

AGENDA

The Columbia Municipal Planning Commission will meet on Wednesday, June 14, 2023 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. 23-0049 - Quail Run Meadows Phase 3 - Request from T-Square Engineering for Final Plat approval of 34 lots with surety in the amount of $185,000, being Tax Map 73 Parcels 17 and 17.04.

   Request from

   Documents:
   None

III. Discussion Items

1. Request from Adam Crunk for Preliminary Plat and Development Plan approval of 126 lots off Trotwood Avenue and Foster Lane, being portions of Tax Map 112 Parcels 18, 18.03, and 18.04. This request is updated to approval of 124 lots.
   THIS ITEM WAS DEFERRED FROM A PREVIOUS AGENDA

   THE APPLICANT IS REQUESTING A DEFERRAL

2. Request from Cole Gaumnitz for Preliminary Plat and Development Plan review for Tax Map 89 Parcel 46 off Industrial Park Road.
   THIS ITEM WAS DEFERRED FROM A PREVIOUS AGENDA

3. Request from Jacob Vincent for Preliminary Plat and Development Plan approval for Rock Springs Phases 1-4 consisting of 187 lots off Rock Springs Road.
   THIS ITEM WAS DEFERRED FROM A PREVIOUS AGENDA

4. Request from Sue Stephenson to rezone 55 properties from CD-3 (Neighborhood Character District) to CD-3L (Neighborhood Large Lot Character District) in the Carriage Hills subdivision located off Concord Road.

5. Request from Chapdelaine and Associates for Preliminary Plat and Site Development Plan approval for 29 lots in Fieldstone Farms Section 5 Phase 2 off Williamsport Pike and Golden Place.

6. Request from Larry Owens for Comprehensive Plan Amendment from Urban Neighborhood to Suburban Neighborhood along with Rezoning from CD-3L (Neighborhood Large Lot Character District) to CD-3 (Neighborhood Character District) at 1205 East End Street.

7. Request from Nelson Crowe to correct a mistake on the official zoning map and rezone property from CD-3 (Neighborhood Character District) to CD-4 (General Urban Character District) at Tax Map 41 Parcel 15 at Cleburne Road and Freehand Lane.

8. Request from Greg Gamble for rezoning of Tax Map 90 Parcel 7.08 off River Road from MU-PUD (Planned Unit Development - Mixed Use) to CD-5 (Urban Center Character District).

9. Request from Joseph Ahler for Preliminary Plat and Development Plan approval for Highland Pointe at Bear Creek located at 1451 Lasea Road.

10. Request from Eric McNeely for Final PUD Master Plan revision for property at Tax Map 51 Parcel 32 off Drumwright Way.

IV. Other Business

1. Adjournment

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.

Organization

Item I.1. - **Call to Order**

Chairman Charlie Goatz called the May Planning Commission Meeting for the City of Columbia to order at 4:00 p.m.
The meeting was held in Council Chambers at City Hall.

Item I.2. - **Roll Call**

All present and included the following Planning Commission Member Charlie Goatz, Planning Commission Member James Shannon, Planning Commission Member Ray Pace, Mayor Chaz Molder, Planning Commission Member Christa Martin, Planning Commission Member Thomas Hutto, Council Member Danny Coleman.

Item I.3. - **Welcome of Visitors/Rules of Conduct**

Chairman Goatz welcomed guests and applicants to the meeting. The Chairman discussed the meeting order and the process for speakers to be heard.

Item I.4. - **Acknowledgement of Official Communications of the Columbia City Council on Annexation and Zoning.**

Director Paul Keltner shared the updated status of the Planning items that were forwarded to City Council.

Item I.5. - **Approval of Minutes**

Mayor Molder moved to approve the minutes. Planning Commission Member Martin seconded the motion. The motion to approve passed seven to zero.

Item I.6. - **Review of Bonds and Letters of Credit**

City Engineer Glenn Harper stated all letters of credit are in order and/or in the process of being updated.

Item I.7. - **Process Updates**

Mr. Kevin McCarthy, City Planner, gave the process updates. The electronic submittal implementation goal is this month. Mr. McCarthy also stated that a final step in the process will be for the applicant to submit plans that have addressed all items of approval. There were directions received from MIS that all board members needed to use the official city email addresses. He also stated that a new fee schedule is in place.

Consent

Item II.1. - **Request from SEC, Inc for Final Plat approval with surety in the amount of $335,000 of Ridgeview Oaks Phase 2 consisting of 44 lots off Echo Ridge Road.**

Mr. Goatz presented the consent item. Planning Commission Member Goatz moved to approve subject to development review comments. Council Member Coleman seconded the motion. The motion to approve passed six to zero.

Item II.2. - **Request from Adam Crunk for Preliminary and Final Plat approval of six lots in the Honey Farm Crossing commercial development at 2248 Nashville Highway and Honey Farm Way.**

Mr. Goatz presented the consent item. Planning Commission Member Goatz moved to approve subject to development review comments. Council Member Coleman seconded the motion. The motion to approve passed seven to zero.

Discussion Items

Item III.1. - **Request from Adam Crunk for Exception to Access Management for properties at Baker Road and Nashville Highway being Tax Map 75 Parcels 11.04 and 31.01.**

THIS ITEM WAS DEFERRED FROM A PREVIOUS AGENDA

Mr. Keltner gave the details of the staff report. He stated that as of today staff had not received any new submitted information. Mr. Adam Crunk, Crunk Engineering, was present to answer questions. Mr. Dave Webb, 507 Jonells Way, stated that he has three concerns related to this property. Where it is located on Nashville Highway, there are two other car dealerships, parking on the shoulder of the road creating traffic safety issue, the shoulder of the road is very narrow, hazardous, and the speed limit has increased. He asked the Commission to require the owner to develop space on their own property for the loading and unloading of the 18 wheelers. He also stated in a letter from McNabb Auto Dealership to the City in regards to this property he read the last paragraph. He stated that the developer and the owner should have known what the City Engineering specifications are before they developed a plan, and the property owner bought the property willingly and was not forced to buy it. The application is asking to put driveways on Baker Road too close to Nashville Highway. He asked the Commission to deny the application. Mr. Adam Crunk, Crunk Engineering, stated that the request was made by the Planning Commission for him to reach out to Maury Regional who owns the property to the South to work out a shared access agreement. In communications, they initially said no, but they offered some other items and they indicated yes they would be open to having shared access. At this point in time, they haven't received a no from Maury Regional, but at the same time, we are coming up to this Planning Commission item and the developer is out of time as it relates to real estate. They would like for this item to be heard in the event that they cannot get a

formal shared agreement in place. At the same time, the shared agreement is still on the table should it go forward. It is actually their preferred route forward. He also stated, but for tonight he would like for the Planning Commission to consider their request. If the answer is no, then the property life is not an option. He also stated in way of the driveway exception the points made about current truck traffic being stopped on Nashville Highway, they believe that having a right turn in off Nashville Highway will help get trucks into the property where they can work. The second entrance will come in line with the rock cliff, will allow easy access back on the property. He also stated that in the staff report the first entrance being directly across from the Farm Credit would actually be a safer design access. The access off Baker Road is further. Mr. Goatz stated to clarify it is not a no yet from the hospital. He asked what is the discussion. Mr. Crunk stated the proposal is to close their access and move a shared access to the median opening that is adjacent to their property. There is also property on the west side where the median line would align with their driveway. They would also be installing turn lanes along Highway 31. Mr. Goatz asked Mr. Harper, if that agreement would be reached, would it conform to City standards.

Mr. Harper stated yes, it would meet the space requirement of the Access Management ordinance, and staff can support the other request administratively. Mayor Molder asked if the shared access is approved by Maury, then by sharing that access of ingress and egress there would not be a need for exception to the access plan. Mr. Harper stated there would be a need, but it would be for access along Baker Road. Mayor Molder stated that the way he read the Engineering letter was that the ingress and egress off of Nashville Highway request was primarily done to allow for the large trucks that was offering inventory to come onto the property to off load the inventory. He asked was that the intention of the property owner. Mr. Crunk stated yes, the unloading would be at the rear of the building. Mayor Molder stated there would not be any unloading or unloading along Nashville Highway. Mr. Crunk stated that is correct. Mayor Molder stated that one could make the point that this access management plan is not excepted to have a counter affect of otherwise potentially leaving no choice but to park along Nashville Highway. Mr. Crunk stated or may be more difficult to get access in and out of Baker Road. The mayor stated on the site plan there appears to be a buffer between Nashville Highway where the development will occur. Mr. Crunk stated that the right of way distance is pretty substantial. Mayor Molder stated that the thought is the truck will come to access point B, and would off load on the property and then get back on to Baker Road from access point C, or maybe A, and then they will have a wide turn. Mr. Crunk stated correct. Mr. Goatz asked Mr. Harper to clarify some of the comments. If it is shared with the south property, and if the access/medians are closed, if you could explain that to me. Mr. Harpes stated that the access could be placed between Baker Road and Burt Drive if the access was shared with Maury Regional and the dealership. One access point could fit between those two roads and meet the space requirement of the Access Management Ordinance. Mr. Goatz stated, Mr. Crunk what you are requesting is your on access, potentially and closing, or doing the right in, right out only, closing the median or what. Mr. Crunk explained the request before you would be right in right out only ,and would be closing the median on Highway 31. The Maury Regional

access would remain open. Further discussion included the layout. Mr. Goatz stated that the best scenario is sharing a shared driveway with the hospital. Mr. Crunk stated that they hope that the shared driveway does come to fruition. They had a meeting with Dr. Chaney and they want to confirm with the Pediatric Center. Mr. Goatz inquired about the requirement for getting a truck in and still using Nashville Highway. Mr. Harper stated that you would have to get with the Police Department in reference to the requirements. He doesn't know if it is legal for them to load and unload on the shoulder of the roadway. Additional discussion included the buffer, parking issues, approval, enforcement, and adequate loading. Mayor Molder asked Mr. Harper, if this piece of the access management plan would prohibit the ingress and egress off of the main thoroughfare when there is an adjacent driveway, how long has that been in effect? Mr. Harper stated 2018. Mayor Molder stated prior to 2018 if this applicant had come to the Commission with this proposal they would not have to had sought exception to our access management they would have had to seek approval from TDOT. Mr. Harper stated that they would have to get a permit from TDOT for the drives on the state route. TDOT would look for our concurrence to the location of those drives.They would locate access at the safest location. Mayor Molder stated as soon as they get approval here, they will have to go to TDOT to get the approval for the cut out which would look to us to see if we concurred. Mr. Harper stated correct. The redevelopment and new development trigger access management. Additional discussion included the separation along Nasville Highway, which is 440 feet. They could meet the separation requirement potentially. Mr. Harper stated no because it is 440 feet from Baker Road, from Burt Drive and from existing access. Mr. Goatz stated you are saying that there is no way to meet the 440 feet. Mr. Harper stated if they shared the drive with Maury Regional, then they could meet it. Further discussion included going in A coming out C, making a 90 degree turn off of Highway 31, U turn on the property, dealership, seeing the building and being able to turn once they see it, TDOT and the approval, full access on Highway 31, different scenario, spacing requirement, compliant location, too close to Burt Drive, and shared lanes on either side. Mr. Shannon asked if the applicant didn't reach an agreement with Maury, without a turn lane number three will be closed. Mr. Harper stated yes, that is what the applicant is requesting. Mr. Shannon stated, with number three being closed, how do you plan on getting the trucks to make a turn anywhere but beside Baker Road. What are you going to do with a tractor trailer coming south bound trying to get into that lot (entrance B)? Mr. Crunk stated that they would have to turn at the light at Baker Road. Councilman Coleman asked if it would be primarily for the trucks leaving. Mr. Crunk stated that he felt that most of the truck traffic would be north bound. Further discussion included traffic route, turning lane, the length of the lane, and traffic study. Mr. Goatz moved to deny, and listen to staff recommendation, with Councilman Coleman seconding. The motion to deny failed with a vote of three to four, with Mr. Hutto, Mayer Molder, Mr. Pace, and Mr. Shannon all voting nay. Mayor Molder moved to approve based upon the fact that he does believe that our access management plan is a good plan to have. He is listening to our City Engineer and he values his opinion, but he also believes that this cannot be one size fits all, and there are too many other factors that he believes supports not allowing the one size that fits all here. He also stated that he would

like to make his motion subject to if there is an agreement between the hospital and the property owner that the developer would come back to this Commission and make that known so that the Board can be aware that the developer is going to move forward and the direction would be different from the exception. Basically, the developer keeps them on notice of any interactions with the hospital , but whether or not the hospital agrees or not would not be a requirement for purposes of this motion. Mr. Goatz seconded the motion. The motion to approve with conditions passed four to three with Councilman Coleman, Dr. Martin, and Mr. Goatz voting Nay.

Item III.2. - **Request from Adam Crunk for Preliminary Plat and Development Plan approval of 126 lots off Trotwood Avenue and Foster Lane, being portions of Tax Map 112 Parcels 18, 18.03, and 18.04. This request is updated to approval of 124 lots.**

THIS ITEM WAS DEFERRED FROM A PREVIOUS AGENDA

Mr. Keltner gave the details of the staff request. Mr. Adam Crunk, Crunk Engineering, was present to answer questions. Mr. Crunk stated that they would like to defer this item. Discussion included several offsite easements, onsite easement related to grading on Foster Lane, sewer, does need to cross on the far east side, signed agreements, sanitary sewer, Wastewater, pump station, shared forced main connection, easement that will be shared by all parties, and property owner letters for the sewer. Mr. Pace asked if there was a letter from the other property owners in agreement with this. Mr. Crunk stated yes, as far as it relates to Foster Lane. They have an agreement with a fourth party, to run a portion of the force main on their property to tie the necessary sewer system. They don't have an agreement in place with the two other property owners to share in the cost of the station, or provide the easement necessary, and to put the force main in the location Wastewater Department wants it. Mr. Pace stated to get this agreement the sewer will go out and up to the last property to Rockland Drive, or go around. Further discussion location of the forcemain, man hole, the highest point, easement, sewer man hole, right of way, survey, smart code, block layout, and better continuation of the neighborhoods. Mr. McCarthy stated that the Zoning Ordinance adopted July of last year is modeled on the smart code adapted to Columbia circumstances. He also discussed Article 5 requirements. He also stated that the layout that Mr. Crunk has proposed is a conforming configuration in a thorough fare that forms blocks that extends to it adjusted to the site. Mr. Goatz stated that the water availability letter has expired. Mr. Crunk stated that they will request a new one. Mr. Goatz asked now that he has gotten a lot of the items, would it be better to come back with a clean package and a new application or would that delay the process. Director Keltner stated that the deferral lists are getting longer and longer. Mr. Goatz asked what will the delay be one month for denial. Mr. Keltner stated two months delay to come before this board. Additional discussion included deferral, work session, delay, meeting requirements from Wastewater. Mayor Molder moved to defer for one month, with a second from Dr. Martin. Motion to defer passed seven to zero.

Item III.3. - **Request from Wade Kincaid to rezone 30.76 acres at 6218 Cayce Lane from CD-2 (Rural Character District) to CD-3 (Neighborhood Character District).**
THIS ITEM WAS DEFERRED FROM A PREVIOUS AGENDA

Chairman Goatz abstained, and Vice Chairman Coleman presided. Mr. Keltner gave the details of the staff report. Aaron Evans, representative, and Gerald Vick, WES Engineering, were present to answer questions. Mr. Evans stated that they did a stormwater study, safety and traffic study. There are no additional changes needed to Cayce Lane. In terms of water, they determined that there are three basins of water collection in the larger area within their property. There is a detention pond already there. The flooding that the neighbors are experiencing the water is pooling up from the entire west side of Cayce Lane, not the east side where their property is. Mr. Harper stated that the audit had three recommendations. One was to put rumble strips as you approach the curve; two was to clear the vegetation in the right of way; and the third option was to rebuild and to realign the roadway. The discussion included no realignment plans. The impact of this particular development is not tied to the issues. There are three collection basins in the area, there is one basin on their property, they have plans for a detention pond on the property, and their plans meet the water requirement for the basin. Susan Shuff, 6219 Cayce Lane, expressed her opposition to the rezoning of Cayce Lane. She also discussed future development, criteria needing to be met, previous documentation provided, the blending of the area, existing development, backing a new development into the area, density, and the location of the development. Daryl Shuff, 6219 Cayce Lane shared handouts. He expressed concerns about Cayce Lane being a very small road, the infrastructure being too small, the character, zoning, the land use plan, the intent, railroad, new housing, water draining, traffic plans, and the Connect Columbia Plan was read. Jenie Paraschak, 6213 Cayce Lane, opposes the rezone of Cayce Lane, the safety, the sewage, flooding, the zones that surround the property, the CD-3 zone, active railroad track, notification letters, studies, and photos of the water. She also stated that this is not the area for this type of development. Mayor Molder asked if they were requesting a change to CD-3, which depicts one hundred and four units. Mr. Keltner stated that it is purely a concept based on what you get inside the construction plan. Mayor Molder asked what would thirty acres in the current zone CD-2 allow. Mr. Keltner stated that it would be one per, it is equivalent to RS-40. Mayor Molder stated, currently there would be approximately thirty residential units as of now that is assuming that you could utilize all thirty acres which is highly unlikely to a residential development that seemingly would have close to a hundred or so residential units. Mr. Keltner stated suburban neighborhood character. Additional discussion included a straight zoning perspective, one unit per acre, denial, managing, zoning, CD-3 tracts, the impact, general comprehensive plan, the development of the area, classification of the neighborhood, and concern as a body. Mr. Keltner stated that any motion to deny should be followed-up by stating which portion from section 8.5.19 on page four that information is attached to the staff report. Which one of the specific criteria that you believe does not meet the request? Vice-Chair Coleman asked Mr. Keltner to speak about infrastructure serving one zone and not another zone . Mr. Keltner stated

that he was not sure that he was following the question exactly. He also stated that the traffic study is essentially looking at the property. It is not enough generation there to warrant improvements that you would typically see in some of the other areas that you have been looking at for the last year or two. As stated by the applicant, the existing condition is just that, it is existing. The traffic study itself does not even point to the turning lanes, which is minor. On the water basin part they did come in, staff had already reviewed all the information that came in. Staff have experienced the water in a particular area, as well as trying to find some ways to remedy those issues, even outside of this particular development. Additional discussion included stormwater, additional right-of-way, making the ditch larger , keeping the water to one side of Cayce Lane, requiring safety improvements, safety audit, requiring safety improvements, abating some of the water,and improvements. The goal will be making sure that the water on the east side of the road stays on the east side of the road. A lot of the storm water issues are coming from Maury County Park. This site is downstream where staff get complaints from. This site does not contribute to the fact that the water is jumping over the railway that is in the path of this site. Vice Chair Coleman inquired about safety. Mr. Harper stated that they had three identified in the audit the rumble strips for the approach , the clearing of the vegetation right-of-way, and re-align the roadway. Mr. McCarthy stated that the Preliminary Plat is not part of this request for the zoning. Mr. Harper confirmed that it cannot be part of this request. Dr. Martin asked the staff to respond to who gets the reports, the three studies that were mentioned, and the fact that these reports were not available. The storm water, safety, and traffic are all specifically who gets each one of them. Mr. Harper stated that typically staff don't get these at rezoning. This was a request at Planning Commission, so it put a time crunch on the applicant. The reports were delivered last Wednesday evening, or Thursday morning. The stormwater report was done by the design engineer, WES Engineering, the traffic study was done by Gillian Fischbach and reviewed by a third party consultant, Vulcar, and Fishbach also did the safety audit. Mr. Keltner stated that the applicant is in charge of providing the report. Staff also have our own staffing consultants that specialize in those fields that work just for us, and review. Conversation goes back and forth in review of those reports. Our consultants are going back and saying something was wrong or incorrect or too high. Dr. Martin stated that the comments that she sees in the staff document were not adverse to what was in the report. Mr. McCarthy stated that the staff report was prepared before the report was received. Mr. McCarthy stated that he prepared an update this afternoon just to acknowledge that staff had received the additional documents and stated that staff wasn't providing any additional comments or analysis. Staff analysis was specific to the rezone. Dr. Martin stated that was what she was inquiring about. Vice-chairman Coleman moved to approve, with Mr. Shannon seconding. Dr. Martin stated, for clarity she wanted to make sure that the Board would have another opportunity to help alleviate the concerns of the constituents that was brought before the Commission. Mr. Harper stated yes. Mr. Coleman asked Mr. Keltner to explain the preliminary plat stage. Mr. Keltner stated that the preliminary plat stage conforms to all of your standards. At that point, they are asking for a preliminary review of it. If everything meets our standards at that point, the applicant would then go in and

start the infrastructure prior to coming back for final plat which is where the applicant obtain the allowance to actually do physical construction.
The motion to approve with condition passed three to two with Mayor Molder, and Mr. Pace voting nay. Mr. Goatz and Mr. Hutto abstained. Mr. Keltner stated that this item will move forward to City Council where there will be two more readings for this item, plus a public hearing.

Item III.4. - **Request from Cole Gaumnitz for Preliminary Plat and Development Plan review for Tax Map 89 Parcel 46 off Industrial Park Road.**
THE APPLICANT HAS REQUESTED TO DEFER THIS ITEM TO THE JUNE PLANNING COMMISSION AGENDA

Mr. Keltner gave the details of the staff report the applicant has request to defer. This is a staff inflicted issue for the deferral it was not recognized until the publication for this agenda. Staff had inadvertently typed in the email address for the applicant, and he did not receive some of the comments and he did not have an opportune time to respond to those. This was a staff error. Mayor Molder moved to defer, with Dr. Martin seconding. Motion to defer passed seven to zero.

Item III.5. - **Request from Sue Stephenson to rezone 55 properties from CD-3 (Neighborhood Character District) to CD-3L (**Neighborhood **Large Lot Character District) in the Carriage Hills subdivision located off Concord Road.**
NO ACTION CAN BE TAKEN ON THIS ITEM AT THE MAY MEETING DUE TO A DEFECT OF REQUIRED NOTICE. THIS ITEM WILL BE MOVED TO THE JUNE AGENDA. PROPER NOTICE HAS BEEN MADE FOR THE NEXT PLANNING COMMISSION MEETING.

Mr. Keltner stated that existing neighborhood notices were sent out, but not all that petitioned were zoned. We were required to list every property that was being requested. So the staff did miss some. Mayor Molder moved to defer. No vote was required.

Item III.6. - **Request from Jacob Vincent for Preliminary Plat and Development Plan approval for Rock Springs Phases 1-4 consisting of 187 lots off Rock Springs Road.**

Mr. Keltner gave the details of the staff report. Scotty Bernick, landscape architect for Ragan Smith, & Clift Smith, CPS, were present to answer questions. Mr. Goatz asked about the ability to discuss the development plan details. Mr. Keltner stated that your ability is to discuss with the applicant if it is adequate with the size, locations, grading and frontage. Further discussion included use, seeing more detail, swing set, wanting to see more details, lot 47 and 46, culdesac, stub out, creating an oddity in pattern for the neighborhood if it is ever extended, and spacing from the roadway. Staff wanted to point out that it is something there. Mr. Scotty Bernick stated that they came in with a different zoning district, with the code evolving they are also learning the requirements and things of that nature. They have really looked at the natural resources of the site. He looked at

the playground, the zoning code requirements, and grading. Additional discussion included the intent, their interpretation of the code, trying to understand exactly what was needed, they have worked a lot with their client, conversations, and preparation with them, construction documents. The culdesac has three options; hammerhead option, subregs, maybe a temporary culdesac, come in with a green space in the middle, or leave it as is and allow the homes to be setback. They are happy to work with staff to see which one is best preferred for that area. Mr. Goatz stated that the staff report indicated that playgrounds should be fronted by buildings, but the development plan depicts them adjacent to the buildings. It looks like the playground is behind lots twelve, thirteen and fourteen and potentially lots eighteen, nineteen, and twenty. It seems like they are hidden behind some existing lots. Mr. Bernick stated that the comments talk about frontage type, and each of the civic spaces qualify the type of frontage. What they have looked at is the different civic spaces all have the same frontage type of building. There is no sensitive area, they have a gas line issue, but the design intent is based on the building code. Mr. Goatz discussed the playground area. Further discussion included access for frontage, pergola, civic space for playgrounds, alley load, slopes, grades, canopy, street scape, code requirements, natural resources, and visibility. Mr. Goatz stated that what it says to him is that lots twelve and thirteen have a private playground. He stated that he would like to see the concept of what the playground would be. Mr. Clift Smith stated that they have been working on the playground vinettes. The lots are precious with the new zone they have come down some, with the tree canopy, right of way, side yard setbacks, and the garage elements. They really would like to maintain as many lots as possible and will try to work out some of this through the construction documents. Mr. Bernick passed out a handout. Mr. Goatz asked if this was deferred, could you guys provide more information pertaining to the amenities for staff to review? Mr. Goatz viewed the handout and stated that they are already working on it. Further discussion included the handout showing four different playgrounds,walkable distances, civic spaces, green area, trails, grading detail and different elements, meeting requirements, the intent, and the green area. Mr. Goatz asked Mr. Kelner about the review of the handout. Mr. Goatz stated that the other comments were about the Engineering comments, do we need more grading detail at this preliminary plan? Mr. Harper stated that they had sufficient response to that. Mr. Goatz stated that water availability is addressed by Columbia Water along with Maury County Water, and the requirement from the city is to have city water. Mr. Keltner stated that the applicant verified that they will be using Columbia water. Mr. Goatz inquired about the fire flow requirement letter. Mr. Keltner stated that the fire flow requirement letter is from the Fire Marshal's office telling the applicant what will be needed. Further discussion included more details, details of the playgrounds, construction documents, and accessibility. Mr. McCarthy discussed conforming to the zoning ordinance and the level of detail required from the Board. Additional discussion included receiving detailed documents, providing the preliminary details, sidewalks, open spaces, green spaces, pictures or renderings, seeing structures, seeing walking trails design intent, understanding what it is that they need to submit, avoiding a deferral, more details, construction documents, and meeting the requirements. Mr. McCarthy stated that what staff is looking for is the tools that staff can look at and compare with

what will come later. Detailed documents that show this conform to what the Planning Commission requires. Mr. Goatz asked if they could provide the preliminary details. Mr. Bernick stated yes. Further discussion included details and looking for a photograph. Mr. Keltner stated that it goes back to the comment that the Site Development Plan should include sufficient notes or graphic details for the Planning Commission to confirm that the Civic Spaces conform to the standards of Section 5.3.3. Councilman Coleman stated that pictures or rendering will work as long as they give an idea of the scope with more detail. Mr. Keltner stated that will be what the staff look at when it comes through. Additional discussion included being able to see more details specifically of the playground area, structure, and overlay. Dr. Martin stated that she just wanted clarity. The water development review comments report says the Maury County Water System and then on page four, Power says Columbia Power and Water does not have an existing power line near your proposed development and is not the service provider. DREMC will be the provider. So we are at water is Columbia Power and Water. Paul clarified, the applicant is stating that they recognize that Columbia Power and Water have the water availability to meet the Fire Marshal's requirement for the fire flow for this development. Dr. Martin stated that even though in the DRC it says Maury County. Mr. Keltner stated that it goes back to the developer and they are saying that they are attaching it to Columbia Water, not Maury County. Further discussion included sharing with the applicant a rendering for clarification. Mr. Goatz moved to defer to allow the applicant time to work on the requested information, and Councilman Coleman seconded. The motion to defer passed seven to zero.

Item III.7. - **Request from WES Engineers & Surveyors for Preliminary Plat and Development Plan approval of four lots at 1009 Woodland Street.**

Mr. Keltner gave the details of the report. He stated that the request is compliant with the plat. Mr. Gerald Vick was present to answer questions. Mayor Molder stated because this is a preliminary plat development plan approval, will the adjourning property owners receive notice? Mr. Keltner stated no, not for a plat. Mayor Molder also stated there is no rezoning requested here. Mr. Keltner stated yes. Mayor Molder stated that the CD-4 will allow for these four units on this size of lot. But there aren't four units in the surrounding vicinity. He feels like it is adding a lot to the property right there. None of the adjoining property owners are going to know that. Mr. Keltner stated that the right to construct is already there. The City's standards have become more favorable to infill development such as this, whereas the previous ordinance would have been much harder to accomplish something like that. The Mayor stated that he was concerned about the adding of four lots to the small space, and the neighbors would not know. Mr. Keltner stated that the rear property is the only one that he is aware of because they are sharing an easement for the driveway, and they have had discussions with them about this. Mayor Molder asked if staff had received any complaints from the owner. Mr. Keltner stated that no complaints had been received. Dr. Martin asked if the frontage was on Woodland Street. Mr. Keltner stated yes, the frontage would be on Woodland. Dr. Martin stated that it is shared with the 9.0.0. is the property that you are

talking about. Mr. Keltner stated yes. The property behind it will actually be shared with the 8.01. Mr. Goatz asked if there is a parking space requirement. Mr. Keltner stated two spaces per unit. Mr. Goatz asked is that for three bedrooms. Mr. Keltner stated per dwelling. Additional discussion included parking on the lot, rear access, sharing the rear access driveway, each unit has 2 cars, driveways, no yard, and a limited amount of setback. He also stated that this one is a setback of 14 feet from the front property line on Woodland Street. Mayor Molder moved to approve, with Dr. Martin seconding. Mayor Molder confirmed that his motion is subject to Development Review comments. Councilman Coleman voted verbally, aye. The motion to approve with condition passed with a vote of seven to zero.

Item III.8. - **Request from Joseph Ahler for site plan revision approval of Duck River Estates off Industrial Park Road.**

Mr. Keltner gave the details of the staff report. Staff have proposed revisions, and previously approved ones by the applicant. Staff found the clustering of the playgrounds to the front. He also stated that discussion should be is the disbursement of playgrounds going to be equal or is it all going to be pushed to one side? Mr. Ahler was present to answer questions. Mr. Goatz stated that there is a playground there now. Mr. Ahler stated that the original had the playground up by the office in the back. One of the residents complained, so the owners moved it down toward the entrance. He also stated that what he is asking for is to be able to move it to the western corner of the development, putting it in Phase 1. Mr. Keltner asked if there was an extra playground added in. Mr. Ahler stated originally there was one. Now the office has two pools and the mail kiosk. The playground was moved down toward the front. Additional discussion included whether the playground is on a higher elevation, plot lot,round about, temporary exit, shared with the Wastewater department, walking trail, moving maintenance to the far west corner, relocation of the playground to the north east corner, and two playgrounds on the east side. There is a playground in phase three, the walking trial, and elevations. Mr. Keltner asked about being able to add another playground. Mr. Ahler stated we could probably put one in the flood plain area (there is an area behind the pump station), the dog park, TVA has been co-operative, and location. Mr. Goatz moved to approve subject to adding an additional playground area, and Councilman Coleman seconded. The motion to approve with conditions passed seven to zero.

Other Business

Item IV.1. - **External request to staff for discussion on car wash bay standards within Zoning Ordinance 4400.**

Mr. Keltner gave the details of the car wash discussion. He stated that these are limited use standards. Discussion included the car wash not face the street, and the Commission can have staff look at it to come up with an alternate for the requirements. Mr. Hutto asked if we are talking about the drive thru . Mr. Keltner stated both the drive thru vs the stop and self-service. Additional discussion included adjustment coming

through the Commission, and the Comp Plan.
Stacey Pippin, representing Love's Travel stop, was present to answer questions. Mr. Pippin stated the question about the car wash and it not being able to face the frontage is based on a code requirement . The car wash should be based in the first or second layer of the frontage. He also stated that they are not necessarily building a car wash. What Love's Travel Stop would like to do is modify their tire service building, to increase the bays from two to three, and then add two truck wash bays. This proposed building has three service bays for tire and maintenance , two bays in the same building for wash, these are allowed. They are not because it is considered a car wash. The building is separated from Bear Creek Pike by seven hundred feet. It is an accessory use behind Love's Travel Stop. He wonders if there is any other action otherthan a text amendment that will allow Love's to move forward with permitting of this truck wash. Mr. Goatz asked if there was another option. Mr. Keltner stated that he didn't know what it would be. He also stated that it is achievable, but it would not be the best design that Love's is looking for. It is achievable, but it may not be what is preferable for Love's Truck Stop. Mr. Pippin stated that unfortunately it is achievable but they would have to remove numerous truck parking spaces which are needed for the drivers. He asked if this is defined as a car wash. It says car wash bays shall not face the street, but this is not a car wash. This is not for automobiles, but it is for semi trucks, and trailers. It is part of the business. They have one building that has essentially bays, that look the same. Three are allowed and three are not. Drivers will not be able to tell if this is a truck wash bay, or a maintenance bay. He is hoping that there is a way through the definition of a truck wash as an accessory structure versus a car wash. Is there any lee way there that will allow them to move forward permitting, without waiting months? Mr. Keltner stated that what you are asking is for a determination on what defines a car wash. That will be handled by the City Planner, Kevin McCarthy. Send that request in to Mr. McCarthy and he will respond back to you. Additional discussion understanding the process, variance, other options, going to the Board of Zoning Appeals, this is not an appeal process, interpretation, this is the appropriate way of bringing it up, and have it looked at.
Mr. Pace discussed changing an eleven foot ceiling height. Mr. Keltner stated that you would change it in the regulation, but you would not do it for one parcel it would be across the board. Mr. Goatz asked if there is a list of several items to look at and it can be presented to the board to look at and maybe expedite. Mr. Keltner stated not a complete list, it is very integrated in how it functions. Mc Carthy stated a comprehension list will be presented over the year, for next month staffing will be looked at. Mayor Molder asked about amendments to the code being presented. Mr. Keltner stated yes, toward the end of the year. Mr. Pace stated he is going to contact Mr. McCarthy, and he will tell him if it is a car wash or not. If he tells him it's not a car wash then he will come back to this board and the Board can ok him building it. Mr. Keltner stated that you would have to amend the text to do that. Mr. Goatz stated that if he determines that it is not a car wash it may fall under other criteria, that might be a building that might not be permittable that this board might not see. Mr. Keltner stated yes. Further discussion included providing examples.
Mayor welcomed the new Planning Commissioner, Mr. James Shannon.

Item IV.2. - **Adjournment**

There being no further business Council Member Coleman moved adjourn the meeting. Planning Commission Member Martin seconded the motion. All members present voted aye. The meeting adjourned at 07:02 PM.

_____ _____

Planning Commission Chairman, Charlie Goatz

Date

QUAIL RUN MEADOWS SUBDIVISION

PHASE 3 FINAL PLAT
LASEA ROAD
COLUMBIA, TN 37174
MAURY COUNTY, TENNESSEE

NO.	DATE	REVISIONS

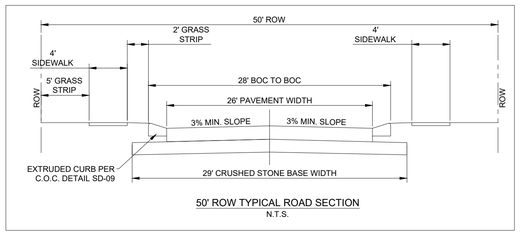
DATE: 2-9-2023
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DRAWN BY: DSW
REVIEWER:

Lot Table		
Parcel #	Area SF	Area AC
300	6600.00	0.15
301	7557.55	0.17
302	7953.60	0.18
303	7953.60	0.18
304	8482.99	0.19
305	8540.99	0.20
306	8053.74	0.18
307	8053.40	0.18
308	8053.18	0.18
309	7918.15	0.18
310	8190.74	0.19
311	8036.10	0.18
312	6964.73	0.16
313	6600.00	0.15
314	6600.00	0.15
315	6600.00	0.15
316	6600.00	0.15
317	6600.00	0.15
318	6600.00	0.15
319	6600.00	0.15
320	6600.00	0.15
321	7012.50	0.16
322	7012.50	0.16
323	7012.50	0.16
324	7012.50	0.16
325	7012.50	0.16
326	7012.50	0.16
327	7012.50	0.16
328	7012.50	0.16
329	7003.40	0.16
330	10345.40	0.24
331	10345.40	0.24
332	7003.40	0.16
333	7012.50	0.16

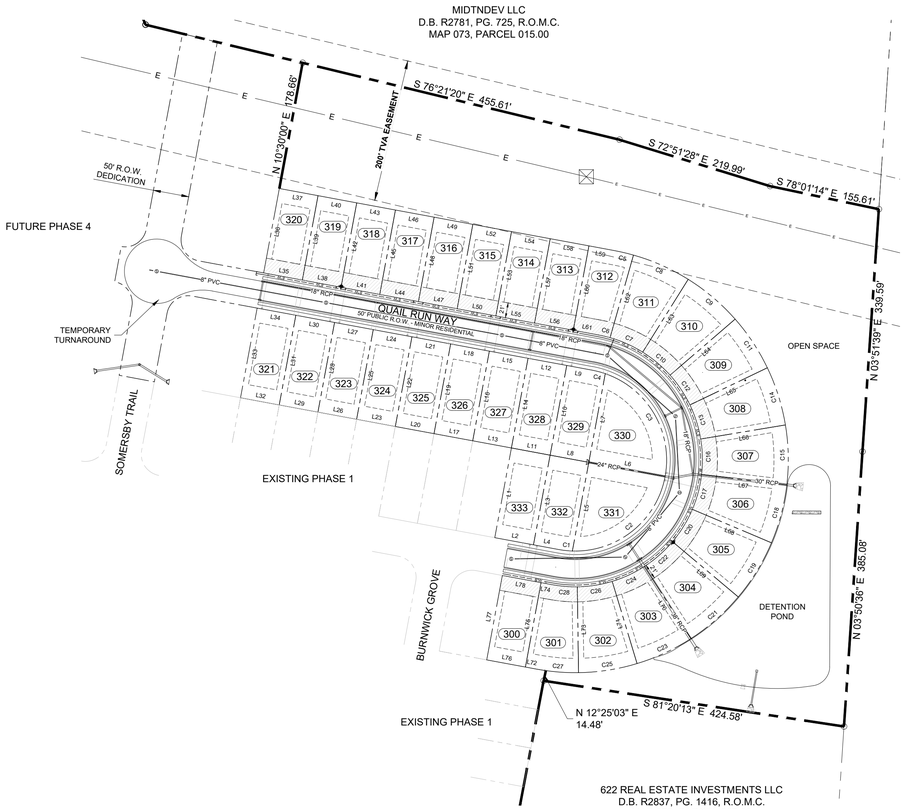
Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C25	83.02	297.50	15.99	S81° 09' 17"W	82.76
C26	49.54	177.50	15.99	N81° 09' 17"E	49.37
C27	58.93	297.50	11.35	N85° 10' 31"W	58.84
C28	35.16	177.50	11.35	S85° 10' 31"E	35.11
C3	181.14	127.50	81.40	S30° 11' 58"E	166.28
C17	50.17	177.50	16.19	N14° 51' 35"E	50.00
C18	84.06	296.61	16.24	S14° 50' 38"W	83.78
C4	19.14	127.50	8.60	S75° 11' 58"E	19.12
C19	89.16	293.26	17.42	S31° 31' 25"W	88.82
C20	53.20	177.50	17.17	N31° 32' 33"E	53.00
C5	27.69	297.50	5.33	S76° 50' 00"E	27.68
C6	16.52	177.50	5.33	N76° 50' 00"W	16.52
C21	88.59	297.50	17.06	S48° 38' 21"W	88.26
C22	52.79	177.50	17.04	N48° 38' 58"E	52.60
C7	50.05	177.50	16.16	N66° 05' 20"W	49.88
C8	83.89	297.50	16.16	S66° 05' 20"E	83.61
C23	83.02	297.50	15.99	S65° 09' 54"W	82.76
C24	49.54	177.50	15.99	N65° 09' 54"E	49.37
C9	86.35	297.50	16.63	S49° 41' 47"E	86.04
C10	50.17	177.50	16.19	N49° 54' 51"W	50.00
C11	81.80	297.50	15.75	S33° 30' 16"E	81.54
C12	50.17	177.50	16.19	N33° 43' 15"W	50.00
C13	50.17	177.50	16.19	N17° 31' 38"W	50.00
C14	84.05	297.50	16.19	S17° 32' 00"E	83.77
C1	19.14	127.50	8.60	N83° 48' 04"W	19.12
C2	181.14	127.50	81.40	S51° 11' 56"W	166.28
C15	84.06	297.50	16.19	S1° 20' 43"E	83.78
C16	50.17	177.50	16.19	N1° 20' 01"W	50.00

Parcel Line Table		
Line #	Length	Direction
L1	127.50	N10° 29' 59.25"E
L2	55.00	N79° 30' 00.75"W
L3	127.50	N10° 29' 59.25"E
L4	35.93	N79° 30' 00.75"W
L5	126.07	N10° 29' 59.25"E
L6	108.43	S79° 30' 00.75"E
L7	126.07	S10° 29' 59.25"W
L8	55.00	S79° 30' 00.75"E
L9	35.93	S79° 30' 00.75"E
L10	127.50	S10° 29' 59.25"W
L11	55.00	S79° 30' 00.75"E
L12	55.00	S79° 30' 00.75"E
L13	55.00	N79° 30' 00.75"W
L14	127.50	S10° 29' 59.25"W
L15	55.00	S79° 30' 00.75"E
L16	127.50	N10° 29' 59.25"E
L17	55.00	N79° 30' 00.75"W
L18	55.00	S79° 30' 00.75"E
L19	127.50	S10° 29' 59.25"W
L20	55.00	N79° 30' 00.75"W
L21	55.00	S79° 30' 00.75"E
L22	127.50	N10° 29' 59.25"E
L23	55.00	N79° 30' 00.75"W
L24	55.00	S79° 30' 00.75"E
L25	127.50	S10° 29' 59.25"W
L26	55.00	N79° 30' 00.75"W
L27	55.00	S79° 30' 00.75"E
L28	127.50	S10° 29' 59.25"W
L29	55.00	N79° 30' 00.75"W
L30	55.00	S79° 30' 00.75"E
L31	127.50	S10° 29' 59.25"W
L32	55.00	N79° 30' 00.75"W
L33	127.50	N10° 29' 59.25"E
L34	55.00	S79° 30' 00.75"E
L35	55.00	N79° 30' 00.75"W
L36	120.00	N10° 29' 59.25"E
L37	55.00	S79° 30' 00.75"E
L38	55.00	N79° 30' 00.75"W
L39	120.00	S10° 29' 59.25"W
L40	55.00	S79° 30' 00.75"E
L41	55.00	N79° 30' 00.75"W
L42	120.00	N10° 29' 59.25"E
L43	55.00	S79° 30' 00.75"E
L44	55.00	N79° 30' 00.75"W
L45	120.00	N10° 29' 59.25"E
L46	55.00	S79° 30' 00.75"E
L47	55.00	N79° 30' 00.75"W
L48	120.00	N10° 29' 59.25"E
L49	55.00	S79° 30' 00.75"E
L50	55.00	N79° 30' 00.75"W
L51	120.00	N10° 29' 59.25"E
L52	55.00	S79° 30' 00.75"E
L53	120.00	N10° 29' 59.25"E

Parcel Line Table		
Line #	Length	Direction
L54	55.00	S79° 30' 00.75"E
L55	55.00	N79° 30' 00.75"W
L56	55.00	N79° 30' 00.75"W
L57	120.00	N10° 29' 59.25"E
L58	55.00	S79° 30' 00.75"E
L59	35.93	S79° 30' 00.75"E
L60	120.00	N10° 29' 59.25"E
L61	35.93	N79° 30' 00.75"W
L62	120.00	N15° 50' 00.24"E
L63	120.00	N31° 59' 20.43"E
L64	120.01	N49° 15' 46.78"E
L65	120.00	N64° 22' 04.57"E
L66	120.00	N80° 32' 50.42"E
L67	120.00	N83° 16' 17.41"W
L68	120.00	S67° 05' 15.41"E
L69	120.00	S49° 55' 18.25"E
L70	120.00	S32° 49' 47.95"E
L71	120.00	N16° 50' 24.89"W
L72	15.93	N79° 30' 00.75"W
L73	120.00	S0° 51' 01.82"E
L74	15.93	S79° 30' 00.75"E
L75	120.00	S10° 29' 59.25"W
L76	55.00	N79° 30' 00.75"W
L77	120.00	N10° 29' 59.25"E
L78	55.00	S79° 30' 00.75"E

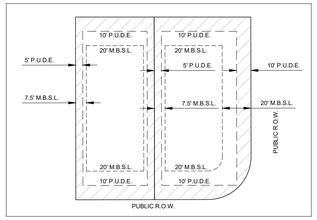


50' ROW TYPICAL ROAD SECTION
N.T.S.





VICINITY MAP (NOT TO SCALE)



TYPICAL LOT (NOT TO SCALE)

- 8"W — WATER LINE
- 18" RCP — STORM SEWER LINE
- 8" PVC — SANITARY SEWER LINE
- E — OVERHEAD ELECTRIC LINE
- DRAINAGE EASEMENT
- UTILITY EASEMENT
- FIRE HYDRANT
- CATCH BASIN
- AREA DRAIN
- SS — SANITARY SEWER MANHOLE
- HEADWALL

SITE DATA	
CURRENT ZONING:	R-6
MINIMUM BUILDING SETBACKS	
FRONT:	20'
REAR:	20'
SIDE:	7.5'
TOTAL PHASE AREA:	12.59 ACRES
TOTAL OPEN SPACE:	5.29 ACRES
NEW STREETS:	1.18 ACRES

IF YOU DIG TENNESSEE...
CALL US FIRST!
1-800-351-1111
TENNESSEE ONE CALL
IT'S THE LAW

TN SPCS NAD 83
SCALE 1" = 100'

100 0 50 100 200

GENERAL NOTES

1. THE PURPOSE OF THIS PLAT IS TO SUBDIVIDE THIS PROPERTY INTO 34 LOTS, 1 OPEN SPACE, AND DEDICATE RIGHT-OF-WAY AND EASEMENTS.
2. 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.
3. SUBJECT PROPERTY IS PARCEL 17.06 AS SHOWN ON MAURY COUNTY TAX MAP 73.
4. DEED REFERENCE: RECORD BOOK 2837, PAGE 394, REGISTER'S OFFICE OF MAURY COUNTY, TN.
5. THE HORIZONTAL LOCATION DATA SHOWN ON THIS SURVEY WAS GATHERED USING STANDARD RADIAL SURVEYING TECHNIQUES WITH AN ELECTRONIC TOTAL STATION AND DATA COLLECTOR AND IS BASED UPON A POSITIONAL SOLUTION DERIVED FROM GLOBAL POSITIONING SYSTEM (GPS) OBSERVATIONS) USING THE TDOT NETWORK. TENNESSEE STATE PLANE COORDINATE SYSTEM ZONE 4100, NAD83. DRONE AERIAL PHOTOMETRY WAS ALSO USED TO SURVEY SOME ELEMENTS.
6. NO TITLE REPORT HAS BEEN FURNISHED, THEREFORE THIS SURVEY IS SUBJECT TO THE FINDINGS OF AN ACCURATE TITLE SEARCH.
7. THE TOTAL AREA OF THE PROPERTY SURVEYED IS 12.59 +/- ACRES.
8. THE NEW RIGHT-OF-WAY DEDICATION AREA IS 1.18 +/- ACRES.
9. BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN FLOOD ZONE "X", AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47119C0195E WITH AN EFFECTIVE DATE OF 4/16/2007, WHICH MAKES UP A PART OF THE NATIONAL FLOOD INSURANCE ADMINISTRATION REPORT; COMMUNITY NO. 119C, PANEL NO. 0195 SUFFIX E. WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PREMISES IS SITUATED. SAID MAP DEFINES ZONE "X" UNDER "OTHER AREAS" AS AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN.
10. THIS PROPERTY IS ZONED R6.
11. THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE REQUIREMENTS OF A GENERAL PROPERTY SURVEY AND CONFORMS TO THE ACCURACY OF A CATEGORY 1 SURVEY AS CURRENTLY DEFINED AND ADOPTED BY THE TENNESSEE STATE BOARD OF EXAMINERS FOR LAND SURVEYORS, AND THE RATIO OF PRECISION IS LESS THAN 1:10,000.
12. ALL PLOT AND DEED RECORDATION REFERENCES SHOWN HEREON ARE AS RECORDED IN THE REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE.
13. THIS SURVEY HAS BEEN SIGNED AND SEALED DIGITALLY.
14. DUCK RIVER ELECTRIC MEMBERSHIP CORPORATION IS THE POWER PROVIDER.
15. STORM WATER MANAGEMENT OPERATION AND MAINTENANCE WILL BE GOVERNED BY THE INSPECTION AND MAINTENANCE AGREEMENT OF PRIVATE STORM WATER MANAGEMENT FACILITIES, DATED _____, IN RECORD BOOK ____, PAGE ____, REGISTER'S OFFICE OF MAURY COUNTY, TN.

SPECIAL UTILITY NOTE

THIS SURVEYOR 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. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DOWN SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTANCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. 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 (3) NOR MORE THAN (10) WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT.

CERTIFICATE OF APPROVAL OF SUBDIVISION AND STREET NAMES

SUBDIVISION NAME AND STREET NAMES ARE APPROVED BY THE CITY ENGINEERING DEPARTMENT AND MAURY COUNTY E911.

_____, 20____
DATE — MAURY E911

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 SURETY HAS BEEN FILED TO GUARANTEE SAID INSTALLATION.

_____, 20____
DATE — DIRECTOR OF COLUMBIA WASTEWATER DEPARTMENT

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 RECORD BOOK NUMBER 2837, PAGE 394, MAURY COUNTY REGISTER'S OFFICE, AND THAT I (WE) HEREBY ADOPT THIS PLAN OF SUBDIVISION WITH MY (OUR) FREE CONSENT, ESTABLISH THE MINIMUM BUILDING RESTRICTION LINE, AND THAT OFFERS OF IRREVOCABLE DEDICATION FOR ALL PUBLIC WAYS, UTILITIES AND OTHER FACILITIES HAVE BEEN FILED.

_____, 20____
DATE — OWNER

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 CATEGORY I LAND SURVEY AS DEFINED IN TITLE 62, CHAPTER 18, TENNESSEE CODE ANNOTATED, AND THAT THE RATIO OF PRECISION IS LESS THAN OR EQUAL TO 1:10,000.

2-9, 2023
DATE — MARK CANTRELL, R.L.S

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.

_____, 20____
DATE — CITY ENGINEER

CERTIFICATE OF APPROVAL FOR RECORDING

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE 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.

_____, 20____
DATE — NAME, TITLE, AGENCY OF AUTHORIZED AGENT

CERTIFICATE OF APPROVAL OF STREETS, DRAINAGE AND UTILITIES

I HEREBY CERTIFY THAT THE STREETS, DRAINAGE AND UTILITIES DESIGNATED IN QUAIL RUN MEADOWS SUBDIVISION (PHASE 2) 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 TO ASSURE COMPLETION OF SUCH IMPROVEMENTS.

_____, 20____
DATE — CITY ENGINEER

CERTIFICATE OF APPROVAL OF WATER SYSTEM

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE 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.

_____, 20____
DATE — NAME, TITLE, AGENCY OF AUTHORIZED AGENT

J. MARK CANTRELL XVI
PROFESSIONAL LAND SURVEYOR
AGRICULTURE COMMERCE
TENNESSEE NO. 1859
2-9-2023

OWNER OF RECORD
QUAIL RUN DEVELOPMENT CO., LLC 1804 WILLIAMSON COURT, SUITE 101 BRENTWOOD, TN 37027 D.B. R2837, PG. 394, R.O.M.C. MAP 073, PARCEL 017.06
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

PROJECT
17-0707

SHEET
1 OF 1

T-SQUARE ENGINEERING
1329 WEST MAIN STREET • FRANKLIN, TN • 615-678-8212 • www.T2-ENG.COM

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, April 11, 2023

ITEM NO.
23-0096

DESCRIPTION: Request from Nathan McVey for final plat approval with surety for 34 lots off Quail Run Way

RECOMMENDATION: For final recommendation please see staff report.

COMMENTS:

Engineering

1. Provide ROW stub to northern property as identified in the preliminary plat.
2. Provide surety in the amount $185,000 by 4/17
3. Install binder and curbing by 4/17
4. Provide development agreement and recorded stormwater maintenance agreement by 4/17

Planning

5. Phasing has changed since Preliminary Plat. Please confirm which portion of Preliminary Plat (17-0707) is included in current Phase 3. Temporary turn-around appears to be in location Oakhall Drive connection to adjacent (north) parcel on Preliminary Plat (see comment from Engineering re: RoW stub). At resubmittal, please briefly explain relocation of detention pond within TVA easement depicted on Preliminary Plat, as well as any other changes in location of features which have occurred since Preliminary Plat approval.

Fire

6. No comments

Building

7. No comments.

Police

8. No comments.

Maury County Schools

9. Current Zones and Capacity: Howell Elementary School (91%), Cox Middle School (73%), Spring Hill High School (102%). 1) No residence is guaranteed zone to a specific school. 2) All zones are subject to change yearly. 3) No concerns with neighborhood design.

Columbia Power

10. Columbia Power System does not have existing power facilities near your proposed development within our service territory. DREMC will be the service provider for this area.

Atmos Energy

11. Natural Gas not in the area.

Duck River Electric Membership Corp

12. Once all requirements are met, we plan to continue to serve. Special Note: Keep in mind the supply chain issues may affect the timeline in which we will be able to provide materials.

Columbia Water

13. "Complete remaining water system infrastructure per approved plans, perform bacterial testing, and deed infrastructure to CPWS."

Maury County E911

14. No comment at this time.

Wastewater

15. Columbia Wastewater has no concerns.

ATT

16. ATT intends to serve.

Maury County Highway Dept.

17. No comments provided.

Public Works

18. No comments.

CPWS Broadband

19. Do NOT plan to serve at this time.

ATTACHMENTS: Final Plat

NOTE: All submittals shall be compliant with City standards prior to Planning Commission review. Items that are not adhering to the regulations and/or comments for that request will not be forwarded to the next agenda until such items are amended.

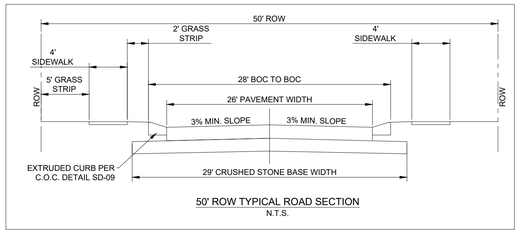
***Please note: *Planning Commission has discontinued holding Study Sessions.*
The next Planning Commission meeting will be on May 10, 2023.

Lot Table		
Parcel #	Area SF	Area AC
300	6600.00	0.15
301	7557.55	0.17
302	7953.60	0.18
303	7953.60	0.18
304	8482.99	0.19
305	8540.99	0.20
306	8053.74	0.18
307	8053.40	0.18
308	8053.18	0.18
309	7918.15	0.18
310	8190.74	0.19
311	8036.10	0.18
312	6964.73	0.16
313	6600.00	0.15
314	6600.00	0.15
315	6600.00	0.15
316	6600.00	0.15
317	6600.00	0.15
318	6600.00	0.15
319	6600.00	0.15
320	6600.00	0.15
321	7012.50	0.16
322	7012.50	0.16
323	7012.50	0.16
324	7012.50	0.16
325	7012.50	0.16
326	7012.50	0.16
327	7012.50	0.16
328	7012.50	0.16
329	7003.40	0.16
330	10345.40	0.24
331	10345.40	0.24
332	7003.40	0.16
333	7012.50	0.16

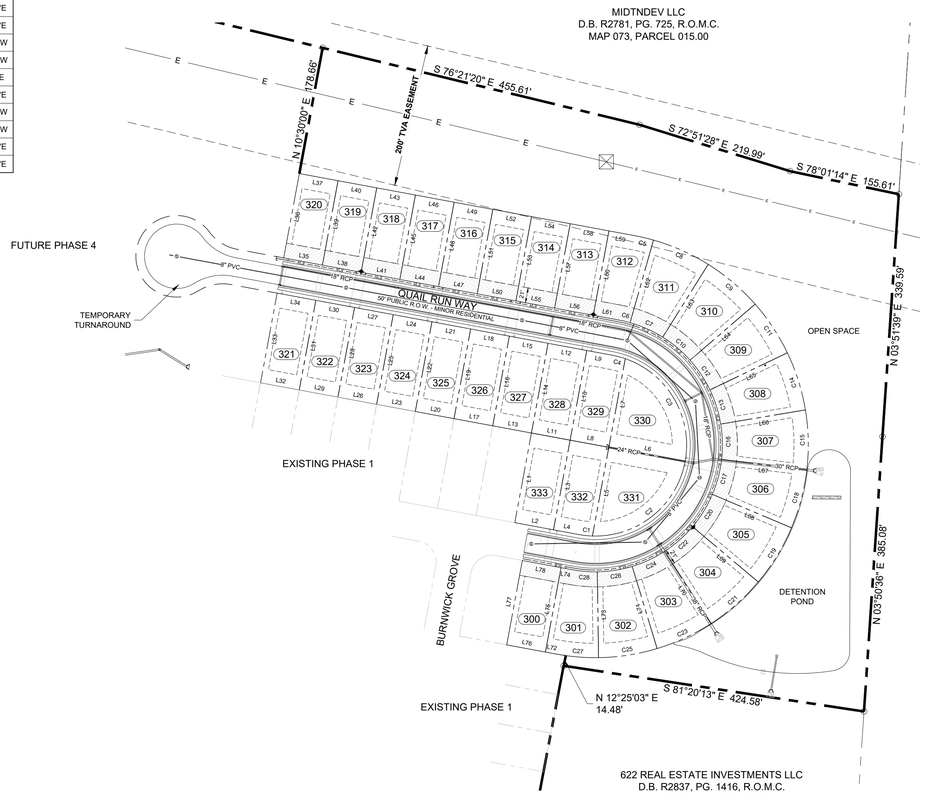
Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C19	89.16	293.26	17.42	S31° 31' 25"W	88.82
C20	53.20	177.50	17.17	N31° 32' 33"E	53.00
C5	27.69	297.50	5.33	S76° 50' 00"E	27.68
C6	16.52	177.50	5.33	N76° 50' 00"W	16.52
C21	88.59	297.50	17.06	S48° 38' 21"W	88.26
C22	52.79	177.50	17.04	N48° 38' 58"E	52.60
C7	50.05	177.50	16.16	N66° 05' 20"W	49.88
C8	83.89	297.50	16.16	S66° 05' 20"E	83.61
C23	83.02	297.50	15.99	S65° 09' 54"W	82.76
C24	49.54	177.50	15.99	N65° 09' 54"E	49.37
C9	86.35	297.50	16.63	S49° 41' 47"E	86.04
C10	50.17	177.50	16.19	N49° 54' 51"W	50.00
C11	81.80	297.50	15.75	S33° 30' 16"E	81.54
C12	50.17	177.50	16.19	N33° 43' 15"W	50.00
C13	50.17	177.50	16.19	N17° 31' 38"W	50.00
C14	84.05	297.50	16.19	S17° 32' 00"E	83.77
C1	19.14	127.50	8.60	N83° 48' 04"W	19.12
C2	181.14	127.50	81.40	S51° 11' 56"W	166.28
C15	84.06	297.50	16.19	S1° 20' 43"E	83.78
C16	50.17	177.50	16.19	N1° 20' 01"W	50.00
C25	83.02	297.50	15.99	S81° 09' 17"W	82.76
C26	49.54	177.50	15.99	N81° 09' 17"E	49.37
C27	58.93	297.50	11.35	N85° 10' 31"W	58.84
C28	35.16	177.50	11.35	S85° 10' 31"E	35.11
C3	181.14	127.50	81.40	S30° 11' 58"E	166.28
C17	50.17	177.50	16.19	N14° 51' 35"E	50.00
C18	84.06	296.61	16.24	S14° 50' 38"W	83.78
C4	19.14	127.50	8.60	S75° 11' 58"E	19.12

Parcel Line Table		
Line #	Length	Direction
L1	127.50	N10° 29' 59.25"E
L2	55.00	N79° 30' 00.75"W
L3	127.50	N10° 29' 59.25"E
L4	35.93	N79° 30' 00.75"W
L5	126.07	N10° 29' 59.25"E
L6	108.43	S79° 30' 00.75"E
L7	126.07	S10° 29' 59.25"W
L8	55.00	S79° 30' 00.75"E
L9	35.93	S79° 30' 00.75"E
L10	127.50	S10° 29' 59.25"W
L11	55.00	S79° 30' 00.75"E
L12	55.00	S79° 30' 00.75"E
L13	55.00	N79° 30' 00.75"W
L14	127.50	S10° 29' 59.25"W
L15	55.00	S79° 30' 00.75"E
L16	127.50	N10° 29' 59.25"E
L17	55.00	N79° 30' 00.75"W
L18	55.00	S79° 30' 00.75"E
L19	127.50	S10° 29' 59.25"W
L20	55.00	N79° 30' 00.75"W
L21	55.00	S79° 30' 00.75"E
L22	127.50	N10° 29' 59.25"E
L23	55.00	N79° 30' 00.75"W
L24	55.00	S79° 30' 00.75"E
L25	127.50	S10° 29' 59.25"W
L26	55.00	N79° 30' 00.75"W
L27	55.00	S79° 30' 00.75"E
L28	127.50	S10° 29' 59.25"W
L29	55.00	N79° 30' 00.75"W
L30	55.00	S79° 30' 00.75"E
L31	127.50	S10° 29' 59.25"W
L32	55.00	N79° 30' 00.75"W
L33	127.50	N10° 29' 59.25"E
L34	55.00	S79° 30' 00.75"E
L35	55.00	N79° 30' 00.75"W
L36	120.00	N10° 29' 59.25"E
L37	55.00	S79° 30' 00.75"E
L38	55.00	N79° 30' 00.75"W
L39	120.00	S10° 29' 59.25"W
L40	55.00	S79° 30' 00.75"E
L41	55.00	N79° 30' 00.75"W
L42	120.00	N10° 29' 59.25"E
L43	55.00	S79° 30' 00.75"E
L44	55.00	N79° 30' 00.75"W
L45	120.00	N10° 29' 59.25"E
L46	55.00	S79° 30' 00.75"E
L47	55.00	N79° 30' 00.75"W
L48	120.00	N10° 29' 59.25"E
L49	55.00	S79° 30' 00.75"E
L50	55.00	N79° 30' 00.75"W
L51	120.00	N10° 29' 59.25"E
L52	55.00	S79° 30' 00.75"E
L53	120.00	N10° 29' 59.25"E

Parcel Line Table		
Line #	Length	Direction
L54	55.00	S79° 30' 00.75"E
L55	55.00	N79° 30' 00.75"W
L56	55.00	N79° 30' 00.75"W
L57	120.00	N10° 29' 59.25"E
L58	55.00	S79° 30' 00.75"E
L59	35.93	S79° 30' 00.75"E
L60	120.00	N10° 29' 59.25"E
L61	35.93	N79° 30' 00.75"W
L62	120.00	N15° 50' 00.24"E
L63	120.00	N31° 59' 20.43"E
L64	120.01	N49° 15' 46.78"E
L65	120.00	N64° 22' 04.57"E
L66	120.00	N80° 32' 50.42"E
L67	120.00	N83° 16' 17.41"W
L68	120.00	S67° 05' 15.41"E
L69	120.00	S49° 55' 18.25"E
L70	120.00	S32° 49' 47.95"E
L71	120.00	N16° 50' 24.89"W
L72	15.93	N79° 30' 00.75"W
L73	120.00	S0° 51' 01.82"E
L74	15.93	S79° 30' 00.75"E
L75	120.00	S10° 29' 59.25"W
L76	55.00	N79° 30' 00.75"W
L77	120.00	N10° 29' 59.25"E
L78	55.00	S79° 30' 00.75"E

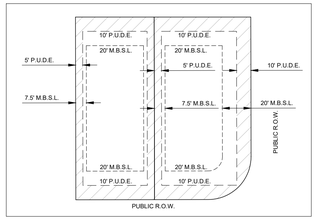


50' ROW TYPICAL ROAD SECTION
N.T.S.





VICINITY MAP (NOT TO SCALE)



TYPICAL LOT (NOT TO SCALE)

- 8"W — WATER LINE
- 18" RCP — STORM SEWER LINE
- 8" PVC — SANITARY SEWER LINE
- E — OVERHEAD ELECTRIC LINE
- DRAINAGE EASEMENT
- UTILITY EASEMENT
- FIRE HYDRANT
- CATCH BASIN
- AREA DRAIN
- SS — SANITARY SEWER MANHOLE
- HEADWALL

SITE DATA	
CURRENT ZONING:	R-6
MINIMUM BUILDING SETBACKS	
FRONT:	20'
REAR:	20'
SIDE:	7.5'
TOTAL PHASE AREA:	12.59 ACRES
TOTAL OPEN SPACE:	5.29 ACRES
NEW STREETS:	1.18 ACRES

IF YOU DIG TENNESSEE...
CALL US FIRST!
1-800-351-1111
TENNESSEE ONE CALL
IT'S THE LAW

TN SPCS NAD 83
SCALE 1" = 100'

100 0 50 100 200

GENERAL NOTES

1. THE PURPOSE OF THIS PLAT IS TO SUBDIVIDE THIS PROPERTY INTO 34 LOTS, 1 OPEN SPACE, AND DEDICATE RIGHT-OF-WAY AND EASEMENTS.
2. 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.
3. SUBJECT PROPERTY IS PARCEL 17.06 AS SHOWN ON MAURY COUNTY TAX MAP 73.
4. DEED REFERENCE: RECORD BOOK 2837, PAGE 394, REGISTER'S OFFICE OF MAURY COUNTY, TN.
5. THE HORIZONTAL LOCATION DATA SHOWN ON THIS SURVEY WAS GATHERED USING STANDARD RADIAL SURVEYING TECHNIQUES WITH AN ELECTRONIC TOTAL STATION AND DATA COLLECTOR AND IS BASED UPON A POSITIONAL SOLUTION DERIVED FROM GLOBAL POSITIONING SYSTEM (GPS) OBSERVATIONS) USING THE TDOT NETWORK. TENNESSEE STATE PLANE COORDINATE SYSTEM ZONE 4100, NAD83. DRONE AERIAL PHOTOMETRY WAS ALSO USED TO SURVEY SOME ELEMENTS.
6. NO TITLE REPORT HAS BEEN FURNISHED, THEREFORE THIS SURVEY IS SUBJECT TO THE FINDINGS OF AN ACCURATE TITLE SEARCH.
7. THE TOTAL AREA OF THE PROPERTY SURVEYED IS 12.59 +/- ACRES.
8. THE NEW RIGHT-OF-WAY DEDICATION AREA IS 1.18 +/- ACRES.
9. BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN FLOOD ZONE "X", AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47119C0195E WITH AN EFFECTIVE DATE OF 4/16/2007, WHICH MAKES UP A PART OF THE NATIONAL FLOOD INSURANCE ADMINISTRATION REPORT; COMMUNITY NO. 119C, PANEL NO. 0195 SUFFIX E, WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PREMISES IS SITUATED. SAID MAP DEFINES ZONE "X" UNDER "OTHER AREAS" AS AREAS DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN.
10. THIS PROPERTY IS ZONED R6.
11. THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE REQUIREMENTS OF A GENERAL PROPERTY SURVEY AND CONFORMS TO THE ACCURACY OF A CATEGORY 1 SURVEY AS CURRENTLY DEFINED AND ADOPTED BY THE TENNESSEE STATE BOARD OF EXAMINERS FOR LAND SURVEYORS, AND THE RATIO OF PRECISION IS LESS THAN 1:10,000.
12. ALL PLOT AND DEED RECORDATION REFERENCES SHOWN HEREON ARE AS RECORDED IN THE REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE.
13. THIS SURVEY HAS BEEN SIGNED AND SEALED DIGITALLY.
14. DUCK RIVER ELECTRIC MEMBERSHIP CORPORATION IS THE POWER PROVIDER.
15. STORM WATER MANAGEMENT OPERATION AND MAINTENANCE WILL BE GOVERNED BY THE INSPECTION AND MAINTENANCE AGREEMENT OF PRIVATE STORM WATER MANAGEMENT FACILITIES, DATED _____ IN RECORD BOOK ____, PAGE ____, REGISTER'S OFFICE OF MAURY COUNTY, TN.

SPECIAL UTILITY NOTE

THIS SURVEYOR 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. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DOWN SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTANCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. 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 (3) NOR MORE THAN (10) WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT.

CERTIFICATE OF APPROVAL OF SUBDIVISION AND STREET NAMES

SUBDIVISION NAME AND STREET NAMES ARE APPROVED BY THE CITY ENGINEERING DEPARTMENT AND MAURY COUNTY E911.

_____, 20____
DATE — MAURY E911

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 SURETY HAS BEEN FILED TO GUARANTEE SAID INSTALLATION.

_____, 20____
DATE — DIRECTOR OF COLUMBIA WASTEWATER DEPARTMENT

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 RECORD BOOK NUMBER 2837, PAGE 394, MAURY COUNTY REGISTER'S OFFICE, AND THAT I (WE) HEREBY ADOPT THIS PLAN OF SUBDIVISION WITH MY (OUR) FREE CONSENT, ESTABLISH THE MINIMUM BUILDING RESTRICTION LINE, AND THAT OFFERS OF IRREVOCABLE DEDICATION FOR ALL PUBLIC WAYS, UTILITIES AND OTHER FACILITIES HAVE BEEN FILED.

_____, 20____
DATE — OWNER

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 CATEGORY I LAND SURVEY AS DEFINED IN TITLE 62, CHAPTER 18, TENNESSEE CODE ANNOTATED, AND THAT THE RATIO OF PRECISION IS LESS THAN OR EQUAL TO 1:10,000.

2-9, 2023
DATE — MARK CANTRELL, R.L.S

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.

_____, 20____
DATE — CITY ENGINEER

CERTIFICATE OF APPROVAL FOR RECORDING

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE 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.

_____, 20____
DATE — NAME, TITLE, AGENCY OF AUTHORIZED AGENT

CERTIFICATE OF APPROVAL OF STREETS, DRAINAGE AND UTILITIES

I HEREBY CERTIFY THAT THE STREETS, DRAINAGE AND UTILITIES DESIGNATED IN QUAIL RUN MEADOWS SUBDIVISION (PHASE 2) 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 TO ASSURE COMPLETION OF SUCH IMPROVEMENTS.

_____, 20____
DATE — CITY ENGINEER

CERTIFICATE OF APPROVAL OF WATER SYSTEM

I HEREBY CERTIFY THAT THE SUBDIVISION PLAT SHOWN HEREON HAS BEEN FOUND TO COMPLY WITH THE 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.

_____, 20____
DATE — NAME, TITLE, AGENCY OF AUTHORIZED AGENT

OWNER OF RECORD
QUAIL RUN DEVELOPMENT CO., LLC 1804 WILLIAMSON COURT, SUITE 101 BRENTWOOD, TN 37027 D.B. R2837, PG. 394, R.O.M.C. MAP 073, PARCEL 017.06
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 2-9-2023
SCALE: 1" = 100'
DRAWN BY: DSW
REVIEWER:

PHASE 3 FINAL PLAT
LASEA ROAD
COLUMBIA, TN 37174
MAURY COUNTY, TENNESSEE

QUAIL RUN MEADOWS SUBDIVISION

J. MARK CANTRELL
PROFESSIONAL LAND SURVEYOR
XVI
AGRICULTURE
COMMERCE
TENNESSEE NO. 18650
2-9-2023

PROJECT
17-0707

SHEET
1 OF 1

T-SQUARE ENGINEERING
1329 WEST MAIN STREET • FRANKLIN, TN • 615-678-8212 • www.T2-ENG.COM

DOCUMENT PREPARED BY:
Name: Nathan McVey
Company T-Square Engineering
Address: 1329 W Main Street, Franklin, TN

After recording return copy to City of Columbia, Development Services

INSPECTION AND MAINTENANCE AGREEMENT OF PRIVATE STORMWATER MANAGEMENT FACILITIES

Map & Parcel Number: Map 73, parcel 17 & 17.04
Project Name: Quail Run Meadows Phase 3

Recorded by deed in the Register of Deeds Office of Maury County in Deed Book _____, Page(s) _____.

THIS AGREEMENT, made this _____ day of _____, 20____ , by and between _____ hereinafter referred to as the "OWNER(S)" of the following property and City of Columbia, Tennessee, hereinafter referred to as the "CITY",

WE, the OWNER(S), with full authority to execute deeds, mortgages, other covenants, all rights, titles, and interests in the property described above, do hereby covenant with the CITY and agree as follows:

1. The OWNER(S) covenant and agree with the CITY that the OWNER(S) shall provide for adequate long term maintenance and continuation of stormwater control measures described in the Long Term Maintenance Plan and shown on the location map, deed of easement drawing or plat attached hereto to ensure that the facilities, are and remain in proper working condition in accordance with approved design standards, rules and regulations, and applicable laws. The OWNER(S) shall perform preventative maintenance activities at intervals described in the schedule attached hereto along with necessary landscaping (grass cutting, etc.) and trash removal as part of regular maintenance.

2. The OWNER(S) shall perform routine inspections to ensure that all long term stormwater management facilities are properly functioning. These inspections shall be conducted on an annual basis, at a minimum. These inspections shall be conducted by a person familiar with control measures implemented at the site. The OWNER(S) or operators shall maintain documents of these inspections.

3. The OWNER(S) shall perform comprehensive inspections of all stormwater management facilities and practices. These inspections shall be conducted once every five years, at a minimum. Such inspections must be conducted by either a professional engineer or landscape architect.

4. The OWNER(S) shall grant to the CITY or its agent or contractor the right of entry at reasonable times and in a reasonable manner for the purpose of inspecting, operating, installing, constructing, reconstructing, maintaining or repairing the facility within the CITY.

5. The OWNER(S) shall record and grant to the CITY the necessary easements and rights-of-way and maintain perpetual access from public rights-of-way to the facility for the CITY or its agent and contractor.

6. If, upon inspection, the CITY finds that the OWNER(S) has failed to properly maintain the facilities, the CITY may order the work performed within ten (10) days. In the event the work is not performed within the specified time, the ONWER(S) agrees to allow the CITY to enter the property and take whatever steps it deems necessary to maintain the stormwater control facilities. This provision shall not be construed to allow the CITY to erect any structure of a permanent nature on the PROPERTY without first obtaining written approval of the OWNER(S).

7. The CITY is under no obligation to maintain or repair said facilities, and in no event shall this Agreement be construed to impose any obligation on the CITY. The OWNER(S) shall reimburse the CITY upon demand the costs incurred in the maintenance of the facilities.

8. If the OWNER(S) fails to pay the CITY for the above expensive after forty-five (45) days written notice, the OWNER(S) authorizes the CITY to collect said expenses from the OWNER(S) through appropriate legal action and the OWNER(S) shall be liable for the reasonable expenses of collection, court costs, and attorney fees.

9. The OWNER(S) and the OWNER(S) heirs, administrators, executors, assigns, and any other successor in interest shall indemnify and hold harmless the CITY and its officers, agents and employees for any and all damages, accidents, casualties, occurrences, claims or attorney's fees which might arise or be asserted, in whole or in part, against the CITY from the construction, presence, existence, or maintenance of the stormwater control facilities subject to this AGREEMENT. In the event a claim is asserted against the CITY, its officers, agents or employees, the CITY shall notify OWNER(S) and the OWNER(S) shall defend at OWNER(S) expense any suit based on such claim. If any judgment or claims against the CITY, its officers, agents or employees, shall be allowed, the OWNER(S) shall pay all costs and expenses in connection therewith. The CITY will not indemnify, defend or hold harmless in any fashion the OWNER(S) from any claims arising from any failure, regardless of any language in any attachment or other document that the OWNER(S) may provide.

10. The OWNER(S) shall not be able to transfer, assign or modify its responsibilities with respect to this agreement without the CITY's written prior consent. Nothing herein shall be construed to prohibit a transfer by OWNER(S) to subsequent owners and assigns.

11. No waiver of any provision of this AGREEMENT shall affect the right of any party thereafter to enforce such provision or to exercise any right or remedy available to it in the event of any default.

12. The OWNER(S) shall record a plat showing and accurately defining the easements for stormwater control facilities. The plat must reference the Instrument Number where this AGREEMENT and its attachments are recorded and contain a note that the OWNER(S) is responsible for maintaining the stormwater management facilities.

13. The OWNER(S) shall record this AGREEMENT in the office of the Register of Deeds for the county of Maury, Tennessee, and the AGREEMENT shall constitute a covenant running with the land, and shall be binding upon the OWNER(S) and the OWNER(S) heirs, administrators, executors, assigns, and any other successors in interest

ATTEST BY OWNER(S):

Print Name _____ Owner _____

Title _____ Address _____

_____

Signature _____ City, State ZIP _____

STATE OF _____
COUNTY OF _____

Before me, _____ of the state and county mentioned, personally appeared _____, with whom I am personally acquainted and who acknowledged that he/she executed the foregoing instrument of the purposes therein contained.

Witness my hand this the _____ day of _____, 20_____.

_____
Notary Public

My Commission Expires:_____

CITY OF COLUMBIA, TENNESSEE
ENGINEERING DEPARTMENT APPROVED BY :_____

STATE OF TENNESSEE
COUNTY OF MAURY

Before me, _____ of the state and county mentioned, personally appeared _____, with whom I am personally acquainted, and who acknowledged themselves to be the City Engineer of the City of Columbia or his designee and as such, being authorized so to do, executed the foregoing instrument of the purposes therein contained.

Witness my hand this the _____ day of _____, 20_____.

_____
Notary Public
My Commission Expires:_____

T-SQUARE ENGINEERING
CIVIL-SITE | TRAFFIC | WASTEWATER

1329 West Main Street
Franklin, TN 37064
615.678.8212

www.T2-eng.com

2/13/23

City of Columbia
Development Services
700 N. Garden Street
Columbia, TN 38401

POST CONSTRUCTION LONG TERM MAINTENANCE PLAN
PROJECT NAME: QUAIL RUN MEADOWS SUBDIVISION (PHASE 3)

SYSTEM DESCRIPTION:

The site consists of stormwater conveyances through piped channels into existing detention ponds.

- 1252 LF of round concrete pipe and 13 storms inlets.

Upon completion of the site construction, 'Record Drawings' in a version not less than AutoCAD 2006 LT (NAD83, NAVD88) of the stormwater controls will be provided to the City of Columbia for verification.

A copy of the INSPECTION AND MAINTENANCE AGREEMENT OF PRIVATE STORMWATER MANAGEMENT FACILITIES that has been completed, notarized and recorded in the Land Records of the County of Maury, Tennessee will be kept on site with this document.

MAINTENANCE PROCEDURES

1. 1252 LF OF RCP AND 13 STORM DRAINS
   - These structures will be inspected and cleaned quarterly to ensure pipes and drain inlets do not fill with sediment or trash.

STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
ST-A1 SINGLE INLET	RIM = 707.96 INV IN = 703.79 INV OUT = 703.79
ST-A2A DOUBLE INLET	RIM = 707.05 INV OUT = 704.05
ST-A3 SINGLE INLET	RIM = 709.24 INV IN = 705.04 INV OUT = 705.04
ST-A3A AREA DRAIN	RIM = 709.50 INV OUT = 706.24
ST-A3B SINGLE INLET	RIM = 709.59 INV IN = 704.76 INV IN = 704.76 INV OUT = 704.76
ST-A4 SINGLE INLET	RIM = 712.97 INV IN = 707.86 INV IN = 707.86 INV OUT = 707.86
ST-A4A SINGLE INLET	RIM = 712.97 INV OUT = 708.97
ST-A5 SINGLE INLET	RIM = 715.92 INV IN = 709.20 INV OUT = 709.20
ST-A6 SINGLE INLET	RIM = 716.45 INV IN = 710.27 INV IN = 710.27 INV OUT = 710.27

STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
ST-A6A SINGLE INLET	RIM = 716.46 INV OUT = 712.46
ST-A6B SINGLE INLET	RIM = 717.00 INV IN = 711.37 INV OUT = 711.37
ST-A7 SINGLE INLET	RIM = 717.57 INV IN = 712.50 INV OUT = 712.50
ST-A8 SINGLE INLET	RIM = 718.37 INV IN = 714.11 INV OUT = 714.11
ST-A8A SINGLE INLET	RIM = 718.37 INV OUT = 714.37
ST-HWA1 HEADWALL	RIM = 706.33 INV IN = 702.33
ST-HWA2 RISER	RIM = 698.51 INV IN = 696.80
ST-HWA3 HEADWALL	RIM = 706.59 INV IN = 703.34
ST-RA1 RISER	RIM = 703.00 INV OUT = 697.28

PIPE TABLE				
NAME:	SIZE:	LENGTH:	SLOPE:	MATERIAL
RA1-HWA2	18"	48	1.00%	RCP
A3-A3B	18"	28	1.00%	18 inch Concrete
A3B-HWA3	24"	142	1.00%	RCP
A6B-A6	18"	110	1.00%	RCP
A8A-A8	18"	26	1.00%	RCP
A8-A7	18"	161	1.00%	RCP
A2A-A1	23"	26	1.00%	23"x 14" RCE
A3A-A3	18"	120	1.00%	RCP
A7-A6B	18"	113	1.00%	RCP
A6-A5	18"	107	1.00%	RCP
A5-A4	18"	134	1.00%	RCP
A4-A3B	18"	94	3.29%	RCP
A1-HWA1	38"	146	1.00%	38"x 24" RCE
A6A-A6	18"	26	8.46%	RCP
A4A-A4	18"	26	4.27%	RCP



N

GRAPHIC SCALE
(IN FEET)
50 0 25 50 100
Scale: 1" = 50'

LEGEND

- PROPOSED STORM PIPE
- DRAIN INLET
- SANITARY SEWER PIPE
- SANITARY SEWER MANHOLE
- PROPOSED LOT LINE
- PROPOSED UTILITY EASEMENT
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED DRAINAGE EASEMENT

THE PROPERTY DESCRIBED ON THIS PLAN DOES NOT LIE WITH AN AREA OF SPECIAL FLOOD INSURANCE RATE MAP, PREPARE BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), COMMUNITY PANEL NUMBER 47119C0195E, REVISED APRIL 16, 2007.

OWNER OF RECORD
LASEA LAND GROUP MAP 073 PARCEL ID: 17, 17.04
APPLICANT
T-SQUARE ENGINEERING 701 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

NO.	DATE	REVISIONS

DATE: 8-30-2021
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: TET

QUAIL RUN MEADOWS SUBDIVISION PHASE 3

DRAINAGE PLAN
1628 LASEA ROAD
COLUMBIA, TN 37174
MAURY COUNTY, TENNESSEE

TIMOTHY E. TURNER
REGISTERED ENGINEER
AGRICULTURE & BIOSYSTEMS
10173
STATE OF TENNESSEE

08–30–2021

17-0707

SHEET
C-5.1

T-SQUARE ENGINEERING
701 WEST MAIN STREET • FRANKLIN, TN • 615-678-8212 • www.T2-ENG.COM

P:\Projects\2017\17-0707 (NVR Lasea rd Site)\production\Phase 3\17-0707 Phase 3 Grading and Drainage Plan.dwg, 9/16/2021 8:11:26 AM

HYDRANT FLOW ANALYSIS

HYDRANT # & LOCATION: [1781] 1732 Quail Run Meadow

DATE: 7/12/2022

MODEL BY: Inflo Design Group, LLC

SYS. DEMAND Max Day

DURATION: 1 hrs.

WATER SUPPLIED BY: Columbia Power and Water Systems

PURPOSE OF TEST: Quail Run Meadows - Section 2 Final Plat

MODEL DATA

FLOW HYDRANT(S)	[1781]	[P-0164]	n/a
GPM:	**854**	0	0

TOTAL FLOW DURING SIMULATION: **854** GPM

GAUGE HYDRANT

HYDRANT # & LOCATION: [1794] 1714 Quail Run Way

CONDITION 1

STATIC 80 PSI RESIDUAL: 48 PSI

CONDITION 2

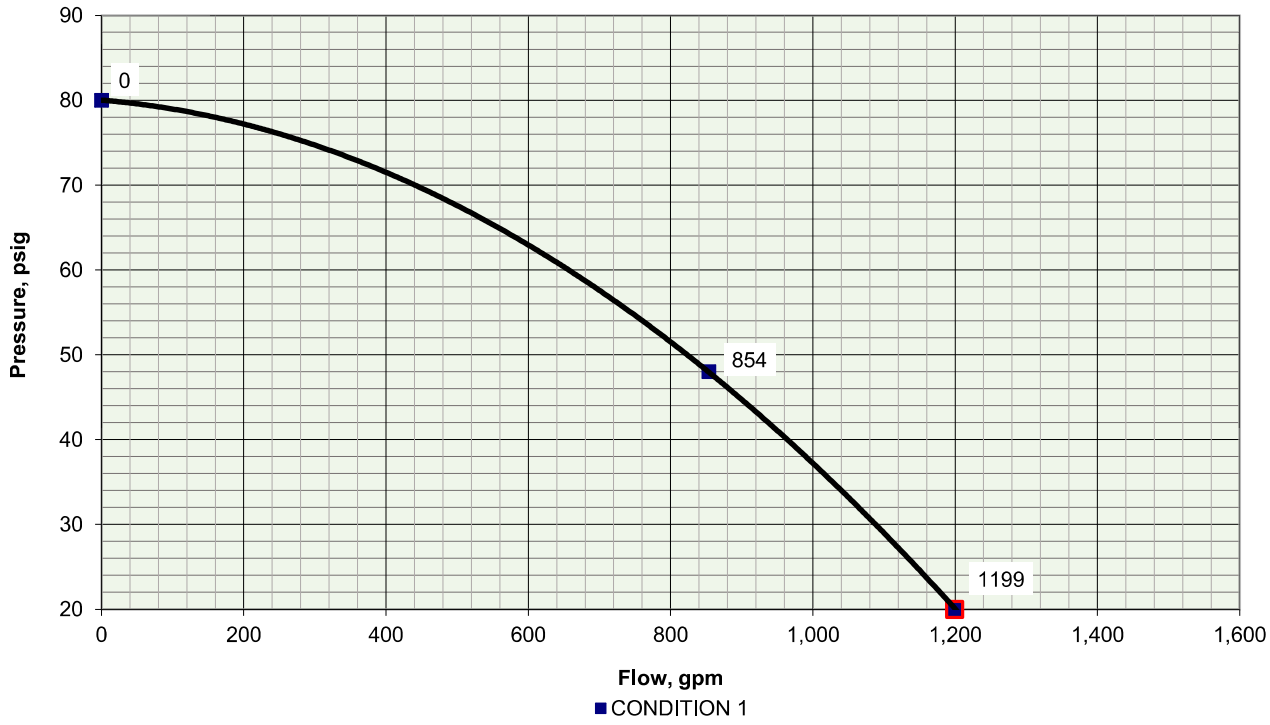
STATIC _____ PSI RESIDUAL: _____ PSI

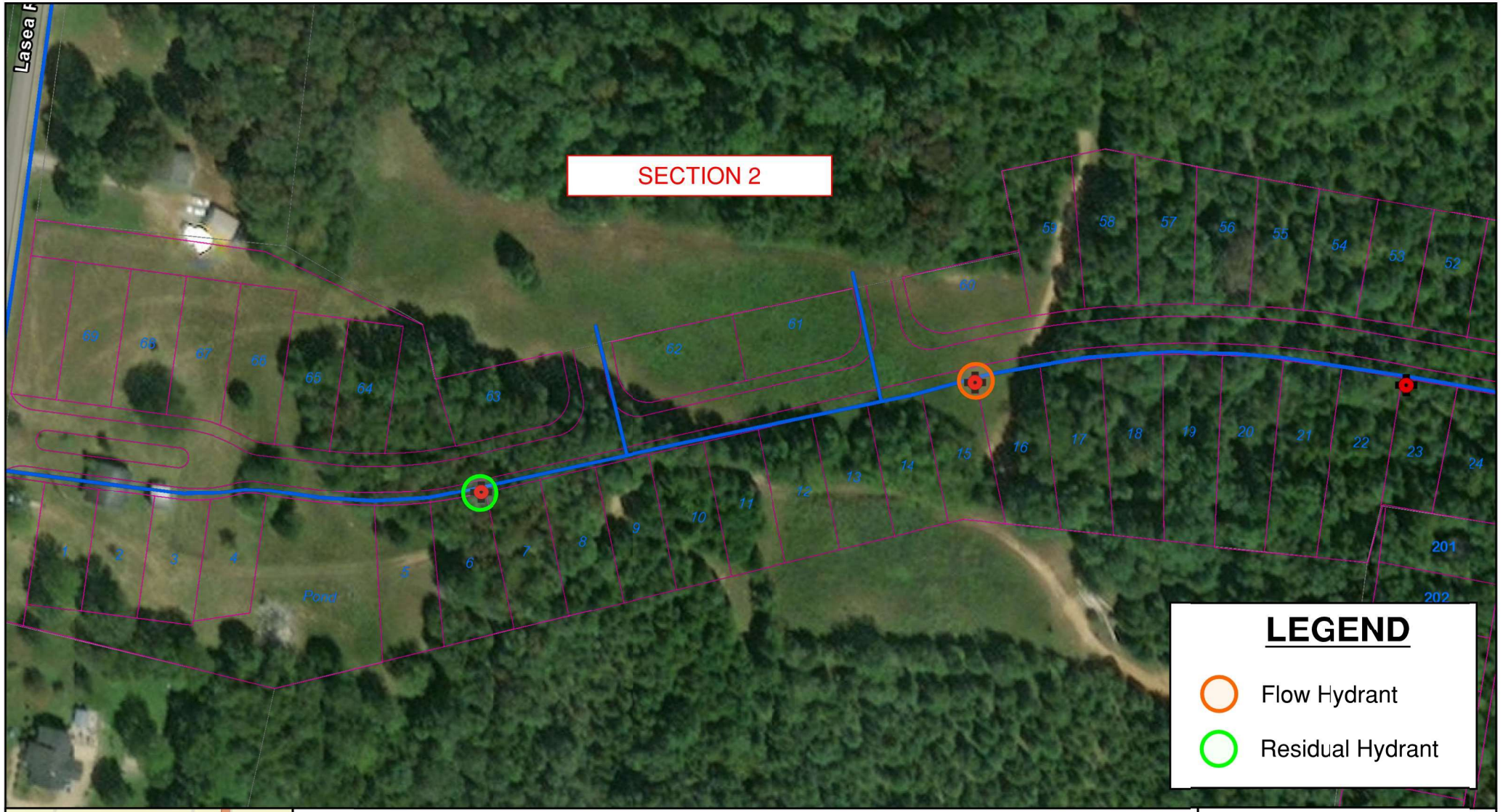
RESULTS: AT 20 PSI RESIDUAL

CONDITION 1 **1199** GPM

CONDITION 2 **---** GPM

REMARKS: Performance based on service elevation of 748' and current CPWS water infrastructure.





Hydrant Analysis Location Map

Quail Run Meadows - Section 2

Tax Map 73, Parcel 17.00 and 17.02

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2022

Coordinate System: NAD 1983 StatePlane Tennessee FIPS 4100 Feet

N

0 0.02 0.04 Mi

0 0.03 0.07 Km

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 on a USB thumb drive or CD (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"

ADDRESS/LOCATION	**1628 Lasea Road**		
	TAX MAP: **73**	GROUP:	PARCEL: **17 & 17.04**
SUMMARY OF NATURE OF REQUEST AND WORK	**Final Plat request for 34 single family lots in Phase 3 of Quail Run Meadows**		

DATE OF PRE-APPLICATION CONFERENCE		*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
❑ Annexation ❑ Rezoning ❑ Preliminary Plat ☒ Final Plat ❑ PUD Preliminary Master Plan ❑ PUD Final Site Plan ❑ Multi-Family Site Plan ❑ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations/Rezoning/PUD's:** ❑ Written Legal Description copy ❑ Requested Zone Listed ❑ Compliance with Comprehensive Plan ❑ Annexation Permission Form ❑ Plans and/or Plats conforming to City standards with check list completed ❑ Columbia Water System Availability Letter **Plats/PUDs:** ❑ Project Name (include Sections & Phases) **Quail Run Meadows Phase 3** ❑ Total Number of Lots **34** ❑ Total acreage **12.59 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 meetings 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	T-Square Engineering	PHONE	615-678-8212
ADDRESS	1329 W MAIN ST., Franklin, TN	EMAIL	Nathan.McVey@t2-eng.com

PROPERTY OWNER NAME	Lasea Land Group	PHONE	615-337-5248
ADDRESS	1804 Williamson Ct., Ste 101 Brentwood, TN	EMAIL	hudsonallensmith@gmail.com

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.

Nathan McVey		2-13-23
APPLICANT NAME	APPLICANT SIGNATURE	DATE
Joel A Smith	JOEL A SMITH	2-6-2023
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	

CITY OF COLUMBIA TENNESSEE
PLANNING COMMISSION
STAFF REPORT

STAFF REPORT CONTACT INFORMATION
Austin Brass, AICP, City Planner, abrass@columbiatn.com, 931-560-1560
Updated by Kevin McCarthy, AICP, Planning Associate II, kmccarthy@columbiatn.com, 931-560-1560

APPLICATION NUMBER	APPLICANT/PROPERTY OWNER
22-0333	**Crunk Engineering LLC/ James & Stacy Gore**
PUBLIC HEARING DATE	PROPERTY ADDRESS/LOCATION
N/A	**6031 Trotwood Ave / Tax Map 12, Parcel 18.00 & 18.03/18.04**

CONFORMITY with the ZONING ORDINANCE:

Update to Review:

At the request of the applicant, Development Services staff performed an additional courtesy review of the revised Preliminary Plat on February 21, 2023. The applicant responded to these comments on March 20, 2023. The resubmittal is responsive to some concerns of Planning and Engineering staff but many significant issues remain. Unresolved review items are noted below.

- It is unclear what improvements will be necessary to serve the area with adequate sanitary sewer. The applicant is working with the City of Columbia Wastewater Department, and adjacent property owners, in order to devise a solution to serve the development. Section 2.2.1.D of the Subdivision Regulations requires that the Preliminary Plat identify "establish a coordinated layout and adequate provisions for…sewerage." Similarly, the § 8.5.6.N.2.d lists Adequacy of sanitary sewer service as review criteria for approval of a Site Development Plan. **This is a critical item which must be resolved prior to approval of a Preliminary Plat and Site Development Plan**.
- The applicant will need to provide a survey in digital format as requested by staff. This is a requirement of § 2.2.3 of the Subdivision regulations. **This item must be provided prior to approval of a Preliminary Plat**.
- The applicant will need to provide documentation of an agreement with the owner of adjacent property for off-site grading associated with improvements on Foster Lane. The offsite grading is necessary for development of the site. **Authorization to make necessary off-site improvements must be secure prior to approval of a Preliminary Plat**.
- Conversation regarding the design of alleys and thoroughfares, at the discretion of Planning Commission, can continue through the review of site construction plans prior to Final Plat. Street specifications may be altered by the City Engineer as authorized by § 5.2.2.G of the Zoning Ordinance.
- The elevation of the pond bank is misstated in the response letter; however, it is correctly noted on the Preliminary Plat.
- The proposed arrangement of thoroughfares and blocks conforms to the Ordinance **for the subject site and its specific limiting conditions**. The shape of the property, the easements which cross it, and the relationship to adjacent parcels limit the possible variation of street layouts. Alternative arrangements would better conform to the standards by eliminating lots, adding Civic Space, extending Road A through lot 77, and extending the portion of Road B parallel to Trotwood Avenue. However, that alternative would reduce the development potential of the site with only marginal improvement to the arrangement of thoroughfares and lots.
    - Section 5.2.2 of the Ordinance allows for adjustment to the block pattern "at the edge of a Development Parcel" in order to accommodate site and cadastral conditions.
    - Various provisions of the Zoning Ordinance allow for the arrangement of thoroughfares and internal drives to define blocks on Development Parcels.

- The Ordinance prescribes medium to large blocks in the CD-3 Character District, with a maximum perimeter of 2,800 ft (Table 4.3.1-C, p. 67; Table 5.2.2.D, p. 308).
- The Ordinance prohibits the creation of through lots (§ 4.3.3.D, p. 190).
- The Ordinance further prescribes the division of blocks into lots and building sites with identifiable frontages, rears, and sides. Non-block thoroughfare arrangements (e.g. lots 87-91) create lots which lack front-to-rear discipline.
- Use of the block pattern enables the regulation of private land use by reference to lot layers.
- Lot layers (i.e. First Layer, Second Layer, and Third layer) form the basis of the bulk standards in the Ordinance (Article 4, p. 45-295; 9.3 p. 503).
- The creation of new street networks which do not form clearly defined blocks does not conform to the letter or the spirit of the Ordinance. A network of thoroughfares forming well-defined blocks allows the gradual development of a continuous interconnected city, rather than a series of disconnected development sites. This is the animating principle of the Smart Code. Ordinance 4400 is based on the Smart Code; most language relating to blocks and lot layers is copied verbatim from the model ordinance. It is also the animating principle of the transect model of urbanism referenced in Connect Columbia.
- The proposed Preliminary Plat forms conforming blocks internal to the site. It also extends the established pattern of the adjacent Hunters Glen neighborhood by abutting the rears of new lots to those of existing lots.
- Along the other Development Parcel boundaries, and enfronting Trotwood Avenue, the Preliminary Plat proposes the arrangement of thoroughfares which do not clearly define blocks. In particular, lots 87 – 91 have rear lot lines abutting a narrow tree save area. This use of the narrow strip of land separating lots 87-91 from Trotwood Avenue is clearly intended to maximize the total number of lots while avoiding the prohibition on through lots and the requirement to form disciplined blocks.
- Accounting for site-specific conditions, the proposed addition to Columbia's street network conforms to the standards of the ordinance, although alternative arrangements remain possible.

- The width of the tree save area which separates lots 87-91 could be larger. As currently depicted the buffer effectively allows the creation of through-lots without meaningful preservation of the existing tree canopy.

ATTACHMENTS (CIRCLE)

SUBMITTED PLANS | CITY MAPS | LEGAL NOTICE | LEGAL DESCRIPTION

PUBLIC COMMENTS | AGENCY COMMENTS | RESPONSE TO STANDARDS

CITY OF COLUMBIA TENNESSEE
PLANNING COMMISSION
STAFF REPORT

STAFF REPORT CONTACT INFORMATION
Austin Brass, AICP, City Planner, abrass@columbiatn.com, 931-560-1560

APPLICATION NUMBER	APPLICANT/PROPERTY OWNER
22-0333	**Crunk Engineering LLC/ James & Stacy Gore**
PUBLIC HEARING DATE	PROPERTY ADDRESS/LOCATION
N/A	**6031 Trotwood Ave / Tax Map 12, Parcel 18.00 & 18.03/18.04**

SUMMARY OF REQUEST: **Preliminary Plat & Development Plan (Foster Lane & Trotwood Ave)**
The preliminary plat request is for development of 126 single-family lots and associated infrastructure on a 49.24-acre development parcel located on the east side of Trotwood Ave within a CD-3 Character District. Any approval to this preliminary plat shall be subject to all design standards for a CD-3 Character district as outline in the Zoning Code.



MAP SOURCE: City GIS

EXISTING ZONING	EXISTING LAND USE	SURROUNDING ZONING & LAND USE	SITE IMPROVEMENTS PROPOSED	SIZE OF PROPERTY
CD-3	Undeveloped	CD-3/ Vacant Land	126 Single-Family Home Lots	49.84 acres

COMPATIBILITY with the **COMPREHENSIVE PLAN:**

Suburban Neighborhood: This property requested annexation with an RS-10 (CD-3) zoning prior to the adoption of the current Zoning Ordinance 4400. A CD-3-character district is a consistent land use designation within a Suburban Neighborhood Future Land Use classification.

PROPERTY HISTORY:

22-0112: Request from Crunk Engineering for the Annexation and Plan of Services with an RS-10 (Low-Density Residential Zoning District) for 6301 Trotwood Ave, Tax Map 112, Parcel 18.00 & 18.04, approved.

COMPATIBILITY with the ZONING ORDINANCE:

Zoning Ordinance Referenced:
The CD-3 Neighborhood District consists of primarily a medium density single-family detached Residential area in which the House is the predominant Building Types. It has medium to deep front Setbacks and medium to wide side Setbacks. Its Thoroughfares have curbs and may include Sidewalks and/or street trees, and form medium to large blocks. CD-3 is an appropriate District for the ***Suburban Neighborhood Character Area****, the Tom Hitch Special Area, and the Bear Creek Pike "Node" Special Area described in the Comprehensive Plan.*

Lot Building Site Standards/ Setbacks:

- 40’ minimum lot width if alley loaded, otherwise 65’ minimum lot width.
- 25’ front setback with a 20’ secondary frontage setback for corner lots
- 8’ side yard setback
- 25’ rear yard setback or 15’ from center of alley.
- If front loaded garages are present in the 1st and second layer (nearest to front of home) than the garage door width shall only equate to 33% of the façade width of the home.
- Less than 20% of the lots or building sites may front a pedestrian path, passage, or walkway.

This preliminary plat indicates a variation of front and rear loaded lots that comply with the building site standards within a CD-3 Character District:

- 29 lots will be a minimum of 50’ with a rear loaded alley that will connect with internal streets.
- 95 lots will be 80’ in width that consist of front-loaded access.
- Staff has commented that lots 92 thru 96 were created as through lots that are prohibited per section 4.3.1-A of the Zoning Code. The applicant has responded with the development of a 10’ open space buffer between the rear lot lines and the right-of-way line at Trotwood Ave. As noted, this open space would be considered unusable.

Streets/Connectivity:

This proposed development plan consists of the updating of Foster Lane. Upgrades to Foster Lane include a standard pavement surface with sidewalks placed on both sides of the roadway with an improved right-of-way cross section. Once standards of Foster Lane are improved to City of Columbia roadway standards, a maintenance agreement can be entertained for city approval. The internal street network of this development will connect with Foster Lane. New street sections consist of an approved 70’ urban neighborhood street right-of-way section that stubs-out into an adjacent parcel to the north and with Holley Berry Drive; an existing street section within the Hunters Glen Subdivision. A cul-de-sac is proposed that is not permitted unless for a special exception request by the Zoning Administrator. A waiver request letter has been presented; however, staff has noted that cul-de-sac can stub out to the west boundary line from its current terminus location. Table 5.2.2 D of the Zoning Code require a maximum block perimeter of 2800 ft. It would be recommended that Road B be extended across lots 54, 71 & 72 to and terminate into Road C to create a block perimeter not extending 2800 ft in conformance with the Zoning Ordinance.

Civic Space:

Section 5.4.1 of Zoning Ordinance 4400 requires any development parcel[1] to contain at least 5% but no more than 20% of its gross acreage assigned as civic space. The zoning code offers a variety of civic space types that include green space, natural areas, pocket parks etc.; however, a civic space designed and equipped as a playground shall be within 800 feet of every lot or building site within a CD-3 Character

[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.

District. The preliminary plat indicates a ring analysis indicates a playground within this parameter within one of the defined civic spaces. 5.6% or 2.78 acres of the development parcel is dedicated to civic space.

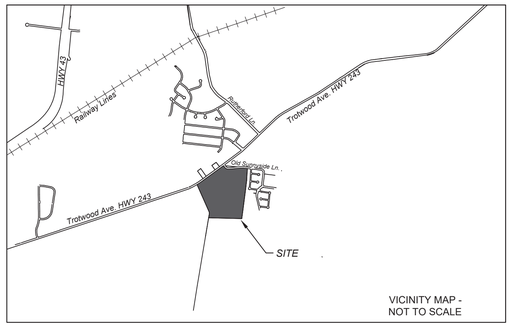
Tree Canopy Cover Retention:

Section 4.3.16 of Zoning Ordinance 4400 requires a percentage of existing tree canopy to be preserved based upon the existing tree canopy on the development site. Among the 49.84-acre site, 5.95 acres (11.9%) has been indicated as having an existing tree canopy. Any existing tree canopy within a CD-3-character district that has less than 19% of the site being tree canopy, require a 54% preservation of overall existing tree canopy on the site. The preliminary plat indicates that 3.21 acres (54.8%) tree canopy will be preserved in meeting this tree canopy retention requirement.

ATTACHMENTS (CIRCLE)

SUBMITTED PLANS | CITY MAPS | LEGAL NOTICE | LEGAL DESCRIPTION

PUBLIC COMMENTS | AGENCY COMMENTS | RESPONSE TO STANDARDS



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.
10. Parcel 18.05 may have been combined with Parcel 18.00 since previous survey. No consolidation document was provided to surveyor.

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 (FORMER)	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	*449,730.568 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	*1,951,606.417 SQ/FT*	*44.802 AC*
PARCEL 18.04 TRACT II	*38,993.582 SQ/FT*	*0.895 AC*
PARCEL 18.05 (EXCLUDED FROM TITLE)	*108,070.789 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: NoMau Partners, LLC

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, 5, 6(a), 8, 11a, 13, 14, 15, 16,17, and 18 of Table A thereof.

The fieldwork was completed on July 8, 2022.
The site was revisited in conjunction with this update on May 8, 2023.

Date of Plat or Map: May 9, 2023

5/9/23

Christopher L. Goetz, TN RLS 2660 — Date

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 — 5/9/2023 — TENNESSEE NO. 2660

Christopher Lyle Goetz, TN RLS 2660
Survey Manager, Gresham Smith
[P] chris.goetz@greshamsmith.com

Revision

No.	Date	Description

ALTA/NSPS LAND TITLE SURVEY

1 of 2

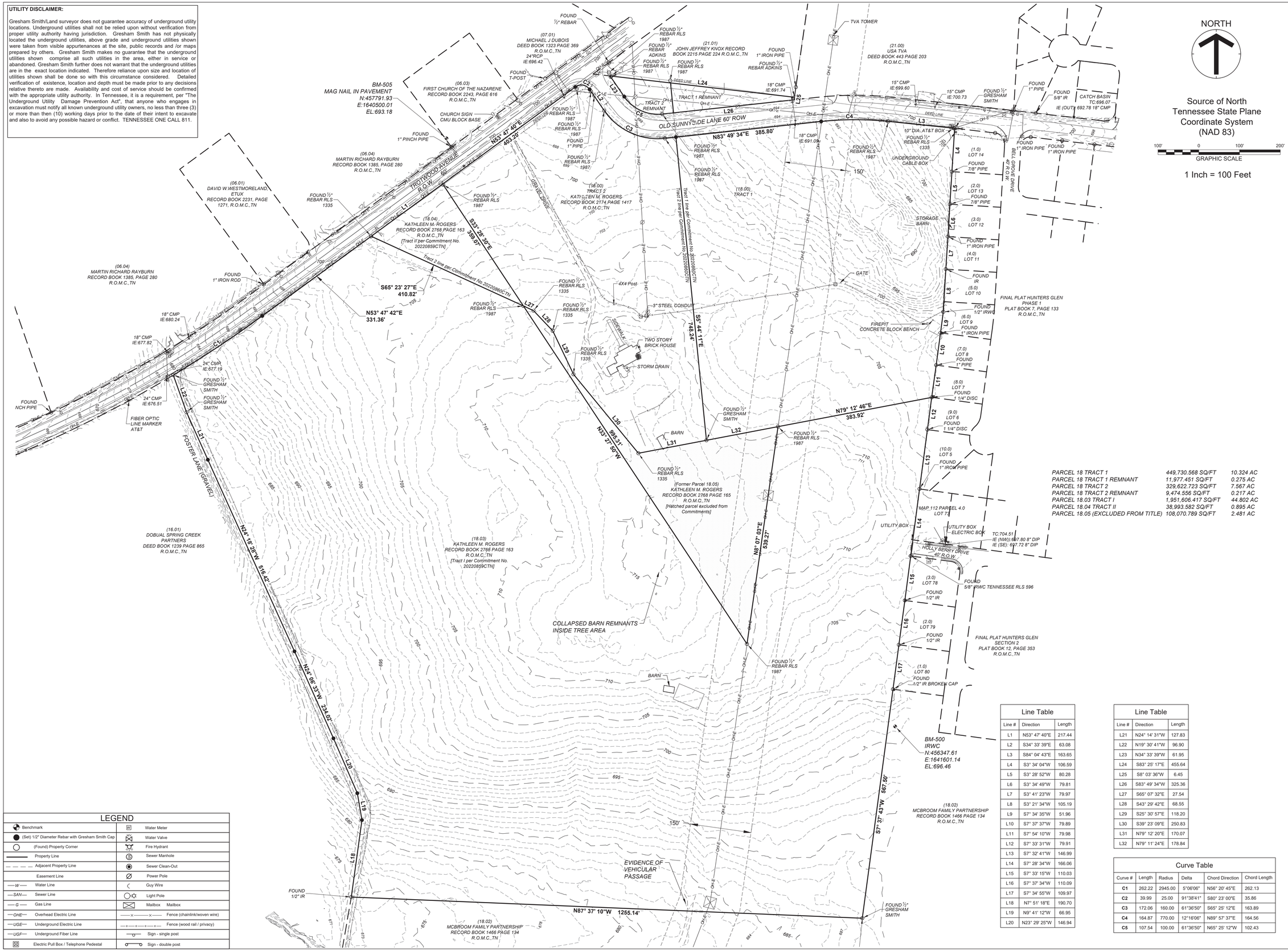
Project Number: 46752.00
May 9, 2023

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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.



NORTH

Source of North
Tennessee State Plane
Coordinate System
(NAD 83)

100' 0 100' 200'
GRAPHIC SCALE

1 Inch = 100 Feet

PARCEL 18 TRACT 1	449,730.568 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	1,951,606.417 SQ/FT	44.802 AC
PARCEL 18.04 TRACT II	38,993.582 SQ/FT	0.895 AC
PARCEL 18.05 (EXCLUDED FROM TITLE)	108,070.789 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° 11' 24"E	178.84

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 — STATE OF TENNESSEE — DEPARTMENT OF AGRICULTURE — 5/9/2023 — TENNESSEE NO. 2660

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: 46752.00
May 9, 2023

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TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

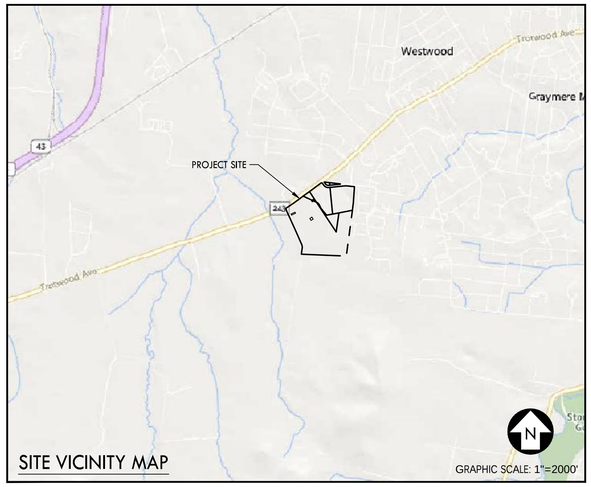
PRELIMINARY PLAT SUBMITTAL

SITE DATA TABLE

PROJECT: TROTWOOD AND FOSTER SUBDIVISION
ADDRESS: SOUTHEAST CORNER OF TROTWOOD AVE AND FOSTER LANE INTERSECTION
PARCEL ID: 112 01803 000
SITE ACREAGE: 49.84 ACRES

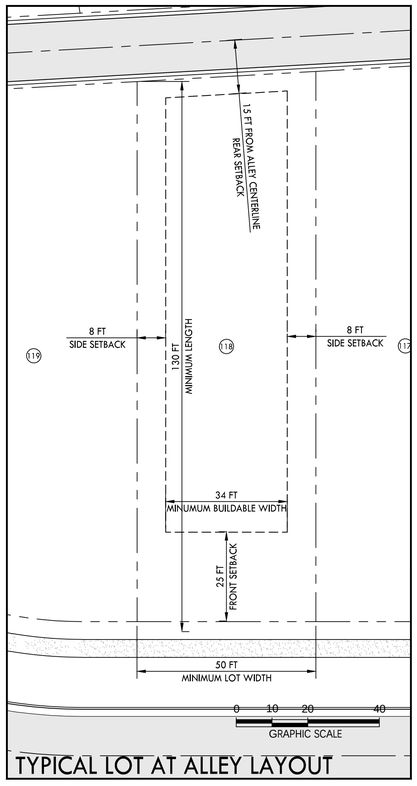
EXISTING ZONING: CD-3
PROPOSED ZONING: CD-3

ZONING DISTRICT:	CD-3
AREA:	49.84 AC
PROPOSED LOTS:	124
BUILDING HEIGHT:	35 FT
MIN. LOT WIDTH:	80 FT (TYPICAL) 50 FT (ALLEY LOADED)
FRONT YARD:	
PRIMARY:	25 FT
SECONDARY:	20 FT
SIDE SETBACK:	8 FT
REAR SETBACK:	25 FT 15 FT FROM CENTER LINE IF ALLEY LOADED
REQUIRED CIVIC USE SPACE	5% OF TOTAL AREA 2.49 AC
PROVIDED CIVIC USE SPACE:	5.6% 2.78 AC

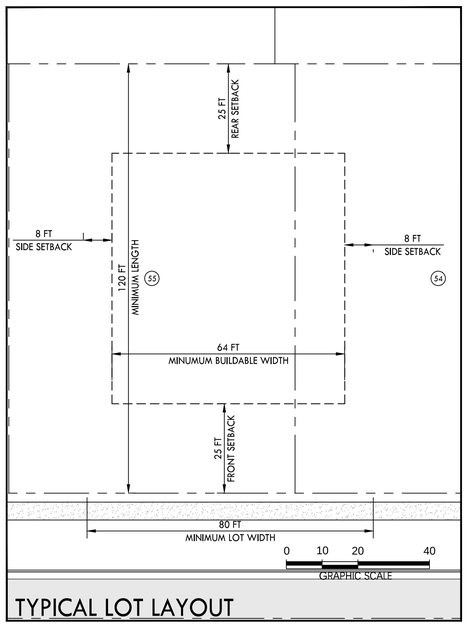


SITE VICINITY MAP

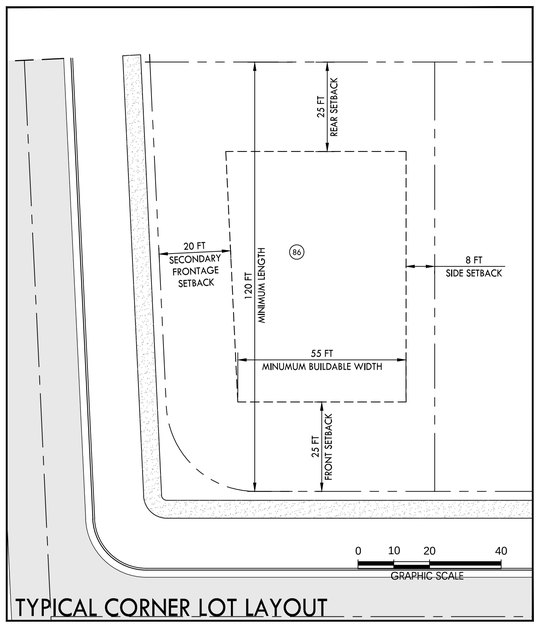
GRAPHIC SCALE: 1"=2000'



TYPICAL LOT AT ALLEY LAYOUT



TYPICAL LOT LAYOUT



TYPICAL CORNER LOT LAYOUT

Sheet List Table

Sheet Number	Sheet Title
C0.0	COVER SHEET
C1.0	OVERALL SITE LAYOUT PLAN
C1.1	SITE LAYOUT PLAN
C1.2	SITE LAYOUT PLAN
C1.3	SITE LAYOUT PLAN
C1.4	SITE LAYOUT PLAN
C1.5	TREE CANOPY EXHIBIT
C1.6	TYPICAL TURN LANE SECTION
C2.0	OVERALL GRADING, DRAINAGE, & UTILITY PLAN
C2.1	GRADING, DRAINAGE, & UTILITY PLAN
C2.2	GRADING, DRAINAGE, & UTILITY PLAN
C2.3	GRADING, DRAINAGE, & UTILITY PLAN
C2.4	GRADING, DRAINAGE, & UTILITY PLAN
C2.5	FORCEMAIN LAYOUT
L1.0	OVERALL LANDSCAPE PLAN
L1.1	LANDSCAPE PLAN
L1.2	LANDSCAPE PLAN
L1.3	LANDSCAPE PLAN
L1.4	LANDSCAPE PLAN
L2.0	LANDSCAPE DETAILS

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REGISTERED LANDSCAPE ARCHITECT
AGRICULTURE
3/17/23
CRAIG
No. 114100
STATE OF TENNESSEE

TROTWOOD AND FOSTER SUBDIVISION
COLUMBIA TENNESSEE

REVISIONS

No.	DATE

03/17/23 22040

C0.0
COVER SHEET

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\preliminary plat\C03 COV.dwg

800 FT CIVIC USE SPACE RADIUS.
ALL LOTS WITHIN DEVELOPMENT ARE WITHIN 800 FT OF A CIVIC USE SPACE

REFER TO SHEET C1.1
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C1.4
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C1.2
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C1.3
FOR DETAILED INFORMATION
IN THIS AREA.

BM-505
MAG NAIL IN PAVEMENT
N:457791.93
E:1640500.03
EL:696.18

OPEN SPACE
A = 3.45 ACRE

TREE SAVE AREA
A = 0.41 ACRE

CIVIC SPACE - PLAYGROUND
A = 0.26 ACRE

CIVIC SPACE - COMMUNITY GARDEN
A = 0.22 ACRE

OPEN SPACE - STORMWATER POND
A = 0.37 ACRE

CIVIC SPACE - PLAYGROUND
A = 0.21 ACRE

CIVIC SPACE - GREEN
A = 1.75 ACRE

OPEN SPACE
A = 0.71 ACRE

TREE SAVE AREA
A = 0.25 ACRE

TREE SAVE AREA
A = 0.21 ACRE

OPEN SPACE - STORMWATER POND
A = 4.07 ACRE

OPEN SPACE
TREE SAVE AREA = 0.33 ACRE
A = 0.41 ACRE

IBM-500
IRWC
N:456347.61
E:1641601.14
EL:696.46

PROJECT SITE

GRAPHIC SCALE: 1"=2000'

SITE VICINITY MAP

FLOOD HAZARD NOTE:

1. THE SUBJECT PROPERTY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD ZONE ACCORDING TO PANEL No. 47119C0280E OF THE F.E.M.A. FLOOD INSURANCE RATE MAPS FOR MAURY COUNTY, TENNESSEE, DATED 4/16/2007

SITE DATA TABLE

PROJECT: TROTWOOD AND FOSTER SUBDIVISION
ADDRESS: SOUTHEAST CORNER OF TROTWOOD AVE AND FOSTER LANE INTERSECTION
PARCEL ID: 112 01803 000
SITE ACREAGE: 49.84 ACRES

EXISTING ZONING: CD-3
PROPOSED ZONING: CD-3

ZONING DISTRICT:	CD-3
AREA:	49.84 AC
PROPOSED LOTS:	124
BUILDING HEIGHT:	35 FT
MIN. LOT WIDTH:	80 FT (TYPICAL) 50 FT (ALLEY LOADED)
FRONT YARD:	
PRIMARY:	25 FT
SECONDARY:	20 FT
SIDE SETBACK:	8 FT
REAR SETBACK:	25 FT 15 FT FROM CENTER LINE IF ALLEY LOADED
REQUIRED CIVIC USE SPACE	5% OF TOTAL AREA 2.49 AC
PROVIDED CIVIC USE SPACE:	5.6% 2.78 AC

0 50 100 150 300
GRAPHIC SCALE

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3/17/23
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TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

REVISIONS	
No.	DATE

03/17/23 22040

C1.0

OVERALL SITE LAYOUT PLAN

Drawing Path: p:\2022\22040 - trotwood and foster sub\division\Dwg\construction\preliminary plat\C1.0 LAY.dwg

NOTES:
1. REFER TO SHEET CXXXX FOR PARCEL AREA TABLES
2. HOA OR OTHER ASSOCIATION TO MAINTAIN CIVIC SPACE.

PROPOSED LAYOUT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPERTY LINE
- EDGE OF NEW PAVEMENT

SEE SHEET C1.4

(06.04) MARTIN RICHARD RAYBURN RECORD BOOK 1385, PAGE 280 R.O.M.C.,TN

1" PINCH PIPE

TROTWOOD AVENUE R.O.W. 60'

FOUND ½" REBAR RLS 1987

(06.01) DAVID W.WESTMORELAND, ETUX RECORD BOOK 2231, PAGE 1271, R.O.M.C.,TN

FOUND ½" REBAR RLS 1335

PAINTED STRIPING

FOUND MAG NAIL WITH WASHER CPWS

248 FT LANE TAPER

S33° 28' 30"E 359.07'

FOUND 1" IRON ROD

180 FT TAPER

R15' (TYP.)

349.84 S33° 47' 42"W

FOUND ½" REBAR RLS 1987

L27

(06.04) MARTIN RICHARD RAYBURN RECORD BOOK 1385, PAGE 280 R.O.M.C.,TN

ASPHALT PAVEMENT (TYP)

DIRECTIONAL ARROW (TYP)

TREE SAVE AREA A = 0.61 ACRE

CIVIC SPACE - PLAYGROUND A = 0.26 ACRE

1329.28 N33° 28' 19"W ROAD C

18" CMP IE:680.24

11 FT TURN LANE

L=71.79', R=70.00' D=58.7598 84.65 N64° 51' 03"W

SEE SHEET C1.6 FOR ROADWAY IMPROVEMENT CROSS-SECTION

310 FT STORAGE

L=7.52', R=70.00' D=6.1602'

CIVIC SPACE - COMMUNITY GARDEN A = 0.22 ACRE

L=190.39', R=125.00' D=87.2670

PAINTED STOP BAR

18" CMP IE:677.82

R30'

DIRECTIONAL ARROW

R30'

L=27.49', R=70.00' D=22.7093'

11 FT LANE WIDTH

730 FT (TYP.)

CONCRETE POST CURB (TYP)

ROAD B

PAINTED STRIPING

348 FT LANE TAPER

ASPHALT PAVEMENT (TYP)

CHARACTER DISTRICT STREET URBAN NEIGHBORHOOD ROADWAY SECTION

FOUND 1" PINCH PIPE

FIBER OPTIC LINE MARKER AT&T

R150'

L=74.77', R=150.00' D=9.4603'

16 FT TYP

CONCRETE CURB AND GUTTER (TYP)

ALLEY ROADWAY SECTION

OPEN SPACE - STORMWATER POND A = 0.37 ACRE

S33° 28' 19"E 100.00'

ALLEY A

S33° 28' 19"E 1100.00'

ASPHALT PAVEMENT (TYP)

MATCH LINE

(18.05) KATHLEEN M.ROGERS RECORD BOOK 2168 PAGE 2 R.O.M.C.,TN [Third] per Commitment No. 2025081...OTN]

FOSTER LANE (GRAVEL)

5' CONCRETE SIDEWALK (TYP)

(16.01) DOBUAL SPRING CREEK PARTNERS DEED BOOK 1239 PAGE 865 R.O.M.C.,TN

MATCH LINE

SEE SHEET C1.2

0 10 20 30 40 50 100
GRAPHIC SCALE

N

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COLUMBIA TENNESSEE

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No.	DATE

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C1.1

SITE LAYOUT PLAN

Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C1.0 LAY.dwg

MATCH LINE

SEE SHEET C1.1

SEE SHEET C1.3

(16.01)
DOBUAL SPRING CREEK PARTNERS
DEED BOOK 1239 PAGE 865
R.O.M.C., TN

FOSTER LANE

ROAD

920.96
N24° 17'06"W
5 FT

CONCRETE CURB AND GUTTER (TYP)

ASPHALT PAVEMENT (TYP)

5' CONCRETE SIDEWALK (TYP)

16 FT
ALLEY (TYP)

D=5.80°
L=44.87
R=300.00

805.
S53° 54' 12"W

CHARACTER DISTRICT STREET
URBAN NEIGHBORHOOD
ROADWAY SECTION

24 FT
TYP

R15'

120 FT
(TYP.)

TREE SAVE AREA
A = 0.21 ACRE

D=32.73.00
L=122.82
R=215.00

26 FT
TYP

OPEN SPACE - STORMWA
A = 4.07 ACRE

FOUND
1/2" IR

48" CMP
IE:665.93

INVERT COVERED BY DE
TOP OF PIPE 670.050

MATCH LINE

MC
R

NOTES:
1. REFER TO SHEET CXXXX FOR PARCEL AREA TABLES
2. HOA OR OTHER ASSOCIATION TO MAINTAIN CIVIC SPACE.

PROPOSED LAYOUT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPERTY LINE
- EDGE OF NEW PAVEMENT

0 10 20 30 40 50 100
GRAPHIC SCALE

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No. 114180
STATE OF TENNESSEE

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

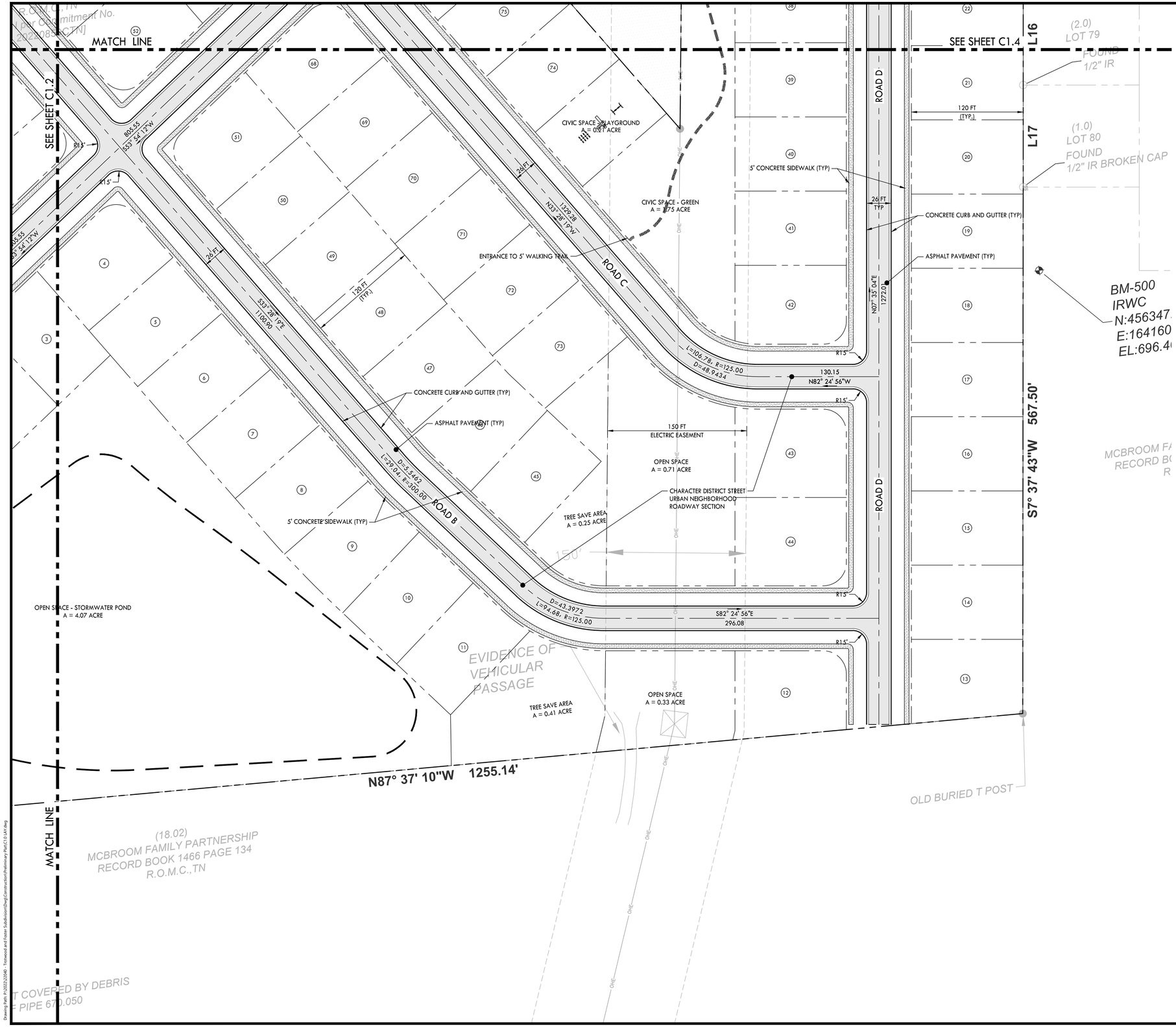
REVISIONS	
No.	DATE

03/17/23 22040

C1.2

SITE LAYOUT PLAN

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\preliminary plat\C1.0 LAY.dwg



NOTES:
1. REFER TO SHEET CXXXX FOR PARCEL AREA TABLES
2. HOA OR OTHER ASSOCIATION TO MAINTAIN CIVIC SPACE.

PROPOSED LAYOUT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPERTY LINE
- EDGE OF NEW PAVEMENT

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TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

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C1.3

SITE LAYOUT PLAN

Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C1.0 LAY.dwg

SEE SHEET C1.1

FOUND ½" REBAR RLS 1987

REBAR RLS 1987

(18.00) TRACT 2 KATHLEEN M. ROGERS RECORD BOOK 2174 PAGE 1417 R.O.M.C.,TN

(18.00) TRACT 1

Tract 1 line per Commitment No.20220860CTN

Tract 2 line per Commitment No.20220860CTN

STORAGE BARN

30' AQUATIC BUFFER

4X4 Post

3" STEEL CONDUIT

FOUND ½" REBAR RLS 1335

FOUND ½" REBAR RLS 1335

FOUND ½" REBAR RLS 1335

TWO STORY BRICK HOUSE

STORM DRAIN

L27

L28

L29

L30

L31

L32

S5° 44' 11"E 748.24'

N33° 28' 19"W 995.41'

BARN

FOUND ½" REBAR RLS 1335

(18.05) KATHLEEN M. ROGERS RECORD BOOK 2768 PAGE 165 R.O.M.C.,TN [Hatched parcel excluded from Commitments]

N8° 06' 56"E 539.25'

CHARACTER DISTRICT STREET URBAN NEIGHBORHOOD ROADWAY SECTION

WALKING PATH (TYP)

150 FT ELECTRIC EASEMENT

ENTRANCE TO 5' WALKING TRAIL

5' WALKING TRAIL

R34'

L=25.53, R=125.00 Δ=43.7896

R138'

26 FT (TYP.)

ROAD D

5' CONCRETE SIDEWALK (TYP)

120 FT (TYP.)

CONCRETE CURB AND GUTTER (TYP)

ASPHALT PAVEMENT (TYP)

N07° 35' 04"E 1272.01

R15'

ROAD E

N82° 24' 45"W 155.40

R15'

HOLLY BERRY DRIVE 40' R.O.W.

MAP 112 PARCEL 4.0 LOT 73

UTILITY BOX

UTILITY BOX

ELECTRIC BO

L6 (3.0) LOT 12

L7 FOUND 1" IRON PIPE (4.0) LOT 11

L8 FOUND IR (5.0) LOT 10

L9 FOUND 1/2" IRWC (6.0) LOT 9

L10 FOUND 1" IRON PIPE (7.0) LOT 8

L11 FOUND 1" PIPE (8.0) LOT 7

L12 FOUND 1 1/4" DISC (9.0) LOT 6

L13 FOUND 1 1/4" DISC (10.0) LOT 5

L14 FOUND 1" IRON PIPE

L15 FOUND 1/2" IR (3.0) LOT 78

L16 FOUND 1/2" IR (2.0) LOT 79

FOUND 5/8"

FINA PL

MATCH LINE

MATCH LINE

SEE SHEET C1.3

NOTES:
1. REFER TO SHEET CXXXX FOR PARCEL AREA TABLES
2. HOA OR OTHER ASSOCIATION TO MAINTAIN CIVIC SPACE.

PROPOSED LAYOUT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPERTY LINE
- EDGE OF NEW PAVEMENT

0 10 20 30 40 50 100
GRAPHIC SCALE

N

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TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

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No.	DATE

03/17/23 22040

C1.4

SITE LAYOUT PLAN

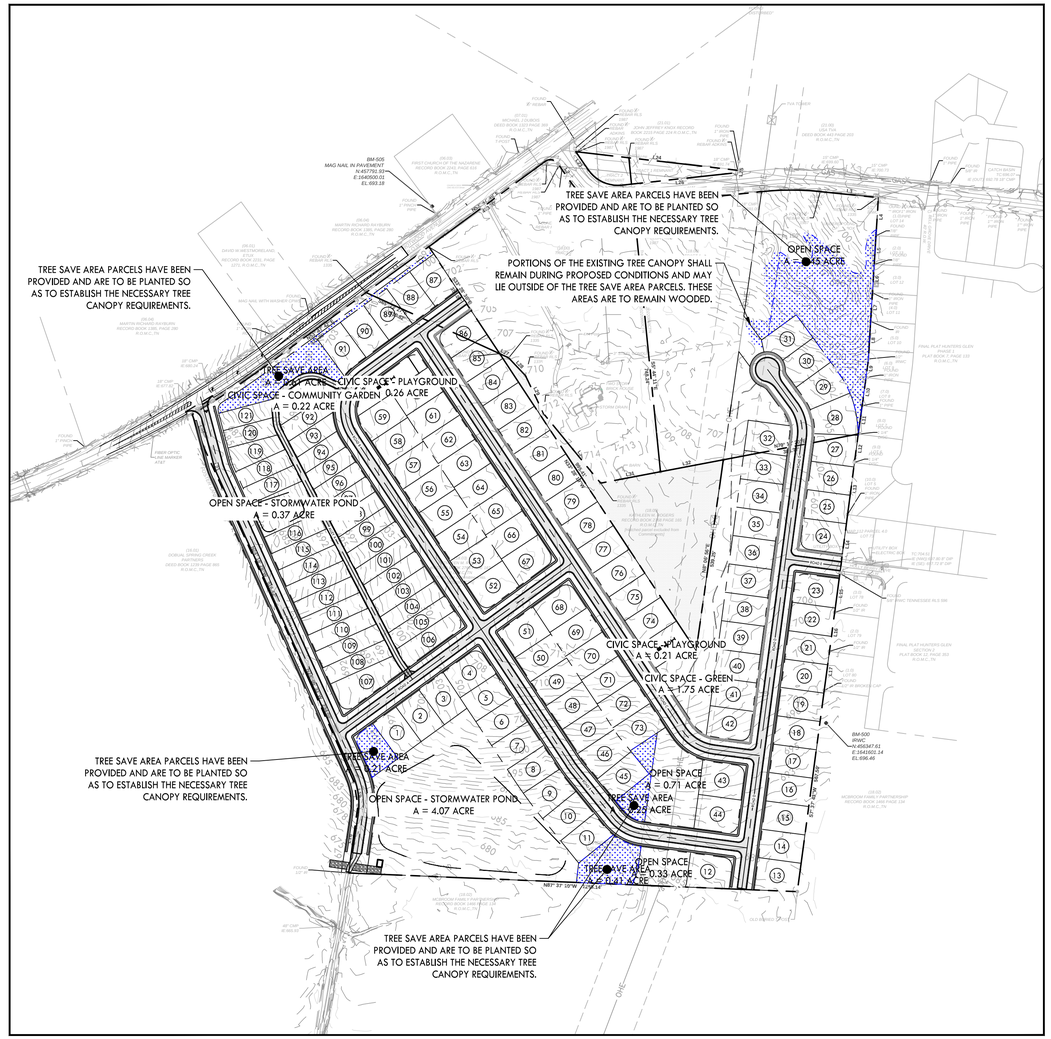
Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C1.0 LAY.dwg

TREE CANOPY PRESERVATION REQUIREMENTS:

TOTAL SITE AREA:	49.84 AC
EXISTING TREE CANOPY AREA:	5.95 AC
TREE CANOPY PERCENTAGE (OF TOTAL AREA):	11.9%
REQUIRED TREE CANOPY RETENTION:	54% 3.21AC
PROVIDE TREE CANOPY RETENTION:	57.3% 3.41 AC



EXISTING TREE CANOPY EXHIBIT



PROPOSED TREE CANOPY EXHIBIT

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C1.5

TREE CANOPY EXHIBIT

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C1.6

TYPICAL TURN LANE SECTION

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\preliminary plat\C1.0 LAY.dwg

REFER TO SHEET C2.1
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C2.4
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C2.2
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C2.3
FOR DETAILED INFORMATION
IN THIS AREA.

BM-505
MAG NAIL IN PAVEMENT
N:457791.93
E:1640500.03
EL: 698.18

OPEN SPACE
A = 3.48 ACRE

TREE SAVE AREA
A = 0.41 ACRE

CIVIC SPACE - COMMUNITY GAZEBO
A = 0.22 ACRE

CIVIC SPACE - PLAYGROUND
A = 0.26 ACRE

OPEN SPACE - STORMWATER POND
A = 0.37 ACRE

CIVIC SPACE - PLAYGROUND
A = 0.21 ACRE

CIVIC SPACE - GREEN
A = 1.75 ACRE

OPEN SPACE
A = 0.71 ACRE

TREE SAVE AREA
A = 0.43 ACRE

OPEN SPACE - STORMWATER POND
A = 4.07 ACRE

OPEN SPACE
A = 0.33 ACRE

TREE SAVE AREA
A = 0.4 ACRE

BM-500
MAG NAIL
N:456347.61
E:1641601.14
EL: 696.46

0 50 100 150 300
GRAPHIC SCALE

N

MAURY COUNTY HIGHWAY DEPARTMENT:

ALL COUNTY ROADWAY AND ROW CONNECTIONS, IMPACTS, ANNEXATIONS, AND IMPROVEMENTS ARE SUBJECT TO FURTHER EVALUATION BY THE MAURY COUNTY HIGHWAY DEPARTMENT AND COULD REQUIRE ADDITIONAL, OFF-SITE ROADWAY IMPROVEMENTS AND/ OR A SEPARATE SURETY FOR ANY POTENTIAL DAMAGE TO EXISTING COUNTY ROADWAYS. FURTHERMORE, THE TRAFFIC IMPACT STUDY SHALL BE SUBJECT TO FURTHER REVIEW BY THE MAURY COUNTY HIGHWAY DEPARTMENT. APPLICANT SHALL REACH OUT TO MCHD FOR FURTHER COORDINATION AND EVALUATION OF THE PROPOSED ROADWAY IMPROVEMENTS ON FOSTER LANE.

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C2.0

OVERALL GRADING, DRAINAGE, & UTILITY PLAN

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(06.04)
MARTIN RICHARD RAYBURN
RECORD BOOK 1385, PAGE 280
R.O.M.C.,TN

(06.01)
DAVID W.WESTMORELAND, ETUX
RECORD BOOK 2231, PAGE 1271, R.O.M.C.,TN

TROTWOOD AVENUE
R.O.W. 60'

SEE SHEET C2.4

S33° 28' 30"E
359.04'

L27

TEE WITH VALVES

FIRE HYDRANT ASSEMBLY (TYP)

8" WATER LINE (TYP)

TREE SAVE AREA
A = 0.61 ACRE

SINGLE CURB INLET (TYP)

CIVIC SPACE - PLAYGROUND
A = 0.26 ACRE

ROAD B

ROAD C

TYPICAL NOTE FOR LOT DRAINAGE: SWALES TO BE PROVIDED BETWEEN LOTS ON LOT LINES.

18" CMP
IE:680.24

CONNECT TO EXISTING WATER LINE WITH TAPPING SLEEVE AND VALVE

18" CMP
IE:677.82

CIVIC SPACE - COMMUNITY GARDEN
A = 0.22 ACRE

SANITARY MANHOLE (TYP)

8" SANITARY LINE (TYP)

SINGLE CATCH BASIN (TYP)

FIRE HYDRANT ASSEMBLY (TYP)

FIBER OPTIC LINE MARKER AT&T

SANITARY MANHOLE (TYP)

OPEN SPACE - STORMWATER POND 1
A = 0.37 ACRE

STORMWATER POND 1

SINGLE CURB INLET (TYP)

STORMWATER POND 1
OUTLET STRUCTURE

SHELEY A

MATCH LINE

(16.01)
DOBUAL SPRING CREEK PARTNERS
DEED BOOK 1239 PAGE 865
R.O.M.C.,TN

MATCH LINE

SEE SHEET C2.2

18.03
KATHLEEN M. ROGERS
RECORD BOOK 2166 PAGE
R.O.M.C.,TN
(per Commitment N
2220035-CT)

0 10 20 30 40 50 100
GRAPHIC SCALE

N

PROPOSED GRADING & DRAINAGE LEGEND

- 55 — PROPOSED CONTOUR
- ST — STORM PIPE
- SINGLE CURB INLET
- SINGLE CATCH BASIN
- JUNCTION BOX

PROPOSED UTILITY LEGEND

- SS — SANITARY SEWER LINE
- W — WATER LINE

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AMERICA
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TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

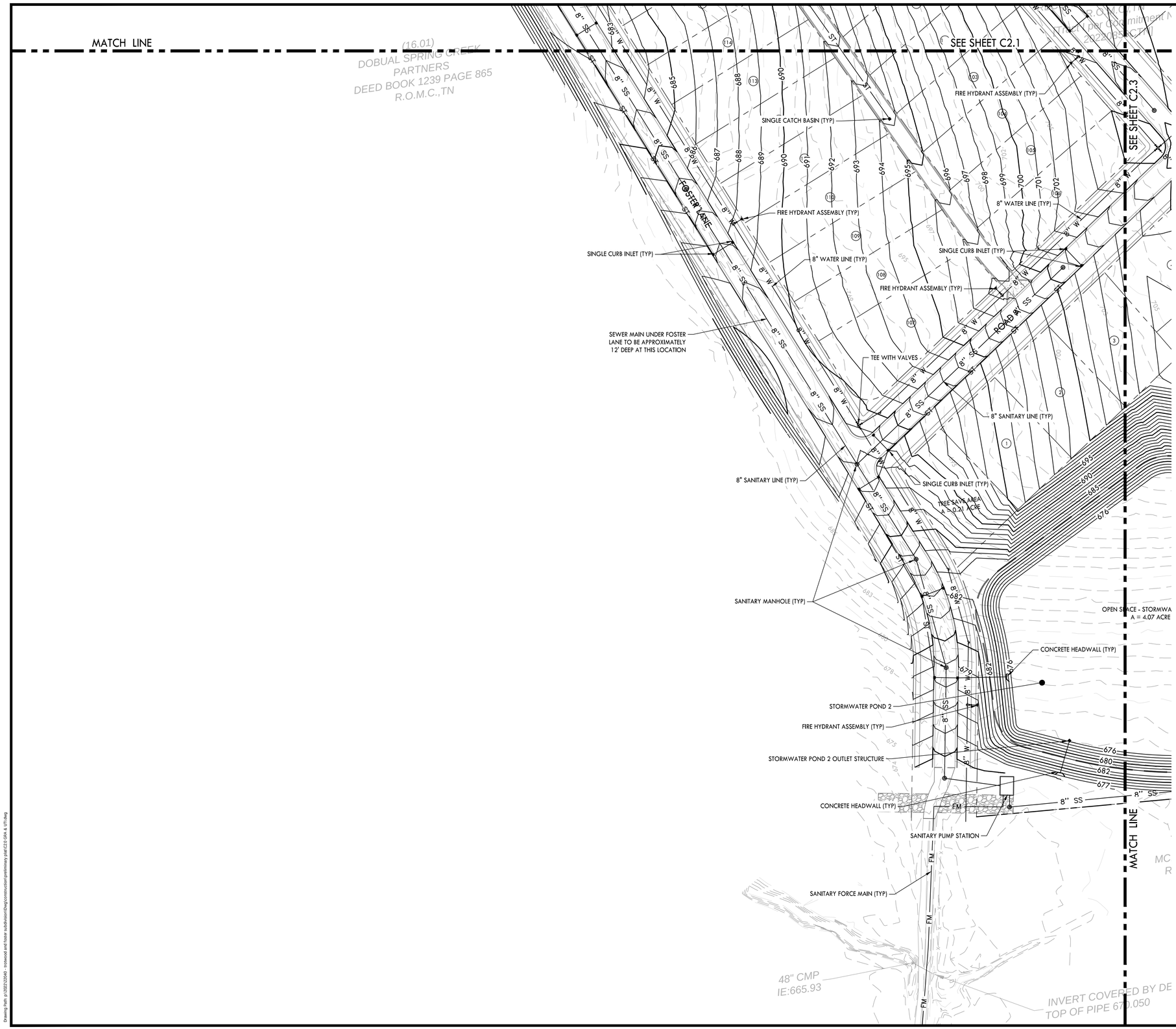
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No.	DATE

03/17/23 22040

C2.1

GRADING, DRAINAGE, & UTILITY PLAN

Drawing Path: s:\2022\22040 - trotwood and foster sub\division\engr\construction\preliminary plat\C2.0 GRA & UTI.dwg



PROPOSED GRADING & DRAINAGE LEGEND

- 55 — PROPOSED CONTOUR
- ST — STORM PIPE
- SINGLE CURB INLET
- SINGLE CATCH BASIN
- JUNCTION BOX

PROPOSED UTILITY LEGEND

- SS — SANITARY SEWER LINE
- W — WATER LINE

0 10 20 30 40 50 100
GRAPHIC SCALE

N

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C2.2

GRADING, DRAINAGE, & UTILITY PLAN

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\preliminary plat\C2.0 GRA & UTI.dwg

MATCH LINE

SEE SHEET C2.2

SEE SHEET C2.4

TEE WITH VALVES

FIRE HYDRANT ASSEMBLY (TYP)

8" WATER LINE (TYP)

SANITARY MANHOLE (TYP)

TYPICAL NOTE FOR LOT DRAINAGE: SWALES TO BE PROVIDED BETWEEN LOTS ON LOT LINES.

8" SANITARY LINE (TYP)

SANITARY FORCE MAIN (TYP)

SINGLE CURB INLET (TYP)

OPEN SPACE
A = 0.71 ACRE

SWALE TO BE PROVIDED ALONG REAR LOT LINES FOR REAR CONNECTING LOTS. INLETS TO BE PROVIDED A MINIMUM OF EVERY 8 LOTS AS PER CITY OF COLUMBIA REQUIREMENTRS

OFF SAVE AREA
0.25 ACRE

OPEN SPACE - STORMWATER POND
A = 4.07 ACRE

STORMWATER POND

CONCRETE HEADWALL (TYP)

EVIDENCE OF VEHICULAR PASSAGE

ST FREE SAVE AREA
A = 0.41 ACRE

ST OPEN SPACE
A = 0.33 ACRE

JUNCTION MANHOLE (TYP)

N87° 37' 10"W 1255.14'

OLD BURIED T POST

(18.02)
MCBROOM FAMILY PARTNERSHIP
RECORD BOOK 1466 PAGE 134
R.O.M.C., TN

T COVERED BY DEBRIS
PIPE 670.050

L16

L17

S7° 37' 43"W 567.50'

(2.0)
LOT 79

(1.0)
LOT 80

BM-500
IRWC
N:456347.
E:164160
EL:696.4

MCBROOM FA
RECORD BO
R

ROAD 'B'

ROAD 'C'

PROPOSED GRADING & DRAINAGE LEGEND

- PROPOSED CONTOUR
- STORM PIPE
- SINGLE CURB INLET
- SINGLE CATCH BASIN
- JUNCTION BOX

PROPOSED UTILITY LEGEND

- SANITARY SEWER LINE
- WATER LINE

0 10 20 30 40 50 100
GRAPHIC SCALE

N

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(615) 873-1795
WWW.CRUNKENG.COM

ENGINEERING CRUNK

ANNA WILSON CRUNK
REGISTERED
AGRICULTURE
3/17/23
AMERICA
114190
STATE OF TENNESSEE

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

REVISIONS

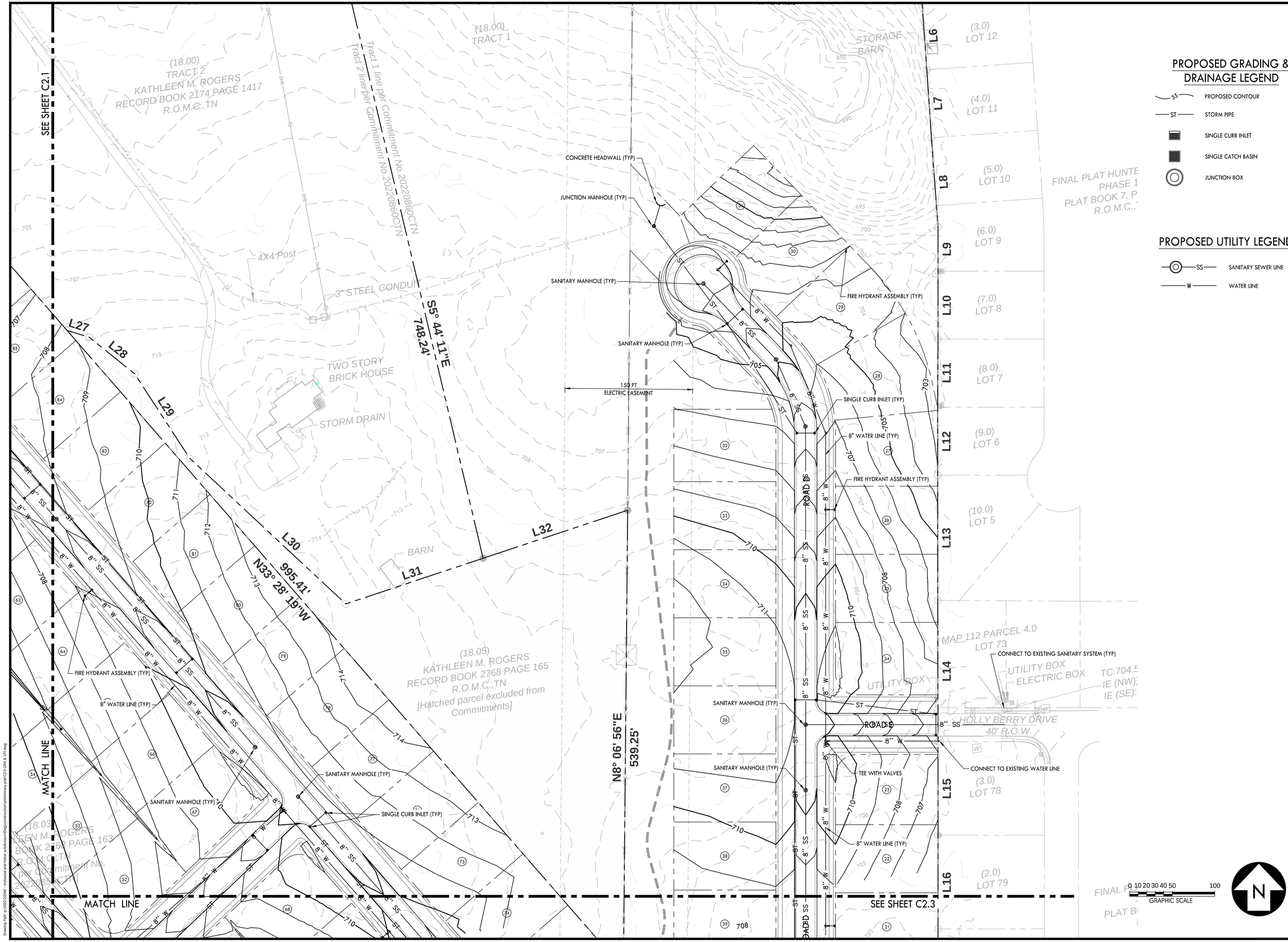
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C2.3

GRADING, DRAINAGE, & UTILITY PLAN

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GRADING, DRAINAGE, & UTILITY PLAN

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OPEN SPACE
A = 3.45 ACRE

CIVIC SPACE - PLAYGROUND
A = 0.29 ACRE

TREE SAVE AREA
A = 0.22 ACRE

CIVIC SPACE - COMMUNITY GARDEN
A = 0.22 ACRE

OPEN SPACE - STORMWATER POND
A = 4.07 ACRE

CIVIC SPACE - PLAYGROUND
A = 0.21 ACRE

CIVIC SPACE - GREEN
A = 0.75 ACRE

OPEN SPACE
A = 0.51 ACRE

TREE SAVE AREA
A = 0.41 ACRE

OPEN SPACE
A = 0.33 ACRE

TREE SAVE AREA
A = 0.41 ACRE

FM FM FM FM FM FM FM FM FM FM

APPROXIMATELY 3,900 L.F. OF
4" FORCEMAIN TO BE INSTALLED.

TIE INTO EXISTING SEWER
MANHOLE.

0 100 200 400
GRAPHIC SCALE

N

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TENNESSEE REGISTERED LANDSCAPE ARCHITECT
AMMER WILSON CRUNK
No. 114100
AGRICULTURE
3/17/23
STATE OF TENNESSEE

TROTWOOD AND FOSTER SUBDIVISION

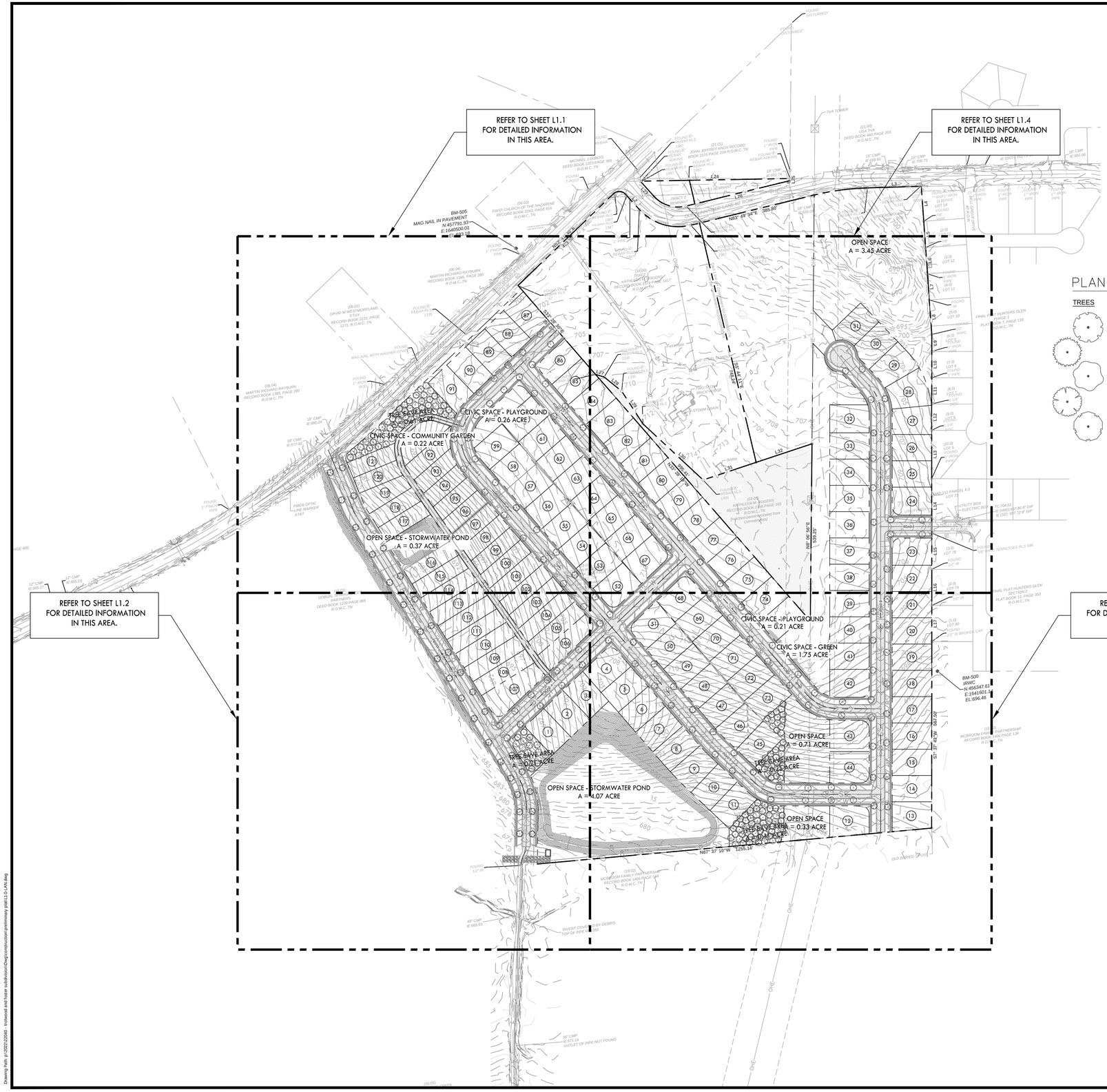
COLUMBIA TENNESSEE

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No.	DATE

03/17/23 22040

C2.5

FORCEMAIN LAYOUT



LANDSCAPE PLAN KEYNOTES

CODE	DESCRIPTION	DETAIL LOCATION
L1	AREA TO BE SEEDED LAWN	AS NOTED
L2	AREA TO BE SODDED LAWN	AS NOTED
L3	PLANTING BED LIMITS	-
L4	IRRIGATION LIMITS	-

NOTES:
1. REFER TO SHEET L2.0 FOR ADDITIONAL NOTES.
2. REFER TO SHEET L2.0 FOR PLANT LIST

PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
	ACE OGL	Acer rubrum 'October Glory' / October Glory Red Maple	2.5" Cal.	B&B	75
	PIN TAE	Pinus taeda / Loblolly Pine	2" Cal.	B&B	56
	QOU NUT	Quercus nuttallii / Nuttall Oak	2" Cal.	B&B	46
	ULM ALL	Ulmus parvifolia 'Allee' / Allee® Lacebark Elm	2" Cal.	B&B	70
	ZEL VIL	Zelkova serrata 'Village Green' / Village Green Japanese Zelkova	2" Cal.	B&B	86

0 50 100 150 300
GRAPHIC SCALE

Know what's below.
Call before you dig.

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L1.0

OVERALL LANDSCAPE PLAN

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LANDSCAPE PLAN KEYNOTES

CODE	DESCRIPTION	DETAIL LOCATION
L1	AREA TO BE SEEDED LAWN	AS NOTED
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L3	PLANTING BED LIMITS	-
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NOTES:
1. REFER TO SHEET L2.0 FOR ADDITIONAL NOTES.
2. REFER TO SHEET L2.0 FOR PLANT LIST

SEE SHEET C1.4

PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
	ACE OGL	Acer rubrum 'October Glory' / October Glory Red Maple	2.5" Cal.	B&B	75
	PIN TAE	Pinus taeda / Loblolly Pine	2" Cal.	B&B	56
	QOU NUT	Quercus nuttallii / Nuttall Oak	2" Cal.	B&B	46
	ULM ALL	Ulmus parvifolia 'Allee' / Allee® Lacebark Elm	2" Cal.	B&B	70
	ZEL VIL	Zelkova serrata 'Village Green' / Village Green Japanese Zelkova	2" Cal.	B&B	86

MATCH LINE

SEE SHEET C1.2

0 10 20 30 40 50 100
GRAPHIC SCALE

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ENGINEERING CRUNK

BRADLEY M. LOWRY
REGISTERED
PROFESSIONAL
AGRICULTURE
TENNESSEE
LANDSCAPE ARCHITECT
3/17/23

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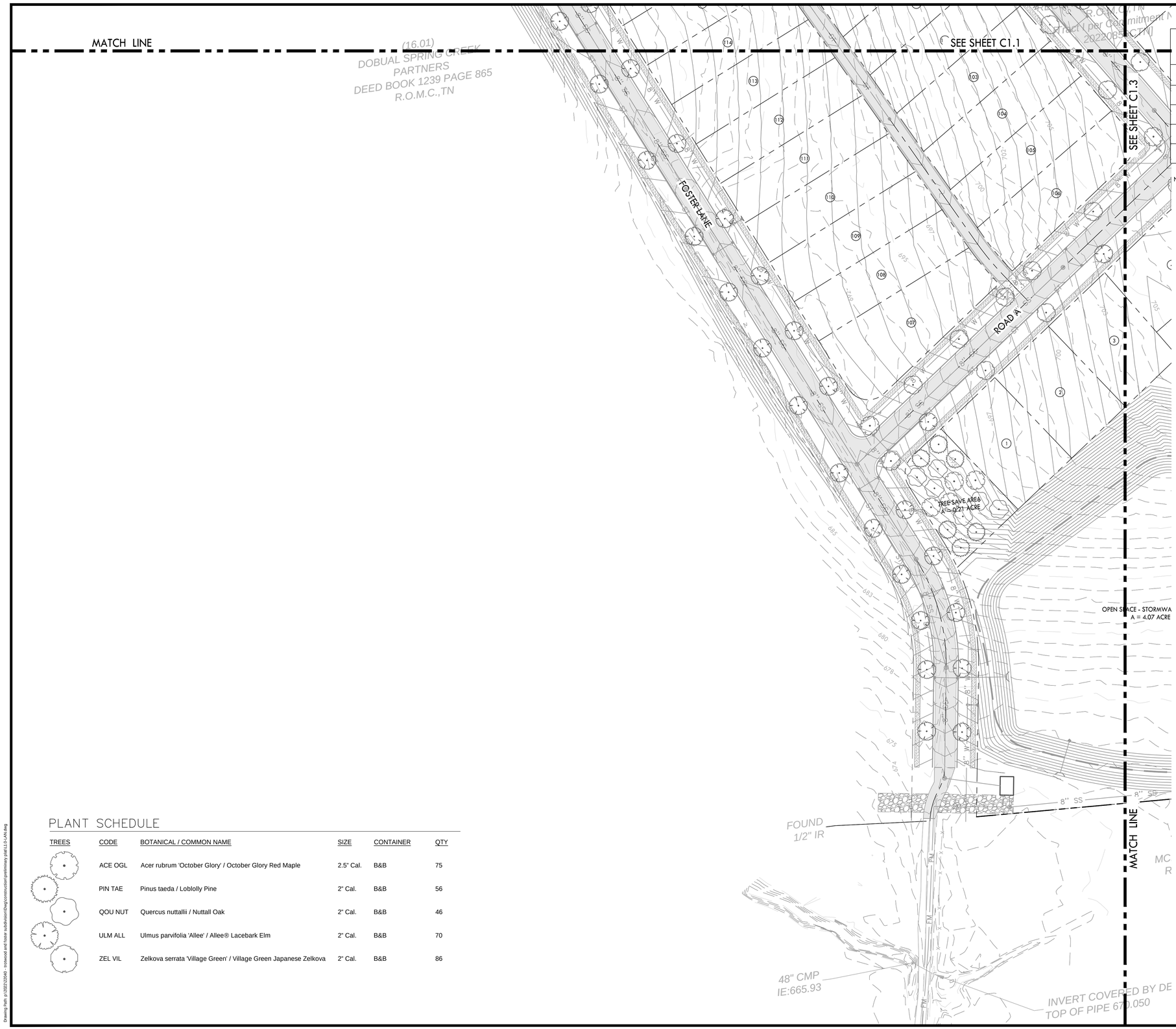
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TROTWOOD AND FOSTER SUBDIVISION
COLUMBIA TENNESSEE

L1.1
LANDSCAPE PLAN

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LANDSCAPE PLAN KEYNOTES

CODE	DESCRIPTION	DETAIL LOCATION
L1	AREA TO BE SEEDED LAWN	AS NOTED
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L3	PLANTING BED LIMITS	-
L4	IRRIGATION LIMITS	-

NOTES:
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2. REFER TO SHEET L2.0 FOR PLANT LIST

PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
	ACE OGL	Acer rubrum 'October Glory' / October Glory Red Maple	2.5" Cal.	B&B	75
	PIN TAE	Pinus taeda / Loblolly Pine	2" Cal.	B&B	56
	QOU NUT	Quercus nuttallii / Nuttall Oak	2" Cal.	B&B	46
	ULM ALL	Ulmus parvifolia 'Allee' / Allee® Lacebark Elm	2" Cal.	B&B	70
	ZEL VIL	Zelkova serrata 'Village Green' / Village Green Japanese Zelkova	2" Cal.	B&B	86

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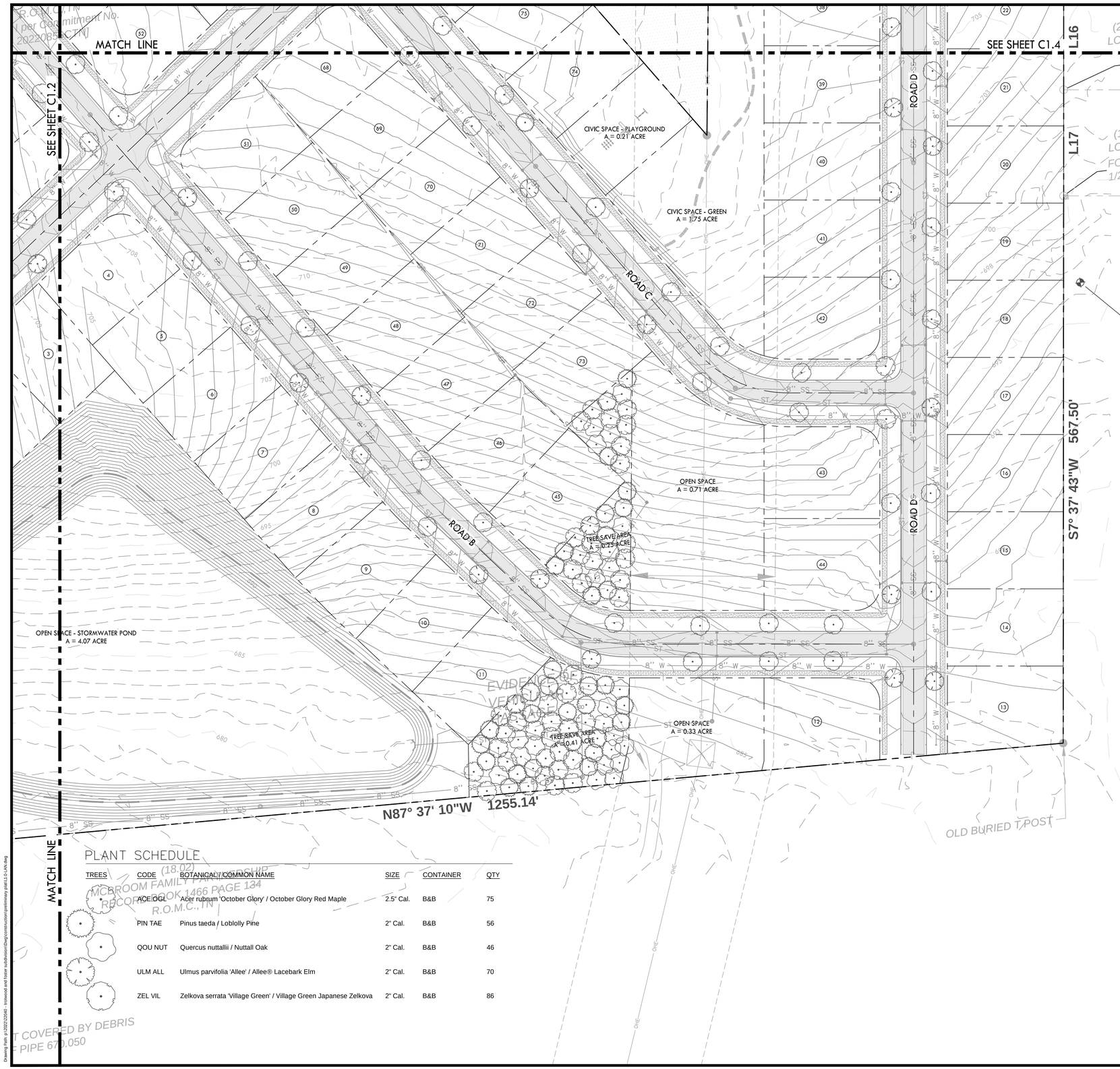
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L1.2
LANDSCAPE PLAN

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LANDSCAPE PLAN KEYNOTES

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L1	AREA TO BE SEEDED LAWN	AS NOTED
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NOTES:
1. REFER TO SHEET L2.0 FOR ADDITIONAL NOTES.
2. REFER TO SHEET L2.0 FOR PLANT LIST

PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
	ACE OGL	Acer rubrum 'October Glory' / October Glory Red Maple	2.5" Cal.	B&B	75
	PIN TAE	Pinus taeda / Loblolly Pine	2" Cal.	B&B	56
	QOU NUT	Quercus nuttallii / Nuttall Oak	2" Cal.	B&B	46
	ULM ALL	Ulmus parvifolia 'Allee' / Allee® Lacebark Elm	2" Cal.	B&B	70
	ZEL VIL	Zelkova serrata 'Village Green' / Village Green Japanese Zelkova	2" Cal.	B&B	86

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AMERICA
3/17/23

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L1.3
LANDSCAPE PLAN

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PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
	ACE OGL	Acer rubrum 'October Glory' / October Glory Red Maple	2.5" Cal.	B&B	75
	PIN TAE	Pinus taeda / Loblolly Pine	2" Cal.	B&B	56
	QOU NUT	Quercus nuttallii / Nuttall Oak	2" Cal.	B&B	46
	ULM ALL	Ulmus parvifolia 'Allee' / Allee® Lacebark Elm	2" Cal.	B&B	70
	ZEL VIL	Zelkova serrata 'Village Green' / Village Green Japanese Zelkova	2" Cal.	B&B	86

LANDSCAPE PLAN KEYNOTES

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L3	PLANTING BED LIMITS	-
L4	IRRIGATION LIMITS	-

NOTES:
1. REFER TO SHEET L2.0 FOR ADDITIONAL NOTES.
2. REFER TO SHEET L2.0 FOR PLANT LIST

SEE SHEET C1.1

MATCH LINE

MATCH LINE

SEE SHEET C1.3

S5° 44' 11"E 748.24'

N33° 28' 19"W 995.41'

N8° 06' 56"E 539.25'

L27 L28 L29 L30 L31 L32

Tract 1 line per Commitment No.20220860CTN

Tract 2 line per Commitment No.20220860CTN

(18.00) TRACT 1

(46.00) TRACT 2

KATHLEEN M. ROGERS RECORD BOOK 2174 PAGE 1417 R.O.M.C., TN

(18.05) KATHLEEN M. ROGERS RECORD BOOK 2768 PAGE 165 R.O.M.C., TN [Hatched parcel excluded from Commitments]

(18.03) KATHLEEN M. ROGERS RECORD BOOK 2768 PAGE 163 R.O.M.C., TN [Hatched parcel per Commitment No. 20220860CTN]

FOUND ½" REBAR RLS 1987

FOUND ½" REBAR RLS 1335

4X4 Post

3" STEEL CONDUIT

TWO STORY BRICK HOUSE

STORM DRAIN

BARN

STORAGE BARN

ROAD D

ROAD E

HOLLY BERRY DRIVE 40' R.O.W.

UTILITY BOX

MAP 112 PARCEL 4.0 LOT 73

L6 (3.0) LOT 12 FOUND 1" IRON PIPE

L7 (4.0) LOT 11 FOUND IR

L8 (5.0) LOT 10 FOUND 1/2" IRWC

L9 (6.0) LOT 9 FOUND 1" IRON PIPE

L10 (7.0) LOT 8 FOUND 1" PIPE

L11 (8.0) LOT 7 FOUND 1 1/4" DISC

L12 (9.0) LOT 6 FOUND 1 1/4" DISC

L13 (10.0) LOT 5 FOUND 1" IRON PIPE

L14

L15 (3.0) LOT 78 FOUND 1/2" IR

L16 (2.0) LOT 79 FOUND 1/2" IR

0 10 20 30 40 50 100
GRAPHIC SCALE

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ENGINEERING CRUNK

BRADLEY M. LOWRY REGISTERED AGRICULTURE 3/17/23 AMERICA TENNESSEE 1501 LANDSCAPE ARCHITECT

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

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L1.4

LANDSCAPE PLAN

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LANDSCAPE NOTES:

SITE PREP

1. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND TAKE PRECAUTIONS TO PREVENT DAMAGE TO THESE UTILITIES.
2. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANIES AND SHALL BE RESPONSIBLE FOR ALL DAMAGES TO UTILITIES.
3. PLANT MATERIALS AND STUMPS INDICATED FOR REMOVAL SHALL BE REMOVED AND DISPOSED OFF-SITE BY THE CONTRACTOR. BACKFILL HOLES WITH QUALITY TOPSOIL FREE OF ROOTS AND ROCKS. SEE TOPSOIL SPECIFICATION.
4. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINE GRADING OF ALL PLANTING AREAS.
5. ALL CONTRACTORS APPLYING CHEMICALS ON SITE SHALL SUBMIT COPIES OF CERTIFICATION(S) AND LICENSES TO THE LANDSCAPE ARCHITECT.
6. PLANTING BEDS SHALL BE CLEARED OF GRASS AND WEEDS PRIOR TO INSTALLATION OF PLANTS.
7. SOD ALL AREAS DISTURBED BY CONSTRUCTION AND NOT DESIGNATED AS GROUND COVER AREAS.

TOPSOIL

1. ALL PLANTED AREAS TO HAVE A MINIMUM OF 6" OF QUALITY TOPSOIL.
2. ALL COMPACTED AREAS TO BE AERATED AND AMENDED AS NEEDED.
3. TOPSOIL IS TO BE NATURAL, FERTILE, FRIABLE, PRODUCTIVE SOIL, NEITHER EXCESSIVELY ACID NOR ALKALINE, AND FREE FROM TOXIC SUBSTANCES, STONES WEEDS, CLAY, CLODS, ROOTS, CINDERS, DEBRIS, AND CONSTRUCTION MATERIAL.

PLANTING

1. ALL PLANTING BEDS OR MULCH BEDS SHALL BE FREE OF WEEDS PRIOR TO THE INSTALLATION OF MULCH..
2. THE OPTIMUM TIME OF PLANTING IS FROM OCTOBER 1 TO APRIL 1. SCHEDULING FOR PLANTING AT OTHER TIMES MUST BE APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT.
3. UPON SECURING PLANT MATERIAL AND BEFORE INSTALLATION, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT FOR A PRE-INSTALLATION INSPECTION IN ORDER TO VERIFY ALL PLANT MATERIAL MEETS SPECIFICATIONS. TREES OF SAME SPECIES ARE TO BE MATCHED IN GROWTH CHARACTER AND UNIFORMITY.
4. PLANTS SHALL BE ORIENTED FOR BEST APPEARANCE AND VERTICAL. ALL NON-BIODEGRADABLE ROOT CONTAINERS SHALL BE REMOVED.
5. AFTER PLANTING, TREE BRANCHES SHALL BE SELECTIVELY TRIMMED BY 25%, MAINTAINING NATURAL SHAPE. ALL DEAD AND BROKEN BRANCHES IN TREES AND SHRUBS SHALL ALSO BE PRUNED. REMOVE TAGS, TWINE, OR OTHER NON-BIODEGRADABLE MATERIAL.
6. WATERING: ALL TREES AND SHRUBS SHALL BE THOROUGHLY WATERED WITHIN ONE HOUR OF INSTALLATION.

PLANT MATERIALS

1. THE LANDSCAPE CONTRACTORS SHALL VERIFY ALL MATERIAL QUANTITIES. IN THE EVENT OF A DISCREPANCY, THE QUANTITIES SHOWN ON THE PLAN WILL TAKE PRECEDENCE.
2. ALL PLANT MATERIALS TO BE NURSERY GROWN AND TO COMPLY WITH THE AMERICAN STANDARDS FOR NURSERY STOCK: ANSI - LATEST EDITION FOR SIZE AND QUALITY.
3. ONLY GRADE "A" TYPE PLANTS WILL BE ACCEPTED. PLANTS THAT ARE INFERIOR OR DAMAGED WILL NOT BE ACCEPTED.
4. THE PLANTS DELIVERED TO THE PROJECT SITE SHALL BE PLANTED AS SOON AS SITE CONDITIONS PERMIT. TAKE CARE IN SCHEDULING PLANT DELIVERIES AND THE SIZE OF DELIVERIES SO THAT LONG PERIODS OF STORAGE ARE AVOIDED. ADEQUATELY PROTECT PLANTS PLACED IN TEMPORARY STORAGE FROM THE SUN AND WIND; WATER PLANTS SO AS TO MAINTAIN THEIR APPEARANCE AND HEALTH. PLANTS THAT HAVE NOT BEEN PROPERLY MAINTAINED DURING TEMPORARY STORAGE MAY BE REJECTED BY THE LANDSCAPE ARCHITECT.
5. ALL TREES SHALL BE FIRST QUALITY REPRESENTATIVES OF THEIR SPECIES AND SHALL MEET ALL REQUIREMENTS OTHERWISE STIPULATED. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT PLANTED MATERIAL IN THE FIELD, AT THE GROWING SITE OR ON THE JOB SITE.

MULCHING

1. ALL PLANTING BEDS OR MULCH BEDS SHALL HAVE WEEDS REMOVED PRIOR TO THE INSTALLATION OF MULCH.
2. ALL PLANTING BEDS SHALL HAVE A MINIMUM OF 3" DEPTH OF AGED SHREDDED HARDWOOD BARK MULCH OR A MINIMUM OF 4" DEEP PINE STRAW MULCH.
3. CONTRACTORS SHALL PROVIDE SMOOTH, NEATLY TRENCHED (3 INCH DEEP) BED EDGES.
4. MULCH SHALL NOT CONTACT OUTER BARK AT BASE OF TREES. PULL BACK MULCH 3-4" FROM TRUNK.

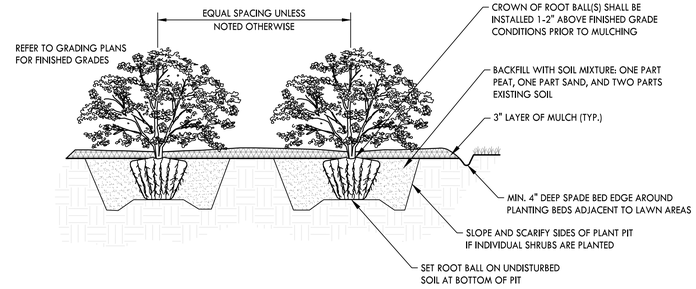
PLANT MAINTENANCE

1. THE LANDSCAPE CONTRACTOR SHALL PROVIDE OWNER WITH WRITTEN INSTRUCTIONS ON THE PROPER CARE OF ALL SPECIFIED PLANT MATERIALS PRIOR TO FINAL PAYMENT.
2. CONTRACTOR TO WARRANTY ALL MATERIAL FOR 2 YEARS AFTER DATE OF FINAL ACCEPTANCE.
3. ALL UNHEALTHY OR DEAD PLANT MATERIAL SHALL BE REPLACED WITHIN ONE YEAR, OR BY THE NEXT PLANTING PERIOD, WHICHEVER COMES FIRST. OTHER DEFECTIVE PLANT MATERIAL SHALL BE REPLACED OR REPAIRED WITHIN THREE (3) MONTHS.

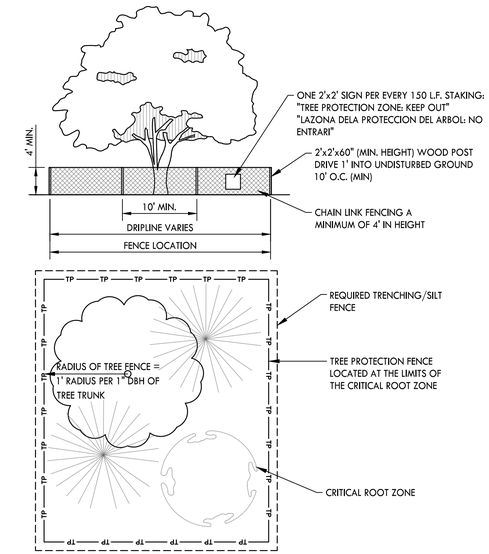
TREE PROTECTION

1. EXISTING TREES TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION DAMAGE.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO PROTECT EXISTING TREES THAT ARE TO REMAIN. NO HEAVY EQUIPMENT OR MATERIALS SHALL BE PERMITTED TO OPERATE OR BE STORED WITHIN THE DRIP LINES OF THE TREES, OUTSIDE THE LIMIT OF GRADING.
3. TREE PROTECTION STEPS:
   - A) INSTALL TREE PROTECTION FENCING IN ACCORDANCE WITH METRO CODE 17.24.110 "PROTECTION OF TREES DURING DEVELOPMENT ACTIVITIES".
   - B) PLACE FENCE POST AND FENCING AT TREE DRIP LINE OR 10' FROM TRUNK, WHICHEVER IS GREATER.
   - C) POST SHALL NOT BE SPACED MORE THAN 10' APART.
   - D) POST TEMPORARY SIGNS - TREE ROOT PROTECTION ZONE.
4. FENCING AND SIGNS SHALL REMAIN IN PLACE UNTIL THE SITE HAS BEEN INSPECTED BY URBAN FORESTER FOR USE AND OCCUPANCY PERMIT.

NOTES:
1. WHERE SHRUBS APPEAR IN BED AREA, 3" OF MULCH SHALL BE SPREAD OVER THE ENTIRE AREA WITHIN THE BED AS INDICATED ON THE PLANS.
2. DO NOT PRUNE SHRUBS BEFORE ACCEPTANCE.
3. CAREFULLY REMOVE CONTAINER FROM ROOT BALL USED FOR SHRUB(S). ANY BROKEN OR CRUMBLING ROOT BALL(S) WILL BE REJECTED.
4. IF SHRUB IS B&B, REMOVE BURLAP FROM TOP $\frac{1}{3}$ OF ROOT BALL OR COMPLETELY REMOVE BURLAP IF SOILS ARE POORLY DRAINED.
5. SCARIFY ROOTBALL IF ROOT BOUND IN CONTAINER PER HORTICULTURE STANDARDS.

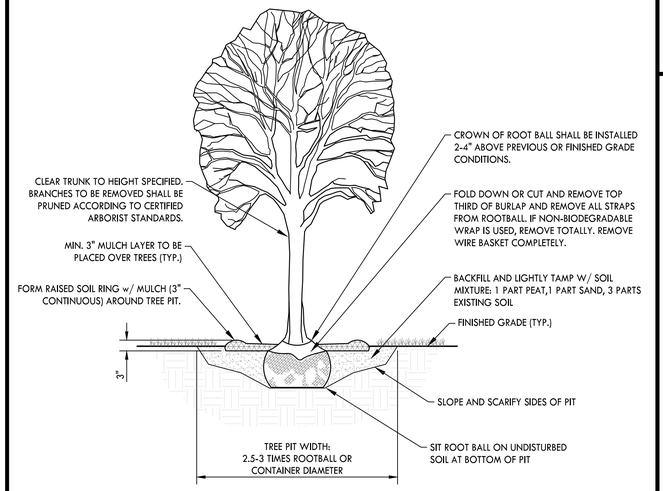


1 SHRUB PLANTING
NOT TO SCALE

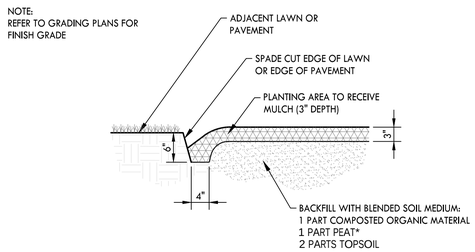


RADIUS OF TREE FENCE=1' RADIUS PER 1" DBH OF TREE TRUNK

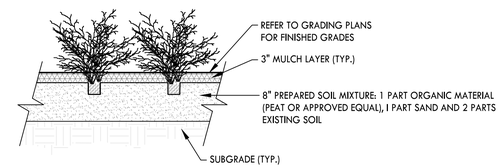
4 TREE PROTECTION
NOT TO SCALE



2 DECIDUOUS TREE PLANTING
NOT TO SCALE



5 SPADE BED EDGE
NOT TO SCALE



3 GROUNDCOVER PLANTING
NOT TO SCALE

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BRADLEY M. LOWRY — REGISTERED — AGRICULTURE — TENNESSEE — LANDSCAPE ARCHITECT — 3/17/23

TROTWOOD AND FOSTER SUBDIVISION
COLUMBIA TENNESSEE

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L2.0
LANDSCAPE DETAILS

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March 14, 2023

City of Columbia
Development Review Committee
700 N Garden Street
Columbia, TN 38401

RE: Trotwood and Foster Subdivision Preliminary Plat

Below are our responses to comments received on February 21, 2023. We believe we have satisfied all comments, but if you have additional concerns or questions, please do not hesitate to contact us. Our responses are as follows:

Engineering

1. Survey needed; no digital supplied only a non-scaled letter size submitted at original submission.
   Response: Survey date is included in this submission.
2. All parallel parking was removed not just cul-de-sac parking.
   Response: Parallel parking was removed throughout the site.
3. Top of pond bank is min. 692 elevation adjust buffer to reflect.
   Response: Top of bank is 682 and buffer has been adjusted to reflect accordingly.
4. Appears to be some off-site grading for Foster Lane, provide agreement.
   Response: Correspondence is ongoing with the adjacent property owner to provide an agreement. Agreement will be provided prior to work session meeting.
5. Engineering is reviewing new proposed storm infrastructure.
   Response: Noted.
6. Unable to verify until survey provided.
   Response: Noted.
7. New alignment of Foster Lane intersecting Trotwood Avenue does not meet geometry standards as outlined in the Engineering Standards and Specifications.
   Response: The layout geometry as well as the approach alignment have been adjusted at this intersection to meet the standards outlined in the Engineering Standards and Specifications.
8. Will need agreement to provide sewer across non-applicant properties.

Planning:

1. Common open space between lot 91-95 is not designed or designated with improvements to meet the definition of open space.
   Response: This open space was revised to be combined with the adjacent open space area to be used as a tree save area as shown on the revised set of plans.
2. Tree save areas are within ROW, tree save area is within power line easement, playground area needed within 800 ft. of all lots, note HOA or other association to maintain Civic Space.
   Response: Tree save areas have been revised to be placed outside of ROW and Easements. A playground area was added to be shown within 800 ft. of all lots. Note was added to the plans about HOA or other association maintaining civic space.
3. Based on conditions of the site staff can agree to the cul-de-sac but it will need to be configured so that the terminus is pointing to the west so that the cul-de-sac can be extended with stub Road B at a later time.

Response: **The layout of the cul-de-sac has been revised so that the roadway can eventually extended with a stub to Road B.**

4. Block perimeter is longer than 2800 feet for Road C.
   Response: **Roadway layout has been changed to add a road connection between Road B and Road C.**
5. Provide phasing plan.
   Response: **There is no phasing proposed for this subdivision.**

We believe that all comments have been addressed. If you have any questions or need additional information, please do not hesitate to contact me at adam@crunkeng.com or 615-873-1795.

Sincerely,



Adam Crunk, PE
Crunk Engineering LLC

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

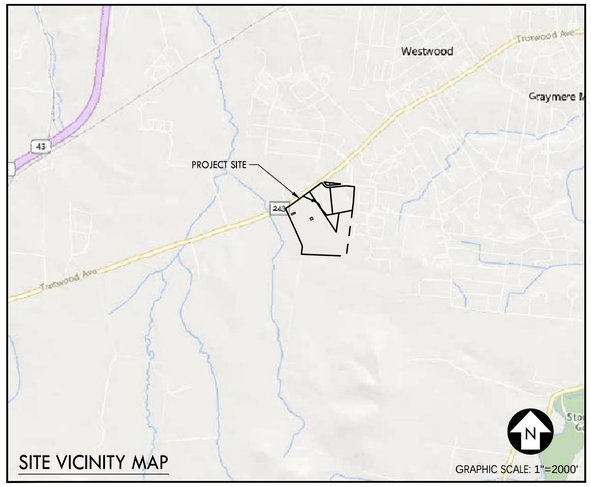
PRELIMINARY PLAT SUBMITTAL

SITE DATA TABLE

PROJECT: TROTWOOD AND FOSTER SUBDIVISION
ADDRESS: SOUTHEAST CORNER OF TROTWOOD AVE AND FOSTER LANE INTERSECTION
PARCEL ID: 112 01803 000
SITE ACREAGE: 49.84 ACRES

EXISTING ZONING: CD-3
PROPOSED ZONING: CD-3

ZONING DISTRICT:	CD-3
AREA:	49.84 AC
PROPOSED LOTS:	124
BUILDING HEIGHT:	35 FT
MIN. LOT WIDTH:	80 FT (TYPICAL) 50 FT (ALLEY LOADED)
FRONT YARD:	
PRIMARY:	25 FT
SECONDARY:	20 FT
SIDE SETBACK:	8 FT
REAR SETBACK:	25 FT 15 FT FROM CENTER LINE IF ALLEY LOADED
REQUIRED CIVIC USE SPACE	5% OF TOTAL AREA 2.49 AC
PROVIDED CIVIC USE SPACE:	5.6% 2.78 AC

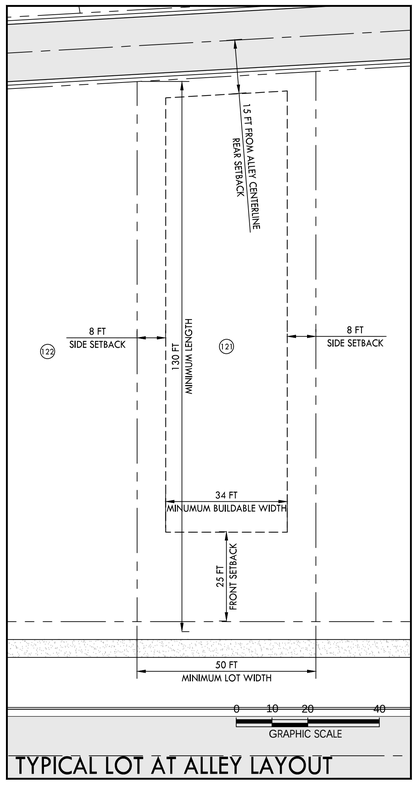


SITE VICINITY MAP

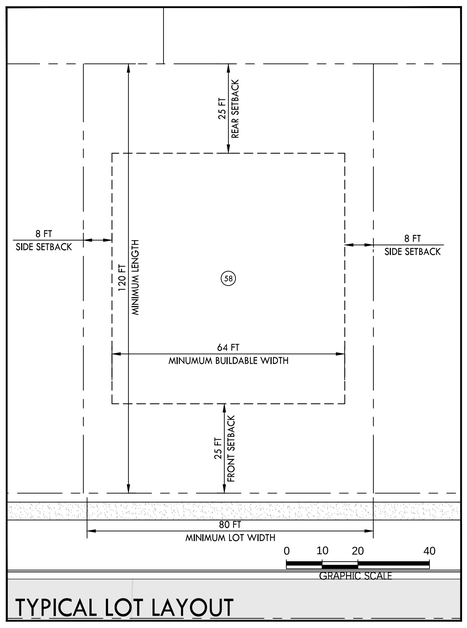
GRAPHIC SCALE: 1"=2000'

Sheet List Table

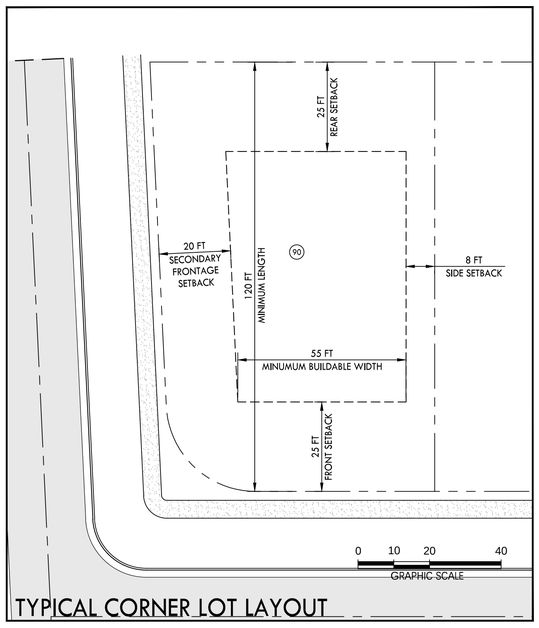
Sheet Number	Sheet Title
C0.0	COVER SHEET
C1.0	OVERALL SITE LAYOUT PLAN
C1.1	SITE LAYOUT PLAN
C1.2	SITE LAYOUT PLAN
C1.3	SITE LAYOUT PLAN
C1.4	SITE LAYOUT PLAN
C1.5	TREE CANOPY EXHIBIT
C1.6	TYPICAL TURN LANE SECTION
C2.0	OVERALL GRADING, DRAINAGE, & UTILITY PLAN
C2.1	GRADING, DRAINAGE, & UTILITY PLAN
C2.2	GRADING, DRAINAGE, & UTILITY PLAN
C2.3	GRADING, DRAINAGE, & UTILITY PLAN
C2.4	GRADING, DRAINAGE, & UTILITY PLAN
C2.5	FORCEMAIN LAYOUT
L1.0	OVERALL LANDSCAPE PLAN
L1.1	LANDSCAPE PLAN
L1.2	LANDSCAPE PLAN
L1.3	LANDSCAPE PLAN
L1.4	LANDSCAPE PLAN
L2.0	LANDSCAPE DETAILS



TYPICAL LOT AT ALLEY LAYOUT



TYPICAL LOT LAYOUT



TYPICAL CORNER LOT LAYOUT

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SUITE 201
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(615) 873-1795
WWW.CRUNKENG.COM

ENGINEERING CRUNK

DANIEL WILSON CRUNK
REGISTERED ENGINEER
AGRICULTURE
1/17/23
AMERICA
No. 114100
STATE OF TENNESSEE

TROTWOOD AND FOSTER SUBDIVISION
COLUMBIA TENNESSEE

REVISIONS

No.	DATE

01/17/23 22040

C0.0
COVER SHEET

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\preliminary plat\C03 COV.dwg

800 FT CIVIC USE SPACE RADIUS.
ALL LOTS WITHIN DEVELOPMENT ARE WITHIN 800 FT OF A CIVIC USE SPACE

REFER TO SHEET C1.1
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C1.4
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C1.2
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C1.3
FOR DETAILED INFORMATION
IN THIS AREA.

BM-505
MAG NAIL IN PAVEMENT
N:457791.50
E:1640500.03
EL:696.18

OPEN SPACE
A = 3.00 ACRE

A = 0.16 ACRE
CIVIC SPACE - POCKET PARK

OPEN SPACE
A = 0.62 ACRE

A = 0.22 ACRE
CIVIC SPACE - PLAYGROUND

OPEN SPACE
A = 0.36 ACRE

CIVIC SPACE - GREEN
A = 1.99 ACRE

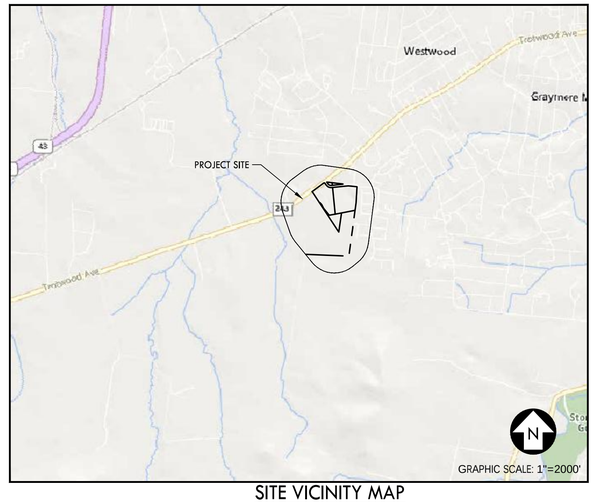
OPEN SPACE
A = 0.90 ACRE

OPEN SPACE
A = 4.28 ACRE

OPEN SPACE
A = 0.33 ACRE

A = 0.41 ACRE
CIVIC SPACE - POCKET PARK

BM-500
IRWC
N:456347.61
E:1641601.1
EL:696.46



SITE VICINITY MAP

FLOOD HAZARD NOTE:

1. THE SUBJECT PROPERTY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD ZONE ACCORDING TO PANEL No. 47119C0280E OF THE F.E.M.A. FLOOD INSURANCE RATE MAPS FOR MAURY COUNTY, TENNESSEE, DATED 4/16/2007

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FRONT YARD:	
PRIMARY:	25 FT
SECONDARY:	20 FT
SIDE SETBACK:	8 FT
REAR SETBACK:	25 FT 15 FT FROM CENTER LINE IF ALLEY LOADED
REQUIRED CIVIC USE SPACE	5% OF TOTAL AREA 2.49 AC
PROVIDED CIVIC USE SPACE:	5.6% 2.78 AC

0 50 100 150 300
GRAPHIC SCALE

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ENGINEERING CRUNK

TENNESSEE LICENSED LANDSCAPE ARCHITECT
ANNA WILSON CHANDLER
REGISTERED
AGRICULTURE
AMERICA
No. 114100
1/17/23
STATE OF TENNESSEE

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

REVISIONS	
No.	DATE

01/17/23 22040

C1.0

OVERALL SITE LAYOUT PLAN

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\preliminary plat\C1.0 LAY.dwg

NOTES:
1. REFER TO SHEET CXXXX FOR PARCEL AREA TABLES

PROPOSED LAYOUT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPERTY LINE
- EDGE OF NEW PAVEMENT

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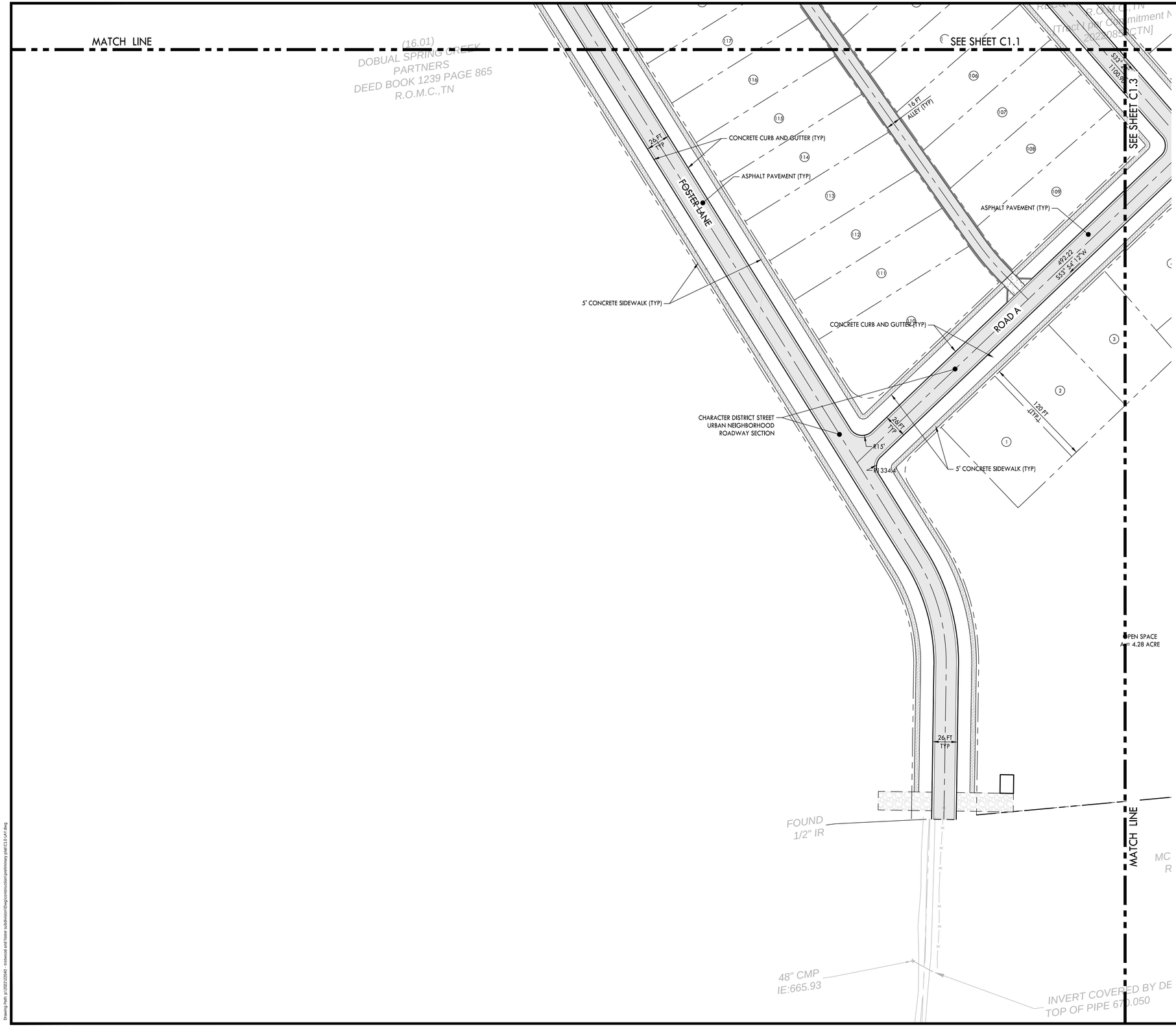
TROTWOOD AND FOSTER SUBDIVISION
COLUMBIA TENNESSEE

REVISIONS	
No.	DATE

01/17/23 22040

C1.1
SITE LAYOUT PLAN

0 10 20 30 40 50 100
GRAPHIC SCALE



NOTES:
1. REFER TO SHEET CXXXX FOR PARCEL AREA TABLES

PROPOSED LAYOUT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPERTY LINE
- EDGE OF NEW PAVEMENT

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ADAM WILSON CRUNK
REGISTERED
LANDSCAPE ARCHITECT
AGRICULTURE
1/17/23
No. 114180
STATE OF TENNESSEE

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

REVISIONS	
No.	DATE

01/17/23 22040

C1.2

SITE LAYOUT PLAN

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Design\construction\preliminary plat\C1.0 LAY.dwg

MATCH LINE

SEE SHEET C1.2

SEE SHEET C1.4

ROAD C

ROAD D

ROAD B

ENTRANCE TO 5' WALKING TRAIL

CIVIC SPACE - GREEN
A = 1.99 ACRE

5' CONCRETE SIDEWALK (TYP)

CONCRETE CURB AND GUTTER (TYP)

ASPHALT PAVEMENT (TYP)

OPEN SPACE
A = 0.90 ACRE

150 FT
ELECTRIC EASEMENT

CHARACTER DISTRICT STREET
URBAN NEIGHBORHOOD
ROADWAY SECTION

OPEN SPACE
A = 4.28 ACRE

OPEN SPACE
A = 0.33 ACRE

CIVIC SPACE - POCKET PARK
A = 0.41 ACRE

120 FT
(TYP.)

26 FT
TYP

R15'

L=106.78, R=125.00
D=48.9434

130.15
N82° 24' 56"W

N03° 28' 19"W
120.20

S39° 11' 19"E
117.19'

L16

L17

(2.0)
LOT 79
FOUND
1/2" IR

(1.0)
LOT 80
FOUND
1/2" IR BROKEN CAP

BM-500
IRWC
N:456347.
E:164160
EL:696.4

S7° 37' 43"W 567.50'

N87° 37' 10"W 1255.14'

MCBROOM F
RECORD B
R

EVIDENCE OF
VEHICULAR
PASSAGE

OLD BURIED T POST

(18.02)
MCBROOM FAMILY PARTNERSHIP
RECORD BOOK 1466 PAGE 134
R.O.M.C.,TN

T COVERED BY DEBRIS
E PIPE 670.050

OHE

NOTES:
1. REFER TO SHEET CXXXX FOR PARCEL AREA TABLES

PROPOSED LAYOUT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPERTY LINE
- EDGE OF NEW PAVEMENT

0 10 20 30 40 50 100
GRAPHIC SCALE

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1/17/23
STATE OF TENNESSEE

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

REVISIONS	
No.	DATE

01/17/23 22040

C1.3

SITE LAYOUT PLAN

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\preliminary plat\C1.0 LAY.dwg

SEE SHEET C1.1

FOUND ½" REBAR RLS 1987

REBAR RLS 1987

(18.00)
TRACT 2
KATHLEEN M. ROGERS
RECORD BOOK 2174 PAGE 1417
R.O.M.C.,TN

(18.00)
TRACT 1

Tract 1 line per Commitment No.20220860CTN
Tract 2 line per Commitment No.20220860CTN

STORAGE BARN

30' AQUATIC BUFFER

ENTRANCE TO 5' WALKING TRAIL

CHARACTER DISTRICT STREET
URBAN NEIGHBORHOOD
ROADWAY SECTION

WALKING PATH (TYP)

4X4 Post

3" STEEL CONDUIT

FOUND ½" REBAR RLS 1335

FOUND ½" REBAR RLS 1335

FOUND ½" REBAR RLS 1335

TWO STORY BRICK HOUSE

STORM DRAIN

S5° 44' 11"E
748.24'

L27

L28

L29

L30
N33° 28' 19"W
995.41'

L31

L32

BARN

5' WALKING TRAIL

FOUND ½" REBAR RLS 1335

(18.05)
KATHLEEN M. ROGERS
RECORD BOOK 2768 PAGE 165
R.O.M.C.,TN
[Hatched parcel excluded from Commitments]

N8° 06' 56"E
539.25'

N79° 12' 20"E
383.77'

26 FT TYP

150 FT
ELECTRIC EASEMENT

ROAD D

5' CONCRETE SIDEWALK (TYP)

120 FT
(TYP.)

CONCRETE CURB AND GUTTER (TYP)

ASPHALT PAVEMENT (TYP)

N07° 35' 04"E
142.15'

R15'

155.40'
N82° 24' 45"W

ROAD E

R15'

R34'

L6 (3.0) LOT 12

L7 FOUND 1" IRON PIPE (4.0) LOT 11

L8 FOUND IR (5.0) LOT 10

L9 FOUND 1/2" IRWC (6.0) LOT 9 FOUND 1" IRON PIPE

L10 (7.0) LOT 8 FOUND 1" PIPE

L11 (8.0) LOT 7 FOUND 1 1/4" DISC

L12 (9.0) LOT 6 FOUND 1 1/4" DISC

L13 (10.0) LOT 5 FOUND 1" IRON PIPE

L14 MAP 112 PARCEL 4.0 LOT 73

UTILITY BOX

UTILITY BOX

ELECTRIC BO

HOLLY BERRY DRIVE
40' R.O.W.

L15 (3.0) LOT 78 FOUND 1/2" IR

L16 (2.0) LOT 79 FOUND 1/2" IR

FOU 5/8"

FINA PL

MATCH LINE

MATCH LINE

SEE SHEET C1.3

S33° 41' 19"E
1,100.89'

(18.03)
KATHLEEN M. ROGERS
RECORD BOOK 2768 PAGE 163
R.O.M.C.,TN
[Per Commitment No. 20220860CTN]

NOTES:
1. REFER TO SHEET CXXXX FOR PARCEL AREA TABLES

PROPOSED LAYOUT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPERTY LINE
- EDGE OF NEW PAVEMENT

0 10 20 30 40 50 100
GRAPHIC SCALE

N

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BRENTWOOD, TN 37027
(615) 873-1795
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ENGINEERING CRUNK

ANNA WILSON CRUNK
REGISTERED ENGINEER
AGRICULTURE
AMERICA
No. 114,180
STATE OF TENNESSEE
1/17/23

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

REVISIONS

No.	DATE

01/17/23 22040

C1.4

SITE LAYOUT PLAN

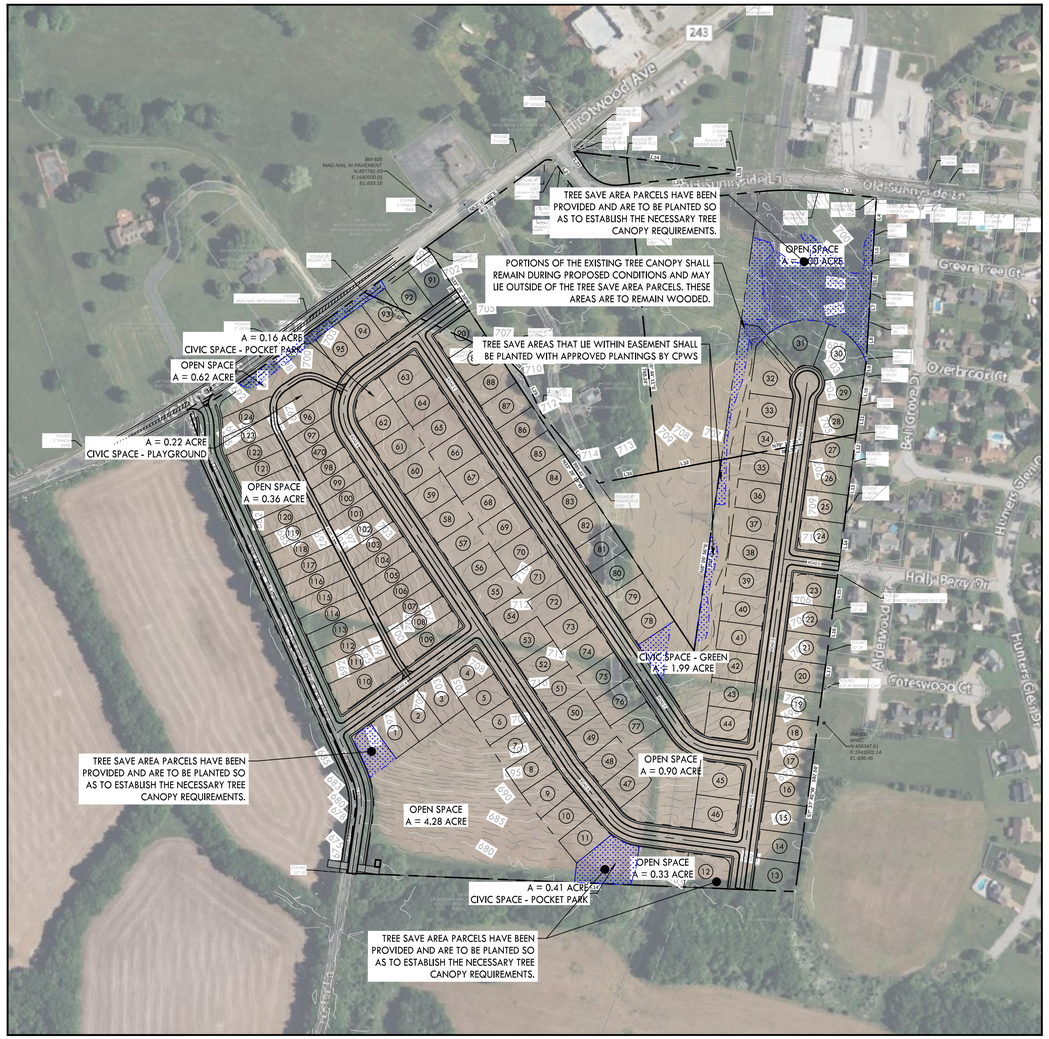
Drawing Path: p:\22022\22040 - trotwood and foster subdivision\Dwg\construction\preliminary plat\C1.0 LAY.dwg

TREE CANOPY PRESERVATION REQUIREMENTS:

TOTAL SITE AREA:	49.84 AC
EXISTING TREE CANOPY AREA:	5.95 AC
TREE CANOPY PERCENTAGE (OF TOTAL AREA):	11.9%
REQUIRED TREE CANOPY RETENTION:	54% 3.21AC
PROVIDE TREE CANOPY RETENTION:	54.8% 3.26 AC



EXISTING TREE CANOPY EXHIBIT



PROPOSED TREE CANOPY EXHIBIT

0 100 200 400
GRAPHIC SCALE

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TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

REVISIONS

No.	DATE

01/17/23 22040

C1.5

TREE CANOPY EXHIBIT

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\preliminary plat\C1.5 TREE.dwg

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ENGINEERING CRUNK

ADAM WILSON CRUNK
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 114180
STATE OF TENNESSEE
1/17/23

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

REVISIONS

No.	DATE

01/17/23 22040

C1.6

TYPICAL TURN LANE SECTION

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\preliminary plat\C1.0 LAY.dwg

MAURY COUNTY HIGHWAY DEPARTMENT:
ALL COUNTY ROADWAY AND ROW CONNECTIONS, IMPACTS, ANNEXATIONS, AND IMPROVEMENTS ARE SUBJECT TO FURTHER EVALUATION BY THE MAURY COUNTY HIGHWAY DEPARTMENT AND COULD REQUIRE ADDITIONAL, OFF-SITE ROADWAY IMPROVEMENTS AND/ OR A SEPARATE SURETY FOR ANY POTENTIAL DAMAGE TO EXISTING COUNTY ROADWAYS. FURTHERMORE, THE TRAFFIC IMPACT STUDY SHALL BE SUBJECT TO FURTHER REVIEW BY THE MAURY COUNTY HIGHWAY DEPARTMENT. APPLICANT SHALL REACH OUT TO MCHD FOR FURTHER COORDINATION AND EVALUATION OF THE PROPOSED ROADWAY IMPROVEMENTS ON FOSTER LANE.

REFER TO SHEET C2.1
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C2.4
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C2.2
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C2.3
FOR DETAILED INFORMATION
IN THIS AREA.

OPEN SPACE
A = 3.00 ACRE

A = 0.16 ACRE
CIVIC SPACE - POCKET PARK

OPEN SPACE
A = 0.62 ACRE

A = 0.22 ACRE
CIVIC SPACE - PLAYGROUND

OPEN SPACE
A = 0.36 ACRE

CIVIC SPACE - GREEN
A = 1.99 ACRE

OPEN SPACE
A = 0.90 ACRE

OPEN SPACE
A = 4.28 ACRE

OPEN SPACE
A = 0.39 ACRE

A = 0.41 ACRE
CIVIC SPACE - POCKET PARK

BM-505
MAG NAIL IN PAVEMENT
N:457791.93
E:1640500.03
EL:696.18

BM-500
MAG NAIL IN PAVEMENT
N:456347.61
E:1641601.14
EL:696.46

0 50 100 150 300
GRAPHIC SCALE

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ENGINEERING CRUNK

ANNA WILSON CRUNK
REGISTERED
LANDSCAPE ARCHITECT
AGRICULTURE
AMERICA
No. LA 1190
STATE OF TENNESSEE
1/17/23

TROTWOOD AND FOSTER SUBDIVISION
COLUMBIA TENNESSEE

REVISIONS

No.	DATE

01/17/23 22040

C2.0
OVERALL GRADING, DRAINAGE, & UTILITY PLAN

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\preliminary plat\C2.0 GRA & UTI.dwg

(06.04)
MARTIN RICHARD RAYBURN
RECORD BOOK 1385, PAGE 280
R.O.M.C.,TN

(06.01)
DAVID W.WESTMORELAND, ETUX
RECORD BOOK 2231, PAGE 1271, R.O.M.C.,TN

TROTWOOD AVENUE
R.O.W. 60'

SEE SHEET C2.4

S33° 28' 30"E
359.07'

L27

TEE WITH VALVES

FIRE HYDRANT ASSEMBLY (TYP)

A = 0.16 ACRE
CIVIC SPACE - POCKET PARK

8" WATER LINE (TYP)

SINGLE CURB INLET (TYP)

OPEN SPACE
A = 0.62 ACRE

CONNECT TO EXISTING WATER LINE WITH TAPPING SLEEVE AND VALVE

18" CMP
IE:680.24

18" CMP
IE:677.82

24" CMP
IE:677.19

24" CMP
IE:676.51

FIBER OPTIC
LINE MARKER
AT&T

SINGLE CATCH BASIN (TYP)

A = 0.22 ACRE
CIVIC SPACE - PLAYGROUND

FIRE HYDRANT ASSEMBLY (TYP)

OPEN SPACE
A = 0.36 ACRE

STORMWATER POND 1

STORMWATER POND 1
OUTLET STRUCTURE

SINGLE CURB INLET (TYP)

SANITARY MANHOLE (TYP)

ROAD C

ALLEY A

8" SANITARY LINE (TYP)

SANITARY MANHOLE (TYP)

FIRE HYDRANT ASSEMBLY (TYP)

MATCH LINE

MATCH LINE

SEE SHEET C2.2

(16.01)
DOBUAL SPRING CREEK PARTNERS
DEED BOOK 1239 PAGE 865
R.O.M.C.,TN

18.03
KATHLEEN M ROGERS
RECORD BOOK 2668 PAGE
R.O.M.C.,TN
Tract I per Commitment N
2022085-CTN]

PROPOSED GRADING & DRAINAGE LEGEND

- PROPOSED CONTOUR
- STORM PIPE
- SINGLE CURB INLET
- SINGLE CATCH BASIN
- JUNCTION BOX

PROPOSED UTILITY LEGEND

- SANITARY SEWER LINE
- WATER LINE

0 10 20 30 40 50 100
GRAPHIC SCALE

N

CRUNK ENGINEERING LLC
7112 CROSSROADS BOULEVARD
SUITE 201
BRENTWOOD, TN 37027
(615) 873-1795
WWW.CRUNKENG.COM

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TENNESSEE REGISTERED ENGINEER
ANNA WILSON CRUNK
AGRICULTURE
1/17/23
STATE OF TENNESSEE

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

REVISIONS	
No.	DATE

01/17/23 22040

C2.1

GRADING, DRAINAGE, & UTILITY PLAN

Drawing Path: s:\2022\22040 - trotwood and foster subdivision\0engr\construction\preliminary plat\C2.0 GRA & UTI.dwg

MATCH LINE

SEE SHEET C2.1

SEE SHEET C2.3

(16.01)
DOBUAL SPRING CREEK
PARTNERS
DEED BOOK 1239 PAGE 865
R.O.M.C., TN

FOSTER LANE

ROAD 'A'

SINGLE CATCH BASIN (TYP)

FIRE HYDRANT ASSEMBLY (TYP)

8" WATER LINE (TYP)

SINGLE CURB INLET (TYP)

SEWER MAIN UNDER FOSTER LANE TO BE APPROXIMATELY 12' DEEP AT THIS LOCATION

TEE WITH VALVES

8" SANITARY LINE (TYP)

SANITARY MANHOLE (TYP)

OPEN SPACE
A= 4.28 ACRE

CONCRETE HEADWALL (TYP)

STORMWATER POND 2

STORMWATER POND 2 OUTLET STRUCTURE

SANITARY PUMP STATION

SANITARY FORCE MAIN (TYP)

48" CMP
IE:665.93

INVERT COVERED BY DE
TOP OF PIPE 670.050

MATCH LINE

PROPOSED GRADING & DRAINAGE LEGEND

- 55 — PROPOSED CONTOUR
- ST — STORM PIPE
- SINGLE CURB INLET
- SINGLE CATCH BASIN
- JUNCTION BOX

PROPOSED UTILITY LEGEND

- SS — SANITARY SEWER LINE
- W — WATER LINE

0 10 20 30 40 50 100
GRAPHIC SCALE

N

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ALAN WILSON CRUNK
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AMERICA
No. 114190
STATE OF TENNESSEE
1/17/23

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

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C2.2

GRADING, DRAINAGE, & UTILITY PLAN

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\preliminary plat\C2.0 GRA & UTI.dwg

MATCH LINE

SEE SHEET C2.2

SEE SHEET C2.4

TEE WITH VALVES

8" WATER LINE (TYP)

SANITARY MANHOLE (TYP)

8" SANITARY LINE (TYP)

FIRE HYDRANT ASSEMBLY (TYP)

8" WATER LINE (TYP)

CIVIC SPACE - GREEN
A = 1.99 ACRE

TYPICAL NOTE FOR LOT DRAINAGE:
SWALES TO BE PROVIDED BETWEEN
LOTS ON LOT LINES.

SINGLE CURB INLET (TYP)

SANITARY FORCE MAIN (TYP)

ROAD B

ROAD C

ROAD D

OPEN SPACE
A = 0.90 ACRE

SWALE TO BE PROVIDED ALONG REAR LOT
LINES FOR REAR CONNECTING LOTS. INLETS TO
BE PROVIDED A MINIMUM OF EVERY 8 LOTS AS
PER CITY OF COLUMBIA REQUIREMENTRS

OPEN SPACE
A = 4.28 ACRE

STORMWATER POND

CONCRETE HEADWALL (TYP)

OPEN SPACE
A = 0.33 ACRE

JUNCTION MANHOLE (TYP)

N87° 37' 10"W 1255.14'

CIVIC SPACE - POCKET PARK
A = 0.41 ACRE

L16

L17

S7° 37' 43"W 567.50'

(2.0)
LOT 79

(1.0)
LOT 80

BM-500
IRWC
N:456347.
E:164160
EL:696.4

MCBROOM F/
RECORD BC
R

OLD BURIED T POST

(18.02)
MCBROOM FAMILY PARTNERSHIP
RECORD BOOK 1466 PAGE 134
R.O.M.C.,TN

T COVERED BY DEBRIS
PIPE 679.050

COLLAPSED BARN REMNANTS
INSIDE TREE AREA

BARN

EVIDENCE OF
VEHICULAR
PASSAGE

OHE

PROPOSED GRADING & DRAINAGE LEGEND

- 55 — PROPOSED CONTOUR
- ST — STORM PIPE
- SINGLE CURB INLET
- SINGLE CATCH BASIN
- JUNCTION BOX

PROPOSED UTILITY LEGEND

- SS — SANITARY SEWER LINE
- W — WATER LINE

0 10 20 30 40 50 100
GRAPHIC SCALE

N

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ANDREW WILSON CRUNK
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STATE OF TENNESSEE
1/17/23

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COLUMBIA TENNESSEE

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C2.3

GRADING, DRAINAGE, & UTILITY PLAN

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\preliminary plat\C2.3 GRA & UTI.dwg

SEE SHEET C2.1

(18.00)
TRACT 2
KATHLEEN M. ROGERS
RECORD BOOK 2174 PAGE 1417
R.O.M.C., TN

(18.00)
TRACT 1

Tract 1 line per Commitment No.20220860CTN
Tract 2 line per Commitment No.20220860CTN

4X4 Post

3" STEEL CONDUIT

TWO STORY
BRICK HOUSE

STORM DRAIN

BARN

STORAGE
BARN

JUNCTION MANHOLE (TYP)

CONCRETE HEADWALL (TYP)

CONCRETE BLOCK BENCH

FIRE HYDRANT ASSEMBLY (TYP)

SANITARY MANHOLE (TYP)

SINGLE CURB INLET (TYP)

8" WATER LINE (TYP)

CONNECT TO EXISTING SANITARY SYSTEM (TYP)

CONNECT TO EXISTING WATER LINE

TEE WITH VALVES

150 FT
ELECTRIC EASEMENT

L27 L28 L29 L30 L31 L32

S5° 44' 11"E
748.24'

N33° 28' 19"W
995.41'

N79° 12' 20"E
383.77'

N8° 06' 56"E
539.25'

ROAD A

ROAD B

ROAD C

ROAD D

ROAD E

L6 L7 L8 L9 L10 L11 L12 L13 L14 L15 L16

(3.0)
LOT 12

(4.0)
LOT 11

(5.0)
LOT 10

(6.0)
LOT 9

(7.0)
LOT 8

(8.0)
LOT 7

(9.0)
LOT 6

(10.0)
LOT 5

(3.0)
LOT 78

(2.0)
LOT 79

FINAL PLAT HUNTE
PHASE 1
PLAT BOOK 7, P.
R.O.M.C.,

MAP 112 PARCEL 4.0
LOT 73

(18.05)
KATHLEEN M. ROGERS
RECORD BOOK 2768 PAGE 165
R.O.M.C., TN
[Hatched parcel excluded from
Commitments]

UTILITY BOX

UTILITY BOX
ELECTRIC BOX

HOLLY BERRY DRIVE
40' R.O.W.

TC:704.5
IE (NW),
IE (SE):

MATCH LINE

MATCH LINE

SEE SHEET C2.3

PROPOSED GRADING & DRAINAGE LEGEND

- 55 — PROPOSED CONTOUR
- ST — STORM PIPE
- SINGLE CURB INLET
- SINGLE CATCH BASIN
- JUNCTION BOX

PROPOSED UTILITY LEGEND

- SS — SANITARY SEWER LINE
- W — WATER LINE

GRAPHIC SCALE 0 10 20 30 40 50 100

N

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JAMES WILSON CRUNK
REGISTERED
AGRICULTURE
No. 114180
11/7/23
STATE OF TENNESSEE

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

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C2.4

GRADING, DRAINAGE, & UTILITY PLAN

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REGISTERED LANDSCAPE ARCHITECT
AGRICULTURE
No. 114100
STATE OF TENNESSEE
1/17/23

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

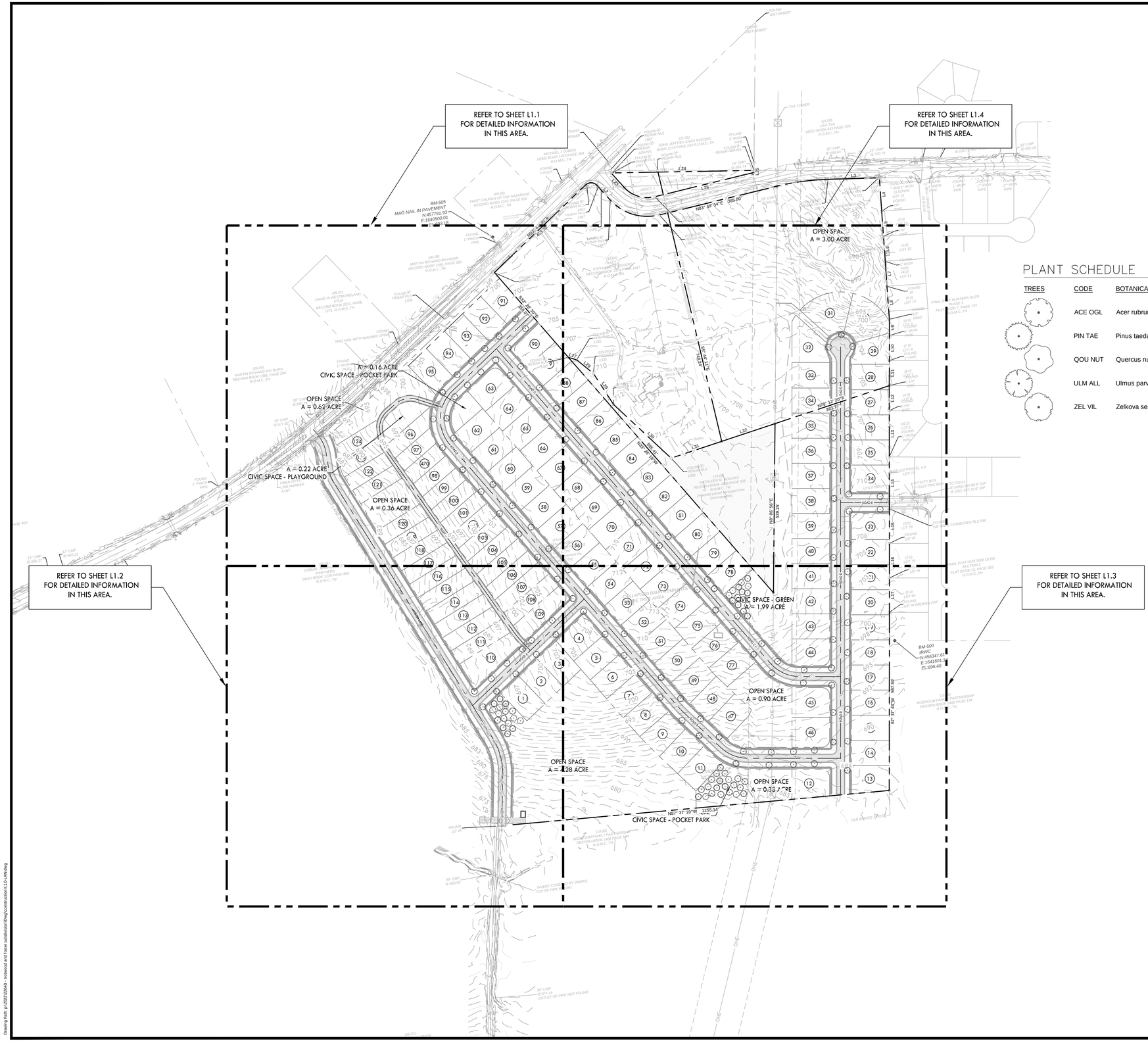
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No.	DATE

01/17/23 22040

C2.5

FORCEMAIN LAYOUT

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\preliminary plat\C2.5 GRA & LIT.dwg



LANDSCAPE PLAN KEYNOTES

CODE	DESCRIPTION	DETAIL LOCATION
L1	AREA TO BE SEEDED LAWN	AS NOTED
L2	AREA TO BE SODDED LAWN	AS NOTED
L3	PLANTING BED LIMITS	-
L4	IRRIGATION LIMITS	-

NOTES:
1. REFER TO SHEET L2.0 FOR ADDITIONAL NOTES.
2. REFER TO SHEET L2.0 FOR PLANT LIST

PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
	ACE OGL	Acer rubrum 'October Glory' / October Glory Red Maple	2.5" Cal.	B&B	27
	PIN TAE	Pinus taeda / Loblolly Pine	2" Cal.	B&B	18
	QOU NUT	Quercus nuttallii / Nuttall Oak	2" Cal.	B&B	17
	ULM ALL	Ulmus parvifolia 'Allee' / Allee® Lacebark Elm	2" Cal.	B&B	34
	ZEL VIL	Zelkova serrata 'Village Green' / Village Green Japanese Zelkova	2" Cal.	B&B	85

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AMERICA
LANDSCAPE ARCHITECT

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

REVISIONS	
No.	DATE

01/17/23 22040

L1.0

OVERALL
LANDSCAPE PLAN

811 Know what's below. Call before you dig.

0 50 100 150 300
GRAPHIC SCALE

N

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\L1.0-LAN.dwg

LANDSCAPE PLAN KEYNOTES

CODE	DESCRIPTION	DETAIL LOCATION
L1	AREA TO BE SEEDED LAWN	AS NOTED
L2	AREA TO BE SODDED LAWN	AS NOTED
L3	PLANTING BED LIMITS	-
L4	IRRIGATION LIMITS	-

NOTES:
1. REFER TO SHEET L2.0 FOR ADDITIONAL NOTES.
2. REFER TO SHEET L2.0 FOR PLANT LIST

SEE SHEET C1.4

PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
	ACE OGL	Acer rubrum 'October Glory' / October Glory Red Maple	2.5" Cal.	B&B	27
	PIN TAE	Pinus taeda / Loblolly Pine	2" Cal.	B&B	18
	QOU NUT	Quercus nuttallii / Nuttall Oak	2" Cal.	B&B	17
	ULM ALL	Ulmus parvifolia 'Allee' / Allee® Lacebark Elm	2" Cal.	B&B	34
	ZEL VIL	Zelkova serrata 'Village Green' / Village Green Japanese Zelkova	2" Cal.	B&B	85

MATCH LINE

SEE SHEET C1.2

0 10 20 30 40 50 100
GRAPHIC SCALE

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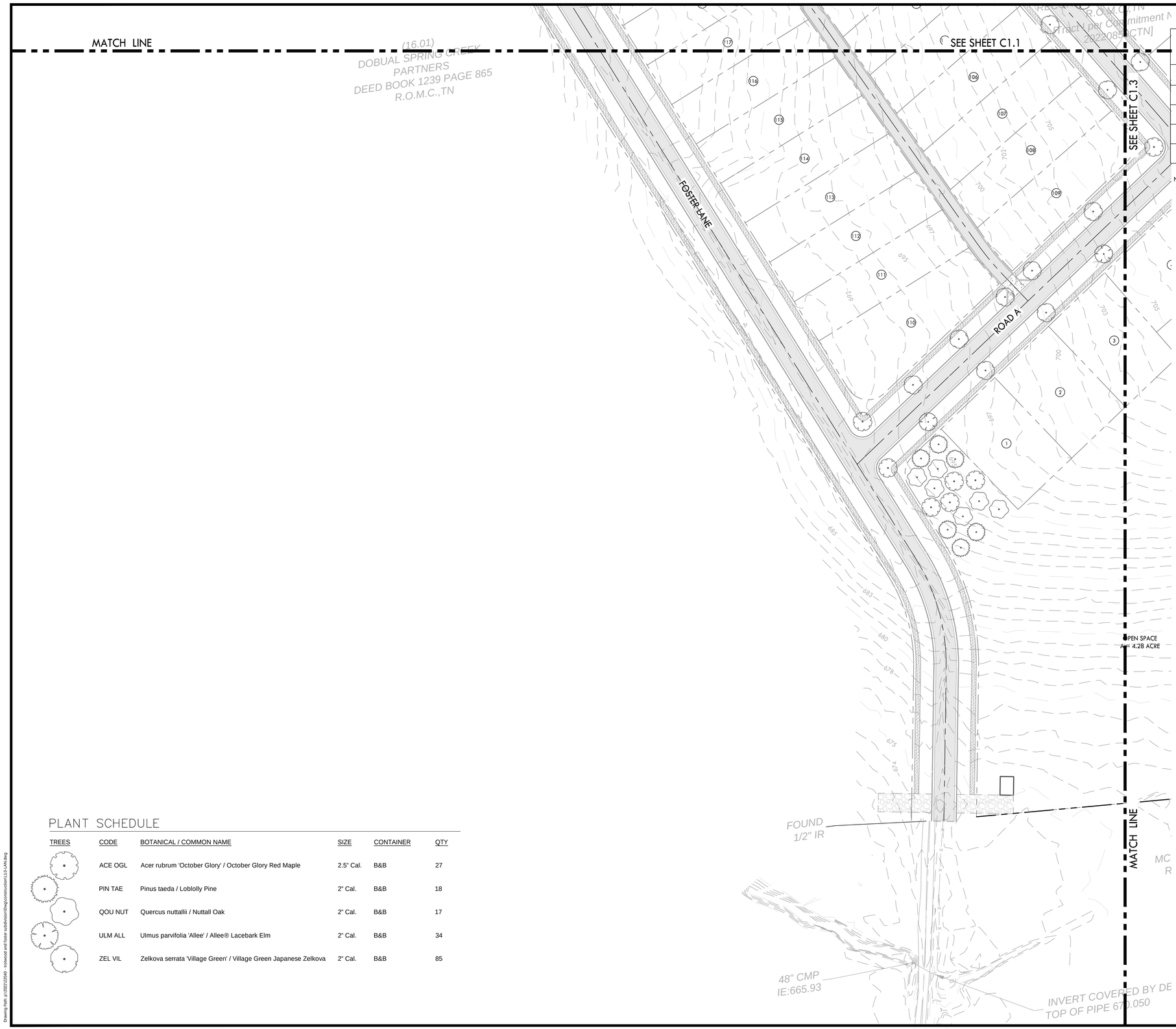
TROTWOOD AND FOSTER
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COLUMBIA TENNESSEE

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No.	DATE

01/17/23 22040

L1.1
LANDSCAPE PLAN

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\temp\construction\L1.0-LAN.dwg



LANDSCAPE PLAN KEYNOTES

CODE	DESCRIPTION	DETAIL LOCATION
L1	AREA TO BE SEEDED LAWN	AS NOTED
L2	AREA TO BE SODDED LAWN	AS NOTED
L3	PLANTING BED LIMITS	-
L4	IRRIGATION LIMITS	-

NOTES:
1. REFER TO SHEET L2.0 FOR ADDITIONAL NOTES.
2. REFER TO SHEET L2.0 FOR PLANT LIST

PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
	ACE OGL	Acer rubrum 'October Glory' / October Glory Red Maple	2.5" Cal.	B&B	27
	PIN TAE	Pinus taeda / Loblolly Pine	2" Cal.	B&B	18
	QOU NUT	Quercus nuttallii / Nuttall Oak	2" Cal.	B&B	17
	ULM ALL	Ulmus parvifolia 'Allee' / Allee® Lacebark Elm	2" Cal.	B&B	34
	ZEL VIL	Zelkova serrata 'Village Green' / Village Green Japanese Zelkova	2" Cal.	B&B	85

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L1.2

LANDSCAPE PLAN

811 Know what's below. Call before you dig.

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\L1.0-LAN.dwg

MATCH LINE

SEE SHEET C1.2

SEE SHEET C1.4

ROAD C

ROAD D

ROAD B

CIVIC SPACE - GREEN
A = 1.99 ACRE

OPEN SPACE
A = 0.90 ACRE

OPEN SPACE
A = 4.28 ACRE

OPEN SPACE
A = 0.33 ACRE

CIVIC SPACE - POCKET PARK
A = 0.41 ACRE

COLLAPSED BARN REMNANTS
INSIDE TREE AREA

BARN

EVIDENCE OF
VEHICULAR
PASSAGE

OLD BURIED T-POST

L16

L17

(2.0)
LOT 79
FOUND
1/2" IR

(1.0)
LOT 80
FOUND
1/2" IR BROKEN CAP

BM-500
IRWC
N:456347.
E:164160
EL:696.4

S7° 37' 43"W 567.50'

N87° 37' 10"W 1255.14'

150'

MCBROOM F
RECORD BO
R

LANDSCAPE PLAN KEYNOTES

CODE	DESCRIPTION	DETAIL LOCATION
L1	AREA TO BE SEEDED LAWN	AS NOTED
L2	AREA TO BE SODDED LAWN	AS NOTED
L3	PLANTING BED LIMITS	-
L4	IRRIGATION LIMITS	-

NOTES:
1. REFER TO SHEET L2.0 FOR ADDITIONAL NOTES.
2. REFER TO SHEET L2.0 FOR PLANT LIST

PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
	ACE OGL	Acer rubrum 'October Glory' / October Glory Red Maple	2.5" Cal.	B&B	27
	PIN TAE	Pinus taeda / Loblolly Pine	2" Cal.	B&B	18
	QOU NUT	Quercus nuttallii / Nuttall Oak	2" Cal.	B&B	17
	ULM ALL	Ulmus parvifolia 'Allee' / Allee® Lacebark Elm	2" Cal.	B&B	34
	ZEL VIL	Zelkova serrata 'Village Green' / Village Green Japanese Zelkova	2" Cal.	B&B	85

(18.02)
MCBROOM FAMILY PARTNERSHIP
RECORD BOOK 1466 PAGE 134
R.O.M.C., TN

T COVERED BY DEBRIS
E PIPE 670.050

0 10 20 30 40 50 100
GRAPHIC SCALE

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LANDSCAPE ARCHITECT

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

REVISIONS	
No.	DATE

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L1.3

LANDSCAPE PLAN

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\L1.0-LAN.dwg

PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER	QTY
	ACE OGL	Acer rubrum 'October Glory' / October Glory Red Maple	2.5" Cal.	B&B	27
	PIN TAE	Pinus taeda / Loblolly Pine	2" Cal.	B&B	18
	QOU NUT	Quercus nuttallii / Nuttall Oak	2" Cal.	B&B	17
	ULM ALL	Ulmus parvifolia 'Allee' / Allee® Lacebark Elm	2" Cal.	B&B	34
	ZEL VIL	Zelkova serrata 'Village Green' / Village Green Japanese Zelkova	2" Cal.	B&B	85

LANDSCAPE PLAN KEYNOTES

CODE	DESCRIPTION	DETAIL LOCATION
L1	AREA TO BE SEEDED LAWN	AS NOTED
L2	AREA TO BE SODDED LAWN	AS NOTED
L3	PLANTING BED LIMITS	-
L4	IRRIGATION LIMITS	-

NOTES:
1. REFER TO SHEET L2.0 FOR ADDITIONAL NOTES.
2. REFER TO SHEET L2.0 FOR PLANT LIST

SEE SHEET C1.1

FOUND ½" REBAR RLS 1987

(18.00) TRACT 1

(46.00) TRACT 2 KATHLEEN M. ROGERS RECORD BOOK 2174 PAGE 1417 R.O.M.C., TN

Tract 1 line per Commitment No.20220860CTN

STORAGE BARN

(3.0) LOT 12

FOUND 1" IRON PIPE (4.0) LOT 11

FOUND IR (5.0) LOT 10

FOUND 1/2" IRWC (6.0) LOT 9

FOUND 1" IRON PIPE

(7.0) LOT 8 FOUND 1" PIPE

(8.0) LOT 7 FOUND 1 1/4" DISC

(9.0) LOT 6 FOUND 1 1/4" DISC

(10.0) LOT 5 FOUND 1" IRON PIPE

MAP 112 PARCEL 4.0 LOT 73

UTILITY BOX

UTILITY BOX ELECTRIC BO

HOLLY BERRY DRIVE 40' R.O.W.

(3.0) LOT 78

FOUND 1/2" IR

(2.0) LOT 79

FOUND 1/2" IR

FOU 5/8"

L6 L7 L8 L9 L10 L11 L12 L13 L14 L15 L16

FINA

PL

4X4 Post

3" STEEL CONDUIT

FOUND ½" REBAR RLS 1335

L27 L28 L29

S5° 44' 11"E 748.24'

TWO STORY BRICK HOUSE

STORM DRAIN

FOUND ½" REBAR RLS 1335

FOUND ½" REBAR RLS 1335

CONCRETE BLOCK BENCH

ROAD D

N79° 12' 20"E 383.77'

L30 N33° 28' 19"W 995.41'

L32

L31

BARN

FOUND ½" REBAR RLS 1335

(18.05) KATHLEEN M. ROGERS RECORD BOOK 2768 PAGE 165 R.O.M.C., TN [Hatched parcel excluded from Commitments]

N8° 06' 56"E 539.25'

ROAD E

MATCH LINE

MATCH LINE

(18.03 KATHLEEN M. ROGERS RECORD BOOK 2768 PAGE 163 R.O.M.C., TN per Commitment No. 20220858CTN]

SEE SHEET C1.3

ROAD D

0 10 20 30 40 50 100
GRAPHIC SCALE

N

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ENGINEERING CRUNK

BRADLEY M. LOWRY REGISTERED AGRICULTURE 1792 TENNESSEE AMERICA LANDSCAPE ARCHITECT

TROTWOOD AND FOSTER SUBDIVISION

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REVISIONS	
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L1.4

LANDSCAPE PLAN

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\L1.0-LAN.dwg

LANDSCAPE NOTES:

SITE PREP

1. THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES AND TAKE PRECAUTIONS TO PREVENT DAMAGE TO THESE UTILITIES.
2. THE LANDSCAPE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANIES AND SHALL BE RESPONSIBLE FOR ALL DAMAGES TO UTILITIES.
3. PLANT MATERIALS AND STUMPS INDICATED FOR REMOVAL SHALL BE REMOVED AND DISPOSED OFF-SITE BY THE CONTRACTOR. BACKFILL HOLES WITH QUALITY TOPSOIL FREE OF ROOTS AND ROCKS. SEE TOPSOIL SPECIFICATION.
4. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINE GRADING OF ALL PLANTING AREAS.
5. ALL CONTRACTORS APPLYING CHEMICALS ON SITE SHALL SUBMIT COPIES OF CERTIFICATION(S) AND LICENSES TO THE LANDSCAPE ARCHITECT.
6. PLANTING BEDS SHALL BE CLEARED OF GRASS AND WEEDS PRIOR TO INSTALLATION OF PLANTS.
7. SOD ALL AREAS DISTURBED BY CONSTRUCTION AND NOT DESIGNATED AS GROUND COVER AREAS.

TOPSOIL

1. ALL PLANTED AREAS TO HAVE A MINIMUM OF 6" OF QUALITY TOPSOIL.
2. ALL COMPACTED AREAS TO BE AERATED AND AMENDED AS NEEDED.
3. TOPSOIL IS TO BE NATURAL, FERTILE, FRIABLE, PRODUCTIVE SOIL, NEITHER EXCESSIVELY ACID NOR ALKALINE, AND FREE FROM TOXIC SUBSTANCES, STONES WEEDS, CLAY, CLODS, ROOTS, CINDERS, DEBRIS, AND CONSTRUCTION MATERIAL.

PLANTING

1. ALL PLANTING BEDS OR MULCH BEDS SHALL BE FREE OF WEEDS PRIOR TO THE INSTALLATION OF MULCH..
2. THE OPTIMUM TIME OF PLANTING IS FROM OCTOBER 1 TO APRIL 1. SCHEDULING FOR PLANTING AT OTHER TIMES MUST BE APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT.
3. UPON SECURING PLANT MATERIAL AND BEFORE INSTALLATION, THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT FOR A PRE-INSTALLATION INSPECTION IN ORDER TO VERIFY ALL PLANT MATERIAL MEETS SPECIFICATIONS. TREES OF SAME SPECIES ARE TO BE MATCHED IN GROWTH CHARACTER AND UNIFORMITY.
4. PLANTS SHALL BE ORIENTED FOR BEST APPEARANCE AND VERTICAL. ALL NON-BIODEGRADABLE ROOT CONTAINERS SHALL BE REMOVED.
5. AFTER PLANTING, TREE BRANCHES SHALL BE SELECTIVELY TRIMMED BY 25%, MAINTAINING NATURAL SHAPE. ALL DEAD AND BROKEN BRANCHES IN TREES AND SHRUBS SHALL ALSO BE PRUNED. REMOVE TAGS, TWINE, OR OTHER NON-BIODEGRADABLE MATERIAL.
6. WATERING: ALL TREES AND SHRUBS SHALL BE THOROUGHLY WATERED WITHIN ONE HOUR OF INSTALLATION.

PLANT MATERIALS

1. THE LANDSCAPE CONTRACTORS SHALL VERIFY ALL MATERIAL QUANTITIES. IN THE EVENT OF A DISCREPANCY, THE QUANTITIES SHOWN ON THE PLAN WILL TAKE PRECEDENCE.
2. ALL PLANT MATERIALS TO BE NURSERY GROWN AND TO COMPLY WITH THE AMERICAN STANDARDS FOR NURSERY STOCK: ANSI - LATEST EDITION FOR SIZE AND QUALITY.
3. ONLY GRADE "A" TYPE PLANTS WILL BE ACCEPTED. PLANTS THAT ARE INFERIOR OR DAMAGED WILL NOT BE ACCEPTED.
4. THE PLANTS DELIVERED TO THE PROJECT SITE SHALL BE PLANTED AS SOON AS SITE CONDITIONS PERMIT. TAKE CARE IN SCHEDULING PLANT DELIVERIES AND THE SIZE OF DELIVERIES SO THAT LONG PERIODS OF STORAGE ARE AVOIDED. ADEQUATELY PROTECT PLANTS PLACED IN TEMPORARY STORAGE FROM THE SUN AND WIND; WATER PLANTS SO AS TO MAINTAIN THEIR APPEARANCE AND HEALTH. PLANTS THAT HAVE NOT BEEN PROPERLY MAINTAINED DURING TEMPORARY STORAGE MAY BE REJECTED BY THE LANDSCAPE ARCHITECT.
5. ALL TREES SHALL BE FIRST QUALITY REPRESENTATIVES OF THEIR SPECIES AND SHALL MEET ALL REQUIREMENTS OTHERWISE STIPULATED. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT PLANTED MATERIAL IN THE FIELD, AT THE GROWING SITE OR ON THE JOB SITE.

MULCHING

1. ALL PLANTING BEDS OR MULCH BEDS SHALL HAVE WEEDS REMOVED PRIOR TO THE INSTALLATION OF MULCH.
2. ALL PLANTING BEDS SHALL HAVE A MINIMUM OF 3" DEPTH OF AGED SHREDDED HARDWOOD BARK MULCH OR A MINIMUM OF 4" DEEP PINE STRAW MULCH.
3. CONTRACTORS SHALL PROVIDE SMOOTH, NEATLY TRENCHED (3 INCH DEEP) BED EDGES.
4. MULCH SHALL NOT CONTACT OUTER BARK AT BASE OF TREES. PULL BACK MULCH 3-4" FROM TRUNK.

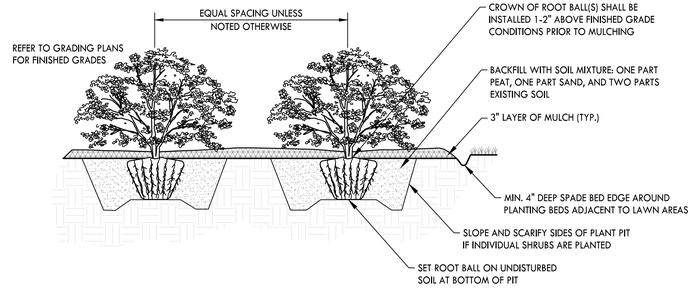
PLANT MAINTENANCE

1. THE LANDSCAPE CONTRACTOR SHALL PROVIDE OWNER WITH WRITTEN INSTRUCTIONS ON THE PROPER CARE OF ALL SPECIFIED PLANT MATERIALS PRIOR TO FINAL PAYMENT.
2. CONTRACTOR TO WARRANTY ALL MATERIAL FOR 2 YEARS AFTER DATE OF FINAL ACCEPTANCE.
3. ALL UNHEALTHY OR DEAD PLANT MATERIAL SHALL BE REPLACED WITHIN ONE YEAR, OR BY THE NEXT PLANTING PERIOD, WHICHEVER COMES FIRST. OTHER DEFECTIVE PLANT MATERIAL SHALL BE REPLACED OR REPAIRED WITHIN THREE (3) MONTHS.

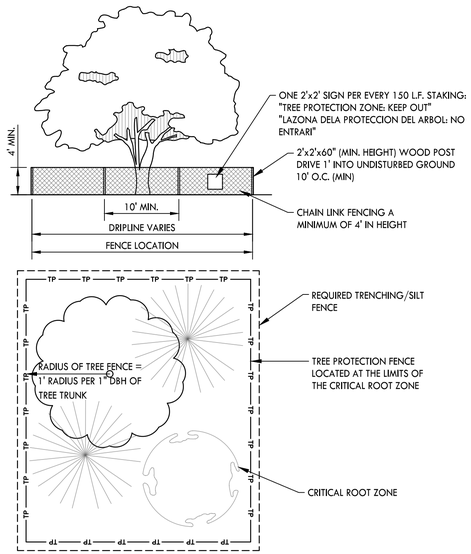
TREE PROTECTION

1. EXISTING TREES TO REMAIN SHALL BE PROTECTED FROM CONSTRUCTION DAMAGE.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO PROTECT EXISTING TREES THAT ARE TO REMAIN. NO HEAVY EQUIPMENT OR MATERIALS SHALL BE PERMITTED TO OPERATE OR BE STORED WITHIN THE DRIP LINES OF THE TREES, OUTSIDE THE LIMIT OF GRADING.
3. TREE PROTECTION STEPS:
   - A) INSTALL TREE PROTECTION FENCING IN ACCORDANCE WITH METRO CODE 17.24.110 "PROTECTION OF TREES DURING DEVELOPMENT ACTIVITIES".
   - B) PLACE FENCE POST AND FENCING AT TREE DRIP LINE OR 10' FROM TRUNK, WHICHEVER IS GREATER.
   - C) POST SHALL NOT BE SPACED MORE THAN 10' APART.
   - D) POST TEMPORARY SIGNS - TREE ROOT PROTECTION ZONE.
4. FENCING AND SIGNS SHALL REMAIN IN PLACE UNTIL THE SITE HAS BEEN INSPECTED BY URBAN FORESTER FOR USE AND OCCUPANCY PERMIT.

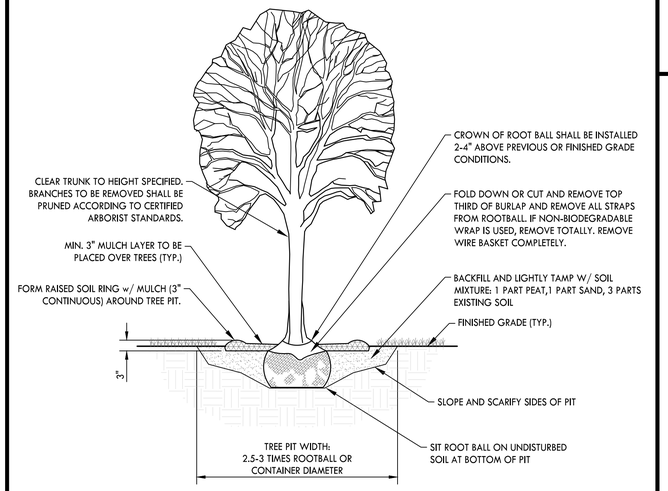
NOTES:
1. WHERE SHRUBS APPEAR IN BED AREA, 3" OF MULCH SHALL BE SPREAD OVER THE ENTIRE AREA WITHIN THE BED AS INDICATED ON THE PLANS.
2. DO NOT PRUNE SHRUBS BEFORE ACCEPTANCE.
3. CAREFULLY REMOVE CONTAINER FROM ROOT BALL USED FOR SHRUB(S). ANY BROKEN OR CRUMBLING ROOT BALL(S) WILL BE REJECTED.
4. IF SHRUB IS B&B, REMOVE BURLAP FROM TOP $\frac{1}{3}$ OF ROOT BALL OR COMPLETELY REMOVE BURLAP IF SOILS ARE POORLY DRAINED.
5. SCARIFY ROOTBALL IF ROOT BOUND IN CONTAINER PER HORTICULTURE STANDARDS.



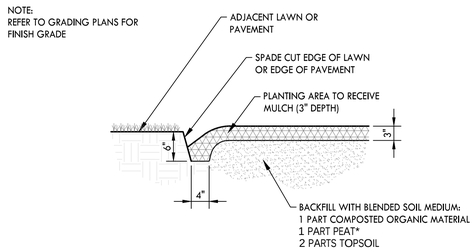
1 SHRUB PLANTING
NOT TO SCALE



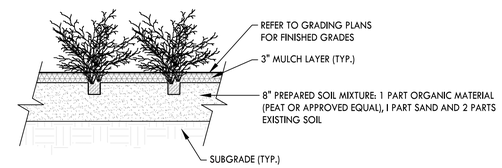
4 TREE PROTECTION
NOT TO SCALE



2 DECIDUOUS TREE PLANTING
NOT TO SCALE



5 SPADE BED EDGE
NOT TO SCALE



3 GROUNDCOVER PLANTING
NOT TO SCALE

CRUNK ENGINEERING LLC
7112 CROSSROADS BOULEVARD
SUITE 201
BRENTWOOD, TN 37027
(615) 873-1795
WWW.CRUNKENG.COM

BRADLEY M. LOWRY
REGISTERED
AGRICULTURE
TENNESSEE
LANDSCAPE ARCHITECT

TROTWOOD AND FOSTER SUBDIVISION
COLUMBIA TENNESSEE

REVISIONS	
No.	DATE

01/17/23 22040

L2.0
LANDSCAPE DETAILS

Drawing Path: p:\2022\22040 - trotwood and foster subdivision\Dwg\construction\L2.0-LAN.dwg

January 17, 2023

City of Columbia
Development Review Committee
700 N Garden Street
Columbia, TN 38401

RE: Trotwood and Foster Subdivision Preliminary Plat

Below are our responses to comments received on Aug 12, 2021. We believe we have satisfied all comments, but if you have additional concerns or questions, please do not hesitate to contact us. Our responses are as follows:

Fire

1. Since you are improving part of Foster Ln, we will ask for an approved turn around at the end of the improved portion, at the pump station.
   Response: A turnaround has been added (Hammerhead style)

2. New water availability is required
   Response:

Public Works

3. No comments.
   Response: Noted.

Building

4. No comments.
   Response: Noted.

Police

5. No comments provided.
   Response: Noted.

Engineering

1. Subject to Construction Plans and TIS.
   Response: Noted.

2. Provide signed survey of all property(s) included in the preliminary plat, in digital form.
   Response: Noted.

3. Remove parallel parking around perimeter of cul-de-sac.
   Response: Parallel parking has been removed around the cul-de-sac and throughout the site as discussed.

4. Provide roadway stub to southern property.
   Response: The roadway layout has been revised to show a stub to the southern property. The lot layout around this portion of roadway has also been adjusted accordingly.

5. Show driveway location for the pump station.
   Response: A driveway has been added to the layout going to the pump station.

6. Show aquatic buffer for the existing pond (northeast corner of the property). Aquatic buffers shall be located in open space or right-of-way.
   Response: The aquatic buffer was delineated on the plans and layout revisions were done to keep the lots out of the 30ft buffer.

7. Provide approximate depth of sewer and storm underneath Foster Lane.
   Response: The approximate depth of the sanitary sewer underneath foster lane will be about 12 ft. There will no longer be storm going underneath foster lane.

8. Provide cross-section detail of Trotwood widening, including drainage ditch or storm sewer. It does not appear there is available right-of-way to an additional lane with shoulder and ditch section on the North side of Trotwood Ave.
   Response: The turn lane has been revised to lie along the centerline of Trotwood and therefore the improvements will be split along the north and south of Trotwood. A cross-section has been added, see sheet C1.6.

9. Realign Foster Lane with driveway across Trotwood or realign driveway and provide agreement from owner (Rayburn).
   Response: The alignment for Foster Lane has been adjusted to line up with the driveway across Trotwood and the turning lane has been shifted to match this realignment.

10. Trotwood Ave. (minor arterial) requires a 90 ft. wide right-of-way. Provide 45 ft. from the centerline of the existing right-of-way.
    Response: The layout near Trotwood Ave. has been adjusted to show a 90 ft. right-of-way with 45 ft. from the centerline.

11. Where a proposed public street intersects an arterial roadway, a minimum of 75 ft. of right-of-way, 250 ft. in length shall be provided from the edge of the intersected street's right-of-way.
    Response: The minimum of 75 ft. of right-of-way has been provided for a 250 ft. length along Foster Lane.

12. Show and describe how on lot drainage will be handled in compliance with lot-to-lot drainage (Chapter 4 ESS).
    Response: The lot to lot drainage has been clarified. There will be a swale along the rear property lines that will capture runoff from back to back and there will be swales along each side property line. The upper lots will drain to

Planning

1. Lots 92 thru 96 are through lots which is not allowed.
   Response: An open space buffer has been provided to prevent the double loading of these lots.

2. setback pump station
   Response: Pump Station has been setback 25 ft. from the property line.

3. Development Plan is a separate item and should have dedicated sheets to those requirements.
   Response: Development Plan has been submitted as a separate item.

4. Typical lot layout indicates minimum lot width of 2.5 ft and 4 ft. what is referring to.
   Response: These were incorrect and are now updated.

5. Tree Canopy Exhibit does not appear to account for area along Foster Lane and Trotwood Avenue.
   Response: This area has now been accounted for.

6. Thoroughfares and internal drives must form a network. The Zoning Ordinance does not allow cul-de-sacs unless approved by Zoning Administrator to accommodate specific site conditions (5.2.2.E p.308).
   Response: A culdesac request letter has been submitted with this submittal.

7. Data table lists min lot width of 80 feet but typical layouts include 50 ft.
   Response: The typical layout is for the alley loaded lots located along the west side of the development. These lots will be reduced in width, however the majority of the lots will conform to an 80' width.

8. Please note lot depths on typical layouts.
   Response: Lot depths have been added.

Maury County Schools

9. Current Zone: Woodard Elementary School, Whitthorne Middle School, Central High School. 1) No residence is guaranteed zone to a specific school. 2) All zones are subject to change yearly.
   Response: Noted.

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.
    Response: Noted.

Wastewater

11. Columbia Wastewater has sent comments to the engineer (Adam Crunk) directly.
    Response: Wastewater comments have been noted and the plan revised accordingly.

Maury County E911

12. Contact Maury County 911 for request and approval for street names. Contact information: cgideon@maury911.org
    Response: Will contact at a future date to confirm street names.

Columbia Water

13. "The project is within Columbia Power and Water's service area and a Water Availability was previously issued, but is now expired. A review of the availability should be requested and if there have been changes that impact capacity requirements a new application and associated documents

will be required. 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. Should adequate facilities not currently exist the study will determine any off-site improvements necessary to serve the development. Off-site improvements are the responsibility of the developer/owner. All 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: Correspondence with CPWS is ongoing and the availability letter will be submitted once received.

Atmos Energy

14. Gas is available Contact Bradie Armstrong @ 615.485.6377.
    Response: Noted.

Duck River Electric Membership Corp

15. No comments provided.
    Response: Noted.

Collier Engineering Company, Inc. on behalf of Maury County Highway Department.

16. Applicant's Preliminary Plat does not contain any specific language or line work that details the annexation of existing Maury County Highway Department ROW on Foster Lane by the City of Columbia. All county roadway and ROW connections, impacts, annexations, and improvements are subject to further evaluation by the Maury County Highway Department and could require additional, off-site roadway improvements and/ or a separate surety for any potential damage to existing county roadways. Furthermore, the traffic impact study shall be subject to further review by the Maury County Highway Department. Applicant shall reach out to MCHD for further coordination and evaluation of the proposed roadway improvements on Foster Lane. Applicant shall add the following note to the Preliminary Plat.
    Response: This note has been added.

We believe that all comments have been addressed. If you have any questions or need additional information, please do not hesitate to contact me at adam@crunkeng.com or 615-873-1795.

Sincerely,



Adam Crunk, PE
Crunk Engineering LLC

800 FT CIVIC USE SPACE RADIUS.
ALL LOTS WITHIN DEVELOPMENT ARE WITHIN 800 FT OF A CIVIC USE SPACE

BM-505
MAG NAIL IN PAVEMENT
N:457791.93
E:1640500.01
EL:693.18

OPEN SPACE
A = 3.00 ACRE

A = 0.16 ACRE
CIVIC SPACE - POCKET PARK

OPEN SPACE
A = 0.62 ACRE

A = 0.22 ACRE
CIVIC SPACE - PLAYGROUND

OPEN SPACE
A = 0.36 ACRE

CIVIC SPACE - GREEN
A = 1.99 ACRE

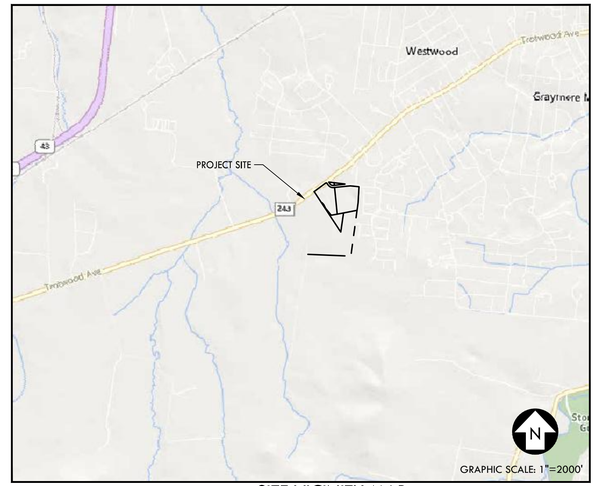
OPEN SPACE
A = 0.90 ACRE

OPEN SPACE
A = 4.28 ACRE

OPEN SPACE
A = 0.33 ACRE

A = 0.41 ACRE
CIVIC SPACE - POCKET PARK

BM-500
IRWC
N:456347.61
E:1641601.14
EL:696.46



SITE VICINITY MAP

FLOOD HAZARD NOTE:

1. THE SUBJECT PROPERTY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD ZONE ACCORDING TO PANEL No. 47119C0280E OF THE F.E.M.A. FLOOD INSURANCE RATE MAPS FOR MAURY COUNTY, TENNESSEE, DATED 4/16/2007

SITE DATA TABLE

PROJECT: TROTWOOD AND FOSTER SUBDIVISION
ADDRESS: SOUTHEAST CORNER OF TROTWOOD AVE AND FOSTER LANE INTERSECTION
PARCEL ID: 112 01803 000
SITE ACREAGE: 49.84 ACRES

EXISTING ZONING: CD-3
PROPOSED ZONING: CD-3

ZONING DISTRICT:	CD-3
AREA:	49.84 AC
PROPOSED LOTS:	124
BUILDING HEIGHT:	35 FT
MIN. LOT WIDTH:	80 FT (TYPICAL) 50 FT (ALLEY LOADED)
FRONT YARD:	
PRIMARY:	25 FT
SECONDARY:	20 FT
SIDE SETBACK:	8 FT
REAR SETBACK:	25 FT 1.5 FT FROM CENTER LINE IF ALLEY LOADED
REQUIRED CIVIC USE SPACE	5% OF TOTAL AREA 2.49 AC
PROVIDED CIVIC USE SPACE:	5.6% 2.78 AC

0 50 100 150 300
GRAPHIC SCALE

CRUNK ENGINEERING LLC
7112 CROSSROADS BOULEVARD
SUITE 201
BRENTWOOD, TN 37027
(615) 873-1795
WWW.CRUNKENG.COM

ENGINEERING CRUNK

RACHEL WILSON CRUNK
REGISTERED LANDSCAPE ARCHITECT
AGRICULTURE
1/17/23
No. 1141180
STATE OF TENNESSEE

TROTWOOD AND FOSTER SUBDIVISION

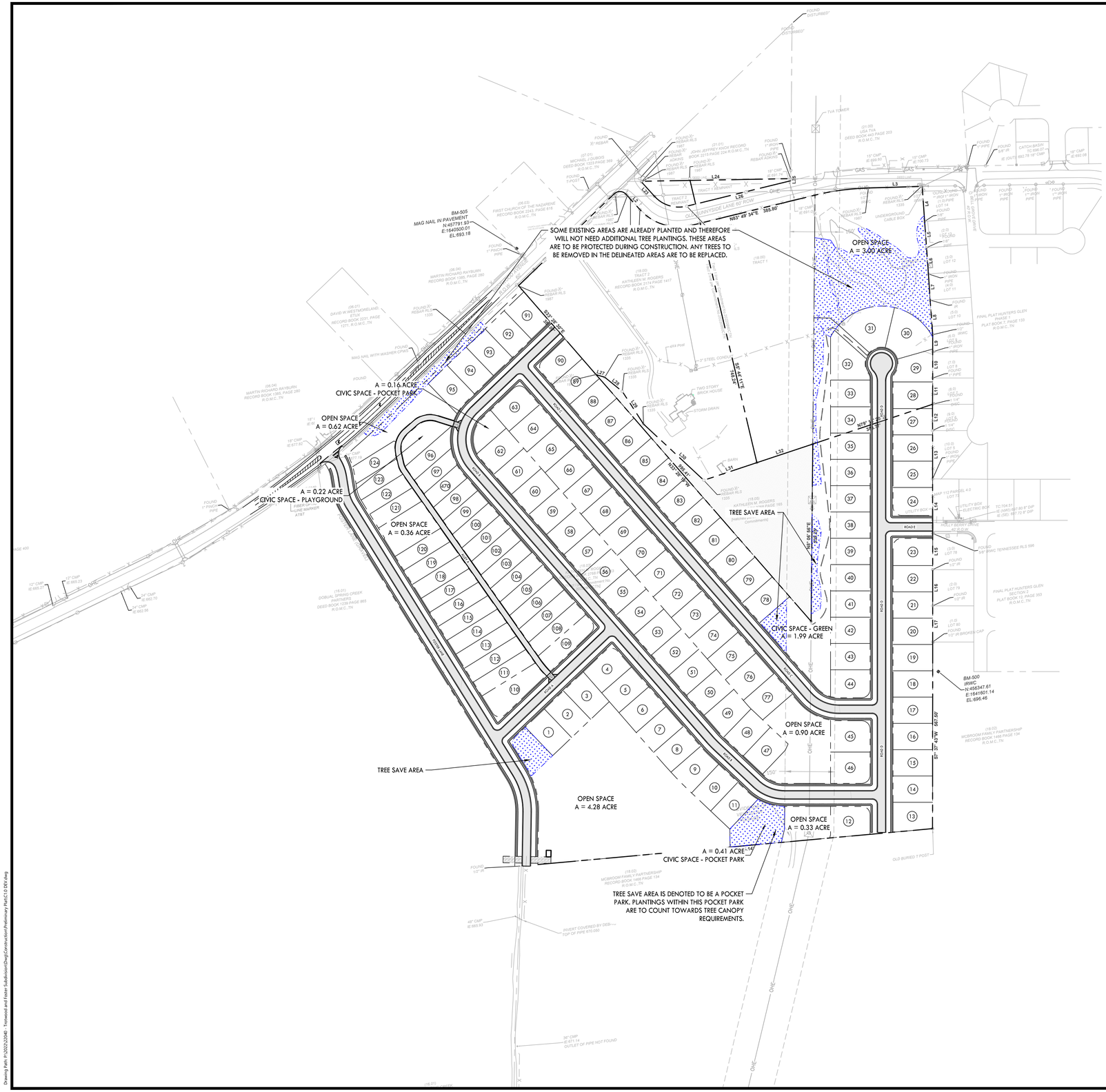
COLUMBIA TENNESSEE

REVISIONS	
No.	DATE

01/17/23 22040

C1.0
DEVELOPMENT PLAN

Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C1.0 DEV.dwg



CRUNK ENGINEERING LLC
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ENGINEERING CRUNK

ANNA WILSON CRUNK
REGISTERED LANDSCAPE ARCHITECT
AGRICULTURE
CAMERON
LA1180
STATE OF TENNESSEE
1/17/23

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

REVISIONS

No.	DATE

01/17/23 22040

C1.1

TREE SAVE AREAS

Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C1.0 DEV.dwg

CITY OF COLUMBIA
TENNESSEE

DEVELOPMENT REVEW COMMITTEE MEETING
Sunday, January 29, 2023

ITEM NO.
22-0333

DESCRIPTION: Request from Crunk Engineering for preliminary plat approval of 126 lots in new subdivision at Trotwood Avenue and Foster Lane, being portions of TM 112 Parcels 18, 18.04 and 18.04

RECOMMENDATION: For final recommendation please see staff report.

COMMENTS:

Fire

1. Since you are improving part of Foster Ln, we will ask for an approved turn around at the end of the improved portion, at the pump station
2. New water availability is required

Public Works

3. No comments.

Building

4. No comments.

Police

5. No comments provided.

Engineering

6. Subject to Construction Plans and TIS
7. Provide signed survey of all property(s) included in the preliminary plat, in digital form.
8. Remove parallel parking around perimeter of culdesac.
9. Provide roadway stub to southern property.
10. Show driveway location for pump station.
11. Show aquatic buffer for existing pond (northeast corner of property). Aquatic buffers shall be located in open space or right-of-way.
12. Provide approximate depth of sewer and storm underneath Foster Lane.

13. Provide cross section detail of Trotwood widening, including drainage ditch or storm sewer. It does not appear there is available right-of-way to an additional lane with shoulder and ditch section on the North side of Trotwood Ave.
14. Realign Foster Lane with driveway across Trotwood or realign driveway and provide agreement from owner (Rayburn).
15. Trotwood Ave (Minor Arterial) requires 90 ft. wide right-of-way. Provide 45 ft. from the centerline of the existing right-of-way.
16. Where a proposed public street intersects an arterial roadway, a minimum of seventy-five (75) feet of right-of-way, two hundred fifty (250) feet in length, shall be provided from the edge of the intersected street's right-of-way.
17. Show and describe how on lot drainage will be handled in compliance with lot to lot drainage (Chapter 4 ESS)

Planning

18. Lots 92 thru 96 are through lots which is not allowed
19. setback pump station
20. Development Plan is a separate item and should have dedicated sheets to those requirements.
21. Typical lot layout indicates minimum lot width of 2.5 ft and 4 ft. what is referring to.
22. Tree Canopy Exhibit does not appear to account for area along Foster Lane and Trotwood Avenue.
23. Thoroughfares and internal drives must form a network. The Zoning Ordinance does not allow cul-de-sacs unless approved by Zoning Administrator to accommodate specific site conditions (5.2.2.E p.308).
24. Data table lists min lot width of 80 feet but typical layouts include 50 ft.
25. Please note lot depths on typical layouts.

Maury County Schools

26. Current Zone: Woodard Elementary School, Whitthorne Middle School, Central High School. 1) No residence is guaranteed zone to a specific school. 2) All zones are subject to change yearly.

Columbia Power

27. 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.

Wastewater

28. Columbia Wastewater has sent comments to the engineer (Adam Crunk) directly.

Maury County E911

29. Contact Maury County 911 for request and approval for street names. Contact information: cgideon@maury911.org

Columbia Water

30. "The project is within Columbia Power and Water's service area and a Water Availability was previously issued, but is now expired. A review of the availability should be requested and if there have been changes that impact capacity requirements a new application and associated documents will be required. 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. Should adequate facilities not currently exist the study will determine any off-site improvements necessary to serve the development. Off-site improvements are the responsibility of the developer/owner. All 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

31. Gas is available Contact Bradie Armstrong @ 615.485.6377.

Duck River Electric Membership Corp

32. No comments provided.

Collier Engineering Company, Inc. on behalf of Maury County Highway Department.

33. Applicant's Preliminary Plat does not contain any specific language or line work that details the annexation of existing Maury County Highway Department ROW on Foster Lane by the City of Columbia. All county roadway and ROW connections, impacts, annexations, and improvements are subject to further evaluation by the Maury County Highway Department and could require additional, off-site roadway improvements and/ or a separate surety for any potential damage to existing county roadways. Furthermore, the traffic impact study shall be subject to further review by the Maury County Highway Department. Applicant shall reach out to MCHD for further coordination and evaluation of the proposed roadway improvements on Foster Lane. Applicant shall add the following note to the Preliminary Plat.

ATTACHMENTS: Preliminary Plat

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

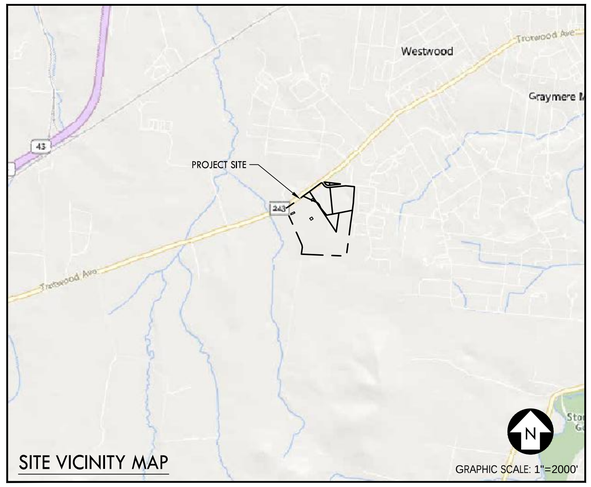
PRELIMINARY PLAT SUBMITTAL

SITE DATA TABLE

PROJECT: TROTWOOD AND FOSTER SUBDIVISION
ADDRESS: SOUTHEAST CORNER OF TROTWOOD AVE AND FOSTER LANE INTERSECTION
PARCEL ID: 112 01803 000
SITE ACREAGE: 49.84 ACRES

EXISTING ZONING: CD-3
PROPOSED ZONING: CD-3

ZONING DISTRICT:	CD-3
AREA:	49.84 AC
PROPOSED LOTS:	127
BUILDING HEIGHT:	35 FT
MIN. LOT WIDTH:	80 FT
FRONT YARD:	
PRIMARY:	25 FT
SECONDARY:	20 FT
SIDE SETBACK:	8 FT
REAR SETBACK:	25 FT 15 FT FROM CENTER LINE OF REAR ALLEY
REQUIRED CIVIC USE SPACE	5% OF TOTAL AREA 2.49 AC
PROVIDED CIVIC USE SPACE:	5.4% 2.68 AC

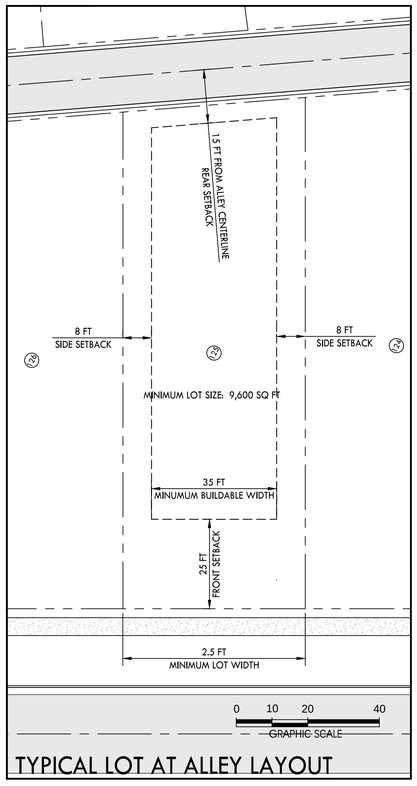


SITE VICINITY MAP

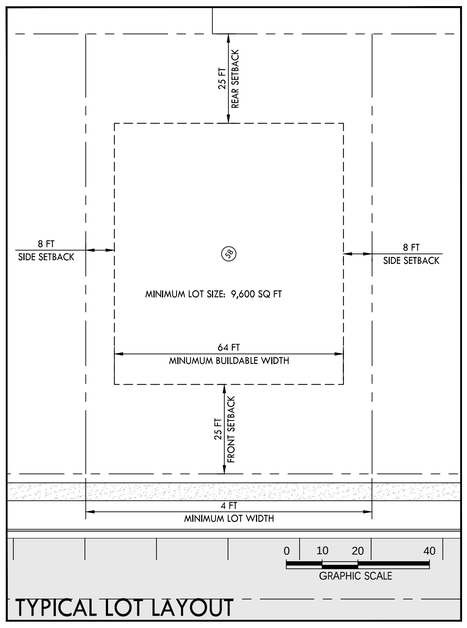
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Sheet List Table

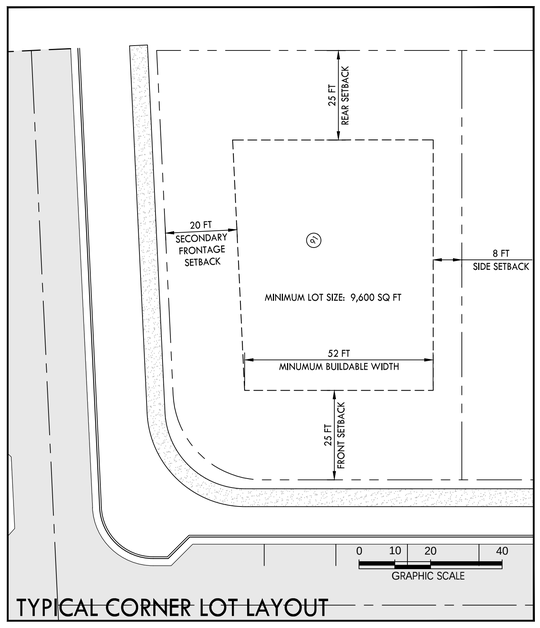
Sheet Number	Sheet Title
C0.0	COVER SHEET
C1.0	OVERALL SITE LAYOUT PLAN
C1.1	SITE LAYOUT PLAN
C1.2	SITE LAYOUT PLAN
C1.3	SITE LAYOUT PLAN
C1.4	SITE LAYOUT PLAN
C1.5	ROADWAY PROFILES
C1.6	ROADWAY PROFILES
C1.7	ROADWAY PROFILES
C1.8	ROADWAY PROFILES
C1.9	ROADWAY PROFILES
C1.10	TREE CANOPY EXHIBIT
C2.0	OVERALL GRADING, DRAINAGE, & UTILITY PLAN
C2.1	GRADING, DRAINAGE, & UTILITY PLAN
C2.2	GRADING, DRAINAGE, & UTILITY PLAN
C2.3	GRADING, DRAINAGE, & UTILITY PLAN
C2.4	GRADING, DRAINAGE, & UTILITY PLAN



TYPICAL LOT AT ALLEY LAYOUT



TYPICAL LOT LAYOUT



TYPICAL CORNER LOT LAYOUT

CRUNK ENGINEERING LLC
7112 CROSSROADS BOULEVARD
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WWW.CRUNKENG.COM

TROTWOOD AND FOSTER SUBDIVISION
COLUMBIA TENNESSEE

REVISIONS

No.	DATE

09/29/22 22040

C0.0

COVER SHEET

Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C0.0 COV.dwg

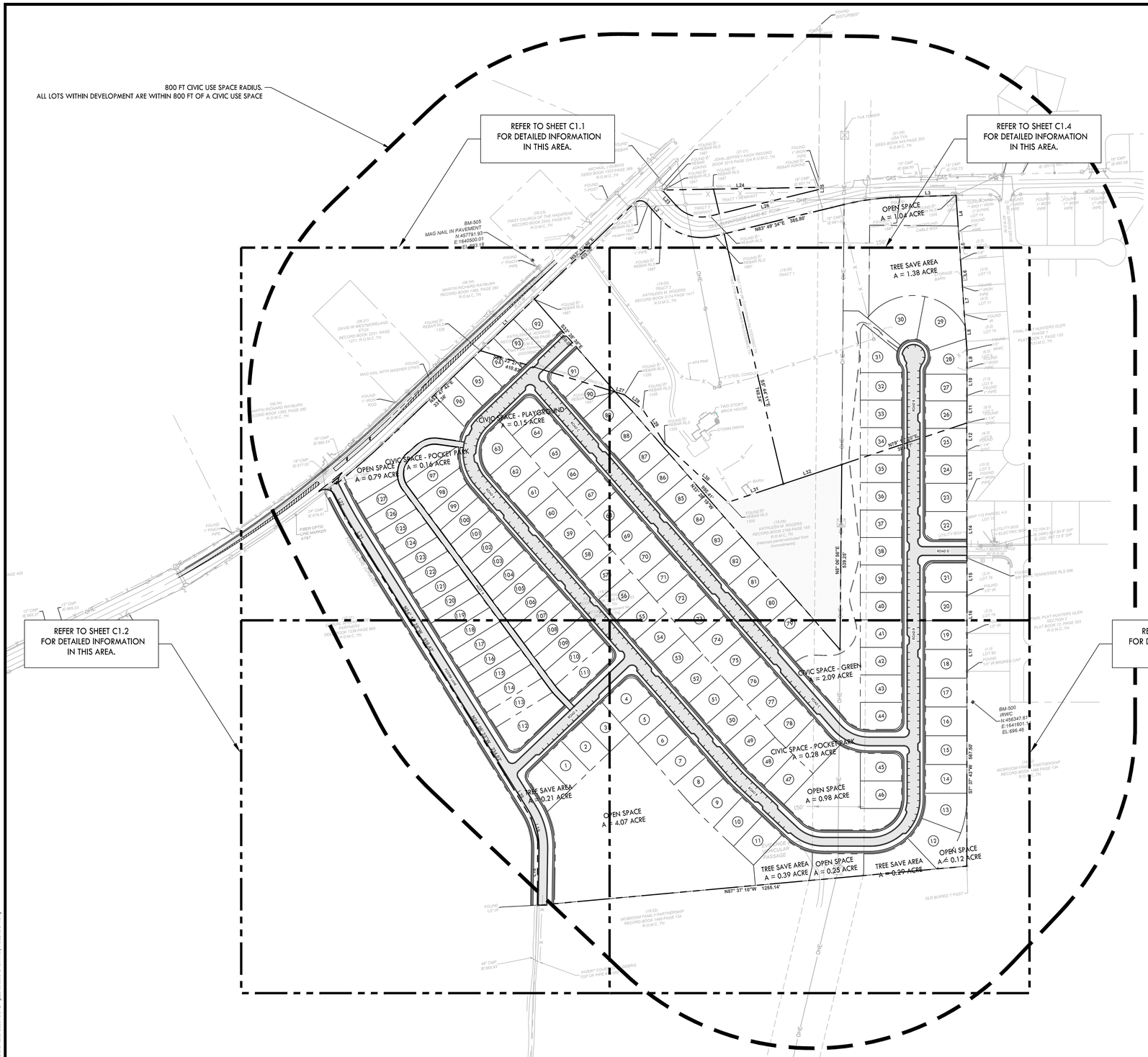
800 FT CIVIC USE SPACE RADIUS.
ALL LOTS WITHIN DEVELOPMENT ARE WITHIN 800 FT OF A CIVIC USE SPACE

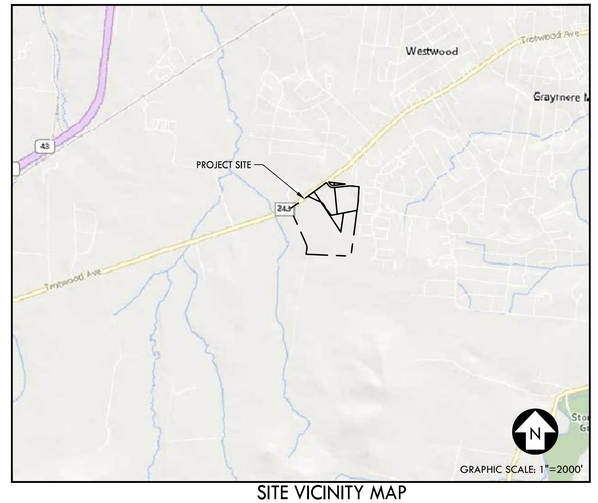
REFER TO SHEET C1.1
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C1.4
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C1.2
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C1.3
FOR DETAILED INFORMATION
IN THIS AREA.





SITE VICINITY MAP

FLOOD HAZARD NOTE:

1. THE SUBJECT PROPERTY DOES NOT LIE WITHIN A SPECIAL FLOOD HAZARD ZONE ACCORDING TO PANEL No. 47119C0280E OF THE F.E.M.A. FLOOD INSURANCE RATE MAPS FOR MAURY COUNTY, TENNESSEE, DATED 4/16/2007

SITE DATA TABLE

PROJECT: TROTWOOD AND FOSTER SUBDIVISION
ADDRESS: SOUTHEAST CORNER OF TROTWOOD AVE AND FOSTER LANE INTERSECTION
PARCEL ID: 112 01803 000
SITE ACREAGE: 49.84 ACRES

EXISTING ZONING: CD-3
PROPOSED ZONING: CD-3

ZONING DISTRICT:	CD-3
AREA:	49.84 AC
PROPOSED LOTS:	127
BUILDING HEIGHT:	35 FT
MIN. LOT WIDTH:	80 FT
FRONT YARD:	
PRIMARY:	25 FT
SECONDARY:	20 FT
SIDE SETBACK:	8 FT
REAR SETBACK:	25 FT
	15 FT FROM CENTER LINE OF REAR ALLEY
REQUIRED CIVIC USE SPACE	5% OF TOTAL AREA
	2.49 AC
PROVIDED CIVIC USE SPACE:	5.4%
	2.68 AC

0 50 100 150 300
GRAPHIC SCALE

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JAMES WILSON CRUNK
REGISTERED
AGRICULTURE
AMERICA
No. 134180
12/19/22
STATE OF TENNESSEE

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

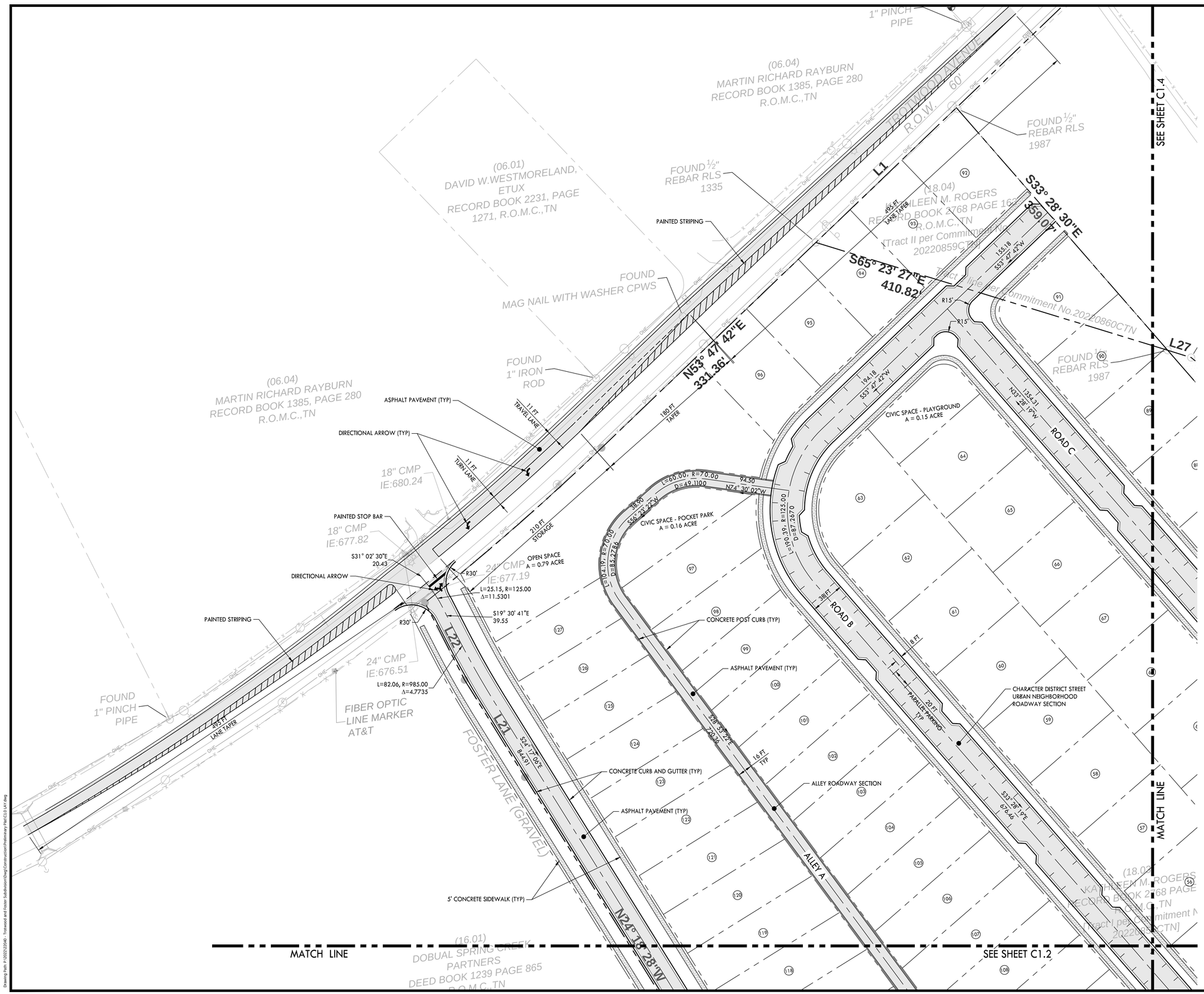
REVISIONS	
No.	DATE

12/19/22 22040

C1.0

OVERALL SITE LAYOUT PLAN

Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C1.0 LAY.dwg



NOTES:
1. REFER TO SHEET CXXXX FOR PARCEL AREA TABLES

PROPOSED LAYOUT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPERTY LINE
- EDGE OF NEW PAVEMENT

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TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

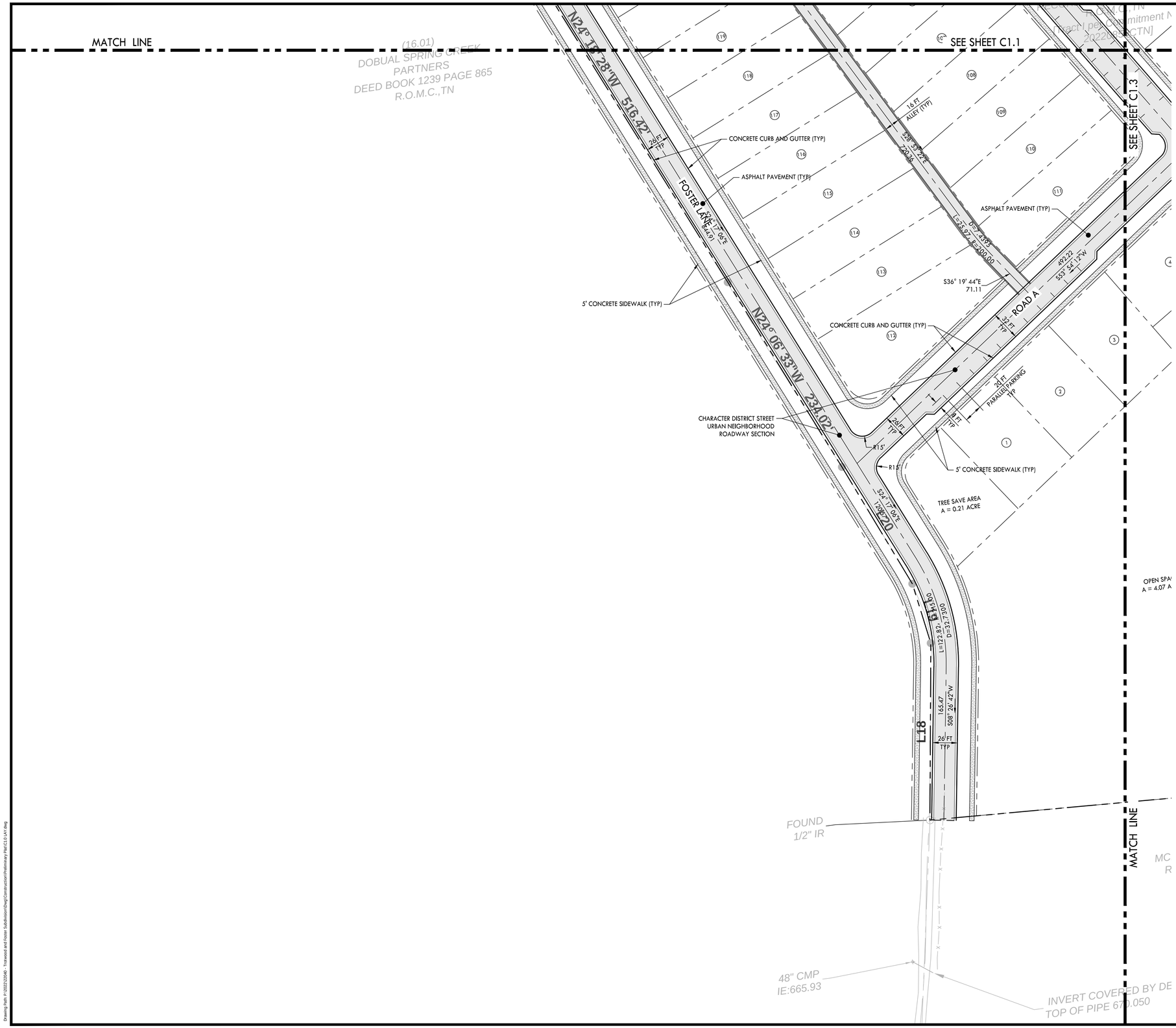
REVISIONS	
No.	DATE

12/19/22 22040

C1.1

SITE LAYOUT PLAN

Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction Preliminary Plat\C1.0 LAY.dwg



NOTES:
1. REFER TO SHEET CXXXX FOR PARCEL AREA TABLES

PROPOSED LAYOUT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPERTY LINE
- EDGE OF NEW PAVEMENT

0 10 20 30 40 50 100
GRAPHIC SCALE

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COLUMBIA TENNESSEE

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12/19/22 22040

C1.2

SITE LAYOUT PLAN

Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C1.0_LAY.dwg

MATCH LINE

SEE SHEET C1.2

SEE SHEET C1.4

ROAD A

ROAD B

ROAD C

ENTRANCE TO 5' WALKING TRAIL

CIVIC SPACE - GREEN
A = 2.09 ACRE

CIVIC SPACE - POCKET PARK
A = 0.28 ACRE

OPEN SPACE
A = 0.98 ACRE

OPEN SPACE
A = 4.07 ACRE

OPEN SPACE
A = 0.25 ACRE

OPEN SPACE
A = 0.12 ACRE

TREE SAVE AREA
A = 0.39 ACRE

TREE SAVE AREA
A = 0.29 ACRE

5' CONCRETE SIDEWALK (TYP)

CONCRETE CURB AND GUTTER (TYP)

ASPHALT PAVEMENT (TYP)

CHARACTER DISTRICT STREET
URBAN NEIGHBORHOOD
ROADWAY SECTION

150 FT
ELECTRIC EASEMENT

20 FT
PARALLEL PARKING
TYP

38 FT
TYP

8 FT
TYP

26 FT

32 FT

R15'

L=354.31
N35° 28' 19"W

S53° 28' 19"E
449.47

L=106.78, R=125.00
D=48.9434

130.15
N82° 24' 56"W

D=5.5462
L=29.04, R=300.00

S39° 01' 04"E
211.40

D=43.2076
L=94.26, R=125.00

S82° 13' 33"E
137.76

D=90.1896
L=96.76, R=125.00

N07° 35' 04"E
354.43

N07° 35' 04"E
167.41

18.3 FT

30.3 FT

L16

L17

S7° 37' 43"W 567.50'

N87° 37' 10"W 1255.14'

(2.0)
LOT 79
FOUND
1/2" IR

(1.0)
LOT 80
FOUND
1/2" IR BROKEN CAP

BM-500
IRWC
N:456347.
E:164160
EL:696.4

MCBROOM F/
RECORD BC
R

EVIDENCE O
VEHICULAR
PASSAGE

OLD BURIED T POST

(18.02)
MCBROOM FAMILY PARTNERSHIP
RECORD BOOK 1466 PAGE 134
R.O.M.C.,TN

T COVERED BY DEBRIS
E PIPE 670.050

OHE

NOTES:
1. REFER TO SHEET CXXXX FOR PARCEL AREA TABLES

PROPOSED LAYOUT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPERTY LINE
- EDGE OF NEW PAVEMENT

0 10 20 30 40 50 100
GRAPHIC SCALE

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STATE OF TENNESSEE
12/19/22

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COLUMBIA TENNESSEE

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12/19/22 22040

C1.3

SITE LAYOUT PLAN

Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C1.3 LAY.dwg

NOTES:
1. REFER TO SHEET CXXXX FOR PARCEL AREA TABLES

PROPOSED LAYOUT LEGEND

- HEAVY DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPERTY LINE
- EDGE OF NEW PAVEMENT

SEE SHEET C1.1

FOUND ½" REBAR RLS 1987

(18.00) TRACT 2 KATHLEEN M. ROGERS RECORD BOOK 2174 PAGE 1417 R.O.M.C.,TN

Tract 1 line per Commitment No.20220860CTN
Tract 2 line per Commitment No.20220860CTN

(18.00) TRACT 1

TREE SAVE AREA A = 1.38 ACRE

STORAGE BARN

WALKING PATH (TYP)

GATE

4X4 Post

3" STEEL CONDUIT

FOUND ½" REBAR RLS 1335

CHARACTER DISTRICT STREET URBAN NEIGHBORHOOD ROADWAY SECTION

ENTRANCE TO 5' WALKING TRAIL

R34'

S5° 44' 11"E 748.24'

L27 L28 L29

TWO STORY BRICK HOUSE

STORM DRAIN

150 FT ELECTRIC EASEMENT

38 FT TYP

20 FT PARALLEL PARKING TYP

8 FT TYP

ROAD D

N07° 35' 0"E 354.43'

N79° 12' 20"E 383.77'

L30 L31 L32

N33° 28' 19"W 995.41'

BARN

5' WALKING TRAIL

5' CONCRETE SIDEWALK (TYP)

CONCRETE CURB AND GUTTER (TYP)

ASPHALT PAVEMENT (TYP)

FOUND ½" REBAR RLS 1335

(18.05) KATHLEEN M. ROGERS RECORD BOOK 2768 PAGE 165 R.O.M.C., TN [Hatched parcel excluded from Commitments]

N8° 06' 56"E 539.25'

L6 L7 L8 L9 L10 L11 L12 L13 L14 L15 L16

(3.0) LOT 12

FOUND 1" IRON PIPE

(4.0) LOT 11

FOUND IR

(5.0) LOT 10

FOUND 1/2" IRWC

(6.0) LOT 9

FOUND 1" IRON PIPE

(7.0) LOT 8 FOUND 1" PIPE

(8.0) LOT 7 FOUND 1 1/4" DISC

(9.0) LOT 6 FOUND 1 1/4" DISC

(10.0) LOT 5 FOUND 1" IRON PIPE

MAP 112 PARCEL 4.0 LOT 73

UTILITY BOX

ELECTRIC BO

HOLLY BERRY DRIVE 40' R.O.W.

(3.0) LOT 78

FOUND 1/2" IR

(2.0) LOT 79

FOUND 1/2" IR

FINA PL

FOU 5/8"

6 FT

R15'

30.3 FT

155.40 N82° 24' 45"W

18.3 FT

25 FT TYP

30 FT TYP

135.4.21 N33° 28' 19"W

MATCH LINE

MATCH LINE

SEE SHEET C1.3

0 10 20 30 40 50 100
GRAPHIC SCALE

N

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ENGINEERING CRUNK

TENNESSEE LICENSED PROFESSIONAL ENGINEER JAMES WILSON CRUNK REGISTERED No. 114180 AGRICULTURE 12/19/22 STATE OF TENNESSEE

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

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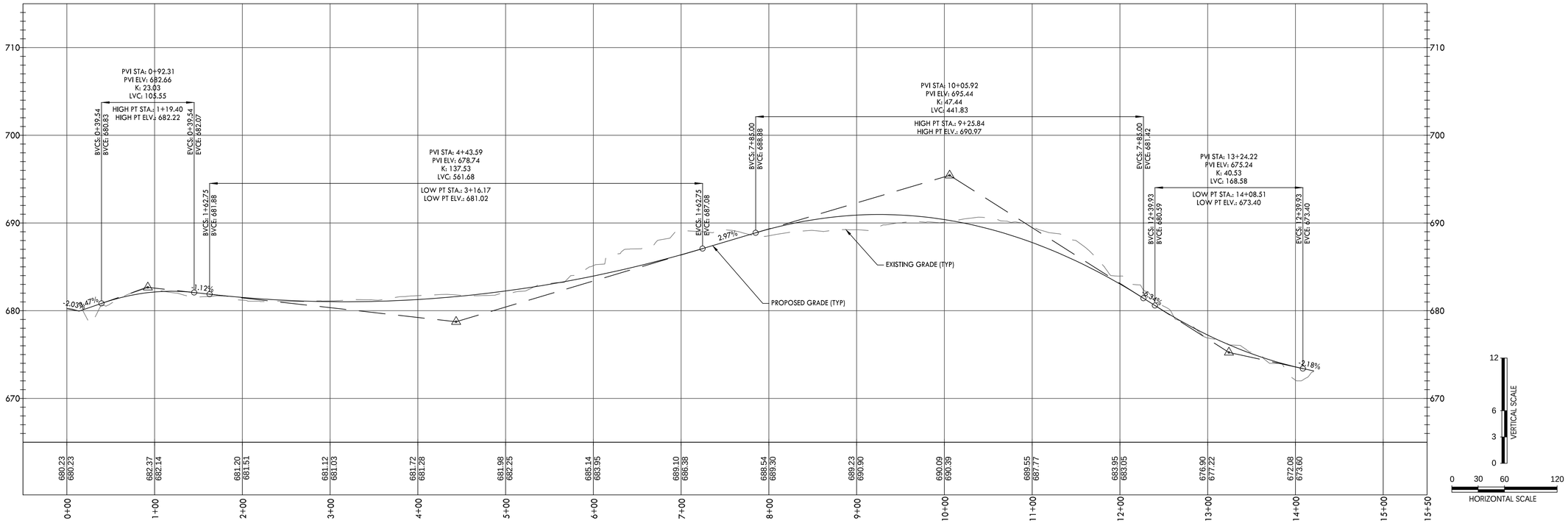
12/19/22 22040

C1.4

SITE LAYOUT PLAN

Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C1.0 LAY.dwg

FOSTER LANE



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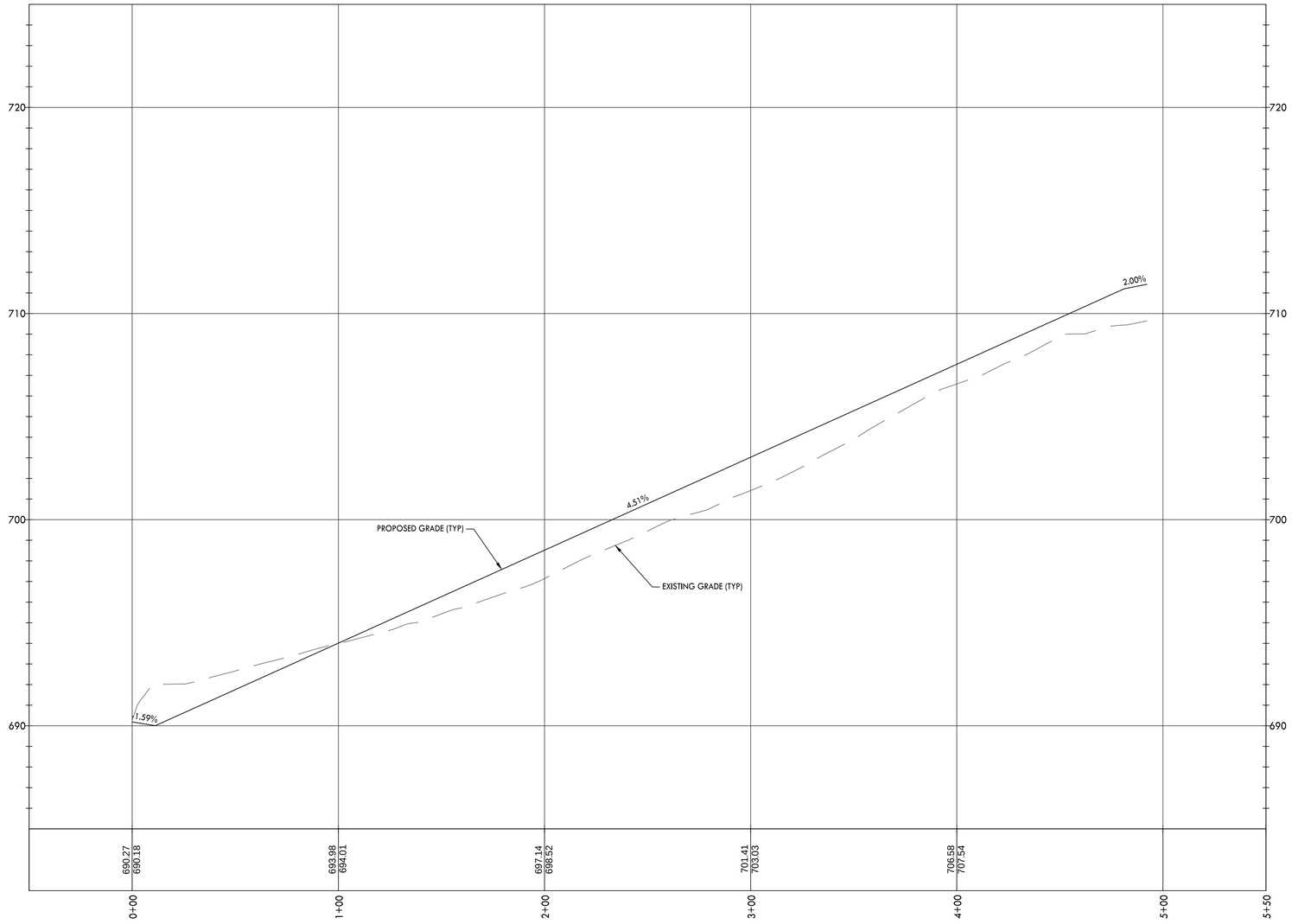
12/19/22 22040

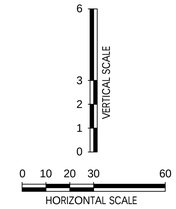
C1.5

ROADWAY PROFILES

Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C1.5 PRO.dwg

ROAD A





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REGISTERED ENGINEER
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NO. 114180
STATE OF TENNESSEE

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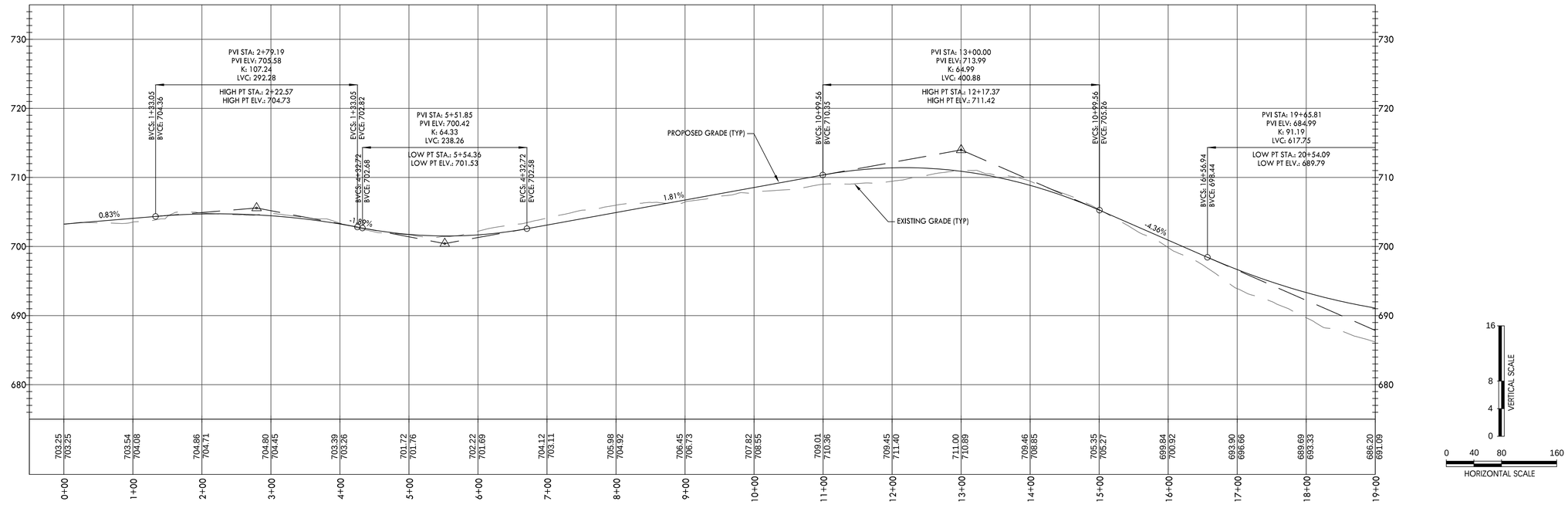
12/19/22 22040

C1.6

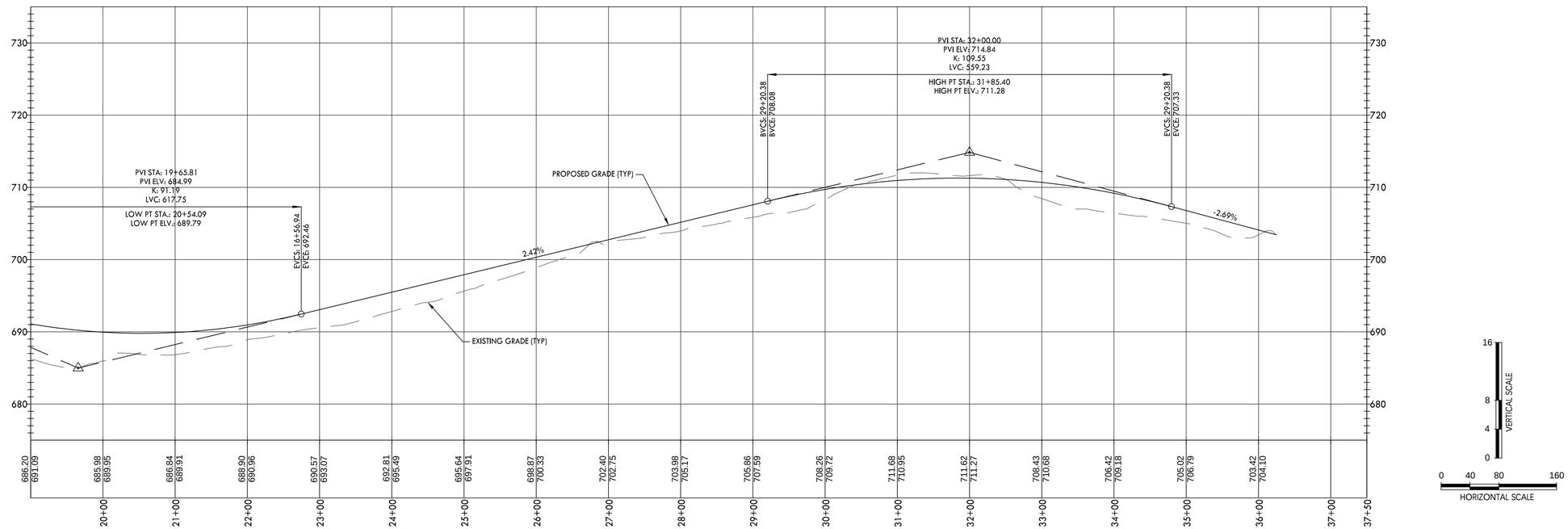
ROADWAY PROFILES

Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C1.5, PRO.dwg

ROAD B



ROAD B



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C1.7

ROADWAY PROFILES

Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C1.5 PRO.dwg

ROAD C

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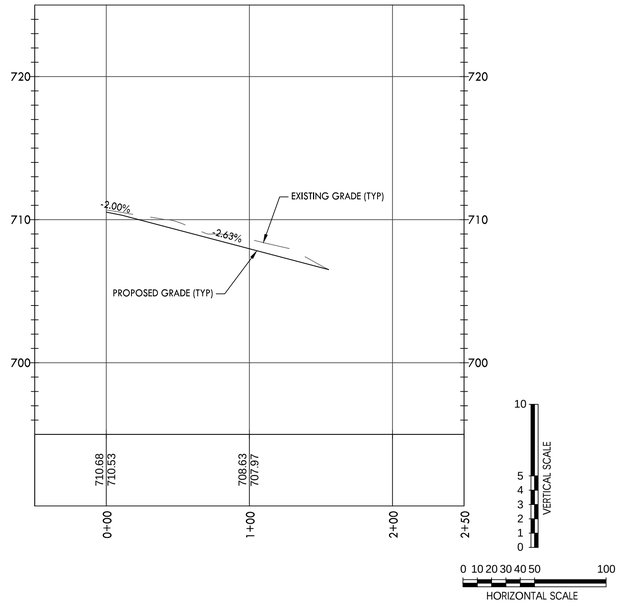
12/19/22 22040

C1.8

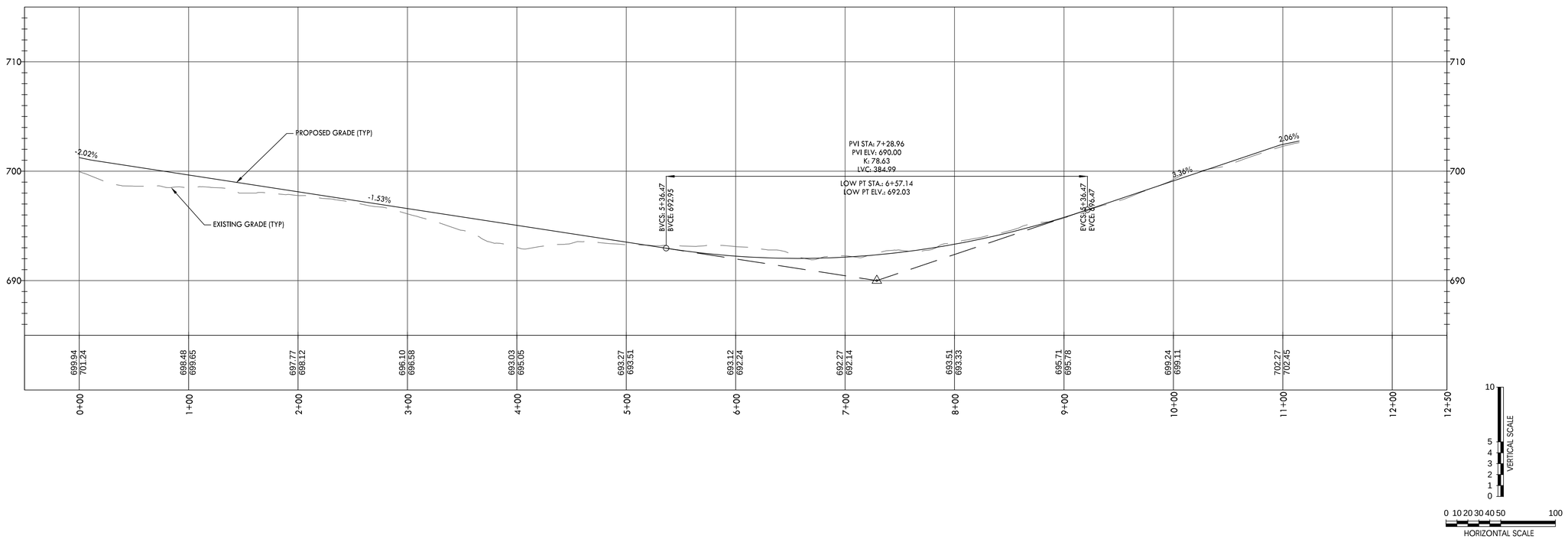
ROADWAY PROFILES

Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C1.8 PRO.dwg

ROAD D



ALLEY A



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C1.9

ROADWAY PROFILES

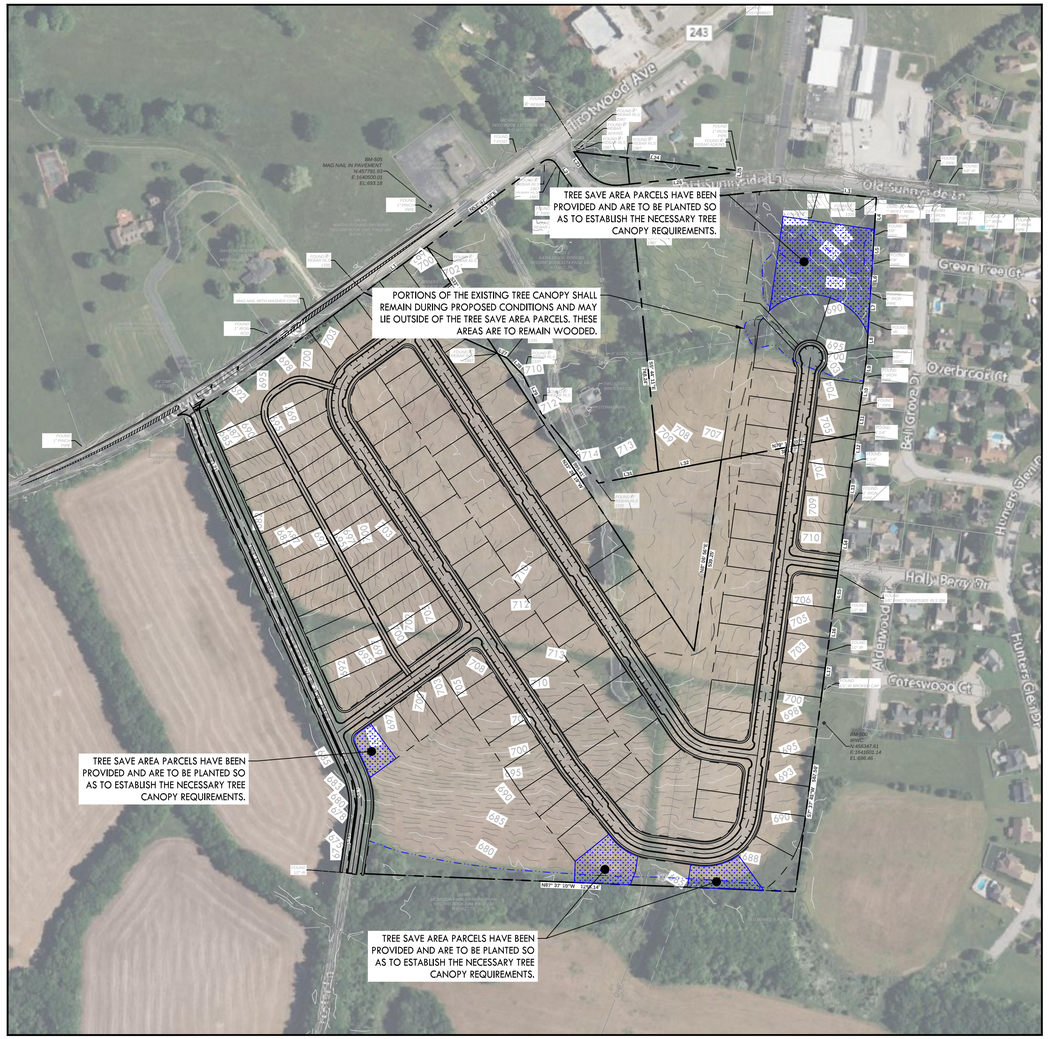
Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C1.9 PRO.dwg

TREE CANOPY PRESERVATION REQUIREMENTS:

TOTAL SITE AREA:	49.84 AC
EXISTING TREE CANOPY AREA:	3.87 AC
TREE CANOPY PERCENTAGE (OF TOTAL AREA):	7.8%
REQUIRED TREE CANOPY RETENTION:	54% 2.09 AC
PROVIDE TREE CANOPY RETENTION:	2.27 AC



EXISTING TREE CANOPY EXHIBIT



PROPOSED TREE CANOPY EXHIBIT

0 100 200 400
GRAPHIC SCALE

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C1.10

TREE CANOPY EXHIBIT

Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C1.10 TREE.dwg

REFER TO SHEET C2.1
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C2.4
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C2.2
FOR DETAILED INFORMATION
IN THIS AREA.

REFER TO SHEET C2.3
FOR DETAILED INFORMATION
IN THIS AREA.

