFY THAT THE SANITARY SEWER SYSTEM OUTLINED OR INDICATED ON THIS FINAL SUBDIVISION PLAT HAS BEEN INSTALLED IN ACCORDANCE WITH THE CURRENT LOCAL AND STATE GOVERNMENT REQUIREMENTS, OR A SUFFICIENT BOND OR OTHER SURETY HAS BEEN FILED TO GUARANTEE SAID INSTALLATION.

DIRECTOR OF WASTEWATER DEPARTMENT, COLUMBIA, TENNESSEE — DATE

CERTIFICATE OF APPROVAL FOR RECORDING

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE CITY OF COLUMBIA SUBDIVISION REGULATIONS, WITH THE EXCEPTION OF SUCH VARIANCES, IF ANY, AS NOTED IN THE MINUTES OF THE COLUMBIA MUNICIPAL PLANNING COMMISSION, AND THAT IT HAS BEEN APPROVED FOR RECORDING IN THE OFFICE OF THE MAURY COUNTY REGISTER OF DEEDS.

SECRETARY, PLANNING COMMISSION, COLUMBIA, TENNESSEE — DATE

CERTIFICATE OF APPROVAL OF SUBDIVISION NAME & STREET NAMES

SUBDIVISION NAME AND STREET NAMES APPROVED BY THE CITY ENGINEERING DEPARTMENT AND BY E-911 MAURY COUNTY.

MAURY COUNTY E911 — DATE

RECORDING STAMP HERE

IF YOU CAN READ THIS YOU ARE HOLDING AN UNRECORDED COPY

FINAL SUBDIVISION PLAT

CITY OF COLUMBIA - MAURY COUNTY - TENNESSEE

TOTAL ACRES:	67.282	TOTAL NO. OF LOTS:	18
ACRES NEW RD/ST:	5.856 (ROW)	L.F. OF NEW RD/ST:	2749.5717
ACRES OPEN SPACE:	0.000	CIVIL DISTRICT:	3RD
DRAWN BY:	AS	CLOSURE ERROR:	SEE NOTE
SCALE:	1" = 150'	DATE:	05/14/2025

WA PROJECT NO. 21-1752 — SHEET 1 OF 3

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	93.65'	375.00'	14° 18' 31"	S62° 07' 47"E	93.41'
C2	91.58'	382.51'	13° 43' 01"	S62° 25' 31"E	91.36'
C3	263.09'	3068.00'	4° 54' 48"	S71° 44' 27"E	263.01'
C4	263.74'	3075.50'	4° 54' 48"	S71° 44' 27"E	263.66'
C5	709.46'	8499.93'	4° 46' 56"	S71° 48' 23"E	709.26'
C6	75.56'	8492.43'	0° 30' 35"	S73° 56' 33"E	75.56'
C7	112.41'	8492.43'	0° 45' 30"	S73° 18' 30"E	112.41'
C8	520.87'	8492.43'	3° 30' 51"	S71° 10' 20"E	520.79'
C9	178.22'	575.00'	17° 45' 32"	S60° 32' 09"E	177.51'
C10	177.29'	567.50'	17° 53' 57"	S60° 27' 56"E	176.57'
C11	23.64'	542.26'	2° 29' 53"	S21° 26' 26"W	23.64'
C12	32.21'	20.00'	92° 15' 51"	N75° 05' 34"E	28.84'
C13	121.61'	100.00'	69° 40' 33"	S19° 54' 22"E	114.25'
C14	56.87'	200.00'	16° 17' 35"	S6° 47' 07"W	56.68'
C15	118.93'	298.00'	22° 51' 58"	S12° 47' 40"E	118.14'

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C16	6.66'	4.00'	95° 22' 46"	S23° 27' 44"W	5.92'
C17	199.55'	60.00'	190° 33' 13"	S24° 07' 30"E	119.49'
C18	71.83'	60.00'	68° 35' 35"	N26° 18' 06"E	67.62'
C19	254.02'	480.00'	30° 19' 19"	N13° 47' 59"E	251.07'
C20	191.56'	480.00'	22° 51' 58"	N12° 47' 40"W	190.29'
C21	272.08'	540.00'	28° 52' 06"	N9° 47' 36"W	269.21'
C22	107.15'	540.00'	11° 22' 08"	N10° 19' 31"E	106.97'
C23	95.24'	480.00'	11° 22' 08"	S10° 19' 31"W	95.09'
C24	241.85'	480.00'	28° 52' 06"	S9° 47' 36"E	239.30'
C25	215.51'	540.00'	22° 51' 58"	S12° 47' 40"E	214.08'
C26	307.12'	540.00'	32° 35' 10"	S14° 55' 55"W	303.00'
C27	12.62'	480.00'	1° 30' 23"	S30° 28' 19"W	12.62'
C28	79.66'	480.00'	9° 30' 30"	N24° 57' 52"E	79.57'

HATCH LEGEND

ROW DEDICATION

DETENTION POND

CHERRY SPRINGS SUBDIVISION, SECTION 2
MAP 89, PARCEL 27.03
PLAT BOOK 20, PAGE 221

TRACY K.SEIBER AND WIFE, CRISTINA M. SEIBER
MAP 89 PARCEL 27.07
BOOK R2532, PAGE 1293
PLAT BOOK 21, PAGE 488

POB
N:470741.49
E:1649350.82

CHERRY SPRINGS SUBDIVISION SECTION 1
PLAT BOOK 15, PAGE 281

HAMPSHIRE PIKE HOLDINGS LLC
MAP 89P, GROUP C, PARCEL 1
BOOK R2947, PAGE 831

HAMPSHIRE PIKE (100' R.O.W.)

OLD WILLIAMSPORT PIKE (50' R.O.W.)

WOODLANDS CROSSING (50' R.O.W.)

STREET A (50' R.O.W.)

STREET B (50' R.O.W.)

AVELY RIDGE WAY (60' R.O.W.)
MAJOR LOCAL

SHEET 3

FUTURE DEVELOPMENT

LOT A
LOT B
LOT C
LOT D
LOT E
LOT F
LOT G

FLOOD ZONE X
FLOOD ZONE AE
REGULAR FLOODWAY
BASE FLOOD ELEVATION: 577'

WATER QUALITY DETENTION POND

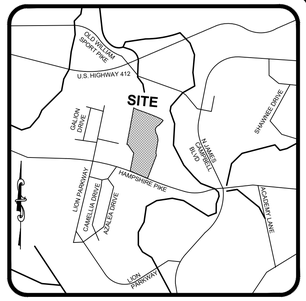
ROW DEDICATION 1
10318.48 SQ.FT

ROW DEDICATION 2
10322.47 SQ.FT

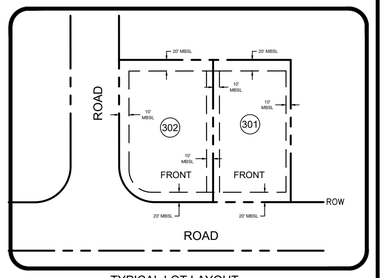
HAMPSHIRE MULTIFAMILY PARTNERS LLC
MAP 100B, GROUP A, PARCEL 12
BOOK R2935, PG 266

JAMES CAMPBELL BLVD PROPERTIES LLC
CREEKSIDE PLACE
SUBDIVISION, LOT 1
MAP 89, PARCEL 41.07
PLAT BK 17, PG 30

JAMES CAMPBELL BLVD PROPERTIES LLC
CREEKSIDE PLACE
SUBDIVISION, LOT 2
MAP 89, PARCEL 41.06
PLAT BK 17, PG 30



VICINITY MAP
NOT TO SCALE



TYPICAL LOT LAYOUT
N.T.S.

Parcel Line Table		
Line #	Length	Direction
L1	8.46'	N7°12'30"E
L2	7.63'	N27°51'17"E
L3	50.45'	N27°51'17"E
L4	118.69'	S55°18'29"W
L5	86.06'	S30°29'38"W
L6	79.99'	S7°58'19"W
L7	118.34'	N14°23'00"W
L8	9.97'	N14°23'00"W
L9	72.00'	S69°47'23"E
L10	50.10'	N8°07'38"E
L11	69.15'	N8°07'38"E
L12	41.77'	N37°28'50"W
L13	47.47'	N37°28'50"W

Parcel Line Table		
Line #	Length	Direction
L14	44.42'	N81°16'34"W
L15	88.09'	S20°12'37"W
L16	102.68'	S34°29'23"W
L17	70.69'	S31°13'30"W
L18	80.64'	S58°46'30"E
L19	28.34'	S14°55'55"W
L20	20.09'	S86°45'59"E
L21	12.28'	N8°34'35"E
L22	48.48'	S86°12'18"E
L23	42.70'	N19°07'41"W
L24	42.97'	S56°21'44"W
L25	8.61'	S31°13'30"W
L26	88.09'	N20°12'37"E

100 0 50 100 200
GRAPHIC SCALE: 1" = 100'

LEGEND

IRON PIN FOUND	FIRE HYDRANT	UTILITY POLE	PUBLIC UTIL. & DRAIN ESMT.	P.U.D.E.	BOUNDARY
IRON PIN SET	SANITARY SEWER MH	GUY ANCHOR	ADDRESSES	1234	CENTERLINE
CONC. MON. FOUND	SANITARY SEWER CO	COMMUNICATION BOX	HANDICAP SPACE		BUFFER
CONC. MON. SET	AREA DRAIN	COMMUNICATION MH	SANITARY SEWER	8" SA / 8" SA	WATER FEATURE
NON-MONUMENTED POINT	CURB INLET	GAS METER	WATER	4" W / 4" W	TREE LINE
CONTROL POINT SET	STORM MH	GAS VALVE	UNDERGROUND ELEC	UGE / UGE	R.O.W. RIGHT OF WAY
BENCH MARK	ELECTRIC METER-BOX	EVERGREEN TREE	OVERHEAD ELEC	OHE / OHE	PVMT. EDGE OF PAVEMENT
WATER METER	ELECTRIC MH	SIDEWALK	GAS	4" G / 4" G	PUDE PUBLIC UTILITY AND DRAINAGE EASEMENT
WATER VALVE	LIGHT POLE	MIN. BUILDING SETBACK M.B.S.L	COMMUNICATIONS	COM / COM	G.I.E. GREEN INFRASTRUCTURE EASEMENT

SHAWN ALAN MCCOWAN REGISTERED LAND SURVEYOR TENNESSEE NO. 3516

WILSON & ASSOCIATES, P.C.
Engineering/Surveying/Environmental

HAMPSHIRE PIKE

MIXED USE SUBDIVISION PHASE 2

RECORDING STAMP HERE

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FINAL SUBDIVISION PLAT

CITY OF COLUMBIA - MAURY COUNTY - TENNESSEE

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ACRES OPEN SPACE:	0.000	CIVIL DISTRICT:	3RD
DRAWN BY:	AS	CLOSURE ERROR:	SEE NOTE
SCALE:	1" = 100'	DATE:	05/14/2025

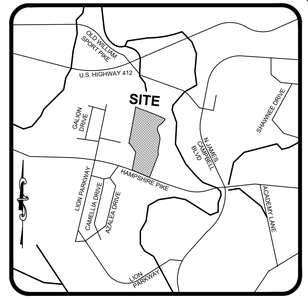
WA PROJECT NO. 21-1752 SHEET 2 OF 3

LEGEND

IRON PIN FOUND		FIRE HYDRANT		UTILITY POLE		PUBLIC UTIL. & DRAIN ESMT.	P.U.D.E.	BOUNDARY	
IRON PIN SET		SANITARY SEWER MH	SS	GUY ANCHOR		ADDRESSES	1234	CENTERLINE	
CONC. MON. FOUND		SANITARY SEWER CO	CO	COMMUNICATION BOX	C	HANDICAP SPACE		BUFFER	
CONC. MON. SET		AREA DRAIN		COMMUNICATION MH	C	SANITARY SEWER	8" SA / 8" SA	WATER FEATURE	
NON-MONUMENTED POINT		CURB INLET		GAS METER	G	WATER	4" W / 4" W	TREE LINE	
CONTROL POINT SET		STORM MH	ST	GAS VALVE		UNDERGROUND ELEC	UGE / UGE	R.O.W.	RIGHT OF WAY
BENCH MARK		ELECTRIC METER-BOX	E	EVERGREEN TREE		OVERHEAD ELEC	OHE / OHE	PVMT.	EDGE OF PAVEMENT
WATER METER	W	ELECTRIC MH	E	SIDEWALK		GAS	4" G / 4" G	PUDE	PUBLIC UTILITY AND DRAINAGE EASEMENT
WATER VALVE		LIGHT POLE		MIN. BUILDING SETBACK	M.B.S.L	COMMUNICATIONS	COM / COM	G.I.E.	GREEN INFRASTRUCTURE EASEMENT

HATCH LEGEND

- ROW DEDICATION
- DETENTION POND

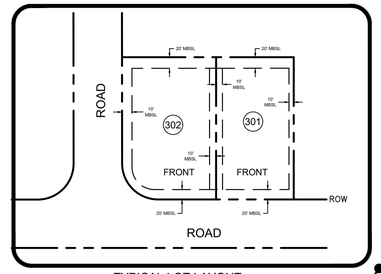


VICINITY MAP
NOT TO SCALE

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C11	23.64'	542.26'	2° 29' 53"	S21° 26' 26"W	23.64'
C12	32.21'	20.00'	92° 15' 51"	N75° 05' 34"E	28.84'
C13	121.61'	100.00'	69° 40' 33"	S19° 54' 22"E	114.25'
C14	56.87'	200.00'	16° 17' 35"	S6° 47' 07"W	56.68'
C15	118.93'	298.00'	22° 51' 58"	S12° 47' 40"E	118.14'
C16	6.66'	4.00'	95° 22' 46"	S23° 27' 44"W	5.92'
C17	199.55'	60.00'	190° 33' 13"	S24° 07' 30"E	119.49'
C18	71.83'	60.00'	68° 35' 35"	N26° 18' 06"E	67.62'
C19	254.02'	480.00'	30° 19' 19"	N13° 47' 59"E	251.07'
C20	191.56'	480.00'	22° 51' 58"	N12° 47' 40"W	190.29'
C21	272.08'	540.00'	28° 52' 06"	N9° 47' 36"W	269.21'
C22	107.15'	540.00'	11° 22' 08"	N10° 19' 31"E	106.97'
C23	95.24'	480.00'	11° 22' 08"	S10° 19' 31"W	95.09'
C24	241.85'	480.00'	28° 52' 06"	S9° 47' 36"E	239.30'
C25	215.51'	540.00'	22° 51' 58"	S12° 47' 40"E	214.08'
C26	307.12'	540.00'	32° 35' 10"	S14° 55' 55"W	303.00'
C27	12.62'	480.00'	1° 30' 23"	S30° 28' 19"W	12.62'
C28	79.66'	480.00'	9° 30' 30"	N24° 57' 52"E	79.57'
C29	31.42'	20.00'	90° 00' 00"	N13° 46' 30"W	28.28'
C30	2.87'	150.00'	1° 05' 41"	N58° 13' 40"W	2.87'
C31	74.31'	150.00'	28° 23' 00"	N43° 29' 19"W	73.55'
C32	70.63'	150.00'	26° 58' 47"	N15° 48' 26"W	69.98'
C33	45.16'	150.00'	17° 14' 57"	N6° 18' 26"E	44.99'
C34	2.28'	150.00'	0° 52' 12"	N14° 29' 49"E	2.28'
C35	40.38'	150.00'	15° 25' 23"	N6° 21' 01"E	40.26'
C36	31.42'	20.00'	90° 00' 00"	N46° 21' 41"W	28.28'
C37	24.73'	200.00'	7° 05' 08"	N87° 49' 06"W	24.72'
C38	22.50'	200.00'	6° 26' 40"	N81° 03' 12"W	22.48'
C39	16.87'	150.00'	6° 26' 40"	S81° 03' 12"E	16.86'
C40	18.55'	150.00'	7° 05' 08"	S87° 49' 06"E	18.54'
C41	31.42'	20.00'	90° 00' 00"	N43° 38' 19"E	28.28'
C42	57.25'	248.00'	13° 13' 38"	N7° 58' 30"W	57.13'
C43	41.72'	248.00'	9° 38' 20"	N19° 24' 29"W	41.67'
C44	17.00'	60.00'	16° 13' 57"	N16° 06' 40"W	16.94'

Parcel Line Table		
Line #	Length	Direction
L9	72.00'	S69°47'23"E
L10	50.10'	N8°07'38"E
L11	69.15'	N8°07'38"E
L12	41.77'	N37°28'50"W
L13	47.47'	N37°28'50"W
L14	44.42'	N81°16'34"W
L15	88.09'	S20°12'37"W
L16	102.68'	S34°29'23"W
L17	70.69'	S31°13'30"W
L18	80.64'	S58°46'30"E
L19	28.34'	S14°55'55"W
L20	20.09'	S86°45'59"E
L21	12.28'	N8°34'35"E
L22	48.48'	S86°12'18"E
L23	42.70'	N19°07'41"W
L24	42.97'	S56°21'44"W
L25	8.61'	S31°13'30"W

Parcel Line Table		
Line #	Length	Direction
L26	88.09'	N20°12'37"E
L27	120.00'	N31°13'30"E
L28	73.97'	N58°46'30"W
L29	28.34'	N14°55'55"E
L30	31.49'	N1°21'41"W
L31	18.96'	S88°38'19"W
L32	43.08'	N84°16'32"W
L33	5.46'	N77°33'40"W
L34	8.99'	S77°49'53"E
L35	43.08'	S84°16'32"E
L36	18.96'	N88°38'19"E
L37	44.00'	N1°21'41"W
L38	54.21'	N24°13'39"W
L39	96.00'	N24°13'39"W
L40	96.00'	N24°13'39"W
L41	96.00'	N24°13'39"W
L42	71.88'	N24°13'39"W



TYPICAL LOT LAYOUT
N.T.S.

GRAPHIC SCALE: 1" = 50'

SEAN ALAN MCGOWAN — REGISTERED LAND SURVEYOR — AGRICULTURE — COMMERCE — TENNESSEE NO. 3516

WILSON & ASSOCIATES, P.C. Engineering/Surveying/Environmental

HAMPSHIRE PIKE

MIXED USE SUBDIVISION PHASE 2

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FINAL SUBDIVISION PLAT

CITY OF COLUMBIA - MAURY COUNTY - TENNESSEE

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ACRES NEW RD/ST:	5.856 (ROW)	L.F. OF NEW RD/ST:	2749.5717
ACRES OPEN SPACE:	0.000	CIVIL DISTRICT:	3RD
DRAWN BY:	AS	CLOSURE ERROR:	SEE NOTE
SCALE:	1" = 50'	DATE:	05/14/2025

WA PROJECT NO. 21-1752 SHEET 3 OF 3

Appendix B: Subdivision Development Agreement

This DEVELOPMENT AGREEMENT is made and entered into on this

7 day of May, 2025,
between THE CITY OF COLUMBIA, TENNESSEE, (hereinafter the "CITY"), and

Hampshire Pike Development Holdings, LLC, the DEVELOPER (hereinafter the "DEVELOPER") named on the Addendum to this Agreement attached hereto and by this reference made a part hereof (hereinafter the "ADDENDUM").

WITNESSETH:

WHEREAS, the DEVELOPER desires to develop the property described on the ADDENDUM (hereinafter the "PROJECT"); and,

WHEREAS, the Development Plan of the PROJECT has been approved by the Columbia Municipal Planning Commission (hereinafter the "CMPC") on the

_____ day of _____, 20_____,
pursuant to Tennessee Code Annotated Title 13, Chapter 4, and the Subdivision Regulations of Columbia, Tennessee (hereinafter the "SUBDIVISION REGULATIONS"); and,

WHEREAS, the DEVELOPER is the owner of the PROJECT and has authority to engage in such development; and,

WHEREAS, the DEVELOPER desires to develop and improve said PROJECT; and,

WHEREAS, in order to provide for the health, safety, and welfare of future residents of the PROJECT, it will be necessary for certain improvements to the CITY'S utility systems, public infrastructure, and common areas to be constructed within and to serve the PROJECT including but not be limited to roads, bridges, sidewalks, pedestrian facilities, stormwater facilities, street signs, markings, signals, street lighting, recreation and park facilities, landscaping, and the like (hereinafter the "IMPROVEMENTS"); and,

WHEREAS, in order for the IMPROVEMENTS to be fully integrated with the utility systems and public infrastructure of the CITY and to function in a satisfactory manner, the DEVELOPER has agreed to construct, in accordance with the Subdivision Regulations and other rules, regulations, and ordinances of the CITY, the IMPROVEMENTS in said PROJECT and extend utilities to the PROJECT at their own cost; and,

WHEREAS, the CITY is willing to accept the dedication of the streets, utilities, and other improvements as determined in the Development Plan of the PROJECT, subject to the City of Columbia City Council approval by resolution, and subject to the applicant's compliance with all requirements in this agreement and applicable existing laws of the CITY of Columbia and the State of Tennessee,

NOW, THEREFORE, it is agreed and understood as follows:

B1 General Conditions

B1.1 Construction Costs

The DEVELOPER shall pay for all material and labor necessary to install and complete the roads, sidewalks, sewers, utilities, and other facilities in accordance with this agreement.

B1.2 City Ordinances, Rules and Regulations

All currently existing CITY ordinances, rules and regulations, and the Subdivision Regulations adopted by the CMPC are made a part of this agreement. In the event of a conflict between the terms of this agreement and a CITY ordinance, the ordinance shall prevail. In the event of a conflict between the terms of this agreement and the Subdivision Regulations, the Subdivision Regulations shall prevail. All work done under this agreement is to be performed in accordance with plans and specifications approved by the City and made a part, hereof.

B1.3 Fees

Review fees, inspection fees, and other amounts established by the CITY shall be paid prior to any review of the plans. If the DEVELOPER fails to install the facilities in accordance with the terms of this Agreement, no portion of the review fees, inspection fees, or other amounts paid to the CITY shall be refundable to the DEVELOPER.

B1.4 Inspection

The CITY shall have a continuous right to inspect the work and facilities to assure that the work and facilities are in accordance with the Subdivision Regulations, approved Construction Plans, and other rules, regulations, and ordinances of the CITY.

B1.5 Right of Entry

The CITY shall have the right, in case of breach of the Performance Agreement, to enter upon any property of the DEVELOPER and take all necessary actions to complete the work and obligations not completed.

B1.6 Easements

The DEVELOPER shall obtain and dedicate to the CITY or cause to be dedicated to the CITY, either by dedication on the plat or by easement deed, in either case in a form acceptable to the CITY, permanent easements of such widths as required by the CITY and noted on the Plans. The DEVELOPER further agrees to grant the necessary easements and rights-of-way across the DEVELOPER's properties without expense to the CITY and waive any claim for damages.

B1.7 Stormwater Maintenance Agreement

If the PROJECT includes any detention or retention ponds, common drainage ditches, water quality facilities, or stormwater facilities outside of the CITY rights-of-way, the DEVELOPER will submit a Stormwater Maintenance Agreement, to be filed with and recorded with the Final Plat.

B1.8 Attorney Fees and Other Expenses

The DEVELOPER shall pay all reasonable costs and expenses incurred by the CITY in enforcing or completing this agreement. The DEVELOPER shall pay all costs and expenses, including the CITY'S attorney fees, of any legal proceedings brought by the CITY against the DEVELOPER seeking remedies for the DEVELOPER'S failure to perform any of its obligations hereunder, whether or not any proceedings are prosecuted to judgment.

B1.9 Agreement Not Assignable

No third party shall obtain any benefits or rights under this agreement nor shall the rights or duties be assigned by either party.

B1.10 Revocation and Interpretation

This agreement shall bind the DEVELOPER when executed by the DEVELOPER and may not be revoked by the DEVELOPER without permission of the CITY, even if the agreement has not been executed by the CITY, or does not bind CITY, for other reasons. This agreement shall be interpreted in accordance with Tennessee law and may only be enforced in the Chancery Court or Circuit Court or Court of competent jurisdiction of Maury County, Tennessee, and Tennessee Appellate Courts.

B1.11 No Oral Agreement

This agreement may not be orally amended and supersedes all prior negotiations, commitments, or understandings.

B1.12 Separability

If any portion of this agreement is held to be unenforceable, the CITY shall have the right to determine whether the remainder of the agreement shall remain in effect, or whether the agreement shall be void and all rights of the DEVELOPER pursuant to this agreement terminated.

B 1.13 Transferability

The DEVELOPER agrees to not transfer the property on which this PROJECT is to be located without first providing the CITY with written notice. The transferee shall provide the CITY an Assumption Agreement of this Agreement, whereby the transferee agrees to perform the IMPROVEMENTS required under this agreement and to provide a performance surety. The DEVELOPER understands that if the DEVELOPER transfers said property without providing the notice of transfer and Assumption Agreement as required herein, they will be in breach of this agreement and in violation of the Subdivision Regulations.

B1.14 Indemnity

The DEVELOPER shall indemnify and hold the CITY harmless from all loss, costs, expenses, liability, money damages, penalties, or claims arising out of any work covered by this agreement, including any attorney fees incurred by the CITY in connection therewith. Inspection of the IMPROVEMENTS by an authorized representative of the CITY shall not constitute a waiver by the CITY of any defect or of any of the DEVELOPER'S obligations hereunder.

B1.15 Binding Effect

This agreement shall be binding upon the DEVELOPER and the DEVELEPOR's heirs, administrators, executors, assigns, and any other successors in interest.

B1.16 Entire Agreement

This document contains the entire agreement between the parties, and there are no collateral understandings or agreements between them. No variations or alterations of the terms of this agreement shall be binding upon either of the parties, unless the same be reduced to writing and made an amendment to this agreement.

B1.17 Headings

Paragraph titles and headings contained herein are inserted for convenience only and shall not be deemed a part of the agreement and in no way shall define, limit, extend, or describe the scope or intent of any provision, hereof.

B2 Performance Surety

At the time of execution of this agreement, the DEVELOPER shall provide the CITY a performance surety, in an amount determined by the City Engineer for the IMPROVEMENTS and other items specified by the Construction Plans, plats, and plans approved by the CMPC. This performance surety shall secure performance of all obligations of the DEVELOPER under this agreement. The performance surety shall meet all requirements established in Chapter 4: Performance Agreement of the Subdivision Regulations and secure full compliance with all terms and conditions of this agreement. The performance surety may be called for failure to comply with the provisions of this agreement in whole or in part according to the terms of the performance surety. The performance surety will not be released, except and until there has been full compliance with this agreement.

B3 Construction

B3.1 Construction Plans

The DEVELOPER shall submit to the CITY, Construction Plans describing in reasonable detail all utility systems, all storm water management systems, all street systems, pedestrian facilities, and all IMPROVEMENTS. The Construction Plans shall be designed according to the Engineering Standards and Specifications, all other codes and ordinances enforced by the City, and sound engineering judgment. The design of all utility systems shall follow the State of Tennessee and utility provider design criteria and specifications. In the event of a disagreement as to compliance with or interpretation of the Construction Plans and the CITY'S specifications, the decision of the CITY shall be final and binding on the DEVELOPER. The Construction Plans shall be prepared by a design professional licensed by the State of Tennessee to design all systems and shall bear the seal, signature, date, and license number of the professional preparing the Construction Plans.

B3.2 Commencement of Construction

Construction of IMPROVEMENTS may not begin until the following events have occurred:

A. The Preliminary Plat has been approved by the CMPC;
B. The Construction Plans are approved by the CITY;
C. The Tennessee Department of Environment and Conservation has approved the applicable portions of the Plans and has confirmed its approval to the CITY and/or DEVELOPER in writing;
D. The CITY shall have received an appropriately executed Development Agreement; and
E. The DEVELOPER shall give the CITY notice of commencement of construction, in writing at least one (1) working day prior to commencement.

B3.3 Site Grading

The DEVELOPER, hereby, agrees to construct all site grading to comply with the approved Construction Plans, including the approved Erosion Control Plan for the PROJECT and to comply with the Engineering Standards and Specifications, Stormwater Ordinance, and all other codes and ordinances enforced by the CITY.

B3.4 Storm Water Management Systems

The DEVELOPER shall be responsible for all storm water management work made necessary by the development of this PROJECT. It is understood and agreed that the CITY in its proprietary function is not and could not be expected to oversee, supervise, or direct the construction of all drainage improvements, and the excavation incident thereto. Neither is the CITY vested with the original design responsibility nor the means to formally survey elevations or the locations of improvements at every stage of the construction process. The CITY is vested with the right of periodic inspections, stop work order, and final approval as a measure of secondary or subsequent enforcement. The DEVELOPER has and shall retain the responsibility to properly anticipate, survey, design and construct the subdivision storm water improvements and give full assurance that same shall not adversely affect the flow or quality of surface water from or upon any property. In providing technical assistance, plan and design review, the CITY does not and shall not relieve or accept any liability from the DEVELOPER.

B3.5 Street Construction

The DEVELOPER, hereby, agrees to construct and improve the streets shown on the Construction Plans to comply with the CITY's specifications and to the satisfaction and approval of the City Engineer by grading, draining, subgrade preparation, base preparation, curbing, signage, striping, signalization, sidewalk installation, and paving with the required preparation, amounts, and types of material. The DEVELOPER further agrees to pay the cost of all engineering, inspection and laboratory cost incidental to the construction of subdivision streets including but not limited to material and density testing. The DEVELOPER further agrees to make all necessary adjustments to manholes and valve boxes to meet finished surface grade and to repair subsurface or base material, as required, in areas directed by the CITY Engineer, prior to application of final surface.

B3.6 Time Period for Construction

The DEVELOPER agrees to be bound to complete, within three (3) years of commencement of construction, all IMPROVEMENTS shown on the plat and plans and all things required by this agreement.

The DEVELOPER further agrees that if due to unforeseen circumstances, he is unable to complete all work included in this agreement within the time specified above, but desires to complete said agreement to the satisfaction of the CITY, the DEVELOPER shall submit a written request for extension of the agreement period to the CITY at least sixty (60) days prior to the expiration of the existing agreement period, specifying the reason for the DEVELOPER's failure to complete the work as agreed and a prospective date for such completion. The DEVELOPER further agrees that if the performance surety executed to secure the value of the work to be performed under this agreement, due to inflation or rising costs, is determined to be inadequate by the City Engineer to secure the cost of said IMPROVEMENTS at the time an extension is sought, the DEVELOPER will provide the additional security to bring the performance surety amount in line with current cost projections as made by the CITY. The DEVELOPER understands that the DEVELOPER's failure to follow the extension procedure constitutes a breach of this agreement and places the DEVELOPER in violation of the Subdivision Regulations. The DEVELOPER further understands, that should the DEVELOPER fail to complete any part of the work outlined in this agreement in a good and workmanlike manner as approved, the CITY shall reserve the right to withhold and withdraw all building permits within the PROJECT until all items of this Agreement have been fulfilled by the DEVELOPER.

B3.7 Off-Site Improvements

The DEVELOPER shall construct any and all off-site facilities that may be required to serve the PROJECT. Unless specifically noted in the Construction Plans and made a part of separate agreement with the CITY, the CITY shall not be required to reimburse the DEVELOPER for construction of off-site improvements.

B3.9 Inspection and Compliance

After construction begins, the CITY shall provide on-site construction inspection as the CITY deems necessary to ensure that all work is performed and completed in accordance with the Construction Plans, CITY specifications, and the contents of this agreement. In the event of a disagreement as to compliance with or interpretation of the Construction Plans and the CITY'S specifications, the decision of the CITY shall be final and binding on the DEVELOPER. If the DEVELOPER fails to construct in accordance with the approved Construction Plans or to comply with the CITY'S specifications, the CITY may issue a stop-work order and DEVELOPER, hereby, agrees to be bound by such order.

B3.10 Testing

The DEVELOPER agrees to pay the cost of all engineering, inspection, and laboratory cost incidental to construction of the streets, sidewalks, utilities, sewers, compacted fill material, and other facilities included within this agreement. Such testing includes, but is not limited to, material and density testing.

B3.11 Scrap Removal

The DEVELOPER agrees to comply with all local, state, and federal rules and regulations regarding waste material and debris disposal.

B3.12 Traffic Control

The DEVELOPER, hereby, agrees to prepare a traffic control/detour plan where required and shall submit said plan to the CITY for review and approval. All traffic control and safety devices, including

signs, lane markings, and barriers necessitated by construction activity undertaken pursuant to this agreement shall be installed and maintained by the DEVELOPER. All traffic control devices shall meet the standards and be installed in accordance with the latest edition of the Manual on Uniform Traffic Control Devices for Streets and Highways, published by the United States Department of Transportation.

B3.13 Temporary Facilities

The DEVELOPER shall provide all temporary facilities including but not limited to utilities and roadways, that are determined by the CITY to be required in connection with or as a result of interruption of service or access that occurs as a consequence of construction activity associated with the work covered by this agreement. Such temporary services shall in all regards and at all points in time be adequate to assure emergency access and adequate fire flows.

B4 Acceptance of Improvements

B4.1 Completion of Improvements

At such time as the improvements have been constructed and installed, in accordance with the Constructions Plans and specifications, required testing and inspections completed and found satisfactory, and all clean-up and cover-up has been done to the satisfaction the City Engineer, a letter requesting preliminary acceptance of the PROJECT will be provided by the DEVELOPER. Formal acceptance shall follow the procedure established in the Subdivision Regulations.

The DEVELOPER agrees the DEVELOPER shall have no claim, direct or implied, in the title or ownership of the IMPROVEMENTS specified in this agreement when the IMPROVEMENTS are complete and thereafter accepted by the CITY. The DEVELOPER will be responsible for construction failures and defects in PROJECT prior to final acceptance. During this period, it shall remain the responsibility of the DEVELOPER to correct and cure these defects and failures.

B4.2 As-Built Drawings and Post-Completion Items

The DEVELOPER agrees to furnish to the CITY as-built plans, on a reproducible, stable media, of the sanitary sewer, storm water management, water mains and service system, and streets within the subdivision before the CITY shall accept the subdivision.

B4.3 Acceptance of Facilities

Upon final acceptance of all or part of the IMPROVEMENTS in the PROJECT, then those IMPROVEMENTS shall become the property of the CITY free from all claims from any person or entity without the necessity of any further writing, agreement, or deed. The DEVELOPER further agrees that any facilities placed within a public or platted right-of-way or dedicated public easement are irrevocably dedicated to the public use without any right of reimbursement or compensation of any kind.

B4.4 Failure to Install

In the event the DEVELOPER fails to install the facilities in accordance with the terms of this agreement, the CITY may, in its sole discretion, elect to accept all or a portion of the IMPROVEMENTS in the PROJECT. Should the CITY choose to accept all or a portion of these IMPROVEMENTS, the CITY shall become the sole owner of these facilities. The CITY may give notice of acceptance by writing delivered to the DEVELOPER or recorded in the Register's Office of Maury County, Tennessee. No further writing or deed shall be required.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed in multiple originals by persons properly authorized so, to do on or as of the day and year first given.

Hampshire Pike Mixed-Use
PROJECT

Completed by the Developer	*Completed by the City*
Hampshire Pike Development Holdings, LLC DEVELOPER NAME	
Dinesh Dalvar AUTHORIZED AGENT NAME	CITY ENGINEER
SIGNATURE	SIGNATURE
May 7, 2025 DATE	DATE
18100 Von Karman Ave Ste 500 STREET	
Irvine, CA 92612 CITY, STATE, ZIP	
949-852-0700 PHONE	
chase.Emery@Steadfastco.com EMAIL	
Attest	*Attest*
Jacklyn White ATTEST NAME	ATTEST NAME
ATTEST SIGNATURE	ATTEST SIGNATURE
May 7, 2025 DATE	DATE

OWNER AFFIDAVIT
COLUMBIA, MAURY COUNTY, TENNESSEE

I/we, Hampshire Pike Holdings, LLC
(Print Name(s) in Full)

being duly sworn, depose and say(s) that I/we am/are the owner(s) of the property described as:

Map 089, Parcel 41.15
(Property Parcel/Tax ID Number)

and located at:

Hampshire Pike, Columbia, TN
(Street Address)

am fully aware of the request for development approval in Columbia, Tennessee. Furthermore, I/we hereby appoint:

Wilson & Associates - Joey Wilson, Sean McGowan, Abigail Overstreet
(Print Name(s) in Full)

to act as my/our authorized agent on my/our behalf on all matters pertaining to the processing and obtaining the application with the exception of legal documents for recording purposes.

Signature

18100 Von Karman, Suite 500
Property Owner Mailing Address

Irvine, CA 92612
City, State, & Zip

Subscribed and sworn to before me this ____ day of _____, 20____.

See attached certificate
Notary Public

My Commission Expires: _____

CALIFORNIA ALL PURPOSE JURAT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of CALIFORNIA)
ss
County of ORANGE)

Subscribed and sworn to (or affirmed) before me on this 17th day of March, 2025, by Rodney F. Emery, proved to me on the basis of satisfactory evidence to be the person who appeared before me.

CRISTINA B. SONG
Notary Public - California
Orange County
Commission # 2422287
My Comm. Expires Oct 20, 2026

WITNESS my hand and official seal.

C Song

Signature of Notary Public

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

PLANNING COMMISSION
PROJECT DEVELOPMENT APPLICATION

SUBMITTAL REQUIREMENTS

Final Plat: * *1 hard copy of all materials for submittal + PDF copy on a USB flash drive (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"
All Others: * Please submit the Application online at City of Columbia | Permitting (onlama.com)

ADDRESS/LOCATION	Hampshire Pike, Columbia, TN		
	TAX MAP: 089	GROUP:	PARCEL: 41.15
SUMMARY OF NATURE OF REQUEST AND WORK	The purpose of this plat is to create 7 lots and dedicate right-of-way.		

DATE OF PRE-APPLICATION CONFERENCE	N/A	*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
❑ Comprehensive Plan Amendment ❑ Annexation ❑ Rezoning ❑ Preliminary Plat ☑ Final Plat ❑ PUD Preliminary Master Plan ❑ PUD Final Site Plan ❑ Site Development Plan ❑ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations:** ❑ Annexation Permission Form **Annexations/Rezoning/Plan Amendments:** ❑ Requested Zone Listed ❑ Statement of Compliance with Comprehensive Plan ❑ Concept Plan **Preliminary Plats/Site Development Plans:** ❑ Plans and/or Plats conforming to City standards with signed and completed check list **All Annexations/Rezoning/Preliminary Plats/Site Development Plans and PUDS:** ❑ Receipt of Payment for Pre-Application Meeting ❑ Written Legal Description copy ❑ Columbia Water System Availability Letter ❑ Columbia Waste Water Department Will Serve Letter

	Plats/PUDs: ☑ Project Name (include Sections & Phases) ☑ Total Number of Lots/Residential Units ☑ Square Footage of Non-Residential Floor Space ☑ Total acreage

Applications and all required submittals must be filed with the Department of Development Services prior to the established deadline. Both the applicant and property owner (if different from applicant) must sign the application. Any requests to defer or move the item to future meeting dates must be requested by the resubmittal date listed on the Planning Commission schedule.

APPLICANT
All communications go to the Applicant's email that is provided.

NAME	Abigail Overstreet	PHONE	615-749-0740
ADDRESS	108 Beasley Dr, Franklin, TN 37064	EMAIL	aoverstreet@wilsonpc.com

PROPERTY OWNER NAME	Hampshire Pike Holdings, LLC	PHONE	(949) 852-0700
ADDRESS	18100 Von Karman, Suite 500 Irvine, CA 92612	EMAIL	james.palda@steadfastco.com

If owner is not a natural person, documentation must be provided showing signing authority on behalf of the entity. If multiple persons are listed as owners in the records of the Maury County Assessor, all owners must sign or the signatory must provide documentation of authority to apply on behalf of record owner (i.e., Power of Attorney or notarized Letter of Authorization). In filling out this application, I attest that (1) I am familiar with the rules, regulations, and procedures of the City of Columbia & (2) all information contained herein is accurate & true to the best of my knowledge.

Abigail Overstreet	Abigail Overstreet	3/14/2025
APPLICANT NAME	APPLICANT SIGNATURE	DATE
Hampshire Pike Holdings, LLC Rod Emery, Authorized Signer	Rod Emery (Mar 17, 2025 13:22 PDT)	Mar 17, 2025
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE

21-1752 Hampshire Pike - Final Plat - Submittal Application

Final Audit Report 2025-03-17

Created:	2025-03-17
By:	Breana Finney (Breana.Finney@SteadfastCo.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAlMpDagpxplhKy8PvX-SVlsP8MHtXF6Hf

"21-1752 Hampshire Pike - Final Plat - Submittal Application" History

Document created by Breana Finney (Breana.Finney@SteadfastCo.com)
2025-03-17 - 6:38:59 PM GMT- IP address: 72.194.102.130

Document emailed to Rod Emery (Rod.Emery@SteadfastCo.com) for signature
2025-03-17 - 6:39:27 PM GMT

Email viewed by Rod Emery (Rod.Emery@SteadfastCo.com)
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Document e-signed by Rod Emery (Rod.Emery@SteadfastCo.com)
Signature Date: 2025-03-17 - 8:22:53 PM GMT - Time Source: server- IP address: 204.2.198.46

Agreement completed.
2025-03-17 - 8:22:53 PM GMT

Legends at Hunters Glen Preliminary Plat/ Site Development Plan

Project #:	25-0138	Location:	Map 112 Parcel 18.02
Applicant:	Gerald Vick, PE	Case Type(s):	Preliminary Plat/SDP
Staff Planner:	Austin Brass, AICP	Proposed Use:	Single-Family Homes

PROJECT SUMMARY

The applicant requests approval of a Preliminary Plat and Site Development Plan for 146 residential lots as well as associated infrastructure and open spaces including three (3) defined civic spaces. This 53.48-acre Development Parcel yields 2.7 density units per acre (du/ac).

- This property is currently zoned (*CD-3*) that permits single-family homes as proposed.
- CPWS (*Columbia Power & Water System*) noted that they can only supply up to 500 gpm (*gallons per minute*) of the required 1,000 gpm for fire protection of single-family homes on the site. Fire added that they can supply an additional 600 gpm with a fire tanker truck to reach 1,100 gpm in meeting this requirement. With this addition, any previous requirements for sprinkler systems have been eliminated.
- This staff report evaluates the site development plan in adherence to all required bulk and area standards including civic space and tree canopy retention requirements.
- The Planning Commission is the **decision-making authority** for the Site Development Plan and Preliminary Plat.
- Any approval should be conditioned on timely submittal of "as-approved" plans which, in the determination of the Zoning Administrator and the City Engineer, reflect the substance of the plans approved by the Planning Commission.
- Templates are provided at the end of the report to assist the Planning Commission in crafting properly formatted motions.

SITE INFORMATION

CURRENT ZONING	EXISTING USE	EXISTING IMP.	LAND AREA
CD-3	Vacant	Vacant	+ /- 53.48 acres



FUTURE LAND USE MAP (Rural Transitions)	ZONING MAP (CD-3)





SITE CONTEXT/ADJACENT PROPERTIES			
	Future Land Use	Zoning	Current Use
Subject Property	Rural Transition	CD-3	Vacant
North	Suburban Neighborhoods	CD-3	Single-Family Residential
South	Rural Transition	County Zoning	Vacant Land
East	Suburban Neighborhoods	CD-3L	Single-Family Residential
West	Rural Transition	County Zoning	Estate Lot

CONSISTENCY WITH CONNECT COLUMBIA



Rural Transition (Current Future Land Use Map Classification) (p.37): The Rural Transition (RT) future land use classification is comprised of unincorporated areas within Columbia's UGB as well as areas of low-intensity development. The area is characterized by very low-density residential neighborhoods, large-lot semi-rural estates, open spaces, and legacy agricultural operations. The intent of the RT future land use classification is to create and maintain a discernible transition between agricultural uses in unincorporated Maury County and the suburban areas within Columbia. Future development is limited and emphasizes the preservation of agricultural uses, open spaces, and the semi-rural character of areas adjacent to the city. Natural and scenic features, such as rolling hills, rivers, rock outcroppings, and historic homes, should be preserved.

CONFORMITY WITH ZONING ORDINANCE

- **The proposed Site Development Plan and Preliminary Plat conform to the bulk standards of the Ordinance within a CD-3 Character District.**

Lots, Building Sites & Bulk Standards:

- The Zoning Ordinance permits single-family house types and conforms to section § 4.3.1 C of the Zoning Ordinance. This proposed preliminary plat includes front-loaded lots for single-family homes.
- Lot variations include:
  - 93 (65') front-loaded single-family home lots.
  - 53 (50') rear-loaded single-family home lots.
  - 5 civic space lots.
  - 3 open space lots
- Table 1 describes applicable bulk standards per section 4.3.1-C (building, lot & building site standards) of the Zoning Ordinance for a CD-3-character district in which the subject property is zoned.

Table 1 (CD-3) Neighborhood Character District Standards		
Bulk Standards:	**Required**	**Proposed**
Density:	4 Density Units Per Acre Maximum	2.7 Density Units Per Acre
Minimum Lot width:	40 ft if alley loaded/ 65ft front-loaded	65ft. min front loaded/ 50 ft. alley loaded
Lot/Building Enfrontment:	Vehicle Throughfare/ 20% or less may enfront pedestrian path	All lots enfront a throughfare street section
Parking:	2 spaces/ Dwelling Unit	2 spaces/ Dwelling Unit
Max. Impervious:	50 Percent	Less than 50 Percent
Setbacks:	**Front** – 25 ft **Front Secondary:** 20 ft min **Side** – 8 ft. **Rear:** 25' or 15 min from center line of rear alley	Front – 25' Front Secondary- 20' Side- 8' Rear- 25' (*15' from centerline of alley for rear loaded lots*)

Architecture:

- **Staff will determine conformity with the prescriptive design standards of the Ordinance at the time of building permit.**
    - The applicant has acknowledged that all structures must conform to the prescriptive design standards in Table 4.3.1-C of the Ordinance.
    - The Ordinance requires garages to maintain minimum interior dimensions of 10 by 20 feet. The Ordinance also establishes a maximum garage door width of 33% of total of garage plus façade width if garage door is in 1st of 2nd layer *(not setback 20' behind principal frontage).*

Civic Spaces:

- **Section 5.3.1 of Zoning Ordinance requires any development parcel to utilize at least 5% but no more than 20% of its gross acreage as Civic Space conforming to the standards of Table 5.3.2-A.[1] The proposed Site Development Plan provides the required Civic Space in the form of Pocket Parks (2) greens with a playground and one (1) playground.**

    - The Site Development Plan dedicates 5.04 acres (9.4%) of the 56-acre site to Civic Space.
    - The Site Development Plan dedicates 5 open space lots totaling 10.54 acres.
    - Each Civic Space type has its own standards for intent, size, frontage, character, and typical facilities including two greens and a playground area.
    - A Playground Shed Plan indicates the requirement of a playground within a 1300 ft radius of all residential lots.
    - A Pedestrian Shed plan indicates the required Main Civic Space Green within the center of an 800' pedestrian shed radius.

Civic Space Types for Development Plan	Size	Area
Green 1 (Main Civic Space *includes playground*)	0.5 acres min, 8 acres max	3.32 acres

[1] Development Parcel: a parcel of land: (1) which, either alone or together with one or more other parcels under a common Development scheme, program or plan, is ten (10) or more gross acres; (2) with respect to the Development of which any new Thoroughfare, Internal Drive, or extension or change of the design of any existing Thoroughfare or Internal Drive is required or will be made or proposed; or (3) with respect to which any District assignment or any Thoroughfare or Internal Drive or alignment thereof is proposed to be made or changed by a Zoning Map or Zoning Map amendment. (§ 9.3, p. 504).

Pocket Park	500 sf min, 0.5 acres max	3.65 acres
Pocket Park	500 sf min, 0.5 acres max	0.75 acres
Green	0.5 acres min, 8 acres max	2.70 acres
Playground	No min, No max	0.24 acres

Tree Canopy Cover Retention/ Specimen Tree Preservation:

- **Section 4.3.16** of the Zoning Ordinance requires a percentage of existing tree cover to be preserved based upon the existing canopy on the development site. In addition, a tree preservation plan is required for any specimen trees that are being proposed to be removed outside of the dedicated tree preservation area.

    - A CD-3-character district has a tree canopy retention based off the existing tree canopy on site. The applicant's tree canopy retention plan indicates that 21.3 acres (40%) of the 53.48-acre site exists as tree canopy. Table 4.3.16 L of the Zoning Ordinance indicates that a site with 40% or more of existing tree canopy cover is required to retain 45% of the site as a tree save area for a CD-3 district. This site development plan indicates 9.84 acres (45%) of the site as tree save area as required.

    - The applicant has provided a tree resource inventory plan that indicates all specimen trees (*trees greater than 24 inches in caliper width*) on site outside of the required tree preservation area. 21 trees have been identified as specimen trees with 12 specimen trees being removed. Among the calculation of the specimen trees, 660 caliper inches are required to be replaced. The applicant noted that 132 trees are being proposed as part of the tree replacement plan. As noted, these trees shall not count towards other landscaping requirements such as street trees and must be replanted within the development site.

REVIEW PROCESS

The Development Review Committee reviewed the proposed Preliminary Plat/Site Development Plan at its June 2025 meeting, as directed by section **8.3.7** of the Zoning Ordinance. Technical comments are provided in the agenda package and summarized above.

The Planning Commission is the Decision-Making Authority for all Site Development Plans that include one or more Development Parcels under **§ 8.5.6. D**.[2]

Sections **8.5.6. I.** establishes criteria for reviewing a Site Development Plan.

I. Review Criteria.

1. The criteria to be applied by the Zoning Administrator in reviewing a Development Plan and application shall be whether such Plan and application comply with the applicable conditions, standards, and requirements of this Ordinance, all applicable previously approved Plans, such as earlier Development Plans, the Comprehensive Plan and all other applicable Land Use Plans.

2. With respect to a Development Plan the Planning Commission shall rely on all conditions, standards, and requirements of Articles 1-5 and Article 7 of this Ordinance and the Planning Commission shall review the Plan and application for compliance with all other conditions, standards, and requirements of this Ordinance, including without limitation those of Article 6 (Supplemental Standards) , and compliance with all applicable previously approved Plans, such as earlier Development Plans, the Comprehensive Plan and all other applicable Land Use Plans. Additionally, in the case of Development in a Special District, the Planning Commission shall determine:

a. Whether the Development Plan conforms to all applicable requirements of the Zoning Ordinance, including any methods of Alternative Performance which are included in the request.

b. Whether the Development design and Development intensity are appropriate for and tailored to the unique characteristics of the site, such

[2] [2] Development Parcel: a parcel of land: (1) which, either alone or together with one or more other parcels under a common Development scheme, program or plan, is ten (10) or more gross acres; (2) with respect to the Development of which any new Thoroughfare, Internal Drive, or extension or change of the design of any existing Thoroughfare or Internal Drive is required or will be made or proposed; or (3) with respect to which any District assignment or any Thoroughfare or Internal Drive or alignment thereof is proposed to be made or changed by a Zoning Map or Zoning Map amendment. (§ 9.3, p. 490).

as significant wooded areas, specimen trees, wetlands, steep slopes, floodplains, and zoning of or existing Development on Adjacent property.

c. Whether the proposed access and circulation are adequate with respect to traffic patterns, traffic control measures, and street pavement areas, with provisions for maintaining traffic flows and reducing any negative effects of traffic on nearby properties.

d. Compliance with site construction requirements.

e. Adequacy of stormwater facilities, water supply, sanitary sewer service, fire protection, street signs, and street lighting as evidenced by conformance with City standards, specifications and guidelines; and

f. Compliance with requirements for Easements or dedications.

Section **2.2.6** of the Subdivision Regulations establishes the review criteria for approval of Preliminary Plats.

A. Recommendations and final action on a Preliminary Plat shall be based on consideration of the following criteria:

1. Whether the proposed Preliminary Plat complies with the applicable zoning district and overlay districts;

2. Whether the proposed Preliminary Plat is consistent with all standards of these Subdivision Regulations and other related codes and ordinances enforced by the City; and

3. Whether the CMPC determines that the particular site is suitable for the type of platting and development proposed.

In the event of a denial, **§ 2.2.5** of the Subdivision Regulations requires the Planning Commission to identify the specific parts of applicable plans and regulations with which the plat does not comply.

SUMMARY OF DEVELOPMENT REVIEW COMMITTEE COMMENTS

The DRC reviewed this proposal at its June 2025 meeting. A full list of comments, and the applicant's responses, is provided in the agenda packet. Some key comments are noted below.

- **Planning** noted that Cul-de-sacs are prohibited unless approved by Planning Commission waiver. The applicant responded by providing a temporary cul-de-sac turnaround with the notation that the cul-de-sac will be eliminated upon the extension of Foster Lane. In addition, it was noted to add a tree inventory plan of all specimen trees outside of the natural tree save area. The applicant responded with an updated plan remarking the removal of several specimen trees.
- **Engineering** noted that site is subject to the submitted TIS (Traffic Impact Study) and Construction Plans.
- **Columbia Water** indicated that the water availability letter was issued on April 23, 2025, and remains valid for 120 days. The letter has noted that the system is only able to support a minimum fire flow of 500 gpm with a requirement for 1,000 gpm required for fire safety. Fire added a note stating that a new tanker truck is in place with Mutual aid agreement with Maury County Fire and Rescue to bring an additional tanker if needed to supply an additional 600 **gpm in addition to the** CPWS water letter stating they can supply 500 gpm with a fire flow of 1,100 gpm; with this additional flow, all homes will not require fire sprinklers if all homes stay under 3,600 sq ft.

SAMPLE MOTIONS

Approve:

Move to find, based on the information presented by the applicant and the analysis provided by city staff, that the criteria listed in sections **8.5.6.I** and **8.5.6.K**of the City of Columbia Zoning Ordinance, and Section **2.2.6** of the Subdivision Regulations, have been satisfied and approve the Site Development Plan and Preliminary Plat as presented *[, subject to technical comments and other conditions presented by planning staff*].

Approve Subject of Conditions:

Move to find, based on the information presented by the applicant and the analysis provided by city staff, that the criteria listed in sections **8.5.6.I** and **8.5.6.K** of the City of

Columbia Zoning Ordinance, and Section **2.2.6** of the Subdivision Regulations, have been satisfied and approve the Site Development Plan and Preliminary Plat subject to the following conditions: [*list conditions of approval crafted by Planning Commission*].

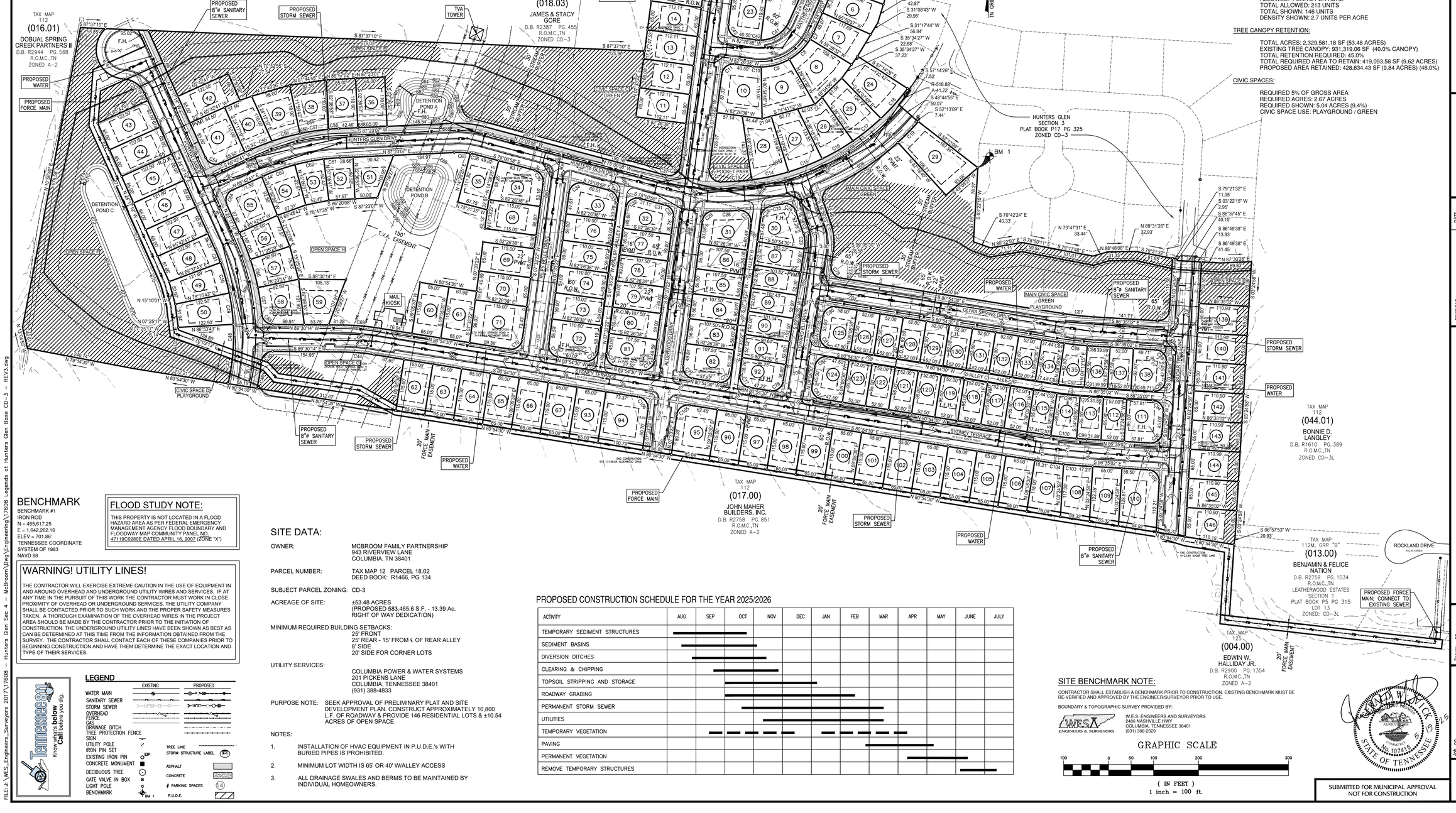
Deny:

Move to deny the Site Development Plan and Preliminary Plat having found, based on the information presented by the applicant and the analysis provided by city staff, that the criteria listed in sections **8.5.6.I** and K of the City of Columbia Zoning Ordinance and Section **2.2.6** of the Subdivision Regulations are not satisfied [*list specific reasons for denial*].

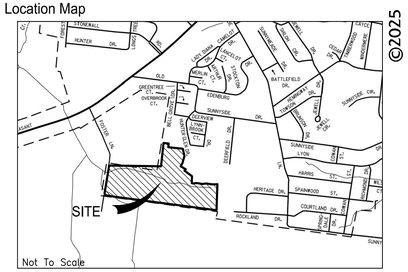
Defer:

Move to find that there is insufficient information to make a decision, defer the matter to the next regularly scheduled meeting of the Planning Commission, and request that the [*applicant/staff*] provide: [*list additional information*] for review at that future meeting.

PRELIMINARY PLAT



Location Map



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PARCEL CALCULATIONS:

DENSITY:

TOTAL ACRES: 53.48 ACRES
ALLOWED: 4 UNITS PER ACRE
TOTAL ALLOWED: 213 UNITS
TOTAL SHOWN: 146 UNITS
DENSITY SHOWN: 2.7 UNITS PER ACRE

TREE CANOPY RETENTION:

TOTAL ACRES: 2,329,581.18 SF (53.48 ACRES)
EXISTING TREE CANOPY: 931,319.06 SF (40.0% CANOPY)
TOTAL RETENTION REQUIRED: 45.0%
TOTAL REQUIRED AREA TO RETAIN: 419,093.58 SF (9.62 ACRES)
PROPOSED AREA RETAINED: 428,634.43 SF (9.84 ACRES) (46.0%)

CIVIC SPACES:

REQUIRED 5% OF GROSS AREA
REQUIRED ACRES: 2.67 ACRES
REQUIRED SHOWN: 5.04 ACRES (9.4%)
CIVIC SPACE USE: PLAYGROUND / GREEN

BENCHMARK

BENCHMARK #1
IRON ROD
N = 455,617.25
E = 1,642,262.16
ELEV = 701.86'
TENNESSEE COORDINATE SYSTEM OF 1983
NAVD 88

FLOOD STUDY NOTE:

THIS PROPERTY IS NOT LOCATED IN A FLOOD HAZARD AREA AS PER FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD BOUNDARY AND FLOODWAY MAP COMMUNITY PANEL NO. 47119C0280E DATED APRIL 16, 2007 (ZONE "X")

WARNING! UTILITY LINES!

THE CONTRACTOR WILL EXERCISE EXTREME CAUTION IN THE USE OF EQUIPMENT IN AND AROUND OVERHEAD AND UNDERGROUND UTILITY WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK THE CONTRACTOR MUST WORK IN CLOSE PROXIMITY OF OVERHEAD OR UNDERGROUND SERVICES, THE UTILITY COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES TAKEN. A THOROUGH EXAMINATION OF THE OVERHEAD WIRES IN THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION. THE UNDERGROUND UTILITY LINES HAVE BEEN SHOWN AS BEST AS CAN BE DETERMINED AT THIS TIME FROM THE INFORMATION OBTAINED FROM THE SURVEY. THE CONTRACTOR SHALL CONTACT EACH OF THESE COMPANIES PRIOR TO BEGINNING CONSTRUCTION AND HAVE THEM DETERMINE THE EXACT LOCATION AND TYPE OF THEIR SERVICES.

Tennessee811 — Know what's below. Call before you dig.

LEGEND

	EXISTING	PROPOSED
WATER MAIN		
SANITARY SEWER		
STORM SEWER		
OVERHEAD		
FENCE		
GAS		
DRAINAGE DITCH		
TREE PROTECTION FENCE		
SIGN		
UTILITY POLE		
IRON PIN SET		
EXISTING IRON PIN	EIP	
CONCRETE MONUMENT		
DECIDUOUS TREE		
GATE VALVE IN BOX		
LIGHT POLE		
BENCHMARK	BM 1	

TREE LINE
STORM STRUCTURE LABEL (ST)
ASPHALT
CONCRETE
PARKING SPACES (14)
P.U.D.E.

SITE DATA:

OWNER: MCBROOM FAMILY PARTNERSHIP
943 RIVERVIEW LANE
COLUMBIA, TN 38401

PARCEL NUMBER: TAX MAP 12 PARCEL 18.02
DEED BOOK: R1466, PG 134

SUBJECT PARCEL ZONING: CD-3

ACREAGE OF SITE: ±53.48 ACRES
(PROPOSED 583,465.6 S.F. - 13.39 Ac. RIGHT OF WAY DEDICATION)

MINIMUM REQUIRED BUILDING SETBACKS:
25' FRONT
25' REAR - 15' FROM ℄ OF REAR ALLEY
8' SIDE
20' SIDE FOR CORNER LOTS

UTILITY SERVICES:
COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TENNESSEE 38401
(931) 388-4833

PURPOSE NOTE: SEEK APPROVAL OF PRELIMINARY PLAT AND SITE DEVELOPMENT PLAN. CONSTRUCT APPROXIMATELY 10,800 L.F. OF ROADWAY & PROVIDE 146 RESIDENTIAL LOTS & ±10.54 ACRES OF OPEN SPACE.

NOTES:

1. INSTALLATION OF HVAC EQUIPMENT IN P.U.D.E.'s WITH BURIED PIPES IS PROHIBITED.
2. MINIMUM LOT WIDTH IS 65' OR 40' W/ALLEY ACCESS
3. ALL DRAINAGE SWALES AND BERMS TO BE MAINTAINED BY INDIVIDUAL HOMEOWNERS.

PROPOSED CONSTRUCTION SCHEDULE FOR THE YEAR 2025/2026

ACTIVITY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY
TEMPORARY SEDIMENT STRUCTURES												
SEDIMENT BASINS												
DIVERSION DITCHES												
CLEARING & CHIPPING												
TOPSOIL STRIPPING AND STORAGE												
ROADWAY GRADING												
PERMANENT STORM SEWER												
UTILITIES												
TEMPORARY VEGETATION												
PAVING												
PERMANENT VEGETATION												
REMOVE TEMPORARY STRUCTURES												

SITE BENCHMARK NOTE:

CONTRACTOR SHALL ESTABLISH A BENCHMARK PRIOR TO CONSTRUCTION. EXISTING BENCHMARK MUST BE RE-VERIFIED AND APPROVED BY THE ENGINEER/SURVEYOR PRIOR TO USE.

BOUNDARY & TOPOGRAPHIC SURVEY PROVIDED BY:

W.E.S. ENGINEERS AND SURVEYORS
2486 NASHVILLE HWY
COLUMBIA, TENNESSEE 38401
(931) 388-2329

GRAPHIC SCALE

100 0 50 100 200 300
(IN FEET)
1 inch = 100 ft.

SUBMITTED FOR MUNICIPAL APPROVAL
NOT FOR CONSTRUCTION

WES ENGINEERS & SURVEYORS
CIVIL ENGINEERS & LAND SURVEYORS
2486 NASHVILLE HIGHWAY
COLUMBIA, TN 38401
PHONE: (931) 388-2329
www.wesengineers.com

ENGINEERS & SURVEYORS

Client
MCBROOM FAMILY PARTNERSHIP
943 RIVERVIEW LANE
COLUMBIA, TN 38401
LINDA WALKER, PARTNER

REVISIONS	DATE

LEGENDS AT HUNTERS GLEN

HUNTERS GLEN DRIVE
COLUMBIA, TENNESSEE
PRELIMINARY PLAT

Drawn: CG | Checked: GV | Approved: GV | Date: 5/19/2025

Job. no. 17608 | Scale: Vertical: 1" = 100' Horizontal:

1 of 2

FILE: J:\WES_Engineers_Surveyors 2017\17608 - Hunters Glen Sec 4 - McBroom\Dwg\Engineering\17608 Legends at Hunters Glen Base CD-3 - REV3.dwg

PRELIMINARY PLAT

LOT AREA TABLE

LOT	SQ. FT.	ACRES
1	7,858.9	0.18
2	10,150.5	0.23
3	17,211.3	0.40
4	16,001.1	0.37
5	12,027.6	0.28
6	8,161.5	0.19
7	8,123.4	0.19
8	10,077.5	0.23
9	10,205.7	0.23
10	10,345.6	0.24
11	7,287.1	0.17
12	7,287.1	0.17
13	7,287.1	0.17
14	7,287.1	0.17
15	7,287.1	0.17
16	7,287.1	0.17
17	7,287.1	0.17
18	7,287.1	0.17
19	7,287.1	0.17
20	7,287.1	0.17
21	7,283.3	0.17
22	8,889.4	0.20
23	8,950.0	0.21
24	9,625.4	0.22
25	8,629.4	0.20
26	8,297.4	0.19
27	8,949.8	0.21
28	9,894.1	0.23
29	12,796.0	0.29
30	7,952.2	0.18
31	8,438.9	0.19
32	6,957.8	0.16
33	7,301.2	0.17
34	8,916.4	0.20
35	7,329.2	0.17
36	7,150.0	0.16
37	7,138.1	0.16
38	8,023.5	0.18
39	8,288.7	0.19
40	7,156.6	0.16
41	9,160.9	0.21
42	7,948.1	0.18
43	7,962.5	0.18
44	7,962.5	0.18
45	7,962.5	0.18
46	7,962.5	0.18
47	7,962.5	0.18
48	8,079.6	0.19
49	7,511.7	0.17
50	7,532.6	0.17
51	6,494.6	0.15
52	5,717.7	0.13
53	5,481.4	0.13
54	6,805.7	0.16
55	8,601.8	0.20
56	6,368.8	0.15
57	6,449.7	0.15
58	8,304.7	0.19
59	8,029.6	0.18
60	7,475.0	0.17
61	7,305.5	0.17
62	7,475.0	0.17
63	7,475.0	0.17
64	7,475.0	0.17
65	7,475.0	0.17
66	7,475.0	0.17
67	7,475.0	0.17
68	7,475.0	0.17
69	7,475.0	0.17
70	7,475.0	0.17
71	11,077.6	0.25
72	8,795.2	0.20
73	6,490.0	0.15
74	6,490.0	0.15
75	6,490.0	0.15
76	6,490.0	0.15
77	6,342.5	0.15
78	6,342.5	0.15
79	6,342.5	0.15
80	6,342.5	0.15
81	7,345.4	0.17
82	7,860.2	0.18
83	6,020.0	0.14
84	6,020.0	0.14
85	6,020.0	0.14
86	6,020.0	0.14
87	5,435.1	0.12
88	5,362.7	0.12
89	5,290.2	0.12
90	5,217.7	0.12
91	5,145.2	0.12
92	5,883.9	0.14
93	7,475.0	0.17
94	11,288.1	0.26
95	9,814.6	0.23
96	7,475.0	0.17
97	7,475.0	0.17
98	7,475.0	0.17
99	7,475.0	0.17
100	7,475.0	0.17
101	7,475.0	0.17
102	7,475.0	0.17
103	7,475.0	0.17
104	7,475.0	0.17
105	7,475.0	0.17
106	7,475.0	0.17
107	8,117.4	0.19
108	7,760.5	0.18
109	8,162.7	0.19
110	11,105.1	0.25
111	7,599.1	0.17
112	4,940.0	0.11
113	5,043.8	0.12
114	5,208.9	0.12
115	5,015.1	0.12
116	4,940.0	0.11
117	4,940.0	0.11
118	4,940.0	0.11
119	4,940.0	0.11
120	4,940.0	0.11
121	4,940.0	0.11
122	4,940.0	0.11
123	4,940.0	0.11
124	6,619.2	0.15
125	6,438.0	0.15
126	4,810.0	0.11
127	4,810.0	0.11
128	4,810.0	0.11
129	4,810.0	0.11
130	4,810.0	0.11
131	4,810.0	0.11
132	4,810.0	0.11
133	4,810.0	0.11
134	4,737.2	0.11
135	5,086.1	0.12
136	4,750.0	0.11
137	4,810.0	0.11
138	6,642.7	0.15
139	7,208.7	0.17
140	7,208.7	0.17
141	7,208.7	0.17
142	7,208.7	0.17
143	7,208.7	0.17
144	7,208.7	0.17
145	7,208.7	0.17
146	7,806.2	0.18
MAIN_CIVIC_SPACE	144,778.8	3.32
CIVIC_SPACE_A	16,171.2	0.37
CIVIC_SPACE_B	11,357.6	0.26
CIVIC_SPACE_C	43,325.9	0.99
CIVIC_SPACE_D	3,850.5	0.09

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	25.00'	39.27'	35.36'	S 37°26'38" E	90°00'00"
C2	130.00'	37.46'	37.33'	S 74°11'18" E	16°30'40"
C3	130.00'	65.30'	64.62'	S 51°32'30" E	28°46'56"
C4	130.00'	65.30'	64.62'	S 22°45'34" E	28°46'56"
C5	130.00'	65.30'	64.62'	S 06°01'22" W	28°46'56"
C6	130.00'	8.48'	8.48'	S 22°16'56" W	3°44'13"
C7	130.00'	16.73'	16.72'	S 27°50'15" W	7°22'25"
C8	130.00'	65.30'	64.62'	S 45°54'56" W	28°46'56"
C9	130.00'	65.30'	64.62'	S 74°41'52" W	28°46'56"
C10	130.00'	19.21'	19.19'	N 86°40'39" W	8°28'03"
C11	25.00'	39.27'	35.36'	S 52°33'22" W	90°00'00"
C12	25.00'	42.48'	37.55'	S 41°07'30" E	97°21'44"
C13	517.50'	69.68'	69.63'	N 86°20'11" E	7°42'53"
C14	517.50'	84.05'	83.96'	N 77°49'34" E	9°18'22"
C15	517.50'	80.23'	80.15'	N 68°43'55" E	8°52'56"
C16	517.50'	79.22'	79.14'	N 59°54'19" E	8°46'14"
C17	517.50'	79.97'	79.89'	N 51°05'35" E	8°51'13"
C18	517.50'	89.33'	89.22'	N 41°43'17" E	9°53'24"
C19	582.50'	65.05'	65.01'	S 44°22'31" W	6°23'53"
C20	582.50'	183.61'	182.85'	S 56°36'16" W	18°03'37"
C21	25.00'	36.90'	33.64'	S 23°21'01" W	84°34'08"
C22	132.50'	64.23'	63.60'	S 04°47'41" E	27°46'22"
C23	67.50'	32.60'	32.28'	N 04°44'39" W	27°40'17"
C24	25.00'	36.90'	33.64'	N 61°13'07" W	84°34'08"
C25	582.50'	28.19'	28.19'	S 77°53'01" W	2°46'23"
C26	25.00'	31.29'	29.29'	S 43°24'47" W	71°42'50"
C27	25.00'	44.27'	38.71'	N 43°10'10" W	101°27'05"
C28	582.50'	55.80'	55.78'	S 88°50'56" W	5°29'18"
C29	25.00'	36.67'	33.47'	S 49°34'29" W	84°02'13"
C30	25.00'	37.13'	33.81'	N 34°59'38" W	85°06'01"
C31	582.50'	25.70'	25.70'	N 76°16'48" W	2°31'41"
C32	25.00'	42.51'	37.57'	S 56°16'12" W	97°25'40"
C33	25.00'	36.03'	32.99'	N 33°43'48" W	82°34'20"
C34	25.00'	42.51'	37.57'	S 56°16'12" W	97°25'40"
C35	25.00'	36.03'	32.99'	N 33°43'48" W	82°34'20"
C36	172.50'	15.20'	15.20'	N 78°05'49" W	5°02'56"
C37	517.50'	12.46'	12.46'	S 75°42'22" E	1°22'48"
C38	25.00'	41.91'	37.17'	N 55°34'48" E	96°02'52"
C39	25.00'	39.27'	35.36'	N 52°33'22" E	90°00'00"
C40	70.00'	130.23'	112.24'	S 29°08'47" E	106°35'40"
C41	70.00'	79.65'	75.42'	S 56°44'46" W	65°11'27"
C42	70.00'	10.04'	10.03'	N 86°33'04" W	8°12'52"
C43	25.00'	39.27'	35.36'	N 37°26'38" W	90°00'00"
C44	470.00'	70.51'	70.44'	N 85°12'22" W	8°35'43"
C45	25.00'	36.80'	33.57'	S 48°19'37" W	84°20'18"
C46	532.50'	60.60'	60.57'	S 09°25'05" W	6°31'13"
C47	467.50'	132.85'	132.41'	N 05°02'11" E	16°16'56"
C48	467.50'	56.73'	56.70'	N 00°22'19" E	6°57'11"
C49	467.50'	70.44'	70.38'	N 07°25'17" W	8°38'00"
C50	467.50'	70.44'	70.38'	N 16°03'17" W	8°38'00"
C51	467.50'	31.96'	31.96'	N 22°19'48" W	3°55'03"
C52	55.50'	60.22'	57.31'	N 59°22'21" W	62°10'03"
C53	64.50'	150.50'	118.61'	N 19°36'36" W	133°41'33"
C54	25.00'	39.27'	35.36'	S 69°17'19" E	90°00'00"
C55	532.50'	49.75'	49.73'	N 68°23'16" E	5°21'11"
C56	532.50'	64.50'	64.46'	N 74°32'04" E	6°56'25"
C57	532.50'	64.63'	64.59'	N 81°28'54" E	6°57'15"
C58	532.50'	22.55'	22.55'	N 86°10'19" E	2°25'35"
C59	237.50'	70.98'	70.72'	S 84°03'09" E	17°07'28"
C60	172.50'	36.11'	36.04'	N 86°37'05" W	11°59'37"
C61	467.50'	36.55'	36.54'	S 85°08'43" W	4°28'48"
C62	467.50'	65.40'	65.35'	S 78°53'51" W	8°00'56"
C63	467.50'	74.89'	74.81'	S 70°18'02" W	9°10'42"
C64	25.00'	39.27'	35.36'	S 20°42'41" W	90°00'00"
C65	532.50'	53.10'	53.08'	S 21°25'55" E	5°42'48"
C66	532.50'	64.74'	64.70'	S 15°05'34" E	6°57'56"
C67	532.50'	59.89'	59.86'	S 08°23'16" E	6°26'40"
C68	25.00'	36.80'	33.57'	S 47°20'05" E	84°20'18"
C69	530.00'	79.51'	79.44'	S 85°12'22" E	8°35'43"
C70	25.00'	39.94'	35.83'	N 53°19'26" E	91°32'07"
C71	25.00'	38.60'	34.88'	S 36°40'34" E	88°27'53"
C72	25.00'	39.94'	35.83'	N 53°19'26" E	91°32'07"
C73	25.00'	38.60'	34.88'	S 36°40'34" E	88°27'53"
C74	25.00'	39.94'	35.83'	N 53°19'26" E	91°32'07"
C75	25.00'	38.60'	34.88'	S 36°40'34" E	88°27'53"
C76	25.00'	39.94'	35.83'	N 53°19'26" E	91°32'07"
C77	25.00'	38.60'	34.88'	S 36°40'34" E	88°27'53"
C78	25.00'	39.27'	35.36'	N 54°05'30" E	90°00'00"
C79	25.00'	39.27'	35.36'	S 35°54'30" E	90°00'00"
C80	25.00'	39.27'	35.36'	S 54°05'30" W	90°00'00"
C81	25.00'	39.27'	35.36'	S 35°54'30" E	90°00'00"
C82	25.00'	39.27'	35.36'	S 54°05'30" W	90°00'00"
C83	25.00'	39.27'	35.36'	S 35°54'30" E	90°00'00"
C84	762.50'	12.98'	12.98'	S 81°23'46" E	0°58'32"
C85	762.50'	51.84'	51.83'	S 83°49'54" E	3°53'43"
C86	762.50'	10.71'	10.71'	S 86°10'54" E	0°48'17"
C87	697.50'	69.09'	69.06'	S 83°44'46" E	5°40'32"
C88	25.00'	39.27'	35.36'	N 48°24'58" E	90°00'00"
C89	25.00'	39.27'	35.36'	S 41°35'02" E	90°00'00"
C90	25.00'	39.27'	35.36'	S 48°24'58" W	90°00'00"
C91	855.00'	12.01'	12.01'	N 86°10'54" W	0°48'17"
C92	855.00'	58.13'	58.12'	N 83°49'54" W	3°53'43"
C93	855.00'	14.56'	14.56'	N 81°23'46" W	0°58'32"
C94	25.00'	39.27'	35.36'	N 41°35'02" W	90°00'00"
C95	875.00'	20.11'	20.11'	N 85°55'32" W	1°19'00"
C96	875.00'	52.01'	52.00'	N 83°33'52" W	3°24'20"
C97	875.00'	14.56'	14.56'	N 81°23'06" W	0°57'11"
C98	25.00'	39.27'	35.36'	S 48°24'58" W	90°00'00"
C99	970.00'	22.29'	22.29'	N 85°55'32" W	1°19'00"
C100	970.00'	57.65'	57.65'	N 83°33'52" W	3°24'20"
C101	970.00'	16.14'	16.14'	N 81°23'06" W	0°57'11"
C102	25.00'	39.27'	35.36'	S 41°35'02" E	90°00'00"
C103	1030.00'	47.81'	47.81'	N 85°15'15" W	2°39'34"
C104	1030.00'	54.22'	54.21'	N 82°24'59" W	3°00'57"
C105	25.00'	39.94'	35.83'	S 53°19'26" W	91°32'07"
C106	25.00'	38.60'	34.88'	S 36°40'34" E	88°27'53"

PARCEL CALCULATIONS:

DENSITY:

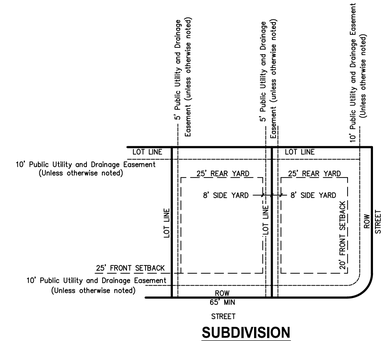
TOTAL ACRES: 53.48 ACRES
ALLOWED: 4 UNITS PER ACRE
TOTAL ALLOWED: 213 UNITS
TOTAL SHOWN: 146 UNITS
DENSITY SHOWN: 2.7 UNITS PER ACRE

TREE CANOPY RETENTION:

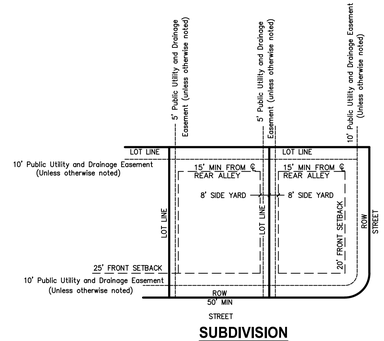
TOTAL ACRES: 2,329,581.18 SF (53.48 ACRES)
EXISTING TREE CANOPY: 931,319.06 SF (40.0% CANOPY)
TOTAL RETENTION REQUIRED: 45.0%
TOTAL REQUIRED AREA TO RETAIN: 419,093.58 SF (9.62 ACRES)
PROPOSED AREA RETAINED: 428,634.43 SF (9.84 ACRES) (46.0%)

CIVIC SPACES:

REQUIRED 5% OF GROSS AREA
REQUIRED ACRES: 2.67 ACRES
REQUIRED SHOWN: 5.04 ACRES (9.4%)
CIVIC SPACE USE: PLAYGROUND / GREEN



SUBDIVISION
TYPICAL LOT LAYOUT



SUBDIVISION
TYPICAL LOT LAYOUT
ALLEY LOADED

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2486 NASHVILLE HIGHWAY
COLUMBIA, TN 38401
PHONE: (931) 388-2329
www.wesengineers.com

ENGINEERS & SURVEYORS

Client
MCBROOM FAMILY PARTNERSHIP
943 RIVERVIEW LANE
COLUMBIA, TN 38401
LINDA WALKER, PARTNER

REVISIONS	DATE

LEGENDS AT HUNTERS GLEN

HUNTERS GLEN DRIVE
COLUMBIA, TENNESSEE
PRELIMINARY PLAT

Drawn: CG
Checked: GV
Approved: GV
Date: 5/19/2025

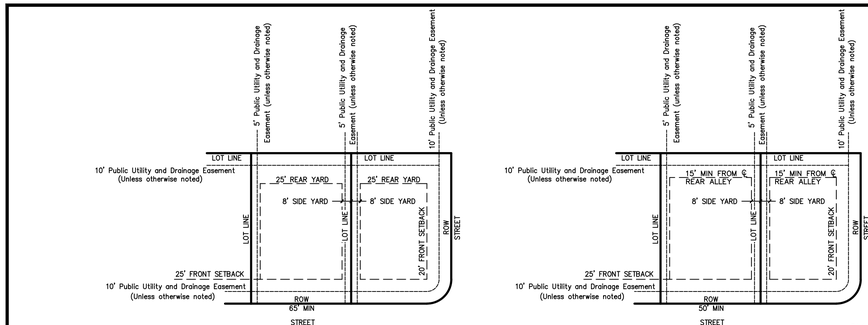
Job. no. 17608
Scale:
Vertical:
Horizontal:



SUBMITTED FOR MUNICIPAL APPROVAL
NOT FOR CONSTRUCTION

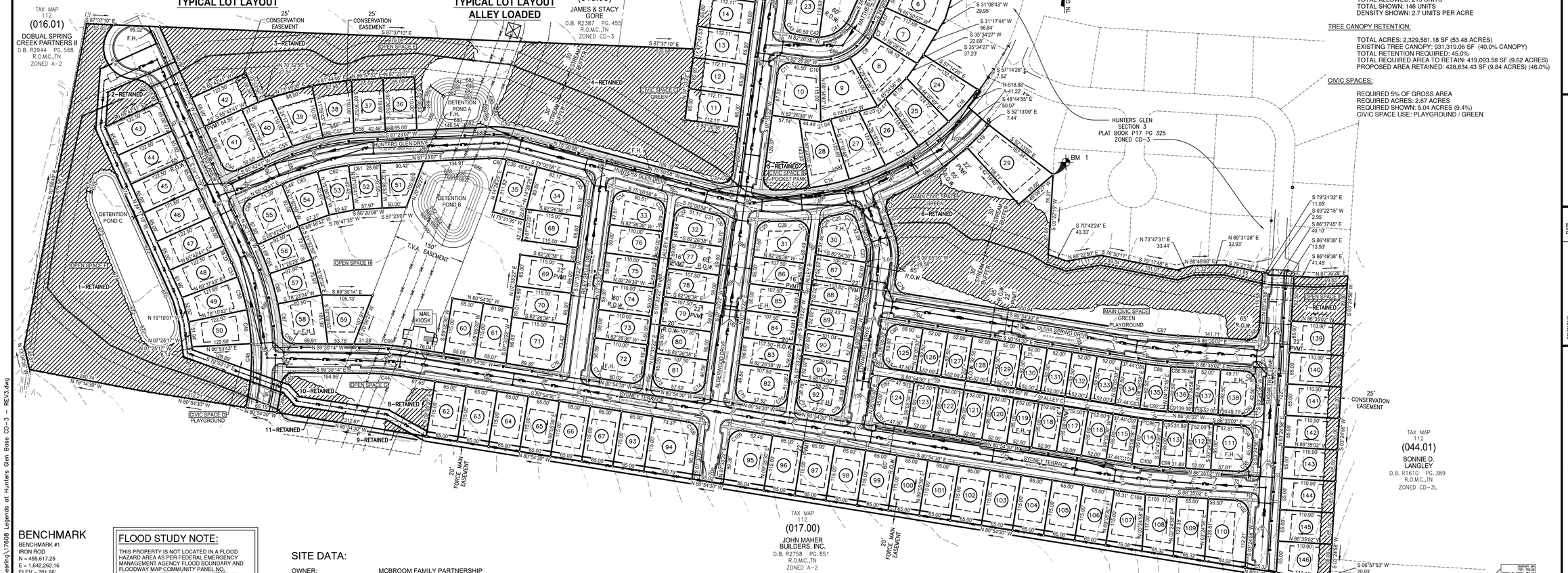
FILE: J:\ WES_Engineers_Surveyors 2017\17608 - Hunters Glen Sec 4 - McBroom\Dwg\Engineering\17608 Legends at Hunters Glen Base CD-3 - REV3.dwg

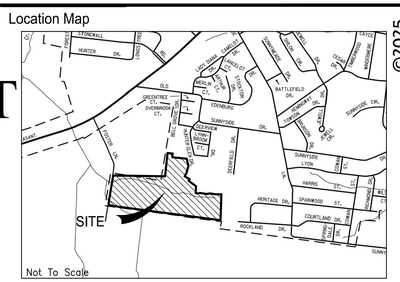
SITE DEVELOPMENT PLAN



SUBDIVISION TYPICAL LOT LAYOUT

SUBDIVISION TYPICAL LOT LAYOUT ALLEY LOADED





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REQUIRED SHOWN: 5.04 ACRES (9.4%)
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BENCHMARK

BENCHMARK #1
IRON ROD
N = 455,617.25
E = 1,642,262.16
ELEV = 701.86'
TENNESSEE COORDINATE SYSTEM OF 1983
NAVD 88

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Tennessee811 Know what's below Call before you dig.

LEGEND

	EXISTING	PROPOSED
WATER MAIN		
SANITARY SEWER		
STORM SEWER		
OVERHEAD		
FENCE		
GAS		
DRAINAGE DITCH		
TREE PROTECTION FENCE		
SIGN		
UTILITY POLE		
IRON PIN SET		
EXISTING IRON PIN	EIP	
CONCRETE MONUMENT		
DECIDUOUS TREE		
GATE VALVE IN BOX		
LIGHT POLE		
BENCHMARK	BM 1	
TREE LINE		
STORM STRUCTURE LABEL		RCP
ASPHALT		
CONCRETE		
# PARKING SPACES		14
TREE CANOPY PRESERVE		

SITE DATA:

OWNER: MCBROOM FAMILY PARTNERSHIP
943 RIVERVIEW LANE
COLUMBIA, TN 38401

PARCEL NUMBER: TAX MAP 12 PARCEL 18.02
DEED BOOK: R1466, PG 134

SUBJECT PARCEL ZONING: CD-3

ACREAGE OF SITE: ±53.48 ACRES
(PROPOSED 583,465.6 S.F. - 13.39 Ac.
RIGHT OF WAY DEDICATION)

MINIMUM REQUIRED BUILDING SETBACKS:
25' FRONT
25' REAR - 15' FROM ℄ OF REAR ALLEY
8' SIDE
20' SIDE FOR CORNER LOTS

UTILITY SERVICES:
COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TENNESSEE 38401
(931) 388-4833

PURPOSE NOTE: SEEK APPROVAL OF PRELIMINARY PLAT AND SITE DEVELOPMENT PLAN. CONSTRUCT APPROXIMATELY 10,800 L.F. OF ROADWAY & PROVIDE 146 RESIDENTIAL LOTS & ±10.54 ACRES OF OPEN SPACE.

NOTES:

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OPEN/CIVIC SPACE AREA TABLES

GROSS AREA	2,329,581.2	53.48					
LOT	SQ. FT.	ACRES	USE	LOT	SQ. FT.	ACRES	USE
MAIN CIVIC SPACE	144,778.8	3.32	GREEN	OPEN SPACE E	139,453.7	3.20	OPEN SPACE
CIVIC SPACE A	16,171.2	0.37	PLAYGROUND	OPEN SPACE F	159,138.6	3.65	OPEN SPACE
CIVIC SPACE B	11,357.6	0.26	POCKET PARK	OPEN SPACE G	32,456.9	0.75	OPEN SPACE
CIVIC SPACE C	43,325.9	0.99	GREEN	OPEN SPACE H	117,667.0	2.70	OPEN SPACE
CIVIC SPACE D	3,850.5	0.09	PLAYGROUND	OPEN SPACE I	10,523.9	0.24	OPEN SPACE
TOTAL CIVIC	219,484.0	5.04		TOTAL OPEN	459,240.1	10.54	

SITE BENCHMARK NOTE:

CONTRACTOR SHALL ESTABLISH A BENCHMARK PRIOR TO CONSTRUCTION. EXISTING BENCHMARK MUST BE RE-VERIFIED AND APPROVED BY THE ENGINEER/SURVEYOR PRIOR TO USE.

BOUNDARY & TOPOGRAPHIC SURVEY PROVIDED BY:

WES ENGINEERS & SURVEYORS
W.E.S. ENGINEERS AND SURVEYORS
2486 NASHVILLE HWY
COLUMBIA, TENNESSEE 38401
(931) 388-2329

GRAPHIC SCALE

100 0 50 100 200 300
(IN FEET)
1 inch = 100 ft.

JOSEPH W. BLICK 19 No. 107418 STATE OF TENNESSEE REGISTERED LAND SURVEYOR

SUBMITTED FOR MUNICIPAL APPROVAL
NOT FOR CONSTRUCTION

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CIVIL ENGINEERS & LAND SURVEYORS
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ENGINEERS & SURVEYORS

Client
MCBROOM FAMILY PARTNERSHIP
943 RIVERVIEW LANE
COLUMBIA, TN 38401
LINDA WALKER, PARTNER

REVISIONS	DATE

LEGENDS AT HUNTERS GLEN

HUNTERS GLEN DRIVE
COLUMBIA, TENNESSEE
SITE DEVELOPMENT PLAN

Drawn: CG
Checked: GV
Approved: GV
Date: 5/19/2025

Job. no. 17608
Scale:
Vertical: 1" = 100'
Horizontal:

1 of 1

FILE: J:\ WES_Engineers_Surveyors 2017\17608 - Hunters Glen Sec 4 - McBroom\Dwg\Engineering\17608 Legends at Hunters Glen Base CD-3 - REV3.dwg

PEDESTRIAN SHED PLAN

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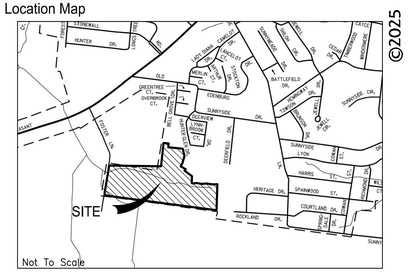
Location Map



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BENCHMARK

BENCHMARK #1
IRON ROD
N = 455,617.25
E = 1,642,262.16
ELEV = 701.86'
TENNESSEE COORDINATE SYSTEM OF 1983
NAVD 88

FLOOD STUDY NOTE:

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LEGEND

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WATER MAIN		
SANITARY SEWER		
STORM SEWER		
OVERHEAD		
FENCE		
GAS		
DRAINAGE DITCH		
TREE PROTECTION FENCE		
SIGN		
UTILITY POLE		
IRON PIN SET		
EXISTING IRON PIN	EIP	
CONCRETE MONUMENT		
DECIDUOUS TREE		
GATE VALVE IN BOX		
LIGHT POLE		
BENCHMARK	BM 1	
TREE LINE		
STORM STRUCTURE LABEL		ST1
ASPHALT		
CONCRETE		
# PARKING SPACES		(4)
TREE CANOPY PRESERVE		

SITE DATA:

OWNER: MCBROOM FAMILY PARTNERSHIP
943 RIVERVIEW LANE
COLUMBIA, TN 38401

PARCEL NUMBER: TAX MAP 12 PARCEL 18.02
DEED BOOK: R1466, PG 134

SUBJECT PARCEL ZONING: CD-3

ACREAGE OF SITE: ±53.48 ACRES
(PROPOSED 583,465.6 S.F. - 13.39 Ac.
RIGHT OF WAY DEDICATION)

MINIMUM REQUIRED BUILDING SETBACKS:
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25' REAR - 15' FROM ℄ OF REAR ALLEY
8' SIDE
20' SIDE FOR CORNER LOTS

UTILITY SERVICES:
COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TENNESSEE 38401
(931) 388-4833

PURPOSE NOTE: SEEK APPROVAL OF PRELIMINARY PLAT AND SITE DEVELOPMENT PLAN. CONSTRUCT APPROXIMATELY 10,800 L.F. OF ROADWAY & PROVIDE 146 RESIDENTIAL LOTS & ±10.54 ACRES OF OPEN SPACE.

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COLUMBIA, TENNESSEE 38401
(931) 388-2329

GRAPHIC SCALE

100 0 50 100 200 300
(IN FEET)
1 inch = 100 ft.

SUBMITTED FOR MUNICIPAL APPROVAL
NOT FOR CONSTRUCTION

RICHARD H. BLALOCK 10/7/15 REGISTERED LANDSCAPE ARCHITECT No. 107415 STATE OF TENNESSEE

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CIVIL ENGINEERS & LAND SURVEYORS
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ENGINEERS & SURVEYORS

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MCBROOM FAMILY PARTNERSHIP
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COLUMBIA, TN 38401
LINDA WALKER, PARTNER

REVISIONS	DATE

LEGENDS AT HUNTERS GLEN

HUNTERS GLEN DRIVE
COLUMBIA, TENNESSEE
SITE DEVELOPMENT PLAN

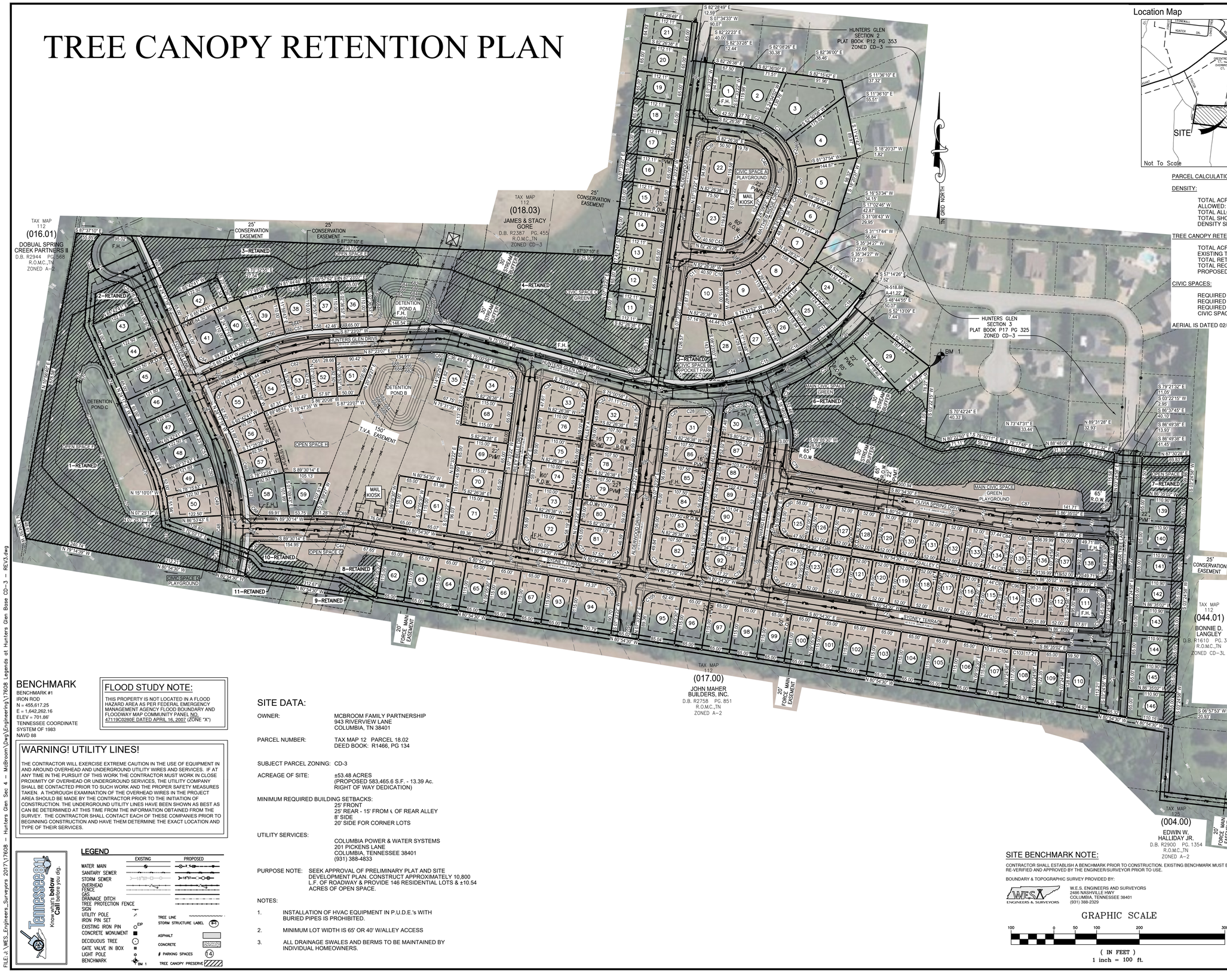
Drawn: CG
Checked: GV
Approved: GV
Date: 5/19/2025

Job. no. 17608
Scale: Vertical: 1" = 100'
Horizontal:

1 of 1

FILE: J:\ WES_Engineers_Surveyors 2017\17608 – Hunters Glen Sec 4 – McBroom\Dwg\Engineering\17608 Legends at Hunters Glen Base CD–3 – REV3.dwg

TREE CANOPY RETENTION PLAN



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SIGN		
UTILITY POLE		
IRON PIN SET		
EXISTING IRON PIN	CIP	
CONCRETE MONUMENT		
DECIDUOUS TREE		
GATE VALVE IN BOX		
LIGHT POLE		
BENCHMARK	BM 1	

TREE LINE
STORM STRUCTURE LABEL (S-1)
ASPHALT
CONCRETE
PARKING SPACES (14)
TREE CANOPY PRESERVE

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COLUMBIA, TN 38401

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DEED BOOK: R1466, PG 134

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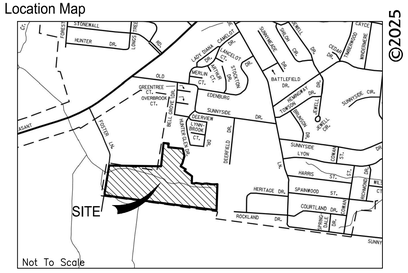
3. ALL DRAINAGE SWALES AND BERMS TO BE MAINTAINED BY INDIVIDUAL HOMEOWNERS.

Location Map



©2025

PARCEL CALCULATIONS:

DENSITY:

TOTAL ACRES: 53.48 ACRES
ALLOWED: 4 UNITS PER ACRE (TABLE 5.4.A-1)
TOTAL ALLOWED: 213 (53.48 * 4)
TOTAL SHOWN: 146 UNITS
DENSITY SHOWN: 3 UNITS PER ACRE (146 / 53.48)

TREE CANOPY RETENTION:

TOTAL ACRES: 2,329,581.18 SF (53.48 ACRES)
EXISTING TREE CANOPY: 931,319.06 SF (40.0% CANOPY)
TOTAL RETENTION REQUIRED: 45.0%
TOTAL REQUIRED AREA TO RETAIN: 419,093.58 SF (9.62 ACRES)
PROPOSED AREA RETAINED: 428,634.43 SF (9.84 ACRES)

CIVIC SPACES:

REQUIRED 5% OF GROSS AREA (SECTION 5.3.1.A)
REQUIRED ACRES: 2.67 ACRES (53.48 * 5%)
REQUIRED SHOWN: 5.04 ACRES
CIVIC SPACE USE: PLAYGROUND / GREEN

AERIAL IS DATED 02/26/2025

CANOPY RETENTION TABLE

		SQ. FT.	ACRES
TOTAL AREA		2,329,581.18	53.48
EXISITING CANOPY A		275,429.63	6.32
EXISITING CANOPY B		406,013.32	9.32
EXISITING CANOPY C		57,887.50	1.33
EXISITING CANOPY D		11,195.56	0.26
EXISITING CANOPY E		170,899.83	3.92
EXISITING CANOPY F		6,143.55	0.14
EXISITING CANOPY G		3,749.67	0.09
EXISTING CANOPY AREA TOTAL		931,319.06	21.38
% OF CANOPY	40.0%		
CANOPY RETENTION (TABLE 4.3.16.L IN ZONING ORDINANCE)	45%	419,093.58	9.62
RETAINED CANOPY 1		105,070.90	2.41
RETAINED CANOPY 2		6,197.36	0.14
RETAINED CANOPY 3		61,225.59	1.41
RETAINED CANOPY 4		87,693.41	2.01
RETAINED CANOPY 5		4,815.19	0.11
RETAINED CANOPY 6		111,864.83	2.57
RETAINED CANOPY 7		10,523.98	0.24
RETAINED CANOPY 8		4,118.34	0.09
RETAINED CANOPY 9		616.58	0.01
RETAINED CANOPY 10		3,402.49	0.08
RETAINED CANOPY 11		3,193.21	0.07
RETAINED CANOPY TOTAL		398,721.88	9.15
CONSERVATION EASEMENTS TOTAL		29,912.55	0.69
PROPOSED RETAINED & EASEMENT TOTAL	46.0%	428,634.43	9.84

SITE BENCHMARK NOTE:

CONTRACTOR SHALL ESTABLISH A BENCHMARK PRIOR TO CONSTRUCTION. EXISTING BENCHMARK MUST BE RE-VERIFIED AND APPROVED BY THE ENGINEER/SURVEYOR PRIOR TO USE.

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2486 NASHVILLE HWY
COLUMBIA, TENNESSEE 38401
(931) 388-2329

GRAPHIC SCALE

100 0 50 100 200 300
(IN FEET)
1 inch = 100 ft.

GERALD W. DICK 19
STATE OF TENNESSEE
REGISTERED ENGINEER
No. 107415

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Client
MCBROOM FAMILY PARTNERSHIP
943 RIVERVIEW LANE
COLUMBIA, TN 38401
LINDA WALKER, PARTNER

REVISIONS	DATE

LEGENDS AT HUNTERS GLEN
HUNTERS GLEN DRIVE
COLUMBIA, TENNESSEE
TREE CANOPY RETENTION PLAN

Drawn: CG | Checked: GV | Approved: GV | Date: 5/19/2025

Job no. 17608 | Scale: Vertical: 1" = 100' Horizontal:

TR-1

FILE: J:\WES_Engineers_Surveyors 2017\17608 - Hunters Glen Sec 4 - McBroom\Dwg\Engineering\17608 Legends at Hunters Glen Base CD-3 - REV3.dwg

F i s c h b a c h
Transportation Group, LLC
Traffic Engineering and Planning

Traffic Impact Study

Hunters Glen Section 4
Hunters Glen Drive
Columbia, TN

Prepared May 2025
For WES Engineers & Surveyors

FTG, LLC
P.O. Box 682736
Franklin, TN 37068
(615) 771-8022 phone
Gillian@FTGtraffic.com

Traffic Impact Study

Hunters Glen Section 4

Hunters Glen Drive
Columbia, Tennessee

Prepared May 2025

PREPARED FOR:
WES Engineers & Surveyors
2486 Nashville Highway
Columbia, TN 38401



PREPARED BY:
Ms. Gillian L. Fischbach, P.E., PTOE
Fischbach Transportation Group (FTG, LLC)
P.O. Box 682736
Franklin, TN 37068
Phone: (615) 771-8022
FTG Project Number: 11318

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1. INTRODUCTION

This traffic study has been prepared in order to identify the traffic impacts of a residential development that is proposed to be constructed at the southern terminus of Hunters Glen Drive in Columbia, Tennessee.

For the purposes of this study, existing and background traffic volumes were established, and capacity analyses were conducted for these conditions. Also, trip generation calculations were performed, and the trips which are expected to be generated by the proposed project were distributed to the roadway system and added to the background traffic volumes. The roadways and intersections which provide access to the site were then re-evaluated to determine the traffic impacts of the proposed project. Access needs for the project were evaluated, and the necessary roadway and/or traffic control improvements were identified. This report presents the results of these analyses and the subsequent recommendations.

2. PROJECT DESCRIPTION

The location of the proposed project is shown in Figure 1. As shown, the project site is located at the southern terminus of Hunters Glen Drive in Columbia, Tennessee. The developer of the proposed project plans to construct 148 single-family homes, and primary access to the project will be provided by extending Hunters Glen Drive into the project site. Secondary access will be provided by extending Alderwood Drive and Sugar Tree Lane into the project site.

The current site plan for the proposed project is shown in Figure 2. In large part, economic and market considerations will dictate the pace and timing with which the proposed project is actually completed. For the purposes of this study, it was assumed that the proposed project will be completed by Year 2030.

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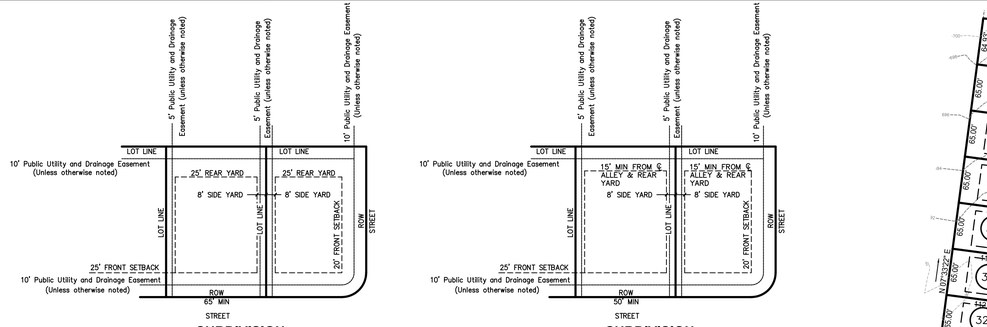
N

No Scale

Figure 1.
Location of the Proposed Project Site

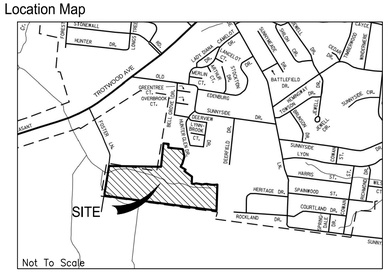
PRELIMINARY PLAT



SUBDIVISION
TYPICAL LOT LAYOUT

SUBDIVISION
TYPICAL LOT LAYOUT
ALLEY LOADED

Location Map



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BENCHMARK

BENCHMARK #1
IRON ROD
N = 455,617.25
E = 1,642,262.16
ELEV = 638.68'
TENNESSEE COORDINATE
SYSTEM OF 1983
NAVD 88

WARNING! UTILITY LINES!

THE CONTRACTOR WILL EXERCISE EXTREME CAUTION IN THE USE OF EQUIPMENT IN AND AROUND OVERHEAD AND UNDERGROUND UTILITY WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK THE CONTRACTOR MUST WORK IN CLOSE PROXIMITY OF OVERHEAD OR UNDERGROUND SERVICES, THE UTILITY COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES TAKEN. A THOROUGH EXAMINATION OF THE OVERHEAD WIRES IN THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION. THE UNDERGROUND UTILITY LINES HAVE BEEN SHOWN AS BEST AS CAN BE DETERMINED AT THIS TIME FROM THE INFORMATION OBTAINED FROM THE SURVEY. THE CONTRACTOR SHALL CONTACT EACH OF THESE COMPANIES PRIOR TO BEGINNING CONSTRUCTION AND HAVE THEM DETERMINE THE EXACT LOCATION AND TYPE OF THEIR SERVICES.

Tennessee811 Know what's **below** **Call** before you dig.

LEGEND

	EXISTING	PROPOSED
WATER MAIN		
SANITARY SEWER		
STORM SEWER		18"ST
OVERHEAD		
FENCE		
GAS		
DRAINAGE DITCH		
TREE PROTECTION FENCE		
SIGN		
UTILITY POLE		
IRON PIN SET	IPS	
EXISTING IRON PIN	EIP	
CONCRETE MONUMENT		
DECIDUOUS TREE		
GATE VALVE IN BOX		
LIGHT POLE		
BENCHMARK	BM 1	
TREE LINE		
STORM STRUCTURE LABEL		ST1
ASPHALT		
CONCRETE		
# PARKING SPACES		14
P.U.D.E.		

SITE DATA:

OWNER: MCBROOM FAMILY TRUST
943 RIVERVIEW LANE
COLUMBIA, TN 38401

PARCEL NUMBER: TAX MAP 12 PARCEL 18.02
DEED BOOK: R1466, PG 134

SUBJECT PARCEL ZONING: CD-3

ACREAGE OF SITE: ±53.50 ACRES
(PROPOSED 649,010.6 S.F. -14.90 Ac.
RIGHT OF WAY DEDICATION)

DENSITY: GROSS ACREAGE OF SITE 2,329,597.3 sf = ±53.48 Ac.
R.O.W. DEDICATION 571,484.6 sf = 13.12 Ac.
148 LOTS/40.36 Ac.=3.67/1

MINIMUM REQUIRED BUILDING SETBACKS:

25' FRONT
25' REAR - 15' FROM ℄ OF ALLEY
8' SIDE - 5 SIDE W / ALLEY
20' SIDE FOR CORNER LOTS

UTILITY SERVICES:

COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TENNESSEE 38401
(931) 388-4833

PURPOSE NOTE: REQUEST FOR CHANGE OF COMPREHENSIVE PLAN & AMEND THE EXISTING MASTER PLAN. CONSTRUCT 9,802.9 L.F. OF ROADWAY & PROVIDE 148 RESIDENTIAL LOTS & ±11.89 ACRES OF OPEN SPACE.

NOTES:

1. INSTALLATION OF HVAC EQUIPMENT IN P.U.D.E.'s WITH BURIED PIPES IS PROHIBITED.
2. MINIMUM LOT WIDTH IS 65' OR 40' W/ALLEY ACCESS
3. ALL DRAINAGE SWALES AND BERMS TO BE MAINTAINED BY INDIVIDUAL HOMEOWNERS.

PROPOSED CONSTRUCTION SCHEDULE FOR THE YEAR 2024/2025

ACTIVITY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY
TEMPORARY SEDIMENT STRUCTURES												
SEDIMENT BASINS												
DIVERSION DITCHES												
CLEARING & CHIPPING												
TOPSOIL STRIPPING AND STORAGE												
ROADWAY GRADING												
PERMANENT STORM SEWER												
UTILITIES												
TEMPORARY VEGETATION												
PAVING												
PERMANENT VEGETATION												
REMOVE TEMPORARY STRUCTURES												

SITE BENCHMARK NOTE:

CONTRACTOR SHALL ESTABLISH A BENCHMARK PRIOR TO CONSTRUCTION. EXISTING BENCHMARK MUST BE RE-VERIFIED AND APPROVED BY THE ENGINEER/SURVEYOR PRIOR TO USE.

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W.E.S. ENGINEERS AND SURVEYORS
2486 NASHVILLE HWY
COLUMBIA, TENNESSEE 38401
(931) 388-2329

FLOOD STUDY NOTE:

THIS PROPERTY IS NOT LOCATED IN A FLOOD HAZARD AREA AS PER FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD BOUNDARY AND FLOODWAY MAP COMMUNITY PANEL NO. 47119C0280E DATED APRIL 16, 2007 (ZONE "X")

GRAPHIC SCALE

100 0 50 100 200 300
(IN FEET)
1 inch = 100 ft.



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www.wesengineers.com
ENGINEERS & SURVEYORS

Client
MCBROOM FAMILY PTR
943 RIVERVIEW LANE
COLUMBIA, TN 38401

REVISIONS | DATE

HUNTERS GLEN SECTION 4, PHASE 1
HUNTERS GLEN DRIVE
COLUMBIA, TENNESSEE
PRELIMINARY PLAT

Drawn: RP | Checked: GV | Approved: GV | Date: 09/24/2024

Job no. 17608 | Scale: | Vertical: 1" = 100' | Horizontal:

FILE: J:\WES_Engineers_Surveyors 2017\17608 - Hunters Glen Sec 4 - McBroom\Dwg\Engineering\17608 Hunters Glen Base 13_A_1_CD-3.dwg

3. YEAR 2024 EXISTING CONDITIONS

3.1 EXISTING LANEAGE AND TRAFFIC CONTROL

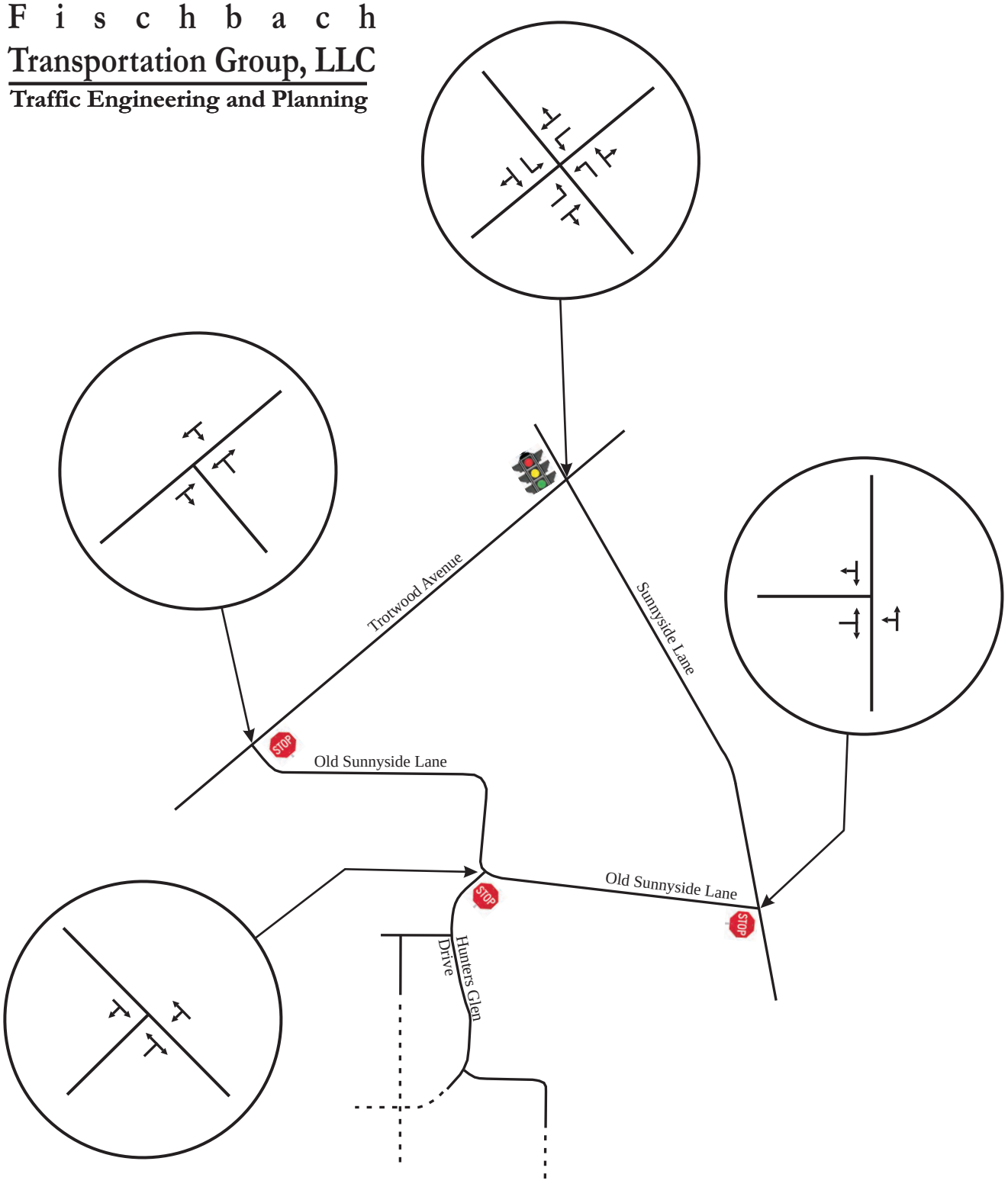
A field visit was completed on December 21, 2024 in order to confirm the laneage and traffic control noted during the collection of turning movement data at the intersections within the study area. The existing laneage and traffic control at the intersections within the study area are shown in Figure 3.

Southern Terminus of Hunters Glen Drive



Photo credit: Google Earth (6/2023)

Fischbach
Transportation Group, LLC
Traffic Engineering and Planning



N

No Scale

XX - AM Peak Hour Volumes
(XX) - PM Peak Hour Volumes

Figure 3.
Existing Laneage and Traffic Control

3.2 YEAR 2024 EXISTING TRAFFIC VOLUMES

In order to provide data for the traffic impact analysis, traffic volumes were counted in 15-minute increments at the following intersections:

- Trotwood Avenue and Cayce Lane / Sunnyside Lane
- Trotwood Avenue and Old Sunnyside Lane
- Sunnyside Lane and Old Sunnyside Lane
- Old Sunnyside Lane and Hunters Glen Drive

This data was collected from 6:00 AM – 7:00 PM on typical weekdays in early December 2024 when schools were in session. The raw traffic volumes are included in Appendix A and are shown in Figure 4.

Using the existing peak hour traffic volumes shown in Figure 4, capacity analyses were conducted for the intersections studied. Specifically, in order to identify current peak hour levels of operation within the study area, the capacity calculations were performed according to the methods outlined in the Highway Capacity Manual 7 (HCM 7). These analyses result in the determination of a Level of Service (LOS), which is a measure of evaluation is used to describe how well an intersection or roadway operates. LOS A represents free flow traffic operations, and LOS F suggests that the traffic demand exceeds the available capacity. In an urbanized area, LOS D is typically considered to be the minimum acceptable LOS. Table 1 presents the descriptions of LOS for signalized intersections, and Table 2 presents the descriptions of LOS for unsignalized intersections.

The results of the capacity analyses for the existing peak hour traffic volumes are shown in Table 3, and Appendix B includes the capacity analyses worksheets. These analyses indicate the following:

Trotwood Avenue and Cayce Lane / Sunnyside Lane
This signalized intersection operates at LOS C during both peak hours.

Trotwood Avenue and Old Sunnyside Lane
At this unsignalized intersection, all of the critical turning movements currently operate at LOS C or better during both peak hours.

Sunnyside Lane and Old Sunnyside Lane
At this unsignalized intersection, all of the critical turning movements currently operate at LOS B or better during both peak hours.

Old Sunnyside Lane and Hunters Glen Drive
At this unsignalized intersection, all of the critical turning movements currently operate at LOS A during both peak hours.

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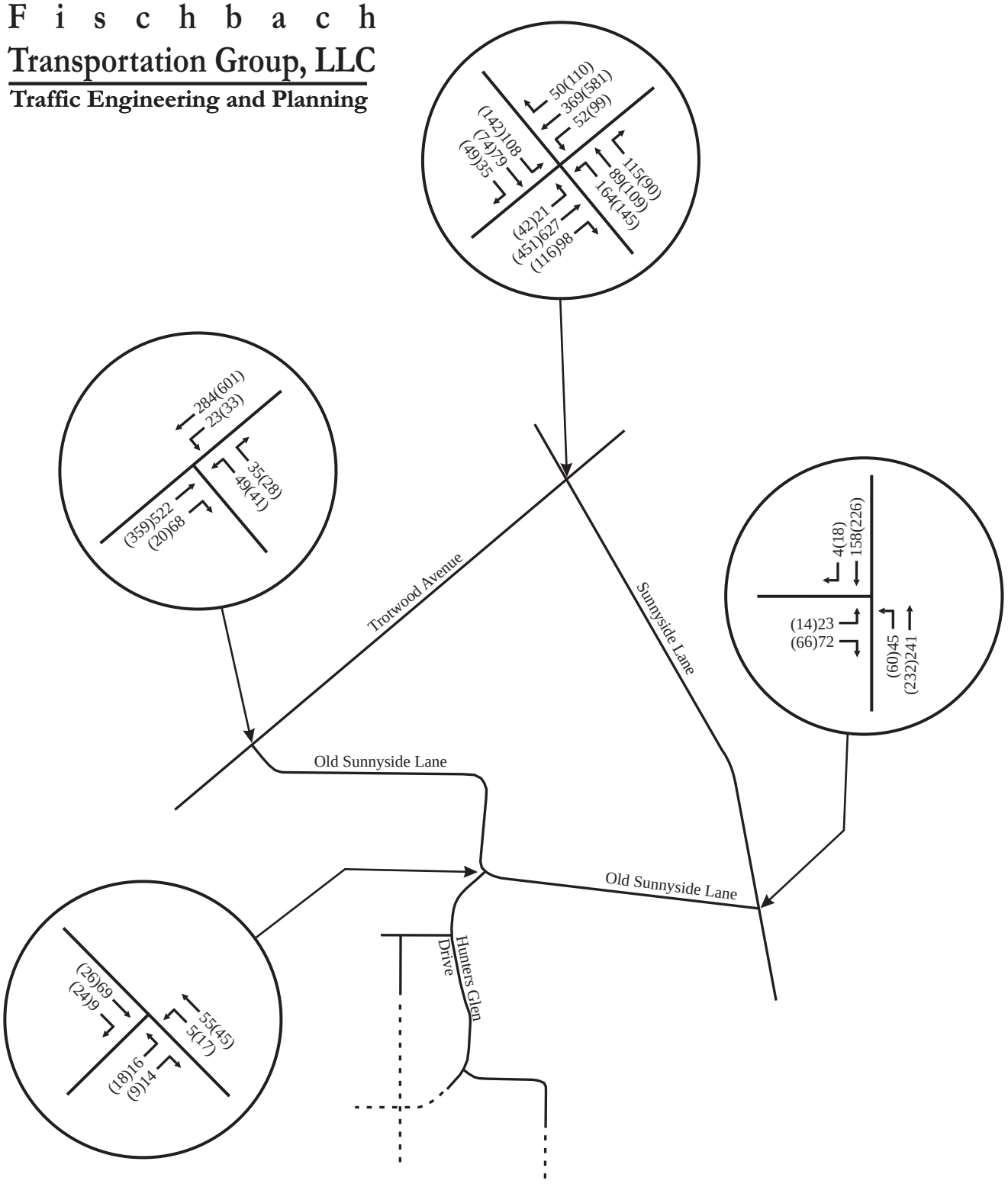

N

No Scale

XX - AM Peak Hour Volumes
(XX) - PM Peak Hour Volumes

Figure 4.
Existing Year 2024 Peak Hour Traffic Volumes
(Collected Early December 2024)

TABLE 1. DESCRIPTIONS OF LOS FOR SIGNALIZED INTERSECTIONS

Level of Service	Description	Average Control Delay per Vehicle (sec)
A	Operations with very low control delay. Progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.	≤ 10
B	Operations with stable flows. This generally occurs with good progression, short cycle lengths, or both. More vehicles stop than for LOS A, causing higher levels of average delay.	> 10 and ≤ 20
C	Operations with stable flow. Occurs with fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, although many still pass through the intersection without stopping.	> 20 and ≤ 35
D	Approaching unstable flow. The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop.	> 35 and ≤ 55
E	Unstable flow. In many cases, this is considered to be the limit for acceptable delay. These high delays generally indicate poor progression, long cycle lengths, and high v/c ratios.	> 55 and ≤ 80
F	Unacceptable delay. This condition often occurs with oversaturation or with high v/c ratios. Poor progression and long cycle lengths may also cause such delay levels.	> 80

Source: Highway Capacity Manual 7 (HCM 7)

TABLE 2. DESCRIPTIONS OF LOS FOR UNSIGNALIZED INTERSECTIONS

Level of Service	Description	Average Control Delay (sec/veh)
A	Minimal delay	≤ 10
B	Brief delay	> 10 and ≤ 15
C	Average delay	> 15 and ≤ 25
D	Significant delay	> 25 and ≤ 35
E	Long delay	> 35 and ≤ 50
F	Extreme delay	> 50

Source: Highway Capacity Manual 7 (HCM 7)

TABLE 3. YEAR 2024 EXISTING PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	AM PEAK HOUR		PM PEAK HOUR	
		LEVEL OF SERVICE	95TH %-ILE QUEUE	LEVEL OF SERVICE	95TH %-ILE QUEUE
Trotwood Avenue and Cayce Lane / Sunnyside Lane	Eastbound Left Turns	LOS B	1 veh (14 sec/veh)	LOS B	1 veh (19 sec/veh)
	Eastbound Thrus / Right Turns	LOS C	24 veh (33 sec/veh)	LOS C	17 veh (26 sec/veh)
	Westbound Left Turns	LOS B	1 veh (20 sec/veh)	LOS B	2 veh (17 sec/veh)
	Westbound Thrus / Right Turns	LOS B	11 veh (19 sec/veh)	LOS C	22 veh (32 sec/veh)
	Northbound Left Turns	LOS D	7 veh (41 sec/veh)	LOS D	6 veh (41 sec/veh)
	Northbound Thrus / Right Turns	LOS D	9 veh (44 sec/veh)	LOS D	9 veh (45 sec/veh)
	Southbound Left Turns	LOS D	5 veh (47 sec/veh)	LOS D	7 veh (47 sec/veh)
	Southbound Thrus / Right Turns	LOS D	5 veh (47 sec/veh)	LOS D	6 veh (45 sec/veh)
	OVERALL INTERSECTION	**LOS C (33 sec/veh)**		**LOS C (33 sec/veh)**	
Trotwood Avenue and Old Sunnyside Lane	Westbound Left Turns / Thrus	LOS A	1 veh (9 sec/veh)	LOS A	1 veh (8 sec/veh)
	Northbound Left / Right Turns	LOS C	1 veh (20 sec/veh)	LOS C	1 veh (22 sec/veh)
Sunnyside Lane and Old Sunnyside Lane	Eastbound Left / Right Turns	LOS B	1 veh (11 sec/veh)	LOS B	1 veh (11 sec/veh)
	Northbound Left Turns / Thrus	LOS A	1 veh (8 sec/veh)	LOS A	1 veh (8 sec/veh)
Old Sunnyside Lane and Hunters Glen Drive	Westbound Left Turns / Thrus	LOS A	0 veh (7 sec/veh)	LOS A	0 veh (7 sec/veh)
	Northbound Left / Right Turns	LOS A	1 veh (9 sec/veh)	LOS A	1 veh (9 sec/veh)

4. YEAR 2030 BACKGROUND TRAFFIC VOLUMES

In order to account for the traffic growth which will occur within the study area because of typical growth, background traffic volumes were established for the intersections within the study area. Specifically, in order to account for typical growth within the study area, consideration was given to the historical traffic volumes near the project site. The Tennessee Department of Transportation (TDOT) conducts an annual count program throughout the state. This count program includes the annual collection of average daily traffic (ADT) counts at numerous fixed locations.

As shown in Table 4, the daily traffic volumes within the study area have increased steadily since 2014. Based on this data, the existing traffic volumes were increased 3% per year, or a total of 18%, in order to establish the initial Year 2030 background traffic volumes shown in Figure 5A.

TABLE 4. HISTORICAL TRAFFIC VOLUMES IN THE STUDY AREA

Year	Station 167 Trotwood Ave ADT	Annual Growth	
2014	12,804		
2015	12,949	1.13%	
2016	13,078	1.00%	
2017	14,724	12.59%	**Overall Growth**
2018	14,095	-4.27%	
2019	14,164	0.49%	
2020	13,651	-3.62%	
2021	14,098	3.27%	
2022	15,056	6.80%	
2023	15,992	6.22%	2.77%
Year	**Station 191 Sunnyside Ln ADT**	**Annual Growth**	
2014	3,936		
2015	4,040	2.64%	
2016	3,822	-5.40%	
2017	4,284	12.09%	**Overall Growth**
2018	4,552	6.26%	
2019	4,286	-5.84%	
2020	3,918	-8.59%	
2021	4,188	6.89%	
2022	4,449	6.23%	
2023	4,834	8.65%	2.54%

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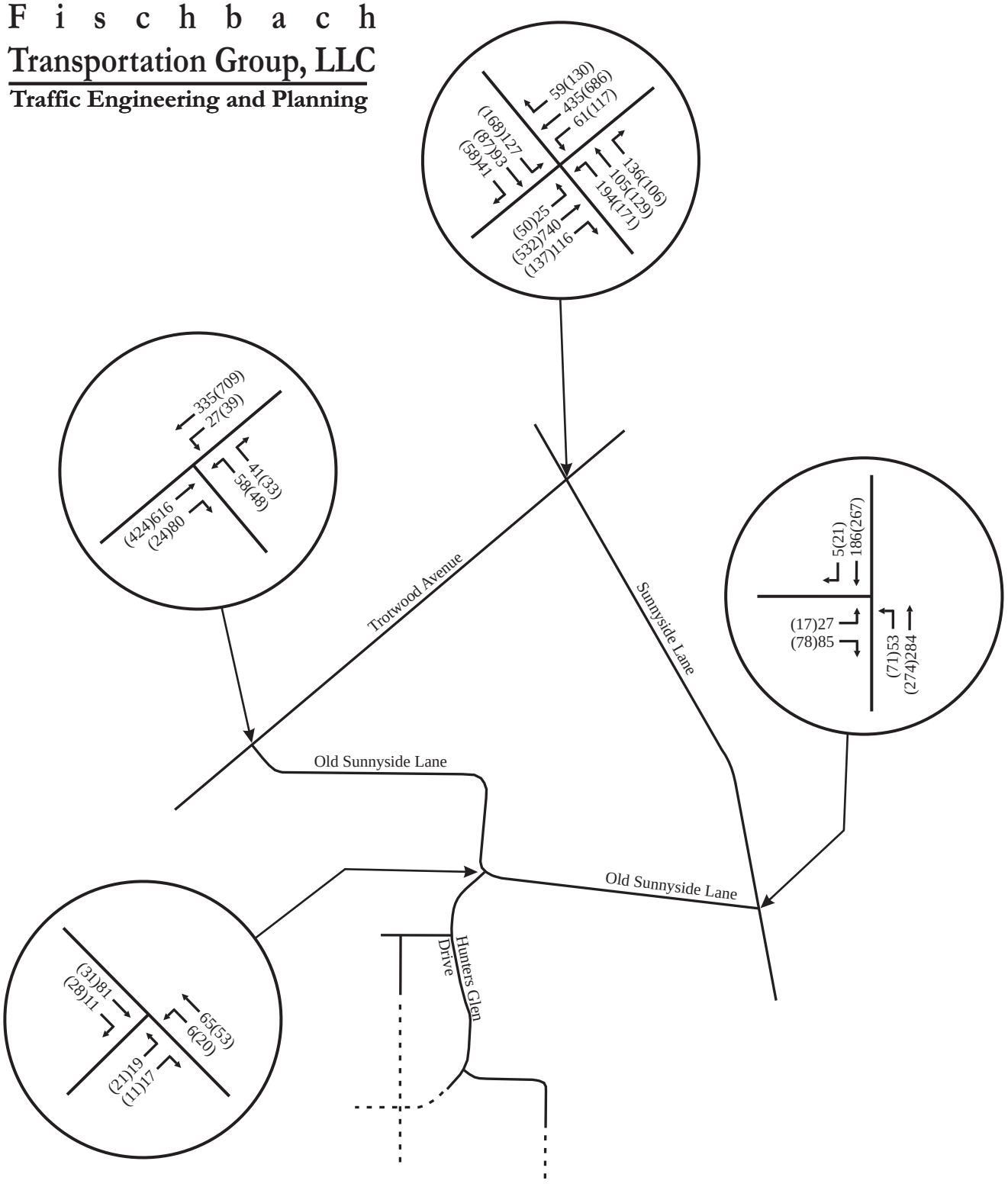
Transportation Group, LLC
Traffic Engineering and Planning



N

No Scale

XX - AM Peak Hour Volumes
(XX) - PM Peak Hour Volumes

Figure 5A.
Initial Year 2030 Background Peak Hour Traffic
(Existing Traffic Volumes Increased 18%)

It is important to note that the following projects are planned for construction in the vicinity of the project site:

1. A gas station and convenience store are planned for construction in the southeast quadrant of the intersection of Trotwood Avenue and Cayce Lane / Sunnyside Lane. The peak hour traffic volumes generated by this project are identified in the Traffic Impact Study prepared by FTG, LLC in June 2022, and these volumes are shown in Figure 5B. Information about this project is included in Appendix A.

2. A residential project is planned for construction on Old Zion Road, southwest of the proposed project site. The peak hour traffic volumes generated by this project are identified in the Traffic Impact Study prepared by Ragan Smith Associates, Inc. in February 2023, and these volumes are shown in Figure 5C. Information about this project is included in Appendix A.

3. The Trotwood Grove residential project is planned for construction immediately southwest of the proposed project site. The peak hour traffic volumes generated by this project are identified in the Traffic Impact Study prepared by Kimley Horn in January 2023, and these volumes are shown in Figure 5D. Information about this project is included in Appendix A.

The traffic volumes shown in Figures 5A-5D were added together in order to identify background traffic volumes, as shown in Figure 5E. Capacity analyses were conducted for the background conditions at the intersections within the study area, and for these analyses, it was assumed that all existing laneage and traffic control will be maintained and no improvements will be provided.

The results of the capacity analyses for the background peak hour traffic volumes are shown in Table 5, and Appendix B includes the capacity analyses worksheets. These analyses indicate the following:

Trotwood Avenue and Cayce Lane / Sunnyside Lane
With the existing laneage, this signalized intersection is expected to operate at LOS F during both peak hours. Based on these results, additional analyses were conducted in order to identify how well this intersection would operate if separate right turn lanes on the eastbound and westbound approaches of Trotwood Avenue. With this additional laneage and optimized signal timings, this signalized intersection is expected to operate at LOS D during both peak hours.

Trotwood Avenue and Old Sunnyside Lane
At this unsignalized intersection, the northbound turning movements are expected to operate at LOS F during both peak hours. However, the vehicle queues are expected to be reasonable.

Sunnyside Lane and Old Sunnyside Lane
At this unsignalized intersection, all of the critical turning movements are expected to operate at LOS B or better during both peak hours.

Old Sunnyside Lane and Hunters Glen Drive
At this unsignalized intersection, all of the critical turning movements are expected to operate at LOS A during both peak hours.

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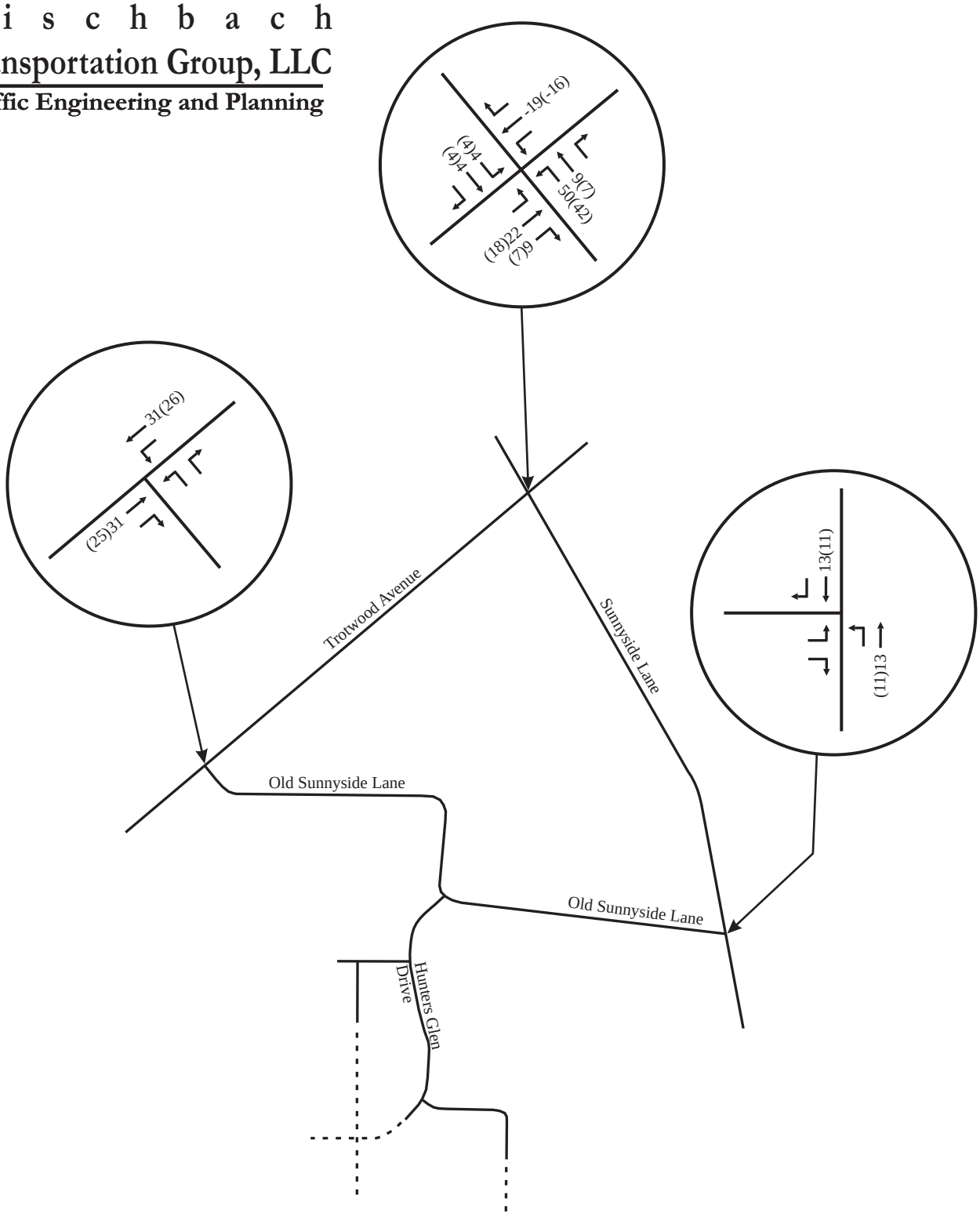

N

No Scale

XX - AM Peak Hour Volumes
(XX) - PM Peak Hour Volumes

Figure 5B.
Peak Hour Traffic Volumes Generated by Highland Convenience Market (Jun 2022 TIS)

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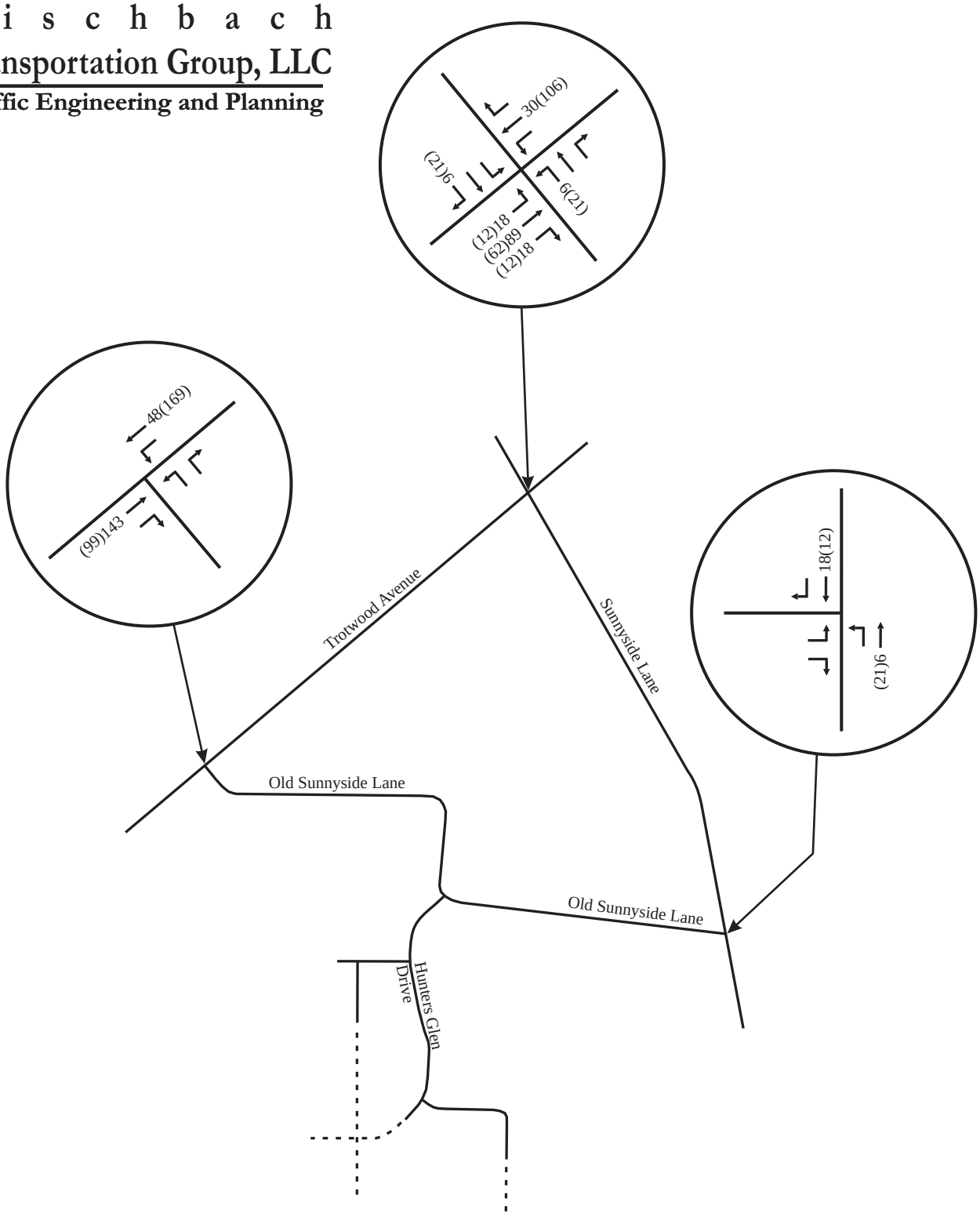

N

No Scale

XX - AM Peak Hour Volumes
(XX) - PM Peak Hour Volumes

Figure 5C.
Peak Hour Traffic Volumes Generated by
Old Zion Road Residential Project (Feb 2023 TIS)

F i s c h b a c h
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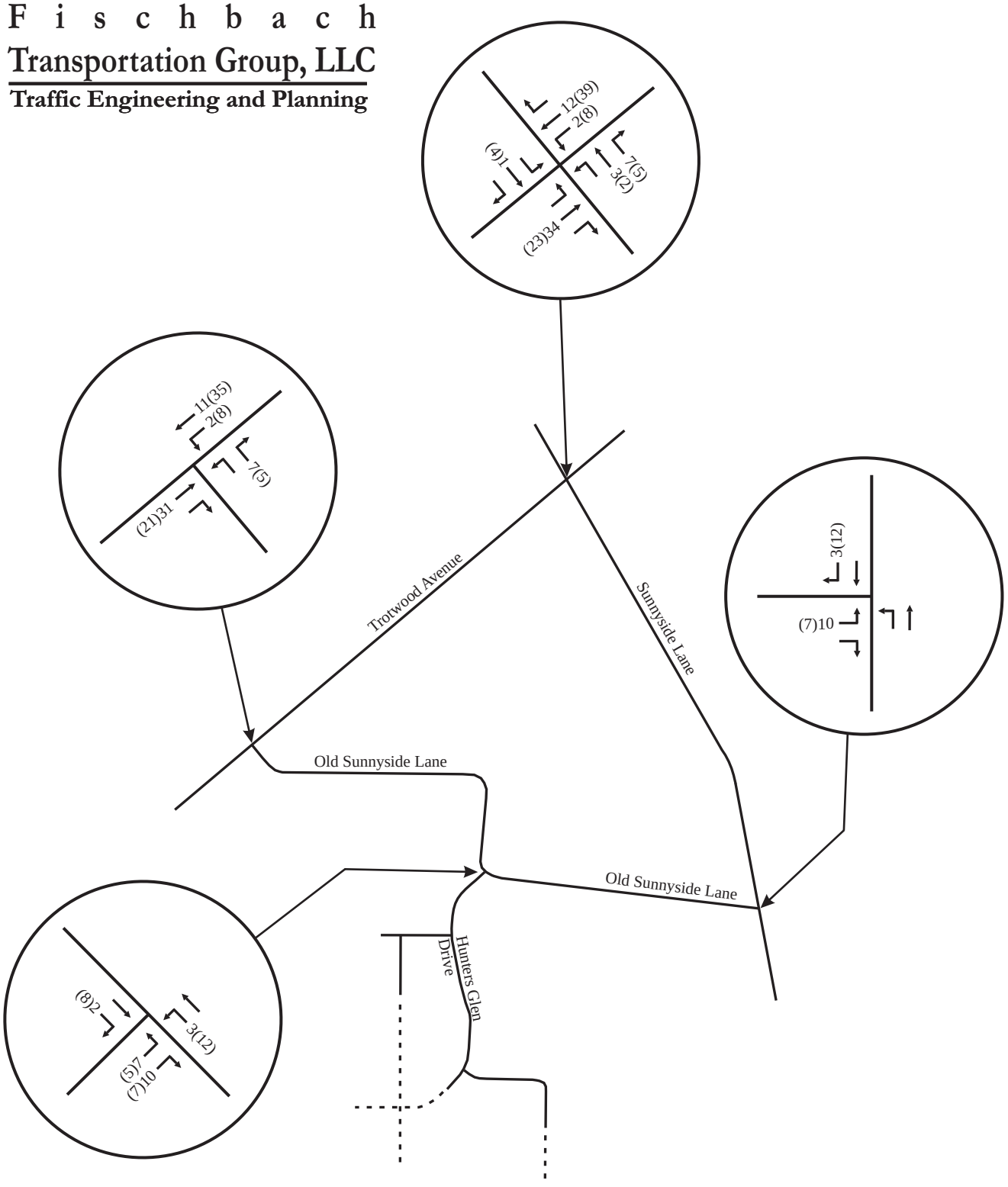

N

No Scale

XX - AM Peak Hour Volumes
(XX) - PM Peak Hour Volumes

Figure 5D.
Peak Hour Traffic Volumes Generated by Trotwood Grove Project (Jan 2023 TIS)

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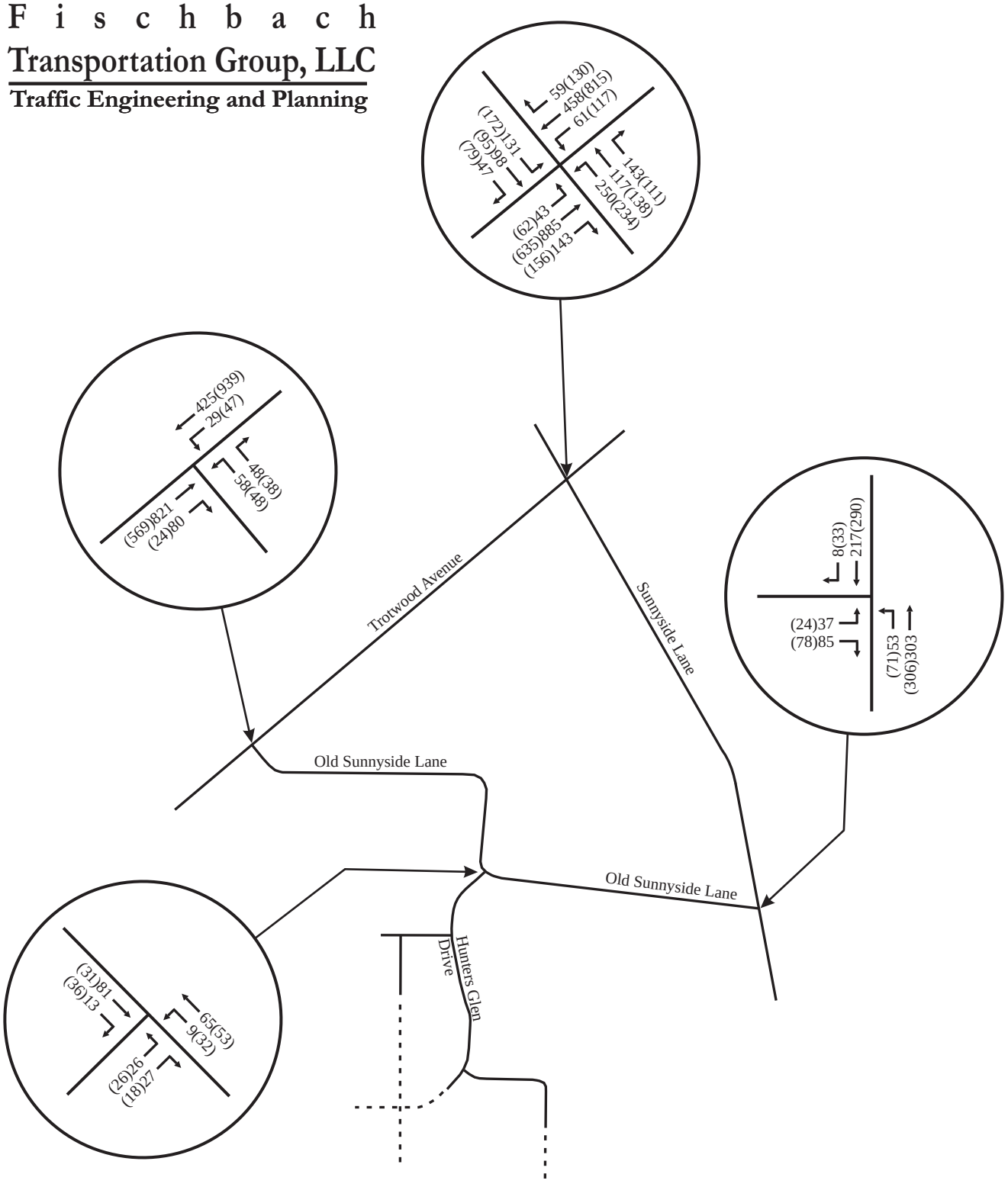

N

No Scale

XX - AM Peak Hour Volumes
(XX) - PM Peak Hour Volumes

Figure 5E.
Final Year 2030 Background Peak Hour Traffic

TABLE 5. YEAR 2030 BACKGROUND PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	AM PEAK HOUR		PM PEAK HOUR	
		LEVEL OF SERVICE	95TH %-ILE QUEUE	LEVEL OF SERVICE	95TH %-ILE QUEUE
Trotwood Avenue and Cayce Lane / Sunnyside Lane (with existing laneage)	Eastbound Left Turns	LOS B	1 veh (15 sec/veh)	LOS C	1 veh (24 sec/veh)
	Eastbound Thrus / Right Turns	LOS F	71 veh (149 sec/veh)	LOS F	35 veh (65 sec/veh)
	Westbound Left Turns	LOS C	1 veh (25 sec/veh)	LOS C	3 veh (25 sec/veh)
	Westbound Thrus / Right Turns	LOS C	15 veh (24 sec/veh)	LOS F	58 veh (126 sec/veh)
	Northbound Left Turns	LOS E	13 veh (63 sec/veh)	LOS F	15 veh (101 sec/veh)
	Northbound Thrus / Right Turns	LOS F	15 veh (80 sec/veh)	LOS F	18 veh (130 sec/veh)
	Southbound Left Turns	LOS F	10 veh (112 sec/veh)	LOS D	9 veh (54 sec/veh)
	Southbound Thrus / Right Turns	LOS F	12 veh (146 sec/veh)	LOS E	9 veh (58 sec/veh)
	OVERALL INTERSECTION	**LOS F (99 sec/veh)**		**LOS F (91 sec/veh)**	
Trotwood Avenue and Cayce Lane / Sunnyside Lane (with dedicated eastbound and westbound right turn lanes)	Eastbound Left Turns	LOS B	1 veh (17 sec/veh)	LOS C	2 veh (30 sec/veh)
	Eastbound Thrus	LOS F	47 veh (74 sec/veh)	LOS C	25 veh (33 sec/veh)
	Eastbound Right Turns	LOS A	3 veh (8 sec/veh)	LOS A	3 veh (9 sec/veh)
	Westbound Left Turns	LOS C	2 veh (30 sec/veh)	LOS C	4 veh (22 sec/veh)
	Westbound Thrus	LOS C	15 veh (25 sec/veh)	LOS D	37 veh (45 sec/veh)
	Westbound Right Turns	LOS B	1 veh (11 sec/veh)	LOS B	3 veh (11 sec/veh)
	Northbound Left Turns	LOS D	12 veh (49 sec/veh)	LOS E	13 veh (58 sec/veh)
	Northbound Thrus / Right Turns	LOS D	13 veh (51 sec/veh)	LOS E	14 veh (61 sec/veh)
	Southbound Left Turns	LOS D	8 veh (54 sec/veh)	LOS E	11 veh (63 sec/veh)
	Southbound Thrus / Right Turns	LOS E	8 veh (56 sec/veh)	LOS E	11 veh (64 sec/veh)
	OVERALL INTERSECTION	**LOS D (50 sec/veh)**		**LOS D (42 sec/veh)**	

Trotwood Avenue and Old Sunnyside Lane	Westbound Left Turns / Thrus	LOS B	1 veh (10 sec/veh)	LOS A	1 veh (9 sec/veh)
	Northbound Left / Right Turns	LOS F	4 veh (59 sec/veh)	LOS F	4 veh (89 sec/veh)
Sunnyside Lane and Old Sunnyside Lane	Eastbound Left / Right Turns	LOS B	1 veh (12 sec/veh)	LOS B	1 veh (13 sec/veh)
	Northbound Left Turns / Thrus	LOS A	1 veh (8 sec/veh)	LOS A	1 veh (8 sec/veh)
Old Sunnyside Lane and Hunters Glen Drive	Westbound Left Turns / Thrus	LOS A	0 veh (7 sec/veh)	LOS A	1 veh (7 sec/veh)
	Northbound Left / Right Turns	LOS A	1 veh (10 sec/veh)	LOS A	1 veh (10 sec/veh)

5. IMPACTS OF PROPOSED DEVELOPMENT

5.1 TRIP GENERATION

Trip generation calculations were conducted in order to identify how much traffic will be generated by the proposed project. Trip generation data for daily and peak hour trips were identified from Trip Generation, 11th Edition, which was published by the Institute of Transportation Engineers (ITE) in 2021. Table 6 presents the daily and peak hour trip generations for proposed project, and these calculations are included in Appendix C.

TABLE 6. TRIP GENERATION

LAND USE	SIZE	DAILY TRAFFIC	GENERATED TRAFFIC			
			AM PEAK HOUR		PM PEAK HOUR	
			ENTER	EXIT	ENTER	EXIT
Single-Family Detached (LUC 210)	148 homes	1,448	28	79	90	53

5.2 TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

For the purposes of this study, it was estimated that the trips generated by the proposed development will access the project site according to the directional distribution shown in Figure 6. The development of this distribution was based on the following factors:

- existing land use characteristics,
- the directions of approach of the existing traffic,
- the access proposed for the project, and
- the locations of population centers in the area.

The peak hour trip generations and directional distribution were used to add the site-generated trips to the roadway system. Figure 7 includes the peak hour traffic volumes that are expected to be generated by the proposed project.

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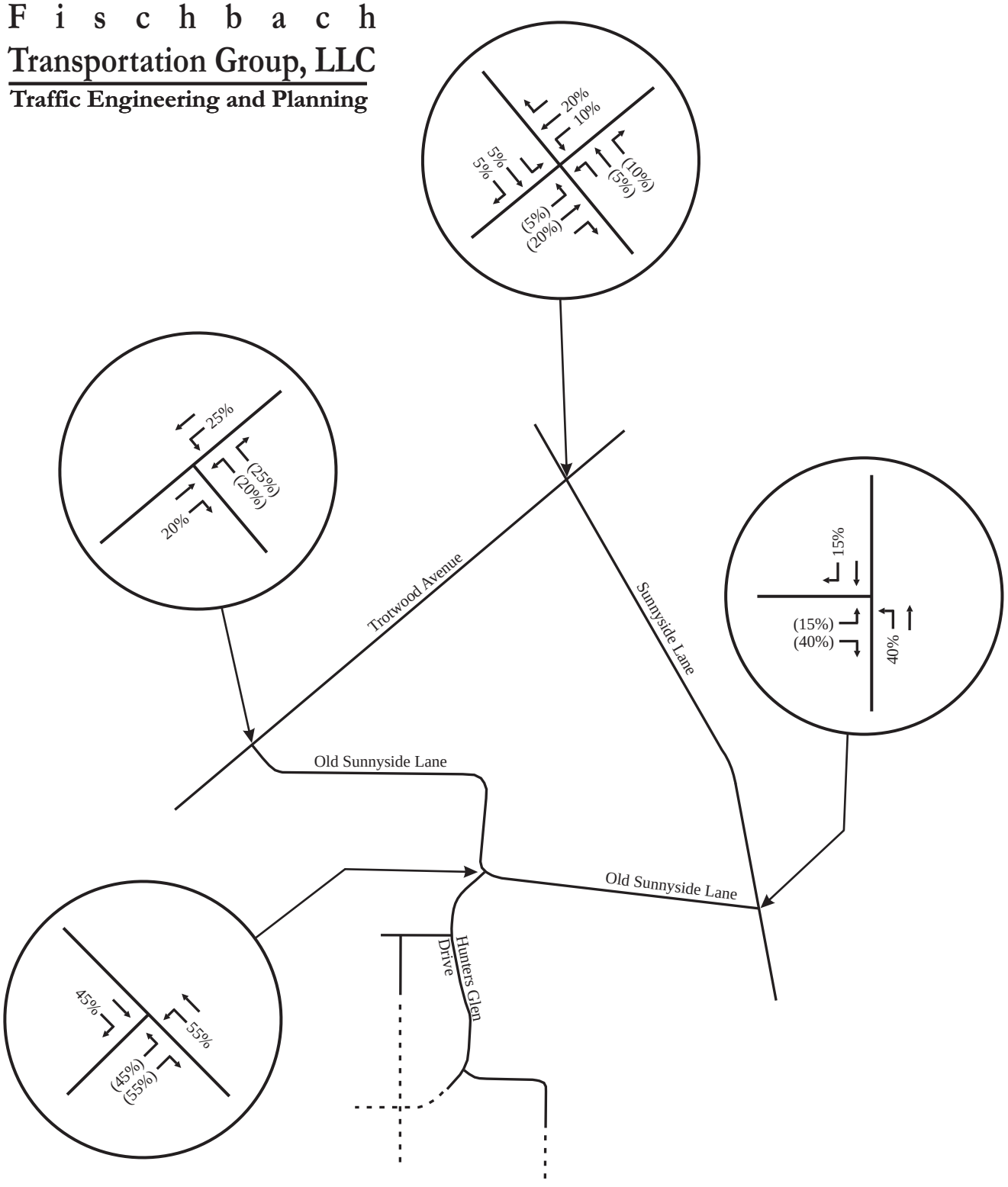

N

No Scale

XX - Entering Volumes
(XX) - Exiting Volumes

Figure 6.
Directional Distribution of Peak Hour Traffic Volumes Generated by the Proposed Project

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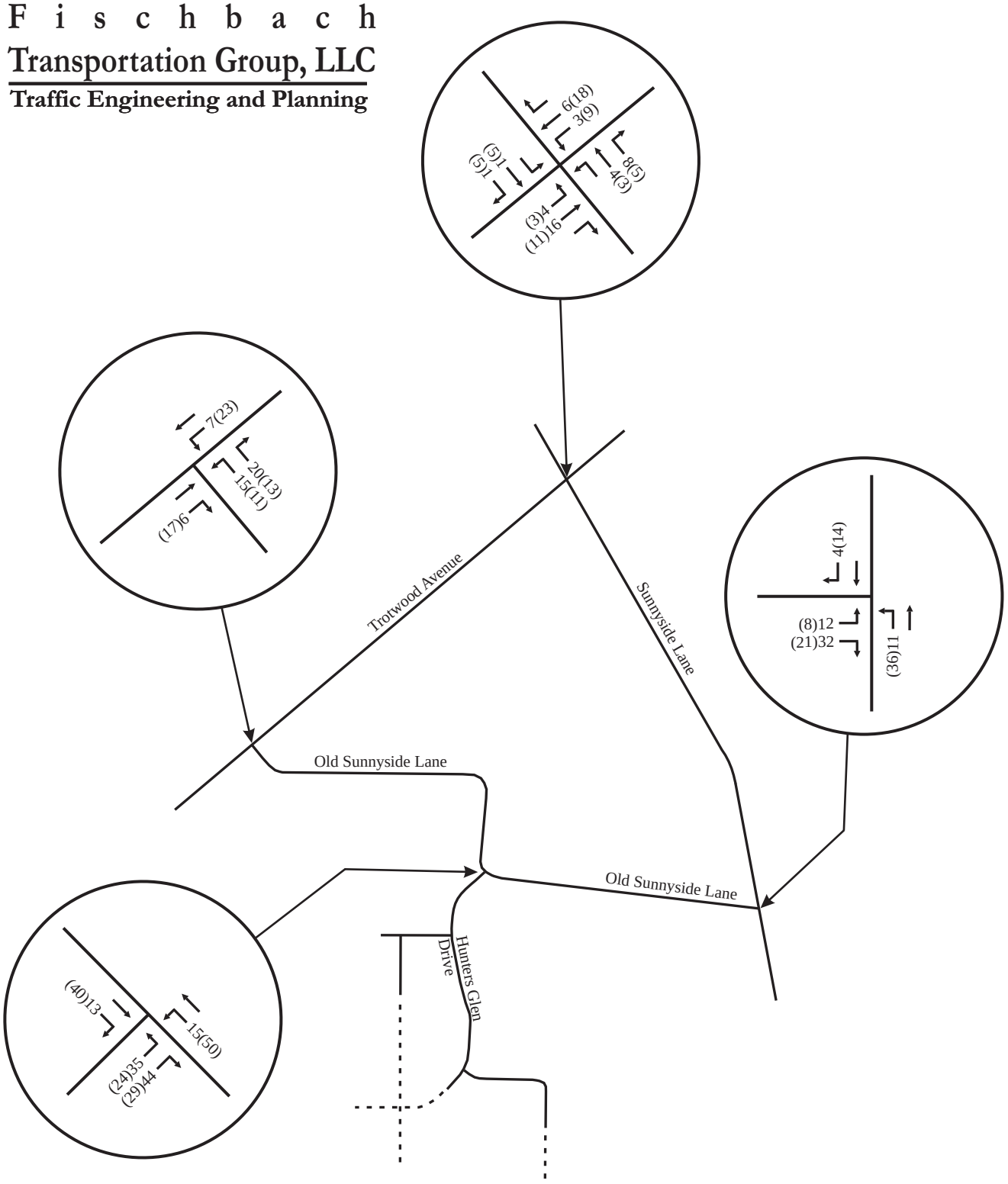
Traffic Engineering and Planning



N

No Scale

XX - AM Peak Hour Volumes
(XX) - PM Peak Hour Volumes

Figure 7.
Peak Hour Traffic Volumes
Generated by the Proposed Project

5.3 CAPACITY ANALYSES

In order to identify the projected peak hour traffic volumes at the completion of the proposed project, the trips generated by the proposed development were added to the background peak hour traffic volumes within the study area. The resulting peak hour volumes are shown in Figure 8.

Using the total projected peak hour traffic volumes, capacity analyses were conducted in order to determine the impact of the proposed project on the roadway system. Specifically, these capacity analyses were used to evaluate the need for roadway and traffic control improvements within the study area. For these analyses, it was assumed that all existing laneage and traffic control will be maintained and no improvements will be provided.

The results of the capacity analyses for the total projected peak hour traffic volumes are shown in Table 7, and Appendix B includes the capacity analyses worksheets. These analyses indicate the following:

Trotwood Avenue and Cayce Lane / Sunnyside Lane
With the existing laneage, this signalized intersection is expected to operate at LOS F during both peak hours. Based on these results, additional analyses were conducted in order to identify how well this intersection would operate if separate right turn lanes on the eastbound and westbound approaches of Trotwood Avenue. With this additional laneage and optimized signal timings, this signalized intersection is expected to operate at LOS E during the AM peak hour and LOS D during the PM peak hour.

Trotwood Avenue and Old Sunnyside Lane
At this unsignalized intersection, the northbound turning movements are expected to operate at LOS F during both peak hours. Based on these results, additional analyses were conducted in order to identify how well this intersection would operate if a dedicated turn lane were provided on each approach. With this additional laneage and the existing unsignalized conditions, the northbound turning movements are expected to operate at LOS F during both peak hours but the northbound vehicle queues will be reduced.

Sunnyside Lane and Old Sunnyside Lane
At this unsignalized intersection, all of the critical turning movements are expected to operate at LOS B or better during both peak hours.

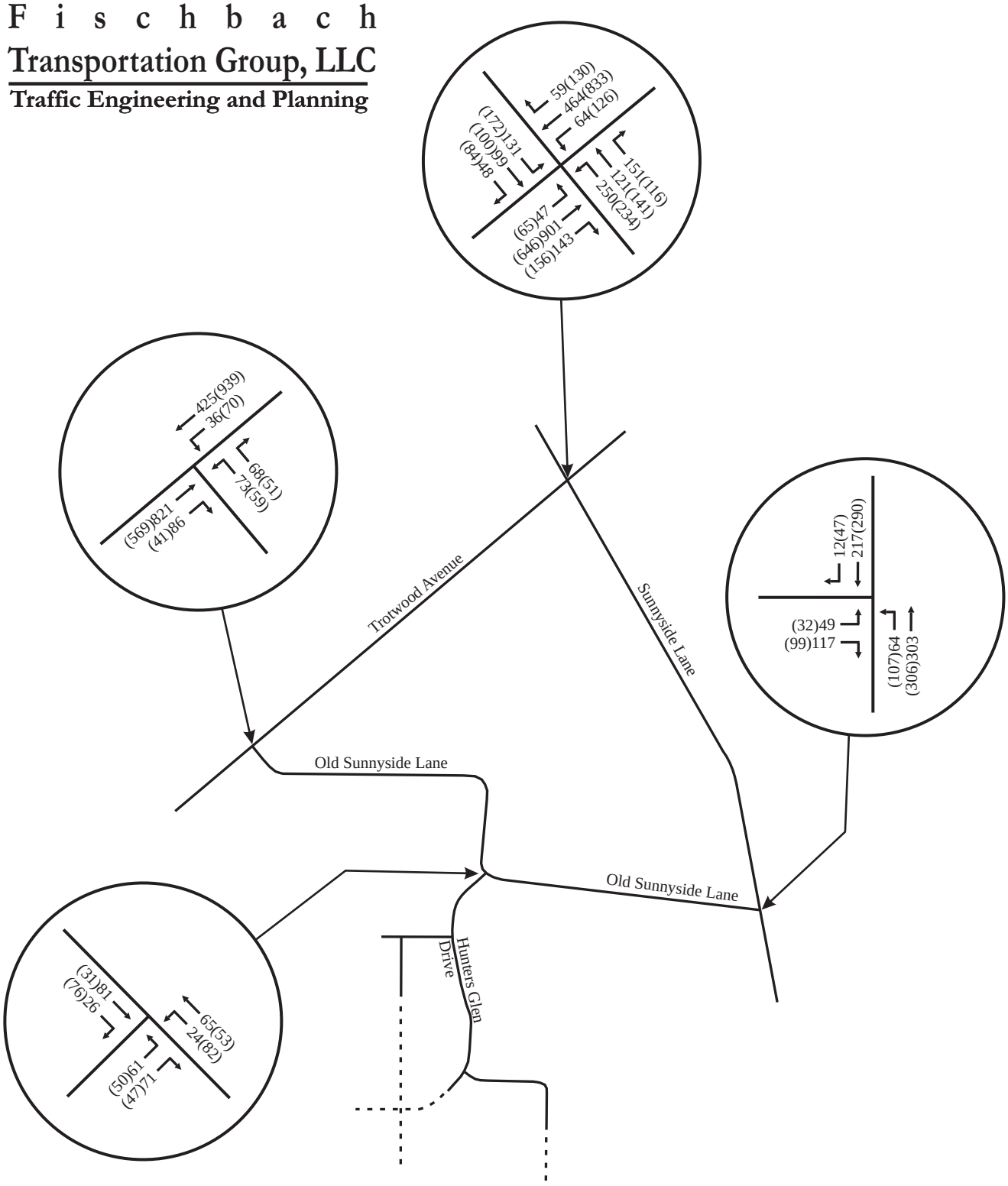
Old Sunnyside Lane and Hunters Glen Drive
At this unsignalized intersection, all of the critical turning movements are expected to operate at LOS B or better during both peak hours.

Using the total projected peak hour traffic volumes, analyses were conducted to determine whether or not the following turn lanes are warranted in conjunction with the proposed project:

- A westbound left turn lane on Trotwood Avenue at Old Sunnyside Lane.
- A eastbound right turn lane on Trotwood Avenue at Old Sunnyside Lane.

For these analyses, consideration was given to the *TDOT Highway System Access Manual*, Volume 3 Geometric Design Criteria, as included in Appendix D. The total projected traffic volumes shown in Figure 8 do warrant both of these dedicated turn lanes.