BM-505
MAG NAIL IN PAVEMENT
N:457791.93
E:1640500.03
EL:696.18

OPEN SPACE
A = 1.04 ACRE

TREE SAVE AREA
A = 1.38 ACRE

CIVIC SPACE - PLAYGROUND
A= 0.15 ACRE

CIVIC SPACE - POCKET PARK
A = 0.14 ACRE

OPEN SPACE
A = 0.79 ACRE

CIVIC SPACE - GREEN
A = 2.09 ACRE

CIVIC SPACE - ROCKET PARK
A = 0.28 ACRE

OPEN SPACE
A = 0.98 ACRE

TREE SAVE AREA
A = 0.24 ACRE

OPEN SPACE
A = 4.07 ACRE

TREE SAVE AREA
A = 0.39 ACRE

OPEN SPACE
A = 0.25 ACRE

TREE SAVE AREA
A = 0.29 ACRE

OPEN SPACE
A = 0.12 ACRE

BM-500
MAG NAIL
N:466347.61
E:1641601.14
EL:696.46

0 50 100 150 300
GRAPHIC SCALE

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12/19/22

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C2.0

OVERALL GRADING, DRAINAGE, & UTILITY PLAN

Drawing Path: P:\2022\22040 - Trotwood and Foster Subdivision\Dwg\Construction\Preliminary Plat\C2.0 GRA & UTI.dwg

(06.04)
MARTIN RICHARD RAYBURN
RECORD BOOK 1385, PAGE 280
R.O.M.C.,TN

(06.01)
DAVID W.WESTMORELAND, ETUX
RECORD BOOK 2231, PAGE 1271, R.O.M.C.,TN

TROTWOOD AVENUE
R.O.W. 60'

L1

S33° 28' 30"E
459.07'

(18.04)
KATHLEEN M. ROGERS
RECORD BOOK 2768 PAGE 163
R.O.M.C.,TN
(Tract II per Commitment No. 20220859CTN)

S65° 23' 27"E
410.82'

(Tract I per Commitment No. 20220860CTN)

N53° 47' 42"E
331.36'

L27

SEE SHEET C2.4

TEE WITH VALVES

FIRE HYDRANT ASSEMBLY (TYP)

CIVIC SPACE - PLAYGROUND
A = 0.15 ACRE

8" WATER LINE (TYP)

ROAD C

SINGLE CURB INLET (TYP)

CIVIC SPACE - POCKET PARK
A = 0.16 ACRE

SANITARY MANHOLE (TYP)

8" SANITARY LINE (TYP)

ROAD B

(06.04)
MARTIN RICHARD RAYBURN
RECORD BOOK 1385, PAGE 280
R.O.M.C.,TN

18" CMP
IE:680.24

CONNECT TO EXISTING WATER LINE WITH TAPPING SLEEVE AND VALVE

18" CMP
IE:677.82

SINGLE CATCH BASIN (TYP)

OPEN SPACE
A = 0.79 ACRE

24" CMP
IE:677.19

L22

24" CMP
IE:676.51

FIBER OPTIC
LINE MARKER
AT&T

L21

FIRE HYDRANT ASSEMBLY (TYP)

SINGLE CATCH BASIN (TYP)

SANITARY MANHOLE (TYP)

SINGLE CURB INLET (TYP)

SANITARY MANHOLE (TYP)

ALLEY A

N22° 18' 28"W

MATCH LINE

MATCH LINE

SEE SHEET C2.2

(16.01)
DOBUAL SPRING CREEK PARTNERS
DEED BOOK 1239 PAGE 865
R.O.M.C.,TN

(18.03)
KATHLEEN M. ROGERS
RECORD BOOK 2768 PAGE
R.O.M.C.,TN
(Tract I per Commitment N
20220859CTN)

PROPOSED GRADING & DRAINAGE LEGEND

- 55 — PROPOSED CONTOUR
- ST — STORM PIPE
- SINGLE CURB INLET
- SINGLE CATCH BASIN
- JUNCTION BOX

PROPOSED UTILITY LEGEND

- SS — SANITARY SEWER LINE
- W — WATER LINE

0 10 20 30 40 50 100
GRAPHIC SCALE

N

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AGRICULTURE
No. 114100
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12/19/22

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

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No.	DATE

12/19/22 22040

C2.1

GRADING, DRAINAGE, & UTILITY PLAN

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MATCH LINE

SEE SHEET C2.1

SEE SHEET C2.3

(16.01)
DOBUAL SPRING CREEK
PARTNERS
DEED BOOK 1239 PAGE 865
R.O.M.C.,TN

N24°13'28"W 516.42'

N28°06'33"W 534.02'

FOSTER LANE

ROAD A

SINGLE CURB INLET (TYP)

FIRE HYDRANT ASSEMBLY (TYP)

SINGLE CATCH BASIN (TYP)

8" WATER LINE (TYP)

TEE WITH VALVES

8" SANITARY LINE (TYP)

SANITARY MANHOLE (TYP)

TREE SAVE AREA
A = 6.21 ACRE

OPEN SPACE
A = 4.07 AC

CONCRETE HEADWALL (TYP)

STORMWATER POND

STORMWATER POND OUTLET STRUCTURE

SANITARY PUMP STATION

SANITARY FORCE MAIN (TYP)

MATCH LINE

48" CMP
IE:665.93

INVERT COVERED BY DE
TOP OF PIPE 670.050

PROPOSED GRADING & DRAINAGE LEGEND

- 55 — PROPOSED CONTOUR
- ST — STORM PIPE
- SINGLE CURB INLET
- SINGLE CATCH BASIN
- JUNCTION BOX

PROPOSED UTILITY LEGEND

- SS — SANITARY SEWER LINE
- W — WATER LINE

0 10 20 30 40 50 100
GRAPHIC SCALE

N

CRUNK ENGINEERING LLC
7112 CROSSROADS BOULEVARD
SUITE 201
BRENTWOOD, TN 37027
(615) 873-1795
WWW.CRUNKENG.COM

ENGINEERING CRUNK

AMY WILSON CRUNK
REGISTERED ENGINEER
AGRICULTURE
12/19/22
No. 114180
STATE OF TENNESSEE

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

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No.	DATE

12/19/22 22040

C2.2

GRADING, DRAINAGE, & UTILITY PLAN

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MATCH LINE

SEE SHEET C2.2

SEE SHEET C2.4

TEE WITH VALVES

FIRE HYDRANT ASSEMBLY (TYP)

8" WATER LINE (TYP)

SANITARY MANHOLE (TYP)

8" SANITARY LINE (TYP)

SANITARY FORCE MAIN (TYP)

SINGLE CURB INLET (TYP)

CIVIC SPACE - GREEN
A = 2.09 ACRE

CIVIC SPACE - POCKET PARK
A = 0.78 ACRE

OPEN SPACE
A = 4.07 ACRE

OPEN SPACE
A = 0.98 ACRE

OPEN SPACE
A = 0.25 ACRE

OPEN SPACE
A = 0.12 ACRE

TREE SAVE AREA
A = 0.39 ACRE

TREE SAVE AREA
A = 0.29 ACRE

STORMWATER POND

CONCRETE HEADWALL (TYP)

JUNCTION MANHOLE (TYP)

ROAD A

ROAD B

ROAD C

COLLAPSED BARN REMNANTS INSIDE TREE AREA

BARN

EVIDENCE OF VEHICULAR PASSAGE

OLD BURIED T-POST

L16

L17

S7° 37' 43"W 567.50'

N87° 37' 10"W 1255.14'

(2.0)
LOT 79

(1.0)
LOT 80

BM-500
IRWC
N:456347.
E:164160
EL:696.4

(18.02)
MCBROOM FAMILY PARTNERSHIP
RECORD BOOK 1466 PAGE 134
R.O.M.C., TN

MCBROOM F/
RECORD BC
R

T COVERED BY DEBRIS
PIPE 670.050

PROPOSED GRADING & DRAINAGE LEGEND

- PROPOSED CONTOUR
- STORM PIPE
- SINGLE CURB INLET
- SINGLE CATCH BASIN
- JUNCTION BOX

PROPOSED UTILITY LEGEND

- SS — SANITARY SEWER LINE
- W — WATER LINE

0 10 20 30 40 50 100
GRAPHIC SCALE

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AMERICA
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COLUMBIA TENNESSEE

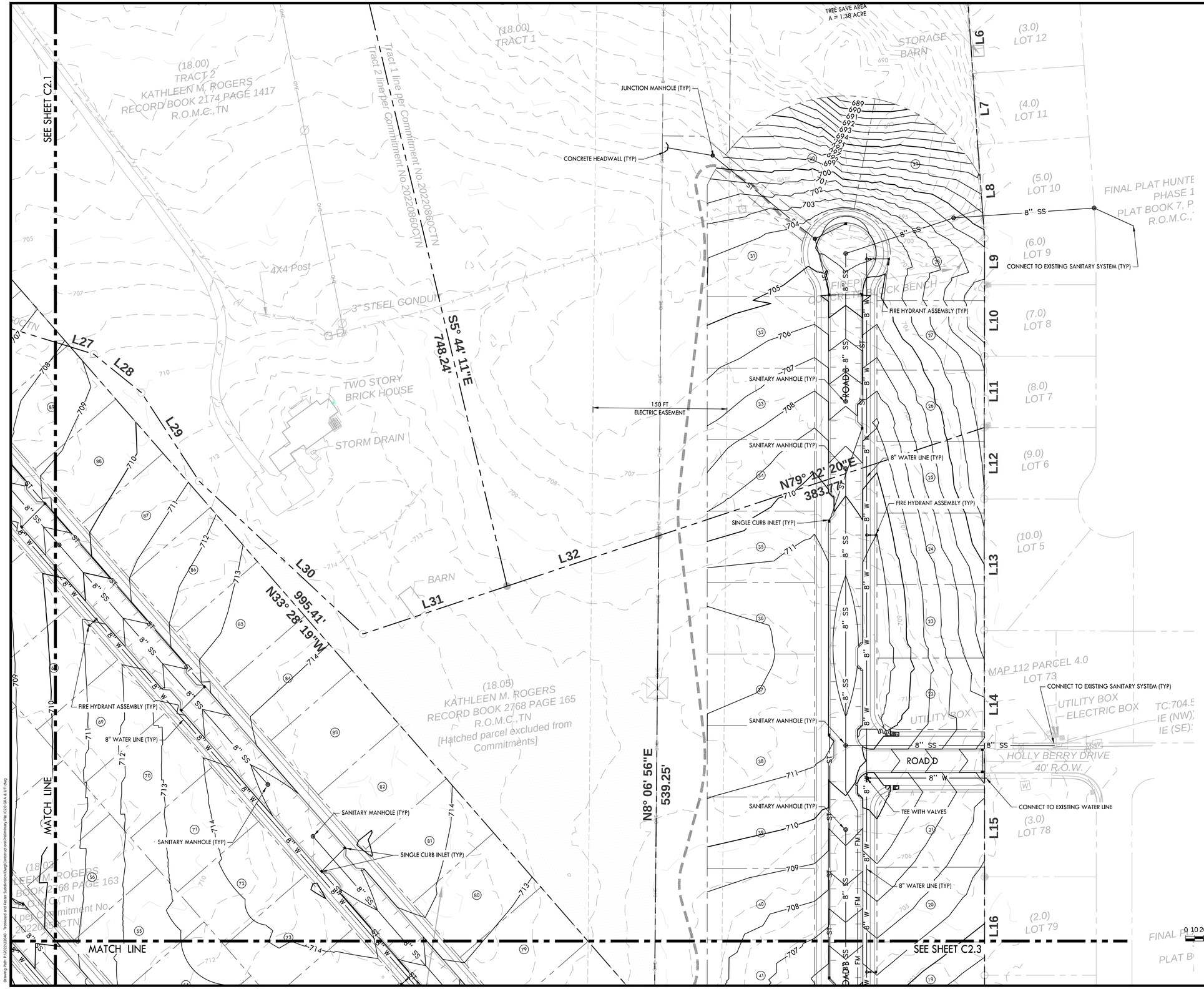
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GRADING, DRAINAGE, & UTILITY PLAN

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PROPOSED GRADING & DRAINAGE LEGEND

- 55 — PROPOSED CONTOUR
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- SINGLE CATCH BASIN
- JUNCTION BOX

PROPOSED UTILITY LEGEND

- SS — SANITARY SEWER LINE
- W — WATER LINE

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STATE OF TENNESSEE

TROTWOOD AND FOSTER SUBDIVISION

COLUMBIA TENNESSEE

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GRADING, DRAINAGE, & UTILITY PLAN

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CPWS

June 7, 2022

Mr. Adam Crunk P.E.
Crunk Engineering, LLC
7112 Crossroads Blvd, Suite 201
Brentwood, TN 37027
Sent via email: adam@crunkeng.com

RE: Water Availability Letter
Trotwood-Foster Subdivision – 124 Units
Foster Lane
Tax Map 112, Parcel 18.00, 18.03, 18.04
Columbia, Maury, TN

Dear Mr. Crunk:

Columbia Power and 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, various Planning Commissions and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies, water service will be made available on a first-come, first-served basis, provided the applicant complies with all rules and regulations of CPWS and conditions set out herein.

The proposed development consists of 124 units. CPWS has evaluated the projected water demands for the proposed residential development in the water system hydraulic model and is able to meet a fire-flow capacity of 1,000 gpm at 20 psi while maintaining the existing level of service and pressures in this portion of the distribution system. CPWS can provide water for the proposed development according to the following requirements:

- Domestic waterline connections will be made to the existing 12-inch water main located on Trotwood and the existing 8-inch water main on Holly Berry Drive.

CPWS

All of the above requirements are to be constructed and paid for by the Applicant and dedicated to CPWS once complete up to and including the meter. No construction of CPWS infrastructure shall be initiated until final construction plans have been approved by TDEC and all parties have fully executed a water service agreement.

Once you have received this Water Availability Letter, next steps in the process to obtain water service from CPWS are as follows:

- Present the attached fire hydrant curve for coordination and approval of development from the Columbia Fire & Rescue Fire Marshall.
- Provide construction drawings for all public water infrastructure for the proposed development in both CAD and PDF format for CPWS review.
- When applicant has resolved all comments provided by CPWS for the construction drawings, CPWS will provide an approval letter and flow calculations to support TDEC approval of the construction drawings.
- Applicant then submits drawings to TDEC for approval. Upon approval by TDEC, applicant may schedule a pre-construction meeting with CPWS. No construction of CPWS infrastructure may take place prior to the pre-construction meeting.
- Applicant is then 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.

If you have any questions, please feel free to contact Mr. Jonathan Hardin or myself at 615-934-7499 or jason.english@inflodesign.com. This letter is valid for one-hundred twenty (120) days from the date of this letter.

Sincerely,

Jason E English

Jason English, P.E.
Inflo Design Group, LLC
on behalf of Columbia Power and Water Systems

cc: Jonathan Hardin, CPWS
File 22-043

Traffic Impact Study

Trotwood & Foster Subdivision

December 2022

FOR SUBMITTAL TO:

City of Columbia, Tennessee

PREPARED FOR:

NoMau Partners

Kimley»Horn

Traffic Impact Study

Trotwood & Foster Subdivision

FOR SUBMITTAL TO:

City of Columbia, Tennessee

PREPARED FOR:

NoMau Partners, Inc.

PREPARED BY:

Kimley»Horn

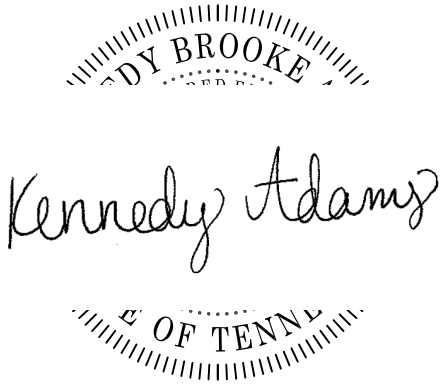
10 Lea Avenue, Suite 400

Nashville, Tennessee 37210

615.564.2701

December 2022

Project Number 118919000



12/19/2022

Kimley»Horn

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Appendix B: Traffic Count Data
Appendix C: Volume Development
Appendix D: *Synchro* Reports
Appendix E: Turn Lane Warrants

1.0 EXECUTIVE SUMMARY

This traffic study evaluated the anticipated traffic impacts associated with the *Trotwood & Foster Subdivision* development, which is expected to be completed in 2025 (referred to herein as build-out year). As currently envisioned, the development will consist of approximately 126 single family detached dwelling units. The approximate 53.13-acre site is located south of Trotwood Avenue and west of Old Sunnyside Lane within the City of Columbia, Tennessee.

This following scenarios were considered in this analysis:

- Existing 2022 Conditions
- Projected 2025 No-Build Conditions
- Projected 2025 Build Conditions

The study network for this analysis includes the following intersections:

1. Trotwood Avenue at Cayce Lane/Sunnyside Lane
2. Trotwood Avenue at Rutherford Lane
3. Trotwood Avenue at Old Sunnyside Lane
4. Trotwood Avenue at Foster Lane

The proposed development will be served by two driveways. Site Driveway A is a proposed full-movement, side street stop controlled driveway along Foster Lane. Site Driveway B is an extension of Holly Berry Drive.

The results of the analyses show that all study intersections currently operate at an acceptable overall LOS during the AM and PM peak hours. Under the projected 2025 No-Build and Build conditions, all study intersections are projected to continue to operate at an acceptable overall LOS during the AM and PM peak hours.

1.1 DEVELOPMENT IMPROVEMENT RECOMMENDATIONS

The following site-access improvements are recommended to serve the Projected 2025 Build traffic conditions (Note: this would be the improvements needed to serve the traffic associated with the *Trotwood & Foster Subdivision* development).

- Foster Lane
    - Provide a paved two-lane roadway with one (1) lane in each direction between Trotwood Avenue and Site Driveway A.
- Intersection 4 – Trotwood Avenue at Foster Lane
    - Construct an exclusive left-turn lane along the westbound approach of Trotwood Avenue (210' of full-width left-turn lane, and 180' of bay taper).
- Intersection 5 – Foster Lane at Site Driveway A
    - Construct one (1) ingress lane entering the site and one (1) egress lane exiting the site.
    - Provide stop-control for westbound approach along Site Driveway A.
- Intersection 6 – Holly Berry Drive Extension at Site Driveway B
    - Construct one (1) ingress lane entering the site and one (1) egress lane exiting the site.

2.0 INTRODUCTION

This report presents the analysis of the anticipated traffic impacts associated with the *Trotwood & Foster Subdivision* development, which is expected to be completed in 2025 (referred to herein as build-out year). As currently envisioned, the development will consist of approximately 126 single family detached dwelling units. The approximate 53.13-acre site is located south of Trotwood Avenue and west of Old Sunnyside Lane within the City of Columbia, Tennessee.

This report will summarize the analyses of the following scenarios:

- Existing 2022 Conditions
- Projected 2025 No-Build Conditions
- Projected 2025 Build Conditions

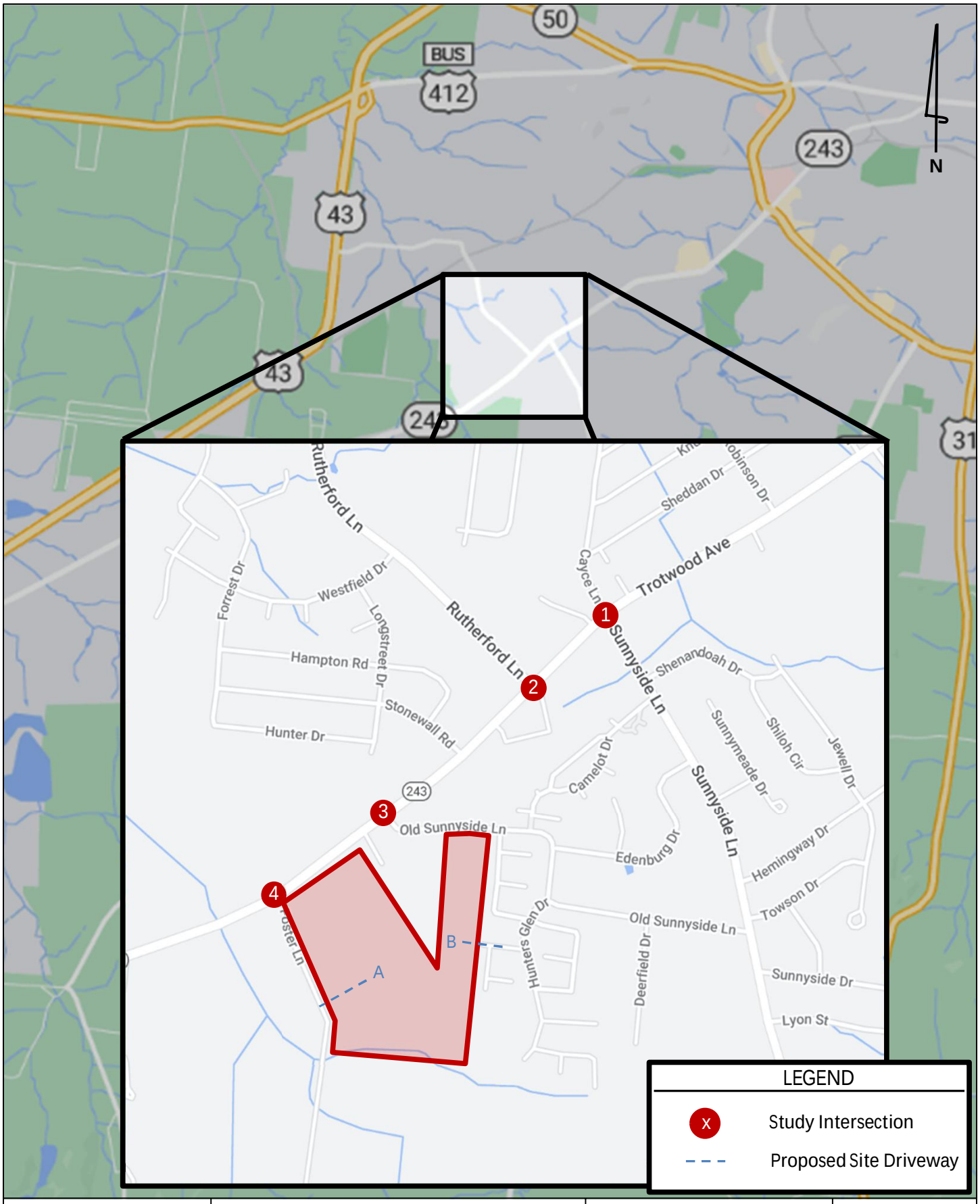
The study network for this analysis includes the following intersections:

1. Trotwood Avenue at Cayce Lane/Sunnyside Lane
2. Trotwood Avenue at Rutherford Lane
3. Trotwood Avenue at Old Sunnyside Lane
4. Trotwood Avenue at Foster Lane

For the purposes of this traffic impact study, Trotwood Avenue, Site Driveway A, Site Driveway B, and the Holly Berry Drive Extension are considered to have an east-west orientation. Cayce Lane, Sunnyside Lane, Rutherford Lane, Old Sunnyside Lane, and Foster Lane are considered to have a north-south orientation.

Figure 1 provides a location map of the project site. **Figure 2** provides an aerial image of the project site.

A site plan is also included in **Appendix A**.



Kimley»Horn	*Trotwood and Foster Subdivision* **Traffic Impact Study**	**Site Location Map**	**Figure 1**



Kimley»Horn	*Trotwood and Foster Subdivision* **Traffic Impact Study**	**Site Aerial**	**Figure 2**

3.0 EXISTING CONDITIONS

3.1 VEHICULAR NETWORK

Characteristics for the roadways within the study are summarized in **Table 1**.

Table 1: Roadway Network				
Roadway	**Number of Lanes**	**Posted Speed Limit (mph)**	**TDOT Classification**	**2021 TDOT AADT**
Trotwood Avenue	2	45	Minor Collector	14,100
Cayce Lane/Sunnyside Lane	2	35	Major Collector	4,200
Rutherford Lane	2	35	Major Collector	3,400
Old Sunnyside Lane	2	25	NA	N/A
Foster Lane	Unpaved Roadway	N/A	N/A	N/A

The existing road geometry is illustrated in **Figure 3.**

3.2 VEHICULAR VOLUMES

Vehicle peak hour turning movement counts (TMCs) were performed at each study intersection. The TMCs were collected during the AM period (7:00 AM – 9:00 AM) and the PM period (4:00 PM – 6:00 PM) on Thursday, July 14, 2022. Peak hours for the study intersection are shown in **Table 2**.

Table 2: Intersection Peak Hours		
Intersection	**AM Peak Hour**	**PM Peak Hour**
1. Trotwood Avenue at Cayce Lane/Sunnyside Lane	7:30 AM – 8:30 AM	4:15 PM – 5:15 PM
2. Trotwood Avenue at Rutherford Lane	7:15 AM – 8:15 AM	4:15 PM – 5:15 PM
3. Trotwood Avenue at Old Sunnyside Lane	7:15 AM – 8:15 AM	4:30 PM – 5:30 PM
4. Trotwood Avenue at Foster Lane	7:15 AM – 8:15 AM	4:00 PM – 5:00 PM

In addition to the TMCs, a 24-hour average daily traffic (ADT) count was also collected at the following location:

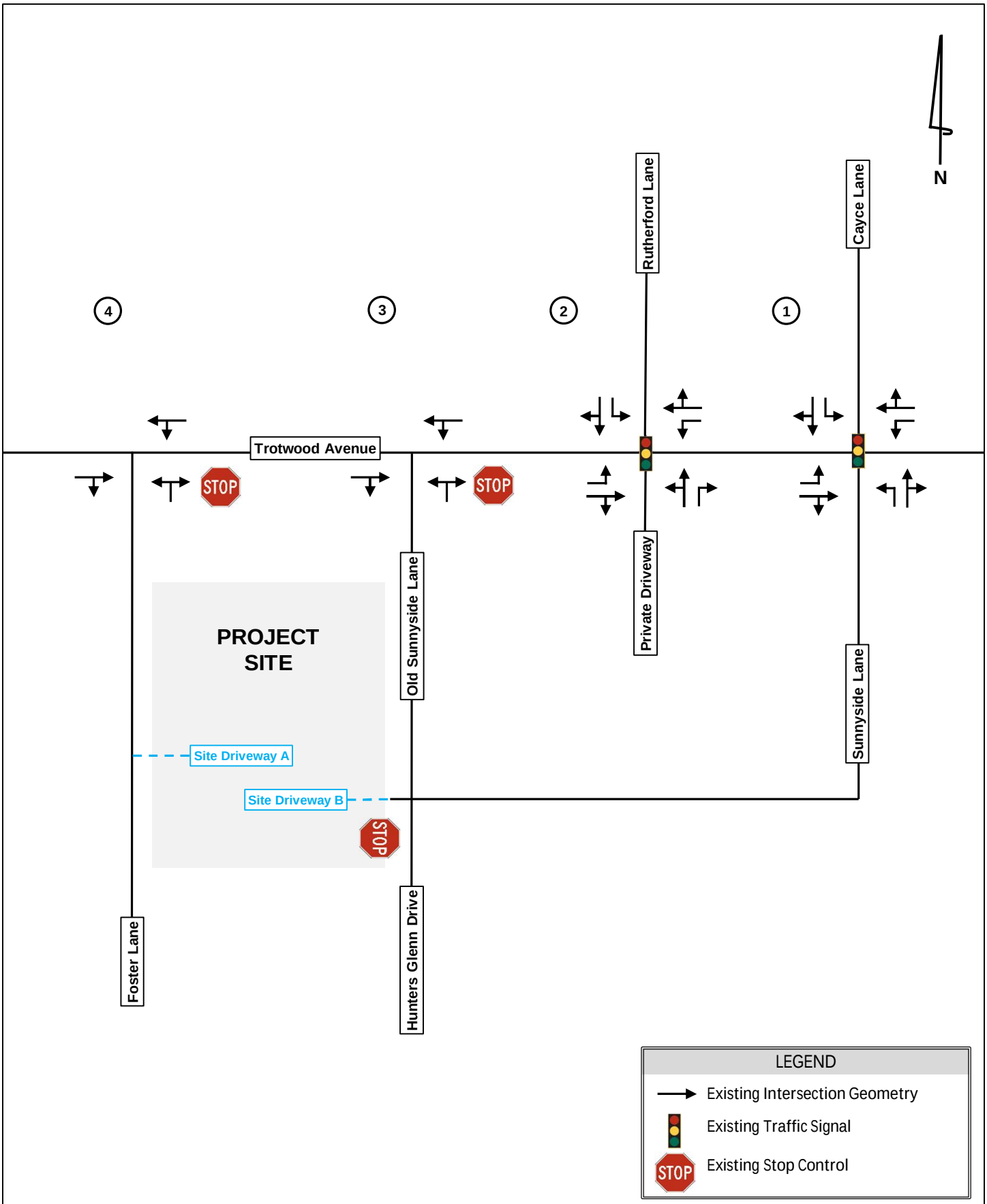
- Trotwood Avenue west of Rutherford Lane (13,700 daily vehicles – 6,600 EB, 7,100 WB)

It should be noted that at the time that counts were performed, the northbound leg of Intersection 2 (Trotwood Avenue at Rutherford Lane) was closed for construction.

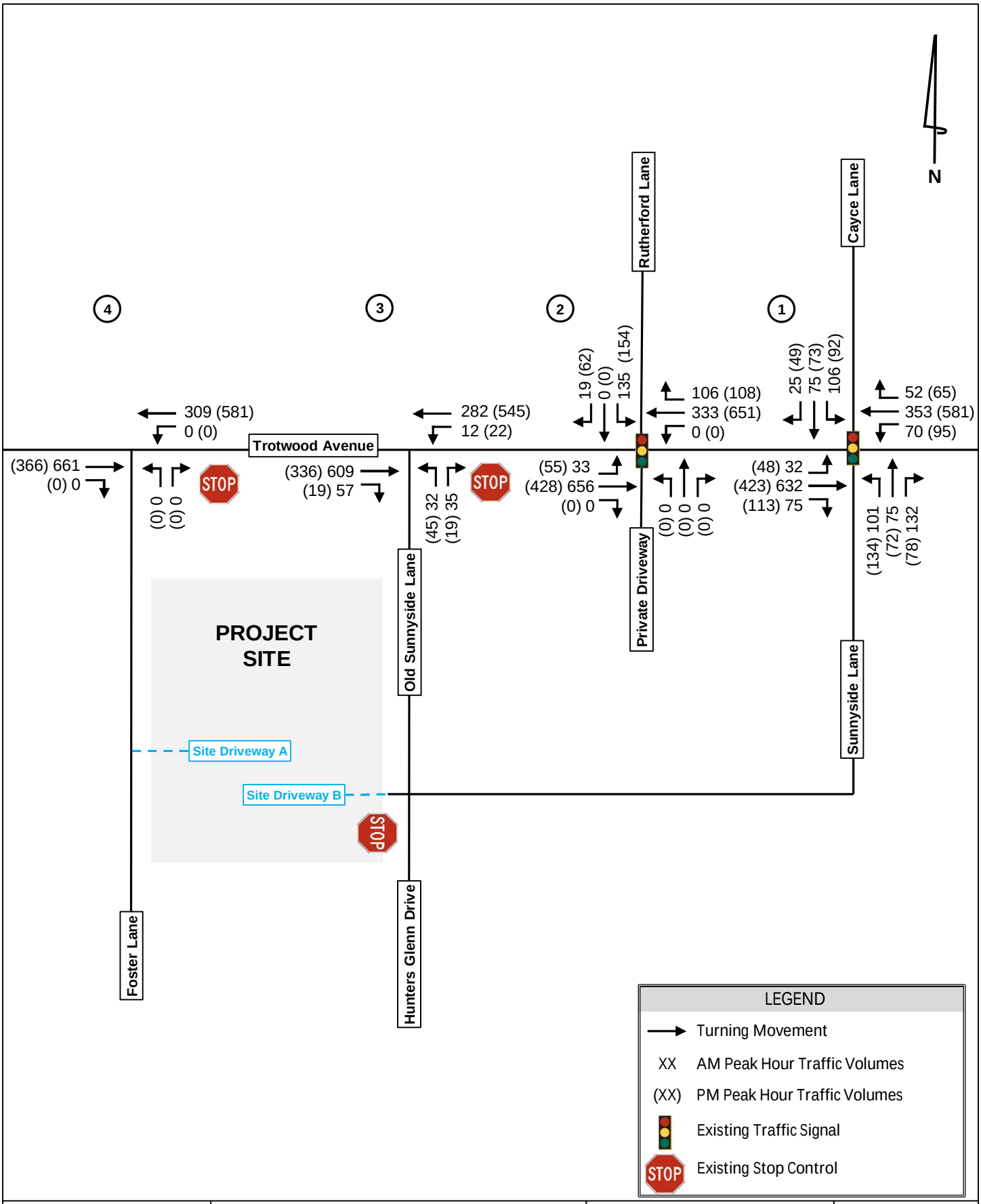
The Existing 2022 turning movement counts were collected while schools were not in session. To account for any reduction in volumes attributed to school traffic, the Existing 2022 counts collected at Trotwood Avenue at Cayce Lane/Sunnyside Lane (Intersection 1) were compared to the Existing 2022 counts collected for the *Sunnyside Gas Station* background development to determine AM and PM adjustment factors. The peak hour adjustment factors were applied to the existing peak hour TMCs at each of the study intersections. The adjustment factors are shown below:

- AM Peak Adjustment Factor – 1.38
- PM Peak Adjustment Factor – 1.07

The Adjusted Existing 2022 peak hour traffic volumes are shown in **Figure 4**. The complete traffic count data is provided in **Appendix B**. The adjustment calculations are provided in **Appendix C**.



Kimley»Horn	*Trotwood and Foster Subdivision* Traffic Impact Study	Existing 2022 Intersection Geometry	Figure 3



Kimley»Horn	*Trotwood and Foster Subdivision* Traffic Impact Study	Existing 2022 Traffic Volumes	Figure 4

4.0 NO-BUILD CONDITIONS

Background traffic is defined as expected traffic on the roadway in future year(s) absent the construction and opening of the proposed project. Background traffic can include a base growth rate based on historical count data as well as population growth data and estimates.

To account for background traffic, the Adjusted Existing 2022 traffic volumes were increased by 3.0% per year for three years to account for the expected background growth through year 2025. Additionally, project trips associated with the following developments were included in the Projected 2025 No-Build Traffic volumes:

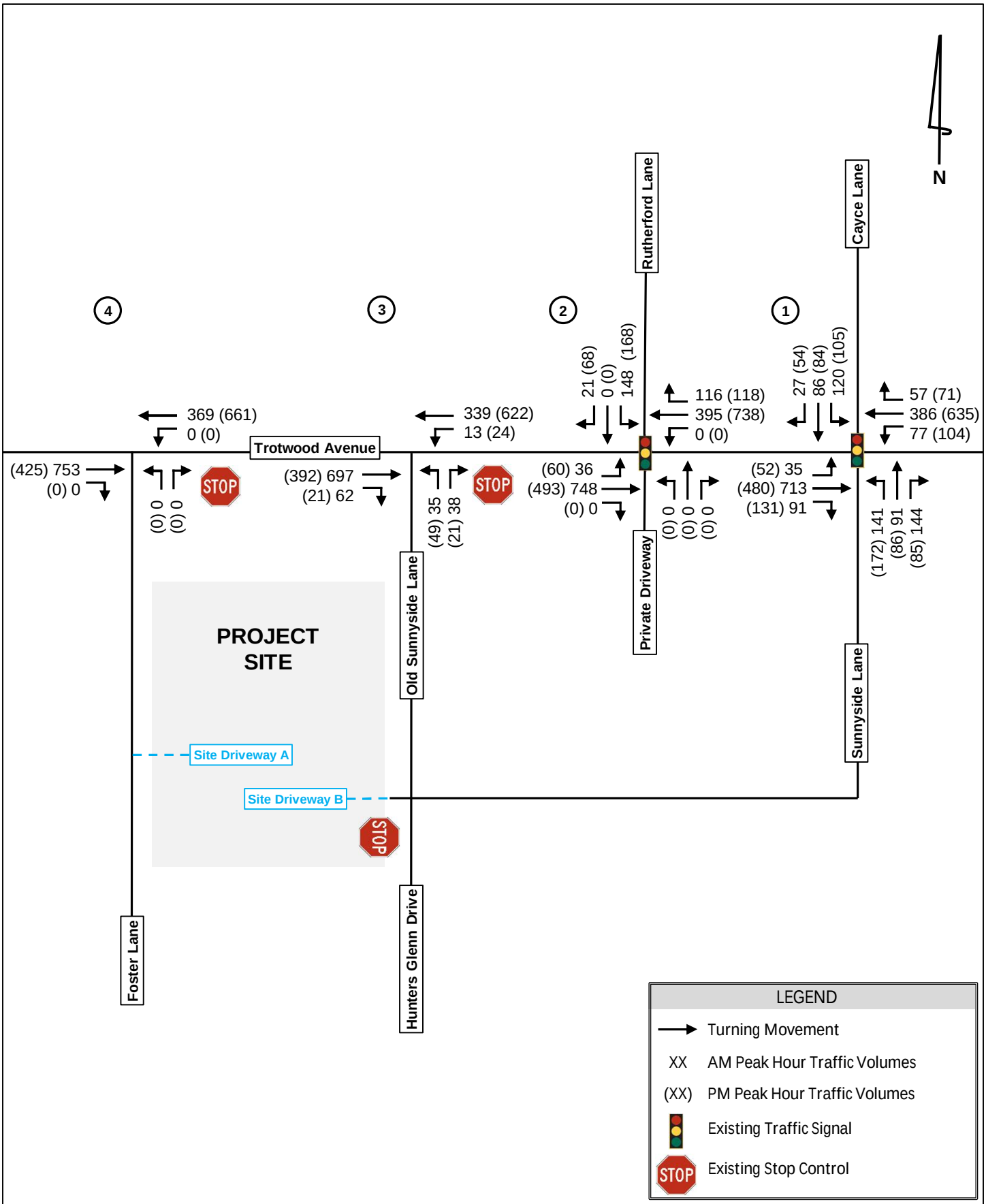
- *Sunnyside Gas Station* development

Figure 5 illustrates the Projected 2025 No-Build traffic volumes.

4.1 FUTURE TRANSPORTATION INFRASTRUCTURE IMPROVEMENTS

The City of Columbia Annual Budget and Tennessee Department of Transportation (TDOT) transportation projects were researched for currently planned/programmed transportation projects within the vicinity of the study area.

No improvements were identified to be included in the capacity analyses.



Kimley»Horn	*Trotwood and Foster Subdivision* Traffic Impact Study	Projected No-Build 2025 Traffic Volumes	Figure 5

5.0 BUILD CONDITIONS

5.1 SITE ACCESS AND CIRCULATION

Access to the proposed site will be provided at two locations. A brief description of the site access is as follows:

- Site Driveway A
    - Proposed full-movement, unsignalized driveway along Foster Lane approximately 1,000' south of Trotwood Avenue. The intersection is proposed to operate under sidestreet stop control and have one (1) ingress lane entering the site and one (1) egress lane exiting the site.
- Site Driveway B
    - Proposed extension of Holly Berry Drive approximately 450' west of Hunters Glen Drive. The extension is proposed have one (1) ingress lane entering the site and one (1) egress lane exiting the site.

Refer to the site plan in **Appendix A** for a visual representation of vehicular access and circulation throughout the proposed development.

5.2 TRIP GENERATION

Traffic for the proposed development was calculated using equations contained in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, *11th Edition*, using equations where available.

Internal capture (or mixed-use) reductions represent the concept that trips generated by individual land uses within a site may remain internal to the site. Mixed-use vehicle trip reductions are calculated using guidance from the *ITE Trip Generation Handbook, 3rd Edition*.

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.

A pass-by trip occurs when a proposed development diverts traffic that is already traveling on a street adjacent to the site. Pass-by reductions are calculated using guidance from the *ITE Trip Generation Handbook, 3rd Edition*.

The trip generation for the site was performed with no reductions to gross trips as the proposed site is not likely to generate significant mixed-use, alternative mode, or pass-by trips.

Table 3 summarizes the project trip generation. **Appendix C** provides a detailed trip generation worksheet for the proposed development.

Table 3: Trip Generation

ITE Code	Land Use	Density	Daily		AM Peak Hour		PM Peak Hour	
			Enter	Exit	Enter	Exit	Enter	Exit
210	Single-Family Detached Housing	126 d.u.	624	624	24	68	77	46
Gross Trips			**624**	**624**	**24**	**68**	**77**	**46**

5.3 TRIP DISTRIBUTION AND ASSIGNMENT

The directional distribution and assignment of new project trips was based on a review of land uses and population densities in the area and the existing peak hour turning movement counts. **Figure 6** provides the directional distribution and assignment of new project trips. **Figure 7** illustrates the assignment of project trips to the study network. The Projected 2025 Build peak hour volumes are shown in **Figure 8**. **Appendix C** provides intersection volume worksheets for all intersections and driveways within the study network.

5.4 TURN LANE EVALUATION

TDOT HSAM Vol 3 Geometric Design Criteria was used to evaluate if left-turn and right-turn lanes should be implemented along the major road at a two-way stop-controlled intersection. From within the TDOT HSAM, the following methodologies were applied to perform these evaluations:

- Figure 3-15 ("Left-Turn Lane Warrant for Urban and Suburban Arterials (Unsignalized)")
- Figure 3-18 ("Right-Turn Lane Warrant Along Two-Lane Roadway (Unsignalized Intersection with Two-Way Stop-Control")

Turn lane evaluations were performed for:

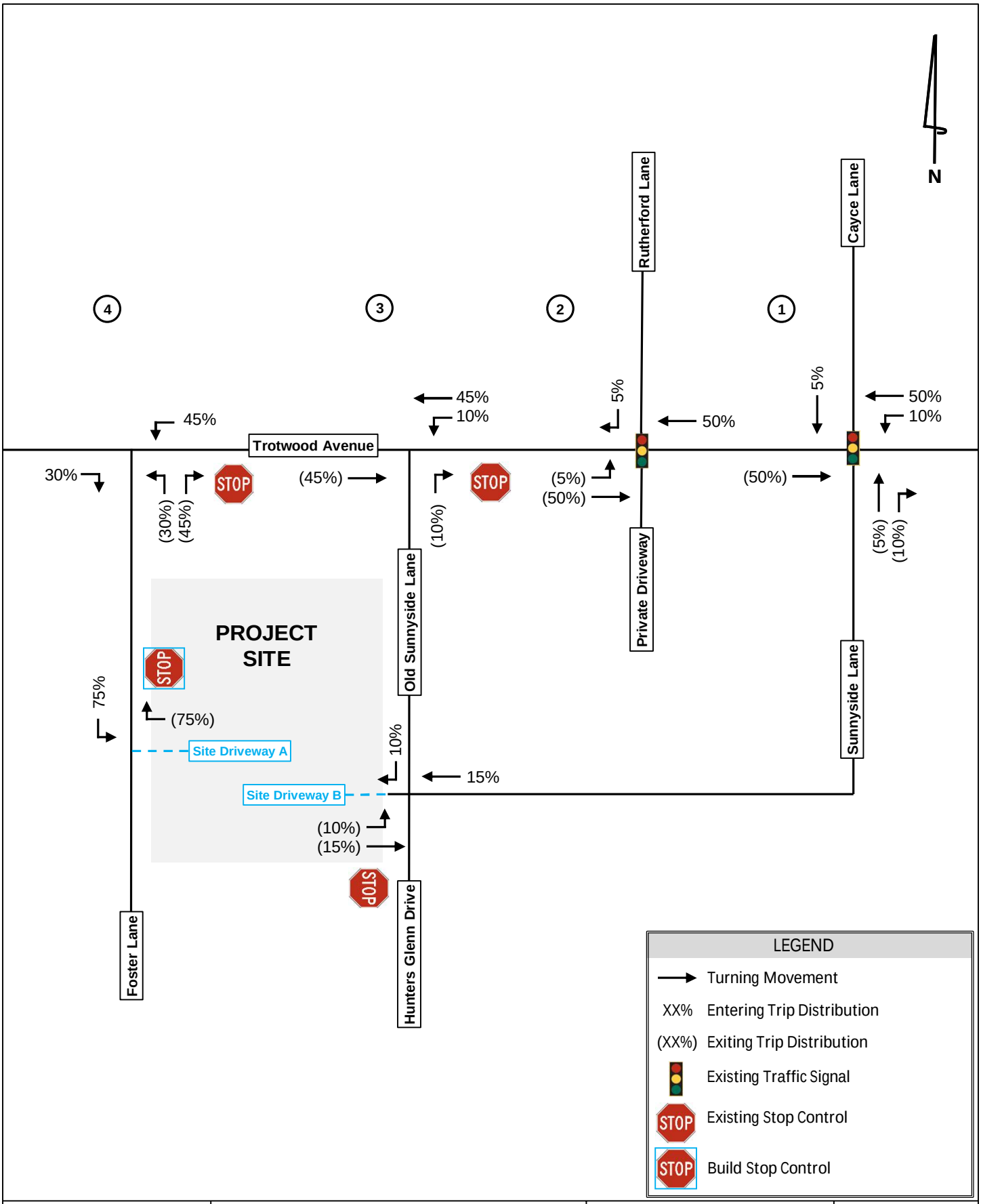
- Trotwood Avenue at Foster Lane
- Foster Lane at Site Driveway A

The results of the turn lane warrants are summarized in **Table 4**. **Appendix E** provides the TDOT Turn Lane Warrant charts used for the analysis.

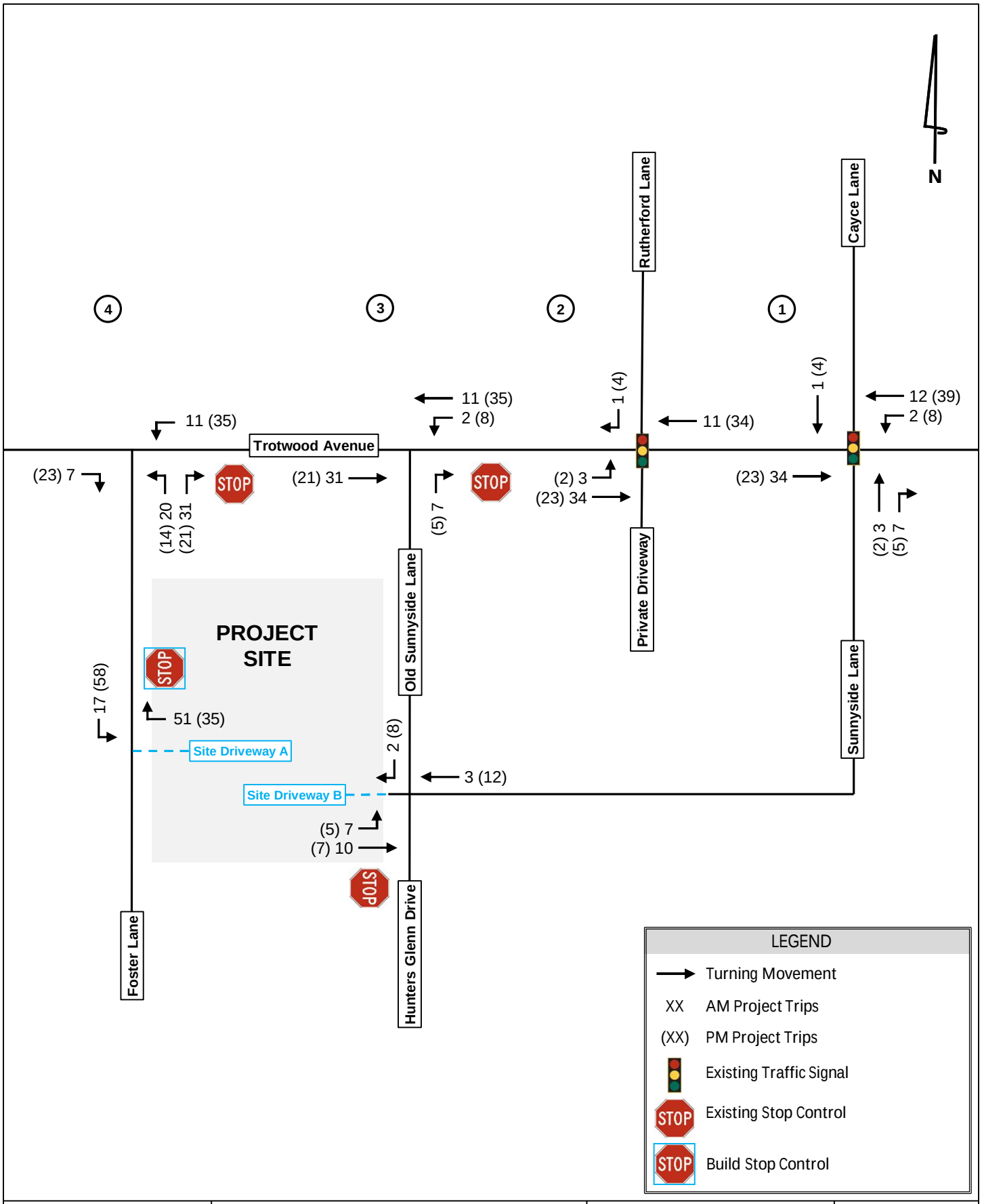
Table 4: Turn Lane Evaluation

Intersection	Movement	Analysis Scenario	AM Peak Hour	PM Peak Hour
4. Trotwood Avenue at Foster Lane	EBR Turn Lane	Build 2025	Not Warranted	Not Warranted
	WBL Turn Lane		WARRANTED	WARRANTED
5. Foster Lane at Site Driveway A	NBR Turn Lane	Build 2025	Not Warranted	Not Warranted
	SBL Turn Lane		Not Warranted	Not Warranted

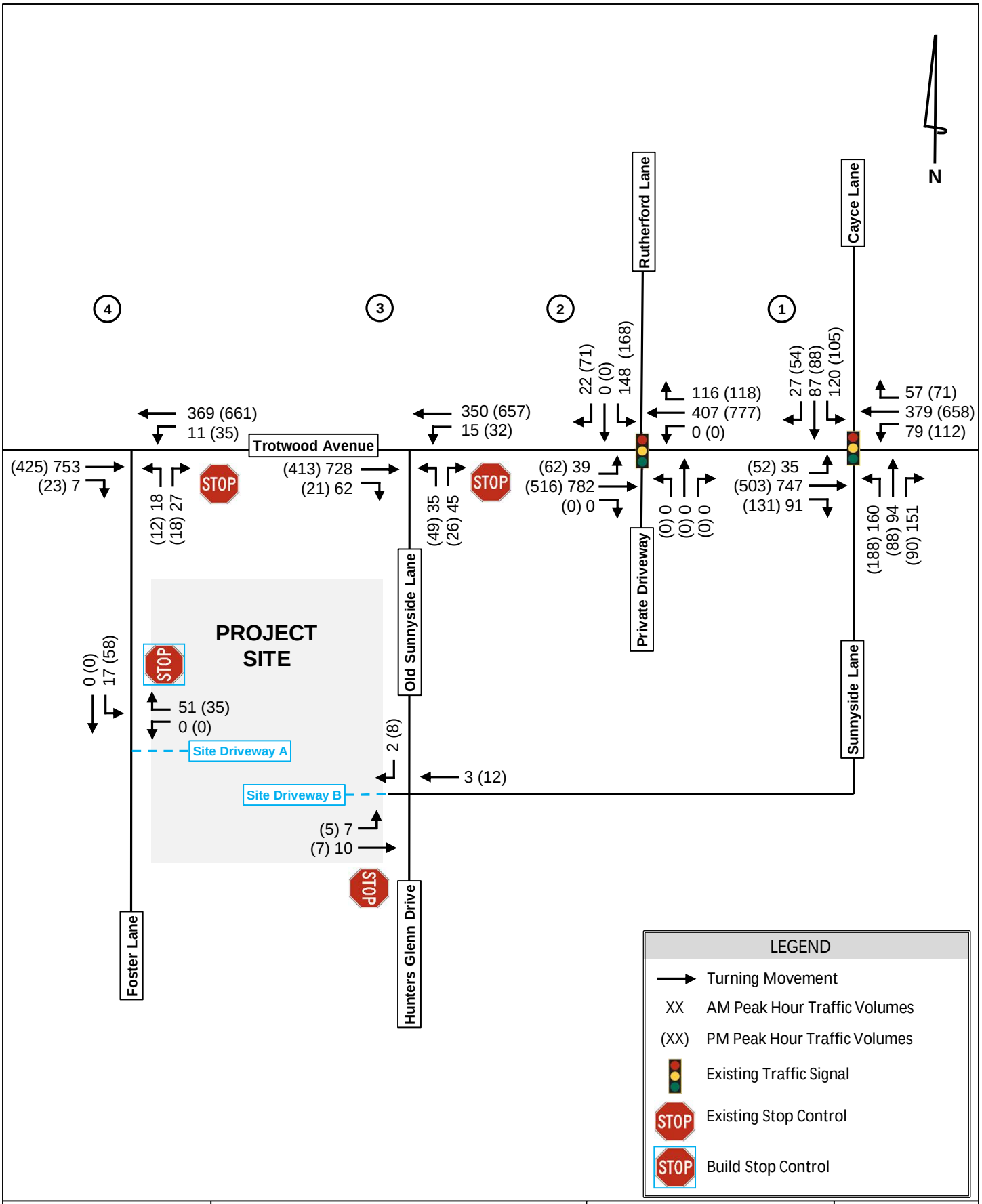
Based on TDOT Geometric Design Criteria, an exclusive left-turn lane along the westbound approach of Trotwood Avenue would require 210' of full-width left-turn lane, and 180' of bay taper.



Kimley»Horn	*Trotwood and Foster Subdivision* Traffic Impact Study	Trip Distribution	Figure 6



Kimley»Horn	*Trotwood and Foster Subdivision* Traffic Impact Study	Project Trips	Figure 7



Kimley»Horn	*Trotwood and Foster Subdivision* Traffic Impact Study	Projected Build 2025 Traffic Volumes	Figure 8

6.0 CAPACITY ANALYSES

6.1 LEVEL-OF-SERVICE ANALYSES

Level-of-service (LOS) determinations were made for the weekday AM and PM peak hours for the study network intersections using *Synchro, Version 11.0. Synchro* software uses methodologies contained in the *Highway Capacity Manual, 6th Edition* to determine the operating characteristics of an intersection. Capacity is defined as the maximum number of vehicles that can pass over a particular road segment or through a particular intersection within a specified period under prevailing roadway, traffic, and control conditions.

LOS is used to describe the operating characteristics of a road segment or intersection in relation to its capacity. LOS is defined as a qualitative measure that describes operational conditions and motorists' perceptions of a traffic stream. The *Highway Capacity Manual* defines six levels of service, LOS A through LOS F, with A being the best and F the worst.

Levels-of-service for unsignalized intersections, with stop control on the minor street only, are reported for the side-street approaches and major street left-turns. Low levels-of-service for side street approaches are not uncommon, as vehicles may experience significant delay turning onto a major roadway.

Levels-of-service for signalized and all-way stop controlled (AWSC) intersections are reported for the intersection as a whole. One or more movements at an intersection may experience a low level-of-service, while the intersection as a whole may operate acceptably.

Capacity analyses were performed for the AM and PM peak hours under the Existing 2022, Projected 2025 No-Build, and Projected 2025 Build traffic conditions. The results of the capacity analyses are summarized in **Table 5**. The *Synchro* analyses reports are included in **Appendix D**.

Table 5: Level-of-Service Summary *LOS (Delay in Seconds)*							
Intersection	**Approach/ Movement**	**Existing 2022**		**Projected 2025 No-Build**		**Projected 2025 Build**	
		AM Peak	**PM Peak**	**AM Peak**	**PM Peak**	**AM Peak**	**PM Peak**
1. Trotwood Avenue at Cayce Lane/ Sunnyside Lane	Overall	C (25.0)	B (19.8)	D (45.3)	C (22.0)	D (54.2)	C (22.6)
2. Trotwood Avenue at Rutherford Lane	Overall	A (9.2)	A (9.5)	A (9.8)	A (9.9)	A (10.0)	A (10.0)
3. Trotwood Avenue at Old Sunnyside Lane	NB	C (20.7)	C (18.4)	D (26.6)	C (22.3)	D (29.0)	C (24.5)
	WBL	A (9.3)	A (8.1)	A (9.7)	A (8.2)	A (9.9)	A (8.3)
4. Trotwood Avenue at Foster Lane	NB	--	--	--	--	C (23.5)	C (17.2)
	WBL	--	--	--	--	A (9.7)	A (8.4)
5. Foster Lane at Site Driveway A	WB	--	--	--	--	*	*
	SBL	--	--	--	--	*	*

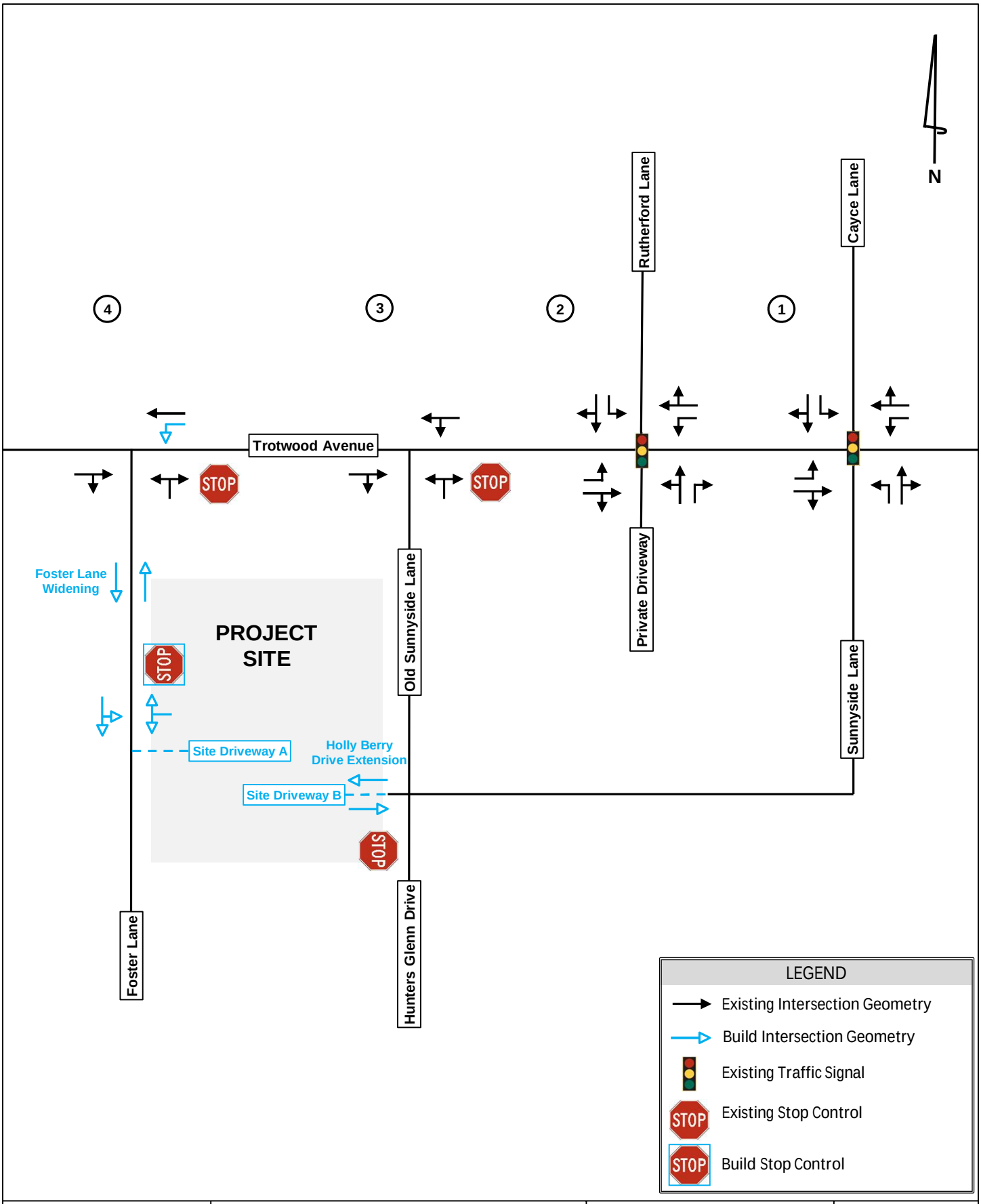
**Negligible delay – no opposing traffic*

All of the study intersections currently operate and are projected to operate at an acceptable overall LOS during both the AM and PM peak hours. It should be noted that low LOS for side street approaches are not uncommon, as vehicles may experience significant delay turning onto a major roadway.

Although all approaches are projected to operate acceptably under all studied scenarios, an exclusive westbound left-turn lane is warranted at the intersection of Trotwood Avenue at Foster Lane (Intersection 4) based on TDOT Geometric Design Criteria. A capacity analysis of the improved conditions at Intersection 4 are shown in **Table 6**.

Table 6: Improved Level-of-Service Summary *LOS (Delay in Seconds)*			
Intersection	**Approach/ Movement**	**Projected 2025 Build**	
		AM Peak	**PM Peak**
4. Trotwood Avenue at Foster Lane	NB	C (23.5)	C (17.0)
	WBL	A (9.7)	A (8.4)

The recommended improvements and lane configuration for site driveways is shown visually in **Figure 9**.



Kimley»Horn	*Trotwood and Foster Subdivision* Traffic Impact Study	Build 2025 Intersection Geometry	Figure 9

7.0 CONCLUSION

This traffic study evaluated the traffic impacts associated with the Trotwood & Foster Subdivision development located south of Trotwood Avenue and west of Old Sunnyside Lane within City of Columbia, Tennessee. The development, which is approximately 53.13-acres in size, will include approximately 126 single family detached dwelling units.

The study network, which consists of four (4) intersections, was analyzed for the weekday AM and PM peak hours under Existing 2022 conditions, Projected 2025 No-Build conditions (three years of background traffic growth plus project traffic associated with the *Sunnyside Gas Station* development), and Projected 2025 Build conditions (Projected 2025 No-Build conditions plus traffic generated by the proposed *Trotwood & Foster Subdivision* development).

Based on the results of this study, all study intersections currently operate at an acceptable overall LOS during the AM and PM peak hours. Under the projected 2025 No-Build and Build conditions, all study intersections are projected to continue to operate at an acceptable overall LOS during the AM and PM peak hours.

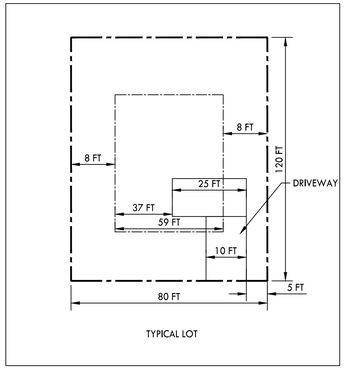
7.1 DEVELOPMENT IMPROVEMENT RECOMMENDATIONS

Based on the results of this traffic impact study, Kimley-Horn and Associates, Inc. recommends the following site-access improvements to serve the Projected 2025 Build traffic conditions (Note: this would be the improvements needed to serve the traffic associated with the *Trotwood & Foster Subdivision* development).

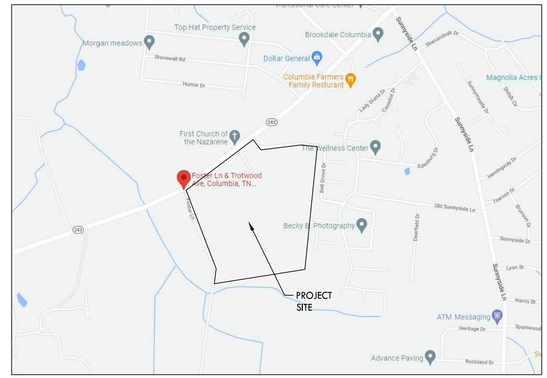
- Foster Lane
    - Provide a paved two-lane roadway with one (1) lane in each direction between Trotwood Avenue and Site Driveway A.
- Intersection 4 – Trotwood Avenue at Foster Lane
    - Construct an exclusive left-turn lane along the westbound approach of Trotwood Avenue (210’ of full-width left-turn lane, and 180’ of bay taper).
- Intersection 5 – Foster Lane at Site Driveway A
    - Construct one (1) ingress lane entering the site and one (1) egress lane exiting the site.
    - Provide stop-control for westbound approach along Site Driveway A.
- Intersection 6 – Holly Berry Drive Extension at Site Driveway B
    - Construct one (1) ingress lane entering the site and one (1) egress lane exiting the site.

APPENDIX A

Site Plan



TYPICAL LOT



SITE VICINITY MAP

SITE DATA TABLE
PROJECT, TROTWOOD AND FOSTER
ADDRESS, COLUMBIA TENNESSEE
PARCEL ID :

EXISTING ZONING:	CD-3
PROPOSED ZONING:	CD-3

ZONING DISTRICT

TOTAL SITE AREA:	53.13 ACRES
PROPOSED LOTS	126
BUILDING HEIGHT	3 STORIES MAX
MIN. LOT SIZE	7800 SF
MIN. LOT WIDTH	51FT
FRONT YARD	25 FT PRIMARY, 20 FT SECONDARY
SIDE SETBACK	8 FT
REAR SETBACK	25 FT
OPEN SETBACK REQ.	##
OPEN SPACE PROVIDED	##
USABLE OPEN SPACE REQ	##
USABLE OPEN SPACE PROVIDED	##

NOTES:
1. REFER TO SHEET C2.0 FOR NOTES.

PROPOSED LAYOUT LEGEND

- PROPOSED BUILDING
- HEAVY DUTY ASPHALT PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPERTY LINE
- EDGE OF NEW PAVEMENT

0 50 100 200
GRAPHIC SCALE

CRUNK ENGINEERING LLC
7112 CROSSROADS BOULEVARD
SUITE 201
BRENTWOOD, TN 37027
(615) 873-1795
WWW.CRUNKENG.COM

TROTWOOD AND FOSTER SUBDIVISION
COLUMBIA TENNESSEE

REVISIONS

No.	DATE

09/29/22 22040

C5.0
SITE LAYOUT

Drawing Path: C:\RAVAN POWERBUILDE PROJECTS\Crunk Engg\Projects\22040 - Trotwood And Foster\September\2020\Work\C5.0 LAY.dwg

APPENDIX B

Traffic Count Data

Bi-Directional Class Count || Volume Summary 15min

Columbia, TN

Marr Traffic DATA COLLECTION

www.marrtraffic.com

Site 5
TN-243 Trotwood Ave,
west of Rutherford Ln

Date
Thursday, July 14, 2022

Weather
Partly Cloudy
81°F

Lat/Long
35.589107°, -87.098139°

0000 - 2400 (24h Session) (07-14-2022)
Volume Summary 15min

TIME	Volume Summary 15min EB	WB	15min Total	60min Total
0000 - 0015	8	14	**22**	
0015 - 0030	2	3	**5**	
0030 - 0045	2	17	**19**	
0045 - 0100	2	12	**14**	**60**
0100 - 0115	2	7	**9**	
0115 - 0130	2	2	**4**	
0130 - 0145	4	4	**8**	
0145 - 0200	2	5	**7**	**28**
0200 - 0215	3	12	**15**	
0215 - 0230	7	6	**13**	
0230 - 0245	7	3	**10**	
0245 - 0300	1	3	**4**	**42**
0300 - 0315	2	6	**8**	
0315 - 0330	6	6	**12**	
0330 - 0345	12	4	**16**	
0345 - 0400	10	3	**13**	**49**
0400 - 0415	9	6	**15**	
0415 - 0430	12	6	**18**	
0430 - 0445	18	7	**25**	
0445 - 0500	32	10	**42**	**100**
0500 - 0515	28	13	**41**	
0515 - 0530	47	21	**68**	
0530 - 0545	38	18	**56**	
0545 - 0600	55	27	**82**	**247**
0600 - 0615	49	38	**87**	
0615 - 0630	86	43	**129**	
0630 - 0645	108	46	**154**	
0645 - 0700	103	37	**140**	**510**
0700 - 0715	87	64	**151**	
0715 - 0730	121	62	**183**	
0730 - 0745	136	71	**207**	
0745 - 0800	130	76	**206**	**747**
0800 - 0815	112	46	**158**	
0815 - 0830	91	86	**177**	
0830 - 0845	109	64	**173**	
0845 - 0900	105	68	**173**	**681**
0900 - 0915	96	72	**168**	
0915 - 0930	105	102	**207**	
0930 - 0945	99	84	**183**	
0945 - 1000	114	77	**191**	**749**
1000 - 1015	96	77	**173**	
1015 - 1030	103	84	**187**	
1030 - 1045	108	108	**216**	
1045 - 1100	105	101	**206**	**782**
1100 - 1115	105	92	**197**	
1115 - 1130	105	102	**207**	
1130 - 1145	109	144	**253**	
1145 - 1200	89	122	**211**	**868**

Time	Volume Summary 15min EB	WB	15min Total	60min Total
1200 - 1215	108	117	**225**	
1215 - 1230	98	119	**217**	
1230 - 1245	129	106	**235**	
1245 - 1300	136	127	**263**	**940**
1300 - 1315	91	116	**207**	
1315 - 1330	100	122	**222**	
1330 - 1345	118	126	**244**	
1345 - 1400	128	125	**253**	**926**
1400 - 1415	106	104	**210**	
1415 - 1430	96	133	**229**	
1430 - 1445	111	150	**261**	
1445 - 1500	109	147	**256**	**956**
1500 - 1515	94	130	**224**	
1515 - 1530	110	150	**260**	
1530 - 1545	119	150	**269**	
1545 - 1600	93	133	**226**	**979**
1600 - 1615	111	149	**260**	
1615 - 1630	113	163	**276**	
1630 - 1645	125	175	**300**	
1645 - 1700	107	166	**273**	**1109**
1700 - 1715	106	162	**268**	
1715 - 1730	99	172	**271**	
1730 - 1745	95	164	**259**	
1745 - 1800	95	169	**264**	**1062**
1800 - 1815	107	158	**265**	
1815 - 1830	95	140	**235**	
1830 - 1845	82	129	**211**	
1845 - 1900	82	126	**208**	**919**
1900 - 1915	75	114	**189**	
1915 - 1930	86	129	**215**	
1930 - 1945	73	87	**160**	
1945 - 2000	55	95	**150**	**714**
2000 - 2015	101	86	**187**	
2015 - 2030	67	78	**145**	
2030 - 2045	45	66	**111**	
2045 - 2100	57	63	**120**	**563**
2100 - 2115	58	61	**119**	
2115 - 2130	42	47	**89**	
2130 - 2145	29	57	**86**	
2145 - 2200	33	51	**84**	**378**
2200 - 2215	20	43	**63**	
2215 - 2230	13	30	**43**	
2230 - 2245	14	26	**40**	
2245 - 2300	19	22	**41**	**187**
2300 - 2315	8	14	**22**	
2315 - 2330	16	13	**29**	
2330 - 2345	8	11	**19**	
2345 - 0000	2	7	**9**	**79**

Session Total	6566	7109	**13675**
Session Average	68.40	74.05	**142.45**
Session Percentage	48.01	51.99	

Bi-Directional Class Count || Volume Summary 60min

Columbia, TN

Marr Traffic DATA COLLECTION

www.marrtraffic.com

Site 5
TN-243 Trotwood Ave,
west of Rutherford Ln

Date
Thursday, July 14, 2022

Weather
Partly Cloudy
81°F

Lat/Long
35.589107°, -87.098139°

0000 - 2400 (24h Session) (07-14-2022)
Volume Summary 60min

	Volume Summary 60min		
TIME	EB	WB	**Total**
0000 - 0100	14	46	**60**
0100 - 0200	10	18	**28**
0200 - 0300	18	24	**42**
0300 - 0400	30	19	**49**
0400 - 0500	71	29	**100**
0500 - 0600	168	79	**247**
0600 - 0700	346	164	**510**
0700 - 0800	474	273	**747**
0800 - 0900	417	264	**681**
0900 - 1000	414	335	**749**
1000 - 1100	412	370	**782**
1100 - 1200	408	460	**868**

	Volume Summary 60min		
Time	EB	WB	**Total**
1200 - 1300	471	469	**940**
1300 - 1400	437	489	**926**
1400 - 1500	422	534	**956**
1500 - 1600	416	563	**979**
1600 - 1700	456	653	**1109**
1700 - 1800	395	667	**1062**
1800 - 1900	366	553	**919**
1900 - 2000	289	425	**714**
2000 - 2100	270	293	**563**
2100 - 2200	162	216	**378**
2200 - 2300	66	121	**187**
2300 - 2400	34	45	**79**

Session Total	6566	7109	**13675**
Session Average	273.58	296.21	**569.79**
Session Percentage	48.01	51.99	

Click here for Map

Peak Hour Turning Movement Count

Columbia, TN

Marr Traffic DATA COLLECTION

www.marrtraffic.com



All vehicles

	Northbound					Southbound					Eastbound					Westbound					
	Sunnyside Ln					Cayce Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	3.1	3.2	3.3	3.4	Total	3.5	3.6	3.7	3.8	Total	3.9	3.10	3.11	3.12	Total	3.13	3.14	3.15	3.16	Total	Total
0730 - 0745	19	13	30	0	62	29	18	7	0	54	7	129	16	0	152	9	71	8	0	88	356
0745 - 0800	27	15	26	0	68	25	10	5	0	40	7	137	19	0	163	16	71	7	0	94	365
0800 - 0815	10	12	22	0	44	8	16	2	0	26	5	98	11	0	114	9	50	7	0	66	250
0815 - 0830	17	14	18	0	49	15	10	4	0	29	4	94	8	0	106	17	64	16	0	97	281
Total	73	54	96	0	223	77	54	18	0	149	23	458	54	0	535	51	256	38	0	345	1252
Approach %	32.74	24.22	43.05	0.00	-	51.68	36.24	12.08	0.00	-	4.30	85.61	10.09	0.00	-	14.78	74.20	11.01	0.00	-	
PHF	0.68	0.90	0.80	0.00	**0.82**	0.66	0.75	0.64	0.00	**0.69**	0.82	0.84	0.71	0.00	**0.82**	0.75	0.90	0.59	0.00	**0.89**	**0.86**

Bikes

	Northbound					Southbound					Eastbound					Westbound					
	Sunnyside Ln					Cayce Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	3.1	3.2	3.3	3.4	Total	3.5	3.6	3.7	3.8	Total	3.9	3.10	3.11	3.12	Total	3.13	3.14	3.15	3.16	Total	Total
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**

Passenger Vehicles (1-3)

	Northbound					Southbound					Eastbound					Westbound					
	Sunnyside Ln					Cayce Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	3.1	3.2	3.3	3.4	Total	3.5	3.6	3.7	3.8	Total	3.9	3.10	3.11	3.12	Total	3.13	3.14	3.15	3.16	Total	Total
0730 - 0745	19	13	30	0	62	28	18	7	0	53	6	124	15	0	145	9	64	8	0	81	341
0745 - 0800	26	13	26	0	65	25	10	5	0	40	6	132	19	0	157	13	65	7	0	85	347
0800 - 0815	9	11	22	0	42	8	14	2	0	24	5	90	9	0	104	9	47	7	0	63	233
0815 - 0830	15	14	18	0	47	15	10	4	0	29	4	86	8	0	98	17	58	15	0	90	264
Total	69	51	96	0	216	76	52	18	0	146	21	432	51	0	504	48	234	37	0	319	1185
Approach %	31.94	23.61	44.44	0.00	-	52.05	35.62	12.33	0.00	-	4.17	85.71	10.12	0.00	-	15.05	73.35	11.60	0.00	-	
PHF	0.66	0.91	0.80	0.00	**0.83**	0.68	0.72	0.64	0.00	**0.69**	0.88	0.82	0.67	0.00	**0.80**	0.71	0.90	0.62	0.00	**0.89**	**0.85**

Single Unit Trucks (4-7)

	Northbound					Southbound					Eastbound					Westbound					
	Sunnyside Ln					Cayce Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	3.1	3.2	3.3	3.4	Total	3.5	3.6	3.7	3.8	Total	3.9	3.10	3.11	3.12	Total	3.13	3.14	3.15	3.16	Total	Total
0730 - 0745	0	0	0	0	0	1	0	0	0	1	1	4	1	0	6	0	4	0	0	4	11
0745 - 0800	1	2	0	0	3	0	0	0	0	0	1	4	0	0	5	3	5	0	0	8	16
0800 - 0815	1	1	0	0	2	0	2	0	0	2	0	5	2	0	7	0	2	0	0	2	13
0815 - 0830	2	0	0	0	2	0	0	0	0	0	0	3	0	0	3	0	2	1	0	3	8
Total	4	3	0	0	7	1	2	0	0	3	2	16	3	0	21	3	13	1	0	17	48
Approach %	57.14	42.86	0.00	0.00	-	33.33	66.67	0.00	0.00	-	9.52	76.19	14.29	0.00	-	17.65	76.47	5.88	0.00	-	
PHF	0.50	0.38	0.00	0.00	**0.58**	0.25	0.25	0.00	0.00	**0.38**	0.50	0.80	0.38	0.00	**0.75**	0.25	0.65	0.25	0.00	**0.53**	**0.75**

Combination Trucks (8-13)

	Northbound					Southbound					Eastbound					Westbound					
	Sunnyside Ln					Cayce Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	3.1	3.2	3.3	3.4	Total	3.5	3.6	3.7	3.8	Total	3.9	3.10	3.11	3.12	Total	3.13	3.14	3.15	3.16	Total	Total
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	3	0	0	3	4
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	2
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	4
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5	0	4	0	0	4	9
Total	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	9	0	0	9	19
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.50	0.00	0.00	**0.50**	0.00	0.56	0.00	0.00	**0.56**	**0.53**

Peak Hour Turning Movement Count

Columbia, TN

Click here for Map

Marr Traffic DATA COLLECTION

www.marrtraffic.com

Thursday, July 14, 2022	
Period	1600 - 1800
Peak Hour	1615 - 1715

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



All vehicles

	Northbound					Southbound					Eastbound					Westbound					
	Sunnyside Ln					Cayce Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	3.1	3.2	3.3	3.4	Total	3.5	3.6	3.7	3.8	Total	3.9	3.10	3.11	3.12	Total	3.13	3.14	3.15	3.16	Total	Total
1615 - 1630	25	12	19	0	56	15	14	13	0	42	9	100	29	0	138	31	147	22	0	200	436
1630 - 1645	26	17	14	0	57	19	12	13	0	44	12	117	32	0	161	22	133	18	0	173	435
1645 - 1700	37	21	24	0	82	23	18	12	0	53	9	89	22	0	120	15	130	12	0	157	412
1700 - 1715	37	17	16	0	70	29	24	8	0	61	15	89	23	0	127	21	133	9	0	163	421
Total	125	67	73	0	265	86	68	46	0	200	45	395	106	0	546	89	543	61	0	693	1704
Approach %	47.17	25.28	27.55	0.00	-	43.00	34.00	23.00	0.00	-	8.24	72.34	19.41	0.00	-	12.84	78.35	8.80	0.00	-	
PHF	0.84	0.80	0.76	0.00	**0.81**	0.74	0.71	0.88	0.00	**0.82**	0.75	0.84	0.83	0.00	**0.85**	0.72	0.92	0.69	0.00	**0.87**	**0.98**

Bikes

	Northbound					Southbound					Eastbound					Westbound					
	Sunnyside Ln					Cayce Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	3.1	3.2	3.3	3.4	Total	3.5	3.6	3.7	3.8	Total	3.9	3.10	3.11	3.12	Total	3.13	3.14	3.15	3.16	Total	Total
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**

Passenger Vehicles (1-3)

	Northbound					Southbound					Eastbound					Westbound					
	Sunnyside Ln					Cayce Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	3.1	3.2	3.3	3.4	Total	3.5	3.6	3.7	3.8	Total	3.9	3.10	3.11	3.12	Total	3.13	3.14	3.15	3.16	Total	Total
1615 - 1630	24	12	18	0	54	15	13	12	0	40	8	98	27	0	133	31	144	22	0	197	424
1630 - 1645	26	16	13	0	55	17	12	11	0	40	12	116	31	0	159	22	131	17	0	170	424
1645 - 1700	37	21	24	0	82	23	18	12	0	53	8	86	21	0	115	15	126	12	0	153	403
1700 - 1715	37	17	15	0	69	28	24	8	0	60	15	88	23	0	126	21	131	9	0	161	416
Total	124	66	70	0	260	83	67	43	0	193	43	388	102	0	533	89	532	60	0	681	1667
Approach %	47.69	25.38	26.92	0.00	-	43.01	34.72	22.28	0.00	-	8.07	72.80	19.14	0.00	-	13.07	78.12	8.81	0.00	-	
PHF	0.84	0.79	0.73	0.00	**0.79**	0.74	0.70	0.90	0.00	**0.80**	0.72	0.84	0.82	0.00	**0.84**	0.72	0.92	0.68	0.00	**0.86**	**0.98**

Single Unit Trucks (4-7)

	Northbound					Southbound					Eastbound					Westbound					
	Sunnyside Ln					Cayce Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	3.1	3.2	3.3	3.4	Total	3.5	3.6	3.7	3.8	Total	3.9	3.10	3.11	3.12	Total	3.13	3.14	3.15	3.16	Total	Total
1615 - 1630	1	0	1	0	2	0	1	0	0	1	1	1	2	0	4	0	3	0	0	3	10
1630 - 1645	0	1	1	0	2	2	0	1	0	3	0	1	1	0	2	0	2	1	0	3	10
1645 - 1700	0	0	0	0	0	0	0	0	0	0	1	2	1	0	4	0	4	0	0	4	8
1700 - 1715	0	0	1	0	1	1	0	0	0	1	0	1	0	0	1	0	1	0	0	1	4
Total	1	1	3	0	5	3	1	1	0	5	2	5	4	0	11	0	10	1	0	11	32
Approach %	20.00	20.00	60.00	0.00	-	60.00	20.00	20.00	0.00	-	18.18	45.45	36.36	0.00	-	0.00	90.91	9.09	0.00	-	
PHF	0.25	0.25	0.75	0.00	**0.63**	0.38	0.25	0.25	0.00	**0.42**	0.50	0.63	0.50	0.00	**0.69**	0.00	0.63	0.25	0.00	**0.69**	**0.80**

Combination Trucks (8-13)

	Northbound					Southbound					Eastbound					Westbound					
	Sunnyside Ln					Cayce Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	3.1	3.2	3.3	3.4	Total	3.5	3.6	3.7	3.8	Total	3.9	3.10	3.11	3.12	Total	3.13	3.14	3.15	3.16	Total	Total
1615 - 1630	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	2
1630 - 1645	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	0	0	0	0	0	2	0	2	0	2	0	0	2	0	1	0	0	1	5
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	100.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.50	0.00	**0.50**	0.00	0.50	0.00	0.00	**0.50**	0.00	0.25	0.00	0.00	**0.25**	**0.63**

Click here for Map

Peak Hour Turning Movement Count

Columbia, TN

Marr Traffic DATA COLLECTION

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All vehicles

	Northbound					Southbound					Eastbound					Westbound					
	Driveway					Rutherford Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	4.1	4.2	4.3	4.4	Total	4.5	4.6	4.7	4.8	Total	4.9	4.10	4.11	4.12	Total	4.13	4.14	4.15	4.16	Total	Total
0715 - 0730	0	0	0	0	0	19	0	4	0	23	9	112	0	0	121	0	58	14	0	72	216
0730 - 0745	0	0	0	0	0	31	0	1	0	32	8	128	0	0	136	0	70	23	0	93	261
0745 - 0800	0	0	0	0	0	33	0	5	0	38	0	130	0	0	130	0	71	30	0	101	269
0800 - 0815	0	0	0	0	0	15	0	4	0	19	7	105	0	0	112	0	42	10	0	52	183
Total	0	0	0	0	0	98	0	14	0	112	24	475	0	0	499	0	241	77	0	318	929
Approach %	0.00	0.00	0.00	0.00	-	87.50	0.00	12.50	0.00	-	4.81	95.19	0.00	0.00	-	0.00	75.79	24.21	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.74	0.00	0.70	0.00	**0.74**	0.67	0.91	0.00	0.00	**0.92**	0.00	0.85	0.64	0.00	**0.79**	**0.86**

Bikes

	Northbound					Southbound					Eastbound					Westbound					
	Driveway					Rutherford Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	4.1	4.2	4.3	4.4	Total	4.5	4.6	4.7	4.8	Total	4.9	4.10	4.11	4.12	Total	4.13	4.14	4.15	4.16	Total	Total
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**

Passenger Vehicles (1-3)

	Northbound					Southbound					Eastbound					Westbound					
	Driveway					Rutherford Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	4.1	4.2	4.3	4.4	Total	4.5	4.6	4.7	4.8	Total	4.9	4.10	4.11	4.12	Total	4.13	4.14	4.15	4.16	Total	Total
0715 - 0730	0	0	0	0	0	16	0	4	0	20	9	104	0	0	113	0	55	14	0	69	202
0730 - 0745	0	0	0	0	0	28	0	1	0	29	8	124	0	0	132	0	64	22	0	86	247
0745 - 0800	0	0	0	0	0	30	0	5	0	35	0	126	0	0	126	0	64	29	0	93	254
0800 - 0815	0	0	0	0	0	13	0	4	0	17	7	97	0	0	104	0	40	10	0	50	171
Total	0	0	0	0	0	87	0	14	0	101	24	451	0	0	475	0	223	75	0	298	874
Approach %	0.00	0.00	0.00	0.00	-	86.14	0.00	13.86	0.00	-	5.05	94.95	0.00	0.00	-	0.00	74.83	25.17	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.73	0.00	0.70	0.00	**0.72**	0.67	0.89	0.00	0.00	**0.90**	0.00	0.87	0.65	0.00	**0.80**	**0.86**

Single Unit Trucks (4-7)

	Northbound					Southbound					Eastbound					Westbound					
	Driveway					Rutherford Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	4.1	4.2	4.3	4.4	Total	4.5	4.6	4.7	4.8	Total	4.9	4.10	4.11	4.12	Total	4.13	4.14	4.15	4.16	Total	Total
0715 - 0730	0	0	0	0	0	2	0	0	0	2	0	5	0	0	5	0	1	0	0	1	8
0730 - 0745	0	0	0	0	0	3	0	0	0	3	0	3	0	0	3	0	4	0	0	4	10
0745 - 0800	0	0	0	0	0	3	0	0	0	3	0	4	0	0	4	0	6	1	0	7	14
0800 - 0815	0	0	0	0	0	1	0	0	0	1	0	5	0	0	5	0	1	0	0	1	7
Total	0	0	0	0	0	9	0	0	0	9	0	17	0	0	17	0	12	1	0	13	39
Approach %	0.00	0.00	0.00	0.00	-	100.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	92.31	7.69	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.75	0.00	0.00	0.00	**0.75**	0.00	0.85	0.00	0.00	**0.85**	0.00	0.50	0.25	0.00	**0.46**	**0.70**

Combination Trucks (8-13)

	Northbound					Southbound					Eastbound					Westbound					
	Driveway					Rutherford Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	4.1	4.2	4.3	4.4	Total	4.5	4.6	4.7	4.8	Total	4.9	4.10	4.11	4.12	Total	4.13	4.14	4.15	4.16	Total	Total
0715 - 0730	0	0	0	0	0	1	0	0	0	1	0	3	0	0	3	0	2	0	0	2	6
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	1	0	3	4
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
0800 - 0815	0	0	0	0	0	1	0	0	0	1	0	3	0	0	3	0	1	0	0	1	5
Total	0	0	0	0	0	2	0	0	0	2	0	7	0	0	7	0	6	1	0	7	16
Approach %	0.00	0.00	0.00	0.00	-	100.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	85.71	14.29	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.50	0.00	0.00	0.00	**0.50**	0.00	0.58	0.00	0.00	**0.58**	0.00	0.75	0.25	0.00	**0.58**	**0.67**

Peak Hour Turning Movement Count

Columbia, TN

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Marr Traffic DATA COLLECTION

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Thursday, July 14, 2022	
Period	1600 - 1800
Peak Hour	1615 - 1715

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



All vehicles

	Northbound					Southbound					Eastbound					Westbound					
	Driveway					Rutherford Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	4.1	4.2	4.3	4.4	Total	4.5	4.6	4.7	4.8	Total	4.9	4.10	4.11	4.12	Total	4.13	4.14	4.15	4.16	Total	Total
1615 - 1630	0	0	0	0	0	28	0	13	0	41	12	101	0	0	113	0	150	27	0	177	331
1630 - 1645	0	0	0	0	0	57	0	16	0	73	12	113	0	0	125	0	159	21	0	180	378
1645 - 1700	0	0	0	0	0	22	0	16	0	38	13	94	0	0	107	0	150	23	0	173	318
1700 - 1715	0	0	0	0	0	37	0	14	0	51	14	92	0	0	106	0	149	30	0	179	336
Total	0	0	0	0	0	144	0	59	0	203	51	400	0	0	451	0	608	101	0	709	1363
Approach %	0.00	0.00	0.00	0.00	-	70.94	0.00	29.06	0.00	-	11.31	88.69	0.00	0.00	-	0.00	85.75	14.25	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.63	0.00	0.92	0.00	**0.70**	0.91	0.88	0.00	0.00	**0.90**	0.00	0.96	0.84	0.00	**0.98**	**0.90**

Bikes

	Northbound					Southbound					Eastbound					Westbound					
	Driveway					Rutherford Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	4.1	4.2	4.3	4.4	Total	4.5	4.6	4.7	4.8	Total	4.9	4.10	4.11	4.12	Total	4.13	4.14	4.15	4.16	Total	Total
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700 - 1715	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	100.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.25	0.00	**0.25**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.25**

Passenger Vehicles (1-3)

	Northbound					Southbound					Eastbound					Westbound					
	Driveway					Rutherford Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	4.1	4.2	4.3	4.4	Total	4.5	4.6	4.7	4.8	Total	4.9	4.10	4.11	4.12	Total	4.13	4.14	4.15	4.16	Total	Total
1615 - 1630	0	0	0	0	0	27	0	13	0	40	12	97	0	0	109	0	143	27	0	170	319
1630 - 1645	0	0	0	0	0	57	0	16	0	73	12	112	0	0	124	0	157	21	0	178	375
1645 - 1700	0	0	0	0	0	22	0	16	0	38	13	89	0	0	102	0	146	22	0	168	308
1700 - 1715	0	0	0	0	0	37	0	12	0	49	14	90	0	0	104	0	147	29	0	176	329
Total	0	0	0	0	0	143	0	57	0	200	51	388	0	0	439	0	593	99	0	692	1331
Approach %	0.00	0.00	0.00	0.00	-	71.50	0.00	28.50	0.00	-	11.62	88.38	0.00	0.00	-	0.00	85.69	14.31	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.63	0.00	0.89	0.00	**0.68**	0.91	0.87	0.00	0.00	**0.89**	0.00	0.94	0.85	0.00	**0.97**	**0.89**

Single Unit Trucks (4-7)

	Northbound					Southbound					Eastbound					Westbound					
	Driveway					Rutherford Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	4.1	4.2	4.3	4.4	Total	4.5	4.6	4.7	4.8	Total	4.9	4.10	4.11	4.12	Total	4.13	4.14	4.15	4.16	Total	Total
1615 - 1630	0	0	0	0	0	1	0	0	0	1	0	3	0	0	3	0	5	0	0	5	9
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	3
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	4	1	0	5	9
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	1	1	0	2	4
Total	0	0	0	0	0	1	0	0	0	1	0	10	0	0	10	0	12	2	0	14	25
Approach %	0.00	0.00	0.00	0.00	-	100.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	85.71	14.29	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.25	0.00	0.00	0.00	**0.25**	0.00	0.63	0.00	0.00	**0.63**	0.00	0.60	0.50	0.00	**0.70**	**0.69**

Combination Trucks (8-13)

	Northbound					Southbound					Eastbound					Westbound					
	Driveway					Rutherford Ln					TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Left	Thru	Right	U-Turn	App	Int
Time	4.1	4.2	4.3	4.4	Total	4.5	4.6	4.7	4.8	Total	4.9	4.10	4.11	4.12	Total	4.13	4.14	4.15	4.16	Total	Total
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	2	3
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
1700 - 1715	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2
Total	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	0	3	0	0	3	6
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	100.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.25	0.00	**0.25**	0.00	0.50	0.00	0.00	**0.50**	0.00	0.38	0.00	0.00	**0.38**	**0.50**

Click here for Map

Peak Hour Turning Movement Count

Columbia, TN

Marr Traffic DATA COLLECTION

www.marrtraffic.com

Thursday, July 14, 2022	
Period	0700 - 0900
Peak Hour	0715 - 0815

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



All vehicles

	Northbound										Eastbound					Westbound					
	Old Sunnyside Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
Time	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9	App Total	Int Total
0715 - 0730	7	-	6	0	13	-	-	-	-	0	-	121	6	0	127	3	49	-	0	52	192
0730 - 0745	6	-	11	0	17	-	-	-	-	0	-	116	15	0	131	0	66	-	0	66	214
0745 - 0800	8	-	6	0	14	-	-	-	-	0	-	120	13	0	133	4	54	-	0	58	205
0800 - 0815	2	-	2	0	4	-	-	-	-	0	-	84	7	0	91	2	35	-	0	37	132
Total	23	0	25	0	48	0	0	0	0	0	0	441	41	0	482	9	204	0	0	213	743
Approach %	47.92	0.00	52.08	0.00	-	0.00	0.00	0.00	0.00	-	0.00	91.49	8.51	0.00	-	4.23	95.77	0.00	0.00	-	
PHF	0.72	0.00	0.57	0.00	**0.71**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.91	0.68	0.00	**0.91**	0.56	0.77	0.00	0.00	**0.81**	**0.87**

Bikes

	Northbound										Eastbound					Westbound					
	Old Sunnyside Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
Time	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9	App Total	Int Total
0715 - 0730	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
0730 - 0745	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
0745 - 0800	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
0800 - 0815	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**

Passenger Vehicles (1-3)

	Northbound										Eastbound					Westbound					
	Old Sunnyside Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
Time	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9	App Total	Int Total
0715 - 0730	7	-	6	0	13	-	-	-	-	0	-	111	6	0	117	3	47	-	0	50	180
0730 - 0745	6	-	11	0	17	-	-	-	-	0	-	114	15	0	129	0	60	-	0	60	206
0745 - 0800	8	-	6	0	14	-	-	-	-	0	-	115	12	0	127	4	47	-	0	51	192
0800 - 0815	2	-	2	0	4	-	-	-	-	0	-	78	7	0	85	2	32	-	0	34	123
Total	23	0	25	0	48	0	0	0	0	0	0	418	40	0	458	9	186	0	0	195	701
Approach %	47.92	0.00	52.08	0.00	-	0.00	0.00	0.00	0.00	-	0.00	91.27	8.73	0.00	-	4.62	95.38	0.00	0.00	-	
PHF	0.72	0.00	0.57	0.00	**0.71**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.91	0.67	0.00	**0.89**	0.56	0.78	0.00	0.00	**0.81**	**0.85**

Single Unit Trucks (4-7)

	Northbound										Eastbound					Westbound					
	Old Sunnyside Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
Time	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9	App Total	Int Total
0715 - 0730	0	-	0	0	0	-	-	-	-	0	-	7	0	0	7	0	1	-	0	1	8
0730 - 0745	0	-	0	0	0	-	-	-	-	0	-	1	0	0	1	0	4	-	0	4	5
0745 - 0800	0	-	0	0	0	-	-	-	-	0	-	5	1	0	6	0	5	-	0	5	11
0800 - 0815	0	-	0	0	0	-	-	-	-	0	-	3	0	0	3	0	2	-	0	2	5
Total	0	0	0	0	0	0	0	0	0	0	0	16	1	0	17	0	12	0	0	12	29
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	94.12	5.88	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.57	0.25	0.00	**0.61**	0.00	0.60	0.00	0.00	**0.60**	**0.66**

Combination Trucks (8-13)

	Northbound										Eastbound					Westbound					
	Old Sunnyside Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
Time	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9	App Total	Int Total
0715 - 0730	0	-	0	0	0	-	-	-	-	0	-	3	0	0	3	0	1	-	0	1	4
0730 - 0745	0	-	0	0	0	-	-	-	-	0	-	1	0	0	1	0	2	-	0	2	3
0745 - 0800	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	2	-	0	2	2
0800 - 0815	0	-	0	0	0	-	-	-	-	0	-	3	0	0	3	0	1	-	0	1	4
Total	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	6	0	0	6	13
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.58	0.00	0.00	**0.58**	0.00	0.75	0.00	0.00	**0.75**	**0.81**

Click here for Map

Peak Hour Turning Movement Count

Columbia, TN

Marr Traffic DATA COLLECTION

www.marrtraffic.com

Thursday, July 14, 2022	
Period	1600 - 1800
Peak Hour	1630 - 1730

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



All vehicles

	Northbound										Eastbound					Westbound					
	Old Sunnyside Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
Time	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9	App Total	Int Total
1630 - 1645	4	-	3	0	7	-	-	-	-	0	-	84	4	0	88	6	129	-	0	135	230
1645 - 1700	13	-	2	0	15	-	-	-	-	0	-	69	7	0	76	8	122	-	0	130	221
1700 - 1715	11	-	6	0	17	-	-	-	-	0	-	79	6	0	85	5	130	-	0	135	237
1715 - 1730	14	-	7	0	21	-	-	-	-	0	-	82	1	0	83	2	128	-	0	130	234
Total	42	0	18	0	60	0	0	0	0	0	0	314	18	0	332	21	509	0	0	530	922
Approach %	70.00	0.00	30.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	94.58	5.42	0.00	-	3.96	96.04	0.00	0.00	-	
PHF	0.75	0.00	0.64	0.00	**0.71**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.93	0.64	0.00	**0.94**	0.66	0.98	0.00	0.00	**0.98**	**0.97**

Bikes

	Northbound										Eastbound					Westbound					
	Old Sunnyside Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
Time	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9	App Total	Int Total
1630 - 1645	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
1645 - 1700	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
1700 - 1715	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
1715 - 1730	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**

Passenger Vehicles (1-3)

	Northbound										Eastbound					Westbound					
	Old Sunnyside Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
Time	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9	App Total	Int Total
1630 - 1645	4	-	3	0	7	-	-	-	-	0	-	83	4	0	87	6	127	-	0	133	227
1645 - 1700	13	-	2	0	15	-	-	-	-	0	-	66	7	0	73	8	119	-	0	127	215
1700 - 1715	11	-	6	0	17	-	-	-	-	0	-	77	6	0	83	5	127	-	0	132	232
1715 - 1730	14	-	7	0	21	-	-	-	-	0	-	81	1	0	82	2	127	-	0	129	232
Total	42	0	18	0	60	0	0	0	0	0	0	307	18	0	325	21	500	0	0	521	906
Approach %	70.00	0.00	30.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	94.46	5.54	0.00	-	4.03	95.97	0.00	0.00	-	
PHF	0.75	0.00	0.64	0.00	**0.71**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.92	0.64	0.00	**0.93**	0.66	0.98	0.00	0.00	**0.98**	**0.98**

Single Unit Trucks (4-7)

	Northbound										Eastbound					Westbound					
	Old Sunnyside Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
Time	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9	App Total	Int Total
1630 - 1645	0	-	0	0	0	-	-	-	-	0	-	1	0	0	1	0	2	-	0	2	3
1645 - 1700	0	-	0	0	0	-	-	-	-	0	-	3	0	0	3	0	3	-	0	3	6
1700 - 1715	0	-	0	0	0	-	-	-	-	0	-	2	0	0	2	0	1	-	0	1	3
1715 - 1730	0	-	0	0	0	-	-	-	-	0	-	1	0	0	1	0	1	-	0	1	2
Total	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	7	0	0	7	14
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.58	0.00	0.00	**0.58**	0.00	0.58	0.00	0.00	**0.58**	**0.58**

Combination Trucks (8-13)

	Northbound										Eastbound					Westbound					
	Old Sunnyside Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
Time	Left 2.1		Right 2.2	U-Turn 2.3	App Total					App Total		Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8		U-Turn 2.9	App Total	Int Total
1630 - 1645	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
1645 - 1700	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
1700 - 1715	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	2	-	0	2	2
1715 - 1730	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.25	0.00	0.00	**0.25**	**0.25**

Click here for Map

Peak Hour Turning Movement Count

Columbia, TN

Marr Traffic DATA COLLECTION

www.marrtraffic.com

Thursday, July 14, 2022	
Period	0700 - 0900
Peak Hour	0715 - 0815

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



All vehicles

	Northbound										Eastbound					Westbound					
	Foster Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left		Right	U-Turn	App					App		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App	Int
Time	1.1		1.2	1.3	Total					Total		1.4	1.5	1.6	Total	1.7	1.8		1.9	Total	Total
0715 - 0730	0	-	0	0	0	-	-	-	-	0	-	127	0	0	127	0	52	-	0	52	179
0730 - 0745	0	-	0	0	0	-	-	-	-	0	-	131	0	0	131	0	70	-	0	70	201
0745 - 0800	0	-	0	0	0	-	-	-	-	0	-	131	0	0	131	0	66	-	0	66	197
0800 - 0815	0	-	0	0	0	-	-	-	-	0	-	91	0	0	91	0	36	-	0	36	127
Total	0	0	0	0	0	0	0	0	0	0	0	480	0	0	480	0	224	0	0	224	704
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.92	0.00	0.00	**0.92**	0.00	0.80	0.00	0.00	**0.80**	**0.88**

Bikes

	Northbound										Eastbound					Westbound					
	Foster Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left		Right	U-Turn	App					App		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App	Int
Time	1.1		1.2	1.3	Total					Total		1.4	1.5	1.6	Total	1.7	1.8		1.9	Total	Total
0715 - 0730	0	-	0	0	0	-	-	-	-	0	-	1	0	0	1	0	0	-	0	0	1
0730 - 0745	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
0745 - 0800	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
0800 - 0815	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.25	0.00	0.00	**0.25**	0.00	0.00	0.00	0.00	**0.00**	**0.25**

Passenger Vehicles (1-3)

	Northbound										Eastbound					Westbound					
	Foster Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left		Right	U-Turn	App					App		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App	Int
Time	1.1		1.2	1.3	Total					Total		1.4	1.5	1.6	Total	1.7	1.8		1.9	Total	Total
0715 - 0730	0	-	0	0	0	-	-	-	-	0	-	115	0	0	115	0	50	-	0	50	165
0730 - 0745	0	-	0	0	0	-	-	-	-	0	-	128	0	0	128	0	64	-	0	64	192
0745 - 0800	0	-	0	0	0	-	-	-	-	0	-	127	0	0	127	0	59	-	0	59	186
0800 - 0815	0	-	0	0	0	-	-	-	-	0	-	85	0	0	85	0	33	-	0	33	118
Total	0	0	0	0	0	0	0	0	0	0	0	455	0	0	455	0	206	0	0	206	661
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.89	0.00	0.00	**0.89**	0.00	0.80	0.00	0.00	**0.80**	**0.86**

Single Unit Trucks (4-7)

	Northbound										Eastbound					Westbound					
	Foster Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left		Right	U-Turn	App					App		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App	Int
Time	1.1		1.2	1.3	Total					Total		1.4	1.5	1.6	Total	1.7	1.8		1.9	Total	Total
0715 - 0730	0	-	0	0	0	-	-	-	-	0	-	8	0	0	8	0	1	-	0	1	9
0730 - 0745	0	-	0	0	0	-	-	-	-	0	-	2	0	0	2	0	4	-	0	4	6
0745 - 0800	0	-	0	0	0	-	-	-	-	0	-	4	0	0	4	0	5	-	0	5	9
0800 - 0815	0	-	0	0	0	-	-	-	-	0	-	2	0	0	2	0	2	-	0	2	4
Total	0	0	0	0	0	0	0	0	0	0	0	16	0	0	16	0	12	0	0	12	28
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.50	0.00	0.00	**0.50**	0.00	0.60	0.00	0.00	**0.60**	**0.78**

Combination Trucks (8-13)

	Northbound										Eastbound					Westbound					
	Foster Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
	Left		Right	U-Turn	App					App		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App	Int
Time	1.1		1.2	1.3	Total					Total		1.4	1.5	1.6	Total	1.7	1.8		1.9	Total	Total
0715 - 0730	0	-	0	0	0	-	-	-	-	0	-	3	0	0	3	0	1	-	0	1	4
0730 - 0745	0	-	0	0	0	-	-	-	-	0	-	1	0	0	1	0	2	-	0	2	3
0745 - 0800	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	2	-	0	2	2
0800 - 0815	0	-	0	0	0	-	-	-	-	0	-	4	0	0	4	0	1	-	0	1	5
Total	0	0	0	0	0	0	0	0	0	0	0	8	0	0	8	0	6	0	0	6	14
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.50	0.00	0.00	**0.50**	0.00	0.75	0.00	0.00	**0.75**	**0.70**

Click here for Map

Peak Hour Turning Movement Count

Columbia, TN

Marr Traffic DATA COLLECTION

www.marrtraffic.com

Thursday, July 14, 2022	
Period	1600 - 1800
Peak Hour	1600 - 1700

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



All vehicles

	Northbound										Eastbound					Westbound					
	Foster Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
Time	Left 1.1		Right 1.2	U-Turn 1.3	App Total					App Total		Thru 1.4	Right 1.5	U-Turn 1.6	App Total	Left 1.7	Thru 1.8		U-Turn 1.9	App Total	Int Total
1600 - 1615	0	-	0	0	0	-	-	-	-	0	-	89	0	0	89	0	137	-	0	137	226
1615 - 1630	0	-	0	0	0	-	-	-	-	0	-	88	0	0	88	0	138	-	0	138	226
1630 - 1645	0	-	0	0	0	-	-	-	-	0	-	88	0	0	88	0	132	-	0	132	220
1645 - 1700	0	-	0	0	0	-	-	-	-	0	-	77	0	0	77	0	136	-	0	136	213
Total	0	0	0	0	0	0	0	0	0	0	0	342	0	0	342	0	543	0	0	543	885
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.96	0.00	0.00	**0.96**	0.00	0.98	0.00	0.00	**0.98**	**0.98**

Bikes

	Northbound										Eastbound					Westbound					
	Foster Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
Time	Left 1.1		Right 1.2	U-Turn 1.3	App Total					App Total		Thru 1.4	Right 1.5	U-Turn 1.6	App Total	Left 1.7	Thru 1.8		U-Turn 1.9	App Total	Int Total
1600 - 1615	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
1615 - 1630	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
1630 - 1645	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
1645 - 1700	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**

Passenger Vehicles (1-3)

	Northbound										Eastbound					Westbound					
	Foster Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
Time	Left 1.1		Right 1.2	U-Turn 1.3	App Total					App Total		Thru 1.4	Right 1.5	U-Turn 1.6	App Total	Left 1.7	Thru 1.8		U-Turn 1.9	App Total	Int Total
1600 - 1615	0	-	0	0	0	-	-	-	-	0	-	86	0	0	86	0	135	-	0	135	221
1615 - 1630	0	-	0	0	0	-	-	-	-	0	-	86	0	0	86	0	133	-	0	133	219
1630 - 1645	0	-	0	0	0	-	-	-	-	0	-	87	0	0	87	0	130	-	0	130	217
1645 - 1700	0	-	0	0	0	-	-	-	-	0	-	72	0	0	72	0	133	-	0	133	205
Total	0	0	0	0	0	0	0	0	0	0	0	331	0	0	331	0	531	0	0	531	862
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.95	0.00	0.00	**0.95**	0.00	0.98	0.00	0.00	**0.98**	**0.98**

Single Unit Trucks (4-7)

	Northbound										Eastbound					Westbound					
	Foster Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
Time	Left 1.1		Right 1.2	U-Turn 1.3	App Total					App Total		Thru 1.4	Right 1.5	U-Turn 1.6	App Total	Left 1.7	Thru 1.8		U-Turn 1.9	App Total	Int Total
1600 - 1615	0	-	0	0	0	-	-	-	-	0	-	1	0	0	1	0	1	-	0	1	2
1615 - 1630	0	-	0	0	0	-	-	-	-	0	-	2	0	0	2	0	4	-	0	4	6
1630 - 1645	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	2	-	0	2	2
1645 - 1700	0	-	0	0	0	-	-	-	-	0	-	4	0	0	4	0	3	-	0	3	7
Total	0	0	0	0	0	0	0	0	0	0	0	7	0	0	7	0	10	0	0	10	17
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.44	0.00	0.00	**0.44**	0.00	0.63	0.00	0.00	**0.63**	**0.61**

Combination Trucks (8-13)

	Northbound										Eastbound					Westbound					
	Foster Ln										TN-243 Trotwood Ave (West)					TN-243 Trotwood Ave (East)					
Time	Left 1.1		Right 1.2	U-Turn 1.3	App Total					App Total		Thru 1.4	Right 1.5	U-Turn 1.6	App Total	Left 1.7	Thru 1.8		U-Turn 1.9	App Total	Int Total
1600 - 1615	0	-	0	0	0	-	-	-	-	0	-	2	0	0	2	0	1	-	0	1	3
1615 - 1630	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	1	-	0	1	1
1630 - 1645	0	-	0	0	0	-	-	-	-	0	-	1	0	0	1	0	0	-	0	0	1
1645 - 1700	0	-	0	0	0	-	-	-	-	0	-	1	0	0	1	0	0	-	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	0	2	0	0	2	6
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.50	0.00	0.00	**0.50**	0.00	0.50	0.00	0.00	**0.50**	**0.50**

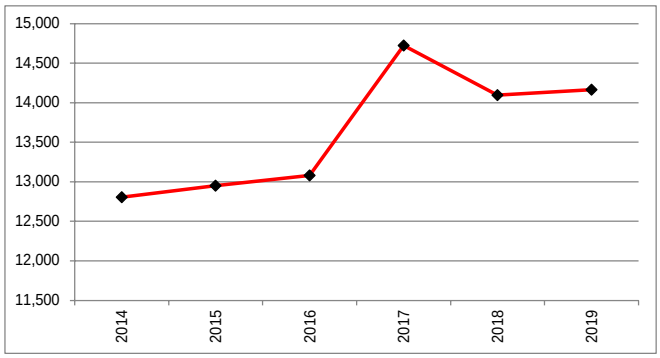
APPENDIX C

Volume Development

Growth Rate Calculations - Trotwood & Foster Subdivision

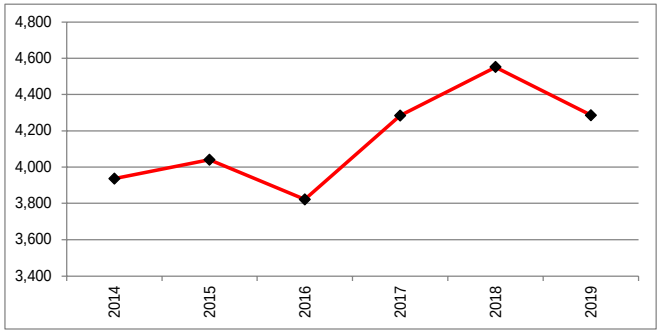
Station	60000167		
Route	Trotwood Avenue		
Location	SW of Sunnyside Lane		
Count Type	Count Year	AADT	Annual Growth Rate
Estimated	2014	12,804	
Actual	2015	12,949	1.1%
Estimated	2016	13,078	1.0%
Actual	2017	14,724	12.6%
Actual	2018	14,095	-4.3%
Actual	2019	14,164	0.5%

	AADT
5 Year Growth Rate	2.0%
Average 1 Year Growth Rate	2.2%
Most Recent Actual Count Growth Rate	0.5%



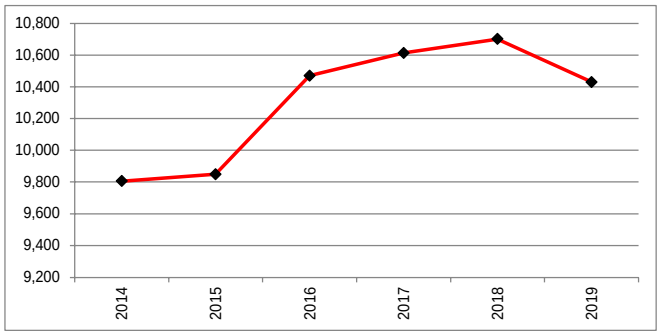
Station	6000019441		
Route	Sunnyside Lane		
Location	N of Harris Street		
Count Type	Count Year	AADT	Annual Growth Rate
Actual	2014	3,936	
Actual	2015	4,040	2.6%
Estimated	2016	3,822	-5.4%
Actual	2017	4,284	12.1%
Actual	2018	4,552	6.3%
Actual	2019	4,286	-5.8%

	AADT
5 Year Growth Rate	1.7%
Average 1 Year Growth Rate	1.9%
Most Recent Actual Count Growth Rate	-5.8%



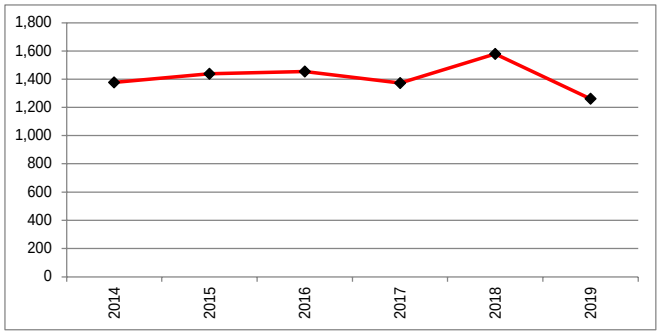
Station	60000234		
Route	Trotwood Avenue		
Location	S of Foster Lane		
Count Type	Count Year	AADT	Annual Growth Rate
Actual	2014	9,806	
Actual	2015	9,849	0.4%
Actual	2016	10,470	6.3%
Actual	2017	10,613	1.4%
Actual	2018	10,702	0.8%
Actual	2019	10,431	-2.5%

	AADT
5 Year Growth Rate	1.2%
Average 1 Year Growth Rate	1.3%
Most Recent Actual Count Growth Rate	-2.5%



Station	60000190		
Route	Greymere Manor Road		
Location	N of Mere Drive		
Count Type	Count Year	AADT	Annual Growth Rate
Actual	2014	1,377	
Actual	2015	1,438	4.4%
Estimated	2016	1,453	1.0%
Estimated	2017	1,373	-5.5%
Actual	2018	1,579	15.0%
Actual	2019	1,261	-20.1%

	AADT
5 Year Growth Rate	-1.7%
Average 1 Year Growth Rate	-1.0%
Most Recent Actual Count Growth Rate	-20.1%



Trip Generation - Trotwood & Foster Subdivision

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	126	d.u.	1,248	92	24	68	123	77	46
NEW TRIPS					1,248	92	24	68	123	77	46

INTERSECTION VOLUME WORKSHEET

INTERSECTION 1

Trotwood Avenue at Cayce Lane / Sunnyside Lane

AM PEAK HOUR

	Trotwood Avenue Eastbound				Trotwood Avenue Westbound				Sunnyside Lane Northbound				Cayce Lane Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing Traffic																	
Existing 2022 AM Volumes	0	23	458	54	0	51	256	38	0	73	54	96	0	77	54	18	1252
Summer AM Adjustment Factor	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	
Adjusted 2022 AM Volumes	0	32	632	75	0	70	353	52	0	101	75	132	0	106	75	25	1728
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	0	0	0	0	0	0	0	0	
Heavy Vehicles	0	2	26	3	0	3	22	1	0	4	3	0	0	1	2	0	
Heavy Vehicle %	2	9	6	6	2	6	9	3	2	5	6	2	2	2	4	2	
Background Traffic																	
Annual Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Growth Factor	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	
Growth Trips	0	3	59	7	0	7	33	5	0	9	7	12	0	10	7	2	161
Sunnyside Gas Station	0	0	22	9	0	0	-19	0	0	50	9	0	0	4	4	0	79
No-Build 2025 AM Volumes	0	35	713	91	0	77	367	57	0	160	91	144	0	120	86	27	1968
Project Traffic																	
Trip Distribution IN						10%	50%								5%		
Trip Distribution OUT			50%								5%	10%					
Project Trips	0	0	34	0	0	2	12	0	0	0	3	7	0	0	1	0	59
Project Trips (unbalanced)	0	0	34	0	0	2	12	0	0	0	3	7	0	0	1	0	59
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	0	34	0	0	2	12	0	0	0	3	7	0	0	1	0	59
Build 2025 AM Volumes	0	35	747	91	0	79	379	57	0	160	94	151	0	120	87	27	2027
% from Existing	0.0%	66.2%	61.3%	59.7%	0.0%	64.2%	67.5%	66.2%	0.0%	45.7%	57.7%	63.4%	0.0%	64.0%	62.4%	67.1%	61.8%
% from Background Growth	0.0%	33.8%	34.1%	40.3%	0.0%	33.2%	29.3%	33.8%	0.0%	54.3%	39.1%	32.0%	0.0%	36.0%	36.4%	32.9%	35.3%
% from Project Trips	0.0%	0.0%	4.6%	0.0%	0.0%	2.5%	3.2%	0.0%	0.0%	0.0%	3.2%	4.6%	0.0%	0.0%	1.2%	0.0%	2.9%

PM PEAK HOUR

	Trotwood Avenue Eastbound				Trotwood Avenue Westbound				Sunnyside Lane Northbound				Cayce Lane Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing Traffic																	
Existing 2022 AM Volumes	0	45	395	106	0	89	543	61	0	125	67	73	0	86	68	46	1704
Summer PM Adjustment Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	
Adjusted 2022 PM Volumes	0	48	423	113	0	95	581	65	0	134	72	78	0	92	73	49	1823
Existing Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Conflicting Pedestrians	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
Heavy Vehicles	0	2	7	4	0	0	11	1	0	1	1	3	0	3	1	3	
Heavy Vehicle %	2	4	2	4	2	2	2	2	2	2	2	4	2	3	2	7	
Background Traffic																	
Annual Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Growth Factor	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	
Growth Trips	0	4	39	11	0	9	54	6	0	12	7	7	0	9	7	5	170
Sunnyside Gas Station	0	0	18	7	0	0	-16	0	0	42	7	0	0	4	4	0	66
No-Build 2025 PM Volumes	0	52	480	131	0	104	619	71	0	188	86	85	0	105	84	54	2059
Project Traffic																	
Trip Distribution IN						10%	50%								5%		
Trip Distribution OUT			50%								5%	10%					
Project Trips	0	0	23	0	0	8	39	0	0	0	2	5	0	0	4	0	81
Project Trips (unbalanced)	0	0	23	0	0	8	39	0	0	0	2	5	0	0	4	0	81
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	0	23	0	0	8	39	0	0	0	2	5	0	0	4	0	81
Build 2025 PM Volumes	0	52	503	131	0	112	658	71	0	188	88	90	0	105	88	54	2140
% from Existing	0.0%	86.3%	78.6%	80.7%	0.0%	79.3%	82.5%	85.6%	0.0%	66.6%	76.4%	81.0%	0.0%	81.9%	77.5%	84.8%	79.6%
% from Background Growth	0.0%	13.7%	16.8%	19.3%	0.0%	13.6%	11.6%	14.4%	0.0%	33.4%	21.3%	13.4%	0.0%	18.1%	18.0%	15.2%	16.6%
% from Project Trips	0.0%	0.0%	4.6%	0.0%	0.0%	7.1%	5.9%	0.0%	0.0%	0.0%	2.3%	5.5%	0.0%	0.0%	4.6%	0.0%	3.8%

INTERSECTION VOLUME WORKSHEET

INTERSECTION 2

Trotwood Avenue at Rutherford Lane

AM PEAK HOUR

	Trotwood Avenue Eastbound				Trotwood Avenue Westbound				Driveway Northbound				Rutherford Lane Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing Traffic																	
Existing 2022 AM Volumes	0	24	475	0	0	0	241	77	0	0	0	0	0	98	0	14	929
Summer AM Adjustment Factor	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	
Adjusted 2022 AM Volumes	0	33	656	0	0	0	333	106	0	0	0	0	0	135	0	19	1282
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	0	0	0	0	0	0	0	0	
Heavy Vehicles	0	0	24	0	0	0	18	2	0	0	0	0	0	11	0	0	
Heavy Vehicle %	2	2	5	2	2	2	7	3	2	2	2	2	2	11	2	2	
Background Traffic																	
Annual Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Growth Factor	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	
Growth Trips	0	3	61	0	0	0	31	10	0	0	0	0	0	13	0	2	120
Sunnyside Gas Station	0	0	31	0	0	0	31	0	0	0	0	0	0	0	0	0	62
No-Build 2025 AM Volumes	0	36	748	0	0	0	395	116	0	0	0	0	0	148	0	21	1464
Project Traffic																	
Trip Distribution IN							50%									5%	
Trip Distribution OUT		5%	50%														
Project Trips	0	3	34	0	0	0	12	0	0	0	0	0	0	0	0	1	50
Project Trips (unbalanced)	0	3	34	0	0	0	12	0	0	0	0	0	0	0	0	1	50
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	3	34	0	0	0	12	0	0	0	0	0	0	0	0	1	50
Build 2025 AM Volumes	0	39	782	0	0	0	407	116	0	0	0	0	0	148	0	22	1514
% from Existing	0.0%	61.3%	60.8%	0.0%	0.0%	0.0%	59.3%	66.2%	0.0%	0.0%	0.0%	0.0%	0.0%	66.1%	0.0%	62.7%	61.4%
% from Background Growth	0.0%	31.0%	34.9%	0.0%	0.0%	0.0%	37.8%	33.8%	0.0%	0.0%	0.0%	0.0%	0.0%	33.9%	0.0%	32.8%	35.3%
% from Project Trips	0.0%	7.7%	4.4%	0.0%	0.0%	0.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	3.3%

PM PEAK HOUR

	Trotwood Avenue Eastbound				Trotwood Avenue Westbound				Driveway Northbound				Rutherford Lane Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing Traffic																	
Existing 2022 AM Volumes	0	51	400	0	0	0	608	101	0	0	0	0	0	144	0	58	1362
Summer PM Adjustment Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	
Adjusted 2022 PM Volumes	0	55	428	0	0	0	651	108	0	0	0	0	0	154	0	62	1457
Existing Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Conflicting Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Heavy Vehicles	0	0	12	0	0	0	15	2	0	0	0	0	0	1	0	1	
Heavy Vehicle %	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	
Background Traffic																	
Annual Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Growth Factor	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	
Growth Trips	0	5	40	0	0	0	61	10	0	0	0	0	0	14	0	6	136
Sunnyside Gas Station	0	0	25	0	0	0	26	0	0	0	0	0	0	0	0	0	51
No-Build 2025 PM Volumes	0	60	493	0	0	0	738	118	0	0	0	0	0	168	0	68	1644
Project Traffic																	
Trip Distribution IN							50%									5%	
Trip Distribution OUT		5%	50%														
Project Trips	0	2	23	0	0	0	39	0	0	0	0	0	0	0	0	4	68
Project Trips (unbalanced)	0	2	23	0	0	0	39	0	0	0	0	0	0	0	0	4	68
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	2	23	0	0	0	39	0	0	0	0	0	0	0	0	4	68
Build 2025 PM Volumes	0	62	516	0	0	0	777	118	0	0	0	0	0	168	0	72	1712
% from Existing	0.0%	82.8%	77.5%	0.0%	0.0%	0.0%	78.3%	85.5%	0.0%	0.0%	0.0%	0.0%	0.0%	85.7%	0.0%	80.5%	79.5%
% from Background Growth	0.0%	13.9%	18.0%	0.0%	0.0%	0.0%	16.7%	14.5%	0.0%	0.0%	0.0%	0.0%	0.0%	14.3%	0.0%	14.0%	16.5%
% from Project Trips	0.0%	3.2%	4.5%	0.0%	0.0%	0.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.6%	4.0%

INTERSECTION VOLUME WORKSHEET

INTERSECTION 3

Trotwood Avenue at Old Sunnyside Lane

AM PEAK HOUR

	Trotwood Avenue Eastbound				Trotwood Avenue Westbound				Old Sunnyside Lane 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 Traffic																	
Existing 2022 AM Volumes	0	0	441	41	0	9	204	0	0	23	0	25					743
Summer AM Adjustment Factor	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	
Adjusted 2022 AM Volumes	0	0	609	57	0	12	282	0	0	32	0	35	0	0	0	0	1025
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	0	0	0	0	0	0	0					
Heavy Vehicles	0	0	23	1	0	0	18	0	0	0	0	0					
Heavy Vehicle %	2	2	5	2	2	2	9	2	2	2	2	2	2	2	2	2	
Background Traffic																	
Annual Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Growth Factor	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	
Growth Trips	0	0	57	5	0	1	26	0	0	3	0	3	0	0	0	0	95
Sunnyside Gas Station	0	0	31	0	0	0	31	0	0	0	0	0					62
No-Build 2025 AM Volumes	0	0	697	62	0	13	339	0	0	35	0	38	0	0	0	0	1182
Project Traffic																	
Trip Distribution IN						10%	45%										
Trip Distribution OUT			45%									10%					
Project Trips	0	0	31	0	0	2	11	0	0	0	0	7	0	0	0	0	51
Project Trips (unbalanced)	0	0	31	0	0	2	11	0	0	0	0	7	0	0	0	0	51
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	0	31	0	0	2	11	0	0	0	0	7	0	0	0	0	51
Build 2025 AM Volumes	0	0	728	62	0	15	350	0	0	35	0	45	0	0	0	0	1233
% from Existing	0.0%	0.0%	60.6%	66.6%	0.0%	58.4%	58.4%	0.0%	0.0%	66.2%	0.0%	56.2%	0.0%	0.0%	0.0%	0.0%	60.2%
% from Background Growth	0.0%	0.0%	35.1%	33.4%	0.0%	28.7%	38.5%	0.0%	0.0%	33.8%	0.0%	28.1%	0.0%	0.0%	0.0%	0.0%	35.6%
% from Project Trips	0.0%	0.0%	4.3%	0.0%	0.0%	13.0%	3.1%	0.0%	0.0%	0.0%	0.0%	15.7%	0.0%	0.0%	0.0%	0.0%	4.1%

PM PEAK HOUR

	Trotwood Avenue Eastbound				Trotwood Avenue Westbound				Old Sunnyside Lane 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 Traffic																	
Existing 2022 AM Volumes	0	0	314	18	0	21	509	0	0	42	0	18					922
Summer PM Adjustment Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	
Adjusted 2022 PM Volumes	0	0	336	19	0	22	545	0	0	45	0	19	0	0	0	0	987
Existing Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Conflicting Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0					
Heavy Vehicles	0	0	7	0	0	0	9	0	0	0	0	0					
Heavy Vehicle %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Background Traffic																	
Annual Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Growth Factor	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	
Growth Trips	0	0	31	2	0	2	51	0	0	4	0	2	0	0	0	0	92
Sunnyside Gas Station	0	0	25	0	0	0	26	0	0	0	0	0					51
No-Build 2025 PM Volumes	0	0	392	21	0	24	622	0	0	49	0	21	0	0	0	0	1130
Project Traffic																	
Trip Distribution IN						10%	45%										
Trip Distribution OUT			45%									10%					
Project Trips	0	0	21	0	0	8	35	0	0	0	0	5	0	0	0	0	69
Project Trips (unbalanced)	0	0	21	0	0	8	35	0	0	0	0	5	0	0	0	0	69
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	0	21	0	0	8	35	0	0	0	0	5	0	0	0	0	69
Build 2025 PM Volumes	0	0	413	21	0	32	657	0	0	49	0	26	0	0	0	0	1199
% from Existing	0.0%	0.0%	76.0%	84.7%	0.0%	64.7%	77.5%	0.0%	0.0%	85.8%	0.0%	68.5%	0.0%	0.0%	0.0%	0.0%	76.9%
% from Background Growth	0.0%	0.0%	18.9%	15.3%	0.0%	10.7%	17.2%	0.0%	0.0%	14.2%	0.0%	12.4%	0.0%	0.0%	0.0%	0.0%	17.3%
% from Project Trips	0.0%	0.0%	5.1%	0.0%	0.0%	24.6%	5.3%	0.0%	0.0%	0.0%	0.0%	19.0%	0.0%	0.0%	0.0%	0.0%	5.8%

INTERSECTION VOLUME WORKSHEET

INTERSECTION 4

Trotwood Avenue at Foster Lane

AM PEAK HOUR

	Trotwood Avenue Eastbound				Trotwood Avenue Westbound				Foster Lane 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 Traffic																	
Existing 2022 AM Volumes	0	0	479	0	0	0	224	0	0	0	0	0					703
Summer AM Adjustment Factor	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	
Adjusted 2022 AM Volumes	0	0	661	0	0	0	309	0	0	0	0	0	0	0	0	0	970
Existing Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	
Conflicting Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0					
Heavy Vehicles	0	0	24	0	0	0	18	0	0	0	0	0					
Heavy Vehicle %	2	2	5	2	2	2	8	2	2	2	2	2	2	2	2	2	
Background Traffic																	
Annual Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Growth Factor	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	
Growth Trips	0	0	61	0	0	0	29	0	0	0	0	0	0	0	0	0	90
Sunnyside Gas Station	0	0	31	0	0	0	31	0	0	0	0	0					62
No-Build 2025 AM Volumes	0	0	753	0	0	0	369	0	0	0	0	0	0	0	0	0	1122
Project Traffic																	
Trip Distribution IN				30%		45%											
Trip Distribution OUT										30%		45%					
Project Trips	0	0	0	7	0	11	0	0	0	20	0	31	0	0	0	0	69
Project Trips (unbalanced)	0	0	0	7	0	11	0	0	0	20	0	31	0	0	0	0	69
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	0	0	7	0	11	0	0	0	20	0	31	0	0	0	0	69
Build 2025 AM Volumes	0	0	753	7	0	11	369	0	0	20	0	31	0	0	0	0	1191
% from Existing	0.0%	0.0%	63.6%	0.0%	0.0%	0.0%	60.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	59.0%
% from Background Growth	0.0%	0.0%	36.4%	0.0%	0.0%	0.0%	39.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	35.2%
% from Project Trips	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	5.8%

PM PEAK HOUR

	Trotwood Avenue Eastbound				Trotwood Avenue Westbound				Foster Lane 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 Traffic																	
Existing 2022 AM Volumes	0	0	342	0	0	0	543	0	0	0	0	0					885
Summer PM Adjustment Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	
Adjusted 2022 PM Volumes	0	0	366	0	0	0	581	0	0	0	0	0	0	0	0	0	947
Existing Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Conflicting Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0					
Heavy Vehicles	0	0	11	0	0	0	12	0	0	0	0	0					
Heavy Vehicle %	2	2	3	2	2	2	2	2	2	2	2	2	2	2	2	2	
Background Traffic																	
Annual Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Growth Factor	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	
Growth Trips	0	0	34	0	0	0	54	0	0	0	0	0	0	0	0	0	88
Sunnyside Gas Station	0	0	25	0	0	0	26	0	0	0	0	0					51
No-Build 2025 PM Volumes	0	0	425	0	0	0	661	0	0	0	0	0	0	0	0	0	1086
Project Traffic																	
Trip Distribution IN				30%		45%											
Trip Distribution OUT										30%		45%					
Project Trips	0	0	0	23	0	35	0	0	0	14	0	21	0	0	0	0	93
Project Trips (unbalanced)	0	0	0	23	0	35	0	0	0	14	0	21	0	0	0	0	93
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	0	0	23	0	35	0	0	0	14	0	21	0	0	0	0	93
Build 2025 PM Volumes	0	0	425	23	0	35	661	0	0	14	0	21	0	0	0	0	1179
% from Existing	0.0%	0.0%	80.5%	0.0%	0.0%	0.0%	82.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	75.1%
% from Background Growth	0.0%	0.0%	19.5%	0.0%	0.0%	0.0%	17.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.0%
% from Project Trips	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	7.9%

INTERSECTION VOLUME WORKSHEET

INTERSECTION 5

Foster Lane at Driveway A

AM PEAK HOUR

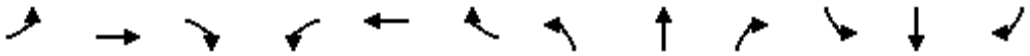
	- Eastbound				Driveway A Westbound				Foster Lane Northbound				Foster Lane Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing Traffic																	
Existing 2022 AM Volumes																	0
Summer AM Adjustment Factor	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	
Adjusted 2022 AM Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Conflicting Pedestrians																	
Heavy Vehicles																	
Heavy Vehicle %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Background Traffic																	
Annual Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Growth Factor	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	
Growth Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sunnyside Gas Station	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No-Build 2025 AM Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Traffic																	
Trip Distribution IN														75%			
Trip Distribution OUT								75%									
Project Trips	0	0	0	0	0	0	0	51	0	0	0	0	0	18	0	0	69
Project Trips (unbalanced)	0	0	0	0	0	0	0	51	0	0	0	0	0	18	0	0	69
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	0	0	0	0	0	0	51	0	0	0	0	0	18	0	0	69
Build 2025 AM Volumes	0	0	0	0	0	0	0	51	0	0	0	0	0	18	0	0	69
% from Existing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% from Background Growth	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% from Project Trips	0.0%	0.0%	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%	0.0%	100.0%

PM PEAK HOUR

	- Eastbound				Driveway A Westbound				Foster Lane Northbound				Foster Lane Southbound				Total Intersection
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	
Existing Traffic																	
Existing 2022 AM Volumes																	0
Summer PM Adjustment Factor	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	1.07	
Adjusted 2022 PM Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Conflicting Pedestrians																	
Heavy Vehicles																	
Heavy Vehicle %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Background Traffic																	
Annual Growth Rate	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	
Growth Factor	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	1.093	
Growth Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sunnyside Gas Station	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No-Build 2025 PM Volumes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Traffic																	
Trip Distribution IN														75%			
Trip Distribution OUT								75%									
Project Trips	0	0	0	0	0	0	0	35	0	0	0	0	0	58	0	0	93
Project Trips (unbalanced)	0	0	0	0	0	0	0	35	0	0	0	0	0	58	0	0	93
Balancing Adjustment																	
Pass-By Adjustment																	
Project Trips	0	0	0	0	0	0	0	35	0	0	0	0	0	58	0	0	93
Build 2025 PM Volumes	0	0	0	0	0	0	0	35	0	0	0	0	0	58	0	0	93
% from Existing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% from Background Growth	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% from Project Trips	0.0%	0.0%	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%	0.0%	100.0%

APPENDIX D

Synchro Reports



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	632	75	70	353	52	101	75	132	106	75	25
Future Volume (veh/h)	32	632	75	70	353	52	101	75	132	106	75	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	1767	1811	1811	1811	1767	1856	1826	1811	1870	1870	1841	1870
Adj Flow Rate, veh/h	37	735	87	81	410	60	117	87	153	123	87	29
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, %	9	6	6	6	9	3	5	6	2	2	4	2
Cap, veh/h	444	806	95	464	821	120	324	97	170	218	219	73
Arrive On Green	0.06	1.00	1.00	0.04	0.55	0.55	0.07	0.16	0.16	0.07	0.17	0.17
Sat Flow, veh/h	1682	1589	188	1725	1506	220	1739	589	1036	1781	1321	440
Grp Volume(v), veh/h	37	0	822	81	0	470	117	0	240	123	0	116
Grp Sat Flow(s),veh/h/ln	1682	0	1777	1725	0	1727	1739	0	1625	1781	0	1761
Q Serve(g_s), s	1.1	0.0	0.0	2.4	0.0	18.7	6.1	0.0	15.9	6.2	0.0	6.5
Cycle Q Clear(g_c), s	1.1	0.0	0.0	2.4	0.0	18.7	6.1	0.0	15.9	6.2	0.0	6.5
Prop In Lane	1.00		0.11	1.00		0.13	1.00		0.64	1.00		0.25
Lane Grp Cap(c), veh/h	444	0	901	464	0	942	324	0	267	218	0	293
V/C Ratio(X)	0.08	0.00	0.91	0.17	0.00	0.50	0.36	0.00	0.90	0.56	0.00	0.40
Avail Cap(c_a), veh/h	599	0	901	557	0	942	397	0	288	290	0	312
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)	0.76	0.00	0.76	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.6	0.0	0.0	11.8	0.0	15.6	34.6	0.0	45.1	35.6	0.0	40.9
Incr Delay (d2), s/veh	0.0	0.0	12.1	0.1	0.0	1.9	0.3	0.0	26.3	0.8	0.0	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	0.4	0.0	3.0	0.9	0.0	7.2	2.6	0.0	8.3	2.7	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.6	0.0	12.1	11.8	0.0	17.5	34.9	0.0	71.4	36.5	0.0	41.3
LnGrp LOS	B	A	B	B	A	B	C	A	E	D	A	D
Approach Vol, veh/h		859			551			357			239	
Approach Delay, s/veh		12.1			16.7			59.4			38.8	
Approach LOS		B			B			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.1	61.8	12.6	23.6	7.9	66.0	12.4	23.8
Change Period (Y+Rc), s	7.5	6.0	4.5	5.5	4.5	6.0	4.5	5.5
Max Green Setting (Gmax), s	10.5	44.0	12.5	19.5	13.5	44.0	12.5	19.5
Max Q Clear Time (g_c+I1), s	4.4	2.0	8.2	17.9	3.1	20.7	8.1	8.5
Green Ext Time (p_c), s	0.0	14.4	0.0	0.1	0.0	5.3	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	25.0
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	656	0	0	333	106	0	0	0	135	0	19
Future Volume (veh/h)	33	656	0	0	333	106	0	0	0	135	0	19
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	1796	1856	1870	1870	1870	1737	1870	1870
Adj Flow Rate, veh/h	38	763	0	0	387	123	0	0	0	157	0	22
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, %	2	5	2	2	7	3	2	2	2	11	2	2
Cap, veh/h	753	1429	0	508	928	295	0	211	179	252	0	179
Arrive On Green	0.03	0.78	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.11	0.00	0.11
Sat Flow, veh/h	1781	1826	0	1781	1306	415	0	1870	1585	1654	0	1585
Grp Volume(v), veh/h	38	763	0	0	0	510	0	0	0	157	0	22
Grp Sat Flow(s),veh/h/ln	1781	1826	0	1781	0	1722	0	1870	1585	1654	0	1585
Q Serve(g_s), s	0.6	17.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	0.0	1.4
Cycle Q Clear(g_c), s	0.6	17.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.2	0.0	1.4
Prop In Lane	1.00		0.00	1.00		0.24	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	753	1429	0	508	0	1223	0	211	179	252	0	179
V/C Ratio(X)	0.05	0.53	0.00	0.00	0.00	0.42	0.00	0.00	0.00	0.62	0.00	0.12
Avail Cap(c_a), veh/h	981	1429	0	790	0	1223	0	553	468	554	0	468
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	0.89	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.3	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.8	0.0	43.9
Incr Delay (d2), s/veh	0.0	1.4	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9	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	0.1	4.6	0.0	0.0	0.0	0.3	0.0	0.0	0.0	4.2	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.3	5.9	0.0	0.0	0.0	0.9	0.0	0.0	0.0	48.8	0.0	44.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	D	A	D
Approach Vol, veh/h		801			510			0			179	
Approach Delay, s/veh		5.8			0.9			0.0			48.2	
Approach LOS		A			A						D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.9	84.1		17.9	0.0	92.1		17.9
Change Period (Y+Rc), s	4.5	6.0		5.5	4.5	6.0		5.5
Max Green Setting (Gmax), s	17.5	44.0		32.5	17.5	44.0		32.5
Max Q Clear Time (g_c+I1), s	2.6	2.0		0.0	0.0	19.2		12.2
Green Ext Time (p_c), s	0.0	7.1		0.0	0.0	10.2		0.2

Intersection Summary	
HCM 6th Ctrl Delay	9.2
HCM 6th LOS	A

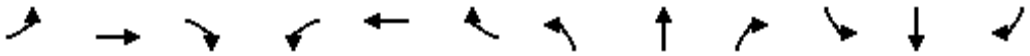
Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	609	57	12	282	32	35
Future Vol, veh/h	609	57	12	282	32	35
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	87	87	87	87	87	87
Heavy Vehicles, %	5	2	2	9	2	2
Mvmt Flow	700	66	14	324	37	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	766	0	1085	733
Stage 1	-	-	-	-	733	-
Stage 2	-	-	-	-	352	-
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	-	-	847	-	240	421
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	712	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	847	-	235	421
Mov Cap-2 Maneuver	-	-	-	-	235	-
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	698	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	20.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	306	-	-	847	-
HCM Lane V/C Ratio	0.252	-	-	0.016	-
HCM Control Delay (s)	20.7	-	-	9.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	423	113	95	581	65	134	72	78	92	73	49
Future Volume (veh/h)	48	423	113	95	581	65	134	72	78	92	73	49
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	1841	1870	1841	1870	1870	1870	1870	1870	1841	1856	1870	1796
Adj Flow Rate, veh/h	49	432	115	97	593	66	137	73	80	94	74	50
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	2	4	2	2	2	2	2	4	3	2	7
Cap, veh/h	417	807	215	630	996	111	244	93	101	208	94	63
Arrive On Green	0.07	1.00	1.00	0.04	0.60	0.60	0.09	0.11	0.11	0.06	0.09	0.09
Sat Flow, veh/h	1753	1423	379	1781	1653	184	1781	816	894	1767	1041	703
Grp Volume(v), veh/h	49	0	547	97	0	659	137	0	153	94	0	124
Grp Sat Flow(s),veh/h/ln	1753	0	1802	1781	0	1837	1781	0	1709	1767	0	1744
Q Serve(g_s), s	1.2	0.0	0.0	2.5	0.0	24.5	7.5	0.0	9.6	5.2	0.0	7.7
Cycle Q Clear(g_c), s	1.2	0.0	0.0	2.5	0.0	24.5	7.5	0.0	9.6	5.2	0.0	7.7
Prop In Lane	1.00		0.21	1.00		0.10	1.00		0.52	1.00		0.40
Lane Grp Cap(c), veh/h	417	0	1022	630	0	1107	244	0	194	208	0	157
V/C Ratio(X)	0.12	0.00	0.53	0.15	0.00	0.60	0.56	0.00	0.79	0.45	0.00	0.79
Avail Cap(c_a), veh/h	571	0	1022	723	0	1107	294	0	303	299	0	309
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)	0.89	0.00	0.89	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.6	0.0	0.0	8.8	0.0	13.5	40.7	0.0	47.5	42.0	0.0	49.0
Incr Delay (d2), s/veh	0.0	0.0	1.8	0.0	0.0	2.4	0.8	0.0	3.0	0.6	0.0	3.3
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	0.4	0.0	0.5	0.9	0.0	9.5	3.3	0.0	4.2	2.3	0.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.6	0.0	1.8	8.9	0.0	15.9	41.5	0.0	50.5	42.6	0.0	52.4
LnGrp LOS	B	A	A	A	A	B	D	A	D	D	A	D
Approach Vol, veh/h		596			756			290			218	
Approach Delay, s/veh		2.5			15.0			46.2			48.1	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	68.4	11.4	18.0	8.4	72.3	13.9	15.4
Change Period (Y+Rc), s	7.5	6.0	4.5	5.5	4.5	6.0	4.5	5.5
Max Green Setting (Gmax), s	10.5	44.0	12.5	19.5	13.5	44.0	12.5	19.5
Max Q Clear Time (g_c+I1), s	4.5	2.0	7.2	11.6	3.2	26.5	9.5	9.7
Green Ext Time (p_c), s	0.0	7.8	0.0	0.3	0.0	7.0	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	428	0	0	651	108	0	0	0	154	0	62
Future Volume (veh/h)	55	428	0	0	651	108	0	0	0	154	0	62
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	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	61	476	0	0	723	120	0	0	0	171	0	69
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	3	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	591	1447	0	710	1095	182	0	217	184	272	0	184
Arrive On Green	0.04	0.78	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.12	0.00	0.12
Sat Flow, veh/h	1781	1856	0	1781	1564	260	0	1870	1585	1781	0	1585
Grp Volume(v), veh/h	61	476	0	0	0	843	0	0	0	171	0	69
Grp Sat Flow(s),veh/h/ln	1781	1856	0	1781	0	1824	0	1870	1585	1781	0	1585
Q Serve(g_s), s	0.9	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0	4.4
Cycle Q Clear(g_c), s	0.9	8.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0	4.4
Prop In Lane	1.00		0.00	1.00		0.14	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	591	1447	0	710	0	1277	0	217	184	272	0	184
V/C Ratio(X)	0.10	0.33	0.00	0.00	0.00	0.66	0.00	0.00	0.00	0.63	0.00	0.38
Avail Cap(c_a), veh/h	806	1447	0	992	0	1277	0	553	468	592	0	468
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	0.78	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.4	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.6	0.0	45.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.9	0.0	0.5
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	2.3	0.0	0.0	0.0	0.7	0.0	0.0	0.0	4.6	0.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.4	4.2	0.0	0.0	0.0	2.1	0.0	0.0	0.0	48.5	0.0	45.4
LnGrp LOS	A	A	A	A	A	A	A	A	A	D	A	D
Approach Vol, veh/h		537			843			0			240	
Approach Delay, s/veh		4.1			2.1			0.0			47.6	
Approach LOS		A			A						D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.7	83.0		18.2	0.0	91.8		18.2
Change Period (Y+Rc), s	4.5	6.0		5.5	4.5	6.0		5.5
Max Green Setting (Gmax), s	17.5	44.0		32.5	17.5	44.0		32.5
Max Q Clear Time (g_c+I1), s	2.9	2.0		0.0	0.0	10.4		12.3
Green Ext Time (p_c), s	0.0	15.0		0.0	0.0	6.0		0.4

Intersection Summary	
HCM 6th Ctrl Delay	9.5
HCM 6th LOS	A

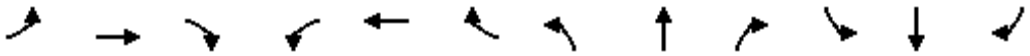
Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	336	19	22	545	45	19
Future Vol, veh/h	336	19	22	545	45	19
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	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	346	20	23	562	46	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	366	0	964	356
Stage 1	-	-	-	-	356	-
Stage 2	-	-	-	-	608	-
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	-	-	1193	-	283	688
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	543	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1193	-	275	688
Mov Cap-2 Maneuver	-	-	-	-	275	-
Stage 1	-	-	-	-	709	-
Stage 2	-	-	-	-	528	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	18.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	335	-	-	1193	-
HCM Lane V/C Ratio	0.197	-	-	0.019	-
HCM Control Delay (s)	18.4	-	-	8.1	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	713	91	77	367	57	160	91	144	120	86	27
Future Volume (veh/h)	35	713	91	77	367	57	160	91	144	120	86	27
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	1767	1811	1811	1811	1767	1856	1826	1811	1870	1870	1841	1870
Adj Flow Rate, veh/h	41	829	106	90	427	66	186	106	167	140	100	31
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, %	9	6	6	6	9	3	5	6	2	2	4	2
Cap, veh/h	402	762	97	139	779	120	356	112	177	226	207	64
Arrive On Green	0.06	0.97	0.97	0.04	0.52	0.52	0.11	0.18	0.18	0.08	0.15	0.15
Sat Flow, veh/h	1682	1574	201	1725	1494	231	1739	633	998	1781	1348	418
Grp Volume(v), veh/h	41	0	935	90	0	493	186	0	273	140	0	131
Grp Sat Flow(s),veh/h/ln	1682	0	1775	1725	0	1725	1739	0	1631	1781	0	1766
Q Serve(g_s), s	1.3	0.0	53.2	2.9	0.0	21.1	9.7	0.0	18.2	7.2	0.0	7.5
Cycle Q Clear(g_c), s	1.3	0.0	53.2	2.9	0.0	21.1	9.7	0.0	18.2	7.2	0.0	7.5
Prop In Lane	1.00		0.11	1.00		0.13	1.00		0.61	1.00		0.24
Lane Grp Cap(c), veh/h	402	0	859	139	0	899	356	0	289	226	0	271
V/C Ratio(X)	0.10	0.00	1.09	0.65	0.00	0.55	0.52	0.00	0.94	0.62	0.00	0.48
Avail Cap(c_a), veh/h	554	0	859	230	0	899	368	0	289	281	0	313
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)	0.67	0.00	0.67	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.1	0.0	1.8	25.9	0.0	17.6	33.9	0.0	44.7	36.1	0.0	42.6
Incr Delay (d2), s/veh	0.0	0.0	52.8	1.9	0.0	2.4	0.5	0.0	37.7	1.0	0.0	0.5
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	0.5	0.0	13.3	1.1	0.0	8.2	4.1	0.0	10.2	3.1	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.1	0.0	54.5	27.8	0.0	20.0	34.4	0.0	82.4	37.1	0.0	43.1
LnGrp LOS	B	A	F	C	A	C	C	A	F	D	A	D
Approach Vol, veh/h		976			583			459			271	
Approach Delay, s/veh		52.8			21.2			63.0			40.0	
Approach LOS		D			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	59.2	13.6	25.0	8.1	63.4	16.2	22.4
Change Period (Y+Rc), s	7.5	6.0	4.5	5.5	4.5	6.0	4.5	5.5
Max Green Setting (Gmax), s	10.5	44.0	12.5	19.5	13.5	44.0	12.5	19.5
Max Q Clear Time (g_c+I1), s	4.9	55.2	9.2	20.2	3.3	23.1	11.7	9.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	45.3
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	748	0	0	395	116	0	0	0	148	0	21
Future Volume (veh/h)	36	748	0	0	395	116	0	0	0	148	0	21
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	1796	1856	1870	1870	1870	1737	1870	1870
Adj Flow Rate, veh/h	42	870	0	0	459	135	0	0	0	172	0	24
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, %	2	5	2	2	7	3	2	2	2	11	2	2
Cap, veh/h	700	1412	0	428	933	274	0	229	194	268	0	194
Arrive On Green	0.03	0.77	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.12	0.00	0.12
Sat Flow, veh/h	1781	1826	0	1781	1333	392	0	1870	1585	1654	0	1585
Grp Volume(v), veh/h	42	870	0	0	0	594	0	0	0	172	0	24
Grp Sat Flow(s),veh/h/ln	1781	1826	0	1781	0	1726	0	1870	1585	1654	0	1585
Q Serve(g_s), s	0.7	22.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	0.0	1.5
Cycle Q Clear(g_c), s	0.7	22.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	0.0	1.5
Prop In Lane	1.00		0.00	1.00		0.23	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	700	1412	0	428	0	1207	0	229	194	268	0	194
V/C Ratio(X)	0.06	0.62	0.00	0.00	0.00	0.49	0.00	0.00	0.00	0.64	0.00	0.12
Avail Cap(c_a), veh/h	925	1412	0	710	0	1207	0	553	468	554	0	468
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	0.84	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.5	5.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.3	0.0	43.0
Incr Delay (d2), s/veh	0.0	2.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	1.0	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	0.2	6.4	0.0	0.0	0.0	0.4	0.0	0.0	0.0	4.6	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.5	7.4	0.0	0.0	0.0	1.2	0.0	0.0	0.0	48.3	0.0	43.1
LnGrp LOS	A	A	A	A	A	A	A	A	A	D	A	D
Approach Vol, veh/h		912			594			0			196	
Approach Delay, s/veh		7.2			1.2			0.0			47.6	
Approach LOS		A			A						D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.1	82.9		18.9	0.0	91.1		18.9				
Change Period (Y+Rc), s	4.5	6.0		5.5	4.5	6.0		5.5				
Max Green Setting (Gmax), s	17.5	44.0		32.5	17.5	44.0		32.5				
Max Q Clear Time (g_c+I1), s	2.7	2.0		0.0	0.0	24.7		13.2				
Green Ext Time (p_c), s	0.0	8.8		0.0	0.0	10.4		0.3				

Intersection Summary	
HCM 6th Ctrl Delay	9.8
HCM 6th LOS	A

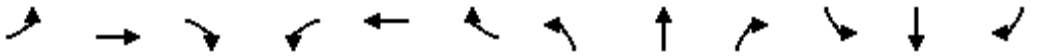
Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	697	62	13	339	35	38
Future Vol, veh/h	697	62	13	339	35	38
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	87	87	87	87	87	87
Heavy Vehicles, %	5	2	2	9	2	2
Mvmt Flow	801	71	15	390	40	44

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	872	0	1257	837
Stage 1	-	-	-	-	837	-
Stage 2	-	-	-	-	420	-
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	-	-	773	-	189	367
Stage 1	-	-	-	-	425	-
Stage 2	-	-	-	-	663	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	773	-	184	367
Mov Cap-2 Maneuver	-	-	-	-	184	-
Stage 1	-	-	-	-	425	-
Stage 2	-	-	-	-	646	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	26.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	249	-	-	773	-
HCM Lane V/C Ratio	0.337	-	-	0.019	-
HCM Control Delay (s)	26.6	-	-	9.7	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	1.4	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	480	131	104	619	71	188	86	85	105	84	54
Future Volume (veh/h)	52	480	131	104	619	71	188	86	85	105	84	54
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	1841	1870	1841	1870	1870	1870	1870	1870	1841	1856	1870	1796
Adj Flow Rate, veh/h	53	490	134	106	632	72	192	88	87	107	86	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	2	4	2	2	2	2	2	4	3	2	7
Cap, veh/h	347	752	206	569	934	106	289	122	121	241	106	68
Arrive On Green	0.07	1.00	1.00	0.04	0.57	0.57	0.11	0.14	0.14	0.07	0.10	0.10
Sat Flow, veh/h	1753	1414	387	1781	1649	188	1781	863	853	1767	1066	682
Grp Volume(v), veh/h	53	0	624	106	0	704	192	0	175	107	0	141
Grp Sat Flow(s),veh/h/ln	1753	0	1800	1781	0	1836	1781	0	1717	1767	0	1748
Q Serve(g_s), s	1.5	0.0	0.0	3.0	0.0	29.6	10.2	0.0	10.7	5.9	0.0	8.7
Cycle Q Clear(g_c), s	1.5	0.0	0.0	3.0	0.0	29.6	10.2	0.0	10.7	5.9	0.0	8.7
Prop In Lane	1.00		0.21	1.00		0.10	1.00		0.50	1.00		0.39
Lane Grp Cap(c), veh/h	347	0	958	569	0	1040	289	0	243	241	0	174
V/C Ratio(X)	0.15	0.00	0.65	0.19	0.00	0.68	0.66	0.00	0.72	0.44	0.00	0.81
Avail Cap(c_a), veh/h	498	0	958	661	0	1040	294	0	304	319	0	310
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)	0.86	0.00	0.86	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.3	0.0	0.0	10.5	0.0	16.8	37.3	0.0	45.1	40.6	0.0	48.5
Incr Delay (d2), s/veh	0.1	0.0	3.0	0.1	0.0	3.5	4.3	0.0	4.0	0.5	0.0	3.4
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	0.5	0.0	0.8	1.1	0.0	12.1	4.7	0.0	4.8	2.6	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.4	0.0	3.0	10.6	0.0	20.3	41.6	0.0	49.2	41.1	0.0	51.9
LnGrp LOS	B	A	A	B	A	C	D	A	D	D	A	D
Approach Vol, veh/h		677			810			367			248	
Approach Delay, s/veh		3.8			19.0			45.2			47.2	
Approach LOS		A			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.3	64.5	12.1	21.1	8.5	68.3	16.7	16.5
Change Period (Y+Rc), s	7.5	6.0	4.5	5.5	4.5	6.0	4.5	5.5
Max Green Setting (Gmax), s	10.5	44.0	12.5	19.5	13.5	44.0	12.5	19.5
Max Q Clear Time (g_c+I1), s	5.0	2.0	7.9	12.7	3.5	31.6	12.2	10.7
Green Ext Time (p_c), s	0.0	9.4	0.0	0.3	0.0	6.0	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	22.0
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	493	0	0	738	118	0	0	0	168	0	68
Future Volume (veh/h)	60	493	0	0	738	118	0	0	0	168	0	68
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	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	67	548	0	0	820	131	0	0	0	187	0	76
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	3	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	543	1430	0	646	1086	173	0	234	198	288	0	198
Arrive On Green	0.04	0.77	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.12	0.00	0.12
Sat Flow, veh/h	1781	1856	0	1781	1574	251	0	1870	1585	1781	0	1585
Grp Volume(v), veh/h	67	548	0	0	0	951	0	0	0	187	0	76
Grp Sat Flow(s),veh/h/ln	1781	1856	0	1781	0	1825	0	1870	1585	1781	0	1585
Q Serve(g_s), s	1.1	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3	0.0	4.8
Cycle Q Clear(g_c), s	1.1	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3	0.0	4.8
Prop In Lane	1.00		0.00	1.00		0.14	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	543	1430	0	646	0	1259	0	234	198	288	0	198
V/C Ratio(X)	0.12	0.38	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.65	0.00	0.38
Avail Cap(c_a), veh/h	756	1430	0	928	0	1259	0	553	468	592	0	468
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	0.68	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.7	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.1	0.0	44.2
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.9	0.0	0.5
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	3.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	5.0	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.7	4.9	0.0	0.0	0.0	2.9	0.0	0.0	0.0	48.0	0.0	44.7
LnGrp LOS	A	A	A	A	A	A	A	A	A	D	A	D
Approach Vol, veh/h		615			951			0			263	
Approach Delay, s/veh		4.8			2.9			0.0			47.0	
Approach LOS		A			A						D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.9	81.9		19.2	0.0	90.8		19.2				
Change Period (Y+Rc), s	4.5	6.0		5.5	4.5	6.0		5.5				
Max Green Setting (Gmax), s	17.5	44.0		32.5	17.5	44.0		32.5				
Max Q Clear Time (g_c+I1), s	3.1	2.0		0.0	0.0	12.6		13.3				
Green Ext Time (p_c), s	0.0	18.5		0.0	0.0	7.1		0.5				

Intersection Summary	
HCM 6th Ctrl Delay	9.9
HCM 6th LOS	A

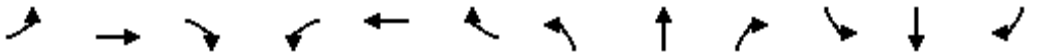
Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	392	21	24	622	49	21
Future Vol, veh/h	392	21	24	622	49	21
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	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	404	22	25	641	51	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	426	0	1106	415
Stage 1	-	-	-	-	415	-
Stage 2	-	-	-	-	691	-
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	-	-	1133	-	233	637
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	497	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1133	-	225	637
Mov Cap-2 Maneuver	-	-	-	-	225	-
Stage 1	-	-	-	-	666	-
Stage 2	-	-	-	-	480	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	22.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	279	-	-	1133	-
HCM Lane V/C Ratio	0.259	-	-	0.022	-
HCM Control Delay (s)	22.3	-	-	8.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	747	91	79	379	57	160	94	151	120	87	27
Future Volume (veh/h)	35	747	91	79	379	57	160	94	151	120	87	27
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	1767	1811	1811	1811	1767	1856	1826	1811	1870	1870	1841	1870
Adj Flow Rate, veh/h	41	869	106	92	441	66	186	109	176	140	101	31
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, %	9	6	6	6	9	3	5	6	2	2	4	2
Cap, veh/h	392	766	93	139	783	117	355	111	178	216	207	64
Arrive On Green	0.06	0.97	0.97	0.04	0.52	0.52	0.11	0.18	0.18	0.08	0.15	0.15
Sat Flow, veh/h	1682	1583	193	1725	1501	225	1739	623	1007	1781	1351	415
Grp Volume(v), veh/h	41	0	975	92	0	507	186	0	285	140	0	132
Grp Sat Flow(s),veh/h/ln	1682	0	1776	1725	0	1726	1739	0	1630	1781	0	1766
Q Serve(g_s), s	1.3	0.0	53.2	2.9	0.0	21.9	9.7	0.0	19.2	7.2	0.0	7.5
Cycle Q Clear(g_c), s	1.3	0.0	53.2	2.9	0.0	21.9	9.7	0.0	19.2	7.2	0.0	7.5
Prop In Lane	1.00		0.11	1.00		0.13	1.00		0.62	1.00		0.23
Lane Grp Cap(c), veh/h	392	0	859	139	0	900	355	0	289	216	0	271
V/C Ratio(X)	0.10	0.00	1.13	0.66	0.00	0.56	0.52	0.00	0.99	0.65	0.00	0.49
Avail Cap(c_a), veh/h	544	0	859	230	0	900	367	0	289	271	0	313
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)	0.64	0.00	0.64	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.2	0.0	1.8	25.9	0.0	17.8	33.9	0.0	45.1	36.1	0.0	42.6
Incr Delay (d2), s/veh	0.0	0.0	70.2	2.0	0.0	2.5	0.5	0.0	48.9	1.7	0.0	0.5
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	0.5	0.0	17.4	1.1	0.0	8.6	4.1	0.0	11.5	3.2	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.2	0.0	72.0	27.9	0.0	20.4	34.5	0.0	94.1	37.8	0.0	43.1
LnGrp LOS	B	A	F	C	A	C	C	A	F	D	A	D
Approach Vol, veh/h		1016			599			471			272	
Approach Delay, s/veh		69.7			21.5			70.5			40.4	
Approach LOS		E			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	59.2	13.6	25.0	8.1	63.4	16.2	22.4
Change Period (Y+Rc), s	7.5	6.0	4.5	5.5	4.5	6.0	4.5	5.5
Max Green Setting (Gmax), s	10.5	44.0	12.5	19.5	13.5	44.0	12.5	19.5
Max Q Clear Time (g_c+I1), s	4.9	55.2	9.2	21.2	3.3	23.9	11.7	9.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	54.2
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	782	0	0	407	116	0	0	0	148	0	22
Future Volume (veh/h)	39	782	0	0	407	116	0	0	0	148	0	22
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	1796	1856	1870	1870	1870	1737	1870	1870
Adj Flow Rate, veh/h	45	909	0	0	473	135	0	0	0	172	0	26
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, %	2	5	2	2	7	3	2	2	2	11	2	2
Cap, veh/h	693	1412	0	404	938	268	0	229	194	268	0	194
Arrive On Green	0.03	0.77	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.12	0.00	0.12
Sat Flow, veh/h	1781	1826	0	1781	1344	384	0	1870	1585	1654	0	1585
Grp Volume(v), veh/h	45	909	0	0	0	608	0	0	0	172	0	26
Grp Sat Flow(s),veh/h/ln	1781	1826	0	1781	0	1727	0	1870	1585	1654	0	1585
Q Serve(g_s), s	0.7	24.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	0.0	1.6
Cycle Q Clear(g_c), s	0.7	24.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.2	0.0	1.6
Prop In Lane	1.00		0.00	1.00		0.22	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	693	1412	0	404	0	1206	0	229	194	268	0	194
V/C Ratio(X)	0.06	0.64	0.00	0.00	0.00	0.50	0.00	0.00	0.00	0.64	0.00	0.13
Avail Cap(c_a), veh/h	916	1412	0	685	0	1206	0	553	468	554	0	468
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	0.83	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.5	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.3	0.0	43.1
Incr Delay (d2), s/veh	0.0	2.3	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.0	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	0.2	7.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	4.6	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.5	7.9	0.0	0.0	0.0	1.3	0.0	0.0	0.0	48.3	0.0	43.2
LnGrp LOS	A	A	A	A	A	A	A	A	A	D	A	D
Approach Vol, veh/h		954			608			0			198	
Approach Delay, s/veh		7.7			1.3			0.0			47.6	
Approach LOS		A			A						D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.2	82.8		18.9	0.0	91.1		18.9				
Change Period (Y+Rc), s	4.5	6.0		5.5	4.5	6.0		5.5				
Max Green Setting (Gmax), s	17.5	44.0		32.5	17.5	44.0		32.5				
Max Q Clear Time (g_c+I1), s	2.7	2.0		0.0	0.0	26.7		13.2				
Green Ext Time (p_c), s	0.0	9.1		0.0	0.0	10.2		0.3				

Intersection Summary	
HCM 6th Ctrl Delay	10.0
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	728	62	15	350	35	45
Future Vol, veh/h	728	62	15	350	35	45
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	87	87	87	87	87	87
Heavy Vehicles, %	5	2	2	9	2	2
Mvmt Flow	837	71	17	402	40	52

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	908	0	1309	873
Stage 1	-	-	-	-	873	-
Stage 2	-	-	-	-	436	-
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	-	-	750	-	176	349
Stage 1	-	-	-	-	409	-
Stage 2	-	-	-	-	652	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	750	-	171	349
Mov Cap-2 Maneuver	-	-	-	-	171	-
Stage 1	-	-	-	-	409	-
Stage 2	-	-	-	-	633	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	29
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	240	-	-	750	-
HCM Lane V/C Ratio	0.383	-	-	0.023	-
HCM Control Delay (s)	29	-	-	9.9	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	1.7	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	753	7	11	369	20	31
Future Vol, veh/h	753	7	11	369	20	31
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	88	88	88	88	88	88
Heavy Vehicles, %	5	2	2	8	2	2
Mvmt Flow	856	8	13	419	23	35

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	864	0	1305	860
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	445	-
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	-	-	779	-	177	356
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	646	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	779	-	173	356
Mov Cap-2 Maneuver	-	-	-	-	173	-
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	632	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	23.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	252	-	-	779	-
HCM Lane V/C Ratio	0.23	-	-	0.016	-
HCM Control Delay (s)	23.5	-	-	9.7	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.9	-	-	0	-

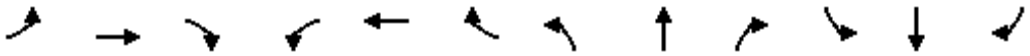
Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	51	0	0	18	0
Future Vol, veh/h	0	51	0	0	18	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	57	0	0	20	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	40	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	40	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	972	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	982	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	972	-	-	-	-	-
Mov Cap-2 Maneuver	972	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	982	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	
HCM LOS	-		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	-	-	-
HCM Lane LOS	-	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	503	131	112	658	71	188	88	90	105	88	54
Future Volume (veh/h)	52	503	131	112	658	71	188	88	90	105	88	54
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	1841	1870	1841	1870	1870	1870	1870	1870	1841	1856	1870	1796
Adj Flow Rate, veh/h	53	513	134	114	671	72	192	90	92	107	90	55
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	4	2	4	2	2	2	2	2	4	3	2	7
Cap, veh/h	319	754	197	561	937	101	289	122	124	237	111	68
Arrive On Green	0.07	1.00	1.00	0.05	0.56	0.56	0.11	0.14	0.14	0.07	0.10	0.10
Sat Flow, veh/h	1753	1429	373	1781	1660	178	1781	848	867	1767	1087	664
Grp Volume(v), veh/h	53	0	647	114	0	743	192	0	182	107	0	145
Grp Sat Flow(s),veh/h/ln	1753	0	1803	1781	0	1838	1781	0	1714	1767	0	1751
Q Serve(g_s), s	1.5	0.0	0.0	3.2	0.0	32.5	10.2	0.0	11.2	5.9	0.0	8.9
Cycle Q Clear(g_c), s	1.5	0.0	0.0	3.2	0.0	32.5	10.2	0.0	11.2	5.9	0.0	8.9
Prop In Lane	1.00		0.21	1.00		0.10	1.00		0.51	1.00		0.38
Lane Grp Cap(c), veh/h	319	0	951	561	0	1038	289	0	246	237	0	178
V/C Ratio(X)	0.17	0.00	0.68	0.20	0.00	0.72	0.67	0.00	0.74	0.45	0.00	0.81
Avail Cap(c_a), veh/h	470	0	951	649	0	1038	294	0	304	316	0	310
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)	0.85	0.00	0.85	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.2	0.0	0.0	10.7	0.0	17.5	37.1	0.0	45.1	40.5	0.0	48.4
Incr Delay (d2), s/veh	0.1	0.0	3.3	0.1	0.0	4.2	4.4	0.0	5.2	0.5	0.0	3.4
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	0.5	0.0	0.9	1.2	0.0	13.4	4.7	0.0	5.1	2.6	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.3	0.0	3.3	10.7	0.0	21.7	41.5	0.0	50.4	41.0	0.0	51.8
LnGrp LOS	B	A	A	B	A	C	D	A	D	D	A	D
Approach Vol, veh/h		700			857			374			252	
Approach Delay, s/veh		4.2			20.3			45.8			47.2	
Approach LOS		A			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	64.0	12.1	21.3	8.5	68.1	16.7	16.7
Change Period (Y+Rc), s	7.5	6.0	4.5	5.5	4.5	6.0	4.5	5.5
Max Green Setting (Gmax), s	10.5	44.0	12.5	19.5	13.5	44.0	12.5	19.5
Max Q Clear Time (g_c+I1), s	5.2	2.0	7.9	13.2	3.5	34.5	12.2	10.9
Green Ext Time (p_c), s	0.0	9.9	0.0	0.3	0.0	5.2	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	22.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	516	0	0	777	118	0	0	0	168	0	72
Future Volume (veh/h)	62	516	0	0	777	118	0	0	0	168	0	72
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	1856	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	69	573	0	0	863	131	0	0	0	187	0	80
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	3	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	527	1429	0	628	1094	166	0	234	198	288	0	198
Arrive On Green	0.04	0.77	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.13	0.00	0.13
Sat Flow, veh/h	1781	1856	0	1781	1586	241	0	1870	1585	1781	0	1585
Grp Volume(v), veh/h	69	573	0	0	0	994	0	0	0	187	0	80
Grp Sat Flow(s),veh/h/ln	1781	1856	0	1781	0	1827	0	1870	1585	1781	0	1585
Q Serve(g_s), s	1.1	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3	0.0	5.1
Cycle Q Clear(g_c), s	1.1	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.3	0.0	5.1
Prop In Lane	1.00		0.00	1.00		0.13	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	527	1429	0	628	0	1260	0	234	198	288	0	198
V/C Ratio(X)	0.13	0.40	0.00	0.00	0.00	0.79	0.00	0.00	0.00	0.65	0.00	0.40
Avail Cap(c_a), veh/h	739	1429	0	909	0	1260	0	553	468	592	0	468
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	0.64	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.7	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.0	0.0	44.3
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.9	0.0	0.5
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	3.2	0.0	0.0	0.0	1.2	0.0	0.0	0.0	5.0	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.7	5.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	48.0	0.0	44.8
LnGrp LOS	A	A	A	A	A	A	A	A	A	D	A	D
Approach Vol, veh/h		642			994			0			267	
Approach Delay, s/veh		4.9			3.3			0.0			47.0	
Approach LOS		A			A						D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.9	81.8		19.3	0.0	90.7		19.3				
Change Period (Y+Rc), s	4.5	6.0		5.5	4.5	6.0		5.5				
Max Green Setting (Gmax), s	17.5	44.0		32.5	17.5	44.0		32.5				
Max Q Clear Time (g_c+I1), s	3.1	2.0		0.0	0.0	13.3		13.3				
Green Ext Time (p_c), s	0.0	20.0		0.0	0.0	7.5		0.5				

Intersection Summary	
HCM 6th Ctrl Delay	10.0
HCM 6th LOS	A

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	413	21	32	657	49	26
Future Vol, veh/h	413	21	32	657	49	26
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	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	426	22	33	677	51	27

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	448	0	1180	437
Stage 1	-	-	-	-	437	-
Stage 2	-	-	-	-	743	-
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	-	-	1112	-	210	620
Stage 1	-	-	-	-	651	-
Stage 2	-	-	-	-	470	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1112	-	200	620
Mov Cap-2 Maneuver	-	-	-	-	200	-
Stage 1	-	-	-	-	651	-
Stage 2	-	-	-	-	447	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	24.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	261	-	-	1112	-
HCM Lane V/C Ratio	0.296	-	-	0.03	-
HCM Control Delay (s)	24.5	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.2	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	425	23	35	661	14	21
Future Vol, veh/h	425	23	35	661	14	21
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	98	98	98	98	98	98
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	434	23	36	674	14	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	457	0	1192	446
Stage 1	-	-	-	-	446	-
Stage 2	-	-	-	-	746	-
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	-	-	1104	-	207	612
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	469	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1104	-	196	612
Mov Cap-2 Maneuver	-	-	-	-	196	-
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	445	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	17.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	331	-	-	1104	-
HCM Lane V/C Ratio	0.108	-	-	0.032	-
HCM Control Delay (s)	17.2	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	35	0	0	58	0
Future Vol, veh/h	0	35	0	0	58	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	39	0	0	64	0

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	128	0	0	0	0	0
Stage 1	0	-	-	-	-	-
Stage 2	128	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	866	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	898	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	866	-	-	-	-	-
Mov Cap-2 Maneuver	866	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	898	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s		0	
HCM LOS	-		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	-	-	-
HCM Lane LOS	-	-	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	753	7	11	369	20	31
Future Vol, veh/h	753	7	11	369	20	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	240	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	5	2	2	8	2	2
Mvmt Flow	856	8	13	419	23	35

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	864	0	1305	860
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	445	-
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	-	-	779	-	177	356
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	646	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	779	-	174	356
Mov Cap-2 Maneuver	-	-	-	-	174	-
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	635	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	23.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	252	-	-	779	-
HCM Lane V/C Ratio	0.23	-	-	0.016	-
HCM Control Delay (s)	23.5	-	-	9.7	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.9	-	-	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	425	23	35	661	14	21
Future Vol, veh/h	425	23	35	661	14	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	240	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	98	98	98	98	98	98
Heavy Vehicles, %	3	2	2	2	2	2
Mvmt Flow	434	23	36	674	14	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	457	0	1192	446
Stage 1	-	-	-	-	446	-
Stage 2	-	-	-	-	746	-
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	-	-	1104	-	207	612
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	469	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1104	-	200	612
Mov Cap-2 Maneuver	-	-	-	-	200	-
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	454	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	17
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	336	-	-	1104	-
HCM Lane V/C Ratio	0.106	-	-	0.032	-
HCM Control Delay (s)	17	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

APPENDIX E

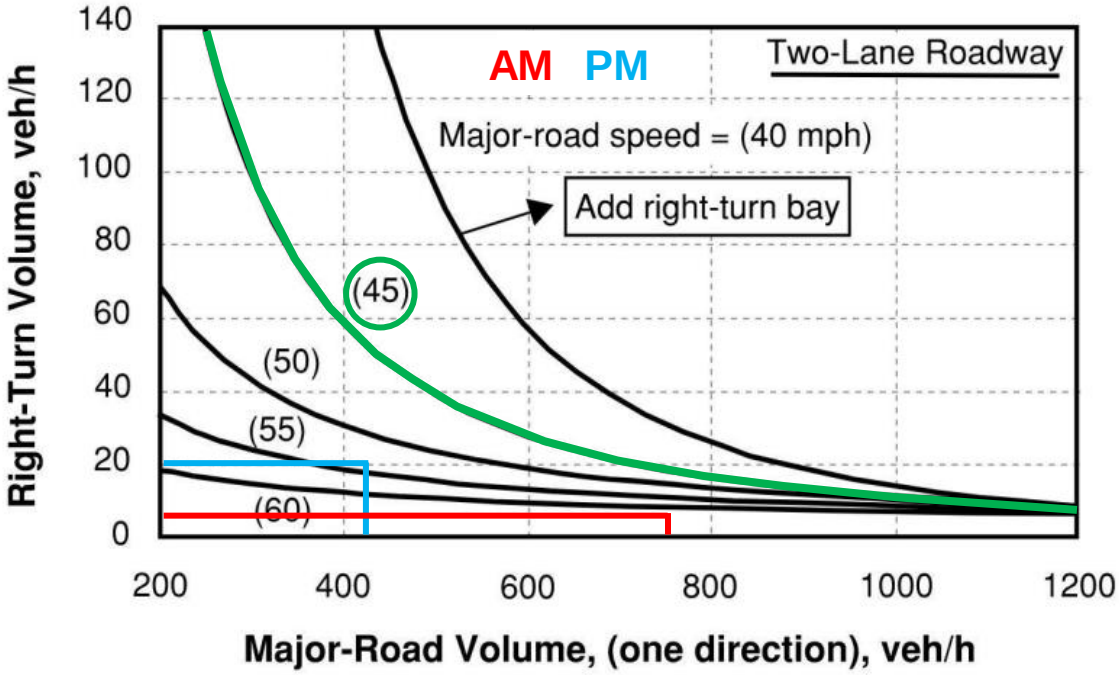
Turn Lane Warrants

TDOT Geometric Design Criteria

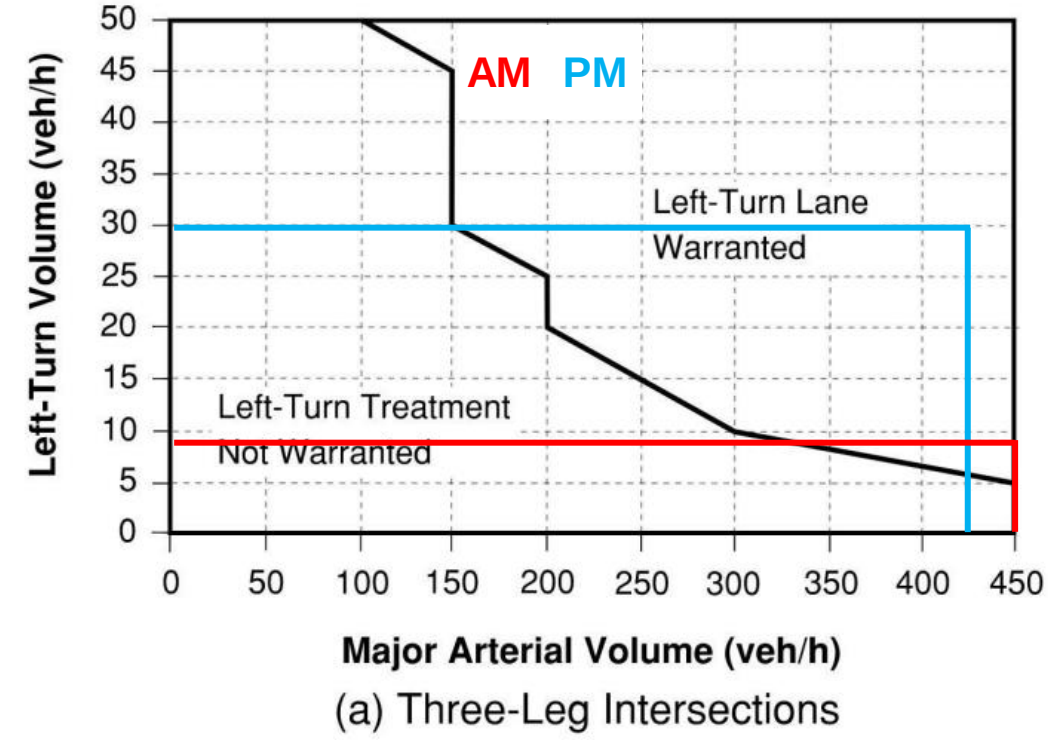
Trotwood Avenue at Foster Lane (Intersection 4)

Build 2025 Conditions

EBR Turn Lane Not Warranted



WBL Turn Lane Warranted



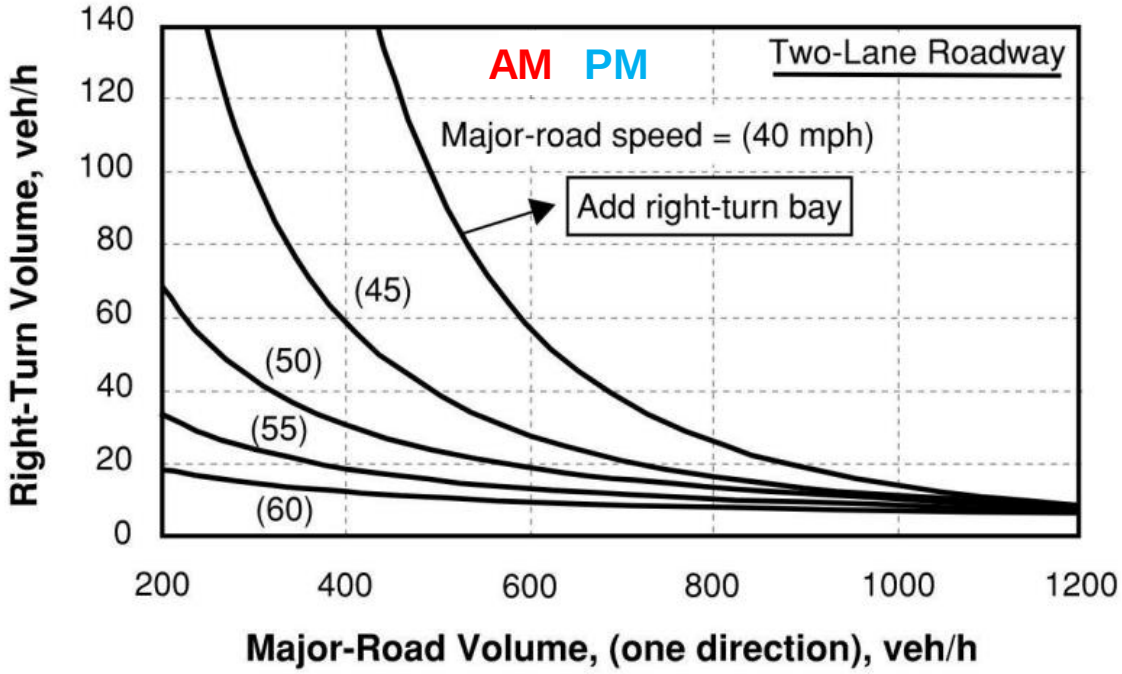
(a) Three-Leg Intersections

TDOT Geometric Design Criteria

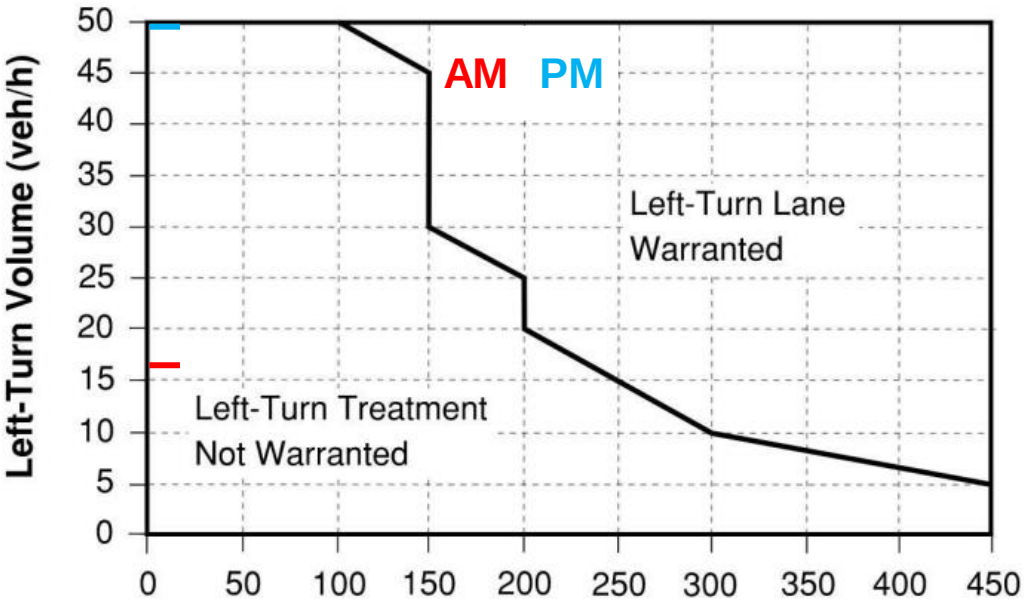
Foster Lane at Site Driveway A (Intersection 5)

Build 2025 Conditions

No NBR Turn Volume – NBR Turn Lane Not Warranted



No conflicting NB Volume - SBL Turn Lane Not Warranted



(a) Three-Leg Intersections

January 17, 2023

City of Columbia
Zoning and Planning
700 N Garden Street
Columbia, TN 38401

RE: Trotwood & Foster Subdivision – Cul-de-sac Approval

Dear Austin Brass,

We are currently in the process of submitting a request for a preliminary plat for the development of Trotwood and Foster Subdivision. This development will consist of 124 single-family lots and is located east of the Trotwood Ave and Foster Lane intersection. As part of this development, we plan to include a proposed cul-de-sac located along the northern section of the property. According to the City of Columbia, TN Zoning Ordinance (2022), cul-de-sacs are not allowed unless approved by Waiver of the Zoning Administrator to accommodate specific site conditions. As part of the proposed project, we would like to make a case for the inclusion of a cul-de-sac for this specific site. The reason for the cul-de-sac is due to an existing cesspool located due north of the cul-de-sac that we need to avoid crossing. This area is extremely low lying and is a saturated natural area. According to the City of Columbia Engineering Standards and Specifications (ESS), cul-de-sacs shall be permitted where the configuration of the property boundaries prevent street connections. In the case of the proposed site, a connection to the north onto Old Sunnyside Lane not be feasible due to the existing low lying area.

This letter is accompanying the preliminary plat and shows this area in much more detail. Please let us know if this cul-de-sac can be approved so we can submit a request for a preliminary plat. Thank you.

If you have any questions or need additional information, please do not hesitate to contact me at adam@crunkeng.com or 615-873-1795.

Sincerely,



Adam Crunk, PE
Crunk Engineering LLC

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 and Foster Preliminary Plat

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

- [x] Name of development
- [x] Contact info for the owner and licensed design professional(s) preparing plan: name, address, email, phone
- [x] Plan sealed by a Design Professional licensed in the State of Tennessee.
- [x] North Arrow, legend, and site vicinity map
- [x] 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
- [x] All property boundaries, existing easements, and encumbrances
- [x] Parcel identification, owner, and deed and plat references of adjoining properties
- [ ] Proposed phasing and timetable for all phases of development N/A
- [x] Traffic Impact Study, as required.
- [x] The substance of all existing and proposed covenants, easements, or other restrictions.

Lots and Land-Use

- [x] The size of total property to be developed in square feet and acres
- [x] Lot numbers of all proposed lots, with dimensions, locations, and square footage
- [x] A tabulation of the land area to be devoted to various uses and activities and overall densities.
- [x] Typical lot layout depicting proposed setbacks, yards, and easements, where applicable

Structures

- [x] Location and approximate dimensions of all existing and proposed structures.
- [x] Location of all earth retaining structures, with approximate top and bottom of wall elevations.
- [x] Existing and intended use of all buildings and structures on site, including the number of dwelling units and density, where applicable
- [x] Location, type, and size of proposed signs
- [x] Approximate height, bulk, and the utilization of structures including activities and the number of living units.

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Grading, Drainage, and Storm

- [x] Existing conditions and contours at vertical intervals of not more than two (2) feet
- [x] General proposed contours at vertical intervals of not more than two (2) feet
- [x] 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
- [x] Location and dimension of aquatic buffer zones
- [x] General layout of the proposed storm drainage system including surface and subsurface drainage systems, areas for detention, and water quality devices.
- [x] Identification of all critical lots

Streets, Parking, and Pedestrian Elements

- [x] Proposed street and alley rights-of-way, typical sections, widths, classification, names, and proposed ownership and maintenance responsibility
- [x] Proposed connections to existing and proposed streets (including classification) located outside the development
- [x] Proposed improvements as identified in the Traffic Impact Study, as required
- [x] Existing and proposed sidewalks, trails, and other pedestrian elements
- [x] Existing and proposed on-street and off-street parking and loading areas
- [x] Summary of all provided and required parking N/A (on-street parking only)

Landscaping, Open Space, and Amenities

- [x] Natural features on site including, but not limited to, wetlands, streams, ponds, springs, sinkholes, wells, rock outcroppings, excessive slopes, and forested areas
- [x] Landscaped areas and buffers with details on proposed plantings, existing vegetation, and other features.
- [x] The location and size of all common open space, parkland dedications, and dedications and reservations of land for public uses.
- [x] Any amenity features and structures for private or public benefit.
- [x] Location, dimension, and materials of fences and walls N/A
- [x] Tree Canopy retention

Utilities

- [x] 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.
- [x] 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

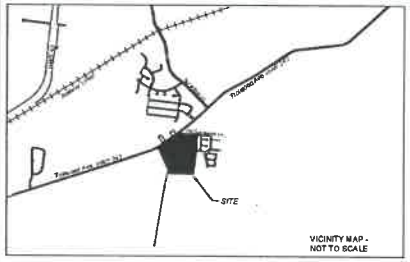
- [x] Legal Description of Property
- [x] Owner's Affidavit N/A
- [x] List of all variances requested N/A
- [x] The nature of the landholder's interest in the land proposed to be developed and a written statement of concurrence from all parties having a beneficial interest in the affected property.
- [x] 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.
- [x] 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.
- [x] Exterior lighting N/A

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:

Patrick Carroll		12/19/22
Print Name	Signature	Date

Rev. 6/7/2022



VICINITY MAP - NOT TO SCALE

UTILITY DISCLAIMER:

Gresham Smith and 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 As-Built 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 reference 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 persons who engages in excavation shall notify all known underground utility owners, no less than three (3) or more than ten (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 2022086CTN with a Commitment Date of April 25, 2022 at 8:00 A.M.; and Commitment Number 2022085CTN with a Commitment Date of May 4,2022 at 8:00 a.m., and lines 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. 47119C0206E, with an effective date of April 16, 2007 for Community No. 470423 & 470122, 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 adjoiners 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 declaration 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 owner 17.00 (Record Book 2758, Page 651) calls for a 30' width. Prescriptive rights may exist.
9. A right-of-way width of 60' was assumed for Trotwood Avenue (66.243), 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 2788, PAGE 163, R.O.M.C.,TN
MAP 112, PARCEL 018.05	KATHLEEN M. RODGERS	0 TROTWOOD AVE., TN 38401	RECORD BOOK 2788, PAGE 165, R.O.M.C.,TN
MAP 112, PARCEL 018.03	JAMES AND STACY GORE	0 TROTWOOD AVE., TN 38401	RECORD BOOK 2367, PAGE 455, R.O.M.C.,TN

PARCEL 18 TRACT 1	446,744.374 SQ/FT	10.324 AC
PARCEL 18 TRACT 1 REMNANT	11,977.451 SQ/FT	0.275 AC
PARCEL 18 TRACT 2	326,622.729 SQ/FT	7.567 AC
PARCEL 18 TRACT 2 REMNANT	9,474.556 SQ/FT	0.217 AC
PARCEL 18.03 TRACT 1	1,851,578.496 SQ/FT	44.902 AC
PARCEL 18.04 TRACT 1	38,963.582 SQ/FT	0.895 AC
PARCEL 18.05 (EXCLUDED FROM TITLE)	103,984.002 SQ/FT	2.488 AC

LEGEND

Benchmark	Water Meter
(240.16') Bearing & Distance per Deed	Water Valve
(Record) Property Corner	Fire Hydrant
Property Line	Sewer Manhole
Adjacent Property Line	Sewer Clean-Out
Easement Line	Power Pole
Water Line	Guy Wire
Sewer Line	Light Pole
Gas Line	Mailbox Mailbox
Overhead Electric Line	Fence (chain/wire/iron rails)
Underground Electric Line	Fence (wood or privacy)
Telecommunications 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.: 2022086CTN
Commitment Date: April 26, 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 67-5-803, 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 853, 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 459, 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 Deeds and Paths as referenced in Book 318, 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. 2022086CTN

Land situated in Maury County, Tennessee:

Tract I:

Being and lying in the 6th 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, passing an iron pin set, said iron pin set being the true point of beginning, and the Northmost 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 367.41 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 24.00 feet, and an iron pin found at 130.67 feet, in all a distance of 2,628.56 feet to an 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 09 degrees, 26 minutes, 26 seconds West for a distance of 284.69 feet to an iron pin found;
thence South 07 degrees, 34 minutes, 30 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, 26 seconds West for a distance of 156.56 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, 16 minutes, 20 seconds West for a distance of 562.84 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 6th 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 true point of beginning, and the Northmost 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 13 minutes 20 seconds West for a distance of 170.07 feet to an iron pin set; thence North 39 degrees, 24 minutes, 08 seconds West for a distance of 259.84 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 89.58 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 16 minutes 49 seconds East for a distance of 692.95 feet to the point of beginning and containing 9.66 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 2-3, 2011 and recorded on December 30, 2011

DESCRIPTION PER COMMITMENT NO. 2022086CTN

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 19 seconds East for a distance of 109.93 feet;
thence North 53 degrees 46 minutes 19 seconds East for a distance of 90.80 feet 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 Kathleen Rogers;
thence leaving said road with Rogers, South 65 degrees 23 minutes 45 seconds East for a distance of 459.37 feet to a iron pin found;
thence South 43 degrees 30 minutes 58 seconds East for a distance of 88.54 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 08 seconds East for a distance of 259.84 feet to a iron pin found;
thence North 79 degrees 10 minutes 58 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 562.84 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 Subdivision Section 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 Northeast 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 124.96 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 31 minutes 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 76 of Hunters Glen Subdivision Section 2;
thence with lot 76, 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 76, 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 48 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 364.70 feet, in all a distance of 1265.96 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 196.76 feet to a point;
thence North 09 degrees 42 minutes 36 seconds West for a distance of 98.95 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 234.32 feet to a point;
thence North 24 degrees 19 minutes 52 seconds West for a distance of 515.42 feet to a point;
thence North 24 degrees 15 minutes 55 seconds West for a distance of 127.93 feet to a point;
thence North 18 degrees 32 minutes 05 seconds West for a distance of 96.89 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, 2018.

Less and except that portion of the above property conveyed to Kathy M. Rogers by the Quitclaim Deed of record in Book R2788, 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 R2367, 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 NLS 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 R2367, page 455;
Thence with the South margine of Trotwood Avenue, North 54 degrees 20 minutes 58 seconds East a distance of 217.26' to an iron pin set;
Thence severing the property of Kathleen Rogers, South 33 degrees 28 minutes 08 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 R2367, page 455, North 05 degrees 21 minutes 41 seconds West a distance of 410.91' which is the point of beginning, having an area of 36,786.9 square feet, 0.86 acres.

Being the same property conveyed to James Gore and Stacy Gore, husband and wife, by the Quitclaim Deed of record in Book R2788, 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 Precisions <0.07 feet between tested pairs
3. Dates of survey-03/17/22 thru 07/06/22
4. Horizontal Datum-NAD-83 (2011), Epoch-2010
   Vertical Datum-NAVD 88 (Geoid computed)
5. Fixed Control Stations- 030560 TNDE TDOT DISTRICT 3E CORS ARP
   DM3831 TN3D TDOT DISTRICT 3D CORS ARP
   DM4245 TN3B TDOT DISTRICT 3B CORS ARP
6. Geoid Model-Geoid 18
7. Combined Grid Factor-0.9999850
   GPS observations were scaled by the inverse factor to achieve ground distances.

PRELIMINARY FOR REVIEW ONLY

Christopher L. Goetz, TN RLS 2660 — Date

SCHEDULE B, PART II
Exceptions from Fidelity National Title Insurance Company
Commitment No.: 2022086CTN
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 67-5-803, 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 the Register'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 R2367, 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: [redacted]

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, 5, 6(a), 8, 11a, 13, 14, 15, 16,17, and 18 of Table A thereof.

The fieldwork was completed on July 6, 2022.

Date of Plat or Map: July 22, 2022

PRELIMINARY FOR REVIEW ONLY

Christopher L. Goetz, TN RLS 2660 — Date

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 L. GOETZ — 2660 — REGISTERED LAND SURVEYOR — STATE OF TENNESSEE — 7/22/2022

PRELIMINARY FOR REVIEW ONLY

Christopher Lyle Goetz, TN RLS 2660
Survey Manager, Gresham Smith
(P) chris.goetz@greshamsmith.com

Revision

No.	Date	Description

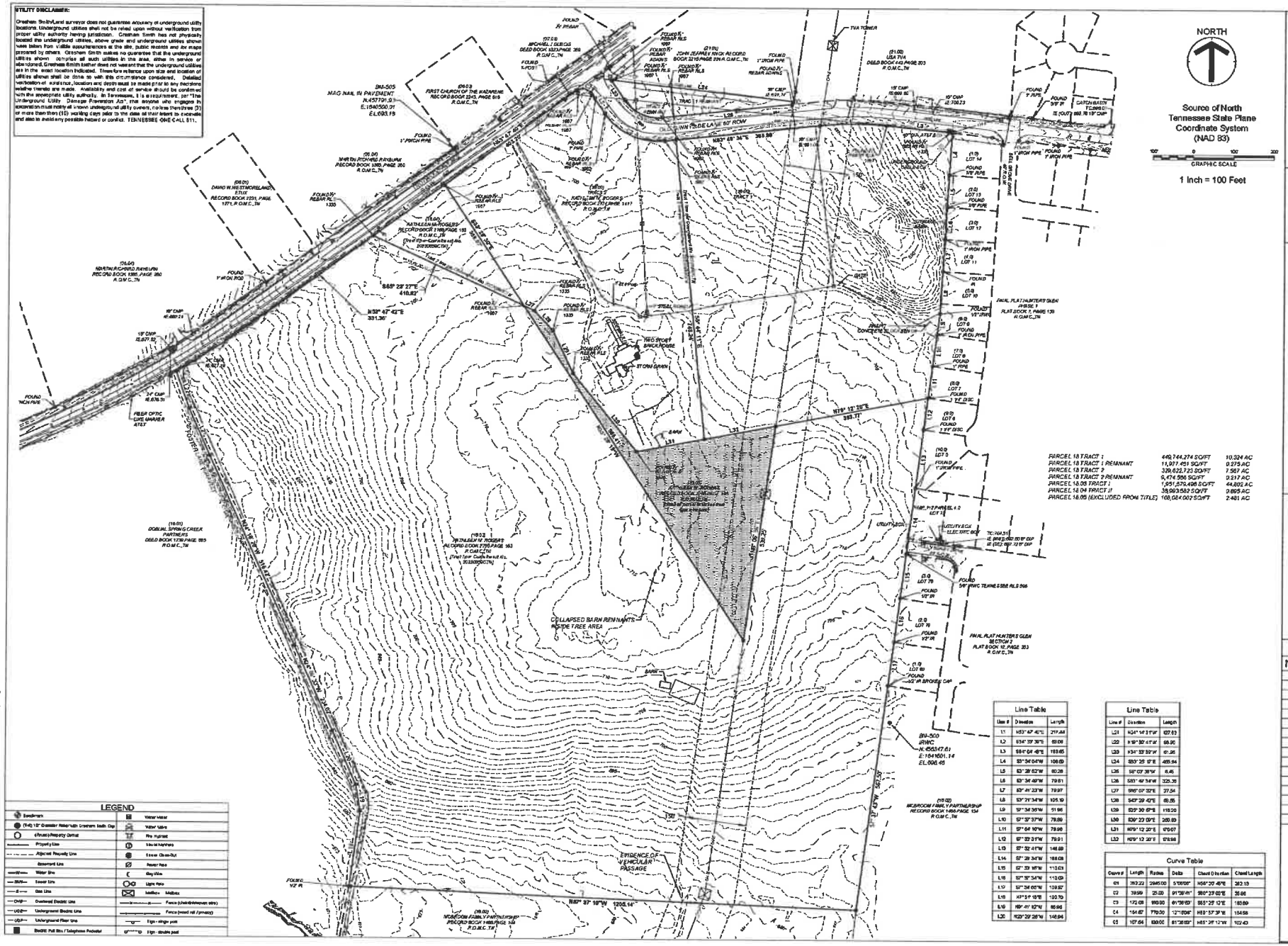
ALTA/NSPS LAND TITLE SURVEY

1 of 2

Project Number: 45709.01
JULY 22, 2022

This Line is 3 Inches When Printed Full Size

Upload: /pgp/data/trafina_ntb045709010/SurveyGis/CADM45709_01_V.Survey.dwg - Chris Goetz - 7/22/2022 5:00:31 PM


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 as 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 excavations within the areas 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 all their intent to excavate and also to avoid any possible hazard or conflict. TENNESSEE ONE-CALL 811.
NORTH
Source of North
Tennessee State Plane
Coordinate System
(NAD 83)
GRAPHIC SCALE
1 Inch = 100 Feet
LEGEND
Benchmark
(THE) 1/2" Diameter Rebar with Gresham Smith Cap
(Found) Property Corner
Property Line
Adjacent Property Line
Easement Line
Water Line
Sewer Line
Gas Line
Overhead Electric Line
Underground Electric Line
Underground Fiber Line
Electric Pull Box / Telephone Pedestal
Water Meter
Water Valve
Fire Hydrant
Manhole
Sewer Clean-Out
Sewer Riser
Gas Valve
Light Pole
Mailbox
Fence (chain/wire/open wire)
Fence (wood rail / privacy)
Sign - single post
Sign - double post
TROTWOOD GROVE
BEING PARCELS 18.00, 18.03, 18.04 & 18.05 OF TAX MAP 112
9TH CIVIL DISTRICT
COLUMBIA, MAURY COUNTY, TENNESSEE
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
Gresham Smith
GreshamSmith.com
222 Second Avenue South
Suite 1400
Nashville, TN 37201
615.770.8100
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 2 329,622,725 SQ/FT 7.567 AC
PARCEL 18 TRACT 2 REMNANT 9,474,566 SQ/FT 0.217 AC
PARCEL 18.06 TRACT I 1,951,579,498 SQ/FT 44.802 AC
PARCEL 18.04 TRACT II 38,903,582 SQ/FT 0.893 AC
PARCEL 18.05 (EXCLUDED FROM TITLE) 108,024,002 SQ/FT 2.481 AC
Line Table
Curve Table
COLLAPSED BARN REMNANTS INSIDE TREE AREA
EVIDENCE OF VEHICULAR PASSAGE
BM-500 (RWC) N: 4553477.61 E: 1641601.14 EL.696.46
BM-505 MAG NAIL IN PAVEMENT N.457791.93 E.1640500.01 EL.693.19
(0.00) MICHAEL J GUEGOS DEED BOOK 1624/PAGE 356 R.O.M.C.,TN
(0.00) FIRST CHURCH OF THE NAZARENE RECORD BOOK 624, PAGE 916 R.O.M.C.,TN
(0.00) MARTIN RICHARD RAYBURN RECORD BOOK 1385, PAGE 260 R.O.M.C.,TN
(0.00) DAVID W. WESTMORELAND, ETUX RECORD BOOK 2231, PAGE 1971, R.O.M.C.,TN
(18.02) KATHLEEN M. ROGERS RECORD BOOK 2115/PAGE 3417 R.O.M.C.,TN
(18.02) KATHLEEN M. ROGERS RECORD BOOK 2115/PAGE 163 R.O.M.C.,TN
(18.01) DOBUAL SPRING CREEK PARTNERS DEED BOOK 1736/PAGE 885 R.O.M.C.,TN
(18.02) MEMPHIS FAMILY PARTNERSHIP RECORD BOOK 1468/PAGE 154 R.O.M.C.,TN
(18.02) MONTOOH FAMILY PARTNERSHIP RECORD BOOK 1468/PAGE 149 R.O.M.C.,TN
(21.00) JOHN JEAMLEY KNOX RECORD BOOK 2215/PAGE 224 R.O.M.C.,TN
(21.00) USA TVA DEED BOOK 442/PAGE 203 R.O.M.C.,TN
TVA TOWER
OLD LAWYERS RD E.A. 60' ROW
FINAL PLAT HUNTER'S GLEN PHASE 1 PLAT BOOK 7, PAGE 139 R.O.M.C.,TN
FINAL PLAT HUNTER'S GLEN SECTION 2 PLAT BOOK 10, PAGE 353 R.O.M.C.,TN
TRACT 1
TRACT 2
TRACT 2 REMNANT
TRACT I
TRACT II
TRACT 1 REMNANT
TRACT 1 REMNANT
TRACT 2 REMNANT
TRACT I
TRACT II

CITY OF COLUMBIA – DEVELOPMENT SERVICES

TRAFFIC IMPACT STUDY (TIS) MEMORANDUM OF UNDERSTANDING (MOU) & AGREEMENT

CONTACT INFO (Identify primary point of contact)	
DEVELOPER/OWNER ☐ PRIMARY CONTACT	CIVIL CONSULTANT ☐ PRIMARY CONTACT
Contact Name: Nelson Crowe	Contact Name: Adam Crunk
Company: NoMau Partners	Company: Crunk Engineering LLC
Address: 1269 Lewisburg Pike Franklin, TN 37064	Address: 7112 Crossroads Boulevard, Suite 201 Brentwood, TN 37027
Email: nelson@fortunallc.net	Email: adam@crunkeng.com
Phone: 615-969-6080	Phone: 615-873-1795

DEVELOPERS TIS CONSULTANT CONTACT INFO: *complete if study was completed by Developer's consultant.*
☒ PRIMARY CONTACT

Contact Name:	Kennedy Adams	Company:	Kimley-Horn & Associates
Address:	10 Lea Avenue, Suite 400, Nashville, TN 37210		
Email:	Kennedy.Adams@kimley-horn.com	Phone:	615.314.5662

INDICATE THE LEVEL OF TIS REVIEW TO BE PERFORMED BY 3RD PARTY CONSULTANT AND CORRESPONDING FEE (SUBJECT TO STAFF CONFIRMATION):

* Level of TIS determined by the number of Daily & Peak Hour Trips per estimated trip generation calculation.

☐ Traffic Access Study ($2,800) ☒ Level I TIS ($3,700) ☐ Level II TIS ($4,800) ☐ Level III TIS (Fee TBD)

TRANSPORTATION IMPACT STUDY – MEMORANDUM OF UNDERSTANDING (MOU)

This MOU acknowledges that the transportation impact study for the following project will be prepared in accordance with the latest version of the City of Columbia Land Development Regulations.

PROJECT INFORMATION:

Name:	Trotwood & Foster Subdivision
Address:	Southeast quadrant at the intersection of Trotwood Avenue at Foster Lane
Description:	Single family detached dwelling units
Existing Land Use (be specific):	RS-10 and Unzoned
Proposed Land Use (be specific):	RS-10
Reason for Request: (Planned Unit Development, Site Plan, Rezoning)	Site Plan
Potential Development Yield (number of residential units; building square footage, projected number of employees, hours of operations):	126 single family detached dwelling units

☒ Attach a site map and a trip generation table with a description of the proposed land uses, ITE rates, estimated daily, morning, midday and afternoon peak hour volumes (ins/outs/totals), proposed trip credits, etc.

☒ Attach a conceptual development plan showing all access points and adjacent streets.

Project Buildout Year: 2025	Ambient or CMP Growth Rate (% Per Year): 3%

STUDY INTERSECTIONS: *use additional pages as necessary	
1. Trotwood Avenue at Foster Lane	9.
2. Trotwood Avenue at Old Sunnyside Lane	10.
3. Trotwood Avenue at Sunnyside Lane	11.
4. Trotwood Avenue at Rutherford Lane	12.
5. Foster Lane at Proposed Site Access	13.
6.	14.
7.	15.
8.	16.

TRIP CREDITS (EXACT AMOUNT OF CREDIT SUBJECT TO APPROVAL BY CITY OF COLUMBIA):

	YES	(indicate __% of total trips)	NO
Transit Usage	☐	%	X
Existing Active Land Use	☐	%	X
Previous Land Use	☐	%	X
Internal Trip	☐	%	X
Pass-By Trip	☐	%	X

3RD PARTY TRAFFIC CONSULTANT CONTACT INFO:	☐ NEEL SCHAFFER	X VOLKERT	
NEEL SCHAFFER - GREG JUDY		VOLKERT – DYAN DAMRON	
201 E. Main Street, Suite 325 Murfreesboro, TN 37130		302 Innovation Drive, Suite 100 Franklin, TN 37067	
greg.judy@neel-schaffer.com	615-217-0500	dyan.damron@volkert.com	615-656-1845

MEMORANDUM OF UNDERSTANDING SIGN OFF:

APPLICANT:	Adam Crunk	Digitally signed by Adam Crunk Date: 2022.12.19 09:25:31-06'00'	12/19/2022
	Name	Signature	Date

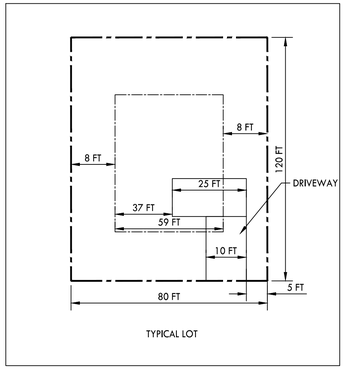
*As applicant, I agree to pay 100% of the review fee. *Paid to the City of Columbia.*
I understand that no work will commence until FULL payment is received and that it is NON-REFUNDABLE.

3RD PARTY TRAFFIC CONSULTANT:			
	Name	Signature	Date
CITY ENGINEER:			
	Name	Signature	Date
DIRECTOR OF DEVELOPMENT SERVICES:			
	Name	Signature	Date

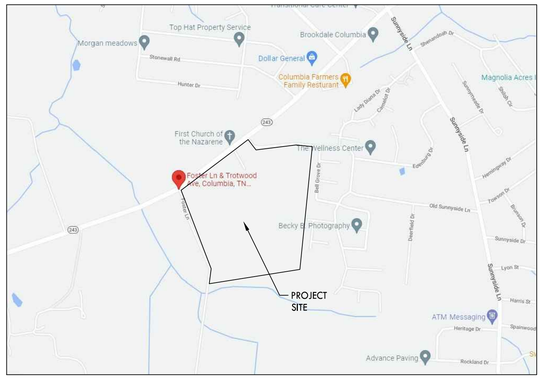
Questions may be submitted and the completed form shall be emailed for review to: Glenn Harper, City Engineer gharper@columbiatn.com.

Trip Generation - Trotwood & Foster Subdivision

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	126	d.u.	1,248	92	24	68	123	77	46
NEW TRIPS					1,248	92	24	68	123	77	46



TYPICAL LOT



SITE VICINITY MAP

SITE DATA TABLE
PROJECT, TROTWOOD AND FOSTER
ADDRESS, COLUMBIA TENNESSEE
PARCEL ID :
EXISTING ZONING: CD-3
PROPOSED ZONING: CD-3

ZONING DISTRICT	
TOTAL SITE AREA:	53.13 ACRES
PROPOSED LOTS	126
BUILDING HEIGHT	3 STORIES MAX
MIN. LOT SIZE	7800 SF
MIN. LOT WIDTH	51FT
FRONT YARD	25 FT PRIMARY, 20 FT SECONDARY
SIDE SETBACK	8 FT
REAR SETBACK	25 FT
OPEN SETBACK REQ.	##
OPEN SPACE PROVIDED	##
USABLE OPEN SPACE REQ	##
USABLE OPEN SPACE PROVIDED	##

NOTES:
1. REFER TO SHEET C2.0 FOR NOTES.

PROPOSED LAYOUT LEGEND

- PROPOSED BUILDING
- HEAVY DUTY ASPHALT PAVEMENT
- LIGHT DUTY ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- CONCRETE SIDEWALK
- PROPERTY LINE
- EDGE OF NEW PAVEMENT

0 50 100 200
GRAPHIC SCALE

CRUNK ENGINEERING LLC
7112 CROSSROADS BOULEVARD
SUITE 201
BRENTWOOD, TN 37027
(615) 873-1795
WWW.CRUNKENG.COM

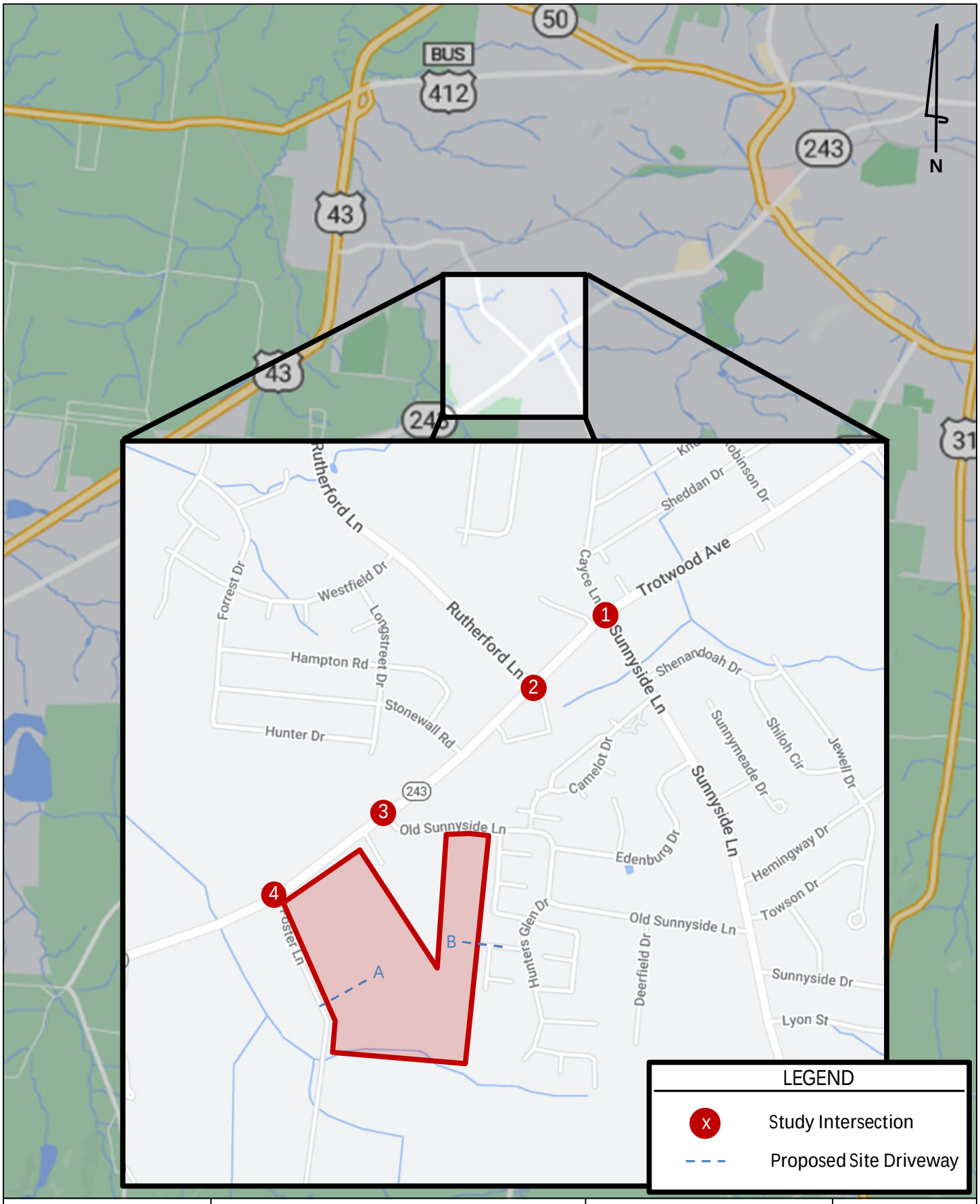
TROTWOOD AND FOSTER SUBDIVISION
COLUMBIA TENNESSEE

REVISIONS	
No.	DATE

09/29/22 22040

C5.0
SITE LAYOUT

Drawing Path: C:\RAVAN POWERBUILDE PROJECTS\Crunk Engg\Projects\22040 - Trotwood And Foster\September\2020\Work\C5.0 LAY.dwg



Kimley»Horn	*Trotwood and Foster Subdivision* **Traffic Impact Study**	**Site Location Map**	**Figure 1**

Authentisign ID: 8C16C8CD-897D-ED11-AC20-0050F2765AB1

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 on a USB thumb drive or CD (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"

ADDRESS/LOCATION	Portion of 6031 Trotwood Avenue and a portion of the parcel at the corner of Trotwood and Foster Ln.		
	TAX MAP: 112	GROUP:	PARCEL: 18.00 & 18.03/18.04
SUMMARY OF NATURE OF REQUEST AND WORK	Request for Preliminary Plat approval of 126 residential units in CD-3		

DATE OF PRE-APPLICATION CONFERENCE	10/26/2022	*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
❑ Annexation ❑ Rezoning ☒ Preliminary Plat ❑ Final Plat ❑ PUD Preliminary Master Plan ❑ PUD Final Site Plan ❑ Multi-Family Site Plan ❑ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations/Rezoning/PUD's:** ❑ Written Legal Description copy ❑ Requested Zone Listed ❑ Compliance with Comprehensive Plan ❑ Annexation Permission Form ❑ Plans and/or Plats conforming to City standards with check list completed ❑ Columbia Water System Availability Letter **Plats/PUDs:** ☒ Project Name (include Sections & Phases) Trotwood & Foster Subdivision ☒ Total Number of Lots 127 lots ☒ Total acreage 51.5 acres

Authentisign ID: 8C16C8CD-897D-ED11-AC20-0050F2765AB1

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 meetings 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	Crunk Engineering LLC, Adam Crunk, PE	PHONE	615-873-1795
ADDRESS	7112 Crossroads Blvd. Ste 201 Brentwood, TN 37027	EMAIL	adam@crunkeng.com

PROPERTY OWNER NAME	James & Stacy Gore	PHONE	615-347-2698
ADDRESS	2101 Key Dr., Brentwood, TN 37027	EMAIL	jimegore@gmail.com

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, PE		12/15/2022
APPLICANT NAME	APPLICANT SIGNATURE	DATE
Stacy Gore	Stacy Gore	12/16/22
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE
~~John Gore~~ James Gore		12/16/22
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	

Authentisign ID: A02432CF-677D-ED11-AC20-0050F2765AB1

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 on a USB thumb drive or CD (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"

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Rev. 4/14/2022

Authentisign ID: A02432CF-677D-ED11-AC20-0050F2765AB1

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 meetings 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	Crunk Engineering LLC, Adam Crunk, PE	PHONE	615-873-1795
ADDRESS	7112 Crossroads Blvd. Ste 201 Brentwood, TN 37027	EMAIL	adam@crunkeng.com

PROPERTY OWNER NAME	Kathleen Rogers	PHONE	615-218-3796
ADDRESS	6031 Trotwood Ave Columbia, TN 38401	EMAIL	km_rogers@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.

Adam Crunk, PE		12/15/2022
APPLICANT NAME	APPLICANT SIGNATURE	DATE
Kathleen Rogers	AuthentiSIGN' Kathleen M Rogers	12/16/22
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	

CITY OF COLUMBIA TENNESSEE
PLANNING COMMISSION
STAFF REPORT

STAFF REPORT CONTACT INFORMATION
Kevin C. McCarthy, AICP, City Planner, kmccarthy@columbiatn.com, 931-560-1560

APPLICATION NUMBER
23-0059

APPLICANT/PROPERTY OWNER
T-Square Engineering / Kure Properties & J&T Land Holdings

PUBLIC HEARING DATE
N/A

PROPERTY ADDRESS/LOCATION
Industrial Park Road /Tax Map 89H Parcel 46

SUMMARY OF REQUEST: **Preliminary Plat & Site Development Plan**

The applicant requests approval of a Preliminary Plat and site Development Plan to create 20 lots and associated infrastructure on a 46.59 acre parcel zoned SD-LI (Special District Light Industrial). The Preliminary Plat and Site Development Plan do not conform to the standards of the Zoning Ordinance.

Ordinarily, the Zoning Administrator will not place non-conforming plans on the Planning Commission agenda. This item has been referred to the Planning Commission due to resubmittals and responses to technical comments which express intent not to conform to the standards of the Ordinance. If the Planning Commission finds that the proposal fails to conform, and denies this request, the applicant may submit a new application for Development Review which conforms to the standards of the Ordinance.



MAP SOURCE: City GIS

EXISTING ZONING	EXISTING LAND USE	SURROUNDING ZONING & LAND USE	SITE IMPROVEMENTS PROPOSED	SIZE OF PROPERTY
SD-LI	Vacant	SD-LI/SD-HI/Unincorporated Industrial and Vacant	Industrial Flex Buildings	46.59 acres

CONSISTENCTY with the **COMPREHENSIVE PLAN:**	**PROPERTY HISTORY:**
Employment District: The future land use designation of the subject property is Employment District. The SD-LI district is consistent with the Employment District Land Use classification.	N/A

CONFORMITY with the ZONING ORDINANCE:

Zoning Ordinance Referenced:

The SD-LI District is intended to provide space for a wide range of wholesale trade, warehousing of a wide variety of products or materials, manufacturing processes, and industrial and related uses that conform to a high level of performance criteria and have few objectionable characteristics. All operations must be carried on within completely enclosed Buildings, thus providing a standard of Development that removes most adverse characteristics that affect neighboring properties. This District may provide a buffer between other Districts and industrial activities that have more objectionable influences. This District may require types of Structures and have Uses and other characteristics that cannot be facilitated in other Districts. New Residential Development, Commercial establishments, Retail establishments, personal service Uses, and community facilities and utilities, are permitted, as well as additional Uses that provide needed complementary services or are necessary for the general community welfare.

Light Industrial Uses:

- Tables 3.7.1 and 4.3.1-I indicate that Light Industrial activities in an SD-LI district must take place in a enclosed structures.
- Section 9.3 (p. 503) of the Ordinance defines a Light Industrial activity which is "conducted solely within an enclosed building."
- The proposed site development plan depicts semi-enclosed structures. The specific activities to occur in these structures is not certain.

Facade Placement/Enfrontment:

- Section 4.3.3.C (p. 190) of the Zoning Ordinance requires that "Within all Districts and Civic Districts, each Lot or Building Site **must have** Frontage along a Thoroughfare or Internal Drive."
- Table 4.3.1-I requires that for each principal building the "Main Entrance must be in Facade of Principal Frontages." Section 9.3 (p. 495) clarifies that the word "Frontage" means the portion of a property between a Throughfare or street and the building façade.
- The Preliminary Plat and Site Development Plan depicts structures which do not enfront a conforming public Thoroughfare.
- The applicant's response to technical comments referencing this requirement restated that the proposed structures will not conform to this standard.

Parking:

- Section 4.3.12.A of the Ordinance requires that "parking accommodations **shall be** provided, located, designed, accessed, constructed, maintained operated, and otherwise meet the standards and requirements specified" in the applicable district standards.

- Section 4.3.12.B of the Ordinance requires that parking be provided in a Parking Lot or Parking Area, or in some limited circumstances on-street.
- Section 4.3.12.C requires that Parking Lots and Parking Areas conform to design standards.
- Section 4.3.12.C.20 prescribes standards for handicapped-accessible parking including the distance from an accessible space to a building entrance and the maximum slope of the accessible route.
- Character district standards in Tables 4.3.1-A though H specifically permit driveway parking in residential settings as an exception to the general rule described in great detail in Sections 4.3.11 and 4.3.12 that parking is permitted in conforming parking stalls and on-street.
- The proposed Preliminary Plat and Site Development Plan does not include conforming parking areas. In response to technical comments the applicant has indicated that parking will be similar to driveway parking in a residential area, which is not permitted in an SD-LI district, or any non-residential setting.
- The proposed Preliminary Plat and Site Development Plan depicts retaining walls between parking spaces. It is unclear whether these will taper to the level of the drive aisle and how the design will accommodate an accessible path.

The proposed Preliminary Plat and Site Development Plan do not conform to the Ordinance. The review criteria listed below indicate that a "Development Plan and application shall be disapproved if the Decision-Making Authority determines that the Plan and application do not comply with any one or more of the review criteria." Conformity to the standards of Articles 1-5 Ordinance is a review criterion. As described above, the proposal does not conform to these standards.

ATTACHMENTS (CIRCLE) SUBMITTED PLANS | CITY MAPS | LEGAL NOTICE | LEGAL DESCRIPTION | PUBLIC COMMENTS | AGENCY COMMENTS | RESPONSE TO STANDARDS

Site Development Plan:

Staff reviewed the request for a Site Development Plan for conformity with the standards listed in the City of Columbia Zoning Ordinance. The relevant provisions of the Ordinance are listed below, followed by staff analysis.

N. 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, 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.

O. Development Plan Procedures Decision-Making Authority's Action.

1. Within 62 days for a Development Plan and application for which the Zoning Administrator is the Decision-Making Authority, or within 62 days after the hearing on a Development Plan and application for which the Planning Commission is the Decision-Making Authority, the Development Plan and application shall be approved or disapproved by the Decision-Making Authority in accordance with the review criteria of Section 8.5.6.N and Sections 8.5.6.O.2-.5 below:

2. A Development Plan and application shall be approved by the Decision-Making Authority, upon a finding that the Development Plan and application are in compliance with the review criteria set forth in Section 8.5.6.N.

3. If a Development Plan and Application are approved, the Development Plan as approved shall become part of the record of approval, and subsequent actions relating to the authorized Development must be consistent with approved items.

4. A Development Plan and application shall be disapproved if the Decision-Making Authority determines that the Plan and application do not comply with any one or more of the review criteria set forth in Section 8.5.6.N.

Staff's review of Section 8.5.6.N and O in relation to this request finds the following:

The proposed Site Development Plan does not conform to Articles 1-5 Ordinance and therefore does not satisfy review criterion 8.5.6.N.2.

ZERO INDUSTRIAL PARK ROAD

SITE DEVELOPMENT PLAN

0 Industrial Park Road
City of Columbia, Tennessee

Tax Map 089, Parcels 046.00, 46.59 Acres

Developer: Kure Properties LLC
4817 Murfreesboro Rd
Arrington, TN 37014
ryan@kureconstruction.com
(630)306-700

Surveyor: Carroll Land Surveying
495 East Main Street, Suite 1
Hohenwald, TN 38462
csurvey@bellsouth.net
(931)796-1654

Landscape Engineer: T-SQUARE ENGINEERING
Consulting Civil Engineering
1329 West Main St., Franklin, TN, 37064
(615)370-1443 * Email curtis.stewart@t2-eng.com

Engineer: T-SQUARE ENGINEERING
Consulting Civil Engineering
1329 West Main St., Franklin, TN, 37064
(615)370-1443 * Email cole.gaumnitz@t2-eng.com



VICINITY MAP
N.T.S.

Sheet Schedule

C-0.0 Cover Sheet
C-0.1 Site Notes
C-1.0 Existing Conditions
C-1.1 Tree Protection Plan
C-2.0 Site Plan
C-2.1 Preliminary Plat
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 Storm Structure and Pipe Tables
C-7.0 Utility Plan
L-1.0 Landscape Plan
L-2.0 Landscape Details

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # 47119C0165E OF THE CITY OF COLUMBIA, TN. DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 05/22/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

COVER SHEET
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION
05/22/2023

PROJECT
22-0431

SHEET
C-0.0

T-SQUARE ENGINEERING

SITE GRADING & EROSION CONTROL NOTES

1. CONSTRUCT SILT BARRIERS BEFORE BEGINNING GRADING OPERATIONS.
2. MULCH AND SEED ALL DISTURBED AREAS AS SOON AS POSSIBLE AFTER FINAL GRADING IS COMPLETED, UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
3. PROVIDE TEMPORARY CONSTRUCTION ACCESS(ES) AT THE POINT(S) WHERE CONSTRUCTION VEHICLES EXIT THE CONSTRUCTION AREA. MAINTAIN PUBLIC ROADWAYS FREE OF TRACKED MUD AND DIRT.
4. THE CONTRACTOR SHALL CHECK ALL EXISTING GRADES AND DIMENSIONS IN THE FIELD PRIOR TO BEGINNING WORK AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
5. THE CONTRACTOR SHALL ADJUST THE CASTINGS OF ALL NEW AND EXISTING STRUCTURES TO MATCH PROPOSED FINISH GRADES.
6. PROPOSED CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF AN ENGINEERED GRADING DESIGN AND REFLECT A PLANNED INTENT WITH REGARD TO DRAINAGE AND MOVEMENT OF MATERIALS. SHOULD THE CONTRACTOR HAVE ANY QUESTION OF THE INTENT OR ANY PROBLEM WITH THE CONTINUITY OF GRADES, THE ENGINEER SHALL BE CONTACTED IMMEDIATELY.
7. ALL CUT AND FILL SLOPES SHALL BE 3 HORIZONTAL TO 1 VERTICAL OR FLATTER UNLESS OTHERWISE INDICATED ON THE PLANS.
8. ALL PIPES UNDER EXISTING PAVED AREAS SHALL BE BACKFILLED TO THE TOP OF SUBGRADE WITH CRUSHED STONE.
9. MINIMUM GRADE ON ASPHALT OR CONCRETE PAVING SHALL BE 1.0%.
10. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE CODES AND OBTAIN APPROVAL AS NECESSARY BEFORE BEGINNING CONSTRUCTION.
11. ALL EARTHWORK, INCLUDING THE EXCAVATED SUBGRADE AND EACH LAYER OF FILL, SHALL BE MONITORED AND APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER, OR THEIR REPRESENTATIVE.
12. IF ANY SPRINGS OR UNDERGROUND STREAMS ARE EXPOSED DURING CONSTRUCTION PERMANENT FRENCH DRAINS MAY BE REQUIRED. THE DRAINS SHALL BE SPECIFIED AND LOCATED DURING CONSTRUCTION AS REQUIRED BY THE CONDITIONS WHICH ARE ENCOUNTERED, AND SHALL BE APPROVED BY THE ENGINEER.
13. THE GRADING & DRAINAGE PLAN IS NOT A DETERMINATION OR GUARANTEE OF THE SUITABILITY OF THE SUBSURFACE CONDITIONS FOR THE WORK INDICATED. A GEOTECHNICAL SOILS REPORT HAS BEEN PREPARED AND IS AVAILABLE FROM THE OWNER. DETERMINATION OF THE SUBSURFACE CONDITIONS FOR THE WORK INDICATED IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
14. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO COMPACT FILL SUFFICIENTLY AROUND AND OVER ALL PIPES, STRUCTURES, VALVE STEMS, ETC., INSIDE THE PROPOSED PAVED AREAS TO AVOID SETTLEMENT. ANY SETTLEMENT DURING THE WARRANTY PERIOD SHALL BE RESTORED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
15. IN NO CASE SHALL SLOPE, HEIGHT, SLOPE INCLINATION, OR EXCAVATION DEPTH, INCLUDING TRENCH CONSTRUCTION, EXCEED THOSE SPECIFIED IN LOCAL, STATE AND FEDERAL REGULATIONS, SPECIFICALLY THE CURRENT OSHA HEALTH AND SAFETY STANDARDS FOR EXCAVATIONS (29 CRF PART 1926) SHALL BE FOLLOWED.
16. DO NOT DISTURB VEGETATION OR REMOVE TREES EXCEPT WHEN NECESSARY FOR GRADING PURPOSES.
17. STRIP TOPSOIL FROM ALL CUT AND FILL AREAS AND STOCKPILE UPON COMPLETION OF GENERAL GRADING OVER ALL DISTURBED AREAS, TO A MINIMUM DEPTH OF 6". CONTRACTOR SHALL SUPPLY ADDITIONAL TOP SOIL IF INSUFFICIENT QUANTITIES EXIST ON SITE.
18. TOP OF GRATE ELEVATIONS AND LOCATION OF COORDINATES FOR DRAINAGE STRUCTURES SHALL BE AS SHOWN ON THE DETAIL, UNLESS NOTED OTHERWISE. THE GRATES SHALL SLOPE LONGITUDINALLY WITH THE PAVEMENT GRADES.
19. ALL DRAINAGE CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE JURISDICTION.
20. POSITIVE DRAINAGE SHALL BE ESTABLISHED AS THE FIRST ORDER OF WORK AND SHALL BE MAINTAINED AT ALL TIMES DURING AND AFTER CONSTRUCTION. SOIL SOFTENED BY PERCHED WATER IN FOUNDATION AND PAVEMENT AREAS MUST BE UNDERCUT AND REPLACED WITH SUITABLE FILL MATERIALS APPROVED BY THE GEOTECHNICAL ENGINEER. GROUNDWATER INFILTRATION INTO EXCAVATIONS SHOULD BE EXPECTED, AND THE WATER SHALL BE REMOVED USING GRAVITY DRAINAGE OR PUMPING.
21. REINFORCED CONCRETE STORM DRAINAGE PIPE SHALL BE CLASS III, WALL "B".
22. FILL SLOPES 3:1 AND GREATER SHALL BE PLACED AND COMPACTED 5' BEYOND PROPOSED LIMITS AND THEN EXCAVATED BACK TO THE PROPOSED LOCATION.
23. THE CONTRACTOR SHALL PROVIDE AN ASBUILT SURVEY STAMPED BY A LICENSED SURVEYOR IN THE STATE OF TENNESSEE FOR ALL PUBLIC STORM SYSTEMS, ONSITE DETENTION PONDS, AND WATER QUALITY MEASURES VERIFYING COMPLIANCE WITH DESIGN DOCUMENTS.
24. THE LOCATION OF ALL DIVERSION SWALES AND DITCHES SHALL BE FIELD ADJUSTED TO AVOID TREES AS POSSIBLE. THE CONTRACTOR SHALL WALK THE ALIGNMENT OF THESE SWALES AND DITCHES IN THE FIELD TO VERIFY AVOIDANCE OF TREES.
25. SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES IS TO BE PLACED AT A SITE APPROVED BY THE ENGINEER. IT SHALL BE TREATED IN A MANNER SO THAT THE AREA AROUND THE DISPOSAL SITE WILL NOT BE CONTAMINATED OR DAMAGED BY THE SEDIMENT IN THE RUN-OFF. COST FOR TTHEIR TREATMENT IS TO BE INCLUDED IN PRICE BID FOR EARTHWORK. THE CONTRACTOR SHALL OBTAIN THE DISPOSAL SITE AS PART OF TTHEIR WORK.
26. STOCKPILED TOPSOIL OR FILL MATERIAL IS TO BE TREATED SO THE SEDIMENT RUN-OFF WILL NOT CONTAMINATE SURROUNDING AREAS OR ENTER NEARBY STREAMS.
27. ANY SITE USED FOR DISPOSAL AND/OR STOCKPILE OF ANY MATERIAL SHALL BE PROPERLY PERMITTED FOR SUCH ACTIVITY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEE THAT ALL REQUIRED PERMITS ARE SECURED FOR EACH PROPERTY UTILIZED. A COPY OF THE APPROVED PERMIT MUST BE PROVIDED TO THE INSPECTOR PRIOR TO COMMENCEMENT OF WORK ON ANY PROPERTY. FAILURE TO DO SO MAY RESULT IN THE CONTRACTOR REMOVING ANY ILLEGALLY PLACED MATERIAL AT THEIR OWN EXPENSE.
28. SEGMENTABLE AND/OR POURED IN PLACE RETAINING WALLS SHALL BE PROVIDED BY THE CONTRACTOR AS A DESIGN BUILD. WALL DESIGN PLANS STAMPED BY A STRUCTURAL REGISTERED ENGINEER IN THE STATE OF THE PROJECT SHALL BE SUBMITTED TO THE ENGINEER AS A SHOP DRAWING. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY GEOTECHNICAL INFORMATION NECESSARY TO PROPERLY DESIGN THE WALL.
29. IF ANY SINKHOLES OR VOID AREAS ARE DISCOVERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH WORK. A PHASE V INJECTION WELL PERMIT WILL NEED TO BE OBTAINED FROM THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION.

GENERAL NOTES

1. THE CONTRACTOR SHALL CHECK ALL EXISTING CONDITIONS, (i.e. INVERTS, UTILITY ROUTINGS, UTILITY CROSSINGS, AND DIMENSIONS) IN THE FIELD PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE ENGINEER.
2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY. THE CONTRACTOR SHALL CALL NATIONAL ONE CALL (811) 72 HOURS PRIOR TO PROCEEDING WITH ANY EXCAVATION.
3. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL CODES AND RECEIVE APPROVAL WHERE NECESSARY BEFORE CONSTRUCTION.
4. EXISTING PAVEMENT OF PUBLIC ROADWAYS SHALL BE PATCHED IN ACCORDANCE WITH LOCAL AGENCY STANDARDS WHEREVER UTILITY INSTALLATION REQUIRES REMOVAL OF THE EXISTING PAVEMENT. COORDINATE PAVEMENT TRENCHING LOCATIONS WITH SITE CIVIL, PLUMBING AND ELECTRICAL PLANS.
5. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. SLIGHT FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY.
6. DIMENSIONS ARE TO FACE OF CURB AND/OR EXTERIOR FACE OF BUILDING UNLESS OTHERWISE NOTED.
7. CONCRETE FOR CURBS SHALL BE 4.000 PSI AND CONCRETE FOR SIDEWALKS SHALL BE 3.500 PSI.
8. ANY WORK UNACCEPTABLE TO THE OWNER'S REPRESENTATIVE OR TO THE LOCAL GOVERNING AUTHORITY SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
9. CURBS SHALL BE PARALLEL TO THE CENTERLINE OF DRIVES. THE CURB SHALL BE PLACED ONLY AFTER HAVING ALL BREAK POINTS (PC & PT OF CURVES) LOCATED AT THE FACE OF CURB OR AT A CONSISTENT OFFSET BY A REGISTERED LAND SURVEYOR.
10. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE MANUAL OF ACCIDENT PREVENTION AND CONSTRUCTION ISSUED BY AGC OF AMERICA, INC. AND THE SAFETY AND HEALTH REGULATIONS OF CONSTRUCTION ISSUED BY THE U.S. DEPARTMENT OF LABOR.
11. THE CONTRACTOR SHALL PAVE IN THE DIRECTION OF TRAFFIC.
12. THE CONTRACTOR SHALL COLD PLANE IN THE DIRECTION OF TRAFFIC.
13. THE CONTRACTOR WILL BE REQUIRED TO ADJUST GRADES OF INTERSECTING STREETS, ALLEYS, PUBLIC ENTRANCES AND PRIVATE DRIVES AS DIRECTED BY THE ENGINEER.
14. ALL ROADWAY AND SIDEWALK CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE CITY OF COLUMBIA.
15. ALL CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFORM TO THE CITY OF COLUMBIA AND TDOT REGULATIONS AND SPECIFICATIONS.
16. ALL CURBING WILL BE REQUIRED TO ADJUST TO THE GRADES OF INTERSECTING STREETS, ALLEYS, PUBLIC ENTRANCES, AND PRIVATE DRIVES AS DIRECTED BY THE ENGINEER.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL EXISTING MANHOLE CASTINGS/LIDS TO PROPOSED FINISHED GRADE AS NECESSARY.

SITE UTILITY NOTES

1. THE SANITARY SEWER SHALL BE OF THE MATERIAL INDICATED ON THE PLAN. POLYVINYLCHLORIDE (PVC) SHALL BE (SDR26). DUCTILE IRON PIPE (D.I.P.) SHALL BE CLASS 250.
2. ALL WATER LINES, SEWER LINES, AND APPURTENANCES SHALL BE OF MATERIALS AND CONSTRUCTION THAT CONFORM TO THE CITY OF COLUMBIA'S STANDARDS AND SPECIFICATIONS.
4. PROVIDE A MINIMUM 36" OF COVER OVER ALL WATER LINES.
5. THE CONTRACTOR SHALL MAINTAIN 10 FEET HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LINES AND WATER LINES. WHERE THESE CRITERIA CANNOT BE MET, THE CONTRACTOR SHALL MAINTAIN 18" VERTICAL SEPARATION BETWEEN WATER AND SEWER LINES.
6. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATION OF EXISTING MANHOLES OR SANITARY SEWER LINES AT THE POINT OF CONNECTION PRIOR TO THE COMMENCEMENT OF ORDERING OF MATERIALS, CONSTRUCTION OR REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES DO NOT CONFLICT WITH SANITARY SEWERS, SANITARY SEWER SERVICES, STORM SEWERS, OR ANY OTHER UTILITY OR STRUCTURE, EXISTING OR PROPOSED.
8. THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.
9. BEFORE CONNECTIONS ARE MADE INTO EXISTING UTILITIES, THE NEW LINES ARE TO BE FLUSHED AND TESTED BY THE CONTRACTOR IN ACCORDANCE WITH THE LOCAL WATER AND SEWER DEPARTMENT SPECIFICATIONS.
10. ALL TRENCHES CUT IN EXISTING ROADS OR DRIVES SHALL UTILIZE A CLEAN SAW CUT AND SHALL BE BACKFILLED (100%) TO FINAL SUBGRADE WITH #57 STONE. REPAIR ROADS PER LOCAL AGENCY REQUIREMENTS.
11. REPAIR ALL DAMAGE TO EXISTING FEATURES (i.e. DRIVES, ROADS, YARDS, LANDSCAPING, ETC…) TO PRE-CONSTRUCTION CONDITION.
12. THE CONTRACTOR SHALL PROVIDE ALL HORIZONTAL AND VERTICAL BENDS TO ATTAIN THE ALIGNMENT INDICATED ON THE PLANS. PROVIDE VERTICAL BENDS WHERE NECESSARY TO ALLOW WATER LINES TO PASSUNDER OR OVER OTHER UTILITY LINES. (ALL BENDS AND BRACES NEEDED MAY NOT BE ACTUALLY SHOWN). PROVIDE BRACING AND/OR RODDING AT ALL BENDS AND TEES AS REQUIRED BY WATER DEPARTMENT.
13. WATER METERS SHALL BE AT LEAST 22" BUT NO MORE THAN 26" FROM TOP OF METER TO PROPOSED FINISHED GRADE.
14. THE CONTRACTOR SHALL VERIFY REQUIRED PIPE LENGTHS. EXISTING PIPE MATERIAL AND SIZES AS SHOWN ON PLANS.
15. REPAIR EXISTING PAVEMENT, CURBS, WALKS, LANDSCAPING, ETC. THAT ARE DAMAGED BY CONSTRUCTION ACTIVITIES TO A LIKE NEW CONDITION AT NO ADDITIONAL COST TO THE OWNER.
16. THE PROPOSED GAS LINE CONSTRUCTION AND INSTALLATION SHALL BE COORDINATED WITH THE LOCAL GAS COMPANY BY THE CONTRACTOR.
17. THE PROPOSED ELECTRIC LINE CONSTRUCTION AND INSTALLATION SHALL BE COORDINATED WITH THE LOCAL ELECTRIC COMPANY BY THE CONTRACTOR.
18. THE PROPOSED TELEPHONE LINE CONSTRUCTION AND INSTALLATION SHALL BE COORDINATED WITH THE LOCAL TELEPHONE COMPANY BY THE CONTRACTOR.
19. WHERE DRAINAGE OR UTILITY LINES OCCUR IN PROPOSED FILL AREAS, THE FILL MATERIAL IS TO BE PLACED AND COMPACTED PER GEOTECHNICAL RECOMMENDATIONS PRIOR TO INSTALLATION OF DRAINAGE OR UTILITY LINES. FILL IS TO BE INSPECTED BY A PROFESSIONAL GEOTECHNICAL ENGINEER TESTING FIRM EMPLOYED BY THE OWNER. RESULTS OF THE TEST SHALL BE FURNISHED TO THE OWNER'S REPRESENTATIVE. CONTRACTOR TO PAY FOR ANY RETESTING.
20. THE CONTRACTOR SHALL ADJUST THE ALIGNMENT OF THE WATER LINES (HORIZONTALLY AND/OR VERTICALLY) TO ALLOW THE REQUIRED BRACING AT BENDS AND TEES.
21. EXISTING CASTINGS LOCATED IN FILL/CUT AREAS SHALL BE ADJUSTED TO ENSURE THAT THE TOP OF CASTING IS FLUSH WITH THE FINISHED GRADE.
22. THE OUTSIDE OF ALL MANHOLES SHALL BE COATED WITH BITUMINOUS PAINT.
23. THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER.
24. PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS.
25. ALL CONNECTIONS TO EXISTING MANHOLES SHALL BE BY THE CORING AND RESILIENT SEAL METHOD.
26. FIRE HYDRANT ASSEMBLIES INCLUDE THE APPROPRIATE SIZED TEE (WITH KICKER), 6" LINE TO HYDRANT, 6" GATE VALVE (WITH VALVE BOX), AND FIRE HYDRANT (WITH KICKER). HYDRANTS SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE PLANS.
27. THE CONCRETE CAPS AND ENCASEMENTS ON WATER AND SEWER LINES SHALL BE A MINIMUM OF 6" THICK. USE 3000 PSI CONCRETE.
28. ALL SANITARY SEWER SERVICES SHALL BE 4" DIAMETER AND EXTEND 10 FEET BEYOND THE PROPERTY LINE.
29. CONTRACTOR SHALL MARK THE LOCATION OF ALL NEW PVC LINES WITH #8 WIRE.
30. ALL PROPOSED LOT CORNERS SHALL BE FIELD STAKED PRIOR TO CONSTRUCTION OF SANITARY SEWERS. CONTROL POINTS ARE AS SHOWN ON THE SITE LAYOUT PLAN.
31. THE BUILDER SHALL VERIFY THE SANITARY SEWER SERVICE ELEVATION PRIOR TO SETTING THE FINISHED FLOOR ELEVATIONS FOR ALL STRUCTURES. THE SANITARY SEWER MAIN AND SERVICES WERE DESIGNED BASED ON SETTING MINIMUM FINISHED FLOOR ELEVATIONS ON A NUMBER OF CRITICAL LOTS. THE BUILDER SHALL ADHERE TO THE MINIMUM FINISHED FLOOR ELEVATIONS LISTED ON THE SANITARY SEWER SHEETS.
32. PROVIDE A MINIMUM 30" OF COVER OVER ALL SEWER LINES IN GRASS AREAS AND 48" OF COVER IN PAVED AREAS.

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # 47119C0165E OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 05/22/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

SITE NOTES
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION
05/22/2023

PROJECT
22-0431

SHEET
C-0.1

ZERO INDUSTRIAL PARK ROAD

EXISTING CONDITIONS

SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

NO.	DATE	REVISIONS

DATE: 05/22/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION

FRITZ C. GAWNITT
REGISTERED
AGRICULTURE
ENGINEER
12442
STATE OF TENNESSEE

05/22/2023

PROJECT
22-0431

SHEET
C-1.0

N

GRAPHIC SCALE
(IN FEET)
80 40 0 40 80 160
SCALE: 1" = 80'

LEGEND

- 500 — EXISTING MAJOR CONTOURS
- 498 — EXISTING MINOR CONTOURS
- EXISTING PROPERTY BOUNDARY
- ADJACENT PROPERTY LINES
- WATER NATURAL AREA BUFFER
- EXISTING POWER POLE
- OHP — EXISTING OVERHEAD POWER
- W — EXISTING WATER LINE
- S — EXISTING SANITARY MANHOLE
- EXISTING TREE LINE
- X — X — EXISTING FENCE

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # 47119C0165E OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00

APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

MARTRAC INC
RECORD BOOK R2810, PAGE 568
TAX MAP 89, PARCEL 8.06

DUCK RIVER

DUCK RIVER
LOW WATER MARK

ZONE AE
(FLOOD)

60' AVERAGE BANK BUFFER

FEMA FLOOD ZONE

82'

32'

ZONE 0X
(NO FLOOD)

(TRACT 3)

46.59
ACRES

S 38°31'25" W 299.38'

L5

L4

L3

L2

L1

N 79°38'04" E 201.81'

N 46°31'48" E 175.23'

GRAVEL DRIVE

INDUSTRIAL PARK ROAD

WATER VAULT

WATER CABINET

16" CULVERT

TRAFFIC HANDHOLD

PAVED DRIVE

CONCRETE PAD
TRAFFIC CONTROL BOX

TRAFFIC CONTROL BOX

TRAFFIC LIGHT
TRAFFIC LOOP

TRAFFIC HANDHOLD

HWY 43 S ON AND OFF RAMP

HWY 43 S

50' EAST TENNESSEE NATURAL GAS LINE EASEMENT (BOOK 843, PAGE 544)

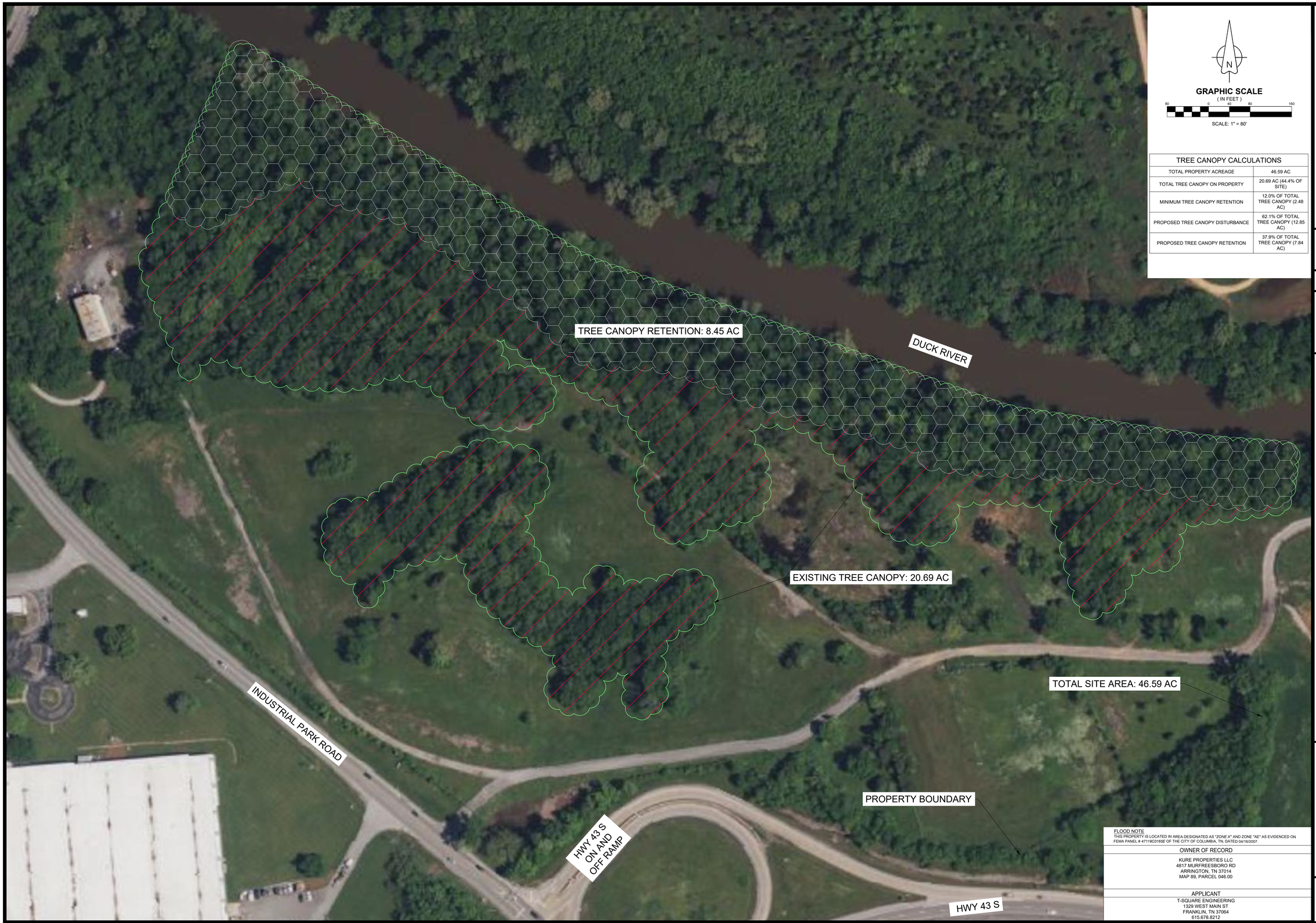
20' SEWER EASEMENT (BOOK R2754, PAGE 852)

EXISTING ROADWAY

PASS IPF AT 188.99'

GRAFTECH ADVANCED GRAPHITE MATERIALS LLC
RECORD BOOK R2391, PAGE 894
TAX MAP 89, PARCEL 45.00

P.O.B.



N

GRAPHIC SCALE

(IN FEET)

80 0 40 80 160

SCALE: 1" = 80'

TREE CANOPY CALCULATIONS	
TOTAL PROPERTY ACREAGE	46.59 AC
TOTAL TREE CANOPY ON PROPERTY	20.69 AC (44.4% OF SITE)
MINIMUM TREE CANOPY RETENTION	12.0% OF TOTAL TREE CANOPY (2.48 AC)
PROPOSED TREE CANOPY DISTURBANCE	62.1% OF TOTAL TREE CANOPY (12.85 AC)
PROPOSED TREE CANOPY RETENTION	37.9% OF TOTAL TREE CANOPY (7.84 AC)

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD

KURE PROPERTIES LLC
4817 MURFREESBORO RD
ARRINGTON, TN 37014
MAP 89, PARCEL 046.00

APPLICANT

T-SQUARE ENGINEERING
1329 WEST MAIN ST
FRANKLIN, TN 37064
615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 05/22/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

TREE PROTECTION PLAN

SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION
05/22/2023

PROJECT
22-0431

SHEET
C-1.1

BUILDING SETBACKS	
FRONT	20 FT
REAR	0 FT
SIDE	0 FT

	PARKING	
	REQUIRED	PROPOSED
1 PER 2,000 SF, MINIMUM OF 1 SPACE PER 2 EMPLOYEES ON PREMISES AT ONE TIME, BUT NO FEWER THAN 2 SPACES	82	
UNITS = 88	176	206
STANDARD ADA STALLS	7	7
VAN ADA STALLS	2	2

SITE DATA		
	EXISTING	PROPOSED
PROPERTY ACREAGE	46.59	46.59
ZONING	LI	LI
USE	VACANT	INDUSTRIAL STORAGE
LOTS	1	16
PROPERTY AREA USE		
PERVIOUS AREA	46.59 AC	38.30 AC
IMPERVIOUS AREA	0 AC	8.29 AC
BUILDING HEIGHT	N/A	1-STORY
BUILDING AREA	N/A	163,027 SF
	REQUIRED	PROPOSED
OPEN SPACE % OF OVERALL	7%	16%
OPEN SPACE TYPE	N/A	NATURAL GREEN WAY
ERROR OF CLOSURE	1/10,000	1/10,000

Parcel Area Table		
PARCEL	SQ. FT.	ACRES
1	206731.35	4.75
2	235129.53	5.40
3	60832.58	1.40
4	111815.55	2.57
5	41140.56	0.94
6	53601.23	1.23
7	46709.28	1.07
8	78368.53	1.80
9	49545.55	1.14
10	40590.92	0.93
11	109463.76	2.51
12	68048.57	1.56
13	50302.38	1.15
14	68016.64	1.56
15	47425.56	1.09
16	65959.02	1.51

Open Space Areas		
PARCEL	SQ. FT.	ACRES
OS 1	331826.56	7.62
OS 2	116114.78	2.67
OS 3	41639.87	0.96
OS 4	42471.23	0.98

ABBREVIATIONS

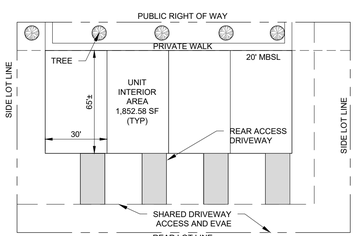
AC	=	ACRES
BLDG	=	BUILDING
EVAE	=	EMERGENCY VEHICLE ACCESS EASEMENT
FT	=	FEET
MBSL	=	MAJOR BUILDING SETBACK LINE
N/A	=	NON APPLICABLE
N.T.S.	=	NOT TO SCALE
R	=	RADIUS
SF	=	SQUARE FEET
(TYP)	=	TYPICAL

N

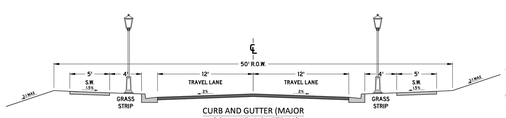
GRAPHIC SCALE
(IN FEET)
80 0 40 80 160
SCALE: 1" = 80'

LEGEND

- PROPOSED LOT LINES
- 00 PROPOSED LOT NUMBER
- PROPOSED BUILDING SETBACK
- PROPOSED ACCESS EASEMENT
- PROPOSED DRAINAGE EASEMENT
- PROPOSED UTILITY EASEMENT
- WATERWAY NATURAL AREA
- 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



TYPICAL LOT LAYOUT
N.T.S



CURB AND GUTTER (MAJOR LOCAL AND INDUSTRIAL)

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-03
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

TYPICAL ROAD SECTION
N.T.S

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # 47119C0165E OF THE CITY OF COLUMBIA, TN. DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 05/22/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

SITE PLAN
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

INDUSTRIAL PARK ROAD
ZERO IN

FRANCIS C. GAVINI II
REGISTERED ENGINEER
AGRICULTURE
ENVIRONMENT
STATE OF TENNESSEE
FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION
05/22/2023

PROJECT
22-0431

SHEET
C-2.0

T-SQUARE ENGINEERING

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N

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(IN FEET)
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SCALE: 1" = 80'

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- 00 PROPOSED LOT NUMBER
- PROPOSED BUILDING SETBACK
- PROPOSED ACCESS EASEMENT
- PROPOSED DRAINAGE EASEMENT
- PROPOSED UTILITY EASEMENT
- WATERWAY NATURAL AREA
- 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

KURE PARK LANE
PUBLIC
50' RIGHT-OF-WAY

KURE PARK COURT
PUBLIC
50' RIGHT-OF-WAY

INDUSTRIAL PARK ROAD
PUBLIC
RIGHT-OF-WAY WIDTH VARIES

RECIPROCAL INGRESS/EGRESS EASEMENT

DRAINAGE EASEMENT

MAINTAIN ACCESS TO EASEMENT FOR EXISTING WASTEWATER FORCEMAIN

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

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05/22/2023

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

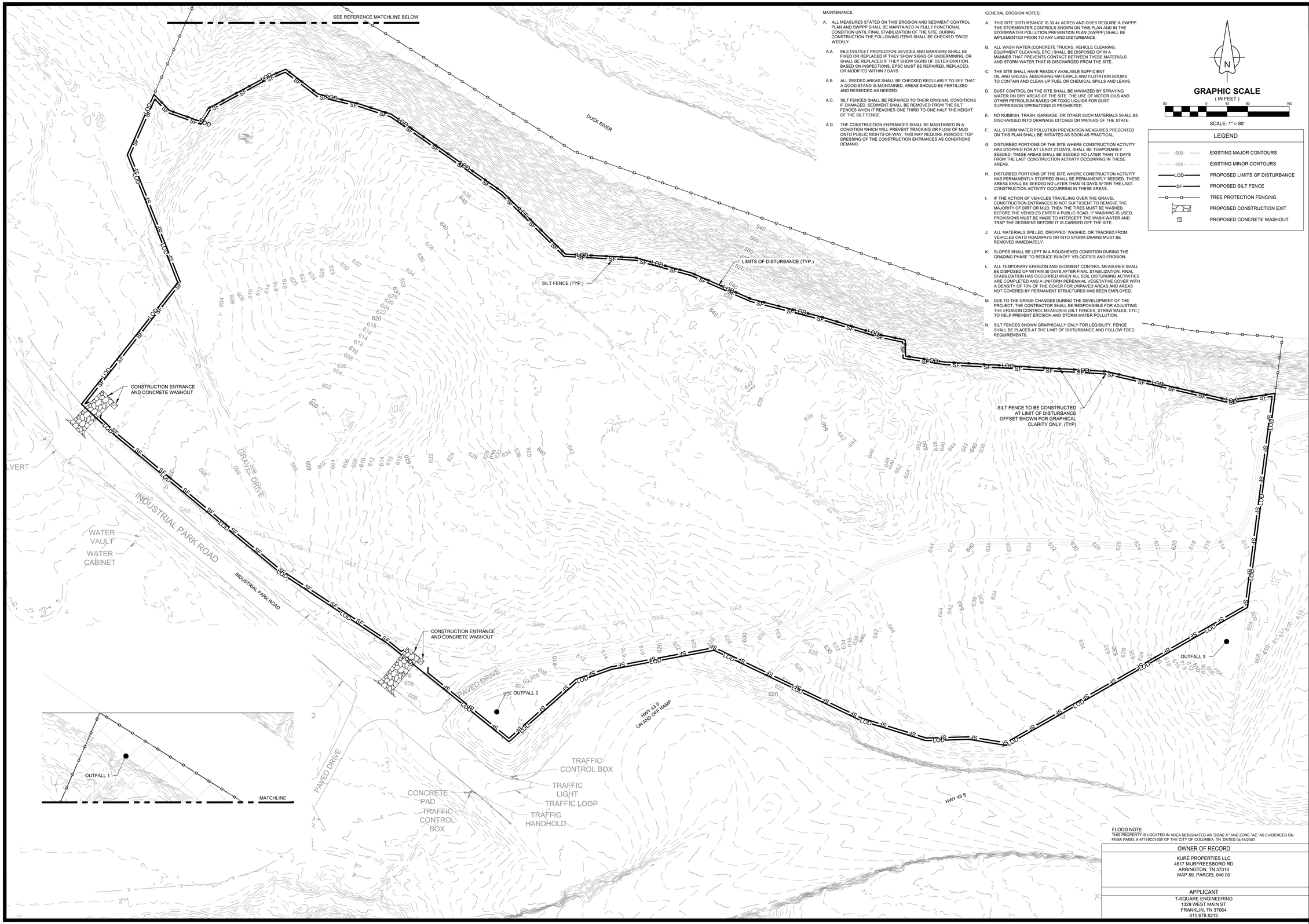
DATE: 05/22/2023
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DRAWN BY: T-SQUARE
REVIEWER: FCG

PRELIMINARY PLAT
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

PROJECT
22-0431

SHEET
C-2.1



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 ENTRANCES 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.

GENERAL EROSION NOTES:

A. THIS SITE DISTURBANCE IS 39.4± 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.

B. 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.

M. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO HELP PREVENT EROSION AND STORM WATER POLLUTION.

N. SILT FENCES SHOWN GRAPHICALLY ONLY FOR LEGIBILITY. FENCE SHALL BE PLACES AT THE LIMIT OF DISTURBANCE AND FOLLOW TDEC REQUIREMENTS.

N

GRAPHIC SCALE

(IN FEET)

80 0 40 80 160

SCALE: 1" = 80'

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

FLOOD NOTE

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OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00

APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 05/22/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

INITIAL EROSION CONTROL
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

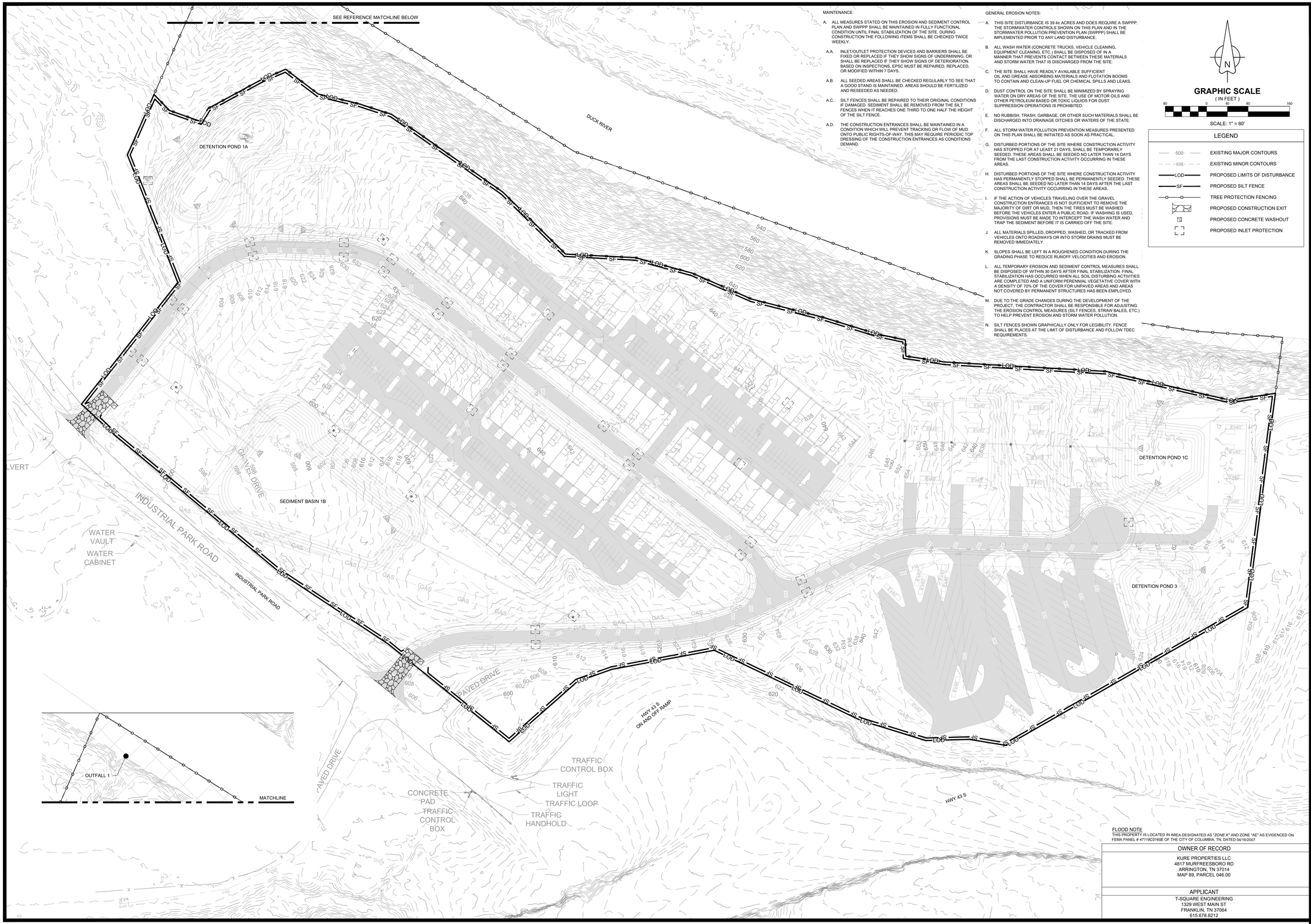
FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION

FRANCIS C. GAWNITT — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — 124450 — STATE OF TENNESSEE

05/22/2023

PROJECT
22-0431

SHEET
C-3.0



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.

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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.

A.D. THE CONSTRUCTION ENTRANCES 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.

GENERAL EROSION NOTES:

A. THIS SITE DISTURBANCE IS 39.4± 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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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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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.

M. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO HELP PREVENT EROSION AND STORM WATER POLLUTION.

N. SILT FENCES SHOWN GRAPHICALLY ONLY FOR LEGIBILITY. FENCE SHALL BE PLACES AT THE LIMIT OF DISTURBANCE AND FOLLOW TDEC REQUIREMENTS.

N

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(IN FEET)
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SCALE: 1" = 80'

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	PROPOSED CONSTRUCTION EXIT
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	PROPOSED INLET PROTECTION

FLOOD NOTE
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OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00

APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

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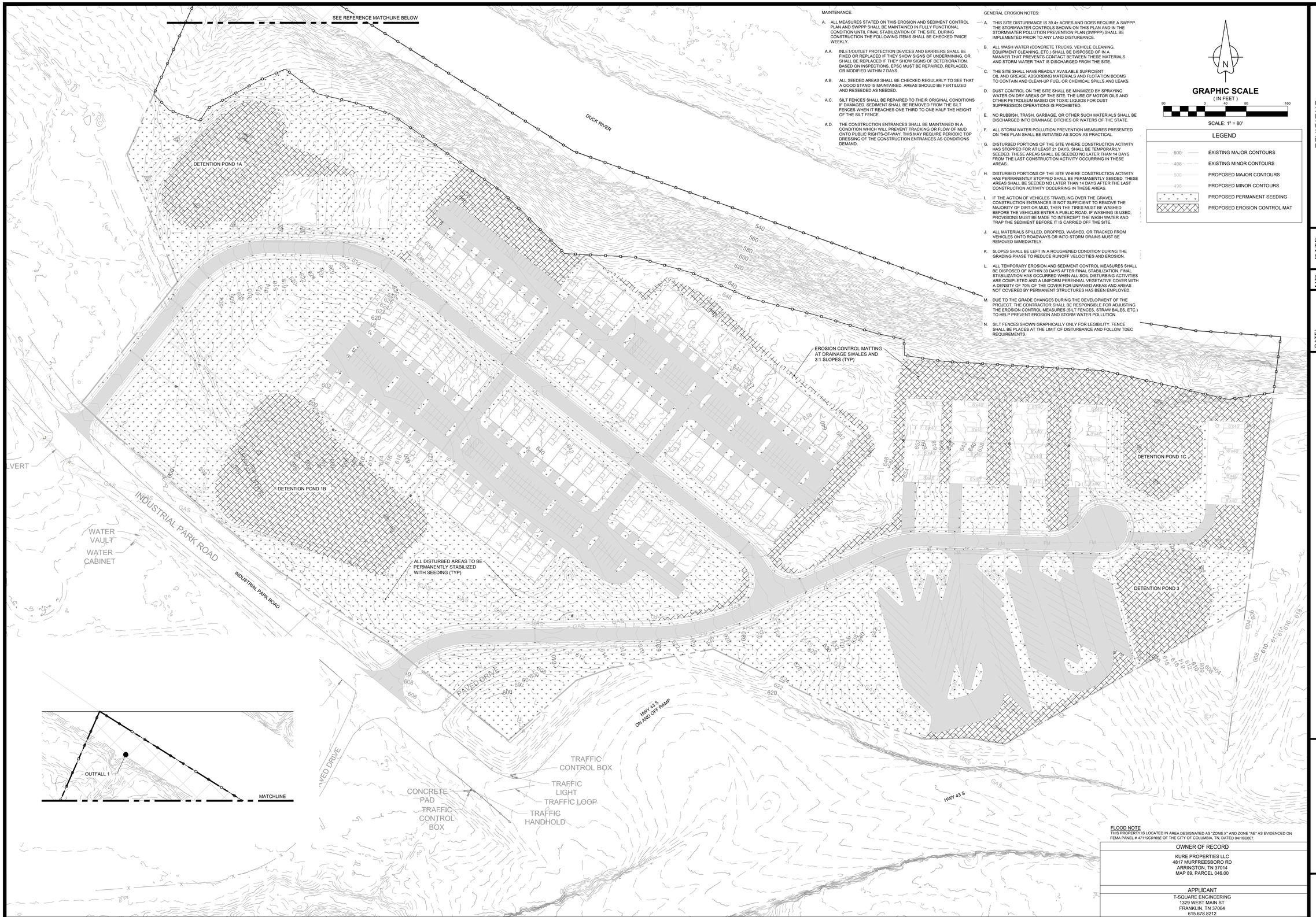
TEMPORARY EROSION CONTROL
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
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FRANK C. GAINWELL
REGISTERED ENGINEER
AGRICULTURE
CIVIL
ENVIRONMENTAL
124450
STATE OF TENNESSEE
05/22/2023

PROJECT
22-0431

SHEET
C-3.1



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.

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GENERAL EROSION NOTES:

A. THIS SITE DISTURBANCE IS 39.4± 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.

B. 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.

M. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO HELP PREVENT EROSION AND STORM WATER POLLUTION.

N. SILT FENCES SHOWN GRAPHICALLY ONLY FOR LEGIBILITY. FENCE SHALL BE PLACES AT THE LIMIT OF DISTURBANCE AND FOLLOW TDEC REQUIREMENTS.

N

GRAPHIC SCALE
(IN FEET)
80 40 0 40 80 160
SCALE: 1" = 80'

LEGEND

500	EXISTING MAJOR CONTOURS
498	EXISTING MINOR CONTOURS
500	PROPOSED MAJOR CONTOURS
498	PROPOSED MINOR CONTOURS
	PROPOSED PERMANENT SEEDING
	PROPOSED EROSION CONTROL MAT

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00

APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION
STATE OF TENNESSEE
05/22/2023

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

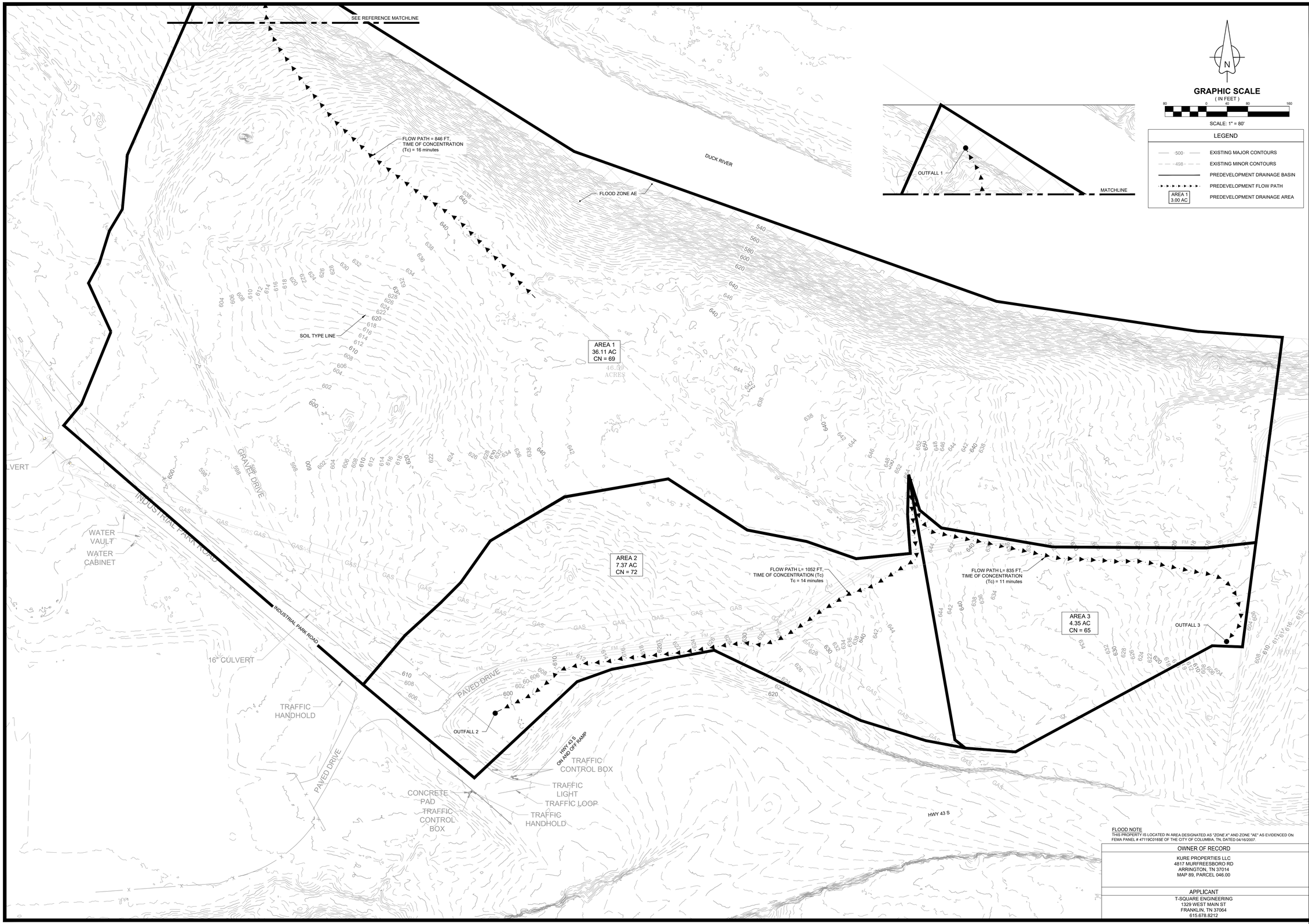
DATE: 05/22/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

FINAL EROSION CONTROL
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

PROJECT
22-0431

SHEET
C-3.2



FLOOD NOTE
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OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00

APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 05/22/2023
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REVIEWER: FCG

PREDEVELOPMENT STORMWATER
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION

FRITZ C. GAWNITT
REGISTERED
AGRICULTURE
ENGINEER
12442
STATE OF TENNESSEE
05/22/2023

PROJECT
22-0431

SHEET
C-4.0

SEE REFERENCE MATCHLINE

FLOW PATH = 337 FT
Tc = 5 Minutes

DETENTION POND 1A

AREA 1A
5.22 AC
CN = 84

FLOW PATH L= 647 FT,
Tc = 5 MINUTES

DUCK RIVER

FLOOD ZONE AE

AREA 1 BYPASS
7.63 AC
CN = 68

FLOW PATH L= 1275 FT,
Tc = 5 MINUTES

AREA 1B
21.48 AC
CN = 78

DETENTION POND 1B

GRAVEL DRIVE

INDUSTRIAL PARK ROAD

WATER VAULT

WATER CABINET

16" CULVERT

TRAFFIC HANDHOLD

PAVED DRIVE

OUTFALL 2

HWY 43 S ON AND OFF RAMP

TRAFFIC CONTROL BOX

TRAFFIC LIGHT

TRAFFIC LOOP

TRAFFIC HANDHOLD

CONCRETE PAD

TRAFFIC CONTROL BOX

HWY 43 S

AREA 1C
4.90 AC
CN = 85

DETENTION POND 1C

FLOW PATH L= 470 FT,
Tc = 5 MINUTES

DETENTION POND 3

AREA 3
4.55 AC
CN = 84

OUTFALL 3

FLOW PATH = 471 FT
Tc = 13 MINUTES

FLOW PATH = 854 FT
Tc = 13 MINUTES

AREA 2
3.94 AC
CN = 76

OUTFALL 1

MATCHLINE

N

GRAPHIC SCALE
(IN FEET)
80 0 40 80 160
SCALE: 1" = 80'

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 AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00

APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 05/22/2023
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REVIEWER: FCG

POSTDEVELOPMENT STORMWATER MANAGEMENT PLAN

SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

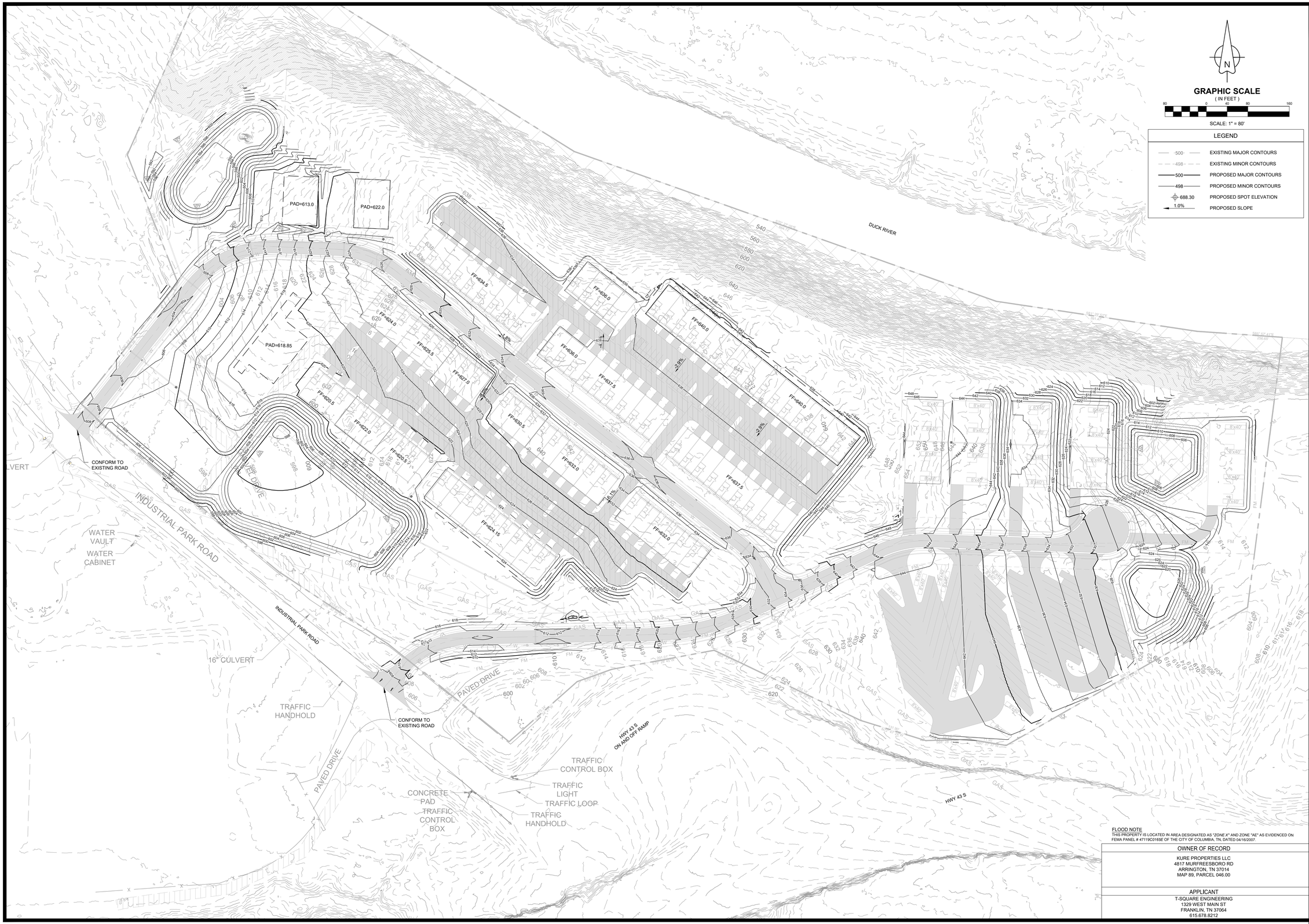
FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION

STATE OF TENNESSEE
FRANCIS C. GAUNNITZ
REGISTERED
AGRICULTURE
ENGINEER
NUMBER
124.450

05/22/2023

PROJECT
22-0431

SHEET
C-4.1



FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # 47119C0165E OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00

APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

NO.	DATE	REVISIONS

DATE: 05/22/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

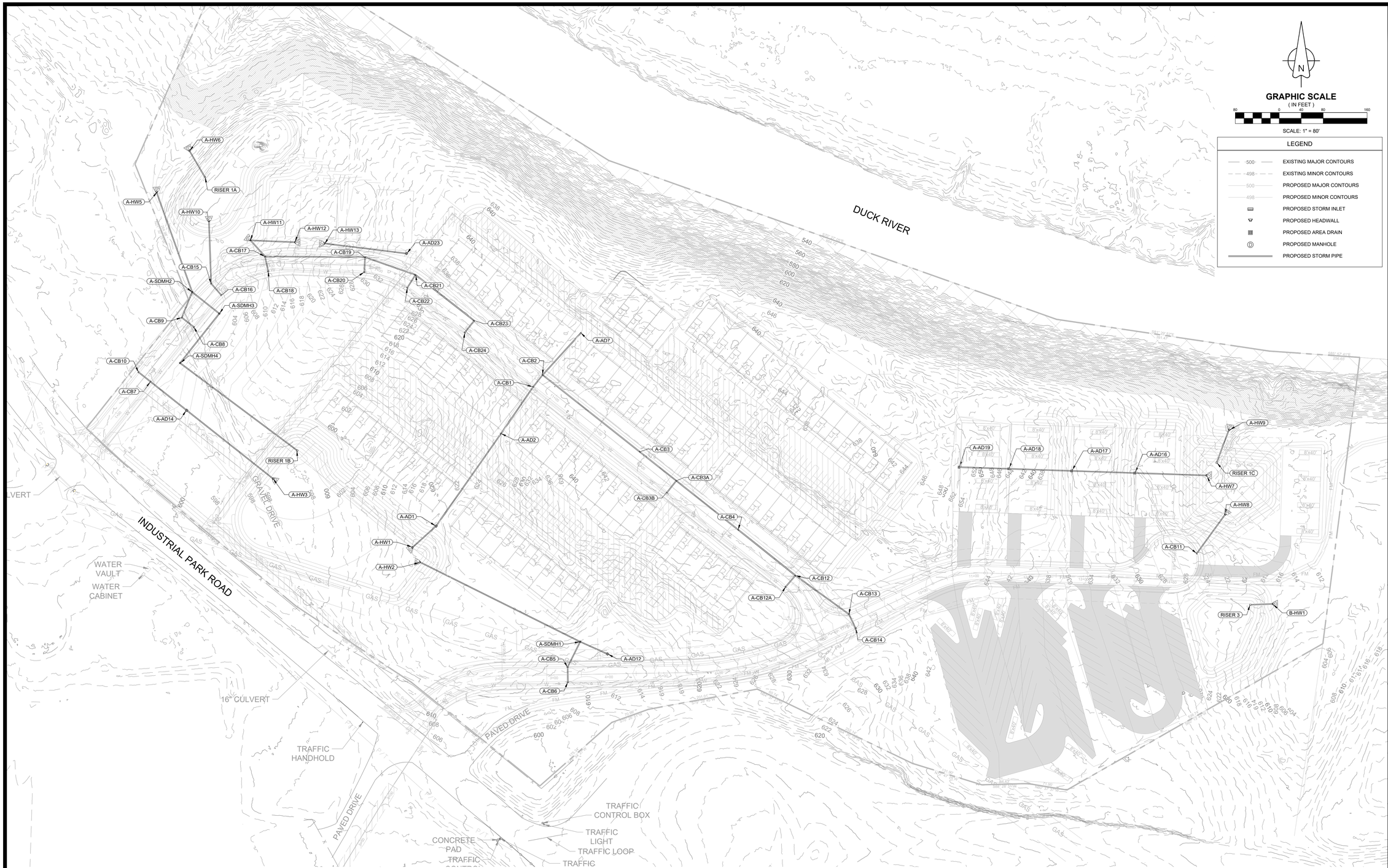
GRADING PLAN
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FRANCIS C. GALVINITZ
REGISTERED AGRICULTURE & ENVIRONMENTAL SCIENTIST
124
STATE OF TENNESSEE
FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION
05/22/2023

PROJECT
22-0431

SHEET
C-5.0



N

GRAPHIC SCALE
(IN FEET)
80 0 40 80 160
SCALE: 1" = 80'

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 MANHOLE
	PROPOSED STORM PIPE

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 05/22/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

DRAINAGE PLAN
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION
05/22/2023

PROJECT
22-0431

SHEET
C-5.1

T-SQUARE ENGINEERING

STRUCTURE TABLE				
NAME	DESC.	DETAILS	PIPES IN	PIPES OUT
A-AD1	3'X3'	RIM = 620.42 FG = 620.42	INV. IN = 616.75	INV. OUT =616.75
A-AD2	3'X3'	RIM = 627.66 FG = 627.30	INV. IN = 625.95	INV. OUT =625.95
A-AD7	3'X3'	RIM = 634.65 FG = 634.65		INV. OUT =627.90
A-AD12	3'X3'	RIM = 611.50 FG = 609.44		INV. OUT =608.00
A-AD14	3'X3'	RIM = 609.46 FG = 609.46	INV. IN = 600.50	INV. OUT =600.50
A-AD16	3'X3'	RIM = 621.30 FG = 621.30	INV. IN = 616.21	INV. OUT =611.21
A-AD17	3'X3'	RIM = 631.80 FG = 631.80	INV. IN = 626.42	INV. OUT =625.42
A-AD18	3'X3'	RIM = 642.51 FG = 642.51	INV. IN = 637.58	INV. OUT =635.58
A-AD19	3'X3'	RIM = 643.30 FG = 643.30		INV. OUT =638.59
A-AD23	3'X3'	RIM = 622.92 FG = 622.92		INV. OUT =617.25
A-CB1	CURB INLET	RIM = 633.87 FG = 633.87	INV. IN = 626.60	INV. OUT =626.60
A-CB2	CURB INLET	RIM = 633.87 FG = 633.87	INV. IN = 626.90 INV. IN = 626.90	INV. OUT =626.90
A-CB3	CURB INLET	RIM = 636.45 FG = 636.45	INV. IN = 626.30	INV. OUT =628.75
A-CB3A	CURB INLET	RIM = 635.60 FG = 635.60	INV. IN = 630.55 INV. IN = 627.15	INV. OUT =627.15
A-CB3B	CURB INLET	RIM = 635.60 FG = 635.60		INV. OUT =630.85
A-CB4	CURB INLET	RIM = 636.52 FG = 636.52	INV. IN = 628.60	INV. OUT =628.60
A-CB5	CURB INLET	RIM = 611.96 FG = 611.96	INV. IN = 607.85	INV. OUT =607.85
A-CB6	CURB INLET	RIM = 611.96 FG = 611.96		INV. OUT =608.00
A-CB7	CURB INLET	RIM = 604.99 FG = 604.99	INV. IN = 600.95	INV. OUT =600.95
A-CB8	CURB INLET	RIM = 603.67 FG = 603.67		INV. OUT =600.00

STRUCTURE TABLE				
NAME	DESC.	DETAILS	PIPES IN	PIPES OUT
A-CB9	CURB INLET	RIM = 603.67 FG = 603.67	INV. IN = 599.80	INV. OUT =599.80
A-CB10	CURB INLET	RIM = 604.99 FG = 604.99		INV. OUT =601.10
A-CB11	CURB INLET	RIM = 626.10 FG = 626.10		INV. OUT =611.48
A-CB12	CURB INLET	RIM = 634.80 FG = 634.80	INV. IN = 630.00 INV. IN = 630.00	INV. OUT =630.00
A-CB12A	CURB INLET	RIM = 634.32 FG = 634.32		INV. OUT =630.15
A-CB13	CURB INLET	RIM = 636.11 FG = 636.11	INV. IN = 630.95	INV. OUT =630.95
A-CB14	CURB INLET	RIM = 635.82 FG = 635.82		INV. OUT =631.10
A-CB15	CURB INLET	RIM = 606.00 FG = 606.00	INV. IN = 600.55	INV. OUT =600.55
A-CB16	CURB INLET	RIM = 606.00 FG = 606.00		INV. OUT =600.70
A-CB17	CURB INLET	RIM = 612.00 FG = 612.00	INV. IN = 604.80 INV. IN = 604.80	INV. OUT =604.80
A-CB18	CURB INLET	RIM = 612.00 FG = 612.00		INV. OUT =605.10
A-CB19	CURB INLET	RIM = 623.21 FG = 623.21	INV. IN = 617.85 INV. IN = 618.20	INV. OUT =617.85
A-CB20	CURB INLET	RIM = 623.34 FG = 623.34		INV. OUT =618.50
A-CB21	CURB INLET	RIM = 626.00 FG = 626.00	INV. IN = 619.40 INV. IN = 618.80	INV. OUT =618.80
A-CB22	CURB INLET	RIM = 626.00 FG = 626.00		INV. OUT =619.10
A-CB23	CURB INLET	RIM = 629.74 FG = 629.74	INV. IN = 625.20	INV. OUT =620.30
A-CB24	CURB INLET	RIM = 629.74 FG = 629.74		INV. OUT =625.50
A-HW1	HEADWALL	RIM = 595.06 FG = 604.64	INV. IN = 604.00	
A-HW2	HEADWALL	RIM = 609.31 FG = 604.85	INV. IN = 606.60	
A-HW3	HEADWALL	RIM = 597.64 FG = 599.66	INV. IN = 599.50	

STRUCTURE TABLE				
NAME	DESC.	DETAILS	PIPES IN	PIPES OUT
A-HW5	HEADWALL	RIM = 596.71 FG = 592.00	INV. IN = 592.00	
A-HW6	HEADWALL	RIM = 592.06 FG = ???	INV. IN = 589.35	
A-HW7	HEADWALL	RIM = 603.53 FG = 606.02	INV. IN = 600.83	
A-HW8	HEADWALL	RIM = 602.77 FG = 606.36	INV. IN = 600.06	
A-HW9	HEADWALL	RIM = 605.57 FG = ???	INV. IN = 603.37	
A-HW10	HEADWALL	RIM = 589.49 FG = 592.42	INV. IN = 592.00	
A-HW11	HEADWALL	RIM = 607.71 FG = 603.72	INV. IN = 602.00 INV. IN = 602.00	
A-HW12	HEADWALL	RIM = 609.00 FG = 612.00		INV. OUT =609.00
A-HW13	HEADWALL	RIM = 621.91 FG = 616.83	INV. IN = 616.50	
A-SDMH1	SDMH	RIM = 614.13 FG = ???	INV. IN = 607.35 INV. IN = 607.30	INV. OUT =607.30
A-SDMH2	SDMH	RIM = 604.00 FG = 604.00	INV. IN = 593.90 INV. IN = 599.55	INV. OUT =593.90
A-SDMH3	SDMH	RIM = 606.06 FG = 606.06	INV. IN = 594.55	INV. OUT =594.55
A-SDMH4	SDMH	RIM = 605.98 FG = 605.98	INV. IN = 595.70	INV. OUT =595.70
RISER 1A	RISER	RIM = 596.00 FG = 592.00		INV. OUT =590.00
RISER 1B	RISER	RIM = 602.00 FG = 598.00		INV. OUT =597.50
RISER 1C	RISER	RIM = 609.00 FG = 606.00		INV. OUT =604.00

STRUCTURE TABLE				
NAME	DESC.	DETAILS	PIPES IN	PIPES OUT
B-HW1	HEADWALL	RIM = 619.65 FG = ???	INV. IN = 617.60	
RISER 3	RISER	RIM = 624.00 FG = 620.00		INV. OUT =618.00

PIPE TABLE			
NAME	SIZE	LENGTH	SLOPE
RISER 3 TO B-HW1	18" RCP	39.56	1.00%

PIPE TABLE			
NAME	SIZE	LENGTH	SLOPE
A-AD1 TO A-HW1	18" RCP	58.06	22.33%
A-AD2 TO A-AD1	18" RCP	204.89	4.47%
A-AD7 TO A-CB2	18" RCP	101.92	0.97%
A-AD12 TO A-SDMH1	18" RCP	52.40	1.29%
A-AD14 TO A-HW3	18" RCP	198.48	0.50%
A-AD16 TO A-HW7	18" RCP	129.69	8.00%
A-AD17 TO A-AD16	18" RCP	114.37	8.00%
A-AD18 TO A-AD17	18" RCP	113.75	8.00%
A-AD19 TO A-AD18	18" RCP	89.19	1.12%
A-AD23 TO A-HW13	18" RCP	148.88	0.50%
A-CB1 TO A-AD2	18" RCP	101.91	0.63%
A-CB2 TO A-CB1	18" RCP	26.77	1.07%
A-CB3 TO A-CB2	18" RCP	224.31	0.82%
A-CB3A TO A-CB3	18" RCP	83.64	1.00%
A-CB3B TO A-CB3A	18" RCP	26.77	1.07%
A-CB4 TO A-CB3A	18" RCP	142.76	1.01%
A-CB5 TO A-SDMH1	18" RCP	48.72	0.98%
A-CB6 TO A-CB5	18" RCP	26.76	0.54%
A-CB7 TO A-AD14	18" RCP	82.75	0.54%
A-CB8 TO A-CB9	18" RCP	26.76	0.71%

PIPE TABLE			
NAME	SIZE	LENGTH	SLOPE
A-CB9 TO A-SDMH2	18" RCP	47.50	0.50%
A-CB10 TO A-CB7	18" RCP	26.76	0.54%
A-CB11 TO A-HW8	18" RCP	86.93	13.14%
A-CB12 TO A-CB4	18" RCP	131.84	1.05%
A-CB12A TO A-CB12	18" RCP	26.03	0.55%
A-CB13 TO A-CB12	18" RCP	118.91	0.79%
A-CB14 TO A-CB13	18" RCP	27.50	0.52%
A-CB15 TO A-HW10	18" RCP	112.16	7.59%
A-CB16 TO A-CB15	18" RCP	26.84	0.53%
A-CB17 TO A-HW11	18" RCP	38.89	7.09%
A-CB18 TO A-CB17	18" RCP	26.77	1.07%
A-CB19 TO A-CB17	18" RCP	181.41	7.17%
A-CB20 TO A-CB19	18" RCP	26.02	1.10%
A-CB21 TO A-CB19	18" RCP	96.01	0.98%
A-CB22 TO A-CB21	18" RCP	26.77	1.08%
A-CB23 TO A-CB21	18" RCP	134.42	0.66%
A-CB24 TO A-CB23	18" RCP	26.77	1.07%
A-HW12 TO A-HW11	18" RCP	80.59	8.72%
A-SDMH1 TO A-HW2	18" RCP	322.89	0.22%
A-SDMH2 TO A-HW5	18" RCP	190.43	0.99%

PIPE TABLE			
NAME	SIZE	LENGTH	SLOPE
A-SDMH3 TO A-SDMH2	18" RCP	61.04	1.04%
A-SDMH4 TO A-SDMH3	18" RCP	114.95	1.00%
RISER 1A TO A-HW6	18" RCP	55.31	1.17%
RISER 1B TO A-SDMH4	18" RCP	266.21	0.68%
RISER 1C TO A-HW9	18" RCP	63.36	1.00%

FLOOD NOTE
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OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 05/22/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

STORM STRUCTURE AND PIPE TABLES

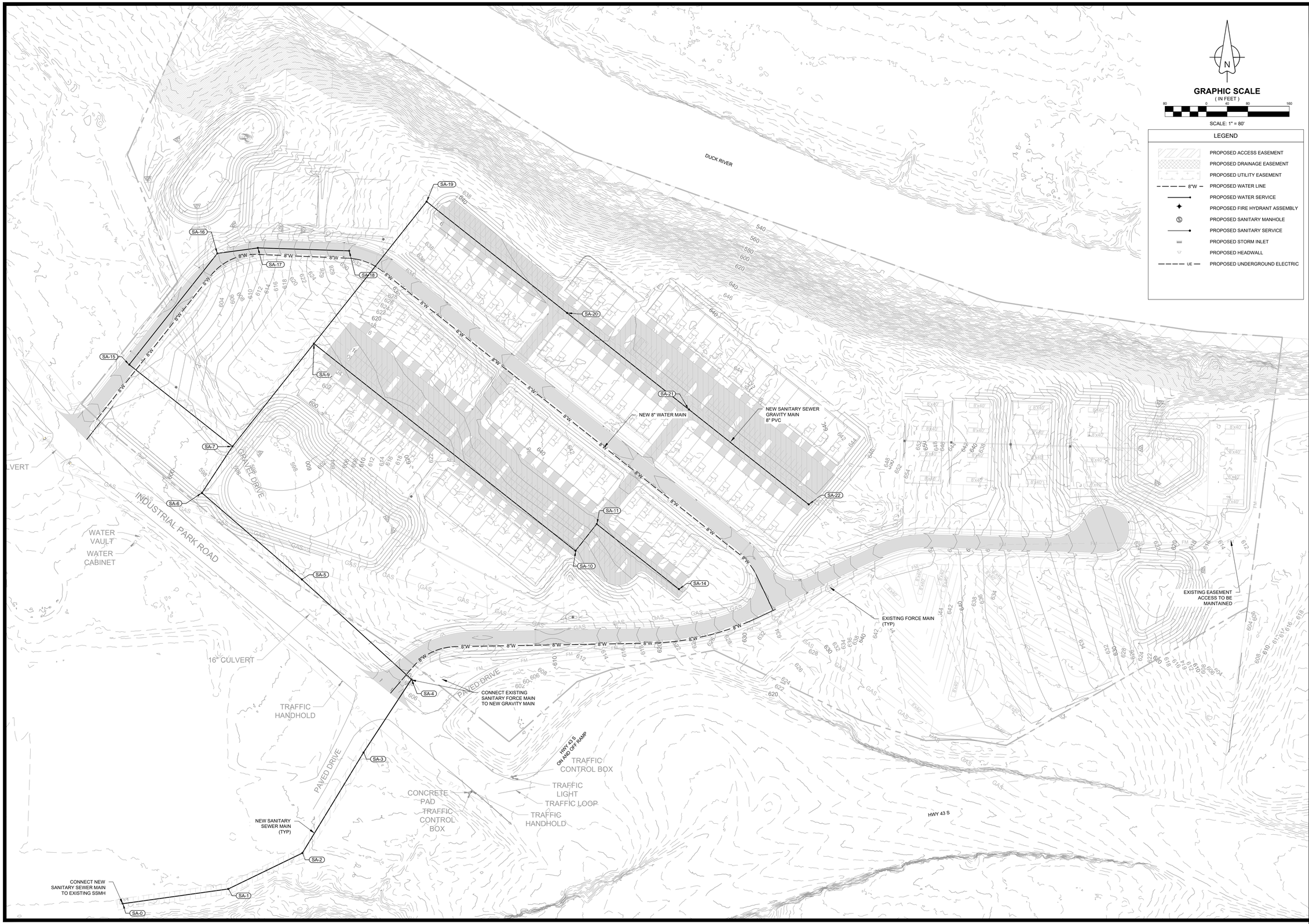
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION
05/22/2023

PROJECT
22-0431

SHEET
C-5.2



ZERO INDUSTRIAL PARK ROAD

UTILITY PLAN

SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

NO.	DATE	REVISIONS

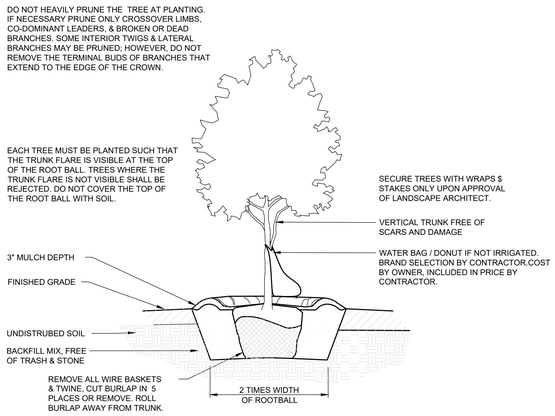
DATE: 05/22/2023
SCALE: AS SHOWN
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REVIEWER: FCG

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NOT FOR CONSTRUCTION
05/22/2023

PROJECT
22-0431

SHEET
C-7.0

T-SQUARE ENGINEERING

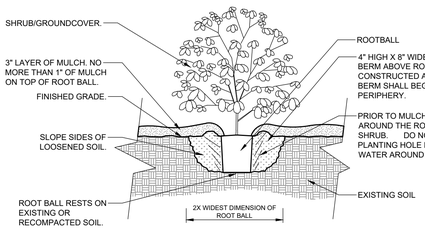


ALL PLANT MATERIAL TO MEET AMERICAN STANDARDS FOR NURSERY STOCK & ANSI Z60.1; LATEST EDITION STANDARDS.

24" RADIUS MULCH RING ON ALL PROPOSED TREES
8" DIA. MULCH RING IF IN LAWN, NO MULCH AT TRUNK.

DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE



SHRUB PLANTING DETAIL

NOT TO SCALE

GENERAL NOTES:

1. UTILITY SERVICES 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. 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.
7. CONTRACTOR TO REPAIR ANY PAVEMENTS, CURBS, AND OTHER IMPROVEMENTS DAMAGED AS A RESULT OF LANDSCAPE INSTALLATION ACTIVITY
8. THE LOCATION OF ALL PLANT MATERIALS SHOWN ON THE PLAN SHALL BE FIELD LOCATED AND STAKED/FLAGGED BY THE CONTRACTOR.
9. DO NOT MAKE SUBSTITUTIONS REGARDING PLANT SIZES OR SPECIES WITHOUT WRITTEN PERMISSION FROM THE OWNER OR LANDSCAPE ARCHITECT.
10. REMOVE ALL METAL BASKETS, STRINGS AND OTHER TIES FROM TREES.
11. 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 AND GROUND COVER.
12. 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.
13. 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.
14. 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.
15. TREE BALLS SHALL HAVE A MINIMUM DIAMETER IN FEET EQUAL TO 10" FOR EACH CALIPER INCH OF THE TREE.
16. 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.
17. 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.
18. 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. ALL PLANTING BEDS AND TREE AND SHRUB PLANTINGS SHALL RECEIVE A MINIMUM
19. 3" DEEP SHREDDED HARDWOOD MULCH LAYER. CONTRACTOR IS RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL INSTALLED PLANT MATERIAL, INCLUDING GRASS AREAS, UNTIL FINAL ACCEPTANCE BY OWNER.
20. WATER ALL PLANT MATERIAL AT TIME OF PLANTING. ALL PLANT MATERIAL IS TO BE GUARANTEED FOR ONE (1) YEAR. GUARANTEE PERIOD STARTS FROM DATE OF FINAL ACCEPTANCE.
21. 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.
22. 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.
23. 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.

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 048.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 03/20/2023
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REVIEWER: CES

LANDSCAPE DETAILS

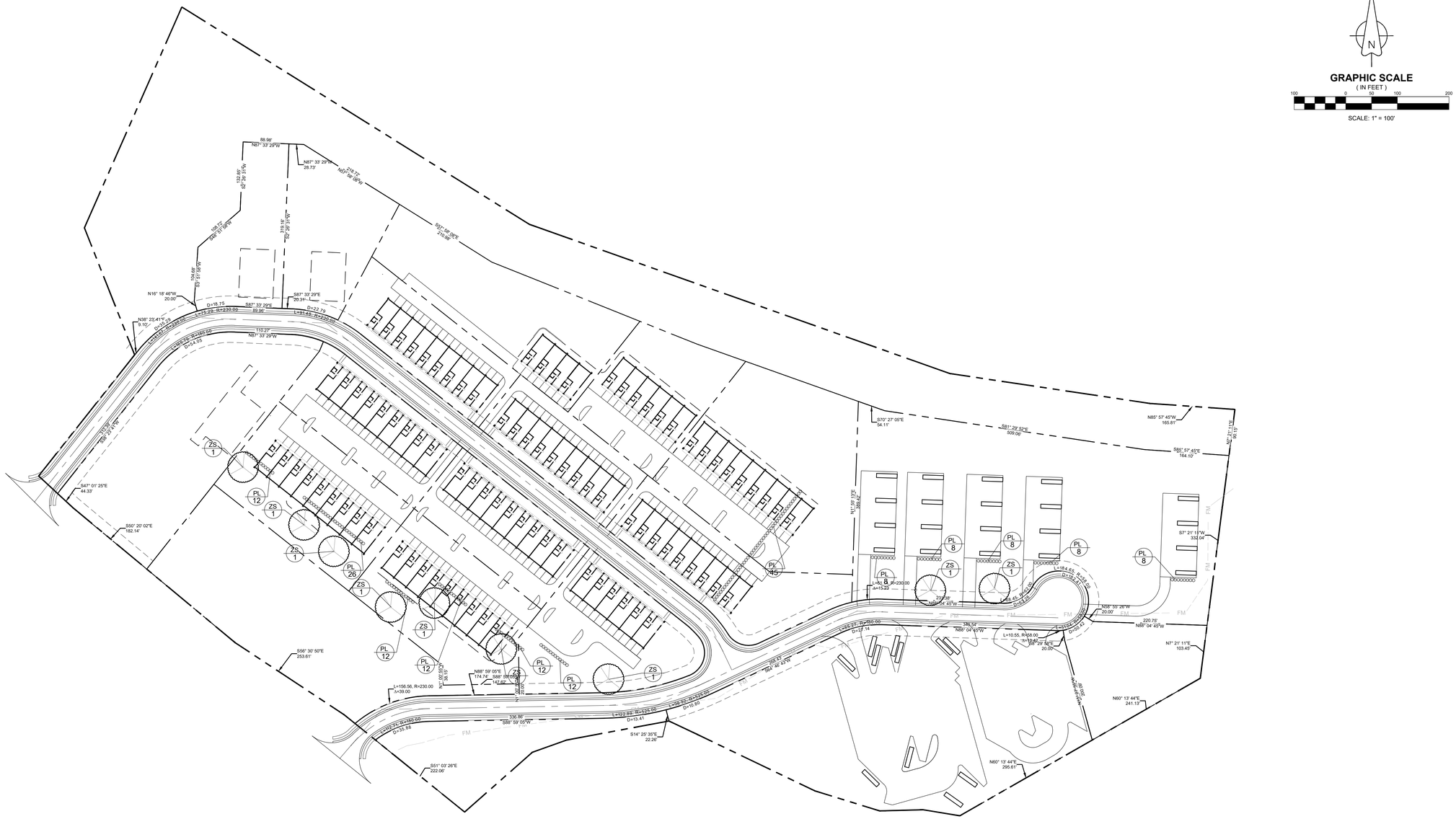
MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

CLAUDIS E. STEWART
REGISTERED LANDSCAPE ARCHITECT
TENNESSEE
03/20/2023

PROJECT
22-0431

SHEET
L - 2.0



PLANT SCHEDULE								
QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT	LEAF	SPACING	NOTES
SHADE TREES								
9	ZS	ZELKOVA SERRATA	JAPANESE ZELKOVA	2.5 CAL, B/B	14'-16'	DECIDUOUS	AS SHOWN	CLEAR TRUNK HEIGHT OF 4' ABOVE GROUND
SHRUBS								
171	PL	PRUNUS LAUROCERASUS	CHERRY LAUREL	30"		EVERGREEN	36" O.C.	

FLOOD NOTE
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OWNER OF RECORD

KURE PROPERTIES LLC
4817 MURFREESBORO RD
ARRINGTON, TN 37014
MAP 89, PARCEL 046.00

APPLICANT

T-SQUARE ENGINEERING
1329 WEST MAIN ST
FRANKLIN, TN 37064
615.678.8212

REVISIONS

NO.	DATE

DATE: 03/20/2023
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DRAWN BY: T-SQUARE
REVIEWER: CES

LANDSCAPE PLAN

MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

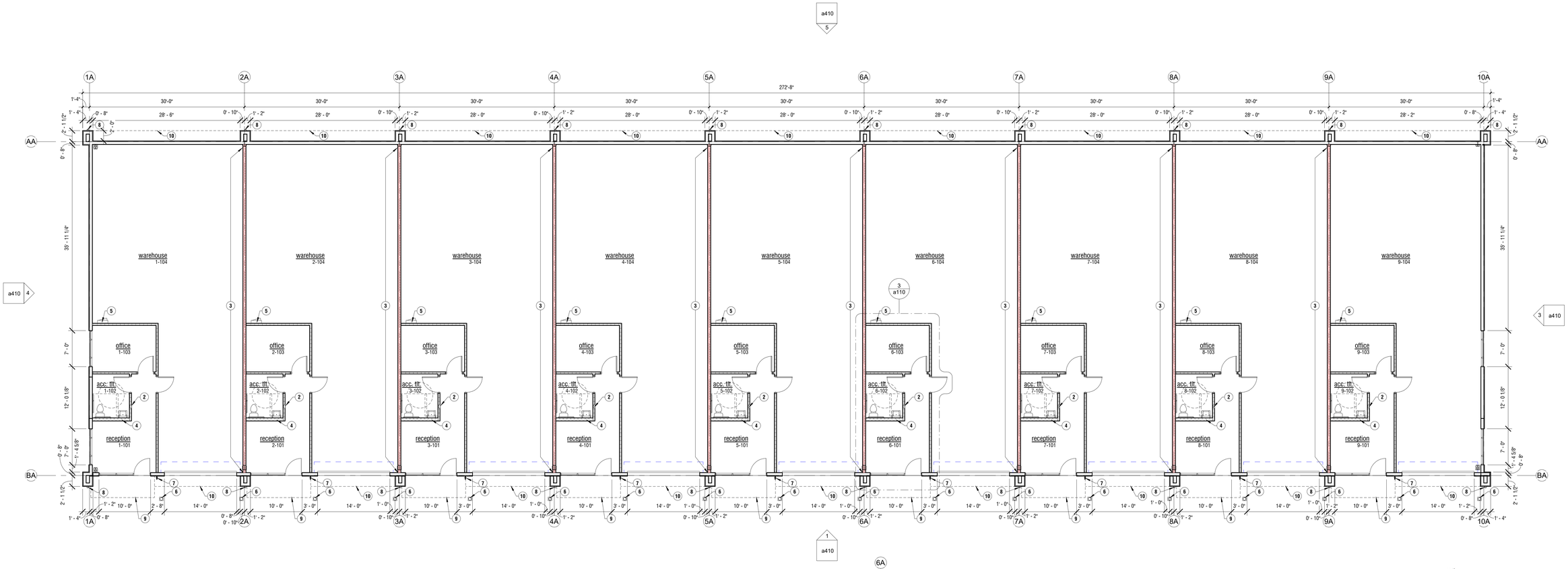
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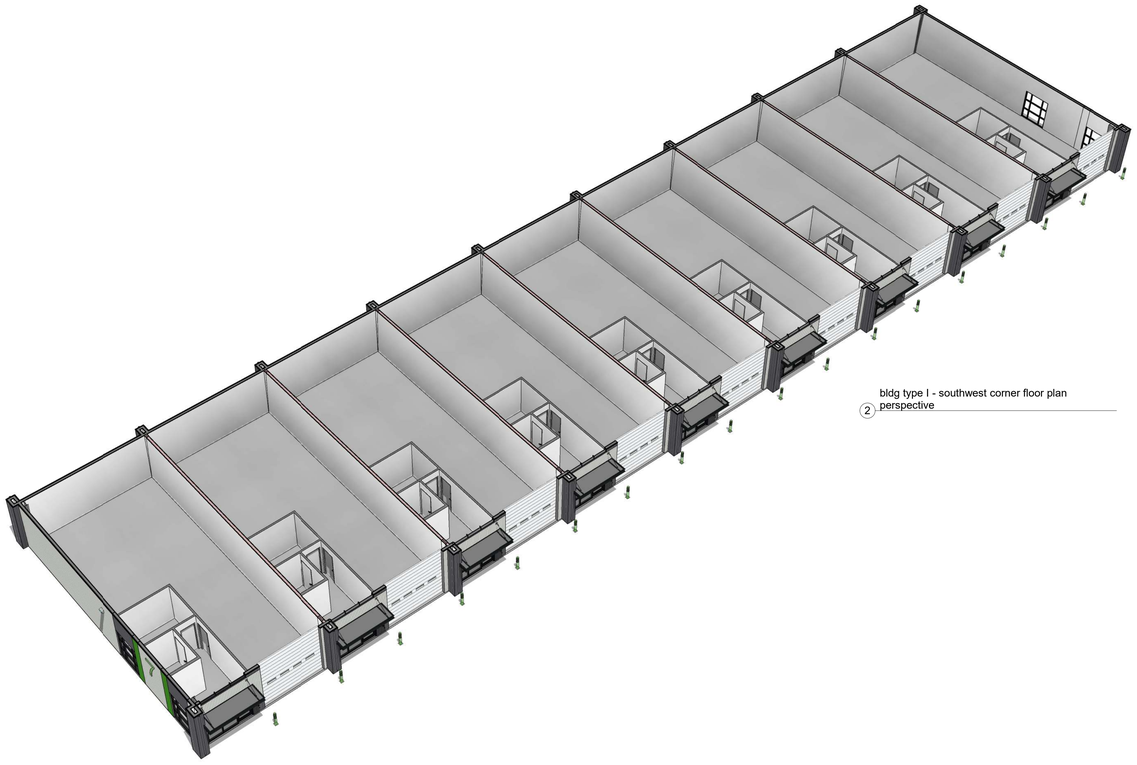
CLYDE E STEWART
REGISTERED
LANDSCAPE ARCHITECT
03/20/2023

PROJECT
22-0431

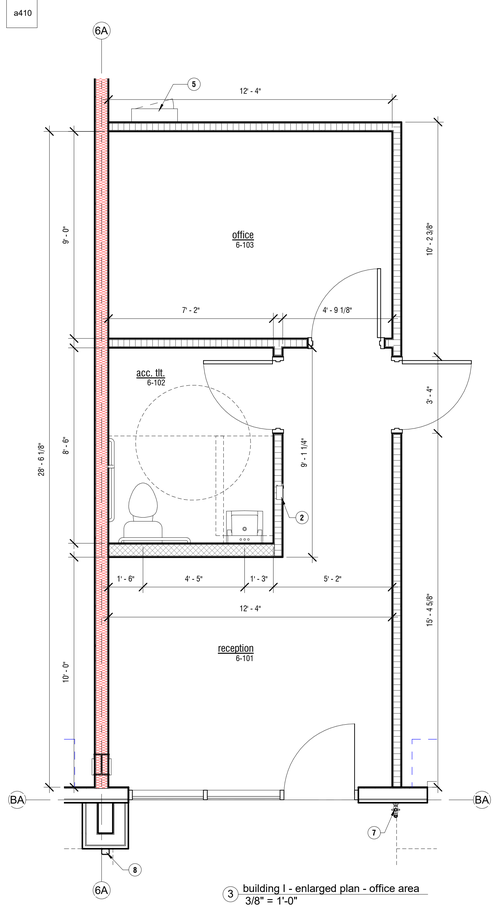
SHEET
L - 1.0

T-SQUARE ENGINEERING





2 bldg type I - southwest corner floor plan perspective



3 building I - enlarged plan - office area
3/8" = 1'-0"

1 first floor noted plan
1/8" = 1'-0"

north

SCALE: 1/8" = 1' - 0" (ARCH:E1 30"x42")

0' 4' 8' 16' 24'

wall legend

- (A) 3-5/8" METAL STUD FRAMED SOUND PARTITION - REFER TO DETAIL XX/GXXX
- (B) 6" METAL STUD FRAMED PLUMBING PARTITION - REFER TO DETAIL XX/GXXX
- (C) 6" METAL STUD FRAMED ONE-HOUR RATED PARTITION - REFER TO DETAIL XX/GXXX
- (W1) EXTERIOR WALL ASSEMBLY - REFER TO DETAIL XX/GXXX

plan notes

1. WALL MOUNTED FIRE EXTINGUISHER - REFER TO DETAIL 3/G300.
2. RECESSED FIRE EXTINGUISHER - REFER TO DETAIL 4/G300.
3. 1 HOUR RATED DEMISING WALL - REFER TO DETAIL X/G200 & X/G210
4. 6" INTERIOR METAL STUD FRAMED WALL FOR PLUMBING AND/OR VENTING.
5. ELECTRICAL PANEL - REFER TO ELECTRICAL.
6. SAFETY BOLLARD - REFER TO DETAIL X/AXXX.
7. HOSE BIB - REFER TO PLUMBING.
8. PREFINISHED ALUMINUM DOWNSPOUT.
9. EXTENT OF CANOPY ABOVE.
10. EXTENT OF ROOF ABOVE.

symbols

A — NEW DOOR (TYPE A) - REFER TO SHEET A600

FEC — SURFACE MOUNTED FIRE EXTINGUISHER CABINET.

general notes

1. REFER TO SHEET A600 FOR DOOR TYPES AND DOOR SCHEDULE.
2. ALL PUBLIC CORRIDORS TO MAINTAIN A MINIMUM OF 44" CLEAR
3. RAISE UNIT STYLE DOORS TO MEET VENTILATION REQUIREMENTS - REFER TO MECHANICAL.

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office | 615.570.2780

client:

KURE PROPERTIES

project:

zero industrial park | office - warehoue
nine-unit office warehouse | single unit office warehouse
tax map 89 | parcel 045.00 || columbia, tennessee

revisions

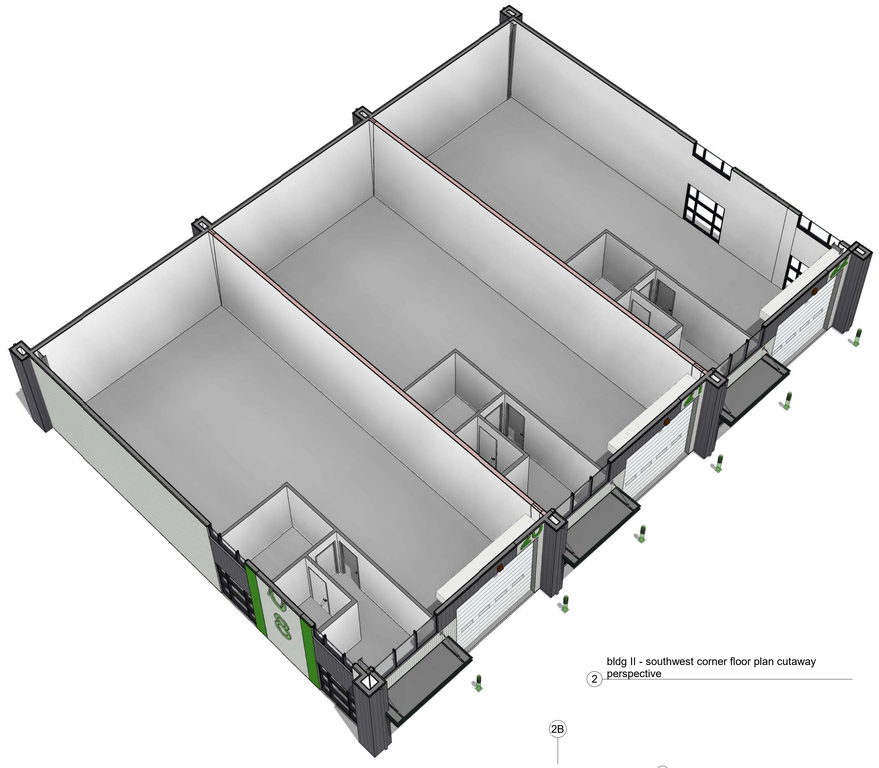
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project no.: c23007.00

first floor noted & dimensioned plan - bldg type I

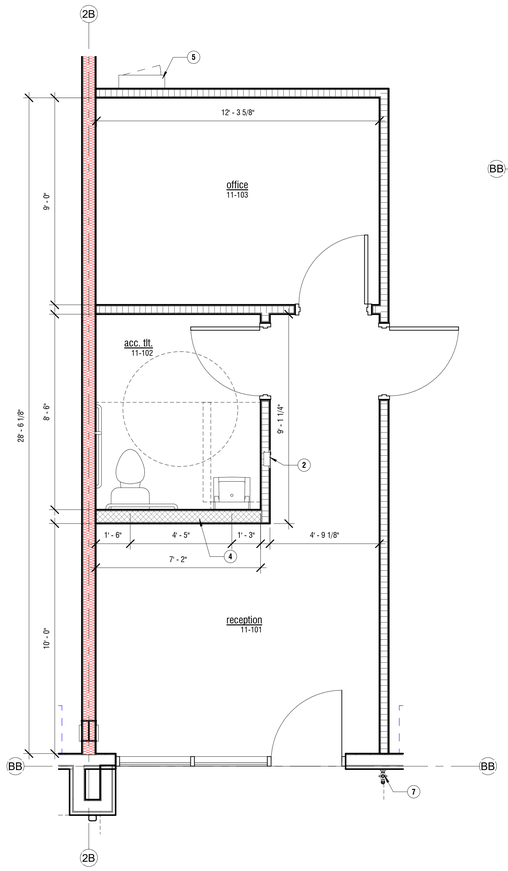
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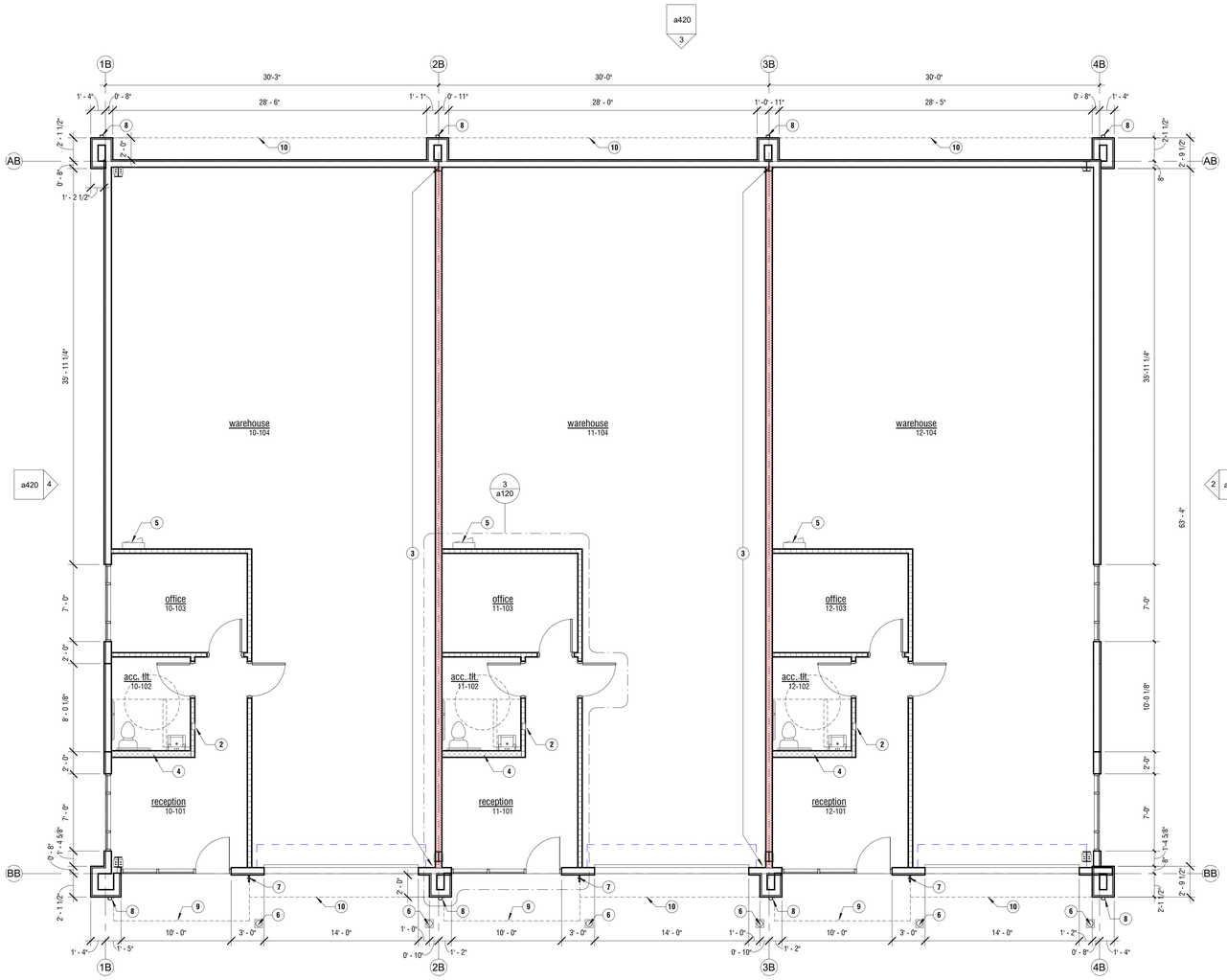
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2 bldg II - southwest corner floor plan cutaway perspective



3 building II - enlarged plan - office area
3/8" = 1'-0"



01 first floor noted plan - bldg type II
3/16" = 1'-0"

1
a420

wall legend

- (A) 3-5/8" METAL STUD FRAMED SOUND PARTITION - REFER TO DETAIL XX/GXXX
- (B) 6" METAL STUD FRAMED PLUMBING PARTITION - REFER TO DETAIL XX/GXXX
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plan notes

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revisions

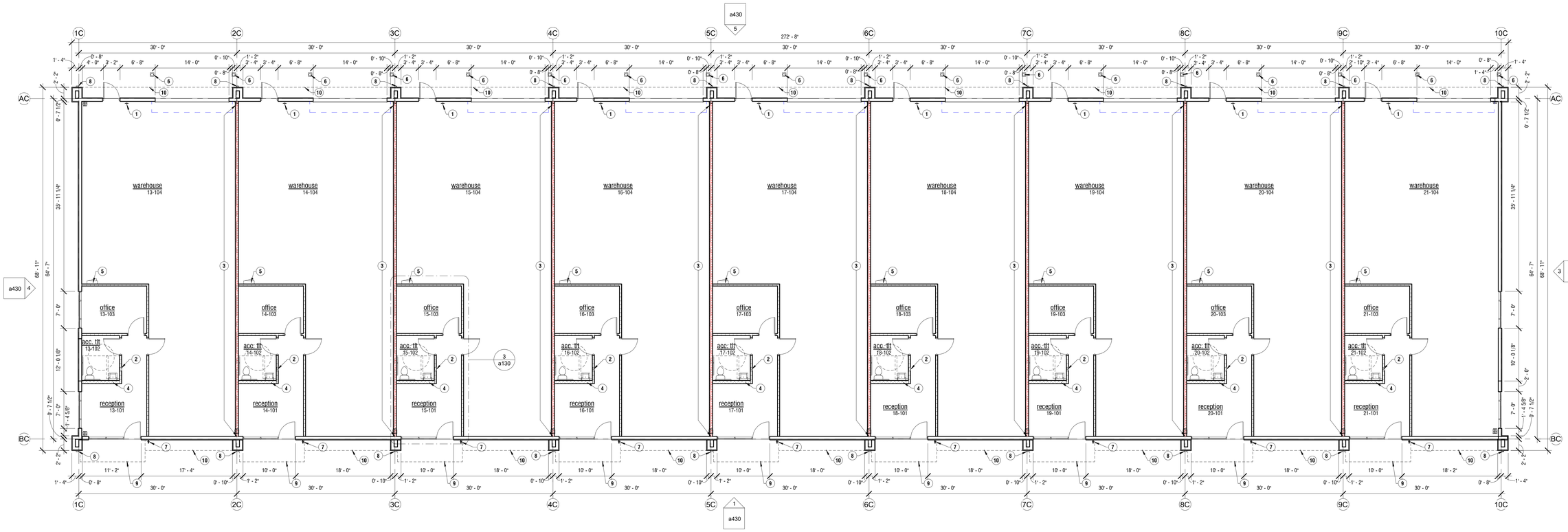
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first floor noted & dimensioned plan - bldg type II

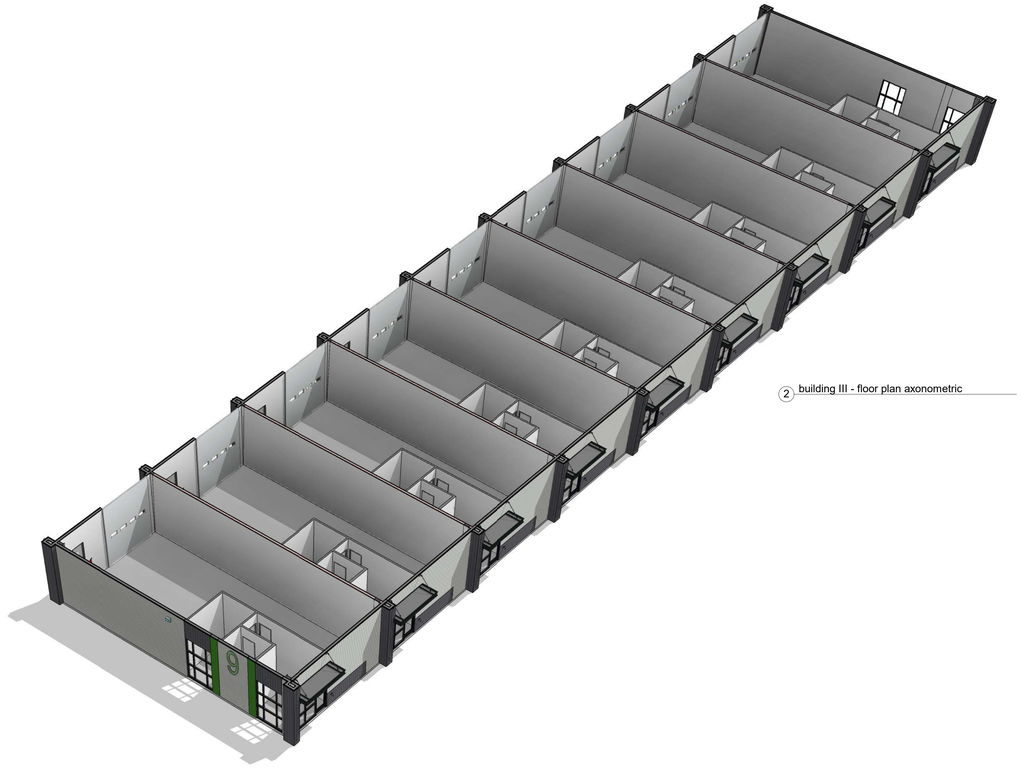
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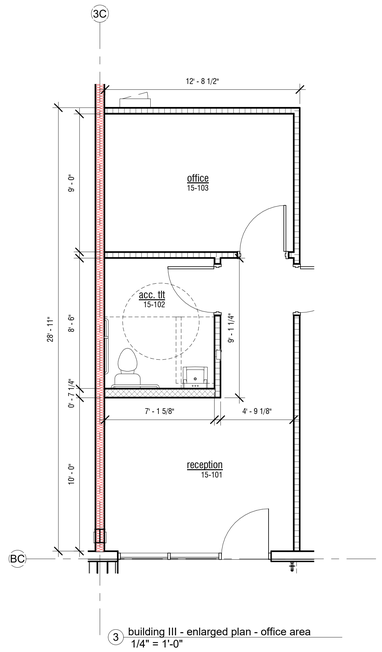
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1 building III - first floor noted plan
1/8" = 1'-0"



2 building III - floor plan axonometric



3 building III - enlarged plan - office area
1/4" = 1'-0"

wall legend

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plan notes

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client:

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project:

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tax map 89 | parcel 046.00 | columbia, tennessee

revisions

date: 05.22.2023
project no.: c23007.00

first floor noted & dimensioned plan - bldg type III

a130

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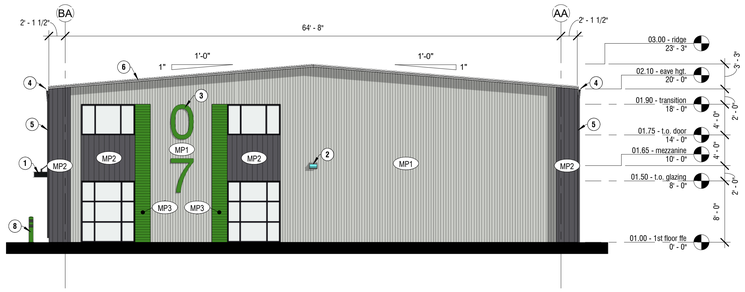
1 plan south building elevation
1/8" = 1'-0"

SCALE: 1/8" = 1' - 0" (ARCH:E1 30"x42")

0' 4' 8' 16' 24'



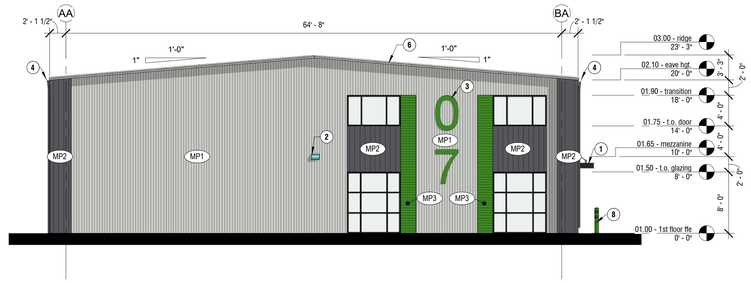
2 bldg type I - southwest corner perspective
elevation



3 bldg I - east elevation
1/8" = 1'-0"

SCALE: 1/8" = 1' - 0" (ARCH:E1 30"x42")

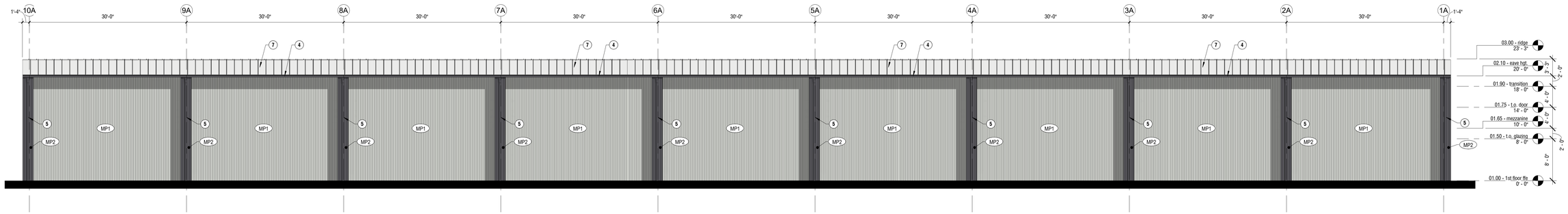
0' 4' 8' 16' 24'



4 plan west building elevation
1/8" = 1'-0"

SCALE: 1/8" = 1' - 0" (ARCH:E1 30"x42")

0' 4' 8' 16' 24'



5 bldg I - north elevation
1/8" = 1'-0"

SCALE: 1/8" = 1' - 0" (ARCH:E1 30"x42")

0' 4' 8' 16' 24'

building I percentage of exterior materials

NORTH ELEVATION

metal panel | | 5383 sf (100%)
- **a) HWP-12 | | stone white - 4988 sf (92.66%)**
- **b) HWP-12 | | graphite - 395 sf (7.34%)**
- **c) 7" reveal panel | | direct green - 0 sf (0%)**

door/window openings | | 0 sf (0%)
- **a) storefront window assembly | | black - 0 sf (0%)**
- **b) storefront door assembly | | black - 0 sf (0%)**
- **c) roll up door assembly | | white - 0 sf (0%)**

total facade | | 5383 sf

WEST ELEVATION

metal panel | | 1311 sf (88.64%)
- **a) HWP-12 | | stone white - 1042 sf (70.45%)**
- **b) HWP-12 | | graphite - 197 sf (13.32%)**
- **c) 7" reveal panel | | direct green - 72 sf (4.87%)**

door/window openings | | 168 sf (11.36%)
- **a) storefront window assembly | | black - 168 sf (11.36%)**
- **b) storefront door assembly | | black - 0 sf (0%)**
- **c) roll up door assembly | | white - 0 sf (0%)**

total facade | | 1,479 sf

SOUTH ELEVATION

metal panel | | 2359 sf (43.82%)
- **a) HWP-12 | | stone white - 1345 sf (24.99%)**
- **b) HWP-12 | | graphite - 1014 sf (18.84%)**
- **c) 7" reveal panel | | direct green - 0 sf (0%)**

door/window openings | | 3024 sf (56.18%)
- **a) storefront window assembly | | black - 1026 sf (19.06%)**
- **b) storefront door assembly | | black - 234 sf (4.35%)**
- **c) roll up door assembly | | white - 1764 sf (32.77%)**

total facade | | 5383 sf

EAST ELEVATION

metal panel | | 1311 sf (88.64%)
- **a) HWP-12 | | stone white - 1042 sf (70.45%)**
- **b) HWP-12 | | graphite - 197 sf (13.32%)**
- **c) 7" reveal panel | | direct green - 72 sf (4.87%)**

door/window openings | | 168 sf (11.36%)
- **a) storefront window assembly | | black - 168 sf (11.36%)**
- **b) storefront door assembly | | black - 0 sf (0%)**
- **c) roll up door assembly | | white - 0 sf (0%)**

total facade | | 1,479 sf

TOTAL PROJECT

total metal panel | | 10,364 sf (75.52%)

total storefront door & windows | | 3,360 sf (24.48%)

overall facade totals | | 13,724 sf

material legend

MP1 — MANUFACTURER: PAC-CLAD
PRODUCT: PRECISION SERIES HWP-12
COLOR NAME: STONE WHITE

MP2 — MANUFACTURER: PAC-CLAD
PRODUCT: PRECISION SERIES HWP-12
COLOR NAME: GRAPHITE

MP3 — MANUFACTURER: PAC-CLAD
PRODUCT: 7" REVEAL WALL PANEL
COLOR NAME: SW6924 DIRECT GREEN

MP4 — MANUFACTURER: PAC-CLAD
METAL TRIM / GUTTER / DOWNSPOUT
COLOR NAME: GRAPHITE

elevation keynotes

1. ENTRY CANOPY - REFER TO DETAIL X/AXXX.
2. EXTERIOR LIGHTING - REFER TO ELECTRICAL
3. EXTERIOR BUILDING GRAPHICS - PAINT USING SW6924 DIRECT GREEN
4. ALUMINUM BOX GUTTER
5. ALUMINUM DOWNSPOUT
6. PEMB METAL FASCIA
7. PEMB METAL ROOF - WHITE
8. STEEL BOLLARD WITH CONCRETE FILL - SEE DETAIL X/AXXX PAINT SW6924 DIRECT GREEN

zone 4 - building envelope requirements fenestration

METAL FRAMING		
FIXED FENESTRATION		0.38
OPERABLE FENESTRATION		0.45
ENTRANCE DOORS		0.77
SHGC - ALL FRAME TYPES		
ORIENTATION	**SEW**	**NORTH**
SHGC: PF < 0.20	0.36	0.48
SHGC: 0.20 < PF < 0.5	0.43	0.43
SHGC: PF > 0.5	0.58	0.58

zone 4 - building envelope requirements

ROOFS	
INSULATION ENTIRELY ABOVE DECK	R-19 + R-11 LINER SYSTEM
WALLS ABOVE GRADE	
METAL BUILDING	R-13 + R-13 CONTINUOUS
SLAB-ON-GRADE FLOORS	
UNHEATED SLABS	R-10 FOR 24IN. BELOW
OPAQUE DOORS	
SWINGING	U-0.61

general elevation notes

STOREFRONT ASSEMBLIES:

1. DOOR AND WINDOW FRAMES TO BE KAWNEER ALUMINUM FINISH NO. 29 - (BLACK ALUMINUM)
2. GLAZING TO BE 1" INSULATED PPG SOLAR CLEAR AND SOLARBAN 60 (3) CLEAR

hvac screening

ALL HVAC EQUIPMENT WILL BE ADEQUATELY SCREENED BY LANDSCAPING OR FENCING. SEE MECHANICAL DRAWINGS FOR LOCATIONS.

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office | 615.570.2780

client:

KURE PROPERTIES

project:

zero industrial park | office - warehoue

nine-unit office warehouse | single unit office warehouse

tax map 89 | parcel 046.00 | | columbia, tennessee

revisions

date: 05.22.2023
project no.: c23007.00

building I elevations - nine (9) unit building

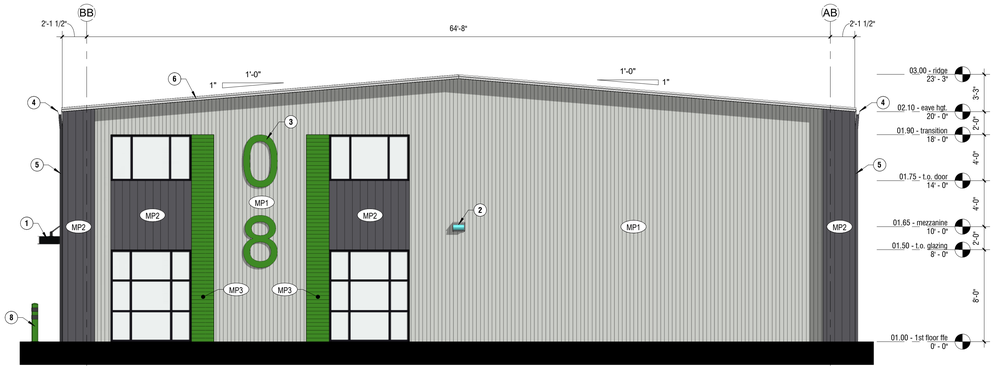
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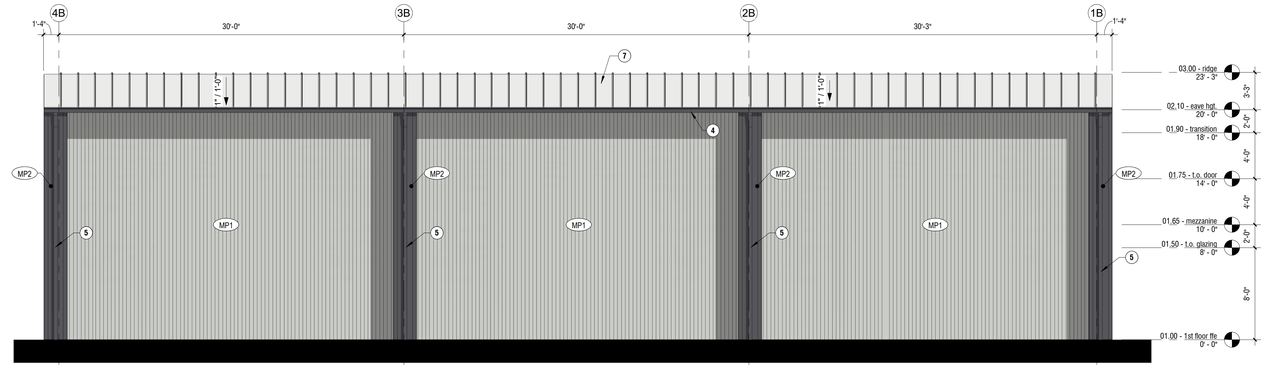
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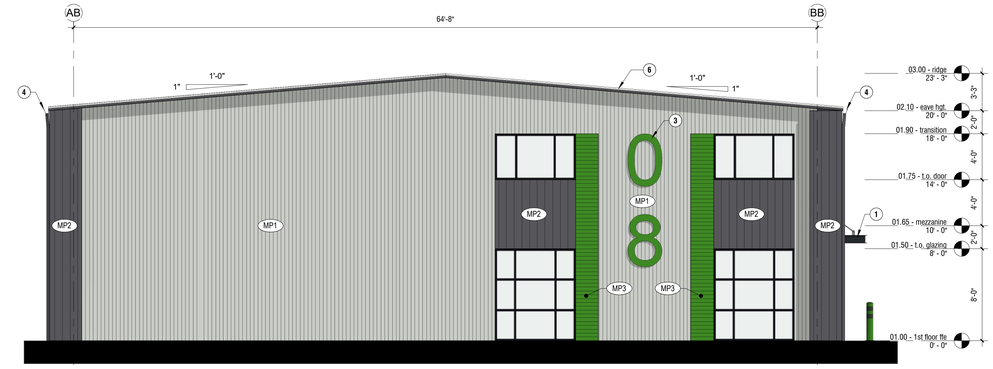
1 bldg type II - south elevation
3/16" = 1'-0"



2 bldg II - east elevation
3/16" = 1'-0"



3 bldg II - north elevation
3/16" = 1'-0"



4 bldg II - west elevation
3/16" = 1'-0"



5 bldg II - southwest corner perspective elevation

building II percentage of exterior materials

NORTH ELEVATION

metal panel | | 1836 sf (100%)
- **a) HWP-12 | | stone white - 1678 sf (91.39%)**
- **b) HWP-12 | | graphite - 158 sf (8.61%)**
- **c) 7" reveal panel | | direct green - 0 sf (0%)**

door/window openings | | 0 sf (0%)
- **a) storefront window assembly | | black - 0 sf (0%)**
- **b) storefront door assembly | | black - 0 sf (0%)**
- **c) roll up door assembly | | white - 0 sf (0%)**

total facade | | 1836 sf

WEST ELEVATION

metal panel | | 1311 sf (88.64%)
- **a) HWP-12 | | stone white - 1042 sf (70.45%)**
- **b) HWP-12 | | graphite - 197 sf (13.32%)**
- **c) 7" reveal panel | | direct green - 72 sf (4.87%)**

door/window openings | | 168 sf (11.36%)
- **a) storefront window assembly | | black - 168 sf (11.36%)**
- **b) storefront door assembly | | black - 0 sf (0%)**
- **c) roll up door assembly | | white - 0 sf (0%)**

total facade | | 1,479 sf

SOUTH ELEVATION

metal panel | |828 sf (45.09%)
- **a) HWP-12 | | stone white - 446 sf (24.29%)**
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door/window openings | | 1008 sf (54.91%)
- **a) storefront window assembly | | black - 342 sf (18.63%)**
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total facade | | 1,479 sf

TOTAL PROJECT

total metal panel | | 5,286 sf (79.73%)

total storefront door & windows | | 1,344 sf (20.27%)

overall facade totals | | 6,630 sf

material legend

MP1 — MANUFACTURER: PAC-CLAD
PRODUCT: PRECISION SERIES HWP-12
COLOR NAME: STONE WHITE

MP2 — MANUFACTURER: PAC-CLAD
PRODUCT: PRECISION SERIES HWP-12
COLOR NAME: GRAPHITE

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PRODUCT: 7" REVEAL WALL PANEL
COLOR NAME: SW6924 DIRECT GREEN

MP4 — MANUFACTURER: PAC-CLAD
METAL TRIM / GUTTER / DOWNSPOUT
COLOR NAME: GRAPHITE

elevation keynotes

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7. PEMB METAL ROOF - WHITE
8. STEEL BOLLARD WITH CONCRETE FILL - SEE DETAIL X/AXXX PAINT SW6924 DIRECT GREEN

zone 4 - building envelope requirements fenestration

METAL FRAMING

FIXED FENESTRATION	0.38
OPERABLE FENESTRATION	0.45
ENTRANCE DOORS	0.77

SHGC - ALL FRAME TYPES

ORIENTATION	SEW	NORTH
SHGC: PF < 0.20	0.36	0.48
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zone 4 - building envelope requirements

ROOFS	
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WALLS ABOVE GRADE	
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UNHEATED SLABS	R-10 FOR 24IN. BELOW
OPAQUE DOORS	
SWINGING	U-0.61

general elevation notes

STOREFRONT ASSEMBLIES:

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client:

KURE PROPERTIES

project:

zero industrial park | office - warehoue
nine-unit office warehouse | single unit office warehouse
tax map 89 | parcel 046.00 | columbia, tennessee

revisions

date: 05.22.2023
project no.: c23007.00

building II elevations - three (3) unit building

a420

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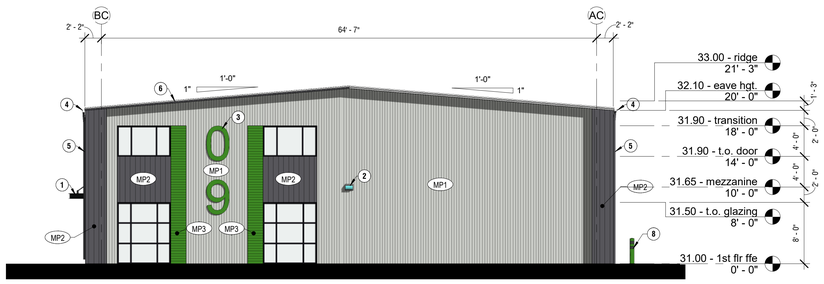
1 bldg III - plan south elevation
1/8" = 1'-0"

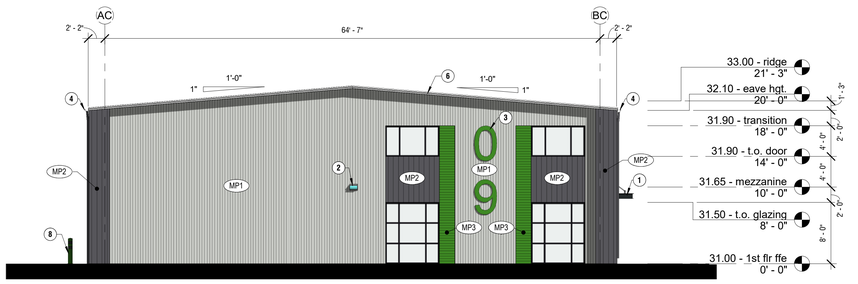
SCALE: 1/8" = 1' - 0" (ARCH:E1 30"x42")

0' 4' 8' 16' 24'



02 bldg III - southwest corner perspective





3 bldg III - plan east elevation
1/8" = 1'-0"

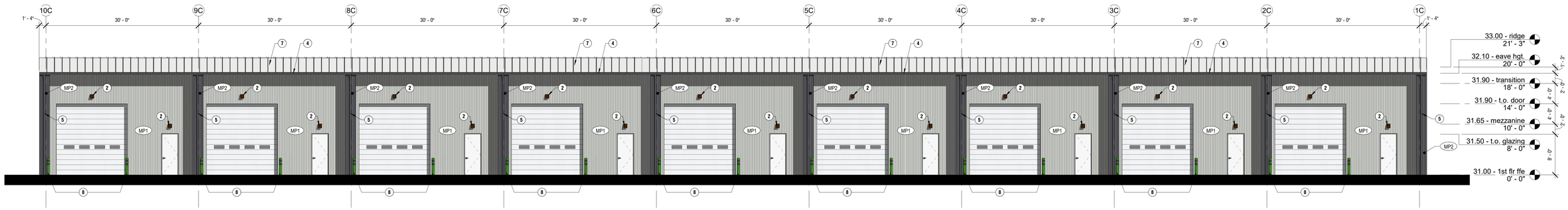
SCALE: 1/8" = 1' - 0" (ARCH:E1 30"x42")

0' 4' 8' 16' 24'

4 bldg III - plan west elevation
1/8" = 1'-0"

SCALE: 1/8" = 1' - 0" (ARCH:E1 30"x42")

0' 4' 8' 16' 24'



5 bldg III - plan north elevation
1/8" = 1'-0"

SCALE: 1/8" = 1' - 0" (ARCH:E1 30"x42")

0' 4' 8' 16' 24'

building III percentage of exterior materials

NORTH ELEVATION

metal panel | | 1836 sf (100%)
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total facade | | 1836 sf

WEST ELEVATION

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PRODUCT: PRECISION SERIES HWP-12
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COLOR NAME: SW6924 DIRECT GREEN

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METAL TRIM / GUTTER / DOWNSPOUT
COLOR NAME: GRAPHITE

elevation keynotes

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zone 4 - building envelope requirements fenestration

METAL FRAMING		
FIXED FENESTRATION		0.38
OPERABLE FENESTRATION		0.45
ENTRANCE DOORS		0.77
SHGC - ALL FRAME TYPES		
ORIENTATION	**SEW**	**NORTH**
SHGC: PF < 0.20	0.36	0.48
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zone 4 - building envelope requirements

ROOFS	
INSULATION ENTIRELY ABOVE DECK	R-19+R-11 LINER SYSTEM
WALLS ABOVE GRADE	
METAL BUILDING	R-13+R-13 CONTINUOUS
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UNHEATED SLABS	R-10 FOR 24IN. BELOW
OPAQUE DOORS	
SWINGING	U-0.61

general elevation notes

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hvac screening

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client:

KURE PROPERTIES

project:

zero industrial park | office - warehoue
nine-unit office warehouse | single u
tax map 89 | parcel 046.00 | | col

revisions

date: 05.22.2023
project no.: c23007.00

building III elevations - nine (9) unit building

a430

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1 plan southwest building perspective



2 plan southeast building perspective



3 building II - southeast building perspective



4 building II - southwest building perspective

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nine-unit office warehouse | single unit office warehouse

tax map 89 | parcel 046.00 | | columbia, tennessee

revisions

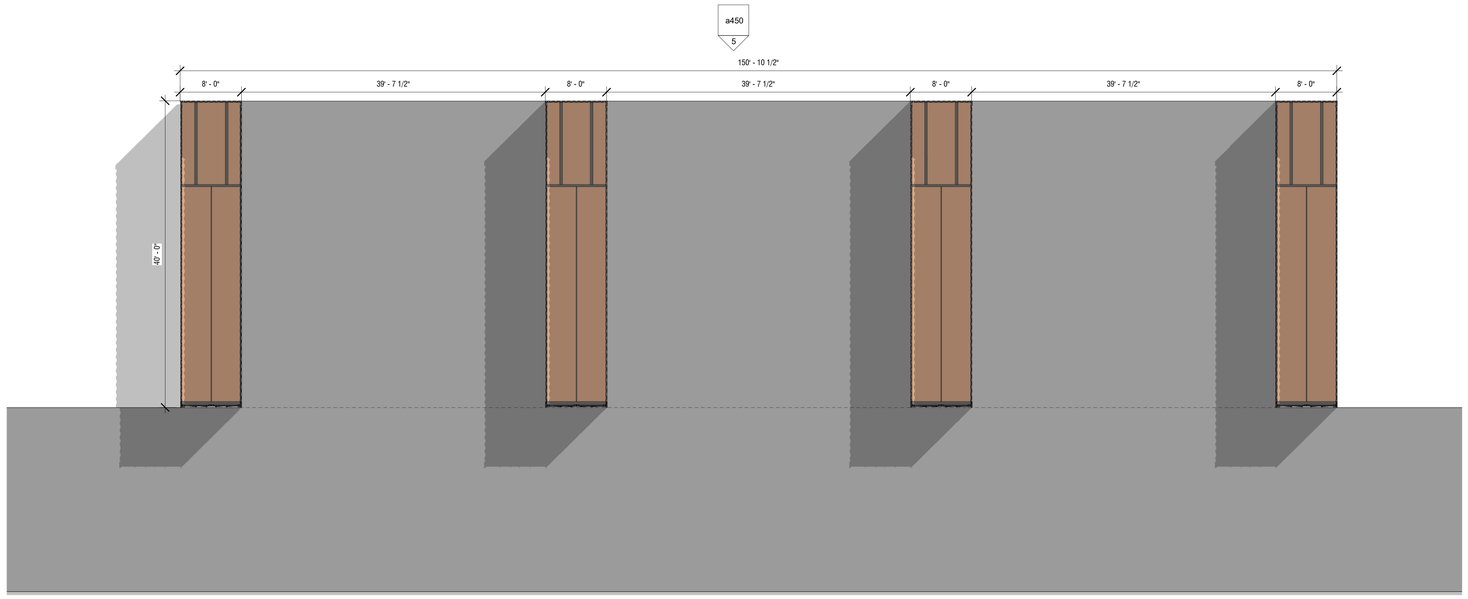
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project no.: c23007.00

building perspectives

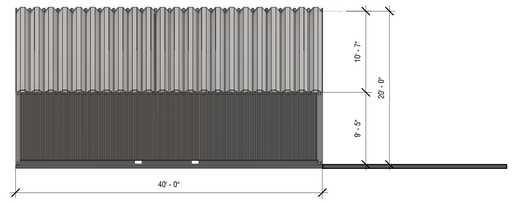
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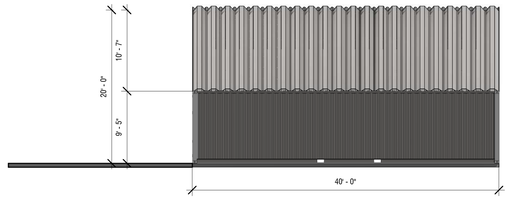
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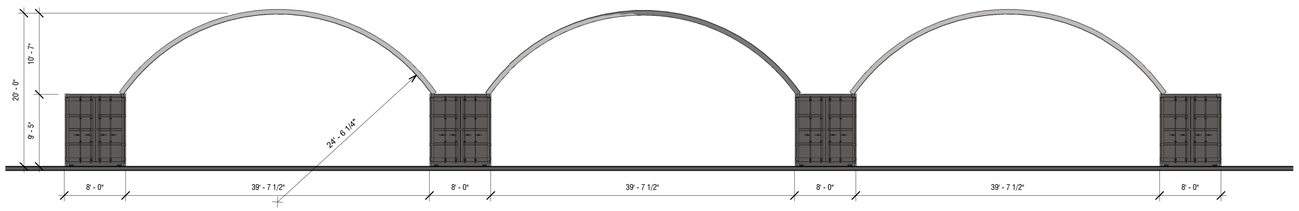
1 quonset hut office and lay in area
1/8" = 1'-0"



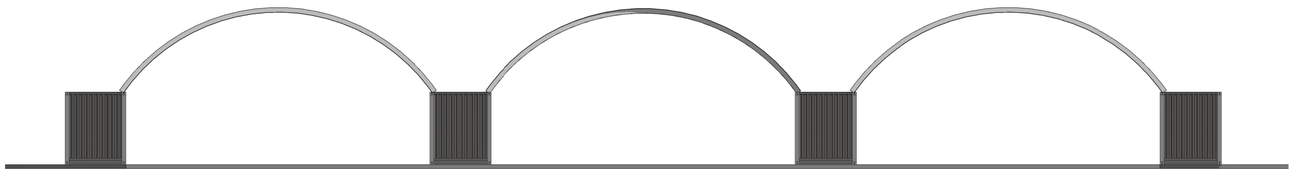
2 side elevation (left) - quonset hut
1/8" = 1'-0"



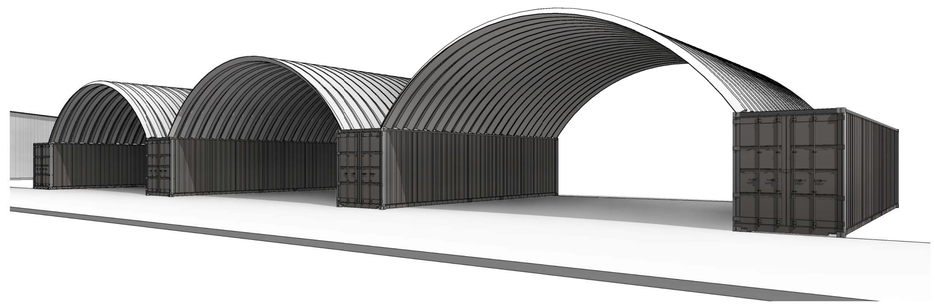
3 side elevation (right) - quonset hut
1/8" = 1'-0"



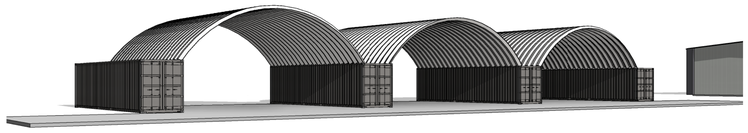
4 front elevation - quonset hut
1/8" = 1'-0"



5 rear elevation - quonset hut
1/8" = 1'-0"



detail perspective view of typical quonset bay
6



7 perspective view of typical quonset grouping

material legend

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PRODUCT: PRECISION SERIES HWP-12
COLOR NAME: STONE WHITE

MP2 — MANUFACTURER: PAC-CLAD
PRODUCT: PRECISION SERIES HWP-12
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zone 4 - building envelope requirements fenestration

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SWINGING	U-0.61

general elevation notes

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hvac screening

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client:

KURE PROPERTIES

project:

zero industrial park | office - warehouse

nine-unit office warehouse | single unit office warehouse

tax map 89 | parcel 046.00 | | columbia, tennessee

revisions

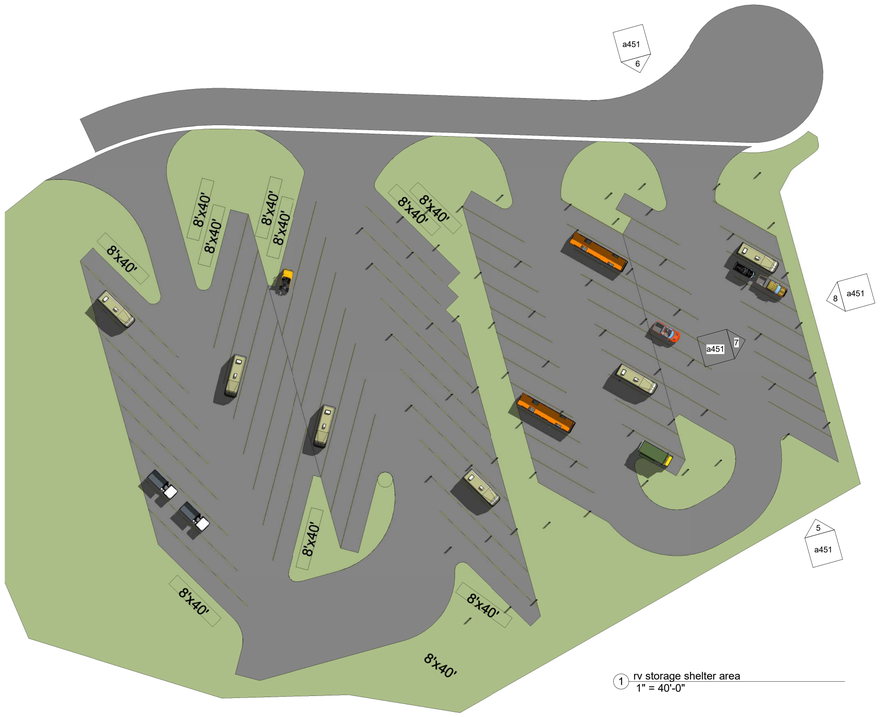
date: 05.22.2023
project no.: c23007.00

accessory structures - quonset hut office & lay in

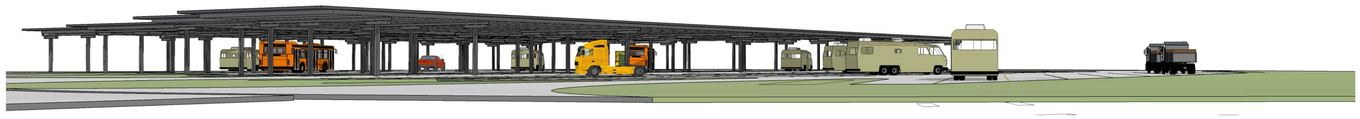
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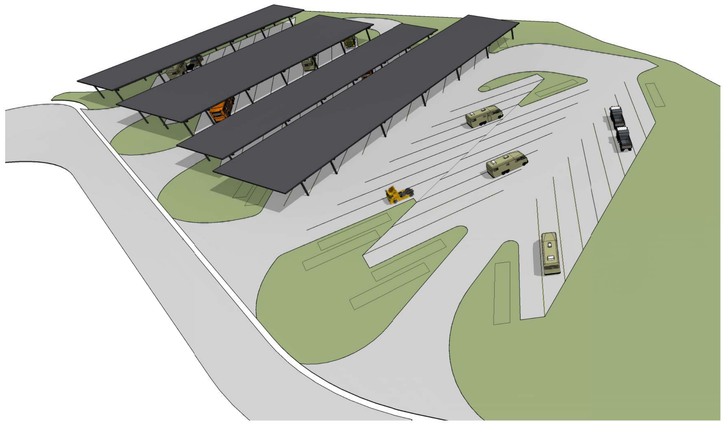
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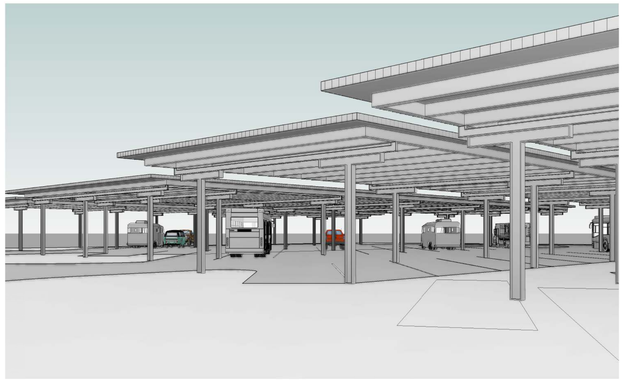
1 rv storage shelter area
1" = 40'-0"



2 streetview perspective at entry to rv storage



3 aerial persective of rv storage area



4 streetview persepective detail view

elevation keynotes

1. ENTRY CANOPY - REFER TO DETAIL X/AXXX.
2. EXTERIOR LIGHTING - REFER TO ELECTRICAL
3. EXTERIOR BUILDING GRAPHICS - PAINT USING SW6924 DIRECT GREEN
4. ALUMINUM BOX GUTTER
5. ALUMINUM DOWNSPOUT
6. PEMB METAL FASCIA
7. PEMB METAL ROOF - WHITE
8. STEEL BOLLARD WITH CONCRETE FILL - SEE DETAIL X/AXXX PAINT SW6924 DIRECT GREEN

zone 4 - building envelope requirements fenestration

METAL FRAMING

FIXED FENESTRATION	0.38
OPERABLE FENESTRATION	0.45
ENTRANCE DOORS	0.77

SHGC - ALL FRAME TYPES

ORIENTATION	SEW	NORTH
SHGC: PF < 0.20	0.36	0.48
SHGC: 0.20 < PF < 0.5	0.43	0.43
SHGC: PF > 0.5	0.58	0.58

zone 4 - building envelope requirements

ROOFS	
INSULATION ENTIRELY ABOVE DECK	R-19+R-11 LINER SYSTEM
WALLS ABOVE GRADE	
METAL BUILDING	R-13+R-13 CONTINUOUS
SLAB-ON-GRADE FLOORS	
UNHEATED SLABS	R-10 FOR 24IN. BELOW
OPAQUE DOORS	
SWINGING	U-0.61

general elevation notes

STOREFRONT ASSEMBLIES:

1. DOOR AND WINDOW FRAMES TO BE KAWNEER ALUMINUM FINISH NO. 29 - (BLACK ALUMINUM)
2. GLAZING TO BE 1" INSULATED PPG SOLAR CLEAR AND SOLARBAN 60 (3) CLEAR

hvac screening

ALL HVAC EQUIPMENT WILL BE ADEQUATELY SCREENED BY LANDSCAPING OR FENCING. SEE MECHANICAL DRAWINGS FOR LOCATIONS.

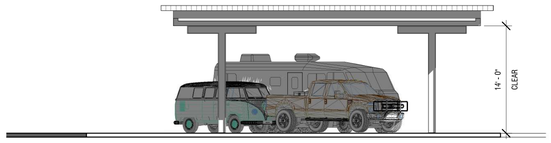
material legend

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PRODUCT: PRECISION SERIES HWP-12
COLOR NAME: STONE WHITE

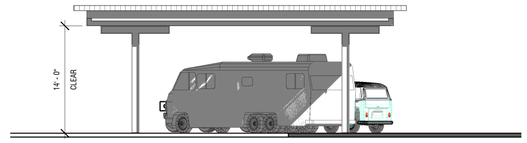
MP2 — MANUFACTURER: PAC-CLAD
PRODUCT: PRECISION SERIES HWP-12
COLOR NAME: GRAPHITE

MP3 — MANUFACTURER: PAC-CLAD
PRODUCT: 7" REVEAL WALL PANEL
COLOR NAME: SW6924 DIRECT GREEN

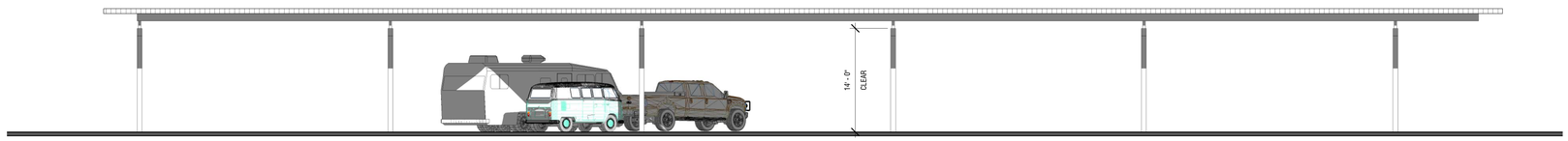
MP4 — MANUFACTURER: PAC-CLAD
METAL TRIM / GUTTER / DOWNSPOUT
COLOR NAME: GRAPHITE



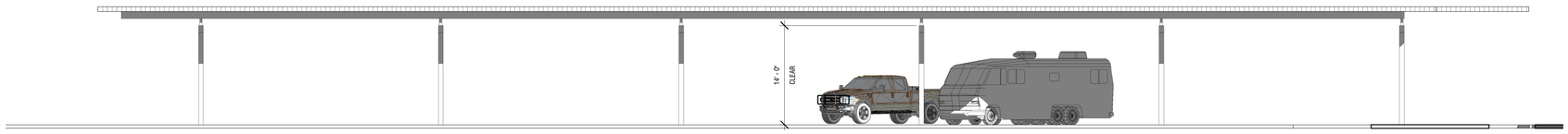
5 rv shelter 1 - plan south elevation
1/8" = 1'-0"



6 rv shelter 1 - plan north elevation
1/8" = 1'-0"



7 rv shelter 1 - plan west elevation
1/8" = 1'-0"



8 rv shelter 1 - plan east elevation
1/8" = 1'-0"

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www.consorti4.com
office | 615.570.2780

client:

KURE PROPERTIES

project:

zero industrial park | office - warehoue
nine-unit office warehouse | single unit office warehouse
tax map 89 | parcel 046.00 | | columbia, tennessee

revisions

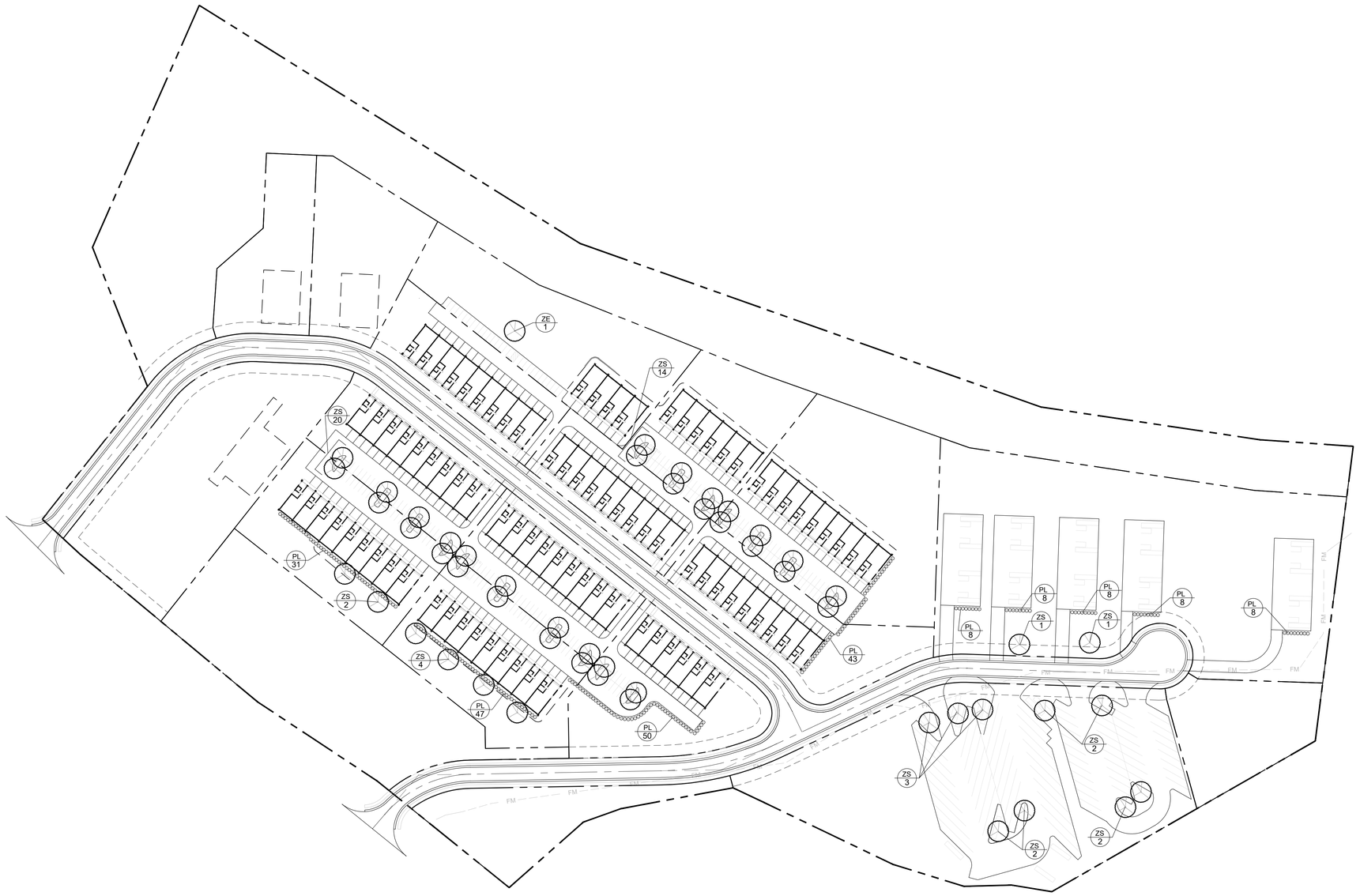
date: 05.22.2023
project no.: c23007.00

accessory structures - rv storage & shelter

a451

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N

GRAPHIC SCALE
(IN FEET)
100 0 50 100 200
SCALE: 1" = 100'

PLANT SCHEDULE								
QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT	LEAF	SPACING	NOTES
SHADE TREES								
52	ZS	ZELKOVA SERRATA	JAPANESE ZELKOVA	2.5 CAL, B/B	14'-16'	DECIDUOUS	AS SHOWN	CLEAR TRUNK HEIGHT OF 4' ABOVE GROUND
SHRUBS								
226	PL	PRUNUS LAUROCERASUS	CHERRY LAUREL	30"		EVERGREEN	36" O.C.	

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # 47119C0165E OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00

APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 05/22/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: CES

LANDSCAPE PLAN

MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

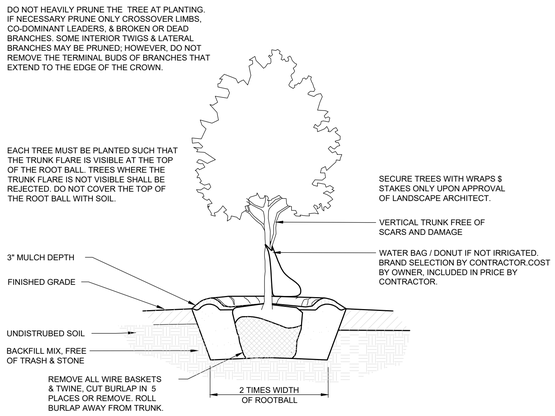
ZERO INDUSTRIAL PARK ROAD

CLAYTON E. STEWART
REGISTERED
AGRICULTURE
LANDSCAPE ARCHITECT
05/22/2023

PROJECT
22-0431

SHEET
L - 1.0

T-SQUARE ENGINEERING

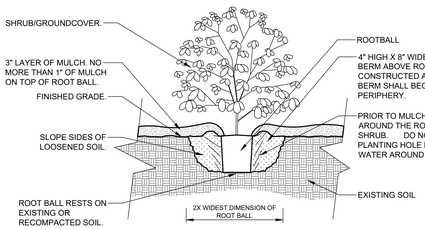


ALL PLANT MATERIAL TO MEET AMERICAN STANDARDS FOR NURSERY STOCK & ANSI Z60.1; LATEST EDITION STANDARDS.

24" RADIUS MULCH RING ON ALL PROPOSED TREES
8" DIA. MULCH RING IF IN LAWN, NO MULCH AT TRUNK.

DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE



SHRUB PLANTING DETAIL

NOT TO SCALE

GENERAL NOTES:

1. UTILITY SERVICES 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. 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.
7. CONTRACTOR TO REPAIR ANY PAVEMENTS, CURBS, AND OTHER IMPROVEMENTS DAMAGED AS A RESULT OF LANDSCAPE INSTALLATION ACTIVITY
8. THE LOCATION OF ALL PLANT MATERIALS SHOWN ON THE PLAN SHALL BE FIELD LOCATED AND STAKED/FLAGGED BY THE CONTRACTOR.
9. DO NOT MAKE SUBSTITUTIONS REGARDING PLANT SIZES OR SPECIES WITHOUT WRITTEN PERMISSION FROM THE OWNER OR LANDSCAPE ARCHITECT.
10. REMOVE ALL METAL BASKETS, STRINGS AND OTHER TIES FROM TREES.
11. 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 AND GROUND COVER.
12. 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.
13. 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.
14. 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.
15. TREE BALLS SHALL HAVE A MINIMUM DIAMETER IN FEET EQUAL TO 10" FOR EACH CALIPER INCH OF THE TREE.
16. 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.
17. 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.
18. 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. ALL PLANTING BEDS AND TREE AND SHRUB PLANTINGS SHALL RECEIVE A MINIMUM
19. 3" DEEP SHREDDED HARDWOOD MULCH LAYER. CONTRACTOR IS RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL INSTALLED PLANT MATERIAL, INCLUDING GRASS AREAS, UNTIL FINAL ACCEPTANCE BY OWNER.
20. WATER ALL PLANT MATERIAL AT TIME OF PLANTING. ALL PLANT MATERIAL IS TO BE GUARANTEED FOR ONE (1) YEAR. GUARANTEE PERIOD STARTS FROM DATE OF FINAL ACCEPTANCE.
21. 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.
22. 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.
23. 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.

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 048.00

APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS		
NO.	DATE	

DATE: 05/22/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: CES

LANDSCAPE DETAILS

MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

CLAUDIS E. STEWART
REGISTERED LANDSCAPE ARCHITECT
TENNESSEE
05/22/2023

PROJECT
22-0431

SHEET
L - 2.0

RS Miller Group LLC

April 16, 2023

Kure Properties
4817 Murfreesboro Road
Arrington, TN 37014

Attention: Mr. Ryan Kure
ryan@kureconstruction.com

Subject: **REPORT OF GEOTECHNICAL EXPLORATION SERVICES**
Proposed Storage / Flex Office Complex
Industrial Park Road
Columbia, TN
RSMG Project No. 23-007G

Dear Mr. Kure:

We are submitting the results of the subsurface exploration performed for the above referenced development in Columbia, Tennessee. The exploration was performed in accordance with Proposal No. G23-025 dated March 14, 2023 for the above referenced project.

The following report presents our findings and recommendations for the proposed development. Should you have any questions regarding this report, or if we can be of any further assistance, please contact us at your convenience.

Sincerely,

RS Miller Group, LLC

David J. Perry, P.E.
VP/Partner
TN 117490

DRAFT

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APPENDICES:

Appendix A: **Figures**
Appendix B: **Observation Trench Records**

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1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this subsurface exploration was to characterize the subsurface conditions for the design and construction of and provide geotechnical-related recommendations for the proposed storage/parking development in Columbia, Tennessee.

1.2 PROJECT INFORMATION AND SITE DESCRIPTION

Initial project information was provided in a March 9, 2023, email transmission from Mr. Cole Gaumnitz (T-Square) to Mr. David Perry (RS Miller Group LLC). Attached to the email was a drawing titled "Site Plan/Preliminary Plat", dated February 13, 2023 showing the property outline, existing elevations and the proposed site plan. We understand from the provided drawing that the proposed development is planning to develop a storage complex and flex office complex on the approximate 46-acre site located at the above location in Columbia, Tennessee. The proposed structures are assumed to be 1-story wood or steel-framed structures with slab-on-grade, or a series of shipping container cubes. Wall veneers are assumed to consist of vinyl, brick, stone or combination thereof. We assume cut depths and fill thicknesses will be less than about 5 feet. Column and wall structural loadings have been assumed to not exceed 50 kips, and 1 kip per linear foot, respectively.

At the time of site reconnaissance, the subject area exists as an open field with grass cover and sporadic patches of trees. From onsite observations, the existing topography is classified as gently sloping down from the northern perimeter to the south. Provided topographic information shows existing grades ranging from elevation 646 feet to elevation 600 feet.

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1.3 SCOPE OF STUDY

This geotechnical exploration involved a site reconnaissance, field exploration, and engineering analysis. The following sections of this report present discussions of the field exploration, site conditions, and conclusions and recommendations. Following the text of this report, figures and test logs are provided in the appendices.

2.0 EXPLORATION

2.1 FIELD EXPLORATION

Due to the relatively light loads anticipated for the proposed construction, the site subsurface conditions were explored with forty observation trenches (OT-1 through OT-40) at or near the locations shown by Figure 4 in Appendix A, on April 4 and 5, 2023. The observation trench locations were located by RSMG personnel in the field by measuring off known site reference points on the provided site plan and utilizing GPS coordinates extrapolated from Google Earth. The depths reference the ground surface elevations at the site that existed at the time of the exploration.

The observation trench locations were advanced using a subcontracted excavator. Sampling of overburden soils was accomplished using a hand-held pocket penetrometer (PP). A pocket penetrometer is a spring-loaded plunger with a set amount of resistance on a small-diameter plunger which is used to probe small samples of soil extracted from the excavation. When the plunger is pushed into the soil sample a set distance, the central graduated shaft of the penetrometer is forced into the penetrometer housing a certain distance. The amount of force

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required to insert the plunger into to soil the set distance is then read from the central shaft and correlated to a soil strength (Qu) in units of tons per square foot (tsf). These PP-values are indicated on the summary of observation trench logs at the testing depth and provide an indication of the relative density of granular materials and strength of cohesive materials. The observation trenches were monitored for the presence of groundwater and backfilled upon completion. Minor settlement should be expected of the backfilled material over time. Detailed observation trench records are presented in Appendix B.

3.0 SUBSURFACE CONDITIONS

3.1 GEOLOGIC CONDITIONS

The subject site is located within the Central Basin Physiographic Province of Middle Tennessee. The Central Basin is an elliptical basin surrounded by the Highland Rim. The Basin is subdivided into inner and outer sections. The inner section is generally smooth and gently rolling in contrast to the higher and more deeply dissected outer Basin. Bedrock is primarily Ordovician limestone, shale and dolomite in the outer Basin. The inner basin is generally covered with limestone with patches of bare platy rock and thin topsoil with glade areas supporting red cedar trees. The region is moderate in karst development with many sinkholes and some large caves present, notably in the glade areas.

The USGS Geologic Map of the Godwin Quadrangle (1964) indicates this particular site is underlain by the Ordovician-aged Hermitage and Carters Limestone Formation. The Hermitage formation is typically a medium to dark bluish gray limestone which may contain calcarenite (i.e., sandstone derived from the erosion of older limestone). Native soil (residuum) formed by the solution weathering of the parent limestone is typically a brownish sandy to silty clay. These soils typically

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average 5 to 20 feet thick and are generally underlain by a zone of extensively weathered parent rock. The weathered zone typically includes "floating" boulders in the soil overburden, as well as cutters and pinnacles. Cutters are slots in the bedrock mass, which are typically filled with wet, soft, unconsolidated soils. Pinnacles are more-resistant, relatively narrow bedrock features protruding from the bedrock surface up into the soil overburden.

The Carters formation is typically a hard, light gray to brown, cryptocrystalline (i.e., microscopically crystalline), medium- to thick-bedded, brittle limestone with occasional thin chert lenses. The limestone weathers to produce a 5- to 10-foot thick layer of native soil (residuum) which is typically an orange to brown silty clay. The soil/rock interface may be irregular due to a layer of rounded boulders at the base of the soil zone.

The limestone bedrock of the Hermitage and Carters Limestone formation is typically susceptible to solution weathering or the creation of karst features, such as sinkholes. Therefore, extreme variances in the bedrock profile can exist, mainly due to the erratic weathering patterns of the bedrock mass. Our experience with sinkhole development is that it will often follow trends particular to a given area. These trends can be lineated along joint patterns in the bedrock, concentration along or within an elevation range, or they can develop randomly. Review of area trends can provide data helpful in identifying potential sinkhole areas.

The limestones underlying the project site are typically jointed and fractured. Solution weathering proceeds deeper along the fractures, enlarging them into irregular slots. Thus, over long periods of geologic time, the solution process gradually changes the rock mass into an irregular assortment of rock pinnacles and blocks with deep slots between. The solution process may also create occasional horizontal caves and vertical chimney-like holes. The formation of these solution voids in the mass sometimes leads to surface depressions (sinks) caused by collapse or subsidence of the

material overlying the void, or by the ravelling or erosion of soils into the void. Our experience indicates solution weathering is prominent in the Carters Limestone in low lying areas and along the contacts with the upper Hermitage Limestone Formation. Review of the USGS Godwin Quadrangle, Tennessee, Topographic Quadrangle Map (2016) indicated the presence of several closed depressions both onsite and within 1 mile of the site. However, we note the scale of the map often precludes mapping of smaller depressions.



Photo 1: Typical Carters Bedrock Exposure



Photo 2: Typical Hermitage Bedrock Exposure

3.2 SUBSURFACE CONDITIONS

At ground surface elevation in each test location, topsoil or limestone gravel fill underlain by residual soil consisting of orange-brown lean and fat clay was encountered in the test locations to termination or refusal depths. Black coal fines were encountered in a few locations within the northeastern quadrant of the site. Excavator refusal or termination depths ranged from less than 1 foot to 9 feet below the existing ground surface elevation.

3.2.1 Fill Soils

Existing fill soils were encountered in observation trenches OT-27, OT-30, OT-32, OT-36, and OT-37 to depths ranging from about 4 inches to 7 feet below existing ground surface elevation before encountering residual soil or refusal. Fill is material which has been transported to their current position and placed by man. The fill generally consisted of either black coal fines, debris from an apparent burn pit, or material consistent with being backfilled from the surrounding area to fill in an apparent sinkhole. The material properties made it impossible to determine in-situ consistencies, however, the material appeared to be uncompacted.

3.2.2 Residual Soils

Below the fill material, residual soil was encountered to termination or refusal depths ranging from less than 1 foot to 9 feet below the existing ground surface elevation. Residual soil is formed from the in-place weathering of the underlying bedrock. The residual soil encountered at the site generally consisted of a moist orange-brown to brown lean clay with iron oxide nodules and weathered rock. The residual soil transitioned into a fat clay with depth. The pocket penetrometer (PP) values of the residual soils ranged from 0.5 tons per square foot (tsf) to 3 tsf, indicating a consistency of firm to stiff.

3.2.3 Refusal Conditions

Excavator refusal materials were encountered in 30 observation trenches at depths ranging from less than 1 foot to 7.5 feet below the existing ground surface elevation. Refusal is a designation applied to any material that cannot be penetrated by the excavator bucket. Excavator refusal may indicate dense gravel or cobble layers, boulders, rock ledges or pinnacles, rock fill/boulders, or the top of continuous bedrock. Based on our observations during field activities, we anticipate the refusal is due to encountering limestone bedrock. The following table presents the observation trench refusal depths at the observation trench locations:

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TEST LOCATION REFUSAL DEPTHS					
Location	**Refusal Depth (feet)**	**Location**	**Refusal Depth (feet)**	**Location**	**Refusal Depth (feet)**
OT-1	2	OT-15	-	OT-29	1
OT-2	1.5	OT-16	2	OT-30	7
OT-3	-	OT-17	7	OT-31	7
OT-4	5.5	OT-18	5.5	OT-32	7
OT-5	-	OT-19	5	OT-33	4.5
OT-6	4.5	OT-20	2.5	OT-34	1
OT-7	3.5	OT-21	-	OT-35	3
OT-8	TNP	OT-22	5	OT-36	7
OT-9	1	OT-23	5.5	OT-37	-
OT-10	TNP	OT-24	TNP	OT-38	3
OT-11	2	OT-25	TNP	OT-39	7.5
OT-12	-	OT-26	0.5	OT-40	3.5
OT-13	4	OT-27	1.5	-	-
OT-14	7	OT-28	3.5	-	-

Note: Refusal depths are taken from the ground surface elevation at the time of exploration and should be considered approximate. Depths rounded to the nearest ½ foot. TNP=tests not performed due to inaccessible rock borrow pit.

3.2.4 Subsurface Water

Subsurface water was not observed in the excavations at the end of exploration activities. However, discontinuous zones of perched water may exist within the overburden. Subsurface water levels may fluctuate due to seasonal change in precipitation amounts or due to construction activities in the area. The groundwater presented in this report is the information

that was collected at the time of our field activities. We recommend that the contractor determine the actual groundwater level at the site at the time of the construction activities.

3.2.5 General

The above subsurface description is of a generalized nature to highlight the major subsurface stratification features and material characteristics. The test logs included in Appendix B should be reviewed for specific information at individual test locations. The depth and thickness of the subsurface strata indicated on the test records were generalized from and interpolated between test locations. The transition between materials will be more or less gradual than indicated and may be abrupt. Information on actual subsurface conditions exists only at the specific test locations and is relevant to the time the exploration was performed. Variations may occur and should be expected between test locations. The stratification lines were used for our analytical purposes and, unless specifically stated otherwise, should not be used as the basis for design or construction cost estimates.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 SITE ASSESSMENT

Based on the results of our subsurface exploration, this site is adaptable for the proposed development. However, as with most sites, some inherent geotechnical issues should be considered during the construction phases. These issues include the presence of previously placed undocumented fill material, differential bearing conditions, moisture sensitive soils, and karst geology.

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4.1.1 Existing Fill Soil

Existing fill soils were encountered in several excavations to depths ranging from about 0.5 to 7 feet below existing ground surface elevation before encountering residual soils or termination. We are not aware, nor have we been provided with testing or observation records for the fill. Accordingly, there are certain risks associated with construction on these types of fill. The risk primarily consists of excessive and/or non-uniform settlement caused by extensive zones or pockets of soft, loose, or uncompacted material. We do note from onsite observations of the site and excavations, the fill does not appear to have undergone any level of compactive effort during initial placement. The following sections provide recommendations with addressing the undocumented fill.

4.1.2 Differential Bearing Concerns

Based on the results of our subsurface exploration and the anticipated cut and fill requirements to develop the site, the possibility exists that a portion of the building foundations may bear in firm to stiff residual clay soil overburden material, while a portion could be bearing on limestone bedrock. This condition will result in a differential bearing condition which could result in excessive differential settlement across the buildings. As a result, recommendations are provided in later sections that will help reduce the risk of adverse differential settlement.

4.1.3 Moisture Sensitive Soils

The subgrade soils at this site consist of clayey soils. These materials will be sensitive to changes in moisture contents. As such, it will be advantageous to perform grading activities during periods of warm and/or dry weather. Areas that are wet or become unstable can possibly be repaired by scarification and re-compaction if grading occurs during warm, dry weather. If grading occurs during wet, cool weather, we expect that additional soft soil at or near the surface soils across the site will have to be undercut and replaced.

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4.1.4 Karst Geology

A certain degree of risk with respect to sinkhole formation and subsidence should be considered with any site located within geologic areas underlain by potentially soluble rock units. While a detailed effort to assess the potential for sinkhole formation on this site was beyond the scope of this evaluation, our site observations and observation trenches encountered obvious indications of sinkhole development. Furthermore, review of the USGS Godwin Topographic Quadrangle Map indicated the presence of one closed depression onsite and several more within 1 mile of the site. If any karst feature is located in an area that requires fill materials to achieve subgrade elevation, the observed karst feature should be stripped of clayey soil and the "throat" be remediated prior to structural backfill. RSMG should be retained to provide recommendations during development activities.

4.2 SITE PREPARATION

4.2.1 Subgrade

Vegetation, topsoil, organic soils, asphalt, existing utilities, rock fragments greater than 6 inches, and other debris should be removed from the proposed foundation construction area prior to commencing construction activities. Any undocumented fill encountered in foundation excavations during construction should also be removed and replaced with properly compacted structural fill. Exact depths of remediation can be determined by onsite RSMG personnel at time of construction, if desired. If unsuitable soil conditions are encountered, these unsuitable materials should be remediated at the geotechnical engineer's recommendations. We recommend the owner carry a contingency budget undercutting and replacement for the development of this project. The actual depth of removal should be determined by a representative of the geotechnical engineer at the time of construction.

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4.2.2 Structural Soil Fill

Material considered suitable for use as structural fill should be clean soil free of organics, trash, and other deleterious material, containing no rock fragments greater than 6 inches in any one dimension. Preferably, structural soil fill material should have a standard Proctor (ASTM D698) maximum dry density of 90 pcf or greater and a plasticity index (PI) of 35 percent or less. Materials with a PI greater than 35 percent are susceptible to volume changes with changes in moisture content. Volume changes in the foundation subgrade can cause structural distress in buildings, floor slabs, and pavements. Material to be used as structural fill should be tested by the geotechnical engineer to confirm that it meets the project requirements before being placed.

Structural fill should be placed in loose, horizontal lifts not exceeding 8 inches in thickness. Each lift should be compacted to at least 95 percent of the soil's maximum dry density per the standard Proctor method (ASTM D698) and within the range of minus (-) 2 percent to plus (+) 2 percent of the optimum moisture content. Each lift should be tested by geotechnical personnel to confirm that the contractors' method is capable of achieving the project requirements before placing any subsequent lifts. Any areas, which have become soft or frozen, should be removed before additional structural fill is placed. Structural soil fill placement should be accomplished under the full-time or near full-time observation of a representative of the geotechnical engineer.

4.2.3 Shotrock Fill Materials

Shotrock fill, with acceptable gradation, can be used as structural fill. Shotrock utilized as structural fill should be well graded with a maximum rock size of 12 inches and be placed in lifts not to exceed 18 inches thick. Shotrock of this size should be placed at depths deeper than 4 feet below planned subgrade levels in the building area. The rock or stone should have a maximum particle size of 8-inches in the largest dimension up to proposed subgrade (from minus 4 feet below subgrade up to subgrade) when mixed with satisfactory material.

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Shotrock fill should have adequate fines to effectively "choke" the larger rock pieces, adequately filling voids or open spaces. The larger rock pieces should lie flat and not overlap each other. The percentage of soil in the fill should be limited to a maximum of 10 percent. Shotrock fill should be compacted using complete passes of a D-8 class crawler tractor, or equivalent. A pass is defined as a complete coverage of the surface with the D-8 track overlapping 50 percent. Shotrock fill placement should be accomplished under the full-time observation of a representative of the geotechnical engineer or qualified representative. Alterations to compaction methods may be appropriate if layers are not sufficiently compacted.

4.2.4 Compacted Crushed Stone Fill

Compacted Crushed Stone Fill can also be used, particularly in small, confined excavations where large heavy equipment can't gain access to. Compacted crushed stone fill should be Type A, Class A, and Grading D in accordance with Section 903.05 of the Tennessee Department of Transportation specifications. The crushed stone fill should be placed in loose, horizontal lifts not exceeding 10 inches in loose thickness. Each lift should be compacted to at least 95 percent of maximum dry density per the standard Proctor method (ASTM D698). Each lift should be compacted and tested by geotechnical personnel to confirm that the contractor's method is capable of achieving the project requirements before placing any subsequent lifts.

4.3 FOUNDATIONS

4.3.1 Soil Bearing Foundations

Foundations for the proposed flex office construction can be supported on stiff or better residual soil or properly compacted structural fill materials. Undocumented fill should be undercut and replaced with properly compacted structural fill material. The recommended allowable bearing capacity for design of soil bearing foundations is 2,000 pounds per square foot (psf). We

recommend that continuous foundations be a minimum of 18 inches wide and isolated spread footings be a minimum of 24 inches wide to reduce the possibility of a localized punching shear failure. Exterior footings should be designed to bear at least 12 inches below finished exterior grade to protect against frost.

As mentioned previously, refusal was encountered at depths ranging from a few inches to 9 feet below the existing ground surface elevation. It should be anticipated that competent bedrock may be encountered during foundation and/or utility excavations. If rock is encountered at the foundation bearing elevation over a small portion of the building pads, we recommend the rock be removed to a minimum depth of 12 inches below planned bearing elevation. The area can then be backfilled with properly compacted crushed stone. The crushed stone will help act as a "cushion" to prevent point loading of the foundation. If desired, the foundation designer may also elect to include additional reinforcing steel into the foundations at these transition points to help resist negative moment forces.

Foundation excavations should be opened, the subgrade evaluated, remedial work performed, and concrete placed in an expeditious manner. Exposure to weather often reduces foundation support capabilities, thus necessitating remedial measures prior to concrete placement. It is also important that proper surface drainage be maintained both during construction (especially in terms of maintaining dry footing trenches) and after construction.

4.3.2 Slab-on-Grade

For slab-on-grade construction, the site should be prepared as previously described. The existing subgrade that consists of in-place residual material of a minimum consistency of stiff is suitable for slab subgrade support. We recommend that the subgrade in areas that encounter undocumented fill be undercut to residual soil material and backfilled with properly compacted structural fill

material. The slab subgrade should be topped with a minimum 4-inch layer of crushed stone to act as a capillary moisture block. The subgrade should be proofrolled and approved prior to the placement of the crushed stone. Based on the conditions encountered on this site, we recommend that the floor slabs be designed using a subgrade modulus of 100 pounds per cubic inch (pci). This modulus is appropriate for small diameter loads (i.e. a 1ft x 1ft plate) and should be adjusted for wider loads.

4.3.3 Settlement

Semi-empirical methods were used to calculate settlement (FHWA method). Based on the known conditions, assumed foundation loads, site geology, laboratory testing, and the FHWA settlement calculations, we estimate that properly designed and constructed footings supported on properly placed and compacted fill materials or existing residual material should experience total settlements of less than 1-inch and differential settlement of about ½ inch.

4.4 PAVEMENT RECOMMENDATIONS

4.4.1 Flexible Pavement Design

AASHTO flexible pavement design methods have been utilized for pavement recommendations. Our recommendations are based on the assumptions that the subgrade has been properly prepared as described previously. The exposed subgrade should then be proofrolled to locate any weak areas needing remediation. Traffic intensities were unavailable at the time this report was prepared. We request these be provided once available to confirm the below section thicknesses are appropriate. We have assumed the following pavement design traffic loads:

- 200 passenger cars and pick-ups/day.
- One 3-axle, single unit, delivery truck/week.

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- One 3-axle, single-unit, trash truck/week.
- One 18-wheeler truck/week.

Based on the above assumed loadings, we recommend the following minimum light duty and heavy duty flexible pavement section:

	Recommended Minimum Thickness (Inches)	
Pavement Materials	Light Duty	Heavy Duty
Bituminous Asphalt Surface Mix	1.0*	1.5
Bituminous Asphalt Base Mix	1.5	2.5
Compacted Crushed Aggregate Base	6.0	8.0

*Assumes layer thickness is not less than is recommended by industry standards. From past experience, typical minimum thickness is 1.5 inches. If so, one asphalt section of 2.5 inches thick should be placed.

We recommend a base stone equivalent to a Type A, Class A and Grading D in accordance with Section 903.05 of the Tennessee Department of Transportation specifications. The bituminous asphalt pavement should be Grading "E" as per Section 411 for the surface mix and Grading “B” as per section 307 for the binder mix. Compaction requirements for the crushed aggregate base and the bituminous asphalt pavement should generally follow Tennessee Department of Transportation specifications.

4.4.2 Rigid Pavement Design

The trash dumpster area and other areas of the project site with anticipated heavy vehicle loads, should be constructed with rigid pavements. For the dumpster area, we recommend that the concrete pavement extend to the full length of the truck beyond the edge of the trash compactor pad.

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We recommend the following minimum rigid pavement section:

Pavement Materials	Recommended Minimum Thickness (Inches)
4,000 psi Type I Concrete	5.0
Compacted Crushed Aggregate Base	5.0

Concrete should be reinforced with welded wire fabric or reinforcing bars to assist in controlling cracking from drying shrinkage and thermal changes. Sawed or formed control joints should be included for each 225 sq. ft of area or less (15 ft by 15 ft). Saw cuts should not cut through the welded wire fabric or reinforcing steel and dowels should be utilized at formed and/or cold joints.

4.4.3 General

Our recommendations are based upon the assumption that the subgrade has been properly prepared (as per previous sections) and that any off-site soil borrow to be used to backfill to the final subgrade meets the requirements of structural soil fill section for off-site borrow. Site grading is generally accomplished early in the construction phase. As construction proceeds, the subgrade may be disturbed or degraded due to utility construction, construction traffic, or wetting or drying. As a result, the pavement subgrade may not be suitable for pavement construction and remedial repair may be required prior to pavement construction. The subgrade should be evaluated immediately prior to pavement construction by proofrolling, as discussed earlier in this report. Particular attention should be given to check for weak materials in anticipated high traffic areas, areas that were degraded by construction traffic, or where backfilled borings are located. Weak materials identified should be repaired by undercutting the weak materials and backfilling the undercut with compacted fill. We also recommend the moisture content of the subgrade materials be checked immediately prior to pavement

construction. If the soil moisture content is not within the ranges recommended in this report, the upper 8 inches should be scarified, moisture conditioned to the recommended moisture content range and recompacted. Stability should then be evaluated by proofrolling.

Paved areas should be constructed with positive drainage to direct water off-site and to minimize surface water seeping into the pavement subgrade. The subgrade should have a sufficient slope to promote drainage. In downgrade areas, the basestone should extend through the slope to allow any water entering the basestone a path to exit.

5.0 CONSTRUCTION CONSIDERATIONS

5.1 EXCAVATIONS

Excavator refusal materials were encountered in several of the observation trenches at depths ranging from a few inches to about 9 feet below the existing ground surface elevation. Typically, soils penetrated by the excavator can be removed with conventional earthmoving equipment. However, excavation equipment varies, and field refusal conditions may vary. The weathering process may be erratic and variations in the rock profile may occur in small lateral distances. Therefore, it is possible that some partially weathered rock and/or rock pinnacles or ledges requiring difficult excavation techniques may be encountered in isolated areas of the site between our test locations.

Overblast Concerns

We caution against extensive overblasting in building areas (blasting below finished grade) during the site grading operations. Overblasting typically damages below grade bedrock by fracturing or heaving the rock from its original position. This often creates difficulties for foundations and floor

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slabs supported on these materials by creating voids in the rock unit and greatly reducing the support capacity. Any areas damaged by overblasting should be evaluated by the geotechnical engineer to determine appropriate corrective measures.

Excavation Safety

Excavations should be sloped or shored in accordance with local, state, and federal regulations, including OSHA (29 CFR Part 1926) excavation trench safety standards. The contractor is usually solely responsible for site safety. This information is provided only as a service and under no circumstances should RSMG be assumed to be responsible for construction site safety.

5.2 FOUNDATION CONSTRUCTION

Foundation excavations should be opened, the subgrade evaluated, remedial work performed, and concrete placed in an expeditious manner. Exposure to weather often reduces foundation support capabilities, thus necessitating remedial measures prior to concrete placement. It is also important that proper surface drainage be maintained both during construction (especially in terms of maintaining dry footing trenches) and after construction. Backfill for footings should be placed in accordance with the recommendations for structural fill presented herein.

Foundation subgrade observations should be performed by a RSMG geotechnical engineer, or his qualified representative, so that the recommendations provided in this report are consistent with the site conditions encountered. A dynamic cone penetrometer (DCP) is commonly utilized to provide information that is compared to the data obtained in the geotechnical report. Where unacceptable materials are encountered, the material should be excavated to stiff, suitable soils or remediated at the geotechnical engineer's direction. Observations within rock fill strata may be

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limited to visual inspection only. Typical remedial measures consist of undercutting, overexcavation, or combinations thereof.

5.3 MOISTURE SENSITIVE SOILS

The fine-grained soils encountered at this site will be sensitive to disturbances caused by construction traffic and changes in moisture content. During wet weather periods, increases in the moisture content of the soil can cause significant reduction in the soil strength and support capabilities. Construction traffic patterns should be varied to prevent the degradation of previously stable subgrade. In addition, plastic soils which become wet may be slow to dry and thus significantly retard the progress of grading and compaction activities. We caution if site grading is performed during the wet weather season, methods such as discing and allowing the material to dry will be required to meet the required compaction recommendations. It will, therefore, be advantageous to perform earthwork and foundation construction activities during dry weather.

5.4 DRAINAGE AND SURFACE WATER CONCERNS

To reduce the potential for undercut and construction induced dropouts, water should not be allowed to collect in the foundation excavations, on floor slab areas, or on prepared subgrades of the construction area either during or after construction. Undercut or excavated areas should be sloped to facilitate removal of any collected rainwater, subsurface water, or surface runoff. Positive site surface drainage should be provided to reduce infiltration of surface water around the perimeter of the building structures. The grades should be sloped away from the building structures and surface drainage should be collected and discharged such that water is not permitted to infiltrate the backfill.

5.5 SINKHOLE CORRECTIVE ACTIONS AND CONSIDERATIONS

Sinkholes within the geological setting are common. Therefore, we have included the below recommendations in the event additional evidence is uncovered during construction activities.

During construction and based on our experience, corrective actions can be performed to reduce the potential for sinkhole development at this site. These corrective actions, such as proper grade selection and positive site drainage, would decrease but not eliminate the potential for sinkhole development.

In general, the portions of a site that are excavated to achieve the desired grades will have a higher risk of sinkhole development than the areas that are filled, because of the exposure of relic fractures in the soil to rainfall and runoff. On the other hand, those portions of a site that receive a modest amount of fill (or that have been filled in the past) will have a decreased risk of sinkhole development caused by rainfall because that placement of a cohesive soil fill over these areas effectively caps the area with a relatively impervious "blanket" of remolded soil. Therefore, the recommendations that follow incorporate a modest remedial treatment program designed to make the surface of the soil in excavated areas less permeable.

Although it is our opinion that the risk of ground subsidence associated with sinkhole formation cannot be eliminated, we have found that several measures are useful in site design and development to reduce this potential risk. These measures include:

- Maintaining positive site drainage to route surface waters well away from structural areas both during construction and for the life of the structure.
- The scarification and re-compaction of the upper 6 to 10 inches of soil in earthwork cut areas.

- Verifying that subsurface piping beneath structures is carefully constructed and pressure tested prior to its placement in service.
- The use of lined ditches, particularly in cut areas, to collect and transport surface water to areas away from structures.

Considerations when building within a sinkhole prone area are to provide positive surface drainage away from any proposed building or parking area both during and after construction. Backfill in utility trenches of other excavations should consist of compacted, well-graded material such as dense graded aggregate or compacted on site soils. The use of an open graded stone such as No. 57 stone is not recommended unless the stone backfill is provided an exit path and not allowed to pond, or water is prevented from accessing the backfilled area. If sinkhole conditions are observed, the type of corrective action is most appropriately determined by RSMG on a case-by-case basis.

5.6 SLOPES

Analysis of proposed slopes for stability was not included in the authorized scope of services. If the client would like this service completed for proposed slopes, RSMG can perform these services for an additional fee, upon request. When requested, RSMG will issue an additional services proposal for review and authorization.

6.0 LIMITATIONS

This report has been prepared in accordance with generally accepted geotechnical engineering practice for specific application to this project. This report is for our geotechnical work only. The conclusions and recommendations contained in this report are based upon applicable standards of our practice in this geographic area at the time this report was prepared. No other warranty, express or implied, is made.

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The analyses and recommendations submitted herein are based, in part, upon the data obtained from the exploration. The nature and extent of variations between the soil test borings will not become evident until construction. We recommend that RSMG be retained to observe the project construction in the field. RSMG cannot accept responsibility for conditions which deviate from those described in this report if not retained to perform construction observation and testing. If variations appear evident, then we will re-evaluate the recommendations of this report. In the event that any changes in the nature, design, or location of the structures are planned, the conclusions and recommendations contained in this report will not be considered valid unless the changes are reviewed and conclusions modified or verified in writing. Also, if the scope of the project should change significantly from that described herein, these recommendations may have to be re-evaluated.

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APPENDICES

RS Miller Group LLC

APPENDIX A

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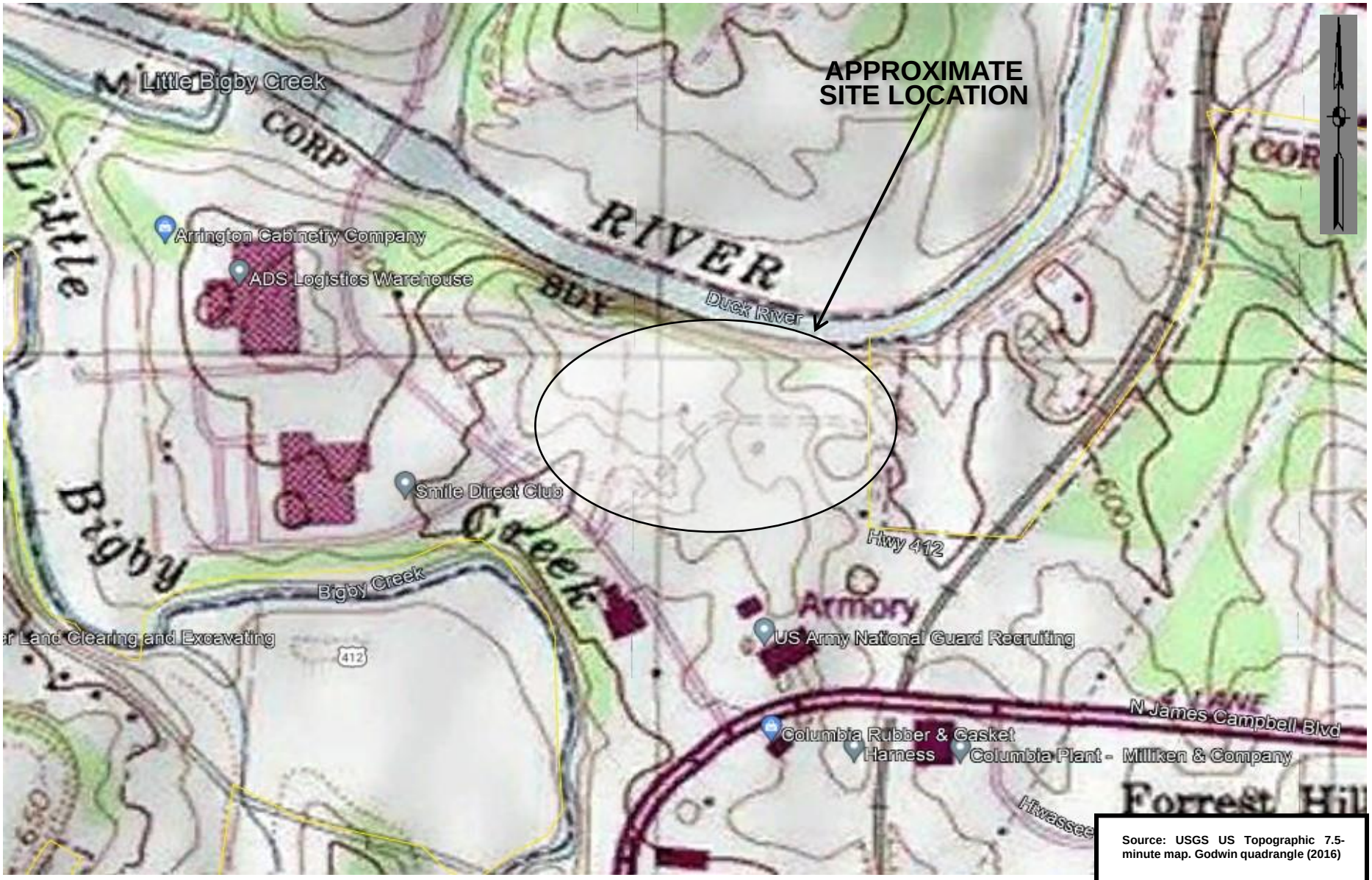


RS Miller Group LLC

Site Vicinity Map
Proposed Parking Complex
Industrial Park Road
Columbia, Tennessee

Project No. 23-027G

Figure No. 1

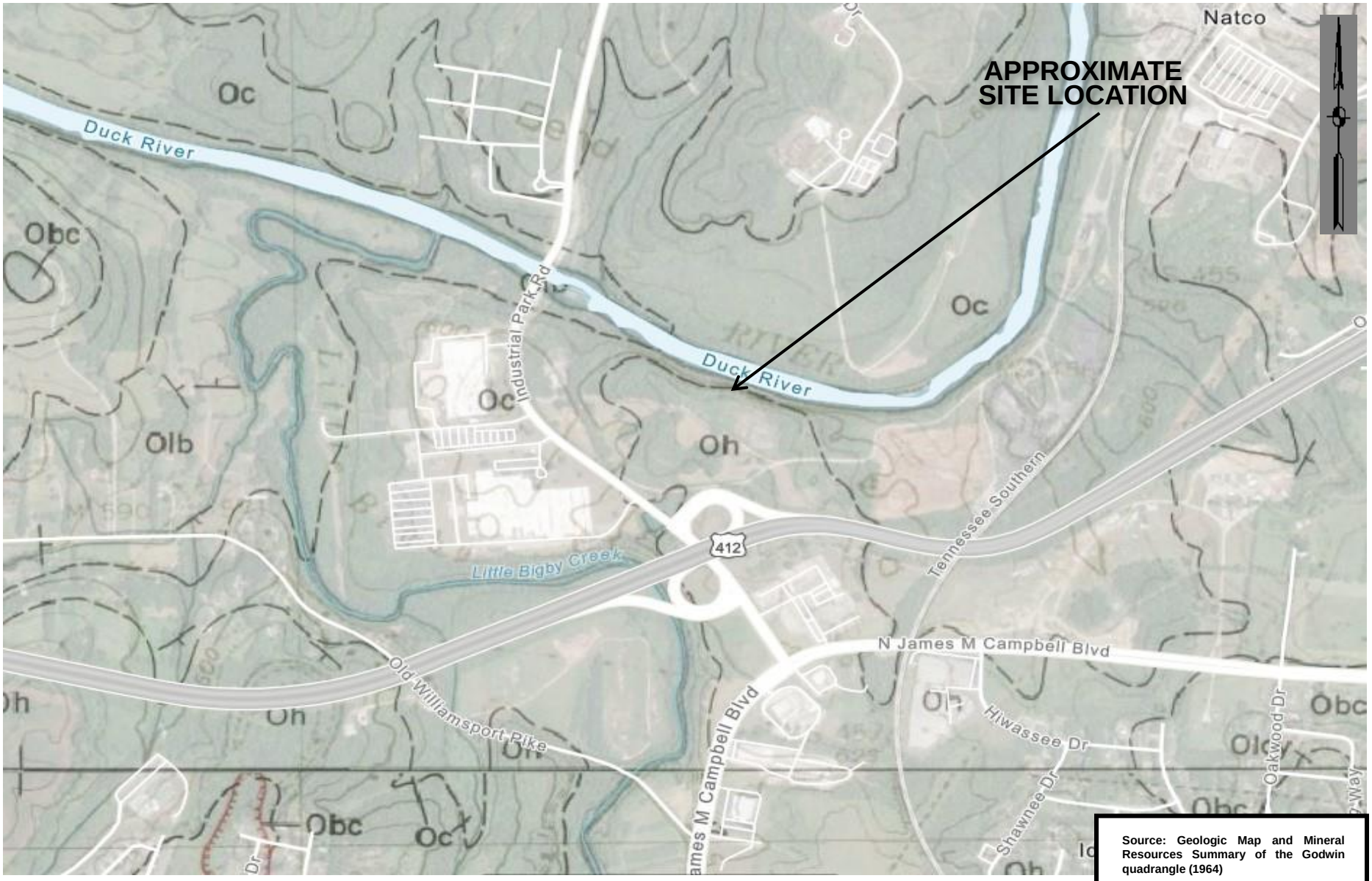


RS Miller Group LLC

Topographic Map
Proposed Parking Complex
Industrial Park Road
Columbia, Tennessee

Project No. 23-027G

Figure No. 2



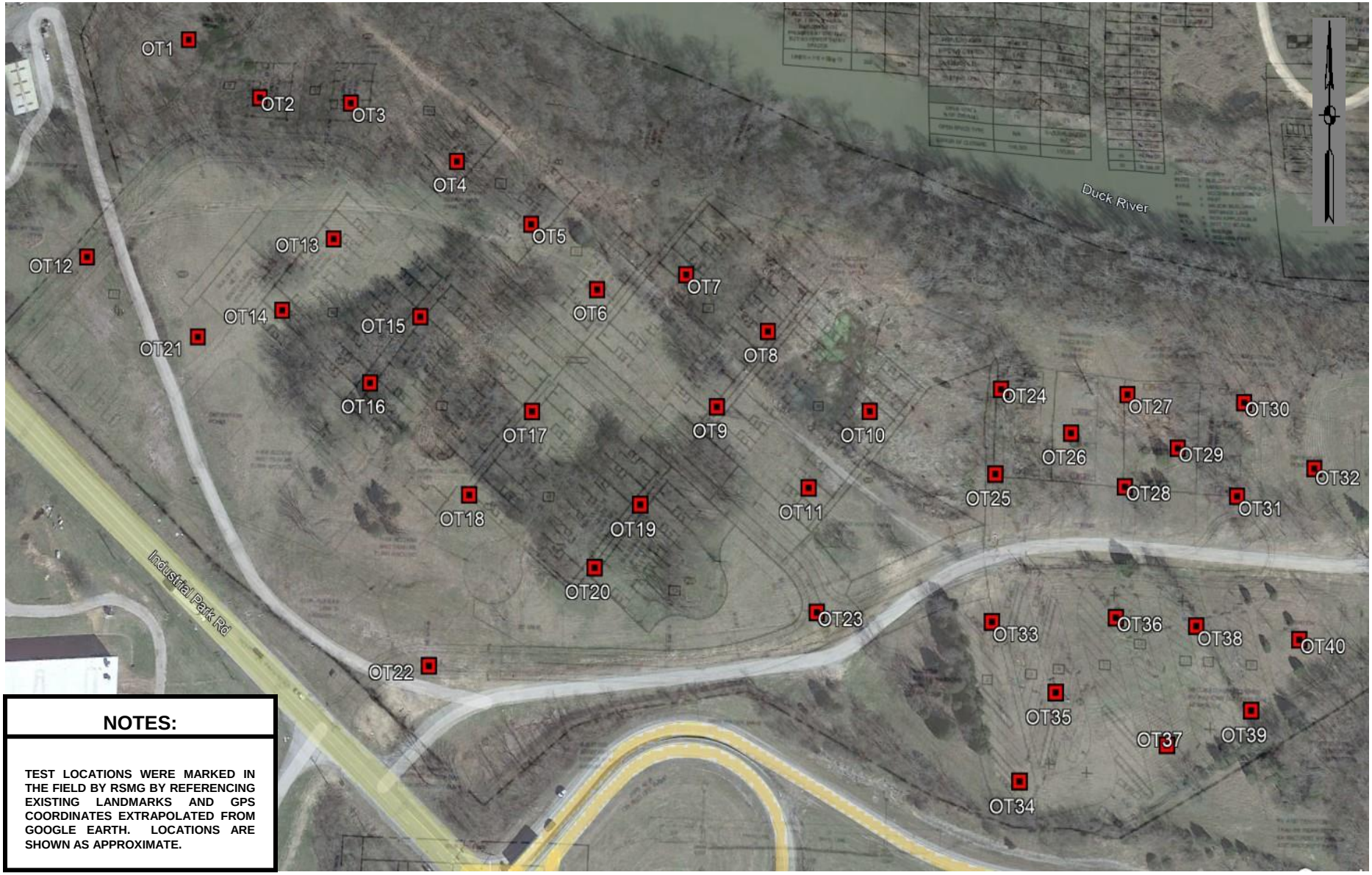
Source: Geologic Map and Mineral Resources Summary of the Godwin quadrangle (1964)

RS Miller Group LLC

Geologic Map
Proposed Parking Complex
Industrial Park Road
Columbia, Tennessee

Project No. 23-027G

Figure No. 3



NOTES:

TEST LOCATIONS WERE MARKED IN THE FIELD BY RSMG BY REFERENCING EXISTING LANDMARKS AND GPS COORDINATES EXTRAPOLATED FROM GOOGLE EARTH. LOCATIONS ARE SHOWN AS APPROXIMATE.

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Test Location Map
Proposed Parking Complex
Industrial Park Road
Columbia, Tennessee

Project No. 23-027G

Figure No. 4









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Site Photographs
Proposed Parking Complex
Industrial Park Road
Columbia, Tennessee

Project No. 23-027G

Figure No. 5

APPENDIX B

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GENERAL NOTES

FINE AND COARSE GRAINED SOIL PROPERTIES

PARTICLE SIZE

BOULDERS:	GREATER THAN 300 mm
COBBLES:	75 mm to 300 mm
GRAVEL:	4.74 mm to 75 mm
COARSE SAND:	2 mm to 4.74 mm
MEDIUM SAND:	0.425 mm to 2 mm
FINE SAND:	0.075 mm to 0.425 mm
SILTS & CLAYS:	LESS THAN 0.075 mm

COARSE GRAINED SOILS (SANDS & GRAVELS)

N-VALUE	RELATIVE DENSITY
0 - 4	VERY LOOSE
5 - 10	LOOSE
11 - 30	MEDIUM DENSE
31 - 50	DENSE
OVER 50	VERY DENSE

FINE GRAINED SOILS (SILTS & CLAYS)

N-VALUE	CONSISTENCY	Qu, PSF
0 - 2	VERY SOFT	0 - 500
3 - 4	SOFT	500 - 1000
5 - 8	FIRM	1000 - 2000
9 - 15	STIFF	2000 - 4000
16 - 30	VERY STIFF	4000 - 8000
OVER 31	HARD	8000 +

STANDARD PENETRATION TEST (ASTM D1586)

THE STANDARD PENETRATION TEST AS DEFINED BY ASTM D1586 IS A METHOD TO OBTAIN A DISTURBED SOIL SAMPLE FOR EXAMINATION AND TESTING AND TO OBTAIN RELATIVE DENSITY AND CONSISTENCY INFORMATON. THE 1.4 INCH I.D./2.0 INCH O.D. SAMPLER IS DRIVEN 3-SIX INCH INCREMENTS WITH A 140 LB. HAMMER FALLING 30 INCHES. THE BLOW COUNTS REQUIRED TO DRIVE THE SAMPLER THE FINAL 2 INCREMENTS ARE ADDED TOGETHER AND DESIGNATED THE N-VALUE. AT TIMES, THE SAMPLER CAN NOT BE DRIVEN THE FULL 18 INCHES. THE FOLLOWING REPRESENTS OUR INTERPRETATION OF THE STANDARD PENETRATION TEST WITH VARIATIONS.

BLOWS/FOOT (N-VALUE)	DESCRIPTION
25	25 BLOWS DROVE SAMPLER 12" AFTER INITIAL 6" SEATING
75/10"	75 BLOWS DROVE SAMPLER 10" AFTER INITIAL 6" SEATING
50/PR	PENETRATION REFUSAL OF SAMPLER AFTER INITIAL 6" SEATING

SAMPLING SYMBOLS

ST:	UNDISTURBED SAMPLE
SS:	SPLIT SPOON SAMPLE
CORE:	ROCK CORE SAMPLE
AU:	AUGER OR BAG SAMPLE

SOIL PROPERTY SYMBOLS

N:	STANDARD PENETRATION, BPF
M:	MOISTURE CONTENT %
LL:	LIQUID LIMIT %
PI:	PLASTICITY INDEX %
Qp:	POCKET PENETROMETER VALUE, TSF
Qu:	UNCONFINED COMPRESSIVE STRENGTH, TSF
DUW:	DRY UNIT WEIGHT, PCF

ROCK PROPERTIES

ROCK QUALITY DESIGNATION (RQD)

PERCENT	QUALITY
90 TO 100	EXCELLENT
75 TO 90	GOOD
50 TO 75	FAIR
25 TO 50	POOR
0 TO 25	VERY POOR

ROCK HARDNESS

VERY SOFT:	ROCK DISINTEGRATES OR EASILY COMPRESSES TO TOUCH: CAN BE HARD TO VERY HARD SOIL.
SOFT:	ROCK IS COHERANT BUT BREAKS EASILY TO THUMB PRESSURE AT SHARP EDGES AND CRUMBLES WITH FIRM HAND PRESSURE.
MODERATELY HARD:	SMALL PIECES CAN BE BROKEN OFF ALONG SHARP EDGES BY CONSIDERABLE HARD THUMB PRESSURE: CAN BE BROKEN BY LIGHT HAMMER BLOWS.
HARD:	ROCK CAN NOT BE BROKEN BY THUMB PRESSURE, BUT CAN BE BROKEN BY MODERATE HAMMER BLOWS.
VERY HARD:	ROCK CAN BE BROKEN BY HEAVY HAMMER BLOWS.

RS Miller Group LLC

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-1	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (2 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, small diameter roots, firm, moist (RESIDUUM)	1.75				
2.0	Trench Refusal at 2 feet					
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-2	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (6 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown to brown, firm, moist (RESIDUUM)	0.75				
2.0	Trench Refusal at 1.5 feet					
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex 0 Industrial Park Road, Columbia, TN RSMG Project No. 23-027G	TEST PIT OBSERVATION RECORD Test Pit No.: OT-3	RS Miller Group LLC
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (8 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, firm to stiff, moist (RESIDUUM)	1.50				
2.0						
3.0		2.25				
4.0						
5.0		2.00				
6.0						
7.0						
8.0	Trench terminated at 8 feet. No refusal.					
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-4	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (8 inches)					
1.0	**Fat CLAY (CH)** - Orange-brown, firm to stiff, moist (RESIDUUM)	1.75				
2.0						
3.0		2.50				
4.0		3.0				
5.0						
6.0	Trench refusal at 5.5 feet.					
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-5	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	Dense Grade Aggregate. Limestone Rock (6 inches)					
1.0						
		1.50				
2.0						
3.0						
		2.00				
4.0	**Lean CLAY (CL)** - Orange-brown, firm to stiff, moist (RESIDUUM)					
5.0						
		2.50				
6.0						
7.0						
8.0						
	Trench terminated at 8 feet. No refusal.					
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-6	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (3 inches)					
1.0	**Fat CLAY (CH)** - Orange-brown, stiff, moist (RESIDUUM)	2.50				
2.0		2.50				
3.0						
4.0		3.0				
5.0	Trench refusal at 4.5 feet.					
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-7	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (4 inches)					
1.0						
2.0	**Fat CLAY (CH)** - Orange-brown, stiff, moist (RESIDUUM)	2.75				
3.0						
4.0	Trench refusal at 3.5 feet.					
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-9	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	Residual Clay/ Limestone Gravel Mix (12 inches)					
1.0	Trench refusal at 1 foot.					
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-11	RS Miller Group LLC
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	ROCK FILL (12 inches)					
1.0						
	Fat CLAY (CH) - Orange-brown, stiff, moist (RESIDUUM)					
2.0	Trench refusal at 2 feet.					
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex 0 Industrial Park Road, Columbia, TN RSMG Project No. 23-027G	TEST PIT OBSERVATION RECORD Test Pit No.: OT-12	RS Miller Group LLC
Date Excavated: April 4 & 5, 2023	Observed By: D Perry	Reviewed By: D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (4 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, firm to stiff, moist (RESIDUUM) Rock pinnacles to either side of the excavation	2.00				
2.0						
3.0		1.50				
4.0						
5.0		1.75				
6.0						
7.0						
8.0	Trench terminated at 7.5 feet. No refusal.					
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-13	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (8 inches)					
1.0	**Fat CLAY (CH)** - Orange-brown, stiff, moist (RESIDUUM)	1.0				
2.0						
3.0		1.75				
4.0	Trench refusal at 4 feet.					
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-14	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (8 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, firm to stiff, moist (RESIDUUM)					
		2.00				
2.0						
3.0		0.75				
4.0						
		0.5				
5.0						
6.0		1.00				
7.0						
	Trench refusal at 7 feet.					
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-15	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (6 inches)					
1.0						
		1.25				
2.0						
3.0						
		1.75				
4.0	**Lean CLAY (CL)** - Orange-brown, firm, moist (RESIDUUM)					
5.0						
		1.75				
6.0						
7.0						
8.0						
	Trench terminated at 8 feet. No refusal.					
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-16	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (4 inches)					
1.0	**Lean CLAY (CH)** - brown, firm, moist (RESIDUUM)	1.75				
2.0	Trench refusal at 2 feet.					
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-17	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (6 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, firm to stiff, moist (RESIDUUM) Pinnacle rock to either side of the excavation.	2.00				
2.0						
3.0		2.50				
4.0	**Fat CLAY (CH)** - Orange-brown, firm, moist (RESIDUUM) Pinnacle rock to either side of the excavation.	1.50				
5.0						
6.0						
7.0	Trench refusal at 7 feet.					
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-18	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (3 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, iron oxide nodules, firm to stiff, moist (RESIDUUM)	1.50				
2.0						
3.0		2.00				
4.0	**Fat CLAY (CH)** - Orange-brown, patches of yellow-gray fat clay, firm, moist (RESIDUUM)					
5.0		1.50				
6.0	Trench refusal at 5.5 feet.					
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-19	RS Miller Group LLC
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (6 inches)					
1.0	**Lean CLAY (CL)** - brown, firm, moist (RESIDUUM)					
		0.50				
2.0						
3.0		1.25				
	Fat CLAY (CH) - red-brown, firm, moist (RESIDUUM)					
4.0						
5.0		1.50				
	Trench refusal at 5 feet.					
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-20	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (6 inches)					
1.0	**Fat CLAY (CH)** - Orange-brown, iron oxide nodules, stiff, moist (RESIDUUM)	2.00				
2.0		2.5				
	Trench refusal at 2.5 feet.					
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-21	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (3 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, firm, moist (RESIDUUM)	1.50				
2.0						
3.0		1.00				
4.0						
5.0		1.00				
6.0						
7.0						
8.0						
9.0						
10.0	Trench terminated at 9 feet. No refusal.					



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex 0 Industrial Park Road, Columbia, TN RSMG Project No. 23-027G	TEST PIT OBSERVATION RECORD Test Pit No.: OT-22	RS Miller Group LLC
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL/Mulch (3 inches)					
1.0	**Fat CLAY (CH)** - yellow-brown, weathered rock, iron oxide nodules, firm, moist (RESIDUUM)	1.00				
2.0						
3.0		1.00				
4.0						
5.0	Trench refusal at 5 feet.					
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-23	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (6 inches)					
1.0	**Lean CLAY (CL)** - brown, stiff, moist (RESIDUUM)					
		2.50				
2.0						
3.0		2.75				
	Fat CLAY (CH) - red-brown, stiff, moist (RESIDUUM)					
4.0						
5.0						
	Trench refusal at 5.5 feet.					
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-26	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL/Weathered Rock (6 inches)					
1.0	Trench refusal at 0.5 foot.					
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-27	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (3 inches)					
1.0	**Fat CLAY (CH)** - red-brown, firm, moist (RESIDUUM)					
	Trench refusal at 1.5 feet.					
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-28	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	COAL FINES - black, dry (4 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, iron oxide nodues, weathered rock, firm, moist (RESIDUUM)					
2.0						
3.0						
4.0	Trench refusal at 3.5 feet.					
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-29	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL/Weathered Rock (12 inches)					
1.0	Trench refusal1 at foot.					
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-30	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	Observed By: D Perry	Reviewed By: D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	COAL FINES - black, dry (12 inches)					
1.0		1.5				
2.0						
3.0						
4.0	**Lean CLAY (CL)** - Orange-brown to brown, iron oxide nodues, weathered rock, firm to stiff, moist (RESIDUUM)	2.25				
5.0						
6.0						
7.0	Trench refusal at 7 feet.					
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex 0 Industrial Park Road, Columbia, TN RSMG Project No. 23-027G	TEST PIT OBSERVATION RECORD Test Pit No.: OT-31	RS Miller Group LLC
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (6 inches)					
1.0	**Lean CLAY (CL)** - Brown to orange-brown, iron oxide nodules, firm to stiff, moist (RESIDUUM)					
		1.5				
2.0						
3.0		2.50				
4.0						
		1.75				
5.0						
6.0						
7.0						
	Trench refusal at 7 feet.					
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-32	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	Observed By: D Perry	Reviewed By: D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
1.0	COAL FINES - black, brick, concrete blocks, trash, rags, dry					
2.0						
3.0						
4.0						
5.0						
6.0						
7.0	Trench refusal at 7 feet.					
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-33	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	SOIL/ROCK MIXED FILL (12 inches)					
1.0		1.75				
2.0						
3.0	**Lean CLAY (CL)** - orange-brown, pockets of gray fat clay, firm to stiff, moist (RESIDUUM)	2.50				
4.0						
5.0	Trench refusal at 4.5 feet.					
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-34	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	LIMESTONE GRAVEL FILL (6 inches)					
	Fat CLAY (CH) - orange-brown, weathered rock, moist (POSSIBLE FILL)					
1.0	Trench refusal at 1 foot.					
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-35	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	Soil/Rock Mixed Fill (8 inches)					
1.0	**Lean CLAY (CL)** - orange-brown, iron oxide nodules, firm, moist (RESIDUUM)	1.75				
2.0						
3.0	Trench refusal at 3 feet.					
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-36	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
1.0	**FILL -** brown with organic inclusions, tree log, weathered rock, very soft, moist **Apparent rock seam. Possible sinkhole.**					
2.0						
3.0						
4.0						
5.0						
6.0						
7.0	Trench refusal at 7 feet.					
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-37	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	LIMESTONE GRAVEL FILL (4 inches)					
1.0	**FILL -** brown to black, charcoal pieces, orange-brown lean clay, brick fragments, rusted metal pieces, limestone boulders up to 30" diameter, cable, wire					
2.0						
3.0						
4.0						
5.0						
6.0						
7.0	Trench refusal at 7 feet.					
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-38	RS Miller Group LLC
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	LIMESTONE GRAVEL (10 inches)					
1.0	**Fat CLAY (CH)** - red-brown, weathered rock, stiff, moist (RESIDUUM)	2.5				
2.0						
3.0	Trench refusal at 3 feet.					
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex 0 Industrial Park Road, Columbia, TN RSMG Project No. 23-027G	TEST PIT OBSERVATION RECORD Test Pit No.: OT-39	RS Miller Group LLC
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	LIMESTONE GRAVEL (6 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, iron oxide nodues, weathered rock, firm to stiff, moist (RESIDUUM)	2.0				
2.0						
3.0		1.50				
4.0		3.0				
5.0						
6.0						
7.0						
8.0	Trench refusal at 7.5 feet.					
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-40	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (6 inches)					
1.0	**Lean CLAY (CH)** - orange-brown, weathered rock,iron oxide nodules, firm to stiff, moist (RESIDUUM)	1.75				
2.0		2.50				
3.0						
4.0	Trench refusal at 3.5 feet.					
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

RS Miller Group LLC

April 16, 2023

Kure Properties
4817 Murfreesboro Road
Arrington, TN 37014

Attention: Mr. Ryan Kure
ryan@kureconstruction.com

Subject: **REPORT OF GEOTECHNICAL EXPLORATION SERVICES**
Proposed Storage / Flex Office Complex
Industrial Park Road
Columbia, TN
RSMG Project No. 23-007G

Dear Mr. Kure:

We are submitting the results of the subsurface exploration performed for the above referenced development in Columbia, Tennessee. The exploration was performed in accordance with Proposal No. G23-025 dated March 14, 2023 for the above referenced project.

The following report presents our findings and recommendations for the proposed development. Should you have any questions regarding this report, or if we can be of any further assistance, please contact us at your convenience.

Sincerely,

RS Miller Group, LLC

David J. Perry, P.E.
VP/Partner
TN 117490

DRAFT

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1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this subsurface exploration was to characterize the subsurface conditions for the design and construction of and provide geotechnical-related recommendations for the proposed storage/parking development in Columbia, Tennessee.

1.2 PROJECT INFORMATION AND SITE DESCRIPTION

Initial project information was provided in a March 9, 2023, email transmission from Mr. Cole Gaumnitz (T-Square) to Mr. David Perry (RS Miller Group LLC). Attached to the email was a drawing titled "Site Plan/Preliminary Plat", dated February 13, 2023 showing the property outline, existing elevations and the proposed site plan. We understand from the provided drawing that the proposed development is planning to develop a storage complex and flex office complex on the approximate 46-acre site located at the above location in Columbia, Tennessee. The proposed structures are assumed to be 1-story wood or steel-framed structures with slab-on-grade, or a series of shipping container cubes. Wall veneers are assumed to consist of vinyl, brick, stone or combination thereof. We assume cut depths and fill thicknesses will be less than about 5 feet. Column and wall structural loadings have been assumed to not exceed 50 kips, and 1 kip per linear foot, respectively.

At the time of site reconnaissance, the subject area exists as an open field with grass cover and sporadic patches of trees. From onsite observations, the existing topography is classified as gently sloping down from the northern perimeter to the south. Provided topographic information shows existing grades ranging from elevation 646 feet to elevation 600 feet.

1.3 SCOPE OF STUDY

This geotechnical exploration involved a site reconnaissance, field exploration, and engineering analysis. The following sections of this report present discussions of the field exploration, site conditions, and conclusions and recommendations. Following the text of this report, figures and test logs are provided in the appendices.

2.0 EXPLORATION

2.1 FIELD EXPLORATION

Due to the relatively light loads anticipated for the proposed construction, the site subsurface conditions were explored with forty observation trenches (OT-1 through OT-40) at or near the locations shown by Figure 4 in Appendix A, on April 4 and 5, 2023. The observation trench locations were located by RSMG personnel in the field by measuring off known site reference points on the provided site plan and utilizing GPS coordinates extrapolated from Google Earth. The depths reference the ground surface elevations at the site that existed at the time of the exploration.

The observation trench locations were advanced using a subcontracted excavator. Sampling of overburden soils was accomplished using a hand-held pocket penetrometer (PP). A pocket penetrometer is a spring-loaded plunger with a set amount of resistance on a small-diameter plunger which is used to probe small samples of soil extracted from the excavation. When the plunger is pushed into the soil sample a set distance, the central graduated shaft of the penetrometer is forced into the penetrometer housing a certain distance. The amount of force

required to insert the plunger into to soil the set distance is then read from the central shaft and correlated to a soil strength (Qu) in units of tons per square foot (tsf). These PP-values are indicated on the summary of observation trench logs at the testing depth and provide an indication of the relative density of granular materials and strength of cohesive materials. The observation trenches were monitored for the presence of groundwater and backfilled upon completion. Minor settlement should be expected of the backfilled material over time. Detailed observation trench records are presented in Appendix B.

3.0 SUBSURFACE CONDITIONS

3.1 GEOLOGIC CONDITIONS

The subject site is located within the Central Basin Physiographic Province of Middle Tennessee. The Central Basin is an elliptical basin surrounded by the Highland Rim. The Basin is subdivided into inner and outer sections. The inner section is generally smooth and gently rolling in contrast to the higher and more deeply dissected outer Basin. Bedrock is primarily Ordovician limestone, shale and dolomite in the outer Basin. The inner basin is generally covered with limestone with patches of bare platy rock and thin topsoil with glade areas supporting red cedar trees. The region is moderate in karst development with many sinkholes and some large caves present, notably in the glade areas.

The USGS Geologic Map of the Godwin Quadrangle (1964) indicates this particular site is underlain by the Ordovician-aged Hermitage and Carters Limestone Formation. The Hermitage formation is typically a medium to dark bluish gray limestone which may contain calcarenite (i.e., sandstone derived from the erosion of older limestone). Native soil (residuum) formed by the solution weathering of the parent limestone is typically a brownish sandy to silty clay. These soils typically

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average 5 to 20 feet thick and are generally underlain by a zone of extensively weathered parent rock. The weathered zone typically includes "floating" boulders in the soil overburden, as well as cutters and pinnacles. Cutters are slots in the bedrock mass, which are typically filled with wet, soft, unconsolidated soils. Pinnacles are more-resistant, relatively narrow bedrock features protruding from the bedrock surface up into the soil overburden.

The Carters formation is typically a hard, light gray to brown, cryptocrystalline (i.e., microscopically crystalline), medium- to thick-bedded, brittle limestone with occasional thin chert lenses. The limestone weathers to produce a 5- to 10-foot thick layer of native soil (residuum) which is typically an orange to brown silty clay. The soil/rock interface may be irregular due to a layer of rounded boulders at the base of the soil zone.

The limestone bedrock of the Hermitage and Carters Limestone formation is typically susceptible to solution weathering or the creation of karst features, such as sinkholes. Therefore, extreme variances in the bedrock profile can exist, mainly due to the erratic weathering patterns of the bedrock mass. Our experience with sinkhole development is that it will often follow trends particular to a given area. These trends can be lineated along joint patterns in the bedrock, concentration along or within an elevation range, or they can develop randomly. Review of area trends can provide data helpful in identifying potential sinkhole areas.

The limestones underlying the project site are typically jointed and fractured. Solution weathering proceeds deeper along the fractures, enlarging them into irregular slots. Thus, over long periods of geologic time, the solution process gradually changes the rock mass into an irregular assortment of rock pinnacles and blocks with deep slots between. The solution process may also create occasional horizontal caves and vertical chimney-like holes. The formation of these solution voids in the mass sometimes leads to surface depressions (sinks) caused by collapse or subsidence of the

material overlying the void, or by the ravelling or erosion of soils into the void. Our experience indicates solution weathering is prominent in the Carters Limestone in low lying areas and along the contacts with the upper Hermitage Limestone Formation. Review of the USGS Godwin Quadrangle, Tennessee, Topographic Quadrangle Map (2016) indicated the presence of several closed depressions both onsite and within 1 mile of the site. However, we note the scale of the map often precludes mapping of smaller depressions.



Photo 1: Typical Carters Bedrock Exposure



Photo 2: Typical Hermitage Bedrock Exposure

3.2 SUBSURFACE CONDITIONS

At ground surface elevation in each test location, topsoil or limestone gravel fill underlain by residual soil consisting of orange-brown lean and fat clay was encountered in the test locations to termination or refusal depths. Black coal fines were encountered in a few locations within the northeastern quadrant of the site. Excavator refusal or termination depths ranged from less than 1 foot to 9 feet below the existing ground surface elevation.

3.2.1 Fill Soils

Existing fill soils were encountered in observation trenches OT-27, OT-30, OT-32, OT-36, and OT-37 to depths ranging from about 4 inches to 7 feet below existing ground surface elevation before encountering residual soil or refusal. Fill is material which has been transported to their current position and placed by man. The fill generally consisted of either black coal fines, debris from an apparent burn pit, or material consistent with being backfilled from the surrounding area to fill in an apparent sinkhole. The material properties made it impossible to determine in-situ consistencies, however, the material appeared to be uncompacted.

3.2.2 Residual Soils

Below the fill material, residual soil was encountered to termination or refusal depths ranging from less than 1 foot to 9 feet below the existing ground surface elevation. Residual soil is formed from the in-place weathering of the underlying bedrock. The residual soil encountered at the site generally consisted of a moist orange-brown to brown lean clay with iron oxide nodules and weathered rock. The residual soil transitioned into a fat clay with depth. The pocket penetrometer (PP) values of the residual soils ranged from 0.5 tons per square foot (tsf) to 3 tsf, indicating a consistency of firm to stiff.

3.2.3 Refusal Conditions

Excavator refusal materials were encountered in 30 observation trenches at depths ranging from less than 1 foot to 7.5 feet below the existing ground surface elevation. Refusal is a designation applied to any material that cannot be penetrated by the excavator bucket. Excavator refusal may indicate dense gravel or cobble layers, boulders, rock ledges or pinnacles, rock fill/boulders, or the top of continuous bedrock. Based on our observations during field activities, we anticipate the refusal is due to encountering limestone bedrock. The following table presents the observation trench refusal depths at the observation trench locations:

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TEST LOCATION REFUSAL DEPTHS					
Location	**Refusal Depth (feet)**	**Location**	**Refusal Depth (feet)**	**Location**	**Refusal Depth (feet)**
OT-1	2	OT-15	-	OT-29	1
OT-2	1.5	OT-16	2	OT-30	7
OT-3	-	OT-17	7	OT-31	7
OT-4	5.5	OT-18	5.5	OT-32	7
OT-5	-	OT-19	5	OT-33	4.5
OT-6	4.5	OT-20	2.5	OT-34	1
OT-7	3.5	OT-21	-	OT-35	3
OT-8	TNP	OT-22	5	OT-36	7
OT-9	1	OT-23	5.5	OT-37	-
OT-10	TNP	OT-24	TNP	OT-38	3
OT-11	2	OT-25	TNP	OT-39	7.5
OT-12	-	OT-26	0.5	OT-40	3.5
OT-13	4	OT-27	1.5	-	-
OT-14	7	OT-28	3.5	-	-

Note: Refusal depths are taken from the ground surface elevation at the time of exploration and should be considered approximate. Depths rounded to the nearest ½ foot. TNP=tests not performed due to inaccessible rock borrow pit.

3.2.4 Subsurface Water

Subsurface water was not observed in the excavations at the end of exploration activities. However, discontinuous zones of perched water may exist within the overburden. Subsurface water levels may fluctuate due to seasonal change in precipitation amounts or due to construction activities in the area. The groundwater presented in this report is the information

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that was collected at the time of our field activities. We recommend that the contractor determine the actual groundwater level at the site at the time of the construction activities.

3.2.5 General

The above subsurface description is of a generalized nature to highlight the major subsurface stratification features and material characteristics. The test logs included in Appendix B should be reviewed for specific information at individual test locations. The depth and thickness of the subsurface strata indicated on the test records were generalized from and interpolated between test locations. The transition between materials will be more or less gradual than indicated and may be abrupt. Information on actual subsurface conditions exists only at the specific test locations and is relevant to the time the exploration was performed. Variations may occur and should be expected between test locations. The stratification lines were used for our analytical purposes and, unless specifically stated otherwise, should not be used as the basis for design or construction cost estimates.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 SITE ASSESSMENT

Based on the results of our subsurface exploration, this site is adaptable for the proposed development. However, as with most sites, some inherent geotechnical issues should be considered during the construction phases. These issues include the presence of previously placed undocumented fill material, differential bearing conditions, moisture sensitive soils, and karst geology.

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4.1.1 Existing Fill Soil

Existing fill soils were encountered in several excavations to depths ranging from about 0.5 to 7 feet below existing ground surface elevation before encountering residual soils or termination. We are not aware, nor have we been provided with testing or observation records for the fill. Accordingly, there are certain risks associated with construction on these types of fill. The risk primarily consists of excessive and/or non-uniform settlement caused by extensive zones or pockets of soft, loose, or uncompacted material. We do note from onsite observations of the site and excavations, the fill does not appear to have undergone any level of compactive effort during initial placement. The following sections provide recommendations with addressing the undocumented fill.

4.1.2 Differential Bearing Concerns

Based on the results of our subsurface exploration and the anticipated cut and fill requirements to develop the site, the possibility exists that a portion of the building foundations may bear in firm to stiff residual clay soil overburden material, while a portion could be bearing on limestone bedrock. This condition will result in a differential bearing condition which could result in excessive differential settlement across the buildings. As a result, recommendations are provided in later sections that will help reduce the risk of adverse differential settlement.

4.1.3 Moisture Sensitive Soils

The subgrade soils at this site consist of clayey soils. These materials will be sensitive to changes in moisture contents. As such, it will be advantageous to perform grading activities during periods of warm and/or dry weather. Areas that are wet or become unstable can possibly be repaired by scarification and re-compaction if grading occurs during warm, dry weather. If grading occurs during wet, cool weather, we expect that additional soft soil at or near the surface soils across the site will have to be undercut and replaced.

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4.1.4 Karst Geology

A certain degree of risk with respect to sinkhole formation and subsidence should be considered with any site located within geologic areas underlain by potentially soluble rock units. While a detailed effort to assess the potential for sinkhole formation on this site was beyond the scope of this evaluation, our site observations and observation trenches encountered obvious indications of sinkhole development. Furthermore, review of the USGS Godwin Topographic Quadrangle Map indicated the presence of one closed depression onsite and several more within 1 mile of the site. If any karst feature is located in an area that requires fill materials to achieve subgrade elevation, the observed karst feature should be stripped of clayey soil and the "throat" be remediated prior to structural backfill. RSMG should be retained to provide recommendations during development activities.

4.2 SITE PREPARATION

4.2.1 Subgrade

Vegetation, topsoil, organic soils, asphalt, existing utilities, rock fragments greater than 6 inches, and other debris should be removed from the proposed foundation construction area prior to commencing construction activities. Any undocumented fill encountered in foundation excavations during construction should also be removed and replaced with properly compacted structural fill. Exact depths of remediation can be determined by onsite RSMG personnel at time of construction, if desired. If unsuitable soil conditions are encountered, these unsuitable materials should be remediated at the geotechnical engineer's recommendations. We recommend the owner carry a contingency budget undercutting and replacement for the development of this project. The actual depth of removal should be determined by a representative of the geotechnical engineer at the time of construction.

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4.2.2 Structural Soil Fill

Material considered suitable for use as structural fill should be clean soil free of organics, trash, and other deleterious material, containing no rock fragments greater than 6 inches in any one dimension. Preferably, structural soil fill material should have a standard Proctor (ASTM D698) maximum dry density of 90 pcf or greater and a plasticity index (PI) of 35 percent or less. Materials with a PI greater than 35 percent are susceptible to volume changes with changes in moisture content. Volume changes in the foundation subgrade can cause structural distress in buildings, floor slabs, and pavements. Material to be used as structural fill should be tested by the geotechnical engineer to confirm that it meets the project requirements before being placed.

Structural fill should be placed in loose, horizontal lifts not exceeding 8 inches in thickness. Each lift should be compacted to at least 95 percent of the soil's maximum dry density per the standard Proctor method (ASTM D698) and within the range of minus (-) 2 percent to plus (+) 2 percent of the optimum moisture content. Each lift should be tested by geotechnical personnel to confirm that the contractors' method is capable of achieving the project requirements before placing any subsequent lifts. Any areas, which have become soft or frozen, should be removed before additional structural fill is placed. Structural soil fill placement should be accomplished under the full-time or near full-time observation of a representative of the geotechnical engineer.

4.2.3 Shotrock Fill Materials

Shotrock fill, with acceptable gradation, can be used as structural fill. Shotrock utilized as structural fill should be well graded with a maximum rock size of 12 inches and be placed in lifts not to exceed 18 inches thick. Shotrock of this size should be placed at depths deeper than 4 feet below planned subgrade levels in the building area. The rock or stone should have a maximum particle size of 8-inches in the largest dimension up to proposed subgrade (from minus 4 feet below subgrade up to subgrade) when mixed with satisfactory material.

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Shotrock fill should have adequate fines to effectively "choke" the larger rock pieces, adequately filling voids or open spaces. The larger rock pieces should lie flat and not overlap each other. The percentage of soil in the fill should be limited to a maximum of 10 percent. Shotrock fill should be compacted using complete passes of a D-8 class crawler tractor, or equivalent. A pass is defined as a complete coverage of the surface with the D-8 track overlapping 50 percent. Shotrock fill placement should be accomplished under the full-time observation of a representative of the geotechnical engineer or qualified representative. Alterations to compaction methods may be appropriate if layers are not sufficiently compacted.

4.2.4 Compacted Crushed Stone Fill

Compacted Crushed Stone Fill can also be used, particularly in small, confined excavations where large heavy equipment can't gain access to. Compacted crushed stone fill should be Type A, Class A, and Grading D in accordance with Section 903.05 of the Tennessee Department of Transportation specifications. The crushed stone fill should be placed in loose, horizontal lifts not exceeding 10 inches in loose thickness. Each lift should be compacted to at least 95 percent of maximum dry density per the standard Proctor method (ASTM D698). Each lift should be compacted and tested by geotechnical personnel to confirm that the contractor's method is capable of achieving the project requirements before placing any subsequent lifts.

4.3 FOUNDATIONS

4.3.1 Soil Bearing Foundations

Foundations for the proposed flex office construction can be supported on stiff or better residual soil or properly compacted structural fill materials. Undocumented fill should be undercut and replaced with properly compacted structural fill material. The recommended allowable bearing capacity for design of soil bearing foundations is 2,000 pounds per square foot (psf). We

recommend that continuous foundations be a minimum of 18 inches wide and isolated spread footings be a minimum of 24 inches wide to reduce the possibility of a localized punching shear failure. Exterior footings should be designed to bear at least 12 inches below finished exterior grade to protect against frost.

As mentioned previously, refusal was encountered at depths ranging from a few inches to 9 feet below the existing ground surface elevation. It should be anticipated that competent bedrock may be encountered during foundation and/or utility excavations. If rock is encountered at the foundation bearing elevation over a small portion of the building pads, we recommend the rock be removed to a minimum depth of 12 inches below planned bearing elevation. The area can then be backfilled with properly compacted crushed stone. The crushed stone will help act as a "cushion" to prevent point loading of the foundation. If desired, the foundation designer may also elect to include additional reinforcing steel into the foundations at these transition points to help resist negative moment forces.

Foundation excavations should be opened, the subgrade evaluated, remedial work performed, and concrete placed in an expeditious manner. Exposure to weather often reduces foundation support capabilities, thus necessitating remedial measures prior to concrete placement. It is also important that proper surface drainage be maintained both during construction (especially in terms of maintaining dry footing trenches) and after construction.

4.3.2 Slab-on-Grade

For slab-on-grade construction, the site should be prepared as previously described. The existing subgrade that consists of in-place residual material of a minimum consistency of stiff is suitable for slab subgrade support. We recommend that the subgrade in areas that encounter undocumented fill be undercut to residual soil material and backfilled with properly compacted structural fill

material. The slab subgrade should be topped with a minimum 4-inch layer of crushed stone to act as a capillary moisture block. The subgrade should be proofrolled and approved prior to the placement of the crushed stone. Based on the conditions encountered on this site, we recommend that the floor slabs be designed using a subgrade modulus of 100 pounds per cubic inch (pci). This modulus is appropriate for small diameter loads (i.e. a 1ft x 1ft plate) and should be adjusted for wider loads.

4.3.3 Settlement

Semi-empirical methods were used to calculate settlement (FHWA method). Based on the known conditions, assumed foundation loads, site geology, laboratory testing, and the FHWA settlement calculations, we estimate that properly designed and constructed footings supported on properly placed and compacted fill materials or existing residual material should experience total settlements of less than 1-inch and differential settlement of about ½ inch.

4.4 PAVEMENT RECOMMENDATIONS

4.4.1 Flexible Pavement Design

AASHTO flexible pavement design methods have been utilized for pavement recommendations. Our recommendations are based on the assumptions that the subgrade has been properly prepared as described previously. The exposed subgrade should then be proofrolled to locate any weak areas needing remediation. Traffic intensities were unavailable at the time this report was prepared. We request these be provided once available to confirm the below section thicknesses are appropriate. We have assumed the following pavement design traffic loads:

- 200 passenger cars and pick-ups/day.
- One 3-axle, single unit, delivery truck/week.

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- One 3-axle, single-unit, trash truck/week.
- One 18-wheeler truck/week.

Based on the above assumed loadings, we recommend the following minimum light duty and heavy duty flexible pavement section:

	Recommended Minimum Thickness (Inches)	
Pavement Materials	Light Duty	Heavy Duty
Bituminous Asphalt Surface Mix	1.0*	1.5
Bituminous Asphalt Base Mix	1.5	2.5
Compacted Crushed Aggregate Base	6.0	8.0

*Assumes layer thickness is not less than is recommended by industry standards. From past experience, typical minimum thickness is 1.5 inches. If so, one asphalt section of 2.5 inches thick should be placed.

We recommend a base stone equivalent to a Type A, Class A and Grading D in accordance with Section 903.05 of the Tennessee Department of Transportation specifications. The bituminous asphalt pavement should be Grading "E" as per Section 411 for the surface mix and Grading “B” as per section 307 for the binder mix. Compaction requirements for the crushed aggregate base and the bituminous asphalt pavement should generally follow Tennessee Department of Transportation specifications.

4.4.2 Rigid Pavement Design

The trash dumpster area and other areas of the project site with anticipated heavy vehicle loads, should be constructed with rigid pavements. For the dumpster area, we recommend that the concrete pavement extend to the full length of the truck beyond the edge of the trash compactor pad.

We recommend the following minimum rigid pavement section:

Pavement Materials	Recommended Minimum Thickness (Inches)
4,000 psi Type I Concrete	5.0
Compacted Crushed Aggregate Base	5.0

Concrete should be reinforced with welded wire fabric or reinforcing bars to assist in controlling cracking from drying shrinkage and thermal changes. Sawed or formed control joints should be included for each 225 sq. ft of area or less (15 ft by 15 ft). Saw cuts should not cut through the welded wire fabric or reinforcing steel and dowels should be utilized at formed and/or cold joints.

4.4.3 General

Our recommendations are based upon the assumption that the subgrade has been properly prepared (as per previous sections) and that any off-site soil borrow to be used to backfill to the final subgrade meets the requirements of structural soil fill section for off-site borrow. Site grading is generally accomplished early in the construction phase. As construction proceeds, the subgrade may be disturbed or degraded due to utility construction, construction traffic, or wetting or drying. As a result, the pavement subgrade may not be suitable for pavement construction and remedial repair may be required prior to pavement construction. The subgrade should be evaluated immediately prior to pavement construction by proofrolling, as discussed earlier in this report. Particular attention should be given to check for weak materials in anticipated high traffic areas, areas that were degraded by construction traffic, or where backfilled borings are located. Weak materials identified should be repaired by undercutting the weak materials and backfilling the undercut with compacted fill. We also recommend the moisture content of the subgrade materials be checked immediately prior to pavement

construction. If the soil moisture content is not within the ranges recommended in this report, the upper 8 inches should be scarified, moisture conditioned to the recommended moisture content range and recompacted. Stability should then be evaluated by proofrolling.

Paved areas should be constructed with positive drainage to direct water off-site and to minimize surface water seeping into the pavement subgrade. The subgrade should have a sufficient slope to promote drainage. In downgrade areas, the basestone should extend through the slope to allow any water entering the basestone a path to exit.

5.0 CONSTRUCTION CONSIDERATIONS

5.1 EXCAVATIONS

Excavator refusal materials were encountered in several of the observation trenches at depths ranging from a few inches to about 9 feet below the existing ground surface elevation. Typically, soils penetrated by the excavator can be removed with conventional earthmoving equipment. However, excavation equipment varies, and field refusal conditions may vary. The weathering process may be erratic and variations in the rock profile may occur in small lateral distances. Therefore, it is possible that some partially weathered rock and/or rock pinnacles or ledges requiring difficult excavation techniques may be encountered in isolated areas of the site between our test locations.

Overblast Concerns

We caution against extensive overblasting in building areas (blasting below finished grade) during the site grading operations. Overblasting typically damages below grade bedrock by fracturing or heaving the rock from its original position. This often creates difficulties for foundations and floor

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slabs supported on these materials by creating voids in the rock unit and greatly reducing the support capacity. Any areas damaged by overblasting should be evaluated by the geotechnical engineer to determine appropriate corrective measures.

Excavation Safety

Excavations should be sloped or shored in accordance with local, state, and federal regulations, including OSHA (29 CFR Part 1926) excavation trench safety standards. The contractor is usually solely responsible for site safety. This information is provided only as a service and under no circumstances should RSMG be assumed to be responsible for construction site safety.

5.2 FOUNDATION CONSTRUCTION

Foundation excavations should be opened, the subgrade evaluated, remedial work performed, and concrete placed in an expeditious manner. Exposure to weather often reduces foundation support capabilities, thus necessitating remedial measures prior to concrete placement. It is also important that proper surface drainage be maintained both during construction (especially in terms of maintaining dry footing trenches) and after construction. Backfill for footings should be placed in accordance with the recommendations for structural fill presented herein.

Foundation subgrade observations should be performed by a RSMG geotechnical engineer, or his qualified representative, so that the recommendations provided in this report are consistent with the site conditions encountered. A dynamic cone penetrometer (DCP) is commonly utilized to provide information that is compared to the data obtained in the geotechnical report. Where unacceptable materials are encountered, the material should be excavated to stiff, suitable soils or remediated at the geotechnical engineer's direction. Observations within rock fill strata may be

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limited to visual inspection only. Typical remedial measures consist of undercutting, overexcavation, or combinations thereof.

5.3 MOISTURE SENSITIVE SOILS

The fine-grained soils encountered at this site will be sensitive to disturbances caused by construction traffic and changes in moisture content. During wet weather periods, increases in the moisture content of the soil can cause significant reduction in the soil strength and support capabilities. Construction traffic patterns should be varied to prevent the degradation of previously stable subgrade. In addition, plastic soils which become wet may be slow to dry and thus significantly retard the progress of grading and compaction activities. We caution if site grading is performed during the wet weather season, methods such as discing and allowing the material to dry will be required to meet the required compaction recommendations. It will, therefore, be advantageous to perform earthwork and foundation construction activities during dry weather.

5.4 DRAINAGE AND SURFACE WATER CONCERNS

To reduce the potential for undercut and construction induced dropouts, water should not be allowed to collect in the foundation excavations, on floor slab areas, or on prepared subgrades of the construction area either during or after construction. Undercut or excavated areas should be sloped to facilitate removal of any collected rainwater, subsurface water, or surface runoff. Positive site surface drainage should be provided to reduce infiltration of surface water around the perimeter of the building structures. The grades should be sloped away from the building structures and surface drainage should be collected and discharged such that water is not permitted to infiltrate the backfill.

5.5 SINKHOLE CORRECTIVE ACTIONS AND CONSIDERATIONS

Sinkholes within the geological setting are common. Therefore, we have included the below recommendations in the event additional evidence is uncovered during construction activities.

During construction and based on our experience, corrective actions can be performed to reduce the potential for sinkhole development at this site. These corrective actions, such as proper grade selection and positive site drainage, would decrease but not eliminate the potential for sinkhole development.

In general, the portions of a site that are excavated to achieve the desired grades will have a higher risk of sinkhole development than the areas that are filled, because of the exposure of relic fractures in the soil to rainfall and runoff. On the other hand, those portions of a site that receive a modest amount of fill (or that have been filled in the past) will have a decreased risk of sinkhole development caused by rainfall because that placement of a cohesive soil fill over these areas effectively caps the area with a relatively impervious "blanket" of remolded soil. Therefore, the recommendations that follow incorporate a modest remedial treatment program designed to make the surface of the soil in excavated areas less permeable.

Although it is our opinion that the risk of ground subsidence associated with sinkhole formation cannot be eliminated, we have found that several measures are useful in site design and development to reduce this potential risk. These measures include:

- Maintaining positive site drainage to route surface waters well away from structural areas both during construction and for the life of the structure.
- The scarification and re-compaction of the upper 6 to 10 inches of soil in earthwork cut areas.

- Verifying that subsurface piping beneath structures is carefully constructed and pressure tested prior to its placement in service.
- The use of lined ditches, particularly in cut areas, to collect and transport surface water to areas away from structures.

Considerations when building within a sinkhole prone area are to provide positive surface drainage away from any proposed building or parking area both during and after construction. Backfill in utility trenches of other excavations should consist of compacted, well-graded material such as dense graded aggregate or compacted on site soils. The use of an open graded stone such as No. 57 stone is not recommended unless the stone backfill is provided an exit path and not allowed to pond, or water is prevented from accessing the backfilled area. If sinkhole conditions are observed, the type of corrective action is most appropriately determined by RSMG on a case-by-case basis.

5.6 SLOPES

Analysis of proposed slopes for stability was not included in the authorized scope of services. If the client would like this service completed for proposed slopes, RSMG can perform these services for an additional fee, upon request. When requested, RSMG will issue an additional services proposal for review and authorization.

6.0 LIMITATIONS

This report has been prepared in accordance with generally accepted geotechnical engineering practice for specific application to this project. This report is for our geotechnical work only. The conclusions and recommendations contained in this report are based upon applicable standards of our practice in this geographic area at the time this report was prepared. No other warranty, express or implied, is made.

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The analyses and recommendations submitted herein are based, in part, upon the data obtained from the exploration. The nature and extent of variations between the soil test borings will not become evident until construction. We recommend that RSMG be retained to observe the project construction in the field. RSMG cannot accept responsibility for conditions which deviate from those described in this report if not retained to perform construction observation and testing. If variations appear evident, then we will re-evaluate the recommendations of this report. In the event that any changes in the nature, design, or location of the structures are planned, the conclusions and recommendations contained in this report will not be considered valid unless the changes are reviewed and conclusions modified or verified in writing. Also, if the scope of the project should change significantly from that described herein, these recommendations may have to be re-evaluated.

DRAFT

APPENDICES

RS Miller Group LLC

APPENDIX A

RS Miller Group LLC

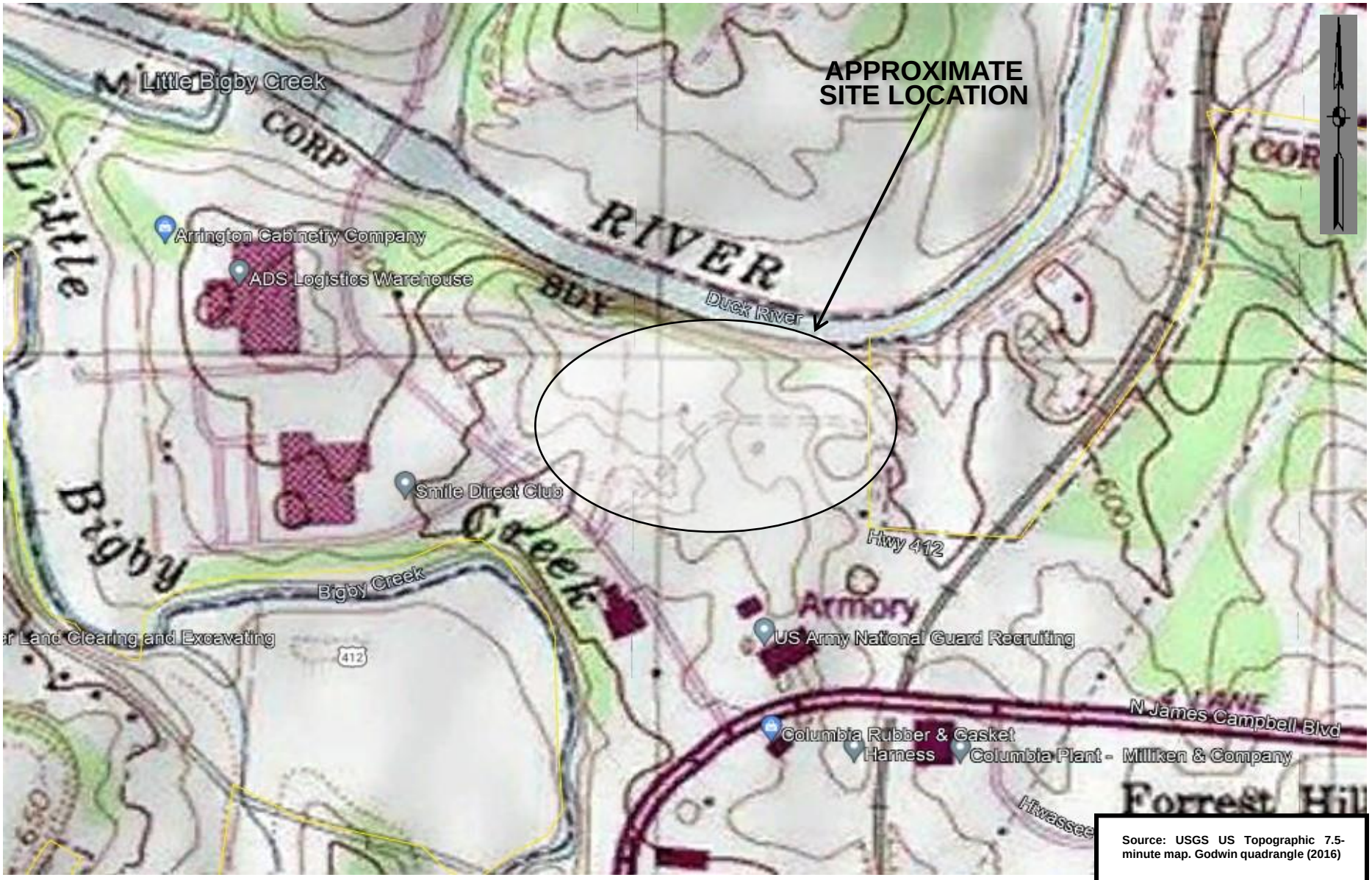


RS Miller Group LLC

Site Vicinity Map
Proposed Parking Complex
Industrial Park Road
Columbia, Tennessee

Project No. 23-027G

Figure No. 1



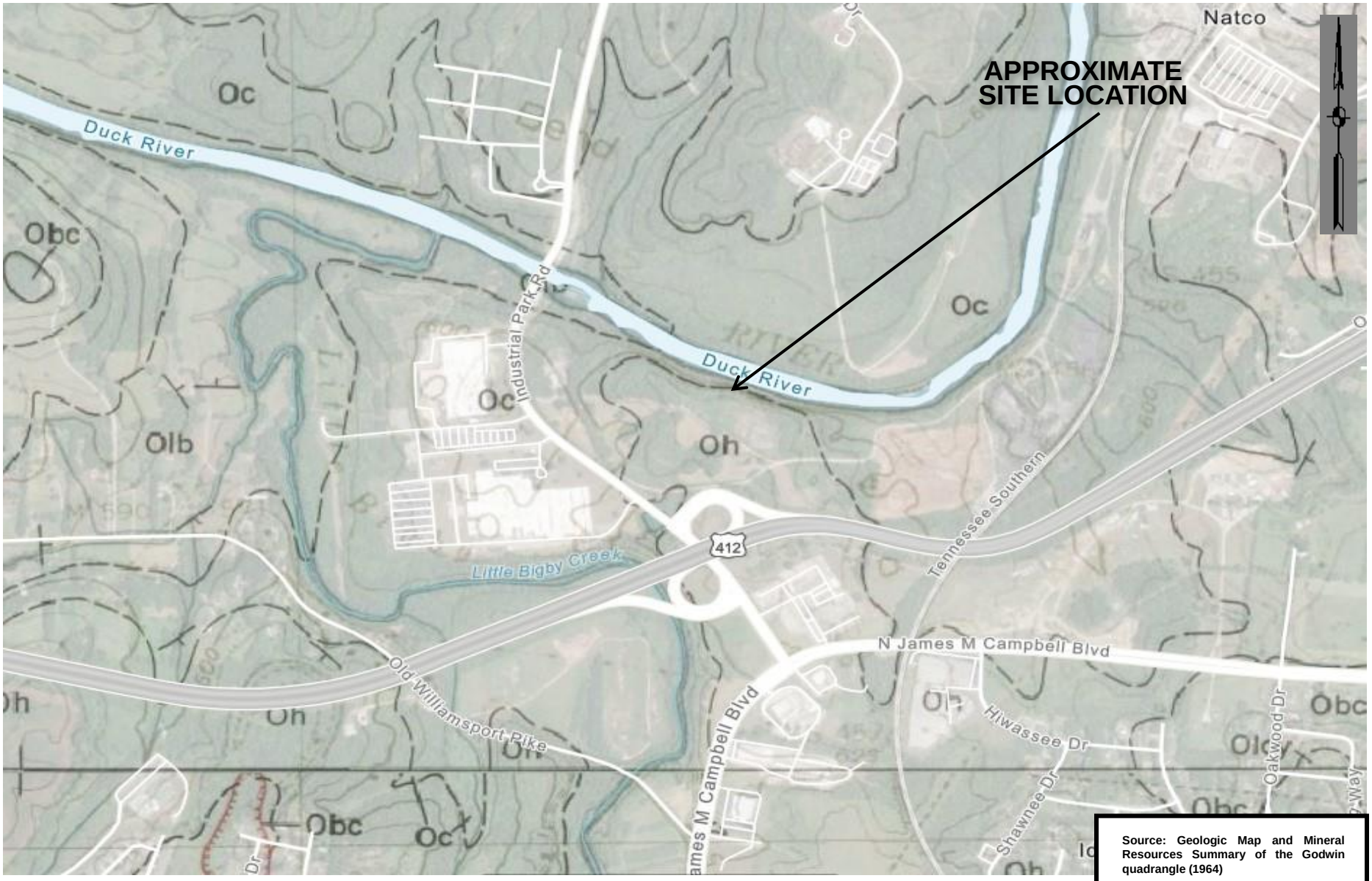
Source: USGS US Topographic 7.5-minute map. Godwin quadrangle (2016)

RS Miller Group LLC

Topographic Map
Proposed Parking Complex
Industrial Park Road
Columbia, Tennessee

Project No. 23-027G

Figure No. 2

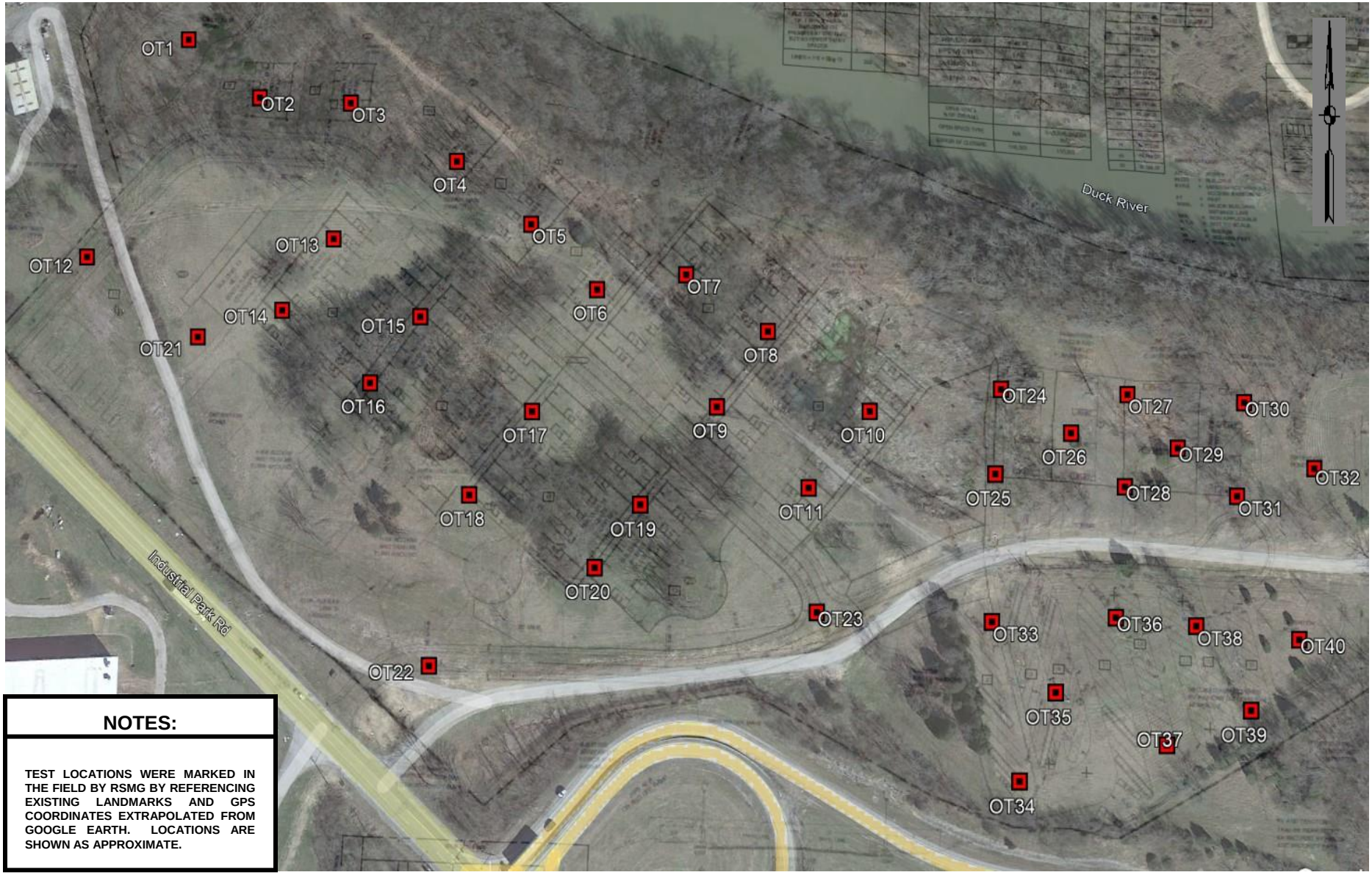


RS Miller Group LLC

Geologic Map
Proposed Parking Complex
Industrial Park Road
Columbia, Tennessee

Project No. 23-027G

Figure No. 3



NOTES:

TEST LOCATIONS WERE MARKED IN THE FIELD BY RSMG BY REFERENCING EXISTING LANDMARKS AND GPS COORDINATES EXTRAPOLATED FROM GOOGLE EARTH. LOCATIONS ARE SHOWN AS APPROXIMATE.

RS Miller Group LLC

Test Location Map
Proposed Parking Complex
Industrial Park Road
Columbia, Tennessee

Project No. 23-027G

Figure No. 4









RS Miller Group LLC

Site Photographs
Proposed Parking Complex
Industrial Park Road
Columbia, Tennessee

Project No. 23-027G

Figure No. 5

APPENDIX B

RS Miller Group LLC

GENERAL NOTES

FINE AND COARSE GRAINED SOIL PROPERTIES

PARTICLE SIZE

BOULDERS:	GREATER THAN 300 mm
COBBLES:	75 mm to 300 mm
GRAVEL:	4.74 mm to 75 mm
COARSE SAND:	2 mm to 4.74 mm
MEDIUM SAND:	0.425 mm to 2 mm
FINE SAND:	0.075 mm to 0.425 mm
SILTS & CLAYS:	LESS THAN 0.075 mm

COARSE GRAINED SOILS (SANDS & GRAVELS)

N-VALUE	RELATIVE DENSITY
0 - 4	VERY LOOSE
5 - 10	LOOSE
11 - 30	MEDIUM DENSE
31 - 50	DENSE
OVER 50	VERY DENSE

FINE GRAINED SOILS (SILTS & CLAYS)

N-VALUE	CONSISTENCY	Qu, PSF
0 - 2	VERY SOFT	0 - 500
3 - 4	SOFT	500 - 1000
5 - 8	FIRM	1000 - 2000
9 - 15	STIFF	2000 - 4000
16 - 30	VERY STIFF	4000 - 8000
OVER 31	HARD	8000 +

STANDARD PENETRATION TEST (ASTM D1586)

THE STANDARD PENETRATION TEST AS DEFINED BY ASTM D1586 IS A METHOD TO OBTAIN A DISTURBED SOIL SAMPLE FOR EXAMINATION AND TESTING AND TO OBTAIN RELATIVE DENSITY AND CONSISTENCY INFORMATON. THE 1.4 INCH I.D./2.0 INCH O.D. SAMPLER IS DRIVEN 3-SIX INCH INCREMENTS WITH A 140 LB. HAMMER FALLING 30 INCHES. THE BLOW COUNTS REQUIRED TO DRIVE THE SAMPLER THE FINAL 2 INCREMENTS ARE ADDED TOGETHER AND DESIGNATED THE N-VALUE. AT TIMES, THE SAMPLER CAN NOT BE DRIVEN THE FULL 18 INCHES. THE FOLLOWING REPRESENTS OUR INTERPRETATION OF THE STANDARD PENETRATION TEST WITH VARIATIONS.

BLOWS/FOOT (N-VALUE)	DESCRIPTION
25	25 BLOWS DROVE SAMPLER 12" AFTER INITIAL 6" SEATING
75/10"	75 BLOWS DROVE SAMPLER 10" AFTER INITIAL 6" SEATING
50/PR	PENETRATION REFUSAL OF SAMPLER AFTER INITIAL 6" SEATING

SAMPLING SYMBOLS

ST:	UNDISTURBED SAMPLE
SS:	SPLIT SPOON SAMPLE
CORE:	ROCK CORE SAMPLE
AU:	AUGER OR BAG SAMPLE

SOIL PROPERTY SYMBOLS

N:	STANDARD PENETRATION, BPF
M:	MOISTURE CONTENT %
LL:	LIQUID LIMIT %
PI:	PLASTICITY INDEX %
Qp:	POCKET PENETROMETER VALUE, TSF
Qu:	UNCONFINED COMPRESSIVE STRENGTH, TSF
DUW:	DRY UNIT WEIGHT, PCF

ROCK PROPERTIES

ROCK QUALITY DESIGNATION (RQD)

PERCENT	QUALITY
90 TO 100	EXCELLENT
75 TO 90	GOOD
50 TO 75	FAIR
25 TO 50	POOR
0 TO 25	VERY POOR

ROCK HARDNESS

VERY SOFT:	ROCK DISINTEGRATES OR EASILY COMPRESSES TO TOUCH: CAN BE HARD TO VERY HARD SOIL.
SOFT:	ROCK IS COHERANT BUT BREAKS EASILY TO THUMB PRESSURE AT SHARP EDGES AND CRUMBLES WITH FIRM HAND PRESSURE.
MODERATELY HARD:	SMALL PIECES CAN BE BROKEN OFF ALONG SHARP EDGES BY CONSIDERABLE HARD THUMB PRESSURE: CAN BE BROKEN BY LIGHT HAMMER BLOWS.
HARD:	ROCK CAN NOT BE BROKEN BY THUMB PRESSURE, BUT CAN BE BROKEN BY MODERATE HAMMER BLOWS.
VERY HARD:	ROCK CAN BE BROKEN BY HEAVY HAMMER BLOWS.

RS Miller Group LLC

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-1	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (2 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, small diameter roots, firm, moist (RESIDUUM)	1.75				
2.0	Trench Refusal at 2 feet					
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-2	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (6 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown to brown, firm, moist (RESIDUUM)	0.75				
2.0	Trench Refusal at 1.5 feet					
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex 0 Industrial Park Road, Columbia, TN RSMG Project No. 23-027G	TEST PIT OBSERVATION RECORD Test Pit No.: OT-3	RS Miller Group LLC
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (8 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, firm to stiff, moist (RESIDUUM)	1.50				
2.0						
3.0		2.25				
4.0						
5.0		2.00				
6.0						
7.0						
8.0	Trench terminated at 8 feet. No refusal.					
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-4	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (8 inches)					
1.0	**Fat CLAY (CH)** - Orange-brown, firm to stiff, moist (RESIDUUM)	1.75				
2.0						
3.0		2.50				
4.0		3.0				
5.0						
6.0	Trench refusal at 5.5 feet.					
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-5	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	Dense Grade Aggregate. Limestone Rock (6 inches)					
1.0						
		1.50				
2.0						
3.0						
		2.00				
4.0	**Lean CLAY (CL)** - Orange-brown, firm to stiff, moist (RESIDUUM)					
5.0						
		2.50				
6.0						
7.0						
8.0						
	Trench terminated at 8 feet. No refusal.					
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-6	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (3 inches)					
1.0	**Fat CLAY (CH)** - Orange-brown, stiff, moist (RESIDUUM)	2.50				
2.0		2.50				
3.0						
4.0		3.0				
5.0	Trench refusal at 4.5 feet.					
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-7	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (4 inches)					
1.0						
2.0	**Fat CLAY (CH)** - Orange-brown, stiff, moist (RESIDUUM)	2.75				
3.0						
4.0	Trench refusal at 3.5 feet.					
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-9	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	Residual Clay/ Limestone Gravel Mix (12 inches)					
1.0	Trench refusal at 1 foot.					
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-11	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	ROCK FILL (12 inches)					
1.0						
	Fat CLAY (CH) - Orange-brown, stiff, moist (RESIDUUM)					
2.0	Trench refusal at 2 feet.					
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-12	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (4 inches)					
1.0						
		2.00				
2.0						
3.0						
		1.50				
4.0	**Lean CLAY (CL)** - Orange-brown, firm to stiff, moist (RESIDUUM) Rock pinnacles to either side of the excavation					
5.0						
		1.75				
6.0						
7.0						
8.0	Trench terminated at 7.5 feet. No refusal.					
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-13	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (8 inches)					
1.0						
		1.0				
2.0	**Fat CLAY (CH)** - Orange-brown, stiff, moist (RESIDUUM)					
		1.75				
3.0						
4.0						
	Trench refusal at 4 feet.					
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-14	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (8 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, firm to stiff, moist (RESIDUUM)					
		2.00				
2.0						
3.0		0.75				
4.0						
		0.5				
5.0						
6.0		1.00				
7.0						
	Trench refusal at 7 feet.					
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex 0 Industrial Park Road, Columbia, TN RSMG Project No. 23-027G	TEST PIT OBSERVATION RECORD Test Pit No.: OT-15	RS Miller Group LLC
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (6 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, firm, moist (RESIDUUM)	1.25				
2.0						
3.0		1.75				
4.0						
5.0		1.75				
6.0						
7.0						
8.0	Trench terminated at 8 feet. No refusal.					
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-16	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (4 inches)					
1.0	**Lean CLAY (CH)** - brown, firm, moist (RESIDUUM)	1.75				
2.0	Trench refusal at 2 feet.					
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-17	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (6 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, firm to stiff, moist (RESIDUUM) Pinnacle rock to either side of the excavation.	2.00				
2.0						
3.0		2.50				
4.0	**Fat CLAY (CH)** - Orange-brown, firm, moist (RESIDUUM) Pinnacle rock to either side of the excavation.	1.50				
5.0						
6.0						
7.0	Trench refusal at 7 feet.					
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-18	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (3 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, iron oxide nodules, firm to stiff, moist (RESIDUUM)	1.50				
2.0						
3.0		2.00				
4.0	**Fat CLAY (CH)** - Orange-brown, patches of yellow-gray fat clay, firm, moist (RESIDUUM)					
5.0		1.50				
6.0	Trench refusal at 5.5 feet.					
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-19	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (6 inches)					
1.0	**Lean CLAY (CL)** - brown, firm, moist (RESIDUUM)					
		0.50				
2.0						
3.0		1.25				
	Fat CLAY (CH) - red-brown, firm, moist (RESIDUUM)					
4.0						
5.0		1.50				
	Trench refusal at 5 feet.					
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-20	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (6 inches)					
1.0	**Fat CLAY (CH)** - Orange-brown, iron oxide nodules, stiff, moist (RESIDUUM)	2.00				
2.0		2.5				
	Trench refusal at 2.5 feet.					
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-21	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (3 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, firm, moist (RESIDUUM)	1.50				
2.0						
3.0		1.00				
4.0						
5.0		1.00				
6.0						
7.0						
8.0						
9.0	Trench terminated at 9 feet. No refusal.					
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex 0 Industrial Park Road, Columbia, TN RSMG Project No. 23-027G	TEST PIT OBSERVATION RECORD Test Pit No.: OT-22	RS Miller Group LLC
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL/Mulch (3 inches)					
1.0	**Fat CLAY (CH)** - yellow-brown, weathered rock, iron oxide nodules, firm, moist (RESIDUUM)	1.00				
2.0						
3.0		1.00				
4.0						
5.0	Trench refusal at 5 feet.					
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-23	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (6 inches)					
1.0	**Lean CLAY (CL)** - brown, stiff, moist (RESIDUUM)					
		2.50				
2.0						
3.0		2.75				
	Fat CLAY (CH) - red-brown, stiff, moist (RESIDUUM)					
4.0						
5.0						
	Trench refusal at 5.5 feet.					
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-26	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL/Weathered Rock (6 inches)					
1.0	Trench refusal at 0.5 foot.					
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-27	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (3 inches)					
1.0	**Fat CLAY (CH)** - red-brown, firm, moist (RESIDUUM)					
	Trench refusal at 1.5 feet.					
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-28	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	COAL FINES - black, dry (4 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, iron oxide nodues, weathered rock, firm, moist (RESIDUUM)					
2.0						
3.0						
4.0	Trench refusal at 3.5 feet.					
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-29	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL/Weathered Rock (12 inches)					
1.0	Trench refusal1 at foot.					
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-30	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	Observed By: D Perry	Reviewed By: D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	COAL FINES - black, dry (12 inches)					
1.0		1.5				
2.0						
3.0						
4.0	**Lean CLAY (CL)** - Orange-brown to brown, iron oxide nodues, weathered rock, firm to stiff, moist (RESIDUUM)	2.25				
5.0						
6.0						
7.0	Trench refusal at 7 feet.					
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments:

Proposed Parking Complex 0 Industrial Park Road, Columbia, TN RSMG Project No. 23-027G	TEST PIT OBSERVATION RECORD Test Pit No.: OT-31	RS Miller Group LLC
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (6 inches)					
1.0	**Lean CLAY (CL)** - Brown to orange-brown, iron oxide nodules, firm to stiff, moist (RESIDUUM)					
		1.5				
2.0						
3.0		2.50				
4.0						
		1.75				
5.0						
6.0						
7.0	Trench refusal at 7 feet.					
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-32	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	Observed By: D Perry	Reviewed By: D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
1.0	COAL FINES - black, brick, concrete blocks, trash, rags, dry					
2.0						
3.0						
4.0						
5.0						
6.0						
7.0	Trench refusal at 7 feet.					
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-33	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	SOIL/ROCK MIXED FILL (12 inches)					
1.0		1.75				
2.0						
3.0	**Lean CLAY (CL)** - orange-brown, pockets of gray fat clay, firm to stiff, moist (RESIDUUM)	2.50				
4.0						
5.0	Trench refusal at 4.5 feet.					
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-34	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	LIMESTONE GRAVEL FILL (6 inches)					
	Fat CLAY (CH) - orange-brown, weathered rock, moist (POSSIBLE FILL)					
1.0	Trench refusal at 1 foot.					
2.0						
3.0						
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-35	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	Soil/Rock Mixed Fill (8 inches)					
1.0	**Lean CLAY (CL)** - orange-brown, iron oxide nodules, firm, moist (RESIDUUM)	1.75				
2.0						
3.0	Trench refusal at 3 feet.					
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-36	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
1.0	**FILL -** brown with organic inclusions, tree log, weathered rock, very soft, moist **Apparent rock seam. Possible sinkhole.**					
2.0						
3.0						
4.0						
5.0						
6.0						
7.0	Trench refusal at 7 feet.					
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-37	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	LIMESTONE GRAVEL FILL (4 inches)					
1.0	**FILL -** brown to black, charcoal pieces, orange-brown lean clay, brick fragments, rusted metal pieces, limestone boulders up to 30" diameter, cable, wire					
2.0						
3.0						
4.0						
5.0						
6.0						
7.0	Trench refusal at 7 feet.					
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-38	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	LIMESTONE GRAVEL (10 inches)					
1.0	**Fat CLAY (CH)** - red-brown, weathered rock, stiff, moist (RESIDUUM)	2.5				
2.0						
3.0	Trench refusal at 3 feet.					
4.0						
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-39	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	Observed By: D Perry	Reviewed By: D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	LIMESTONE GRAVEL (6 inches)					
1.0	**Lean CLAY (CL)** - Orange-brown, iron oxide nodues, weathered rock, firm to stiff, moist (RESIDUUM)	2.0				
2.0						
3.0		1.50				
4.0		3.0				
5.0						
6.0						
7.0						
8.0	Trench refusal at 7.5 feet.					
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

Proposed Parking Complex	TEST PIT OBSERVATION RECORD	RS Miller Group LLC
0 Industrial Park Road, Columbia, TN	Test Pit No.: OT-40	
RSMG Project No. 23-027G		
Date Excavated: April 4 & 5, 2023	**Observed By:** D Perry	**Reviewed By:** D Perry

Depth (feet)	Material Description	PP (tsf)	LL	PL	PI	%M
	TOPSOIL (6 inches)					
1.0	**Lean CLAY (CH)** - orange-brown, weathered rock,iron oxide nodules, firm to stiff, moist (RESIDUUM)	1.75				
2.0		2.50				
3.0						
4.0	Trench refusal at 3.5 feet.					
5.0						
6.0						
7.0						
8.0						
9.0						
10.0						



Excavated test pit



Excavated material

Comments: _____

ZERO INDUSTRIAL PARK ROAD

SITE DEVELOPMENT PLAN

0 Industrial Park Road
City of Columbia, Tennessee

Tax Map 089, Parcels 046.00, 46.59 Acres

Developer: Kure Properties LLC
4817 Murfreesboro Rd
Arrington, TN 37014
ryan@kureconstruction.com
(630)306-700

Surveyor: Carroll Land Surveying
495 East Main Street, Suite 1
Hohenwald, TN 38462
csurvey@bellsouth.net
(931)796-1654

Landscape Engineer: T-SQUARE ENGINEERING
Consulting Civil Engineering
1329 West Main St., Franklin, TN, 37064
(615)370-1443 * Email curtis.stewart@t2-eng.com

Engineer: T-SQUARE ENGINEERING
Consulting Civil Engineering
1329 West Main St., Franklin, TN, 37064
(615)370-1443 * Email cole.gaumnitz@t2-eng.com

VICINITY MAP
N.T.S.

Sheet Schedule

C-0.0 Cover Sheet
C-0.1 Site Notes
C-1.0 Existing Conditions
C-1.1 Tree Protection Plan
C-2.0 Site Plan
C-2.1 Preliminary Plat
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 Storm Structure and Pipe Tables
C-7.0 Utility Plan
L-1.0 Landscape Plan
L-2.0 Landscape Details

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # 47119C0165E OF THE CITY OF COLUMBIA, TN. DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 03/20/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

COVER SHEET
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMITTING REVIEW ONLY
NOT FOR CONSTRUCTION
03/20/2023

PROJECT
22-0431

SHEET
C-0.0

T-SQUARE ENGINEERING

P:\Projects\2022\22-0431 (Industrial Park Blvd. - Ryan Kure)\Production\22-0431 1 Site Plan.dwg, 3/20/2023 12:53:34 PM, DWG To PDF.pc3

SITE GRADING & EROSION CONTROL NOTES

1. CONSTRUCT SILT BARRIERS BEFORE BEGINNING GRADING OPERATIONS.
2. MULCH AND SEED ALL DISTURBED AREAS AS SOON AS POSSIBLE AFTER FINAL GRADING IS COMPLETED, UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
3. PROVIDE TEMPORARY CONSTRUCTION ACCESS(ES) AT THE POINT(S) WHERE CONSTRUCTION VEHICLES EXIT THE CONSTRUCTION AREA. MAINTAIN PUBLIC ROADWAYS FREE OF TRACKED MUD AND DIRT.
4. THE CONTRACTOR SHALL CHECK ALL EXISTING GRADES AND DIMENSIONS IN THE FIELD PRIOR TO BEGINNING WORK AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
5. THE CONTRACTOR SHALL ADJUST THE CASTINGS OF ALL NEW AND EXISTING STRUCTURES TO MATCH PROPOSED FINISH GRADES.
6. PROPOSED CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF AN ENGINEERED GRADING DESIGN AND REFLECT A PLANNED INTENT WITH REGARD TO DRAINAGE AND MOVEMENT OF MATERIALS. SHOULD THE CONTRACTOR HAVE ANY QUESTION OF THE INTENT OR ANY PROBLEM WITH THE CONTINUITY OF GRADES, THE ENGINEER SHALL BE CONTACTED IMMEDIATELY.
7. ALL CUT AND FILL SLOPES SHALL BE 3 HORIZONTAL TO 1 VERTICAL OR FLATTER UNLESS OTHERWISE INDICATED ON THE PLANS.
8. ALL PIPES UNDER EXISTING PAVED AREAS SHALL BE BACKFILLED TO THE TOP OF SUBGRADE WITH CRUSHED STONE.
9. MINIMUM GRADE ON ASPHALT OR CONCRETE PAVING SHALL BE 1.0%.
10. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE CODES AND OBTAIN APPROVAL AS NECESSARY BEFORE BEGINNING CONSTRUCTION.
11. ALL EARTHWORK, INCLUDING THE EXCAVATED SUBGRADE AND EACH LAYER OF FILL, SHALL BE MONITORED AND APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER, OR THEIR REPRESENTATIVE.
12. IF ANY SPRINGS OR UNDERGROUND STREAMS ARE EXPOSED DURING CONSTRUCTION PERMANENT FRENCH DRAINS MAY BE REQUIRED. THE DRAINS SHALL BE SPECIFIED AND LOCATED DURING CONSTRUCTION AS REQUIRED BY THE CONDITIONS WHICH ARE ENCOUNTERED, AND SHALL BE APPROVED BY THE ENGINEER.
13. THE GRADING & DRAINAGE PLAN IS NOT A DETERMINATION OR GUARANTEE OF THE SUITABILITY OF THE SUBSURFACE CONDITIONS FOR THE WORK INDICATED. A GEOTECHNICAL SOILS REPORT HAS BEEN PREPARED AND IS AVAILABLE FROM THE OWNER. DETERMINATION OF THE SUBSURFACE CONDITIONS FOR THE WORK INDICATED IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
14. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO COMPACT FILL SUFFICIENTLY AROUND AND OVER ALL PIPES, STRUCTURES, VALVE STEMS, ETC., INSIDE THE PROPOSED PAVED AREAS TO AVOID SETTLEMENT. ANY SETTLEMENT DURING THE WARRANTY PERIOD SHALL BE RESTORED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
15. IN NO CASE SHALL SLOPE, HEIGHT, SLOPE INCLINATION, OR EXCAVATION DEPTH, INCLUDING TRENCH CONSTRUCTION, EXCEED THOSE SPECIFIED IN LOCAL, STATE AND FEDERAL REGULATIONS, SPECIFICALLY THE CURRENT OSHA HEALTH AND SAFETY STANDARDS FOR EXCAVATIONS (29 CRF PART 1926) SHALL BE FOLLOWED.
16. DO NOT DISTURB VEGETATION OR REMOVE TREES EXCEPT WHEN NECESSARY FOR GRADING PURPOSES.
17. STRIP TOPSOIL FROM ALL CUT AND FILL AREAS AND STOCKPILE UPON COMPLETION OF GENERAL GRADING OVER ALL DISTURBED AREAS, TO A MINIMUM DEPTH OF 6". CONTRACTOR SHALL SUPPLY ADDITIONAL TOP SOIL IF INSUFFICIENT QUANTITIES EXIST ON SITE.
18. TOP OF GRATE ELEVATIONS AND LOCATION OF COORDINATES FOR DRAINAGE STRUCTURES SHALL BE AS SHOWN ON THE DETAIL, UNLESS NOTED OTHERWISE. THE GRATES SHALL SLOPE LONGITUDINALLY WITH THE PAVEMENT GRADES.
19. ALL DRAINAGE CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE JURISDICTION.
20. POSITIVE DRAINAGE SHALL BE ESTABLISHED AS THE FIRST ORDER OF WORK AND SHALL BE MAINTAINED AT ALL TIMES DURING AND AFTER CONSTRUCTION. SOIL SOFTENED BY PERCHED WATER IN FOUNDATION AND PAVEMENT AREAS MUST BE UNDERCUT AND REPLACED WITH SUITABLE FILL MATERIALS APPROVED BY THE GEOTECHNICAL ENGINEER. GROUNDWATER INFILTRATION INTO EXCAVATIONS SHOULD BE EXPECTED, AND THE WATER SHALL BE REMOVED USING GRAVITY DRAINAGE OR PUMPING.
21. REINFORCED CONCRETE STORM DRAINAGE PIPE SHALL BE CLASS III, WALL "B".
22. FILL SLOPES 3:1 AND GREATER SHALL BE PLACED AND COMPACTED 5' BEYOND PROPOSED LIMITS AND THEN EXCAVATED BACK TO THE PROPOSED LOCATION.
23. THE CONTRACTOR SHALL PROVIDE AN ASBUILT SURVEY STAMPED BY A LICENSED SURVEYOR IN THE STATE OF TENNESSEE FOR ALL PUBLIC STORM SYSTEMS, ONSITE DETENTION PONDS, AND WATER QUALITY MEASURES VERIFYING COMPLIANCE WITH DESIGN DOCUMENTS.
24. THE LOCATION OF ALL DIVERSION SWALES AND DITCHES SHALL BE FIELD ADJUSTED TO AVOID TREES AS POSSIBLE. THE CONTRACTOR SHALL WALK THE ALIGNMENT OF THESE SWALES AND DITCHES IN THE FIELD TO VERIFY AVOIDANCE OF TREES.
25. SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES IS TO BE PLACED AT A SITE APPROVED BY THE ENGINEER. IT SHALL BE TREATED IN A MANNER SO THAT THE AREA AROUND THE DISPOSAL SITE WILL NOT BE CONTAMINATED OR DAMAGED BY THE SEDIMENT IN THE RUN-OFF. COST FOR TTHEIR TREATMENT IS TO BE INCLUDED IN PRICE BID FOR EARTHWORK. THE CONTRACTOR SHALL OBTAIN THE DISPOSAL SITE AS PART OF TTHEIR WORK.
26. STOCKPILED TOPSOIL OR FILL MATERIAL IS TO BE TREATED SO THE SEDIMENT RUN-OFF WILL NOT CONTAMINATE SURROUNDING AREAS OR ENTER NEARBY STREAMS.
27. ANY SITE USED FOR DISPOSAL AND/OR STOCKPILE OF ANY MATERIAL SHALL BE PROPERLY PERMITTED FOR SUCH ACTIVITY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEE THAT ALL REQUIRED PERMITS ARE SECURED FOR EACH PROPERTY UTILIZED. A COPY OF THE APPROVED PERMIT MUST BE PROVIDED TO THE INSPECTOR PRIOR TO COMMENCEMENT OF WORK ON ANY PROPERTY. FAILURE TO DO SO MAY RESULT IN THE CONTRACTOR REMOVING ANY ILLEGALLY PLACED MATERIAL AT THEIR OWN EXPENSE.
28. SEGMENTABLE AND/OR POURED IN PLACE RETAINING WALLS SHALL BE PROVIDED BY THE CONTRACTOR AS A DESIGN BUILD. WALL DESIGN PLANS STAMPED BY A STRUCTURAL REGISTERED ENGINEER IN THE STATE OF THE PROJECT SHALL BE SUBMITTED TO THE ENGINEER AS A SHOP DRAWING. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY GEOTECHNICAL INFORMATION NECESSARY TO PROPERLY DESIGN THE WALL.
29. IF ANY SINKHOLES OR VOID AREAS ARE DISCOVERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH WORK. A PHASE V INJECTION WELL PERMIT WILL NEED TO BE OBTAINED FROM THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION.

GENERAL NOTES

1. THE CONTRACTOR SHALL CHECK ALL EXISTING CONDITIONS, (i.e. INVERTS, UTILITY ROUTINGS, UTILITY CROSSINGS, AND DIMENSIONS) IN THE FIELD PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE ENGINEER.
2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY. THE CONTRACTOR SHALL CALL NATIONAL ONE CALL (811) 72 HOURS PRIOR TO PROCEEDING WITH ANY EXCAVATION.
3. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL CODES AND RECEIVE APPROVAL WHERE NECESSARY BEFORE CONSTRUCTION.
4. EXISTING PAVEMENT OF PUBLIC ROADWAYS SHALL BE PATCHED IN ACCORDANCE WITH LOCAL AGENCY STANDARDS WHEREVER UTILITY INSTALLATION REQUIRES REMOVAL OF THE EXISTING PAVEMENT. COORDINATE PAVEMENT TRENCHING LOCATIONS WITH SITE CIVIL, PLUMBING AND ELECTRICAL PLANS.
5. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. SLIGHT FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY.
6. DIMENSIONS ARE TO FACE OF CURB AND/OR EXTERIOR FACE OF BUILDING UNLESS OTHERWISE NOTED.
7. CONCRETE FOR CURBS SHALL BE 4.000 PSI AND CONCRETE FOR SIDEWALKS SHALL BE 3.500 PSI.
8. ANY WORK UNACCEPTABLE TO THE OWNER'S REPRESENTATIVE OR TO THE LOCAL GOVERNING AUTHORITY SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
9. CURBS SHALL BE PARALLEL TO THE CENTERLINE OF DRIVES. THE CURB SHALL BE PLACED ONLY AFTER HAVING ALL BREAK POINTS (PC & PT OF CURVES) LOCATED AT THE FACE OF CURB OR AT A CONSISTENT OFFSET BY A REGISTERED LAND SURVEYOR.
10. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE MANUAL OF ACCIDENT PREVENTION AND CONSTRUCTION ISSUED BY AGC OF AMERICA, INC. AND THE SAFETY AND HEALTH REGULATIONS OF CONSTRUCTION ISSUED BY THE U.S. DEPARTMENT OF LABOR.
11. THE CONTRACTOR SHALL PAVE IN THE DIRECTION OF TRAFFIC.
12. THE CONTRACTOR SHALL COLD PLANE IN THE DIRECTION OF TRAFFIC.
13. THE CONTRACTOR WILL BE REQUIRED TO ADJUST GRADES OF INTERSECTING STREETS, ALLEYS, PUBLIC ENTRANCES AND PRIVATE DRIVES AS DIRECTED BY THE ENGINEER.
14. ALL ROADWAY AND SIDEWALK CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE CITY OF COLUMBIA.
15. ALL CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFORM TO THE CITY OF COLUMBIA AND TDOT REGULATIONS AND SPECIFICATIONS.
16. ALL CURBING WILL BE REQUIRED TO ADJUST TO THE GRADES OF INTERSECTING STREETS, ALLEYS, PUBLIC ENTRANCES, AND PRIVATE DRIVES AS DIRECTED BY THE ENGINEER.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL EXISTING MANHOLE CASTINGS/LIDS TO PROPOSED FINISHED GRADE AS NECESSARY.

SITE UTILITY NOTES

1. THE SANITARY SEWER SHALL BE OF THE MATERIAL INDICATED ON THE PLAN. POLYVINYLCHLORIDE (PVC) SHALL BE (SDR26). DUCTILE IRON PIPE (D.I.P.) SHALL BE CLASS 250.
2. ALL WATER LINES, SEWER LINES, AND APPURTENANCES SHALL BE OF MATERIALS AND CONSTRUCTION THAT CONFORM TO THE CITY OF COLUMBIA'S STANDARDS AND SPECIFICATIONS.
4. PROVIDE A MINIMUM 36" OF COVER OVER ALL WATER LINES.
5. THE CONTRACTOR SHALL MAINTAIN 10 FEET HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LINES AND WATER LINES. WHERE THESE CRITERIA CANNOT BE MET, THE CONTRACTOR SHALL MAINTAIN 18" VERTICAL SEPARATION BETWEEN WATER AND SEWER LINES.
6. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATION OF EXISTING MANHOLES OR SANITARY SEWER LINES AT THE POINT OF CONNECTION PRIOR TO THE COMMENCEMENT OF ORDERING OF MATERIALS, CONSTRUCTION OR REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES DO NOT CONFLICT WITH SANITARY SEWERS, SANITARY SEWER SERVICES, STORM SEWERS, OR ANY OTHER UTILITY OR STRUCTURE, EXISTING OR PROPOSED.
8. THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.
9. BEFORE CONNECTIONS ARE MADE INTO EXISTING UTILITIES, THE NEW LINES ARE TO BE FLUSHED AND TESTED BY THE CONTRACTOR IN ACCORDANCE WITH THE LOCAL WATER AND SEWER DEPARTMENT SPECIFICATIONS.
10. ALL TRENCHES CUT IN EXISTING ROADS OR DRIVES SHALL UTILIZE A CLEAN SAW CUT AND SHALL BE BACKFILLED (100%) TO FINAL SUBGRADE WITH #57 STONE. REPAIR ROADS PER LOCAL AGENCY REQUIREMENTS.
11. REPAIR ALL DAMAGE TO EXISTING FEATURES (i.e. DRIVES, ROADS, YARDS, LANDSCAPING, ETC...) TO PRE-CONSTRUCTION CONDITION.
12. THE CONTRACTOR SHALL PROVIDE ALL HORIZONTAL AND VERTICAL BENDS TO ATTAIN THE ALIGNMENT INDICATED ON THE PLANS. PROVIDE VERTICAL BENDS WHERE NECESSARY TO ALLOW WATER LINES TO PASSUNDER OR OVER OTHER UTILITY LINES. (ALL BENDS AND BRACES NEEDED MAY NOT BE ACTUALLY SHOWN). PROVIDE BRACING AND/OR RODDING AT ALL BENDS AND TEES AS REQUIRED BY WATER DEPARTMENT.
13. WATER METERS SHALL BE AT LEAST 22" BUT NO MORE THAN 26" FROM TOP OF METER TO PROPOSED FINISHED GRADE.
14. THE CONTRACTOR SHALL VERIFY REQUIRED PIPE LENGTHS. EXISTING PIPE MATERIAL AND SIZES AS SHOWN ON PLANS.
15. REPAIR EXISTING PAVEMENT, CURBS, WALKS, LANDSCAPING, ETC. THAT ARE DAMAGED BY CONSTRUCTION ACTIVITIES TO A LIKE NEW CONDITION AT NO ADDITIONAL COST TO THE OWNER.
16. THE PROPOSED GAS LINE CONSTRUCTION AND INSTALLATION SHALL BE COORDINATED WITH THE LOCAL GAS COMPANY BY THE CONTRACTOR.
17. THE PROPOSED ELECTRIC LINE CONSTRUCTION AND INSTALLATION SHALL BE COORDINATED WITH THE LOCAL ELECTRIC COMPANY BY THE CONTRACTOR.
18. THE PROPOSED TELEPHONE LINE CONSTRUCTION AND INSTALLATION SHALL BE COORDINATED WITH THE LOCAL TELEPHONE COMPANY BY THE CONTRACTOR.
19. WHERE DRAINAGE OR UTILITY LINES OCCUR IN PROPOSED FILL AREAS, THE FILL MATERIAL IS TO BE PLACED AND COMPACTED PER GEOTECHNICAL RECOMMENDATIONS PRIOR TO INSTALLATION OF DRAINAGE OR UTILITY LINES. FILL IS TO BE INSPECTED BY A PROFESSIONAL GEOTECHNICAL ENGINEER TESTING FIRM EMPLOYED BY THE OWNER. RESULTS OF THE TEST SHALL BE FURNISHED TO THE OWNER'S REPRESENTATIVE. CONTRACTOR TO PAY FOR ANY RETESTING.
20. THE CONTRACTOR SHALL ADJUST THE ALIGNMENT OF THE WATER LINES (HORIZONTALLY AND/OR VERTICALLY) TO ALLOW THE REQUIRED BRACING AT BENDS AND TEES.
21. EXISTING CASTINGS LOCATED IN FILL/CUT AREAS SHALL BE ADJUSTED TO ENSURE THAT THE TOP OF CASTING IS FLUSH WITH THE FINISHED GRADE.
22. THE OUTSIDE OF ALL MANHOLES SHALL BE COATED WITH BITUMINOUS PAINT.
23. THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER.
24. PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS.
25. ALL CONNECTIONS TO EXISTING MANHOLES SHALL BE BY THE CORING AND RESILIENT SEAL METHOD.
26. FIRE HYDRANT ASSEMBLIES INCLUDE THE APPROPRIATE SIZED TEE (WITH KICKER), 6" LINE TO HYDRANT, 6" GATE VALVE (WITH VALVE BOX), AND FIRE HYDRANT (WITH KICKER). HYDRANTS SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE PLANS.
27. THE CONCRETE CAPS AND ENCASEMENTS ON WATER AND SEWER LINES SHALL BE A MINIMUM OF 6" THICK. USE 3000 PSI CONCRETE.
28. ALL SANITARY SEWER SERVICES SHALL BE 4" DIAMETER AND EXTEND 10 FEET BEYOND THE PROPERTY LINE.
29. CONTRACTOR SHALL MARK THE LOCATION OF ALL NEW PVC LINES WITH #8 WIRE.
30. ALL PROPOSED LOT CORNERS SHALL BE FIELD STAKED PRIOR TO CONSTRUCTION OF SANITARY SEWERS. CONTROL POINTS ARE AS SHOWN ON THE SITE LAYOUT PLAN.
31. THE BUILDER SHALL VERIFY THE SANITARY SEWER SERVICE ELEVATION PRIOR TO SETTING THE FINISHED FLOOR ELEVATIONS FOR ALL STRUCTURES. THE SANITARY SEWER MAIN AND SERVICES WERE DESIGNED BASED ON SETTING MINIMUM FINISHED FLOOR ELEVATIONS ON A NUMBER OF CRITICAL LOTS. THE BUILDER SHALL ADHERE TO THE MINIMUM FINISHED FLOOR ELEVATIONS LISTED ON THE SANITARY SEWER SHEETS.
32. PROVIDE A MINIMUM 30" OF COVER OVER ALL SEWER LINES IN GRASS AREAS AND 48" OF COVER IN PAVED AREAS.

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 03/20/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

SITE NOTES
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

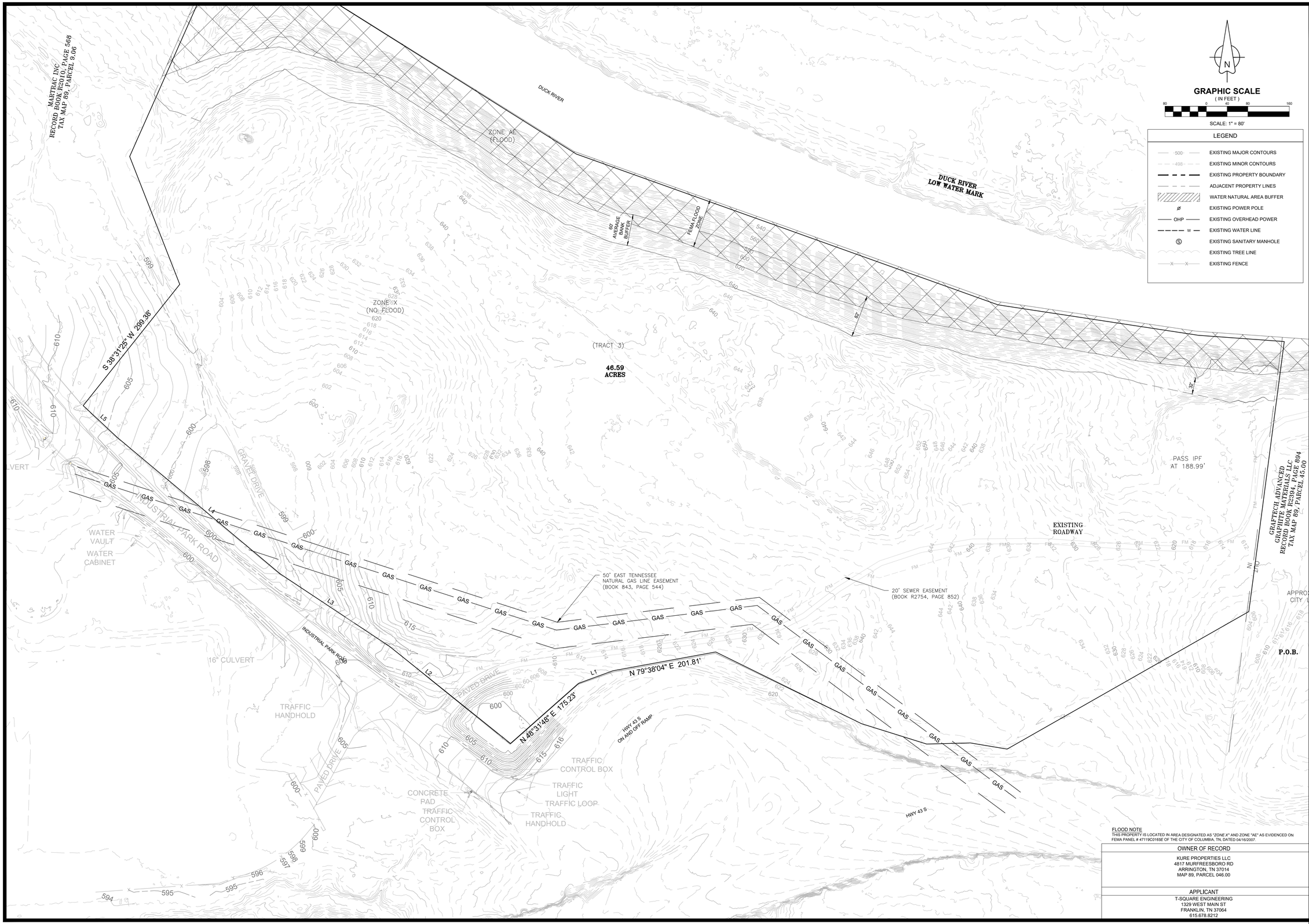
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03/20/2023

PROJECT
22-0431

SHEET
C-0.1

T-SQUARE ENGINEERING

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FLOOD NOTE
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OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00

APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 03/20/2023
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DRAWN BY: T-SQUARE
REVIEWER: FCG

EXISTING CONDITIONS

SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION

FRITZ C. GAUNNITT
REGISTERED
ENGINEER
124450
STATE OF TENNESSEE

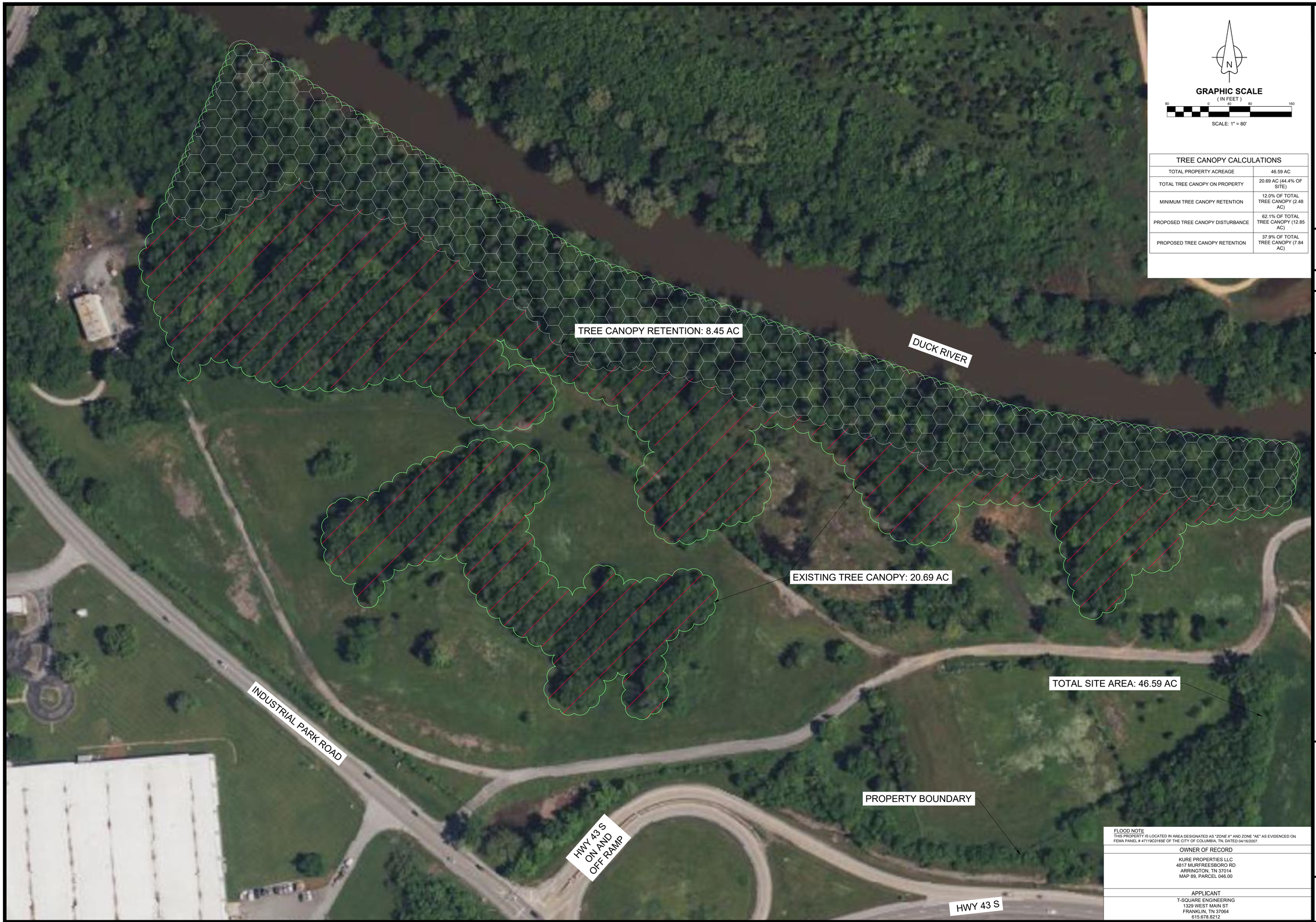
03/20/2023

PROJECT
22-0431

SHEET
C-1.0

T-SQUARE ENGINEERING

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N

GRAPHIC SCALE

(IN FEET)

80 0 40 80 160

SCALE: 1" = 80'

TREE CANOPY CALCULATIONS	
TOTAL PROPERTY ACREAGE	46.59 AC
TOTAL TREE CANOPY ON PROPERTY	20.69 AC (44.4% OF SITE)
MINIMUM TREE CANOPY RETENTION	12.0% OF TOTAL TREE CANOPY (2.48 AC)
PROPOSED TREE CANOPY DISTURBANCE	62.1% OF TOTAL TREE CANOPY (12.85 AC)
PROPOSED TREE CANOPY RETENTION	37.9% OF TOTAL TREE CANOPY (7.84 AC)

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD

KURE PROPERTIES LLC
4817 MURFREESBORO RD
ARRINGTON, TN 37014
MAP 89, PARCEL 046.00

APPLICANT

T-SQUARE ENGINEERING
1329 WEST MAIN ST
FRANKLIN, TN 37064
615.678.8212

REVISIONS

NO.	DATE

DATE: 03/20/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

TREE PROTECTION PLAN

SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION

FRANK C. GALYNN III
REGISTERED ENGINEER
AGRICULTURE
124465
STATE OF TENNESSEE

03/20/2023

PROJECT
22-0431

SHEET
C-1.1

T-SQUARE ENGINEERING

P:\Projects\2022\22-0431 (Industrial Park Blvd. - Ryan Kure)\Production\22-0431 2 Tree Protection Plan.dwg, 3/20/2023 12:54:40 PM, DWG To PDF.pc3

BUILDING SETBACKS	
FRONT	20 FT
REAR	0 FT
SIDE	0 FT

	PARKING	
	REQUIRED	PROPOSED
1 PER 2,000 SF, MINIMUM OF 1 SPACE PER 2 EMPLOYEES ON PREMISES AT ONE TIME, BUT NO FEWER THAN 2 SPACES	102	
UNITS = 110	220	240

SITE DATA		
	EXISTING	PROPOSED
PROPERTY ACREAGE	46.59	46.59
ZONING	LI	LI
USE	VACANT	INDUSTRIAL STORAGE
LOTS	1	19
PROPERTY AREA USE		
PERVIOUS AREA	46.59 AC	38.30 AC
IMPERVIOUS AREA	0 AC	8.29 AC
BUILDING HEIGHT	N/A	1-STORY
BUILDING AREA	N/A	203,781 SF
	REQUIRED	PROPOSED
OPEN SPACE % OF OVERALL	7%	16%
OPEN SPACE TYPE	N/A	NATURAL GREEN WAY
ERROR OF CLOSURE	1/10,000	1/10,000

Parcel Area Table			Open Space Areas		
PARCEL	SQ. FT.	ACRES	PARCEL	SQ. FT.	ACRES
1	40590.92	0.93	OS 1	331826.56	7.62
2	235129.53	5.40	OS 2	116114.78	2.67
2	49545.55	1.14	OS 3	41639.87	0.96
4	44384.69	1.02	OS 4	42471.23	0.98
5	46783.20	1.07			
6	43777.08	1.00			
7	46198.41	1.06			
8	50556.80	1.16			
9	112554.26	2.58			
9	48213.29	1.11			
11	206731.35	4.75			
12	58540.02	1.34			
13	40502.21	0.93			
14	40115.00	0.92			
15	40115.00	0.92			
16	40191.75	0.92			
17	40115.00	0.92			
18	40173.20	0.92			
19	109463.76	2.51			

ABBREVIATIONS

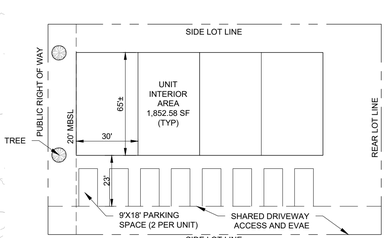
AC	=	ACRES
BLDG	=	BUILDING
EVAE	=	EMERGENCY VEHICLE ACCESS EASEMENT
FT	=	FEET
MBSL	=	MAJOR BUILDING SETBACK LINE
N/A	=	NON APPLICABLE
N.T.S.	=	NOT TO SCALE
R	=	RADIUS
SF	=	SQUARE FEET
(TYP)	=	TYPICAL

N

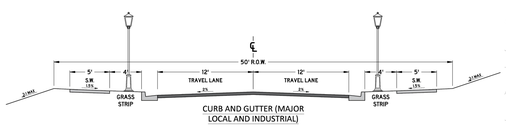
GRAPHIC SCALE
(IN FEET)
80 0 40 80 160
SCALE: 1" = 80'

LEGEND

- PROPOSED LOT LINES
- 00 PROPOSED LOT NUMBER
- PROPOSED BUILDING SETBACK
- PROPOSED ACCESS EASEMENT
- PROPOSED DRAINAGE EASEMENT
- PROPOSED UTILITY EASEMENT
- WATERWAY NATURAL AREA
- 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



TYPICAL LOT LAYOUT
N.T.S



CURB AND GUTTER (MAJOR LOCAL AND INDUSTRIAL)

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

TYPICAL ROAD SECTION
N.T.S

FLOOD NOTE
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OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION
CRAIG C. GAVINITZ
REGISTERED AGRICULTURE
STATE OF TENNESSEE
03/20/2023

PROJECT
22-0431

SHEET
C-2.0

REVISIONS

NO.	DATE

DATE: 03/20/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

SITE PLAN
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

T-SQUARE ENGINEERING

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Parcel Area Table		
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6	43777.08	1.00
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8	50556.80	1.16
9	112554.26	2.58
9	48213.29	1.11
11	206731.35	4.75
12	58540.02	1.34
13	40502.21	0.93
14	40115.00	0.92
15	40115.00	0.92
16	40191.75	0.92
17	40115.00	0.92
18	40173.20	0.92
19	109463.76	2.51

Open Space Areas		
PARCEL	SQ. FT.	ACRES
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OS 2	116114.78	2.67
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SCALE: 1" = 80'

LEGEND

- PROPOSED LOT LINES
- 00 PROPOSED LOT NUMBER
- PROPOSED BUILDING SETBACK
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- PROPOSED UTILITY EASEMENT
- WATERWAY NATURAL AREA
- 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

KURE PARK LANE
PUBLIC
50' RIGHT-OF-WAY

KURE PARK COURT
PUBLIC
50' RIGHT-OF-WAY

INDUSTRIAL PARK ROAD
PUBLIC
RIGHT-OF-WAY WIDTH VARIES

FLOOD NOTE
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KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

REVISIONS

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REVIEWER: FCG

PRELIMINARY PLAT
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

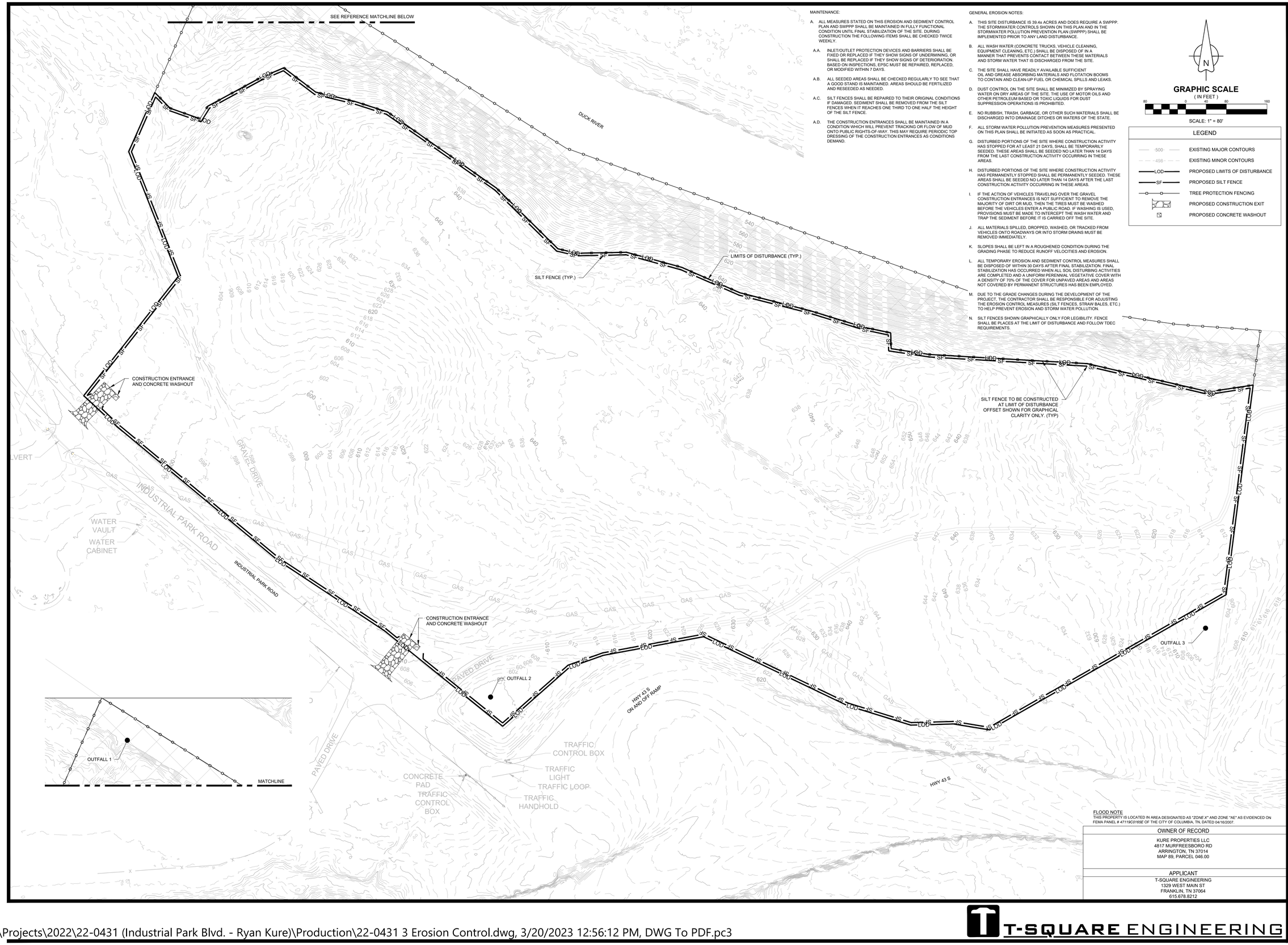
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STATE OF TENNESSEE
03/20/2023

PROJECT
22-0431

SHEET
C-2.1

T-SQUARE ENGINEERING

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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 ENTRANCES 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.

GENERAL EROSION NOTES:

A. THIS SITE DISTURBANCE IS 39.4± 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.

B. 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.

M. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO HELP PREVENT EROSION AND STORM WATER POLLUTION.

N. SILT FENCES SHOWN GRAPHICALLY ONLY FOR LEGIBILITY. FENCE SHALL BE PLACES AT THE LIMIT OF DISTURBANCE AND FOLLOW TDEC REQUIREMENTS.

N

GRAPHIC SCALE

(IN FEET)

80 0 40 80 160

SCALE: 1" = 80'

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

FLOOD NOTE

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OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

ZERO INDUSTRIAL PARK ROAD

INITIAL EROSION CONTROL

SITE DEVELOPMENT PLAN

TAX MAP 89, PARCEL 046.00

COLUMBIA, TENNESSEE

NO.	DATE	REVISIONS

DATE: 03/20/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION

FRANK C. GALYNN III
REGISTERED ENGINEER
AGRICULTURE
124462
STATE OF TENNESSEE

03/20/2023

PROJECT
22-0431

SHEET
C-3.0

T-SQUARE ENGINEERING

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SEE REFERENCE MATCHLINE BELOW

DETENTION POND 1A

DUCK RIVER

SEDIMENT BASIN 1B

INDUSTRIAL PARK ROAD

GRAVEL DRIVE

PAVED DRIVE

DETENTION POND 1C

DETENTION POND 3

HWY 43 S ON AND OFF RAMP

HWY 43 S

WATER VAULT

WATER CABINET

TRAFFIC CONTROL BOX

TRAFFIC LIGHT

TRAFFIC LOOP

TRAFFIC HANDHOLD

CONCRETE PAD

TRAFFIC CONTROL BOX

Intersection 1
Alignment=ROAD 1, Station=8+03.80
Alignment=ROAD 2, Station=17+53.81

OUTFALL 1

MATCHLINE

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.

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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.

M. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO HELP PREVENT EROSION AND STORM WATER POLLUTION.

N. SILT FENCES SHOWN GRAPHICALLY ONLY FOR LEGIBILITY. FENCE SHALL BE PLACES AT THE LIMIT OF DISTURBANCE AND FOLLOW TDEC REQUIREMENTS.

N

GRAPHIC SCALE
(IN FEET)
80 0 40 80 160
SCALE: 1" = 80'

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
	PROPOSED INLET PROTECTION

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 03/20/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

TEMPORARY EROSION CONTROL
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION

FRANCIS C. GALVANI, JR. REGISTERED ENGINEER AGRICULTURE COLUMBIA 124462 STATE OF TENNESSEE

03/20/2023

PROJECT
22-0431

SHEET
C-3.1

T-SQUARE ENGINEERING

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SEE REFERENCE MATCHLINE BELOW

DUCK RIVER

DETENTION POND 1A

DETENTION POND 1B

DETENTION POND 1C

DETENTION POND 3

INDUSTRIAL PARK ROAD

ALL DISTURBED AREAS TO BE PERMANENTLY STABILIZED WITH SEEDING (TYP)

EROSION CONTROL MATTING AT DRAINAGE SWALES AND 3:1 SLOPES (TYP)

HWY 43 S ON AND OFF RAMP

HWY 43 S

WATER VAULT

WATER CABINET

TRAFFIC CONTROL BOX

TRAFFIC LIGHT

TRAFFIC LOOP

TRAFFIC HANDHOLD

CONCRETE PAD

TRAFFIC CONTROL BOX

OUTFALL 1

MATCHLINE

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 ENTRANCES 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.

GENERAL EROSION NOTES:

A. THIS SITE DISTURBANCE IS 39.4± 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.

B. 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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N. SILT FENCES SHOWN GRAPHICALLY ONLY FOR LEGIBILITY. FENCE SHALL BE PLACES AT THE LIMIT OF DISTURBANCE AND FOLLOW TDEC REQUIREMENTS.

N

GRAPHIC SCALE

(IN FEET)

80 0 40 80 160

SCALE: 1" = 80'

LEGEND

500	EXISTING MAJOR CONTOURS
498	EXISTING MINOR CONTOURS
500	PROPOSED MAJOR CONTOURS
498	PROPOSED MINOR CONTOURS
	PROPOSED PERMANENT SEEDING
	PROPOSED EROSION CONTROL MAT

FLOOD NOTE

THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 03/20/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

FINAL EROSION CONTROL
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
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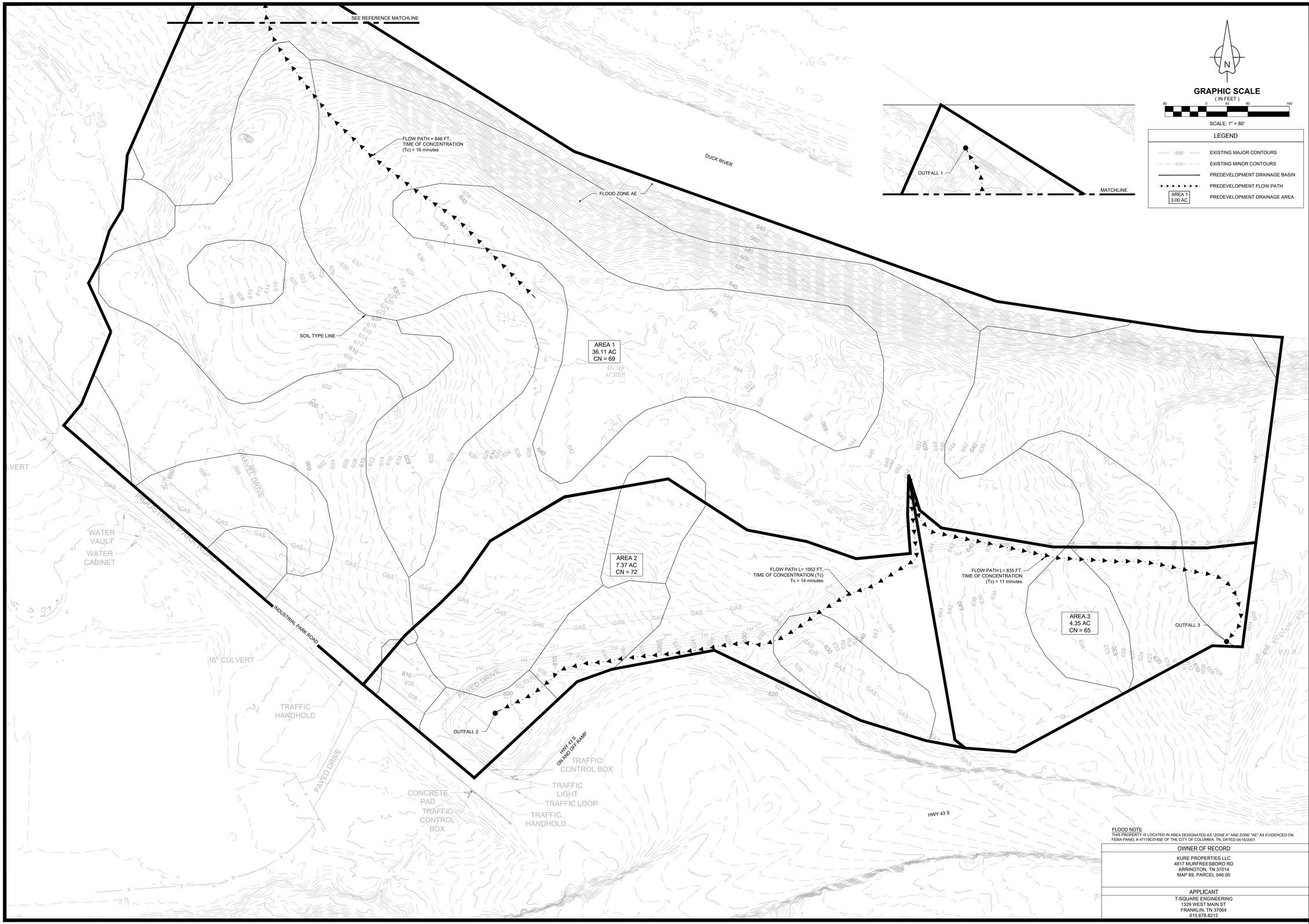
STATE OF TENNESSEE
FRANK C. GALYNN III
REGISTERED ENGINEER
AGRICULTURE
124462
03/20/2023

PROJECT
22-0431

SHEET
C-3.2

T-SQUARE ENGINEERING

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FLOOD NOTE
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KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00

APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

NO.	DATE	REVISIONS

DATE: 03/20/2023
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DRAWN BY: T-SQUARE
REVIEWER: FCG

PREDEVELOPMENT STORMWATER
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

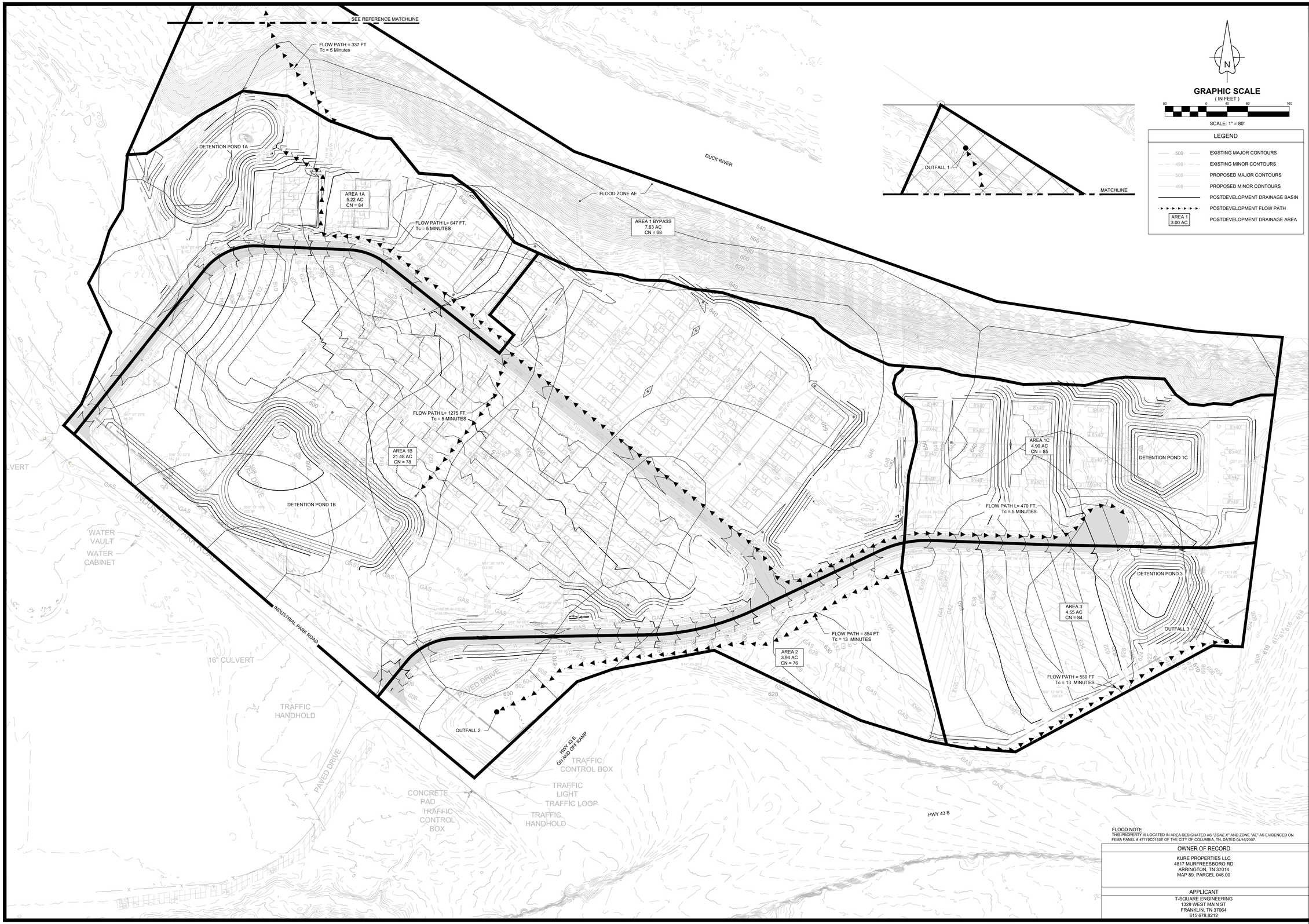
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FRITZ C. GAUNNITT
REGISTERED
LANDSCAPE
ARCHITECT
124
STATE OF TENNESSEE
03/20/2023

PROJECT
22-0431

SHEET
C-4.0

T-SQUARE ENGINEERING

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FLOOD NOTE
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OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00

APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

POSTDEVELOPMENT STORMWATER PLAN

SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

NO.	DATE	REVISIONS

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FRANCIS E. GAVIN II
REGISTERED PROFESSIONAL ENGINEER
AGRICULTURE
STATE OF TENNESSEE

03/20/2023

PROJECT
22-0431

SHEET
C-4.1

T-SQUARE ENGINEERING

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FLOOD NOTE
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OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

ZERO INDUSTRIAL PARK ROAD

GRADING PLAN
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

NO.	DATE	REVISIONS

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REVIEWER: FDG

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03/20/2023

PROJECT
22-0431

SHEET
C-5.0

T-SQUARE ENGINEERING

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N

GRAPHIC SCALE
(IN FEET)
80 0 40 80 160
SCALE: 1" = 80'

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 MANHOLE
	PROPOSED STORM PIPE

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00

APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 03/20/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

DRAINAGE PLAN
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION

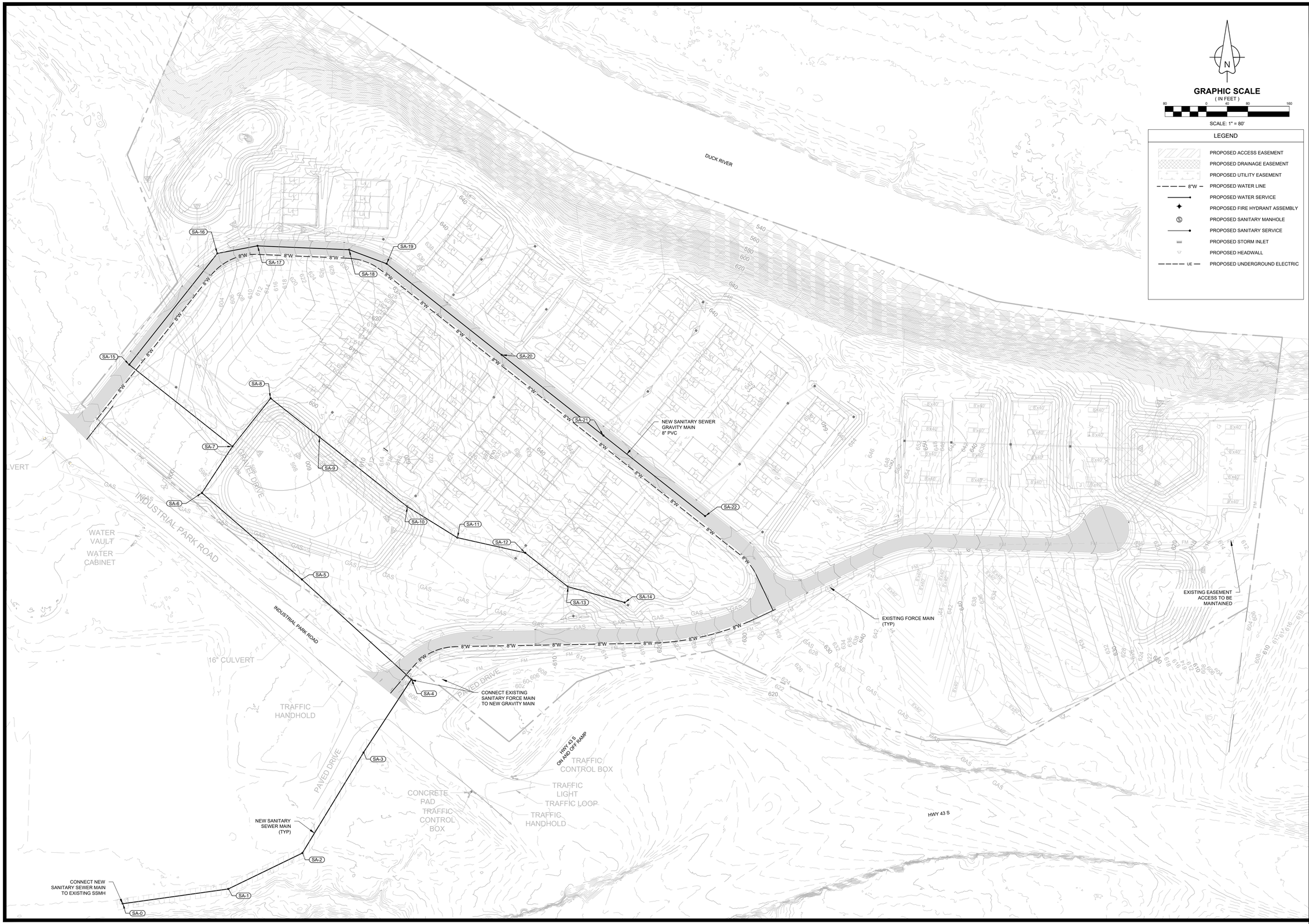
FRANK C. GAWNT III — REGISTERED ENGINEER — AGRICULTURE — 124450 — STATE OF TENNESSEE
03/20/2023

PROJECT
22-0431

SHEET
C-5.1

T-SQUARE ENGINEERING

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NO.	DATE	REVISIONS

DATE: 03/20/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

UTILITY PLAN
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

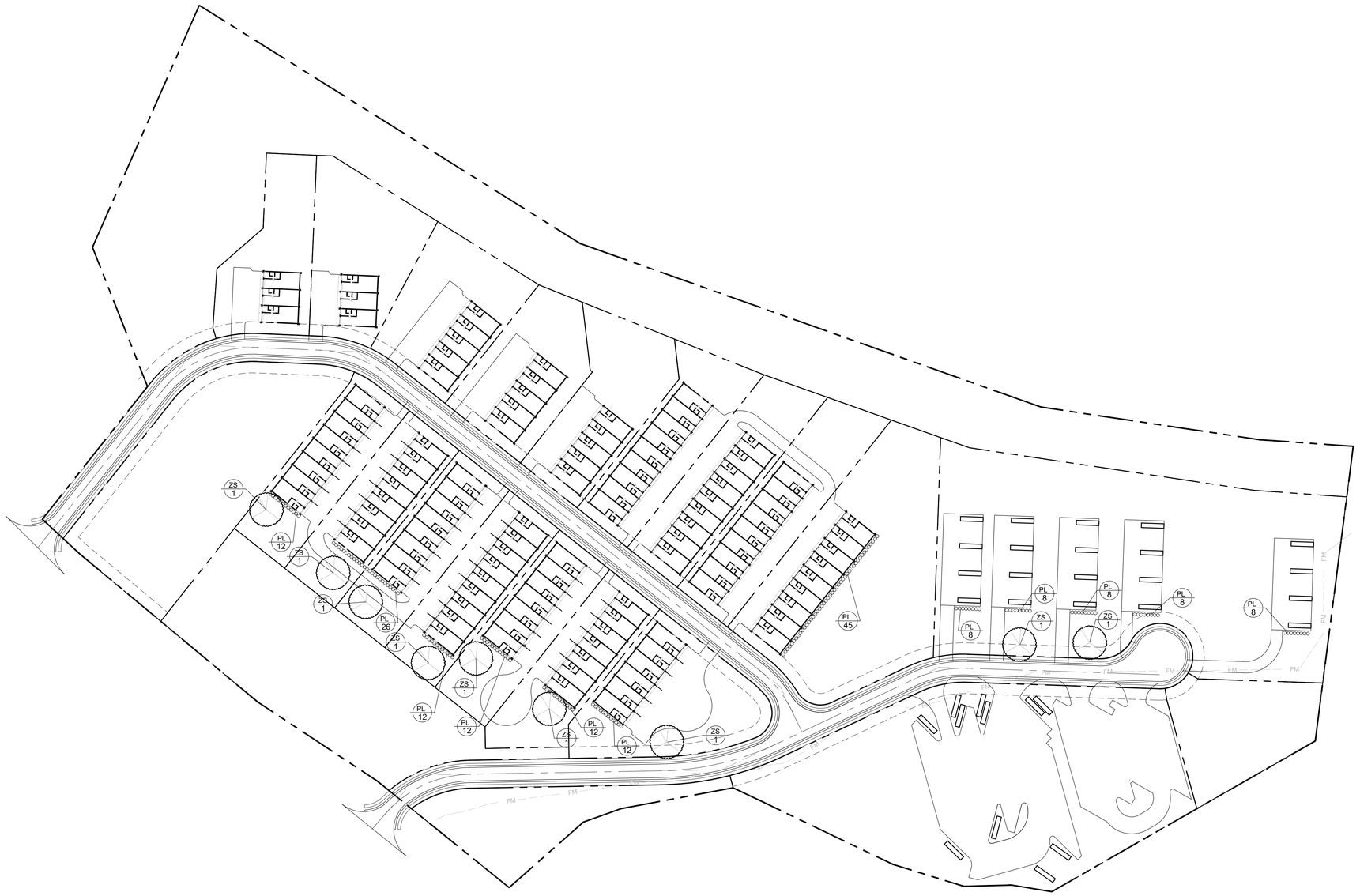
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03/20/2023

PROJECT
22-0431

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T-SQUARE ENGINEERING

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PLANT SCHEDULE								
QTY	SYM	BOTANICAL NAME	COMMON NAME	SIZE	HEIGHT	LEAF	SPACING	NOTES
SHADE TREES								
9	ZS	ZELKOVA SERRATA	JAPANESE ZELKOVA	2.5 CAL, B/B	14'-16'	DECIDUOUS	AS SHOWN	CLEAR TRUNK HEIGHT OF 4' ABOVE GROUND
SHRUBS								
171	PL	PRUNUS LAUROCERASUS	CHERRY LAUREL	30"		EVERGREEN	36" O.C.	

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # 47119C0165E OF THE CITY OF COLUMBIA, TN. DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS		
NO.	DATE	

DATE: 03/20/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: CES

LANDSCAPE PLAN

MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

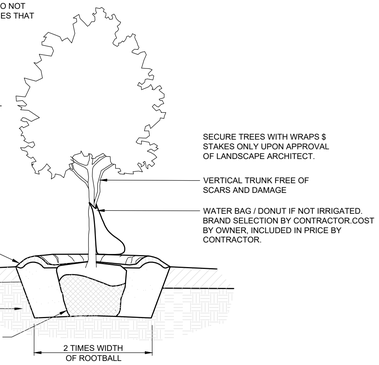
CHRIS E STEWART
REGISTERED
LANDSCAPE ARCHITECT
TENNESSEE
LANDSCAPE ARCHITECT
03/20/2023

PROJECT
22-0431

SHEET
L - 1.0

DO NOT HEAVILY PRUNE THE TREE AT PLANTING. IF NECESSARY PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS, & BROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS & LATERAL BRANCHES MAY BE PRUNED; HOWEVER, DO NOT REMOVE THE TERMINAL BUDS OF BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.

EACH TREE MUST BE PLANTED SUCH THAT THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE TRUNK FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL WITH SOIL.

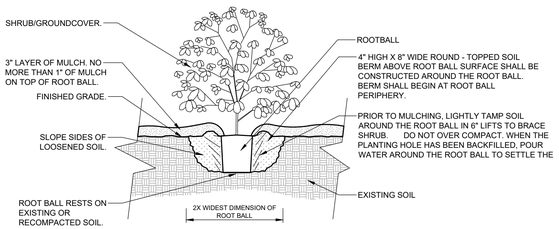


ALL PLANT MATERIAL TO MEET AMERICAN STANDARDS FOR NURSERY STOCK & ANSI Z60.1; LATEST EDITION STANDARDS.

24" RADIUS MULCH RING ON ALL PROPOSED TREES
8" DIA. MULCH RING IF IN LAWN, NO MULCH AT TRUNK.

DECIDUOUS TREE PLANTING DETAIL

NOT TO SCALE



SHRUB PLANTING DETAIL

NOT TO SCALE

GENERAL NOTES:

1. UTILITY SERVICES 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. 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.
7. CONTRACTOR TO REPAIR ANY PAVEMENTS, CURBS, AND OTHER IMPROVEMENTS DAMAGED AS A RESULT OF LANDSCAPE INSTALLATION ACTIVITY
8. THE LOCATION OF ALL PLANT MATERIALS SHOWN ON THE PLAN SHALL BE FIELD LOCATED AND STAKED/FLAGGED BY THE CONTRACTOR.
9. DO NOT MAKE SUBSTITUTIONS REGARDING PLANT SIZES OR SPECIES WITHOUT WRITTEN PERMISSION FROM THE OWNER OR LANDSCAPE ARCHITECT.
10. REMOVE ALL METAL BASKETS, STRINGS AND OTHER TIES FROM TREES.
11. 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 AND GROUND COVER.
12. 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.
13. 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.
14. 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.
15. TREE BALLS SHALL HAVE A MINIMUM DIAMETER IN FEET EQUAL TO 10" FOR EACH CALIPER INCH OF THE TREE.
16. 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.
17. 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.
18. 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. ALL PLANTING BEDS AND TREE AND SHRUB PLANTINGS SHALL RECEIVE A MINIMUM
19. 3" DEEP SHREDDED HARDWOOD MULCH LAYER. CONTRACTOR IS RESPONSIBLE FOR THE WATERING AND MAINTENANCE OF ALL INSTALLED PLANT MATERIAL, INCLUDING GRASS AREAS, UNTIL FINAL ACCEPTANCE BY OWNER.
20. WATER ALL PLANT MATERIAL AT TIME OF PLANTING. ALL PLANT MATERIAL IS TO BE GUARANTEED FOR ONE (1) YEAR. GUARANTEE PERIOD STARTS FROM DATE OF FINAL ACCEPTANCE.
21. 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.
22. 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.
23. 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.

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 03/20/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: CES

LANDSCAPE DETAILS

MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

CLIFFORD E. STEWART
REGISTERED
LANDSCAPE ARCHITECT
TENNESSEE
03/20/2023

PROJECT
22-0431

SHEET
L - 2.0

GRIGGS & MALONEY
INCORPORATED
Engineering & Environmental Consulting

P.O. Box 2968
Murfreesboro, TN 37133-2968
(615) 895-8221
Fax: (615) 895-0632

May 16, 2022

Ashworth Law Firm
Kure Construction and
Synergy Realty Network
Attn: Ms. Wendy Smith
1585 Mallory Lane, Ste #103
Brentwood, TN 37027

Re: Phase I Environmental Site Assessment Update – Columba Industrial Properties, LLC Property, Industrial Park Road, Columbia, Maury County, Tennessee
(G&M Project Number 1454-01)

Ms. Smith:

As you requested, Griggs & Maloney, Inc. (G&M) has completed a Phase I Environmental Site Assessment (ESA) also known as an All Appropriate Inquiry (AAI) update (Phase I Update or AAI Update) of a 46.59-acre property located on the northeast side of Industrial Park Road in Columbia, Maury County, Tennessee (the "Subject Property"). The Subject Property is known as Maury County Tax Assessor Map 89, Parcel 46.00. G&M conducted a Phase I ESA/AAI of the Subject Property (G&M Project No. 1309-01) and issued a report of our findings in a document entitled "*All Appropriate Inquiry Report, Columbia Industrial Properties, LLC Property, Industrial Park Road, Columbia, Tennessee*" dated July 27, 2018 (the "2018 report"). The information in the 2018 report is incorporated by reference herein.

Investigative Strategies

Environmental assessments are typically divided into three (3) sequential phases. These phases include the following:

Phase I: Review of available historical records; interviews with persons knowledgeable of the site; and a visual inspection of the site, preferably a perambulatory reconnaissance or "walk-over" of the site.

Phase II: Selective sampling of areas suspect of being potential environmental liabilities.

Phase III: Develop strategy for site utilization and/or potential environmental remediation or clean up.

The initiation of each phase is dependent upon the findings of the previous phase. For example, at a minimum, each site investigation includes a Phase I ESA/AAI record review, knowledgeable person interview, and site reconnaissance.

If the reviewed information and inspections indicate no environmental *recognized environmental conditions*[1], then there is no need to proceed with Phases II and III investigations. However, the Phase I ESA may identify an area, or areas, of the property which in the past, currently, or which may reasonably be expected to pose future environmental liabilities. Such a finding would typically result in a recommendation for collecting media (e.g., building materials, soil, groundwater, surface water) samples and subsequent analysis as part of a Phase II investigation. The Phase II investigation would be designed to confirm or refute the presence of substances of environmental concern on the property.

If a Phase II Assessment indicates environmental concerns that need further investigation or corrective action, then a Phase III Assessment may be necessary. Phase III is a more comprehensive sampling, assessment, and site remediation program, which may allow for estimating the remedial actions and capital/operating costs for the property. The American Society for Testing and Materials (ASTM) Standard E 1527-21 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* indicates that reliance on a Phase I/AAI report may be made conditionally if it was completed within 180 days to one year before an update is required for further reliance.

2018 Report Findings and Recommendations:

The 2018 report was prepared in general conformance with ASTM's former Standard 1527-13. The 2018 report Executive Summary stated the following:

> *The Subject Property supports no buildings and is currently only used for hay production. Former uses of the Subject Property include an area once used for employee picnic, a borrow area used to gather material to fill/patch roads and washouts on the rest of the facility, and an area once used as a contractors' parking lot. A concrete slab that once supported a picnic pavilion is located on the north-central portion of the Subject Property. A small slab, electrical conduit, utility poles and a pole-mounted electrical transformer are located on the southeastern portion of the Subject Property. The Subject Property has had no other uses. Duck River and undeveloped wooded areas beyond are located along the northern boundary of the Subject Property. A landfill associated with the UCAR Carbon facility and undeveloped areas are located on adjacent eastern property. Industrial Park Road and the Freeland Auto Recycling facility beyond are located south and southwest of the Subject Property. A facility occupied by a company that reclaims carbonaceous materials from the UCAR Carbon facility area and undeveloped areas are located on adjacent western property.*

[1] A *recognized environmental condition* is (1) the presence of hazardous substances or petroleum due to a release to the environment; (2) the *likely* presence of hazardous substances or petroleum products due to a *likely* release to the environment; or (3) the presence of hazardous substances or petroleum products under conditions that pose a material threat of a future release to the environment. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

Conclusions and Recommendations:

A recognized environmental condition (REC) is the presence or likely presence of any hazardous substances or petroleum products in, on or at a property: 1) due to any release to the environment; 2) under conditions indicative of a release to the environment; or 3) under any conditions that pose a material threat of future release to the environment. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. This assessment has revealed no apparent RECs in connection with the Subject Property which are of sufficient concern to warrant a Phase II investigation at this time. However, the observed pole-mounted electrical transformer on the Subject Property appears to be part of the real property owned by the Subject Property owner and may contain concentrations of polychlorinated biphenyls (PCBs). The presence of the electrical transformer on the Subject Property and its ownership by the Subject Property owner is considered a REC based upon potential for the transformer to release PCBs to the environment.

The U.S. Environmental Protection Agency (EPA) has identified PCBs as suspected human carcinogens. PCBs were found in dielectric fluid in many electrical components and equipment manufactured prior to 1979. Electrical devices, which should be suspected of containing PCBs, include electrical power transformers, capacitors, and ballasts. Federal regulations require that electrical transformers that have not been tested previously and were manufactured before July 2, 1979 must be assumed to contain between 50 and 500 parts per million (ppm) PCBs. Such transformers are classified as PCB-contaminated articles. Electrical transformers containing dielectric fluid with greater than 500 ppm PCB are classified as PCB-containing articles. Those with less than 50 ppm PCB fluids are considered "non-PCB". Federal regulations require the owner of PCB-containing or PCB-contaminated equipment to cleanup releases from such equipment. No labelling regarding PCB content of the Subject Property transformer were noted. The observed transformer is no longer active and is apparently disconnected from active lines. We recommend that the observed transformer and any contents be evaluated for PCB content and/or removed from the Subject Property for offsite reclamation or disposal. The final disposition of the transformer should be documented and kept on file by the owner.

Current Phase I ESA Update Activities:

Owner Interview

G&M conducted a telephone interview of Mr. Tom Grosko, Subject Property owner representative on May 10, 2022, regarding Subject Property uses and changes since the time of the 2018 report. Mr. Grosko indicated that the Subject Property has remained unused since the time of the 2018 report and indicated that the security fence has remained in place around the Subject Property with the southern gate locked and the eastern access drive under security guard restriction on adjacent property. He indicated that a sanitary

sewer easement was obtained by the City of Columbia across the Subject Property to connect a wastewater generation operation on adjacent eastern property to the municipal sanitary sewer system. Mr. Grosko indicated that the inactive pole-mounted electrical transformer identified in the 2018 report was removed from the Subject Property at the time of acquisition for offsite disposal/recycling. Mr. Grosko indicated no additional changes to the Subject Property since the time of the 2018 report.

Local Record Review:

G&M reviewed Maury County Tax Assessor records for the Subject Property on May 11, 2022. A copy of the tax assessor information is included in Attachment 1. The tax assessor records indicated that Columbia Industrial Properties, LLC owns the Subject Property. The tax assessor records indicated that the current owner acquired the Subject Property by deed dated June 5, 2018, recorded at the Maury County Register of Deeds Office in Columba in Record Book 2499, Page 715. The records indicate no buildings on the Subject Property and that public potable water, sewer, electric, and natural gas systems are available for connection to the Subject Property. The Subject Property is described as being classified for farm use in the tax assessor records. No information in the tax assessor records indicative of *recognized environmental conditions (RECs)* on the Subject Property since the time of the 2018 report were noted.

The legal description for the Subject Property is described as "Tract 3" in a copy of the current deed of record for the Subject Property (Record Book 2499, Page 715-720) included in Attachment 1.

G&M conducted a review of the ownership records for the Subject Property back to the time of the 2018 report at the Maury County of Deeds Office in Columbia on May 10, 2022. The reviewed ownership information indicated that Columbia Industrial Properties, LLC acquired the Subject Property from GT Columbia, LLC by deed as described above. No register of deeds records reviewed as indexed by Subject Property owner names since the time of the 2018 report indicated environmental liens or activity or land use restrictions (ALUs) based on environmental conditions on the Subject Property. However, a 20 foot-wide sewer easement dated July 28, 2021, had been recorded for the Subject Property in a document recorded in Record Book 2754, Page 852. G&M does not practice law and recommends a lien search prior to acquisition by a competent attorney.

G&M conducted a review of aerial photographs of the Subject Property area taken in 2019 and 2022. The aerial photos indicated no changes to the Subject Property surface and no uses of the Subject Property from the time of the 2018 report.

State and Federal Regulatory Agency File Searches:

As part of the investigation, G&M reviewed computer search database search reports of federal and state databases containing recognized, registered regulated sites within the city, county, and/or zip code search areas. The May 10, 2022, database searches were based on a latitude/longitude estimate of the approximate Subject (or Target) Property boundaries. Envirosite Corporation (Envirosite) provided the computer database search for the vicinity of the Subject Property parcels. A list of ASTM-recommended databases to be searched are described in Table 1. These databases and several others were searched as part of the

Envirosite database investigation as specified in the Envirosite report. A copy of the Envirosite database search report is attached. The database search distances were selected based on ASTM Standard E 1527-13 recommendations. The following sections present a summary of the findings of the database searches.

Table 1.

Searched Databases

• NPL	National Priority List and Federal Delisted NPL
• CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
• CERCLIS-NFRAP	CERCLIS No Further Remedial Action Planned
• RCRIS	Resource Conservation and Recovery Information System
• RCRIS - TSD	Resource Conservation and Recovery Information System – Treatment Storage and Disposal Facilities
• RCRIS - COR	Resource Conservation and Recovery Information System – Corrective Action Sites (CORRACTS) and non-CORRACTS TSD facilities list
• LANDFILLS	Solid Waste Facilities List
• RCRIS-GEN	Resource Conservation and Recovery Information System – Generator of Hazardous Waste
• RCRIS - NLR	Resource Conservation and Recovery Information System – No Longer Regulated Sites
• ERNS	Emergency Response Notification System
• STATE and Tribal SITES	Tennessee Division of Superfund and applicable tribal lists of regulated sites
• STATE UST	Owner/Facility Report of All Tanks Regardless of Status
• STATE LUST	Leaking registered UST list - Division of Petroleum USTs

Table 1.

Searched Databases (Continued)

• STATE Engineering Control Registries	A comprehensive and electronically published and available list of sites subject to physical site requirements based on environmental conditions identified by state environmental agencies (as available).
• Institutional Control Registries	A comprehensive and electronically published and available list of sites subject to land use restrictions based on environmental conditions identified by state environmental agencies (as available).
• Voluntary Cleanup Sites	A comprehensive and electronically published and available list of sites subject to voluntary cleanup requirements (as available).
• Brownfield Sites	A comprehensive and electronically published and available list of sites designated as "Brownfield sites" by state agencies (as available).

NPL/CERCLIS/CERC/NFRAP

National Priorities Listing (NPL) of Superfund sites is an EPA listing of uncontrolled or abandoned hazardous waste sites. The Comprehensive Environmental Response, Compensation, and Liability (Act) Information System (CERCLIS) is a database of known and suspected uncontrolled or abandoned hazardous waste sites. The CERCLA No Further Remedial Action Planned (CERC-NFRAP) database identifies CERCLA sites that have been investigated or remediated and deemed to require no further investigation or remediation.

The EPA replaced CERCLIS, the Comprehensive Environmental Response, Compensation, and Liability Information System with a more modern system called SEMS, Superfund Enterprise Management System. Envirosite has recently updated their government record reports to include SEMS. EPA last updated CERCLIS November 12, 2013. The acronym "SEMS" replaces the acronym "CERCLIS" in the Envirosite government record reports. All the records stored in CERCLIS have been moved over to SEMS. In addition, EPA has renamed their archive system to SEMS-Archive. Envirosite reports now include both SEMS-Archive and NFRAP data.

No NFRAP, NPL or CERCLIS sites are identified in the Envirosite report as being located within the ASTM-recommended 1.0-mile approximate minimum search radius of the Subject Property for NFRAP and 0.5-mile for NPL and CERCLIS.

ERNS

Emergency Response Notification System (ERNS) is a national computer database of information on the release of hazardous substances into the environment, including spill locations, substances released, and the responsible party. No ERNS sites or facilities are identified in the Envirosite report as being located within the ASTM-recommended search distance of the Subject (Target) Property.

RCRIS

Resource Conservation and Recovery (RCRA) Information System reports the listing of small (SQG) and large quantity generators (LQG) and treatment, storage, and disposal (TSD) facilities of hazardous wastes that are required to register their activities under RCRA. Hazardous waste SQG facilities generate 100 to 1,000 kilograms (kg) (220 to 2,200 pounds) of hazardous waste per month. Hazardous waste LQG facilities generate more than 1,000 kg of hazardous waste per month. Generators of hazardous waste in quantities of less than 100 kg per month are classified as Conditionally Exempt (CE) or Very Small Quantity Generators (VSQG) of hazardous waste. Facilities that have submitted information to Tennessee Department of Environment and Conservation (TDEC) – Division of Solid and Hazardous Waste Management have been issued identification numbers, but are designated RCRA Non-generators (RCRA_NONGEN).

No registered hazardous waste generators are identified as being located within the ASTM-recommended approximate minimum search distance of the Subject Property or surrounding adjacent properties.

CORRACTS

The Corrective Action Report (CORRACTS) is a computerized inventory of all facilities identified by the EPA as having been subject to EPA corrective action requirements. No CORRACTS facilities were identified in the Envirosite report as being located within the ASTM-recommended search radius of the Subject Property (one mile).

State Databases and Files Review

SPILS

Statewide Petroleum Incident Logging Section (SPILS) is a program within TDEC's Division of Solid Waste Management (DSWM). This program logs incidents along Tennessee's roadways where a reportable quantity of petroleum products is released to the environment, ensuring that appropriate cleanup standards are applied, remediation activities are completed, and final reports detailing the response are received and reviewed. Once an incident has been remediated, SPILS will issue a closure letter for the Responsible Party's file.

The Envirosite report identified no SPILS sites or facilities within the ASTM-recommended search distance (the Target or Subject Property is the search distance).

VOAP/VCPBF SITES

Tennessee is a "State Plan State" having authority to implement and regulate environmental conditions in lieu of the U.S. Environmental Protection Agency (USEPA) with the stipulation that state environmental regulations must be at least as stringent as USEPA requirements. The State Remediation Sites (SRS) List reviewed by Envirosite includes State Hazardous Waste Sites (SHWS) and facilities that are or have been reviewed by the Tennessee Department of Environment and Conservation (TDEC) – State Remediation Program (SRP). The SRP manages the VOAP or Voluntary Cleanup Program/Brownfields (VCPBF) program. This program offers landowners the opportunity to work proactively with state government to address necessary cleanup of a property to return it to productive use. In return for their efforts, participants can receive a "No Further Action" letter and a release of liability for areas where investigation and cleanup is conducted. The program is open to everyone with an interest in addressing contamination at a site. The following are examples of situations where this program is currently used.

- To resolve potential liability of an innocent landowner at a contaminated site,
- To address potential liability at a site for a prospective owner,
- To establish a legal basis for enforcement of institutional controls to limit future liability at a site resulting from it progressing to uses with increased risk,
- As an alternative to receiving a unilateral order from the Commissioner to investigate and clean up an inactive hazardous substance site.

The VOAP is participating as part of Tennessee's state response program under the Small Business Liability Relief and Brownfields Revitalization Act. As a result, program participants may receive protection from intervention by U.S. EPA at eligible sites. As part of the program requirements, land use restrictions must be recorded for the registered sites/facilities.

Five (5) SHWS facilities are identified in the Envirosite report as being located within the ASTM-recommended search distance of the Subject Property (0.5-mile) including Union Carbide, the facility property from which the Subject Property was carved. The Union Carbide facility is identified as a Division of Remediation (DoR) site (Facility Identification Number 60539) that is classified as "Open." G&M contacted DoR on May 12, 2022, by email to determine if a land use restriction has been prepared for the site which would include the Subject Property and if the site case is actually considered open. In a May 12, 2022, response to the G&M request, DoR representative Alison Hensley indicated that there is no DoR record of land use restriction and that the only records available at DoR under the identification number were hazardous waste reporting documents dated 1981. Ms. Hensley forwarded the records request to Division of Solid Waste Management (DSWM). The May 12, 2022, response from Michael Miracle of DSWM included numerous records for the Graftech facility and former Graftech facility areas now occupied by Mersen Graphite Company, for Special Waste disposal offsite. A review of all of the records received found no information indicative of impact to the environmental condition of the Subject Property.

UST/LUST

TDEC's Division of Underground Petroleum Storage Tanks (DUST) is the Tennessee regulatory agency with purview over petroleum underground storage tanks (USTs). With few regulatory exceptions, no petroleum distributor can deliver fuel to a facility that is not registered with DUST. DUST oversees a release investigation and cleanup fund as part of the DUST their registration program. The fund reimburses qualified facilities for release investigations after a deductible is met much like an insurance program. DUST policy requires that two (2) criteria be met by UST facilities for fund eligibility. The two requirements are 1) "Proper (and timely) tank registration, and 2) Proper (and timely) annual tank fee payment." Please note that a facility must be in "substantial compliance with the technical regulations" to receive fund coverage according to DUST. Therefore, DUST must approve a facility for fund coverage to be received. The fund acts as an insurance program in that certain deductibles must be met before DUST funds are activated. Further, financial culpability criteria for the facility must be met before DUST registration is valid.

Neither the Subject Property nor any surrounding adjacent property is identified as a registered UST or registered and reported leaking UST (LUST) facility in the Envirosite report. No LUST facilities are identified in the Envirosite report as being located within the ASTM-recommended search distance for LUST facilities of 0.5-mile.

Landfills/SWF/LF

The Envirosite search of the Tennessee Division of Solid Waste Management (DSWM) databases identified no solid waste facility/landfill facilities (SWF/LFs) as being located within the ASTM-recommended search distance of the Subject Property of one mile.

Unlocatable Sites List

Envirosite typically compiles a list of identified sites and facilities in the searched databases that, based on available location information, could not be adequately mapped but may be within the ASTM-recommended search distances for such facilities. This list is entitled the Report Summary of Unlocatable Sites (Page 13 of 79) and contains no sites or facility names.

Site Reconnaissance May 10, 2022:

G&M Senior Environmental Scientist Kerry Given conducted a reconnaissance of the Subject Property on foot on May 10, 2022. The weather at the time of the site reconnaissance included generally clear skies and an approximate temperature of 81º Fahrenheit.

G&M noted no physical changes to the surface of the Subject Property with the exception of surface fixtures and surface conditions indicative of the presence of a recently installed sanitary sewer connection and the absence of any pole-mounted electrical transformers. No surface stains, significant apparent waste materials, surface conditions indicative of waste burial, or unusual odors were noted on the Subject

Property surface. Digital images collected during the May 10, 2022, site reconnaissance are included in Attachment 1.

Conclusions and Recommendations

The only item of potential concern identified in the 2018 G&M Phase I ESA, the presence of a potentially PCB-containing or contaminated pole-mounted, unused electrical transformer, has been addressed. No additional potential or confirmed *RECs* were identified. We have performed a Phase I Environmental Site Assessment (also known as an All Appropriate Inquiry – AAI) and this Update in general conformance with the scope and limitations of ASTM Practice E 1527-21 for the Subject Property. No further investigation of the environmental condition of the Subject Property is warranted based on investigatory findings as described herein.

This Phase I ESA Update was also conducted in accordance with the exceptions and limitations included in Attachment 3.

Please contact us if you have any questions.

Kerry Given
Sr. Environmental Scientist

Attachments

ATTACHMENT 1

SUBJECT PROPERTY DEED, TAX RECORDS, AND PHOTOGRAPHS

BK/PG: R2499/715-720
18008155

6 PGS:AL-QUITCLAIM DEED	
NANCY BATCH: 200893	06/08/2018 - 09:10 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

This instrument prepared by and after recording return to:

Thompson Burton PLLC
One Franklin Park
6100 Tower Circle, Suite 200
Franklin, Tennessee 37067
Attn: Walt Burton, Esq.

QUIT CLAIM DEED

Address New Owner(s) as follows:	Send Tax Bills To:	Tax Parcel
Columbia Industrial Properties, LLC 401 Rutherford Lane Columbia, TN 38401 Attention: Kelli Gillham	Columbia Industrial Properties, LLC 401 Rutherford Lane Columbia, TN 38401 Attention: Kelli Gillham	Map 076, Parcel 080.00 000 Map 076, Parcel 080.00 001 Map 076, Parcel 080.00 002 Map 076, Parcel 080.00 003

FOR AND IN CONSIDERATION of the sum of Ten Dollars and No/100 ($10.00), cash in hand paid by the Grantee and other good and valuable consideration accepted as cash, the receipt and sufficiency of which are hereby acknowledged, **GT COLUMBIA, LLC**, a Delaware limited liability company (hereinafter referred to as "Grantor"), herein this day bargained, sold and does by these presents bargain, sell, remise, release, and forever **QUITCLAIM** to **COLUMBIA INDUSTRIAL PROPERTIES, LLC**, a Tennessee limited liability company (hereinafter referred to as "Grantee"; the terms "Grantor" and "Grantee" to include their respective heirs, legal representatives, successors and assigns where the context requires or permits) all the right, title, interest, claim or demand which Grantor has or may have had in and to the real property described on **Exhibit "A"** attached hereto and made a part hereof by this reference together with all easements, appurtenances, improvements, and fixtures (the "Property").

The Property is being conveyed subject to all matters of record, including without limitation anything shown on any recorded plat; unpaid taxes for 2018 and subsequent years; unpaid assessments; restrictive covenants, easements or set-back lines that may be applicable; zoning restrictions; prior liens or encumbrances as well as any priority created by a fixture filing; and to any matter that an accurate survey of the premises might disclose.

[Signatures Commence on Following Page]

Mail:
FIDELITY NATIONAL TITLE
6840 CAROTHERS PKWY
STE 200
FRANKLIN TN 37067

IN WITNESS WHEREOF, Grantor has hereunto set Grantor's hand and seal as of the 5 day of June, 2018.

GRANTOR:

GT COLUMBIA LLC,
a Delaware limited liability company

By: _____
Name: William F. Firestone
Its: President

STATE OF CT)
)
COUNTY OF AFD)

Personally appeared before me, the undersigned authority, a Notary Public in and for said County and State, WILLIAM FIRESTONE, the MEMBER/PRESIDENT of GT Columbia LLC, a Delaware limited liability company, the within-named Grantor, with whom I am personally acquainted, or proved to me on the basis of satisfactory evidence, and who acknowledged that he/she as MEMBER/PRESIDENT executed the foregoing instrument for the purposes therein expressed and contained, by signing the name GT Columbia LLC, a Delaware limited liability company, as such MEMBER/PRESIDENT

Witness my hand and official seal this 5 day of June, 2018.

My Commission Expires: _____

_____
Notary Public

ISMAEL GOMES DE PINHO NOTARY PUBLIC My Commission Expires 10-31-2020 CONNECTICUT

AFFIDAVIT OF VALUE

I, WILLIAM FIRESTONE, hereby swear or affirm that, to the best of my knowledge, information and belief, the actual consideration for this transfer is $0.00.

Subscribed and sworn to before me this 5 day of June, 2018.

_____
William Firestone

_____
Notary Public

My Commission Expires: _____

ISMAEL GOMES DE PINHO NOTARY PUBLIC My Commission Expires 10-31-2020 CONNECTICUT

[Signature Page to Quit Claim Deed]

EXHIBIT "A"

Legal Description of the Property

TRACT 1

BEING AND LYING IN THE 9TH CIVIL DISTRICT OF MAURY COUNTY, TENNESSEE AND LYING WEST OF AND ADJACENT TO NEW HWY 7, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A IRON PIN FOUND ON THE WEST R.O.W. OF NEW HWY 7; SAID IRON PIN FOUND BEING THE NORTHEAST CORNER OF THE TRACT BEING DESCRIBED, AND THE SOUTHEAST CORNER OF MAPA SPONTEX INC; THENCE WITH WEST R.O.W. OF NEW HWY 7, S 16°18'35" E FOR A DISTANCE OF 166.65' TO A POINT; THENCE S 07°09'04" E FOR A DISTANCE OF 140.98' TO A POINT; THENCE S 08°16'30" W, PASSING THE CENTER OF A 60' INGRESS-EGRESS AND UTILITIES EASEMENT (UNION CARBIDE ROAD-A PRIVATE ROAD) AT 226.90', IN ALL A DISTANCE OF 388.58' TO A CONCRETE MONUMENT; THENCE S 29°32'30" W FOR A DISTANCE OF 54.72' TO A CONCRETE MONUMENT; THENCE S 04°44'23" W FOR A DISTANCE OF 293.90' TO A CONCRETE MONUMENT; THENCE S 11°32'00" W FOR A DISTANCE OF 6.03' TO A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE EASTERN MOST SOUTHEAST CORNER OF THE TRACT BEING DESCRIBED, AND THE NORTHEAST CORNER OF WENDELL PULLEN; THENCE LEAVING SAID ROAD WITH PULLEN, N 88°44'43" W FOR A DISTANCE OF 377.07' TO A IRON PIPE FOUND; SAID IRON PIPE FOUND BEING THE NORTHWEST CORNER OF PULLEN; THENCE CONTINUING WITH PULLEN, S 01°41'56" E FOR A DISTANCE OF 168.65' TO A IRON PIPE FOUND; SAID IRON PIPE FOUND BEING THE SOUTHWEST CORNER OF PULLEN, AND THE NORTH BOUNDARY OF WILL CHEEK ETUX; THENCE WITH CHEEK, N 83°49'19" W FOR A DISTANCE OF 348.46' TO A IRON PIPE FOUND; SAID IRON PIPE FOUND BEING THE NORTHWEST CORNER OF CHEEK; THENCE CONTINUING WITH CHEEK, S 09°19'59" W FOR A DISTANCE OF 176.08' TO A IRON PIN FOUND; THENCE S 49°18'11" W FOR A DISTANCE OF 99.31' TO A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE SOUTHWEST CORNER OF CHEEK, AND THE NORTHWEST CORNER OF LOT 8 OF ROYAL OAK SUBDIVISION; THENCE WITH LOT 8, S 04°40'18" W FOR A DISTANCE OF 362.41' TO A POINT ON THE WEST R.O.W. OF NEW HWY 7; SAID POINT BEING THE SOUTHWEST CORNER OF LOT 8; THENCE LEAVING LOT 8 WITH THE WEST R.O.W. OF NEW HWY 7, S 53°06'38" W FOR A DISTANCE OF 350.63' TO A IRON PIN FOUND ON THE EAST R.O.W. OF A EAST TENNESSEE NATURAL GAS LINE EASEMENT; THENCE WITH EAST R.O.W. OF SAID EASEMENT AND CONTINUING WITH WEST R.O.W. OF NEW HWY 7, S 39°07'21" W FOR A DISTANCE OF 206.30' TO A POINT; THENCE S 33°34'48" W FOR A DISTANCE OF 48.40' TO A IRON PIN FOUND; THENCE LEAVING EAST R.O.W. OF SAID GAS EASEMENT CONTINUING WITH NEW HWY 7, WITH A CURVE TURNING TO THE LEFT WITH AN ARC LENGTH OF 55.01', WITH A RADIUS OF 158.86', WITH A CHORD BEARING OF N 59°45'56" W, WITH A CHORD LENGTH OF 54.74' TO AN IRON PIN FOUND ON THE WEST R.O.W. OF SAID GAS EASEMENT; THENCE LEAVING SAID GAS EASEMENT CONTINUING WITH NEW HWY 7, N 69°36'26" W FOR A DISTANCE OF 121.38' TO A IRON PIN FOUND; THENCE WITH A CURVE TURNING TO THE LEFT WITH AN ARC LENGTH OF 106.93', WITH A RADIUS OF 733.77', WITH A CHORD BEARING OF N 73°52'43" W, WITH A CHORD LENGTH OF 106.84'; THENCE WITH A REVERSE CURVE TURNING TO THE RIGHT WITH AN ARC LENGTH OF 39.08', WITH A RADIUS OF 25.00', WITH A CHORD BEARING OF N 33°54'15" W, WITH A CHORD LENGTH OF 35.22' TO A POINT ON THE EAST R.O.W. OF OAKVIEW DRIVE; THENCE

WITH EAST R.O.W. OF OAKVIEW DRIVE, N 11°48'39" E FOR A DISTANCE OF 224.79' TO A IRON PIN FOUND AT THE END OF SAID ROAD; THENCE WITH END OF SAID ROAD, N 78°11'21" W FOR A DISTANCE OF 50.00' TO A IRON PIN FOUND ON THE WEST R.O.W. OF OAKVIEW DRIVE; THENCE WITH WEST R.O.W. OF SAID ROAD, S 11°52'18" W FOR A DISTANCE OF 299.07' TO A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE NORTHEAST CORNER OF LOT 23 OF ROYAL OAKS SUBDIVISION; THENCE LEAVING SAID ROAD WITH LOT 23, N 78°33'49" W FOR A DISTANCE OF 150.00' TO A CONCRETE MONUMENT; SAID CONCRETE MONUMENT BEING THE NORTHWEST CORNER OF LOT 23; THENCE WITH LOTS 23-18, S 11°54'00" W FOR A DISTANCE OF 538.58' TO A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE NORTHEAST CORNER OF GRAFTECH ADVANCED GRAPHITE MATERIALS, LLC; THENCE WITH GRAFTECH ADVANCED GRAPHITE MATERIALS, LLC, N 51°14'53" W FOR A DISTANCE OF 836.44' TO A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE NORTHWEST CORNER OF GRAFTECH ADVANCED GRAPHITE MATERIALS, LLC; THENCE CONTINUING WITH GRAFTECH ADVANCED GRAPHITE MATERIALS, LLC, S 25°54'08" W FOR A DISTANCE OF 684.25' TO A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE SOUTHWEST CORNER OF GRAFTECH ADVANCED GRAPHITE MATERIALS, LLC, THE NORTH BOUNDARY OF VICTOR AND EMMA TATE, AND THE SOUTHERN MOST SOUTHEAST CORNER OF THE TRACT BEING DESCRIBED; THENCE WITH TATE, N 80°36'58" W, PASSING A TVA LINE, FOR A DISTANCE OF 1092.64' TO A POINT; SAID POINT BEING THE EAST BOUNDARY OF CSX TRANSPORTATION INC, THE NORTHWEST CORNER OF TATE, AND THE SOUTHWEST CORNER OF THE TRACT BEING DESCRIBED; THENCE WITH CSX TRANSPORTATION INC, N 00°29'24" E FOR A DISTANCE OF 179.41'; THENCE WITH A CURVE TURNING TO THE RIGHT WITH AN ARC LENGTH OF 1330.34', WITH A RADIUS OF 2241.86', WITH A CHORD BEARING OF N 17°23'52" E, WITH A CHORD LENGTH OF 1310.91'; THENCE N 34°23'52" E FOR A DISTANCE OF 1253.23' TO A IRON PIN FOUND; SAID IRON PIN FOUND BEING THE NORTHWEST CORNER OF THE TRACT BEING DESCRIBED, AND THE SOUTHWEST CORNER OF MAPA SPONTEX INC; THENCE WITH MAPA SPONTEX, N 89°06'45" E, PASSING A TVA LINE, AND A EAST TENNESSEE NATURAL GAS LINE EASEMENT, FOR A DISTANCE OF 2867.17' TO THE POINT OF BEGINNING AND CONTAINING 164.05 ACRES AS SURVEYED BY KENNETH CARROLL, RLS TENNESSEE LICENSE NUMBER 1335, APRIL 23, 2018.

THE ABOVE TRACT IS SUBJECT TO A 60' INGRESS-EGRESS AND UTILITIES EASEMENT (UNION CARBIDE ROAD-A PRIVATE ROAD) BEING DESCRIBED WITH CENTERLINE AS FOLLOWS:

BEGINNING AT A IRON PIN FOUND ON THE WEST R.O.W. OF NEW HWY 7; SAID IRON PIN FOUND BEING THE NORTHEAST CORNER OF THE ABOVE DESCRIBED TRACT, AND THE SOUTHEAST CORNER OF MAPA SPONTEX INC; THENCE WITH WEST R.O.W. OF NEW HWY 7, S 16°18'35" E FOR A DISTANCE OF 166.65' TO A POINT; THENCE S 07°09'04" E FOR A DISTANCE OF 140.98' TO A POINT; THENCE S 08°16'30" W FOR A DISTANCE OF 226.90' TO THE TRUE POINT OF BEGINNING; THENCE LEAVING SAID HWY WITH CENTER OF THE EASEMENT BEING DESCRIBED, N 80°11'56" W FOR A DISTANCE OF 294.99' TO A POINT; THENCE N 80°35'23" W FOR A DISTANCE OF 94.13' TO A POINT; THENCE N 81°08'49" W FOR A DISTANCE OF 77.56' TO A POINT; THENCE N 82°40'10" W FOR A DISTANCE OF 116.59' TO A POINT; THENCE N 87°09'02" W FOR A DISTANCE OF 52.79' TO A POINT; THENCE S 87°22'30" W FOR A DISTANCE OF 45.48' TO A POINT; THENCE S 80°49'03" W FOR A DISTANCE OF 68.01' TO A POINT; THENCE S 76°12'19" W FOR A DISTANCE OF 54.91' TO A POINT; THENCE S 74°08'53" W FOR A DISTANCE OF 63.22' TO A POINT; THENCE S 70°39'40" W FOR A DISTANCE OF 365.22' TO A POINT; THENCE S 70°30'30" W FOR A DISTANCE OF 125.61' TO A POINT;

THENCE S 70°31'30" W FOR A DISTANCE OF 143.94' TO A POINT; THENCE S 69°07'55" W FOR A DISTANCE OF 57.30' TO A POINT; THENCE S 65°45'15" W FOR A DISTANCE OF 127.95' TO A POINT; THENCE S 61°22'40" W FOR A DISTANCE OF 99.43' TO A POINT; THENCE S 56°24'07" W FOR A DISTANCE OF 147.92' TO A POINT; THENCE S 58°35'10" W FOR A DISTANCE OF 104.43' TO A POINT IN THE CENTER OF A TVA LINE; THENCE CONTINUING WITH CENTER OF SAID EASEMENT, S 59°03'44" W FOR A DISTANCE OF 500.57' TO A POINT; THENCE S 60°24'12" W FOR A DISTANCE OF 86.58' TO A POINT; THENCE S 71°42'13" W FOR A DISTANCE OF 58.25' TO A POINT; THENCE N 89°08'46" W FOR A DISTANCE OF 43.31' TO A POINT; THENCE N 72°41'29" W FOR A DISTANCE OF 51.72' TO A POINT; THENCE N 58°00'43" W FOR A DISTANCE OF 61.04' TO A POINT; THENCE N 55°09'57" W FOR A DISTANCE OF 208.35' TO A POINT; THENCE N 55°30'13" W FOR A DISTANCE OF 385.91' TO A POINT; THENCE N 55°47'26" W FOR A DISTANCE OF 188.37' TO A GATE-POINT; THENCE N 54°40'30" W FOR A DISTANCE OF 31.51' TO A POINT; THENCE N 60°36'39" W FOR A DISTANCE OF 21.14' TO A POINT; THENCE N 55°19'45" W, CROSSING CSX TRANSPORTATION INC, FOR A DISTANCE OF 67.31' TO A POINT; THENCE N 55°11'12" W FOR A DISTANCE OF 58.60' TO A POINT ON THE EAST BOUNDARY OF CSX TRANSPORTATION INC.

THE ABOVE TRACT IS SUBJECT TO A 50' EAST TENNESSEE NATURAL GAS LINE EASEMENT AS RECORDED IN DEED BOOK 843, PAGE 544, DEED BOOK 261, PAGE 610, DEED BOOK 307, PAGE 284, DEED BOOK 283, PAGE 453, AND RECORD BOOK R1537, PAGE 296, A TVA LINE-150' R.O.W. AS RECORDED IN DEED BOOK 232, PAGE 601, AND A 12" WATER MAIN EASEMENT AS RECORDED IN DEED BOOK 805, PAGE 721, IN THE REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE.

TRACT 3

BEING AND LYING IN THE 9TH CIVIL DISTRICT OF MAURY COUNTY, TENNESSEE AND LYING NORTH OF AND ADJACENT TO HWY 412, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A IRON PIN FOUND ON THE NORTH R.O.W. OF HWY 412; SAID IRON PIN FOUND BEING THE SOUTHEAST CORNER OF THE TRACT BEING DESCRIBED, THE WEST BOUNDARY OF GRAFTECH ADVANCED GRAPHITE MATERIALS, LLC; THENCE WITH NORTH R.O.W. OF HWY 412, S 60°13'44" W For A Distance Of 536.74'; THENCE N 80°37'37" W For A Distance Of 71.95'; THENCE S 88°28'31" W For A Distance Of 84.43'; THENCE N 72°47'24" W For A Distance Of 131.90'; THENCE N 64°20'19" W For A Distance Of 252.14'; THENCE N 64°37'21" W For A Distance Of 60.74'; THENCE S 79°28'45" W For A Distance Of 201.01'; THENCE S 70°26'51" W For A Distance Of 70.99'; THENCE S 48°34'27" W For A Distance Of 175.34' TO A POINT IN THE INTERSECTION OF THE NORTH R.O.W. OF HWY 412 AND THE EAST R.O.W. OF INDUSTRIAL PARK ROAD; SAID POINT BEING THE SOUTHWEST CORNER OF THE TRACT BEING DESCRIBED; THENCE WITH EAST R.O.W. OF INDUSTRIAL PARK ROAD, N 51°03'26" W For A Distance Of 299.81'; THENCE N 56°30'50" W For A Distance Of 253.61'; THENCE N 50°13'18" W, PASSING AN EAST TENNESSEE GAS LINE EASEMENT, For A Distance Of 409.61' To A IRON PIN FOUND; THENCE N 47°09'09" W For A Distance Of 89.96'; SAID POINT BEING THE SOUTHEAST CORNER OF MARTRAC INC; THENCE LEAVING INDUSTRIAL PARK ROAD WITH MARTRAC INC, N 38°23'41" E For A Distance Of 299.38' To A IRON PIN FOUND; THENCE N 21°32'25" W For A Distance Of 264.98' To A IRON PIN FOUND; THENCE N 23°49'05" E For A Distance Of 467.73' TO A POINT ON THE LOW WATER MARK OF THE DUCK RIVER; SAID POINT BEING THE NORTHWEST CORNER OF THE TRACT BEING DESCRIBED, AND THE NORTHEAST CORNER OF MARTRAC INC; THENCE WITH LOW WATER MARK OF THE

DUCK RIVER, S 57°58'08" E For A Distance Of 794.07'; THENCE S 70°27'05" E For A Distance Of 864.72'; THENCE S 81°29'52" E For A Distance Of 391.47'; THENCE S 85°57'41" E For A Distance Of 165.81' TO A POINT; SAID POINT BEING THE NORTHEAST CORNER OF THE TRACT BEING DESCRIBED; THENCE LEAVING SAID RIVER WITH A NEW GT COLUMBIA LLC DIVISION LINE, S 07°21'11" W, PASSING AN IRON PIN FOUND AT 188.99', IN ALL A Distance Of 525.63' To The Point Of Beginning And Containing 46.59 Acres AS SURVEYED BY KENNETH CARROLL, RLS TENNESSEE LICENSE NUMBER 1335, APRIL 23, 2018.

THE ABOVE TRACT IS SUBJECT TO A 50' EAST TENNESSEE NATURAL GAS LINE EASEMENT AS RECORDED IN DEED BOOK 843, PAGE 544, IN THE REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE.

TRACTS 1 AND 3 BEING A PORTION OF THE SAME PROPERTY AS CONVEYED TO GT COLUMBIA, LLC AS RECORDED IN RECORD BOOK R2458, PAGE 1294, IN THE REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE.

State of Tennessee Comptroller of the Treasury

Real Estate Assessment Data

County Number: 060 **County Name:** MAURY **Tax Year:** 2022

Property Owner and Mailing Address

Jan 1 Owner:
COLUMBIA INDUSTRIAL PROPERTIES LLC
ATTN: KELLI GILLHAM
401 RUTHERFORD LN
COLUMBIA, TN 38401

Property Location

Address: INDUSTRIAL PARK RD

Map: 089 **Grp:** **Ctrl Map:** 089 **Parcel:** 046.00 **PI:** **S/I:** 000

Value Information

Reappraisal Year: 2022

Land Mkt Value:	$93,200
Improvement Value:	$0
Total Market Appraisal:	$93,200
Assessment %:	25
Assessment:	$23,300

General Information

Class:	10 - FARM		
City #:	156	**City:**	COLUMBIA
SSD1:	000	**SSD2:**	000
District:	09	**Mkt Area:**	C99
# Bldgs:	0	**# Mobile Homes:**	0
Utilities - Water / Sewer:	01 - PUBLIC / PUBLIC	**Utilities - Electricity:**	01 - PUBLIC
Utilities - Gas / Gas Type:	01 - PUBLIC - NATURAL GAS	**Zoning:**	

Subdivision Data

Subdivision:

Plat Bk: **Plat Pg:** **Block:** **Lot:**

Additional Description

UNRECORDED SURVEY

Building Information

Extra Features

Sale Information

Sale Date	Price	Book	Page	Vac/Imp	Type Instrument	Qualification
06/05/2018		R2499	715		QC	
09/30/2017		R2458	1294			

Land Information

Deed Acres: 46.59 **Calc Acres:** 0.00 **Total Land Units:** 46.59

Land Type: 15 - INDUSTRIAL **Soil Class:** **Units:** 46.59

New Search Return to List **View GIS Map for this Parcel**

Glossary of Terms **How to Search** **Fact Sheet**

Division of Property Assessments Home Page | Comptroller of the Treasury Home Page | State of Tennessee Home Page

MAY 10, 2022, SUBJECT PROPERTY IMAGES



Picture 1 – This is a generally northward view of the paved Subject Property vehicle entrance from Industrial Park Road.



Picture 2 – This is a generally northeastward view along the paved road on the southern perimeter areas of the Subject Property.



Picture 3 – No pole-mounted electrical transformers were found on the Subject Property.



Picture 4 – The Subject Property is generally characterized as grass-covered with wooded areas. This is a southwestward view of the western portion of the Subject Property.



Picture 5 – This is a westward view of the eastern portion of the Subject Property from the gravel drive connecting the Subject Property to eastern adjacent areas.



Picture 6 – This is a May 10, 2022, westward view of slab on the northern portion of the Subject Property described in the 2018 report.

ATTACHMENT 2

COMPUTER DATABASE REPORT

Government Records Report | 2022

With Platinum Review

Order Number: 71800

Report Generated: 05/10/2022

Project Name: AAI Update Columbia Ind Prop, LLC Property

Project Number: 14__-01 Ask Ker

Columbia Ind. Prop., LLC Property
Industrial Park Rd
Columbia, TN 38401

with Envirosite Atlas

2 Corporate Drive
Suite 450
Shelton, CT 06484
Toll Free: 866-211-2028
www.envirositecorp.com

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2022

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Envirosite Corporation has conducted a search of all reasonably ascertainable records in accordance with EPA's AAI (40 CFR Part 312) requirements and the ASTM E-1527-21 Environmental Site Assessments standard.

SUBJECT PROPERTY INFORMATION:

ADDRESS:

Columbia Ind. Prop., LLC Property
Industrial Park Rd
Columbia, TN 38401

COORDINATES:

Latitude (North):	35.632547 - 35°37'57.2"
Longitude (West):	-87.067144 - -87°4'1.7"
Universal Transverse Mercator:	Zone 16N
UTM X (Meters):	493920.52
UTM Y (Meters):	3943195.82
State Plane Coordinates:	4100 - Tennessee (US Survey Feet)
X Coordinate (Feet):	1651388.735 E
Y Coordinate (Feet):	474649.403 N

ELEVATION:

Elevation:	640 ft. above sea level

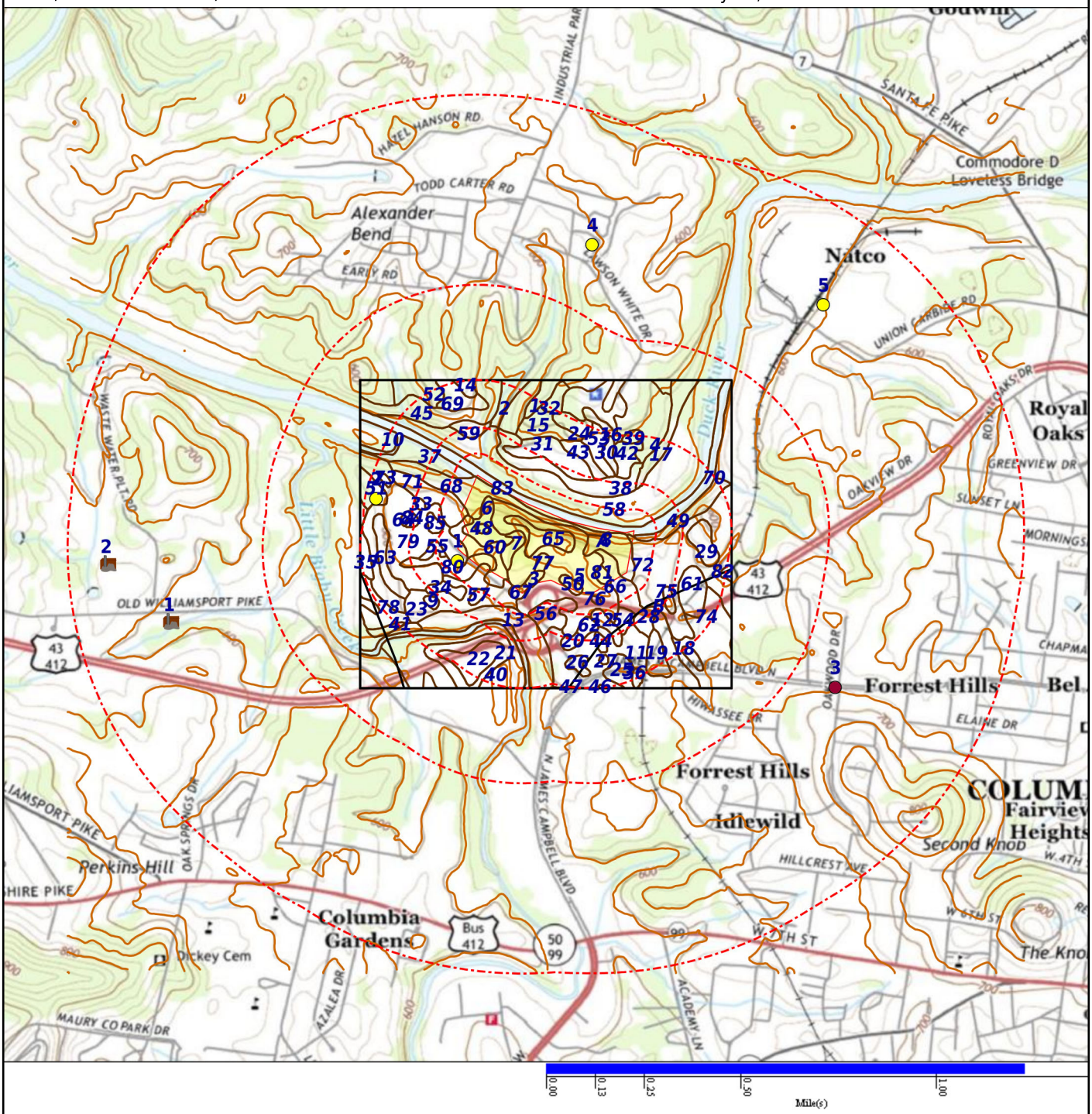
USGS TOPOGRAPHIC MAP ASSOCIATED WITH SUBJECT PROPERTY:

Subject Property Map: 35087-F1 Godwin, TN
Most Recent Revision: 2019

MAP ID	SITE NAME	ADDRESS	DATABASE(S)	RELATIVE ELEVATION	DIRECTION / DISTANCE
1	FREELAND AUTO RECYCLING, LLC | G...	981 INDUSTRIAL PARK ROAD...	SHWS - TN	Lower	W / 0.022 mi., 116 ft.
2	AL'S GARDEN ART, INC. | FEDDERS | ...	1027 INDUSTRIAL PARK ROAD	I C - TN, SHWS - TN, VCP - TN	Lower	WNW / 0.222 mi., 117...
3	JONES & SONS CAR LOT	601 JAMES CAMPBELL BLVD.	SHWS - TN	Higher	ESE / 0.614 mi., 3241 ft.
4	MAURY CO. SANITARY LANDFILL	1198 INDUSTRIAL PKWAY	SHWS - TN	Lower	NNE / 0.676 mi., 3569...
5	UNION CARBIDE CORP.	SANTE FE PIKE	SHWS - TN	Lower	NE / 0.769 mi., 4061 ft.

SUBJECT NAME: Columbia Ind. Prop., LLC Property
ADDRESS: Industrial Park Rd, Columbia, TN, 38401
LAT/LONG: 35.632547 / -87.067144

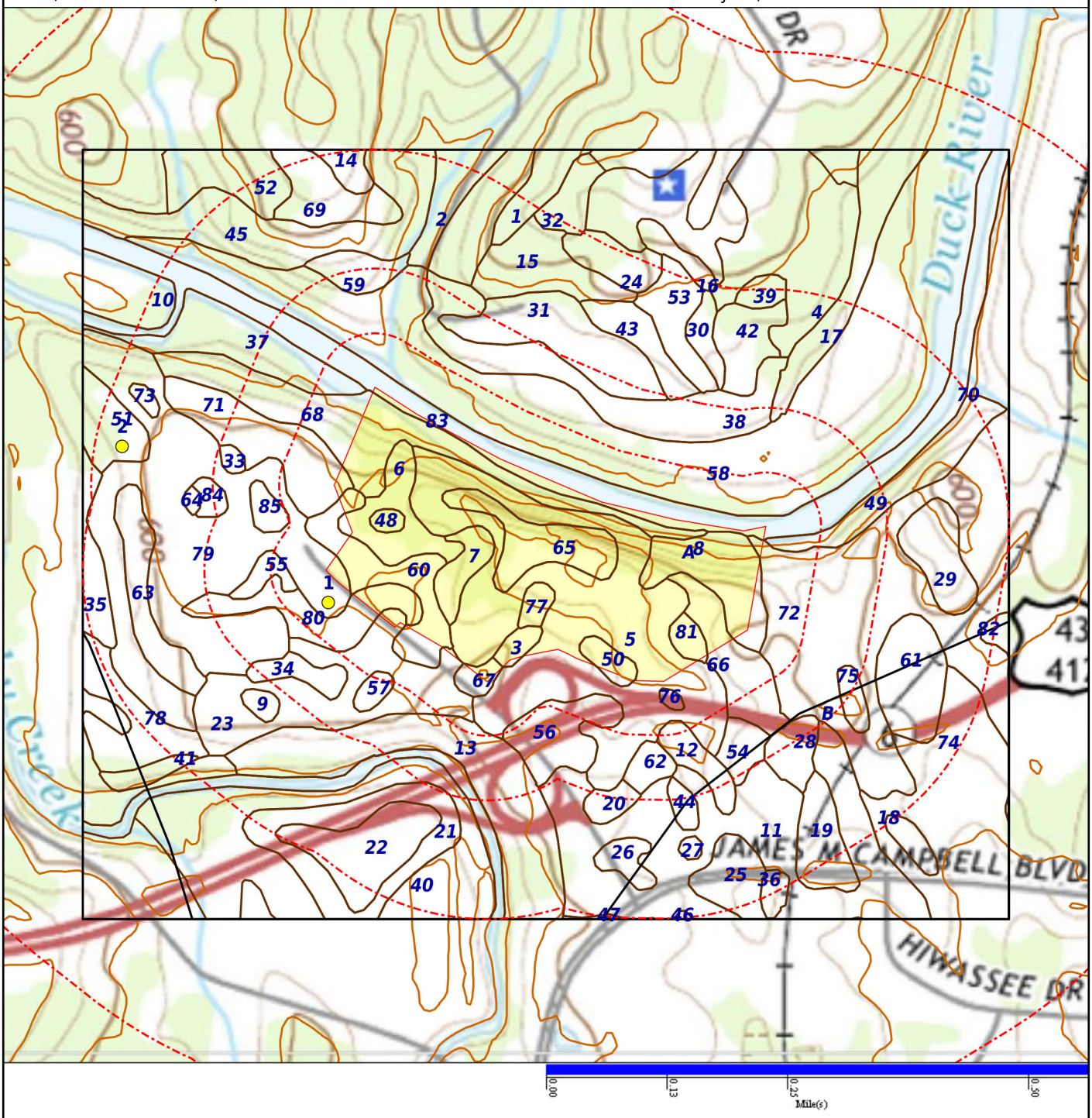
PREPARED FOR: Griggs & Maloney, Inc.
ORDER #: 71800
REPORT DATE: May 10, 2022



+ Subject Property
Equal/Higher Elevation
Lower Elevation
CDC HAZDAT (No Data)
Department of Defense (No Data)
Historical DOD (No Data)
National Priority List (No Data)

SUBJECT NAME: Columbia Ind. Prop., LLC Property
ADDRESS: Industrial Park Rd, Columbia, TN, 38401
LAT/LONG: 35.632547 / -87.067144

PREPARED FOR: Griggs & Maloney, Inc.
ORDER #: 71800
REPORT DATE: May 10, 2022



DATABASE	SUBJECT PROPERTY	SEARCH DISTANCE (MILES)	<1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	TOTAL MAPPED
FEDERAL RCRA NON-CORRACTS TSD FACILITIES LIST								
ARCHIVED RCRA TSDF		0.500	0	0	0	--	--	0
RCRA_TSDF		0.500	0	0	0	--	--	0
FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS								
AST PBS		0.250	0	0	--	--	--	0
EPA UST		0.250	0	0	--	--	--	0
FEMA UST		0.250	0	0	--	--	--	0
HIST INDIAN UST R6		0.250	0	0	--	--	--	0
HIST INDIAN UST R7		0.250	0	0	--	--	--	0
INDIAN UST R1		0.250	0	0	--	--	--	0
INDIAN UST R10		0.250	0	0	--	--	--	0
INDIAN UST R2		0.250	0	0	--	--	--	0
INDIAN UST R4		0.250	0	0	--	--	--	0
INDIAN UST R5		0.250	0	0	--	--	--	0
INDIAN UST R6		0.250	0	0	--	--	--	0
INDIAN UST R7		0.250	0	0	--	--	--	0
INDIAN UST R8		0.250	0	0	--	--	--	0
INDIAN UST R9		0.250	0	0	--	--	--	0
HIST UST - TN		0.250	0	0	--	--	--	0
UST - TN		0.250	0	0	--	--	--	0
FEDERAL CERCLIS LIST								
CERCLIS NFRAP		0.500	0	0	0	--	--	0
CERCLIS-HIST		0.500	0	0	0	--	--	0
EPA SAA		0.500	0	0	0	--	--	0
FEDERAL FACILITY		1.000	0	0	0	0	--	0
SEMS_8R_ACTIVE SITES		0.500	0	0	0	--	--	0
SEMS_8R_ARCHIVED SITES		0.500	0	0	0	--	--	0
FEDERAL RCRA CORRACTS FACILITIES LIST								
CORRACTS		1.000	0	0	0	0	--	0
HIST CORRACTS 2		1.000	0	0	0	0	--	0
FEDERAL DELISTED NPL SITE LIST								
DELISTED NPL		1.000	0	0	0	0	--	0
DELISTED PROPOSED NPL		1.000	0	0	0	0	--	0
SEMS_DELETED NPL		1.000	0	0	0	0	--	0

DATABASE	SUBJECT PROPERTY	SEARCH DISTANCE (MILES)	<1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	TOTAL MAPPED
FEDERAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS								
EPA LF MOP		0.500	0	0	0	--	--	0
FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS								
EPA LUST		0.500	0	0	0	--	--	0
HIST INDIAN LUST R4		0.500	0	0	0	--	--	0
HIST INDIAN LUST R8		0.500	0	0	0	--	--	0
INDIAN LUST R1		0.500	0	0	0	--	--	0
INDIAN LUST R10		0.500	0	0	0	--	--	0
INDIAN LUST R2		0.500	0	0	0	--	--	0
INDIAN LUST R4		0.500	0	0	0	--	--	0
INDIAN LUST R5		0.500	0	0	0	--	--	0
INDIAN LUST R6		0.500	0	0	0	--	--	0
INDIAN LUST R7		0.500	0	0	0	--	--	0
INDIAN LUST R8		0.500	0	0	0	--	--	0
INDIAN LUST R9		0.500	0	0	0	--	--	0
HIST LUST CO - TN		0.500	0	0	0	--	--	0
LUST - TN		0.500	0	0	0	--	--	0
LUST TRUST - TN		0.500	0	0	0	--	--	0
LUST_JO - TN		0.500	0	0	0	--	--	0
FEDERAL ERNS LIST								
ERNS		SP	0	--	--	--	--	0
FEDERAL INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES								
FED E C		0.500	0	0	0	--	--	0
FED I C		0.500	0	0	0	--	--	0
RCRA IC_EC		0.250	0	0	--	--	--	0
FEDERAL RCRA GENERATORS LIST								
HIST RCRA_CESQG		0.125	0	--	--	--	--	0
HIST RCRA_LQG		0.125	0	--	--	--	--	0
HIST RCRA_NONGEN		0.125	0	--	--	--	--	0
HIST RCRA_SQG		0.125	0	--	--	--	--	0
RCRA_LQG		0.125	0	--	--	--	--	0
RCRA_NONGEN		0.125	0	--	--	--	--	0
RCRA_SQG		0.125	0	--	--	--	--	0
RCRA_VSQG		0.125	0	--	--	--	--	0

DATABASE	SUBJECT PROPERTY	SEARCH DISTANCE (MILES)	<1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	TOTAL MAPPED
FEDERAL NPL SITE LIST								
NPL		1.000	0	0	0	0	--	0
NPL EPA R1 GIS		1.000	0	0	0	0	--	0
NPL EPA R3 GIS		1.000	0	0	0	0	--	0
NPL EPA R6 GIS		1.000	0	0	0	0	--	0
NPL EPA R8 GIS		1.000	0	0	0	0	--	0
NPL EPA R9 GIS		1.000	0	0	0	0	--	0
PART NPL		1.000	0	0	0	0	--	0
PROPOSED NPL		1.000	0	0	0	0	--	0
SEMS_FINAL NPL		1.000	0	0	0	0	--	0
SEMS_PROPOSED NPL		1.000	0	0	0	0	--	0
STATE AND TRIBAL BROWNFIELD SITES								
TRIBAL BROWNFIELDS		0.500	0	0	0	--	--	0
BROWNFIELDS - TN		0.500	0	0	0	--	--	0
STATE INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES								
E C - TN		0.500	0	0	0	--	--	0
I C - TN		0.500	0	1	0	--	--	1
STATE- AND TRIBAL - EQUIVALENT CERCLIS								
SHWS - TN		1.000	1	1	0	3	--	5
STATE AND TRIBAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS								
SWF/LF - TN		0.500	0	0	0	--	--	0
STATE AND TRIBAL VOLUNTARY CLEANUP SITES								
VCP - TN		0.500	0	1	0	--	--	1
LOCAL BROWNFIELD LISTS								
BROWNFIELDS-ACRES		0.500	0	0	0	--	--	0
FED BROWNFIELDS		0.500	0	0	0	--	--	0
LOCAL LISTS OF HAZARDOUS WASTE / CONTAMINATED SITES								
FED CDL		SP	0	--	--	--	--	0
US HIST CDL		SP	0	--	--	--	--	0
CDL - TN		SP	0	--	--	--	--	0
RECORDS OF EMERGENCY RELEASE REPORTS								
HMIRS (DOT)		SP	0	--	--	--	--	0
SPILLS - TN		0.125	0	--	--	--	--	0

DATABASE	SUBJECT PROPERTY	SEARCH DISTANCE (MILES)	<1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	TOTAL MAPPED
RECORDS OF EMERGENCY RELEASE REPORTS *(cont.)*								
SPILLS 2 - TN		0.125	0	--	--	--	--	0
LOCAL LAND RECORDS								
LIENS 2		SP	0	--	--	--	--	0
LOCAL LISTS OF LANDFILL / SOLID WASTE DISPOSAL SITES								
TRIBAL ODI		0.500	0	0	0	--	--	0
OTHER ASCERTAINABLE RECORDS								
ALT FUELING		0.250	0	0	--	--	--	0
CDC HAZDAT		1.000	0	0	0	0	--	0
CORRECTIVE ACTIONS_2020		0.500	0	0	0	--	--	0
DOD		1.000	0	0	0	0	--	0
EPA FUELS		SP	0	--	--	--	--	0
FUDS		1.000	0	0	0	0	--	0
HIST DOD		1.000	0	0	0	0	--	0
NPL AOC		1.000	0	0	0	0	--	0
NPL LIENS		SP	0	--	--	--	--	0
PADS		SP	0	--	--	--	--	0
PCB TRANSFORMER		SP	0	--	--	--	--	0
PFAS NPL		0.500	0	0	0	--	--	0
PFAS TRIS		0.500	0	0	0	--	--	0
PFAS UCMR3		0.500	0	0	0	--	--	0
VAPOR		0.500	0	0	0	--	--	0
DRYCLEANERS - TN		0.250	0	0	--	--	--	0
DRYCLEANERS CLEANUP - TN		0.250	0	0	--	--	--	0
PFAS - TN		0.500	0	0	0	--	--	0

Map Id: 1
Direction: W
Distance: 0.022 mi., 116 ft.
Elevation: 605 ft.
Relative: Lower

Site Name : FREELAND AUTO RECYCLING, LLC | GENERAL ELECTRIC | GE CO APPLIANCES 981 INDUSTRIAL PARK ROAD | 981 INDUSTRIAL PARK ROAD COLUMBIA COLUMBIA | Columbia, TN 38401

Database(s) : [SHWS - TN]

Envirosite ID: 5941540
EPA ID: N/R

SHWS - TN

Facility Name :	GENERAL ELECTRIC
Facility Address :	981 INDUSTRIAL PARK ROAD, COLUMBIA
County :	MAURY
DOR ID :	60538
DOR EFO :	N/R
Promulgated Date :	N/R
Delisted Date :	N/R
Site Status :	CLOSED
Acres :	N/R
Latitude :	35.630556
Longitude :	-87.072222
Last Date in Agency List :	2022-04-11

Map Id: 2
Direction: WNW
Distance: 0.222 mi., 1170 ft.
Elevation: 595 ft.
Relative: Lower

Site Name : AL'S GARDEN ART, INC. | FEDDERS | COLUMBIA SPECIALTIES INC FEDDERS 1027 INDUSTRIAL PARK ROAD COLUMBIA | Columbia, TN

Database(s) : [I C - TN, SHWS - TN, VCP - TN]

Envirosite ID: 5932082
EPA ID: N/R

I C - TN

Facility Name :	FEDDERS
Facility Address :	1027 INDUSTRIAL PARK ROAD, COLUMBIA
County :	MAURY
Date Recorded :	2012-04-13
Date Removed :	N/R
DOR Site ID :	SRS600991
Site Status :	CLOSED
Control Type :	INSTITUTIONAL
Control Description :	LAND USE RESTRICTION
Total Site Acreage :	62.37
Control Acreage :	62.37
Control Latitude :	35.633
Control Longitude :	-87.073
Deed Book :	N/R
TDEC Field Office :	NASHVILLE
Map :	089
Page :	N/R
Parcel :	009.00
Site Latitude :	35.633578
Site Longitude :	-87.073047
Last Date in Agency List :	2022-04-24

Map Id: 2
Direction: WNW
Distance: 0.222 mi., 1170 ft.
Elevation: 595 ft.
Relative: Lower

Site Name : AL'S GARDEN ART, INC. | FEDDERS | COLUMBIA SPECIALTIES INC FEDDERS
1027 INDUSTRIAL PARK ROAD
COLUMBIA | Columbia, TN

Database(s) : [I C - TN, SHWS - TN, VCP - TN] ***(cont.)***

Envirosite ID: 5932082
EPA ID: N/R

SHWS - TN

Facility Name :	FEDDERS
Facility Address :	1027 INDUSTRIAL PARK ROAD, COLUMBIA
County :	MAURY
DOR ID :	SRS600991
DOR EFO :	N/R
Promulgated Date :	N/R
Delisted Date :	N/R
Site Status :	CLOSED
Acres :	62.37
Latitude :	35.633578
Longitude :	-87.073047
Last Date in Agency List :	2022-04-11

VCP - TN

Facility Name :	FEDDERS
Facility Address :	1027 INDUSTRIAL PARK ROAD, COLUMBIA
County :	MAURY
DOR ID :	SRS600991
EPA Facility ID :	N/R
EPA Registry ID :	N/R
Program :	N/R
Site Status :	CLOSED
EFO :	NASHVILLE
Acres :	62.37
Latitude :	35.633578
Longitude :	-87.073047
TDEC Field Office :	NASHVILLE
Last Date in Agency List :	2022-04-06

Map Id: 3
Direction: ESE
Distance: 0.614 mi., 3241 ft.
Elevation: 676 ft.
Relative: Higher

Site Name : JONES & SONS CAR LOT
601 JAMES CAMPBELL BLVD.
COLUMBIA, TN

Database(s) : [SHWS - TN]

Envirosite ID: 5942356
EPA ID: N/R

SHWS - TN

Facility Name :	JONES & SONS CAR LOT
Facility Address :	601 JAMES CAMPBELL BLVD., COLUMBIA
County :	MAURY
DOR ID :	SRS600414
DOR EFO :	N/R
Promulgated Date :	N/R

Map Id: 3
Direction: ESE
Distance: 0.614 mi., 3241 ft.
Elevation: 676 ft.
Relative: Higher

Site Name : JONES & SONS CAR LOT
601 JAMES CAMPBELL BLVD.
COLUMBIA, TN

Database(s) : [SHWS - TN] ***(cont.)***

Envirosite ID: 5942356
EPA ID: N/R

SHWS - TN ***(cont.)***

Delisted Date :	N/R
Site Status :	CLOSED
Acres :	N/R
Latitude :	35.592545
Longitude :	-87.051308
Last Date in Agency List :	2022-04-11

Map Id: 4
Direction: NNE
Distance: 0.676 mi., 3569 ft.
Elevation: 633 ft.
Relative: Lower

Site Name : MAURY CO. SANITARY LANDFILL
1198 INDUSTRIAL PKWAY
COLUMBIA, TN

Database(s) : [SHWS - TN]

Envirosite ID: 5964443
EPA ID: N/R

SHWS - TN

Facility Name :	MAURY CO. SANITARY LANDFILL
Facility Address :	1198 INDUSTRIAL PKWAY, COLUMBIA
County :	MAURY
DOR ID :	60525
DOR EFO :	N/R
Promulgated Date :	N/R
Delisted Date :	N/R
Site Status :	OPEN
Acres :	N/R
Latitude :	35.643972
Longitude :	-87.064722
Last Date in Agency List :	2022-04-11

Map Id: 5
Direction: NE
Distance: 0.769 mi., 4061 ft.
Elevation: 600 ft.
Relative: Lower

Site Name : UNION CARBIDE CORP.
SANTE FE PIKE
COLUMBIA, TN

Database(s) : [SHWS - TN]

Envirosite ID: 5964739
EPA ID: N/R

SHWS - TN

Facility Name :	UNION CARBIDE CORP.
Facility Address :	SANTE FE PIKE, COLUMBIA
County :	MAURY
DOR ID :	60539
DOR EFO :	N/R

Map Id: 5
Direction: NE
Distance: 0.769 mi., 4061 ft.
Elevation: 600 ft.
Relative: Lower

Site Name : UNION CARBIDE CORP.
SANTE FE PIKE
COLUMBIA, TN

Database(s) : [SHWS - TN] ***(cont.)***

Envirosite ID: 5964739
EPA ID: N/R

SHWS - TN ***(cont.)***

Promulgated Date :	N/R
Delisted Date :	N/R
Site Status :	OPEN
Acres :	N/R
Latitude :	35.641667
Longitude :	-87.054167
Last Date in Agency List :	2022-04-11

No unmappable sites reported.

FEDERAL RCRA NON-CORRACTS TSD FACILITIES LIST

ARCHIVED RCRA TSDF: Resource Conservation and Recovery Act hazardous waste transportation storage disposal and treatment facilities

Agency Version Date: 12/30/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 06/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 03/28/2022

RCRA_TSDF: Resource Conservation and Recovery Act hazardous waste transportation storage disposal and treatment facilities

Agency Version Date: 12/30/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 06/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 03/28/2022

FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS

AST PBS: Bulk petroleum terminals with a total bulk storage capacity of 50,000 barrels or more.

Agency Version Date: 02/22/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 05/20/2022
Agency: Department of Homeland Security
Agency Contact: 202-853-5361
Most Recent Contact: 02/22/2022

EPA UST: Facilities listed in the EPA UST Finder database

Agency Version Date: 02/15/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/25/2022
Agency: EPA
Agency Contact: (202) 566-1667
Most Recent Contact: 04/28/2022

FEMA UST: FEMA underground storage tank listing

Agency Version Date: 10/08/2021
Agency Update Frequency: Varies
Planned Next Contact: 06/27/2022
Agency: FEMA
Agency Contact: 202-212-5283
Most Recent Contact: 04/01/2022

HIST INDIAN UST R6: Historical Underground Storage Tanks on Indian Land in EPA Region 6

Agency Version Date: 12/03/2021
Agency Update Frequency: Semi Annually
Planned Next Contact: 05/27/2022
Agency: U.S. Environmental Protection Agency Region 6
Agency Contact: 855-246-3642
Most Recent Contact: 03/01/2022

HIST INDIAN UST R7: Historical Underground Storage Tanks on Indian Land in EPA Region 7

Agency Version Date: 08/10/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 05/12/2022
Agency: U.S. Environmental Protection Agency Region 7
Agency Contact: 855-246-3642
Most Recent Contact: 02/15/2022

INDIAN UST R1: Underground Storage Tanks on Indian Land in EPA Region 1

Agency Version Date: 04/15/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/14/2022
Agency: U.S. Environmental Protection Agency Region 1
Agency Contact: 855-246-3642
Most Recent Contact: 04/15/2022

INDIAN UST R10: Underground Storage Tanks on Indian Land in EPA Region 10

Agency Version Date: 02/14/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 05/12/2022
Agency: U.S. Environmental Protection Agency Region 10
Agency Contact: 855-246-3642
Most Recent Contact: 02/14/2022

FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS (cont.)

INDIAN UST R2: Underground Storage Tanks on Indian Land in EPA Region 2

Agency Version Date: 12/07/2016
Agency Update Frequency: Quarterly
Planned Next Contact: 07/15/2022
Agency: U.S. Environmental Protection Agency Region 2
Agency Contact: 855-246-3642
Most Recent Contact: 04/19/2022

INDIAN UST R4: Underground Storage Tanks on Indian Land in EPA Region 4

Agency Version Date: 02/14/2022
Agency Update Frequency: Semi Annually
Planned Next Contact: 05/12/2022
Agency: U.S. Environmental Protection Agency Region 4
Agency Contact: 855-246-3642
Most Recent Contact: 02/14/2022

INDIAN UST R5: Underground Storage Tanks on Indian Land in EPA Region 5

Agency Version Date: 01/31/2022
Agency Update Frequency: Varies
Planned Next Contact: 07/25/2022
Agency: U.S. Environmental Protection Agency Region 5
Agency Contact: 855-246-3642
Most Recent Contact: 04/28/2022

INDIAN UST R6: Underground Storage Tanks on Indian Land in EPA Region 6

Agency Version Date: 03/01/2022
Agency Update Frequency: Semi Annually
Planned Next Contact: 05/27/2022
Agency: U.S. Environmental Protection Agency Region 6
Agency Contact: 855-246-3642
Most Recent Contact: 03/01/2022

INDIAN UST R7: Underground Storage Tanks on Indian Land in EPA Region 7

Agency Version Date: 04/28/2022
Agency Update Frequency: Varies
Planned Next Contact: 07/25/2022
Agency: U.S. Environmental Protection Agency Region 7
Agency Contact: 855-246-3642
Most Recent Contact: 04/28/2022

INDIAN UST R8: Underground Storage Tanks on Indian Land in EPA Region 8

Agency Version Date: 04/14/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/11/2022
Agency: U.S. Environmental Protection Agency Region 8
Agency Contact: 855-246-3642
Most Recent Contact: 04/14/2022

INDIAN UST R9: Underground Storage Tanks on Indian Land in EPA Region 9

Agency Version Date: 04/14/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/11/2022
Agency: U.S. Environmental Protection Agency Region 9
Agency Contact: 855-246-3642
Most Recent Contact: 04/14/2022

HIST UST - TN: No longer registered Underground Storage Tanks

Agency Version Date: 04/10/2019
Agency Update Frequency: Varies
Planned Next Contact: 06/27/2022
Agency: Department of Environment & Conservation
Agency Contact: (615) 532-0945
Most Recent Contact: 03/31/2022

UST - TN: Registered Underground Storage Tanks

Agency Version Date: 02/09/2022
Agency Update Frequency: Varies
Planned Next Contact: 08/04/2022
Agency: Department of Environment & Conservation
Agency Contact: (615) 532-0945
Most Recent Contact: 05/09/2022

FEDERAL CERCLIS LIST

CERCLIS NFRAP: The CERCLIS sites with No Further Remedial Action Planned from the CERCLIS program database. The Environmental Protection Agency decommissioned the CERCLIS data in 2014. The last update was November 12, 2013.

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 800-424-9346
Most Recent Contact: 04/26/2022

CERCLIS-HIST: The CERCLIS program database contains information on the assessment and remediation of federal hazardous waste sites. The Environmental Protection Agency decommissioned the CERCLIS data in 2014. The last update was November 12, 2013.

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 800-424-9346
Most Recent Contact: 04/26/2022

EPA SAA: Listing of Sites with Superfund Alternative Approach Agreements.

Agency Version Date: 11/01/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 07/21/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 800-424-9346
Most Recent Contact: 04/25/2022

FEDERAL FACILITY: Sites where Federal Facilities Restoration and Reuse Office (FFRRO) arranged cleanup for Base Closure and Property Transfer at Federal Facilities

Agency Version Date: 01/28/2022
Agency Update Frequency: Varies
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8712
Most Recent Contact: 04/26/2022

SEMS_8R_ACTIVE SITES: The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. NPL sites include latitude and longitude information. For non-NPL sites, a brief site status is provided.

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 04/26/2022

SEMS_8R_ARCHIVED SITES: The Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 04/26/2022

FEDERAL RCRA CORRACTS FACILITIES LIST

CORRACTS: List of facilities where Resource Conservation and Recovery Act Corrective Action Program used to investigate and remediate hazardous releases

Agency Version Date: 12/30/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 06/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 202-566-1667
Most Recent Contact: 03/28/2022

HIST CORRACTS 2: List of facilities where Resource Conservation and Recovery Act Corrective Action Program used to investigate and remediate hazardous releases that are no longer in current agency list.

Agency Version Date: 10/12/2018
Agency Update Frequency: Annually
Planned Next Contact: 05/23/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 202-566-1667
Most Recent Contact: 02/24/2022

FEDERAL DELISTED NPL SITE LIST

DELISTED NPL: National Priority List of sites that were delisted and no longer require action

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 04/26/2022

DELISTED PROPOSED NPL: Sites that have been delisted from the proposed National Priority List

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 04/26/2022

SEMS_DELETED NPL: All Deleted National Priority List Sties

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 04/26/2022

FEDERAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS

EPA LF MOP: Sites in the EPA Landfill Methane Outreach Program

Agency Version Date: 03/25/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 06/21/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 03/25/2022

FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS

EPA LUST: Releases listed in the EPA UST Finder database

Agency Version Date: 02/15/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/25/2022
Agency: EPA
Agency Contact: (202) 566-1667
Most Recent Contact: 04/28/2022

HIST INDIAN LUST R4: Historical Leaking Underground Storage Tanks on Indian Land in EPA Region 4

Agency Version Date: 08/23/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 05/12/2022
Agency: U.S. Environmental Protection Agency Region 4
Agency Contact: 855-246-3642
Most Recent Contact: 02/15/2022

HIST INDIAN LUST R8: Historical Leaking Underground Storage Tanks on Indian Land in EPA Region 8

Agency Version Date: 08/16/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 07/29/2022
Agency: U.S. Environmental Protection Agency Region 8
Agency Contact: 855-246-3642
Most Recent Contact: 05/04/2022

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land in EPA Region 1

Agency Version Date: 04/15/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/14/2022
Agency: U.S. Environmental Protection Agency Region 1
Agency Contact: 855-246-3642
Most Recent Contact: 04/15/2022

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land in EPA Region 10

Agency Version Date: 02/14/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 05/12/2022
Agency: U.S. Environmental Protection Agency Region 10
Agency Contact: 855-246-3642
Most Recent Contact: 02/14/2022

FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS (cont.)

INDIAN LUST R2: Leaking Underground Storage Tanks on Indian Land in EPA Region 2

Agency Version Date: 12/07/2016
Agency Update Frequency: Quarterly
Planned Next Contact: 07/15/2022
Agency: U.S. Environmental Protection Agency Region 2
Agency Contact: 855-246-3642
Most Recent Contact: 04/19/2022

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land in EPA Region 4

Agency Version Date: 02/14/2022
Agency Update Frequency: Semi Annually
Planned Next Contact: 05/12/2022
Agency: U.S. Environmental Protection Agency Region 4
Agency Contact: 855-246-3642
Most Recent Contact: 02/14/2022

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land in EPA Region 5

Agency Version Date: 01/31/2022
Agency Update Frequency: Varies
Planned Next Contact: 07/25/2022
Agency: U.S. Environmental Protection Agency Region 5
Agency Contact: 855-246-3642
Most Recent Contact: 04/28/2022

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land in EPA Region 6

Agency Version Date: 02/03/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/28/2022
Agency: U.S. Environmental Protection Agency Region 6
Agency Contact: 855-246-3642
Most Recent Contact: 05/02/2022

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land in EPA Region 7

Agency Version Date: 08/10/2021
Agency Update Frequency: Varies
Planned Next Contact: 07/25/2022
Agency: U.S. Environmental Protection Agency Region 7
Agency Contact: 855-246-3642
Most Recent Contact: 04/28/2022

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land in EPA Region 8

Agency Version Date: 02/04/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/29/2022
Agency: U.S. Environmental Protection Agency Region 8
Agency Contact: 855-246-3642
Most Recent Contact: 05/03/2022

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land in EPA Region 9

Agency Version Date: 04/14/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/11/2022
Agency: U.S. Environmental Protection Agency Region 9
Agency Contact: 855-246-3642
Most Recent Contact: 04/14/2022

HIST LUST CO - TN: Leaking Underground Storage tank sites listed in the Columbia Office

Agency Version Date: 03/27/2018
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 05/17/2022
Agency: Department of Environmental Conservation Columbia Field Office
Agency Contact: (615) 532-0945
Most Recent Contact: 02/18/2022

LUST - TN: Fund Eligible Leaking Underground Storage Tank

Agency Version Date: 04/19/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/15/2022
Agency: Department of Environment & Conservation
Agency Contact: (615) 532-0945
Most Recent Contact: 04/19/2022

LUST TRUST - TN: Petroleum release sites that are eligible for reimbursement

Agency Version Date: 03/09/2022
Agency Update Frequency: Varies
Planned Next Contact: 06/06/2022
Agency: Department of Environment & Conservation
Agency Contact: (615) 532-0945
Most Recent Contact: 03/09/2022

FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS (cont.)

LUST_JO - TN: Leaking Underground Storage tank sites listed in the Johnson City Office

Agency Version Date: 09/29/2021
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 06/15/2022

Agency: Department of Environmental Conservation Johnson City Field Office
Agency Contact: (615) 532-0945
Most Recent Contact: 03/21/2022

FEDERAL ERNS LIST

ERNS: Emergency Response Notification System records of reported spills

Agency Version Date: 04/19/2022
Agency Update Frequency: Annually
Planned Next Contact: 07/15/2022

Agency: National Response Center United States Coast Guard
Agency Contact: N/R
Most Recent Contact: 04/19/2022

FEDERAL INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES

FED E C: Federal listing of remediation sites with engineering controls

Agency Version Date: 02/22/2022
Agency Update Frequency: Varies
Planned Next Contact: 05/20/2022

Agency: U.S. Environmental Protection Agency
Agency Contact: 800-424-9346
Most Recent Contact: 02/22/2022

FED I C: Federal listing of remediation sites with institutional controls

Agency Version Date: 02/22/2022
Agency Update Frequency: Varies
Planned Next Contact: 05/20/2022

Agency: U.S. Environmental Protection Agency
Agency Contact: 800-424-9346
Most Recent Contact: 02/22/2022

RCRA IC_EC: Sites with institutional or engineering controls related to Resource Conservation and Recovery Act

Agency Version Date: 02/04/2022
Agency Update Frequency: Varies
Planned Next Contact: 07/29/2022

Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 05/03/2022

FEDERAL RCRA GENERATORS LIST

HIST RCRA_CESQG: List of Resource Conservation and Recovery Act licensed conditionally exempt small quantity generators that are no longer in current agency list.

Agency Version Date: 10/12/2018
Agency Update Frequency: Annually
Planned Next Contact: 05/23/2022

Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 02/24/2022

HIST RCRA_LQG: List of Resource Conservation and Recovery Act licensed large quantity generators that are no longer in current agency list.

Agency Version Date: 10/12/2018
Agency Update Frequency: Annually
Planned Next Contact: 05/23/2022

Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 02/24/2022

HIST RCRA_NONGEN: List of Resource Conservation and Recovery Act licensed non-generators that are no longer in current agency list.

Agency Version Date: 10/12/2018
Agency Update Frequency: Annually
Planned Next Contact: 05/23/2022

Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 02/24/2022

FEDERAL RCRA GENERATORS LIST (cont.)

HIST RCRA_SQG: List of Resource Conservation and Recovery Act licensed small quantity generators that are no longer in current agency list.

Agency Version Date: 10/12/2018
Agency Update Frequency: Annually
Planned Next Contact: 05/23/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 02/24/2022

RCRA_LQG: Resource Conservation and Recovery Act listing of licensed large quantity generators

Agency Version Date: 12/30/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 06/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 03/28/2022

RCRA_NONGEN: Resource Conservation and Recovery Act listing of licensed non-generators

Agency Version Date: 12/30/2021
Agency Update Frequency: Varies
Planned Next Contact: 06/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 03/28/2022

RCRA_SQG: Resource Conservation and Recovery Act listing of licensed small quantity generators

Agency Version Date: 12/30/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 06/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 03/28/2022

RCRA_VSQG: Resource Conservation and Recovery Act listing of licensed very small quantity generators.

Agency Version Date: 12/30/2021
Agency Update Frequency: Varies
Planned Next Contact: 06/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 215-814-2469
Most Recent Contact: 03/28/2022

FEDERAL NPL SITE LIST

NPL: List of priority contaminated sites among identified releases or threatened releases of hazardous substances pollutants or contaminants nationally

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 04/26/2022

NPL EPA R1 GIS: Geospatial data for the Environmental Protection Agency Region 1 National Priority List subject to environmental regulation

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 202-566-2132
Most Recent Contact: 04/26/2022

NPL EPA R3 GIS: Geospatial data for the Environmental Protection Agency Region 3 National Priority List subject to environmental regulation

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 202-566-2132
Most Recent Contact: 04/26/2022

NPL EPA R6 GIS: Geospatial data for the Environmental Protection Agency Region 6 National Priority List subject to environmental regulation

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 202-566-2132
Most Recent Contact: 04/26/2022

FEDERAL NPL SITE LIST (cont.)

NPL EPA R8 GIS: Geospatial data for the Environmental Protection Agency Region 8 National Priority List subject to environmental regulation

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 202-566-2132
Most Recent Contact: 04/26/2022

NPL EPA R9 GIS: Geospatial data for the Environmental Protection Agency Region 9 National Priority List subject to environmental regulation

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 202-566-2132
Most Recent Contact: 04/26/2022

PART NPL: Sites that are a part of an National Priority List site referred to as the parent site

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 04/26/2022

PROPOSED NPL: Sites that have been proposed for the National Priority List

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 04/26/2022

SEMS_FINAL NPL: All Included National Priority List Sites

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 04/26/2022

SEMS_PROPOSED NPL: All Proposed National Priority List Sites

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 04/26/2022

STATE AND TRIBAL BROWNFIELD SITES

TRIBAL BROWNFIELDS: Tribal brownfield remediation site listing

Agency Version Date: 02/10/2017
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 06/10/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 855-246-3642
Most Recent Contact: 03/16/2022

BROWNFIELDS - TN: List of Brownfield sites

Agency Version Date: 04/06/2022
Agency Update Frequency: Varies
Planned Next Contact: 07/04/2022
Agency: Department of Environment & Conservation
Agency Contact: (615)532-3020
Most Recent Contact: 04/06/2022

STATE INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES

E C - TN: Sites with Engineering Controls

Agency Version Date: 04/11/2022
Agency Update Frequency: Varies
Planned Next Contact: 07/07/2022
Agency: Department of Environment & Conservation
Agency Contact: (615) 532-0916
Most Recent Contact: 04/11/2022

STATE INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES (cont.)

I C - TN: Sites with Institutional Controls

Agency Version Date: 04/11/2022
Agency Update Frequency: Varies
Planned Next Contact: 07/07/2022
Agency: Department of Environment & Conservation
Agency Contact: (615) 532-0916
Most Recent Contact: 04/11/2022

STATE- AND TRIBAL - EQUIVALENT CERCLIS

SHWS - TN: Promulgated Sites

Agency Version Date: 04/11/2022
Agency Update Frequency: Varies
Planned Next Contact: 07/07/2022
Agency: Department of Environment & Conservation
Agency Contact: (615) 532-0240
Most Recent Contact: 04/11/2022

STATE AND TRIBAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS

SWF/LF - TN: State Landfill locations

Agency Version Date: 02/23/2022
Agency Update Frequency: Varies
Planned Next Contact: 05/23/2022
Agency: Department of Environment & Conservation
Agency Contact: (615) 532-0780
Most Recent Contact: 02/23/2022

STATE AND TRIBAL VOLUNTARY CLEANUP SITES

VCP - TN: Voluntary Cleanup Oversight and Assistance Program Sites

Agency Version Date: 04/06/2022
Agency Update Frequency: Varies
Planned Next Contact: 07/04/2022
Agency: Department of Environment & Conservation
Agency Contact: (615)532-3020
Most Recent Contact: 04/06/2022

LOCAL BROWNFIELD LISTS

BROWNFIELDS-ACRES: EPA Brownfields Assessment, Cleanup and Redevelopment Exchange System.