F i s c h b a c h
Transportation Group, LLC
Traffic Engineering and Planning



N

No Scale

XX - AM Peak Hour Volumes
(XX) - PM Peak Hour Volumes

Figure 8.
Total Projected Peak Hour Traffic Volumes at the Completion of the Proposed Project

TABLE 7. YEAR 2030 TOTAL PEAK HOUR LEVELS OF SERVICE

INTERSECTION	TURNING MOVEMENT	AM PEAK HOUR		PM PEAK HOUR	
		LEVEL OF SERVICE	95TH %-ILE QUEUE	LEVEL OF SERVICE	95TH %-ILE QUEUE
Trotwood Avenue and Cayce Lane / Sunnyside Lane (with existing laneage)	Eastbound Left Turns	LOS B	1 veh (15 sec/veh)	LOS C	1 veh (24 sec/veh)
	Eastbound Thrus / Right Turns	LOS F	74 veh (158 sec/veh)	LOS F	37 veh (72 sec/veh)
	Westbound Left Turns	LOS C	1 veh (25 sec/veh)	LOS C	3 veh (25 sec/veh)
	Westbound Thrus / Right Turns	LOS C	15 veh (24 sec/veh)	LOS F	62 veh (136 sec/veh)
	Northbound Left Turns	LOS E	13 veh (63 sec/veh)	LOS F	16 veh (115 sec/veh)
	Northbound Thrus / Right Turns	LOS F	17 veh (93 sec/veh)	LOS F	20 veh (161 sec/veh)
	Southbound Left Turns	LOS F	10 veh (112 sec/veh)	LOS D	8 veh (51 sec/veh)
	Southbound Thrus / Right Turns	LOS F	13 veh (151 sec/veh)	LOS E	10 veh (61 sec/veh)
	OVERALL INTERSECTION	**LOS F (104 sec/veh)**		**LOS F (101 sec/veh)**	
Trotwood Avenue and Cayce Lane / Sunnyside Lane (with dedicated eastbound and westbound right turn lanes)	Eastbound Left Turns	LOS B	1 veh (18 sec/veh)	LOS C	2 veh (31 sec/veh)
	Eastbound Thrus	LOS F	52 veh (89 sec/veh)	LOS C	27 veh (34 sec/veh)
	Eastbound Right Turns	LOS A	3 veh (8 sec/veh)	LOS A	4 veh (10 sec/veh)
	Westbound Left Turns	LOS C	2 veh (30 sec/veh)	LOS C	4 veh (23 sec/veh)
	Westbound Thrus	LOS C	16 veh (26 sec/veh)	LOS D	41 veh (48 sec/veh)
	Westbound Right Turns	LOS B	1 veh (12 sec/veh)	LOS B	3 veh (11 sec/veh)
	Northbound Left Turns	LOS D	12 veh (48 sec/veh)	LOS E	14 veh (62 sec/veh)
	Northbound Thrus / Right Turns	LOS D	14 veh (51 sec/veh)	LOS E	16 veh (66 sec/veh)
	Southbound Left Turns	LOS D	8 veh (54 sec/veh)	LOS E	11 veh (66 sec/veh)
	Southbound Thrus / Right Turns	LOS E	8 veh (56 sec/veh)	LOS E	12 veh (69 sec/veh)
	OVERALL INTERSECTION	**LOS E (56 sec/veh)**		**LOS D (45 sec/veh)**	

Trotwood Avenue and Old Sunnyside Lane (with existing laneage)	Westbound Left Turns / Thrus	LOS B	1 veh (11 sec/veh)	LOS A	1 veh (9 sec/veh)
	Northbound Left / Right Turns	LOS F	7 veh (97 sec/veh)	LOS F	7 veh (177 sec/veh)
Trotwood Avenue and Old Sunnyside Lane (with dedicated turn lanes)	Westbound Left Turns / Thrus	LOS B	1 veh (11 sec/veh)	LOS A	1 veh (9 sec/veh)
	Northbound Left Turns	LOS F	3 veh (66 sec/veh)	LOS F	4 veh (142 sec/veh)
	Northbound Right Turns	LOS C	1 veh (19 sec/veh)	LOS B	1 veh (13 sec/veh)
Sunnyside Lane and Old Sunnyside Lane	Eastbound Left / Right Turns	LOS B	1 veh (13 sec/veh)	LOS B	1 veh (14 sec/veh)
	Northbound Left Turns / Thrus	LOS A	1 veh (8 sec/veh)	LOS A	1 veh (8 sec/veh)
Old Sunnyside Lane and Hunters Glen Drive	Westbound Left Turns / Thrus	LOS A	1 veh (8 sec/veh)	LOS A	1 veh (8 sec/veh)
	Northbound Left / Right Turns	LOS B	1 veh (10 sec/veh)	LOS B	1 veh (11 sec/veh)

6. CONCLUSIONS AND RECOMMENDATIONS

The analyses conducted for the purposes of this study indicate that the following considerations should be made in order to accommodate the traffic volumes that will be generated by the proposed project:

Trotwood Avenue and Cayce Lane / Sunnyside Lane

With the existing laneage, this signalized intersection is expected to operate at LOS F during both peak hours under background and total projected conditions. Based on these results, additional analyses were conducted in order to identify how well this intersection would operate if separate right turn lanes on the eastbound and westbound approaches of Trotwood Avenue. With this additional laneage and optimized signal timings, this signalized intersection is expected to operate at LOS E during the AM peak hour and LOS D during the PM peak hour with the completion of the proposed project. ***However, no laneage or traffic control modifications are recommended at this intersection in conjunction with the proposed project.***

Trotwood Avenue and Old Sunnyside Lane

At this unsignalized intersection, the northbound turning movements are expected to operate at LOS F during both peak hours under background and total projected conditions. Based on these results, additional analyses were conducted in order to identify how well this intersection would operate if a dedicated turn lane were provided on each approach. Specifically, this would include a dedicated westbound left turn lane, a dedicated eastbound right turn lane, and separate northbound left and right turn lanes. With this additional laneage and the existing unsignalized conditions, the northbound turning movements are expected to operate at LOS F during both peak hours but the northbound vehicle queues will be reduced.

If these turn lanes are provided in conjunction with the proposed project, each of them should be designed and constructed to AASHTO standards, and each turn lane should include at least 75 feet of storage. The developer of the proposed project has budgeted for the widening of Old Sunnyside Lane to provide separate turn lanes, as shown in Figure 9.

Sunnyside Lane and Old Sunnyside Lane

At this unsignalized intersection, all of the critical turning movements are expected to operate at LOS B or better during both peak hours at the completion of the proposed project.

Therefore, no laneage or traffic control modifications are recommended at this intersection in conjunction with the proposed project.

Old Sunnyside Lane and Hunters Glen Drive

At this unsignalized intersection, all of the critical turning movements are expected to operate at LOS B or better during both peak hours at the completion of the proposed project.

Therefore, no laneage or traffic control modifications are recommended at this intersection in conjunction with the proposed project.

Traffic Calming in Hunters Glen

Although the traffic volumes in Hunters Glen are expected to remain relatively low and appropriate for medium-density residential communities, the additional vehicles generated by the proposed project may have a negative impact on the existing homeowners in the Hunters Glen community. Therefore, it would be appropriate for the City of Columbia to consider the following traffic calming techniques on the public streets that will provide direct access to the project site:

Chicanes

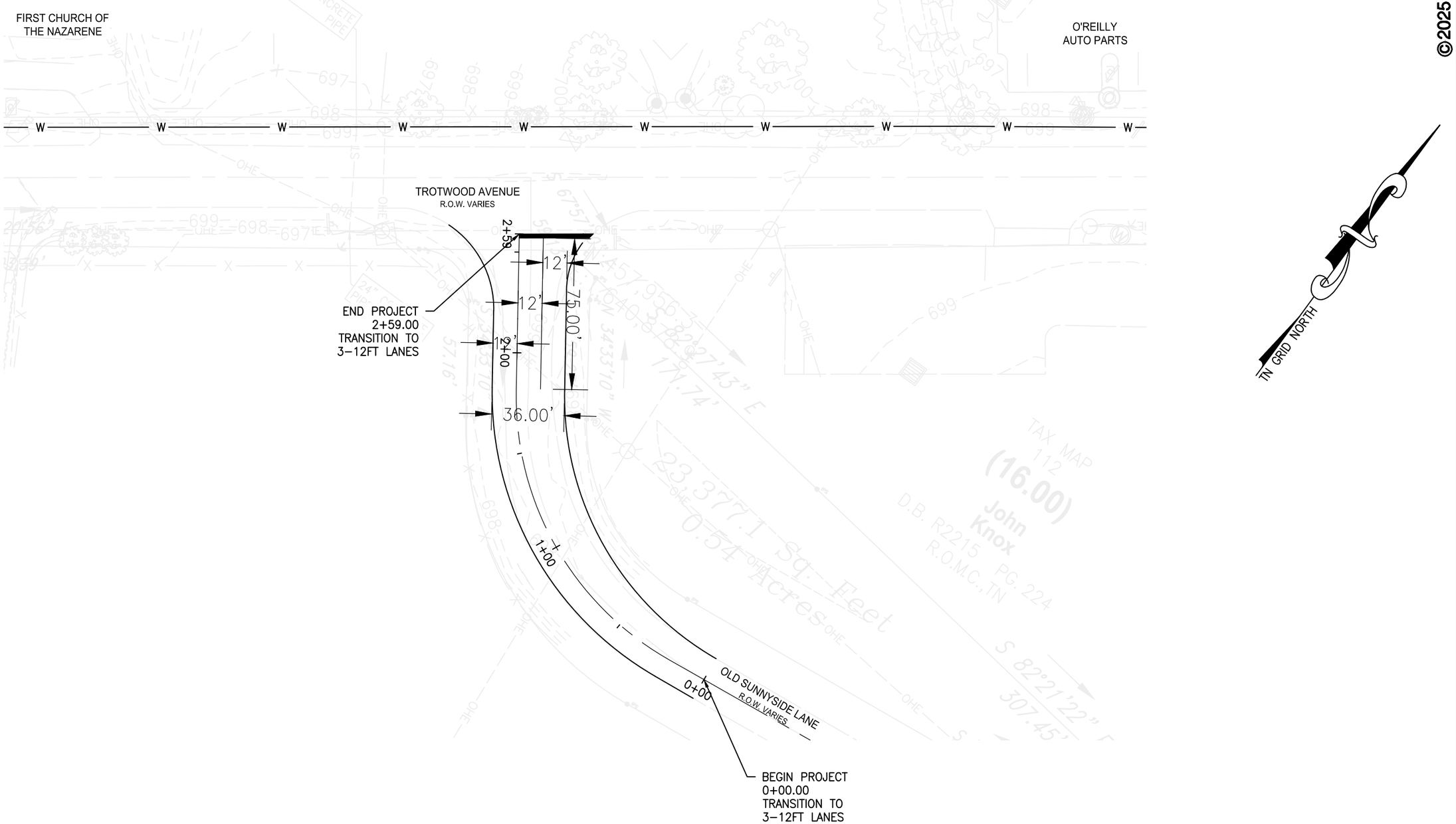
Chicanes are created when the path of travel is shifted and motorists are required to reduce vehicle speeds in order to navigate curves and/or avoid grassy, curbed bulbs that are constructed within the pavement. The public roadways within Hunters Glen typically include 30 feet of pavement, and so there is adequate width to construct chicanes on these facilities. While this treatment would likely reduce vehicle speeds and add more opportunities for green space within the Hunters Glen community, chicanes would also reduce the on-street parking and, potentially, reduce visibility for motorists. If chicanes are constructed on one or more roadways within the Hunters Glen community, the design and installation of these elements should be consistent with industry standards and should be reviewed and approved by the City of Columbia Engineering Department.

Radar Feedback

Radar speed signs are a relatively-low cost option for encouraging motorists to keep their speeds at or below the speed limit. Also, recent research indicates that radar feedback is generally effective at reducing typical vehicle speeds. However, there is some potential that motorists become desensitized to permanent installations of these signs. Also, these signs do not include any enforcement of vehicle speeds.

Narrow Striping

By striping relatively narrow travel lanes, motorists are encouraged to travel at reasonable speeds and improve safety for pedestrians and bicyclists. Also, within the existing 30-foot pavement widths, a nine-foot travel lane and a six-foot parking lane could be provided in each direction. However, if this treatment is implemented, each new cross-section should be reviewed and approved by the City of Columbia Engineering Department.



LEGEND

	EXISTING	PROPOSED
WATER MAIN		
SANITARY SEWER	10"s	
STORM SEWER	15"r	
OVERHEAD		
DRAINAGE DITCH		
STREET SIGN		
LIGHT POLE		
UTILITY POLE		
STANDARD DUTY ASPHALT PAVEMENT		
HEAVY DUTY ASPHALT PAVEMENT		
CONCRETE PAVEMENT		
STORM STRUCTURE LABEL		

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

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REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 107415
STATE OF TENNESSEE
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CIVIL ENGINEERS & LAND SURVEYORS
2486 NASHVILLE HIGHWAY
COLUMBIA, TN 38401
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LEGENDS AT HUNTERS GLEN TURN LANE EXHIBIT
TROTWOOD AVE & OLD SUNNYSIDE LN

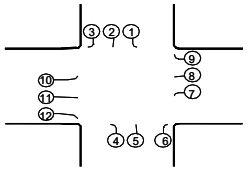
COLUMBIA, TN 38401
T.D.O.T. DRIVEWAY ENTRANCE

Drawn: CG
Checked: GWV
Approved: GWV
Date: 4/30/2025

17608 1 OF 1

FILE: J:\WES_Engineers_Surveyors 2017\17608 - Hunters Glen Sec 4 - McBroom\Dwg\Engineering\17608 Legends at Hunters Glen Base CD-3 - REV3.dwg

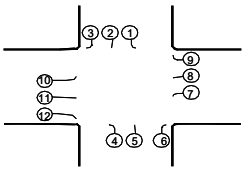
APPENDIX A
EXISTING TRAFFIC COUNTS AND SPEED DATA
BACKGROUND TRAFFIC COUNTS



INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: Trotwood Avenue and Cayce Lane / Sunnyside Lane
DATE: 12-Dec-24 Thu
RECORDER: Burns
NOTES: signalized

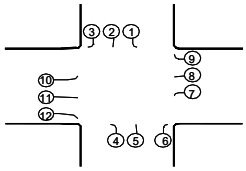
LOCATION	S/B Cayce Lane			N/B Sunnyside Lane			W/B Trotwood Avenue			E/B Trotwood Avenue				
TIME	1	2	3	4	5	6	7	8	9	10	11	12		
6:00-6:15	8	5	5	6	5	8	2	21	5	1	68	7	848	141
6:15-6:30	9	4	2	12	5	12	5	31	3		67	3	1,038	153
6:30-6:45	14	5	3	12	14	16	4	45	2	2	113	8	1,320	238
6:45-7:00	18	10	8	10	15	19	9	70	7	4	130	16	1,542	316
7:00-7:15	28	9	3	29	17	29	7	72	12	5	107	13	1,710	331
7:15-7:30	**26**	**16**	**6**	**34**	**25**	**33**	**8**	**89**	**10**	**5**	**163**	**20**	**1,807**	435
7:30-7:45	**32**	**26**	**12**	**41**	**29**	**29**	**8**	**78**	**14**	**4**	**168**	**19**	1,690	460
7:45-8:00	**25**	**20**	**7**	**40**	**18**	**24**	**22**	**113**	**16**	**5**	**162**	**32**	1,557	**484**
8:00-8:15	**25**	**17**	**10**	**49**	**17**	**29**	**14**	**89**	**10**	**7**	**134**	**27**	1,442	428
8:15-8:30	22	13	2	16	12	21	9	56	8	5	130	24	1,368	318
8:30-8:45	38	14	7	17	13	25	20	58	17	3	101	14	1,390	327
8:45-9:00	27	15	8	14	13	31	21	70	5	2	137	26	1,388	369
9:00-9:15	26	14	7	14	11	29	20	72	5	3	129	24	1,330	354
9:15-9:30	26	13	7	13	9	27	19	74	5	4	121	22	1,272	340
9:30-9:45	25	13	6	13	7	26	19	75	5	4	112	20	1,262	325
9:45-10:00	25	12	6	12	5	24	18	77	5	5	104	18	1,255	311
10:00-10:15	24	11	5	12	3	22	17	79	5	6	96	16	1,286	296
10:15-10:30	25	10	6	13	7	20	13	96	7	5	115	13	1,299	330
10:30-10:45	25	10	5	10	8	21	21	76	9	6	116	11	1,316	318
10:45-11:00	17	10	3	19	15	22	22	91	12	6	114	11	1,350	342
11:00-11:15	23	8	7	17	7	20	21	92	11	1	90	12	1,409	309
11:15-11:30	20	4	9	18	7	23	20	100	13	10	109	14	1,512	347
11:30-11:45	16	13	8	20	10	13	18	111	15	5	106	17	1,546	352
11:45-12:00	14	8	5	17	10	23	24	118	34	7	126	15	1,616	401
12:00-12:15	22	10	2	24	14	24	20	136	22	10	105	23	1,604	412
12:15-12:30	19	11	9	20	18	20	25	129	5	5	105	15	1,593	381
12:30-12:45	32	10	8	19	19	30	25	124	12	9	118	16	1,623	422
12:45-1:00	17	9	6	21	17	26	21	118	14	5	116	19	1,621	389
1:00-1:15	19	10	6	23	16	26	22	125	16	6	113	19	1,662	401
1:15-1:30	21	12	6	25	14	26	23	131	17	7	110	19	1,703	411
1:30-1:45	22	13	6	27	13	26	23	138	19	7	106	20	1,744	420
1:45-2:00	24	15	6	29	11	26	24	144	20	8	103	20	1,766	430
2:00-2:15	26	16	6	31	10	26	25	151	22	9	100	20	1,803	442
2:15-2:30	35	5	7	36	13	20	10	159	16	11	128	12	1,850	452
2:30-2:45	34	10	9	40	21	28	27	132	17	8	98	18	1,901	442
2:45-3:00	26	12	8	32	14	20	20	155	17	12	124	27	1,943	467
3:00-3:15	41	29	9	31	19	29	23	119	19	13	124	33	1,946	489
3:15-3:30	22	27	14	26	21	16	26	136	18	12	150	35	1,908	503
3:30-3:45	25	27	12	26	20	17	27	138	18	10	133	31	1,893	484
3:45-4:00	27	27	10	27	20	18	29	140	18	9	117	28	1,936	470
4:00-4:15	30	27	8	27	19	19	30	142	18	7	100	24	1,946	451
4:15-4:30	33	19	13	38	14	23	28	151	13	11	117	28	2,007	488
4:30-4:45	**43**	**27**	**17**	**39**	**17**	**21**	**18**	**162**	**23**	**10**	**115**	**35**	**2,008**	**527**
4:45-5:00	**31**	**17**	**12**	**37**	**32**	**24**	**24**	**144**	**20**	**6**	**101**	**32**	1,917	480
5:00-5:15	**37**	**12**	**12**	**35**	**38**	**23**	**32**	**138**	**22**	**17**	**118**	**28**	1,831	512
5:15-5:30	**31**	**18**	**8**	**34**	**22**	**22**	**25**	**137**	**45**	**9**	**117**	**21**	1,704	489
5:30-5:45	22	16	11	33	25	24	28	109	43	19	89	17	1,571	436
5:45-6:00	25	11	9	24	17	23	27	124	32	9	77	16	1,467	394
6:00-6:15	21	9	9	34	18	15	32	127	29	7	73	11	1,342	385
6:15-6:30	22	6	4	14	6	16	23	119	38	6	87	15		356
6:30-6:45	17	8	12	24	11	16	27	101	26	7	69	14		332
6:45-7:00	12	5	6	12	12	19	15	89	29	5	51	14		269
TOTAL	**1,274**	**698**	**392**	**1,246**	**773**	**1,169**	**1,040**	**5,571**	**843**	**359**	**5,782**	**1,012**		
AM PK HR	108	79	35	164	89	115	52	369	50	21	627	98	**7:15-8:15**	**0.93**
SCHOOL PK														
PM PK HR	142	74	49	145	109	90	99	581	110	42	451	116	**4:30-5:30**	**0.95**



INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: Trotwood Avenue and Old Sunnyside Lane
DATE: 4-Dec-24 Wed
RECORDER: Burns
NOTES: stop sign on Old Sunnyside Lane

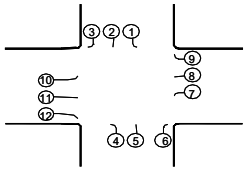
LOCATION	S/B Trotwood Avenue			N/B Trotwood Avenue			W/B Old Sunnyside Lane			E/B				
TIME	1	2	3	4	5	6	7	8	9	10	11	12		
6:00-6:15	1	19			53	1	3		1				546	78
6:15-6:30	1	31			88	5			4				643	129
6:30-6:45		50			88	4	2		8				781	152
6:45-7:00	3	51			111	8	9		5				903	187
7:00-7:15	1	65			91	5	4		9				940	175
7:15-7:30		**84**			**145**	**12**	**12**		**14**				**981**	267
7:30-7:45	**6**	**87**			**140**	**21**	**14**		**6**				878	**274**
7:45-8:00	**6**	**52**			**125**	**24**	**13**		**4**				782	224
8:00-8:15	**11**	**61**			**112**	**11**	**10**		**11**				728	216
8:15-8:30	7	54			89	6	6		2				681	164
8:30-8:45	1	57			106	3	8		3				682	178
8:45-9:00	3	47			107	5	4		4				666	170
9:00-9:15	3	51			102	5	4		4				654	169
9:15-9:30	2	55			97	5	3		3				642	165
9:30-9:45	2	59			91	4	3		3				652	162
9:45-10:00	1	63			86	4	2		2				666	158
10:00-10:15	1	67			81	4	2		2				698	157
10:15-10:30	6	76			85	3	1		4				726	175
10:30-10:45	3	75			94	2			2				732	176
10:45-11:00	3	77			103	3	3		1				732	190
11:00-11:15	3	80			92	3	3		4				746	185
11:15-11:30	4	82			82	3	4		6				750	181
11:30-11:45	4	85			71	3	4		9				749	176
11:45-12:00	7	97			90	2	6		2				771	204
12:00-12:15	3	97			77	3	3		6				752	189
12:15-12:30	3	101			61	7	3		5				753	180
12:30-12:45	4	93			90	4	3		4				766	198
12:45-1:00	5	78			90	7	3		2				768	185
1:00-1:15	5	86			88	6	3		2				786	190
1:15-1:30	4	93			85	5	3		3				804	193
1:30-1:45	4	101			83	5	4		3				842	200
1:45-2:00	3	108			80	4	4		4				869	203
2:00-2:15	3	116			78	3	4		4				932	208
2:15-2:30	1	122			83	5	9		11				979	231
2:30-2:45	6	110			92	10	6		3				1,026	227
2:45-3:00	5	130			107	7	13		4				1,065	266
3:00-3:15	6	118			114	9	6		2				1,054	255
3:15-3:30	17	134			103	14	7		3				1,042	278
3:30-3:45	14	130			100	11	8		3				1,039	266
3:45-4:00	11	125			96	9	10		4				1,032	255
4:00-4:15	8	121			93	6	11		4				1,062	243
4:15-4:30	8	150			92	8	13		4				1,059	275
4:30-4:45	**5**	**147**			**80**	**6**	**12**		**9**				**1,082**	259
4:45-5:00	**8**	**166**			**90**	**7**	**9**		**5**				1,053	285
5:00-5:15	**6**	**142**			**77**	**4**	**4**		**7**				1,007	240
5:15-5:30	**14**	**146**			**112**	**3**	**16**		**7**				971	**298**
5:30-5:45	9	127			74	6	9		5				846	230
5:45-6:00	8	122			87	10	9		3				769	239
6:00-6:15	8	108			72	6	6		4				678	204
6:15-6:30	6	95			63	5			4					173
6:30-6:45	3	85			54	6	4		1					153
6:45-7:00	5	74			56	4	4		5					148
TOTAL	**261**	**4,750**			**4,706**	**326**	**306**		**234**					
AM PK HR	23	284			522	68	49		35				**7:15-8:15**	**0.90**
SCHOOL PK														
PM PK HR	33	601			359	20	41		28				**4:30-5:30**	**0.91**



INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: Sunnyside Lane and Old Sunnyside Lane
DATE: 11-Dec-24 Wed
RECORDER: Burns
NOTES: stop sign on Old Sunnyside Lane

LOCATION	S/B Sunnyside Lane			N/B Old Sunnyside Lane			W/B			E/B Old Sunnyside Lane				
TIME	1	2	3	4	5	6	7	8	9	10	11	12		
6:00-6:15		11			9					2		1	194	23
6:15-6:30		12	1	1	22					1		3	256	40
6:30-6:45		19	1	3	24					2		6	333	55
6:45-7:00		30		1	33					4		8	424	76
7:00-7:15		26	1	9	32					3		14	488	85
7:15-7:30		**26**	**1**	**13**	**60**					**7**		**10**	**543**	117
7:30-7:45		**50**	**2**	**6**	**66**					**7**		**15**	523	**146**
7:45-8:00		**37**		**14**	**58**					**5**		**26**	454	140
8:00-8:15		**45**	**1**	**12**	**57**					**4**		**21**	400	140
8:15-8:30		33	5	8	33					4		14	341	97
8:30-8:45		28	1	6	38					1		3	318	77
8:45-9:00		30		5	41					3		7	311	86
9:00-9:15		29	1	4	38					3		6	288	81
9:15-9:30		27	1	3	35					3		5	265	74
9:30-9:45		26	2	3	31					3		5	253	70
9:45-10:00		24	2	2	28					3		4	248	63
10:00-10:15		23	3	1	25					3		3	274	58
10:15-10:30		24	2		28					3		5	287	62
10:30-10:45		23		2	33					1		6	301	65
10:45-11:00		28	1	6	43					5		6	322	89
11:00-11:15		23	3	5	35					2		3	302	71
11:15-11:30		29	2	5	30					4		6	314	76
11:30-11:45		24	4	9	40					2		7	302	86
11:45-12:00		38	2	4	21					2		2	315	69
12:00-12:15		35		5	38							5	339	83
12:15-12:30		27	4	4	26							3	338	64
12:30-12:45		27	2	10	51					3		6	354	99
12:45-1:00		25	6	4	49					4		5	335	93
1:00-1:15		32	1	4	43							2	319	82
1:15-1:30		30	1	5	40					1		3	312	80
1:30-1:45		28	2	6	37					2		5	326	80
1:45-2:00		26	2	7	33					3		6	370	77
2:00-2:15		24	2	8	30					4		7	410	75
2:15-2:30		30	5	8	44					1		6	466	94
2:30-2:45		42	4	12	50					5		11	528	124
2:45-3:00		42	4	8	48					5		10	559	117
3:00-3:15		53	3	6	52					7		10	595	131
3:15-3:30		**57**	**6**	**14**	**51**					**5**		**23**	**616**	**156**
3:30-3:45		**57**	**5**	**15**	**56**					**4**		**19**	610	155
3:45-4:00		**56**	**4**	**15**	**60**					**3**		**14**	607	153
4:00-4:15		**56**	**3**	**16**	**65**					**2**		**10**	593	152
4:15-4:30		52	2	18	61					2		15	585	150
4:30-4:45		61	5	6	64					2		14	573	152
4:45-5:00		50	5	13	63					3		5	536	139
5:00-5:15		50	2	14	64					7		7	520	144
5:15-5:30		56	1	12	57					4		8	447	138
5:30-5:45		51	1	7	46					5		5	417	115
5:45-6:00		54	4	11	45					2		7	365	123
6:00-6:15		35	5	3	21					5		2	293	71
6:15-6:30		41	3	3	44					10		7		108
6:30-6:45		34	1	4	23							1		63
6:45-7:00		23		2	20					1		5		51
TOTAL		**1,819**	**119**	**362**	**2,141**					**167**		**407**		
AM PK HR		158	4	45	241					23		72	**7:15-8:15**	**0.93**
SCHOOL PK														
PM PK HR		226	18	60	232					14		66	**3:15-4:15**	**0.99**



INTERSECTION TRAFFIC VOLUME COUNTS

LOCATION: Old Sunnyside Lane and Hunters Glen Drive
DATE: 5-Dec-24 Thu
RECORDER: Burns
NOTES: stop sign on Hunters Glen Drive

LOCATION	S/B Old Sunnyside Lane			N/B			W/B Old Sunnyside Lane			E/B Hunters Glen Drive				
TIME	1	2	3	4	5	6	7	8	9	10	11	12		
6:00-6:15	2		2							1	1		55	6
6:15-6:30	2							1	3	3	1		69	10
6:30-6:45	4		1						3	6	2		95	16
6:45-7:00	9								2	9	3		119	23
7:00-7:15	7		1					1	5	4	2		148	20
7:15-7:30	**15**		**1**						**13**	**6**	**1**		**168**	36
7:30-7:45	**13**		**2**						**14**	**7**	**4**		162	40
7:45-8:00	**24**		**2**					**1**	**16**	**2**	**7**		146	**52**
8:00-8:15	**17**		**4**					**4**	**12**	**1**	**2**		108	40
8:15-8:30	11		3					1	6	6	3		82	30
8:30-8:45	8		3					3	2	5	3		63	24
8:45-9:00	4		1					2	1	3	3		52	14
9:00-9:15	4		1					2	1	3	3		48	14
9:15-9:30	3		1					1	1	2	3		44	11
9:30-9:45	3		1					1	2	2	4		51	13
9:45-10:00	2		1						2	1	4		53	10
10:00-10:15	2		1						2	1	4		55	10
10:15-10:30	3		3					4	2	3	3		55	18
10:30-10:45	3		1					2	6	1	2		55	15
10:45-11:00	1		1					2	3	3	2		54	12
11:00-11:15	3		4					1		1	1		50	10
11:15-11:30	3		2					2	7		4		55	18
11:30-11:45	3		5						2	2	2		49	14
11:45-12:00	1								1	4	2		48	8
12:00-12:15	6		1					3	4	1			55	15
12:15-12:30	3		1						7	1			55	12
12:30-12:45	3		2						6	1	1		60	13
12:45-1:00	4		3					1	5	1	1		65	15
1:00-1:15	4		3					1	4	1	2		65	15
1:15-1:30	5		4					2	3	1	2		72	17
1:30-1:45	5		5					2	2	1	3		76	18
1:45-2:00	2		2					2	4	2	3		88	15
2:00-2:15	5		4					2	5	2	4		105	22
2:15-2:30	4		2					1	7	3	4		122	21
2:30-2:45	11		3					4	7	2	3		145	30
2:45-3:00	6		2					3	15	4	2		152	32
3:00-3:15	11		4					1	14	5	4		149	39
3:15-3:30	25		2					2	13	1	1		132	44
3:30-3:45	19		3					2	11	1	1		116	37
3:45-4:00	12		4					2	10		1		121	29
4:00-4:15	6		5					2	8		1		130	22
4:15-4:30	5		5					4	10	3	1		137	28
4:30-4:45	**9**		**5**					**8**	**11**	**7**	**2**		**139**	**42**
4:45-5:00	**7**		**7**					**4**	**10**	**6**	**4**		127	38
5:00-5:15	**5**		**5**						**14**	**3**	**2**		109	29
5:15-5:30	**5**		**7**					**5**	**10**	**2**	**1**		105	30
5:30-5:45	8		4					5	6	4	3		89	30
5:45-6:00	2		3					6	6	2	1		72	20
6:00-6:15	1		2					7	12	2	1		65	25
6:15-6:30	2		1					4	4	2	1			14
6:30-6:45	4		2					2	3	1	1			13
6:45-7:00	3		2					3	4	1				13
TOTAL	**329**		**134**					**106**	**321**	**136**	**116**			
AM PK HR	69		9					5	55	16	14		**7:15-8:15**	**0.81**
SCHOOL PK														
PM PK HR	26		24					17	45	18	9		**4:30-5:30**	**0.83**

F i s c h b a c h
Transportation Group, LLC
Traffic Engineering and Planning

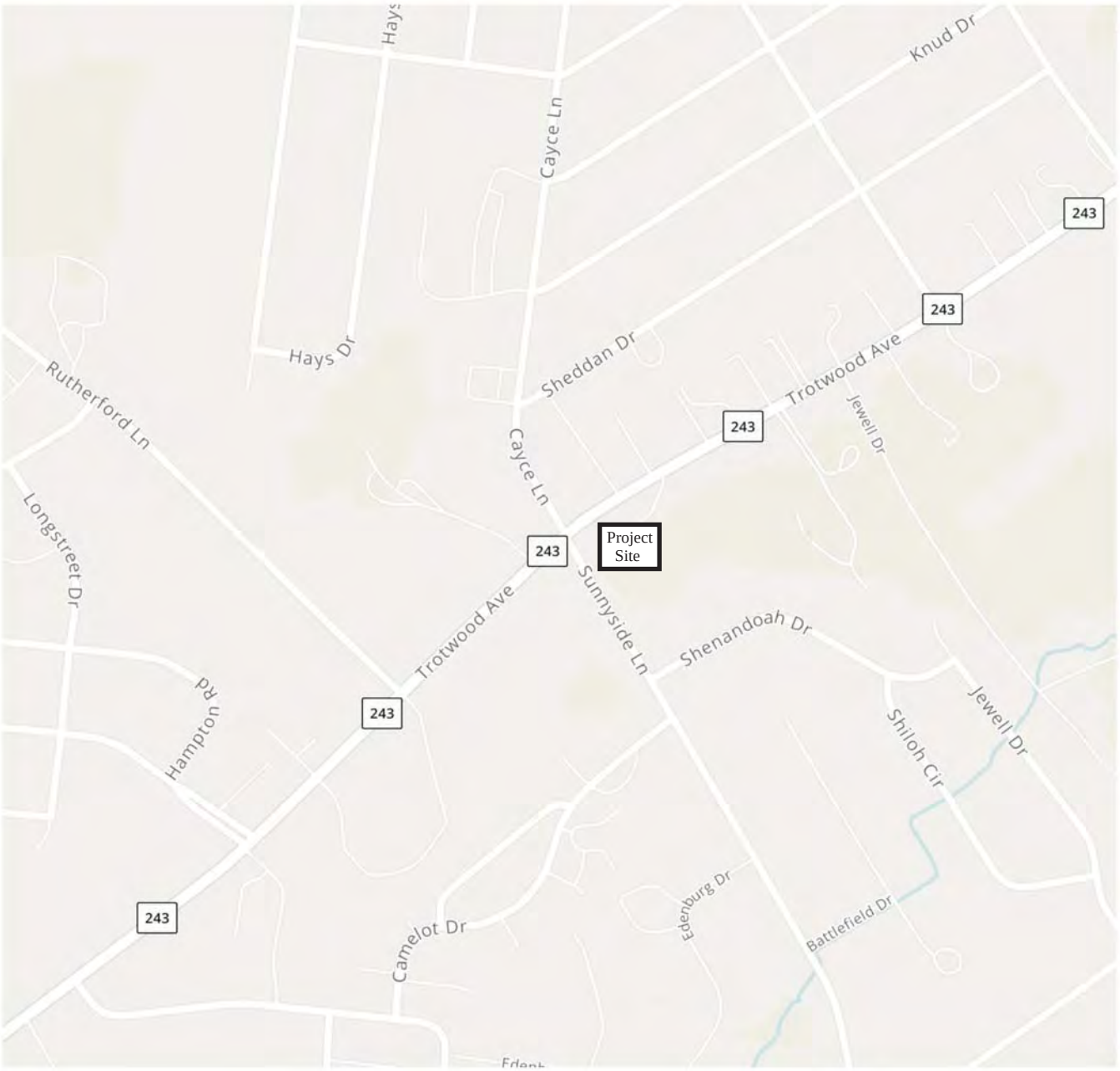
Traffic Impact Study

Highland Convenience Market
Trotwood Avenue and Sunnyside Lane
Columbia, TN

Prepared April 2022
(Revised June 2022)
For WES Engineers & Surveyors

FTG, LLC
P.O. Box 682736
Franklin, TN 37068
(615) 771-8022 phone
Gillian@FTGtraffic.com

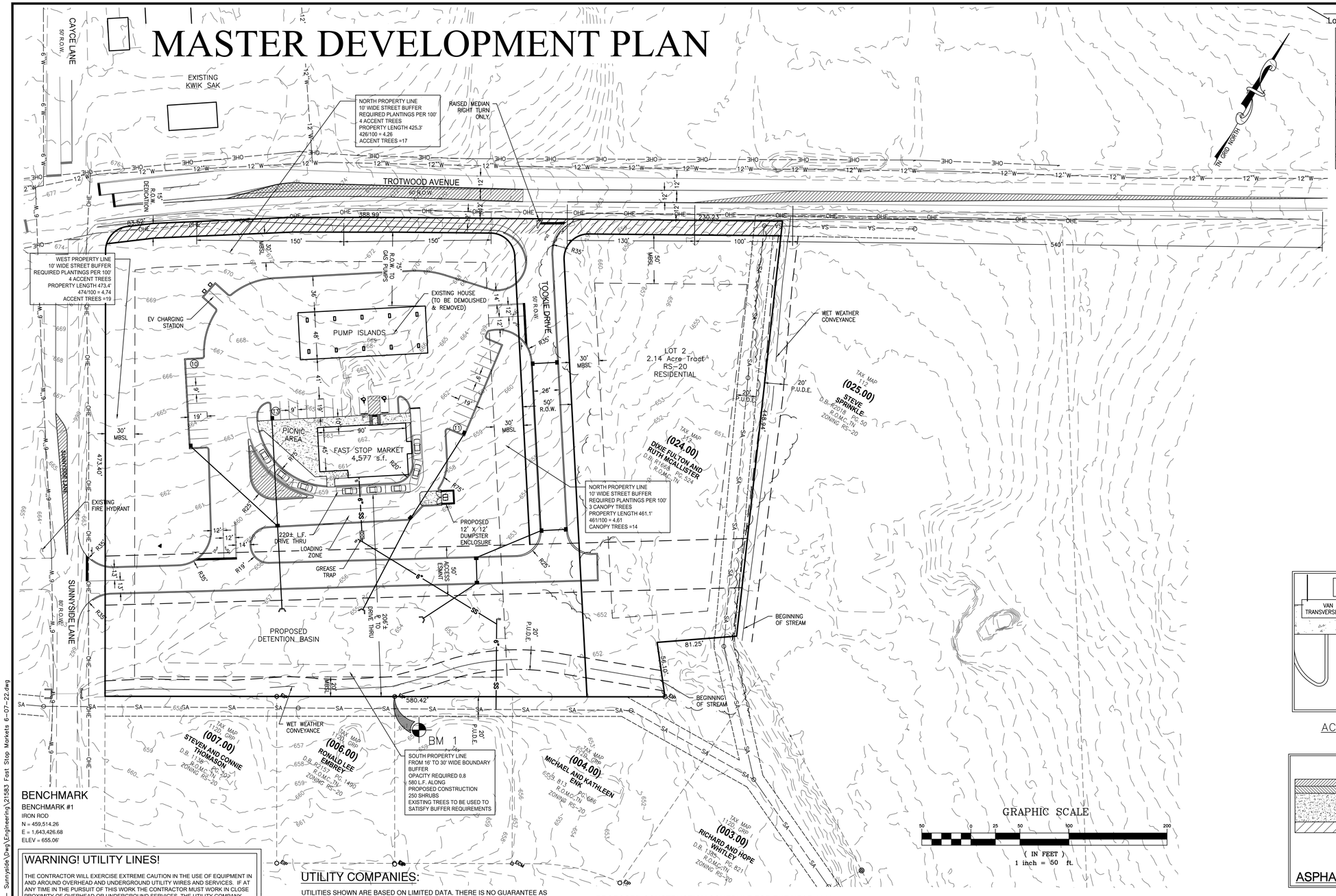
F i s c h b a c h
Transportation Group, LLC
Traffic Engineering and Planning



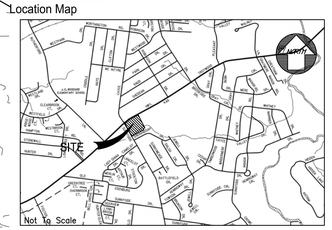
No Scale

Figure 1.
Location of the Proposed Project Site

MASTER DEVELOPMENT PLAN



Location Map



TN GRID NORTH

SITE DATA:

OWNER: DIXIE WILLIAMSON & RUTH MCALLISTER
6746 OLD ZION ROAD
COLUMBIA, TN 38401

PARCEL NUMBER: TAX MAP 112 PARCEL 22.00, 23.00, 24.00
DEED BOOK: R1668, PG 524

SUBJECT PARCEL ZONING: EXISTING: RS-20 PROPOSED: GCS - PUD

RIGHT OF WAY DEDICATION: 26,888.77 s.f. - 0.62 Ac.

ACREAGE OF SITE: LOT 1 - 202,267.40 s.f. / ±4.64 ACRES
LOT - 2 - 88,651.44 s.f. / ±2.04 ACRES

PARKING REQUIREMENTS: 1 SPACE PER 150 SF FLOOR SPACE
BLDG 4,221 SF / 150 = 29 REQUIRED
32 STANDARD SPACES
2 ACCESSIBLE SPACE
34 TOTAL PROVIDED

MINIMUM REQUIRED BUILDING SETBACKS:

50' FRONT
20' REAR SETBACK
10' SIDE SETBACK

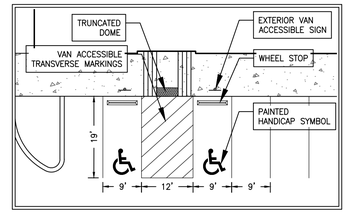
UTILITY SERVICES: WATER SERVICE
COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TENNESSEE 38401
(931) 388-4833

ELECTRIC SERVICE
COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TENNESSEE 38401
(931) 388-4833

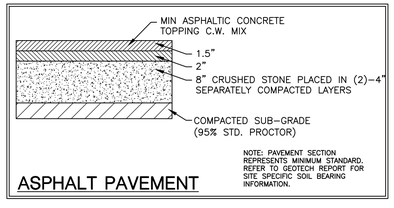
PURPOSE NOTE: REZONE A PORTION OF THE PARCEL TO CONSTRUCT CONVENIENCE STORE & GASOLINE STATION.

NOTES:

1. INSTALLATION OF HVAC EQUIPMENT IN P.U.D.E.'s WITH BURIED PIPES IS PROHIBITED.
2. MINIMUM RS-20 LOT SIZE IS 120' X 167' (20,000 S.F.)



ACCESSIBLE PARKING DETAIL
NOT TO SCALE



NOTE: PAVEMENT SECTION REPRESENTS MINIMUM STANDARD. REFER TO GEOTECH REPORT FOR SITE SPECIFIC SOIL BEARING INFORMATION.

ASPHALT PAVEMENT

BENCHMARK

BENCHMARK #1
IRON ROD
N = 459,514.26
E = 1,643,426.68
ELEV = 655.06'

WARNING! UTILITY LINES!

THE CONTRACTOR WILL EXERCISE EXTREME CAUTION IN THE USE OF EQUIPMENT IN AND AROUND OVERHEAD AND UNDERGROUND UTILITY WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK THE CONTRACTOR MUST WORK IN CLOSE PROXIMITY OF OVERHEAD OR UNDERGROUND SERVICES, THE UTILITY COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES TAKEN. A THOROUGH EXAMINATION OF THE OVERHEAD WIRES IN THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION. THE UNDERGROUND UTILITY LINES HAVE BEEN SHOWN AS BEST AS CAN BE DETERMINED AT THIS TIME FROM THE INFORMATION OBTAINED FROM THE SURVEY. THE CONTRACTOR SHALL CONTACT EACH OF THESE COMPANIES PRIOR TO BEGINNING CONSTRUCTION AND HAVE THEM DETERMINE THE EXACT LOCATION AND TYPE OF THEIR SERVICES.

Tennessee811
Know what's below
Call before you dig.

LEGEND

	EXISTING	PROPOSED
WATER MAIN		W
SANITARY SEWER	8"SA	8"SA
STORM SEWER	15"ST	15"ST
OVERHEAD	OHE	
FENCE		
GAS		
DRAINAGE DITCH		
TREE PROTECTION FENCE		
SIGN		
UTILITY POLE		
IRON PIN SET		
EXISTING IRON PIN		
CONCRETE MONUMENT		
DECIDUOUS TREE		
GATE VALVE IN BOX		
LIGHT POLE		
BENCHMARK	BM 1	
TREE LINE		
STORM STRUCTURE LABEL		ST1
ASPHALT		
CONCRETE		
# PARKING SPACES		14

UTILITY COMPANIES:

UTILITIES SHOWN ARE BASED ON LIMITED DATA. THERE IS NO GUARANTEE AS TO THEIR LOCATION OR SIZE. PLEASE CONTACT RESPECTIVE UTILITY COMPANIES PRIOR TO CONSTRUCTION. POSSIBLE CONTACTS IN THIS AREA INCLUDE:

MUNICIPALITY:
CITY OF COLUMBIA
707 NORTH MAIN ST.
COLUMBIA, TN 38401

ELECTRIC:
COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TN 38401
(931) 388-4833

CABLE TELEVISION:
COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TN 38401
(931) 388-4833

STORM WATER:
CITY OF COLUMBIA
ENGINEERING/INSPECTION
707 N. MAIN STREET
COLUMBIA, TN 38401
(931) 560-1530
Contact: Glenn Harper, P.E.

WATER:
COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TN 38401
(931) 388-4833

CABLE TELEVISION:
CHARTER COMMUNICATIONS
2008 S. MAIN STREET
COLUMBIA, TN 38401
(931) 388-1326

SANITARY:
CITY OF COLUMBIA
WASTEWATER SYSTEM
1244 TREATMENT PLANT RD.
COLUMBIA, TN 38401
(931) 560-1001
Donnie Boshers, Director

TELEPHONE:
AT&T
904 S. HIGH ST
COLUMBIA, TN 38401
JAMIE WHITFIELD
(615) 975-0505
jw0972@att.com

GAS:
ATMOS ENERGY
810 NASHVILLE HWY.
COLUMBIA, TN 38401
(888) 824-3434
NASHVILLE
(615) 872-5100

PROPOSED CONSTRUCTION SCHEDULE FOR THE YEAR 2022

ACTIVITY	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG
TEMPORARY SEDIMENT STRUCTURES												
SEDIMENT BASINS												
DIVERSION DITCHES												
CLEARING & CHIPPING												
TOPSOIL STRIPPING AND STORAGE												
ROADWAY GRADING												
PERMANENT STORM SEWER												
UTILITIES												
TEMPORARY VEGETATION												
PAVING												
PERMANENT VEGETATION												
REMOVE TEMPORARY STRUCTURES												

GEOTECHNICAL NOTE:

CONTRACTOR TO COMPLETE A GEOTECHNICAL STUDY CONDUCTED ON THIS SITE PRIOR TO COMINCEMENT OF CONSTRUCTION. THE DESIGN FOR THE SITE IMPROVEMENTS SHOWN ON THIS PLAN HAVE RELIED ON GENERAL INFORMATION FROM FIELD REVIEW OF EXISTING TERRAIN. IF, IN THE PURSUIT OF THIS WORK BY THE CONTRACTOR, CONDITIONS OR CIRCUMSTANCES ARE ENCOUNTERED THAT ARE DIFFERENT THAN REFLECTED IN THESE PLANS OR THAT APPEAR TO IMPACT THE SCOPE OF THE WORK, THE CONTRACTOR WILL IMMEDIATELY NOTIFY THE CIVIL ENGINEER, THE GEOTECHNICAL ENGINEER AND THE OWNER/DEVELOPER, BEFORE ANY REMEDIAL COURSE OF ACTION OR DESIGN CHANGE IS INITIATED, ALL PARTIES TO THE PROCESS (OWNER, CIVIL ENGINEER, GEOTECHNICAL ENGINEER, AND CONTRACTOR) MUST BE IN AGREEMENT AND THE MAGNITUDE OF THE COST/TIME REQUIRED FOR THE MEASURES ESTABLISHED.

SITE BENCHMARK NOTE:

CONTRACTOR SHALL ESTABLISH A BENCHMARK PRIOR TO CONSTRUCTION. EXISTING BENCHMARK MUST BE RE-VERIFIED AND APPROVED BY THE ENGINEER/SURVEYOR PRIOR TO USE.

BOUNDARY & TOPOGRAPHIC SURVEY PROVIDED BY:

WES ENGINEERS & SURVEYORS

W.E.S. ENGINEERS AND SURVEYORS
2486 NASHVILLE HWY
COLUMBIA, TENNESSEE 38401
(931) 388-2329

FLOOD STUDY NOTE:

A PORTION OF THE PROPERTY IS LOCATED WITHIN A FLOOD HAZARD AREA AS PER FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAPS (FIRM's) MAP NUMBER 47119C0280E DATED APRIL 16, 2007.

GERALD WOLVICK
LICENSED PROFESSIONAL ENGINEER
NO. 107415
STATE OF TENNESSEE
6/22/22
geraldw@wesengineers.com

SUBMITTED FOR MUNICIPAL REVIEW
NOT FOR CONSTRUCTION

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WES ENGINEERS & SURVEYORS
CIVIL ENGINEERS & LAND SURVEYORS
2486 NASHVILLE HIGHWAY
COLUMBIA, TN 38401
PHONE: (931) 388-2329
www.wesengineers.com

ENGINEERS & SURVEYORS

Client
HIGHLAND CORPORATION
108 MILL AVENUE, P.O. BOX 190
HOWENWALD, TN 38462
CONTACT: BOBBY PAGE

DATE / REVISIONS

HIGHLAND CONVENIENCE MARKET

TROTWOOD AVENUE
COLUMBIA, TN

MASTER DEVELOPMENT PLAN

Drawn: RP
Checked: GV
Approved: GV
Date: APRIL 18, 2022

Job. no. 21583
Scale:
Vertical: 1"=50'
Horizontal:

MP-1

FILE: J:_WES_Engineers_Surveyors 2021\21583 - Fast Stop Markets - Sunnyside\Dwg\Engineering\21583 Fast Stop Markets 6-07-22.dwg

5. IMPACTS OF PROPOSED DEVELOPMENT

5.1 TRIP GENERATION

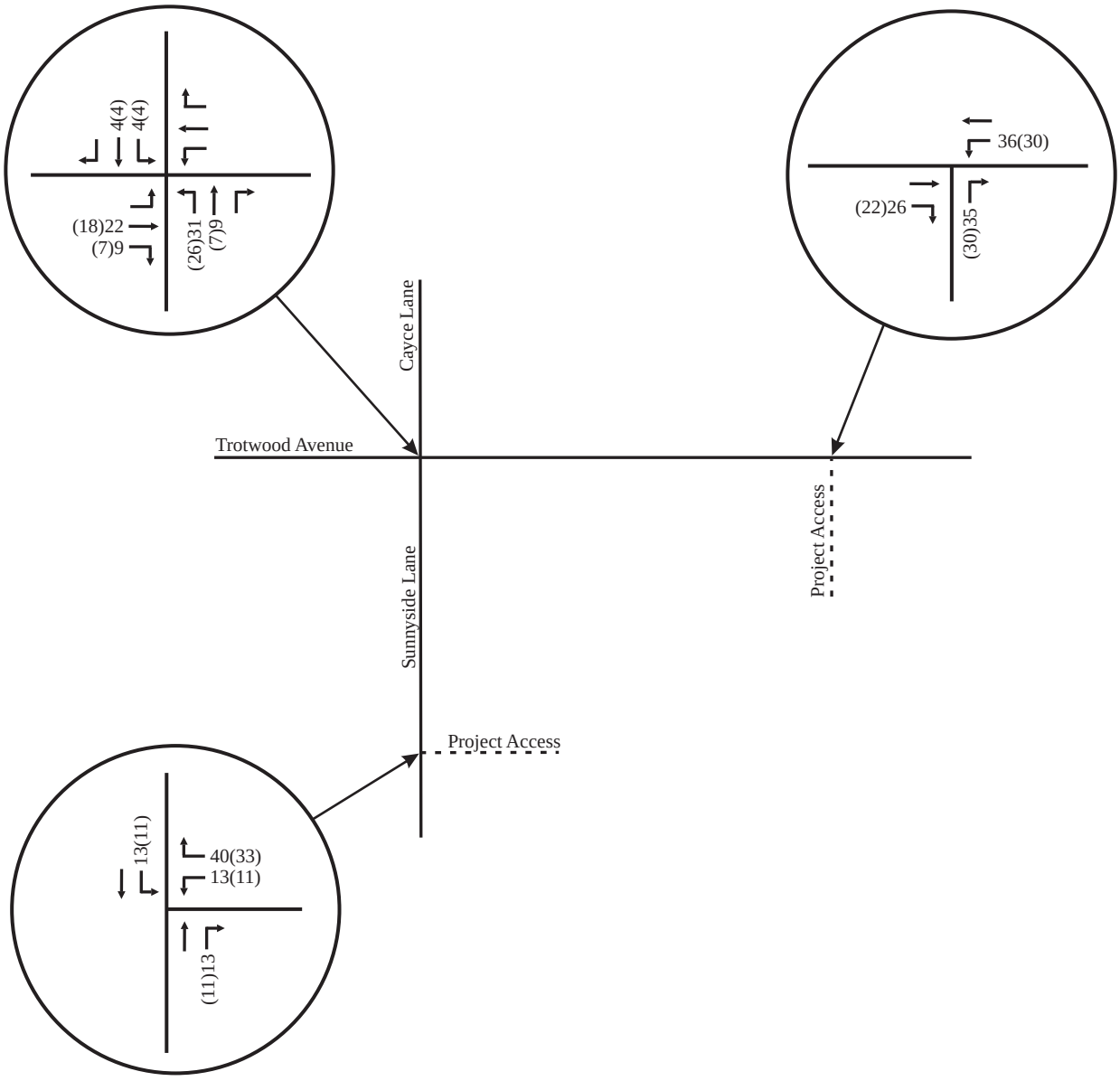
Trip generation calculations were conducted in order to identify how much traffic will be generated by the proposed project. Trip generation data for daily and peak hour trips were identified from Trip Generation, 11th Edition, which was published by the Institute of Transportation Engineers (ITE) in 2021. Table 6 presents the daily and peak hour trip generations for proposed project, and these calculations are included in Appendix C.

TABLE 6. TRIP GENERATION

LAND USE	SIZE	DAILY TRAFFIC	GENERATED TRAFFIC			
			AM PEAK HOUR		PM PEAK HOUR	
			ENTER	EXIT	ENTER	EXIT
Convenience / Gas (LUC 945)	GFA 4-5.5K 10 pumps	2,572	135	135	114	114

Studies have shown that, typically, a portion of the trips generated by commercial developments are captured, or "pass-by" trips from the adjacent street system. For the purposes of this study, it was assumed that 35% of the peak hour traffic generated by the proposed project will be pass-by traffic.

F i s c h b a c h
Transportation Group, LLC
Traffic Engineering and Planning

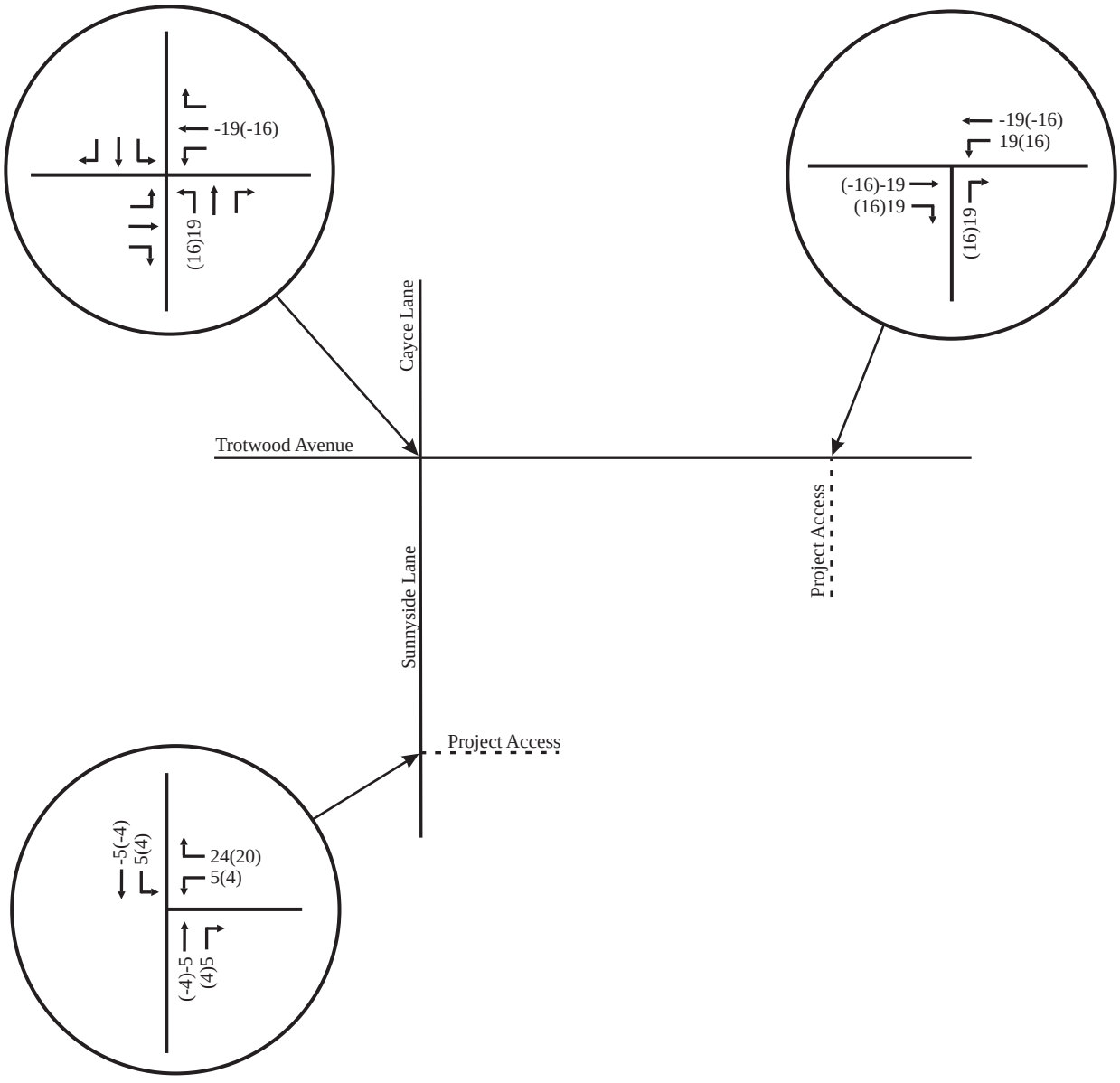


No Scale

XX - AM Peak Hour Volumes
(XX) - PM Peak Hour Volumes

Figure 7A.
PRIMARY Peak Hour Traffic Volumes Generated by the Proposed Project

F i s c h b a c h
Transportation Group, LLC
Traffic Engineering and Planning





No Scale

XX - AM Peak Hour Volumes
(XX) - PM Peak Hour Volumes

Figure 7B.
PASS-BY Peak Hour Traffic Volumes
Generated by the Proposed Project

TRAFFIC IMPACT STUDY

for

OLD ZION ROAD DEVELOPMENT

Columbia, Tennessee

March 21, 2022
Updated May 20, 2022
Updated June 21, 2022
Updated July 27, 2022
Updated September 19, 2022
Updated February 13, 2023

Prepared for:

Willow Branch Homes
1718 General George Patton Dr.
Brentwood, Tennessee, 37027

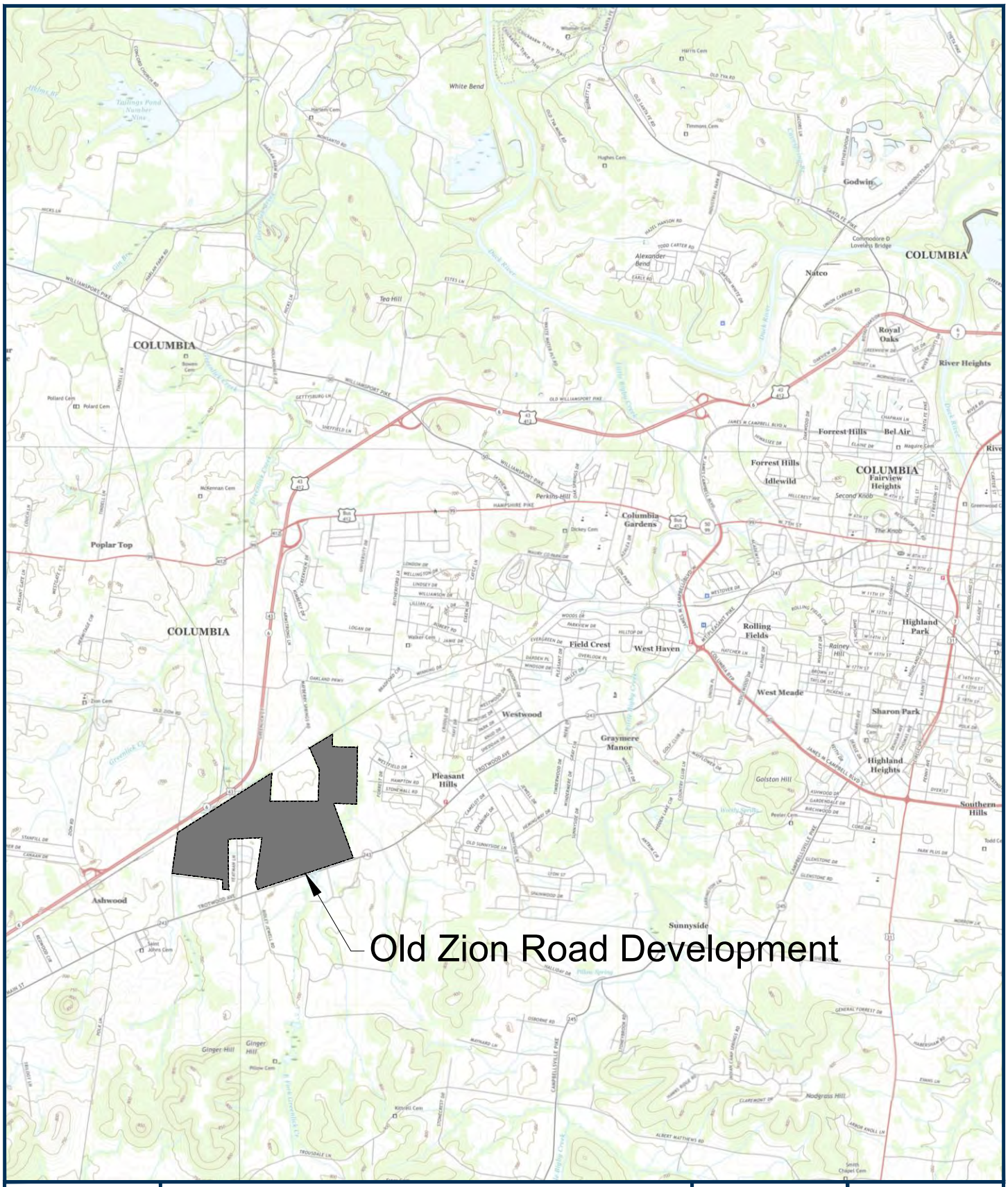
Prepared by:

RaganSmith



RAGAN-SMITH-ASSOCIATES, INC.
315 Woodland Street, P.O. Box 60070
Nashville, Tennessee 37206-0070
(615) 244-8591

21-0244



RaganSmith

Old Zion Road Development

Location Map

Figure
1

	60' LOT ALLEY	71 LOTS
	60' LOT	370 LOTS
	75' LOT ALLEY	29 LOTS
	75' LOT	278 LOTS
	100' LOT	16 LOTS
	7AC. HISTORIC HOME	1 LOT
	TOTAL	765 LOTS

COLUMBIA URBAN GROWTH BOUNDARY

LAWRENCEBURG HWY

RIDLEY PARK

PARK LAND DEDICATION +/- 31AC

EXISTING HOME TO REMAIN

AMENITY

STORM BASIN

OLD ZION RD

OLD ZION RD EXD

TROTWOOD AVE

COLUMBIA CITY LIMITS

RaganSmith

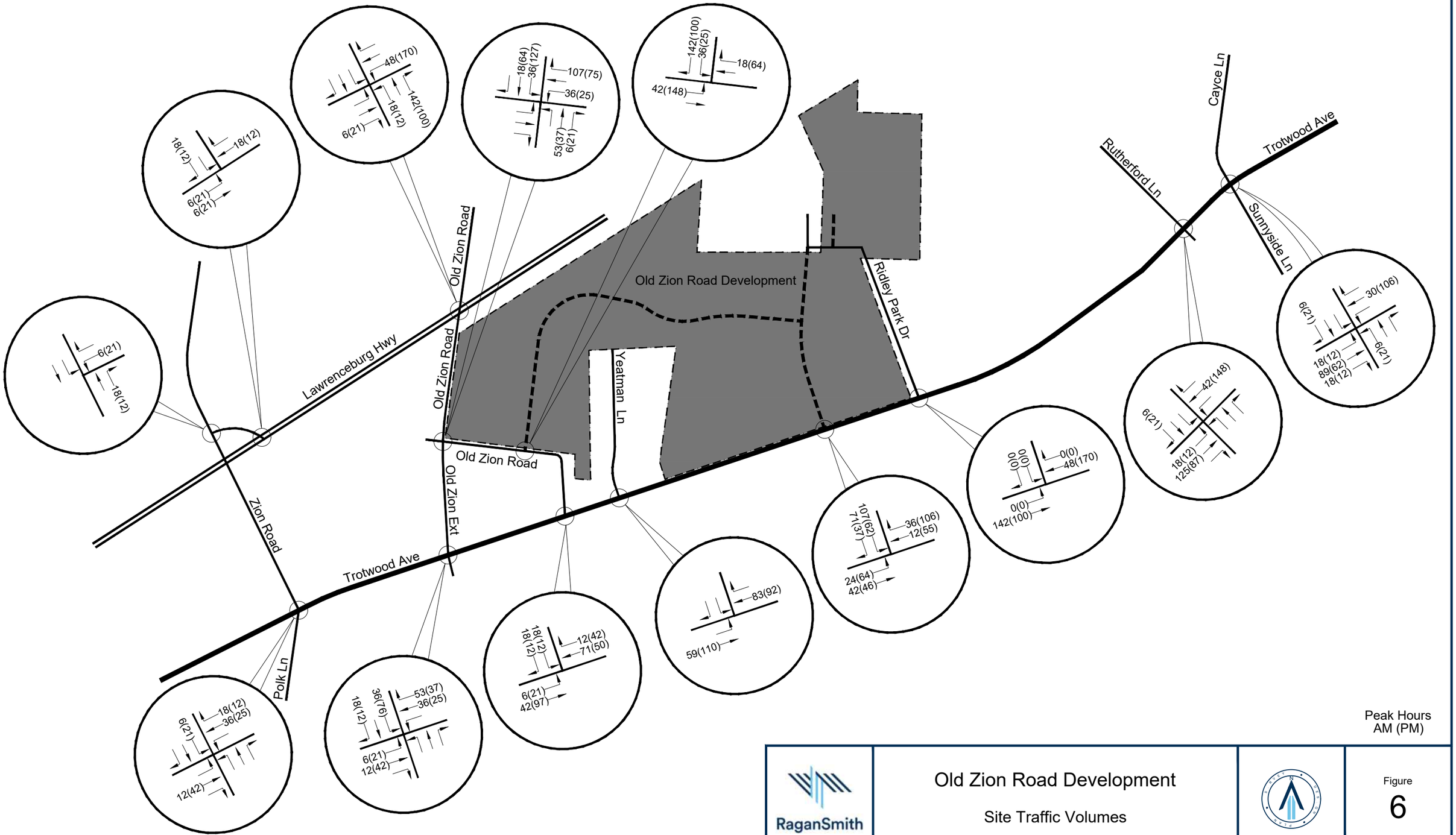
OLD ZION ROAD
PRELIMINARY PUD MASTERPLAN

DRAWING TITLE: OVERALL MASTERPLAN

DRAWING NUMBER: 2

0 600 1200

SCALE = 1"=300'



Peak Hours
AM (PM)

RaganSmith

Old Zion Road Development

Site Traffic Volumes

Figure
6

Traffic Impact Study

Trotwood & Foster Subdivision

January 2023

FOR SUBMITTAL TO:

City of Columbia, Tennessee

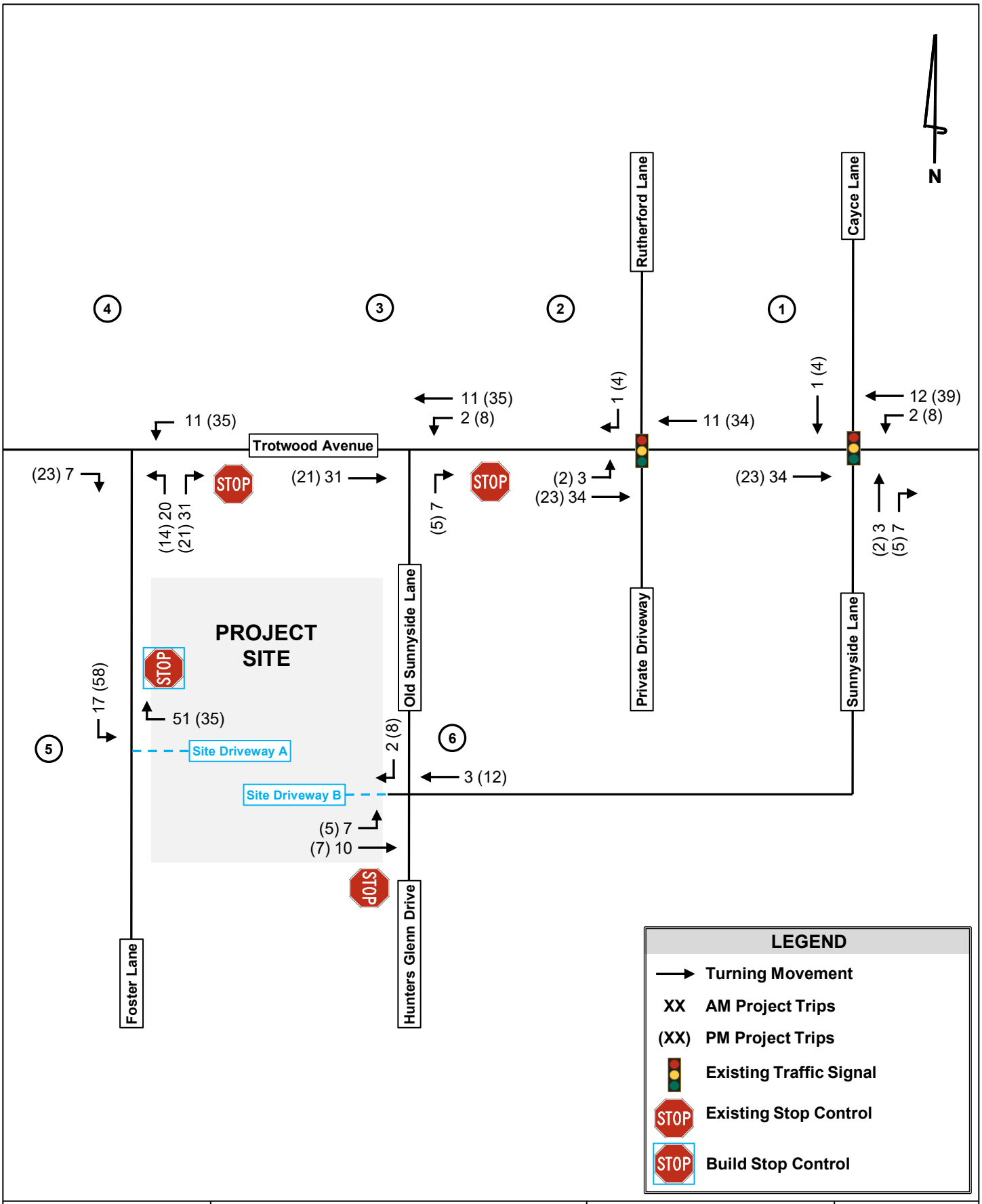
PREPARED FOR:

NoMau Partners

Kimley»Horn



Kimley»Horn	*Trotwood and Foster Subdivision* **Traffic Impact Study**	**Site Aerial**	**Figure 2**



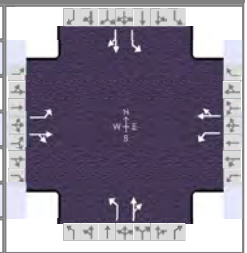
Kimley»Horn	*Trotwood and Foster Subdivision* Traffic Impact Study	Project Trips	Figure 7

APPENDIX B
CAPACITY ANALYSES

EXISTING CONDITIONS

HCS Signalized Intersection Results Summary

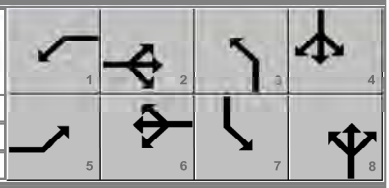
General Information				Intersection Information	
Agency	FTG			Duration, h	0.250
Analyst	FTG	Analysis Date	Jan 29, 2025	Area Type	Other
Jurisdiction	Columbia, TN	Time Period	AM Peak Hour	PHF	0.93
Urban Street	Trotwood Avenue	Analysis Year	2024 (Existing)	Analysis Period	1> 7:00
Intersection	Cayce Lane/Sunnyside…	File Name	1_exam.xus		
Project Description	11257				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	21	627	98	52	369	50	164	89	115	108	79	35

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	2.8	0.4	48.9	8.9	15.0	0.0	
Yellow	4.0	0.0	4.0	4.0	4.0	0.0	
Red	2.0	0.0	2.0	2.0	2.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	4.0		10.0		10.0
Phase Duration, s	8.8	54.9	9.2	55.3		21.0		14.9
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.1		3.1
Queue Clearance Time (g_s), s	2.6		3.5			14.4		8.7
Green Extension Time (g_e), s	0.0	0.0	0.1	0.0		0.6		0.3
Phase Call Probability	0.47		0.79			1.00		1.00
Max Out Probability	0.00		0.00			0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	23	780		56	451		176	219		116	123	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1855		1810	1860		1810	1725		1810	1800	
Queue Service Time (g_s), s	0.6	37.0		1.5	16.2		9.2	12.4		6.2	6.7	
Cycle Queue Clearance Time (g_c), s	0.6	37.0		1.5	16.2		9.2	12.4		6.2	6.7	
Green Ratio (*g/C*)	0.52	0.49		0.52	0.49		0.15	0.15		0.09	0.09	
Capacity (*c*), veh/h	419	907		213	917		271	259		162	161	
Volume-to-Capacity Ratio (*X*)	0.054	0.859		0.263	0.492		0.650	0.848		0.719	0.762	
Back of Queue (*Q*), ft/ln (95 th percentile)	10	600		26	280		181	227		127	136	
Back of Queue (*Q*), veh/ln (95 th percentile)	0.4	24.0		1.1	11.2		7.3	9.1		5.1	5.4	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.03	2.00		0.26	0.56		1.21	0.76		0.85	0.42	
Uniform Delay (d_1), s/veh	13.4	22.5		19.3	17.0		40.0	41.4		44.3	44.5	
Incremental Delay (d_2), s/veh	0.0	10.4		0.2	1.9		1.0	3.0		2.2	2.8	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	13.5	32.9		19.6	18.9		41.0	44.4		46.6	47.3	
Level of Service (LOS)	B	C		B	B		D	D		D	D	
Approach Delay, s/veh / LOS	32.4	C		18.9	B		42.9	D		46.9	D	
Intersection Delay, s/veh / LOS	32.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.90	B	1.95	B	1.94	B
Bicycle LOS Score / LOS	1.81	B	1.32	A	1.14	A	0.88	A

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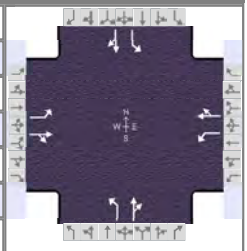
HCS Signalized Intersection Results Summary

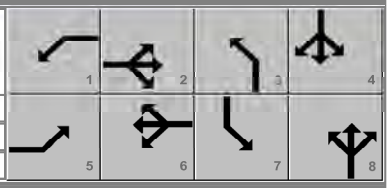
General Information				Intersection Information	
Agency	FTG			Duration, h	0.250
Analyst	FTG	Analysis Date	Jan 29, 2025	Area Type	Other
Jurisdiction	Columbia, TN	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Trotwood Avenue	Analysis Year	2024 (Existing)	Analysis Period	1> 7:00
Intersection	Cayce Lane/Sunnyside…	File Name	1_expm.xus		
Project Description	11257				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	42	451	116	99	581	110	145	109	90	142	74	49

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	4.2	0.6	46.6	10.4	14.2	0.0	
Yellow	4.0	0.0	4.0	4.0	4.0	0.0	
Red	2.0	0.0	2.0	2.0	2.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	4.0		10.0		10.0
Phase Duration, s	10.2	52.6	10.8	53.2		20.2		16.4
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.1		3.1
Queue Clearance Time (g_s), s	3.2		5.0			13.6		10.1
Green Extension Time (g_e), s	0.1	0.0	0.2	0.0		0.5		0.3
Phase Call Probability	0.71		0.94			1.00		1.00
Max Out Probability	0.00		0.00			0.00		0.01

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	44	597		104	727		153	209		149	129	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1833		1810	1847		1810	1757		1810	1773	
Queue Service Time (g_s), s	1.2	25.8		3.0	34.3		7.9	11.6		8.1	7.1	
Cycle Queue Clearance Time (g_c), s	1.2	25.8		3.0	34.3		7.9	11.6		8.1	7.1	
Green Ratio (*g/C*)	0.51	0.47		0.51	0.47		0.14	0.14		0.10	0.10	
Capacity (*c*), veh/h	229	854		333	872		256	249		188	184	
Volume-to-Capacity Ratio (*X*)	0.193	0.699		0.313	0.834		0.596	0.842		0.795	0.703	
Back of Queue (*Q*), ft/ln (95 th percentile)	21	420		51	559		157	220		165	140	
Back of Queue (*Q*), veh/ln (95 th percentile)	0.9	16.8		2.0	22.4		6.3	8.8		6.6	5.6	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.07	1.40		0.51	1.12		1.04	0.73		1.10	0.43	
Uniform Delay (d_1), s/veh	19.2	21.1		16.3	23.0		40.2	41.8		43.8	43.3	
Incremental Delay (d_2), s/veh	0.2	4.7		0.2	9.2		0.8	3.0		2.9	1.8	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	19.3	25.9		16.5	32.2		41.1	44.8		46.7	45.1	
Level of Service (LOS)	B	C		B	C		D	D		D	D	
Approach Delay, s/veh / LOS	25.4	C		30.2	C		43.2	D		46.0	D	
Intersection Delay, s/veh / LOS	33.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.90	B	1.95	B	1.94	B
Bicycle LOS Score / LOS	1.55	B	1.86	B	1.09	A	0.95	A

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HCS Two-Way Stop-Control Report

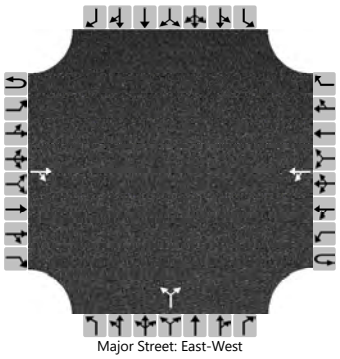
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2024
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	11318 (Existing)

Site Information

Intersection	Trotwood/Old Sunnyside
Jurisdiction	Columbia, TN
East/West Street	Trotwood Ave
North/South Street	Old Sunnyside Ln
Peak Hour Factor	0.90
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			522	68		23	284			49		35				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						26					93					
Capacity, c (veh/h)						941					331					
v/c Ratio						0.03					0.28					
95% Queue Length, Q_{95} (veh)						0.1					1.1					
95% Queue Length, Q_{95} (ft)						2.5					27.5					
Control Delay (s/veh)						8.9	0.3				20.1					
Level of Service (LOS)						A	A				C					
Approach Delay (s/veh)					0.9				20.1							
Approach LOS					A				C							

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HCS Two-Way Stop-Control Report

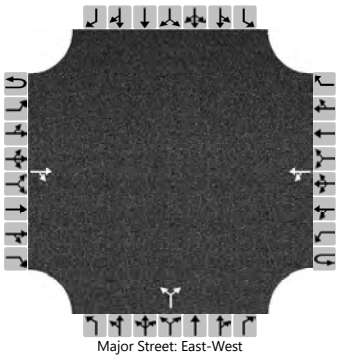
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2024
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	11318 (Existing)

Site Information

Intersection	Trotwood/Old Sunnyside
Jurisdiction	Columbia, TN
East/West Street	Trotwood Ave
North/South Street	Old Sunnyside Ln
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			359	20		33	601			41		28				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						36					76					
Capacity, c (veh/h)						1153					294					
v/c Ratio						0.03					0.26					
95% Queue Length, Q_{95} (veh)						0.1					1.0					
95% Queue Length, Q_{95} (ft)						2.5					25.0					
Control Delay (s/veh)						8.2	0.4				21.5					
Level of Service (LOS)						A	A				C					
Approach Delay (s/veh)					0.8				21.5							
Approach LOS					A				C							

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HCS Two-Way Stop-Control Report

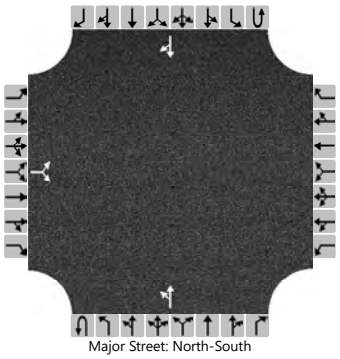
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2024
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	11318 (Existing)

Site Information

Intersection	Sunnyside/Old Sunnyside
Jurisdiction	Columbia, TN
East/West Street	Old Sunnyside Ln
North/South Street	Sunnyside Ln
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		23		72						45	241				158	4
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			102							48						
Capacity, c (veh/h)			738							1415						
v/c Ratio			0.14							0.03						
95% Queue Length, Q_{95} (veh)			0.5							0.1						
95% Queue Length, Q_{95} (ft)			12.5							2.5						
Control Delay (s/veh)			10.7							7.6	0.3					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		10.7								1.5						
Approach LOS		B								A						

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HCS Two-Way Stop-Control Report

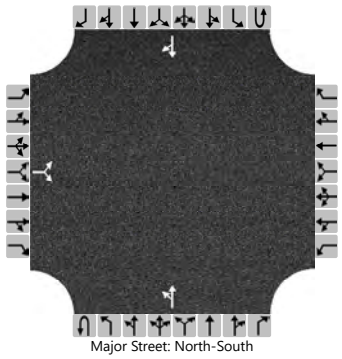
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2024
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	11318 (Existing)

Site Information

Intersection	Sunnyside/Old Sunnyside
Jurisdiction	Columbia, TN
East/West Street	Old Sunnyside Ln
North/South Street	Sunnyside Ln
Peak Hour Factor	0.99
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		14		66						60	232				226	18
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			81							61						
Capacity, c (veh/h)			707							1331						
v/c Ratio			0.11							0.05						
95% Queue Length, Q_{95} (veh)			0.4							0.1						
95% Queue Length, Q_{95} (ft)			10.0							2.5						
Control Delay (s/veh)			10.7							7.8	0.4					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		10.7								1.9						
Approach LOS		B								A						

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HCS Two-Way Stop-Control Report

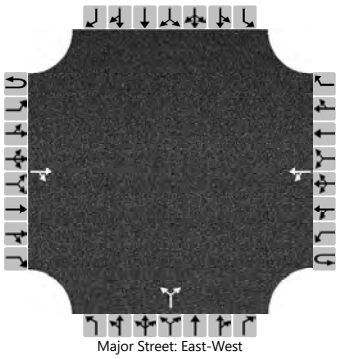
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2024
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	11318 (Existing)

Site Information

Intersection	Old Sunnyside/Hunters Glen
Jurisdiction	Columbia, TN
East/West Street	Old Sunnyside Ln
North/South Street	Hunters Glen Dr
Peak Hour Factor	0.81
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			69	9		5	55			16		14				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						6					37					
Capacity, c (veh/h)						1510					885					
v/c Ratio						0.00					0.04					
95% Queue Length, Q_{95} (veh)						0.0					0.1					
95% Queue Length, Q_{95} (ft)						0.0					2.5					
Control Delay (s/veh)						7.4	0.0				9.2					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)					0.6				9.2							
Approach LOS					A				A							

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HCS Two-Way Stop-Control Report

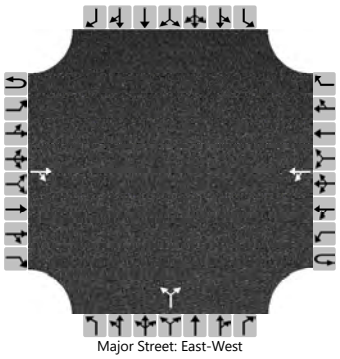
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2024
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	11318 (Existing)

Site Information

Intersection	Old Sunnyside/Hunters Glen
Jurisdiction	Columbia, TN
East/West Street	Old Sunnyside Ln
North/South Street	Hunters Glen Dr
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			26	24		17	45			18		9				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						20					33					
Capacity, c (veh/h)						1556					899					
v/c Ratio						0.01					0.04					
95% Queue Length, Q_{95} (veh)						0.0					0.1					
95% Queue Length, Q_{95} (ft)						0.0					2.5					
Control Delay (s/veh)						7.3	0.1				9.2					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)					2.1				9.2							
Approach LOS					A				A							

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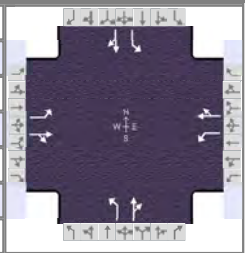
BACKGROUND CONDITIONS