Agency Version Date: 09/17/2021
Agency Update Frequency: Quarterly
Planned Next Contact: 06/06/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 855-246-3642
Most Recent Contact: 03/10/2022

FED BROWNFIELDS: Federal brownfield remediation sites

Agency Version Date: 01/24/2022
Agency Update Frequency: Semi Annually
Planned Next Contact: 07/18/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 855-246-3642
Most Recent Contact: 04/21/2022

LOCAL LISTS OF HAZARDOUS WASTE / CONTAMINATED SITES

FED CDL: The U.S. Department of Justice listing of clandestine drug lab locations

Agency Version Date: 04/11/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/07/2022
Agency: U.S. Department of Justice
Agency Contact: 202-307-7610
Most Recent Contact: 04/11/2022

US HIST CDL: The U.S. Department of Justice historical listing of clandestine drug lab locations

Agency Version Date: 08/05/2019
Agency Update Frequency: Quarterly
Planned Next Contact: 05/16/2022
Agency: U.S. Department of Justice
Agency Contact: 202-307-7610
Most Recent Contact: 02/16/2022

LOCAL LISTS OF HAZARDOUS WASTE / CONTAMINATED SITES (cont.)

CDL - TN: Methamphetamine Contaminated Properties

Agency Version Date: 03/02/2022
Agency Update Frequency: Varies
Planned Next Contact: 05/30/2022
Agency: Department of Environment & Conservation
Agency Contact: (865) 594-5444
Most Recent Contact: 03/02/2022

RECORDS OF EMERGENCY RELEASE REPORTS

HMIRS (DOT): Hazardous Material spills reported by the Department of Transportation

Agency Version Date: 03/18/2022
Agency Update Frequency: Varies
Planned Next Contact: 06/14/2022
Agency: U.S. Department of Transportation
Agency Contact: (202) 366-4996
Most Recent Contact: 03/18/2022

SPILLS - TN: List of reported chemical spills from the Division of Solid Waste Management

Agency Version Date: 11/02/2017
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 07/27/2022
Agency: Department of Environment & Conservation
Agency Contact: (615) 532-0240
Most Recent Contact: 05/02/2022

SPILLS 2 - TN: List of spill complaints from the Division of Solid Waste Management

Agency Version Date: 02/03/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 08/01/2022
Agency: Department of Environment & Conservation
Agency Contact: (615) 532-0240
Most Recent Contact: 05/04/2022

LOCAL LAND RECORDS

LIENS 2: Comprehensive Environmental Response Compensation and Liability Act sites with liens

Agency Version Date: 05/11/2017
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 06/13/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 800-424-9346
Most Recent Contact: 03/16/2022

LOCAL LISTS OF LANDFILL / SOLID WASTE DISPOSAL SITES

TRIBAL ODI: Indian land open dump inventory for all regions

Agency Version Date: 02/21/2022
Agency Update Frequency: Varies
Planned Next Contact: 05/19/2022
Agency: Indian Health Service
Agency Contact: 301-443-3593
Most Recent Contact: 02/21/2022

OTHER ASCERTAINABLE RECORDS

ALT FUELING: Alternative Fueling Stations by fuel type.

Agency Version Date: 03/25/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 06/21/2022
Agency: U.S. Department of Energy
Agency Contact: N/R
Most Recent Contact: 03/25/2022

CDC HAZDAT: The Agency for Toxic Substances and Disease Registry's Hazardous Substance Release/Health Effects Database.

Agency Version Date: 01/28/2022
Agency Update Frequency: Varies
Planned Next Contact: 07/22/2022
Agency: Agency for Toxic Substances and Disease Registry
Agency Contact: 770-488-6399
Most Recent Contact: 04/26/2022

OTHER ASCERTAINABLE RECORDS (cont.)

CORRECTIVE ACTIONS_2020: In 2009 the EPA created the 2020 Corrective Action Baseline list of contaminated or potentially contaminated sites with a cleanup goal to complete 95% by the year 2020. The names on the list indicate the facility owners who may or may not have caused the contamination.

Agency Version Date: 12/21/2018
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 07/15/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: N/R
Most Recent Contact: 04/19/2022

DOD: Department of Defense sites from the Protected Areas Database (PAD-US)

Agency Version Date: 01/28/2022
Agency Update Frequency: Varies
Planned Next Contact: 07/22/2022
Agency: United States Geologic Survey (USGS)
Agency Contact: 1-888-275-8747
Most Recent Contact: 04/26/2022

EPA FUELS: List of companies and facilities registered to participate in EPA Fuel Programs under Title 40 CFR Part 80.

Agency Version Date: 02/04/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/28/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: (202) 564-2307
Most Recent Contact: 05/03/2022

FUDS: Defense sites that require cleanup

Agency Version Date: 02/07/2022
Agency Update Frequency: Varies
Planned Next Contact: 08/01/2022
Agency: US Army Corps of Engineering
Agency Contact: (202) 761-0011
Most Recent Contact: 05/05/2022

HIST DOD: Department of Defense historical sites

Agency Version Date: 01/28/2022
Agency Update Frequency: No Longer Maintained
Planned Next Contact: 07/22/2022
Agency: Environmental Protection Agency
Agency Contact: (800) 424-9346
Most Recent Contact: 04/26/2022

NPL AOC: Areas of Concern related to NPL remediation sites

Agency Version Date: 01/28/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/22/2022
Agency: Environmental Protection Agency
Agency Contact: N/R
Most Recent Contact: 04/26/2022

NPL LIENS: National Priority List of sites with Liens

Agency Version Date: 01/28/2022
Agency Update Frequency: Varies
Planned Next Contact: 07/22/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 04/26/2022

PADS: Listing of generators transporters commercial store/ brokers and disposers of PCB

Agency Version Date: 04/26/2022
Agency Update Frequency: Varies
Planned Next Contact: 07/22/2022
Agency: Environmental Protection Agency
Agency Contact: (703) 308-8404
Most Recent Contact: 04/26/2022

PCB TRANSFORMER: Disposal and Storage of Polychlorinated Biphenyl (PCB) Waste

Agency Version Date: 02/11/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 05/10/2022
Agency: Environmental Protection Agency
Agency Contact: (703) 308-8404
Most Recent Contact: 02/11/2022

OTHER ASCERTAINABLE RECORDS (cont.)

PFAS NPL: List of NPL sites with PFAS or PFOA contamination

Agency Version Date: 04/01/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/26/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 04/29/2022

PFAS TRIS: List of TRIS sites where PFAS or PFOA are used/manufactured/ treated/ transported/released.

Agency Version Date: 03/25/2022
Agency Update Frequency: Varies
Planned Next Contact: 06/21/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: (202) 566-1667
Most Recent Contact: 03/25/2022

PFAS UCMR3: List of PWS wells sampled for Unregulated Contaminant Monitoring Rule (UCMR)

Agency Version Date: 03/08/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 06/02/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 703-603-8867
Most Recent Contact: 03/08/2022

VAPOR: EPA Vapor Intrusion Database

Agency Version Date: 03/19/2021
Agency Update Frequency: Varies
Planned Next Contact: 06/03/2022
Agency: U.S. Environmental Protection Agency
Agency Contact: 855-246-3642
Most Recent Contact: 03/08/2022

DRYCLEANERS - TN: Dry Cleaning Facilities

Agency Version Date: 02/10/2022
Agency Update Frequency: Varies
Planned Next Contact: 08/04/2022
Agency: Department of Environment & Conservation
Agency Contact: (615) 532-0900
Most Recent Contact: 05/09/2022

DRYCLEANERS CLEANUP - TN: Listing of dry cleaning facilities under remediation.

Agency Version Date: 04/15/2022
Agency Update Frequency: Quarterly
Planned Next Contact: 07/14/2022
Agency: Department of Environment & Conservation
Agency Contact: N/R
Most Recent Contact: 04/15/2022

PFAS - TN: List of PFAS contaminated sites

Agency Version Date: 03/07/2022
Agency Update Frequency: Varies
Planned Next Contact: 06/03/2022
Agency: Department of Environment & Conservation
Agency Contact: N/R
Most Recent Contact: 03/07/2022

SUBJECT PROPERTY ADDRESS:
Columbia Ind. Prop., LLC Property
Industrial Park Rd
Columbia, TN 38401

SUBJECT PROPERTY COORDINATES:

Latitude(North):	35.632547 - 35°37'57.2"
Longitude(West):	-87.067144 - -87°4'1.7"
Universal Transverse Mercator:	Zone 16N
UTM X (Meters):	493920.52
UTM Y (Meters):	3943195.82
State Plane Coordinates:	4100 - Tennessee (US Survey Feet)
X Coordinate (Feet):	1651388.735 E
Y Coordinate (Feet):	474649.403 N

ELEVATION:

Elevation:	640 ft. above sea level

USGS TOPOGRAPHIC MAP:

Subject Property Map:	35087-F1 Godwin, TN
Most Recent Revision:	2019

GEOHYDROLOGY DATA:

SUBJECT PROPERTY TOPOGRAPHY:

Topographic Gradient: West

DFIRM FLOOD ZONE:

	DFIRM Flood
Subject Property County:	Electronic Data:
MAURY	N/R
Flood Plain Panel at Subject Property:	N/R
Additional Panels in search area:	N/R

FEMA FLOOD ZONE:

	FEMA Flood
Subject Property County:	Electronic Data:
MAURY	N/R
Flood Plain Panel at Subject Property:	N/R
Additional Panels in search area:	N/R

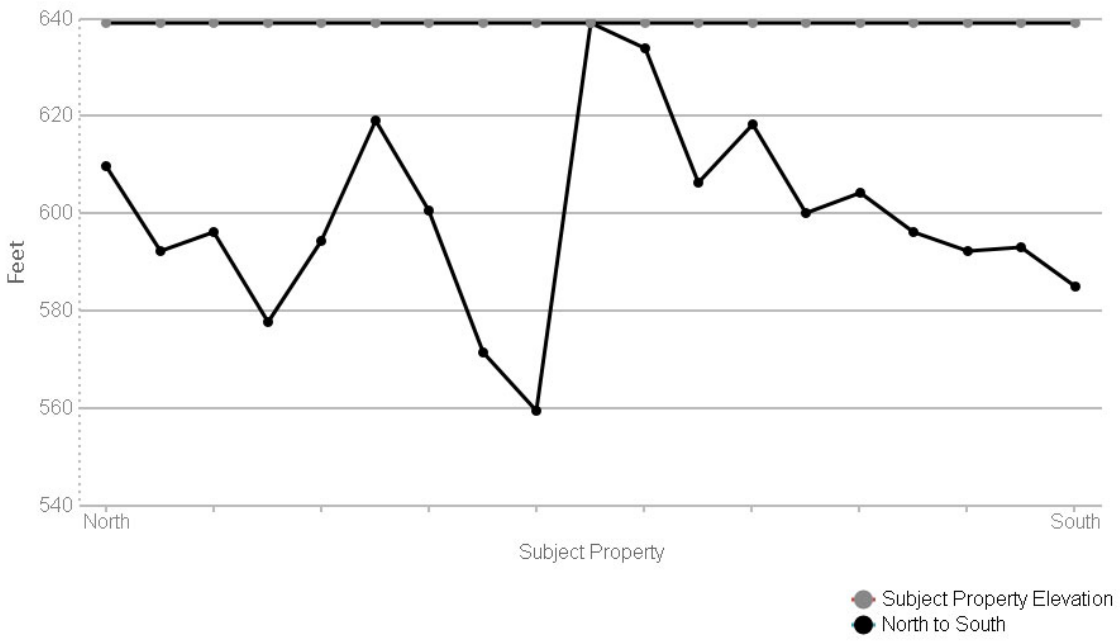
NATIONAL WETLAND INVENTORY:

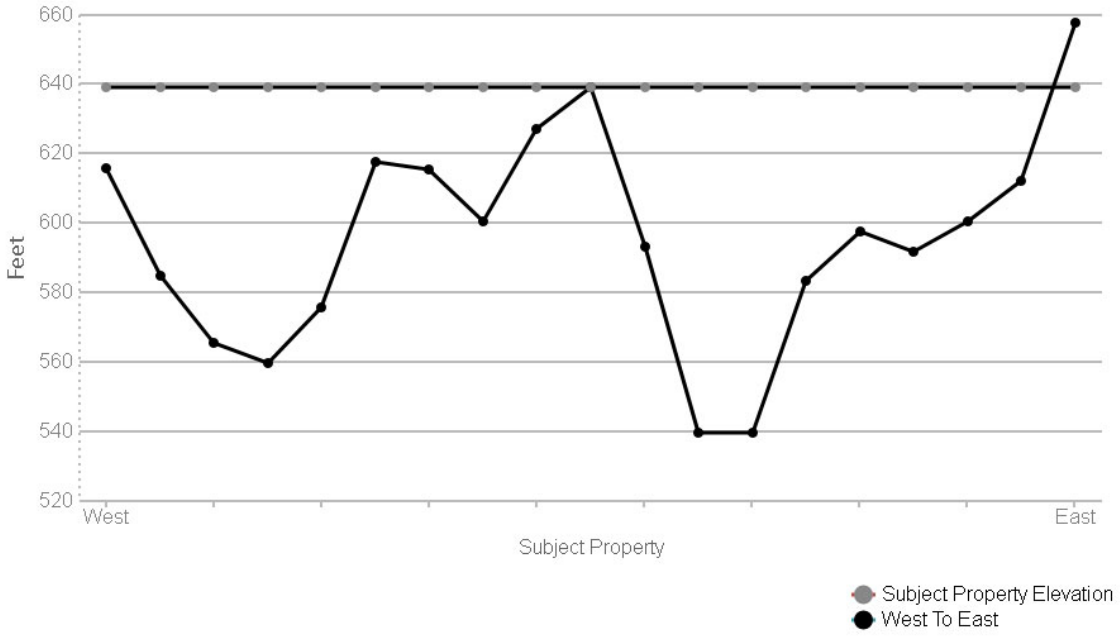
	NWI Electronic
NWI Quad at Subject Property:	Data Coverage:
No available data	No available data

LITHOSTRATIGRAPHIC INFORMATION:

ROCK STRATIGRAPHIC UNIT:		GEOLOGIC AGE IDENTIFICATION
Era:	Paleozoic	Category: 125 O2 Middle Ordovician (Mohawkian)
System:	Ordovician	
Series:	Middle Ordovician (Mohawkian)	
Code:	O2	

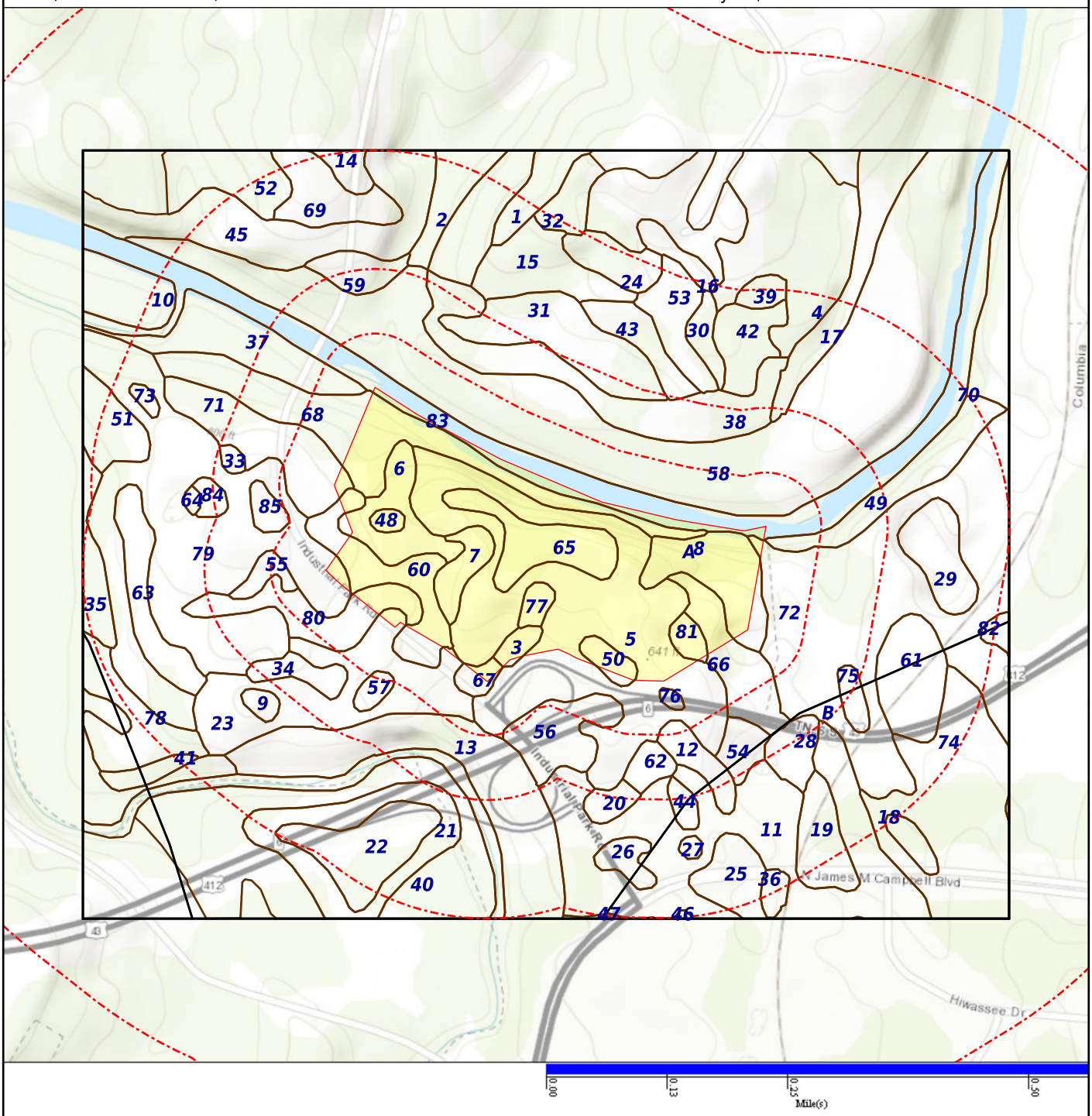
SURROUNDING ELEVATION PROFILES:





SUBJECT NAME: Columbia Ind. Prop., LLC Property
ADDRESS: Industrial Park Rd, Columbia, TN, 38401
LAT/LONG: 35.632547 / -87.067144

PREPARED FOR: Griggs & Maloney, Inc.
ORDER #: 71800
REPORT DATE: May 10, 2022



SOIL COMPOSITION IN GENERAL AREA OF SUBJECT PROPERTY:

Agency source: Soil Conservation Service, US Department of Agriculture

SOIL MAP ID 1	SSURGO
USDA Soil Name	Gullied land,Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Not Reported
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-76		No data	No data	0-0	0-0
2	76-86		No data	No data	0-0	0-0

SOIL MAP ID 2	SSURGO
USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 3	SSURGO
USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 4 **SSURGO**

USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 5 **SSURGO**

USDA Soil Name	Etowah,Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5
2	18-97	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5
3	97-178	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5

SOIL MAP ID 6	SSURGO
USDA Soil Name	Braxton,Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	C
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25	Silty clay loam	No data	No data	14.11-42.34	5.1-6
2	25-76	Clay	No data	No data	4.23-14.11	5.1-6
3	76-152	Clay	No data	No data	1.41-4.23	5.1-6.5

SOIL MAP ID 7	SSURGO
USDA Soil Name	Braxton,Series
USDA Soil Texture	Silty clay
Hydrologic Soil Group	C
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25	Silty clay	No data	No data	4.23-14.11	5.1-6
2	25-76	Clay	No data	No data	4.23-14.11	5.1-6
3	76-152	Clay	No data	No data	1.41-4.23	5.1-6.5

SOIL MAP ID 8	SSURGO
USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 9 **SSURGO**

USDA Soil Name	Etowah,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25	Silt loam	No data	No data	4.23-14.11	4.5-5.5
2	25-76	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5
3	76-152	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5

SOIL MAP ID 10 **SSURGO**

USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 11	SSURGO
USDA Soil Name	Inman,Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	C
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-15	Silty clay loam	No data	No data	4.23-14.11	5.6-7.3
2	15-81	Clay	No data	No data	1.41-4.23	5.6-7.3
3	81-106		No data	No data	0-1.41	0-0

SOIL MAP ID 12	SSURGO
USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 13	SSURGO
USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Not Reported
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 14 **SSURGO**

USDA Soil Name	Etowah,Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5
2	18-97	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5
3	97-178	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5

SOIL MAP ID 15 **SSURGO**

USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 16	SSURGO
USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 17	SSURGO
USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Not Reported
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 18	SSURGO
USDA Soil Name	Lindell,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B/D
Soil Drainage Class	Moderately well drained
Hydric Classification	4
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
2	18-38	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
3	38-132	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
4	132-200	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75	4.23-14.11	5.6-7.3

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
4	132-200	Silty clay loam	Transportation Officials, 1984.	mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3

SOIL MAP ID 19 **SSURGO**

USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 20 **SSURGO**

USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 21	SSURGO
USDA Soil Name	Humphreys,Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	A
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-3	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Gravels, gravel with fines, Clayey Gravel. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	5.1-6.5
2	3-69	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Gravels, gravel with fines, Clayey Gravel. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	5.1-6.5
3	69-107	Coarse sandy loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	42.34-141.1	5.1-6.5

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
4	107-200	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Gravels, gravel with fines, Clayey Gravel. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	5.1-7.3

SOIL MAP ID 22 **SSURGO**

USDA Soil Name	Armour,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-30	Silt loam	No data	No data	4.23-14.11	5.1-6
2	30-61	Silty clay loam	No data	No data	4.23-14.11	5.1-6
3	61-152	Silty clay loam	No data	No data	4.23-14.11	5.1-6

SOIL MAP ID 23 **SSURGO**

USDA Soil Name	Colbert,Series
USDA Soil Texture	Silty clay
Hydrologic Soil Group	D
Soil Drainage Class	Moderately well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silty clay	No data	No data	0.42-1.41	4.5-6.5
2	20-114	Clay	No data	No data	0-0.42	4.5-6.5
3	114-140	Clay	No data	No data	0-0.42	6.1-7.8
4	140-165		No data	No data	0-0.42	0-0

SOIL MAP ID 24 **SSURGO**

USDA Soil Name	Etowah,Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5
2	18-97	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5
3	97-178	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5

SOIL MAP ID 25 **SSURGO**

USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 26	SSURGO
USDA Soil Name	Hampshire,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	C
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-6.5
2	18-30	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5.6-6.5
3	30-76	Clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM	1.41-4.23	5.6-6.5

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
3	30-76	Clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	test D 2487, in ASTM, 1984).	1.41-4.23	5.6-6.5
4	76-119	Clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-14.11	5.6-6.5
5	119-144	No data	No data	No data	0.01-1.41	0-0

SOIL MAP ID 27 **SSURGO**

USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 28	SSURGO
USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 29	SSURGO
USDA Soil Name	Mines,Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Not Reported
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

SOIL MAP ID 30	SSURGO
USDA Soil Name	Etowah,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25	Silt loam	No data	No data	4.23-14.11	4.5-5.5
2	25-76	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5
3	76-152	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5

SOIL MAP ID 31	SSURGO
USDA Soil Name	Armour,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-30	Silt loam	No data	No data	4.23-14.11	5.1-6
2	30-61	Silty clay loam	No data	No data	4.23-14.11	5.1-6
3	61-152	Silty clay loam	No data	No data	4.23-14.11	5.1-6

SOIL MAP ID 32	SSURGO
USDA Soil Name	Etowah,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25	Silt loam	No data	No data	4.23-14.11	4.5-5.5
2	25-76	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5
3	76-152	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5

SOIL MAP ID 33	SSURGO
USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 34 **SSURGO**

USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 35 **SSURGO**

USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 36	SSURGO
USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 37	SSURGO
USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 38	SSURGO
USDA Soil Name	Humphreys,Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	A
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-3	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Gravels, gravel with fines, Clayey Gravel. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	5.1-6.5
2	3-69	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Gravels, gravel with fines, Clayey Gravel. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	5.1-6.5
3	69-107	Coarse sandy loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	42.34-141.1	5.1-6.5
4	107-200	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Gravels, gravel with fines, Clayey Gravel. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil	14.11-42.34	5.1-7.3

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
4	107-200	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	5.1-7.3

SOIL MAP ID 39 **SSURGO**

USDA Soil Name	Etowah,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25	Silt loam	No data	No data	4.23-14.11	4.5-5.5
2	25-76	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5
3	76-152	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5

SOIL MAP ID 40 **SSURGO**

USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 41 **SSURGO**

USDA Soil Name	Humphreys,Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	A
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-3	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Gravels, gravel with fines, Clayey Gravel. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	5.1-6.5
2	3-69	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Gravels, gravel with fines, Clayey Gravel. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	5.1-6.5
3	69-107	Coarse sandy loam	Reference: This is a classification of soil material for highway and airfield	Reference: This is a classification of soil material designed for general construction	42.34-141.1	5.1-6.5

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
3	69-107	Coarse sandy loam	construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	42.34-141.1	5.1-6.5
4	107-200	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Gravels, gravel with fines, Clayey Gravel. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	5.1-7.3

SOIL MAP ID 42 **SSURGO**

USDA Soil Name	Armour,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-30	Silt loam	No data	No data	4.23-14.11	5.1-6
2	30-61	Silty clay loam	No data	No data	4.23-14.11	5.1-6
3	61-152	Silty clay loam	No data	No data	4.23-14.11	5.1-6

SOIL MAP ID 43	SSURGO
USDA Soil Name	Etowah,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25	Silt loam	No data	No data	4.23-14.11	4.5-5.5
2	25-76	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5
3	76-152	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5

SOIL MAP ID 44	SSURGO
USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 45	SSURGO
USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Not Reported
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 46 **SSURGO**

USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 47 **SSURGO**

USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 48 **SSURGO**

USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 49 **SSURGO**

USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Not Reported
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 50 **SSURGO**

USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 51	SSURGO
USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 52	SSURGO
USDA Soil Name	Gullied land,Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Not Reported
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-76		No data	No data	0-0	0-0
2	76-86		No data	No data	0-0	0-0

SOIL MAP ID 53	SSURGO
USDA Soil Name	Etowah,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25	Silt loam	No data	No data	4.23-14.11	4.5-5.5
2	25-76	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5
3	76-152	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5

SOIL MAP ID 54 **SSURGO**

USDA Soil Name	Gullied land,Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Not Reported
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-76		No data	No data	0-0	0-0
2	76-86		No data	No data	0-0	0-0

SOIL MAP ID 55 **SSURGO**

USDA Soil Name	Colbert,Series
USDA Soil Texture	Silty clay
Hydrologic Soil Group	D
Soil Drainage Class	Moderately well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silty clay	No data	No data	0.42-1.41	4.5-6.5
2	20-114	Clay	No data	No data	0-0.42	4.5-6.5
3	114-140	Clay	No data	No data	0-0.42	6.1-7.8
4	140-165		No data	No data	0-0.42	0-0

SOIL MAP ID 56	SSURGO
USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 57	SSURGO
USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 58	SSURGO
USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 59 **SSURGO**

USDA Soil Name	Humphreys,Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	A
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-3	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Gravels, gravel with fines, Clayey Gravel. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	5.1-6.5
2	3-69	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Gravels, gravel with fines, Clayey Gravel. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	5.1-6.5
3	69-107	Coarse sandy loam	Reference: This is a classification of soil material for highway and airfield	Reference: This is a classification of soil material designed for general construction	42.34-141.1	5.1-6.5

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
3	69-107	Coarse sandy loam	construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	42.34-141.1	5.1-6.5
4	107-200	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Gravels, gravel with fines, Clayey Gravel. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	5.1-7.3

SOIL MAP ID 60 **SSURGO**

USDA Soil Name	Armour,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-36	Silt loam	No data	No data	4.23-14.11	5.1-6
2	36-102	Silty clay loam	No data	No data	4.23-14.11	5.1-6
3	102-152	Silty clay loam	No data	No data	4.23-14.11	5.1-6

SOIL MAP ID 61	SSURGO
USDA Soil Name	Colbert,Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	D
Soil Drainage Class	Moderately well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silty clay loam	No data	No data	1.41-4.23	4.5-6.5
2	20-61	Silty clay	No data	No data	0.42-1.41	4.5-6.5
3	61-114	Clay	No data	No data	0-0.42	4.5-6.5
4	114-140	Clay	No data	No data	0-0.42	6.1-7.8
5	140-165		No data	No data	0-0.42	0-0

SOIL MAP ID 62	SSURGO
USDA Soil Name	Armour,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-36	Silt loam	No data	No data	4.23-14.11	5.1-6
2	36-102	Silty clay loam	No data	No data	4.23-14.11	5.1-6
3	102-152	Silty clay loam	No data	No data	4.23-14.11	5.1-6

SOIL MAP ID 63	SSURGO
USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 64 **SSURGO**

USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 65 **SSURGO**

USDA Soil Name	Etowah,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25	Silt loam	No data	No data	4.23-14.11	4.5-5.5
2	25-76	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5
3	76-152	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5

SOIL MAP ID 66	SSURGO
USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 67	SSURGO
USDA Soil Name	Lindell,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B/D
Soil Drainage Class	Moderately well drained
Hydric Classification	4
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
2	18-38	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size	4.23-14.11	5.6-7.3

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
2	18-38	Silt loam	of State Highway and Transportation Officials, 1984.	distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
3	38-132	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
4	132-200	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3

SOIL MAP ID 68	SSURGO
USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Not Reported
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 69 **SSURGO**

USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 70 **SSURGO**

USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 71	SSURGO
USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 72	SSURGO
USDA Soil Name	Gladeville,Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	D
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.6-8.4
2	20-25	Clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size	0.42-14.11	6.6-8.4

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
2	20-25	Clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.42-14.11	6.6-8.4
3	25-50		No data	No data	0.001-0.42	0-0

SOIL MAP ID 73 **SSURGO**

USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 74 **SSURGO**

USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 75 **SSURGO**

USDA Soil Name	Lindell,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B/D
Soil Drainage Class	Moderately well drained
Hydric Classification	4
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
2	18-38	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
3	38-132	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for	4.23-14.11	5.6-7.3

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
3	38-132	Silt loam	and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
4	132-200	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3

SOIL MAP ID 76 **SSURGO**

USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 77	SSURGO
USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 78	SSURGO
USDA Soil Name	Armour,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-30	Silt loam	No data	No data	4.23-14.11	5.1-6
2	30-61	Silty clay loam	No data	No data	4.23-14.11	5.1-6
3	61-152	Silty clay loam	No data	No data	4.23-14.11	5.1-6

SOIL MAP ID 79	SSURGO
USDA Soil Name	Etowah,Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5
2	18-97	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5
3	97-178	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5

SOIL MAP ID 80 **SSURGO**

USDA Soil Name	Huntington,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-61	Silt loam	No data	No data	4.23-14.11	5.6-7.8
2	61-163	Silt loam	No data	No data	4.23-14.11	5.6-7.8

SOIL MAP ID 81 **SSURGO**

USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 82	SSURGO
USDA Soil Name	Lindell,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B/D
Soil Drainage Class	Moderately well drained
Hydric Classification	4
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
2	18-38	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
3	38-132	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM	4.23-14.11	5.6-7.3

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
3	38-132	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
4	132-200	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3

SOIL MAP ID 83	SSURGO
USDA Soil Name	Water,Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Not Reported
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

SOIL MAP ID 84	SSURGO
USDA Soil Name	Rock outcrop, Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25		No data	No data	0-0.42	0-0

SOIL MAP ID 85 **SSURGO**

USDA Soil Name	Etowah,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-25	Silt loam	No data	No data	4.23-14.11	4.5-5.5
2	25-76	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5
3	76-152	Silty clay loam	No data	No data	4.23-14.11	4.5-5.5

SOIL MAP ID A **STATSGO**

USDA Soil Name	Nolin,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	7
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-8	Silt loam	No data	No data	4.2343-14.1143	5.6-8.4
2	8-52	No data	No data	No data	4.2343-14.1143	5.6-8.4
3	52-65	No data	No data	No data	4.2343-42.343	5.1-8.4

SOIL MAP ID B	STATSGO
USDA Soil Name	Maury,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-16	Silt loam	No data	No data	14.1143-42.343	5.1-7.3
2	16-29	Silty clay loam	No data	No data	4.2343-42.343	5.1-6.5
3	29-42	No data	No data	No data	4.2343-42.343	5.1-6.5
4	42-75	No data	No data	No data	4.2343-14.1143	4.5-6

WATER AGENCY DATA:

WATER AGENCY SEARCH DISTANCES:

DATABASE:	SEARCH DISTANCE (MILES):
OIL & GAS WELLS - TN	1.000

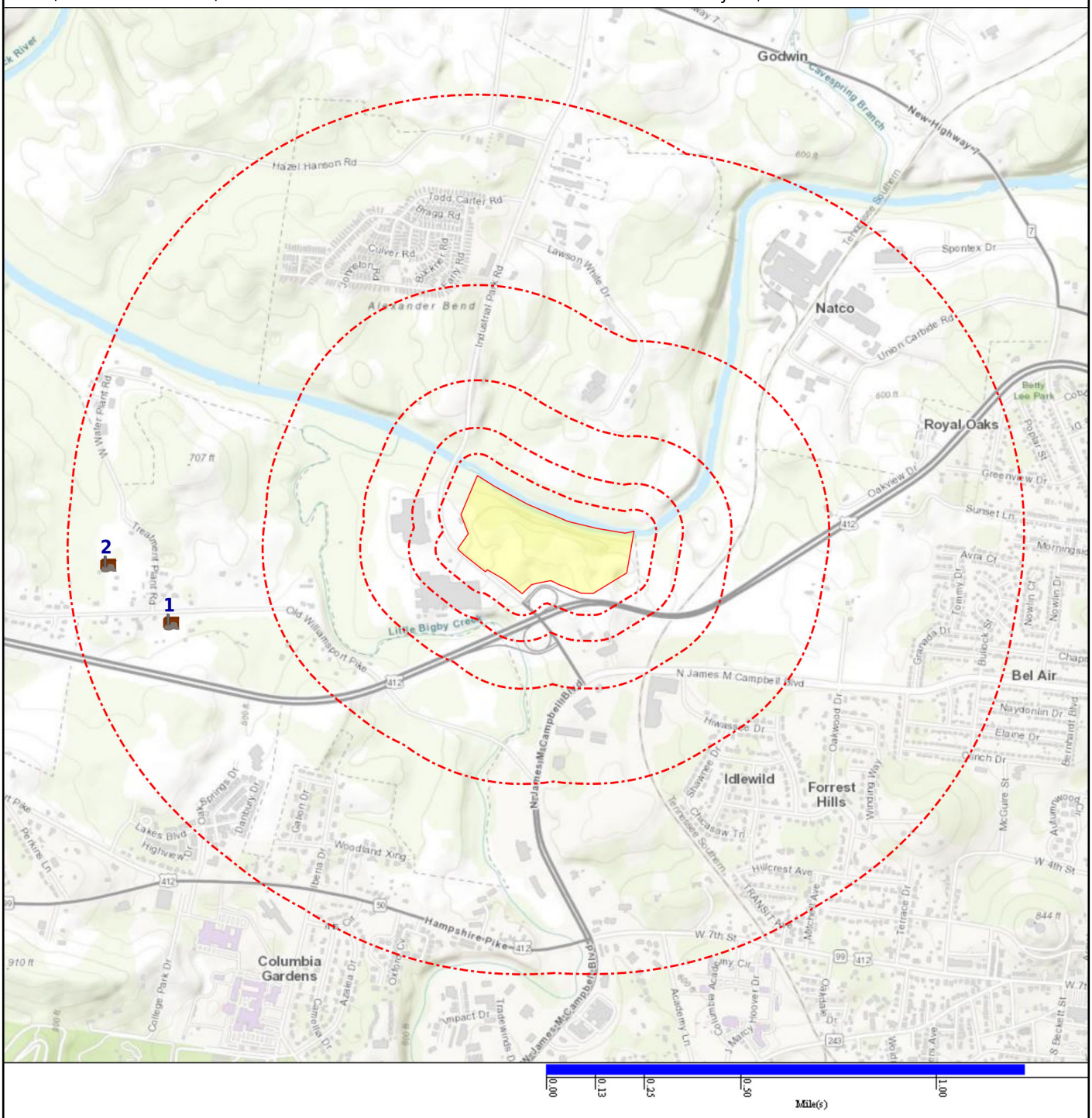
DISTANCE TO NEAREST:	DISTANCE:
OIL & GAS WELLS - TN	0.764 mi / 4035 ft

STATE/LOCAL WATER AGENCY DATA SUMMARY:

MAP ID:	WELL ID:	LOCATION FROM SP:
1	119-00036	1/2 - 1 Mile W
2	119-00037	1/2 - 1 Mile W

SUBJECT NAME: Columbia Ind. Prop., LLC Property
ADDRESS: Industrial Park Rd, Columbia, TN, 38401
LAT/LONG: 35.632547 / -87.067144

PREPARED FOR: Griggs & Maloney, Inc.
ORDER #: 71800
REPORT DATE: May 10, 2022



Map Id: 1
Direction: W
Distance: 0.764 mi., 4036 ft.
Elevation: 586 ft.
Relative: Lower

Site Name : 119-00036
35.6295, -87.084
TN

Database(s) : [OIL & GAS WELLS - TN]

Envirosite ID: 18097317
EPA ID: N/R

OIL & GAS WELLS - TN

Permit Date :	N/R
Permit Number :	N/R
API Number :	119-00036
Operator Name :	FEE
Well Name and Number :	BOWMAN TOM G #1
EFO Name :	Columbia
Purpose af Well :	N/R
Formation at Total Depth :	N/R
Elevation :	580
County :	Maury
Last Date in Agency List :	2022-04-11

Map Id: 2
Direction: W
Distance: 0.900 mi., 4753 ft.
Elevation: 625 ft.
Relative: Lower

Site Name : 119-00037
35.631694, -87.086861
TN

Database(s) : [OIL & GAS WELLS - TN]

Envirosite ID: 18097319
EPA ID: N/R

OIL & GAS WELLS - TN

Permit Date :	N/R
Permit Number :	N/R
API Number :	119-00037
Operator Name :	FEE
Well Name and Number :	COTHRAN KERNIE #1
EFO Name :	Columbia
Purpose af Well :	N/R
Formation at Total Depth :	N/R
Elevation :	720
County :	Maury
Last Date in Agency List :	2022-04-11

RADON DATA:

STATE SOURCE: No Available Data

FEDERAL AREA RADON INFORMATION FOR: 38401

NUMBER OF SAMPLE SITES: 32

Area:	Average Activity:	% <4 pCi/L:	% 4-20 pCi/L:	% >20 pCi/L:
basement	7.55 pCi/L	40%	50%	10%
first floor	3.1045 pCi/L	63.64%	36.36%	0%

FEDERAL EPA RADON ZONE FOR MAURY COUNTY: Zone = 3

Note: Zone 1 indoor average level > 4 pCI/L

: Zone 2 indoor average level > = 2 pCI/L and <= 4 pCI/L

: Zone 3 indoor average < 2 pCI/L

SSURGO
Detailed Soil Data Map
Natural Resources Conservation Service: U.S. Department of Agriculture
(202) 690-4985
Detailed Soil Data Map

STATSGO & MUI
General Soil Data Map
Natural Resources Conservation Service: U.S. Department of Agriculture
(202) 690-4985
General Soil Data Map

USGS GEOLOGIC AGE
USGS Digital Data Series DDS
Natural Resources Conservation Service: U.S. Department of Agriculture
(202) 690-4985
USGS Digital Data Series DDS: Geologic Age and Rock Stratigraphic Unit

OIL & GAS WELLS - TN
Oil and Gas Wells
Department of Environment & Conservation
888-891-8332
Locations of oil and gas wells

RADON
National Radon Database
U.S. Environmental Protection Agency
215-814-2469
A study of the EPA/State Residential Radon Survey and the National Residential Radon Survey.

RADON EPA
RADON EPA
U.S. Environmental Protection Agency
215-814-2469
EPA list of Radon zones

AIRPORT FACILITIES
Airport landing facilities
Federal Aviation Administration
(866) 835-5322
Airport landing facilities

BASINS
Better Assessment Science Integrating point & Non-point Sources
U.S. Environmental Protection Agency
855-246-3642
Integrated geographical information system national watershed data and environmental assessment known as Better Assessment Science Integrating point & Non-point Sources

DIGITAL OBSTACLE
Obstacles of interest to aviation users
Federal Aviation Administration
855-379-6518
The Digital Obstacle File describes all known obstacles of interest to aviation users in the U.S. with limited coverage of the Pacific the Caribbean Canada and Mexico. The obstacles are assigned unique numerical identifiers; accuracy codes and listed in order of ascending latitude within each state or area by FAA Region.

EPICENTERS
National Geographical Data Center
National Geographical Data Center
303-497-6826
List of recent and historic earthquakes and information.

ATTACHMENT 3

EXCEPTIONS AND LIMITATIONS

Exceptions and Limitations:

No All Appropriate Inquiry (AAI) also known as an environmental site assessment (ESA) can wholly eliminate uncertainty regarding the potential for *recognized environmental conditions* in connection with a property. Performance of this or any AAI or ESA is intended to reduce, but not eliminate, uncertainty regarding the environmental condition of a property.

The expressed opinions of Griggs & Maloney, Inc. are made within the limitations of this investigation and the assessor's experience. It is impossible to obtain full, comprehensive knowledge of the condition of all the Subject Property's environmental media through a limited investigation of this nature.

This AAI or ESA is made subject to the following certification and limiting conditions:

The environmental inspector and/or Griggs & Maloney, Inc., has no personal interest in or bias with respect to the subject matter of the AAI or ESA or any parties who may be part of a financial transaction involving the property. The conclusions and recommendations of the report are not based in whole or in part upon the race, color, creed, sex, or national origin of any of the Principal Parties.

The environmental inspector has personally inspected the property and has made a visual inspection of adjacent properties, to the extent possible by readily available access. The inspection does not include a survey of the property, removal of any soil, water, or air samples, or any type of inspection that would require extraordinary effort to access.

The observations described in this AAI or ESA were made under the conditions stated herein. The conclusions presented in the AAI or ESA were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by the Client.

In preparing this AAI or ESA, Griggs & Maloney, Inc., has relied upon certain information provided by the state and local officials and other parties referenced therein, and on information contained in the files of state and/or local agencies available to Griggs & Maloney, Inc., at the time of the AAI or ESA. Although there may have been some degree of overlap in the information provided by these various sources, Griggs & Maloney, Inc. has made no attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this AAI or ESA and undertakes no responsibility for accuracy of such items.

Griggs & Maloney, Inc., assumes no responsibility for matters of a legal nature affecting the property inspected or the title thereto. The property is inspected assuming responsible ownership. Griggs & Maloney, Inc., assumes that there are no hidden, unapparent, or latent conditions or defects in or of the property, subsoil, or structures, other than those noted in the inspection report. Griggs & Maloney, Inc. assumes no responsibility for such conditions, or for the inspection, engineering, or repair, which might be required, to discover or correct such factors.

Any drawings presented herein are included to assist in generally visualizing the setting of the Subject Property features and no responsibility is assumed for accuracy of such drawings. Griggs & Maloney, Inc. has made no survey of the property and it is assumed that any survey provided is correct.

The site investigation and resulting AAI or ESA report are made by the environmental inspector and/or Griggs & Maloney, Inc., solely for the benefit and personal use of the Principal Parties. No disclosure may be made of this AAI or ESA contents without the prior written consent of Griggs & Maloney, Inc.

Data gaps (lack or inability to obtain information required by ASTM E 1527-05 despite good faith efforts by G&M to gather such information) were not encountered during this AAI or ESA unless otherwise stated. However, it should be noted that in our experience, virtually no property has been found to have documented uses within five-year increments from 1940 to present, the goal of ASTM E 1527-05.

The party(ies) for which this report was prepared is/are the "user(s)" of this AAI or ESA. The User(s) did not disclose to G&M any contractual or agreed price or that any *recognized environmental conditions*, environmental liens, Activity and Use Limitations (AULs), or institutional controls exist for the Subject Property unless otherwise stated. In the case of a potential property transfer, the User did not disclose concern regarding fair market value compared to agreed sales price unless otherwise stated. Unless otherwise stated, this report was prepared with the assumption that its purpose is limited to Landowner Liability Protections (LLPs) to CERCLA liabilities as defined in ASTM 1527-05 3.2.46. G&M did not review recorded land title records for environmental liens unless otherwise stated herein.

ALL APPROPRIATE INQUIRY
REPORT
COLUMBIA INDUSTRIAL PROPERTIES, LLC
PROPERTY
INDUSTRIAL PARK ROAD
COLUMBIA, TENNESSEE

JULY 27, 2018

Prepared For:

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ALL APPROPRIATE INQUIRY REPORT
COLUMBIA INDUSTRIAL PROPERTIES, LLC PROPERTY
INDUSTRIAL PARK ROAD
COLUMBIA, TENNESSEE

1.1 SUMMARY

As requested by Mr. Tom Grosko, representing the Columbia Industrial Properties, LLC, Griggs & Maloney, Inc. (G&M) conducted an All Appropriate Inquiry (AAI) of a 46.59-acre property located on the north side of Industrial Park Road in Columbia, Maury County, Tennessee (the Subject Property). Mr. Grosko indicated that Columbia Industrial Properties, LLC has recently purchased the Subject Property. The Subject Property is the southwestern portion of the Union Carbide corporation/UCAR Carbon/Graftech approximately 285-acre facility property which has a street address of 791 Santa Fe Pike. The Subject Property comprises a portion of Maury County Tax Assessor Map 76, Parcel 80. The recording of the deed of off-conveyance of the Subject Property from the larger parcel had apparently not been recorded at the time of this investigation. Therefore, the owner of the Subject Property of record is GT Columbia c/o Capital Recovery Group.

Subject Property Findings:

The Subject Property supports no buildings and is currently only used for hay production. Former uses of the Subject Property include an area once used for employee picnic, a borrow area used to gather material to fill/patch roads and washouts on the rest of the facility, and an area once used as a contractors' parking lot. A concrete slab that once supported a picnic pavilion is located on the north-central portion of the Subject Property. A small slab, electrical conduit, utility poles and a pole-mounted electrical transformer are located on the southeastern portion of the Subject Property. The Subject Property has had no other uses.

Duck River and undeveloped wooded areas beyond are located along the northern boundary of the Subject Property. A landfill associated with the UCAR Carbon facility and undeveloped areas are located on adjacent eastern property. Industrial Park Road and the Freeland Auto Recycling facility beyond are located south and southwest of the Subject Property. A facility occupied by a company that reclaims carbonaceous materials from the UCAR Carbon facility area and undeveloped areas are located on adjacent western property.

Conclusions and Recommendations:

A *recognized environmental condition* (REC) is the presence or likely presence of any hazardous substances or petroleum products in, on or at a property: 1) due to any release to the environment; 2) under conditions indicative of a release to the environment; or 3) under any conditions that pose a material threat of future release to the environment. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

This assessment has revealed no apparent RECs in connection with the Subject Property which are of sufficient concern to warrant a Phase II investigation at this time. However, the observed pole-mounted electrical transformer on the Subject Property appears to be part of the real property owned by the Subject Property owner and may contain concentrations of polychlorinated biphenyls (PCBs). The presence of the electrical transformer on the Subject Property and its ownership by the Subject Property owner is considered a REC based upon potential for the transformer to release PCBs to the environment.

The U.S. Environmental Protection Agency (EPA) has identified PCBs as suspected human carcinogens. PCBs were found in dielectric fluid in many electrical components and equipment manufactured prior to 1979. Electrical devices, which should be suspected of containing PCBs, include electrical power transformers, capacitors, and ballasts. Federal regulations require that electrical transformers that have not been tested previously and were manufactured before July 2, 1979 must be assumed to contain between 50 and 500 parts per million (ppm) PCBs. Such transformers are classified as PCB-contaminated articles. Electrical transformers containing dielectric fluid with greater than 500 ppm PCB are classified as PCB-containing articles. Those with less than 50 ppm PCB fluids are considered "non-PCB". Federal regulations require the owner of PCB-containing or PCB-contaminated equipment to cleanup releases from such equipment. No labelling regarding PCB content of the Subject Property transformer were noted. The observed transformer is no longer active and is apparently disconnected from active lines. We recommend that the observed transformer and any contents be evaluated for PCB content and/or removed from the Subject Property for offsite reclamation or disposal. The final disposition of the transformer should be documented and kept on file by the owner.

1.2 INTRODUCTION

As requested by Mr. Tom Grosko, representing the Columbia Industrial Properties, LLC, Griggs & Maloney, Inc. (G&M) conducted an All Appropriate Inquiry (AAI) of a 46.59-acre property located on the north side of Industrial Park Road in Columbia, Maury County, Tennessee (the Subject Property). Mr. Grosko indicated that Columbia Industrial Properties, LLC has recently purchased the Subject Property. The Subject Property is the southwestern portion of the Union Carbide corporation/UCAR Carbon/Graftech approximately 285-acre facility property which has a street address of 791 Santa Fe Pike. The Subject Property comprises a portion of Maury County Tax Assessor Map 76, Parcel 80. The recording of the deed of off-conveyance of the Subject Property from the larger parcel had apparently not been recorded at the time of this investigation. Therefore, the owner of the Subject Property of record is GT Columbia c/o Capital Recovery Group.

This report presents the details of an AAI of the Subject Property. This AAI was conducted in general conformance with the scope and limitations of the American Society for Testing and Materials (ASTM) E 1527-13 *Standard Practice for Phase I Environmental Site Assessments: Environmental Site Assessment Process*. Environmental assessments are typically divided into three (3) sequential phases. These phases include the following:

Phase I: Review of available historical records; interviews with persons knowledgeable of the site; and a visual inspection of the site, preferably a perambulatory reconnaissance or "walk-over" of the site.
Phase II: Selective sampling of areas suspect of being potential environmental liabilities.
Phase III: Develop strategy for site utilization and/or potential environmental remediation or clean up.

The initiation of each phase is dependent upon the findings of the previous phase. For example, at a minimum, each site investigation includes an AAI record review, knowledgeable person interview, and site reconnaissance. If the reviewed information and inspections indicate no environmental *recognized environmental conditions*[1], then there is no need to proceed with Phases II and III investigations.

The initiation of each phase is dependent upon the findings of the previous phase. For example, at a minimum, each site investigation includes an AAI record review, knowledgeable person interview, and site reconnaissance. If the reviewed information and inspections indicate no environmental concerns, then there is no need to proceed with Phases II and III investigations.

However, the AAI may identify an area, or areas, of the property which in the past, currently, or which may reasonably be expected to pose future environmental liabilities. Such a finding would typically result in a recommendation for collecting media (e.g., building materials, soil, groundwater, surface water) samples and subsequent analysis as part of a Phase II investigation.

[1] A *recognized environmental condition* (REC) is "the presence or likely presence of any hazardous substances or petroleum products in, on or at a property: 1) due to any release to the environment; 2) under conditions indicative of a release to the environment; or 3) under any conditions that pose a material threat of future release to the environment." The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

The Phase II investigation would be designed to confirm or refute the presence of substances of environmental concern on the property.

If a Phase II Assessment indicates environmental concerns that need further investigation or corrective action, then a Phase III Assessment may be necessary. Phase III is a more comprehensive sampling, assessment, and site remediation program, which may allow for estimating the remedial actions and capital/operating costs for the property.

No AAI or environmental site assessment (ESA) can wholly eliminate uncertainty regarding the potential for *recognized environmental conditions* in connection with a property. Performance of this or any AAI or ESA is intended to reduce, but not eliminate, uncertainty regarding the environmental condition of a property.

The expressed opinions of Griggs & Maloney, Inc. are made within the limitations of this investigation and the assessor's experience. It is impossible to obtain full, comprehensive knowledge of the condition of all the Subject Property's environmental media through a limited investigation of this nature.

1.2.1 PURPOSE

The purpose of this investigation is to meet the intent of commercial and customary practice in the United States of America for ASTM Standard E 1527-13 for the Subject Property with respect to a range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA – 42 U.S.C. §9601) and petroleum products. This report is intended to provide the parties for whom it was prepared (User) information to meet one of the requirements of the definition of "innocent landowner", "contiguous property owner", or "bona fide prospective purchaser" limitations on CERCLA liability known as landowner liability protections (LLPs) as described in ASTM E 1527-13.

1.2.2 DETAILED SCOPE OF SERVICES

This AAI included:

- A perambulatory visual and olfactory field reconnaissance of the Subject Property and adjoining properties as observed from the Subject Property and public thoroughfares;
- A review of the site history through public record review and interviews of persons knowledgeable of site history;
- A review of the Federal and State Regulatory Agency databases; and
- A review of historical aerial photographs and United States Geological Survey (USGS) topographic maps (quadrangles) of the site and surrounding properties.

This report will summarize the observations made, and provide conclusions developed during the AAI. The AAI was performed in general conformance with the scope and

limitations of ASTM E 1527-13 guidelines, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessments Process*.

1.2.3 SIGNIFICANT ASSUMPTIONS

The observations described in this ESA were made under the conditions stated herein. The conclusions presented in the ESA were based solely upon the services described herein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by the Client.

In preparing this AAI or ESA, Griggs & Maloney, Inc., has relied upon certain information provided by the state and local officials and other parties referenced therein, and on information contained in the files of state and/or local agencies available to Griggs & Maloney, Inc., at the time of the AAI or ESA. Although there may have been some degree of overlap in the information provided by these various sources, Griggs & Maloney, Inc. has made no attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this AAI or ESA and undertakes no responsibility for accuracy of such items.

In the absence of information offered by the user or client or their representatives or interviewees, G&M reasonably assumes that no adjustments to consideration (agreed sales price) has been made based on undisclosed environmental conditions and that all adjustments to the consideration have been made based on market conditions and negotiation between other parties unless otherwise stated herein.

Griggs & Maloney, Inc. assumes no responsibility for matters of a legal nature affecting the property inspected or the title thereto. The property is inspected assuming responsible ownership. Griggs & Maloney, Inc. assumes that there are no hidden, unapparent, or latent conditions or defects in or of the property, subsoil, or structures, other than those noted in the inspection report. Griggs & Maloney, Inc. assumes no responsibility for such conditions, or for the inspection, engineering, or repair, which might be required, to discover or correct such factors.

1.2.4 LIMITATIONS AND EXCEPTIONS

No AAI also known as an environmental site assessment (ESA) can wholly eliminate uncertainty regarding the potential for *recognized environmental conditions* in connection with a property. Performance of this or any AAI or ESA is intended to reduce, but not eliminate, uncertainty regarding the environmental condition of a property.

The expressed opinions of Griggs & Maloney, Inc. are made within the limitations of this investigation and the assessor's experience. It is impossible to obtain full, comprehensive knowledge of the condition of all the Subject Property's environmental media through a limited investigation of this nature.

This AAI or ESA is made subject to the following certification and limiting conditions:

The environmental inspector and/or Griggs & Maloney, Inc., has no personal interest in or bias with respect to the subject matter of the AAI or ESA or any parties who may be part of a financial transaction involving the property. The conclusions and recommendations of the report are not based in whole or in part upon the race, color, creed, sex, or national origin of any of the Principal Parties.

The environmental inspector has personally inspected the property and has made a visual inspection of adjacent properties, to the extent possible by readily available access. The inspection does not include a survey of the property, removal of any soil, water, or air samples, or any type of inspection that would require extraordinary effort to access.

The observations described in this ESA were made under the conditions stated herein. The conclusions presented in the ESA were based solely upon the services described therein, and not on scientific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by the Client.

Any drawings presented herein are included to assist in generally visualizing the setting of the Subject Property features and no responsibility is assumed for accuracy of such drawings. Griggs & Maloney, Inc. has made no survey of the property and it is assumed that any survey provided is correct.

The site investigation and resulting AAI or ESA report are made by the environmental inspector and/or Griggs & Maloney, Inc., solely for the benefit and personal use of the User. No disclosure may be made of this AAI or ESA contents without the prior written consent of Griggs & Maloney, Inc.

Data gaps (lack of or inability to obtain information required by ASTM E 1527-13 despite good faith efforts by G&M to gather such information) were not encountered during this AAI or ESA unless otherwise stated. However, it should be noted that in our experience, virtually no property has been found to have documented uses within five-year increments from 1940 (or earlier, if developed) to present, the goal of ASTM E 1527-13.

The party(ies) for which this report was prepared is/are the "user(s)" of this AAI. The User(s) did not disclose to G&M any contractual or agreed price or that any *recognized environmental conditions*, environmental liens, Activity and Use Limitations (AULs), or institutional controls exist for the Subject Property unless otherwise stated. In the case of a potential property transfer, the User did not disclose concern regarding fair market value compared to agreed sales price unless otherwise stated. Unless otherwise stated, this report was prepared with the assumption that its purpose is limited to Landowner Liability Protections (LLPs) to CERCLA liabilities as defined in ASTM 1527-13 3.2.46. G&M did not review recorded land title records for environmental liens unless otherwise stated herein.

This AAI or ESA is the property of G&M and the use of this AAI or ESA, in any manner, is prohibited until full payment is made to G&M for the services rendered. After payment in full has been made to G&M, this AAI or ESA becomes the property of the buyer/client, subject to the provisions of these limiting conditions.

1.2.5 SPECIAL TERMS AND CONDITIONS

The environmental professional(s) that prepared this report has made a reasonable effort to obtain relevant information regarding *recognized environmental conditions* to exist on the Subject Property. Information provided from record data search services, interviews and historical record reviews has not been independently verified unless obvious need for independent verification was identified during the ESA investigation. A reasonable effort has been made to independently verify information if the environmental professional(s) preparing this report had actual knowledge that certain information was incorrect. Accuracy and completeness of record information varies among information sources, including governmental sources. A reasonable effort has been made to compensate for mistakes or insufficiencies in the information reviewed.

1.2.6 USER RELIANCE

The identified user of this report is Columbia Industrial Properties, LLC. No other party meets the definition of "User" without expressed written permission is given by Griggs & Maloney, Inc. and users identified herein.

1.3 SITE DESCRIPTION

1.3.1 LOCATION AND LEGAL DESCRIPTION

The Subject Property includes the southwestern portion of Maury County Tax Map 76, Parcel 80. The undeveloped Subject Property is located on the north side of Industrial Park Road. Mr. Grosko provided a copy of the legal description for the Subject Property and a copy of a survey for it. These documents are included in Appendix 1.17.4. A graphic depiction of the Subject Property location is presented in Figure 1 (Site Location Map) included in Appendix 1.17.1.

1.3.2 SITE AND VICINITY GENERAL CHARACTERISTICS

The relative surface elevations of the Subject Property are best described as generally rolling. The Subject Property comprises open grassy areas recently cut for hay and densely wooded areas. The Subject Property is located along the southern bank of Duck River. Adjacent northern property beyond Duck River includes a large, densely wooded area south of an incarceration facility. Adjacent eastern areas include UCAR's Landfill Site 1, an apparently inactive and closed landfill surrounded by chain-link fence, and wooded and grassy areas. Adjacent southern property beyond Industrial Park Road supports the Freeland Auto Recycling facility, an apparent indoor used auto parts reclamation facility. Adjacent western property supports a small facility occupied by a company that reclaims carbonaceous materials from the UCAR facility east and northeast of the Subject Property. The Subject Property is located in an area of Columbia that has been developed for industrial and institutional activities along Duck River.

Surface drainage from the Subject Property area is toward Duck River located along the northern boundary of the Subject Property.

The U.S. Geological Survey (USGS) topographic quadrangle for the Subject Property vicinity (Godwin, Tennessee) indicates that the Subject Property surface elevations are between approximately 570 to the northwest and 630 feet above mean sea level (msl).

1.3.3 CURRENT USE OF THE PROPERTY

The Subject Property is unused except for hay production and periodic harvesting.

1.3.4 DESCRIPTIONS OF STRUCTURES, ROADS, OTHER IMPROVEMENTS ON THE SITE

The Subject Property supports no buildings. A concrete slab that once supported a picnic pavilion according to Mr. Larry Lockridge, retired UCAR engineer, is located on the central portion of the Subject Property. A small concrete slab, observed electrical conduit, and utility poles on the eastern portion of the Subject Property mark the former location of a contractors' parking lot according to Mr. Lockridge. A paved road is located along the southern Subject Property boundary and extends eastward to adjacent UCAR facility areas as a gravel road. A chain link fence is located along portions of the southern Subject Property boundary. An excavated borrow area was noted on the northeastern portion of the Subject Property. Mr. Lockridge indicated that material from this borrow area was used to buildup and patch gravel road areas on the UCAR facility. The Subject Property supports no other roads or improvements. Mr. Lockridge indicated that the UCAR facility has discontinued production operations.

1.3.5 CURRENT USES OF THE ADJOINING PROPERTIES

Adjacent northern property beyond Duck River includes a large, densely wooded area south of an incarceration facility. Adjacent eastern areas include UCAR's Landfill Site 1, an apparently inactive and closed landfill surrounded by chain-link fence, and wooded and grassy areas. Adjacent southern property beyond Industrial Park Road supports the Freeland Auto Recycling facility, an apparent indoor used auto parts reclamation facility. Adjacent western property supports a small facility occupied by a company that reclaims carbonaceous materials from the UCAR facility east and northeast of the Subject Property according to Mr. Lockridge.

1.4 USER PROVIDED INFORMATION

1.4.1 ENVIRONMENTAL LIENS

The User(s) provided no information indicative of the existence of environmental liens on the Subject Property. A review of computerized records indexed by the Subject Property owner names back to 1985 at the Maury County Register of Deeds Office in Columbia on July 23, 2018, indicated no environmental liens on the Subject Property. The User provided no information indicative of an environmental lien on the Subject Property.

1.4.2 ACTIVITY AND USE LIMITATIONS

The User(s) provided no information indicative of the existence of Activity and Use Limitations (AUL) restrictions associated with the environmental condition of the Subject Property. A review of computerized records indexed by the Subject Property owner names back to 1985 at the Maury County Register of Deeds Office in Columbia on July 23, 2018, indicated no AULs.

1.4.3 SPECIALIZED KNOWLEDGE

The User(s) provided no information indicative of additional specialized knowledge of the activities, use or appurtenances on the Subject Property.

1.4.4 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

The User(s) provided no information indicative of a reduction in agreed or offered sales price or valuation related to environmental issues on or near the Subject Property.

1.4.5 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

The User(s) did not indicate awareness of commonly known or reasonably ascertainable information indicative of *recognized environmental conditions* on or near the Subject Property.

1.4.6 OBVIOUS CONTAMINATION PRESENCE OR LIKELY PRESENCE

The User(s) did not express or imply information indicative of the obvious or likely presence of contamination on or near the Subject Property.

1.4.7 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION

Maury County Tax Assessor and Register of Deeds information indicated that the Subject Property owner is GT Columbia C/O Capital Recovery Group. However, Mr. Grosko indicated that Columbia Industrial Properties, LLC has purchased the Subject Property. The owner manages the Subject Property which is not occupied.

1.4.8 REASON FOR PERFORMING PHASE I

Mr. Grosko indicated that Columbia Industrial Properties, LLC recently purchased the Subject Property. He indicated that this Phase I ESA was requested to identify recognized environmental conditions (RECs) as described under the CERCLA provisions discussed above.

1.4.9 OTHER

The User(s) did not express or imply any additional information regarding the environmental condition of the Subject Property.

1.5 RECORDS REVIEW

1.5.1 STANDARD ENVIRONMENTAL RECORD SOURCES

As part of the investigation, G&M reviewed computer search database search reports of federal and state databases containing recognized, registered regulated sites within the city, county, and/or zip code search areas. The July 16, 2018, database searches were based on a latitude/longitude estimate of the approximate Subject (or Target) Property boundaries. GeoSearch, Inc. (GeoSearch) provided the computer database search for the vicinity of the Subject Property parcels. A list of ASTM-recommended databases to be searched are described in Table 1. These databases and several others were searched as part of the GeoSearch database investigation as specified in the GeoSearch report. The GeoSearch database search report is included in Appendix 1.17.5. of this report. The database search distances were selected based on ASTM Standard E 1527-13 recommendations. The following sections present a summary of the findings of the database searches.

TABLE 1.

SEARCHED DATABASES

• NPL	National Priority List and Federal Delisted NPL
• CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
• CERCLIS-NFRAP	CERCLIS No Further Remedial Action Planned
• RCRIS	Resource Conservation and Recovery Information System
• RCRIS - TSD	Resource Conservation and Recovery Information System – Treatment Storage and Disposal Facilities
• RCRIS - COR	Resource Conservation and Recovery Information System – Corrective Action Sites (CORRACTS) and non-CORRACTS TSD facilities list
• RCRIS-GEN	Resource Conservation and Recovery Information System –Generator of Hazardous Waste
• RCRIS - NLR	Resource Conservation and Recovery Information System – No Longer Regulated Sites
• ERNS	Emergency Response Notification System
• LANDFILLS	Solid Waste Facilities List
• STATE AND TRIBAL SITES	Tennessee Division of Superfund and applicable tribal lists of regulated sites
• STATE UST	Owner/Facility Report of All Tanks Regardless of Status
• STATE LUST	Leaking registered UST list - Division of Petroleum USTs
• STATE ENGINEERING CONTROL REGISTRIES	A comprehensive and electronically published and available list of sites subject to physical site requirements based on environmental conditions identified by state environmental agencies (as available).

TABLE 1.

SEARCHED DATABASES (CONTINUED)

• INSTITUTIONAL CONTROL REGISTRIES	A comprehensive and electronically published and available list of sites subject to land use restrictions based on environmental conditions identified by state environmental agencies (as available).
• VOLUNTARY CLEANUP SITES	A comprehensive and electronically published and available list of sites subject to voluntary cleanup requirements (as available).
• BROWNFIELD SITES	A comprehensive and electronically published and available list of sites designated as "Brownfield sites" by state agencies (as available).

NPL/CERCLIS/CERC/NFRAP

National Priorities Listing (NPL) of Superfund sites is an EPA listing of uncontrolled or abandoned hazardous waste sites. The Comprehensive Environmental Response, Compensation, and Liability (Act) Information System (CERCLIS) is a database of known and suspected uncontrolled or abandoned hazardous waste sites. The CERCLA No Further Remedial Action Planned (CERC-NFRAP) database identifies CERCLA sites that have been investigated or remediated and deemed to require no further investigation or remediation.

The EPA recently replaced CERCLIS, the Comprehensive Environmental Response, Compensation, and Liability Information System with a more modern system called SEMS, Superfund Enterprise Management System. GeoSearch has recently updated their government record reports to include SEMS. EPA last updated CERCLIS November 12, 2013. The acronym "SEMS" replaces the acronym "CERCLIS" in the GeoSearch government record reports. All the records stored in CERCLIS have been moved over to SEMS. In addition, EPA has renamed their archive system to SEMS-Archive. GeoSearch reports now include both SEMS-Archive and NFRAP data.

The UCAR facility on Santa Fe Pike in Columbia is identified as a SEMSEARCH facility having Identification Number TND0004038428. G&M reviewed Tennessee Department of Environment and Conservation (TDEC) – Division of Solid Waste Management (DSWM) records for this identification number. There is no indication in these records of potential environmental impact to the Subject Property from activities at the UCAR facility. This facility was not placed on the U.S. Environmental Protection Agency (EPA) NPL. Further, the facility did not qualify for further environmental evaluation or investigation after 1981-1984 EPA and TDEC assessments and inspections.

The General Electric Company facility on Industrial Park Road (Facility Identification Number TND075470443 - apparently being the current Freeland Auto Recycling facility) and the Maury County Sanitary Landfill on North Bypass Industrial Park (Facility Identification Number TND098084683) are also identified as SEMSEARCH facilities. Neither of these facilities were placed on the NPL after evaluation or investigation after 1979-1984 EPA and TDEC assessments and inspections.

No other NFRAP, NPL or CERCLIS sites were identified as being located within the ASTM-recommended approximate minimum search radius of the Subject Property (1.0 mile and 0.5 mile, respectively).

ERNS

Emergency Response Notification System (ERNS) is a national computer database of information on the release of hazardous substances into the environment, including spill locations, substances released, and the responsible party. The UCAR facility appears in the GeoSearch report under three (3) event numbers (11073357, 1108021, and 947969). Interviews of Mr. Lockridge and Ms. Beverly Philpot of the DSWM office in Columbia and DSWM records review indicated no potential impact to the Subject Property from historical reported ERNS incidents at the UCAR facility.

RCRIS

Resource Conservation and Recovery (RCRA) Information System reports the listing of small (SQG) and large quantity generators (LQG) and treatment, storage, and disposal (TSD) facilities of hazardous wastes that are required to register their activities under RCRA. Hazardous waste SQG facilities generate 100 to 1,000 kilograms (kg) (220 to 2,200 pounds) of hazardous waste per month. Hazardous waste LQG facilities generate more than 1,000 kg of hazardous waste per month. Generators of hazardous waste in quantities of less than 100 kg per month are classified as Conditionally Exempt (CE) generators of hazardous waste.

The GeoSearch report identified GT Columbia at 791 Santa Fe Pike (the UCAR facility) as a registered CESQG RCRA hazardous waste generator (Facility Identification Number TND004038428). Incidentally, Ms. Beverly Philpot is identified as the Health, Safety and Environmental contact for the facility in these records. A review of the DSWM records for this facility number indicated no potential for impact to the Subject Property resulting from activities at the GT Columbia facility.

The adjacent southern former General Electric Company facility (current Freeland Auto Recycling facility) is identified as a registered RCRA hazardous waste generation facility. A review of the data for this facility indicated no potential impact to the Subject Property from activities at this adjacent facility with regard to hazardous waste generation. No other registered hazardous waste generators are identified as being located within the ASTM-recommended approximate minimum search distance of the Subject Property (Subject or adjacent property).

CORRACTS

The Corrective Action Report (CORRACTS) is a computerized inventory of all facilities identified by the EPA as having been subject to EPA corrective action requirements. No CORRACTS facilities were identified in the GeoSearch report as being located within the ASTM-recommended search radius of the Subject Property (one mile).

State Databases and Files Review

VOAP/VCPBF SITES

Tennessee is a "State Plan State" having authority to implement and regulate environmental conditions in lieu of the U.S. Environmental Protection Agency (USEPA) with the stipulation that state environmental regulations must be at least as stringent as USEPA requirements. The State Remediation Sites (SRS) List reviewed by GeoSearch includes sites and facilities that are or have been reviewed by the Tennessee Department of Environment and Conservation (TDEC) – State Remediation Program (SRP). The SRP manages the VOAP or Voluntary Cleanup Program/Brownfields (VCPBF) program. This program offers landowners the opportunity to work proactively with state government to address necessary cleanup of a property to return it to productive use. In return for their efforts, participants can receive a "No Further Action" letter and a release of liability for areas where investigation and cleanup is conducted. The program is open to everyone with an interest in addressing contamination at a site. The following are examples of situations where this program is currently used.

- To resolve potential liability of an innocent landowner at a contaminated site,
- To address potential liability at a site for a prospective owner,
- To establish a legal basis for enforcement of institutional controls to limit future liability at a site resulting from it progressing to uses with increased risk,
- As an alternative to receiving a unilateral order from the Commissioner to investigate and clean up an inactive hazardous substance site.

The VOAP is participating as part of Tennessee's state response program under the Small Business Liability Relief and Brownfields Revitalization Act. As a result, program participants may receive protection from intervention by U.S. EPA at eligible sites. One (1) facility, Fedders located at 1027 Industrial Park Road (Facility Identification Number SR600991), was identified as being an SRS facility within the ASTM-recommended search distance of the Subject Property (0.5-mile). Based on SRP review and granting of SRS status to this facility, there is no apparent potential for CERCLA liability to the Subject Property owner form this offsite facility. No other SRS-VOAP/VCPBF sites were identified as being within the search distance of the Subject Property.

UST/LUST

TDEC's Division of Underground Petroleum Storage Tanks (DUST) is the Tennessee regulatory agency with purview over petroleum underground storage tank (USTs). With few regulatory exceptions, no petroleum distributor can deliver fuel to a facility that is not registered with DUST. DUST oversees a release investigation and cleanup fund as part of the DUST their registration program. The fund reimburses qualified facilities for release investigations after a deductible is met much like an insurance program. DUST policy requires that two (2) criteria be met by UST facilities for fund eligibility. The two

requirements are 1) "Proper (and timely) tank registration, and 2) Proper (and timely) annual tank fee payment." Please note that a facility must be in "substantial compliance with the technical regulations" to receive fund coverage according to DUST. Therefore, DUST must approve a facility for fund coverage to be received. The fund acts as an insurance program in that certain deductibles must be met before DUST funds are activated. Further, financial culpability criteria for the facility must be met before DUST registration is valid.

The Subject Property is not identified as a registered UST or registered and reported leaking UST (LUST) facility in the GeoSearch report.

The adjacent former General Electric Company facility at Industrial Park Road (current Freeland Auto Recycling facility) is identified as a registered UST facility (Facility Identification Number 6600111) with three (3) USTs that are identified as "permanently out of use" at this offsite facility. The permanently out of use status indicates that DUST has issued a letter of no further action required to the facility after the registered USTs have been closed. Based on case closure by DUST, there is no apparent potential impact to the Subject Property from UST operations at this adjacent facility.

No other adjacent property is identified in the GeoSearch report as being a registered UST facility. No registered and reported LUST facilities were identified as being located within the ASTM-recommended search distance of 0.5-mile.

LANDFILLS

The GeoSearch search of the Tennessee Division of Solid Waste Management (DSWM) databases identified the UCAR facility (Graftech Advanced Graphite Materials, LLC) as a registered landfill facility (Facility Identification Number IDL600000047). G&M reviewed DSWM records for this facility number, interviewed Ms. Beverly Philpot at the TDEC DSWM Environmental Assistance Center (EAC) in Columbia, and interviewed Mr. Lockridge regarding the landfills at the UCAR facility. The following points of interest were noted:

- The UCAR facility began operations in 1937 on northern areas of their facility approximately 0.5-mile northeast of the Subject Property;

- Facility operations included the manufacture of carbon electrodes and other carbon products for the silicon metals industry. Calcined anthracite coal was crushed, screened and hot-blended with coal tar pitch in controlled proportions. The resulting mix was sent to a forming press (extruded or molded), cut into specific lengths, and cooled. The mixture was baked to make carbon electrodes, cathodes, and refractories;

- The facility had established industrial landfills at their property for the disposal of "inert" carbonaceous materials since 1937. The landfills were registered with the Tennessee Department of Health in 1971 with the establishment of a Tennessee regulatory agency for landfill activities;

- Up to five (5) landfill and potential landfill areas were registered throughout the period of UCAR operations including two that were never activated, Sites 4 and 5. Landfill Site 5 was designated to be on the northern portion of the Subject Property. The observed borrow area on the Subject Property appears to have been the initiation of excavation for the proposed landfill, but it never became an active landfill and reviewed maps indicate that full area excavation was not completed;

- Groundwater monitoring through sampling and laboratory analysis of samples from five (5) onsite wells including two (2) wells adjacent to Landfill Site 1 began in 1994 and the results have indicated no contamination of groundwater with concentrations of analytes above drinking water Maximum Concentration Levels (MCLs). One of the two wells at Landfill Site 1 is located between the landfill and the Subject Property;

- Groundwater flow direction from UCAR landfill areas is indicated toward Duck River rather than toward the Subject Property;

- Wastes disposed in the UCAR landfills includes carbonaceous materials, asbestos-containing materials, demolition debris, mortar, refractory materials, and "inert" production wastes; and

- Subject Property landfill inspections by DSWM have indicated no violations or release concerns.

Copies of salient documents found in the DSWM records are included in Appendix 1.17.5. Based on the reviewed material and information provided by Ms. Philpot and Mr. Lockridge, there is no apparent potential for activities on the eastern and northeastern UCAR facility areas that have impacted the Subject Property with regard to CERCLA liability.

Three (3) additional registered landfills are located with the ASTM-recommended search distance of the Subject Property according to the GeoSearch report. Each of these offsite landfills is indicated as being north of the Subject Property beyond Duck River. Duck River appears to create a hydrologic divide between the offsite landfills and the Subject Property. No other registered solid waste disposal or landfills within the ASTM-recommended search distance of one mile.

STATE HAZARDOUS WASTE SITE

The GeoSearch report identified no state hazardous waste sites as being located within the ASTM-recommended search distance of the Subject Property.

UNLOCATABLE SITES LIST

GeoSearch typically compiles a list of identified sites and facilities in the searched databases that, based on available location information, could not be adequately mapped but may be within the ASTM-recommended search distances for such facilities. This list

is entitled the Report Summary of Unlocatable Sites (Page 106 of 121) and contains seven (7) site or facility names. None of the identified seven facilities were found within an area of potential impact to the Subject Property during a vehicular reconnaissance of the Subject Property neighborhood.

The EPA summarized its policy towards owners of property containing contaminated aquifers in the Federal Register Volume 60, Page 34790 (July 3, 1995). This policy does not address the presence of contamination in the absence of groundwater influence or state or local regulatory liability. The EPA policy reads as follows:

> *This policy states the agency's position that, subject to certain conditions, where hazardous substances have come to be located on or in a property solely as the result of subsurface migration in an aquifer from a source or sources outside the property, EPA will not take enforcement actions under CERCLA, 42 U.S. C. 106 and 107, against the owner of such property to require the performance of response actions or the payment of response costs.*

It is important to note that this policy does not address contamination in the absence of groundwater or state regulatory liability.

1.5.2 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

No additional "environmental record" sources as defined by ASTM E 1527-13 were reviewed as part of this investigation because they are not reasonably ascertainable, sufficiently useful, accurate and complete in light of the objective of the records review by the environmental professional(s).

1.5.3 PHYSICAL SETTING SOURCES

G&M conducted a review of the U.S. Geological Survey (USGS) topographic maps depicting the vicinity of the Subject Property (Godwin, Tennessee) as mandated by ASTM E 1527-13. The USGS maps were dated 1901 (1:125,000 scale), 1940 (1:24,000 scale), 1941 (1:24,000 scale), 1965 (1:24,000 scale), 1988 (1:24,000 scale), and 2013 (1:24,000 scale). A copy of the 2013 Subject Property portion of these maps is presented as Figure 1 in Appendix 1.17.1. The Subject Property portion of the 1988 map was used to produce Figure 3 in Appendix 1.17.4. Copies of the Subject Property portion of the other maps can also be found in Appendix 1.17.4.

These maps indicated two structures on the Subject Property that appeared after the 1965 map and before the 1988 map. These structures appear to be the picnic pavilion and a guard shack at a contractors' parking lot as identified by Mr. Lockridge. A road being Industrial Park Road to the south was under construction in the 1965 map. The existing paved and gravel road on the Subject Property and adjacent eastern property areas appears in the 1965 map. Mr. Lockridge indicated that this road was used by contractors for entry into the UCAR facility and that UCAR provided shuttle services for the contractors from a parking lot once located on the eastern portion of the Subject Property. No other structures and no surface water bodies on the Subject Property throughout the

period of coverage. No additional uses of the Subject or surrounding adjacent properties were indicated in the historical map review.

No additional listed discretionary or non-standard physical setting sources as identified in ASTM E 1527-13 were reviewed as part of this investigation because they were deemed not reasonably ascertainable, sufficiently useful by the environmental professional(s).

1.5.4 HISTORICAL SOURCES REVIEWED

G&M reviewed the historical chain of ownership of the Subject Property back to 1929 at the Maury County Register of Deeds Office in Columbia, Tennessee on July 23 and 27, 2018. The ownership review was conducted to identify Subject Property ownership indicative of uses of environmental concern. The ownership review was not conducted to identify past or existing liens on the Subject Property associated with any encumbrances other than those associated with environmental issues, therefore this historical chain of ownership review does not constitute a "title search". G&M always recommends a lien search by a competent title search company or attorney prior to the acquisition of real estate. The deed records review indicated that the Subject Property was owned by private individuals and the City of Columbia prior to ownership by UCAR Carbon Company and its successors. No additional Subject Property uses were indicated in the chain of ownership review. An abstract of the reviewed historical Subject Property ownership records is presented in Table 2.

A July 23, 2018, review of Maury County Tax Assessor records for the parcel that includes the acre Subject Property indicated that it is classified for industrial use. The tax records indicated no buildings specifically on the Subject Property. The tax records indicated no uses of the Subject Property. No other pertinent information for the Subject Property was noted in the reviewed tax assessor records for the Subject Property.

G&M conducted a computer search for lien and activities and use limitations (AULs) records for the Subject Property at the Maury County Register of Deeds Office in Columbia on July 23, 2018. The search results indicated no recorded "environmental liens" or AULs on the Subject Property back to 1985, a time before state agencies implemented a policy of issuing AULs and environmental liens for the presence of recognized environmental conditions.

A review of the U.S. Geological Survey (USGS) topographic quadrangle maps review description in Section 1.5.3 above describe the historical use indications from this source.

Historical fire insurance maps were prepared for some urban areas of the U.S. from the mid-1860s to the mid-1960s. These maps can show property appurtenances that may be of environmental significance. A response from GeoSearch for historical fire insurance map coverage for the Subject Property indicated that there is no historical fire insurance map coverage for this area of Maury County.

TABLE 2. HISTORICAL OWNERSHIP SUMMARY

COLUMBIA INDUSTRIAL PROPERTIES, LLC PROPERTY
INDUSTRIAL PARK ROAD
COLUMBIA, TENNESSEE

DEED BOOK	PAGE NO.	DATE	OWNERSHIP TRANSFERRED FROM	OWNERSHIP TRANSFERRED TO
2458	1294	9/27/2017	Graftech Advanced Graphite Materials, LLC	GT Columbia, LLC
2394	894	9/30/2016	Graphtech International Holdings, Inc.	Graftech Advanced Graphite Materials, LLC
805	721	1/1/1989	Union Carbide Corporation	UCAR Carbon Company, Inc.
843	538	7/12/1990	East Tennessee Natural Gas Company	UCAR Carbon Company, Inc.
725	481	2/13/1985	Travis Sargent Patterson and wife, Shirley Patterson	Union Carbide Corporation
579	776	7/16/1975	The City of Columbia	Union Carbide Corporation
401	489	7/23/1962	Mrs. Frances B. Pipkin, widow	Union Carbide Corporation
297	146	11/6/1952	W. P. Morgan and wife, Sarah B. Morgan	Travis Sargent Patterson and wife
519	694	5/22/1970	Travis Sargent Patterson, et al, Heirs of Travis Patterson	Travis Sargent Patterson and wife
633	665	9/14/1978	Johnny Dorris Patterson and wife, Connie Patterson	Travis Sargent Patterson and wife
409	328	2/15/1963	Curtis Lentz and wife, Edna Lentz	The City of Columbia
275	85	4/23/1970	Mrs. Naomi Estes Haston	Homer Pipkin and wife, Frances B. Pipkin
519	702	5/22/970	Travis Sargent Patterson, et al, Heirs of Travis Patterson	Johnny Dorris Patterson
140	612	9/5/1917	Nancy L. Morgan, widow	W. P. Morgan and wife
275	187	4/13/1953	Mrs. Cora Leonhardt, widow	Curtis Lentz
337	83	12/16/1957	Homer F. Pipkin	Curtis Lentz
303	320	4/20/1954	Gordon Pipkin	Curtis Lentz
259	355	1/28/1947	C. W. Brewer and wife Dena Brewer	Mary Louise Pipkin
159	107	12/21/1921	A. L. Haston and wife, Naomi Haston	D. Coley Gardner and wife
157	148	10/9/1920	T. G. Letzing and wife, Emma Letzing	Frank A. Leonhardt
145	612	12/3/1918	A. D. Frierson and wife, L. S. Frierson	F. T. Leonhardt
259	355	1/28/1947	C. W. Brewer and wife, Dena Brewer	Mrs. Mary Louise Pipkin
243	186	12/2/1944	L. L. Prentice and wife, Annie B. Prentice	C. W. Brewer and wife, Bena Brewer
197	214	1/17/1936	Maury D. Armstrong and wife, Emma McFall Armstrong	L. L. Prentice and wife, Annie B. Prentice

G&M conducted an onsite interview of Mr. Larry Lockridge, engineer for UCAR between 1980 and 2007 (retirement), regarding Subject Property history and uses. G&M and Mr. Lockridge also reviewed the historical aerial photographs included in Appendix 1.17.4 together onsite during the site reconnaissance on July 23, 2018. Mr. Lockridge indicated that a picnic pavilion was supported by a slab noted on the northern portion of the Subject Property. Mr. Lockridge indicated that a contractors' parking lot including a guard shack and observed utility poles was located on the eastern portion of the Subject Property. Mr. Lockridge indicated that an observed borrow area on the northern portion of the Subject Property was used to gather material used in repairing gravel roads and filling small areas on the UCAR facility property. He indicated that the Subject Property has most recently been used for hay production. Hay bales were noted in open grassy areas on the Subject Property. Mr. Lockridge indicated no additional uses of the Subject Property.

G&M and Mr. Lockridge reviewed historical aerial photographs dated 1938, 1949, 1958, 1968, 1974, 1981, 1987, 1998, 2004, 2006, 2007, 2008, 2010, 2012, 2014, 2015, and 2016. These photos depicted no development or roads on the Subject Property through 1958. They depicted the presence of Industrial Park Road and the current gravel/paved road on the Subject Property in 1968 and still, no buildings. The condition of the Subject Property remained unchanged until the 1981 photo which depicts the presence of the picnic area and pavilion, the northern borrow area and the contractors' parking lot on the eastern portion of the Subject Property. The borrow area appeared to be more active in the 1987 photo. By 1998 the Subject Property parking lot and picnic area were in a state of neglect. The 2004 – 2016 presented no significant additional information for the Subject Property except that the largest portion of borrow from the northern portion of the Subject Property appeared to have occurred by 2010.

The adjacent eastern landfill area does not appear to be in use until the 1974 photograph and the former General Electric facility first appears in that same photo. Adjacent western areas support no development until the 1981 photograph. No additional uses of the Subject Property or surrounding adjacent properties were indicated in the historical aerial photograph review.

Mr. Grosko provided for review a copy of a Phase I ESA report prepared by AEI Consultants of Boston, Massachusetts dated July 18, 2017, that covered the entire UCAR property. The 2017 AEI Phase I ESA report indicated that landfill activities began at Landfill Site 1 adjacent to the Subject Property in the 1906s. The 2017 AEI Phase I ESA report provided no significant additional information related to the Subject Property.

1.5.5 CHRONOLOGICAL HISTORICAL USE INFORMATION ON THE PROPERTY

The Subject Property supported no roads until the 1960s. A picnic pavilion and contractors' parking lot were located on the central and eastern portions of the Subject Property from circa the 1970s to circa 1998. A borrow area once intended as a potential landfill site but never completed or used was located on the northern portion of the Subject Property from circa 1981 to present. The Subject Property has most recently been used for hay production and harvesting. No other uses of the Subject Property were identified.

1.5.6 HISTORICAL USE INFORMATION ON ADJOINING PROPERTIES SUMMARY

G&M conducted interviews, reviewed historical reports and historical aerial photographs and USGS topographic maps for the vicinity of the Subject Property as described above and reviewed site and surrounding adjacent property appurtenances from the Subject Property on July 23, 2018. These sources indicated no additional uses of surrounding adjacent properties of apparent environmental significance.

1.6 SITE RECONNAISSANCE

Kerry Given, G&M Senior Environmental Scientist, conducted a peripatetic vehicular and walking reconnaissance of the Subject Property with Mr. Lockridge and a vehicular reconnaissance of paved public thoroughfares in the area on July 23, 2018. The purpose of the reconnaissance was to identify visible surface evidence of Subject and adjacent property use and activities constituting environmental conditions of concern (*recognized environmental conditions*) on the Subject Property. The weather at the time of the reconnaissance included generally mostly cloudy skies and a temperature of approximately 85º Fahrenheit.

1.6.1 METHODOLOGY AND LIMITING CONDITIONS

G&M conducted a peripatetic walking and driving visual reconnaissance of open areas of the Subject Property and visually limited reviews of densely wooded boundary areas. The Subject Property comprises open, grassy areas and dense vegetation areas. No limiting conditions were apparent during this investigation with the exception of dense vegetation that obscured Subject Property surfaces in some areas.

1.6.2 GENERAL SITE SETTING

The irregularly shaped Subject Property on the southern bank of Duck River is located in an area of Columbia that has been developed for industrial and institutional uses. Surrounding property uses are described above. No additional or previous adjacent or surrounding property uses were noted. No surface water bodies were noted on the Subject Property. The topography of the Subject Property vicinity includes generally slightly rolling relative surface elevations.

1.6.2.1 Current and Past Use of Property

The Subject Property is currently used for hay production and harvesting. Historically, the Subject Property has been used as a picnic area, a borrow area for soil and rock, and a parking lot had been located on the eastern portion of the Subject Property.

1.6.2.2 Current and Past Use of Adjoining Properties

Adjacent northern property beyond Duck River includes a large, densely wooded area south of a Maury County-operated incarceration facility. Adjacent eastern areas include UCAR's Landfill Site 1, an apparently inactive and closed landfill surrounded by chain-link fence, and wooded and grassy areas. Adjacent southern

property beyond Industrial Park Road supports the Freeland Auto Recycling facility, an apparent indoor used auto parts reclamation facility, and formerly a heating and air conditioning manufacturing facility (General Electric Company). Adjacent western property supports a small facility occupied by a company that reclaims carbonaceous materials from the UCAR facility east and northeast of the Subject Property. No other historical uses of surrounding adjacent properties were identified.

1.6.2.3 Current and Past Uses in Surrounding Area

The Subject Property is located in an industrial park located on both sides of Duck River. The river appears to create a hydrologic divide between northern areas and the Subject Property. Fedders Corporation, a manufacturer of heating and air conditioning equipment and located west of the Subject Property, appears to have been similar to the former General Electric facility south of the Subject Property. No additional current or past uses of surrounding area properties were identified.

1.6.2.4 Observed Geologic, Hydrogeologic, Hydrologic, and Topographic Conditions

Surface drainage from the Subject Property area is toward Duck River located along the northern boundary of the Subject Property according to USGS topographic map reviews. Reviews of DSWM records for the UCAR facility and the AEI Consultants 2017 Phase I ESA report were in agreement with the flow direction as indicated on the topographic maps for the Subject Property and UCAR facility areas. A review of the depicted surface on the USGS topographic map for the Subject Property vicinity and surface observations in the vicinity indicated that regional groundwater flow is likely northward at the Subject Property and northward, northwestward and westward toward Duck River on the UCAR facility area. Groundwater flow direction is expected to be in the same general direction as surface flow, but subsurface features (karst geology typical in the area) can alter the anticipated flow direction. The topographic map review for the vicinity of the Subject Property and site surface conditions indicate that the Subject Property does not receive significant stormwater runoff from any adjacent property with regard to CERCLA.

1.6.2.5 General Description of Structures

The Subject Property apparently supports no structures other than the two observed concrete slabs on grade.

1.6.2.6 Roads

The Subject Property supports a paved and gravel road located on southern areas that leads to adjacent western property, to adjacent eastern property, and to Industrial Park Road to the south. A locked gate is located at the Subject Property entrance from Industrial Park Road. The Subject Property supports no other roads or improvements.

1.6.2.7 Potable Water Supply

The municipal potable water supply system is known to be located within the Subject Property area. But, there are no buildings on the Subject Property to connect to the system.

1.6.2.8 Sewage Disposal System

The municipal sanitary sewer system does not apparently extend to the Subject Property area. The Subject Property supports no structures to connect to the municipal sanitary sewer system and no sanitary sewage is generated on the Subject Property.

1.6.3 INTERIOR AND EXTERIOR OBSERVATIONS

1.6.3.1 Hazardous Substances and Petroleum Products Found in Connection with Identified Current Uses of the Property

Other than the presence of a pole-mounted electrical transformer noted on the eastern portion of the Subject Property, no surface indications of the presence of additional hazardous substances or petroleum products associated with current uses of the Subject Property were noted on the Subject Property.

1.6.3.2 Hazardous Substances and Petroleum Products Found in Connection with Identified Past Uses of the Property

No surface indications of the past presence of areas of hazardous substances or petroleum products associated with past uses of the Subject Property were noted during the site reconnaissance. No surface indications of the presence of buried waste were noted on the Subject Property.

1.6.3.3 Storage Tanks

No aboveground storage tanks (ASTs) or surface fixtures typically associated with underground storage tanks (USTs) such as dispensers, fill ports, or vent pipes were noted on the Subject Property. Mr. Lockridge indicated that there have been no USTs or ASTs on the Subject Property.

1.6.3.4 Odors

No unusual odors were noted on or near the Subject Property.

1.6.3.5 Pools of Liquid

No pools of liquid were noted on the Subject Property.

1.6.3.6 Drums, Containers, and Sacks of Chemicals

No containers including drums, totes, or other rigid containers with capacities greater than five gallons or sacks of chemicals with contents were noted on the Subject or surrounding adjacent properties.

1.6.3.7 PCB's (Polychlorinated Biphenyls)

The U.S. Environmental Protection Agency (EPA) has identified polychlorinated biphenyls (PCBs) as suspected human carcinogens. PCBs were found in dielectric fluid in many electrical components and equipment manufactured prior to 1979. Electrical devices, which should be suspected of containing PCBs, include electrical power transformers, capacitors, and ballasts. Federal regulations require that electrical transformers that have not been tested previously and were manufactured before July 2, 1979 must be assumed to contain between 50 and 500 parts per million (ppm) PCBs. Such transformers are classified as PCB-contaminated. Electrical transformers containing dielectric fluid with greater than 500 ppm PCB are classified as PCB-containing. Those with less than 50 ppm PCB fluids are considered "non-PCB". Federal regulations require the owner of PCB-containing or PCB-contaminated equipment to cleanup releases from such equipment.

One (1) pole-mounted electrical transformer was noted in a densely vegetated area on the eastern portion of the Subject Property. The transformer was apparently once associated with a guard shack and parking lot lights in that area associated with a contractors' parking lot. The observed transformer is likely a part of the Subject Property ownership. No labelling indicative of PCB content was noted on the observed transformer. No surface evidence of apparent release from the transformer was noted.

No other suspect PCB-containing or PCB-contaminated articles were noted on the Subject Property.

1.6.4 INTERIOR OBSERVATIONS

1.6.4.1 Heating and Cooling

The Subject Property supports no buildings to heat or cool.

1.6.4.2 Stains or Corrosion

No environmentally significant surface stains or surface indications of corrosion were noted on the Subject Property.

1.6.4.3 Drains and Sumps

No environmentally significant drains or sumps were noted on the Subject Property.

1.6.5 EXTERIOR OBSERVATIONS

1.6.5.1 Pits, Ponds, and Lagoons

An excavated pit being a borrow area as described by Mr. Lockridge was noted on the northern portion of the Subject Property. No other pits or ponds or lagoons were noted on the Subject Property. No environmentally significant pits, ponds or lagoons within the scope of CERCLA concern for the Subject Property were noted on adjacent or nearby properties.

1.6.5.2 Stained Soil or Pavement

No stained surface soil or stained pavement surfaces were noted on the Subject Property.

1.6.5.3 Stressed Vegetation

No stressed vegetation was noted on or near the Subject Property.

1.6.5.4 Solid Waste

No surface indications of the presence of buried waste were noted during the site reconnaissance.

1.6.5.5 Wastewater

No process wastewater operations are or apparently have been conducted on the Subject Property.

1.6.5.6 Wells

No groundwater wells were noted on the Subject Property. Mr. Lockridge indicated that there are no groundwater wells on the Subject Property to his knowledge.

1.6.5.7 Septic Systems

No evidence of the presence or former presence of septic systems was noted on the Subject Property.

1.7 INTERVIEWS

1.7.1 INTERVIEW WITH OWNER

Mr. Grosko identified Mr. Lockridge as a Subject Property representative with significant knowledge of historical Subject Property activities and use. G&M interviewed Mr. Lockridge during the site reconnaissance on July 23, 2018.

1.7.2 INTERVIEW WITH SITE MANAGER

The owner manages the Subject Property.

1.7.3 INTERVIEWS WITH OCCUPANTS

The Subject Property is unoccupied.

1.7.4 INTERVIEWS WITH LOCAL GOVERNMENT OFFICIALS

G&M conducted an in person interview of Ms. Beverly Philpot, TDEC – DSWM, at the Columbia TDEC Environmental Assistance Center on July 23, 2018. No information gathered in that interview indicated potential for the Subject Property to comprise RECs related to activities and uses of the Subject Property or from activities and uses of surrounding adjacent properties.

Based on the identified current and historical uses of the Subject Property, the records reviews and interviews as described herein and the absence of activities that require additional governmental permit application related to environmental issues, no local government officials were interviewed for this investigation. G&M has found in previous interviews that the government officials refer us to the public records described herein for the Subject Property, which were reviewed.

1.7.5 INTERVIEWS WITH OTHERS

No other interviews were conducted as part of this investigation.

1.8 FINDINGS WITH OPINIONS

As requested by Mr. Tom Grosko, representing the Columbia Industrial Properties, LLC, Griggs & Maloney, Inc. (G&M) conducted an All Appropriate Inquiry (AAI) of a 46.59-acre property located on the north side of Industrial Park Road in Columbia, Maury County, Tennessee (the Subject Property). Mr. Grosko indicated that Columbia Industrial Properties, LLC has recently purchased the Subject Property. The Subject Property is the southwestern portion of the Union Carbide corporation/UCAR Carbon/Graftech approximately 285-acre facility property which has a street address of 791 Santa Fe Pike. The Subject Property comprises a portion of Maury County Tax Assessor Map 76, Parcel 80. The recording of the deed of off-conveyance of the Subject Property from the larger parcel had apparently not been recorded at the time of this investigation. Therefore, the owner of the Subject Property of record is GT Columbia c/o Capital Recovery Group.

The Subject Property supports no buildings and is currently only used for hay production. Former uses of the Subject Property include an area once used for employee picnic, a borrow area used to gather material to fill/patch roads and washouts on the rest of the facility, and an area once used as a contractors' parking lot. A concrete slab that once supported a picnic pavilion is located on the north-central portion of the Subject Property. A small slab, electrical conduit,

utility poles and a pole-mounted electrical transformer are located on the southeastern portion of the Subject Property. The Subject Property has had no other uses.

Duck River and undeveloped wooded areas beyond are located along the northern boundary of the Subject Property. A landfill associated with the UCAR Carbon facility and undeveloped areas are located on adjacent eastern property. Industrial Park Road and the Freeland Auto Recycling facility beyond are located south and southwest of the Subject Property. A facility occupied by a company that reclaims carbonaceous materials from the UCAR Carbon facility area and undeveloped areas are located on adjacent western property.

Findings:

This AAI has resulted in findings for the Subject Property as including the following:

- Known or Suspect *Recognized Environmental Conditions* (RECs) – The observed pole-mounted electrical transformer on the Subject Property appears to be part of the real property owned by the Subject Property owner and may contain concentrations of polychlorinated biphenyls (PCBs). The presence of the electrical transformer on the Subject Property and its ownership by the Subject Property owner is considered a REC. No labelling regarding PCB content of the Subject Property transformer were noted. The observed transformer is no longer active and is apparently disconnected from active lines. We recommend that the observed transformer and any contents be evaluated for PCB content and/or removed from the Subject Property for offsite reclamation or disposal. Documentation of the final disposition of the transformer should be kept on file by the owner. No other RECs were noted on the Subject Property.

- Controlled RECs – None.

- Historical RECs – None.

De Minimis Conditions which generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies – None.

1.9 OPINION REGARDING ADDITIONAL INVESTIGATIONS

This assessment has revealed no apparent recognized environmental conditions in connection with the Subject Property, which are of sufficient concern to warrant a Phase II investigation or further action at this time.

1.10 DATA GAPS

No significant data gaps were apparent at the conclusion of this investigation.

1.11 CONCLUSIONS

This assessment has revealed no apparent *recognized environmental conditions* in connection with the Subject Property, which are of sufficient concern to warrant a Phase II investigation or further action at this time with the exception of the observed transformer.

1.12 LIMITING CONDITIONS/DEVIATIONS

No limiting conditions or deviations from the ASTM Standard E 1527-13 were identified during this investigation other than some areas of the Subject Property that were densely vegetated preventing direct visual review. However, as described in the Standard, this was not an exhaustive investigation of the environmental condition of the Subject Property (Section 4.5.2.).

1.13 ENVIRONMENTAL PROFESSIONAL STATEMENT

Kerry Given, G&M Senior Environmental Scientist, has met the definition of environmental professional under ASTM E 1527-13 Appendix X2.1.1 (2) (iii) and (iv). Kerry Given received a Bachelor of Science (B.S.) degree from Western Kentucky University (1991) and has been a Registered Environmental Property Assessor (REPA) with the National Registry of Environmental Professionals and a Certified Environmental Inspector (CEI) with the Environmental Assessment Association. Given is member of the ASTM and its Committee E-50 on environmental assessments and Committee E-50.02 on Commercial Property Transactions, and a certified AHERA asbestos inspector/ management planner and project monitor. He has more than twenty (20) years' experience in industrial and environmental consulting. Based on these qualifications, Mr. Given is considered to be an "Environmental Professional" under 40 CFR 312 (Federal Register/Vol. 70, No. 210/Tuesday, November 1, 2005, Rules and Regulations).

Steve Maloney, G&M Principal and Biologist, has met the definition of environmental professional under ASTM E 1527-13 Appendix X2.1.1 (2) (iii) and (iv). Mr. Maloney received B.S. and M.S. degrees in Biology from Middle Tennessee State University (1971 and 1974), has been a CEI, and a Certified Hazardous Materials Manager (CHMM). Mr. Maloney also has over forty (40) years' experience in the environmental consulting field. Mr. Maloney's specialties include performance of environmental site assessments, hazardous waste management, contaminated site investigation/remediation and regulatory compliance issues. Based on these qualifications, Mr. Maloney is considered to be an "Environmental Professional" under 40 CFR 312 (Federal Register/Vol. 70, No. 210/Tuesday, November 1, 2005, Rules and Regulations).

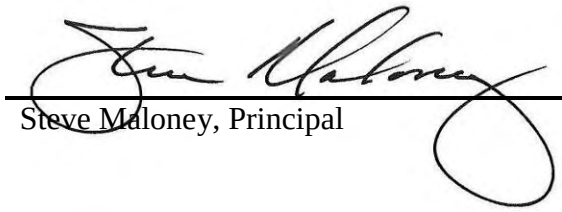
1.14 SIGNATURES

ASSESSOR:



Kerry Given, Senior Environmental Scientist — July 27, 2018 (Date)

REVIEWER:



Steve Maloney, Principal — July 27, 2018 (Date)

1.15 ADDITIONAL SERVICES

No additional services were performed by G&M prior to July 27, 2018, for the user with regard to the Subject Property.

1.16 REFERENCES

G&M can provide references upon request. G&M has relied upon reference materials and records as described herein.

1.17 APPENDICES

1.17.1 SITE LOCATION (VICINITY) MAP (FIGURE 1)

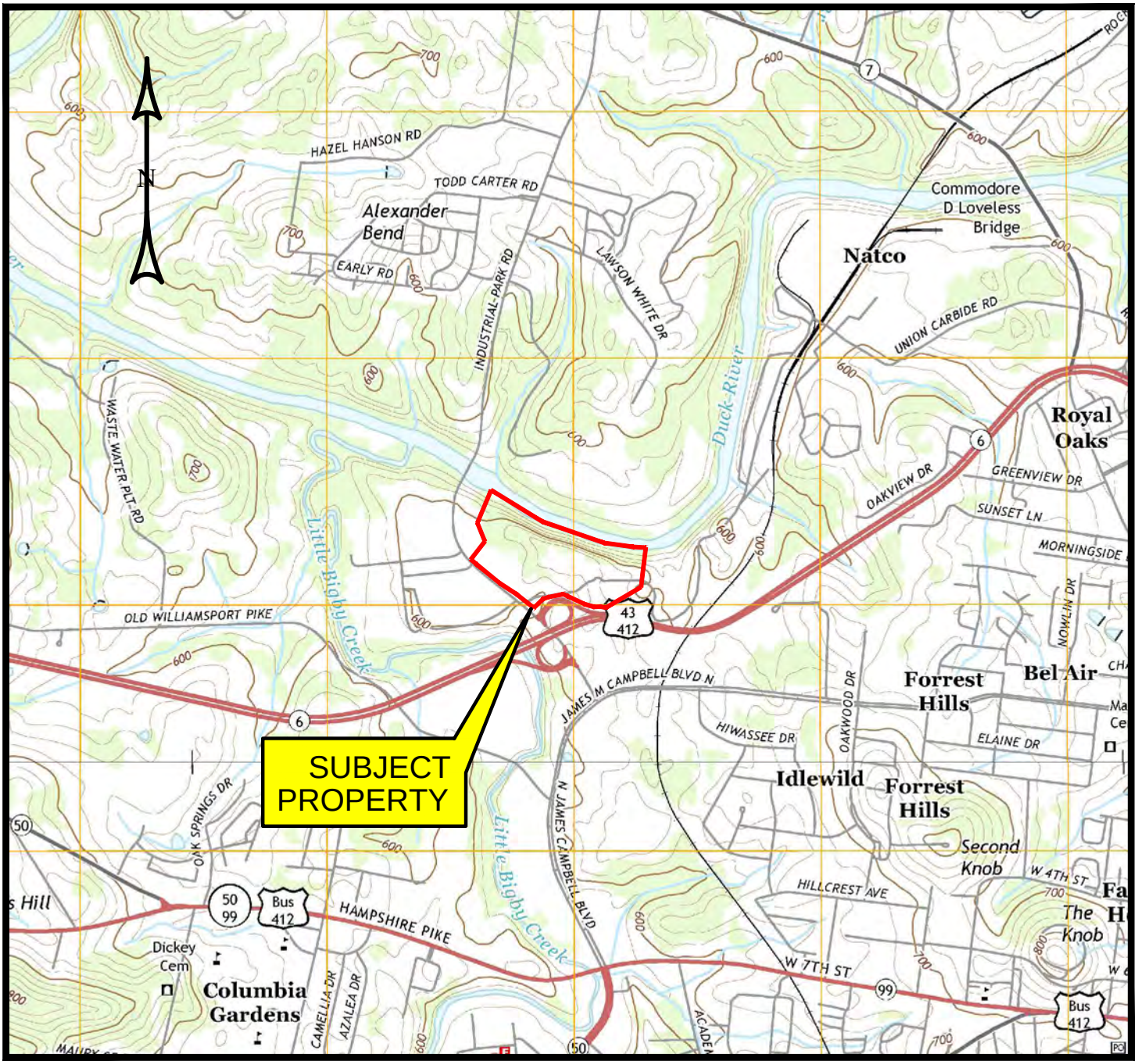


Figure 1
Site Location Map

All Appropriate Inquiry
Columbia Industrial Properties, LLC Property
Industrial Park Road
Columbia, Tennessee

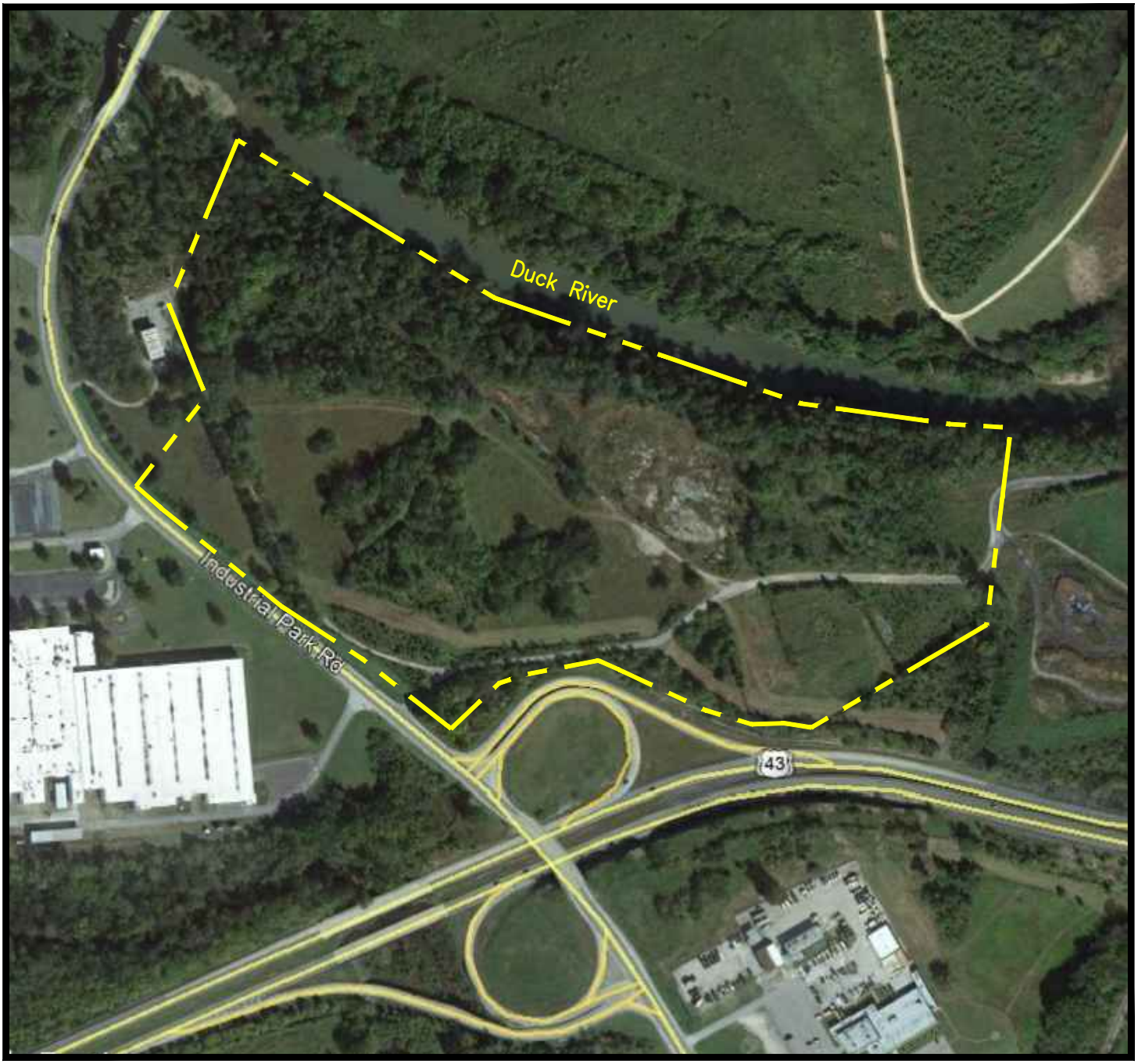
Project No. 1309-01 July 2018

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GRIGGS & MALONEY
INCORPORATED
Engineering & Environmental Consulting
P.O. BOX 2968, MURFREESBORO, TN 37133-2968
(615) 895-8221 * FAX (615) 895-0632

FILE NAME: L: \Enviro\Active\1309-01\Drawings\Fig 1 Location and 3 Topographic.dwg

1.17.2 SITE DETAIL MAP (FIGURE 2)



200 0 200 400 600

SCALE IN FEET

N

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INCORPORATED
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P.O. BOX 2968, MURFREESBORO, TN 37133-2968
(615) 895-8221 * FAX (615) 895-0632

FILE NAME: L: \Enviro\Active\1309-01\Drawings\Fig 2 Site Detail Map.dwg

Figure 2
Site Detail Map

All Appropriate Inquiry
Columbia Industrial Properties, LLC Property
Industrial Park Road
Columbia, Tennessee

Project No. 1309-01 July 2018

1.17.3 SITE PHOTOGRAPHS



Picture 1 – This is a generally westward view along the road leading into the Subject Property from adjacent eastern UCAR facility areas. Note the adjacent densely vegetated areas.



Picture 2 – This is a generally southward view of a typical open, grassy area on the Subject Property. Note the lamp post to the left in this view of the former contractors' parking lot area.



Picture 3 – This is a generally northward view of the excavated borrow area noted on the northern portion of the Subject Property.



Picture 4 – This is generally northwestward view of the gravel road adjacent to the borrow area and open fields and densely vegetated areas typical of the Subject Property.



Picture 5 – This is a view of the observed concrete slab that once supported a picnic pavilion according to Mr. Lockridge.



Picture 6 – This is a generally eastward view along a maintained natural gas underground pipeline area on the southern portion of the Subject Property.

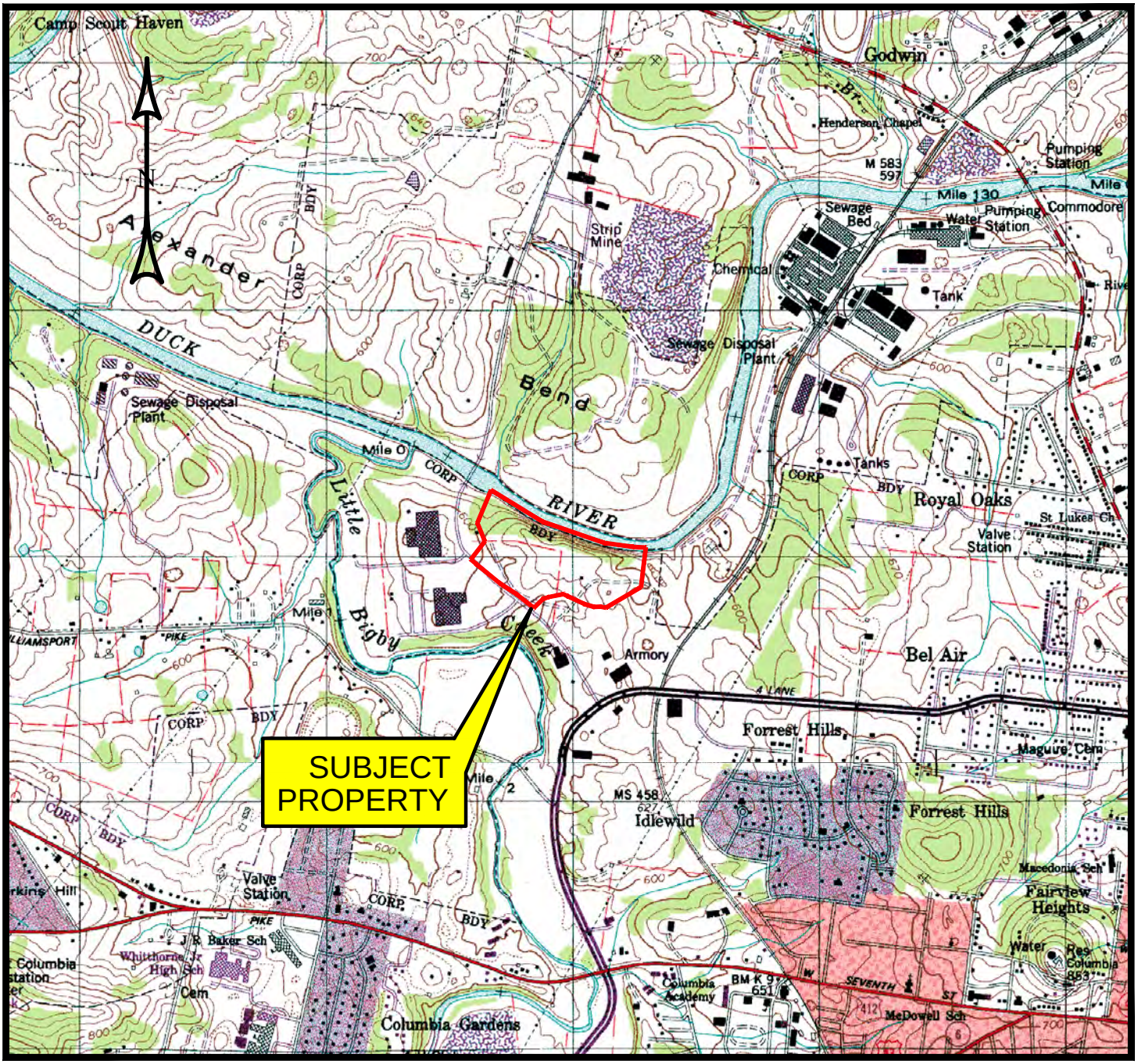


Picture 7 – This is a generally southward view of the paved and gated access area from Industrial Park Road (background) to the Subject Property (foreground).



Picture 8 – This is an eastward view of utility poles observed in a densely vegetated area on the eastern portion of the Subject Property, one of which supports a potentially PCB electrical transformer.

1.17.4 HISTORICAL RESEARCH DOCUMENTATION



Taken from: U.S.G.S.
7.5 Minute Series (Topographic)
Godwin and Columbia Quadrangles
1965, Photorevised 1988 and 1965, Photorevised 1989

GRIGGS & MALONEY
INCORPORATED
Engineering & Environmental Consulting
P.O. BOX 2968, MURFREESBORO, TN 37133-2968
(615) 895-8221 * FAX (615) 895-0632

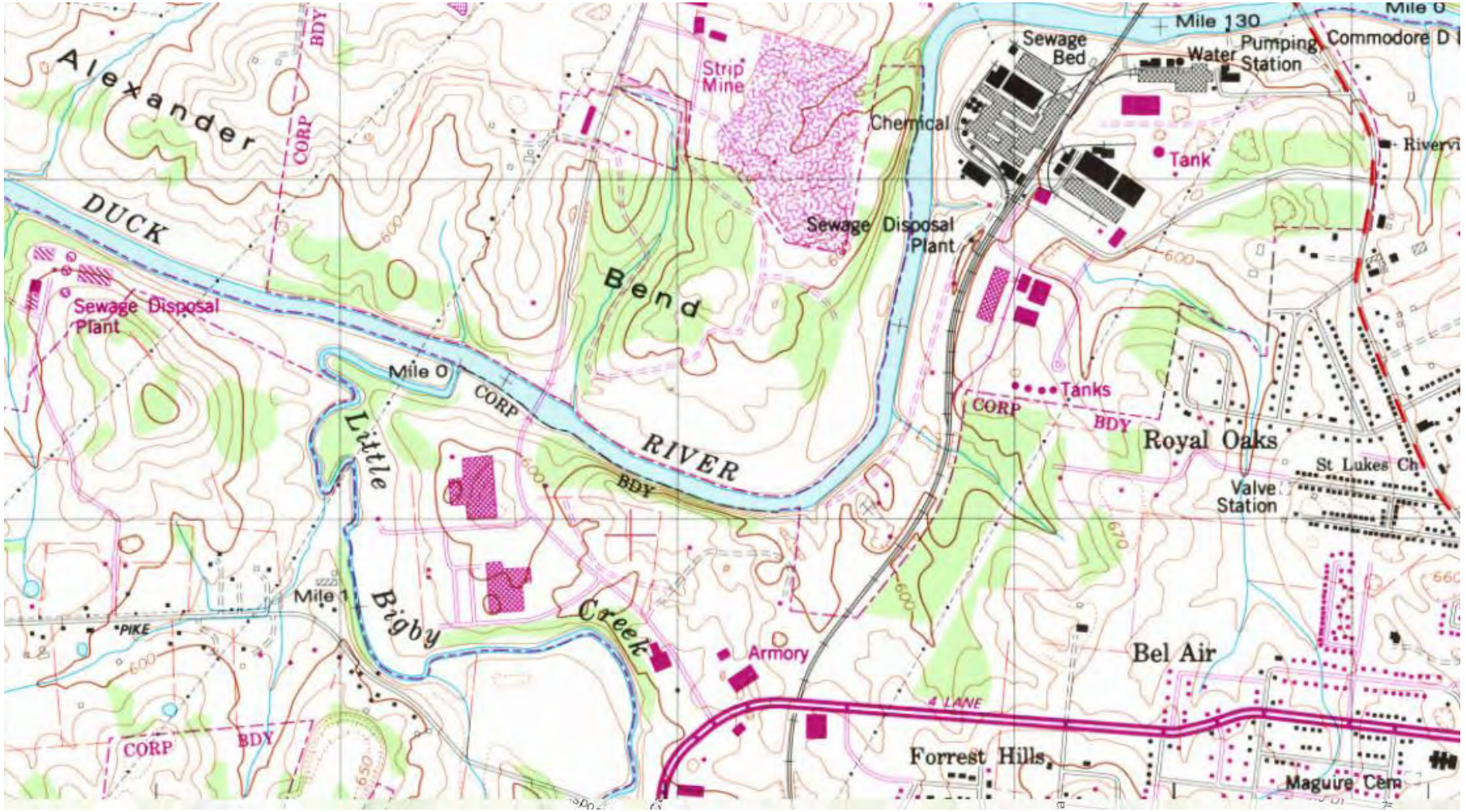
FILE NAME: L: \Enviro\Active\1309-01\Drawings\Fig 1 Location and 3 Topographic.dwg

Figure 3
Area Topographic Map

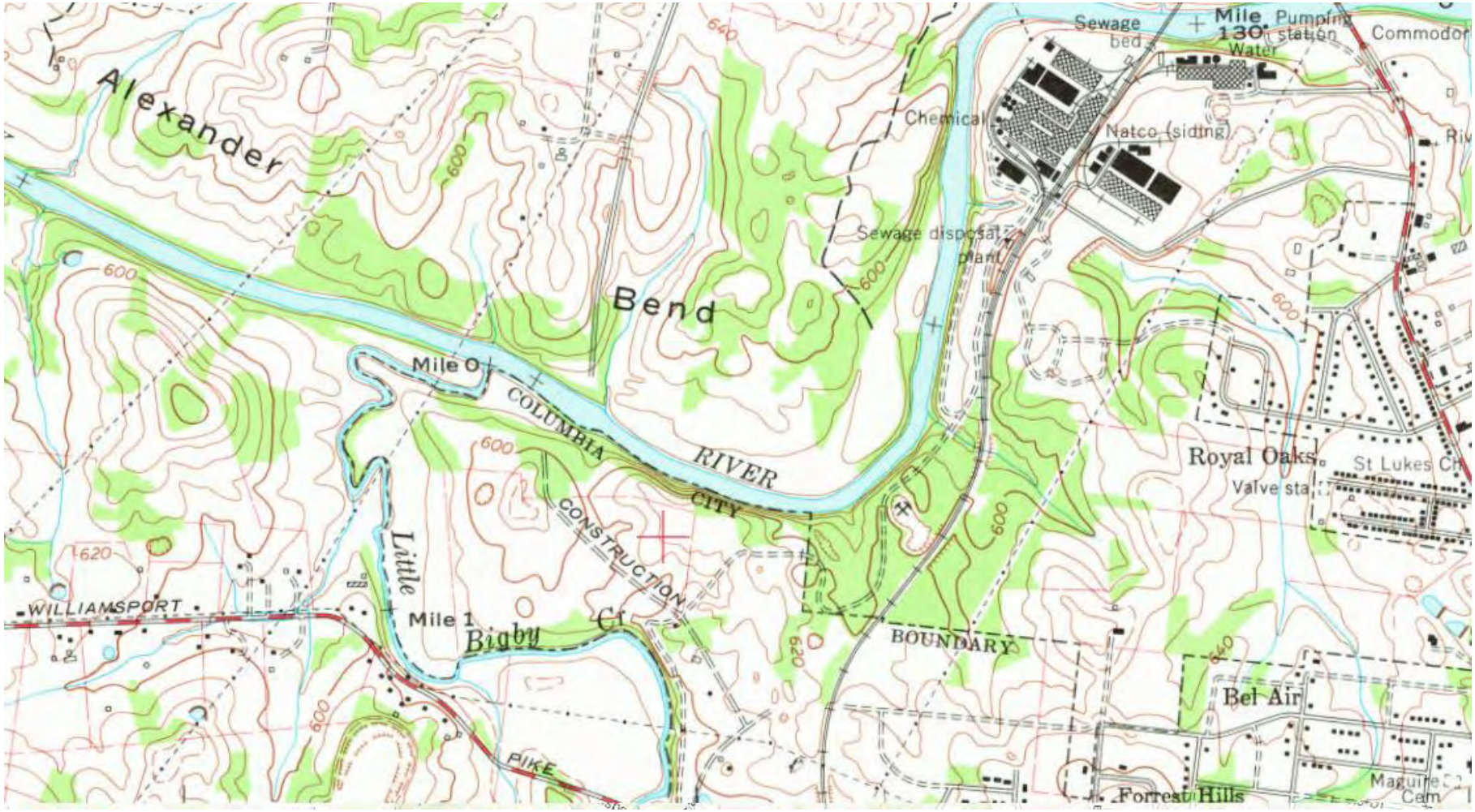
All Appropriate Inquiry
Columbia Industrial Properties, LLC Property
Industrial Park Road
Columbia, Tennessee

Project No. 1309-01 July 2018

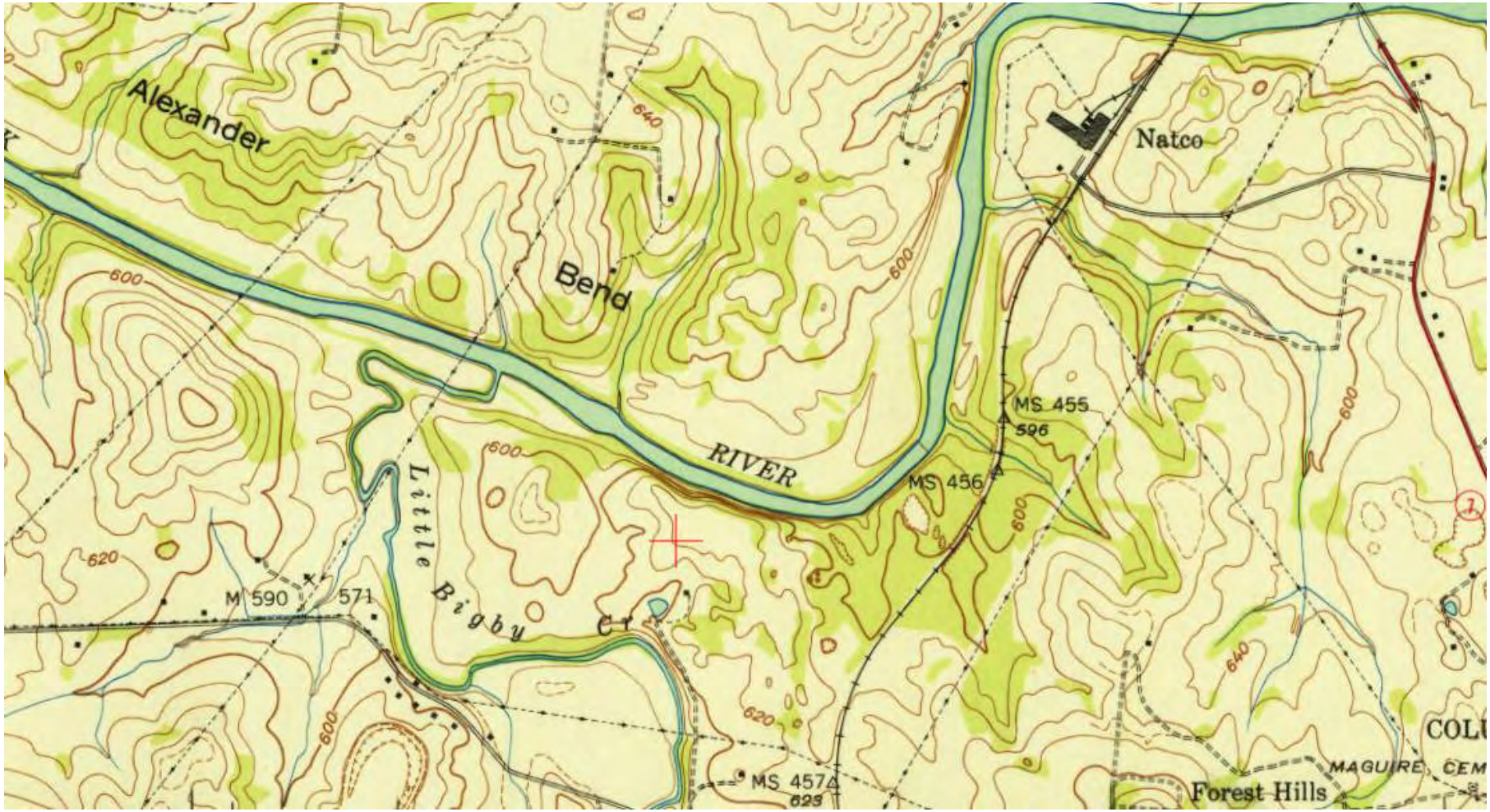
© 2018 Griggs & Maloney, Inc.



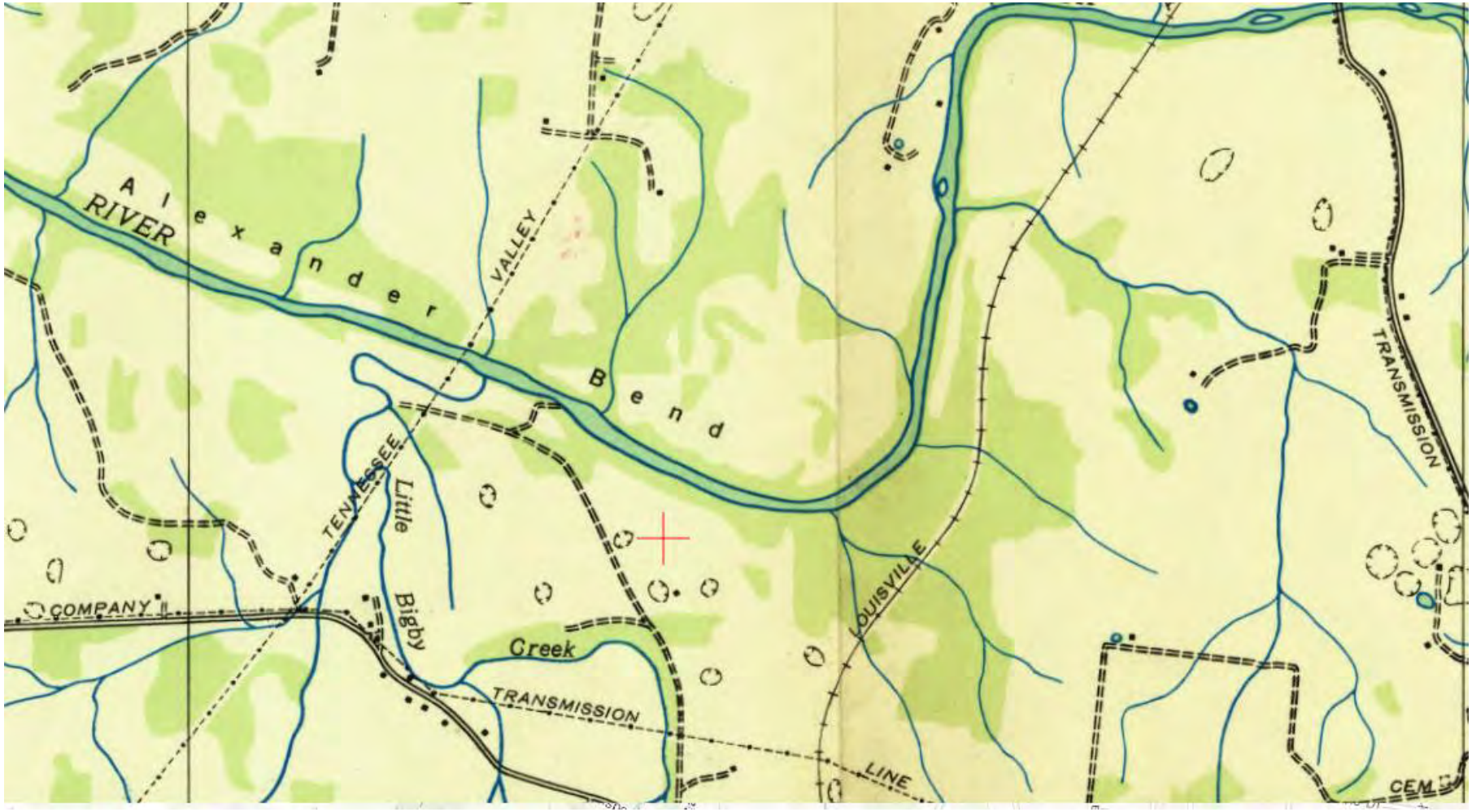
USGS Topographic Map – Godwin, TN (1988) Scale 1:24,000



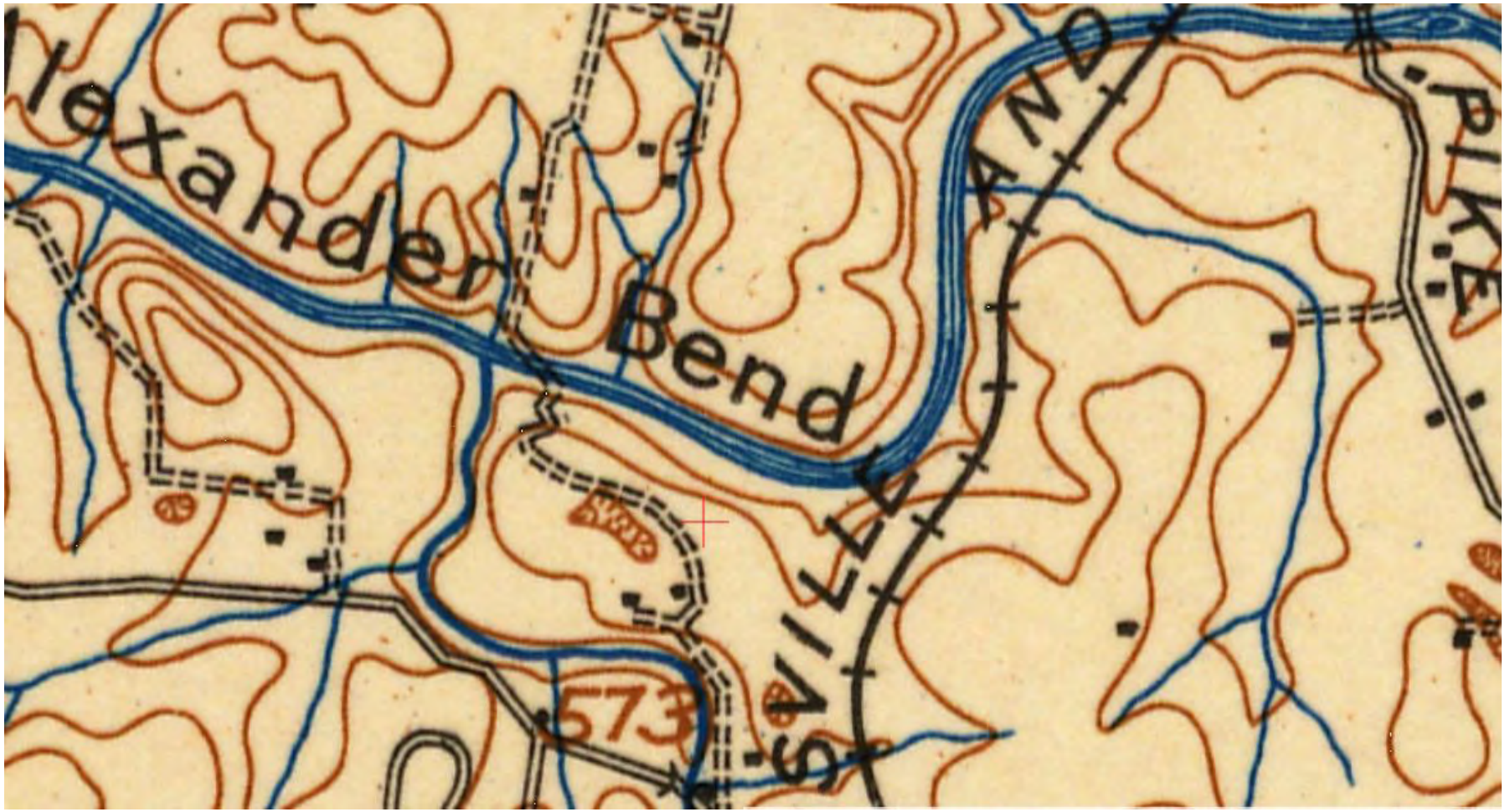
USGS Topographic Map – Godwin, TN (1965) Scale 1:24,000



USGS Topographic Map – Godwin, TN (1941) Scale 1:24,000



USGS Topographic Map – Godwin, TN (1940) Scale 1:24,000



USGS Topographic Map – Columbia, TN (1901) Scale 1:125,000

Historical Aerials Package

Target Property:

Tract 3 Former UCAR Facility

1231 Industrial Park Rd

Columbia, Maury, Tennessee 38401

Prepared For:

Griggs & Maloney Inc

Order #: 111382

Job #: 246798

Project #: Ask Kerry

Date: 7/16/2018

Target Property Summary

Tract 3 Former UCAR Facility
1231 Industrial Park Rd
Columbia, Maury, Tennessee 38401

USGS Quadrangle: Godwin
Target Property Geometry: Area

Target Property Longitude(s)/Latitude(s):
(-87.069713000, 35.634945000), (-87.067761000, 35.633934000), (-87.066387000, 35.633515000), (-87.064907000, 35.633201000), (-87.063963000, 35.633132000), (-87.062911000, 35.633027000), (-87.063061000, 35.631562000), (-87.064521000, 35.630690000), (-87.064928000, 35.630742000), (-87.065143000, 35.630655000), (-87.066237000, 35.631161000), (-87.067331000, 35.631039000), (-87.067997000, 35.630516000), (-87.070786000, 35.632486000), (-87.070164000, 35.633062000), (-87.070293000, 35.634021000)

Aerial Research Summary

Date	Source	Scale	Frame
2016	USDA	1" = 500'	N/A
2014	USDA	1" = 500'	N/A
2012	USDA	1" = 500'	N/A
2010	USDA	1" = 500'	N/A
2008	USDA	1" = 500'	N/A
2007	USDA	1" = 500'	N/A
2006	USDA	1" = 500'	N/A
2004	USDA	1" = 500'	N/A
04/01/1998	USGS	1" = 500'	N/A
06/05/1987	USGS	1" = 500'	63-150
02/20/1981	USGS	1" = 500'	355-19
12/05/1974	ASCS	1" = 1000'	PI-3
10/20/1968	ASCS	1" = 1000'	PI-1
04/22/1958	ASCS	1" = 1000'	PI-3
09/22/1949	ASCS	1" = 500'	4-29
04/26/1938	ASCS	1" = 500'	8-39

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Tract 3 Former UCAR Facility
USDA
2016

GeoSearch

JOB #: 246798 - 07/16/2018



Tract 3 Former UCAR Facility
USDA
2014

GeoSearch



Tract 3 Former UCAR Facility
USDA
2012

GeoSearch

JOB #: 246798 - 07/16/2018



N
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Tract 3 Former UCAR Facility
USDA
2010

GeoSearch



N
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Tract 3 Former UCAR Facility
USDA
2008

GeoSearch



N
W E
S

Tract 3 Former UCAR Facility
USDA
2007

GeoSearch



N
W E
S

Tract 3 Former UCAR Facility
USDA
2006

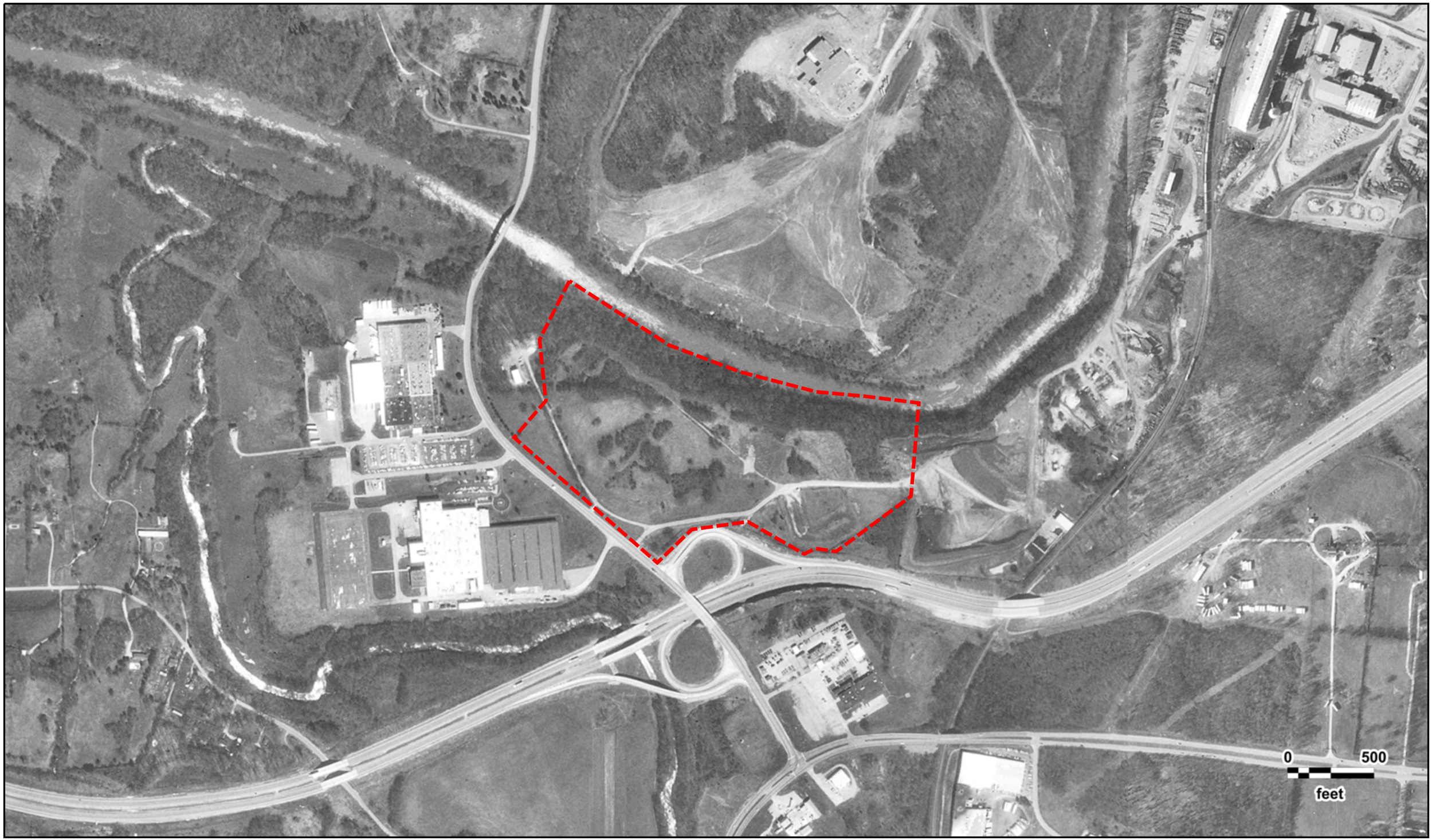
GeoSearch



N
W E
S

Tract 3 Former UCAR Facility
USDA
2004

GeoSearch



N
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S

Tract 3 Former UCAR Facility
USGS
04/01/1998

GeoSearch



N
W E
S

Tract 3 Former UCAR Facility
USGS
06/05/1987

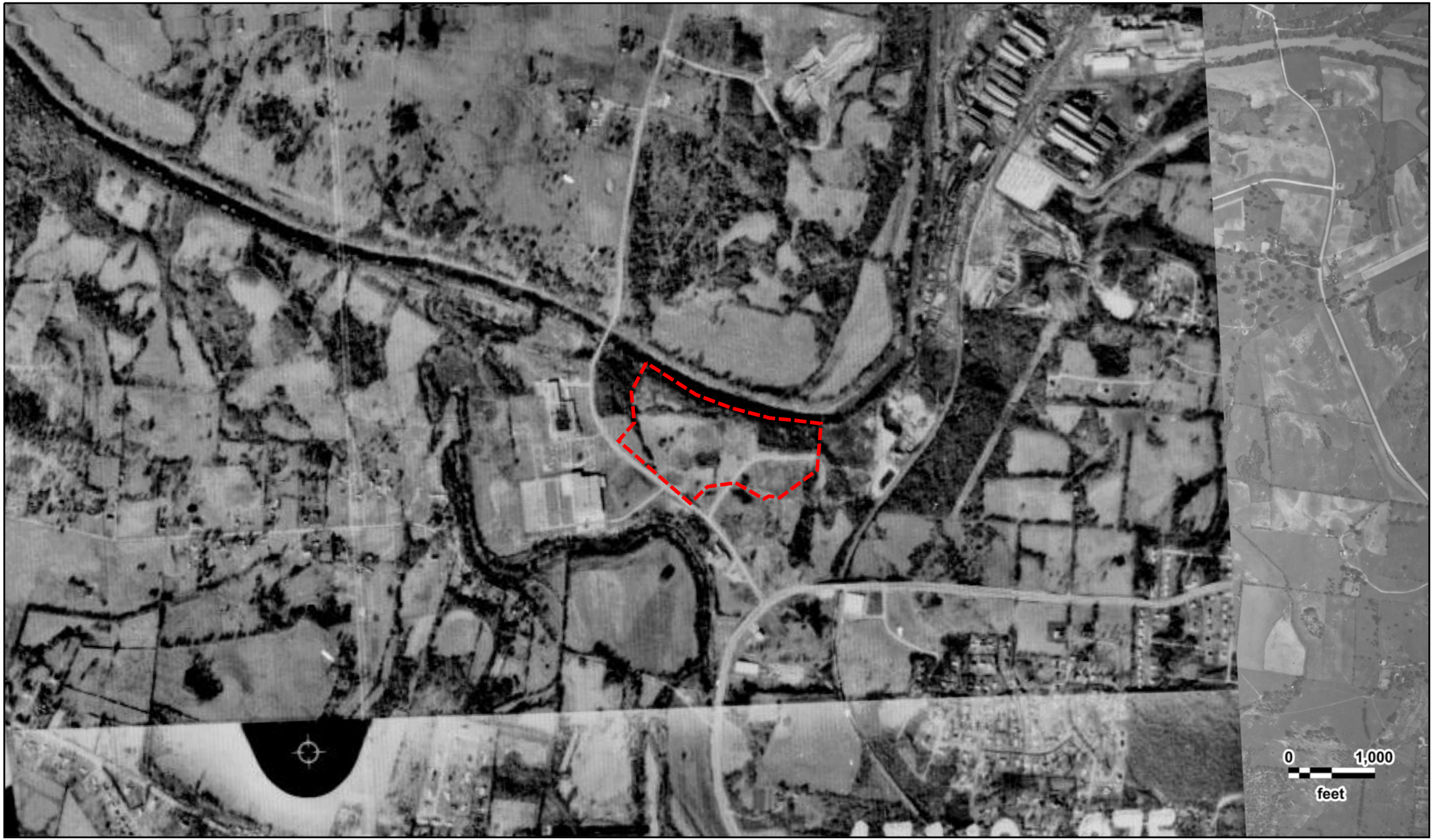
GeoSearch



N
W E
S

Tract 3 Former UCAR Facility
USGS
02/20/1981

GeoSearch



Tract 3 Former UCAR Facility
ASCS
12/05/1974

GeoSearch



Tract 3 Former UCAR Facility
ASCS
10/20/1968

GeoSearch

JOB #: 246798 - 07/16/2018

ALI- 5T-85

ALI-4DD-163

ALI-4DD-192

ALI-4DD-164

ALI-4DD-191

0 1,000
feet

Tract 3 Former UCAR Facility
ASCS
04/22/1958

GeoSearch



Tract 3 Former UCAR Facility
ASCS
09/22/1949

GeoSearch



N
W E
S

Tract 3 Former UCAR Facility
ASCS
04/26/1938

GeoSearch

TIMC418_3

GT COLUMBIA LLC
46.59 ACRES
TRACT 3

BEING AND LYING IN THE 9TH CIVIL DISTRICT OF MAURY COUNTY, TENNESSEE AND LYING NORTH OF AND ADJACENT TO NEW HWY 7, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

Beginning At A IRON PIN FOUND ON THE NORTH R.O.W. OF NEW HWY 7; SAID IRON PIN FOUND BEING THE SOUTHEAST CORNER OF THE TRACT BEING DESCRIBED, THE WEST BOUNDARY OF GRAFTECH ADVANCED GRAPHITE MATERIALS, LLC; THENCE WITH NORTH R.O.W. OF NEW HWY 7, S 60°13'44" W For A Distance Of 536.74'; THENCE N 80°37'37" W For A Distance Of 71.95'; THENCE S 88°28'31" W For A Distance Of 84.43'; THENCE N 72°47'24" W For A Distance Of 131.90'; THENCE N 64°20'19" W For A Distance Of 252.14'; THENCE N 64°37'21" W For A Distance Of 60.74'; THENCE S 79°28'45" W For A Distance Of 201.01'; THENCE S 70°26'51" W For A Distance Of 70.99'; THENCE S 48°34'27" W For A Distance Of 175.34' TO A POINT IN THE INTERSECTION OF THE NORTH R.O.W. OF NEW HWY 7 AND THE EAST R.O.W. OF INDUSTRIAL PARK ROAD; SAID POINT BEING THE SOUTHWEST CORNER OF THE TRACT BEING DESCRIBED; THENCE WITH EAST R.O.W. OF INDUSTRIAL PARK ROAD, N 51°03'26" W For A Distance Of 299.81'; THENCE N 56°30'50" W For A Distance Of 253.61'; THENCE N 50°13'18" W, PASSING AN EAST TENNESSEE GAS LINE EASEMENT, For A Distance Of 409.61' To A IRON PIN FOUND; THENCE N 47°09'09" W For A Distance Of 89.96'; SAID POINT BEING THE SOUTHEAST CORNER OF MARTRAC INC; THENCE LEAVING INDUSTRIAL PARK ROAD WITH MARTRAC INC, N 38°23'41" E For A Distance Of 299.38' To A IRON PIN FOUND; THENCE N 21°32'25" W For A Distance Of 264.98' To A IRON PIN FOUND; THENCE N 23°49'05" E For A Distance Of 467.73' TO A POINT ON THE LOW WATER MARK OF THE DUCK RIVER; SAID POINT BEING THE NORTHWEST CORNER OF THE TRACT BEING DESCRIBED, AND THE NORTHEAST CORNER OF MARTRAC INC; THENCE WITH LOW WATER MARK OF THE DUCK RIVER, S 57°58'08" E For A Distance Of 794.07'; THENCE S 70°27'05" E For A Distance Of 864.72'; THENCE S 81°29'52" E For A Distance Of 391.47'; THENCE S 85°57'41" E For A Distance Of 165.81' TO A POINT; SAID POINT BEING THE NORTHEAST CORNER OF THE TRACT BEING DESCRIBED; THENCE LEAVING SAID RIVER WITH A NEW GT COLUMBIA LLC DIVISION LINE, S 07°21'11" W, PASSING AN IRON PIN FOUND AT 188.99', IN ALL A Distance Of 525.63' To The Point Of Beginning And Containing 46.59 Acres AS SURVEYED BY KENNETH CARROLL, RLS TENNESSEE LICENSE NUMBER 1335, APRIL 23, 2018.

THE ABOVE TRACT IS SUBJECT TO A 50' EAST TENNESSEE NATURAL GAS LINE EASEMENT AS RECORDED IN DEED BOOK 843, PAGE 544, IN THE REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE.

BEING A PORTION OF THE SAME PROPERTY AS CONVEYED TO GT COLUMBIA, LLC AS RECORDED IN RECORD BOOK R2458, PAGE 1294, IN THE REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE.

FIM Abstract

Target Property:

Tract 3 Former UCAR Facility
1231 Industrial Park Rd
Columbia, Maury County, Tennessee 38401

Prepared For:

Griggs & Maloney Inc

Order #: 111382
Job #: 246797
Project #: Ask Kerry
Date: 07/13/2018

phone: 888-396-0042 · fax: 512-472-9967 · www.geo-search.com

GeoSearch FIM

Date: 07/13/18

GS Job Number: 111382

Company Name: Griggs & Maloney Inc

Project Number: Ash Kerry

Site Information: Tract Former UCAF Facility
1231 Industrial Park Rd,
Columbia, TN 38401

The collections of fire insurance maps listed below were reviewed according to the site information supplied by client. Based on the information provided, no coverage is available.

Library of Congress
University Publications of America
Other Libraries (universities, state, local, etc.).

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TARGET PROPERTY SUMMARY

Tract 3 Former UCAR Facility
1231 Industrial Park Rd
Columbia, Maury County, Tennessee 38401

USGS Quadrangle: ***Godwin, TN***
Target Property Geometry: ***Corridor***

Target Property Longitude(s)/Latitude(s):
(-87.062911, 35.633027), (-87.063061, 35.631562), (-87.064521, 35.630690), (-87.064928, 35.630742), (-87.065143, 35.630655), (-87.066237, 35.631161), (-87.067331, 35.631039), (-87.067997, 35.630516), (-87.070786, 35.632486), (-87.070164, 35.633062), (-87.070293, 35.634021), (-87.069713, 35.634945), (-87.067761, 35.633934), (-87.066387, 35.633515), (-87.064907, 35.633201), (-87.063963, 35.633132), (-87.062911, 35.633027)

County/Parish Covered:
Maury (TN)

Zipcode(s) Covered:
Columbia TN: 38401

State(s) Covered:
TN

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State of Tennessee Comptroller of the Treasury

Real Estate Assessment Data

Home | About | New Search | Return to List

County Number: 060 **County Name:** MAURY **Tax Year:** 2018

Property Owner and Mailing Address

Jan 1 Owner:
GT COLUMBIA C/O CAPITAL RECOVERY GROUP
ATTN: WILLIAM J FIRESTONE
1654 KING ST UNIT 9
ENFIELD, CT 06082

Property Location

Address: SANTA FE PIKE 791

Map: 076 **Grp:** **Ctrl Map:** 076 **Parcel:** 080.00 **PI:** **S/I:** 000

Value Information

Reappraisal Year: 2018

Land Mkt Value:	$753,400
Improvement Value:	$3,106,700
Total Market Appraisal:	$3,860,100
Assessment %:	40
Assessment:	$1,544,040

General Information

Class:	09 - INDUSTRIAL		
City #:	000	**City:**	
SSD1:	000	**SSD2:**	000
District:	09	**Mkt Area:**	C80
# Bldgs:	35	**# Mobile Homes:**	0
Utilities - Water / Sewer:	01 - PUBLIC / PUBLIC	**Utilities - Electricity:**	01 - PUBLIC
Utilities - Gas / Gas Type:	01 - PUBLIC - NATURAL GAS	**Zoning:**	

Subdivision Data

Subdivision:

Plat Bk: **Plat Pg:** **Block:** **Lot:**

Additional Description

OUTSIDE CITY-40%ASSMT

Building Information

Building # 1

Improvement Type:	45 - AVERAGE MFG	**Stories:**	1
Living/Business Sq. Ft.:	39,600		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL

Cabinet/Millwork:	02 - BELOW AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	01 - MINIMUM
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	04 - ABOVE AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1937	**Condition:**	A - AVERAGE

Building Areas:

Area: 45 **Sq Ft:** 39,600
Area: UTF **Sq Ft:** 1,240

Building # 2

Improvement Type:	45 - AVERAGE MFG	**Stories:**	1
Living/Business Sq. Ft.:	46,750		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	02 - BELOW AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	02 - BELOW AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	04 - ABOVE AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1937	**Condition:**	A - AVERAGE

Building Areas:

Area: 45 **Sq Ft:** 46,750

Building # 3

Improvement Type:	45 - AVERAGE MFG	**Stories:**	1
Living/Business Sq. Ft.:	24,355		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	12 - BRICK/WOOD	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	04 - ABOVE AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1937	**Condition:**	A - AVERAGE

Building Areas:

Area: 45 **Sq Ft:** 24,355

Building # 4

Improvement Type:	45 - AVERAGE MFG	**Stories:**	2
Living/Business Sq. Ft.:	2,728		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	04 - ABOVE AVERAGE

Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1937	**Condition:**	A - AVERAGE

Building Areas:

Area: 45 **Sq Ft:** 1,716
Area: 45 **Sq Ft:** 1,012

Building # 5

Improvement Type:	45 - AVERAGE MFG	**Stories:**	2
Living/Business Sq. Ft.:	50,784		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	11 - COMMON BRICK	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	05 - BAR JOIST/RIGID FRAME	**Roof Cover/Deck:**	10 - BUILT-UP COMPOSITION
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	04 - ABOVE AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1943	**Condition:**	A - AVERAGE

Building Areas:

Area: FEL **Sq Ft:** 41,000
Area: BMU **Sq Ft:** 8,464
Area: 45 **Sq Ft:** 8,464
Area: 45 **Sq Ft:** 8,464
Area: 45 **Sq Ft:** 8,464
Area: 45 **Sq Ft:** 8,464
Area: 45 **Sq Ft:** 8,464

Building # 6

Improvement Type:	45 - AVERAGE MFG	**Stories:**	1
Living/Business Sq. Ft.:	31,875		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	04 - ABOVE AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1943	**Condition:**	A - AVERAGE

Building Areas:

Area: 45 **Sq Ft:** 31,875

Building # 7

Improvement Type:	45 - AVERAGE MFG	**Stories:**	1
Living/Business Sq. Ft.:	91,520		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0

Bath Tile:	00 - NONE	**Electrical:**	04 - ABOVE AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1943	**Condition:**	A - AVERAGE

Building Areas:

Area: 45 **Sq Ft:** 91,520
Area: CAW **Sq Ft:** 1,674

Building # 8

Improvement Type:	44 - LIGHT MFG	**Stories:**	1
Living/Business Sq. Ft.:	2,806		
Foundation:	02 - CONTINUOUS FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	11 - COMMON BRICK	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	04 - WOODFRAME/TRUSS	**Roof Cover/Deck:**	10 - BUILT-UP COMPOSITION
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1943	**Condition:**	A - AVERAGE

Building Areas:

Area: 44 **Sq Ft:** 2,806

Building # 9

Improvement Type:	44 - LIGHT MFG	**Stories:**	1
Living/Business Sq. Ft.:	6,596		
Foundation:	02 - CONTINUOUS FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	01 - WOOD BEAM & COLUMN
Roof Framing:	02 - GABLE/HIP	**Roof Cover/Deck:**	02 - METAL SHINGLE
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1943	**Condition:**	A - AVERAGE

Building Areas:

Area: 44 **Sq Ft:** 6,596

Building # 10

Improvement Type:	30 - OFFICE	**Stories:**	2
Living/Business Sq. Ft.:	37,558		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	11 - COMMON BRICK	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	05 - BAR JOIST/RIGID FRAME	**Roof Cover/Deck:**	10 - BUILT-UP COMPOSITION
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	04 - ASPHALT TILE
Interior Finish:	07 - DRYWALL	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	05 - FLOOR & WALL	**Electrical:**	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1943	**Condition:**	A - AVERAGE

Building Areas:

Area: 30 **Sq Ft:** 21,953
Area: 30 **Sq Ft:** 15,605

Building # 11

Improvement Type:	45 - AVERAGE MFG	**Stories:**	1
Living/Business Sq. Ft.:	58,394		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1951	**Condition:**	A - AVERAGE

Building Areas:

Area: 45 **Sq Ft:** 58,394
Area: CAW **Sq Ft:** 6,000
Area: CAW **Sq Ft:** 2,610
Area: CAW **Sq Ft:** 1,120

Building # 12

Improvement Type:	44 - LIGHT MFG	**Stories:**	1
Living/Business Sq. Ft.:	4,210		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	03 - CONCRETE REINFORCED
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1953	**Condition:**	A - AVERAGE

Building Areas:

Area: 44 **Sq Ft:** 4,210

Building # 13

Improvement Type:	44 - LIGHT MFG	**Stories:**	1
Living/Business Sq. Ft.:	1,281		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	19 - PREFIN METAL CRIMPED	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	13 - PREFIN METAL CRIMPED
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	04 - ABOVE AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1982	**Condition:**	A - AVERAGE

Building Areas:

Area: 44 **Sq Ft:** 1,281

Building # 14

Improvement Type:	45 - AVERAGE MFG	**Stories:**	1
Living/Business Sq. Ft.:	46,774		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	04 - ABOVE AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1952	**Condition:**	A - AVERAGE

Building Areas:

Area: 45 **Sq Ft:** 46,774

Building # 15

Improvement Type:	44 - LIGHT MFG	**Stories:**	2
Living/Business Sq. Ft.:	57,600		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	06 - STRUCTURAL SLAB
Exterior Wall:	11 - COMMON BRICK	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	10 - BUILT-UP COMPOSITION
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	04 - ABOVE AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1953	**Condition:**	A - AVERAGE

Building Areas:

Area: FEL **Sq Ft:** 41,000
Area: BMU **Sq Ft:** 8,460
Area: 44 **Sq Ft:** 8,460
Area: 44 **Sq Ft:** 8,460
Area: 44 **Sq Ft:** 8,460
Area: 44 **Sq Ft:** 8,460
Area: 44 **Sq Ft:** 8,460
Area: 44 **Sq Ft:** 6,840

Building # 16

Improvement Type:	41 - GARAGE	**Stories:**	1
Living/Business Sq. Ft.:	2,730		
Foundation:	02 - CONTINUOUS FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	05 - RIGID FRAME
Roof Framing:	05 - BAR JOIST/RIGID FRAME	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	00 - NONE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	01 - MINIMUM
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	00 - NONE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1954	**Condition:**	A - AVERAGE

Building Areas:

Area: 41 **Sq Ft:** 2,730

Building # 17

Improvement Type:	44 - LIGHT MFG	**Stories:**	1
Living/Business Sq. Ft.:	4,308		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	19 - PREFIN METAL CRIMPED	**Structural Frame:**	03 - CONCRETE REINFORCED
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	13 - PREFIN METAL CRIMPED
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	01 - UNFINISHED	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	04 - ABOVE AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1953	**Condition:**	A - AVERAGE

Building Areas:

Area: 44 **Sq Ft:** 4,308

Building # 18

Improvement Type:	40 - WAREHOUSE	**Stories:**	1
Living/Business Sq. Ft.:	76,010		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1953	**Condition:**	A - AVERAGE

Building Areas:

Area: 40 **Sq Ft:** 68,250
Area: SSA **Sq Ft:** 7,760

Building # 19

Improvement Type:	44 - LIGHT MFG	**Stories:**	1
Living/Business Sq. Ft.:	6,000		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	05 - RIGID FRAME
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	02 - BELOW AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	02 - BELOW AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1954	**Condition:**	A - AVERAGE

Building Areas:

Area: 44 **Sq Ft:** 6,000
Area: CAW **Sq Ft:** 500

Building # 20

Improvement Type:	47 - PREFAB	**Stories:**	1
Living/Business Sq. Ft.:	6,000		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	05 - RIGID FRAME
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	02 - BELOW AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	02 - BELOW AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1954	**Condition:**	A - AVERAGE

Building Areas:

Area: 47 **Sq Ft:** 6,000

Building # 21

Improvement Type:	47 - PREFAB	**Stories:**	1
Living/Business Sq. Ft.:	6,450		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	05 - RIGID FRAME
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	02 - BELOW AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	02 - BELOW AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	04 - ABOVE AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1981	**Condition:**	A - AVERAGE

Building Areas:

Area: 47 **Sq Ft:** 4,500
Area: OFA **Sq Ft:** 1,950

Building # 22

Improvement Type:	45 - AVERAGE MFG	**Stories:**	1
Living/Business Sq. Ft.:	1,232		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1960	**Condition:**	A - AVERAGE

Building Areas:

Area: 45 **Sq Ft:** 1,232
Area: HAC **Sq Ft:** 1,232

Building # 23

Improvement Type:	22 - SALES	**Stories:**	1
Living/Business Sq. Ft.:	816		
Foundation:	02 - CONTINUOUS FOOTING	**Floor System:**	01 - SLAB ON GRADE

Exterior Wall:	07 - CONCRETE BLOCK	**Structural Frame:**	00 - NONE
Roof Framing:	04 - WOODFRAME/TRUSS	**Roof Cover/Deck:**	10 - BUILT-UP COMPOSITION
Cabinet/Millwork:	02 - BELOW AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	01 - UNFINISHED	**Paint/Decor:**	02 - BELOW AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	02 - BELOW AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1961	**Condition:**	A - AVERAGE

Building Areas:

Area: 22 **Sq Ft:** 816

Building # 24

Improvement Type:	44 - LIGHT MFG	**Stories:**	2
Living/Business Sq. Ft.:	1,352		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	07 - CONCRETE BLOCK	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	05 - BAR JOIST/RIGID FRAME	**Roof Cover/Deck:**	10 - BUILT-UP COMPOSITION
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1964	**Condition:**	A - AVERAGE

Building Areas:

Area: 44 **Sq Ft:** 676
Area: 44 **Sq Ft:** 676

Building # 25

Improvement Type:	44 - LIGHT MFG	**Stories:**	1
Living/Business Sq. Ft.:	940		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	02 - BELOW AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1964	**Condition:**	A - AVERAGE

Building Areas:

Area: 44 **Sq Ft:** 940

Building # 26

Improvement Type:	47 - PREFAB	**Stories:**	1
Living/Business Sq. Ft.:	7,125		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE

Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1965	**Condition:**	A - AVERAGE

Building Areas:

Area: 47 **Sq Ft:** 7,125

Building # 27

Improvement Type:	44 - LIGHT MFG	**Stories:**	1
Living/Business Sq. Ft.:	6,160		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	02 - BELOW AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	02 - BELOW AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1965	**Condition:**	A - AVERAGE

Building Areas:

Area: 44 **Sq Ft:** 6,160

Building # 28

Improvement Type:	47 - PREFAB	**Stories:**	1
Living/Business Sq. Ft.:	17,610		
Foundation:	01 - PIERS	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	00 - UNFINISHED	**Structural Frame:**	05 - RIGID FRAME
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	00 - NONE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	01 - MINIMUM
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	00 - NONE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1973	**Condition:**	A - AVERAGE

Building Areas:

Area: 47 **Sq Ft:** 17,610

Building # 29

Improvement Type:	47 - PREFAB	**Stories:**	1
Living/Business Sq. Ft.:	2,400		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	19 - PREFIN METAL CRIMPED	**Structural Frame:**	05 - RIGID FRAME
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	13 - PREFIN METAL CRIMPED
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1974	**Condition:**	A - AVERAGE

Building Areas:

Area: 47 **Sq Ft:** 2,400

Building # 30

Improvement Type:	47 - PREFAB	**Stories:**	1
Living/Business Sq. Ft.:	16,700		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	01 - CORRUGATED METAL	**Structural Frame:**	05 - RIGID FRAME
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	00 - CORRUGATED METAL
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	04 - ABOVE AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1975	**Condition:**	A - AVERAGE

Building Areas:

Area: 47 **Sq Ft:** 16,700

Building # 31

Improvement Type:	47 - PREFAB	**Stories:**	1
Living/Business Sq. Ft.:	10,815		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	19 - PREFIN METAL CRIMPED	**Structural Frame:**	02 - MASONRY PIL/STL
Roof Framing:	06 - STEEL TRUSS/PURLINS	**Roof Cover/Deck:**	13 - PREFIN METAL CRIMPED
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	04 - ABOVE AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1975	**Condition:**	A - AVERAGE

Building Areas:

Area: 47 **Sq Ft:** 10,815

Building # 32

Improvement Type:	40 - WAREHOUSE	**Stories:**	1
Living/Business Sq. Ft.:	627		
Foundation:	02 - CONTINUOUS FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	07 - CONCRETE BLOCK	**Structural Frame:**	00 - NONE
Roof Framing:	04 - WOODFRAME/TRUSS	**Roof Cover/Deck:**	10 - BUILT-UP COMPOSITION
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1977	**Condition:**	A - AVERAGE

Building Areas:

Area: 40 **Sq Ft:** 627

Building # 33

Improvement Type:	47 - PREFAB	**Stories:**	1
Living/Business Sq. Ft.:	1,152		

Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	19 - PREFIN METAL CRIMPED	**Structural Frame:**	00 - NONE
Roof Framing:	05 - BAR JOIST/RIGID FRAME	**Roof Cover/Deck:**	13 - PREFIN METAL CRIMPED
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	01 - UNFINISHED	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1982	**Condition:**	A - AVERAGE

Building Areas:

Area: 47 **Sq Ft:** 1,152

Building # 34

Improvement Type:	40 - WAREHOUSE	**Stories:**	1
Living/Business Sq. Ft.:	772		
Foundation:	02 - CONTINUOUS FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	07 - CONCRETE BLOCK	**Structural Frame:**	00 - NONE
Roof Framing:	05 - BAR JOIST/RIGID FRAME	**Roof Cover/Deck:**	11 - BUILT-UP/METAL GYPSUM
Cabinet/Millwork:	03 - AVERAGE	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	03 - AVERAGE
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	03 - AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1987	**Condition:**	A - AVERAGE

Building Areas:

Area: 40 **Sq Ft:** 772

Building # 35

Improvement Type:	47 - PREFAB	**Stories:**	1
Living/Business Sq. Ft.:	3,680		
Foundation:	03 - SPREAD FOOTING	**Floor System:**	01 - SLAB ON GRADE
Exterior Wall:	00 - UNFINISHED	**Structural Frame:**	00 - NONE
Roof Framing:	05 - BAR JOIST/RIGID FRAME	**Roof Cover/Deck:**	13 - PREFIN METAL CRIMPED
Cabinet/Millwork:	01 - MINIMUM	**Floor Finish:**	01 - CONCRETE FINISH
Interior Finish:	00 - NONE	**Paint/Decor:**	01 - MINIMUM
Heat and A/C:	0 -	**Plumbing Fixtures:**	0
Bath Tile:	00 - NONE	**Electrical:**	02 - BELOW AVERAGE
Shape:	01 - RECTANGULAR DESIGN	**Quality:**	01 - AVERAGE
Act Yr Built:	1989	**Condition:**	A - AVERAGE

Building Areas:

Area: 47 **Sq Ft:** 3,680

Extra Features

Bldg/Card#	Type	Description	Units
1	CHAIN LINK FENCE	6X11000	11,000
1	RAILROAD SPUR		10,000
2		12X20	1
3			360
4			1,100
4			800

5	CONCRETE PAVING	75,000
5	ASPHALT PAVING	214,000
7		7,500

Sale Information

Sale Date	Price	Book	Page	Vac/Imp	Type Instrument	Qualification
09/30/2017	$3,479,004	R2458	1294	IMPROVED	WD	P
09/30/2016		R2394	894		QC	
07/12/1990	$10	843	538	IMPROVED	QC	D
06/01/1990	$164,810	837	730	VACANT	WD	K
01/01/1989	$10	805	721	VACANT	WD	H
02/13/1985	$0	725	481			
01/01/1000	$0	579	776			
01/01/1000	$0	401	489			
01/01/1000	$0	297	146			

Land Information

Deed Acres: 165.59 **Calc Acres:** 0.00 **Total Land Units:** 165.59

Land Type: 15 - INDUSTRIAL **Soil Class:** **Units:** 101.01

Land Type: 15 - INDUSTRIAL **Soil Class:** **Units:** 64.58

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State of Tennessee Comptroller of the Treasury

Real Estate Assessment Data

Home | About | New Search | Return to List

County Number: 060 **County Name:** MAURY **Tax Year:** 2018

Property Owner and Mailing Address

Jan 1 Owner:
GT COLUMBIA C/O CAPITAL RECOVERY GROUP
ATTN: WILLIAM J FIRESTONE
1654 KING ST UNIT 9
ENFIELD, CT 06082

Property Location

Address: SANTA FE PIKE 791

Map: 076 **Grp:** **Ctrl Map:** 076 **Parcel:** 080.00 **PI:** **S/I:** 001

Value Information

Reappraisal Year: 2018

Land Mkt Value:	$180,400
Improvement Value:	$6,900
Total Market Appraisal:	$187,300
Assessment %:	25
Assessment:	$46,825

General Information

Class:	10 - FARM		
City #:	156	**City:**	COLUMBIA
SSD1:	000	**SSD2:**	000
District:	09	**Mkt Area:**	C99
# Bldgs:	0	**# Mobile Homes:**	0
Utilities - Water / Sewer:	01 - PUBLIC / PUBLIC	**Utilities - Electricity:**	01 - PUBLIC
Utilities - Gas / Gas Type:	01 - PUBLIC - NATURAL GAS	**Zoning:**	

Subdivision Data

Subdivision:

Plat Bk: **Plat Pg:** **Block:** **Lot:**

Additional Description

725-487 ADDED .35 AC
PART INSIDE CITY@25%ASSMT

Building Information

Extra Features

Bldg/Card#	Type	Description	Units
1	CHAIN LINK FENCE	6X3600	3,600

Sale Information

Sale Date	Price	Book	Page	Vac/Imp	Type Instrument	Qualification
09/30/2017	$3,479,004	R2458	1294	IMPROVED	WD	P
09/30/2016		R2394	894		QC	
06/01/1990	$164,810	837	730	VACANT	WD	K
01/01/1989	$10	805	721	VACANT	WD	H
02/13/1985	$0	725	487			
01/01/1000	$0	579	776			
01/01/1000	$0	401	489			

Land Information

Deed Acres: 45.09 **Calc Acres:** 0.00 **Total Land Units:** 45.09

Land Type: 15 - INDUSTRIAL **Soil Class:** **Units:** 45.09

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State of Tennessee Comptroller of the Treasury

Real Estate Assessment Data

County Number: 060 **County Name:** MAURY **Tax Year:** 2018

Property Owner and Mailing Address

Jan 1 Owner:
GT COLUMBIA C/O CAPITAL RECOVERY GROUP
ATTN: WILLIAM J FIRESTONE
1654 KING ST UNIT 9
ENFIELD, CT 06082

Property Location

Address: SANTA FE PIKE 791

Map: 076 **Grp:** **Ctrl Map:** 076 **Parcel:** 080.00 **PI:** **S/I:** 002

Value Information

Reappraisal Year: 2018

Land Mkt Value:	$16,400
Improvement Value:	$0
Total Market Appraisal:	$16,400
Assessment %:	40
Assessment:	$6,560

General Information

Class:	09 - INDUSTRIAL		
City #:	156	**City:**	COLUMBIA
SSD1:	000	**SSD2:**	000
District:	09	**Mkt Area:**	Z51
# Bldgs:	0	**# Mobile Homes:**	0
Utilities - Water / Sewer:	01 - PUBLIC / PUBLIC	**Utilities - Electricity:**	01 - PUBLIC
Utilities - Gas / Gas Type:	01 - PUBLIC - NATURAL GAS	**Zoning:**	

Subdivision Data

Subdivision:

Plat Bk: **Plat Pg:** **Block:** **Lot:**

Additional Description

INSIDE CITY @40% ASSMT

Building Information

Extra Features

Sale Information

Sale Date	Price	Book	Page	Vac/Imp	Type Instrument	Qualification
09/30/2017	$3,479,004	R2458	1294	IMPROVED	WD	P
09/30/2016		R2394	894		QC	

07/12/1990	$0	843	538

Land Information

Deed Acres: 10.93 **Calc Acres:** 0.00 **Total Land Units:** 10.93

Land Type: 15 - INDUSTRIAL **Soil Class:** **Units:** 10.93

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State of Tennessee Comptroller of the Treasury

Real Estate Assessment Data

Home | About | New Search | Return to List

County Number: 060 **County Name:** MAURY **Tax Year:** 2018

Property Owner and Mailing Address

Jan 1 Owner:
GT COLUMBIA C/O CAPITAL RECOVERY GROUP
ATTN: WILLIAM J FIRESTONE
1654 KING ST UNIT 9
ENFIELD, CT 06082

Property Location

Address: SANTA FE PIKE 791

Map: 076 **Grp:** **Ctrl Map:** 076 **Parcel:** 080.00 **PI:** **S/I:** 003

Value Information

Reappraisal Year: 2018

Land Mkt Value:	$473,900
Improvement Value:	$0
Total Market Appraisal:	$473,900
Assessment %:	25
Assessment:	$118,475

General Information

Class:	10 - FARM		
City #:	000	**City:**	
SSD1:	000	**SSD2:**	000
District:	09	**Mkt Area:**	C99
# Bldgs:	0	**# Mobile Homes:**	0
Utilities - Water / Sewer:	01 - PUBLIC / PUBLIC	**Utilities - Electricity:**	01 - PUBLIC
Utilities - Gas / Gas Type:	01 - PUBLIC - NATURAL GAS	**Zoning:**	

Subdivision Data

Subdivision:

Plat Bk: **Plat Pg:** **Block:** **Lot:**

Additional Description

OUTSIDE CITY @25% ASSMT

Building Information

Extra Features

Sale Information

Sale Date	Price	Book	Page	Vac/Imp	Type Instrument	Qualification
09/30/2017	$3,479,004	R2458	1294	IMPROVED	WD	P
09/30/2016		R2394	894		QC	

07/12/1990	$0	843	538

Land Information

Deed Acres: 118.48 **Calc Acres:** 0.00 **Total Land Units:** 118.48

Land Type: 15 - INDUSTRIAL **Soil Class:** **Units:** 118.48

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1.17.5 REGULATORY RECORDS DOCUMENTATION

GeoSearch
On time. On target. In touch.™

Radius Report

NEW: *GeoLens by Geosearch*

Target Property:

Tract 3 Former UCAR Facility
1231 Industrial Park Rd
Columbia, Maury County, Tennessee 38401

Prepared For:

Griggs & Maloney Inc

Order #: 111382
Job #: 246796
Project #: Ask Kerry
Date: 07/16/2018

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Unlocatable Report . . . . . See Attachment

Zip Report . . . . . See Attachment

Disclaimer

This report was designed by GeoSearch to meet or exceed the records search requirements of the All Appropriate Inquiries Rule (40 CFR ï¿½312.26) and the current version of the ASTM International E1527, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process or, if applicable, the custom requirements requested by the entity that ordered this report. The records and databases of records used to compile this report were collected from various federal,state and local governmental entities. It is the goal of GeoSearch to meet or exceed the 40 CFR ï¿½312.26 and E1527 requirements for updating records by using the best available technology. GeoSearch contacts the appropriate governmental entities on a recurring basis. Depending on the frequency with which a record source or database of records is updated by the governmental entity, the data used to prepare this report may be updated monthly, quarterly, semi-annually, or annually.

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Target Property Summary

Target Property Information

Tract 3 Former UCAR Facility
1231 Industrial Park Rd
Columbia, Tennessee 38401

Coordinates
Area centroid (-87.066995, 35.6324540)
653 feet above sea level

USGS Quadrangle
Godwin, TN

Geographic Coverage Information

County/Parish: Maury (TN)
ZipCode(s):
Columbia TN: 38401

Database Summary

FEDERAL LISTING

Standard Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
EMERGENCY RESPONSE NOTIFICATION SYSTEM	ERNSTN	3	1	TP/AP
FEDERAL ENGINEERING INSTITUTIONAL CONTROL SITES	EC	0	0	TP/AP
LAND USE CONTROL INFORMATION SYSTEM	LUCIS	0	0	TP/AP
RCRA SITES WITH CONTROLS	RCRASC	0	0	TP/AP
RESOURCE CONSERVATION & RECOVERY ACT - GENERATOR	RCRAGR04	2	0	0.1250
RESOURCE CONSERVATION & RECOVERY ACT - NON-GENERATOR	RCRANGR04	1	0	0.1250
FEMA OWNED STORAGE TANKS	FEMAUST	0	0	0.2500
BROWNFIELDS MANAGEMENT SYSTEM	BF	0	0	0.5000
DELISTED NATIONAL PRIORITIES LIST	DNPL	0	0	0.5000
NO LONGER REGULATED RCRA NON-CORRACTS TSD FACILITIES	NLRRCRAT	0	0	0.5000
RESOURCE CONSERVATION & RECOVERY ACT - NON-CORRACTS TREATMENT, STORAGE & DISPOSAL FACILITIES	RCRAT	0	0	0.5000
SUPERFUND ENTERPRISE MANAGEMENT SYSTEM	SEMS	0	0	0.5000
SUPERFUND ENTERPRISE MANAGEMENT SYSTEM ARCHIVED SITE INVENTORY	SEMSARCH	3	0	0.5000
NATIONAL PRIORITIES LIST	NPL	0	0	1.0000
NO LONGER REGULATED RCRA CORRECTIVE ACTION FACILITIES	NLRRCRAC	0	0	1.0000
PROPOSED NATIONAL PRIORITIES LIST	PNPL	0	0	1.0000
RESOURCE CONSERVATION & RECOVERY ACT - CORRECTIVE ACTION FACILITIES	RCRAC	0	0	1.0000
RESOURCE CONSERVATION & RECOVERY ACT - SUBJECT TO CORRECTIVE ACTION FACILITIES	RCRASUBC	0	0	1.0000

SUB-TOTAL		9	1	

Additional Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
AEROMETRIC INFORMATION RETRIEVAL SYSTEM / AIR FACILITY SUBSYSTEM	AIRSAFS	1	0	TP/AP
BIENNIAL REPORTING SYSTEM	BRS	1	0	TP/AP
CERCLIS LIENS	SFLIENS	0	0	TP/AP
CLANDESTINE DRUG LABORATORY LOCATIONS	CDL	0	0	TP/AP
EPA DOCKET DATA	DOCKETS	0	0	TP/AP
ENFORCEMENT AND COMPLIANCE HISTORY INFORMATION	ECHOR04	3	2	TP/AP

Database Summary

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
FACILITY REGISTRY SYSTEM	FRSTN	7	3	TP/AP
HAZARDOUS MATERIALS INCIDENT REPORTING SYSTEM	HMIRSR04	0	0	TP/AP
INTEGRATED COMPLIANCE INFORMATION SYSTEM (FORMERLY DOCKETS)	ICIS	2	0	TP/AP
INTEGRATED COMPLIANCE INFORMATION SYSTEM NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	ICISNPDES	3	1	TP/AP
MATERIAL LICENSING TRACKING SYSTEM	MLTS	0	0	TP/AP
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM	NPDESR04	1	0	TP/AP
PCB ACTIVITY DATABASE SYSTEM	PADS	1	0	TP/AP
PERMIT COMPLIANCE SYSTEM	PCSR04	0	0	TP/AP
SEMS LIEN ON PROPERTY	SEMSLIENS	0	0	TP/AP
SECTION SEVEN TRACKING SYSTEM	SSTS	0	0	TP/AP
TOXIC SUBSTANCE CONTROL ACT INVENTORY	TSCA	1	0	TP/AP
TOXICS RELEASE INVENTORY	TRI	2	0	TP/AP
ALTERNATIVE FUELING STATIONS	ALTFUELS	0	0	0.2500
HISTORICAL GAS STATIONS	HISTPST	0	0	0.2500
INTEGRATED COMPLIANCE INFORMATION SYSTEM DRYCLEANERS	ICISCLEANERS	0	0	0.2500
MINE SAFETY AND HEALTH ADMINISTRATION MASTER INDEX FILE	MSHA	0	0	0.2500
MINERAL RESOURCE DATA SYSTEM	MRDS	1	0	0.2500
OPEN DUMP INVENTORY	ODI	0	0	0.5000
SURFACE MINING CONTROL AND RECLAMATION ACT SITES	SMCRA	0	0	0.5000
URANIUM MILL TAILINGS RADIATION CONTROL ACT SITES	USUMTRCA	0	0	0.5000
DEPARTMENT OF DEFENSE SITES	DOD	0	0	1.0000
FORMER MILITARY NIKE MISSILE SITES	NMS	0	0	1.0000
FORMERLY USED DEFENSE SITES	FUDS	1	0	1.0000
FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM	FUSRAP	0	0	1.0000
RECORD OF DECISION SYSTEM	RODS	0	0	1.0000
SUB-TOTAL		24	6	

STATE (TN) LISTING

Standard Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
INSTITUTIONAL / ENGINEERING CONTROLS REGISTRY	ICEC	0	0	TP/AP
REGISTERED UNDERGROUND STORAGE TANKS	RST	1	2	0.2500
DELISTED PROMULGATED SITES	DELISTEDPS	0	0	0.5000
LANDFILL AND SOLID WASTE DISPOSAL SITES	LFSWDS	4	0	0.5000
LEAKING UNDERGROUND STORAGE TANKS	LST	0	0	0.5000
STATE REMEDIATION SITES	SRS	1	0	0.5000
VOLUNTARY CLEANUP AND BROWNFIELD SITES	VCPBF	1	0	0.5000
PROMULGATED INACTIVE HAZARDOUS WASTE SITES	PIHWS	0	0	1.0000
SUB-TOTAL		7	2	

Additional Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
CLANDESTINE METHAMPHETAMINE LABS	CDL	0	0	TP/AP
REGISTERED DRYCLEANING FACILITIES	CLEANERS	0	0	0.2500
SUB-TOTAL		0	0	

TRIBAL LISTING

Standard Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
UNDERGROUND STORAGE TANKS ON TRIBAL LANDS	USTR04	0	0	0.2500
LEAKING UNDERGROUND STORAGE TANKS ON TRIBAL LANDS	LUSTR04	0	0	0.5000
OPEN DUMP INVENTORY ON TRIBAL LANDS	ODINDIAN	0	0	0.5000
SUB-TOTAL		0	0	

Additional Environmental Records

Database	Acronym	Locatable	Unlocatable	Search Radius (miles)
INDIAN RESERVATIONS	INDIANRES	0	0	1.0000
SUB-TOTAL		0	0	
TOTAL		40	9	

Database Radius Summary

FEDERAL LISTING

*Standard environmental records are displayed in **bold**.*

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
AIRSAFS	0.0200	1	NS	NS	NS	NS	NS	1
BRS	0.0200	1	NS	NS	NS	NS	NS	1
CDL	0.0200	0	NS	NS	NS	NS	NS	0
DOCKETS	0.0200	0	NS	NS	NS	NS	NS	0
EC	**0.0200**	**0**	**NS**	**NS**	**NS**	**NS**	**NS**	**0**
ECHOR04	0.0200	3	NS	NS	NS	NS	NS	3
ERNSTN	**0.0200**	**3**	**NS**	**NS**	**NS**	**NS**	**NS**	**3**
FRSTN	0.0200	7	NS	NS	NS	NS	NS	7
HMIRSR04	0.0200	0	NS	NS	NS	NS	NS	0
ICIS	0.0200	2	NS	NS	NS	NS	NS	2
ICISNPDES	0.0200	3	NS	NS	NS	NS	NS	3
LUCIS	**0.0200**	**0**	**NS**	**NS**	**NS**	**NS**	**NS**	**0**
MLTS	0.0200	0	NS	NS	NS	NS	NS	0
NPDESR04	0.0200	1	NS	NS	NS	NS	NS	1
PADS	0.0200	1	NS	NS	NS	NS	NS	1
PCSR04	0.0200	0	NS	NS	NS	NS	NS	0
RCRASC	**0.0200**	**0**	**NS**	**NS**	**NS**	**NS**	**NS**	**0**
SEMSLIENS	0.0200	0	NS	NS	NS	NS	NS	0
SFLIENS	0.0200	0	NS	NS	NS	NS	NS	0
SSTS	0.0200	0	NS	NS	NS	NS	NS	0
TRI	0.0200	2	NS	NS	NS	NS	NS	2
TSCA	0.0200	1	NS	NS	NS	NS	NS	1
RCRAGR04	**0.1250**	**1**	**1**	**NS**	**NS**	**NS**	**NS**	**2**
RCRANGR04	**0.1250**	**1**	**0**	**NS**	**NS**	**NS**	**NS**	**1**
ALTFUELS	0.2500	0	0	0	NS	NS	NS	0
FEMAUST	**0.2500**	**0**	**0**	**0**	**NS**	**NS**	**NS**	**0**
HISTPST	0.2500	0	0	0	NS	NS	NS	0
ICISCLEANERS	0.2500	0	0	0	NS	NS	NS	0
MRDS	0.2500	1	0	0	NS	NS	NS	1
MSHA	0.2500	0	0	0	NS	NS	NS	0
BF	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
DNPL	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
NLRRCRAT	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
ODI	0.5000	0	0	0	0	NS	NS	0
RCRAT	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**

Database Radius Summary

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
SEMS	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
SEMSARCH	**0.5000**	**2**	**0**	**0**	**1**	**NS**	**NS**	**3**
SMCRA	0.5000	0	0	0	0	NS	NS	0
USUMTRCA	0.5000	0	0	0	0	NS	NS	0
DOD	1.0000	0	0	0	0	0	NS	0
FUDS	1.0000	0	0	0	0	1	NS	1
FUSRAP	1.0000	0	0	0	0	0	NS	0
NLRRCRAC	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
NMS	1.0000	0	0	0	0	0	NS	0
NPL	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
PNPL	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
RCRAC	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
RCRASUBC	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
RODS	1.0000	0	0	0	0	0	NS	0
SUB-TOTAL		30	1	0	1	1	0	33

STATE (TN) LISTING

*Standard environmental records are displayed in **bold**.*

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
CDL	0.0200	0	NS	NS	NS	NS	NS	0
ICEC	**0.0200**	**0**	**NS**	**NS**	**NS**	**NS**	**NS**	**0**
CLEANERS	0.2500	0	0	0	NS	NS	NS	0
RST	**0.2500**	**1**	**0**	**0**	**NS**	**NS**	**NS**	**1**
DELISTEDPS	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
LFSWDS	**0.5000**	**1**	**0**	**0**	**3**	**NS**	**NS**	**4**
LST	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
SRS	**0.5000**	**0**	**1**	**0**	**0**	**NS**	**NS**	**1**
VCPBF	**0.5000**	**0**	**1**	**0**	**0**	**NS**	**NS**	**1**
PIHWS	**1.0000**	**0**	**0**	**0**	**0**	**0**	**NS**	**0**
SUB-TOTAL		2	2	0	3	0	0	7

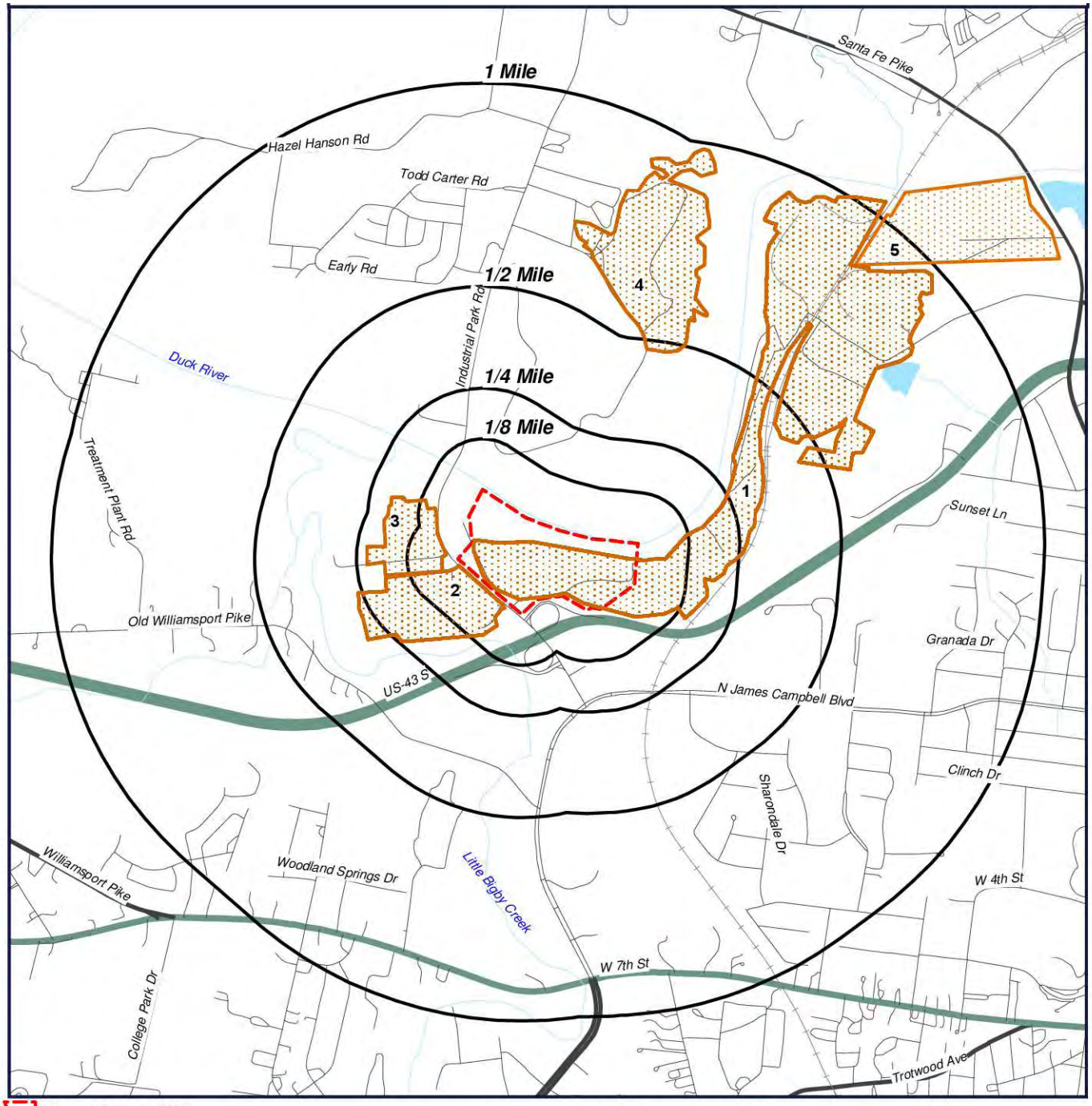
TRIBAL LISTING

*Standard environmental records are displayed in **bold**.*

Acronym	Search Radius (miles)	TP/AP (0 - 0.02)	1/8 Mile (> TP/AP)	1/4 Mile (> 1/8)	1/2 Mile (> 1/4)	1 Mile (> 1/2)	> 1 Mile	Total
USTR04	**0.2500**	**0**	**0**	**0**	**NS**	**NS**	**NS**	**0**
LUSTR04	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
ODINDIAN	**0.5000**	**0**	**0**	**0**	**0**	**NS**	**NS**	**0**
INDIANRES	1.0000	0	0	0	0	0	NS	0
SUB-TOTAL		0	0	0	0	0	0	0
TOTAL		32	3	0	4	1	0	40

NOTES:
NS = NOT SEARCHED
TP/AP = TARGET PROPERTY/ADJACENT PROPERTY

Radius Map 1



Target Property (TP)
PADS
AIRSAFS
BRS
ICIS
TSCA
ICISNPDES
RCRAGR04
NPDESR04
LFSWDS
ERNSTN
FRSTN
SEMSARCH
MRDS
ECHOR04
TRI
RCRANGR04
RST
VCPBF
SRS
FUDS

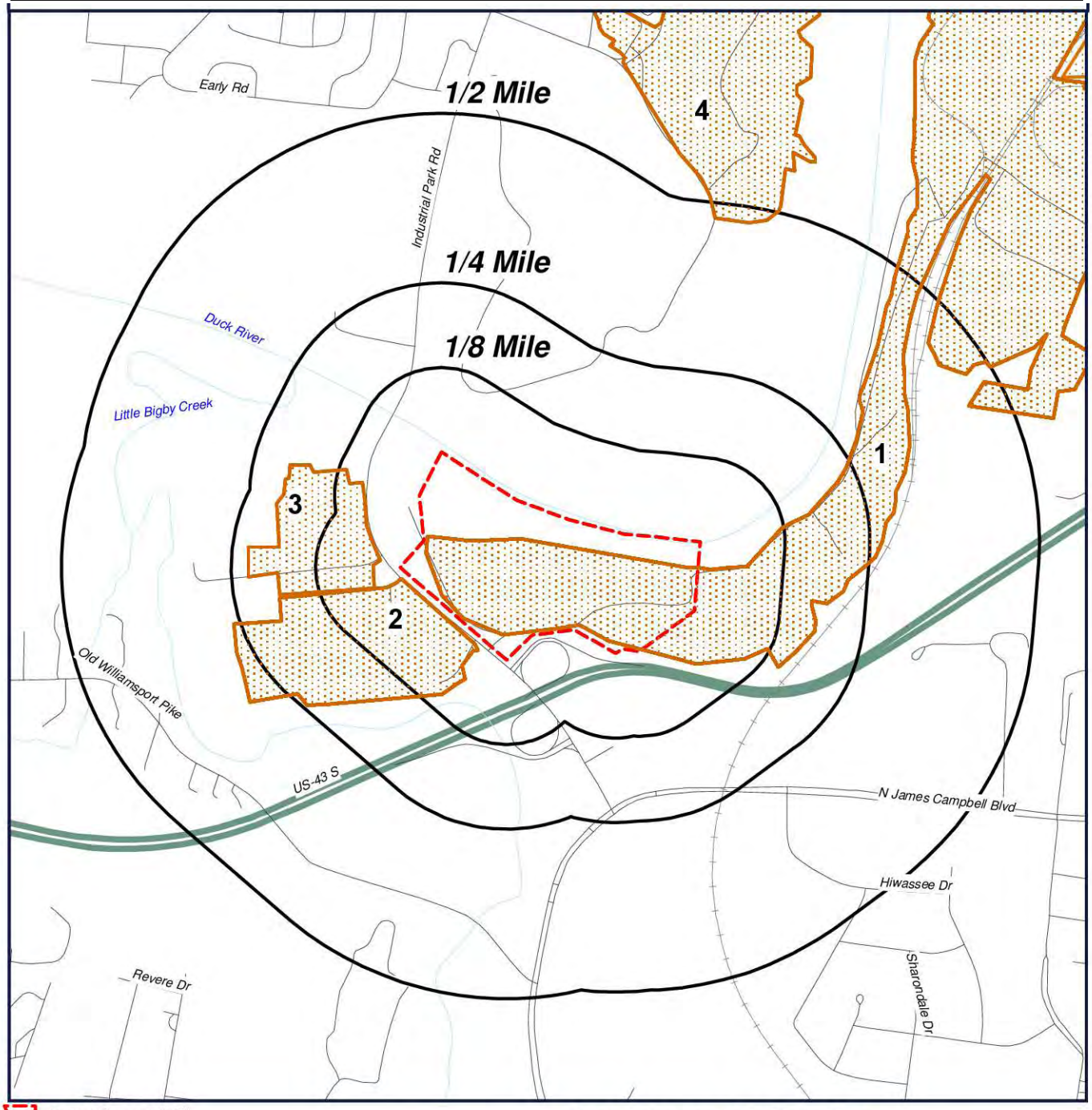
Tract 3 Former UCAR Facility
1231 Industrial Park Rd
Columbia, Tennessee
38401

N
W E
S

0' 1000' 2000' 3000'
SCALE: 1" = 2000'

Click here to access Satellite view

Radius Map 2



Target Property (TP)
PADS
AIRSAFS
BRS
ICIS
TSCA
ICISNPDES
RCRAGR04
NPDESR04
LFSWDS
ERNSTN
FRSTN
SEMSARCH
MRDS
ECHOR04
TRI
RCRANGR04
RST
VCPBF
SRS
FUDS

Tract 3 Former UCAR Facility
1231 Industrial Park Rd
Columbia, Tennessee
38401

N
W E
S

0' 600' 1200' 1800'
SCALE: 1" = 1200'

[Click here to access Satellite view]

Ortho Map



Target Property (TP)
PADS
AIRSAFS
BRS
ICIS
TSCA
ICISNPDES
RCRAGR04
NPDESR04
LFSWDS
ERNSTN
FRSTN
SEMSARCH
MRDS
ECHOR04
TRI
RCRANGR04
RST
VCPBF
SRS
FUDS

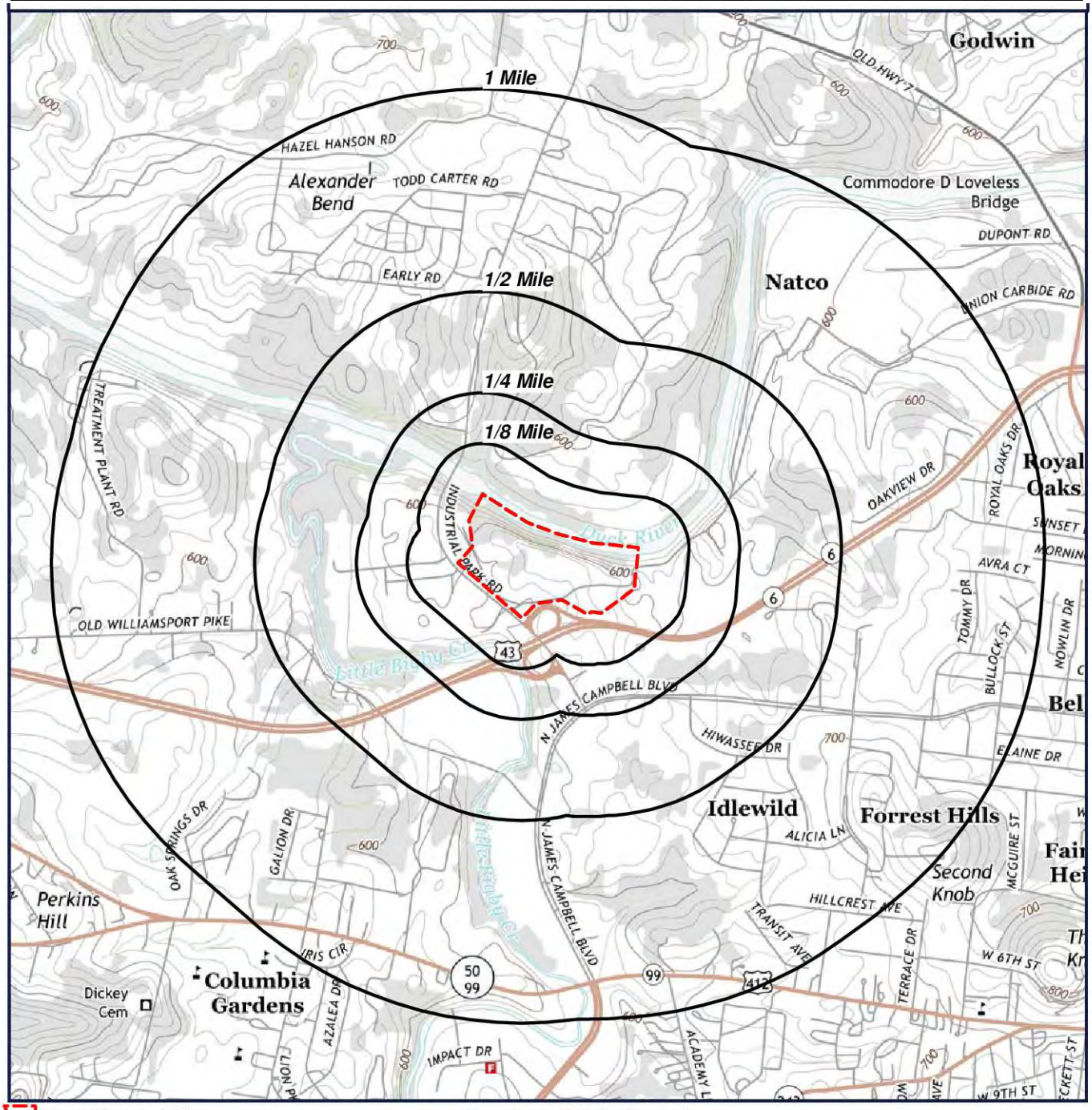
Quadrangle(s): Godwin
Tract 3 Former UCAR Facility
1231 Industrial Park Rd
Columbia, Tennessee
38401

N
W E
S

0' 600' 1200' 1800'
SCALE: 1" = 1200'

[Click here to access Satellite view]

Topographic Map



Target Property (TP)

Quadrangle(s): Godwin
Source: USGS, 05/03/2013
Tract 3 Former UCAR Facility
1231 Industrial Park Rd
Columbia, Tennessee
38401

N
W E
S

0' 1000' 2000' 3000'
SCALE: 1" = 2000'

Click here to access Satellite view

Located Sites Summary

*NOTE: Standard environmental records are displayed in **bold**.*

Map ID#	Database Name	Site ID#	Relative Elevation	Distance From Site	Site Name	Address	PAGE #
1	AIRSAFS	84629	Lower (606 ft.)	TP	GRATECH INTERNATIONAL HOLDINGS, INC.	791 SANTA FE PIKE, COLUMBIA, TN 38401	18
1	BRS	TND004038428	Lower (606 ft.)	TP	GRAFTECH INTERNATIONAL HOLDINGS INC.	791 SANTA FE PIKE, COLUMBIA, TN 38401	36
1	ECHOR04	110024586447	Lower (606 ft.)	TP	GRAFTECH ADVANCED GRAPHITE MATERIALS LLC	791 SANTA FE PIKE, COLUMBIA, TN 38401	39
1	***ERNSTN***	***1107357***	***Lower (606 ft.)***	***TP***	***MANUFACTURING FACILITY***	***791 SANTA FE PIKE, COLUMBIA, TN 38401***	***40***
1	***ERNSTN***	***1108021***	***Lower (606 ft.)***	***TP***		***791 SANTA FE PIKE, COLUMBIA, TN 38401***	***42***
1	***ERNSTN***	***947969***	***Lower (606 ft.)***	***TP***	***GRAFTECH MANUFACTURING PLANT, COLUMBIA, TN ALONG DUCK RIVER***	***791 SANTE FE PIKE, COLUMBIA, TN 38401***	***43***
1	FRSTN	110024586447	Lower (606 ft.)	TP	GRAFTECH INTERNATIONAL HOLDINGS LLC	791 SANTA FE PIKE, COLUMBIA, TN 38401	44
1	FRSTN	110035842675	Lower (606 ft.)	TP	GRAFTECH INTERNATIONAL HOLDINGS INC.	791 SANTA FE PIKE, COLUMBIA, TN 38401	45
1	FRSTN	110040889027	Lower (606 ft.)	TP	GRAFTECH INTERNATIONAL HOLDINGS LLC	HIGHWAY 7, SANTA FE PIKE, COLUMBIA, TN 38401	46
1	ICIS	110024586447	Lower (606 ft.)	TP	GRAFTECH ADVANCED GRAPHITE MATERIALS LLC	791 SANTA FE PIKE, COLUMBIA, TN 38401	47
1	ICIS	110035842675	Lower (606 ft.)	TP	UCAR CARBON COMPANY-COLUMBIA	791 SANTA FE PIKE, COLUMBIA, TN 38401	48
1	ICISNPDES	TN0002275INPDES	Lower (606 ft.)	TP	GRAFTECH ADVANCED GRAPHITE MATERIALS LLC	791 SANTA FE PIKE, COLUMBIA, TN 38401	49
1	ICISNPDES	TNR050188INPDES	Lower (606 ft.)	TP	GRAFTECH INTERNATIONAL HOLDINGS INC.	791 SANTA FE PK, COLUMBIA, TN 38401	65
1	***LFSWDS***	***IDL600000047***	***Lower (606 ft.)***	***TP***	***GRAFTECH ADVANCED GRAPHITE MATERIALS, LLC***	***791 SANTA FE PIKE, COLUMBIA, TN***	***70***
1	MRDS	10202322	Lower (606 ft.)	TP	UNION CARBIDE/ COLUMBIA, TN.	MAURY COUNTY, COLUMBIA, TN 38401	71
1	NPDESR04	TN0002275	Lower (606 ft.)	TP	UCAR CARBON COMPANY-COLUMBIA	SANTA FE PIKE, COLUMBIA, TN 38401	72
1	PADS	TND004038428	Lower (606 ft.)	TP	UCAR CARBON CO INC	SANTA FE PIKE, COLUMBIA, TN 38401	73
1	***RCRAGR04***	***TND004038428***	***Lower (606 ft.)***	***TP***	***GT COLUMBIA LLC***	***791 SANTA FE PIKE, COLUMBIA, TN 38401***	***74***

Located Sites Summary

*NOTE: Standard environmental records are displayed in **bold**.*

Map ID#	Database Name	Site ID#	Relative Elevation	Distance From Site	Site Name	Address	PAGE #
1	***SEMSARCH***	***TND004038428***	***Lower (606 ft.)***	***TP***	***UNION CARBIDE CORP***	***SANTA FE PIKE, COLUMBIA, TN 38401***	***77***
1	TRI	38401CRCRBSANTA	Lower (606 ft.)	TP	GRAFTECH ADVANCED GRAPHITE MATERIALS LLC	791 SANTA FE PIKE, COLUMBIA, TN 38401	78
1	TSCA	18269330	Lower (606 ft.)	TP	GRAFTECH INTERNATIONAL HOLDINGS INC	791 SANTA FE PIKE, COLUMBIA, TN 38401	80
2	ECHOR04	110009447866	Lower (597 ft.)	0.012 mi. SW (63 ft.)	GE CO APPLIANCES	981 INDUSTRIAL PARK ROAD, COLUMBIA, TN 38401	83
2	ECHOR04	110070031842	Lower (597 ft.)	0.012 mi. SW (63 ft.)	FREELAND AUTO RECYCLING, LLC	981 INDUSTRIAL PARK ROAD, COLUMBIA, TN 38401	84
2	FRSTN	110001865964	Lower (597 ft.)	0.012 mi. SW (63 ft.)	ACCURIDE CORPORATION	981 INDUSTRIAL PARK ROAD, COLUMBIA, TN 38401	85
2	FRSTN	110009447866	Lower (597 ft.)	0.012 mi. SW (63 ft.)	GE CO APPLIANCES	981 INDUSTRIAL PARK ROAD, COLUMBIA, TN 38401	86
2	FRSTN	110027631640	Lower (597 ft.)	0.012 mi. SW (63 ft.)	GENERAL ELECTRIC	COLUMBIA, TN 38401	87
2	FRSTN	110070031842	Lower (597 ft.)	0.012 mi. SW (63 ft.)	FREELAND AUTO RECYCLING, LLC	981 INDUSTRIAL PARK ROAD, COLUMBIA, TN 38401	88
2	ICISNPDES	TNR050287INPDES	Lower (597 ft.)	0.012 mi. SW (63 ft.)	FREELAND AUTO RECYCLING, LLC	981 INDUSTRIAL PARK ROAD, COLUMBIA, TN 38401	89
2	***RCRANGR04***	***TND075470443***	***Lower (597 ft.)***	***0.012 mi. SW (63 ft.)***	***GENERAL ELECTRIC COMPANY***	***981 INDUSTRIAL PARK ROAD, COLUMBIA, TN 38401***	***91***
2	***RST***	***6600111***	***Lower (597 ft.)***	***0.012 mi. SW (63 ft.)***	***GENERAL ELECTRIC***	***INDUSTRIAL PARK RT. # 4, COLUMBIA, TN 38401***	***93***
2	***SEMSARCH***	***TND075470443***	***Lower (597 ft.)***	***0.012 mi. SW (63 ft.)***	***GENERAL ELECTRIC CO.***	***INDUSTRIAL PARK, COLUMBIA, TN 38401***	***95***
2	TRI	38401GNRLLROUTE	Lower (597 ft.)	0.012 mi. SW (63 ft.)	GE CO. APPLIANCES	981 INDL. PARK RD., COLUMBIA, TN 38401	96
3	***RCRAGR04***	***TND982172793***	***Lower (619 ft.)***	***0.032 mi. WNW (169 ft.)***	***COLUMBIA SPECIALTIES***	***INDUSTRIAL PARK RD, COLUMBIA, TN 38401***	***97***
3	***SRS***	***SRS600991***	***Lower (619 ft.)***	***0.032 mi. WNW (169 ft.)***	***FEDDERS***	***1027 INDUSTRIAL PARK ROAD, COLUMBIA, TN***	***99***
3	***VCPBF***	***SRS600991***	***Lower (619 ft.)***	***0.032 mi. WNW (169 ft.)***	***FEDDERS***	***1027 INDUSTRIAL PARK ROAD, COLUMBIA, TN***	***100***
4	***LFSWDS***	***SNL600000240***	***Lower (601 ft.)***	***0.477 mi. N (2519 ft.)***	***MAURY COUNTY BALEFILL***	***1198 INDUSTRIAL PARK RD, COLUMBIA, TN***	***101***
4	***LFSWDS***	***SWP600001003***	***Lower (601 ft.)***	***0.477 mi. N (2519 ft.)***	***MAURY COUNTY BALER FACILITY***	***1198 INDUSTRIAL PARK RD, COLUMBIA, TN***	***102***
4	***LFSWDS***	***TRF600001253***	***Lower (601 ft.)***	***0.477 mi. N (2519 ft.)***	***MAURY COUNTY SANITARY TRANSFER STATION***	***1198 INDUSTRIAL PARK RD, COLUMBIA, TN***	***103***
4	***SEMSARCH***	***TND980848683***	***Lower (601 ft.)***	***0.477 mi. N (2519 ft.)***	***MAURY CNTY SANITARY LDFL***	***N BYPASS INDUSTRIAL PARK, COLUMBIA, TN 38401***	***104***
5	FUDS	G04TN0181	Lower (608 ft.)	0.869 mi. NE (4588 ft.)	MAURY C.W.S. PLANT	COLUMBIA, TN 38401	105

Elevation Summary

Elevations are collected from the USGS 3D Elevation Program 1/3 arc-second (approximately 10 meters) layer hosted at the NGTOC. .

Target Property Elevation: 653 ft.

*NOTE: Standard environmental records are displayed in **bold**.*

EQUAL/HIGHER ELEVATION

No Records Found

LOWER ELEVATION

Map ID#	Database Name	Elevation	Site Name	Address	Page #
1	AIRSAFS	606 ft.	GRATECH INTERNATIONAL HOLDINGS, INC.	791 SANTA FE PIKE, COLUMBIA, TN 38401	18
1	BRS	606 ft.	GRAFTECH INTERNATIONAL HOLDINGS INC.	791 SANTA FE PIKE, COLUMBIA, TN 38401	36
1	ECHOR04	606 ft.	GRAFTECH ADVANCED GRAPHITE MATERIALS LLC	791 SANTA FE PIKE, COLUMBIA, TN 38401	39
1	***ERNSTN***	***606 ft.***	***MANUFACTURING FACILITY***	***791 SANTA FE PIKE, COLUMBIA, TN 38401***	***40***
1	***ERNSTN***	***606 ft.***		***791 SANTA FE PIKE, COLUMBIA, TN 38401***	***42***
1	***ERNSTN***	***606 ft.***	***GRAFTECH MANUFACTURING PLANT, COLUMBIA, TN ALONG DUCK RIVER***	***791 SANTE FE PIKE, COLUMBIA, TN 38401***	***43***
1	FRSTN	606 ft.	GRAFTECH INTERNATIONAL HOLDINGS LLC	791 SANTA FE PIKE, COLUMBIA, TN 38401	44
1	FRSTN	606 ft.	GRAFTECH INTERNATIONAL HOLDINGS INC.	791 SANTA FE PIKE, COLUMBIA, TN 38401	45
1	FRSTN	606 ft.	GRAFTECH INTERNATIONAL HOLDINGS LLC	HIGHWAY 7, SANTA FE PIKE, COLUMBIA, TN 38401	46
1	ICIS	606 ft.	GRAFTECH ADVANCED GRAPHITE MATERIALS LLC	791 SANTA FE PIKE, COLUMBIA, TN 38401	47
1	ICIS	606 ft.	UCAR CARBON COMPANY-COLUMBIA	791 SANTA FE PIKE, COLUMBIA, TN 38401	48
1	ICISNPDES	606 ft.	GRAFTECH ADVANCED GRAPHITE MATERIALS LLC	791 SANTA FE PIKE, COLUMBIA, TN 38401	49
1	ICISNPDES	606 ft.	GRAFTECH INTERNATIONAL HOLDINGS INC.	791 SANTA FE PK, COLUMBIA, TN 38401	65
1	***LFSWDS***	***606 ft.***	***GRAFTECH ADVANCED GRAPHITE MATERIALS, LLC***	***791 SANTA FE PIKE, COLUMBIA, TN***	***70***
1	MRDS	606 ft.	UNION CARBIDE/ COLUMBIA, TN.	MAURY COUNTY, COLUMBIA, TN 38401	71
1	NPDESR04	606 ft.	UCAR CARBON COMPANY-COLUMBIA	SANTA FE PIKE, COLUMBIA, TN 38401	72
1	PADS	606 ft.	UCAR CARBON CO INC	SANTA FE PIKE, COLUMBIA, TN 38401	73
1	***RCRAGR04***	***606 ft.***	***GT COLUMBIA LLC***	***791 SANTA FE PIKE, COLUMBIA, TN 38401***	***74***
1	***SEMSARCH***	***606 ft.***	***UNION CARBIDE CORP***	***SANTA FE PIKE, COLUMBIA, TN 38401***	***77***
1	TRI	606 ft.	GRAFTECH ADVANCED GRAPHITE MATERIALS LLC	791 SANTA FE PIKE, COLUMBIA, TN 38401	78
1	TSCA	606 ft.	GRAFTECH INTERNATIONAL HOLDINGS INC	791 SANTA FE PIKE, COLUMBIA, TN 38401	80

Elevation Summary

Map ID#	Database Name	Elevation	Site Name	Address	Page #
2	ECHOR04	597 ft.	GE CO APPLIANCES	981 INDUSTRIAL PARK ROAD, COLUMBIA, TN 38401	83
2	ECHOR04	597 ft.	FREELAND AUTO RECYCLING, LLC	981 INDUSTRIAL PARK ROAD, COLUMBIA, TN 38401	84
2	FRSTN	597 ft.	ACCURIDE CORPORATION	981 INDUSTRIAL PARK ROAD, COLUMBIA, TN 38401	85
2	FRSTN	597 ft.	GE CO APPLIANCES	981 INDUSTRIAL PARK ROAD, COLUMBIA, TN 38401	86
2	FRSTN	597 ft.	GENERAL ELECTRIC	COLUMBIA, TN 38401	87
2	FRSTN	597 ft.	FREELAND AUTO RECYCLING, LLC	981 INDUSTRIAL PARK ROAD, COLUMBIA, TN 38401	88
2	ICISNPDES	597 ft.	FREELAND AUTO RECYCLING, LLC	981 INDUSTRIAL PARK ROAD, COLUMBIA, TN 38401	89
2	***RCRANGR04***	***597 ft.***	***GENERAL ELECTRIC COMPANY***	***981 INDUSTRIAL PARK ROAD, COLUMBIA, TN 38401***	***91***
2	***RST***	***597 ft.***	***GENERAL ELECTRIC***	***INDUSTRIAL PARK RT. # 4, COLUMBIA, TN 38401***	***93***
2	***SEMSARCH***	***597 ft.***	***GENERAL ELECTRIC CO.***	***INDUSTRIAL PARK, COLUMBIA, TN 38401***	***95***
2	TRI	597 ft.	GE CO. APPLIANCES	981 INDL. PARK RD., COLUMBIA, TN 38401	96
3	***RCRAGR04***	***619 ft.***	***COLUMBIA SPECIALTIES***	***INDUSTRIAL PARK RD, COLUMBIA, TN 38401***	***97***
3	***SRS***	***619 ft.***	***FEDDERS***	***1027 INDUSTRIAL PARK ROAD, COLUMBIA, TN***	***99***
3	***VCPBF***	***619 ft.***	***FEDDERS***	***1027 INDUSTRIAL PARK ROAD, COLUMBIA, TN***	***100***
4	***LFSWDS***	***601 ft.***	***MAURY COUNTY BALEFILL***	***1198 INDUSTRIAL PARK RD, COLUMBIA, TN***	***101***
4	***LFSWDS***	***601 ft.***	***MAURY COUNTY BALER FACILITY***	***1198 INDUSTRIAL PARK RD, COLUMBIA, TN***	***102***
4	***LFSWDS***	***601 ft.***	***MAURY COUNTY SANITARY TRANSFER STATION***	***1198 INDUSTRIAL PARK RD, COLUMBIA, TN***	***103***
4	***SEMSARCH***	***601 ft.***	***MAURY CNTY SANITARY LDFL***	***N BYPASS INDUSTRIAL PARK, COLUMBIA, TN 38401***	***104***
5	FUDS	608 ft.	MAURY C.W.S. PLANT	COLUMBIA, TN 38401	105

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

SITE INFORMATION

UNIQUE ID: **84629**
PLANT ID: **84629**
NAME: **GRATECH INTERNATIONAL HOLDINGS, INC.**
ADDRESS: **791 SANTA FE PIKE**
COLUMBIA, TN 38401
CLASSIFICATION: **ACTUAL OR POTENTIAL EMISSIONS ARE ABOVE THE APPLICABLE MAJOR SOURCE THRESHOLDS.**
OPERATION STATUS: **OPERATING**
STATE COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
FACILITY TYPE: **PRIVATELY OWNED/OPERATED**
CURRENT HIGH PRIORITY VIOLATOR: **NOT REPORTED**
SIC DESCRIPTION: **ESTABLISHMENTS PRIMARILY ENGAGED IN MANUFACTURING CARBON, GRAPHITE, AND METAL-GRAPHITE BRUSHES AND BRUSH STOCK; CARBON OR GRAPHITE ELECTRODES FOR THERMAL AND ELECTROLYTIC USES; CARBON AND GRAPHITE FIBERS; AND OTHER CARBON, GRAPHITE, AND METAL-GRAPHITE PRODUCTS.**

ENFORCEMENT ACTIONS

DATE ACHIEVED: **05/28/2014**
DATE RECORDED: **07/08/2014**
NATIONAL ACTION TYPE: **TITLE V ANNUAL COMPL CERT DUE/RECVD BY STATE/LOCAL**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **NOT REPORTED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **05/28/2014**
DATE RECORDED: **07/08/2014**
NATIONAL ACTION TYPE: **TITLE V COMPLIANCE CERTIFICATION REVIEW BY STATE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **IN COMPLIANCE**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **05/30/2013**
DATE RECORDED: **09/11/2013**
NATIONAL ACTION TYPE: **STATE CONDUCTED FCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**

PENALTY AMOUNT: **0**

DATE ACHIEVED: **05/30/2013**
DATE RECORDED: **09/11/2013**
NATIONAL ACTION TYPE: **TITLE V COMPLIANCE CERTIFICATION REVIEW BY STATE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **IN COMPLIANCE**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **05/29/2013**
DATE RECORDED: **09/11/2013**
NATIONAL ACTION TYPE: **TITLE V ANNUAL COMPL CERT DUE/RECVD BY STATE/LOCAL**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **NOT REPORTED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **04/16/2013**
DATE RECORDED: **09/11/2013**
NATIONAL ACTION TYPE: **STATE PCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **NOT REPORTED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **12/27/2012**
DATE RECORDED: **07/23/2013**
NATIONAL ACTION TYPE: **OWNER/OPERATOR-CONDUCTED SOURCE TEST**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **STACK TEST PASSED**
POLLUTANT: **TOTAL PARTICULATE MATTER**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **12/27/2012**
DATE RECORDED: **07/23/2013**
NATIONAL ACTION TYPE: **STATE CONDUCTED FCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**

RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **06/15/2012**
DATE RECORDED: **09/18/2012**
NATIONAL ACTION TYPE: **TITLE V COMPLIANCE CERTIFICATION REVIEW BY STATE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **IN COMPLIANCE**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **05/25/2012**
DATE RECORDED: **02/15/2013**
NATIONAL ACTION TYPE: **TITLE V ANNUAL COMPL CERT DUE/RECVD BY STATE/LOCAL**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **NOT REPORTED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **05/03/2012**
DATE RECORDED: **07/18/2012**
NATIONAL ACTION TYPE: **OWNER/OPERATOR-CONDUCTED SOURCE TEST**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **PENDING**
POLLUTANT: **TOTAL PARTICULATE MATTER**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **05/27/2011**
DATE RECORDED: **09/08/2011**
NATIONAL ACTION TYPE: **TITLE V ANNUAL COMPL CERT DUE/RECVD BY STATE/LOCAL**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **NOT REPORTED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **03/01/2011**
DATE RECORDED: **11/30/2011**
NATIONAL ACTION TYPE: **TITLE V COMPLIANCE CERTIFICATION REVIEW BY STATE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **IN COMPLIANCE**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **03/01/2011**
DATE RECORDED: **10/06/2011**
NATIONAL ACTION TYPE: **STATE PCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **NOT REPORTED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **03/01/2011**
DATE RECORDED: **11/30/2011**
NATIONAL ACTION TYPE: **STATE CONDUCTED FCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **05/28/2010**
DATE RECORDED: **07/08/2010**
NATIONAL ACTION TYPE: **TITLE V ANNUAL COMPL CERT DUE/RECVD BY STATE/LOCAL**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **NOT REPORTED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **02/26/2010**
DATE RECORDED: **10/18/2010**
NATIONAL ACTION TYPE: **STATE PCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **NOT REPORTED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**

TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **09/22/2009**
DATE RECORDED: **11/06/2009**
NATIONAL ACTION TYPE: **TITLE V COMPLIANCE CERTIFICATION REVIEW BY STATE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **IN COMPLIANCE**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **09/22/2009**
DATE RECORDED: **11/06/2009**
NATIONAL ACTION TYPE: **STATE CONDUCTED FCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **05/20/2009**
DATE RECORDED: **06/29/2009**
NATIONAL ACTION TYPE: **TITLE V ANNUAL COMPL CERT DUE/RECVD BY STATE/LOCAL**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **NOT REPORTED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **06/16/2008**
DATE RECORDED: **06/30/2008**
NATIONAL ACTION TYPE: **STATE CONDUCTED FCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **06/16/2008**
DATE RECORDED: **06/30/2008**
NATIONAL ACTION TYPE: **TITLE V COMPLIANCE CERTIFICATION REVIEW BY STATE**

ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **IN COMPLIANCE**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **05/23/2008**
DATE RECORDED: **06/05/2008**
NATIONAL ACTION TYPE: **TITLE V ANNUAL COMPL CERT DUE/RECVD BY STATE/LOCAL**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **NOT REPORTED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **11/21/2007**
DATE RECORDED: **04/03/2008**
NATIONAL ACTION TYPE: **STATE CONDUCTED FCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **11/21/2007**
DATE RECORDED: **01/16/2008**
NATIONAL ACTION TYPE: **TITLE V COMPLIANCE CERTIFICATION REVIEW BY STATE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **IN COMPLIANCE**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **05/29/2007**
DATE RECORDED: **06/25/2007**
NATIONAL ACTION TYPE: **TITLE V ANNUAL COMPL CERT DUE/RECVD BY STATE/LOCAL**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **NOT REPORTED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **08/16/2006**
DATE RECORDED: **09/26/2006**
NATIONAL ACTION TYPE: **TITLE V COMPLIANCE CERTIFICATION REVIEW BY STATE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **IN COMPLIANCE**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **05/31/2006**
DATE RECORDED: **08/01/2006**
NATIONAL ACTION TYPE: **TITLE V ANNUAL COMPL CERT DUE/RECVD BY STATE/LOCAL**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **NOT REPORTED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **04/04/2006**
DATE RECORDED: **05/10/2006**
NATIONAL ACTION TYPE: **STATE CONDUCTED FCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **08/19/2005**
DATE RECORDED: **07/31/2007**
NATIONAL ACTION TYPE: **TITLE V COMPLIANCE CERTIFICATION REVIEW BY STATE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **IN COMPLIANCE**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **07/20/2005**
DATE RECORDED: **08/05/2005**
NATIONAL ACTION TYPE: **TITLE V COMPLIANCE CERTIFICATION REVIEW BY STATE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **IN COMPLIANCE**
POLLUTANT: **NOT REPORTED**

ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **05/16/2005**
DATE RECORDED: **07/05/2005**
NATIONAL ACTION TYPE: **TITLE V ANNUAL COMPL CERT DUE/RECVD BY STATE/LOCAL**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **NOT REPORTED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **04/06/2005**
DATE RECORDED: **06/20/2005**
NATIONAL ACTION TYPE: **STATE CONDUCTED FCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **06/02/2004**
DATE RECORDED: **06/28/2004**
NATIONAL ACTION TYPE: **TITLE V ANNUAL COMPL CERT DUE/RECVD BY STATE/LOCAL**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **NOT REPORTED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **02/12/2004**
DATE RECORDED: **05/17/2004**
NATIONAL ACTION TYPE: **STATE CONDUCTED FCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **02/13/2003**
DATE RECORDED: **05/21/2003**

NATIONAL ACTION TYPE: **STATE CONDUCTED FCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **02/08/2002**
DATE RECORDED: **10/16/2002**
NATIONAL ACTION TYPE: **STATE CONDUCTED FCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE,TITLE V PERMITS**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **02/13/2001**
DATE RECORDED: **05/22/2001**
NATIONAL ACTION TYPE: **STATE PCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **02/10/2000**
DATE RECORDED: **05/18/2000**
NATIONAL ACTION TYPE: **STATE PCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **11/14/1995**
DATE RECORDED: **08/19/1996**
NATIONAL ACTION TYPE: **STATE PCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **07/26/1994**
DATE RECORDED: **09/24/1994**
NATIONAL ACTION TYPE: **STATE PCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **05/27/1993**
DATE RECORDED: **10/30/1993**
NATIONAL ACTION TYPE: **STATE PCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **03/24/1992**
DATE RECORDED: **05/08/1992**
NATIONAL ACTION TYPE: **STATE PCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **07/16/1991**
DATE RECORDED: **09/19/1991**
NATIONAL ACTION TYPE: **STATE PCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE**
RESULTS OF STACK TEST AND TITLE V: **NOT REPORTED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **05/24/1990**
DATE RECORDED: **08/21/1990**
NATIONAL ACTION TYPE: **STATE PCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**

POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **04/05/1989**
DATE RECORDED: **02/22/1990**
NATIONAL ACTION TYPE: **STATE PCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **07/14/1988**
DATE RECORDED: **02/22/1990**
NATIONAL ACTION TYPE: **STATE PCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **05/12/1987**
DATE RECORDED: **02/22/1990**
NATIONAL ACTION TYPE: **STATE PCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

DATE ACHIEVED: **06/05/1986**
DATE RECORDED: **02/22/1990**
NATIONAL ACTION TYPE: **STATE PCE/ON-SITE**
ALL AIR PROGRAM: **SIP SOURCE**
RESULTS OF STACK TEST AND TITLE V: **ACTION ACHIEVED**
POLLUTANT: **NOT REPORTED**
ALL POLLUTION IN VIOLATION: **NOT REPORTED**
TYPE OF VIOLATION(S): **NOT REPORTED**
PENALTY AMOUNT: **0**

AIR PROGRAM

AIR PROGRAM STATUS: **OPERATING**
EPA COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
POLLUTANT COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
POLLUTANT: **CARBON MONOXIDE**

AIR PROGRAM STATUS: **OPERATING**
EPA COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
POLLUTANT COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
POLLUTANT: **HYDROGEN SULFIDE**

AIR PROGRAM STATUS: **OPERATING**
EPA COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
POLLUTANT COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
POLLUTANT: **NOT REPORTED**

AIR PROGRAM STATUS: **OPERATING**
EPA COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
POLLUTANT COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
POLLUTANT: **TOTAL PARTICULATE MATTER**

AIR PROGRAM STATUS: **OPERATING**
EPA COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
POLLUTANT COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
POLLUTANT: **SULFUR DIOXIDE**

AIR PROGRAM STATUS: **OPERATING**
EPA COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
POLLUTANT COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
POLLUTANT: **TOTAL HAP POLLUTANT**

AIR PROGRAM STATUS: **OPERATING**
EPA COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
POLLUTANT COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
POLLUTANT: **VOLATILE ORGANIC COMPOUNDS**

AIR PROGRAM STATUS: **OPERATING**
EPA COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
POLLUTANT COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**
POLLUTANT: **TOTAL PARTICULATE MATTER**

HISTORICAL COMPLIANCE AIR PROGRAM LEVEL

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1103**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**

COMPLIANCE DATE (YYYQ): **0904**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1203**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **0801**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **0704**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **0803**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1203**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1004**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1202**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **0901**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1301**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1101**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1202**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1102**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **0903**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **0903**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **0703**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **0703**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **0902**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1001**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1102**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1304**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1002**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **0802**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1402**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1001**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1204**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **0704**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1402**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **0701**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1103**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **0702**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **0804**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **0901**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1403**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1101**

HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1003**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **0803**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1301**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **0604**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1304**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1004**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1003**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1201**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1303**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1104**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **0604**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1201**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1303**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **0904**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1002**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1104**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **0702**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **0902**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1401**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1204**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **0802**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **0701**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**

COMPLIANCE DATE (YYYQ): **1403**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **0804**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1401**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **0801**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **TITLE V PERMITS**
COMPLIANCE DATE (YYYQ): **1302**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

AIR PROGRAM: **SIP SOURCE**
COMPLIANCE DATE (YYYQ): **1302**
HISTORICAL COMPLIANCE STATUS: **IN COMPLIANCE - INSPECTION**

Back to Report Summary

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

FACILITY INFORMATION

HANDLER IDENTIFICATION: **TND004038428**
SITENAME: **GRAFTECH INTERNATIONAL HOLDINGS INC.**
ADDRESS: **791 SANTA FE PIKE**
COLUMBIA, TN 38401
REPORTED YEARS: **2011**

WASTE INFORMATION LAST REPORTED YEAR: **2011**

MANAGEMENT LOCATION: **OFFSITE**
SOURCE CODE DESCRIPTION:
OTHER ONE-TIME OR INTERMITTENT PROCESSES (SPECIFY IN COMMENTS)
FORM CODE DESCRIPTION:
W209 - PAINT, INK, LACQUER, OR VARNISH (FLUID û NOT DRIED OUT OR SLUDGE)
MANAGEMENT DESCRIPTION:
H040 - INCINERATION - THERMAL DESTRUCTION OTHER THAN USE AS A FUEL (INCLUDES ANY PREPARATION PRIOR TO BURNING)
GENERATOR ID INCLUDED IN NBR: **YES**
GENERATOR WASTE STREAM INCLUDED IN NBR: **YES**
QUANITITY GENERATED IN TONS: **.0685124**
MANAGER ID INCLUDED IN NBR: **NO**
MANAGER WASTE STREAM INCLUDED IN NBR: **NO**
QUANITITY MANAGED IN TONS: **0**
SHIPPER ID INCLUDED IN NBR: **YES**
SHIPPER WASTE STREAM INCLUDED IN NBR: **YES**
SHIPPER ID: **TND004038428**
SHIPPER STATE: **TENNESSEE**
QUANITITY SHIPPED IN TONS: **.0360065**
RECEIVER ID INCLUDED IN NBR: **NO**
RECEIVER WASTE STREAM INCLUDED IN NBR: **NO**
RECEIVER ID: **ALD000622464**
RECEIVER STATE: **ALABAMA**
QUANITITY RECEIVED IN TONS: **0**
FEDERAL WASTE: **YES**
WASTEWATER CHARACTERISTIC INDICATOR: **NO**
WASTE DESCRIPTION SIC: **335991 -**
WASTE MINIMIZATION CODE DESCRIPTION:
X - NO WASTE MINIMIZATION EFFORTS WERE IMPLEMENTED FOR THIS WASTE
WASTE CODE DESCRIPTION: **D001 - IGNITABLE WASTE**

MANAGEMENT LOCATION: **OFFSITE**
SOURCE CODE DESCRIPTION:
DISCARDING OFF-SPECIFICATION, OUT-OF-DATE, AND/OR UNUSED CHEMICALS OR PRODUCTS
FORM CODE DESCRIPTION:
W001 - LAB PACKS FROM ANY SOURCE NOT CONTAINING ACUTE HAZARDOUS WASTE

MANAGEMENT DESCRIPTION:
H010 - METALS RECOVERY INCLUDING RETORTING, SMELTING, CHEMICAL, ETC.
GENERATOR ID INCLUDED IN NBR: **YES**
GENERATOR WASTE STREAM INCLUDED IN NBR: **YES**
QUANITITY GENERATED IN TONS: **.0320058**
MANAGER ID INCLUDED IN NBR: **NO**
MANAGER WASTE STREAM INCLUDED IN NBR: **NO**
QUANITITY MANAGED IN TONS: **0**
SHIPPER ID INCLUDED IN NBR: **YES**
SHIPPER WASTE STREAM INCLUDED IN NBR: **YES**
SHIPPER ID: **TND004038428**
SHIPPER STATE: **TENNESSEE**
QUANITITY SHIPPED IN TONS: **.0320058**
RECEIVER ID INCLUDED IN NBR: **NO**
RECEIVER WASTE STREAM INCLUDED IN NBR: **NO**
RECEIVER ID: **ALD000622464**
RECEIVER STATE: **ALABAMA**
QUANITITY RECEIVED IN TONS: **0**
FEDERAL WASTE: **YES**
WASTEWATER CHARACTERISTIC INDICATOR: **NO**
WASTE DESCRIPTION SIC: **335991 -**
WASTE MINIMIZATION CODE DESCRIPTION:
X - NO WASTE MINIMIZATION EFFORTS WERE IMPLEMENTED FOR THIS WASTE
WASTE CODE DESCRIPTION: **D001 - IGNITABLE WASTE**

MANAGEMENT LOCATION: **OFFSITE**
SOURCE CODE DESCRIPTION:
LABORATORY ANALYTICAL WASTES (USED CHEMICALS FROM LABORATORY OPERATIONS)
FORM CODE DESCRIPTION:
W203 - CONCENTRATED NON-HALOGENATED (E.G., NON-CHLORINATED) SOLVENT
MANAGEMENT DESCRIPTION:
H040 - INCINERATION - THERMAL DESTRUCTION OTHER THAN USE AS A FUEL (INCLUDES ANY PREPARATION PRIOR TO BURNING)
GENERATOR ID INCLUDED IN NBR: **YES**
GENERATOR WASTE STREAM INCLUDED IN NBR: **YES**
QUANITITY GENERATED IN TONS: **.5040912**
MANAGER ID INCLUDED IN NBR: **NO**
MANAGER WASTE STREAM INCLUDED IN NBR: **NO**
QUANITITY MANAGED IN TONS: **0**
SHIPPER ID INCLUDED IN NBR: **YES**
SHIPPER WASTE STREAM INCLUDED IN NBR: **YES**
SHIPPER ID: **TND004038428**
SHIPPER STATE: **TENNESSEE**
QUANITITY SHIPPED IN TONS: **.199036**
RECEIVER ID INCLUDED IN NBR: **NO**
RECEIVER WASTE STREAM INCLUDED IN NBR: **NO**
RECEIVER ID: **ALD000622464**

RECEIVER STATE: **ALABAMA**
QUANITITY RECEIVED IN TONS: **0**
FEDERAL WASTE: **YES**
WASTEWATER CHARACTERISTIC INDICATOR: **NO**
WASTE DESCRIPTION SIC: **335991 -**
WASTE MINIMIZATION CODE DESCRIPTION:
X - NO WASTE MINIMIZATION EFFORTS WERE IMPLEMENTED FOR THIS WASTE
WASTE CODE DESCRIPTION: **D001 - IGNITABLE WASTE**

MANAGEMENT LOCATION: **NONE**
SOURCE CODE DESCRIPTION:
OTHER PRODUCTION OR SERVICE-RELATED PROCESSES FROM WHICH THE WASTE IS A DIRECT OUTFLOW OR RESULT (SPECIFY IN COMMENTS)
FORM CODE DESCRIPTION:
W409 - OTHER ORGANIC SOLIDS (SPECIFY IN COMMENTS)
MANAGEMENT DESCRIPTION:
NOT REPORTED -
GENERATOR ID INCLUDED IN NBR: **YES**
GENERATOR WASTE STREAM INCLUDED IN NBR: **YES**
QUANITITY GENERATED IN TONS: **.0013202**
MANAGER ID INCLUDED IN NBR: **NO**
MANAGER WASTE STREAM INCLUDED IN NBR: **NO**
QUANITITY MANAGED IN TONS: **0**
SHIPPER ID INCLUDED IN NBR: **YES**
SHIPPER WASTE STREAM INCLUDED IN NBR: **NO**
SHIPPER ID: **NOT REPORTED**
SHIPPER STATE: **NOT REPORTED**
QUANITITY SHIPPED IN TONS: **0**
RECEIVER ID INCLUDED IN NBR: **NO**
RECEIVER WASTE STREAM INCLUDED IN NBR: **NO**
RECEIVER ID: **NOT REPORTED**
RECEIVER STATE: **NOT REPORTED**
QUANITITY RECEIVED IN TONS: **0**
FEDERAL WASTE: **YES**
WASTEWATER CHARACTERISTIC INDICATOR: **NO**
WASTE DESCRIPTION SIC: **335991 -**
WASTE MINIMIZATION CODE DESCRIPTION:
X - NO WASTE MINIMIZATION EFFORTS WERE IMPLEMENTED FOR THIS WASTE
WASTE CODE DESCRIPTION: **U125 - 2-FURANCARBOXALDEHYDE (I)**

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Enforcement and Compliance History Information (ECHOR04)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

FACILITY INFORMATION

UNIQUE ID: **110024586447**
REGISTRY ID: **110024586447**
NAME: **GRAFTECH ADVANCED GRAPHITE MATERIALS LLC**
ADDRESS: **791 SANTA FE PIKE**
COLUMBIA, TN 38401
COUNTY: **MAURY COUNTY**
FACILITY LINK: *Facility Detail Report*

Back to Report Summary

Emergency Response Notification System (ERNSTN)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

INCIDENT INFORMATION

GSID#: **1107357**
NRC ID#: **1107357**
INCIDENT LOCATION: **MANUFACTURING FACILITY**
INCIDENT ADDRESS: **791 SANTA FE PIKE**
COLUMBIA, TN 38401
INCIDENT COUNTY: **MAURY**

INCIDENT DETAILS

INCIDENT DATE: **2/3/2015 3:05:00 PM**
INCIDENT CAUSE: **EQUIPMENT FAILURE**
INCIDENT TYPE: **FIXED**
INCIDENT OCCURED/DISCOVERED: **DISCOVERED**
INCIDENT DESCRIPTION: **BENZO (A) ANTHRACENE, BENZO (B) FLUORANTHENE, BENZO (J) FLUORANTHENE, #7, 12-DIMETHYL BENZ (A) ANTHRACENE, BENZO (A) PYRENE, DIBENZ (A,H) ANTHRACENE, DIBENZO (A,H) PYRENE AND DIBENZO (A,L) PYRENE RELEASED FROM A BAKE FURNACE DUE TO A FAILURE OF AIR POLLUTION CONTROL EQUIPMENT.**

RESPONSIBLE PARTY

RESPONSIBLE COMPANY: **GRAFTECH INTERNATIONAL**
ADDRESS: **ADDRESS NOT REPORTED**
COLUMBIA TN 38401
RESPONSIBLE COMPANY ORGANIZATION TYPE: **PRIVATE ENTERPRISE**

MATERIALS INVOLVED

CHRIS CODE: **NCC**
MATERIAL REACHED WATER: **NO**
WATER AMOUNT: **UNKNOWN AMOUNT / NOT REPORTED**
MATERIAL RELEASED/AMOUNT: **BENZO (J) FLUORANTHENE / 146 POUND(S)**

CHRIS CODE: **NCC**
MATERIAL REACHED WATER: **NO**
WATER AMOUNT: **UNKNOWN AMOUNT / NOT REPORTED**
MATERIAL RELEASED/AMOUNT: **#7, 12-DIMETHYL BENZ (A) ANTHRACENE / 146 POUND(S)**

CHRIS CODE: **NCC**
MATERIAL REACHED WATER: **NO**
WATER AMOUNT: **UNKNOWN AMOUNT / NOT REPORTED**
MATERIAL RELEASED/AMOUNT: **BENZO (B) FLUORANTHENE / 145 POUND(S)**

CHRIS CODE: **NCC**
MATERIAL REACHED WATER: **NO**
WATER AMOUNT: **UNKNOWN AMOUNT / NOT REPORTED**
MATERIAL RELEASED/AMOUNT: **BENZO (A) ANTHRACENE / 64 POUND(S)**

CHRIS CODE: **NCC**

MATERIAL REACHED WATER: **NO**
WATER AMOUNT: **UNKNOWN AMOUNT / NOT REPORTED**
MATERIAL RELEASED/AMOUNT: **BENZO (A) PYRENE / 93 POUND(S)**

CHRIS CODE: **NCC**
MATERIAL REACHED WATER: **NO**
WATER AMOUNT: **UNKNOWN AMOUNT / NOT REPORTED**
MATERIAL RELEASED/AMOUNT: **DIBENZO (A,L) PYRENE / 29 POUND(S)**

CHRIS CODE: **NCC**
MATERIAL REACHED WATER: **NO**
WATER AMOUNT: **UNKNOWN AMOUNT / NOT REPORTED**
MATERIAL RELEASED/AMOUNT: **DIBENZO (A,H) PYRENE / 3 POUND(S)**

CHRIS CODE: **NCC**
MATERIAL REACHED WATER: **NO**
WATER AMOUNT: **UNKNOWN AMOUNT / NOT REPORTED**
MATERIAL RELEASED/AMOUNT: **DIBENZ (A,H) ANTHRACENE / 24 POUND(S)**

OTHER MATERIALS INVOLVED
- NO OTHER MATERIALS INVOLVED -

REMEDIAL ACTION
REMEDIAL ACTION: **AIR POLLUTION CONTROL UNIT IS FUNCTIONING AND THEY ARE SECURING OPERATIONS.**

Back to Report Summary

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

INCIDENT INFORMATION

GSID#: **1108021**
NRC ID#: **1108021**
INCIDENT LOCATION: **NOT REPORTED**
INCIDENT ADDRESS: **791 SANTA FE PIKE**
COLUMBIA, TN 38401
INCIDENT COUNTY: **MAURY**

INCIDENT DETAILS

INCIDENT DATE: **2/11/2015 12:50:00 PM**
INCIDENT CAUSE: **EQUIPMENT FAILURE**
INCIDENT TYPE: **FIXED**
INCIDENT OCCURED/DISCOVERED: **OCCURRED**
INCIDENT DESCRIPTION: **CALLER IS REPORTING A RELEASE OF BENZO (A) ANTHRACENE INTO THE ATMOSPHERE FROM A BAKE FURNACE DUE TO A MALFUNCTION OF THE TRANSFER DAMPER. INCIDENT IS STILL UNDER INVESTIGATION.**

RESPONSIBLE PARTY

RESPONSIBLE COMPANY: **GRAFTECH INTERNATIONAL**
ADDRESS: **ADDRESS NOT REPORTED**
COLUMBIA TN 38401
RESPONSIBLE COMPANY ORGANIZATION TYPE: **PRIVATE ENTERPRISE**

MATERIALS INVOLVED

CHRIS CODE: **NCC**
MATERIAL REACHED WATER: **NO**
WATER AMOUNT: **UNKNOWN AMOUNT / NOT REPORTED**
MATERIAL RELEASED/AMOUNT: **BENZO (A) ANTHRACENE / 49.5 POUND(S)**

OTHER MATERIALS INVOLVED

- NO OTHER MATERIALS INVOLVED -

REMEDIAL ACTION

REMEDIAL ACTION: **TRIED TO BRING ON OTHER FURNACES, EVENT WAS SECURED TODAY AT 1200.**

Back to Report Summary

Emergency Response Notification System (ERNSTN)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

INCIDENT INFORMATION

GSID#: **947969**

NRC ID#: **947969**

INCIDENT LOCATION: **GRAFTECH MANUFACTURING PLANT, COLUMBIA, TN ALONG DUCK RIVER**

INCIDENT ADDRESS: **791 SANTE FE PIKE**
COLUMBIA, TN 38401

INCIDENT COUNTY: **MAURY**

INCIDENT DETAILS

INCIDENT DATE: **5/14/2010 8:30:00 AM**

INCIDENT CAUSE: **FLOOD**

INCIDENT TYPE: **FIXED**

INCIDENT OCCURED/DISCOVERED: **DISCOVERED**

INCIDENT DESCRIPTION: **ON 5/1/10 AND 5/2/10, MIDDLE TENNESSEE EXPERIENCED ATYPICAL RAINFALL, OFTEN OCCURRING IN INTENSE BURSTS AND TOTALING 9.7 INCHES NEAR THE GRAFTECH MANUFACTURING SITE IN COLUMBIA. DUCK RIVER FLOODED AT A PEAK LEVEL OF 579.33 AMSL AND FLOW OF 45,000 CFS ALON**

RESPONSIBLE PARTY

RESPONSIBLE COMPANY: **GRAFTECH INTERNATIONAL HOLDINGS INC.**

ADDRESS: **ADDRESS NOT REPORTED**
COLUMBIA TN 38401

RESPONSIBLE COMPANY ORGANIZATION TYPE: **PRIVATE ENTERPRISE**

MATERIALS INVOLVED

CHRIS CODE: **PCB**

MATERIAL REACHED WATER: **YES**

WATER AMOUNT: **8 POUND(S)**

MATERIAL RELEASED/AMOUNT: **POLYCHLORINATED BIPHENYLS / 8 POUND(S)**

OTHER MATERIALS INVOLVED

- NO OTHER MATERIALS INVOLVED -

REMEDIAL ACTION

REMEDIAL ACTION: **GRAFTECH INSTALLED TEMPORARY CHECK DAM AT BANK BREACH TO PREVENT ADDITIONAL MATERIALS FROM REACHING THE RIVER. CORRECTIVE ACTION PLAN SUBMITTED TO TN DEC AND ARMY CORPS OF ENGINEERS ON 7/12/10, WHICH WILL BE IMPLEMENTED UPON THEIR APPROVAL.**

Back to Report Summary

Facility Registry System (FRSTN)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

FACILITY INFORMATION

REGISTRY ID: **110024586447**

NAME: **GRAFTECH INTERNATIONAL HOLDINGS LLC**

LOCATION ADDRESS: **791 SANTA FE PIKE**
COLUMBIA, TN 38401

COUNTY: **MAURY COUNTY**

EPA REGION: **4**

FEDERAL FACILITY: **NOT REPORTED**

TRIBAL LAND: **NOT REPORTED**

ALTERNATIVE NAME/S:

GRAFTECH INTERNATIONAL HOLDINGS INC.
GRAFTECH INTERNATIONAL HOLDINGS, INC.
GRAFTECH ADVANCED GRAPHITE MATERIALS LLC (GRAFTECH INTERNATIONAL HOLDINGS INC.)
GRAFTECH INTERNATIONAL HOLDINGS LLC
GRAFTECH INTERNATIONAL HOLDINGS INC
GRAF TECH - COLUMBIA, TN
GRATECH INTERNATIONAL HOLDINGS, INC.
UCAR CARBON CO INC

PROGRAM/S LISTED FOR THIS FACILITY

BR - BR
RCRAINFO - RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM
ICIS - INTEGRATED COMPLIANCE INFORMATION SYSTEM
AIR - AIR
NPDES - NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
EIS - EIS
E-GGRT - E-GGRT
TRIS - TOXIC CHEMICAL RELEASE INVENTORY SYSTEM
TSCA - TSCA
AIRS/AFS - AEROMETRIC INFORMATION RETRIEVAL SYSTEM / AIRS FACILITY SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

3624 - CARBON AND GRAPHITE PRODUCTS

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

335991 - CARBON AND GRAPHITE PRODUCT MANUFACTURING.
335991 - CARBON AND GRAPHITE PRODUCT MANUFACTURING.
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Back to Report Summary

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

FACILITY INFORMATION

REGISTRY ID: **110035842675**

NAME: **GRAFTECH INTERNATIONAL HOLDINGS INC.**

LOCATION ADDRESS: **791 SANTA FE PIKE**
COLUMBIA, TN 38401

COUNTY: **MAURY**

EPA REGION: **04**

FEDERAL FACILITY: **NOT REPORTED**

TRIBAL LAND: **NOT REPORTED**

ALTERNATIVE NAME/S:

GRAFTECH INTERNATIONAL HOLDINGS INC.
GRAFTECH INTERNATIONAL HOLDINGS, INC.
GRAFTECH INTERNATIONAL HOLDINGS LLC
GRATECH INTERNATIONAL HOLDINGS, INC.
UCAR CARBON COMPANY-COLUMBIA
GRAFTECH INTERNATIONAL HOLDINGS INC
GRAF TECH - COLUMBIA, TN
UCAR CARBON CO INC

PROGRAM/S LISTED FOR THIS FACILITY

TRIS - TOXIC CHEMICAL RELEASE INVENTORY SYSTEM
AIR - AIR
NPDES - NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
RCRAINFO - RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM
EIS - EIS
TSCA - TSCA
E-GGRT - E-GGRT
ICIS - INTEGRATED COMPLIANCE INFORMATION SYSTEM
AIRS/AFS - AEROMETRIC INFORMATION RETRIEVAL SYSTEM / AIRS FACILITY SYSTEM
BR - BR

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

3624 - CARBON AND GRAPHITE PRODUCTS

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

335991 - CARBON AND GRAPHITE PRODUCT MANUFACTURING.
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335991 - CARBON AND GRAPHITE PRODUCT MANUFACTURING.

Back to Report Summary

Facility Registry System (FRSTN)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

FACILITY INFORMATION

REGISTRY ID: **110040889027**

NAME: **GRAFTECH INTERNATIONAL HOLDINGS LLC**

LOCATION ADDRESS: **HIGHWAY 7, SANTA FE PIKE**
COLUMBIA, TN 38401

COUNTY: **MAURY**

EPA REGION: **04**

FEDERAL FACILITY: **NOT REPORTED**

TRIBAL LAND: **NOT REPORTED**

ALTERNATIVE NAME/S:

UCAR CARBON COMPANY INC

PROGRAM/S LISTED FOR THIS FACILITY

EIS - EIS

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

NO SIC DATA REPORTED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

335991 - CARBON AND GRAPHITE PRODUCT MANUFACTURING.

Back to Report Summary

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

SITE INFORMATION

GEOSEARCH ID: **110024586447**
REGISTRY ID: **110024586447**
NAME: **GRAFTECH ADVANCED GRAPHITE MATERIALS LLC**
ADDRESS: **791 SANTA FE PIKE**
COLUMBIA TN 38401
STANDARD INDUSTRIAL CLASSIFICATION: **CARBON AND GRAPHITE PRODUCTS**

REGIONAL DOCKETS

- NO REGIONAL DOCKETS REPORTED

RELATED ACTIVITIES

- NO RELATED ACTIVITIES REPORTED

VIOLATIONS

- NO VIOLATIONS REPORTED

CASE IDENTIFIER

CASE NUMBER: **TN-200098934**
FISCAL YEAR: **NOT REPORTED**
CASE NAME: **GRAF TECH**
ACTIVITY TYPE: **ADMINISTRATIVE - INFORMAL**
ACTIVITY STATUS: **ACHIEVED**
ACTIVITY STATUS DATE: **3/18/2014**
LEAD: **STATE**
CASE STATUS DATE: **3/18/2014**
DOJ DOCKET NUMBER: **NOT REPORTED**
ENFORCEMENT OUTCOME: **NOT REPORTED**
MULTIMEDIA FLAG: **NOT REPORTED**
ENFORCEMENT SUMMARY:
NOT REPORTED

ENFORCEMENT TYPE

ENFORCEMENT TYPE: **NOTICE OF VIOLATION**

POLLUTANTS CITED

- NO POLLUTION CITED REPORTED

Back to Report Summary

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

SITE INFORMATION

GEOSEARCH ID: **110035842675**
REGISTRY ID: **110035842675**
NAME: **UCAR CARBON COMPANY-COLUMBIA**
ADDRESS: **791 SANTA FE PIKE**
COLUMBIA TN 38401
STANDARD INDUSTRIAL CLASSIFICATION: **CARBON AND GRAPHITE PRODUCTS**

REGIONAL DOCKETS

- NO REGIONAL DOCKETS REPORTED

RELATED ACTIVITIES

- NO RELATED ACTIVITIES REPORTED

VIOLATIONS

- NO VIOLATIONS REPORTED

CASE IDENTIFIER

CASE NUMBER: **TN-200098934**
FISCAL YEAR: **NOT REPORTED**
CASE NAME: **GRAF TECH**
ACTIVITY TYPE: **ADMINISTRATIVE - INFORMAL**
ACTIVITY STATUS: **ACHIEVED**
ACTIVITY STATUS DATE: **3/18/2014**
LEAD: **STATE**
CASE STATUS DATE: **3/18/2014**
DOJ DOCKET NUMBER: **NOT REPORTED**
ENFORCEMENT OUTCOME: **NOT REPORTED**
MULTIMEDIA FLAG: **NOT REPORTED**
ENFORCEMENT SUMMARY:
NOT REPORTED

ENFORCEMENT TYPE

ENFORCEMENT TYPE: **NOTICE OF VIOLATION**

POLLUTANTS CITED

- NO POLLUTION CITED REPORTED

Back to Report Summary

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

FACILITY INFORMATION

GEOSEARCH ID: **TN0002275INPDES**
NPDES ID: **TN0002275** FACILITY #: **110024586447**
NAME: **GRAFTECH ADVANCED GRAPHITE MATERIALS LLC**
PHYSICAL ADDRESS: **791 SANTA FE PIKE**
COLUMBIA TN 38401
COUNTY: **MAURY**
FACILITY TYPE: **PRIVATELY OWNED FACILITY**
IMPAIRED WATERS: **NOT REPORTED**

STANDARD INDUSTRIAL CLASSIFICATION

3624-CARBON AND GRAPHITE PRODUCTS

PERMITS

FACILITY TYPE INDICATOR: **NON-POTABLE WATER**
PERMIT TYPE: **NPDES INDIVIDUAL PERMIT**
MAJOR MINOR FACILITY: **MINOR DISCHARGER**
PERMIT STATUS: **EFFECTIVE**
WATER BODY: **DUCK-LOWER**
PERMIT NAME: **GRAFTECH ADVANCED GRAPHITE MATERIALS LLC (GRAFTECH INTERNATIONAL HOLDINGS INC.)**
AGENCY TYPE: **STATE**
ORIGINAL ISSUE DATE: **12/24/1980**
ISSUE DATE: **4/1/2013**
ISSUING AGENCY: **TDEC - DWR**
EFFECTIVE DATE: **5/1/2013**
EXPIRATION DATE: **3/31/2018**
RETIREMENT DATE: **NOT REPORTED**
TERMINATION DATE: **NOT REPORTED**
PERMIT COMPLIANCE STATUS: **NOT REPORTED**
PERMIT SUBJECT TO DMR RUN: **NOT REPORTED**
REPORTABLE NONCOMPLIANCE TRACKING IS ON: **YES**

INSPECTIONS

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **11/09/2016**
ACTUAL END DATE: **11/09/2016**

MONITOR TYPE: **OVERSIGHT**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **01/21/2015**
ACTUAL END DATE: **01/21/2015**

MONITOR TYPE: **OVERSIGHT**
LEAD AGENCY: **STATE**

ACTUAL BEGIN DATE: **07/19/2012**
ACTUAL END DATE: **07/19/2012**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **07/22/2010**
ACTUAL END DATE: **07/22/2010**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **06/21/2007**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **05/01/2001**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **12/04/1995**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **06/25/1993**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **03/26/1992**

MONITOR TYPE: **SAMPLING**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **03/26/1992**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **03/11/1992**

MONITOR TYPE: **SAMPLING**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **03/11/1992**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **12/12/1990**

MONITOR TYPE: **SAMPLING**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **12/12/1990**

MONITOR TYPE: **BIOMONITORING**
LEAD AGENCY: **EPA**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **09/15/1989**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **EPA**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **09/13/1989**

MONITOR TYPE: **SAMPLING**
LEAD AGENCY: **EPA**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **09/13/1989**

MONITOR TYPE: **SAMPLING**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **06/13/1989**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **06/13/1989**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **10/14/1987**

MONITOR TYPE: **BIOMONITORING**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **09/14/1987**

MONITOR TYPE: **SAMPLING**

LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **04/14/1987**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **04/14/1987**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **06/11/1986**

MONITOR TYPE: **SAMPLING**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **06/11/1986**

MONITOR TYPE: **AUDIT**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **01/24/1986**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **10/31/1984**

MONITOR TYPE: **RECONNAISSANCE WITHOUT SAMPLING**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **09/13/1984**

MONITOR TYPE: **SAMPLING**
LEAD AGENCY: **EPA**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **06/23/1982**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **EPA**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **06/23/1982**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**

ACTUAL END DATE: **08/12/1981**

MONITOR TYPE: **SAMPLING**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **08/12/1981**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **05/29/1980**

MONITOR TYPE: **SAMPLING**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **05/29/1980**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **EPA**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **07/26/1979**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **07/25/1979**

MONITOR TYPE: **SAMPLING**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **07/25/1979**

MONITOR TYPE: **SAMPLING**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **07/23/1979**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **07/23/1979**

MONITOR TYPE: **EVALUATION**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **NOT REPORTED**
ACTUAL END DATE: **06/14/1975**

HISTORIC COMPLIANCE

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20162**
HISTORIC NON-COMPLIANCE: **V**
NUMBER OF E90 VIOLATIONS: **2**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20153**
HISTORIC NON-COMPLIANCE: **V**
NUMBER OF E90 VIOLATIONS: **2**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20151**
HISTORIC NON-COMPLIANCE: **V**
NUMBER OF E90 VIOLATIONS: **2**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20143**
HISTORIC NON-COMPLIANCE: **RNC/CATEGORY II - REPORTABLE NON-COMPLIANCE**
NUMBER OF E90 VIOLATIONS: **2**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20142**
HISTORIC NON-COMPLIANCE: **SNC/CATEGORY I - EFFLUENT VIOLATIONS OF MONTHLY AVERAGE LIMITS (TECHNICAL REVIEW CRITERIA AND CHRONIC)**
NUMBER OF E90 VIOLATIONS: **2**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20141**
HISTORIC NON-COMPLIANCE: **SNC/CATEGORY I - EFFLUENT VIOLATIONS OF MONTHLY AVERAGE LIMITS (TECHNICAL REVIEW CRITERIA AND CHRONIC)**
NUMBER OF E90 VIOLATIONS: **4**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20134**
HISTORIC NON-COMPLIANCE: **RNC/CATEGORY II - REPORTABLE NON-COMPLIANCE**

NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20133**
HISTORIC NON-COMPLIANCE: **RNC/CATEGORY II - REPORTABLE NON-COMPLIANCE**
NUMBER OF E90 VIOLATIONS: **1**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20123**
HISTORIC NON-COMPLIANCE: **V**
NUMBER OF E90 VIOLATIONS: **2**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20121**
HISTORIC NON-COMPLIANCE: **V**
NUMBER OF E90 VIOLATIONS: **2**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20114**
HISTORIC NON-COMPLIANCE: **V**
NUMBER OF E90 VIOLATIONS: **1**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20113**
HISTORIC NON-COMPLIANCE: **NOT REPORTED**
NUMBER OF E90 VIOLATIONS: **1**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20101**
HISTORIC NON-COMPLIANCE: **NOT CONSIDERED IN RNC/SNC BASED ON MANUAL REVIEW OF DATA BY STATE OR EPA REGION.**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20094**
HISTORIC NON-COMPLIANCE: **NOT CONSIDERED IN RNC/SNC BASED ON MANUAL REVIEW OF DATA BY STATE OR EPA REGION.**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20093**
HISTORIC NON-COMPLIANCE: **NOT CONSIDERED IN RNC/SNC BASED ON MANUAL REVIEW OF DATA BY STATE OR EPA REGION.**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20092**
HISTORIC NON-COMPLIANCE: **NOT CONSIDERED IN RNC/SNC BASED ON MANUAL REVIEW OF DATA BY STATE OR EPA REGION.**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20091**
HISTORIC NON-COMPLIANCE: **NOT CONSIDERED IN RNC/SNC BASED ON MANUAL REVIEW OF DATA BY STATE OR EPA REGION.**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20084**
HISTORIC NON-COMPLIANCE: **NOT CONSIDERED IN RNC/SNC BASED ON MANUAL REVIEW OF DATA BY STATE OR EPA REGION.**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20083**
HISTORIC NON-COMPLIANCE: **NOT CONSIDERED IN RNC/SNC BASED ON MANUAL REVIEW OF DATA BY STATE OR EPA REGION.**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**

NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20082**
HISTORIC NON-COMPLIANCE: **NOT CONSIDERED IN RNC/SNC BASED ON MANUAL REVIEW OF DATA BY STATE OR EPA REGION.**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20081**
HISTORIC NON-COMPLIANCE: **NOT CONSIDERED IN RNC/SNC BASED ON MANUAL REVIEW OF DATA BY STATE OR EPA REGION.**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20074**
HISTORIC NON-COMPLIANCE: **NOT CONSIDERED IN RNC/SNC BASED ON MANUAL REVIEW OF DATA BY STATE OR EPA REGION.**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20073**
HISTORIC NON-COMPLIANCE: **NOT CONSIDERED IN RNC/SNC BASED ON MANUAL REVIEW OF DATA BY STATE OR EPA REGION.**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20072**
HISTORIC NON-COMPLIANCE: **NOT CONSIDERED IN RNC/SNC BASED ON MANUAL REVIEW OF DATA BY STATE OR EPA REGION.**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20071**
HISTORIC NON-COMPLIANCE: **NOT CONSIDERED IN RNC/SNC BASED ON MANUAL REVIEW OF DATA BY STATE OR EPA REGION.**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**

NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20064**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20063**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20062**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20061**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20054**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20053**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20052**
HISTORIC NON-COMPLIANCE: **W**

NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20051**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20044**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20043**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20042**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20041**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20034**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20033**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20032**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20031**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20024**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20023**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20022**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20021**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**

NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20014**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20013**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **2**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20012**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20011**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20004**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20003**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20002**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**

NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20001**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **19994**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **19993**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **19992**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **19991**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **19984**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **19983**

HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **19982**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **19981**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **19974**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **19973**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **19972**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **19971**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **19964**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **19963**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **19962**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **19961**
HISTORIC NON-COMPLIANCE: **W**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

SINGLE EVENT VIOLATIONS

- NO SINGLE EVENT VIOLATIONS REPORTED -

FORMAL ENFORCEMENT ACTIONS

- NO FORMAL ENFORCEMENT ACTIONS REPORTED -

EFFLUENT VIOLATIONS

- NOT REPORTED -

EFFLUENT VIOLATIONS contd..

- NOT REPORTED -

EFFLUENT VIOLATIONS contd..

- NOT REPORTED -

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Integrated Compliance Information System National Pollutant Discharge Elimination System (ICISNPDES)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

FACILITY INFORMATION

GEOSEARCH ID: **TNR050188INPDES**
NPDES ID: **TNR050188** FACILITY #: **110024586447**
NAME: **GRAFTECH INTERNATIONAL HOLDINGS INC.**
PHYSICAL ADDRESS: **791 SANTA FE PK**
COLUMBIA TN 38401
COUNTY: **MAURY**
FACILITY TYPE: **NOT REPORTED**
IMPAIRED WATERS: **NOT REPORTED**

STANDARD INDUSTRIAL CLASSIFICATION

3624-CARBON AND GRAPHITE PRODUCTS

PERMITS

FACILITY TYPE INDICATOR: **NON-POTABLE WATER**
PERMIT TYPE: **GENERAL PERMIT COVERED FACILITY**
MAJOR MINOR FACILITY: **MINOR DISCHARGER**
PERMIT STATUS: **EFFECTIVE**
WATER BODY: **NOT REPORTED**
PERMIT NAME: **UCAR CARBON COMPANY, INC.**
AGENCY TYPE: **STATE**
ORIGINAL ISSUE DATE: **12/25/2005**
ISSUE DATE: **6/15/2015**
ISSUING AGENCY: **NOT REPORTED**
EFFECTIVE DATE: **9/30/2016**
EXPIRATION DATE: **4/14/2020**
RETIREMENT DATE: **NOT REPORTED**
TERMINATION DATE: **NOT REPORTED**
PERMIT COMPLIANCE STATUS: **NOT REPORTED**
PERMIT SUBJECT TO DMR RUN: **NOT REPORTED**
REPORTABLE NONCOMPLIANCE TRACKING IS ON: **YES**

INSPECTIONS

MONITOR TYPE: **EVALUATION (IU)**
LEAD AGENCY: **STATE**
ACTUAL BEGIN DATE: **07/09/2015**
ACTUAL END DATE: **07/09/2015**

HISTORIC COMPLIANCE

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20171**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**

NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20164**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20163**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20162**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20161**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20154**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20153**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**

NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20152**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20151**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20144**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20143**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20142**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20141**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**

NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20134**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20133**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20132**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20131**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20124**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20123**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**

NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20122**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20121**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

HISTORIC NON-COMPLIANCE QUARTER (YYYYQ): **20114**
HISTORIC NON-COMPLIANCE: **UNDETERMINED QNCR STATUS - INSUFFICIENT DATA, OR PERMITEE IS A MINOR DISCHARGER NOT SUBJECT TO MANDATORY REPORTING**
NUMBER OF E90 VIOLATIONS: **0**
NUMBER OF COMPLIANCE SCHEDULE VIOLATIONS: **0**
NUMBER OF SINGLE EVENT VIOLATIONS: **0**
NUMBER OF PERMIT SCHEDULE VIOLATIONS: **0**

SINGLE EVENT VIOLATIONS

- NO SINGLE EVENT VIOLATIONS REPORTED -

FORMAL ENFORCEMENT ACTIONS

- NO FORMAL ENFORCEMENT ACTIONS REPORTED -

EFFLUENT VIOLATIONS

- NOT REPORTED -

EFFLUENT VIOLATIONS contd..

- NOT REPORTED -

EFFLUENT VIOLATIONS contd..

- NOT REPORTED -

Back to Report Summary

Landfill and Solid Waste Disposal Sites (LFSWDS)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

FACILITY INFORMATION

PERMIT NUMBER: **IDL600000047**
FACILITY NAME: **GRAFTECH ADVANCED GRAPHITE MATERIALS, LLC**
ADDRESS: **791 SANTA FE PIKE**
COLUMBIA, TN
COUNTY: **MAURY**
PERMITTEE NAME: **GRAFTECH ADVANCED GRAPHITE MATERIALS, LLC**
PERMIT TYPE: **CLASS II**
STATUS: **ACTIVE**
ISSUANCE DATE: **JAN-01-1984**

Back to Report Summary

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

FACILITY INFORMATION

GEOSEARCH ID: **10202322**
DEP ID: **10202322**
MINE NAME: **UNION CARBIDE/ COLUMBIA, TN.**
ADDRESS: **MAURY COUNTY**
COLUMBIA, TN 38401
DEVELOPMENT STATUS: **PLANT**

COMMODITY DETAILS

COMMODITY: **GRAPHITE**
COMMODITY TYPE: **NON-METALLIC**
COMMODITY GROUP: **GRAPHITE**
IMPORTANCE: **PRIMARY**

MATERIAL DETAILS NO MATERIAL DETAILS REPORTED

NAME DETAILS

SITE NAME: **UNION CARBIDE/ COLUMBIA, TN.**
STATUS: **CURRENT**

Back to Report Summary

National Pollutant Discharge Elimination System (NPDESR04)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

FACILITY INFORMATION

NPDES ID#: **TN0002275**
NAME: **UCAR CARBON COMPANY-COLUMBIA**
PHYSICAL ADDRESS: **SANTA FE PIKE**
COLUMBIA, TN 38401
PERMITTYPE / ISSUE DATE: **NOT REPORTED / 06/14/75**
FACILITY TYPE: **INDUSTRIAL**
STANDARD INDUSTRIAL CLASSIFICATION: **CARBON AND GRAPHITE PRODUCTS**
RECEIVING WATER: **DUCK RV**

Back to Report Summary

PCB Activity Database System (PADS)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

FACILITY INFORMATION

EPA ID#: **TND004038428**

NAME: **UCAR CARBON CO INC**

ADDRESS: **SANTA FE PIKE**
COLUMBIA, TN 38401

CERTIFICATION DATE: **3/23/1990**

INSTALLATION CONTACT NAME: **R A BOLTON**

INSTALLATION CONTACT PHONE: **(715)380-4215**

OWNER INFORMATION

NAME: **UCAR CARBON CO INC**

TYPE OF PCB ACTIVITY

GENERATOR: **YES**

DISPOSER: **NOT REPORTED**

STORER: **NOT REPORTED**

RESEARCH: **NOT REPORTED**

TRANSPORTER: **NOT REPORTED**

SMELTER: **NOT REPORTED**

Back to Report Summary

Resource Conservation & Recovery Act - Generator (RCRAGR04)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

FACILITY INFORMATION

EPA ID#: **TND004038428**
NAME: **GT COLUMBIA LLC**
ADDRESS: **791 SANTA FE PIKE**
COLUMBIA, TN 38401
CONTACT NAME: **BERVERLY PHILPOT**
CONTACT ADDRESS: **791 SANTA FE PIKE**
COLUMBIA TN 38401
CONTACT PHONE: **931-762-7101**
NON-NOTIFIER: **NOT A NON-NOTIFIER**
DATE RECEIVED BY AGENCY: **11/02/2017**

OWNER TYPE: **PRIVATE**
OWNER NAME: **GRAFTECH INTERNATIONAL LTD.**
OPERATOR TYPE: **PRIVATE**
OPERATOR NAME: **GRAFTECH INTERNATIONAL LTD.**

CERTIFICATION

CERTIFICATION NAME:	CERTIFICATION TITLE:	CERTIFICATION SIGNED DATE:
BVERLY H PHILPOT	**MANAGER, HS &EP**	**10/30/2017**
PAUL E WAYNE	**OPERATIONS DIRECTOR**	**02/24/2017**
RANDY PIERCE	**DIRECTOR OF OPERATIONS**	**02/25/2016**
RANDY PIERCE	**DIRECTOR OF OPERTIONS**	**02/25/2015**
RANDY PIERCE	**DIRECTOR OF OPERTIONS**	**02/15/2015**
RANDY PIERCE	**DIRECTOR OF OPERTIONS**	**02/15/2015**
RANDY PIERCE	**DIRECTOR OF OPERTIONS**	**02/03/2014**
TIM HALLMARK	**HSEP MANGER**	**02/14/2013**
TIM HALLMARK	**HSEP MANGER**	**03/30/2012**
JEFFREY M BRYANT	**PLANT MANAGER**	**02/27/2012**
JEFFFREY M BRYANT	**PLANT MANAGER**	**02/16/2011**
K C BREWER	**BUSINESS DIRECTOR**	**02/24/2009**
K C BREWER	**BUSINESS DIRECTOR**	**02/29/2008**
KC BREWER	**BUSINESS DIRECTOR**	**11/08/2007**
JEFF BRYANT	**OPERATIONS MANAGER**	**02/15/2007**
RON MITCHUM	**GM CORBON ELECTRODES**	**02/27/2006**
JEFFREY M BRYANT	**PRODUCTION MANAGER**	**02/22/2005**
J M BRYANT	**PRODUCTION MANAGER**	**02/27/2004**
JEFF BRYANT	**OPS MANAGER**	**02/25/2003**
MR M W MITCHELL MANAGER	**MANAGER**	**03/01/1997**

INDUSTRY CLASSIFICATION (NAICS)

32411 - PETROLEUM REFINERIES
335991 - CARBON AND GRAPHITE PRODUCT MANUFACTURING

CURRENT ACTIVITY INFORMATION

GENERATOR STATUS: **CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR** LAST UPDATED DATE: **11/08/2017**
SUBJECT TO CORRECTIVE ACTION UNIVERSE: **NO**
TDSFs POTENTIALLY SUBJECT TO CORRECTIVE ACTION UNDER 3004 (u)/(v) UNIVERSE: **NO**
TDSFs ONLY SUBJECT TO CORRECTIVE ACTION UNDER DISCRETIONARY AUTHORITIES UNIVERSE: **NO**
NON TSDFs WHERE RCRA CORRECTIVE ACTION HAS BEEN IMPOSED UNIVERSE: **NO**
CORRECTIVE ACTION WORKLOAD UNIVERSE: **NO**

IMPORTER: **NO**
MIXED WASTE GENERATOR: **NO**
RECYCLER: **NO**
TRANSPORTER: **NO**
ONSITE BURNER EXEMPTION: **NO**
FURNACE EXEMPTION: **NO**
USED OIL REFINER: **NO**
USED OIL TRANSFER FACILITY: **NO**
UNDERGROUND INJECTION: **NO**
UNIVERSAL WASTE DESTINATION FACILITY: **NO**
TRANSFER FACILITY: **NO**
USED OIL FUEL BURNER: **NO**
USED OIL PROCESSOR: **NO**
USED OIL FUEL MARKETER TO BURNER: **NO**
SPECIFICATION USED OIL MARKETER: **NO**
USED OIL TRANSPORTER: **NO**

COMPLIANCE, MONITORING AND ENFORCEMENT INFORMATION

EVALUATIONS

06/30/2015	**CEI**	**COMPLIANCE EVALUATION INSPECTION ON-SITE**
12/05/2002	**CEI**	**COMPLIANCE EVALUATION INSPECTION ON-SITE**
06/04/1986	**CEI**	**COMPLIANCE EVALUATION INSPECTION ON-SITE**
01/10/1985	**CEI**	**COMPLIANCE EVALUATION INSPECTION ON-SITE**

VIOLATIONS **- NO VIOLATIONS REPORTED -**

ENFORCEMENTS **- NO ENFORCEMENTS REPORTED -**

HAZARDOUS WASTE

D001	**IGNITABLE WASTE**
D009	**MERCURY**
F003	**THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NONHALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS, AND A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.**
F005	**THE FOLLOWING SPENT NONHALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE,CARBON DISULFIDE, ISOBUTANOL, PYRIDINE,BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NONHALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001,F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.**

UNIVERSAL WASTE

WASTE TYPE:	ACCUMULATED WASTE ON-SITE:	GENERATED WASTE ON-SITE:	SOURCE TYPE:
BATTERIES	**YES**	**YES**	**ANNUAL/BIENNIAL REPORT UPDATED WITH NOTIFICATION**
BATTERIES	**YES**	**NOT REPORTED**	**NOTIFICATION**
BATTERIES	**YES**	**NO**	**NOTIFICATION**
BATTERIES	**YES**	**YES**	**NOTIFICATION**
LAMPS	**YES**	**NOT REPORTED**	**NOTIFICATION**
LAMPS	**YES**	**NO**	**NOTIFICATION**
LAMPS	**YES**	**YES**	**NOTIFICATION**
MERCURY CONTAINING EQUIPMENT	**YES**	**NOT REPORTED**	**NOTIFICATION**
MERCURY CONTAINING EQUIPMENT	**YES**	**NO**	**NOTIFICATION**
MERCURY CONTAINING EQUIPMENT	**YES**	**YES**	**NOTIFICATION**

CORRECTIVE ACTION AREA **- NO CORRECTIVE ACTION AREA INFORMATION REPORTED -**

CORRECTIVE ACTION EVENT

NO CORRECTIVE ACTION EVENT(S) REPORTED

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Superfund Enterprise Management System Archived Site Inventory (SEMSARCH)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

FACILITY INFORMATION

EPA ID#: **TND004038428**

SITE ID#: **0403589**

NAME: **UNION CARBIDE CORP**

ADDRESS: **SANTA FE PIKE**
COLUMBIA, TN 38401

COUNTY: **MAURY**

FEDERAL FACILITY: **NOT A FEDERAL FACILITY**

NPL: **NOT ON THE NPL**

NON NPL STATUS: **NFRAP-SITE DOES NOT QUALIFY FOR THE NPL BASED ON EXISTING INFORMATION**

SEMS SEARCH: **CLICK HERE**

Below information was gathered from the prior NFRAP update completed in 10/2013 update:

ACTION	START DATE	COMPLETION DATE	RESPONSIBILITY
DS - DISCOVERY	**NOT REPORTED**	**8/1/1980**	**EPA FUND**
PA - PRELIMINARY ASSESSMENT	**NOT REPORTED**	**8/1/1984**	**STATE (FUND)**
SI - SITE INSPECTION	**NOT REPORTED**	**8/1/1984**	**STATE (FUND)**
VS - ARCHIVE SITE	**NOT REPORTED**	**8/1/1984**	**EPA IN-HOUSE**

ACTION DESCRIPTIONS

DS - (DISCOVERY) - THE PROCESS BY WHICH A POTENTIAL HAZARDOUS WASTE SITE IS BROUGHT TO THE ATTENTION OF THE EPA. THE PROCESS CAN OCCUR THROUGH THE USE OF SEVERAL MECHANISMS SUCH AS A PHONE CALL OR REFERRAL BY ANOTHER GOVERNMENT AGENCY.

PA - (PRELIMINARY ASSESSMENT) - COLLECTION OF DIVERSE EXISTING INFORMATION ABOUT THE SOURCE AND NATURE OF THE SITE HAZARD. IT IS EPA POLICY TO COMPLETE THE PRELIMINARY ASSESSMENT WITHIN ONE YEAR OF SITE DISCOVERY.

SI - (SITE INSPECTION) - THE PROCESS OF COLLECTING SITE DATA AND SAMPLES TO CHARACTERIZE THE SEVERITY OF THE HAZARD FOR THE HAZARD RANKING SCORE AND/OR ENFORCEMENT SUPPORT.

VS - (ARCHIVE SITE) - THE DECISION IS MADE THAT NO FURTHER ACTIVITY IS PLANNED AT THE SITE.

Back to Report Summary

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

FACILITY INFORMATION

ID #: **38401CRCRBSANTA**

OWNER NAME: **GRAFTECH INTERNATIONAL LTD**

FACILITY NAME: **GRAFTECH ADVANCED GRAPHITE MATERIALS LLC**

ADDRESS: **791 SANTA FE PIKE**
COLUMBIA, TN 38401

COUNTY: **MAURY**

(NAICS) INDUSTRIAL CLASSIFICATION

335991 - THIS U.S. INDUSTRY COMPRISES ESTABLISHMENTS PRIMARILY ENGAGED IN MANUFACTURING CARBON, GRAPHITE, AND METAL-GRAPHITE BRUSHES AND BRUSH STOCK; CARBON OR GRAPHITE ELECTRODES FOR THERMAL AND ELECTROLYTIC USES; CARBON AND GRAPHITE FIBERS; AND OTHER CARBON, GRAPHITE, AND METAL-GRAPHITE PRODUCTS.

CHEMICAL/S RELEASED

POLYCYCLIC AROMATIC COMPOUNDS, BENZO(G,H,I)PERYLENE

RELEASE INFORMATION

(Release amounts are reported in pounds)

REPORT YEAR	FUGITIVE AIR	STACK AIR	WATER RELEASE	CLASS I INJECTION WELLS	CLASS II - V INJECTION WELLS	RCRA C / OTHER LANDFILLS	LAND TREATMENT
2016	0	0	4	0	0	8908	0
2015	0	1511	98	0	0	1515	0
2014	1	346	536	0	0	34330	0
2013	0	230	433	0	0	2743	0
2012	1	285	192	0	0	34332	0
2011	1	8153	408	0	0	19548	0
2010	1	306	517	0	0	25546	0
2009	2	154	513	0	0	1482	0
2008	0	81	1095	0	0	1833	0
2007	0	31	158	0	0	0	0
2006	0	605	2886	0	0	1142	0
2005	0	1396	316	0	0	3522	0
2004	0	7919	307	0	0	9052	0
2003	0	13275	380	0	0	32610	0
2002	0	5940	285	0	0	32610	0
2001	0	18262	163	0	0	32610	0
2000	0	20504	112	0	0	32610	0
1999	0	15000	250	0	0	3500	0
1998	0	17000	250	0	0	3500	0
1997	5	0	0	0	0	4156	0
1996	0	0	0	0	0	3325	0
1995	0	0	0	0	0	6750	0
1990	11062	0	0	0	0	0	0
1989	15137	0	0	0	0	0	0
1988	18415	0	0	0	0	26235	0

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Toxic Substance Control Act Inventory (TSCA)

MAP ID# 1

Distance from Property: 0 mi. (0 ft.) X
Elevation: 606 ft. (Lower than TP)

FACILITY INFORMATION

GEOSEARCH ID: **18269330**
SITE NAME: **GRAFTECH INTERNATIONAL HOLDINGS INC**
ADDRESS: **791 SANTA FE PIKE**
COLUMBIA, TN 38401
COUNTY: **MAURY**

FACILITY DETAILS

CHEMICAL ID NUMBER: **64743-05-1**
STRIPPED CHEMICAL ID NUMBER: **64743051**
CHEMICAL REPORT ID: **557458**
NUMBER ID CODE: **CASRN**
CHEMICAL NAME: **COKE (PETROLEUM), CALCINED**
ACTIVITY: **I**
DOM MANUFACTURED(LB): **NOT REPORTED**
DOM IMPORTED(LB): **1409825**
DOM IMPORTED NEVER AT SITE: **NO**
VOLUME USED: **1409825**
VOLUME EXPORTED: **NOT REPORTED**
NUMBER OF WORKERS: **50 - 99**
MAXIMUM CONCENTRATION: **90% +**
CHEMICAL RECYCLED: **NO**
PHYSICAL FORMS: **OTHERSOLID**
PAST PRODUCTION VOLUME: **NOT REPORTED**
PARENT COMPANY NAME: **GRAFTECH INTERNATIONAL LTD**
PARENT ADDRESS: **12900 SNOW ROAD**
PARENT SUPPLEMENTAL ADDRESS: **NOT REPORTED**
PARENT CITY: **PARMA**
PARENT STATE: **OH**
PARENT ZIP CODE: **44130**
SUBMITTER NAME: **JEFF M BRYANT**

CHEMICAL ID NUMBER: **65996-93-2**
STRIPPED CHEMICAL ID NUMBER: **65996932**
CHEMICAL REPORT ID: **557464**
NUMBER ID CODE: **CASRN**
CHEMICAL NAME: **PITCH, COAL TAR, HIGH-TEMP.**
ACTIVITY: **I**
DOM MANUFACTURED(LB): **NOT REPORTED**
DOM IMPORTED(LB): **334378**
DOM IMPORTED NEVER AT SITE: **NO**
VOLUME USED: **334378**
VOLUME EXPORTED: **NOT REPORTED**
NUMBER OF WORKERS: **50 - 99**
MAXIMUM CONCENTRATION: **90% +**

CHEMICAL RECYCLED: **NO**
PHYSICAL FORMS: **OTHERSOLID, PELLETSLARGECRYSTALS**
PAST PRODUCTION VOLUME: **210315**
PARENT COMPANY NAME: **GRAFTECH INTERNATIONAL LTD**
PARENT ADDRESS: **12900 SNOW ROAD**
PARENT SUPPLEMENTAL ADDRESS: **NOT REPORTED**
PARENT CITY: **PARMA**
PARENT STATE: **OH**
PARENT ZIP CODE: **44130**
SUBMITTER NAME: **JEFF M BRYANT**

CHEMICAL ID NUMBER: **68187-59-7**
STRIPPED CHEMICAL ID NUMBER: **68187597**
CHEMICAL REPORT ID: **557452**
NUMBER ID CODE: **CASRN**
CHEMICAL NAME: **COAL, ANTHRACITE, CALCINED**
ACTIVITY: **I**
DOM MANUFACTURED(LB): **WITHHELD**
DOM IMPORTED(LB): **WITHHELD**
DOM IMPORTED NEVER AT SITE: **NO**
VOLUME USED: **39100**
VOLUME EXPORTED: **NOT REPORTED**
NUMBER OF WORKERS: **50 - 99**
MAXIMUM CONCENTRATION: **60% - < 90%**
CHEMICAL RECYCLED: **YES**
PHYSICAL FORMS: **OTHERSOLID**
PAST PRODUCTION VOLUME: **117300**
PARENT COMPANY NAME: **GRAFTECH INTERNATIONAL LTD**
PARENT ADDRESS: **12900 SNOW ROAD**
PARENT SUPPLEMENTAL ADDRESS: **NOT REPORTED**
PARENT CITY: **PARMA**
PARENT STATE: **OH**
PARENT ZIP CODE: **44130**
SUBMITTER NAME: **JEFF M BRYANT**

CHEMICAL ID NUMBER: **7440-44-0**
STRIPPED CHEMICAL ID NUMBER: **7440440**
CHEMICAL REPORT ID: **557446**
NUMBER ID CODE: **CASRN**
CHEMICAL NAME: **CARBON**
ACTIVITY: **B**
DOM MANUFACTURED(LB): **463824**
DOM IMPORTED(LB): **5520**
DOM IMPORTED NEVER AT SITE: **NOT REPORTED**
VOLUME USED: **30992**
VOLUME EXPORTED: **NOT REPORTED**
NUMBER OF WORKERS: **50 - 99**

MAXIMUM CONCENTRATION: **90% +**
CHEMICAL RECYCLED: **YES**
PHYSICAL FORMS: **OTHERSOLID**
PAST PRODUCTION VOLUME: **93121**
PARENT COMPANY NAME: **GRAFTECH INTERNATIONAL LTD**
PARENT ADDRESS: **12900 SNOW ROAD**
PARENT SUPPLEMENTAL ADDRESS: **NOT REPORTED**
PARENT CITY: **PARMA**
PARENT STATE: **OH**
PARENT ZIP CODE: **44130**
SUBMITTER NAME: **JEFF M BRYANT**

CHEMICAL ID NUMBER: **7782-42-5**
STRIPPED CHEMICAL ID NUMBER: **7782425**
CHEMICAL REPORT ID: **557440**
NUMBER ID CODE: **CASRN**
CHEMICAL NAME: **GRAPHITE**
ACTIVITY: **I**
DOM MANUFACTURED(LB): **NOT REPORTED**
DOM IMPORTED(LB): **4533620**
DOM IMPORTED NEVER AT SITE: **NO**
VOLUME USED: **4533620**
VOLUME EXPORTED: **NOT REPORTED**
NUMBER OF WORKERS: **50 - 99**
MAXIMUM CONCENTRATION: **90% +**
CHEMICAL RECYCLED: **YES**
PHYSICAL FORMS: **OTHERSOLID**
PAST PRODUCTION VOLUME: **39914572**
PARENT COMPANY NAME: **GRAFTECH INTERNATIONAL LTD**
PARENT ADDRESS: **12900 SNOW ROAD**
PARENT SUPPLEMENTAL ADDRESS: **NOT REPORTED**
PARENT CITY: **PARMA**
PARENT STATE: **OH**
PARENT ZIP CODE: **44130**
SUBMITTER NAME: **JEFF M BRYANT**

CONSUMER USE DETAILS NO DETAILS REPORTED

INDUSTRIAL USE DETAILS NO DETAILS REPORTED

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Enforcement and Compliance History Information (ECHOR04)

MAP ID# 2

Distance from Property: 0.012 mi. (63 ft.) SW
Elevation: 597 ft. (Lower than TP)

FACILITY INFORMATION

UNIQUE ID: **110009447866**
REGISTRY ID: **110009447866**
NAME: **GE CO APPLIANCES**
ADDRESS: **981 INDUSTRIAL PARK ROAD**
COLUMBIA, TN 38401
COUNTY: **MAURY**
FACILITY LINK: *Facility Detail Report*

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Enforcement and Compliance History Information (ECHOR04)

MAP ID# 2

Distance from Property: 0.012 mi. (63 ft.) SW
Elevation: 597 ft. (Lower than TP)

FACILITY INFORMATION

UNIQUE ID: **110070031842**
REGISTRY ID: **110070031842**
NAME: **FREELAND AUTO RECYCLING, LLC**
ADDRESS: **981 INDUSTRIAL PARK ROAD**
COLUMBIA, TN 38401
COUNTY: **NOT REPORTED**
FACILITY LINK: *Facility Detail Report*

Back to Report Summary

MAP ID# 2

Distance from Property: 0.012 mi. (63 ft.) SW
Elevation: 597 ft. (Lower than TP)

FACILITY INFORMATION

REGISTRY ID: **110001865964**

NAME: **ACCURIDE CORPORATION**

LOCATION ADDRESS: **981 INDUSTRIAL PARK ROAD**
COLUMBIA, TN 38401-6647

COUNTY: **MAURY**

EPA REGION: **04**

FEDERAL FACILITY: **NOT REPORTED**

TRIBAL LAND: **NOT REPORTED**

ALTERNATIVE NAME/S:

ACCURIDE CORPORATION

PROGRAM/S LISTED FOR THIS FACILITY

AIRS/AFS - AEROMETRIC INFORMATION RETRIEVAL SYSTEM / AIRS FACILITY SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

3499 - FABRICATED METAL PRODUCTS, NOT ELSEWHERE CLASSIFIED

3714 - MOTOR VEHICLE PARTS AND ACCESSORIES

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

336399 - ALL OTHER MOTOR VEHICLE PARTS MANUFACTURING.

336399 - ALL OTHER MOTOR VEHICLE PARTS MANUFACTURING.

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Facility Registry System (FRSTN)

MAP ID# 2

Distance from Property: 0.012 mi. (63 ft.) SW
Elevation: 597 ft. (Lower than TP)

FACILITY INFORMATION

REGISTRY ID: **110009447866**

NAME: **GE CO APPLIANCES**

LOCATION ADDRESS: **981 INDUSTRIAL PARK ROAD**
COLUMBIA, TN 38401-6647

COUNTY: **MAURY**

EPA REGION: **4**

FEDERAL FACILITY: **NOT REPORTED**

TRIBAL LAND: **NOT REPORTED**

ALTERNATIVE NAME/S:

GE CO APPLIANCES

GENERAL ELECTRIC COMPANY

PROGRAM/S LISTED FOR THIS FACILITY

TRIS - TOXIC CHEMICAL RELEASE INVENTORY SYSTEM

RCRAINFO - RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

3585 - AIR-CONDITIONING AND WARM AIR HEATING EQUIPMENT AND COMMERCIAL AND INDUSTRIAL REFRIGERATION EQUIPMENT

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

333415 - AIR-CONDITIONING AND WARM AIR HEATING EQUIPMENT AND COMMERCIAL AND INDUSTRIAL REFRIGERATION EQUIPMENT MANUFACTURING.

333415 - AIR-CONDITIONING AND WARM AIR HEATING EQUIPMENT AND COMMERCIAL AND INDUSTRIAL REFRIGERATION EQUIPMENT MANUFACTURING.

333912 - AIR AND GAS COMPRESSOR MANUFACTURING.

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Facility Registry System (FRSTN)

MAP ID# 2

Distance from Property: 0.012 mi. (63 ft.) SW
Elevation: 597 ft. (Lower than TP)

FACILITY INFORMATION

REGISTRY ID: **110027631640**

NAME: **GENERAL ELECTRIC**

LOCATION ADDRESS: **NO STREET REPORTED**
COLUMBIA, TN 38401

COUNTY: **MAURY**

EPA REGION: **4**

FEDERAL FACILITY: **NOT REPORTED**

TRIBAL LAND: **NOT REPORTED**

ALTERNATIVE NAME/S:

GENERAL ELECTRIC

PROGRAM/S LISTED FOR THIS FACILITY

UST - UST

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)

NO SIC DATA REPORTED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)

NO NAICS DATA REPORTED

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Facility Registry System (FRSTN)

MAP ID# 2

Distance from Property: 0.012 mi. (63 ft.) SW
Elevation: 597 ft. (Lower than TP)

FACILITY INFORMATION

REGISTRY ID: **110070031842**

NAME: **FREELAND AUTO RECYCLING, LLC**

LOCATION ADDRESS: **981 INDUSTRIAL PARK ROAD**
COLUMBIA, TN 38401

COUNTY: **NOT REPORTED**

EPA REGION: **4**

FEDERAL FACILITY: **NOT REPORTED**

TRIBAL LAND: **NOT REPORTED**

ALTERNATIVE NAME/S:
NO ALTERNATIVE NAME(S) LISTED FOR THIS FACILITY

PROGRAM/S LISTED FOR THIS FACILITY
NPDES - NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

STANDARD INDUSTRIAL CLASSIFICATION/S (SIC)
5015 - MOTOR VEHICLE PARTS, USED

NORTH AMERICAN INDUSTRY CLASSIFICATION/S (NAICS)
NO NAICS DATA REPORTED

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Integrated Compliance Information System National Pollutant Discharge Elimination System (ICISNPDES)

MAP ID# 2

Distance from Property: 0.012 mi. (63 ft.) SW
Elevation: 597 ft. (Lower than TP)

FACILITY INFORMATION

GEOSEARCH ID: **TNR050287INPDES**
NPDES ID: **TNR050287** FACILITY #: **110070031842**
NAME: **FREELAND AUTO RECYCLING, LLC**
PHYSICAL ADDRESS: **981 INDUSTRIAL PARK ROAD**
COLUMBIA TN 38401
COUNTY: **NOT REPORTED**
FACILITY TYPE: **NOT REPORTED**
IMPAIRED WATERS: **NOT REPORTED**

STANDARD INDUSTRIAL CLASSIFICATION

- NOT REPORTED -

PERMITS

FACILITY TYPE INDICATOR: **NON-POTABLE WATER**
PERMIT TYPE: **GENERAL PERMIT COVERED FACILITY**
MAJOR MINOR FACILITY: **MINOR DISCHARGER**
PERMIT STATUS: **EFFECTIVE**
WATER BODY: **DUCK-LOWER**
PERMIT NAME: **FREELAND AUTO RECYCLING, LLC**
AGENCY TYPE: **STATE**
ORIGINAL ISSUE DATE: **3/2/2017**
ISSUE DATE: **3/2/2017**
ISSUING AGENCY: **TDEC - DWR**
EFFECTIVE DATE: **3/2/2017**
EXPIRATION DATE: **4/14/2020**
RETIREMENT DATE: **NOT REPORTED**
TERMINATION DATE: **NOT REPORTED**
PERMIT COMPLIANCE STATUS: **YES**
PERMIT SUBJECT TO DMR RUN: **NOT REPORTED**
REPORTABLE NONCOMPLIANCE TRACKING IS ON: **YES**

INSPECTIONS

- NO INSPECTIONS REPORTED -

HISTORIC COMPLIANCE

- NO HISTORIC COMPLIANCE REPORTED -

SINGLE EVENT VIOLATIONS

- NO SINGLE EVENT VIOLATIONS REPORTED -

FORMAL ENFORCEMENT ACTIONS

- NO FORMAL ENFORCEMENT ACTIONS REPORTED -

EFFLUENT VIOLATIONS

- NOT REPORTED -

EFFLUENT VIOLATIONS contd..

- NOT REPORTED -

EFFLUENT VIOLATIONS contd..

- NOT REPORTED -

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Resource Conservation & Recovery Act - Non-Generator (RCRANGR04)

MAP ID# 2

Distance from Property: 0.012 mi. (63 ft.) SW
Elevation: 597 ft. (Lower than TP)

FACILITY INFORMATION

EPA ID#: **TND075470443**
NAME: **GENERAL ELECTRIC COMPANY**
ADDRESS: **981 INDUSTRIAL PARK ROAD**
COLUMBIA, TN 38401
CONTACT NAME: **DOUGLAS LANE**
CONTACT ADDRESS: **APPLIANCE PARK AP65-100**
LOUSIVILLE KY 40225
CONTACT PHONE: **502-452-5414**
NON-NOTIFIER: **NOT A NON-NOTIFIER**
DATE RECEIVED BY AGENCY: **03/01/2004**

OWNER TYPE: **NOT REPORTED**
OWNER NAME: **NOT REPORTED**
OPERATOR TYPE: **NOT REPORTED**
OPERATOR NAME: **NOT REPORTED**

CERTIFICATION

CERTIFICATION NAME:	CERTIFICATION TITLE:	CERTIFICATION SIGNED DATE:
RICHARD WILSON	**SAFETY ENV ENG**	**02/17/1992**

INDUSTRY CLASSIFICATION (NAICS)

325188 - ALL OTHER BASIC INORGANIC CHEMICAL MANUFACTURING
333415 - AIR-CONDITIONING AND WARM AIR HEATING EQUIPMENT AND COMMERCIAL AND INDUSTRIAL REFRIGERATION EQUIPMENT MANUFACTURING
333912 - AIR AND GAS COMPRESSOR MANUFACTURING
514199 - ALL OTHER INFORMATION SERVICES

CURRENT ACTIVITY INFORMATION

GENERATOR STATUS: **NON-GENERATOR** LAST UPDATED DATE: **04/22/2004**
SUBJECT TO CORRECTIVE ACTION UNIVERSE: **NO**
TDSFs POTENTIALLY SUBJECT TO CORRECTIVE ACTION UNDER 3004 (u)/(v) UNIVERSE: **NO**
TDSFs ONLY SUBJECT TO CORRECTIVE ACTION UNDER DISCRETIONARY AUTHORITIES UNIVERSE: **NO**
NON TSDFs WHERE RCRA CORRECTIVE ACTION HAS BEEN IMPOSED UNIVERSE: **NO**
CORRECTIVE ACTION WORKLOAD UNIVERSE: **NO**

IMPORTER: **NO**
MIXED WASTE GENERATOR: **NO**
RECYCLER: **NO**
TRANSPORTER: **NO**
ONSITE BURNER EXEMPTION: **NO**
FURNACE EXEMPTION: **NO**
USED OIL REFINER: **NO**
USED OIL TRANSFER FACILITY: **NO**

UNDERGROUND INJECTION: **NO**
UNIVERSAL WASTE DESTINATION FACILITY: **NO**
TRANSFER FACILITY: **NO**
USED OIL FUEL BURNER: **NO**
USED OIL PROCESSOR: **NO**
USED OIL FUEL MARKETER TO BURNER: **NO**
SPECIFICATION USED OIL MARKETER: **NO**
USED OIL TRANSPORTER: **NO**

COMPLIANCE, MONITORING AND ENFORCEMENT INFORMATION

EVALUATIONS

10/08/1992	**CSE**	**COMPLIANCE SCHEDULE EVALUATION**
06/11/1992	**CEI**	**COMPLIANCE EVALUATION INSPECTION ON-SITE**
06/11/1992	**FCI**	**FOCUSED COMPLIANCE INSPECTION**
01/08/1991	**CEI**	**COMPLIANCE EVALUATION INSPECTION ON-SITE**
01/08/1991	**FCI**	**FOCUSED COMPLIANCE INSPECTION**

07/25/1988	CSE COMPLIANCE SCHEDULE EVALUATION
05/05/1988	CEI COMPLIANCE EVALUATION INSPECTION ON-SITE
03/02/1987	NRR NON-FINANCIAL RECORD REVIEW
02/05/1987	CEI COMPLIANCE EVALUATION INSPECTION ON-SITE
12/04/1985	CEI COMPLIANCE EVALUATION INSPECTION ON-SITE
03/08/1985	CSE COMPLIANCE SCHEDULE EVALUATION
01/10/1985	CEI COMPLIANCE EVALUATION INSPECTION ON-SITE
04/18/1984	CEI COMPLIANCE EVALUATION INSPECTION ON-SITE

VIOLATIONS

06/11/1992	262.C GENERATORS - PRE-TRANSPORT
05/05/1988	262.A GENERATORS - GENERAL
05/05/1988	262.C GENERATORS - PRE-TRANSPORT
05/05/1988	264.B TSD - GENERAL FACILITY STANDARDS
01/10/1985	262.C GENERATORS - PRE-TRANSPORT
01/01/0001	262.C GENERATORS - PRE-TRANSPORT

ENFORCEMENTS

06/22/1992	120 WRITTEN INFORMAL
05/19/1988	120 WRITTEN INFORMAL
01/17/1985	120 WRITTEN INFORMAL

HAZARDOUS WASTE

- NO HAZARDOUS WASTE INFORMATION REPORTED -

UNIVERSAL WASTE **- NO UNIVERSAL WASTE REPORTED -**

CORRECTIVE ACTION AREA **- NO CORRECTIVE ACTION AREA INFORMATION REPORTED -**

CORRECTIVE ACTION EVENT

NO CORRECTIVE ACTION EVENT(S) REPORTED

Back to Report Summary

MAP ID# 2

Distance from Property: 0.012 mi. (63 ft.) SW
Elevation: 597 ft. (Lower than TP)

FACILITY INFORMATION

FACILITY ID: **6600111**
NAME: **GENERAL ELECTRIC**
ADDRESS: **INDUSTRIAL PARK RT. # 4**
COLUMBIA, TN 38401
COUNTY: **NOT REPORTED**
FACILITY TYPE: **UTILITIES**
CURRENTLY IN USE: **NOT REPORTED**
ABANDONED COMPARTMENT: **NOT REPORTED**
TEMPORARY OUT OF SERVICE: **NOT REPORTED**
PERMANENTLY OUT OF SERVICE: **2**
OWNER ID: **306732**
OWNER NAME: **GENERAL ELECTRIC**
OWNER ADDRESS: **INDUSTRAIL PARK RT.**
COLUMBIA, TN 38401
OWNER TYPE: **PRIVATE**

COMPARTMENT DETAILS

TANK ID: **38088**
TANK NUMBER: **1**
COMPARTMENT ID: **38653**
COMPARTMENT LETTER: **A**
REGULATED: **REGULATED**
COMPARTMENT STATUS: **PERMANENTLY OUT OF USE**
SUBSTANCE: **DIESEL**
CAPACITY: **1000**
DATE OF TANK INSTALL: **DEC-21-1979**
DATE OF LAST USE: **NOV-30-1989**
DATE REMOVED: **NOV-30-1989**
DATE CLOSED: **NOT REPORTED**
TANK TYPE: **NONE**
TANK MATERIAL: **ASPHALT COATED OR BARE STEEL**
TANK RELEASE DETECTION: **NOTLISTED**
PIPE MATERIAL: **GALVANIZED STEEL**
PIPE RELEASE DETECTION: **NOTLISTED**
PIPE REPAIRED: **NO**
OVERFILL: **NO**
OVERFILL TYPE: **NOT REPORTED**
SPILL DEVICE: **NO**
FLEXIBLE PIPING: **NOT REPORTED**

TANK ID: **38089**
TANK NUMBER: **2**
COMPARTMENT ID: **38654**

COMPARTMENT LETTER: **A**
REGULATED: **REGULATED**
COMPARTMENT STATUS: **PERMANENTLY OUT OF USE**
SUBSTANCE: **DIESEL**
CAPACITY: **500**
DATE OF TANK INSTALL: **DEC-21-1979**
DATE OF LAST USE: **NOV-30-1989**
DATE REMOVED: **NOV-30-1989**
DATE CLOSED: **NOT REPORTED**
TANK TYPE: **NONE**
TANK MATERIAL: **ASPHALT COATED OR BARE STEEL**
TANK RELEASE DETECTION: **NOTLISTED**
PIPE MATERIAL: **GALVANIZED STEEL**
PIPE RELEASE DETECTION: **NOTLISTED**
PIPE REPAIRED: **NO**
OVERFILL: **NO**
OVERFILL TYPE: **NOT REPORTED**
SPILL DEVICE: **NO**
FLEXIBLE PIPING: **NOT REPORTED**

TANK ID: **38090**
TANK NUMBER: **3**
COMPARTMENT ID: **38655**
COMPARTMENT LETTER: **A**
REGULATED: **REGULATED**
COMPARTMENT STATUS: **PERMANENTLY OUT OF USE**
SUBSTANCE: **HEATING OIL**
CAPACITY: **20000**
DATE OF TANK INSTALL: **12/21/74**
DATE OF LAST USE: **12/21/90**
DATE REMOVED: **12/21/90**
DATE CLOSED: **NOT REPORTED**
TANK TYPE: **NONE**
TANK MATERIAL: **ASPHALT COATED OR BARE STEEL**
TANK RELEASE DETECTION: **DEFERRED**
PIPE MATERIAL: **GALVANIZED STEEL**
PIPE RELEASE DETECTION: **NOTREQ**
PIPE REPAIRED: **NO**
OVERFILL: **NO**
OVERFILL TYPE: **NOT REPORTED**
SPILL DEVICE: **NO**
FLEXIBLE PIPING: **NOT REPORTED**

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Superfund Enterprise Management System Archived Site Inventory (SEMSARCH)

MAP ID# 2

Distance from Property: 0.012 mi. (63 ft.) SW
Elevation: 597 ft. (Lower than TP)

FACILITY INFORMATION

EPA ID#: **TND075470443**

SITE ID#: **0403785**

NAME: **GENERAL ELECTRIC CO.**

ADDRESS: **INDUSTRIAL PARK**
COLUMBIA, TN 38401

COUNTY: **MAURY**

FEDERAL FACILITY: **NOT A FEDERAL FACILITY**

NPL: **NOT ON THE NPL**

NON NPL STATUS: **NFRAP-SITE DOES NOT QUALIFY FOR THE NPL BASED ON EXISTING INFORMATION**

SEMS SEARCH: **CLICK HERE**

Below information was gathered from the prior NFRAP update completed in 10/2013 update:

ACTION	START DATE	COMPLETION DATE	RESPONSIBILITY
DS - DISCOVERY	**NOT REPORTED**	**8/1/1980**	**EPA FUND**
PA - PRELIMINARY ASSESSMENT	**NOT REPORTED**	**8/1/1984**	**STATE (FUND)**
SI - SITE INSPECTION	**NOT REPORTED**	**6/1/1984**	**STATE (FUND)**
VS - ARCHIVE SITE	**NOT REPORTED**	**2/29/1996**	**EPA IN-HOUSE**

ACTION DESCRIPTIONS

DS - (DISCOVERY) - THE PROCESS BY WHICH A POTENTIAL HAZARDOUS WASTE SITE IS BROUGHT TO THE ATTENTION OF THE EPA. THE PROCESS CAN OCCUR THROUGH THE USE OF SEVERAL MECHANISMS SUCH AS A PHONE CALL OR REFERRAL BY ANOTHER GOVERNMENT AGENCY.

PA - (PRELIMINARY ASSESSMENT) - COLLECTION OF DIVERSE EXISTING INFORMATION ABOUT THE SOURCE AND NATURE OF THE SITE HAZARD. IT IS EPA POLICY TO COMPLETE THE PRELIMINARY ASSESSMENT WITHIN ONE YEAR OF SITE DISCOVERY.

SI - (SITE INSPECTION) - THE PROCESS OF COLLECTING SITE DATA AND SAMPLES TO CHARACTERIZE THE SEVERITY OF THE HAZARD FOR THE HAZARD RANKING SCORE AND/OR ENFORCEMENT SUPPORT.

VS - (ARCHIVE SITE) - THE DECISION IS MADE THAT NO FURTHER ACTIVITY IS PLANNED AT THE SITE.

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Toxics Release Inventory (TRI)

MAP ID# 2

Distance from Property: 0.012 mi. (63 ft.) SW
Elevation: 597 ft. (Lower than TP)

FACILITY INFORMATION

ID #: **38401GNRLLROUTE**

OWNER NAME: **GE CO**

FACILITY NAME: **GE CO. APPLIANCES**

ADDRESS: **981 INDL. PARK RD.**
COLUMBIA, TN 38401

COUNTY: **MAURY**

(NAICS) INDUSTRIAL CLASSIFICATION

333415 - THIS U.S. INDUSTRY COMPRISES ESTABLISHMENTS PRIMARILY ENGAGED IN (1) MANUFACTURING AIR-CONDITIONING (EXCEPT MOTOR VEHICLE) AND WARM AIR FURNACE EQUIPMENT AND/OR (2) MANUFACTURING COMMERCIAL AND INDUSTRIAL REFRIGERATION AND FREEZER EQUIPMENT.

CHEMICAL/S RELEASED

SULFURIC ACID (1994 AND AFTER "ACID AEROSOLS" ONLY)

RELEASE INFORMATION

(Release amounts are reported in pounds)

REPORT YEAR	FUGITIVE AIR	STACK AIR	WATER RELEASE	CLASS I INJECTION WELLS	CLASS II - V INJECTION WELLS	RCRA C / OTHER LANDFILLS	LAND TREATMENT
1993	0	0	0	0	0	0	0
1992	17313	17313	0	0	0	0	0
1991	14722	34353	0	0	0	0	0
1990	0	72355	0	0	0	0	0
1988	0	172282	0	0	0	0	0
1987	0	175617	0	0	0	0	0

Back to Report Summary

Resource Conservation & Recovery Act - Generator (RCRAGR04)

MAP ID# 3

Distance from Property: 0.032 mi. (169 ft.) WNW
Elevation: 619 ft. (Lower than TP)

FACILITY INFORMATION

EPA ID#: **TND982172793**
NAME: **COLUMBIA SPECIALTIES**
ADDRESS: **INDUSTRIAL PARK RD**
COLUMBIA, TN 38401
CONTACT NAME: **JOE HARPOLE**
CONTACT ADDRESS: **1027 INDUSTRIAL PARK ROAD**
COLUMBIA TN 38401
CONTACT PHONE: **931-381-2200**
NON-NOTIFIER: **NOT A NON-NOTIFIER**
DATE RECEIVED BY AGENCY: **04/03/2007**

OWNER TYPE: **NOT REPORTED**
OWNER NAME: **NOT REPORTED**
OPERATOR TYPE: **NOT REPORTED**
OPERATOR NAME: **NOT REPORTED**

CERTIFICATION

CERTIFICATION NAME:	CERTIFICATION TITLE:	CERTIFICATION SIGNED DATE:
J D FOGG	**GNRL MNGR**	**02/06/1992**
DERICK REDDY	**TECH CONTACT**	**01/23/1989**

INDUSTRY CLASSIFICATION (NAICS)

325991 - CUSTOM COMPOUNDING OF PURCHASED RESINS

333415 - AIR-CONDITIONING AND WARM AIR HEATING EQUIPMENT AND COMMERCIAL AND INDUSTRIAL REFRIGERATION EQUIPMENT MANUFACTURING

CURRENT ACTIVITY INFORMATION

GENERATOR STATUS: **CONDITIONALLY EXEMPT SMALL QUANTITY GENERATOR** LAST UPDATED DATE: **09/02/2000**
SUBJECT TO CORRECTIVE ACTION UNIVERSE: **NO**
TDSFs POTENTIALLY SUBJECT TO CORRECTIVE ACTION UNDER 3004 (u)/(v) UNIVERSE: **NO**
TDSFs ONLY SUBJECT TO CORRECTIVE ACTION UNDER DISCRETIONARY AUTHORITIES UNIVERSE: **NO**
NON TSDFs WHERE RCRA CORRECTIVE ACTION HAS BEEN IMPOSED UNIVERSE: **NO**
CORRECTIVE ACTION WORKLOAD UNIVERSE: **NO**

IMPORTER: **NO**
MIXED WASTE GENERATOR: **NO**
RECYCLER: **NO**
TRANSPORTER: **NO**
ONSITE BURNER EXEMPTION: **NO**
FURNACE EXEMPTION: **NO**
USED OIL REFINER: **NO**
USED OIL TRANSFER FACILITY: **NO**

UNDERGROUND INJECTION: **NO**
UNIVERSAL WASTE DESTINATION FACILITY: **NO**
TRANSFER FACILITY: **NO**
USED OIL FUEL BURNER: **NO**
USED OIL PROCESSOR: **NO**
USED OIL FUEL MARKETER TO BURNER: **NO**
SPECIFICATION USED OIL MARKETER: **NO**
USED OIL TRANSPORTER: **NO**

COMPLIANCE, MONITORING AND ENFORCEMENT INFORMATION

EVALUATIONS

05/13/1993	**CSE COMPLIANCE SCHEDULE EVALUATION**
01/27/1993	**CEI COMPLIANCE EVALUATION INSPECTION ON-SITE**
01/27/1993	**FCI FOCUSED COMPLIANCE INSPECTION**

VIOLATIONS

01/27/1993	**262.C GENERATORS - PRE-TRANSPORT**

ENFORCEMENTS

02/03/1993 **120 WRITTEN INFORMAL**

HAZARDOUS WASTE

- NO HAZARDOUS WASTE INFORMATION REPORTED -

UNIVERSAL WASTE **- NO UNIVERSAL WASTE REPORTED -**

CORRECTIVE ACTION AREA **- NO CORRECTIVE ACTION AREA INFORMATION REPORTED -**

CORRECTIVE ACTION EVENT

NO CORRECTIVE ACTION EVENT(S) REPORTED

Back to Report Summary

State Remediation Sites (SRS)

MAP ID# 3

Distance from Property: 0.032 mi. (169 ft.) WNW
Elevation: 619 ft. (Lower than TP)

FACILITY INFORMATION

SITE ID: **SRS600991**
FACILITY NAME: **FEDDERS**
ADDRESS: **1027 INDUSTRIAL PARK ROAD**
COLUMBIA, TN
COUNTY: **MAURY**
STATUS: **CLOSED**
ACTIVITY: **VOLUNTARY CLEANUP OVERSIGHT AND ASSISTANCE PROGRAM/STATE REMEDIATION PROGRAM SITE**

Back to Report Summary

Voluntary Cleanup and Brownfield Sites (VCPBF)

MAP ID# 3

Distance from Property: 0.032 mi. (169 ft.) WNW
Elevation: 619 ft. (Lower than TP)

FACILITY INFORMATION

SITE ID: **SRS600991**
FACILITY NAME: **FEDDERS**
ADDRESS: **1027 INDUSTRIAL PARK ROAD**
COLUMBIA, TN

FACILITY DETAILS

ENVIRONMENTAL FIELD OFFICE: **SRP**
PROJECT MANAGER: **NOT REPORTED**
PROGRAM: **VOLUNTARY**
SUBPROGRAM: **SRP**
SITE STATUS: **CLOSED**
ACREAGE: **62.37**

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Landfill and Solid Waste Disposal Sites (LFSWDS)

MAP ID# 4

Distance from Property: 0.477 mi. (2,519 ft.) N
Elevation: 601 ft. (Lower than TP)

FACILITY INFORMATION

PERMIT NUMBER: **SNL600000240**
FACILITY NAME: **MAURY COUNTY BALEFILL**
ADDRESS: **1198 INDUSTRIAL PARK RD**
COLUMBIA, TN
COUNTY: **MAURY**
PERMITTEE NAME: **MAURY COUNTY GOVERNMENT**
PERMIT TYPE: **CLASS I**
STATUS: **INACTIVE**
ISSUANCE DATE: **SEP-17-1991**

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Landfill and Solid Waste Disposal Sites (LFSWDS)

MAP ID# 4

Distance from Property: 0.477 mi. (2,519 ft.) N
Elevation: 601 ft. (Lower than TP)

FACILITY INFORMATION

PERMIT NUMBER: **SWP600001003**
FACILITY NAME: **MAURY COUNTY BALER FACILITY**
ADDRESS: **1198 INDUSTRIAL PARK RD**
COLUMBIA, TN
COUNTY: **MAURY**
PERMITTEE NAME: **MAURY COUNTY GOVERNMENT**
PERMIT TYPE: **PROCESSING**
STATUS: **ACTIVE**
ISSUANCE DATE: **JUL-25-1990**

Back to Report Summary

Landfill and Solid Waste Disposal Sites (LFSWDS)

MAP ID# 4

Distance from Property: 0.477 mi. (2,519 ft.) N
Elevation: 601 ft. (Lower than TP)

FACILITY INFORMATION

PERMIT NUMBER: **TRF600001253**
FACILITY NAME: **MAURY COUNTY SANITARY TRANSFER STATION**
ADDRESS: **1198 INDUSTRIAL PARK RD**
COLUMBIA, TN
COUNTY: **MAURY**
PERMITTEE NAME: **MAURY COUNTY GOVERNMENT**
PERMIT TYPE: **TRANSFER**
STATUS: **ACTIVE**
ISSUANCE DATE: **JAN-16-1997**

Back to Report Summary

Superfund Enterprise Management System Archived Site Inventory (SEMSARCH)

MAP ID# 4

Distance from Property: 0.477 mi. (2,519 ft.) N
Elevation: 601 ft. (Lower than TP)

FACILITY INFORMATION

EPA ID#: **TND980848683**

SITE ID#: **0404070**

NAME: **MAURY CNTY SANITARY LDFL**

ADDRESS: **N BYPASS INDUSTRIAL PARK**
COLUMBIA, TN 38401

COUNTY: **MAURY**

FEDERAL FACILITY: **NOT A FEDERAL FACILITY**

NPL: **NOT ON THE NPL**

NON NPL STATUS: **NFRAP-SITE DOES NOT QUALIFY FOR THE NPL BASED ON EXISTING INFORMATION**

SEMS SEARCH: **CLICK HERE**

Below information was gathered from the prior NFRAP update completed in 10/2013 update:

ACTION	START DATE	COMPLETION DATE	RESPONSIBILITY
DS - DISCOVERY	**NOT REPORTED**	**11/1/1979**	**EPA FUND**
PA - PRELIMINARY ASSESSMENT	**NOT REPORTED**	**11/1/1983**	**STATE (FUND)**
SI - SITE INSPECTION	**NOT REPORTED**	**6/1/1984**	**EPA FUND**
VS - ARCHIVE SITE	**NOT REPORTED**	**6/1/1984**	**EPA IN-HOUSE**

ACTION DESCRIPTIONS

DS - (DISCOVERY) - THE PROCESS BY WHICH A POTENTIAL HAZARDOUS WASTE SITE IS BROUGHT TO THE ATTENTION OF THE EPA. THE PROCESS CAN OCCUR THROUGH THE USE OF SEVERAL MECHANISMS SUCH AS A PHONE CALL OR REFERRAL BY ANOTHER GOVERNMENT AGENCY.

PA - (PRELIMINARY ASSESSMENT) - COLLECTION OF DIVERSE EXISTING INFORMATION ABOUT THE SOURCE AND NATURE OF THE SITE HAZARD. IT IS EPA POLICY TO COMPLETE THE PRELIMINARY ASSESSMENT WITHIN ONE YEAR OF SITE DISCOVERY.

SI - (SITE INSPECTION) - THE PROCESS OF COLLECTING SITE DATA AND SAMPLES TO CHARACTERIZE THE SEVERITY OF THE HAZARD FOR THE HAZARD RANKING SCORE AND/OR ENFORCEMENT SUPPORT.

VS - (ARCHIVE SITE) - THE DECISION IS MADE THAT NO FURTHER ACTIVITY IS PLANNED AT THE SITE.

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MAP ID# 5

Distance from Property: 0.869 mi. (4,588 ft.) NE
Elevation: 608 ft. (Lower than TP)

FUDS #: **G04TN0181**
FFID: **TN9799F3524**
NAME: **MAURY C.W.S. PLANT**
CITY: **COLUMBIA**
STATE: **TN**
ZIPCODE: **38401**
DISTRICT RESPONSIBLE FOR THE FUDS PROPERTY: **SAVANNAH DISTRICT (SAS)**
IS THE PROPERTY HAS ANY CLEANUP UNDER THE MILITARY MUNITIONS RESPONSE PROGRAM (MMRP): **Y**
DESCRIPTION: **THE MAURY C.W.S. PLANT WAS LOCATED OFF SANTA FE PIKE, TWO MILES NORTHWEST OF COLUMBIA, IN MAURY CO., TN.**
HISTORY: **THE PLANT WAS BUILT IN 1942 TO PRODUCE CARBON FILTERS FOR GAS MASKS AND FOR THE CONVERSION OF ACTIVATED CARBON TO WHETLERITE. THE PLANT, HOWEVER, WAS NEVER PUT IN OPERATION. AFTER CONSTRUCTION WAS COMPLETED, THE PLANT WAS PLACED ON STANDBY STATUS. IT REMAINED ON STANDBY UNTIL IT WAS SOLD TO THE MAURY FARMERS COOPERATIVE IN 1947. THE PLANT WAS THEN SOLD IN 1951 TO THE DUPONT CO. IN 1981, THE PLANT WAS SOLD TO SPONTEX, INC.**

Back to Report Summary

Unlocated Sites Summary

This list contains sites that could not be mapped due to limited or incomplete address information.