HCS Signalized Intersection Results Summary

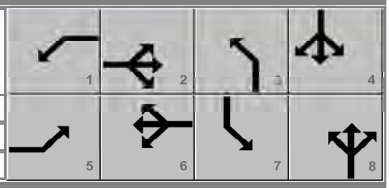
General Information				Intersection Information	
Agency	FTG			Duration, h	0.250
Analyst	FTG	Analysis Date	Jan 29, 2025	Area Type	Other
Jurisdiction	Columbia, TN	Time Period	AM Peak Hour	PHF	0.93
Urban Street	Trotwood Avenue	Analysis Year	2030 (Back)	Analysis Period	1> 7:00
Intersection	Cayce Lane/Sunnyside…	File Name	1_bgam.xus		
Project Description	11257				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	43	885	143	61	458	59	250	117	143	131	98	47

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.4	1.0	46.7	8.0	17.0	0.0
Yellow	4.0	0.0	4.0	4.0	4.0	0.0
Red	2.0	0.0	2.0	2.0	2.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	4.0		10.0		10.0
Phase Duration, s	10.3	53.6	9.4	52.7		23.0		14.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.1		3.1
Queue Clearance Time (g_s), s	3.3		3.9			18.0		10.0
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0		0.0		0.0
Phase Call Probability	0.72		0.84			1.00		1.00
Max Out Probability	0.01		0.00			1.00		1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	46	1105		66	556		269	280		141	156	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1854		1810	1862		1810	1729		1810	1795	
Queue Service Time (g_s), s	1.3	47.6		1.9	22.7		14.5	16.0		7.8	8.0	
Cycle Queue Clearance Time (g_c), s	1.3	47.6		1.9	22.7		14.5	16.0		7.8	8.0	
Green Ratio (*g/C*)	0.51	0.48		0.50	0.47		0.17	0.17		0.08	0.08	
Capacity (*c*), veh/h	358	883		133	869		308	294		145	144	
Volume-to-Capacity Ratio (*X*)	0.129	1.252		0.494	0.640		0.874	0.951		0.973	1.086	
Back of Queue (*Q*), ft/ln (95 th percentile)	22	1768		34	379		320	372		252	307	
Back of Queue (*Q*), veh/ln (95 th percentile)	0.9	70.7		1.4	15.2		12.8	14.9		10.1	12.3	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.07	5.89		0.34	0.76		2.13	1.24		1.68	0.94	
Uniform Delay (d_1), s/veh	15.0	26.2		23.8	20.3		40.5	41.1		45.9	46.0	
Incremental Delay (d_2), s/veh	0.1	122.6		1.1	3.6		22.3	39.1		66.1	99.8	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	15.1	148.8		24.9	23.9		62.8	80.2		112.0	145.8	
Level of Service (LOS)	B	F		C	C		E	F		F	F	
Approach Delay, s/veh / LOS	143.4	F		24.0	C		71.7	E		129.8	F	
Intersection Delay, s/veh / LOS	98.5						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.90	B	1.95	B	1.94	B
Bicycle LOS Score / LOS	2.39	B	1.51	B	1.39	A	0.98	A

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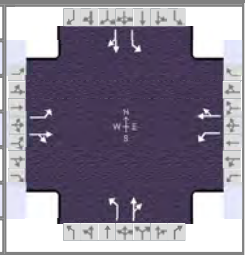
HCS Signalized Intersection Results Summary

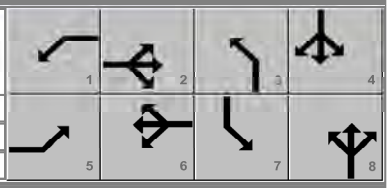
General Information				Intersection Information	
Agency	FTG			Duration, h	0.250
Analyst	FTG	Analysis Date	Jan 29, 2025	Area Type	Other
Jurisdiction	Columbia, TN	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Trotwood Avenue	Analysis Year	2030 (Back)	Analysis Period	1> 7:00
Intersection	Cayce Lane/Sunnyside…	File Name	1_bgpm.xus		
Project Description	11257				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	62	635	156	117	815	130	234	138	111	172	95	79

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.0	0.6	44.3	12.4	13.6	0.0
Yellow	4.0	0.0	4.0	4.0	4.0	0.0
Red	2.0	0.0	2.0	2.0	2.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	4.0		10.0		10.0
Phase Duration, s	11.0	50.3	11.7	51.0		19.6		18.4
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.1		3.1
Queue Clearance Time (g_s), s	3.9		5.7			15.6		12.2
Green Extension Time (g_e), s	0.1	0.0	0.2	0.0		0.0		0.2
Phase Call Probability	0.84		0.97			1.00		1.00
Max Out Probability	0.00		0.00			1.00		1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	65	833		123	995		246	262		181	183	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1835		1810	1854		1810	1759		1810	1756	
Queue Service Time (g_s), s	1.9	44.3		3.7	45.0		13.6	13.6		9.7	10.2	
Cycle Queue Clearance Time (g_c), s	1.9	44.3		3.7	45.0		13.6	13.6		9.7	10.2	
Green Ratio (*g/C*)	0.49	0.44		0.50	0.45		0.14	0.14		0.12	0.12	
Capacity (*c*), veh/h	163	814		174	834		246	239		225	218	
Volume-to-Capacity Ratio (*X*)	0.401	1.023		0.706	1.193		1.003	1.098		0.805	0.839	
Back of Queue (*Q*), ft/ln (95 th percentile)	34	881		67	1456		375	444		214	225	
Back of Queue (*Q*), veh/ln (95 th percentile)	1.4	35.3		2.7	58.3		15.0	17.7		8.6	9.0	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.11	2.94		0.67	2.91		2.50	1.48		1.43	0.69	
Uniform Delay (d_1), s/veh	23.1	27.8		23.2	27.5		43.2	43.2		42.6	42.8	
Incremental Delay (d_2), s/veh	0.6	37.6		2.0	98.5		58.1	86.8		11.4	15.6	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	23.7	65.4		25.2	126.0		101.3	130.0		54.0	58.4	
Level of Service (LOS)	C	F		C	F		F	F		D	E	
Approach Delay, s/veh / LOS	62.4	E		114.9	F		116.1	F		56.2	E	
Intersection Delay, s/veh / LOS	91.4						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.91	B	1.95	B	1.94	B
Bicycle LOS Score / LOS	1.97	B	2.33	B	1.33	A	1.09	A

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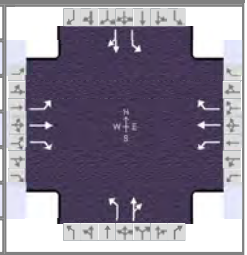
HCS Signalized Intersection Results Summary

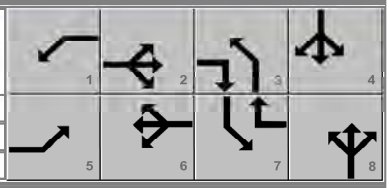
General Information				Intersection Information	
Agency	FTG			Duration, h	0.250
Analyst	FTG	Analysis Date	Jan 29, 2025	Area Type	Other
Jurisdiction	Columbia, TN	Time Period	AM Peak Hour	PHF	0.93
Urban Street	Trotwood Avenue	Analysis Year	2030 (Back)	Analysis Period	1> 7:00
Intersection	Cayce Lane/Sunnyside…	File Name	1_bgam_imp.xus		
Project Description	11257				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	43	885	143	61	458	59	250	117	143	131	98	47

Signal Information			
Cycle, s	120.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.8	0.9	56.6	12.7	21.9	0.0	
Yellow	4.0	0.0	4.0	4.0	4.0	0.0	
Red	2.0	0.0	2.0	2.0	2.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	3.0	1.1	3.0		10.0		10.0
Phase Duration, s	10.7	63.5	9.8	62.6		27.9		18.7
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.1		3.1
Queue Clearance Time (g_s), s	3.5		4.2			20.9		12.2
Green Extension Time (g_e), s	0.1	0.0	0.1	0.0		1.0		0.5
Phase Call Probability	0.79		0.89			1.00		1.00
Max Out Probability	0.00		0.00			0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	46	952	154	66	492	63	269	280		141	156	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1729		1810	1795	
Queue Service Time (g_s), s	1.5	57.5	4.3	2.2	22.2	2.1	17.1	18.9		9.1	10.2	
Cycle Queue Clearance Time (g_c), s	1.5	57.5	4.3	2.2	22.2	2.1	17.1	18.9		9.1	10.2	
Green Ratio (*g/C*)	0.51	0.48	0.66	0.50	0.47	0.58	0.18	0.18		0.11	0.11	
Capacity (*c*), veh/h	397	910	1066	118	897	931	331	316		192	190	
Volume-to-Capacity Ratio (*X*)	0.117	1.045	0.144	0.555	0.549	0.068	0.813	0.885		0.734	0.819	
Back of Queue (*Q*), ft/ln (95 th percentile)	28	1164	64	42	382	33	307	324		187	206	
Back of Queue (*Q*), veh/ln (95 th percentile)	1.1	46.6	2.6	1.7	15.3	1.3	12.3	13.0		7.5	8.2	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.09	3.88	0.00	0.42	0.76	0.00	2.05	1.08		1.25	0.63	
Uniform Delay (d_1), s/veh	16.8	31.2	7.6	28.7	22.6	11.1	47.1	47.8		52.0	52.5	
Incremental Delay (d_2), s/veh	0.0	42.3	0.3	1.5	2.4	0.1	1.9	3.3		2.0	3.3	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	16.9	73.6	7.9	30.2	25.0	11.3	48.9	51.1		54.0	55.8	
Level of Service (LOS)	B	F	A	C	C	B	D	D		D	E	
Approach Delay, s/veh / LOS	62.5	E		24.2	C		50.0	D		55.0	D	
Intersection Delay, s/veh / LOS	49.9						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.91	B	2.15	B	2.14	B
Bicycle LOS Score / LOS	2.39	B	1.51	B	1.39	A	0.98	A

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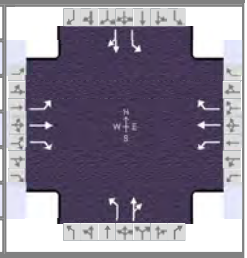
HCS Signalized Intersection Results Summary

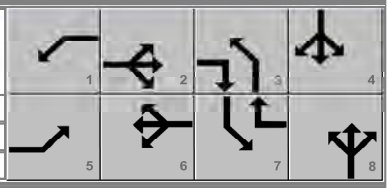
General Information				Intersection Information	
Agency	FTG			Duration, h	0.250
Analyst	FTG	Analysis Date	Jan 29, 2025	Area Type	Other
Jurisdiction	Columbia, TN	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Trotwood Avenue	Analysis Year	2030 (Back)	Analysis Period	1> 7:00
Intersection	Cayce Lane/Sunnyside…	File Name	1_bgpm_imp.xus		
Project Description	11257				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	62	635	156	117	815	130	234	138	111	172	95	79

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.5	1.3	68.8	17.0	23.4	0.0	
Yellow	4.0	0.0	4.0	4.0	4.0	0.0	
Red	2.0	0.0	2.0	2.0	2.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	3.0	1.1	3.0		10.0		10.0
Phase Duration, s	11.5	74.8	12.8	76.1		29.4		23.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.1		3.1
Queue Clearance Time (g_s), s	4.5		6.7			22.4		16.3
Green Extension Time (g_e), s	0.1	0.0	0.2	0.0		0.9		0.7
Phase Call Probability	0.92		0.99			1.00		1.00
Max Out Probability	0.00		0.00			0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	65	668	164	123	858	137	246	262		181	183	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1759		1810	1756	
Queue Service Time (g_s), s	2.5	38.6	5.4	4.7	57.5	4.9	18.4	20.4		13.7	14.3	
Cycle Queue Clearance Time (g_c), s	2.5	38.6	5.4	4.7	57.5	4.9	18.4	20.4		13.7	14.3	
Green Ratio (*g/C*)	0.53	0.49	0.66	0.54	0.50	0.62	0.17	0.17		0.12	0.12	
Capacity (*c*), veh/h	175	935	1060	311	952	1002	302	293		220	213	
Volume-to-Capacity Ratio (*X*)	0.373	0.715	0.155	0.396	0.901	0.137	0.817	0.894		0.825	0.860	
Back of Queue (*Q*), ft/ln (95 th percentile)	46	628	86	87	936	80	330	356		263	268	
Back of Queue (*Q*), veh/ln (95 th percentile)	1.9	25.1	3.4	3.5	37.4	3.2	13.2	14.3		10.5	10.7	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.15	2.09	0.00	0.87	1.87	0.00	2.20	1.19		1.76	0.83	
Uniform Delay (d_1), s/veh	29.1	27.9	9.1	22.0	31.8	10.9	56.3	57.1		60.1	60.3	
Incremental Delay (d_2), s/veh	0.5	4.7	0.3	0.3	13.3	0.3	2.1	3.8		3.0	3.9	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	29.6	32.6	9.4	22.3	45.0	11.2	58.3	61.0		63.0	64.2	
Level of Service (LOS)	C	C	A	C	D	B	E	E		E	E	
Approach Delay, s/veh / LOS	28.1	C		38.4	D		59.7	E		63.6	E	
Intersection Delay, s/veh / LOS	42.1						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.91	B	2.16	B	2.14	B
Bicycle LOS Score / LOS	1.97	B	2.33	B	1.33	A	1.09	A

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HCS Two-Way Stop-Control Report

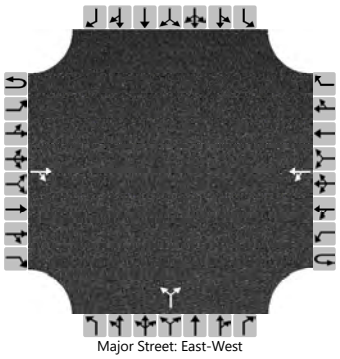
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2030
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	11318 (Back)

Site Information

Intersection	Trotwood/Old Sunnyside
Jurisdiction	Columbia, TN
East/West Street	Trotwood Ave
North/South Street	Old Sunnyside Ln
Peak Hour Factor	0.90
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			821	80		29	425			58		48				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						32					118					
Capacity, c (veh/h)						700					176					
v/c Ratio						0.05					0.67					
95% Queue Length, Q_{95} (veh)						0.1					3.9					
95% Queue Length, Q_{95} (ft)						2.5					97.5					
Control Delay (s/veh)						10.4	0.6				59.4					
Level of Service (LOS)						B	A				F					
Approach Delay (s/veh)					1.3				59.4							
Approach LOS					A				F							

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HCS Two-Way Stop-Control Report

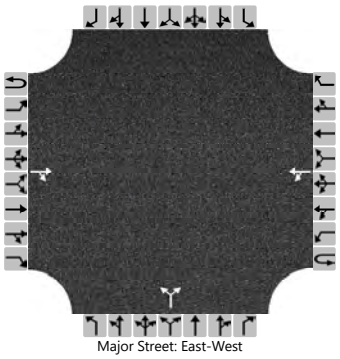
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2030
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	11318 (Back)

Site Information

Intersection	Trotwood/Old Sunnyside
Jurisdiction	Columbia, TN
East/West Street	Trotwood Ave
North/South Street	Old Sunnyside Ln
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			569	24		47	939			48		38				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage						Undivided										

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						52					95					
Capacity, c (veh/h)						944					127					
v/c Ratio						0.05					0.74					
95% Queue Length, Q_{95} (veh)						0.2					4.3					
95% Queue Length, Q_{95} (ft)						5.0					107.5					
Control Delay (s/veh)						9.0	1.2				88.7					
Level of Service (LOS)						A	A				F					
Approach Delay (s/veh)						1.5				88.7						
Approach LOS						A				F						

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HCS Two-Way Stop-Control Report

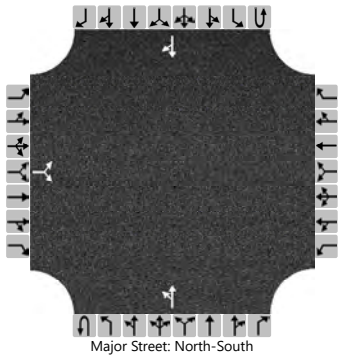
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2030
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	11318 (Back)

Site Information

Intersection	Sunnyside/Old Sunnyside
Jurisdiction	Columbia, TN
East/West Street	Old Sunnyside Ln
North/South Street	Sunnyside Ln
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		37		85						53	303				217	8
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			131							57						
Capacity, c (veh/h)			616							1336						
v/c Ratio			0.21							0.04						
95% Queue Length, Q_{95} (veh)			0.8							0.1						
95% Queue Length, Q_{95} (ft)			20.0							2.5						
Control Delay (s/veh)			12.4							7.8	0.4					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		12.4								1.5						
Approach LOS		B								A						

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HCS Two-Way Stop-Control Report

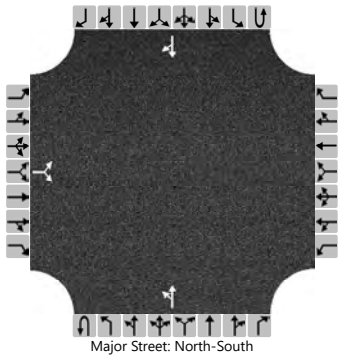
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2030
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	11318 (Back)

Site Information

Intersection	Sunnyside/Old Sunnyside
Jurisdiction	Columbia, TN
East/West Street	Old Sunnyside Ln
North/South Street	Sunnyside Ln
Peak Hour Factor	0.99
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		24		78						71	306				290	33
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			103							72						
Capacity, c (veh/h)			584							1245						
v/c Ratio			0.18							0.06						
95% Queue Length, Q_{95} (veh)			0.6							0.2						
95% Queue Length, Q_{95} (ft)			15.0							5.0						
Control Delay (s/veh)			12.5							8.1	0.6					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		12.5								2.0						
Approach LOS		B								A						

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HCS Two-Way Stop-Control Report

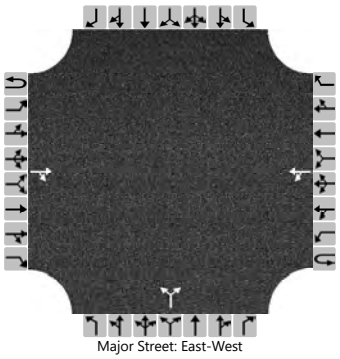
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2030
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	11318 (Back)

Site Information

Intersection	Old Sunnyside/Hunters Glen
Jurisdiction	Columbia, TN
East/West Street	Old Sunnyside Ln
North/South Street	Hunters Glen Dr
Peak Hour Factor	0.81
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			81	13		9	65			26		27				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11					65					
Capacity, c (veh/h)						1485					857					
v/c Ratio						0.01					0.08					
95% Queue Length, Q_{95} (veh)						0.0					0.2					
95% Queue Length, Q_{95} (ft)						0.0					5.0					
Control Delay (s/veh)						7.4	0.1				9.6					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)					1.0				9.6							
Approach LOS					A				A							

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HCS Two-Way Stop-Control Report

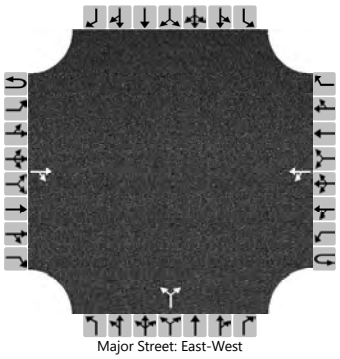
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2030
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	11318 (Back)

Site Information

Intersection	Old Sunnyside/Hunters Glen
Jurisdiction	Columbia, TN
East/West Street	Old Sunnyside Ln
North/South Street	Hunters Glen Dr
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			31	36		32	53			26		18				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						39					53					
Capacity, c (veh/h)						1530					855					
v/c Ratio						0.03					0.06					
95% Queue Length, Q_{95} (veh)						0.1					0.2					
95% Queue Length, Q_{95} (ft)						2.5					5.0					
Control Delay (s/veh)						7.4	0.2				9.5					
Level of Service (LOS)						A	A				A					
Approach Delay (s/veh)					2.9				9.5							
Approach LOS					A				A							

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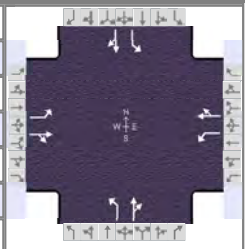
TOTAL PROJECTED CONDITIONS

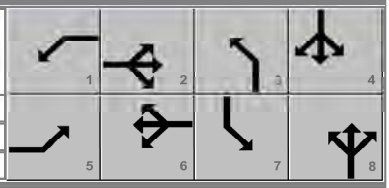
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	FTG			Duration, h	0.250
Analyst	FTG	Analysis Date	Jan 29, 2025	Area Type	Other
Jurisdiction	Columbia, TN	Time Period	AM Peak Hour	PHF	0.93
Urban Street	Trotwood Avenue	Analysis Year	2030 (Total)	Analysis Period	1> 7:00
Intersection	Cayce Lane/Sunnyside…	File Name	1_fuam.xus		
Project Description	11257				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	47	901	143	64	464	59	250	121	151	131	99	48

Signal Information												
Cycle, s	100.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On	Green	3.4	1.1	46.5	8.0	17.0	0.0		
Force Mode	Fixed	Simult. Gap N/S	On	Yellow	4.0	0.0	4.0	4.0	4.0	0.0		
				Red	2.0	0.0	2.0	2.0	2.0	0.0		



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	4.0		10.0		10.0
Phase Duration, s	10.5	53.6	9.4	52.5		23.0		14.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.1		3.1
Queue Clearance Time (g_s), s	3.4		4.0			18.9		10.0
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0		0.0		0.0
Phase Call Probability	0.75		0.85			1.00		1.00
Max Out Probability	0.01		0.00			1.00		1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	51	1123		69	562		269	292		141	158	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1854		1810	1862		1810	1727		1810	1795	
Queue Service Time (g_s), s	1.4	47.6		2.0	23.2		14.5	16.9		7.8	8.0	
Cycle Queue Clearance Time (g_c), s	1.4	47.6		2.0	23.2		14.5	16.9		7.8	8.0	
Green Ratio (*g/C*)	0.51	0.48		0.50	0.46		0.17	0.17		0.08	0.08	
Capacity (*c*), veh/h	355	882		134	865		308	294		145	144	
Volume-to-Capacity Ratio (*X*)	0.142	1.273		0.513	0.650		0.874	0.996		0.973	1.101	
Back of Queue (*Q*), ft/ln (95 th percentile)	24	1857		36	386		320	415		252	314	
Back of Queue (*Q*), veh/ln (95 th percentile)	1.0	74.3		1.4	15.4		12.8	16.6		10.1	12.6	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.08	6.19		0.36	0.77		2.13	1.38		1.68	0.97	
Uniform Delay (d_1), s/veh	15.2	26.2		23.8	20.5		40.5	41.5		45.9	46.0	
Incremental Delay (d_2), s/veh	0.1	131.6		1.1	3.8		22.3	51.3		66.1	104.7	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	15.3	157.8		25.0	24.3		62.8	92.8		112.0	150.7	
Level of Service (LOS)	B	F		C	C		E	F		F	F	
Approach Delay, s/veh / LOS	151.7	F		24.4	C		78.4	E		132.5	F	
Intersection Delay, s/veh / LOS	103.9						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.90	B	1.90	B	1.95	B	1.94	B
Bicycle LOS Score / LOS	2.42	B	1.53	B	1.41	A	0.98	A

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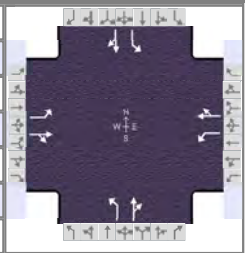
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	FTG			Duration, h	0.250
Analyst	FTG	Analysis Date	Jan 29, 2025	Area Type	Other
Jurisdiction	Columbia, TN	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Trotwood Avenue	Analysis Year	2030 (Total)	Analysis Period	1> 7:00
Intersection	Cayce Lane/Sunnyside…	File Name	1_fupm.xus		
Project Description	11257				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	65	646	156	126	833	130	234	141	116	172	100	84

Signal Information			
Cycle, s	100.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.1	0.9	44.0	13.0	13.0	0.0	1	2	3	4		
Yellow	4.0	0.0	4.0	4.0	4.0	0.0	5	6	7	8		
Red	2.0	0.0	2.0	2.0	2.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	4.0		10.0		10.0
Phase Duration, s	11.1	50.0	12.0	50.9		19.0		19.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.1		3.1
Queue Clearance Time (g_s), s	4.0		6.0			15.0		12.8
Green Extension Time (g_e), s	0.1	0.0	0.2	0.0		0.0		0.2
Phase Call Probability	0.85		0.97			1.00		1.00
Max Out Probability	0.00		0.00			1.00		1.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	68	844		133	1014		246	271		181	194	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1836		1810	1855		1810	1757		1810	1756	
Queue Service Time (g_s), s	2.0	44.0		4.0	44.9		13.0	13.0		9.7	10.8	
Cycle Queue Clearance Time (g_c), s	2.0	44.0		4.0	44.9		13.0	13.0		9.7	10.8	
Green Ratio (*g/C*)	0.49	0.44		0.50	0.45		0.13	0.13		0.13	0.13	
Capacity (*c*), veh/h	164	808		181	833		236	229		235	228	
Volume-to-Capacity Ratio (*X*)	0.416	1.045		0.733	1.217		1.046	1.183		0.771	0.850	
Back of Queue (*Q*), ft/ln (95 th percentile)	36	935		72	1548		396	506		210	240	
Back of Queue (*Q*), veh/ln (95 th percentile)	1.4	37.4		2.9	61.9		15.9	20.2		8.4	9.6	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.12	3.12		0.73	3.10		2.64	1.69		1.40	0.74	
Uniform Delay (d_1), s/veh	23.1	28.0		23.2	27.6		43.5	43.5		42.1	42.6	
Incremental Delay (d_2), s/veh	0.6	44.2		2.2	108.6		71.2	117.8		9.2	18.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	23.8	72.2		25.3	136.2		114.7	161.3		51.2	60.6	
Level of Service (LOS)	C	F		C	F		F	F		D	E	
Approach Delay, s/veh / LOS	68.6	E		123.4	F		139.1	F		56.1	E	
Intersection Delay, s/veh / LOS	100.6						F					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.91	B	1.95	B	1.94	B
Bicycle LOS Score / LOS	1.99	B	2.38	B	1.34	A	1.11	A

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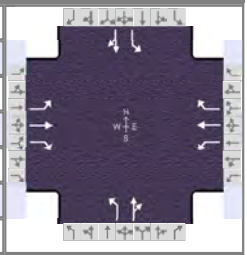
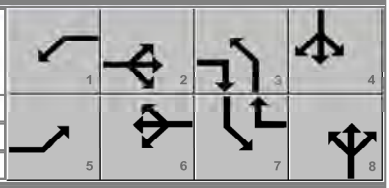
HCS Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	FTG			Duration, h	0.250
Analyst	FTG	Analysis Date	Jan 29, 2025	Area Type	Other
Jurisdiction	Columbia, TN	Time Period	AM Peak Hour	PHF	0.93
Urban Street	Trotwood Avenue	Analysis Year	2030 (Total)	Analysis Period	1> 7:00
Intersection	Cayce Lane/Sunnyside…	File Name	1_fuam_imp.xus		
Project Description	11257				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	47	901	143	64	464	59	250	121	151	131	99	48

Signal Information												
Cycle, s	120.0	Reference Phase	2									
Offset, s	0	Reference Point	End									
Uncoordinated	No	Simult. Gap E/W	On									
Force Mode	Fixed	Simult. Gap N/S	On									
				Green	4.0	0.9	55.4	12.9	22.8	0.0		
				Yellow	4.0	0.0	4.0	4.0	4.0	0.0		
				Red	2.0	0.0	2.0	2.0	2.0	0.0		



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	3.0	1.1	3.0		10.0		10.0
Phase Duration, s	10.9	62.3	10.0	61.4		28.8		18.9
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.1		3.1
Queue Clearance Time (g_s), s	3.7		4.4			21.8		12.3
Green Extension Time (g_e), s	0.1	0.0	0.1	0.0		1.1		0.5
Phase Call Probability	0.81		0.90			1.00		1.00
Max Out Probability	0.00		0.00			0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	51	969	154	69	499	63	269	292		141	158	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1727		1810	1795	
Queue Service Time (g_s), s	1.7	56.3	4.3	2.4	23.0	2.1	17.0	19.8		9.0	10.3	
Cycle Queue Clearance Time (g_c), s	1.7	56.3	4.3	2.4	23.0	2.1	17.0	19.8		9.0	10.3	
Green Ratio (*g/C*)	0.50	0.47	0.66	0.50	0.46	0.57	0.19	0.19		0.11	0.11	
Capacity (*c*), veh/h	384	891	1061	121	878	916	344	328		194	193	
Volume-to-Capacity Ratio (*X*)	0.131	1.087	0.145	0.570	0.569	0.069	0.781	0.891		0.726	0.821	
Back of Queue (*Q*), ft/ln (95 th percentile)	31	1287	65	46	396	34	303	336		186	208	
Back of Queue (*Q*), veh/ln (95 th percentile)	1.2	51.5	2.6	1.8	15.9	1.4	12.1	13.5		7.5	8.3	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.10	4.29	0.00	0.46	0.79	0.00	2.02	1.12		1.24	0.64	
Uniform Delay (d_1), s/veh	17.5	31.9	7.7	28.7	23.6	11.6	46.2	47.4		51.9	52.4	
Incremental Delay (d_2), s/veh	0.1	56.6	0.3	1.6	2.7	0.1	1.5	3.4		1.9	3.3	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	17.6	88.5	8.0	30.3	26.2	11.7	47.7	50.7		53.8	55.7	
Level of Service (LOS)	B	F	A	C	C	B	D	D		D	E	
Approach Delay, s/veh / LOS	74.9	E		25.2	C		49.3	D		54.8	D	
Intersection Delay, s/veh / LOS	55.5						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.91	B	1.91	B	2.15	B	2.14	B
Bicycle LOS Score / LOS	2.42	B	1.53	B	1.41	A	0.98	A

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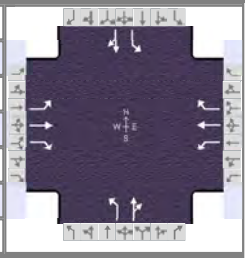
HCS Signalized Intersection Results Summary

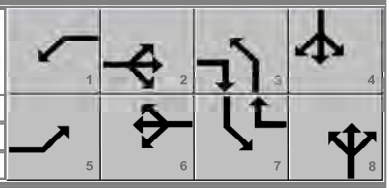
General Information				Intersection Information	
Agency	FTG			Duration, h	0.250
Analyst	FTG	Analysis Date	Jan 29, 2025	Area Type	Other
Jurisdiction	Columbia, TN	Time Period	PM Peak Hour	PHF	0.95
Urban Street	Trotwood Avenue	Analysis Year	2030 (Total)	Analysis Period	1> 7:00
Intersection	Cayce Lane/Sunnyside…	File Name	1_fupm_imp.xus		
Project Description	11257				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	65	646	156	126	833	130	234	141	116	172	100	84

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.7	1.9	74.1	18.9	25.4	0.0						
Yellow	4.0	0.0	4.0	4.0	4.0	0.0						
Red	2.0	0.0	2.0	2.0	2.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	3.0	1.1	3.0		10.0		10.0
Phase Duration, s	11.7	80.1	13.5	82.0		31.4		24.9
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	3.1	0.0	3.1	0.0		3.1		3.1
Queue Clearance Time (g_s), s	4.7		7.4			24.7		18.3
Green Extension Time (g_e), s	0.1	0.0	0.2	0.0		1.0		0.7
Phase Call Probability	0.94		1.00			1.00		1.00
Max Out Probability	0.00		0.00			0.00		0.00

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	68	680	164	133	877	137	246	271		181	194	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1810	1900	1610	1810	1900	1610	1810	1757		1810	1756	
Queue Service Time (g_s), s	2.7	42.1	5.7	5.4	63.2	5.1	19.7	22.7		14.6	16.3	
Cycle Queue Clearance Time (g_c), s	2.7	42.1	5.7	5.4	63.2	5.1	19.7	22.7		14.6	16.3	
Green Ratio (*g/C*)	0.53	0.49	0.66	0.55	0.51	0.63	0.17	0.17		0.13	0.13	
Capacity (*c*), veh/h	175	943	1069	316	965	1021	304	295		228	222	
Volume-to-Capacity Ratio (*X*)	0.392	0.721	0.154	0.420	0.908	0.134	0.810	0.916		0.793	0.874	
Back of Queue (*Q*), ft/ln (95 th percentile)	52	681	92	101	1021	83	351	392		277	298	
Back of Queue (*Q*), veh/ln (95 th percentile)	2.1	27.2	3.7	4.1	40.8	3.3	14.0	15.7		11.1	11.9	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.17	2.27	0.00	1.01	2.04	0.00	2.34	1.31		1.85	0.92	
Uniform Delay (d_1), s/veh	30.7	29.7	9.4	23.1	33.7	11.0	60.1	61.4		63.6	64.4	
Incremental Delay (d_2), s/veh	0.5	4.8	0.3	0.3	13.8	0.3	2.0	4.7		2.4	4.2	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	31.3	34.4	9.7	23.4	47.6	11.2	62.1	66.1		66.0	68.6	
Level of Service (LOS)	C	C	A	C	D	B	E	E		E	E	
Approach Delay, s/veh / LOS	29.7	C		40.4	D		64.2	E		67.3	E	
Intersection Delay, s/veh / LOS	44.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.92	B	1.91	B	2.16	B	2.15	B
Bicycle LOS Score / LOS	1.99	B	2.38	B	1.34	A	1.11	A

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HCS Two-Way Stop-Control Report

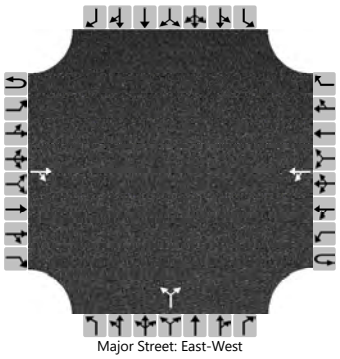
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2030
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	11318 (Total)

Site Information

Intersection	Trotwood/Old Sunnyside
Jurisdiction	Columbia, TN
East/West Street	Trotwood Ave
North/South Street	Old Sunnyside Ln
Peak Hour Factor	0.90
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			821	86		36	425			73		68				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						40					157					
Capacity, c (veh/h)						696					174					
v/c Ratio						0.06					0.90					
95% Queue Length, Q_{95} (veh)						0.2					6.6					
95% Queue Length, Q_{95} (ft)						5.0					165.0					
Control Delay (s/veh)						10.5	0.8				97.3					
Level of Service (LOS)						B	A				F					
Approach Delay (s/veh)					1.6				97.3							
Approach LOS					A				F							

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HCS Two-Way Stop-Control Report

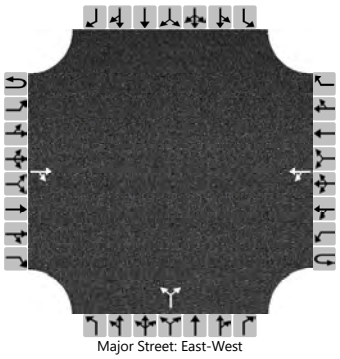
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2030
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	11318 (Total)

Site Information

Intersection	Trotwood/Old Sunnyside
Jurisdiction	Columbia, TN
East/West Street	Trotwood Ave
North/South Street	Old Sunnyside Ln
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			569	41		70	939			59		51				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						77					121					
Capacity, c (veh/h)						929					113					
v/c Ratio						0.08					1.07					
95% Queue Length, Q_{95} (veh)						0.3					7.2					
95% Queue Length, Q_{95} (ft)						7.5					180.0					
Control Delay (s/veh)						9.2	1.8				176.8					
Level of Service (LOS)						A	A				F					
Approach Delay (s/veh)					2.3				176.8							
Approach LOS					A				F							

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HCS Two-Way Stop-Control Report

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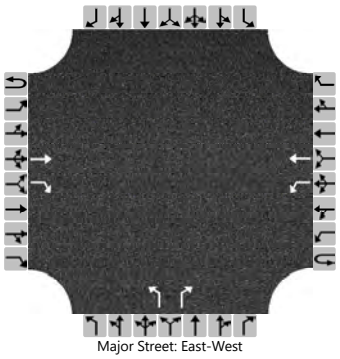
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	11318 (Total)

Site Information

Intersection	Trotwood/Old Sunnyside
Jurisdiction	Columbia, TN
East/West Street	Trotwood Ave
North/South Street	Old Sunnyside Ln
Peak Hour Factor	0.90
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	1	1	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume (veh/h)			821	86		36	425			73		68				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized			No							No						
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						40				81		76				
Capacity, c (veh/h)						696				135		335				
v/c Ratio						0.06				0.60		0.23				
95% Queue Length, Q_{95} (veh)						0.2				3.1		0.9				
95% Queue Length, Q_{95} (ft)						5.0				77.5		22.5				
Control Delay (s/veh)						10.5				65.8		18.9				
Level of Service (LOS)						B				F		C				
Approach Delay (s/veh)						0.8				43.2						
Approach LOS						A				E						

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HCS Two-Way Stop-Control Report

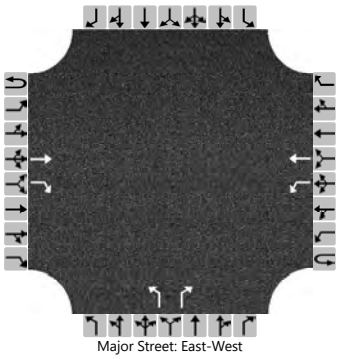
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2030
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	11318 (Total)

Site Information

Intersection	Trotwood/Old Sunnyside
Jurisdiction	Columbia, TN
East/West Street	Trotwood Ave
North/South Street	Old Sunnyside Ln
Peak Hour Factor	0.91
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	1	0	1	1	0		1	0	1		0	0	0
Configuration			T	R		L	T			L		R				
Volume (veh/h)			569	41		70	939			59		51				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized			No							No						
Median Type | Storage			Undivided													

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						77				65		56				
Capacity, c (veh/h)						929				80		488				
v/c Ratio						0.08				0.81		0.11				
95% Queue Length, Q_{95} (veh)						0.3				4.1		0.4				
95% Queue Length, Q_{95} (ft)						7.5				102.5		10.0				
Control Delay (s/veh)						9.2				141.7		13.3				
Level of Service (LOS)						A				F		B				
Approach Delay (s/veh)						0.6				82.2						
Approach LOS						A				F						

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HCS Two-Way Stop-Control Report

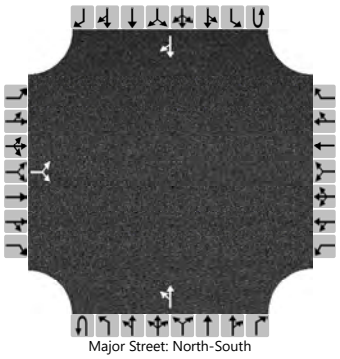
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2030
Time Analyzed	AM Peak Hour
Intersection Orientation	North-South
Project Description	11318 (Total)

Site Information

Intersection	Sunnyside/Old Sunnyside
Jurisdiction	Columbia, TN
East/West Street	Old Sunnyside Ln
North/South Street	Sunnyside Ln
Peak Hour Factor	0.93
Analysis Time Period (hrs)	0.25

Lanes



Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		49		117						64	303				217	12
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			178							69						
Capacity, c (veh/h)			606							1332						
v/c Ratio			0.29							0.05						
95% Queue Length, Q_{95} (veh)			1.2							0.2						
95% Queue Length, Q_{95} (ft)			30.0							5.0						
Control Delay (s/veh)			13.4							7.9	0.5					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		13.4								1.8						
Approach LOS		B								A						

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HCS Two-Way Stop-Control Report

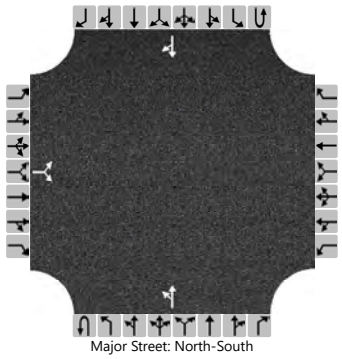
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2030
Time Analyzed	PM Peak Hour
Intersection Orientation	North-South
Project Description	11318 (Total)

Site Information

Intersection	Sunnyside/Old Sunnyside
Jurisdiction	Columbia, TN
East/West Street	Old Sunnyside Ln
North/South Street	Sunnyside Ln
Peak Hour Factor	0.99
Analysis Time Period (hrs)	0.25

Lanes


Major Street: North-South

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	0	1	0
Configuration			LR							LT						TR
Volume (veh/h)		32		99						107	306				290	47
Percent Heavy Vehicles (%)		0		0						0						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized																
Median Type | Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.40		6.20						4.10						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.50		3.30						2.20						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			132							108						
Capacity, c (veh/h)			541							1230						
v/c Ratio			0.24							0.09						
95% Queue Length, Q_{95} (veh)			1.0							0.3						
95% Queue Length, Q_{95} (ft)			25.0							7.5						
Control Delay (s/veh)			13.8							8.2	0.9					
Level of Service (LOS)			B							A	A					
Approach Delay (s/veh)		13.8								2.8						
Approach LOS		B								A						

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HCS Two-Way Stop-Control Report

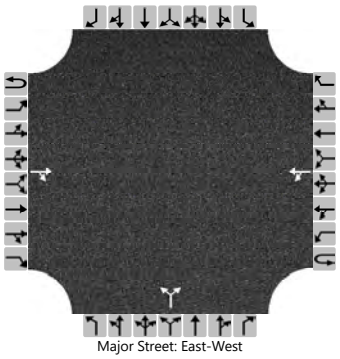
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2030
Time Analyzed	AM Peak Hour
Intersection Orientation	East-West
Project Description	11318 (Total)

Site Information

Intersection	Old Sunnyside/Hunters Glen
Jurisdiction	Columbia, TN
East/West Street	Old Sunnyside Ln
North/South Street	Hunters Glen Dr
Peak Hour Factor	0.81
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			81	26		24	65			61		71				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						30					163					
Capacity, c (veh/h)						1465					826					
v/c Ratio						0.02					0.20					
95% Queue Length, Q_{95} (veh)						0.1					0.7					
95% Queue Length, Q_{95} (ft)						2.5					17.5					
Control Delay (s/veh)						7.5	0.2				10.4					
Level of Service (LOS)						A	A				B					
Approach Delay (s/veh)					2.1				10.4							
Approach LOS					A				B							

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HCS Two-Way Stop-Control Report

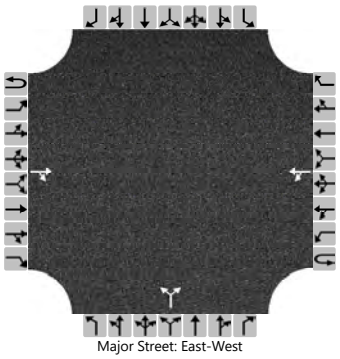
General Information

Analyst	FTG
Agency/Co.	FTG
Date Performed	Jan 2025
Analysis Year	2030
Time Analyzed	PM Peak Hour
Intersection Orientation	East-West
Project Description	11318 (Total)

Site Information

Intersection	Old Sunnyside/Hunters Glen
Jurisdiction	Columbia, TN
East/West Street	Old Sunnyside Ln
North/South Street	Hunters Glen Dr
Peak Hour Factor	0.83
Analysis Time Period (hrs)	0.25

Lanes


Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	1	0		0	0	0
Configuration				TR		LT					LR					
Volume (veh/h)			31	76		82	53			50		47				
Percent Heavy Vehicles (%)						0				0		0				
Proportion Time Blocked																
Percent Grade (%)										0						
Right Turn Channelized																
Median Type | Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						4.1				7.1		6.2				
Critical Headway (sec)						4.10				6.40		6.20				
Base Follow-Up Headway (sec)						2.2				3.5		3.3				
Follow-Up Headway (sec)						2.20				3.50		3.30				

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						99					117					
Capacity, c (veh/h)						1469					747					
v/c Ratio						0.07					0.16					
95% Queue Length, Q_{95} (veh)						0.2					0.6					
95% Queue Length, Q_{95} (ft)						5.0					15.0					
Control Delay (s/veh)						7.6	0.5				10.7					
Level of Service (LOS)						A	A				B					
Approach Delay (s/veh)					4.8				10.7							
Approach LOS					A				B							

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APPENDIX C
TRIP GENERATION

TRIP GENERATION CALCULATIONS - Single-Family Homes Detached

The following calculations are based on the data compiled for ITE Land Use Code 210.

Average Daily Traffic

Ln(T) = 0.92 Ln(**X**) + 2.68
Ln(T) = 0.92 Ln(**148**) + 2.68
T = 1,448 vehicles

Enter = 0.50 (1,448) = 724 vehicles
Exit = 0.50 (1,448) = 724 vehicles

AM traffic during peak hour of adjacent street

Ln(T) = 0.91 Ln(**X**) + 0.12
Ln(T) = 0.91 Ln(**148**) + 0.12
T = 107 vehicles

Enter = 0.26 (107) = 28 vehicles
Exit = 0.74 (107) = 79 vehicles

PM traffic during peak hour of adjacent street

Ln(T) = 0.94 Ln(**X**) + 0.27
Ln(T) = 0.94 Ln(**148**) + 0.27
T = 143 vehicles

Enter = 0.63 (143) = 90 vehicles
Exit = 0.37 (143) = 53 vehicles

APPENDIX D
RELEVANT PAGES FROM
TDOT HIGHWAY SYSTEM ACCESS MANUAL, VOLUME 3

where a left-turn lane would help mitigate traffic conflicts, not necessarily situations where a left-turn lane is required or must be constructed.

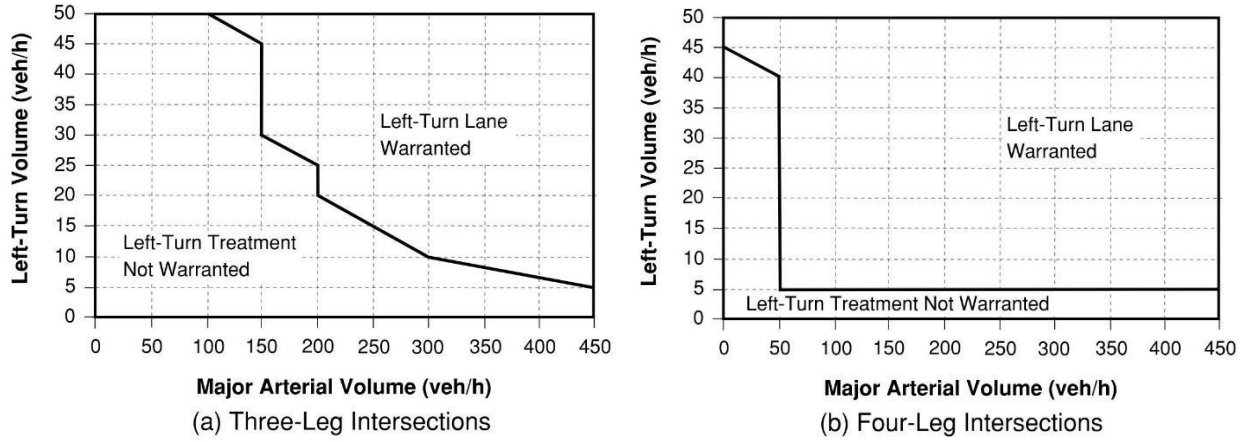


Figure 3-15: Left-Turn Lane Warrant for Urban and Suburban Arterials (Unsignalized)[20, 21]

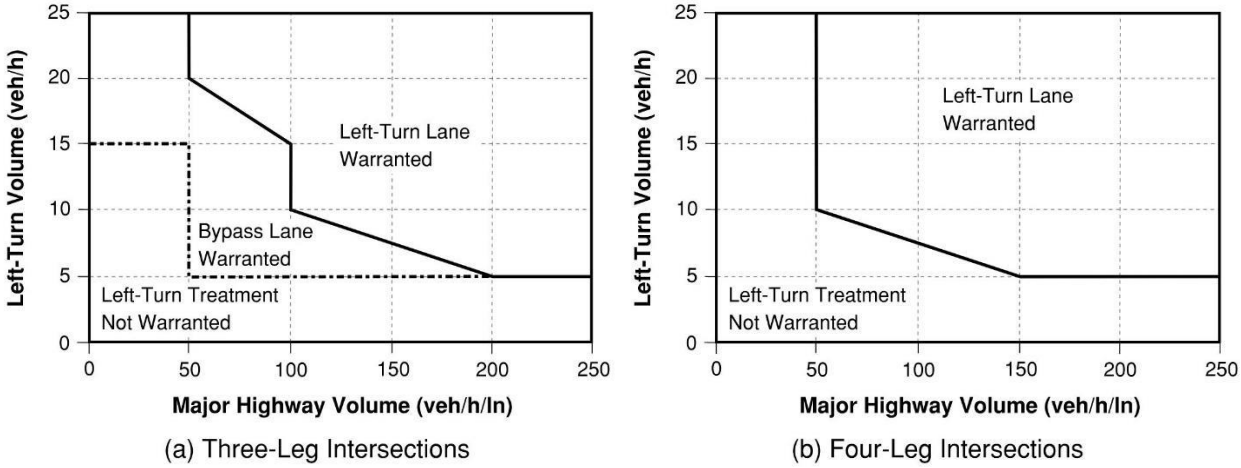


Figure 3-16: Left-Turn Lane Warrant for Two-Lane Rural Roadways (Unsignalized) [20, 21]

[20] TRB, NCHRP Repot 745, Left-Turn Accommodations at Unsignalized Intersections (2013)
[21] AASHTO, A Policy on Geometric Design of Highways and Streets 7th Edition (2018)

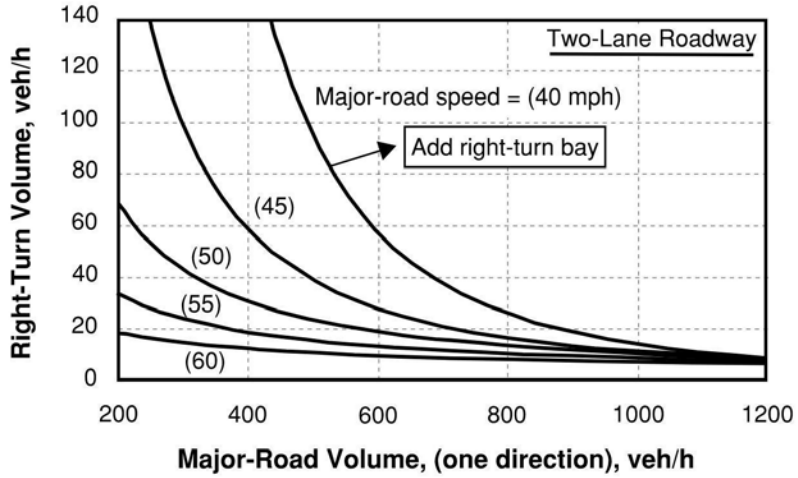


Figure 3-18: Right-Turn Lane Warrant along Two-Lane Roadway (Unsignalized Intersection with Two-Way Stop-Control)[24]

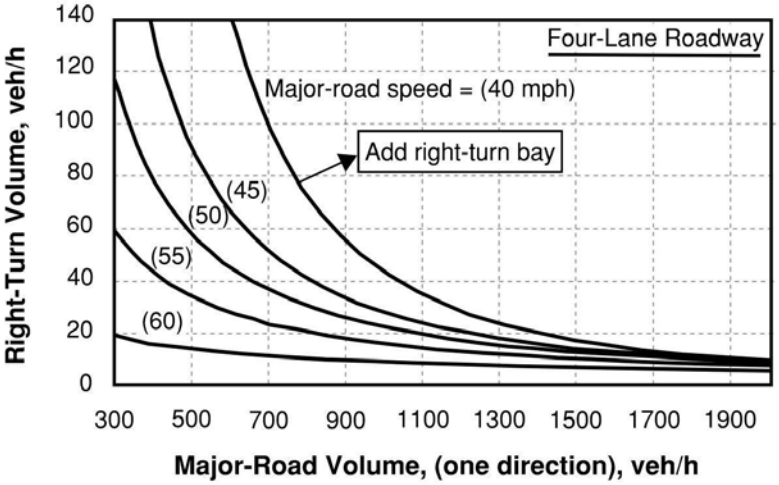
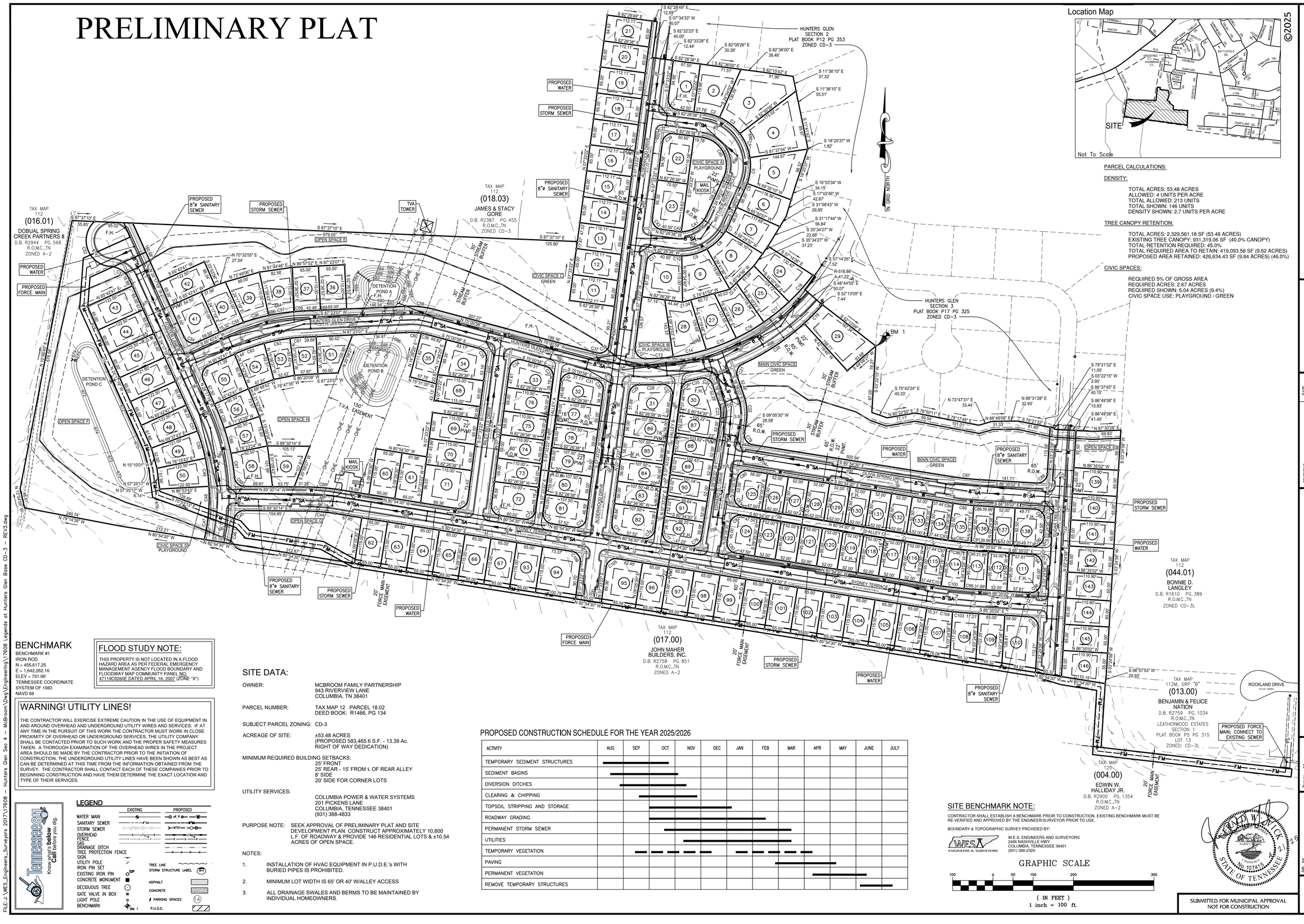


Figure 3-19: Right-Turn Lane Warrant along Four-Lane Roadway (Unsignalized Intersection with Two-Way Stop-Control) [25]

[24] TRB, NCHRP 457, Evaluating Intersection Improvements (2001)
[25] TRB, NCHRP 457, Evaluating Intersection Improvements (2001)

PRELIMINARY PLAT



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PARCEL CALCULATIONS:

DENSITY:

TOTAL ACRES: 53.48 ACRES
ALLOWED: 4 UNITS PER ACRE
TOTAL ALLOWED: 213 UNITS
TOTAL SHOWN: 146 UNITS
DENSITY SHOWN: 2.7 UNITS PER ACRE

TREE CANOPY RETENTION:

TOTAL ACRES: 2,329,581.18 SF (53.48 ACRES)
EXISTING TREE CANOPY: 931,319.06 SF (40.0% CANOPY)
TOTAL RETENTION REQUIRED: 45.0%
TOTAL REQUIRED AREA TO RETAIN: 419,093.58 SF (9.62 ACRES)
PROPOSED AREA RETAINED: 428,634.43 SF (9.84 ACRES) (46.0%)

CIVIC SPACES:

REQUIRED 5% OF GROSS AREA
REQUIRED ACRES: 2.67 ACRES
REQUIRED SHOWN: 5.04 ACRES (9.4%)
CIVIC SPACE USE: PLAYGROUND / GREEN

BENCHMARK

BENCHMARK #1
IRON ROD
N = 455,617.25
E = 1,642,262.16
ELEV = 701.86'
TENNESSEE COORDINATE SYSTEM OF 1983
NAVD 88

FLOOD STUDY NOTE:

THIS PROPERTY IS NOT LOCATED IN A FLOOD HAZARD AREA AS PER FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD BOUNDARY AND FLOODWAY MAP COMMUNITY PANEL NO. 47119C0280E DATED APRIL 16, 2007 (ZONE "X")

WARNING! UTILITY LINES!

THE CONTRACTOR WILL EXERCISE EXTREME CAUTION IN THE USE OF EQUIPMENT IN AND AROUND OVERHEAD AND UNDERGROUND UTILITY WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK THE CONTRACTOR MUST WORK IN CLOSE PROXIMITY OF OVERHEAD OR UNDERGROUND SERVICES, THE UTILITY COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES TAKEN. A THOROUGH EXAMINATION OF THE OVERHEAD WIRES IN THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION. THE UNDERGROUND UTILITY LINES HAVE BEEN SHOWN AS BEST AS CAN BE DETERMINED AT THIS TIME FROM THE INFORMATION OBTAINED FROM THE SURVEY. THE CONTRACTOR SHALL CONTACT EACH OF THESE COMPANIES PRIOR TO BEGINNING CONSTRUCTION AND HAVE THEM DETERMINE THE EXACT LOCATION AND TYPE OF THEIR SERVICES.

Tennessee811 Know what's below Call before you dig.

LEGEND

	EXISTING	PROPOSED
WATER MAIN		
SANITARY SEWER		
STORM SEWER		
OVERHEAD		
FENCE		
GAS		
DRAINAGE DITCH		
TREE PROTECTION FENCE		
SIGN		
UTILITY POLE		
IRON PIN SET		
EXISTING IRON PIN		
CONCRETE MONUMENT		
DECIDUOUS TREE		
GATE VALVE IN BOX		
LIGHT POLE		
BENCHMARK		

TREE LINE
STORM STRUCTURE LABEL
ASPHALT
CONCRETE
PARKING SPACES
P.U.D.E.

SITE DATA:

OWNER: MCBROOM FAMILY PARTNERSHIP
943 RIVERVIEW LANE
COLUMBIA, TN 38401

PARCEL NUMBER: TAX MAP 12 PARCEL 18.02
DEED BOOK: R1466, PG 134

SUBJECT PARCEL ZONING: CD-3

ACREAGE OF SITE: ±53.48 ACRES
(PROPOSED 583,465.6 S.F. - 13.39 Ac.
RIGHT OF WAY DEDICATION)

MINIMUM REQUIRED BUILDING SETBACKS:
25' FRONT
25' REAR - 15' FROM ℄ OF REAR ALLEY
8' SIDE
20' SIDE FOR CORNER LOTS

UTILITY SERVICES:
COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TENNESSEE 38401
(931) 388-4833

PURPOSE NOTE: SEEK APPROVAL OF PRELIMINARY PLAT AND SITE DEVELOPMENT PLAN. CONSTRUCT APPROXIMATELY 10,800 L.F. OF ROADWAY & PROVIDE 146 RESIDENTIAL LOTS & ±10.54 ACRES OF OPEN SPACE.

NOTES:

1. INSTALLATION OF HVAC EQUIPMENT IN P.U.D.E.'s WITH BURIED PIPES IS PROHIBITED.
2. MINIMUM LOT WIDTH IS 65' OR 40' W/ALLEY ACCESS
3. ALL DRAINAGE SWALES AND BERMS TO BE MAINTAINED BY INDIVIDUAL HOMEOWNERS.

PROPOSED CONSTRUCTION SCHEDULE FOR THE YEAR 2025/2026

ACTIVITY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY
TEMPORARY SEDIMENT STRUCTURES												
SEDIMENT BASINS												
DIVERSION DITCHES												
CLEARING & CHIPPING												
TOPSOIL STRIPPING AND STORAGE												
ROADWAY GRADING												
PERMANENT STORM SEWER												
UTILITIES												
TEMPORARY VEGETATION												
PAVING												
PERMANENT VEGETATION												
REMOVE TEMPORARY STRUCTURES												

SITE BENCHMARK NOTE:

CONTRACTOR SHALL ESTABLISH A BENCHMARK PRIOR TO CONSTRUCTION. EXISTING BENCHMARK MUST BE RE-VERIFIED AND APPROVED BY THE ENGINEER/SURVEYOR PRIOR TO USE.

BOUNDARY & TOPOGRAPHIC SURVEY PROVIDED BY:

W.E.S. ENGINEERS AND SURVEYORS
2486 NASHVILLE HWY
COLUMBIA, TENNESSEE 38401
(931) 388-2329

GRAPHIC SCALE

100 0 50 100 200 300
(IN FEET)
1 inch = 100 ft.

RICHARD W. WOLICK
REGISTERED LANDSCAPE ARCHITECT
No. 107415
STATE OF TENNESSEE

SUBMITTED FOR MUNICIPAL APPROVAL
NOT FOR CONSTRUCTION

WES ENGINEERS & SURVEYORS
CIVIL ENGINEERS & LAND SURVEYORS
2486 NASHVILLE HIGHWAY
COLUMBIA, TN 38401
PHONE: (931) 388-2329
www.wesengineers.com

ENGINEERS & SURVEYORS

Client
MCBROOM FAMILY PARTNERSHIP
943 RIVERVIEW LANE
COLUMBIA, TN 38401
LINDA WALKER, PARTNER

REVISIONS	DATE

LEGENDS AT HUNTERS GLEN

HUNTERS GLEN DRIVE
COLUMBIA, TENNESSEE
PRELIMINARY PLAT

Drawn: CG
Checked: GV
Approved: GV
Date: 4/21/2025

Job. no. 17608
Scale:
Vertical: 1" = 100'
Horizontal:

1 of 2

FILE:J:\WES_Engineers_Surveyors 2017\17608 - Hunters Glen Sec 4 - McBroom\Dwg\Engineering\17608 Legends at Hunters Glen Base CD-3 - REV3.dwg

PRELIMINARY PLAT

LOT AREA TABLE

LOT	SQ. FT.	ACRES
1	7,858.9	0.18
2	10,150.5	0.23
3	17,211.3	0.40
4	16,001.1	0.37
5	12,027.6	0.28
6	8,161.5	0.19
7	8,123.4	0.19
8	10,077.5	0.23
9	10,205.7	0.23
10	10,345.6	0.24
11	7,287.1	0.17
12	7,287.1	0.17
13	7,287.1	0.17
14	7,287.1	0.17
15	7,287.1	0.17
16	7,287.1	0.17
17	7,287.1	0.17
18	7,287.1	0.17
19	7,287.1	0.17
20	7,287.1	0.17
21	7,283.3	0.17
22	8,889.4	0.20
23	8,950.0	0.21
24	9,625.4	0.22
25	8,629.4	0.20
26	8,297.4	0.19
27	8,949.8	0.21
28	9,894.1	0.23
29	12,796.0	0.29
30	7,952.2	0.18
31	8,438.9	0.19
32	6,957.8	0.16
33	7,301.2	0.17
34	8,916.4	0.20
35	7,329.2	0.17
36	7,150.0	0.16
37	7,138.1	0.16
38	8,023.5	0.18
39	8,288.7	0.19
40	7,156.6	0.16
41	9,160.9	0.21
42	7,948.1	0.18
43	7,962.5	0.18
44	7,962.5	0.18
45	7,962.5	0.18
46	7,962.5	0.18
47	7,962.5	0.18
48	8,079.6	0.19
49	7,511.7	0.17
50	7,532.6	0.17
51	6,494.6	0.15
52	5,717.7	0.13
53	5,481.4	0.13
54	6,805.7	0.16
55	8,601.8	0.20
56	6,368.8	0.15
57	6,449.7	0.15
58	8,304.7	0.19
59	8,029.6	0.18
60	7,475.0	0.17
61	7,305.5	0.17
62	7,475.0	0.17
63	7,475.0	0.17
64	7,475.0	0.17
65	7,475.0	0.17
66	7,475.0	0.17
67	7,475.0	0.17
68	7,475.0	0.17
69	7,475.0	0.17
70	7,475.0	0.17
71	11,077.6	0.25
72	8,795.2	0.20
73	6,490.0	0.15
74	6,490.0	0.15
75	6,490.0	0.15
76	6,490.0	0.15
77	6,342.5	0.15
78	6,342.5	0.15
79	6,342.5	0.15
80	6,342.5	0.15
81	7,345.4	0.17
82	7,860.2	0.18
83	6,020.0	0.14
84	6,020.0	0.14
85	6,020.0	0.14
86	6,020.0	0.14
87	5,435.1	0.12
88	5,362.7	0.12
89	5,290.2	0.12
90	5,217.7	0.12
91	5,145.2	0.12
92	5,883.9	0.14
93	7,475.0	0.17
94	11,288.1	0.26
95	9,814.6	0.23
96	7,475.0	0.17
97	7,475.0	0.17
98	7,475.0	0.17
99	7,475.0	0.17
100	7,475.0	0.17
101	7,475.0	0.17
102	7,475.0	0.17
103	7,475.0	0.17
104	7,475.0	0.17
105	7,475.0	0.17
106	7,475.0	0.17
107	8,117.4	0.19
108	7,760.5	0.18
109	8,162.7	0.19
110	11,105.1	0.25
111	7,599.1	0.17
112	4,940.0	0.11
113	5,043.8	0.12
114	5,208.9	0.12
115	5,015.1	0.12
116	4,940.0	0.11
117	4,940.0	0.11
118	4,940.0	0.11
119	4,940.0	0.11
120	4,940.0	0.11
121	4,940.0	0.11
122	4,940.0	0.11
123	4,940.0	0.11
124	6,619.2	0.15
125	6,438.0	0.15
126	4,810.0	0.11
127	4,810.0	0.11
128	4,810.0	0.11
129	4,810.0	0.11
130	4,810.0	0.11
131	4,810.0	0.11
132	4,810.0	0.11
133	4,810.0	0.11
134	4,737.2	0.11
135	5,086.1	0.12
136	4,750.0	0.11
137	4,810.0	0.11
138	6,642.7	0.15
139	7,208.7	0.17
140	7,208.7	0.17
141	7,208.7	0.17
142	7,208.7	0.17
143	7,208.7	0.17
144	7,208.7	0.17
145	7,208.7	0.17
146	7,806.2	0.18
MAIN_CIVIC_SPACE	144,778.8	3.32
CIVIC_SPACE_A	16,171.2	0.37
CIVIC_SPACE_B	11,357.6	0.26
CIVIC_SPACE_C	43,325.9	0.99
CIVIC_SPACE_D	3,850.5	0.09

CURVE TABLE

CURVE	RADIUS	ARC_LENGTH	CHORD_LENGTH	CHORD_BEARING	DELTA_ANGLE
C1	25.00'	39.27'	35.36'	S 37°26'38" E	90°00'00"
C2	130.00'	37.46'	37.33'	S 74°11'18" E	16°30'40"
C3	130.00'	65.30'	64.62'	S 51°32'30" E	28°46'56"
C4	130.00'	65.30'	64.62'	S 22°45'34" E	28°46'56"
C5	130.00'	65.30'	64.62'	S 06°01'22" W	28°46'56"
C6	130.00'	8.48'	8.48'	S 22°16'56" W	3°44'13"
C7	130.00'	16.73'	16.72'	S 27°50'15" W	7°22'25"
C8	130.00'	65.30'	64.62'	S 45°54'56" W	28°46'56"
C9	130.00'	65.30'	64.62'	S 74°41'52" W	28°46'56"
C10	130.00'	19.21'	19.19'	N 86°40'39" W	8°28'03"
C11	25.00'	39.27'	35.36'	S 52°33'22" W	90°00'00"
C12	25.00'	42.48'	37.55'	S 41°07'30" E	97°21'44"
C13	517.50'	69.68'	69.63'	N 86°20'11" E	7°42'53"
C14	517.50'	84.05'	83.96'	N 77°49'34" E	9°18'22"
C15	517.50'	80.23'	80.15'	N 68°43'55" E	8°52'56"
C16	517.50'	79.22'	79.14'	N 59°54'19" E	8°46'14"
C17	517.50'	79.97'	79.89'	N 51°05'35" E	8°51'13"
C18	517.50'	89.33'	89.22'	N 41°43'17" E	9°53'24"
C19	582.50'	65.05'	65.01'	S 44°22'31" W	6°23'53"
C20	582.50'	183.61'	182.85'	S 56°36'16" W	18°03'37"
C21	25.00'	36.90'	33.64'	S 23°21'01" W	84°34'08"
C22	132.50'	64.23'	63.60'	S 04°47'41" E	27°46'22"
C23	67.50'	32.60'	32.28'	N 04°44'39" W	27°40'17"
C24	25.00'	36.90'	33.64'	N 61°13'07" W	84°34'08"
C25	582.50'	28.19'	28.19'	S 77°53'01" W	2°46'23"
C26	25.00'	31.29'	29.29'	S 43°24'47" W	71°42'50"
C27	25.00'	44.27'	38.71'	N 43°10'10" W	101°27'05"
C28	582.50'	55.80'	55.78'	S 88°50'56" W	5°29'18"
C29	25.00'	36.67'	33.47'	S 49°34'29" W	84°02'13"
C30	25.00'	37.13'	33.81'	N 34°59'38" W	85°06'01"
C31	582.50'	25.70'	25.70'	N 76°16'48" W	2°31'41"
C32	25.00'	42.51'	37.57'	S 56°16'12" W	97°25'40"
C33	25.00'	36.03'	32.99'	N 33°43'48" W	82°34'20"
C34	25.00'	42.51'	37.57'	S 56°16'12" W	97°25'40"
C35	25.00'	36.03'	32.99'	N 33°43'48" W	82°34'20"
C36	172.50'	15.20'	15.20'	N 78°05'49" W	5°02'56"
C37	517.50'	12.46'	12.46'	S 75°42'22" E	1°22'48"
C38	25.00'	41.91'	37.17'	N 55°34'48" E	96°02'52"
C39	25.00'	39.27'	35.36'	N 52°33'22" E	90°00'00"
C40	70.00'	130.23'	112.24'	S 29°08'47" E	106°35'40"
C41	70.00'	79.65'	75.42'	S 56°44'46" W	65°11'27"
C42	70.00'	10.04'	10.03'	N 86°33'04" W	8°12'52"
C43	25.00'	39.27'	35.36'	N 37°26'38" W	90°00'00"
C44	470.00'	70.51'	70.44'	N 85°12'22" W	8°35'43"
C45	25.00'	36.80'	33.57'	S 48°19'37" W	84°20'18"
C46	532.50'	60.60'	60.57'	S 09°25'05" W	6°31'13"
C47	467.50'	132.85'	132.41'	N 05°02'11" E	16°16'56"
C48	467.50'	56.73'	56.70'	N 00°22'19" E	6°57'11"
C49	467.50'	70.44'	70.38'	N 07°25'17" W	8°38'00"
C50	467.50'	70.44'	70.38'	N 16°03'17" W	8°38'00"
C51	467.50'	31.96'	31.96'	N 22°19'48" W	3°55'03"
C52	55.50'	60.22'	57.31'	N 59°22'21" W	62°10'03"
C53	64.50'	150.50'	118.61'	N 19°36'36" W	133°41'33"
C54	25.00'	39.27'	35.36'	S 69°17'19" E	90°00'00"
C55	532.50'	49.75'	49.73'	N 68°23'16" E	5°21'11"
C56	532.50'	64.50'	64.46'	N 74°32'04" E	6°56'25"
C57	532.50'	64.63'	64.59'	N 81°28'54" E	6°57'15"
C58	532.50'	22.55'	22.55'	N 86°10'19" E	2°25'35"
C59	237.50'	70.98'	70.72'	S 84°03'09" E	17°07'28"
C60	172.50'	36.11'	36.04'	N 86°37'05" W	11°59'37"
C61	467.50'	36.55'	36.54'	S 85°08'43" W	4°28'48"
C62	467.50'	65.40'	65.35'	S 78°53'51" W	8°00'56"
C63	467.50'	74.89'	74.81'	S 70°18'02" W	9°10'42"
C64	25.00'	39.27'	35.36'	S 20°42'41" W	90°00'00"
C65	532.50'	53.10'	53.08'	S 21°25'05" E	5°42'48"
C66	532.50'	64.74'	64.70'	S 15°05'34" E	6°57'56"
C67	532.50'	59.89'	59.86'	S 08°23'16" E	6°26'40"
C68	25.00'	36.80'	33.57'	S 47°20'05" E	84°20'18"
C69	530.00'	79.51'	79.44'	S 85°12'22" E	8°35'43"
C70	25.00'	39.94'	35.83'	N 53°19'26" E	91°32'07"
C71	25.00'	38.60'	34.88'	S 36°40'34" E	88°27'53"
C72	25.00'	39.94'	35.83'	N 53°19'26" E	91°32'07"
C73	25.00'	38.60'	34.88'	S 36°40'34" E	88°27'53"
C74	25.00'	39.94'	35.83'	N 53°19'26" E	91°32'07"
C75	25.00'	38.60'	34.88'	S 36°40'34" E	88°27'53"
C76	25.00'	39.94'	35.83'	N 53°19'26" E	91°32'07"
C77	25.00'	38.60'	34.88'	S 36°40'34" E	88°27'53"
C78	25.00'	39.27'	35.36'	N 54°05'30" E	90°00'00"
C79	25.00'	39.27'	35.36'	S 35°54'30" E	90°00'00"
C80	25.00'	39.27'	35.36'	S 54°05'30" W	90°00'00"
C81	25.00'	39.27'	35.36'	S 35°54'30" E	90°00'00"
C82	25.00'	39.27'	35.36'	S 54°05'30" W	90°00'00"
C83	25.00'	39.27'	35.36'	S 35°54'30" E	90°00'00"
C84	762.50'	12.98'	12.98'	S 81°23'46" E	0°58'32"
C85	762.50'	51.84'	51.83'	S 83°49'54" E	3°53'43"
C86	762.50'	10.71'	10.71'	S 86°10'54" E	0°48'17"
C87	697.50'	69.09'	69.06'	S 83°44'46" E	5°40'32"
C88	25.00'	39.27'	35.36'	N 48°24'58" E	90°00'00"
C89	25.00'	39.27'	35.36'	S 41°35'02" E	90°00'00"
C90	25.00'	39.27'	35.36'	S 48°24'58" W	90°00'00"
C91	855.00'	12.01'	12.01'	N 86°10'54" W	0°48'17"
C92	855.00'	58.13'	58.12'	N 83°49'54" W	3°53'43"
C93	855.00'	14.56'	14.56'	N 81°23'46" W	0°58'32"
C94	25.00'	39.27'	35.36'	N 41°35'02" W	90°00'00"
C95	875.00'	20.11'	20.11'	N 85°55'32" W	1°19'00"
C96	875.00'	52.01'	52.00'	N 83°33'52" W	3°24'20"
C97	875.00'	14.56'	14.56'	N 81°23'06" W	0°57'11"
C98	25.00'	39.27'	35.36'	S 48°24'58" W	90°00'00"
C99	970.00'	22.29'	22.29'	N 85°55'32" W	1°19'00"
C100	970.00'	57.65'	57.65'	N 83°33'52" W	3°24'20"
C101	970.00'	16.14'	16.14'	N 81°23'06" W	0°57'11"
C102	25.00'	39.27'	35.36'	S 41°35'02" E	90°00'00"
C103	1030.00'	47.81'	47.81'	N 85°15'15" W	2°39'34"
C104	1030.00'	54.22'	54.21'	N 82°24'59" W	3°00'57"
C105	25.00'	39.94'	35.83'	S 53°19'26" W	91°32'07"
C106	25.00'	38.60'	34.88'	S 36°40'34" E	88°27'53"

PARCEL CALCULATIONS:

DENSITY:

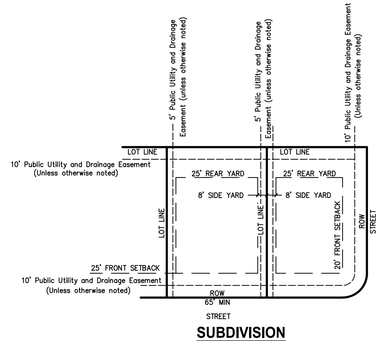
TOTAL ACRES: 53.48 ACRES
ALLOWED: 4 UNITS PER ACRE
TOTAL ALLOWED: 213 UNITS
TOTAL SHOWN: 146 UNITS
DENSITY SHOWN: 2.7 UNITS PER ACRE

TREE CANOPY RETENTION:

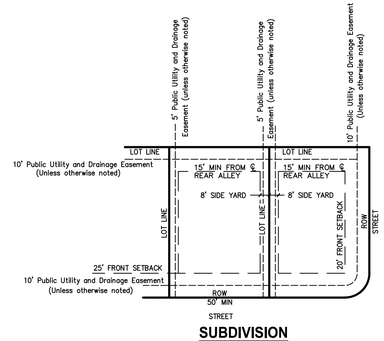
TOTAL ACRES: 2,329,581.18 SF (53.48 ACRES)
EXISTING TREE CANOPY: 931,319.06 SF (40.0% CANOPY)
TOTAL RETENTION REQUIRED: 45.0%
TOTAL REQUIRED AREA TO RETAIN: 419,093.58 SF (9.62 ACRES)
PROPOSED AREA RETAINED: 428,634.43 SF (9.84 ACRES) (46.0%)

CIVIC SPACES:

REQUIRED 5% OF GROSS AREA
REQUIRED ACRES: 2.67 ACRES
REQUIRED SHOWN: 5.04 ACRES (9.4%)
CIVIC SPACE USE: PLAYGROUND / GREEN



SUBDIVISION
TYPICAL LOT LAYOUT



SUBDIVISION
TYPICAL LOT LAYOUT
ALLEY LOADED

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www.wesengineers.com
ENGINEERS & SURVEYORS

Client
MCBROOM FAMILY PARTNERSHIP
943 RIVERVIEW LANE
COLUMBIA, TN 38401
LINDA WALKER, PARTNER

REVISIONS	DATE

LEGENDS AT HUNTERS GLEN
HUNTERS GLEN DRIVE
COLUMBIA, TENNESSEE
PRELIMINARY PLAT

Drawn: CG
Checked: GV
Approved: GV
Date: 4/21/2025

Job. no. 17608
Scale:
Vertical:
Horizontal:

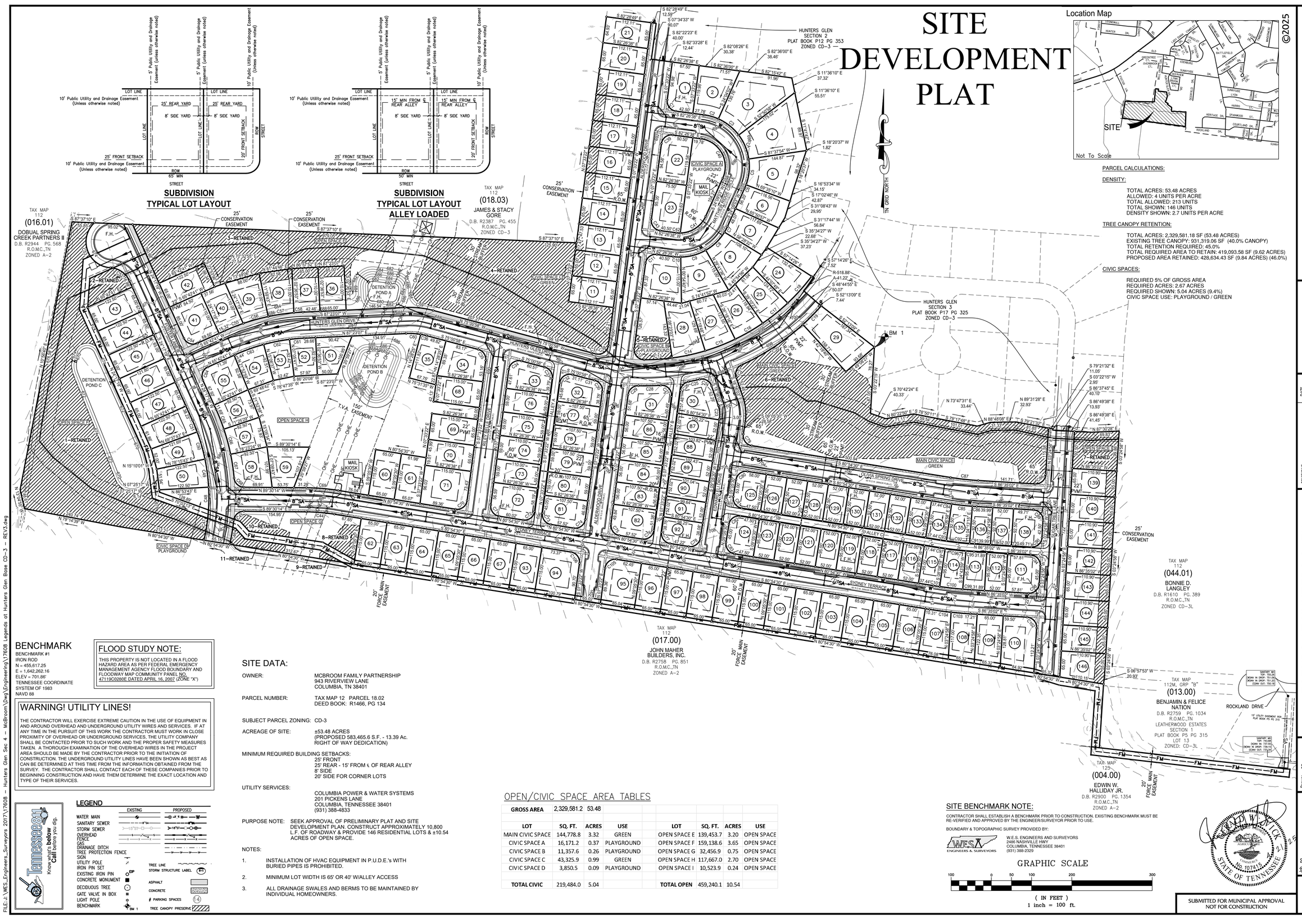


SUBMITTED FOR MUNICIPAL APPROVAL
NOT FOR CONSTRUCTION

2 of 2

FILE: J:\ WES_Engineers_Surveyors 2017\17608 - Hunters Glen Sec 4 - McBroom\Dwg\Engineering\17608 Legends at Hunters Glen Base CD-3 - REV3.dwg

SITE DEVELOPMENT PLAT



Location Map

©2025

PARCEL CALCULATIONS:

DENSITY:

TOTAL ACRES: 53.48 ACRES
ALLOWED: 4 UNITS PER ACRE
TOTAL ALLOWED: 213 UNITS
TOTAL SHOWN: 146 UNITS
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TREE CANOPY RETENTION:

TOTAL ACRES: 2,329,581.18 SF (53.48 ACRES)
EXISTING TREE CANOPY: 931,319.06 SF (40.0% CANOPY)
TOTAL RETENTION REQUIRED: 45.0%
TOTAL REQUIRED AREA TO RETAIN: 419,093.58 SF (9.62 ACRES)
PROPOSED AREA RETAINED: 428,634.43 SF (9.84 ACRES) (46.0%)

CIVIC SPACES:

REQUIRED 5% OF GROSS AREA
REQUIRED ACRES: 2.67 ACRES
REQUIRED SHOWN: 5.04 ACRES (9.4%)
CIVIC SPACE USE: PLAYGROUND / GREEN

BENCHMARK

BENCHMARK #1
IRON ROD
N = 455,617.25
E = 1,642,262.16
ELEV = 701.86'
TENNESSEE COORDINATE SYSTEM OF 1983
NAVD 88

FLOOD STUDY NOTE:

THIS PROPERTY IS NOT LOCATED IN A FLOOD HAZARD AREA AS PER FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD BOUNDARY AND FLOODWAY MAP COMMUNITY PANEL NO. 47119C0280E DATED APRIL 16, 2007 (ZONE "X")

WARNING! UTILITY LINES!

THE CONTRACTOR WILL EXERCISE EXTREME CAUTION IN THE USE OF EQUIPMENT IN AND AROUND OVERHEAD AND UNDERGROUND UTILITY WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK THE CONTRACTOR MUST WORK IN CLOSE PROXIMITY OF OVERHEAD OR UNDERGROUND SERVICES, THE UTILITY COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES TAKEN. A THOROUGH EXAMINATION OF THE OVERHEAD WIRES IN THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION. THE UNDERGROUND UTILITY LINES HAVE BEEN SHOWN AS BEST AS CAN BE DETERMINED AT THIS TIME FROM THE INFORMATION OBTAINED FROM THE SURVEY. THE CONTRACTOR SHALL CONTACT EACH OF THESE COMPANIES PRIOR TO BEGINNING CONSTRUCTION AND HAVE THEM DETERMINE THE EXACT LOCATION AND TYPE OF THEIR SERVICES.

Tennessee811 Know what's below Call before you dig.

LEGEND

	EXISTING	PROPOSED
WATER MAIN		W
SANITARY SEWER		S
STORM SEWER		
OVERHEAD		
FENCE		
GAS		
DRAINAGE DITCH		
TREE PROTECTION FENCE		
SIGN		
UTILITY POLE		
IRON PIN SET		
EXISTING IRON PIN	EIP	
CONCRETE MONUMENT		
DECIDUOUS TREE		
GATE VALVE IN BOX		
LIGHT POLE		
BENCHMARK	BM 1	
TREE LINE		
STORM STRUCTURE LABEL		RT1
ASPHALT		
CONCRETE		
# PARKING SPACES		(4)
TREE CANOPY PRESERVE		

SITE DATA:

OWNER: MCBROOM FAMILY PARTNERSHIP
943 RIVERVIEW LANE
COLUMBIA, TN 38401

PARCEL NUMBER: TAX MAP 12 PARCEL 18.02
DEED BOOK: R1466, PG 134

SUBJECT PARCEL ZONING: CD-3

ACREAGE OF SITE: ±53.48 ACRES
(PROPOSED 583,465.6 S.F. - 13.39 Ac.
RIGHT OF WAY DEDICATION)

MINIMUM REQUIRED BUILDING SETBACKS:
25' FRONT
25' REAR - 15' FROM ℄ OF REAR ALLEY
8' SIDE
20' SIDE FOR CORNER LOTS

UTILITY SERVICES:
COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TENNESSEE 38401
(931) 388-4833

PURPOSE NOTE: SEEK APPROVAL OF PRELIMINARY PLAT AND SITE DEVELOPMENT PLAN. CONSTRUCT APPROXIMATELY 10,800 L.F. OF ROADWAY & PROVIDE 146 RESIDENTIAL LOTS & ±10.54 ACRES OF OPEN SPACE.

NOTES:

1. INSTALLATION OF HVAC EQUIPMENT IN P.U.D.E.'s WITH BURIED PIPES IS PROHIBITED.
2. MINIMUM LOT WIDTH IS 65' OR 40' W/ALLEY ACCESS
3. ALL DRAINAGE SWALES AND BERMS TO BE MAINTAINED BY INDIVIDUAL HOMEOWNERS.

OPEN/CIVIC SPACE AREA TABLES

GROSS AREA	2,329,581.2	53.48					
LOT	SQ. FT.	ACRES	USE	LOT	SQ. FT.	ACRES	USE
MAIN CIVIC SPACE	144,778.8	3.32	GREEN	OPEN SPACE E	139,453.7	3.20	OPEN SPACE
CIVIC SPACE A	16,171.2	0.37	PLAYGROUND	OPEN SPACE F	159,138.6	3.65	OPEN SPACE
CIVIC SPACE B	11,357.6	0.26	PLAYGROUND	OPEN SPACE G	32,456.9	0.75	OPEN SPACE
CIVIC SPACE C	43,325.9	0.99	GREEN	OPEN SPACE H	117,667.0	2.70	OPEN SPACE
CIVIC SPACE D	3,850.5	0.09	PLAYGROUND	OPEN SPACE I	10,523.9	0.24	OPEN SPACE
TOTAL CIVIC	219,484.0	5.04		TOTAL OPEN	459,240.1	10.54	

SITE BENCHMARK NOTE:

CONTRACTOR SHALL ESTABLISH A BENCHMARK PRIOR TO CONSTRUCTION. EXISTING BENCHMARK MUST BE RE-VERIFIED AND APPROVED BY THE ENGINEER/SURVEYOR PRIOR TO USE.

BOUNDARY & TOPOGRAPHIC SURVEY PROVIDED BY:

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W.E.S. ENGINEERS AND SURVEYORS
2486 NASHVILLE HWY
COLUMBIA, TENNESSEE 38401
(931) 388-2329

GRAPHIC SCALE

100 0 50 100 200 300
(IN FEET)
1 inch = 100 ft.

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www.wesengineers.com
ENGINEERS & SURVEYORS

Client
MCBROOM FAMILY PARTNERSHIP
943 RIVERVIEW LANE
COLUMBIA, TN 38401
LINDA WALKER, PARTNER

REVISIONS	DATE

LEGENDS AT HUNTERS GLEN

HUNTERS GLEN DRIVE
COLUMBIA, TENNESSEE
SITE DEVELOPMENT PLAN

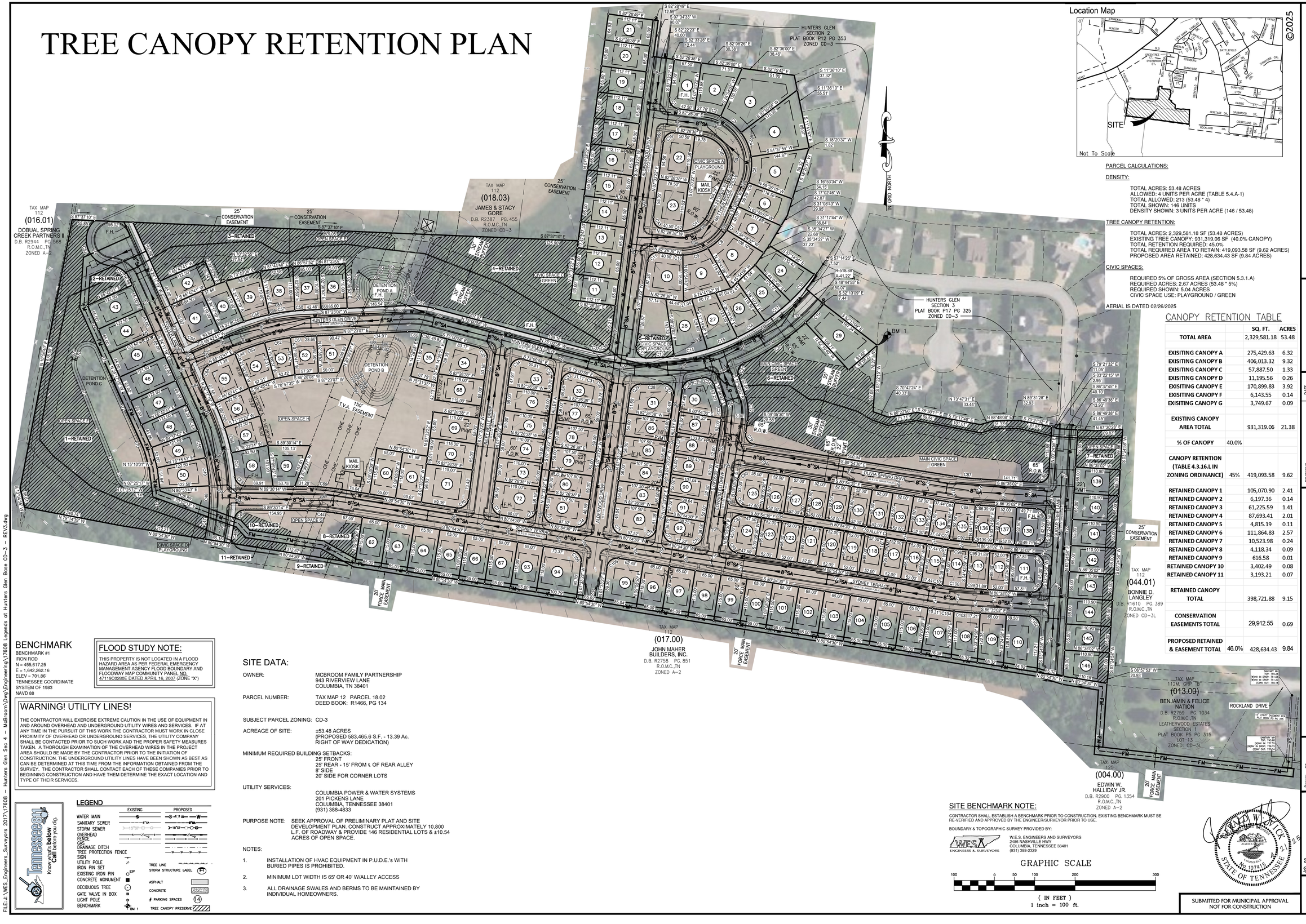
Drawn: CG
Checked: GV
Approved: GV
Date: 4/21/2025

Job no. 17608
Scale: Vertical: 1" = 100'
Horizontal:

1 of 1

FILE: J:\ WES_Engineers_Surveyors 2017\17608 - Hunters Glen Sec 4 - McBroom\Dwg\Engineering\17608 Legends at Hunters Glen Base CD-3 - REV3.dwg

TREE CANOPY RETENTION PLAN



Location Map

©2025

PARCEL CALCULATIONS:

DENSITY:

TOTAL ACRES: 53.48 ACRES
ALLOWED: 4 UNITS PER ACRE (TABLE 5.4.A-1)
TOTAL ALLOWED: 213 (53.48 * 4)
TOTAL SHOWN: 146 UNITS
DENSITY SHOWN: 3 UNITS PER ACRE (146 / 53.48)

TREE CANOPY RETENTION:

TOTAL ACRES: 2,329,581.18 SF (53.48 ACRES)
EXISTING TREE CANOPY: 931,319.06 SF (40.0% CANOPY)
TOTAL RETENTION REQUIRED: 45.0%
TOTAL REQUIRED AREA TO RETAIN: 419,093.58 SF (9.62 ACRES)
PROPOSED AREA RETAINED: 428,634.43 SF (9.84 ACRES)

CIVIC SPACES:

REQUIRED 5% OF GROSS AREA (SECTION 5.3.1.A)
REQUIRED ACRES: 2.67 ACRES (53.48 * 5%)
REQUIRED SHOWN: 5.04 ACRES
CIVIC SPACE USE: PLAYGROUND / GREEN

AERIAL IS DATED 02/26/2025

CANOPY RETENTION TABLE

		SQ. FT.	ACRES
TOTAL AREA		2,329,581.18	53.48
EXISITING CANOPY A		275,429.63	6.32
EXISITING CANOPY B		406,013.32	9.32
EXISITING CANOPY C		57,887.50	1.33
EXISITING CANOPY D		11,195.56	0.26
EXISITING CANOPY E		170,899.83	3.92
EXISITING CANOPY F		6,143.55	0.14
EXISITING CANOPY G		3,749.67	0.09
EXISTING CANOPY AREA TOTAL		931,319.06	21.38
% OF CANOPY	40.0%		
CANOPY RETENTION (TABLE 4.3.16.L IN ZONING ORDINANCE)	45%	419,093.58	9.62
RETAINED CANOPY 1		105,070.90	2.41
RETAINED CANOPY 2		6,197.36	0.14
RETAINED CANOPY 3		61,225.59	1.41
RETAINED CANOPY 4		87,693.41	2.01
RETAINED CANOPY 5		4,815.19	0.11
RETAINED CANOPY 6		111,864.83	2.57
RETAINED CANOPY 7		10,523.98	0.24
RETAINED CANOPY 8		4,118.34	0.09
RETAINED CANOPY 9		616.58	0.01
RETAINED CANOPY 10		3,402.49	0.08
RETAINED CANOPY 11		3,193.21	0.07
RETAINED CANOPY TOTAL		398,721.88	9.15
CONSERVATION EASEMENTS TOTAL		29,912.55	0.69
PROPOSED RETAINED & EASEMENT TOTAL	46.0%	428,634.43	9.84

BENCHMARK

BENCHMARK #1
IRON ROD
N = 455,617.25
E = 1,642,262.16
ELEV = 701.86'
TENNESSEE COORDINATE SYSTEM OF 1983
NAVD 88

FLOOD STUDY NOTE:

THIS PROPERTY IS NOT LOCATED IN A FLOOD HAZARD AREA AS PER FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD BOUNDARY AND FLOODWAY MAP COMMUNITY PANEL NO. 47119C0280E DATED APRIL 16, 2007 (ZONE "X")

WARNING! UTILITY LINES!

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Tennessee811 Know what's below Call before you dig.

LEGEND

	EXISTING	PROPOSED
WATER MAIN		W
SANITARY SEWER	8"SA	8"SA
STORM SEWER	18"ST	18"ST
OVERHEAD	OHE	
FENCE		
GAS		
DRAINAGE DITCH		
TREE PROTECTION FENCE		
SIGN		
UTILITY POLE		
IRON PIN SET		
EXISTING IRON PIN	CIP	
CONCRETE MONUMENT		
DECIDUOUS TREE		
GATE VALVE IN BOX		
LIGHT POLE		
BENCHMARK	BM 1	
TREE LINE		
STORM STRUCTURE LABEL		ST1
ASPHALT		
CONCRETE		
# PARKING SPACES		14
TREE CANOPY PRESERVE		

SITE DATA:

OWNER: MCBROOM FAMILY PARTNERSHIP
943 RIVERVIEW LANE
COLUMBIA, TN 38401

PARCEL NUMBER: TAX MAP 12 PARCEL 18.02
DEED BOOK: R1466, PG 134

SUBJECT PARCEL ZONING: CD-3

ACREAGE OF SITE: ±53.48 ACRES
(PROPOSED 583,465.6 S.F. - 13.39 Ac.
RIGHT OF WAY DEDICATION)

MINIMUM REQUIRED BUILDING SETBACKS:
25' FRONT
25' REAR - 15' FROM ℄ OF REAR ALLEY
8' SIDE
20' SIDE FOR CORNER LOTS

UTILITY SERVICES:
COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TENNESSEE 38401
(931) 388-4833

PURPOSE NOTE: SEEK APPROVAL OF PRELIMINARY PLAT AND SITE DEVELOPMENT PLAN. CONSTRUCT APPROXIMATELY 10,800 L.F. OF ROADWAY & PROVIDE 146 RESIDENTIAL LOTS & ±10.54 ACRES OF OPEN SPACE.

NOTES:

1. INSTALLATION OF HVAC EQUIPMENT IN P.U.D.E.'s WITH BURIED PIPES IS PROHIBITED.
2. MINIMUM LOT WIDTH IS 65' OR 40' W/ALLEY ACCESS
3. ALL DRAINAGE SWALES AND BERMS TO BE MAINTAINED BY INDIVIDUAL HOMEOWNERS.

SITE BENCHMARK NOTE:

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W.E.S. ENGINEERS AND SURVEYORS
2486 NASHVILLE HWY
COLUMBIA, TENNESSEE 38401
(931) 388-2329

GRAPHIC SCALE

100 0 50 100 200 300
(IN FEET)
1 inch = 100 ft.

SUBMITTED FOR MUNICIPAL APPROVAL
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CIVIL ENGINEERS & LAND SURVEYORS
2486 NASHVILLE HIGHWAY
COLUMBIA, TN 38401
PHONE: (931) 388-2329
www.wesengineers.com

ENGINEERS & SURVEYORS

Client
MCBROOM FAMILY PARTNERSHIP
943 RIVERVIEW LANE
COLUMBIA, TN 38401
LINDA WALKER, PARTNER

REVISIONS | DATE

Drawn: CG
Checked: GV
Approved: GV
Date: 4/21/2025

Job. no. 17608
Scale: 1" = 100'
Vertical:
Horizontal:

LEGENDS AT HUNTERS GLEN

HUNTERS GLEN DRIVE
COLUMBIA, TENNESSEE
TREE CANOPY RETENTION PLAN

TR-1

FILE: J:\WES_Engineers_Surveyors 2017\17608 - Hunters Glen Sec 4 - McBroom\Dwg\Engineering\17608 Legends at Hunters Glen Base CD-3 - REV3.dwg

LEGAL DESCRIPTION

Being a tract of land located in the 9th Civil District of Maury County, Tennessee, and in the city limits of Columbia, Tennessee, and bounded on the North by Campbell P. Ridley remaining portion of farm, and Old Sunnyside Lane; East by Old Sunnyside Lane, Campbell P. Ridley, Jr., Deerfield Subdivision, Lots 13 thru 17; Hubert E. Langley; Leatherwood Estates, Section 1, Lot 13; South by Jennie Jo Hardison; West by Old Thomas Lane, and Campbell P. Ridley remaining portion of farm; and more particularly described as follows:

Beginning at an iron pin in the center of Old Thomas Lane, and being the Northwest corner of Jennie Jo Hardison, and also being the Southwest corner of herein described tract; thence with the center of Old Thomas Lane North 03 deg. 06 min. East 212.05 feet to an iron pin; thence with same North 04 deg. 42 min. East 511.13 feet to an iron pin; thence with Campbell P. Ridley remaining portion of farm North 87 deg. 10 min. East 1255.14 feet to an iron pin; thence with same North 02 deg. 22 min. East passing an iron pin at 950.84 feet, in all 1502.38 feet to an iron pin; thence with same and fence line North 01 deg. 41 min. West 451.50 feet to an iron pin; thence with the South margin of Old Sunnyside Lane South 88 deg. 39 min. East 516.44 feet to an iron pin; thence with same with a curve to the right with a central angle of 90 deg. 05 min., T = 89.99 feet, R = 89.85 feet, a length on curve of 141.27 feet to an iron pin; thence with the West margin of Old Sunnyside Lane South 01 deg. 25 min. West 416.24 feet to an iron pin; thence with same with a curve to the left with a central angle of 88 deg. 07 min., T = 133.89 feet, R = 138.35 feet, a length on curve of 212.77 feet to an iron pin; thence with the South margin of Old Sunnyside Lane South 86 deg. 42 min. East 347.62 feet to an iron pin; thence with Campbell P. Ridley, Jr. South 00 deg. 57 min. West 815.98 feet to an iron pin; thence with same and fence line South 86 deg. 23 min. East 277.52 feet to an iron pin; thence with rock fence and Deerfield Subdivision, Lots 13 thru 17 South 00 deg. 21 min. West 555.75 feet to an iron pin; thence with Hubert E. Langley and rock fence South 01 deg. 48 min. East 835.27 feet to an iron pin; thence with Leatherwood Estates, Section 1, Lot 13 and rock fence South 00 deg. 27 min. East 20.85 feet to an iron pin; thence with Jennie Joe Hardison and fence line North 86 deg. 08 min. West 2478.66 feet to an iron pin; thence with same North 84 deg. 26 min. West 240.92 feet to the point of beginning containing 97.01 acres by survey of James D. Webb, Engineer-Surveyor, Maury County, Columbia, Tennessee, dated February 12, 1988.

Being all of the property obtained by Hunters Glen Limited Partnership as recorded in Deed Book 763, Page 510, Register's Office, Maury County, Columbia, Tennessee.

OLD SUNNYSIDE LANE (60' R.O.W.)

To U.S. Hwy. 43

35'

S88°39'E 516.44'

Δ=90°05' T=89.99' L=141.27' R=89.85'

L=141.27'

WIRE FENCE

N1°41'W 451.50'

CAMPBELL P. RIDLEY DEED BK. 469, PG. 507 TAX MAP 112, PC. 118

1502.38'

PP@ 950.84'

STAKED LINE

N 2°22'E

Δ=88°07' T=133.89' L=212.77' R=138.35'

L=212.77'

S1°25'W 416.24'

OLD SUNNYSIDE LANE (60' R.O.W.)

S86°42'E 347.62'

35' 25'

815.98'

S0°57'W

STAKED LINE

CAMPBELL P. RIDLEY, JR. DEED BK. 569, PG. 56 TAX MAP 112, PC. 18.01

MAGNETIC NORTH

WIRE FENCE

S86°23'E 277.52'

555.75'

S0°21'W

ROCK FENCE

DEERFIELD SUBDIVISION PLAT BK. 6, PG. 567-A

LOT 17

LOT 16

LOT 15

LOT 14

LOT 13

835.27'

S1°48'E

ROCK FENCE

HUBERT E. LANGLEY DEED BOOK 707, PG. 565 TAX MAP 112, PC. 44.01

LEATHERWOOD EST. SECTION 1 PLAT BK. 5, PAGE 315

LOT 12

LOT 13

S0°27'E 20.85'

N86°08'W 2478.66'

WIRE FENCE

JENNIE JO HARDISON DEED BOOK 699, PG. 448 TAX MAP 112, PC. 17

25' R.O.W.

75' R.O.W.

T.V.A. POWER LINE

T.V.A. TOWER

STAKED LINE

N 87°10' E 1255.14'

℄ DRAINAGE DITCH

℄ DRAINAGE DITCH

℄ DRAINAGE DITCH

℄ OLD THOMAS LANE

N 3°06'E 212.05'

N 4°42'E 511.13'

N 84°26'W 240.92'

WIRE FENCE

POINT OF BEGINNING

97.01 ACRES

HUNTERS GLEN LIMITED PARTNERSHIP
DEED BOOK 763, PG. 510
TAX MAP 112, PC. 18.02

NOTE: 97.01 ACRES IS INSIDE CITY LIMITS OF COLUMBIA, TENNESSEE AND IS ZONED RS-10, SINGLE FAMILY MEDIUM DENSITY RESIDENTIAL DISTRICT.

FLOOD NOTE

I HAVE CONSULTED THE FLOOD BOUNDARY AND FLOODWAY MAP AND THE TRACT SHOWN IS NOT IN A DESIGNATED FLOOD AREA.

James D. Webb
JAMES D. WEBB
REGISTERED LAND SURVEYOR
TENNESSEE # 596

NOTE: ALL PROPERTY CORNERS ARE IRON PINS UNLESS OTHERWISE NOTED.

CERTIFICATION

I HEREBY CERTIFY THAT I HAVE SURVEYED THE TRACTS SHOWN AND THAT THIS PLAT IS A TRUE REPRESENTATION OF THE SURVEY.

James D. Webb
REGISTERED LAND SURVEYOR
TENNESSEE #596

JAMES D. WEBB REGISTERED LAND SURVEYOR AGRICULTURE COMMERCE TENNESSEE No. 596

NO.	DATE	REVISION	BY
		I HEREBY CERTIFY THAT THIS IS A CLASS "A" SURVEY AND THE RATIO OF PRECISION OF THE UNADJUSTED SURVEY IS 1/10,000+ AS SHOWN HEREON. James D. Webb	

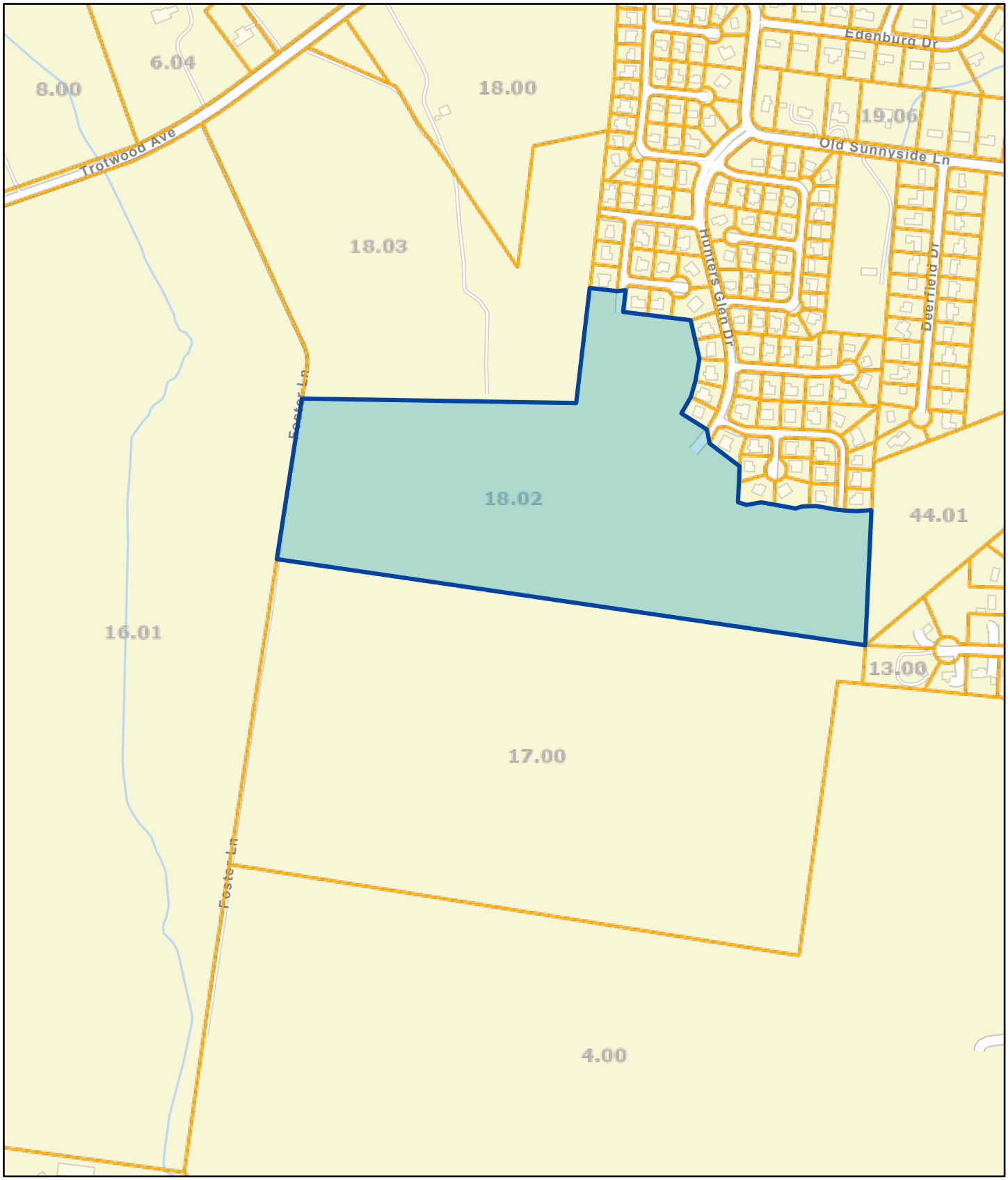
SHEET TITLE: PLAT OF SURVEY (97.01 ACRES) 9TH CIVIL DISTRICT MAURY COUNTY, TENNESSEE

PROJECT: HUNTERS GLEN LIMITED PARTNERSHIP FIVE POST OAK PARK, SUITE 2150 HOUSTON, TEXAS 77027

PROJECT NO. 88-5
SCALE 1" = 200'
DATE 2-12-88
DRAWN BY D. DALE
CHECKED BY J.D.W.
DRAWING NO. 88-5C
1 OF 1 SHTS

JAMES D. WEBB, ENGINEER-SURVEYOR
223 EAST JAMES M. CAMPBELL BLVD.
COLUMBIA, TN 38401
(615) 388-2329

Maury County - Parcel: 112 018.02



Date: September 16, 2024

County: Maury
Owner: MCBROOM FAMILY PARTNERSHIP
Address: HUNTERS GLEN DR
Parcel Number: 112 018.02
Deeded Acreage: 0
Calculated Acreage: 53.5
Date of TDOT Imagery: 2021
Date of Vexcel Imagery: 2023

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

State of Tennessee, Comptroller of the Treasury, Division of Property Assessments (DPA), Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

The property lines are compiled from information maintained by your local county Assessor's office but are not conclusive evidence of property ownership in any court of law.

Maury County - Parcel: 112 018.02



Date: September 16, 2024

County: Maury
Owner: MCBROOM FAMILY PARTNERSHIP
Address: HUNTERS GLEN DR
Parcel Number: 112 018.02
Deeded Acreage: 0
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The property lines are compiled from information maintained by your local county Assessor's office but are not conclusive evidence of property ownership in any court of law.

April 23, 2025

Mr. Gerald W. Vick P.E.
WES Engineers & Surveyors
2486 Nashville Hwy
Columbia, TN 38401
Sent via email: gerald@wesengineers.com

RE: **Water Availability Letter**
Hunters Glen Subdivision Phase 4 – 148 Units
Tax Map 12, Parcel 18.02
Columbia, Maury County, TN

NWS Fees Paid: 12/01/2024
WAL Expires: 12/01/2025

Dear Mr. Vick:

Columbia Power & Water Systems ("the Utility"/CPWS) is a municipal corporation authorized to provide water services in accordance with State law. CPWS has adopted rules, regulations, and standard operation procedures, prescribing the conditions under which CPWS will furnish water service. In addition, certain State laws delegate authority to the Tennessee Department of Environment and Conservation (TDEC), various Planning Commissions, and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Water service will be made available on a first-come, first-served basis, subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies. Water service is subject to availability of all CPWS furnished equipment and materials appropriate for the development and provided the applicant complies with all rules and regulations of CPWS and conditions set out herein.

We have received your application for water availability to serve a proposed residential development consisting of 148 single-family residential units near Trotwood Avenue east of Foster Lane. CPWS has evaluated the projected water demands for the proposed development in the water system hydraulic model and is able to provide domestic and fire protection service while maintaining state standards for level of service and pressures in this portion of the distribution system. New Water Service (NWS) Fees have been paid by the applicant which initiated Design Review and Coordination with CPWS. As such, this Water Availability Letter will expire in one-year from payment of water service fees to provide time for the design and review process.

CPWS has determined that the existing system is <u>not</u> able to provide 1,000 gallons per minute (gpm) fire flow in the proposed development without adverse effects in the surrounding area. However, the existing system is able to meet the minimum 500 gpm fire flow requirement – which would require new development to incorporate fire sprinklers in the structures, according to the Fire Flow Requirements letter dated 9/9/2024 submitted as part of the

application. Please be aware that CPWS Distribution System Master Planning includes improvements in this area to support a higher level of service and growth, including the ability to support larger fire flow demands. If the developer is interested in accelerating those system improvements by direct participation - including construction – we welcome a meeting to discuss.

The demand load for the full buildout of the proposed development will require another water main connection to the 12-inch main in Trotwood Avenue via Foster Lane. It appears that the adjacent (proposed) Foster Lane subdivision is expected to be served by water mains running through the Hunters Glen Phase 4 subdivision. Based on this concept, we have reviewed this application with the understanding that both projects (Foster Lane Subdivision and Hunters Glen Ph4) would be constructed at the same time.

As such, CPWS can provide water for the proposed development according to the following criteria and requirements:

- The first 80-units (total between both projects; Foster Ln and Hunters Glen Ph4) can be served from existing water mains in the Hunters Glen development on Alterwood Drive, Hunters Glen Drive, and Sugar Tree Lane.
- Additional units (81 through buildout) will require an additional water main connection from the development to Trotwood Avenue via Foster Lane.
- The current CPWS system is only able to support a minimum fire flow of 500 gpm within the development until (planned) additional improvements in the Southside distribution area are completed.
- According to the Fire Flow Requirements Letter (provided with the application) this will require buildings to be sprinklered until the system can meet a 1,000 gpm minimum fire flow.
- Separate fire and domestic meters with backflow devices will be required to serve the proposed Project.

All of the above requirements up to and including the meter(s) are to be constructed and paid for by the Applicant and dedicated to CPWS once complete. No construction of water infrastructure shall be initiated until final construction plans have been approved by CPWS (including TDEC approval).

The remaining steps in the process to vest water service from CPWS are as follows:

- Applicant will prepare design drawings for review and approval by CPWS for construction of the proposed water system improvements.
    - Provide design drawings in AutoCAD and .pdf format for CPWS review of proposed development. Include design drawings for grading, drainage, roadway improvements, buried (wet and dry) utilities, water systems, and surface improvements.
    - CPWS will submit proposed improvements design to TDEC for review and approval.

  - Once comments received from TDEC have been addressed and approved, CPWS will approve the Construction Drawings for the proposed water system improvements.
- Upon Construction Drawing approval by CPWS, applicant may then pay Impact Fees and schedule the pre-construction meeting. Pre-construction meeting will be canceled and re-scheduled unless all impact fees are paid at least 48 hours prior, or surety is provided in lieu of full payment.
- Water meters will be ordered by CPWS once meter fees are paid by the Applicant.
  - Meter fees are subject to change based on final design and the prevailing Board-approved rates at time of payment.
  - If surety is provided in lieu of payment, meters are not ordered until fees are paid and may result in extended lead-times.
- Applicants will be charged Impact Fees and Meter Fees in effect at time of payment. Please see CPWS website for schedule of impact fees and timing of planned fee escalations. Anticipated meter costs and impact fees for this project are according to the following table:

Impact Fees and Meter Costs	Number	$ / Unit	Total
3/4" Service Meter Cost	148	$540	$79,920
1" Fire Meter Cost	148	$710	$105,080
Impact Fee for 3/4" Service Meter	148	$6,000	$888,000
Current Fees Due Prior to Pre-Construction Meeting =			$1,073,000

- After the pre-construction meeting, CPWS will then issue a formal Notice to Proceed.
- Applicant is required to construct all public water infrastructure per CPWS standard specifications and provide CPWS personnel unregulated access to the site to inspect the construction of the water infrastructure. No construction of water improvements may take place prior to the Notice to Proceed or without a CPWS inspector present.

Please feel free to contact me at 931-388-4833 x7655 or Matt.Wheeler@cpws.com if you have questions or would like to discuss.

Sincerely,



Matthew J. Wheeler, P.E.
Vice President of Water Resources, CPWS

cc: Randy McBroom
Bart Anderson, CPWS
Eric King, Inflo Design Group
File 24-066

November 14, 2024

Mr. Gerald W. Vick P.E.
WES Engineers & Surveyors
2486 Nashville Hwy
Columbia, TN 38401
Sent via email: gerald@wesengineers.com

RE: Water Availability Letter
Hunters Glen Subdivision Phase 4 – 148 Units
Tax Map 12, Parcel 18.02
Columbia, Maury County, TN

Dear Mr. Vick:

Columbia Power & Water Systems ("the Utility"/CPWS) is a municipal corporation authorized to provide water services in accordance with State law. CPWS has adopted rules, regulations, and standard operation procedures, prescribing the conditions under which CPWS will furnish water service. In addition, certain State laws delegate authority to the Tennessee Department of Environment and Conservation (TDEC), various Planning Commissions, and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Water service will be made available on a first-come, first-served basis, subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies. Water service is subject to availability of all CPWS furnished equipment and materials appropriate for the development and provided the applicant complies with all rules and regulations of CPWS and conditions set out herein.

We have received your application for water availability to serve a proposed residential development consisting of 148 single-family residential units near Trotwood Avenue east of Foster Lane. We provided an initial response letter on October 28th, 2024, indicating that the existing system could not meet the requested domestic and fire flow demands without causing service in the area to drop below minimum standards. However, CPWS has performed additional field measurements and water system hydraulic model analysis of the projected water demands for the proposed development since that date.

CPWS has determined that the existing system is <u>not</u> able to provide 1,000 gallons per minute (gpm) fire flow in the proposed development without adverse effects in the surrounding area. However, the existing system is able to meet the minimum 500 gpm fire flow requirement – which would require new development to incorporate fire sprinklers in the structures, according to the Fire Flow Requirements letter dated 9/9/2024 submitted as part of the

application. In addition, the demand load for the full buildout of the proposed development will require another water main connection to the 12-inch main in Trotwood Avenue via Foster Lane. As such, CPWS can provide water for the proposed development according to the following criteria and requirements:

- The first 80-units can be served from existing water mains in the Hunters Glen development on Alterwood Drive, Hunters Glen Drive, and Sugar Tree Lane.
- Additional units (81 through buildout) will require an additional water main connection from the development to Trotwood Avenue via Foster Lane.
- The current CPWS system is only able to support a minimum fire flow of 500 gpm within the development until (planned) additional improvements in the Southside distribution area are completed.
- According to the Fire Flow Requirements Letter (provided with the application) this will require buildings to be sprinklered until the system can meet a 1,000 gpm minimum fire flow.
- Separate fire and domestic meters with backflow devices will be required to serve the proposed Project.

All of the above requirements up to and including the meter(s) are to be constructed and paid for by the Applicant and dedicated to CPWS once complete. No construction of water infrastructure shall be initiated until final construction plans have been approved by CPWS (including TDEC approval).

Please be aware that CPWS Distribution System Master Planning includes improvements in this area to support a higher level of service and growth, including the ability to support larger fire flow demands. If the developer is interested in accelerating those system improvements by direct participation - including construction – we welcome a meeting to discuss.

This Water Availability Letter will expire in one-hundred twenty (120) days unless vested by payment of water service fees and impact fees for the proposed project. If the Applicant elects to pay only a portion of the impact fees due for the proposed development, then the vesting will only apply to the portion for which impact fees were paid. Any request for water availability after the expiration date of this letter will be considered a new application.

Once you have received this Water Availability Letter, next steps in the process to vest water service from CPWS are as follows:

- Remit to CPWS new water service fees for plan review, TDEC coordination, and inspection as follows:

  $1,500 + $370 per SFU equivalent

- Applicant will prepare design drawings for review and approval by CPWS for construction of the proposed water system improvements.

  - Provide design drawings in AutoCAD and .pdf format for CPWS review of proposed development. Include design drawings for grading, drainage, roadway improvements, buried (wet and dry) utilities, water systems, and surface improvements.
  - CPWS will submit proposed improvements design to TDEC for review and approval.
  - Once comments received from TDEC have been addressed and approved, CPWS will approve the Construction Drawings for the proposed water system improvements.
- As an option, the applicant may request CPWS design the water infrastructure to support the proposed development project. Under this option, the applicant will:
  - Provide site base CAD files in DWG format, including roads, lot lines, existing and proposed contours, and other existing and proposed utilities, for use in development of water construction drawings.
  - CPWS will then develop design drawings for the water system improvements and submit to TDEC for review and approval.
- Current water service fees due prior to CPWS review of design plans are listed in the table below. *Note that payment of Water Service Fees will extend the expiration of this Water Availability Letter while the applicant is working with CPWS on design and review of the improvement drawings*.

Water Service Fees	SFUs	Total
$1,500 + 370 per SFU	148	**$56,260**

- Upon Construction Drawing approval by CPWS, applicant may then pay Impact Fees and schedule the pre-construction meeting. Pre-construction meeting will be canceled and re-scheduled unless all impact fees are paid at least 48 hours prior, or surety is provided in lieu of full payment.
- Water meters will be ordered by CPWS once meter fees are paid by the Applicant.
  - Meter fees are subject to change based on final design and the prevailing Board-approved rates at time of payment.
  - If surety is provided in lieu of payment, meters are not ordered until fees are paid and may result in extended lead-times.
  - Note that meter fees are charged at time of purchase, based on price of meter at that time.

- Anticipated meter costs and impact fees for this project are according to the following table:

Impact Fees and Meter Costs	Number	$ / Unit	Total
3/4" Service Meter Cost	148	Current Price	Deferred
1" Fire Meter Cost	148	Current Price	Deferred
Impact Fee for 3/4" Service Meter	148	$6,000	$888,000.00
Current Fees Due Prior to Pre-Construction Meeting =			**$888,000.00**

- After the pre-construction meeting, CPWS will then issue a formal Notice to Proceed. No construction of water improvements may take place prior to the Notice to Proceed.
- Applicant is required to construct all public water infrastructure per CPWS standard specifications and provide CPWS personnel unregulated access to the site to inspect the construction of the water infrastructure. No construction of water improvements may take place without a CPWS inspector present.

Please feel free to contact me at 931-388-4833 x7655 or Matt.Wheeler@cpws.com if you have questions or would like to discuss.

Sincerely,

Matthew J. Wheeler, P.E.
Vice President of Water Resources, CPWS

cc: Bart Anderson, CPWS
Eric King, Inflo Design Group
File 24-066

Columbia Fire & Rescue

Fire Flow Requirements

Water Purveyor: Columbia Power & Water System

Date: 9/9/2024
Name: Gerald W. Vick, PE
Phone: 931-388-2329
Email: gerald@wesengineers.com
Address/Parcel ID: Hunters Glen Drive Map 12 Parcel 18.02
Property Type: (•) Residential ( ) Commercial ( ) Industrial
Construction Type: V-B - Wood Frame
Enclosed Area (ft^2): +/- 3,000 SF per home

FILLED OUT BY COLUMBIA FIRE AND RESCUE

NFPA Sprinkler Type: NFPA 13D

Water System Demand without Sprinkler Credit

Fire flow Requirements (International Fire Code Appendix B)

Fire Flow: 1,000 gpm Duration: 1 hours

Fire Hydrant Location and Distribution (International Fire Code Appendix C)

Minimum number of hydrants: 1

Average spacing between hydrants: 500 ft.

Maximum distance from frontage to hydrant: 250 ft.

Water System Demand with Sprinkler Credit

Fire flow requirements (International Fire Code Appendix B)

Fire Flow: 500 gpm Duration: 1/2 hours

Fire Hydrant Location and Distribution (International Fire Code Appendix C)

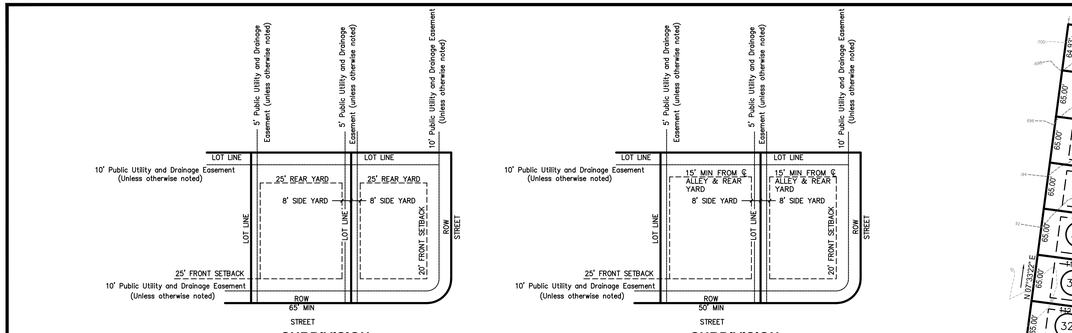
Minimum number of hydrants: 1

Average spacing between hydrants: 500 ft.

Maximum distance from frontage to hydrant: 250 ft.

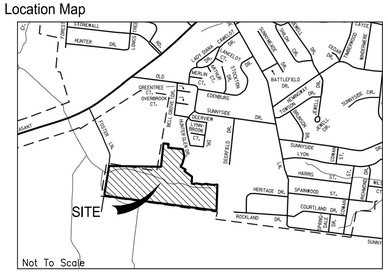
Fire Plan Reviewer: Brad Massey Date: 9/10/2024

PRELIMINARY PLAT



SUBDIVISION TYPICAL LOT LAYOUT

SUBDIVISION TYPICAL LOT LAYOUT ALLEY LOADED





©2024

BENCHMARK

BENCHMARK #1
IRON ROD
N = 455,617.25
E = 1,642,262.16
ELEV = 638.68'
TENNESSEE COORDINATE SYSTEM OF 1983
NAVD 88

WARNING! UTILITY LINES!

THE CONTRACTOR WILL EXERCISE EXTREME CAUTION IN THE USE OF EQUIPMENT IN AND AROUND OVERHEAD AND UNDERGROUND UTILITY WIRES AND SERVICES. IF AT ANY TIME IN THE PURSUIT OF THIS WORK THE CONTRACTOR MUST WORK IN CLOSE PROXIMITY OF OVERHEAD OR UNDERGROUND SERVICES, THE UTILITY COMPANY SHALL BE CONTACTED PRIOR TO SUCH WORK AND THE PROPER SAFETY MEASURES TAKEN. A THOROUGH EXAMINATION OF THE OVERHEAD WIRES IN THE PROJECT AREA SHOULD BE MADE BY THE CONTRACTOR PRIOR TO THE INITIATION OF CONSTRUCTION. THE UNDERGROUND UTILITY LINES HAVE BEEN SHOWN AS BEST AS CAN BE DETERMINED AT THIS TIME FROM THE INFORMATION OBTAINED FROM THE SURVEY. THE CONTRACTOR SHALL CONTACT EACH OF THESE COMPANIES PRIOR TO BEGINNING CONSTRUCTION AND HAVE THEM DETERMINE THE EXACT LOCATION AND TYPE OF THEIR SERVICES.

Tennessee811 Know what's **below** **Call** before you dig.

LEGEND

	EXISTING	PROPOSED
WATER MAIN		
SANITARY SEWER		
STORM SEWER		18"ST
OVERHEAD		
FENCE		
GAS		
DRAINAGE DITCH		
TREE PROTECTION FENCE		
SIGN		
UTILITY POLE		
IRON PIN SET	IPS	
EXISTING IRON PIN	EIP	
CONCRETE MONUMENT		
DECIDUOUS TREE		
GATE VALVE IN BOX		
LIGHT POLE		
BENCHMARK	BM 1	
TREE LINE		
STORM STRUCTURE LABEL		ST1
ASPHALT		
CONCRETE		
# PARKING SPACES		14
P.U.D.E.		

SITE DATA:

OWNER: MCBROOM FAMILY TRUST
943 RIVERVIEW LANE
COLUMBIA, TN 38401

PARCEL NUMBER: TAX MAP 12 PARCEL 18.02
DEED BOOK: R1466, PG 134

SUBJECT PARCEL ZONING: CD-3

ACREAGE OF SITE: ±53.50 ACRES
(PROPOSED 649,010.6 S.F. -14.90 Ac.
RIGHT OF WAY DEDICATION)

DENSITY: GROSS ACREAGE OF SITE 2,329,597.3 sf = ±53.48 Ac.
R.O.W. DEDICATION 571,484.6 sf = 13.12 Ac.
148 LOTS/40.36 Ac.=3.67/1

MINIMUM REQUIRED BUILDING SETBACKS:

25' FRONT
25' REAR - 15' FROM ℄ OF ALLEY
8' SIDE - 5 SIDE W / ALLEY
20' SIDE FOR CORNER LOTS

UTILITY SERVICES:

COLUMBIA POWER & WATER SYSTEMS
201 PICKENS LANE
COLUMBIA, TENNESSEE 38401
(931) 388-4833

PURPOSE NOTE: REQUEST FOR CHANGE OF COMPREHENSIVE PLAN & AMEND THE EXISTING MASTER PLAN. CONSTRUCT 9,802.9 L.F. OF ROADWAY & PROVIDE 148 RESIDENTIAL LOTS & ±11.89 ACRES OF OPEN SPACE.

NOTES:

1. INSTALLATION OF HVAC EQUIPMENT IN P.U.D.E.'s WITH BURIED PIPES IS PROHIBITED.
2. MINIMUM LOT WIDTH IS 65' OR 40' W/ALLEY ACCESS
3. ALL DRAINAGE SWALES AND BERMS TO BE MAINTAINED BY INDIVIDUAL HOMEOWNERS.

PROPOSED CONSTRUCTION SCHEDULE FOR THE YEAR 2024/2025

ACTIVITY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY
TEMPORARY SEDIMENT STRUCTURES												
SEDIMENT BASINS												
DIVERSION DITCHES												
CLEARING & CHIPPING												
TOPSOIL STRIPPING AND STORAGE												
ROADWAY GRADING												
PERMANENT STORM SEWER												
UTILITIES												
TEMPORARY VEGETATION												
PAVING												
PERMANENT VEGETATION												
REMOVE TEMPORARY STRUCTURES												

SITE BENCHMARK NOTE:

CONTRACTOR SHALL ESTABLISH A BENCHMARK PRIOR TO CONSTRUCTION. EXISTING BENCHMARK MUST BE RE-VERIFIED AND APPROVED BY THE ENGINEER/SURVEYOR PRIOR TO USE.

BOUNDARY & TOPOGRAPHIC SURVEY PROVIDED BY:

W.E.S. ENGINEERS AND SURVEYORS
2486 NASHVILLE HWY
COLUMBIA, TENNESSEE 38401
(931) 388-2329

FLOOD STUDY NOTE:

THIS PROPERTY IS NOT LOCATED IN A FLOOD HAZARD AREA AS PER FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD BOUNDARY AND FLOODWAY MAP COMMUNITY PANEL NO. 47119C0280E DATED APRIL 16, 2007 (ZONE "X")

GRAPHIC SCALE

100 0 50 100 200 300
(IN FEET)
1 inch = 100 ft.

JEREMY W. JOYCE — 9/24/24 — REGISTERED LAND SURVEYOR — No. 1074115 — STATE OF TENNESSEE — NOT FOR CONSTRUCTION

SUBMITTED FOR MUNICIPAL APPROVAL
NOT FOR CONSTRUCTION

WES ENGINEERS & SURVEYORS
CIVIL ENGINEERS & LAND SURVEYORS
2486 NASHVILLE HIGHWAY
COLUMBIA, TN 38401
PHONE: (931) 388-2329
www.wesengineers.com
ENGINEERS & SURVEYORS

Client
MCBROOM FAMILY PTR
943 RIVERVIEW LANE
COLUMBIA, TN 38401

REVISIONS | DATE

HUNTERS GLEN SECTION 4, PHASE 1

HUNTERS GLEN DRIVE
COLUMBIA, TENNESSEE
PRELIMINARY PLAT

Drawn: RP | Checked: GV | Approved: GV | Date: 09/24/2024

Job no. 17608 | Scale: | Vertical: 1" = 100' | Horizontal:

FILE:J:\WES_Engineers_Surveyors 2017\17608 - Hunters Glen Sec 4 - McBroom\Dwg\Engineering\17608 Hunters Glen Base 13_A_1_CD-3.dwg

CITY OF COLUMBIA
TENNESSEE

WASTEWATER DEPARTMENT

22 April 2025

Gerald Vick
WES Engineers & Surveyors
2486 Nashville Hwy
Columbia, TN 38401

RE: Hunter's Glen Drive 112018.02, Columbia, TN 38401; Legends at Hunters Glen

Gerald,

This letter serves as confirmation that the City of Columbia Wastewater Department has the available capacity to service the subject development. Any extension to the existing sewer infrastructure will be initiated by the owner/developer, reviewed by our department and approved by the State of Tennessee. The project must be advanced in accordance with local, state and federal rules, regulations and policies. Funding and construction of those improvements will remain the responsibility of the owner/developer. New customers will be required to pay all fees applicable at the time of connection. Any Final Plat approval and Dedication are both subject to installation and function, as determined by our Department. No detailed design plan for an extension of the sewer has been proposed at this time.

The Developer is required to obtain easements and install the force main up to the sanitary sewer near Rockland Dr in order to avoid the Cayce Valley Dr main line.

Donnie Boshers, Director
City of Columbia, TN
Wastewater Department

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

Preliminary Plat, Site Development Plan, and PUD Checklist

Development: Legends At Hunters Glen

This checklist shall be completed, and included with the submittal documents. If the submittal does not contain a completed checklist, it shall be deemed incomplete. All below listed items shall be included in the submittal documents and plans, as well as any further information required by the City of Columbia to evaluate compliance and to perform a full and complete review. See Zoning Ordinance Article 8 and Subdivision Regulations.

General

- ☑ Name of development
- ☑ Contact info for the owner and licensed design professional(s) preparing plan: name, address, email, phone
- ☑ Plan sealed by a design professional licensed in the State of Tennessee.
- ☑ North Arrow, legend, and site vicinity map
- ☑ Graphic Scale: between 1 in. = 10 ft. and 1 in. =100 ft.
- ❑ Survey stamped by a State of Tennessee Licensed Professional Land Surveyor, with all project boundaries including bearings and angles to the nearest hundredth, utilities, and existing streets and rights-of-way.
- ☑ Note referencing Tennessee State Plane Coordinate System, NAD 83 Datum
- ☑ All property boundaries, existing easements, and encumbrances
- ☑ Parcel identification, owner, and deed and plat references of adjoining properties
- ☑ Proposed phasing and timetable for all phases of development
- ❑ Traffic Impact Study, as required.
- ❑ The substance of all existing and proposed covenants, easements, or other restrictions.

Lots and Land-Use

- ☑ The size of total property to be developed in square feet and acres
- ☑ Lot numbers of all proposed lots, with dimensions, locations, and square footage
- ☑ A tabulation of the land area to be devoted to various uses and activities and overall densities.
- ☑ Typical lot layout depicting proposed setbacks, yards, and easements, where applicable

Structures

- ❑ Location and approximate dimensions of all existing and proposed structures.
- ❑ Location of all earth retaining structures, with approximate top and bottom of wall elevations.
- ❑ Existing and intended use of all buildings and structures on site, including the number of dwelling units and density, where applicable
- ❑ Location, type, and size of proposed signs
- ❑ Approximate height, bulk, and the utilization of structures including activities and the number of living units.

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

Grading, Drainage, and Storm

- ☑ Existing conditions and contours at vertical intervals of not more than two (2) feet
- ☑ General proposed contours at vertical intervals of not more than two (2) feet
- ☑ FEMA Special Flood Hazard Area (SFHA), 100-year Floodplain (F-P), and Floodway (F-W) boundaries with elevations and the exact location of the nearest benchmark. Indicate the Flood Insurance Rate Map (FIRM) panel number, its effective date, and flood insurance zones
- ☑ Location and dimension of aquatic buffer zones
- ☑ General layout of the proposed storm drainage system including surface and subsurface drainage systems, areas for detention, and water quality devices.
- ❑ Identification of all critical lots

Streets, Parking, and Pedestrian Elements

- ☑ Proposed street and alley rights-of-way, typical sections, widths, classification, names, and proposed ownership and maintenance responsibility
- ☑ Proposed connections to existing and proposed streets (including classification) located outside the development
- ❑ Proposed improvements as identified in the Traffic Impact Study, as required
- ☑ Existing and proposed sidewalks, trails, and other pedestrian elements
- ☑ Existing and proposed on-street and off-street parking and loading areas
- ❑ Summary of all provided and required parking

Landscaping, Open Space, and Amenities

- ☑ Natural features on site including, but not limited to, wetlands, streams, ponds, springs, sinkholes, wells, rock outcroppings, excessive slopes, and forested areas
- ❑ Landscaped areas and buffers with details on proposed plantings, existing vegetation, and other features.
- ☑ The location and size of all common open space, parkland dedications, and dedications and reservations of land for public uses.
- ❑ Any amenity features and structures for private or public benefit.
- ❑ Location, dimension, and materials of fences and walls
- ☑ Tree Canopy retention

Utilities

- ☑ General layout and location of existing and proposed utilities and utility features including, but not limited to potable water, fire hydrants, sanitary sewer, storm sewer, and power and communication facilities.
- ❑ Acknowledgement from water, sewer, and power utility providers that the proposed development may be adequately served with existing infrastructure, or if improvements are required to adequately serve the development, a general statement of the improvements.

CITY OF
COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

PUD Specific Items

- ❑ List of all deviations from PUD Standards requested
- ❑ The nature of the landholder's interest in the land proposed to be developed and a written statement of concurrence from all parties having a beneficial interest in the affected property.
- ❑ Location and approximate dimensions of all existing and proposed structures including approximate height, bulk, and the utilization of structures including activities and the number of living units. Include architectural renderings of all proposed structures with materials listed.
- ❑ The substance of covenants, grants of easements or other restrictions to be imposed upon the use of the land, buildings and structures including proposed easements for public utilities on the property or documentation of off-site easements.
- ❑ Exterior lighting plan.

If the application is deemed incomplete by the Zoning Administrator, a written request shall be made within ten days after the original submittal, for further information. In such case the application shall be held in abeyance until deemed complete for final review. No plan shall be formally presented for Planning Commission action until such plan is found complete, compliant with City standards, and ready for review.

Checklist Completed By:

Print Name	Signature	Date

April 21, 2025

Austin Brass, AICP, City Planner
Development Services – City of Columbia
700 North Garden Street
Columbia, Tennessee 38401

RE: Legends at Hunters Glen – Preliminary Plat / Site Development Plan

On behalf of the owner for the proposed development, WES Engineers & Surveyors would like to present the documents attached to the City of Columbia for the Preliminary Plat / Site Development Plan.

The development consists of 146 proposed single family residential lots. The configuration proposes the extension of Hunters Glen Drive and Alderwood Drive as well as planning the extension / reconfiguration of Foster Lane. The original Master Plan of this development shows similar configuration with this proposed development planned to fit with the current Development Standards. Total acreage of the remaining parcel is 53.48 Acres with a proposed 13.39 acres as Right-of-Way dedication. Proposed density is 3.64 lots per acre with CD-3 allowing up to 4 lots per acre.

ATTACHMENTS: Preliminary Plat, Site Development Plan, Tree Canopy Retention Plan

The new service fees have been paid for the water so it is my understanding that at that point the availability does not expire. I hope you find the attached information helpful in your review. If you have any questions or comments regarding this and the associated documentation, please do not hesitate to contact me directly.

Sincerely,
WES Engineers & Surveyors

Gerald W. Vick, PE
Principal

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
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PLANNING COMMISSION
PROJECT DEVELOPMENT APPLICATION

SUBMITTAL REQUIREMENTS

Final Plat: * *1 hard copy of all materials for submittal + PDF copy on a USB flash drive (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"
All Others: * Please submit the Application online at City of Columbia | Permitting (onlama.com)

ADDRESS/LOCATION	Hunters Glen Drive		
	TAX MAP: 112	GROUP:	PARCEL: 018.02
SUMMARY OF NATURE OF REQUEST AND WORK	Request Preliminary Plat & Site Development Plan Approval for Legends at Hunters Glen.		

DATE OF PRE-APPLICATION CONFERENCE	7-10-2024	*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
❑ Comprehensive Plan Amendment ❑ Annexation ❑ Rezoning ☑ Preliminary Plat ❑ Final Plat ❑ PUD Preliminary Master Plan ❑ PUD Final Site Plan ☑ Site Development Plan ❑ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations:** ❑ Annexation Permission Form **Annexations/Rezoning/Plan Amendments:** ❑ Requested Zone Listed ❑ Statement of Compliance with Comprehensive Plan ❑ Concept Plan **Preliminary Plats/Site Development Plans:** ☑ Plans and/or Plats conforming to City standards with signed and completed check list **All Annexations/Rezoning/Preliminary Plats/Site Development Plans and PUDS:** ☑ Receipt of Payment for Pre-Application Meeting ☑ Written Legal Description copy ☑ Columbia Water System Availability Letter ☑ Columbia Waste Water Department Will Serve Letter

	Plats/PUDs: ☑ Project Name (include Sections & Phases) Legends at Hunters Glen ☑ Total Number of Lots/Residential Units 146 ☐ Square Footage of Non-Residential Floor Space ☑ Total acreage 53.48 Ac

Applications and all required submittals must be filed with the Department of Development Services prior to the established deadline. Both the applicant and property owner (if different from applicant) must sign the application. Any requests to defer or move the item to future meeting dates must be requested by the resubmittal date listed on the Planning Commission schedule.

APPLICANT
All communications go to the Applicant's email that is provided.

NAME	WES Engineers & Surveyors	PHONE	(931) 388-2329
ADDRESS	2486 Nashville Hwy, CLMA	EMAIL	gerald@wesengineers.com

PROPERTY OWNER NAME	McBroom Family Trust	PHONE	(931) 384-0092
ADDRESS	943 Riverview Lane, Columbia	EMAIL	mcbroom5@msn.com

If owner is not a natural person, documentation must be provided showing signing authority on behalf of the entity. If multiple persons are listed as owners in the records of the Maury County Assessor, all owners must sign or the signatory must provide documentation of authority to apply on behalf of record owner (i.e., Power of Attorney or notarized Letter of Authorization). In filling out this application, I attest that (1) I am familiar with the rules, regulations, and procedures of the City of Columbia & (2) all information contained herein is accurate & true to the best of my knowledge.

WES Eng & Srvs.		10/16/24
APPLICANT NAME	APPLICANT SIGNATURE	DATE
McBroom Family Trust		10/16/24
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE

Rev. 2/7/2024

1221 East End Street Rezoning

Project #:	25-0193	Location:	Map 99 Parcel 59.03
Applicant:	Cole Newton, PE	Case Type(s):	Rezoning
Staff Planner:	Austin Brass, AICP	Proposed Use:	Single-Family Homes

PROJECT SUMMARY

The applicant requests to rezone a 10-acre property located at 1221 E End Street to CD-3 (*Neighborhood Character District*) from the current Zoning of CD-3L (*Neighborhood Large Lot Character District*).

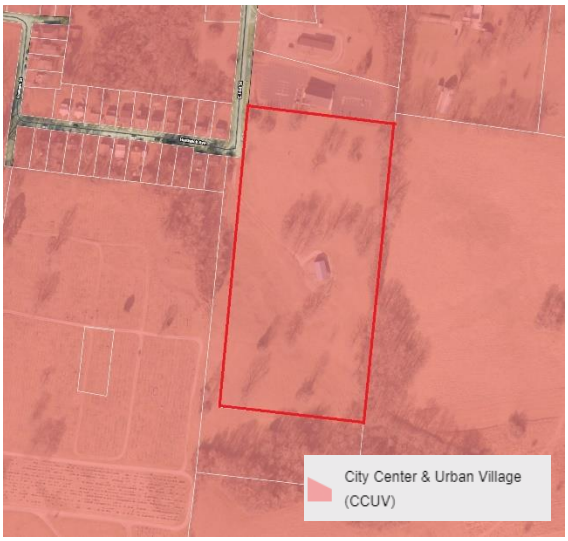
- The requested zoning is consistent with the City Center Urban Village (CCUV) and future land use classification in *Connect Columbia.*
- The applicant has provided a concept plan depicting the development of the property for 28 single-family homes and associated civic space and infrastructure with a density of 2.8 lots per acre with CD-3 allowing 4 units per acre.
- A previous request for Rezoning of this property from R-20 to R-6 was denied by City Council on July 14th, 2022 (*22-0065*). The previous concept plan in support of the denied rezoning request indicated 47 single-family lots with a minimum lot width of 50' as allowed under the standards of the requested R-6 zoning classification. As of July 2022, all R-20 property became classified as CD-3L (Neighborhood Large Lot Character District).
- Differences from the CD-3L *(existing*) and proposed CD-3 Character District include a density from 2 units per acre (*CD-3L*) to 4 units per acre (*CD-3)* and a 100 ft' lot width minimum (*CD-3L*) to a 65' minimum for front loaded lots with the option to have 40' minimum lots for rear loaded products (*CD-3*).
- Subsequent development and division of the property will require review and approval by the Planning Commission or the Zoning Administrator.
- The Planning Commission is a **recommending body** for rezoning requests; City Council is the decision-making authority.
- Templates are provided at the end of the report to assist the Planning Commission in crafting properly formatted motions.

SITE INFORMATION

CURRENT ZONING	EXISTING USE	EXISTING IMP.	LAND AREA
CD-3L	Vacant Land	Vacant Land	+/- 10 acres



FUTURE LAND USE MAP	ZONING MAP (CD3-L)





SITE CONTEXT/ADJACENT PROPERTIES			
	Future Land Use	Zoning	Current Use
Subject Property	City Center Urban Village	CD 3-L	Vacant
North	City Center Urban Village	CD-3L	Religious Facility
South	City Center Urban Village	CD-3L	Vacant
East	City Center Urban Village	CD-3	Vacant
West	City Center Urban Village	CD-3	Single Family

CONSISTENCY WITH CONNECT COLUMBIA

City Center & Urban Village: The requested rezoning is consistent with the future land use map. The future land use of most of the subject site is CCUV. The City Center & Urban Village (CCUV) future land use area comprises Columbia's iconic core and ancillary focal points (Connect Columbia, p. 35). It includes the historic courthouse square and the places residents of Columbia associated with worship, commerce, the arts, community activities and government administration. The CCUV also supports the creation of urbanized nodes which provide identifiable commercial hubs for Columbia's emerging neighborhoods. Each development parcel should add to Columbia's existing sense of place and extend its established form and pattern to create a more interconnected community. The future land use classification is implemented by the CD-4 and CD-5-character districts, as well as CV and PUDs. **In addition, the Planning Commission may determine that CD-3 and CD-4C are also appropriate implementing District for the City Center & Urban Village Future Land Use Policy.**

Character & Intent

The City Center & Urban Village (CCUV) future land use area comprises Columbia's iconic core and ancillary focal points. It includes the historic courthouse square and the places residents of Columbia associate with worship, commerce, the arts, community activities and government administration. The CCUV also supports the creation of urbanized nodes which provide identifiable commercial hubs for Columbia's emerging neighborhoods. Each development parcel should add to Columbia's existing sense of place and extend its established form and pattern to create a more interconnected community.

Primary Land Uses are horizontally and vertically mixed in a variety of structure types. The intensity and mix of uses is largely determined by context. New residential development provides a mixture of housing within walking distance of commercial and civic spaces. New non-residential development in established residential areas shall be comprised of low-intensity uses which serve residents' daily needs. Higher intensity uses should complement and extend the traditional pattern of development in Columbia's core, or establish identifiable centers for emerging nodes.

Future development should emphasize connectivity and continuity of the city as a whole. Additionally, new development shall create a pedestrian-friendly environment by filling gaps in sidewalks and enhancing multi-modal infrastructure. All new and infill development shall emphasize linkages to identifiable community anchors such as mixed-use commercial centers, schools, parks, or civic institutions.



Land Use Considerations

Primary uses include government, civic uses, parks, religious facilities, offices, retail, and all forms of medium-density housing. Secondary land uses include utility facilities, institutional uses, low-density housing, and neighborhood retail. New industrial and warehouse uses are inappropriate.

Form & Pattern

The CCUV includes established and infill neighborhoods at medium to high densities organized along a well-connected transportation network. Infill development supports and extends the formation of blocks and eliminates gaps in the built environment. The CCUV future land use is distinguished from Suburban Neighborhoods (SN) by the unambiguous prominence of public frontages. A high density of streets and thoroughfares with complete public frontages extends the public sphere outward from civic and commercial spaces. Implementing bulk and design standards clearly delineate the public and private realms though the application of layers and front-to-back discipline of lots. Bulk and design standards are occasionally modified to accommodate historic preservation, artistic innovation, redevelopment, and other place-based policies of the City. New development should accompany concurrent extension of complete urban services in places where they do not already exist. Parking is provided on an area-wide basis as a utility supplemented by private land users.

Implementing Districts
Neighborhood CD-3 (Only where compatible with established pattern)
General Urban CD-4
Urban Center CD-5
General Urban-Corridor CD-4C (only along Arterial roadways)
Urban Center – Corridor CD-5C (only along Arterial roadways)*
Mixed Use PUD PUD-MU
Civic CV

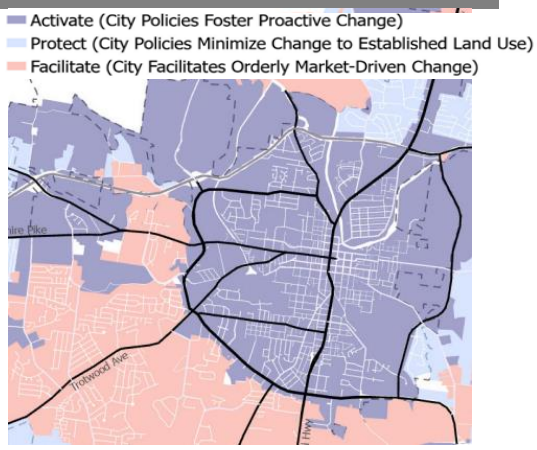
Implementing Standards
General Development Pattern: Mixed Uses & Isolated Uses
Density (density unites per ace): ≥ 12 du/ac
Building Height: 1-5 stories
Open Space Elements: Civic Spaces, Parks & Greenways





AREA OF CHANGE

Connect Columbia established the areas of change policy designation for the subject site as *activate*. The designation includes areas where significant and beneficial change is occurring or is desired. These areas are the focus of proactive City policies to bring the community's values to fruition. Public investment and increased coordination with the private sector will achieve transformational changes envisioned by the community (Connect Columbia p. 32).



CONFORMITY WITH ZONING ORDINANCE

As required by **§ 8.5.19.F.3** of the Zoning Ordinance, the applicant provided a concept plan (i.e. "Sketch Development Plan"). The current request establishes the applicable standards for future reviews. The concept plan is not a plan of development and approval of the rezoning request does not establish a vested right.

- The concept demonstrates that it is possible to develop the site in conformity with the bulk and design standard of the Ordinance at Table 4.3.1-D.

- The concept plan depicts the development of 28 lots that are a combination of front and rear loaded lot dimensions for single-family homes.
- The concept plan indicates that required civic spaces and has a notation of tree replanting areas.

- If the rezoning is successful and the site develops, Planning staff will perform zoning compliance review to determine conformity with the standards of the Ordinance.

REVIEW PROCESS

The Development Review Committee evaluated the proposed rezoning at its June 2025 meeting, as directed by section **8.3.7** of the Zoning Ordinance. Technical comments are provided in the agenda package.

Section **8.5.19** of the Zoning Ordinance directs the Planning Commission to review and make a recommendation on all proposed changes to the Official Zoning Map. The Planning Commission is the recommending body for rezonings under **§ 8.3.3.B.3** of the Zoning Ordinance. The City Council is the decision-making authority.

Section **8.5.19.H.4** of the Zoning Ordinance establishes the review criteria for approval of all changes to the Official Zoning Map:

a. The Rezoning is consistent and not in conflict with the Comprehensive Plan or other applicable approved local plans for the area;
b. It has been determined that the legal purposes for which zoning exists, as set forth in Section 1.5 [, are not contravened];
c. It has been determined that there will be no adverse effect upon Adjoining property owners unless such effect can be justified by the overwhelming public good or welfare;
d. It has been determined that no one property owner or small group of property owners will benefit materially from the change to the detriment of the general public;
e. It has been determined that conditions affecting the area have changed to a sufficient to warrant the Zoning Map Amendment or that the existing zoning of the property was the result of a mistake;
f. It has been determined that adequate school, road, parks, wastewater treatment, water supply, and stormwater drainage facilities are available

SUMMARY OF DEVELOPMENT REVIEW COMMITTEE COMMENTS

The DRC reviewed this proposal at its June 2025 meeting. A full list of comments, and the applicant's responses, is provided in the agenda packet. Some key comments are noted below.

- **Planning** noted that initial concept plan indicated a cul-de-sac that the Zoning Ordinance prohibits. The applicant responded by updating their concept plan to eliminate the cul-de-sac to demonstrate the site can be developed in accordance with the Zoning Standards of the Ordinance that prohibits cul-de-sacs.
- **Columbia Water** noted that a water availability letter was issued on April 24,2025 and remains valid for 120 days.

COMMENTARY FROM PLANNING STAFF

The requested CD-3 zoning is consistent with Connect Columbia. The site's future land use classification is City Center Urban Village (CCUV). The Area of Change Policy for the property is *activate*, indicating that the city encourages beneficial changes to the land use pattern in the area.

The proposed CD-3 Zoning is in character with adjacent uses. The vicinity of the requested zoning consists of similar uses for single-family homes on lots that are more minimal in size (50') than the proposed rezoning of CD-3 with 65' lots. This proposed rezoning allows for an extension of the existing neighborhood in meeting the goals and policy framework of Connect Columbia.

SAMPLE MOTIONS

Recommend to Approve:

Move to find, based on the information presented by the applicant and the analysis provided by city staff, that the criteria listed in sections **8.5.19.H** of the City of Columbia Zoning Ordinance have been satisfied and recommend approval of the proposed rezoning *[, subject to technical comments and other conditions presented by planning staff*].

Recommend to Deny:

Move to recommend denial of the requested rezoning having found, based on the information presented by the applicant and the analysis provided by city staff, that the criteria listed in section **8.5.19.H** of the City of Columbia Zoning Ordinance are not satisfied [*list specific reasons for denial*].

Defer:

Move to find that there is insufficient information to decide, defer the matter to the next regularly scheduled meeting of the Planning Commission, and request that the [*applicant/staff*] provide: [*list additional information*] for review at a future meeting.

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DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, June 10, 2025

ITEM NO.
25-0193

DESCRIPTION: 1221 E End Street

COMMENTS:

Wastewater

1. Columbia Wastewater has no comments.

Planning

2. The lead staff person for this case is Austin Brass, City Planner, AICP. Please contact abrass@columbiatn.gov with questions about the development review process or technical comments. The case planner should be copied on all communication with other city staff.
3. At resubmittal, please provide a response letter addressing each comment along with any revised plans. If the nature of the comment does not warrant a response, or the comment was previously addressed, please simply note that the information has been acknowledged. Any documents or additional information that you want to present to the Planning Commission should be included in your resubmittal.
4. Concept plan indicates cul-de-sac that the Zoning Ordinance prohibits. If Preliminary Plat is submitted, the would need to be addressed.
5. Submit updated application found on website
6. Note adjacent CD-3 section.

Engineering

7. No comments on rezoning

Building

8. No comments.

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Police

9. No comments provided.

Public Works

10. No comments.

City Attorney

11. No comments provided.

Maury County E911

12. Contact Crystal Gideon at Cgideon@maury911.org for street names request. Maury911.org to review fee cost. Once preliminary plat has been approved, Maury 911 will need a copy with lot numbers that must not change and all approved street names labeled correctly on copy sent to us.

Maury County Schools

13. Howell Elementary, Cox Middle School, Central High School
    The development combined with current neighborhoods and additional approved developments in these zones may require either new construction of realignment of school zones to accommodate new students.

Columbia Water

14. A water availability letter was issued on April 24, 2025, it remains valid for 120 days. The availability of capacity to serve is based on a determination
    by the Fire Marshal of fire flow requirements and the information submitted on the Water Service Availability Request application. Any off-site
    improvements detailed in the availability letter are the responsibility of the developer/owner. All public water system improvements are subject to

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the preparation and approval of detailed construction plans prepared in accordance with CPWS and Tennessee Department of Environment and Conservation requirements.

Columbia Power

15. Columbia Power System has an existing power line near your proposed development. We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction.
    . Unfortunately, due to current supply chain challenges, no timeframe can be guaranteed regarding the availability of meters or transformers appropriate for your development.

Duck River Electric Membership Corp

16. No comments.

Maury County Highway Dept.

17. No comments.

ATT

18. No comments provided.

Atmos Energy

19. No comments provided.

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Resubmittal Guidelines

Please provide a comment response letter as well as digital copies of revised plans and supporting documentation. Submit all required documents electronically through the online portal: columbia.onlama.com. If the files are oversized, please provide a file sharing link.

Please contact the case planner identified in the Planning Comments with any questions about the review process.

Please contact pkeltner@columbiatn.gov or srichardson@columbiatn.gov if you encounter difficulties with the online portal.

You will receive an invoice for required advertising and mailing fees. All fees must be paid by the Friday following resubmittal in order advance to the Planning Commission agenda.

NOTE: All resubmittals must demonstrate compliance with city standards prior to Planning Commission review. Requests which do not adhere to regulations and/or remain unresponsive to technical comments will not be forwarded to the next agenda until such items are amended. Final Plat applications which are not ready to proceed to Planning Commission following the first resubmittal deadline will be added to the following DRC agenda to confirm the status of required infrastructure and utilities. Applications which remain incomplete following two resubmittal deadlines will be closed.

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DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, June 10, 2025

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25-0193

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Total Site Data	
	PROVIDED
TOTAL PROPERTY ACREAGE	10.00 +/- AC
CURRENT ZONING	CD-3L
PROPOSED REZONING	CD-3
LOT WIDTH (MIN.)	40 FT. IF ALLEY LOADED GARAGE AT REAR, OTHERWISE 65 FT.
TREE SAVE AREA	0.43 AC > 0.43 AC (REQUIRED)
LOTS	4.82 AC
TOTAL OPEN SPACE	2.53 AC
TOTAL CIVIC SPACE	0.64 AC (6.4% OF GROSS ACREAGE)
RIGHT OF WAY	2.61 AC
TOTAL LOTS	26
CD-3 DENSITY	2.60 LOTS / AC

NOTES:

1. SEE THIS SHEET FOR THE TYPICAL ROADWAY SECTION.
2. TREE SAVE AREA GENERALLY LOCATED IN OPEN SPACE 1 & 4 (OS:1 & OS:4) & CIVIC SPACE 1. TREE REPLANTING AREA IS LOCATED IN OPEN SPACE 2 (OS:2).
3. CIVIC SPACE 1 TO BE GREEN AREA
4. CIVIC SPACE 2 TO BE PLAYGROUND
5. OS-3 TO BE MAIL KIOSK AREA
6. LOTS 1 - 8 - CD-3 ZONING (MIN. 65 FT WIDTH)
   LOTS 9 - 16 - CD-3 ZONING (MIN. 40 FT WIDTH)
   LOTS 16 - 26 - CD-3 ZONING (MIN. 65 FT WIDTH)

N

GRAPHIC SCALE
(IN FEET)
0 50 100

SCALE: 1" = 50'

LEGEND

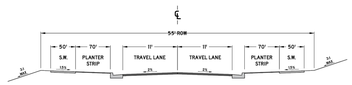
PROPERTY LINE

EXISTING CONTOURS

CIVIC SPACE AREA TABLE		
CIVIC SPACE NO.	AREA (SQ. FT.)	AREA (ACRES)
CIVIC SPACE 1	21,885	0.50
CIVIC SPACE 2	5,945	0.14

OPEN SPACE AREA TABLE		
OS NO.	AREA (SQ. FT.)	AREA (ACRES)
OS : 1	5,957	0.14
OS : 2	59,679	1.37
OS : 3	8,994	0.21
OS : 4	3,846	0.09
OS : 5	31,198	0.72

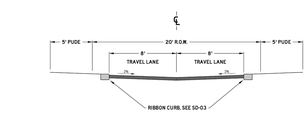
LOT AREA TABLE		
LOT NO.	AREA (SQ. FT.)	AREA (ACRES)
1	9,110	0.21
2	7,425	0.17
3	7,425	0.17
4	7,425	0.17
5	7,425	0.17
6	7,425	0.17
7	9,009	0.21
8	8,797	0.20
9	4,179	0.10
10	4,000	0.09
11	5,048	0.12
12	5,048	0.12
13	4,000	0.09
14	4,000	0.09
15	4,000	0.09
16	4,000	0.09
17	7,150	0.16
18	7,164	0.16
19	7,937	0.18
20	13,503	0.31
21	8,418	0.19
22	7,911	0.18
23	8,912	0.20
24	8,490	0.19
25	7,911	0.18
26	8,417	0.19



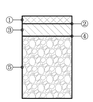
NOTES:

1. ONLY PERMITTED WITHIN THE APPLICABLE ZONING DISTRICTS
2. ONLY PERMITTED ON MINOR LOCAL AND MAJOR LOCAL ROADWAY CLASSIFICATIONS.
3. PAVEMENT SECTION SHALL FOLLOW THE CORRESPONDING ROADWAY CLASSIFICATION'S STANDARD DETAIL
4. CURB AND GUTTER, SEE SD-01
5. SIDEWALK, SEE SD-02
6. DECORATIVE LIGHT BASES SHALL BE BETWEEN 18" AND 24" BEHIND THE BACK OF CURB.
7. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED
8. DIMENSIONS REFLECT A MINIMUM STANDARD
9. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA DEVELOPMENT SERVICES DEPARTMENT ENGINEERING DIVISION	CHARACTER DISTRICT STREET SUBURBAN NEIGHBORHOOD NO PARALLEL PARKING (NTS)	DATE 7/1/2024
STANDARD DETAILS		DS-12



PAVEMENT SCHEDULE	
①	SURFACE @ 1.5" THICK 411-D ASPHALT CONCRETE MIX, PG64-22 W/ 0% GRADING D, SURFACE, OR SP 9.5 ASPHALT CONCRETE MIX, PG64-22 W/ 20% GRADING M, SURFACE
②	TACK COAT (GENERAL USE) 402-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) - ELEM. D OR ELEM.
③	BIT. BINDER @ 2" THICK 307-04 ASPHALT CONCRETE MIX, PG64-22 - OPTION 400 - LEVELING D MIX
④	PRIME COAT 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) - ELEM. D OR ELEM.
⑤	MINERAL AGGREGATE BASE @ 6" THICK 303-01 MINERAL AGGREGATE, TYPE A BASE, GRADING D



NOTES:

1. ADDITIONAL RIGHT OF WAY MAY BE REQUIRED
2. DIMENSIONS REFLECT A MINIMUM STANDARD
3. ELEMENTS OF THIS DETAIL MAY BE ALTERED AND APPROVED BY THE CITY ENGINEER

CITY OF COLUMBIA DEVELOPMENT SERVICES DEPARTMENT ENGINEERING DIVISION	ALLEY (NTS)	DATE 6/9/2022
STANDARD DETAILS		RD-06

NOT FOR CONSTRUCTION

ARCHITECTURE
INTERIORS
CIVIL SITE
TKC
818 SOUTH MAIN ST, COLUMBIA, TN 38401 | 615.377.7477 | WWW.TKC-AE.COM

CONSULTANTS:

PROJECT TITLE:
1221 EAST END STREET
1221 EAST END STREET
COLUMBIA, TN 38401

SHEET TITLE:
CONCEPT PLAN

Revision		
No.	Date	Description

THIS DRAWING IS THE PROPERTY OF TKC ARCHITECTURE & ENGINEERING (TKC A&E). ANY UNAUTHORIZED REPRODUCTION OR USAGE WITHOUT THE PRIOR WRITTEN CONSENT OF TKC A&E IS PROHIBITED.