Database Name	Site ID#	Site Name	Address	City/State/Zip/County
ECHOR04	110070009784	PHILLIP'S MASONRY GROUP, INC.	INDUSTRIAL PARK DRIVE	COLUMBIA 38401 Maury
ECHOR04	TNR180908	PHILLIP'S MASONRY GROUP, INC.	INDUSTRIAL PARK DRIVE	COLUMBIA 38401 Maury
ERNSTN	329077	SITE SPECIFIC	HWY 43 412 WEST EXIT	COLUMBIA
FRSTN	110027618941	COLUMBIA CONSTRUCTION CO.		COLUMBIA 38401 Maury
FRSTN	110038785491	MAR TRAC, INC.	INDUSTRIAL PARK ROAD	COLUMBIA 38401 Maury
FRSTN	110070009784	PHILLIP'S MASONRY GROUP, INC.	INDUSTRIAL PARK DRIVE	COLUMBIA 38401 Maury
ICISNPDES	TNR180908INPDES	PHILLIP'S MASONRY GROUP, INC.	INDUSTRIAL PARK DRIVE	COLUMBIA 38401 Maury
RST	6600045	COLUMBIA CONSTRUCTION CO.	IND PARK ROAD	COLUMBIA 38401 Maury
RST	0600130	OMS #10	INDUSTRAIL PARK ROAD	COLUMBIA, TN 38401

AIRSAFS Aerometric Information Retrieval System / Air Facility Subsystem

VERSION DATE: 10/20/14

The United States Environmental Protection Agency (EPA) modified the Aerometric Information Retrieval System (AIRS) to a database that exclusively tracks the compliance of stationary sources of air pollution with EPA regulations: the Air Facility Subsystem (AFS). Since this change in 2001, the management of the AIRS/AFS database was assigned to EPA's Office of Enforcement and Compliance Assurance.

BRS Biennial Reporting System

VERSION DATE: 12/31/11

The United States Environmental Protection Agency (EPA), in cooperation with the States, biennially collects information regarding the generation, management, and final disposition of hazardous wastes regulated under the Resource Conservation and Recovery Act of 1976 (RCRA), as amended. The Biennial Report captures detailed data on the generation of hazardous waste from large quantity generators and data on waste management practices from treatment, storage and disposal facilities. Currently, the EPA states that data collected between 1991 and 1997 was originally a part of the defunct Biennial Reporting System and is now incorporated into the RCRAInfo data system.

CDL Clandestine Drug Laboratory Locations

VERSION DATE: 07/01/16

The U.S. Department of Justice ("the Department") provides this information as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments. The Department does not establish, implement, enforce, or certify compliance with clean-up or remediation standards for contaminated sites; the public should contact a state or local health department or environmental protection agency for that information.

DOCKETS EPA Docket Data

VERSION DATE: 12/22/05

The United States Environmental Protection Agency Docket data lists Civil Case Defendants, filing dates as far back as 1971, laws broken including section, violations that occurred, pollutants involved, penalties assessed and superfund awards by facility and location. Please refer to ICIS database as source of current data.

EC Federal Engineering Institutional Control Sites

VERSION DATE: 08/03/15

This database includes site locations where Engineering and/or Institutional Controls have been identified as part

of a selected remedy for the site as defined by United States Environmental Protection Agency official remedy decision documents. A site listing does not indicate that the institutional and engineering controls are currently in place nor will be in place once the remedy is complete; it only indicates that the decision to include either of them in the remedy is documented as of the completed date of the document. Institutional controls are actions, such as legal controls, that help minimize the potential for human exposure to contamination by ensuring appropriate land or resource use. Engineering controls include caps, barriers, or other device engineering to prevent access, exposure, or continued migration of contamination.

ECHOR04 Enforcement and Compliance History Information

VERSION DATE: 08/26/17

The EPA's Enforcement and Compliance History Online (ECHO) database, provides compliance and enforcement information for facilities nationwide. This database includes facilities regulated as Clean Air Act stationary sources, Clean Water Act direct dischargers, Resource Conservation and Recovery Act hazardous waste handlers, Safe Drinking Water Act public water systems along with other data, such as Toxics Release Inventory releases.

ERNSTN Emergency Response Notification System

VERSION DATE: 04/29/18

This National Response Center database contains data on reported releases of oil, chemical, radiological, biological, and/or etiological discharges into the environment anywhere in the United States and its territories. The data comes from spill reports made to the U.S. Environmental Protection Agency, U.S. Coast Guard, the National Response Center and/or the U.S. Department of Transportation.

FRSTN Facility Registry System

VERSION DATE: 04/17/18

The United States Environmental Protection Agency's Office of Environmental Information (OEI) developed the Facility Registry System (FRS) as the centrally managed database that identifies facilities, sites or places subject to environmental regulations or of environmental interest. The Facility Registry System replaced the Facility Index System or FINDS database.

HMIRSR04 Hazardous Materials Incident Reporting System

VERSION DATE: 03/27/18

The HMIRS database contains unintentional hazardous materials release information reported to the U.S. Department of Transportation located in EPA Region 4. This region includes the following states: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

ICIS Integrated Compliance Information System (formerly DOCKETS)

VERSION DATE: 09/23/17

ICIS is a case activity tracking and management system for civil, judicial, and administrative federal Environmental Protection Agency enforcement cases. ICIS contains information on federal administrative and federal judicial cases under the following environmental statutes: the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, the Emergency Planning and Community Right-to-Know Act - Section 313, the Toxic Substances Control Act, the Federal Insecticide, Fungicide, and Rodenticide Act, the Comprehensive Environmental Response, Compensation, and Liability Act, the Safe Drinking Water Act, and the Marine Protection, Research, and Sanctuaries Act.

ICISNPDES Integrated Compliance Information System National Pollutant Discharge Elimination System

VERSION DATE: 07/09/17

Authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States.

LUCIS Land Use Control Information System

VERSION DATE: 09/01/06

The LUCIS database is maintained by the U.S. Department of the Navy and contains information for former Base Realignment and Closure (BRAC) properties across the United States.

MLTS Material Licensing Tracking System

VERSION DATE: 06/29/17

MLTS is a list of approximately 8,100 sites which have or use radioactive materials subject to the United States Nuclear Regulatory Commission (NRC) licensing requirements.

NPDESR04 National Pollutant Discharge Elimination System

VERSION DATE: 04/01/07

Authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. The NPDES database was collected from December 2002 until April 2007. Refer to the PCS and/or ICIS-NPDES database as source of current data. This database includes permitted facilities located in EPA Region 4. This region includes the following states: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

PADS PCB Activity Database System

VERSION DATE: 07/18/17

PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are

required to notify the EPA of such activities.

PCSR04 Permit Compliance System

VERSION DATE: 08/01/12

The Permit Compliance System is used in tracking enforcement status and permit compliance of facilities controlled by the National Pollutant Discharge Elimination System (NPDES) under the Clean Water Act and is maintained by the United States Environmental Protection Agency's Office of Compliance. PCS is designed to support the NPDES program at the state, regional, and national levels. This database includes permitted facilities located in EPA Region 4. This region includes the following states: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee. PCS has been modernized, and no longer exists. National Pollutant Discharge Elimination System (ICIS-NPDES) data can now be found in Integrated Compliance Information System (ICIS).

RCRASC RCRA Sites with Controls

VERSION DATE: 03/21/18

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities with institutional controls in place.

SEMSLIENS SEMS Lien on Property

VERSION DATE: 04/11/18

The U.S. Environmental Protections Agency's (EPA) Office of Solid Waste and Emergency Response, Office of Superfund Remediation and Technology Innovation (OSRTI), has implemented The Superfund Enterprise Management System (SEMS), formerly known as CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System) to track and report on clean-up and enforcement activities taking place at Superfund sites. SEMS represents a joint development and ongoing collaboration between Superfund's Remedial, Removal, Federal Facilities, Enforcement and Emergency Response programs. This is a listing of SEMS sites with a lien on the property.

SFLIENS CERCLIS Liens

VERSION DATE: 06/08/12

A Federal CERCLA ("Superfund") lien can exist by operation of law at any site or property at which United States Environmental Protection Agency has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties. This database contains those CERCLIS sites where the Lien on Property action is complete.

SSTS Section Seven Tracking System

VERSION DATE: 02/01/17

The United States Environmental Protection Agency tracks information on pesticide establishments through the Section Seven Tracking System (SSTS). SSTS records the registration of new establishments and records pesticide production at each establishment. The Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) requires that production of pesticides or devices be conducted in a registered pesticide-producing or device-producing establishment. ("Production" includes formulation, packaging, repackaging, and relabeling.)

TRI Toxics Release Inventory

VERSION DATE: 12/31/16

The Toxics Release Inventory, provided by the United States Environmental Protection Agency, includes data on toxic chemical releases and waste management activities from certain industries as well as federal and tribal facilities. This inventory contains information about the types and amounts of toxic chemicals that are released each year to the air, water, and land as well as information on the quantities of toxic chemicals sent to other facilities for further waste management.

TSCA Toxic Substance Control Act Inventory

VERSION DATE: 12/31/12

The Toxic Substances Control Act (TSCA) was enacted in 1976 to ensure that chemicals manufactured, imported, processed, or distributed in commerce, or used or disposed of in the United States do not pose any unreasonable risks to human health or the environment. TSCA section 8(b) provides the United States Environmental Protection Agency authority to "compile, keep current, and publish a list of each chemical substance that is manufactured or processed in the United States." This TSCA Chemical Substance Inventory contains non-confidential information on the production amount of toxic chemicals from each manufacturer and importer site.

RCRAGR04 Resource Conservation & Recovery Act - Generator

VERSION DATE: 03/01/18

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities currently generating hazardous waste. EPA Region 4 includes the following states: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

RCRANGR04 Resource Conservation & Recovery Act - Non-Generator

VERSION DATE: 03/01/18

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities classified as non-generators. Non-Generators do not presently generate hazardous waste. EPA Region 4 includes the following states: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

ALTFUELS Alternative Fueling Stations

VERSION DATE: 01/22/18

Nationwide list of alternative fueling stations made available by the US Department of Energy's Office of Energy Efficiency & Renewable Energy. Includes Biodiesel stations, Ethanol (E85) stations, Liquefied Petroleum Gas (Propane) stations, Ethanol (E85) stations, Natural Gas stations, Hydrogen stations, and Electric Vehicle Supply Equipment (EVSE).

FEMAUST FEMA Owned Storage Tanks

VERSION DATE: 12/01/16

This is a listing of FEMA owned underground and aboveground storage tank sites. For security reasons, address information is not released to the public according to the U.S. Department of Homeland Security.

HISTPST Historical Gas Stations

VERSION DATE: NR

This historic directory of service stations is provided by the Cities Service Company. The directory includes Cities Service filling stations that were located throughout the United States in 1930.

ICISCLEANERS Integrated Compliance Information System Drycleaners

VERSION DATE: 09/23/17

This is a listing of drycleaner facilities from the Integrated Compliance Information System (ICIS). The Environmental Protection Agency (EPA) tracks facilities that possess NAIC and SIC codes that classify businesses as drycleaner establishments.

MRDS Mineral Resource Data System

VERSION DATE: 03/15/16

MRDS (Mineral Resource Data System) is a collection of reports describing metallic and nonmetallic mineral resources throughout the world. Included are deposit name, location, commodity, deposit description, geologic characteristics, production, reserves, resources, and references. This database contains the records previously provided in the Mineral Resource Data System (MRDS) of USGS and the Mineral Availability System/Mineral Industry Locator System (MAS/MILS) originated in the U.S. Bureau of Mines, which is now part of USGS.

MSHA Mine Safety and Health Administration Master Index File

VERSION DATE: 09/01/17

The Mine dataset lists all Coal and Metal/Non-Metal mines under MSHA's jurisdiction since 1/1/1970. It includes such information as the current status of each mine (Active, Abandoned, NonProducing, etc.), the current owner and operating company, commodity codes and physical attributes of the mine. Mine ID is the unique key for this data. This information is provided by the United States Department of Labor - Mine Safety and Health Administration (MSHA).

BF Brownfields Management System

VERSION DATE: 06/27/18

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. The United States Environmental Protection Agency maintains this database to track activities in the various brown field grant programs including grantee assessment, site cleanup and site redevelopment. This database included tribal brownfield sites.

DNPL Delisted National Priorities List

VERSION DATE: 04/11/18

This database includes sites from the United States Environmental Protection Agency's Final National Priorities List (NPL) where remedies have proven to be satisfactory or sites where the original analyses were inaccurate, and the site is no longer appropriate for inclusion on the NPL, and final publication in the Federal Register has occurred.

NLRRCRAT No Longer Regulated RCRA Non-CORRACTS TSD Facilities

VERSION DATE: 03/01/18

This database includes RCRA Non-Corrective Action TSD facilities that are no longer regulated by the United States Environmental Protection Agency or do not meet other RCRA reporting requirements. This listing includes facilities that formerly treated, stored or disposed of hazardous waste.

ODI Open Dump Inventory

VERSION DATE: 06/01/85

The open dump inventory was published by the United States Environmental Protection Agency. An “open dump” is defined as a facility or site where solid waste is disposed of which is not a sanitary landfill which meets the criteria promulgated under section 4004 of the Solid Waste Disposal Act (42 U.S.C. 6944) and which is not a facility for disposal of hazardous waste. This inventory has not been updated since June 1985.

RCRAT Resource Conservation & Recovery Act - Non-CORRACTS Treatment, Storage & Disposal Facilities

VERSION DATE: 03/01/18

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities recognized as hazardous waste treatment, storage, and disposal sites (TSD).

SEMS Superfund Enterprise Management System

VERSION DATE: 04/11/18

The U.S. Environmental Protections Agency's (EPA) Office of Solid Waste and Emergency Response, Office of Superfund Remediation and Technology Innovation (OSRTI), has implemented The Superfund Enterprise Management System (SEMS), formerly known as CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System) to track and report on clean-up and enforcement activities taking place at Superfund sites. SEMS represents a joint development and ongoing collaboration between Superfund's Remedial, Removal, Federal Facilities, Enforcement and Emergency Response programs.

SEMSARCH Superfund Enterprise Management System Archived Site Inventory

VERSION DATE: 04/11/18

The Superfund Enterprise Management System Archive listing (SEMS-ARCHIVE) has replaced the CERCLIS NFRAP reporting system in 2015. This listing reflect sites that have been assessed and no further remediation is planned and is of no further interest under the Superfund program.

SMCRA Surface Mining Control and Reclamation Act Sites

VERSION DATE: 08/25/17

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

USUMTRCA Uranium Mill Tailings Radiation Control Act Sites

VERSION DATE: 03/04/17

The Legacy Management Office of the Department of Energy (DOE) manages radioactive and chemical waste, environmental contamination, and hazardous material at over 100 sites across the U.S. The L.M. Office manages this database of sites registered under the Uranium Mill Tailings Control Act (UMTRCA).

DOD Department of Defense Sites

VERSION DATE: 12/01/14

This information originates from the National Atlas of the United States Federal Lands data, which includes lands owned or administered by the Federal government. Army DOD, Army Corps of Engineers DOD, Air Force DOD, Navy DOD and Marine DOD areas of 640 acres or more are included.

FUDS Formerly Used Defense Sites

VERSION DATE: 06/01/15

The Formerly Used Defense Sites (FUDS) inventory includes properties previously owned by or leased to the United States and under Secretary of Defense Jurisdiction, as well as Munitions Response Areas (MRAs). The remediation of these properties is the responsibility of the Department of Defense. This data is provided by the U.S. Army Corps of Engineers (USACE), the boundaries/polygon data are based on preliminary findings and not all properties currently have polygon data available. DISCLAIMER: This data represents the results of data collection/processing for a specific USACE activity and is in no way to be considered comprehensive or to be used in any legal or official capacity as presented on this site. While the USACE has made a reasonable effort to insure the accuracy of the maps and associated data, it should be explicitly noted that USACE makes no warranty, representation or guaranty, either expressed or implied, as to the content, sequence, accuracy, timeliness or completeness of any of the data provided herein. For additional information on Formerly Used Defense Sites please contact the USACE Public Affairs Office at (202) 528-4285.

FUSRAP Formerly Utilized Sites Remedial Action Program

VERSION DATE: 03/04/17

The U.S. DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from the Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations. The DOE Office of Legacy Management (LM) established long-term surveillance and maintenance (LTS&M) requirements for remediated FUSRAP sites. DOE evaluates the final site conditions of a remediated site on the basis of risk for different future uses. DOE then confirms that LTS&M requirements will maintain protectiveness.

NLRRCRAC No Longer Regulated RCRA Corrective Action Facilities

VERSION DATE: 03/01/18

This database includes RCRA Corrective Action facilities that are no longer regulated by the United States Environmental Protection Agency or do not meet other RCRA reporting requirements.

NMS Former Military Nike Missile Sites

VERSION DATE: 12/01/84

This information was taken from report DRXTH-AS-IA-83A016 (Historical Overview of the Nike Missile System, 12/1984) which was performed by Environmental Science and Engineering, Inc. for the U.S. Army Toxic and Hazardous Materials Agency Assessment Division. The Nike system was deployed between 1954 and the mid-1970's. Among the substances used or stored on Nike sites were liquid missile fuel (JP-4); starter fluids (UDKH, aniline, and furfuryl alcohol); oxidizer (IRFNA); hydrocarbons (motor oil, hydraulic fluid, diesel fuel, gasoline, heating oil); solvents (carbon tetrachloride, trichloroethylene, trichloroethane, stoddard solvent); and battery electrolyte. The quantities of material a disposed of and procedures for disposal are not documented in published reports. Virtually all information concerning the potential for contamination at Nike sites is confined to personnel who were assigned to Nike sites.
During deactivation most hardware was shipped to depot-level supply points. There were reportedly instances where excess materials were disposed of on or near the site itself at closure. There was reportedly no routine site decontamination.

NPL National Priorities List

VERSION DATE: 04/11/18

This database includes United States Environmental Protection Agency (EPA) National Priorities List sites that fall under the EPA's Superfund program, established to fund the cleanup of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action.

PNPL Proposed National Priorities List

VERSION DATE: 04/11/18

This database contains sites proposed to be included on the National Priorities List (NPL) in the Federal Register. The United States Environmental Protection Agency investigates these sites to determine if they may present long-term threats to public health or the environment.

RCRAC Resource Conservation & Recovery Act - Corrective Action Facilities

VERSION DATE: 03/01/18

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities with corrective action activity.

RCRASUBC Resource Conservation & Recovery Act - Subject to Corrective Action Facilities

VERSION DATE: 03/01/18

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances. This listing refers to facilities subject to corrective actions.

RODS Record of Decision System

VERSION DATE: 04/11/18

These decision documents maintained by the United States Environmental Protection Agency describe the chosen remedy for NPL (Superfund) site remediation. They also include site history, site description, site characteristics, community participation, enforcement activities, past and present activities, contaminated media, the contaminants present, and scope and role of response action.

CDL Clandestine Methamphetamine Labs

VERSION DATE: 04/01/18

This Registry of Methamphetamine Contaminated Properties is maintained by the Department of Environment and Conservation. The registry includes properties reported by a law enforcement agency that have been under order of quarantine for at least sixty days because of potentially hazardous residual contamination that pose a threat to human health and render a property 'Unsafe for Human Use.'

ICEC Institutional / Engineering Controls Registry

VERSION DATE: 04/17/18

The Department of Environment and Conservation (TDEC) provides this registry of sites with institutional controls in place. According to the TDEC, in cases where the cleanup does not remove or address all of the contamination at the property to the most stringent of standards (e.g., for residential or unrestricted use), Institutional Controls (ICs) may be required as part of the cleanup. ICs are legally enforceable restrictions, conditions, or controls that limit or prevent the use of the property, ground water, or surface water so that future exposure to contamination can be prevented or minimized. In Tennessee, ICs are implemented as a Notice of Land Use Restrictions. ICs can also be used in conjunction with engineering controls (ECs). ECs are constructed parts of a cleanup that act to cover (i.e. “cap”) or limit exposure to residual contamination at the property.

CLEANERS Registered Drycleaning Facilities

VERSION DATE: 03/21/18

The Department of Environment and Conservation provides this list of Registered Drycleaning Facilities.

RST Registered Underground Storage Tanks

VERSION DATE: 02/18/18

This underground storage tank database is provided by the Department of Environment and Conservation. The mission of the Division of Underground Storage Tanks is to protect human health and environment by preventing future petroleum underground storage tank releases and remediating existing petroleum underground storage tank contamination.

DELISTEDPS Delisted Promulgated Sites

VERSION DATE: 04/17/18

These sites have been deleted from the Department of Environment and Conservation’s (TDEC) Inactive Hazardous Substance Sites list. According to the TDEC, in order for a promulgated site to be removed from the List, the following shall have occurred: (a) The hazardous substances which posed or may have posed a threat to human health or the environment have to the satisfaction of the Commissioner been removed/stabilized or determined to no longer pose a threat, (b) All relevant site characteristics, including, but not limited to, migration

pathways, have been evaluated and either no longer pose a threat to human health or the environment, or have been remediated or any such threat is being controlled by other means, such as institutional controls, to the satisfaction of the Commissioner, (c) The site will require no long term monitoring and maintenance activities, or financial assurance for the costs of these activities has been established in a form, amount, and manner acceptable to the Commissioner, (d) All monitoring wells, etc., that serve as potential sources or routes for future contamination have been properly abandoned, protected, or otherwise accounted for, and (e) All state cost recovery issues have been resolved to the satisfaction of the Commissioner.

LFSWDS Landfill and Solid Waste Disposal Sites

VERSION DATE: 05/22/18

The Department of Environment and Conservation provides this list of permitted solid waste management facilities.

LST Leaking Underground Storage Tanks

VERSION DATE: 04/03/18

This leaking underground storage tank database is provided by the Department of Environment and Conservation. The database includes details on all facilities where any type of environment related activity has occurred due to a tank closure, a suspected release or a confirmed release.

SRS State Remediation Sites

VERSION DATE: 01/09/18

The State Remediation Program (SRP) was established in 1994 within the Division of Solid Waste Management of the Department of Environment and Conservation for the purpose of providing owners, prospective purchasers and other interested parties the means to voluntarily investigate, clean up or monitor contaminated sites not regulated under RCRA, CERCLA or the Tennessee Division of Underground Tanks. The goal of the program is to provide fair, comprehensive and consistent regulation of the investigation and remediation of contaminated sites in a timely and cost effective manner consistent with other State and Federal programs. This list includes both active and inactive program sites.

VCPBF Voluntary Cleanup and Brownfield Sites

VERSION DATE: 04/20/18

This list of Voluntary Cleanup Oversight and Assistance Program (VOAP) sites, which also includes Brownfield sites, is provided by the Department of Environment and Conservation. The VOAP offers people the opportunity to work proactively with state government to address necessary cleanup of a property to return it to productive use. In return for their efforts, participants can receive a No Further Action letter and a release of liability for areas where investigation and cleanup is conducted.

PIHWS Promulgated Inactive Hazardous Waste Sites

VERSION DATE: 12/22/17

The Promulgated Sites list consists of inactive hazardous substance sites regulated by the Department of Environment and Conservation's (TDEC) Division of Remediation. These sites, under Tennessee's Chapter 1200-1-13 and rules issued by the Solid Waste Board under the Authority of Part 2 of the "Hazardous Waste Management Act" (T.C.A. §68-212-201 et seq.), are inactive and pose or may reasonably be anticipated to pose a danger to public health, safety, or the environment as a result of the presence of a hazardous substance.

Environmental Records Definitions - TRIBAL

USTR04 Underground Storage Tanks On Tribal Lands

VERSION DATE: 05/08/18

Underground storage tanks on Tribal lands located in Region 4 include the following states: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

LUSTR04 Leaking Underground Storage Tanks On Tribal Lands

VERSION DATE: 05/08/18

Leaking underground storage tanks on Tribal lands located in Region 4 include the following states: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

ODINDIAN Open Dump Inventory on Tribal Lands

VERSION DATE: 11/08/06

This Indian Health Service database contains information about facilities and sites on tribal lands where solid waste is disposed of, which are not sanitary landfills or hazardous waste disposal facilities, and which meet the criteria promulgated under section 4004 of the Solid Waste Disposal Act (42 U.S.C. 6944).

INDIANRES Indian Reservations

VERSION DATE: 01/01/00

The Department of Interior and Bureau of Indian Affairs maintains this database that includes American Indian Reservations, off-reservation trust lands, public domain allotments, Alaska Native Regional Corporations and Recognized State Reservations.

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B.Sly Mgt.

UCAR

UCAR CARBON COMPANY INC. P.O. Box 513, Columbia, TN 38402-0513

(615) 388-1410

RECEIVED

JUL 1 1 1997

Div. of
Solid & Hazardous Waste

IDL 60-102-
C1

July 8, 1997

Mr. John H. Hankinson Jr.
Regional Administrator
U.S. Environmental Protection Agency, Region IV
Atlanta Federal Center
100 Alabama Street S.W.
Atlanta, GA 30303

Re: Removal of Non-Friable Transite Flatboard Panels and Floor Tile

Dear Mr. Hankinson:

In accordance with 40 CFR S 61.145, UCAR Carbon Company, Inc., Columbia, Tennessee is here within complying with the notification requirements concerning the removal of asbestos containing material. This removal is scheduled for July 23, 1997. Our contractor is Kimmins Abatement Corporation, 2609 Allen-Genoa Road, P.O. Box 4710, Pasadena, Texas 77502.

A. Description and Location of panels to be removed
698,820 square feet of non-friable transite flatboard panels and small amounts of floor tile from the demolition of buildings 17, 18, 21, 30, 69, 70, 71, 74, and 75.

B. Scheduled starting and completion dates of removal
Removal will begin on 7/23/97 and end on 12/01/98.

C. Description of planned removal
Panels will be unscrewed, removed and placed on pallets. Panels will be wetted and wrapped in plastic. Workers will be protected per the requirements of the State of Tennessee. Kimmins Abatement Corporation will perform all removal work.

D. Location of waste disposal site
The panels will be wrapped in plastic and disposed of in the site 1 landfill at the Columbia plant. The asbestos containing material will be labeled and deposited in this site and covered with a minimum of six (6) inches of non-asbestos containing material.

Sincerely,

Michael Lamb
Environmental Administrator

Cc: Mr. John Walton
Mr. Tom Tiesler

TN D00-403-8428

AUG 1 2 1994

60-0047

Solid & Hazardous Waste

UCAR CARBON

UCAR CARBON COMPANY INC. P.O. BOX 513, COLUMBIA, TENNESSEE 38402-0513

August 11, 1994

Mr. Greer Tidwell,
Regional Administrator
U. S. Environmental Protection Agency, Region IV
345 Courtland Street
Atlanta, GA 30365

Re: Removal of Non-Friable Transite Flatboard Panels

Dear Mr. Tidwell:

In accordance with 40 C.F.R. S 61.45, UCAR Carbon Company, Inc., Columbia, Tennessee, is here within complying with the Notification requirements concerning the removal of asbestos containing material. This removal is scheduled for Monday, August 29 and Tuesday, August 30. Our contractor is Denard and Moore Construction Company, 2064 Fishing Road, Belfast, TN 37019, (615) 276-2600.

A. Description and Location of Panels to be Removed

Two-hundred Nineteen (219) square feet of non-friable transite flatboard panels (24" H x 8" W x 1/2" thick) will be removed from the switchbox control panels in the Bake Buildings of C4K, C7K, C9K, and Ring I. These flatboard panels are 40% asbestos.

B. Scheduled Starting and Completion Dates of Removal

The removal will begin on Monday, August 29, 1994 with completion on Tuesday, August 30, 1994.

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C. Description of Planned Removal

The flatboard panels will be unscrewed, removed from the switchboxes, and placed on a wooden pallet. The panels will be wetted down and wrapped in plastic. Workers will be protected per the requirements of the state of Tennessee. All removal work will be performed by our contractor.

D. Location of Waste Disposal Site

The panels wrapped in plastic will be disposed of in our landfill site No. 1 at the Columbia plant. The asbestos containing panels will be deposited in this site and covered with a minimum of six (6) inches of compacted non-asbestos containing material.

Very Truly Yours,

Ken Brinkley

Ken Brinkley,
OH & E

KB/tmm
CC: Mr. John Walton
Mr. Tom Tiesler

9408k1.wpd

TND-00-403-8428 WP 11/21
Sig 11/25

UCAR

UCAR CARBON COMPANY INC. P.O. Box 513, Columbia, TN 38402-0513

(615) 388-1410

RECEIVED
NOV 21 1996
Div. of
Solid & Hazardous Waste

November 20, 1996

handle as special waste

Mr. Al Majors
Tennessee Division of Solid Waste Management
Nashville Environmental Field Office
3000 Morgan Road
Joelton, Tennessee 37080

Re: Minor Modification to UCAR Carbon Company Inc., Columbia, Tennessee Landfill
Permit # IDL 60-102-0047 MOD

Dear Mr. Majors:

In accordance with Section 1200-1-7-.02(5)(b)(3)(v) of the Rules Governing the Processing and Disposal of Solid Waste in Tennessee, UCAR Carbon Company Inc. requests a minor modification to the Class II landfill permit (Registration No. IDL 60-102-0047 MOD) for Site 1 for the disposal of mortar mix to be included in the "Activities Authorized".

Mortar mix is currently used at UCAR Carbon to reconstruct electrode baking furnaces and furnace covers. Typically, the mortar to water ratio is approximately 1,200 pounds of mortar to 20-30 gallons of water.

We are requesting modification of the permit to allow landfilling mortar mix which has gone through two different processes:

1) Fire-cured mortar

2) Non fire-cured mortar

The fire-cured mortar is utilized in the reconstruction of the furnaces and the furnace covers, and could possibly be used as such for several years prior to landfilling. It is anticipated that approximately 1,200-1,500 pounds of fire-cured mortar will be deposited per month in the landfill, since much of this mortar is in a continuous cycle in the furnace construction. The mortar which is air-dried beyond use for the furnace or furnace covers, or the non fire-cured mortar, is anticipated to be landfilled at a rate of 1,200-1,800 pounds per year.

Enclosed for your information is an MSDS of the mortar material used in the reconstruction process of the furnaces and covers. In addition, a sample of the fire-cured and non fire-cured waste mortar material was subjected to TCLP extraction analyses for metals and non-volatile and volatile organics. A copy of the laboratory analytical report is enclosed. As you will note, none of the organics were detected in the mortar sample. Similarly, the metals were either below detection limits or were well below TCLP limits for hazardous waste characterization.

Based upon the TCLP analytical results and the innocuous nature of the mortar waste, UCAR Carbon Company Inc. requests your approval of this minor modification. If you have any questions, or desire further information, please contact me at (615) 380-4224.

Very truly yours,

M. D. Smith

M. D. Smith
Environmental Manager

Enclosures

copy: Mr. Tom Tiesler, TDSWM Director
Mr. Kevin Wolfe, EMPE, Inc.

TNO-00-403-8428 [redacted]

UCAR

UCAR CARBON COMPANY INC.

P.O. Box 513, Columbia, TN 38402-0513

(615) 388-1410

August 29, 1996

RECEIVED
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Div. of
Solid & Hazardous Waste

Mr. Tom Tiesler
Director
Division of Solid Waste Management
Fifth Floor, L & C Tower
401 Church Street
Nashville, Tennessee 37243-1535

RE: Notification of Intent to Close Site 3 Landfill; [redacted]
Columbia, Tennessee

Dear Mr. Tiesler:

In accordance with Rule 1200-1-7-.04(8)(c)1 of the Division of Solid Waste Management regulations, [redacted] Columbia, Tennessee, wishes to make known its intent to close the Site 3 disposal unit located at approximately 35° 38' 10" N latitude and 87° 02' 52" W longitude.

UCAR Carbon will begin closure activities for Site 3 on October 31, 1996. This site will no longer receive waste after October 9, 1996, due to the lack of a composite liner and leachate collection and gas monitoring systems.

UCAR Carbon will continue to operate the Site 1 disposal unit located at approximately 35° 37' 53" N latitude and 87° 03' 42" W longitude. This site received a waiver from the rules requiring a composite liner, leachate collection, and gas monitoring in accordance with Rule 1200-1-7-.01(5), on February 14, 1996.

If you have any questions, please contact me at (615) 380-4224.

Very truly yours,

M. D. Smith

M. D. Smith
Environmental Manager

CO

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Solid Waste Management
5th Floor, L & C Tower
401 Church Street
Nashville, Tennessee 37243-1535
615-532-0780

February 29, 1996

M. D. Smith
UCAR Carbon, Inc.
P O Box 513
Columbia, TN 38402-0513

RE: UCAR Columbia Landfill IDL 60-102-0047

Dear Mr. Smith:

The Division of Solid Waste Management has evaluated your January 30, 1996 letter requesting clarification of the waste types allowed to be disposed of at the UCAR Landfill IDL 60-102-0047 in Maury County., Tennessee. As your know, the permit for this facility was modified on February 14, 1996 to incorporate a variance to allow landfilling beyond October 1996 without a liner/leachate collection system. Evaluation of this variance request was based in part on a waste characterization provided by UCAR. The variance request submitted by UCAR contained the following waste description. "Specifically the waste material being placed in the landfill is primarily carbonaceous waste material generated from the manufacture of carbon graphite electrodes. A small fraction of the waste stream consists of inert construction and demolition waste generated from construction activities at the facility."

Since investigation at the Columbia facility revealed the absence of geologic buffer beneath portions of the facility, the Division cannot approve any waste for disposal at this facility which is not essentially inert.

The Division will re-evaluate the suitability of the other UCAR waste streams for continued disposal based on a special waste evaluation by the Division's Nashville Field Office. UCAR should submit a separate special waste application for each wastestream to include appropriate analytical data.

Please contact this office or the Nashville Field Office with any questions on this matter.

Sincerely,

J. M. Apple (by wdw)

Mike Apple
Assistant Director
Division of Solid Waste Management

JMA/GAP/ss UCAR

CC: Al Majors, Nashville Field Office

CO

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Solid Waste Management
5th Floor, L & C Tower
401 Church Street
Nashville, Tennessee 37243-1535
615-532-0780

FEB 14 1996

Mr. Morris Smith, Environmental Engineer
UCAR Carbon Company, Inc.
P O Box 513
Columbia, TN 38402-0513

RE: UCAR Carbon Company, Inc. Industrial Landfill, Permit IDL 60-102-0047 MOD

Dear Mr. Smith:

The Tennessee Department of Environment and Conservation has decided to approve the modification to permit number IDL 60-102-0047 MOD for a waiver from rules requiring a composite liner, leachate collection and gas monitoring.

I appreciate your interest in complying with state statutes and look forward to working with you again.

Sincerely,

Tom Tiesler

Tom Tiesler, Director
Division of Solid Waste Management

JTT/DBM/ss PER9

Enclosure

cc: Al Majors, Nashville Field Office

Maury

DEC 21 1981

PMG - 12/22
DAS - 12/29
File

UNION CARBIDE

UNION CARBIDE CORPORATION
P.O. BOX 513, COLUMBIA, TENNESSEE 38401
Carbon Products Division

December 18, 1981

Ms. Phyllis Garman
Tennessee Department of Public Health
Division of Solid Waste Management
150 9th Avenue, North
Nashville, Tennessee 37219

Dear Ms. Garman:

Attached please find a copy of a USGS map outlining Union Carbide Corporation's Columbia, Tennessee plant.

Outlined on this map is the boundary of a proposed new landfill site #5. We would like to include this new site in our construction and operational plans for an operating permit.

Prior to requesting surveying work for this new site we request a preliminary indication from you as to the acceptability of this new site for industrial landfill use.

At your earliest convenience please advise me when you could come down to inspect this site.

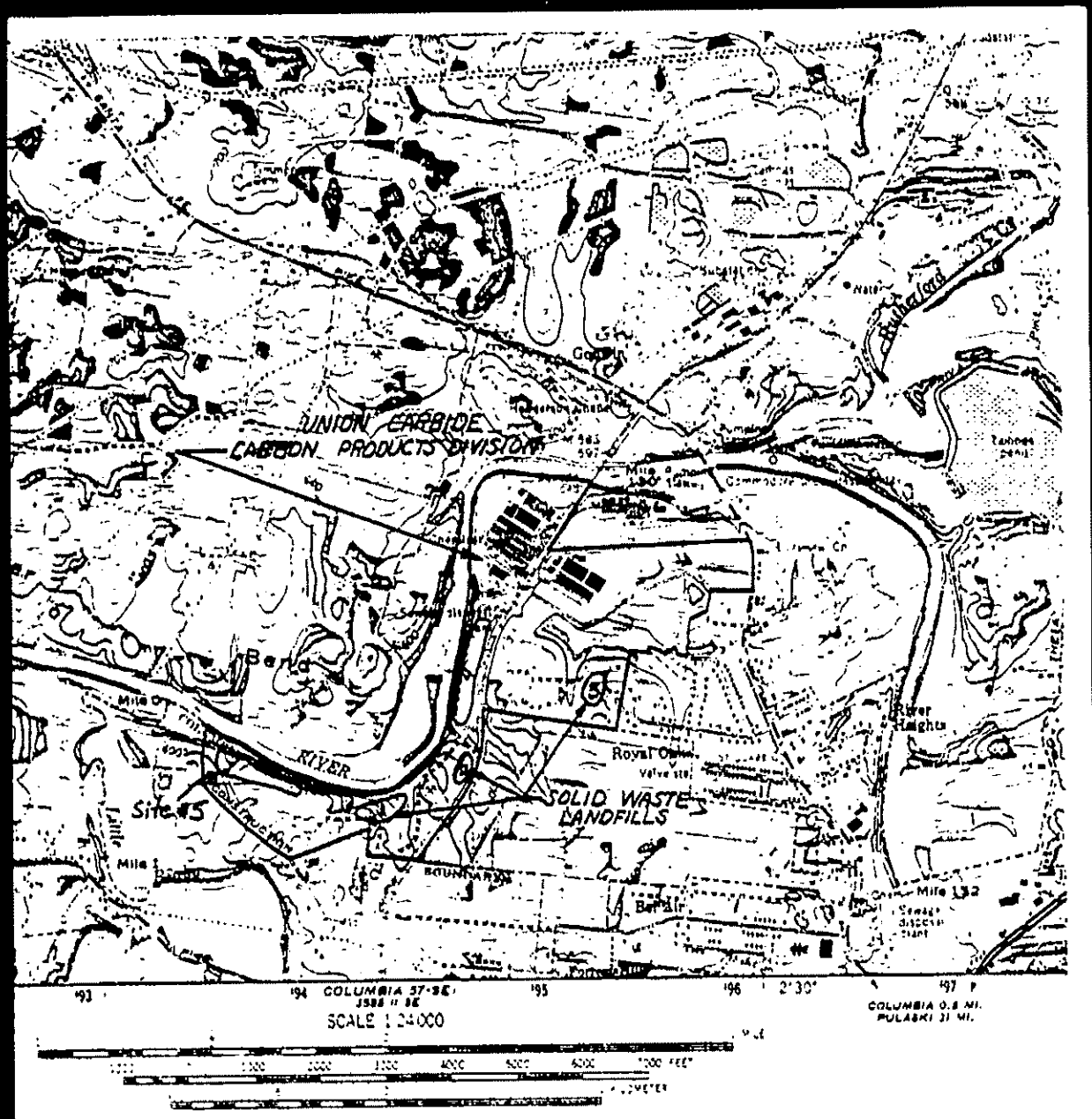
Very truly yours,

R. A. Bolton

Administrator - Environment
and Health

R.A.Bolton:jbm

Attachment



UNITED STATES
TENNESSEE VALLEY AUTHORITY
MAPS AND SURVEYS BRANCH

GODWIN QUADRANGLE
TENNESSEE-MAURY CO.
7.5 MINUTE SERIES (TOPOGRAPHIC) 57-NE

DHB

JMA 4-6
DAB 4-7
BWM 4-6
GLP 4-8
DAS 4-16
SNS 4/27
JCA 4/29
JLC 4-27
ESB-file

April 6, 1971

Mr. B. W. Boshears
Asst. Head-Plant Engineering
Union Carbide Corporation
P.O. Box 513
Columbia, Tennessee 38401

Re: Maury County Disposal Sites

Dear Mr. Boshears:

In reply to your letter of March 18, 1971, the following comments are made. Upon reviewing the material analysis and consulting with involved agencies, the material has been deemed suitable for landfilling purposes. This decision was reached with the assumption that the 7.7 percent noted in the analysis as "other" is an insoluable or inert residue which was not necessary to present for our review.

The disposal of the sludge without daily cover would be acceptable provided that the sludge does not dry to a condition which would create a dust problem. In prior conversation the general procedure was to cover the drying sludge with a new sludge before a dust problem results. This procedure should be sufficient to restrict any problems. The mixing of this sludge with trash is also acceptable.

Disposal of trash separately will pose a different problem than the processes above. As noted in your letter, the disposed trash will contain oil rags along with various flamable wastes--such as, lumber, paper, cardboard, rubber, etc. This condition might possibly create a fire hazard, and if a fire did result, problems of public opinion might come to bear. This situation would pose a problem to both UNION CARBIDE, and the Solid Waste Section. The possibility of blowing waste must also be considered. As the appearance of a site is of major concern, some controls would be necessary to allow open disposal. The above mentioned problems are presented as possible restrictions of depositing the trash without cover. A trench type disposal with careful control would reduce the possibility of problems resulting from disposal of this material; however, as the site would be for Union Carbide's exclusive use, more stringent control would be available than is possible at other sites. A review of the method used would be necessary before a decision could be reached.

TENNESSEE STREAM TSMP MITIGATION PROGRAM

5000 Linbar Drive, Suite 275
Nashville, TN 37211

Preliminary Authorization and Credit Availability Request

Applicant Information			
Name:	Vulcan Materials/Tony Russo	Telephone:	615-347-8942
Address:	115 East Park Dr, Suite 100 Brentwood, TN 37027		
Email:	russot@vmcmail.com		

Consultant Information *(if applicable)*			
Company:	Griggs & Maloney, Inc,		
Name:	Conor Maloney	Telephone:	615-895-8221
Address:	PO Box 2968 Murfreesboro, TN 37133		
Email:	cmaloney@griggsandmaloney.com		

Project Information			
Stream Name:	Unnamed Trib. to Rutherford Creek		
Latitude:	35.6605	Longitude:	-87.0181
HUC8:	06040003 Lower Duck River		
Estimated Credits Requested:	352		
Anticipated Date of Credit Purchase *(month/year)*:	1/2019		

Additional Information
Please provide any additional information such as any special mitigation requirements etc:

For any questions, please call or email Eric Chance at 615-831-9311 x112 or eric.chance@tsmp.us

_____
Signature

_____
Date

To summarize, the disposal of sludge without daily cover will be acceptable to this office, provided that a dust problem does not result. The disposal of trash with the sludge is also acceptable. To dispose of trash separately might create some problems, but a decision on this matter is subject to review depending upon the exact manner of disposal.

Thank you for your concern with the solid waste problem in Tennessee. I am most appreciative of the cooperation and courtesy you and your staff has extended me. If there are any questions concerning this letter or I can be of further service, please do not hesitate to contact me.

Yours very truly,

J. M. Apple
Solid Waste Management
Division of Environmental Sanitation

JMA/lst

Enclosure

cc: Maury County Health Department
South Central Regional Health Office

UNION CARBIDE CORPORATION
CARBON PRODUCTS DIVISION
P. O. BOX 513, COLUMBIA, TENNESSEE 38401

March 18, 1971

Mr. Mike Apple
Division of Solid Waste Disposal
State of Tenn. Public Health Dept.
Cordell Hull Building
Nashville, Tennessee 37219

Dear Mr. Apple:

The Columbia plant, Carbon Products Division, Union Carbide Corporation, desires to start a land fill program at a remote site as soon as details and requirements can be resolved. It is our intention to comply with the new regulations adopted by the State of Tennessee in establishing this program.

The purpose of this letter, in accordance with your instructions on February 12, 1971, is to describe the two materials to be disposed of so that they may be classified and the lawful land fill requirements determined.

Trash - Approximately 200 cubic yards per week is accumulated. It is basically Type O and includes paper, cardboard, lumber, floor sweepings, oil rags and rubber scraps. In addition, it contains tires, conveyor belting, metal scraps, and steel banding. It will not contain any garbage.

Sludge - Approximately 200 cubic yards per week is accumulated. This material is essentially fine particles of metallurgical coke that have been scrubbed from an air stream. It is 40-50% solid and 50-60% water. The coke was used as thermal insulation in our graphitizing process and has been calcined in excess of 1000°C. This temperature has volatilized the reactive low molecular weight hydrocarbons rendering it chemically inert at standard conditions. A typical analysis of the coke material is as follows:

Carbon		72%
Ash - SiO_2	12.2%	
Fe_2O_3	6.6	Fe^{+3} (insoluble)
CaO	0.8	
S	0.7	
Other	7.7	
	28.0	28%
		100%

Because it is uncertain at this time whether both trash and sludge will be disposed of independantly or at the same site we request a ruling in either case.

As the sludge material is inert we believe it is suitable for land fill with only a final grade earth cover and no intermediate cover layers.

Upon receipt of a ruling we plan to locate a suitable site and ask for an inspection in preparation for an Application for Registration.

If you will supply us with a copy of the new regulations and a list of the previously approved but unused local land fill sites it will be most helpful.

We appreciate the cooperation you and Mr. Barnett extended us during your visit on February 12, 1971, and we look forward to working with you in the future.

Very truly yours,

UNION CARBIDE CORPORATION
Carbon Products Division

B. W. Boshears

Assistant Head
Plant Engineering Department

B.W.Boshears:jws

CC: Mr. G. Barnett, County Sanitarian
Maury County Health Department
Columbia, Tennessee

Maury Co.
Geologic File

1 copy
please

STATE OF TENNESSEE
DEPARTMENT OF PUBLIC HEALTH
CORDELL HULL BUILDING
NASHVILLE, TENNESSEE 37219

January 18, 1982

Subject: Geologic evaluation of an on-site disposal area for Union Carbide Corporation of Columbia, Maury County (visited on January 11, 1982).

Site: Approximately 8 acres (19.7 ha) on Union Carbide plant property; site 5 on map.

Location: Godwin quadrangle (57-NE); on south side of Duck River at river mile 128.2 (see attached map).

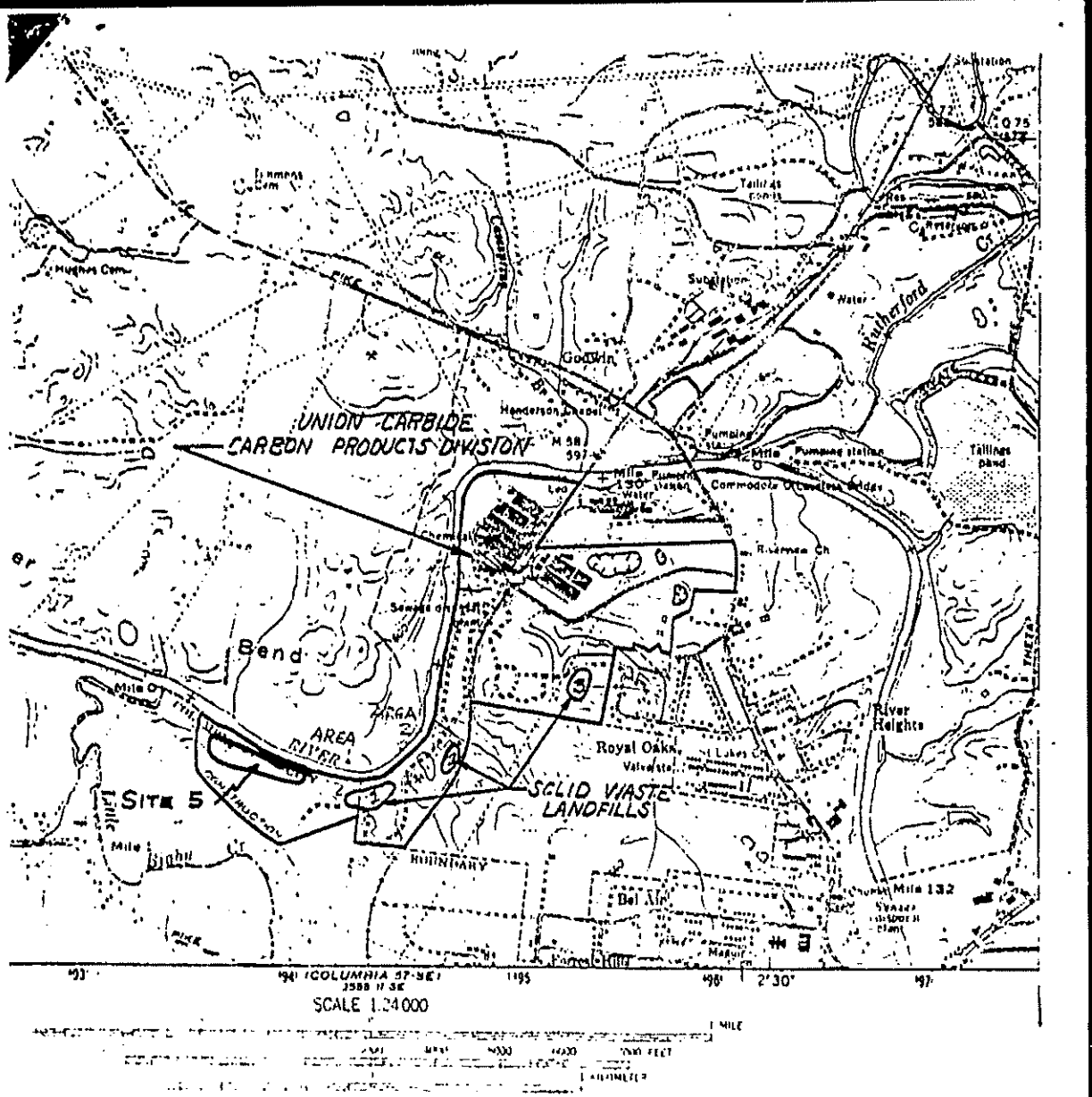
This site is adjacent to other areas that have been investigated for use as disposal sites (see geologic report of April 9, 1981). The site exhibits similar characteristics to the other area; however, no open crevasses or sinkholes were observed. There is good soil cover over the site and it lies well above the 100-year flood elevation of Duck River. Natural drainage is to the west where a drainageway slopes to the river.

Recommendations: Based upon the previous investigation and the walk-over of the site after a dozier had cleared portions of the area, this site appears to be suitable for disposal of industrial waste. A two-foot layer of soil should be left above the bedrock to serve as a buffer between the waste material and the bedrock/soil interface.

Phyllis M. Garman

Phyllis M. Garman, Geologist
Division of Solid Waste Management

PMG/jc 1-2



UNITED STATES
TENNESSEE VALLEY AUTHORITY
MAPS AND SURVEYS BRANCH

GODWIN QUADRANGLE
TENNESSEE-KENTUCKY CO.
7.5 MINUTE SERIES (TOPOGRAPHIC) 57-NE

MAR 16 1982

jthw 3·17

Maury
60-57

UNION CARBIDE CORPORATION
P.O. BOX 513, COLUMBIA, TENNESSEE 38401
Carbon Products Division

March 15, 1982

Mr. Joe Walkup
Tennessee Division of Solid Waste Management
150 9th Avenue, North
Nashville, Tennessee 37219

Dear Mr. Walkup:

Union Carbide Corporation currently is operating two solid waste disposal sites and planning three additional sites at our Columbia, Tennessee plant. These sites are to be utilized for the disposal of various types of solid, non-hazardous waste generated at the plant. Union Carbide Corporation is in the process of registering these sites with the State of Tennessee Department of Public Health, Division of Solid Waste Management (Department).

A normal procedure for registration of such sites includes the design and implementation of a groundwater monitoring program. The purpose of this program is to determine if landfill operations are significantly contaminating the site groundwater system.

Three general types of waste will be disposed at the Union Carbide Columbia sites. The majority of the waste will be inert carbon dust resulting from plant operations. Because such material is chemically inert, there is little chance that any significant volume of offensive leachate will be generated.

Since the carbon dust is similar to the types of material used in carbon filters, it is possible that there may be some improvement in the quality of water passing through the material.

Minor amounts of other process wastes, such as scrubber sludge, waste oil and smog-hog sludge will also be disposed at the various sites.

The concentrations of various chemical constituents in these wastes were determined by EPA toxic tests. These tests were performed according to accepted EPA methods. A summary of the results of these tests is presented on attached Table 1. In general, toxic contaminant concentrations were lower than permissible concentrations allowed by the Department of Solid Waste Management and the U.S. Environmental Protection Agency RCRA regulations.

Minor amounts of paper and similar wastes may also be disposed at the various sites. However, such volumes will be small in comparison to disposed volumes of carbon dust. The paper waste is less innocuous than many wastes encountered in commercial waste sites. Due to its chemical composition, such waste does not generage any significant quantities of offensive leachate due to decomposition.

As previously noted, the purpose of monitoring the groundwater at a landfill site is to determine if landfill operations significantly contaminate the groundwater system. The above review of waste types indicate that there is not significant potential for contaminant from the Union Carbide Columbia Plant waste disposal sites. The unique nature of the disposed wastes may even result in some improvement in quality of percolated water due to carbon filtration. Therefore, monitoring is unnecessary. For this reason, Union Carbide requests a waiver from groundwater monitoring at the Columbia sites.

As agreed in our meeting of February 22, 1982, please advise us within two weeks (April 1, 1982) as to the acceptance of our proposal and the draft plan for site #3.

If we can provide additional information to assist in your evaluation of this program, please contact us.

Very truly yours,

R. A. Bolton

Manager - Health, Safety and Environmental Affairs

R.A.Bolton:jbm

CC: Ms. Phyllis Garman
Mr. Don Skackelford
Mr. William F. Edelen, Jr., P.E.

Little 3-29-82

TABLE 1

ANALYSES OF EPA TOXICS
(EPA TEST METHODS)

Parameter	Scrubber Sludge	Waste Oil	SOMG/HOG Sludge
Arsenic	0.03	0.03	0.05
Barium	0.2	0.5	1.0
Cadium	0.02	0.02	0.01
Chromium	0.02	0.03	0.05
Lead	0.2	0.2	0.05
Mercury	0.005	0.005	0.03
Selenium	0.08	0.05	0.01
Silber	0.02	0.03	0.05

Note: Results are in milligrams per liter.

September 27, 1982

Mr. R. A. Bolton
Manager-Health, Safety and Environmental Affairs
Union Carbide Corporation
P.O. Box 513
Columbia, Tennessee 38401

Dear Mr. Bolton:

This letter is in regards to our telephone discussion on September 22, 1982, about the daily cover of waste.

Any site being used to dispose of any putrescible waste such as paper, etc. is required by solid waste regulations to be covered daily.

The sites being used to dispose of carbon dust and demolition would not be required to be covered daily, but if the carbon dust causes a dust problem, steps should be taken to control the problem.

If we can be of further assistance, please contact us at (615) 741-0633.

Sincerely,

Joe H. Walkup
Division of Solid Waste Management

JHW/cgw 5-2

UNION CARBIDE CORPORATION
P.O. BOX 513, COLUMBIA, TENNESSEE 38401
Carbon Products Division

September 2, 1982

Mr. Joe Walkup
Tennessee Division of Solid Waste Management
150 9th Avenue, North
Nashville, Tennessee 37219

Dear Mr. Walkup:

Union Carbide Corporation's Columbia plant is currently operating two solid waste disposal sites and planning three additional sites. These sites are utilized for the landfilling of various types of solid, non-hazardous waste generated from the plant operations. We are nearing the final stages of registering these sites with the Division of Solid Waste Management for approval of operating permits.

The normal regulatory procedure for registration of solid (non-hazardous) waste landfills is the inclusion of a daily six inch soil cover over the disposed solid waste material. The purpose of this requirement is to control vermins and to prevent blowing litter in sanitary landfills.

Since the majority of solid waste generated by the Columbia plant is classified as inert, carbon dust, and no sanitary landfill material such as garbage or other putrescible waste is generated, Union Carbide Corporation requests that a waiver be granted the Columbia plant for exclusion of this daily soil cover requirement.

If we are required to a landfill operation of daily cover our on-site landfill's life will be cut at least fifty percent and involve an initial capital expense in excess of $200,000 for heavy equipment.

As agreed in our meeting of September 3, 1982, please advise us within two weeks (September 17, 1982) as to the acceptance of our proposal.

If we can provide additional information to assist in your evaluation please contact us.

Very truly yours,

R. A. Bolton

Manager - Health, Safety & Environmental Affairs

R.A.Bolton:jbm

ADS 9-22-95
TNO-00-403-8428

IDL 60-102-0047

empe inc.
consulting engineers and environmental scientists

September 21, 1995

RECEIVED
SEP 22 1995
Div. of
Solid & Hazardous Waste

Mr. Al Majors
Nashville Field Office
Tennessee Division of Solid Waste Management
3000 Morgan Road
Joelton, TN 37080

Re: UCAR Carbon - Columbia, Tennessee Facility chemical analysis of waste

Dear Al,

UCAR Carbon in Columbia has recently had total constituent analysis and TCLP analysis performed on samples of the waste materials that are going into its landfill. Comparison of these analyses to the results of the past years groundwater analyses is important to UCAR's current request for a waiver of the liner and leachate collection standards for class II landfills. Specifically, none of the organic compounds positively detected in the total constituent analyses have been detected in any of the past year's groundwater samples. In addition to this, the TCLP analyses of the waste samples show that metals identified in the total constituent analyses, some of which have been detected in the groundwater, do not leach out of the waste. This supports the opinion that metals detected in the groundwater result from naturally occurring conditions and not from waste in the landfills.

For your review, I have enclosed copies of the lab reports of waste analyses and a list of the constituents positively detected in the waste. If you should have any questions or comments, please feel free to call me at 255-9300.

Sincerely,

John L. Bowers, P.G.

Enclosures

JLB/tlb

pc: Alan Spear, TN DSWM, w/enclosures
Morris Smith, UCAR Carbon
David Booth, EMPE

ucar\columbia\let95\am0921jb.doc

PLAZA I SUITE 410 • 220 ATHENS WAY • NASHVILLE, TENNESSEE 37228 • TELEPHONE (615) 255-9300 • FAX (615) 255-9345

OGDEN *ENVIRONMENTAL AND ENERGY SERVICES*

3325 Perimeter Hill Dr.
Nashville, TN 37211
615 333 0630
Fax 615 331 4715

August 17, 1995

Mr. Morris Smith
Health, Safety, and Environmental Affairs
UCAR Carbon Company, Inc.
P.O. Box 513
Columbia, Tennessee 38402-0513

NASHVILLE ENVIRONMENTAL
RECEIVED
AUG 24 1995
TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
FIELD OFFICE

Re: **Ground-Water Monitoring Report**
Columbia Facility, Sites 1 and 3
July 1995
Ogden Project No. 4 4330 0001 0000

Dear Mr. Ellis:

On July 11, 12 and 13, 1995, Ogden Environmental and Energy Services (Ogden) personnel performed slug tests on and collected ground-water samples from five monitoring wells at the UCAR Columbia facility. Two wells at Site 1 and three wells at Site 3 were sampled. This letter describes the slug testing and sampling event and presents the analytical results.

The work was accomplished by Mr. David Doyle, R.G. and Mr. Jeff Moore of Ogden's Nashville office. The sampling was conducted in accordance with the procedures outlined in the Closure/Post Closure Plan for the UCAR Carbon Company, Inc., Columbia, Tennessee prepared by EMPE in November 1991 with revisions made in 1993. The State of Tennessee Department of Environment and Conservation, Division of Solid Waste Management (TDSWM) modified the Closure/Post Closure Plan on September 26, 1994. The modification required the analysis of organic and inorganic constituents, base neutral extractables, chloride, ammonia as nitrogen, sulfate, specific conductance, and chemical oxygen demand (COD).

To measure the hydraulic conductivity of the water-bearing zone at the site, rising-head slug tests were performed at all five wells. The tests were conducted in the following manner: 1) an *In Situ* pressure transducer was attached to an *In Situ* Hermit SE 1000 data logger and placed into the well; 2) a clean bailer was placed into the well and allowed to fill with water; 3) upon equilibration of the water level, the bailer was quickly removed, resulting in an essentially instantaneous lowering of the water level; and 4) the water level was allowed to reequilibrate while the data logger recorded the rising level. The data collected were analyzed using AQTESOLV, a computer program designed for slug and pumping test analysis. Using the Bouwer and Rice method, the following values of hydraulic conductivity (K) were obtained:

MW 1-1	$K = 2.2 \times 10^{-7}$ cm/sec
MW 1-2	$K = 1.1 \times 10^{-7}$ cm/sec
MW 3-2	$K = 1.3 \times 10^{-4}$ cm/sec

MW 3-3	$K = 8.8 \times 10^{-6}$ cm/sec
MW 3-4 (new well)	$K = 3.3 \times 10^{-6}$ cm/sec

The average hydraulic conductivity for Site 1 is 1.6×10^{-7} cm/sec, and for Site 3 is 4.4×10^{-6} cm/sec. The raw data from the slug tests, along with the graphs showing recovery data, are included in Appendix 1.

Water levels and well depths were measured prior to purging and sampling. Each well was purged of three well volumes, or until dry, before the well was sampled. The pH, temperature, and specific conductance were measured prior to purging and after each purged well volume. Water levels, total depths, and physical parameters obtained from each well during purging procedures are presented in Table 1.

The July 1995, sampling event included the first sampling of a new monitoring well at Site 3. The new well, referred to in this report as MW 3-4, was installed as a replacement of MW 3-1 at the request of TDSWM. The new well is located on the downgradient side of Site 3, northwest of MW 3-1 as shown in Figure 2. Monitoring well MW 3-1 will no longer be sampled. Because of insufficient flow of ground water, all of the monitoring wells except the new well (MW 3-4) were bailed dry, allowed to recharge, and then sampled. Monitoring well MW 3-4 was the only well capable of producing three well volumes during the purging activities.

Because there are only two monitoring wells at Site 1, no gradient calculations for Site 1 are possible. A Site Plan for Site 1 is presented as Figure 1. Using the July, 1995 ground-water elevation data, a Ground-Water Gradient Map for Site 3 has been prepared and is presented as Figure 2. Based on the measured ground-water gradient (0.05) and the measured hydraulic conductivity of 4.2×10^{-6} cm/sec, the ground-water flow rate beneath this site is estimated to be 1.1 feet per year.

All samples were placed in appropriate containers, packed in coolers with ice, and shipped under chain-of-custody procedures to ATI Laboratories in Pensacola, Florida or Eckenfelder Labs in Nashville, Tennessee (for volatile analysis only). In addition to the samples collected from the monitoring wells, blanks were submitted for analysis to provide QA/QC data. The blanks included; 1) an air blank prepared in the field by pouring deionized water into the sample bottles; 2) an equipment rinseate blank, prepared in the field by pouring deionized water through a clean bailer into the sample bottles; and 3) a trip blank, prepared in the laboratory.

The following analysis was performed by Eckenfelder:

- Appendix I, Landfill Volatiles (Methods 8260 and 8011)

The following analyses were performed by ATI:

- Appendix II, Landfill Metals Group (Method 6010, 7470 for Mercury)
- Base Neutral Extractables (Method 8270)
- Chloride (Method 325.3)
- Chemical Oxygen Demand (Method 410.4)
- Conductivity (Method 120.1)
- Fluoride (Method 340.2)
- Ammonia as Nitrogen (Method 350.1); and
- Sulfate (Method 375.4)

A summary of the analytical results of the July 1995 analysis is presented in Table 2. Analyses were completed July 27, 1995. The laboratory data sheets, laboratory quality control (QC) reports, and chain-of-custody form are included as Appendix 2.

These results constitute the first semi-annual data collection for the UCAR-Columbia facility. Using the analytical results collected during the first year, Ogden has performed statistical analyses of the ground-water quality for the listed analytes.

Statistical comparisons between upgradient and downgradient wells could not be performed for the Site 1 wells (MW 1-1 and MW 1-2) because only two wells are available to monitor ground-water quality. Three wells are necessary to determine ground-water gradient and flow direction. Intrawell comparisons were made, however, using the control-chart technique available through GRITSTAT, the U.S. EPA designed statistical program. The control chart analysis was performed only for well MW 1-1, because there were not enough data available from MW 1-2, which has been sampled for all constituents only once (July 1995) due to insufficient water. The control chart analysis showed no out-of-control process for MW 1-1, and none of the detected constituents at Site 1 were measured at concentrations exceeding MCLs. GRITSTAT data sheets are included in Appendix 3.

Based on calculated ground-water flow direction, monitoring well MW 3-3 has been determined as the upgradient well at Site 3. Wells MW 3-4 and MW 3-2 have likewise been determined to be hydraulically downgradient. Using MW 3-3 data as representative of unimpacted ground-water quality, Ogden has completed the statistical comparisons of the three monitoring wells. GRITSTAT was utilized to perform the ANOVA-nonparametric comparisons. GRITSTAT data sheets are included as Appendix 3.

Statistical analyses of upgradient (MW 3-3) and downgradient (MW 3-4 and MW 3-2) ground-water quality were performed on 15 detected parameters. Only two analytes were determined to have statistically significant differences, both at MW 3-2. Analyses indicate that total barium results at MW 3-2 are statistically significant when compared to the background conditions.

However, the concentrations of barium are well below the 2.0 mg/l maximum contaminant level (MCL) as listed in the TDEC Chapter 1200 Regulations. One other parameter, fluoride, was determined to be statistically significant from background concentrations at monitoring well MW 3-2. Although elevated above the background values, fluoride concentrations in ground-water from MW 3-2 were well below the 4.0 mg/l MCL. Statistical comparisons of the remaining detected parameters at Site 3 did not reveal any other significant differences between upgradient and downgradient ground-water quality.

Statistical analyses were not performed on two detected parameters, methylene chloride and bis (2-ethylhexyl) phthalate. Methylene chloride was detected in wells MW 3-3 and MW 3-4, as well as the air blank and a laboratory method blank. It is therefore unlikely that the measured concentrations (0.0013 mg/l) represent ground-water conditions. Bis (2-ethylhexyl) phthalate was detected in well MW 3-4 and the air blank. Again, it is unlikely that the measured concentration (0.030 mg/l) represents ground-water conditions.

If you have any questions or comments regarding this matter, please do not hesitate to call.

Sincerely,

OGDEN ENVIRONMENTAL AND ENERGY SERVICES

Chris Scott, P.G.
Project Manager

Attachments

OGDEN

Hydrology: Surface: Overland flow is toward Duck River except in the areas where fill material ponds the runoff. Culverts have been constructed beneath all three fill areas although some ponding still exists. In areas of sinks and open crevasses the surface water would drain downward through the solutional openings. Potential for surface flooding from Duck River has been eliminated by the berms of the fill areas. However, erosion of these berms during flood can be expected and backwater rising in the sink areas could cause internal flooding or saturation.

Subsurface: Ground-water movement would be fairly rapid through the widened joints and solution openings. This area serves as a recharge to Duck River.

Conclusion: Because of the highly developed Karst topography in this area and the resultant rapid recharge to the local ground water, this site is not suitable for landfill use. An area without sinkhole development should be used; Although E.P. Toxicity tests of the materials disposed of here indicate that they are not hazardous, internal flooding through the sinkholes and cavities during high water levels of Duck River could cause ground surface failure and/or concentrated solution of the fill materials. A close-out plan should be developed for all three areas with the following recommendations:

(1) Avoid all open crevasses.
(2) Bottom areas filled with rock and dirt beneath wastes.
(3) Drainage culverts kept open.
(4) Final cover over all wastes.

Phyllis M. Garman

Phyllis M. Garman, Geologist
Division of Solid Waste Management

PMG/vm 5/14

References

Burwell, H. B., 1964, Geologic Map of the Godwin Quadrangle, Tennessee: Tennessee Division of Geology, GM 57-NE.

Newcome, Roy, Jr., 1958, Ground Water in the Central Basin of Tennessee: Tennessee Division of Geology, Rept. of Invest. No. 4.

Theis, Charles V., 1936, Ground Water in South-Central Tennessee: U.S.G.S. Water-Supply Paper 677.

U.S.G.S., 1965, Topographic map of the Godwin Quadrangle 57-NE, scale 1 : 24000.

1.17.6 INTERVIEW DOCUMENTATION

G&M interviewed individuals regarding the Subject Property as described in this report and including the following;

- In person interview of Mr. Larry Lockridge, retired UCAR engineer (1980-2007) during the site reconnaissance;
- In person interview of Ms. Beverly Philpot, TDEC DSWM – Columbia Environmental Assistance Center; and
- Attempted contact of Mr. Tim Hallmark, former UCAR environmental manager, by email. If future discussions with Mr. Hallmark indicated significant additional information regarding the Subject Property, G&M will issue an addendum to this report.

1.17.7 SPECIAL CONTRACTUAL CONDITIONS BETWEEN USER AND ENVIRONMENTAL PROFESSIONAL

1.17.8 QUALIFICATION(S) OF THE ENVIRONMENTAL PROFESSIONAL(S)

GRIGGS & MALONEY
INCORPORATED
Engineering & Environmental Consulting

R. KERRY GIVEN

MURFREESBORO, TENNESSEE 37130
(615) 895-8221 • (615) 895-0632 FAX
KGIVEN@GRIGGSANDMALONEY.COM

EDUCATION

- Western Kentucky University (1991) – B.S., Geography

CERTIFICATIONS & ACCREDITATIONS

- Tennessee Licensed AHERA Asbestos Inspector, Management Planner, Project Monitor
- Mold Remediation Sampling & Evaluation, Design Issues Training
- HAZWOPER
- Mine Safety and Health Administration (MSHA) Certification
- Visible Emissions Certification
- Hazardous Materials Transportation Certification
- Former Certified Environmental Inspector
- Former Registered Environmental Property Assessor

BACKGROUND

Mr. Given has conducted or been involved in more than 1,200 Phase I Environmental Site Assessments in 14 states and Canada including hospitals, manufacturing facilities, and commercial properties. His project work has included several Phase II investigations, a Superfund remediation project and Brownfield Agreements.

PROJECT EXPERIENCE

- Mr. Given has been involved in numerous asbestos and lead-based paint monitoring, clearance testing projects and underground storage tank investigations/upgrades at more than 50 facilities in Tennessee, Georgia, and Texas. His underground storage tank investigations/upgrades have included more than fifty facilities in Tennessee, Georgia and Texas. He has conducted numerous mold evaluations, indoor air quality investigations and Visible Emissions Evaluations for clients with air emissions permits.

- Mr. Given developed on-site analytical method selection and protocol for a $10-million PCB remediation project in East Tennessee, and has assisted in the completion of Community Development Block Grants and several National Environmental Protection Act Investigations. Mr. Given has coordinated several projects that have included archeological, wetland, and threatened and endangered species investigations.

PREVIOUS EXPERIENCE

GRIGGS & MALONEY, INC. • MURFREESBORO, TENNESSEE
2001 – 2017 • Senior Environmental Scientist

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EDUCATION

- Middle Tennessee State University (1971) – B.S., Biology
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CERTIFICATIONS & ACCREDITATIONS

- Certified Environmental Inspector
- HAZWOPER
- Mine Safety and Health Administration (MSHA) Certification

BACKGROUND & PROJECT EXPERIENCE

Mr. Maloney has over forty years' experience as a consultant with private engineering firms. His experience includes environmental audits and assessments (NEPA), jurisdictional waters and wetland assessments, hazardous waste site investigation, site remediation, on-site hazardous waste treatment operations, underground storage tank investigation, groundwater remediation, waste stream characterization, water quality data acquisition and interpretation, aquatic/terrestrial inventory surveys (includes threatened and endangered species and Indiana Bat Habitat Assessments), limnological investigations, ecological surveys, fish kill investigations, bio-monitoring and bioassay studies, population studies, toxicity and contamination studies using plant/animal tissue and interim status hazardous waste treatment facility management.

Mr. Maloney has managed surface mining programs, such as the U.S. Department of Interior's Office of Surface Mining's Small Operator Assistance Program, where his duties included contract negotiations, development/management of financial and field data collection programs, and report preparation.

Mr. Maloney has participated in prehistoric/historic cultural resource assessments; worked with the University of Tennessee Archaeological field crews involved in site reconnaissance, testing and excavation; performed as field assistant on a Tennessee Division of Archaeology salvage excavation; as well as conducting statewide archaeological resource reconnaissance surveys in Tennessee, Kentucky, and Alabama.

PREVIOUS EXPERIENCE

GRIGGS & MALONEY, INC. • MURFREESBORO, TN
1989 – 2017 • Principal

HORIZON ENGINEERING & ENVIRONMENTAL SCIENCES • LA VERGNE, TN
1985 – 1988 • Vice-President

BARCON, INC. • LA VERGNE, TN
1983 – 1985 • Vice-President

ENVIRONMENTAL SYSTEMS CORPORATION • KNOXVILLE, TN
1982 – 1983 • Environmental Scientist/Manager

D&S UNIVERSAL MINING. • CROSSVILLE, TN
1980 – 1981 • Consultant

EMPE • NASHVILLE, TN
1975 – 1980 • Biologist



TRAFFIC IMPACT STUDY

Zero Industrial Park Road
Development

Map 89 Parcel 46.00
Columbia, TN

T2-Eng.com

T-SQUARE
ENGINEERING

TRAFFIC IMPACT STUDY

Zero Industrial Park Road Development
Map 89, Parcel 46.00
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Certification

I certify that this Traffic Impact Study has been prepared by me and under my immediate supervision and that I have the experience and training in the field of traffic and transportation engineering.



3/9/23

James O. Ensley, III, P.E.
T-Square Engineering, Inc.
Project Manager – Traffic Division

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Introduction

The purpose of this study is to analyze the traffic impacts on the surrounding roadway network associated with the proposed Zero Industrial Park Road development along Industrial Park Road in Columbia, TN. The proposed development will consist of approximately 240,000 square feet of Industrial Storage use and seventy-one (71) RV and Tractor Trailer storage parking spaces.

As shown on the Location Map and Preliminary Site Plan on Figures 1 and 2, respectively, the proposed development is located along the east side of Industrial Park Road in Columbia, TN. The development is proposing two (2) access points on Industrial Park Road: one (1) full access aligned with the driveway of Smile Direct Club on Industrial Park Road and one (1) full access aligned with the driveway of 981 Industrial Park Road on Industrial Park Road. The surrounding area is predominantly commercial.

This study analyzes the existing and projected traffic operations of the roadway networks and intersections surrounding the proposed development. To evaluate the projected traffic operations, existing traffic volumes were grown (background traffic volumes) to a 2025 design year based on average traffic growth rates and combined with the generated traffic volumes from nearby background developments and estimated trips generated from the proposed development. Lastly, improvement recommendations were presented to alleviate the anticipated traffic volumes' effect on the existing roadway network near the site.



LEGEND

Existing Study Intersection

N.T.S.

Figure 1
Location Map

BUILDING SETBACKS	
FRONT	20 FT
REAR	0 FT
SIDE	0 FT

	PARKING	
	ADA	REGULAR
OFFICE REQUIRED	1	10
OFFICE PROPOSED	1	10
INDUSTRIAL REQUIRED	8	80
INDUSTRIAL PROPOSED	8	283

SITE DATA		
	EXISTING	PROPOSED
PROPERTY ACREAGE	46.59	46.59
ZONING	LI	LI
USE	VACANT	INDUSTRIAL STORAGE
LOTS	1	16
PROPERTY AREA USE		
PERVIOUS AREA	46.59 AC	38.30 AC
IMPERVIOUS AREA	0 AC	8.29 AC
BUILDING HEIGHT	N/A	1-STORY
BUILDING AREA	N/A	3.72 AC
	REQUIRED	PROPOSED
OPEN SPACE % OF OVERALL	7%	16%
OPEN SPACE TYPE	N/A	NATURAL GREEN WAY
ERROR OF CLOSURE	1/10,000	1/10,000

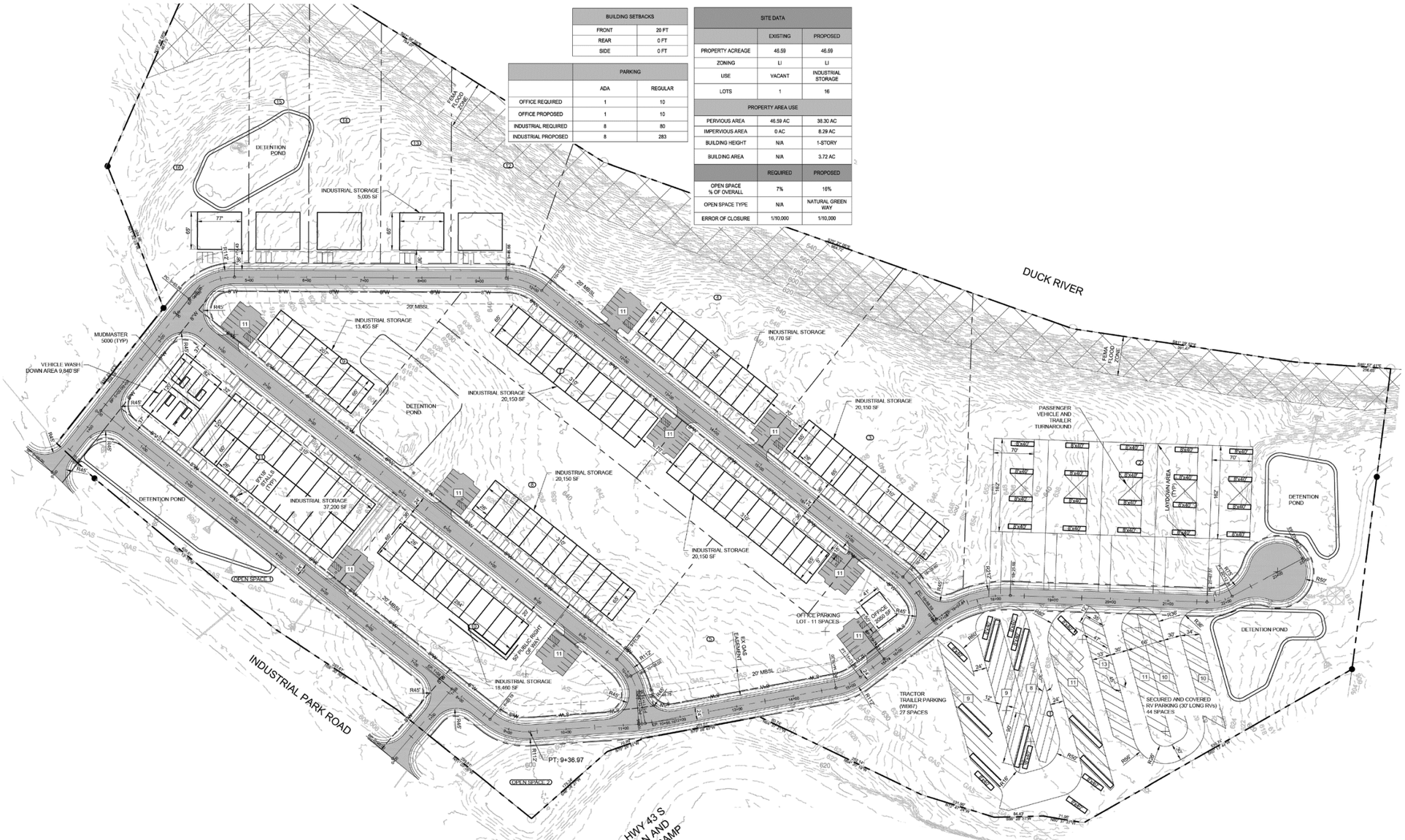


Figure 2
Preliminary Site Plan

Existing Study Area

Existing Roadway Network

The existing roadway network surrounding the proposed Zero Industrial Park Road Development includes Industrial Park Road, US-412, N James Campbell Boulevard, and Santa Fe Pike (TN-7). Below is a description of each roadway serving the proposed development:

Industrial Park Road

Industrial Park Road is functionally classified by the City of Columbia as a Collector and a Principal Arterial. Industrial Park Road is oriented in a north-south direction and provides a connection between Santa Fe Pike to the north and N James Campbell Boulevard to the south. Near the project site, Industrial Park Road is a two (2) lane roadway with one (1) eleven (11) foot travel lane in each direction (northbound and southbound) and four (4) foot shoulders. The posted speed limit along Industrial Park Road is 45 MPH.



Looking south along Industrial Park Road

US-412

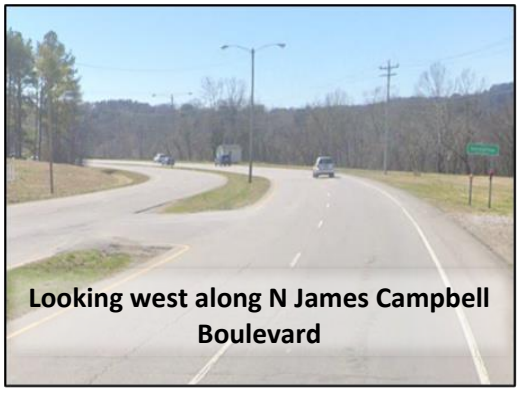
US-412 is functionally classified by the City of Columbia as a Freeway. Near the project site, US-412 is oriented in an east-west direction and provides a connection between Mt. Pleasant to the west and I-65 to the east. Near the project site, US-412 is a four (4) lane divided roadway with two (2) twelve (12) foot travel lanes in each direction (eastbound and westbound) and ten (10) foot shoulders. The posted speed limit along US-412 varies from 55 MPH to 65 MPH, and the assumed speed limit on each of the ramps (eastbound and westbound) is 30 MPH.



Looking east along US-412

N James Campbell Boulevard

N James Campbell Boulevard is functionally classified by the City of Columbia as a Minor Arterial and Principal Arterial. Near the project site, N James Campbell Boulevard is oriented in a north-south direction and provides a connection from Santa Fe Pike (TN-7) to the north and Hampshire Pike (TN-99) to the south. Near the project site, N James Campbell Boulevard is a four (4) lane divided roadway with two (2) twelve (12) foot travel lanes in each direction (northbound and southbound). The posted speed limit along N James Campbell Boulevard is 45 MPH.



Looking west along N James Campbell Boulevard

Santa Fe Pike (TN-7)

Santa Fe Pike (TN-7) is functionally classified by the City of Columbia as a Principal Arterial. Near the project site, Santa Fe Pike (TN-7) is oriented in an east-west direction and provides a connection to the City of Santa Fe to the west and the City of Columbia to the east. Near the project site, Santa Fe Pike (TN-7) is a five (5) lane divided roadway with two (2) twelve (12) foot travel lanes in each direction (eastbound and westbound), a twelve (12) foot two-way left-turn lane, and six (6) foot shoulders. The posted speed limit along Santa Fe Pike is 55 MPH.



Looking east along Santa Fe Pike (TN-7)

Existing Intersections

This study analyzed six (6) existing intersections within the vicinity of the project site. The intersections analyzed are listed below with a brief description of each, and Figure 3 shows the existing lane geometry at the intersections.

Industrial Park Road and N James Campbell Boulevard

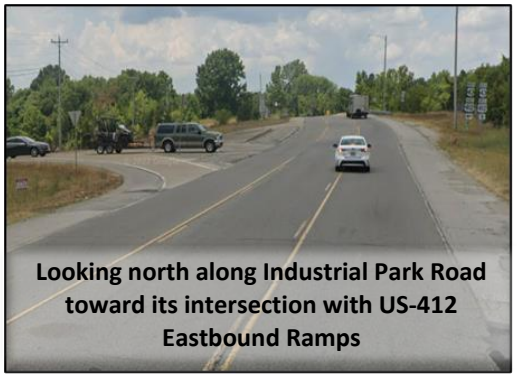
The existing intersection of Industrial Park Road and N James Campbell Boulevard is a signalized intersection with four (4) approaches. The southbound approach of Industrial Park Road has one (1) shared lane for left-turn and through movements and one (1) exclusive lane for right-turn movements. The northbound approach has one (1) shared lane for left-turn, through, and right-turn movements. The eastbound approach of N James Campbell Boulevard has one (1) exclusive lane for left-turn movements with approximately 140 feet of storage, one (1) exclusive lane for through movements, and one (1) shared lane for through and right-turn movements. The westbound approach of N James Campbell Boulevard has one (1) shared lane for left-turn and through movements and one (1) shared lane for through and right-turn movements.



Looking east along N James Campbell Boulevard towards its intersection with Industrial Park Road

Industrial Park Road and US-412 EB Ramps

The existing intersection of Industrial Park Road and the US-412 EB Ramps is an unsignalized intersection with three (3) approaches. The southbound approach of Industrial Park Road has one exclusive lane for through movements and one (1) channelized lane for right-turn movements with approximately 180 feet of storage operating under a free-flow condition. The northbound approach of Industrial Park Road has one (1) exclusive lane for left-turn movements with 100 feet of storage which transitions into a two-way left-turn lane and one (1) exclusive lane for through movements operating under a free-flow condition. The eastbound approach of the US-412 EB Ramps has one (1) exclusive lane for left-turn movements operating under a stop condition and one (1) channelized lane for right-turn movements with approximately eighty (80) feet of storage operating under a yield condition.



Looking north along Industrial Park Road toward its intersection with US-412 Eastbound Ramps

Industrial Park Road and US-412 WB Ramps



Looking north along Industrial Park Road toward its intersection with US-412 Westbound Ramps

The existing intersection of Industrial Park Road and the US-412 WB Ramps is a signalized intersection with three (3) approaches. The southbound approach of Industrial Park Road has one (1) exclusive lane for left-turn movements with 100 feet of storage which transitions into a two-way left-turn lane and one (1) exclusive lane for through movements. The northbound approach of Industrial Park Road has one (1) exclusive lane for through movements and one (1) channelized lane for right-turn movements with approximately 100 feet of storage. The westbound approach of the US-412 WB Ramps has one (1) exclusive lane for left-turn movements and one (1) channelized lane for right-turn movements with approximately thirty (30) feet of storage.

Industrial Park Road and Smile Direct Club Drive



Looking south along Industrial Park Road towards its intersection with Smile Direct Club Drive

The existing intersection of Industrial Park Road and Smile Direct Club Drive is an unsignalized intersection with three (3) existing approaches. The southbound approach of Industrial Park Road has one (1) shared lane for through and right-turn movements operating under a free-flow condition. The northbound approach of Industrial Park Road has one (1) exclusive lane for left-turn movements with 100 feet of storage which transitions into a two-way left-turn lane and one (1) exclusive lane for through movements operating under a free-flow condition. The eastbound approach of Smile Direct Club Drive has one (1) shared lane for left-turn, through, and right-turn movements operating under a stop condition.

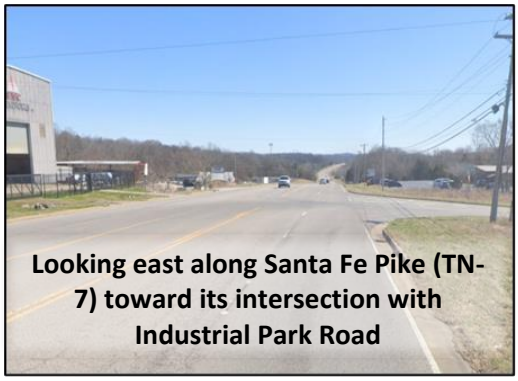
Industrial Park Road and 981 Industrial Park Road Drive



Looking south along Industrial Park Road toward its intersection with 981 Industrial Road Drive

The existing intersection of Industrial Park Road and 981 Industrial Park Road Drive is an unsignalized intersection with three (3) existing approaches. The southbound approach of Industrial Park Road has one (1) shared lane for through and right-turn movements operating under a free-flow condition. The northbound approach of Industrial Park Road has one (1) shared lane for left-turn and through movements operating under a free flow condition. The eastbound approach of 981 Industrial Park Road Drive has one (1) shared lane for left-turn, through, and right-turn movements operating under a stop condition.

Industrial Park Road and Santa Fe Pike (TN-7)



Looking east along Santa Fe Pike (TN-7) toward its intersection with Industrial Park Road

The existing intersection of Industrial Park Road and Santa Fe Pike (TN-7) is an unsignalized intersection with three (3) existing approaches. The northbound approach of Industrial Park Road has one (1) exclusive lane for left-turn movements and one (1) channelized lane for right-turn movements with approximately eighty-five (85) feet of storage operating under a stop condition. The eastbound approach of Santa Fe Pike (TN-7) has one (1) exclusive lane for through movements and one (1) shared lane for through and right-turn movements operating under a free-flow condition. The westbound approach of Santa Fe Pike (TN-7) has one (1) exclusive lane for left-turn movements with 100 feet of storage which transitions into a two-way left-turn lane and two (2) exclusive lanes for through movements operating under a free-flow condition.

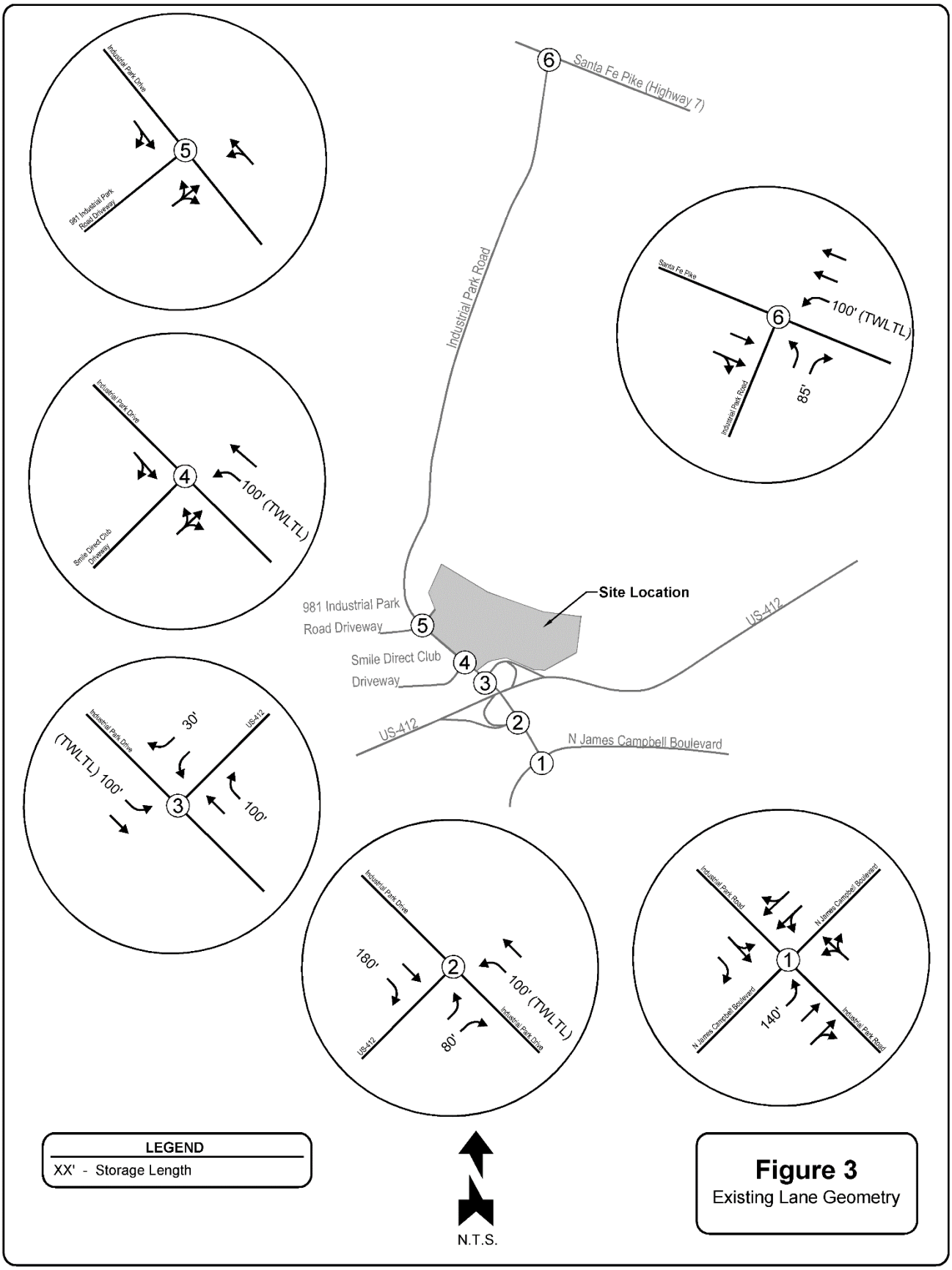


Figure 3
Existing Lane Geometry

Existing Traffic Volumes

To establish existing traffic volumes within the study area, T-Square Engineering conducted turning movement counts at the study intersections on a typical weekday in January 2023 while Maury County Schools were in session. The turning movement counts were conducted over a total of twelve (12) hours from 6:00 AM – 6:00 PM. From the turning movement counts, the AM and PM peak hour traffic volumes for all intersections were established and determined to occur between 7:15 AM – 8:15 AM and 4:15 PM – 5:15 PM, respectively. Existing hourly turning movement counts are shown in the tables below. Figure 4 shows the existing peak hour totals at the study intersections for the AM and PM peak hour periods. Appendix A contains the detailed turning movement counts at each intersection.

Table 1. Turning Movement Counts, Industrial Park Road and N James Campbell Boulevard

Time	SOUTHBOUND			NORTHBOUND			WESTBOUND			EASTBOUND		
	Industrial Park Road			Driveway			N James Campbell Boulevard			N James Campbell Boulevard		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 – 7:00 AM	26	4	390	0	2	0	2	81	29	234	107	2
7:00 – 8:00 AM	96	3	753	3	1	3	5	196	27	337	180	10
8:00 – 9:00 AM	57	7	494	4	1	2	2	112	16	248	118	1
9:00 – 10:00 AM	30	4	386	3	6	4	3	128	19	272	137	1
10:00 – 11:00 AM	34	2	338	0	2	2	0	106	21	291	142	3
11:00 AM – 12:00 PM	30	4	316	2	3	5	2	147	27	321	179	4
12:00 – 1:00 PM	24	9	329	9	6	1	2	138	34	353	157	5
1:00 – 2:00 PM	31	3	314	7	4	6	2	148	31	340	151	9
2:00 – 3:00 PM	38	3	456	2	5	1	3	168	40	438	177	4
3:00 – 4:00 PM	66	2	523	4	2	2	2	202	46	530	246	3
4:00 – 5:00 PM	57	2	493	6	6	3	3	205	55	580	221	5
5:00 – 6:00 PM	26	3	395	2	8	2	0	196	42	521	203	0
TOTAL	**515**	**46**	**5,187**	**42**	**46**	**31**	**26**	**1,827**	**387**	**4,465**	**2,018**	**47**

Table 2. Turning Movement Counts, Industrial Park Road and US-412 EB Ramps

Time	SOUTHBOUND			NORTHBOUND			EASTBOUND		
	Industrial Park Road			Industrial Park Road			US-412		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 – 7:00 AM	0	339	21	101	143	0	93	0	77
7:00 – 8:00 AM	0	590	18	133	200	0	77	0	273
8:00 – 9:00 AM	0	489	10	157	154	0	36	0	115
9:00 – 10:00 AM	0	299	20	150	137	0	26	0	65
10:00 – 11:00 AM	0	312	11	141	159	0	23	0	68
11:00 AM – 12:00 PM	0	338	23	166	167	0	33	0	46
12:00 – 1:00 PM	0	363	18	173	211	0	33	0	50
1:00 – 2:00 PM	0	333	18	178	237	0	54	0	63
2:00 – 3:00 PM	0	446	34	214	272	0	45	0	63
3:00 – 4:00 PM	0	462	22	265	368	0	47	0	74
4:00 – 5:00 PM	0	562	31	276	419	0	52	0	43
5:00 – 6:00 PM	0	429	17	220	355	0	41	0	33
TOTAL	**0**	**4,962**	**243**	**2,174**	**2,822**	**0**	**560**	**0**	**970**

Table 3. Turning Movement Counts, Industrial Park Road and US-412 WB Ramps

Time	SOUTHBOUND			NORTHBOUND			WESTBOUND		
	Industrial Park Road			Industrial Park Road			US-412		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 – 7:00 AM	45	174	0	0	225	12	192	0	11
7:00 – 8:00 AM	46	303	0	0	234	39	301	0	14
8:00 – 9:00 AM	41	227	0	0	152	37	271	0	15
9:00 – 10:00 AM	32	160	0	0	116	46	157	0	16
10:00 – 11:00 AM	26	157	0	0	145	31	166	0	4
11:00 AM – 12:00 PM	31	185	0	0	154	47	175	0	19
12:00 – 1:00 PM	30	189	0	0	217	27	194	0	15
1:00 – 2:00 PM	27	161	0	0	252	44	186	0	17
2:00 – 3:00 PM	89	235	0	0	240	73	245	0	8
3:00 – 4:00 PM	81	248	0	0	316	104	243	0	11
4:00 – 5:00 PM	122	317	0	0	321	151	271	0	9
5:00 – 6:00 PM	84	194	0	0	269	123	252	0	8
TOTAL	**654**	**2,550**	**0**	**0**	**2,641**	**734**	**2,653**	**0**	**147**

Table 4. Turning Movement Counts, Industrial Park Road and Smile Direct Club Drive

Time	SOUTHBOUND			NORTHBOUND			EASTBOUND		
	Industrial Park Road			Industrial Park Road			Smile Direct Club Drive		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 – 7:00 AM	0	225	0	4	233	0	0	0	2
7:00 – 8:00 AM	0	340	1	4	246	0	0	0	2
8:00 – 9:00 AM	0	271	0	3	164	0	0	0	2
9:00 – 10:00 AM	0	187	1	5	127	0	1	0	3
10:00 – 11:00 AM	0	179	0	0	147	0	0	0	0
11:00 AM – 12:00 PM	0	212	1	6	166	0	0	0	5
12:00 – 1:00 PM	0	212	0	4	226	0	0	0	2
1:00 – 2:00 PM	0	181	0	3	255	0	0	0	3
2:00 – 3:00 PM	0	298	0	3	245	0	0	0	12
3:00 – 4:00 PM	0	315	0	0	314	0	1	0	8
4:00 – 5:00 PM	0	434	0	2	328	0	1	0	3
5:00 – 6:00 PM	0	280	0	0	285	0	0	0	1
TOTAL	**0**	**3,134**	**3**	**34**	**2,736**	**0**	**3**	**0**	**43**

Table 5. Turning Movement Counts, Industrial Park Road and 981 Industrial Park Road Drive

Time	SOUTHBOUND			WESTBOUND			EASTBOUND		
	Industrial Park Road			Industrial Park Road			981 Industrial Park Road Drive		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 – 7:00 AM	0	228	0	1	233	0	0	0	0
7:00 – 8:00 AM	0	345	0	10	240	0	0	0	1
8:00 – 9:00 AM	0	270	0	3	161	0	0	0	0
9:00 – 10:00 AM	0	189	0	2	124	0	1	0	1
10:00 – 11:00 AM	0	181	0	1	154	0	0	0	1
11:00 AM – 12:00 PM	0	203	1	2	158	0	0	0	3
12:00 – 1:00 PM	0	200	2	4	223	0	1	0	5
1:00 – 2:00 PM	0	178	0	2	258	0	0	0	5
2:00 – 3:00 PM	0	296	1	3	242	0	0	0	9
3:00 – 4:00 PM	0	320	0	9	312	0	1	0	4
4:00 – 5:00 PM	0	425	0	0	328	0	1	0	8
5:00 – 6:00 PM	0	274	0	0	280	0	0	0	0
TOTAL	**0**	**3,109**	**4**	**37**	**2,713**	**0**	**4**	**0**	**37**

Table 6. Turning Movement Counts, Industrial Park Road and Santa Fe Pike (TN-7)

Time	NORTHBOUND			WESTBOUND			EASTBOUND		
	Industrial Park Road			Santa Fe Pike			Santa Fe Pike		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
6:00 – 7:00 AM	123	0	65	31	70	0	0	90	132
7:00 – 8:00 AM	141	0	60	54	99	0	0	156	232
8:00 – 9:00 AM	86	0	43	48	93	0	0	111	179
9:00 – 10:00 AM	86	0	20	26	88	0	0	83	128
10:00 – 11:00 AM	73	0	35	26	67	0	0	83	106
11:00 AM – 12:00 PM	85	0	32	26	83	0	0	82	92
12:00 – 1:00 PM	112	0	36	36	101	0	0	102	116
1:00 – 2:00 PM	132	0	42	57	96	0	0	96	96
2:00 – 3:00 PM	147	0	42	35	110	0	0	105	142
3:00 – 4:00 PM	211	0	31	48	147	0	0	113	194
4:00 – 5:00 PM	227	0	46	81	165	0	0	116	270
5:00 – 6:00 PM	212	0	41	49	143	0	0	89	187
TOTAL	**1,635**	**0**	**493**	**517**	**1,262**	**0**	**0**	**1,226**	**1,874**

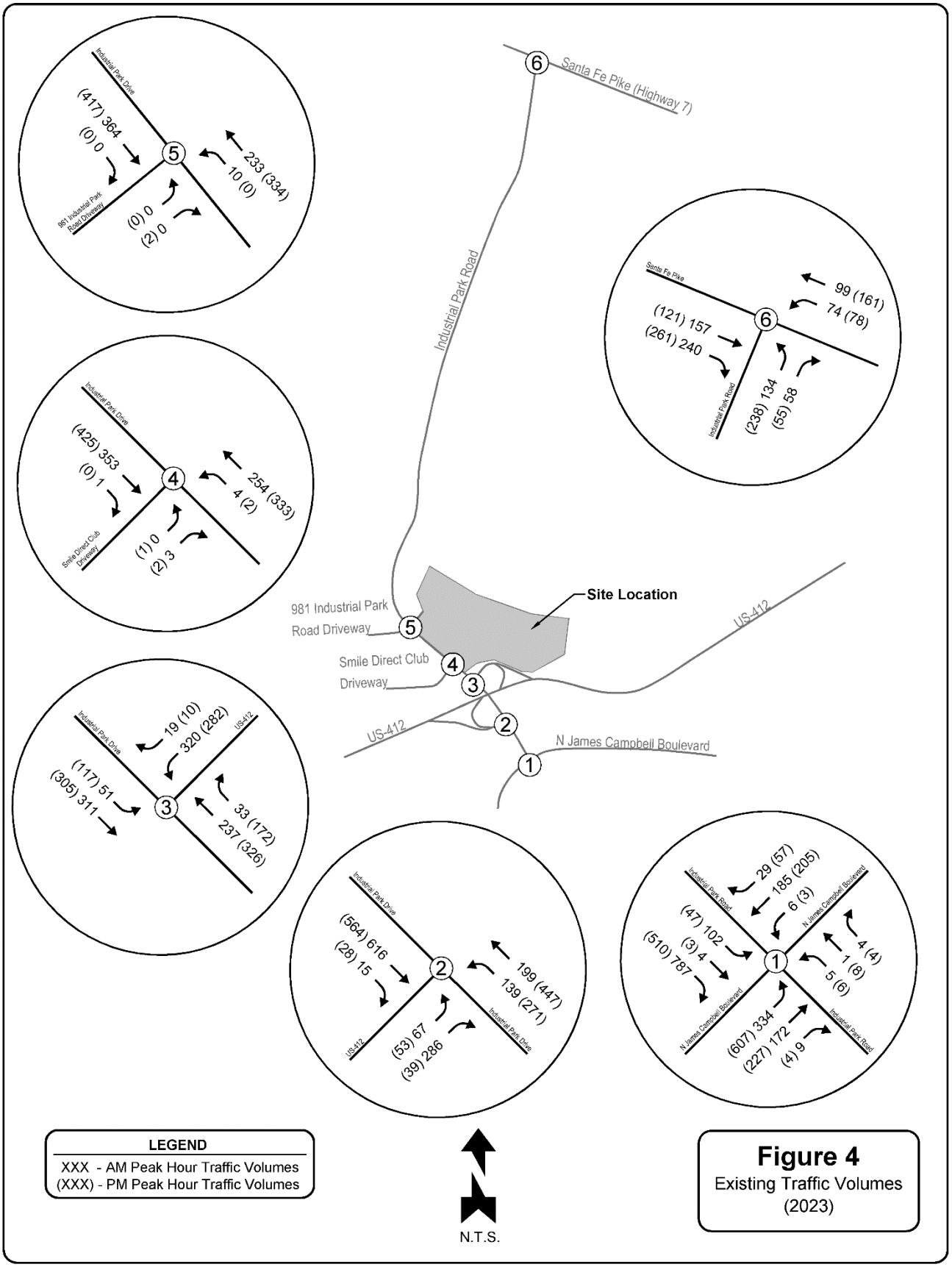


Figure 4
Existing Traffic Volumes
(2023)

Existing Capacity Analysis

To evaluate the existing traffic operations at the study intersections within the vicinity of the project site, AM and PM peak hour capacity analyses were performed per the calculations outlined in the *Highway Capacity Manual*[1](HCM). Levels of service (LOS), corresponding average delays, and 95th percentile queues were calculated for each turning movement. An LOS is a qualitative measure or grade used to distinguish how traffic is serviced at an intersection or along a roadway. The range of LOS is A to F, with A being the highest and F the lowest. The 95th percentile queue is the queue length (in vehicles) that has only a five (5) percent probability of being exceeded during the analysis period. The 95th percentile queue is not typical of what an average driver would experience, and driver experiences would be better characterized by the mean queue length. The table below details each LOS for signalized and unsignalized intersections, as specified within the HCM.

Table 7. Level of Service (LOS) Details

Level of Service*	Average Control Delay (seconds per vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50
Source: HCM 2010, Exhibits 18-4 and 19-1		

To determine the effectiveness of traffic operations within the study area a minimum LOS or baseline needs to be established. Any LOS below the established baseline will be considered unsatisfactory. LOS C is generally acceptable for typical roadway function while LOS D is typically considered to be the minimum acceptable LOS. According to the City of Columbia's *Connect Columbia Transportation Plan (2018)*, "In urban areas, LOS D is typically considered to be the minimum acceptable level of service." The following conditions shall be considered unsatisfactory for the purposes of this study:

1. Overall intersections with an LOS E or F.
2. Individual traffic movements with an LOS E or F.

The existing intersections within the study area were analyzed with existing traffic volumes under existing roadway conditions/geometries. It should be noted that existing traffic signal timings were utilized at the intersections of Industrial Park Road and N James Campbell Boulevard and Industrial Park Road and US-412 WB Ramps. The existing capacity analyses were conducted using *Synchro* software by Trafficware for both signalized and unsignalized intersections. Appendix C contains the detailed capacity analyses results.

[1] Transportation Research Board (TRB). Highway Capacity Manual, 5th Edition (2010). Washington, DC: 2010

Table 8. Existing Capacity Analyses

Study Intersection	Control	Approach	2023 Existing Conditions					
			AM Peak Hour			PM Peak Hour		
			LOS	Delay (s)	Queue (feet)	LOS	Delay (s)	Queue (feet)
1. **Industrial Park Road and N James Campbell Boulevard**	Signal	NB L/T/R	C	20.5	13	C	20.6	21
		SB Left/Thru	C	22.7	86	C	21.4	46
		SB Right	D	48.0	291	B	16.0	93
		EB Left	B	11.6	121	C	23.7	341#
		EB Thru	A	7.0	31	A	7.1	39
		EB Thru/Right	A	7.0	31	A	7.1	39
		WB Left/Thru	C	23.6	72	C	24.2	81
		WB Thru/Right	C	24.2	72	C	25.2	81
		Overall	**C**	**31.0**	--	**B**	**19.1**	--
2. **Industrial Park Road and US-412 EB Ramps**	TWSC	NB Left	A	9.7	25	B	10.4	50
		EB Left	C	20.8	25	D	32.0	50
		EB Right	D	28.7	150	B	13.2	25
3. **Industrial Park Road and US-412 EB Ramps**	Signal	NB Thru	B	12.9	157	A	9.6	365
		SB Left	A	7.8	24	A	5.5	55
		SB Thru	A	7.2	121	A	4.5	139
		WB Left	D	47.2	#243	F	191.7	295
		Overall	**C**	**22.7**	--	**E**	**57.5**	--
4. **Industrial Park Road and Smile Direct Club Drive**	TWSC	NB Left	A	8.1	0	A	8.3	0
		EB L/T/R	B	10.5	0	B	12.6	0
5. **Industrial Park Road and 981 Industrial Park Road Drive**	TWSC	NB Left/Thru	A	8.1	0	A	0.0	0
		EB L/T/R	A	0.0	0	B	11.0	0
6. **Industrial Park Road and Santa Fe Pike (TN-7)**	TWSC	NB Left	B	14.1	50	C	18.0	75
		NB Right	B	10.0	25	A	9.9	25
		WB Left	A	8.4	25	A	8.4	25

– 95th percentile volume exceeds capacity; queue may be longer. Queue shown is maximum after two cycles.

The following assessment are based on the results of the 2023 Existing Capacity Analyses as shown in the table above:

Industrial Park Road and N James Campbell Boulevard

- All critical movements for this intersection currently operate at an acceptable minimum LOS C during both AM and PM peak with existing traffic volumes.

Industrial Park Road and US-412 EB Ramps

- All critical movements for this intersection currently operate at an acceptable minimum LOS D during both AM and PM peak with existing traffic volumes.

Industrial Park Road and US-412 WB Ramps

- The exclusive westbound left-turn movement currently operates at LOS F during the PM peak hour period with existing traffic volumes.
- The overall intersection currently operates at LOS E during the PM peak hour period with existing traffic volumes.
- All other critical movements for this intersection currently operate at an acceptable minimum LOS D during both AM and PM peak with existing traffic volumes.

Industrial Park Road and Smile Direct Club Drive

- All critical movements for this intersection currently operate at an acceptable minimum LOS B during both AM and PM peak with existing traffic volumes.

Industrial Park Road and 981 Industrial Park Road Drive

- All critical movements for this intersection currently operate at an acceptable minimum LOS B during both AM and PM peak with existing traffic volumes.

Industrial Park Road and Santa Fe Pike (TN-7)

- All critical movements for this intersection currently operate at an acceptable minimum LOS C during both AM and PM peak with existing traffic volumes.

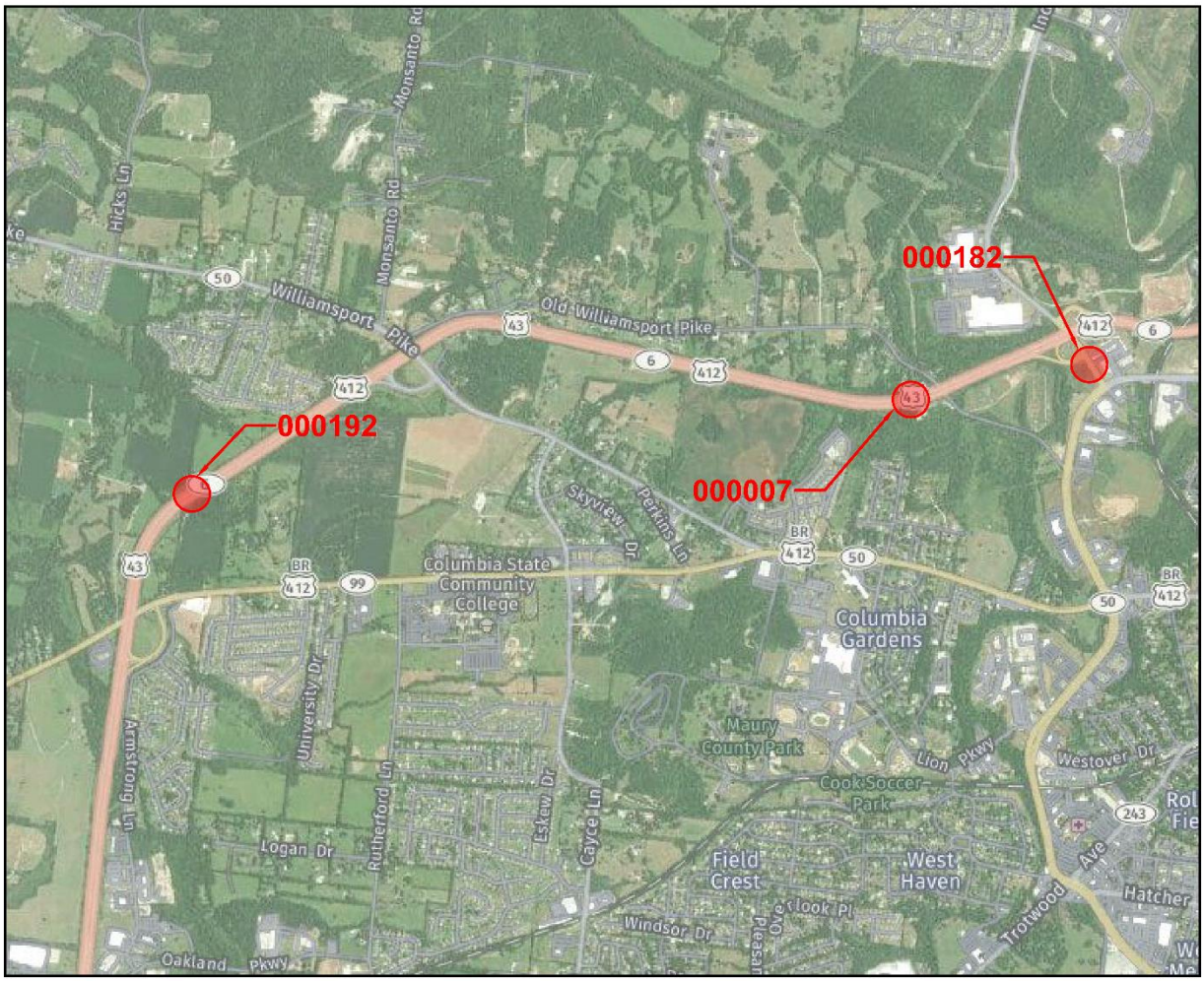
Background Traffic Volumes

To account for traffic growth within the vicinity of the project site prior to the completion of the proposed Zero Industrial Park Road Development, background traffic volumes were established. Average annual daily traffic (AADT) volumes were obtained from Tennessee Department of Transportation (TDOT) count stations, and an average growth trend per year was established. This growth trend was used as a multiplication factor to grow the existing traffic volumes to the 2025 design year (development completion). Figure 5 displays the locations of the TDOT Count Stations within the surrounding area.

As shown in Figure 5, the average yearly percent change in traffic over a six (6) year period from 2016 - 2021 was 2.17%. However, to conform to the recently conducted traffic impact studies within the area, the existing traffic volumes were grown by +2.50% per year for two (2) years. Figure D1 in Appendix D shows the background peak hour totals at the study intersections for the AM and PM peak hour periods.

To account for the additional traffic growth within the vicinity of the project site, the generated traffic volumes from a previously conducted Traffic Study near the project site was added to the grown background traffic volumes. The Steadfast Hampshire Pike Development generated traffic volumes were included as outlined within the Steadfast Hampshire Pike Traffic Impact Study conducted by Kimley Horn in October 2021 and revised July 2022.

The generated background development volumes from the Steadfast Hampshire Pike Development are shown on Figure D2 in Appendix D. The background traffic volumes as shown in Figure D1 were added to the generated background development volumes as shown in Figure D2 resulting in the total combined background peak hour traffic volumes for the study intersections, as shown on Figure 6.



TDOT Count Station:	Marshall 000182		Marshall 000007		Marshall 0000192		Average % Growth
Year	AADT	% Change	AADT	% Change	AADT	% Change	
2021	13,601	--	20,749	--	18,645	--	--
2020	12,723	6.90%	18,950	9.49%	17,442	6.90%	7.76%
2019	13,814	-0.77%	24,513	-7.68%	17,341	3.76%	-1.56%
2018	12,685	2.41%	22,061	-1.98%	17,932	1.33%	0.59%
2017	10,640	6.96%	22,067	-1.49%	17,381	1.82%	2.43%
2016	10,721	5.37%	21,424	-0.63%	18,543	0.11%	1.62%
Average % Change	**4.17%**		**-0.46%**		**2.78%**		**2.17%**
						Applied % Growth*	**2.50%**

N.T.S.

Figure 5
TDOT Count Locations & Background Traffic Growth Trends

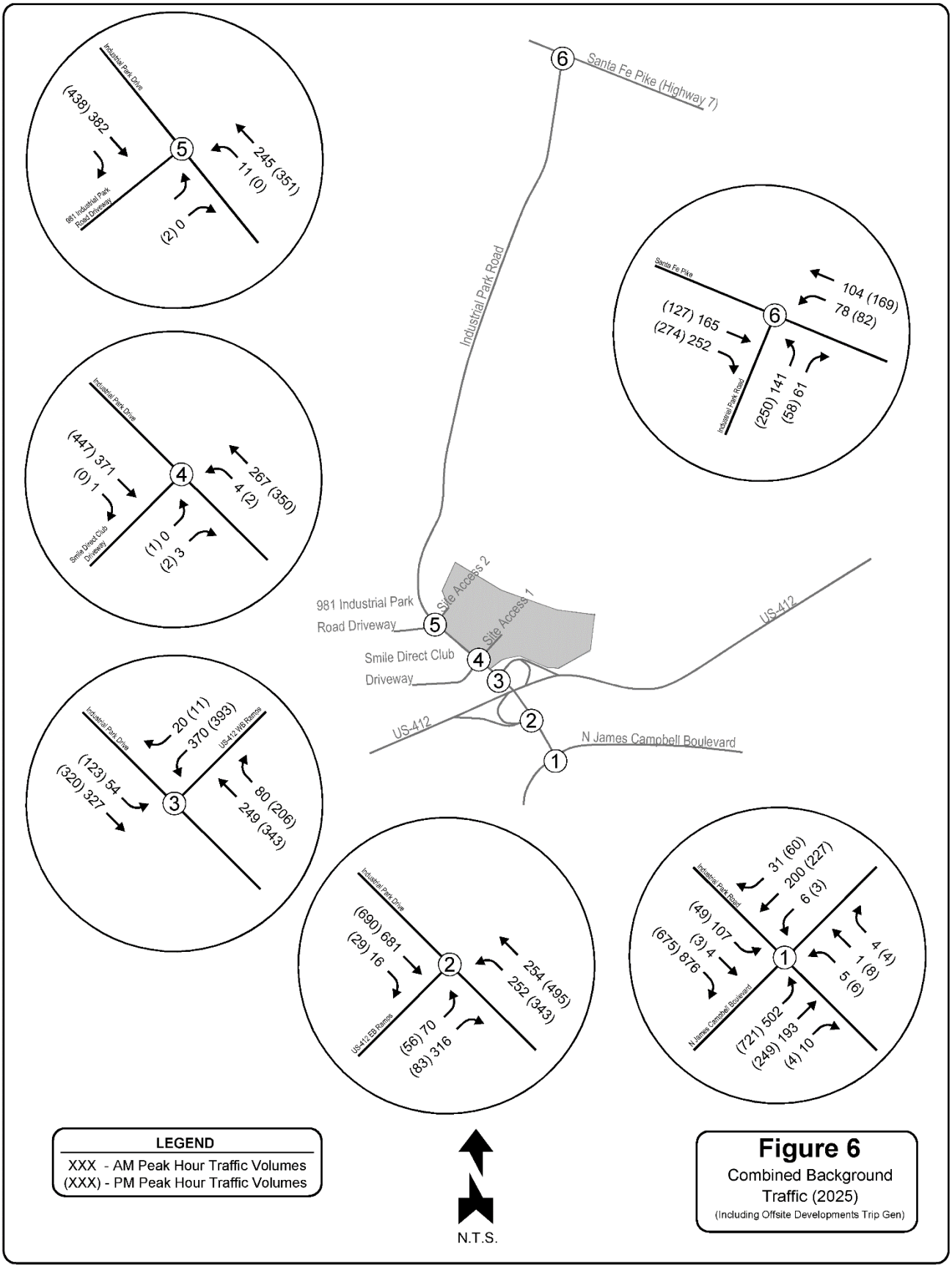


Figure 6
Combined Background Traffic (2025)
(Including Offsite Developments Trip Gen)

Background Capacity Analyses

To evaluate the background traffic operations at the study intersections within the vicinity of the project site, the AM and PM peak hour capacity analyses were performed based on calculations outlined in the Highway Capacity Manual (HCM). Levels of service (LOS), corresponding average delays, and 95th percentile queues were calculated for each turning movement.

The previously conducted Traffic Study for the background development resulted in a recommended roadway improvement to a study intersection. This recommended improvement will be utilized as part of the background roadway conditions and have been included in the background capacity analyses. The improvement is listed below.

Industrial Park Road at N James Campbell Boulevard

- 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.

The intersections were analyzed with background traffic volumes and roadway conditions based on lane geometries as outlined in the Background Traffic Volumes section above. It should be noted that existing traffic signal timings were utilized at the intersection of Industrial Park Road and US-412 WB Ramps for this analysis. Additionally, optimized traffic signal timings were utilized at the intersection of Industrial Park Road and N James Campbell Boulevard for this analysis. The background capacity analyses were conducted using *Synchro* software by Trafficware for both signalized and unsignalized intersections. Appendix C contains the detailed capacity analyses results.

Table 9. Background Capacity Analyses

	Study Intersection	Control	Approach	2025 Background Conditions					
				AM Peak Hour			PM Peak Hour		
				LOS	Delay (s)	Queue (feet)	LOS	Delay (s)	Queue (feet)
1.	**Industrial Park Road and N James Campbell Boulevard**	Signal	NB L/T/R	B	17.0	12	C	22.5	23
			SB L/T/R	B	13.0	#327	B	11.1	110
			SB Right	B	13.0	90	B	11.1	52
			EB Left	C	23.8	#285	C	33.6	#434
			EB Thru	A	9.4	41	A	6.1	38
			EB Thru/Right	A	9.4	41	A	6.1	38
			WB Left/Thru	C	24.8	79	C	25.3	90
			WB Thru/Right	C	25.5	79	C	26.4	90
			Overall	**B**	**16.9**	--	**C**	**20.8**	--
2.	**Industrial Park Road and US-412 EB Ramps**	TWSC	NB Left	B	11.1	50	B	12.4	75
			EB Left	D	32.8	50	F	51.9	50
			EB Right	E	44.7	200	C	16.5	25
3.	**Industrial Park Road and US-412 EB Ramps**	Signal	NB Thru	B	13.6	177	A	9.8	409
			SB Left	A	8.2	23	A	5.7	55
			SB Thru	A	7.7	114	A	4.5	139
			WB Left	E	69.2	#332	F	300.0+	#513
			Overall	**C**	**31.9**	--	**F**	**138.1**	--
4.	**Industrial Park Road and Smile Direct Club Drive**	TWSC	NB Left	A	8.1	0	A	8.3	0
			EB L/T/R	B	10.6	0	B	12.9	0
5.	**Industrial Park Road and 981 Industrial Park Road Drive**	TWSC	NB Left/Thru	A	8.2	0	A	0.0	0
			EB L/T/R	A	0.0	0	B	11.1	0
6.	**Industrial Park Road and Santa Fe Pike (TN-7)**	TWSC	NB Left	B	14.6	50	C	19.3	75
			NB Right	B	10.1	25	B	10.0	25
			WB Left	A	8.5	25	A	8.5	25

– 95th percentile volume exceeds capacity; queue may be longer. Queue shown is maximum after two cycles.
m – Volumes for 95th percentile queue is metered by upstream signal.

The following assessment are based on the results of the 2025 Background Capacity Analyses as shown in the table above:

Industrial Park Road and N James Campbell Boulevard

- All critical movements for this intersection will operate at an acceptable minimum LOS C during both AM and PM peak with background traffic volumes.

Industrial Park Road and US-412 EB Ramps

- The exclusive eastbound left-turn movement will operate at LOS F during the PM peak hour period with background traffic volumes.
- The exclusive eastbound right-turn movement will operate at LOS E during the AM peak hour period with background traffic volumes.

- All other critical movements for this intersection will operate at an acceptable minimum LOS D during both AM and PM peak with background traffic volumes.

Industrial Park Road and US-412 WB Ramps

- The exclusive westbound left-turn movement will operate at LOS E and LOS F during the AM and PM peak hour periods, respectively with background traffic volumes.
- The overall intersection will operate at LOS F during the PM peak hour period with background traffic volumes.
- All other critical movements for this intersection will operate at an acceptable minimum LOS C during both AM and PM peak with background traffic volumes.

Industrial Park Road and Smile Direct Club Drive

- All critical movements for this intersection will operate at an acceptable minimum LOS B during both AM and PM peak with background traffic volumes.

Industrial Park Road and 981 Industrial Park Road Drive

- All critical movements for this intersection will operate at an acceptable minimum LOS B during both AM and PM peak with background traffic volumes.

Industrial Park Road and Santa Fe Pike (TN-7)

- All critical movements for this intersection will operate at an acceptable minimum LOS C during both AM and PM peak with background traffic volumes.

Impacts

Trips were generated to establish projected traffic volumes for the proposed Zero Industrial Park Road. Daily and peak hour trips were generated by formulas presented in the *Trip Generation Manual*[2] based on the land uses proposed by the development. As previously stated, the proposed development will consist of approximately 240,000 square feet of Industrial Storage use and seventy-one (71) RV and Tractor Trailer storage parking spaces. The Industrial Park (130) and Mini-Warehouse (151) ITE Land Uses were used to estimate the generated traffic volumes. The table below provides the new trips generated for the proposed development. Appendix B contains detailed trip generation calculations.

Table 10. Zero Industrial Park Road Development Trip Generation

ITE Land Use (Code)	Size	Generated Traffic Volumes				
		Daily	AM Peak		PM Peak	
			Enter	Exit	Enter	Exit
Industrial Park (130)	240,000 SF	1,480	66	16	18	64
Min-Warehouse (151)	71 Spaces	9	2	1	2	1
TOTAL		**1,489**	**68**	**17**	**20**	**65**

Projected Traffic Distribution and Assignments

For the purposes of this study, estimated directional distributions shown on Figure 7 were made for the proposed development's generated traffic volumes. The development of these directional distributions was established based on the following:

- Conducted hourly turning movement counts.
- Proposed land use characteristics.
- Existing roadway network.
- Existing lane geometry of surrounding intersections.
- The access locations of the proposed development.
- Locations of populations centers within the surrounding area.

The primary trips generated were assigned to the existing roadway network per the distributions shown on Figure 7, resulting in the generated peak hour traffic volumes shown on Figure 8. The generated peak hour traffic volumes were added to the total combined background volumes as shown in Figure 6, resulting in the total projected peak hour traffic volumes in Figure 9.

[2] Institute of Transportation Engineers (ITE). Trip Generation Manual, 11th Edition. Washington, DC: ITE, 2022

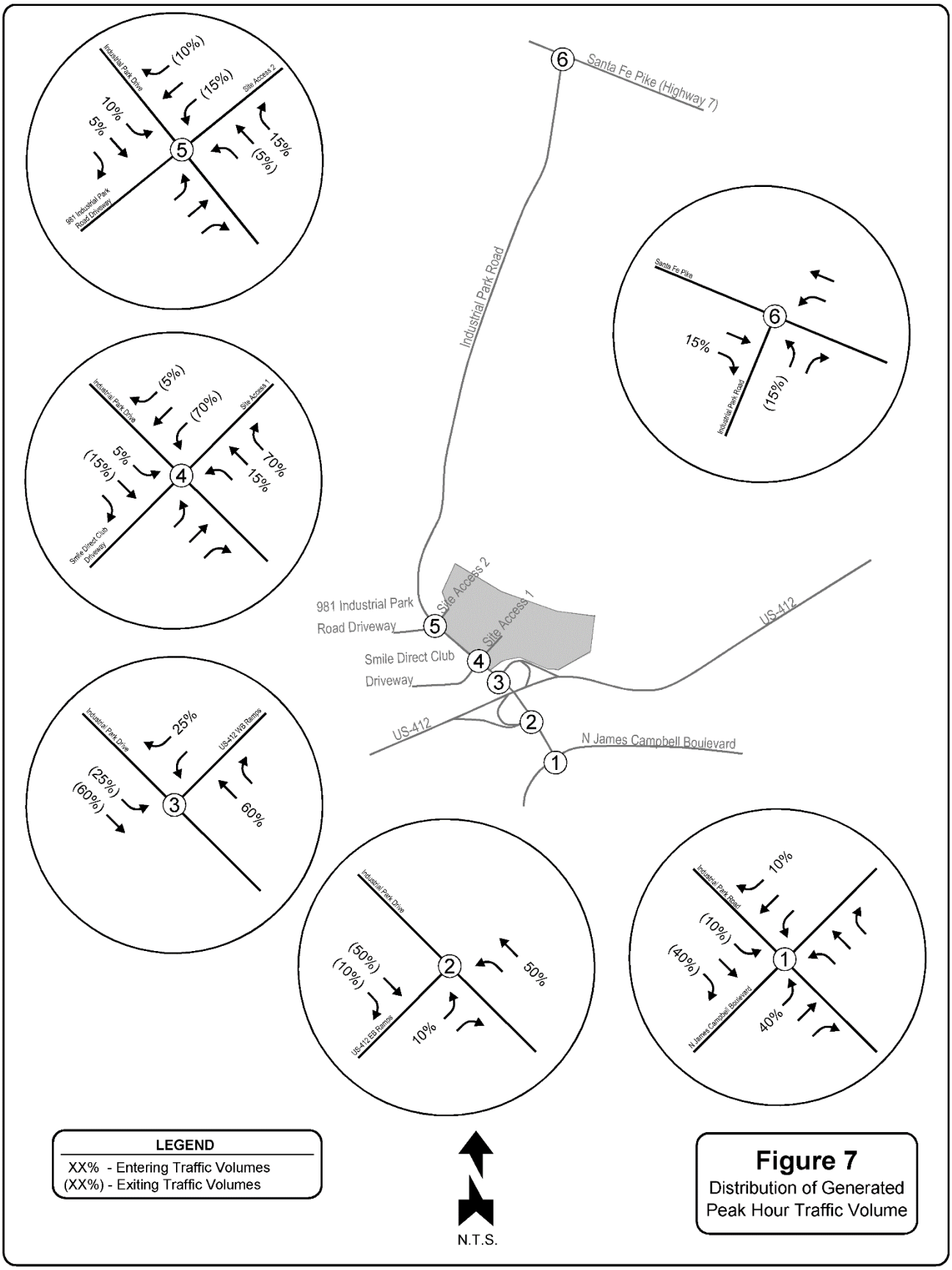


Figure 7
Distribution of Generated
Peak Hour Traffic Volume

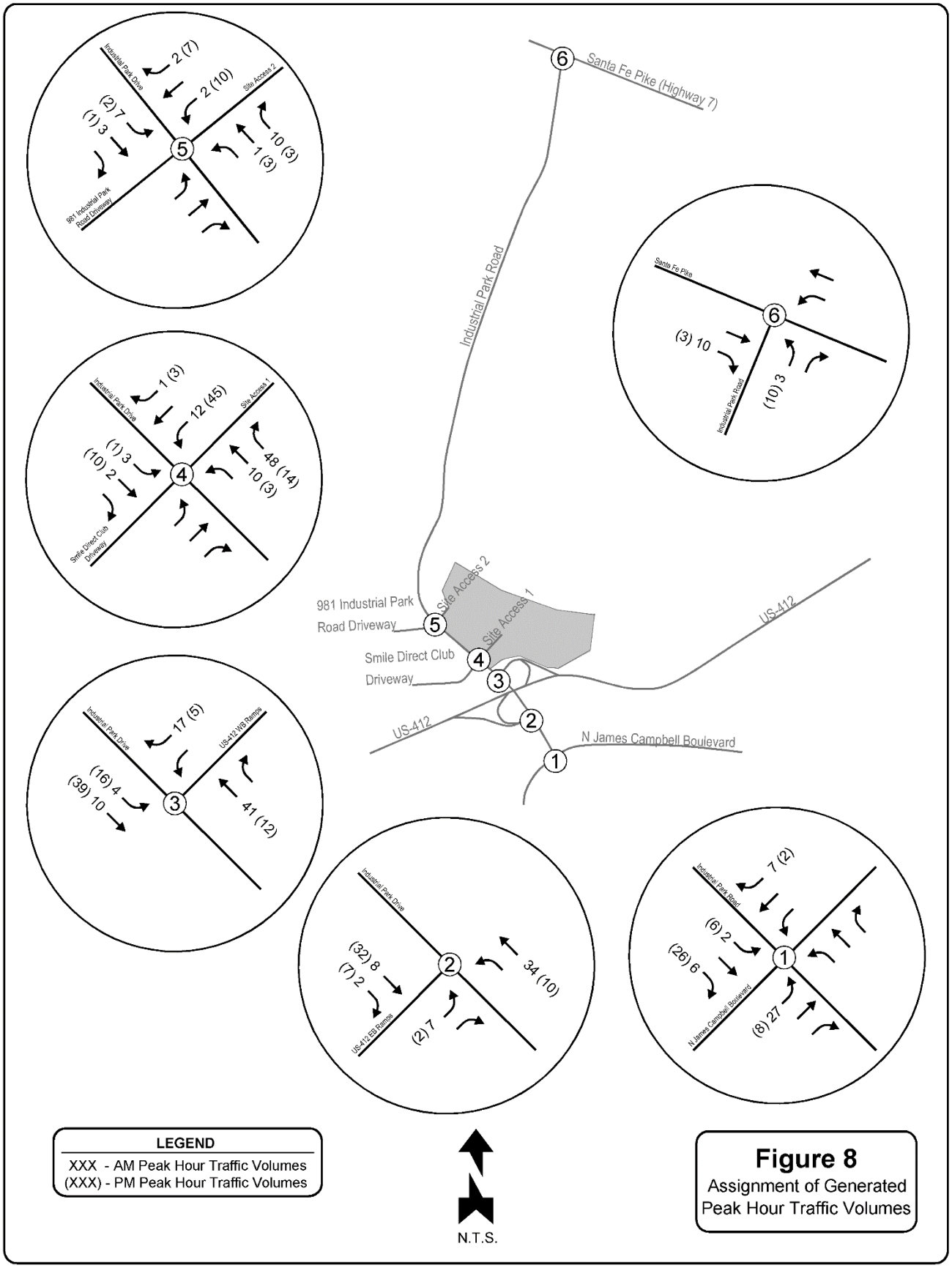


Figure 8
Assignment of Generated Peak Hour Traffic Volumes

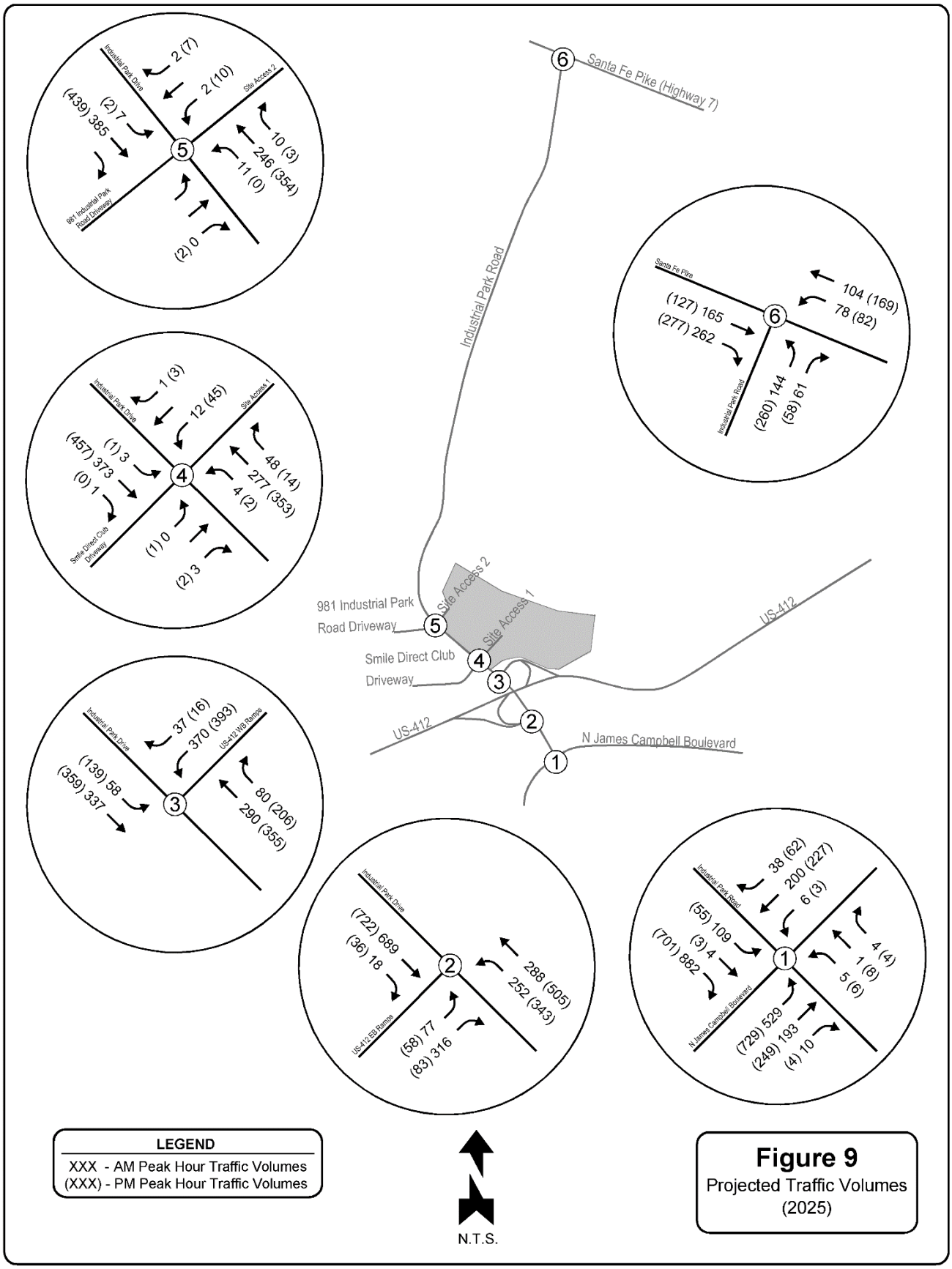


Figure 9
Projected Traffic Volumes
(2025)

Projected Capacity Analysis

To evaluate the projected traffic operations at the study intersections within the vicinity of the project site, AM and PM peak hour capacity analyses were performed. The capacity analyses include the total projected traffic volumes generated from the proposed development in addition to background traffic volumes. Levels-of-service (LOS), corresponding average delays, and 95th percentile queues were calculated for each turning movement. The intersections were analyzed based on background roadway conditions and lane geometries as outlined previously with projected traffic volumes.

The intersections were analyzed with projected traffic volumes and roadway conditions based on lane geometries as outlined in the Background Traffic Volumes section above. It should be noted that existing traffic signal timings were utilized at the intersection of Industrial Park Road and US-412 WB Ramps for this analysis. Additionally, optimized traffic signal timings were utilized at the intersection of Industrial Park Road and N James Campbell Boulevard for this analysis. The projected capacity analyses were conducted using *Synchro* software by Trafficware for both signalized and unsignalized intersections. Appendix C contains the detailed capacity analyses results.

Table 11. Projected Capacity Analyses

	Study Intersection	Control	Approach	2025 Projected Conditions					
				AM Peak Hour			PM Peak Hour		
				LOS	Delay (s)	Queue (feet)	LOS	Delay (s)	Queue (feet)
1.	**Industrial Park Road and N James Campbell Boulevard**	Signal	NB L/T/R	B	18.3	12	C	22.5	23
			SB L/T/R	B	13.9	#354	B	11.3	118
			SB Right	B	13.9	89	B	11.3	58
			EB Left	C	22.6	#288	D	35.6	#443
			EB Thru	A	8.4	38	A	6.1	38
			EB Thru/Right	A	8.4	38	A	6.1	38
			WB Left/Thru	C	23.9	78	C	25.3	90
			WB Thru/Right	C	24.6	78	C	26.5	90
			Overall	**B**	**17.0**	--	**C**	**21.5**	--
2.	**Industrial Park Road and US-412 EB Ramps**	TWSC	NB Left	B	11.1	50	B	12.8	75
			EB Left	E	35.9	50	F	57.0	75
			EB Right	E	46.9	225	C	17.3	25
3.	**Industrial Park Road and US-412 EB Ramps**	Signal	NB Thru	B	14.4	200	A	10.0	425
			SB Left	A	8.4	24	A	5.8	60
			SB Thru	A	7.8	114	A	4.7	157
			WB Left	E	69.2	#342	F	+300.0	#517
			Overall	**C**	**31.2**	--	**F**	**131.1**	--
4.	**Industrial Park Road and Smile Direct Club Drive/Site Access 1**	TWSC	NB Left	A	8.1	0	A	8.4	0
			SB Left	A	8.0	0	A	8.1	0
			EB L/T/R	B	10.6	0	B	13.9	0
			WB L/T/R	C	16.0	25	C	21.6	25
5.	**Industrial Park Road and 981 Industrial Park Road Drive/Site Access 2**	TWSC	NB Left/Thru	A	8.2	0	A	0.0	0
			SB Left	A	7.2	0	A	8.1	0
			EB L/T/R	A	0.0	0	B	11.1	0
			WB L/T/R	B	12.8	0	C	15.6	25
6.	**Industrial Park Road and Santa Fe Pike (TN-7)**	TWSC	NB Left	B	14.8	50	C	20.0	100
			NB Right	B	10.1	25	B	10.0	25
			WB Left	A	8.6	25	A	8.5	25

– 95th percentile volume exceeds capacity; queue may be longer. Queue shown is maximum after two cycles.

The following assessment are based on the results of the 2025 Projected Capacity Analyses as shown in the table above:

Industrial Park Road and N James Campbell Boulevard

- All critical movements for this intersection currently operate at an acceptable minimum LOS C during both AM and PM peak with projected traffic volumes.

Industrial Park Road and US-412 EB Ramps

- The exclusive eastbound left-turn movement will operate at LOS E and LOS F during the AM and PM peak hour periods, respectively with projected traffic volumes.
- The exclusive eastbound right-turn movement will operate at LOS E during the AM peak hour period with projected traffic volumes.

- All other critical movements for this intersection currently operate at an acceptable minimum LOS C during both AM and PM peak with projected traffic volumes.

Industrial Park Road and US-412 WB Ramps

- The exclusive westbound left-turn movement will operate at LOS E and LOS F during the AM and PM peak hour periods, respectively with projected traffic volumes.
- The overall intersection will operate at LOS F during the PM peak hour period with projected traffic volumes.
- All other critical movements for this intersection will operate at an acceptable minimum LOS C during both AM and PM peak with projected traffic volumes.

Industrial Park Road and Smile Direct Club Drive

- All critical movements for this intersection will operate at an acceptable minimum LOS B during both AM and PM peak with projected traffic volumes.

Industrial Park Road and 981 Industrial Park Road Drive

- All critical movements for this intersection will operate at an acceptable minimum LOS B during both AM and PM peak with projected traffic volumes.

Industrial Park Road and Santa Fe Pike (TN-7)

- All critical movements for this intersection will operate at an acceptable minimum LOS C during both AM and PM peak with projected traffic volumes.

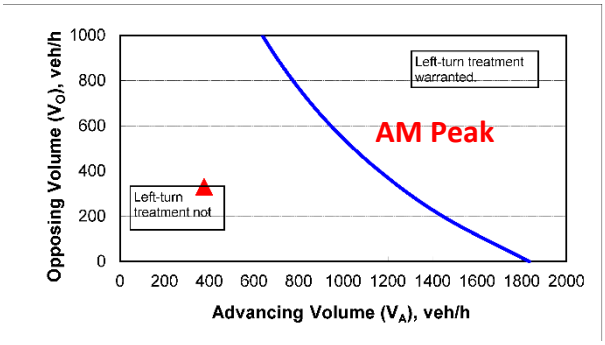
Intersection Assessments (Projected Conditions)

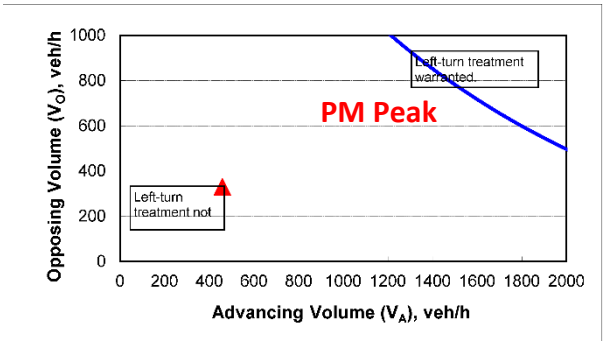
Engineering assessments were performed on the intersections within the study area to identify underlying inefficiencies and solutions to alleviate any concerns associated with intersection geometries and existing traffic volumes along the roadway network. Major-road approach right-turn lane warrants were performed based on Figure 2-6 in the *NCHRP Report 457 – Evaluating Intersection Improvements: An Engineering Study Guide*[3] and projected traffic volumes. Minor-road approach geometric warrants were performed based on Figure 2-4 in the *NCHRP Report 457 – Evaluating Intersection Improvements: An Engineering Study Guide*. The results of the warrants are shown below.

Industrial Park Road and Smile Direct Club Drive/Site Access 1

Table 12. Major-Road Approach Geometry, SBL Industrial Park Road at Smile Direct Club Drive/SA 1

Variable	AM Peak	PM Peak
85th percentile speed, mph:	45	45
Percent of left-turns in advancing volume (V_A), %:	1%	0%
Advancing volume (V_A), veh/h:	377	458
Opposing volume (V_O), veh/h:	329	329
Limiting advancing volume (V_A), veh/h:	1253	2386
Left-turn bay warranted:	**NO**	**NO**
Source: *NCHRP Report 457: Evaluating Intersection Improvements: An Engineering Study Guide*		



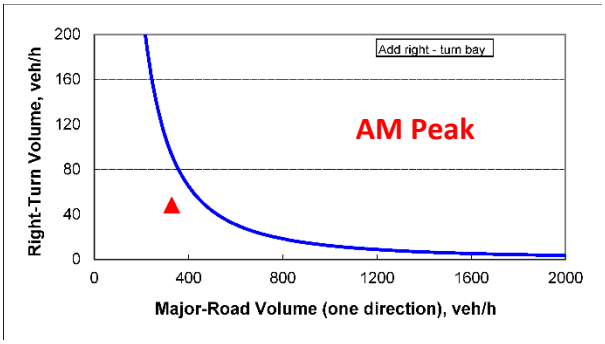


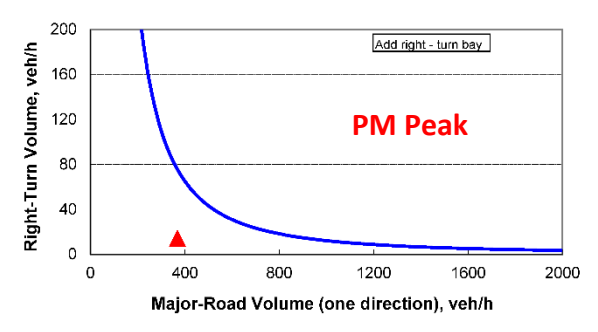
As shown in the table above and the corresponding graphs, it was determined that a southbound left-turn lane is not warranted along Industrial Park Road at its intersection with Site Access 1 during either peak hour period with projected traffic volumes.

[3] Transportation Research Board (TRB). Evaluating Intersection Improvements: An Engineering Study Guide. Washington, DC: 2001

Table 13. Major-Road Approach Geometry, NBR Industrial Park Road at Smile Direct Club Drive/SA 1

Variable	AM Peak	PM Peak
Major-road speed, mph:	45	45
Major-road volume (one direction), veh/h:	329	369
Major-road right-turn volume, veh/h:	48	14
Limiting right-turn volume, veh/h:	93	75
Right-turn bay warranted:	**NO**	**NO**
Source: *NCHRP Report 457: Evaluating Intersection Improvements: An Engineering Study Guide*		

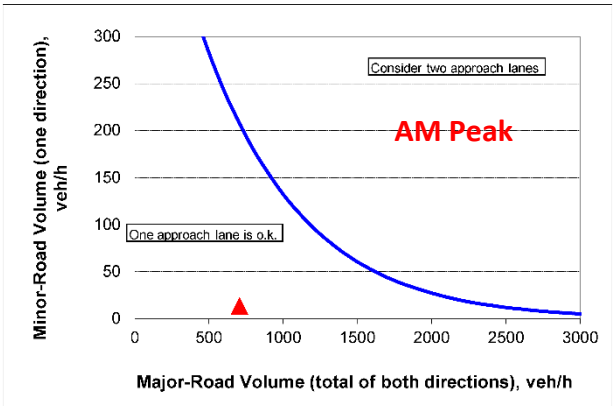


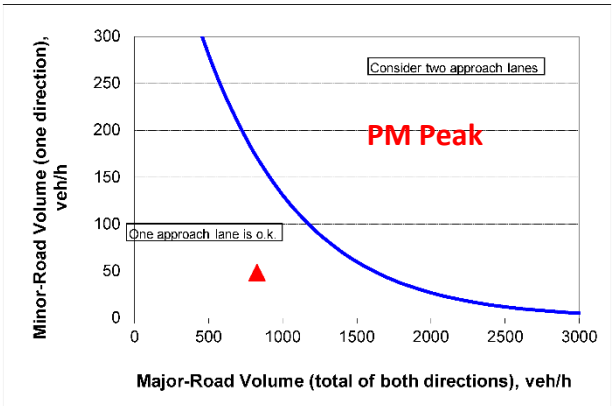


As shown in the table above and the corresponding graphs, it was determined that a northbound right-turn lane is not warranted along Industrial Park Road at its intersection with Site Access 1 during either peak hour period with projected traffic volumes.

Table 14. Minor-Road Approach Geometry, WBR Site Access 1 at Industrial Park Road

Variable	AM Peak	PM Peak
Major-road volume (total both directions), veh/h:	706	827
Percentage of right-turns on minor road, %:	8%	6%
Minor-road volume (one direction), veh/h:	13	48
Limiting minor-road volume (one direction), veh/h:	207	171
Right-turn bay warranted:	**One (1) approach lane is sufficient**	**One (1) approach lane is sufficient**
Source: *NCHRP Report 457: Evaluating Intersection Improvements: An Engineering Study Guide*		



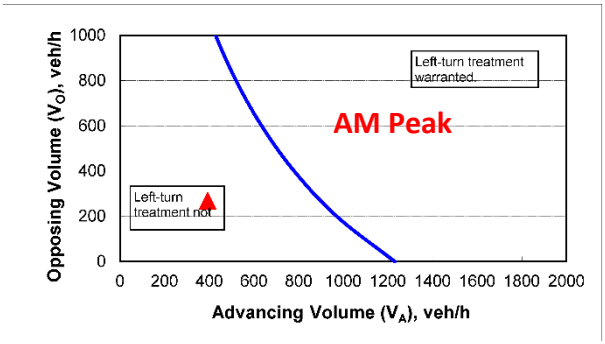


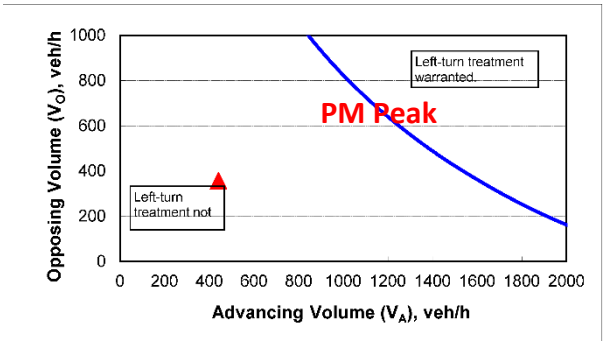
As shown in the table above and the corresponding graphs, it was determined that one (1) shared lane for left-turning and right-turning movements on the westbound approach of Site Access 1 at Industrial Park Road is sufficient with projected traffic volumes.

Industrial Park Road and Site Access 2

Table 15. Major-Road Approach Geometry, SBL Industrial Park Road at 981 IPR Drive/SA 2

Variable	AM Peak	PM Peak
85th percentile speed, mph:	45	45
Percent of left-turns in advancing volume (V_A), %:	2%	0%
Advancing volume (V_A), veh/h:	392	441
Opposing volume (V_O), veh/h:	267	357
Limiting advancing volume (V_A), veh/h:	900	1608
Left-turn bay warranted:	**NO**	**NO**
Source: *NCHRP Report 457: Evaluating Intersection Improvements: An Engineering Study Guide*		

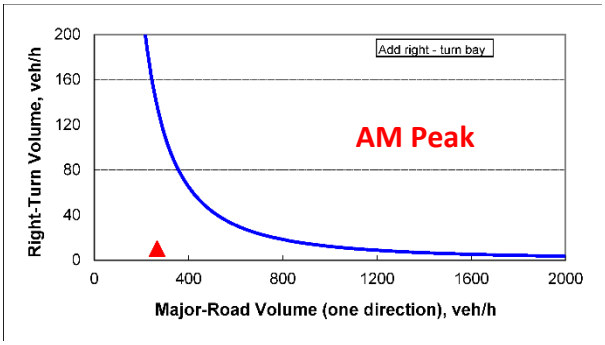


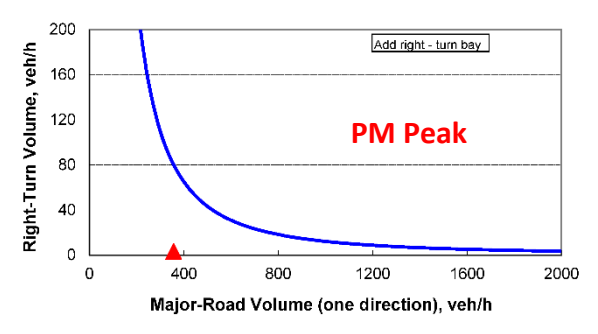


As shown in the table above and the corresponding graphs, it was determined that a southbound left-turn lane is not warranted along Industrial Park Road at its intersection with Site Access 2 during either peak hour period with projected traffic volumes.

Table 16. Major-Road Approach Geometry, NBR Industrial Park Road at 981 IPR Drive/SA 2

Variable	AM Peak	PM Peak
Major-road speed, mph:	45	45
Major-road volume (one direction), veh/h:	267	357
Major-road right-turn volume, veh/h:	10	3
Limiting right-turn volume, veh/h:	136	80
Right-turn bay warranted:	**NO**	**NO**
Source: *NCHRP Report 457: Evaluating Intersection Improvements: An Engineering Study Guide*		

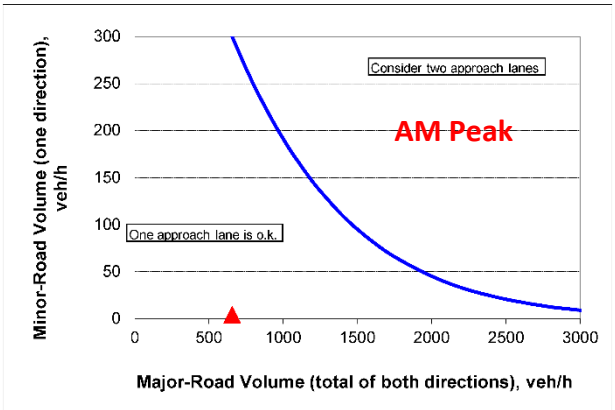


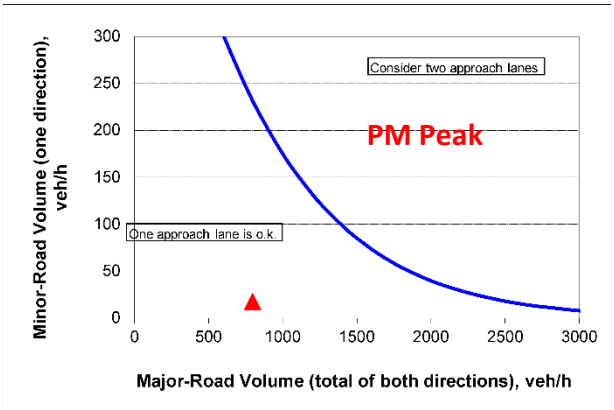


As shown in the table above and the corresponding graphs, it was determined that a northbound right-turn lane is not warranted along Industrial Park Road at its intersection with Site Access 2 during either peak hour period with projected traffic volumes.

Table 17. Minor-Road Approach Geometry, WBR Site Access 2 at Industrial Park Road

Variable	AM Peak	PM Peak
Major-road volume (total both directions), veh/h:	659	798
Percentage of right-turns on minor road, %:	50%	41%
Minor-road volume (one direction), veh/h:	4	17
Limiting minor-road volume (one direction), veh/h:	299	231
Right-turn bay warranted:	**One (1) approach lane is sufficient**	**One (1) approach lane is sufficient**
Source: *NCHRP Report 457: Evaluating Intersection Improvements: An Engineering Study Guide*		





As shown in the table above and the corresponding graphs, it was determined that one (1) shared lane for left-turning and right-turning movements on the westbound approach of Site Access 2 at Industrial Park Road is sufficient with projected traffic volumes.

Sight Distance Analysis

A sight distance analysis was conducted at the proposed site access location to determine if the sight distance criteria set forth by TDOT and the guidelines within AASHTO's *A Policy on Geometric Design of Highways and Streets* (Green Book) would be satisfied. Per the AASHTO Green Book, the procedures used to determine the sight distance criteria at the proposed site access drive were *Case B1 - Left turn from stop at minor street* and *Case B2 - Right turn from stop at minor street*.

The required sight distance for a vehicle making a left-turn and right-turn from stop at Site Access 1 and Site Access 2 along Industrial Park Road was calculated to be 497 feet and 430 feet, respectively, based on the 45 MPH speed limit along Industrial Park Road. As shown on Figure 10 and Figure 11, the required vertical and horizontal sight distances for left-turns and right-turns from the Site Access (497 feet and 430 feet, respectively) satisfy Cases B1 and B2 as outlined within the AASHTO Green Book. However, it should be noted that all vegetation along Industrial Park Road within the turning vehicle's line-of-sight will need to be cleared to ensure adequate sight distance is maintained.

In-field sight distance measurements were taken to establish the correctness of the calculated sight distances. The measurements were taken from the approximate locations of each Site Access and along Industrial Park Road. The measurements for Site Access 1 were taken approximately 600 feet along both approaches to the proposed access. The measurements were taken from approximately 500 feet along both approaches to the proposed access. See the photos and descriptions below.

Site Access 1



SA1 LT Measurement – Looking approximately 600 feet north along Industrial Park Road from Site Access 1



SA1 LT Measurement – Looking approximately 600 feet south along Industrial Park Road to Site Access 1

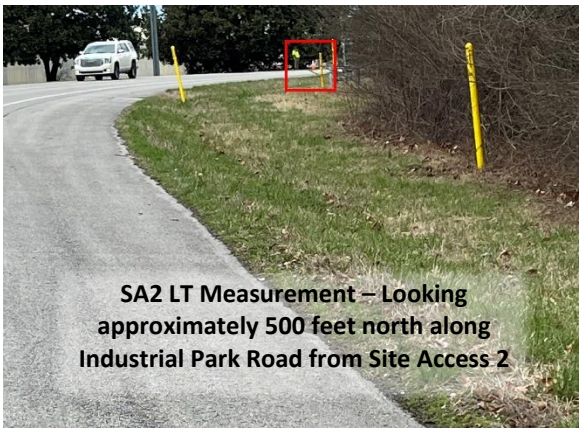


SA1 RT Measurement – Looking approximately 600 feet south along Industrial Park Road from Site Access 1



SA1 RT Measurement – Looking approximately 600 feet north along Industrial Park Road to Site Access 1

Site Access 2



SA2 LT Measurement – Looking approximately 500 feet north along Industrial Park Road from Site Access 2



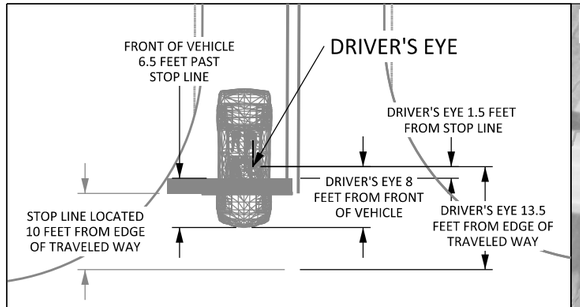
SA2 LT Measurement – Looking approximately 500 feet south along Industrial Park Road to Site Access 2



SA2 RT Measurement – Looking approximately 500 feet south along Industrial Park Road from Site Access 2

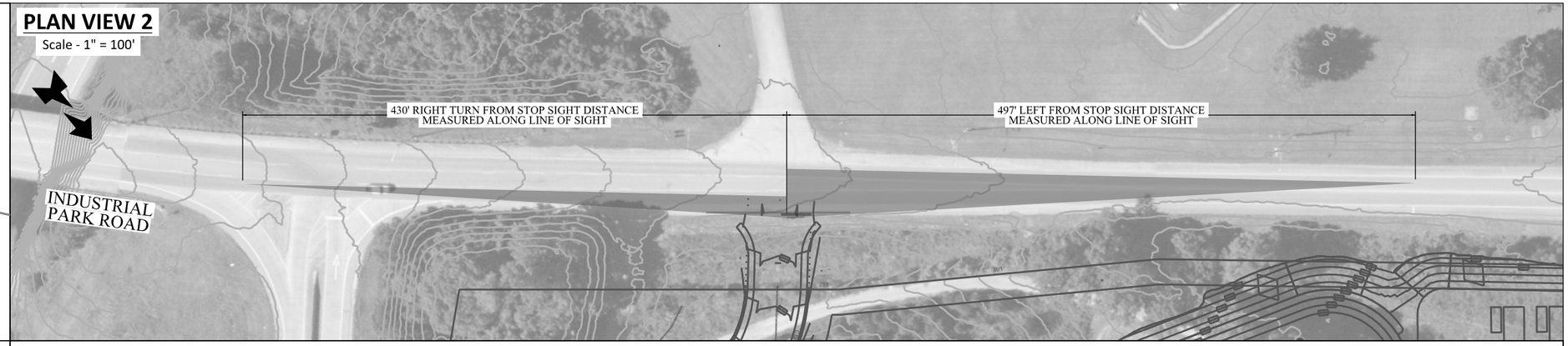


SA2 RT Measurement – Looking approximately 600 feet north along Industrial Park Road to Site Access 2



PLAN VIEW 1

Scale - 1" = 20'



SIGHT DISTANCE NOTES

LEFT TURN FROM STOP

THE REQUIRED SIGHT DISTANCE FOR A VEHICLE MAKING A LEFT TURN FROM STOP AT SITE ACCESS 1 ALONG INDUSTRIAL PARK ROAD IS IN EXCESS OF **497** FEET. THUS, MEETING THE REQUIRED 497 FEET CALCULATED FROM *AASHTO'S A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS - 6TH EDITION, 2011 (GREEN BOOK).* ACCORDING TO *TABLE 9-5 - TIME GAP FOR CASE B1, LEFT TURN FROM STOP (GREEN BOOK),* THE ALLOWABLE TIME GAP FOR A PASSENGER CAR WITH A MAJOR STREET DESIGN SPEED OF **45 MPH** IS OF **7.5 SECONDS**. THE INTERSECTION SIGHT DISTANCE WAS CALCULATED USING *EQUATION 9-1 (GREEN BOOK)* AS SHOWN BELOW.

ISD = $1.47V_{major}$ t_g = 1.47(45mph)(7.5s) = **497 FEET**

ISD = INTERSECTION SIGHT DISTANCE (FEET)

V_{major} = **45 MPH** = DESIGN SPEED OF MAJOR ROAD (MPH)

t_g = **7.5 s** = TIME GAP FOR MINOR ROAD VEHICLE TO ENTER THE MAJOR ROAD (s)

RIGHT TURN FROM STOP

THE REQUIRED SIGHT DISTANCE FOR A VEHICLE MAKING A RIGHT TURN FROM STOP AT SITE ACCESS 1 ALONG INDUSTRIAL PARK ROAD IS IN EXCESS OF **430 FEET**. THUS, MEETING THE REQUIRED 430 FEET CALCULATED FROM *AASHTO'S A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS - 6TH EDITION, 2011 (GREEN BOOK).* ACCORDING TO *TABLE 9-7 - TIME GAP FOR CASE B2, RIGHT TURN FROM STOP (GREEN BOOK)*, THE ALLOWABLE TIME GAP FOR A PASSENGER CAR WITH A MAJOR STREET DESIGN SPEED OF **45 MPH** IS OF **6.5 SECONDS**. THE INTERSECTION SIGHT DISTANCE WAS CALCULATED USING *EQUATION 9-1* (GREEN BOOK) AS SHOWN BELOW.

ISD = $1.47V_{major}$ t_g = 1.47(45mph)(6.5s) = **430 FEET**

ISD = INTERSECTION SIGHT DISTANCE

V_{major} = **45 MPH** = DESIGN SPEED OF MAJOR ROAD (MPH)

t_g = **6.5 s** = TIME GAP FOR MINOR ROAD VEHICLE TO ENTER THE MAJOR ROAD (s)

THE SITE ACCESS SATISFIES BOTH CASE B1 FOR LEFT-TURNING VEHICLES AND CASE B2 FOR RIGHT-TURNING VEHICLES AS OUTLINED WITHIN THE AASHTO GREEN BOOK.

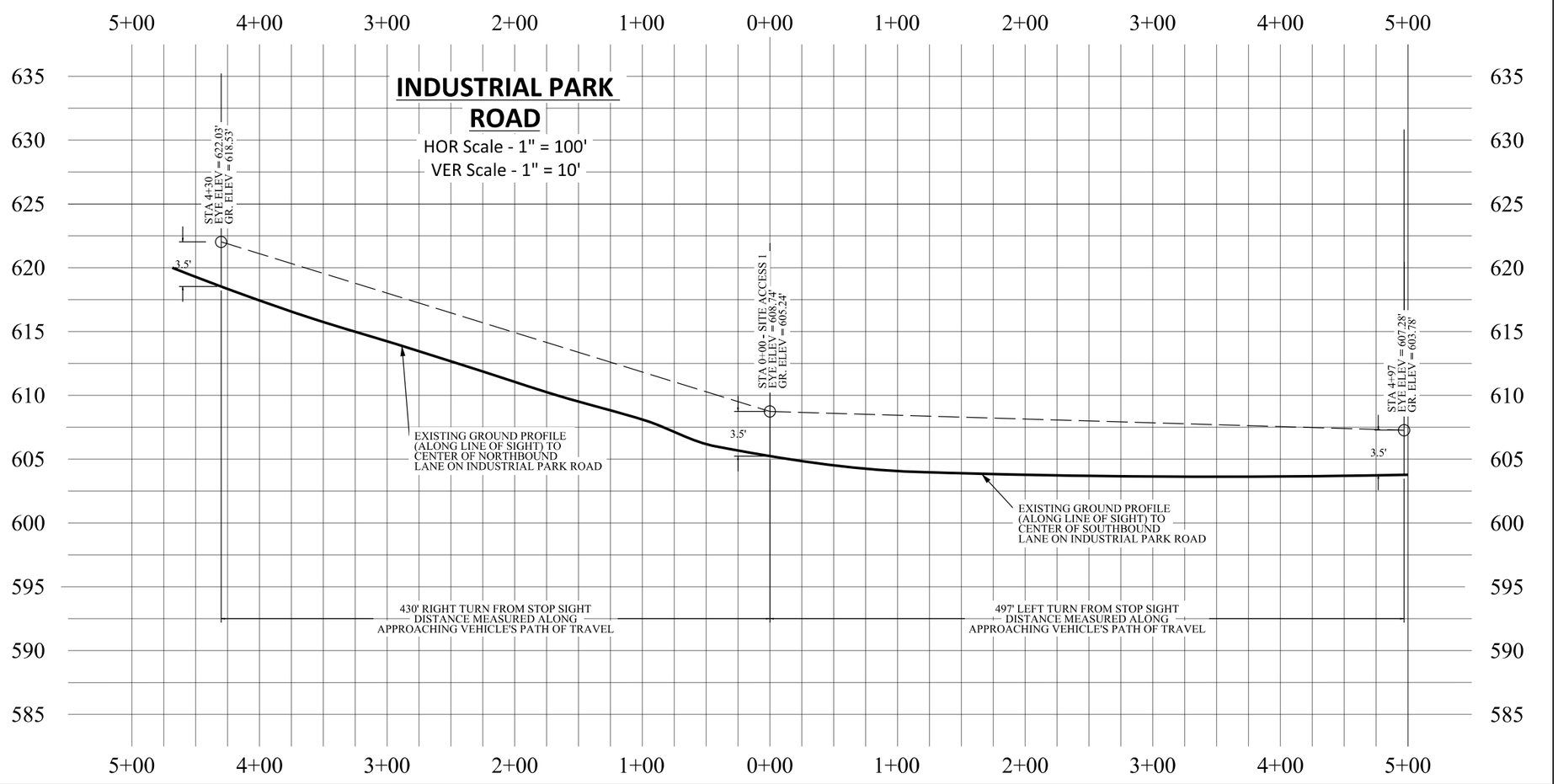
DECISION POINT

AS DESCRIBED IN AASHTO'S A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS:
FIELD OBSERVATIONS OF VEHICLE STOPPING POSITIONS FOUND THAT, WHERE NEEDED, DRIVERS WILL STOP WITH THE FRONT OF THEIR VEHICLE **6.5 FEET OR LESS** IN FRONT OF THE DESIRED STOPPING POSITION AT A STOP LINE. MEASUREMENTS OF PASSENGER CARS INDICATE THAT THE DISTANCE FROM THE FRONT OF THE VEHICLE TO THE DRIVER'S EYE FOR THE CURRENT U.S. PASSENGER CAR POPULATION IS NEARLY ALWAYS EIGHT (8) FEET OR LESS.

THEREFORE, IN ORDER TO ACCOUNT FOR VEHICLES STOPPING PAST THE STOP LINE, THE DECISION POINT (DRIVER'S EYE) WAS PLACED 1.5 FEET BEFORE THE STOP LINE AS OPPOSED TO **EIGHT (8) FEET** AS SHOWN IN PLAN VIEW 1. THIS CALCULATION IS DETAILED BELOW:

DP = AVG. VEHICLE LENGTH - STOPPING POSITION = 8 FT - 6.5 FT = **1.5 FT**

DP = DECISION POINT (DRIVER'S EYE)
AVG. VEHICLE LENGTH = 8 FEET
STOPPING POSITION = 6.5 FEET



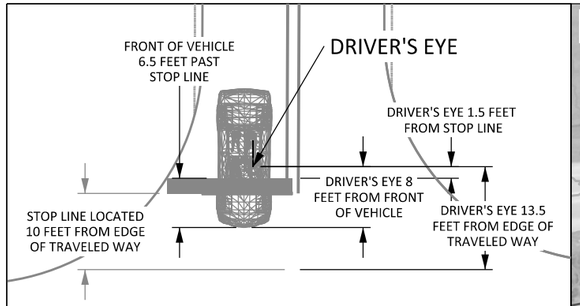
T-SQUARE ENGINEERING & SURVEYING

Figure 10 - Sight Distance Analysis (Industrial Park Road and Site Access 1)

Zero Industrial Park Road Development ● Franklin (Williamson County), TN ● Approximate Scale: Varies

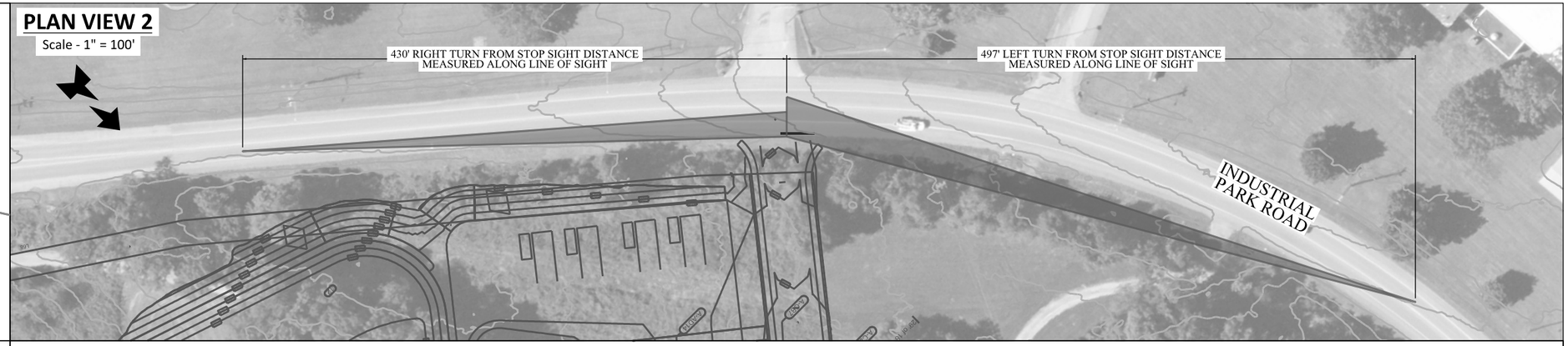
Prepared by T-Square Engineering, Inc.

1329 West Main Street ● Franklin, TN 37064 ● www.T2-Eng.com



PLAN VIEW 1

Scale - 1" = 20'



SIGHT DISTANCE NOTES

LEFT TURN FROM STOP

THE REQUIRED SIGHT DISTANCE FOR A VEHICLE MAKING A LEFT TURN FROM STOP AT SITE ACCESS 2 ALONG INDUSTRIAL PARK ROAD IS IN EXCESS OF **497** FEET. THUS, MEETING THE REQUIRED 497 FEET CALCULATED FROM *AASHTO'S A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS - 6TH EDITION, 2011 (GREEN BOOK).* ACCORDING TO *TABLE 9-5 - TIME GAP FOR CASE B1, LEFT TURN FROM STOP (GREEN BOOK),* THE ALLOWABLE TIME GAP FOR A PASSENGER CAR WITH A MAJOR STREET DESIGN SPEED OF **45 MPH** IS OF **7.5 SECONDS**. THE INTERSECTION SIGHT DISTANCE WAS CALCULATED USING *EQUATION 9-1 (GREEN BOOK)* AS SHOWN BELOW.

ISD = $1.47V_{major}$ t_g = 1.47(45mph)(7.5s) = **497 FEET**

ISD = INTERSECTION SIGHT DISTANCE (FEET)

V_{major} = **45 MPH** = DESIGN SPEED OF MAJOR ROAD (MPH)

t_g = **7.5 s** = TIME GAP FOR MINOR ROAD VEHICLE TO ENTER THE MAJOR ROAD (s)

RIGHT TURN FROM STOP

THE REQUIRED SIGHT DISTANCE FOR A VEHICLE MAKING A RIGHT TURN FROM STOP AT SITE ACCESS 2 ALONG INDUSTRIAL PARK ROAD IS IN EXCESS OF **430 FEET**. THUS, MEETING THE REQUIRED 430 FEET CALCULATED FROM *AASHTO'S A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS - 6TH EDITION, 2011 (GREEN BOOK).* ACCORDING TO *TABLE 9-7 - TIME GAP FOR CASE B2, RIGHT TURN FROM STOP (GREEN BOOK)*, THE ALLOWABLE TIME GAP FOR A PASSENGER CAR WITH A MAJOR STREET DESIGN SPEED OF **45 MPH** IS OF **6.5 SECONDS**. THE INTERSECTION SIGHT DISTANCE WAS CALCULATED USING *EQUATION 9-1* (GREEN BOOK) AS SHOWN BELOW.

ISD = $1.47V_{major}$ t_g = 1.47(45mph)(6.5s) = **430 FEET**

ISD = INTERSECTION SIGHT DISTANCE

V_{major} = **45 MPH** = DESIGN SPEED OF MAJOR ROAD (MPH)

t_g = **6.5 s** = TIME GAP FOR MINOR ROAD VEHICLE TO ENTER THE MAJOR ROAD (s)

THE SITE ACCESS SATISFIES BOTH CASE B1 FOR LEFT-TURNING VEHICLES AND CASE B2 FOR RIGHT-TURNING VEHICLES AS OUTLINED WITHIN THE AASHTO GREEN BOOK.

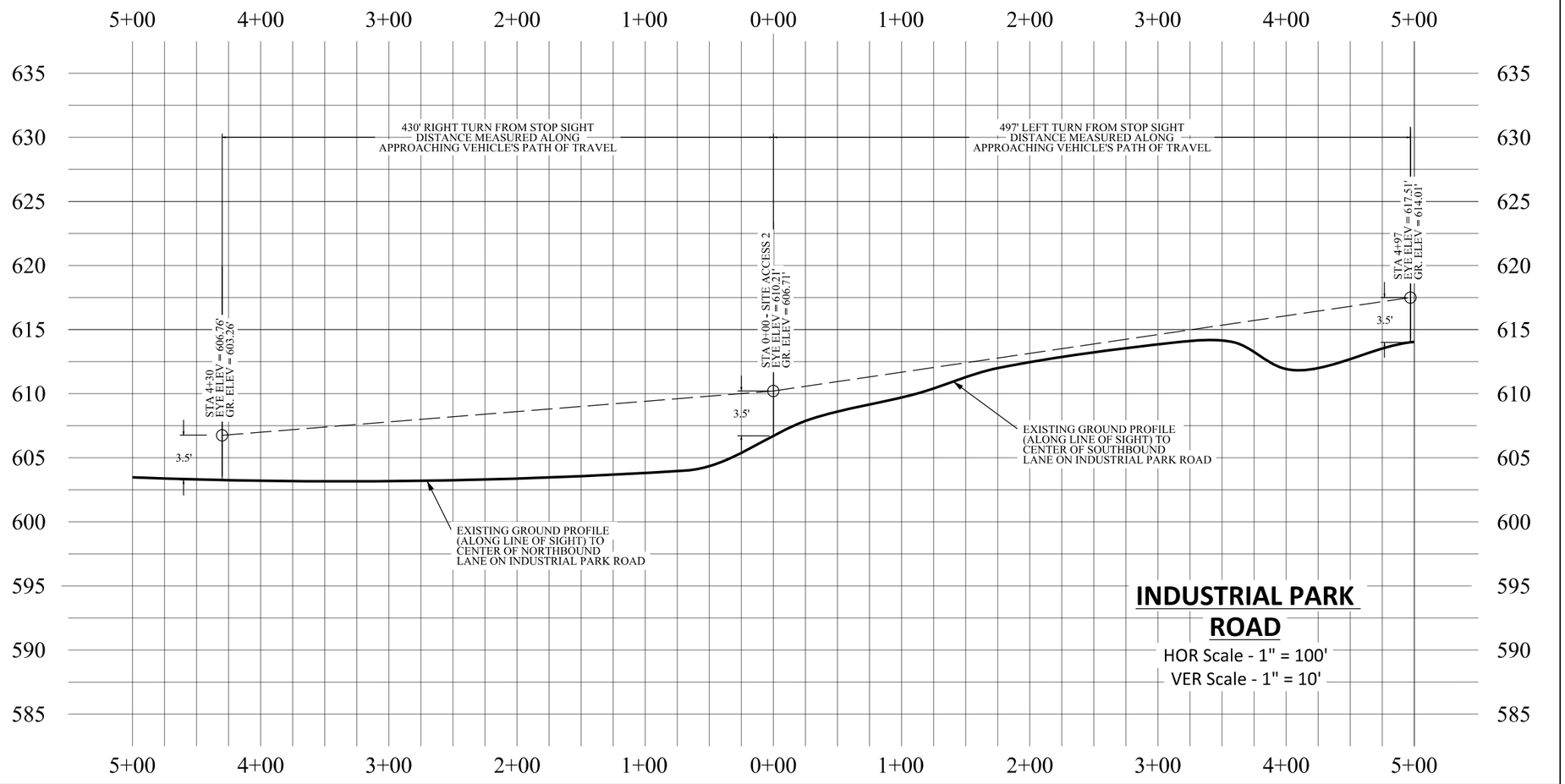
DECISION POINT

AS DESCRIBED IN AASHTO'S A POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS:
FIELD OBSERVATIONS OF VEHICLE STOPPING POSITIONS FOUND THAT, WHERE NEEDED, DRIVERS WILL STOP WITH THE FRONT OF THEIR VEHICLE **6.5 FEET OR LESS** IN FRONT OF THE DESIRED STOPPING POSITION AT A STOP LINE. MEASUREMENTS OF PASSENGER CARS INDICATE THAT THE DISTANCE FROM THE FRONT OF THE VEHICLE TO THE DRIVER'S EYE FOR THE CURRENT U.S. PASSENGER CAR POPULATION IS NEARLY ALWAYS EIGHT (8) FEET OR LESS.

THEREFORE, IN ORDER TO ACCOUNT FOR VEHICLES STOPPING PAST THE STOP LINE, THE DECISION POINT (DRIVER'S EYE) WAS PLACED 1.5 FEET BEFORE THE STOP LINE AS OPPOSED TO **EIGHT (8) FEET** AS SHOWN IN PLAN VIEW 1. THIS CALCULATION IS DETAILED BELOW:

DP = AVG. VEHICLE LENGTH - STOPPING POSITION = 8 FT- 6.5 FT = **1.5 FT**

DP = DECISION POINT (DRIVER'S EYE)
AVG. VEHICLE LENGTH = 8 FEET
STOPPING POSITION = 6.5 FEET



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Figure 11 - Sight Distance Analysis (Industrial Park Road and Site Access 2)

Zero Industrial Park Road Development ● Franklin (Williamson County), TN ● Approximate Scale: Varies

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Conclusions

Existing Conditions

Intersection Capacity Analyses

Industrial Park Road and N James Campbell Boulevard

- All critical movements for this intersection currently operate at an acceptable minimum LOS C during both AM and PM peak with existing traffic volumes.

Industrial Park Road and US-412 EB Ramps

- All critical movements for this intersection currently operate at an acceptable minimum LOS D during both AM and PM peak with existing traffic volumes.

Industrial Park Road and US-412 WB Ramps

- The exclusive westbound left-turn movement currently operates at LOS F during the PM peak hour period with existing traffic volumes.
- The overall intersection currently operates at LOS E during the PM peak hour period with existing traffic volumes.
- All other critical movements for this intersection currently operate at an acceptable minimum LOS D during both AM and PM peak with existing traffic volumes.

Industrial Park Road and Smile Direct Club Drive

- All critical movements for this intersection currently operate at an acceptable minimum LOS B during both AM and PM peak with existing traffic volumes.

Industrial Park Road and 981 Industrial Park Road Drive

- All critical movements for this intersection currently operate at an acceptable minimum LOS B during both AM and PM peak with existing traffic volumes.

Industrial Park Road and Santa Fe Pike (TN-7)

- All critical movements for this intersection currently operate at an acceptable minimum LOS C during both AM and PM peak with existing traffic volumes.

Background Conditions

Intersection Capacity Analyses

Industrial Park Road and N James Campbell Boulevard

- All critical movements for this intersection currently operate at an acceptable minimum LOS C during both AM and PM peak with background traffic volumes.

Industrial Park Road and US-412 EB Ramps

- The exclusive eastbound left-turn movement will operate at LOS F during the PM peak hour period with background traffic volumes.
- The exclusive eastbound right-turn movement will operate at LOS E during the AM peak hour period with background traffic volumes.
- All other critical movements for this intersection currently operate at an acceptable minimum LOS D during both AM and PM peak with background traffic volumes.

Industrial Park Road and US-412 WB Ramps

- The exclusive westbound left-turn movement will operate at LOS E and LOS F during the AM and PM peak hour periods, respectively with background traffic volumes.
- The overall intersection currently operates at LOS F during the PM peak hour period with background traffic volumes.
- All other critical movements for this intersection currently operate at an acceptable minimum LOS C during both AM and PM peak with existing traffic volumes.

Industrial Park Road and Smile Direct Club Drive

- All critical movements for this intersection will operate at an acceptable minimum LOS B during both AM and PM peak with background traffic volumes.

Industrial Park Road and 981 Industrial Park Road Drive

- All critical movements for this intersection will operate at an acceptable minimum LOS B during both AM and PM peak with background traffic volumes.

Industrial Park Road and Santa Fe Pike (TN-7)

- All critical movements for this intersection will operate at an acceptable minimum LOS C during both AM and PM peak with background traffic volumes.

Projected Conditions

Intersection Capacity Analyses

Industrial Park Road and N James Campbell Boulevard

- All critical movements for this intersection currently operate at an acceptable minimum LOS C during both AM and PM peak with projected traffic volumes.

Industrial Park Road and US-412 EB Ramps

- The exclusive eastbound left-turn movement will operate at LOS E and LOS F during the AM and PM peak hour periods, respectively with projected traffic volumes.
- The exclusive eastbound right-turn movement will operate at LOS E during the AM peak hour period with projected traffic volumes.
- All other critical movements for this intersection currently operate at an acceptable minimum LOS C during both AM and PM peak with projected traffic volumes.

Industrial Park Road and US-412 WB Ramps

- The exclusive westbound left-turn movement will operate at LOS E and LOS F during the AM and PM peak hour periods, respectively with projected traffic volumes.
- The overall intersection will operate at LOS F during the PM peak hour period with projected traffic volumes.
- All other critical movements for this intersection will operate at an acceptable minimum LOS C during both AM and PM peak with projected traffic volumes.

Industrial Park Road and Smile Direct Club Drive

- All critical movements for this intersection will operate at an acceptable minimum LOS B during both AM and PM peak with projected traffic volumes.

Industrial Park Road and 981 Industrial Park Road Drive

- All critical movements for this intersection will operate at an acceptable minimum LOS B during both AM and PM peak with projected traffic volumes.

Industrial Park Road and Santa Fe Pike (TN-7)

- All critical movements for this intersection will operate at an acceptable minimum LOS C during both AM and PM peak with projected traffic volumes.

<u>Turn Lane Analyses</u>

- It was determined that the southbound approach of Industrial Park Road at its intersection with the proposed Site Access 1 does not warrant an exclusive lane for left-turning movements with projected traffic volumes.
- It was determined that the northbound approach of Industrial Park Road at its intersection with the proposed Site Access 1 does not warrant an exclusive lane for right-turning movements with projected traffic volumes.
- It was determined that the westbound approach of the proposed Site Access 1 at its intersection with Industrial Park Road is sufficient with one (1) shared lane for left-turning and right-turning movements with projected traffic volumes.
- It was determined that the southbound approach of Industrial Park Road at its intersection with the proposed Site Access 2 does not warrant an exclusive lane for left-turning movements with projected traffic volumes.

- It was determined that the northbound approach of Industrial Park Road at its intersection with the proposed Site Access 2 does not warrant an exclusive lane for right-turning movements with projected traffic volumes.
- It was determined that the westbound approach of the proposed Site Access 2 at its intersection with Industrial Park Road is sufficient with one (1) shared lane for left-turning and right-turning movements with projected traffic volumes.

Recommendations

Based on the analyses within this study, and a review of the proposed development's access plan, the recommendations below have been presented to be implemented as part of the proposed Zero Industrial Park Road Development in Columbia, TN. These recommendations will be constructed in addition to the additional improvements at the study intersections outlined in previously conducted traffic studies within the area.

Improvement Recommendations for the Zero Industrial Park Road Development

Industrial Park Road and N James Campbell Boulevard

- Optimize the existing signal timings at this intersection to accommodate the generated traffic volumes from the proposed Zero Industrial Park Road Development.

Industrial Park Road and US-412 EB Ramps

- No additional improvements are recommended for this intersection as part of the construction of the proposed development.

Industrial Park Road and US-412 WB Ramps

- Optimize the existing signal timings at this intersection to accommodate the generated traffic volumes from the proposed Zero Industrial Park Road Development.

Industrial Park Road and Smile Direct Club Drive/Site Access 1

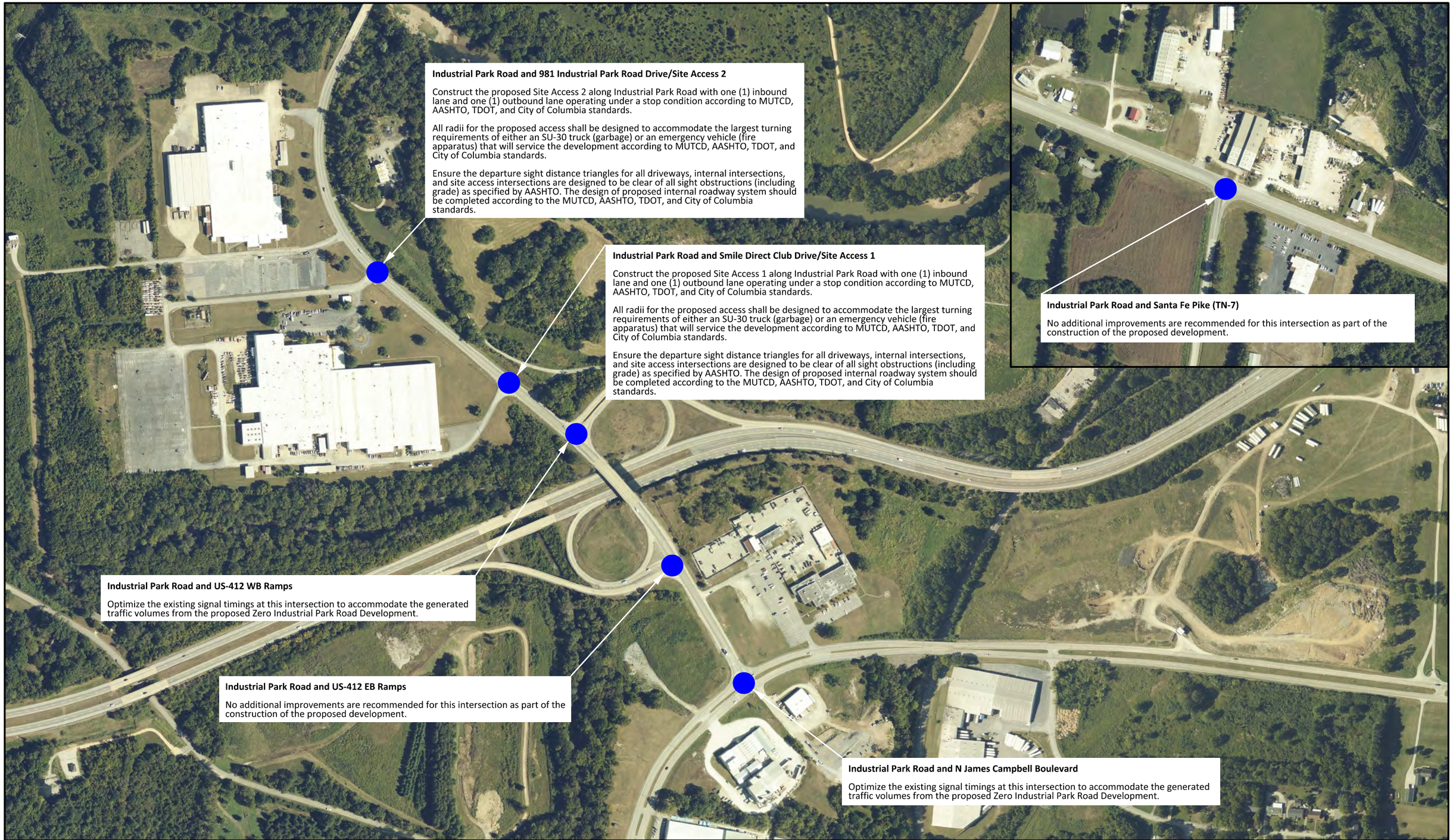
- Construct the proposed Site Access 1 along Industrial Park Road with one (1) inbound lane and one (1) outbound lane operating under a stop condition according to MUTCD, AASHTO, TDOT, and City of Columbia standards.
- All radii for the proposed access shall be designed to accommodate the largest turning requirements of either an SU-30 truck (garbage) or an emergency vehicle (fire apparatus) that will service the development according to MUTCD, AASHTO, TDOT, and City of Columbia standards.
- Ensure the departure sight distance triangles for all driveways, internal intersections, and site access intersections are designed to be clear of all sight obstructions (including grade) as specified by AASHTO. The design of proposed internal roadway system should be completed according to the MUTCD, AASHTO, TDOT, and City of Columbia standards.

Industrial Park Road and 981 Industrial Park Road Drive/Site Access 2

- Construct the proposed Site Access 2 along Industrial Park Road with one (1) inbound lane and one (1) outbound lane operating under a stop condition according to MUTCD, AASHTO, TDOT, and City of Columbia standards.
- All radii for the proposed access shall be designed to accommodate the largest turning requirements of either an SU-30 truck (garbage) or an emergency vehicle (fire apparatus) that will service the development according to MUTCD, AASHTO, TDOT, and City of Columbia standards.
- Ensure the departure sight distance triangles for all driveways, internal intersections, and site access intersections are designed to be clear of all sight obstructions (including grade) as specified by AASHTO. The design of proposed internal roadway system should be completed according to the MUTCD, AASHTO, TDOT, and City of Columbia standards.

Industrial Park Road and Santa Fe Pike (TN-7)

- No additional improvements are recommended for this intersection as part of the construction of the proposed development.



T-SQUARE ENGINEERING & SURVEYING

Figure 12 - Recommended Improvements

Zero Industrial Park Road Development ● Columbia, TN ● Approximate Scale: 1" = 400'

Prepared by T-Square Engineering, Inc.

1329 West Main Street ● Franklin, TN 37064 ● www.T2-Eng.com

400' 200' 0' 400'

1 inch = 400 feet

Projected Capacity Analysis with Improvements

To evaluate the impact of the proposed improvements on the projected traffic operations at the study intersections within the vicinity of the project site, AM and PM peak hour capacity analyses were performed with projected traffic volumes. Levels-of-service (LOS), corresponding average delays, and 95th percentile queues were calculated for each turning movement. The study intersections were analyzed under projected conditions with the proposed recommendations outlined in the Conclusions and Recommendations portion of this study. Appendix C contains the detailed capacity analyses results.

It should be noted that optimized traffic signal timings were utilized at the intersections of Industrial Park Road and N James Campbell Boulevard and Industrial Park Road and US-412 WB Ramps for this analysis. The projected capacity analyses with improvements were conducted using *Synchro* software by Trafficware for both signalized and unsignalized intersections. Appendix C contains the detailed capacity analyses results.

Table 18. Projected Capacity Analyses with Improvements

	Study Intersection	Control	Approach	2025 Projected with Improvements Conditions					
				AM Peak Hour			PM Peak Hour		
				LOS	Delay (s)	Queue (feet)	LOS	Delay (s)	Queue (feet)
1.	**Industrial Park Road and N James Campbell Boulevard**	Signal	NB L/T/R	B	18.3	12	C	22.5	23
			SB L/T/R	B	13.9	#354	B	11.3	118
			SB Right	B	13.9	89	B	11.3	58
			EB Left	C	22.6	#288	D	35.6	#443
			EB Thru	A	8.4	38	A	6.1	38
			EB Thru/Right	A	8.4	38	A	6.1	38
			WB Left/Thru	C	23.9	78	C	25.3	90
			WB Thru/Right	C	24.6	78	C	26.5	90
			Overall	**B**	**17.0**	--	**C**	**21.5**	--
2.	**Industrial Park Road and US-412 EB Ramps**	TWSC	NB Left	B	11.1	50	B	12.8	75
			EB Left	E	35.9	50	F	57.0	75
			EB Right	E	46.9	225	C	17.3	25
3.	**Industrial Park Road and US-412 EB Ramps**	Signal	NB Thru	B	15.4	247	B	18.5	#488
			SB Left	A	9.4	32	B	11.1	59
			SB Thru	A	8.8	155	A	9.5	151
			WB Left	D	44.1	#285	D	50.9	#366
			Overall	**C**	**23.0**	--	**C**	**25.3**	--
4.	**Industrial Park Road and Smile Direct Club Drive/Site Access 1**	TWSC	NB Left	A	8.1	0	A	8.4	0
			SB Left	A	8.0	0	A	8.1	0
			EB L/T/R	B	10.6	0	B	13.9	0
			WB L/T/R	C	16.0	25	C	21.6	25
5.	**Industrial Park Road and 981 Industrial Park Road Drive/Site Access 2**	TWSC	NB Left/Thru	A	8.2	0	A	0.0	0
			SB Left	A	7.2	0	A	8.1	0
			EB L/T/R	A	0.0	0	B	11.1	0
			WB L/T/R	B	12.8	0	C	15.6	25
6.	**Industrial Park Road and Santa Fe Pike (TN-7)**	TWSC	NB Left	B	14.8	50	C	20.0	100
			NB Right	B	10.1	25	B	10.0	25
			WB Left	A	8.6	25	A	8.5	25

– 95th percentile volume exceeds capacity; queue may be longer. Queue shown is maximum after two cycles.

APPENDIX

APPENDIX A – DETAILED TURNING MOVEMENT COUNTS AND SIGNAL TIMINGS

Location: Maury County (Columbia)
Count Type: Classified Turning Movement Counts

Count Sites: 6
Intersection #: 1
Intersection: Industrial Park Road and James Campbell Boulevard

Southbound: Industrial Park Road
Westbound: James Campbell Boulevard
Northbound: Driveway
Eastbound: James Campbell Boulevard

Lat/Long: 35.627314587353005, -87.0652381763964

Count Date: 1/26/2023

Time Period: 0600 - 0900 (Weekday AM Peak)

Figure 1 - Turning Movement Designation

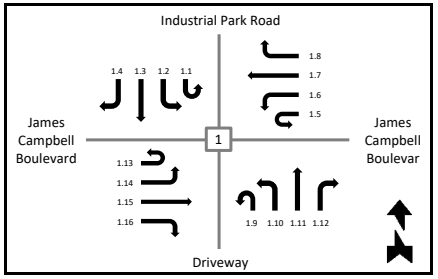
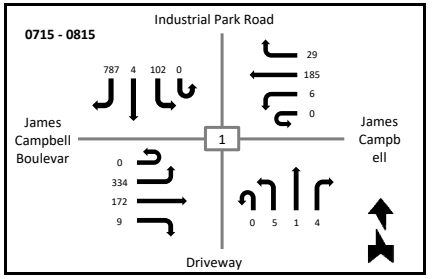


Figure 2 - AM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	Industrial Park Road						James Campbell Boulevard						Driveway						James Campbell Boulevard					
Time	U-Turn 1.1	Left 1.2	Thru 1.3	Right 1.4	Peds X-Walk	App Total	U-Turn 1.5	Left 1.6	Thru 1.7	Right 1.8	Peds X-Walk	App Total	U-Turn 1.9	Left 1.10	Thru 1.11	Right 1.12	Peds X-Walk	App Total	U-Turn 1.13	Left 1.14	Thru 1.15	Right 1.16	Peds X-Walk	App Total
0600 - 0615	0	4	0	50	0	54	0	0	10	12	0	22	0	0	0	0	0	0	0	59	23	1	0	83
0615 - 0630	0	6	3	87	0	96	0	1	18	3	0	22	0	0	0	0	0	0	0	60	20	0	0	80
0630 - 0645	0	8	0	111	0	119	0	0	20	8	0	28	0	0	2	0	0	2	0	67	29	0	0	96
0645 - 0700	0	8	1	142	0	151	0	1	33	6	0	40	0	0	0	0	0	0	0	48	35	1	0	84
0700 - 0715	0	13	1	124	0	138	0	0	48	6	0	54	0	0	0	0	0	0	0	70	38	1	0	109
0715 - 0730	0	23	1	203	0	227	0	1	64	5	0	70	0	0	1	2	0	3	0	77	36	3	0	116
0730 - 0745	0	20	0	226	0	246	0	2	41	11	0	54	0	1	0	0	0	1	0	96	42	2	0	140
0745 - 0800	0	40	1	200	0	241	0	2	43	5	0	50	0	2	0	1	0	3	0	94	64	4	0	162
0800 - 0815	0	19	2	158	0	179	0	1	37	8	0	46	0	2	0	1	0	3	0	67	30	0	0	97
0815 - 0830	0	15	0	121	0	136	0	0	26	5	0	31	0	0	0	1	0	1	0	64	31	1	0	96
0830 - 0845	0	9	3	99	0	111	0	1	17	1	0	19	0	1	0	0	0	1	0	53	29	0	0	82
0845 - 0900	0	14	2	116	0	132	0	0	32	2	0	34	0	1	1	0	0	2	0	64	28	0	0	92
Grand Total	**0**	**179**	**14**	**1637**	**0**	**1830**	**0**	**9**	**389**	**72**	**0**	**470**	**0**	**7**	**4**	**5**	**0**	**16**	**0**	**819**	**405**	**13**	**0**	**1237**
Peak Hour Total																								
0715 - 0815	**0**	**102**	**4**	**787**	**0**	**893**	**0**	**6**	**185**	**29**	**0**	**220**	**0**	**5**	**1**	**4**	**0**	**10**	**0**	**334**	**172**	**9**	**0**	**515**
App %	0.00%	9.78%	0.77%	89.45%			0.00%	1.91%	82.77%	15.32%			0.00%	43.75%	25.00%	31.25%			0.00%	66.21%	32.74%	1.05%		
Int %	0.00%	5.04%	0.39%	46.07%		51.51%	0.00%	0.25%	10.95%	2.03%		13.23%	0.00%	0.20%	0.11%	0.14%		0.45%	0.00%	23.05%	11.40%	0.37%		34.82%
Cars Total	0	172	13	1583			0	9	370	64			0	7	1	5			0	774	397	13		
Heavy Total	0	7	1	54			0	0	19	8			0	0	3	0			0	45	8	0		
% Cars	**0.00%**	**96.09%**	**92.86%**	**96.70%**			**0.00%**	**100.00%**	**95.12%**	**88.89%**			**0.00%**	**100.00%**	**25.00%**	**100.00%**			**0.00%**	**94.51%**	**98.02%**	**100.00%**		
% Heavy	**0.00%**	**3.91%**	**7.14%**	**3.30%**			**0.00%**	**0.00%**	**4.88%**	**11.11%**			**0.00%**	**0.00%**	**75.00%**	**0.00%**			**0.00%**	**5.49%**	**1.98%**	**0.00%**		

Location: Maury County (Columbia)
Count Type: Classified Turning Movement Counts

Count Sites: 6
Intersection #: 1
Intersection: Industrial Park Road and James Campbell Boulevard

Southbound: Industrial Park Road
Westbound: James Campbell Boulevard
Northbound: Driveway
Eastbound: James Campbell Boulevard

Lat/Long: 35.627314587353005, -87.0652381763964

Count Date: 1/26/2023

Time Period: 1500 - 1800 (Weekday PM Peak)

Figure 1 - Turning Movement Designation

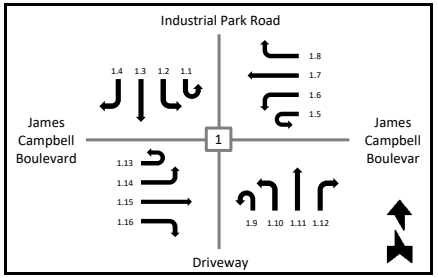
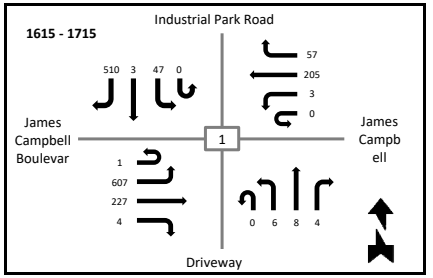


Figure 2 - PM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	Industrial Park Road						James Campbell Boulevard						Driveway						James Campbell Boulevard					
Time	U-Turn 1.1	Left 1.2	Thru 1.3	Right 1.4	Peds X-Walk	App Total	U-Turn 1.5	Left 1.6	Thru 1.7	Right 1.8	Peds X-Walk	App Total	U-Turn 1.9	Left 1.10	Thru 1.11	Right 1.12	Peds X-Walk	App Total	U-Turn 1.13	Left 1.14	Thru 1.15	Right 1.16	Peds X-Walk	App Total
1500 - 1515	0	18	2	138	0	158	0	0	52	12	0	64	0	0	1	0	0	1	0	137	88	1	0	226
1515 - 1530	0	14	0	128	0	142	0	0	41	16	0	57	0	2	1	1	0	4	1	121	53	1	0	176
1530 - 1545	0	19	0	134	0	153	0	0	54	14	0	68	0	0	0	0	0	0	0	148	61	0	0	209
1545 - 1600	0	15	0	123	0	138	0	2	55	4	0	61	0	2	0	1	0	3	0	124	44	1	0	169
1600 - 1615	0	18	0	105	0	123	0	0	54	17	0	71	0	2	1	1	0	4	0	134	51	1	0	186
1615 - 1630	0	10	1	115	0	126	0	0	47	8	0	55	0	2	2	1	0	5	0	131	63	2	0	196
1630 - 1645	0	17	0	141	0	158	0	1	64	17	0	82	0	1	3	0	0	4	1	156	64	1	0	222
1645 - 1700	0	12	1	132	0	145	0	2	40	13	0	55	0	1	0	1	0	2	0	159	43	1	0	203
1700 - 1715	0	8	1	122	0	131	0	0	54	19	0	73	0	2	3	2	0	7	0	161	57	0	0	218
1715 - 1730	0	8	1	99	0	108	0	0	38	7	0	45	0	0	1	0	0	1	0	158	41	0	0	199
1730 - 1745	0	6	0	88	0	94	0	0	51	11	0	62	0	0	4	0	0	4	0	101	55	0	0	156
1745 - 1800	0	4	1	86	0	91	0	0	53	5	0	58	0	0	0	0	0	0	0	101	50	0	0	151
Grand Total	**0**	**149**	**7**	**1411**	**0**	**1567**	**0**	**5**	**603**	**143**	**0**	**751**	**0**	**12**	**16**	**7**	**0**	**35**	**2**	**1631**	**670**	**8**	**0**	**2311**
Peak Hour Total																								
1615 - 1715	**0**	**47**	**3**	**510**	**0**	**560**	**0**	**3**	**205**	**57**	**0**	**265**	**0**	**6**	**8**	**4**	**0**	**18**	**1**	**607**	**227**	**4**	**0**	**839**
App %	0.00%	9.51%	0.45%	90.04%			0.00%	0.67%	80.29%	19.04%			0.00%	34.29%	45.71%	20.00%			0.09%	70.58%	28.99%	0.35%		
Int %	0.00%	3.19%	0.15%	30.25%		33.60%	0.00%	0.11%	12.93%	3.07%		16.10%	0.00%	0.26%	0.34%	0.15%		0.75%	0.04%	34.97%	14.37%	0.17%		49.55%
Cars Total	0	141	4	1392			0	4	598	136			0	12	14	7			2	1597	665	8		
Heavy Total	0	8	3	19			0	1	5	7			0	0	2	0			0	34	5	0		
% Cars	**0.00%**	**94.63%**	**57.14%**	**98.65%**			**0.00%**	**80.00%**	**99.17%**	**95.10%**			**0.00%**	**100.00%**	**87.50%**	**100.00%**			**100.00%**	**97.92%**	**99.25%**	**100.00%**		
% Heavy	**0.00%**	**5.37%**	**42.86%**	**1.35%**			**0.00%**	**20.00%**	**0.83%**	**4.90%**			**0.00%**	**0.00%**	**12.50%**	**0.00%**			**0.00%**	**2.08%**	**0.75%**	**0.00%**		

Location: Maury County (Columbia)
Count Type: Classified Turning Movement Counts

Count Sites: 6
Intersection #: 2
Intersection: Industrial Park Road and US-412 Eastbound Ramps

Southbound: Industrial Park Road
Westbound: N/A
Northbound: Industrial Park Road
Eastbound: US-412 Eastbound Ramps

Lat/Long: 35.62876801270463, -87.06627329012

Count Date: 1/24/2023

Time Period: 0600 - 0900 (Weekday AM Peak)

Figure 1 - Turning Movement Designation

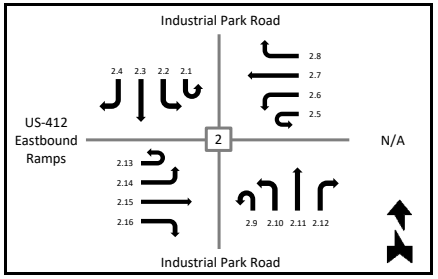
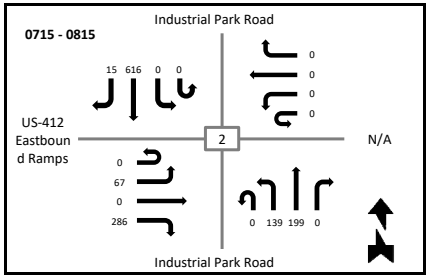


Figure 2 - AM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	Industrial Park Road						N/A						Industrial Park Road						US-412 Eastbound Ramps					
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App
Time	2.1	2.2	2.3	2.4	X-Walk	Total	2.5	2.6	2.7	2.8	X-Walk	Total	2.9	2.10	2.11	2.12	X-Walk	Total	2.13	2.14	2.15	2.16	X-Walk	Total
0600 - 0615	0	0	47	4	0	51	0	0	0	0	0	0	0	29	32	0	0	61	0	19	0	7	0	26
0615 - 0630	0	0	79	12	0	91	0	0	0	0	0	0	0	30	38	0	0	68	0	18	0	8	0	26
0630 - 0645	0	0	103	4	0	107	0	0	0	0	0	0	0	16	34	0	0	50	0	31	0	31	0	62
0645 - 0700	0	0	110	1	0	111	0	0	0	0	0	0	0	26	39	0	0	65	0	25	0	31	0	56
0700 - 0715	0	0	117	4	0	121	0	0	0	0	0	0	0	31	49	0	0	80	0	19	0	26	0	45
0715 - 0730	0	0	168	4	0	172	0	0	0	0	0	0	0	34	49	0	0	83	0	27	0	70	0	97
0730 - 0745	0	0	138	6	0	144	0	0	0	0	0	0	0	34	55	0	0	89	0	15	0	90	0	105
0745 - 0800	0	0	167	4	0	171	0	0	0	0	0	0	0	34	47	0	0	81	0	16	0	87	0	103
0800 - 0815	0	0	143	1	0	144	0	0	0	0	0	0	0	37	48	0	0	85	0	9	0	39	0	48
0815 - 0830	0	0	125	5	0	130	0	0	0	0	0	0	0	39	41	0	0	80	0	12	0	31	0	43
0830 - 0845	0	0	110	3	1	113	0	0	0	0	0	0	0	43	28	0	0	71	0	7	0	24	1	31
0845 - 0900	0	0	111	1	0	112	0	0	0	0	0	0	0	38	37	0	0	75	0	8	0	21	0	29
Grand Total	**0**	**0**	**1418**	**49**	**1**	**1467**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**391**	**497**	**0**	**0**	**888**	**0**	**206**	**0**	**465**	**1**	**671**
Peak Hour Total																								
0715 - 0815	**0**	**0**	**616**	**15**	**0**	**631**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**139**	**199**	**0**	**0**	**338**	**0**	**67**	**0**	**286**	**0**	**353**
App %	0.00%	0.00%	96.66%	3.34%			0.00%	0.00%	0.00%	0.00%			0.00%	44.03%	55.97%	0.00%			0.00%	30.70%	0.00%	69.30%		
Int %	0.00%	0.00%	46.86%	1.62%		48.48%	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%	12.92%	16.42%	0.00%		29.35%	0.00%	6.81%	0.00%	15.37%		22.17%
Cars Total	0	0	1363	39			0	0	0	0			0	374	464	0			0	184	0	461		
Heavy Total	0	0	55	10			0	0	0	0			0	17	33	0			0	22	0	4		
% Cars	**0.00%**	**0.00%**	**96.12%**	**79.59%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**95.65%**	**93.36%**	**0.00%**			**0.00%**	**89.32%**	**0.00%**	**99.14%**		
% Heavy	**0.00%**	**0.00%**	**3.88%**	**20.41%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**4.35%**	**6.64%**	**0.00%**			**0.00%**	**10.68%**	**0.00%**	**0.86%**		

Location: Maury County (Columbia)
Count Type: Classified Turning Movement Counts

Count Sites: 6
Intersection #: 2
Intersection: Industrial Park Road and US-412 Eastbound Ramps

Southbound: Industrial Park Road
Westbound: N/A
Northbound: Industrial Park Road
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Lat/Long: 35.62876801270463, -87.06627329012

Count Date: 1/24/2023

Time Period: 1500 - 1800 (Weekday PM Peak)

Figure 1 - Turning Movement Designation

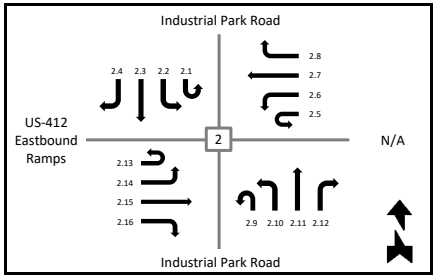
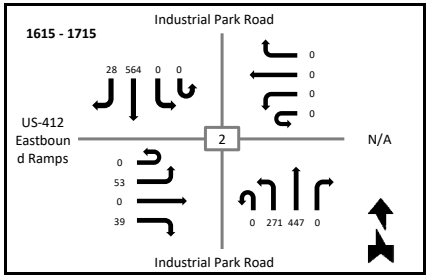


Figure 2 - PM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	Industrial Park Road						N/A						Industrial Park Road						US-412 Eastbound Ramps					
Time	U-Turn 2.1	Left 2.2	Thru 2.3	Right 2.4	Peds X-Walk	App Total	U-Turn 2.5	Left 2.6	Thru 2.7	Right 2.8	Peds X-Walk	App Total	U-Turn 2.9	Left 2.10	Thru 2.11	Right 2.12	Peds X-Walk	App Total	U-Turn 2.13	Left 2.14	Thru 2.15	Right 2.16	Peds X-Walk	App Total
1500 - 1515	0	0	125	6	0	131	0	0	0	0	0	0	0	66	87	0	0	153	0	11	0	26	0	37
1515 - 1530	0	0	97	4	0	101	0	0	0	0	0	0	0	67	93	0	0	160	0	13	0	22	0	35
1530 - 1545	0	0	129	10	0	139	0	0	0	0	0	0	0	78	104	0	0	182	0	8	0	14	0	22
1545 - 1600	0	0	111	2	0	113	0	0	0	0	0	0	0	54	84	0	0	138	0	15	0	12	0	27
1600 - 1615	0	0	138	8	0	146	0	0	0	0	0	0	0	76	110	0	0	186	0	13	0	11	0	24
1615 - 1630	0	0	128	2	0	130	0	0	0	0	0	0	0	63	95	0	0	158	0	8	0	11	0	19
1630 - 1645	0	0	152	14	0	166	0	0	0	0	0	0	0	68	124	0	0	192	0	16	0	10	0	26
1645 - 1700	0	0	144	7	0	151	0	0	0	0	0	0	0	69	90	0	0	159	0	15	0	11	0	26
1700 - 1715	0	0	140	5	0	145	0	0	0	0	0	0	0	71	138	0	0	209	0	14	0	7	0	21
1715 - 1730	0	0	93	4	0	97	0	0	0	0	0	0	0	54	83	0	0	137	0	13	0	11	0	24
1730 - 1745	0	0	92	6	0	98	0	0	0	0	0	0	0	53	83	0	0	136	0	11	0	12	0	23
1745 - 1800	0	0	104	2	0	106	0	0	0	0	0	0	0	42	51	0	0	93	0	3	0	3	0	6
Grand Total	**0**	**0**	**1453**	**70**	**0**	**1523**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**761**	**1142**	**0**	**0**	**1903**	**0**	**140**	**0**	**150**	**0**	**290**
Peak Hour Total																								
1615 - 1715	**0**	**0**	**564**	**28**	**0**	**592**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**271**	**447**	**0**	**0**	**718**	**0**	**53**	**0**	**39**	**0**	**92**
App %	0.00%	0.00%	95.40%	4.60%			0.00%	0.00%	0.00%	0.00%			0.00%	39.99%	60.01%	0.00%			0.00%	48.28%	0.00%	51.72%		
Int %	0.00%	0.00%	39.10%	1.88%		40.98%	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%	20.48%	30.73%	0.00%		51.21%	0.00%	3.77%	0.00%	4.04%		7.80%
Cars Total	0	0	1421	70			0	0	0	0			0	750	1103	0			0	128	0	143		
Heavy Total	0	0	32	0			0	0	0	0			0	11	39	0			0	12	0	7		
% Cars	**0.00%**	**0.00%**	**97.80%**	**100.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**98.55%**	**96.58%**	**0.00%**			**0.00%**	**91.43%**	**0.00%**	**95.33%**		
% Heavy	**0.00%**	**0.00%**	**2.20%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**1.45%**	**3.42%**	**0.00%**			**0.00%**	**8.57%**	**0.00%**	**4.67%**		

Location: Maury County (Columbia)
Count Type: Classified Turning Movement Counts

Count Sites: 6
Intersection #: 3
Intersection: Industrial Park Road and US-412 Westbound Ramps

Southbound: Industrial Park Road
Westbound: US-412 Westbound Ramps
Northbound: Industrial Park Road
Eastbound: N/A

Lat/Long: 35.63027698484705, -87.0678005420638

Count Date: 1/24/2023

Time Period: 0600 - 0900 (Weekday AM Peak)

Figure 1 - Turning Movement Designation

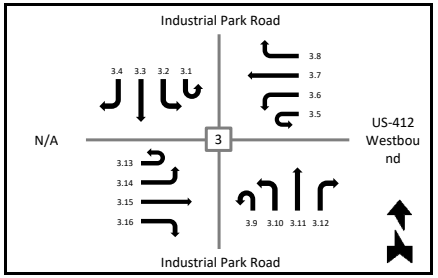
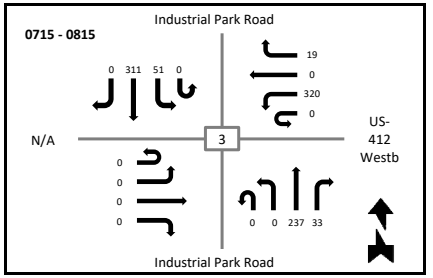


Figure 2 - AM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	Industrial Park Road						US-412 Westbound Ramps						Industrial Park Road						N/A					
Time	U-Turn 3.1	Left 3.2	Thru 3.3	Right 3.4	Peds X-Walk	App Total	U-Turn 3.5	Left 3.6	Thru 3.7	Right 3.8	Peds X-Walk	App Total	U-Turn 3.9	Left 3.10	Thru 3.11	Right 3.12	Peds X-Walk	App Total	U-Turn 3.13	Left 3.14	Thru 3.15	Right 3.16	Peds X-Walk	App Total
0600 - 0615	0	15	28	0	0	43	0	29	0	0	0	29	0	0	50	1	0	51	0	0	0	0	0	0
0615 - 0630	0	8	46	0	0	54	0	43	0	4	0	47	0	0	51	4	0	55	0	0	0	0	0	0
0630 - 0645	0	11	48	0	0	59	0	60	0	3	0	63	0	0	59	5	0	64	0	0	0	0	0	0
0645 - 0700	0	11	52	0	0	63	0	60	0	4	0	64	0	0	65	2	0	67	0	0	0	0	0	0
0700 - 0715	0	6	55	0	0	61	1	63	0	1	0	65	0	0	44	17	0	61	0	0	0	0	0	0
0715 - 0730	0	16	87	0	0	103	0	88	0	4	0	92	0	0	73	6	0	79	0	0	0	0	0	0
0730 - 0745	0	13	77	0	0	90	0	61	0	2	0	63	0	0	63	8	0	71	0	0	0	0	0	0
0745 - 0800	0	11	84	0	0	95	0	89	0	7	0	96	0	0	54	8	0	62	0	0	0	0	0	0
0800 - 0815	0	11	63	0	0	74	0	82	0	6	0	88	0	0	47	11	0	58	0	0	0	0	0	0
0815 - 0830	0	10	63	0	0	73	0	66	0	3	0	69	0	0	42	9	0	51	0	0	0	0	0	0
0830 - 0845	0	11	48	0	0	59	0	65	0	2	0	67	0	0	30	6	0	36	0	0	0	0	0	0
0845 - 0900	0	9	53	0	0	62	0	58	0	4	0	62	0	0	33	11	0	44	0	0	0	0	0	0
Grand Total	**0**	**132**	**704**	**0**	**0**	**836**	**1**	**764**	**0**	**40**	**0**	**805**	**0**	**0**	**611**	**88**	**0**	**699**	**0**	**0**	**0**	**0**	**0**	**0**
Peak Hour Total																								
0715 - 0815	**0**	**51**	**311**	**0**	**0**	**362**	**0**	**320**	**0**	**19**	**0**	**339**	**0**	**0**	**237**	**33**	**0**	**270**	**0**	**0**	**0**	**0**	**0**	**0**
App %	0.00%	15.79%	84.21%	0.00%			0.12%	94.91%	0.00%	4.97%			0.00%	0.00%	87.41%	12.59%			0.00%	0.00%	0.00%	0.00%		
Int %	0.00%	5.64%	30.09%	0.00%		35.73%	0.04%	32.65%	0.00%	1.71%		34.40%	0.00%	0.00%	26.11%	3.76%		29.87%	0.00%	0.00%	0.00%	0.00%		0.00%
Cars Total	0	118	645	0			1	746	0	33			0	0	562	84			0	0	0	0		
Heavy Total	0	14	59	0			0	18	0	7			0	0	49	4			0	0	0	0		
% Cars	**0.00%**	**89.39%**	**91.62%**	**0.00%**			**100.00%**	**97.64%**	**0.00%**	**82.50%**			**0.00%**	**0.00%**	**91.98%**	**95.45%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**		
% Heavy	**0.00%**	**10.61%**	**8.38%**	**0.00%**			**0.00%**	**2.36%**	**0.00%**	**17.50%**			**0.00%**	**0.00%**	**8.02%**	**4.55%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**		

Location: Maury County (Columbia)
Count Type: Classified Turning Movement Counts

Count Sites: 6
Intersection #: 3
Intersection: Industrial Park Road and US-412 Westbound Ramps

Southbound: Industrial Park Road
Westbound: US-412 Westbound Ramps
Northbound: Industrial Park Road
Eastbound: N/A

Lat/Long: 35.63027698484705, -87.0678005420638

Count Date: 1/24/2023

Time Period: 1500 - 1800 (Weekday PM Peak)

Figure 1 - Turning Movement Designation

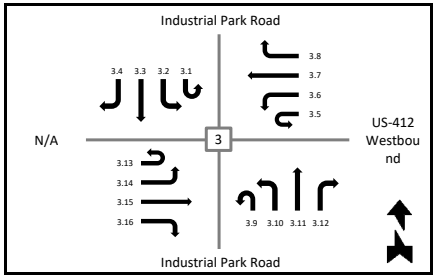
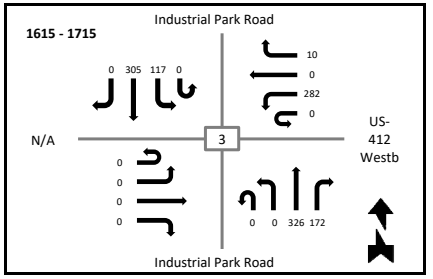


Figure 2 - PM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	Industrial Park Road						US-412 Westbound Ramps						Industrial Park Road						N/A					
Time	U-Turn 3.1	Left 3.2	Thru 3.3	Right 3.4	Peds X-Walk	App Total	U-Turn 3.5	Left 3.6	Thru 3.7	Right 3.8	Peds X-Walk	App Total	U-Turn 3.9	Left 3.10	Thru 3.11	Right 3.12	Peds X-Walk	App Total	U-Turn 3.13	Left 3.14	Thru 3.15	Right 3.16	Peds X-Walk	App Total
1500 - 1515	0	21	73	0	0	94	0	63	0	2	0	65	0	0	70	33	0	103	0	0	0	0	0	0
1515 - 1530	0	14	44	0	0	58	0	58	0	5	0	63	0	0	79	23	0	102	0	0	0	0	0	0
1530 - 1545	0	29	74	0	0	103	0	63	0	2	0	65	0	0	87	31	0	118	0	0	0	0	0	0
1545 - 1600	0	17	57	0	0	74	1	59	0	2	0	62	0	0	80	17	0	97	0	0	0	0	0	0
1600 - 1615	0	30	74	0	0	104	0	71	0	1	0	72	0	0	86	38	0	124	0	0	0	0	0	0
1615 - 1630	0	36	68	0	0	104	0	61	0	3	0	64	0	0	73	29	0	102	0	0	0	0	0	0
1630 - 1645	0	30	101	0	0	131	0	63	0	2	0	65	0	0	91	49	0	140	0	0	0	0	0	0
1645 - 1700	0	26	74	0	0	100	0	76	0	3	0	79	0	0	71	35	0	106	0	0	0	0	0	0
1700 - 1715	0	25	62	0	0	87	0	82	0	2	0	84	0	0	91	59	0	150	0	0	0	0	0	0
1715 - 1730	0	30	40	0	0	70	0	57	0	4	0	61	0	0	68	26	0	94	0	0	0	0	0	0
1730 - 1745	0	15	45	0	0	60	0	54	0	1	0	55	0	0	70	25	0	95	0	0	0	0	0	0
1745 - 1800	0	14	47	0	0	61	0	59	0	1	0	60	0	0	40	13	0	53	0	0	0	0	0	0
Grand Total	**0**	**287**	**759**	**0**	**0**	**1046**	**1**	**766**	**0**	**28**	**0**	**795**	**0**	**0**	**906**	**378**	**0**	**1284**	**0**	**0**	**0**	**0**	**0**	**0**
Peak Hour Total																								
1615 - 1715	**0**	**117**	**305**	**0**	**0**	**422**	**0**	**282**	**0**	**10**	**0**	**292**	**0**	**0**	**326**	**172**	**0**	**498**	**0**	**0**	**0**	**0**	**0**	**0**
App %	0.00%	27.44%	72.56%	0.00%			0.13%	96.35%	0.00%	3.52%			0.00%	0.00%	70.56%	29.44%			0.00%	0.00%	0.00%	0.00%		
Int %	0.00%	9.18%	24.29%	0.00%		33.47%	0.03%	24.51%	0.00%	0.90%		25.44%	0.00%	0.00%	28.99%	12.10%		41.09%	0.00%	0.00%	0.00%	0.00%		0.00%
Cars Total	0	263	742	0			1	754	0	26			0	0	864	371			0	0	0	0		
Heavy Total	0	24	17	0			0	12	0	2			0	0	42	7			0	0	0	0		
% Cars	**0.00%**	**91.64%**	**97.76%**	**0.00%**			**100.00%**	**98.43%**	**0.00%**	**92.86%**			**0.00%**	**0.00%**	**95.36%**	**98.15%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**		
% Heavy	**0.00%**	**8.36%**	**2.24%**	**0.00%**			**0.00%**	**1.57%**	**0.00%**	**7.14%**			**0.00%**	**0.00%**	**4.64%**	**1.85%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**		

Location: Maury County (Columbia)
Count Type: Classified Turning Movement Counts

Count Sites: 6
Intersection #: 4
Intersection: Industrial Park Road and Smile Direct Club Driveway

Southbound: Industrial Park Road
Westbound: N/A
Northbound: Industrial Park Road
Eastbound: Smile Direct Club Driveway

Lat/Long: 35.63089909935184, -87.06879561083238

Count Date: 1/24/2023

Time Period: 0600 - 0900 (Weekday AM Peak)

Figure 1 - Turning Movement Designation

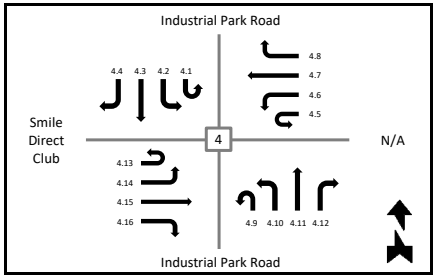
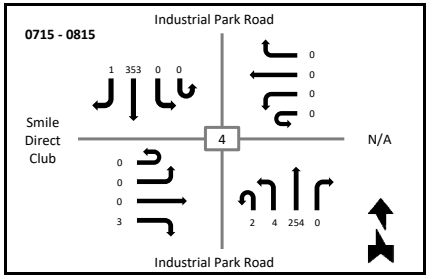


Figure 2 - AM Peak Hour TMC



	Southbound						Westbound						Northbound						Eastbound					
	Industrial Park Road						N/A						Industrial Park Road						Smile Direct Club Driveway					
Time	U-Turn 4.1	Left 4.2	Thru 4.3	Right 4.4	Peds X-Walk	App Total	U-Turn 4.5	Left 4.6	Thru 4.7	Right 4.8	Peds X-Walk	App Total	U-Turn 4.9	Left 4.10	Thru 4.11	Right 4.12	Peds X-Walk	App Total	U-Turn 4.13	Left 4.14	Thru 4.15	Right 4.16	Peds X-Walk	App Total
0600 - 0615	0	0	45	0	0	45	0	0	0	0	0	0	0	1	49	0	0	50	0	0	0	0	0	0
0615 - 0630	0	0	54	0	0	54	0	0	0	0	0	0	0	1	54	0	0	55	0	0	0	1	0	1
0630 - 0645	0	0	57	0	0	57	0	0	0	0	0	0	0	1	62	0	0	63	0	0	0	0	0	0
0645 - 0700	0	0	69	0	0	69	0	0	0	0	0	0	0	1	68	0	0	69	0	0	0	1	0	1
0700 - 0715	0	0	58	0	0	58	0	0	0	0	0	0	0	0	45	0	0	45	0	0	0	0	0	0
0715 - 0730	0	0	103	0	0	103	0	0	0	0	0	0	0	2	74	0	0	76	0	0	0	0	0	0
0730 - 0745	0	0	84	0	0	84	0	0	0	0	0	0	2	2	64	0	0	68	0	0	0	0	0	0
0745 - 0800	0	0	95	1	0	96	0	0	0	0	0	0	0	0	63	0	0	63	0	0	0	2	0	2
0800 - 0815	0	0	71	0	0	71	0	0	0	0	0	0	0	0	53	0	0	53	0	0	0	1	0	1
0815 - 0830	0	0	73	0	0	73	0	0	0	0	0	0	0	2	44	0	0	46	0	0	0	1	0	1
0830 - 0845	0	0	59	0	0	59	0	0	0	0	0	0	0	0	32	0	0	32	0	0	0	0	2	0
0845 - 0900	0	0	68	0	0	68	0	0	0	0	0	0	1	1	35	0	0	37	0	0	0	0	0	0
Grand Total	**0**	**0**	**836**	**1**	**0**	**837**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**11**	**643**	**0**	**0**	**657**	**0**	**0**	**0**	**6**	**2**	**6**
Peak Hour Total																								
0715 - 0815	**0**	**0**	**353**	**1**	**0**	**354**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**4**	**254**	**0**	**0**	**260**	**0**	**0**	**0**	**3**	**0**	**3**
App %	0.00%	0.00%	99.88%	0.12%			0.00%	0.00%	0.00%	0.00%			0.46%	1.67%	97.87%	0.00%			0.00%	0.00%	0.00%	100.00%		
Int %	0.00%	0.00%	55.73%	0.07%		55.80%	0.00%	0.00%	0.00%	0.00%		0.00%	0.20%	0.73%	42.87%	0.00%		43.80%	0.00%	0.00%	0.00%	0.40%		0.40%
Cars Total	0	0	764	1			0	0	0	0			3	9	592	0			0	0	0	4		
Heavy Total	0	0	72	0			0	0	0	0			0	2	51	0			0	0	0	2		
% Cars	**0.00%**	**0.00%**	**91.39%**	**100.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**100.00%**	**81.82%**	**92.07%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**66.67%**		
% Heavy	**0.00%**	**0.00%**	**8.61%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**18.18%**	**7.93%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**33.33%**		

Location: Maury County (Columbia)
Count Type: Classified Turning Movement Counts

Count Sites: 6
Intersection #: 4
Intersection: Industrial Park Road and Smile Direct Club Driveway

Southbound: Industrial Park Road
Westbound: N/A
Northbound: Industrial Park Road
Eastbound: Smile Direct Club Driveway

Lat/Long: 35.63089909935184, -87.06879561083238

Count Date: 1/24/2023

Time Period: 1500 - 1800 (Weekday PM Peak)

Figure 1 - Turning Movement Designation

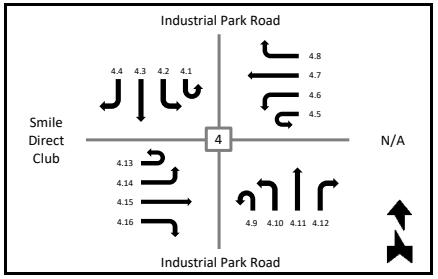
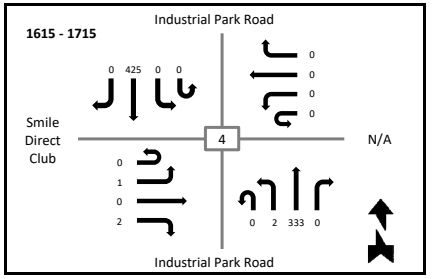


Figure 2 - PM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	Industrial Park Road						N/A						Industrial Park Road						Smile Direct Club Driveway					
Time	U-Turn 4.1	Left 4.2	Thru 4.3	Right 4.4	Peds X-Walk	App Total	U-Turn 4.5	Left 4.6	Thru 4.7	Right 4.8	Peds X-Walk	App Total	U-Turn 4.9	Left 4.10	Thru 4.11	Right 4.12	Peds X-Walk	App Total	U-Turn 4.13	Left 4.14	Thru 4.15	Right 4.16	Peds X-Walk	App Total
1500 - 1515	0	0	82	0	0	82	0	0	0	0	0	0	0	0	66	0	0	66	0	1	0	6	0	7
1515 - 1530	0	0	59	0	0	59	0	0	0	0	0	0	1	0	82	0	0	83	0	0	0	0	0	0
1530 - 1545	0	0	98	0	0	98	0	0	0	0	0	0	3	0	86	0	0	89	0	0	0	1	0	1
1545 - 1600	0	0	76	0	0	76	0	0	0	0	0	0	0	0	80	0	0	80	0	0	0	1	0	1
1600 - 1615	0	0	96	0	0	96	0	0	0	0	0	0	1	0	91	0	0	92	0	0	0	2	0	2
1615 - 1630	0	0	107	0	0	107	0	0	0	0	0	0	0	1	71	0	0	72	0	0	0	0	0	0
1630 - 1645	0	0	134	0	0	134	0	0	0	0	0	0	0	0	96	0	0	96	0	1	0	1	0	2
1645 - 1700	0	0	97	0	0	97	0	0	0	0	0	0	0	1	70	0	0	71	0	0	0	0	0	0
1700 - 1715	0	0	87	0	0	87	0	0	0	0	0	0	0	0	96	0	0	96	0	0	0	1	0	1
1715 - 1730	0	0	70	0	0	70	0	0	0	0	0	0	0	0	74	0	0	74	0	0	0	0	0	0
1730 - 1745	0	0	61	0	0	61	0	0	0	0	0	0	0	0	70	0	0	70	0	0	0	0	0	0
1745 - 1800	0	0	62	0	0	62	0	0	0	0	0	0	0	0	45	0	0	45	0	0	0	0	0	0
Grand Total	**0**	**0**	**1029**	**0**	**0**	**1029**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**2**	**927**	**0**	**0**	**934**	**0**	**2**	**0**	**12**	**0**	**14**
Peak Hour Total																								
1615 - 1715	**0**	**0**	**425**	**0**	**0**	**425**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**333**	**0**	**0**	**335**	**0**	**1**	**0**	**2**	**0**	**3**
App %	0.00%	0.00%	100.00%	0.00%			0.00%	0.00%	0.00%	0.00%			0.54%	0.21%	99.25%	0.00%			0.00%	14.29%	0.00%	85.71%		
Int %	0.00%	0.00%	52.05%	0.00%		52.05%	0.00%	0.00%	0.00%	0.00%		0.00%	0.25%	0.10%	46.89%	0.00%		47.24%	0.00%	0.10%	0.00%	0.61%		0.71%
Cars Total	0	0	987	0			0	0	0	0			5	1	883	0			0	2	0	12		
Heavy Total	0	0	42	0			0	0	0	0			0	1	44	0			0	0	0	0		
% Cars	**0.00%**	**0.00%**	**95.92%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**100.00%**	**50.00%**	**95.25%**	**0.00%**			**0.00%**	**100.00%**	**0.00%**	**100.00%**		
% Heavy	**0.00%**	**0.00%**	**4.08%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**50.00%**	**4.75%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**		

Location: Maury County (Columbia)
Count Type: Classified Turning Movement Counts

Count Sites: 6
Intersection #: 5
Intersection: Industrial Park Road and 981 Industrial Park Road Driveway

Southbound: Industrial Park Road
Westbound: N/A
Northbound: Industrial Park Road
Eastbound: 981 Industrial Park Road Driveway

Lat/Long: 35.632248642133675, -87.07078998269195

Count Date: 1/24/2023

Time Period: 0600 - 0900 (Weekday AM Peak)

Figure 1 - Turning Movement Designation

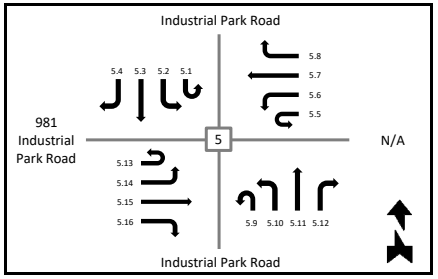
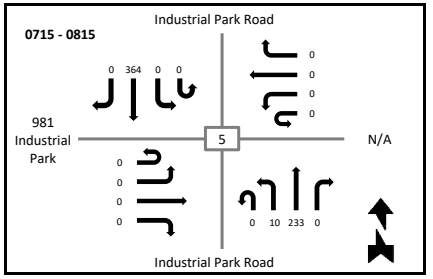


Figure 2 - AM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	Industrial Park Road						N/A						Industrial Park Road						981 Industrial Park Road Driveway					
Time	U-Turn 5.1	Left 5.2	Thru 5.3	Right 5.4	Peds X-Walk	App Total	U-Turn 5.5	Left 5.6	Thru 5.7	Right 5.8	Peds X-Walk	App Total	U-Turn 5.9	Left 5.10	Thru 5.11	Right 5.12	Peds X-Walk	App Total	U-Turn 5.13	Left 5.14	Thru 5.15	Right 5.16	Peds X-Walk	App Total
0600 - 0615	0	0	49	0	0	49	0	0	0	0	0	0	0	0	53	0	0	53	0	0	0	0	0	0
0615 - 0630	0	0	55	0	0	55	0	0	0	0	0	0	0	0	53	0	0	53	0	0	0	0	0	0
0630 - 0645	0	0	61	0	0	61	0	0	0	0	0	0	0	0	64	0	0	64	0	0	0	0	0	0
0645 - 0700	0	0	63	0	0	63	0	0	0	0	0	0	0	1	63	0	0	64	0	0	0	0	0	0
0700 - 0715	0	0	60	0	0	60	0	0	0	0	0	0	0	2	57	0	0	59	0	0	0	1	0	1
0715 - 0730	0	0	107	0	0	107	0	0	0	0	0	0	0	5	62	0	0	67	0	0	0	0	0	0
0730 - 0745	0	0	92	0	0	92	0	0	0	0	0	0	0	2	61	0	0	63	0	0	0	0	0	0
0745 - 0800	0	0	86	0	0	86	0	0	0	0	0	0	0	1	60	0	0	61	0	0	0	0	0	0
0800 - 0815	0	0	79	0	0	79	0	0	0	0	0	0	0	2	50	0	0	52	0	0	0	0	0	0
0815 - 0830	0	0	65	0	0	65	0	0	0	0	0	0	0	0	44	0	0	44	0	0	0	0	0	0
0830 - 0845	0	0	59	0	0	59	0	0	0	0	0	0	0	0	30	0	0	30	0	0	0	0	0	0
0845 - 0900	0	0	67	0	0	67	0	0	0	0	0	0	0	1	37	0	0	38	0	0	0	0	0	0
Grand Total	**0**	**0**	**843**	**0**	**0**	**843**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**634**	**0**	**0**	**648**	**0**	**0**	**0**	**1**	**0**	**1**
Peak Hour Total																								
0715 - 0815	**0**	**0**	**364**	**0**	**0**	**364**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**233**	**0**	**0**	**243**	**0**	**0**	**0**	**0**	**0**	**0**
App %	0.00%	0.00%	100.00%	0.00%			0.00%	0.00%	0.00%	0.00%			0.00%	2.16%	97.84%	0.00%			0.00%	0.00%	0.00%	100.00%		
Int %	0.00%	0.00%	56.50%	0.00%		56.50%	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%	0.94%	42.49%	0.00%		43.43%	0.00%	0.00%	0.00%	0.07%		0.07%
Cars Total	0	0	773	0			0	0	0	0			0	12	581	0			0	0	0	1		
Heavy Total	0	0	70	0			0	0	0	0			0	2	53	0			0	0	0	0		
% Cars	**0.00%**	**0.00%**	**91.70%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**85.71%**	**91.64%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**100.00%**		
% Heavy	**0.00%**	**0.00%**	**8.30%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**14.29%**	**8.36%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**		

Location: Maury County (Columbia)
Count Type: Classified Turning Movement Counts

Count Sites: 6
Intersection #: 5
Intersection: Industrial Park Road and 981 Industrial Park Road Driveway

Southbound: Industrial Park Road
Westbound: N/A
Northbound: Industrial Park Road
Eastbound: 981 Industrial Park Road Driveway

Lat/Long: 35.632248642133675, -87.07078998269195

Count Date: 1/24/2023

Time Period: 1500 - 1800 (Weekday PM Peak)

Figure 1 - Turning Movement Designation

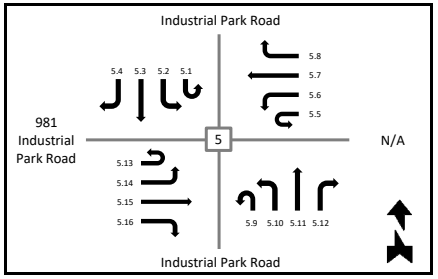
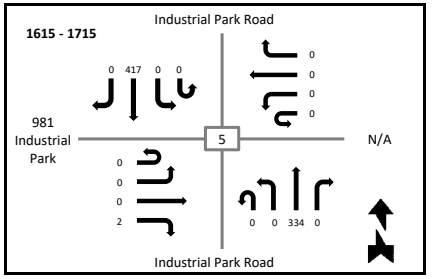


Figure 2 - PM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	Industrial Park Road						N/A						Industrial Park Road						981 Industrial Park Road Driveway					
Time	U-Turn 5.1	Left 5.2	Thru 5.3	Right 5.4	Peds X-Walk	App Total	U-Turn 5.5	Left 5.6	Thru 5.7	Right 5.8	Peds X-Walk	App Total	U-Turn 5.9	Left 5.10	Thru 5.11	Right 5.12	Peds X-Walk	App Total	U-Turn 5.13	Left 5.14	Thru 5.15	Right 5.16	Peds X-Walk	App Total
1500 - 1515	0	0	86	0	0	86	0	0	0	0	0	0	0	4	65	0	0	69	0	0	0	1	0	1
1515 - 1530	0	0	71	0	0	71	0	0	0	0	0	0	0	1	82	0	0	83	0	1	0	1	0	2
1530 - 1545	0	0	85	0	0	85	0	0	0	0	0	0	0	2	82	0	0	84	0	0	0	0	0	0
1545 - 1600	0	0	78	0	0	78	0	0	0	0	0	0	0	2	83	0	0	85	0	0	0	2	0	2
1600 - 1615	0	0	90	0	0	90	0	0	0	0	0	0	0	0	91	0	0	91	0	1	0	6	0	7
1615 - 1630	0	0	111	0	0	111	0	0	0	0	0	0	0	0	71	0	0	71	0	0	0	2	0	2
1630 - 1645	0	0	126	0	0	126	0	0	0	0	0	0	0	0	89	0	0	89	0	0	0	0	0	0
1645 - 1700	0	0	98	0	0	98	0	0	0	0	0	0	0	0	77	0	0	77	0	0	0	0	0	0
1700 - 1715	0	0	82	0	0	82	0	0	0	0	0	0	0	0	97	0	0	97	0	0	0	0	0	0
1715 - 1730	0	0	70	0	0	70	0	0	0	0	0	0	0	0	68	0	0	68	0	0	0	0	0	0
1730 - 1745	0	0	60	0	0	60	0	0	0	0	0	0	0	0	71	0	0	71	0	0	0	0	0	0
1745 - 1800	0	0	62	0	0	62	0	0	0	0	0	0	0	0	44	0	0	44	0	0	0	0	0	0
Grand Total	**0**	**0**	**1019**	**0**	**0**	**1019**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**920**	**0**	**0**	**929**	**0**	**2**	**0**	**12**	**0**	**14**
Peak Hour Total																								
1615 - 1715	**0**	**0**	**417**	**0**	**0**	**417**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**334**	**0**	**0**	**334**	**0**	**0**	**0**	**2**	**0**	**2**
App %	0.00%	0.00%	100.00%	0.00%			0.00%	0.00%	0.00%	0.00%			0.00%	0.97%	99.03%	0.00%			0.00%	14.29%	0.00%	85.71%		
Int %	0.00%	0.00%	51.94%	0.00%		51.94%	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%	0.46%	46.89%	0.00%		47.35%	0.00%	0.10%	0.00%	0.61%		0.71%
Cars Total	0	0	977	0			0	0	0	0			0	9	875	0			0	2	0	12		
Heavy Total	0	0	42	0			0	0	0	0			0	0	45	0			0	0	0	0		
% Cars	**0.00%**	**0.00%**	**95.88%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**100.00%**	**95.11%**	**0.00%**			**0.00%**	**100.00%**	**0.00%**	**100.00%**		
% Heavy	**0.00%**	**0.00%**	**4.12%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**4.89%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**		

Location: Maury County (Columbia)
Count Type: Classified Turning Movement Counts

Count Sites: 6
Intersection #: 6
Intersection: Santa Fe Pike and Industrial Park Road

Southbound: N/A
Westbound: Santa Fe Pike
Northbound: Industrial Park Road
Eastbound: Santa Fe Pike

Lat/Long: 35.653913046380076, -87.06481552169635

Count Date: 1/24/2023

Time Period: 0600 - 0900 (Weekday AM Peak)

Figure 1 - Turning Movement Designation

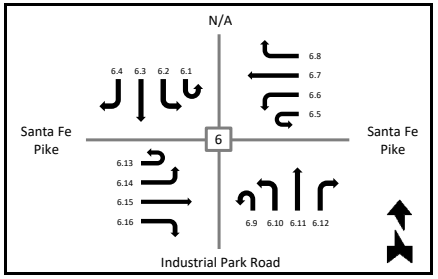
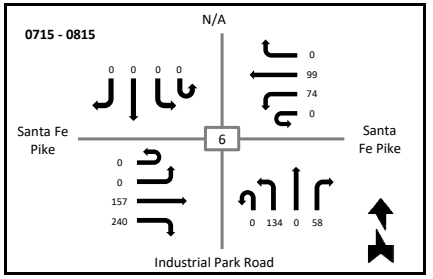


Figure 2 - AM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	N/A						Santa Fe Pike						Industrial Park Road						Santa Fe Pike					
Time	U-Turn 6.1	Left 6.2	Thru 6.3	Right 6.4	Peds X-Walk	App Total	U-Turn 6.5	Left 6.6	Thru 6.7	Right 6.8	Peds X-Walk	App Total	U-Turn 6.9	Left 6.10	Thru 6.11	Right 6.12	Peds X-Walk	App Total	U-Turn 6.13	Left 6.14	Thru 6.15	Right 6.16	Peds X-Walk	App Total
0600 - 0615	0	0	0	0	0	0	0	8	17	0	0	25	0	17	0	12	0	29	0	0	8	35	0	43
0615 - 0630	0	0	0	0	0	0	0	6	9	0	0	15	0	29	0	17	0	46	0	0	18	25	0	43
0630 - 0645	0	0	0	0	0	0	0	10	14	0	0	24	0	38	0	22	0	60	0	0	30	36	0	66
0645 - 0700	0	0	0	0	0	0	0	7	30	0	0	37	0	39	0	14	0	53	0	0	34	36	0	70
0700 - 0715	0	0	0	0	0	0	0	5	24	0	0	29	0	32	0	10	0	42	0	0	26	35	0	61
0715 - 0730	0	0	0	0	0	0	0	9	25	0	0	34	0	49	0	21	0	70	0	0	30	70	0	100
0730 - 0745	0	0	0	0	0	0	0	10	28	0	0	38	0	30	0	18	0	48	0	0	53	63	0	116
0745 - 0800	0	0	0	0	0	0	0	30	22	0	0	52	0	30	0	11	0	41	0	0	47	64	0	111
0800 - 0815	0	0	0	0	0	0	0	25	24	0	0	49	0	25	0	8	0	33	0	0	27	43	0	70
0815 - 0830	0	0	0	0	0	0	0	8	24	0	0	32	0	25	0	12	0	37	0	0	36	33	0	69
0830 - 0845	0	0	0	0	0	0	0	6	22	0	0	28	0	22	0	11	0	33	0	0	18	50	0	68
0845 - 0900	0	0	0	0	0	0	0	9	23	0	0	32	0	14	0	12	0	26	0	0	30	53	0	83
Grand Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**133**	**262**	**0**	**0**	**395**	**0**	**350**	**0**	**168**	**0**	**518**	**0**	**0**	**357**	**543**	**0**	**900**
Peak Hour Total																								
0715 - 0815	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**74**	**99**	**0**	**0**	**173**	**0**	**134**	**0**	**58**	**0**	**192**	**0**	**0**	**157**	**240**	**0**	**397**
App %	0.00%	0.00%	0.00%	0.00%			0.00%	33.67%	66.33%	0.00%			0.00%	67.57%	0.00%	32.43%			0.00%	0.00%	39.67%	60.33%		
Int %	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%	7.34%	14.45%	0.00%		21.79%	0.00%	19.31%	0.00%	9.27%		28.57%	0.00%	0.00%	19.69%	29.95%		49.64%
Cars Total	0	0	0	0			0	92	207	0			0	321	0	131			0	0	328	511		
Heavy Total	0	0	0	0			0	41	55	0			0	29	0	37			0	0	29	32		
% Cars	**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**69.17%**	**79.01%**	**0.00%**			**0.00%**	**91.71%**	**0.00%**	**77.98%**			**0.00%**	**0.00%**	**91.88%**	**94.11%**		
% Heavy	**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**30.83%**	**20.99%**	**0.00%**			**0.00%**	**8.29%**	**0.00%**	**22.02%**			**0.00%**	**0.00%**	**8.12%**	**5.89%**		

Location: Maury County (Columbia)
Count Type: Classified Turning Movement Counts

Count Sites: 6
Intersection #: 6
Intersection: Santa Fe Pike and Industrial Park Road

Southbound: N/A
Westbound: Santa Fe Pike
Northbound: Industrial Park Road
Eastbound: Santa Fe Pike

Lat/Long: 35.653913046380076, -87.06481552169635

Count Date: 1/24/2023

Time Period: 1500 - 1800 (Weekday PM Peak)

Figure 1 - Turning Movement Designation

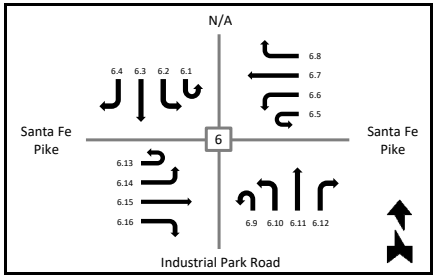
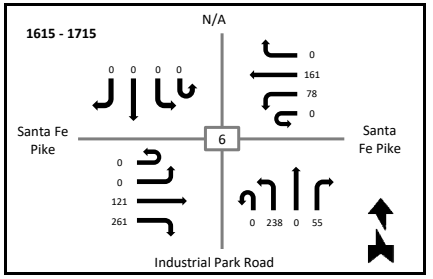


Figure 2 - PM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	N/A						Santa Fe Pike						Industrial Park Road						Santa Fe Pike					
Time	U-Turn 6.1	Left 6.2	Thru 6.3	Right 6.4	Peds X-Walk	App Total	U-Turn 6.5	Left 6.6	Thru 6.7	Right 6.8	Peds X-Walk	App Total	U-Turn 6.9	Left 6.10	Thru 6.11	Right 6.12	Peds X-Walk	App Total	U-Turn 6.13	Left 6.14	Thru 6.15	Right 6.16	Peds X-Walk	App Total
1500 - 1515	0	0	0	0	0	0	0	12	30	0	0	42	0	46	0	10	0	56	0	0	38	47	0	85
1515 - 1530	0	0	0	0	0	0	0	10	46	0	0	56	0	62	0	9	0	71	0	0	26	43	0	69
1530 - 1545	0	0	0	0	0	0	0	14	33	0	0	47	0	45	0	8	0	53	0	0	21	53	0	74
1545 - 1600	0	0	0	0	0	0	0	12	38	0	0	50	0	58	0	4	0	62	0	0	28	51	0	79
1600 - 1615	0	0	0	0	0	0	0	15	42	0	0	57	0	63	0	4	0	67	0	0	29	63	0	92
1615 - 1630	0	0	0	0	0	0	0	22	37	0	0	59	0	47	0	12	0	59	0	0	35	78	0	113
1630 - 1645	0	0	0	0	0	0	0	27	46	0	0	73	0	62	0	15	0	77	0	0	26	62	0	88
1645 - 1700	0	0	0	0	0	0	0	17	40	0	0	57	0	55	0	15	0	70	0	0	26	67	0	93
1700 - 1715	0	0	0	0	0	0	0	12	38	0	0	50	0	74	0	13	0	87	0	0	34	54	0	88
1715 - 1730	0	0	0	0	0	0	0	18	41	0	0	59	0	53	0	8	0	61	0	0	25	44	0	69
1730 - 1745	0	0	0	0	0	0	0	11	41	0	0	52	0	49	0	12	0	61	0	0	15	45	0	60
1745 - 1800	0	0	0	0	0	0	0	8	23	0	0	31	0	36	0	8	0	44	0	0	15	44	0	59
Grand Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**178**	**455**	**0**	**0**	**633**	**0**	**650**	**0**	**118**	**0**	**768**	**0**	**0**	**318**	**651**	**0**	**969**
Peak Hour Total																								
1615 - 1715	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**78**	**161**	**0**	**0**	**239**	**0**	**238**	**0**	**55**	**0**	**293**	**0**	**0**	**121**	**261**	**0**	**382**
App %	0.00%	0.00%	0.00%	0.00%			0.00%	28.12%	71.88%	0.00%			0.00%	84.64%	0.00%	15.36%			0.00%	0.00%	32.82%	67.18%		
Int %	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%	7.51%	19.20%	0.00%		26.71%	0.00%	27.43%	0.00%	4.98%		32.41%	0.00%	0.00%	13.42%	27.47%		40.89%
Cars Total	0	0	0	0			0	157	435	0			0	635	0	115			0	0	301	609		
Heavy Total	0	0	0	0			0	21	20	0			0	15	0	3			0	0	17	42		
% Cars	**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**88.20%**	**95.60%**	**0.00%**			**0.00%**	**97.69%**	**0.00%**	**97.46%**			**0.00%**	**0.00%**	**94.65%**	**93.55%**		
% Heavy	**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**11.80%**	**4.40%**	**0.00%**			**0.00%**	**2.31%**	**0.00%**	**2.54%**			**0.00%**	**0.00%**	**5.35%**	**6.45%**		

TR

Sepac 3.58d Timings Data

Location:	43
and	Industrial

TS #	49
Date:	9-2-20

key 3-1-1			Vehicle times					
Phase	1	2	3	4	5	6	7	8
min green	7	10	10	7	10	10	10	15
pass/10	30	30	30	30	30	30	30	30
max # 1	18	30	25	22	26	48	25	35
max # 2	29	50	30	21	30	88	30	50
yellow/10	40	40	40	40	40	40	40	40
red/10	20	20	20	20	20	20	20	20

key 3-2			Density Times					
Phase	1	2	3	4	5	6	7	8
aini/10								
max int								
Tb4								
carsb4								
Time to								
Min gap								

key 3-3-1		Pedestrian Times						
Phase	1	2	3	4	5	6	7	8
Walk		7		7		7		7
Ped clear		8		8		8		8
fl wk								
ext pcl								
act riw								
		1 = yes 0 = no						

key 3-6		Sequence control						
phase	1	2	3	4	5	6	7	8
ph. Omit	1							
ph. Yell								
Codes	0		01-08 # - phase					
	none		phase is omitted by # on					
	none phase yellow is omitted by # yellow							

key 3-1-3 and 3-3-2						V.& P. recalls			
Phases	1	2	3	4	5	6	7	8	
veh.recall		2				2			
ped recall									
delay									
Codes		0		1		2		3	4
		none		Inactive		red		yellow	gree
		none		to na 1		to na II		to both	
		none		1 call		minimum		maximum	soft
		none		1 call		ped		na	na+

key 3-5		N. lock & misc						
Phase	1	2	3	4	5	6	7	8
non lock								
2 entry								
lc pass								
con. Ser.								
no sgap								
		1 = yes 0 = no						

key 3-4	Init. Na response							
phas	1	2	3	4	5	6	7	8
initial	1	3	1	1	1	3	1	1
na resp	0	1	0	2	0	1	0	2

Codes	0	1	2	3	4
Init	none	inact	red	yel	grn
na resp	none	to 1	to 2	both	

key 3-7-1	Det. Controls Assign w/ 1 under phase #												key 3-7-2							
detector	1	2	3	4	5	6	7	8					9	10	11	12	13	14	15	16
assign phase			1	4	2	6							3		4	4	4	4	4	
oper mode																				
switch																				
	Det. Timings																			
extend time					50															
delay time				100																

key 3-7-3	Det. Controls Assign w/ 1 under phase #												key 3-7-4							
detector	17	18	19	20	21	22	23	24					25	26	27	28	29	30	31	32
assign phase	1	3	5		6	6	6	6					6				7		8	8
oper mode																				
switch																				
	Det. Timings																			
extend time																				
delay time																				

codes	0		1		2		3		4	
	norm veh		norm ped		one call		st bar a		st bar b	
	none									
	none									

key3-7-9	Ped. Dets.							
Ped Det Control	1	2	3	4	5	6	7	8
Assigned phase		2		4		6		8
Operation Mode		1		1		1		1
Switch Phase								

Mode	0-veh	1-ped	2-0ne	3-sba
	4-sbb	5-ppl	6-ppt	7-and

Startup & misc.	key 4-1	
Startup time	8	time in sec.
Startup state	0	0-fl 1-red
red rev/10	40	time in tenths
auto ped clear	0	o-no 1- yes
Stop t reset	0	0-no 1-yes
Alt. sequence	0	0-18
SPECIAL SEQ	0	0-no 1-yes

Coordination data and set up key 5-1							
Coord. Setup		0	1	2	3	4	5
Oper	0	fre	aut	man			
mode	0	prm	yld	pyl	pom	som	fac
max	2	inh	mx1	mx2			
corr	0	dwl	ndw	swy	sw+	sw2	
ofst	0	beg	end of green				
frce	0	pln cycle time					
mx dwell	0						
yield period	0						

Overlap Standard use up/down to select which overlap to view ("E" to view)

key 4-3			0-no 1-yes

Overlap A	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
Parents																
GRN Phases																
G/Y Phases																
PED Phases																

TR GRN STD		YEL/10	40
TR GRN PRE		RED/10	20

Overlap B	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
Parents																
GRN Phases																
G/Y Phases																
PED Phases																

TR GRN STD		YEL/10	40
TR GRN PRE		RED/10	20

Overlap C	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
Parents																
GRN Phases																
G/Y Phases																
PED Phases																

TR GRN STD		YEL/10	40
TR GRN PRE		RED/10	20

Overlap D	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6
Parents																
GRN Phases																
G/Y Phases																
PED Phases																

TR GRN STD		YEL/10	40
TR GRN PRE		RED/10	20

key 5-3 **Input Dial1 split1 Phase Param. Level 2**

Phase	1	2	3	4	5	6	7	8
Time								
Mode								
P.RED								
P.EXT								

mode: 0-actuated 1-coord ph 2-min rec
3-max rec 4-ped rec 5-mx+p
6-ph omit 7-dual coord phase

key 5-3 **Input Dial 2 split 1 phase Param. Level 2**

Phase	1	2	3	4	5	6	7	8
Time								
Mode								
P.RED								
P.EXT								

Mode: 0-actuatec 1-coord ph 2-min rec
3-max rec 4-ped rec 5-mx+p rec
6-ph omit 7-dual coord phase

key 5-3

Input Dial1 Split 1 Param. Level 1

offset	time	alt	patn	max	cor	sp	r2	r3	r4
#	sec	seq	mode	mode	mode	mode	lag	lag	lag
1									
2									
3									

mode 0-6 nrm/prm/yld/pyl/pom/som/fac

key 5-3

Input Dial1 Split 1 Param. Level 1

offse	time	alt	patn	max	cor	sp	r2	r3	r4
#	sec	seq	mode	mode	mode	mode	lag	lag	lag
1									
2									
3									

mode 0-6 nrm/prm/yld/pyl/pom/som/fac

key 6-3-E

Traffic Events

DD	HH	MM	DL	SP	OF

Location:	James Campbell
and	Industrial

TS #	21
Date:	8-31-2020

key 3-1			Vehicle times					
Phase	1	2	3	4	5	6	7	8
min green	5	15	5	5	5	15	0	0
pass/10	15	60	20	15	15	50	0	0
max # 1	25	50	15	25	0	50	0	0
max # 2	0	0	0	0	0	0	0	0
yellow/10	35	40	40	40	35	40	35	40
red/10	10	20	10	10	10	20	10	10

key 3-2		Density Times						
Phase	1	2	3	4	5	6	7	8
aini/10								
max int								
Tb4								
carsb4								
Time to								
Min gap								

key 3-3		Pedestrian Times						
Phase	1	2	3	4	5	6	7	8
Walk		7	0	7	0	7	0	7
Ped clear		0	0	0	0	0	0	0
fl wk		0	0	0	0	0	0	0
ext pcl		0	0	0	0	0	0	0
act riw		0	0	0	0	0	0	0
		1 = yes 0 = no						

key 3-7		Sequence control						
phase	1	2	3	4	5	6	7	8
ph. Omit	2	0	0	0	0	0	0	0
ph. Yell	0	0	0	0	0	0	0	0
Codes	0		01-08 # - phase					
	none		phase is omitted by # on					
	none phase yellow is omitted by # yellow							

key 3-5	V.& P. recalls							
Phases	1	2	3	4	5	6	7	8
veh.recall	0	2	0	0	0	2	0	0
ped recall	0	0	0	0	0	0	0	0
delay	0	0	0	0	0	0	0	0
Codes		0		1		2		3		4
		none		Inactive		red		yellow		gree
		none		to na 1		to na II		to both		
		none		1 call		minimum		maximum		soft
		none		1 call		ped		na		na+

key 3-6	N. lock & misc							
Phase	1	2	3	4	5	6	7	8
non lock	1	0	1	1	0	0	0	0
2 entry	0	0	0	0	0	0	0	0
lc pass	0	0	0	0	0	0	0	0
con. Ser.	0	0	0	0	0	0	0	0
no sgap								
		1 = yes 0 = no						

key 3-4	Init. Na response							
phas	1	2	3	4	5	6	7	8
initial	1	4	1	1	0	4	0	0
na resp	0	0	0	0	0	0	0	0

Codes	0	1	2	3	4
Init	none	inact	red	yel	grn
na resp	none	to 1	to 2	both	

key 4-4			
OVL TRAILING GREENS, YELLOWS AND REDS			
	GREEN	YELLOW	RED
OLA	0	40	20
OLB	0	40	20
OLC	0	40	20
OLD	0	40	20
OLE	0	40	20
OLF	0	40	20

key 3-8-1	Det. Controls											key 3-8-2							
detector	1	2	3	4	5	6	7	8				9	10	11	12	13	14	15	16
assign phase	1	6	0	0	5	2	7	8				0	0	3	4	0	0	0	0
oper mode	0	0	0	0	0	0	0	0				0	0	0	0	0	0	0	0
switch	0	0	0	0	0	0	0	0				0	0	0	0	0	0	0	0
key 3-8-1	Det. Timings "Change From Controls to Timings"											key 3-8-2							
extend time	0	0	0	0	0	0	0	0				0	0	0	0	0	0	0	0
delay time	0	0	0	0	0	0	0	0				0	0	0	0	0	0	0	0
key 3-8-3	Det. Controls											key 3-8-4							
detector	17	18	19	20	21	22	23	24				25	26	27	28	29	30	31	32
assign phase	0	0	0	0	0	0	0	0				0	0	0	0	0	0	0	0
oper mode	0	0	0	0	0	0	0	0				0	0	0	0	0	0	0	0
switch	0	0	0	0	0	0	0	0											
key 3-8- 3	Det. Timings "Change From Controls to Timings"											key 3-8-4							
extend time	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0
delay time	0	0	0	0	0	0	0	0	0			0	0	0	0	0	0	0	0

codes	0	1	2	3	4
	norm veh	norm ped	one call	st bar a	st bar b
	none				
	none				

key3-8-9	Ped. Dets.							
Ped Det Control	1	2	3	4	5	6	7	8
Assigned phase	1	2	3	4	5	6	7	8
Operation Mode	1	1	1	1	1	1	1	1
Switch Phase	0	0	0	0	0	0	0	0

Mode	0-veh	1-ped	2-0ne	3-sba
	4-sbb	5-ppl	6-ppt	7-and

Startup & misc.		key 4-1
Startup time	5	time in sec.
Startup state	0	0-fl 1-red
red rev/10	40	time in tenths
auto ped clear	0	o-no 1- yes
Stop t reset	0	0-no 1-yes
Alt. sequence	0	0-18
I'NAT'L SEQ	0	0-no 1-yes

Coordination data and set up key 5-1							
Coord. Setup		0	1	2	3	4	5
Oper	0	fre	aut	man			
mode	0	prm	yld	pyl	pom	som	fac
max	0	inh	mx1	mx2			
corr	0	dwl	ndw	swy	sw+	sw2	
ofst	0	beg	end of green				
frce	0	pln cycle time					
mx dwell	0						
yield period							

key 4-3			Overlap Standard use up/down to swtich between overlaps 0-no 1-yes

Overlap A

OVL Phase																			
PHS/CHN	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
OVL CHN																			

Overlap B

OVL Phase																			
PHS/CHN	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
OVL CHN																			

Overlap C

OVL Phase																			
PHS/CHN	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
OVL CHN																			

Overlap D

OVL Phase																			
PHS/CHN	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
OVL CHN																			

key 5-3 **Input Dial1 split1 Phase Param. Level 2**

Phase	1	2	3	4	5	6	7	8
Time								
Mode								

mode: 0-actuated 1-coord ph 2-min rec
3-max rec 4-ped rec 5-mx+p
6-ph omit 7-dual coord phase

key 5-3 **Input Dial 2 split 1 phase Param. Level 2**

Phase	1	2	3	4	5	6	7	8
Time								
Mode								

Mode: 0-actuatec 1-coord ph 2-min rec
3-max rec 4-ped rec 5-mx+p rec
6-ph omit 7-dual coord phase

key 5-3

Input Dial1 Split 1 Param. Level 1

offset	time	alt	patn	r2	r3	r4
#	sec	seq	mode	lag	lag	lag
1						
2						
3						

mode 0-6 nrm/prm/yld/pyl/pom/som/fac

key 5-3 **Input Dial 2 split 1 Param. Level 1**

Offset	time	alt	patn	r2	r3	r4
#	sec	seq	mode	lag	lag	lag
1						
2						
3						

Traffic Events						
key 6-3-E	DD	HH	MM	DL	SP	OF

APPENDIX B – DETAILED TRIP GENERATION CALCULATIONS

1329 West Main Street
Franklin, TN 37064
615-678-8212

www.T2-Eng.com

TRIP GENERATION

Project:	Zero Industrial Park Road Development – Columbia, TN
ITE Land Use:	Industrial Park & Mini-Warehouse
ITE Code:	130 & 151
Trip Ends vs:	**ITE 130** – 240,000 SF and **ITE 151** – 71 Storage Units
Daily Equation:	Weekday – Varies by Land Use
AM Equation:	Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 AM – Varies by Land Use
PM Equation:	Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 PM – Varies by Land Use

Total Site Generated Traffic

Land Use	Size	Generated Traffic Volumes				
		Daily	AM Peak		PM Peak	
			Enter	Exit	Enter	Exit
Industrial Park (130)	240,000 SF	1,480	66	16	18	64
Mini-Warehouse (151)	71 Spaces	9	2	1	2	1
TOTAL		**1,489**	**68**	**17**	**20**	**65**

Industrial Park (130) – 240,000 Square Feet

Time Period	Formula[1]	Calculation	Trips
Daily	$T = 0.52\ Ln(X) + 4.45$	$T = 0.52\ Ln(240) + 4.45$	1,480
AM Peak (Total)	$T = 0.34(X)$	$T = 0.34(240)$	82
AM Peak (Entering)	$T = 0.81(Total\ AM\ Trips)$	$T = 0.81(82)$	66
AM Peak (Exiting)	$T = 0.19(Total\ AM\ Trips)$	$T = 0.19(82)$	16
PM Peak (Total)	$T = 0.34(X)$	$T = 0.34(240)$	82
PM Peak (Entering)	$T = 0.22(Total\ PM\ Trips)$	$T = 0.22(82)$	18
PM Peak (Exiting)	$T = 0.78(Total\ PM\ Trips)$	$T = 0.78(82)$	64

[1] Institute of Transportation Engineers (ITE). Trip Generation Manual, 11th Edition. Washington, DC: ITE, 2023

1329 West Main Street
Franklin, TN 37064
615-678-8212

www.T2-Eng.com

Mini-Warehouse (151) – 71 Storage Units

Time Period	Formula[2]	Calculation	Trips
Daily	$T = 18.86(X) - 4.09$	$T = 18.86(0.71) - 4.09$	9
AM Peak (Total)	$Ln(T) = 0.62\ Ln(X) + 1.34$	$Ln(T) = 0.62\ Ln(0.71) + 1.34$	3
AM Peak (Entering)	$T = 0.58(Total\ AM\ Trips)$	$T = 0.58(3)$	2
AM Peak (Exiting)	$T = 0.42(Total\ AM\ Trips)$	$T = 0.42(3)$	1
PM Peak (Total)	$Ln(T) = 0.59\ Ln(X) + 1.43$	$Ln(T) = 0.59\ Ln(0.71) + 1.43$	3
PM Peak (Entering)	$T = 0.48(Total\ PM\ Trips)$	$T = 0.48(3)$	2
PM Peak (Exiting)	$T = 0.52(Total\ PM\ Trips)$	$T = 0.52(3)$	1

[2] Institute of Transportation Engineers (ITE). Trip Generation Manual, 11th Edition. Washington, DC: ITE, 2023

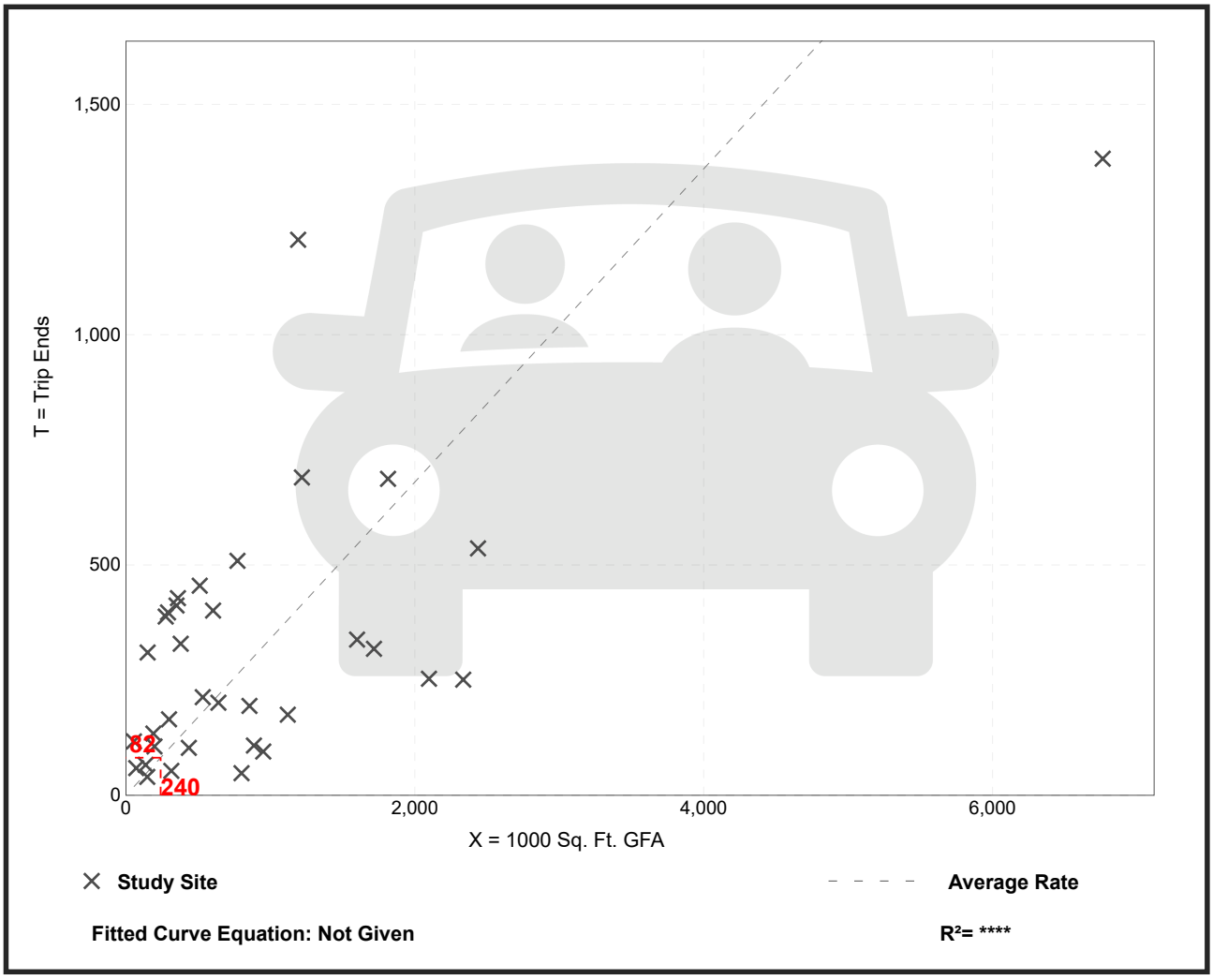
Industrial Park
(130)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 34
Avg. 1000 Sq. Ft. GFA: 956
Directional Distribution: 81% entering, 19% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.34	0.06 - 2.13	0.33

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

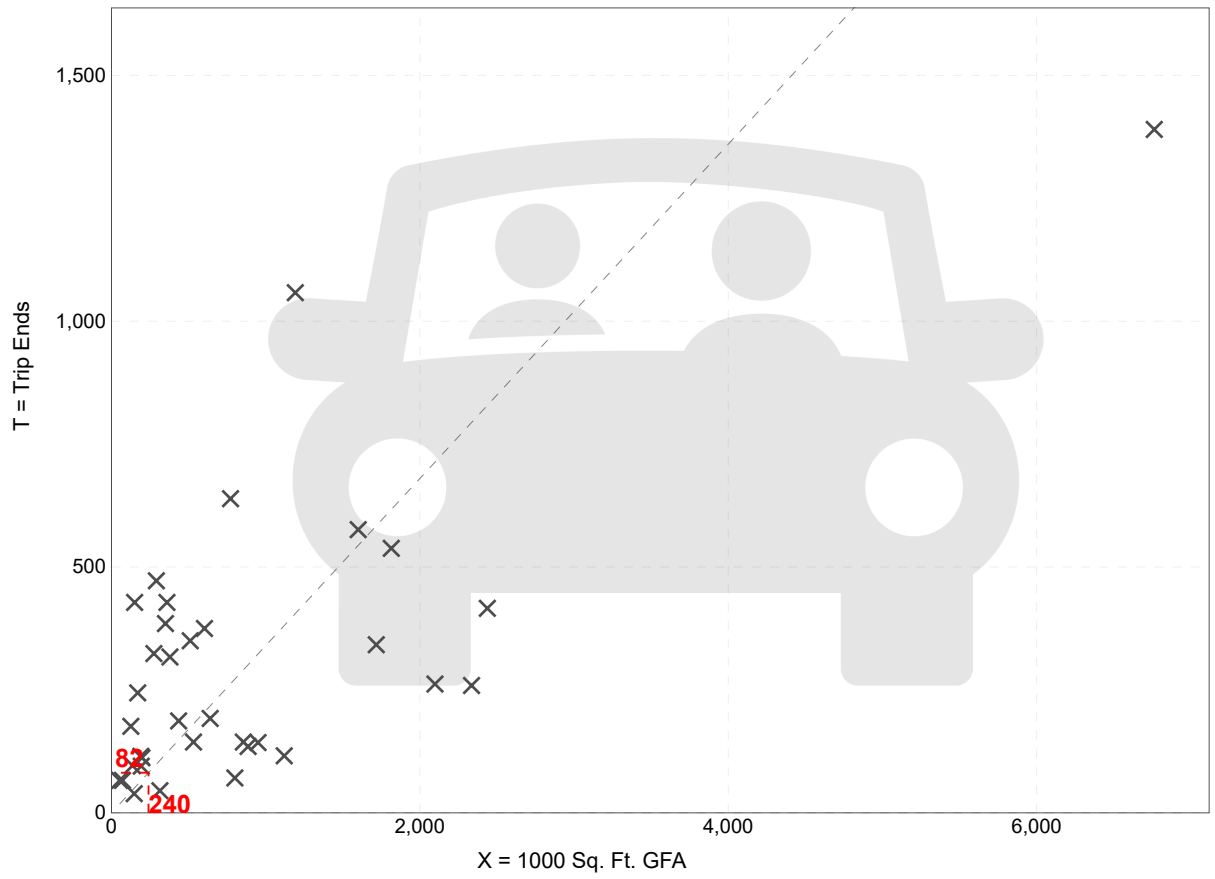
Industrial Park
(130)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 35
Avg. 1000 Sq. Ft. GFA: 899
Directional Distribution: 22% entering, 78% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.34	0.09 - 2.85	0.36

Data Plot and Equation



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Industrial Park
(130)

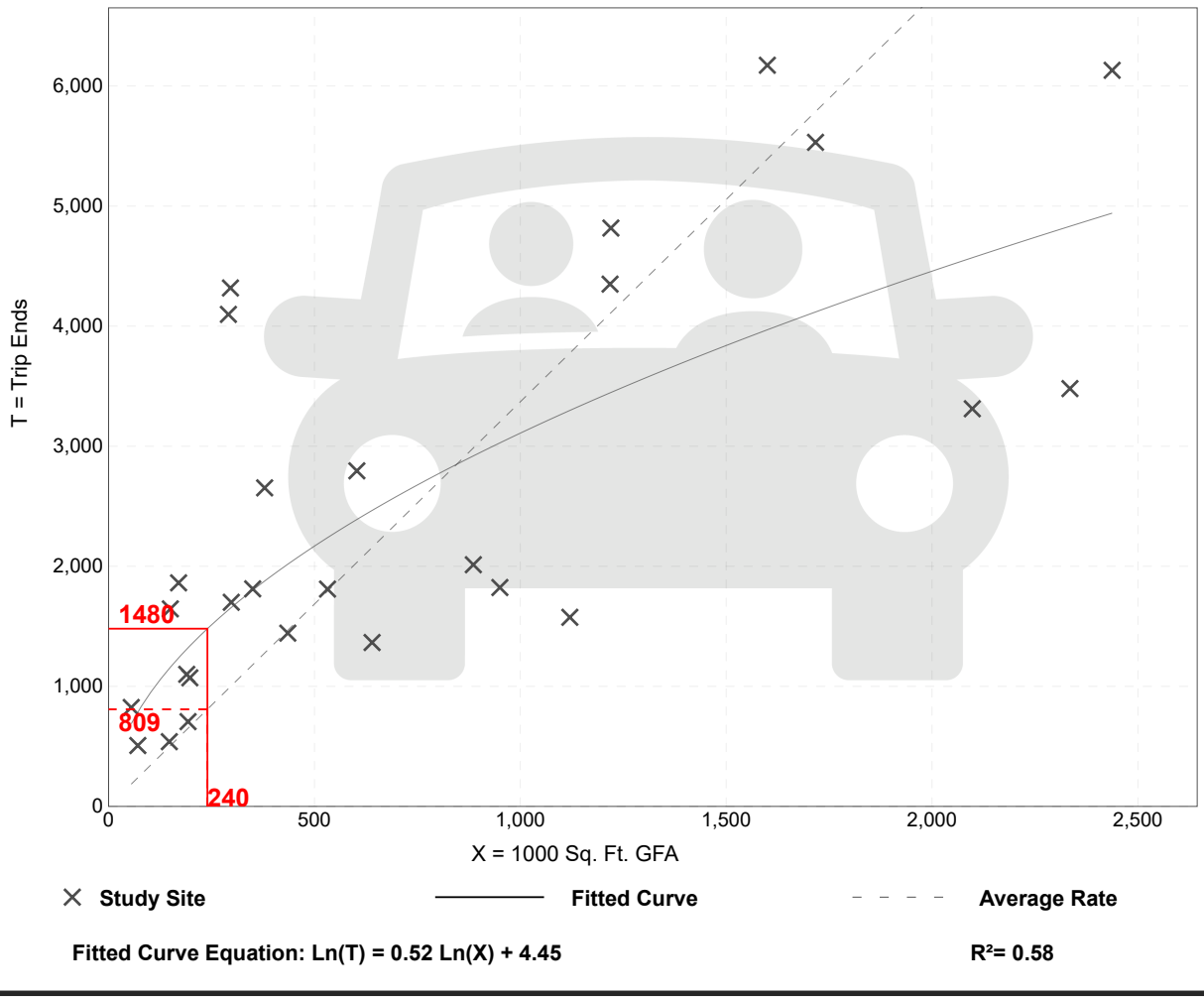
Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 27
Avg. 1000 Sq. Ft. GFA: 762
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.37	1.41 - 14.98	2.60

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.52 Ln(X) + 4.45 **R^2= 0.58**

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Mini-Warehouse
(151)

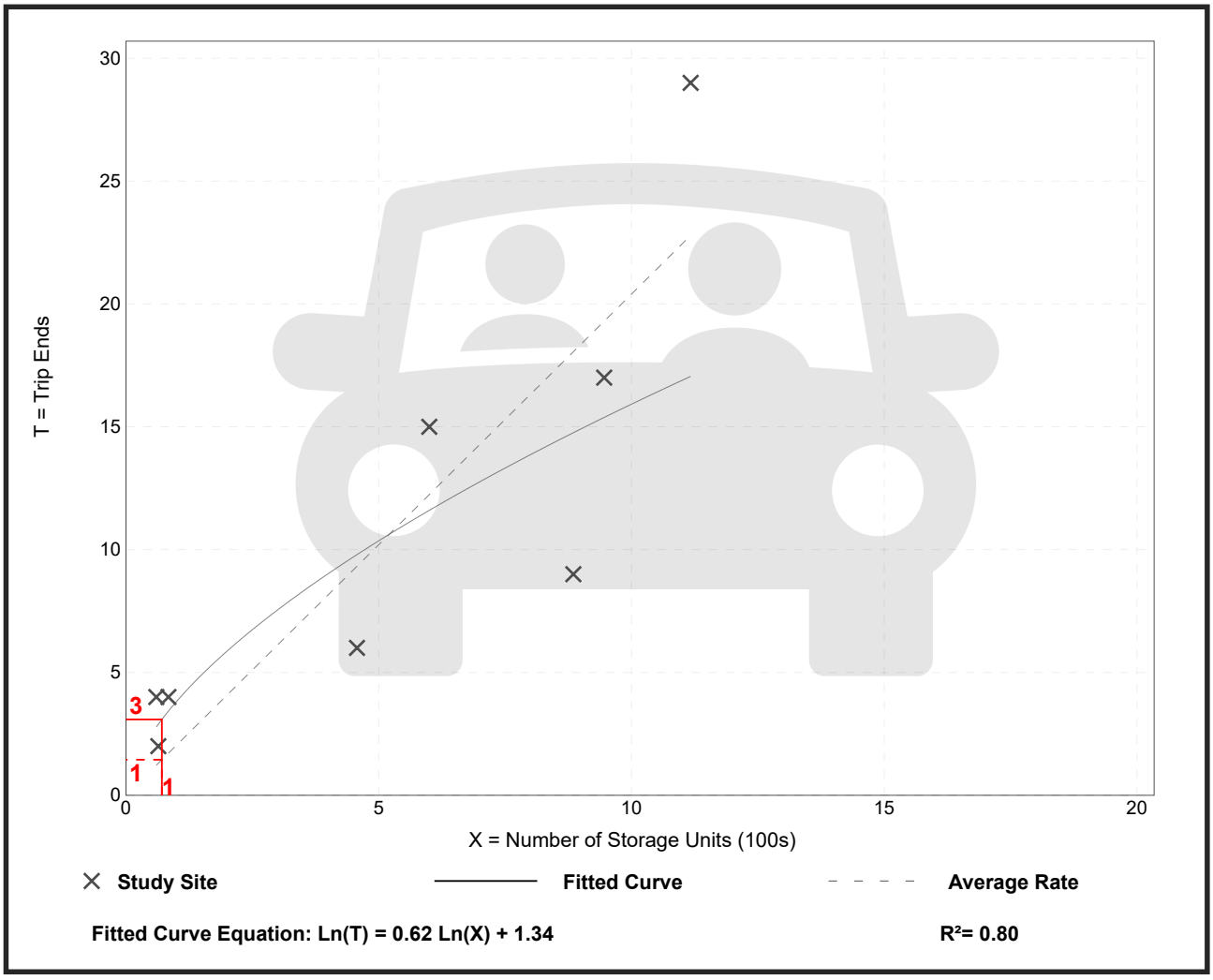
Vehicle Trip Ends vs: **Storage Units (100s)**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 8
Avg. Num. of Storage Units (100s): 5
Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per Storage Unit (100s)

Average Rate	Range of Rates	Standard Deviation
2.04	1.02 - 6.67	1.00

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.62 Ln(X) + 1.34 **R^2= 0.80**

Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Mini-Warehouse
(151)

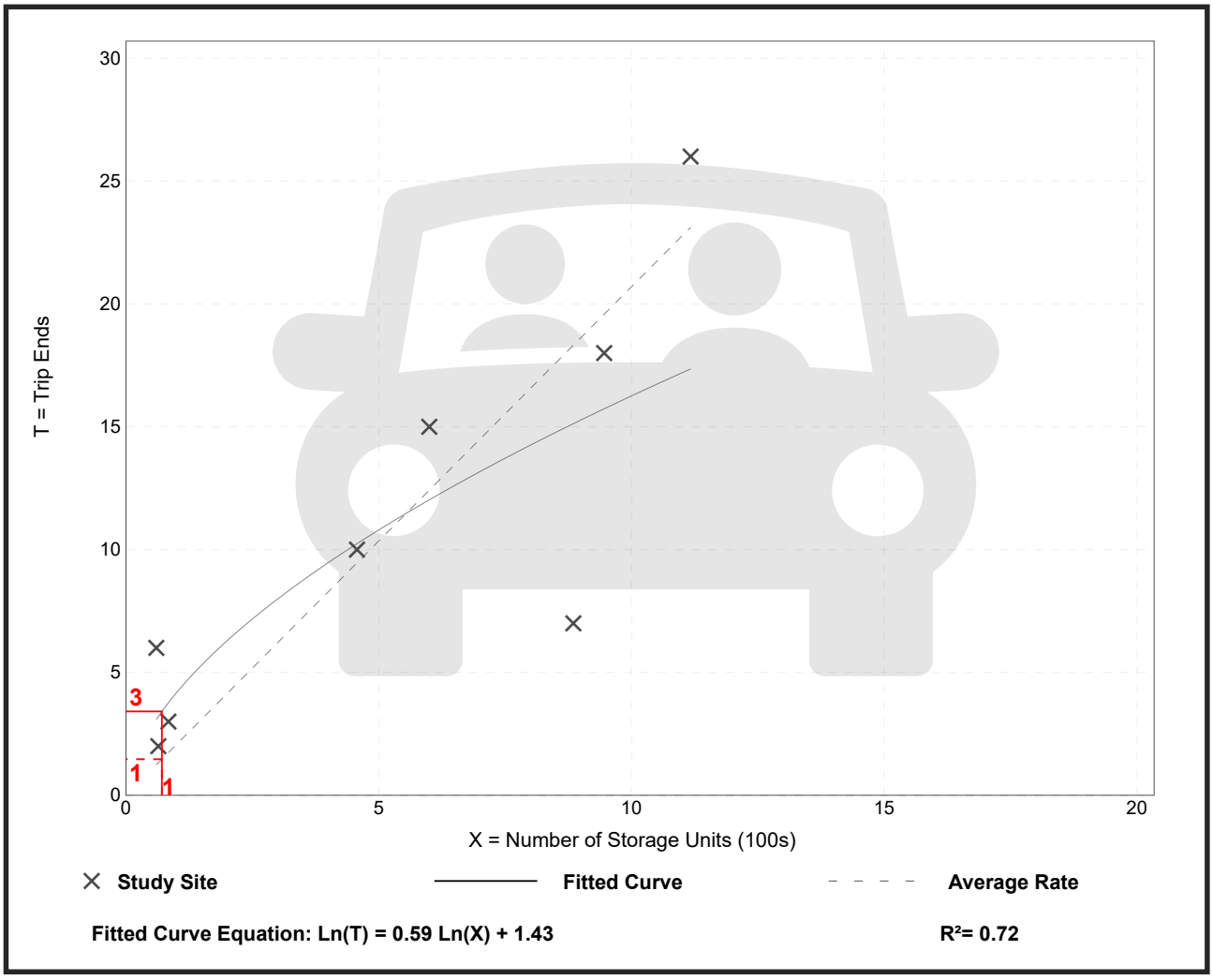
Vehicle Trip Ends vs: **Storage Units (100s)**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 8
Avg. Num. of Storage Units (100s): 5
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per Storage Unit (100s)

Average Rate	Range of Rates	Standard Deviation
2.07	0.79 - 10.00	1.24

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Mini-Warehouse
(151)

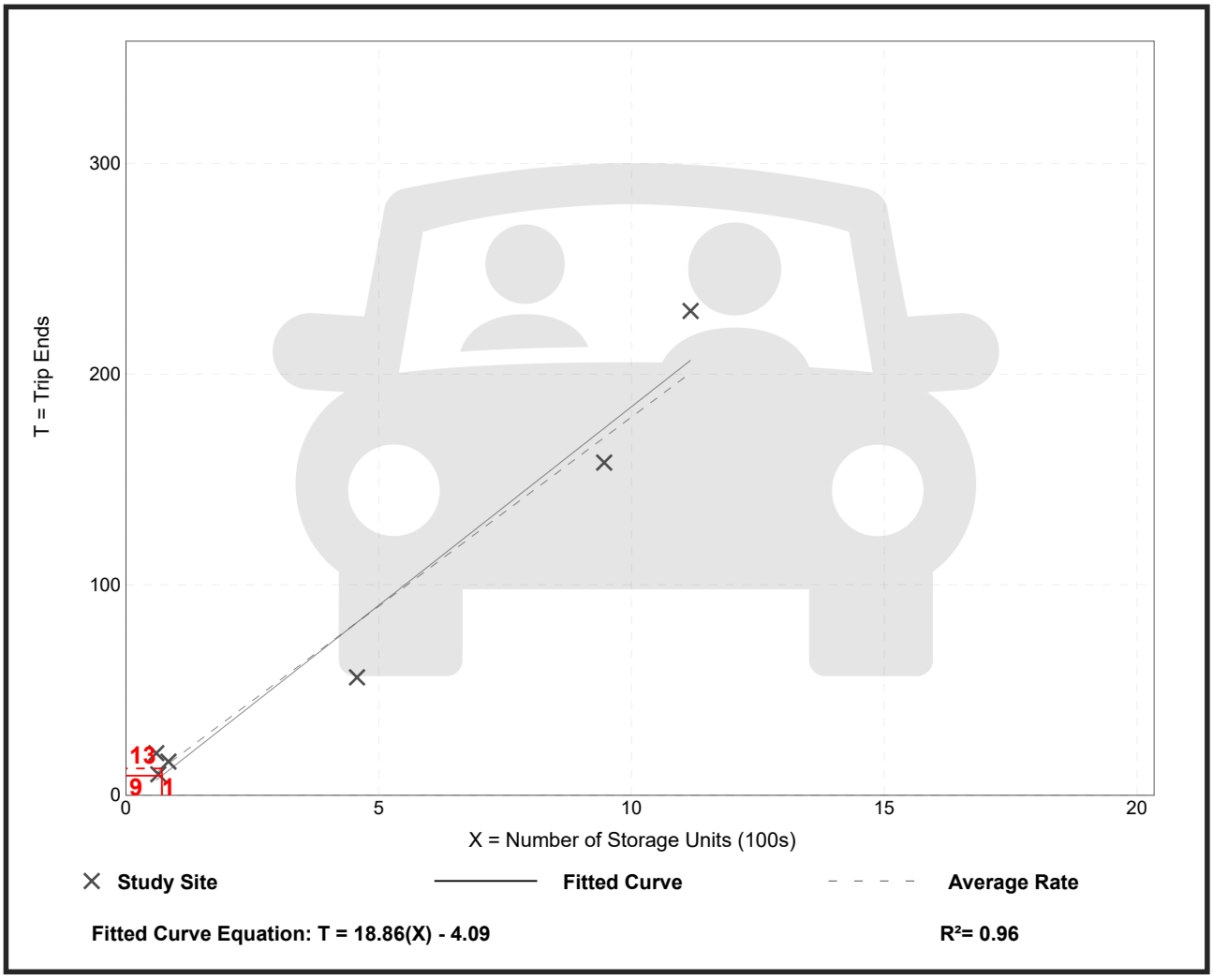
Vehicle Trip Ends vs: **Storage Units (100s)**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. Num. of Storage Units (100s): 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Storage Unit (100s)

Average Rate	Range of Rates	Standard Deviation
17.96	12.25 - 33.33	4.13

Data Plot and Equation



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APPENDIX C – CAPACITY ANALYSES

EXISTING CAPACITY ANALYSES

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	334	172	9	6	185	29	5	1	4	102	4	787
Future Volume (veh/h)	334	172	9	6	185	29	5	1	4	102	4	787
Number	1	6	16	5	2	12	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	363	187	10	7	201	32	5	1	4	111	4	855
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	0	1	1
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	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	806	2006	107	58	753	116	171	48	98	475	16	855
Arrive On Green	0.27	0.59	0.59	0.25	0.25	0.25	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1774	3419	182	30	2972	457	373	179	368	1428	58	1583
Grp Volume(v), veh/h	363	96	101	127	0	113	10	0	0	115	0	855
Grp Sat Flow(s),veh/h/ln	1774	1770	1831	1845	0	1614	919	0	0	1487	0	1583
Q Serve(g_s), s	8.6	1.8	1.8	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	20.0
Cycle Q Clear(g_c), s	8.6	1.8	1.8	4.1	0.0	4.2	3.8	0.0	0.0	3.8	0.0	20.0
Prop In Lane	1.00		0.10	0.06		0.28	0.50		0.40	0.97		1.00
Lane Grp Cap(c), veh/h	806	1038	1074	518	0	409	317	0	0	491	0	855
V/C Ratio(X)	0.45	0.09	0.09	0.25	0.00	0.28	0.03	0.00	0.00	0.23	0.00	1.00
Avail Cap(c_a), veh/h	806	1038	1074	518	0	409	317	0	0	491	0	855
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	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.8	6.8	6.8	22.4	0.0	22.5	20.3	0.0	0.0	21.6	0.0	17.3
Incr Delay (d2), s/veh	1.8	0.2	0.2	1.1	0.0	1.7	0.2	0.0	0.0	1.1	0.0	30.8
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	4.4	0.9	0.9	2.3	0.0	2.1	0.2	0.0	0.0	2.0	0.0	24.8
LnGrp Delay(d),s/veh	11.6	7.0	7.0	23.6	0.0	24.2	20.5	0.0	0.0	22.7	0.0	48.0
LnGrp LOS	B	A	A	C		C	C			C		D
Approach Vol, veh/h		560			240			10			970	
Approach Delay, s/veh		10.0			23.8			20.5			45.0	
Approach LOS		A			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	25.0	25.0		25.0		50.0		25.0
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0
Max Green Setting (Gmax), s	20.5	19.0		20.0		44.0		20.0
Max Q Clear Time (g_c+I1), s	10.6	6.2		22.0		3.8		5.8
Green Ext Time (p_c), s	0.8	0.9		0.0		1.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	31.0
HCM 2010 LOS	C

Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	363	197	240	10	115	855
v/c Ratio	0.46	0.10	0.28	0.02	0.32	0.77
Control Delay	9.5	6.6	21.5	17.1	25.0	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.5	6.6	21.5	17.1	25.0	11.1
Queue Length 50th (ft)	75	17	42	2	43	130
Queue Length 95th (ft)	121	31	72	13	86	291
Internal Link Dist (ft)		1454	1763	93	578	
Turn Bay Length (ft)	140					
Base Capacity (vph)	786	2063	846	428	361	1114
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	0.46	0.10	0.28	0.02	0.32	0.77

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	334	172	6	185	5	1	102	4	787
Future Volume (vph)	334	172	6	185	5	1	102	4	787
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	pm+ov
Protected Phases	1	6		2		8		4	1
Permitted Phases	6		2		8		4		4
Detector Phase	1	6	2	2	8	8	4	4	1
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	15.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	24.0	24.0	24.0	10.0	10.0	22.5	22.5	9.5
Total Split (s)	25.0	50.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	33.3%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.5	4.0	4.0	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	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
Lead-Lag Optimize?	Yes		Yes	Yes					Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	45.5	44.0		19.0		20.0		20.0	45.5
Actuated g/C Ratio	0.61	0.59		0.25		0.27		0.27	0.61
v/c Ratio	0.46	0.10		0.28		0.02		0.32	0.77
Control Delay	9.5	6.6		21.5		17.1		25.0	11.1
Queue Delay	0.0	0.0		0.0		0.0		0.0	0.0
Total Delay	9.5	6.6		21.5		17.1		25.0	11.1
LOS	A	A		C		B		C	B
Approach Delay		8.5		21.5		17.1		12.8	
Approach LOS		A		C		B		B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 47 (63%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 12.6	Intersection LOS: B
Intersection Capacity Utilization 78.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: James Campbell Boulevard & Industrial Park Road



Intersection	
Int Delay, s/veh	8.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	67	286	139	199	616	15
Future Vol, veh/h	67	286	139	199	616	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	80	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	73	311	151	216	670	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1196	678	670	0	-	0
Stage 1	678	-	-	-	-	-
Stage 2	518	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	206	452	920	-	-	-
Stage 1	504	-	-	-	-	-
Stage 2	598	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	172	452	920	-	-	-
Mov Cap-2 Maneuver	300	-	-	-	-	-
Stage 1	421	-	-	-	-	-
Stage 2	598	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	27.2	4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	920	-	300	452	-	-
HCM Lane V/C Ratio	0.164	-	0.243	0.688	-	-
HCM Control Delay (s)	9.7	-	20.8	28.7	-	-
HCM Lane LOS	A	-	C	D	-	-
HCM 95th %tile Q(veh)	0.6	-	0.9	5.1	-	-



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	320	19	237	33	51	311
Future Volume (veh/h)	320	19	237	33	51	311
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	348	0	258	0	55	338
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	390	348	852	0	633	1134
Arrive On Green	0.22	0.00	0.46	0.00	0.07	0.61
Sat Flow, veh/h	1774	1583	1863	0	1774	1863
Grp Volume(v), veh/h	348	0	258	0	55	338
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	0	1774	1863
Q Serve(g_s), s	13.3	0.0	6.1	0.0	1.0	6.1
Cycle Q Clear(g_c), s	13.3	0.0	6.1	0.0	1.0	6.1
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	390	348	852	0	633	1134
V/C Ratio(X)	0.89	0.00	0.30	0.00	0.09	0.30
Avail Cap(c_a), veh/h	405	362	852	0	820	1134
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	0.0	12.0	0.0	7.8	6.5
Incr Delay (d2), s/veh	20.7	0.0	0.9	0.0	0.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	0.0	3.3	0.0	0.5	3.3
LnGrp Delay(d),s/veh	47.2	0.0	12.9	0.0	7.8	7.2
LnGrp LOS	D		B		A	A
Approach Vol, veh/h	348		258			393
Approach Delay, s/veh	47.2		12.9			7.3
Approach LOS	D		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.6	38.0				48.6		21.4
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	12.0	24.0				42.0		16.0
Max Q Clear Time (g_c+I1), s	3.0	8.1				8.1		15.3
Green Ext Time (p_c), s	0.1	1.1				1.9		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	22.7
HCM 2010 LOS	C



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	348	21	294	55	338
v/c Ratio	0.74	0.05	0.36	0.10	0.32
Control Delay	33.8	12.5	16.5	8.2	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	33.8	12.5	16.5	8.2	9.8
Queue Length 50th (ft)	132	3	91	10	75
Queue Length 95th (ft)	#243	18	157	24	121
Internal Link Dist (ft)	1424		714		314
Turn Bay Length (ft)		50		100	
Base Capacity (vph)	482	440	833	628	1128
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	0.72	0.05	0.35	0.09	0.30

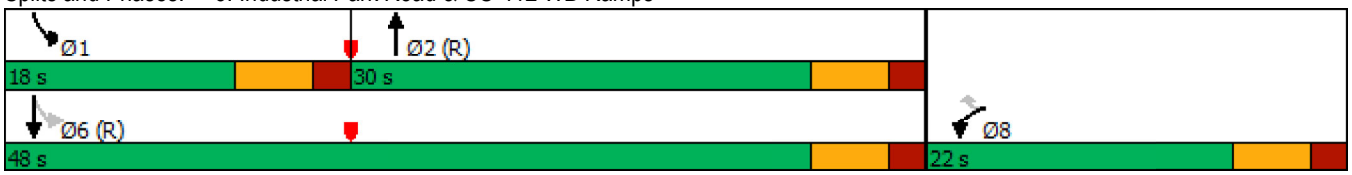
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	320	19	237	51	311
Future Volume (vph)	320	19	237	51	311
Turn Type	Prot	Perm	NA	pm+pt	NA
Protected Phases	8		2	1	6
Permitted Phases		8		6	
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	20.0	20.0	30.0	18.0	48.0
Total Split (s)	22.0	22.0	30.0	18.0	48.0
Total Split (%)	31.4%	31.4%	42.9%	25.7%	68.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	18.7	18.7	31.4	39.3	39.3
Actuated g/C Ratio	0.27	0.27	0.45	0.56	0.56
v/c Ratio	0.74	0.05	0.36	0.10	0.32
Control Delay	33.8	12.5	16.5	8.2	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	33.8	12.5	16.5	8.2	9.8
LOS	C	B	B	A	A
Approach Delay	32.6		16.5		9.6
Approach LOS	C		B		A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 19.5	Intersection LOS: B
Intersection Capacity Utilization 53.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Industrial Park Road & US-412 WB Ramps



Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	4	254	353	1
Future Vol, veh/h	0	3	4	254	353	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	3	4	276	384	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	669	385	385	0	-	0
Stage 1	385	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	423	663	1173	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	764	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	422	663	1173	-	-	-
Mov Cap-2 Maneuver	422	-	-	-	-	-
Stage 1	686	-	-	-	-	-
Stage 2	764	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.5	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1173	-	663	-	-
HCM Lane V/C Ratio	0.004	-	0.005	-	-
HCM Control Delay (s)	8.1	-	10.5	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	10	233	364	0
Future Vol, veh/h	0	0	10	233	364	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	11	253	396	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	671	396	396	0	-	0
Stage 1	396	-	-	-	-	-
Stage 2	275	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	422	653	1163	-	-	-
Stage 1	680	-	-	-	-	-
Stage 2	771	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	417	653	1163	-	-	-
Mov Cap-2 Maneuver	417	-	-	-	-	-
Stage 1	673	-	-	-	-	-
Stage 2	771	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1163	-	-	-	-
HCM Lane V/C Ratio	0.009	-	-	-	-
HCM Control Delay (s)	8.1	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	157	240	74	99	134	58
Future Vol, veh/h	157	240	74	99	134	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	100	-	0	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	171	261	80	108	146	63

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	432	0	516	216
Stage 1	-	-	-	-	302	-
Stage 2	-	-	-	-	214	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1124	-	489	789
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	801	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1124	-	454	789
Mov Cap-2 Maneuver	-	-	-	-	542	-
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	744	-

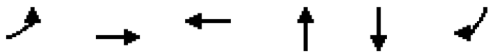
Approach	EB	WB	NB
HCM Control Delay, s	0	3.6	12.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	542	789	-	-	1124	-
HCM Lane V/C Ratio	0.269	0.08	-	-	0.072	-
HCM Control Delay (s)	14.1	10	-	-	8.4	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	1.1	0.3	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	607	227	4	3	205	57	6	8	4	47	3	510
Future Volume (veh/h)	607	227	4	3	205	57	6	8	4	47	3	510
Number	1	6	16	5	2	12	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	660	247	4	3	223	62	7	9	4	51	3	554
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	0	1	1
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	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	781	2091	34	51	682	183	162	196	73	450	24	855
Arrive On Green	0.27	0.59	0.59	0.25	0.25	0.25	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1774	3565	58	8	2693	724	366	735	275	1337	90	1583
Grp Volume(v), veh/h	660	122	129	154	0	134	20	0	0	54	0	554
Grp Sat Flow(s),veh/h/ln	1774	1770	1853	1858	0	1567	1376	0	0	1427	0	1583
Q Serve(g_s), s	19.8	2.3	2.3	0.0	0.0	5.2	0.0	0.0	0.0	1.4	0.0	18.6
Cycle Q Clear(g_c), s	19.8	2.3	2.3	5.0	0.0	5.2	0.6	0.0	0.0	2.0	0.0	18.6
Prop In Lane	1.00		0.03	0.02		0.46	0.35		0.20	0.94		1.00
Lane Grp Cap(c), veh/h	781	1038	1087	520	0	397	432	0	0	474	0	855
V/C Ratio(X)	0.85	0.12	0.12	0.30	0.00	0.34	0.05	0.00	0.00	0.11	0.00	0.65
Avail Cap(c_a), veh/h	781	1038	1087	520	0	397	432	0	0	474	0	855
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	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.8	6.9	6.9	22.8	0.0	22.9	20.4	0.0	0.0	20.9	0.0	12.2
Incr Delay (d2), s/veh	10.9	0.2	0.2	1.4	0.0	2.3	0.2	0.0	0.0	0.5	0.0	3.8
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	11.7	1.2	1.2	2.8	0.0	2.5	0.3	0.0	0.0	0.9	0.0	9.0
LnGrp Delay(d),s/veh	23.7	7.1	7.1	24.2	0.0	25.2	20.6	0.0	0.0	21.4	0.0	16.0
LnGrp LOS	C	A	A	C		C	C			C		B
Approach Vol, veh/h		911			288			20			608	
Approach Delay, s/veh		19.1			24.7			20.6			16.5	
Approach LOS		B			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	25.0	25.0		25.0		50.0		25.0
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0
Max Green Setting (Gmax), s	20.5	19.0		20.0		44.0		20.0
Max Q Clear Time (g_c+I1), s	21.8	7.2		20.6		4.3		2.6
Green Ext Time (p_c), s	0.0	1.1		0.0		1.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B



Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	660	251	288	20	54	554
v/c Ratio	0.85	0.12	0.34	0.04	0.14	0.51
Control Delay	22.9	7.0	20.5	18.1	22.2	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.9	7.0	20.5	18.1	22.2	4.6
Queue Length 50th (ft)	172	24	48	6	19	39
Queue Length 95th (ft)	#341	39	81	21	46	93
Internal Link Dist (ft)		1454	1763	93	578	
Turn Bay Length (ft)	140					
Base Capacity (vph)	772	2073	858	454	381	1097
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	0.85	0.12	0.34	0.04	0.14	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	607	227	3	205	6	8	47	3	510
Future Volume (vph)	607	227	3	205	6	8	47	3	510
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	pm+ov
Protected Phases	1	6		2		8		4	1
Permitted Phases	6		2		8		4		4
Detector Phase	1	6	2	2	8	8	4	4	1
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	15.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	24.0	24.0	24.0	10.0	10.0	22.5	22.5	9.5
Total Split (s)	25.0	50.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
Total Split (%)	33.3%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	3.5	4.0	4.0	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	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
Lead-Lag Optimize?	Yes		Yes	Yes					Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	45.5	44.0		19.0		20.0		20.0	45.5
Actuated g/C Ratio	0.61	0.59		0.25		0.27		0.27	0.61
v/c Ratio	0.85	0.12		0.34		0.04		0.14	0.51
Control Delay	22.9	7.0		20.5		18.1		22.2	4.6
Queue Delay	0.0	0.0		0.0		0.0		0.0	0.0
Total Delay	22.9	7.0		20.5		18.1		22.2	4.6
LOS	C	A		C		B		C	A
Approach Delay		18.5		20.5		18.1		6.1	
Approach LOS		B		C		B		A	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 47 (63%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 14.7	Intersection LOS: B
Intersection Capacity Utilization 66.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: James Campbell Boulevard & Industrial Park Road



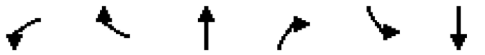
Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	53	39	271	447	564	28
Future Vol, veh/h	53	39	271	447	564	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	80	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	42	295	486	613	30

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1704	628	613	0	-	0
Stage 1	628	-	-	-	-	-
Stage 2	1076	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	101	483	966	-	-	-
Stage 1	532	-	-	-	-	-
Stage 2	327	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	70	483	966	-	-	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	370	-	-	-	-	-
Stage 2	327	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	24	3.9	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	966	-	190	483	-	-
HCM Lane V/C Ratio	0.305	-	0.303	0.088	-	-
HCM Control Delay (s)	10.4	-	32	13.2	-	-
HCM Lane LOS	B	-	D	B	-	-
HCM 95th %tile Q(veh)	1.3	-	1.2	0.3	-	-



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	282	10	326	172	117	305
Future Volume (veh/h)	282	10	326	172	117	305
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	307	0	354	0	127	332
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	244	218	1182	0	739	1401
Arrive On Green	0.14	0.00	0.63	0.00	0.06	0.75
Sat Flow, veh/h	1774	1583	1863	0	1774	1863
Grp Volume(v), veh/h	307	0	354	0	127	332
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	0	1774	1863
Q Serve(g_s), s	15.0	0.0	9.4	0.0	2.4	5.9
Cycle Q Clear(g_c), s	15.0	0.0	9.4	0.0	2.4	5.9
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	244	218	1182	0	739	1401
V/C Ratio(X)	1.26	0.00	0.30	0.00	0.17	0.24
Avail Cap(c_a), veh/h	244	218	1182	0	1002	1401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	0.0	9.0	0.0	5.4	4.1
Incr Delay (d2), s/veh	144.7	0.0	0.7	0.0	0.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.1	0.0	5.0	0.0	1.2	3.1
LnGrp Delay(d),s/veh	191.7	0.0	9.6	0.0	5.5	4.5
LnGrp LOS	F		A		A	A
Approach Vol, veh/h	307		354			459
Approach Delay, s/veh	191.7		9.6			4.8
Approach LOS	F		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	12.9	75.1				88.0		21.0
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	23.0	53.0				82.0		15.0
Max Q Clear Time (g_c+I1), s	4.4	11.4				7.9		17.0
Green Ext Time (p_c), s	0.3	2.0				1.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	57.5
HCM 2010 LOS	E



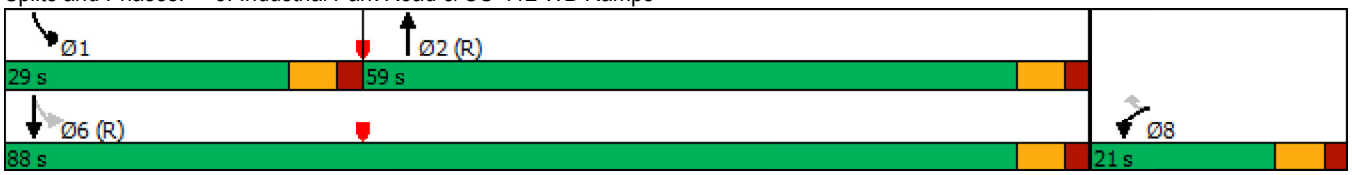
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	307	11	541	127	332
v/c Ratio	0.60	0.02	0.64	0.32	0.30
Control Delay	40.5	24.7	24.4	10.9	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	40.5	24.7	24.4	10.9	10.9
Queue Length 50th (ft)	190	4	252	34	100
Queue Length 95th (ft)	295	18	365	55	139
Internal Link Dist (ft)	1424		714		314
Turn Bay Length (ft)		50		100	
Base Capacity (vph)	510	459	880	561	1401
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	0.60	0.02	0.61	0.23	0.24

Intersection Summary

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	282	10	326	117	305
Future Volume (vph)	282	10	326	117	305
Turn Type	Prot	Perm	NA	pm+pt	NA
Protected Phases	8		2	1	6
Permitted Phases		8		6	
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	20.0	20.0	30.0	18.0	48.0
Total Split (s)	21.0	21.0	59.0	29.0	88.0
Total Split (%)	19.3%	19.3%	54.1%	26.6%	80.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	31.4	31.4	50.8	65.6	65.6
Actuated g/C Ratio	0.29	0.29	0.47	0.60	0.60
v/c Ratio	0.60	0.02	0.64	0.32	0.30
Control Delay	40.5	24.7	24.4	10.9	10.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	40.5	24.7	24.4	10.9	10.9
LOS	D	C	C	B	B
Approach Delay	39.9		24.4		10.9
Approach LOS	D		C		B

Intersection Summary	
Cycle Length: 109	
Actuated Cycle Length: 109	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 23.4	Intersection LOS: C
Intersection Capacity Utilization 64.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: Industrial Park Road & US-412 WB Ramps



Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	2	2	333	425	0
Future Vol, veh/h	1	2	2	333	425	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	2	362	462	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	828	462	462	0	-	0
Stage 1	462	-	-	-	-	-
Stage 2	366	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	341	600	1099	-	-	-
Stage 1	634	-	-	-	-	-
Stage 2	702	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	340	600	1099	-	-	-
Mov Cap-2 Maneuver	340	-	-	-	-	-
Stage 1	633	-	-	-	-	-
Stage 2	702	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1099	-	478	-	-
HCM Lane V/C Ratio	0.002	-	0.007	-	-
HCM Control Delay (s)	8.3	-	12.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	2	0	334	417	0
Future Vol, veh/h	0	2	0	334	417	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	0	363	453	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	816	453	453	0	-	0
Stage 1	453	-	-	-	-	-
Stage 2	363	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	347	607	1108	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	704	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	347	607	1108	-	-	-
Mov Cap-2 Maneuver	347	-	-	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	704	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1108	-	607	-	-
HCM Lane V/C Ratio	-	-	0.004	-	-
HCM Control Delay (s)	0	-	11	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	121	261	78	161	238	55
Future Vol, veh/h	121	261	78	161	238	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	100	-	0	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	132	284	85	175	259	60

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	416	0	532	208
Stage 1	-	-	-	-	274	-
Stage 2	-	-	-	-	258	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1139	-	477	798
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	761	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1139	-	441	798
Mov Cap-2 Maneuver	-	-	-	-	532	-
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	704	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.7	16.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	532	798	-	-	1139	-
HCM Lane V/C Ratio	0.486	0.075	-	-	0.074	-
HCM Control Delay (s)	18	9.9	-	-	8.4	-
HCM Lane LOS	C	A	-	-	A	-
HCM 95th %tile Q(veh)	2.6	0.2	-	-	0.2	-

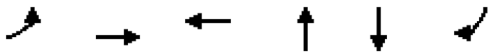
BACKGROUND CAPACITY ANALYSES

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	502	193	10	6	200	31	5	1	4	107	4	876
Future Volume (veh/h)	502	193	10	6	200	31	5	1	4	107	4	876
Number	1	6	16	5	2	12	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	546	210	11	7	217	34	5	1	4	0	0	1079
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	0	1	2
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	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	691	1789	93	57	715	109	192	52	115	0	616	1752
Arrive On Green	0.22	0.52	0.52	0.24	0.24	0.24	0.33	0.33	0.33	0.00	0.00	0.33
Sat Flow, veh/h	1774	3423	178	29	2979	452	363	157	346	0	1863	3167
Grp Volume(v), veh/h	546	108	113	137	0	121	10	0	0	0	0	1079
Grp Sat Flow(s),veh/h/ln	1774	1770	1831	1845	0	1615	866	0	0	0	1863	1583
Q Serve(g_s), s	16.7	2.3	2.4	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	17.3
Cycle Q Clear(g_c), s	16.7	2.3	2.4	4.5	0.0	4.6	0.3	0.0	0.0	0.0	0.0	17.3
Prop In Lane	1.00		0.10	0.05		0.28	0.50		0.40	0.00		1.00
Lane Grp Cap(c), veh/h	691	925	957	493	0	388	358	0	0	0	616	1752
V/C Ratio(X)	0.79	0.12	0.12	0.28	0.00	0.31	0.03	0.00	0.00	0.00	0.00	0.62
Avail Cap(c_a), veh/h	691	925	957	493	0	388	358	0	0	0	616	1752
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	14.8	9.1	9.1	23.4	0.0	23.4	16.9	0.0	0.0	0.0	0.0	11.3
Incr Delay (d2), s/veh	8.9	0.3	0.3	1.4	0.0	2.1	0.1	0.0	0.0	0.0	0.0	1.6
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	9.8	1.2	1.3	2.5	0.0	2.3	0.2	0.0	0.0	0.0	0.0	7.8
LnGrp Delay(d),s/veh	23.8	9.4	9.4	24.8	0.0	25.5	17.0	0.0	0.0	0.0	0.0	13.0
LnGrp LOS	C	A	A	C		C	B					B
Approach Vol, veh/h		767			258			10			1079	
Approach Delay, s/veh		19.6			25.1			17.0			13.0	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	21.2	24.0		29.8		45.2		29.8
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0
Max Green Setting (Gmax), s	16.7	18.0		24.8		39.2		24.8
Max Q Clear Time (g_c+I1), s	18.7	6.6		19.3		4.4		2.3
Green Ext Time (p_c), s	0.0	0.9		2.4		1.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.9
HCM 2010 LOS	B

Notes



Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	546	221	258	10	539	533
v/c Ratio	0.81	0.12	0.32	0.02	0.84	0.50
Control Delay	23.2	8.9	22.8	14.2	26.1	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	23.2	8.9	22.8	14.2	26.1	4.4
Queue Length 50th (ft)	155	24	47	2	131	36
Queue Length 95th (ft)	#285	41	79	12	#327	90
Internal Link Dist (ft)		1454	1763	93	578	
Turn Bay Length (ft)	140					
Base Capacity (vph)	676	1841	802	449	644	1060
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	0.81	0.12	0.32	0.02	0.84	0.50

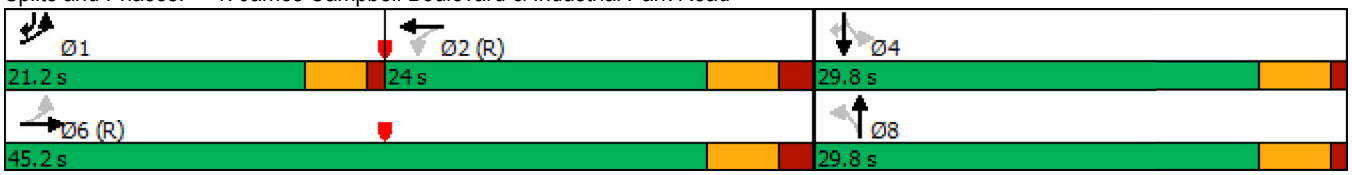
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	502	193	6	200	5	1	107	4	876
Future Volume (vph)	502	193	6	200	5	1	107	4	876
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	pm+ov
Protected Phases	1	6		2		8		4	1
Permitted Phases	6		2		8		4		4
Detector Phase	1	6	2	2	8	8	4	4	1
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	15.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	24.0	24.0	24.0	10.0	10.0	22.5	22.5	9.5
Total Split (s)	21.2	45.2	24.0	24.0	29.8	29.8	29.8	29.8	21.2
Total Split (%)	28.3%	60.3%	32.0%	32.0%	39.7%	39.7%	39.7%	39.7%	28.3%
Yellow Time (s)	3.5	4.0	4.0	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	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
Lead-Lag Optimize?	Yes		Yes	Yes					Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	40.7	39.2		18.0		24.8		24.8	46.5
Actuated g/C Ratio	0.54	0.52		0.24		0.33		0.33	0.62
v/c Ratio	0.81	0.12		0.32		0.02		0.84	0.50
Control Delay	23.2	8.9		22.8		14.2		26.1	4.4
Queue Delay	0.0	0.0		0.0		0.0		0.0	0.0
Total Delay	23.2	8.9		22.8		14.2		26.1	4.4
LOS	C	A		C		B		C	A
Approach Delay		19.1		22.8		14.2		15.3	
Approach LOS		B		C		B		B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 47 (63%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 70	
Control Type: Pretimed	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 17.6	Intersection LOS: B
Intersection Capacity Utilization 80.4%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: James Campbell Boulevard & Industrial Park Road



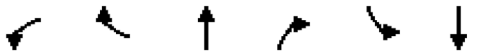
Intersection	
Int Delay, s/veh	12.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	70	316	252	254	681	16
Future Vol, veh/h	70	316	252	254	681	16
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	80	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	343	274	276	740	17

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1573	749	740	0	-	0
Stage 1	749	-	-	-	-	-
Stage 2	824	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	121	412	867	-	-	-
Stage 1	467	-	-	-	-	-
Stage 2	431	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	83	412	867	-	-	-
Mov Cap-2 Maneuver	204	-	-	-	-	-
Stage 1	319	-	-	-	-	-
Stage 2	431	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	42.5	5.5	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	867	-	204	412	-	-
HCM Lane V/C Ratio	0.316	-	0.373	0.834	-	-
HCM Control Delay (s)	11.1	-	32.8	44.7	-	-
HCM Lane LOS	B	-	D	E	-	-
HCM 95th %tile Q(veh)	1.4	-	1.6	7.8	-	-



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	370	20	249	80	54	327
Future Volume (veh/h)	370	20	249	80	54	327
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	402	0	271	0	59	355
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	405	362	831	0	612	1118
Arrive On Green	0.23	0.00	0.45	0.00	0.07	0.60
Sat Flow, veh/h	1774	1583	1863	0	1774	1863
Grp Volume(v), veh/h	402	0	271	0	59	355
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	0	1774	1863
Q Serve(g_s), s	15.8	0.0	6.6	0.0	1.1	6.6
Cycle Q Clear(g_c), s	15.8	0.0	6.6	0.0	1.1	6.6
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	405	362	831	0	612	1118
V/C Ratio(X)	0.99	0.00	0.33	0.00	0.10	0.32
Avail Cap(c_a), veh/h	405	362	831	0	795	1118
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	0.0	12.6	0.0	8.1	6.9
Incr Delay (d2), s/veh	42.3	0.0	1.0	0.0	0.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	0.0	3.6	0.0	0.5	3.6
LnGrp Delay(d),s/veh	69.2	0.0	13.6	0.0	8.2	7.7
LnGrp LOS	E		B		A	A
Approach Vol, veh/h	402		271			414
Approach Delay, s/veh	69.2		13.6			7.7
Approach LOS	E		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.8	37.2				48.0		22.0
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	12.0	24.0				42.0		16.0
Max Q Clear Time (g_c+I1), s	3.1	8.6				8.6		17.8
Green Ext Time (p_c), s	0.1	1.2				2.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	31.9
HCM 2010 LOS	C



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	402	22	358	59	355
v/c Ratio	0.77	0.05	0.47	0.12	0.36
Control Delay	36.0	14.1	17.4	8.1	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	14.1	17.4	8.1	10.4
Queue Length 50th (ft)	149	3	119	12	88
Queue Length 95th (ft)	#332	20	177	23	114
Internal Link Dist (ft)	1424		714		314
Turn Bay Length (ft)		50		100	
Base Capacity (vph)	522	475	778	552	1117
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	0.77	0.05	0.46	0.11	0.32

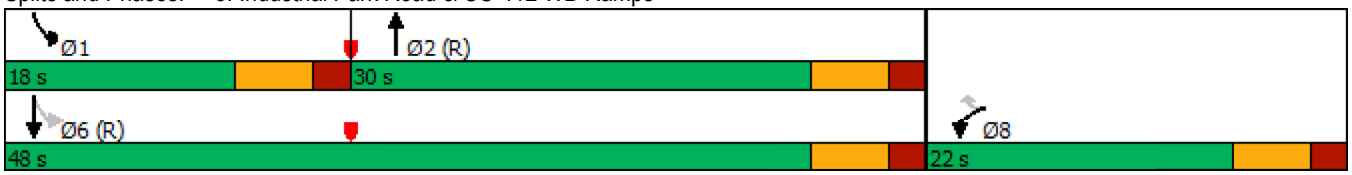
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	370	20	249	54	327
Future Volume (vph)	370	20	249	54	327
Turn Type	Prot	Perm	NA	pm+pt	NA
Protected Phases	8		2	1	6
Permitted Phases		8		6	
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	20.0	20.0	30.0	18.0	48.0
Total Split (s)	22.0	22.0	30.0	18.0	48.0
Total Split (%)	31.4%	31.4%	42.9%	25.7%	68.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	20.7	20.7	29.4	37.3	37.3
Actuated g/C Ratio	0.30	0.30	0.42	0.53	0.53
v/c Ratio	0.77	0.05	0.47	0.12	0.36
Control Delay	36.0	14.1	17.4	8.1	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	36.0	14.1	17.4	8.1	10.4
LOS	D	B	B	A	B
Approach Delay	34.9		17.4		10.1
Approach LOS	C		B		B

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 21.1	Intersection LOS: C
Intersection Capacity Utilization 59.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Industrial Park Road & US-412 WB Ramps



Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	3	4	267	371	1
Future Vol, veh/h	0	3	4	267	371	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	3	4	290	403	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	702	404	404	0	-	0
Stage 1	404	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	404	647	1155	-	-	-
Stage 1	674	-	-	-	-	-
Stage 2	753	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	403	647	1155	-	-	-
Mov Cap-2 Maneuver	403	-	-	-	-	-
Stage 1	672	-	-	-	-	-
Stage 2	753	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1155	-	647	-	-
HCM Lane V/C Ratio	0.004	-	0.005	-	-
HCM Control Delay (s)	8.1	-	10.6	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	11	245	382	0
Future Vol, veh/h	0	0	11	245	382	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	12	266	415	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	705	415	415	0	-	0
Stage 1	415	-	-	-	-	-
Stage 2	290	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	403	637	1144	-	-	-
Stage 1	666	-	-	-	-	-
Stage 2	759	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	398	637	1144	-	-	-
Mov Cap-2 Maneuver	398	-	-	-	-	-
Stage 1	658	-	-	-	-	-
Stage 2	759	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1144	-	-	-	-
HCM Lane V/C Ratio	0.01	-	-	-	-
HCM Control Delay (s)	8.2	0	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	165	252	78	104	141	61
Future Vol, veh/h	165	252	78	104	141	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	100	-	0	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	179	274	85	113	153	66

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	453	0	543	227
Stage 1	-	-	-	-	316	-
Stage 2	-	-	-	-	227	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1104	-	470	776
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	789	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1104	-	434	776
Mov Cap-2 Maneuver	-	-	-	-	527	-
Stage 1	-	-	-	-	712	-
Stage 2	-	-	-	-	728	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.7	13.2
HCM LOS			B

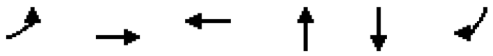
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	527	776	-	-	1104	-
HCM Lane V/C Ratio	0.291	0.085	-	-	0.077	-
HCM Control Delay (s)	14.6	10.1	-	-	8.5	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	1.2	0.3	-	-	0.2	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	721	249	4	3	227	60	6	8	4	49	3	675
Future Volume (veh/h)	721	249	4	3	227	60	6	8	4	49	3	675
Number	1	6	16	5	2	12	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	784	271	4	3	247	65	7	9	4	0	0	793
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	0	1	2
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	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	830	2209	33	51	669	171	139	165	60	0	437	1735
Arrive On Green	0.31	0.62	0.62	0.25	0.25	0.25	0.23	0.23	0.23	0.00	0.00	0.23
Sat Flow, veh/h	1774	3570	53	7	2726	696	315	702	254	0	1863	3167
Grp Volume(v), veh/h	784	134	141	168	0	147	20	0	0	0	0	793
Grp Sat Flow(s),veh/h/ln	1774	1770	1853	1858	0	1572	1271	0	0	0	1863	1583
Q Serve(g_s), s	23.5	2.3	2.4	0.0	0.0	5.8	0.0	0.0	0.0	0.0	0.0	11.3
Cycle Q Clear(g_c), s	23.5	2.3	2.4	5.6	0.0	5.8	0.6	0.0	0.0	0.0	0.0	11.3
Prop In Lane	1.00		0.03	0.02		0.44	0.35		0.20	0.00		1.00
Lane Grp Cap(c), veh/h	830	1095	1147	505	0	386	363	0	0	0	437	1735
V/C Ratio(X)	0.94	0.12	0.12	0.33	0.00	0.38	0.06	0.00	0.00	0.00	0.00	0.46
Avail Cap(c_a), veh/h	830	1095	1147	505	0	386	363	0	0	0	437	1735
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	13.3	5.9	5.9	23.5	0.0	23.6	22.2	0.0	0.0	0.0	0.0	10.2
Incr Delay (d2), s/veh	20.3	0.2	0.2	1.8	0.0	2.8	0.3	0.0	0.0	0.0	0.0	0.9
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	16.2	1.2	1.2	3.1	0.0	2.8	0.4	0.0	0.0	0.0	0.0	5.0
LnGrp Delay(d),s/veh	33.6	6.1	6.1	25.3	0.0	26.4	22.5	0.0	0.0	0.0	0.0	11.1
LnGrp LOS	C	A	A	C		C	C					B
Approach Vol, veh/h		1059			315			20			793	
Approach Delay, s/veh		26.5			25.8			22.5			11.1	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	28.0	24.4		22.6		52.4		22.6
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0
Max Green Setting (Gmax), s	23.5	18.4		17.6		46.4		17.6
Max Q Clear Time (g_c+I1), s	25.5	7.8		13.3		4.4		2.6
Green Ext Time (p_c), s	0.0	1.2		1.4		1.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	20.8
HCM 2010 LOS	C

Notes



Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	784	275	315	20	401	389
v/c Ratio	0.95	0.13	0.38	0.07	0.66	0.37
Control Delay	33.0	6.0	21.9	20.1	11.0	2.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	6.0	21.9	20.1	11.0	2.9
Queue Length 50th (ft)	207	24	55	6	22	16
Queue Length 95th (ft)	#434	38	90	23	110	52
Internal Link Dist (ft)		1454	1763	93	578	
Turn Bay Length (ft)	140					
Base Capacity (vph)	827	2186	830	298	609	1038
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	0.95	0.13	0.38	0.07	0.66	0.37

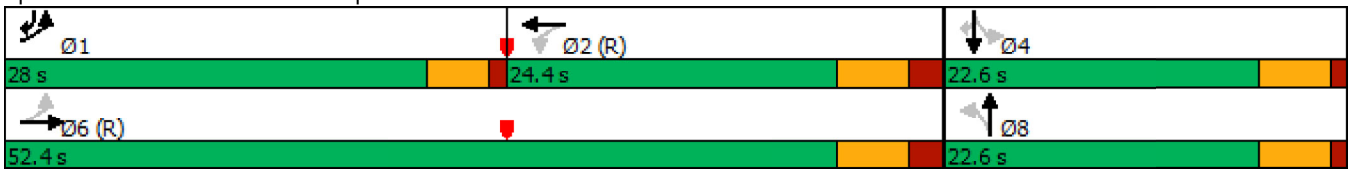
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	721	249	3	227	6	8	49	3	675
Future Volume (vph)	721	249	3	227	6	8	49	3	675
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	pm+ov
Protected Phases	1	6		2		8		4	1
Permitted Phases	6		2		8		4		4
Detector Phase	1	6	2	2	8	8	4	4	1
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	15.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	24.0	24.0	24.0	10.0	10.0	22.5	22.5	9.5
Total Split (s)	28.0	52.4	24.4	24.4	22.6	22.6	22.6	22.6	28.0
Total Split (%)	37.3%	69.9%	32.5%	32.5%	30.1%	30.1%	30.1%	30.1%	37.3%
Yellow Time (s)	3.5	4.0	4.0	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	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
Lead-Lag Optimize?	Yes		Yes	Yes					Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	47.9	46.4		18.4		17.6		17.6	46.1
Actuated g/C Ratio	0.64	0.62		0.25		0.23		0.23	0.61
v/c Ratio	0.95	0.13		0.38		0.07		0.66	0.37
Control Delay	33.0	6.0		21.9		20.1		11.0	2.9
Queue Delay	0.0	0.0		0.0		0.0		0.0	0.0
Total Delay	33.0	6.0		21.9		20.1		11.0	2.9
LOS	C	A		C		C		B	A
Approach Delay		26.0		21.9		20.1		7.0	
Approach LOS		C		C		C		A	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 47 (63%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 80	
Control Type: Pretimed	
Maximum v/c Ratio: 0.95	
Intersection Signal Delay: 18.5	Intersection LOS: B
Intersection Capacity Utilization 85.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: James Campbell Boulevard & Industrial Park Road



Intersection	
Int Delay, s/veh	5

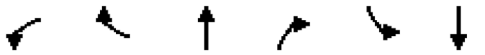
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	56	83	343	495	690	29
Future Vol, veh/h	56	83	343	495	690	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	80	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	61	90	373	538	750	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2050	766	750	0	-	0
Stage 1	766	-	-	-	-	-
Stage 2	1284	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	61	403	859	-	-	-
Stage 1	459	-	-	-	-	-
Stage 2	260	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 35	403	859	-	-	-
Mov Cap-2 Maneuver	135	-	-	-	-	-
Stage 1	260	-	-	-	-	-
Stage 2	260	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	30.8	5.1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	859	-	135	403	-	-
HCM Lane V/C Ratio	0.434	-	0.451	0.224	-	-
HCM Control Delay (s)	12.4	-	51.9	16.5	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	2.2	-	2	0.8	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	393	11	343	206	123	320
Future Volume (veh/h)	393	11	343	206	123	320
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	427	0	373	0	134	348
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	244	218	1181	0	723	1401
Arrive On Green	0.14	0.00	0.63	0.00	0.06	0.75
Sat Flow, veh/h	1774	1583	1863	0	1774	1863
Grp Volume(v), veh/h	427	0	373	0	134	348
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	0	1774	1863
Q Serve(g_s), s	15.0	0.0	10.0	0.0	2.5	6.2
Cycle Q Clear(g_c), s	15.0	0.0	10.0	0.0	2.5	6.2
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	244	218	1181	0	723	1401
V/C Ratio(X)	1.75	0.00	0.32	0.00	0.19	0.25
Avail Cap(c_a), veh/h	244	218	1181	0	986	1401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	0.0	9.1	0.0	5.5	4.1
Incr Delay (d2), s/veh	353.5	0.0	0.7	0.0	0.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	31.3	0.0	5.3	0.0	1.2	3.3
LnGrp Delay(d),s/veh	400.5	0.0	9.8	0.0	5.7	4.5
LnGrp LOS	F		A		A	A
Approach Vol, veh/h	427		373			482
Approach Delay, s/veh	400.5		9.8			4.8
Approach LOS	F		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	12.9	75.1				88.0		21.0
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	23.0	53.0				82.0		15.0
Max Q Clear Time (g_c+I1), s	4.5	12.0				8.2		17.0
Green Ext Time (p_c), s	0.3	2.2				2.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	138.1
HCM 2010 LOS	F



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	427	12	597	134	348
v/c Ratio	0.80	0.02	0.73	0.40	0.32
Control Delay	49.2	26.5	28.4	12.7	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	26.5	28.4	12.7	11.6
Queue Length 50th (ft)	277	4	309	38	113
Queue Length 95th (ft)	#513	21	409	55	139
Internal Link Dist (ft)	1424		714		314
Turn Bay Length (ft)		50		100	
Base Capacity (vph)	536	481	884	514	1401
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	0.80	0.02	0.68	0.26	0.25

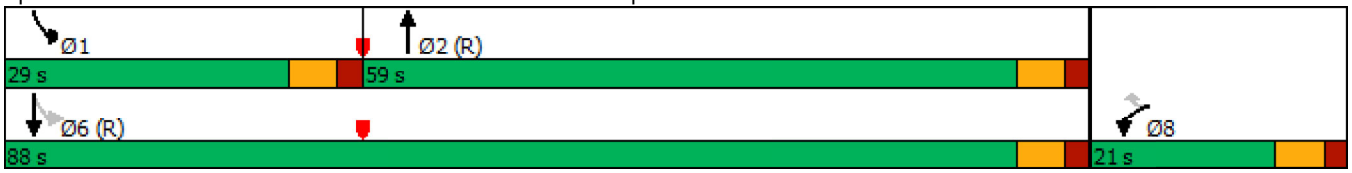
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	393	11	343	123	320
Future Volume (vph)	393	11	343	123	320
Turn Type	Prot	Perm	NA	pm+pt	NA
Protected Phases	8		2	1	6
Permitted Phases		8		6	
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	20.0	20.0	30.0	18.0	48.0
Total Split (s)	21.0	21.0	59.0	29.0	88.0
Total Split (%)	19.3%	19.3%	54.1%	26.6%	80.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	33.0	33.0	49.0	64.0	64.0
Actuated g/C Ratio	0.30	0.30	0.45	0.59	0.59
v/c Ratio	0.80	0.02	0.73	0.40	0.32
Control Delay	49.2	26.5	28.4	12.7	11.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	49.2	26.5	28.4	12.7	11.6
LOS	D	C	C	B	B
Approach Delay	48.6		28.4		11.9
Approach LOS	D		C		B

Intersection Summary	
Cycle Length: 109	
Actuated Cycle Length: 109	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 29.0	Intersection LOS: C
Intersection Capacity Utilization 74.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Industrial Park Road & US-412 WB Ramps



Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	2	2	350	447	0
Future Vol, veh/h	1	2	2	350	447	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	2	2	380	486	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	870	486	486	0	-	0
Stage 1	486	-	-	-	-	-
Stage 2	384	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	322	581	1077	-	-	-
Stage 1	618	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	321	581	1077	-	-	-
Mov Cap-2 Maneuver	321	-	-	-	-	-
Stage 1	617	-	-	-	-	-
Stage 2	688	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1077	-	457	-	-
HCM Lane V/C Ratio	0.002	-	0.007	-	-
HCM Control Delay (s)	8.3	-	12.9	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	2	0	351	438	0
Future Vol, veh/h	0	2	0	351	438	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	2	0	382	476	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	858	476	476	0	-	0
Stage 1	476	-	-	-	-	-
Stage 2	382	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	327	589	1086	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	690	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	327	589	1086	-	-	-
Mov Cap-2 Maneuver	327	-	-	-	-	-
Stage 1	625	-	-	-	-	-
Stage 2	690	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1086	-	589	-	-
HCM Lane V/C Ratio	-	-	0.004	-	-
HCM Control Delay (s)	0	-	11.1	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	6.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	127	274	82	169	250	58
Future Vol, veh/h	127	274	82	169	250	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	100	-	0	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	138	298	89	184	272	63

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	436	0	557	218
Stage 1	-	-	-	-	287	-
Stage 2	-	-	-	-	270	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1120	-	460	786
Stage 1	-	-	-	-	736	-
Stage 2	-	-	-	-	751	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1120	-	424	786
Mov Cap-2 Maneuver	-	-	-	-	519	-
Stage 1	-	-	-	-	736	-
Stage 2	-	-	-	-	692	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	17.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	519	786	-	-	1120	-
HCM Lane V/C Ratio	0.524	0.08	-	-	0.08	-
HCM Control Delay (s)	19.3	10	-	-	8.5	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	3	0.3	-	-	0.3	-

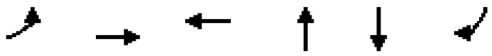
PROJECTED CAPACITY ANALYSES

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	529	193	10	6	200	38	5	1	4	109	4	882
Future Volume (veh/h)	529	193	10	6	200	38	5	1	4	109	4	882
Number	1	6	16	5	2	12	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	575	210	11	7	217	41	5	1	4	0	0	1088
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	0	1	2
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	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	723	1871	97	57	733	134	182	50	106	0	571	1710
Arrive On Green	0.23	0.55	0.55	0.25	0.25	0.25	0.31	0.31	0.31	0.00	0.00	0.31
Sat Flow, veh/h	1774	3423	178	27	2893	528	358	162	347	0	1863	3167
Grp Volume(v), veh/h	575	108	113	141	0	124	10	0	0	0	0	1088
Grp Sat Flow(s),veh/h/ln	1774	1770	1831	1846	0	1602	868	0	0	0	1863	1583
Q Serve(g_s), s	17.5	2.2	2.2	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.0	18.1
Cycle Q Clear(g_c), s	17.5	2.2	2.2	4.6	0.0	4.7	0.3	0.0	0.0	0.0	0.0	18.1
Prop In Lane	1.00		0.10	0.05		0.33	0.50		0.40	0.00		1.00
Lane Grp Cap(c), veh/h	723	967	1001	518	0	406	338	0	0	0	571	1710
V/C Ratio(X)	0.80	0.11	0.11	0.27	0.00	0.31	0.03	0.00	0.00	0.00	0.00	0.64
Avail Cap(c_a), veh/h	723	967	1001	518	0	406	338	0	0	0	571	1710
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	13.8	8.2	8.2	22.6	0.0	22.7	18.1	0.0	0.0	0.0	0.0	12.1
Incr Delay (d2), s/veh	8.8	0.2	0.2	1.3	0.0	1.9	0.2	0.0	0.0	0.0	0.0	1.8
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	10.1	1.1	1.2	2.5	0.0	2.3	0.2	0.0	0.0	0.0	0.0	8.2
LnGrp Delay(d),s/veh	22.6	8.4	8.4	23.9	0.0	24.6	18.3	0.0	0.0	0.0	0.0	13.9
LnGrp LOS	C	A	A	C		C	B					B
Approach Vol, veh/h		796			265			10			1088	
Approach Delay, s/veh		18.7			24.2			18.3			13.9	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	22.0	25.0		28.0		47.0		28.0
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0
Max Green Setting (Gmax), s	17.5	19.0		23.0		41.0		23.0
Max Q Clear Time (g_c+I1), s	19.5	6.7		20.1		4.2		2.3
Green Ext Time (p_c), s	0.0	1.0		1.5		1.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Notes



Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	575	221	265	10	544	537
v/c Ratio	0.81	0.11	0.31	0.03	0.90	0.51
Control Delay	22.1	8.0	21.5	15.4	34.3	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.1	8.0	21.5	15.4	34.3	4.4
Queue Length 50th (ft)	157	22	46	2	148	34
Queue Length 95th (ft)	#288	38	78	12	#354	89
Internal Link Dist (ft)		1454	1763	93	578	
Turn Bay Length (ft)	140					
Base Capacity (vph)	708	1925	848	375	607	1053
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	0.81	0.11	0.31	0.03	0.90	0.51

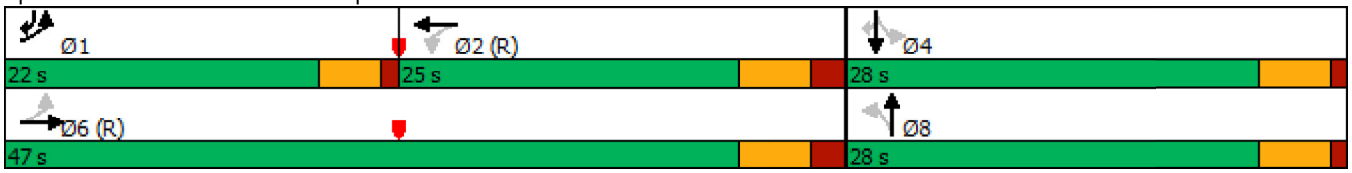
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	529	193	6	200	5	1	109	4	882
Future Volume (vph)	529	193	6	200	5	1	109	4	882
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	pm+ov
Protected Phases	1	6		2		8		4	1
Permitted Phases	6		2		8		4		4
Detector Phase	1	6	2	2	8	8	4	4	1
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	15.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	24.0	24.0	24.0	10.0	10.0	22.5	22.5	9.5
Total Split (s)	22.0	47.0	25.0	25.0	28.0	28.0	28.0	28.0	22.0
Total Split (%)	29.3%	62.7%	33.3%	33.3%	37.3%	37.3%	37.3%	37.3%	29.3%
Yellow Time (s)	3.5	4.0	4.0	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	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
Lead-Lag Optimize?	Yes		Yes	Yes					Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	42.5	41.0		19.0		23.0		23.0	45.5
Actuated g/C Ratio	0.57	0.55		0.25		0.31		0.31	0.61
v/c Ratio	0.81	0.11		0.31		0.03		0.90	0.51
Control Delay	22.1	8.0		21.5		15.4		34.3	4.4
Queue Delay	0.0	0.0		0.0		0.0		0.0	0.0
Total Delay	22.1	8.0		21.5		15.4		34.3	4.4
LOS	C	A		C		B		C	A
Approach Delay		18.2		21.5		15.4		19.4	
Approach LOS		B		C		B		B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 47 (63%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 19.2	Intersection LOS: B
Intersection Capacity Utilization 82.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: James Campbell Boulevard & Industrial Park Road



Intersection	
Int Delay, s/veh	12.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	77	316	252	288	689	18
Future Vol, veh/h	77	316	252	288	689	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	80	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	84	343	274	313	749	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1620	759	749	0	-	0
Stage 1	759	-	-	-	-	-
Stage 2	861	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	113	406	860	-	-	-
Stage 1	462	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 77	406	860	-	-	-
Mov Cap-2 Maneuver	198	-	-	-	-	-
Stage 1	315	-	-	-	-	-
Stage 2	414	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	44.7	5.2	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	860	-	198	406	-	-
HCM Lane V/C Ratio	0.319	-	0.423	0.846	-	-
HCM Control Delay (s)	11.1	-	35.9	46.9	-	-
HCM Lane LOS	B	-	E	E	-	-
HCM 95th %tile Q(veh)	1.4	-	1.9	8.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	370	37	290	80	58	337
Future Volume (veh/h)	370	37	290	80	58	337
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	402	0	315	0	63	366
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	405	362	826	0	578	1118
Arrive On Green	0.23	0.00	0.44	0.00	0.07	0.60
Sat Flow, veh/h	1774	1583	1863	0	1774	1863
Grp Volume(v), veh/h	402	0	315	0	63	366
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	0	1774	1863
Q Serve(g_s), s	15.8	0.0	7.9	0.0	1.2	6.8
Cycle Q Clear(g_c), s	15.8	0.0	7.9	0.0	1.2	6.8
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	405	362	826	0	578	1118
V/C Ratio(X)	0.99	0.00	0.38	0.00	0.11	0.33
Avail Cap(c_a), veh/h	405	362	826	0	757	1118
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	0.0	13.0	0.0	8.3	7.0
Incr Delay (d2), s/veh	42.3	0.0	1.3	0.0	0.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	0.0	4.3	0.0	0.6	3.7
LnGrp Delay(d),s/veh	69.2	0.0	14.4	0.0	8.4	7.8
LnGrp LOS	E		B		A	A
Approach Vol, veh/h	402		315			429
Approach Delay, s/veh	69.2		14.4			7.8
Approach LOS	E		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	10.9	37.1				48.0		22.0
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	12.0	24.0				42.0		16.0
Max Q Clear Time (g_c+I1), s	3.2	9.9				8.8		17.8
Green Ext Time (p_c), s	0.1	1.4				2.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	402	40	402	63	366
v/c Ratio	0.80	0.09	0.51	0.14	0.36
Control Delay	39.3	13.6	17.7	7.7	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	13.6	17.7	7.7	9.9
Queue Length 50th (ft)	154	6	136	12	87
Queue Length 95th (ft)	#342	30	200	24	114
Internal Link Dist (ft)	1424		714		314
Turn Bay Length (ft)		50		100	
Base Capacity (vph)	502	463	792	536	1117
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	0.80	0.09	0.51	0.12	0.33

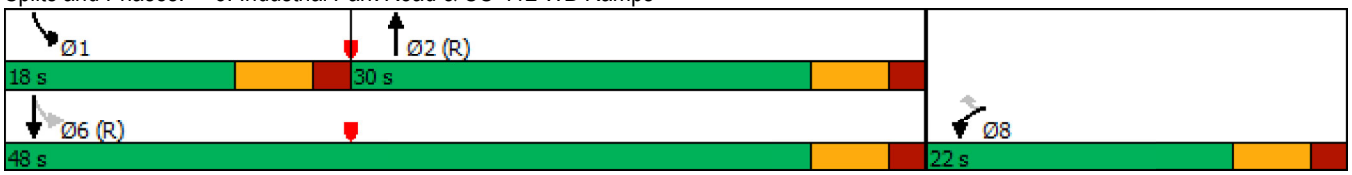
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	370	37	290	58	337
Future Volume (vph)	370	37	290	58	337
Turn Type	Prot	Perm	NA	pm+pt	NA
Protected Phases	8		2	1	6
Permitted Phases		8		6	
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	20.0	20.0	30.0	18.0	48.0
Total Split (s)	22.0	22.0	30.0	18.0	48.0
Total Split (%)	31.4%	31.4%	42.9%	25.7%	68.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	19.9	19.9	30.1	38.1	38.1
Actuated g/C Ratio	0.28	0.28	0.43	0.54	0.54
v/c Ratio	0.80	0.09	0.51	0.14	0.36
Control Delay	39.3	13.6	17.7	7.7	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	13.6	17.7	7.7	9.9
LOS	D	B	B	A	A
Approach Delay	36.9		17.7		9.6
Approach LOS	D		B		A

Intersection Summary	
Cycle Length: 70	
Actuated Cycle Length: 70	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 21.7	Intersection LOS: C
Intersection Capacity Utilization 61.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Industrial Park Road & US-412 WB Ramps



Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	3	12	0	1	4	277	48	3	371	1
Future Vol, veh/h	0	0	3	12	0	1	4	277	48	3	371	1
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	-	-	-	-	-	-	100	-	-	-	-	-
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	3	13	0	1	4	301	52	3	403	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	746	771	404	746	745	327	404	0	0	353	0	0
Stage 1	410	410	-	335	335	-	-	-	-	-	-	-
Stage 2	336	361	-	411	410	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	330	331	647	330	342	714	1155	-	-	1206	-	-
Stage 1	619	595	-	679	643	-	-	-	-	-	-	-
Stage 2	678	626	-	618	595	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	328	329	647	327	340	714	1155	-	-	1206	-	-
Mov Cap-2 Maneuver	328	329	-	327	340	-	-	-	-	-	-	-
Stage 1	617	593	-	677	641	-	-	-	-	-	-	-
Stage 2	675	624	-	613	593	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	16	0.1	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1155	-	-	647	341	1206	-	-
HCM Lane V/C Ratio	0.004	-	-	0.005	0.041	0.003	-	-
HCM Control Delay (s)	8.1	-	-	10.6	16	8	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	2	0	2	11	246	10	7	385	0
Future Vol, veh/h	0	0	0	2	0	2	11	246	10	7	385	0
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	-	-	-	-	-	-	-	-	-	-	-	-
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	2	0	2	12	267	11	8	418	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	732	736	418	731	731	273	418	0	0	278	0	0
Stage 1	434	434	-	297	297	-	-	-	-	-	-	-
Stage 2	298	302	-	434	434	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	337	346	635	337	349	766	1141	-	-	1285	-	-
Stage 1	600	581	-	712	668	-	-	-	-	-	-	-
Stage 2	711	664	-	600	581	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	331	339	635	332	342	766	1141	-	-	1285	-	-
Mov Cap-2 Maneuver	331	339	-	332	342	-	-	-	-	-	-	-
Stage 1	593	576	-	703	660	-	-	-	-	-	-	-
Stage 2	700	656	-	595	576	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	12.8	0.3	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1141	-	-	-	463	1285	-	-
HCM Lane V/C Ratio	0.01	-	-	-	0.009	0.006	-	-
HCM Control Delay (s)	8.2	0	-	0	12.8	7.8	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	165	262	78	104	144	61
Future Vol, veh/h	165	262	78	104	144	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	100	-	0	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	179	285	85	113	157	66

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	464	0	549	232
Stage 1	-	-	-	-	322	-
Stage 2	-	-	-	-	227	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1094	-	466	770
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	789	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1094	-	430	770
Mov Cap-2 Maneuver	-	-	-	-	523	-
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	727	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.7	13.4
HCM LOS			B

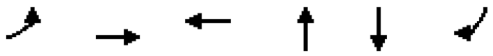
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	523	770	-	-	1094	-
HCM Lane V/C Ratio	0.299	0.086	-	-	0.077	-
HCM Control Delay (s)	14.8	10.1	-	-	8.6	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	1.2	0.3	-	-	0.3	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	729	249	4	3	227	62	6	8	4	55	3	701
Future Volume (veh/h)	729	249	4	3	227	62	6	8	4	55	3	701
Number	1	6	16	5	2	12	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	792	271	4	3	247	67	7	9	4	0	0	828
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	0	1	2
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	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	829	2209	33	51	664	175	137	163	59	0	437	1735
Arrive On Green	0.31	0.62	0.62	0.25	0.25	0.25	0.23	0.23	0.23	0.00	0.00	0.23
Sat Flow, veh/h	1774	3570	53	7	2708	712	309	694	251	0	1863	3167
Grp Volume(v), veh/h	792	134	141	169	0	148	20	0	0	0	0	828
Grp Sat Flow(s),veh/h/ln	1774	1770	1853	1858	0	1569	1254	0	0	0	1863	1583
Q Serve(g_s), s	23.5	2.3	2.4	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	12.0
Cycle Q Clear(g_c), s	23.5	2.3	2.4	5.7	0.0	5.9	0.6	0.0	0.0	0.0	0.0	12.0
Prop In Lane	1.00		0.03	0.02		0.45	0.35		0.20	0.00		1.00
Lane Grp Cap(c), veh/h	829	1095	1147	505	0	385	359	0	0	0	437	1735
V/C Ratio(X)	0.96	0.12	0.12	0.34	0.00	0.38	0.06	0.00	0.00	0.00	0.00	0.48
Avail Cap(c_a), veh/h	829	1095	1147	505	0	385	359	0	0	0	437	1735
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	13.5	5.9	5.9	23.5	0.0	23.6	22.2	0.0	0.0	0.0	0.0	10.4
Incr Delay (d2), s/veh	22.1	0.2	0.2	1.8	0.0	2.9	0.3	0.0	0.0	0.0	0.0	0.9
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	16.8	1.2	1.2	3.2	0.0	2.9	0.4	0.0	0.0	0.0	0.0	5.4
LnGrp Delay(d),s/veh	35.6	6.1	6.1	25.3	0.0	26.5	22.5	0.0	0.0	0.0	0.0	11.3
LnGrp LOS	D	A	A	C		C	C					B
Approach Vol, veh/h		1067			317			20			828	
Approach Delay, s/veh		28.0			25.8			22.5			11.3	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	28.0	24.4		22.6		52.4		22.6
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0
Max Green Setting (Gmax), s	23.5	18.4		17.6		46.4		17.6
Max Q Clear Time (g_c+I1), s	25.5	7.9		14.0		4.4		2.6
Green Ext Time (p_c), s	0.0	1.2		1.3		1.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Notes



Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	792	275	317	20	414	411
v/c Ratio	0.96	0.13	0.38	0.07	0.68	0.40
Control Delay	34.8	6.0	21.8	20.2	11.7	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.8	6.0	21.8	20.2	11.7	3.3
Queue Length 50th (ft)	210	24	55	6	25	21
Queue Length 95th (ft)	#443	38	90	23	118	58
Internal Link Dist (ft)		1454	1763	93	578	
Turn Bay Length (ft)	140					
Base Capacity (vph)	827	2186	832	284	611	1038
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	0.96	0.13	0.38	0.07	0.68	0.40

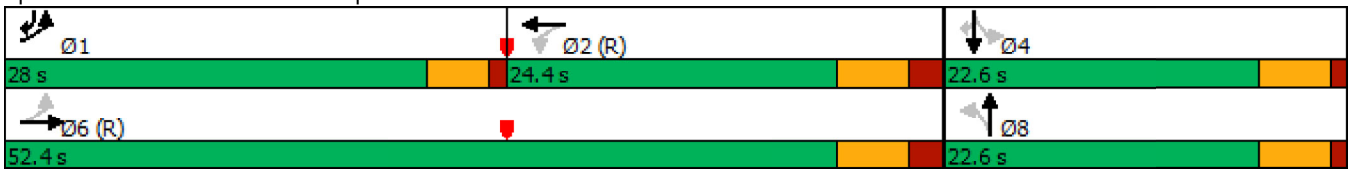
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	729	249	3	227	6	8	55	3	701
Future Volume (vph)	729	249	3	227	6	8	55	3	701
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	pm+ov
Protected Phases	1	6		2		8		4	1
Permitted Phases	6		2		8		4		4
Detector Phase	1	6	2	2	8	8	4	4	1
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	15.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	24.0	24.0	24.0	10.0	10.0	22.5	22.5	9.5
Total Split (s)	28.0	52.4	24.4	24.4	22.6	22.6	22.6	22.6	28.0
Total Split (%)	37.3%	69.9%	32.5%	32.5%	30.1%	30.1%	30.1%	30.1%	37.3%
Yellow Time (s)	3.5	4.0	4.0	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	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
Lead-Lag Optimize?	Yes		Yes	Yes					Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	47.9	46.4		18.4		17.6		17.6	46.1
Actuated g/C Ratio	0.64	0.62		0.25		0.23		0.23	0.61
v/c Ratio	0.96	0.13		0.38		0.07		0.68	0.40
Control Delay	34.8	6.0		21.8		20.2		11.7	3.3
Queue Delay	0.0	0.0		0.0		0.0		0.0	0.0
Total Delay	34.8	6.0		21.8		20.2		11.7	3.3
LOS	C	A		C		C		B	A
Approach Delay		27.4		21.8		20.2		7.5	
Approach LOS		C		C		C		A	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 47 (63%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 80	
Control Type: Pretimed	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 19.2	Intersection LOS: B
Intersection Capacity Utilization 87.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: James Campbell Boulevard & Industrial Park Road



Intersection	
Int Delay, s/veh	5.2

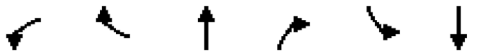
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	58	83	343	505	722	36
Future Vol, veh/h	58	83	343	505	722	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	80	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	90	373	549	785	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2100	805	785	0	-	0
Stage 1	805	-	-	-	-	-
Stage 2	1295	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	~ 57	382	834	-	-	-
Stage 1	440	-	-	-	-	-
Stage 2	257	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 32	382	834	-	-	-
Mov Cap-2 Maneuver	129	-	-	-	-	-
Stage 1	243	-	-	-	-	-
Stage 2	257	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	33.6	5.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	834	-	129	382	-	-
HCM Lane V/C Ratio	0.447	-	0.489	0.236	-	-
HCM Control Delay (s)	12.8	-	57	17.3	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	2.3	-	2.3	0.9	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	393	16	355	206	139	359
Future Volume (veh/h)	393	16	355	206	139	359
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	427	0	386	0	151	390
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	244	218	1180	0	713	1401
Arrive On Green	0.14	0.00	0.63	0.00	0.06	0.75
Sat Flow, veh/h	1774	1583	1863	0	1774	1863
Grp Volume(v), veh/h	427	0	386	0	151	390
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	0	1774	1863
Q Serve(g_s), s	15.0	0.0	10.4	0.0	2.9	7.1
Cycle Q Clear(g_c), s	15.0	0.0	10.4	0.0	2.9	7.1
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	244	218	1180	0	713	1401
V/C Ratio(X)	1.75	0.00	0.33	0.00	0.21	0.28
Avail Cap(c_a), veh/h	244	218	1180	0	975	1401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	47.0	0.0	9.2	0.0	5.7	4.2
Incr Delay (d2), s/veh	353.5	0.0	0.7	0.0	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	31.3	0.0	5.6	0.0	1.4	3.8
LnGrp Delay(d),s/veh	400.5	0.0	10.0	0.0	5.8	4.7
LnGrp LOS	F		A		A	A
Approach Vol, veh/h	427		386			541
Approach Delay, s/veh	400.5		10.0			5.0
Approach LOS	F		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	12.9	75.1				88.0		21.0
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	23.0	53.0				82.0		15.0
Max Q Clear Time (g_c+I1), s	4.9	12.4				9.1		17.0
Green Ext Time (p_c), s	0.3	2.3				2.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	131.1
HCM 2010 LOS	F



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	427	17	610	151	390
v/c Ratio	0.81	0.04	0.74	0.45	0.35
Control Delay	51.1	25.1	28.9	13.4	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	25.1	28.9	13.4	11.8
Queue Length 50th (ft)	280	6	318	43	128
Queue Length 95th (ft)	#517	25	425	60	157
Internal Link Dist (ft)	1424		714		314
Turn Bay Length (ft)		50		100	
Base Capacity (vph)	525	473	883	511	1401
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	0.81	0.04	0.69	0.30	0.28

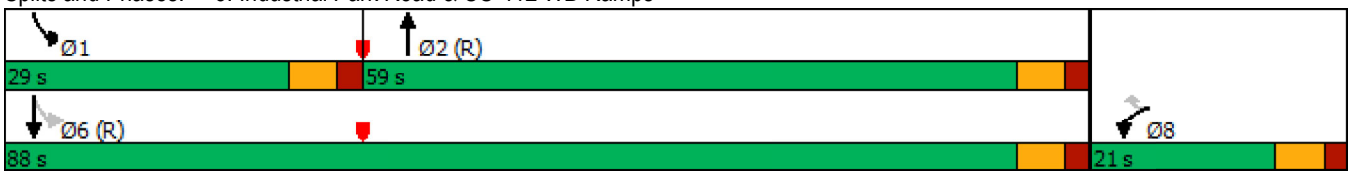
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	393	16	355	139	359
Future Volume (vph)	393	16	355	139	359
Turn Type	Prot	Perm	NA	pm+pt	NA
Protected Phases	8		2	1	6
Permitted Phases		8		6	
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	20.0	20.0	30.0	18.0	48.0
Total Split (s)	21.0	21.0	59.0	29.0	88.0
Total Split (%)	19.3%	19.3%	54.1%	26.6%	80.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	32.3	32.3	49.2	64.7	64.7
Actuated g/C Ratio	0.30	0.30	0.45	0.59	0.59
v/c Ratio	0.81	0.04	0.74	0.45	0.35
Control Delay	51.1	25.1	28.9	13.4	11.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	25.1	28.9	13.4	11.8
LOS	D	C	C	B	B
Approach Delay	50.1		28.9		12.2
Approach LOS	D		C		B

Intersection Summary	
Cycle Length: 109	
Actuated Cycle Length: 109	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 29.2	Intersection LOS: C
Intersection Capacity Utilization 75.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Industrial Park Road & US-412 WB Ramps



Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	2	45	0	3	2	353	14	1	457	0
Future Vol, veh/h	1	0	2	45	0	3	2	353	14	1	457	0
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	-	-	-	-	-	-	100	-	-	-	-	-
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	2	49	0	3	2	384	15	1	497	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	896	902	497	896	895	392	497	0	0	399	0	0
Stage 1	499	499	-	396	396	-	-	-	-	-	-	-
Stage 2	397	403	-	500	499	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	261	277	573	261	280	657	1067	-	-	1160	-	-
Stage 1	554	544	-	629	604	-	-	-	-	-	-	-
Stage 2	629	600	-	553	544	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	259	276	573	259	279	657	1067	-	-	1160	-	-
Mov Cap-2 Maneuver	259	276	-	259	279	-	-	-	-	-	-	-
Stage 1	553	543	-	628	603	-	-	-	-	-	-	-
Stage 2	625	599	-	550	543	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.9	21.6	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1067	-	-	408	269	1160	-	-
HCM Lane V/C Ratio	0.002	-	-	0.008	0.194	0.001	-	-
HCM Control Delay (s)	8.4	-	-	13.9	21.6	8.1	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.7	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	2	10	0	7	0	354	3	2	439	0
Future Vol, veh/h	0	0	2	10	0	7	0	354	3	2	439	0
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	-	-	-	-	-	-	-	-	-	-	-	-
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	2	11	0	8	0	385	3	2	477	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	872	869	477	869	868	387	477	0	0	388	0	0
Stage 1	481	481	-	387	387	-	-	-	-	-	-	-
Stage 2	391	388	-	482	481	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	271	290	588	272	290	661	1085	-	-	1170	-	-
Stage 1	566	554	-	637	610	-	-	-	-	-	-	-
Stage 2	633	609	-	565	554	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	267	289	588	271	289	661	1085	-	-	1170	-	-
Mov Cap-2 Maneuver	267	289	-	271	289	-	-	-	-	-	-	-
Stage 1	566	553	-	637	610	-	-	-	-	-	-	-
Stage 2	626	609	-	562	553	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	15.6	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1085	-	-	588	358	1170	-	-
HCM Lane V/C Ratio	-	-	-	0.004	0.052	0.002	-	-
HCM Control Delay (s)	0	-	-	11.1	15.6	8.1	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

Intersection	
Int Delay, s/veh	6.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	127	277	82	169	260	58
Future Vol, veh/h	127	277	82	169	260	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	100	-	0	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	138	301	89	184	283	63

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	439	0	559	220
Stage 1	-	-	-	-	289	-
Stage 2	-	-	-	-	270	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1117	-	459	784
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	751	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1117	-	422	784
Mov Cap-2 Maneuver	-	-	-	-	517	-
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	691	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	18.2
HCM LOS			C

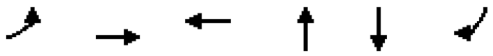
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	517	784	-	-	1117	-
HCM Lane V/C Ratio	0.547	0.08	-	-	0.08	-
HCM Control Delay (s)	20	10	-	-	8.5	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	3.3	0.3	-	-	0.3	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	529	193	10	6	200	38	5	1	4	109	4	882
Future Volume (veh/h)	529	193	10	6	200	38	5	1	4	109	4	882
Number	1	6	16	5	2	12	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	575	210	11	7	217	41	5	1	4	0	0	1088
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	0	1	2
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	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	723	1871	97	57	733	134	182	50	106	0	571	1710
Arrive On Green	0.23	0.55	0.55	0.25	0.25	0.25	0.31	0.31	0.31	0.00	0.00	0.31
Sat Flow, veh/h	1774	3423	178	27	2893	528	358	162	347	0	1863	3167
Grp Volume(v), veh/h	575	108	113	141	0	124	10	0	0	0	0	1088
Grp Sat Flow(s),veh/h/ln	1774	1770	1831	1846	0	1602	868	0	0	0	1863	1583
Q Serve(g_s), s	17.5	2.2	2.2	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.0	18.1
Cycle Q Clear(g_c), s	17.5	2.2	2.2	4.6	0.0	4.7	0.3	0.0	0.0	0.0	0.0	18.1
Prop In Lane	1.00		0.10	0.05		0.33	0.50		0.40	0.00		1.00
Lane Grp Cap(c), veh/h	723	967	1001	518	0	406	338	0	0	0	571	1710
V/C Ratio(X)	0.80	0.11	0.11	0.27	0.00	0.31	0.03	0.00	0.00	0.00	0.00	0.64
Avail Cap(c_a), veh/h	723	967	1001	518	0	406	338	0	0	0	571	1710
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	13.8	8.2	8.2	22.6	0.0	22.7	18.1	0.0	0.0	0.0	0.0	12.1
Incr Delay (d2), s/veh	8.8	0.2	0.2	1.3	0.0	1.9	0.2	0.0	0.0	0.0	0.0	1.8
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	10.1	1.1	1.2	2.5	0.0	2.3	0.2	0.0	0.0	0.0	0.0	8.2
LnGrp Delay(d),s/veh	22.6	8.4	8.4	23.9	0.0	24.6	18.3	0.0	0.0	0.0	0.0	13.9
LnGrp LOS	C	A	A	C		C	B					B
Approach Vol, veh/h		796			265			10			1088	
Approach Delay, s/veh		18.7			24.2			18.3			13.9	
Approach LOS		B			C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	22.0	25.0		28.0		47.0		28.0
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0
Max Green Setting (Gmax), s	17.5	19.0		23.0		41.0		23.0
Max Q Clear Time (g_c+I1), s	19.5	6.7		20.1		4.2		2.3
Green Ext Time (p_c), s	0.0	1.0		1.5		1.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.0
HCM 2010 LOS	B

Notes



Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	575	221	265	10	544	537
v/c Ratio	0.81	0.11	0.31	0.03	0.90	0.51
Control Delay	22.1	8.0	21.5	15.4	34.3	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.1	8.0	21.5	15.4	34.3	4.4
Queue Length 50th (ft)	157	22	46	2	148	34
Queue Length 95th (ft)	#288	38	78	12	#354	89
Internal Link Dist (ft)		1454	1763	93	578	
Turn Bay Length (ft)	140					
Base Capacity (vph)	708	1925	848	375	607	1053
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	0.81	0.11	0.31	0.03	0.90	0.51

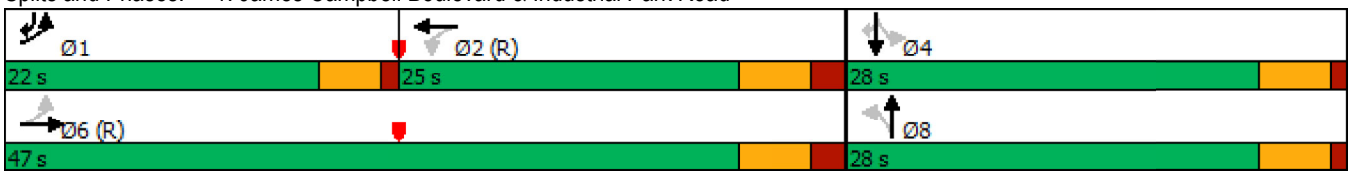
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	529	193	6	200	5	1	109	4	882
Future Volume (vph)	529	193	6	200	5	1	109	4	882
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	pm+ov
Protected Phases	1	6		2		8		4	1
Permitted Phases	6		2		8		4		4
Detector Phase	1	6	2	2	8	8	4	4	1
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	15.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	24.0	24.0	24.0	10.0	10.0	22.5	22.5	9.5
Total Split (s)	22.0	47.0	25.0	25.0	28.0	28.0	28.0	28.0	22.0
Total Split (%)	29.3%	62.7%	33.3%	33.3%	37.3%	37.3%	37.3%	37.3%	29.3%
Yellow Time (s)	3.5	4.0	4.0	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	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
Lead-Lag Optimize?	Yes		Yes	Yes					Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	42.5	41.0		19.0		23.0		23.0	45.5
Actuated g/C Ratio	0.57	0.55		0.25		0.31		0.31	0.61
v/c Ratio	0.81	0.11		0.31		0.03		0.90	0.51
Control Delay	22.1	8.0		21.5		15.4		34.3	4.4
Queue Delay	0.0	0.0		0.0		0.0		0.0	0.0
Total Delay	22.1	8.0		21.5		15.4		34.3	4.4
LOS	C	A		C		B		C	A
Approach Delay		18.2		21.5		15.4		19.4	
Approach LOS		B		C		B		B	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 47 (63%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 65	
Control Type: Pretimed	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 19.2	Intersection LOS: B
Intersection Capacity Utilization 82.1%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: James Campbell Boulevard & Industrial Park Road



Intersection	
Int Delay, s/veh	12.4

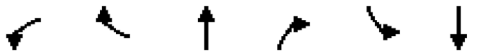
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	77	316	252	288	689	18
Future Vol, veh/h	77	316	252	288	689	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	80	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	84	343	274	313	749	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1620	759	749	0	-	0
Stage 1	759	-	-	-	-	-
Stage 2	861	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	113	406	860	-	-	-
Stage 1	462	-	-	-	-	-
Stage 2	414	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 77	406	860	-	-	-
Mov Cap-2 Maneuver	198	-	-	-	-	-
Stage 1	315	-	-	-	-	-
Stage 2	414	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	44.7	5.2	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	860	-	198	406	-	-
HCM Lane V/C Ratio	0.319	-	0.423	0.846	-	-
HCM Control Delay (s)	11.1	-	35.9	46.9	-	-
HCM Lane LOS	B	-	E	E	-	-
HCM 95th %tile Q(veh)	1.4	-	1.9	8.1	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	370	37	290	80	58	337
Future Volume (veh/h)	370	37	290	80	58	337
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	402	0	315	0	63	366
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	448	400	851	0	574	1113
Arrive On Green	0.25	0.00	0.46	0.00	0.07	0.60
Sat Flow, veh/h	1774	1583	1863	0	1774	1863
Grp Volume(v), veh/h	402	0	315	0	63	366
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	0	1774	1863
Q Serve(g_s), s	17.5	0.0	8.8	0.0	1.3	7.9
Cycle Q Clear(g_c), s	17.5	0.0	8.8	0.0	1.3	7.9
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	448	400	851	0	574	1113
V/C Ratio(X)	0.90	0.00	0.37	0.00	0.11	0.33
Avail Cap(c_a), veh/h	554	495	851	0	723	1113
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	28.9	0.0	14.2	0.0	9.3	8.1
Incr Delay (d2), s/veh	15.2	0.0	1.2	0.0	0.1	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	0.0	4.8	0.0	0.7	4.2
LnGrp Delay(d),s/veh	44.1	0.0	15.4	0.0	9.4	8.8
LnGrp LOS	D		B		A	A
Approach Vol, veh/h	402		315			429
Approach Delay, s/veh	44.1		15.4			8.9
Approach LOS	D		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	11.3	42.5				53.8		26.2
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	12.0	25.0				43.0		25.0
Max Q Clear Time (g_c+I1), s	3.3	10.8				9.9		19.5
Green Ext Time (p_c), s	0.1	1.4				2.1		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	23.0
HCM 2010 LOS	C



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	402	40	402	63	366
v/c Ratio	0.82	0.09	0.50	0.13	0.34
Control Delay	41.2	12.8	20.5	9.4	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	12.8	20.5	9.4	11.0
Queue Length 50th (ft)	183	7	144	13	93
Queue Length 95th (ft)	#285	28	247	32	155
Internal Link Dist (ft)	1424		714		314
Turn Bay Length (ft)		50		100	
Base Capacity (vph)	560	514	801	541	1073
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	0.72	0.08	0.50	0.12	0.34

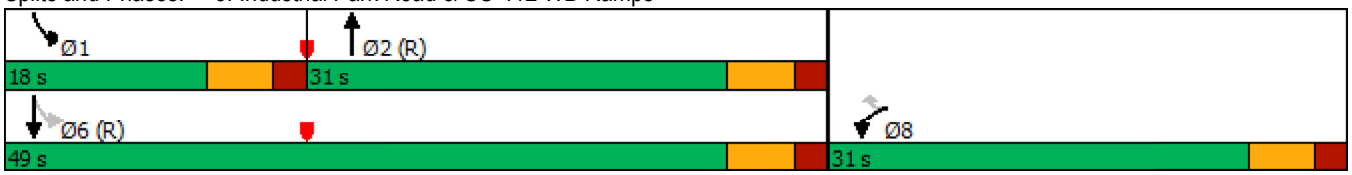
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	370	37	290	58	337
Future Volume (vph)	370	37	290	58	337
Turn Type	Prot	Perm	NA	pm+pt	NA
Protected Phases	8		2	1	6
Permitted Phases		8		6	
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	20.0	20.0	30.0	18.0	48.0
Total Split (s)	31.0	31.0	31.0	18.0	49.0
Total Split (%)	38.8%	38.8%	38.8%	22.5%	61.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	22.2	22.2	35.0	45.8	45.8
Actuated g/C Ratio	0.28	0.28	0.44	0.57	0.57
v/c Ratio	0.82	0.09	0.50	0.13	0.34
Control Delay	41.2	12.8	20.5	9.4	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	12.8	20.5	9.4	11.0
LOS	D	B	C	A	B
Approach Delay	38.6		20.5		10.8
Approach LOS	D		C		B

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.82	
Intersection Signal Delay: 23.5	Intersection LOS: C
Intersection Capacity Utilization 61.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Industrial Park Road & US-412 WB Ramps



Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	3	12	0	1	4	277	48	3	371	1
Future Vol, veh/h	0	0	3	12	0	1	4	277	48	3	371	1
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	-	-	-	-	-	-	100	-	-	-	-	-
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	3	13	0	1	4	301	52	3	403	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	746	771	404	746	745	327	404	0	0	353	0	0
Stage 1	410	410	-	335	335	-	-	-	-	-	-	-
Stage 2	336	361	-	411	410	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	330	331	647	330	342	714	1155	-	-	1206	-	-
Stage 1	619	595	-	679	643	-	-	-	-	-	-	-
Stage 2	678	626	-	618	595	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	328	329	647	327	340	714	1155	-	-	1206	-	-
Mov Cap-2 Maneuver	328	329	-	327	340	-	-	-	-	-	-	-
Stage 1	617	593	-	677	641	-	-	-	-	-	-	-
Stage 2	675	624	-	613	593	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	16	0.1	0.1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1155	-	-	647	341	1206	-	-
HCM Lane V/C Ratio	0.004	-	-	0.005	0.041	0.003	-	-
HCM Control Delay (s)	8.1	-	-	10.6	16	8	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	2	0	2	11	246	10	7	385	0
Future Vol, veh/h	0	0	0	2	0	2	11	246	10	7	385	0
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	-	-	-	-	-	-	-	-	-	-	-	-
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	2	0	2	12	267	11	8	418	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	732	736	418	731	731	273	418	0	0	278	0	0
Stage 1	434	434	-	297	297	-	-	-	-	-	-	-
Stage 2	298	302	-	434	434	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	337	346	635	337	349	766	1141	-	-	1285	-	-
Stage 1	600	581	-	712	668	-	-	-	-	-	-	-
Stage 2	711	664	-	600	581	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	331	339	635	332	342	766	1141	-	-	1285	-	-
Mov Cap-2 Maneuver	331	339	-	332	342	-	-	-	-	-	-	-
Stage 1	593	576	-	703	660	-	-	-	-	-	-	-
Stage 2	700	656	-	595	576	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	12.8	0.3	0.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1141	-	-	-	463	1285	-	-
HCM Lane V/C Ratio	0.01	-	-	-	0.009	0.006	-	-
HCM Control Delay (s)	8.2	0	-	0	12.8	7.8	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0	-	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	165	262	78	104	144	61
Future Vol, veh/h	165	262	78	104	144	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	100	-	0	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	179	285	85	113	157	66

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	464	0	549	232
Stage 1	-	-	-	-	322	-
Stage 2	-	-	-	-	227	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1094	-	466	770
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	789	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1094	-	430	770
Mov Cap-2 Maneuver	-	-	-	-	523	-
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	727	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.7	13.4
HCM LOS			B

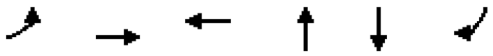
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	523	770	-	-	1094	-
HCM Lane V/C Ratio	0.299	0.086	-	-	0.077	-
HCM Control Delay (s)	14.8	10.1	-	-	8.6	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	1.2	0.3	-	-	0.3	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	729	249	4	3	227	62	6	8	4	55	3	701
Future Volume (veh/h)	729	249	4	3	227	62	6	8	4	55	3	701
Number	1	6	16	5	2	12	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	792	271	4	3	247	67	7	9	4	0	0	828
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	0	1	2
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	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	829	2209	33	51	664	175	137	163	59	0	437	1735
Arrive On Green	0.31	0.62	0.62	0.25	0.25	0.25	0.23	0.23	0.23	0.00	0.00	0.23
Sat Flow, veh/h	1774	3570	53	7	2708	712	309	694	251	0	1863	3167
Grp Volume(v), veh/h	792	134	141	169	0	148	20	0	0	0	0	828
Grp Sat Flow(s),veh/h/ln	1774	1770	1853	1858	0	1569	1254	0	0	0	1863	1583
Q Serve(g_s), s	23.5	2.3	2.4	0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	12.0
Cycle Q Clear(g_c), s	23.5	2.3	2.4	5.7	0.0	5.9	0.6	0.0	0.0	0.0	0.0	12.0
Prop In Lane	1.00		0.03	0.02		0.45	0.35		0.20	0.00		1.00
Lane Grp Cap(c), veh/h	829	1095	1147	505	0	385	359	0	0	0	437	1735
V/C Ratio(X)	0.96	0.12	0.12	0.34	0.00	0.38	0.06	0.00	0.00	0.00	0.00	0.48
Avail Cap(c_a), veh/h	829	1095	1147	505	0	385	359	0	0	0	437	1735
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	13.5	5.9	5.9	23.5	0.0	23.6	22.2	0.0	0.0	0.0	0.0	10.4
Incr Delay (d2), s/veh	22.1	0.2	0.2	1.8	0.0	2.9	0.3	0.0	0.0	0.0	0.0	0.9
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	9.9	1.2	1.2	3.2	0.0	2.9	0.4	0.0	0.0	0.0	0.0	5.4
LnGrp Delay(d),s/veh	35.6	6.1	6.1	25.3	0.0	26.5	22.5	0.0	0.0	0.0	0.0	11.3
LnGrp LOS	D	A	A	C		C	C					B
Approach Vol, veh/h		1067			317			20			828	
Approach Delay, s/veh		28.0			25.8			22.5			11.3	
Approach LOS		C			C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	28.0	24.4		22.6		52.4		22.6
Change Period (Y+Rc), s	4.5	6.0		5.0		6.0		5.0
Max Green Setting (Gmax), s	23.5	18.4		17.6		46.4		17.6
Max Q Clear Time (g_c+I1), s	25.5	7.9		14.0		4.4		2.6
Green Ext Time (p_c), s	0.0	1.2		1.3		1.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Notes



Lane Group	EBL	EBT	WBT	NBT	SBT	SBR
Lane Group Flow (vph)	792	275	317	20	414	411
v/c Ratio	0.96	0.13	0.38	0.07	0.68	0.40
Control Delay	34.8	6.0	21.8	20.2	11.7	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.8	6.0	21.8	20.2	11.7	3.3
Queue Length 50th (ft)	210	24	55	6	25	21
Queue Length 95th (ft)	#443	38	90	23	118	58
Internal Link Dist (ft)		1454	1763	93	578	
Turn Bay Length (ft)	140					
Base Capacity (vph)	827	2186	832	284	611	1038
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	0.96	0.13	0.38	0.07	0.68	0.40

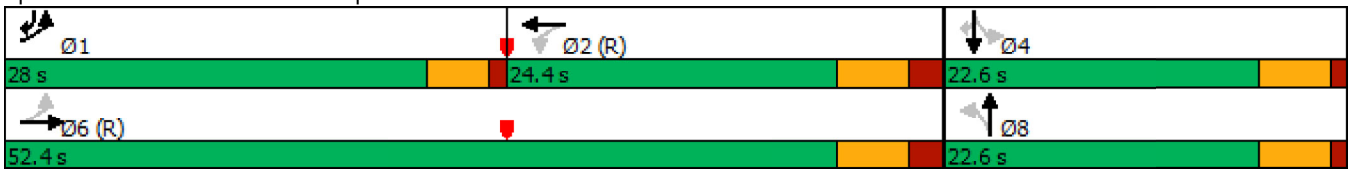
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	729	249	3	227	6	8	55	3	701
Future Volume (vph)	729	249	3	227	6	8	55	3	701
Turn Type	pm+pt	NA	Perm	NA	Perm	NA	Perm	NA	pm+ov
Protected Phases	1	6		2		8		4	1
Permitted Phases	6		2		8		4		4
Detector Phase	1	6	2	2	8	8	4	4	1
Switch Phase									
Minimum Initial (s)	5.0	15.0	15.0	15.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	24.0	24.0	24.0	10.0	10.0	22.5	22.5	9.5
Total Split (s)	28.0	52.4	24.4	24.4	22.6	22.6	22.6	22.6	28.0
Total Split (%)	37.3%	69.9%	32.5%	32.5%	30.1%	30.1%	30.1%	30.1%	37.3%
Yellow Time (s)	3.5	4.0	4.0	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	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
Lead-Lag Optimize?	Yes		Yes	Yes					Yes
Recall Mode	Max	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	47.9	46.4		18.4		17.6		17.6	46.1
Actuated g/C Ratio	0.64	0.62		0.25		0.23		0.23	0.61
v/c Ratio	0.96	0.13		0.38		0.07		0.68	0.40
Control Delay	34.8	6.0		21.8		20.2		11.7	3.3
Queue Delay	0.0	0.0		0.0		0.0		0.0	0.0
Total Delay	34.8	6.0		21.8		20.2		11.7	3.3
LOS	C	A		C		C		B	A
Approach Delay		27.4		21.8		20.2		7.5	
Approach LOS		C		C		C		A	

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 47 (63%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green	
Natural Cycle: 80	
Control Type: Pretimed	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 19.2	Intersection LOS: B
Intersection Capacity Utilization 87.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: James Campbell Boulevard & Industrial Park Road



Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	58	83	343	505	722	36
Future Vol, veh/h	58	83	343	505	722	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	0	80	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	63	90	373	549	785	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2100	805	785	0	-	0
Stage 1	805	-	-	-	-	-
Stage 2	1295	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	~ 57	382	834	-	-	-
Stage 1	440	-	-	-	-	-
Stage 2	257	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 32	382	834	-	-	-
Mov Cap-2 Maneuver	129	-	-	-	-	-
Stage 1	243	-	-	-	-	-
Stage 2	257	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	33.6	5.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	834	-	129	382	-	-
HCM Lane V/C Ratio	0.447	-	0.489	0.236	-	-
HCM Control Delay (s)	12.8	-	57	17.3	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	2.3	-	2.3	0.9	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	393	16	355	206	139	359
Future Volume (veh/h)	393	16	355	206	139	359
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	427	0	386	0	151	390
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	464	414	799	0	518	1096
Arrive On Green	0.26	0.00	0.43	0.00	0.08	0.59
Sat Flow, veh/h	1774	1583	1863	0	1774	1863
Grp Volume(v), veh/h	427	0	386	0	151	390
Grp Sat Flow(s),veh/h/ln	1774	1583	1863	0	1774	1863
Q Serve(g_s), s	18.7	0.0	11.9	0.0	3.4	8.7
Cycle Q Clear(g_c), s	18.7	0.0	11.9	0.0	3.4	8.7
Prop In Lane	1.00	1.00		0.00	1.00	
Lane Grp Cap(c), veh/h	464	414	799	0	518	1096
V/C Ratio(X)	0.92	0.00	0.48	0.00	0.29	0.36
Avail Cap(c_a), veh/h	488	435	799	0	634	1096
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	0.0	16.5	0.0	10.8	8.6
Incr Delay (d2), s/veh	22.1	0.0	2.1	0.0	0.3	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	0.0	6.6	0.0	1.7	4.7
LnGrp Delay(d),s/veh	50.9	0.0	18.5	0.0	11.1	9.5
LnGrp LOS	D		B		B	A
Approach Vol, veh/h	427		386			541
Approach Delay, s/veh	50.9		18.5			9.9
Approach LOS	D		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	12.8	40.3				53.1		26.9
Change Period (Y+Rc), s	6.0	6.0				6.0		6.0
Max Green Setting (Gmax), s	12.0	28.0				46.0		22.0
Max Q Clear Time (g_c+I1), s	5.4	13.9				10.7		20.7
Green Ext Time (p_c), s	0.2	1.7				2.3		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	427	17	610	151	390
v/c Ratio	0.91	0.04	0.84	0.46	0.36
Control Delay	54.0	16.9	34.2	12.5	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	54.0	16.9	34.2	12.5	10.1
Queue Length 50th (ft)	203	4	255	32	96
Queue Length 95th (ft)	#366	18	#488	59	151
Internal Link Dist (ft)	1424		714		314
Turn Bay Length (ft)		50		100	
Base Capacity (vph)	486	440	726	386	1088
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	0.88	0.04	0.84	0.39	0.36

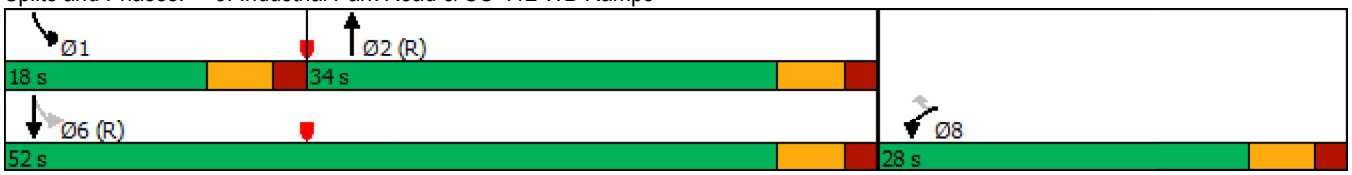
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	393	16	355	139	359
Future Volume (vph)	393	16	355	139	359
Turn Type	Prot	Perm	NA	pm+pt	NA
Protected Phases	8		2	1	6
Permitted Phases		8		6	
Detector Phase	8	8	2	1	6
Switch Phase					
Minimum Initial (s)	7.0	7.0	10.0	7.0	10.0
Minimum Split (s)	20.0	20.0	30.0	18.0	48.0
Total Split (s)	28.0	28.0	34.0	18.0	52.0
Total Split (%)	35.0%	35.0%	42.5%	22.5%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	C-Min	None	C-Min
Act Effct Green (s)	21.3	21.3	31.7	46.7	46.7
Actuated g/C Ratio	0.27	0.27	0.40	0.58	0.58
v/c Ratio	0.91	0.04	0.84	0.46	0.36
Control Delay	54.0	16.9	34.2	12.5	10.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	54.0	16.9	34.2	12.5	10.1
LOS	D	B	C	B	B
Approach Delay	52.6		34.2		10.8
Approach LOS	D		C		B

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 80	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 31.4	Intersection LOS: C
Intersection Capacity Utilization 75.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 3: Industrial Park Road & US-412 WB Ramps



Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↱			↕	
Traffic Vol, veh/h	1	0	2	45	0	3	2	353	14	1	457	0
Future Vol, veh/h	1	0	2	45	0	3	2	353	14	1	457	0
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	-	-	-	-	-	-	100	-	-	-	-	-
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	2	49	0	3	2	384	15	1	497	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	896	902	497	896	895	392	497	0	0	399	0	0
Stage 1	499	499	-	396	396	-	-	-	-	-	-	-
Stage 2	397	403	-	500	499	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	261	277	573	261	280	657	1067	-	-	1160	-	-
Stage 1	554	544	-	629	604	-	-	-	-	-	-	-
Stage 2	629	600	-	553	544	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	259	276	573	259	279	657	1067	-	-	1160	-	-
Mov Cap-2 Maneuver	259	276	-	259	279	-	-	-	-	-	-	-
Stage 1	553	543	-	628	603	-	-	-	-	-	-	-
Stage 2	625	599	-	550	543	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.9	21.6	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1067	-	-	408	269	1160	-	-
HCM Lane V/C Ratio	0.002	-	-	0.008	0.194	0.001	-	-
HCM Control Delay (s)	8.4	-	-	13.9	21.6	8.1	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.7	0	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	2	10	0	7	0	354	3	2	439	0
Future Vol, veh/h	0	0	2	10	0	7	0	354	3	2	439	0
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	-	-	-	-	-	-	-	-	-	-	-	-
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	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	2	11	0	8	0	385	3	2	477	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	872	869	477	869	868	387	477	0	0	388	0	0
Stage 1	481	481	-	387	387	-	-	-	-	-	-	-
Stage 2	391	388	-	482	481	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	271	290	588	272	290	661	1085	-	-	1170	-	-
Stage 1	566	554	-	637	610	-	-	-	-	-	-	-
Stage 2	633	609	-	565	554	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	267	289	588	271	289	661	1085	-	-	1170	-	-
Mov Cap-2 Maneuver	267	289	-	271	289	-	-	-	-	-	-	-
Stage 1	566	553	-	637	610	-	-	-	-	-	-	-
Stage 2	626	609	-	562	553	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.1	15.6	0	0
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1085	-	-	588	358	1170	-	-
HCM Lane V/C Ratio	-	-	-	0.004	0.052	0.002	-	-
HCM Control Delay (s)	0	-	-	11.1	15.6	8.1	0	-
HCM Lane LOS	A	-	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.2	0	-	-

Intersection	
Int Delay, s/veh	6.7

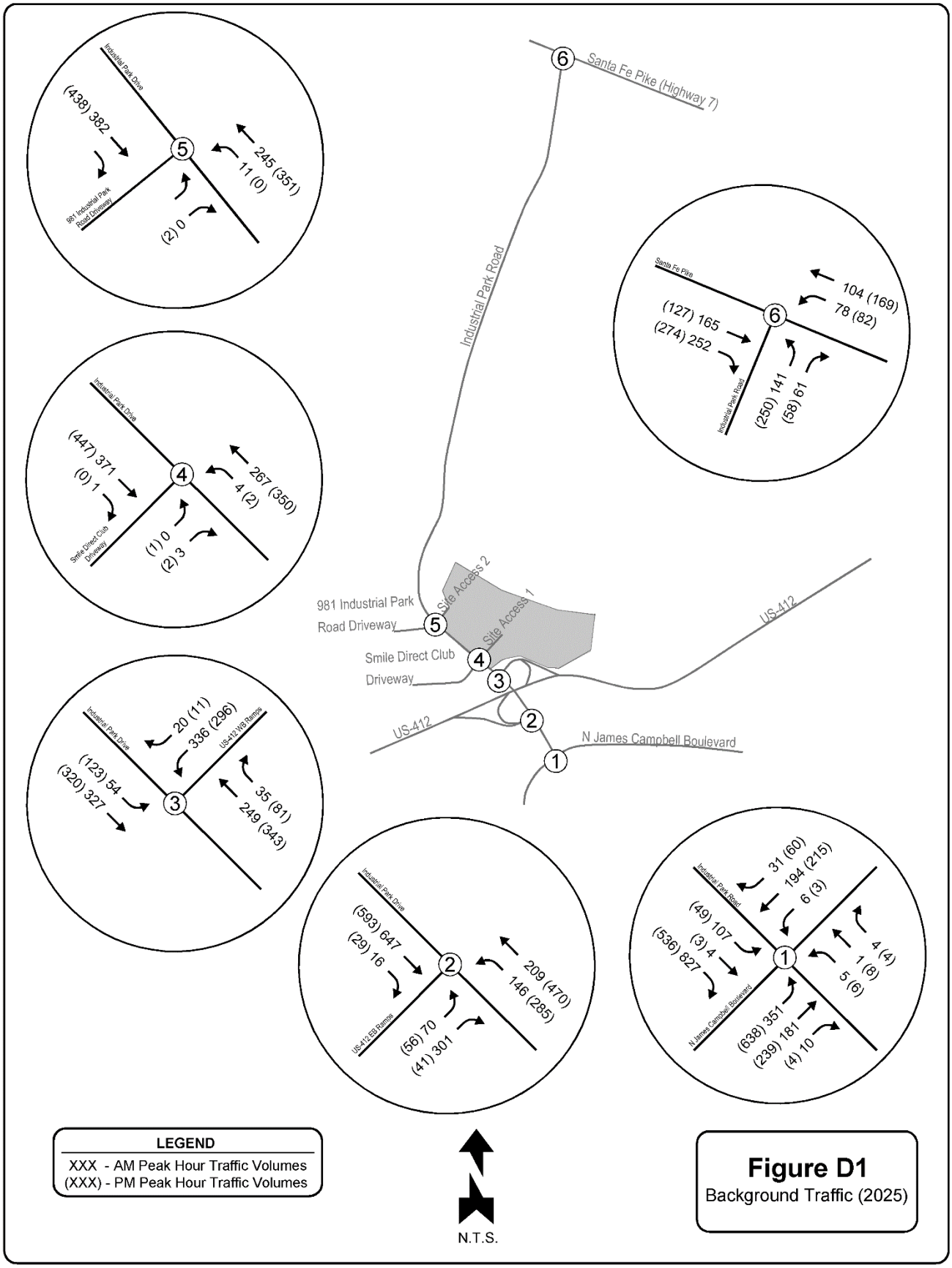
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	127	277	82	169	260	58
Future Vol, veh/h	127	277	82	169	260	58
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	100	-	0	85
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	138	301	89	184	283	63

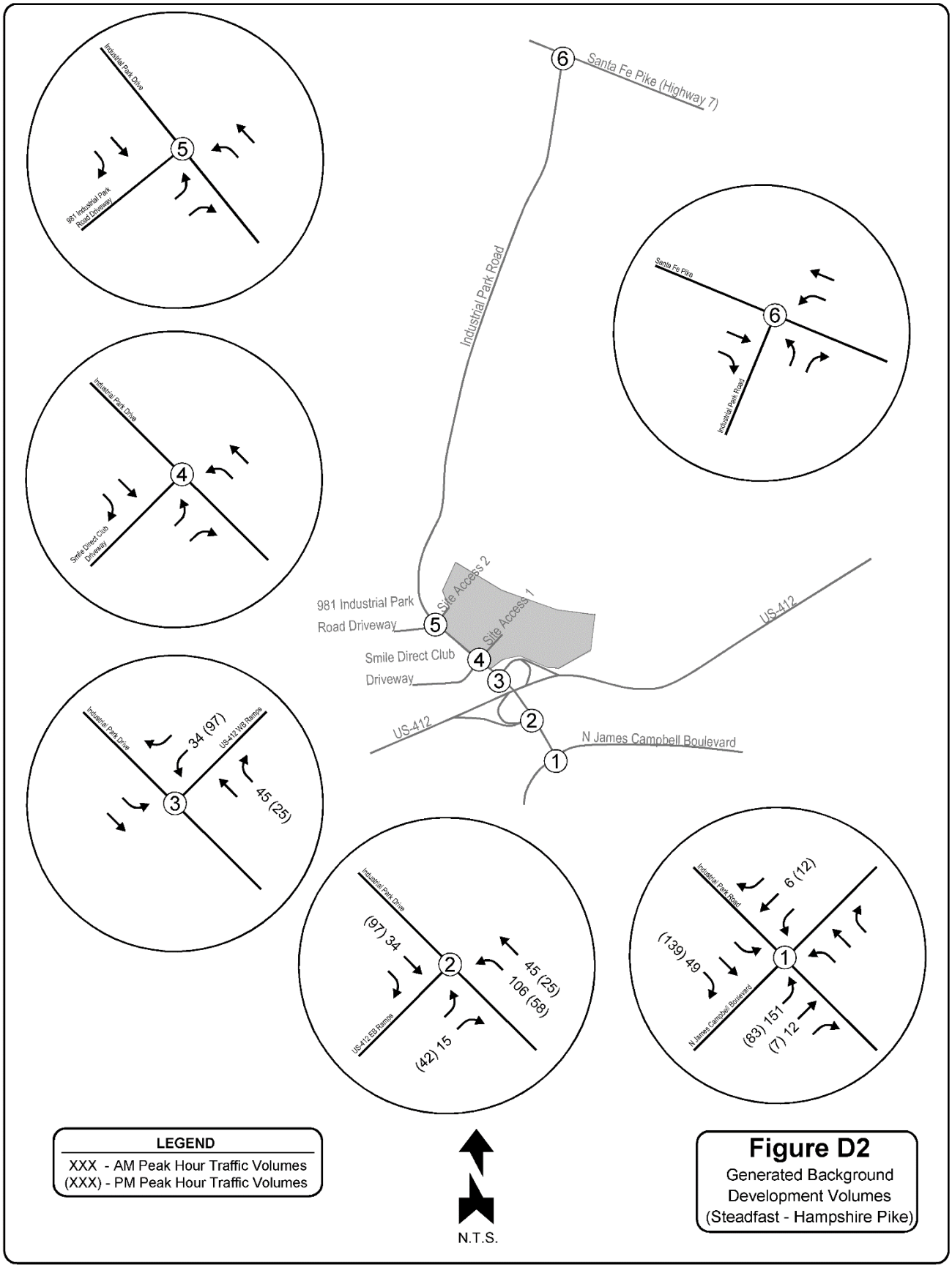
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	439	0	559	220
Stage 1	-	-	-	-	289	-
Stage 2	-	-	-	-	270	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1117	-	459	784
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	751	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1117	-	422	784
Mov Cap-2 Maneuver	-	-	-	-	517	-
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	691	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	18.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	517	784	-	-	1117	-
HCM Lane V/C Ratio	0.547	0.08	-	-	0.08	-
HCM Control Delay (s)	20	10	-	-	8.5	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	3.3	0.3	-	-	0.3	-

APPENDIX D – ADDITIONAL FIGURES


6
Santa Fe Pike (Highway 7)
Industrial Park Road
5
981 Industrial Park Road Driveway
Site Access 2
Site Access 1
4
Smile Direct Club Driveway
US-412
3
2
N James Campbell Boulevard
1
Industrial Park Drive
(438) 382
245 (351)
11 (0)
(2) 0
Santa Fe Pike
104 (169)
78 (82)
(127) 165
(274) 252
(250) 141
(58) 61
(447) 371
(0) 1
267 (350)
4 (2)
(1) 0
(2) 3
US-412 WB Ramps
20 (11)
336 (296)
(123) 54
(320) 327
35 (81)
249 (343)
US-412 EB Ramps
(593) 647
(29) 16
209 (470)
146 (285)
(56) 70
(41) 301
31 (60)
194 (215)
6 (3)
(49) 107
(3) 4
(536) 827
4 (4)
1 (8)
5 (6)
(638) 351
(239) 181
(4) 10
LEGEND
XXX - AM Peak Hour Traffic Volumes
(XXX) - PM Peak Hour Traffic Volumes
N.T.S.
Figure D1
Background Traffic (2025)


6
Santa Fe Pike (Highway 7)
Industrial Park Road
981 Industrial Park Road Driveway
Site Access 2
Site Access 1
Smile Direct Club Driveway
US-412
N James Campbell Boulevard
5
4
3
2
1
Industrial Park Drive
981 Industrial Park Road Driveway
Smile Direct Club Driveway
Santa Fe Pike
Industrial Park Road
US-412 WB Ramps
34 (97)
45 (25)
US-412 EB Ramps
(97) 34
45 (25)
106 (58)
(42) 15
6 (12)
(139) 49
N James Campbell Boulevard
(83) 151
(7) 12
LEGEND
XXX - AM Peak Hour Traffic Volumes
(XXX) - PM Peak Hour Traffic Volumes
N.T.S.
Figure D2
Generated Background Development Volumes
(Steadfast - Hampshire Pike)

T-SQUARE ENGINEERING
CIVIL-SITE | TRAFFIC | WASTEWATER

1329 West Main Street
Franklin, TN 37064
615.678.8212

www.T2-eng.com

March 20th, 2023

City of Columbia Staff

Comment Response Letter – Site Developemt Plan – 0 Industrial Road

Project Number – 22-0431
Project Name – 0 Industrial Road

Maury County E911

4. Contact Maury County 911for Subdivision and street name application. Cgideon@maury911.org

Columbia Power

5. 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.
   Understood.

Planning

6. Fire access and Trailer Turn Around areas shall meet all Driveway standards.
   Noted: On driveway at lot 19 the turn around area meets the required material and shape, however an additional driveway extends past the turnaround to provide access to the last unit.
7. Driveways shall not be greater than 24' wide in first layer. All driveways shall be of asphalt and/or concrete.
   Noted – all driveway throats to lots with buildings have been reduced down to 24-feet.
8. Setback encroachment in the RV parking areas. Show parking spaces for storage area.
   RV and trailer parking spaces have been removed from setback.
9. Show parking area storage container area, Northeast.
   Parking spaces are shown for the storage areas.
10. Show parking spaces for all buildings
    Typical parking layout for buildings shown in the typical lot layout detail on sheet C-2.0. All striping not shown on plan for clarity.
11. Landscaping plan needed for buildings and parking lot.
    See landscape plan sheet L-1.0

12. Lots 18 and 19 are through lots and will to been fronted by only one thoroughfare. Lots have been separated and fronted by only one thoroughfare. Note lots 18 and 19 have been adjusted to 17 and 18.
13. Entrances will need to be in the facade of the principal frontage. - {The buildings will need to face the street.) Building does not have a principal entrance and is in an industrial park where the intention is to have access to various storage units along a shared driveway. Similar to typical self storage buildings.
14. Add elevations details for wash area structure/cargo containers and coverings for RV's. Wash area structure has been removed from the application. Covering for RVs and cargo containers have been added to the elevations.
15. No wash bay shall be located in 1st or second layer or frontage of site. Would be required to be modified to put wash bay in separate layer. e.g. behind building area. A wash bay in the 3rd layer would require the bay (wash doorway) to be 20' behind principle building plane of structure. Wash structure removed from application.
16. Discussion was had about ADA compliance for buildings with stair step grading. Parking lot will need to comply with federal and Zoning 4-3-12C-20 asphalt and/or concrete. Parking spaces akin to driveway parking for residential units are proposed. No formal parking lot is being considered.

Public Works

17. Please see attached Dumpster and Accessibility guidelines. The City does not have compactor service. Private dumpster/compactor service is an option if not retaining City sanitation services.

Engineering

18. Subject to constructions plans, and traffic impact study. Noted.
19. MOU has not been executed for traffic impact study. TIS not received. TIS attached.
20. All roadway design elements shall meet major local roadway. Noted.
21. Based upon the proposed uses all design elements and curb radii shall be capable of accommodating the design vehicle. An appropriate design vehicle is the WB-62. Noted.
22. Gravel turn arounds are not permitted. All turn-arounds now paved.
23. For Preliminary Plat: provide a separate sheet showing only the infrastructure and lot{s). Separate sheet C-2.1 has been included in the set.
24. Will roadways be private or public? Public
25. Stormwater ponds should be located on a common/open space lot and a regional detention agreement should be provided. As previously discussed and confirmed in email, the stormwater ponds are allowed on private lots with easement.
26. Provide more detail regarding retaining walls in the parking area{s) for the flex buildings. Step walls separating the grade changes between pads will be provided at the construction document phase.

Fire

27. Hose pull will have to reach 150ft around all sides of structure. Noted.

Wastewater

28. Columbia Wastewater requires that easements be presented, with proof that new sewer construction within the easements is possible. If it is possible to use the easement, a gravity solution is required since that is what is stated to be the intended solution in email correspondence. The existing force main within the easement shall be shortened by the Developers and tied-in to the proposed manhole on the subject site, and shall gravity flow the rest of the way to the existing force main tie-in point to the Columbia gravity system near Smile Direct. No grinder pump systems are allowed. Noted.

Columbia Water

29. "The project is within Columbia Power and Water's service area and a Water Availability Letter was recently issued. 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 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." Noted.

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, March 7, 2023

ITEM NO.
23-0059

DESCRIPTION: Request for development site plan approval at Tax Map 89 Parcel 46 off Industrial Park Road.

RECOMMENDATION: For final recommendation please see staff report.

COMMENTS:

ATT

1. Plan to serve.

Police

2. No comments provided.

Building

3. No comment.

Maury County E911

4. Contact Maury County 911 for Subdivision and street name application. Cgideon@maury911.org

Columbia Power

5. 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.

Planning

6. Fire access and Trailer Turn Around areas shall meet all Driveway standards.

7. Driveways shall not be greater than 24' wide in first layer. All driveways shall be of asphalt and/or concrete.
8. Setback encroachment in the RV parking areas. Show parking spaces for storage area.
9. Show parking area storage container area, Northeast.
10. Show parking spaces for all buildings
11. Landscaping plan needed for buildings and parking lot.
12. Lots 18 and 19 are through lots and will to been fronted by only one thoroughfare.
13. Entrances will need to be in the facade of the principal frontage. - (The buildings will need to face the street.)
14. Add elevations details for wash area structure/cargo containers and coverings for RV's
15. No wash bay shall be located in 1st or second layer or frontage of site. Would be required to be modified to put wash bay in separate layer. e.g. behind building area. A wash bay in the 3rd layer would require the bay (wash doorway) to be 20' behind principle building plane of structure.
16. Discussion was had about ADA compliance for buildings with stair step grading. Parking lot will need to comply with federal and Zoning 4-3-12C-20

Public Works

17. Please see attached Dumpster and Accessibility guidelines. The City does not have compactor service. Private dumpster/compactor service is an option if not retaining City sanitation services.

Engineering

18. Subject to constructions plans, and traffic impact study
19. MOU has not been executed for traffic impact study. TIS not received
20. All roadway design elements shall meet major local roadway.
21. Based upon the proposed uses all design elements and curb radii shall be capable of accommodating the design vehicle. An appropriate design vehicle is the WB-62
22. Gravel turn arounds are not permitted
23. For Preliminary Plat: provide a separate sheet showing only the infrastructure and lot(s)
24. Will roadways be private or public?
25. Stormwater ponds should be located on a common/open space lot and a regional detention agreement should be provided.
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Fire

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Maury County Highway Dept.

30. No comment.

Atmos Energy

31. No comments.

Maury County Schools

32. No comments provided.

Duck River Electric Membership Corp

33. No comments.

CPWS Broadband

34. Plan to Serve

ATTACHMENTS: Concept Plan

NOTE: All submittals shall be compliant with City standards prior to Planning Commission review. Items that are not adhering to the regulations and/or comments for that request will not be forwarded to the next agenda until such items are amended.

ZERO INDUSTRIAL PARK ROAD

SITE DEVELOPMENT PLAN

0 Industrial Park Road
City of Columbia, Tennessee
Tax Map 089, Parcels 046.00, 46.59 Acres

Developer: Kure Properties LLC
4817 Murfreesboro Rd
Arrington, TN 37014
ryan@kureconstruction.com
(630)306-700

Surveyor: Carroll Land Surveying
495 East Main Street, Suite 1
Hohenwald, TN 38462
csurvey@bellsouth.net
(931)796-1654

Landscape Engineer: T-SQUARE ENGINEERING
Consulting Civil Engineering
1329 West Main St., Franklin, TN, 37064
(615)370-1443 * Email curtis.stewart@t2-eng.com

Engineer: T-SQUARE ENGINEERING
Consulting Civil Engineering
1329 West Main St., Franklin, TN, 37064
(615)370-1443 * Email cole.gaumnitz@t2-eng.com



VICINITY MAP
N.T.S.

Sheet Schedule

C-0.0 Cover Sheet
C-0.1 Site Notes
C-1.0 Existing Conditions
C-2.0 Site Plan / Preliminary Plat
C-2.1 Lot Line and Curve Tables
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 Storm Structure and Pipe Tables
C-7.0 Utility Plan
L-1.0 Tree Protection Plan

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # 47119C0165E OF THE CITY OF COLUMBIA, TN. DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 02/13/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

COVER SHEET
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION
02/13/2023

PROJECT
22-0431

SHEET
C-0.0

T-SQUARE ENGINEERING

SITE GRADING & EROSION CONTROL NOTES

1. CONSTRUCT SILT BARRIERS BEFORE BEGINNING GRADING OPERATIONS.
2. MULCH AND SEED ALL DISTURBED AREAS AS SOON AS POSSIBLE AFTER FINAL GRADING IS COMPLETED, UNLESS OTHERWISE INDICATED. CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
3. PROVIDE TEMPORARY CONSTRUCTION ACCESS(ES) AT THE POINT(S) WHERE CONSTRUCTION VEHICLES EXIT THE CONSTRUCTION AREA. MAINTAIN PUBLIC ROADWAYS FREE OF TRACKED MUD AND DIRT.
4. THE CONTRACTOR SHALL CHECK ALL EXISTING GRADES AND DIMENSIONS IN THE FIELD PRIOR TO BEGINNING WORK AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
5. THE CONTRACTOR SHALL ADJUST THE CASTINGS OF ALL NEW AND EXISTING STRUCTURES TO MATCH PROPOSED FINISH GRADES.
6. PROPOSED CONTOUR LINES AND SPOT ELEVATIONS ARE THE RESULT OF AN ENGINEERED GRADING DESIGN AND REFLECT A PLANNED INTENT WITH REGARD TO DRAINAGE AND MOVEMENT OF MATERIALS. SHOULD THE CONTRACTOR HAVE ANY QUESTION OF THE INTENT OR ANY PROBLEM WITH THE CONTINUITY OF GRADES, THE ENGINEER SHALL BE CONTACTED IMMEDIATELY.
7. ALL CUT AND FILL SLOPES SHALL BE 3 HORIZONTAL TO 1 VERTICAL OR FLATTER UNLESS OTHERWISE INDICATED ON THE PLANS.
8. ALL PIPES UNDER EXISTING PAVED AREAS SHALL BE BACKFILLED TO THE TOP OF SUBGRADE WITH CRUSHED STONE.
9. MINIMUM GRADE ON ASPHALT OR CONCRETE PAVING SHALL BE 1.0%.
10. CONTRACTOR SHALL CONFORM TO ALL APPLICABLE CODES AND OBTAIN APPROVAL AS NECESSARY BEFORE BEGINNING CONSTRUCTION.
11. ALL EARTHWORK, INCLUDING THE EXCAVATED SUBGRADE AND EACH LAYER OF FILL, SHALL BE MONITORED AND APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER, OR THEIR REPRESENTATIVE.
12. IF ANY SPRINGS OR UNDERGROUND STREAMS ARE EXPOSED DURING CONSTRUCTION PERMANENT FRENCH DRAINS MAY BE REQUIRED. THE DRAINS SHALL BE SPECIFIED AND LOCATED DURING CONSTRUCTION AS REQUIRED BY THE CONDITIONS WHICH ARE ENCOUNTERED, AND SHALL BE APPROVED BY THE ENGINEER.
13. THE GRADING & DRAINAGE PLAN IS NOT A DETERMINATION OR GUARANTEE OF THE SUITABILITY OF THE SUBSURFACE CONDITIONS FOR THE WORK INDICATED. A GEOTECHNICAL SOILS REPORT HAS BEEN PREPARED AND IS AVAILABLE FROM THE OWNER. DETERMINATION OF THE SUBSURFACE CONDITIONS FOR THE WORK INDICATED IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
14. THE CONTRACTOR SHALL TAKE SPECIAL CARE TO COMPACT FILL SUFFICIENTLY AROUND AND OVER ALL PIPES, STRUCTURES, VALVE STEMS, ETC., INSIDE THE PROPOSED PAVED AREAS TO AVOID SETTLEMENT. ANY SETTLEMENT DURING THE WARRANTY PERIOD SHALL BE RESTORED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
15. IN NO CASE SHALL SLOPE, HEIGHT, SLOPE INCLINATION, OR EXCAVATION DEPTH, INCLUDING TRENCH CONSTRUCTION, EXCEED THOSE SPECIFIED IN LOCAL, STATE AND FEDERAL REGULATIONS, SPECIFICALLY THE CURRENT OSHA HEALTH AND SAFETY STANDARDS FOR EXCAVATIONS (29 CRF PART 1926) SHALL BE FOLLOWED.
16. DO NOT DISTURB VEGETATION OR REMOVE TREES EXCEPT WHEN NECESSARY FOR GRADING PURPOSES.
17. STRIP TOPSOIL FROM ALL CUT AND FILL AREAS AND STOCKPILE UPON COMPLETION OF GENERAL GRADING OVER ALL DISTURBED AREAS, TO A MINIMUM DEPTH OF 6". CONTRACTOR SHALL SUPPLY ADDITIONAL TOP SOIL IF INSUFFICIENT QUANTITIES EXIST ON SITE.
18. TOP OF GRATE ELEVATIONS AND LOCATION OF COORDINATES FOR DRAINAGE STRUCTURES SHALL BE AS SHOWN ON THE DETAIL, UNLESS NOTED OTHERWISE. THE GRATES SHALL SLOPE LONGITUDINALLY WITH THE PAVEMENT GRADES.
19. ALL DRAINAGE CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE JURISDICTION.
20. POSITIVE DRAINAGE SHALL BE ESTABLISHED AS THE FIRST ORDER OF WORK AND SHALL BE MAINTAINED AT ALL TIMES DURING AND AFTER CONSTRUCTION. SOIL SOFTENED BY PERCHED WATER IN FOUNDATION AND PAVEMENT AREAS MUST BE UNDERCUT AND REPLACED WITH SUITABLE FILL MATERIALS APPROVED BY THE GEOTECHNICAL ENGINEER. GROUNDWATER INFILTRATION INTO EXCAVATIONS SHOULD BE EXPECTED, AND THE WATER SHALL BE REMOVED USING GRAVITY DRAINAGE OR PUMPING.
21. REINFORCED CONCRETE STORM DRAINAGE PIPE SHALL BE CLASS III, WALL "B".
22. FILL SLOPES 3:1 AND GREATER SHALL BE PLACED AND COMPACTED 5' BEYOND PROPOSED LIMITS AND THEN EXCAVATED BACK TO THE PROPOSED LOCATION.
23. THE CONTRACTOR SHALL PROVIDE AN ASBUILT SURVEY STAMPED BY A LICENSED SURVEYOR IN THE STATE OF TENNESSEE FOR ALL PUBLIC STORM SYSTEMS, ONSITE DETENTION PONDS, AND WATER QUALITY MEASURES VERIFYING COMPLIANCE WITH DESIGN DOCUMENTS.
24. THE LOCATION OF ALL DIVERSION SWALES AND DITCHES SHALL BE FIELD ADJUSTED TO AVOID TREES AS POSSIBLE. THE CONTRACTOR SHALL WALK THE ALIGNMENT OF THESE SWALES AND DITCHES IN THE FIELD TO VERIFY AVOIDANCE OF TREES.
25. SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES IS TO BE PLACED AT A SITE APPROVED BY THE ENGINEER. IT SHALL BE TREATED IN A MANNER SO THAT THE AREA AROUND THE DISPOSAL SITE WILL NOT BE CONTAMINATED OR DAMAGED BY THE SEDIMENT IN THE RUN-OFF. COST FOR TTHEIR TREATMENT IS TO BE INCLUDED IN PRICE BID FOR EARTHWORK. THE CONTRACTOR SHALL OBTAIN THE DISPOSAL SITE AS PART OF TTHEIR WORK.
26. STOCKPILED TOPSOIL OR FILL MATERIAL IS TO BE TREATED SO THE SEDIMENT RUN-OFF WILL NOT CONTAMINATE SURROUNDING AREAS OR ENTER NEARBY STREAMS.
27. ANY SITE USED FOR DISPOSAL AND/OR STOCKPILE OF ANY MATERIAL SHALL BE PROPERLY PERMITTED FOR SUCH ACTIVITY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEE THAT ALL REQUIRED PERMITS ARE SECURED FOR EACH PROPERTY UTILIZED. A COPY OF THE APPROVED PERMIT MUST BE PROVIDED TO THE INSPECTOR PRIOR TO COMMENCEMENT OF WORK ON ANY PROPERTY. FAILURE TO DO SO MAY RESULT IN THE CONTRACTOR REMOVING ANY ILLEGALLY PLACED MATERIAL AT THEIR OWN EXPENSE.
28. SEGMENTABLE AND/OR POURED IN PLACE RETAINING WALLS SHALL BE PROVIDED BY THE CONTRACTOR AS A DESIGN BUILD. WALL DESIGN PLANS STAMPED BY A STRUCTURAL REGISTERED ENGINEER IN THE STATE OF THE PROJECT SHALL BE SUBMITTED TO THE ENGINEER AS A SHOP DRAWING. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY GEOTECHNICAL INFORMATION NECESSARY TO PROPERLY DESIGN THE WALL.
29. IF ANY SINKHOLES OR VOID AREAS ARE DISCOVERED DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH WORK. A PHASE V INJECTION WELL PERMIT WILL NEED TO BE OBTAINED FROM THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION.

GENERAL NOTES

1. THE CONTRACTOR SHALL CHECK ALL EXISTING CONDITIONS, (i.e. INVERTS, UTILITY ROUTINGS, UTILITY CROSSINGS, AND DIMENSIONS) IN THE FIELD PRIOR TO COMMENCEMENT OF WORK. REPORT ANY DISCREPANCIES TO THE ENGINEER.
2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT THE CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY. THE CONTRACTOR SHALL CALL NATIONAL ONE CALL (811) 72 HOURS PRIOR TO PROCEEDING WITH ANY EXCAVATION.
3. THE CONTRACTOR SHALL CONFORM TO ALL LOCAL CODES AND RECEIVE APPROVAL WHERE NECESSARY BEFORE CONSTRUCTION.
4. EXISTING PAVEMENT OF PUBLIC ROADWAYS SHALL BE PATCHED IN ACCORDANCE WITH LOCAL AGENCY STANDARDS WHEREVER UTILITY INSTALLATION REQUIRES REMOVAL OF THE EXISTING PAVEMENT. COORDINATE PAVEMENT TRENCHING LOCATIONS WITH SITE CIVIL, PLUMBING AND ELECTRICAL PLANS.
5. PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. SLIGHT FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY.
6. DIMENSIONS ARE TO FACE OF CURB AND/OR EXTERIOR FACE OF BUILDING UNLESS OTHERWISE NOTED.
7. CONCRETE FOR CURBS SHALL BE 4.000 PSI AND CONCRETE FOR SIDEWALKS SHALL BE 3.500 PSI.
8. ANY WORK UNACCEPTABLE TO THE OWNER'S REPRESENTATIVE OR TO THE LOCAL GOVERNING AUTHORITY SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
9. CURBS SHALL BE PARALLEL TO THE CENTERLINE OF DRIVES. THE CURB SHALL BE PLACED ONLY AFTER HAVING ALL BREAK POINTS (PC & PT OF CURVES) LOCATED AT THE FACE OF CURB OR AT A CONSISTENT OFFSET BY A REGISTERED LAND SURVEYOR.
10. THE CONTRACTOR SHALL COMPLY WITH ALL PERTINENT PROVISIONS OF THE MANUAL OF ACCIDENT PREVENTION AND CONSTRUCTION ISSUED BY AGC OF AMERICA, INC. AND THE SAFETY AND HEALTH REGULATIONS OF CONSTRUCTION ISSUED BY THE U.S. DEPARTMENT OF LABOR.
11. THE CONTRACTOR SHALL PAVE IN THE DIRECTION OF TRAFFIC.
12. THE CONTRACTOR SHALL COLD PLANE IN THE DIRECTION OF TRAFFIC.
13. THE CONTRACTOR WILL BE REQUIRED TO ADJUST GRADES OF INTERSECTING STREETS, ALLEYS, PUBLIC ENTRANCES AND PRIVATE DRIVES AS DIRECTED BY THE ENGINEER.
14. ALL ROADWAY AND SIDEWALK CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE CITY OF COLUMBIA.
15. ALL CONSTRUCTION MATERIALS AND INSTALLATION SHALL CONFORM TO THE CITY OF COLUMBIA AND TDOT REGULATIONS AND SPECIFICATIONS.
16. ALL CURBING WILL BE REQUIRED TO ADJUST TO THE GRADES OF INTERSECTING STREETS, ALLEYS, PUBLIC ENTRANCES, AND PRIVATE DRIVES AS DIRECTED BY THE ENGINEER.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL EXISTING MANHOLE CASTINGS/LIDS TO PROPOSED FINISHED GRADE AS NECESSARY.

SITE UTILITY NOTES

1. THE SANITARY SEWER SHALL BE OF THE MATERIAL INDICATED ON THE PLAN. POLYVINYLCHLORIDE (PVC) SHALL BE (SDR26). DUCTILE IRON PIPE (D.I.P.) SHALL BE CLASS 250.
2. ALL WATER LINES, SEWER LINES, AND APPURTENANCES SHALL BE OF MATERIALS AND CONSTRUCTION THAT CONFORM TO THE CITY OF COLUMBIA'S STANDARDS AND SPECIFICATIONS.
4. PROVIDE A MINIMUM 36" OF COVER OVER ALL WATER LINES.
5. THE CONTRACTOR SHALL MAINTAIN 10 FEET HORIZONTAL SEPARATION BETWEEN SANITARY SEWER LINES AND WATER LINES. WHERE THESE CRITERIA CANNOT BE MET, THE CONTRACTOR SHALL MAINTAIN 18" VERTICAL SEPARATION BETWEEN WATER AND SEWER LINES.
6. THE CONTRACTOR SHALL FIELD VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATION OF EXISTING MANHOLES OR SANITARY SEWER LINES AT THE POINT OF CONNECTION PRIOR TO THE COMMENCEMENT OF ORDERING OF MATERIALS, CONSTRUCTION OR REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES DO NOT CONFLICT WITH SANITARY SEWERS, SANITARY SEWER SERVICES, STORM SEWERS, OR ANY OTHER UTILITY OR STRUCTURE, EXISTING OR PROPOSED.
8. THE LOCATION OF EXISTING UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.
9. BEFORE CONNECTIONS ARE MADE INTO EXISTING UTILITIES, THE NEW LINES ARE TO BE FLUSHED AND TESTED BY THE CONTRACTOR IN ACCORDANCE WITH THE LOCAL WATER AND SEWER DEPARTMENT SPECIFICATIONS.
10. ALL TRENCHES CUT IN EXISTING ROADS OR DRIVES SHALL UTILIZE A CLEAN SAW CUT AND SHALL BE BACKFILLED (100%) TO FINAL SUBGRADE WITH #57 STONE. REPAIR ROADS PER LOCAL AGENCY REQUIREMENTS.
11. REPAIR ALL DAMAGE TO EXISTING FEATURES (i.e. DRIVES, ROADS, YARDS, LANDSCAPING, ETC…) TO PRE-CONSTRUCTION CONDITION.
12. THE CONTRACTOR SHALL PROVIDE ALL HORIZONTAL AND VERTICAL BENDS TO ATTAIN THE ALIGNMENT INDICATED ON THE PLANS. PROVIDE VERTICAL BENDS WHERE NECESSARY TO ALLOW WATER LINES TO PASSUNDER OR OVER OTHER UTILITY LINES. (ALL BENDS AND BRACES NEEDED MAY NOT BE ACTUALLY SHOWN). PROVIDE BRACING AND/OR RODDING AT ALL BENDS AND TEES AS REQUIRED BY WATER DEPARTMENT.
13. WATER METERS SHALL BE AT LEAST 22" BUT NO MORE THAN 26" FROM TOP OF METER TO PROPOSED FINISHED GRADE.
14. THE CONTRACTOR SHALL VERIFY REQUIRED PIPE LENGTHS. EXISTING PIPE MATERIAL AND SIZES AS SHOWN ON PLANS.
15. REPAIR EXISTING PAVEMENT, CURBS, WALKS, LANDSCAPING, ETC. THAT ARE DAMAGED BY CONSTRUCTION ACTIVITIES TO A LIKE NEW CONDITION AT NO ADDITIONAL COST TO THE OWNER.
16. THE PROPOSED GAS LINE CONSTRUCTION AND INSTALLATION SHALL BE COORDINATED WITH THE LOCAL GAS COMPANY BY THE CONTRACTOR.
17. THE PROPOSED ELECTRIC LINE CONSTRUCTION AND INSTALLATION SHALL BE COORDINATED WITH THE LOCAL ELECTRIC COMPANY BY THE CONTRACTOR.
18. THE PROPOSED TELEPHONE LINE CONSTRUCTION AND INSTALLATION SHALL BE COORDINATED WITH THE LOCAL TELEPHONE COMPANY BY THE CONTRACTOR.
19. WHERE DRAINAGE OR UTILITY LINES OCCUR IN PROPOSED FILL AREAS, THE FILL MATERIAL IS TO BE PLACED AND COMPACTED PER GEOTECHNICAL RECOMMENDATIONS PRIOR TO INSTALLATION OF DRAINAGE OR UTILITY LINES. FILL IS TO BE INSPECTED BY A PROFESSIONAL GEOTECHNICAL ENGINEER TESTING FIRM EMPLOYED BY THE OWNER. RESULTS OF THE TEST SHALL BE FURNISHED TO THE OWNER'S REPRESENTATIVE. CONTRACTOR TO PAY FOR ANY RETESTING.
20. THE CONTRACTOR SHALL ADJUST THE ALIGNMENT OF THE WATER LINES (HORIZONTALLY AND/OR VERTICALLY) TO ALLOW THE REQUIRED BRACING AT BENDS AND TEES.
21. EXISTING CASTINGS LOCATED IN FILL/CUT AREAS SHALL BE ADJUSTED TO ENSURE THAT THE TOP OF CASTING IS FLUSH WITH THE FINISHED GRADE.
22. THE OUTSIDE OF ALL MANHOLES SHALL BE COATED WITH BITUMINOUS PAINT.
23. THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT AT NO ADDITIONAL COST TO THE OWNER.
24. PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS.
25. ALL CONNECTIONS TO EXISTING MANHOLES SHALL BE BY THE CORING AND RESILIENT SEAL METHOD.
26. FIRE HYDRANT ASSEMBLIES INCLUDE THE APPROPRIATE SIZED TEE (WITH KICKER), 6" LINE TO HYDRANT, 6" GATE VALVE (WITH VALVE BOX), AND FIRE HYDRANT (WITH KICKER). HYDRANTS SHALL BE INSTALLED AT LOCATIONS SHOWN ON THE PLANS.
27. THE CONCRETE CAPS AND ENCASEMENTS ON WATER AND SEWER LINES SHALL BE A MINIMUM OF 6" THICK. USE 3000 PSI CONCRETE.
28. ALL SANITARY SEWER SERVICES SHALL BE 4" DIAMETER AND EXTEND 10 FEET BEYOND THE PROPERTY LINE.
29. CONTRACTOR SHALL MARK THE LOCATION OF ALL NEW PVC LINES WITH #8 WIRE.
30. ALL PROPOSED LOT CORNERS SHALL BE FIELD STAKED PRIOR TO CONSTRUCTION OF SANITARY SEWERS. CONTROL POINTS ARE AS SHOWN ON THE SITE LAYOUT PLAN.
31. THE BUILDER SHALL VERIFY THE SANITARY SEWER SERVICE ELEVATION PRIOR TO SETTING THE FINISHED FLOOR ELEVATIONS FOR ALL STRUCTURES. THE SANITARY SEWER MAIN AND SERVICES WERE DESIGNED BASED ON SETTING MINIMUM FINISHED FLOOR ELEVATIONS ON A NUMBER OF CRITICAL LOTS. THE BUILDER SHALL ADHERE TO THE MINIMUM FINISHED FLOOR ELEVATIONS LISTED ON THE SANITARY SEWER SHEETS.
32. PROVIDE A MINIMUM 30" OF COVER OVER ALL SEWER LINES IN GRASS AREAS AND 48" OF COVER IN PAVED AREAS.

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # 47119C0165E OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 02/13/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

ZERO INDUSTRIAL PARK ROAD

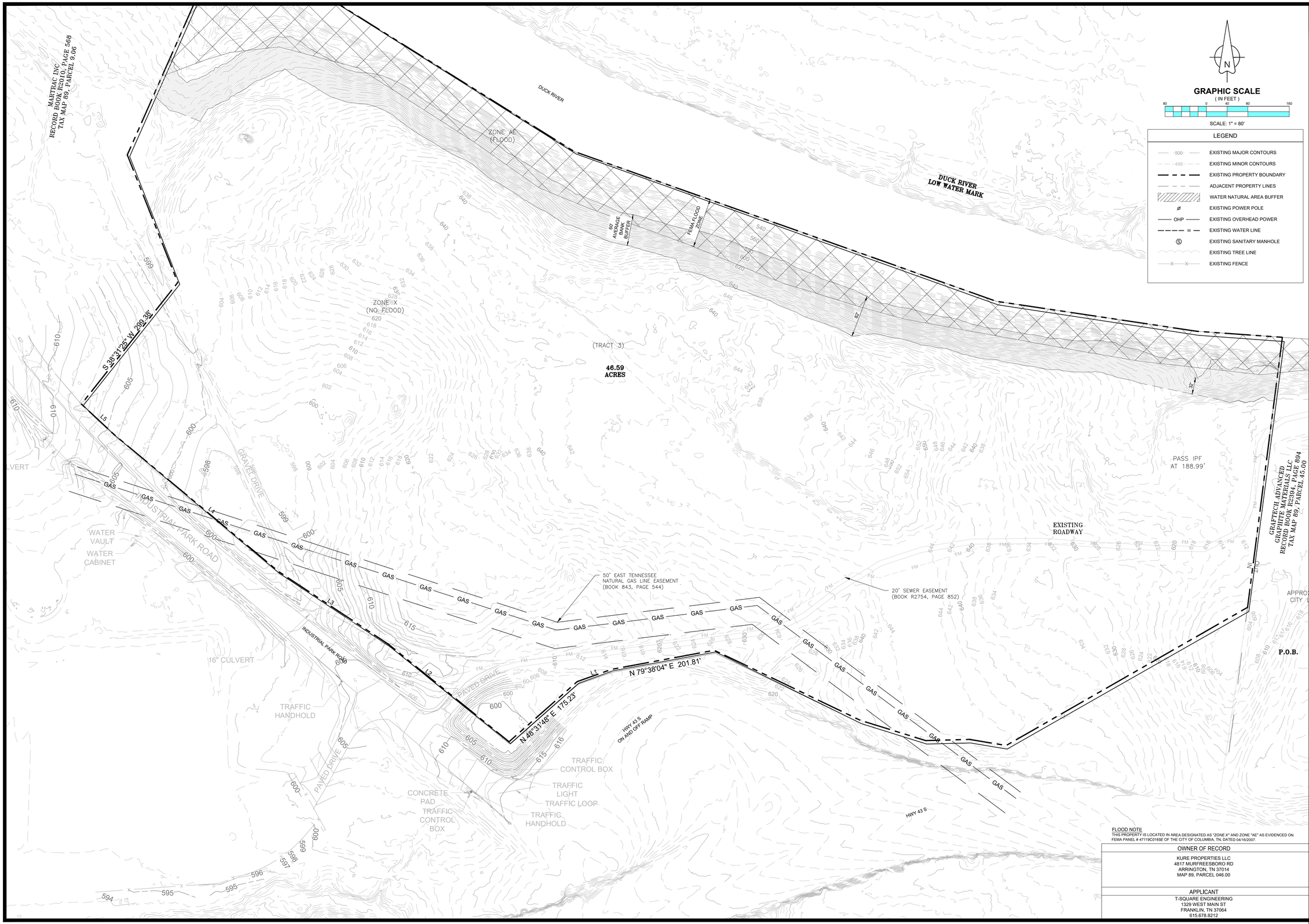
SITE NOTES

SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION
02/13/2023

PROJECT
22-0431

SHEET
C-0.1



FLOOD NOTE
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OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00

APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 02/13/2023
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REVIEWER: FCG

EXISTING CONDITIONS

SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMITTING REVIEW ONLY
NOT FOR CONSTRUCTION

FRITZ C. GAUNNITT
REGISTERED ENGINEER
AGRICULTURE
CIVIL
124450
STATE OF TENNESSEE

02/13/2023

PROJECT
22-0431

SHEET
C-1.0

BUILDING SETBACKS	
FRONT	20 FT
REAR	0 FT
SIDE	0 FT

	PARKING	
	REQUIRED	PROPOSED
1 PER 2,000 SF, MINIMUM OF 1 SPACE PER 2 EMPLOYEES ON PREMISES AT ONE TIME, BUT NO FEWER THAN 2 SPACES	107	
UNITS = 110 + Bldg 13	222	233

SITE DATA		
	EXISTING	PROPOSED
PROPERTY ACREAGE	46.59	46.59
ZONING	LI	LI
USE	VACANT	INDUSTRIAL STORAGE
LOTS	1	20
PROPERTY AREA USE		
PERVIOUS AREA	46.59 AC	38.30 AC
IMPERVIOUS AREA	0 AC	8.29 AC
BUILDING HEIGHT	N/A	1-STORY
BUILDING AREA	N/A	214,081 SF
	REQUIRED	PROPOSED
OPEN SPACE % OF OVERALL	7%	16%
OPEN SPACE TYPE	N/A	NATURAL GREEN WAY
ERROR OF CLOSURE	1/10,000	1/10,000

Parcel Area Table	
PARCEL	SQ. FT.
1	249,094.67
2	235,240.10
3	112,616.33
4	50,556.80
5	46,198.41
6	43,777.08
7	46,783.20
8	44,364.69
9	48,127.70
10	49,271.58
11	115,487.33
12	91,448.26
13	82,086.79
14	49,371.05
15	49,285.02
16	49,379.31
17	49,285.02
18	51,372.35
19	44,844.03
20	59,084.27

Open Space Areas	
PARCEL	SQ. FT.
A	255,796.74
B	42,190.11
Road Areas	
PARCEL	SQ. FT.
ROAD 1	80,489.76
ROAD 2	83,435.62

ABBREVIATIONS

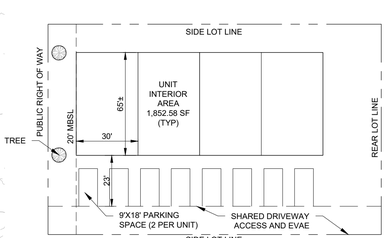
AC	=	ACRES
BLDG	=	BUILDING
EVAE	=	EMERGENCY VEHICLE ACCESS EASEMENT
FT	=	FEET
MBSL	=	MAJOR BUILDING SETBACK LINE
N/A	=	NON APPLICABLE
N.T.S.	=	NOT TO SCALE
R	=	RADIUS
SF	=	SQUARE FEET
(TYP)	=	TYPICAL

N

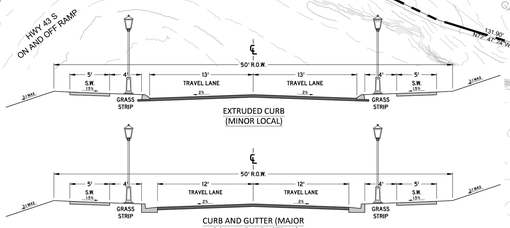
GRAPHIC SCALE
(IN FEET)
80 0 40 80 160
SCALE: 1" = 80'

LEGEND

- PROPOSED LOT LINES
- 00 PROPOSED LOT NUMBER
- PROPOSED BUILDING SETBACK
- PROPOSED ACCESS EASEMENT
- PROPOSED DRAINAGE EASEMENT
- PROPOSED UTILITY EASEMENT
- WATERWAY NATURAL AREA
- 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



TYPICAL LOT LAYOUT
N.T.S



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

TYPICAL ROAD SECTION
N.T.S

FLOOD NOTE
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OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

REVISIONS

NO.	DATE

DATE: 02/13/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

SITE PLAN / PRELIMINARY PLAT
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FRANCIS C. GAVIN IV
REGISTERED PROFESSIONAL ENGINEER
AGRICULTURE
POMPEY
124
STATE OF TENNESSEE
FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION
02/13/2023

PROJECT
22-0431

SHEET
C-2.0

T-SQUARE ENGINEERING

Parcel Line Table		
Line #	Length	Direction
L1	536.74	S60° 13' 44.00"W
L2	71.95	N80° 37' 37.00"W
L3	84.43	S88° 28' 30.99"W
L4	131.90	N72° 47' 24.00"W
L5	252.14	N64° 20' 19.00"W
L6	60.74	N64° 37' 21.01"W
L7	22.26	N14° 25' 34.84"W
L9	269.64	N64° 46' 42.57"E
L11	341.75	S88° 04' 44.91"E
L13	245.05	S88° 04' 44.91"E
L14	103.45	S7° 21' 11.09"W
L15	98.84	S7° 21' 11.09"W
L16	233.19	S7° 21' 11.09"W
L19	234.59	N88° 04' 44.91"W
L21	389.27	N1° 55' 15.09"E
L22	54.11	S70° 27' 05.00"E
L23	509.06	S81° 29' 52.00"E
L24	164.10	S85° 57' 44.80"E
L26	163.11	S64° 46' 42.57"W
L28	2.26	N25° 23' 05.91"W
L30	110.43	N51° 36' 19.01"W
L31	466.69	N38° 23' 40.99"E
L32	92.48	S70° 27' 05.00"E
L33	113.00	N51° 36' 19.01"W
L34	428.12	N38° 23' 40.99"E
L35	119.40	S70° 27' 05.00"E

Parcel Line Table		
Line #	Length	Direction
L36	113.00	N51° 36' 19.01"W
L37	389.55	N38° 23' 40.99"E
L38	119.40	S70° 27' 05.00"E
L39	113.00	N51° 36' 19.01"W
L40	290.25	N38° 23' 40.99"E
L41	71.52	N6° 36' 19.01"W
L42	170.68	S68° 11' 37.62"E
L43	128.00	N51° 36' 19.01"W
L44	205.00	N38° 23' 40.99"E
L45	5.00	N51° 36' 19.01"W
L46	121.24	N6° 36' 19.01"W
L47	175.46	S68° 11' 37.62"E
L48	170.00	N51° 36' 19.01"W
L49	267.12	N38° 23' 40.99"E
L50	82.71	S68° 11' 37.62"E
L51	137.41	N51° 36' 19.01"W
L53	250.31	N27° 59' 36.65"E
L54	210.98	S57° 58' 08.00"E
L56	46.27	N87° 33' 29.42"W
L57	316.81	N2° 26' 30.58"E
L58	28.83	N87° 46' 00.69"E
L59	218.72	S57° 58' 08.00"E
L60	130.77	N87° 33' 29.42"W
L62	49.90	S38° 23' 40.99"W
L63	264.98	N21° 32' 25.01"W
L64	161.09	N23° 49' 05.00"E

Parcel Line Table		
Line #	Length	Direction
L65	331.58	N87° 46' 00.69"E
L67	23.46	N51° 03' 26.01"W
L68	253.61	N56° 30' 50.00"W
L69	409.61	N50° 13' 18.00"W
L70	39.81	N47° 09' 00.00"W
L71	120.96	N38° 23' 40.99"E
L72	226.28	S51° 36' 19.01"E
L73	113.22	S51° 36' 19.01"E
L74	113.00	S51° 36' 19.01"E
L75	113.22	S51° 36' 19.01"E
L76	113.00	S51° 36' 19.01"E
L77	80.03	S20° 14' 46.43"E
L78	232.21	N38° 23' 40.99"E
L79	177.03	S87° 33' 29.42"E
L80	434.69	S38° 23' 40.99"W
L81	436.15	S38° 23' 40.99"W
L83	96.19	S51° 36' 19.01"E
L84	436.15	S38° 23' 40.99"W
L85	113.00	S51° 36' 19.01"E
L86	436.15	S38° 23' 40.99"W
L87	113.22	S51° 36' 19.01"E
L88	436.15	S38° 23' 40.99"W
L89	113.00	S51° 36' 19.01"E
L90	430.27	S38° 23' 40.99"W
L91	15.27	S88° 59' 05.14"W
L93	113.00	S51° 36' 19.01"E

Parcel Line Table		
Line #	Length	Direction
L94	260.00	S38° 23' 40.99"W
L95	59.81	S1° 00' 54.86"E
L96	195.40	S88° 59' 05.14"W
L97	113.00	S51° 36' 19.01"E
L101	162.12	S88° 59' 05.14"W
L102	223.43	S51° 36' 19.01"E
L103	794.07	S57° 58' 08.00"E
L104	864.72	S70° 27' 05.00"E
L105	391.47	S81° 29' 52.00"E
L106	165.81	S85° 57' 44.80"E
L107	90.15	S7° 21' 11.09"W
L108	164.10	N85° 57' 44.80"W
L109	509.06	N81° 29' 52.00"W
L110	385.38	N70° 27' 05.00"W
L111	428.85	N68° 11' 37.62"W
L112	429.70	N57° 58' 08.00"W
L113	360.41	S87° 46' 00.69"W
L114	306.64	N23° 49' 05.00"E
L115	70.99	S70° 26' 51.01"W
L116	175.34	S48° 34' 26.99"W
L117	226.29	N51° 03' 26.01"W
L119	372.80	N88° 59' 05.14"E
L121	22.26	S14° 25' 34.84"E
L122	201.01	S79° 28' 44.99"W

Curve Table					
Curve #	Length	Radius	Delta	Chord Direction	Chord Length
C1	98.92	525.00	10.80	N70° 10' 34"E	98.77
C2	82.90	175.00	27.14	N78° 20' 59"E	82.13
C3	49.67	58.00	49.07	N67° 23' 14"E	48.17
C4	196.58	58.00	194.19	N54° 14' 27"W	115.11
C5	68.45	62.00	63.26	S60° 17' 34"W	65.03
C6	59.92	225.00	15.26	S84° 17' 28"W	59.75
C7	46.66	225.00	11.88	S70° 43' 11"W	46.58
C8	50.17	32.00	89.84	N70° 18' 12"W	45.19
C9	68.64	150.00	26.22	N38° 29' 42"W	68.05
C10	27.23	150.00	10.40	N56° 48' 21"W	27.19
C11	66.89	150.00	25.55	N74° 46' 56"W	66.34
C12	141.49	150.00	54.05	S65° 25' 06"W	136.31
C13	74.86	150.00	28.59	S55° 27' 26"W	74.08
C15	94.33	100.00	54.05	N65° 25' 06"E	90.87
C17	45.64	100.00	26.15	S74° 28' 58"E	45.25
C18	17.11	100.00	9.80	S56° 30' 23"E	17.09
C19	50.35	150.00	19.23	S79° 22' 09"W	50.11
C20	46.96	100.00	26.90	S38° 09' 11"E	46.53
C21	51.57	32.00	92.34	S19° 34' 31"W	46.17
C22	192.66	475.00	23.24	S77° 21' 54"W	191.34
C23	81.53	100.00	46.71	N65° 37' 40"E	79.29
C24	122.89	525.00	13.41	N82° 16' 45"E	122.61

GRAPHIC SCALE
(IN FEET)
80 0 40 80 160
SCALE: 1" = 80'

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 02/13/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

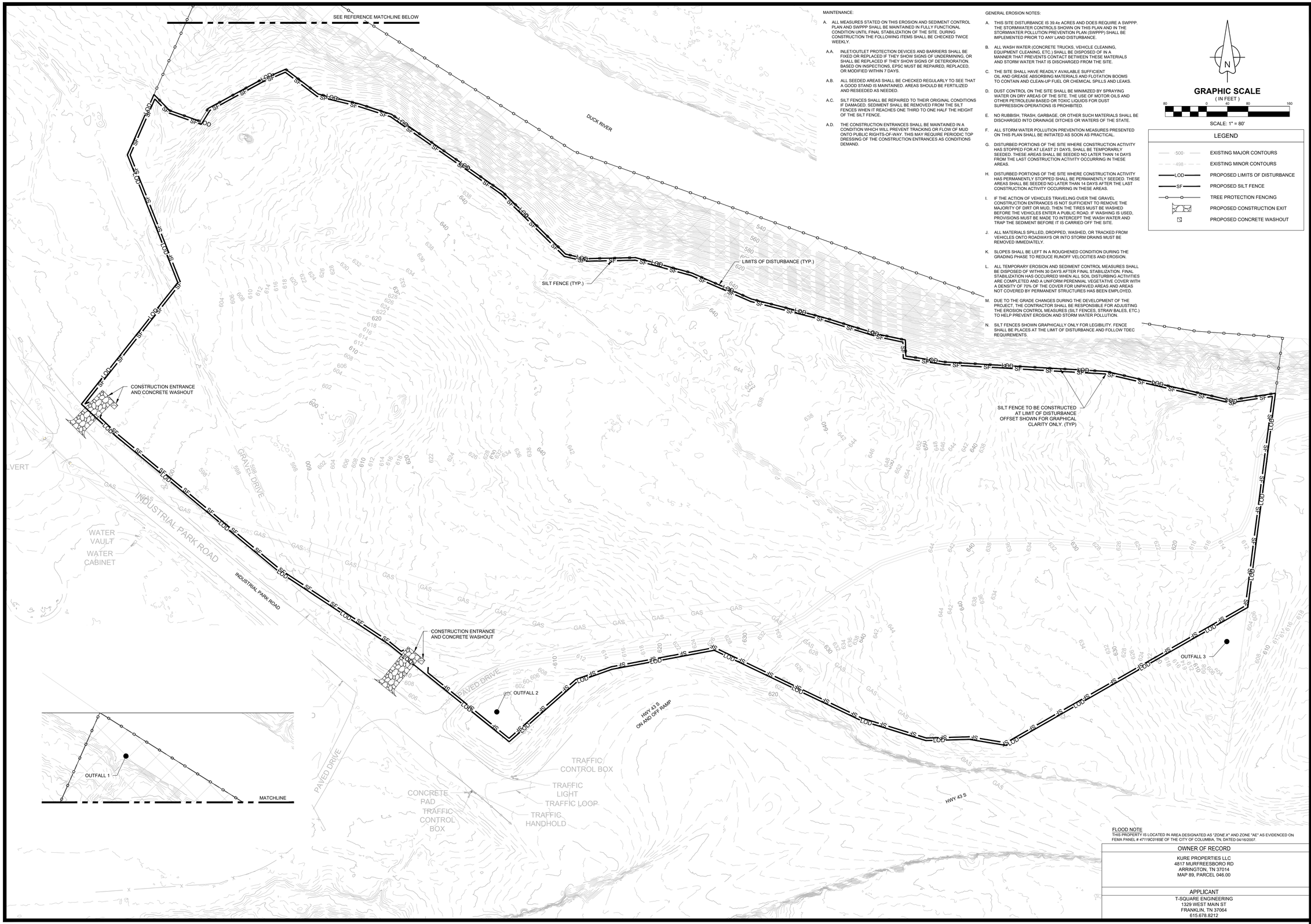
LOT LINE AND CURVE TABLES
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION
02/13/2023

PROJECT
22-0431

SHEET
C-2.1



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 ENTRANCES 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.

GENERAL EROSION NOTES:

A. THIS SITE DISTURBANCE IS 39.4± 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.

B. 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.

M. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO HELP PREVENT EROSION AND STORM WATER POLLUTION.

N. SILT FENCES SHOWN GRAPHICALLY ONLY FOR LEGIBILITY. FENCE SHALL BE PLACES AT THE LIMIT OF DISTURBANCE AND FOLLOW TDEC REQUIREMENTS.

N

GRAPHIC SCALE

(IN FEET)

80 0 40 80 160

SCALE: 1" = 80'

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

FLOOD NOTE

THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 02/13/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

INITIAL EROSION CONTROL
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

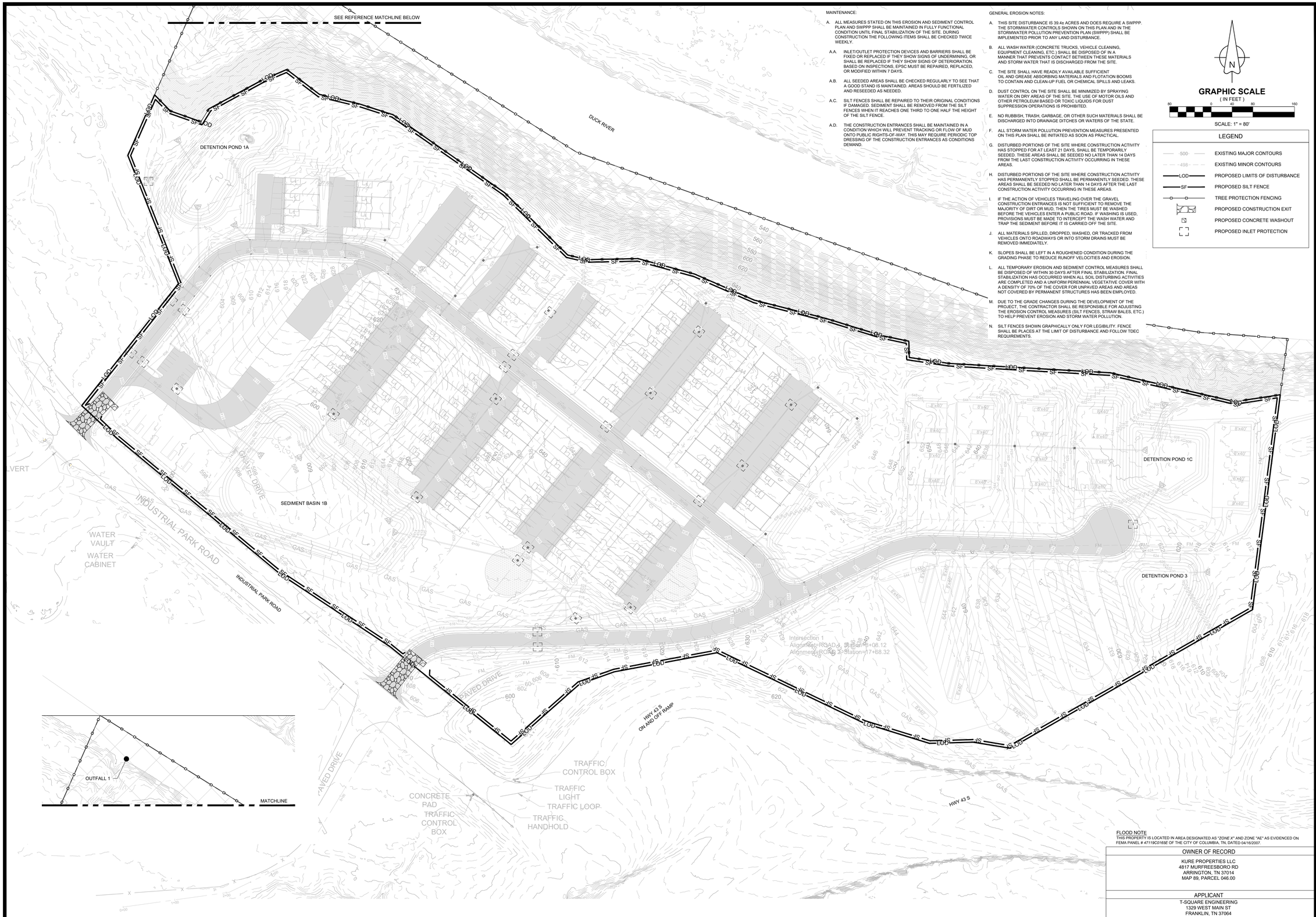
ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION

FRANK C. GALYNN III
REGISTERED ENGINEER
AGRICULTURE
124462
STATE OF TENNESSEE
02/13/2023

PROJECT
22-0431

SHEET
C-3.0



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 ENTRANCES 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.

GENERAL EROSION NOTES:

A. THIS SITE DISTURBANCE IS 39.4± 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.

B. 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.

M. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, STRAW BALES, ETC.) TO HELP PREVENT EROSION AND STORM WATER POLLUTION.

N. SILT FENCES SHOWN GRAPHICALLY ONLY FOR LEGIBILITY. FENCE SHALL BE PLACES AT THE LIMIT OF DISTURBANCE AND FOLLOW TDEC REQUIREMENTS.

N

GRAPHIC SCALE
(IN FEET)
80 0 40 80 160
SCALE: 1" = 80'

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
	PROPOSED INLET PROTECTION

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

TEMPORARY EROSION CONTROL
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

REVISIONS

NO.	DATE

DATE: 02/13/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION
STATE OF TENNESSEE
02/13/2023

PROJECT
22-0431

SHEET
C-3.1

SEE REFERENCE MATCHLINE BELOW

DUCK RIVER

DETENTION POND 1A

DETENTION POND 1B

DETENTION POND 1C

DETENTION POND 3

EROSION CONTROL MATTING AT DRAINAGE SWALES AND 3:1 SLOPES (TYP)

ALL DISTURBED AREAS TO BE PERMANENTLY STABILIZED WITH SEEDING (TYP)

INDUSTRIAL PARK ROAD

PAVED DRIVE

HWY 43 S ON AND OFF RAMP

HWY 43 S

WATER VAULT

WATER CABINET

TRAFFIC CONTROL BOX

TRAFFIC LIGHT

TRAFFIC LOOP

TRAFFIC HANDHOLD

CONCRETE PAD

TRAFFIC CONTROL BOX

OUTFALL 1

MATCHLINE

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.

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GENERAL EROSION NOTES:

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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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N. SILT FENCES SHOWN GRAPHICALLY ONLY FOR LEGIBILITY. FENCE SHALL BE PLACES AT THE LIMIT OF DISTURBANCE AND FOLLOW TDEC REQUIREMENTS.

N

GRAPHIC SCALE
(IN FEET)
80 0 40 80 160

SCALE: 1" = 80'

LEGEND

500	EXISTING MAJOR CONTOURS
498	EXISTING MINOR CONTOURS
500	PROPOSED MAJOR CONTOURS
498	PROPOSED MINOR CONTOURS
	PROPOSED PERMANENT SEEDING
	PROPOSED EROSION CONTROL MAT

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 02/13/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

FINAL EROSION CONTROL
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

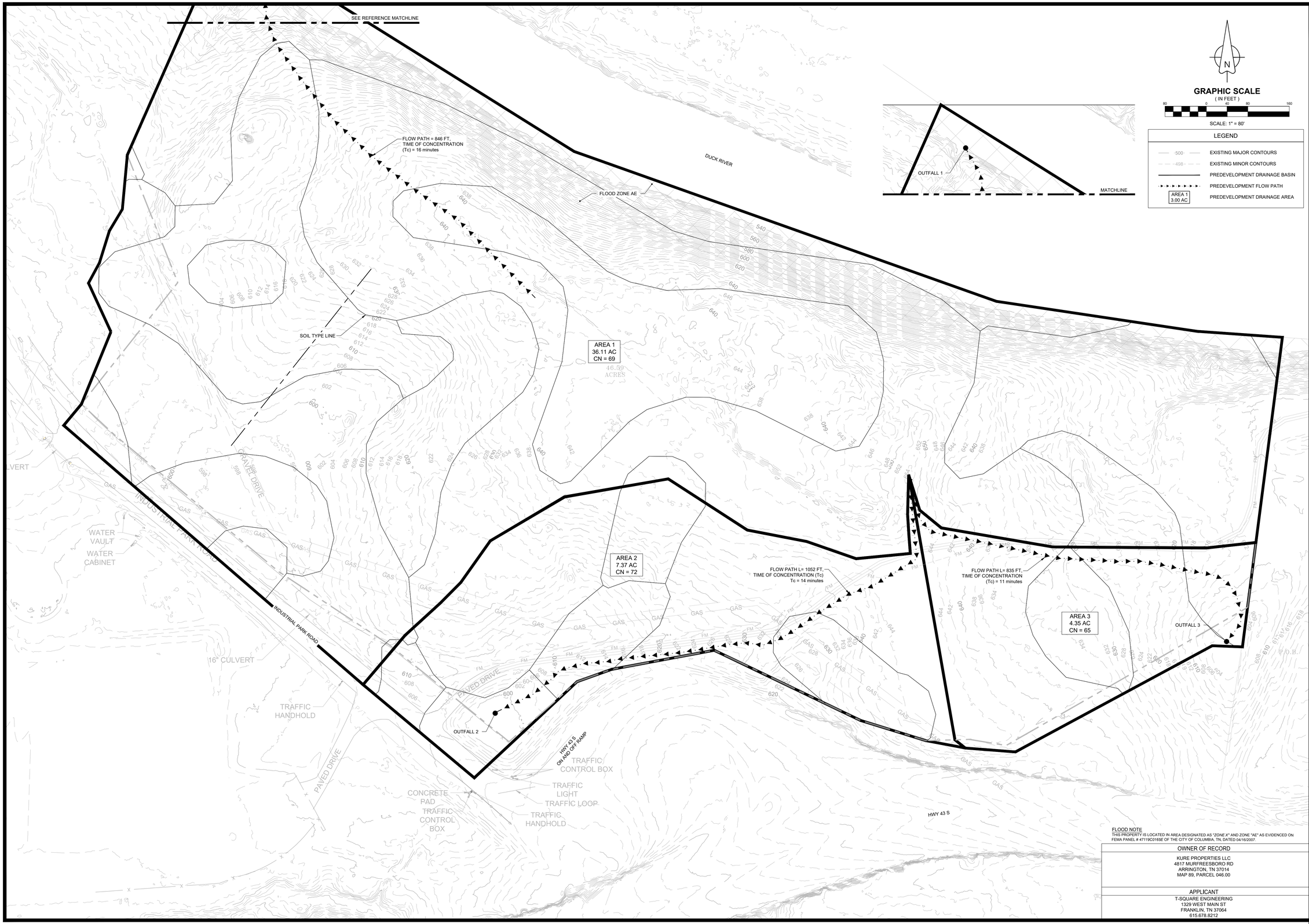
ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION

02/13/2023

PROJECT
22-0431

SHEET
C-3.2



FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00

APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 02/13/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

PREDEVELOPMENT STORMWATER
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

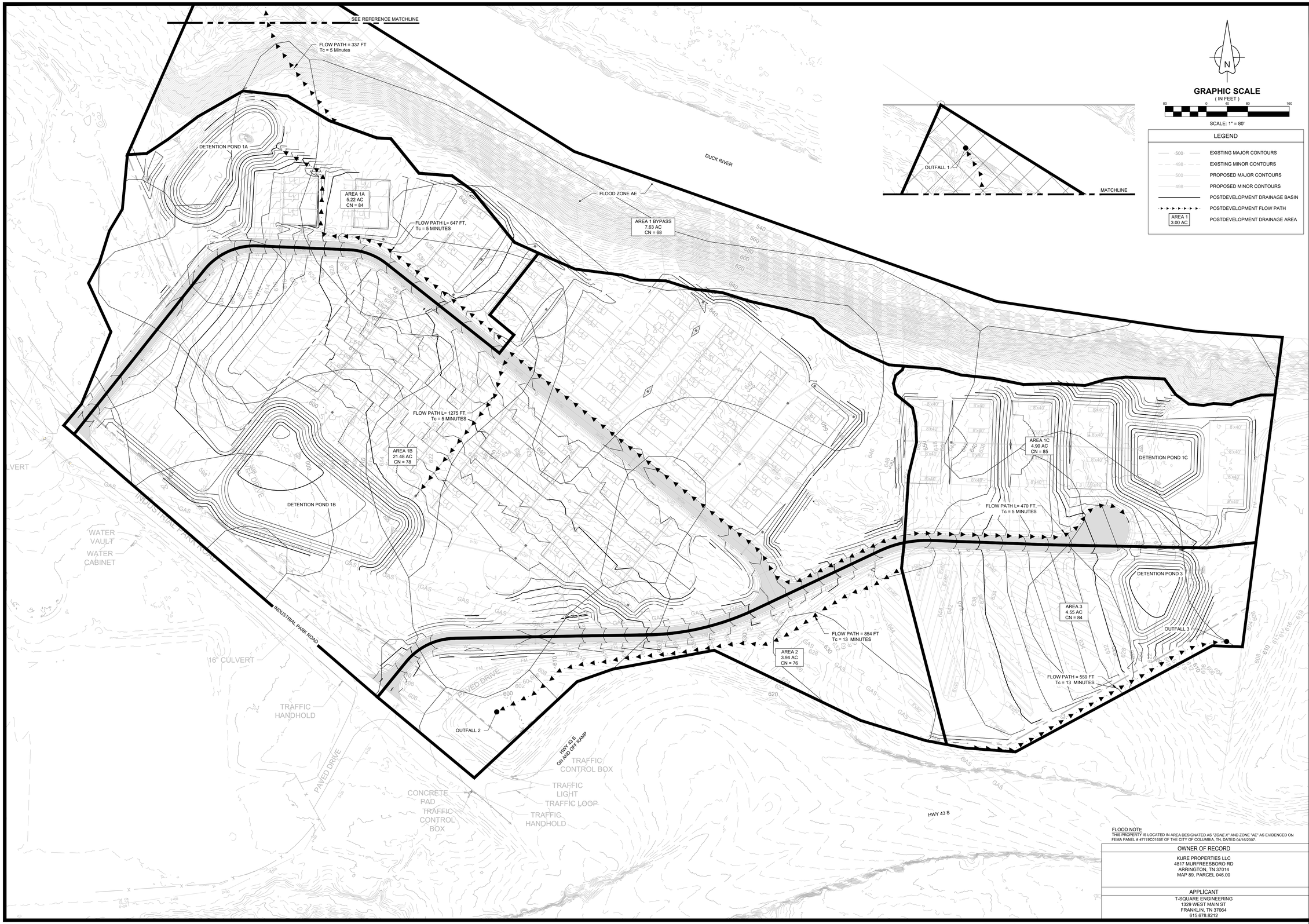
FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION

FRANCIS C. GAUNNITZ
REGISTERED
LANDSCAPE
ARCHITECT
No. 124
STATE OF TENNESSEE

02/13/2023

PROJECT
22-0431

SHEET
C-4.0



FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00

APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

POSTDEVELOPMENT STORMWATER
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

NO.	DATE	REVISIONS

DATE: 02/13/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION
02/13/2023

PROJECT
22-0431

SHEET
C-4.1



FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

T-SQUARE ENGINEERING

NO.	DATE	REVISIONS

DATE: 02/13/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FDG

GRADING PLAN
SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

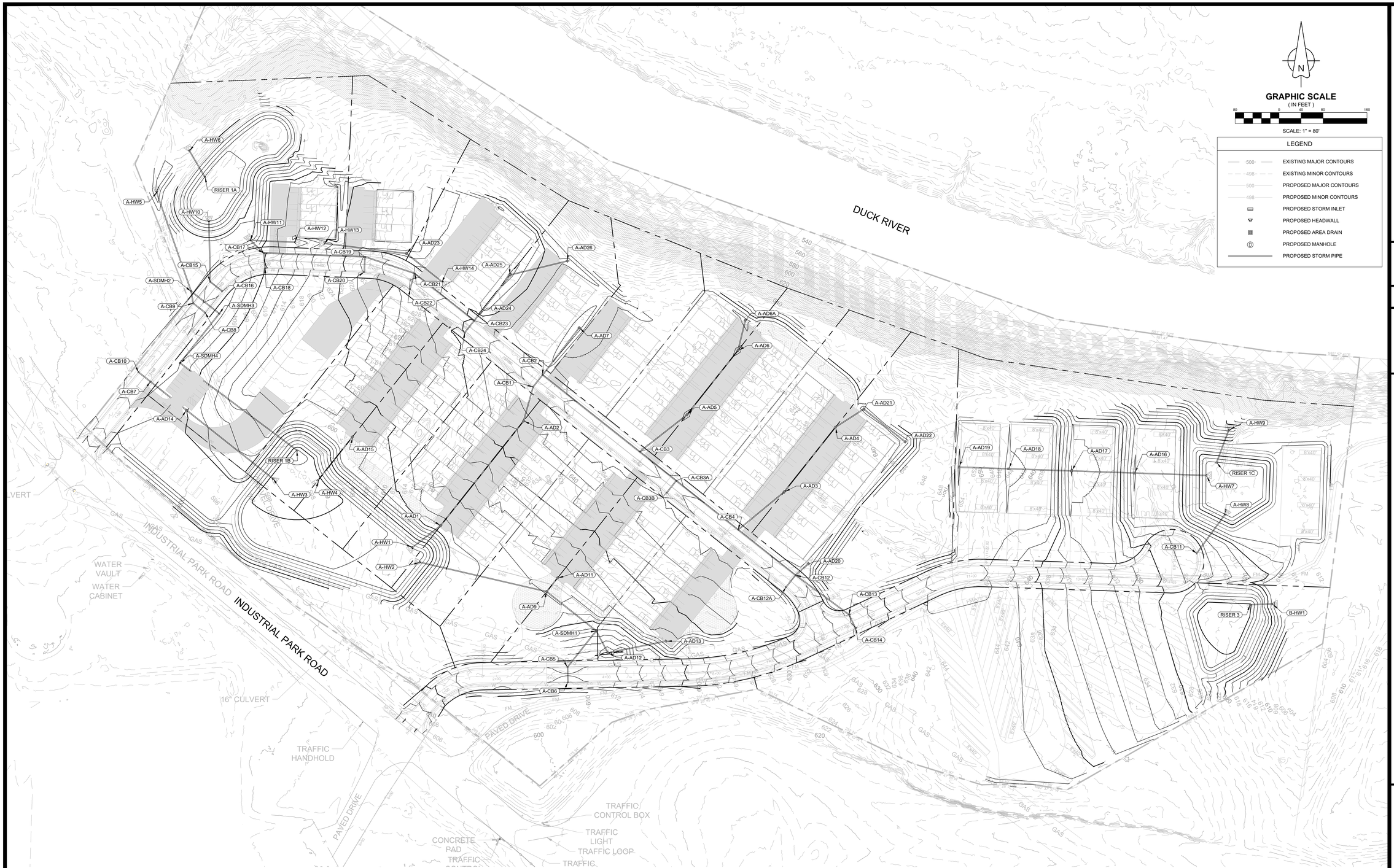
ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION

FRANK D. GAWNITZ — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — 124450 — STATE OF TENNESSEE
02/13/2023

PROJECT
22-0431

SHEET
C-5.0



FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # 47119C0165E OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD
KURE PROPERTIES LLC 4817 MURFREESBORO RD ARRINGTON, TN 37014 MAP 89, PARCEL 046.00
APPLICANT
T-SQUARE ENGINEERING 1329 WEST MAIN ST FRANKLIN, TN 37064 615.678.8212

DRAINAGE PLAN

SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

NO.	DATE	REVISIONS

DATE: 02/13/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION
02/13/2023

PROJECT
22-0431

SHEET
C-5.1

T-SQUARE ENGINEERING

STRUCTURE TABLE				
NAME	DESC.	DETAILS	PIPES IN	PIPES OUT
A-AD1	3'X3'	RIM = 621.26 FG = 621.26	INV. IN = 616.75	INV. OUT =616.75
A-AD2	3'X3'	RIM = 632.97 FG = 632.97	INV. IN = 625.95	INV. OUT =625.95
A-AD3	3'X3'	RIM = 636.25 FG = 636.25	INV. IN = 629.25	INV. OUT =629.25
A-AD4	3'X3'	RIM = 636.25 FG = 636.25	INV. IN = 630.15	INV. OUT =630.15
A-AD5	3'X3'	RIM = 635.75 FG = 635.75	INV. IN = 630.25	INV. OUT =630.25
A-AD6	3'X3'	RIM = 635.75 FG = 635.75	INV. IN = 631.25	INV. OUT =631.25
A-AD6A	3'X3'	RIM = 635.41 FG = 635.41		INV. OUT =631.90
A-AD7	3'X3'	RIM = 631.28 FG = 631.00		INV. OUT =627.90
A-AD9	3'X3'	RIM = 624.11 FG = 624.11	INV. IN = 606.60 INV. IN = 619.50	INV. OUT =606.60
A-AD11	3'X3'	RIM = 624.77 FG = 624.77		INV. OUT =620.25
A-AD12	3'X3'	RIM = 611.50 FG = 609.75	INV. IN = 608.00	INV. OUT =608.00
A-AD13	3'X3'	RIM = 627.05 FG = 627.05		INV. OUT =622.50
A-AD14	3'X3'	RIM = 609.82 FG = 609.82	INV. IN = 600.50	INV. OUT =600.50
A-AD15	3'X3'	RIM = 616.62 FG = 616.62		INV. OUT =612.00
A-AD16	3'X3'	RIM = 621.30 FG = 621.30	INV. IN = 616.21	INV. OUT =611.21
A-AD17	3'X3'	RIM = 631.80 FG = 631.80	INV. IN = 626.42	INV. OUT =625.42
A-AD18	3'X3'	RIM = 642.51 FG = 642.51	INV. IN = 637.58	INV. OUT =635.58
A-AD19	3'X3'	RIM = 643.30 FG = 643.30		INV. OUT =638.59
A-AD20	3'X3'	RIM = 634.82 FG = 634.82		INV. OUT =630.30
A-AD21	3'X3'	RIM = 634.88 FG = 634.88	INV. IN = 630.50	INV. OUT =630.50

STRUCTURE TABLE				
NAME	DESC.	DETAILS	PIPES IN	PIPES OUT
A-AD22	3'X3'	RIM = 634.59 FG = 634.59		INV. OUT =631.10
A-AD23	3'X3'	RIM = 623.02 FG = 623.02	INV. IN = 617.25	INV. OUT =617.25
A-AD24	3'X3'	RIM = 629.17 FG = 629.17	INV. IN = 620.50	INV. OUT =620.50
A-AD25	3'X3'	RIM = 625.50 FG = 625.50	INV. IN = 621.00	INV. OUT =621.00
A-AD26	3'X3'	RIM = 630.51 FG = 630.51		INV. OUT =626.00
A-CB1	CURB INLET	RIM = 634.39 FG = 634.39	INV. IN = 626.60	INV. OUT =626.60
A-CB2	CURB INLET	RIM = 634.39 FG = 634.39	INV. IN = 626.90 INV. IN = 626.90	INV. OUT =626.90
A-CB3	CURB INLET	RIM = 636.19 FG = 636.19	INV. IN = 629.15 INV. IN = 626.30	INV. OUT =628.75
A-CB3A	CURB INLET	RIM = 635.34 FG = 635.34	INV. IN = 630.55 INV. IN = 627.15	INV. OUT =627.15
A-CB3B	CURB INLET	RIM = 635.34 FG = 635.34		INV. OUT =630.85
A-CB4	CURB INLET	RIM = 636.72 FG = 636.72	INV. IN = 628.60 INV. IN = 628.60	INV. OUT =628.60
A-CB5	CURB INLET	RIM = 611.63 FG = 611.63	INV. IN = 607.85	INV. OUT =607.85
A-CB6	CURB INLET	RIM = 611.63 FG = 611.63		INV. OUT =608.00
A-CB7	CURB INLET	RIM = 605.07 FG = 605.07	INV. IN = 600.95	INV. OUT =600.95
A-CB8	CURB INLET	RIM = 603.56 FG = 603.56		INV. OUT =600.00
A-CB9	CURB INLET	RIM = 603.56 FG = 603.56	INV. IN = 599.80	INV. OUT =599.80
A-CB10	CURB INLET	RIM = 605.07 FG = 605.07		INV. OUT =601.10
A-CB11	CURB INLET	RIM = 626.10 FG = 626.10		INV. OUT =611.48
A-CB12	CURB INLET	RIM = 634.55 FG = 634.55	INV. IN = 630.00 INV. IN = 630.00 INV. IN = 630.00	INV. OUT =630.00
A-CB12A	CURB INLET	RIM = 634.55 FG = 634.55		INV. OUT =630.15

STRUCTURE TABLE				
NAME	DESC.	DETAILS	PIPES IN	PIPES OUT
A-CB13	CURB INLET	RIM = 635.81 FG = 635.81	INV. IN = 630.95	INV. OUT =630.95
A-CB14	CURB INLET	RIM = 635.81 FG = 635.81		INV. OUT =631.10
A-CB15	CURB INLET	RIM = 604.23 FG = 604.23	INV. IN = 600.55	INV. OUT =600.55
A-CB16	CURB INLET	RIM = 604.23 FG = 604.23		INV. OUT =600.70
A-CB17	CURB INLET	RIM = 609.86 FG = 609.86	INV. IN = 604.80 INV. IN = 604.80	INV. OUT =604.80
A-CB18	CURB INLET	RIM = 609.61 FG = 609.61		INV. OUT =605.10
A-CB19	CURB INLET	RIM = 622.03 FG = 622.03	INV. IN = 617.85 INV. IN = 618.20	INV. OUT =617.85
A-CB20	CURB INLET	RIM = 622.03 FG = 622.03		INV. OUT =618.50
A-CB21	CURB INLET	RIM = 625.56 FG = 625.56	INV. IN = 619.40 INV. IN = 618.80	INV. OUT =618.80
A-CB22	CURB INLET	RIM = 626.00 FG = 626.00		INV. OUT =619.10
A-CB23	CURB INLET	RIM = 630.04 FG = 630.04	INV. IN = 620.30 INV. IN = 625.20	INV. OUT =620.30
A-CB24	CURB INLET	RIM = 630.04 FG = 630.04		INV. OUT =625.50
A-HW1	HEADWALL	RIM = 595.06 FG = 604.64	INV. IN = 604.00	
A-HW2	HEADWALL	RIM = 596.28 FG = 604.85	INV. IN = 604.00	
A-HW3	HEADWALL	RIM = 597.64 FG = 599.66	INV. IN = 599.50	
A-HW4	HEADWALL	RIM = 596.05 FG = 599.22	INV. IN = 598.95	
A-HW5	HEADWALL	RIM = 596.71 FG = 592.00	INV. IN = 592.00	
A-HW6	HEADWALL	RIM = 592.06 FG = ???	INV. IN = 589.35	
A-HW7	HEADWALL	RIM = 603.53 FG = 606.02	INV. IN = 600.83	
A-HW8	HEADWALL	RIM = 602.77 FG = 606.36	INV. IN = 600.06	

STRUCTURE TABLE				
NAME	DESC.	DETAILS	PIPES IN	PIPES OUT
A-HW9	HEADWALL	RIM = 605.57 FG = ???	INV. IN = 603.37	
A-HW10	HEADWALL	RIM = 589.49 FG = 592.42	INV. IN = 592.00	
A-HW11	HEADWALL	RIM = 607.71 FG = 603.97	INV. IN = 602.00 INV. IN = 602.00	
A-HW12	HEADWALL	RIM = 609.00 FG = 612.00		INV. OUT =609.00
A-HW13	HEADWALL	RIM = 621.91 FG = 616.83	INV. IN = 616.50	
A-HW14	HEADWALL	RIM = 621.72 FG = 627.67		INV. OUT =623.00
A-SDMH1	SDMH	RIM = 617.60 FG = 617.60	INV. IN = 607.35 INV. IN = 607.30	INV. OUT =607.30
A-SDMH2	SDMH	RIM = 602.29 FG = ???	INV. IN = 593.90 INV. IN = 599.55	INV. OUT =593.90
A-SDMH3	SDMH	RIM = 605.35 FG = 605.35	INV. IN = 594.55	INV. OUT =594.55
A-SDMH4	SDMH	RIM = 605.98 FG = 605.98	INV. IN = 595.70	INV. OUT =595.70
RISER 1A	RISER	RIM = 596.00 FG = 592.00		INV. OUT =590.00
RISER 1B	RISER	RIM = 602.00 FG = 598.00		INV. OUT =597.50
RISER 1C	RISER	RIM = 609.00 FG = 606.00		INV. OUT =604.00

STRUCTURE TABLE				
NAME	DESC.	DETAILS	PIPES IN	PIPES OUT
B-HW1	HEADWALL	RIM = 619.65 FG = ???	INV. IN = 617.60	
RISER 3	RISER	RIM = 624.00 FG = 620.00		INV. OUT =618.00

PIPE TABLE			
NAME	SIZE	LENGTH	SLOPE
RISER 3 TO B-HW1	18" RCP	37.70	1.00%

PIPE TABLE			
NAME	SIZE	LENGTH	SLOPE
A-AD1 TO A-HW1	18" RCP	65.00	19.85%
A-AD2 TO A-AD1	18" RCP	242.10	3.78%
A-AD3 TO A-CB4	18" RCP	107.11	0.60%
A-AD4 TO A-AD3	18" RCP	148.76	0.60%
A-AD5 TO A-CB3	18" RCP	107.73	1.01%
A-AD6 TO A-AD5	18" RCP	148.76	0.67%
A-AD6A TO A-AD6	18" RCP	54.97	1.15%
A-AD7 TO A-CB2	18" RCP	107.28	0.92%
A-AD9 TO A-HW2	18" RCP	235.49	1.10%
A-AD11 TO A-AD9	18" RCP	30.25	2.38%
A-AD12 TO A-SDMH1	18" RCP	42.63	1.55%
A-AD13 TO A-AD12	18" RCP	106.95	13.48%
A-AD14 TO A-HW3	18" RCP	198.48	0.50%
A-AD15 TO A-HW4	18" RCP	100.51	13.03%
A-AD16 TO A-HW7	18" RCP	128.80	8.00%
A-AD17 TO A-AD16	18" RCP	114.37	8.00%
A-AD18 TO A-AD17	18" RCP	113.75	8.00%
A-AD19 TO A-AD18	18" RCP	89.19	1.12%
A-AD20 TO A-CB12	18" RCP	30.04	0.96%
A-AD21 TO A-AD4	18" RCP	60.17	0.57%

PIPE TABLE			
NAME	SIZE	LENGTH	SLOPE
A-AD22 TO A-AD21	18" RCP	94.76	0.63%
A-AD23 TO A-HW13	18" RCP	148.88	0.50%
A-AD24 TO A-CB23	18" RCP	17.97	1.04%
A-AD25 TO A-AD24	18" RCP	85.87	0.57%
A-AD26 TO A-AD25	18" RCP	104.93	4.70%
A-CB1 TO A-AD2	18" RCP	62.96	1.01%
A-CB2 TO A-CB1	18" RCP	26.77	1.07%
A-CB3 TO A-CB2	18" RCP	224.31	0.82%
A-CB3A TO A-CB3	18" RCP	83.64	1.00%
A-CB3B TO A-CB3A	18" RCP	26.77	1.07%
A-CB4 TO A-CB3A	18" RCP	142.76	1.01%
A-CB5 TO A-SDMH1	18" RCP	81.20	0.60%
A-CB6 TO A-CB5	18" RCP	26.76	0.54%
A-CB7 TO A-AD14	18" RCP	82.75	0.54%
A-CB8 TO A-CB9	18" RCP	26.76	0.71%
A-CB9 TO A-SDMH2	18" RCP	19.07	1.14%
A-CB10 TO A-CB7	18" RCP	26.76	0.54%
A-CB11 TO A-HW8	18" RCP	86.09	13.14%
A-CB12 TO A-CB4	18" RCP	131.82	1.05%
A-CB12A TO A-CB12	18" RCP	26.76	0.54%

PIPE TABLE			
NAME	SIZE	LENGTH	SLOPE
A-CB13 TO A-CB12	18" RCP	119.68	0.78%
A-CB14 TO A-CB13	18" RCP	26.76	0.53%
A-CB15 TO A-HW10	18" RCP	108.70	7.83%
A-CB16 TO A-CB15	18" RCP	26.76	0.54%
A-CB17 TO A-HW11	18" RCP	32.86	8.34%
A-CB18 TO A-CB17	18" RCP	26.77	1.07%
A-CB19 TO A-CB17	18" RCP	183.57	7.08%
A-CB20 TO A-CB19	18" RCP	26.77	1.07%
A-CB21 TO A-CB19	18" RCP	94.04	1.00%
A-CB22 TO A-CB21	18" RCP	28.77	1.00%
A-CB23 TO A-CB21	18" RCP	137.17	0.65%
A-CB24 TO A-CB23	18" RCP	26.77	1.07%
A-HW12 TO A-HW11	18" RCP	80.59	8.72%
A-HW14 TO A-AD23	18" RCP	82.47	6.94%
A-SDMH1 TO A-AD9	18" RCP	112.44	0.61%
A-SDMH2 TO A-HW5	18" RCP	188.55	1.00%
A-SDMH3 TO A-SDMH2	18" RCP	61.35	1.00%
A-SDMH4 TO A-SDMH3	18" RCP	110.97	1.00%
RISER 1A TO A-HW6	18" RCP	53.25	1.17%
RISER 1B TO A-SDMH4	18" RCP	262.90	0.68%

PIPE TABLE			
NAME	SIZE	LENGTH	SLOPE
RISER 1C TO A-HW9	18" RCP	61.30	1.00%

FLOOD NOTE
THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # 47119C0165E OF THE CITY OF COLUMBIA, TN. DATED 04/16/2007.

OWNER OF RECORD

KURE PROPERTIES LLC
4817 MURFREESBORO RD
ARRINGTON, TN 37014
MAP 89, PARCEL 046.00

APPLICANT

T-SQUARE ENGINEERING
1329 WEST MAIN ST
FRANKLIN, TN 37064
615.678.8212

REVISIONS

NO.	DATE

DATE: 02/13/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

STORM STRUCTURE AND PIPE TABLES

SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

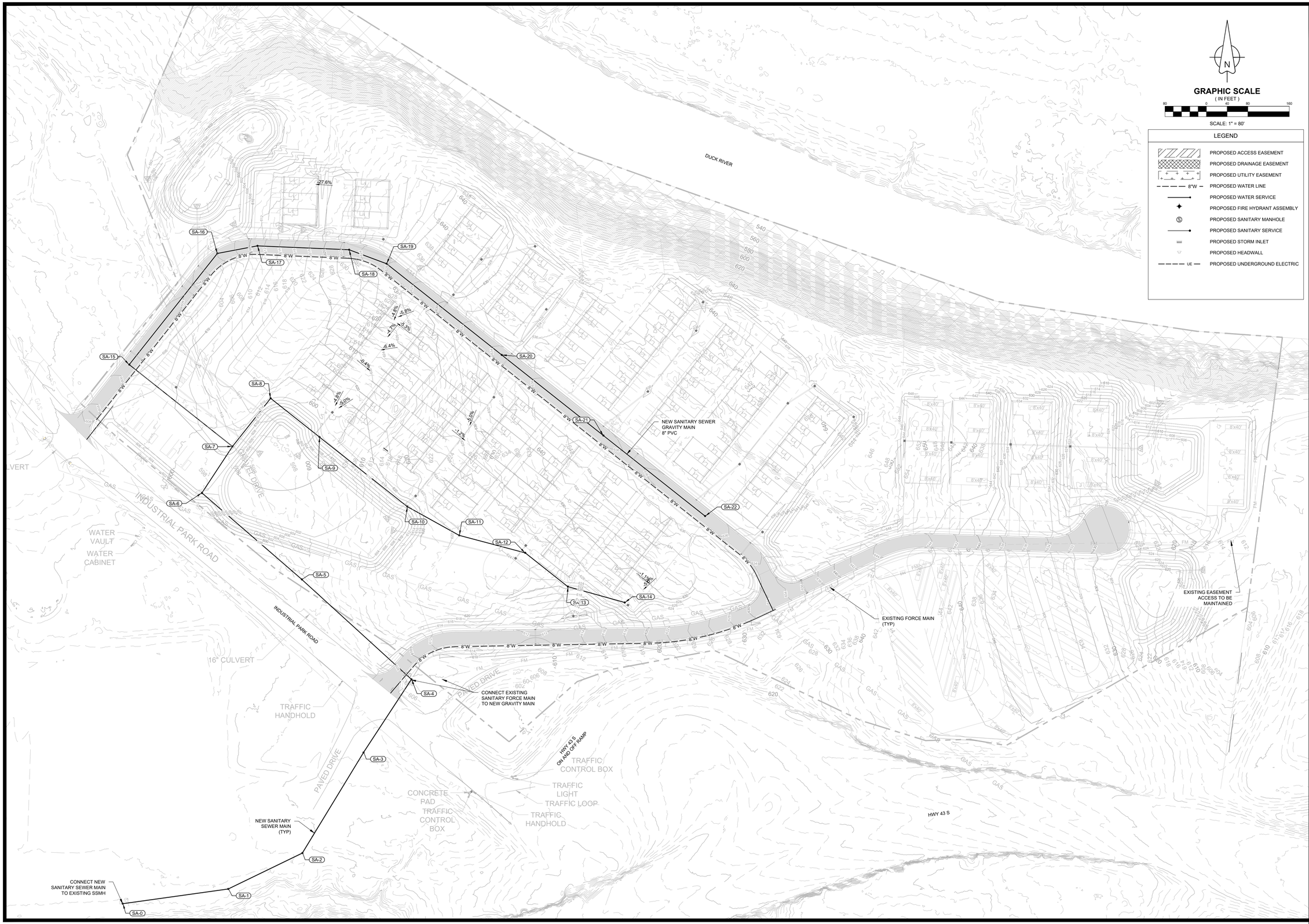
ZERO INDUSTRIAL PARK ROAD

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02/13/2023

PROJECT
22-0431

SHEET
C-5.2

T-SQUARE ENGINEERING



ZERO INDUSTRIAL PARK ROAD

NO.	DATE	REVISIONS

DATE: 02/13/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

UTILITY PLAN

SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION

FRITZ C. GALVINITZ
REGISTERED AGRICULTURAL ENGINEER
PRIMEER
124
STATE OF TENNESSEE
02/13/2023

PROJECT
22-0431

SHEET
C-7.0

T-SQUARE ENGINEERING

STRUCTURE TABLE				
NAME	DESC.	DETAILS	PIPES IN	PIPES OUT
SA-0	MANHOLE	RIM = 593.55 FG = 593.55	INV. IN = 578.40	INV. OUT =576.50
SA-1	MANHOLE	RIM = 595.03 FG = 595.03	INV. IN = 584.90	INV. OUT =584.70
SA-2	MANHOLE	RIM = 598.57 FG = 598.57	INV. IN = 586.70	INV. OUT =586.50
SA-3	MANHOLE	RIM = 604.60 FG = 604.60	INV. IN = 589.20	INV. OUT =589.00
SA-4	MANHOLE	RIM = 609.10 FG = 608.80	INV. IN = 590.70	INV. OUT =590.50
SA-5	MANHOLE	RIM = 600.24 FG = ???	INV. IN = 592.65	INV. OUT =592.45
SA-6	MANHOLE	RIM = 606.71 FG = 606.71	INV. IN = 594.40	INV. OUT =594.20
SA-7	MANHOLE	RIM = 613.06 FG = ???	INV. IN = 595.70 INV. IN = 602.10	INV. OUT =595.50
SA-8	MANHOLE	RIM = 616.12 FG = 616.12	INV. IN = 602.90	INV. OUT =602.70
SA-9	MANHOLE	RIM = 614.03 FG = 614.03	INV. IN = 603.70	INV. OUT =603.50
SA-10	MANHOLE	RIM = 615.08 FG = 615.08	INV. IN = 606.10	INV. OUT =605.90
SA-11	MANHOLE	RIM = 622.47 FG = 622.47	INV. IN = 608.50	INV. OUT =608.30
SA-12	MANHOLE	RIM = 624.66 FG = 624.66	INV. IN = 611.40	INV. OUT =611.20
SA-13	MANHOLE	RIM = 621.59 FG = 621.33	INV. IN = 613.70	INV. OUT =613.50
SA-14	MANHOLE	RIM = 627.13 FG = 627.13		INV. OUT =616.00
SA-15	MANHOLE	RIM = 605.70 FG = 605.70	INV. IN = 597.45	INV. OUT =597.25
SA-16	MANHOLE	RIM = 606.00 FG = 606.00	INV. IN = 600.85	INV. OUT =598.85
SA-17	MANHOLE	RIM = 611.10 FG = 611.10	INV. IN = 605.90	INV. OUT =603.70
SA-18	MANHOLE	RIM = 622.96 FG = 622.96	INV. IN = 618.00	INV. OUT =616.80
SA-19	MANHOLE	RIM = 625.97 FG = 625.97	INV. IN = 621.75	INV. OUT =621.55
SA-20	MANHOLE	RIM = 634.51 FG = 634.51	INV. IN = 624.80	INV. OUT =624.60
SA-21	MANHOLE	RIM = 636.49 FG = 636.49	INV. IN = 627.50	INV. OUT =627.30
SA-22	MANHOLE	RIM = 637.05 FG = 637.05		INV. OUT =630.00

PIPE TABLE			
NAME	SIZE	LENGTH	SLOPE
SA-0 TO	10" PVC	9.74	27.08%
SA-1 TO SA-0	10" PVC	201.72	3.07%
SA-2 TO SA-1	10" PVC	155.08	1.01%
SA-3 TO SA-2	10" PVC	223.05	1.01%
SA-4 TO SA-3	10" PVC	164.88	0.77%
SA-5 TO SA-4	8" PVC	282.37	0.61%
SA-6 TO SA-5	8" PVC	250.98	0.61%
SA-7 TO SA-6	8" PVC	103.37	1.03%
SA-8 TO SA-7	8" PVC	114.51	0.51%
SA-9 TO SA-8	8" PVC	116.22	0.50%
SA-10 TO SA-9	8" PVC	212.23	1.02%
SA-11 TO SA-10	8" PVC	110.57	1.92%
SA-12 TO SA-11	8" PVC	128.04	2.05%
SA-13 TO SA-12	8" PVC	101.04	2.00%
SA-14 TO SA-13	8" PVC	109.98	2.02%
SA-15 TO SA-7	8" PVC	250.29	0.61%
SA-16 TO SA-15	8" PVC	269.87	0.51%
SA-17 TO SA-16	8" PVC	74.87	3.62%
SA-18 TO SA-17	8" PVC	173.41	6.15%
SA-19 TO SA-18	8" PVC	73.27	4.60%
SA-20 TO SA-19	8" PVC	279.59	1.01%
SA-21 TO SA-20	8" PVC	246.44	1.00%
SA-22 TO SA-21	8" PVC	246.44	1.00%

NO.	DATE	REVISIONS

DATE: 02/13/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

SANITARY SEWER STRUCTURES AND TABLES

SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

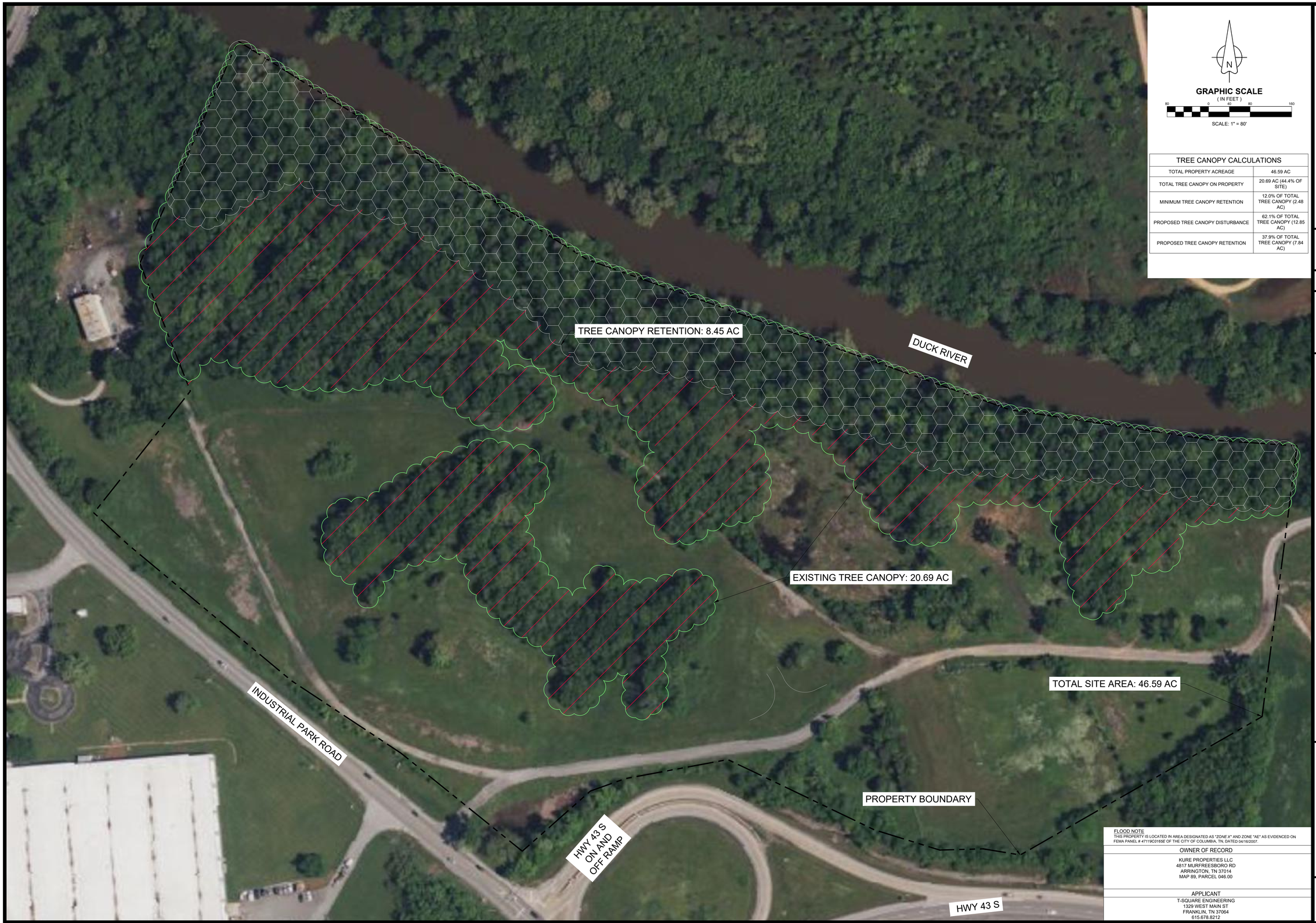
ZERO INDUSTRIAL PARK ROAD

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02/13/2023

PROJECT
22-0431

SHEET
C-7.1

T-SQUARE ENGINEERING



N

GRAPHIC SCALE

(IN FEET)

80 0 40 80 160

SCALE: 1" = 80'

TREE CANOPY CALCULATIONS	
TOTAL PROPERTY ACREAGE	46.59 AC
TOTAL TREE CANOPY ON PROPERTY	20.69 AC (44.4% OF SITE)
MINIMUM TREE CANOPY RETENTION	12.0% OF TOTAL TREE CANOPY (2.48 AC)
PROPOSED TREE CANOPY DISTURBANCE	62.1% OF TOTAL TREE CANOPY (12.85 AC)
PROPOSED TREE CANOPY RETENTION	37.9% OF TOTAL TREE CANOPY (7.84 AC)

FLOOD NOTE

THIS PROPERTY IS LOCATED IN AREA DESIGNATED AS "ZONE X" AND ZONE "AE" AS EVIDENCED ON FEMA PANEL # *47119C0165E* OF THE CITY OF COLUMBIA, TN, DATED 04/16/2007.

OWNER OF RECORD

KURE PROPERTIES LLC
4817 MURFREESBORO RD
ARRINGTON, TN 37014
MAP 89, PARCEL 046.00

APPLICANT

T-SQUARE ENGINEERING
1329 WEST MAIN ST
FRANKLIN, TN 37064
615.678.8212

T-SQUARE ENGINEERING

REVISIONS

NO.	DATE

DATE: 02/13/2023
SCALE: AS SHOWN
DRAWN BY: T-SQUARE
REVIEWER: FCG

TREE PROTECTION PLAN

SITE DEVELOPMENT PLAN
TAX MAP 89, PARCEL 046.00
COLUMBIA, TENNESSEE

ZERO INDUSTRIAL PARK ROAD

FOR PERMIT REVIEW ONLY
NOT FOR CONSTRUCTION

FRITZ C. GAYNILT
REGISTERED ENGINEER
AGRICULTURE
CIVIL
124465
STATE OF TENNESSEE

02/13/2023

PROJECT
22-0431

SHEET
L-1.0

12/19/2022

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

RE: Zero Industrial Park Road
Map 089, Parcel 46.00
Cul-De-Sac Justification

Dear City of Columbia,

As requested in the Pre-App meeting on December 7, 2022, I am providing this letter of justification for our proposed cul-de-sac improvement.

Due to access needs to the eastern side of the property a road is required. However, due to topography, vegetation, and proximity to the Duck River a looped road is not feasible. Therefore, to provide access to the property proper turnaround for large trucks and fire engines, a city standard cul-de-sac is proposed.

Respectfully,

Cole Gaumnitz, PE
Project Manager
T-Square Engineering

Exhibit "A"

Legal Description of Property

BEING AND LYING IN THE 9TH CIVIL DISTRICT OF MAURY COUNTY, TENNESSEE AND LYING NORTH OF AND ADJACENT TO HWY 412, BEING MORE PARTICULARLY AS FOLLOWS:

BEGINNING AT A IRON PIN FOUND ON THE NORTH R.O.W. OF HWY 412; SAID IRON PIN FOUND BEING THE SOUTHEAST CORNER OF THE TRACT BEING DESCRIBED, THE WEST BOUNDARY OF GRAFTECH ADVANCED GRAPHITE MATERIALS, LLC; THENCE WITH NORTH R:0.W. OF HWY 412, S 60°13'44" W For A Distance of 536.74'; THENCE N 80°37'37" W For A Distance of 71.95'; THENCE S 88°28'31" W For A Distance Of 84.43'; THENCE N 72°47'24" W For A Distance Of 131.90'; THENCE N 64°20'19" W For A Distance Of 252.14'; THENCE N 64°37'21" W For A Distance Of 60.74'; THENCE S 79°28'45" W For A Distance Of 201.01'; THENCE S 70°26'51" W For A Distance Of 70.99'; THENCE S 48°34'27" W For A Distance Of 175.34' TO A POINT IN THE INTERSECTION OF THE NORTH R.O.W. OF HWY 412 AND THE EAST R.O.W. OF INDUSTRIAL PARK ROAD; SAID POINT BEING THE SOUTHWEST CORNER OF THE TRACT BEING DESCRIBED; THENCE WITH EAST R.O.W. OF INDUSTRIAL PARK ROAD, N 51°03'26" W For A Distance Of 299.81'; THENCE N 56°30'50" W For A Distance Of 253.61'; THENCE N 50°13'18" W, PASSING AN EAST TENNESSEE GAS LINE EASEMENT, For A Distance Of 409.61' To A IRON PIN FOUND; THENCE N 47°09'09" W For A Distance Of 89.96'; SAID POINT BEING THE SOUTHEAST CORNER OF MARTRAC INC; THENCE LEAVING INDUSTRIAL PARK ROAD WITH MARTRAC INC, N 38°23'41" E For A Distance Of 299.38' TO A IRON PIN FOUND; THENCE N 21°32'25" W For A Distance Of 264.98' TO A IRON PIN FOUND; THENCE N 23°49'05" E For A Distance Of 467.73' TO A POINT ON THE LOW WATER MARK OF THE DUCK RIVER; SAID POINT BEING THE NORTHWEST CORNER OF THE TRACT BEING DESCRIBED, AND THE NORTHEAST CORNER OF MARTRAC INC; THENCE WITH LOW WATER MARK OF THE DUCK RIVER, S 57°58'08" E For A Distance Of 794.07'; THENCE S 70°27'05" E For A Distance Of 864.72'; THENCE S 81°29'52" E For A Distance Of 391.47'; THENCE S 85°57'41" E For A Distance of 165.8-1' TO A POINT; SAID POINT BEING THE NORTHEAST CORNER OF THE TRACT BEING DESCRIBED; THENCE LEAVING SAID RIVER WITH A NEW GT COLUMBIA LLC DIVISION LINE, S 07°21'11" W, PASSING AN IRON PIN FOUND AT 188.99', IN ALL A Distance Of 525.63' To The Point Of Beginning And Containing 46.59 Acres AS SURVEYED BY KENNETH CARROLL, RLS TENNESSEE LICENSE NUMBER 1335, APRIL 23, 2018.

Being a portion of the same property conveyed to COLUMBIA INDUSTRIAL PROPERTIES, LLC, a Tennessee limited liability company, by deed of record in Book R2499, Page 715, in the Register's Office of Maury County, Tennessee.

Exhibit "B"

Permitted Exceptions

1. Taxes and assessments for the year 2022 and subsequent, a lien not yet due and payable.

2. Easement of record in Book 843, Page 544, Register's Office for Maury County, Tennessee.

3. Sewer Easement of record in Book R2754, Page 852, in the Register's Office for Maury County, Tennessee.

4. Matters shown on that certain ALTA Survey by Kenneth Carroll, TN RLS No. 1335 of Carroll Land Surveying dated April 16, 2007 and designated as Job No. TIMC418_3A, last revised September 28, 2022.

CITY OF COLUMBIA – DEVELOPMENT SERVICES

TRAFFIC IMPACT STUDY (TIS) MEMORANDUM OF UNDERSTANDING (MOU) & AGREEMENT

CONTACT INFO (Identify primary point of contact)	
DEVELOPER/OWNER ☐ PRIMARY CONTACT	CIVIL CONSULTANT ☒ PRIMARY CONTACT
Contact Name: Ryan Kure	Contact Name: Nathan McVey
Company: Kure Properties LLC	Company: T-Square Engineering
Address: 4817 Murfreesboro Road, P.O. Box 666, Arrington, TN 37014	Address: 1329 West Main Street, Franklin, TN 37064
Email: ryan@kureconstruction.com	Email: nathan.mcvey@t2-eng.com
Phone: (630) 849-3671	Phone: (615) 678-8212

DEVELOPERS TIS CONSULTANT CONTACT INFO: *complete if study was completed by Developer's consultant.*			
Contact Name:	James Ensley III, PE	Company:	T-Square Engineering
Address:	1329 West Main Street, Franklin, TN 37064		
Email:	james.ensley@t2-eng.com	Phone:	615-678-8212

INDICATE THE LEVEL OF TIS REVIEW TO BE PERFORMED BY 3RD PARTY CONSULTANT AND CORRESPONDING FEE (SUBJECT TO STAFF CONFIRMATION):

* Level of TIS determined by the number of Daily & Peak Hour Trips per estimated trip generation calculation.

☐ Traffic Access Study ($2,800) ☒ Level I TIS ($3,700) ☐ Level II TIS ($4,800) ☐ Level III TIS (Fee TBD)

TRANSPORTATION IMPACT STUDY – MEMORANDUM OF UNDERSTANDING (MOU)

This MOU acknowledges that the transportation impact study for the following project will be prepared in accordance with the latest version of the City of Columbia Land Development Regulations.

PROJECT INFORMATION:	
Name:	Zero Industrial Park Road Development
Address:	Map 89, Parcel 46.00
Description:	Industrial Park Development with Recreational Vehicle and Tractor Trailer Parking along Industrial Park Road in Columbia, TN
Existing Land Use (be specific):	Vacant Property
Proposed Land Use (be specific):	Industrial Park
Reason for Request: (Planned Unit Development, Site Plan, Rezoning)	Site Plan
Potential Development Yield (number of residential units; building square footage, projected number of employees, hours of operations):	Industrial Park (240,000 SF) Mini-Warehouse (71 Spaces)

☐ Attach a site map and a trip generation table with a description of the proposed land uses, ITE rates, estimated daily, morning, midday and afternoon peak hour volumes (ins/outs/totals), proposed trip credits, etc.

☐ Attach a conceptual development plan showing all access points and adjacent streets.

Project Buildout Year:	2025	Ambient or CMP Growth Rate (% Per Year):	2.50%

STUDY INTERSECTIONS: *use additional pages as necessary	
1. Industrial Park Road and N James Campbell Boulevard	9.
2. Industrial Park Road and US-412 EB Ramps	10.
3. Industrial Park Road and US-412 WB Ramps	11.
4. Industrial Park Road and Smile Direct Club Driveway	12.
5. Industrial Park Road and 981 Industrial Park Road Driveway	13.
6. Industrial Park Road and Santa Fe Pike	14.
7.	15.
8.	16.

TRIP CREDITS (EXACT AMOUNT OF CREDIT SUBJECT TO APPROVAL BY CITY OF COLUMBIA):			
	YES	(indicate ___% of total trips)	NO
Transit Usage	☐	%	☒
Existing Active Land Use	☐	%	☒
Previous Land Use	☐	%	☒
Internal Trip	☐	%	☒
Pass-By Trip	☐	%	☒

3RD PARTY TRAFFIC CONSULTANT CONTACT INFO:		☐ NEEL SCHAFFER	☒ VOLKERT
NEEL SCHAFFER - GREG JUDY		VOLKERT – DYAN DAMRON	
201 E. Main Street, Suite 325 Murfreesboro, TN 37130		302 Innovation Drive, Suite 100 Franklin, TN 37067	
greg.judy@neel-schaffer.com	615-217-0500	dyan.damron@volkert.com	615-656-1845

MEMORANDUM OF UNDERSTANDING SIGN OFF:

APPLICANT: Ryan Kure — Name | Signature | 2/3/23 Date

*As applicant, I agree to pay 100% of the review fee. *Paid to the City of Columbia.*
I understand that no work will commence until FULL payment is received and that it is NON-REFUNDABLE.

3RD PARTY TRAFFIC CONSULTANT: Dyan Damron, PE, PTP — Name | Signature | 2/13/23 Date

CITY ENGINEER: _____ Name | Signature | Date

DIRECTOR OF DEVELOPMENT SERVICES: _____ Name | Signature | Date

Questions may be submitted and the completed form shall be emailed for review to: Glenn Harper, City Engineer gharper@columbiatn.com.



LEGEND

Existing Study Intersection

N.T.S.

Figure 1
Location Map

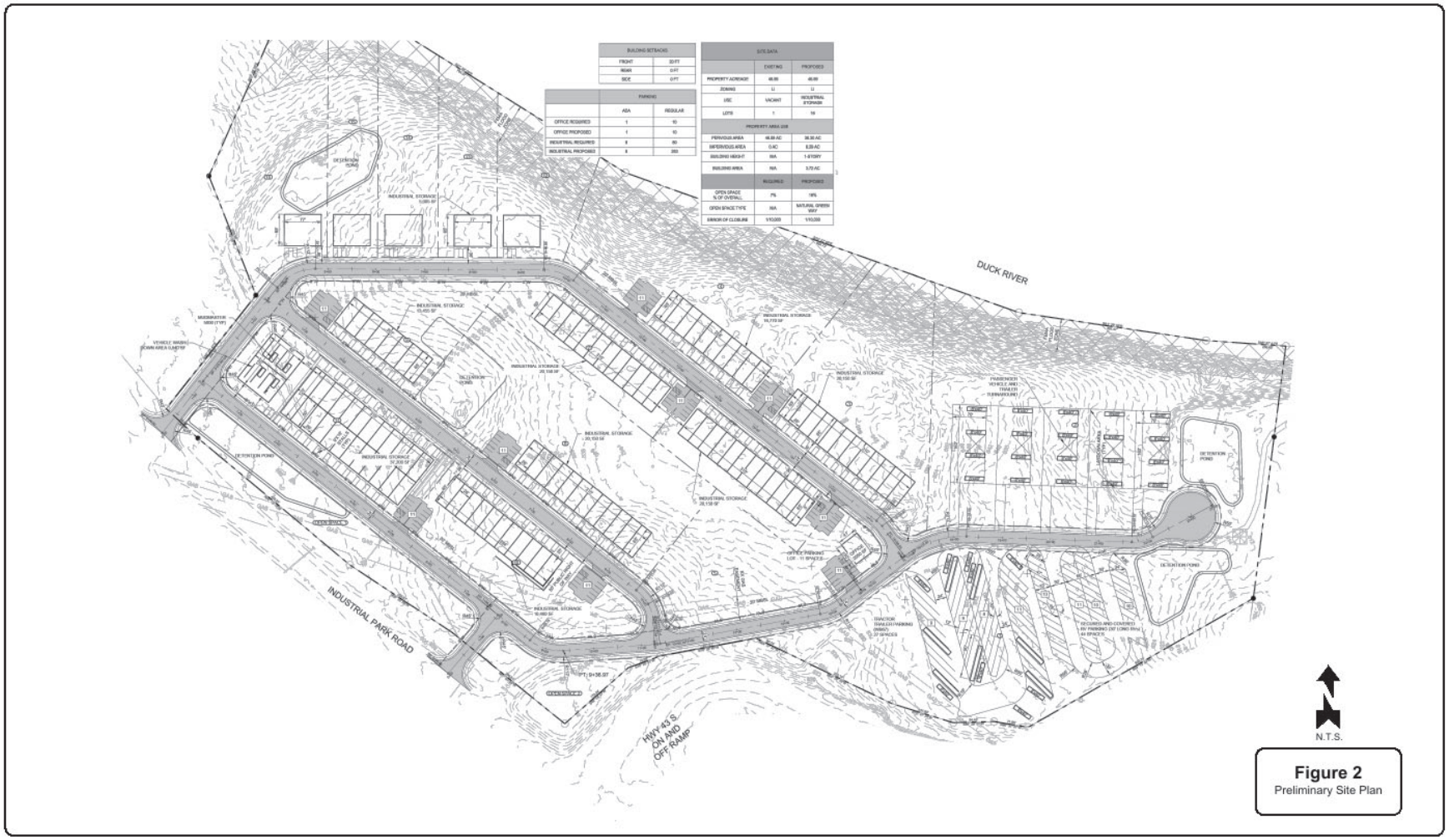
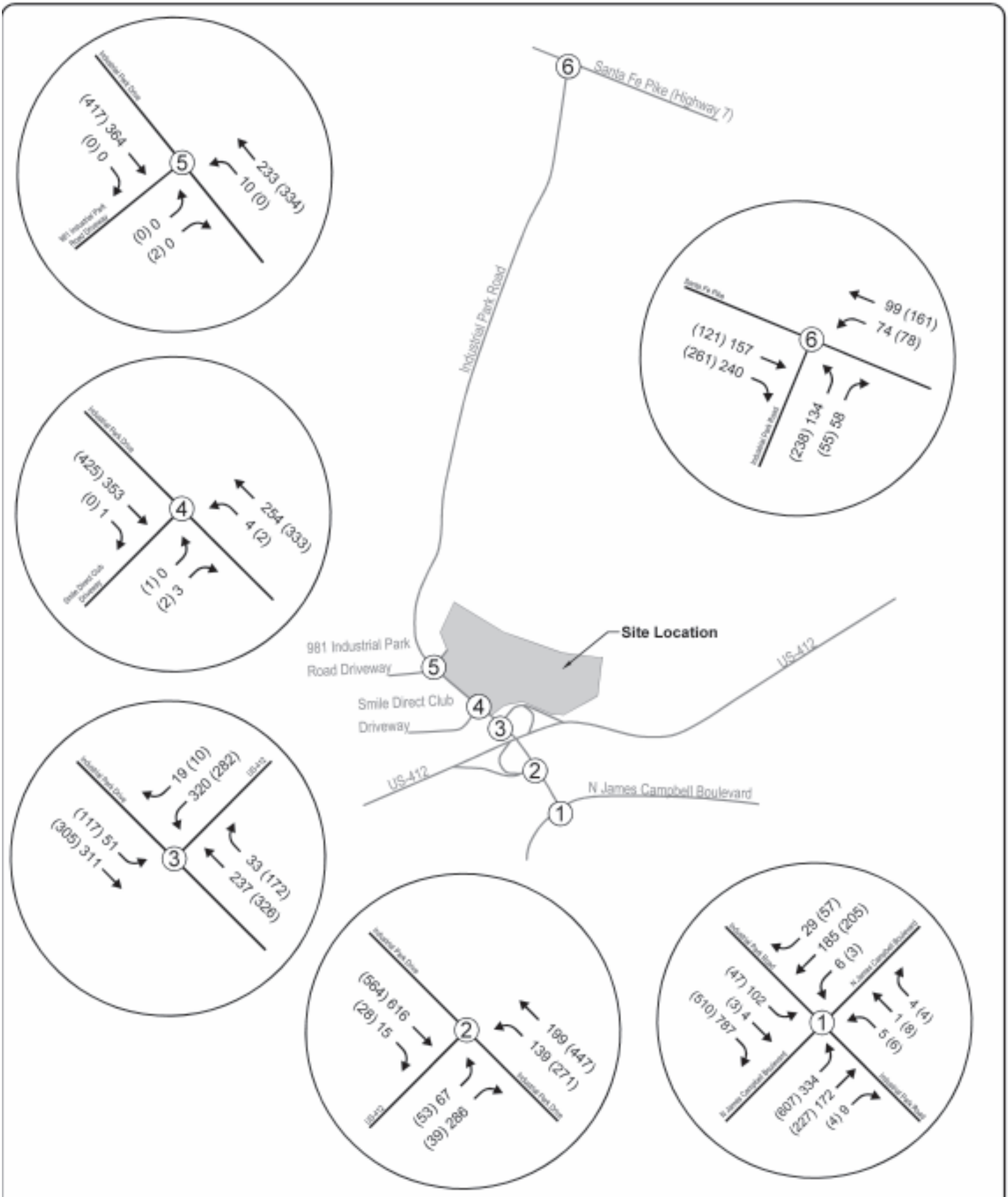


Figure 2
Preliminary Site Plan

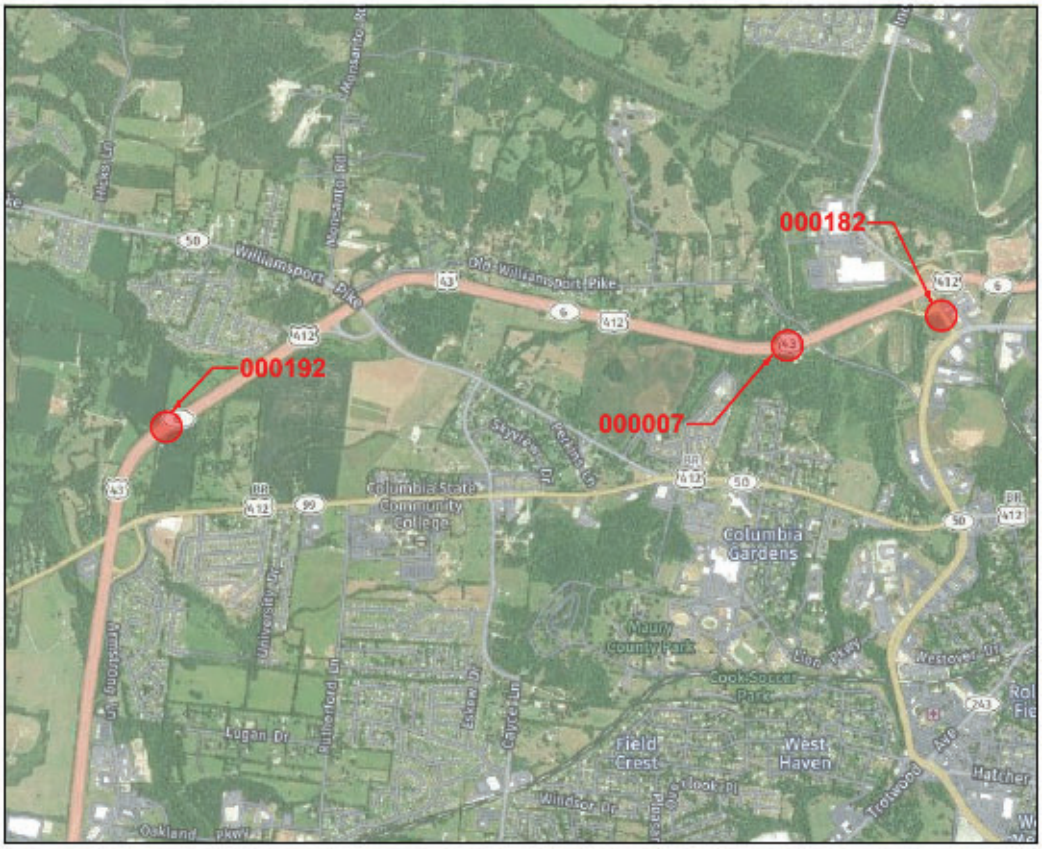


LEGEND

XXX - AM Peak Hour Traffic Volumes
(XXX) - PM Peak Hour Traffic Volumes

N.T.S.

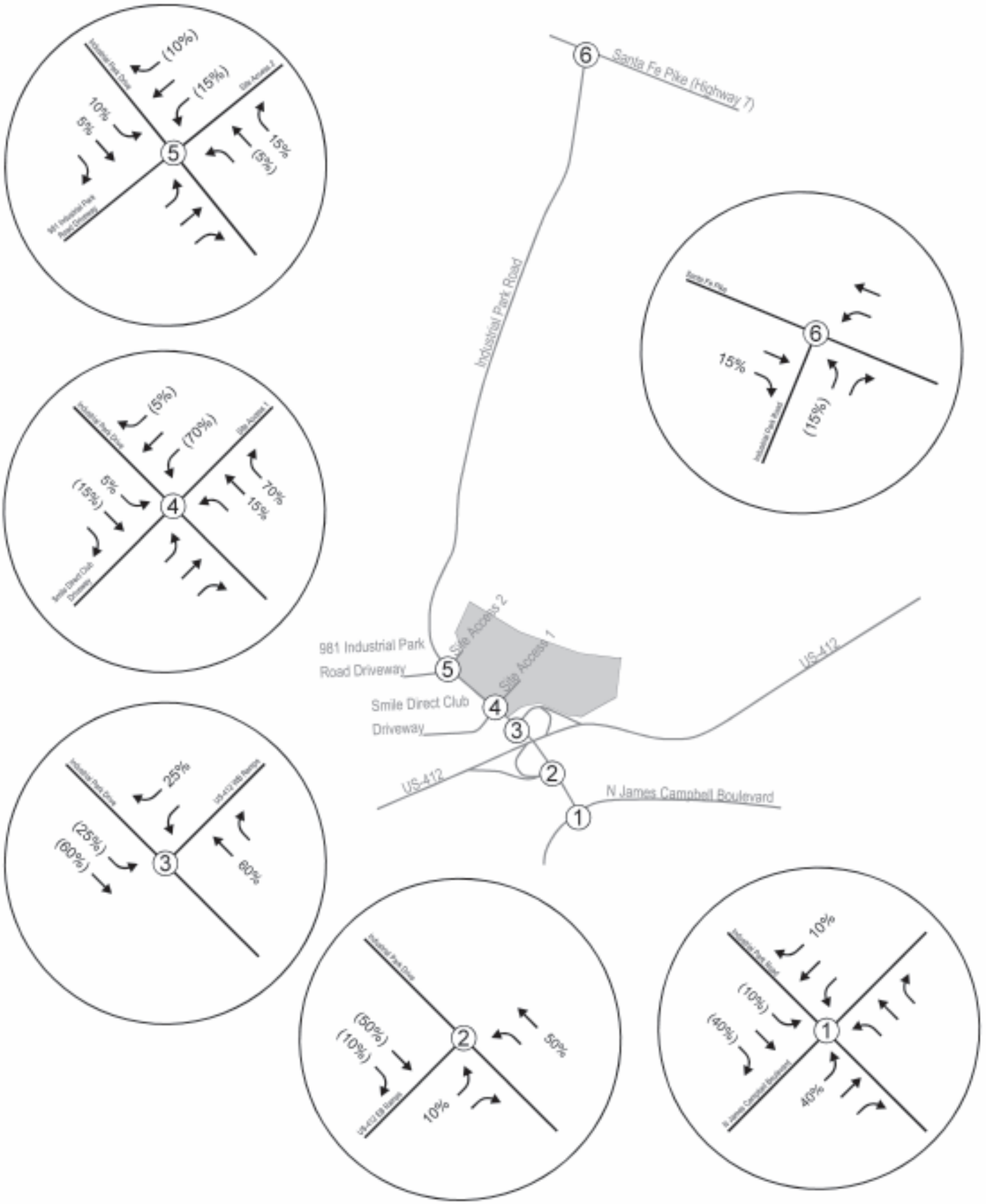
Figure 4
Existing Traffic Volumes
(2023)



TDOT Count Station:	Marshall 000182		Marshall 000007		Marshall 0000192		Average % Growth
Year	AADT	% Change	AADT	% Change	AADT	% Change	
2021	13,601	--	20,749	--	18,645	--	--
2020	12,723	6.90%	18,950	9.49%	17,442	6.90%	7.76%
2019	13,814	-0.77%	24,513	-7.68%	17,341	3.76%	-1.56%
2018	12,685	2.41%	22,061	-1.98%	17,932	1.33%	0.59%
2017	10,640	6.96%	22,067	-1.49%	17,381	1.82%	2.43%
2016	10,721	5.37%	21,424	-0.63%	18,543	0.11%	1.62%
Average % Change	4.17%		-0.46%		2.78%		**2.17%**
						Applied % Growth*	**2.50%**

N.T.S.

Figure 5
TDOT Count Locations & Background Traffic Growth Trends



LEGEND

XX% - Entering Traffic Volumes
(XX%) - Exiting Traffic Volumes

N.T.S.

Figure 7
Distribution of Generated Peak Hour Traffic Volume

1329 West Main Street
Franklin, TN 37064
615-678-8212
www.T2-Eng.com

TRIP GENERATION

Project:	Zero Industrial Park Road Development – Columbia, TN
ITE Land Use:	Industrial Park & Mini-Warehouse
ITE Code:	130 & 151
Trip Ends vs:	**ITE 130** – 240,000 SF and **ITE 151** – 71 Storage Units
Daily Equation:	Weekday – Varies by Land Use
AM Equation:	Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 AM – Varies by Land Use
PM Equation:	Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 PM – Varies by Land Use

Total Site Generated Traffic

Land Use	Size	Generated Traffic Volumes				
		Daily	AM Peak		PM Peak	
			Enter	Exit	Enter	Exit
Industrial Park (130)	240,000 SF	1,480	66	16	18	64
Mini-Warehouse (151)	71 Spaces	9	2	1	2	1
	TOTAL	**1,489**	**68**	**17**	**20**	**65**

Industrial Park (130) – 240,000 Square Feet

Time Period	Formula[1]	Calculation	Trips
Daily	$T = 0.52\ Ln(X) + 4.45$	$T = 0.52\ Ln(240) + 4.45$	1,480
AM Peak (Total)	$T = 0.34(X)$	$T = 0.34(240)$	82
AM Peak (Entering)	$T = 0.81(Total\ AM\ Trips)$	$T = 0.81(82)$	66
AM Peak (Exiting)	$T = 0.19(Total\ AM\ Trips)$	$T = 0.19(82)$	16
PM Peak (Total)	$T = 0.34(X)$	$T = 0.34(240)$	82
PM Peak (Entering)	$T = 0.22(Total\ PM\ Trips)$	$T = 0.22(82)$	18
PM Peak (Exiting)	$T = 0.78(Total\ PM\ Trips)$	$T = 0.78(82)$	64

[1] Institute of Transportation Engineers (ITE). Trip Generation Manual, 11th Edition. Washington, DC: ITE, 2023

1329 West Main Street
Franklin, TN 37064
615-678-8212
www.T2-Eng.com

Mini-Warehouse (151) – 71 Storage Units

Time Period	Formula[2]	Calculation	Trips
Daily	$T = 18.86(X) - 4.09$	$T = 18.86(0.71) - 4.09$	9
AM Peak (Total)	$Ln(T) = 0.62\ Ln(X) + 1.34$	$Ln(T) = 0.62\ Ln(0.71) + 1.34$	3
AM Peak (Entering)	$T = 0.58(Total\ AM\ Trips)$	$T = 0.58(3)$	2
AM Peak (Exiting)	$T = 0.42(Total\ AM\ Trips)$	$T = 0.42(3)$	1
PM Peak (Total)	$Ln(T) = 0.59\ Ln(X) + 1.43$	$Ln(T) = 0.59\ Ln(0.71) + 1.43$	3
PM Peak (Entering)	$T = 0.48(Total\ PM\ Trips)$	$T = 0.48(3)$	2
PM Peak (Exiting)	$T = 0.52(Total\ PM\ Trips)$	$T = 0.52(3)$	1

[2] Institute of Transportation Engineers (ITE). Trip Generation Manual, 11th Edition. Washington, DC: ITE, 2023

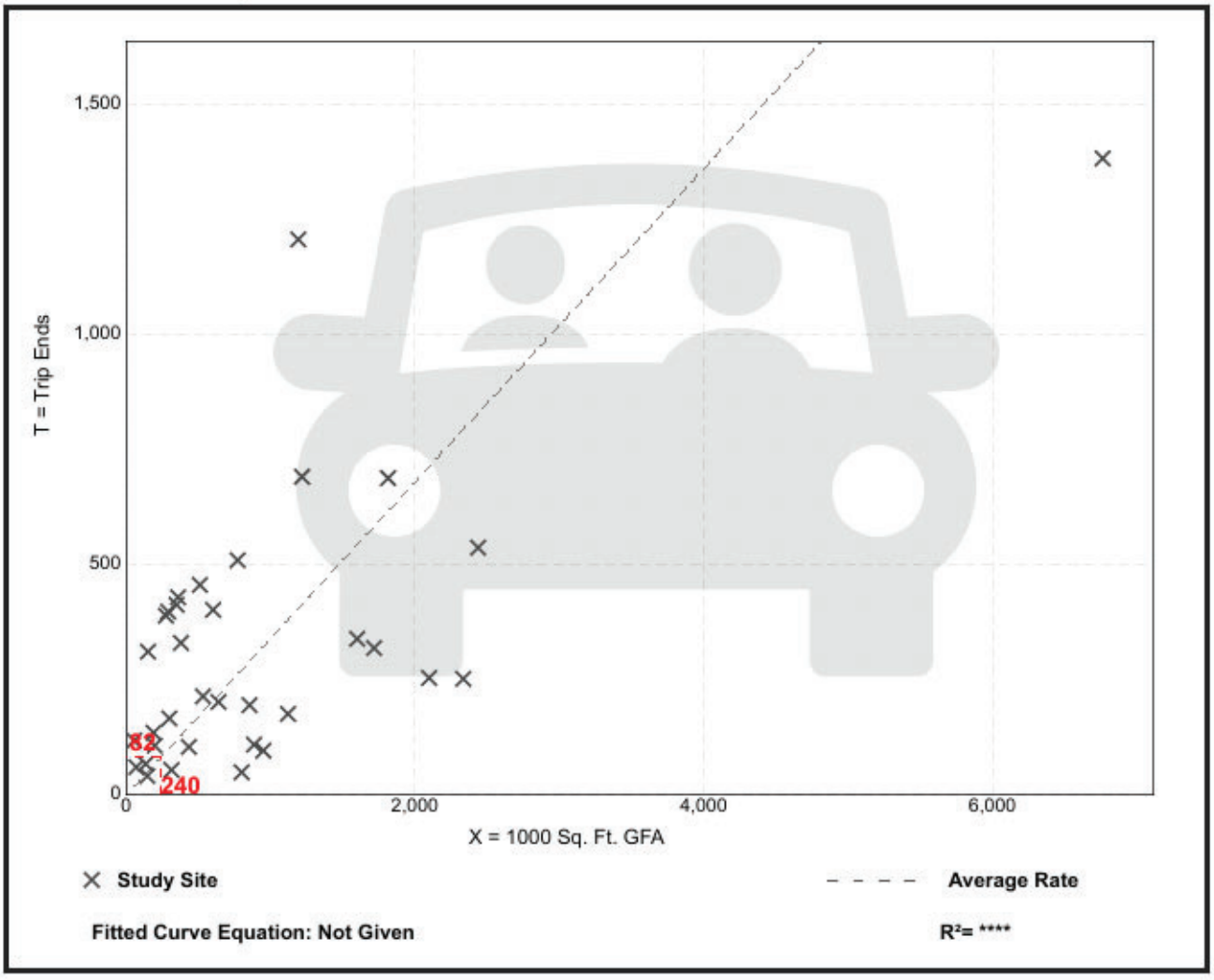
Industrial Park
(130)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 34
Avg. 1000 Sq. Ft. GFA: 956
Directional Distribution: 81% entering, 19% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.34	0.06 - 2.13	0.33

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

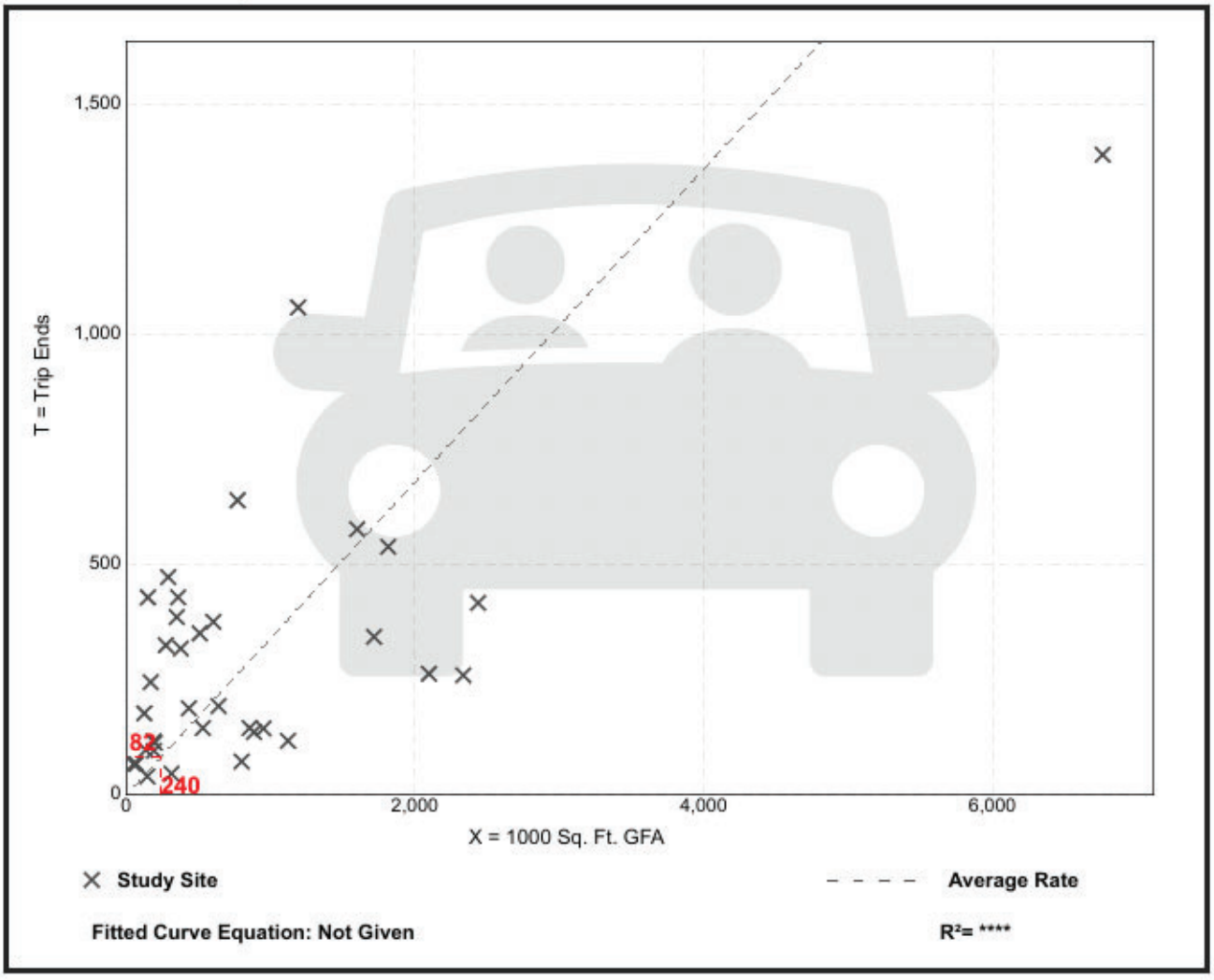
Industrial Park
(130)

Vehicle Trip Ends vs: **1000 Sq. Ft. GFA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 35
Avg. 1000 Sq. Ft. GFA: 899
Directional Distribution: 22% entering, 78% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.34	0.09 - 2.85	0.36

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Industrial Park
(130)

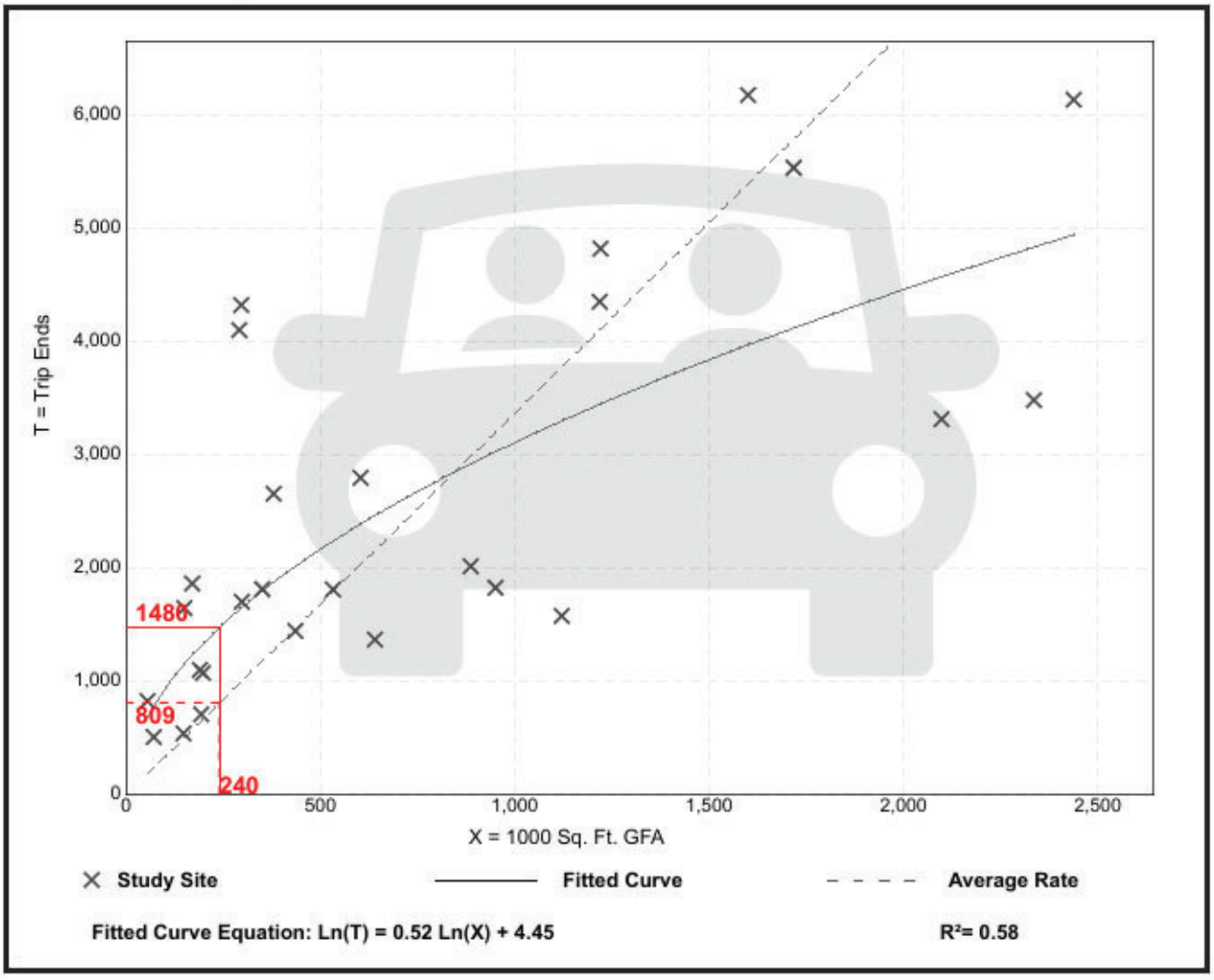
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 27
Avg. 1000 Sq. Ft. GFA: 762
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.37	1.41 - 14.98	2.60

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Mini-Warehouse
(151)

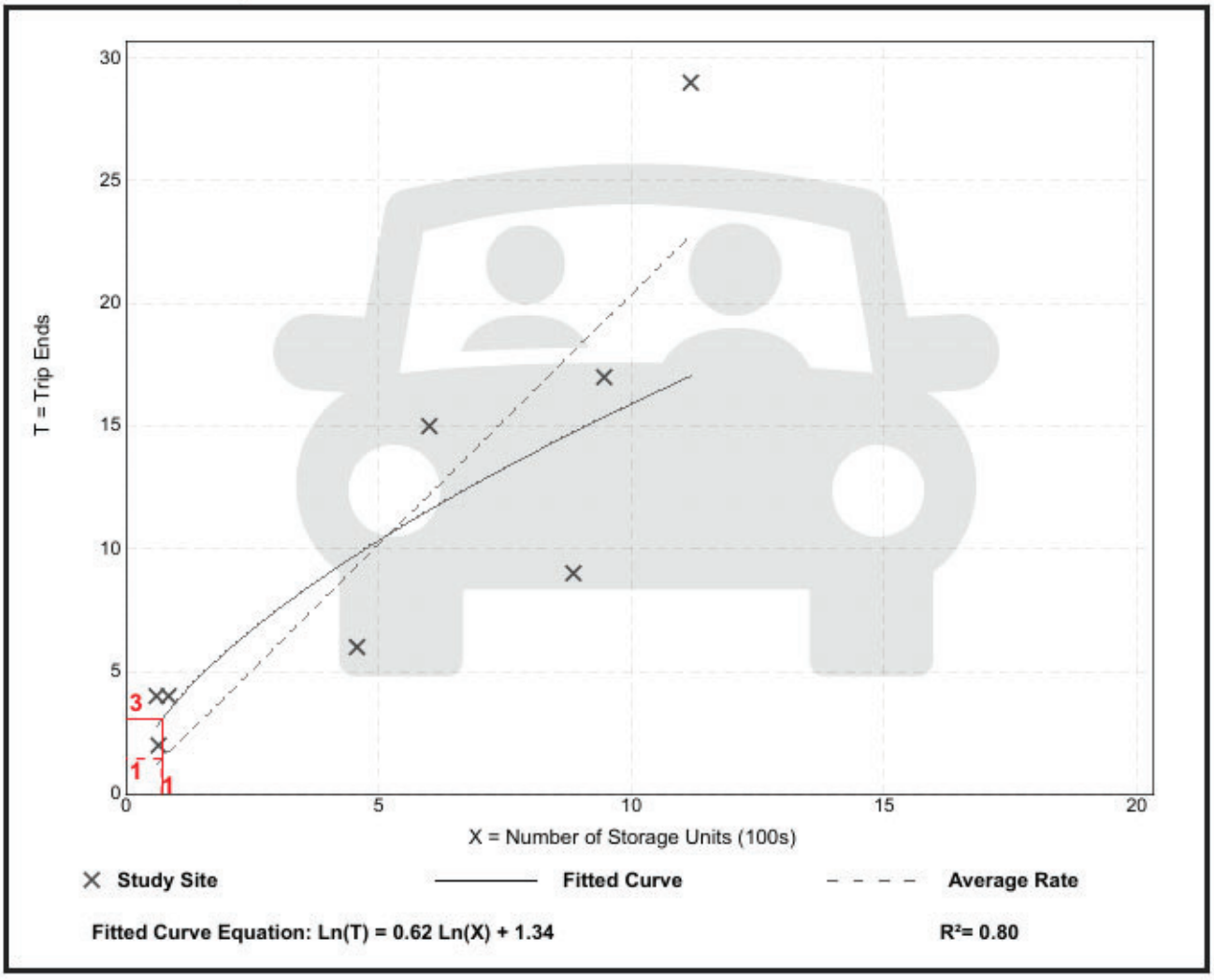
Vehicle Trip Ends vs: **Storage Units (100s)**
On a: **Weekday,**
AM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 8
Avg. Num. of Storage Units (100s): 5
Directional Distribution: 58% entering, 42% exiting

Vehicle Trip Generation per Storage Unit (100s)

Average Rate	Range of Rates	Standard Deviation
2.04	1.02 - 6.67	1.00

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Mini-Warehouse
(151)

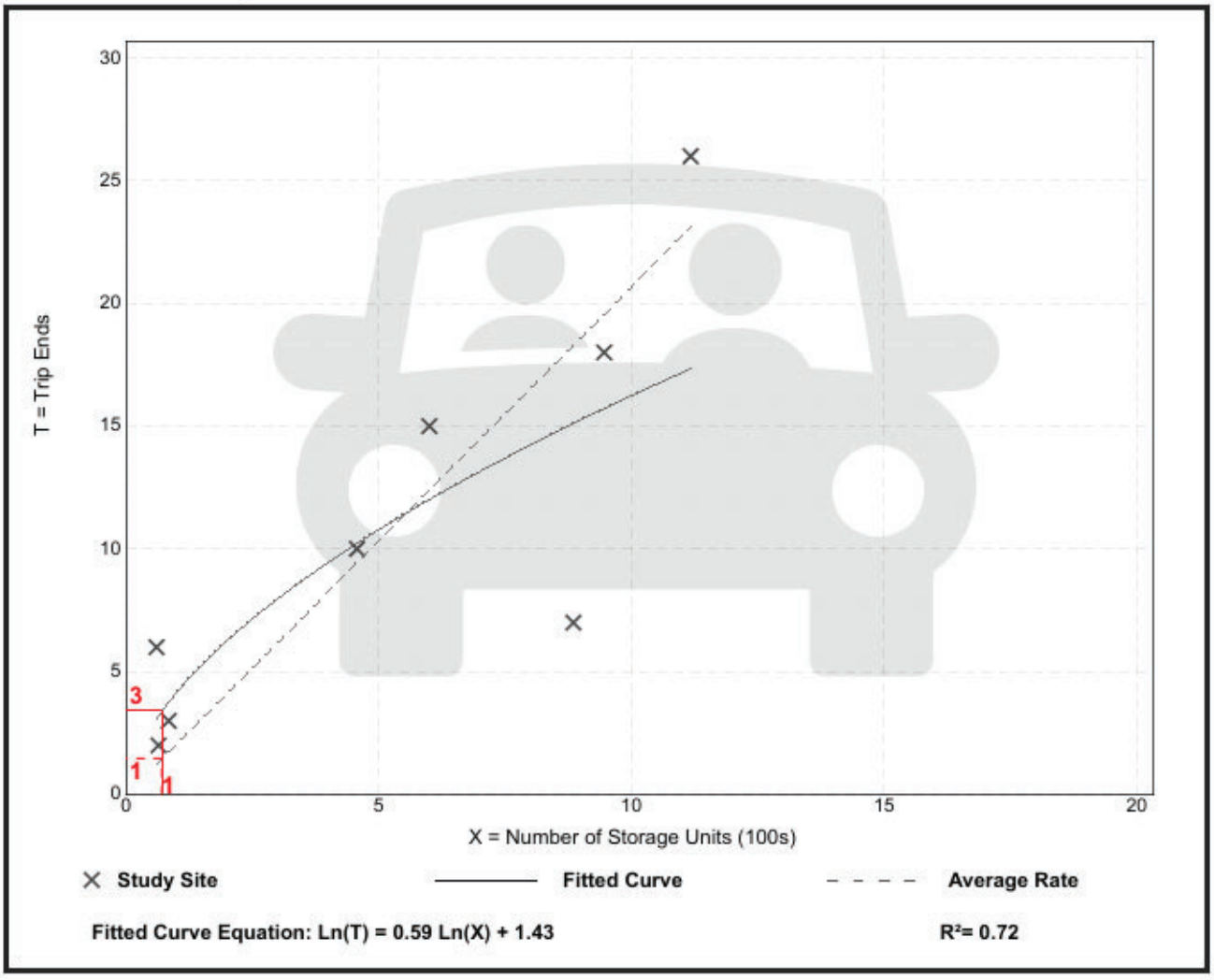
Vehicle Trip Ends vs: **Storage Units (100s)**
On a: **Weekday,**
PM Peak Hour of Generator

Setting/Location: **General Urban/Suburban**
Number of Studies: 8
Avg. Num. of Storage Units (100s): 5
Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per Storage Unit (100s)

Average Rate	Range of Rates	Standard Deviation
2.07	0.79 - 10.00	1.24

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

Mini-Warehouse
(151)

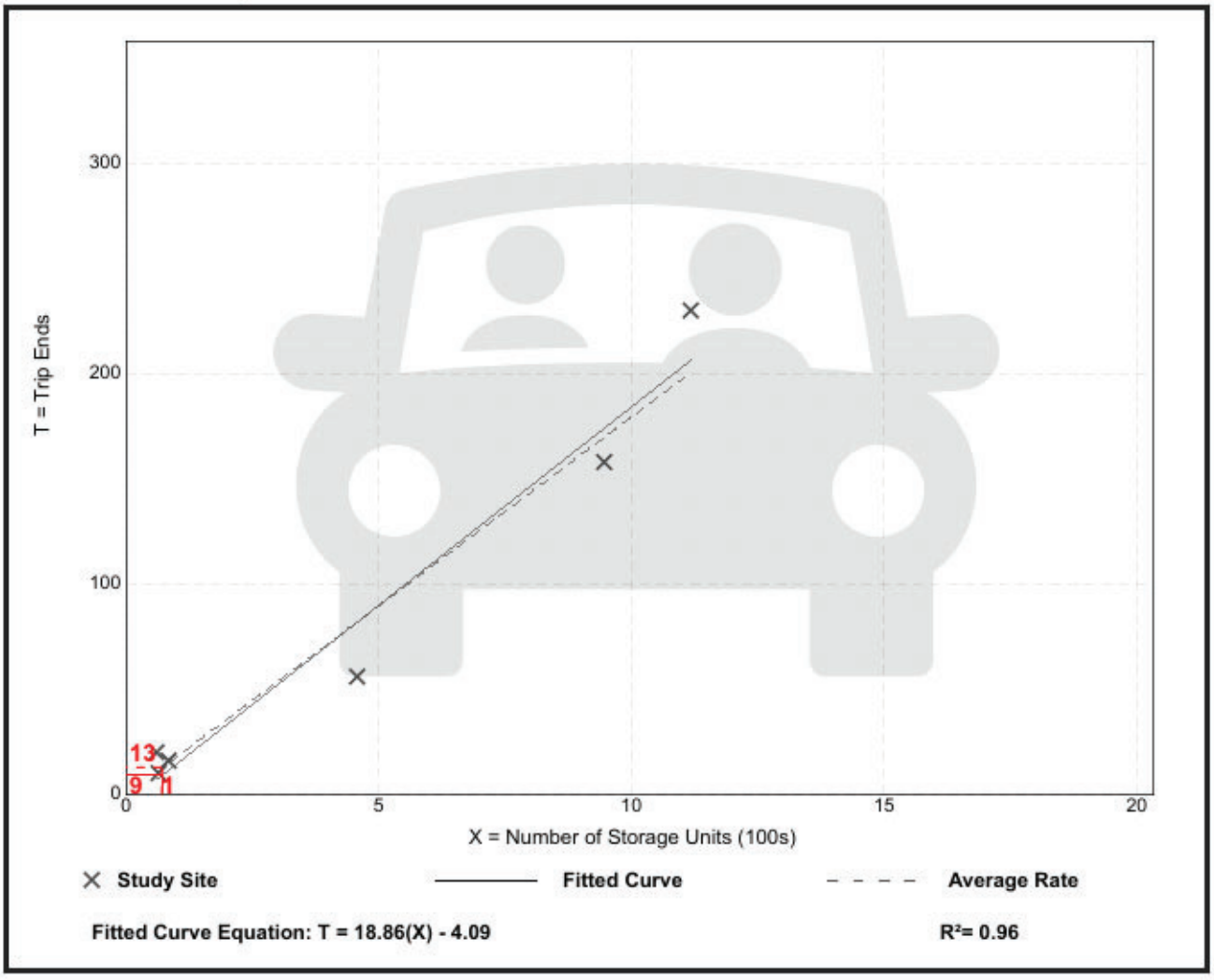
Vehicle Trip Ends vs: Storage Units (100s)
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. Num. of Storage Units (100s): 5
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Storage Unit (100s)

Average Rate	Range of Rates	Standard Deviation
17.96	12.25 - 33.33	4.13

Data Plot and Equation



Trip Gen Manual, 11th Edition ● Institute of Transportation Engineers

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 on a USB thumb drive or CD (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"

ADDRESS/LOCATION	Ø INDUSTRIAL PARK ROAD		
	TAX MAP: 089	GROUP:	PARCEL: 46.00
SUMMARY OF NATURE OF REQUEST AND WORK	NEW INDUSTRIAL PARK ON APPROXIMATELY 46.59 ACRES. PARCEL TO SUBDIVIDE INTO 20 INDUSTRIAL LOTS, 2 OPEN SPACE LOTS, AND 2 PUBLIC ROADS		

DATE OF PRE-APPLICATION CONFERENCE	12/7/22	*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
☐ Annexation ☐ Rezoning ☒ Preliminary Plat ☐ Final Plat ☐ PUD Preliminary Master Plan ☐ PUD Final Site Plan ☐ Multi-Family Site Plan ☒ Other: SITE DEVELOPMENT PLAN **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations/Rezoning/PUD's:** ☐ Written Legal Description copy ☐ Requested Zone Listed ☐ Compliance with Comprehensive Plan ☐ Annexation Permission Form ☐ Plans and/or Plats conforming to City standards with check list completed ☐ Columbia Water System Availability Letter **Plats/PUDs:** ☒ Project Name (include Sections & Phases) ZERO INDUSTRIAL PARK ROAD ☒ Total Number of Lots 22 ☒ Total acreage 46.59 ACRES

Rev. 4/14/2022

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 meetings 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	COLE GAUMNITZ	PHONE	(615) 678-8212
ADDRESS	1329 W. MAIN ST. FRANKLIN, TN	EMAIL	cole.gaumnitz@tz-eng.com

PROPERTY OWNER NAME	KURE PROPERTIES LLC & J&T LAND HOLDINGS LLC	PHONE	(630) 306-7000
ADDRESS	4817 MURFREESBORO RD ARRINGTON, TN 37014	EMAIL	ryan@kureconstruction.com

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 GAUMNITZ		2/10/2023
APPLICANT NAME	APPLICANT SIGNATURE	DATE
Ryan Kure		2/10/2023
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	

CPWS

February 13, 2023

Mr. Cole Gaumnitz
T-Square Engineering
1329 W. Main Street
Franklin, TN 37064
Sent via email: cole.gaumnitz@t2-eng.com

RE: Water Availability Letter
Zero Industrial Park
Industrial Park Road
Tax Map 89, Parcel 46
Columbia, Maury County, TN

Dear Mr. Gaumnitz:

Columbia Power and 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, various Planning Commissions and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies, water service will be made available on a first-come, first-served basis, provided the applicant complies with all rules and regulations of CPWS and conditions set out herein.

The proposed development is 240,000 square-feet of industrial storage, including 2,050 square-feet of office space and 4 equipment washdown rooms. CPWS has evaluated the projected water demands for the proposed industrial development in the water system hydraulic model and is able to meet a fire-flow capacity of 1,125 gpm at 20 psi while maintaining the existing level of service and pressures in this portion of the distribution system. CPWS can provide water for the proposed development according to the following requirements:

- Waterline connections will be made to the existing 12-inch water main located on Industrial Park Rd.

- Domestic and fire protection service for the development will be provided by redundant meters, one located at each entrance at Industrial Park Rd.

All of the above requirements are to be constructed and paid for by the Applicant and dedicated to CPWS once complete up to and including the meter. No construction of CPWS infrastructure shall be initiated until final construction plans have been approved by TDEC and all parties have fully executed a water service agreement.

Once you have received this Water Availability Letter, next steps in the process to obtain water service from CPWS are as follows:

- Present the attached hydrant analysis report for coordination and approval of development from the Columbia Fire & Rescue Fire Marshall.
- 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.
- Remit to CPWS new water service fees:

New Water Service Fee: $1,500 + $370 per SFU (25.8 SFUs)	$11,046.00

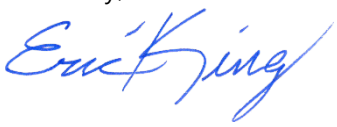
- CPWS will then develop water construction drawings and submit to TDEC for approval. Upon approval by TDEC and payment of meter and impact fees by the applicant, applicant may then schedule a pre-construction meeting with CPWS. Pre-construction meeting will not be scheduled until fees are paid in full or surety is provided in lieu of full payment. Final meter and impact fees are subject to change based on final design and meter size determination. Meter fees are subject to change based on market costs at time of purchase. Meters will not be set until meter and impact fees are paid.

Meter Fee: TBD per 8" meter (2 meters)	TBD
Impact Fee: $750,000 per 8" meter (1 meter)	$750,000.00
Total Meter and Impact Fees Due =	**$750,000.00**

- After the pre-construction meeting, CPWS will then issue a formal notice to proceed. No construction of CPWS infrastructure may take place prior to the pre-construction meeting.
- Applicant is then 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.

If you have any questions, please feel free to contact me at 423-774-0349 or eric.king@inflodesign.com. This letter is valid for one-hundred twenty (120) days from the date of this letter.

Sincerely,



Eric King, P.E.
Inflo Design Group, LLC
on behalf of Columbia Power and Water Systems

cc: Jonathan Hardin, CPWS
File 23-001

CITY OF COLUMBIA
TENNESSEE

WASTEWATER DEPARTMENT

10 February 2023

Cole Gaumnitz
T-Square Engineering
1329 W. Main St,
Franklin, TN 37067

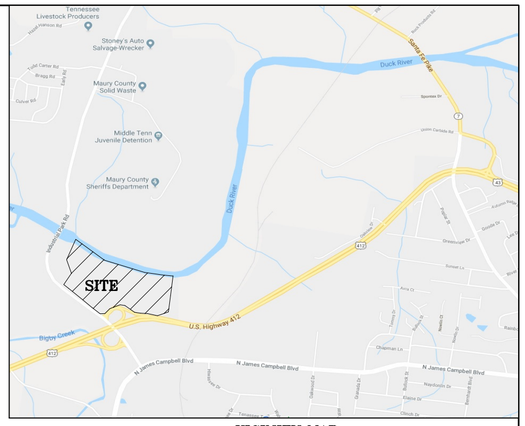
RE: Zero Industrial Park Road, Map 089, Parcel 46.00

Cole,

This letter serves as confirmation that the City of Columbia Wastewater Department has the available capacity to service the above-referenced development. Major or minor improvements to existing infrastructure may or may not be necessary to satisfactorily convey the additional sanitary sewer flow from the above-referenced proposed 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. 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

CARROLL LAND SURVEYING
495 EAST MAIN STREET, SUITE 1
HOHENWALD, TN 38462
PHONE: (931)796-1654
FAX: (931)796-1651
EMAIL: csurvey@bellsouth.net



VICINITY MAP
(NOT TO SCALE)

STATE PLANE COORDINATES
4-19-18

MARTRAC INC
RECORD BOOK R2010, PAGE 568
TAX MAP 89, PARCEL 9.06

N 23°49'05" E 467.73'

S 57°58'08" E 794.07'

DUCK RIVER
LOW WATER MARK

S 70°27'05" E 864.72'

S 81°29'52" E 391.47'

L10

N:475099.48
E:1650408.62

N 21°32'25" W 264.98'

ZONE AE
(FLOOD)

ZONE X
(NO FLOOD)

(TRACT 3)
46.59
ACRES

299.38'
N 38°23'41" E

L9

L8

N 56°30'50" W 253.61'

N 51°03'26" W 299.81'

L7

L6

L5

L4

N 64°20'19" W 252.14'

L3

L2

L1

S 60°13'44" W 536.74'

50' EAST TENNESSEE
NATURAL GAS LINE EASEMENT
(DEED BOOK 843, PAGE 544)

GAS

EXISTING
ROADWAY

INDUSTRIAL
PARK ROAD

PASS IPF
AT 188.99'

S 07°21'11" W 525.63'

IN

OUT

GRAFTECH ADVANCED
GRAPHITE MATERIALS LLC
RECORD BOOK R2394, PAGE 894
TAX MAP 89, PARCEL 45.00

N:474226.01
E:1652570.86
P.O.B.
(TRACT 3)

APPROXIMATE
CITY LIMITS

HWY 412
VARIABLE R.O.W.

LINE	BEARING	DISTANCE
L1	N 80°37'37" W	71.95'
L2	S 88°28'31" W	84.43'
L3	N 72°47'24" W	131.90'
L4	N 64°37'21" W	60.74'
L5	S 79°28'45" W	201.01'
L6	S 70°26'51" W	70.99'
L7	S 48°34'27" W	175.34'
L8	N 50°13'18" W	409.61'
L9	N 47°09'09" W	89.96'
L10	S 85°57'41" E	165.52'

KENNETH CARROLL
REGISTERED LAND SURVEYOR
XVI
AGRICULTURE
COMMERCE
TENNESSEE NO. 1335

0 200 400 600

CERTIFICATION

I KENNETH CARROLL, LICENSED LAND SURVEYOR, DO HEREBY CERTIFY THAT THIS PLAT WAS PREPARED UNDER MY DIRECTION, THAT IT IS MY OPINION THAT THIS SURVEY MEETS OR EXCEEDS THE STANDARDS OF PRACTICES 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

LEGEND

● = IRON PIN FOUND
⊠ = SEWER BOX

NOTE: MY REVIEW OF THE "FEMA" FLOOD HAZARD MAP AVAILABLE INDICATES THAT THIS PROPERTY IS IN ZONE "AE&X" AS INDICATED BY MAP

47119C0165E 475423

AS DATED APRIL 16, 2007.

Kenneth Carroll

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 R2499, PAGE 715, COUNTY REGISTERS OFFICE, AND THAT I (WE) HEREBY ADOPT THIS PLAN OF SUB-DIVISION WITH MY (OUR) FREE CONSENT; ESTABLISH THE MINIMUM RESTRICTION LINES, AND THAT OFFERS OF IRREVOCABLE DEDICATION FOR ALL PUBLIC WAYS, UTILITIES, AND OTHER FACILITIES HAVE BEEN FILLED.

DATE

COLUMBIA INDUSTRIAL PROPERTIES LLC

SURVEY FOR COLUMBIA INDUSTRIAL PROPERTIES LLC

SCALE: 1" = 200'	APPROVED: KENNETH CARROLL	DRAWN BY: BRITTANY R.
DATE: 4-23-18		REVISED: / /

REVISED: 6-9-22 TO SHOW SEWER INFORMATION.

9TH CIVIL DISTRICT - MAURY COUNTY, TN

REF: RECORD BOOK R2499, PAGE 715
TAX MAP 89, PARCEL 46.00

JOB NAME: TIMC418_3A
(JC)

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: ZERO INDUSTRIAL PARK ROAD

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.
- ☐ N/A 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.
- ☐ 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.
- ☐ N/A 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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TENNESSEE

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COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

PUD Specific Items

- ❑ Legal Description of Property
- ❑ Owner's Affidavit
- ❑ List of all variances 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

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:

COLE GRAMNITZ		2/13/2023
Print Name	Signature	Date

PRELIMINARY PLAT AND DEVELOPMENT PLAN

FOR

ROCK SPRINGS

DEE PURSUIT, LLC

CONTACTS

OPTIONEE/DEVELOPER

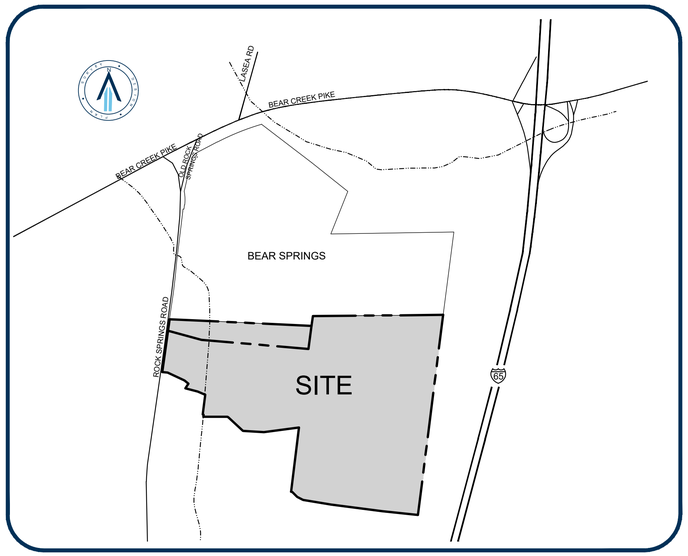
CLIFF SMITH
DEE PURSUIT, LLC
213 OVERLOOK CIRCLE, SUITE B2
BRENTWOOD, TN 37027
(615) 376-5177
cliff.smith@cpsland.com

CIVIL

JACOB VINCENT
RAGAN SMITH
315 WOODLAND STREET
NASHVILLE, TN 37206
(615) 244-8591
jvincent@ragansmith.com

LANDSCAPE ARCHITECTURE

ANDREW TARSI
RAGAN SMITH
315 WOODLAND STREET
NASHVILLE, TN 37206
(615) 244-8591
atarsi@ragansmith.com



LOCATION MAP
NOT TO SCALE

INDEX OF SHEETS

SHEET	DESCRIPTION
CVR	COVER SHEET
PRELIMINARY PLAT	
P0.0	ALTA SURVEY
P1.0	OVERALL PRELIMINARY PLAT
P2.0	PRELIMINARY PLAT
P3.0	PRELIMINARY PLAT
P4.0	PRELIMINARY PLAT
DEVELOPMENT PLAN	
DP1.0	EXISTING CONDITIONS
DP2.0	TREE PRESERVATION PLAN
2 DP3.0	PEDESTRIAN & CIVIC SPACE PLAN
DP4.0	ROADWAY SECTIONS
2 DP5.1	CIVIC SPACE #1
DP5.2	CIVIC SPACE #2
DP5.3	CIVIC SPACE #3
DP5.4	CIVIC SPACE #4
DP5.5	CIVIC SPACE #5

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

SCOTT MICHAEL BERNICK — REGISTERED LANDSCAPE ARCHITECT — TENNESSEE NO. 691 — 05/22/2023

JACOB F. VINCENT — REGISTERED AGENCY LANDSCAPE ARCHITECT — NO. 0011453 — STATE OF TENNESSEE — 05/22/23

RaganSmith
Nashville - Murfreesboro - Chattanooga
ragansmith.com

ROCK SPRINGS
FOR
DEE PURSUIT, LLC
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: NOT TO SCALE
Date: MARCH 20, 2023
Approved By: JFV

Revisions:

-	-	-
-	-	-
-	-	-
-	-	-
2	2023.05.22	PER STAFF COMMENTS
1	2023.04.17	PER STAFF COMMENTS

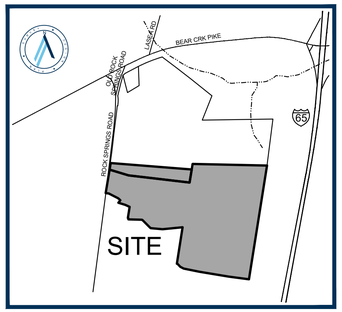
Drawing Title:
COVER

Drawing No.
CVR

Project No.
21-0389

Know what's below. Call before you dig.

G:\21-0389\5-SURVEY\PRELIMINARY PLAT\21-0389 PRELIMINARY PLAT-COVER.DWG
PLOTTED BY AMANDA REED ON: 5/22/2023 1:51 PM | LAST UPDATED BY AREED ON: 4/17/2023 2:29 PM



LOCATION MAP
(NOT TO SCALE)

GENERAL NOTES

1. BEARINGS SHOWN HEREON ARE BASED ON THE TENNESSEE COORDINATE SYSTEM OF 1983. GPS EQUIPMENT WAS USED TO DETERMINE THE POSITION OF TWO (2) CONTROL POINTS FOR THE SURVEYED PROPERTY TO ESTABLISH AS BASIS FOR BEARING FOR THE SURVEY.
2. TYPE OF GPS EQUIPMENT USED- TRIMBLE MODEL R10, DUAL FREQUENCY RECEIVER. TYPE OF GPS SURVEY: TDOT NETWORK ADJUSTED REAL TIME KINEMATIC. THE RELATIVE POSITIONAL QUALITY IS 0.05'.
3. BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN FLOOD ZONE X, AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47119C0195E, WITH AN EFFECTIVE REVISED DATE OF APRIL 15, 2007 WHICH MAKES UP A PART OF THE NATIONAL FLOOD INSURANCE ADMINISTRATION REPORT; COMMUNITY NO. 470123 PANEL NO. 0195, SUFFIX E WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PREMISES IS SITUATED. SAID MAP DEFINES ZONE "X" UNDER "OTHER AREAS" AS AN AREA DETERMINED TO BE OUTSIDE THE 2% ANNUAL FLOODPLAIN.
4. THE SURVEYED PROPERTY IS CURRENTLY ZONED CD-3, AS SHOWN ON THE CURRENT GIS ZONING MAP FOR THE CITY OF COLUMBIA. NO ZONING REPORT WAS PROVIDED AT THE TIME OF THIS SURVEY.
5. WETLAND AREAS SHOWN HEREON ARE BASED ON A HYDROLOGIC DETERMINATION REPORT PREPARED BY GROW ENVIRONMENTAL SOLUTIONS, DATED JANUARY 5, 2022, AND FLAGGED AREAS LOCATED DURING FIELD WORK.
6. THIS SURVEYOR HAS NOT BEEN FURNISHED WITH A COPY OF A TITLE COMMITMENT. THE SURVEYED PROPERTY IS, THEREFORE, SUBJECT TO THE FINDINGS OF A COMPLETE AND ACCURATE TITLE SEARCH.

UTILITY NOTE

THIS SURVEYOR 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. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. 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 (3) THREE NOR MORE THAN (10) TEN WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 811.

PROPERTY DESCRIPTIONS - AS SURVEYED

MAP 092, PARCEL 11.01

BEING A CERTAIN TRACT OR PARCEL OF LAND LYING AND BEING IN THE FOURTH (4th) CIVIL DISTRICT OF MAURY COUNTY, CITY OF COLUMBIA, TENNESSEE. BEING BOUNDED ON THE NORTH BY THE BEAR SPRINGS, LLC PROPERTY OF RECORD IN BOOK R2797, PAGE 1063, REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE (R.O.M.C.T.); ON THE EAST AND SOUTH BY THE DONALD BLAIR PROPERTY OF RECORD IN BOOK R2394, PAGE 889, R.O.M.C.T. AND ON THE WEST BY ROCK SPRINGS ROAD (50-FOOT RIGHT-OF-WAY) AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC" IN THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, SAID IRON ROD LYING APPROXIMATELY 2,470 FEET SOUTH OF THE INTERSECTION OF SAID ROCK SPRINGS ROAD WITH BEAR CREEK PIKE AND BEING THE NORTHWEST CORNER OF THE PROPERTY SHOWN ON THE PLAT OF SURVEY FOR THE J.C. CONNELLY ESTATE OF RECORD IN PLAT BOOK 15, PAGE 126, R.O.M.C.T.;

THENCE, WITH THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, NORTH 07 DEGREES 50 MINUTES 39 SECONDS EAST, 597.29 FEET TO A DISTURBED 5/8-INCH IRON ROD (OLD), THE SOUTHWEST CORNER OF SAID BEAR SPRINGS, LLC AND THE NORTHWEST CORNER AND **POINT OF BEGINNING** OF THE HEREIN DESCRIBED TRACT;

THENCE, LEAVING THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, WITH THE SOUTHERLY LINE OF SAID BEAR SPRINGS, LLC, SOUTH 87 DEGREES 19 MINUTES 36 SECONDS EAST, 1591.31 FEET TO A 1-INCH IRON PIPE (OLD) IN THE WEST LINE OF SAID DONALD BLAIR, SAID IRON PIPE BEING THE NORTHEAST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH SAID BLAIR THE FOLLOWING THREE (3) CALLS:

1. SOUTH 07 DEGREES 21 MINUTES 48 SECONDS WEST, 260.60 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC", THE SOUTHWEST CORNER OF THE HEREIN DESCRIBED TRACT;
2. NORTH 85 DEGREES 08 MINUTES 12 SECONDS WEST, 1203.60 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
3. NORTH 74 DEGREES 48 MINUTES 12 SECONDS WEST, 388.24 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC" IN THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, SAID IRON ROD BEING THE SOUTHWEST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, NORTH 07 DEGREES 50 MINUTES 39 SECONDS EAST, 130.07 FEET TO THE **POINT OF BEGINNING** CONTAINING **351,779 SQUARE FEET** OR **8.08 ACRES**, MORE OR LESS

BEING THE SAME PROPERTY CONVEYED TO GARY W. CONNELLY FROM J.C. CONNELLY AND WIFE, BERNICE CONNELLY BY DEED OF RECORD IN BOOK 607, PAGE 699, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE.

SAID PROPERTY BEING FURTHER CONVEYED BY DEED CREATING TENANCY BY THE ENTIRETIES BETWEEN GARY W. CONNELLY AND WIFE, NANCY CONNELLY OF RECORD IN BOOK R1486, PAGE 557, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE.

MAP 092, PARCEL 11.02

BEING A CERTAIN TRACT OR PARCEL OF LAND LYING AND BEING IN THE FOURTH (4th) CIVIL DISTRICT OF MAURY COUNTY, CITY OF COLUMBIA, TENNESSEE. BEING BOUNDED ON THE NORTH AND WEST BY THE GARY W. CONNELLY AND WIFE, NANCY CONNELLY PROPERTY OF RECORD IN BOOK 607, PAGE 699 AND BOOK R1486, PAGE 557, REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE (R.O.M.C.T.) AND THE BEAR SPRINGS, LLC PROPERTY OF RECORD IN BOOK R2797, PAGE 1063, R.O.M.C.T.; ON THE EAST BY THE MATTIE LORENE HOLT PROPERTY OF RECORD IN BOOK R1750, PAGE 61, R.O.M.C.T.; ON THE SOUTH BY THE GREGORY S. BAKER PROPERTY OF RECORD IN BOOK R2785, PAGE 1051, R.O.M.C.T., THE RAY HOOD AND WIFE, OMA M. HOOD PROPERTY OF RECORD IN BOOK 681, PAGE 283, R.O.M.C.T. AND THE BOBBY HOLT PROPERTY OF RECORD IN BOOK 849, PAGE 505, R.O.M.C.T.; ON THE SOUTH AND WEST BY THE DEBORAH K. JEWELL PROPERTY OF RECORD IN BOOK R1935, PAGE 1473, R.O.M.C.T., THE LORENE HOLT PROPERTY OF RECORD IN BOOK R1504, PAGE 338, R.O.M.C.T. AND THE ADAM P. WEST PROPERTY OF RECORD IN BOOK R1793, PAGE 478, R.O.M.C.T. AND ON THE WEST BY ROCK SPRINGS ROAD (50-FOOT RIGHT-OF-WAY) AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC" IN THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, SAID IRON ROD LYING APPROXIMATELY 2,470 FEET SOUTH OF THE INTERSECTION OF SAID ROCK SPRINGS ROAD WITH BEAR CREEK PIKE AND BEING THE NORTHWEST CORNER OF THE PROPERTY SHOWN ON THE PLAT OF SURVEY FOR THE J.C. CONNELLY ESTATE OF RECORD IN PLAT BOOK 15, PAGE 126, R.O.M.C.T.;

THENCE, WITH THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, NORTH 07 DEGREES 50 MINUTES 39 SECONDS EAST, 467.22 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC", THE SOUTHWEST CORNER OF SAID GARY W. CONNELLY AND WIFE, NANCY CONNELLY, SAID IRON ROD BEING THE NORTHWEST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, LEAVING THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, WITH SAID CONNELLY THE FOLLOWING THREE (3) CALLS:

1. SOUTH 74 DEGREES 48 MINUTES 12 SECONDS EAST, 388.24 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
2. SOUTH 85 DEGREES 08 MINUTES 12 SECONDS EAST, 1203.60 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
3. NORTH 07 DEGREES 21 MINUTES 48 SECONDS EAST, 260.60 FEET TO A 1-INCH IRON PIPE (OLD) AT AN INTERIOR CORNER IN THE SOUTHERLY LINE OF SAID BEAR SPRINGS, LLC;

THENCE, WITH THE SOUTHERLY LINE OF SAID BEAR SPRINGS, LLC THE FOLLOWING TWO (2) CALLS:

1. NORTH 08 DEGREES 05 MINUTES 52 SECONDS EAST, 110.99 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
2. GENERALLY WITH A FENCE, NORTH 89 DEGREES 29 MINUTES 25 SECONDS EAST, 1458.58 FEET TO AN IRON ROD (OLD) WITH CAP STAMPED "RLS #1335 IN THE WESTERLY LINE OF SAID MATTIE LORENE HOLT, SAID IRON ROD BEING THE NORTHEAST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH THE WESTERLY LINE OF SAID HOLT, SOUTH 07 DEGREES 10 MINUTES 21 SECONDS WEST, 2259.04 FEET TO AN EXISTING WOODEN FENCE POST IN THE NORTHERLY LINE OF SAID GREGORY S. BAKER, SAID FENCE POST BEING THE SOUTHWEST CORNER OF SAID HOLT AND THE SOUTHEAST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH THE NORTHERLY LINE OF SAID BAKER THE FOLLOWING FOUR (4) CALLS:
NORTH 84 DEGREES 02 MINUTES 02 SECONDS WEST, 400.23 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
NORTH 82 DEGREES 39 MINUTES 15 SECONDS WEST, 579.40 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
NORTH 80 DEGREES 21 MINUTES 15 SECONDS WEST, 317.90 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
NORTH 63 DEGREES 02 MINUTES 15 SECONDS WEST, 73.70 FEET TO AN ANGLE IRON (OLD), THE NORTHEAST CORNER OF SAID RAY AND OMA HOOD, THE NORTHWEST CORNER OF SAID BAKER AND THE SOUTHWEST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH THE NORTHERLY LINE OF SAID HOOD, THE FOLLOWING TWO (2) CALLS:

1. NORTH 45 DEGREES 13 MINUTES 29 SECONDS WEST, 79.81 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
2. NORTH 83 DEGREES 15 MINUTES 18 SECONDS WEST, 11.88 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC" AT THE SOUTHEAST CORNER OF SAID LORENE HOLT;

THENCE, WITH THE EASTERLY LINE OF SAID HOLT AND THE EASTERLY LINE OF SAID DEBORAH K. JEWELL, GENERALLY WITH A FENCE, NORTH 07 DEGREES 01 MINUTES 15 SECONDS EAST, 724.80 FEET TO AN EXISTING WOODEN FENCE POST, THE NORTHEAST CORNER OF SAID JEWELL;

THENCE, WITH THE NORTHERLY LINE OF SAID JEWELL, GENERALLY WITH A FENCE, SOUTH 82 DEGREES 28 MINUTES 09 SECONDS WEST, 397.66 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";

THENCE, CONTINUING WITH THE NORTHERLY LINE OF SAID JEWELL AND THE NORTHERLY LINE OF SAID LORENE HOLT, GENERALLY WITH A FENCE, NORTH 86 DEGREES 09 MINUTES 30 SECONDS WEST, 234.07 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";

THENCE, CONTINUING WITH THE NORTHERLY LINE OF SAID HOLT, GENERALLY WITH A FENCE, THE FOLLOWING TWO (2) CALLS:

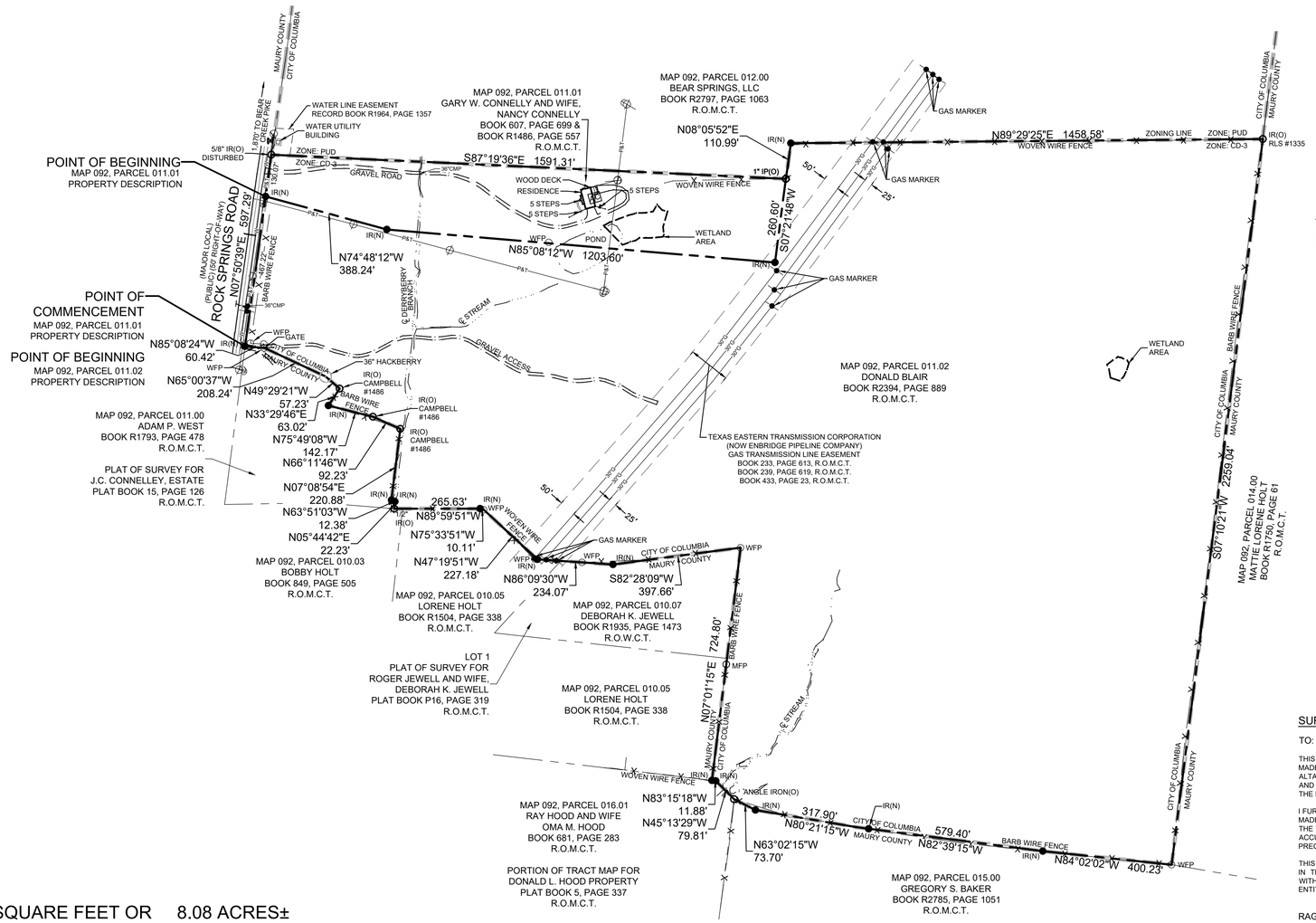
1. NORTH 47 DEGREES 19 MINUTES 51 SECONDS WEST, 227.18 FEET TO AN EXISTING WOODEN FENCE POST;
2. NORTH 75 DEGREES 33 MINUTES 51 SECONDS WEST, 10.11 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";

THENCE, CONTINUING WITH THE NORTHERLY LINE OF SAID HOLT AND THE NORTHERLY LINE OF SAID BOBBY HOLT, GENERALLY WITH A FENCE, NORTH 89 DEGREES 59 MINUTES 51 SECONDS WEST, 265.63 FEET TO A 1/2-INCH IRON ROD (OLD), THE SOUTHEAST CORNER OF SAID ADAM P. WEST;

THENCE, LEAVING THE NORTHERLY LINE OF SAID BOBBY HOLT, WITH SAID WEST, GENERALLY WITH A FENCE, THE FOLLOWING NINE (9) CALLS:

1. NORTH 05 DEGREES 44 MINUTES 42 SECONDS EAST, 22.23 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
2. NORTH 63 DEGREES 51 MINUTES 03 SECONDS WEST, 12.38 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
3. NORTH 07 DEGREES 08 MINUTES 54 SECONDS EAST, 220.88 FEET TO AN IRON ROD (OLD) WITH CAP STAMPED "CAMPBELL #1486";
4. NORTH 66 DEGREES 11 MINUTES 46 SECONDS WEST, 92.23 FEET TO AN IRON ROD (OLD) WITH CAP STAMPED "CAMPBELL #1486";
5. NORTH 75 DEGREES 49 MINUTES 08 SECONDS WEST, 142.17 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
6. NORTH 33 DEGREES 29 MINUTES 46 SECONDS EAST, 63.02 FEET TO AN IRON ROD (OLD) WITH CAP STAMPED "CAMPBELL #1486";
7. NORTH 49 DEGREES 29 MINUTES 21 SECONDS WEST, 57.23 FEET TO A 36" HACKBERRY TREE;
8. NORTH 65 DEGREES 00 MINUTES 37 SECONDS WEST, 208.24 FEET TO AN EXISTING WOODEN FENCE POST;
9. NORTH 85 DEGREES 08 MINUTES 24 SECONDS WEST, 60.42 FEET TO THE **POINT OF BEGINNING** CONTAINING **4,380,055 SQUARE FEET**, OR **100.55 ACRES**, MORE OR LESS.

BEING THE SAME PROPERTY CONVEYED TO DONALD BLAIR FROM DONALD BLAIR, EXECUTOR OF THE ESTATE OF JAMES STEVEN MARSHALL BY QUITCLAIM DEED OF RECORD IN BOOK R2394, PAGE 889, REGISTERS OFFICE FOR MAURY COUNTY, TENNESSEE.



LEGEND

IR(N)	IRON ROD (NEW) (1/2" X 18" W/CAP STAMPED "RAGAN SMITH & ASSOCIATES")
IR(O)	IRON ROD (OLD)
IP(O)	IRON PIPE (OLD)
∅	UTILITY POLE
∅→	UTILITY POLE W/ ANCHOR
WFP	WOODEN FENCE POST
MFP	METAL FENCE POST
INV	INVERT
P&T	OVERHEAD POWER AND TELEPHONE LINES
X	FENCE
	SIGN
CMP	CORRUGATED METAL PIPE
R.O.M.C.T.	REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE

PARCEL 011.01 AREA = 351,779 SQUARE FEET OR 8.08 ACRES±
PARCEL 011.02 AREA = 4,380,055 SQUARE FEET OR 100.55 ACRES±
TOTAL AREA = 4,731,834 SQUARE FEET OR 108.63 ACRES±

PROPERTY MAP REFERENCE

BEING PARCEL NUMBERS 011.01 AND 011.02 AS SHOWN ON MAURY COUNTY PROPERTY MAP NUMBER 092.

DEED REFERENCE

MAP 092, PARCEL 011.01

BEING THE SAME PROPERTY CONVEYED TO GARY W. CONNELLY FROM J.C. CONNELLY AND WIFE, BERNICE CONNELLY BY DEED OF RECORD IN BOOK 607, PAGE 699, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE.

SAID PROPERTY BEING FURTHER CONVEYED BY DEED CREATING TENANCY BY THE ENTIRETIES BETWEEN GARY W. CONNELLY AND WIFE, NANCY CONNELLY OF RECORD IN BOOK R1486, PAGE 557, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE.

MAP 092, PARCEL 011.02

BEING THE SAME PROPERTY CONVEYED TO DONALD BLAIR FROM DONALD BLAIR, EXECUTOR OF THE ESTATE OF JAMES STEVEN MARSHALL BY QUITCLAIM DEED OF RECORD IN BOOK R2394, PAGE 889, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE.

SURVEYOR'S STATEMENT

TO: ROCK SPRINGS INVESTMENT PARTNERS

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, 6a, 8, 9, 11, 13, 16 AND 18 OF TABLE A THEREOF.
THE FIELD WORK WAS COMPLETED ON FEBRUARY 21, 2023.

I FURTHER CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH CHAPTER 0820-4, STANDARDS OF PRACTICE AS ADOPTED BY THE TENNESSEE STATE BOARD OF EXAMINERS FOR LAND SURVEYORS, CONFORMS TO THE ACCURACY OF A CATEGORY I SURVEY AS DEFINED IN THE STANDARDS, AND THE RATIO OF PRECISION OF THE UNADJUSTED SURVEY IS BETTER THAN 1:10,000.

THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PERSON OR ENTITY NAMED IN THE CERTIFICATE AND DOES NOT EXTEND TO ANY UNNAMED PERSON OR ENTITY WITHOUT AN EXPRESS RE-CERTIFICATION BY THE SURVEYOR NAMING SAID PERSON OR ENTITY.

RAGAN-SMITH ASSOCIATES, INC.

BY: _____ 03/20/2023
CHRISTOPHER J. MABERY, TN. RLS NO. 2483 — DATE



(SEE GENERAL NOTE 1)

0 200 400

811 Know what's below. Call before you dig.

RaganSmith

Nashville - Murfreesboro - Chattanooga
ragansmith.com



BLAIR & CONNELLY PROPERTIES

FOR

ROCK SPRINGS INVESTMENT PARTNERS

1479 ROCK SPRINGS ROAD, COLUMBIA, TENNESSEE 38401
4th CIVIL DISTRICT OF MAURY COUNTY, CITY OF COLUMBIA, TENNESSEE

Scale: 1" = 200'

Date: MARCH 20, 2023

Approved By: CJM

Revisions:

– –
– –
– –
– –
– –
– –

Drawing Title:

ALTA/NSPS LAND TITLE SURVEY

Drawing No.

P0.0

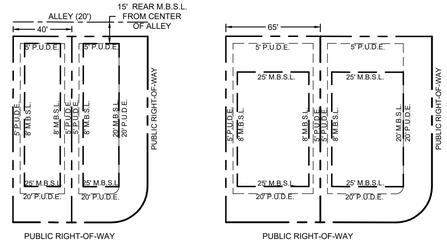
Project No.

21-0389

G:\21-0389\1-SURVEY\ALTA\21-0389 ALTA.DWG
PLOTTED BY CHRIS MABERY ON 3/15/2023 5:48 AM - LAST UPDATED BY CMABERY ON 3/15/2023 5:52 PM

PRELIMINARY PLAT GENERAL NOTES

1. THE PURPOSE OF THIS PLAT IS TO CREATE 187 SINGLE FAMILY LOTS AND 7 OPEN SPACE LOTS.
2. BEARINGS SHOWN HEREON ARE BASED ON THE TENNESSEE COORDINATE SYSTEM OF 1983. GPS EQUIPMENT WAS USED TO DETERMINE THE POSITION OF TWO (2) CONTROL POINTS FOR THE SURVEYED PROPERTY TO ESTABLISH AS BASIS FOR BEARING FOR THE SURVEY.
3. TYPE OF GPS EQUIPMENT USED: TRIMBLE MODEL R10, DUAL FREQUENCY RECEIVER. TYPE OF GPS SURVEY: TDOT NETWORK ADJUSTED REAL TIME KINEMATIC. THE RELATIVE POSITIONAL QUALITY IS 0.05'.
4. ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 88. CONTOURS ARE AT TWO FOOT INTERVALS AND ARE BASED ON A FIELD RUN SURVEY USING RANDOM SPOT ELEVATIONS. CONTOURS WERE DERIVED USING SURFACE MODELING TECHNIQUES.
5. THIS PROPERTY IS CURRENTLY ZONED CD-3 NEIGHBORHOOD DISTRICT.
6. BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN FLOOD ZONE X, AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47119C0195E, WITH AN EFFECTIVE REVISED DATE OF APRIL 15, 2007 WHICH MAKES UP A PART OF THE NATIONAL FLOOD INSURANCE ADMINISTRATION REPORT; COMMUNITY NO. 470123 PANEL NO. 0195, SUFFIX E WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PREMISES IS SITUATED. SAID MAP DEFINES ZONE "X" UNDER "OTHER AREAS" AS AN AREA DETERMINED TO BE OUTSIDE THE 2% ANNUAL FLOODPLAIN.
7. ALL ROADS TO BE PUBLIC RIGHT OF WAY AND MAINTAINED BY THE CITY.
8. ALL OPEN SPACE TO BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
9. ALL OPEN SPACE TO BE DESIGNATED AS A PUBLIC UTILITY AND DRAINAGE, EASEMENT.
10. LIGHTING AT ALL BUILDING SITE LINES WILL NOT EXCEED 1.0 FOOT CANDLE AND ON-STIE OUTDOOR LIGHTING WILL CONFORM TO THE STANDARDS OF 4.3.17B OF THE ZONING ORDINANCE (TO BE CONFIRMED AT BUILDING PERMIT.)



SINGLE FAMILY TYPICAL ALLEY LOT DETAIL
UNLESS SHOWN OTHERWISE
(NOT TO SCALE)

SINGLE FAMILY TYPICAL LOT DETAIL
UNLESS SHOWN OTHERWISE
(NOT TO SCALE)

*BUILDING STANDARDS MUST MEET THE CD-3 REQUIREMENTS AS OUTLINED IN THE ZONING ORDINANCE.

ANTICIPATED DEVELOPMENT PHASING AND CONSTRUCTION SCHEDULE

PHASE 1 -	AUGUST 2023 - AUGUST 2024
PHASE 2 -	AUGUST 2024 - AUGUST 2025
PHASE 3 -	AUGUST 2025 - AUGUST 2026
PHASE 4 -	AUGUST 2026 - AUGUST 2027

150' 75' 300'

SITE DATA TABLE

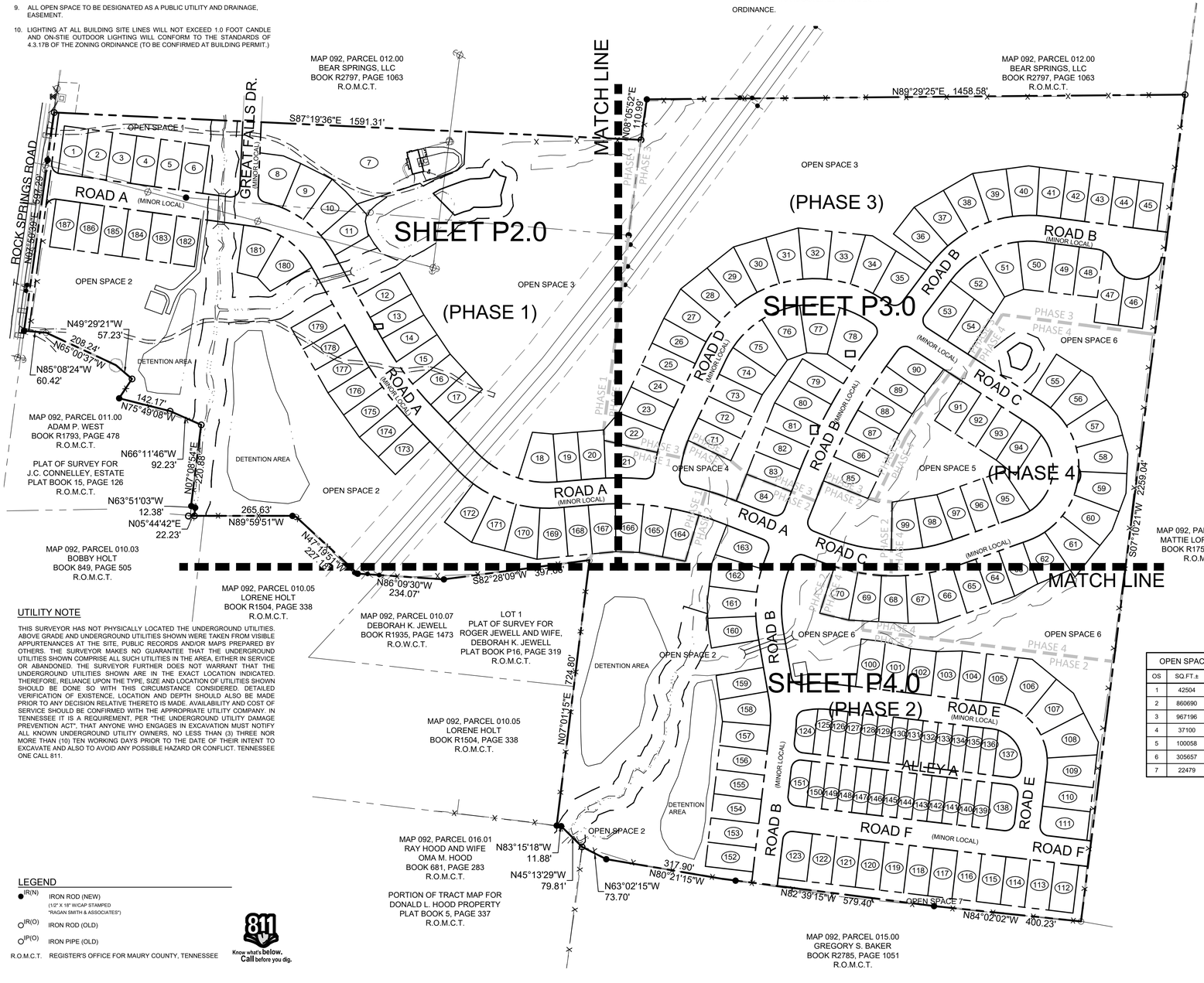
TOTAL SINGLE FAMILY LOT AREA	= 39.78 ACRES±
TOTAL OPEN SPACE AREA	= 53.62 ACRES±
TOTAL RIGHT-OF-WAY AREA	= 15.06 ACRES±
TOTAL RIGHT-OF-WAY DEDICATION	= 0.17 ACRES±
TOTAL SITE AREA	= 108.63 ACRES±

LOT TYPES
40' LOT: 28
65' LOT: 159

SETBACKS:
FRONT: 25'
SIDE: 8', 20' CORNER
REAR: 25'
REAR (ALLEY): 15' FROM CENTER OF ALLEY
MAXIMUM BUILDING HEIGHT: 3 STORIES OR 35'

*BUILDING STANDARDS MUST MEET THE CD-3 STANDARDS REFERENCED IN TABLES 4.3.1-C AND 4.3.8B AND ALL OTHER REQUIREMENTS OF THE ZONING ORDINANCE IN EFFECT AT THE TIME OF SITE DEVELOPMENT PLAN APPROVAL.

PARKING CALCULATIONS
PARKING REQUIRED: 2 SPACES/UNIT
PARKING PROVIDED: MIN. 2 SPACES/UNIT



UTILITY NOTE

THIS SURVEYOR 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. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. 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 (3) THREE NOR MORE THAN (10) TEN WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 811.

LEGEND

- ● IR(N) — IRON ROD (NEW) (1/2" X 18" W/CAP STAMPED "RAGAN SMITH & ASSOCIATES")
- O IR(O) — IRON ROD (OLD)
- O IP(O) — IRON PIPE (OLD)
- R.O.M.C.T. — REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE

811 Know what's below. Call before you dig.

OPEN SPACE TABLE

OS	SQ.FT.±	ACRES±
1	42504	0.98
2	860690	19.76
3	967196	22.20
4	37100	0.85
5	100058	2.30
6	305657	7.02
7	22479	0.52

LOT AREA TABLE

LOT	SQ.FT.±	ACRES±
1	8579	0.20
2	8580	0.20
3	8580	0.20
4	8580	0.20
5	8580	0.20
6	8580	0.20
7	77406	1.78
8	12050	0.28
9	10431	0.24
10	10539	0.24
11	9425	0.22
12	8580	0.20
13	8580	0.20
14	9074	0.21
15	9117	0.21
16	9090	0.21
17	8715	0.20
18	10755	0.25
19	8580	0.20
20	8942	0.21
21	11683	0.27
22	10702	0.25
23	9476	0.22
24	8580	0.20
25	8580	0.20
26	9125	0.21
27	10417	0.24
28	10374	0.24
29	10374	0.24
30	10374	0.24
31	10374	0.24
32	10374	0.24
33	10374	0.24
34	10917	0.25
35	11229	0.26
36	10374	0.24
37	10374	0.24
38	10374	0.24
39	10374	0.24
40	10260	0.24
41	9051	0.21
42	8580	0.20
43	8580	0.20
44	8580	0.20
45	8580	0.20
46	8782	0.20
47	10677	0.25
48	8601	0.20
49	8709	0.20
50	11244	0.26
51	10996	0.25
52	11347	0.26
53	11778	0.27
54	8747	0.20
55	9435	0.22
56	11455	0.26
57	11256	0.26
58	11256	0.26
59	11256	0.26
60	11256	0.26
61	11712	0.27
62	9580	0.22
63	8729	0.20
64	8580	0.20
65	8920	0.20
66	9790	0.22
67	9768	0.22
68	9247	0.21
69	9303	0.21
70	9568	0.22
71	8565	0.20
72	8580	0.20
73	8580	0.20
74	9688	0.22
75	11175	0.26
76	10911	0.25
77	10911	0.25
78	13675	0.31
79	8870	0.20
80	9136	0.21
81	9138	0.21
82	8875	0.20
83	8537	0.20
84	10006	0.23
85	8952	0.21
86	9054	0.21
87	8952	0.21
88	8901	0.20
89	8901	0.20
90	10326	0.24
91	8580	0.20
92	8580	0.20
93	8580	0.20
94	8694	0.20
95	9843	0.23
96	8580	0.20
97	8580	0.20
98	9722	0.22
99	9777	0.22
100	8580	0.20
101	8750	0.20
102	8400	0.19
103	8750	0.20
104	8580	0.20
105	9885	0.23
106	12580	0.29
107	12210	0.28
108	12630	0.29
109	10087	0.23
110	8580	0.20
111	10006	0.23
112	8580	0.20
113	8580	0.20
114	8580	0.20
115	8580	0.20
116	8580	0.20
117	8580	0.20
118	8580	0.20
119	8580	0.20
120	8580	0.20
121	8580	0.20
122	8580	0.20
123	8580	0.20
124	8580	0.20
125	8580	0.20
126	8580	0.20
127	8580	0.20
128	8580	0.20
129	8580	0.20
130	8580	0.20
131	8580	0.20
132	8580	0.20
133	8580	0.20
134	8580	0.20
135	8580	0.20
136	8580	0.20
137	7262	0.17
138	8857	0.20
139	5125	0.12
140	5125	0.12
141	5125	0.12
142	5125	0.12
143	5125	0.12
144	5125	0.12
145	5125	0.12
146	5125	0.12
147	5125	0.12
148	5125	0.12
149	5125	0.12
150	5125	0.12
151	6357	0.15
152	8580	0.20
153	8580	0.20
154	8580	0.20
155	8580	0.20
156	8580	0.20
157	8763	0.20
158	10073	0.23
159	8653	0.20
160	9540	0.22
161	9945	0.23
162	10036	0.23
163	10441	0.24
164	9238	0.21
165	9238	0.21
166	9137	0.21
167	9059	0.21
168	8762	0.20
169	10072	0.23
170	10374	0.24
171	10374	0.24
172	10374	0.24
173	8629	0.20
174	9098	0.21
175	9084	0.21
176	9006	0.21
177	8834	0.20
178	8580	0.20
179	8580	0.20
180	11329	0.26
181	10745	0.25
182	8580	0.20
183	8580	0.20
184	8580	0.20
185	8580	0.20
186	8580	0.20
187	8580	0.20

RaganSmith

Nashville - Murfreesboro - Chattanooga
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JACOB F. VINCENT — 040232 — REGISTERED LAND SURVEYOR — AGE CUR. LIBE — 04 • 17 • 2023 — NATIONAL LAND SURVEYING — STATE OF TENNESSEE

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=150'

Date: MARCH 20, 2023

Approved By: JFV

Revisions:

1	2023.04.17	PER STAFF COMMENTS

Drawing Title:

OVERALL PRELIMINARY PLAT

Drawing No.

P1.0

Project No.

21-0389

G:\21-0389\1-SURVEY\PRELIMINARY PLAT\21-0389 PRELIMINARY PLAT.DWG
PLOTTED BY: AMANDA REED ON: 4/17/2023 11:54 AM — LAST UPDATED BY: AMEED ON: 4/17/2023 11:31 AM

PROJECT BENCH MARK
HUBNAIL IN POWER POLE #195863
ELEVATION=738.87

WATER LINE EASEMENT
RECORD BOOK R1984, PAGE 1357

EXISTING DRIVEWAY SERVING THE EXISTING HOME ON LOT 7 TO BE REMOVED/RELOCATED

OPEN SPACE 1

S87°19'36"E 1591.31'

MAP 092, PARCEL 012.00
BEAR SPRINGS, LLC
BOOK R2797, PAGE 1063
R.O.M.C.T.

N08°05'52"E
110.99'

0 60 120

EXISTING HOME TO REMAIN

EXISTING DRIVEWAY SERVING EXISTING HOME ON LOT X TO BE REMOVED/ RELOCATED

WETLAND AREA

EXISTING POND

EXISTING OVERHEAD POWER LINES BE REMOVED AND RELOCATED UNDERGROUND

WETLAND BUFFER

POND BUFFER

MATCH LINE
SEE SHEET P3.0

ROCK SPRINGS ROAD

N03°29'39"E 367.29'

ROAD A
(MINOR LOCAL)

GREAT FALLS DR
(MINOR LOCAL)

STREAM BUFFER

PROPOSED FIRE HYDRANT (TYP.)

5' SIDEWALK (TYP.)

CBU MAILBOX LOCATION

22.5' RIGHT OF WAY DEDICATION

RIGHT OF WAY DEDICATION AREA - 7,469 SQ. FT.± OR 0.17 AC.±

OPEN SPACE 2

OPEN SPACE 3

SHARED DRIVEWAY EASEMENT - BOOK 1309, PAGE 683 R.O.M.C.T.

PUMP STATION

DETENTION AREA

N49°29'21"W
57.23'

208.24'
N65°00'37"W

N85°08'24"W
60.42'

N33°29'46"E
63.02'

142.17'
N75°49'08"W

MAP 092, PARCEL 011.00
ADAM P. WEST
BOOK R1793, PAGE 478
R.O.M,C.T.

PLAT OF SURVEY FOR
J.C. CONNELLEY, ESTATE
PLAT BOOK 15, PAGE 126
R.O.M.C.T.

N66°11'46"W
92.23'

N07°08'54"E
220.88'

N63°51'03"W
12.38'

265.63'
N89°59'51"W

N05°44'42"E
22.23'

MAP 092, PARCEL 010.03
BOBBY HOLT
BOOK 849, PAGE 505
R.O.M.C.T.

MAP 092, PARCEL 010.05
LORENE HOLT
BOOK R1504, PAGE 338
R.O.M.C.T.

N75°33'51"W
10.11'

N47°19'51"W
221.18'

GAS MARKER

TEXAS EASTERN TRANSMISSION CORPORATION
(NOW ENBRIDGE PIPELINE COMPANY)
GAS TRANSMISSION LINE EASEMENT
BOOK R236, PAGE 619, R.O.M.C.T. &
BOOK R237, PAGE 607, R.O.M.C.T.

MATCH LINE
SEE SHEET P4.0

S82°28'09"W 397.66'

CITY OF COLUMBIA
MAURY COUNTY

PHASE 1
PHASE 2
PHASE 3

PRELIMINARY PLAT GENERAL NOTES

1. SEE SHEET P1.0 FOR NOTES, LOT DETAILS, SITE DATA, AND AREA TABLES.

LEGEND

● IR(N)	IRON ROD (NEW) (1/2" X 18" W/CAP STAMPED "RAGAN SMITH & ASSOCIATES")	⌀	UTILITY POLE
○ IR(O)	IRON ROD (OLD)	⌀⟿	UTILITY POLE W/ ANCHOR
○ IP(O)	IRON PIPE (OLD)	⌀⟿	UTILITY POLE W/ LIGHT
	FIRE HYDRANT	-P&T-	OVERHEAD POWER AND TELEPHONE LINES
	WATER VALVE	—SA—	SANITARY SEWER LINE
W	WATER METER	— G —	GAS LINE
		— W —	WATER LINE
	CATCH BASIN	ST	PROPOSED STORM PIPE
		M.B.S.L.	MINIMUM BUILDING SETBACK LINE
■	PROPOSED STORM INLET	P.U.D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT
●	PROPOSED SANITARY MANHOLE	WWC	WET WEATHER CONVEYANCE
R.O.M.C.T.	REGISTERS OFFICE FOR MAURY COUNTY, TENNESSEE	R.O.W.	RIGHT OF WAY

811 Know what's below. Call before you dig.

D:\21-0389\1-SURVEY\PRELIMINARY PLAT\21-0389 PRELIMINARY PLAT.DWG
PLOTTED BY AMANDA REED ON 4/17/2023 11:34 AM LAST UPDATED BY AREED ON 4/17/2023 11:31 AM

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JACOB F. VINCENT
LICENSED PROFESSIONAL ENGINEER
AGE: CURRENT
No. 001149
STATE OF TENNESSEE
04 17 2023

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=60'

Date: MARCH 20, 2023

Approved By: JFV

Revisions:

1	2023.04.17	PER STAFF COMMENTS

Drawing Title:

PRELIMINARY PLAT

Drawing No.

P2.0

Project No.

21-0389



0 60 120

PRELIMINARY PLAT GENERAL NOTES

1. SEE SHEET P1.0 FOR NOTES, LOT DETAILS, SITE DATA, AND AREA TABLES.

Know what's below. Call before you dig.

LEGEND

● IR(N)	IRON ROD (NEW) (1/2" X 18" W/CAP STAMPED "RAGAN SMITH & ASSOCIATES")	⌀	UTILITY POLE
○ IR(O)	IRON ROD (OLD)	⌀⟶	UTILITY POLE W/ ANCHOR
○ IP(O)	IRON PIPE (OLD)	⌀⟿	UTILITY POLE W/ LIGHT
	FIRE HYDRANT	—P&T—	OVERHEAD POWER AND TELEPHONE LINES
	WATER VALVE	— SA —	SANITARY SEWER LINE
W	WATER METER	— G —	GAS LINE
	CATCH BASIN	— W —	WATER LINE
■	PROPOSED STORM INLET	ST	PROPOSED STORM PIPE
●	PROPOSED SANITARY MANHOLE	M.B.S.L.	MINIMUM BUILDING SETBACK LINE
R.O.M.C.T.	REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE	P.U.D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT
		WWC	WET WEATHER CONVEYANCE
		R.O.W.	RIGHT OF WAY

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JACOB F. VINCENT
REGISTERED
LICENSED
AGENT/CURATEUR
No. 0011459
STATE OF TENNESSEE
04 • 17 • 2023

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale:	1"=60'
Date:	MARCH 20, 2023
Approved By:	JFV

Revisions:

- - -
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- - -
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Drawing Title:

PRELIMINARY PLAT

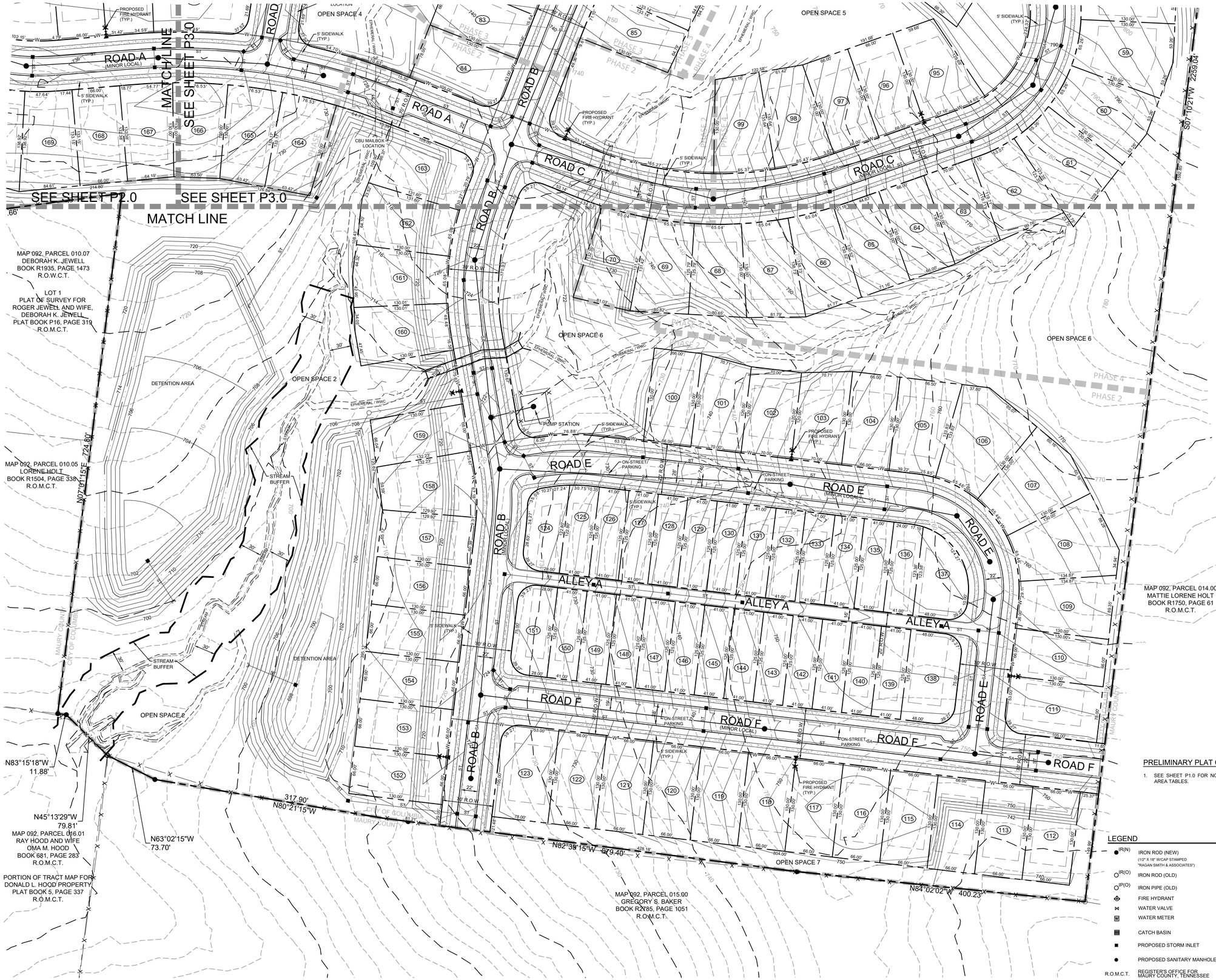
Drawing No.

P3.0

Project No.

21-0389

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PLOTTED BY AMANDA REED ON 4/17/2023 11:51 AM LAST UPDATED BY AREED ON 4/17/2023 11:51 AM



0 60 120

PRELIMINARY PLAT GENERAL NOTES

1. SEE SHEET P1.0 FOR NOTES, LOT DETAILS, SITE DATA, AND AREA TABLES.

Know what's below. Call before you dig.

LEGEND

IR(N)	IRON ROD (NEW) (1/2" X 18" W/CAP STAMPED "RAGAN SMITH & ASSOCIATES")	⌀	UTILITY POLE
IR(O)	IRON ROD (OLD)	⌀⟶	UTILITY POLE W/ ANCHOR
IP(O)	IRON PIPE (OLD)	⌀⟶	UTILITY POLE W/ LIGHT
	FIRE HYDRANT	-P&T-	OVERHEAD POWER AND TELEPHONE LINES
	WATER VALVE	— SA —	SANITARY SEWER LINE
W	WATER METER	— G —	GAS LINE
	CATCH BASIN	— W —	WATER LINE
	PROPOSED STORM INLET	ST	PROPOSED STORM PIPE
	PROPOSED SANITARY MANHOLE	M.B.S.L.	MINIMUM BUILDING SETBACK LINE
		P.U.D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT
		WWC	WET WEATHER CONVEYANCE
R.O.M.C.T.	REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE	R.O.W.	RIGHT OF WAY

RaganSmith

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JACOB F. VINCENT
NO. 0021452
AGENT CURRIER
04 17 2023
STATE OF TENNESSEE

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=60'

Date: MARCH 20, 2023

Approved By: JFV

Revisions:

1	2023.04.17	PER STAFF COMMENTS

Drawing Title:

PRELIMINARY PLAT

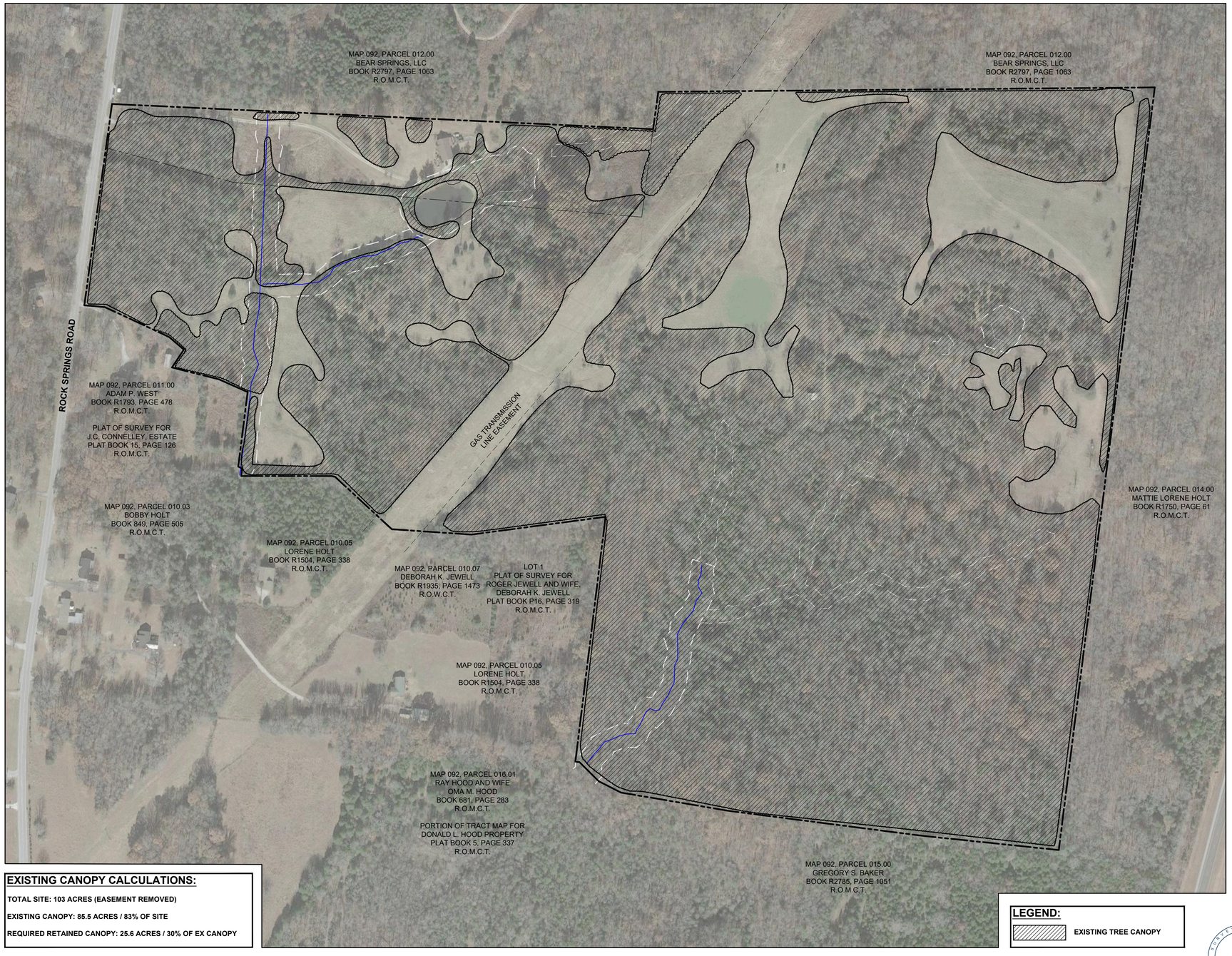
Drawing No.

P4.0

Project No.

21-0389

D:\21-0389\-SURVEY\PRELIMINARY PLAT\21-0389 PRELIMINARY PLAT.DWG
PLOTTED BY AMANDA REED ON 4/17/2023 11:34 AM
LAST UPDATED BY AREED ON 4/17/2023 11:31 AM



EXISTING CANOPY CALCULATIONS:

TOTAL SITE: 103 ACRES (EASEMENT REMOVED)

EXISTING CANOPY: 85.5 ACRES / 83% OF SITE

REQUIRED RETAINED CANOPY: 25.6 ACRES / 30% OF EX CANOPY

LEGEND:

EXISTING TREE CANOPY

Know what's **below.** **Call** before you dig.

0 150 300

G:\2-0389\-PLANNING\3-PLAN SHEETS\1-LMB DEVELOPMENT PLAN.DWG
PLOTTED BY ANDREW TARSI ON 4/17/2023 11:32 AM
LAST UPDATED BY ATARSI ON 4/17/2023 11:26 AM

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ANDREW TARSI REGISTERED LANDSCAPE ARCHITECT TENNESSEE No. 337 AGRICULTURE COMMERCE 04-17-23

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=150'

Date: MARCH 20, 2023

Approved By: A. TARSI

Revisions:

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Drawing Title:

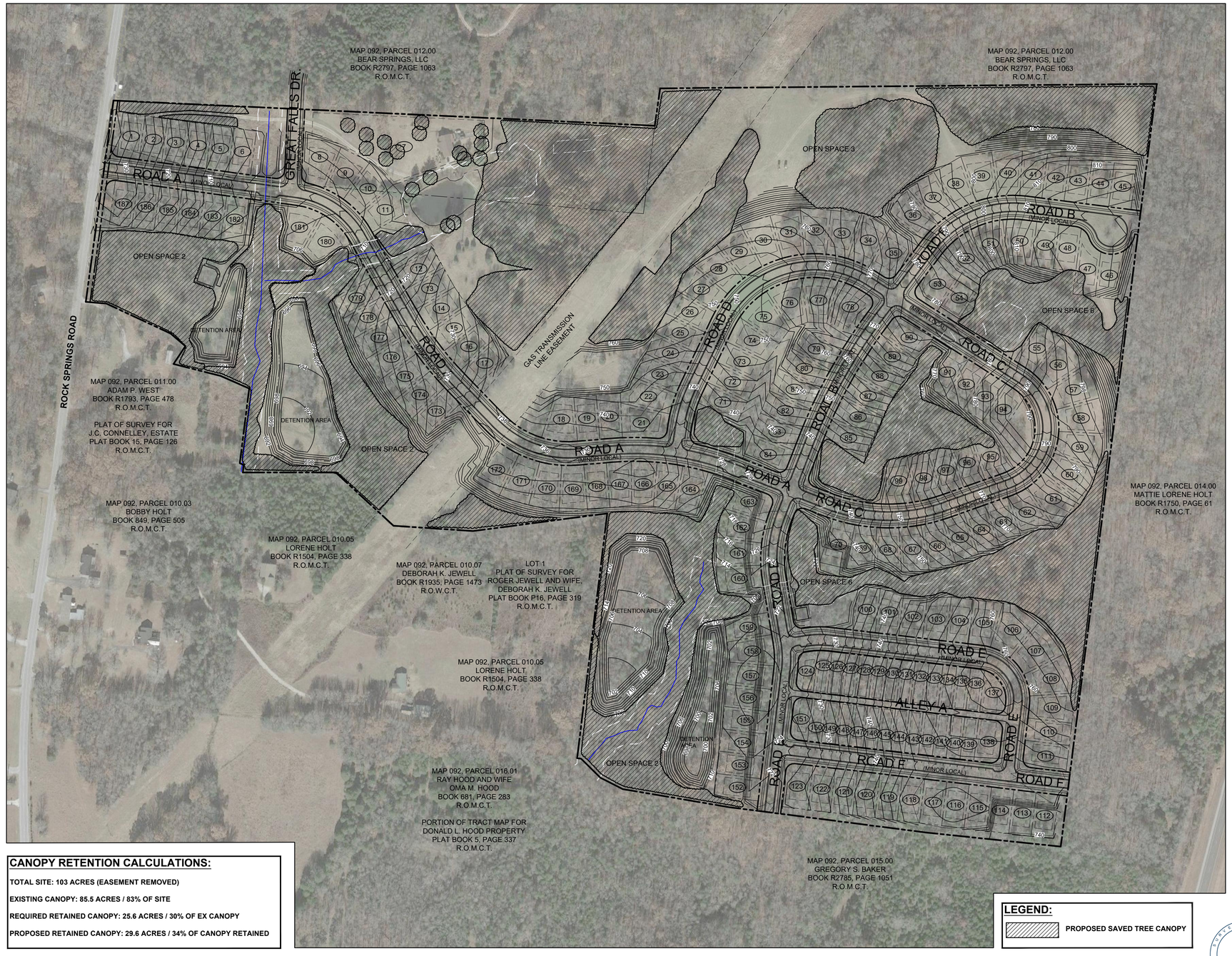
EXISTING CONDITIONS

Drawing No.

DP1.0

Project No.

21-0389



CANOPY RETENTION CALCULATIONS:

TOTAL SITE: 103 ACRES (EASEMENT REMOVED)

EXISTING CANOPY: 85.5 ACRES / 83% OF SITE

REQUIRED RETAINED CANOPY: 25.6 ACRES / 30% OF EX CANOPY

PROPOSED RETAINED CANOPY: 29.6 ACRES / 34% OF CANOPY RETAINED

LEGEND:

PROPOSED SAVED TREE CANOPY

Know what's below. Call before you dig.

0 150 300

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ANDREW TARSI REGISTERED LANDSCAPE ARCHITECT TENNESSEE No. 337 AGRICULTURE COMMERCE 04-17-23

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=150'

Date: MARCH 20, 2023

Approved By: A. TARSI

Revisions:

- - -
- - -
- - -
- - -
- - -
- - -

Drawing Title:

TREE PRESERVATION PLAN

Drawing No.

DP2.0

Project No.

21-0389

G:\21-0389\1-PLANNING\2-PLAN SHEETS\21-0389 DEVELOPMENT PLAN.DWG
PLOTTED BY: ANDREW TARSI ON: 4/17/2023 11:59 AM
LAST UPDATED BY: AYARI ON: 4/17/2023 11:59 AM

Green
An open area, available for unstructured recreation. A Green may be spatially defined by landscaping rather than Building Frontages. Its landscape shall consist of lawn and Trees, naturalistically disposed. The minimum size is 0.5 acre and the maximum is 8 acres.

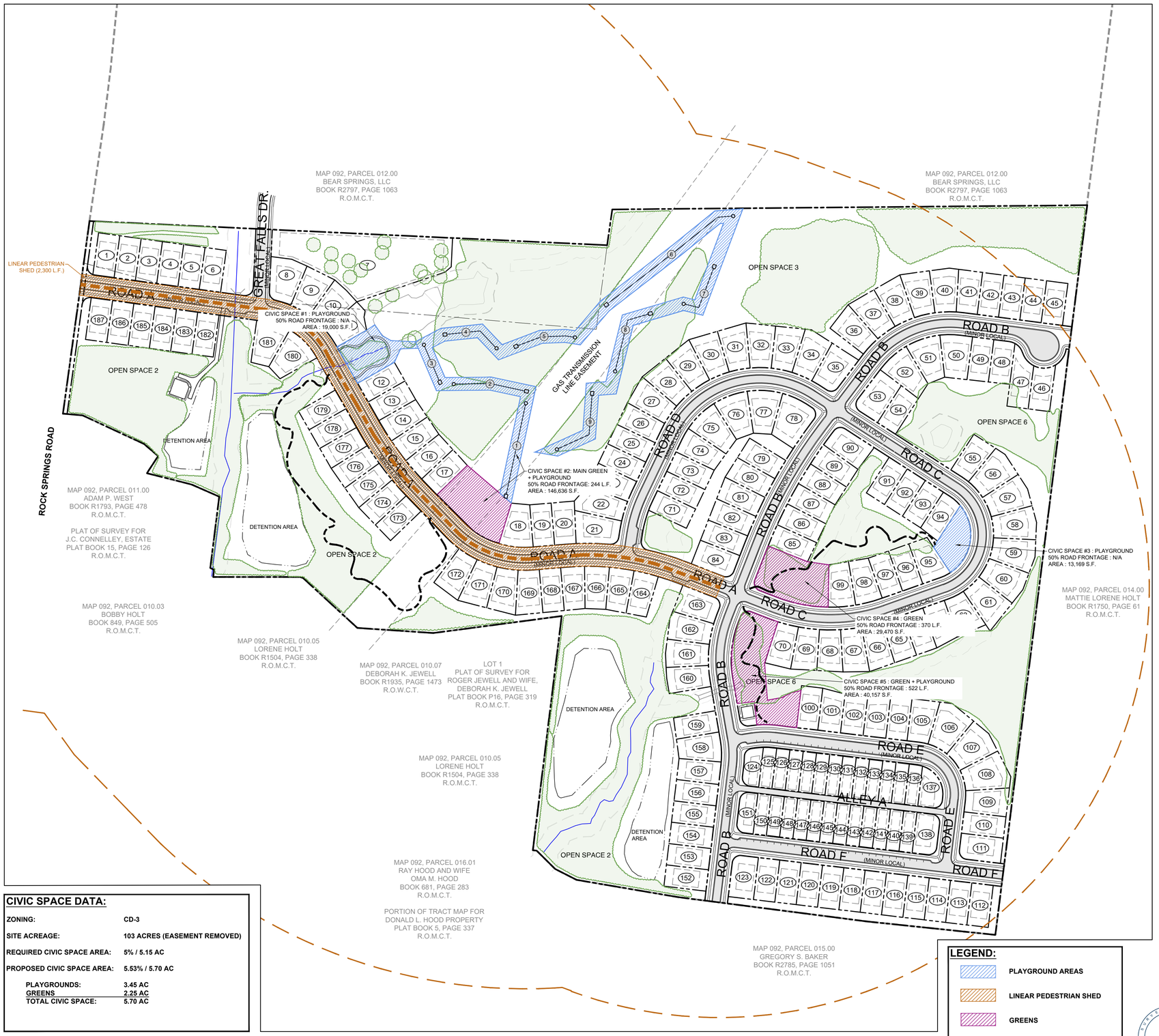


NOTE: GREENS WILL INCLUDE TYPICAL FEATURES. EXAMPLES OF TYPICAL FEATURES ARE AREAS OF PASSIVE AND ACTIVE RECREATION, PLAYGROUNDS AND PLAY STRUCTURES, PATHS AND TRAILS, AND ACCESSORY STRUCTURES. SPECIFIC TYPICAL FEATURES WILL BE DEFINED WITH THE CONSTRUCTION DOCUMENTS AND SHALL MEET THE MINIMUM REQUIREMENTS.

Playground
An open area designed and equipped for the recreation of children. A Playground may include an open shelter. Playgrounds shall be interspersed within Residential areas and may be placed within a Block. Playgrounds may be included within Natural Areas and Greens. There is no minimum or maximum size.



NOTE: PLAYGROUNDS WILL INCLUDE TYPICAL FEATURES. EXAMPLES OF TYPICAL FEATURES ARE AREAS OF ACTIVE RECREATION, PLAY STRUCTURES, PATHS, AND WATER FEATURES. SPECIFIC TYPICAL FEATURES WILL BE DEFINED WITH THE CONSTRUCTION DOCUMENTS AND SHALL MEET THE MINIMUM REQUIREMENTS.



CIVIC SPACE DATA:

ZONING:	**CD-3**
SITE ACREAGE:	**103 ACRES (EASEMENT REMOVED)**
REQUIRED CIVIC SPACE AREA:	**5% / 5.15 AC**
PROPOSED CIVIC SPACE AREA:	**5.53% / 5.70 AC**
PLAYGROUNDS:	**3.45 AC**
GREENS	**2.25 AC**
TOTAL CIVIC SPACE:	**5.70 AC**

LEGEND:

- PLAYGROUND AREAS
- LINEAR PEDESTRIAN SHED
- GREENS
- PRIMITIVE TRAIL

Know what's below. Call before you dig.

0 150 300

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ragansmith.com

SCOTT MICHAEL BERWICK
REGISTERED
LANDSCAPE ARCHITECT
TENNESSEE NO. 3597
BY
DATE 5/22/2023

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=150'

Date: MARCH 20, 2023

Approved By: A. TARSI

Revisions:

-	-	-
-	-	-
-	-	-
-	-	-
2	2023.05.22	PER STAFF COMMENTS
1	2023.04.17	PER STAFF COMMENTS

Drawing Title:

PEDESTRIAN & CIVIC SPACE PLAN

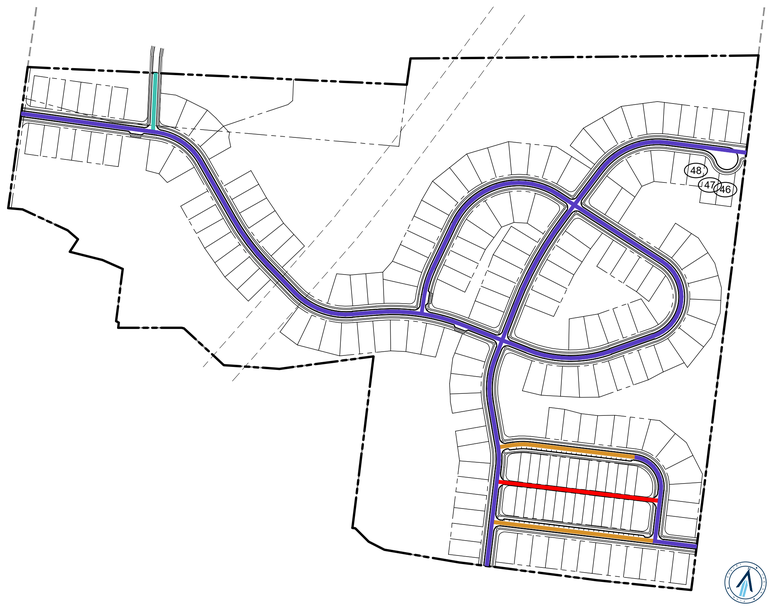
Drawing No.

DP3.0

Project No.

21-0389

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PLOTTED BY: HEATHER N. GRIMES ON: 5/22/2023 3:13 PM LAST UPDATED BY: HGRIMES ON: 5/22/2023 3:08 PM



STREET SECTION KEY MAP
SCALE: 1"=300'

Shared Use Lane

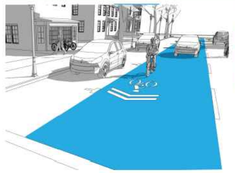


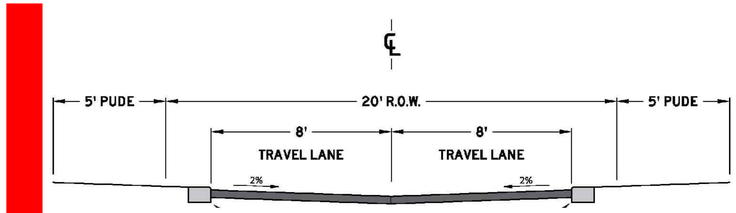
Illustration is provided for illustrative purposes only.

Permitted Districts

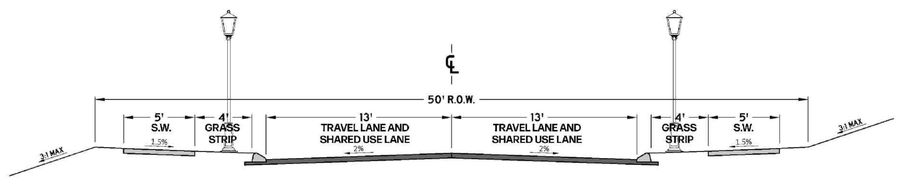
CD-2 | CD-3L | CD-3 | CD-4 | CD-4C | CD-5 | CD-5C | SD-inst | SD-LI | SD-HI | PUD-R | PUD-MU

Riding Surface Width	Same as Vehicular Lane
Buffer	N/A
Movement	With Traffic
Intersection Detailing	Signed, signalized
Bicycle Parking	Opportunistic, rack, Bicycle Shelter

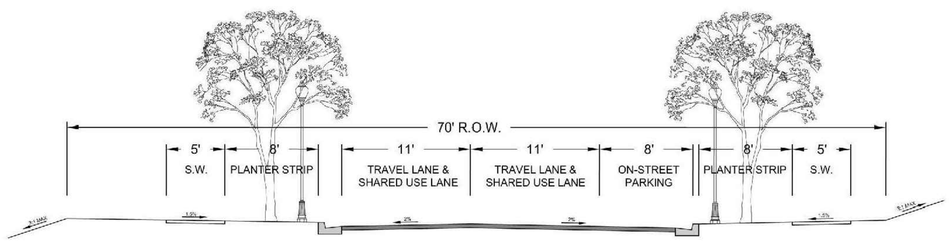
SHARED USE LANE DETAIL



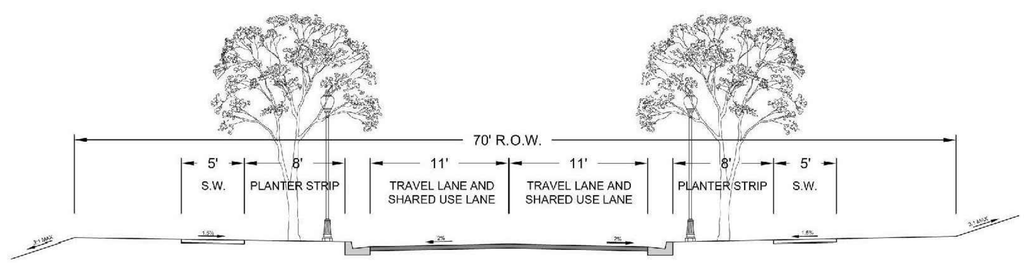
20' ALLEY SECTION
NOT TO SCALE



50' STREET SECTION
NOT TO SCALE



70' STREET SECTION WITH ON-STREET PARKING
NOT TO SCALE



70' STREET SECTION WITHOUT ON-STREET PARKING
NOT TO SCALE

G:\21-0389\1-PLANNING\PLAN SHEETS\21-0389 DEVELOPMENT PLAN.DWG
PLOTTED BY: ANDREW TARSI ON: 4/17/2023 11:32 AM LAST UPDATED BY: AYARS ON: 4/17/2023 11:38 AM

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ANDREW TARSI REGISTERED LANDSCAPE ARCHITECT TENNESSEE No. 337 04-17-23

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale:	NOT TO SCALE
Date:	MARCH 20, 2023
Approved By:	A. TARSI

Revisions:

-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
1	2023.04.17	PER STAFF COMMENTS

Drawing Title:

ROADWAY SECTIONS

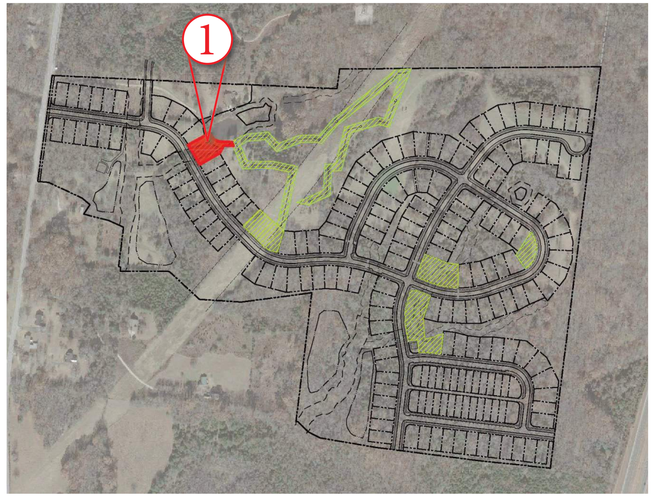
Drawing No.

DP4.0

Project No.

21-0389

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VICINITY MAP



A (1) SWING SET



B 3-HAMMOCK LOUNGE



D POND OVERLOOK



C (1) KID BOUNCER



E EXERCISE LOOP

IMAGERY:
FOR DESIGN INTENT ONLY



CIVIC SPACE #1: PLAYGROUND

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0 20 40

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SCOTT MICHAEL BERNICK REGISTERED LANDSCAPE ARCHITECT TENNESSEE NO. 001 LANDSCAPE ARCHITECT
3/22/2023

ROCK SPRINGS
FOR
DEE PURSUIT, LLC
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=20'

Date: MARCH 20, 2023

Approved By: S.BERNICK

Revisions:

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Drawing Title:

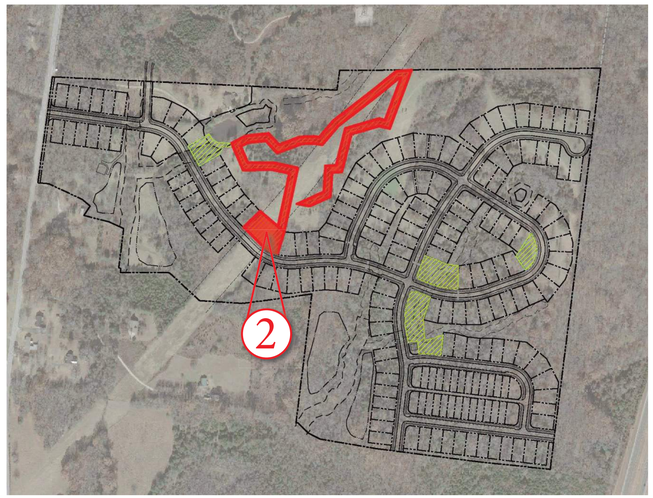
CIVIC SPACE #1

Drawing No.

DP5.1

Project No.
21-0389

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PLOTTED BY HEATHER H. GRABLE ON 3/15/2023 12:43 PM LAST UPDATED BY HGRABLE ON 3/15/2023 12:15 PM



VICINITY MAP


B ACTIVE LAWN


A (9) HOLE FRISBEE GOLF


D WALKING PATH


C (1) BIKE RACK


E SEATING AREA

IMAGERY:
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CIVIC SPACE #2: MAIN GREEN & PLAYGROUND

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SCOTT MICHAEL BERNICK REGISTERED LANDSCAPE ARCHITECT TENNESSEE NO. 001 3/22/2023

ROCK SPRINGS
FOR
DEE PURSUIT, LLC
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=20'
Date: MARCH 20, 2023
Approved By: S.BERNICK
Revisions:
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Drawing Title:
CIVIC SPACE #2

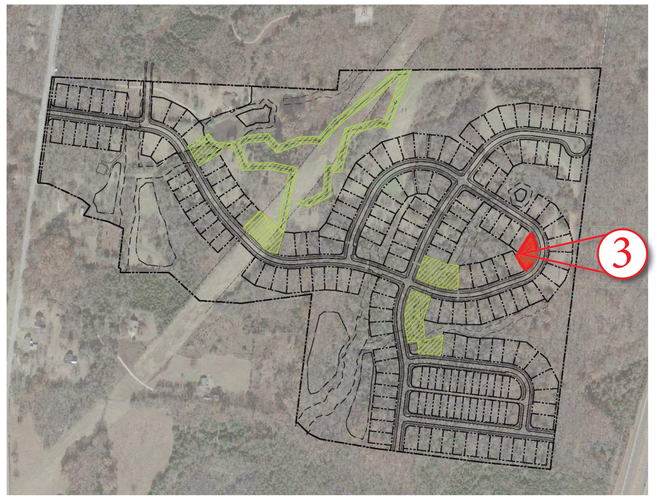
Drawing No.
DP5.2

Project No.
21-0389

Know what's below. Call before you dig.