REZONING

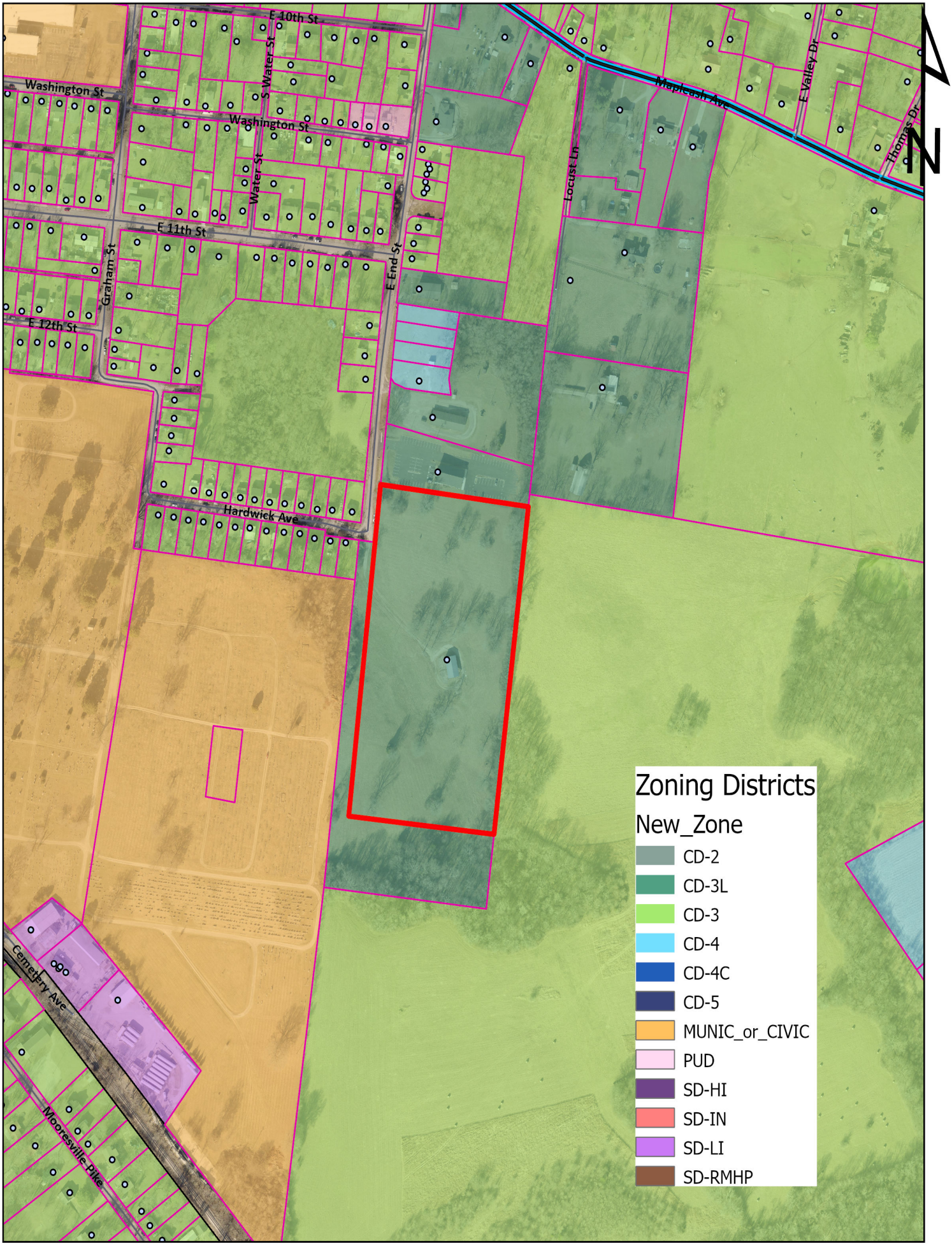
DATE: 04/15/2025

DRAWN BY: TS

PROJECT NO.: 2502

SHEET NO.:

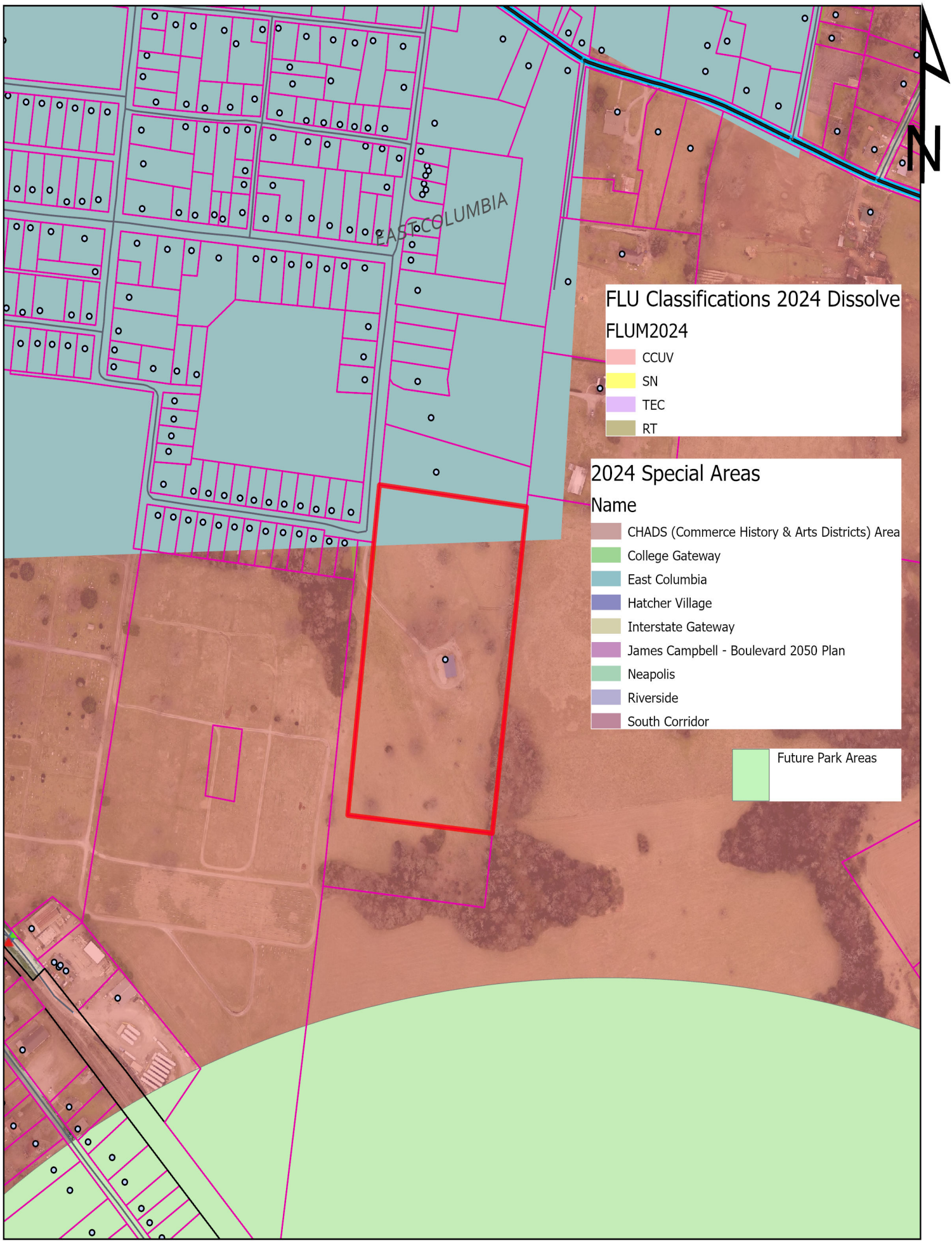
1 of 1



25-0193
1221 E. End Street
Tax Map 99 Parcel 59.03

Development Services
700 N. Garden Street
Columbia, TN 38401
www.columbiatn.gov

CITY OF COLUMBIA



25-0193
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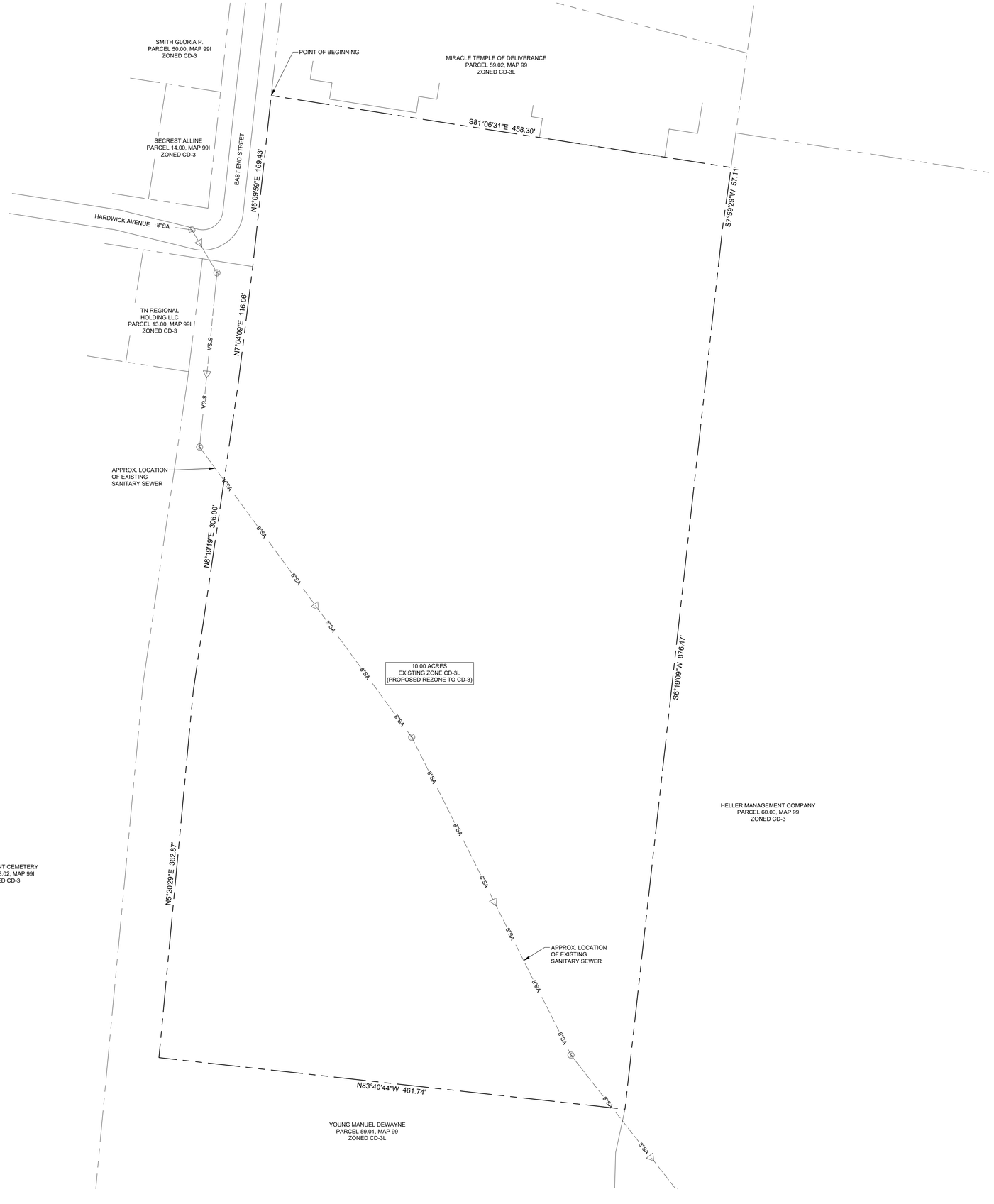
CITY OF COLUMBIA
TENNESSEE



N

GRAPHIC SCALE
(IN FEET)
0 50 100
SCALE: 1" = 50'

LEGEND
PROPERTY LINE

ARCHITECTURE
INTERIORS
CIVIL SITE
TKC
818 SOUTH MAIN ST, COLUMBIA, TN 38401 | 615.377.7477 | WWW.TKC-AE.COM

CONSULTANTS:

PROJECT TITLE:
1221 EAST END STREET
1221 EAST END STREET
COLUMBIA, TN 38401

Revision		
No.	Date	Description

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SHEET TITLE:
LEGAL DESCRIPTION

REZONING
DATE: 04/15/2025
DRAWN BY: TS
PROJECT NO.: 2502

SHEET NO.:

NOT FOR CONSTRUCTION

PARCEL 59.03 MAP 99 PROPERTY REZONING LEGAL DESCRIPTION

BEGINNING at a point on the east right-of-way margin of East End Street, said point being the southwest corner of Miracle Temple of Deliverance and the POINT OF BEGINNING.

THENCE LEAVING THE SAID RIGHT-OF-WAY MARGIN RUN SOUTH 81 DEGREES 6 MINUTES 31 SECONDS EAST – 458.30 FEET TO POINT, SAID POINT BEING THE SOUTHEAST CORNER OF MIRACLE TEMPLE DELIVERANCE; THENCE SOUTH 7 DEGREES 59 MINUTES 29 SECONDS WEST – 57.11 FEET TO A POINT ALONG THE WEST LINE OF HELLER MANAGEMENT COMPANY; THENCE SOUTH 6 DEGREES 19 MINUTES 9 SECONDS WEST – 876.47 FEET TO A POINT, SAID POINT BEING THE NORTHEAST CORNER OF MANUEL DEWAYNE YOUNG PROPERTY; THENCE NORTH 83 DEGREES 40 MINUTES 44 SECONDS WEST – 461.74 FEET; THENCE NORTH 5 DEGREES 20 MINUTES 29 SECONDS EAST – 362.87 FEET; THENCE NORTH 8 DEGREES 19 MINUTES 19 SECONDS EAST – 306.00 FEET; THENCE NORTH 7 DEGREES 4 MINUTES 9 SECONDS EAST – 116.06 FEET TO THE POINT ON THE EAST RIGHT-OF-WAY MARGIN OF EAST END STREET; THENCE ALONG THE SAID RIGHT-OF-WAY MARGIN, NORTH 6 DEGREES 9 MINUTES 59 SECONDS EAST – 169.43 FEET TO THE POINT OF BEGINNING.

INCLUDES A TOTAL OF 435,717.49 SF (10.00 AC).

April 24, 2025

Mr. Tony Salonga
TKC Architecture and Engineering
818 S. Main Street
Columbia, TN 38401
Sent via email: *tsalonga@tkc-ae.com*

RE: **Water Availability Letter** Expires: 8/22/2025
1221 East End Street – 26 Units
Tax Map & Parcel: 099 059.03
Columbia, Maury County, TN

Dear Mr. Salonga:

Columbia Power & Water Systems ("the Utility"/CPWS) is a municipal corporation authorized to provide water services in accordance with State law. CPWS has adopted rules, regulations, and standard operation procedures, prescribing the conditions under which CPWS will furnish water service. In addition, certain State laws delegate authority to the Tennessee Department of Environment and Conservation (TDEC), various Planning Commissions, and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Water service will be made available on a first-come, first-served basis, subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies. Water service is subject to availability of all CPWS furnished equipment and materials appropriate for the development and provided the applicant complies with all rules and regulations of CPWS and conditions set out herein.

The proposed development is a residential subdivision consisting of 26 single family units. CPWS has evaluated the projected water demands for the proposed development in the water system hydraulic model and is able to provide domestic and fire protection service while maintaining state standards for level of service and pressures in this portion of the distribution system. CPWS can provide water for the proposed development according to the following criteria and requirements:

- CPWS is able to meet a fire-flow capacity of 1,000 gpm at this location
- Minimum 8-inch size water mains will be required in-tract for the development
- Separate irrigation meters with backflow devices will be required to serve the proposed Project.

All of the above requirements up to and including the meter(s) are to be constructed and paid for by the Applicant and dedicated to CPWS once complete. No construction of water infrastructure shall be initiated until final construction plans have been approved by CPWS (including TDEC approval).

This Water Availability Letter will expire in one-hundred twenty (120) days unless vested by payment of water service fees and impact fees for the proposed project. If the Applicant elects to pay only a portion of the impact fees due for the proposed development, then the vesting will only apply to the portion for which impact fees were paid. Any request for water availability after the expiration date of this letter will be considered a new application.

Once you have received this Water Availability Letter, next steps in the process to vest water service from CPWS are as follows:

- Remit to CPWS new water service fees for plan review, TDEC coordination, and inspection as follows: $1,500 + $370 per SFU equivalent
- Applicant will prepare design drawings for review and approval by CPWS for construction of the proposed water system improvements.
    - Provide design drawings in AutoCAD and .pdf format for CPWS review of proposed development. Include design drawings for grading, drainage, roadway improvements, buried (wet and dry) utilities, water systems, and surface improvements.
    - CPWS will submit proposed improvements design to TDEC for review and approval.
    - Once comments received from TDEC have been addressed and approved, CPWS will approve the Construction Drawings for the proposed water system improvements.
- As an option, the applicant may request CPWS design the public water system infrastructure to support the proposed development project. Under this option, the applicant will:
    - Provide site base CAD files in DWG format, including roads, lot lines, existing and proposed contours, and other existing and proposed utilities, for use in development of water construction drawings.
    - CPWS will then develop design drawings for the water main extension and submit to TDEC for review and approval.
- Current water service fees due prior to CPWS review of design plans are listed in the table below. *Note that payment of Water Service Fees will extend the expiration of this Water Availability Letter for one year, while the applicant is working with CPWS on design and review of the improvement drawings.*

Water Service Fees	SFUs	Total
$1,500 + 370 per SFU	26	**$11,120**

- Upon Construction Drawing approval by CPWS, applicant may then pay Impact Fees and Meter Fees and schedule the pre-construction meeting. Pre-construction meeting will be canceled and re-scheduled unless all impact fees are paid at least 48 hours prior, or surety is provided in lieu of full payment.
- Water meters will be ordered by CPWS once meter fees are paid by the Applicant.
    - Meter fees are subject to change based on final design and the prevailing Board-approved rates at time of payment.
    - If surety is provided in lieu of payment, meters are not ordered until fees are paid and may result in extended lead-times.
- Applicants will be charged Impact Fees and Meter Fees in effect at time of payment. Please see CPWS website for schedule of impact fees and timing of planned fee escalations. Anticipated meter costs and impact fees for this project are according to the following table:

Impact Fees and Meter Costs	Number	$ / Unit	Total
¾" Service Meter Cost	26	$540	$14,040
Current Impact Fee for ¾" Service Meter	26	$5,000	$130,000
Estimate of Fees Due Prior to Pre-Construction Meeting =			**$144,040**

- After the pre-construction meeting, CPWS will then issue a formal Notice to Proceed.
- Applicant is required to construct all public water infrastructure per CPWS standard specifications and provide CPWS personnel unregulated access to the site to inspect the construction of the water infrastructure.
- No construction of water improvements may take place prior to the Notice to Proceed or without a CPWS inspector present.

Please feel free to contact me at 931-388-4833 x7655 or Matt.Wheeler@cpws.com if you have questions or would like to discuss.

Sincerely,

Matthew J. Wheeler, P.E.
Vice President of Water Resources, CPWS

cc: Bart Anderson, CPWS
Eric King, Inflo Design Group
File 25-010

CITY OF COLUMBIA
TENNESSEE

WASTEWATER DEPARTMENT

7 February 2025

Tony Salonga
TKC Architecture and Engineering, LLC
818 S. Main Street
Columbia, TN 38401

RE: 1221 East End Street, Columbia, TN 38401; 26 units Single-Family

Tony,

This letter serves as confirmation that the City of Columbia Wastewater Department has the available capacity to service the subject development. Any extension to the existing sewer infrastructure will be initiated by the owner/developer, reviewed by our department and approved by the State of Tennessee. The project must be advanced in accordance with local, state and federal rules, regulations and policies. Funding and construction of those improvements will remain the responsibility of the owner/developer. New customers will be required to pay all fees applicable at the time of connection. Any Final Plat approval and Dedication are both subject to installation and function, as determined by our Department. No detailed design plan for an extension of the sewer has been proposed at this time.

Donnie Boshers, Director
City of Columbia, TN
Wastewater Department

ARCHITECTURE
INTERIORS
CIVIL SITE

818 S MAIN STREET
COLUMBIA, TN 38401
TKC-AE.COM
615.617.7477

May 19th, 2025

Planning Staff
City of Columbia
700 N Garden Street
Columbia, TN 38401

Project: 1221 East End Street

Subject: 1221 East End Street Rezone

Staff,

We are requesting the acceptance of our Rezone of the property located at 1221 East End Street. We are proposing for Parcel 59.03 Map 99 to be rezoned to CD-3. The current zoning is CD-3L. This submittal follows the City's zoning ordinance and subdivision regulations. The existing conditions consist of one existing building, trees and grass areas. We are proposing 26 single-family lots.

The total site is +/- 10.00 acres.

With the Rezone approval we would submit for Site Development Plan and Preliminary Plat approval.

If you have any comments or questions, please contact TKC Architecture and Engineering.

Thank you,

Cole Newton, PE, LEED AP
TKC Architecture and Engineering LLC
615.617.7477 (o)
931.797.3323 (c)
cole@tkc-ae.com

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

PLANNING COMMISSION
PROJECT DEVELOPMENT APPLICATION

SUBMITTAL REQUIREMENTS

** 1 hard copy of all materials for submittal + PDF copy of submittal on USB thumb drive or CD*
Fold hard copy submittals larger than 8½"x11"

ADDRESS/LOCATION	1221 East End		
	TAX MAP: 99	GROUP:	PARCEL: 59.03
SUMMARY OF NATURE OF REQUEST AND WORK	TO REZONE 10 ACRE PROPERTY FROM EXISTING CD-3L ZONING TO PROPOSED CD-3 ZONING USE		

REQUEST DATE FOR PRE-APPLICATION CONFERENCE	2/26/25	*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
❑ Annexation ☒ Rezoning ❑ Sketch Plat – *Must be submitted at least two weeks prior to Preliminary Plat submittal* ❑ Preliminary Plat ❑ Final Plat ❑ PUD Preliminary Master Plan + Checklist ❑ PUD Final Site Plan + Checklist ❑ Multi-Family Site Plan ☒ Other: Concept Plan **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat* *Freedom Point Elevations*	Annexations/Rezoning: ☒ Written Legal Description copy ☒ Requested Zone Listed ❑ Compliance with Comprehensive Plan ❑ Annexation Permission Form ❑ Plans and/or Plats conforming to City standards Plats/PUDs: • Project Name (include Sections & Phases) • Total Number of Lots Rezone Exhibit (26) • Total acreage 10.0 +/- acres

Applications and all required submittals must be filed with the Department of Development Services prior to the established deadline. Both the applicant and property owner (if different from applicant) must sign the application.

APPLICANT

All communications go to the Applicant's email that is provided.

NAME	TKC Architecture & Engineering LLC	PHONE	615-617-7477
ADDRESS	818 S. Main Street, Columbia, TN 38401	EMAIL	cole@tkc-ae.com

PROPERTY OWNER NAME	EASTEND TN PARTNERS	PHONE	615-626-6917
ADDRESS	PO Box 25183 NASHVILLE TN 37202	EMAIL	Kroeger@bellsouth.net

In filling out this application, I attest that (1) I am familiar with the rules, regulations, and procedures of the City of Columbia & (2) all information contained herein is accurate & true to the best of my knowledge.

Cole Newton (TKC A & E)	Cole Newton	4/21/2025
APPLICANT NAME	APPLICANT SIGNATURE	DATE
EASTEND TN PARTNERS	Ben Kroeger	5-16-25
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE

STAFF USE ONLY

DOCKET NO.		FEE PAID	
RECEIPT NO.		REQUESTED AGENDA	

DATE NOTICES SENT TO ADJACENT PROPERTY OWNERS	
DATE OF PUBLIC NOTICES IN DAILY HERALD	

BOARD ACTION	

Foster Lane Annexation & Rezoning/ Comprehensive Plan Amendment

Project #:	25-0198	Location:	Tax Map 88 Parcel 071.01
Applicant:	Adam Crunk, PE	Case Type(s):	Annx/Rzn & Comp Plan Amendment
Staff Planner:	Austin Brass, AICP Jermey Humphrey	Proposed Use:	Sigle-Family Residential CD-3

PROJECT SUMMARY

The applicant requests annexation with a plan of services for an 86-acre parcel located off Foster Lane at Tax Map 88, Parcel 071. In addition, the applicant is requesting a Comprehensive Plan Amendment from Rual Transitions to Suburban Neighborhood with a requested CD-3 Zoning of the subject parcel and also includes a Comprehensive Plan amendment from Rural Transitions to Suburban Neighborhood for Parcel 112 18.02 (53.5-acre tract) located just north of the subject site.

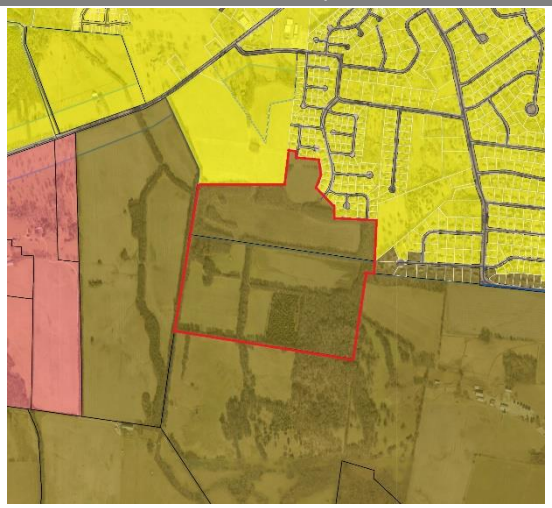
- Staff has noted that this site requested for annexation is not adjacent to an improved roadway (*Foster Ln*) that can adequality serve the annexation request and highlighted that this request is premature for annexation until adjacent infrastructure improvements are made.
- A conditional water availability letter has been issued from CPWS noting its validity of 120 days from issuance. It was noted that only 500 gpm can be served with fire adding that an additional 600 gpm can be provided in meeting required fire flow with the recent addition of a tanker truck.
- The proposed development is inconsistent with the future land use element of the comprehensive plan, *Connect Columbia* being Rural Transitions, and thus requesting a Future Land Use Classification of Suburban Neighborhood.
- The concept plan submitted demonstrates that it is possible to develop the site in conformity with the standards of the requested character districts.
- The Planning Commission is a **recommending body** for the annexation in which Section 8.5.20.F of the Zoning Ordinance lists the criteria for Planning Commission action.

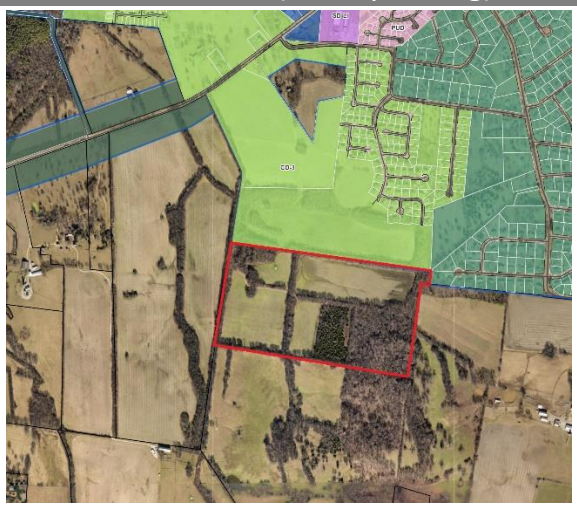
SITE INFORMATION

CURRENT ZONING	EXISTING USE	EXISTING IMP.	LAND AREA
County	Vacant	Vacant	+/- 86 acres



FUTURE LAND USE MAP (Rural Transitions)	ZONING MAP (County Zoning)





SITE CONTEXT/ADJACENT PROPERTIES			
	Future Land Use	Zoning	Current Use
Subject Property	Rural Transition (RT)	County	Vacant
North	Rural Transition (RT)	CD-3	Vacant/Developing
South	RT Rural Transition (RT)	County	Vacant
East	Rural Transition (RT)	County	Agricultural Use
West	Rural Transition (RT)	County	Vacant

CONSISTENCY WITH CONNECT COLUMBIA

The applicant's request for annexation and a Comprehensive Plan amendment to allow CD-3 zoning for the subject property has been reviewed for consistency with the **Connect Columbia Comprehensive Plan**, specifically the **Rural Transition (RT)** Future Land Use Classification. The proposed request is found to be **inconsistent** with the explicit intent, policies, and provisions of the Connect Columbia Comprehensive Plan for the following reasons:

- **Conflict with Rural Transition (RT) Intent:** The Comprehensive Plan clearly defines the RT classification as an area intended to "create and maintain a discernable transition between agricultural uses... and the suburban areas within Columbia," emphasizing the "preservation of agricultural uses, open spaces, and the semi-rural character of areas adjacent to the city." The primary land use is defined as "very low-density detached housing." Allowing a CD-3 zoning designation, which typically facilitates higher densities and a more urban character, directly undermines this foundational intent of maintaining

a rural-to-suburban transition.



- **Inappropriate Land Uses:** The RT classification explicitly states that "New mixed-use, medium-density residential, commercial, industrial and warehouse uses are inappropriate." While the specific uses of CD-3 are not detailed in this report, CD-3 would likely permit uses or densities that fall into these categories deemed inappropriate for the RT area.

- **Premature Annexation and Lack of Urban Services:** A core policy within the RT classification, found under the "Form & Pattern" section, states: "**Annexations and rezonings are inappropriate without concurrent extensions of urban services.**" The subject property currently lacks essential urban services, such as public sewer infrastructure. The applicant's request for annexation and rezoning without the concurrent extension of these critical services represents a direct contravention of this explicit Comprehensive Plan policy.

- **Mismatch with Designated Implementing Districts:** The Comprehensive Plan identifies the "Rural Character District CD-2" and "Civic CV" as the implementing zoning districts for the RT future land use classification. The applicant's request for "CD-3" zoning is not an enumerated implementing district for RT, indicating a significant departure from the planned zoning framework for this area.

- **Deviation from Planned Form & Pattern:** The RT classification describes a character of "single-family detached residential areas and legacy agricultural operations" with "large

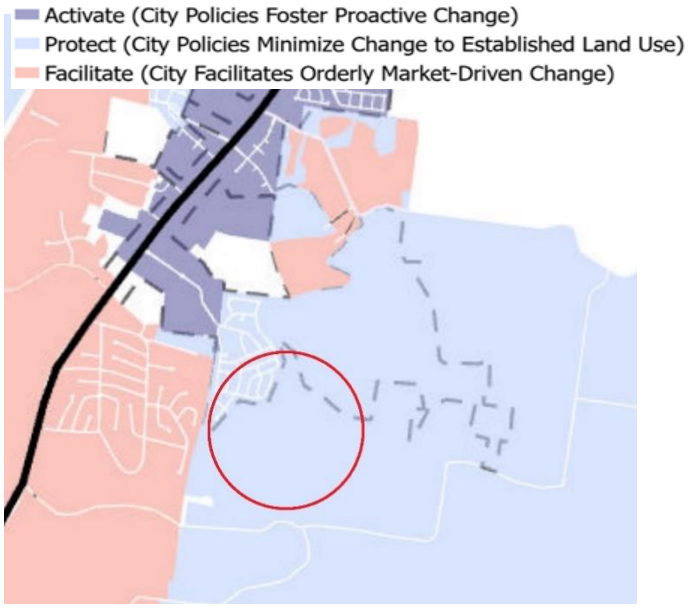
lots with very deep setbacks," "minimal site and design requirements," and "insignificant public frontages." A CD-3 district would likely introduce form and pattern standards inconsistent with this semi-rural, very low-density character.

- **Orderly and Contiguous Development:** The request is also considered premature in the context of orderly and contiguous growth, especially given that an area immediately to the south has been recently annexed but remains undeveloped and without urban services. Permitting annexation and higher-intensity zoning in an area lacking services creates an undesirable "leapfrog" development pattern, which is contrary to the principles of efficient infrastructure extension.

For these reasons, the request for a Comprehensive Plan Amendment to allow CD-3 zoning and the associated annexation is deemed **inconsistent** with the vision and specific policies of the Connect Columbia Comprehensive Plan for the Rural Transition area.

AREA OF CHANGE (Protect)

Connect Columbia established the areas of change policy designation for the subject site as ***Protect*.** These are areas that are not expected (or do not desire) to experience significant changes in character. Occasional new or infill development within these areas may enhance quality of place and improve connectivity and transportation options, However, the land use pattern is established, and major or intense development should provide clear public benefits. The review process should emphasize compatibility and adequacy of municipal services. (Connect Columbia p. 32).



CONFORMITY WITH ZONING ORDINANCE

As required by **§ 8.5.19.F.3** of the Zoning Ordinance, the applicant has provided a concept plan. The purpose of the concept plan is to demonstrate that it may be possible to develop the site in conformity with the standards of the requested character districts. The applicant's request involves a proposed annexation and a concurrent request for CD-3 zoning for the subject property. This section assesses the conformity of the proposed zoning with the intent and regulations of the Columbia Zoning Ordinance as they relate to the Comprehensive Plan.

The proposed CD-3 zoning is found to be **not in conformity** with the existing Columbia Zoning Ordinance, as it applies to the context of the subject property and its Comprehensive Plan designation.

- **Inconsistent with Comprehensive Plan Implementing Districts:** As noted in the "Consistency with Connect Columbia" section, the Comprehensive Plan designates the Rural Character District (CD-2) and Civic (CV) as the appropriate implementing zoning districts for areas classified as Rural Transition (RT). The applicant's request for CD-3 zoning is a district that is not designated to implement the RT Future Land Use Classification. To grant CD-3 zoning, an amendment to the Comprehensive Plan would be necessary to change the underlying Future Land Use designation for this property, as the Zoning Ordinance relies on the Comprehensive Plan for guiding zoning decisions.
- **Zoning Pre-requisites for Annexation:** The Zoning Ordinance, in conjunction with the Comprehensive Plan, establishes that areas being annexed must have the necessary urban services available or must have them concurrently extended. The lack of adjacent and available urban services, particularly sewer, means that the proposed CD-3 zoning, which typically implies a greater demand for such services, cannot be adequately supported at this location under current conditions. The Zoning Ordinance's application is intrinsically linked to the ability to serve the proposed uses and densities.
- **Incompatibility with Existing Rural Character District Intent:** The intent of the existing Rural Character District (CD-2), which is the designated implementing zone for RT, is to maintain low densities and preserve rural characteristics. Allowing CD-3 zoning would introduce a level of development intensity and form that is fundamentally incompatible with the purpose and standards of the adjacent and surrounding CD-2 zoned properties, as well as the overarching intent of the RT area.

Therefore, without a fundamental change to the underlying Comprehensive Plan Future Land Use classification for this property to one that supports CD-3 zoning and absent the provision of necessary urban services, the proposed CD-3 zoning is **not in conformity** with the guiding principles and structure of the Columbia Zoning Ordinance in this context.

SUMMARY OF DEVELOPMENT REVIEW COMMITTEE COMMENTS

The DRC reviewed this proposal at its meeting in February 2025. A full list of comments, and the applicant's responses, is provided in the agenda packet. Some key comments are noted below.

- **Engineering:** No comments
- **Planning** noted that the implementing Character district for Hillside and Natural Space protection is Civic. The applicant responded by establishing a Civic district over the required protection area in accordance with *Connect Columbia.* Furthermore, planning noted that access with the adjoining CPWS property to the east of the subject property will require joint agreements if a Development Plan for the subject site is created.
- **Fire Marshal:** Advisory note was made that structure over 150 ft off main roads will not meet the code. This was based off of the concept plan only and would be required to addressed at time of Site Development Plan.
- **Columbia Water** issued conditional water availability letter on January 2, 2025, and remains valid for 120 days. It was highlighted in the letter that current planning anticipates completion of water system improvements near the end of 2028.
- **Wastewater** noted that it has the available capacity to service the development; however, existing infrastructure improvements may be required to covey additional sanitary sewer flow from the development with a requirement of a contract with a third-party engineering consultant.

REVIEW PROCESS

The Development Review Committee evaluated the proposed rezoning at its July 2025 meeting, as directed by **Section 8.3.7** of the Zoning Ordinance. Technical comments are provided in the agenda package.

Section 8.5.19 of the Zoning Ordinance directs the Planning Commission to review and make a recommendation on all proposed changes to the Official Zoning Map. The Planning Commission is the recommending body for rezonings under **§ 8.3.3.B.3** of the Zoning Ordinance.

Section 8.5.19.H.4 of the Zoning Ordinance establishes the review criteria for approval of all changes to the Official Zoning Map:

a. *The Rezoning*[1] *is consistent and not in conflict with the Comprehensive Plan or other applicable approved local plans for the area;*

b. It has been determined that the legal purposes for which zoning exists, as set forth in Section 1.5 [, are not contravened];

c. It has been determined that there will be no adverse effect upon Adjoining property owners unless such effect can be justified by the overwhelming public good or welfare;

d. It has been determined that no one property owner or small group of property owners will benefit materially from the change to the detriment of the general public;

e. It has been determined that conditions affecting the area have changed to a sufficient to warrant the Zoning Map Amendment or that the existing zoning of the property was the result of a mistake;

f. It has been determined that adequate schools, roads, parks, wastewater treatment, water supply, and stormwater drainage facilities are available.

Section 8.5.20 of the Zoning Ordinance directs the Planning Commission to review and make a recommendation on all proposed Comprehensive Plan, Future Land Use Map, or other City land use plan Amendment(s)/Adoption(s). Collectively referred to as "Land Use Plans" within the Section.

Section 8.5.20.E of the Zoning Ordinance establishes the actions by the Planning Commission when considering changes to Amendments/Adoptions.

Section 8.5.20.F outlines the criteria for Planning Commission Recommendations:

1. *Whether the proposed change would be consistent with the intent, goals, objectives, policies, guiding principles and programs of all other applicable adopted Land Use Plans;*

[1] **Rezoning**: A change in the district boundaries or district classifications of the Zoning map pursuant to Section 8.5.19. **For the purposes of the Ordinance, rezoning also includes the initial zoning of a property that occurs with annexation.**

2. *Whether the proposed change would be compatible with the existing land use pattern and designated future land uses;*

3. *Whether the proposed change would create substantial adverse impacts in the Adjacent area or the City in general;*

4. *Whether conditions affecting the area have changed to a sufficient extent to warrant the proposed change; and*

5. *Whether the subject parcel is of adequate shape and size to accommodate the proposed change*

SAMPE MOTIONS

Approve:

Move to find, based on the information presented by the applicant and the analysis provided by city staff, that the criteria listed in section **8.5.19.H.4** of the City of Columbia Zoning Ordinance have been satisfied and recommend approval of the request to annex with plan of services as presented, subject to technical comments and other conditions presented by planning staff.

Deny:

Move to recommend denial of the requested annexation with a plan of services and zoning having found, based on the information presented by the applicant and the analysis provided by city staff, that the criteria listed in section **8.5.19.H.4** of the City of Columbia Zoning Ordinance are not satisfied [*list specific reasons for denial*].

Defer:

Move to find that there is insufficient information to make a decision, defer the matter to the next regularly scheduled meeting of the Planning Commission, and request that the [applicant/staff] provide: [list additional information] for review at a future meeting.

June 17,2025

Mr. Aaron Keathley
Crunk Engineering, LLC
7112 Crossroads Blvd. Suite 201
Franklin, TN 37067
Sent via email: *Aaron@crunkeng.com*

RE: **Water Availability Letter** Expires: 10/15/2025
Foster Lane Subdivision – 174 Units
Tax Map 112, Parcel 017.00
Columbia, Maury County, TN

Dear Mr. Keathley:

Columbia Power & Water Systems ("the Utility"/CPWS) is a municipal corporation authorized to provide water services in accordance with State law. CPWS has adopted rules, regulations, and standard operation procedures, prescribing the conditions under which CPWS will furnish water service. In addition, certain State laws delegate authority to the Tennessee Department of Environment and Conservation (TDEC), various Planning Commissions, and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Water service will be made available on a first-come, first-served basis, subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies. Water service is subject to availability of all CPWS furnished equipment and materials appropriate for the development and provided the applicant complies with all rules and regulations of CPWS and conditions set out herein.

We have received your application for water availability to serve a proposed residential development consisting of 174 single-family residential units off Foster Lane south of the intersection with Trotwood Avenue. It appears that the proposed water infrastructure connections are anticipated to come through stub-streets in the adjacent (proposed) Hunters Glen Phase 4 subdivision. Based on this concept, we have reviewed this application for service with the understanding that both projects (Foster Lane Subdivision and Hunters Glen Ph4) would be constructed at the same time. CPWS has performed field measurements and water system hydraulic model analysis of the projected water demands for the proposed development.

CPWS has determined that the existing system is <u>not</u> able to provide 1,000 gallons per minute (gpm) fire flow in the proposed development without adverse effects in the surrounding area. However, the existing system is able to meet the minimum 500 gpm fire flow requirement – as

listed in the Fire Flow Requirements letter submitted as part of the application. In addition, the demand load for the full buildout of the proposed development will require another water main connection to the 12-inch main in Trotwood Avenue via Foster Lane. As such, CPWS can provide water for the proposed development according to the following criteria and requirements:

- The first 80-units (total between both projects; Foster Ln and Hunters Glen Ph4) can be served from existing water mains in the Hunters Glen development on Alterwood Drive, Hunters Glen Drive, and Sugar Tree Lane.
- Additional units (81 through buildout) will require an additional water main connection from the development to Trotwood Avenue via Foster Lane.
- The current CPWS system is only able to support a minimum fire flow of 500 gpm within the development until (planned) additional improvements in the Southside distribution area are completed.
- Separate irrigation meters with backflow devices will be required to serve the proposed Project.
- If fire sprinkler systems are requested or required, separate fire meters with backflow devices will be required to serve the proposed Project.

All of the above requirements up to and including the meter(s) are to be constructed and paid for by the Applicant and dedicated to CPWS once complete. No construction of water infrastructure shall be initiated until final construction plans have been approved by CPWS (including TDEC approval).

Please be aware that CPWS Distribution System Master Planning includes improvements in this area to support a higher level of service and growth, including the ability to support larger fire flow demands. If the developer is interested in accelerating those system improvements by direct participation - including construction – we welcome a meeting to discuss.

This Water Availability Letter will expire on the date listed on the first page unless vested by payment of water service fees and impact fees for the proposed project. If the Applicant elects to pay only a portion of the impact fees due for the proposed development, then the vesting will only apply to the portion for which impact fees were paid. Any request for water availability after the expiration date of this letter will be considered a new application.

Once you have received this Water Availability Letter, next steps in the process to vest water service from CPWS are as follows:

- Remit to CPWS new water service fees for plan review, TDEC coordination, and inspection as follows: $1,500 + $370 per SFU equivalent
- Applicant will prepare design drawings for review and approval by CPWS for construction of the proposed water system improvements.
    - Provide design drawings in AutoCAD and .pdf format for CPWS review of proposed development. Include design drawings for grading, drainage,

roadway improvements, buried (wet and dry) utilities, water systems, and surface improvements.
    - CPWS will submit proposed improvements design to TDEC for review and approval.
    - Once comments received from TDEC have been addressed and approved, CPWS will approve the Construction Drawings for the proposed water system improvements.
- As an option, the applicant may request CPWS design the water infrastructure to support the proposed development project. Under this option, the applicant will:
    - Provide site base CAD files in DWG format, including roads, lot lines, existing and proposed contours, and other existing and proposed utilities, for use in development of water construction drawings.
    - CPWS will then develop design drawings for the water system improvements and submit to TDEC for review and approval.
- Current water service fees due prior to CPWS review of design plans are listed in the table below. *Note that payment of Water Service Fees will extend the expiration of this Water Availability Letter for one year, while the applicant is working with CPWS on design and review of the improvement drawings*.

Water Service Fees	SFUs	Total
$1,500 + 370 per SFU	174	**$65,880**

- Upon Construction Drawing approval by CPWS, applicant may then pay Impact Fees and schedule the pre-construction meeting. Pre-construction meeting will be canceled and re-scheduled unless all impact fees are paid at least 48 hours prior, or surety is provided in lieu of full payment.
- Water meters will be ordered by CPWS once meter fees are paid by the Applicant.
    - Meter fees are subject to change based on final design and the prevailing Board-approved rates at time of payment.
    - If surety is provided in lieu of payment, meters are not ordered until fees are paid and may result in extended lead-times.
    - Note that meter fees are charged at time of purchase, based on price of meter at that time.
- Applicants will be charged Impact Fees and Meter Fees in effect at time of payment. Please see CPWS website for schedule of impact fees and timing of planned fee escalations. Anticipated meter costs and impact fees for this project are according to the following table:

Impact Fees and Meter Costs	Number	$ / Unit	Total
3/4" Service Meter Cost	174	$540	$93,960
(7/1/25) Impact Fee for 3/4" Service Meter	174	$5,500	$957,000
Estimate of Fees Due Prior to Pre-Construction Meeting =			**$1,050,960**

- After the pre-construction meeting, CPWS will then issue a formal Notice to Proceed. No construction of water improvements may take place prior to the Notice to Proceed.
- Applicant is required to construct all public water infrastructure per CPWS standard specifications and provide CPWS personnel unregulated access to the site to inspect the construction of the water infrastructure. No construction of water improvements may take place without a CPWS inspector present.

Please feel free to contact me at 931-388-4833 x7655 or Matt.Wheeler@cpws.com if you have questions or would like to discuss.

Sincerely,



Matthew J. Wheeler, P.E.
Vice President of Water Resources, CPWS

cc: John Maher, John Maher Builders
Bart Anderson, CPWS
Eric King, Inflo Design Group
File 23-034

PLAN OF SERVICES

FOR ANNEXATION
Foster Lane PROPERTY
+/-86.6 ACRES,
BEING
TAX MAP 112 PARCEL 17

(25-0198)

A. Water

A water availability letter was issued, and it remains valid and will not expire until October 15, 2025. The availability of capacity to serve is based on a determination by the Fire Marshal of fire flow requirements and the information submitted on the Water Service Availability Request application. Any off-site improvements detailed in the availability letter are the responsibility of the developer/owner. All public water system improvements are subject to the preparation and approval of detailed construction plans prepared in accordance with CPWS and Tennessee Department of Environment and Conservation requirements."

B. Sewer

All sewer improvements including but not limited to off-site improvements, on-site improvements, and pump station and equipment installation shall be completed and functioning to the satisfaction of the Director of the Wastewater Department prior to the filing of any Final Plat with the City of Columbia Municipal Planning Commission, unless specific approval is granted by the Director and a surety of sufficient amount is provided. Note: Pump stations will require a building permit and all other required permits from additional entities. All inspections must be completed and certificates of completion granted before Council Agenda Deadline. Please contact the Wastewater Department for standard design details and equipment.

C. Police

The jurisdiction of the Columbia Police Department will be extended to the areas annexed immediately upon the effective date of annexation.

D. Fire and Rescue

1. The City of Columbia Fire & Rescue Department provides an array of services to the citizens and visitors of the City of Columbia. These services include but may not be limited to non-emergency services such as fire prevention and codes enforcement, pre-incident planning, public education programs, smoke alarm check/replacement, and emergency services such as fire suppression, heavy rescue, emergency medical first response, and hazardous materials response. The City of Columbia Fire Department currently holds an Insurance Service Organization (ISO) Class 1 rating.

   Columbia Fire & Rescue strives to provide all services in a timely, courteous, and professional manner. Due to the nature of emergency services, we strive to arrive at the incident scene as quickly as possible but without posing additional dangers to the residents/visitors we meet while responding to your location.

Infrastructure:

The infrastructure put in place is like the foundation of your development. If the infrastructure is designed and constructed with the present needs and future plans in mind, your development will be prepared for the future.

Water:

Columbia Fire & Rescue requires that there be sufficient water provided through the municipal water system to meet the needed fire flow requirements for your facility. These flows are calculated by the Fire Marshal. These flows are based on many factors dealing with your buildings' construction type, fire load in the building, square footages, and etc. If you install fire sprinkler systems in your facilities, Columbia Fire & Rescue can drastically reduce fire flow requirements.

Roadway and Bridges: Columbia Fire & Rescue serves the residents and visitors of our jurisdiction by utilizing highly trained firefighters and modern fire apparatus. A minimum response to a structure fire in your development will be four fire apparatus. One of the fire apparatus that will respond to your development will be a ladder truck with a gross vehicle weight rating of approximately 80,000 pounds. Roadways and bridges must be designed and constructed not only with light vehicle traffic in mind but with the emergency service vehicles that will be servicing your development.

Damage Free Property Access: Columbia Fire & Rescue requires all gates automatic or manual that will be or may be locked to be equipped with Knox Rapid Entry system. You can research this product at www.knoxbox.com or your gate vendor will be familiar with the product. Our department would also

be happy to work with you to find what Knox Rapid Entry product is best suited for your application.

Damage Free Home/Facility Access: Currently, Columbia Fire & Rescue does not require residential occupancies to be equipped with the Knox Rapid Entry system. However, this product is a very wise investment for your future development. The Knox Rapid Entry System products allow homes to be secured but also allow the Columbia Fire & Rescue Department access to your property and/or homes without any delay or property damage. The system has an armored key lock safe recess mounted to the exterior of the homes with the key to the residence inside. Firefighters access the residence key during an emergency to gain entry into the home without causing any property damage. Again, our department would be happy to provide you with information and education on this program and its many positive attributes.

Emergency Response to Your Location: The proposed annex will be located on the Property at Tax Map 112 Parcel 17, Foster Lane, in Columbia, Tennessee. This location is approximately 0.8 miles from Fire Station #4 located at 5040 Trotwood Ave, 3.6 miles from Columbia Fire Station #2 located at 711 Lion Parkway, 5.4 miles from Fire Station #1 located at 1000 South Garden in downtown Columbia. These distances are used to calculate an estimated response time to your development for the different levels of emergency response that may be needed at your facilities.

Medical Emergency Response: Columbia Fire & Rescue normally responds a minimum of one fire apparatus from Station #4 to service your location for a medical emergency. From the time you dial 911 until the fire department will arrive at your location will be within 2.00 minutes. Should your property experience a mass casualty incident where additional fire apparatus/firefighters would need to respond, then Fire Station #2 or Fire Station #4 could send an additional unit and arrive on-scene within 5.00 minutes of your 911 call.

Fire Incident Response: Columbia Fire & Rescue recommends a multi-faceted fire suppression approach. First, future homes should be constructed to meet or exceed all applicable fire and life safety codes. Secondly, even if not required by building, fire, or life safety codes, we encourage the installation and use of fire sprinkles in future homes. Columbia Fire & Rescue's normal fire incident response to a single family residential development is three fire apparatus with a minimum 15 firefighters and 1 Chief Officer. Response times will be similar to the times estimated in the emergency medical response section. Your first fire apparatus should be on-scene within approximately 2.00 minutes, the second fire apparatus should be on-scene within 5.00 minutes, and the third/fourth apparatus should be on-scene within 6.50 minutes. Columbia Fire & Rescue also has an automatic aid agreement and you would also receive a response from Mt. Pleasant Fire Department with-in 7.50 minutes. Due to OSHA standards that require at least four firefighters to arrive on-scene prior to initiating an interior

fire attack and Columbia Fire & Rescue's minimum staffing policy, it could take the 6.50 minutes to get the minimum number of firefighters to the scene to begin an interior fire attack.

In summary, the members of the Columbia Fire & Rescue consider it an honor to serve the residents and visitors in our community each and every day. When an emergency occurs, time is our worst enemy. Columbia firefighters train to reduce every second while not posing any additional undue risk to firefighters and/or the public when responding to or working at an emergency incident. The times estimated in the referenced examples are a combination of averages and estimations. Our department has very little data to support incident responses to your location. The time estimations are based on the fire companies being at their regular station, time it takes for Maury 911 to process a 911 call, the time it takes for Columbia firefighters to board the apparatus and leave the station, and the travel time from the station to your location is an estimate based on road miles, probable traffic conditions, and road conditions. You can see by the examples referenced above that it will take time for Columbia Fire & Rescue to receive your call for help and then respond to your location. The roadways have considerable driveway/cross street connections, hills, curves, and reduced speed zones that contribute to a long response time for fire apparatus to arrive.

E. Development Services

1. The planning and zoning jurisdiction of the City will extend to the annexed areas immediately upon the effective date of the annexation.

2. The property shall be zoned CD-3 (Neighborhood Character District) upon the effective date of the annexation.

3. The code administration jurisdiction of the City will extend to the annexed areas immediately upon the effective date of the annexation.

4. Upon the effective date of annexation, all development will be required to abide by the Columbia Zoning Ordinance.

F. Streets and Drainage

1. Upon acceptance by City Council and all warranties have expired; all streets and drainage systems will be maintained by Public Works. Services will include: Street sweeping, Catch basin cleaning, Street and curb repair, Snow removal, Drainage maintenance, and Sidewalk repair.

2. **Signage:** Upon acceptance by City Council, all approved street signs will be maintained by Public Works.

G. Parks and Recreation

Residents of the annexed areas may use all existing recreational facilities, parks, etc., on the effective date of annexation. The same standards and policies now used in the present City will be followed in expanding the recreational program and facilities in the enlarged City.

H. Refuse Collection

Single family homes will receive the following City of Columbia sanitation services:

Residential customers will be issued one 96-gallon garbage receptacle with the option to purchase up to two additional garbage receptacles. The Sanitation Department will provide weekly curbside garbage collection. Bi-weekly curbside recycling will be offered on a subscription basis. Brush collection will be provided on a bi-weekly basis. Residents are allotted three free bulk item pickups per year.

I. Power

Columbia Power System has an existing power line near your proposed development.

We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction.

J. Schools

This property falls under the jurisdiction of Maury County Public School System.

The development combined with current neighborhoods and additional approved developments in these zones may require either new construction or realignment of school zones to accommodate new students.

June 16, 2025

Crunk Engineering, LLC
7112 Crossroads Blvd, Ste 201
Brentwood, TN 37027

Response to Comments

Item No. 25-0198
Foster Lane Comprehensive Plan Amendment Annexation

Columbia Development Services,

The following comments were received from a development review committee meeting held on June 10, 2023 regarding a comprehensive plan amendment and annexation for the subject parcels located on Foster Lane. These comments have been reviewed and incorporated where appropriate. Should you have additional questions or comments, please let us know.

Thanks,

Adam Crunk, PE
Principal Engineer
Crunk Engineering
adam@crunkeng.com

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, June 10, 2025

ITEM NO.
25-0198

DESCRIPTION: Foster Ln Comp Plan Amendment Annexation

COMMENTS:

Fire

1. Advisory Note: I know the water availability letter states CPWS can supply 500gpm and the houses will have to be sprinkled per the required water letter, but through our established auto aid agreements and tanker operations, we have calculated an additional sustainable water flow of 600gpm. This capacity is supplemental to the existing calculations for CPWS water system. We would have 1,100gpm available now, therefore the homes will not have to be sprinkled.

RESPONSE: Understood

Wastewater

1. Developer is required to work with the owners of the property to the north to obtain general sanitary sewer access as well as pump station access.

RESPONSE: Understood

Planning

1. The lead staff personnel for this case are Austin Brass, City Planner, AICP and Jeremy Humphrey, Planner II. Please contact abrass@columbiatn.gov and jhumphrey@columbiatn.gov with questions about the development review process or technical comments. The case planner should be copied on all communication with other city staff.

RESPONSE: Understood

2. At resubmittal, please provide a response letter addressing each comment along with any revised plans. If the nature of the comment does not warrant a response, or the comment was previously addressed, please simply note that the information has been acknowledged. Any documents or additional information that you want to present to the Planning Commission should be included in your resubmittal.

RESPONSE: This letter is prepared to serve as a response to comments.

3. Provide description of proposed project in application and complete entire application. Complete all applicable, i.e.; annexation, rezoning, and comp plan amendment.

RESPONSE: Two applications have been prepared for this project; one for the annexation and rezoning by the Mahers, and the other for the comprehensive plan amendment by both the Mahers and the McBrooms. Both applications have been submitted for consideration by the planning commission.

4. Site is not currently adjacent to a roadway that can adequately serve the annexation request. As noted, this application for annexation is premature as it is not directly connected to adequate infrastructure to support request.

RESPONSE: The applicant is working on obtaining easements and agreements for the proposed right-of-way associated with the extension of Foster Lane in the event that future developments to the north are not completed. It is not unusual to have annexations and rezonings in which major infrastructure improvements are necessary for development. We simply ask approval for annexation and rezoning understanding that future improvements will be necessary for the development of the property. The landowner has worked alongside the property owners to the north for an orderly process of development and shared cost for significant sewer, water, and roadway improvements that are critical to the development of these parcels.

Engineering

1. No comments on Annexation, Rezoning, and Comprehensive Plan Amendment.

RESPONSE: Understood

Police

1. No comments provided.

RESPONSE: Understood.

Building

1. No comments.

Public Works

1. Please see attached Plan of Services.
2. Garbage Collection
   Single family homes will receive the following City of Columbia sanitation services: Residential customers
   will be issued one 96-gallon garbage receptacle with the option to purchase up to two additional garbage
   receptacles. The Sanitation Department will provide weekly curbside garbage collection. Bi-

weekly
curbside recycling will be offered on a subscription basis. Brush collection will be provided on a bi-weekly
basis. Residents are allotted three free bulk item pickups per year.
Streets and Drainage
Upon acceptance by City Council and all warranties have expired, all streets and drainage systems will be
maintained by Public Works. Services will include:
 Street sweeping
 Catch basin cleaning
 Street and curb repair
 Snow removal
 Drainage maintenance
 Sidewalk repair
Signage
Upon acceptance by City Council, all approved street signs will be maintained by Public Works.

3. Please see attached Plan of Services.
4. Garbage Collection
   Single family homes will receive the following City of Columbia sanitation services: Residential customers
   will be issued one 96-gallon garbage receptacle with the option to purchase up to two additional garbage
   receptacles. The Sanitation Department will provide weekly curbside garbage collection. Bi-weekly
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    Street sweeping
    Catch basin cleaning
    Street and curb repair
    Snow removal
    Drainage maintenance
    Sidewalk repair
   Signage
   Upon acceptance by City Council, all approved street signs will be maintained by Public Works.

RESPONSE: Reviewed and Understood.

City Attorney

1. No comments provided.

Maury County E911

1. No comment on annexation. No street names have been placed on reserve.

Maury County Schools

1. Battle Creek Elementary, Battle Creek Middle, Battle Creek High 9-11 (25/26 SY) 9-12 (26/27 SY). The development combined with current neighborhoods and additional approved developments in these zones may require either new construction of realignment of school zones to accommodate new students.

RESPONSE: Understood.

Columbia Water

1. A water availability letter was issued on December 13, 2024, however it is currently expired. The availability of capacity to serve is based on a determination by the Fire Marshal of fire flow requirements and the information submitted on the Water Service Availability Request application. Any off-site improvements detailed in the availability letter are the responsibility of the developer/owner. All public water system improvements are subject to the preparation and approval of detailed construction plans prepared in accordance with CPWS and Tennessee Department of Environment and Conservation requirements.

RESPONSE: Understood, a new letter has been requested and associated fees paid to CPWS.

Columbia Power

1. Columbia Power System has an existing power line near your proposed development. We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction.
   . Unfortunately, due to current supply chain challenges, no timeframe can be guaranteed regarding the availability of meters or transformers appropriate for your development.

RESPONSE: Understood.

Duck River Electric Membership Corp

1. No comments.

Maury County Highway Dept.

1. Foster Lane ROW and roadway shall be annexed by the City of Columbia with the subject property from Trotwood Avenue to Tax Map 125 Parcel 004.00.

RESPONSE: Understood.

Atmos Energy

1. No comments provided.

ATT

1. No comments provided.

CITY OF
COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, June 10, 2025

ITEM NO.
25-0198

DESCRIPTION: Foster Ln Comp Plan Amendment Annexation

COMMENTS:

Fire

1. Advisory Note: I know the water availability letter states CPWS can supply 500gpm and the houses will have to be sprinkled per the required water letter, but through our established auto aid agreements and tanker operations, we have calculated an additional sustainable water flow of 600gpm. This capacity is supplemental to the existing calculations for CPWS water system. We would have 1,100gpm available now, therefore the homes will not have to be sprinkled.

Wastewater

2. Developer is required to work with the owners of the property to the north to obtain general sanitary sewer access as well as pump station access.

Planning

3. The lead staff personnel for this case are Austin Brass, City Planner, AICP and Jeremy Humphrey, Planner II. Please contact abrass@columbiatn.gov and jhumphrey@columbiatn.gov with questions about the development review process or technical comments. The case planner should be copied on all communication with other city staff.
4. At resubmittal, please provide a response letter addressing each comment along with any revised plans. If the nature of the comment does not warrant a response, or the comment was previously addressed, please simply note that the information has been acknowledged. Any documents or additional information that you want to present to the Planning Commission should be included in your resubmittal.
5. Provide description of proposed project in application and complete entire application. Complete all applicable, i.e.; annexation, rezoning, and comp plan amendment.

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

6. 4. Site is not currently adjacent to a roadway that can adequately serve the annexation request. As noted, this application for annexation is premature as it is not directly connected to adequate infrastructure to support request.

Engineering

7. No comments on Annexation, Rezoning, and Comprehensive Plan Amendment.

Police

8. No comments provided.

Building

9. No comments.

Public Works

10. Please see attached Plan of Services.
11. Garbage Collection
    Single family homes will receive the following City of Columbia sanitation services: Residential customers
    will be issued one 96-gallon garbage receptacle with the option to purchase up to two additional garbage
    receptacles. The Sanitation Department will provide weekly curbside garbage collection. Bi-weekly
    curbside recycling will be offered on a subscription basis. Brush collection will be provided on a bi-weekly
    basis. Residents are allotted three free bulk item pickups per year.
    Streets and Drainage
    Upon acceptance by City Council and all warranties have expired, all streets and drainage systems will be
    maintained by Public Works. Services will include:
    - Street sweeping
    - Catch basin cleaning
    - Street and curb repair
    - Snow removal

- Drainage maintenance
- Sidewalk repair

Signage
Upon acceptance by City Council, all approved street signs will be maintained by Public Works.

12. Please see attached Plan of Services.
13. Garbage Collection
Single family homes will receive the following City of Columbia sanitation services: Residential customers
will be issued one 96-gallon garbage receptacle with the option to purchase up to two additional garbage
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- Snow removal
- Drainage maintenance
- Sidewalk repair

Signage
Upon acceptance by City Council, all approved street signs will be maintained by Public Works.

City Attorney

14. No comments provided.

Maury County E911

15. No comment on annexation. No street names have been placed on reserve.

Maury County Schools

16. Battle Creek Elementary, Battle Creek Middle, Battle Creek High 9-11 (25/26 SY) 9-12 (26/27 SY).

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
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The development combined with current neighborhoods and additional approved developments in these zones may require either new construction of realignment of school zones to accommodate new students.

Columbia Water

17. A water availability letter was issued on December 13, 2024, however it is currently expired. The availability of capacity to serve is based on a determination by the Fire Marshal of fire flow requirements and the information submitted on the Water Service Availability Request application. Any off-site improvements detailed in the availability letter are the responsibility of the developer/owner. All public water system improvements are subject to the preparation and approval of detailed construction plans prepared in accordance with CPWS and Tennessee Department of Environment and Conservation requirements.

Columbia Power

18. Columbia Power System has an existing power line near your proposed development. We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction.
. Unfortunately, due to current supply chain challenges, no timeframe can be guaranteed regarding the availability of meters or transformers appropriate for your development.

Duck River Electric Membership Corp

19. No comments.

Maury County Highway Dept.

20. Foster Lane ROW and roadway shall be annexed by the City of Columbia with the subject property from Trotwood Avenue to Tax Map 125 Parcel 004.00.

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

Atmos Energy

21. No comments provided.

ATT

22. No comments provided.

Resubmittal Guidelines

Please provide a comment response letter as well as digital copies of revised plans and supporting documentation. Submit all required documents electronically through the online portal: columbia.onlama.com. If the files are oversized, please provide a file sharing link.

Please contact the case planner identified in the Planning Comments with any questions about the review process.

Please contact pkeltner@columbiatn.gov or srichardson@columbiatn.gov if you encounter difficulties with the online portal.

You will receive an invoice for required advertising and mailing fees. All fees must be paid by the Friday following resubmittal in order advance to the Planning Commission agenda.

NOTE: All resubmittals must demonstrate compliance with city standards prior to Planning Commission review. Requests which do not adhere to regulations and/or remain unresponsive to technical comments will not be forwarded to the next agenda until such items are amended. Final Plat applications which are not ready to proceed to Planning Commission following the first resubmittal deadline will be added to the following DRC agenda to confirm the status of required infrastructure and utilities. Applications which remain incomplete following two resubmittal deadlines will be closed.



SITE DATA TABLE

PARCEL ID: 112 017.00
OWNER: JOHN MAHER BUILDERS, INC
ADDRESS: P.O. BOX 681727 FRANKLIN, TN 37068
SITE ACREAGE: 86.7-AC

EXISTING ZONING: N/A - COUNTY JURISDICTION
EXISTING USE: FARM
PROPOSED ZONING: CD-3
PROPOSED USE: RESIDENTIAL DEVELOPMENT

ZONE CD-3 DESIGN STANDARDS:
MAX DENSITY: 4 UNITS / GROSS ACREAGE (MAX)
MAX BLOCK PERIMETER: 2800-FT
MIN LOT WIDTH: 65-FT
SETBACKS:
FRONT = 25-FT (MIN)
SECONDARY FRONTAGE = 20-FT (MIN)
SIDE = 8-FT (MIN)
REAR = 25-FT (MIN)
OFF STREET PARKING: MIN. LENGTH OF 100-FT FROM INTERNAL DRIVE
CIVIC SPACE REQUIREMENT: MINIMUM 0.5-AC, MAXIMUM 8-AC

DESIGN ELEMENTS:
DENSITY: 174 UNITS / 86.7-AC = 2.0 UNITS / AC
CIVIC SPACE PROVIDED: 27.7-AC (31.9% OF GROSS ACREAGE)

Parcel Table	
Lot #	Area
1	11,825
2	11,212
3	11,543
4	10,356
5	10,356
6	10,356
7	10,356
8	10,356
9	10,356
10	10,356
11	10,356
12	10,356
13	10,356
14	10,552
15	10,379
16	10,477
17	10,477
18	10,477
19	10,477
20	10,477
21	10,477
22	10,477
23	11,732
24	12,566
25	13,534
26	9,495
27	11,687
28	13,016
29	14,345
30	15,675
31	16,870
32	10,090
33	10,090
34	10,090
35	10,090
36	10,090
37	10,090
38	10,090
39	10,090
40	10,090
41	10,090
42	10,090
43	11,533
44	12,164
45	12,164
46	11,549
47	10,090
48	10,090
49	10,090
50	10,090
51	10,090
52	10,090
53	10,538
54	10,672
55	10,672
56	10,672
57	10,672
58	10,672
59	10,672
60	10,672
61	10,672
62	10,761
63	11,059
64	11,169

Parcel Table	
Lot #	Area
66	11,128
67	11,107
68	11,086
69	11,065
70	11,045
71	11,024
72	11,003
73	10,983
74	10,962
75	10,808
76	10,141
77	10,258
78	10,239
79	10,221
80	10,202
81	10,184
82	13,633
83	10,400
84	10,400
85	10,400
86	10,400
87	10,400
88	10,266
89	10,908
90	11,042
91	11,042
92	11,042
93	11,042
94	11,042
95	11,042
96	11,042
97	11,042
98	11,042
99	11,042
100	11,042
101	10,908
102	10,908
103	11,042
104	11,042
105	11,042
106	11,042
107	11,042
108	11,042
109	11,042
110	11,042
111	11,042
112	11,042
113	11,042
114	10,908
115	11,019
116	11,153
117	11,153
118	11,153
119	11,153
120	11,153
121	11,019
122	10,307
123	10,441
124	10,441
125	10,441
126	10,441
127	10,441
128	10,441
129	10,441

Parcel Table	
Lot #	Area
131	10,307
132	10,441
133	10,441
134	10,441
135	10,441
136	10,441
137	10,441
138	10,441
139	10,307
140	11,763
141	11,897
142	11,897
143	11,897
144	11,897
145	11,897
146	11,897
147	11,897
148	11,763
149	11,763
150	11,897
151	11,897
152	11,897
153	11,897
154	11,897
155	11,897
156	11,897
157	11,763
158	10,307
159	10,441
160	10,441
161	10,441
162	10,441
163	10,441
164	10,441
165	10,441
166	10,307
167	13,310
168	11,231
169	11,231
170	11,231
171	11,231
172	11,231
173	11,231
174	11,097
1000	217,611
1001	28,253
1002	61,498
1003	147,143
1004	116,053
1005	23,264
1006	613,809

CRUNK ENGINEERING LLC
7112 CROSSROADS BOULEVARD
SUITE 201
BRENTWOOD, TN 37027
(615) 873-1795
WWW.CRUNKENG.COM

EXHIBIT

FOSTER LANE SUBDIVISON

FOSTER LANE COLUMBIA, TN

REVISIONS

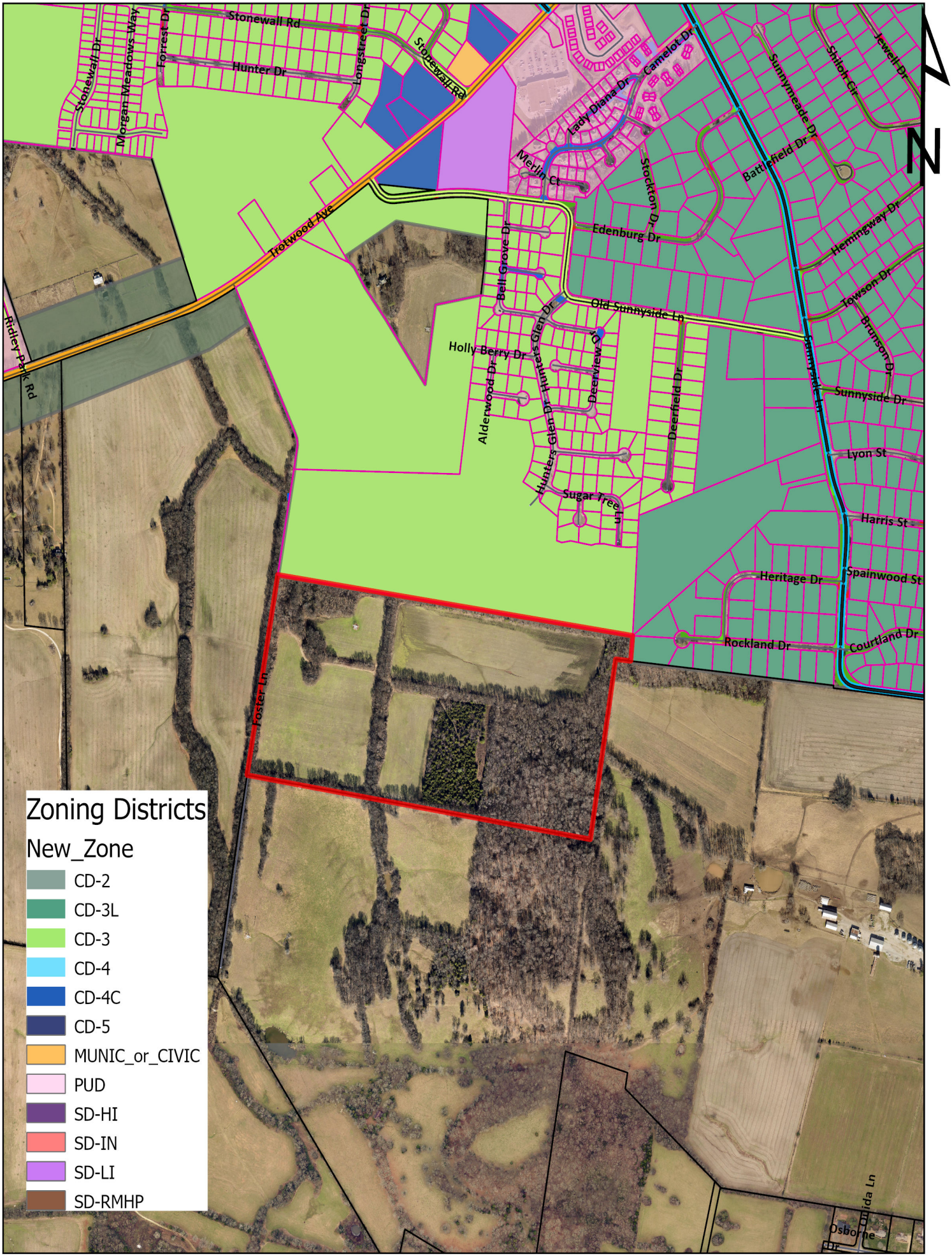
No.	DATE

04/21/2025 21072

C0.0

PRELIMINARY
LAYOUT EXHIBIT

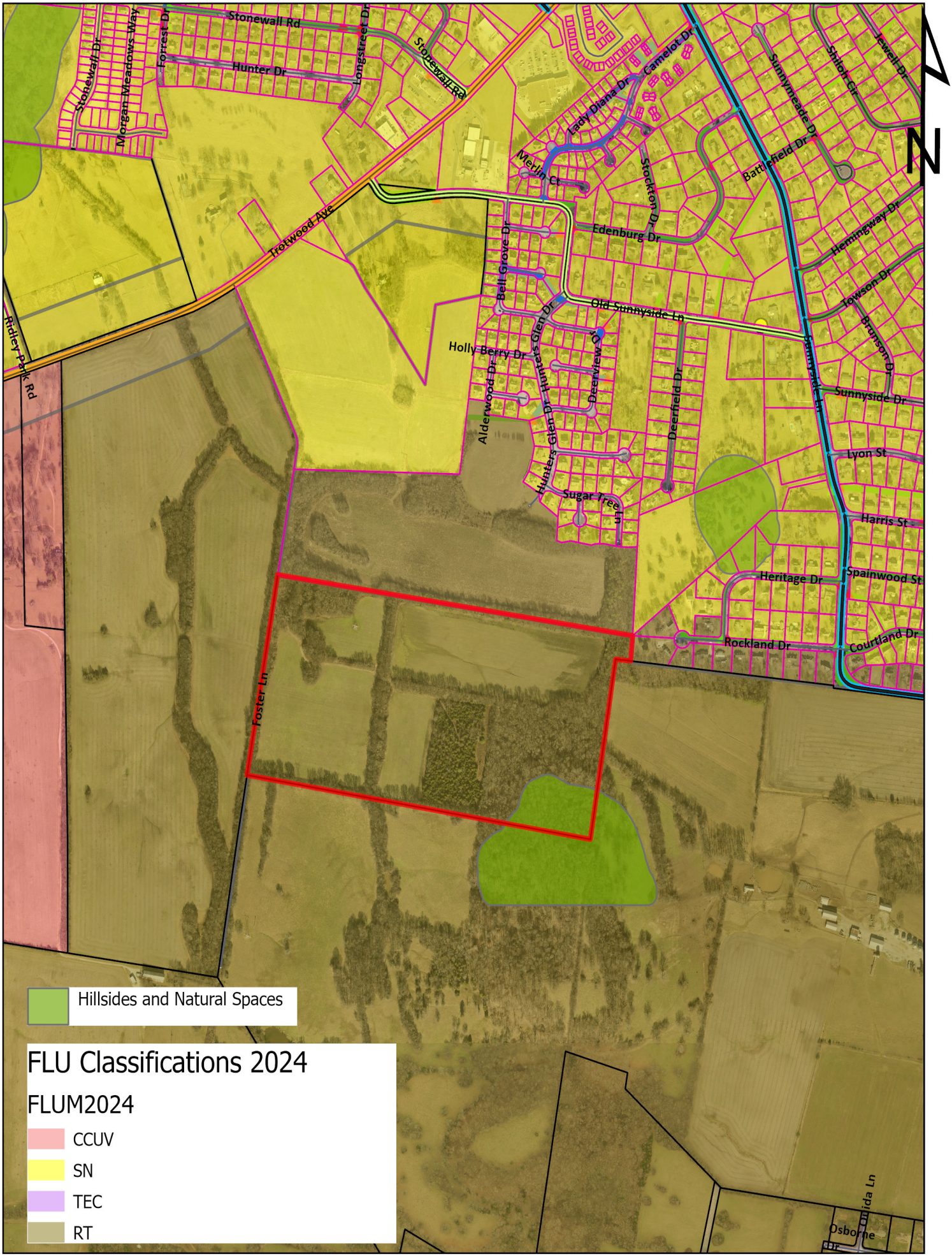
Drawing Path: P:\2021\21072 - Foster Ln Subdivision Columbia\Dwg\Sketch\Foster Ln Layout_CD3_2025 (PUC).dwg



25-0198
Tax Map 112 Parcel 17
Foster Lane

Development Services
700 N. Garden Street
Columbia, TN 38401
www.columbiatn.gov

CITY OF COLUMBIA
TENNESSEE



25-0198
Tax Map 112 Parcel 17
Foster Lane

Development Services
700 N. Garden Street
Columbia, TN 38401
www.columbiatn.gov

CITY OF COLUMBIA
TENNESSEE

Legal Description

A parcel of land located in the 9th civil District of Maury County, Tennessee. More particularly described as follows;

Beginning at a found iron rod and Cap in the centerline of Foster Lane, A.K.A. Old Thomas Lane, having a right-of-way width of 30'.

Said point of beginning being the southwest corner of lands owned by the McBroom Family Partnership, of record in deed book R1466, page 135, Register's Office Maury County, Tennessee (R.O.M.C, TN.);

Thence, along the south line of said lands of McBroom Family Partnership, South 79°12'28" East, a distance of 240.92 feet to a found iron pin;

Thence, continuing along the South line of said lands of McBroom Family Partnership, generally along a fence, South 80°54'28" East, a distance of 2477.51 feet to a found iron rod and cap in the west line of lot 13 of leatherwood Estates, Section 1, of record in Plat book 56, page 315, R.O.M.C., TN.;

Thence, along the west line of said lot 13 of Leatherwood Estates, South 03°36'18" West, a distance of 158.91 feet to a found metal stake in a rock wall, and the Southwest corner of Lot 13 Leatherwood Estates. Said point also being on the North line of lands owned by Edwin W. Halliday, Family Trust of record in deed book R2383, page 186, R.O.M.C., TN.;

Thence, along the North Line of said lands of Halliday Family Trust, North 8301'05" West, a distance of 117.28 feet, to tree with a fence intersection, at the northwest corner of said lands of Halliday Family Trust;

Thence, along the centerline of foster lane, North 09'19"07 East, a distance of 116.73 feet to the point of Beginning. Being 85.711 acres of land, more or less, according to a Boundary Survey by Homeland Surveying & Mapping, LLC, dated July 20, 2021.

December 13, 2024
Extension: 4/10/2025

Mr. Aaron Keathley
Crunk Engineering, LLC
7112 Crossroads Blvd. Suite 201
Franklin, TN 37067
Sent via email: Aaron@crunkeng.com

RE: Water Availability Letter (Extension) Expires: 6/12/2025
Foster Lane Subdivision – 174 Units
Tax Map 112, Parcel 017.00
Columbia, Maury County, TN

Dear Mr. Keathley:

Columbia Power & Water Systems ("the Utility"/CPWS) is a municipal corporation authorized to provide water services in accordance with State law. CPWS has adopted rules, regulations, and standard operation procedures, prescribing the conditions under which CPWS will furnish water service. In addition, certain State laws delegate authority to the Tennessee Department of Environment and Conservation (TDEC), various Planning Commissions, and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Water service will be made available on a first-come, first-served basis, subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies. Water service is subject to availability of all CPWS furnished equipment and materials appropriate for the development and provided the applicant complies with all rules and regulations of CPWS and conditions set out herein.

We have received your application for water availability to serve a proposed residential development consisting of 174 single-family residential units off Foster Lane south of the intersection with Trotwood Avenue. It appears that the proposed water infrastructure connections are anticipated to come through stub-streets in the adjacent (proposed) Hunters Glen Phase 4 subdivision. Based on this concept, we have reviewed this application for service with the understanding that both projects (Foster Lane Subdivision and Hunters Glen Ph4) would be constructed at the same time. CPWS has performed field measurements and water system hydraulic model analysis of the projected water demands for the proposed development.

CPWS has determined that the existing system is <u>not</u> able to provide 1,000 gallons per minute (gpm) fire flow in the proposed development without adverse effects in the surrounding area.

However, the existing system is able to meet the minimum 500 gpm fire flow requirement – which would require new development to incorporate fire sprinklers in the structures, according to the Fire Flow Requirements letter submitted as part of the application. In addition, the demand load for the full buildout of the proposed development will require another water main connection to the 12-inch main in Trotwood Avenue via Foster Lane. As such, CPWS can provide water for the proposed development according to the following criteria and requirements:

- The first 80-units (total between both projects; Foster Ln and Hunters Glen Ph4) can be served from existing water mains in the Hunters Glen development on Alterwood Drive, Hunters Glen Drive, and Sugar Tree Lane.
- Additional units (81 through buildout) will require an additional water main connection from the development to Trotwood Avenue via Foster Lane.
- The current CPWS system is only able to support a minimum fire flow of 500 gpm within the development until (planned) additional improvements in the Southside distribution area are completed.
- According to the Fire Flow Requirements Letter (dated 11/25/2024) this will require buildings to be sprinklered until the system can meet a 1,000 gpm minimum fire flow.
- Separate fire and domestic meters with backflow devices will be required to serve the proposed Project.

All of the above requirements up to and including the meter(s) are to be constructed and paid for by the Applicant and dedicated to CPWS once complete. No construction of water infrastructure shall be initiated until final construction plans have been approved by CPWS (including TDEC approval).

Please be aware that CPWS Distribution System Master Planning includes improvements in this area to support a higher level of service and growth, including the ability to support larger fire flow demands. If the developer is interested in accelerating those system improvements by direct participation - including construction – we welcome a meeting to discuss.

This Water Availability Letter will expire on the date listed on the first page unless vested by payment of water service fees and impact fees for the proposed project. If the Applicant elects to pay only a portion of the impact fees due for the proposed development, then the vesting will only apply to the portion for which impact fees were paid. Any request for water availability after the expiration date of this letter will be considered a new application.

Once you have received this Water Availability Letter, next steps in the process to vest water service from CPWS are as follows:

- Remit to CPWS new water service fees for plan review, TDEC coordination, and inspection as follows:

  $1,500 + $370 per SFU equivalent

- Applicant will prepare design drawings for review and approval by CPWS for construction of the proposed water system improvements.
    - Provide design drawings in AutoCAD and .pdf format for CPWS review of proposed development. Include design drawings for grading, drainage, roadway improvements, buried (wet and dry) utilities, water systems, and surface improvements.
    - CPWS will submit proposed improvements design to TDEC for review and approval.
    - Once comments received from TDEC have been addressed and approved, CPWS will approve the Construction Drawings for the proposed water system improvements.
- As an option, the applicant may request CPWS design the water infrastructure to support the proposed development project. Under this option, the applicant will:
    - Provide site base CAD files in DWG format, including roads, lot lines, existing and proposed contours, and other existing and proposed utilities, for use in development of water construction drawings.
    - CPWS will then develop design drawings for the water system improvements and submit to TDEC for review and approval.
- Current water service fees due prior to CPWS review of design plans are listed in the table below. *Note that payment of Water Service Fees will extend the expiration of this Water Availability Letter for one year, while the applicant is working with CPWS on design and review of the improvement drawings*.

Water Service Fees	SFUs	Total
$1,500 + 370 per SFU	174	**$65,880**

- Upon Construction Drawing approval by CPWS, applicant may then pay Impact Fees and schedule the pre-construction meeting. Pre-construction meeting will be canceled and re-scheduled unless all impact fees are paid at least 48 hours prior, or surety is provided in lieu of full payment.
- Water meters will be ordered by CPWS once meter fees are paid by the Applicant.
    - Meter fees are subject to change based on final design and the prevailing Board-approved rates at time of payment.
    - If surety is provided in lieu of payment, meters are not ordered until fees are paid and may result in extended lead-times.
    - Note that meter fees are charged at time of purchase, based on price of meter at that time.

- Applicants will be charged Impact Fees and Meter Fees in effect at time of payment. Please see CPWS website for schedule of impact fees and timing of planned fee escalations. Anticipated meter costs and impact fees for this project are according to the following table:

Impact Fees and Meter Costs	Number	$ / Unit	Total
3/4" Service Meter Cost	174	Current Price	Deferred
1" Fire Meter Cost	174	Current Price	Deferred
Current Impact Fee for 3/4" Service Meter	174	$5,000	$870,000.00
Estimate of Fees Due Prior to Pre-Construction Meeting =			**$870,000.00**

- After the pre-construction meeting, CPWS will then issue a formal Notice to Proceed. No construction of water improvements may take place prior to the Notice to Proceed.
- Applicant is required to construct all public water infrastructure per CPWS standard specifications and provide CPWS personnel unregulated access to the site to inspect the construction of the water infrastructure. No construction of water improvements may take place without a CPWS inspector present.

Please feel free to contact me at 931-388-4833 x7655 or Matt.Wheeler@cpws.com if you have questions or would like to discuss.

Sincerely,

Matthew J. Wheeler, P.E.
Vice President of Water Resources, CPWS

cc: John Maher, John Maher Builders
Bart Anderson, CPWS
Eric King, Inflo Design Group
File 23-034

Columbia Fire & Rescue

Fire Flow Requirements

Water Purveyor: Columbia Power & Water System

Date: 11/25/2024
Name: Aaron Keathley
Phone: 615-708-3517
Email: aaron@crunkeng.com
Address/Parcel ID: 112 017.00
Property Type: (•) Residential ( ) Commercial ( ) Industrial
Construction Type: Residential Subdivisi
Enclosed Area (ft²): 2000/home

FILLED OUT BY COLUMBIA FIRE AND RESCUE

NFPA Sprinkler Type: NFPA 13R

Water System Demand without Sprinkler Credit

Fire flow Requirements (International Fire Code Appendix B)

Fire Flow: 1,000 gpm Duration: 1 hours

Fire Hydrant Location and Distribution (International Fire Code Appendix C)

Minimum number of hydrants: 1

Average spacing between hydrants: 500 ft.

Maximum distance from frontage to hydrant: 250 ft.

Water System Demand with Sprinkler Credit

Fire flow requirements (International Fire Code Appendix B)

Fire Flow: 500 gpm Duration: 1/2 hours

Fire Hydrant Location and Distribution (International Fire Code Appendix C)

Minimum number of hydrants: 1

Average spacing between hydrants: 500 ft.

Maximum distance from frontage to hydrant: 250 ft.

Fire Plan Reviewer: Brad Massey Date: 11/25/2024

SUGAR TREE LN

HUNTER'S GLEN DR

PROPOSED CONNECTION TO THE FUTURE HUNTERS GLEN

ELECTRIC LINE
150FT EASEMENT WIDTH

NEW FOSTER LN

STORMWATER DETENTION AREA: 7.2 AC

POND A

POND B

OPEN SPACE

80.00 FT

123.00 FT

81.88 FT

100.00 FT

81.21 FT

70.00 FT

ROADWAY STUB TO ADJACENT PROPERTY

CIVIC SPACE NATURAL AREA 14.1 AC

TIE-IN ROAD NETWORK TO EXISTING FOSTER LN

82.55 FT

ROADWAY STUB TO ADJACENT PROPERTY

FOSTER LN

- **PROPOSED ZONING: CD-3**
- **174 TOTAL LOTS** (MIN. 100' X 80')
  MAX. ALLOWABLE LOTS : 346 (86.6 AC @ 4 PER AC)
- **URBAN NEIGHBORHOOD STREET:**
  70' ROW 38' ROADWAY WIDTH
- **STORMWATER POND** (0.8% OF SITE AREA):
  6.9 AC REQUIRED
  7.2 AC PROVIDED
- **CIVIC SPACE** (5-20% OF SITE AREA):
  4.3 - 17.3 AC REQUIRED
  14.1 AC PROVIDED

0 50 100 150 300
GRAPHIC SCALE

N

CRUNK ENGINEERING LLC
7112 CROSSROADS BLVD
SUITE 201
FRANKLIN, TN 37067
(615) 873-1795
WWW.CRUNKENG.COM

NOT FOR CONSTRUCTION

FOSTER LN SUBDIVISION

FOSTER LN
COLUMBIA, TN 38401

REVISIONS

No.	DATE

08/01/24 21072

C1.0

PRELIMINARY LAYOUT PLAN

CPWS
Columbia Power & Water Systems

201 Pickens Lane
P.O. Box 379
Columbia, TN 38402

P 931.388.4833
F 931.388.5287
www.cpws.com

December 4, 2024

Aaron Keathley, E.I.T.
Crunk Engineering, LLC

Re: Foster Lane, being Tax Map: 112 Parcel: 017.00

Dear Sir:

Columbia Power System serving this development is dependent on the development of the adjacent property and/or any necessary utility easements across adjacent properties.

We are willing to serve this residential development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction.

• **Unfortunately, due to current supply chain challenges, no timeframe can be guaranteed regarding the availability of meters or transformers appropriate for your development.**

Yours truly,

COLUMBIA POWER SYSTEM

Trevor Gilmer
Power Engineering Manager

kw

CITY OF COLUMBIA
TENNESSEE

WASTEWATER DEPARTMENT

21 November 2024

Aaron Keathley
Crunk Engineering, LLC
7112 Crossroads Blvd, Ste 201
Brentwood, TN 37027

RE: Foster Ln, Columbia, TN 38401; 112 0017.00

Aaron,

This letter serves as confirmation that the City of Columbia Wastewater Department has the available capacity to service the subject development. Any extension to the existing sewer infrastructure will be initiated by the owner/developer, reviewed by our department and approved by the State of Tennessee. The project must be advanced in accordance with local, state and federal rules, regulations and policies. Funding and construction of those improvements will remain the responsibility of the owner/developer. New customers will be required to pay all fees applicable at the time of connection. Any Final Plat approval and Dedication are both subject to installation and function, as determined by our Department. No detailed design plan for an extension of the sewer has been proposed at this time.

Given the unit count of 174 and the nature of the site, which will require the installation of a pump station, it is in the City's best interest to require the pump station to be placed at a point which is outside the subject parcel so that it is at the lowest possible point for joint-development purposes and so that the force main may terminate at a manhole closer to Rockland Dr.

Donnie Boshers, Director
City of Columbia, TN
Wastewater Department

Aaron Keathley

From: Ryan Filipkowski <RFilipkowski@Columbiatn.gov>
Sent: Thursday, February 20, 2025 10:03 AM
To: Aaron Keathley
Cc: Austin Brass; Melissa Sanders; Donnie Boshers; Douglas Toney; Adam Crunk
Subject: RE: [Caution External Email] - Online Form Submission #1879 for Wastewater Will-Serve-Letter Request

Yes, it is valid from 1 year of the date on the letter.

Ryan Filipkowski, P.E.
Civil Engineer
Columbia Wastewater Department
O) 931-560-1001 Ext. 1023
C) 931-777-9020
RFilipkowski@Columbiatn.gov
*Note .gov email change

From: Aaron Keathley <aaron@crunkeng.com>
Sent: Wednesday, February 19, 2025 9:21 AM
To: Ryan Filipkowski <RFilipkowski@Columbiatn.gov>
Cc: KMcCarthy@columbiatn.gov; Melissa Sanders <MSanders@Columbiatn.gov>; Donnie Boshers <DBoshers@Columbiatn.gov>; Douglas Toney <DToney@Columbiatn.gov>; Adam Crunk <adam@crunkeng.com>
Subject: RE: [Caution External Email] - Online Form Submission #1879 for Wastewater Will-Serve-Letter Request

Good Morning Ryan,
I wanted to follow up to this request and see if this letter was still valid?

Thanks!

Aaron Keathley, E.I
Civil : Site Development
Crunk Engineering, LLC
C: 615.708.3517

From: Aaron Keathley <uk.keathley@gmail.com>
Sent: Friday, November 22, 2024 8:31 AM
To: Aaron Keathley <aaron@crunkeng.com>
Subject: Fwd: [Caution External Email] - Online Form Submission #1879 for Wastewater Will-Serve-Letter Request

---------- Forwarded message ---------
From: **Ryan Filipkowski** <RFilipkowski@columbiatn.gov>
Date: Thu, Nov 21, 2024 at 3:47 PM
Subject: RE: [Caution External Email] - Online Form Submission #1879 for Wastewater Will-Serve-Letter Request
To: uk.keathley@gmail.com <uk.keathley@gmail.com>, Kevin McCarthy <KMcCarthy@columbiatn.gov>, Melissa Sanders <MSanders@columbiatn.gov>, Donnie Boshers <DBoshers@columbiatn.gov>, Douglas Toney <DToney@columbiatn.gov>, Adam Crunk (adam@crunkeng.com) <adam@crunkeng.com>

Attached. Please note the requirements in the letter.

Ryan Filipkowski, P.E.

Civil Engineer

Columbia Wastewater Department

O) 931-560-1001 Ext. 1023

C) 931-777-9020

RFilipkowski@Columbiatn.gov

*Note .gov email change

From: noreply@civicplus.com <noreply@civicplus.com>
Sent: Thursday, November 21, 2024 11:56 AM
To: Kevin McCarthy <KMcCarthy@Columbiatn.gov>; Ryan Filipkowski <RFilipkowski@Columbiatn.gov>; Melissa Sanders <MSanders@Columbiatn.gov>; Donnie Boshers <DBoshers@Columbiatn.gov>; Douglas Toney <DToney@Columbiatn.gov>
Subject: [Caution External Email] - Online Form Submission #1879 for Wastewater Will-Serve-Letter Request

Wastewater Will-Serve-Letter Request

This is an application to Columbia Wastewater Department to evaluate a request for sewer service for the property identified in this application. Beginning in January 2024, a will serve letter is required for all applications to the Columbia Municipal Planning Commission for Annexations, Rezonings, Preliminary Plats, major Site Development Plans, and Planned Unit Developments. The letter must be submitted with the application on or before the applicable CMPC submittal deadline in order to initiate the Development Review Process. Additionally, the Zoning Administrator (or designee) or the Wastewater Director (or designee) may require a will serve letter for any parcel of real property requiring new or increased service, or requiring a sewer line extension. The Zoning Administrator (or designee) may waive this requirement for development proposals of four or fewer density units as described in Article 5 of the Zoning Ordinance. Letters are valid for one year from date of issuance, unless a shorter time is specified.

Contact kmccarthy@columbiatn.gov and rfilipkowski@columbiatn.gov with question about this form.

Applicant Information

Name of Firm	Crunk Engineering, LLC
Name	Aaron Keathley
Email Address	uk.keathley@gmail.com
Address	7112 Crossroads Blvd, Ste 201
City	Brentwood
State	TN
Zip Code	37027
Phone Number	6157083517
Have you had a pre-app with Development Services?	Yes

Property Information

Please provide as much information as possible.

Development Name	Foster Lane Subdivision

Description of Project	Construction of 174 single family homes including the utility and roadway infrastructure to support the development.
Property Address	*Field not completed.*
Parcel ID	112 0017.00
TN Property Viewer GIS Link	https://tnmap.tn.gov/assessment/
Is this property currently inside the city of Columbia?	No
Is this property currently served by Columbia Wastewater	No
Total Land Area (Acres)	85.71
Intended Use	Single-Family Detached
Number of Residential Units	174
Square Footage of Non-Residential Structures	0
Concept Plan File Upload	Foster_Ln_Subdivision_CD3.pdf

Email not displaying correctly? View it in your browser.

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CITY OF COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES

I, John Maher being the sole owner of the Foster Lane Property more particularly described as Parcel 112 017.00 on Deed of Record in Deed Book R2758 Pages 851-853 in the Maury County Register of Deeds office, do hereby, formally, request that the City of Columbia, Tennessee annex such property into such City.

John Maher
Print Name

12-2-24
Date

Signature

STAFF USE ONLY	
Docket Number:	Requested Agenda:

Crunk Engineering, LLC
7112 Crossroads Blvd. Ste 201
Brentwood, TN 37027
[615] 873-1795

May 19, 2025

City of Columbia
Development Services
700 North Garden Street
Columbia, TN 38401
[931] 560-1560

Subject: Comprehensive Plan Amendment // Statement of Justification

Columbia Planning Commission -

This letter serves as a formal request for a Comprehensive Plan Amendment (CPA) to the Connect Columbia Comprehensive Plan and its associated Future Land Use Map (FLUM). The subject of this request includes Tax Map #112 017.00, an 85.8-acre parcel owned by John Maher Builders, Inc., hereafter referred to as Parcel A, and the neighboring Parcel #112 018.02, a 53.5-acre tract owned by the McBroom Family Partnership, hereafter referred to as Parcel B.

Both parcels are located on Foster Lane, a rural road that connects to Trotwood Avenue just east of Columbia. They are currently designated as Rural Transition (RT) on the FLUM. This classification is intended for very low-density residential neighborhoods, large-lot semi-rural estates, open spaces, and legacy agricultural operations. The RT classification serves to create and preserve a distinct transition between agricultural uses in unincorporated Maury County and the suburban character of Columbia. According to the FLUM zoning matrix, the RT classification supports zoning character districts CD-2 (Rural) and CV (Civic), with a permitted maximum density of 1 dwelling unit per acre.

Parcel B, however, has been approved for development as the Hunters Glen Subdivision and has already been assigned the CD-3 zoning designation, with 148 lots currently under construction. This equates to an approximate density of 2.8 dwelling units per acre, which is inconsistent with the current FLUM designation.

To support the continued development of Parcel B and to establish a cohesive and consistent development pattern along Foster Lane, we respectfully request an amendment to the FLUM to reclassify both Parcel A and Parcel B as Suburban Neighborhood (SN). This amendment will enable the annexation and zoning of Parcel B under CD-3 in alignment with the comprehensive plan and will promote consistent land use along this growing corridor.

Respectfully,

Adam Crunk, P.E.
Project Engineer
adam@crunkeng.com
[615] 873-1795

Crunk Engineering, LLC
7112 Crossroads Blvd. Ste 201
Brentwood, TN 37027
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Respectfully,

Adam Crunk, P.E.
Project Engineer
adam@crunkeng.com
[615] 873-1795

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560

PLANNING COMMISSION
PROJECT DEVELOPMENT APPLICATION

SUBMITTAL REQUIREMENTS

Please submit scanned copy of the application online at City of Columbia | Permitting (onlama.com)
If there is no access to a computer, please submit all pertinent information on a flash drive as well as provide one hard copy. Additional fee may apply.

ADDRESS/LOCATION	**Foster Lane**		
	TAX MAP: ~~017.00~~ 112	GROUP:	PARCEL: ~~112~~ 17.00
SUMMARY OF NATURE OF REQUEST AND WORK	**Requesting the annexation of the parcel identified in this application, along with the assignment of a CD-3 zoning designation to the property.**		

DATE OF PRE-APPLICATION CONFERENCE	**9/1/2021**	*Pre-application meetings are scheduled for Wednesdays. Concept plan/fee due the Friday before the meeting.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
☐ Comprehensive Plan Amendment ☒ Annexation ☒ Rezoning ☐ Preliminary Plat ☐ Final Plat ☐ PUD Preliminary Master Plan ☐ PUD Final Site Plan ☐ Site Development Plan ☐ ARC Alternative Compliance ☐ As Approved Plans ☐ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations:** ☒ Annexation Permission Form **Annexations/Rezoning/Plan Amendments:** ☒ Requested Zone Listed ☒ Statement of Compliance with Comprehensive Plan ☒ Concept Plan **Preliminary Plats/Site Development Plans:** ☐ Plans and/or Plats conforming to City standards with signed and completed check list **All Annexations/Rezoning/Preliminary Plats/Site Development Plans and PUDS:** ☒ Receipt of Payment for Pre-Application Meeting ☒ Written Legal Description copy ☒ Columbia Water System Availability Letter ☒ Columbia Waste Water Department Will Serve Letter

Rev. 3/5/2025

	Plats/PUDs: ☒ Project Name (include Sections & Phases) **Foster Lane Subdivision** ☒ Total Number of Lots/Residential Units **174 Lots** ☐ Square Footage of Non-Residential Floor Space ☒ Total acreage **86.6**

Applications and all required submittals must be filed with the Department of Development Services prior to the established deadline. Both the applicant and property owner (if different from applicant) must sign the application. Any requests to defer or move the item to future meeting dates must be requested by the resubmittal date listed on the Planning Commission schedule.

APPLICANT
All communications will go to the Applicant's email that is provided.

NAME	**Adam Crunk, PE**	PHONE	**615-873-1795**
ADDRESS	**7112 Crossroads Blvd. Ste 201, Brentwood, TN 37207**	EMAIL	**adam@crunkeng.com**

PROPERTY OWNER NAME	**John Maher Builders, Inc.**	PHONE	**615-351-1980**
ADDRESS	**1109 Old Kedron Rd. Spring Hill, TN 37174**	EMAIL	**johnmaher1@comcast.net**

If owner is not a natural person, documentation must be provided showing signing authority on behalf of the entity. If multiple persons are listed as owners in the records of the Maury County Assessor, all owners must sign or the signatory must provide documentation of authority to apply on behalf of record owner (i.e., Power of Attorney or notarized Letter of Authorization). In filling out this application, I attest that (1) I am familiar with the rules, regulations, and procedures of the City of Columbia & (2) all information contained herein is accurate & true to the best of my knowledge.

Adam Crunk		5/16/2025
APPLICANT NAME	APPLICANT SIGNATURE	DATE
John Maher		5-16-2025
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE

Rev. 3/5/2025

Double Branch Rd Annex. & Comp. Plan Amendment

Project #:	25-0200	Location:	Tax Map 067 Parcel 001.00
Applicant:	Nick Moran	Case Type(s):	Annex. /Comp Plan Amend
Staff Planner:	Charles Rush & Robert Archibald, Principal Planners	Proposed Use:	Residential

PROJECT SUMMARY

The applicant requests annexation and a comprehensive plan amendment, along with a plan of services, for 206.96 acres located on the north side of Double Branch Road. A connection will be made into the Honey Farm PUD via road access to Beeswax St. With this annexation request, the applicant is requesting the CD-3L zoning district. Current Connect Columbia 2024 classifies this parcel as Rural Transition (RT). Rural Transition does not allow for the CD-3L zoning classification.

- The subject site is located on the north side of Double Branch Rd and to the south of Honey Farms. The property does adjoin property within the city limits via bordering the Honey Farm and Green Mills Rd PUDs.
- The Development Review Committee (DRC) evaluated this application at its June 2025 meeting with comments associated with the request.
- A conditional water availability letter has been issued from CPWS, noting its validity until 05/20/2026. **It was highlighted in the letter that CPWS cannot commit source water availability for additional developments until several major Long Term Water Supply Program improvements have been constructed and our water system permit is updated. Current planning anticipates completion of the Long Term Water Supply Program improvement near the end of 2028, but that schedule is subject to several external agency approvals and public processes, which could extend the timeline.**
- A concept plan has been submitted with the annexation and comp plan amendment, which shows 250 residential units, an amenity center, a pool, and a pool house. **Please note that this concept plan is non-binding.** It is also worth noting that the property could develop to different standards if the comprehensive plan is changed to Suburban Neighborhood (SN) the following Zoning Districts would be permitted: Neighborhood Large Lots CD-3L, Neighborhood CD-3, General Urban Corridor CD-4C (only along Arterial roadways), Manufactured Home Park SD-MHP, Residential PUD (PUD-R), Mixed Use PUD (PUD-MU), or Civic (CV).
- The proposed development is not consistent with the future land use element of the comprehensive plan, *Connect Columbia* being Rural Transition.

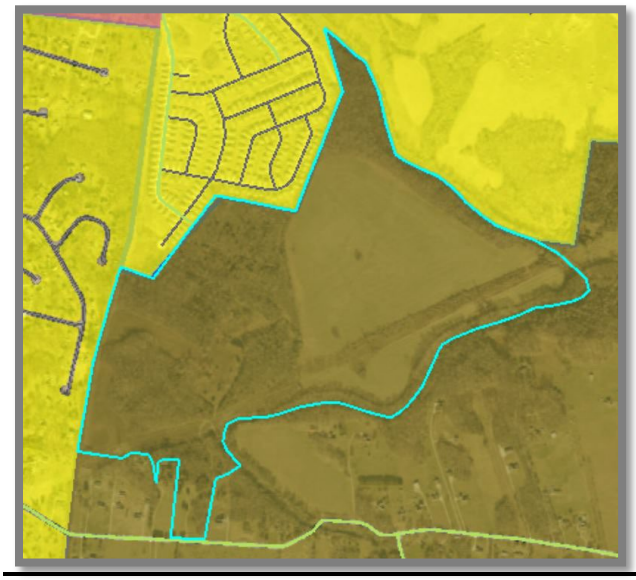
- The concept plan submitted demonstrates that it is possible to develop the site in conformity with the standards of the requested character districts (CD-3L).
- Section 2.3 Newly Annexed Properties (Zoning Ordinance 4400, Page 37) "Newly annexed properties shall have an initial zoning of CD-3L. However, an application for rezoning to any other District may be considered concurrently with the action for annexation, subject to 8.5.19."
- 8.5.19.C.1 "**All petitions for rezoning shall be consistent with the Comprehensive Plan and any applicable local plan**. A petition for Rezoning shall not be approved by the City Council unless the Rezoning is consistent with and not in conflict with the Comprehensive Plan or applicable local plans, as determined by the Planning Commission (see Section 8.5.20). The Planning Commission is not obligated to recommend approval of a request which would bring existing zoning into conformity with the Comprehensive Plan prior to the time such change is warranted by the findings of 8.5.19.H.4.e and f."
- The Planning Commission is a **recommended body** for the annexation and comprehensive plan amendment, in which Section 8.5.20 of the Zoning Ordinance lists the criteria for Planning Commission action. The City Council is the final approving authority for this request.
- Templates are provided at the end of the report to assist the Planning Commission in crafting properly formatted motions.

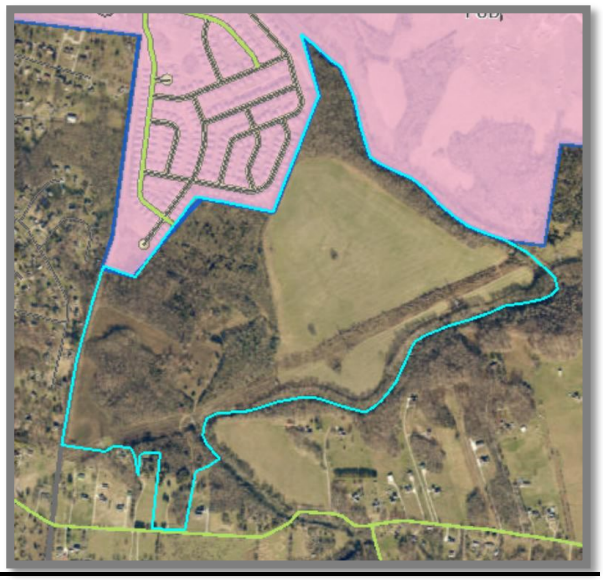
SITE INFORMATION

CURRENT ZONING	EXISTING USE	EXISTING IMP.	LAND AREA
County	Horse & Loft Barn	Residential	+/- 206.96 acres



FUTURE LAND USE MAP	ZONING MAP





SITE CONTEXT/ADJACENT PROPERTIES			
	Future Land Use	Zoning	Current Use
Subject Property	Rural Transition	County	Vacant
North	Suburban Neighborhood	PUD	Honey Farms and Greens Mill Rd PUDs
South	Rural Transition	County	Single-Family Residential/Vacant
East	Suburban Neighborhood/Rural Transition	PUD (City) & County	Greens Mill Rd PUD, Single Family & Vacant
West	Suburban Neighborhood	County	Single Family Residential

CONSISTENCY WITH CONNECT COLUMBIA

Rural Transition (Current Future Land Use Map Classification) (p.37): The Rural Transition (RT) future land use classification is comprised of unincorporated areas within Columbia's UGB as well as areas of low-intensity development. The area is characterized by very low-density residential neighborhoods, large-lot semi-rural estates, open spaces, and legacy agricultural operations. The intent of the RT future land use classification is to create and maintain a discernible transition between agricultural uses in unincorporated Maury County and the suburban areas within Columbia. Future development is limited and emphasizes the preservation of agricultural uses, open spaces, and the semi-rural character of areas adjacent to the city. Natural and scenic features, such as rolling hills, rivers, rock outcroppings, and historic homes, should be preserved.



Suburban Neighborhood (Proposed Future Land Use Map Classification) (p.36): The intent of the Suburban Neighborhoods (SN) future land use is to enhance existing suburban areas and create new neighborhoods that will improve the quality of life in Columbia. Where appropriate, the SN future land use area also establishes mixed-use and commercial centers which serve residents' retail needs and provide a wider range of housing options. Each development parcel should add to Columbia's existing sense of place and extend the established form and pattern to create a more interconnected community. Future development should emphasize connectivity and continuity of the city as a whole. The density and intensity of residential development increases in proximity to areas under the CCUV future land use classification. In the same way, density and intensity decrease in proximity to areas under the Rural Transition (RT) future land use classification. New development enhances pedestrian infrastructure with sidewalks and other multimodal routes. Public frontages may include sidewalks and street trees. Over time, new and infill development connects neighborhoods and community anchors such as libraries, neighborhood centers, health facilities, retail uses, parks, and schools.

Suburban Neighborhoods

Character & Intent

The intent of the Suburban Neighborhoods (SN) future land use is to enhance existing suburban areas and create new neighborhoods that will improve the quality of life in Columbia. Where appropriate, the SN future land use area also establishes mixed-use and commercial centers which serve residents' retail needs and provide a wider range of housing options. Each development parcel should add to Columbia's existing sense of place and extend the established form and pattern to create a more interconnected community. Future development should emphasize connectivity and continuity of the city as a whole. The density and intensity of residential development increases in proximity to areas under the CCUV future land use classification. In the same way, density and intensity decrease in proximity to areas under the Rural Transition (RT) future land use classification. New development enhances pedestrian infrastructure with sidewalks and other multimodal routes. Public frontages may include sidewalks and street trees. Over time, new and infill development connects neighborhoods and community anchors such as libraries, neighborhood centers, health facilities, retail uses, parks, and schools.

Land Use Considerations

The primary land use is low-density detached housing. Along arterial roadways, primary uses may include offices, retail, and all forms of medium-density housing. Secondary land uses include accessory dwellings, two-family homes, civic uses, institutional uses, schools, religious facilities, utility facilities, parks and open space. New industrial and warehouse uses are inappropriate.



Form & Pattern

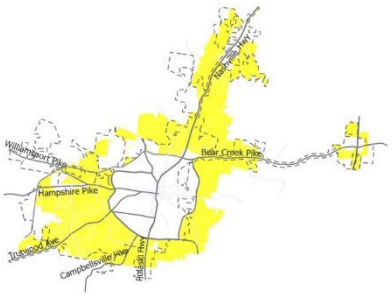
The SN future land use area is characterized by the organization of the built environment to extend a succession of large-lot neighborhoods and compact walkable neighborhoods. Development parcels extend established neighborhood patterns. Leap-frogging development is inappropriate. The SN future land use is distinguished from RT in the organization of lots and thoroughfares to form blocks. Physically separated developments which do not extend established block formation and roadway networks are inappropriate. The density of streets and blocks increases with proximity to CCUV and community anchors. Implementing bulk and design standards loosely delimit the public and domestic realms though the application of layers and front-to-back discipline of lots. Along arterial roadways, commercial corridors of varying intensities emerge over time with a high-quality built environment typified by a mix of building types and a balance between automobile-oriented and pedestrian-oriented design. The physical intensity of development along arterial corridors varies based on the surrounding residential density and the roadway's place in the transportation network. New development should accompany concurrent extension of complete urban services. Parking is provided on-site by private land users, supplemented by on-street spaces.

Implementing Districts

Neighborhood-Large Lot CD-3L
Neighborhood CD-3
General Urban-Corridor CD-4C (only along Arterial roadways)
Manufactured Home Park SD-MHP
Residential PUD PUD-R
Mixed Use PUD PUD-MU
Civic CV

Implementing Standards

General Development Pattern: Mixed Uses & Isolated Uses
Density (density unites per ace): 4 - 24 du/ac
Building Height: 1 - 4 stories
Open Space Elements: Civic Spaces, Parks & Greenways





Land Use: A Guide for Orderly & Beneficial Growth | 36

CONFORMITY WITH ZONING ORDINANCE

As required by **§ 8.5.19.F.3** of the Zoning Ordinance, the applicant has provided a non-binding concept plan. The purpose of the concept plan is to demonstrate that it may be possible to develop the site in conformity with the standards of the requested character districts. The concept plan indicates 250 residential units, an amenity center, a pool, and a pool house. The remaining sections of the parcel are proposed to be CD-3L Zoning that permits single-family homes at 2 units density per acre (DU/AC). The plan shows 1.21 DU/AC.

SUMMARY OF DEVELOPMENT REVIEW COMMITTEE COMMENTS

The DRC reviewed this proposal at its meeting in June 2025. A full list of comments, and the applicant's responses, is provided in the agenda packet. Some key comments are noted below.

- **Engineering:** No comments on Annexation, Rezoning, and Comprehensive Plan Amendment.
- **Fire Marshal:** No Comments
- **Columbia Water** issued a conditional water availability letter on May 20, 2025, and it remains valid for 120 days. It was highlighted in the letter that current planning anticipates completion of water system improvements near the end of 2028. (**Updated letter is attached that extends it to 05/20/2026**)
- **Wastewater** is concerned with development near Double Branch Rd which requires its own bore under the creek in order to obtain sanitary sewer access. Annexation of this property and proper planning of onsite sanitary sewer systems could benefit the sewer system of the Honey Farm subdivision in multiple ways, including the elimination of a public-owned pump station and privately owned grinder pumps through future public infrastructure projects.

REVIEW PROCESS

The Development Review Committee evaluated the proposed rezoning at its February 2025 meeting, as directed by **Section 8.3.7** of the Zoning Ordinance. Technical comments are provided in the agenda package.

Section 8.5.19 of the Zoning Ordinance directs the Planning Commission to review and make a recommendation on all proposed changes to the Official Zoning Map. The Planning Commission is the recommending body for rezonings under **§ 8.3.3.B.3** of the Zoning Ordinance.

Section 8.5.19.H.4 of the Zoning Ordinance establishes the review criteria for approval of all changes to the Official Zoning Map:

a. *The Rezoning[1] is consistent and not in conflict with the Comprehensive Plan or other applicable approved local plans for the area;*

b. It has been determined that the legal purposes for which zoning exists, as set forth in Section 1.5 [, are not contravened];

c. It has been determined that there will be no adverse effect upon Adjoining property owners unless such effect can be justified by the overwhelming public good or welfare;

d. It has been determined that no one property owner or small group of property owners will benefit materially from the change to the detriment of the general public;

e. It has been determined that conditions affecting the area have changed to a sufficient to warrant the Zoning Map Amendment or that the existing zoning of the property was the result of a mistake;

f. It has been determined that adequate school, road, parks, wastewater treatment, water supply, and stormwater drainage facilities are available.

SAMPE MOTIONS

Approve:

Move to find, based on the information presented by the applicant and the analysis provided by city staff, that the criteria listed in section **8.5.19.H.4** of the City of Columbia Zoning Ordinance have been satisfied and recommend approval of the request to annex with plan of services as presented and the Comprehensive Plan Amendment, subject to technical comments and other conditions presented by planning staff.

[1] **Rezoning**: A change in the district boundaries or district classifications of the Zoning map pursuant to Section 8.5.19. **For the purposes of the Ordinance, rezoning also includes the initial zoning of a property that occurs with annexation.**

Deny:

Move to recommend denial of the requested annexation with a plan of services and Comprehensive Plan Amendment, having found, based on the information presented by the applicant and the analysis provided by city staff, that the criteria listed in section **8.5.19.H.4** of the City of Columbia Zoning Ordinance are not satisfied [*list specific reasons for denial*].

Defer:

Move to find that there is insufficient information to make a decision, defer the matter to the next regularly scheduled meeting of the Planning Commission, and request that the [applicant/staff] provide: [list additional information] for review at a future meeting.

PLAN OF SERVICES

FOR ANNEXATION
Double Branch Road PROPERTY
+/-206.96 ACRES,
BEING
TAX MAP 67 PARCEL 1

(25-0200)

A. Water

A water availability letter was issued on May 20, 2025, it remains valid for 120 days. The availability of capacity to serve is based on a determination by the Fire Marshal of fire flow requirements and the information submitted on the Water Service Availability Request application. Any off-site improvements detailed in the availability letter are the responsibility of the developer/owner. All public water system improvements are subject to the preparation and approval of detailed construction plans prepared in accordance with CPWS and Tennessee Department of Environment and Conservation requirements."

B. Sewer

All sewer improvements including but not limited to off-site improvements, on-site improvements, and pump station and equipment installation shall be completed and functioning to the satisfaction of the Director of the Wastewater Department prior to the filing of any Final Plat with the City of Columbia Municipal Planning Commission, unless specific approval is granted by the Director and a surety of sufficient amount is provided. Note: Pump stations will require a building permit and all other required permits from additional entities. All inspections must be completed and certificates of completion granted before Council Agenda Deadline. Please contact the Wastewater Department for standard design details and equipment.

C. Police

The jurisdiction of the Columbia Police Department will be extended to the areas annexed immediately upon the effective date of annexation.

D. Fire and Rescue

1. The City of Columbia Fire & Rescue Department provides an array of services to the citizens and visitors of the City of Columbia. These services include but may not be limited to non-emergency services such as fire prevention and codes enforcement, pre-incident planning, public education programs, smoke alarm check/replacement, and emergency services such as fire suppression, heavy rescue, emergency medical first response, and hazardous materials response. The City of Columbia Fire Department currently holds an Insurance Service Organization (ISO) Class 1 rating.

   Columbia Fire & Rescue strives to provide all services in a timely, courteous, and professional manner. Due to the nature of emergency services, we strive to arrive at the incident scene as quickly as possible but without posing additional dangers to the residents/visitors we meet while responding to your location.

Infrastructure:

The infrastructure put in place is like the foundation of your development. If the infrastructure is designed and constructed with the present needs and future plans in mind, your development will be prepared for the future.

Water:

Columbia Fire & Rescue requires that there be sufficient water provided through the municipal water system to meet the needed fire flow requirements for your facility. These flows are calculated by the Fire Marshal. These flows are based on many factors dealing with your buildings' construction type, fire load in the building, square footages, and etc. If you install fire sprinkler systems in your facilities, Columbia Fire & Rescue can drastically reduce fire flow requirements.

Roadway and Bridges: Columbia Fire & Rescue serves the residents and visitors of our jurisdiction by utilizing highly trained firefighters and modern fire apparatus. A minimum response to a structure fire in your development will be four fire apparatus. One of the fire apparatus that will respond to your development will be a ladder truck with a gross vehicle weight rating of approximately 80,000 pounds. Roadways and bridges must be designed and constructed not only with light vehicle traffic in mind but with the emergency service vehicles that will be servicing your development.

Damage Free Property Access: Columbia Fire & Rescue requires all gates automatic or manual that will be or may be locked to be equipped with Knox Rapid Entry system. You can research this product at www.knoxbox.com or your gate vendor will be familiar with the product. Our department would also

be happy to work with you to find what Knox Rapid Entry product is best suited for your application.

Damage Free Home/Facility Access: Currently, Columbia Fire & Rescue does not require residential occupancies to be equipped with the Knox Rapid Entry system. However, this product is a very wise investment for your future development. The Knox Rapid Entry System products allow homes to be secured but also allow the Columbia Fire & Rescue Department access to your property and/or homes without any delay or property damage. The system has an armored key lock safe recess mounted to the exterior of the homes with the key to the residence inside. Firefighters access the residence key during an emergency to gain entry into the home without causing any property damage. Again, our department would be happy to provide you with information and education on this program and its many positive attributes.

Emergency Response to Your Location: The proposed annex will be located on the Property at Lasea Road Tax Map 67 Parcel 1 in Columbia, Tennessee. This location is approximately 3.0 miles from Fire Station #5 located at 2633 Nashville Hwy, 6.1 miles from Columbia Fire Station #1 located at 1000 South Garden St. in downtown Columbia, and 6.4 miles from Fire Station #3 located at 705 Firefighter Dr. These distances are used to calculate an estimated response time to your development for the different levels of emergency response that may be needed at your facilities.

Medical Emergency Response: Columbia Fire & Rescue normally responds a minimum of one fire apparatus from Station #5 to service your location for a medical emergency. From the time you dial 911 until the fire department will arrive at your location will be within 4.50 minutes. Should your property experience a mass casualty incident where additional fire apparatus/firefighters would need to respond, then Fire Station #1 or Fire Station #3 could send an additional unit and arrive on-scene within 6.50 minutes of your 911 call.

Fire Incident Response: Columbia Fire & Rescue recommends a multi-faceted fire suppression approach. First, future homes should be constructed to meet or exceed all applicable fire and life safety codes. Secondly, even if not required by building, fire, or life safety codes, we encourage the installation and use of fire sprinkles in future homes. Columbia Fire & Rescue's normal fire incident response to a single family residential development is three fire apparatus with a minimum 15 firefighters and 1 Chief Officer. Response times will be similar to the times estimated in the emergency medical response section. Your first fire apparatus should be on-scene within approximately 4.50 minutes, the second fire apparatus should be on-scene within 6.50 minutes, and the third/fourth apparatus should be on-scene within 6.50 minutes. Columbia Fire & Rescue also has an automatic aid agreement and you would also receive a response from Spring Hill Fire Department with-in 10.00 minutes. Due to OSHA standards that require at least four firefighters to arrive on-scene prior to initiating an interior fire attack

and Columbia Fire & Rescue's minimum staffing policy, it could take the 6.50 minutes to get the minimum number of firefighters to the scene to begin an interior fire attack.

In summary, the members of the Columbia Fire & Rescue consider it an honor to serve the residents and visitors in our community each and every day. When an emergency occurs, time is our worst enemy. Columbia firefighters train to reduce every second while not posing any additional undue risk to firefighters and/or the public when responding to or working at an emergency incident. The times estimated in the referenced examples are a combination of averages and estimations. Our department has very little data to support incident responses to your location. The time estimations are based on the fire companies being at their regular station, time it takes for Maury 911 to process a 911 call, the time it takes for Columbia firefighters to board the apparatus and leave the station, and the travel time from the station to your location is an estimate based on road miles, probable traffic conditions, and road conditions. You can see by the examples referenced above that it will take time for Columbia Fire & Rescue to receive your call for help and then respond to your location. The roadways have considerable driveway/cross street connections, hills, curves, and reduced speed zones that contribute to a long response time for fire apparatus to arrive.

E. Development Services

1. The planning and zoning jurisdiction of the City will extend to the annexed areas immediately upon the effective date of the annexation.

2. The property shall be zoned CD-3L (Neighborhood Large Lot Character District) upon the effective date of the annexation.

3. The code administration jurisdiction of the City will extend to the annexed areas immediately upon the effective date of the annexation.

4. Upon the effective date of annexation, all development will be required to abide by the Columbia Zoning Ordinance.

F. Streets and Drainage

1. Upon acceptance by City Council and all warranties have expired; all streets and drainage systems will be maintained by Public Works. Services will include: Street sweeping, Catch basin cleaning, Street and curb repair, Snow removal, Drainage maintenance, and Sidewalk repair.

2. **Signage:** Upon acceptance by City Council, all approved street signs will be maintained by Public Works.

G. Parks and Recreation

Residents of the annexed areas may use all existing recreational facilities, parks, etc., on the effective date of annexation. The same standards and policies now used in the present City will be followed in expanding the recreational program and facilities in the enlarged City.

H. Refuse Collection

Single family homes will receive the following City of Columbia sanitation services:
Residential customers will be issued one 96-gallon garbage receptacle with the option to purchase up to two additional garbage receptacles. The Sanitation Department will provide weekly curbside garbage collection. Bi-weekly curbside recycling will be offered on a subscription basis. Brush collection will be provided on a bi-weekly basis. Residents are allotted three free bulk item pickups per year.

I. Power

Columbia Power System has an existing power line near your proposed development.
We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction.

J. Schools

This property falls under the jurisdiction of Maury County Public School System.
The development combined with current neighborhoods and additional approved developments in these zones may require either new construction or realignment of school zones to accommodate new students.

June 16, 2025

City of Columbia Development Review Committee,

Gamble Design Collaborative is pleased to provide the following comment response letter for Project – 25-0200, here after referred to as "**Double Branch Road Comprehensive Land Use Plan Amendment and Annexation Request."** Please see the attached municipality comments and our responses:

Planning

1. The lead staff personnel for this case are Charles Rush and Robert Archibald, Principal Planners. Please contact crush@columbiatn.gov and rarchibald@columbiatn.gov with questions about the development review process or technical comments. The case planner should be copied on all communication with other city staff.

Response: Understood.

2. At resubmittal, please provide a response letter addressing each comment along with any revised plans. If the nature of the comment does not warrant a response, or the comment was previously addressed, please simply note that the information has been acknowledged. Any documents or additional information that you want to present to the Planning Commission should be included in your resubmittal.

Response: Response letter has been provided.

3. Provide description of proposed project in application and complete entire application. Complete all applicable, i.e.; annexation, rezoning, and comp plan amendment.

Response: Project description has been provided with submittal. Land Use Plan Amendment and Annexation Request have been combined into one submittal. Because the applicant wishes to annex the property into the City of Columbia, under it's base zoning of CD-3L, a rezoning request is not required.

Fire

4. No comments

Response: Understood.

greg.gamble@gdc-tn.com | 615.975.5765 cell | 3020 Stansberry Lane, Suite 201, Franklin, TN 37069

Engineering

5. No comments on Annexation, Rezoning, and Comprehensive Plan Amendment.

Response: Understood.

6. Show approved Greens Mill PUD layout on Concept Plan.

Response: Approved Greens Mill layout has been provided on all exhibits and sheets. Concept plan is conceptual in nature and final layout is to be determined at Site Development Plan.

Wastewater

7. Columbia Wastewater is concerned with development near Double Branch Rd which might require its own bore under the creek in order to obtain sanitary sewer access.

Response: Understood. Applicant will coordinate with the Columbia Wastewater to determine sanitary sewer access at Site Development Plan.

8. Annexation of this property and proper planning of onsite sanitary sewer systems could benefit the sewer system of the Honey Farm subdivision in multiple ways, including elimination of a public-owned pump station and privately-owned grinder pumps through future public infrastructure projects.

Response: Understood.

Maury County E911

9. No comment on Annexation.

Response: Understood.

Maury County Schools

10. Battle Creek Elementary, Battle Creek Middle, Battle Creek High 9-11 (25/26 SY) 9-12 (26/27 SY). Spring Hill High 12 (25/26 SY).
    The development combined with current neighborhoods and additional approved developments in these zones may require either new construction of realignment of school zones to accommodate new students.

Response: Understood.

Columbia Water

11. A water availability letter was issued on May 20, 2025, it remains valid for 120 days. The availability of capacity to serve is based on a determination by the Fire Marshal of fire flow requirements and the information submitted on the Water Service Availability Request application. Any off-site improvements detailed in the availability letter are the responsibility of the developer/owner. All public water system improvements are subject to the preparation and approval of detailed construction plans prepared in accordance with CPWS and Tennessee Department of Environment and Conservation requirements.

Response: Understood.

Duck River Electric Membership Corp

12. DREMC has existing power on parcel. DREMC plans to serve pending annexation.

Response: Understood.

Building

13. No comments.

Response: Understood.

Police

14. No comments provided.

Response: Understood.

Public Works

15. No comments.

Response: Understood.

City Attorney

16. No comments provided.

Response: Understood.

Columbia Power

17. Columbia Power System has an existing power line near your proposed development. We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction.
    . Unfortunately, due to current supply chain challenges, no timeframe can be guaranteed regarding the availability of meters or transformers appropriate for your development.

Response: Understood.

greg.gamble@gdc-tn.com | 615.975.5765 cell | 3020 Stansberry Lane, Suite 201, Franklin, TN 37069

Maury County Highway Dept.

18. Applicant to coordinate with the Maury County Highway Department and Collier Engineering Company for review and approval of the connection to Double Branch Road and any potential off-site improvements required as part of this development.

Response: Understood.

Atmos Energy

19. No comment provided.

Response: Understood.

ATT

20. No comment provided.

Response: Understood.

Sincerely,



Greg Gamble

CITY OF
COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, June 10, 2025

ITEM NO.
25-0200

DESCRIPTION: Double Branch Rd Comp Plan Amendment Annexation

COMMENTS:

Planning

1. The lead staff personnel for this case are Charles Rush and Robert Archibald, Principal Planners. Please contact crush@columbiatn.gov and rarchibald@columbiatn.gov with questions about the development review process or technical comments. The case planner should be copied on all communication with other city staff.
2. At resubmittal, please provide a response letter addressing each comment along with any revised plans. If the nature of the comment does not warrant a response, or the comment was previously addressed, please simply note that the information has been acknowledged. Any documents or additional information that you want to present to the Planning Commission should be included in your resubmittal.
3. Provide description of proposed project in application and complete entire application. Complete all applicable, i.e.; annexation, rezoning, and comp plan amendment.

Fire

4. No comments

Engineering

5. No comments on Annexation, Rezoning, and Comprehensive Plan Amendment.

6. Show approved Greens Mill PUD layout on Concept Plan.

Wastewater

7. Columbia Wastewater is concerned with development near Double Branch Rd which might require its own bore under the creek in order to obtain sanitary sewer access.
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DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

Building

13. No comments.

Police

14. No comments provided.

Public Works

15. No comments.

City Attorney

16. No comments provided.

Columbia Power

17. Columbia Power System has an existing power line near your proposed development. We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction.
    . Unfortunately, due to current supply chain challenges, no timeframe can be guaranteed regarding the availability of meters or transformers appropriate for your development.

Maury County Highway Dept.

18. Applicant to coordinate with the Maury County Highway Department and Collier Engineering Company for review and approval of the connection to Double Branch Road and any potential off-site improvements required as part of this development.

Atmos Energy

19. No comment provided.

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

ATT

20. No comment provided.

Resubmittal Guidelines

Please provide a comment response letter as well as digital copies of revised plans and supporting documentation. Submit all required documents electronically through the online portal: columbia.onlama.com. If the files are oversized, please provide a file sharing link.

Please contact the case planner identified in the Planning Comments with any questions about the review process.

Please contact pkeltner@columbiatn.gov or srichardson@columbiatn.gov if you encounter difficulties with the online portal.

You will receive an invoice for required advertising and mailing fees. All fees must be paid by the Friday following resubmittal in order advance to the Planning Commission agenda.

NOTE: All resubmittals must demonstrate compliance with city standards prior to Planning Commission review. Requests which do not adhere to regulations and/or remain unresponsive to technical comments will not be forwarded to the next agenda until such items are amended. Final Plat applications which are not ready to proceed to Planning Commission following the first resubmittal deadline will be added to the following DRC agenda to confirm the status of required infrastructure and utilities. Applications which remain incomplete following two resubmittal deadlines will be closed.

May 20, 2025

Mr. Wes Magill
Magill Incorporated
9248 Stepping Stone Drive
Franklin, TN 37067
Sent via email: *wmagill@magillinc.com*

RE: Conditional Water Availability Letter Expires: 5/20/2026
Lepley Farm at Double Branch – 230 Units
Off Double Branch Road
Tax Map & Parcel #: 067 00100 000
Columbia, Maury County, TN

Dear Mr. Magill:

Columbia Power & Water Systems ("the Utility"/CPWS) is a municipal corporation authorized to provide water services in accordance with State law. CPWS has adopted rules, regulations, and standard operation procedures, prescribing the conditions under which CPWS will furnish water service. In addition, certain State laws delegate authority to the Tennessee Department of Environment and Conservation (TDEC), various Planning Commissions, and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Water service will be made available on a first-come, first-served basis, subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies. Water service is subject to availability of all CPWS furnished equipment and materials appropriate for the development and provided the applicant complies with all rules and regulations of CPWS and conditions set out herein.

We have received your application for water availability to serve a proposed development consisting of 230 residential units, an amenity center, pool, and pool house located off Double Branch Road in Maury County. We understand this project is requesting annexation into the City of Columbia.

CPWS will be able to meet the anticipated water demands and fire flow requirements with the extension of backbone water service mains to the project site. However, current peak season water usage and planned (committed) water demands for developments in progress are expected to reach the CPWS source water withdrawal limit set by our water system permit. As such, CPWS cannot commit source water availability for additional developments until several major Long Term Water Supply Program (LTWSP) improvements have been constructed and our water system permit is updated. Note that current planning anticipates completion of the

LTWSP improvements near the end of 2028, but that schedule is subject to several external agency approvals and public processes which could extend the timeline.

CPWS is providing a Conditional Water Availability Letter for the Project which is dependent on the following stipulations and requirements:

- Source Water availability to serve the proposed development is subject to expansion of the CPWS water treatment plant (WTP), raw water pumping and transmission system, and water system permit to withdraw and serve sufficient additional water beyond the demands of this development.
- Water main extensions will be necessary to serve the proposed development, with details to be determined as part of design coordination after subsequent application for water service.
- Separate fire, commercial, landscape irrigation, and domestic meters (with backflow devices) will be required to serve the proposed Project.
- No construction of water infrastructure shall be initiated until final construction plans have been approved by CPWS (including TDEC approval).

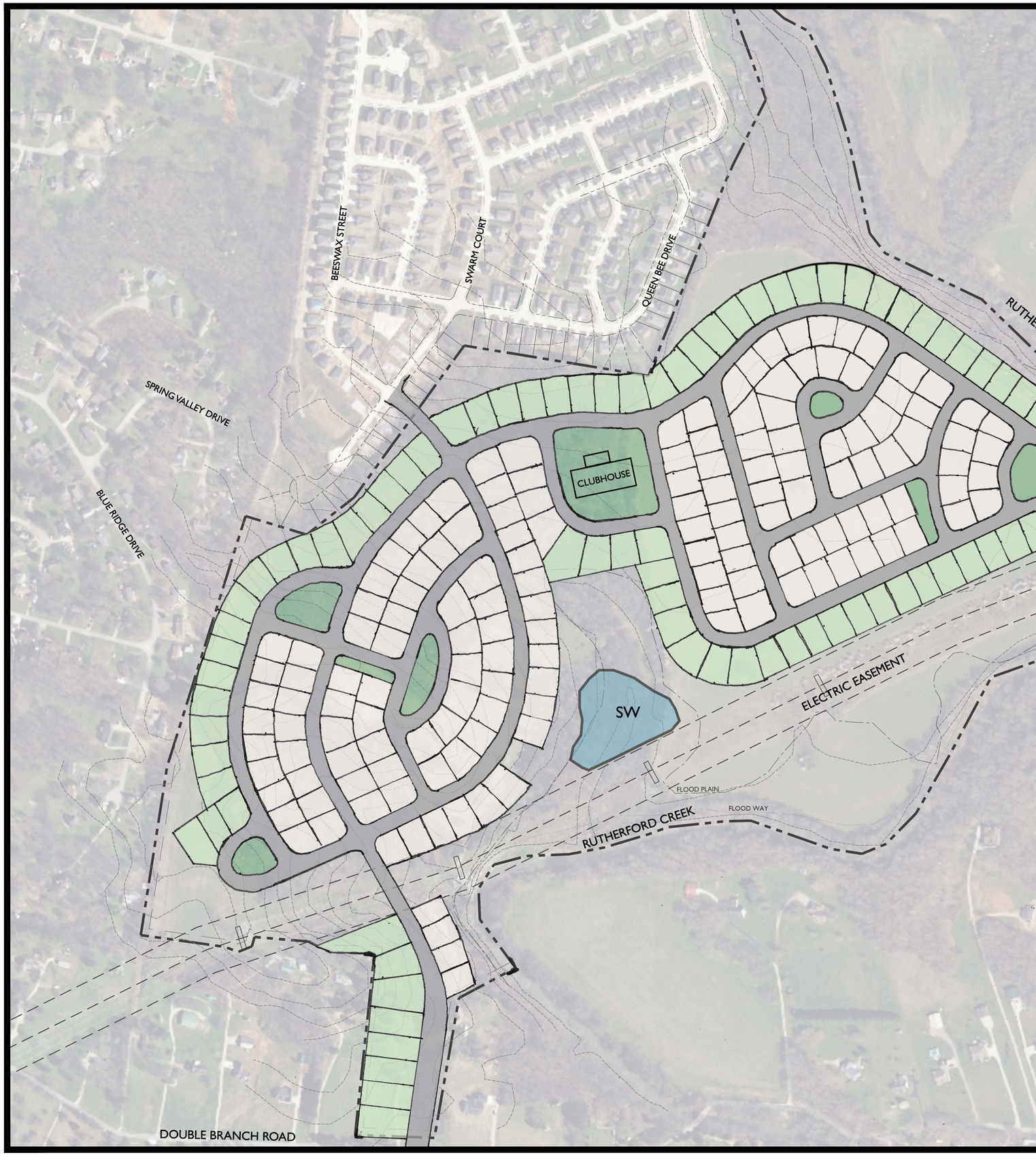
A typical Water Availability Letter expires in one-hundred twenty (120) days unless vested by payment of water service fees and impact fees for the proposed project. However, this Conditional Water Availability Letter represents a planning-level document for use by the applicant during due-diligence and efforts toward completing the entitlement process. It is premature to set the New Water Service Fees and Impact Fees at this time, as the development detail is expected to change through the entitlement process and fee escalations are anticipated within that timeline as well. As such, **this Conditional Water Availability Letter will be valid for a period of one year**. After that time, the applicant will be required to submit a new application for water availability and CPWS will update timing for availability and detail the additional fees for vesting of water availability.

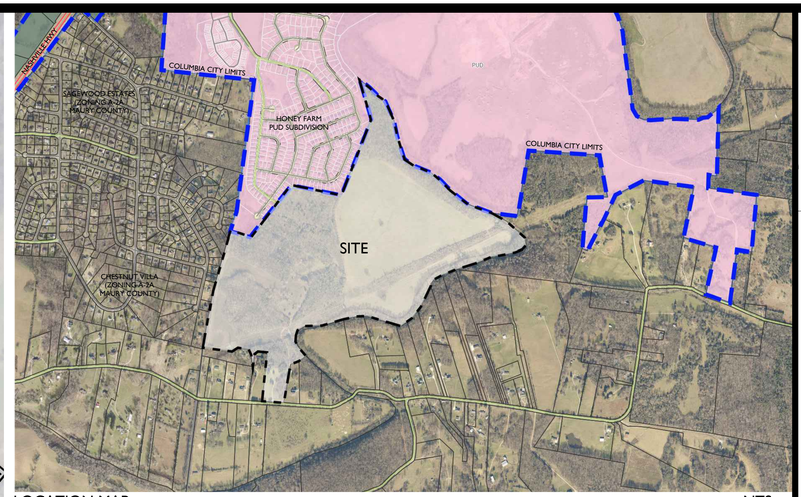
Please feel free to contact me at 931-388-4833 x7655 or Matt.Wheeler@cpws.com if you have questions or would like to discuss.

Sincerely,

Matthew J. Wheeler, P.E.
Vice President of Water Resources, CPWS

cc: Koby DuMont, Monterra Development
Bart Anderson, CPWS
Eric King, Inflo Design Group
File 25-019





LOCATION MAP NTS

PROJECT INFORMATION:

PARCEL: MAP 67 PARCEL 1.00
ADDRESS: DOUBLE BRANCH ROAD
AREA: 206.96 AC

APPLICANT/LANDSCAPE ARCHITECT:
GREG GAMBLE
GAMBLE DESIGN COLLABORATIVE
3020 STANSBERRY LANE, SUITE 201
FRANKLIN, TN 37069
615-975-5765
greg.gamble@gdc-tn.com

DEVELOPER:
PATRICK ACHILLES
DREES HOMES
1651 WESTGATE CIRCLE
BRENTWOOD, TN 37027
615-516-9397
pachilles@dreeshomes.com

OWNER:
C&E DOUBLE BRANCH LLC.
1250 SADDLE SPRINGS DRIVE
THOMPSON'S STATION, TN 37179
615-642-6939
Robclepley@gmail.com

SKETCH PLAN CD-3L DESIGN CRITERIA:

GROSS SITE AREA: 206.96 AC
GROSS DENSITY: 1.21 DUA
TOTAL UNITS: 250 UNITS

REQUIRED CIVIC SPACE: 10.35 AC MIN (5% GROSS AREA)

ANNEXATION REQUEST:

EXISTING ZONING: A-2A (COUNTY)
FUTURE LAND USE: RURAL TRANSITION
REQUESTED ZONING: CD-3L

ON BEHALF OF THE PROPERTY OWNER, THE APPLICANT IS REQUESTING ANNEXATION INTO THE CITY OF COLUMBIA FOR THE PROPERTY LOCATED AT DOUBLE BRANCH ROAD, (MAP 067, PARCEL 1.00). THIS PROPERTY IS 206.96 AC AND SHARES A BOUNDARY WITH RUTHERFORD CREEK. THE PROPERTY INCLUDES FLOODWAY, 100-YEAR FLOODPLAIN, AN ELECTRIC EASEMENT, WOODED AREAS, AND ROLLING HILLS. THE PROPERTY'S NORTHERN PROPERTY LINE ABUTS WITH THE CURRENT COLUMBIA CITY LIMITS.

THE PROPERTY WILL BE DEVELOPED UNDER THE BASE ANNEXATION ZONING OF CD-3L AND ADHERE TO ALL ZONING REQUIREMENTS AS OUTLINED IN THE ZONING ORDINANCE. NO VARIANCES ARE REQUESTED AT THIS TIME.

THE MASTER PLAN IS CONCEPTUAL IN NATURE AND SUBJECT TO REFINEMENT. THE ANNEXATION APPLICATION STATES THE NUMBER OF UNITS AS 250, FOR A 1.21 DU/AC.

THE FUTURE LAND USE PLAN ADOPTED IN 2024, DESIGNATES THIS PROPERTY AS RURAL TRANSITION, WHICH HAS A MAXIMUM 1 DU/AC. HOWEVER, APPROXIMATELY 50% OF THE PROPERTY ABUTS THE SUBURBAN NEIGHBORHOOD LAND USE, WHICH HAS A MAXIMUM 4-24 DU/AC. THIS DEVELOPMENT WILL SERVE AS A TRANSITION IN LOT SIZES FROM MORE DENSE DEVELOPMENTS NORTHWEST OF THE PROPERTY TO THE LESS DENSE RURAL DEVELOPMENTS TO THE SOUTHEAST.

CONCEPT PLAN LOT DIMENSIONS:

SINGLE-FAMILY LOTS

100' X 130'
FRONT SETBACK: 30'
SIDE SETBACK: 12'
REAR SETBACK: 30'
MAXIMUM BUILDING WIDTH: 76'
MAXIMUM UNITS PER BUILDING: 1
PARKING PROVIDED IN GARAGES AND DRIVEWAYS

100' X 150'
FRONT SETBACK: 30'
SIDE SETBACK: 12'
REAR SETBACK: 30'
MAXIMUM BUILDING WIDTH: 76'
MAXIMUM UNITS PER BUILDING: 1
PARKING PROVIDED IN GARAGES AND DRIVEWAYS

KEY
100' X 130' LOTS
100' X 150' LOTS

LEGAL DESCRIPTION OF PROPERTY:
PROPERTY MAP 067, PARCEL 1.00
DOUBLE BRANCH ROAD
MAURY COUNTY, TENNESSEE

FOR COMPLETE LEGAL DESCRIPTION, PLEASE SEE ALTA SURVEY.

N

0 200 400 600
BASE INFORMATION - GIS, AND BING AERIAL 2024

GAMBLE DESIGN COLLABORATIVE
DEVELOPMENT PLANNING AND LANDSCAPE ARCHITECTURE

DOUBLE BRANCH ROAD
ANNEXATION REQUEST
Columbia, Maury County, Tennessee

5/19/25
LANDSCAPE ARCHITECT

Revision Date

ANNEXATION REQUEST
SHEET
L1.0

CARROLL LAND SURVEYING
495 EAST MAIN STREET, SUITE 1
HOHENWALD, TN 38462
PHONE: (931)796-1654
FAX: (931)796-1651
EMAIL: csurvey@bellsouth.net

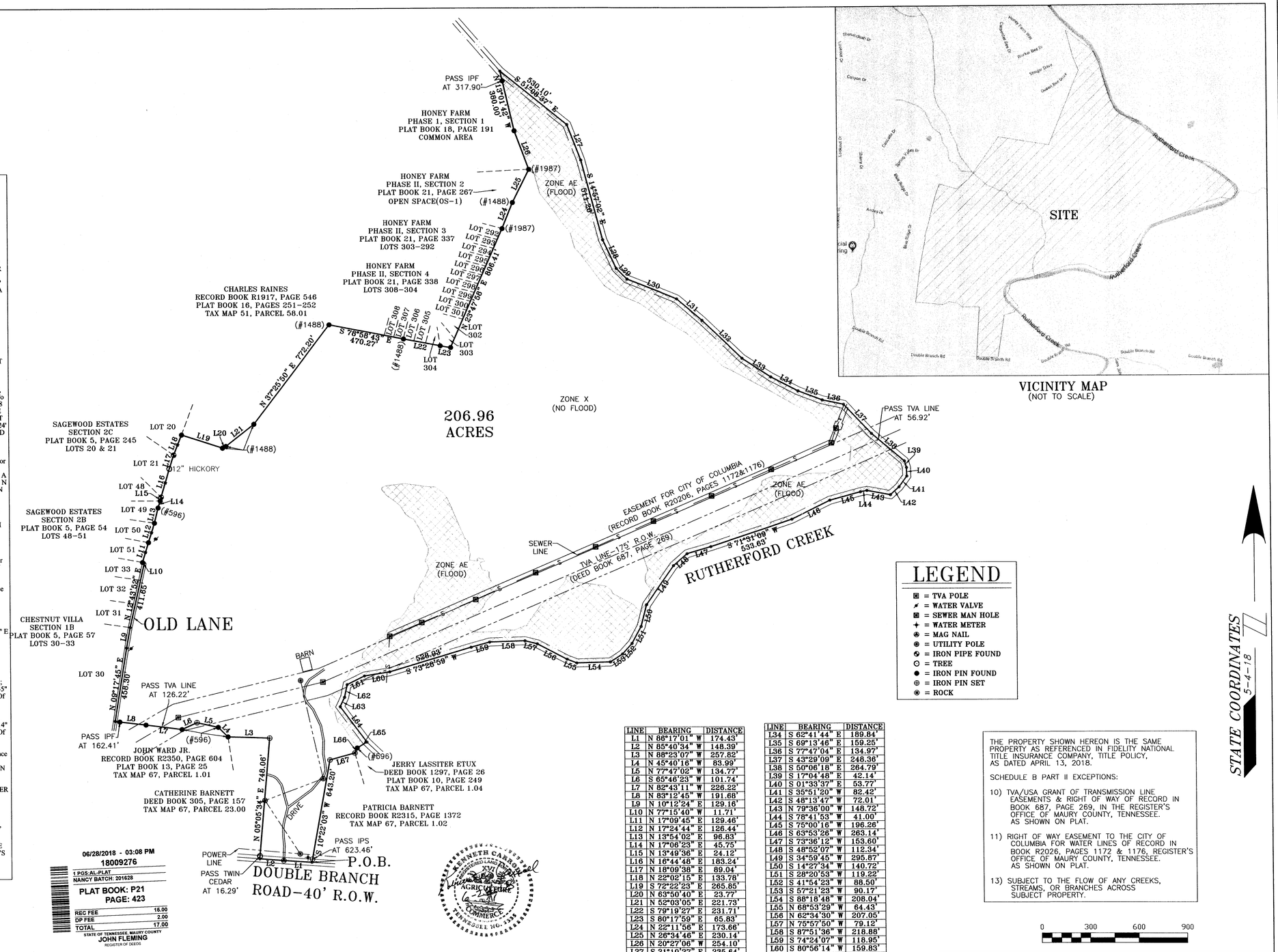
LEGAL DESCRIPTION

BEING AND LYING IN THE 3RD CIVIL DISTRICT OF MAURY COUNTY, TENNESSEE AND LYING NORTH OF DOUBLE BRANCH ROAD, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

Beginning At A POINT IN THE CENTER OF DOUBLE BRANCH ROAD; SAID POINT BEING THE SOUTHERN MOST SOUTHEAST CORNER OF THE TRACT BEING DESCRIBED, AND THE SOUTHWEST CORNER OF PATRICIA BARNETT; THENCE WITH CENTER OF SAID ROAD, N 86°17'01" W For A Distance Of 174.43' To A MAG NAIL; THENCE N 85°40'34" W For A Distance Of 148.39' TO A POINT; SAID POINT BEING THE SOUTHERN MOST SOUTHWEST CORNER OF THE TRACT BEING DESCRIBED, AND THE SOUTHEAST CORNER OF CATHERINE BARNETT; THENCE LEAVING SAID ROAD WITH BARNETT, N 05°05'34" E, PASSING A TWIN CEDAR TREE AT 16.29', IN ALL A Distance Of 748.06' To A IRON PIN SET; SAID IRON PIN SET BEING THE NORTHEAST CORNER OF BARNETT; THENCE CONTINUING WITH BARNETT, N 88°23'07" W For A Distance Of 257.82' To A IRON PIN FOUND (#596); SAID IRON PIN FOUND BEING THE NORTHWEST CORNER OF BARNETT, AND THE NORTHEAST CORNER OF JOHN WARD JR.; THENCE WITH WARD, N 45°40'16" W For A Distance Of 83.99' To A IRON PIN FOUND (#596); THENCE N 77°47'02" W For A Distance Of 134.77' To A IRON PIN SET; THENCE S 65°46'23" W For A Distance Of 101.74' To A IRON PIN FOUND(#596); THENCE N 82°43'11" W, PASSING THE CENTER OF A TVA LINE AT 126.22', IN ALL A Distance Of 226.22' To A IRON PIN FOUND; THENCE N 83°12'45" W, PASSING AN IRON PIN FOUND AT 162.41' IN ALL A Distance Of 191.68' TO A POINT IN THE CENTER OF AND OLD LANE; SAID POINT BEING THE WESTERN MOST SOUTHWEST CORNER OF THE TRACT BEING, THE NORTHWEST CORNER OF WARD, AND THE EAST BOUNDARY OF LOT 30 OF CHESTNUT VILLA SECTION 1B; THENCE WITH CENTER OF SAID ROAD AND EAST BOUNDARY OF LOT 30 OF CHESTNUT VILLA, N 09°17'45" E For A Distance Of 458.30' To A POINT; THENCE N 10°12'24" E For A Distance Of 129.16' To A POINT; SAID POINT BEING THE NORTHEAST CORNER OF LOT 30, AND THE SOUTHEAST CORNER OF LOT 31; THENCE WITH LOTS 31-33, N 12°43'52" E For A Distance Of 411.65' To A POINT; SAID POINT BEING THE NORTHEAST CORNER OF LOT 33; THENCE LEAVING CENTER OF SAID OLD LANE CONTINUING WITH LOT 33, N 77°15'40" W For A Distance Of 11.71' To A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE SOUTHEAST CORNER OF LOT 51 OF SAGEWOOD ESTATES SECTION 2B; THENCE WITH LOT 51 OF SAGEWOOD ESTATES SECTION 2B AND A FENCE, N 17°09'45" E For A Distance Of 129.46' To A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE SOUTHEAST CORNER OF LOT 50; THENCE WITH LOT 50 AND CONTINUING WITH A FENCE, N 17°24'44" E For A Distance Of 126.44' To A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE SOUTHEAST CORNER OF LOT 49; THENCE WITH LOT 49 AND CONTINUING WITH A FENCE, N 13°54'02" E For A Distance Of 96.83' To A IRON PIN FOUND (#596); THENCE N 17°06'23" E For A Distance Of 45.75' To A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE SOUTHEAST CORNER OF LOT 48; THENCE WITH LOT 48 AND CONTINUING WITH A FENCE, N 13°49'36" E For A Distance Of 24.12' To A IRON PIPE FOUND; SAID IRON PIPE FOUND BEING THE SOUTHEAST CORNER OF LOT 21 OF SAGEWOOD ESTATES SECTION 2C; THENCE WITH LOT 21 OF SAGEWOOD ESTATES SECTION 2C AND CONTINUING WITH A FENCE, N 16°44'48" E For A Distance Of 183.24' To A 12" HICKORY; THENCE N 18°09'38" E For A Distance Of 89.04' To A IRON PIPE FOUND; SAID IRON PIPE FOUND BEING THE SOUTHEAST CORNER OF LOT 20; THENCE WITH LOT 20 AND CONTINUING WITH A FENCE, N 22°02'15" E For A Distance Of 133.78' To A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE WESTERN MOST NORTHWEST CORNER OF THE TRACT BEING DESCRIBED, AND THE SOUTHWEST CORNER OF CHARLES RAINES; THENCE LEAVING SAGEWOOD ESTATES SECTION 2C AND SAID FENCE WITH RAINES, S 72°22'23" E For A Distance Of 265.85' To A IRON PIN FOUND (#1488); SAID IRON PIN FOUND BEING THE SOUTHERN MOST SOUTHEAST CORNER OF RAINES; THENCE CONTINUING WITH RAINES, N 63°50'40" E For A Distance Of 23.77' To A IRON PIN FOUND (#1488); THENCE N 52°03'05" E For A Distance Of 221.73' To A IRON PIN FOUND (#1488); THENCE N 37°25'50" E For A Distance Of 772.20' To A IRON PIN FOUND (#1488); THENCE S 78°58'43" E, PASSING THE EASTERN MOST SOUTHEAST CORNER OF RAINES, AND THE SOUTH BOUNDARY OF LOT 308 OF HONEY FARM PHASE II SECTION 4, For A Distance Of 470.27' To A IRON PIN FOUND (#1488); SAID IRON PIN FOUND BEING THE SOUTHEAST CORNER OF LOT 307, AND THE SOUTHWEST CORNER OF LOT 306; THENCE WITH LOTS 306-304, S 79°19'27" E For A Distance Of 231.71' To A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE SOUTHWEST CORNER OF LOT 303 OF HONEY FARM PHASE II SECTION 3; THENCE WITH LOT 303 OF HONEY FARM PHASE II SECTION 3, S 80°17'59" E For A Distance Of 65.83' To A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE SOUTHEAST CORNER OF LOT 303; THENCE WITH LOTS 303-292 OF HONEY FARM PHASE II SECTION 3, N 23°47'58" E For A Distance Of 806.41' To A IRON PIN FOUND (#1987); SAID IRON PIN FOUND BEING THE NORTHEAST CORNER OF LOT 292, AND THE SOUTHEAST CORNER OF OPEN SPACE (OS-1) OF HONEY FARM PHASE II SECTION 2; THENCE WITH OPEN SPACE (OS-1) OF HONEY FARM PHASE II SECTION 2, N 22°11'56" E For A Distance Of 173.66' To A IRON PIN FOUND (#1488); THENCE N 26°34'46" E For A Distance Of 230.14' To A IRON PIN FOUND (#1987); SAID IRON PIN FOUND BEING THE NORTHEAST CORNER OF OPEN SPACE (OS-1) OF HONEY FARM PHASE II SECTION 2, AND THE SOUTHEAST CORNER OF A COMMON AREA OF HONEY FARM PHASE I SECTION 1; THENCE WITH A COMMON AREA OF HONEY FARM PHASE I SECTION 1, N 20°27'06" W For A Distance Of 254.10' To A IRON PIN FOUND; THENCE N 13°01'42" W, PASSING AN IRON PIN FOUND AT 317.90', IN ALL A Distance Of 380.00' To A POINT IN THE CENTER OF RUTHERFORD CREEK; SAID POINT BEING THE NORTHERN MOST NORTHWEST CORNER OF THE TRACT BEING DESCRIBED; THENCE WITH CENTER OF SAID CREEK, S 51°08'37" E For A Distance Of 530.10'; THENCE S 21°10'27" E For A Distance Of 235.64'; THENCE S 14°57'02" E For A Distance Of 511.26'; THENCE S 24°44'10" E For A Distance Of 196.45'; THENCE S 45°00'00" E For A Distance Of 93.74'; THENCE S 68°07'46" E For A Distance Of 331.06'; THENCE S 49°24'17" E For A Distance Of 204.66'; THENCE S 46°25'20" E For A Distance Of 341.03'; THENCE S 57°19'33" E For A Distance Of 212.10'; THENCE S 62°41'44" E For A Distance Of 189.84'; THENCE S 69°13'46" E For A Distance Of 159.25'; THENCE S 77°47'04" E For A Distance Of 134.97'; THENCE S 43°29'09" E For A Distance Of 248.36'; THENCE S 50°06'18" E, PASSING THE CENTER OF A TVA LINE AT 56.92', IN ALL A Distance Of 264.79'; THENCE S 17°04'48" E For A Distance Of 42.14'; THENCE S 01°33'37" E For A Distance Of 53.77'; THENCE S 35°51'20" W For A Distance Of 82.42'; THENCE S 48°13'47" W For A Distance Of 72.01'; THENCE N 79°36'00" W For A Distance Of 148.72'; THENCE S 78°41'53" W For A Distance Of 41.00'; THENCE S 75°00'16" W For A Distance Of 196.26'; THENCE S 63°53'26" W For A Distance Of 263.14'; THENCE S 71°31'09" W For A Distance Of 533.63'; THENCE S 73°36'12" W For A Distance Of 153.60'; THENCE S 48°52'07" W For A Distance Of 112.34'; THENCE S 34°59'45" W For A Distance Of 295.87'; THENCE S 14°27'34" W For A Distance Of 140.72'; THENCE S 28°20'53" W For A Distance Of 119.22'; THENCE S 41°54'23" W For A Distance Of 88.50'; THENCE S 57°21'23" W For A Distance Of 90.17'; THENCE S 88°18'48" W For A Distance Of 208.04'; THENCE N 68°53'29" W For A Distance Of 64.43'; THENCE N 62°34'30" W For A Distance Of 207.05'; THENCE N 75°57'50" W For A Distance Of 79.12'; THENCE S 87°51'36" W For A Distance Of 218.88'; THENCE S 74°24'07" W For A Distance Of 118.95'; THENCE S 73°28'59" W For A Distance Of 528.93'; THENCE S 80°56'14" W For A Distance Of 159.83'; THENCE S 63°39'13" W For A Distance Of 120.16'; THENCE S 11°45'48" W For A Distance Of 79.77'; THENCE S 25°40'20" W For A Distance Of 63.44'; THENCE S 36°44'47" E For A Distance Of 273.01' To A POINT; SAID POINT BEING THE NORTHEAST CORNER OF JERRY LASSITER ETUX; THENCE LEAVING SAID CREEK WITH LASSITER, S 59°23'35" W For A Distance Of 69.95' To A IRON PIN FOUND; THENCE S 25°22'28" W For A Distance Of 34.24' To A Rock; SAID ROCK BEING THE NORTHWEST CORNER OF LASSITER, AND THE NORTHEAST CORNER OF PATRICIA BARNETT; THENCE WITH BARNETT, S 74°47'08" W For A Distance Of 160.59' To A IRON PIN SET; SAID IRON PIN SET BEING THE NORTHWEST CORNER OF BARNETT; THENCE CONTINUING WITH BARNETT, S 10°22'03" W, PASSING AN IRON PIN SET AT 623.46', IN ALL A Distance Of 643.20' To The Point Of Beginning And Containing 206.96 Acres AS SURVEYED BY KENNETH CARROLL, RLS TENNESSEE LICENSE NUMBER 1335, MAY 4, 2018.

THE ABOVE TRACT IS SUBJECT TO 20 FEET OF THE 40 FOOT R.O.W. OF DOUBLE BRANCH ROAD, A 175' TVA LINE R.O.W. AS RECORDED IN DEED BOOK 687, PAGE 269, AND AN EASEMENT FOR CITY OF COLUMBIA AS RECORDED IN RECORD BOOK R2026, PAGES 1172 AND 1176, IN THE REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE.

BEING THE SAME PROPERTY AS CONVEYED TO L E BARNETT ETAL AS RECORDED IN DEED BOOK 609, PAGE 77, DEED BOOK 811, PAGE 314, DEED BOOK 285, PAGE 273, AND DEED BOOK 231, PAGE 589, IN THE REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE.



VICINITY MAP
(NOT TO SCALE)

LINE	BEARING	DISTANCE
L1	N 86°17'01" W	174.43'
L2	N 85°40'34" W	148.39'
L3	N 88°23'07" W	257.82'
L4	N 45°40'16" W	83.99'
L5	N 77°47'02" W	134.77'
L6	S 65°46'23" W	101.74'
L7	N 82°43'11" W	226.22'
L8	N 83°12'45" W	191.68'
L9	N 10°12'24" E	129.16'
L10	N 77°15'40" W	11.71'
L11	N 17°09'45" E	129.46'
L12	N 17°24'44" E	126.44'
L13	N 13°54'02" E	96.83'
L14	N 17°06'23" E	45.75'
L15	N 13°49'36" E	24.12'
L16	N 16°44'48" E	183.24'
L17	N 18°09'38" E	89.04'
L18	N 22°02'15" E	133.78'
L19	S 72°22'23" E	265.85'
L20	N 63°50'40" E	23.77'
L21	N 52°03'05" E	221.73'
L22	S 79°19'27" E	231.71'
L23	S 80°17'59" E	65.83'
L24	N 22°11'56" E	173.66'
L25	N 26°34'46" E	230.14'
L26	N 20°27'06" W	254.10'
L27	S 21°10'27" E	235.64'
L28	S 24°44'10" E	196.45'
L29	S 45°00'00" E	93.74'
L30	S 68°07'46" E	331.06'
L31	S 49°24'17" E	204.66'
L32	S 46°25'20" E	341.03'
L33	S 57°19'33" E	212.10'

LINE	BEARING	DISTANCE
L34	S 62°41'44" E	189.84'
L35	S 69°13'46" E	159.25'
L36	S 77°47'04" E	134.97'
L37	S 43°29'09" E	248.36'
L38	S 50°06'18" E	264.79'
L39	S 17°04'48" E	42.14'
L40	S 01°33'37" E	53.77'
L41	S 35°51'20" W	82.42'
L42	S 48°13'47" W	72.01'
L43	N 79°36'00" W	148.72'
L44	S 78°41'53" W	41.00'
L45	S 75°00'16" W	196.26'
L46	S 63°53'26" W	263.14'
L47	S 73°36'12" W	153.60'
L48	S 48°52'07" W	112.34'
L49	S 34°59'45" W	295.87'
L50	S 14°27'34" W	140.72'
L51	S 28°20'53" W	119.22'
L52	S 41°54'23" W	88.50'
L53	S 57°21'23" W	90.17'
L54	S 88°18'48" W	208.04'
L55	N 68°53'29" W	64.43'
L56	N 62°34'30" W	207.05'
L57	N 75°57'50" W	79.12'
L58	S 87°51'36" W	218.88'
L59	S 74°24'07" W	118.95'
L60	S 80°56'14" W	159.83'
L61	S 63°39'13" W	120.16'
L62	S 11°45'48" W	79.77'
L63	S 25°40'20" W	63.44'
L64	S 36°44'47" E	273.01'
L65	S 59°23'35" W	69.95'
L66	S 25°22'28" W	34.24'
L67	S 74°47'08" W	160.59'

LEGEND

- ⊠ = TVA POLE
- ✕ = WATER VALVE
- ▣ = SEWER MAN HOLE
- ✛ = WATER METER
- ⊕ = MAG NAIL
- ◉ = UTILITY POLE
- ◔ = IRON PIPE FOUND
- ○ = TREE
- ● = IRON PIN FOUND
- ⊕ = IRON PIN SET
- ◉ = ROCK

STATE COORDINATES
5-4-18

THE PROPERTY SHOWN HEREON IS THE SAME PROPERTY AS REFERENCED IN FIDELITY NATIONAL TITLE INSURANCE COMPANY, TITLE POLICY, AS DATED APRIL 13, 2018.

SCHEDULE B PART II EXCEPTIONS:

10) TVA/USA GRANT OF TRANSMISSION LINE EASEMENTS & RIGHT OF WAY OF RECORD IN BOOK 687, PAGE 269, IN THE REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE. AS SHOWN ON PLAT.

11) RIGHT OF WAY EASEMENT TO THE CITY OF COLUMBIA FOR WATER LINES OF RECORD IN BOOK R2026, PAGES 1172 & 1176, REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE. AS SHOWN ON PLAT.

13) SUBJECT TO THE FLOW OF ANY CREEKS, STREAMS, OR BRANCHES ACROSS SUBJECT PROPERTY.

0 300 600 900

06/28/2018 - 03:08 PM
18009276
1 POS-AL-PLAT
NANCY BATCH: 201628
PLAT BOOK: P21
PAGE: 423
REC FEE 16.00
DP FEE 2.00
TOTAL 17.00
STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

CERTIFICATION

I, KENNETH CARROLL, LICENSED LAND SURVEYOR, DO HEREBY CERTIFY FIDELITY NATIONAL TITLE INSURANCE COMPANY, AND ROBERT C. LEPLEY AND TERI L. LEPLEY THAT THIS PLAT WAS PREPARED UNDER MY DIRECTION, THAT IT IS MY OPINION THAT THIS SURVEY MEETS OR EXCEEDS THE STANDARDS OF PRACTICE FOR A CATEGORY 1 SURVEY, AND THAT THE RATIO OF PRECISION OF THE UNADJUSTED SURVEY WAS 1:10,000 + AS SHOWN HEREON.

Kenneth Carroll
KENNETH CARROLL
TENN. REG NO. 1335

NOTE:
EASEMENT FOR ACCESS AND WATER SET OUT IN DEED BOOK 305, PAGE 159 EXTINGUISHED BY QUITCLAIM DEED AND WARRANTY DEED BEING RECORDED SIMULTANEOUSLY HEREWITH.

KENNETH CARROLL REGISTERED LAND SURVEYOR XVI AGRICULTURE COMMERCE TENNESSEE NO. 1335

NOTE: MY REVIEW OF THE "FEMA" FLOOD HAZARD MAP AVAILABLE INDICATES THAT THIS PROPERTY IS IN ZONE "AE&X" AS INDICATED BY MAP

47119C0190E 470123

AS DATED APRIL 16, 2007.

Kenneth Carroll

ALTA SURVEY OF L E BARNETT ESTATE

SCALE: 1" = 300'	APPROVED BY: KENNETH CARROLL	DRAWN BY: BRITTANY RICHARDSON
DATE: 5/4/18		

3RD CIVIL DISTRICT - MAURY COUNTY, TN

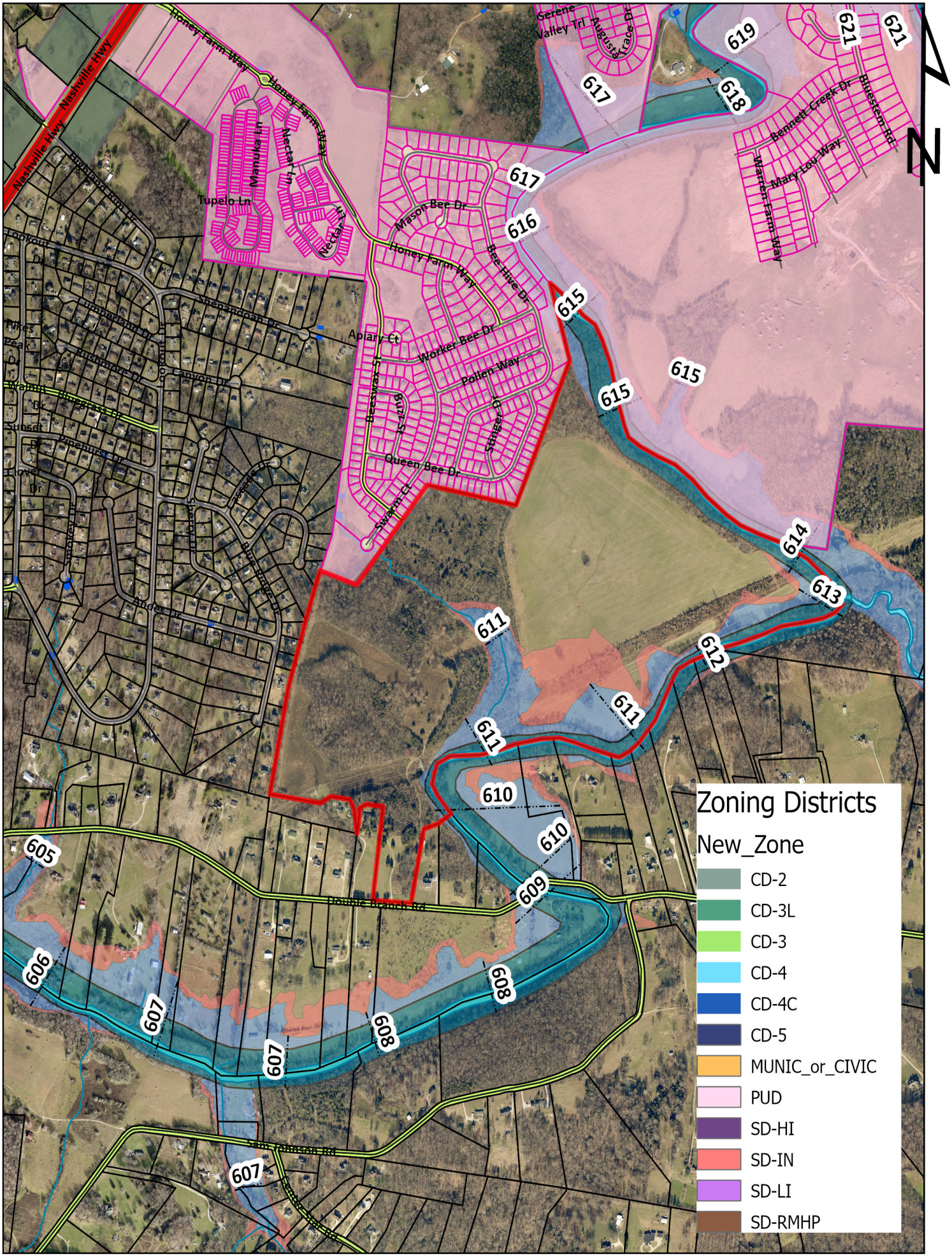
REF: DEED BOOK 609, PAGE 77; DEED BOOK 811, PAGE 314; DEED BOOK 285, PAGE 273; DEED BOOK 231, PAGE 589; TAX MAP 67, PARCEL 1.00

JOB NAME: BARN518 (JC)

Description of Requested Zone

The parcel ID is Map 067 Parcel 001.00 and the address is Double Branch Road. The location would not allow us to select the correct parcel ID. The applicant is requesting the annexation of the for mentioned parcel into the City of Columbia. This property is 206.96 AC. The applicant is not requesting a rezoning with the annexation. The property will be developed under the CD-3L design standards.

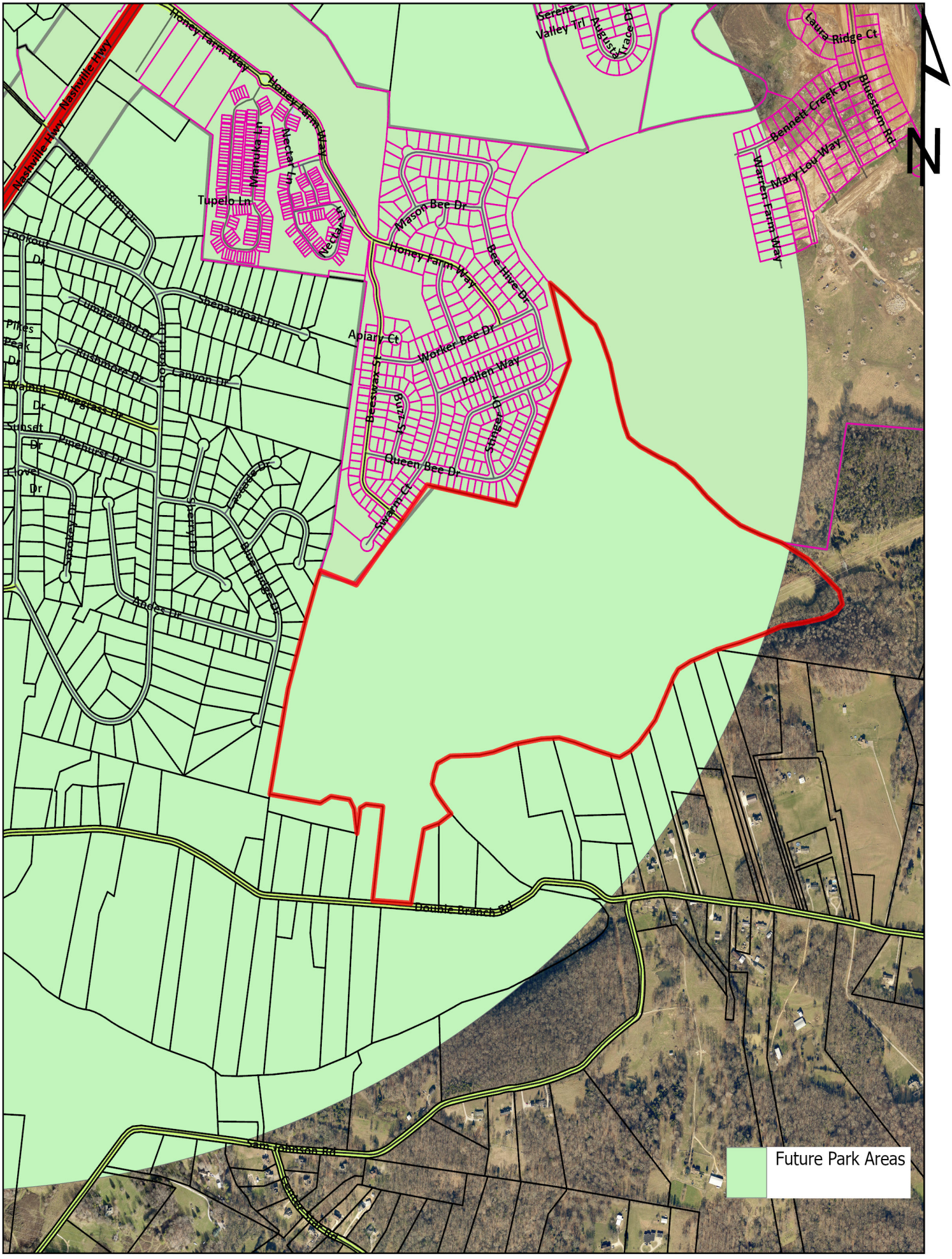
The CD-3L Neighborhood Large Lot Character District consist of primarily a low density single-family detached Residential area in which House is the predominant Building type. It has large Lotor Building Sites, medium deep front Setback and medium to wide side Setbacks. Its Thoroughfares and Internal Drives have curbs and may include Sidewalks, and/or street tress, and form medium to large blocks. CD-3L is an appropriate District for the Suburban Neighborhoods future land use Character Area described in the Comprehensive plan.