0 20 40

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VICINITY MAP



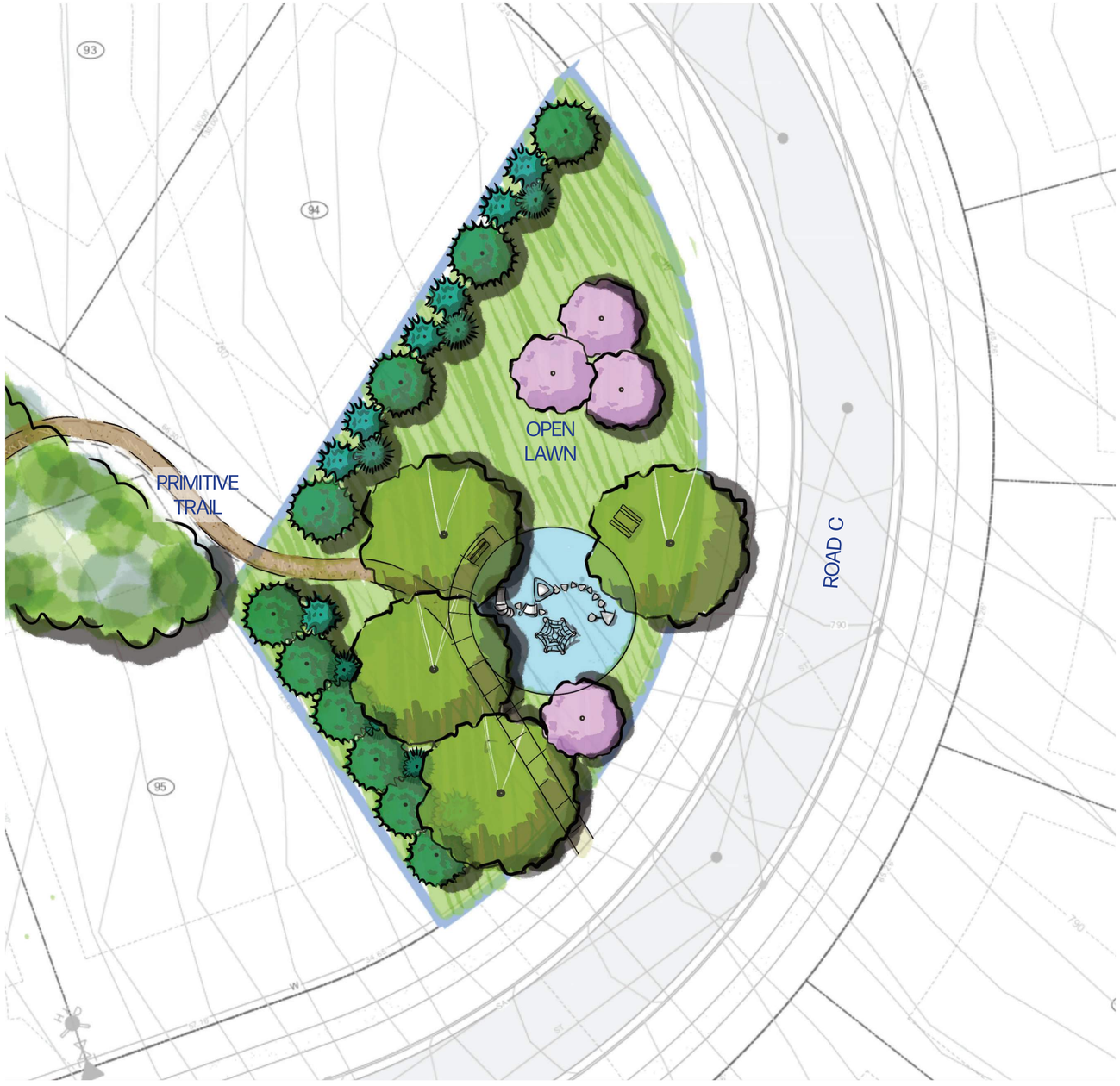








IMAGERY:
FOR DESIGN INTENT ONLY



CIVIC SPACE #3: PLAYGROUND

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ragansmith.com

SCOTT MICHAEL BERNICK REGISTERED LANDSCAPE ARCHITECT TENNESSEE NO. 001 LANDSCAPE ARCHITECTURE
3/22/2023

ROCK SPRINGS
FOR
DEE PURSUIT, LLC
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: #"=##'
Date: MARCH 20, 2023
Approved By: S.BERNICK
Revisions:
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Drawing Title:
CIVIC SPACE #3

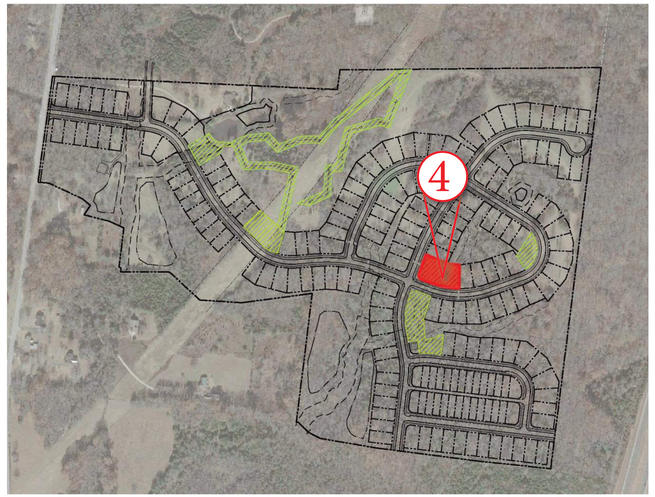
Drawing No.
DP5.3

Project No.
21-0389

811 Know what's below. Call before you dig.

0 20 40

G:\21-0389\LA PLANNING\LA PLAN SHEETS\21-0389 CIVIC SPACES.DWG
PLOTTED BY: HEATHER H. CHRISTIAN ON: 3/10/2023 12:45 PM LAST UPDATED BY: HCHRISTIAN ON: 3/10/2023 12:15 PM

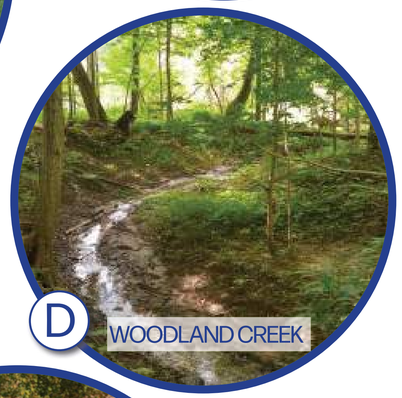


VICINITY MAP











IMAGERY:
FOR DESIGN INTENT ONLY



CIVIC SPACE #4: GREEN

Know what's below. Call before you dig.

0 20 40

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Nashville - Murfreesboro - Chattanooga

SCOTT MICHAEL BERNICK REGISTERED LANDSCAPE ARCHITECT TENNESSEE NO. 301 LANDSCAPE ARCHITECT 3/22/2023

ROCK SPRINGS
FOR
DEE PURSUIT, LLC
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=20'

Date: MARCH 20, 2023

Approved By: S.BERNICK

Revisions:

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Drawing Title:

CIVIC SPACE #4

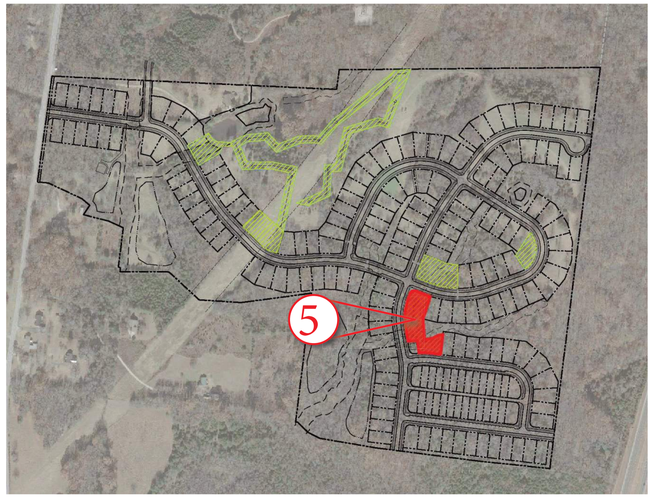
Drawing No.

DP5.4

Project No.

21-0389

C:\21-0389 - ROCK SPRINGS\04 WRITTEN_USE\CIVIC SPACES.dwg
PLOTTED BY HEATHER H. GRABER ON 3/16/2023 12:45 PM LAST UPDATED BY HGRABER ON 3/16/2023 12:15 PM



VICINITY MAP











IMAGERY:
FOR DESIGN INTENT ONLY

Know what's **below.** **Call** before you dig.

0 20 40



CIVIC SPACE #5: GREEN & PLAYGROUND

RaganSmith

Nashville - Murfreesboro - Chattanooga

SCOTT MICHAEL BERNICK REGISTERED LANDSCAPE ARCHITECT TENNESSEE NO. 001 LANDSCAPE ARCHITECT 3/22/2023

ROCK SPRINGS
FOR
DEE PURSUIT, LLC
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

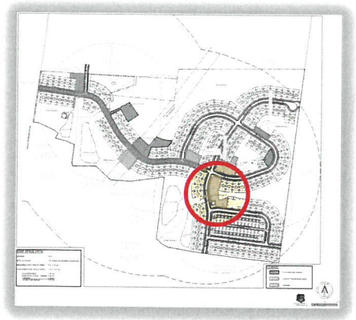
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Date: MARCH 20, 2023
Approved By: S.BERNICK
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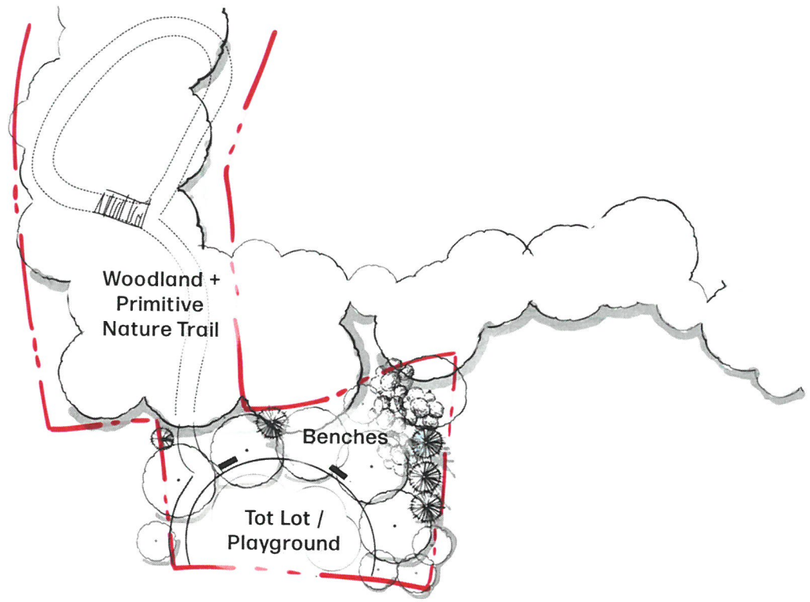
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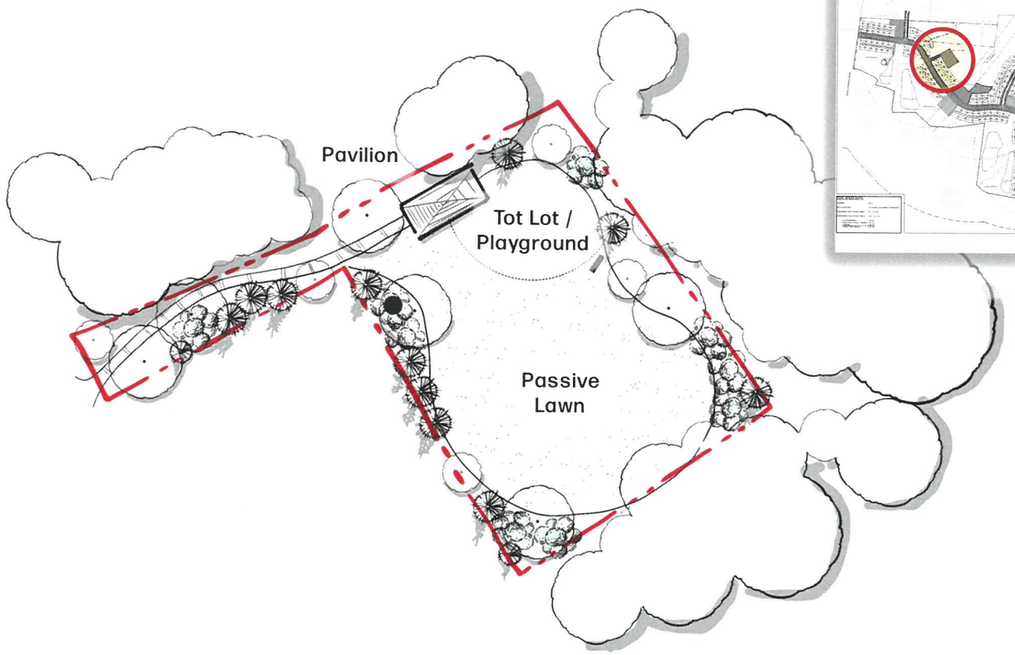
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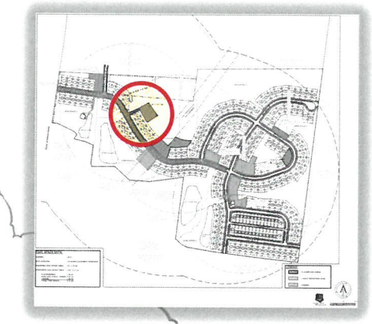
Project No.
21-0389

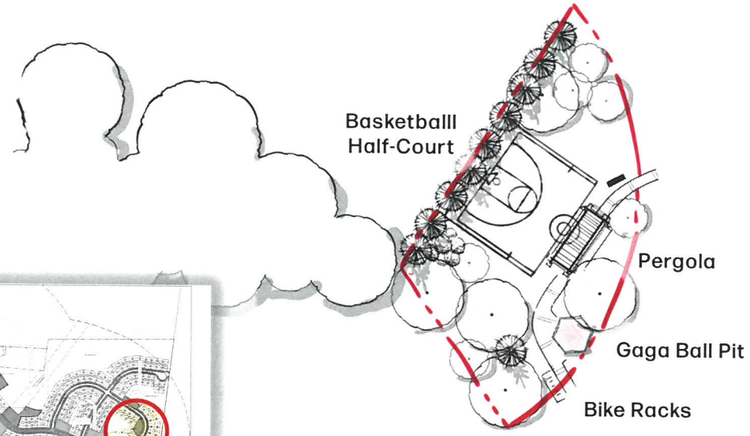
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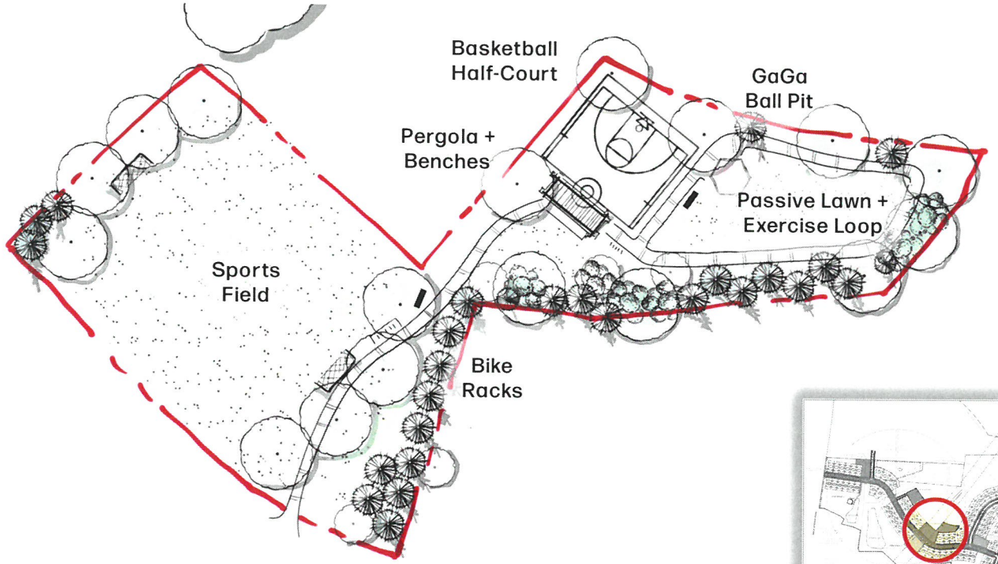




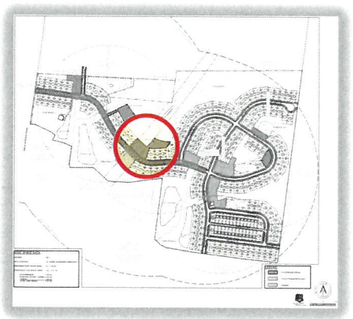












RaganSmith

CONCEPTUAL PLAYGROUND VIGNETTES
COLUMIBA, TN
21-0389

ROCK SPRINGS II

0 30 60

CITY OF COLUMBIA TENNESSEE
PLANNING COMMISSION
STAFF REPORT

STAFF REPORT CONTACT INFORMATION
Kevin C. McCarthy, AICP, City Planner, kmccarthy@columbiatn.com, 931-560-1560

APPLICATION NUMBER
23-0094

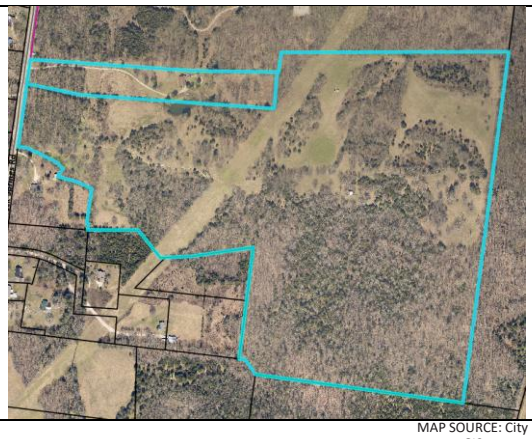
APPLICANT/PROPERTY OWNER
Jacob Vincent/ Donald Blair

PUBLIC HEARING DATE
N/A

PROPERTY ADDRESS/LOCATION
1479 Rock Springs Road / Tax Map 92, Parcel 11.01 and 11.02

SUMMARY OF REQUEST: **Preliminary Plat & Site Development Plan**

The applicant requests approval of a Preliminary Plat and Site Development Plan for 187 single-family lots as well as associated infrastructure and civic spaces on a 108.63-acre development parcel located on the east side of Rock Springs Road within a CD-3 Character District.



MAP SOURCE: City GIS

EXISTING ZONING	EXISTING LAND USE	SURROUNDING ZONING & LAND USE	SITE IMPROVEMENTS PROPOSED	SIZE OF PROPERTY
CD-3	Undeveloped	PUD-R/ Unincorporated Single-Family/Vacant Land	187 Single-Family Home Lots	108.63 acres

CONSISTENCTY with the **COMPREHENSIVE PLAN:**

Rural Countryside: The future land use designation of the subject property is Rural Countryside. A CD-3-character district is not consistent with the Rural Countryside land use classification. This property was annexed with an RS-10 zoning prior to the adoption of the current Zoning Ordinance 4400. The zoning was consistent with the future land use classification at that time. Properties zoned RS-10 converted to CD-3 upon adoption of Zoning Ordinance 4400.

PROPERTY HISTORY:

October 2022: The City Council approved a request from Reagan Smith for Comprehensive Plan Amendment as well as Annexation with Plan of Services and an RS-10 (Low-Density Residential Zoning District) zoning designation. The Planning Commission had previously recommended approval in June 2022.

CONFORMITY with the ZONING ORDINANCE:

Zoning Ordinance Referenced:
The CD-3 Neighborhood District consists primarily of a medium density single-family detached residential area in which the House is the predominant building types. It has medium to deep front setbacks and medium to wide side Setbacks. Its Thoroughfares have curbs and may include Sidewalks and/or street trees, and form medium to large blocks (Table 3.7.1 p. 36; Table 4.3.1-C, p. 66).

Lot Building Site Standards/ Setbacks:

- 40’ minimum lot width if alley loaded, otherwise 65’ minimum lot width.
- 25’ front setback with a 20’ secondary frontage setback for corner lots
- 8’ side yard setback
- 25’ rear yard setback or 15’ from center of alley.
- If front loaded garages face the first or second layer (nearest to front of home), the garage door width shall not exceed 33% of the façade width of the home.
- Up to 20% of lots or building sites may enfront a pedestrian path, passage, or walkway.

This preliminary plat indicates a variation of front and rear loaded lots that comply with the building site standards within a CD-3 Character District:

- 28 lots will be a minimum of 40’ wide with a rear loaded alley that will connect with internal streets.
- 159 “front-loaded” lots will be 65’ wide.

Streets/Connectivity:

Thoroughfares and Internal Drives shall be provided and designed to define Blocks which do not exceed a maximum block permitter (§ 5.2.2.D, p.308).

- The term block is defined in § 9.3 (p. 482) to include lots and building sites circumscribed by thoroughfares and alleys.
- The maximum block permitter in a CD-3 character district is 2,800 feet.
- The proposed Preliminary Plat and Site Development Plan includes a network of throughfares and alleys which define some conforming blocks.
- Some sections of the proposed development include throughfares which do not define blocks. These sections do utilize conforming throughfare assemblies and accommodate limitations of the site.

Thoroughfares and Internal Drives shall terminate at other Thoroughfares or Internal Drives, forming a network, connecting wherever possible to Thoroughfares or Internal Drives on Adjacent sites; cul-de-sacs are not allowed unless approved by Waiver of the Zoning Administrator to accommodate specific site conditions (§ 5.2.2.E, p.308).

- Lots 47 and 46 enfront a temporary cul-de-sac.
- At the time of an eventual connection to the adjacent site, the “dip” in the right-of-way will likely be vacated by the city and the fee simple ownership will revert to the adjacent property owners. This will create lots with public and private frontages out of rhythm with the rest of the street.
- The planning commission may approve the proposed Preliminary Plat and Site Development Plan on the condition that lots 47 and 46 be removed or relocated.

Civic Space:

Section 5.3.1 of Zoning Ordinance 4400 requires any development parcel[1] to utilize at least 5% but no

[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).

more than 20% of its gross acreage as Civic Space conforming to the standards of § 5.3.3.

Section 5.3.3 offers a variety of Civic Space types that include green space, natural areas, pocket parks etc.

Each Civic Space type has its own standards for intent, size, frontage, character, and typical facilities. Section 5.3.3.B further requires civic space designed and equipped as a playground within 800 feet of every lot or building site within a CD-3 Character District.

- The proposed Preliminary Plat and Site Development Plan depicts 5.57 acres of Civic Space, exceeding the 5% minimum.
- Playgrounds account for more than 2.0 acres of the proposed Civic Space.
- Greens account for the balance of the proposed Civic Space.
- One of the proposed Greens includes a Playground, which is necessary to place the lots in the southeast corner of the site within the required distance from a playground.
- Table 5.3.3-B (p. 333) indicates that playgrounds should be fronted by buildings. The Site Development Plan depicts playgrounds which are adjacent to or behind buildings. The Planning Commission may determine whether this arrangement conforms to the standards of the Ordinance.
- The Site Development Plan describes the Civic Space amenities in general terms with notes indicating that further details will be provided during the administrative review of site construction plans for horizontal improvements preceding Final Plat.
- It is within the discretion of the Planning Commission to determine whether greater detail is necessary to ensure compliance with the standards of the Ordinance, or to delegate that determination to staff during later administrative reviews.

Playground



Permitted In / Adjacent to:

CD-2 | CD-3L | CD-3 | CD-4 | CD-4C | CD-5 | CD-5C | SD-MHP | SD-LI | PUD-R | PUD-MU

Intent

An open area designed and equipped for the recreation of children. A Playground may include an open shelter. Playgrounds shall be interspersed within Residential areas and may be placed within a Block. Playgrounds may be included within Natural Areas and Greens. There is no minimum or maximum size.

Specifications

Size	No min. No max
Frontage	Buildings
Character	Formal or Informal

Typical Facilities

- Active recreation
- Play structures
- Paths
- Water features

Green



Permitted In / Adjacent to:

CD-2 | CD-3L | CD-3 | CD-4 | CD-4C | SD-MHP | PUD-R

Intent

An open area, available for unstructured recreation. A Green may be spatially defined by landscaping rather than Building Frontages. Its landscape shall consist of lawn and trees, naturalistically disposed. The minimum size is 0.5 acre and the maximum is 8 acres.

Specifications

Size	0.5 ac min, 8 ac max
Frontage	Independent
Character	Informal

Typical Facilities

- Passive and active recreation
- Playgrounds and play structures
- Paths and trails
- Accessory structures

Tree Canopy Cover Retention:

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.

- The applicant's tree preservation plan identifies 85.5 acres (83%) of the 103 acre site as existing tree canopy.
- Table 4.3.16.L of the Ordinance requires retention of at least 30% of the existing canopy.
- The applicant's tree preservation plan proposes to preserve 34% of the existing tree canopy and identifies 29.6 acres of tree save areas.

Bicycle Accommodations:

Section 5.2.4.B of the Zoning Ordinance requires bicycle accommodations for Development Parcels greater than 80 acres in size.

- The applicant proposes to utilize shared use lanes throughout the proposed development.
- Shared use lanes are one of the bicycle accommodation types permitted under the Ordinance.
- The Planning Commission may approve the proposed bicycle accommodation or may

recommend one of the other options identified in the Ordinance.

Shared Use Lane

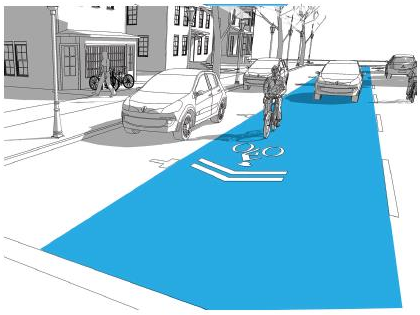


Illustration is provided for illustrative purposes only.

Permitted Districts

CD-2 | CD-3L | CD-3 | CD-4 | CD-4C | CD-5 | CD-5C | SD-int | SD-LI | SD-HI | PUD-R | PUD-MU

Riding Surface Width	Same as Vehicular Lane
Buffer	N/A
Movement	With Traffic
Intersection Detailing	Signed, signalized
Bicycle Parking	Opportunistic, rack, Bicycle Shelter

Procedural Requirements:

Section 8.5.6 of the Zoning Ordinance requires that the appropriate Decision-Making Authority approve a Site Development Plan demonstrating compliance with the Ordinance prior to any development or subdivision of land. The Planning Commission is the Decision-Making Authority for properties which qualify as Development Parcels, including the subject site. The applicant has submitted elements of a Site Development Plan along with a Preliminary Plat as a single document. Approval should be conditioned on timely submittal of two separate "as-approved" documents which, in the determination of the Zoning Administrator and the City Engineer, reflect the substance of the plans approved by the Planning Commission.

ATTACHMENTS (CIRCLE) SUBMITTED PLANS | CITY MAPS | LEGAL NOTICE | LEGAL DESCRIPTION | PUBLIC COMMENTS | AGENCY COMMENTS | RESPONSE TO STANDARDS

Site Development Plan:

Staff reviewed the request for a Site Development Plan for conformity with the standards listed in the City of Columbia Zoning Ordinance. The relevant provisions of the Ordinance are listed below, followed by staff analysis.

N. 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, 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.

O. Development Plan Procedures Decision-Making Authority's Action.

1. Within 62 days for a Development Plan and application for which the Zoning Administrator is the Decision-Making Authority, or within 62 days after the hearing on a Development Plan and application for which the Planning Commission is the Decision-Making Authority, the Development Plan and application shall be approved or disapproved by the Decision-Making Authority in accordance with the review criteria of Section 8.5.6.N and Sections 8.5.6.O.2-.5 below:

2. A Development Plan and application shall be approved by the Decision-Making Authority, upon a finding that the Development Plan and application are in compliance with the review criteria set forth in Section 8.5.6.N.

3. If a Development Plan and Application are approved, the Development Plan as approved shall become part of the record of approval, and subsequent actions relating to the authorized Development must be consistent with approved items.

4. A Development Plan and application shall be disapproved if the Decision-Making Authority determines that the Plan and application do not comply with any one or more of the review criteria set forth in Section 8.5.6.N.

Staff's review of Section 8.5.6.N and O in relation to this request finds the following:

The proposed Site Development Plan generally conforms to the requirements of the Zoning Ordinance. Adjustment of the block pattern of thoroughfares based on site conditions is discussed in the standards section above.

Planning Commission may require additional details related to Civic Space.

The Planning Commission may condition approval on the removal of lots 47 and 46 in order to better conform to the character of the CD-3 Neighborhood Character District.

Technical comments from service providers indicate that services are in place to support the proposed development. A few technical comments are noteworthy and may warrant further evaluation by the Planning Commission.

- Maury County Schools provided comments that the proposed development would be served by Howell Elementary, currently at 91% capacity; Cox Middle School, currently at 73% capacity; and Central High School, currently at 84%. Maury County Schools reiterated in its comments that no residence is guaranteed assignment to a specific attendance zone.
- Both Maury County Water and Columbia Power and Water Systems (CPWS) have indicated their intent to serve the proposed development. It is generally the policy of the City that new residential developments should be served by CPWS.

Preliminary Plat and Site Development Plan are two separate documents which are reviewed concurrently.[2]

- The Preliminary Plat must adhere to the Subdivision Regulations and propose a plan for installation of infrastructure and the subdivision of land in a manner that conforms to the Zoning Ordinance and other regulations of the City. A Preliminary Plat approved by Planning Commission is the first step in the process of subdividing the property into smaller parcels.
- The Site Development Plan details how the proposed development of the site will conform to the requirements of the Zoning Ordinance for Development Parcels. A Site Development Plan approved by the Planning Commission will control all subsequent development of the site.

[2] There are some exceptions where Preliminary Plats and/or Site Construction Plans serve as the required Development Plan.

- Approval should be conditioned on the submittal of separate "as-approved" documents which reflect the determinations of the Planning Commission.

PRELIMINARY PLAT AND DEVELOPMENT PLAN

FOR

ROCK SPRINGS

DEE PURSUIT, LLC

CONTACTS

OPTIONEE/DEVELOPER

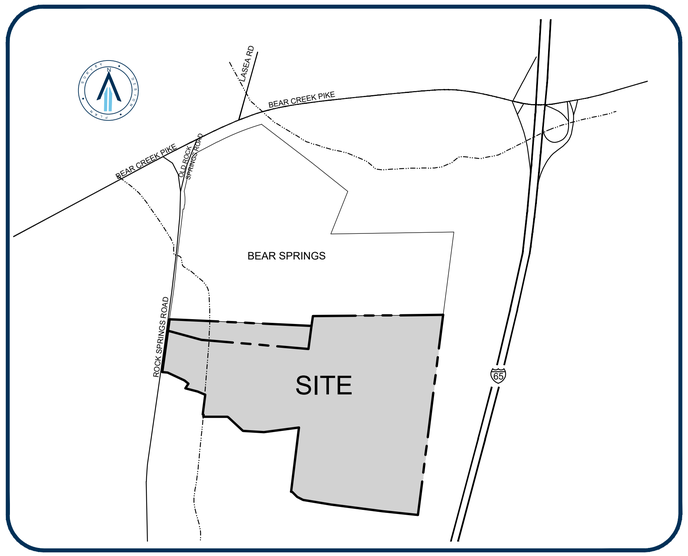
CLIFF SMITH
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BRENTWOOD, TN 37027
(615) 376-5177
cliff.smith@cpsland.com

CIVIL

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(615) 244-8591
jvincent@ragansmith.com

LANDSCAPE ARCHITECTURE

ANDREW TARSI
RAGAN SMITH
315 WOODLAND STREET
NASHVILLE, TN 37206
(615) 244-8591
atarsi@ragansmith.com



LOCATION MAP
NOT TO SCALE

INDEX OF SHEETS

SHEET	DESCRIPTION
CVR	COVER SHEET

PRELIMINARY PLAT

P0.0	ALTA SURVEY
P1.0	OVERALL PRELIMINARY PLAT
P2.0	PRELIMINARY PLAT
P3.0	PRELIMINARY PLAT
P4.0	PRELIMINARY PLAT

DEVELOPMENT PLAN

DP1.0	EXISTING CONDITIONS
DP2.0	TREE PRESERVATION PLAN
DP3.0	PEDESTRIAN & CIVIC SPACE PLAN
DP4.0	ROADWAY SECTIONS

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Know what's below. Call before you dig.

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ragansmith.com

JACOB F. VINCENT
REGISTERED LANDSCAPE ARCHITECT
AGENCY NUMBER
NO. 001145
STATE OF TENNESSEE
04 • 17 • 2023

ROCK SPRINGS
FOR
DEE PURSUIT, LLC
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: NOT TO SCALE
Date: MARCH 20, 2023
Approved By: JFV

Revisions:

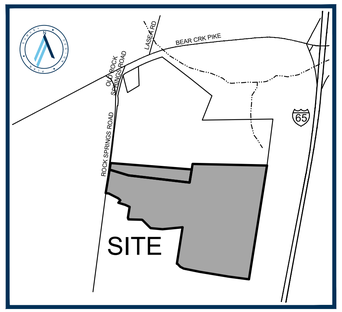
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1	2023.04.17	PER STAFF COMMENTS

Drawing Title:
COVER

Drawing No.
CVR

Project No.
21-0389

G:\21-0389\5-SURVEY\PRELIMINARY PLAT\21-0389 PRELIMINARY PLAT-COVER.DWG
PLOTTED BY AMANDA REED ON 4/17/2023 11:33 AM LAST UPDATED BY AREED ON 4/17/2023 9:39 AM



LOCATION MAP
(NOT TO SCALE)

GENERAL NOTES

1. BEARINGS SHOWN HEREON ARE BASED ON THE TENNESSEE COORDINATE SYSTEM OF 1983. GPS EQUIPMENT WAS USED TO DETERMINE THE POSITION OF TWO (2) CONTROL POINTS FOR THE SURVEYED PROPERTY TO ESTABLISH AS BASIS FOR BEARING FOR THE SURVEY.
2. TYPE OF GPS EQUIPMENT USED- TRIMBLE MODEL R10, DUAL FREQUENCY RECEIVER. TYPE OF GPS SURVEY: TDOT NETWORK ADJUSTED REAL TIME KINEMATIC. THE RELATIVE POSITIONAL QUALITY IS 0.05'.
3. BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN FLOOD ZONE X, AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47119C0195E, WITH AN EFFECTIVE REVISED DATE OF APRIL 15, 2007 WHICH MAKES UP A PART OF THE NATIONAL FLOOD INSURANCE ADMINISTRATION REPORT; COMMUNITY NO. 470123 PANEL NO. 0195, SUFFIX E WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PREMISES IS SITUATED. SAID MAP DEFINES ZONE "X" UNDER "OTHER AREAS" AS AN AREA DETERMINED TO BE OUTSIDE THE 2% ANNUAL FLOODPLAIN.
4. THE SURVEYED PROPERTY IS CURRENTLY ZONED CD-3, AS SHOWN ON THE CURRENT GIS ZONING MAP FOR THE CITY OF COLUMBIA. NO ZONING REPORT WAS PROVIDED AT THE TIME OF THIS SURVEY.
5. WETLAND AREAS SHOWN HEREON ARE BASED ON A HYDROLOGIC DETERMINATION REPORT PREPARED BY GROW ENVIRONMENTAL SOLUTIONS, DATED JANUARY 5, 2022, AND FLAGGED AREAS LOCATED DURING FIELD WORK.
6. THIS SURVEYOR HAS NOT BEEN FURNISHED WITH A COPY OF A TITLE COMMITMENT. THE SURVEYED PROPERTY IS, THEREFORE, SUBJECT TO THE FINDINGS OF A COMPLETE AND ACCURATE TITLE SEARCH.

UTILITY NOTE

THIS SURVEYOR 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. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. 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 (3) THREE NOR MORE THAN (10) TEN WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 811.

PROPERTY DESCRIPTIONS - AS SURVEYED

MAP 092, PARCEL 11.01

BEING A CERTAIN TRACT OR PARCEL OF LAND LYING AND BEING IN THE FOURTH (4th) CIVIL DISTRICT OF MAURY COUNTY, CITY OF COLUMBIA, TENNESSEE. BEING BOUNDED ON THE NORTH BY THE BEAR SPRINGS, LLC PROPERTY OF RECORD IN BOOK R2797, PAGE 1063, REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE (R.O.M.C.T.); ON THE EAST AND SOUTH BY THE DONALD BLAIR PROPERTY OF RECORD IN BOOK R2394, PAGE 889, R.O.M.C.T. AND ON THE WEST BY ROCK SPRINGS ROAD (50-FOOT RIGHT-OF-WAY) AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC" IN THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, SAID IRON ROD LYING APPROXIMATELY 2,470 FEET SOUTH OF THE INTERSECTION OF SAID ROCK SPRINGS ROAD WITH BEAR CREEK PIKE AND BEING THE NORTHWEST CORNER OF THE PROPERTY SHOWN ON THE PLAT OF SURVEY FOR THE J.C. CONNELLY ESTATE OF RECORD IN PLAT BOOK 15, PAGE 126, R.O.M.C.T.;

THENCE, WITH THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, NORTH 07 DEGREES 50 MINUTES 39 SECONDS EAST, 597.29 FEET TO A DISTURBED 5/8-INCH IRON ROD (OLD), THE SOUTHWEST CORNER OF SAID BEAR SPRINGS, LLC AND THE NORTHWEST CORNER AND **POINT OF BEGINNING** OF THE HEREIN DESCRIBED TRACT;

THENCE, LEAVING THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, WITH THE SOUTHERLY LINE OF SAID BEAR SPRINGS, LLC, SOUTH 87 DEGREES 19 MINUTES 36 SECONDS EAST, 1591.31 FEET TO A 1-INCH IRON PIPE (OLD) IN THE WEST LINE OF SAID DONALD BLAIR, SAID IRON PIPE BEING THE NORTHEAST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH SAID BLAIR THE FOLLOWING THREE (3) CALLS:

1. SOUTH 07 DEGREES 21 MINUTES 48 SECONDS WEST, 260.60 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC", THE SOUTHWEST CORNER OF THE HEREIN DESCRIBED TRACT;
2. NORTH 85 DEGREES 08 MINUTES 12 SECONDS WEST, 1203.60 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
3. NORTH 74 DEGREES 48 MINUTES 12 SECONDS WEST, 388.24 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC" IN THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, SAID IRON ROD BEING THE SOUTHWEST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, NORTH 07 DEGREES 50 MINUTES 39 SECONDS EAST, 130.07 FEET TO THE **POINT OF BEGINNING** CONTAINING **351,779 SQUARE FEET** OR **8.08 ACRES**, MORE OR LESS

BEING THE SAME PROPERTY CONVEYED TO GARY W. CONNELLY FROM J.C. CONNELLY AND WIFE, BERNICE CONNELLY BY DEED OF RECORD IN BOOK 607, PAGE 699, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE.

SAID PROPERTY BEING FURTHER CONVEYED BY DEED CREATING TENANCY BY THE ENTIRETIES BETWEEN GARY W. CONNELLY AND WIFE, NANCY CONNELLY OF RECORD IN BOOK R1486, PAGE 557, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE.

MAP 092, PARCEL 011.02

BEING A CERTAIN TRACT OR PARCEL OF LAND LYING AND BEING IN THE FOURTH (4th) CIVIL DISTRICT OF MAURY COUNTY, CITY OF COLUMBIA, TENNESSEE. BEING BOUNDED ON THE NORTH AND WEST BY THE GARY W. CONNELLY AND WIFE, NANCY CONNELLY PROPERTY OF RECORD IN BOOK 607, PAGE 699 AND BOOK R1486, PAGE 557, REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE (R.O.M.C.T.) AND THE BEAR SPRINGS, LLC PROPERTY OF RECORD IN BOOK R2797, PAGE 1063, R.O.M.C.T.; ON THE EAST BY THE MATTIE LORENE HOLT PROPERTY OF RECORD IN BOOK R1750, PAGE 61, R.O.M.C.T.; ON THE SOUTH BY THE GREGORY S. BAKER PROPERTY OF RECORD IN BOOK R2785, PAGE 1051, R.O.M.C.T., THE RAY HOOD AND WIFE, OMA M. HOOD PROPERTY OF RECORD IN BOOK 681, PAGE 283, R.O.M.C.T. AND THE BOBBY HOLT PROPERTY OF RECORD IN BOOK 849, PAGE 505, R.O.M.C.T.; ON THE SOUTH AND WEST BY THE DEBORAH K. JEWELL PROPERTY OF RECORD IN BOOK R1935, PAGE 1473, R.O.M.C.T., THE LORENE HOLT PROPERTY OF RECORD IN BOOK R1504, PAGE 338, R.O.M.C.T. AND THE ADAM P. WEST PROPERTY OF RECORD IN BOOK R1793, PAGE 478, R.O.M.C.T. AND ON THE WEST BY ROCK SPRINGS ROAD (50-FOOT RIGHT-OF-WAY) AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC" IN THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, SAID IRON ROD LYING APPROXIMATELY 2,470 FEET SOUTH OF THE INTERSECTION OF SAID ROCK SPRINGS ROAD WITH BEAR CREEK PIKE AND BEING THE NORTHWEST CORNER OF THE PROPERTY SHOWN ON THE PLAT OF SURVEY FOR THE J.C. CONNELLY ESTATE OF RECORD IN PLAT BOOK 15, PAGE 126, R.O.M.C.T.;

THENCE, WITH THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, NORTH 07 DEGREES 50 MINUTES 39 SECONDS EAST, 467.22 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC", THE SOUTHWEST CORNER OF SAID GARY W. CONNELLY AND WIFE, NANCY CONNELLY, SAID IRON ROD BEING THE NORTHWEST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, LEAVING THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, WITH SAID CONNELLY THE FOLLOWING THREE (3) CALLS:

1. SOUTH 74 DEGREES 48 MINUTES 12 SECONDS EAST, 388.24 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
2. SOUTH 85 DEGREES 08 MINUTES 12 SECONDS EAST, 1203.60 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
3. NORTH 07 DEGREES 21 MINUTES 48 SECONDS EAST, 260.60 FEET TO A 1-INCH IRON PIPE (OLD) AT AN INTERIOR CORNER IN THE SOUTHERLY LINE OF SAID BEAR SPRINGS, LLC;

THENCE, WITH THE SOUTHERLY LINE OF SAID BEAR SPRINGS, LLC THE FOLLOWING TWO (2) CALLS:

1. NORTH 08 DEGREES 05 MINUTES 52 SECONDS EAST, 110.99 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
2. GENERALLY WITH A FENCE, NORTH 89 DEGREES 29 MINUTES 25 SECONDS EAST, 1458.58 FEET TO AN IRON ROD (OLD) WITH CAP STAMPED "RLS #1335 IN THE WESTERLY LINE OF SAID MATTIE LORENE HOLT, SAID IRON ROD BEING THE NORTHEAST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH THE WESTERLY LINE OF SAID HOLT, SOUTH 07 DEGREES 10 MINUTES 21 SECONDS WEST, 2259.04 FEET TO AN EXISTING WOODEN FENCE POST IN THE NORTHERLY LINE OF SAID GREGORY S. BAKER, SAID FENCE POST BEING THE SOUTHWEST CORNER OF SAID HOLT AND THE SOUTHEAST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH THE NORTHERLY LINE OF SAID BAKER THE FOLLOWING FOUR (4) CALLS:
NORTH 84 DEGREES 02 MINUTES 02 SECONDS WEST, 400.23 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
NORTH 82 DEGREES 39 MINUTES 15 SECONDS WEST, 579.40 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
NORTH 80 DEGREES 21 MINUTES 15 SECONDS WEST, 317.90 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
NORTH 63 DEGREES 02 MINUTES 15 SECONDS WEST, 73.70 FEET TO AN ANGLE IRON (OLD), THE NORTHEAST CORNER OF SAID RAY AND OMA HOOD, THE NORTHWEST CORNER OF SAID BAKER AND THE SOUTHWEST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH THE NORTHERLY LINE OF SAID HOOD, THE FOLLOWING TWO (2) CALLS:

1. NORTH 45 DEGREES 13 MINUTES 29 SECONDS WEST, 79.81 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
2. NORTH 83 DEGREES 15 MINUTES 18 SECONDS WEST, 11.88 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC" AT THE SOUTHEAST CORNER OF SAID LORENE HOLT;

THENCE, WITH THE EASTERLY LINE OF SAID HOLT AND THE EASTERLY LINE OF SAID DEBORAH K. JEWELL, GENERALLY WITH A FENCE, NORTH 07 DEGREES 01 MINUTES 15 SECONDS EAST, 724.80 FEET TO AN EXISTING WOODEN FENCE POST, THE NORTHEAST CORNER OF SAID JEWELL;

THENCE, WITH THE NORTHERLY LINE OF SAID JEWELL, GENERALLY WITH A FENCE, SOUTH 82 DEGREES 28 MINUTES 09 SECONDS WEST, 397.66 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";

THENCE, CONTINUING WITH THE NORTHERLY LINE OF SAID JEWELL AND THE NORTHERLY LINE OF SAID LORENE HOLT, GENERALLY WITH A FENCE, NORTH 86 DEGREES 09 MINUTES 30 SECONDS WEST, 234.07 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";

THENCE, CONTINUING WITH THE NORTHERLY LINE OF SAID HOLT, GENERALLY WITH A FENCE, THE FOLLOWING TWO (2) CALLS:

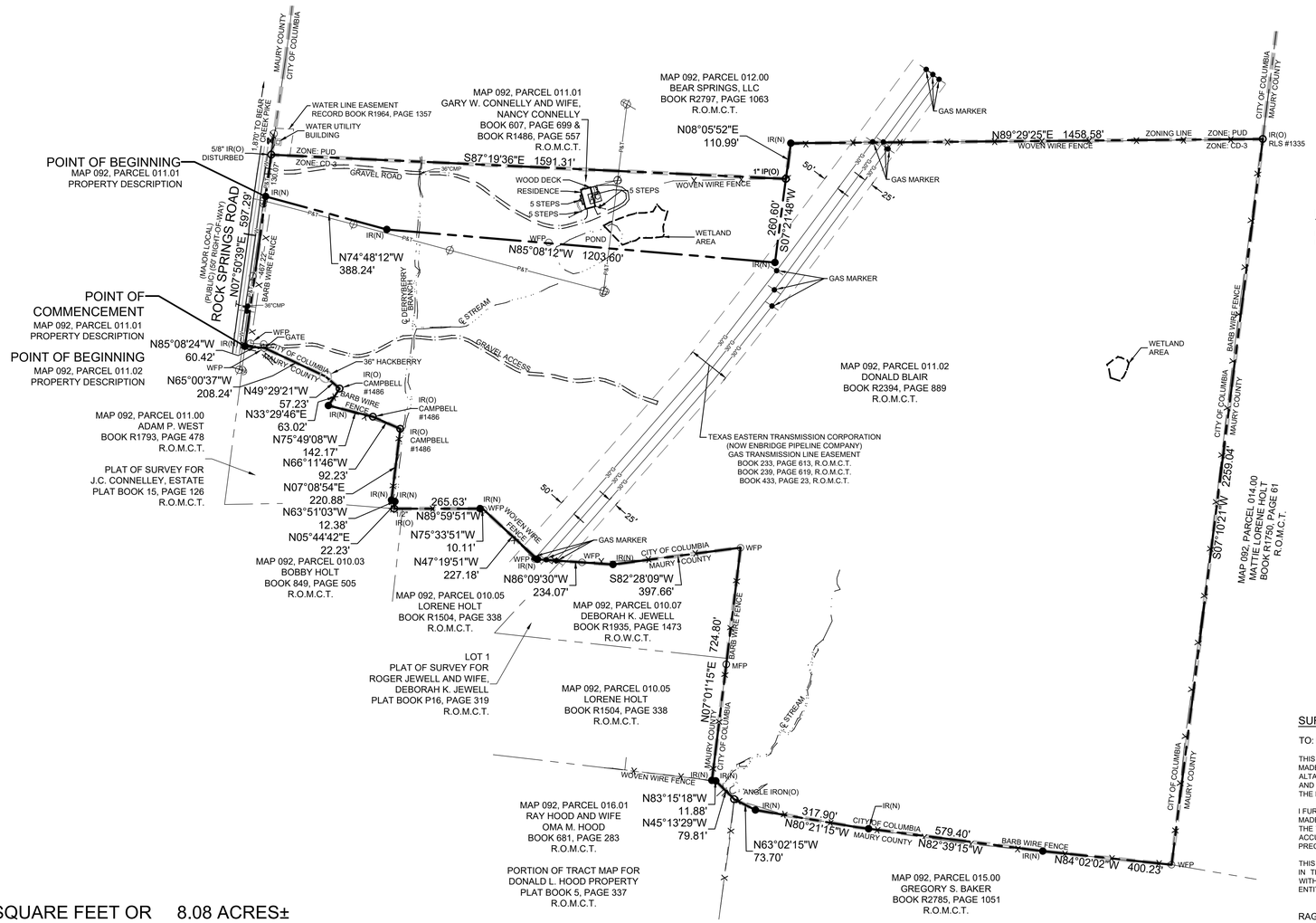
1. NORTH 47 DEGREES 19 MINUTES 51 SECONDS WEST, 227.18 FEET TO AN EXISTING WOODEN FENCE POST;
2. NORTH 75 DEGREES 33 MINUTES 51 SECONDS WEST, 10.11 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";

THENCE, CONTINUING WITH THE NORTHERLY LINE OF SAID HOLT AND THE NORTHERLY LINE OF SAID BOBBY HOLT, GENERALLY WITH A FENCE, NORTH 89 DEGREES 59 MINUTES 51 SECONDS WEST, 265.63 FEET TO A 1/2-INCH IRON ROD (OLD), THE SOUTHEAST CORNER OF SAID ADAM P. WEST;

THENCE, LEAVING THE NORTHERLY LINE OF SAID BOBBY HOLT, WITH SAID WEST, GENERALLY WITH A FENCE, THE FOLLOWING NINE (9) CALLS:

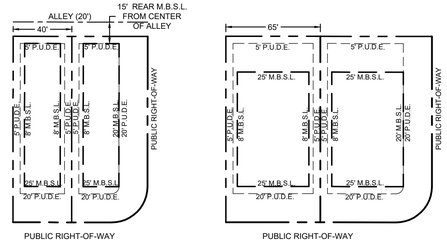
1. NORTH 05 DEGREES 44 MINUTES 42 SECONDS EAST, 22.23 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
2. NORTH 63 DEGREES 51 MINUTES 03 SECONDS WEST, 12.38 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
3. NORTH 07 DEGREES 08 MINUTES 54 SECONDS EAST, 220.88 FEET TO AN IRON ROD (OLD) WITH CAP STAMPED "CAMPBELL #1486";
4. NORTH 66 DEGREES 11 MINUTES 46 SECONDS WEST, 92.23 FEET TO AN IRON ROD (OLD) WITH CAP STAMPED "CAMPBELL #1486";
5. NORTH 75 DEGREES 49 MINUTES 08 SECONDS WEST, 142.17 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
6. NORTH 33 DEGREES 29 MINUTES 46 SECONDS EAST, 63.02 FEET TO AN IRON ROD (OLD) WITH CAP STAMPED "CAMPBELL #1486";
7. NORTH 49 DEGREES 29 MINUTES 21 SECONDS WEST, 57.23 FEET TO A 36" HACKBERRY TREE;
8. NORTH 65 DEGREES 00 MINUTES 37 SECONDS WEST, 208.24 FEET TO AN EXISTING WOODEN FENCE POST;
9. NORTH 85 DEGREES 08 MINUTES 24 SECONDS WEST, 60.42 FEET TO THE **POINT OF BEGINNING** CONTAINING **4,380,055 SQUARE FEET**, OR **100.55 ACRES**, MORE OR LESS.

BEING THE SAME PROPERTY CONVEYED TO DONALD BLAIR FROM DONALD BLAIR, EXECUTOR OF THE ESTATE OF JAMES STEVEN MARSHALL BY QUITCLAIM DEED OF RECORD IN BOOK R2394, PAGE 889, REGISTERS OFFICE FOR MAURY COUNTY, TENNESSEE.


MAURY COUNTY
CITY OF COLUMBIA
WATER LINE EASEMENT
RECORD BOOK R1964, PAGE 1357
WATER UTILITY
BUILDING
ZONE: PUD
ZONE: CD-3
1,970' TO BEAR CREEK PIKE
5/8" IR(O) DISTURBED
POINT OF BEGINNING
MAP 092, PARCEL 011.01
PROPERTY DESCRIPTION
IR(N)
S87°19'36"E 1591.31'
MAP 092, PARCEL 011.01
GARY W. CONNELLY AND WIFE,
NANCY CONNELLY
BOOK 607, PAGE 699 &
BOOK R1486, PAGE 557
R.O.M.C.T.
MAP 092, PARCEL 012.00
BEAR SPRINGS, LLC
BOOK R2797, PAGE 1063
R.O.M.C.T.
N08°05'52"E
110.99'
GAS MARKER
N89°29'25"E 1458.58'
WOVEN WIRE FENCE
ZONING LINE
ZONE: PUD
ZONE: CD-3
CITY OF COLUMBIA
MAURY COUNTY
IR(O)
RLS #1335
1" IP(O)
WOOD DECK
RESIDENCE
5 STEPS
5 STEPS
5 STEPS
WOVEN WIRE FENCE
GAS MARKER
WETLAND AREA
POND
WFP
N85°08'12"W 1203.60'
260.60'
S07°21'48"W
IR(N)
GAS MARKER
ROCK SPRINGS ROAD
(MAJOR LOCAL)
(PUBLIC) (SP RIGHT-OF-WAY)
N07°50'39"E 597.29'
BARB WIRE FENCE
36"CMP
N74°48'12"W
388.24'
BARB WIRE FENCE
POINT OF COMMENCEMENT
MAP 092, PARCEL 011.01
PROPERTY DESCRIPTION
POINT OF BEGINNING
MAP 092, PARCEL 011.02
PROPERTY DESCRIPTION
N85°08'24"W 60.42'
WFP
GATE
CITY OF COLUMBIA
MAURY COUNTY
N65°00'37"W 208.24'
36" HACKBERRY
IR(O) CAMPBELL #1486
BARB WIRE FENCE
N49°29'21"W 57.23'
N33°29'46"E 63.02'
N75°49'08"W 142.17'
N66°11'46"W 92.23'
N07°08'54"E 220.88'
N63°51'03"W 12.38'
N05°44'42"E 22.23'
MAP 092, PARCEL 011.00
ADAM P. WEST
BOOK R1793, PAGE 478
R.O.M.C.T.
PLAT OF SURVEY FOR
J.C. CONNELLEY, ESTATE
PLAT BOOK 15, PAGE 126
R.O.M.C.T.
MAP 092, PARCEL 010.03
BOBBY HOLT
BOOK 849, PAGE 505
R.O.M.C.T.
265.63'
N89°59'51"W
N75°33'51"W 10.11'
N47°19'51"W 227.18'
N86°09'30"W 234.07'
S82°28'09"W 397.66'
MAP 092, PARCEL 010.05
LORENE HOLT
BOOK R1504, PAGE 338
R.O.M.C.T.
MAP 092, PARCEL 010.07
DEBORAH K. JEWELL
BOOK R1935, PAGE 1473
R.O.W.C.T.
LOT 1
PLAT OF SURVEY FOR
ROGER JEWELL AND WIFE,
DEBORAH K. JEWELL
PLAT BOOK P16, PAGE 319
R.O.M.C.T.
724.80'
N07°01'15"E
BARB WIRE FENCE
MFP
MAP 092, PARCEL 010.05
LORENE HOLT
BOOK R1504, PAGE 338
R.O.M.C.T.
WOVEN WIRE FENCE
ANGLE IRON(O)
N83°15'18"W 11.88'
N45°13'29"W 79.81'
MAP 092, PARCEL 016.01
RAY HOOD AND WIFE
OMA M. HOOD
BOOK 681, PAGE 283
R.O.M.C.T.
PORTION OF TRACT MAP FOR
DONALD L. HOOD PROPERTY
PLAT BOOK 5, PAGE 337
R.O.M.C.T.
317.90'
N80°21'15"W
N63°02'15"W 73.70'
579.40'
N82°39'15"W
400.23'
N84°02'02"W
MAP 092, PARCEL 015.00
GREGORY S. BAKER
BOOK R2785, PAGE 1051
R.O.M.C.T.
MAP 092, PARCEL 011.02
DONALD BLAIR
BOOK R2394, PAGE 889
R.O.M.C.T.
TEXAS EASTERN TRANSMISSION CORPORATION
(NOW ENBRIDGE PIPELINE COMPANY)
GAS TRANSMISSION LINE EASEMENT
BOOK 233, PAGE 613, R.O.M.C.T.
BOOK 239, PAGE 619, R.O.M.C.T.
BOOK 433, PAGE 23, R.O.M.C.T.
MAP 092, PARCEL 014.00
MATTIE LORENE HOLT
BOOK R1750, PAGE 61
R.O.M.C.T.
S07°10'21"W 2259.04'
WFP
IR(N)
CITY OF COLUMBIA
MAURY COUNTY
WFP
IR(N)
WFP WOVEN WIRE FENCE
GAS MARKER
50'
25'
30'CMP
30'CMP
30'CMP

PRELIMINARY PLAT GENERAL NOTES

1. THE PURPOSE OF THIS PLAT IS TO CREATE 187 SINGLE FAMILY LOTS AND 7 OPEN SPACE LOTS.
2. BEARINGS SHOWN HEREON ARE BASED ON THE TENNESSEE COORDINATE SYSTEM OF 1983. GPS EQUIPMENT WAS USED TO DETERMINE THE POSITION OF TWO (2) CONTROL POINTS FOR THE SURVEYED PROPERTY TO ESTABLISH AS BASIS FOR BEARING FOR THE SURVEY.
3. TYPE OF GPS EQUIPMENT USED: TRIMBLE MODEL R10, DUAL FREQUENCY RECEIVER. TYPE OF GPS SURVEY: TDOT NETWORK ADJUSTED REAL TIME KINEMATIC. THE RELATIVE POSITIONAL QUALITY IS 0.05'.
4. ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 88. CONTOURS ARE AT TWO FOOT INTERVALS AND ARE BASED ON A FIELD RUN SURVEY USING RANDOM SPOT ELEVATIONS. CONTOURS WERE DERIVED USING SURFACE MODELING TECHNIQUES.
5. THIS PROPERTY IS CURRENTLY ZONED CD-3 NEIGHBORHOOD DISTRICT.
6. BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN FLOOD ZONE X, AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47119C0195E, WITH AN EFFECTIVE REVISED DATE OF APRIL 15, 2007 WHICH MAKES UP A PART OF THE NATIONAL FLOOD INSURANCE ADMINISTRATION REPORT; COMMUNITY NO. 470123 PANEL NO. 0195, SUFFIX E WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PREMISES IS SITUATED. SAID MAP DEFINES ZONE "X" UNDER "OTHER AREAS" AS AN AREA DETERMINED TO BE OUTSIDE THE 2% ANNUAL FLOODPLAIN.
7. ALL ROADS TO BE PUBLIC RIGHT OF WAY AND MAINTAINED BY THE CITY.
8. ALL OPEN SPACE TO BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
9. ALL OPEN SPACE TO BE DESIGNATED AS A PUBLIC UTILITY AND DRAINAGE, EASEMENT.
10. LIGHTING AT ALL BUILDING SITE LINES WILL NOT EXCEED 1.0 FOOT CANDLE AND ON-STIE OUTDOOR LIGHTING WILL CONFORM TO THE STANDARDS OF 4.3.17B OF THE ZONING ORDINANCE (TO BE CONFIRMED AT BUILDING PERMIT.)



SINGLE FAMILY TYPICAL ALLEY LOT DETAIL
UNLESS SHOWN OTHERWISE
(NOT TO SCALE)

SINGLE FAMILY TYPICAL LOT DETAIL
UNLESS SHOWN OTHERWISE
(NOT TO SCALE)

*BUILDING STANDARDS MUST MEET THE CD-3 REQUIREMENTS AS OUTLINED IN THE ZONING ORDINANCE.

ANTICIPATED DEVELOPMENT PHASING AND CONSTRUCTION SCHEDULE

PHASE 1 -	AUGUST 2023 - AUGUST 2024
PHASE 2 -	AUGUST 2024 - AUGUST 2025
PHASE 3 -	AUGUST 2025 - AUGUST 2026
PHASE 4 -	AUGUST 2026 - AUGUST 2027

150' 75' 300'

SITE DATA TABLE

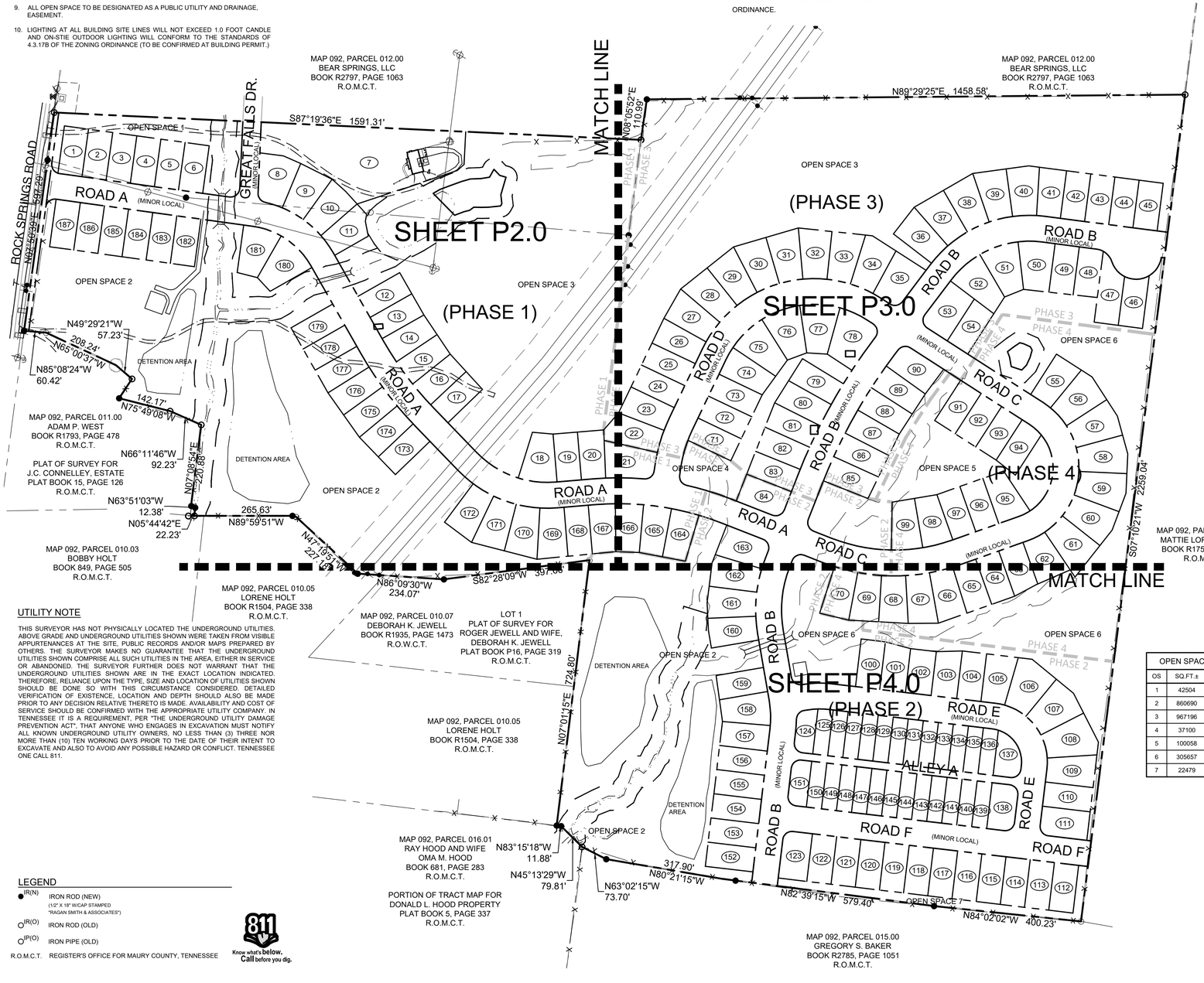
TOTAL SINGLE FAMILY LOT AREA	= 39.78 ACRES±
TOTAL OPEN SPACE AREA	= 53.62 ACRES±
TOTAL RIGHT-OF-WAY AREA	= 15.06 ACRES±
TOTAL RIGHT-OF-WAY DEDICATION	= 0.17 ACRES±
TOTAL SITE AREA	= 108.63 ACRES±

LOT TYPES
40' LOT: 28
65' LOT: 159

SETBACKS:
FRONT: 25'
SIDE: 8', 20' CORNER
REAR: 25'
REAR (ALLEY): 15' FROM CENTER OF ALLEY
MAXIMUM BUILDING HEIGHT: 3 STORIES OR 35'

*BUILDING STANDARDS MUST MEET THE CD-3 STANDARDS REFERENCED IN TABLES 4.3.1-C AND 4.3.8B AND ALL OTHER REQUIREMENTS OF THE ZONING ORDINANCE IN EFFECT AT THE TIME OF SITE DEVELOPMENT PLAN APPROVAL.

PARKING CALCULATIONS
PARKING REQUIRED: 2 SPACES/UNIT
PARKING PROVIDED: MIN. 2 SPACES/UNIT



UTILITY NOTE

THIS SURVEYOR 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. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. 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 (3) THREE NOR MORE THAN (10) TEN WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 811.

LEGEND

- ● IR(N) — IRON ROD (NEW) (1/2" X 18" W/CAP STAMPED "RAGAN SMITH & ASSOCIATES")
- O IR(O) — IRON ROD (OLD)
- O IP(O) — IRON PIPE (OLD)
- R.O.M.C.T. — REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE

811 Know what's below. Call before you dig.

OPEN SPACE TABLE

OS	SQ.FT.±	ACRES±
1	42504	0.98
2	860690	19.76
3	967196	22.20
4	37100	0.85
5	100058	2.30
6	305657	7.02
7	22479	0.52

LOT AREA TABLE

LOT	SQ.FT.±	ACRES±
1	8579	0.20
2	8580	0.20
3	8580	0.20
4	8580	0.20
5	8580	0.20
6	8580	0.20
7	77406	1.78
8	12050	0.28
9	10431	0.24
10	10539	0.24
11	9425	0.22
12	8580	0.20
13	8580	0.20
14	9074	0.21
15	9117	0.21
16	9090	0.21
17	8715	0.20
18	10755	0.25
19	8580	0.20
20	8942	0.21
21	11683	0.27
22	10702	0.25
23	9476	0.22
24	8580	0.20
25	8580	0.20
26	9125	0.21
27	10417	0.24
28	10374	0.24
29	10374	0.24
30	10374	0.24
31	10374	0.24
32	10374	0.24
33	10374	0.24
34	10917	0.25
35	11229	0.26
36	10374	0.24
37	10374	0.24
38	10374	0.24
39	10374	0.24
40	10260	0.24
41	9051	0.21
42	8580	0.20
43	8580	0.20
44	8580	0.20
45	8580	0.20
46	8782	0.20
47	10677	0.25

LOT AREA TABLE

LOT	SQ.FT.±	ACRES±
48	8601	0.20
49	8709	0.20
50	11244	0.26
51	10996	0.25
52	11347	0.26
53	11778	0.27
54	8747	0.20
55	9435	0.22
56	11455	0.26
57	11256	0.26
58	11256	0.26
59	11256	0.26
60	11256	0.26
61	11712	0.27
62	9580	0.22
63	8729	0.20
64	8580	0.20
65	8920	0.20
66	9790	0.22
67	9768	0.22
68	9247	0.21
69	9303	0.21
70	9568	0.22
71	8565	0.20
72	8580	0.20
73	8580	0.20
74	9688	0.22
75	11175	0.26
76	10911	0.25
77	10911	0.25
78	13675	0.31
79	8870	0.20
80	9136	0.21
81	9138	0.21
82	8875	0.20
83	8537	0.20
84	10006	0.23
85	8952	0.21
86	9054	0.21
87	8952	0.21
88	8901	0.20
89	8901	0.20
90	10326	0.24
91	8580	0.20
92	8580	0.20
93	8580	0.20
94	8694	0.20

LOT AREA TABLE

LOT	SQ.FT.±	ACRES±
95	9843	0.23
96	8580	0.20
97	8580	0.20
98	9722	0.22
99	9777	0.22
100	8580	0.20
101	8750	0.20
102	8400	0.19
103	8750	0.20
104	8580	0.20
105	9885	0.23
106	12580	0.29
107	12210	0.28
108	12630	0.29
109	10087	0.23
110	8580	0.20
111	10006	0.23
112	8580	0.20
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136	5116	0.12
137	7262	0.17
138	8857	0.20
139	5125	0.12
140	5125	0.12
141	5125	0.12

LOT AREA TABLE

LOT	SQ.FT.±	ACRES±
142	5125	0.12
143	5125	0.12
144	5125	0.12
145	5125	0.12
146	5125	0.12
147	5125	0.12
148	5125	0.12
149	5125	0.12
150	5125	0.12
151	6357	0.15
152	8580	0.20
153	8580	0.20
154	8580	0.20
155	8580	0.20
156	8763	0.20
157	10073	0.23
158	8653	0.20
159	9540	0.22
160	9945	0.23
161	10036	0.23
162	10441	0.24
163	9238	0.21
164	9238	0.21
165	9137	0.21
166	9059	0.21
167	8762	0.20
168	10072	0.23
169	10374	0.24
170	10374	0.24
171	10374	0.24
172	10374	0.24
173	8629	0.20
174	9098	0.21
175	9084	0.21
176	9006	0.21
177	8834	0.20
178	8580	0.20
179	8580	0.20
180	11329	0.26
181	10745	0.25
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183	8580	0.20
184	8580	0.20
185	8580	0.20
186	8580	0.20
187	8580	0.20

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JACOB F. VINCENT — 102572 — REGISTERED — AGENT/LICENSEE — 04 • 17 • 2023 — NATIONAL LAND SURVEYOR — 0011459 — STATE OF TENNESSEE

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=150'

Date: MARCH 20, 2023

Approved By: JFV

Revisions:

-	-	-
-	-	-
-	-	-
-	-	-
-	-	-

1 2023.04.17 PER STAFF COMMENTS

Drawing Title:

OVERALL PRELIMINARY PLAT

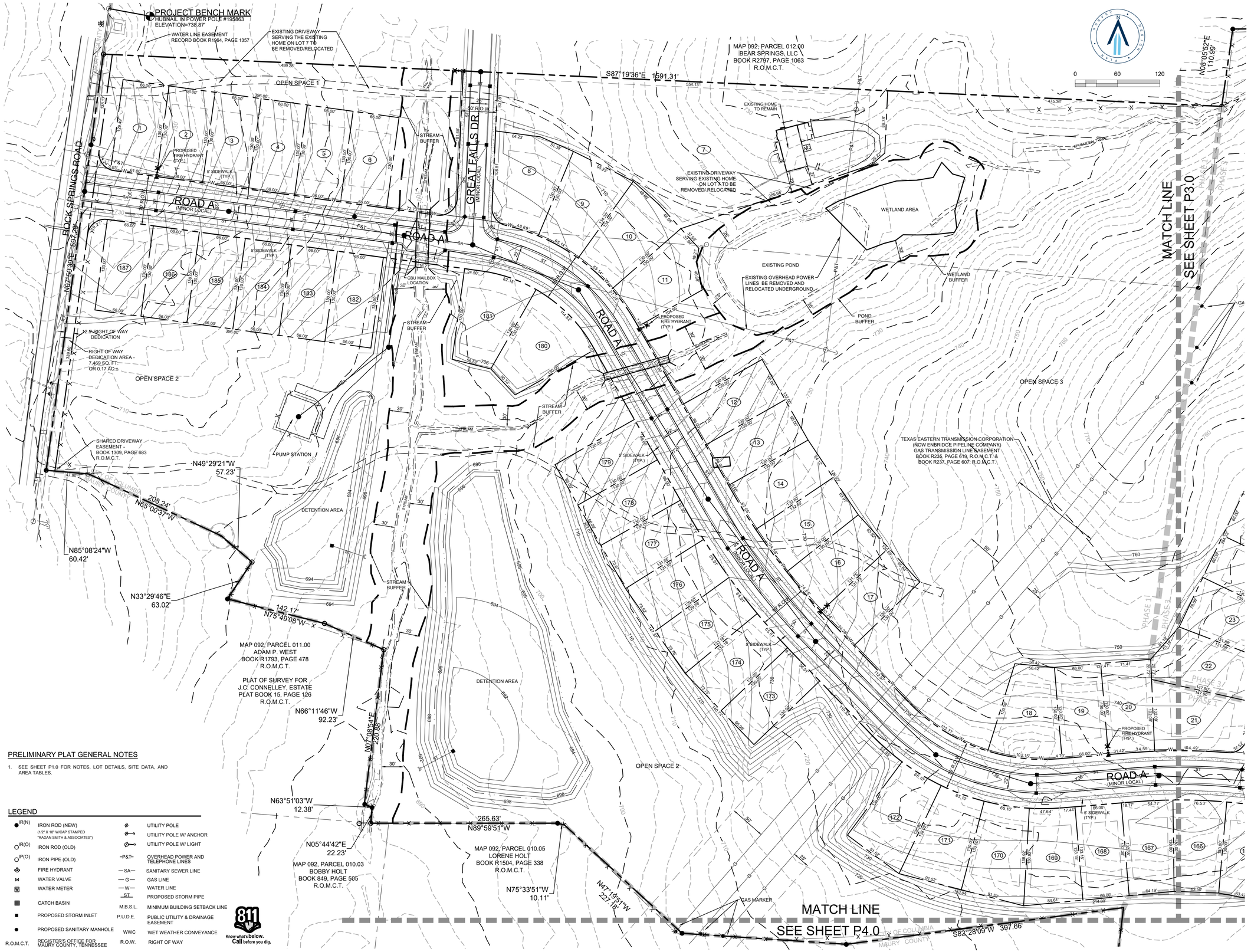
Drawing No.

P1.0

Project No.

21-0389

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PLOTTED BY: AMANDA REED ON: 4/17/2023 11:54 AM — LAST UPDATED BY: AMEED ON: 4/17/2023 11:31 AM



PRELIMINARY PLAT GENERAL NOTES

1. SEE SHEET P1.0 FOR NOTES, LOT DETAILS, SITE DATA, AND AREA TABLES.

LEGEND

● IR(N)	IRON ROD (NEW) (1/2" X 18" W/CAP STAMPED "RAGAN SMITH & ASSOCIATES")	⌀	UTILITY POLE
○ IR(O)	IRON ROD (OLD)	⌀⟶	UTILITY POLE W/ ANCHOR
○ IP(O)	IRON PIPE (OLD)	⌀⟶	UTILITY POLE W/ LIGHT
	FIRE HYDRANT	-P&T-	OVERHEAD POWER AND TELEPHONE LINES
⋈	WATER VALVE	—SA—	SANITARY SEWER LINE
W	WATER METER	— G —	GAS LINE
	CATCH BASIN	— W —	WATER LINE
	PROPOSED STORM INLET	ST	PROPOSED STORM PIPE
	PROPOSED SANITARY MANHOLE	M.B.S.L.	MINIMUM BUILDING SETBACK LINE
		P.U.D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT
		WWC	WET WEATHER CONVEYANCE
R.O.M.C.T.	REGISTERS OFFICE FOR MAURY COUNTY, TENNESSEE	R.O.W.	RIGHT OF WAY

Know what's below. Call before you dig.

D:\21-0389\1-SURVEY\PRELIMINARY PLAT\21-0389 PRELIMINARY PLAT.DWG
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JACOB F. VINCENT
REGISTERED
LICENSED
AGENT/CURATEUR
No. 00114198
STATE OF TENNESSEE
04 17 2023

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=60'

Date: MARCH 20, 2023

Approved By: JFV

Revisions:

1	2023.04.17	PER STAFF COMMENTS

Drawing Title:

PRELIMINARY PLAT

Drawing No.

P2.0

Project No.

21-0389



0 60 120

PRELIMINARY PLAT GENERAL NOTES

1. SEE SHEET P1.0 FOR NOTES, LOT DETAILS, SITE DATA, AND AREA TABLES.

Know what's below. Call before you dig.

LEGEND

● IR(N)	IRON ROD (NEW) (1/2" X 18" W/CAP STAMPED "RAGAN SMITH & ASSOCIATES")	⌀	UTILITY POLE
○ IR(O)	IRON ROD (OLD)	⌀⟶	UTILITY POLE W/ ANCHOR
○ IP(O)	IRON PIPE (OLD)	⌀⟿	UTILITY POLE W/ LIGHT
	FIRE HYDRANT	—P&T—	OVERHEAD POWER AND TELEPHONE LINES
	WATER VALVE	— SA —	SANITARY SEWER LINE
W	WATER METER	— G —	GAS LINE
	CATCH BASIN	— W —	WATER LINE
■	PROPOSED STORM INLET	ST	PROPOSED STORM PIPE
●	PROPOSED SANITARY MANHOLE	M.B.S.L.	MINIMUM BUILDING SETBACK LINE
R.O.M.C.T.	REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE	P.U.D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT
		WWC	WET WEATHER CONVEYANCE
		R.O.W.	RIGHT OF WAY

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JACOB F. VINCENT
REGISTERED
LICENSED
LANDSCAPE
ARCHITECT
0011459
STATE OF TENNESSEE
04 • 17 • 2023

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=60'

Date: MARCH 20, 2023

Approved By: JFV

Revisions:

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Drawing Title:

PRELIMINARY PLAT

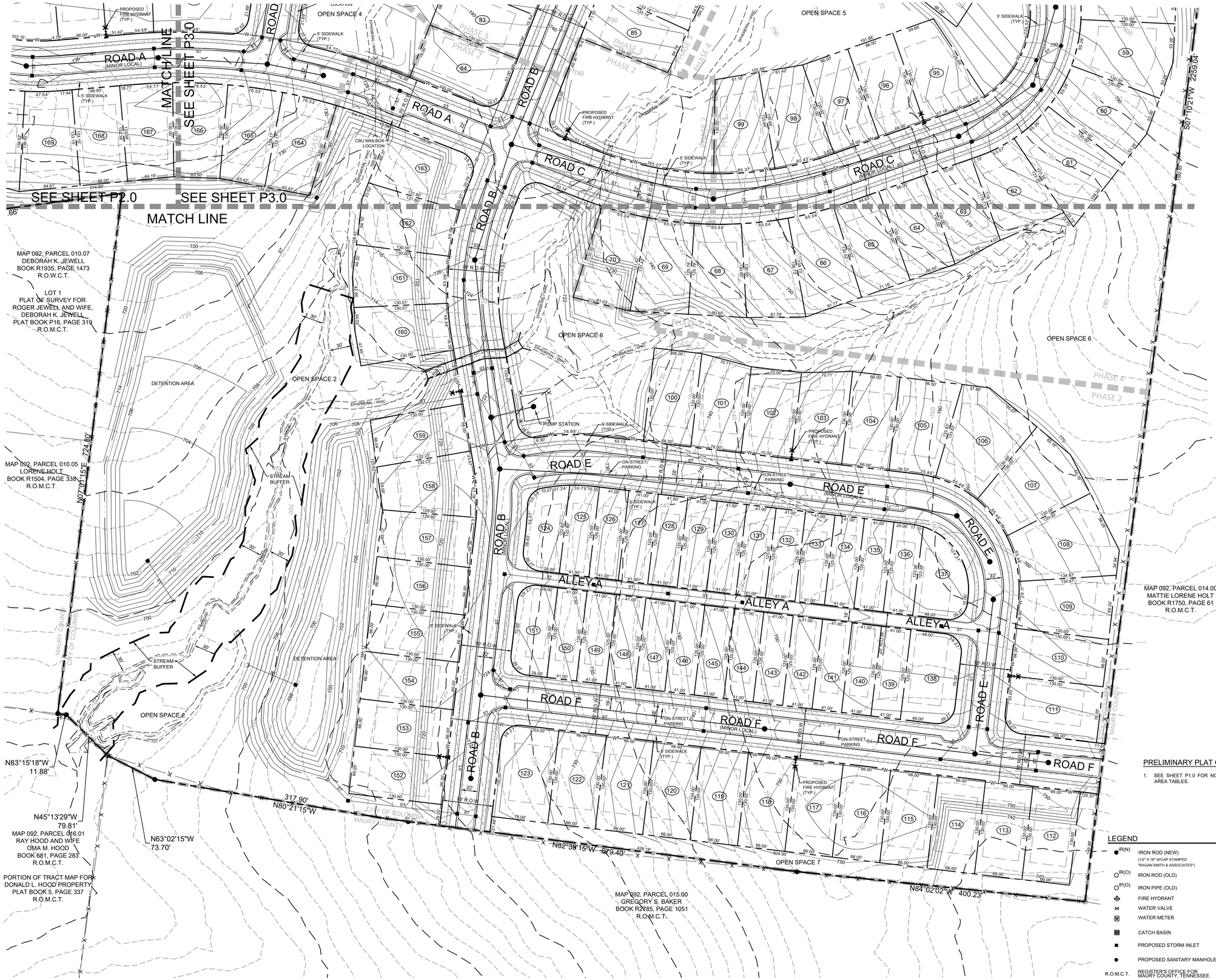
Drawing No.

P3.0

Project No.

21-0389

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JACOB F. VINCENT
NO. 0021452
AGRICULTURE
04 17 2023
STATE OF TENNESSEE

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale:	1"=60'
Date:	MARCH 20, 2023
Approved By:	JFV

Revisions:

1	2023.04.17	PER STAFF COMMENTS

Drawing Title:

PRELIMINARY PLAT

Drawing No.

P4.0

Project No.

21-0389

PRELIMINARY PLAT GENERAL NOTES

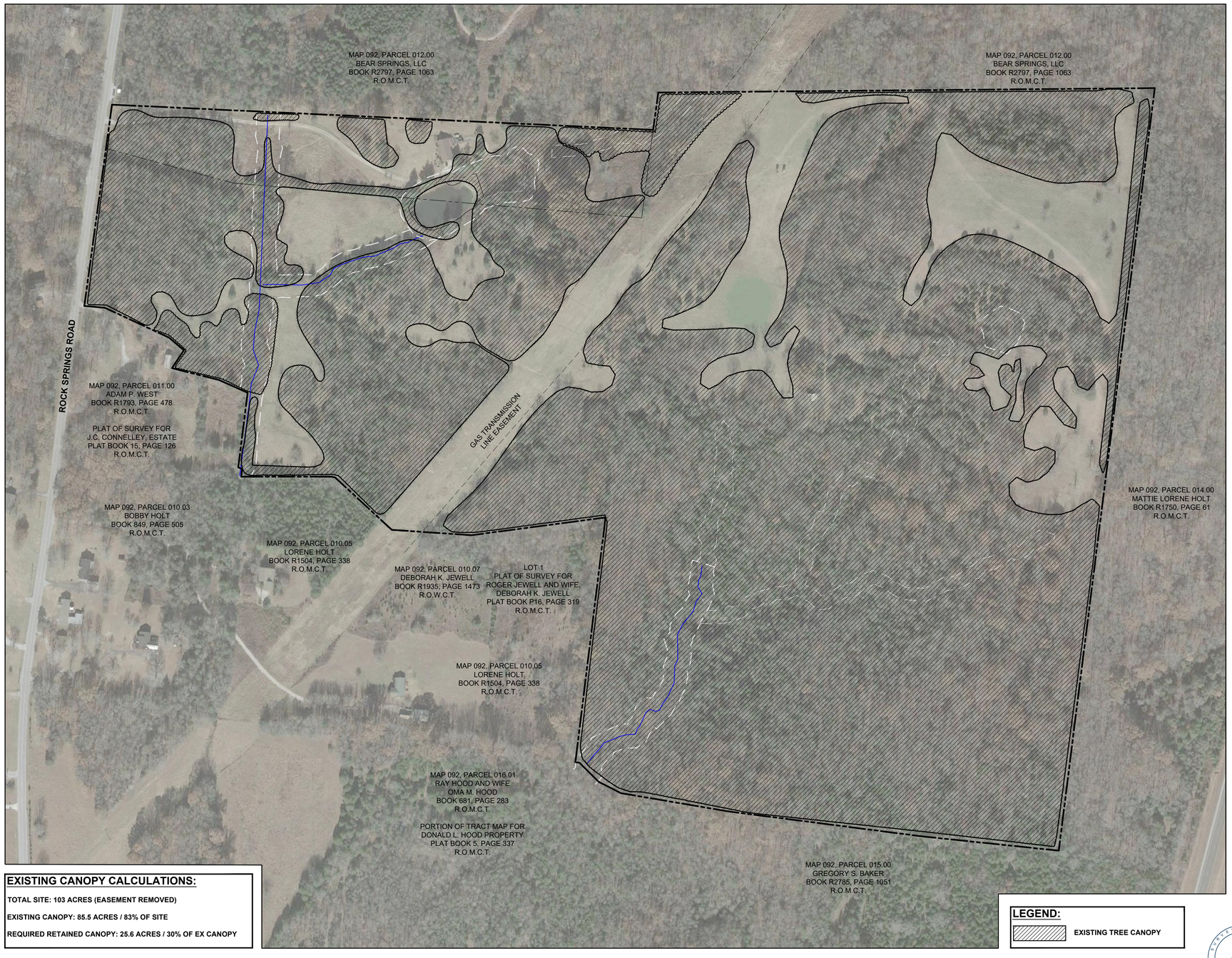
1. SEE SHEET P1.0 FOR NOTES, LOT DETAILS, SITE DATA, AND AREA TABLES.

811 Know what's below. Call before you dig.

LEGEND

● IR(N)	IRON ROD (NEW) (1/2" X 18" W/CAP STAMPED "RAGAN SMITH & ASSOCIATES")	⌀	UTILITY POLE
○ IR(O)	IRON ROD (OLD)	⌀⟶	UTILITY POLE W/ ANCHOR
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	FIRE HYDRANT	-P&T-	OVERHEAD POWER AND TELEPHONE LINES
	WATER VALVE	—SA—	SANITARY SEWER LINE
W	WATER METER	— G —	GAS LINE
	CATCH BASIN	— W —	WATER LINE
■	PROPOSED STORM INLET	ST	PROPOSED STORM PIPE
●	PROPOSED SANITARY MANHOLE	M.B.S.L.	MINIMUM BUILDING SETBACK LINE
		P.U.D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT
		WWC	WET WEATHER CONVEYANCE
R.O.M.C.T.	REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE	R.O.W.	RIGHT OF WAY

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EXISTING CANOPY CALCULATIONS:

TOTAL SITE: 103 ACRES (EASEMENT REMOVED)

EXISTING CANOPY: 85.5 ACRES / 83% OF SITE

REQUIRED RETAINED CANOPY: 25.6 ACRES / 30% OF EX CANOPY

LEGEND:

EXISTING TREE CANOPY

811 Know what's **below.** **Call** before you dig.

0 150 300

G:\2-0389\PLANNING\PLAN SHEETS\2-0389 DEVELOPMENT PLAN.DWG
PLOTTED BY ANDREW TARSI ON 4/17/2023 11:32 AM
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ANDREW TARSI REGISTERED LANDSCAPE ARCHITECT TENNESSEE No. 337 AGRICULTURE COMMERCE
04-17-23

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=150'

Date: MARCH 20, 2023

Approved By: A. TARSI

Revisions:

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Drawing Title:

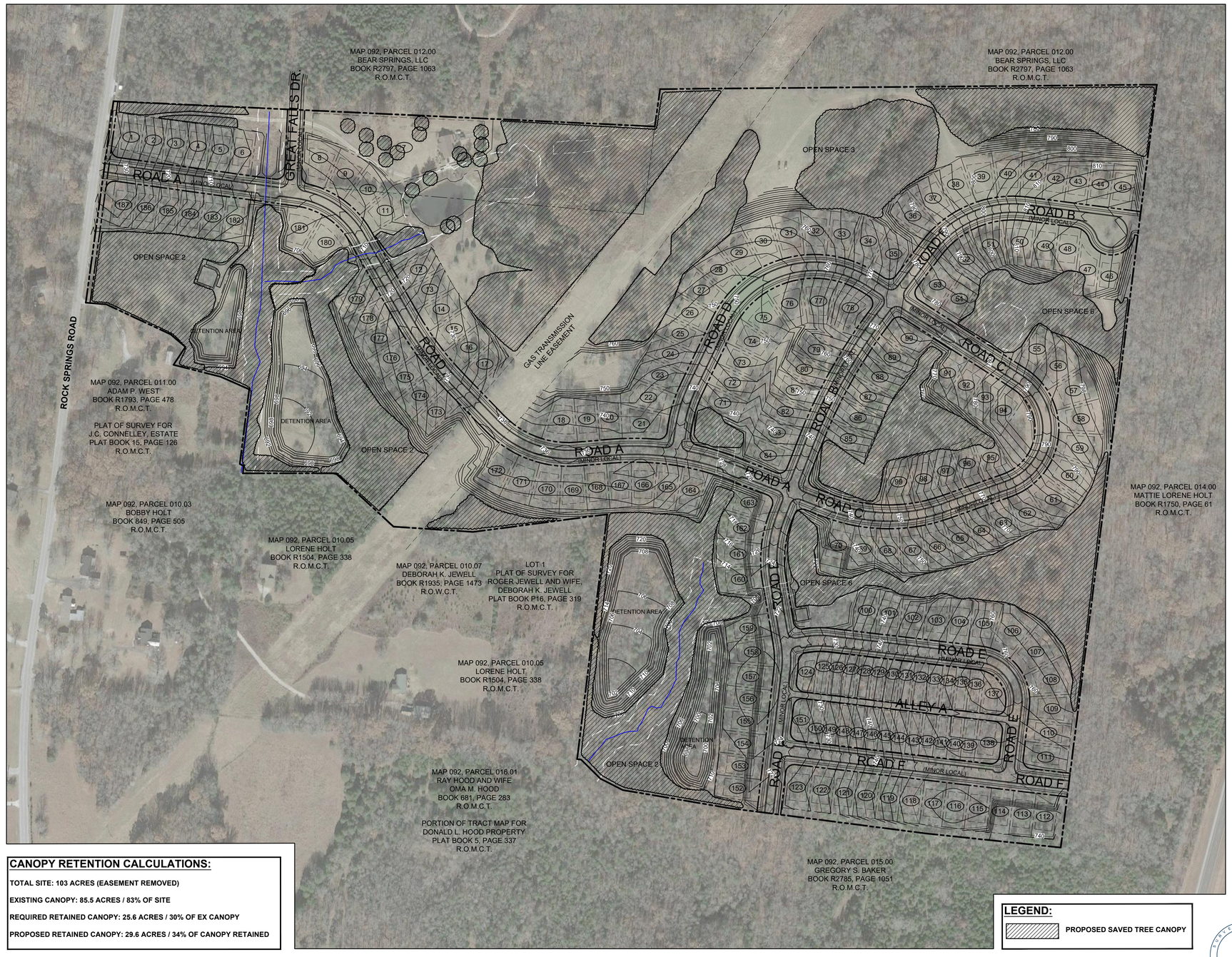
EXISTING CONDITIONS

Drawing No.

DP1.0

Project No.

21-0389



CANOPY RETENTION CALCULATIONS:

TOTAL SITE: 103 ACRES (EASEMENT REMOVED)

EXISTING CANOPY: 85.5 ACRES / 83% OF SITE

REQUIRED RETAINED CANOPY: 25.6 ACRES / 30% OF EX CANOPY

PROPOSED RETAINED CANOPY: 29.6 ACRES / 34% OF CANOPY RETAINED

LEGEND:

PROPOSED SAVED TREE CANOPY

Know what's below. Call before you dig.

0 150 300

G:\21-0389\1-PLANNING\2-PLAN SHEETS\21-0389 DEVELOPMENT PLAN.DWG
PLOTTED BY: ANDREW TARSI ON: 4/17/2023 11:59 AM
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ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=150'

Date: MARCH 20, 2023

Approved By: A. TARSI

Revisions:

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- - -
- - -
- - -
- - -

Drawing Title:

TREE PRESERVATION PLAN

Drawing No.

DP2.0

Project No.

21-0389

Green
An open area, available for unstructured recreation. A Green may be spatially defined by landscaping rather than Building Frontages. Its landscape shall consist of lawn and Trees, naturalistically disposed. The minimum size is 0.5 acre and the maximum is 8 acres.

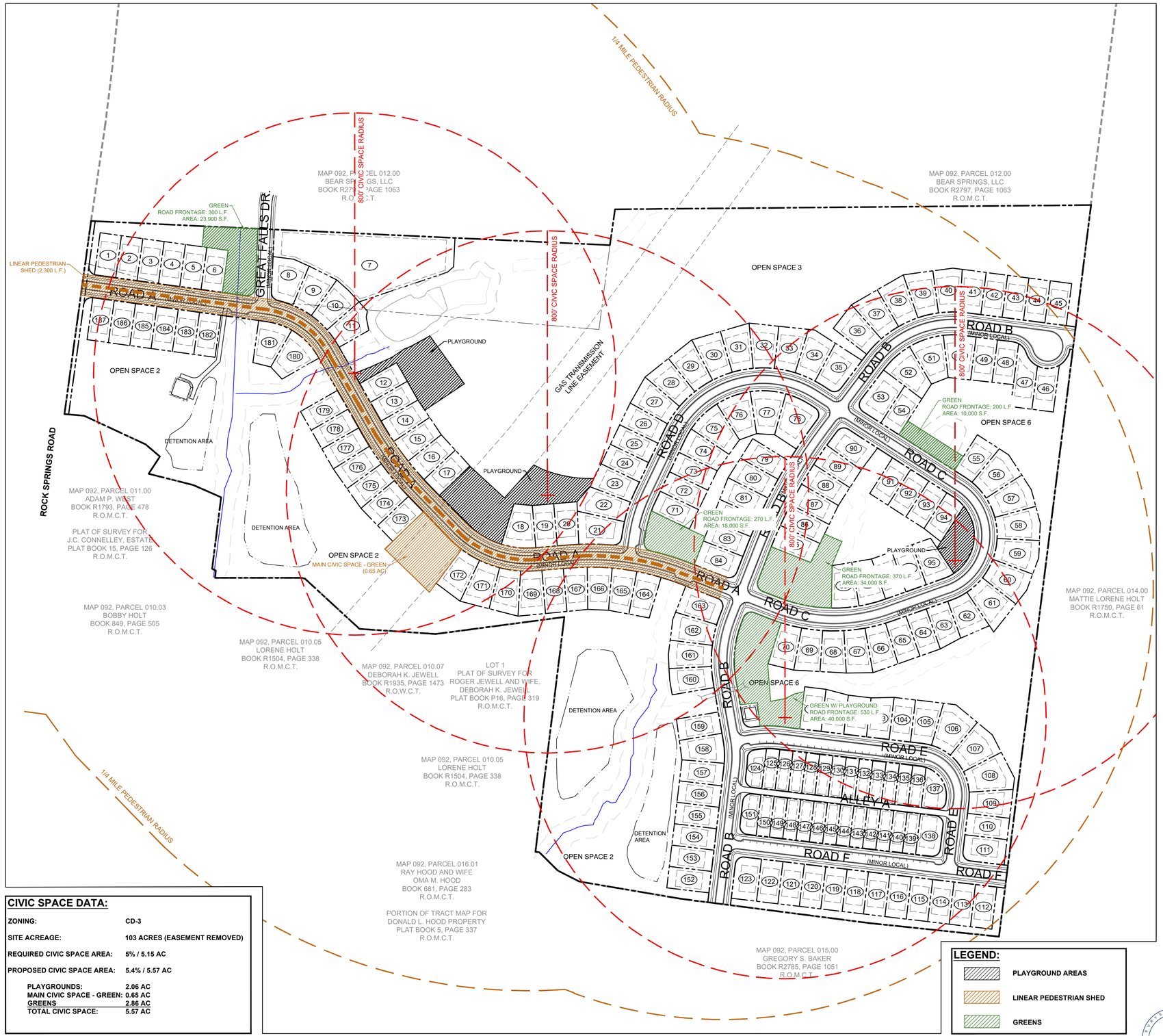


NOTE: GREENS WILL INCLUDE TYPICAL FEATURES. EXAMPLES OF TYPICAL FEATURES ARE AREAS OF PASSIVE AND ACTIVE RECREATION, PLAYGROUNDS AND PLAY STRUCTURES, PATHS AND TRAILS, AND ACCESSORY STRUCTURES. SPECIFIC TYPICAL FEATURES WILL BE DEFINED WITH THE CONSTRUCTION DOCUMENTS AND SHALL MEET THE MINIMUM REQUIREMENTS.

Playground
An open area designed and equipped for the recreation of children. A Playground may include an open shelter. Playgrounds shall be interspersed within Residential areas and may be placed within a Block. Playgrounds may be included within Natural Areas and Greens. There is no minimum or maximum size.



NOTE: PLAYGROUNDS WILL INCLUDE TYPICAL FEATURES. EXAMPLES OF TYPICAL FEATURES ARE AREAS OF ACTIVE RECREATION, PLAY STRUCTURES, PATHS, AND WATER FEATURES. SPECIFIC TYPICAL FEATURES WILL BE DEFINED WITH THE CONSTRUCTION DOCUMENTS AND SHALL MEET THE MINIMUM REQUIREMENTS.



CIVIC SPACE DATA:

ZONING:	**CD-3**
SITE ACREAGE:	**103 ACRES (EASEMENT REMOVED)**
REQUIRED CIVIC SPACE AREA:	**5% / 5.15 AC**
PROPOSED CIVIC SPACE AREA:	**5.4% / 5.57 AC**
PLAYGROUNDS:	**2.06 AC**
MAIN CIVIC SPACE - GREEN:	**0.65 AC**
GREENS	**2.86 AC**
TOTAL CIVIC SPACE:	**5.57 AC**

LEGEND:
- PLAYGROUND AREAS
- LINEAR PEDESTRIAN SHED
- GREENS

Know what's below. Call before you dig.

0 150 300

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ROCK SPRINGS
FOR
DEE PURSUIT, LLC
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

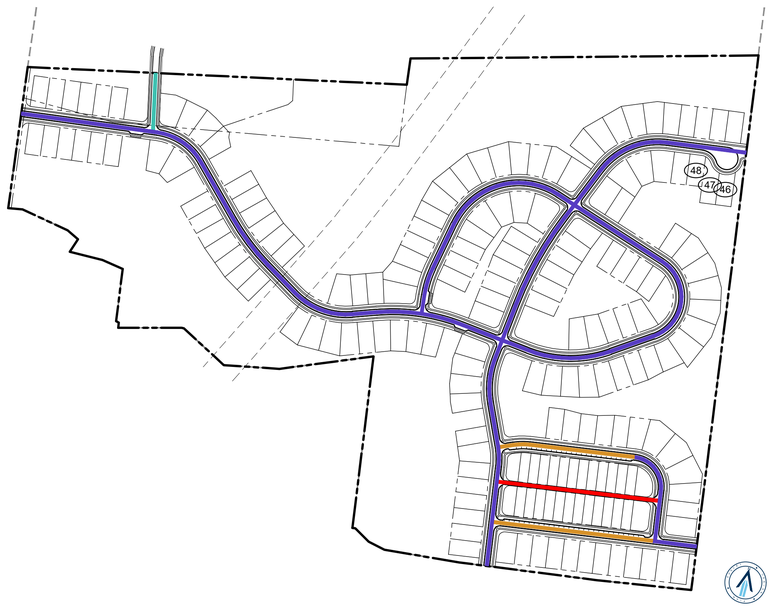
Scale: 1"=150'
Date: MARCH 20, 2023
Approved By: A. TARSI
Revisions:
1 2023.04.17 PER STAFF COMMENTS

Drawing Title:
PEDESTRIAN & CIVIC SPACE PLAN

Drawing No.
DP3.0

Project No.
21-0389

G:\21-0389\1-PLANNING\3-PLAN SHEETS\21-0389 DEVELOPMENT PLAN.DWG
PLOTTED BY: ANDREW TARSI ON: 4/17/2023 11:19 AM
LAST UPDATED BY: AYARA ON: 4/17/2023 11:28 AM



STREET SECTION KEY MAP
SCALE: 1"=300'

Shared Use Lane

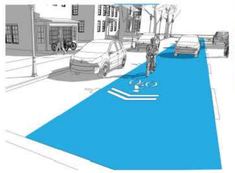


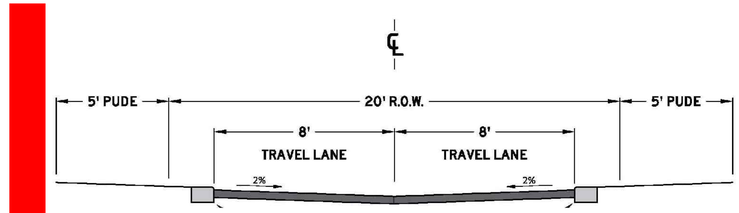
Illustration is provided for illustrative purposes only.

Permitted Districts

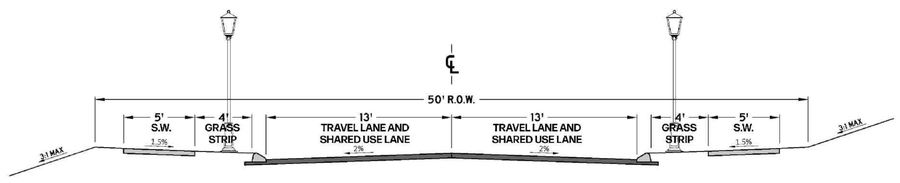
CD-2 | CD-3L | CD-3 | CD-4 | CD-4C | CD-5 | CD-5C | SD-inst | SD-LI | SD-HI | PUD-R | PUD-MU

Riding Surface Width	Same as Vehicular Lane
Buffer	N/A
Movement	With Traffic
Intersection Detailing	Signed, signalized
Bicycle Parking	Opportunistic, rack, Bicycle Shelter

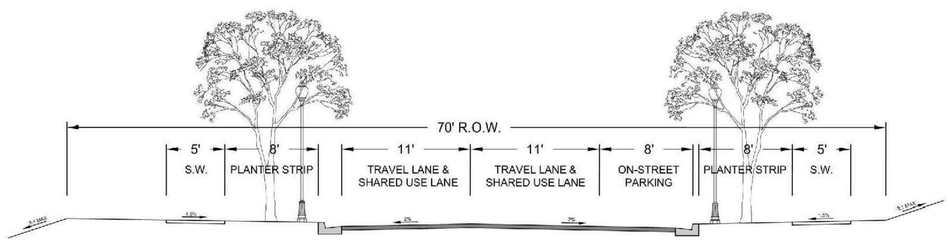
SHARED USE LANE DETAIL



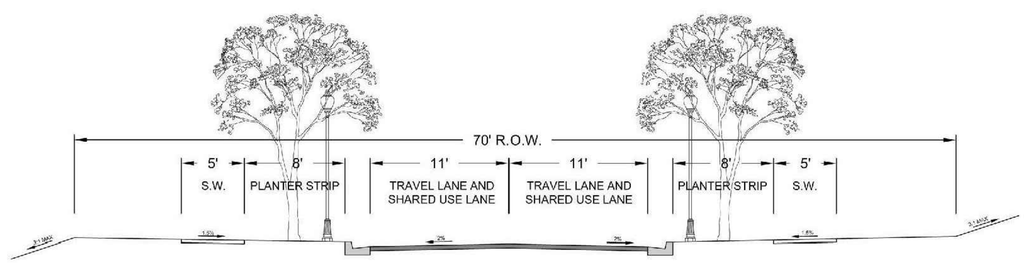
20' ALLEY SECTION
NOT TO SCALE



50' STREET SECTION
NOT TO SCALE



70' STREET SECTION WITH ON-STREET PARKING
NOT TO SCALE



70' STREET SECTION WITHOUT ON-STREET PARKING
NOT TO SCALE

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ANDREW TARSI REGISTERED LANDSCAPE ARCHITECT TENNESSEE No. 337 AGRICULTURE COMMERCE 04-17-23

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: NOT TO SCALE

Date: MARCH 20, 2023

Approved By: A. TARSI

Revisions:

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-	-	-
-	-	-
-	-	-
-	-	-
1	2023.04.17	PER STAFF COMMENTS

Drawing Title:

ROADWAY SECTIONS

Drawing No.

DP4.0

Project No.

21-0389

811 Know what's below. Call before you dig.

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RaganSmith

April 17, 2023

HAND DELIVERED

Ms. Sandra Richardson
City of Columbia
700 North Garden Street
Columbia, TN 38401

RE: ROCK SPRINGS
PRELIMINARY PLAT AND DEVELOPMENT PLAN
COLUMBIA, TN
RAGANSMITH#21-0389

Dear Ms. Richardson:

Enclosed please find 1 copy of the revised plans and a USB containing digital files for the above referenced project. In response to the comments dated April 11, 2023, we offer the following:

COMMENTS:

Planning

1. Show features that converts each civic space to the specified space and access.
   Response: Main civic space has been revised to provide adequate access. Civic space features will be shown on construction plans.

2. Existing house to remain??? Driveway is going through Lots 1 and 2.
   Response: The existing driveway will be removed/relocated to serve the existing home that will remain on Lot 7.

3. Road B, terminus?
   Response: The terminus of the cul de sac pavement has been rounded per Engineering comment.

4. Consult Table 5.3.3-B for Civic Space standards and revise accordingly. There is an 8-acre minimum area for Natural Areas (as noted on sheet P7.0). Civic Spaces are distinct from Open Space and should provide an amenity to residents. The size and location of Natural Areas should accommodate “Paths and trails...[etc].” The Site Development Plan should include sufficient notes or graphic detail for Planning Commission to confirm that the Civic Spaces conform to the standards of Section 5.3.3.
   Response: Revised civic spaces and corresponding tabulations are shown on Sheet DP3.0. A combination of playgrounds and greens have been proposed to meet 5.3.3-B. One green also includes a playground, meeting the playground requirement.

NASHVILLE
315 Woodland Street
P.O. Box 60070
Nashville, TN 37206
(615) 244-8591

MURFREESBORO
1500 Medical Center Parkway
Suite 2 J
Murfreesboro, TN 37129
(615) 546-6050

CHATTANOOGA
1410 Cowart Street
Suite 200
Chattanooga, TN 37408
(423) 490-9400

5. Please include a note on the indicating that lighting at all Building Site Lines will not exceed 1.0 foot candle and that on-site outdoor lighting will conform to the standards of 4.3.17.B (p.297) of the Zoning Ordinance (to be confirmed at building permit).
   Response: See General Note 10 on sheet P1.0.

6. Please revise notes relating to conformity with CD-3 standards to specifically reference Tables 4.3.1-C and 4.3.8.B and all other requirements of the Zoning Ordinance in effect at the time of Site Development Plan approval.
   Response:The CD-3 notes in the Site Data Table on sheet P1.0 have been revised to reference Tables 4.3.1-C and 4.3.8B and all other requirements of the Zoning Ordinance in effect at the time of Site Development Plan approval.

7. It may be helpful to provide sheets P5.0 – P8.0, as well as notes related to the requirements of the Zoning Ordinance, as a separate Site Development Plan.
   Response: Understood. Please see sheets that are now titled Development Plan or DP1.0.

8. The site exceeds 80 acres in size. Please add indicate bikeway type appropriate for CD-3 as described at 5.2.4.B of the Zoning Ordinance (p. 322-325).
   Response: In accordance with 5.2.4.B, a shared use lane is being proposed and is shown on Sheet DP4.0.

9. Please revise Natural Areas so that at least 50% of perimeter enfronts a thoroughfare.
   Response: Understood. Please see revised Sheet DP3.0 for Natural Areas.

Engineering

10. Subject to construction plans and TIS
    Response: We recognize this as an informational comment.

11. Note: generally, lots not suitable for slab on grade foundations. Elevated slabs, crawlspaces, or basements required for the majority of the lots shown. Generally 2.5 feet of grade difference between adjacent grades at foundations on side lot lines is the maximum difference. See ESS detail DD-04.
    Response: Additional grading detail will be shown on the construction drawings, which will include lot line swales, ditches, etc. Lot grading notes will be on the plan also.

12. Buffers located within a subdivision shall be located on a common or open space lot and within a PDE, PUDE, or PUDAE, or within a City right-of-way.
    Response: The stream buffers are located in open space lots that are designated as public utility and drainage easements.

13. Buffer encroaches within lot 7, 11.
    Response: Lot 7 and 11 have been revised so the buffer falls entirely within open space and not on the lots.

14. Hydrological determination will be required for the site, submitted with construction plans.
    Response: We recognize this as an informational comment.

15. Provisions should be made with wastewater to construct future sanitary lines to southern adjoining property lines to provide consolidation of services and potential future removal of pump station(s).
    Response: Coordination will be done with the development to the north to minimize sewer pump stations for the area.

16. OHE shown along Road A to lot 7 shall be relocated underground or abandoned.
    Response: A note has been added to the plans referencing the overhead power lines to be removed/relocated.

17. Verification from gas company will be required with construction plans for grading and construction within the easement.
    Response: We recognize this as an informational comment.

18. Culdesac at end of road B should be constructed with the terminus rounded and ROW stubbing to the property line.
    Response: The cul de sac has been revised to show a rounded terminus and the right of way stubbing to the property line.

Fire

19. Need to get a water availability letter from Columbia Power & Water Systems, if you already have one, please upload it to this permit.
    Response: A copy of the availability letter is included with this submittal.

Maury County Schools

20. Current Zones and Capacity: Howell Elementary School (91%), Cox Middle School (73%), Central High School (84%). 1) No residence is guaranteed zone to a specific school. 2) All zones are subject to change yearly. 3) No concerns with neighborhood design.
    Response: We recognize this as an informational comment.

Police

21. No comments provided.

Building

22. No comments.

Columbia Power

23. Columbia Power System does not have an existing power line near your proposed development and is not the service provider. DREMC will be the service provider for this area.
    Response: We recognize this as an informational comment.

Atmos Energy

24. Natural Gas Available on Bear Creek Pike.
    Response: We recognize this as an informational comment.

Public Works

25. No comments.

Duck River Electric Membership Corp

26. Once all requir4ements are met, we plan to serve. Need site plans, electrical layout, and subdivision requirements sent in to cisley@dremc.com and thooper@dremc.com
    Special note: Keep in mind the supply chain issues may affect the timeline in which we will be able to provide materials.
    Response: We recognize this as an informational comment.

Columbia Water

27. "A Water Availability Letter was recently issued. 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 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: We recognize this as an informational comment.

Maury County E911

28. Contact Maury County 911 for subdivision and street name request. cgideon@maury911.org.
    Response: We are working with Maury County 911 to obtain subdivision and street name approval. Names have been submitted for review.

Wastewater

29. Columbia Wastewater has no concerns.
    Response: We recognize this as an informational comment.

ATT

30. ATT intends to serve.
    Response: We recognize this as an informational comment.

Maury County Highway Dept.

31. No comments provided.

Maury County Water System

32. The above mentioned development is in Maury County Water System's service territory. MCWS intends to provide water service to this development.
    Response: Further conversations are needed between the developer, Maury Co. Water, and Columbia Water.

33. In order to issue a Letter of Water Availability for the development, a Review Application must be submitted to MCWS by the developer/owner of the property.
    Response: Further conversations are needed between the developer, Maury Co. Water, and Columbia Water.

Please call should you have any questions.

Sincerely,

RAGAN-SMITH-ASSOCIATES, INC.

Chris Mabery, RLS
Survey Project Manager

Jake Vincent, P.E.
Senior Associate

CM/JV:ar

CITY OF COLUMBIA
TENNESSEE

ITEM # 2

DEVELOPMENT REVIEW COMMITTEE COMMENT FORM

April 11, 2023

NAME OR DEPARTMENT: _____

Case Number: 23-0094

Request from Jacob Vincent for preliminary plat and development plan approval of Rock Springs consisting of four phases and 187 lots at Tax Map 92 Parcels 11.01 and 11.02.

COMMENTS:

Once all requirements are met, we plan to serve. Need site plans, electrical layout, and subdivision requirements sent in to cisley@dremc.com and thooper@dremc.com.

Special note: Keep in mind the supply chain issues may affect the timeline in which we will be able to provide materials.

CITY OF COLUMBIA
TENNESSEE

ITEM # 2

DEVELOPMENT REVIEW COMMITTEE COMMENT FORM

April 11, 2023

NAME OR DEPARTMENT: Maury County 911

Case Number: 23-0094

Request from Jacob Vincent for preliminary plat and development plan approval of Rock Springs consisting of four phases and 187 lots at Tax Map 92 Parcels 11.01 and 11.02.

COMMENTS:

Contact Maury County 911 for Subdivison + Street name request.

Cgideon@maury911.org

CITY OF COLUMBIA
TENNESSEE

ITEM # 2

DEVELOPMENT REVIEW COMMITTEE COMMENT FORM

April 11, 2023

NAME OR DEPARTMENT: Wastewater

Case Number: 23-0094

Request from Jacob Vincent for preliminary plat and development plan approval of Rock Springs consisting of four phases and 187 lots at Tax Map 92 Parcels 11.01 and 11.02.

COMMENTS:

Columbia Wastewater has no concerns.

2
23-0094

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

April 5, 2023

Ragan Smith
Jacob Vincent
315 Woodland St.
Nashville, TN

Re: Rock Springs Rd., Tax Map 92 Parcels 11.01 and 11.02

Dear Sir:

Columbia Power System does not have an existing power line near your proposed development and is not the service provider. DREMC will be the service provider for this area.

- **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

Ryan Massey,
Vice President of Power Operations

kw

CITY OF COLUMBIA
TENNESSEE

ITEM # 2

DEVELOPMENT REVIEW COMMITTEE COMMENT FORM

April 11, 2023

NAME OR DEPARTMENT: Maury County Public Schools

Case Number: 23-0094

Request from Jacob Vincent for preliminary plat and development plan approval of Rock Springs consisting of four phases and 187 lots at Tax Map 92 Parcels 11.01 and 11.02.

COMMENTS:

Current Zones and Capacity: Howell Elementary School (91%), Cox Middle School (73%), Central High School (84%).

1) **No residence is guaranteed zone to a specific school.**
2) **All zones are subject to change yearly.**
3) **No concerns with neighborhood design.**

CITY OF COLUMBIA
TENNESSEE

ITEM # 2

DEVELOPMENT REVIEW COMMITTEE COMMENT FORM

April 11, 2023

NAME OR DEPARTMENT:
ATT

Case Number: 23-0094

Request from Jacob Vincent for preliminary plat and development plan approval of Rock Springs consisting of four phases and 187 lots at Tax Map 92 Parcels 11.01 and 11.02.

COMMENTS: ATT INTENDS TO SERVE

CITY OF COLUMBIA
TENNESSEE

ITEM # 2

DEVELOPMENT REVIEW COMMITTEE COMMENT FORM

April 11, 2023

NAME OR DEPARTMENT: Atmos Energy

Case Number: 23-0094

Request from Jacob Vincent for preliminary plat and development plan approval of Rock Springs consisting of four phases and 187 lots at Tax Map 92 Parcels 11.01 and 11.02.

COMMENTS:

Natural Gas Available on Bear Creek Pike

CITY OF COLUMBIA
TENNESSEE

ITEM # 2

DEVELOPMENT REVIEW COMMITTEE COMMENT FORM

April 11, 2023

NAME OR DEPARTMENT: Maury Co. Water System

Case Number: 23-0094

Request from Jacob Vincent for preliminary plat and development plan approval of Rock Springs consisting of four phases and 187 lots at Tax Map 92 Parcels 11.01 and 11.02.

COMMENTS:

The above mentioned development is in Maury County Water System's service territory. MCWS intends to provide water service to this development.

In order to issue a Letter of Water Availability for the development, a Review Application must be submitted to MCWS by the develper/owner of the property.

CITY OF COLUMBIA

TENNESSEE

ITEM # 2

DEVELOPMENT REVIEW COMMITTEE COMMENT FORM

April 11, 2023

NAME OR DEPARTMENT: CPWS Broadband

Case Number: 23-0094

Request from Jacob Vincent for preliminary plat and development plan approval of Rock Springs consisting of four phases and 187 lots at Tax Map 92 Parcels 11.01 and 11.02.

COMMENTS: Plan to Serve

Sandra Richardson

From: Mike Harris <mike.harris@inflodesign.com>
Sent: Wednesday, April 12, 2023 1:29 PM
To: Melissa Sanders; Sandra Richardson
Cc: Eric King; Jason English; Bart Anderson; Shane Andrews; Darrin Hall; Jermaine Cooper; Bridgett Griggs; Jonathan Hardin; Barney Fullington
Subject: [External Email] - Development Committee CPWS Water Comments

Sandra and Melissa,

See CPWS Water Comments below for the April Development Committee Meeting. Please let us know if you have any questions!

23-0093 - Request from Susan Stephenson for approval to rezone multiple properties within Carriage Hills Subdivison located off Carters Creek Pike from CD-3 (Neighborhood Character District) to CD-3L (Neighborhood Large Lot Character District).

"No comments"

23-0094 - Request from Jacob Vincent for preliminary plat and development plan approval of Rock Springs consisting of four phases and 187 lots at Tax Map 92 Parcels 11.01 and 11.02.

"A Water Availability Letter was recently issued. 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 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."

23-0095 - Request from TKC Architect and Engineering for final plat and surety approval of Williamsport Pike Townhomes Phase 1 consisting of 91 units off Williamsport Pike and Twin Lakes Drive.

"Complete water system infrastructure per approved plans, complete pressure and bacterial test, deed infrastructure to CPWS."

23-0096 - Request from T-Square Engineering for final plat and surety approval of Quail Run Meadows Phase 3 consisting of 34 lots off Quail Run Way.

"Complete remaining water system infrastructure per approved plans, perform bacteria testing and deed infrastructure to CPWS"

23-0097 - Request from Adam Crunk for preliminary and final plat approval for Honey Farm Crossings being a six lot subdivision at Nashville Highway and Honey Farm Way.

"No comments."

23-0099 - Request from WES Engineers & Surveyors for preliminary plat approval at 1009 Woodland Street consisting of four lots.

CITY OF COLUMBIA
TENNESSEE

WASTEWATER DEPARTMENT

2 March 2023

Cliff Smith
213 Overlook Circle, Suite B2
Brentwood, TN 37027

RE: Rock Springs Rd

Cliff,

This letter serves as confirmation that the City of Columbia Wastewater Department has the available capacity to service the above-referenced development. Major or minor improvements to existing infrastructure may or may not be necessary to satisfactorily convey the additional sanitary sewer flow from the above-referenced proposed 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. Grinder Pump systems are not allowed by the City of Columbia. 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. 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

Columbia Fire & Rescue

Fire Flow Requirements

Water Purveyor: Columbia Power & Water System

Date: 3.6.23
Name: Cliff Smith
Phone: 615.477.3186
Email: cliff.smith@cpsland.com
Address/Parcel ID: 1479 Rock Springs Road 092 011.01 and 092-011.02
Property Type: (•) Residential ( ) Commercial ( ) Industrial
Construction Type: stick
Enclosed Area (ft^2): 1500 - 2500 sf.

FILLED OUT BY COLUMBIA FIRE AND RESCUE

NFPA Sprinkler Type: 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

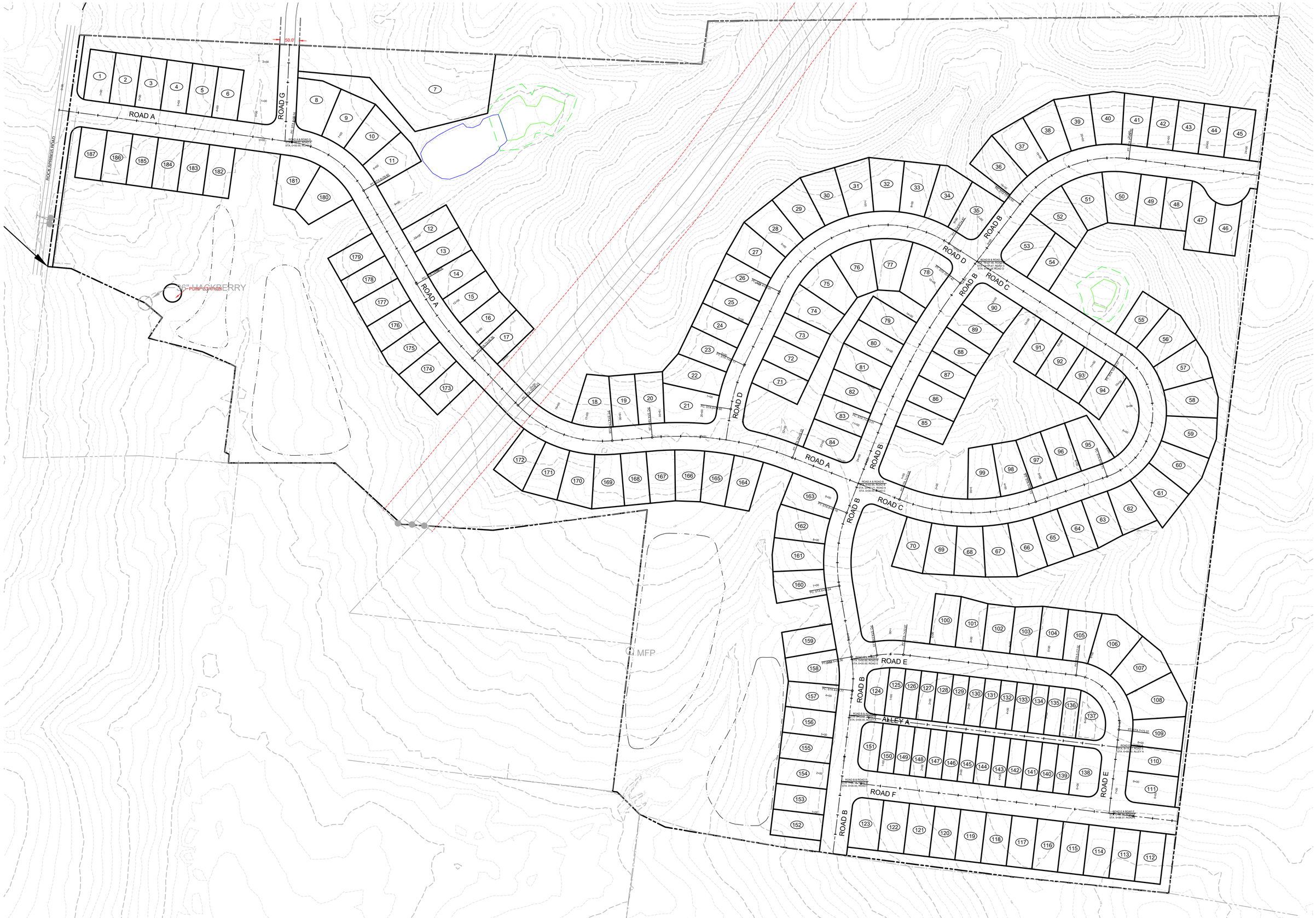
Fire Hydrant Location and Distribution (International Fire Code Appendix C)

Minimum number of hydrants: 1

Average spacing between hydrants: 500 ft.

Maximum distance from frontage to hydrant: 250 ft.

Fire Plan Reviewer: Sarah Glover, Asst Fire Marshal Date: 3/7/23


ROCK SPRINGS ROAD
ROAD A
ROAD G
ROAD B
ROAD C
ROAD D
ROAD E
ROAD F
ALLEY A
ROAD A & ROAD G
PC: STA 0+00.00, ROAD A
STA: 0+00.00, ROAD G
ROAD A & ROAD B
PC: STA 0+00.00, ROAD B
STA: 0+00.00, ROAD A
ROAD B & ROAD C
PC: STA 0+00.00, ROAD C
STA: 0+00.00, ROAD B
ROAD B & ROAD D
PC: STA 0+00.00, ROAD D
STA: 0+00.00, ROAD B
ROAD B & ROAD E
PC: STA 0+00.00, ROAD E
STA: 0+00.00, ROAD B
ROAD B & ROAD F
PC: STA 0+00.00, ROAD F
STA: 0+00.00, ROAD B
ROAD E & ALLEY A
PC: STA 0+00.00, ALLEY A
STA: 0+00.00, ROAD E
ROAD E & ROAD F
PC: STA 0+00.00, ROAD F
STA: 0+00.00, ROAD E
ROAD A & ROAD B
PC: STA 0+00.00, ROAD B
STA: 0+00.00, ROAD A
ROAD B & ROAD C
PC: STA 0+00.00, ROAD C
STA: 0+00.00, ROAD B
ROAD B & ROAD D
PC: STA 0+00.00, ROAD D
STA: 0+00.00, ROAD B
ROAD B & ROAD E
PC: STA 0+00.00, ROAD E
STA: 0+00.00, ROAD B
ROAD B & ROAD F
PC: STA 0+00.00, ROAD F
STA: 0+00.00, ROAD B
ROAD E & ALLEY A
PC: STA 0+00.00, ALLEY A
STA: 0+00.00, ROAD E
ROAD E & ROAD F
PC: STA 0+00.00, ROAD F
STA: 0+00.00, ROAD E
36" PINE
36" HACKBERRY
MFP

December 22, 2022

To Whom It May Concern:

The letter serves as confirmation that Duck River Electric Membership Corporation (DREMC) will be the local power provider for the Rock Spring subdivision. Distribution power will be provided in accordance with all DREMC service policies, rules and regulations, and cooperative bylaws as regulated by the Tennessee Valley Authority

Sincerely,

Billy Tiller

Billy Tiller
Vice President of Engineering
DREMC

1411 Madison Street | PO Box 89 | Shelbyville, TN 37162 | 931.684.4621

This instrument prepared by
Hugh W. Entrekin
TUNE, ENTREKIN & WHITE
Suite 1700, AmSouth Center
315 Deaderick St.
Nashville, Tennessee 37238-1700

DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS FOR ROCK SPRINGS

THIS DECLARATION of Covenants, Conditions and Restrictions (hereinafter referred to as "Declaration") made and published on or as of the date hereinafter set forth, by and between **ROCK SPRINGS INVESTMENT PARTNERS** (hereinafter referred to as "Developer"), and any and all persons, firms, corporations or other entities, hereafter acquiring any of the within described property.

W I T N E S S E T H:

WHEREAS, the Developer is the owner of certain real property located in Davidson County and Williamson County, Tennessee, and desires to create thereon, a residential development known as **ROCK SPRINGS**, more particularly described on Exhibit A attached hereto (the "Development" or “Subdivision”) for the mutual benefit of the future residents of the Development; and

WHEREAS, it is in the best interest of the Developer, as well as to the 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; and

WHEREAS, the Developer desires to provide for the preservation of the values and amenities and the desirability and attractiveness of the real property in the Development, and for the continued maintenance and operation of any common areas; and

WHEREAS, the Developer has deemed it desirable, for the efficient preservation of the values and amenities in the Development, and to fulfill the foregoing objects, purposes and requirements, to create an entity to which should be delegated and assigned the powers of maintaining any common areas, managing the affairs of the residential development, administering and enforcing the covenants and restrictions, and collecting and disbursing any necessary assessments and charges hereinafter created;

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and

WHEREAS, the Developer 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 within the Development for the purpose of exercising the aforementioned functions.

NOW, THEREFORE, for and in consideration of the foregoing premises, and the terms, conditions and restrictions hereinafter set forth, the Developer declares that the real property hereinafter described is and shall be held, transferred, sold, conveyed and occupied subject to the following restrictions, covenants, conditions, easements, assessments and liens all of which are to be construed as covenants running with the land and which shall be binding on all parties having or acquiring any right, title or interest in the hereafter described property or any part thereof and which shall inure to the benefit of each owner thereof. Every person or other party hereafter acquiring any of the within described property made subject to this Declaration, by acceptance of a deed to any interest in or to said property, shall take such property interest subject to this Declaration and to the terms and conditions hereof, and shall be deemed to have agreed to the same.

ARTICLE I
DEFINITIONS

The following words, when used herein, shall have the following meanings:

Section 1. The "Association" shall mean **Rock Springs Homeowners Association**, **Inc.** a Tennessee not-for-profit corporation, its successors and assigns organized by the Developer for the purpose of owning and maintaining the Common Area and which has as its members every Lot Owner subject to assessment as hereinafter provided. The By-Laws of the Association are attached hereto as Exhibit B and are incorporated herein by reference. The By-Laws may be amended from time to time as provided for therein.

Section 2. “Builder” shall mean and refer to any person who is in the business of constructing single family residences and who acquires any Lot(s) in the Subdivision for the purpose of constructing a single family residence thereon for sale to a third party customer of the Builder.

Section 3. "Common Area or Common Areas" shall mean and refer to any and all real property owned by the Association, and such other property to which the Association may hold legal title, whether in fee or for a term of years, for the non-exclusive use, benefit and enjoyment of the members of the Association, subject to the provisions hereof, and such other property as shall become the responsibility of the Association, through easements or otherwise, including any recreational areas, which may be constructed initially by the Developer whether thereafter by the Association. Common

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Areas with respect to the property made subject to this Declaration, whether at the time of filing of this Declaration or subsequently by Supplemental Declarations shall be shown on the plat(s) for Rock Springs and designated thereon as “Common Areas” or “Open Space.”

Section 4. "Declaration" shall mean this instrument, as the same may be amended and/or supplemented from time to time as provided for herein.

Section 5. "Developer" shall mean ROCK SPRINGS DEVELOPMENT, LLC its successors, representatives and assigns, provided such assigns are designated in writing by the Developer as an assignee of the rights of the Developer as set forth herein.

Section 6. "House" shall mean and refer to a building situated upon any Lot designated and intended for use and occupancy as a residence by a single family.

Section 7 "**Lot**” shall mean any lot shown on any recorded Plat(s) of the Property and shall not include any dedicated streets and roadways; and the term “Lot” shall also mean and refer to every “**Unit**,” which shall mean and refer to any individually numbered portion of any building, designed and built for use and occupancy as a single family residence and intended for independent ownership, which is not owned in common with any other Unit Owner as to be created and further described in the DECLARATION OF PROTECTIVE COVENANTS, CONDITIONS AND RESTRICTIONS FOR ROCK SPRINGS TOWNHOMES, a Horizontal Property Regime with Private Elements.

Section 8. "Supplemental Maintenance Lot" shall mean any lot with a general configuration as shown on Exhibit C attached hereto.

Section 9 “Lot Owner” shall mean and refer to the record owner, whether one or more Persons, of the fee interest in any Lot, excluding, however, those parties holding such interest merely as security for the performance of an obligation; and with regard to the Original Declaration “Lot Owner” shall also mean and refer to every “Unit Owner,” which shall mean and refer to the Person(s) whose estates or interests, individually or collectively, aggregate fee simple ownership of a Unit, its Private Elements, the Limited Common Elements appurtenant thereto and of the undivided percentage of ownership interest in the Common Elements as to be created and further described in the DECLARATION OF PROTECTIVE COVENANTS, CONDITIONS AND RESTRICTIONS FOR ROCK SPRINGS TOWNHOMES, a Horizontal Property Regime with Private Elements. “Unit Owner” shall not mean the mortgagee or beneficiary of a recorded Mortgage or deed of trust who holds a lien solely for security purposes and does not have possession of the Unit.

Section 10. "Master Plan" shall mean and refer to the Master Plan which plan has

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been given preliminary approval by the Davidson County, Metropolitan Planning Commission and the Williamson County Planning Commission for the development of the Subdivision on the Property. Developer reserves the right to amend the Master Plan at any time as well as any amendments thereof and such rights shall include without limitation the right to reconfigure Lots, increasing or decreasing the number of different Lot types, and adding or removing property from the Subdivision.

Section 11.
"Occupant" shall mean or refer to any Person or Persons in possession of a Lot or Unit other than the Lot Owner or Unit Owner.

Section 12. "Person" shall mean or refer to a natural person, as well as a corporation, partnership, firm, association, trust, or other legal entity.

Section 13. "Plat(s)" shall mean and refer to the plat(s) for Rock Springs to be recorded in the Davidson County and Williamson County Register of Deeds Office subdividing the Property into Lots and reflecting thereon the public streets, Common Areas, and utility easements and other matters normally shown on subdivision plats. The Property shall be platted in two or more phases.

Section 14. "Property" shall mean the real property submitted to this Declaration and described on Exhibit A attached hereto and incorporated herein by reference. The Property shall not include any public streets and roadways shown on the Plat. As provided in this Declaration, the Developer shall have the right to subject certain additional real property to the terms of this Declaration and in such event such additional property shall be deemed to be included within the definition of "Property."

Section 15. "Subdivision" shall mean and refer to the Rock Springs Subdivision to be platted on the Property.

Section 16. "Alley Loaded Lots" shall mean and refer to those Lots in the Subdivision having a garage that is accessed on, over and through an alley and said Lots shall have an average width of approximately forty (40) feet.

Section 17. "65 Foot Lots" shall mean and refer to Lots in the Subdivision having an average width of approximately Sixty-Five (65) feet.

Section 18. "66 Foot Lots" shall mean and refer to Lots located in the Subdivision having an average width of approximately sixty-six (66) feet.

Section 19. "75 Foot Lots" shall mean and refer to Lots in the Subdivision having an average width of approximately seventy-five (75) feet.

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Section 21. "Architectural Review Committee" shall mean and refer to that committee formed and operated in the manner described in Article IV hereof.

Section 22. "Design Standards" shall mean that document created by the Architectural Review Committee that shall describe the standards required for the architectural and landscape design of all houses.

Section 23. "Lawn Art" shall mean and refer to improvements made upon the Lot(s) in the Subdivision and shall include rock walls, gardens, trails, pathways, flower beds, plant material containers, ornamental statues, fountains, decorative flags, bird baths, bird houses and other items which may be included in the general definition of this term.

ARTICLE II
MEMBERSHIP AND VOTING RIGHTS

Section 1. Every Lot Owner who is subject to assessment by the Association as hereinafter provided shall be a member of the Association. Membership shall be appurtenant to, and may not be separated from, ownership of any Lot which is subject to assessment. When any Lot is owned of record in joint tenancy, tenancy in common, tenancy by the entirety, or by some other legal entity, their membership as to such Lot shall be joint and the rights of such membership (including the voting power arising therefrom) shall be exercised as specified herein. A corporate member's vote shall be cast by the president of the member corporation or by any other officer or proxy appointed by the president or designated by the Board of Directors of such corporation. When two or more persons hold an interest in any Lot as owners thereof, all such persons shall be members. The vote for such Lot shall be exercised by one of such persons as proxy or nominee for all persons holding an interest as owners in the Lot and in no event shall more than one vote be cast with respect to any Lot, except as provided above with respect to Developer. If joint owners are unable to specify by their majority vote how their vote shall be cast, then no vote shall be cast with respect to such Lot.

Section 2. The Association shall have two classes of voting membership:

Class A. Class A members shall be all Lot Owners, with the exception of the Developer or its assignees as hereinafter provided, and shall be entitled to one vote for each Lot owned. When more than one person holds an interest in any Lot, all such persons shall be members. The vote for such Lot shall be exercised as they determine, but in no event shall more than one vote be cast with respect to any Lot.

Class B. The Class B member shall be the Developer and any assignee of

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the Developer to whom such rights have been assigned in writing. The Class B member shall be entitled to four (4) votes for each Lot owned. For voting purposes, any and all Lots shown on the Master Plan but not yet platted shall also be counted as Lots owned by the Developer or its assignee and the Owner of any such unplatted Lots shall be entitled to four (4) votes for each Lot owned prior to the termination of the Class B Membership and one vote for each such unplatted Lot thereafter.

The Class B memberships shall continue until the earlier of (i) one year after 75% of the total Lots shown on the Master Plan have been sold by the Developer, (ii) ten (10) years from the latter of the date hereof or the date of the last supplement to this Declaration, or (iii) the Developer's election by notice to the Association to relinquish such additional voting rights (hereinafter referred to as the "Transfer of Control") after which time the Class B membership interest shall terminate and Developer shall have only one vote for each Lot that it owns.

Section 3. Transfer of Control. When more than seventy-five percent (75%) of the Lots within the Subdivision have been sold to a Lot Owner who will occupy the Lot as such Lot Owner's residence, a special meeting of the Association shall be called within sixty (60) days to initiate an orderly process for the initial meeting of the Members and ultimately for the Transfer of Control.

Section 4. First Meeting of Members. The first regular annual meeting of the Members may be held, subject to the terms hereof, on any date, 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 months after all of the Lots have been sold by the Developer, or (b) three years following conveyance of the first Lot by the Developer.

Section 5. Acceptance of Development. By acceptance of a deed to a Lot, any purchaser of a Lot shall be deemed to have accepted and approved the entire plans for the Rock Springs Subdivision Development, and all improvements constructed by that date, including, without limitation, the utilities, drains, roads, sewers, landscaping, Common Area amenities, and all other improvements as designated on the plat and as may be supplemented by additional plats upon completion of development of any portion of the Subdivision. Such purchaser agrees that all improvements constructed after the date of purchase consistent with such plans, and at the same quality of then existing improvements, shall be accepted.

ARTICLE III
COVENANT FOR ASSESSMENTS FOR THE ASSOCIATION

Section 1. Creation of the Lien and Personal Obligation of Assessments. All Lot

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Owners by acceptance of a deed for any Lot, whether or not it shall be so expressed in such deed, is deemed to covenant and agrees to pay to the Association: (1) annual assessments or charges, (2) supplemental assessments or charges, (3) special assessments for capital improvements, such assessments to be established and collected as hereinafter provided, and (4) any other amounts properly assessed against a Lot Owner by the Association, including fines, late fees or any other amounts. The annual, supplemental and special assessments and any other amounts properly charged to a Lot Owner by the Association, together with interest, costs, and reasonable attorney's fees as hereinafter provided, shall be a charge on the Lot and shall be a continuing lien upon the Lot against which each assessment is made from the date when due until the same is paid in full or otherwise discharged. Each such assessment, together with interest, costs, and reasonable attorney's fees, shall also be the personal obligation of the person who was the Lot Owner at the time when the assessment fell due. The personal obligation for delinquent assessments shall not pass to successors in title of said person unless expressly assumed by them.

Section 2. Purpose of Assessments. The assessments levied by the Association shall be used exclusively to promote the recreation, health, safety, and welfare of the Lot Owners, to provide for the maintenance of the Common Area, to provide for the maintenance of Supplemental Maintenance Lots, to pay the fees of any management agent the Association may employ to manage the affairs of the Association, and to pay other reasonable and necessary expenses of the Association including the repayment of any loans or advances from the Developer. An adequate reserve fund for the maintenance, repair, and replacement of items maintained by the Association pursuant to this section shall be established and funded by regular monthly payments.

Section 3. Annual Assessment.

Annual Assessment. The Board of Directors shall establish the amount of the annual assessment for each calendar year and shall set the time and manner by which the annual assessment shall be paid. Until otherwise set by the Board of Directors, the annual assessments shall be payable in quarterly installments due on the first day of each quarter.

Section 4. Supplemental Assessments For Supplemental Maintenance Lots. In addition to the annual assessments authorized in Article III, Section 3 above, the Association may levy supplemental assessments for Supplemental Maintenance Lot Owners.

(a) The supplemental dues for Supplemental Maintenance Lot Owners shall be established by the Board of Directors and payable in quarterly installments on the first day of each quarter.

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(b) The Association shall assess the supplemental assessments for Supplemental Maintenance Lot Owners to cover the cost of Lot maintenance of those Supplemental Maintenance Lots and other maintenance as may exceed the type and scope of maintenance of the rest of Rock Springs, and any additional administrative costs incurred by the Association as a result of its maintenance and oversight activities on behalf of the Supplemental Maintenance Lot Owners. The Association may promulgate Rules and Regulations applicable only to the Supplemental Maintenance Lots. The Owners of the Supplemental Maintenance Lots may elect a subcommittee (the "Supplemental Maintenance Lot Subcommittee") of the Board of the Association that shall report to and be under the authority of the Board of the Association. The Supplemental Maintenance Lot Subcommittee shall be an advisory committee to the Board concerning matters affecting Owners of Supplemental Maintenance Lots, but the Board shall have final authority over all matters of the Association including matters affecting the Owners of Supplemental Maintenance Lots. All Supplemental Maintenance Lot Owners shall have full access to all amenities and Common Areas in Rock Springs and shall pay regular annual assessments to the Association in the same amount as other Owners in Rock Springs and shall also pay the supplemental assessments for Supplemental Maintenance Lot Owners applicable only to Supplemental Maintenance Lot Owners.

Section 5. Special Assessments for Capital Improvements

In addition to the annual assessments authorized in Article III, Section 3 above and the supplemental assessments authorized in Article III, Section IV above, the Association may levy, in any assessment year, a special assessment to pay in whole or in part, the cost of any construction, reconstruction, repair or replacement of a capital improvement upon the Common Area, including fixtures and personal property, if any, related thereto, provided that any such assessment shall have the assent of at least two-thirds (2/3rds) of the votes entitled to be cast by the Association members who are voting in person or by proxy at a meeting duly called for this purpose.

Section 6. Working Capital Fund. Each Owner of a completed residence in the Subdivision shall pay a working capital fund assessment of Three Hundred Fifty Dollars ($350.00) to the Association at the closing of the sale of a completed residence to the initial Owner of such residence and such Owner shall also pay at the initial closing of the sale of such residence a management set up fee in an amount to be set from time to time by the management company for the Board of Directors, with such fee to be paid to the management company for the Association or as otherwise may be directed by the Association. Pending the Transfer of Control, to the extent that the Association is unable

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to pay all costs of maintaining the Common Areas and administering the Association, Developer agrees that it will loan monies to the Association on an interest free basis to fund any such deficits. The amounts paid to the working capital fund by each Owner upon the closing of the sale of the completed residence to such Owner shall not be considered as advance payment of regular assessments. The working capital fund shall be held and disbursed for the following purposes in the order of priority:

(a) To fund costs of maintenance of the Common Areas and administration of the Association that cannot be defrayed by assessments;

(b) To reimburse the Developer for all amounts loaned by Developer to the Association to fund any operating deficits; and

(c) To assure that the Association will have cash available to meet unforeseen expenditures or to acquire additional equipment or services deemed necessary or desirable by the Board of Directors.

Section 7. Lot Transfer Fee. A lot transfer fee in the amount of One Hundred Fifty Dollars and No/100 ($150.00), as may be reasonably increased from time to time by the management company for the Association, shall be paid to the management company for the Association by the buyer or new Owner of such Lot upon any sale or transfer of any Lot, except sales or transfers by or to a Builder or by or to an affiliate of a Builder and except transfers by deed in lieu of foreclosure or transfers by foreclosure.

Section 8. Notice and Quorum for Any Action Authorized Under Section 3, 4 or 5. Written notice of any meeting called for the purpose of taking any action authorized under Section 3, 4 or 5 of this Article III shall be sent to all members not less than fifteen (15) days nor more than thirty (30) days in advance of the meeting. At the first such meeting called, the presence of members or of proxies entitled to cast twenty percent (20%) of all votes entitled to be cast by the Association members shall constitute a quorum. If the required quorum is not present, another meeting may be called subject to the same notice requirement, and the required quorum at the subsequent meeting shall be one-half (1/2) of the required quorum at the preceding meeting. This procedure may be repeated with the required quorum reduced by half at each subsequent meeting until a quorum is achieved although in no event may the required quorum be less than 10% of the total votes eligible to be cast. No such subsequent meeting shall be held more than ninety (90) days following the preceding meeting.

Section 9. Uniform Rate of Assessment. Annual, supplemental and special assessments must be fixed at a uniform rate for all Lots and may be collected on a quarterly basis.

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Section 10. Date of Commencement of Annual Assessments and Supplemental Assessments Due Dates. The annual assessments and supplemental assessments provided for herein shall commence as to Lots not owned by the Developer on the first day of the first month following the closing of the transfer of the first Lot by Developer. As to Lots owned by the Developer, the annual assessments and supplemental assessments shall commence as to each Lot upon conveyance of such Lot by Developer except for a transfer in which Developer is transferring its rights as Developer. The first annual assessment and supplemental assessment shall be adjusted according to the number of months remaining in the calendar year. The Board of Directors of the Association shall fix the amount of the annual assessment and supplemental assessment against each Lot at least thirty (30) days in advance of each annual assessment and supplemental assessment period. Written notice of the annual assessment and supplemental assessment shall be sent to every Lot Owner subject thereto. The annual assessment and supplemental assessment shall be paid quarterly on the first day of each quarter by every Lot Owner or in such installments as shall be determined by the Board of Directors of the Association. The Association shall, upon demand, and for a reasonable charge, furnish a certificate signed by an officer of the Association setting forth whether the annual assessment and/or supplemental assessment on a specified Lot have been paid. A properly executed certificate of the Association as to the status of the annual assessment and supplemental assessment on a Lot is binding upon the Association as of the date of its issuance. Notwithstanding anything to the contrary contained herein, annual assessment and supplemental assessment shall not commence as to any Lots owned by a Builder until the earlier of (i) one year following the closing date for the purchase of said Lot by Builder from Developer or (ii) the date of receipt of a certificate of occupancy for a single family residence on the Lot.

Section 11. Effect of Non-Payment of Assessments: Remedies of the Association. Any assessment not paid by the tenth (10th) day of the month in which it is due shall be subject to a late charge in an amount established by the Board of Directors of the Association and shall bear interest from the due date at the maximum rate allowed by applicable law. The Association may bring an action at law against the Lot Owner personally obligated to pay the same, or foreclose the lien against the Lot, and there shall be added to the amount of such assessment all collection costs, including reasonable attorney's fees, and the costs of bringing such action or foreclosure. No Lot Owner may waive or otherwise escape liability for the assessments provided for herein by non-use of the Common Area or abandonment of his Lot.

Section 12. Subordination of the Lien to Mortgages. The lien of the assessments on any Lot provided for herein shall be subordinate to the lien of any first mortgage now or hereafter placed on the Lot. Sale or transfer of any Lot shall not affect the assessment lien. However, the sale or transfer of any Lot pursuant to mortgage foreclosure or any proceeding in lieu thereof, shall extinguish the lien of such assessments as to payments which become due prior to such sale or transfer. No sale or transfer shall relieve such

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Lot from liability for any assessments thereafter becoming due or from the lien thereof.

ARTICLE IV
ARCHITECTURAL, MAINTENANCE, AND USE RESTRICTIONS

Section 1. Architectural Review Authority. The Developer shall have sole architectural and design reviewing authority for Lots and Homes within the Development until (i) the Developer has sold all Lots and (ii) all of the structures or residences on all Lots within the Subdivision have been completed and approved for final use and occupancy. However, the Developer may, in its discretion, transfer a portion of its architectural and design review authority to the Board when the Developer transfers governing authority to the Board in accordance with the By-laws; provided however, that without an express written relinquishment of this authority by the Developer, no such transfer of architectural and design review authority shall be assumed or otherwise become effective and the Developer shall continue to exercise the rights thus reserved to it until such time as it shall execute and record in the office of the Register of Deeds a document assigning those rights to the Board.

Section 2. Single Family Residential Construction. No building or other structure shall be erected, altered or permitted to remain on any Lot other than one (1) single family residential dwelling not to exceed two and one-half (2-1/2) stories in height which may have an attached private garage for not more than three (3) cars which structures shall not exceed the main dwelling in height. Each residence shall include an attached garage, with a permitted exception being the alley loaded homes to be constructed on Alley Loaded Lots which shall be permitted to have detached garages. The space within the garage may not be converted for use as living space or be for business purposes. However, notwithstanding anything to the contrary contained herein, townhomes may be constructed on the Town Home Site and such townhomes do not have to have garages.

Section 3. Approval of Plans.

(a) No construction, reconstruction, remodeling, alteration, or addition of or to any structure, building, fence, wall, drive, or improvement of any nature (including landscaping) shall be constructed on any Lot without obtaining prior written approval of an Architectural Review Committee composed of three (3) or more members as to the location, plans, and specifications therefore. Such committee may establish architectural and landscaping “Design Standards” to establish minimum design principles and standards. Prior to the Transfer of Control, the Developer shall appoint the members of the Architectural Review Committee, and subsequent to the Transfer of Control the members of such Committee shall be appointed by the Board of Directors of the Association. As a prerequisite to consideration for approval, and prior to the

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commencement of the contemplated work, a Lot Owner shall submit to the Developer, or the Association's managing agent, as the case may be, such plans, specifications, and other information concerning the proposed improvements as the Architectural Review Committee may require from time to time as a condition for its review and approval thereof accompanied with such fee as the Association may require, and the Developer or such managing agent shall submit the same to the Architectural Review Committee for approval. All plans of proposed residences to be constructed in the Subdivision shall conform to the standards set forth in subparagraph (b) below and the restrictions and provisions contained in this Declaration, and the Architectural Review Committee shall be the sole arbiter of such plans and may withhold its approval for any reason, including purely aesthetic reasons. Upon approval being given, construction shall be started and prosecuted to completion promptly and in strict conformity with such plans, otherwise the approval shall be void. A reasonable fee may be charged by the Association to defray its costs incurred in considering and acting upon such proposed plans and specifications.

(b) Residences to be constructed within the Subdivision shall be sufficiently compatible with existing architectural styles that predominate in the development to assure a pleasing overall appearance and maintain its image as a high quality, single family, residential neighborhood. Existing structures will be considered but do not, as such, constitute precedent nor assure approval.

(c) Developer, the Architectural Review Committee, the Association and the individual members thereof shall not be liable for any act or omission in performing or purporting to perform the functions delegated hereunder. The Developer, Architectural Review Committee and/or the Association shall use their best efforts to indicate approval or disapproval of any plans submitted within thirty (30) days after the receipt of the required documents. Approval or disapproval by Developer, Architectural Review Committee or the Association shall not be deemed to constitute any warranty or representation by it including, without limitation, any warranty or representation as to fitness, design or adequacy of the proposed construction or compliance with applicable statutes, codes and regulations. Anything contained in this Section 3, or elsewhere in this Declaration to the contrary notwithstanding, Developer, the Association and the Architectural Review Committee are hereby authorized and empowered, at their sole and absolute discretion, to make and permit reasonable modifications or deviations from any of the requirements of this Declaration relating to the type, kind, quantity or quality of the building materials to be used in the construction of any building or improvement on any Lot and of the size and location of any such building or improvement when, in their sole and final judgment, such modifications and deviations in such improvements will be in harmony with existing structures and will not materially detract from the aesthetic appearance of the Property and the improvements as a whole; provided, however, such modifications and deviations must remain within all applicable ordinances and regulations established by the Davidson County Planning Commission (and/or City of Nashville, if applicable), the Williamson County Planning Commission, the Town of Nolensville

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Planning Commission and/or any other applicable governing authority.

Developer, Architectural Review Committee or the Association, as the case may be, may require the submission to it of such documents and items, including as examples, but without limitation, written requests for and description of the variances requested, plans, specifications, plot plans and samples of material(s), as either of them shall deem appropriate, in connection with its consideration of a request for a variance. If Developer, the Association or the Architectural Review Committee approve such request for a variance, it shall evidence such approval, and grant its permission for such variance, only by written instrument, addressed to the Owner of the Lot(s) relative to which such variance has been requested, describing the applicable restrictive covenant(s) and the particular variance requested, expressing its decision to permit the variance, describing (when applicable) the conditions on which the variance has been approved (including as examples, but without limitations, the type of alternative materials to be permitted, and alternate fence height approved), and signed by Developer, Architectural Review Committee or the Association, as the case may be. Any request for a variance shall be deemed to have been disapproved for the purposes hereof in the event of either (i) written notice of disapproval from Developer, the Architectural Review Committee or the Association or (ii) failure by Developer, Architectural Review Committee or the Association to respond to the request for variance. In the event Developer, the Architectural Review Committee or the Association or any successor to the authority thereof shall not then be functioning, no variances from the covenants herein contained shall be permitted, it being the intention of Developer that no variances be available except at its discretion or that of the Association or Architectural Review Committee. Neither Developer, the Architectural Review Committee nor the Association shall have the authority to approve any variance except as expressly provided in this Declaration.

Section 4. Structural Compliance. All structures shall be built in substantial compliance with the plans and specifications therefore, approved by Developer, the Architectural Review Committee or the Association as provided in Section 3 above.

Section 5. Improvement and Setback Restrictions. No building or structure, or any part thereof shall be located on any Lot nearer to the front line, the rear line, or any side line than the minimum building setback lines required by Metro Davidson County, Tennessee, the City of Nashville, the Town of Nolensville, or Williamson County, Tennessee and as may be shown on the recorded plats. No encroachment upon any utility easements reserved on the Plat shall be authorized or permitted.

Section 6. Re-subdivision of Lots. No Lot shall be re-subdivided, nor shall any building be erected or placed on any such re-subdivided Lot, unless such re-subdivision is approved by the Association, as well as any governmental authority having jurisdiction. Developer, however, shall have the right, but not the obligation, to re-subdivide Lots, by recorded plat or in any other lawful manner, all or any part of the Property, and such Lots,

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as re-platted, shall be subject to this Declaration as if such Lots were originally included herein. Any such re-plat must comply with pertinent re-platting ordinances, statutes, regulations and requirements.

Section 7. Walls, Fences and Hedges. No wall or fence shall be erected or maintained nearer to the front lot line than the front building line on such Lot, nor on corner lots nearer to the side Lot line than one half of the building setback line parallel to the side street. No side or rear fence, wall or hedge shall be more than six (6) feet in height except for the fence to be constructed (construction to be at the sole option of the Developer) on the exterior boundary of the Common Area. Prior to commencing the addition or modification of any wall or fence, plans for such improvement shall be submitted to the Architectural Review Committee as provided in Article IV, Section 3. Any wall, fence or hedge erected on a Lot shall be maintained by the Owner thereof except for the fence to be constructed (construction to be at the sole option of the Developer) by the Developer in the common area. All fencing shall be constructed only of such materials and erected only on such Lots and in such a manner as shall be approved by the Association. Fences shall conform to the approved designs. No fence over thirty-six (36) inches shall be constructed or maintained between a line eight (8) feet back from the front building or setback line and the street; provided, however, the planting of hedges, shrubbery or evergreens in lieu of a fence, and extending to the front or sides of any Lot is permitted, provided such planting shall not be maintained at a height in excess of forty-two (42) inches. No fence over thirty (30) inches is permitted within ten (10) feet of a street right of way. Fences to be located on the property line or a minimum of five (5) feet off the property line to allow for maintenance between fences.

Section 8. Roofing Material and Pitch. The roof of any building (including any garage) shall be constructed or covered with asphalt or composition type shingles. Any other type of roofing material shall be permitted only in the sole discretion of the Architectural Review Committee upon written request prior to construction. Minimum roof pitch to be determined by Architectural Review Committee or as shown in the Design Standards. The roof pitches on all homes shall be subject to the regulations of the Architectural Review Committee.

Section 9. Swimming Pools. Swimming pools shall be allowed only on Lots approved by the Architectural Review Committee of the Association and shall be located at the rear of the residence. All swimming pools shall have a perimeter enclosure, the plans for which, including landscaping plans, must be approved by the Architectural Review Committee. The construction of any swimming pool shall conform to all applicable government regulations. No above ground swimming pools shall be permitted. Landscaping shall be provided to reduce the visual impact of the pool from public streets and adjacent neighbors. Pool pumps and equipment shall be substantially screened from view. Screened enclosures of pools are not permitted.

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Section 10. Storage Tanks and Refuse Disposal. No exposed above-ground tanks or receptacles shall be permitted for the storage of fuel, water, or any other substance, except for refuse produced through normal daily living and of a nature which is satisfactory for pick-up by the Department of Public Works or its equivalent. Incinerators for garbage, trash, or other refuse shall not be used or permitted to be erected or placed on any Lot. All equipment, coolers, and garbage cans shall be concealed from the view of neighboring lots, roads, streets, and open areas.

Section 11. Clothes Lines. Outside clothes lines shall not be permitted.

Section 12. Signs and Advertisements. No sign, advertisement, billboard or advertising structure of any kind shall be erected upon or displayed or otherwise exposed in view on any Lot or any improvement thereon without the prior written consent of the Association; provided that this requirement shall not preclude the installation by Developer of signs identifying the entire residential development, individual neighborhoods within the Subdivision and directions to model homes and homes for sale, and provided further that this requirement shall not preclude the placement by Owners or Builders of "For Sale" signs in the front of individual residences of such size, character, and number as shall from time to time be approved by the Association. The Association shall have the right to remove any such unapproved sign, advertisement, billboard or structure that is placed on said Lots, and in doing so shall not be subject to any liability for trespass or other tort in connection therewith or arising from such removal. Developer's rights contained in this Paragraph shall not expire until all homes in the Subdivision have been sold by the Builders. No garage sale signs, other than a temporary community garage sale sign so approved by the Architectural Review Committee shall be permitted.

Section 13. Use of Temporary Structures. No structure of a temporary character, mobile home, camper, trailer, basement, tent, shack, tool shed, storage shed, garage, barn or other outbuilding shall be erected, moved onto any Lot and/or used at any time as a residence, nor shall any residence of a temporary character be permitted. No structure of any kind except a dwelling house may be occupied as a residence, and the outside of any building so occupied must be completed before occupancy, including landscaping. Other structures of a permanent or semi-permanent nature may be approved from time to time in accordance with the provisions of this Article IV provided however these shall not include detached storage sheds whether permanent or not. Temporary structures may be used as building or sales offices and storage sheds and for related purposes during the construction period by the Developer or its assigns and Builders.

Section 14. Parking and Storage of Automobiles, Boats, Trailers and Other Vehicles. No trailers, motorhomes, boats, boat trailers, go carts, golf carts, travel trailers, inoperative automobiles, campers or any other vehicle as may be determined by the

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Board, or other item of personal property as may be determined by the Board shall be temporarily, semi-permanently or permanently parked or stored in the public street right-of-way or forward of the front building line. Storage of such items and vehicles must be screened from public view, either within the garage (and no storage is allowed in a garage unless the garage door is closed) or behind a fence which screens such vehicle from public view, unless otherwise approved in writing by the Developer or Association in accordance with Section 2 above. No for sale signs may be posted on vehicles located on a Lot or on the street in front of or to the side of a Lot. No tractor trailers, buses, or other large commercial vehicles shall be parked on driveways or in streets within the Property for periods of time exceeding twelve (12) hours or for more than twenty-four (24) hours in any calendar week. The foregoing shall not apply to construction vehicles of the Developer or Builders. No on street parking of cars for periods over twenty-four (24) hours in any calendar week.

Section 15. Outside Lighting. Outside lights at eaves and door entrances shall be permitted, but no exterior flashing or high-intensity lights, floodlights, or spotlights on the exterior of any building shall be permitted, except with the prior written approval of the Association. Tasteful accent lighting are encouraged and security lighting which does not create a nuisance for other Lot Owners are permitted. The Association, at its sole discretion, reserves the right to require any Lot Owner to deactivate or remove any light which the Association deems to be unattractive or a nuisance to other Lot Owners. Tasteful holiday decorative lighting is permitted from Thanksgiving until January 7 subject to any rules established by the Association regarding the types and extent of such lighting.

Section 16. Antennae and Satellite Dishes. No electronic antenna or device of any type shall be erected, constructed, placed or permitted to remain on any Lot, house or building in the Subdivision. No satellite dishes greater than eighteen (18) inches in diameter shall be installed on any house or Lot and all dishes shall be placed at the rear of the house so as to not be visible from the street unless limited satellite reception requires front or side yard placement, in which case landscape screening and Architectural Review Committee approval shall be required.

Section 17. HVAC Units. All central air conditioning systems must be used, erected, placed or maintained to the rear of the main residential structure and screened from view. No window or wall type air conditioning units shall be permitted.

Section 18. Recreational Equipment. All playground and recreational equipment must be used, erected, placed or maintained to the rear of all Lots located behind the house, no nearer to the side lot lines than a line projected from the sides of the home to the rear property line. Wood construction for such equipment is required, using green, blue or yellow colors only for attachments. No metal play equipment is allowed. No tree houses, play houses or other such structures shall be allowed except as may be specifically allowed by the Architectural Review Committee. Landscape screening may

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be required to lessen the visual impact to adjacent homes and streets.

Section 19. Oil and Mining Operations. No oil drilling. Oil development operations, oil refining, quarrying or mining operations shall be permitted on any Lot, nor shall oil wells, tanks, tunnels, mineral excavations or shafts be permitted upon or in any Lot. No derrick or other structure designed for use in boring for oil or natural gas shall be erected, maintained or permitted upon any Lot.

Section 20. Basketball Goals. Basketball goals shall be permanent mount located at the rear or side of the house and shall consist of a black pole and clear Plexiglass backboard and require Architectural Review Committee approval. No portable goals are permitted. Basketball goals shall be set back a minimum of five (5) feet from the side property line. Goals within ten (10) feet of a property line or located on the side yard of a corner lot shall be screened with landscaping as shall be approved by the Architectural Review Committee.

Section 21. Maintenance of All Lots Excluding Supplemental Maintenance Lots and Town Home Site. All Lots, excluding Supplemental Maintenance Lots and Town Home Site, together with the exterior of all improvements located thereon, shall be maintained in a neat and attractive condition by their respective Owners or Occupants. Such maintenance shall include, but not be limited to, painting, repairing, replacing, and caring for roofs, gutters, down spouts, building surfaces, patios, walkways, driveways, and other exterior improvements. The Owner or Occupant of each Lot shall at all times keep all weeds and grass thereon cut in a sanitary, healthful and attractive manner and all trees and shrubbery pruned and cut. In addition, each Lot Owner shall be responsible for maintaining the right of way and any Common Area between such Lot Owner's Lot and the street. Each Lot Owner agrees to abide by rules which may be established by the Association regarding specifics on maintenance of Lots and residences on the Lots as well as any requirements regarding plantings on Lots. No Lot shall be used for storage of material and equipment, except for normal residential requirements or incident to construction of improvements thereon as herein permitted. The accumulation of garbage, trash or rubbish of any kind and the burning (except as permitted by law) of any such materials is prohibited. In the event of default on the part of the Owner or Occupant of any Lot in observing the above requirements or any of them, each default continuing after ten (10) days written notice thereof, the Association may, subject to approval of its Board of Directors, enter upon said Lot, repair, maintain and restore the same, cut or prune or cause to be cut or pruned, such weeds, grass, trees and shrubbery and remove or cause to be removed, such garbage, trash and rubbish or do any other thing necessary to secure compliance with these restrictions and to place said Lot in a neat, attractive healthful and sanitary condition. In so doing, the Association or its agents shall not be subject to any liability for trespass or otherwise. All costs incurred in any such repair, maintenance, restoration, cutting, pruning or removal shall be charged against the Owner of such Lot as the personal obligation of such Owner and as a lien upon the Lot, enforceable and

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collectible in the same manner and to the same extent as a maintenance assessment. Any Occupant of such Lot shall be jointly and severally liable with the Owner of the payment of such costs.

The Association shall contract with one (1) or more landscaping services to provide grass cutting, lawn maintenance, proper care for all trees, shrubbery and other landscaping, and other necessary maintenance services for the Common Areas, provision for which shall be made in the annual assessments. Such maintenance shall be at varying intervals based on the overall Maintenance Plan established by the Developer and the Association.

Section 22. Maintenance of Supplemental Maintenance Lots. The Association shall be responsible for the following maintenance obligations:

(a) With respect to the Supplemental Maintenance Lots, the Association shall be responsible for maintaining the front of each Supplemental Maintenance Lot. Additionally, the rear yards of all Alley Loaded Lots shall be also maintained by the Association up to the rear fence line, even though such yards of each Supplemental Maintenance Lot are not part of the Common Area. **Exhibit C** attached hereto provides additional clarification on maintenance responsibilities. In the case of Supplemental Maintenance Lots that are located on corner lots, the Association shall be responsible for maintaining side yards of such corner lots, and such side yard maintenance shall be for the area that is bounded by (i) the service lane or alley in the rear of the lot, (ii) the sidewalk to the side and front of the lot, and (iii) a line running the length of the lot from the front to the rear along an extension of the line of any Supplemental Maintenance Lots restricted wall or courtyard fence. Front and rear maintenance and side yard maintenance for Supplemental Maintenance Lots shall include regular cutting of grass, edging, weeding, fertilizing and remulching one (1) time per year. Each Owner of a Supplemental Maintenance Lot shall be responsible for street tree and plant replacement (such street tree or plant damaged or diseased shall be replaced with same species of at least equal size and quality of original tree or plant) throughout such Supplemental Maintenance Lot owned by that Owner and each Owner of a Supplemental Maintenance Lot shall be responsible for maintenance of the courtyard area between the front and rear yards, and the Association shall not be responsible for any costs associated with such plant replacement and maintenance. Supplemental Maintenance Lot Owners are responsible for any and all maintenance not specifically mentioned herein.

(b) With respect to all Supplemental Maintenance Lots, each Owner shall be responsible for replacement and maintenance of that portion of the

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irrigation system serving the Supplemental Maintenance Lot, as well as that portion of the Common Area in front of each Supplemental Maintenance Lot (and to the side of each Supplemental Maintenance Lot) that is bounded by the street, the sidewalk and an extension of the property lines (the "Sidewalk Strip"). The irrigation system serving a Supplemental Maintenance Lot and Sidewalk Strip shall be referred to as the "Supplemental Maintenance Lot Irrigation System", and the Supplemental Maintenance Lot Owner's maintenance responsibilities as described herein shall apply regardless of whether the Supplemental Maintenance Lot Irrigation System is located on the Supplemental Maintenance Lot or in the Common Area. Maintenance of the Supplemental Maintenance Lot Irrigation System shall include, but is not limited to, the cost of maintaining, winterizing and operating the irrigation system lines and sprinkler heads. Furthermore, each Supplemental Maintenance Lot Owner shall furnish the water for the Supplemental Maintenance Lot Irrigation System serving his or her Supplemental Maintenance Lot and the adjacent Sidewalk Strip from his or her separately metered individual domestic water supply.

(c) Except as provided specifically for in this Article IV, Section 22, the Owner of each Supplemental Maintenance Lot shall have the sole responsibility for maintenance of all exterior and interior portions of the House; land, flora and landscaping within the boundaries of the House; those areas within enclosed patios and courtyards; all inside and outside driveways serving only one House; and other improvements not maintained by the Association. Each Owner shall maintain said portions of its Home or Supplemental Maintenance Lot in a manner consistent with the community-wide standard, the applicable covenants set forth in this Declaration, and such rules and regulations as may be established by the Board from time to time. Prior to replacing any trees or plants on his or her Supplemental Maintenance Lot as required by this Article IV, an Owner must obtain the approval of the Association's Architectural Review Committee.

Section 23. Damage Destruction or Maintenance. In the event of damage or destruction to any structure located on the Property, the respective Owner thereof agrees as follows:

(a) In the event of total destruction, the Owner shall promptly clear the Lot of debris and leave the same in a neat and orderly condition. Within sixty (60) days of any insurance settlement, the Owner must commence to rebuild and reconstruct the structure. Any such rebuilding and reconstruction shall be accomplished in conformity with the plans and specifications of the original structure so destroyed, subject to any changes or modifications as approved by the Developer or the Association or

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Architectural Review Committee, as the case may be, in accordance this Article IV hereof.

(b) In the case of partial damage or destruction, the Owner shall as promptly as an insurance adjustment may be made, cause the damage or destruction to be repaired and restored in a first class condition in accordance with the plans and specifications of the original structure and in conformity with its original exterior painting and decor. Any change or alteration musts be approved by the Developer or the Association, as the case may be, in accordance with Article IV hereof. In no event shall any damaged structure be left unrepaired and unrestored for in excess of sixty (60) days from the date of the insurance adjustment.

(c) If the correction of a maintenance or repair problem incurred on one Lot necessitates construction work or access on another Lot, both Owners shall have an easement on the Property of the other for the purpose of this construction. Each party shall contribute to the cost of restoration thereof equally, unless such damage was caused by the fault of an Owner, in which event the Owners shall allocate the cost of restoration in proportion to the relative fault of the parties.

Section 24. Use of Premises. Each Lot shown on the Plat shall be used only for private, single family residential purposes and not otherwise, except that the Town Home Site may be used as residential townhomes. Notwithstanding the foregoing, Developer or any Builder may maintain, as long as it owns property in or upon such portion of the Property as Developer may determine, such facilities as in its sole discretion may be necessary or convenient, including, but without limitation, offices, storage areas, model units and signs, and houses in the development) to use, residential structures, garages or accessory buildings for sales offices and display purposes, but all rights of Developer and of any Builder acting with Developer's permission under this sentence, shall be operative and effective only during the construction and sales period within the area, and this provision may not be amended, altered or repaired without the prior consent of the Developer.

Section 25. Animals and Pets. No animals, livestock, or poultry of any kind shall be raised, bred, pastured, or maintained on any Lot, except household pets such as dogs and cats which may be kept thereon in reasonable numbers as pets with no more than two (2) pets whose primary residence is outside and a maximum total of five (5) pets for the sole pleasure of the Owner or Occupant, but not for any commercial use or purpose. No animal shall be allowed to roam freely in the Subdivision and all animals must be either kept in a secure enclosure to be located on the rear of the Lot hidden from public view or in the home. No dog run fencing shall be permitted. All animals shall be maintained on a leash and under control at all times when not otherwise secured in the required enclosure or in the home. No Owner or Occupant shall be allowed to keep on any Lot or the Common Area any animal which causes excessive noise (including without limitation barking), odor or constitutes a danger to other persons or otherwise constitutes a

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nuisance. The Board of Directors of the Association shall be the sole judge using their sole discretion as to whether any animal violates the provisions hereof and any such decision may be based, among other things on the number of animals kept by a Lot Owner. Lot Owners shall be responsible for cleaning up and removing any animal waste deposited by their pets in the Common Areas, on any other Lot in the Subdivision, or on any street in the Subdivision.

Section 26. Nuisances and Unsightly Materials. No house or other structure on any Lot shall be used for any business or commercial purpose other than home office which does not require meeting the public. Each Owner or Occupant shall refrain from any act or use of his Lot which could reasonably cause embarrassment, discomfort, annoyance, or nuisance to others. No noxious, offensive, or illegal activity shall be carried on upon any Lot. No motorcycle, motorbike, motor scooter, go cart, or any other unlicensed motorized vehicle shall be permitted to be operated on or in the Common Areas. No Lot shall be used, in whole or in part, for the storage of rubbish of any character whatsoever, not shall any substance, thing, or material be kept upon any Lot which will emit foul or noxious odors or which will cause any noise that will or might disturb the peace and quiet of the Owners or Occupants of surrounding Lots or property. The foregoing shall not be construed to prohibit the temporary deposits of trash and other debris for pick-up by garbage and trash removal service units. The Board of Directors of the Association shall be the sole judge using its sole discretion in determining any violation of any provision contained in this Declaration.

Section 27. Hobbies and Activities. The pursuit of any inherently dangerous activity or hobby, including, without limitation, the assembly and disassembly of motor vehicles or other mechanical devices, the shooting of firearms, fireworks, or pyrotechnic devices of any type or size, the use of bows and arrows and other such activities shall not be pursued or undertaken on any part of any Lot or upon the Common Areas without the consent of the Association.

Section 28. Visual Obstruction at the Intersection of Public Streets. No object or thing which obstructs sight lines at elevations between two (2) feet and six (6) feet above the surface of the streets shall be placed, planted or permitted to remain on any corner Lot within the triangular area formed by the curb lines of the street involved and a line running from curb line to curb line at points twenty-five (25) feet from the junction of the street curb lines. The same limitations shall apply on any Lot within ten (10) feet from the intersection of a street property line with the edge of a driveway.

Section 29. Governmental Restrictions. Each Owner shall observe all governmental building codes, health regulations, zoning restrictions, and other regulations applicable to his Lot. In the event of any conflict between any provision of any such governmental code, regulation, or restriction and any provisions of this Declaration, the more restrictive provision shall apply.

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Section 30. Roads. It shall be obligatory upon all owners of the Lots in this Subdivision to consult with Davidson County, The Town of Nolensville, Tenneessee, or Williamson County, Tennessee before any driveways, culverts, other structures or grading are constructed within the limits of any dedicated roadway, and such placement or construction shall be done in accordance with the requirements of the jurisdiction applying to the roads within the Subdivision in order that the roads or streets within the Subdivision which would be affected by such placement or construction may not be disqualified for acceptance by the jurisdiction into the public road system.

Section 31. Easement for Roads. The right is expressly reserved to the Developer and Owners, their representatives, heirs, successors and assigns, to construct all streets, roads, alleys, or other public ways as now, or hereafter may be, shown on the Plat(s), at such grades or elevation as they, in their sole discretion, may deem proper; and, for the purpose of constructing such streets, roads, alleys or public ways, they additionally, shall have an easement, not exceeding ten (10) feet in width, upon and along each adjoining Lot, for the construction of properly banked slopes in accordance with the specifications of the government body or agency having jurisdiction over the construction of public roads; and no Owner of any Lot shall have any right of action or claim for damages against anyone on account of the grade of elevation at which such road, street, alley or public way may hereafter be constructed, or on account of the bank slopes constructed within the limits of the said ten (10) foot easement.

Section 32. Minimum Square Footages. The minimum square footage for residences constructed on fifty-five (55) foot Lots shall be 1,200 square feet. The minimum square footage for residences constructed on sixty (60) foot Lots shall be 1,700 square feet The minimum square footage for residences constructed on the seventy-five (75) foot Lots shall be 2,000 square feet. The minimum square footage for residences constructed on the Town Home Site shall be 1,000 square feet. For purposes of calculating square footage contained in a residence, the square footage calculation shall include only heated, finished living space.

Section 33. Maintenance and Use of Common Areas and Amenities. The Common Areas and any and all amenities thereon shall be for the recreational use and enjoyment of the Owners and their permitted guests and invitees. Except as may otherwise be delegated to the Owners by the Association, the Association shall be responsible for the ongoing maintenance of all Common Areas and all improvements thereon in a reasonable order and condition, including without limitation any and all drainage ways, drainage detention areas and other drainage facilities.

Section 34. Erosion Control and Lot Maintenance. During and throughout construction, as well as after completion of a residence, the Builder or Lot Owner shall take such action as may be reasonably required: (a) to control, inhibit, and prevent land

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erosion and the sedimentation of streams and ponds from erosion, and (b) to keep such site in a neat and attractive condition free from trash and debris. If a Builder or Owner does not maintain a site as herein provided, then the Developer or the Association may, after reasonable notice to Builder or Owner, have the required work done and the cost thus incurred shall be paid by the Builder or Owner upon demand. The Developer and the Association shall have the right of entry upon each Lot as necessary to perform such work or cause such work to be performed or to require the Builder or Owner to use designated erosion control specialists.

Section 35. Storage of Building Materials. No lumber, brick, stone, block or other building materials shall be stored on any Lot except for building purposes for that particular Lot or by a Builder as a central storage structure, and then only for such time as is reasonably necessary for a diligent completion of the project.

Section 36. Drainage. No Lot Owner shall place fill on any lot or place fences, trees, or landscaping in such a location or position that will interfere with the existing drainage on or from other Lots or the Common Areas. It is the responsibility of each Builder to provide adequate drainage on the Lot.

Section 37. Curb Cuts and Damage. Any Builder or Owner who makes a curb cut or damages any Common Areas shall be responsible for repairing same at his sole expense and at the direction and to the satisfaction of the Developer or the Association. Builder or Owner shall reimburse Developer for the cost of any such repairs if Developer repairs damages.

Section 38. Excavation and Fill. No Owner or Builder shall excavate or extract earth from any Lot for any business or commercial purpose. Proposed elevation changes on a Lot shall be included with the plan submitted to the Architectural Committee prior to commencement of construction. Changes which adversely affect the surface grade of adjacent or surrounding Lots or the storm water drainage plan will not be permitted. Substantial quantities of fill brought to any Lot during construction shall be subject to prior approval by the Developer or Association for stability and effect on adjacent Lots.

Section 39. Driveways and Parking. All driveways and parking areas shall be paved with either broom finished concrete or gray aggregate concrete as designated by the Developer.

Section 40. Sidewalks And Trails. Sidewalks shall be required as shown on the final plat. It shall be the responsibility of the Builder or Owner of the Lot on which a sidewalk is to be located to construct and properly install the portion of the sidewalk which is to be located on their particular Lot in accordance with the specifications of the jurisdiction. Such sidewalks shall be broom finish concrete and shall meet all of the specifications contained in the Americans Disabilities Act, and be completed at the time

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of completion of a residence on such Lot. Trails in the Common Area and along the entry road will be asphalt or such other materials as designated by the Developer. If no residence has been constructed on a Lot within one (1) year following the date of the sale of such Lot by Developer to a Builder or Owner, then Developer or the Association may require the Builder or Owner to install the sidewalk on such Lot by written notice to the Lot Owner or Builder and such installation shall be completed within ninety (90) days after the date of such notice. If the Lot Owner or Builder fails to so install the sidewalk(s), Developer or the Association may enter the Lot(s) and may install same and collect the cost for such installation from the Builder or Lot Owner including interest thereon from the date the costs were incurred at the highest rate allowed by law. The Developer may choose to install sidewalks on certain Lots in which case the subsequent Builder or Lot Owner shall reimburse Developer for the cost of such sidewalk construction.

Section 41. Landscaping and Trees. The front elevation of each residence in the Subdivision shall be landscaped with shrubs, bushes, trees or other plantings so as to provide cover at grade across the front of the home. Street Trees shall be of the species specified by and planted in the location specified by the Developer and planted in bulk during the best planting season by the Developer or Builder. In addition, the front of all Lots shall be sod and the rear and side of all Lots shall be strawed and seeded. All plantings and landscaping and seeding shall be completed prior to occupancy of the residence, weather permitting. The Lot Owner shall be responsible for replacing any street trees damaged or diseased with same species of equal size and quality of original tree. In order to maintain continuity in the Subdivision, the initial planting of Street Trees and the replacement of Street Trees is not optional. In addition, the Association shall have the right to go on any Lot in order to “limb up” or trim any such Street Trees. Each Lot Owner shall be responsible for maintaining shrubbery or other plantings on their Lot and keeping same properly trimmed and shall be responsible for replacing any such shrubbery or plantings if any such plantings die. The lot owner (whose lot abuts the right of way and fronts the street next to which the trees are planted) shall be responsible for watering, fertilizing, and maintaining and caring for the street trees installed by the Developer and shall be responsible for replacing any dead, damaged, or diseased street trees whether they are in such street’s right of way or within a landscape maintenance easement. In the event that such street trees are not being properly maintained by the Lot Owner (in the sole opinion of the Association), the Association may assume the maintenance of such tree(s), at the cost and expense of such Lot Owner. If such tree dies and is not replaced by the Lot Owner within ninety (90) days from notification by the Association, or within the next planting season, the Association shall replace such tree at the Lot Owner’s expense. All plant material species and arrangements must be installed per the plans as must be approved by the Architectural Review Committee.

Section 42. Front Porches. No front porch on any residence shall be enclosed in any way either screened in or glassed in or otherwise walled in. The materials which may be used for front porch railings shall be specified in the Design Standards.

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Section 43. Rules and Regulations. The Association shall have the right to pass rules and regulations governing additional aspects of and imposing additional restrictions on the use and maintenance of the Lots and use of and maintenance of Common Areas. Said rules and regulations may include (without limitation) the right to make additional special assessments against specific lot owners as a result of a Lot Owner's (or any agent or invitee of a Lot Owner) violation of any of the terms of this Declaration or of any rules or regulations promulgated hereunder. **In addition, the rules and regulations may provide that Lot Owners shall be responsible for maintenance of limited portions of Common Areas immediately adjoining their lot.** Any and all assessments made pursuant to the rules and regulations shall be deemed assessments properly made pursuant to the terms of this Declaration and may be collected by the Association in accordance with the provisions as contained herein. In addition, the Rules and Regulations may include (without limitation) restrictions and rules regarding any and all aspects of the use of the Lots and residences thereon as well as the Common Areas regarding any matter which the Association believes should be regulated in order to preserve the desirability and attractiveness and/or provide for maintenance of the Development if the Association reasonably determines that such rules and regulations shall benefit the overall Development. Specifically, and without limiting any additional matters which may be addressed in the Rules and Regulations, the Rules and Regulations may regulate lawn art, lighting, neon signs, interior window coverings that are visible from the street, and holiday decorations. In addition, the Board of Directors of the Association shall have the power to set, assess, and collect fines from Lot Owners for violations of this Declaration or any Rules of the Association. Tasteful landscaping is required by the approved plan including attractive ornamentation which does not create a nuisance to other Lot owners. The Association reserves the right to require any Lot Owner to remove any landscaping and/or Lawn Art which the Association (the Association shall be the sole judge using their sole discretion) deems to be unattractive or a nuisance to other Lot Owners.

ARTICLE V
INSURANCE

Section 1. Common Area. The Association shall keep in force and maintain such hazard, public liability, or other insurance as it shall deem necessary relating to the Common Area and any amenities located thereon. The Association may also insure any other property, whether real or personal, owned by it, against such hazards as may be deemed desirable by the Association. Premiums for all insurance carried by the Association shall be part of the expenses covered by the annual assessments of the Association.

Section 2. Lots. Insurance against damage by fire or other casualty to the

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improvements on any Lot, liability insurance with respect to occurrences on any Lot, and other insurance relating to each Lot, shall be the responsibility of the individual Lot Owners.

Section 3. Fidelity Bonds. At the discretion of the Board of Directors of the Association, blanket fidelity bonds will be maintained by the Association for all officers, directors, trustees, and employees of the Association handling, or responsible for, the funds of or administered by the Association. Further, in the event the Association delegates some or all of the responsibility for the handling of funds to a management agent, a blanket fidelity bond will be required for officers, employees, and agents of such management agent handling, or responsible for, the funds of or administered on behalf of the Association.

(a) The total amount of fidelity bond coverage shall be based upon the best judgment of the officers of the Association and shall not be less than the estimated maximum of funds, including reserve funds, in the custody of the Association or the management agent, as the case may be, at any given time during the term of each bond. However, in no event may the aggregate amount of such bond be less than a sum equal to three (3) month's aggregate assessment on all Lots plus reserve funds.

(b) All such fidelity bonds shall:

(I) Name the Association as an obligee;

(ii) Contain waivers by the issuers of the bonds of all defenses based upon the exclusion of persons serving without compensation from the definition of "employees" or similar terms or expressions; and

(iii) Shall provide that they may not be canceled or substantially modified (including cancellation for non-payment of premium) without at least ten (10) days' prior written notice to the Association.

(c) Premiums on all such fidelity bonds (except premiums on fidelity bonds maintained by a management agent for its officers, employees, and agents) shall be paid by the Association as a common expense.

Section 4. Other Insurance. The Association may also obtain such other insurance as the Board of Directors deems desirable, in such amounts, from such sources and in such forms as it seems desirable, insuring the Common Area owned and maintained by the Association and insuring each member of the Board and officer of the Association, and each member of any committee appointed pursuant to the Bylaws of the Association, from liability arising from the fact that said person is or was a director or officer of the Association, or a member of such a committee. The premiums for such

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insurance and bonds shall be a common expense of the Association.

Unpaid officers and Directors of the Association shall not be liable to any Lot Owner for any act or omission unless the act or omission constitutes gross negligence or willful misconduct. If an unpaid Director or officer of any of the Associations prevails in any legal action brought against him in his official capacity by a Lot Owner, that Lot Owner shall pay the Director or officer all his reasonable legal fees.

ARTICLE VI
EASEMENTS

Easements. In addition to, and without limitation of, any other easements or rights reserved elsewhere in this Declaration, the following rights and easements are hereby reserved:

1. Easements for installation and maintenance of utilities and drainage facilities are reserved as shown on any Plat and as otherwise shown by the public records. Within these easements, no structure, planting, or other materials shall be placed or permitted to remain which may damage or interfere with the installation and maintenance of utilities, or which may change the direction of flow of drainage channels in the easements, or which may obstruct or retard the flow of water through drainage channels in the easements. The easement area of each Lot and all improvements in it shall be maintained continuously by the Lot Owner, except for those improvements for which a public authority or utility company is responsible. In the event any Lot Owner or Builder damages or alters any improvements or otherwise alters the flow of drainage as designed for the Subdivision, then such Lot Owner or Builder shall be responsible for repairing any such damage or make any corrections necessary in order to restore normal drainage in accordance with the drainage design for the Subdivision.

2. Easements are reserved as shown on any plat and as otherwise shown by the public records for the purpose of permitting any and all utilities, including without limitation underground wires or cables, water, sewer, and drainage. Easements are also reserved as shown on any plat and as otherwise shown by the public records for the purpose of permitting public access to sidewalks and trails

3. Each Lot Owner shall grant such easements upon his Lot as are necessary to serve the Property for water, sewer, drainage, telephone, gas, electricity and other utilities, and the erection and maintenance of the necessary poles and other equipment, wires and conduits, sewer and water lines, drainage facilities on, above or below any Lot; provided, however, no Lot Owner shall be required to grant any easement which would unreasonably interfere with the use and enjoyment of his Lot or House and any easement granted hereby shall impose on the grantee of

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said easement the obligation to (a) maintain said easement so that the use thereof will not interfere with the use and enjoyment of any Lot or House and (b) repair and restore that portion of any Lot upon which the easement is located to its original condition or as near as possible to its original condition.

4. Until completion of Developer's intended development of the Property, an easement is reserved to the Developer for ingress and egress generally across the Property, including any Lot, at reasonable places, for the purpose of completing Developer's intended development of the Property, provided that said easement shall be reasonable and shall not unreasonably interfere with the construction of improvements on a Lot nor the use and enjoyment of a Lot by a Lot Owner. Developer and the Association also reserves any and all easements reasonably required to allow completion, repair and maintenance of any and all utility areas, or improvements.

5. Until completion of Developer's intended development of the Property, an easement is reserved to the Developer to enter the Common Area and to maintain thereon such facilities and perform such operations as in the sole opinion of the Developer may be reasonably required, convenient or incidental to the intended development of the Property by the Developer.

6. An easement is granted and reserved to the Association, its officers, agents, employees, including employees of any management company having a contract with the Association, over and upon the Common Area to perform the duties of maintenance and repair of the Common Area, to maintain any utilities for which an easement has been granted, and to prevent damage to the Common Area or any Lot or House situated thereon. In addition, the Association shall have the authority to grant easements over the Common Areas for such purposes as may be determined by the Association which do not unreasonably interfere with the Lot Owners use of the Common Areas.

7. In accordance with the specifications of the governmental body or agency having jurisdiction over the construction of public roads, the right is expressly reserved to the Developer, to construct all streets, roads, alleys (including any and all utility or drainage facilities), or other public ways as now, or hereafter, may be shown on any Plat at such grades or elevations as Developer, in its sole discretion, may deem proper; and for the purpose of constructing such streets, roads, alleys or public ways, Developer additionally shall have an easement, not exceeding ten (10) feet in width, upon and along each adjoining Lot, for the construction of proper bank slopes and no Lot Owner shall have any right of action or claim for damages against any one on account of the grade or elevation at which such road, street, alley or public way may hereafter be constructed, or on account of the bank slopes constructed within the limits of the said ten (10) foot easement.

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8. The Developer reserves the right to build the entrance sign(s) at the entrance(s) for the Subdivision. Once constructed, the entrance sign shall become the property of the Association. The Developer reserves all rights of ingress and egress onto said Common Area as may be necessary to construct said entrance sign.

9. Each Alley Loaded Lot Owner (for the purposes of this paragraph "Grantor") grants to the Alley Loaded Lot Owner adjacent its restricted wall (the "Adjacent Owner") a recreational and use easement (the "Recreational and Use Easement") over the land located next to Grantor's restricted wall, spanning three (3) to twenty (20) feet in width from the Grantor's restricted wall to the Grantor's property line, and spanning a length from Adjacent Owner's front fence to the rear of the Adjacent Owner's garage, or to the Adjacent Owner's rear fence, if any. The "restricted wall" is the exterior side of each Home built on an Alley Loaded Lot with minimum windows. As shown on the preliminary site plan, the width of such Recreational and Use Easement may vary from three (3) to twenty (20), depending on the location of a given Home relative to the property line it shares with the adjacent Home. The Adjacent Owner shall maintain the lawn and/or landscape the area contained in the Recreational and Use Easement, and may install in it a deck or patio and may add other ornamental or landscape features. However, the Adjacent Owner shall have no right to affix anything (including vines) to the restricted wall. The Grantor shall have full access to said Recreational and Use Easement for the purpose of maintaining Grantor's Home.

ARTICLE VII
GENERAL PROVISIONS

Section 1. Enforcement. The Association, or any Lot Owner, shall have the right to enforce, by any proceeding at law or in equity, all restrictions, conditions, covenants, reservations, liens and charges now or hereafter imposed by the provisions of this Declaration. Failure by the Association, or by any Lot Owner, to enforce any covenant or restriction herein contained shall in no event be deemed a waiver of the right to do so thereafter.

Section 2. Fines. The Board shall have the power to impose reasonable fines against Owners or occupants, which shall be an assessment of the Lot, shall constitute a lien on the property of the violating Owner or Occupant and may be collected in the same manner provided for the collection of assessments as above stated. The Board also shall have the authority to suspend an Owner's right to vote or to use the Common Area for violation of any duty imposed under the Declaration, the By-Laws, or any Rules and Regulations duly adopted hereunder, provided however; nothing herein shall authorize

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the Association or the Board to limit ingress and egress to or from a Lot. In the event that any Occupant of a Lot violates the Declaration, the By-Laws, or any Rules and Regulations and a fine is imposed, the fine shall first be assessed against the Occupant; provided however, if the fine is not paid by the Occupant within the time period set by the Board, the Owner shall pay the fine upon notice from the Association. The failure of the Board to enforce any provision of the Declaration, the By-Laws or any Rules and Regulations shall not be deemed as a waiver of the right of the Board to do so thereafter. A fine will automatically be assessed for a violation of the Architectural Review Committee approval requirements and Design Standards.

Section 3. Severability. Invalidation of any one of these covenants or restrictions by judgment or court order shall in no way affect any other provisions which shall remain in full force and effect.

Section 4. Duration and Amendment. The covenants and restrictions of this Declaration shall run with and bind the land, for a term of thirty (30) years from the date this Declaration is recorded, after which time they shall be automatically extended for successive periods of ten (10) years unless an instrument signed by a majority of those Owners then owning the Lots has been recorded prior to the expiration of said 30-year period or any said 10-year period, as the case may be, agreeing to terminate said covenants or to modify said covenants in whole or in part for the next 10-year period. Except as provided below, the provisions of this Declaration may be amended by Developer, without joinder of the Owner of any Lot, for a period of five (5) years from the date of recordation of this instrument. Thereafter, this Declaration may be amended by the affirmative vote of at least three-fourths (3/4ths) of the votes of the Owners. No such amendment shall become effective until the instrument evidencing such change has been filed of record signed by the required number of Lot Owners. Notwithstanding the foregoing, the Owners of the Lots shall have no right to amend the provisions under this Declaration concerning the right of Developer to subject certain additional property to these restrictions or reasons contained in Section 9 without the prior written consent of Developer. In addition, notwithstanding anything to the contrary contained herein, Developer reserves the right to file any amendments that may be necessary to correct clerical or typographical errors in this Declaration, and to make any amendments that may be necessary to conform the Declaration with regulations of the Federal Home Loan Mortgage Corporation, Federal Housing Administration, the Veterans Administration or other applicable regulations that may be necessary to assure lender approval of the Subdivision. For so long as the Developer maintains ownership of any Lots, any amendments which would provide the annexation of additional properties, the merger of the Subdivision with any other similar project or the consolidation of the Subdivision with such similar project, the mortgaging of Common Areas, the dedication of Common Areas, or the dissolution or amendment of the provisions of this Declaration, shall require the prior written approval of the Veterans Administration or the Federal Housing Administration, if such approval is required by said agencies as a condition to making

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loans on homes constructed in the Subdivision. However, such approval shall not be required in order to subject the Property described in Section 9 below to this Declaration.

Section 5. Appointment of Successor Developer; Resignation of Developer. Developer reserves the right to assign its rights as Developer to any other person as to all or any portion of the Property by written instrument specifically setting out such assignment and any such assignee shall become the Developer hereunder upon such assignment with respect to the portion of the Property so assigned. Developer shall have the right at any time upon sixty (60) days written notice to the Association to resign as Developer of the Subdivision and shall thereafter be freed from any and all obligations imposed upon Developer upon the effective date of such resignation. Any representatives of Developer on the Association's Board may also resign at any time upon written notice to the Association.

Section 6. Headings and Binding Effect. Headings are 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 rights set forth herein shall be binding upon and inure to the benefit of the respective heirs, executors, successors and assigns of the Developer and all persons claiming by, through or under Developer.

Section 7. Unintentional Violation of Restrictions. In the event of unintentional violation of any of the foregoing restrictions with respect to any Lot, the Developer or its successors reserves the right, but shall have no obligation, (by and with the mutual written consent of the Owner or Owners of such Lot) to change, amend, or release any of the foregoing restrictions as the same may apply to that particular Lot.

Section 8. Books and Records. The books and records of the Association shall, during reasonable business hours, be subject to inspection by any member upon five (5) days written prior notice. The charter, bylaws of the Association and this Declaration shall be available for inspection by any member at the principal office of the Association where copies may be purchased at a reasonable cost.

Section 9. Conflicts. In the event of any conflict between the provisions of this Declaration and the bylaws of the Association, the provisions of this Declaration shall control.

Section 10. Developer's Right To Add Additional Property To The Subdivision.

Developer and its successors and assigns, reserves the right to add additional land to the terms of this Declaration by means of a Supplemental Declaration to be signed by Developer or its successors and assigns and recorded in the Davidson County or Williamson County Register of Deed's Office. The additional property must be near the Property. Upon the addition of any such additional property, all Lot Owners within such

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property shall have the same rights and obligations as all other Lot Owners in the Subdivision effective with the date of recordation of the Supplemental Declaration adding such additional property to the Subdivision.

Section 11. Consent to Rezoning and Annexation. Every Owner shall be deemed to have consented to any rezoning of the Property or any of the additional property which may be added to the Subdivision as described in Section 9 above which may be necessary for the development of additional sections or the addition of such property to the Subdivision

Section 12. Miscellaneous HUD Compliance Requirements. Notwithstanding anything to the contrary contained in this Declaration, (i) annexation of additional properties, merger or consolidation, mortgaging or dedication of the common areas, dissolution, and amendment of this Declaration or Articles of Incorporation of the Association requires prior approval of HUD/VA as long as there exists Class B membership in the Corporation and (ii) if the Association is dissolved, the assets of the Association shall be dedicated to a public body, or conveyed to a non-profit organization with purposes similar to the Association; (iii) amendments to he Declaration must be approved by two-thirds vote of the Owners; (iv) Class B Membership shall cease no later than December 31, 2015; (v) the Common Area cannot be mortgaged or conveyed without the consent of at least two thirds (2/3rds) of the Lot Owners (excluding the Developer).

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IN WITNESS WHEREOF, the undersigned, being the Developer herein, have hereunto set their hands this ____ day of _____, 2023.
.

ROCK SPRINGS DEVELOPMENT, LLC
By:_____
Its: _____

STATE OF TENNESSEE)
COUNTY OF DAVIDSON)

Personally appeared before me, the undersigned, a Notary Public in and for the county and state aforesaid, _____ with whom I am personally acquainted, and who acknowledged that he executed the foregoing instrument for the purposes therein contained and who further acknowledged that he is the President of ROCK SPRINGS INVESTMENT PARTNERS, a Tennessee general partnership company, the within named bargainor, and is authorized to executed this instrument on behalf of the company.

Witness my hand and official seal at office, on this the ____ day of _____, 2006.

_____
Notary Public

My Commission Expires:_____

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EXHIBIT "A"

LEGAL DESCRIPTION

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EXHIBIT "B"

BY-LAWS
OF
ROCK SPRINGS HOMEOWNER'S ASSOCIATION, INC.

ARTICLE I
DEFINITIONS

The following words, when used herein, shall have the following meanings:

Section 1. "Association" shall mean Rock Springs Homeowners Association, Inc. 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" recorded simultaneously herewith in the Register's Office for Davidson County and Williamson County, Tennessee, as hereafter amended.

Section 4. "Developer" 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 Area" shall have the meaning given it in the Declaration.

Section 7. "Lot" shall have the meaning given it in the Declaration.

Section 8. "Lot Owner" shall have the meaning given it in the Declaration.

Section 9. "Plat" shall have the meaning given it in the Declaration.

Section 10. "Property" shall have the meaning given it in the Declaration.

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ARTICLE II
NAME AND LOCATION

The name of the Association is Rock Springs Homeowners Association, Inc. The principal office of the Association shall be located at Ghertner & Company, 413 7th Avenue South, Nashville, Davidson County, TN 37203 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 Davidson or County of Williamson, 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 Developer or (b) Three (3) years following conveyance of the first Lot by the Developer. 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, twenty percent (20%) 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

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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 Developer and who shall serve until the Transfer of Control (as defined in the Declaration). After the Transfer of Control (as defined in the Declaration), 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. After the Transfer of Control, the Owners in the Town Home Site shall be permitted to have at least one (1) of the five members of the Board of Directors be a representative from the Town Home Site. After the Transfer of Control, the Owners from the Supplemental Maintenance Lots shall be permitted to have at least one (1) of the five members of the Board of Directors be a representative from the Supplemental Maintenance Lots. The one (1) Board of Director representative requirement from each of the Town Home Site and Supplemental Maintenance Lots shall be waived in any election whereby there is no Owner from those respective sites running for election to the Board of Directors. In no event shall the waiver of this representation entitlement in any election be deemed a permanent waiver of this entitlement.

Section 2. Term of Office. Directors shall be elected for terms of two (2) years or until their successor is elected. In addition, the Directors shall be grouped into three (3) separate classes so that approximately one-third of the existing total number of Directors

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are up for re-election each year. Thus, as to the initial Directors, certain Directors will serve for one year terms, certain Directors shall serve for two year terms, and certain Directors shall serve for three year terms as may be determined by the initial Directors elected by the Owners. Thereafter, Directors shall be elected for two year staggered terms so that only one third of the directors are up for reelection in any one year .

Section 3. Removal. Any Director may be removed from the Board, with or without cause, by a majority vote of the Members of the Association, or in the case of the initial Board, by the Developer. In the event of death, resignation or removal of a Director, his successor shall be selected by the remaining Members of the Board, or in the case of the initial Board, by the Developer, 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. 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. Nomination for election to the Board of Directors shall be made by a Nominating Committee. Nomination may also be made from the floor at the annual meeting. The Nominating Committee shall consist of a Chairman who shall be a member of the Board of Directors and two or more Members of the Association. The Nominating Committee shall be appointed by the Board of Directors prior to each annual meeting of the Members, to serve from the close of such annual meeting until the close of the next annual meeting and such appointment shall be announced at each annual meeting. The Nominating Committee shall make as many nominations for election to the Board of Directors as it shall in its discretion determine, but not less than the number of vacancies that are to be filled. Such nominations may be made from among Members or non-Members.

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

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MEETING OF DIRECTORS

Section 1. Regular Meetings. Regular meetings of the Board of Directors shall be held at intervals established by the Board upon at least three (3) days written notice, (or without notice if the time and place has been previously fixed by the Board), at such place and hour as may be fixed from time to time by resolution of the Board. 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' 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.

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 Area 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 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 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.

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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 and supplemental assessment against each Lot at least thirty (30) days in advance of each annual assessment and supplemental assessment period; and

(2) Send written notice of each assessment to every Lot 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 Lot 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 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 Area 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 to act upon any matter as required under the Declaration

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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.

ARTICLE VIII
OFFICERS AND THEIR DUTIES

Section 1. Enumeration of Officers. The officers of this Association shall be a president , who shall at all times be a member of the Board of Directors, and a secretary, and such other officers as the Board 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 and each shall hold office for one (1) year unless he shall sooner resign, or shall be removed, or otherwise disqualified to serve.

Section 4. Special Appointments. The Board 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 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. Any officer may resign at any time by giving written notice to the Board, 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. 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 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.

(c) Secretary. The secretary shall record the votes and keep the minutes of all meetings and proceedings of the Board and the Members; serve notice of meetings of the Board 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.

(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 shall appoint a Architectural Review Committee as provided in the Declaration and a Nominating Committee as provided in these Bylaws. 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 a Lot 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

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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 Lot 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 Lot Owner may waive or otherwise escape liability for the assessments provided for herein by non-use of the Common Area 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

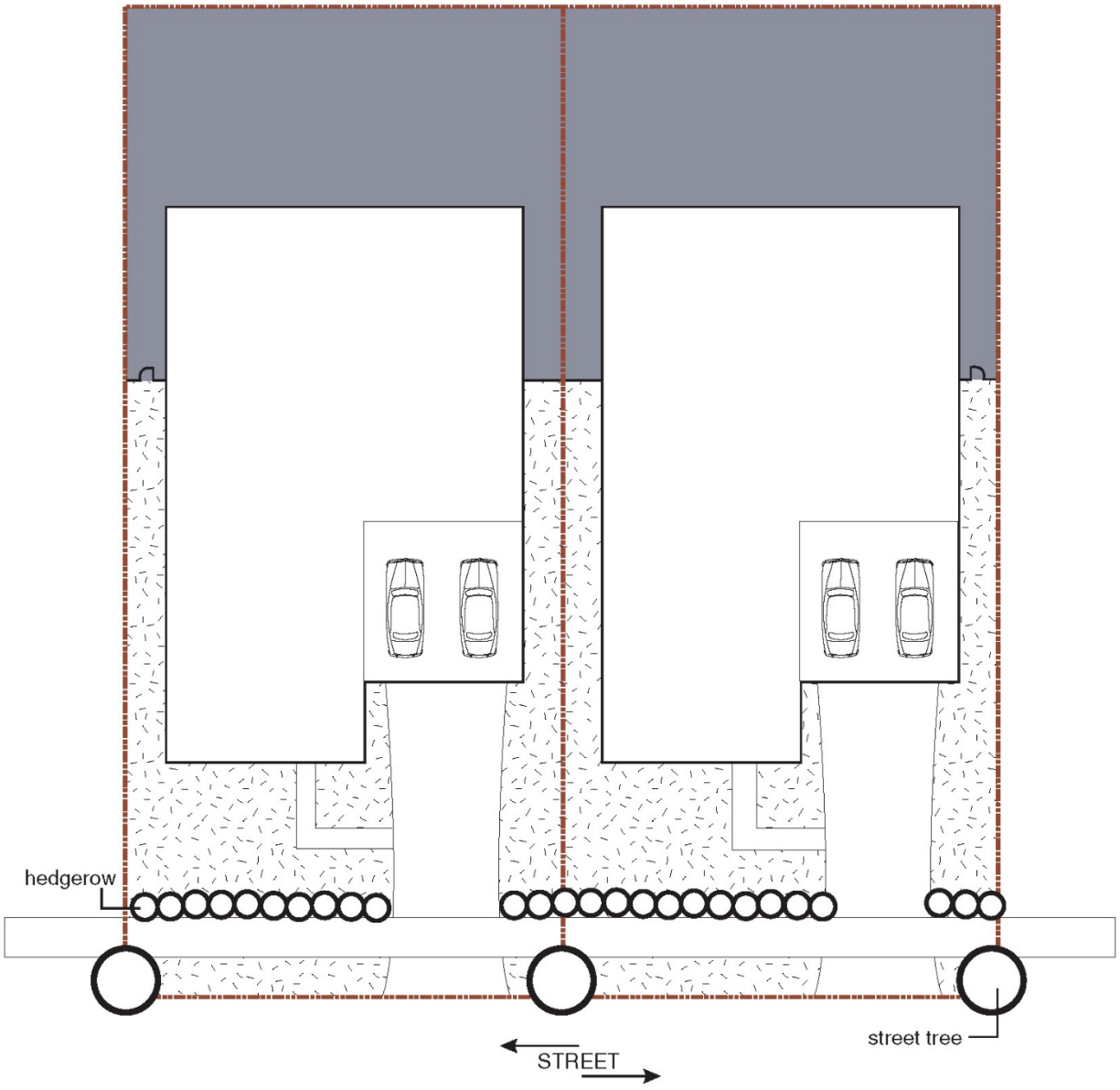
Section 1. The fiscal year of the Association shall begin on the first day of January and end on the 31st day of December of every year, except that the first fiscal year shall begin on the date of incorporation.

Section 2. HUD has the right to veto amendments to the By-Laws while there is Class B Membership.

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EXHIBIT C

BURKITT PLACE
55' SUPPLEMENTAL MAINTENANCE LOT EXHIBIT

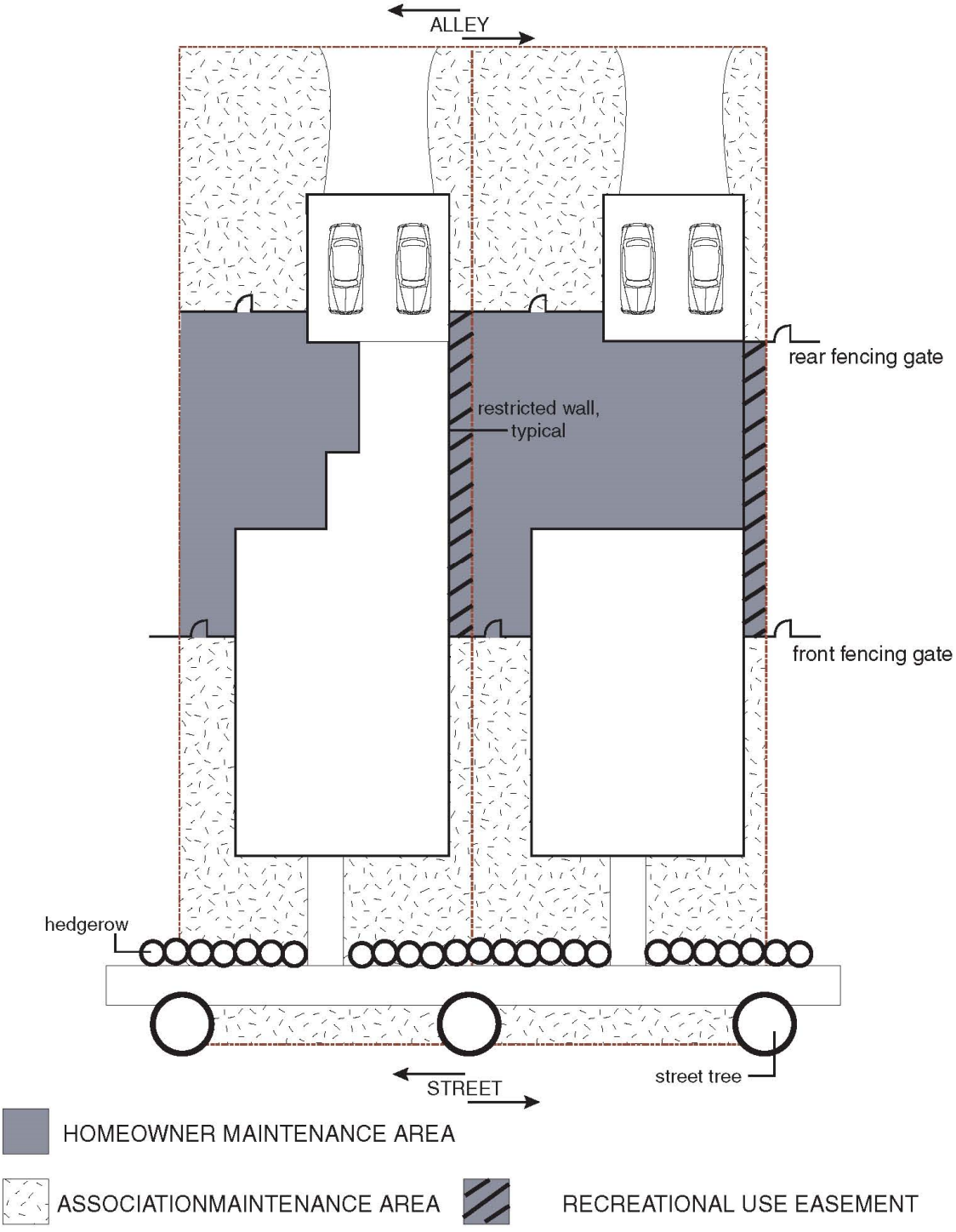


HOMEOWNER MAINTENANCE AREA

ASSOCIATION MAINTENANCE AREA

EXHIBIT C

BURKITT PLACE
40' SUPPLEMENTAL MAINTENANCE LOT EXHIBIT



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: Rock Springs

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

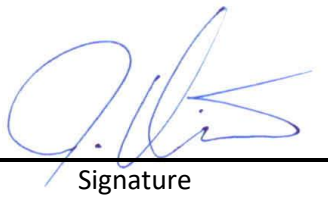
DEVELOPMENT SERVICES
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COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

PUD Specific Items Not applicable to this submittal

- ❑ Legal Description of Property
- ❑ Owner's Affidavit
- ❑ List of all variances 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

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:

Jacob Vincent		03/20/2023
Print Name	Signature	Date

TRAFFIC IMPACT STUDY

for

Rock Springs

City of Columbia, Tennessee

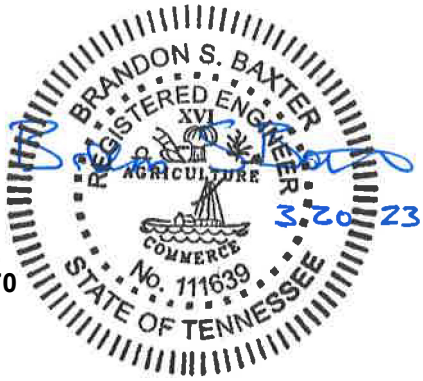
March 20, 2023

Prepared for:

Rock Springs Investment Partners
213 Overlook Circle, Suite B-2
Brentwood, Tennessee 37027

Prepared by:

RaganSmith



RAGAN-SMITH-ASSOCIATES, INC.
315 Woodland Street, P.O. Box 60070
Nashville, Tennessee 37206-0070
(615) 244-8591

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ROCK SPRINGS
TRAFFIC IMPACT STUDY

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EXECUTIVE SUMMARY

INTRODUCTION

The proposed Rock Springs development is located south of Bear Creek Pike between Rock Springs Road and Interstate 65 in the City of Columbia, Tennessee. When completed, Rock Springs will consist of 187 single family homes. Access to the Rock Springs development is proposed to tie in to Rock Springs Road and adjacent developments to promote interconnectivity.

SITE TRAFFIC

The traffic impact of the Rock Springs development is based upon a calculation of the number of vehicle trips that will enter and/or exit the site. The analysis periods of this study are in the a.m. and p.m. peak hours of a typical weekday. Therefore, trips were generated according to the *Trip Generation Manual, 11th Edition* published by the Institute of Transportation Engineers (ITE). The trip generation for the Rock Springs development is shown in the table below.

ROCK SPRINGS									
TRIP GENERATION									
Land Use	Land Use Code	Total Units	Daily Trips	A.M. Peak Hour			P.M. Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Single Family	210	187 Units	1,795	33	99	132	113	66	179

TRAFFIC ANALYSIS

The following public intersections were analyzed for capacity deficiencies and improvement needs:

- Bear Creek Pike at Lasea Road
- Bear Creek Pike at Rock Springs Road
- Rock Springs Road at Project Access

For these intersections, the following traffic scenarios were analyzed, where applicable:

- 2023 Adjusted Traffic
- 2030 Background Traffic
- 2030 Total Traffic with all traffic projected in the study area, including Rock Springs development.

CONCLUSIONS AND RECOMMENDATIONS

Bear Creek Pike at Lasea Road

- No intersection control changes, traffic signal modifications or additional laneage are recommended at this intersection due to the impact of the Rock Springs development.

Bear Creek Pike at Rock Springs Road

- No intersection control changes or additional laneage are recommended at this intersection due to the impact of the Rock Springs development.

Rock Springs Road at Project Access

- Right turn lane and left turn lane warrants were conducted for the intersection to determine if the projected total traffic volumes meet the volume-based warrants. It was determined that additional turn lanes are not warranted based on the expected traffic volumes.

- The east leg of the intersection should be designed to meet City of Columbia standards, with a minimum of one lane exiting and one lane entering.

- Proposed grading, landscaping, and monument signage at the entrance to the Rock Springs development should be located outside the intersection sight triangles. Features within the intersection sight triangles should be designed so that sight lines are not obstructed.

- During the preparation and review of the Rock Springs Access construction documents, it should be confirmed that there is the minimum intersection sight distance available.

I. INTRODUCTION

The purpose of this study is to analyze the transportation-related impacts due to the proposed Rock Springs development located south of Bear Creek Pike between Rock Springs Road and Interstate 65 in the City of Columbia, Tennessee. This report has been requested by the City of Columbia staff as part of the development process.

In order to evaluate the development, an inventory of the existing transportation system was carried out, along with an assessment of its adequacy. Based on the project schedule, a design year was established, and system-wide growth rates were applied to existing traffic volumes. Site traffic was generated, distributed, and assigned to the roadway to quantify the site impact. Transportation analyses were performed in order to assess any site or non-site related impacts on the roadway. Finally, recommendations for roadway improvements and/or transportation system improvements were offered.

II. PROPOSED DEVELOPMENT

A. Project Description

As shown in Figure 1, the proposed Rock Springs site is south of Bear Creek Pike between Rock Springs Road and Interstate 65 in the City of Columbia, Tennessee. The site property contains approximately 107.44 acres and is comprised of Parcel 11.01 and Parcel 11.02 on Maury County Map 92. The property is bound by Rock Springs PUD residential development to the north, vacant land to the east and south, and Rock Springs Road to the west.

The current proposed site layout for Rock Springs consists of 187 single family residential lots. Figure 2 shows the Rock Springs concept plan.

B. Site Access

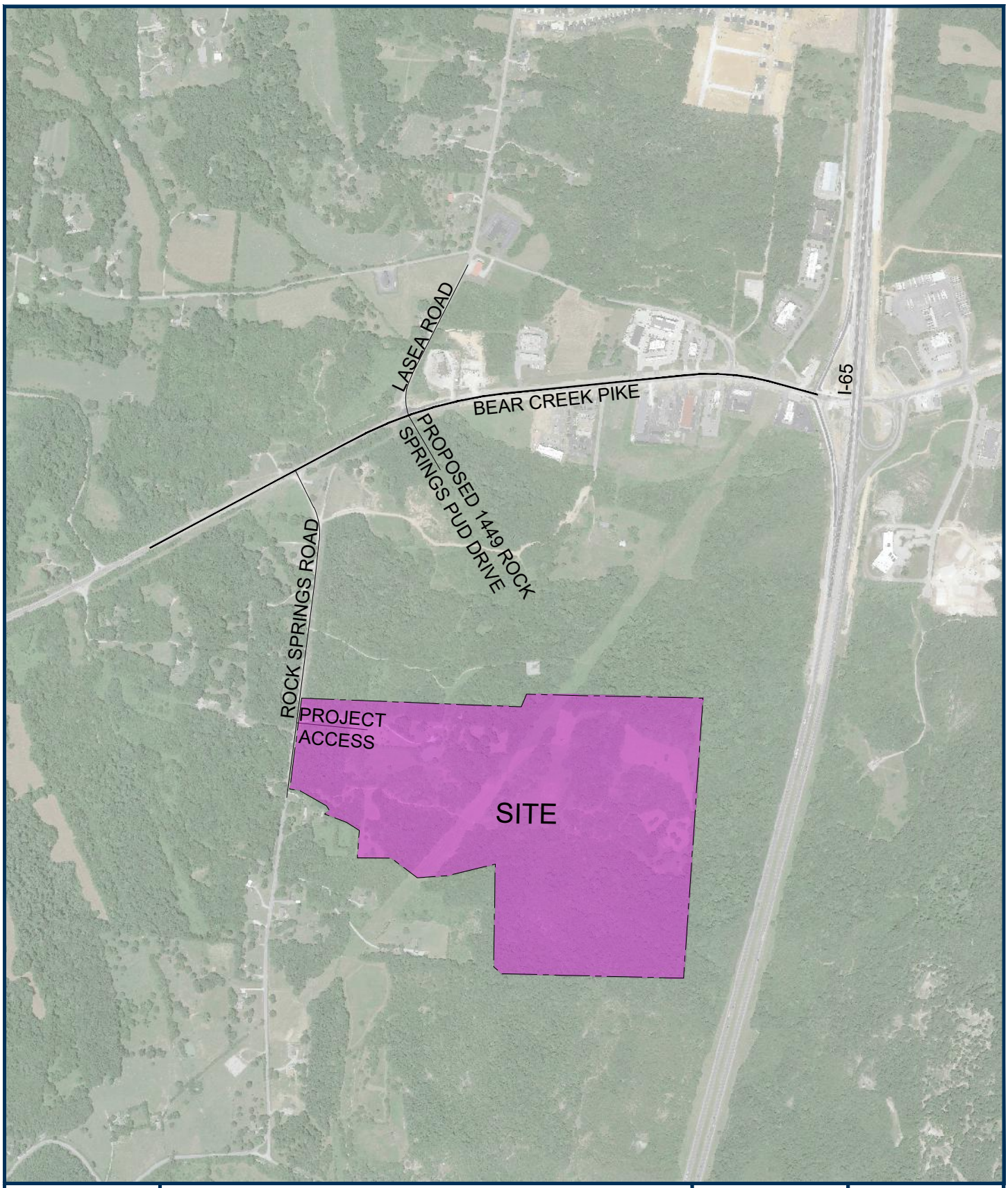
The concept plan shows that access to Rock Springs will be provided at the following locations:

- Project Access: The main access for the Rock Springs development will be provided on Rock Springs Road approximately 2,500 feet south of the intersection with Bear Creek Pike.

- 1449 Rock Springs Road PUD Access: The secondary access for the development will be provided on Bear Creek Pike at the intersection of Lasea Road. The Rock Springs development will tie into a proposed stub out that will be constructed along the southern property line for the 1449 Rock Springs PUD development. This access will not be utilized until the development has completed the stub out connection.

C. Phasing and Timing

The development timeline of Rock Springs anticipates that it will be completed in approximately seven (7) years. For the analysis of this report, the full build-out of Rock Springs has been assumed to occur in the year 2030 and will be analyzed in one phase.

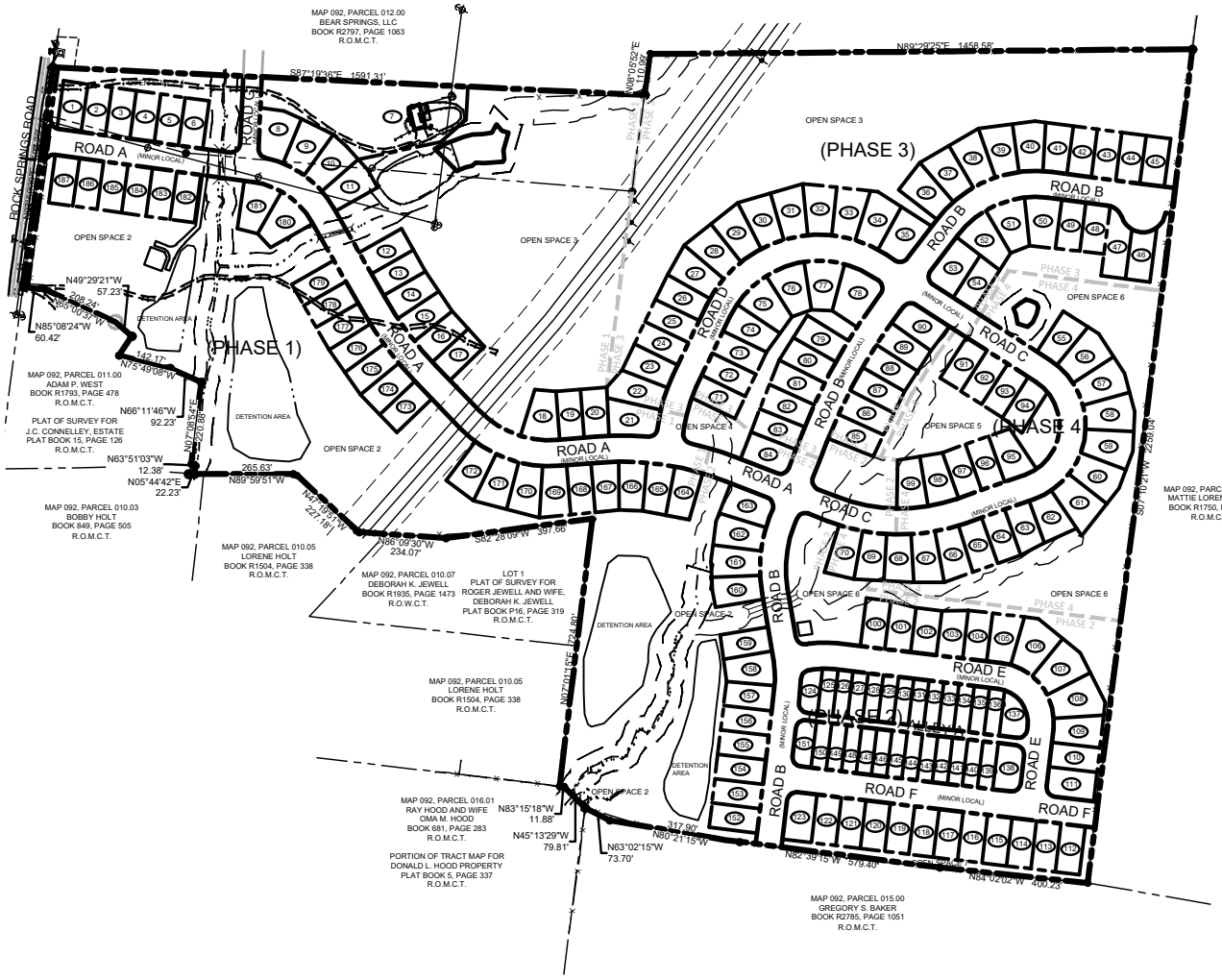


RaganSmith

Rock Springs Development

Location Map

Figure 1



LEGEND

R.O.M.C.T. REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE

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ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=150'

Date: MARCH 20, 2023

Approved By: JFV

Revisions:

Drawing Title:

OVERALL SITE LAYOUT

Drawing No.

2

Project No.

21-0389

III. EXISTING CONDITIONS

A. Transportation System

The existing transportation system in the area is made up of arterial and local roadways which will provide regional and local access to the site. The following roadway will comprise the study area for consideration of the traffic impact of the Rock Springs development.

TABLE 1

EXISTING ROADWAY CHARACTERISTICS

Roadway Name	Designation[1]	Classification	Speed Limit	Lanes	Multimodal
Bear Creek Pike (U.S. Highway 412, State Route 99)	State Route & National Highway System	Principal Arterial [1] Arterial [2]	55 / 45	3	None
Lasea Road	Local Street	Local Street	NP [3]	2	None
Rock Springs Road	Local Street	Minor Collector [1] Collector [2]	40	2	None

[1] Per Tennessee Department of Transportation Maury County Classification Map
[2] Per ConnectColumbia Roadway Functional Classifications
[3] Not Posted

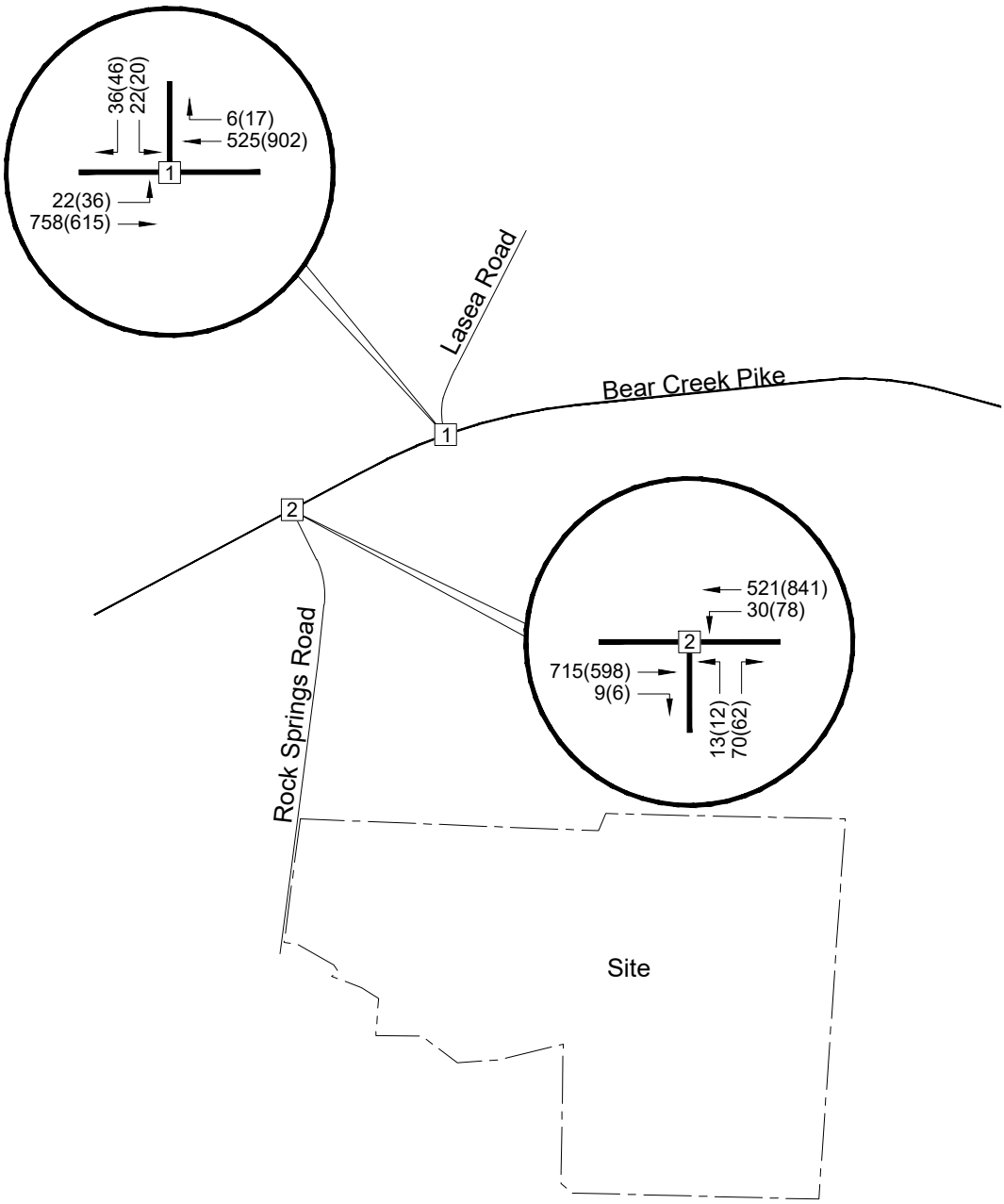
B. Traffic Volumes

The peak hour of the adjacent street traffic was used to determine the impact of Rock Springs on the existing transportation system. Hourly traffic data was collected in March 2023 to identify the peak periods for analysis. Turning movement traffic counts were collected at the following intersections:

- Bear Creek Pike at Lasea Road
- Bear Creek Pike at Rock Springs Road

At the time of the traffic count collection, Bear Creek Pike is under construction in the area of the Interstate 65 interchange. The Bear Creek Pike traffic count data from 2021 was compared to the traffic count data collected in 2023 and it was noted that the 2023 eastbound and westbound through volumes were lower than the 2021 through volumes. The March 2023 eastbound and westbound through volumes were grown by 8% to account for the lower traffic volumes that may be due to the ongoing construction activity.

Existing peak hour traffic volumes are shown in Figure 3.



Peak Hours
AM (PM)

RaganSmith

Rock Springs Development

2023 Adjusted Traffic Volumes

Figure
3

IV. FORECASTED BACKGROUND TRAFFIC

A. Introduction

Before any impacts to the study area could be addressed, some estimate of background traffic volumes for the horizon years had to be established. Background traffic volumes were established by segregating potential growth into two categories:

- Specific development traffic growth within the immediate study area
- Growth due to small scale development and/or general population growth

B. Specific Development Growth

Based on discussions with City of Columbia staff, there are four known specific, approved developments in the general study area that will contribute new traffic to the system prior to the completion of Rock Springs in 2030. The trip generation for the background projects is shown in Table 2. Additional information about the background developments can be found in the appendix of this report.

TABLE 2

TRIP GENERATION: BACKGROUND DEVELOPMENTS

Development	Daily Trips	A.M. Peak Hour			P.M. Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Green Property Lasea Road[(1)]	2,068	41	122	163	137	80	217
Crichton Property[(2)]	1,532	22	74	96	71	42	113
Old Highway 99[(3)]	3,314	64	160	224	186	113	299
1449 Rock Springs Road PUD[(4)]	5,545	81	262	343	254	150	404

[(1)] Source: Green Property Lasea Road Traffic Impact Study, September 2021.
[(2)] Source: Crichton Property Traffic Impact Study, October 2021.
[(3)] Source: Old Highway 99 Traffic Impact Study, January 2023
[(4)] Source: 1449 Rock Springs Road PUD Traffic Impact Study, April 2021.

The following improvements are to be constructed by the background developments at the study intersection and have been included in the background traffic and total traffic analysis.

- Bear Creek Pike at Lasea Road:
  - Install traffic signal - *1449 Rock Springs PUD*
  - Construct the 1449 Rock Springs PUD access drive along the northbound approach with one inbound lane and two outbound lanes. The northbound turn lanes should include a minimum storage length of 175 feet and appropriate taper. – *1449 Rock Springs PUD*
  - Install an exclusive eastbound right turn-lane along Bear Creek Pike with 230 feet of storage and 180 feet of taper. – *1449 Rock Springs PUD*

- Bear Creek Pike at Rock Springs Road
  - Remove the existing raised median island and configure northbound approach to include one southbound through lane, one northbound left-turn lane with 75 feet of storage, and one northbound right-turn lane- *1449 Rock Springs PUD*
  - Install an exclusive right turn lane along the eastbound approach of Bear Creek Pike with 180 feet of storage - *1449 Rock Springs PUD*

C. Annual Growth

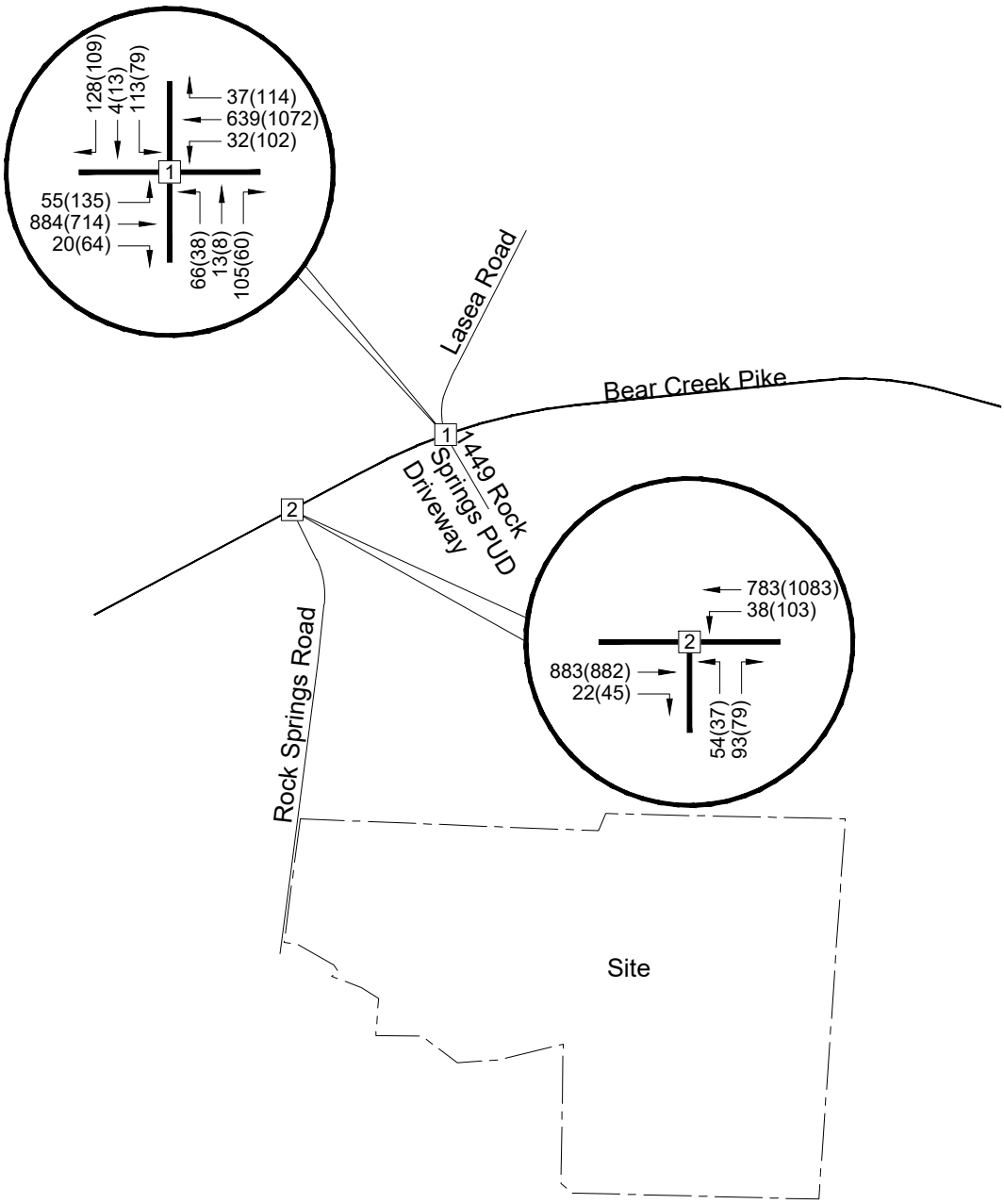
To establish traffic growth due to population growth or small-scale development, Tennessee Department of Transportation (TDOT) historical traffic was obtained for Bear Creek Pike and Rock Springs Road in the study area. Based upon linear regression analysis of the historical traffic data, a ***2 percent annual growth rate*** will be used as the base growth for the existing traffic volumes.

D. Background Traffic Summary

Background traffic for the future traffic forecasts was compiled based on the following:

- Existing traffic count data
- Specific background developments
- 2% annual increase of traffic volumes for the period from 2023 to 2030

Background traffic volumes on the study area roadways, representing existing traffic volumes plus background growth, for the year 2030 are shown in Figure 4.



Peak Hours
AM (PM)

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Rock Springs Development

2030 Background Traffic Volumes

Figure
4

V. PROPOSED SITE TRAFFIC

A. Site Trip Generation

In order to quantify site-related impacts within the study area, some estimates of site trip generation and traffic assignment had to be established. Trip generation rates for the development were established using information for the weekday a.m. and p.m. peak hour of the adjacent street as shown in the ITE *Trip Generation Manual, 11th Edition*.

Trip generation for the Rock Springs development is shown in Table 3.

TABLE 3

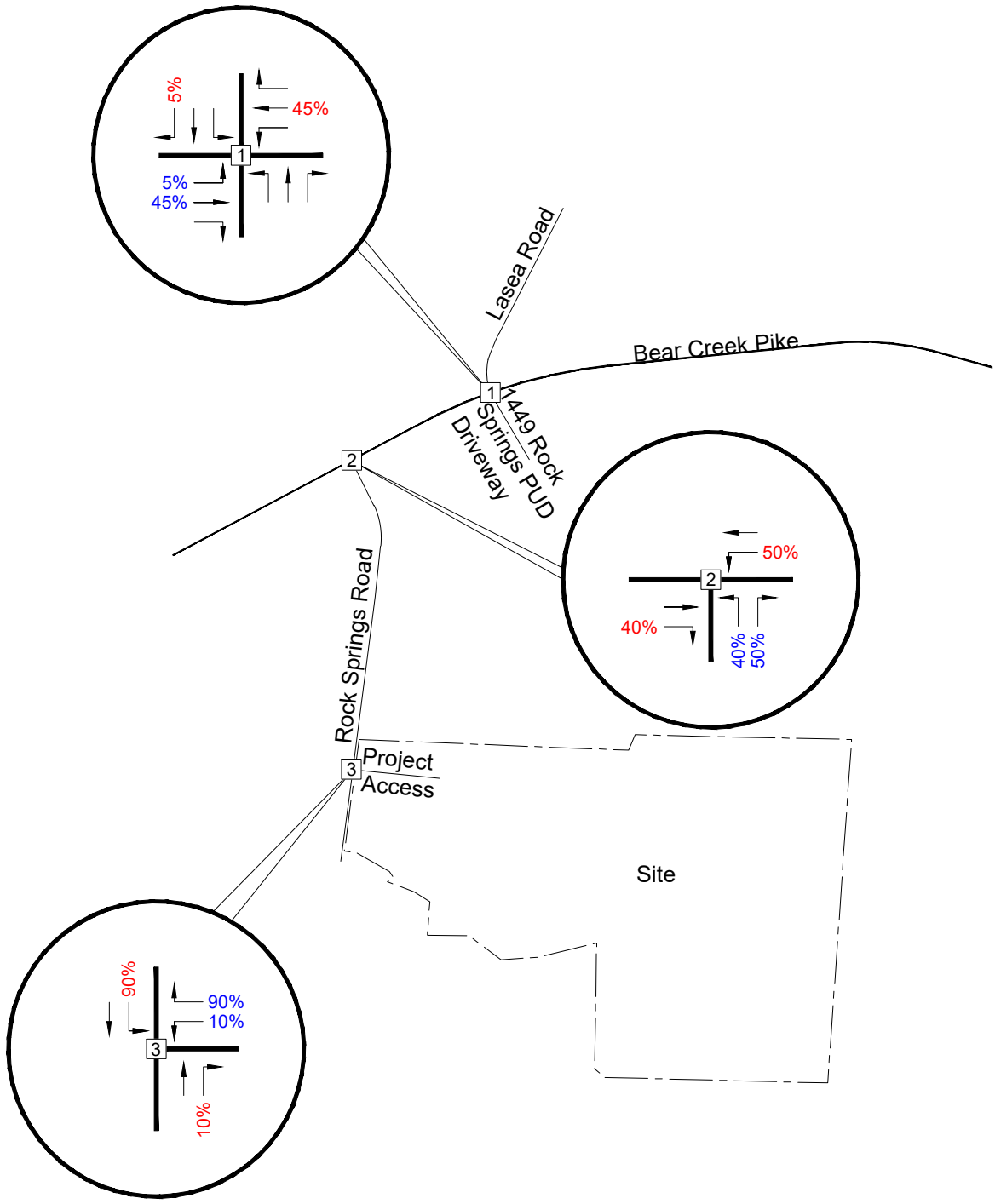
ROCK SPRINGS TRIP GENERATION

Land Use	Land Use Code	Total Units	Daily Trips	A.M. Peak Hour			P.M. Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
Single Family	210	187 Units	1,795	33	99	132	113	66	179

B. Site Trip Distribution and Assignment

Site trips were distributed based primarily upon the prevalent commuter traffic patterns in the area and the proximity and routes to major transportation facilities. Figure 5 shows the distribution of the site trips for Rock Springs.

Site traffic volumes generated by Rock Springs in the horizon year 2030 are shown in Figure 6. The accumulation of existing, background growth and site-generated traffic for the horizon year 2030 is shown in Figure 7.

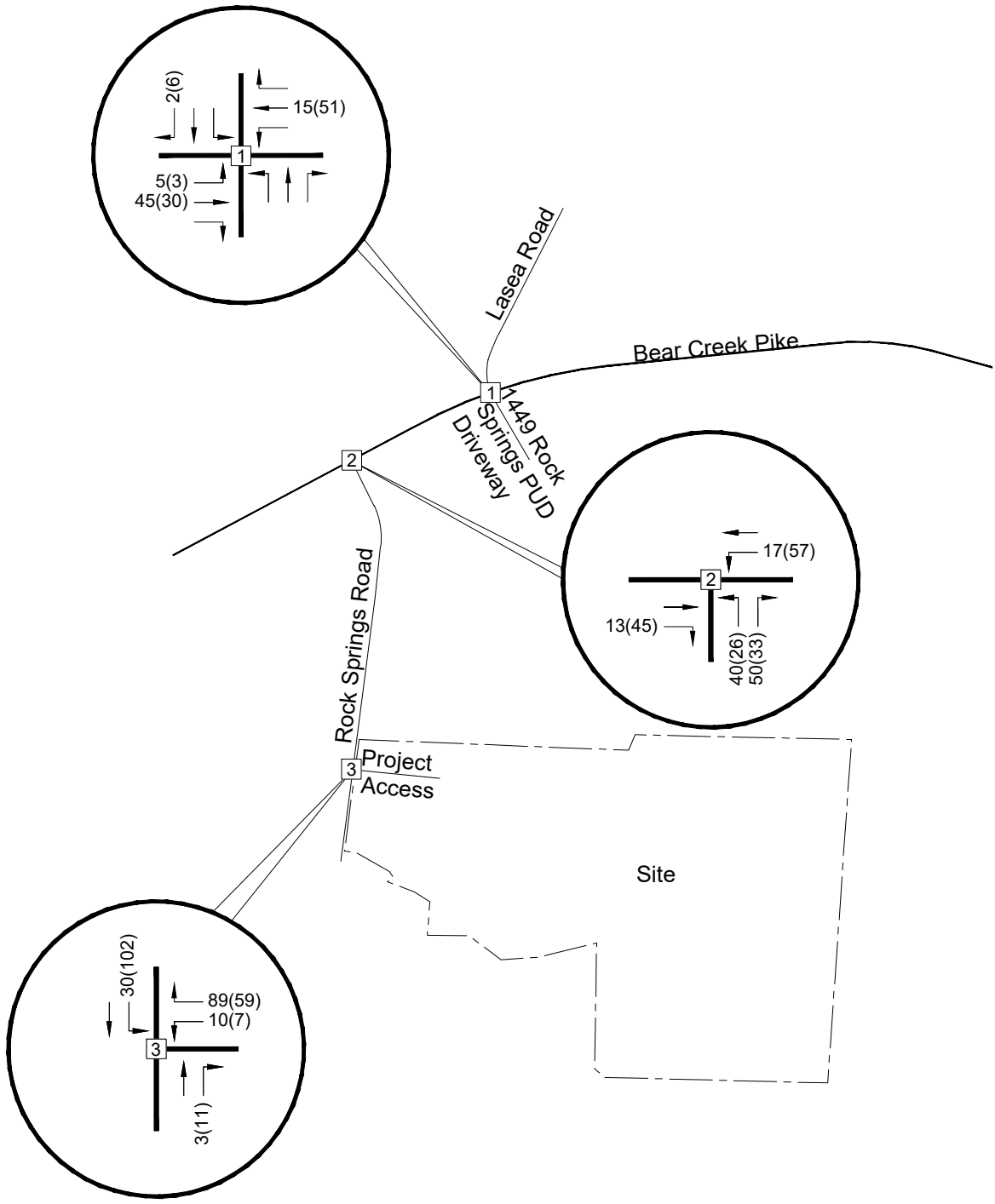


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Rock Springs Development

Site Trip Distribution

Figure 5



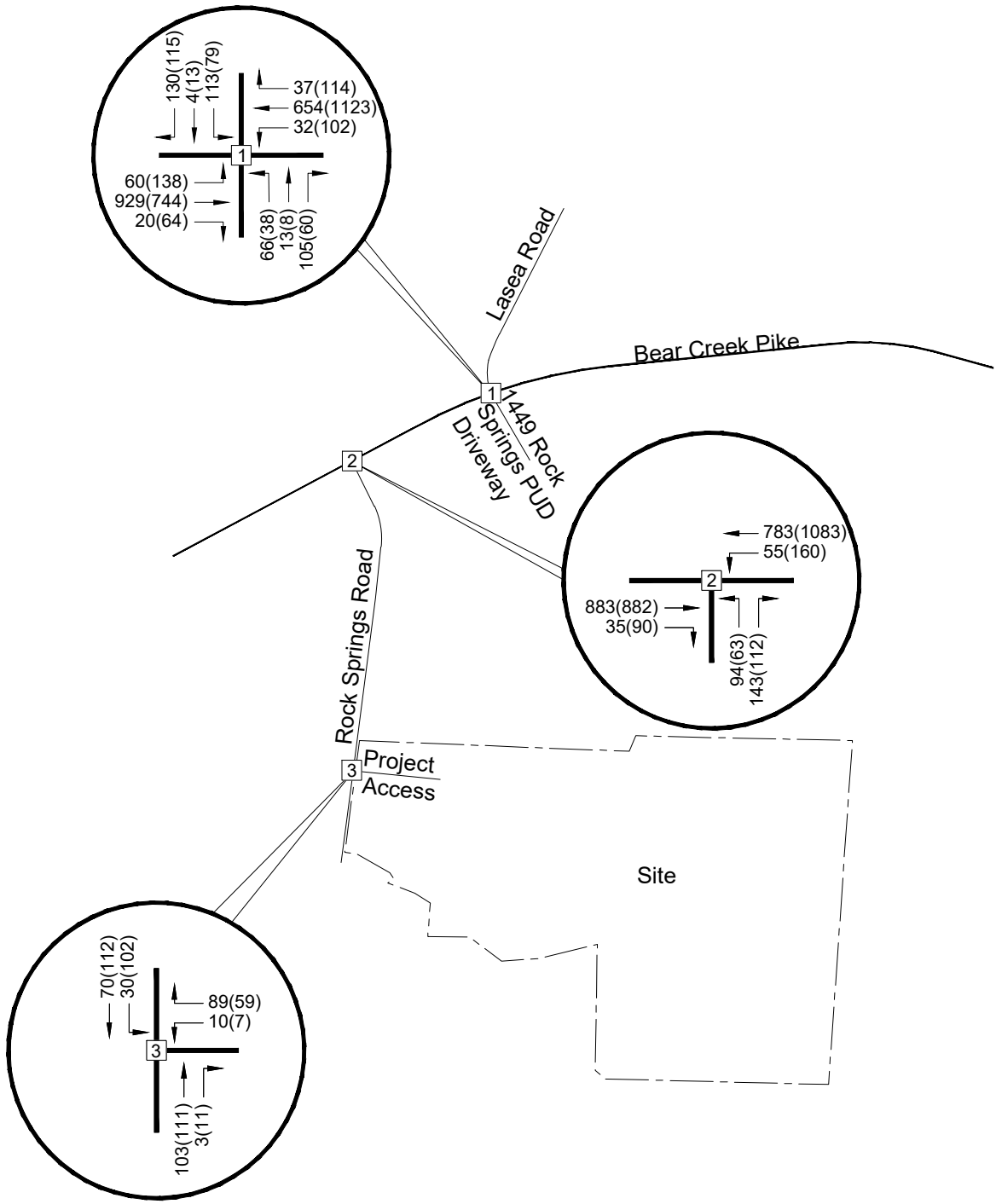
Peak Hours
AM (PM)

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Rock Springs Development

Site Trips

Figure
6



Peak Hours
AM (PM)

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Rock Springs Development

2030 Total Traffic Volumes

Figure
7

VI. TRANSPORTATION ANALYSIS

A. Intersection Capacity Analysis

In order to gauge the site impact and identify capacity deficiencies, intersection capacity analyses were conducted at the proposed Rock Springs study area intersections. Capacity analyses were conducted according to the methodology and procedures outlined in the *Highway Capacity Manual*, HCM 6th Edition, published by Transportation Research Board. Intersections were analyzed for capacity deficiencies and geometric improvement needs during the a.m. and p.m. peak hours for existing, background and total traffic conditions.

It should be noted that the Background and Total traffic conditions analysis includes the improvements recommended in the background developments traffic studies.

Level of service (LOS) criteria for unsignalized intersections is shown in Table 4 below.

TABLE 4

LEVEL OF SERVICE DESCRIPTIONS FOR UNSIGNALIZED INTERSECTIONS

Level of Service	Description	Control Delay (sec./veh.)
A	Usually no conflicting traffic	0 - 10
B	Occasionally some delay due to conflicting traffic	> 10 - 15
C	Delay is noticeable but not inconveniencing	> 15 - 25
D	Delay is noticeable and irritating, increased risk taking	> 25 - 35
E	Delay approaches tolerance level, risk taking likely	> 35 - 50
F	Delay exceeds tolerance level, high likelihood of risk taking	> 50

Source: Highway Capacity Manual, HCM 2010

Level of service (LOS) criteria for signalized intersections is shown in Table 5 below.

TABLE 5

LEVEL OF SERVICE DESCRIPTIONS FOR SIGNALIZED INTERSECTIONS

Level of Service	Description	Control Delay (sec. /veh.)
A	Volume-to-capacity ratio is low, progression is extremely favorable, most vehicles travel through intersection without stopping.	0 - 10
B	Volume-to-capacity ratio is low, progression is good and/or short cycle lengths is present, more vehicles stop than for LOS A.	> 10 – 20
C	Progression is favorable and/or cycle length is moderate, number of vehicles stopping is significant although many still pass through intersection without stopping.	> 20 – 35
D	Volume-to-capacity ratio is high, progression is ineffective, cycle length is long, many vehicles stop.	> 35 – 55
E	Volume-to-capacity ratio is high, progression is unfavorable, cycle length is long, many vehicles stop.	> 55 – 80
F	Volume-to-capacity ratio is very high, progression is very poor, cycle length is long, most cycles fail to clear the queue.	> 80

Source: Highway Capacity Manual, HCM 2010

Capacity analysis results for the a.m. peak hour are shown in Table 6.

TABLE 6				
INTERSECTION CAPACITY RESULTS – A.M. PEAK HOUR				
Intersection	**Condition [1]**	**Level of Service (avg. delay/vehicle – sec.)**		
		2023 Existing	**2030 Background**	**2030 Total**
Bear Creek Pike at Lasea Road / 1449 Rock Springs PUD Access	EB Left	A (8.6)	-	-
	TWSC SB	B (14.8)	-	-
	Overall Intersection	-	C (33.3)	C (31.1)
Bear Creek Pike at Rock Springs Road	WB Left	A (9.8)	B (10.8)	B (11.0)
	TWSC NB	C (16.5)	D (25.6)	E (35.3)
Rock Springs Road at Project Access	SB Left	-	-	A (7.7)
	TWSC WB	-	-	A (9.4)
[1] TWSC = Two-way Stop Control				

Capacity analysis results for the p.m. peak hour are shown in Table 7.

TABLE 7				
INTERSECTION CAPACITY RESULTS – P.M. PEAK HOUR				
Intersection	**Condition [1]**	**Level of Service (avg. delay/vehicle – sec.)**		
		2023 Existing	**2030 Background**	**2030 Total**
Bear Creek Pike at Lasea Road / 1449 Rock Springs PUD Access	EB Left	B (10.4)	-	-
	TWSC SB	C (20.5)	-	-
	Overall Intersection	-	C (34.0)	D (39.3)
Bear Creek Pike at Rock Springs Road	WB Left	A (9.2)	B (11.1)	B (12.2)
	TWSC NB	C (15.7)	D (29.3)	E (48.7)
Rock Springs Road at Project Access	SB Left	-	-	A (7.7)
	TWSC WB	-	-	A (9.6)
[1] TWSC = Two-way Stop Control				

B. Turn Lane Warrants

The National Cooperative Highway Research Program (NCHRP) Report 457 provides guidance for evaluating intersection improvements at unsignalized intersections. Specific volume-based warrants have been checked to evaluate the need for right turn and left turn deceleration and storage lanes.

Table 8 below details pertinent right turn lane warrant information for applicable intersections in the study area during 2030 Total Traffic Conditions.

TABLE 8					
RIGHT TURN LANE WARRANT ANALYSIS – 2030 TOTAL TRAFFIC CONDITIONS					
Location	**Peak Hour**	**Advancing Volume**	**Right Turn Volume**	**Speed (mph)**	**Right Turn Lane Warranted[1]**
Rock Spring Road (NB) at Project Access	A.M.	106	3	40	No
	P.M.	122	11		No
[1] Evaluating Intersection Improvements: An Engineering Study Guide, NCHRP Report 457 Transportation Research Board, pg. 22-23					

Table 9 below details pertinent left turn lane warrant information for applicable intersections in the study area during 2030 Total Traffic Conditions.

TABLE 9						
LEFT TURN LANE WARRANT ANALYSIS - 2030 TOTAL TRAFFIC CONDITIONS						
Location	**Peak Hour**	**Advancing Volume**	**Opposing Volume**	**L%**	**Speed (mph)**	**Left Turn Lane Warranted[1]**
Rock Spring Road (SB) at Project Access	A.M.	100	106	30.0%	40	No
	P.M.	214	122	47.7%		No
[1] Evaluating Intersection Improvements: An Engineering Study Guide, NCHRP Report 457 Transportation Research Board, pg. 21-22						

VII. CONCLUSIONS AND RECOMMENDATIONS

A. Bear Creek Pike at Lasea Road

Traffic operations at the intersection of Bear Creek Pike at Lasea Road are expected to operate at level of service C during the a.m. peak hour and level of service D during the p.m. peak hour.

The following recommendations are offered for the intersection of Bear Creek Pike at Lasea Road:

- No intersection control changes, traffic signal modifications or additional laneage are recommended at this intersection due to the impact of the Rock Springs development.

B. Bear Creek Pike at Rock Springs Road

Traffic operations at the intersection of Bear Creek Pike at Rock Springs Road are expected to operate at level of service E during the a.m. and p.m. peak hour. On arterial roads with high peak hour traffic volumes, it is an expected operation characterization that many minor street approaches to stop-controlled intersections will incur delays during peak hours resulting in level of service E or F.

The following recommendations are offered for the intersection of Bear Creek Pike at Rock Springs Road:

- No intersection control changes or additional laneage are recommended at this intersection due to the impact of the Rock Springs development.

C. Rock Springs Road at Project Access

Traffic operations at the intersection of Rock Springs Road at the Project Access are expected to operate at level of service A during the a.m. and p.m. peak hour.

The following recommendations are offered for the intersection of Rock Springs Road at Project Access:

- Right turn lane and left turn lane warrants were conducted for the intersection to determine if the projected total traffic volumes meet the volume-based warrants. It was determined that additional turn lanes are not warranted based on the expected traffic volumes.

- The east leg of the intersection should be designed to meet City of Columbia standards, with a minimum of one lane exiting and one lane entering.

- Proposed grading, landscaping, and monument signage at the entrance to the Rock Springs development should be located outside the intersection sight triangles. Features within the intersection sight triangles should be designed so that sight lines are not obstructed.

- During the preparation and review of the Rock Springs Access construction documents, it should be confirmed that there is the minimum intersection sight distance available.

APPENDIX

A. TRAFFIC COUNTS

B. TRIP GENERATION & TRAFFIC DERIVATION WORKSHEETS

C. CAPACITY ANALYSIS WORKSHEETS – EXISTING TRAFFIC

D. CAPACITY ANALYSIS WORKSHEETS – BACKGROUND TRAFFIC

E. CAPACITY ANALYSIS WORKSHEETS – TOTAL TRAFFIC

APPENDIX A

TRAFFIC COUNTS

Click here for Map

Peak Hour Turning Movement Count

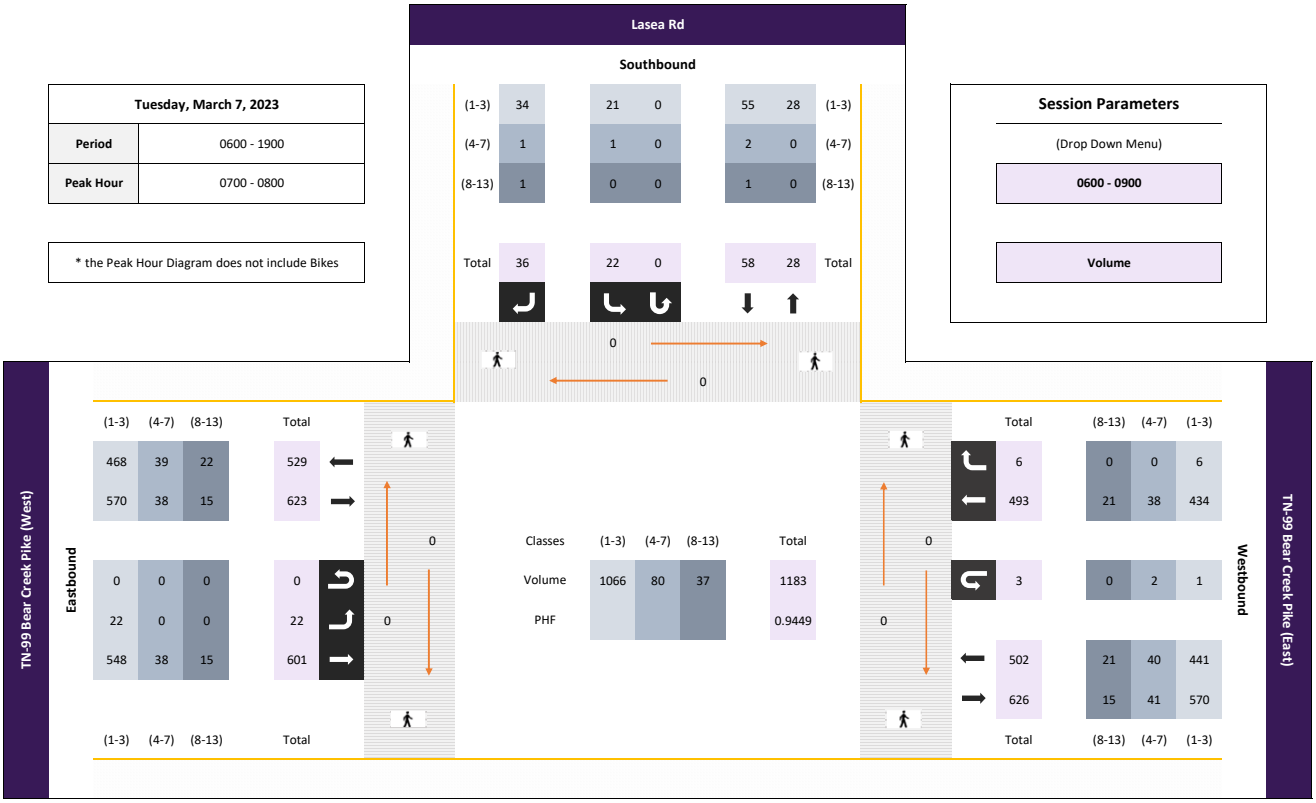
Columbia TN

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Tuesday, March 7, 2023	
Period	0600 - 1900
Peak Hour	0700 - 0800

* the Peak Hour Diagram does not include Bikes



Session Parameters

(Drop Down Menu)

0600 - 0900

Volume

All vehicles

	Southbound					Lasea Rd					Eastbound					TN-99 Bear Creek Pike (West)					Westbound					TN-99 Bear Creek Pike (East)	
Time					App Total	Left 1.1		Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5		U-Turn 1.6	App Total		Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0700 - 0715	-	-	-	-	0	9	-	9	0	18	4	149	-	0	153	-	136	3	0	139	310
0715 - 0730	-	-	-	-	0	2	-	11	0	13	11	152	-	0	163	-	105	1	1	107	283
0730 - 0745	-	-	-	-	0	4	-	7	0	11	5	144	-	0	149	-	114	1	2	117	277
0745 - 0800	-	-	-	-	0	7	-	9	0	16	2	156	-	0	158	-	138	1	0	139	313
Total	0	0	0	0	0	22	0	36	0	58	22	601	0	0	623	0	493	6	3	502	1183
Approach %	0.00	0.00	0.00	0.00	-	37.93	0.00	62.07	0.00	-	3.53	96.47	0.00	0.00	-	0.00	98.21	1.20	0.60	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.61	0.00	0.82	0.00	**0.81**	0.50	0.96	0.00	0.00	**0.96**	0.00	0.89	0.50	0.38	**0.90**	**0.94**

Passenger Vehicles (1-3)

	Southbound					Lasea Rd					Eastbound					TN-99 Bear Creek Pike (West)					Westbound					TN-99 Bear Creek Pike (East)	
Time					App Total	Left 1.1		Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5		U-Turn 1.6	App Total		Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0700 - 0715	-	-	-	-	0	8	-	9	0	17	4	135	-	0	139	-	127	3	0	130	286
0715 - 0730	-	-	-	-	0	2	-	10	0	12	11	142	-	0	153	-	92	1	1	94	259
0730 - 0745	-	-	-	-	0	4	-	7	0	11	5	131	-	0	136	-	98	1	0	99	246
0745 - 0800	-	-	-	-	0	7	-	8	0	15	2	140	-	0	142	-	117	1	0	118	275
Total	0	0	0	0	0	21	0	34	0	55	22	548	0	0	570	0	434	6	1	441	1066
Approach %	0.00	0.00	0.00	0.00	-	38.18	0.00	61.82	0.00	-	3.86	96.14	0.00	0.00	-	0.00	98.41	1.36	0.23	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.66	0.00	0.85	0.00	**0.81**	0.50	0.96	0.00	0.00	**0.93**	0.00	0.85	0.50	0.25	**0.85**	**0.93**

Single Unit Trucks (4-7)

	Southbound					Lasea Rd					Eastbound					TN-99 Bear Creek Pike (West)					Westbound					TN-99 Bear Creek Pike (East)	
Time					App Total	Left 1.1		Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5		U-Turn 1.6	App Total		Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0700 - 0715	-	-	-	-	0	1	-	0	0	1	0	13	-	0	13	-	6	0	0	6	20
0715 - 0730	-	-	-	-	0	0	-	0	0	0	0	5	-	0	5	-	7	0	0	7	12
0730 - 0745	-	-	-	-	0	0	-	0	0	0	0	11	-	0	11	-	9	0	2	11	22
0745 - 0800	-	-	-	-	0	0	-	1	0	1	0	9	-	0	9	-	16	0	0	16	26
Total	0	0	0	0	0	1	0	1	0	2	0	38	0	0	38	0	38	0	2	40	80
Approach %	0.00	0.00	0.00	0.00	-	50.00	0.00	50.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	95.00	0.00	5.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.25	0.00	0.25	0.00	**0.50**	0.00	0.73	0.00	0.00	**0.73**	0.00	0.59	0.00	0.25	**0.63**	**0.77**

Combination Trucks (8-13)

	Southbound					Lasea Rd					Eastbound					TN-99 Bear Creek Pike (West)					Westbound					TN-99 Bear Creek Pike (East)	
Time					App Total	Left 1.1		Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5		U-Turn 1.6	App Total		Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0700 - 0715	-	-	-	-	0	0	-	0	0	0	0	1	-	0	1	-	3	0	0	3	4
0715 - 0730	-	-	-	-	0	0	-	1	0	1	0	5	-	0	5	-	6	0	0	6	12
0730 - 0745	-	-	-	-	0	0	-	0	0	0	0	2	-	0	2	-	7	0	0	7	9
0745 - 0800	-	-	-	-	0	0	-	0	0	0	0	7	-	0	7	-	5	0	0	5	12
Total	0	0	0	0	0	0	0	1	0	1	0	15	0	0	15	0	21	0	0	21	37
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	100.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.25	0.00	**0.25**	0.00	0.54	0.00	0.00	**0.54**	0.00	0.75	0.00	0.00	**0.75**	**0.77**

Bikes

	Southbound					Lasea Rd					Eastbound					TN-99 Bear Creek Pike (West)					Westbound					TN-99 Bear Creek Pike (East)	
Time					App Total	Left 1.1		Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5		U-Turn 1.6	App Total		Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0700 - 0715	-	-	-	-	0	0	-	0	0	0	0	0	-	0	0	-	0	0	0	0	0
0715 - 0730	-	-	-	-	0	0	-	0	0	0	0	0	-	0	0	-	0	0	0	0	0
0730 - 0745	-	-	-	-	0	0	-	0	0	0	0	0	-	0	0	-	0	0	0	0	0
0745 - 0800	-	-	-	-	0	0	-	0	0	0	0	0	-	0	0	-	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**

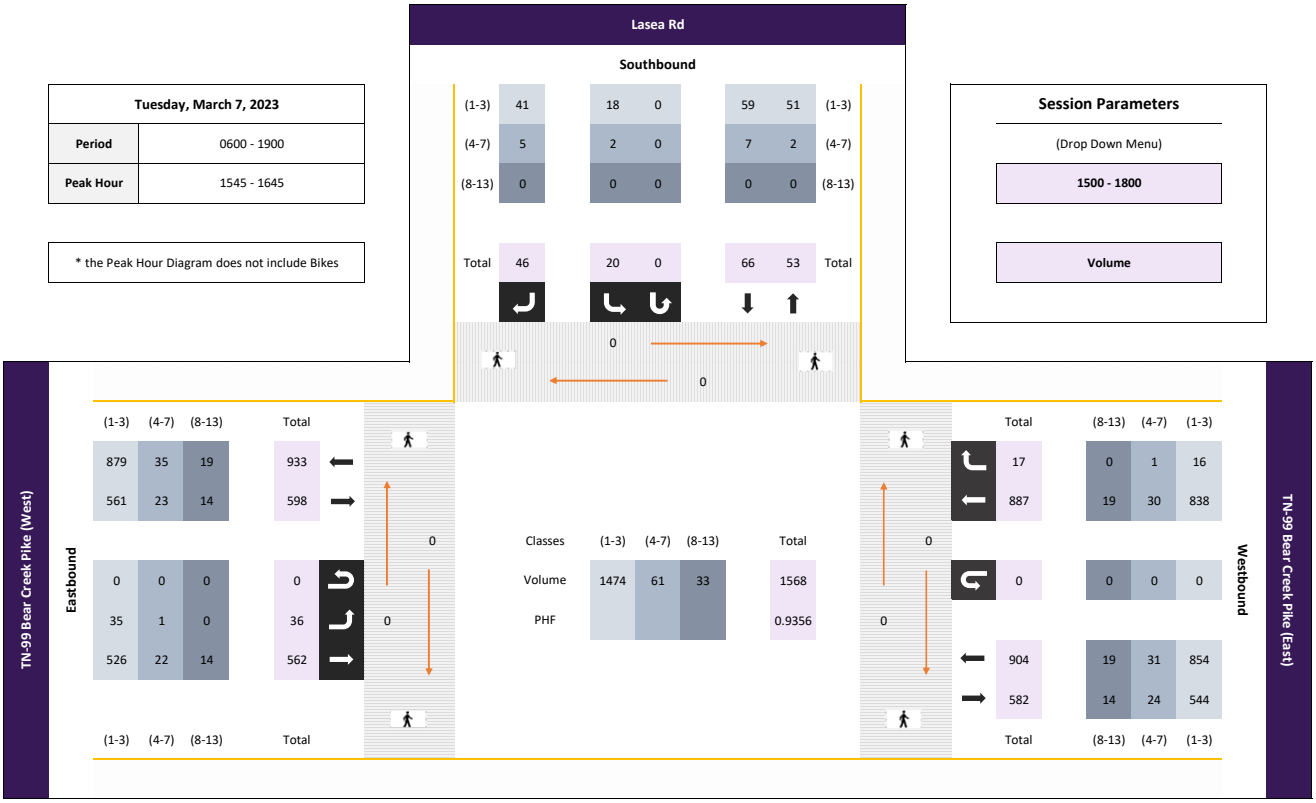
Click here for Map

Peak Hour Turning Movement Count

Columbia TN

Marr Traffic DATA COLLECTION

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All vehicles

	Southbound					Lasea Rd					Eastbound					TN-99 Bear Creek Pike (West)					Westbound					TN-99 Bear Creek Pike (East)	
Time					App Total	Left 1.1		Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5		U-Turn 1.6	App Total		Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
1545 - 1600	-	-	-	-	0	6	-	8	0	14	8	150	-	0	158	-	206	3	0	209	381
1600 - 1615	-	-	-	-	0	7	-	12	0	19	13	147	-	0	160	-	233	7	0	240	419
1615 - 1630	-	-	-	-	0	3	-	9	0	12	10	142	-	0	152	-	225	1	0	226	390
1630 - 1645	-	-	-	-	0	4	-	17	0	21	5	123	-	0	128	-	223	6	0	229	378
Total	0	0	0	0	0	20	0	46	0	66	36	562	0	0	598	0	887	17	0	904	1568
Approach %	0.00	0.00	0.00	0.00	-	30.30	0.00	69.70	0.00	-	6.02	93.98	0.00	0.00	-	0.00	98.12	1.88	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.71	0.00	0.68	0.00	**0.79**	0.69	0.94	0.00	0.00	**0.93**	0.00	0.95	0.61	0.00	**0.94**	**0.94**

Passenger Vehicles (1-3)

	Southbound					Lasea Rd					Eastbound					TN-99 Bear Creek Pike (West)					Westbound					TN-99 Bear Creek Pike (East)	
Time					App Total	Left 1.1		Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5		U-Turn 1.6	App Total		Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
1545 - 1600	-	-	-	-	0	6	-	8	0	14	8	139	-	0	147	-	192	3	0	195	356
1600 - 1615	-	-	-	-	0	6	-	10	0	16	13	134	-	0	147	-	221	7	0	228	391
1615 - 1630	-	-	-	-	0	2	-	9	0	11	10	138	-	0	148	-	212	1	0	213	372
1630 - 1645	-	-	-	-	0	4	-	14	0	18	4	115	-	0	119	-	213	5	0	218	355
Total	0	0	0	0	0	18	0	41	0	59	35	526	0	0	561	0	838	16	0	854	1474
Approach %	0.00	0.00	0.00	0.00	-	30.51	0.00	69.49	0.00	-	6.24	93.76	0.00	0.00	-	0.00	98.13	1.87	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.75	0.00	0.73	0.00	**0.82**	0.67	0.95	0.00	0.00	**0.95**	0.00	0.95	0.57	0.00	**0.94**	**0.94**

Single Unit Trucks (4-7)

	Southbound					Lasea Rd					Eastbound					TN-99 Bear Creek Pike (West)					Westbound					TN-99 Bear Creek Pike (East)	
Time					App Total	Left 1.1		Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5		U-Turn 1.6	App Total		Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
1545 - 1600	-	-	-	-	0	0	-	0	0	0	0	9	-	0	9	-	12	0	0	12	21
1600 - 1615	-	-	-	-	0	1	-	2	0	3	0	8	-	0	8	-	7	0	0	7	18
1615 - 1630	-	-	-	-	0	1	-	0	0	1	0	1	-	0	1	-	6	0	0	6	8
1630 - 1645	-	-	-	-	0	0	-	3	0	3	1	4	-	0	5	-	5	1	0	6	14
Total	0	0	0	0	0	2	0	5	0	7	1	22	0	0	23	0	30	1	0	31	61
Approach %	0.00	0.00	0.00	0.00	-	28.57	0.00	71.43	0.00	-	4.35	95.65	0.00	0.00	-	0.00	96.77	3.23	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.50	0.00	0.42	0.00	**0.58**	0.25	0.61	0.00	0.00	**0.64**	0.00	0.63	0.25	0.00	**0.65**	**0.73**

Combination Trucks (8-13)

	Southbound					Lasea Rd					Eastbound					TN-99 Bear Creek Pike (West)					Westbound					TN-99 Bear Creek Pike (East)	
Time					App Total	Left 1.1		Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5		U-Turn 1.6	App Total		Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
1545 - 1600	-	-	-	-	0	0	-	0	0	0	0	2	-	0	2	-	2	0	0	2	4
1600 - 1615	-	-	-	-	0	0	-	0	0	0	0	5	-	0	5	-	5	0	0	5	10
1615 - 1630	-	-	-	-	0	0	-	0	0	0	0	3	-	0	3	-	7	0	0	7	10
1630 - 1645	-	-	-	-	0	0	-	0	0	0	0	4	-	0	4	-	5	0	0	5	9
Total	0	0	0	0	0	0	0	0	0	0	0	14	0	0	14	0	19	0	0	19	33
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.70	0.00	0.00	**0.70**	0.00	0.68	0.00	0.00	**0.68**	**0.83**

Bikes

	Southbound					Lasea Rd					Eastbound					TN-99 Bear Creek Pike (West)					Westbound					TN-99 Bear Creek Pike (East)	
Time					App Total	Left 1.1		Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5		U-Turn 1.6	App Total		Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
1545 - 1600	-	-	-	-	0	0	-	0	0	0	0	0	-	0	0	-	0	0	0	0	0
1600 - 1615	-	-	-	-	0	0	-	0	0	0	0	0	-	0	0	-	0	0	0	0	0
1615 - 1630	-	-	-	-	0	0	-	0	0	0	0	0	-	0	0	-	0	0	0	0	0
1630 - 1645	-	-	-	-	0	0	-	0	0	0	0	0	-	0	0	-	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**

Classified Turn Movement Count || All vehicles

Columbia TN

Marr Traffic DATA COLLECTION
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Site 1 of 2

Lasea Rd
TN-99 Bear Creek Pike (West)
TN-99 Bear Creek Pike (East)

Date
Tuesday, March 7, 2023

Lat/Long
35.642343°, -86.904882°

Weather
Fair
58°F

0600 - 1900 (Weekday 13h Session) (03-07-2023)
All vehicles

	Southbound				Eastbound				Westbound				
	Lasea Rd				TN-99 Bear Creek Pike (West)				TN-99 Bear Creek Pike (East)				
TIME	Left 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0600 - 0615	5	4	0	9	7	152	0	159	50	0	0	50	218
0615 - 0630	5	3	0	8	4	171	0	175	105	0	0	105	288
0630 - 0645	7	10	0	17	4	150	0	154	100	2	0	102	273
0645 - 0700	3	6	0	9	14	137	1	152	105	1	0	106	267
Hourly Total	20	23	0	**43**	29	610	1	**640**	360	3	0	**363**	**1046**
0700 - 0715	9	9	0	18	4	149	0	153	136	3	0	139	310
0715 - 0730	2	11	0	13	11	152	0	163	105	1	1	107	283
0730 - 0745	4	7	0	11	5	144	0	149	114	1	2	117	277
0745 - 0800	7	9	0	16	2	156	0	158	138	1	0	139	313
Hourly Total	22	36	0	**58**	22	601	0	**623**	493	6	3	**502**	**1183**
0800 - 0815	4	3	0	7	7	146	0	153	87	1	0	88	248
0815 - 0830	4	7	0	11	5	113	0	118	103	3	0	106	235
0830 - 0845	3	8	0	11	10	136	0	146	115	2	0	117	274
0845 - 0900	7	9	0	16	5	96	0	101	113	2	0	115	232
Hourly Total	18	27	0	**45**	27	491	0	**518**	418	8	0	**426**	**989**
0900 - 0915	2	5	0	7	8	98	0	106	82	2	0	84	197
0915 - 0930	3	7	0	10	3	129	0	132	87	6	0	93	235
0930 - 0945	6	5	0	11	3	96	0	99	123	1	0	124	234
0945 - 1000	2	4	0	6	8	86	0	94	98	7	0	105	205
Hourly Total	13	21	0	**34**	22	409	0	**431**	390	16	0	**406**	**871**
1000 - 1015	1	4	1	6	4	96	0	100	82	1	0	83	189
1015 - 1030	5	8	0	13	5	113	0	118	88	1	0	89	220
1030 - 1045	2	5	0	7	3	101	0	104	93	4	0	97	208
1045 - 1100	5	2	0	7	4	77	0	81	109	3	0	112	200
Hourly Total	13	19	1	**33**	16	387	0	**403**	372	9	0	**381**	**817**
1100 - 1115	2	4	0	6	7	85	0	92	107	3	0	110	208
1115 - 1130	3	7	0	10	6	105	0	111	89	5	0	94	215
1130 - 1145	5	3	0	8	4	89	0	93	104	3	0	107	208
1145 - 1200	1	2	0	3	4	105	0	109	102	2	0	104	216
Hourly Total	11	16	0	**27**	21	384	0	**405**	402	13	0	**415**	**847**
1200 - 1215	3	4	1	8	5	82	0	87	94	3	0	97	192
1215 - 1230	5	4	0	9	3	91	0	94	100	7	2	109	212
1230 - 1245	3	6	0	9	2	98	0	100	119	8	0	127	236
1245 - 1300	3	3	0	6	9	76	0	85	134	7	0	141	232
Hourly Total	14	17	1	**32**	19	347	0	**366**	447	25	2	**474**	**872**
1300 - 1315	5	5	0	10	4	109	0	113	134	2	0	136	259
1315 - 1330	1	7	0	8	8	88	0	96	113	1	0	114	218
1330 - 1345	3	5	0	8	7	109	0	116	133	2	0	135	259
1345 - 1400	3	3	0	6	1	109	0	110	146	3	0	149	265
Hourly Total	12	20	0	**32**	20	415	0	**435**	526	8	0	**534**	**1001**
1400 - 1415	1	6	0	7	3	111	0	114	119	0	0	119	240
1415 - 1430	2	5	0	7	7	103	0	110	127	2	0	129	246
1430 - 1445	5	8	0	13	8	73	0	81	130	2	0	132	226
1445 - 1500	2	3	0	5	4	86	0	90	155	0	0	155	250
Hourly Total	10	22	0	**32**	22	373	0	**395**	531	4	0	**535**	**962**
1500 - 1515	8	9	0	17	6	127	0	133	162	3	0	165	315
1515 - 1530	7	3	0	10	8	105	0	113	156	3	0	159	282
1530 - 1545	5	6	0	11	7	131	0	138	191	2	0	193	342
1545 - 1600	6	8	0	14	8	150	0	158	206	3	0	209	381
Hourly Total	26	26	0	**52**	29	513	0	**542**	715	11	0	**726**	**1320**
1600 - 1615	7	12	0	19	13	147	0	160	233	7	0	240	419
1615 - 1630	3	9	0	12	10	142	0	152	225	1	0	226	390
1630 - 1645	4	17	0	21	5	123	0	128	223	6	0	229	378
1645 - 1700	1	8	0	9	11	143	0	154	214	1	0	215	378
Hourly Total	15	46	0	**61**	39	555	0	**594**	895	15	0	**910**	**1565**
1700 - 1715	3	8	0	11	7	128	0	135	163	4	0	167	313
1715 - 1730	5	10	0	15	7	133	0	140	194	1	0	195	350
1730 - 1745	7	5	0	12	7	121	0	128	201	3	0	204	344
1745 - 1800	5	9	0	14	6	113	0	119	128	4	0	132	265
Hourly Total	20	32	0	**52**	27	495	0	**522**	686	12	0	**698**	**1272**
1800 - 1815	3	5	0	8	7	90	0	97	139	1	0	140	245
1815 - 1830	4	4	0	8	5	79	0	84	134	1	0	135	227
1830 - 1845	1	5	0	6	5	83	0	88	114	2	0	116	210
1845 - 1900	3	3	0	6	6	54	0	60	110	0	0	110	176
Hourly Total	11	17	0	**28**	23	306	0	**329**	497	4	0	**501**	**858**
Grand Total	205	322	2	**529**	316	5886	1	**6203**	6732	134	5	**6871**	**13603**
Approach %	38.75	60.87	0.38	-	5.09	94.89	0.02	-	97.98	1.95	0.07	-	
Intersection %	1.51	2.37	0.01	3.89	2.32	43.27	0.01	45.60	49.49	0.99	0.04	50.51	
PHF	0.71	0.68	0.00	**0.79**	0.69	0.94	0.00	**0.93**	0.95	0.61	0.00	**0.94**	**0.94**

Classified Turn Movement Count || Passenger Vehicles (1-3)

Columbia TN

Marr Traffic DATA COLLECTION
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Site 1 of 2

Lasea Rd
TN-99 Bear Creek Pike (West)
TN-99 Bear Creek Pike (East)

Date
Tuesday, March 7, 2023

Lat/Long
35.642343°, -86.904882°

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0600 - 1900 (Weekday 13h Session) (03-07-2023)
Passenger Vehicles (1-3)

	Southbound				Eastbound				Westbound				
	Lasea Rd				TN-99 Bear Creek Pike (West)				TN-99 Bear Creek Pike (East)				
TIME	Left 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0600 - 0615	5	4	0	9	6	146	0	152	45	0	0	45	206
0615 - 0630	4	3	0	7	4	164	0	168	93	0	0	93	268
0630 - 0645	7	10	0	17	3	136	0	139	89	2	0	91	247
0645 - 0700	3	6	0	9	14	128	1	143	88	1	0	89	241
Hourly Total	19	23	0	**42**	27	574	1	**602**	315	3	0	**318**	**962**
0700 - 0715	8	9	0	17	4	135	0	139	127	3	0	130	286
0715 - 0730	2	10	0	12	11	142	0	153	92	1	1	94	259
0730 - 0745	4	7	0	11	5	131	0	136	98	1	0	99	246
0745 - 0800	7	8	0	15	2	140	0	142	117	1	0	118	275
Hourly Total	21	34	0	**55**	22	548	0	**570**	434	6	1	**441**	**1066**
0800 - 0815	3	3	0	6	5	137	0	142	75	1	0	76	224
0815 - 0830	4	7	0	11	5	97	0	102	91	3	0	94	207
0830 - 0845	3	7	0	10	8	120	0	128	99	2	0	101	239
0845 - 0900	7	8	0	15	5	77	0	82	97	2	0	99	196
Hourly Total	17	25	0	**42**	23	431	0	**454**	362	8	0	**370**	**866**
0900 - 0915	2	5	0	7	7	81	0	88	68	2	0	70	165
0915 - 0930	3	7	0	10	3	115	0	118	73	5	0	78	206
0930 - 0945	6	5	0	11	2	81	0	83	105	1	0	106	200
0945 - 1000	2	3	0	5	7	75	0	82	73	7	0	80	167
Hourly Total	13	20	0	**33**	19	352	0	**371**	319	15	0	**334**	**738**
1000 - 1015	1	3	1	5	4	85	0	89	64	1	0	65	159
1015 - 1030	4	6	0	10	5	98	0	103	73	1	0	74	187
1030 - 1045	2	5	0	7	3	84	0	87	78	4	0	82	176
1045 - 1100	4	2	0	6	4	63	0	67	91	3	0	94	167
Hourly Total	11	16	1	**28**	16	330	0	**346**	306	9	0	**315**	**689**
1100 - 1115	2	4	0	6	6	75	0	81	87	3	0	90	177
1115 - 1130	2	7	0	9	5	93	0	98	74	3	0	77	184
1130 - 1145	4	1	0	5	3	72	0	75	88	3	0	91	171
1145 - 1200	1	2	0	3	3	85	0	88	88	2	0	90	181
Hourly Total	9	14	0	**23**	17	325	0	**342**	337	11	0	**348**	**713**
1200 - 1215	1	4	0	5	5	68	0	73	79	3	0	82	160
1215 - 1230	4	2	0	6	3	78	0	81	89	6	1	96	183
1230 - 1245	3	5	0	8	0	82	0	82	105	7	0	112	202
1245 - 1300	3	2	0	5	8	60	0	68	112	7	0	119	192
Hourly Total	11	13	0	**24**	16	288	0	**304**	385	23	1	**409**	**737**
1300 - 1315	5	5	0	10	3	94	0	97	109	2	0	111	218
1315 - 1330	1	7	0	8	7	75	0	82	95	1	0	96	186
1330 - 1345	3	4	0	7	6	93	0	99	118	2	0	120	226
1345 - 1400	3	2	0	5	1	96	0	97	126	3	0	129	231
Hourly Total	12	18	0	**30**	17	358	0	**375**	448	8	0	**456**	**861**
1400 - 1415	1	5	0	6	3	97	0	100	107	0	0	107	213
1415 - 1430	2	5	0	7	5	90	0	95	116	2	0	118	220
1430 - 1445	5	8	0	13	8	60	0	68	119	2	0	121	202
1445 - 1500	2	2	0	4	4	71	0	75	136	0	0	136	215
Hourly Total	10	20	0	**30**	20	318	0	**338**	478	4	0	**482**	**850**
1500 - 1515	8	7	0	15	6	114	0	120	151	3	0	154	289
1515 - 1530	6	3	0	9	8	89	0	97	148	3	0	151	257
1530 - 1545	4	6	0	10	6	121	0	127	178	2	0	180	317
1545 - 1600	6	8	0	14	8	139	0	147	192	3	0	195	356
Hourly Total	24	24	0	**48**	28	463	0	**491**	669	11	0	**680**	**1219**
1600 - 1615	6	10	0	16	13	134	0	147	221	7	0	228	391
1615 - 1630	2	9	0	11	10	138	0	148	212	1	0	213	372
1630 - 1645	4	14	0	18	4	115	0	119	213	5	0	218	355
1645 - 1700	1	8	0	9	11	129	0	140	208	1	0	209	358
Hourly Total	13	41	0	**54**	38	516	0	**554**	854	14	0	**868**	**1476**
1700 - 1715	3	8	0	11	7	114	0	121	158	4	0	162	294
1715 - 1730	5	10	0	15	7	121	0	128	190	1	0	191	334
1730 - 1745	7	5	0	12	6	115	0	121	191	3	0	194	327
1745 - 1800	5	8	0	13	5	108	0	113	125	3	0	128	254
Hourly Total	20	31	0	**51**	25	458	0	**483**	664	11	0	**675**	**1209**
1800 - 1815	3	4	0	7	7	88	0	95	137	1	0	138	240
1815 - 1830	3	4	0	7	5	74	0	79	128	1	0	129	215
1830 - 1845	1	5	0	6	5	82	0	87	110	2	0	112	205
1845 - 1900	3	3	0	6	6	53	0	59	105	0	0	105	170
Hourly Total	10	16	0	**26**	23	297	0	**320**	480	4	0	**484**	**830**
Grand Total	190	295	1	**486**	291	5258	1	**5550**	6051	127	2	**6180**	**12216**
Approach %	39.09	60.70	0.21	-	5.24	94.74	0.02	-	97.91	2.06	0.03	-	
Intersection %	1.56	2.41	0.01	3.98	2.38	43.04	0.01	45.43	49.53	1.04	0.02	50.59	

Classified Turn Movement Count || Single Unit Trucks (4-7)

Columbia TN

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Site 1 of 2

Lasea Rd
TN-99 Bear Creek Pike (West)
TN-99 Bear Creek Pike (East)

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Single Unit Trucks (4-7)

	Southbound				Eastbound				Westbound				
	Lasea Rd				TN-99 Bear Creek Pike (West)				TN-99 Bear Creek Pike (East)				
TIME	Left 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0600 - 0615	0	0	0	0	1	4	0	5	4	0	0	4	9
0615 - 0630	1	0	0	1	0	4	0	4	7	0	0	7	12
0630 - 0645	0	0	0	0	1	8	0	9	6	0	0	6	15
0645 - 0700	0	0	0	0	0	5	0	5	8	0	0	8	13
Hourly Total	1	0	0	**1**	2	21	0	**23**	25	0	0	**25**	**49**
0700 - 0715	1	0	0	1	0	13	0	13	6	0	0	6	20
0715 - 0730	0	0	0	0	0	5	0	5	7	0	0	7	12
0730 - 0745	0	0	0	0	0	11	0	11	9	0	2	11	22
0745 - 0800	0	1	0	1	0	9	0	9	16	0	0	16	26
Hourly Total	1	1	0	**2**	0	38	0	**38**	38	0	2	**40**	**80**
0800 - 0815	1	0	0	1	2	4	0	6	5	0	0	5	12
0815 - 0830	0	0	0	0	0	11	0	11	7	0	0	7	18
0830 - 0845	0	1	0	1	1	12	0	13	7	0	0	7	21
0845 - 0900	0	0	0	0	0	11	0	11	12	0	0	12	23
Hourly Total	1	1	0	**2**	3	38	0	**41**	31	0	0	**31**	**74**
0900 - 0915	0	0	0	0	1	8	0	9	13	0	0	13	22
0915 - 0930	0	0	0	0	0	11	0	11	7	1	0	8	19
0930 - 0945	0	0	0	0	1	11	0	12	11	0	0	11	23
0945 - 1000	0	1	0	1	0	8	0	8	17	0	0	17	26
Hourly Total	0	1	0	**1**	2	38	0	**40**	48	1	0	**49**	**90**
1000 - 1015	0	0	0	0	0	7	0	7	12	0	0	12	19
1015 - 1030	1	2	0	3	0	12	0	12	7	0	0	7	22
1030 - 1045	0	0	0	0	0	12	0	12	8	0	0	8	20
1045 - 1100	0	0	0	0	0	5	0	5	13	0	0	13	18
Hourly Total	1	2	0	**3**	0	36	0	**36**	40	0	0	**40**	**79**
1100 - 1115	0	0	0	0	0	5	0	5	14	0	0	14	19
1115 - 1130	1	0	0	1	1	8	0	9	9	2	0	11	21
1130 - 1145	1	2	0	3	0	10	0	10	10	0	0	10	23
1145 - 1200	0	0	0	0	1	10	0	11	8	0	0	8	19
Hourly Total	2	2	0	**4**	2	33	0	**35**	41	2	0	**43**	**82**
1200 - 1215	2	0	1	3	0	6	0	6	12	0	0	12	21
1215 - 1230	0	2	0	2	0	5	0	5	8	1	0	9	16
1230 - 1245	0	0	0	0	2	10	0	12	7	1	0	8	20
1245 - 1300	0	1	0	1	0	12	0	12	12	0	0	12	25
Hourly Total	2	3	1	**6**	2	33	0	**35**	39	2	0	**41**	**82**
1300 - 1315	0	0	0	0	0	7	0	7	17	0	0	17	24
1315 - 1330	0	0	0	0	1	5	0	6	14	0	0	14	20
1330 - 1345	0	1	0	1	1	12	0	13	12	0	0	12	26
1345 - 1400	0	1	0	1	0	8	0	8	11	0	0	11	20
Hourly Total	0	2	0	**2**	2	32	0	**34**	54	0	0	**54**	**90**
1400 - 1415	0	0	0	0	0	7	0	7	6	0	0	6	13
1415 - 1430	0	0	0	0	2	9	0	11	7	0	0	7	18
1430 - 1445	0	0	0	0	0	6	0	6	6	0	0	6	12
1445 - 1500	0	1	0	1	0	11	0	11	11	0	0	11	23
Hourly Total	0	1	0	**1**	2	33	0	**35**	30	0	0	**30**	**66**
1500 - 1515	0	1	0	1	0	9	0	9	8	0	0	8	18
1515 - 1530	1	0	0	1	0	10	0	10	7	0	0	7	18
1530 - 1545	1	0	0	1	1	5	0	6	10	0	0	10	17
1545 - 1600	0	0	0	0	0	9	0	9	12	0	0	12	21
Hourly Total	2	1	0	**3**	1	33	0	**34**	37	0	0	**37**	**74**
1600 - 1615	1	2	0	3	0	8	0	8	7	0	0	7	18
1615 - 1630	1	0	0	1	0	1	0	1	6	0	0	6	8
1630 - 1645	0	3	0	3	1	4	0	5	5	1	0	6	14
1645 - 1700	0	0	0	0	0	6	0	6	3	0	0	3	9
Hourly Total	2	5	0	**7**	1	19	0	**20**	21	1	0	**22**	**49**
1700 - 1715	0	0	0	0	0	6	0	6	1	0	0	1	7
1715 - 1730	0	0	0	0	0	5	0	5	3	0	0	3	8
1730 - 1745	0	0	0	0	1	4	0	5	8	0	0	8	13
1745 - 1800	0	0	0	0	1	2	0	3	1	1	0	2	5
Hourly Total	0	0	0	**0**	2	17	0	**19**	13	1	0	**14**	**33**
1800 - 1815	0	1	0	1	0	0	0	0	1	0	0	1	2
1815 - 1830	0	0	0	0	0	0	0	0	2	0	0	2	2
1830 - 1845	0	0	0	0	0	0	0	0	2	0	0	2	2
1845 - 1900	0	0	0	0	0	0	0	0	3	0	0	3	3
Hourly Total	0	1	0	**1**	0	0	0	**0**	8	0	0	**8**	**9**
Grand Total	12	20	1	**33**	19	371	0	**390**	425	7	2	**434**	**857**
Approach %	36.36	60.61	3.03	-	4.87	95.13	0.00	-	97.93	1.61	0.46	-	
Intersection %	1.40	2.33	0.12	3.85	2.22	43.29	0.00	45.51	49.59	0.82	0.23	50.64	

Classified Turn Movement Count || Combination Trucks (8-13)

Columbia TN

Marr Traffic DATA COLLECTION
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Site 1 of 2

Lasea Rd
TN-99 Bear Creek Pike (West)
TN-99 Bear Creek Pike (East)

Date
Tuesday, March 7, 2023

Lat/Long
35.642343°, -86.904882°

Weather
Fair
58°F

0600 - 1900 (Weekday 13h Session) (03-07-2023)
Combination Trucks (8-13)

	Southbound				Eastbound				Westbound				
	Lasea Rd				TN-99 Bear Creek Pike (West)				TN-99 Bear Creek Pike (East)				
TIME	Left 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0600 - 0615	0	0	0	0	0	2	0	2	1	0	0	1	3
0615 - 0630	0	0	0	0	0	3	0	3	5	0	0	5	8
0630 - 0645	0	0	0	0	0	6	0	6	5	0	0	5	11
0645 - 0700	0	0	0	0	0	4	0	4	9	0	0	9	13
Hourly Total	0	0	0	**0**	0	15	0	**15**	20	0	0	**20**	**35**
0700 - 0715	0	0	0	0	0	1	0	1	3	0	0	3	4
0715 - 0730	0	1	0	1	0	5	0	5	6	0	0	6	12
0730 - 0745	0	0	0	0	0	2	0	2	7	0	0	7	9
0745 - 0800	0	0	0	0	0	7	0	7	5	0	0	5	12
Hourly Total	0	1	0	**1**	0	15	0	**15**	21	0	0	**21**	**37**
0800 - 0815	0	0	0	0	0	5	0	5	7	0	0	7	12
0815 - 0830	0	0	0	0	0	5	0	5	5	0	0	5	10
0830 - 0845	0	0	0	0	1	4	0	5	9	0	0	9	14
0845 - 0900	0	1	0	1	0	8	0	8	4	0	0	4	13
Hourly Total	0	1	0	**1**	1	22	0	**23**	25	0	0	**25**	**49**
0900 - 0915	0	0	0	0	0	9	0	9	1	0	0	1	10
0915 - 0930	0	0	0	0	0	3	0	3	7	0	0	7	10
0930 - 0945	0	0	0	0	0	4	0	4	7	0	0	7	11
0945 - 1000	0	0	0	0	1	3	0	4	8	0	0	8	12
Hourly Total	0	0	0	**0**	1	19	0	**20**	23	0	0	**23**	**43**
1000 - 1015	0	0	0	0	0	4	0	4	6	0	0	6	10
1015 - 1030	0	0	0	0	0	3	0	3	8	0	0	8	11
1030 - 1045	0	0	0	0	0	5	0	5	7	0	0	7	12
1045 - 1100	1	0	0	1	0	9	0	9	5	0	0	5	15
Hourly Total	1	0	0	**1**	0	21	0	**21**	26	0	0	**26**	**48**
1100 - 1115	0	0	0	0	1	5	0	6	6	0	0	6	12
1115 - 1130	0	0	0	0	0	4	0	4	6	0	0	6	10
1130 - 1145	0	0	0	0	1	7	0	8	6	0	0	6	14
1145 - 1200	0	0	0	0	0	10	0	10	6	0	0	6	16
Hourly Total	0	0	0	**0**	2	26	0	**28**	24	0	0	**24**	**52**
1200 - 1215	0	0	0	0	0	8	0	8	3	0	0	3	11
1215 - 1230	1	0	0	1	0	8	0	8	3	0	1	4	13
1230 - 1245	0	1	0	1	0	6	0	6	7	0	0	7	14
1245 - 1300	0	0	0	0	1	4	0	5	10	0	0	10	15
Hourly Total	1	1	0	**2**	1	26	0	**27**	23	0	1	**24**	**53**
1300 - 1315	0	0	0	0	1	8	0	9	8	0	0	8	17
1315 - 1330	0	0	0	0	0	8	0	8	4	0	0	4	12
1330 - 1345	0	0	0	0	0	4	0	4	3	0	0	3	7
1345 - 1400	0	0	0	0	0	5	0	5	9	0	0	9	14
Hourly Total	0	0	0	**0**	1	25	0	**26**	24	0	0	**24**	**50**
1400 - 1415	0	1	0	1	0	7	0	7	6	0	0	6	14
1415 - 1430	0	0	0	0	0	4	0	4	4	0	0	4	8
1430 - 1445	0	0	0	0	0	7	0	7	5	0	0	5	12
1445 - 1500	0	0	0	0	0	4	0	4	8	0	0	8	12
Hourly Total	0	1	0	**1**	0	22	0	**22**	23	0	0	**23**	**46**
1500 - 1515	0	1	0	1	0	4	0	4	3	0	0	3	8
1515 - 1530	0	0	0	0	0	6	0	6	1	0	0	1	7
1530 - 1545	0	0	0	0	0	5	0	5	3	0	0	3	8
1545 - 1600	0	0	0	0	0	2	0	2	2	0	0	2	4
Hourly Total	0	1	0	**1**	0	17	0	**17**	9	0	0	**9**	**27**
1600 - 1615	0	0	0	0	0	5	0	5	5	0	0	5	10
1615 - 1630	0	0	0	0	0	3	0	3	7	0	0	7	10
1630 - 1645	0	0	0	0	0	4	0	4	5	0	0	5	9
1645 - 1700	0	0	0	0	0	8	0	8	3	0	0	3	11
Hourly Total	0	0	0	**0**	0	20	0	**20**	20	0	0	**20**	**40**
1700 - 1715	0	0	0	0	0	8	0	8	4	0	0	4	12
1715 - 1730	0	0	0	0	0	7	0	7	1	0	0	1	8
1730 - 1745	0	0	0	0	0	2	0	2	2	0	0	2	4
1745 - 1800	0	1	0	1	0	3	0	3	2	0	0	2	6
Hourly Total	0	1	0	**1**	0	20	0	**20**	9	0	0	**9**	**30**
1800 - 1815	0	0	0	0	0	2	0	2	1	0	0	1	3
1815 - 1830	1	0	0	1	0	5	0	5	4	0	0	4	10
1830 - 1845	0	0	0	0	0	1	0	1	2	0	0	2	3
1845 - 1900	0	0	0	0	0	1	0	1	2	0	0	2	3
Hourly Total	1	0	0	**1**	0	9	0	**9**	9	0	0	**9**	**19**
Grand Total	3	6	0	**9**	6	257	0	**263**	256	0	1	**257**	**529**
Approach %	33.33	66.67	0.00	-	2.28	97.72	0.00	-	99.61	0.00	0.39	-	
Intersection %	0.57	1.13	0.00	1.70	1.13	48.58	0.00	49.72	48.39	0.00	0.19	48.58	

Classified Turn Movement Count || Bikes

Columbia TN

Marr Traffic DATA COLLECTION
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Site 1 of 2

Lasea Rd
TN-99 Bear Creek Pike (West)
TN-99 Bear Creek Pike (East)

Date
Tuesday, March 7, 2023

Lat/Long
35.642343°, -86.904882°

Weather
Fair
58°F

0600 - 1900 (Weekday 13h Session) (03-07-2023)
Bikes

	Southbound				Eastbound				Westbound				
	Lasea Rd				TN-99 Bear Creek Pike (West)				TN-99 Bear Creek Pike (East)				
TIME	Left 1.1	Right 1.2	U-Turn 1.3	App Total	Left 1.4	Thru 1.5	U-Turn 1.6	App Total	Thru 1.7	Right 1.8	U-Turn 1.9	App Total	Int Total
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
0900 - 0915	0	0	0	0	0	0	0	0	0	0	0	0	0
0915 - 0930	0	0	0	0	0	0	0	0	0	0	0	0	0
0930 - 0945	0	0	0	0	0	0	0	0	0	0	0	0	0
0945 - 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1000 - 1015	0	1	0	1	0	0	0	0	0	0	0	0	1
1015 - 1030	0	0	0	0	0	0	0	0	0	0	0	0	0
1030 - 1045	0	0	0	0	0	0	0	0	0	0	0	0	0
1045 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	1	0	**1**	0	0	0	**0**	0	0	0	**0**	**1**
1100 - 1115	0	0	0	0	0	0	0	0	0	0	0	0	0
1115 - 1130	0	0	0	0	0	0	0	0	0	0	0	0	0
1130 - 1145	0	0	0	0	0	0	0	0	0	0	0	0	0
1145 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1200 - 1215	0	0	0	0	0	0	0	0	0	0	0	0	0
1215 - 1230	0	0	0	0	0	0	0	0	0	0	0	0	0
1230 - 1245	0	0	0	0	0	0	0	0	0	0	0	0	0
1245 - 1300	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1300 - 1315	0	0	0	0	0	0	0	0	0	0	0	0	0
1315 - 1330	0	0	0	0	0	0	0	0	0	0	0	0	0
1330 - 1345	0	0	0	0	0	0	0	0	0	0	0	0	0
1345 - 1400	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1400 - 1415	0	0	0	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1800 - 1815	0	0	0	0	0	0	0	0	0	0	0	0	0
1815 - 1830	0	0	0	0	0	0	0	0	0	0	0	0	0
1830 - 1845	0	0	0	0	0	0	0	0	0	0	0	0	0
1845 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Grand Total	0	1	0	**1**	0	0	0	**0**	0	0	0	**0**	**1**
Approach %	0.00	100.00	0.00	-	0.00	0.00	0.00	-	0.00	0.00	0.00	-	
Intersection %	0.00	100.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Pedestrian Count || All vehicles

Columbia TN

Marr Traffic DATA COLLECTION
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Site 1 of 2

Lasea Rd
TN-99 Bear Creek Pike (West)
TN-99 Bear Creek Pike (East)

Date
Tuesday, March 7, 2023

Weather
Fair
58°F

Lat/Long
35.642343°, -86.904882°

0600 - 1900 (Weekday 13h Session) (03-07-2023)
Pedestrians

	Southbound			Eastbound			Westbound			
	Lasea Rd			TN-99 Bear Creek Pike (West)			TN-99 Bear Creek Pike (East)			
TIME	EB 1c	WB 1d	App Total	NB 1e	SB 1f	App Total	NB 1g	SB 1h	App Total	Int Total
0600 - 0615	0	0	0	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	0	0	0	0	0	0
0630 - 0645	0	0	0	0	0	0	0	0	0	0
0645 - 0700	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
0700 - 0715	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
0800 - 0815	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
0900 - 0915	0	0	0	0	0	0	0	0	0	0
0915 - 0930	0	0	0	0	0	0	0	0	0	0
0930 - 0945	0	0	0	0	0	0	0	0	0	0
0945 - 1000	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1000 - 1015	0	0	0	0	0	0	0	0	0	0
1015 - 1030	0	0	0	0	0	0	0	0	0	0
1030 - 1045	0	0	0	0	0	0	0	0	0	0
1045 - 1100	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1100 - 1115	0	0	0	0	0	0	0	0	0	0
1115 - 1130	0	0	0	0	0	0	0	0	0	0
1130 - 1145	0	0	0	0	0	0	0	0	0	0
1145 - 1200	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1200 - 1215	0	0	0	0	0	0	0	0	0	0
1215 - 1230	0	0	0	0	0	0	0	0	0	0
1230 - 1245	0	0	0	0	0	0	0	0	0	0
1245 - 1300	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1300 - 1315	0	0	0	0	0	0	0	0	0	0
1315 - 1330	0	0	0	0	0	0	0	0	0	0
1330 - 1345	0	0	0	0	0	0	0	0	0	0
1345 - 1400	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1400 - 1415	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1500 - 1515	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1600 - 1615	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1700 - 1715	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1800 - 1815	0	0	0	0	0	0	0	0	0	0
1815 - 1830	0	0	0	0	0	0	0	0	0	0
1830 - 1845	0	0	0	0	0	0	0	0	0	0
1845 - 1900	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
Grand Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
Approach %	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Click here for Map

Peak Hour Turning Movement Count

Columbia TN

Marr Traffic DATA COLLECTION

www.marrtraffic.com

Tuesday, March 7, 2023	
Period	0600 - 1900
Peak Hour	0700 - 0800

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

0600 - 0900

Volume



All vehicles

	Northbound										Eastbound					Westbound					
	Rock Springs Rd										TN-99 Bear Creek Pike (West)					TN-99 Bear Creek Pike (East)					
	Left		Right	U-Turn	App					App		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App	Int
Time	2.1		2.2	2.3	Total					Total		2.4	2.5	2.6	Total	2.7	2.8		2.9	Total	Total
0700 - 0715	5	-	14	0	19	-	-	-	-	0	-	136	4	0	140	3	141	-	0	144	303
0715 - 0730	2	-	18	0	20	-	-	-	-	0	-	124	2	0	126	5	109	-	1	115	261
0730 - 0745	3	-	20	0	23	-	-	-	-	0	-	127	2	0	129	9	119	-	0	128	280
0745 - 0800	3	-	18	0	21	-	-	-	-	0	-	139	1	0	140	12	130	-	0	142	303
Total	13	0	70	0	83	0	0	0	0	0	0	526	9	0	535	29	499	0	1	529	1147
Approach %	15.66	0.00	84.34	0.00	-	0.00	0.00	0.00	0.00	-	0.00	98.32	1.68	0.00	-	5.48	94.33	0.00	0.19	-	
PHF	0.65	0.00	0.88	0.00	**0.90**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.95	0.56	0.00	**0.96**	0.60	0.88	0.00	0.25	**0.92**	**0.95**

Passenger Vehicles (1-3)

	Northbound										Eastbound					Westbound					
	Rock Springs Rd										TN-99 Bear Creek Pike (West)					TN-99 Bear Creek Pike (East)					
	Left		Right	U-Turn	App					App		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App	Int
Time	2.1		2.2	2.3	Total					Total		2.4	2.5	2.6	Total	2.7	2.8		2.9	Total	Total
0700 - 0715	3	-	14	0	17	-	-	-	-	0	-	120	3	0	123	3	131	-	0	134	274
0715 - 0730	1	-	18	0	19	-	-	-	-	0	-	115	2	0	117	5	97	-	1	103	239
0730 - 0745	3	-	18	0	21	-	-	-	-	0	-	118	1	0	119	6	107	-	0	113	253
0745 - 0800	2	-	16	0	18	-	-	-	-	0	-	125	1	0	126	10	108	-	0	118	262
Total	9	0	66	0	75	0	0	0	0	0	0	478	7	0	485	24	443	0	1	468	1028
Approach %	12.00	0.00	88.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	98.56	1.44	0.00	-	5.13	94.66	0.00	0.21	-	
PHF	0.75	0.00	0.92	0.00	**0.89**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.96	0.58	0.00	**0.96**	0.60	0.85	0.00	0.25	**0.87**	**0.94**

Single Unit Trucks (4-7)

	Northbound										Eastbound					Westbound					
	Rock Springs Rd										TN-99 Bear Creek Pike (West)					TN-99 Bear Creek Pike (East)					
	Left		Right	U-Turn	App					App		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App	Int
Time	2.1		2.2	2.3	Total					Total		2.4	2.5	2.6	Total	2.7	2.8		2.9	Total	Total
0700 - 0715	2	-	0	0	2	-	-	-	-	0	-	15	0	0	15	0	6	-	0	6	23
0715 - 0730	0	-	0	0	0	-	-	-	-	0	-	4	0	0	4	0	6	-	0	6	10
0730 - 0745	0	-	2	0	2	-	-	-	-	0	-	7	1	0	8	3	6	-	0	9	19
0745 - 0800	1	-	2	0	3	-	-	-	-	0	-	7	0	0	7	1	17	-	0	18	28
Total	3	0	4	0	7	0	0	0	0	0	0	33	1	0	34	4	35	0	0	39	80
Approach %	42.86	0.00	57.14	0.00	-	0.00	0.00	0.00	0.00	-	0.00	97.06	2.94	0.00	-	10.26	89.74	0.00	0.00	-	
PHF	0.38	0.00	0.50	0.00	**0.58**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.55	0.25	0.00	**0.57**	0.33	0.51	0.00	0.00	**0.54**	**0.71**

Combination Trucks (8-13)

	Northbound										Eastbound					Westbound					
	Rock Springs Rd										TN-99 Bear Creek Pike (West)					TN-99 Bear Creek Pike (East)					
	Left		Right	U-Turn	App					App		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App	Int
Time	2.1		2.2	2.3	Total					Total		2.4	2.5	2.6	Total	2.7	2.8		2.9	Total	Total
0700 - 0715	0	-	0	0	0	-	-	-	-	0	-	1	1	0	2	0	4	-	0	4	6
0715 - 0730	1	-	0	0	1	-	-	-	-	0	-	5	0	0	5	0	6	-	0	6	12
0730 - 0745	0	-	0	0	0	-	-	-	-	0	-	2	0	0	2	0	6	-	0	6	8
0745 - 0800	0	-	0	0	0	-	-	-	-	0	-	7	0	0	7	1	5	-	0	6	13
Total	1	0	0	0	1	0	0	0	0	0	0	15	1	0	16	1	21	0	0	22	39
Approach %	100.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	93.75	6.25	0.00	-	4.55	95.45	0.00	0.00	-	
PHF	0.25	0.00	0.00	0.00	**0.25**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.54	0.25	0.00	**0.57**	0.25	0.88	0.00	0.00	**0.92**	**0.75**

Bikes

	Northbound										Eastbound					Westbound					
	Rock Springs Rd										TN-99 Bear Creek Pike (West)					TN-99 Bear Creek Pike (East)					
	Left		Right	U-Turn	App					App		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App	Int
Time	2.1		2.2	2.3	Total					Total		2.4	2.5	2.6	Total	2.7	2.8		2.9	Total	Total
0700 - 0715	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
0715 - 0730	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
0730 - 0745	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
0745 - 0800	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**

Click here for Map

Peak Hour Turning Movement Count

Columbia TN

Marr Traffic DATA COLLECTION

www.marrtraffic.com

Tuesday, March 7, 2023	
Period	0600 - 1900
Peak Hour	1600 - 1700

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

1500 - 1800

Volume



All vehicles

	Northbound										Eastbound					Westbound					
	Rock Springs Rd										TN-99 Bear Creek Pike (West)					TN-99 Bear Creek Pike (East)					
	Left		Right	U-Turn	App					App		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App	Int
Time	2.1		2.2	2.3	Total					Total		2.4	2.5	2.6	Total	2.7	2.8		2.9	Total	Total
1600 - 1615	1	-	15	0	16	-	-	-	-	0	-	148	3	0	151	16	233	-	0	249	416
1615 - 1630	3	-	16	0	19	-	-	-	-	0	-	135	1	0	136	17	217	-	0	234	389
1630 - 1645	4	-	15	1	20	-	-	-	-	0	-	115	0	0	115	24	212	-	0	236	371
1645 - 1700	3	-	16	0	19	-	-	-	-	0	-	137	2	0	139	21	202	-	0	223	381
Total	11	0	62	1	74	0	0	0	0	0	0	535	6	0	541	78	864	0	0	942	1557
Approach %	14.86	0.00	83.78	1.35	-	0.00	0.00	0.00	0.00	-	0.00	98.89	1.11	0.00	-	8.28	91.72	0.00	0.00	-	
PHF	0.69	0.00	0.97	0.25	**0.93**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.90	0.50	0.00	**0.90**	0.81	0.93	0.00	0.00	**0.95**	**0.94**

Passenger Vehicles (1-3)

	Northbound										Eastbound					Westbound					
	Rock Springs Rd										TN-99 Bear Creek Pike (West)					TN-99 Bear Creek Pike (East)					
	Left		Right	U-Turn	App					App		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App	Int
Time	2.1		2.2	2.3	Total					Total		2.4	2.5	2.6	Total	2.7	2.8		2.9	Total	Total
1600 - 1615	1	-	13	0	14	-	-	-	-	0	-	137	3	0	140	15	220	-	0	235	389
1615 - 1630	3	-	16	0	19	-	-	-	-	0	-	130	1	0	131	17	204	-	0	221	371
1630 - 1645	3	-	15	0	18	-	-	-	-	0	-	107	0	0	107	23	201	-	0	224	349
1645 - 1700	3	-	11	0	14	-	-	-	-	0	-	128	2	0	130	21	195	-	0	216	360
Total	10	0	55	0	65	0	0	0	0	0	0	502	6	0	508	76	820	0	0	896	1469
Approach %	15.38	0.00	84.62	0.00	-	0.00	0.00	0.00	0.00	-	0.00	98.82	1.18	0.00	-	8.48	91.52	0.00	0.00	-	
PHF	0.83	0.00	0.86	0.00	**0.86**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.92	0.50	0.00	**0.91**	0.83	0.93	0.00	0.00	**0.95**	**0.94**

Single Unit Trucks (4-7)

	Northbound										Eastbound					Westbound					
	Rock Springs Rd										TN-99 Bear Creek Pike (West)					TN-99 Bear Creek Pike (East)					
	Left		Right	U-Turn	App					App		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App	Int
Time	2.1		2.2	2.3	Total					Total		2.4	2.5	2.6	Total	2.7	2.8		2.9	Total	Total
1600 - 1615	0	-	2	0	2	-	-	-	-	0	-	6	0	0	6	1	7	-	0	8	16
1615 - 1630	0	-	0	0	0	-	-	-	-	0	-	1	0	0	1	0	6	-	0	6	7
1630 - 1645	1	-	0	1	2	-	-	-	-	0	-	5	0	0	5	1	7	-	0	8	15
1645 - 1700	0	-	2	0	2	-	-	-	-	0	-	4	0	0	4	0	4	-	0	4	10
Total	1	0	4	1	6	0	0	0	0	0	0	16	0	0	16	2	24	0	0	26	48
Approach %	16.67	0.00	66.67	16.67	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	7.69	92.31	0.00	0.00	-	
PHF	0.25	0.00	0.50	0.25	**0.75**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.67	0.00	0.00	**0.67**	0.50	0.86	0.00	0.00	**0.81**	**0.75**

Combination Trucks (8-13)

	Northbound										Eastbound					Westbound					
	Rock Springs Rd										TN-99 Bear Creek Pike (West)					TN-99 Bear Creek Pike (East)					
	Left		Right	U-Turn	App					App		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App	Int
Time	2.1		2.2	2.3	Total					Total		2.4	2.5	2.6	Total	2.7	2.8		2.9	Total	Total
1600 - 1615	0	-	0	0	0	-	-	-	-	0	-	5	0	0	5	0	6	-	0	6	11
1615 - 1630	0	-	0	0	0	-	-	-	-	0	-	4	0	0	4	0	7	-	0	7	11
1630 - 1645	0	-	0	0	0	-	-	-	-	0	-	3	0	0	3	0	4	-	0	4	7
1645 - 1700	0	-	3	0	3	-	-	-	-	0	-	5	0	0	5	0	3	-	0	3	11
Total	0	0	3	0	3	0	0	0	0	0	0	17	0	0	17	0	20	0	0	20	40
Approach %	0.00	0.00	100.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	0.00	100.00	0.00	0.00	-	
PHF	0.00	0.00	0.25	0.00	**0.25**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.85	0.00	0.00	**0.85**	0.00	0.71	0.00	0.00	**0.71**	**0.91**

Bikes

	Northbound										Eastbound					Westbound					
	Rock Springs Rd										TN-99 Bear Creek Pike (West)					TN-99 Bear Creek Pike (East)					
	Left		Right	U-Turn	App					App		Thru	Right	U-Turn	App	Left	Thru		U-Turn	App	Int
Time	2.1		2.2	2.3	Total					Total		2.4	2.5	2.6	Total	2.7	2.8		2.9	Total	Total
1600 - 1615	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
1615 - 1630	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
1630 - 1645	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
1645 - 1700	0	-	0	0	0	-	-	-	-	0	-	0	0	0	0	0	0	-	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	-	
PHF	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	0.00	0.00	0.00	0.00	**0.00**	**0.00**

Classified Turn Movement Count || All vehicles

Columbia TN

Marr Traffic DATA COLLECTION
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Site 2 of 2
Rock Springs Rd

TN-99 Bear Creek Pike (West)
TN-99 Bear Creek Pike (East)

Date
Tuesday, March 7, 2023

Lat/Long
35.641161°, -86.907741°

Weather
Fair
58°F

0600 - 1900 (Weekday 13h Session) (03-07-2023)
All vehicles

	Northbound				Eastbound				Westbound				
	Rock Springs Rd				TN-99 Bear Creek Pike (West)				TN-99 Bear Creek Pike (East)				
TIME	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8	U-Turn 2.9	App Total	Int Total
0600 - 0615	2	13	0	15	150	4	0	154	6	48	0	54	223
0615 - 0630	2	17	0	19	159	0	0	159	5	100	0	105	283
0630 - 0645	2	12	0	14	143	5	0	148	5	105	0	110	272
0645 - 0700	1	15	0	16	151	1	0	152	9	98	0	107	275
Hourly Total	7	57	0	**64**	603	10	0	**613**	25	351	0	**376**	**1053**
0700 - 0715	5	14	0	19	136	4	0	140	3	141	0	144	303
0715 - 0730	2	18	0	20	124	2	0	126	5	109	1	115	261
0730 - 0745	3	20	0	23	127	2	0	129	9	119	0	128	280
0745 - 0800	3	18	0	21	139	1	0	140	12	130	0	142	303
Hourly Total	13	70	0	**83**	526	9	0	**535**	29	499	1	**529**	**1147**
0800 - 0815	1	6	0	7	151	2	0	153	9	83	0	92	252
0815 - 0830	3	5	0	8	126	3	0	129	11	97	1	109	246
0830 - 0845	2	12	0	14	120	0	0	120	6	116	0	122	256
0845 - 0900	1	3	0	4	98	4	0	102	7	116	0	123	229
Hourly Total	7	26	0	**33**	495	9	0	**504**	33	412	1	**446**	**983**
0900 - 0915	1	10	0	11	98	2	0	100	3	80	0	83	194
0915 - 0930	0	10	0	10	123	0	0	123	6	87	0	93	226
0930 - 0945	3	5	0	8	95	2	0	97	8	123	0	131	236
0945 - 1000	1	11	0	12	83	1	0	84	9	91	0	100	196
Hourly Total	5	36	0	**41**	399	5	0	**404**	26	381	0	**407**	**852**
1000 - 1015	2	7	0	9	95	3	0	98	8	81	0	89	196
1015 - 1030	2	9	0	11	106	0	0	106	7	87	0	94	211
1030 - 1045	4	10	0	14	94	3	0	97	7	91	0	98	209
1045 - 1100	1	2	0	3	79	2	0	81	3	103	0	106	190
Hourly Total	9	28	0	**37**	374	8	0	**382**	25	362	0	**387**	**806**
1100 - 1115	0	10	0	10	85	3	0	88	6	112	0	118	216
1115 - 1130	1	8	0	9	100	2	0	102	8	87	0	95	206
1130 - 1145	0	8	0	8	87	1	0	88	10	95	0	105	201
1145 - 1200	2	14	0	16	97	2	0	99	7	93	0	100	215
Hourly Total	3	40	0	**43**	369	8	0	**377**	31	387	0	**418**	**838**
1200 - 1215	1	4	0	5	80	0	0	80	8	94	0	102	187
1215 - 1230	1	9	0	10	88	4	0	92	9	92	0	101	203
1230 - 1245	0	6	0	6	88	3	0	91	12	113	0	125	222
1245 - 1300	4	9	0	13	76	1	0	77	9	128	0	137	227
Hourly Total	6	28	0	**34**	332	8	0	**340**	38	427	0	**465**	**839**
1300 - 1315	2	8	0	10	108	3	0	111	8	130	0	138	259
1315 - 1330	4	9	0	13	87	4	0	91	6	112	0	118	222
1330 - 1345	0	12	0	12	102	2	0	104	11	129	0	140	256
1345 - 1400	3	6	0	9	104	7	0	111	9	141	0	150	270
Hourly Total	9	35	0	**44**	401	16	0	**417**	34	512	0	**546**	**1007**
1400 - 1415	4	8	0	12	109	1	0	110	10	115	0	125	247
1415 - 1430	2	6	0	8	100	2	0	102	16	121	0	137	247
1430 - 1445	2	7	0	9	75	3	0	78	11	126	0	137	224
1445 - 1500	2	9	0	11	80	1	0	81	17	139	0	156	248
Hourly Total	10	30	0	**40**	364	7	0	**371**	54	501	0	**555**	**966**
1500 - 1515	0	2	0	2	132	2	0	134	16	154	0	170	306
1515 - 1530	0	8	0	8	107	2	0	109	12	150	0	162	279
1530 - 1545	1	11	0	12	127	1	0	128	13	186	0	199	339
1545 - 1600	0	12	0	12	142	1	0	143	18	197	0	215	370
Hourly Total	1	33	0	**34**	508	6	0	**514**	59	687	0	**746**	**1294**
1600 - 1615	1	15	0	16	148	3	0	151	16	233	0	249	416
1615 - 1630	3	16	0	19	135	1	0	136	17	217	0	234	389
1630 - 1645	4	15	1	20	115	0	0	115	24	212	0	236	371
1645 - 1700	3	16	0	19	137	2	0	139	21	202	0	223	381
Hourly Total	11	62	1	**74**	535	6	0	**541**	78	864	0	**942**	**1557**
1700 - 1715	3	7	0	10	126	3	0	129	18	149	0	167	306
1715 - 1730	3	7	0	10	135	2	0	137	12	194	0	206	353
1730 - 1745	1	9	0	10	117	2	0	119	13	195	1	209	338
1745 - 1800	2	11	0	13	109	0	0	109	13	128	1	142	264
Hourly Total	9	34	0	**43**	487	7	0	**494**	56	666	2	**724**	**1261**
1800 - 1815	1	6	0	7	90	0	0	90	13	129	1	143	240
1815 - 1830	0	5	0	5	76	1	0	77	18	121	0	139	221
1830 - 1845	2	6	0	8	82	2	0	84	10	109	0	119	211
1845 - 1900	3	4	0	7	59	3	0	62	10	105	0	115	184
Hourly Total	6	21	0	**27**	307	6	0	**313**	51	464	1	**516**	**856**
Grand Total	96	500	1	**597**	5700	105	0	**5805**	539	6513	5	**7057**	**13459**
Approach %	16.08	83.75	0.17	-	98.19	1.81	0.00	-	7.64	92.29	0.07	-	
Intersection %	0.71	3.71	0.01	4.44	42.35	0.78	0.00	43.13	4.00	48.39	0.04	52.43	
PHF	0.69	0.97	0.25	**0.93**	0.90	0.50	0.00	**0.90**	0.81	0.93	0.00	**0.95**	**0.94**

Classified Turn Movement Count || Passenger Vehicles (1-3)

Columbia TN

Marr Traffic DATA COLLECTION
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Site 2 of 2
Rock Springs Rd

TN-99 Bear Creek Pike (West)
TN-99 Bear Creek Pike (East)

Date
Tuesday, March 7, 2023

Lat/Long
35.641161°, -86.907741°

Weather
Fair
58°F

0600 - 1900 (Weekday 13h Session) (03-07-2023)
Passenger Vehicles (1-3)

	Northbound				Eastbound				Westbound				
	Rock Springs Rd				TN-99 Bear Creek Pike (West)				TN-99 Bear Creek Pike (East)				
TIME	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8	U-Turn 2.9	App Total	Int Total
0600 - 0615	2	12	0	14	142	4	0	146	6	39	0	45	205
0615 - 0630	2	17	0	19	154	0	0	154	4	89	0	93	266
0630 - 0645	2	10	0	12	131	0	0	131	5	96	0	101	244
0645 - 0700	1	13	0	14	143	1	0	144	4	88	0	92	250
Hourly Total	7	52	0	**59**	570	5	0	**575**	19	312	0	**331**	**965**
0700 - 0715	3	14	0	17	120	3	0	123	3	131	0	134	274
0715 - 0730	1	18	0	19	115	2	0	117	5	97	1	103	239
0730 - 0745	3	18	0	21	118	1	0	119	6	107	0	113	253
0745 - 0800	2	16	0	18	125	1	0	126	10	108	0	118	262
Hourly Total	9	66	0	**75**	478	7	0	**485**	24	443	1	**468**	**1028**
0800 - 0815	1	6	0	7	141	1	0	142	8	72	0	80	229
0815 - 0830	2	4	0	6	111	2	0	113	9	84	1	94	213
0830 - 0845	2	11	0	13	103	0	0	103	5	103	0	108	224
0845 - 0900	1	2	0	3	79	1	0	80	5	101	0	106	189
Hourly Total	6	23	0	**29**	434	4	0	**438**	27	360	1	**388**	**855**
0900 - 0915	1	9	0	10	81	1	0	82	1	70	0	71	163
0915 - 0930	0	9	0	9	110	0	0	110	4	70	0	74	193
0930 - 0945	3	5	0	8	78	2	0	80	8	105	0	113	201
0945 - 1000	1	8	0	9	75	1	0	76	8	69	0	77	162
Hourly Total	5	31	0	**36**	344	4	0	**348**	21	314	0	**335**	**719**
1000 - 1015	2	6	0	8	85	3	0	88	6	63	0	69	165
1015 - 1030	2	8	0	10	92	0	0	92	7	71	0	78	180
1030 - 1045	4	8	0	12	78	3	0	81	4	77	0	81	174
1045 - 1100	1	2	0	3	66	2	0	68	3	87	0	90	161
Hourly Total	9	24	0	**33**	321	8	0	**329**	20	298	0	**318**	**680**
1100 - 1115	0	9	0	9	75	2	0	77	6	94	0	100	186
1115 - 1130	1	8	0	9	87	1	0	88	6	65	0	71	168
1130 - 1145	0	6	0	6	71	1	0	72	9	83	0	92	170
1145 - 1200	2	12	0	14	78	2	0	80	5	83	0	88	182
Hourly Total	3	35	0	**38**	311	6	0	**317**	26	325	0	**351**	**706**
1200 - 1215	0	4	0	4	66	0	0	66	7	79	0	86	156
1215 - 1230	1	8	0	9	75	4	0	79	8	80	0	88	176
1230 - 1245	0	5	0	5	70	1	0	71	11	100	0	111	187
1245 - 1300	4	7	0	11	63	1	0	64	8	106	0	114	189
Hourly Total	5	24	0	**29**	274	6	0	**280**	34	365	0	**399**	**708**
1300 - 1315	2	7	0	9	93	2	0	95	7	107	0	114	218
1315 - 1330	3	9	0	12	73	4	0	77	5	99	0	104	193
1330 - 1345	0	11	0	11	85	2	0	87	11	111	0	122	220
1345 - 1400	3	6	0	9	92	5	0	97	8	118	0	126	232
Hourly Total	8	33	0	**41**	343	13	0	**356**	31	435	0	**466**	**863**
1400 - 1415	3	8	0	11	93	1	0	94	10	103	0	113	218
1415 - 1430	2	6	0	8	86	2	0	88	15	110	0	125	221
1430 - 1445	2	7	0	9	62	3	0	65	11	114	0	125	199
1445 - 1500	2	9	0	11	66	1	0	67	16	121	0	137	215
Hourly Total	9	30	0	**39**	307	7	0	**314**	52	448	0	**500**	**853**
1500 - 1515	0	2	0	2	119	2	0	121	16	145	0	161	284
1515 - 1530	0	8	0	8	91	2	0	93	12	142	0	154	255
1530 - 1545	1	11	0	12	115	1	0	116	11	173	0	184	312
1545 - 1600	0	12	0	12	132	1	0	133	18	181	0	199	344
Hourly Total	1	33	0	**34**	457	6	0	**463**	57	641	0	**698**	**1195**
1600 - 1615	1	13	0	14	137	3	0	140	15	220	0	235	389
1615 - 1630	3	16	0	19	130	1	0	131	17	204	0	221	371
1630 - 1645	3	15	0	18	107	0	0	107	23	201	0	224	349
1645 - 1700	3	11	0	14	128	2	0	130	21	195	0	216	360
Hourly Total	10	55	0	**65**	502	6	0	**508**	76	820	0	**896**	**1469**
1700 - 1715	3	7	0	10	113	3	0	116	18	144	0	162	288
1715 - 1730	3	7	0	10	122	2	0	124	12	191	0	203	337
1730 - 1745	1	9	0	10	110	2	0	112	12	186	1	199	321
1745 - 1800	2	11	0	13	103	0	0	103	12	124	1	137	253
Hourly Total	9	34	0	**43**	448	7	0	**455**	54	645	2	**701**	**1199**
1800 - 1815	1	6	0	7	88	0	0	88	13	125	1	139	234
1815 - 1830	0	5	0	5	71	1	0	72	18	116	0	134	211
1830 - 1845	2	6	0	8	81	2	0	83	10	106	0	116	207
1845 - 1900	3	4	0	7	58	3	0	61	10	99	0	109	177
Hourly Total	6	21	0	**27**	298	6	0	**304**	51	446	1	**498**	**829**
Grand Total	87	461	0	**548**	5087	85	0	**5172**	492	5852	5	**6349**	**12069**
Approach %	15.88	84.12	0.00	-	98.36	1.64	0.00	-	7.75	92.17	0.08	-	
Intersection %	0.72	3.82	0.00	4.54	42.15	0.70	0.00	42.85	4.08	48.49	0.04	52.61	

Classified Turn Movement Count || Single Unit Trucks (4-7)

Columbia TN

Marr Traffic DATA COLLECTION
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Site 2 of 2
Rock Springs Rd

TN-99 Bear Creek Pike (West)
TN-99 Bear Creek Pike (East)

Date
Tuesday, March 7, 2023

Lat/Long
35.641161°, -86.907741°

Weather
Fair
58°F

0600 - 1900 (Weekday 13h Session) (03-07-2023)
Single Unit Trucks (4-7)

	Northbound				Eastbound				Westbound				
	Rock Springs Rd				TN-99 Bear Creek Pike (West)				TN-99 Bear Creek Pike (East)				
TIME	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8	U-Turn 2.9	App Total	Int Total
0600 - 0615	0	1	0	1	6	0	0	6	0	7	0	7	14
0615 - 0630	0	0	0	0	1	0	0	1	1	7	0	8	9
0630 - 0645	0	1	0	1	8	5	0	13	0	4	0	4	18
0645 - 0700	0	2	0	2	4	0	0	4	2	4	0	6	12
Hourly Total	0	4	0	**4**	19	5	0	**24**	3	22	0	**25**	**53**
0700 - 0715	2	0	0	2	15	0	0	15	0	6	0	6	23
0715 - 0730	0	0	0	0	4	0	0	4	0	6	0	6	10
0730 - 0745	0	2	0	2	7	1	0	8	3	6	0	9	19
0745 - 0800	1	2	0	3	7	0	0	7	1	17	0	18	28
Hourly Total	3	4	0	**7**	33	1	0	**34**	4	35	0	**39**	**80**
0800 - 0815	0	0	0	0	4	1	0	5	1	5	0	6	11
0815 - 0830	0	1	0	1	10	1	0	11	2	6	0	8	20
0830 - 0845	0	1	0	1	13	0	0	13	1	5	0	6	20
0845 - 0900	0	1	0	1	11	3	0	14	2	10	0	12	27
Hourly Total	0	3	0	**3**	38	5	0	**43**	6	26	0	**32**	**78**
0900 - 0915	0	1	0	1	8	0	0	8	2	9	0	11	20
0915 - 0930	0	1	0	1	9	0	0	9	2	10	0	12	22
0930 - 0945	0	0	0	0	14	0	0	14	0	11	0	11	25
0945 - 1000	0	2	0	2	5	0	0	5	1	14	0	15	22
Hourly Total	0	4	0	**4**	36	0	0	**36**	5	44	0	**49**	**89**
1000 - 1015	0	1	0	1	7	0	0	7	1	12	0	13	21
1015 - 1030	0	1	0	1	10	0	0	10	0	8	0	8	19
1030 - 1045	0	2	0	2	11	0	0	11	2	8	0	10	23
1045 - 1100	0	0	0	0	4	0	0	4	0	11	0	11	15
Hourly Total	0	4	0	**4**	32	0	0	**32**	3	39	0	**42**	**78**
1100 - 1115	0	1	0	1	4	1	0	5	0	12	0	12	18
1115 - 1130	0	0	0	0	9	1	0	10	2	14	0	16	26
1130 - 1145	0	2	0	2	8	0	0	8	1	7	0	8	18
1145 - 1200	0	1	0	1	10	0	0	10	2	5	0	7	18
Hourly Total	0	4	0	**4**	31	2	0	**33**	5	38	0	**43**	**80**
1200 - 1215	1	0	0	1	5	0	0	5	1	11	0	12	18
1215 - 1230	0	1	0	1	5	0	0	5	0	10	0	10	16
1230 - 1245	0	0	0	0	13	2	0	15	0	7	0	7	22
1245 - 1300	0	1	0	1	10	0	0	10	1	12	0	13	24
Hourly Total	1	2	0	**3**	33	2	0	**35**	2	40	0	**42**	**80**
1300 - 1315	0	1	0	1	4	1	0	5	1	15	0	16	22
1315 - 1330	1	0	0	1	6	0	0	6	1	11	0	12	19
1330 - 1345	0	1	0	1	13	0	0	13	0	13	0	13	27
1345 - 1400	0	0	0	0	9	1	0	10	1	14	0	15	25
Hourly Total	1	2	0	**3**	32	2	0	**34**	3	53	0	**56**	**93**
1400 - 1415	1	0	0	1	8	0	0	8	0	5	0	5	14
1415 - 1430	0	0	0	0	10	0	0	10	0	6	0	6	16
1430 - 1445	0	0	0	0	6	0	0	6	0	6	0	6	12
1445 - 1500	0	0	0	0	11	0	0	11	1	13	0	14	25
Hourly Total	1	0	0	**1**	35	0	0	**35**	1	30	0	**31**	**67**
1500 - 1515	0	0	0	0	9	0	0	9	0	6	0	6	15
1515 - 1530	0	0	0	0	10	0	0	10	0	7	0	7	17
1530 - 1545	0	0	0	0	6	0	0	6	1	11	0	12	18
1545 - 1600	0	0	0	0	9	0	0	9	0	13	0	13	22
Hourly Total	0	0	0	**0**	34	0	0	**34**	1	37	0	**38**	**72**
1600 - 1615	0	2	0	2	6	0	0	6	1	7	0	8	16
1615 - 1630	0	0	0	0	1	0	0	1	0	6	0	6	7
1630 - 1645	1	0	1	2	5	0	0	5	1	7	0	8	15
1645 - 1700	0	2	0	2	4	0	0	4	0	4	0	4	10
Hourly Total	1	4	1	**6**	16	0	0	**16**	2	24	0	**26**	**48**
1700 - 1715	0	0	0	0	6	0	0	6	0	2	0	2	8
1715 - 1730	0	0	0	0	5	0	0	5	0	2	0	2	7
1730 - 1745	0	0	0	0	5	0	0	5	1	7	0	8	13
1745 - 1800	0	0	0	0	3	0	0	3	0	1	0	1	4
Hourly Total	0	0	0	**0**	19	0	0	**19**	1	12	0	**13**	**32**
1800 - 1815	0	0	0	0	0	0	0	0	0	3	0	3	3
1815 - 1830	0	0	0	0	0	0	0	0	0	2	0	2	2
1830 - 1845	0	0	0	0	0	0	0	0	0	1	0	1	1
1845 - 1900	0	0	0	0	0	0	0	0	0	3	0	3	3
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	9	0	**9**	**9**
Grand Total	7	31	1	**39**	358	17	0	**375**	36	409	0	**445**	**859**
Approach %	17.95	79.49	2.56	-	95.47	4.53	0.00	-	8.09	91.91	0.00	-	
Intersection %	0.81	3.61	0.12	4.54	41.68	1.98	0.00	43.66	4.19	47.61	0.00	51.80	

Classified Turn Movement Count || Combination Trucks (8-13)

Columbia TN

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Site 2 of 2
Rock Springs Rd

TN-99 Bear Creek Pike (West)
TN-99 Bear Creek Pike (East)

Date
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0600 - 1900 (Weekday 13h Session) (03-07-2023)
Combination Trucks (8-13)

	Northbound				Eastbound				Westbound				
	Rock Springs Rd				TN-99 Bear Creek Pike (West)				TN-99 Bear Creek Pike (East)				
TIME	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8	U-Turn 2.9	App Total	Int Total
0600 - 0615	0	0	0	0	2	0	0	2	0	2	0	2	4
0615 - 0630	0	0	0	0	4	0	0	4	0	4	0	4	8
0630 - 0645	0	1	0	1	4	0	0	4	0	5	0	5	10
0645 - 0700	0	0	0	0	4	0	0	4	3	6	0	9	13
Hourly Total	0	1	0	**1**	14	0	0	**14**	3	17	0	**20**	**35**
0700 - 0715	0	0	0	0	1	1	0	2	0	4	0	4	6
0715 - 0730	1	0	0	1	5	0	0	5	0	6	0	6	12
0730 - 0745	0	0	0	0	2	0	0	2	0	6	0	6	8
0745 - 0800	0	0	0	0	7	0	0	7	1	5	0	6	13
Hourly Total	1	0	0	**1**	15	1	0	**16**	1	21	0	**22**	**39**
0800 - 0815	0	0	0	0	6	0	0	6	0	6	0	6	12
0815 - 0830	1	0	0	1	5	0	0	5	0	7	0	7	13
0830 - 0845	0	0	0	0	4	0	0	4	0	8	0	8	12
0845 - 0900	0	0	0	0	8	0	0	8	0	5	0	5	13
Hourly Total	1	0	0	**1**	23	0	0	**23**	0	26	0	**26**	**50**
0900 - 0915	0	0	0	0	9	1	0	10	0	1	0	1	11
0915 - 0930	0	0	0	0	4	0	0	4	0	7	0	7	11
0930 - 0945	0	0	0	0	3	0	0	3	0	7	0	7	10
0945 - 1000	0	1	0	1	3	0	0	3	0	8	0	8	12
Hourly Total	0	1	0	**1**	19	1	0	**20**	0	23	0	**23**	**44**
1000 - 1015	0	0	0	0	3	0	0	3	0	6	0	6	9
1015 - 1030	0	0	0	0	4	0	0	4	0	8	0	8	12
1030 - 1045	0	0	0	0	5	0	0	5	1	6	0	7	12
1045 - 1100	0	0	0	0	9	0	0	9	0	5	0	5	14
Hourly Total	0	0	0	**0**	21	0	0	**21**	1	25	0	**26**	**47**
1100 - 1115	0	0	0	0	6	0	0	6	0	6	0	6	12
1115 - 1130	0	0	0	0	4	0	0	4	0	8	0	8	12
1130 - 1145	0	0	0	0	8	0	0	8	0	5	0	5	13
1145 - 1200	0	1	0	1	9	0	0	9	0	5	0	5	15
Hourly Total	0	1	0	**1**	27	0	0	**27**	0	24	0	**24**	**52**
1200 - 1215	0	0	0	0	9	0	0	9	0	4	0	4	13
1215 - 1230	0	0	0	0	8	0	0	8	1	2	0	3	11
1230 - 1245	0	1	0	1	5	0	0	5	1	6	0	7	13
1245 - 1300	0	1	0	1	3	0	0	3	0	10	0	10	14
Hourly Total	0	2	0	**2**	25	0	0	**25**	2	22	0	**24**	**51**
1300 - 1315	0	0	0	0	11	0	0	11	0	8	0	8	19
1315 - 1330	0	0	0	0	8	0	0	8	0	2	0	2	10
1330 - 1345	0	0	0	0	4	0	0	4	0	5	0	5	9
1345 - 1400	0	0	0	0	3	1	0	4	0	9	0	9	13
Hourly Total	0	0	0	**0**	26	1	0	**27**	0	24	0	**24**	**51**
1400 - 1415	0	0	0	0	8	0	0	8	0	7	0	7	15
1415 - 1430	0	0	0	0	4	0	0	4	1	5	0	6	10
1430 - 1445	0	0	0	0	7	0	0	7	0	6	0	6	13
1445 - 1500	0	0	0	0	3	0	0	3	0	5	0	5	8
Hourly Total	0	0	0	**0**	22	0	0	**22**	1	23	0	**24**	**46**
1500 - 1515	0	0	0	0	4	0	0	4	0	3	0	3	7
1515 - 1530	0	0	0	0	6	0	0	6	0	1	0	1	7
1530 - 1545	0	0	0	0	6	0	0	6	1	2	0	3	9
1545 - 1600	0	0	0	0	1	0	0	1	0	3	0	3	4
Hourly Total	0	0	0	**0**	17	0	0	**17**	1	9	0	**10**	**27**
1600 - 1615	0	0	0	0	5	0	0	5	0	6	0	6	11
1615 - 1630	0	0	0	0	4	0	0	4	0	7	0	7	11
1630 - 1645	0	0	0	0	3	0	0	3	0	4	0	4	7
1645 - 1700	0	3	0	3	5	0	0	5	0	3	0	3	11
Hourly Total	0	3	0	**3**	17	0	0	**17**	0	20	0	**20**	**40**
1700 - 1715	0	0	0	0	7	0	0	7	0	3	0	3	10
1715 - 1730	0	0	0	0	8	0	0	8	0	1	0	1	9
1730 - 1745	0	0	0	0	2	0	0	2	0	2	0	2	4
1745 - 1800	0	0	0	0	3	0	0	3	1	3	0	4	7
Hourly Total	0	0	0	**0**	20	0	0	**20**	1	9	0	**10**	**30**
1800 - 1815	0	0	0	0	2	0	0	2	0	1	0	1	3
1815 - 1830	0	0	0	0	5	0	0	5	0	3	0	3	8
1830 - 1845	0	0	0	0	1	0	0	1	0	2	0	2	3
1845 - 1900	0	0	0	0	1	0	0	1	0	3	0	3	4
Hourly Total	0	0	0	**0**	9	0	0	**9**	0	9	0	**9**	**18**
Grand Total	2	8	0	**10**	255	3	0	**258**	10	252	0	**262**	**530**
Approach %	20.00	80.00	0.00	-	98.84	1.16	0.00	-	3.82	96.18	0.00	-	
Intersection %	0.38	1.51	0.00	1.89	48.11	0.57	0.00	48.68	1.89	47.55	0.00	49.43	

Classified Turn Movement Count || Bikes

Columbia TN

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Site 2 of 2
Rock Springs Rd

TN-99 Bear Creek Pike (West)
TN-99 Bear Creek Pike (East)

Date
Tuesday, March 7, 2023

Lat/Long
35.641161°, -86.907741°

Weather
Fair
58°F

0600 - 1900 (Weekday 13h Session) (03-07-2023)
Bikes

	Northbound				Eastbound				Westbound				
	Rock Springs Rd				TN-99 Bear Creek Pike (West)				TN-99 Bear Creek Pike (East)				
TIME	Left 2.1	Right 2.2	U-Turn 2.3	App Total	Thru 2.4	Right 2.5	U-Turn 2.6	App Total	Left 2.7	Thru 2.8	U-Turn 2.9	App Total	Int Total
0600 - 0615	0	0	0	0	0	0	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	0	0	0	0	0	0	0	0	0
0630 - 0645	0	0	0	0	0	0	0	0	0	0	0	0	0
0645 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
0700 - 0715	0	0	0	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
0800 - 0815	0	0	0	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
0900 - 0915	0	0	0	0	0	0	0	0	0	0	0	0	0
0915 - 0930	0	0	0	0	0	0	0	0	0	0	0	0	0
0930 - 0945	0	0	0	0	0	0	0	0	0	0	0	0	0
0945 - 1000	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1000 - 1015	0	0	0	0	0	0	0	0	1	0	0	1	1
1015 - 1030	0	0	0	0	0	0	0	0	0	0	0	0	0
1030 - 1045	0	0	0	0	0	0	0	0	0	0	0	0	0
1045 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	1	0	0	**1**	**1**
1100 - 1115	0	0	0	0	0	0	0	0	0	0	0	0	0
1115 - 1130	0	0	0	0	0	0	0	0	0	0	0	0	0
1130 - 1145	0	0	0	0	0	0	0	0	0	0	0	0	0
1145 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1200 - 1215	0	0	0	0	0	0	0	0	0	0	0	0	0
1215 - 1230	0	0	0	0	0	0	0	0	0	0	0	0	0
1230 - 1245	0	0	0	0	0	0	0	0	0	0	0	0	0
1245 - 1300	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1300 - 1315	0	0	0	0	0	0	0	0	0	0	0	0	0
1315 - 1330	0	0	0	0	0	0	0	0	0	0	0	0	0
1330 - 1345	0	0	0	0	0	0	0	0	0	0	0	0	0
1345 - 1400	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1400 - 1415	0	0	0	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1700 - 1715	0	0	0	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
1800 - 1815	0	0	0	0	0	0	0	0	0	0	0	0	0
1815 - 1830	0	0	0	0	0	0	0	0	0	0	0	0	0
1830 - 1845	0	0	0	0	0	0	0	0	0	0	0	0	0
1845 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	**0**
Grand Total	0	0	0	**0**	0	0	0	**0**	1	0	0	**1**	**1**
Approach %	0.00	0.00	0.00	-	0.00	0.00	0.00	-	100.00	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00	

Pedestrian Count || All vehicles

Columbia TN

Marr Traffic DATA COLLECTION
www.marrtraffic.com

Site 2 of 2
Rock Springs Rd

TN-99 Bear Creek Pike (West)
TN-99 Bear Creek Pike (East)

Date
Tuesday, March 7, 2023

Lat/Long
35.641161°, -86.907741°

Weather
Fair
58°F

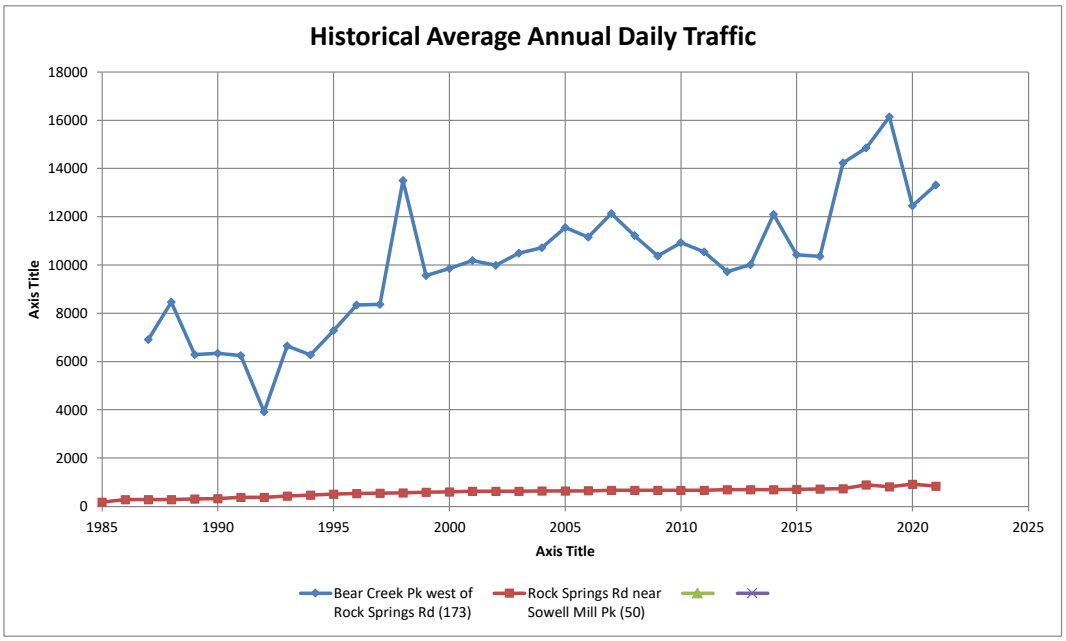
0600 - 1900 (Weekday 13h Session) (03-07-2023)
Pedestrians

	Northbound			Eastbound			Westbound			
	Rock Springs Rd			TN-99 Bear Creek Pike (West)			TN-99 Bear Creek Pike (East)			
TIME	EB 2a	WB 2b	App Total	NB 2e	SB 2f	App Total	NB 2g	SB 2h	App Total	Int Total
0600 - 0615	0	0	0	0	0	0	0	0	0	0
0615 - 0630	0	0	0	0	0	0	0	0	0	0
0630 - 0645	0	0	0	0	0	0	0	0	0	0
0645 - 0700	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
0700 - 0715	0	0	0	0	0	0	0	0	0	0
0715 - 0730	0	0	0	0	0	0	0	0	0	0
0730 - 0745	0	0	0	0	0	0	0	0	0	0
0745 - 0800	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
0800 - 0815	0	0	0	0	0	0	0	0	0	0
0815 - 0830	0	0	0	0	0	0	0	0	0	0
0830 - 0845	0	0	0	0	0	0	0	0	0	0
0845 - 0900	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
0900 - 0915	0	0	0	0	0	0	0	0	0	0
0915 - 0930	0	0	0	0	0	0	0	0	0	0
0930 - 0945	0	0	0	0	0	0	0	0	0	0
0945 - 1000	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1000 - 1015	0	0	0	0	0	0	0	0	0	0
1015 - 1030	0	0	0	0	0	0	0	0	0	0
1030 - 1045	0	0	0	0	0	0	0	0	0	0
1045 - 1100	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1100 - 1115	0	0	0	0	0	0	0	0	0	0
1115 - 1130	0	0	0	0	0	0	0	0	0	0
1130 - 1145	0	0	0	0	0	0	0	0	0	0
1145 - 1200	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1200 - 1215	0	0	0	0	0	0	0	0	0	0
1215 - 1230	0	0	0	0	0	0	0	0	0	0
1230 - 1245	0	0	0	0	0	0	0	0	0	0
1245 - 1300	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1300 - 1315	0	0	0	0	0	0	0	0	0	0
1315 - 1330	0	0	0	0	0	0	0	0	0	0
1330 - 1345	0	0	0	0	0	0	0	0	0	0
1345 - 1400	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1400 - 1415	0	0	0	0	0	0	0	0	0	0
1415 - 1430	0	0	0	0	0	0	0	0	0	0
1430 - 1445	0	0	0	0	0	0	0	0	0	0
1445 - 1500	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1500 - 1515	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1600 - 1615	0	0	0	0	0	0	0	0	0	0
1615 - 1630	0	0	0	0	0	0	0	0	0	0
1630 - 1645	0	0	0	0	0	0	0	0	0	0
1645 - 1700	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1700 - 1715	0	0	0	0	0	0	0	0	0	0
1715 - 1730	0	0	0	0	0	0	0	0	0	0
1730 - 1745	0	0	0	0	0	0	0	0	0	0
1745 - 1800	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
1800 - 1815	0	0	0	0	0	0	0	0	0	0
1815 - 1830	0	0	0	0	0	0	0	0	0	0
1830 - 1845	0	0	0	0	0	0	0	0	0	0
1845 - 1900	0	0	0	0	0	0	0	0	0	0
Hourly Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
Grand Total	0	0	**0**	0	0	**0**	0	0	**0**	**0**
Approach %	0.00	0.00	-	0.00	0.00	-	0.00	0.00	-	
Intersection %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

APPENDIX B

TRIP GENERATION & TRAFFIC DERIVATION WORKSHEETS

HISTORICAL TRAFFIC COUNT DATA				
Year	Bear Creek Pk west of Rock Springs Rd (173)	Rock Springs Rd near Sowell Mill Pk (50)		
1985		173		
1986		278		
1987	6911	280		
1988	8459	283		
1989	6290	311		
1990	6338	317		
1991	6250	374		
1992	3917	375		
1993	6640	423		
1994	6275	470		
1995	7277	503		
1996	8340	534		
1997	8372	540		
1998	13502	553		
1999	9565	590		
2000	9852	597		
2001	10190	621		
2002	9981	623		
2003	10487	630		
2004	10711	640		
2005	11556	643		
2006	11158	644		
2007	12130	660		
2008	11213	660		
2009	10374	663		
2010	10931	666		
2011	10543	667		
2012	9718	687		
2013	10012	688		
2014	12097	691		
2015	10430	704		
2016	10356	717		
2017	14228	730		
2018	14859	894		
2019	16144	808		
2020	12450	920		
2021	13309	841		



		Bear Creek Pk west of Rock Springs Rd (173)	Rock Springs Rd near Sowell Mill Pk (50)	-	-
Analysis Period	Begin	2012	2012	-	-
	End	2021	2021	-	-
Future Year		2030	2030	-	-
Forecasted Traffic Volume		19460	1110	-	-
Annual Growth Rate		4.31%	3.17%	-	-
Growth Factor		1.462	1.548	-	-

TRIP GENERATION (11th Edition)

Single-Family Detached Housing - 187 Dwelling Units

Use ITE Land Use Code 210 (Single-Family Detached Housing) and associated trip generation rates for 24-hour total trips and peak hour trips.