25-0200
Tax Map 67 Parcel 1.00
Double Branch Road

Development Services
700 N. Garden Street
Columbia, TN 38401
www.columbiatn.gov

CITY OF COLUMBIA
TENNESSEE



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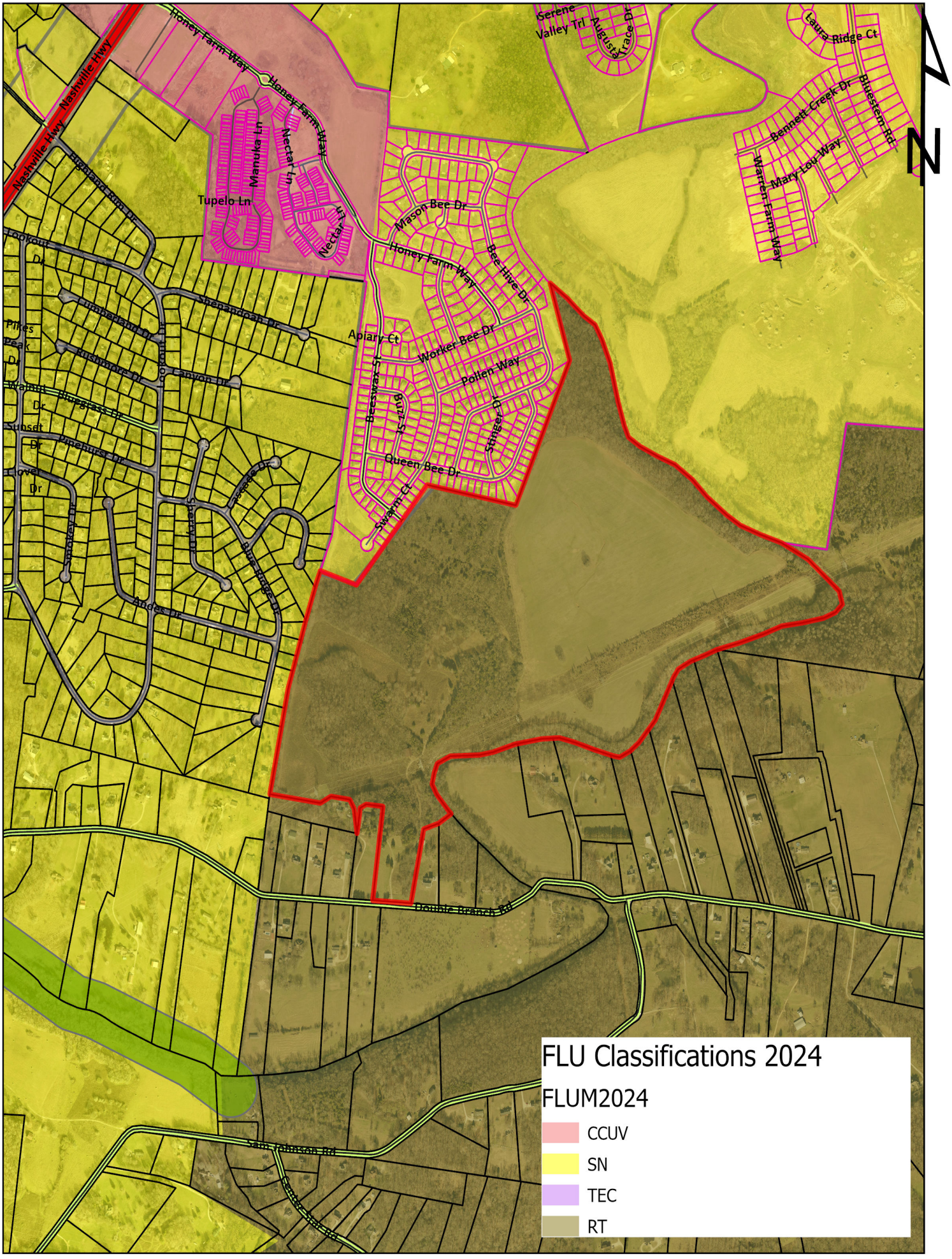
TENNESSEE



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Tax Map 67 Parcel 1.00
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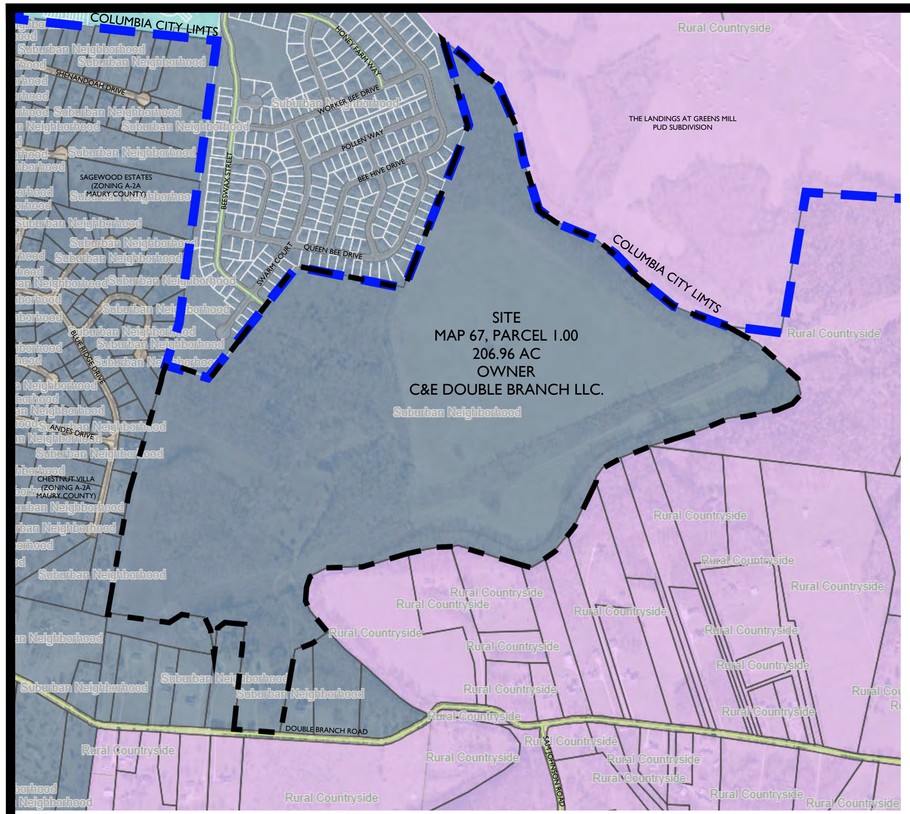
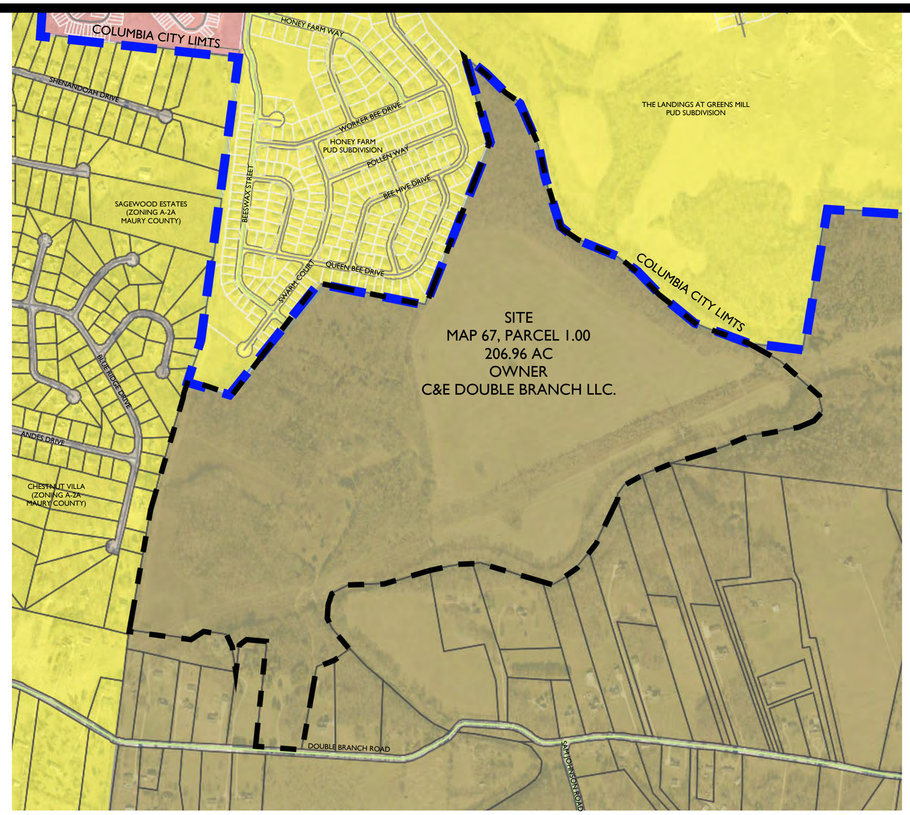
CITY OF COLUMBIA
TENNESSEE



PRE 2024 LAND USE PLAN



CURRENT LAND USE PLAN

KEY

- COLUMBIA CITY LIMITS

PRE 2024 LAND USE PLAN

- SUBURBAN NEIGHBORHOOD
- RURAL COUNTRYSIDE
- SUBURBAN CORRIDOR

CURRENT LAND USE PLAN

- SUBURBAN NEIGHBORHOOD
- RURAL TRANSITIONS
- CITY CENTER AND URBAN VILLAGE

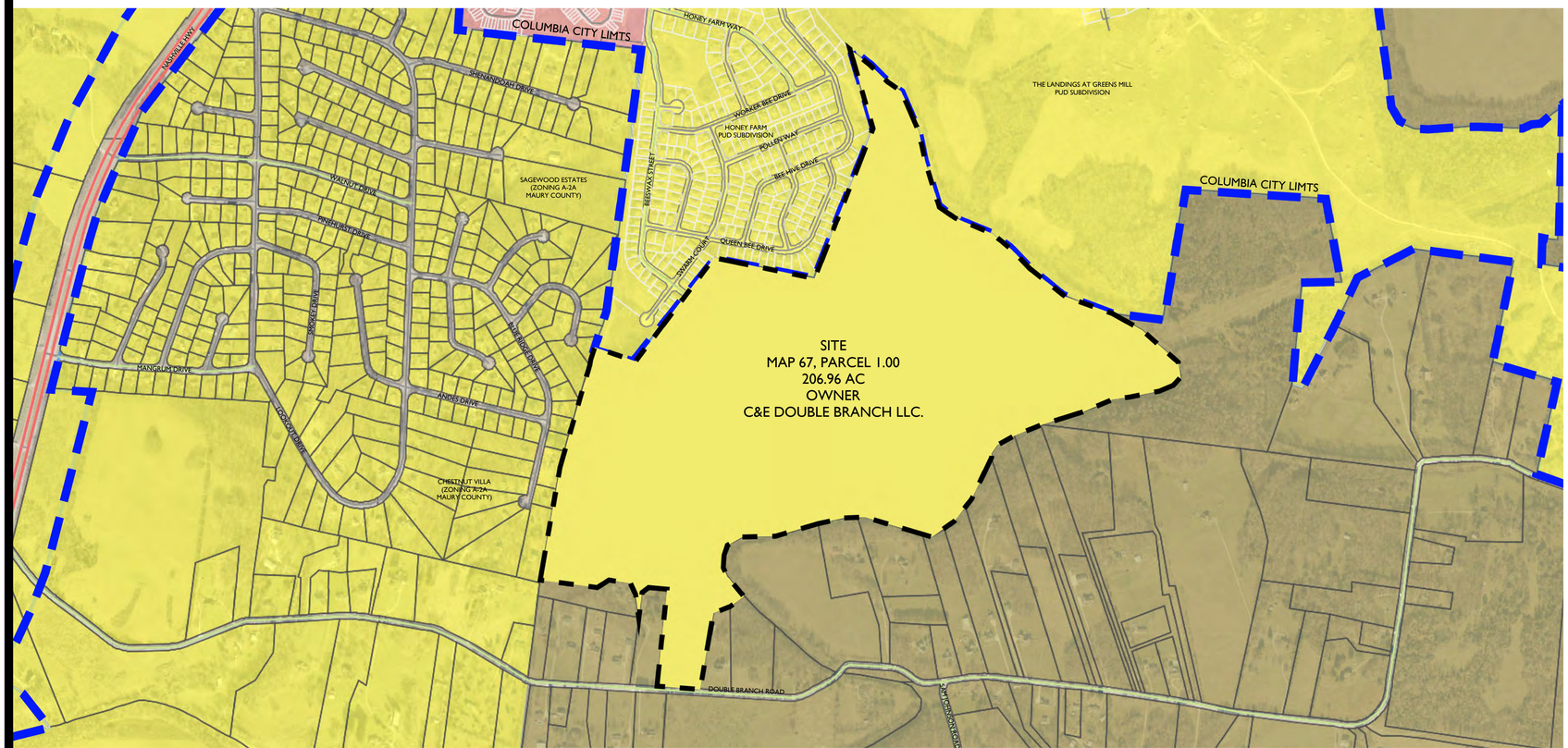
PROJECT INFORMATION:

PARCEL: MAP 67 PARCEL 1.00
ADDRESS: DOUBLE BRANCH ROAD
AREA: 206.96 AC

APPLICANT/LANDSCAPE ARCHITECT:
GREG GAMBLE
GAMBLE DESIGN COLLABORATIVE
3020 STANSBERRY LANE, SUITE 201
FRANKLIN, TN 37069
615-975-5765
greg.gamble@gdc-tn.com

DEVELOPER:
PATRICK ACHILLES
DREES HOMES
1651 WESTGATE CIRCLE
BRENTWOOD, TN 37027
615-516-9397
pachilles@dreeshomes.com

OWNER:
C&E DOUBLE BRANCH LLC.
1250 SADDLE SPRINGS DRIVE
THOMPSON'S STATION, TN 37179
615-642-6939
Robclepley@gmail.com



PROPOSED LAND USE PLAN

LEGAL DESCRIPTION OF PROPERTY:
PROPERTY MAP 067, PARCEL 1.00
DOUBLE BRANCH ROAD
MAURY COUNTY, TENNESSEE

FOR COMPLETE LEGAL DESCRIPTION, PLEASE SEE ALTA SURVEY.

N

0 500 1000 1500

BASE INFORMATION - GIS, AND BING AERIAL 2024

GAMBLE DESIGN COLLABORATIVE

DEVELOPMENT PLANNING AND LANDSCAPE ARCHITECTURE

DOUBLE BRANCH ROAD
LAND USE PLAN AMENDMENT
Columbia, Maury County, Tennessee

Revision Date

LAND USE PLAN AMENDMENT

SHEET

LI.0

LAND USE PLAN AMENDMENT JUSTIFICATION

1. Whether the proposed change would be consistent with the intent, goals, objectives, policies, guiding principles and programs of all other applicable adopted Land Use Plans;

Please refer to the following exserts from the Connect Columbia Comprehensive Plan and the applicant responses:

- *"The intent of the Suburban Neighborhoods (SN) future land use is to enhance existing suburban areas and create new neighborhoods that will improve the quality of life in Columbia".*

If one were to consider predictable suburban growth patterns, this site presents an exciting opportunity to help transition the recently approved subdivisions of Honey Farm and The Landings at Greens Mill, to the rural character of the county. These communities, located along the city limits, would greatly benefit from the additional infrastructure an SN neighborhood would provide. Road connections, utilities, and programmed open spaces would be features within a new community.

- *"extend the established form and pattern to create a more interconnected community".*

Any proposed development for the site, would be required to provide connection to the surrounding communities. This road network would give these communities future connection to Double Branch Road (Major Local Road) within approximately 1 mile from Nashville HWY. The site is also located along Rutherford Creek. This natural boundary in the landscape, can be used as a delineation between the two future land uses of SN and RT. Using waterways as a natural break between future land uses is a common practice. One example would be The Landings at Greens Mill, now under the SN future land use, separated by Rutherford Creek from the RT policy to the north.

- *"density and intensity decrease in proximity to areas under the Rural Transition (RT) future land use classification".*

Lot sizes consist with the SN future land use could be used to transition from the smaller lots within the surrounding communities, and the rural homesteads located in the county. Natural characteristics of the site, preclude it from high density development. The undulating topography discourages large building pads and expansive parking areas. The creek and floodplain prevent any development within close proximity to the proposed delineation line and establishes and natural barrier between the two future land uses.

- *"The SN future land use is distinguished from RT in the organization of lots and thoroughfares to form blocks. Physically separated developments which do not extend established block formation and roadway networks are inappropriate."*

This parcel is one of only a few undeveloped, large tracks of land in the area. This allows for the creation and formation of future suburban growth patterns that help aid in the transition from city to county. The formation of these areas will be influenced by the natural characteristics of the site. Blocks and street networks can be clustered around existing development and transition into large informal open spaces as the site moves south towards Rutherford Creek. This natural buffer provides an ideal opportunity to ease the transition between SN and RT.

Connect Columbia established goals to help guide development. The following are objectives for Connect Columbia and our responses:

- Objective 2.4: Prioritize investments which enhance Columbia residents' ability to move efficiently throughout the city

Additional road networks that come with future development, are designed with the intention of improving existing connectivity. Current subdivision like Honey Farm and The Landings at Greens Mill, would greatly benefit from road connections to the south. A Major Local Road, Double Branch Road, could serve as a connection point. This parcel has direct access to Double Branch Road and is located approximately 1 mile from Nashville HWY (Principal Arterial).

- Objective 2.5: Create a range of housing opportunities for all households and income levels

The SN future land use allows for a much greater level of diversity when it comes to housing opportunities. The current zoning districts associated with the RT future land use, are more restrictive and only accommodate the lots of 1 AC or larger. This type of housing does not lend itself to people from different income levels living within the same community. The SN associated zoning districts are much more flexible when it comes to housing types, income level, and different uses. Due to the natural constraints and context within the surrounding area of the site, it is not suitable for high density development, but it would appropriate for low to medium density development. Allowing this amendment, increases the sites ability to provide different housing opportunities, while also maintaining the natural landscape.

- Objective 4.1: Establish gateways to the city

Although the site's geographic location and orientation doesn't provide an obvious opportunity for a gateway into the city's downtown area, the proposed design does offer a transition of intensity from the county properties at the south end of the site to the city zoned properties to the north.

2. Whether the proposed change would be compatible with the existing land use pattern and designated future land uses;

As recently as 2024, this property was designated with the "Suburban Neighborhood" Future Land Use category. After the current Comprehensive Plan was approved in 2024, this property was reassigned to the "Rural Transitions" Future Land-Use category, although the reasoning for this reassignment is unknown. Amending the property back to a "Suburban Neighborhood" Future Land Use designation, would align with the context of the area. Approximately 50% of the property, borders along the SN future land uses designation. In the Connect Columbia Comprehensive Plan, there are many cases where an existing waterway is used as a natural delineation between future land uses. Perhaps most notably, The Landings at Greens Mill shares a SN to RT boundary that utilizes Rutherford Creek is a natural barrier between the two future lands uses. We request the same be applied to this portion of Rutherford Creek.

3. Whether the proposed change would create substantial adverse impacts in the Adjacent area or the City in general;

The owner has a strong desire to annex the property into the City of Columbia. This property is in the urban growth boundary and abutting city limits on its northwest and northeast boundaries, ideally situated for annexation. However, the Zoning Ordinance requires all annexed property to be annexed into the city as a CD-3L district (see *SECTION 2.3 NEWLY ANNEXED PROPERTIES).* The CD-3L zoning district is not listed under the "Rural Transition" implementing districts. In order to proceed and promote predictable growth patterns, the Future Land Use Plan must be amended. Given the design criteria of the SN future land use designation and context of the surrounding area, this Land Use Amendment would have no adverse effects on the region. The future road network and infrastructure will help to fill in gaps within the region, while maintaining the sites natural character.

4. Whether conditions affecting the area have changed to a sufficient extent to warrant the proposed change; and

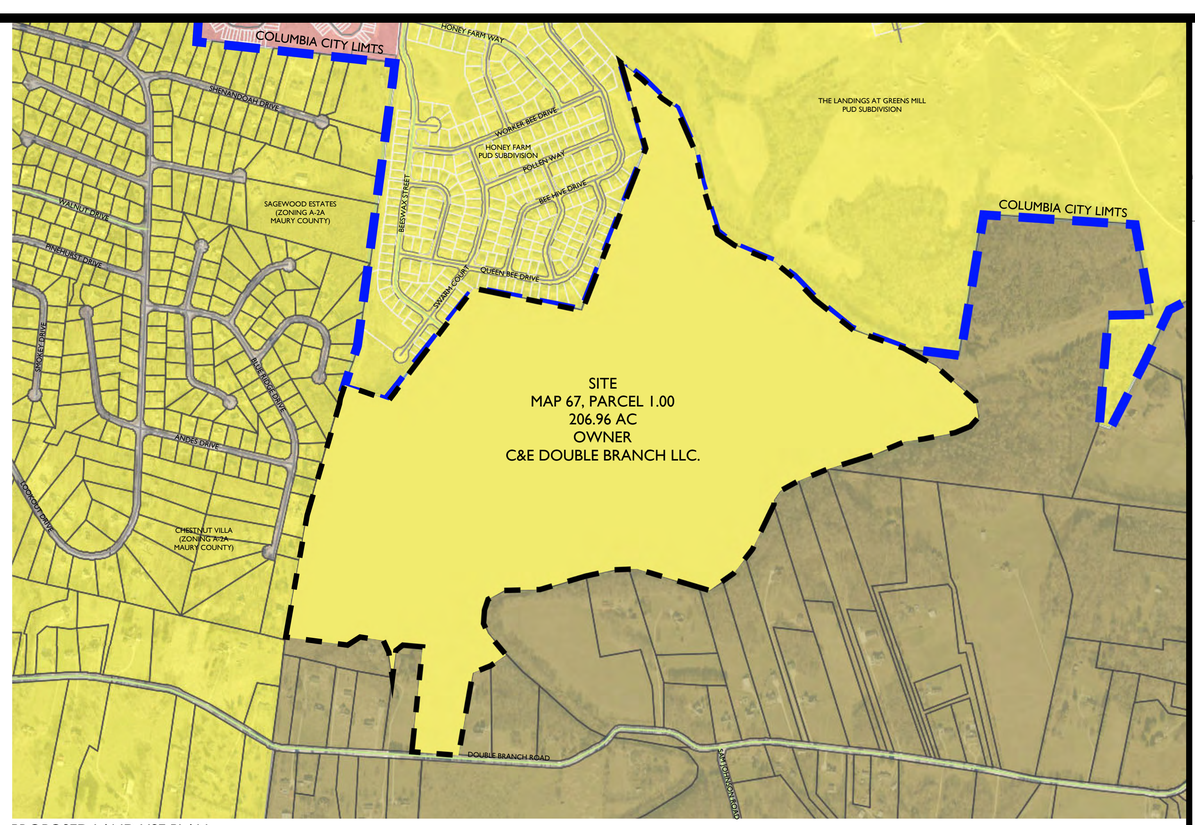
The current Connect Columbia Comprehensive Plan was adopted in February 2024. Prior to that, this parcel of land was designated as "Suburban Neighborhood". Within the context of the surrounding area, we believe this parcel was incorrectly assigned as RT. The property is located approximately 1 mile from Nashville HWY and has multiple street connections to existing neighborhoods within the city limits. Honey Farms and The Landings at Greens Mill are directly adjacent to the North. Both communities could benefit from the future infrastructure and connectivity that comes with development. The development of this property under the SN future land use and the southern connection that it provides to Double Branch Road would be particularly helpful to the residents of Honey Farms which consists of 582 homes and only a single point of access (northwest to Nashville HWY).

5. Whether the subject parcel is of adequate shape and size to accommodate the proposed change.

This property is approximately 206.96 AC in size, making it one of the larger, unbroken tracks of land in the area.

"The SN future land use is distinguished from RT in the organization of lots and thoroughfares to form blocks. Physically separated developments which do not extend established block formation and roadway networks are inappropriate."

Due to its size and shape, this parcel is more than adequate to accommodate the proposed change to SN. Because of the parcel's large size, the formation of blocks and road networks can be accomplished while being respectful of the site's natural resources.



PROPOSED LAND USE PLAN

KEY

COLUMBIA CITY LIMITS

CURRENT LAND USE PLAN

SUBURBAN NEIGHBORHOOD

RURAL TRANSITIONS

CITY CENTER AND URBAN VILLAGE

N

0 500 1000 1500

BASE INFORMATION - GIS, AND BING AERIAL 2024

PROJECT INFORMATION:

PARCEL: MAP 67 PARCEL 1.00
ADDRESS: DOUBLE BRANCH ROAD
AREA: 206.96 AC

APPLICANT/LANDSCAPE ARCHITECT:
GREG GAMBLE
GAMBLE DESIGN COLLABORATIVE
3020 STANSBERRY LANE, SUITE 201
FRANKLIN, TN 37069
615-975-5765
greg.gamble@gdc-tn.com

DEVELOPER:
PATRICK ACHILLES
DREES HOMES
1651 WESTGATE CIRCLE
BRENTWOOD, TN 37027
615-516-9397
pachilles@dreeshomes.com

OWNER:
C&E DOUBLE BRANCH LLC.
1250 SADDLE SPRINGS DRIVE
THOMPSON'S STATION, TN 37179
615-642-6939
Robclepley@gmail.com

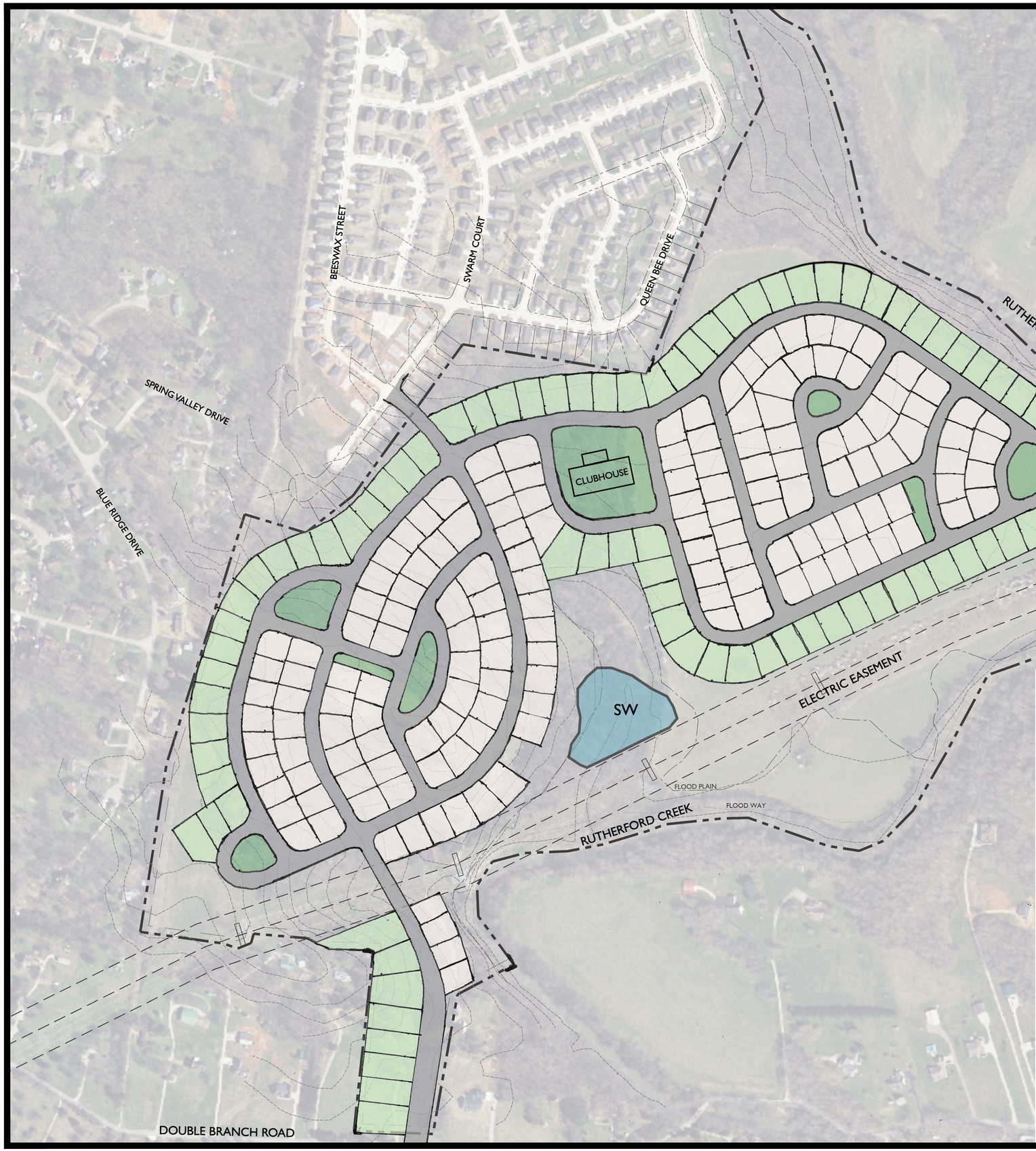
GAMBLE DESIGN COLLABORATIVE
DEVELOPMENT PLANNING AND LANDSCAPE ARCHITECTURE

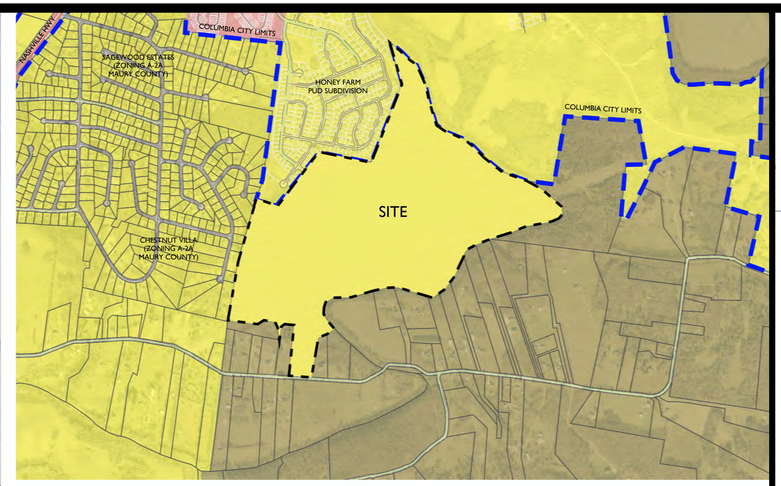
DOUBLE BRANCH ROAD
LAND USE PLAN AMENDMENT
Columbia, Maury County, Tennessee

Revision Date
- △ _____
- △ _____
- △ _____
- △ _____

LAND USE PLAN AMENDMENT JUSTIFICATION SHEET

L2.0





LOCATION MAP - PROPOSED LAND USE PLAN NTS

PROJECT INFORMATION:

PARCEL: MAP 67 PARCEL 1.00
ADDRESS: DOUBLE BRANCH ROAD
AREA: 206.96 AC

APPLICANT/LANDSCAPE ARCHITECT:
GREG GAMBLE
GAMBLE DESIGN COLLABORATIVE
3020 STANSBERRY LANE, SUITE 201
FRANKLIN, TN 37069
615-975-5765
greg.gamble@gdc-tn.com

DEVELOPER:
PATRICK ACHILLES
DREES HOMES
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pachilles@dreeshomes.com

OWNER:
C&E DOUBLE BRANCH LLC.
1250 SADDLE SPRINGS DRIVE
THOMPSON'S STATION, TN 37179
615-642-6939
Robclepley@gmail.com

SKETCH PLAN CD-3L DESIGN CRITERIA:

GROSS SITE AREA: 206.96 AC
GROSS DENSITY: 1.21 DUA
TOTAL UNITS: 250 UNITS

REQUIRED CIVIC SPACE: 10.35 AC MIN (5% GROSS AREA)

CONCEPT PLAN LOT DIMENSIONS:

SINGLE-FAMILY LOTS

100' X 130'
FRONT SETBACK: 30'
SIDE SETBACK: 12'
REAR SETBACK: 30'
MAXIMUM BUILDING WIDTH: 76'
MAXIMUM UNITS PER BUILDING: 1
PARKING PROVIDED IN GARAGES AND DRIVEWAYS

100' X 150'
FRONT SETBACK: 30'
SIDE SETBACK: 12'
REAR SETBACK: 30'
MAXIMUM BUILDING WIDTH: 76'
MAXIMUM UNITS PER BUILDING: 1
PARKING PROVIDED IN GARAGES AND DRIVEWAYS

KEY
100' X 130' LOTS
100' X 150' LOTS

LEGAL DESCRIPTION OF PROPERTY:
PROPERTY MAP 067, PARCEL 1.00
DOUBLE BRANCH ROAD
MAURY COUNTY, TENNESSEE

FOR COMPLETE LEGAL DESCRIPTION, PLEASE SEE ALTA SURVEY.

N

0 200 400 600
BASE INFORMATION - GIS, AND BING AERIAL 2024

GAMBLE DESIGN COLLABORATIVE
DEVELOPMENT PLANNING AND LANDSCAPE ARCHITECTURE

DOUBLE BRANCH ROAD
LAND USE PLAN AMENDMENT
Columbia, Maury County, Tennessee

NEW SEVEN AGRICULTURE COMMERCE TENNESSEE NO. 1412 LANDSCAPE ARCHITECT
5/19/25

Revision Date

CONCEPTUAL MASTER PLAN

SHEET
L3.0

LAND USE PLAN AMENDMENT JUSTIFICATION

1. Whether the proposed change would be consistent with the intent, goals, objectives, policies, guiding principles and programs of all other applicable adopted Land Use Plans;

Please refer to the following exserts from the Connect Columbia Comprehensive Plan and the applicant responses:

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If one were to consider predictable suburban growth patterns, this site presents an exciting opportunity to help transition the recently approved subdivisions of Honey Farm and The Landings at Greens Mill, to the rural character of the county. These communities, located along the city limits, would greatly benefit from the additional infrastructure an SN neighborhood would provide. Road connections, utilities, and programmed open spaces would be features within a new community.

- *"extend the established form and pattern to create a more interconnected community".*

Any proposed development for the site, would be required to provide connection to the surrounding communities. This road network would give these communities future connection to Double Branch Road (Major Local Road) within approximately 1 mile from Nashville HWY. The site is also located along Rutherford Creek. This natural boundary in the landscape, can be used as a delineation between the two future land uses of SN and RT. Using waterways as a natural break between future land uses is a common practice. One example would be The Landings at Greens Mill, now under the SN future land use, separated by Rutherford Creek from the RT policy to the north.

- *"density and intensity decrease in proximity to areas under the Rural Transition (RT) future land use classification".*

Lot sizes consist with the SN future land use could be used to transition from the smaller lots within the surrounding communities, and the rural homesteads located in the county. Natural characteristics of the site, preclude it from high density development. The undulating topography discourages large building pads and expansive parking areas. The creek and floodplain prevent any development within close proximity to the proposed delineation line and establishes and natural barrier between the two future land uses.

- *"The SN future land use is distinguished from RT in the organization of lots and thoroughfares to form blocks. Physically separated developments which do not extend established block formation and roadway networks are inappropriate."*

This parcel is one of only a few undeveloped, large tracks of land in the area. This allows for the creation and formation of future suburban growth patterns that help aid in the transition from city to county. The formation of these areas will be influenced by the natural characteristics of the site. Blocks and street networks can be clustered around existing development and transition into large informal open spaces as the site moves south towards Rutherford Creek. This natural buffer provides an ideal opportunity to ease the transition between SN and RT.

Connect Columbia established goals to help guide development. The following are objectives for Connect Columbia and our responses:

- Objective 2.4: Prioritize investments which enhance Columbia residents' ability to move efficiently throughout the city

Additional road networks that come with future development, are designed with the intention of improving existing connectivity. Current subdivision like Honey Farm and The Landings at Greens Mill, would greatly benefit from road connections to the south. A Major Local Road, Double Branch Road, could serve as a connection point. This parcel has direct access to Double Branch Road and is located approximately 1 mile from Nashville HWY (Principal Arterial).

- Objective 2.5: Create a range of housing opportunities for all households and income levels

The SN future land use allows for a much greater level of diversity when it comes to housing opportunities. The current zoning districts associated with the RT future land use, are more restrictive and only accommodate the lots of 1 AC or larger. This type of housing does not lend itself to people from different income levels living within the same community. The SN associated zoning districts are much more flexible when it comes to housing types, income level, and different uses. Due to the natural constraints and context within the surrounding area of the site, it is not suitable for high density development, but it would appropriate for low to medium density development. Allowing this amendment, increases the sites ability to provide different housing opportunities, while also maintaining the natural landscape.

- Objective 4.1: Establish gateways to the city

Although the site's geographic location and orientation doesn't provide an obvious opportunity for a gateway into the city's downtown area, the proposed design does offer a transition of intensity from the county properties at the south end of the site to the city zoned properties to the north.

2. Whether the proposed change would be compatible with the existing land use pattern and designated future land uses;

As recently as 2024, this property was designated with the "Suburban Neighborhood" Future Land Use category. After the current Comprehensive Plan was approved in 2024, this property was reassigned to the "Rural Transitions" Future Land-Use category, although the reasoning for this reassignment is unknown. Amending the property back to a "Suburban Neighborhood" Future Land Use designation, would align with the context of the area. Approximately 50% of the property, borders along the SN future land uses designation. In the Connect Columbia Comprehensive Plan, there are many cases where an existing waterway is used as a natural delineation between future land uses. Perhaps most notably, The Landings at Greens Mill shares a SN to RT boundary that utilizes Rutherford Creek is a natural barrier between the two future lands uses. We request the same be applied to this portion of Rutherford Creek.

3. Whether the proposed change would create substantial adverse impacts in the Adjacent area or the City in general;

The owner has a strong desire to annex the property into the City of Columbia. This property is in the urban growth boundary and abutting city limits on its northwest and northeast boundaries, ideally situated for annexation. However, the Zoning Ordinance requires all annexed property to be annexed into the city as a CD-3L district (see *SECTION 2.3 NEWLY ANNEXED PROPERTIES).* The CD-3L zoning district is not listed under the "Rural Transition" implementing districts. In order to proceed and promote predictable growth patterns, the Future Land Use Plan must be amended. Given the design criteria of the SN future land use designation and context of the surrounding area, this Land Use Amendment would have no adverse effects on the region. The future road network and infrastructure will help to fill in gaps within the region, while maintaining the sites natural character.

4. Whether conditions affecting the area have changed to a sufficient extent to warrant the proposed change; and

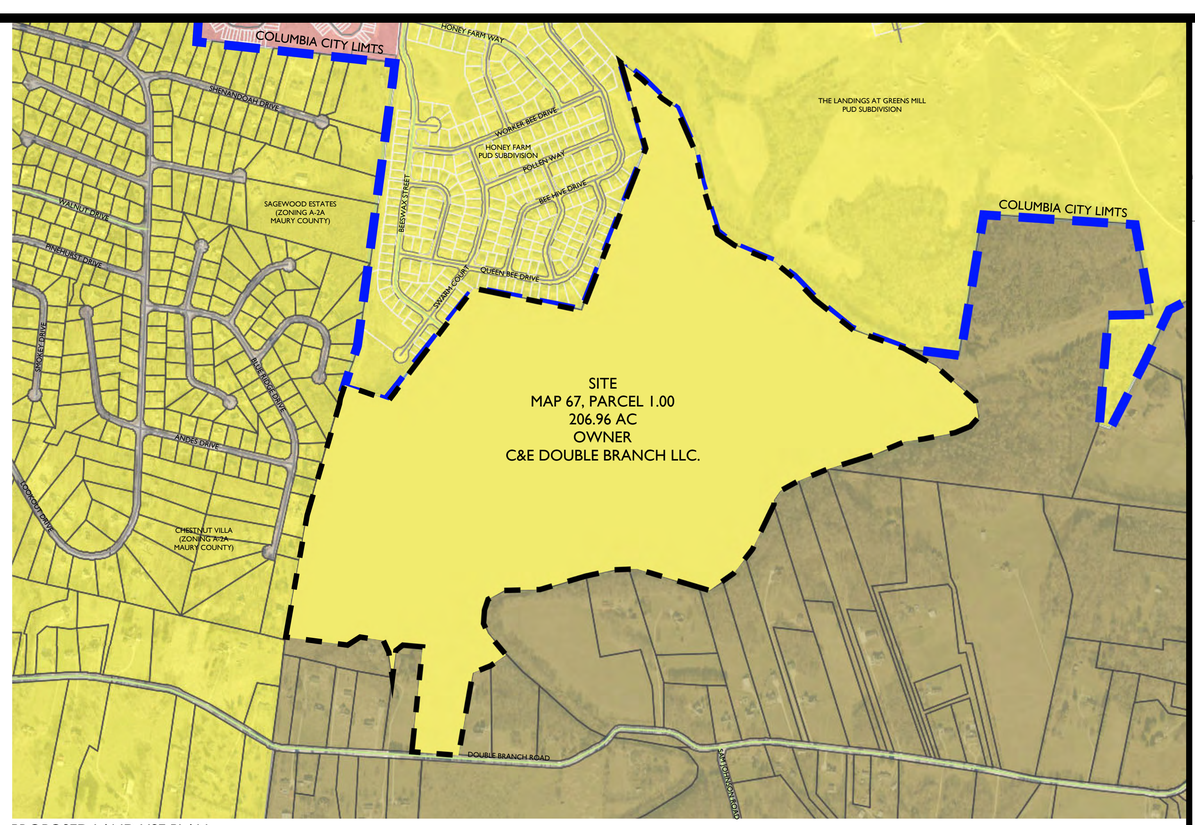
The current Connect Columbia Comprehensive Plan was adopted in February 2024. Prior to that, this parcel of land was designated as "Suburban Neighborhood". Within the context of the surrounding area, we believe this parcel was incorrectly assigned as RT. The property is located approximately 1 mile from Nashville HWY and has multiple street connections to existing neighborhoods within the city limits. Honey Farms and The Landings at Greens Mill are directly adjacent to the North. Both communities could benefit from the future infrastructure and connectivity that comes with development. The development of this property under the SN future land use and the southern connection that it provides to Double Branch Road would be particularly helpful to the residents of Honey Farms which consists of 582 homes and only a single point of access (northwest to Nashville HWY).

5. Whether the subject parcel is of adequate shape and size to accommodate the proposed change.

This property is approximately 206.96 AC in size, making it one of the larger, unbroken tracks of land in the area.

"The SN future land use is distinguished from RT in the organization of lots and thoroughfares to form blocks. Physically separated developments which do not extend established block formation and roadway networks are inappropriate."

Due to its size and shape, this parcel is more than adequate to accommodate the proposed change to SN. Because of the parcel's large size, the formation of blocks and road networks can be accomplished while being respectful of the site's natural resources.



PROPOSED LAND USE PLAN

KEY

COLUMBIA CITY LIMITS

CURRENT LAND USE PLAN

SUBURBAN NEIGHBORHOOD

RURAL TRANSITIONS

CITY CENTER AND URBAN VILLAGE

N

0 500 1000 1500

BASE INFORMATION - GIS, AND BING AERIAL 2024

PROJECT INFORMATION:

PARCEL: MAP 67 PARCEL 1.00
ADDRESS: DOUBLE BRANCH ROAD
AREA: 206.96 AC

APPLICANT/LANDSCAPE ARCHITECT:
GREG GAMBLE
GAMBLE DESIGN COLLABORATIVE
3020 STANSBERRY LANE, SUITE 201
FRANKLIN, TN 37069
615-975-5765
greg.gamble@gdc-tn.com

DEVELOPER:
PATRICK ACHILLES
DREES HOMES
1651 WESTGATE CIRCLE
BRENTWOOD, TN 37027
615-516-9397
pachilles@dreeshomes.com

OWNER:
C&E DOUBLE BRANCH LLC.
1250 SADDLE SPRINGS DRIVE
THOMPSON'S STATION, TN 37179
615-642-6939
Robclepley@gmail.com

GAMBLE DESIGN COLLABORATIVE
DEVELOPMENT PLANNING AND LANDSCAPE ARCHITECTURE

DOUBLE BRANCH ROAD
LAND USE PLAN AMENDMENT
Columbia, Maury County, Tennessee

Revision Date
- △ _____
- △ _____
- △ _____
- △ _____

LAND USE PLAN AMENDMENT JUSTIFICATION SHEET

L2.0

CARROLL LAND SURVEYING
495 EAST MAIN STREET, SUITE 1
HOHENWALD, TN 38462
PHONE: (931)796-1654
FAX: (931)796-1651
EMAIL: csurvey@bellsouth.net

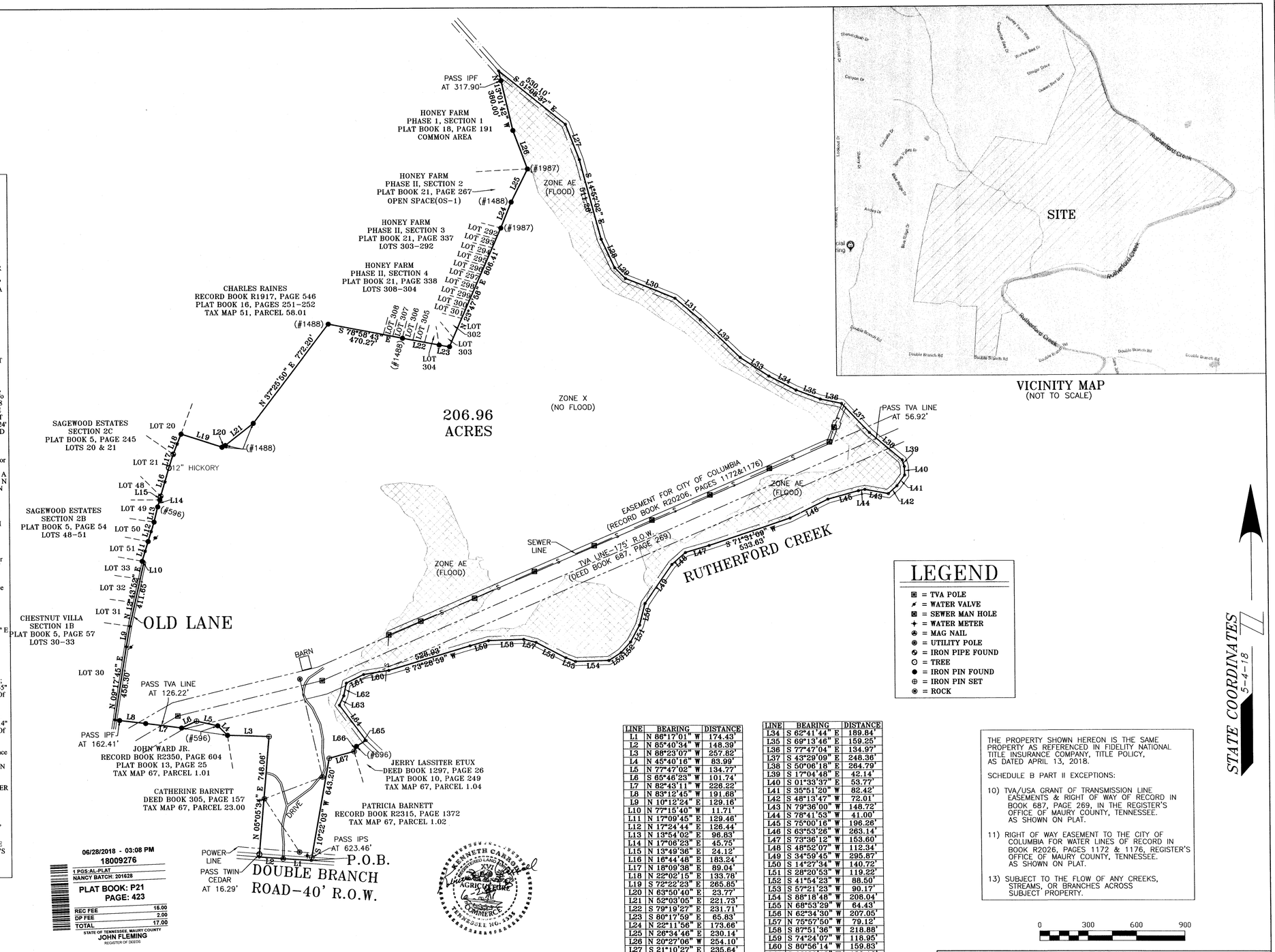
LEGAL DESCRIPTION

BEING AND LYING IN THE 3RD CIVIL DISTRICT OF MAURY COUNTY, TENNESSEE AND LYING NORTH OF DOUBLE BRANCH ROAD, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

Beginning At A POINT IN THE CENTER OF DOUBLE BRANCH ROAD; SAID POINT BEING THE SOUTHERN MOST SOUTHEAST CORNER OF THE TRACT BEING DESCRIBED, AND THE SOUTHWEST CORNER OF PATRICIA BARNETT; THENCE WITH CENTER OF SAID ROAD, N 86°17'01" W For A Distance Of 174.43' To A MAG NAIL; THENCE N 85°40'34" W For A Distance Of 148.39' TO A POINT; SAID POINT BEING THE SOUTHERN MOST SOUTHWEST CORNER OF THE TRACT BEING DESCRIBED, AND THE SOUTHEAST CORNER OF CATHERINE BARNETT; THENCE LEAVING SAID ROAD WITH BARNETT, N 05°05'34" E, PASSING A TWIN CEDAR TREE AT 16.29', IN ALL A Distance Of 748.06' To A IRON PIN SET; SAID IRON PIN SET BEING THE NORTHEAST CORNER OF BARNETT; THENCE CONTINUING WITH BARNETT, N 88°23'07" W For A Distance Of 257.82' To A IRON PIN FOUND (#596); SAID IRON PIN FOUND BEING THE NORTHWEST CORNER OF BARNETT, AND THE NORTHEAST CORNER OF JOHN WARD JR.; THENCE WITH WARD, N 45°40'16" W For A Distance Of 83.99' To A IRON PIN FOUND (#596); THENCE N 77°47'02" W For A Distance Of 134.77' To A IRON PIN SET; THENCE S 65°46'23" W For A Distance Of 101.74' To A IRON PIN FOUND(#596); THENCE N 82°43'11" W, PASSING THE CENTER OF A TVA LINE AT 126.22', IN ALL A Distance Of 226.22' To A IRON PIN FOUND; THENCE N 83°12'45" W, PASSING AN IRON PIN FOUND AT 162.41' IN ALL A Distance Of 191.68' TO A POINT IN THE CENTER OF AND OLD LANE; SAID POINT BEING THE WESTERN MOST SOUTHWEST CORNER OF THE TRACT BEING, THE NORTHWEST CORNER OF WARD, AND THE EAST BOUNDARY OF LOT 30 OF CHESTNUT VILLA SECTION 1B; THENCE WITH CENTER OF SAID ROAD AND EAST BOUNDARY OF LOT 30 OF CHESTNUT VILLA, N 09°17'45" E For A Distance Of 458.30' To A POINT; THENCE N 10°12'24" E For A Distance Of 129.16' To A POINT; SAID POINT BEING THE NORTHEAST CORNER OF LOT 30, AND THE SOUTHEAST CORNER OF LOT 31; THENCE WITH LOTS 31-33, N 12°43'52" E For A Distance Of 411.65' To A POINT; SAID POINT BEING THE NORTHEAST CORNER OF LOT 33; THENCE LEAVING CENTER OF SAID OLD LANE CONTINUING WITH LOT 33, N 77°15'40" W For A Distance Of 11.71' To A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE SOUTHEAST CORNER OF LOT 51 OF SAGEWOOD ESTATES SECTION 2B; THENCE WITH LOT 51 OF SAGEWOOD ESTATES SECTION 2B AND A FENCE, N 17°09'45" E For A Distance Of 129.46' To A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE SOUTHEAST CORNER OF LOT 50; THENCE WITH LOT 50 AND CONTINUING WITH A FENCE, N 17°24'44" E For A Distance Of 126.44' To A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE SOUTHEAST CORNER OF LOT 49; THENCE WITH LOT 49 AND CONTINUING WITH A FENCE, N 13°54'02" E For A Distance Of 96.83' To A IRON PIN FOUND (#596); THENCE N 17°06'23" E For A Distance Of 45.75' To A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE SOUTHEAST CORNER OF LOT 48; THENCE WITH LOT 48 AND CONTINUING WITH A FENCE, N 13°49'36" E For A Distance Of 24.12' To A IRON PIPE FOUND; SAID IRON PIPE FOUND BEING THE SOUTHEAST CORNER OF LOT 21 OF SAGEWOOD ESTATES SECTION 2C; THENCE WITH LOT 21 OF SAGEWOOD ESTATES SECTION 2C AND CONTINUING WITH A FENCE, N 16°44'48" E For A Distance Of 183.24' To A 12" HICKORY; THENCE N 18°09'38" E For A Distance Of 89.04' To A IRON PIPE FOUND; SAID IRON PIPE FOUND BEING THE SOUTHEAST CORNER OF LOT 20; THENCE WITH LOT 20 AND CONTINUING WITH A FENCE, N 22°02'15" E For A Distance Of 133.78' To A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE WESTERN MOST NORTHWEST CORNER OF THE TRACT BEING DESCRIBED, AND THE SOUTHWEST CORNER OF CHARLES RAINES; THENCE LEAVING SAGEWOOD ESTATES SECTION 2C AND SAID FENCE WITH RAINES, S 72°22'23" E For A Distance Of 265.85' To A IRON PIN FOUND (#1488); SAID IRON PIN FOUND BEING THE SOUTHERN MOST SOUTHEAST CORNER OF RAINES; THENCE CONTINUING WITH RAINES, N 63°50'40" E For A Distance Of 23.77' To A IRON PIN FOUND (#1488); THENCE N 52°03'05" E For A Distance Of 221.73' To A IRON PIN FOUND (#1488); THENCE N 37°25'50" E For A Distance Of 772.20' To A IRON PIN FOUND (#1488); THENCE S 78°58'43" E, PASSING THE EASTERN MOST SOUTHEAST CORNER OF RAINES, AND THE SOUTH BOUNDARY OF LOT 308 OF HONEY FARM PHASE II SECTION 4, For A Distance Of 470.27' To A IRON PIN FOUND (#1488); SAID IRON PIN FOUND BEING THE SOUTHEAST CORNER OF LOT 307, AND THE SOUTHWEST CORNER OF LOT 306; THENCE WITH LOTS 306-304, S 79°19'27" E For A Distance Of 231.71' To A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE SOUTHWEST CORNER OF LOT 303 OF HONEY FARM PHASE II SECTION 3; THENCE WITH LOT 303 OF HONEY FARM PHASE II SECTION 3, S 80°17'59" E For A Distance Of 65.83' To A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE SOUTHEAST CORNER OF LOT 303; THENCE WITH LOTS 303-292 OF HONEY FARM PHASE II SECTION 3, N 23°47'58" E For A Distance Of 806.41' To A IRON PIN FOUND (#1987); SAID IRON PIN FOUND BEING THE NORTHEAST CORNER OF LOT 292, AND THE SOUTHEAST CORNER OF OPEN SPACE (OS-1) OF HONEY FARM PHASE II SECTION 2; THENCE WITH OPEN SPACE (OS-1) OF HONEY FARM PHASE II SECTION 2, N 22°11'56" E For A Distance Of 173.66' To A IRON PIN FOUND (#1488); THENCE N 26°34'46" E For A Distance Of 230.14' To A IRON PIN FOUND (#1987); SAID IRON PIN FOUND BEING THE NORTHEAST CORNER OF OPEN SPACE (OS-1) OF HONEY FARM PHASE II SECTION 2, AND THE SOUTHEAST CORNER OF A COMMON AREA OF HONEY FARM PHASE I SECTION 1; THENCE WITH A COMMON AREA OF HONEY FARM PHASE I SECTION 1, N 20°27'06" W For A Distance Of 254.10' To A IRON PIN FOUND; THENCE N 13°01'42" W, PASSING AN IRON PIN FOUND AT 317.90', IN ALL A Distance Of 380.00' To A POINT IN THE CENTER OF RUTHERFORD CREEK; SAID POINT BEING THE NORTHERN MOST NORTHWEST CORNER OF THE TRACT BEING DESCRIBED; THENCE WITH CENTER OF SAID CREEK, S 51°08'37" E For A Distance Of 530.10'; THENCE S 21°10'27" E For A Distance Of 235.64'; THENCE S 14°57'02" E For A Distance Of 511.26'; THENCE S 24°44'10" E For A Distance Of 196.45'; THENCE S 45°00'00" E For A Distance Of 93.74'; THENCE S 68°07'46" E For A Distance Of 331.06'; THENCE S 49°24'17" E For A Distance Of 204.66'; THENCE S 46°25'20" E For A Distance Of 341.03'; THENCE S 57°19'33" E For A Distance Of 212.10'; THENCE S 62°41'44" E For A Distance Of 189.84'; THENCE S 69°13'46" E For A Distance Of 159.25'; THENCE S 77°47'04" E For A Distance Of 134.97'; THENCE S 43°29'09" E For A Distance Of 248.36'; THENCE S 50°06'18" E, PASSING THE CENTER OF A TVA LINE AT 56.92', IN ALL A Distance Of 264.79'; THENCE S 17°04'48" E For A Distance Of 42.14'; THENCE S 01°33'37" E For A Distance Of 53.77'; THENCE S 35°51'20" W For A Distance Of 82.42'; THENCE S 48°13'47" W For A Distance Of 72.01'; THENCE N 79°36'00" W For A Distance Of 148.72'; THENCE S 78°41'53" W For A Distance Of 41.00'; THENCE S 75°00'16" W For A Distance Of 196.26'; THENCE S 63°53'26" W For A Distance Of 263.14'; THENCE S 71°31'09" W For A Distance Of 533.63'; THENCE S 73°36'12" W For A Distance Of 153.60'; THENCE S 48°52'07" W For A Distance Of 112.34'; THENCE S 34°59'45" W For A Distance Of 295.87'; THENCE S 14°27'34" W For A Distance Of 140.72'; THENCE S 28°20'53" W For A Distance Of 119.22'; THENCE S 41°54'23" W For A Distance Of 88.50'; THENCE S 57°21'23" W For A Distance Of 90.17'; THENCE S 88°18'48" W For A Distance Of 208.04'; THENCE N 68°53'29" W For A Distance Of 64.43'; THENCE N 62°34'30" W For A Distance Of 207.05'; THENCE N 75°57'50" W For A Distance Of 79.12'; THENCE S 87°51'36" W For A Distance Of 218.88'; THENCE S 74°24'07" W For A Distance Of 118.95'; THENCE S 73°28'59" W For A Distance Of 528.93'; THENCE S 80°56'14" W For A Distance Of 159.83'; THENCE S 63°39'13" W For A Distance Of 120.16'; THENCE S 11°45'48" W For A Distance Of 79.77'; THENCE S 25°40'20" W For A Distance Of 63.44'; THENCE S 36°44'47" E For A Distance Of 273.01' To A POINT; SAID POINT BEING THE NORTHEAST CORNER OF JERRY LASSITER ETUX; THENCE LEAVING SAID CREEK WITH LASSITER, S 59°23'35" W For A Distance Of 69.95' To A IRON PIN FOUND; THENCE S 25°22'28" W For A Distance Of 34.24' To A Rock; SAID ROCK BEING THE NORTHWEST CORNER OF LASSITER, AND THE NORTHEAST CORNER OF PATRICIA BARNETT; THENCE WITH BARNETT, S 74°47'08" W For A Distance Of 160.59' To A IRON PIN SET; SAID IRON PIN SET BEING THE NORTHWEST CORNER OF BARNETT; THENCE CONTINUING WITH BARNETT, S 10°22'03" W, PASSING AN IRON PIN SET AT 623.46', IN ALL A Distance Of 643.20' To The Point Of Beginning And Containing 206.96 Acres AS SURVEYED BY KENNETH CARROLL, RLS TENNESSEE LICENSE NUMBER 1335, MAY 4, 2018.

THE ABOVE TRACT IS SUBJECT TO 20 FEET OF THE 40 FOOT R.O.W. OF DOUBLE BRANCH ROAD, A 175' TVA LINE R.O.W. AS RECORDED IN DEED BOOK 687, PAGE 269, AND AN EASEMENT FOR CITY OF COLUMBIA AS RECORDED IN RECORD BOOK R2026, PAGES 1172 AND 1176, IN THE REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE.

BEING THE SAME PROPERTY AS CONVEYED TO L E BARNETT ETAL AS RECORDED IN DEED BOOK 609, PAGE 77, DEED BOOK 811, PAGE 314, DEED BOOK 285, PAGE 273, AND DEED BOOK 231, PAGE 589, IN THE REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE.



LINE	BEARING	DISTANCE
L1	N 86°17'01" W	174.43'
L2	N 85°40'34" W	148.39'
L3	N 88°23'07" W	257.82'
L4	N 45°40'16" W	83.99'
L5	N 77°47'02" W	134.77'
L6	S 65°46'23" W	101.74'
L7	N 82°43'11" W	226.22'
L8	N 83°12'45" W	191.68'
L9	N 10°12'24" E	129.16'
L10	N 77°15'40" W	11.71'
L11	N 17°09'45" E	129.46'
L12	N 17°24'44" E	126.44'
L13	N 13°54'02" E	96.83'
L14	N 17°06'23" E	45.75'
L15	N 13°49'36" E	24.12'
L16	N 16°44'48" E	183.24'
L17	N 18°09'38" E	89.04'
L18	N 22°02'15" E	133.78'
L19	S 72°22'23" E	265.85'
L20	N 63°50'40" E	23.77'
L21	N 52°03'05" E	221.73'
L22	S 79°19'27" E	231.71'
L23	S 80°17'59" E	65.83'
L24	N 22°11'56" E	173.66'
L25	N 26°34'46" E	230.14'
L26	N 20°27'06" W	254.10'
L27	S 21°10'27" E	235.64'
L28	S 24°44'10" E	196.45'
L29	S 45°00'00" E	93.74'
L30	S 68°07'46" E	331.06'
L31	S 49°24'17" E	204.66'
L32	S 46°25'20" E	341.03'
L33	S 57°19'33" E	212.10'

LINE	BEARING	DISTANCE
L34	S 62°41'44" E	189.84'
L35	S 69°13'46" E	159.25'
L36	S 77°47'04" E	134.97'
L37	S 43°29'09" E	248.36'
L38	S 50°06'18" E	264.79'
L39	S 17°04'48" E	42.14'
L40	S 01°33'37" E	53.77'
L41	S 35°51'20" W	82.42'
L42	S 48°13'47" W	72.01'
L43	N 79°36'00" W	148.72'
L44	S 78°41'53" W	41.00'
L45	S 75°00'16" W	196.26'
L46	S 63°53'26" W	263.14'
L47	S 73°36'12" W	153.60'
L48	S 48°52'07" W	112.34'
L49	S 34°59'45" W	295.87'
L50	S 14°27'34" W	140.72'
L51	S 28°20'53" W	119.22'
L52	S 41°54'23" W	88.50'
L53	S 57°21'23" W	90.17'
L54	S 88°18'48" W	208.04'
L55	N 68°53'29" W	64.43'
L56	N 62°34'30" W	207.05'
L57	N 75°57'50" W	79.12'
L58	S 87°51'36" W	218.88'
L59	S 74°24'07" W	118.95'
L60	S 80°56'14" W	159.83'
L61	S 63°39'13" W	120.16'
L62	S 11°45'48" W	79.77'
L63	S 25°40'20" W	63.44'
L64	S 36°44'47" E	273.01'
L65	S 59°23'35" W	69.95'
L66	S 25°22'28" W	34.24'
L67	S 74°47'08" W	160.59'

LEGEND

- ⊠ = TVA POLE
- ✕ = WATER VALVE
- ▣ = SEWER MAN HOLE
- ✛ = WATER METER
- ⊕ = MAG NAIL
- ◉ = UTILITY POLE
- ⊘ = IRON PIPE FOUND
- ○ = TREE
- ● = IRON PIN FOUND
- ⊕ = IRON PIN SET
- ◉ = ROCK

THE PROPERTY SHOWN HEREON IS THE SAME PROPERTY AS REFERENCED IN FIDELITY NATIONAL TITLE INSURANCE COMPANY, TITLE POLICY, AS DATED APRIL 13, 2018.

SCHEDULE B PART II EXCEPTIONS:

10) TVA/USA GRANT OF TRANSMISSION LINE EASEMENTS & RIGHT OF WAY OF RECORD IN BOOK 687, PAGE 269, IN THE REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE. AS SHOWN ON PLAT.

11) RIGHT OF WAY EASEMENT TO THE CITY OF COLUMBIA FOR WATER LINES OF RECORD IN BOOK R2026, PAGES 1172 & 1176, REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE. AS SHOWN ON PLAT.

13) SUBJECT TO THE FLOW OF ANY CREEKS, STREAMS, OR BRANCHES ACROSS SUBJECT PROPERTY.

0 300 600 900

STATE COORDINATES 5-4-18

06/28/2018 - 03:08 PM
18009276
1 POS-AL-PLAT
NANCY BATCH: 201628
PLAT BOOK: P21
PAGE: 423

REC FEE	16.00
DP FEE	2.00
TOTAL	17.00

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

CERTIFICATION

I, KENNETH CARROLL, LICENSED LAND SURVEYOR, DO HEREBY CERTIFY FIDELITY NATIONAL TITLE INSURANCE COMPANY, AND ROBERT C. LEPLEY AND TERI L. LEPLEY THAT THIS PLAT WAS PREPARED UNDER MY DIRECTION, THAT IT IS MY OPINION THAT THIS SURVEY MEETS OR EXCEEDS THE STANDARDS OF PRACTICE FOR A CATEGORY 1 SURVEY, AND THAT THE RATIO OF PRECISION OF THE UNADJUSTED SURVEY WAS 1:10,000 + AS SHOWN HEREON.

Kenneth Carroll
KENNETH CARROLL
TENN. REG NO. 1335

NOTE:
EASEMENT FOR ACCESS AND WATER SET OUT IN DEED BOOK 305, PAGE 159 EXTINGUISHED BY QUITCLAIM DEED AND WARRANTY DEED BEING RECORDED SIMULTANEOUSLY HEREWITH.

NOTE: MY REVIEW OF THE "FEMA" FLOOD HAZARD MAP AVAILABLE INDICATES THAT THIS PROPERTY IS IN ZONE "AE&X" AS INDICATED BY MAP

47119C0190E 470123

AS DATED APRIL 16, 2007.

Kenneth Carroll

KENNETH CARROLL REGISTERED LAND SURVEYOR XVI AGRICULTURE COMMERCE TENNESSEE NO. 1335

ALTA SURVEY OF L E BARNETT ESTATE

SCALE: 1" = 300'	APPROVED BY: KENNETH CARROLL	DRAWN BY: BRITTANY RICHARDSON
DATE: 5/4/18	3RD CIVIL DISTRICT - MAURY COUNTY, TN	
REF: DEED BOOK 609, PAGE 77; DEED BOOK 811, PAGE 314; DEED BOOK 285, PAGE 273; DEED BOOK 231, PAGE 589; TAX MAP 67, PARCEL 1.00		JOB NAME: BARN518 (JC)

May 20, 2025

Mr. Wes Magill
Magill Incorporated
9248 Stepping Stone Drive
Franklin, TN 37067
Sent via email: *wmagill@magillinc.com*

RE: Conditional Water Availability Letter Expires: 5/20/2026
Lepley Farm at Double Branch – 230 Units
Off Double Branch Road
Tax Map & Parcel #: 067 00100 000
Columbia, Maury County, TN

Dear Mr. Magill:

Columbia Power & Water Systems ("the Utility"/CPWS) is a municipal corporation authorized to provide water services in accordance with State law. CPWS has adopted rules, regulations, and standard operation procedures, prescribing the conditions under which CPWS will furnish water service. In addition, certain State laws delegate authority to the Tennessee Department of Environment and Conservation (TDEC), various Planning Commissions, and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Water service will be made available on a first-come, first-served basis, subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies. Water service is subject to availability of all CPWS furnished equipment and materials appropriate for the development and provided the applicant complies with all rules and regulations of CPWS and conditions set out herein.

We have received your application for water availability to serve a proposed development consisting of 230 residential units, an amenity center, pool, and pool house located off Double Branch Road in Maury County. We understand this project is requesting annexation into the City of Columbia.

CPWS will be able to meet the anticipated water demands and fire flow requirements with the extension of backbone water service mains to the project site. However, current peak season water usage and planned (committed) water demands for developments in progress are expected to reach the CPWS source water withdrawal limit set by our water system permit. As such, CPWS cannot commit source water availability for additional developments until several major Long Term Water Supply Program (LTWSP) improvements have been constructed and our water system permit is updated. Note that current planning anticipates completion of the

LTWSP improvements near the end of 2028, but that schedule is subject to several external agency approvals and public processes which could extend the timeline.

CPWS is providing a Conditional Water Availability Letter for the Project which is dependent on the following stipulations and requirements:

- Source Water availability to serve the proposed development is subject to expansion of the CPWS water treatment plant (WTP), raw water pumping and transmission system, and water system permit to withdraw and serve sufficient additional water beyond the demands of this development.
- Water main extensions will be necessary to serve the proposed development, with details to be determined as part of design coordination after subsequent application for water service.
- Separate fire, commercial, landscape irrigation, and domestic meters (with backflow devices) will be required to serve the proposed Project.
- No construction of water infrastructure shall be initiated until final construction plans have been approved by CPWS (including TDEC approval).

A typical Water Availability Letter expires in one-hundred twenty (120) days unless vested by payment of water service fees and impact fees for the proposed project. However, this Conditional Water Availability Letter represents a planning-level document for use by the applicant during due-diligence and efforts toward completing the entitlement process. It is premature to set the New Water Service Fees and Impact Fees at this time, as the development detail is expected to change through the entitlement process and fee escalations are anticipated within that timeline as well. As such, **this Conditional Water Availability Letter will be valid for a period of one year**. After that time, the applicant will be required to submit a new application for water availability and CPWS will update timing for availability and detail the additional fees for vesting of water availability.

Please feel free to contact me at 931-388-4833 x7655 or Matt.Wheeler@cpws.com if you have questions or would like to discuss.

Sincerely,

Matthew J. Wheeler, P.E.
Vice President of Water Resources, CPWS

cc: Koby DuMont, Monterra Development
Bart Anderson, CPWS
Eric King, Inflo Design Group
File 25-019

Docusign Envelope ID: 52F72A06-4DDE-49C7-9014-28568515592D

CITY OF COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES

I, C+E Double Branch LLC being the sole owner of the property more particularly described as 206.96 Acres on Plat of Record in Plat Book 21 Page 423 in the Maury County Register of Deeds office, do hereby, formally, request that the City of Columbia, Tennessee annex such property into such City.

C+E Double Branch LLC
Print Name

4-21-25
Date

DocuSigned by:
Rob Lepley
BCCD263A63B2411...
Signature

STAFF USE ONLY	
Docket Number:	Requested Agenda:

Docusign Envelope ID: D23AFE30-0AF4-4BA5-95BD-E9E83D71FF08

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560

PLANNING COMMISSION
PROJECT DEVELOPMENT APPLICATION

SUBMITTAL REQUIREMENTS

Please submit scanned copy of the application online at City of Columbia | Permitting (onlama.com)
If there is no access to a computer, please submit all pertinent information on a flash drive as well as provide one hard copy. Additional fee may apply.

ADDRESS/LOCATION	Double Branch Rd		
	TAX MAP:	GROUP:	PARCEL: 067 00100
SUMMARY OF NATURE OF REQUEST AND WORK			

DATE OF PRE-APPLICATION CONFERENCE		*Pre-application meetings are scheduled for Wednesdays. Concept plan/fee due the Friday before the meeting.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
☑ Comprehensive Plan Amendment ☐ Annexation ☐ Rezoning ☐ Preliminary Plat ☐ Final Plat ☐ PUD Preliminary Master Plan ☐ PUD Final Site Plan ☐ Site Development Plan ☐ ARC Alternative Compliance ☐ As Approved Plans ☐ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations:** ☐ Annexation Permission Form **Annexations/Rezoning/Plan Amendments:** ☐ Requested Zone Listed ☐ Statement of Compliance with Comprehensive Plan ☐ Concept Plan **Preliminary Plats/Site Development Plans:** ☐ Plans and/or Plats conforming to City standards with signed and completed check list **All Annexations/Rezoning/Preliminary Plats/Site Development Plans and PUDS:** ☐ Receipt of Payment for Pre-Application Meeting ☐ Written Legal Description copy ☐ Columbia Water System Availability Letter ☐ Columbia Waste Water Department Will Serve Letter

Docusign Envelope ID: D23AFE30-0AF4-4BA5-95BD-E9E83D71FF08

Plats/PUDs:

- ❑ Project Name (include Sections & Phases)
  Double Branch
- ❑ Total Number of Lots/Residential Units
  250
- ❑ Square Footage of Non-Residential Floor Space
- ❑ Total acreage 206.96

Applications and all required submittals must be filed with the Department of Development Services prior to the established deadline. Both the applicant and property owner (if different from applicant) must sign the application. Any requests to defer or move the item to future meeting dates must be requested by the resubmittal date listed on the Planning Commission schedule.

APPLICANT
All communications will go to the Applicant's email that is provided.

NAME	Nick Moran	PHONE	615-371-9750
ADDRESS	1651 Westgate Circle	EMAIL	nmoran@dreeshomes.com

PROPERTY OWNER NAME	C+E Double Branch LLC	PHONE	615-642-6939
ADDRESS	1250 Saddle Springs Dr.	EMAIL	Robcleplay@gmail.com

If owner is not a natural person, documentation must be provided showing signing authority on behalf of the entity. If multiple persons are listed as owners in the records of the Maury County Assessor, all owners must sign or the signatory must provide documentation of authority to apply on behalf of record owner (i.e., Power of Attorney or notarized Letter of Authorization). In filling out this application, I attest that (1) I am familiar with the rules, regulations, and procedures of the City of Columbia & (2) all information contained herein is accurate & true to the best of my knowledge.

Nick Moran		5/19/25
APPLICANT NAME	APPLICANT SIGNATURE	DATE
C &E Double Branch LLC	DocuSigned by: Rob Lepley BCCD263A63B2411...	5-19-2025
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE

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CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
PHONE: (931) 560-1560

PLANNING COMMISSION
PROJECT DEVELOPMENT APPLICATION

SUBMITTAL REQUIREMENTS

Please submit scanned copy of the application online at City of Columbia | Permitting (onlama.com)
If there is no access to a computer, please submit all pertinent information on a flash drive as well as provide one hard copy. Additional fee may apply.

ADDRESS/LOCATION	Double Branch Rd		
	TAX MAP:	GROUP:	PARCEL: 067 00100
SUMMARY OF NATURE OF REQUEST AND WORK	Request permission from owners to annex		

DATE OF PRE-APPLICATION CONFERENCE		*Pre-application meetings are scheduled for Wednesdays. Concept plan/fee due the Friday before the meeting.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
☐ Comprehensive Plan Amendment ☑ Annexation ☐ Rezoning ☐ Preliminary Plat ☐ Final Plat ☐ PUD Preliminary Master Plan ☐ PUD Final Site Plan ☐ Site Development Plan ☐ ARC Alternative Compliance ☐ As Approved Plans ☐ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations:** ☑ Annexation Permission Form **Annexations/Rezoning/Plan Amendments:** ☐ Requested Zone Listed ☐ Statement of Compliance with Comprehensive Plan ☐ Concept Plan **Preliminary Plats/Site Development Plans:** ☐ Plans and/or Plats conforming to City standards with signed and completed check list **All Annexations/Rezoning/Preliminary Plats/Site Development Plans and PUDS:** ☐ Receipt of Payment for Pre-Application Meeting ☐ Written Legal Description copy ☐ Columbia Water System Availability Letter ☐ Columbia Waste Water Department Will Serve Letter

	Plats/PUDs: ☑ Project Name (include Sections & Phases) Double Branch ☑ Total Number of Lots/Residential Units 250 ☐ Square Footage of Non-Residential Floor Space ☑ Total acreage 206.96

Applications and all required submittals must be filed with the Department of Development Services prior to the established deadline. Both the applicant and property owner (if different from applicant) must sign the application. Any requests to defer or move the item to future meeting dates must be requested by the resubmittal date listed on the Planning Commission schedule.

APPLICANT
All communications will go to the Applicant's email that is provided.

NAME	Nick Moran	PHONE	615-371-9750
ADDRESS	1631 Westgate Circle	EMAIL	nmoran@dreshomes.com

PROPERTY OWNER NAME	C+E Double Branch LLC	PHONE	615-642-6939
ADDRESS	1250 Saddlesprings Dr.	EMAIL	Robcleplay@gmail.com

If owner is not a natural person, documentation must be provided showing signing authority on behalf of the entity. If multiple persons are listed as owners in the records of the Maury County Assessor, all owners must sign or the signatory must provide documentation of authority to apply on behalf of record owner (i.e., Power of Attorney or notarized Letter of Authorization). In filling out this application, I attest that (1) I am familiar with the rules, regulations, and procedures of the City of Columbia & (2) all information contained herein is accurate & true to the best of my knowledge.

Nick Moran		4/18/25
APPLICANT NAME	APPLICANT SIGNATURE	DATE
C+E Double Branch LLC	Member	4-20-25
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE

Rev. 3/5/2025

PLAN OF SERVICES

FOR ANNEXATION
Double Branch Road PROPERTY
+/-209.96 ACRES,
BEING
TAX MAP 67 PARCEL 1

(25-0200)

A. Water

A water availability letter was issued on May 20, 2025, it remains valid for 120 days. The availability of capacity to serve is based on a determination by the Fire Marshal of fire flow requirements and the information submitted on the Water Service Availability Request application. Any off-site improvements detailed in the availability letter are the responsibility of the developer/owner. All public water system improvements are subject to the preparation and approval of detailed construction plans prepared in accordance with CPWS and Tennessee Department of Environment and Conservation requirements."

B. Sewer

All sewer improvements including but not limited to off-site improvements, on-site improvements, and pump station and equipment installation shall be completed and functioning to the satisfaction of the Director of the Wastewater Department prior to the filing of any Final Plat with the City of Columbia Municipal Planning Commission, unless specific approval is granted by the Director and a surety of sufficient amount is provided. Note: Pump stations will require a building permit and all other required permits from additional entities. All inspections must be completed and certificates of completion granted before Council Agenda Deadline. Please contact the Wastewater Department for standard design details and equipment.

C. Police

The jurisdiction of the Columbia Police Department will be extended to the areas annexed immediately upon the effective date of annexation.

D. Fire and Rescue

1. The City of Columbia Fire & Rescue Department provides an array of services to the citizens and visitors of the City of Columbia. These services include but may not be limited to non-emergency services such as fire prevention and codes enforcement, pre-incident planning, public education programs, smoke alarm check/replacement, and emergency services such as fire suppression, heavy rescue, emergency medical first response, and hazardous materials response. The City of Columbia Fire Department currently holds an Insurance Service Organization (ISO) Class 1 rating.

   Columbia Fire & Rescue strives to provide all services in a timely, courteous, and professional manner. Due to the nature of emergency services, we strive to arrive at the incident scene as quickly as possible but without posing additional dangers to the residents/visitors we meet while responding to your location.

Infrastructure:

The infrastructure put in place is like the foundation of your development. If the infrastructure is designed and constructed with the present needs and future plans in mind, your development will be prepared for the future.

Water:

Columbia Fire & Rescue requires that there be sufficient water provided through the municipal water system to meet the needed fire flow requirements for your facility. These flows are calculated by the Fire Marshal. These flows are based on many factors dealing with your buildings' construction type, fire load in the building, square footages, and etc. If you install fire sprinkler systems in your facilities, Columbia Fire & Rescue can drastically reduce fire flow requirements.

Roadway and Bridges: Columbia Fire & Rescue serves the residents and visitors of our jurisdiction by utilizing highly trained firefighters and modern fire apparatus. A minimum response to a structure fire in your development will be four fire apparatus. One of the fire apparatus that will respond to your development will be a ladder truck with a gross vehicle weight rating of approximately 80,000 pounds. Roadways and bridges must be designed and constructed not only with light vehicle traffic in mind but with the emergency service vehicles that will be servicing your development.

Damage Free Property Access: Columbia Fire & Rescue requires all gates automatic or manual that will be or may be locked to be equipped with Knox Rapid Entry system. You can research this product at www.knoxbox.com or your gate vendor will be familiar with the product. Our department would also

be happy to work with you to find what Knox Rapid Entry product is best suited for your application.

Damage Free Home/Facility Access: Currently, Columbia Fire & Rescue does not require residential occupancies to be equipped with the Knox Rapid Entry system. However, this product is a very wise investment for your future development. The Knox Rapid Entry System products allow homes to be secured but also allow the Columbia Fire & Rescue Department access to your property and/or homes without any delay or property damage. The system has an armored key lock safe recess mounted to the exterior of the homes with the key to the residence inside. Firefighters access the residence key during an emergency to gain entry into the home without causing any property damage. Again, our department would be happy to provide you with information and education on this program and its many positive attributes.

Emergency Response to Your Location: The proposed annex will be located on the Property at Lasea Road Tax Map 67 Parcel 1 in Columbia, Tennessee. This location is approximately 3.0 miles from Fire Station #5 located at 2633 Nashville Hwy, 6.1 miles from Columbia Fire Station #1 located at 1000 South Garden St. in downtown Columbia, and 6.4 miles from Fire Station #3 located at 705 Firefighter Dr. These distances are used to calculate an estimated response time to your development for the different levels of emergency response that may be needed at your facilities.

Medical Emergency Response: Columbia Fire & Rescue normally responds a minimum of one fire apparatus from Station #5 to service your location for a medical emergency. From the time you dial 911 until the fire department will arrive at your location will be within 4.50 minutes. Should your property experience a mass casualty incident where additional fire apparatus/firefighters would need to respond, then Fire Station #1 or Fire Station #3 could send an additional unit and arrive on-scene within 6.50 minutes of your 911 call.

Fire Incident Response: Columbia Fire & Rescue recommends a multi-faceted fire suppression approach. First, future homes should be constructed to meet or exceed all applicable fire and life safety codes. Secondly, even if not required by building, fire, or life safety codes, we encourage the installation and use of fire sprinkles in future homes. Columbia Fire & Rescue's normal fire incident response to a single family residential development is three fire apparatus with a minimum 15 firefighters and 1 Chief Officer. Response times will be similar to the times estimated in the emergency medical response section. Your first fire apparatus should be on-scene within approximately 4.50 minutes, the second fire apparatus should be on-scene within 6.50 minutes, and the third/fourth apparatus should be on-scene within 6.50 minutes. Columbia Fire & Rescue also has an automatic aid agreement and you would also receive a response from Spring Hill Fire Department with-in 10.00 minutes. Due to OSHA standards that require at least four firefighters to arrive on-scene prior to initiating an interior fire attack

and Columbia Fire & Rescue's minimum staffing policy, it could take the 6.50 minutes to get the minimum number of firefighters to the scene to begin an interior fire attack.

In summary, the members of the Columbia Fire & Rescue consider it an honor to serve the residents and visitors in our community each and every day. When an emergency occurs, time is our worst enemy. Columbia firefighters train to reduce every second while not posing any additional undue risk to firefighters and/or the public when responding to or working at an emergency incident. The times estimated in the referenced examples are a combination of averages and estimations. Our department has very little data to support incident responses to your location. The time estimations are based on the fire companies being at their regular station, time it takes for Maury 911 to process a 911 call, the time it takes for Columbia firefighters to board the apparatus and leave the station, and the travel time from the station to your location is an estimate based on road miles, probable traffic conditions, and road conditions. You can see by the examples referenced above that it will take time for Columbia Fire & Rescue to receive your call for help and then respond to your location. The roadways have considerable driveway/cross street connections, hills, curves, and reduced speed zones that contribute to a long response time for fire apparatus to arrive.

E. Development Services

1. The planning and zoning jurisdiction of the City will extend to the annexed areas immediately upon the effective date of the annexation.

2. The property shall be zoned CD-3L (Neighborhood Large Lot Character District) upon the effective date of the annexation.

3. The code administration jurisdiction of the City will extend to the annexed areas immediately upon the effective date of the annexation.

4. Upon the effective date of annexation, all development will be required to abide by the Columbia Zoning Ordinance.

F. Streets and Drainage

1. Upon acceptance by City Council and all warranties have expired; all streets and drainage systems will be maintained by Public Works. Services will include: Street sweeping, Catch basin cleaning, Street and curb repair, Snow removal, Drainage maintenance, and Sidewalk repair.

2. **Signage:** Upon acceptance by City Council, all approved street signs will be maintained by Public Works.

G. Parks and Recreation

Residents of the annexed areas may use all existing recreational facilities, parks, etc., on the effective date of annexation. The same standards and policies now used in the present City will be followed in expanding the recreational program and facilities in the enlarged City.

H. Refuse Collection

Single family homes will receive the following City of Columbia sanitation services:
Residential customers will be issued one 96-gallon garbage receptacle with the option to purchase up to two additional garbage receptacles. The Sanitation Department will provide weekly curbside garbage collection. Bi-weekly curbside recycling will be offered on a subscription basis. Brush collection will be provided on a bi-weekly basis. Residents are allotted three free bulk item pickups per year.

I. Power

Columbia Power System has an existing power line near your proposed development.
We are willing to serve this new development subject to all Columbia Power System policies and procedures in effect at actual time service is rendered provided an approved final plat and complete electrical load information is furnished as soon as possible prior to start of actual construction.

J. Schools

This property falls under the jurisdiction of Maury County Public School System.
The development combined with current neighborhoods and additional approved developments in these zones may require either new construction or realignment of school zones to accommodate new students.