Average Daily Traffic

Ln(T) = 0.92 Ln(X) + 2.68
Ln(T) = 0.92 Ln(187) + 2.68
T = 1795

A.M. Peak Hour of Adjacent Street Traffic

Ln(T) = 0.91 Ln(X) + 0.12
Ln(T) = 0.91 Ln(187) + 0.12
T = 132

Enter = 0.25(132) = 33
Exit = 0.75(132) = 99

P.M. Peak Hour of Adjacent Street Traffic

Ln(T) = 0.94 Ln(X) + 0.27
Ln(T) = 0.94 Ln(187) + 0.27
T = 179

Enter = 0.63(179) = 113
Exit = 0.37(179) = 66

Lasea Road at Bear Creek Pike

AM	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
2023 total	-	-	-	22	-	36	22	601	-	-	496	6
2021 total	-	-	-	24	-	15	9	702	-	-	483	5
2023-2021	-	-	-	-2	-	21	13	-101	-	-	13	1
% difference	-	-	-	-8%	-	140%	144%	-14%	-	-	3%	20%

PM	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
2023 total	-	-	-	20	-	46	36	562	-	-	887	17
2021 total	-	-	-	20	-	23	29	569	-	-	835	10
2023-2021	-	-	-	0	-	23	7	-7	-	-	52	7
% difference	-	-	-	0%	-	100%	24%	-1%	-	-	6%	70%

Lasea Road at Bear Creek Pike - adjusted

AM	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
2023 total	-	-	-	22	-	36	22	758	-	-	522	6
2021 total	-	-	-	24	-	15	9	702	-	-	483	5
2023-2021	-	-	-	-2	-	21	13	56	-	-	39	1
% difference	-	-	-	-8%	-	140%	144%	8%	-	-	8%	20%

8% of 2021 volume

EB	WB
56	39

PM	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
2023 total	-	-	-	20	-	46	36	615	-	-	902	17
2021 total	-	-	-	20	-	23	29	569	-	-	835	10
2023-2021	-	-	-	0	-	23	7	46	-	-	67	7
% difference	-	-	-	0%	-	100%	24%	8%	-	-	8%	70%

8% of 2021 volume

EB	WB
46	67

Rock Springs Road at Bear Creek Pike

AM	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
2023 total	13	-	70	-	-	-	-	526	9	30	499	-
2021 total	5	0	46	-	-	-	-	662	1	14	482	-
2023-2021	8	-	24	-	-	-	-	-136	8	16	17	-
% difference	160%	-	52%	-	-	-	-	-21%	800%	114%	4%	-

PM	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
2023 total	12	-	62	-	-	-	-	535	6	78	864	-
2021 total	6	-	40	-	-	-	-	554	12	73	779	-
2023-2021	2	-	7	-	-	-	-	33	0	2	44	-
% difference	33%	-	18%	-	-	-	-	6%	0%	3%	6%	-

Rock Springs Road at Bear Creek Pike - adjusted

AM	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
2023 total	13	-	70	-	-	-	-	715	9	30	521	-
2021 total	5	0	46	-	-	-	-	662	1	14	482	-
2023-2021	8	-	24	-	-	-	-	53	8	16	39	-
% difference	160%	-	52%	-	-	-	-	8%	800%	114%	8%	-

8% of 2021 volume

EB	WB
53	39

PM	Northbound			Southbound			Eastbound			Westbound		
	L	T	R	L	T	R	L	T	R	L	T	R
2023 total	12	-	62	-	-	-	-	598	6	78	841	-
2021 total	6	-	40	-	-	-	-	554	12	73	779	-
2023-2021	6	-	22	-	-	-	-	44	-6	5	62	-
% difference	100%	-	55%	-	-	-	-	8%	-50%	7%	8%	-

8% of 2021 volume

EB	WB
44	62

TRAFFIC VOLUME WORKSHEET
SPECIFIC NON-SITE TRIP GENERATION &
PROPOSED DEVELOPMENT TRIP GENERATION

RaganSmith

SPECIFIC NON-SITE DEVELOPMENT TRIP GENERATION							
Development	Daily	A.M. Peak Hour			P.M. Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Green Property Lasea Road - Fischbach	2,068	41	122	163	137	80	217
Crichton Property - T Square	1,532	22	74	96	71	42	113
Old Highway 99 - Kimley Horn	3,314	64	160	224	186	113	299
1449 Rock Springs Road PUD - Ragan Smith	5,545	81	262	343	254	150	404
TOTAL	**12,459**	**208**	**618**	**826**	**648**	**385**	**1,033**

BLAIR TRIP GENERATION							
Development	Daily	A.M. Peak Hour			P.M. Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Blair	**1,795**	**33**	**99**	**132**	**113**	**66**	**179**
TOTAL	**1,795**	**33**	**99**	**132**	**113**	**66**	**179**

TRAFFIC VOLUME WORKSHEET
Bear Creek Pike at Lasea Road
A.M. PEAK HOUR

RaganSmith

Description		Northbound Rock Springs PUD Access			Southbound Lasea Road			Eastbound Bear Creek Pike			Westbound Bear Creek Pike		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2023 EXISTING TRAFFIC VOLUMES					22		36	22	758		0	525	6
2030 BACKGROUND TRAFFIC VOLUMES													
Annual Background Growth													
Growth Rate (%/year)					2.0		2.0	2.0	2.0		2.0	2.0	2.0
Growth Factor		1.00	1.00	1.00	1.15	1.00	1.15	1.15	1.15	1.00	1.15	1.15	1.15
Annual Background Growth Trips		0	0	0	3	0	5	3	113	0	0	78	1
Specific Development Background Growth													
Green Property Lasea Road - Fischbach	% In							30					10
	% Out				10		30						
	Trips	0	0	0	12	0	37	12	0	0	0	0	4
Crichton Property - T Square	% In							35					60
	% Out				60		35						
	Trips	0	0	0	44	0	26	8	0	0	0	0	13
Old Highway 99 - Kimley Horn	% In							15					20
	% Out				20		15					20	
	Trips	0	0	0	32	0	24	10	0	0	0	32	13
1449 Rock Springs Road PUD - Ragan Smith	% In					5				25	40	5	
	% Out	25	5	40					5				
	Trips	66	13	105	0	4	0	0	13	20	32	4	0
Specific Development Background Growth Trips		66	13	105	88	4	87	30	13	20	32	36	30
2030 Background Traffic Volumes		66	13	105	113	4	128	55	884	20	32	639	37
2030 SITE TRAFFIC VOLUMES													
Blair	% In						5					45	
	% Out							5	45				
	Trips	0	0	0	0	0	2	5	45	0	0	15	0
2030 Site Traffic Volumes		0	0	0	0	0	2	5	45	0	0	15	0
2030 TOTAL TRAFFIC VOLUMES		66	13	105	113	4	130	60	929	20	32	654	37

TRAFFIC VOLUME WORKSHEET
Bear Creek Pike at Lasea Road
P.M. PEAK HOUR

RaganSmith

Description		Northbound Rock Springs PUD Access			Southbound Lasea Road			Eastbound Bear Creek Pike			Westbound Bear Creek Pike		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2023 EXISTING TRAFFIC VOLUMES					20		46	36	615			902	17
2030 BACKGROUND TRAFFIC VOLUMES													
Annual Background Growth													
Growth Rate (%/year)					2.0		2.0	2.0	2.0			2.0	2.0
Growth Factor		1.00	1.00	1.00	1.15	1.00	1.15	1.15	1.15	1.00	1.00	1.15	1.15
Annual Background Growth Trips		0	0	0	3	0	7	5	91	0	0	134	3
Specific Development Background Growth													
Green Property Lasea Road - Fischbach	% In							30					10
	% Out				10		30						
	Trips	0	0	0	8	0	24	41	0	0	0	0	14
Crichton Property - T Square	% In							35					60
	% Out				60		35						
	Trips	0	0	0	25	0	15	25	0	0	0	0	43
Old Highway 99 - Kimley Horn	% In							15					20
	% Out				20		15					20	
	Trips	0	0	0	23	0	17	28	0	0	0	23	37
1449 Rock Springs Road PUD - Ragan Smith	% In					5				25	40	5	
	% Out	25	5	40					5				
	Trips	38	8	60	0	13	0	0	8	64	102	13	0
Specific Development Background Growth Trips		38	8	60	56	13	56	94	8	64	102	36	94
2030 Background Traffic Volumes		38	8	60	79	13	109	135	714	64	102	1072	114
2030 SITE TRAFFIC VOLUMES													
Blair	% In						5					45	
	% Out							5	45				
	Trips	0	0	0	0	0	6	3	30	0	0	51	0
2030 Site Traffic Volumes		0	0	0	0	0	6	3	30	0	0	51	0
2030 TOTAL TRAFFIC VOLUMES		38	8	60	79	13	115	138	744	64	102	1123	114

TRAFFIC VOLUME WORKSHEET
Bear Creek Pike at Rock Springs Road
A.M. PEAK HOUR

RaganSmith

Description		Northbound Rock Springs Road			Southbound N/A			Eastbound Bear Creek Pike			Westbound Bear Creek Pike		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2023 EXISTING TRAFFIC VOLUMES		13		70					715	9	30	521	
2030 BACKGROUND TRAFFIC VOLUMES													
Annual Background Growth													
Growth Rate (%/year)		2.0		2.0					2.0	2.0	2.0	2.0	
Growth Factor		1.15	1.00	1.15	1.00	1.00	1.00	1.00	1.15	1.15	1.15	1.15	1.00
Annual Background Growth Trips		2	0	10	0	0	0	0	106	1	4	77	0
Specific Development Background Growth													
Green Property Lasea Road - Fischbach	% In								30				
	% Out											30	
	Trips	0	0	0	0	0	0	0	12	0	0	37	0
Crichton Property - T Square	% In								35				
	% Out											35	
	Trips	0	0	0	0	0	0	0	8	0	0	26	0
Old Highway 99 - Kimley Horn	% In								35				
	% Out											35	
	Trips	0	0	0	0	0	0	0	22	0	0	56	0
1449 Rock Springs Road PUD - Ragan Smith	% In								25	15	5		
	% Out	15		5								25	
	Trips	39	0	13	0	0	0	0	20	12	4	66	0
Specific Development Background Growth Trips		39	0	13	0	0	0	0	62	12	4	185	0
2030 Background Traffic Volumes		54	0	93	0	0	0	0	883	22	38	783	0
2030 SITE TRAFFIC VOLUMES													
Blair	% In									40	50		
	% Out	40		50									
	Trips	40	0	50	0	0	0	0	0	13	17	0	0
2030 Site Traffic Volumes		40	0	50	0	0	0	0	0	13	17	0	0
2030 TOTAL TRAFFIC VOLUMES		94	0	143	0	0	0	0	883	35	55	783	0

TRAFFIC VOLUME WORKSHEET
Bear Creek Pike at Rock Springs Road
P.M. PEAK HOUR

RaganSmith

Description		Northbound Rock Springs Road			Southbound N/A			Eastbound Bear Creek Pike			Westbound Bear Creek Pike		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2023 EXISTING TRAFFIC VOLUMES		12		62					598	6	78	841	
2030 BACKGROUND TRAFFIC VOLUMES													
Annual Background Growth													
Growth Rate (%/year)		2.0		2.0					2.0	2.0	2.0	2.0	
Growth Factor		1.15	1.00	1.15	1.00	1.00	1.00	1.00	1.15	1.15	1.15	1.15	1.00
Annual Background Growth Trips		2	0	9	0	0	0	0	89	1	12	125	0
Specific Development Background Growth													
Green Property Lasea Road - Fischbach	% In								30				
	% Out											30	
	Trips	0	0	0	0	0	0	0	41	0	0	24	0
Crichton Property - T Square	% In								35				
	% Out											35	
	Trips	0	0	0	0	0	0	0	25	0	0	15	0
Old Highway 99 - Kimley Horn	% In								35				
	% Out											35	
	Trips	0	0	0	0	0	0	0	65	0	0	40	0
1449 Rock Springs Road PUD - Ragan Smith	% In								25	15	5		
	% Out	15		5								25	
	Trips	23	0	8	0	0	0	0	64	38	13	38	0
Specific Development Background Growth Trips		23	0	8	0	0	0	0	195	38	13	117	0
2030 Background Traffic Volumes		37	0	79	0	0	0	0	882	45	103	1083	0
2030 SITE TRAFFIC VOLUMES													
Blair	% In									40	50		
	% Out	40		50									
	Trips	26	0	33	0	0	0	0	0	45	57	0	0
2030 Site Traffic Volumes		26	0	33	0	0	0	0	0	45	57	0	0
2030 TOTAL TRAFFIC VOLUMES		63	0	112	0	0	0	0	882	90	160	1083	0

TRAFFIC VOLUME WORKSHEET
Rock Springs Road at Project Access
A.M. PEAK HOUR

RaganSmith

Description		Northbound Rock Springs Road			Southbound Rock Springs Road			Eastbound			Westbound Project Access		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2023 EXISTING TRAFFIC VOLUMES			83			39							
2030 BACKGROUND TRAFFIC VOLUMES													
Annual Background Growth													
Growth Rate (%/year)			2.0			2.0							
Growth Factor		1.00	1.15	1.00	1.00	1.15	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Annual Background Growth Trips		0	12	0	0	6	0	0	0	0	0	0	0
Specific Development Background Growth													
Green Property Lasea Road - Fischbach	% In												
	% Out												
	Trips	0	0	0	0	0	0	0	0	0	0	0	0
Crichton Property - T Square	% In												
	% Out												
	Trips	0	0	0	0	0	0	0	0	0	0	0	0
Old Highway 99 - Kimley Horn	% In												
	% Out												
	Trips	0	0	0	0	0	0	0	0	0	0	0	0
1449 Rock Springs Road PUD - Ragan Smith	% In		10										
	% Out					10							
	Trips	0	8	0	0	26	0	0	0	0	0	0	0
Specific Development Background Growth Trips		0	8	0	0	26	0	0	0	0	0	0	0
2030 Background Traffic Volumes		0	103	0	0	70	0	0	0	0	0	0	0
2030 SITE TRAFFIC VOLUMES													
Blair	% In			10	90								
	% Out										10		90
	Trips	0	0	3	30	0	0	0	0	0	10	0	89
2030 Site Traffic Volumes		0	0	3	30	0	0	0	0	0	10	0	89
2030 TOTAL TRAFFIC VOLUMES		0	103	3	30	70	0	0	0	0	10	0	89

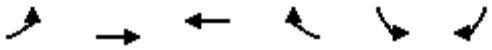
TRAFFIC VOLUME WORKSHEET
Rock Springs Road at Project Access
P.M. PEAK HOUR

RaganSmith

Description		Northbound Rock Springs Road			Southbound Rock Springs Road			Eastbound			Westbound Project Access		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2023 EXISTING TRAFFIC VOLUMES			74			84							
2030 BACKGROUND TRAFFIC VOLUMES													
Annual Background Growth													
Growth Rate (%/year)			2.0			2.0							
Growth Factor		1.00	1.15	1.00	1.00	1.15	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Annual Background Growth Trips		0	11	0	0	12	0	0	0	0	0	0	0
Specific Development Background Growth													
Green Property Lasea Road - Fischbach	% In												
	% Out												
	Trips	0	0	0	0	0	0	0	0	0	0	0	0
Crichton Property - T Square	% In												
	% Out												
	Trips	0	0	0	0	0	0	0	0	0	0	0	0
Old Highway 99 - Kimley Horn	% In												
	% Out												
	Trips	0	0	0	0	0	0	0	0	0	0	0	0
1449 Rock Springs Road PUD - Ragan Smith	% In		10										
	% Out					10							
	Trips	0	25	0	0	15	0	0	0	0	0	0	0
Specific Development Background Growth Trips		0	25	0	0	15	0	0	0	0	0	0	0
2030 Background Traffic Volumes		0	111	0	0	112	0	0	0	0	0	0	0
2030 SITE TRAFFIC VOLUMES													
Blair	% In			10	90								
	% Out										10		90
	Trips	0	0	11	102	0	0	0	0	0	7	0	59
2030 Site Traffic Volumes		0	0	11	102	0	0	0	0	0	7	0	59
2030 TOTAL TRAFFIC VOLUMES		0	111	11	102	112	0	0	0	0	7	0	59

APPENDIX C

CAPACITY ANALYSIS WORKSHEETS
EXISTING TRAFFIC



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	22	758	525	6	22	36
Future Volume (vph)	22	758	525	6	22	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			120	0	50
Storage Lanes	1			1	1	1
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1743	1696	1583	1719	1524
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1743	1696	1583	1719	1524
Link Speed (mph)		35	55		30	
Link Distance (ft)		955	1347		1328	
Travel Time (s)		18.6	16.7		30.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	9%	12%	2%	5%	6%
Adj. Flow (vph)	23	798	553	6	23	38
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	798	553	6	23	38
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	22	758	525	6	22	36
Future Vol, veh/h	22	758	525	6	22	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	120	0	50
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	9	12	2	5	6
Mvmt Flow	23	798	553	6	23	38

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	559	0	-	0	1397	553
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	844	-
Critical Hdwy	4.12	-	-	-	6.45	6.26
Critical Hdwy Stg 1	-	-	-	-	5.45	-
Critical Hdwy Stg 2	-	-	-	-	5.45	-
Follow-up Hdwy	2.218	-	-	-	3.545	3.354
Pot Cap-1 Maneuver	1012	-	-	-	153	525
Stage 1	-	-	-	-	570	-
Stage 2	-	-	-	-	417	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1012	-	-	-	149	525
Mov Cap-2 Maneuver	-	-	-	-	284	-
Stage 1	-	-	-	-	557	-
Stage 2	-	-	-	-	417	-

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	14.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1012	-	-	-	284	525
HCM Lane V/C Ratio	0.023	-	-	-	0.082	0.072
HCM Control Delay (s)	8.6	-	-	-	18.8	12.4
HCM Lane LOS	A	-	-	-	C	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3	0.2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	715	9	30	521	13	70
Future Volume (vph)	715	9	30	521	13	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	50		0	175
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.998					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1737	0	1543	1712	1378	1524
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1737	0	1543	1712	1378	1524
Link Speed (mph)	45			55	35	
Link Distance (ft)	1142			955	1763	
Travel Time (s)	17.3			11.8	34.3	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	9%	22%	17%	11%	31%	6%
Adj. Flow (vph)	753	9	32	548	14	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	762	0	32	548	14	74
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.2%		ICU Level of Service A	
Analysis Period (min) 15			

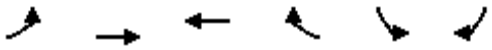
Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	715	9	30	521	13	70
Future Vol, veh/h	715	9	30	521	13	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	175
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	9	22	17	11	31	6
Mvmt Flow	753	9	32	548	14	74

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	762	0	1370	758
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	612	-
Critical Hdwy	-	-	4.27	-	6.71	6.26
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.353	-	3.779	3.354
Pot Cap-1 Maneuver	-	-	787	-	140	401
Stage 1	-	-	-	-	415	-
Stage 2	-	-	-	-	489	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	787	-	134	401
Mov Cap-2 Maneuver	-	-	-	-	262	-
Stage 1	-	-	-	-	415	-
Stage 2	-	-	-	-	469	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	16.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	262	401	-	-	787	-
HCM Lane V/C Ratio	0.052	0.184	-	-	0.04	-
HCM Control Delay (s)	19.5	16	-	-	9.8	-
HCM Lane LOS	C	C	-	-	A	-
HCM 95th %tile Q(veh)	0.2	0.7	-	-	0.1	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	36	615	902	17	20	46
Future Volume (vph)	36	615	902	17	20	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50			120	0	50
Storage Lanes	1			1	1	1
Taper Length (ft)	25				0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1752	1792	1792	1524	1641	1455
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1752	1792	1792	1524	1641	1455
Link Speed (mph)		35	55		30	
Link Distance (ft)		955	1347		1328	
Travel Time (s)		18.6	16.7		30.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	6%	6%	6%	10%	11%
Adj. Flow (vph)	38	654	960	18	21	49
Shared Lane Traffic (%)						
Lane Group Flow (vph)	38	654	960	18	21	49
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane		Yes	Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.5%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	615	902	17	20	46
Future Vol, veh/h	36	615	902	17	20	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	120	0	50
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	3	6	6	6	10	11
Mvmt Flow	38	654	960	18	21	49

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	978	0	-	0	1690	960
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	730	-
Critical Hdwy	4.13	-	-	-	6.5	6.31
Critical Hdwy Stg 1	-	-	-	-	5.5	-
Critical Hdwy Stg 2	-	-	-	-	5.5	-
Follow-up Hdwy	2.227	-	-	-	3.59	3.399
Pot Cap-1 Maneuver	702	-	-	-	98	299
Stage 1	-	-	-	-	359	-
Stage 2	-	-	-	-	463	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	702	-	-	-	93	299
Mov Cap-2 Maneuver	-	-	-	-	220	-
Stage 1	-	-	-	-	340	-
Stage 2	-	-	-	-	463	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	20.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	702	-	-	-	220	299
HCM Lane V/C Ratio	0.055	-	-	-	0.097	0.164
HCM Control Delay (s)	10.4	-	-	-	23.1	19.4
HCM Lane LOS	B	-	-	-	C	C
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3	0.6



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	598	6	78	841	12	62
Future Volume (vph)	598	6	78	841	12	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	50		0	175
Storage Lanes		0	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999					0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1791	0	1752	1810	1543	1455
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1791	0	1752	1810	1543	1455
Link Speed (mph)	45			55	35	
Link Distance (ft)	1142			955	1763	
Travel Time (s)	17.3			11.8	34.3	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	6%	2%	3%	5%	17%	11%
Adj. Flow (vph)	636	6	83	895	13	66
Shared Lane Traffic (%)						
Lane Group Flow (vph)	642	0	83	895	13	66
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane				Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	598	6	78	841	12	62
Future Vol, veh/h	598	6	78	841	12	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	50	-	0	175
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	6	2	3	5	17	11
Mvmt Flow	636	6	83	895	13	66

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	642	0	1700	639
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	1061	-
Critical Hdwy	-	-	4.13	-	6.57	6.31
Critical Hdwy Stg 1	-	-	-	-	5.57	-
Critical Hdwy Stg 2	-	-	-	-	5.57	-
Follow-up Hdwy	-	-	2.227	-	3.653	3.399
Pot Cap-1 Maneuver	-	-	938	-	93	460
Stage 1	-	-	-	-	498	-
Stage 2	-	-	-	-	312	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	938	-	85	460
Mov Cap-2 Maneuver	-	-	-	-	201	-
Stage 1	-	-	-	-	498	-
Stage 2	-	-	-	-	285	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	15.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	201	460	-	-	938	-
HCM Lane V/C Ratio	0.064	0.143	-	-	0.088	-
HCM Control Delay (s)	24.1	14.1	-	-	9.2	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	0.5	-	-	0.3	-

APPENDIX D

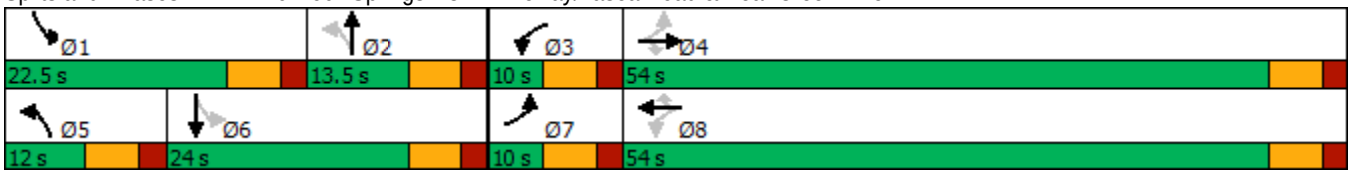
CAPACITY ANALYSIS WORKSHEETS BACKGROUND TRAFFIC

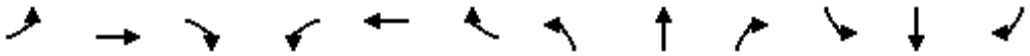
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	884	20	32	639	37	66	13	105	113	4	128
Future Volume (vph)	55	884	20	32	639	37	66	13	105	113	4	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		230	50		120	175		0	50		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			180		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.867			0.854	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1743	1583	1703	1696	1583	1770	1615	0	1719	1532	0
Flt Permitted	0.218			0.084			0.668			0.394		
Satd. Flow (perm)	406	1743	1583	151	1696	1583	1244	1615	0	713	1532	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			229			229		111			135	
Link Speed (mph)		35			55			30			30	
Link Distance (ft)		955			1347			713			1328	
Travel Time (s)		18.6			16.7			16.2			30.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	9%	2%	6%	12%	2%	2%	2%	2%	5%	2%	6%
Adj. Flow (vph)	58	931	21	34	673	39	69	14	111	119	4	135
Shared Lane Traffic (%)												
Lane Group Flow (vph)	58	931	21	34	673	39	69	125	0	119	139	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		0			0			0			0	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	7.0		4.0	7.0	
Minimum Split (s)	10.0	16.0	16.0	10.0	16.0	16.0	10.0	13.0		22.5	13.0	
Total Split (s)	10.0	54.0	54.0	10.0	54.0	54.0	12.0	13.5		22.5	24.0	
Total Split (%)	10.0%	54.0%	54.0%	10.0%	54.0%	54.0%	12.0%	13.5%		22.5%	24.0%	
Maximum Green (s)	4.0	48.0	48.0	4.0	48.0	48.0	6.0	7.5		16.5	18.0	
Yellow Time (s)	4.0	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	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	None	
Act Effct Green (s)	50.6	48.3	48.3	49.3	46.1	46.1	13.5	7.6		23.1	14.7	
Actuated g/C Ratio	0.56	0.54	0.54	0.55	0.51	0.51	0.15	0.08		0.26	0.16	
v/c Ratio	0.20	1.00	0.02	0.23	0.78	0.04	0.31	0.53		0.40	0.38	
Control Delay	9.8	52.7	0.1	11.7	26.8	0.1	31.0	20.0		31.1	10.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	9.8	52.7	0.1	11.7	26.8	0.1	31.0	20.0		31.1	10.6	
LOS	A	D	A	B	C	A	C	B		C	B	
Approach Delay		49.1			24.7			23.9			20.1	
Approach LOS		D			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 90.1			
Natural Cycle: 100			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.00			
Intersection Signal Delay: 35.2		Intersection LOS: D	
Intersection Capacity Utilization 75.0%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: 1449 Rock Springs PUD Driveway/Lasea Road & Bear Creek Pike





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	884	20	32	639	37	66	13	105	113	4	128
Future Volume (veh/h)	55	884	20	32	639	37	66	13	105	113	4	128
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	1767	1870	1811	1722	1870	1870	1870	1870	1826	1870	1811
Adj Flow Rate, veh/h	58	931	0	34	673	0	69	14	0	119	4	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	9	2	6	12	2	2	2	2	5	2	6
Cap, veh/h	315	949	852	137	910	838	283	157	0	333	227	0
Arrive On Green	0.03	0.54	0.00	0.03	0.53	0.00	0.05	0.08	0.00	0.08	0.12	0.00
Sat Flow, veh/h	1781	1767	1585	1725	1722	1585	1781	1870	0	1739	1870	0
Grp Volume(v), veh/h	58	931	0	34	673	0	69	14	0	119	4	0
Grp Sat Flow(s),veh/h/ln	1781	1767	1585	1725	1722	1585	1781	1870	0	1739	1870	0
Q Serve(g_s), s	1.3	46.1	0.0	0.8	27.0	0.0	3.1	0.6	0.0	5.5	0.2	0.0
Cycle Q Clear(g_c), s	1.3	46.1	0.0	0.8	27.0	0.0	3.1	0.6	0.0	5.5	0.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	315	949	852	137	910	838	283	157	0	333	227	0
V/C Ratio(X)	0.18	0.98	0.00	0.25	0.74	0.00	0.24	0.09	0.00	0.36	0.02	0.00
Avail Cap(c_a), veh/h	333	949	852	170	925	852	319	157	0	507	377	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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.2	20.2	0.0	21.2	16.3	0.0	35.1	37.8	0.0	33.1	34.6	0.0
Incr Delay (d2), s/veh	0.3	24.5	0.0	0.9	3.1	0.0	0.4	1.1	0.0	0.6	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	0.5	23.0	0.0	0.3	9.3	0.0	1.4	0.3	0.0	2.3	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	44.8	0.0	22.1	19.4	0.0	35.5	38.9	0.0	33.8	34.6	0.0
LnGrp LOS	B	D	A	C	B	A	D	D	A	C	C	A
Approach Vol, veh/h		989			707			83			123	
Approach Delay, s/veh		42.9			19.6			36.1			33.8	
Approach LOS		D			B			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.6	13.5	8.3	54.0	10.2	16.9	9.1	53.2
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	16.5	7.5	4.0	48.0	6.0	18.0	4.0	48.0
Max Q Clear Time (g_c+I1), s	7.5	2.6	2.8	48.1	5.1	2.2	3.3	29.0
Green Ext Time (p_c), s	0.2	0.0	0.0	0.0	0.0	0.0	0.0	3.8

Intersection Summary	
HCM 6th Ctrl Delay	33.3
HCM 6th LOS	C



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	883	22	38	783	54	93
Future Volume (vph)	883	22	38	783	54	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		180	50		0	75
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1743	1324	1543	1712	1378	1524
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1743	1324	1543	1712	1378	1524
Link Speed (mph)	45			55	30	
Link Distance (ft)	1142			955	1751	
Travel Time (s)	17.3			11.8	39.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	9%	22%	17%	11%	31%	6%
Adj. Flow (vph)	929	23	40	824	57	98
Shared Lane Traffic (%)						
Lane Group Flow (vph)	929	23	40	824	57	98
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 58.9%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	883	22	38	783	54	93
Future Vol, veh/h	883	22	38	783	54	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	180	50	-	0	75
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	9	22	17	11	31	6
Mvmt Flow	929	23	40	824	57	98

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	952	0	1833	929
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	904	-
Critical Hdwy	-	-	4.27	-	6.71	6.26
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.353	-	3.779	3.354
Pot Cap-1 Maneuver	-	-	664	-	70	319
Stage 1	-	-	-	-	342	-
Stage 2	-	-	-	-	352	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	664	-	66	319
Mov Cap-2 Maneuver	-	-	-	-	184	-
Stage 1	-	-	-	-	342	-
Stage 2	-	-	-	-	331	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	25.6
HCM LOS			D

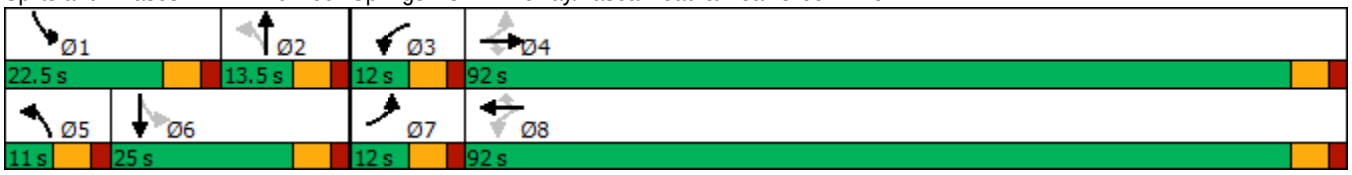
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	184	319	-	-	664	-
HCM Lane V/C Ratio	0.309	0.307	-	-	0.06	-
HCM Control Delay (s)	33.1	21.2	-	-	10.8	-
HCM Lane LOS	D	C	-	-	B	-
HCM 95th %tile Q(veh)	1.2	1.3	-	-	0.2	-

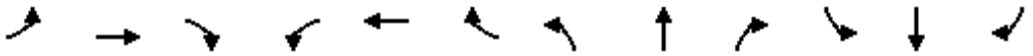
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	714	64	102	1072	114	38	8	60	79	13	109
Future Volume (vph)	135	714	64	102	1072	114	38	8	60	79	13	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		230	50		120	175		0	50		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			180		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.868			0.866	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1792	1583	1703	1792	1524	1770	1617	0	1641	1495	0
Flt Permitted	0.047			0.243			0.674			0.422		
Satd. Flow (perm)	87	1792	1583	436	1792	1524	1255	1617	0	729	1495	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			164		64			116	
Link Speed (mph)		35			55			30			30	
Link Distance (ft)		955			1347			713			1328	
Travel Time (s)		18.6			16.7			16.2			30.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	6%	2%	6%	6%	6%	2%	2%	2%	10%	2%	11%
Adj. Flow (vph)	144	760	68	109	1140	121	40	9	64	84	14	116
Shared Lane Traffic (%)												
Lane Group Flow (vph)	144	760	68	109	1140	121	40	73	0	84	130	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		0			0			0			0	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	7.0		4.0	7.0	
Minimum Split (s)	10.0	16.0	16.0	10.0	16.0	16.0	10.0	13.0		22.5	13.0	
Total Split (s)	12.0	92.0	92.0	12.0	92.0	92.0	11.0	13.5		22.5	25.0	
Total Split (%)	8.6%	65.7%	65.7%	8.6%	65.7%	65.7%	7.9%	9.6%		16.1%	17.9%	
Maximum Green (s)	6.0	86.0	86.0	6.0	86.0	86.0	5.0	7.5		16.5	19.0	
Yellow Time (s)	4.0	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	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	None	
Act Effct Green (s)	92.1	86.1	86.1	92.1	86.1	86.1	12.5	7.5		24.6	16.2	
Actuated g/C Ratio	0.68	0.64	0.64	0.68	0.64	0.64	0.09	0.06		0.18	0.12	
v/c Ratio	1.08	0.67	0.06	0.31	1.00	0.12	0.30	0.49		0.40	0.46	
Control Delay	132.7	19.5	0.1	8.3	51.3	0.7	52.3	29.5		53.0	18.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	132.7	19.5	0.1	8.3	51.3	0.7	52.3	29.5		53.0	18.1	
LOS	F	B	A	A	D	A	D	C		D	B	
Approach Delay		34.9			43.4			37.6			31.8	
Approach LOS		C			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 140			
Actuated Cycle Length: 135			
Natural Cycle: 140			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.08			
Intersection Signal Delay: 39.1		Intersection LOS: D	
Intersection Capacity Utilization 94.6%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: 1449 Rock Springs PUD Driveway/Lasea Road & Bear Creek Pike





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	714	64	102	1072	114	38	8	60	79	13	109
Future Volume (veh/h)	135	714	64	102	1072	114	38	8	60	79	13	109
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	1811	1870	1811	1811	1811	1870	1870	1870	1752	1870	1737
Adj Flow Rate, veh/h	144	760	0	109	1140	0	40	9	0	84	14	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	6	2	6	6	6	2	2	2	10	2	11
Cap, veh/h	161	1190	1042	398	1172	993	187	109	0	230	173	0
Arrive On Green	0.05	0.66	0.00	0.04	0.65	0.00	0.03	0.06	0.00	0.06	0.09	0.00
Sat Flow, veh/h	1767	1811	1585	1725	1811	1535	1781	1870	0	1668	1870	0
Grp Volume(v), veh/h	144	760	0	109	1140	0	40	9	0	84	14	0
Grp Sat Flow(s),veh/h/ln	1767	1811	1585	1725	1811	1535	1781	1870	0	1668	1870	0
Q Serve(g_s), s	4.6	32.0	0.0	2.8	77.4	0.0	2.7	0.6	0.0	6.0	0.9	0.0
Cycle Q Clear(g_c), s	4.6	32.0	0.0	2.8	77.4	0.0	2.7	0.6	0.0	6.0	0.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	161	1190	1042	398	1172	993	187	109	0	230	173	0
V/C Ratio(X)	0.89	0.64	0.00	0.27	0.97	0.00	0.21	0.08	0.00	0.36	0.08	0.00
Avail Cap(c_a), veh/h	161	1207	1057	416	1207	1023	206	109	0	340	275	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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.4	13.1	0.0	11.2	21.7	0.0	55.1	57.5	0.0	52.1	53.5	0.0
Incr Delay (d2), s/veh	41.7	1.1	0.0	0.4	19.4	0.0	0.6	1.5	0.0	1.0	0.2	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	6.5	12.4	0.0	0.9	32.9	0.0	1.2	0.3	0.0	2.6	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.1	14.2	0.0	11.6	41.1	0.0	55.7	59.0	0.0	53.1	53.7	0.0
LnGrp LOS	E	B	A	B	D	A	E	E	A	D	D	A
Approach Vol, veh/h		904			1249			49			98	
Approach Delay, s/veh		24.5			38.5			56.3			53.2	
Approach LOS		C			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	13.5	10.7	90.8	9.6	17.9	12.0	89.5
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	16.5	7.5	6.0	86.0	5.0	19.0	6.0	86.0
Max Q Clear Time (g_c+I1), s	8.0	2.6	4.8	34.0	4.7	2.9	6.6	79.4
Green Ext Time (p_c), s	0.1	0.0	0.0	6.5	0.0	0.0	0.0	4.1

Intersection Summary	
HCM 6th Ctrl Delay	34.0
HCM 6th LOS	C



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	882	45	103	1083	37	79
Future Volume (vph)	882	45	103	1083	37	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		180	50		0	75
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1792	1583	1752	1810	1543	1455
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1792	1583	1752	1810	1543	1455
Link Speed (mph)	45			55	30	
Link Distance (ft)	1142			955	1751	
Travel Time (s)	17.3			11.8	39.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	6%	2%	3%	5%	17%	11%
Adj. Flow (vph)	938	48	110	1152	39	84
Shared Lane Traffic (%)						
Lane Group Flow (vph)	938	48	110	1152	39	84
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 67.0%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	882	45	103	1083	37	79
Future Vol, veh/h	882	45	103	1083	37	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	180	50	-	0	75
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	6	2	3	5	17	11
Mvmt Flow	938	48	110	1152	39	84

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	986	0	2310	938
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	1372	-
Critical Hdwy	-	-	4.13	-	6.57	6.31
Critical Hdwy Stg 1	-	-	-	-	5.57	-
Critical Hdwy Stg 2	-	-	-	-	5.57	-
Follow-up Hdwy	-	-	2.227	-	3.653	3.399
Pot Cap-1 Maneuver	-	-	697	-	~ 38	308
Stage 1	-	-	-	-	358	-
Stage 2	-	-	-	-	219	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	697	-	~ 32	308
Mov Cap-2 Maneuver	-	-	-	-	124	-
Stage 1	-	-	-	-	358	-
Stage 2	-	-	-	-	184	-

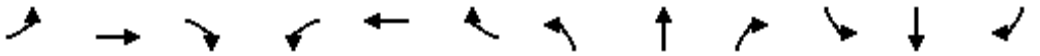
Approach	EB	WB	NB
HCM Control Delay, s	0	1	29.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	124	308	-	-	697	-
HCM Lane V/C Ratio	0.317	0.273	-	-	0.157	-
HCM Control Delay (s)	47	21	-	-	11.1	-
HCM Lane LOS	E	C	-	-	B	-
HCM 95th %tile Q(veh)	1.2	1.1	-	-	0.6	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

APPENDIX E

CAPACITY ANALYSIS WORKSHEETS
TOTAL TRAFFIC

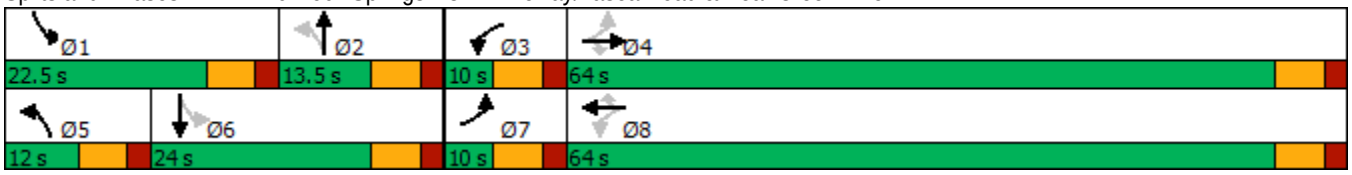


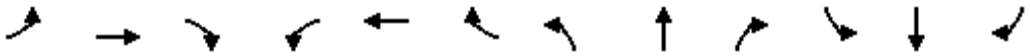
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	929	20	32	654	37	66	13	105	113	4	130
Future Volume (vph)	60	929	20	32	654	37	66	13	105	113	4	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		230	50		120	175		0	50		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			180		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.867			0.854	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1743	1583	1703	1696	1583	1770	1615	0	1719	1532	0
Flt Permitted	0.237			0.070			0.667			0.352		
Satd. Flow (perm)	441	1743	1583	125	1696	1583	1242	1615	0	637	1532	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			208			208		111			137	
Link Speed (mph)		35			55			30			30	
Link Distance (ft)		955			1347			713			1328	
Travel Time (s)		18.6			16.7			16.2			30.2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	9%	2%	6%	12%	2%	2%	2%	2%	5%	2%	6%
Adj. Flow (vph)	63	978	21	34	688	39	69	14	111	119	4	137
Shared Lane Traffic (%)												
Lane Group Flow (vph)	63	978	21	34	688	39	69	125	0	119	141	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		0			0			0			0	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	7.0		4.0	7.0	
Minimum Split (s)	10.0	16.0	16.0	10.0	16.0	16.0	10.0	13.0		22.5	13.0	
Total Split (s)	10.0	64.0	64.0	10.0	64.0	64.0	12.0	13.5		22.5	24.0	
Total Split (%)	9.1%	58.2%	58.2%	9.1%	58.2%	58.2%	10.9%	12.3%		20.5%	21.8%	
Maximum Green (s)	4.0	58.0	58.0	4.0	58.0	58.0	6.0	7.5		16.5	18.0	
Yellow Time (s)	4.0	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	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	None	
Act Effct Green (s)	60.6	58.3	58.3	59.3	56.1	56.1	13.5	7.5		24.0	15.4	
Actuated g/C Ratio	0.60	0.58	0.58	0.59	0.56	0.56	0.13	0.07		0.24	0.15	
v/c Ratio	0.20	0.97	0.02	0.25	0.73	0.04	0.35	0.56		0.44	0.40	
Control Delay	9.1	45.4	0.1	12.2	23.6	0.1	37.0	22.5		37.0	11.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	9.1	45.4	0.1	12.2	23.6	0.1	37.0	22.5		37.0	11.5	
LOS	A	D	A	B	C	A	D	C		D	B	
Approach Delay		42.3			21.9			27.7			23.2	
Approach LOS		D			C			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 100.8			
Natural Cycle: 110			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 0.97			
Intersection Signal Delay: 32.1		Intersection LOS: C	
Intersection Capacity Utilization 78.3%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: 1449 Rock Springs PUD Driveway/Lasea Road & Bear Creek Pike





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	929	20	32	654	37	66	13	105	113	4	130
Future Volume (veh/h)	60	929	20	32	654	37	66	13	105	113	4	130
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	1767	1870	1811	1722	1870	1870	1870	1870	1826	1870	1811
Adj Flow Rate, veh/h	63	978	0	34	688	0	69	14	0	119	4	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	9	2	6	12	2	2	2	2	5	2	6
Cap, veh/h	339	1012	908	140	972	895	264	142	0	312	209	0
Arrive On Green	0.03	0.57	0.00	0.02	0.56	0.00	0.05	0.08	0.00	0.08	0.11	0.00
Sat Flow, veh/h	1781	1767	1585	1725	1722	1585	1781	1870	0	1739	1870	0
Grp Volume(v), veh/h	63	978	0	34	688	0	69	14	0	119	4	0
Grp Sat Flow(s),veh/h/ln	1781	1767	1585	1725	1722	1585	1781	1870	0	1739	1870	0
Q Serve(g_s), s	1.5	52.3	0.0	0.8	28.6	0.0	3.5	0.7	0.0	6.1	0.2	0.0
Cycle Q Clear(g_c), s	1.5	52.3	0.0	0.8	28.6	0.0	3.5	0.7	0.0	6.1	0.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	339	1012	908	140	972	895	264	142	0	312	209	0
V/C Ratio(X)	0.19	0.97	0.00	0.24	0.71	0.00	0.26	0.10	0.00	0.38	0.02	0.00
Avail Cap(c_a), veh/h	352	1038	931	167	1012	931	288	142	0	458	341	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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	12.8	20.2	0.0	22.8	15.6	0.0	39.5	42.5	0.0	37.5	39.0	0.0
Incr Delay (d2), s/veh	0.3	19.9	0.0	0.9	2.2	0.0	0.5	1.4	0.0	0.8	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	0.5	24.5	0.0	0.4	9.7	0.0	1.6	0.4	0.0	2.6	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.1	40.1	0.0	23.7	17.8	0.0	40.0	43.8	0.0	38.2	39.0	0.0
LnGrp LOS	B	D	A	C	B	A	D	D	A	D	D	A
Approach Vol, veh/h		1041			722			83			123	
Approach Delay, s/veh		38.5			18.1			40.6			38.3	
Approach LOS		D			B			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.2	13.5	8.4	62.6	10.7	17.1	9.3	61.7
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	16.5	7.5	4.0	58.0	6.0	18.0	4.0	58.0
Max Q Clear Time (g_c+I1), s	8.1	2.7	2.8	54.3	5.5	2.2	3.5	30.6
Green Ext Time (p_c), s	0.2	0.0	0.0	2.3	0.0	0.0	0.0	4.3

Intersection Summary	
HCM 6th Ctrl Delay	31.1
HCM 6th LOS	C

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	883	35	55	783	94	143
Future Volume (vph)	883	35	55	783	94	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		180	50		0	75
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1743	1324	1543	1712	1378	1524
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1743	1324	1543	1712	1378	1524
Link Speed (mph)	45			55	30	
Link Distance (ft)	1142			955	1751	
Travel Time (s)	17.3			11.8	39.8	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	9%	22%	17%	11%	31%	6%
Adj. Flow (vph)	929	37	58	824	99	151
Shared Lane Traffic (%)						
Lane Group Flow (vph)	929	37	58	824	99	151
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 62.0%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	883	35	55	783	94	143
Future Vol, veh/h	883	35	55	783	94	143
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	180	50	-	0	75
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	9	22	17	11	31	6
Mvmt Flow	929	37	58	824	99	151

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	966	0	1869	929
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	940	-
Critical Hdwy	-	-	4.27	-	6.71	6.26
Critical Hdwy Stg 1	-	-	-	-	5.71	-
Critical Hdwy Stg 2	-	-	-	-	5.71	-
Follow-up Hdwy	-	-	2.353	-	3.779	3.354
Pot Cap-1 Maneuver	-	-	656	-	~ 67	319
Stage 1	-	-	-	-	342	-
Stage 2	-	-	-	-	337	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	656	-	~ 61	319
Mov Cap-2 Maneuver	-	-	-	-	175	-
Stage 1	-	-	-	-	342	-
Stage 2	-	-	-	-	307	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	35.3
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	175	319	-	-	656	-
HCM Lane V/C Ratio	0.565	0.472	-	-	0.088	-
HCM Control Delay (s)	49.4	26	-	-	11	-
HCM Lane LOS	E	D	-	-	B	-
HCM 95th %tile Q(veh)	3	2.4	-	-	0.3	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	10	89	103	3	30	70
Future Volume (vph)	10	89	103	3	30	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		35	35	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.879		0.996			
Flt Protected	0.995					0.985
Satd. Flow (prot)	1629	0	1453	0	0	1757
Flt Permitted	0.995					0.985
Satd. Flow (perm)	1629	0	1453	0	0	1757
Link Speed (mph)	30		30			30
Link Distance (ft)	2129		1097			1751
Travel Time (s)	48.4		24.9			39.8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	31%	2%	17%	2%
Adj. Flow (vph)	11	94	108	3	32	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	105	0	111	0	0	106
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	89	103	3	30	70
Future Vol, veh/h	10	89	103	3	30	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	31	2	17	2
Mvmt Flow	11	94	108	3	32	74

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	248	110	0	0	111	0
Stage 1	110	-	-	-	-	-
Stage 2	138	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.27	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.353	-
Pot Cap-1 Maneuver	740	943	-	-	1390	-
Stage 1	915	-	-	-	-	-
Stage 2	889	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	722	943	-	-	1390	-
Mov Cap-2 Maneuver	722	-	-	-	-	-
Stage 1	915	-	-	-	-	-
Stage 2	868	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.4	0	2.3
HCM LOS	A		

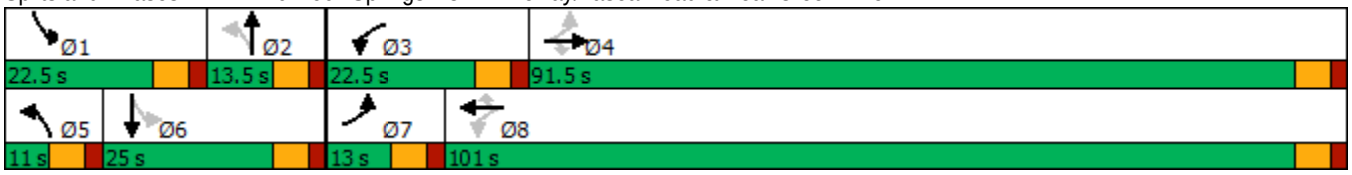
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	915	1390	-
HCM Lane V/C Ratio	-	-	0.114	0.023	-
HCM Control Delay (s)	-	-	9.4	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

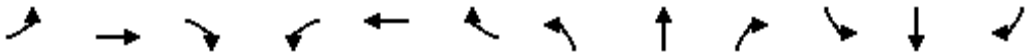
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	744	64	102	1123	114	38	8	60	79	13	115
Future Volume (vph)	138	744	64	102	1123	114	38	8	60	79	13	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		230	50		120	175		0	50		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	25			25			25			180		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.868			0.865	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1792	1583	1703	1792	1524	1770	1617	0	1641	1493	0
Flt Permitted	0.043			0.226			0.670			0.422		
Satd. Flow (perm)	79	1792	1583	405	1792	1524	1248	1617	0	729	1493	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			196			153		64			122	
Link Speed (mph)		35			55			30			30	
Link Distance (ft)		955			1347			713			1328	
Travel Time (s)		18.6			16.7			16.2			30.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	6%	2%	6%	6%	6%	2%	2%	2%	10%	2%	11%
Adj. Flow (vph)	147	791	68	109	1195	121	40	9	64	84	14	122
Shared Lane Traffic (%)												
Lane Group Flow (vph)	147	791	68	109	1195	121	40	73	0	84	136	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		0			0			0			0	
Two way Left Turn Lane		Yes			Yes							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8		8	2			6		
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	10.0	10.0	4.0	10.0	10.0	4.0	7.0		4.0	7.0	
Minimum Split (s)	10.0	16.0	16.0	22.5	16.0	16.0	10.0	13.0		22.5	13.0	
Total Split (s)	13.0	91.5	91.5	22.5	101.0	101.0	11.0	13.5		22.5	25.0	
Total Split (%)	8.7%	61.0%	61.0%	15.0%	67.3%	67.3%	7.3%	9.0%		15.0%	16.7%	
Maximum Green (s)	7.0	85.5	85.5	16.5	95.0	95.0	5.0	7.5		16.5	19.0	
Yellow Time (s)	4.0	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	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max		None	None	
Act Effct Green (s)	100.9	93.9	93.9	103.1	95.0	95.0	12.5	7.5		25.2	16.6	
Actuated g/C Ratio	0.69	0.65	0.65	0.71	0.65	0.65	0.09	0.05		0.17	0.11	
v/c Ratio	1.09	0.68	0.06	0.30	1.02	0.12	0.32	0.51		0.42	0.49	
Control Delay	137.4	21.0	0.1	7.8	57.4	0.9	58.7	31.8		58.6	19.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	137.4	21.0	0.1	7.8	57.4	0.9	58.7	31.8		58.6	19.0	
LOS	F	C	A	A	E	A	E	C		E	B	
Approach Delay		36.6			48.8			41.3			34.1	
Approach LOS		D			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 145.4			
Natural Cycle: 150			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.09			
Intersection Signal Delay: 42.9		Intersection LOS: D	
Intersection Capacity Utilization 97.9%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: 1449 Rock Springs PUD Driveway/Lasea Road & Bear Creek Pike





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	744	64	102	1123	114	38	8	60	79	13	115
Future Volume (veh/h)	138	744	64	102	1123	114	38	8	60	79	13	115
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	1811	1870	1811	1811	1811	1870	1870	1870	1752	1870	1737
Adj Flow Rate, veh/h	147	791	0	109	1195	0	40	9	0	84	14	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	6	2	6	6	6	2	2	2	10	2	11
Cap, veh/h	148	1235	1081	400	1209	1024	175	99	0	217	161	0
Arrive On Green	0.05	0.68	0.00	0.03	0.67	0.00	0.03	0.05	0.00	0.06	0.09	0.00
Sat Flow, veh/h	1767	1811	1585	1725	1811	1535	1781	1870	0	1668	1870	0
Grp Volume(v), veh/h	147	791	0	109	1195	0	40	9	0	84	14	0
Grp Sat Flow(s),veh/h/ln	1767	1811	1585	1725	1811	1535	1781	1870	0	1668	1870	0
Q Serve(g_s), s	6.9	35.0	0.0	2.8	91.5	0.0	3.0	0.6	0.0	6.6	1.0	0.0
Cycle Q Clear(g_c), s	6.9	35.0	0.0	2.8	91.5	0.0	3.0	0.6	0.0	6.6	1.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	148	1235	1081	400	1209	1024	175	99	0	217	161	0
V/C Ratio(X)	0.99	0.64	0.00	0.27	0.99	0.00	0.23	0.09	0.00	0.39	0.09	0.00
Avail Cap(c_a), veh/h	148	1235	1081	540	1213	1028	188	99	0	309	251	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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.1	12.7	0.0	11.3	23.1	0.0	61.3	63.9	0.0	57.9	59.7	0.0
Incr Delay (d2), s/veh	71.3	1.1	0.0	0.4	23.0	0.0	0.7	1.8	0.0	1.1	0.2	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	8.2	13.6	0.0	0.9	39.7	0.0	1.4	0.4	0.0	2.9	0.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	120.5	13.9	0.0	11.7	46.1	0.0	61.9	65.7	0.0	59.1	59.9	0.0
LnGrp LOS	F	B	A	B	D	A	E	E	A	E	E	A
Approach Vol, veh/h		938			1304			49			98	
Approach Delay, s/veh		30.6			43.2			62.6			59.2	
Approach LOS		C			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.7	13.5	10.9	102.7	10.0	18.2	13.0	100.6
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	16.5	7.5	16.5	85.5	5.0	19.0	7.0	95.0
Max Q Clear Time (g_c+I1), s	8.6	2.6	4.8	37.0	5.0	3.0	8.9	93.5
Green Ext Time (p_c), s	0.1	0.0	0.2	6.9	0.0	0.0	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	39.3
HCM 6th LOS	D



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	882	90	160	1083	63	112
Future Volume (vph)	882	90	160	1083	63	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		180	50		0	75
Storage Lanes		1	1		1	1
Taper Length (ft)			25		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1792	1583	1752	1810	1543	1455
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1792	1583	1752	1810	1543	1455
Link Speed (mph)	45			55	30	
Link Distance (ft)	1142			955	1751	
Travel Time (s)	17.3			11.8	39.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	6%	2%	3%	5%	17%	11%
Adj. Flow (vph)	938	96	170	1152	67	119
Shared Lane Traffic (%)						
Lane Group Flow (vph)	938	96	170	1152	67	119
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes			Yes		
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	4.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	882	90	160	1083	63	112
Future Vol, veh/h	882	90	160	1083	63	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	180	50	-	0	75
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	6	2	3	5	17	11
Mvmt Flow	938	96	170	1152	67	119

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1034	0	2430	938
Stage 1	-	-	-	-	938	-
Stage 2	-	-	-	-	1492	-
Critical Hdwy	-	-	4.13	-	6.57	6.31
Critical Hdwy Stg 1	-	-	-	-	5.57	-
Critical Hdwy Stg 2	-	-	-	-	5.57	-
Follow-up Hdwy	-	-	2.227	-	3.653	3.399
Pot Cap-1 Maneuver	-	-	668	-	~ 31	308
Stage 1	-	-	-	-	358	-
Stage 2	-	-	-	-	190	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	668	-	~ 23	308
Mov Cap-2 Maneuver	-	-	-	-	101	-
Stage 1	-	-	-	-	358	-
Stage 2	-	-	-	-	142	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	48.7
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	101	308	-	-	668	-
HCM Lane V/C Ratio	0.664	0.387	-	-	0.255	-
HCM Control Delay (s)	92.9	23.9	-	-	12.2	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	3.3	1.8	-	-	1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	7	59	111	11	102	112
Future Volume (vph)	7	59	111	11	102	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		35	35	
Storage Lanes	1	0		0	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.878		0.988			
Flt Protected	0.995					0.977
Satd. Flow (prot)	1627	0	1624	0	0	1811
Flt Permitted	0.995					0.977
Satd. Flow (perm)	1627	0	1624	0	0	1811
Link Speed (mph)	30		30			30
Link Distance (ft)	2129		1097			1751
Travel Time (s)	48.4		24.9			39.8
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	2%	2%	17%	2%	2%	3%
Adj. Flow (vph)	7	63	118	12	109	119
Shared Lane Traffic (%)						
Lane Group Flow (vph)	70	0	130	0	0	228
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	59	111	11	102	112
Future Vol, veh/h	7	59	111	11	102	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	17	2	2	3
Mvmt Flow	7	63	118	12	109	119

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	461	124	0	0	130	0
Stage 1	124	-	-	-	-	-
Stage 2	337	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	559	927	-	-	1455	-
Stage 1	902	-	-	-	-	-
Stage 2	723	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	514	927	-	-	1455	-
Mov Cap-2 Maneuver	514	-	-	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	665	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	3.7
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	854	1455	-
HCM Lane V/C Ratio	-	-	0.082	0.075	-
HCM Control Delay (s)	-	-	9.6	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.2	-

PRELIMINARY PLAT
FOR
ROCK SPRINGS
DEE PURSUIT, LLC

CONTACTS

OPTIONEE/DEVELOPER

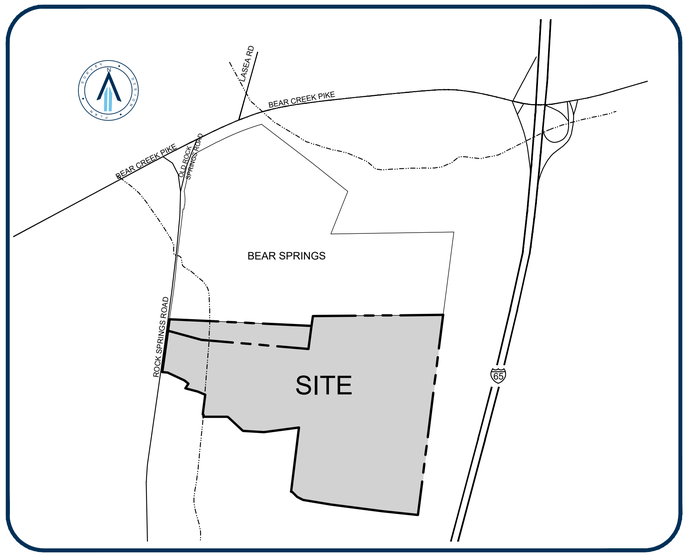
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LOCATION MAP
NOT TO SCALE

INDEX OF SHEETS

SHEET	DESCRIPTION
CVR	COVER SHEET
PRELIMINARY PLAT	
P0.0	ALTA SURVEY
P1.0	OVERALL PRELIMINARY PLAT
P2.0	PRELIMINARY PLAT
P3.0	PRELIMINARY PLAT
P4.0	PRELIMINARY PLAT
P5.0	EXISTING CONDITIONS
P6.0	TREE PRESERVATION PLAN
P7.0	PEDESTRIAN & CIVIC SPACE PLAN
P8.0	ROADWAY SECTIONS

CITY OF COLUMBIA,
MAURY COUNTY,
TENNESSEE

RaganSmith
Nashville - Murfreesboro - Chattanooga
ragansmith.com

JACOB F. VINCENT
REGISTERED
AGRICULTURE
No. 0011419393
STATE OF TENNESSEE
03 20 2023

ROCK SPRINGS
FOR
DEE PURSUIT, LLC
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: NOT TO SCALE
Date: MARCH 20, 2023
Approved By: JFV
Revisions:
- - -
- - -
- - -
- - -
- - -
- - -

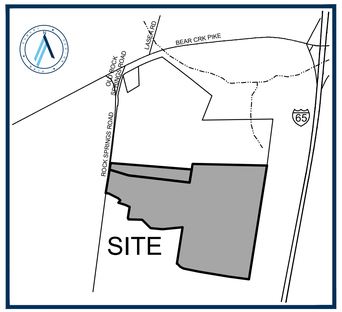
Drawing Title:
COVER

Drawing No.
CVR

Project No.
21-0389

811 Know what's below. Call before you dig.

G:\21-0389\5-SURVEY\PRELIMINARY PLAT\21-0389 PRELIMINARY PLAT-COVER.DWG
PLOTTED BY AMANDA REED ON 3/20/2023 10:58 AM LAST UPDATED BY AREED ON 3/17/2023 3:43 PM



LOCATION MAP
(NOT TO SCALE)

GENERAL NOTES

1. BEARINGS SHOWN HEREON ARE BASED ON THE TENNESSEE COORDINATE SYSTEM OF 1983. GPS EQUIPMENT WAS USED TO DETERMINE THE POSITION OF TWO (2) CONTROL POINTS FOR THE SURVEYED PROPERTY TO ESTABLISH AS BASIS FOR BEARING FOR THE SURVEY.
2. TYPE OF GPS EQUIPMENT USED- TRIMBLE MODEL R10, DUAL FREQUENCY RECEIVER. TYPE OF GPS SURVEY: TDOT NETWORK ADJUSTED REAL TIME KINEMATIC. THE RELATIVE POSITIONAL QUALITY IS 0.05'.
3. BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN FLOOD ZONE X, AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47119C0195E, WITH AN EFFECTIVE REVISED DATE OF APRIL 15, 2007 WHICH MAKES UP A PART OF THE NATIONAL FLOOD INSURANCE ADMINISTRATION REPORT; COMMUNITY NO. 470123 PANEL NO. 0195, SUFFIX E WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PREMISES IS SITUATED. SAID MAP DEFINES ZONE "X" UNDER "OTHER AREAS" AS AN AREA DETERMINED TO BE OUTSIDE THE 2% ANNUAL FLOODPLAIN.
4. THE SURVEYED PROPERTY IS CURRENTLY ZONED CD-3, AS SHOWN ON THE CURRENT GIS ZONING MAP FOR THE CITY OF COLUMBIA. NO ZONING REPORT WAS PROVIDED AT THE TIME OF THIS SURVEY.
5. WETLAND AREAS SHOWN HEREON ARE BASED ON A HYDROLOGIC DETERMINATION REPORT PREPARED BY GROW ENVIRONMENTAL SOLUTIONS, DATED JANUARY 5, 2022, AND FLAGGED AREAS LOCATED DURING FIELD WORK.
6. THIS SURVEYOR HAS NOT BEEN FURNISHED WITH A COPY OF A TITLE COMMITMENT. THE SURVEYED PROPERTY IS, THEREFORE, SUBJECT TO THE FINDINGS OF A COMPLETE AND ACCURATE TITLE SEARCH.

UTILITY NOTE

THIS SURVEYOR 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. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. 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 (3) THREE NOR MORE THAN (10) TEN WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 811.

PROPERTY DESCRIPTIONS - AS SURVEYED

MAP 092, PARCEL 11.01

BEING A CERTAIN TRACT OR PARCEL OF LAND LYING AND BEING IN THE FOURTH (4th) CIVIL DISTRICT OF MAURY COUNTY, CITY OF COLUMBIA, TENNESSEE. BEING BOUNDED ON THE NORTH BY THE BEAR SPRINGS, LLC PROPERTY OF RECORD IN BOOK R2797, PAGE 1063, REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE (R.O.M.C.T.); ON THE EAST AND SOUTH BY THE DONALD BLAIR PROPERTY OF RECORD IN BOOK R2394, PAGE 889, R.O.M.C.T. AND ON THE WEST BY ROCK SPRINGS ROAD (50-FOOT RIGHT-OF-WAY) AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC" IN THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, SAID IRON ROD LYING APPROXIMATELY 2,470 FEET SOUTH OF THE INTERSECTION OF SAID ROCK SPRINGS ROAD WITH BEAR CREEK PIKE AND BEING THE NORTHWEST CORNER OF THE PROPERTY SHOWN ON THE PLAT OF SURVEY FOR THE J.C. CONNELLY ESTATE OF RECORD IN PLAT BOOK 15, PAGE 126, R.O.M.C.T.;

THENCE, WITH THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, NORTH 07 DEGREES 50 MINUTES 39 SECONDS EAST, 597.29 FEET TO A DISTURBED 5/8-INCH IRON ROD (OLD), THE SOUTHWEST CORNER OF SAID BEAR SPRINGS, LLC AND THE NORTHWEST CORNER AND **POINT OF BEGINNING** OF THE HEREIN DESCRIBED TRACT;

THENCE, LEAVING THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, WITH THE SOUTHERLY LINE OF SAID BEAR SPRINGS, LLC, SOUTH 87 DEGREES 19 MINUTES 36 SECONDS EAST, 1591.31 FEET TO A 1-INCH IRON PIPE (OLD) IN THE WEST LINE OF SAID DONALD BLAIR, SAID IRON PIPE BEING THE NORTHEAST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH SAID BLAIR THE FOLLOWING THREE (3) CALLS:

1. SOUTH 07 DEGREES 21 MINUTES 48 SECONDS WEST, 260.60 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC", THE SOUTHWEST CORNER OF THE HEREIN DESCRIBED TRACT;
2. NORTH 85 DEGREES 08 MINUTES 12 SECONDS WEST, 1203.60 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
3. NORTH 74 DEGREES 48 MINUTES 12 SECONDS WEST, 388.24 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC" IN THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, SAID IRON ROD BEING THE SOUTHWEST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, NORTH 07 DEGREES 50 MINUTES 39 SECONDS EAST, 130.07 FEET TO THE **POINT OF BEGINNING** CONTAINING **351,779 SQUARE FEET** OR **8.08 ACRES**, MORE OR LESS

BEING THE SAME PROPERTY CONVEYED TO GARY W. CONNELLY FROM J.C. CONNELLY AND WIFE, BERNICE CONNELLY BY DEED OF RECORD IN BOOK 607, PAGE 699, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE.

SAID PROPERTY BEING FURTHER CONVEYED BY DEED CREATING TENANCY BY THE ENTIRETIES BETWEEN GARY W. CONNELLY AND WIFE, NANCY CONNELLY OF RECORD IN BOOK R1486, PAGE 557, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE.

MAP 092, PARCEL 011.02

BEING A CERTAIN TRACT OR PARCEL OF LAND LYING AND BEING IN THE FOURTH (4th) CIVIL DISTRICT OF MAURY COUNTY, CITY OF COLUMBIA, TENNESSEE. BEING BOUNDED ON THE NORTH AND WEST BY THE GARY W. CONNELLY AND WIFE, NANCY CONNELLY PROPERTY OF RECORD IN BOOK 607, PAGE 699 AND BOOK R1486, PAGE 557, REGISTER'S OFFICE OF MAURY COUNTY, TENNESSEE (R.O.M.C.T.) AND THE BEAR SPRINGS, LLC PROPERTY OF RECORD IN BOOK R2797, PAGE 1063, R.O.M.C.T.; ON THE EAST BY THE MATTIE LORENE HOLT PROPERTY OF RECORD IN BOOK R1750, PAGE 61, R.O.M.C.T.; ON THE SOUTH BY THE GREGORY S. BAKER PROPERTY OF RECORD IN BOOK R2785, PAGE 1051, R.O.M.C.T., THE RAY HOOD AND WIFE, OMA M. HOOD PROPERTY OF RECORD IN BOOK 681, PAGE 283, R.O.M.C.T. AND THE BOBBY HOLT PROPERTY OF RECORD IN BOOK 849, PAGE 505, R.O.M.C.T.; ON THE SOUTH AND WEST BY THE DEBORAH K. JEWELL PROPERTY OF RECORD IN BOOK R1935, PAGE 1473, R.O.M.C.T., THE LORENE HOLT PROPERTY OF RECORD IN BOOK R1504, PAGE 338, R.O.M.C.T. AND THE ADAM P. WEST PROPERTY OF RECORD IN BOOK R1793, PAGE 478, R.O.M.C.T. AND ON THE WEST BY ROCK SPRINGS ROAD (50-FOOT RIGHT-OF-WAY) AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC" IN THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, SAID IRON ROD LYING APPROXIMATELY 2,470 FEET SOUTH OF THE INTERSECTION OF SAID ROCK SPRINGS ROAD WITH BEAR CREEK PIKE AND BEING THE NORTHWEST CORNER OF THE PROPERTY SHOWN ON THE PLAT OF SURVEY FOR THE J.C. CONNELLY ESTATE OF RECORD IN PLAT BOOK 15, PAGE 126, R.O.M.C.T.;

THENCE, WITH THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, NORTH 07 DEGREES 50 MINUTES 39 SECONDS EAST, 467.22 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC", THE SOUTHWEST CORNER OF SAID GARY W. CONNELLY AND WIFE, NANCY CONNELLY, SAID IRON ROD BEING THE NORTHWEST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, LEAVING THE EASTERLY RIGHT-OF-WAY OF SAID ROCK SPRINGS ROAD, WITH SAID CONNELLY THE FOLLOWING THREE (3) CALLS:

1. SOUTH 74 DEGREES 48 MINUTES 12 SECONDS EAST, 388.24 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
2. SOUTH 85 DEGREES 08 MINUTES 12 SECONDS EAST, 1203.60 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
3. NORTH 07 DEGREES 21 MINUTES 48 SECONDS EAST, 260.60 FEET TO A 1-INCH IRON PIPE (OLD) AT AN INTERIOR CORNER IN THE SOUTHERLY LINE OF SAID BEAR SPRINGS, LLC;

THENCE, WITH THE SOUTHERLY LINE OF SAID BEAR SPRINGS, LLC THE FOLLOWING TWO (2) CALLS:

1. NORTH 08 DEGREES 05 MINUTES 52 SECONDS EAST, 110.99 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
2. GENERALLY WITH A FENCE, NORTH 89 DEGREES 29 MINUTES 25 SECONDS EAST, 1458.58 FEET TO AN IRON ROD (OLD) WITH CAP STAMPED "RLS #1335 IN THE WESTERLY LINE OF SAID MATTIE LORENE HOLT, SAID IRON ROD BEING THE NORTHEAST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH THE WESTERLY LINE OF SAID HOLT, SOUTH 07 DEGREES 10 MINUTES 21 SECONDS WEST, 2259.04 FEET TO AN EXISTING WOODEN FENCE POST IN THE NORTHERLY LINE OF SAID GREGORY S. BAKER, SAID FENCE POST BEING THE SOUTHWEST CORNER OF SAID HOLT AND THE SOUTHEAST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH THE NORTHERLY LINE OF SAID BAKER THE FOLLOWING FOUR (4) CALLS:
NORTH 84 DEGREES 02 MINUTES 02 SECONDS WEST, 400.23 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
NORTH 82 DEGREES 39 MINUTES 15 SECONDS WEST, 579.40 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
NORTH 80 DEGREES 21 MINUTES 15 SECONDS WEST, 317.90 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
NORTH 63 DEGREES 02 MINUTES 15 SECONDS WEST, 73.70 FEET TO AN ANGLE IRON (OLD), THE NORTHEAST CORNER OF SAID RAY AND OMA HOOD, THE NORTHWEST CORNER OF SAID BAKER AND THE SOUTHWEST CORNER OF THE HEREIN DESCRIBED TRACT;

THENCE, WITH THE NORTHERLY LINE OF SAID HOOD, THE FOLLOWING TWO (2) CALLS:

1. NORTH 45 DEGREES 13 MINUTES 29 SECONDS WEST, 79.81 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
2. NORTH 83 DEGREES 15 MINUTES 18 SECONDS WEST, 11.88 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC" AT THE SOUTHEAST CORNER OF SAID LORENE HOLT;

THENCE, WITH THE EASTERLY LINE OF SAID HOLT AND THE EASTERLY LINE OF SAID DEBORAH K. JEWELL, GENERALLY WITH A FENCE, NORTH 07 DEGREES 01 MINUTES 15 SECONDS EAST, 724.80 FEET TO AN EXISTING WOODEN FENCE POST, THE NORTHEAST CORNER OF SAID JEWELL;

THENCE, WITH THE NORTHERLY LINE OF SAID JEWELL, GENERALLY WITH A FENCE, SOUTH 82 DEGREES 28 MINUTES 09 SECONDS WEST, 397.66 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";

THENCE, CONTINUING WITH THE NORTHERLY LINE OF SAID JEWELL AND THE NORTHERLY LINE OF SAID LORENE HOLT, GENERALLY WITH A FENCE, NORTH 86 DEGREES 09 MINUTES 30 SECONDS WEST, 234.07 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";

THENCE, CONTINUING WITH THE NORTHERLY LINE OF SAID HOLT, GENERALLY WITH A FENCE, THE FOLLOWING TWO (2) CALLS:

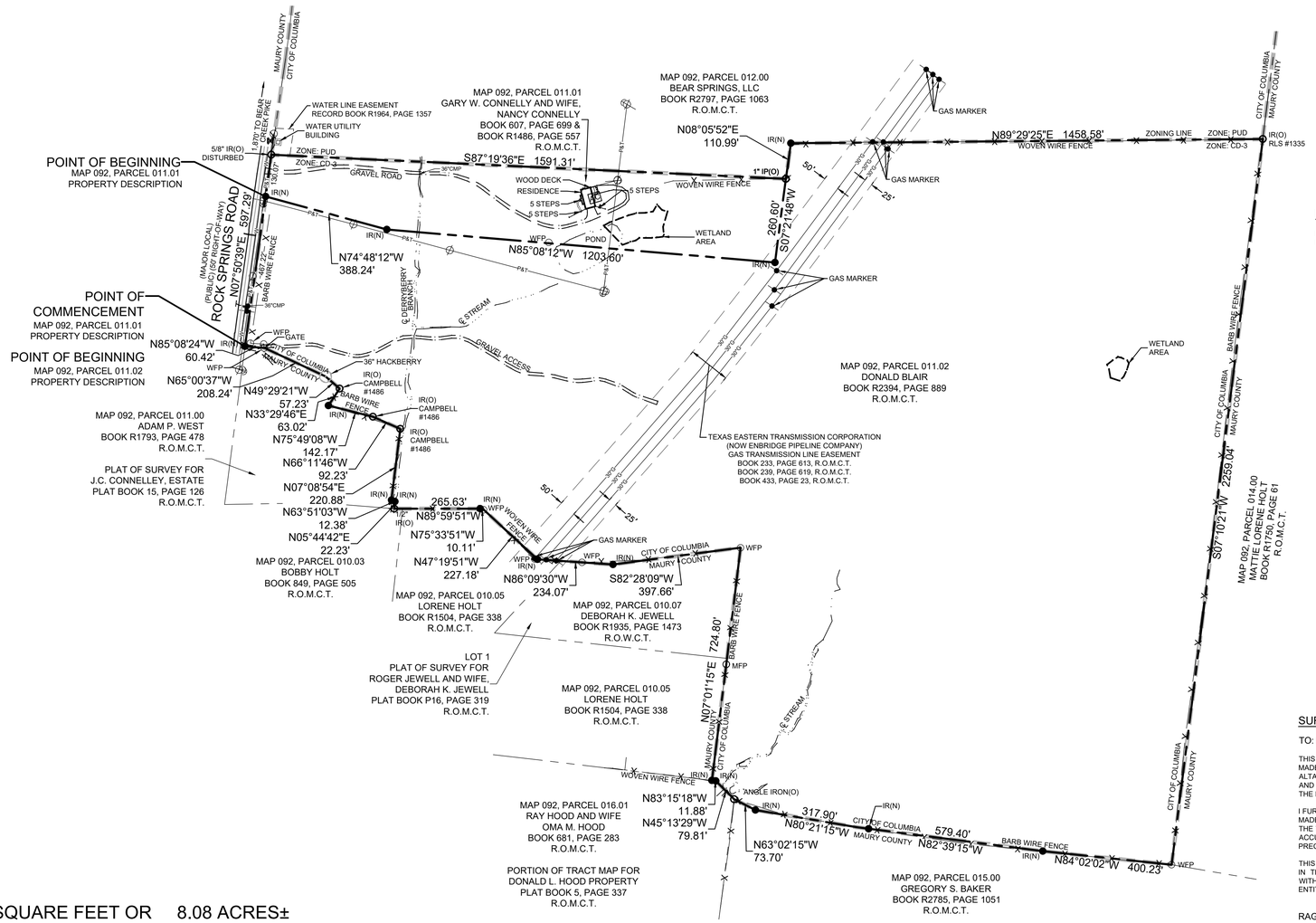
1. NORTH 47 DEGREES 19 MINUTES 51 SECONDS WEST, 227.18 FEET TO AN EXISTING WOODEN FENCE POST;
2. NORTH 75 DEGREES 33 MINUTES 51 SECONDS WEST, 10.11 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";

THENCE, CONTINUING WITH THE NORTHERLY LINE OF SAID HOLT AND THE NORTHERLY LINE OF SAID BOBBY HOLT, GENERALLY WITH A FENCE, NORTH 89 DEGREES 59 MINUTES 51 SECONDS WEST, 265.63 FEET TO A 1/2-INCH IRON ROD (OLD), THE SOUTHEAST CORNER OF SAID ADAM P. WEST;

THENCE, LEAVING THE NORTHERLY LINE OF SAID BOBBY HOLT, WITH SAID WEST, GENERALLY WITH A FENCE, THE FOLLOWING NINE (9) CALLS:

1. NORTH 05 DEGREES 44 MINUTES 42 SECONDS EAST, 22.23 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
2. NORTH 63 DEGREES 51 MINUTES 03 SECONDS WEST, 12.38 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
3. NORTH 07 DEGREES 08 MINUTES 54 SECONDS EAST, 220.88 FEET TO AN IRON ROD (OLD) WITH CAP STAMPED "CAMPBELL #1486";
4. NORTH 66 DEGREES 11 MINUTES 46 SECONDS WEST, 92.23 FEET TO AN IRON ROD (OLD) WITH CAP STAMPED "CAMPBELL #1486";
5. NORTH 75 DEGREES 49 MINUTES 08 SECONDS WEST, 142.17 FEET TO A 1/2-INCH IRON ROD (NEW) WITH CAP STAMPED "RAGAN SMITH ASSOC";
6. NORTH 33 DEGREES 29 MINUTES 46 SECONDS EAST, 63.02 FEET TO AN IRON ROD (OLD) WITH CAP STAMPED "CAMPBELL #1486";
7. NORTH 49 DEGREES 29 MINUTES 21 SECONDS WEST, 57.23 FEET TO A 36" HACKBERRY TREE;
8. NORTH 65 DEGREES 00 MINUTES 37 SECONDS WEST, 208.24 FEET TO AN EXISTING WOODEN FENCE POST;
9. NORTH 85 DEGREES 08 MINUTES 24 SECONDS WEST, 60.42 FEET TO THE **POINT OF BEGINNING** CONTAINING **4,380,055 SQUARE FEET**, OR **100.55 ACRES**, MORE OR LESS.

BEING THE SAME PROPERTY CONVEYED TO DONALD BLAIR FROM DONALD BLAIR, EXECUTOR OF THE ESTATE OF JAMES STEVEN MARSHALL BY QUITCLAIM DEED OF RECORD IN BOOK R2394, PAGE 889, REGISTERS OFFICE FOR MAURY COUNTY, TENNESSEE.



LEGEND

IR(N)	IRON ROD (NEW) (1/2" X 18" W/CAP STAMPED "RAGAN SMITH & ASSOCIATES")
IR(O)	IRON ROD (OLD)
IP(O)	IRON PIPE (OLD)
∅	UTILITY POLE
∅→	UTILITY POLE W/ ANCHOR
WFP	WOODEN FENCE POST
MFP	METAL FENCE POST
INV	INVERT
P&T	OVERHEAD POWER AND TELEPHONE LINES
X	FENCE
	SIGN
CMP	CORRUGATED METAL PIPE
R.O.M.C.T.	REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE

PARCEL 011.01 AREA = 351,779 SQUARE FEET OR 8.08 ACRES±
PARCEL 011.02 AREA = 4,380,055 SQUARE FEET OR 100.55 ACRES±
TOTAL AREA = 4,731,834 SQUARE FEET OR 108.63 ACRES±

PROPERTY MAP REFERENCE

BEING PARCEL NUMBERS 011.01 AND 011.02 AS SHOWN ON MAURY COUNTY PROPERTY MAP NUMBER 092.

DEED REFERENCE

MAP 092, PARCEL 011.01

BEING THE SAME PROPERTY CONVEYED TO GARY W. CONNELLY FROM J.C. CONNELLY AND WIFE, BERNICE CONNELLY BY DEED OF RECORD IN BOOK 607, PAGE 699, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE.

SAID PROPERTY BEING FURTHER CONVEYED BY DEED CREATING TENANCY BY THE ENTIRETIES BETWEEN GARY W. CONNELLY AND WIFE, NANCY CONNELLY OF RECORD IN BOOK R1486, PAGE 557, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE.

MAP 092, PARCEL 011.02

BEING THE SAME PROPERTY CONVEYED TO DONALD BLAIR FROM DONALD BLAIR, EXECUTOR OF THE ESTATE OF JAMES STEVEN MARSHALL BY QUITCLAIM DEED OF RECORD IN BOOK R2394, PAGE 889, REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE.

SURVEYOR'S STATEMENT

TO: ROCK SPRINGS INVESTMENT PARTNERS

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, 6a, 8, 9, 11, 13, 16 AND 18 OF TABLE A THEREOF.
THE FIELD WORK WAS COMPLETED ON FEBRUARY 21, 2023.

I FURTHER CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH CHAPTER 0820-4, STANDARDS OF PRACTICE AS ADOPTED BY THE TENNESSEE STATE BOARD OF EXAMINERS FOR LAND SURVEYORS, CONFORMS TO THE ACCURACY OF A CATEGORY I SURVEY AS DEFINED IN THE STANDARDS, AND THE RATIO OF PRECISION OF THE UNADJUSTED SURVEY IS BETTER THAN 1:10,000.

THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PERSON OR ENTITY NAMED IN THE CERTIFICATE AND DOES NOT EXTEND TO ANY UNNAMED PERSON OR ENTITY WITHOUT AN EXPRESS RE-CERTIFICATION BY THE SURVEYOR NAMING SAID PERSON OR ENTITY.

RAGAN-SMITH ASSOCIATES, INC.

BY: _____ 03/20/2023
CHRISTOPHER J. MABERY, TN. RLS NO. 2483 — DATE



(SEE GENERAL NOTE 1)

0 200 400

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RaganSmith

Nashville - Murfreesboro - Chattanooga
ragansmith.com



BLAIR & CONNELLY PROPERTIES

FOR

ROCK SPRINGS INVESTMENT PARTNERS

1479 ROCK SPRINGS ROAD, COLUMBIA, TENNESSEE 38401
4th CIVIL DISTRICT OF MAURY COUNTY, CITY OF COLUMBIA, TENNESSEE

Scale: 1" = 200'

Date: MARCH 20, 2023

Approved By: CJM

Revisions:

– –
– –
– –
– –
– –
– –

Drawing Title:

ALTA/NSPS LAND TITLE SURVEY

Drawing No.

P0.0

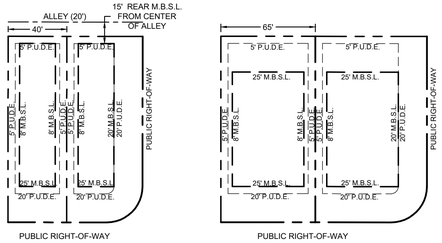
Project No.

21-0389

© CT-0389 X-SURVEY\ALTA\0389 ALTA.DWG
PLOTTED BY CHRIS MABERY ON 3/20/2023 8:58 AM - LAST UPDATED BY CMABERY ON 3/15/2023 5:52 PM

PRELIMINARY PLAT GENERAL NOTES

1. THE PURPOSE OF THIS PLAT IS TO CREATE 187 SINGLE FAMILY LOTS AND 7 OPEN SPACE LOTS.
2. BEARINGS SHOWN HEREON ARE BASED ON THE TENNESSEE COORDINATE SYSTEM OF 1983. GPS EQUIPMENT WAS USED TO DETERMINE THE POSITION OF TWO (2) CONTROL POINTS FOR THE SURVEYED PROPERTY TO ESTABLISH AS BASIS FOR BEARING FOR THE SURVEY.
3. TYPE OF GPS EQUIPMENT USED: TRIMBLE MODEL R10, DUAL FREQUENCY RECEIVER. TYPE OF GPS SURVEY: TDOT NETWORK ADJUSTED REAL TIME KINEMATIC. THE RELATIVE POSITIONAL QUALITY IS 0.05'.
4. ELEVATIONS SHOWN HEREON ARE BASED ON NAVD 88. CONTOURS ARE AT TWO FOOT INTERVALS AND ARE BASED ON A FIELD RUN SURVEY USING RANDOM SPOT ELEVATIONS. CONTOURS WERE DERIVED USING SURFACE MODELING TECHNIQUES.
5. THIS PROPERTY IS CURRENTLY ZONED CD-3 NEIGHBORHOOD DISTRICT.
6. BY SCALED MAP LOCATION AND GRAPHIC PLOTTING ONLY, THIS PROPERTY LIES WITHIN FLOOD ZONE X, AS DESIGNATED ON CURRENT FEDERAL EMERGENCY MANAGEMENT AGENCY MAP NO. 47119C0195E, WITH AN EFFECTIVE REVISED DATE OF APRIL 15, 2007 WHICH MAKES UP A PART OF THE NATIONAL FLOOD INSURANCE ADMINISTRATION REPORT; COMMUNITY NO. 470123 PANEL NO. 0195, SUFFIX E WHICH IS THE CURRENT FLOOD INSURANCE RATE MAP FOR THE COMMUNITY IN WHICH SAID PREMISES IS SITUATED. SAID MAP DEFINES ZONE "X" UNDER "OTHER AREAS" AS AN AREA DETERMINED TO BE OUTSIDE THE 2% ANNUAL FLOODPLAIN.
7. ALL ROADS TO BE PUBLIC RIGHT OF WAY AND MAINTAINED BY THE CITY.
8. ALL OPEN SPACE TO BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
9. ALL OPEN SPACE TO BE DESIGNATED AS A PUBLIC, UTILITY, AND DRAINAGE, EASEMENT.



SINGLE FAMILY
TYPICAL ALLEY LOT DETAIL
UNLESS SHOWN OTHERWISE
(NOT TO SCALE)

SINGLE FAMILY
TYPICAL LOT DETAIL
UNLESS SHOWN OTHERWISE
(NOT TO SCALE)

*BUILDING STANDARDS MUST MEET THE CD-3 REQUIREMENTS AS OUTLINED IN THE ZONING ORDINANCE.

ANTICIPATED DEVELOPMENT PHASING AND CONSTRUCTION SCHEDULE

PHASE 1 -	AUGUST 2023 - AUGUST 2024
PHASE 2 -	AUGUST 2024 - AUGUST 2025
PHASE 3 -	AUGUST 2025 - AUGUST 2026
PHASE 4 -	AUGUST 2026 - AUGUST 2027

150' 75' 300'

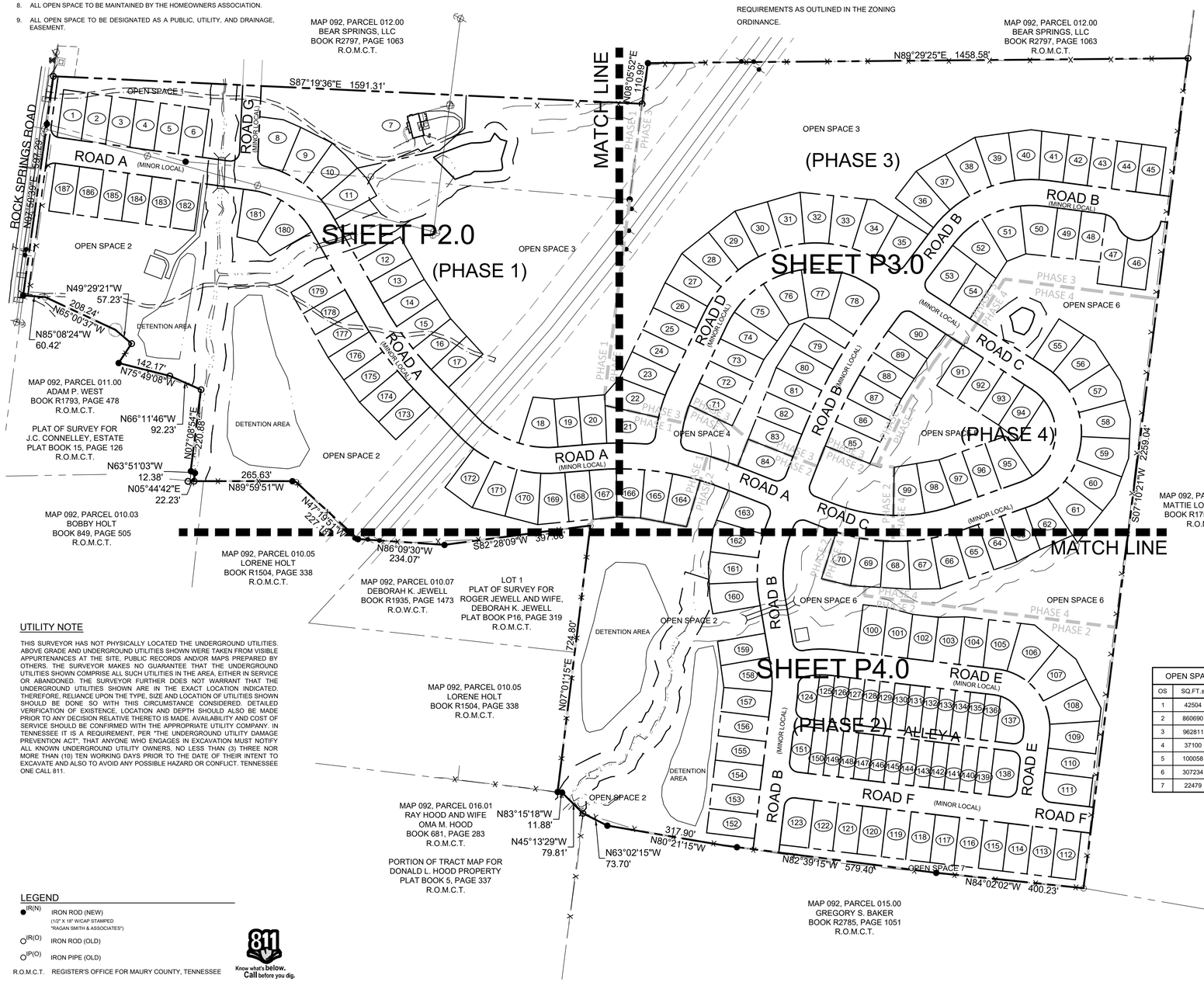
SITE DATA TABLE

TOTAL SINGLE FAMILY LOT AREA	= 39.88 ACRES±
TOTAL OPEN SPACE AREA	= 53.55 ACRES±
TOTAL RIGHT-OF-WAY AREA	= 15.03 ACRES±
TOTAL RIGHT-OF-WAY DEDICATION	= 0.17 ACRES±
TOTAL SITE AREA	= 108.63 ACRES±

LOT TYPES
40' LOT: 28
65' LOT: 159

SETBACKS:
FRONT: 25'
SIDE: 8', 20' CORNER
REAR: 25'
REAR (ALLEY): 15' FROM CENTER OF ALLEY
MAXIMUM BUILDING HEIGHT: 3 STORIES OR 35'
*BUILDING STANDARDS MUST MEET THE CD-3 REQUIREMENTS AS OUTLINED IN THE ZONING ORDINANCE.

PARKING CALCULATIONS
PARKING REQUIRED: 2 SPACES/UNIT
PARKING PROVIDED: MIN. 2 SPACES/UNIT



UTILITY NOTE

THIS SURVEYOR 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. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. 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 (3) THREE NOR MORE THAN (10) TEN WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 811.

LEGEND

- IR(N) — IRON ROD (NEW) (1/2" X 18" W/CAP STAMPED "RAGAN SMITH & ASSOCIATES")
- IR(O) — IRON ROD (OLD)
- IP(O) — IRON PIPE (OLD)
- R.O.M.C.T. — REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE

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OPEN SPACE TABLE		
OS	SQ.FT.±	ACRES±
1	42504	0.98
2	860690	19.76
3	962811	22.10
4	37100	0.85
5	100058	2.30
6	307234	7.05
7	22479	0.52

LOT AREA TABLE		
LOT	SQ.FT.±	ACRES±
1	8579	0.20
2	8580	0.20
3	8580	0.20
4	8580	0.20
5	8580	0.20
6	8580	0.20
7	80975	1.86
8	12050	0.28
9	10431	0.24
10	10539	0.24
11	10239	0.24
12	8580	0.20
13	8580	0.20
14	9074	0.21
15	9117	0.21
16	9090	0.21
17	8715	0.20
18	10755	0.25
19	8580	0.20
20	8942	0.21
21	11683	0.27
22	10702	0.25
23	9476	0.22
24	8580	0.20
25	8580	0.20
26	9125	0.21
27	10417	0.24
28	10374	0.24
29	10374	0.24
30	10374	0.24
31	10374	0.24
32	10374	0.24
33	10374	0.24
34	10917	0.25
35	11229	0.26
36	10374	0.24
37	10374	0.24
38	10374	0.24
39	10374	0.24
40	10260	0.24
41	9051	0.21
42	8580	0.20
43	8580	0.20
44	8580	0.20
45	8580	0.20
46	8821	0.20
47	10772	0.25

LOT AREA TABLE		
LOT	SQ.FT.±	ACRES±
48	8621	0.20
49	8709	0.20
50	11244	0.26
51	10996	0.25
52	11347	0.26
53	11778	0.27
54	8747	0.20
55	9435	0.22
56	11455	0.26
57	11256	0.26
58	11256	0.26
59	11256	0.26
60	11256	0.26
61	11712	0.27
62	9580	0.22
63	8729	0.20
64	8580	0.20
65	8920	0.20
66	9790	0.22
67	9768	0.22
68	9247	0.21
69	9303	0.21
70	9568	0.22
71	8565	0.20
72	8580	0.20
73	8580	0.20
74	9688	0.22
75	11175	0.26
76	10911	0.25
77	10911	0.25
78	13675	0.31
79	8870	0.20
80	9136	0.21
81	9138	0.21
82	8875	0.20
83	8537	0.20
84	10006	0.23
85	8952	0.21
86	9054	0.21
87	8952	0.21
88	8901	0.20
89	8901	0.20
90	10326	0.24
91	8580	0.20
92	8580	0.20
93	8580	0.20
94	8694	0.20

LOT AREA TABLE		
LOT	SQ.FT.±	ACRES±
95	9843	0.23
96	8580	0.20
97	8580	0.20
98	9722	0.22
99	9777	0.22
100	8580	0.20
101	8750	0.20
102	8400	0.19
103	8750	0.20
104	8580	0.20
105	9885	0.23
106	12580	0.29
107	12210	0.28
108	12630	0.29
109	10087	0.23
110	8580	0.20
111	10006	0.23
112	8580	0.20
113	8580	0.20
114	8580	0.20
115	8580	0.20
116	8580	0.20
117	8580	0.20
118	8580	0.20
119	8580	0.20
120	8580	0.20
121	8580	0.20
122	8580	0.20
123	10006	0.23
124	6057	0.14
125	5103	0.12
126	5125	0.12
127	5125	0.12
128	5125	0.12
129	5125	0.12
130	5125	0.12
131	5125	0.12
132	5125	0.12
133	5125	0.12
134	5125	0.12
135	5125	0.12
136	5116	0.12
137	7262	0.17
138	8857	0.20
139	5125	0.12
140	5125	0.12
141	5125	0.12

LOT AREA TABLE		
LOT	SQ.FT.±	ACRES±
142	5125	0.12
143	5125	0.12
144	5125	0.12
145	5125	0.12
146	5125	0.12
147	5125	0.12
148	5125	0.12
149	5125	0.12
150	5125	0.12
151	6357	0.15
152	8580	0.20
153	8580	0.20
154	8580	0.20
155	8580	0.20
156	8580	0.20
157	8763	0.20
158	10073	0.23
159	8653	0.20
160	9540	0.22
161	9945	0.23
162	10036	0.23
163	10441	0.24
164	9238	0.21
165	9238	0.21
166	9137	0.21
167	9059	0.21
168	8762	0.20
169	10072	0.23
170	10374	0.24
171	10374	0.24
172	10374	0.24
173	8629	0.20
174	9098	0.21
175	9084	0.21
176	9006	0.21
177	8834	0.20
178	8580	0.20
179	8580	0.20
180	11329	0.26
181	10745	0.25
182	8580	0.20
183	8580	0.20
184	8580	0.20
185	8580	0.20
186	8580	0.20
187	8580	0.20

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ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=150'

Date: MARCH 20, 2023

Approved By: JFV

Revisions:

Drawing Title:

OVERALL
PRELIMINARY PLAT

Drawing No.

P1.0

Project No.

21-0389

D:\21-0389\1-SURVEY\PRELIMINARY PLAT\21-0389 PRELIMINARY PLAT.DWG
PLOTTED BY AMANDA REED ON 3/20/2023 10:57 AM
LAST UPDATED BY AREED ON 3/20/2023 10:55 AM

PROJECT BENCH MARK
HUBNAIL IN POWER POLE #195863
ELEVATION=738.87'

WATER LINE EASEMENT
RECORD BOOK R1984, PAGE 1357

MAP 092, PARCEL 012.00
BEAR SPRINGS, LLC
BOOK R2797, PAGE 1063
R.O.M.C.T.

S87°19'36"E 1591.31'
554.13'

N08°05'52"E
110.99'

OPEN SPACE 1

ROCK SPRINGS ROAD

N03°59'39"E
307.29'

ROAD A
(MINOR LOCAL)

ROAD G
(MINOR LOCAL)

PROPOSED FIRE HYDRANT (TYP.)

5' SIDEWALK (TYP.)

50' R.O.W.

STREAM BUFFER

EXISTING HOME TO REMAIN

EXISTING POND

WETLAND AREA

WETLAND BUFFER

POND BUFFER

EASEMENT

MATCH LINE
SEE SHEET P3.0

PHASE 1
PHASE 2
PHASE 3

CBU MAILBOX LOCATION

22.5' RIGHT OF WAY DEDICATION

RIGHT OF WAY DEDICATION AREA - 7,469 SQ. FT.± OR 0.17 AC.±

OPEN SPACE 2

OPEN SPACE 3

PUMP STATION

DETENTION AREA

N49°29'21"W
57.23'

208.24'
N65°00'37"W

N85°08'24"W
60.42'

N33°29'46"E
63.02'

142.17'
N75°49'08"W

MAP 092, PARCEL 011.00
ADAM P. WEST
BOOK R1793, PAGE 478
R.O.M.C.T.

PLAT OF SURVEY FOR
J.C. CONNELLEY, ESTATE
PLAT BOOK 15, PAGE 126
R.O.M.C.T.

N66°11'46"W
92.23'

N07°08'54"E
220.88'

N63°51'03"W
12.38'

N05°44'42"E
22.23'

265.63'
N89°59'51"W

MAP 092, PARCEL 010.03
BOBBY HOLT
BOOK 849, PAGE 505
R.O.M.C.T.

MAP 092, PARCEL 010.05
LORENE HOLT
BOOK R1504, PAGE 338
R.O.M.C.T.

N75°33'51"W
10.11'

N47°19'51"W
221.18'

GAS MARKER

MATCH LINE
SEE SHEET P4.0

S82°28'09"W 397.66'

TEXAS EASTERN TRANSMISSION CORPORATION
(NOW ENBRIDGE PIPELINE COMPANY)
GAS TRANSMISSION LINE EASEMENT
BOOK 233, PAGE 613, R.O.M.C.T.
BOOK 239, PAGE 619, R.O.M.C.T.
BOOK 433, PAGE 23, R.O.M.C.T.

CITY OF COLUMBIA
MAURY COUNTY

PRELIMINARY PLAT GENERAL NOTES

1. SEE SHEET P1.0 FOR NOTES, LOT DETAILS, SITE DATA, AND AREA TABLES.

LEGEND

● IR(N)	IRON ROD (NEW) (1/2" X 18" W/CAP STAMPED "RAGAN SMITH & ASSOCIATES")	⌀	UTILITY POLE
○ IR(O)	IRON ROD (OLD)	⌀⟶	UTILITY POLE W/ ANCHOR
○ IP(O)	IRON PIPE (OLD)	⌀—○	UTILITY POLE W/ LIGHT
	FIRE HYDRANT	—P&T—	OVERHEAD POWER AND TELEPHONE LINES
	WATER VALVE	—SA—	SANITARY SEWER LINE
W	WATER METER	—G—	GAS LINE
	CATCH BASIN	—W—	WATER LINE
	PROPOSED STORM INLET	ST	PROPOSED STORM PIPE
	PROPOSED SANITARY MANHOLE	M.B.S.L.	MINIMUM BUILDING SETBACK LINE
R.O.M.C.T.	REGISTERS OFFICE FOR MAURY COUNTY, TENNESSEE	P.U.D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT
		WWC	WET WEATHER CONVEYANCE
		R.O.W.	RIGHT OF WAY

811 Know what's below. Call before you dig.

G:\21-0389\1-SURVEY\PRELIMINARY PLAT\21-0389 PRELIMINARY PLAT.DWG
PLOTTED BY AMANDA REED ON 3/20/2023 12:08 PM
LAST UPDATED BY AREED ON 3/20/2023 10:58 AM

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Nashville - Murfreesboro - Chattanooga
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ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=60'

Date: MARCH 20, 2023

Approved By: JFV

Revisions:

- - -
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- - -

Drawing Title:

PRELIMINARY PLAT

Drawing No.

P2.0

Project No.

21-0389



PRELIMINARY PLAT GENERAL NOTES

1. SEE SHEET P1.0 FOR NOTES, LOT DETAILS, SITE DATA, AND AREA TABLES.

Know what's below. Call before you dig. 811

LEGEND

● IR(N)	IRON ROD (NEW) (1/2" X 18" W/CAP STAMPED "RAGAN SMITH & ASSOCIATES")	⌀	UTILITY POLE
		⌀⟶	UTILITY POLE W/ ANCHOR
○ IR(O)	IRON ROD (OLD)	⌀⊸	UTILITY POLE W/ LIGHT
○ IP(O)	IRON PIPE (OLD)	-P&T-	OVERHEAD POWER AND TELEPHONE LINES
	FIRE HYDRANT	—SA—	SANITARY SEWER LINE
	WATER VALVE	— G —	GAS LINE
W	WATER METER	—W—	WATER LINE
	CATCH BASIN	ST	PROPOSED STORM PIPE
■	PROPOSED STORM INLET	M.B.S.L.	MINIMUM BUILDING SETBACK LINE
●	PROPOSED SANITARY MANHOLE	P.U.D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT
R.O.M.C.T.	REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE	WWC	WET WEATHER CONVEYANCE
		R.O.W.	RIGHT OF WAY

0 60 120

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ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=60'

Date: MARCH 20, 2023

Approved By: JFV

Revisions:

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Drawing Title:

PRELIMINARY PLAT

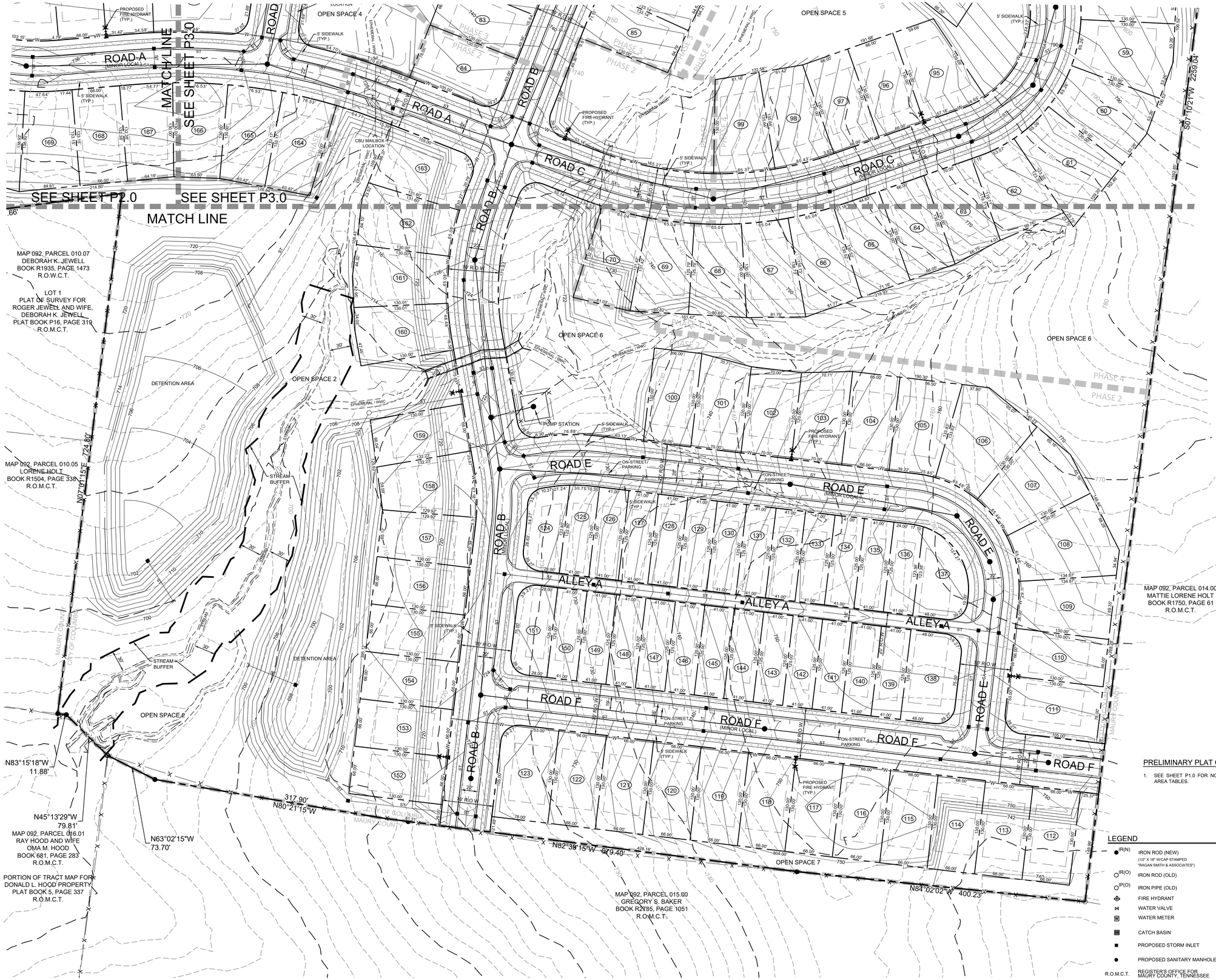
Drawing No.

P3.0

Project No.

21-0389

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PLOTTED BY AMANDA REED ON 3/20/2023 12:07 PM LAST UPDATED BY AREED ON 3/20/2023 10:58 AM



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PRELIMINARY PLAT GENERAL NOTES

1. SEE SHEET P1.0 FOR NOTES, LOT DETAILS, SITE DATA, AND AREA TABLES.

Know what's below. Call before you dig.

LEGEND

● IR(N)	IRON ROD (NEW) (1/2" X 18" W/CAP STAMPED "RAGAN SMITH & ASSOCIATES")	⌀	UTILITY POLE
		⌀⟶	UTILITY POLE W/ ANCHOR
○ IR(O)	IRON ROD (OLD)	⌀⟶	UTILITY POLE W/ LIGHT
○ IP(O)	IRON PIPE (OLD)	-P&T-	OVERHEAD POWER AND TELEPHONE LINES
	FIRE HYDRANT	— SA —	SANITARY SEWER LINE
	WATER VALVE	— G —	GAS LINE
W	WATER METER	— W —	WATER LINE
	CATCH BASIN	ST	PROPOSED STORM PIPE
■	PROPOSED STORM INLET	M.B.S.L.	MINIMUM BUILDING SETBACK LINE
●	PROPOSED SANITARY MANHOLE	P.U.D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT
		WWC	WET WEATHER CONVEYANCE
R.O.M.C.T.	REGISTER'S OFFICE FOR MAURY COUNTY, TENNESSEE	R.O.W.	RIGHT OF WAY

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ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale:	1"=60'
Date:	MARCH 20, 2023
Approved By:	JFV
Revisions:	

Drawing Title:

PRELIMINARY PLAT

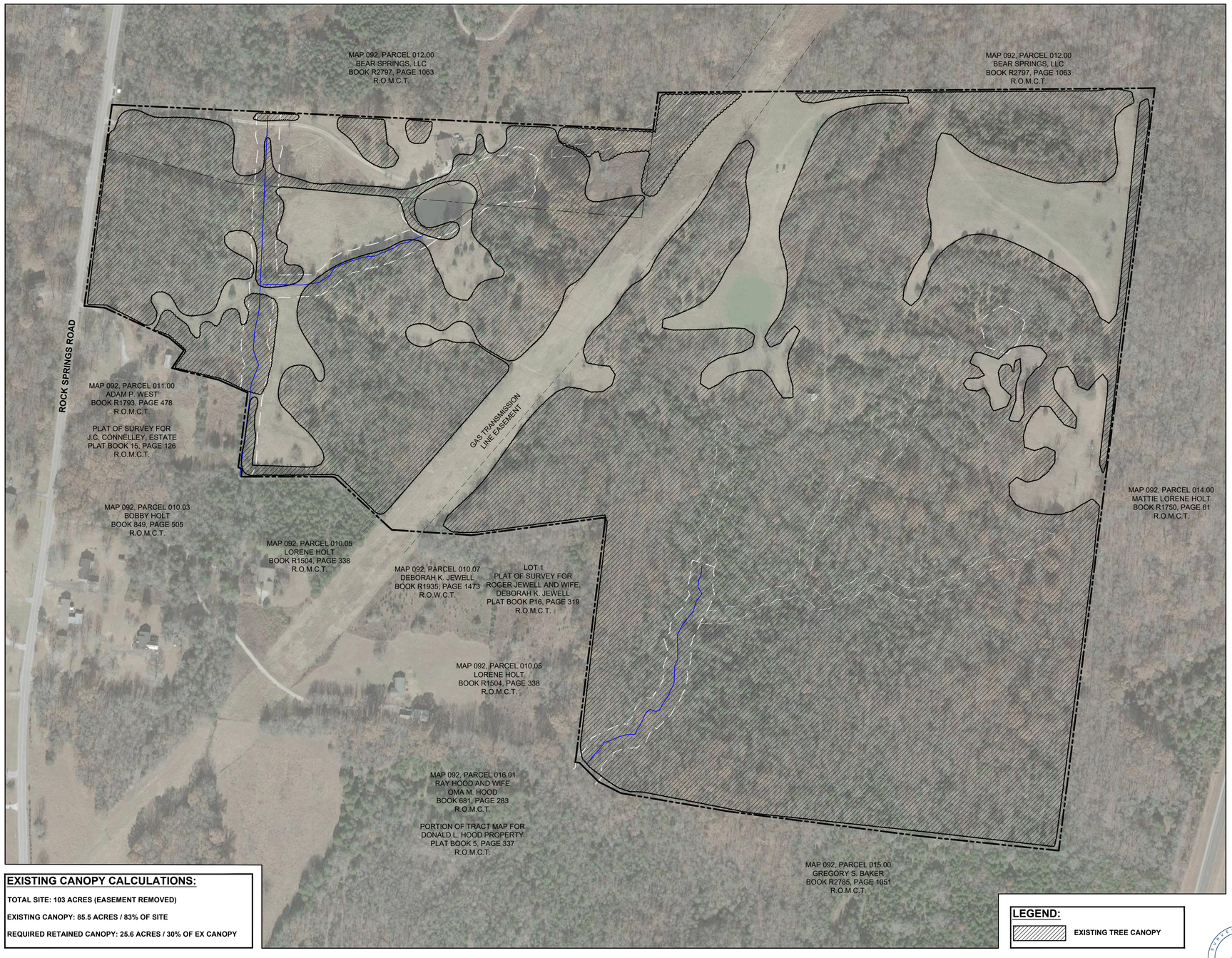
Drawing No.

P4.0

Project No.

21-0389

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LAST UPDATED BY AMANDA REED ON 3/20/2023 10:59 AM
PLOTTED BY AMANDA REED ON 3/20/2023 10:57 AM



EXISTING CANOPY CALCULATIONS:

TOTAL SITE: 103 ACRES (EASEMENT REMOVED)

EXISTING CANOPY: 85.5 ACRES / 83% OF SITE

REQUIRED RETAINED CANOPY: 25.6 ACRES / 30% OF EX CANOPY

LEGEND:

EXISTING TREE CANOPY

Know what's below. Call before you dig.

0 150 300

G:\2-0389\PLANNING\PLAN SHEETS\2-1389 DEVELOPMENT PLAN.DWG
PLOTTED BY ANDREW TARSI ON 3/20/2023 12:10 PM
LAST UPDATED BY AYANSI ON 3/20/2023 12:09 PM

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ANDREW TARSI REGISTERED LANDSCAPE ARCHITECT TENNESSEE No. 331 CERTIFICATE OF AUTHORITY No. 1010 STATE OF TENNESSEE DEPARTMENT OF AGRICULTURE 03-20-23

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=150'

Date: MARCH 20, 2023

Approved By: A. TARSI

Revisions:

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Drawing Title:

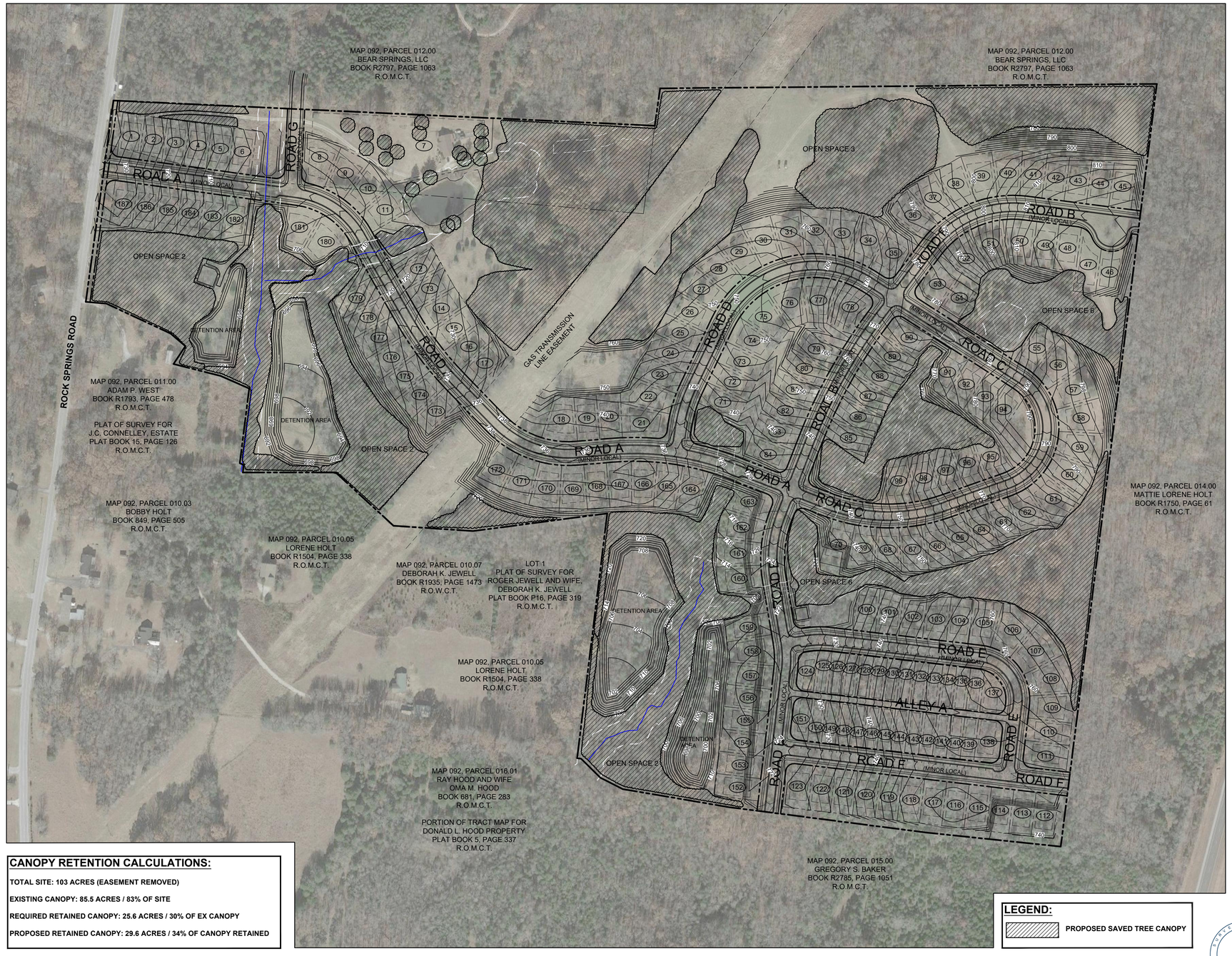
EXISTING CONDITIONS

Drawing No.

P5.0

Project No.

21-0389



CANOPY RETENTION CALCULATIONS:

TOTAL SITE: 103 ACRES (EASEMENT REMOVED)

EXISTING CANOPY: 85.5 ACRES / 83% OF SITE

REQUIRED RETAINED CANOPY: 25.6 ACRES / 30% OF EX CANOPY

PROPOSED RETAINED CANOPY: 29.6 ACRES / 34% OF CANOPY RETAINED

LEGEND:

PROPOSED SAVED TREE CANOPY

Know what's below. Call before you dig.

0 150 300

G:\21-0389\1-PLANNING\2-PLAN SHEETS\2-0389 DEVELOPMENT PLAN.DWG
PLOTTED BY: ANDREW TARSI ON: 3/20/2023 12:51 PM
LAST UPDATED BY: AYARS ON: 3/20/2023 12:08 PM

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ANDREW TARSI REGISTERED LANDSCAPE ARCHITECT TENNESSEE No. 337 — 03-20-23

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: 1"=150'

Date: MARCH 20, 2023

Approved By: A. TARSI

Revisions:

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- - -

Drawing Title:

TREE PRESERVATION PLAN

Drawing No.

P6.0

Project No.

21-0389

Green
An open area, available for unstructured recreation. A Green may be spatially defined by landscaping rather than Building Frontages. Its landscape shall consist of lawn and Trees, naturalistically disposed. The minimum size is 0.5 acre and the maximum is 8 acres.

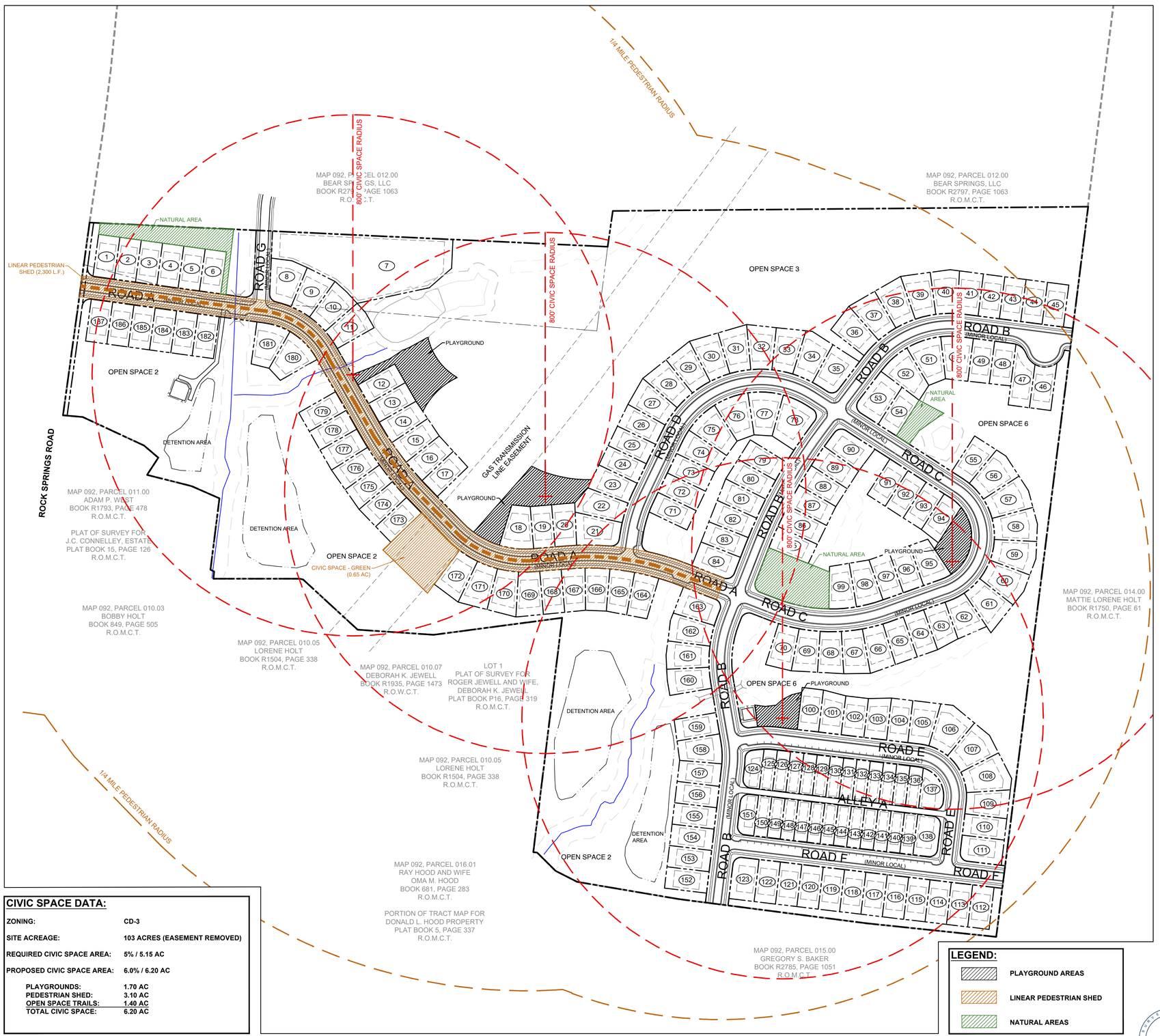


Natural Area
A natural area available for unstructured recreation. A Natural Area may be independent of surrounding Building Frontages. Its landscape shall consist of Paths and trails, meadows, waterbodies, woodland and open shelters, all naturalistically disposed. Natural Areas may be lineal, following the trajectories of natural corridors. The minimum size is 8 acres.



Playground
An open area designed and equipped for the recreation of children. A Playground may include an open shelter. Playgrounds shall be interspersed within Residential areas and may be placed within a Block. Playgrounds may be included within Natural Areas and Greens. There is no minimum or maximum size.





CIVIC SPACE DATA:

ZONING:	**CD-3**
SITE ACREAGE:	**103 ACRES (EASEMENT REMOVED)**
REQUIRED CIVIC SPACE AREA:	**5% / 5.15 AC**
PROPOSED CIVIC SPACE AREA:	**6.0% / 6.20 AC**
PLAYGROUNDS:	**1.70 AC**
PEDESTRIAN SHED:	**3.10 AC**
OPEN SPACE TRAILS:	**1.40 AC**
TOTAL CIVIC SPACE:	**6.20 AC**

LEGEND:
- PLAYGROUND AREAS
- LINEAR PEDESTRIAN SHED
- NATURAL AREAS

Know what's below. Call before you dig.

0 150 300

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Nashville - Murfreesboro - Chattanooga
ragansmith.com

ANDREW TARSI REGISTERED CIVIL AGRICULTURE COMMERCE ETC. TENNESSEE No. LANDSCAPE ARCHITECT 03-20-23

ROCK SPRINGS
FOR
DEE PURSUIT, LLC
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

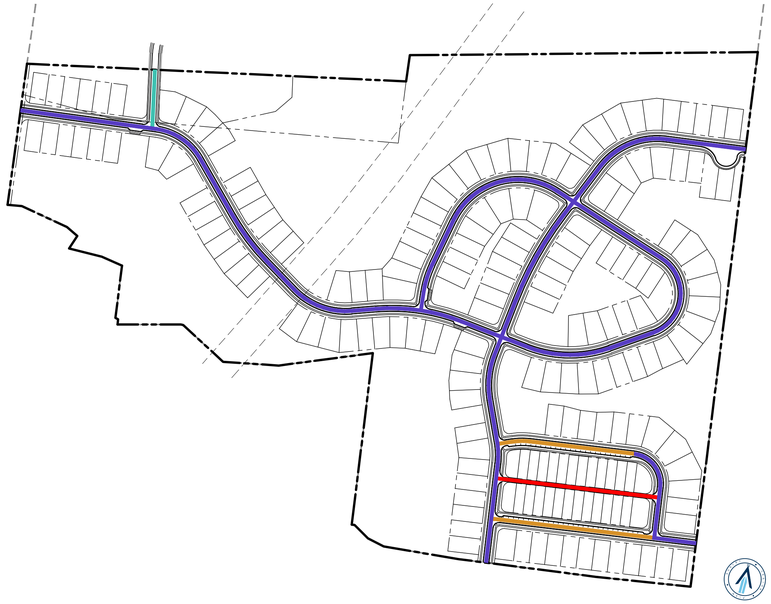
Scale: 1"=150'
Date: MARCH 20, 2023
Approved By: A. TARSI
Revisions:

Drawing Title:
PEDESTRIAN & CIVIC SPACE PLAN

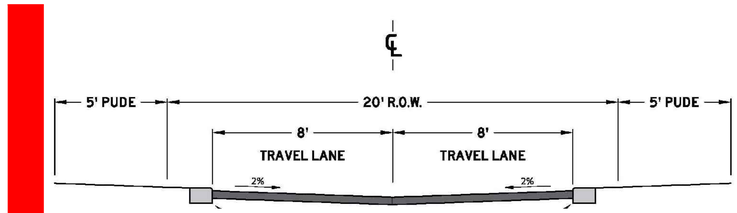
Drawing No.
P7.0

Project No.
21-0389

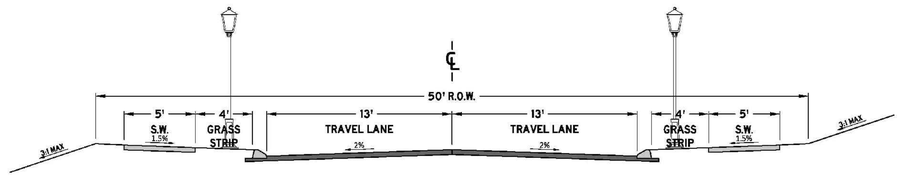
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PLOTTED BY: ANDREW TARSI ON: 3/20/2023 12:19 PM
LAST UPDATED BY: ATARSI ON: 3/20/2023 12:08 PM



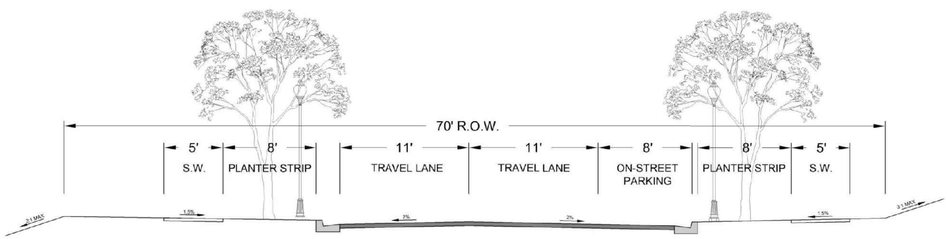
STREET SECTION KEY MAP
SCALE: 1"=300'



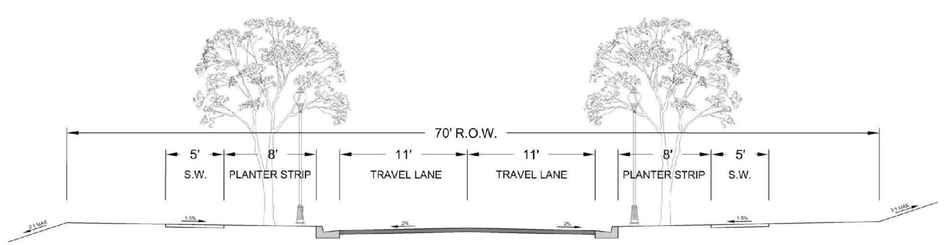
20' ALLEY SECTION
NOT TO SCALE



50' STREET SECTION
NOT TO SCALE



70' STREET SECTION WITH ON-STREET PARKING
NOT TO SCALE



70' STREET SECTION WITHOUT ON-STREET PARKING
NOT TO SCALE

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ragansmith.com

ANDREW TARSI
REGISTERED
STATE OF TENNESSEE
AGRICULTURE
COMMERCE
TENNESSEE No. 337
LANDSCAPE ARCHITECT
03-20-23

ROCK SPRINGS

FOR

DEE PURSUIT, LLC

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Scale: NOT TO SCALE

Date: MARCH 20, 2023

Approved By: A. TARSI

Revisions:

- - -
- - -
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Drawing Title:

ROADWAY SECTIONS

Drawing No.

P8.0

Project No.

21-0389

811 Know what's **below.** **Call** before you dig.

G:\21-0389\P_PLANNING\3-PLAN SHEETS\21-0389 DEVELOPMENT PLAN.DWG
PLOTTED BY: ANDREW TARSI ON: 3/20/2023 12:13 PM LAST UPDATED BY: AYARS ON: 3/20/2023 12:08 PM

March 20, 2023

Mr. Cliff Smith
CPS Land, LLC
213 Overlook Circle
Brentwood, TN 37027
Sent via email: cliff.smith@cpsland.com

RE: Water Availability Letter
Rock Springs – 187 Units
105 acres on Rock Springs Rd
Tax Map 92, Parcel 11.02
Columbia, Maury County, TN

Dear Mr. Smith:

Columbia Power and 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, various Planning Commissions and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies, water service will be made available on a first-come, first-served basis, 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 consists of 187 single-family units. CPWS has evaluated the projected water demands for the proposed residential development in the water system hydraulic model and is able to meet a fire-flow capacity of 1,000 gpm at 20 psi while maintaining the existing level of service and pressures in this portion of the distribution system. CPWS can provide water for the proposed development according to the following requirements:

- This water letter represents a planning-only approval for the support of 187 single family units.

- Each Phase of the development will be considered individually to ensure water infrastructure including all related CPWS furnished equipment and appurtenances are available to support additional homes at the time application is made to proceed to construction for that Phase.
- System capacity for individual Phases of the development is reserved when CPWS has provided approval to proceed to construction and appropriate Impact Fees are paid.
- Based on State requirements, project phases will be delivered and activated as whole units. CPWS will not accept ownership of or activate portions of the water system that are smaller than the entirety of the infrastructure approved by the State on a single set of drawings. Phase boundaries should be defined with this is mind, as no water connections in the Phase will be activated until the entire Phase of construction is complete.
- Phase 1 connection for domestic water supply may be by extension of the 12-inch main in the adjacent Bear Springs development to the North.
- Phase 2 will require a secondary connection to Bear Creek Pike, extending a new 12-inch main along Rock Springs Road to the development.

All of the above requirements are to be constructed and paid for by the Applicant and dedicated to CPWS once complete up to and including the meter. No construction of CPWS infrastructure shall be initiated until final construction plans have been approved by TDEC and all parties have fully executed a water service agreement.

Once you have received this Water Availability Letter, next steps in the process to obtain water service from CPWS are as follows:

- Present the attached hydrant analysis report for coordination and approval of development from the Columbia Fire & Rescue Fire Marshall.
- Provide a development phasing drawing indicating boundaries of each phase and the number of each type of dwelling in each phase.
- Provide a proforma schedule or similar document indicating the timeline for delivery of homes, which aligns with the phases and boundaries in the phasing drawing.
- 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.
- Prior to expiration of this water availability letter in 120 days, remit to CPWS new water service fees for Phase 1 (estimated based on preliminary information) as follows:

New Water Service Fee: $1,500 + $370 per SFU (45 SFUs)	$18,150.00

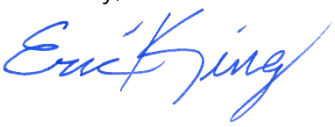
- CPWS will then develop water construction drawings and submit to TDEC for approval. Upon approval by TDEC and payment of meter and impact fees by the applicant, applicant may then schedule a pre-construction meeting with CPWS. Pre-construction meeting will not be scheduled until fees are paid in full or surety is provided in lieu of full payment. Final meter and impact fees are subject to change based on final design and meter size determination. Meter fees are subject to change based on market costs at time of purchase. Meters will not be set until meter and impact fees are paid. Meter and Impact Fees for Phase 1 are as follows:

Meter Fee: $540 per 3/4" meter (45 meters)	$24,300.00
Impact Fee: $4,500 per 3/4" meter (45 meters)	$202,500.00
Total Meter and Impact Fees Due =	**$226,800.00**

- After the pre-construction meeting, CPWS will then issue a formal notice to proceed. No construction of CPWS infrastructure may take place prior to the pre-construction meeting.
- Applicant is then 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.
- Subsequent Phases will require individual applications and associated fees. Should this letter expire prior to payment of the New Water Service Fee for Phase 1 of the development, a new application will be required to evaluate current conditions before proceeding.

If you have any questions, please feel free to contact me at 423-774-0349 or eric.king@inflodesign.com. This letter is valid for one-hundred twenty (120) days from the date of this letter.

Sincerely,



Eric King, P.E.
Inflo Design Group, LLC
on behalf of Columbia Power and Water Systems

cc: Jonathan Hardin, CPWS
File 22-049

This instrument prepared by Beverly Rayburn, Attorney, Columbia, Tennessee. (Map 92, Parcel 11.01)

DEED CREATING TENANCY BY THE ENTIRETIES

WHEREAS, I, GARY W. CONNELLY, am the owner of a tract of land hereinafter described by virtue of a deed of record in Deed Book 607, Page 699 of the Register's Office of Maury County, Tennessee and,

WHEREAS, I, GARY W. CONNELLY, desire to create a tenancy by the entirety to said tract of land in my wife, NANCY CONNELLY pursuant to Section 66-1-109 of Tennessee Code Annotated.

NOW, THEREFORE, in consideration of the premises and my intention to create a tenancy by the entirety in my wife, Nancy Connelly, in and to said tract of land, I do hereby sell, transfer and convey a tenancy by the entirety in said tract of land unto my wife, Nancy Connelly, her heirs and assigns in and to the following described tract or parcel of land lying and being in the Fourth Civil District of Maury County, Tennessee and being more particularly described as follows:

Bounded on the North by Mrs. Jerry Duvall, on the South by J. C. Connelly property, on the East by J.C. Connelly property and on the West by Rock Springs Road.

Beginning with an iron pipe in the East margin of the Rock Springs Road, same point of beginning being the Southeast corner of the Mrs. Jerry Duvall property, also the Southwest corner of the tract being described. Thence with the East margin of the Rock Springs Road South 6 deg. 56' West 127.5 ft. to an iron pipe; thence leaving the road and with new boundaries within the J. C. Connelly tract of land, South 77 deg. 30' East 402.0 ft. to an iron pipe, South 87 deg. 50' East 1203.6 ft. to an iron pipe, North 4 deg. 40' East 260.6 ft. to an iron pipe in the South boundary of Mrs. Jerry Duvall property. Thence with the South boundary of the Mrs. Jerry Duvall property South 87 deg. 31' West 1607 ft. to the point of beginning, containing 8.28 acres, according to survey of James T. Brewer made April 18, 1977.

Being the property conveyed unto Gary W. Connelly by deed of record in Deed Book 607, Page 699 in the Register of Deeds Office of Maury County, Tennessee.

This legal description is taken from the prior deed of record in Deed Book 607, Page 699 Register's Office of Maury County, Tennessee.

IN WITNESS WHEREOF, this conveyance has been executed on the 30th day of May 2000.

Gary W. Connelly

STATE OF TENNESSEE

COUNTY OF MAURY

Personally appeared before me, the undersigned authority, a Notary Public, Gary W. Connelly, with whom I am personally acquainted, and who acknowledged that he executed the within instrument for the purposes therein contained.

WITNESS my hand, at office this 30th day of May, 2000

Robert K. Pinnell
Notary Public

My Commission Expires:

03-22-04

STATE OF TENNESSEE

COUNTY OF MAURY

I or we, hereby affirm that the actual consideration for this transfer or value of the property transferred, whichever is greater is $ Exempt

Nancy C. Connelly
Affiant

Sworn to and subscribed before me this the 30th day of May, 2000

Robert K. Pinnell
Notary Public

My Commission Expires:

03-22-04

The name and address of the person or agency responsible for payment of real property taxes of the property described herein:

mail Nancy C. Connelly
1479 Rock Springs Rd
Columbia, TN 38401

State of Tennessee, County of MAURY
Received for record the 30 day of
MAY 2000 at 11:46 AM. (REC# 39533)
Recorded in official records
Book R1486 pages 557- 558
State Tax $ .00 Clerks Fee $ .00,
Recording $ 10.00, Total $ 10.00,
Register of Deeds L. WAYNE WHITE
Deputy Register LENNIS CHESNUT

STATE OF TENNESSEE)
COUNTY OF MAURY)

The actual consideration for this transfer is $ 0 .

Donald Blair
Affiant

Subscribed and sworn to before me on this
3rd day of ~~July~~ October, 2016.

Kristy A. Clark
Notary Public
My Commission Expires: 4-22-19

KRISTY A. CLARK STATE OF TENNESSEE NOTARY PUBLIC MAURY COUNTY

BK/PG: R2394/889-891
16013354

3 PGS:AL-QUITCLAIM DEED	
NANCY BATCH: 177827	10/03/2016 - 10:54 AM
VALUE	0.00
MORTGAGE TAX	0.00
TRANSFER TAX	0.00
RECORDING FEE	15.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	0.00
TOTAL AMOUNT	17.00

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

This instrument was prepared by:
C. Anthony Edwards
Edwards & Prince
Attorneys at Law
P O Box 334
Columbia TN 38402-0334

Address New Owner as Follows:	Send Tax Bills to:	Map-Parcel Numbers
Donald Blair 2499 Rally Hill Rd Columbia, TN 348401	Same	Map 092; Parcel 011.02

PICK UP: TAMI BLAIR

QUITCLAIM DEED

KNOW ALL MEN BY THESE PRESENTS that DONALD BLAIR, Executor of the Estate of JAMES STEVEN MARSHALL, deceased, for and in consideration of the sum of Ten and no/100 Dollars ($10.00), cash in hand paid, the receipt and sufficiency of which is hereby acknowledged, and in connection with the distribution and closing of the Estate of JAMES STEVEN MARSHALL, the decedent's will having been duly admitted to probate in Maury County, Tennessee, being Case No. P-294-15 in said Clerk's office, has bargained and sold and does hereby convey, remise, release and forever quitclaim unto DONALD BLAIR, his heirs and assigns, all of his entire right, title and interest in and to certain tract or parcel of real estate located in the 4th Civil District of Maury County, Tennessee and in the City of Columbia, more particularly described as follows:

A certain tract of land lying in the Fourth (4th) Civil District of Maury County, Tennessee, and being located on the East side of Rock Springs Road, and being more fully described to-wit;

Beginning at a plastake at a utility pole in the East right-of-way line of Rock Springs Road, (said plastake being an agreed corner between Gary Connelly and J. C. Connelly as of December 27, 1989), said plastake being the Northwest corner of said tract, the Southwest corner of Gary Connelly; thence with an agreed line between J. C. Connelly and Gary Connelly as follows; South 76° 31' East 403.3 feet to a plastake, South 82° 50' East 508 feet to a post on the West bank of a pond; thence crossing said pond South 85° 55' East 221 feet to a fence post on the East bank of said pond and continuing along the same course with a fence line 478.7 feet for a total distance of 669.7 feet to a plastake at a fence corner, the Southeast corner of Gary Connelly; thence with a fence line North 11°10' East passing Gary Connelly's Northeast corner at 250 feet and continuing along said course with fence 107 feet for a total distance of 357 feet to a plastake in a fence corner in Duvall's South property line; thence with a fence line along Duvall's South property line South 89° 56' East passing the centerline of a pipeline at 274 feet and continuing with fence along the same course 1195.3 feet for a total distance of 1469.3 feet to a plastake at a fence corner in Nicholson's West property line, said plastake being the Northeast corner of said tract, the Southeast corner of Duvall's property; thence with a fence line along Nicholson's West property line south 09°05' West 2224.3 feet to a plastake at a fence corner in Manuel's North property line, said plastake being the Southwest corner of Nicholson, the Southeast corner of said tract thence with a fence line along Manuel's North property line as follows; North 82° 25' West 1298 feet, North 62° 15' West 75 feet, North 40°00' West 66 feet, North 57° 30' West 20 feet to a plastake at an old fence corner; thence with fence line and the East line of Nicholson North 09° 10' East 703 feet to a plastake at a fence corner, the Northeast corner of Nicholson; thence with fence line along the North property line of Nicholson as follows: South 83° 55' West 400 feet, North 85° 00' West 239 feet to a point in the centerline of said pipeline; thence North 48° 15' West 219 feet, North 68° 55' West 10 feet, North 89°30' West 263 feet to a plastake at a fence corner on the East bank of a small branch, said plastake being the Southeast corner of a 4.54 acre tract belonging to J. C. Connelly; thence with the East property line of said 4.54 acre tract, North 06°00' East 23 feet; thence crossing said branch North 59° 30' West 12 feet to a fence line on the West bank of said branch; thence with said fence North 08° 45' East 222 feet to a plastake at a fence corner on the West bank of said branch, the Northeast corner of said 4.54

acre tract; thence with a fence line along the North property line of said 4.54 acre tract as follows: North 65° 00' West 94 feet, North 76° 10' West 143 feet, North 32° 10' East 63 feet, North 48° 25' West 61 feet to a Hackberry at a fence corner; thence North 64° 03' West 205.3 feet to a post on the South side of a gate; thence North 86°00' West 70 feet to a point in the centerline of a joint driveway in the East right-of-way line of Rock Springs Road, the Southwest corner of said tract, the Northwest corner of said 4.54 acre tract; thence with the East right-of-way line of said Rock Springs Road North 06° 56' East 456 feet to the point of beginning and containing 99.39 acres more or less as per survey made by James E. Sanders, T.R.L.S #31 dated December 27, 1989 and known the office of same as Job No. 10000520.

Being the same property conveyed to JAMES STEVEN MARSHALL and wife, BRENDA LEE MARSHALL, in deed of record in Book R1792, Page 1239-1241, at the Register's Office of Maury County, Tennessee. BRENDA LEE MARSHALL died November 28, 2007. JAMES STEVEN MARSHALL died testate on November 30, 2015; see Probate Case #P-294-15 at the Maury County Probate Office of Maury County.

The instrument hereby released and quitclaimed is subject to such limitations, restrictions and encumbrances as may affect the premises.

WITNESS my hand this 3rd day of ~~July~~ October, 2016.

Donald Blair
DONALD BLAIR

STATE OF TENNESSEE
COUNTY OF MAURY

Personally appeared before me, the undersigned, a Notary Public in and for said county and state, the within named **DONALD BLAIR,** the bargainor, with whom I am personally acquainted or who proved to me on the basis of satisfactory evidence, and who acknowledged the execution of the foregoing instrument for the purposes therein contained and expressed.

Witness my hand and seal, this 3rd day of ~~July~~ October, 2016.

Kristy A. Clark
Notary Public

My Commission Expires: 4-22-19

KRISTY A. CLARK
STATE OF TENNESSEE NOTARY PUBLIC
MAURY COUNTY

RaganSmith

March 20, 2023

HAND DELIVERED

Development Services
City of Columbia
700 North Garden St.
Columbia, Tennessee 38401

RE: ROCK SPRINGS
PRELIMINARY PLAT
RAGAN-SMITH #21-0389

To whom it may concern:

Enclosed please find the following:

- One (1) copy of the Preliminary Plat
- Preliminary Plat Application and Checklist
- Review fee check ($3,740.00)
- Copy of current deeds of record
- Signed/Notarized Owner Affidavits
- Traffic Study
- Utility Availability Letters
- Fire Flow Letter
- Draft copy of Declaration of Covenants
- Flash drive with digital files

We are requesting review and placement on the upcoming May 10, 2023 Planning Commission agenda. Please call if you have any questions or require any additional information.

Sincerely,

RAGAN-SMITH-ASSOCIATES, INC.

Jacob F. Vincent, P.E., CPESC
Senior Associate

JFV:amr

Enclosures

NASHVILLE
315 Woodland Street
Nashville, TN 37206
(615) 244-8591

MURFREESBORO
100 East Vine Street, Suite 402
Murfreesboro, TN 37130
(615) 546-6050

CHATTANOOGA
1410 Cowart Street, Suite 200
Chattanooga, TN 37408
(423) 490-9400

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 on a USB thumb drive or CD (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"

ADDRESS/LOCATION	1479 Rock Springs Road		
	TAX MAP: 92	GROUP:	PARCEL: 11.01, 11.02
SUMMARY OF NATURE OF REQUEST AND WORK	This property contains +/- 108 acres and is zoned (CD-3) within the Columbia City Limits. This preliminary plat proposes 187 single family lots and 7 open space lots.		

DATE OF PRE-APPLICATION CONFERENCE	3/1/2023	*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
❑ Annexation ❑ Rezoning ☑ Preliminary Plat ❑ Final Plat ❑ PUD Preliminary Master Plan ❑ PUD Final Site Plan ❑ Multi-Family Site Plan ❑ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations/Rezoning/PUD's:** ❑ Written Legal Description copy ❑ Requested Zone Listed ❑ Compliance with Comprehensive Plan ❑ Annexation Permission Form ❑ Plans and/or Plats conforming to City standards with check list completed ❑ Columbia Water System Availability Letter **Plats/PUDs:** ☑ Project Name (include Sections & Phases) Rock Springs - Phases 1-4 ☑ Total Number of Lots 187 ☑ Total acreage 108.63

Rev. 4/14/2022

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 meetings 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	Jacob Vincent	PHONE	(615) 244-8591
ADDRESS	315 Woodland St., Nashville, TN	EMAIL	jvincent@ragansmith.com

PROPERTY OWNER NAME	Donald Blair	PHONE	(931) 922-8110
ADDRESS	2499 Rally Hill Rd., Columbia, TN	EMAIL	tpatblair2003@yahoo.com

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.

Jacob Vincent		03/20/2023
APPLICANT NAME	APPLICANT SIGNATURE	DATE
Donald Blair	Donald Blair	3/9/2023
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	

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 meetings 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	Jacob Vincent	PHONE	(615) 244-8591
ADDRESS	315 Woodland St., Nashville, TN	EMAIL	jvincent@raganSmith.com

PROPERTY OWNER NAME	Gary Connelly	PHONE	931 446-2168
ADDRESS	1479 Rock Springs Rd.	EMAIL	acsonic5454@gmail.com

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.

Jacob Vincent		03/20/2023
APPLICANT NAME	APPLICANT SIGNATURE	DATE
Gary Connelly	X Gary Connelly	3/9/2023
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE

STAFF USE ONLY

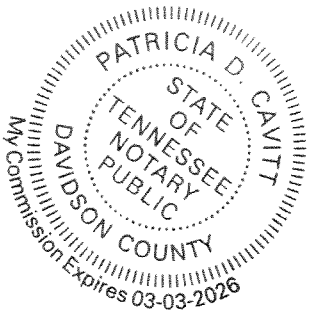
DOCKET NO.		FEE PAID	
RECEIPT NO.		REQUESTED AGENDA	

DATE NOTICES SENT TO ADJACENT PROPERTY OWNERS	
DATE OF PUBLIC NOTICES IN DAILY HERALD	

BOARD ACTION	

GARY CONNELLY: Sworn to and subscribed before me this 9 day of March, 2023.

Seal



Notary Public
Commission Expires:_____

AFFIDAVIT

Owner's Permission of Subdivision
Map 92, Parcel 11.02

I, Donald Blair, as owner, of all or a portion of the property included within the following subdivision on this the 16th day of March 2023, does hereby authorize Ragan-Smith-Associates, Inc., to submit the Rock Springs Preliminary Plat, for review and conditional approval by the Columbia Municipal Planning Commission.

By: Donald Blair
Donald Blair

STATE OF TENNESSEE
COUNTY OF Williamson

Before me, Charity Johnson, a notary public in and for the State and County aforesaid, personally appeared the within named Donald Blair, the within named bargainor, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence) and who acknowledges that he executed the within instrument for the purposes therein contained.

Witness my hand and official seal at Franklin, Tennessee, this 16th day of March, 2023.

NOTARY PUBLIC

My commission expires: July 24, 2023

CHARITY JOHNSON
STATE OF TENNESSEE NOTARY PUBLIC
WILLIAMSON COUNTY
My Commission Expires July 24, 2023

Re: Carriage Hills Subdivision Proposed Rezoning-Responses requested of the applicant by Planning per the Development Review Committee Meeting held on Tuesday, April 11, 2023:

Responses to the 8.5.19h.4 criteria outlined in Planning Commission Action:

a) The rezoning request is consistent and not in conflict with the Comprehensive Plan since the Carriage Hills Subdivision area is designated as Suburban Neighborhood.

b) The City of Columbia has determined that the legal purposes for zoning exist and are outlined in Ordinance 440, Section 1.5 – Purposes, Intent & Objectives: 1.5.1 – General (A)-(P) on pages 6-7.

c) 1. There are no adverse effects upon adjoining property owners. This Subdivision was established prior to 1989 and most of the original homebuilders and owners still reside in the Subdivision today. Every homeowner in Carriage Hills Subdivision is in agreement with the rezoning request and all of them concur with this downzoning. Every one of the 55 homes located in this subdivision are represented on the petition that we have submitted and this is reflected with the signatures of all 88 homeowners.
2. The 4 adjoining property owners are large agricultural parcels that include a 19-acre cattle farm and a 12-acre horse farm, both of which are mostly in the county, a 4.5-acre farm in the county, a 40-acre heavily-forested area in the county that was heavily mined, and a 30-acre parcel that has been vacant for over 35 years. Again, these few contiguous farm properties consist of only 3 large agricultural homesteads and land that has been determined unbuildable by the owner (due to sink holes, caverns, and a lot of rock).

d) No one property owner or small group of property owners will benefit materially from the change, nor will it cause any detriment to the general public.

e) 1. It has been determined that conditions affecting the area <u>have changed to warrant the Zoning Map Amendment and this new CD-3L rezoning will reflect the Larger Lot Character District our homes and lots represent.</u> Every lot in Carriage Hills Subdivision has the frontage width that is required for the CD-3L zoning classification.
2. Around 2005, Carriage Hills Subdivision was annexed into the City of Columbia and initially zoned RS-15. It was then changed to RS-10 when RS-15 was eliminated. However, none of the homes on Carter's Creek Pike, Concord Drive or Lenox Drive were less than 20,000 square feet (RS-20) and most are significantly larger. Subsequently, a Lenox Drive extension, Dover Drive, Grayson Place, Saxon Court, and a Lenox Drive extension were then built and additional homes were constructed on lots that were comparable to ours or even larger. The lots in Carriage Hills Subdivision range from approximately 1/2-acre, ½-acre+, 1+ acre, on up to 3.4-acres, and everything in between. <u>However, the Zoning Ordinance today focuses on the frontage width of lots, not the square footage of the lots.</u>
3. The CD-3L downzoning for a less intensive and more restrictive classification reflects the lots within the Subdivision and therefore CD-3L is the appropriate zoning for Carriage Hills Subdivision. The zoning classification should correspond with and complement the large homes and lots that exist in Carriage Hills. We want to protect our home and property values.

f) This is a long-established, built-out Subdivision. Maury County schools expressed that they "had no concerns with neighborhood design," and no other city department, county department or entity had any comments or questions, except for Planning which has been addressed.

Responses to the K.6. criteria outlined in City Council Action:

a) The rezoning request is in agreement with the Comprehensive Plan since the Carriage Hills Subdivision area is designated as Suburban Neighborhood.
b) The City of Columbia has determined that the legal purposes for zoning exist and are not contravened (reference outline in Ordinance 440, Section 1.5 – Purposes, Intent & Objectives: 1.5.1 – General (A)-(P) on pages 6-7).
c) 1. There are no adverse effects upon adjoining property owners. This Subdivision was established prior to 1989 and most of the original homebuilders and owners still reside in the Subdivision today. Every homeowner in Carriage Hills Subdivision is in agreement with the rezoning request and all of them concur with this downzoning. Every one of the 55 homes located in this subdivision are represented on the petition that we have submitted and this is reflected with the signatures of all 88 homeowners.
2. The 4 adjoining property owners are large agricultural parcels that include a 19-acre cattle farm and a 12-acre horse farm, both of which are in the county, a 4.5-acre farm in the county, a 40-acre heavily-forested area in the county that was heavily mined, and a 30-acre parcel that has been vacant for over 35 years. These few contiguous properties consist of only 3 large agricultural homesteads, and land that has been determined unbuildable by the owner (full of sink holes, caverns, and a lot of rock).

Footnote:

1. It has been determined that conditions affecting the area have changed to warrant the Zoning Map Amendment and this new CD-3L rezoning will reflect the Larger Lot Character District our homes and lots represent. Every lot in Carriage Hills Subdivision has the frontage width that is required for the CD-3L zoning classification.
2. Around 2005, Carriage Hills Subdivision was annexed into the City of Columbia and initially zoned RS-15. It was then changed to RS-10 when RS-15 zoning was eliminated. However, none of the homes on Carter's Creek Pike, Concord Drive or Lenox Drive were less than 20,000 square feet (RS-20) and most are significantly larger. Subsequently, a Lenox Drive extension, Dover Drive, Grayson Place, Saxon Court, and a Lenox Drive extension were then built and additional homes were constructed on lots that were comparable to ours or even larger. The lots in Carriage Hills Subdivision range from approximately 1/2-acre, ½-acre+, 1+ acre, on up to 3.4-acres, and everything in between. <u>However, the Zoning Ordinance today focuses on the frontage width of lots, not the square footage of the lots.</u>
3. The CD-3L downzoning for a less intensive and more restrictive classification reflects the lots within the Subdivision and therefore CD-3L is the appropriate zoning for Carriage Hills Subdivision. The zoning classification should correspond with and complement the large homes and lots that exist in Carriage Hills. We want to protect our home and property values.

Sue Stephenson, Representative
Carriage Hills Subdivision
April 16, 2023

CITY OF COLUMBIA
TENNESSEE

ITEM # 1

DEVELOPMENT REVIEW COMMITTEE COMMENT FORM

April 11, 2023

NAME OR DEPARTMENT: Maury County 911

Case Number: 23-0093

Request from Susan Stephenson for approval to rezone multiple properties within Carriage Hills Subdivision located off Carters Creek Pike from CD-3 (Neighborhood Character District) to CD-3L (Neighborhood Large Lot Character District).

COMMENTS:

No Comment

CITY OF COLUMBIA
TENNESSEE

ITEM # 1

DEVELOPMENT REVIEW COMMITTEE COMMENT FORM

April 11, 2023

NAME OR DEPARTMENT: Wastewater

Case Number: 23-0093

Request from Susan Stephenson for approval to rezone multiple properties within Carriage Hills Subdivision located off Carters Creek Pike from CD-3 (Neighborhood Character District) to CD-3L (Neighborhood Large Lot Character District).

COMMENTS:

Columbia Wastewater has no concern with this change.

1
23-0093

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

April 5, 2023

Susan Stephenson

Re: Rezone several properties within Carriage Hills subdivision located off Carters Creek Pike from CD-3 to CD-3L (Neighborhood large lot character District)

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

Ryan Massey, P.E.
Vice President of Power Operations

kw

CITY OF COLUMBIA
TENNESSEE

ITEM # 1

DEVELOPMENT REVIEW COMMITTEE COMMENT FORM

April 11, 2023

NAME OR DEPARTMENT: Maury County Public Schools

Case Number: 23-0093

Request from Susan Stephenson for approval to rezone multiple properties within Carriage Hills Subdivision located off Carters Creek Pike from CD-3 (Neighborhood Character District) to CD-3L (Neighborhood Large Lot Character District).

COMMENTS:

Current Zones and Capacity: Spring Hill Elementary School (82%), Spring Hill Middle School (55%), Spring Hill High School (102%).

1) **No residence is guaranteed zone to a specific school.**
2) **All zones are subject to change yearly.**
3) **No concerns with neighborhood design.**

CITY OF COLUMBIA
TENNESSEE

ITEM # 1

DEVELOPMENT REVIEW COMMITTEE COMMENT FORM

April 11, 2023

NAME OR DEPARTMENT:
ATT

Case Number: 23-0093

Request from Susan Stephenson for approval to rezone multiple properties within Carriage Hills Subdivision located off Carters Creek Pike from CD-3 (Neighborhood Character District) to CD-3L (Neighborhood Large Lot Character District).

COMMENTS: ATT INTENDS TO SERVE

CITY OF COLUMBIA
TENNESSEE

ITEM # 1

DEVELOPMENT REVIEW COMMITTEE COMMENT FORM

April 11, 2023

NAME OR DEPARTMENT: Atmos Energy

Case Number: 23-0093

Request from Susan Stephenson for approval to rezone multiple properties within Carriage Hills Subdivision located off Carters Creek Pike from CD-3 (Neighborhood Character District) to CD-3L (Neighborhood Large Lot Character District).

COMMENTS:

No Comment

CITY OF COLUMBIA
TENNESSEE

ITEM # 1

DEVELOPMENT REVIEW COMMITTEE COMMENT FORM

April 11, 2023

NAME OR DEPARTMENT: CPWS Broadband

Case Number: 23-0093

Request from Susan Stephenson for approval to rezone multiple properties within Carriage Hills Subdivision located off Carters Creek Pike from CD-3 (Neighborhood Character District) to CD-3L (Neighborhood Large Lot Character District).

COMMENTS: Plan to Serve

Sandra Richardson

From: Mike Harris <mike.harris@inflodesign.com>
Sent: Wednesday, April 12, 2023 1:29 PM
To: Melissa Sanders; Sandra Richardson
Cc: Eric King; Jason English; Bart Anderson; Shane Andrews; Darrin Hall; Jermaine Cooper; Bridgett Griggs; Jonathan Hardin; Barney Fullington
Subject: [External Email] - Development Committee CPWS Water Comments

Sandra and Melissa,

See CPWS Water Comments below for the April Development Committee Meeting. Please let us know if you have any questions!

23-0093 - Request from Susan Stephenson for approval to rezone multiple properties within Carriage Hills Subdivison located off Carters Creek Pike from CD-3 (Neighborhood Character District) to CD-3L (Neighborhood Large Lot Character District).

"No comments"

23-0094 - Request from Jacob Vincent for preliminary plat and development plan approval of Rock Springs consisting of four phases and 187 lots at Tax Map 92 Parcels 11.01 and 11.02.

"A Water Availability Letter was recently issued. 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 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."

23-0095 - Request from TKC Architect and Engineering for final plat and surety approval of Williamsport Pike Townhomes Phase 1 consisting of 91 units off Williamsport Pike and Twin Lakes Drive.

"Complete water system infrastructure per approved plans, complete pressure and bacterial test, deed infrastructure to CPWS."

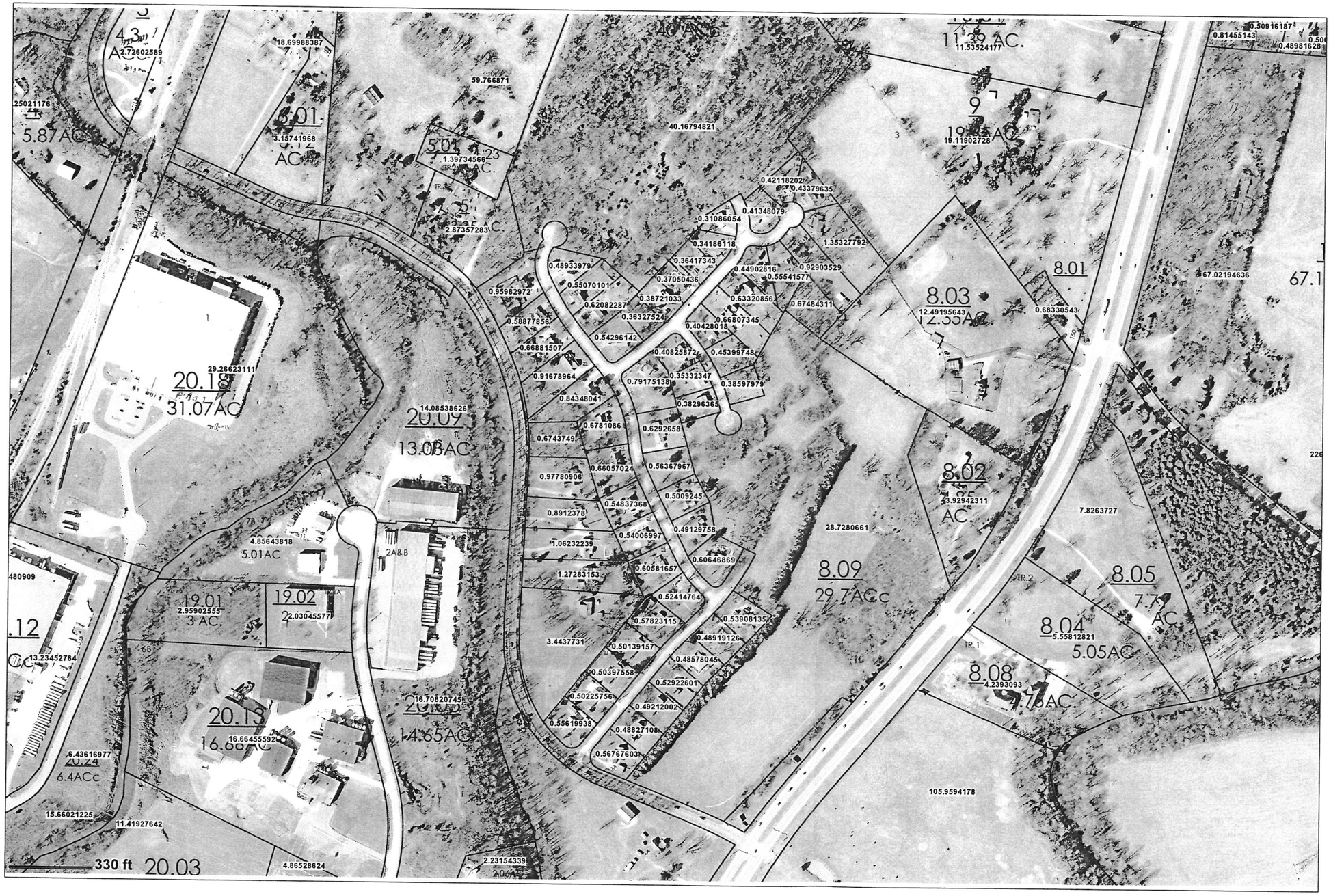
23-0096 - Request from T-Square Engineering for final plat and surety approval of Quail Run Meadows Phase 3 consisting of 34 lots off Quail Run Way.

"Complete remaining water system infrastructure per approved plans, perform bacteria testing and deed infrastructure to CPWS"

23-0097 - Request from Adam Crunk for preliminary and final plat approval for Honey Farm Crossings being a six lot subdivision at Nashville Highway and Honey Farm Way.

"No comments."

23-0099 - Request from WES Engineers & Surveyors for preliminary plat approval at 1009 Woodland Street consisting of four lots.



MAURY COUNTY, TENNESSEE

DISCLAIMER: THIS MAP IS FOR PROPERTY TAX ASSESSMENT PURPOSES ONLY. IT WAS CONSTRUCTED FROM PROPERTY INFORMATION RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS, AND IS NOT CONCLUSIVE AS TO LOCATION OF PROPERTY OR LEGAL OWNERSHIP.

FILE:

Prepared by:
Security Title & Escrow Co., LLC
Columbia, Tennessee 38402-1431

BK/PG: R2373/191-192
16006695

2 PGS:AL-WARRANTY DEED	
SUSIE BATCH: 173060	05/25/2016 - 12:55 PM
VALUE	230000.00
MORTGAGE TAX	0.00
TRANSFER TAX	851.00
RECORDING FEE	10.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	864.00

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, this indenture entered into between **Jacob M. Mann and wife, Melissa A. Mann,** FIRST PARTY, which expression shall include heirs, assigns and personal representatives, and **Amy B. Vaught and husband, Joseph R. Vaught,** SECOND PARTY, which expression shall include heirs, assigns and personal representatives.

WITNESSETH:

For the consideration of the sum of TEN DOLLARS ($10.00), and other good and valuable considerations, the receipt of all of which is hereby acknowledged, FIRST PARTY conveys unto SECOND PARTY the following described property:

Located in the Third (3rd) Civil District of Maury County, Tennessee, being Lot 31, Carriage Hills Subdivision, Section 1, as shown on plat of record in Plat Book 5, Page 282, Register's Office of Maury County, Tennessee.

Being the same property conveyed to Jacob M. Mann and wife, Melissa A. Mann by deed dated April 30, 2007 and recorded in Book R1987, Page 224, Register's Office of Maury County, Tennessee.

Map & Parcel 66K-A-17

TO HAVE AND TO HOLD said real estate unto SECOND PARTY together with all rights, title, easements and appurtenances thereunto belonging, forever.

FIRST PARTY COVENANTS with SECOND PARTY that he is lawfully seized and possessed of said real estate, that FIRST PARTY has a good and lawful right to convey the same, and that it is unencumbered except for easements and/or restrictions, if any, of record in the **MAURY** County, Tennessee Register of Deeds office.

FIRST PARTY FURTHER COVENANTS to forever warrant and defend the title to said real estate unto SECOND PARTY against the lawful claims of all persons whomsoever.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

208 CARTERS CREEK PIKE
Property Address

Ownership and Mailing Address
VAUGHT AMY B ETVIR JOSEPH R
208 CARTERS CREEK PIKE
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 1**
BK **5** PG **282** BLOCK LOT **31** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **120X493.62 IRR**

TAX YEAR 2023
MAURY

JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
060	066K	A	017.00		000

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**

Map **066K** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type **01 Single Family** Lower Level **1 No Basement**
Stories **2 Story Frame** Heating/Air **8 Heat And Cooling Pkg**
Exterior Wall **11 Common Brick** Attic
Heating Fuel

Year Built **1987** Eff Yr Built **2002** Rooms **0** Bedrooms **0**
Full Baths Half Baths Add'l Fixtures **9** Total Fixtures **9**
Wood FP Stacks Openings Add'l Sty PreFab Add'l Sty
Info Src **0** Occ **0** Rental: Src Year **0** Amount **0** Sched

Foundation **02 Continuous Footing** Floor Finish **11 Carpet Combination**
Floor System **04 Wood W/ Sub Floor** Interior Finish **07 Drywall**
Party Wall **00 None** Paint/Decor **04 Above Average**
Struct. Frame **00 None** Bath Tile **00 None**
Roof Framing **02 Gable/Hip** Electrical **04 Above Average**
Roof Cov/Deck **03 Composition Shingle** Shape **01 Rectangular Design**
Cab/Millwork **04 Above Average**

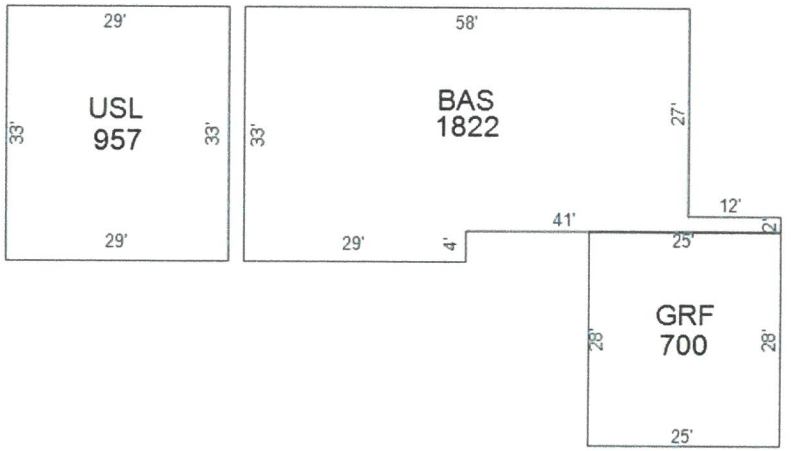
Quality **2 : Above Average** Condition **Average** Class:
Prorate Date Factor % Comp Cost & Design **0**
Depr: Physical **20** Other Phys Functional External % Good **80**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,822	1.192	1	1.07	1.21	2,109	2022	20	1.00

	Base Dwelling	Add'l Areas	Total	$/SqFt
RCN	282,080	90,550	372,630	176.69
RCNLD	225,660	72,440	298,100	141.35

% Complete
Dwelling Factor **1**
Dwelling Value **298,100**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	1,822			
	GRF	700	0	71.06	49,740
	USL	957	30	42.64	40,810



APPRAISED VALUES

LAND	60,000
IMPROVEMENTS	303,800
TOTAL APPRAISAL	363,800
GREENBELT APR	
ASSESSMENT	90,950
ASSESSED @	25%
APPROACH	COST VALUE

Value Correlation

	Value
COST	363,800
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units
Water/Sewer **01 Public / Public**
Electricity **01 Public**
Gas **00 None**
Topo **0 Level**
Road Type **3 Paved**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **01/01/2006** By **04**
Improvements **1**
Mobile Homes **0**
NH Trend **0 STABLE**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	Driveway	2000	2000	1	C	1			3000	UN	3,000	100		1	3,000
WDK	Wood Deck	2000	2000	144	C	1	12X12		20.8333	AV	3,000	34		1	1,020
CUD	Detached Carport Unf	1998	1998	440	D	1	20X22		9.3182	FR	4,100	40		1	1,640

Total OBY Value 5,660

ENTRANCES

Date	Code	ID
01/01/2002	01 Bldg Apr	33

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	U	22	01		120	493	1	60,000.00							100	60,000.00	60,000
					Totals:		1										60,000

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
05/20/2016	R2373	191	230,000	230,000	I	WD	A	VAUGHT AMY B ETVIR JOSEPH R
04/30/2007	R1982	224	184,900	184,900	I	WD	A	MANN JACOB M ETUX
04/03/2001	R1531	503	146,500	146,500	I	WD	A	STERNENBERG FREDERICK K
02/10/1987	767	567	17,500	17,500	V	WD	A	MOORES DANIEL L

NOTES

INCR LAND UNIT PRICE PER 32*FN06VI
INCR LAND PRICE*R06FN*AREA CODE R06BV*JG*CHG AREA CODE*FN
R18: CHG EYB, KITCHEN REMODEL PER 32 *CB - R18: CHG QLTY, CHG WDK EYB PER 32 *CB

PREPARED BY:
DAVID A. HUGHES
ATTORNEY AT LAW
COLUMBIA, TENN.

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, this indenture entered into between Charles O. Morton and wife, Judy L. Morton, FIRST PARTY, which expression shall include heirs, assigns and personal representatives, and George W. Waggoner, Jr. and wife, Deborah K. Waggoner, as tenants by the entirety, SECOND PARTY, which expression shall include heirs, assigns and personal representatives.

W I T N E S S E T H:

For the consideration of the sum of TEN DOLLARS ($10.00), and other good and valuable considerations, the receipt of all of which is hereby acknowledged, FIRST PARTY conveys unto SECOND PARTY the following described property:

> Located in the Third (3rd) Civil District of Maury County, Tennessee, and being Lot No. 33, Carriage Hills Subdivision, Section 1, as shown on plat of record in Plat Book 5, Page 282, Register's Office of Maury County, Tennessee.
>
> Being the same property conveyed to FIRST PARTY herein by deed of record in Book 783, Page 188, Register's Office for Maury County, Tennessee.
>
> Map 66K, Group A, Parcel 19.

TO HAVE AND TO HOLD said real estate unto SECOND PARTY together with all rights, titles, easements and appurtenances thereunto belonging, forever.

FIRST PARTY COVENANTS with SECOND PARTY that they are lawfully seized and possessed of said real estate and that FIRST PARTY has a good and lawful right to convey the same, and that it is unencumbered except as follows: current year's property taxes which will be prorated as of the date of this deed and assumed by SECOND PARTY; building restrictions of record in Book 647, Page 280, as amended in Book 653, Page 511, and Book 733, Page 432, Register's Office of Maury County, Tennessee; subject to a 10 ft. gas line easement, for the benefit of United Cities Gas Company, Inc., running across subject property, as shown by instrument of

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

212 CARTERS CREEK PIKE
Property Address

Ownership and Mailing Address
WAGGONER GEORGE W JR
ETUX DEBORAH K
212 CARTERS CREEK PIKE
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 1**
BK **5** PG **282** BLOCK LOT **0033** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **125X361.10 IRR.**

TAX YEAR 2023
MAURY

060	066K	A	019.00		000
JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**

Map **066F** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type **01 Single Family** | Lower Level **1 No Basement**
Stories **1 Story Frame** | Heating/Air **8 Heat And Cooling Pkg**
Exterior Wall **12 Brick/Wood** | Attic
Heating Fuel

Year Built **1987** | Eff Yr Built **2006** | Rooms **0** | Bedrooms **0**
Full Baths | Half Baths | Add'l Fixtures **9** | Total Fixtures **9**
Wood FP Stacks **1** | Openings **1** | Add'l Sty | PreFab | Add'l Sty
Info Src **3** | Occ **0** | Rental: Src | Year **0** | Amount **0** | Sched

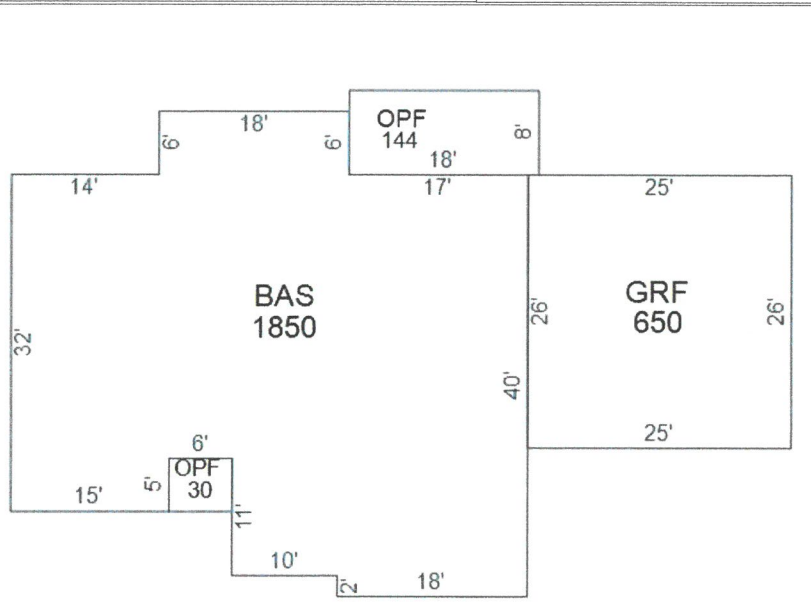
Foundation **02 Continuous Footing** | Floor Finish **11 Carpet Combination**
Floor System **04 Wood W/ Sub Floor** | Interior Finish **07 Drywall**
Party Wall **00 None** | Paint/Decor **04 Above Average**
Struct. Frame **00 None** | Bath Tile **00 None**
Roof Framing **02 Gable/Hip** | Electrical **04 Above Average**
Roof Cov/Deck **03 Composition Shingle** | Shape **04 Irregular Shape**
Cab/Millwork **04 Above Average**

Quality **2 : Above Average** | Condition **Average** | Class:
Prorate | Date | Factor | % Comp | Cost & Design **0**
Depr: Physical **20** | Other Phys | Functional | External | % Good **80**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,850	1.208	1	1.021	1.21	1,850	2022	16	1.00

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete
RCN	277,680	53,610	331,290	179.08	Dwelling Factor 1
RCNLD	222,140	42,880	265,020	143.25	Dwelling Value 265,020

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	1,850			
	OPF	30	0	42.67	1,280
	OPF	144	0	42.64	6,140
	GRF	650	0	71.06	46,190



APPRAISED VALUES

LAND	60,000
IMPROVEMENTS	269,500
TOTAL APPRAISAL	329,500
GREENBELT APR	
ASSESSMENT	82,375
ASSESSED @	25%
APPROACH	COST VALUE

Value Correlation

	Value
COST	329,500
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units
Water/Sewer **01 Public / Public**
Electricity **01 Public**
Gas **00 None**
Topo **0 Level**
Road Type **3 Paved**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **01/01/2006** By **04**
Improvements **1**
Mobile Homes **0**
NH Trend **0 STABLE**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	Wood Deck	1987	1987	252	C	1	21X12		18.8095	AV	4,740	10		1	470
DRW	Driveway	1987	1987	1	C	1			4000	UN	4,000	100		1	4,000

Total OBY Value 4,470

ENTRANCES

Date	Code	ID
01/01/2002	01 Bldg Apr	32

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	U	22	01		125	361	1	60,000.00							100	60,000.00	60,000
						Totals:	1										60,000

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
07/29/1994	1228	874	87,120	87,120	I	WD	A	WAGGONER GEORGE W JR
11/23/1987	783	188	92,300	92,300	I	WD	D	MORTON CHARLES O
08/31/1987	777	601	78,651	78,651	I	AO	D	BAILEY MORTGAGE COMPANY
01/21/1987	767	262	28,000	28,000	V	WD	D	FLANIGAN BLDRS INC

NOTES

INCR LAND UNIT PRICE PER 32*FN06VI*CHG EYB*R06FN*AREA CODE
R06BV*CHG AREA*FN*CHG EYB & DRWY R10/32*JG*CHG EYB*R10/42*FN
R14:32 INC LND*LDS - R18: CHG QLTY PER 32 *CB - R22: CHG DRW VAL PER 32 *CB

PREPARED BY:
WILLIAM A. GRAHAM
ATTORNEY AT LAW
COLUMBIA, TENN.

KNOW ALL MEN BY THESE PRESENTS, this indenture entered into between ROBERT H. PLUMHOF and wife, LIKANAH PLUMHOF, FIRST PARTY, which expression shall include heirs, assigns and personal representatives, and PAT O. COLEMAN, JR. and wife, BRENDA M. COLEMAN, as tenants by the entirety, SECOND PARTY, which expression shall include heirs, assigns and personal representatives.

W I T N E S S E T H:

For the consideration of TEN DOLLARS ($10.00), and other good and valuable consid- tions, the receipt of all of which is here OWNER REQUESTS NO PUBLICATION OF THIS DOCUMENT 3T PARTY conveys to SECOND PARTY the following

Loca d) Civil District of Maury Coun eing Lot No. 34, Carriage Hills n 1, as shown on plat of recor , Page 282 of the Register's Offic of Maury County, Tennessee.

Being the same property conveyed to FIRST PARTY by deed recorded in Book 787, Page 57 of said Register's Office.

This property is shown on the tax records of Maury County, Tennessee as Map 66K, Group A, Parcel 20.

TO HAVE AND TO HOLD said real estate unto SECOND PARTY, together with all rights, titles, easements and appurtenances thereunto belonging, forever.

FIRST PARTY COVENANTS that it is lawfully seized and possessed of said real estate and that FIRST PARTY has a good and lawful right to convey the same, and that it is unencumbered, except for current year's property taxes, building restrictions recorded in Book 647, Page 280, as amended in Book 653, Page 511 and Book 733, Page 342, and a 10' wide pipeline easement granted to United Cities Gas Co., Inc. as described in Book 765, Page 696 of said Register's Office.

FIRST PARTY FURTHER COVENANTS to forever warrant and defend the title to the above described property unto SECOND PARTY against the lawful claims of all persons whomsoever.

MAURY COUNTY, STATE OF TENNESSEE
Received for record this 12 of Sept 1990 at 9:45 o'clock A M
Note Book 12 Page 477 Receipt # 56253 Recording Fee 12.00
State Tax 356.40 Probate Fee 1.00 Total 369.40
Book ____ Page ____ Witness my Hand,
MAURY COUNTY REGISTER OF DEEDS

I hereby certify that I registered the above instrument this 20 day of Sept. 1990
P. Warren White
MAURY COUNTY REGISTER OF DEEDS

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

214 CARTERS CREEK PIKE (Property Address)	Subdivision **CARRIAGE HILLS SEC 1**	**TAX YEAR 2023 MAURY**	060	066K	A	020.00	000
Ownership and Mailing Address	BK **5** PG **282** BLOCK LOT **0034** TRACT		JUR	CONTROL MAP	GROUP	PARCEL	PI S/I
COLEMAN PAT O JR ETUX	Alt Subdiv	City **60156 Columbia**	Map **066F**		Updated 10/27/2022		
BRENDA M	BK PG BLOCK LOT TRACT	SSD1	Dist **03**		Printed 03/17/2023		
214 CARTERS CREEK PIKE	Additional Description	SSD2					
COLUMBIA TN 38401	Dimensions **154.78X292.08 IRR.**	Total Land Units **1**			Card: 1 of 1		
		Deed Acres **0**					
		Calculated Acres **0**			Page: 1 of 1		

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1987**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**8**	Total Fixtures	**8**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **1**	Rental: Src		Year **0**		Amount **0**	Sched

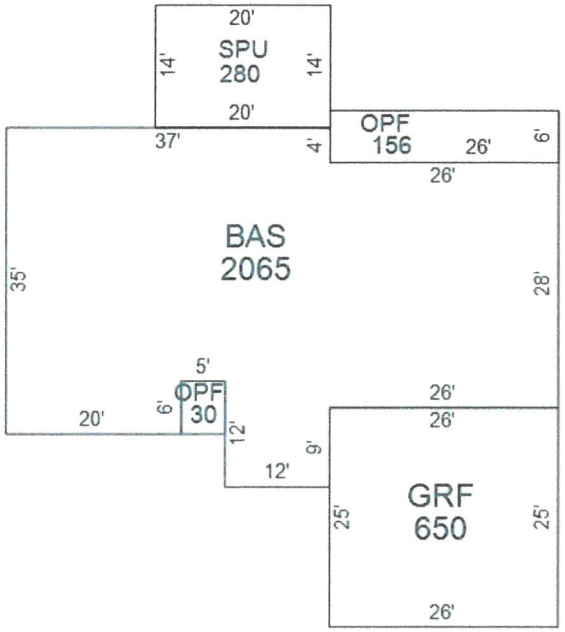
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**02 L-Shaped**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition	**Average**	Class:	
Prorate	Date	Factor	% Comp	Cost & Design	**0**
Depr: Physical	**20**	Other Phys	Functional	External	% Good **80**

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
2,065	**1.335**	**1**	**1**	**1.21**	**2,065**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**298,190**	**66,060**	**364,250**	**176.39**	Dwelling Factor	**1**
RCNLD	**238,550**	**52,840**	**291,390**	**141.11**	Dwelling Value	**291,390**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**2,065**			
	OPF	**30**	**0**	**42.67**	**1,280**
	GRF	**650**	**0**	**71.06**	**46,190**
	OPF	**156**	**0**	**42.63**	**6,650**
	SPU	**280**	**0**	**42.64**	**11,940**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**296,300**
TOTAL APPRAISAL	**356,300**
GREENBELT APR	
ASSESSMENT	**89,075**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**356,300**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**1987**	**2000**	**350**	**C**	**1**	**14 X 25**		**16.3143**	**AV**	**5,710**	**34**		**1**	**1,940**
DRW	**Driveway**	**1987**	**1987**	**1**	**C**	**1**			**3000**	**UN**	**3,000**	**100**		**1**	**3,000**

Total OBY Value **4,940**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**154**	**292**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
09/19/1990	**845**	**355**	**108,000**	**108,000**	**I**	**WD**	**A**	**COLEMAN PAT O JR**
02/03/1988	**787**	**57**	**101,000**	**101,000**	**I**	**WD**	**I**	**PLUMHOF ROBERT H**
08/31/1987	**777**	**603**	**73,338**	**73,338**	**I**	**WD**	**D**	**BAILEY MORTGAGE COMPANY**
01/21/1987	**767**	**262**	**28,000**	**28,000**	**V**	**WD**	**D**	**FLANIGAN BLDRS INC**

NOTES

INCR LAND PRICE*R06FN*AREA CODE R06BV*CHG AREA CODE*FN
CHG EYB & CHG OPF TO SPU R10/32*JG*CHG EYB*R10/42*FN
15:32 ADD SPU/OPF/CHG OBY'S*LDS
R18: CHG QLTY PER 32 *CB

BK/PG:R2832/618-620
22007049

3 PGS : WARRANTY DEED	
BECKY BUCHANAN 274899 - 22007049	
04/07/2022 - 08:13 AM	
VALUE	350000.00
MORTGAGE TAX	0.00
TRANSFER TAX	1295.00
RECORDING FEE	15.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	1313.00

STATE of TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

This Instrument Prepared By:
Thomas M. Hutto, Esq.
Dale, Hutto & Lyle, PLLC
805 South Garden Street
P.O. Box 1017
Columbia, TN 38402-1017

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, this indenture entered into between **MARVIN JEROME SEVERSON, JR., AND WIFE, HOPE SEVERSON,** FIRST PARTY, which expression shall include heirs, assigns and personal representatives, and, **PERRY MICHAEL LANGLEY AND KATHY LANGLEY, HUSBAND AND WIFE, AS TENANTS BY ENTIRETY,** SECOND PARTY, which expression shall include heirs, assigns and personal representatives.

WITNESSETH:

For the consideration of TEN DOLLARS ($10.00), and other good and valuable considerations, the receipt of all of which is hereby acknowledged, FIRST PARTY conveys to SECOND PARTY the following described property:

Located in the Third (3rd) Civil District of Maury County, Tennessee, more particularly described as follows: Lot 32, Carriage Hills Subdivision, Section 1, as shown on plat of record in Plat Book 5, Page 282, ROMCT.

Being the same property conveyed to Marvin Jerome Severson, Jr and wife, Hope Severson by deed recorded on June 30, 1993 in Book 1187, Page 83, in the Maury County Register of Deeds.

This property is shown on the tax records of Maury County, Tennessee as Map 066K, Group A, Parcel 018.00.

Legal description obtained from prior deed.

TO HAVE AND TO HOLD said real estate unto SECOND PARTY, together with all rights, titles, easements and appurtenances thereunto belonging, forever.

FIRST PARTY COVENANTS that it is lawfully seized and possessed of said real estate and that FIRST PARTY has a good and lawful right to convey the same, and that it is unencumbered, except for current year's property taxes; gas pipeline easement conveyed to United Cities Gas Company in Deed Book 765, Page 696, Register's Office of Maury County, Tennessee; all matters shown on plat of record in Plat Book 5, Page 282, Register's Office of Maury County, Tennessee; building restrictions of record in Book 647, Page 280, as amended in Book 653, Page 511 and Book 733, Page 432, Register's Office of Maury County, Tennessee; and any other matters of record.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

| | | |

BK/PG:R2792/156-159
21025402

4 PGS : WARRANTY DEED	
BECKY BUCHANAN 262836 - 21025402	
11/19/2021 - 01:47 PM	
VALUE	530000.00
MORTGAGE TAX	0.00
TRANSFER TAX	1961.00
RECORDING FEE	20.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	1984.00

STATE of TENNESSEE, MAURY COUNTY

JOHN FLEMING
REGISTER OF DEEDS

WARRANTY DEED

STATE OF TENNESSEE
COUNTY OF Williamson

THE ACTUAL CONSIDERATION OR VALUE, WHICHEVER IS GREATER, FOR THIS TRANSFER IS $530,000.00.

Affiant

SUBSCRIBED AND SWORN TO BEFORE ME, THIS THE 17TH DAY OF NOVEMBER, 2021.

Notary Public

MY COMMISSION EXPIRES:
(AFFIX SEAL)

MEGAN DUPRIEST
TENNESSEE NOTARY PUBLIC
My Comm Exp. 5/24/2025
COUNTY OF WILLIAMSON

THIS INSTRUMENT WAS PREPARED BY
Land Title South, Inc. 3326 Aspen Grove Drive, Sutie 400, Franklin, TN 37067

File No.: 21-CD-740

ADDRESS NEW OWNER(S) AS FOLLOWS:	SEND TAX BILLS TO:	MAP-PARCEL NO.(S)
Ronnie David Smith and Kelly Todd Smith	New Owners	Tax Map: 066K-A-016.00 and Parcel ID:
(NAME) 206 Carters Creek Pike	(NAME)	
(ADDRESS) Columbia, TN 38401	(ADDRESS)	
(CITY) (STATE) (ZIP)	(CITY) (STATE) (ZIP)	

FOR AND IN CONSIDERATION OF THE SUM OF Five Hundred Thirty Thousand Dollars And No/100 Dollars ($530,000.00), CASH IN HAND PAID BY THE HEREINAFTER NAMED GRANTEES, AND OTHER GOOD AND VALUABLE CONSIDERATIONS, THE RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED, WE, DOUGLAS W. WILLIAMS AND ROSEANN WILLIAMS, HEREINAFTER CALLED THE GRANTORS, HAVE BARGAINED AND SOLD, AND BY THESE PRESENTS DO TRANSFER AND CONVEY UNTO RONNIE SMITH AND KELLY SMITH, husband and wife, HEREINAFTER CALLED THE GRANTEES, THEIR HEIRS AND ASSIGNS, A CERTAIN TRACT OR PARCEL OF LAND IN MAURY COUNTY, STATE OF TENNESSEE, DESCRIBED AS FOLLOWS, TO-WIT:

Lot 28:

LOCATED in the Third (3rd) Civil District of Maury County, Tennessee, and being Lot 28, Carriage Hills Subdivision, Section 1 as shown on plat of record in Plat Book 5, Page 282, Register's Office of Maury County, Tennessee.

Being the same property conveyed to Douglas W. Williams and wife, Roseann Williams, as tenants by the entirety, by Warranty Deed, from John W. Pilkinton, dated April 10, 2013, recorded April 12, 2013, of

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

206 CARTERS CREEK PIKE
Property Address

Ownership and Mailing Address
SMITH RONNIE ETUX KELLY SMITH
206 CARTERS CREEK PIKE
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 1**
BK **5** PG **282** BLOCK LOT **28-30** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **171.31X493.62 IRR.**

TAX YEAR 2023
MAURY

060	066K	A	016.00		000
JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **3.4**

Map **066K** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type **01 Single Family** Lower Level **1 No Basement**
Stories **2 Story Frame** Heating/Air **8 Heat And Cooling Pkg**
Exterior Wall **11 Common Brick** Attic
Heating Fuel

Year Built	Eff Yr Built	Rooms	Bedrooms
1993	**2006**	**0**	**0**

Full Baths	Half Baths	Add'l Fixtures	Total Fixtures
		7	**7**

Wood FP Stacks	Openings	Add'l Sty	PreFab	Add'l Sty

Info Src	Occ	Rental: Src	Year	Amount	Sched
2	**1**		**0**	**0**	

Foundation **02 Continuous Footing** Floor Finish **11 Carpet Combination**
Floor System **04 Wood W/ Sub Floor** Interior Finish **07 Drywall**
Party Wall **00 None** Paint/Decor **04 Above Average**
Struct. Frame **00 None** Bath Tile **00 None**
Roof Framing **02 Gable/Hip** Electrical **04 Above Average**
Roof Cov/Deck **03 Composition Shingle** Shape **01 Rectangular Design**
Cab/Millwork **04 Above Average**

Quality **1 : Average** Condition **Average** Class:

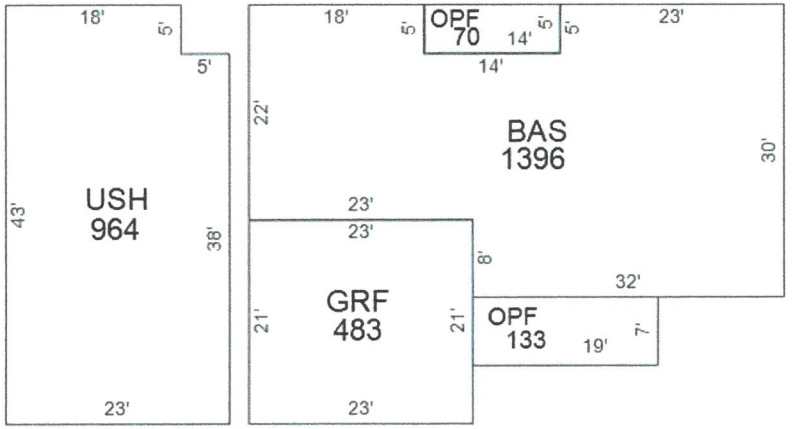
Prorate	Date	Factor	% Comp	Cost & Design
				0

Depr: Physical	Other Phys	Functional	External	% Good
16				**84**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,396	**.937**	**1**	**1.07**	**1**	**1,974**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete
RCN	**181,340**	**92,150**	**273,490**	**138.55**	Dwelling Factor **1**
RCNLD	**152,330**	**77,410**	**229,740**	**116.38**	Dwelling Value **229,740**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,396**			
	OPF	**70**	**0**	**35.29**	**2,470**
	OPF	**133**	**0**	**35.26**	**4,690**
	GRF	**483**	**0**	**58.74**	**28,370**
	USH	**964**	**60**	**58.73**	**56,620**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**239,000**
TOTAL APPRAISAL	**299,000**
GREENBELT APR	
ASSESSMENT	**74,750**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**299,000**
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units
Water/Sewer **01 Public / Public**
Electricity **01 Public**
Gas **00 None**
Topo **0 Level**
Road Type **3 Paved**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **07/14/2014** By **32**
Improvements **1**
Mobile Homes **0**
NH Trend **0 STABLE**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
GUD	**Detached Garage Unfi**	**1995**	**1995**	**280**	**C**	**1**	**14X20**		**44.6071**	**AV**	**12,490**	**46**		**1**	**5,750**
DRW	**Driveway**	**2000**	**2000**	**1**	**C**	**1**			**3000**	**UN**	**3,000**	**100**		**1**	**3,000**
PTO	**Patio**	**2000**	**2000**	**144**	**C**	**1**	**12X12**		**9.5833**	**AV**	**1,380**	**34**		**1**	**470**

Total OBY Value **9,220**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**				**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
						Totals:	**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
11/17/2021	**R2792**	**156**	**530,000**	**530,000**	**I**	**WD**	**N**	**SMITH RONNIE ETUX KELLY SMITH**
04/10/2013	**R2230**	**443**						**WILLIAMS DOUGLAS WAYNE ETUX ROS**
06/23/2003	**R1721**	**765**						**WILLIAMS DOUG ETUX ROSEANN**
04/28/2000	**R1482**	**171**	**165,000**	**165,000**	**I**	**WD**	**A**	**WILLIAMS DOUG ETUX**

NOTES

CHG QUAL TO 01 INCR LAND PRICE*R06FN*AREA CODE R06BV*
CHG AREA CODE*FN*CHG EYB & PATIO EYB R10/32*JG
CHG EYB*R10/42*FN
2015:DEL 66K-A-14,15 COMBINE W/THIS PRCL PER OWNER*PB

File.

Lenders Title Company
Columbia Office
811 Hatcher Lane, Ste B
Columbia, TN. 38401

WARRANTY DEED

BK/PG: R2879/1250-1251
22019355

2 PGS:AL-WARRANTY DEED
NANCY BATCH 290675 10/12/2022 - 01:52 PM

VALUE	439900.00
MORTGAGE TAX	0.00
TRANSFER TAX	1627.63
RECORDING FEE	10.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	1640.63

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

STATE OF TENNESSEE
COUNTY OF ~~WILLIAMSON~~ MAURY

THE ACTUAL CONSIDERATION OR VALUE, WHICHEVER IS GREATER, FOR THIS TRANSFER IS $439,900.00

Affiant

SUBSCRIBED AND SWORN TO BEFORE ME, THIS THE 11th DAY OF October, 2022

Notary Public

MY COMMISSION EXPIRES: 2-25-24

(AFFIX SEAL)

SHERRI ANN CHURCH NOTARY PUBLIC STATE OF TENNESSEE

MST 2022-1337

THIS INSTRUMENT WAS PREPARED BY:
James T. Oglesby, Attorney and Yvette L. Meldrum, Attorney
Mid-State Title & Escrow, Inc., 128 Holiday Court, Suite 125, Franklin, TN 37067

ADDRESS NEW OWNER(S) AS FOLLOWS:	SEND TAX BILLS TO:	MAP-PARCEL NUMBERS
Vernon Burdett and Nita Burdett husband and wife	Liberty Federal Credit Union	066K-A-007.00
(NAME)	(NAME)	
112 Concord Drive	4401 Theater Drive	
(ADDRESS)	(ADDRESS)	
Columbia, TN 38401	Evansville IN 47715	
(CITY) (STATE) (ZIP)	(CITY) (STATE) (ZIP)	

FOR AND CONSIDERATION OF THE SUM OF TEN DOLLARS, CASH IN HAND PAID BY THE HEREINAFTER NAMED GRANTEES, AND OTHER GOOD AND VALUABLE CONSIDERATIONS, THE RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED, WE, **Michael Melton and Tonyanna Rose Melton, husband and wife,** HEREINAFTER CALLED THE GRANTORS, HAVE BARGAINED AND SOLD, AND BY THESE PRESENTS DO TRANSFER AND CONVEY UNTO **Vernon Burdett and Nita Burdett husband and wife,** HEREINAFTER CALLED THE GRANTEES, THEIR HEIRS AND ASSIGNS, A CERTAIN TRACT OR PARCEL OF LAND IN **MAURY** COUNTY, STATE OF TENNESSEE, DESCRIBED AS FOLLOWS, TO-WIT:

Situate in the Third (3rd) Civil District of Maury County, Tennessee, being Lot No. 7 on the Plan of Carriage Hills Subdivision., Section 1, of record in Plat Book 5, Page 282, in the Register's Office for Maury County, Tennessee, to which Plan reference is hereby made for a more complete description of the property.

Being the same property conveyed to Michael Melton and Tonyanna Rose Melton, husband and wife by Warranty deed from Kerlind Investment Group, LLC, a Tennessee Limited Liability Company of record in Book R2557, page 1445, Register's Office for Maury County, Tennessee, dated May 20, 2019 and recorded on May 24, 2019.

Subject to: Property taxes have been prorated and the Grantee has assumed payment thereof when same become due and payable. Subject to all matters shown on the Plan of record in Plat Book 5, Page 282, Register's Office for Maury County, Tennessee. Restrictions of record in Book 647, Page 280, as amended in Book 653, Page 511 and Book 733, Page 432, in the Register's Office for Maury County, Tennessee. Easement for Gas Pipeline of record in Book 765, Page 696, in the Register's Office for Maury County, Tennessee.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

112 CONCORD DR Property Address	Subdivision **CARRIAGE HILLS SEC 1** BK **5** PG **282** BLOCK LOT **7** TRACT	**TAX YEAR 2023** **MAURY**	**060** JUR	**066K** CONTROL MAP	**A** GROUP	**007.00** PARCEL	PI	**000** S/I
Ownership and Mailing Address **BURDETT VERNON ETUX NITA BURDETT** **112 CONCORD DR** **COLUMBIA TN 38401**	Alt Subdiv BK PG BLOCK LOT TRACT Additional Description Dimensions **115X178.25 IRR.**	City **60156 Columbia** SSD1 SSD2 Total Land Units **1** Deed Acres **0** Calculated Acres **0**	Map **066K** Dist **03**	Updated 10/28/2022 Printed 03/17/2023 Card: 1 of 1 Page: 1 of 1				

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1987**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**6**	Total Fixtures	**6**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **0**	Rental: Src		Year **0**	Amount **0**		Sched

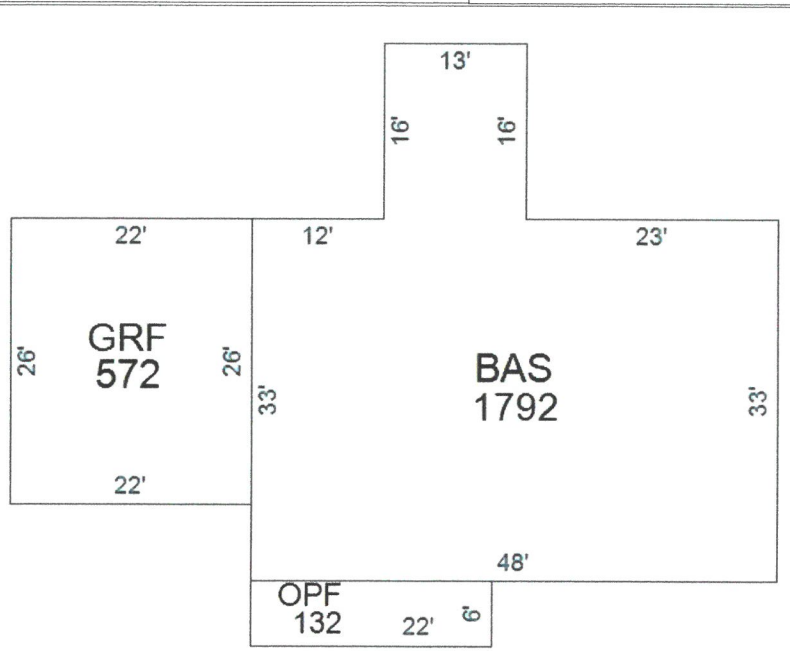
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition	**Average**	Class:	
Prorate	Date	Factor	% Comp	Cost & Design	**0**
Depr: Physical	**20**	Other Phys	Functional	External	% Good **80**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,792	**1.174**	**1**	**1**	**1.21**	**1,792**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**259,770**	**46,280**	**306,050**	**170.79**	Dwelling Factor	**1**
RCNLD	**207,820**	**37,020**	**244,840**	**136.63**	Dwelling Value	**244,840**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,792**			
	OPF	**132**	**0**	**42.65**	**5,630**
	GRF	**572**	**0**	**71.07**	**40,650**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**248,000**
TOTAL APPRAISAL	**308,000**
GREENBELT APR	
ASSESSMENT	**77,000**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**308,000**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1987**	**1987**	**1**	**C**	**1**			**2500**	**UN**	**2,500**	**100**	**1**	**1**	**2,500**
PTO	**Patio**	**1987**	**2000**	**192**	**C**	**1**	**12X16**		**9.5833**	**AV**	**1,840**	**34**	**1**	**1**	**630**

Total OBY Value **3,130**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**115**	**178**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
10/07/2022	**R2879**	**1250**	**439,900**	**439,900**	**I**	**WD**	**A**	**BURDETT VERNON ETUX NITA BURDET**
05/20/2019	**R2557**	**1445**	**179,000**	**179,000**	**I**	**WD**	**A**	**MELTON MICHAEL ETUX TONYANNA RC**
11/30/2016	**R2404**	**1118**				**QC**		**KERLIND INVESTMENT GROUP LLC**
09/29/2015	**R2341**	**400**	**135,000**	**135,000**	**I**	**WD**	**I**	**BAILEY THOMAS ETUX DOROTHY**

NOTES

CHG EYB INCR LAND PRICE*R06FN*AREA CODE R06BV*R1944-76 SUB TRUSTEE*JG
CHG AREA CODE*FN*CHG EYB & SHAPE R10/32*JG*CHG EYB*R10/42*FN
R2404-1118 ALSO 43N-F-6*JG*R18: CHG QLTY PER 32 *CB -R22: CHG WDK/PTO PER 32 *CB

file: F. Dale

THIS INSTRUMENT PREPARED BY:
STEENBERGEN & GREFSENG
ATTORNEYS AT LAW
COLUMBIA, TENNESSEE 38401

TAX MAP: 66K, GROUP A
PARCEL: 12

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS that for and in consideration of the sum of Ten Dollars ($10.00), cash in hand paid, and other good and valuable considerations, the receipt and sufficiency of which is hereby acknowledged, we, John H. Bliss and wife, Jacquelyn K. Bliss, have this day sold and by these presents do hereby bargain, sell, transfer and convey unto Barbara Bartley, a single person, her heirs and assigns, the following described property located in the Third (3rd) Civil District of Maury County, Tennessee, more particularly bounded and described as follows, to wit:

> Being Lot 9 of Carriage Hills Subdivision, Section 1 as shown on the plat of record in Plat Book 5, Page 282, Register's Office of Maury County, Tennessee.
>
> Being the same property conveyed to Sellers by deed of record in Book 815, Page 581, Register's Office of Maury County, Tennessee, and also knows as Parcel 12 on Map 66K, Group A in the Tax Assessor's Office of Maury County, Tennessee.
>
> This is the same description as was contained in the last deed of record.

TO HAVE AND TO HOLD said tract or parcel of real estate unto the said Barbara Bartley, her heirs and assigns, together with all rights, title, interest, easements, appurtenances and hereditaments thereunto belonging in fee simple forever.

WE DO COVENANT with the said Barbara Bartley, her heirs and assigns, that we are lawfully seized and possessed of said above described tract or parcel of real estate, have a good and lawful right to sell and convey the same and that the same is unencumbered except for building restrictions of record, minimum building set back lines and utility and drainage easements as shown on the recorded plat and current year's property taxes which are pro-rated and assumed by grantee.

WE FURTHER COVENANT and bind ourselves, our heirs and personal representatives to warrant and forever defend the title to said above described tract or parcel of real estate unto the said Barbara Bartley, her heirs and assigns, against the lawful

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

103 CONCORD DR	Subdivision **CARRIAGE HILLS SEC 1**	**TAX YEAR 2023**	060	066K	A	012.00		000
Property Address	BK **5** PG **282** BLOCK LOT **0009** TRACT	**MAURY**	JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
Ownership and Mailing Address	Alt Subdiv	City **60156 Columbia**	Map **066K**	Updated 10/27/2022				
FORD BARBARA J	BK PG BLOCK LOT TRACT	SSD1	Dist **03**	Printed 03/17/2023				
103 CONCORD DR	Additional Description	SSD2		Card: 1 of 1				
COLUMBIA TN 38401	Dimensions **130X170**	Total Land Units **1** / Deed Acres **0** / Calculated Acres **0**		Page: 1 of 1				

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**11 Common Brick**	Attic	
Heating Fuel			

Year Built	**1987**	Eff Yr Built	**2002**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**6**	Total Fixtures	**6**
Wood FP Stacks		Openings		Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **1**	Rental: Src		Year **0**		Amount **0**	Sched

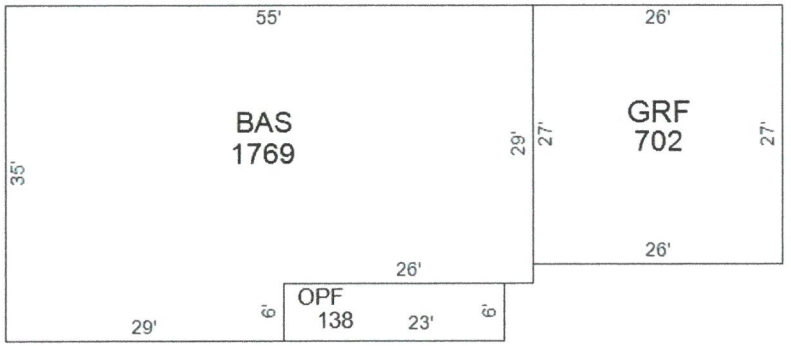
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**03 Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition	**Average**	Class:	
Prorate	Date	Factor	% Comp	Cost & Design	**0**
Depr: Physical	**20**	Other Phys	Functional	External	% Good **80**

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,769	**1.16**	**1**	**1.07**	**1.21**	**1,769**	**2022**	**20**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**269,530**	**55,770**	**325,300**	**183.89**	Dwelling Factor	**1**
RCNLD	**215,620**	**44,610**	**260,230**	**147.11**	Dwelling Value	**260,230**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,769**			
	OPF	**138**	**0**	**42.61**	**5,880**
	GRF	**702**	**0**	**71.07**	**49,890**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**265,300**
TOTAL APPRAISAL	**325,300**
GREENBELT APR	
ASSESSMENT	**81,325**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**325,300**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**2006**	**2006**	**1**	**C**	**1**			**2000**	**UN**	**2,000**	**100**		**1**	**2,000**
WDK	**Wood Deck**	**2006**	**2006**	**360**	**C**	**1**	**12X30**		**16.1111**	**AV**	**5,800**	**52**		**1**	**3,020**

Total OBY Value **5,020**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**130**	**170**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
07/01/1991	**1121**	**645**	**86,000**	**86,000**	**I**	**WD**	**A**	**BARTLEY BARBARA**
06/30/1989	**815**	**581**	**85,900**	**85,900**	**I**	**WD**	**A**	**HARMON WILLIAM**
09/29/1986	**761**	**233**						**HARMON WILLIAM**

NOTES

INCR LAND PRICE*R06FN*AREA CODE R06BV*CHG AREA CODE*FN
CHG EYB & COMBINE DECKS R10/32*JG*CHG ELEC TO 03 &
EYB*R10/IH*FN
R18: CHG QLTY PER 32 *CB

BK/PG: R2752/412-413

21015576

2 PGS:AL-WARRANTY DEED	
BECKY BATCH: 252599	07/20/2021 - 10:00 AM
VALUE	290000.00
MORTGAGE TAX	0.00
TRANSFER TAX	1073.00
RECORDING FEE	10.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	1086.00

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

STATE OF TENNESSEE
COUNTY OF Sumner

THE ACTUAL CONSIDERATION OR VALUE, WHICHEVER IS GREATER, FOR THIS TRANSFER IS $290,000.00.

Affiant

SUBSCRIBED AND SWORN TO BEFORE ME, THIS THE 14 DAY OF JULY, 2021.

Notary Public

MY COMMISSION EXPIRES: 4/23/2025
(AFFIX SEAL)

Crystal Johnson
State of Tennessee Notary Public
Sumner County

PREPARED BY & RETURN TO:
Realty Title & Escrow Company, Inc.
5407 Main St., Suite 103
Spring Hill, TN 37174

18-NSH21-02208

Address of New Owner:	Send Tax Bills to:	Tax Information:
Michael Johnson 104 Concord Drive Columbia, TN 38401	New Owner PO BOX 1148 Franklin, TN 37065	Tax Map(s): 066K-A-003.00 000 Parcel ID(s): 066K A 003.00

WARRANTY DEED

For and in consideration of the sum of ten dollars and no/100 ($10.00), cash in hand paid by the hereinafter named Grantees, and other good and valuable consideration, the receipt of which is hereby acknowledged, **Barry Alan Kent, a single man**, hereinafter referred to as Grantors, have bargained and sold, and do hereby transfer and convey to **Michael Johnson, an unmarried man**, hereinafter called the Grantees, their successors and assigns, a certain tract or parcel of land in Maury County, State of Tennessee, described as follows: to- wit:

Located in the Third (3rd) Civil District of Maury County, Tennessee, and being Lot No. 3, Carriage Hills Subd. Sec. 1, as shown on plat of record in Plat Book 5, Page 282, Register's Office of Maury County, Tennessee.

Being the same property conveyed to Barry Alan Kent, a single man by Warranty Deed from Janice F. Smith, a single woman of record in Book R2449, Page 153, in the Register's Office of Maury County, Tennessee, dated August 07, 2017 and recorded on August 14, 2017.

This conveyance is subject to all easements, restrictive covenants and conditions, and other matters of record, including all items set out on any applicable plat of record.

This property is improved property known as: **104 Concord Drive, Columbia, TN 38401**

To have and to hold the said tract or parcel of land, with the appurtenances, estate, title and interest thereto belonging to the said Grantees, their heirs, successors and assigns, forever. Grantors covenant with Grantees that Grantors are lawfully seised and possessed of said land in fee simple, have a good right to convey it, and the same is unencumbered, unless otherwise herein set out. Grantors do further covenant and bind ourselves, our heirs, successors, assigns and representatives, to warrant and forever defend the title to said land to said Grantees, their heirs and assigns, against the lawful claims of all persons whomsoever.

Wherever used, the singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

104 CONCORD DR Property Address	Subdivision **CARRIAGE HILLS SEC 1** BK **5** PG **282** BLOCK LOT **3** TRACT	**TAX YEAR 2023** **MAURY**	**060**	**066K**	**A**	**003.00**		**000**
Ownership and Mailing Address	Alt Subdiv		JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
JOHNSON MICHAEL **104 CONCORD DR** **COLUMBIA TN 38401**	BK PG BLOCK LOT TRACT	City **60156 Columbia**	Map **066K**		Updated 10/27/2022			
	Additional Description	SSD1	Dist **03**		Printed 03/17/2023			
	Dimensions **120X175**	SSD2	Card: 1 of 1					
		Total Land Units **1** Deed Acres **0** Calculated Acres **0**	Page: 1 of 1					

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**11 Common Brick**	Attic	
Heating Fuel			

Year Built	**1980**	Eff Yr Built	**2008**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**6**	Total Fixtures	**6**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **0**	Rental: Src		Year **0**	Amount **0**		Sched

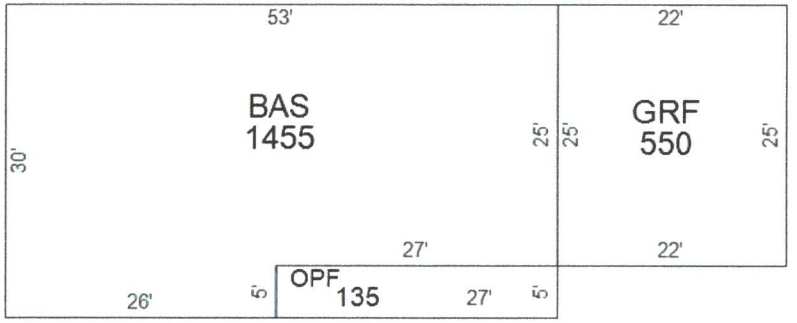
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**10 Panel-Plast-Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**03 Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition	**Average**	Class:	
Prorate	Date	Factor	% Comp	Cost & Design	**0**
Depr: Physical	**14**	Other Phys	Functional	External	% Good **86**

	Factors							
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,455	**.973**	**1**	**1.07**	**1.21**	**1,455**	**2022**	**14**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**230,580**	**44,840**	**275,420**	**189.29**	Dwelling Factor	**1**
RCNLD	**198,300**	**38,560**	**236,860**	**162.79**	Dwelling Value	**236,860**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,455**			
	OPF	**135**	**0**	**42.67**	**5,760**
	GRF	**550**	**0**	**71.05**	**39,080**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**239,300**
TOTAL APPRAISAL	**299,300**
GREENBELT APR	
ASSESSMENT	**74,825**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**299,300**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
PTO	**Patio**	**2006**	**2006**	**80**	**C**	**1**	**8X10**		**9.625**	**AV**	**770**	**52**		**1**	**400**
DRW	**Driveway**	**2006**	**2006**	**1**	**C**	**1**			**2000**	**UN**	**2,000**	**100**		**1**	**2,000**

Total OBY Value **2,400**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**04**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**120**	**175**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
07/14/2021	**R2752**	**412**	**290,000**	**290,000**	**I**	**WD**	**A**	**JOHNSON MICHAEL**
08/07/2017	**R2449**	**153**	**185,500**	**185,500**	**I**	**WD**	**A**	**KENT BARRY ALAN**
04/30/1997	**1329**	**272**	**102,000**	**102,000**	**I**	**WD**	**A**	**SMITH JANICE F**
04/19/1993	**1179**	**1**	**10**	**10**	**I**	**QC**	**D**	**GABBERT KATHLEEN A**

NOTES

FOR 06:CHG WD DECK TO PATIO PER 32*INCR LAND PRICE*R06FN
06>CHG AREA CO*R06JS*FN*CHG PATIO EYB*R10/32*JG*
R2014:32 INCREASE DRWY*LDS

This instrument prepared by Thomas Napier Gordon, Attorney, Columbia, Tennessee.

D E E D

For and in consideration of the sum of Ten Dollars ($10.00), cash in hand paid, and other good and valuable considerations, the receipt and sufficiency of all of which are hereby acknowledged, I, PAUL SCRIBNER, a single person, have this day bargained and sold, and do by these presents sell, transfer and convey unto EDDIE D. KELLEY and wife, SHIRLEY H. KELLEY, as tenants by the entirety, their heirs and assigns, the following described tract or parcel of land lying and being in the Third Civil District of Maury County, Tennessee, more particularly described as follows, to-wit:

> Being Lot No. 11 of Carriage Hills Subdivision, Section I, a plat of which appears of record in Plat Book 5, Page 282 of the Register's Office of Maury County, Tennessee.
>
> For source of title see deeds recorded in Book 631, Page 347 and Book 649, Page 594 of the Register's Office of Maury County, Tennessee.

TO HAVE AND TO HOLD the above described tract or parcel of land, together with all rights, titles, interests, easements, appurtenances and hereditaments thereunto belonging and pertaining, unto EDDIE D. KELLEY and wife, SHIRLEY H. KELLEY, as tenants by the entirety, their heirs and assigns, in fee simple forever.

I, PAUL SCRIBNER, covenant with the said EDDIE D. KELLEY and wife, SHIRLEY H. KELLEY, that I am lawfully seized and possessed of the above described tract or parcel of land, have a good and lawful right to sell and convey the same, and that said property is unencumbered except for subdivision restrictions of record in Book 647, Page 280, as amended in Book 653, Page 511 of the Register's Office of Maury County, Tennessee, and any building setback lines and utility and drainage easements imposed by the plat of said subdivision; and I do further covenant and bind myself, my heirs and personal representatives, to forever warrant and defend the title to said above described property unto the said EDDIE D. KELLEY and wife, SHIRLEY H. KELLEY, their

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

| | | |

File Security Title

This Instrument Prepared By:

JOE M. LAMBERT, JR.
Second Floor Firstar Bank Building
P.O. Box 306
Shelbyville, TN 37162
(931) 684-9600

New Property Owners:

TIMOTHY LOVE and wife,
JANE LOVE
105 Concord Drive
Columbia, TN 38402

Tax Responsibility:
SAME

This property is identified
on the Tax Assessor's records
as Map 66K, Group A, Parcel 11.00

State of Tennessee, County of MAURY
Received for record the 19 day of
APRIL 2002 at 2:13 PM. (REC# 79202)
Recorded in official records
Book R1613 pages 258- 259

WARRANTY DEED

FOR AND IN CONSIDERATION of the sum of Ten ($10.00) Dollars, cash in hand paid, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, **SUSAN E. COLEMAN,** has this day bargained and sold and does, by these presents, sell, transfer, and convey unto **TIMOTHY LOVE and wife, JANE LOVE,** their heirs and assigns, a certain tract or parcel of land, lying and being in the Ninth (9th) Civil District of Maury County, Tennessee, bounded and described as follows, to-wit:

Being Lot No. 10, Carriage Hills Subdivision, Section I, as shown on plat of record in Plat Book 5, Page 282, Register's Office for Maury County, Tennessee.

Said lot fronts 130 feet on the west side of concord Drive and extends back in a westerly direction between parallel lines, a distance of 170.0 feet to a common line in the rear measuring 130.0 feet.

This conveyance is subject to any and all existing easements and restrictions of record.

Being the same property conveyed to Susan E. Coleman by Warranty Deed of record at Deed Book 1293, Page 648, Register's Office, Maury County, Tennessee.

TO HAVE AND TO HOLD said tract or parcel of land, together with all improvements thereon, and all appurtenances thereunto belonging, unto the said **TIMOTHY LOVE and wife, JANE LOVE**, their heirs and assigns, forever.

State Tax $ 432.90 Clerks Fee $ 1.00,
Recording $ 12.00, Total $ 445.90,
Register of Deeds L. WAYNE WHITE
Deputy Register LENNIS CHESNUT
BK R1613 PG 258

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

105 CONCORD DR
Property Address
Ownership and Mailing Address

LOVE TIMOTHY ETUX
JANE
105 CONCORD DR
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 1**
BK **5** PG **282** BLOCK LOT **0010** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **130X170**

TAX YEAR 2023
MAURY

060	066K	A	011.00		000
JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**

Map **066K** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type **01 Single Family** Lower Level **1 No Basement**
Stories **1 Story Frame** Heating/Air **8 Heat And Cooling Pkg**
Exterior Wall **11 Common Brick** Attic
Heating Fuel

Year Built	**1980**	Eff Yr Built	**2002**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**6**	Total Fixtures	**6**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src	**3**	Occ **0**	Rental: Src	Year	**0**	Amount **0**	Sched

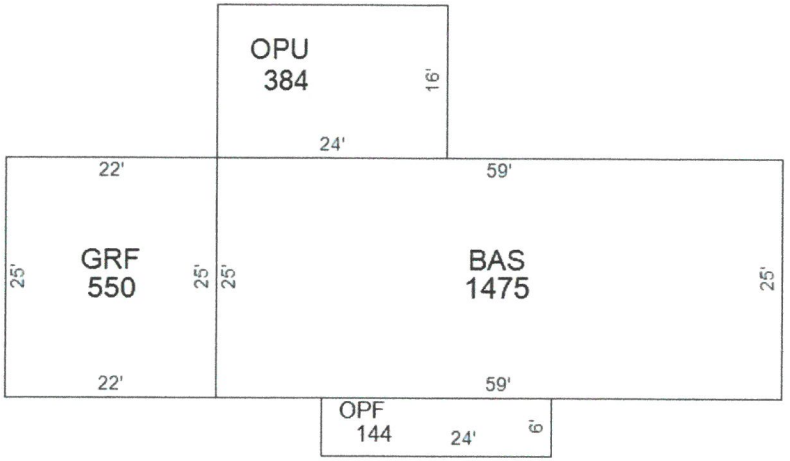
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**10 Panel-Plast-Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality **2 : Above Average** Condition **Average** Class:
Prorate Date Factor % Comp Cost & Design **0**
Depr: Physical **20** Other Phys Functional External % Good **80**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,475	**.985**	**1**	**1.07**	**1.21**	**1,475**	**2022**	**20**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**233,380**	**53,410**	**286,790**	**194.43**	Dwelling Factor	**1**
RCNLD	**186,700**	**42,720**	**229,420**	**155.54**	Dwelling Value	**229,420**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,475**			
	OPF	**144**	**0**	**42.64**	**6,140**
	GRF	**550**	**0**	**71.05**	**39,080**
	OPU	**384**	**0**	**21.33**	**8,190**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**232,400**
TOTAL APPRAISAL	**292,400**
GREENBELT APR	
ASSESSMENT	**73,100**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**292,400**
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units
Water/Sewer **03 Public / Individual**
Electricity **01 Public**
Gas **00 None**
Topo **0 Level**
Road Type **3 Paved**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **01/01/2006** By **04**
Improvements **1**
Mobile Homes **0**
NH Trend **0 STABLE**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1995**	**1995**	**1**	**C**	**1**			**3000**	**UN**	**3,000**	**100**		**1**	**3,000**

Total OBY Value
3,000

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**04**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**130**	**170**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
04/18/2002	**R1613**	**258**	**117,000**	**117,000**	**I**	**WD**	**A**	**LOVE TIMOTHY ETUX**
06/06/1996	**1293**	**648**	**102,000**	**102,000**	**I**	**WD**	**A**	**COLEMAN SUSAN E**
02/12/1993	**1172**	**881**	**83,500**	**83,500**	**I**	**WD**	**A**	**WALKER J CLIFF ETUX**
01/24/1991	**1109**	**960**	**75,000**	**75,000**	**I**	**WD**	**A**	**PECKENPAUGH ROBERT**

NOTES

R14:32 INCREASE DRWY*LDS - R18: CHG QLTY PER 32*CB - R22: CHG DRW VAL PER 32*CB 22: CHG OPU PER 51 *CB

PREPARED BY FRANK K. DALE
FILE 805 SOUTH GARDEN STREET
P. O. BOX 1017
COLUMBIA, TN 38402

KNOW ALL MEN BY THESE PRESENTS, this indenture entered into between RONALD J. HAMILTON and wife, SHIRLEY J. HAMILTON, FIRST PARTY, which expression shall include heirs, assigns and personal representatives, and ROBERT G. MARSHALL and wife, DONNA J. MARSHALL, as tenants by the entirety, SECOND PARTY, which expression shall include heirs, assigns and personal representatives.

W I T N E S S E T H:

For the consideration of TEN DOLLARS ($10.00), and other good and valuable considerations, the receipt of all of which is hereby acknowledged, FIRST PARTY conveys to SECOND PARTY the following described property:

> Located in the Third (3rd) Civil District of Maury County, Tennessee, and being Lot 2, Carriage Hills Subdivision, Section 1, as shown on plat of record in Plat Book 5, Page 282 of the Register's Office of Maury County, Tennessee.
>
> Being the same property conveyed to FIRST PARTY by deed recorded in Book 767, Page 389 of said Register's Office.

TO HAVE AND TO HOLD said real estate unto SECOND PARTY, together with all rights, titles, easements and appurtenances thereunto belonging, forever.

FIRST PARTY COVENANTS that it is lawfully seized and possessed of said real estate and that FIRST PARTY has a good and lawful right to convey the same, and that it is unencumbered, except for current year's property taxes, building restrictions recorded in Book 647, Page 280, as amended in Book 653, Page 511 and Book 733, Page 432, building setback lines, utility and drainage easements shown on plat of record in Plat Book 5, Page 282 and possible telephone line easement shown in Book 295, Page 292 of said Register's Office.

FIRST PARTY FURTHER COVENANTS to forever warrant and defend the title to the above described property unto SECOND PARTY against the lawful claims of all persons whomsoever.

Maury County, State of Tennessee
Received for record the 26 day of Nov 19 89 at 12:15 o'clock P M
Note Book 12 Pg 339 Receipt# 38076 Recording Fee 8.00
State Tax 306.90 Probate Fee 150 Total 315.40
Book Page Witness my hand

BOOK 813 PAGE 276

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

TAX YEAR 2023	060	066K	A	002.00		000
MAURY	JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I

102 CONCORD DR
Property Address

Ownership and Mailing Address
MARSHALL ROBERT G
ETUX DONNA J
102 CONCORD DR
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 1**
BK **5** PG **282** BLOCK LOT **0002** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **120X175**

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**

Map **066K** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1987**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**8**	Total Fixtures	**8**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **0**	Rental: Src		Year **0**		Amount **0**	Sched

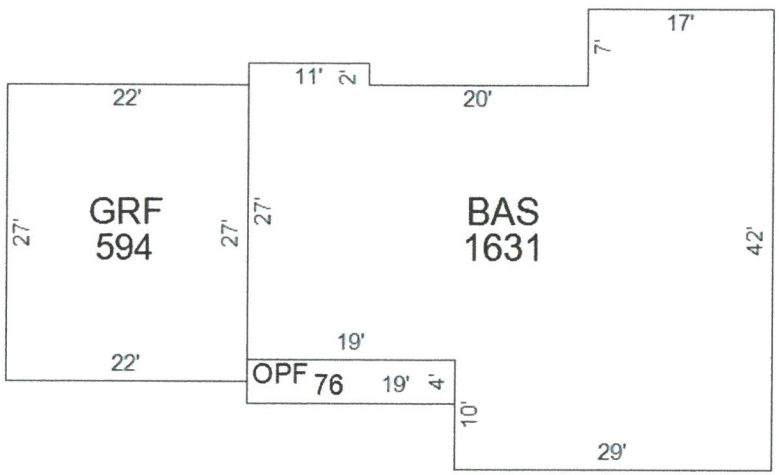
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition	**Average**	Class:	
Prorate	Date	Factor	% Comp	Cost & Design	**0**
Depr: Physical	**20**	Other Phys	Functional	External	% Good **80**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,631	**1.078**	**1**	**1**	**1.21**	**1,631**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**242,300**	**45,450**	**287,750**	**176.43**	Dwelling Factor	**1**
RCNLD	**193,840**	**36,360**	**230,200**	**141.14**	Dwelling Value	**230,200**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,631**			
	OPF	**76**	**0**	**42.63**	**3,240**
	GRF	**594**	**0**	**71.06**	**42,210**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**237,900**
TOTAL APPRAISAL	**297,900**
GREENBELT APR	
ASSESSMENT	**74,475**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**297,900**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**2006**	**2006**	**200**	**C**	**1**	**10X20**		**20.85**	**AV**	**4,170**	**52**		**1**	**2,170**
DRW	**Driveway**	**1998**	**1998**	**1**	**C**	**1**			**3000**	**UN**	**3,000**	**100**		**1**	**3,000**
UTB	**Utility Building**	**1998**	**1998**	**192**	**C**	**1**	**12X16**		**25.2604**	**AV**	**4,850**	**52**		**1**	**2,520**

Total OBY Value **7,690**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**120**	**175**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
05/26/1989	**813**	**276**	**93,000**	**93,000**	**I**	**WD**	**A**	**MARSHALL ROBERT G**
01/29/1987	**767**	**389**	**80,500**	**80,500**	**I**	**WD**	**A**	**HAMILTON RONALD J**
10/03/1986	**761**	**369**						**STEARNS THOMAS W.**

NOTES

CHG EYB INCR LAND PRICE*R06FN*CHG AREA CODE*FN*CHG DECK EYB & DRWY PRICE*R10/32*JG*R18: CHG QLTY & EYB PER 32 *CB - R22: CHG HVAC PER 32 *CB

WARRANTY DEED

STATE OF TENNESSEE
COUNTY OF WILLIAMSON
THE ACTUAL CONSIDERATION OR VALUE, WHICHEVER IS GREATER, FOR THIS TRANSFER IS $ 107,000.00

Affiant

SUBSCRIBED AND SWORN TO BEFORE ME, THIS THE 12th DAY OF March 19 99

Notary Public

MY COMMISSION EXPIRES: 9-11-2001
(AFFIX SEAL)

RUSSELL JOHN McCANN NOTARY PUBLIC AT LARGE WILLIAMSON COUNTY, TENN.

MAIL

THIS INSTRUMENT WAS PREPARED BY
Sidwell & Barrett, P.C., 121 First Ave. Suite 200, Franklin, Tennessee 37064

ADDRESS NEW OWNER(S) AS FOLLOWS:	SEND TAX BILLS TO:	MAP-PARCEL NUMBERS
Gregory F. Philpott (NAME)	Countrywide Home Loans, Inc. (NAME)	MAP: 66K
109 Concord Drive (ADDRESS)	718 Thompson Lane, Suite 114 (ADDRESS)	GROUP: A
Columbia, Tennessee 38401 (CITY) (STATE) (ZIP)	Nashville, Tennessee 37204 (CITY) (STATE) (ZIP)	PARCEL: 009.00

FOR AND CONSIDERATION OF THE SUM OF TEN DOLLARS, CASH IN HAND PAID BY THE HEREINAFTER NAMED GRANTEES, AND OTHER GOOD AND VALUABLE CONSIDERATIONS, THE RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED, WE, Jimmy Kent Woody and wife, Anita B. Woody

HEREINAFTER CALLED THE GRANTORS, HAVE BARGAINED AND SOLD, AND BY THESE PRESENTS DO TRANSFER AND CONVEY UNTO Gregory F. Philpott and wife, Tabitha N. Philpott

HEREINAFTER CALLED THE GRANTEES, THEIR HEIRS AND ASSIGNS, A CERTAIN TRACT OR PARCEL OF LAND IN Maury COUNTY, STATE OF TENNESSEE, DESCRIBED AS FOLLOWS, TO-WIT:

Tract I:

Located in the Third (3rd) Civil District of Maury County, Tennessee, and being Lot No. 12, Carriage Hills Subdivision, Section 1, as shown on plat of record in Plat Book 5, page 282, Register's Office for Maury County, Tennessee.

Being the same property conveyed to JIMMY KENT WOODY and wife, ANITA B. WOODY, as tenants by the entirety, by deed from Francis T. Sparkman and wife, Bettie V. Sparkman of record in Book 715, page 782, Register's Office for Maury County, Tennessee.

Tract II:

SITUATE in the Third (3rd) Civil District of Maury County, Tennessee and being a part of Lot 13 of Carriage Hills Subdivision, Section I as shown by a map of record in Plat Book 5 at page 282 and more particularly described as follows:

Beginning at a point in the southwest corner of Lot 13 a common corner to Lot 12 in the northern margin of Concord Drive; thence north 55 degrees 37 minutes west 182.70 feet to a point in the northwest corner of Lot 13 a common corner

CONTINUED

unimproved ( )
This is improved (X) property, known as 109 Concord Drive, Columbia, Tennessee 38401
(House Number) (Street) (P.O. Address) (City or Town) (Postal Zip)

TO HAVE AND TO HOLD the said tract or parcel of land, with the appurtenances, estate, title and interest thereto belonging to the said GRANTEES, their heirs and assigns forever; and we do covenant with the said GRANTEES that we are lawfully seized and possessed of said land in fee simple, have a good right to convey it and the same is unencumbered, unless otherwise herein set out; and we do further covenant and bind ourselves, our heirs and representatives, to warrant and forever defend the title to the said land to the said GRANTEES, their heirs and assigns, against the lawful claims of all persons whomsoever. Wherever used, the singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

Witness our hand s this 12th day of March 19 99

Jimmy Kent Woody
Jimmy Kent Woody

Anita B. Woody
Anita B. Woody

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

109 CONCORD DR
Property Address

Ownership and Mailing Address
PHILPOTT GREGORY F ETUX
TABITHA N
109 CONCORD DR
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 1**
BK **5** PG **282** BLOCK LOT **0012** TRACT
Alt Subdiv **LOT P/13**
BK PG BLOCK LOT **P/13** TRACT
Additional Description
Dimensions **142.91X182.7 IRR**

TAX YEAR 2023
MAURY

060	066K	A	009.00		000
JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**

Map **066K** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type **01 Single Family** Lower Level **1 No Basement**
Stories **1 Story Frame** Heating/Air **8 Heat And Cooling Pkg**
Exterior Wall **11 Common Brick** Attic
Heating Fuel

Year Built	**1980**	Eff Yr Built	**2002**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**6**	Total Fixtures	**6**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **0**	Rental: Src		Year **0**		Amount **0**	Sched

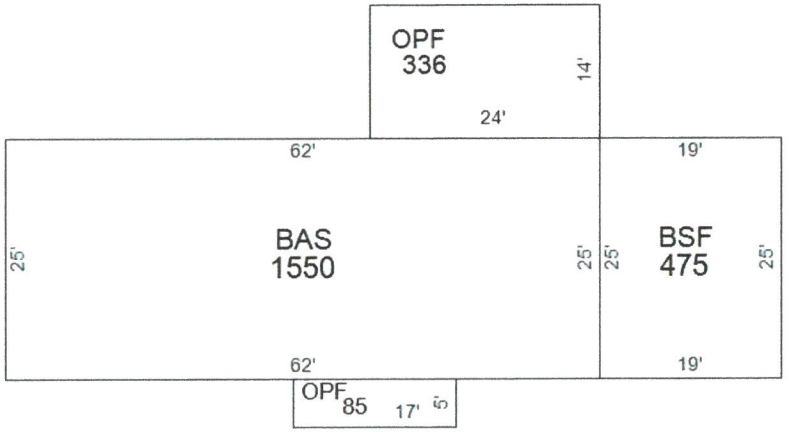
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**10 Panel-Plast-Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**03 Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality **2 : Above Average** Condition **Average** Class:
Prorate Date Factor % Comp Cost & Design **0**
Depr: Physical **20** Other Phys Functional External % Good **80**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,550	**1.03**	**1**	**1.07**	**1.21**	**2,025**	**2022**	**20**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete
RCN	**243,840**	**71,960**	**315,800**	**155.95**	Dwelling Factor **1**
RCNLD	**195,070**	**57,570**	**252,640**	**124.76**	Dwelling Value **252,640**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,550**			
	BSF	**475**	**100**	**113.71**	**54,010**
	OPF	**85**	**0**	**42.59**	**3,620**
	OPF	**336**	**0**	**42.65**	**14,330**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**274,400**
TOTAL APPRAISAL	**334,400**
GREENBELT APR	
ASSESSMENT	**83,600**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**334,400**
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units
Water/Sewer **03 Public / Individual**
Electricity **01 Public**
Gas **00 None**
Topo **0 Level**
Road Type **3 Paved**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **01/01/2006** By **04**
Improvements **1**
Mobile Homes **0**
NH Trend **0 STABLE**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1990**	**1990**	**1**	**C**	**1**			**1000**	**UN**	**1,000**	**100**		**1**	**1,000**
GUD	**Detached Garage Unfi**	**1990**	**2008**	**912**	**C**	**1**	**38 X 24**		**29.9013**	**AV**	**27,270**	**72**		**1**	**19,630**
PTO	**Patio**	**2019**	**2019**	**130**	**C**	**1**	**10 X 13**		**9.6154**	**AV**	**1,250**	**91**		**1**	**1,140**

Total OBY Value **21,770**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**15**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**142**	**182**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
03/12/1999	**R1422**	**817**	**107,000**	**107,000**	**I**	**WD**	**A**	**PHILPOTT GREGORY F ETUX**
10/15/1987	**781**	**105**						**WOODY JIMMY K**
07/16/1984	**715**	**782**						**WOODY JIMMY K**

NOTES

R18: CHG QLTY PER 32 *CB - R22: ADD OPF, DEL CUD PER 32 *CB
22: ADD PTO, DEL WDK PER 51 *CB

Standard Form RE1001 - General Warranty Deed

This Instrument Prepared by: R. W. Hardison, Attorney at Law
710 N. Main Street, P. O. Box 1505, Columbia, TN 38402-1505

Send Tax Bills To:	Owner:
Rudy A. Holzer	same
2395	
Burton, MI 48519	

OATH: I, the undersigned Affiant, do hereby swear or affirm that the actual consideration for transfer or the value of the property being transferred, whichever is greater, is $ 18000.00.

Affiant

Subscribed and sworn before me this 28th day of October, 1988.

Notary Public

Commission Expires: 1-27-91

NOTARY PUBLIC AT LARGE STATE OF TN

D E E D

This indenture is made and entered into this 28th day of October, 1988 between Bobby R. Pilkinton (GRANTOR) and Rudy A. Holzer, and wife, Valerie D. Holzer (GRANTEE).

For and in consideration of ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, cash in hand paid, Grantor does by these presents, sell, transfer and conveys unto Grantee, the following described tract or parcel of land:

(See Exhibit A attached hereto and incorporated herein by reference.)

To have and to hold the above-described tract or parcel of land, together with all rights, titles, interests, easements, appurtenances, and hereditaments thereto appertaining, to Grantee, its heirs and assigns forever in fee simple.

Grantor covenants with Grantee that Grantor is lawfully seized and possessed in fee simple of the above-described tract or parcel of land, that Grantor has the full, good and lawful right and authority to sell, transfer and convey the same, and that the above-described tract or parcel of land is unencumbered except for covenants, conditions and restrictions as set forth in instrument dated June 27, 1979 of record in Book 647 at page 289 and as amended in Book 653 at page 511 and Book 733 at page 432 in the Maury County, Tennessee Register of Deeds Office.

And, Grantor does warrant, and hereby binds its successors to title, to forever defend the title to the above-mentioned tract or parcel of land against the lawful claims of all persons whatsoever, unto Grantee, its heirs and assigns.

Maury County, State of Tennessee
Received for record the 10 day of Nov 1988 at 1:45 o'clock P M
Note Book 12 Pg 387 Receipt# 31600 Recording Fee 8.50
State Tax 59.40 Probate Fee .50 Total 67.90
Book ____ Page ____ Witness my hand Janice W. Andrews Register

I hereby certify that I registered the above instrument the 14 day of Nov 1988
Janice W. Andrews Register

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

108 CONCORD DR	Subdivision **CARRIAGE HILLS SEC 1**				**TAX YEAR 2023**	**060**	**066K**	**A**	**005.00**		**000**
Property Address	BK **5**	PG **282**	BLOCK	LOT **0005**	TRACT	**MAURY**	JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
Ownership and Mailing Address	Alt Subdiv					City **60156 Columbia**		Map **066K**		Updated 10/27/2022		
HOLZER RUDY A ETUX	BK	PG	BLOCK	LOT	TRACT	SSD1		Dist **03**		Printed 03/17/2023		
VALERIE D	Additional Description					SSD2						
108 CONCORD DR						Total Land Units **1**		Card: 1 of 1				
COLUMBIA TN 38401	Dimensions **120.65X175 IRR.**					Deed Acres **0**						
						Calculated Acres **0**		Page: 1 of 1				

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**11 Common Brick**	Attic	
Heating Fuel			

Year Built	**1989**	Eff Yr Built	**2002**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**8**	Total Fixtures	**8**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **1**	Rental: Src		Year **0**		Amount **0**	Sched

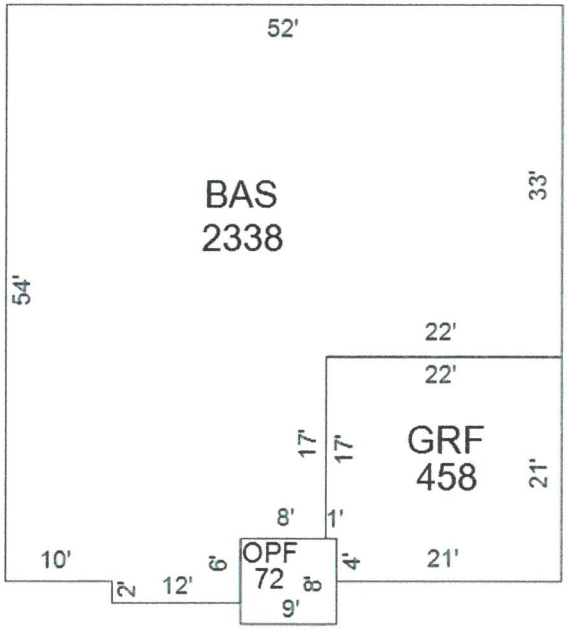
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**03 Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition **Average**		Class:	
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**	

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
2,338	**1.496**	**1**	**1.07**	**1.21**	**2,338**	**2022**	**20**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**355,520**	**35,620**	**391,140**	**167.30**	Dwelling Factor	**1**
RCNLD	**284,420**	**28,500**	**312,920**	**133.84**	Dwelling Value	**312,920**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**2,338**			
	OPF	**72**	**0**	**42.64**	**3,070**
	GRF	**458**	**0**	**71.07**	**32,550**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**317,300**
TOTAL APPRAISAL	**377,300**
GREENBELT APR	
ASSESSMENT	**94,325**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**377,300**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1989**	**1989**	**1**	**C**	**1**			**4000**	**UN**	**4,000**	**100**		**1**	**4,000**
PTO	**Patio**	**1989**	**2002**	**1**	**C**	**1**			**400**	**UN**	**400**	**100**		**1**	**400**

Total OBY Value **4,400**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**120**	**175**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
10/28/1988	**801**	**544**	**18,000**	**18,000**	**V**	**WD**	**A**	**HOLZER RUDY A ETUX**
10/28/1986	**763**	**112**						**PILKINTON BOBBY R**

NOTES

ADD PATIO PER 32*FN06VI*INCR LAND PRICE*R06FN*06:CHG AREA CODER*R06JS
CHG AREA CODE*FN*CHG EYB & DRWY R10/32*JG*CHG EYB*R10/42*FN
R18: CHG QLTY PER 32 *CB - R22: CHG DRW VAL, PTO EYB PER 32 *CB

State of Tennessee, County of MAURY
Received for record the 02 day of
JUNE 2000 at 3:43 PM. (REC# 39841)
Recorded in official records
Book R1487 pages 409- 410
State Tax $ 462.50 Clerks Fee $ 1.00,
Recording $ 10.00, Total $ 473.50,
Register of Deeds L. WAYNE WHITE
Deputy Register JUNE RUSHING ANDERSON

File

PREPARED BY:
JAMES T. DUBOIS
ATTORNEY AT LAW
COLUMBIA, TENN.

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, this indenture entered into between Donald L. Joyce and wife, Brenda K. Joyce, FIRST PARTY, which expression shall include heirs, assigns and personal representatives, and Hector Guzman, SECOND PARTY, which expression shall include heirs, assigns and personal representatives.

W I T N E S S E T H:

For the consideration of the sum of TEN DOLLARS ($10.00), and other good and valuable considerations, the receipt of all of which is hereby acknowledged, FIRST PARTY conveys unto SECOND PARTY the following described property:

> Located in the Third (3rd) Civil District of Maury County, Tennessee, and being Lot No. 13, Carriage Hills Subdivision, Section 1, as shown on plat of record in Plat Book 5, Page 282, Register's Office of Maury County, Tennessee.
>
> INCLUDED IN THE ABOVE DESCRIBED PROPERTY BUT TO BE EXCLUDED FROM THIS CONVEYANCE IS THE FOLLOWING DESCRIBED TRACT OR PARCEL OF LAND:
>
> Beginning at a point in the southwest corner of Lot 13, Carriage Hills Subdivision, Section 1, as shown in Plat Book 5, Page 282, Register's Office of Maury County, Tennessee, a common corner to Lot 12 in the northern margin of Concord Drive; thence North 55 degrees 37 minutes West 182.70 feet to a point the northwest corner of Lot 13 a common corner to Lot 12; thence North 52 degrees 42 minutes East 14 feet to a point; thence in a straight line to the point of beginning.
>
> Being the same property conveyed to FIRST PARTY by deed of record in Book 813, Page 700, Register's Office of Maury County, Tennessee.
>
> Map 66K, Group A, Parcel 8.

TO HAVE AND TO HOLD said real estate unto SECOND PARTY together with all rights, titles, easements and appurtenances thereunto belonging, forever.

FIRST PARTY COVENANTS with SECOND PARTY that they are lawfully seized and possessed of said real estate and that FIRST PARTY has a good and lawful right to convey the same, and that it is unencumbered except as follows: current year's property taxes

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

| | | |

WARRANTY DEED

BK/PG:R2846/1034-1036
22010739

3 PGS : WARRANTY DEED	
BECKY BUCHANAN 279629 - 22010739	
05/27/2022 - 02:19 PM	
VALUE	429200.00
MORTGAGE TAX	0.00
TRANSFER TAX	1588.04
RECORDING FEE	15.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	1606.04

STATE of TENNESSEE, MAURY COUNTY

JOHN FLEMING
REGISTER OF DEEDS

STATE OF TENNESSEE
COUNTY OF Williamson

THE ACTUAL CONSIDERATION OR VALUE, WHICHEVER IS GREATER, FOR THIS TRANSFER IS $429,200.00

Affiant

SUBSCRIBED AND SWORN TO BEFORE ME, THIS THE 27TH DAY OF MAY, 2022.

Bethany D Scott
Notary Public

MY COMMISSION EXPIRES: 3-28-26
(AFFIX SEAL)

BETHANY D SCOTT
STATE OF TENNESSEE NOTARY PUBLIC
WILSON COUNTY
MY COMMISSION EXPIRES MARCH 28, 2026

THIS INSTRUMENT WAS PREPARED BY
Kathryn Cassidy, Ark Title Group, LLC, 1612 Westgate Circle, Suite 115, Brentwood, TN 37027
File No.: TN-22-06967

ADDRESS NEW OWNER(S) AS FOLLOWS:	SEND TAX BILLS TO:	MAP-PARCEL NO.(S)
Zachary Colburn and Lindsay Colburn, husband and wife	Zachary Colburn and Lindsay Colburn, husband and wife	
(NAME) 100 Concord Drive	(NAME) 100 Concord Drive	066K-A-001.00
(ADDRESS) Columbia, TN 38401	(ADDRESS) Columbia, TN 38401	
(CITY) (STATE) (ZIP)	(CITY) (STATE) (ZIP)	

FOR AND IN CONSIDERATION OF THE SUM OF Four Hundred Twenty-Nine Thousand Two Hundred And No/100 Dollars ($429,200.00), CASH IN HAND PAID BY THE HEREINAFTER NAMED GRANTEES, AND OTHER GOOD AND VALUABLE CONSIDERATIONS, THE RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED, WE, **EDGEMONT PROPERTIES LLC, A TENNESSEE LIMITED LIABILITY COMPANY, DBA EDGEMONT HOLDINGS**, HEREINAFTER CALLED THE GRANTORS, HAVE BARGAINED AND SOLD, AND BY THESE PRESENTS DO TRANSFER AND CONVEY UNTO **ZACHARY COLBURN AND LINDSAY COLBURN, HUSBAND AND WIFE**, HEREINAFTER CALLED THE GRANTEES, THEIR HEIRS AND ASSIGNS, A CERTAIN TRACT OR PARCEL OF LAND IN MAURY COUNTY, STATE OF TENNESSEE, DESCRIBED AS FOLLOWS, TO-WIT:

Land in Maury County, Tennessee, being Lot No. 1 on the Plan of Carriage Hills Subdivision, Section 1 of record in Plat Book 5, Page 282, in the Register's Office for Maury County, Tennessee, to which Plan reference is hereby made for a more complete description of the property.

Being the same property conveyed to Edgemont Properties LLC, a Tennessee Limited Liability Company, DBA Edgemont Holdings by Warranty deed from Justin Whitwell and Brittany Whitwell, a Married Couple of record in Book R2647, page 1063, Register's Office for Maury County, Tennessee, dated June 25, 2020 and recorded on July 14, 2020.

Being the same property conveyed to Justin Whitwell, a single man by Warranty deed from Heirs at Law of Wallace F. Wissen, Deceased, Kimberly Rolfson, and Heidi Lablue, by and Through Its Duly Appointed Attorney-in-fact, Kimberly Rolfson of record in Book R2432, page 879, Register's Office for Maury County, Tennessee, dated May 01, 2017 and recorded on May 15, 2017.

unimproved ☐
This is improved ☒ property, known as 100 Concord Drive, Columbia, TN 38401
(House No.) (Street) (P.O. Address) (City or Town) (Postal Zip)

TO HAVE AND TO HOLD the said tract or parcel of land, with the appurtenances, estate, title and interest thereto belonging to the said GRANTEES, their heirs and assigns forever; and we do covenant with the said GRANTEES that we are lawfully seized and possessed of said land in fee simple, have a good right to convey it and the same is unencumbered, unless otherwise herein set out; and we do further covenant and bind ourselves, our heirs and representatives, to warrant and forever defend the title to the said land to the said GRANTEES, their heirs and assigns, against the lawful claims of all persons whomsoever. Wherever used, the singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

100 CONCORD DR Property Address	Subdivision **CARRIAGE HILLS SEC 1**				**TAX YEAR 2023**	**060**	**066K**	**A**	**001.00**		**000**
Ownership and Mailing Address	BK **5**	PG **282**	BLOCK	LOT **1**	TRACT	**MAURY**	JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
COLBURN ZACHARY ETUX LINDSAY COLBURN **100 CONCORD DR** **COLUMBIA TN 38401**	Alt Subdiv BK	PG	BLOCK	LOT	TRACT	City **60156 Columbia**		Map **066K**		Updated 07/06/2022	
	Additional Description					SSD1		Dist **03**		Printed 03/17/2023	
	Dimensions **153.98X170.64 IRR.**					SSD2		Card: 1 of 1			
						Total Land Units **1** Deed Acres **0** Calculated Acres **0**		Page: 1 of 1			

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**7 Heat And Cooling Split**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built **1987**	Eff Yr Built **2006**	Rooms **0**	Bedrooms **0**				
Full Baths	Half Baths	Add'l Fixtures **8**	Total Fixtures **8**				
Wood FP Stacks **1**	Openings **1**	Add'l Sty	PreFab	Add'l Sty			
Info Src **3**	Occ **0**	Rental: Src	Year **0**	Amount **0**	Sched		

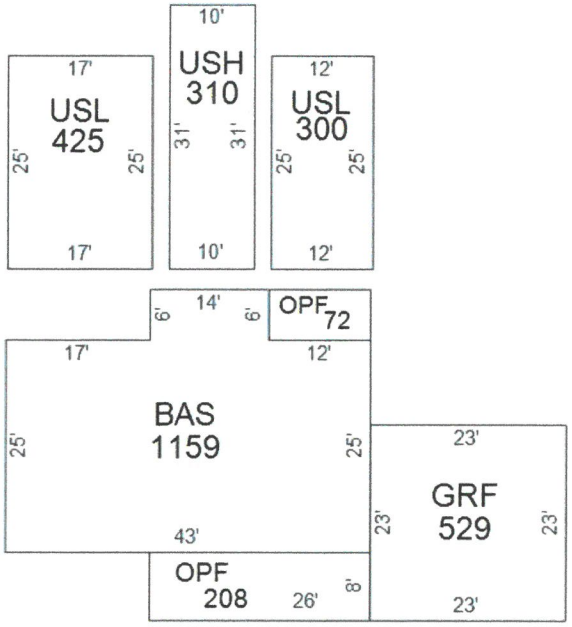
Foundation	**02 Continuous Footing**	Floor Finish	**12 Carpet**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition **Average**		Class:	
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**	

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,159	**.794**	**1**	**1**	**1.21**	**1,563**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**184,140**	**102,470**	**286,610**	**183.37**	Dwelling Factor	**1**
RCNLD	**147,310**	**81,980**	**229,290**	**146.70**	Dwelling Value	**229,290**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,159**			
	OPF	**208**	**0**	**42.64**	**8,870**
	OPF	**72**	**0**	**42.64**	**3,070**
	GRF	**529**	**0**	**71.06**	**37,590**
	USH	**310**	**60**	**71.06**	**22,030**
	USL	**300**	**30**	**42.63**	**12,790**
	USL	**425**	**30**	**42.64**	**18,120**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**242,200**
TOTAL APPRAISAL	**302,200**
GREENBELT APR	
ASSESSMENT	**75,550**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**302,200**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1987**	**1987**	**1**	**C**	**1**			**3000**	**UN**	**3,000**	**100**		**1**	**3,000**
WDK	**Wood Deck**	**1987**	**1987**	**264**	**C**	**1**	**11X24**		**18.447**	**AV**	**4,870**	**10**		**1**	**490**
GUD	**Detached Garage Unfi**	**1996**	**1996**	**576**	**C**	**1**	**24X24**		**34.0625**	**AV**	**19,620**	**48**		**1**	**9,420**

Total OBY Value **12,910**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**153**	**170**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
05/27/2022	**R2846**	**1034**	**429,200**	**429,200**	**I**	**WD**	**A**	**COLBURN ZACHARY ETUX LINDSAY CO**
06/25/2020	**R2647**	**1063**	**230,000**	**230,000**	**I**	**WD**	**A**	**EDGEMONT PROPERTIES LLC**
05/01/2017	**R2432**	**879**	**171,500**	**171,500**	**I**	**WD**	**A**	**WHITWELL JUSTIN**
04/26/2017	**R2432**	**877**				**HR**		**ROLFSON KIMBERLY & HEIDI LABLUE**

NOTES

INCR LAND PRICE*R06FN*CHG AREA CODE*R06JS*CHG AREA CODE FN*R2014:32 CHG EFF AGE INCREASE DRWY*LDS 15:32 CHG EYB*LDS

Return to: DLO Title, LLC
101 SE Parkway Court, Ste 220
Franklin, TN 37064-3982

BK/PG: R2586/393-394
19015212

2 PGS:AL-WARRANTY DEED	
SUSIE BATCH: 219199	10/03/2019 - 08:30 AM
VALUE	349900.00
MORTGAGE TAX	0.00
TRANSFER TAX	1294.63
RECORDING FEE	10.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	1307.63

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

STATE OF TENNESSEE
COUNTY OF ~~Maury~~ Williamson (ETK)

The actual consideration or value, whichever is greater, for this transfer is $349,900.00

Affiant

Subscribed and sworn to before me, this 2nd day of October, 2019.

E. Mannix
Notary Public

My commission expires: 1-3-23

E. MANNIX STATE OF TENNESSEE NOTARY PUBLIC DAVIDSON COUNTY

THIS INSTRUMENT WAS PREPARED BY
SIGNATURE TITLE SERVICES, LLC
7065 Moores Lane, Suite 100
Brentwood, TN 37027

WARRANTY DEED

Address of New Owner(s) as follows:	Send Tax Bills To:	Map-Parcel Numbers:
Adam York **Kathryn York**	New Owner	**066K-A-004.00**
106 Concord Drive		
Columbia, TN 38401		

FOR AND IN CONSIDERATION OF THE SUM OF TEN DOLLARS, CASH IN HAND PAID BY THE HEREINAFTER NAMED GRANTEES, AND OTHER GOOD AND VALUABLE CONSIDERATIONS, THE RECEIPT OF WHICH IS HEREBY ACKNOWLEDGE, WE,

Preston Dalton and wife, Asiah Dalton, as tenants by the entirety

HEREINAFTER CALLED THE GRANTORS, HAVE BARGAINED AND SOLD, AND BY THESE PRESENTS DO TRANSFER AND CONVEY UNTO

Adam York and Kathryn York, husband and wife

HEREINAFTER CALLED THE GRANTEES, THEIR HEIRS AND ASSIGNS, A CERTAIN TRACT OR PARCEL OF LAND IN Maury COUNTY, STATE OF TENNESSEE, DESCRIBED AS FOLLOWS, TO-WIT:

Located in the Third (3rd) Civil District of Maury County, Tennessee, being Lot No. 4 on the Plan of Carriage Hills Subdivision, Section 1 of record in Plat Book 5, Page 282, in the Register's Office for Maury County, Tennessee, to which Plan reference is hereby made for a more complete description of the property.

Being the same property conveyed to Preston Dalton and wife, Asiah Dalton, as tenants by the entirety by Warranty deed from First Farmers and Merchants Bank, Conservators for Kurt Brydon Peterson, a 1/2 undivided interest and Bonita J. Peterson, a 1/2 undivided interest of record in Book R2544, page 1141, Register's Office for Maury County, Tennessee, dated March 05, 2019 and recorded on March 07, 2019.

THIS CONVEYANCE IS MADE SUBJECT TO THE FOLLOWING:

Restrictions of record in Book 647, page 280, Book 653, page 511, Book 733, page 432, said Register's Office.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

106 CONCORD DR
Property Address

Ownership and Mailing Address
YORK ADAM ETUX KATHRYN
106 CONCORD DR
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 1**
BK **5** PG **282** BLOCK LOT **4** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **130X175**

TAX YEAR 2023
MAURY

060	066K	A	004.00		000
JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**

Map **066K** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**7 Heat And Cooling Split**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1987**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**8**	Total Fixtures	**8**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **0**	Rental: Src		Year **0**		Amount **0**	Sched

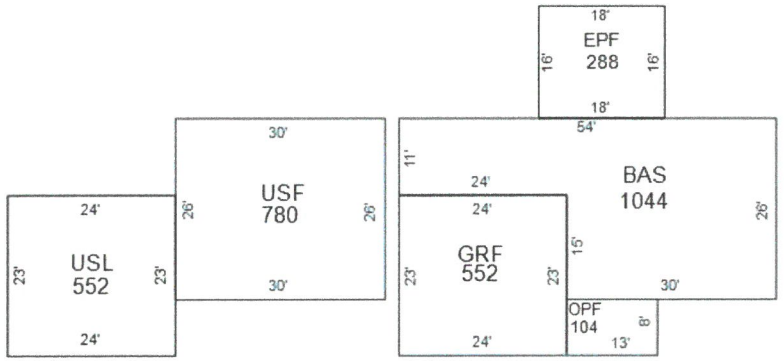
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**03 U-Shaped**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition	**Average**	Class:	
Prorate	Date	Factor	% Comp	Cost & Design	**0**
Depr: Physical	**20**	Other Phys	Functional	External	% Good **80**

	Factors							
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,044	**.723**	**1**	**1**	**1.21**	**1,990**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**168,380**	**199,730**	**368,110**	**184.98**	Dwelling Factor	**1**
RCNLD	**134,700**	**159,770**	**294,470**	**147.97**	Dwelling Value	**294,470**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,044**			
	USF	**780**	**100**	**127.92**	**99,780**
	OPF	**104**	**0**	**42.60**	**4,430**
	GRF	**552**	**0**	**71.07**	**39,230**
	EPF	**288**	**0**	**113.72**	**32,750**
	USL	**552**	**30**	**42.64**	**23,540**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**298,100**
TOTAL APPRAISAL	**358,100**
GREENBELT APR	
ASSESSMENT	**89,525**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**358,100**
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units
Water/Sewer
01 Public / Public
Electricity
01 Public
Gas
00 None
Topo **0 Level**
Road Type **3 Paved**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **01/01/2006** By **04**
Improvements **1**
Mobile Homes **0**
NH Trend **0 STABLE**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
PTO	**Patio**	**1995**	**1995**	**288**	**B**	**1**	**18X16**		**10.8681**	**GD**	**3,130**	**19**		**1**	**600**
DRW	**Driveway**	**1995**	**1995**	**1**	**C**	**1**			**3000**	**UN**	**3,000**	**100**		**1**	**3,000**

Total OBY Value **3,600**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**130**	**175**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
10/02/2019	**R2585**	**393**	**349,900**	**349,900**	**I**	**WD**	**A**	**YORK ADAM ETUX KATHRYN**
03/05/2019	**R2544**	**1141**	**236,800**	**236,800**	**I**	**WD**	**J**	**DALTON PRESTON ETUX ASIAH**
09/24/2018	**R2519**	**529**				**CO**		**FIRST FARMERS/MERCHANTS BANK CO**
08/05/2005	**R1872**	**942**	**169,900**	**169,900**	**I**	**WD**	**A**	**PETERSON KURT B ETUX**

NOTES

06:DELETE PATIO & ADD OPF PER 32*FN06VI 1841-284 QC*CHG EYB* FN06VI*CHG EYB INCR LAND PRICE*R06FN*06:CHG AREA CO*FN CHG EYB, PATIO, & DRWY R10/32*JG*CHG EYB*R10/42*FN R18: CHG QLTY PER 32 *CB - R2519-529 ORDER TO CONVEY TO CONSERVATOR & SELL PROPERTY*JG - 20: CHG OPF/EPF PER 50 *CB

MORTGA[illegible] SOVRAN MORTGAGE CORPORA[illegible]

STATE OF TENNESSEE
COUNTY OF Williamson

THE ACTUAL CONSIDERATION OR VALUE, WHICHEVER IS GREATER, FOR THIS TRANSFER IS $ 112,000.00

Susan C. Stephenson
Affiant

SUBSCRIBED AND SWORN TO BEFORE ME THIS THE 28th DAY OF April 19 89

Notary Public

MY COMMISSION EXPIRES: 4/11/92

(AFFIX SEAL)

THIS INSTRUMENT PREPARED BY Brenda Franks Hale

HALE & HALE ATTORNEYS, 312 First Tennessee Bank Building, Franklin, Tennessee 37064

NAME / ADDRESS		
ADDRESS NEW OWNER(S) AS FOLLOWS:	SEND TAX BILLS TO:	MAP-PARCEL NUMBERS
Robert F. Stephenson (NAME)	Sovran Mortgage Corporation (NAME)	MAP 66K
110 Concord Drive (STREET ADDRESS OR ROUTE NUMBER)	1512 Willowlawn Drive (STREET ADDRESS)	GROUP A
Columbia, Tennessee 38401 (CITY) (STATE) (P.O. ZIP)	Richmond, VA 23230 (CITY) (STATE) (ZIP)	PARCEL 6

FOR AND CONSIDERATION OF THE SUM OF TEN DOLLARS, CASH IN HAND PAID BY THE HEREINAFTER NAMED GRANTEES, AND OTHER GOOD AND VALUABLE CONSIDERATIONS, THE RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED, WE, Kenneth D. Thomas and wife, Helen L. Thomas

HEREINAFTER CALLED THE GRANTORS, HAVE BARGAINED AND SOLD, AND BY THESE PRESENTS DO TRANSFER AND CONVEY UNTO Robert F. Stephenson and wife, Susan C. Stephenson

HEREINAFTER CALLED THE GRANTEES, THEIR HEIRS AND ASSIGNS, A CERTAIN TRACT OR PARCEL OF LAND IN Maury COUNTY, STATE OF TENNESSEE, DESCRIBED AS FOLLOWS: TO-WIT:

A parcel of land lying and being in the Third Civil District of Maury County, Tennessee, and more particularly described as follows, to-wit:

Being Lot No. 6 of Carriage Hills Subdivision, Section I, a plat of which appears of record in Plat Book 5, page 282, Register's Office for Maury County, Tennessee.

Being the same property conveyed to Kenneth D. Thomas and wife, Helen L. Thomas by deed from Flanigan Builders, Inc. of record in Book 769, page 304, Register's Office for Maury County, Tennessee.

This conveyance is subject to the plan of Carriage Hills Subdivision, Section I, of record in Plat Book 5, page 282, Register's Office for Maury County, Tennessee; and further to restrictions of record in Book 647, page 280, Book 653, page 511, and Book 733, page 432, said Register's Office.

Maury County, State of Tennessee
Received for record the 1 day of May 1989 at 11:35 o'clock A M
Note Book 14 Pg 427 Receipt# 37031 Recording Fee 8.00
State Tax 369.60 Probate Fee .50 Total 378.10
Book [illegible] Page [illegible] Witness my hand Pamela Andrews
Register

This is improved (XX) unimproved ( ) property, known as 110 Concord Drive, Columbia, Tennessee 38401
(House Number) (Street) (P.O. Address) (City or Town) (Postal Zip)

TO HAVE AND TO HOLD the said tract or parcel of land, with the appurtenances, estate, title and interest thereto belonging to the said GRANTEES, their heir and assigns, forever; and we do covenant with the said GRANTEES that we are lawfully seized and possessed of said land in fee simple, have a good right to covey it and the same is unencumbered, unless otherwise herein set out; and we do further covenant and bind ourselves, our heirs and representatives, to warrant and forever defend the title to the said land to the said GRANTEES, their heirs and assigns, against the lawful claims of all persons whomsoever. Wherever used, the singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

Witness our hand this 28th day of April, 19 89

Kenneth D. Thomas

Helen L. Thomas

BOOK 811 PAGE 351

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

110 CONCORD DR	Subdivision **CARRIAGE HILLS SEC 1**	**TAX YEAR 2023**	060	066K	A	006.00		000
Property Address	BK **5** PG **282** BLOCK LOT **0006** TRACT	**MAURY**	JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
Ownership and Mailing Address	Alt Subdiv	City **60156 Columbia**	Map **066K**	Updated 10/27/2022				
STEPHENSON ROBERT F	BK PG BLOCK LOT TRACT	SSD1	Dist **03**	Printed 03/17/2023				
ETUX SUSAN C	Additional Description	SSD2	Card: 1 of 1					
110 CONCORD DR	Dimensions **128.91X171.90 IRR.**	Total Land Units **1**	Page: 1 of 1					
COLUMBIA TN 38401		Deed Acres **0**						
		Calculated Acres **0**						

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**12 Brick/Wood**	Attic	**4 Full-Fin**
Heating Fuel			

Year Built **1987**	Eff Yr Built **2006**	Rooms **0**	Bedrooms **0**				
Full Baths	Half Baths	Add'l Fixtures **12**	Total Fixtures **12**				
Wood FP Stacks **1**	Openings **1**	Add'l Sty	PreFab	Add'l Sty			
Info Src **3**	Occ **0**	Rental: Src	Year **0**	Amount **0**	Sched		

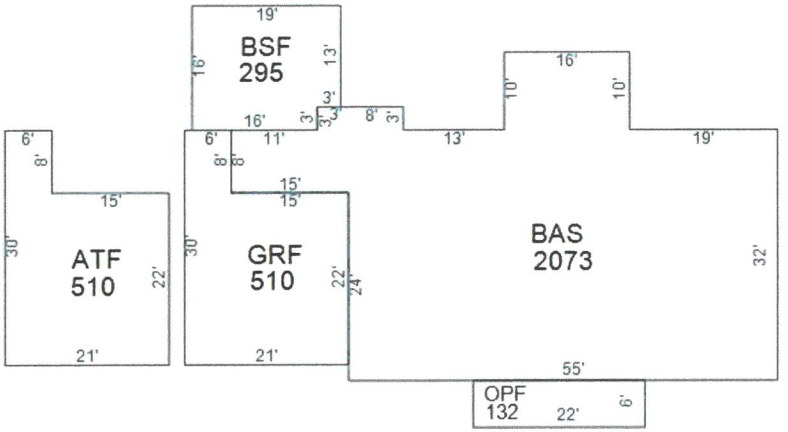
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition **Average**	Class:		
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**	

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
2,073	**1.34**	**1**	**1.021**	**1.21**	**2,368**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**311,970**	**89,910**	**401,880**	**169.71**	Dwelling Factor	**1**
RCNLD	**249,580**	**71,920**	**321,500**	**135.77**	Dwelling Value	**321,500**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**2,073**			
	BSF	**295**	**100**	**113.69**	**33,540**
	OPF	**132**	**0**	**42.65**	**5,630**
	GRF	**510**	**0**	**71.06**	**36,240**
	ATF	**510**	**0**	**28.43**	**14,500**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**352,500**
TOTAL APPRAISAL	**412,500**
GREENBELT APR	
ASSESSMENT	**103,125**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**412,500**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1996**	**1996**	**1**	**C**	**1**			**4000**	**UN**	**4,000**	**100**	**1**	**1**	**4,000**
WDK	**Wood Deck**	**2012**	**2012**	**420**	**C**	**1**	**21 X 20**		**15.0952**	**AV**	**6,340**	**70**	**1**	**1**	**4,440**
GFD	**Detached Garage Fini**	**1996**	**2002**	**1,008**	**C**	**1**	**24 X 42**		**37.371**	**AV**	**37,670**	**60**	**1**	**1**	**22,600**

Total OBY Value **31,040**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**128**	**171**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
04/28/1989	**811**	**351**	**112,000**	**112,000**	**I**	**WD**	**A**	**STEPHENSON ROBERT F**
03/10/1987	**769**	**304**	**95,500**	**95,500**	**I**	**WD**	**A**	**THOMAS KENNETH D**
10/16/1986	**761**	**573**						**FLANIGAN BUILDERS**

NOTES

CHG EYB INCR LAND PRICE*R06FN*AREA CODE R06BV*06:ELECT TO 04 QUAL TO 01*R06FN
CHG AREA CODE*FN -R18: CHG QLTY PER 32 *CB -R22: CHG DRW VAL, REP WDK PER 32 *CB

Ret- Alpha & Omega

This instrument prepared by Daniel L. Murphy, Attorney at Law, 207 W. 8th St., Columbia, Tennessee.

GENERAL WARRANTY DEED

This indenture is made and entered into this the 28th day of May, 2004 between **Ralph H. Warner and wife, Betty L. Warner** (hereinafter referred to as "GRANTOR") and **Harvey P. Nicholson and wife, Carolyn D. Nicholson** (hereinafter referred to as "GRANTEE").

For and in consideration of Ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, cash in hand paid, Grantor does by these presents, sell, transfer and convey unto grantee, the following described tract or parcel of land:

SITUATE in the Third (3rd) Civil District of Maury County, Tennessee and being more particularly described as follows:

Lot 8 of the Carriage Hills Subdivision, Section 1 as shown by a map of record in Plat Book 5 at page 282 in the Maury County, Tennessee Register of Deeds office.

Being the same property conveyed to Ralph H. Warner and wife, Betty L. Warner by instrument dated May 18, 2001 of record in Book R1540 at page 784 in the Maury County, Tennessee Register of Deeds office.

Tax Parcel #66K-A-66K-13.00

Note: The legal description set forth above is the same property as contained in Grantor's previous deed of record and no new survey is available.

To have and to hold the above-described tract or parcel of land, together with all rights, titles, interest, easements, appurtenances, and hereditaments thereto appertaining, to Grantee, its heirs and assigns forever in fee simple.

Grantor covenants with Grantee that Grantor is lawfully seized and possessed in fee simple of the above-described tract or parcel of land, that Grantor has the full, good and lawful right and authority to sell, transfer and convey the same, and that the above-described tract or parcel of land is unencumbered, except for easements and rights-of-way as shown by map of record in Plat Book 5, Page 282; covenants, conditions and restrictions as set forth in instrument of record in Book 647, Page 280 and amended in Book 653 at page 511 and Book 733 at page 432; an easement for the purpose of telephone line, in favor of A T & T, of record in Book 295, Page 292 and by an easement for the purpose of electric transmission line, in favor of U S of America, of record in Book 661, Page 46 in the Maury County, Tennessee Register of Deeds Office.

And, Grantor does warrant, and hereby binds its successors to title, to forever defend the title to the above-described tract or parcel of land against the lawful claims of all persons whatsoever, unto Grantee, its heirs and assigns.

In Witness Whereof, Grantor has set its hand(s) the date first above-written.

Ralph H. Warner

Ralph H. Warner

Betty L. Warner

Betty L. Warner

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

101 CONCORD DR Property Address	Subdivision **CARRIAGE HILLS SEC 1** BK **5** PG **282** BLOCK LOT **0008** TRACT	**TAX YEAR 2023** **MAURY**	060 JUR	066K CONTROL MAP	A GROUP	013.00 PARCEL	PI	000 S/I
Ownership and Mailing Address **NICHOLSON HARVEY P ETUX** **CAROLYN D** **101 CONCORD DR** **COLUMBIA TN 38401**	Alt Subdiv BK PG BLOCK LOT TRACT Additional Description Dimensions **141.73X170 IRR.**	City **60156 Columbia** SSD1 SSD2 Total Land Units **1** Deed Acres **0** Calculated Acres **0**	Map **066K** Dist **03**	Updated 10/27/2022 Printed 03/17/2023 Card: 1 of 1 Page: 1 of 1				

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1993**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**9**	Total Fixtures	**9**
Wood FP Stacks		Openings		Add'l Sty		PreFab	Add'l Sty
Info Src **0**	Occ **0**	Rental: Src		Year **0**		Amount **0**	Sched

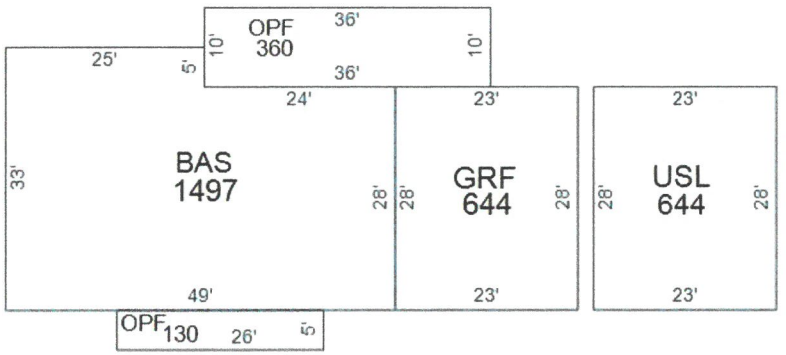
Foundation	**02**	**Continuous Footing**	Floor Finish	**11**	**Carpet Combination**
Floor System	**04**	**Wood W/ Sub Floor**	Interior Finish	**07**	**Drywall**
Party Wall	**00**	**None**	Paint/Decor	**04**	**Above Average**
Struct. Frame	**00**	**None**	Bath Tile	**00**	**None**
Roof Framing	**02**	**Gable/Hip**	Electrical	**04**	**Above Average**
Roof Cov/Deck	**03**	**Composition Shingle**	Shape	**02**	**L-Shaped**
Cab/Millwork	**04**	**Above Average**			

Quality	**2 : Above Average**	Condition	**Average**	Class:	
Prorate	Date	Factor	% Comp	Cost & Design	**0**
Depr: Physical	**20**	Other Phys	Functional	External	% Good **80**

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,497	**.998**	**1**	**1**	**1.21**	**1,690**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**222,110**	**94,110**	**316,220**	**187.11**	Dwelling Factor	**1**
RCNLD	**177,690**	**75,290**	**252,980**	**149.69**	Dwelling Value	**252,980**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,497**			
	OPF	**130**	**0**	**42.62**	**5,540**
	OPF	**360**	**0**	**42.64**	**15,350**
	GRF	**644**	**0**	**71.06**	**45,760**
	USL	**644**	**30**	**42.64**	**27,460**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**263,100**
TOTAL APPRAISAL	**323,100**
GREENBELT APR	
ASSESSMENT	**80,775**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**323,100**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1993**	**1993**	**1**	**C**	**1**			**2000**	**UN**	**2,000**	**100**		**1**	**2,000**
GUD	**Detached Garage Unfi**	**1995**	**1995**	**480**	**C**	**1**	**20X24**		**36.6667**	**AV**	**17,600**	**46**		**1**	**8,100**

Total OBY Value **10,100**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**141**	**170**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
05/28/2004	**R1801**	**273**	**145,000**	**145,000**	**I**	**WD**	**A**	**NICHOLSON HARVEY P ETUX**
05/18/2001	**R1540**	**784**	**137,500**	**137,500**	**I**	**WD**	**A**	**WARNER RALPH H ETUX**
12/15/1999	**R1463**	**855**	**134,500**	**134,500**	**I**	**WD**	**A**	**PARSONS DAVID I ETUX**
02/15/1995	**1245**	**379**	**111,550**	**111,550**	**I**	**WD**	**A**	**CHEEK WILLIAM L SR**

NOTES

QUAL TO 01 DELETE WD DECK INCR LAND PRICE & ADD OPF*R06FN
AREA CODE R06BV*CHG AREA CODE*FN*CHG EYB & DRWY R10/32*JG*
CHG EYB*R10/42*FN
R18: CHG QLTY PER 32 *CB

This Instrument Prepared By:
K. Brian Hay, Attorney at Law
104 W. 6th Street, Ste. 200
Columbia, TN 38401

MAIL

BROKER TITLE AND ESCROW LLC
1404 7TH AVE S
NASHVILLE, TN 37212

Name and Address of New Owner:	Name and Address of Entity Responsible for Payment of Real Property Taxes
Patrick Lucero and wife Carol Lucero	New Owner
1125 Dover Drive	
Columbia TN 38401	

WARRANTY DEED

FOR AND IN CONSIDERATION OF One Dollar ($1.00) and other good and valuable consideration, the receipt and legal sufficiency of all of which are hereby acknowledged, **Wanda H. Smith, an unmarried person** *(herein called "Grantor")*, has this day bargained and sold, transferred and conveyed and by these presents does bargain, sell, transfer and convey unto **Patrick Lucero and wife Carol Lucero** *(herein called "Grantee")* the following described property situated and located in Maury County, Tennessee, to wit:

SITUATE in the THIRD (3RD) Civil District of Maury County, Tennessee and being more particularly described as follows:

Lot 51 of the Carriage Hills Subdivision, Section II as shown by a map of record in Plat Book 8 at page 82 in the Maury County, Tennessee Register of Deeds office, which is incorporated herein by reference for a more complete property description.

BEING the same property conveyed to Wanda H. Smith by instruments of record in Book R1500 at page 370 (corrected in Book R1672 at page 200) and Book R2006 at page 1072 in the Maury County, Tennessee Register of Deeds office.

Tax Parcel #066F-A-16.00

The property description used herein above is the same as contained in the last deed of reference and no new boundary survey is available.

TO HAVE AND TO HOLD the aforesaid real estate, together with all appurtenances and hereditaments thereunto appertaining unto Grantee, its successors and assigns in fee simple forever.

Grantor covenants that Grantor is lawfully seized and possessed of said real estate, has full power and lawful authority to sell and convey the same; that the title thereto is free, clear and unencumbered except for easements and restrictions, if any, appearing in the Maury County, Tennessee Register of Deeds office; and, Grantor will forever warrant and defend the same against the lawful claims of all persons whomsoever.

The words "Grantor" and "Grantee" shall include their respective successors and assigns where the context requires or permits.

IN WITNESS WHEREOF, the Grantor has caused this instrument to be executed on this 24th day of November, 2015

GRANTOR:

Wanda H. Smith

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

1125 DOVER DR
Property Address
Ownership and Mailing Address

LUCERO PATRICK ETUX CAROL
1125 DOVER DR
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 2**
BK **8** PG **82** BLOCK LOT **51** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **147.02X150.33 IRR**

TAX YEAR 2023
MAURY

060	066F	A	016.00		000
JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**
Map **066F** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**3 Part Basement**
Stories	**1 Story Frame**	Heating/Air	**7 Heat And Cooling Split**
Exterior Wall	**11 Common Brick**	Attic	
Heating Fuel			

Year Built	**2001**	Eff Yr Built	**2007**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**9**	Total Fixtures	**9**
Wood FP Stacks		Openings		Add'l Sty		PreFab	Add'l Sty
Info Src **0**	Occ **0**	Rental: Src		Year **0**		Amount **0**	Sched

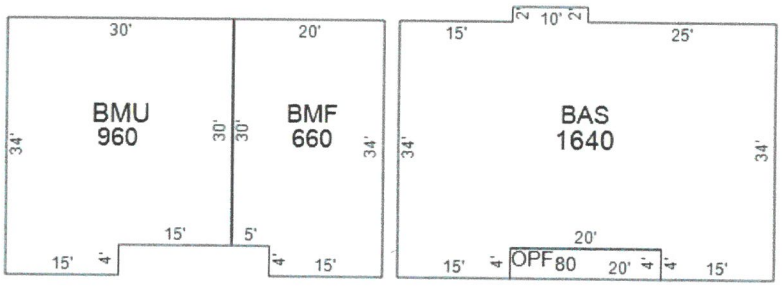
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**03 Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**03 Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**03 Average**		

Quality **1+ : Average +** Condition **Average** Class:
Prorate Date Factor % Comp Cost & Design **0**
Depr: Physical **15** Other Phys Functional External % Good **85**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,640	**1.083**	**1**	**1.07**	**1.07**	**1,640**	**2022**	**15**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete
RCN	**231,360**	**60,330**	**291,690**	**177.86**	Dwelling Factor **1**
RCNLD	**196,660**	**51,280**	**247,940**	**151.18**	Dwelling Value **247,940**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,640**			
	BMF	**660**	**0**	**50.27**	**33,180**
	OPF	**80**	**0**	**37.75**	**3,020**
	BMU	**960**	**0**	**25.14**	**24,130**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**253,500**
TOTAL APPRAISAL	**313,500**
GREENBELT APR	
ASSESSMENT	**78,375**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**313,500**
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units
Water/Sewer **03 Public / Individual**
Electricity **01 Public**
Gas **00 None**
Topo **1 Rolling**
Road Type **0 Us Highway**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **01/01/2006** By **32**
Improvements **1**
Mobile Homes **0**
NH Trend **3 TRANSITION**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**2001**	**2001**	**1**	**C**	**1**			**3000**	**UN**	**3,000**	**100**		**1**	**3,000**
WDK	**Wood Deck**	**2001**	**2001**	**200**	**C**	**1**	**10 X 20**		**20.85**	**AV**	**4,170**	**37**		**1**	**1,540**
PTO	**Patio**	**2001**	**2001**	**336**	**C**	**1**	**14 X 24**		**7.8274**	**AV**	**2,630**	**37**		**1**	**970**

Total OBY Value **5,510**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**147**	**150**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
11/24/2015	**R2348**	**1006**	**198,000**	**198,000**	**I**	**WD**	**A**	**LUCERO PATRICK ETUX CAROL**
09/21/2007	**R2006**	**1072**						**SMITH WANDA H**
12/30/2002	**R1672**	**200**						**SMITH WAYNE ETUX**
08/30/2000	**R1500**	**370**	**17,000**	**17,000**	**V**	**WD**	**A**	**SMITH WAYNE ETUX**

NOTES

R22: CHG DRW VAL PER 32 *CB - 22: ADD PTO, CHG WDK PER 51 *CB

This Instrument Prepared by and Return to:
Bell & Alexander Title Services, Inc.
8110 Isabella Lane, 2nd Floor
Brentwood, TN 37027

STATE OF TENNESSEE
COUNTY OF Williamson

The actual consideration or value, whichever is greater is $330,000.00.

Affiant

Subscribed and sworn before me this the 27th day of July, 2021.

Notary Public
My commission expires: 9-6-22

DIANA K GALL
STATE OF TENNESSEE NOTARY PUBLIC
DAVIDSON COUNTY

WARRANTY DEED

Address of New Owner:	Send Tax Bill to:	Tax Information:
Bradley J. Imburgia and Michelle N. Imburgia 1113 Dover Drive Columbia, TN 38401	Churchill Mortgage Corporation 1749 Mallory Lane, Suite 100 Brentwood, TN 37027	066F A 019.00

For and in consideration of the sum of ten and no/100 dollars ($10.00), cash in hand paid by the hereinafter Grantees, and other good and valuable consideration, the receipt of which is hereby acknowledged, STEPHEN DICK, AN UNMARRIED MAN, AND SHARI DICK, AN UNMARRIED WOMAN, hereinafter referred to as Grantors, have bargained and sold, and do hereby transfer and convey to BRADLEY J. IMBURGIA AND MICHELLE N. IMBURGIA, HUSBAND AND WIFE, hereinafter called the Grantees, their successors and assigns, a certain tract or parcel of land, together with all tenements, hereditaments and appurtenances thereto located in Maury County, State of Tennessee, described as follows:

Land in Maury County, Tennessee and being more particularly described as Lot 54 in the Carriage Hills Subdivision, Section 2, as shown by Final Plat of record in Plat Book 8, page 82, Register's Office for said County, to which plan reference is hereby made for a more complete description.

Being the same property conveyed to Shari Dick and Stephen Dick, wife and husband, by deed dated 01/28/2019, from Michael G. Lester and wife, Melissa K. Lester, of record in Book R2539, page 775, Register's Office for said County.

Subject to all Easements and Restrictions of record.

THIS IS IMPROVED PROPERTY KNOWN AS 1113 Dover Drive, Columbia, TN 38401.

To have and to hold the said tract or parcel of land, with the appurtenances, estate, title and interest thereto belonging to the said Grantees, their heirs, successors and/or assigns, forever. Grantors covenant with Grantees that Grantors are lawfully seized and possessed of said land in fee simple, have a good right to convey it, and the same is unencumbered, unless otherwise herein set out. Grantors do further covenant and bind ourselves, our heirs, successors, assigns and representatives, to warrant and forever defend the title to said land to said Grantees, their successors, heirs and assigns, against the lawful claims of all persons whomsoever. Wherever used, the singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

BK/PG: R2754/651-652
21016201

2 PGS:AL-WARRANTY DEED	
JANE BATCH: 253027	07/28/2021 - 09:35 AM
VALUE	330000.00
MORTGAGE TAX	0.00
TRANSFER TAX	1221.00
RECORDING FEE	10.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	1234.00

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

1113 DOVER DR
Property Address
Ownership and Mailing Address
IMBURGIA BRADLEY J ETUX MICHELLE N
1113 DOVER DR
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 2**
BK **8** PG **82** BLOCK LOT **54** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **100.00X160.97 IRR**

TAX YEAR 2023
MAURY

JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
060	066F	A	019.00		000

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**
Map **066F** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type **01 Single Family** Lower Level **1 No Basement**
Stories **2 Story Frame** Heating/Air **7 Heat And Cooling Split**
Exterior Wall **04 Siding Average** Attic
Heating Fuel

Year Built	1996	Eff Yr Built	2014	Rooms	0	Bedrooms	0
Full Baths		Half Baths		Add'l Fixtures	9	Total Fixtures	9
Wood FP Stacks	1	Openings	1	Add'l Sty		PreFab	Add'l Sty
Info Src	3	Occ	1	Rental: Src		Year 0	Amount 0 Sched

Foundation **02 Continuous Footing** Floor Finish **11 Carpet Combination**
Floor System **04 Wood W/ Sub Floor** Interior Finish **07 Drywall**
Party Wall **00 None** Paint/Decor **04 Above Average**
Struct. Frame **00 None** Bath Tile **00 None**
Roof Framing **02 Gable/Hip** Electrical **04 Above Average**
Roof Cov/Deck **03 Composition Shingle** Shape **01 Rectangular Design**
Cab/Millwork **04 Above Average**

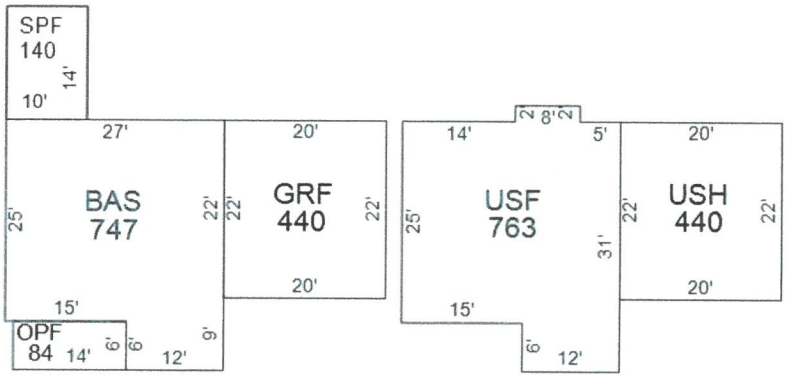
Quality **1+ : Average +** Condition **Average** Class:
Prorate Date Factor % Comp Cost & Design **0**
Depr: Physical **10** Other Phys Functional External % Good **90**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
747	.539	1	1	1.07	1,774	2022	8	1.00

	Base Dwelling	Add'l Areas	Total	$/SqFt
RCN	114,300	153,580	267,880	151.00
RCNLD	102,870	138,230	241,100	135.91

% Complete
Dwelling Factor **1**
Dwelling Value **241,100**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	747			
	USF	763	100	113.12	86,310
	OPF	84	0	37.74	3,170
	GRF	440	0	62.84	27,650
	USH	440	60	62.84	27,650
	SPF	140	0	62.86	8,800



APPRAISED VALUES

LAND	60,000
IMPROVEMENTS	259,700
TOTAL APPRAISAL	319,700
GREENBELT APR	
ASSESSMENT	79,925
ASSESSED @	25%
APPROACH	COST VALUE

Value Correlation

	Value
COST	319,700
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units
Water/Sewer **03 Public / Individual**
Electricity **01 Public**
Gas **00 None**
Topo **1 Rolling**
Road Type **0 Us Highway**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **01/01/2006** By **32**
Improvements **1**
Mobile Homes **0**
NH Trend **3 TRANSITION**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	Wood Deck	1996	1996	168	C	1	14X12		20.8333	AV	3,500	22		1	770
DRW	Driveway	1996	1996	1	C	1			4000	UN	4,000	100		1	4,000
POL	Swimming Pool	1997	2010	512	D	1	16X32		67.6172	FR	34,620	40		1	13,850

Total OBY Value 18,620

ENTRANCES

Date	Code	ID
01/01/2002	01 Bldg Apr	32

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	U	22	01		100	160	1	60,000.00							100	60,000.00	60,000	
					Totals:		1										60,000	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
07/26/2021	R2754	651	330,000	330,000	I	WD	A	IMBURGIA BRADLEY J ETUX MICHELLE
01/28/2019	R2539	775	285,000	285,000	I	WD	A	DICK SHARI ETVIR STEPHEN
04/29/2005	R1855	575	165,900	165,900	I	WD	A	LESTER MICHAEL G ETUX
05/30/1997	1332	668	115,005	115,005	I	WD	A	BEDFORD CARL C ETUX

NOTES

R18: CHG QLTY PER 32 *CB - R22: CHG DRW VAL PER 32 *CB
R22: ADD OPF, CHG POL EYB PER 41 *CB - 22: CHG OPF/SPF PER 51 *CB

Address New Owner And return deed to: Benjamin F. Inman, Jr. 1118 Dover Columbia, TN 38401	Send Tax Bills to: NEW OWNER	Drafted by: Paul J. Fealk 019252 UAW Legal Services Plan 100 Stephen P. Yokich Parkway, P.O. Box 1797 Spring Hill, TN 37174

QUITCLAIM DEED

P/U BY:

KNOW ALL BY THESE PRESENTS that Delaine C. Inman, for and in consideration of the sum of Ten and No/100 Dollars ($10.00), cash in hand paid, the receipt of which is hereby acknowledged, has bargained and sold, and does hereby convey, remise, release and forever quitclaim unto Benjamin F. Inman, Jr., his heirs successors and assigns, her entire right, title and interest in and to a certain tract or parcel of land in Maury County, Tennessee, described as follows:

Located in the Third (3rd) Civil District of Maury County, Tennessee, and being Lot No. 44, Carriage Hills Subdivision, Section 2, Phase 1, as shown on plat of record in Plat Book 8, page 82, Register's Office of Maury County, Tennessee.

Being the same property conveyed to Benjamin F. Inman, Jr and wife, Delaine C. Inman, by deed of record in Book R1457, Page 924, Register's Office for Maury County, Tennessee.

Map 66F Group A Parcel 9

This is improved property commonly known as 1118 Dover Drive, Columbia, Tennessee 38401.

This instrument and the interest hereby released and quitclaimed are subject to such limitations, restrictions and encumbrances as may affect the premises.

WITNESS my hand this 21ST day of June, 2004.

Delaine C. Inman
Delaine C. Inman

STATE OF TENNESSEE)
COUNTY OF Perry)

Personally appeared before me, Delaine C. Inman, the undersigned Notary Public in and for said County and State, the within named grantor, Delaine C. Inman, with whom I am personally acquainted (or proved to be on the basis of satisfactory evidence), and who acknowledged executing the within instrument for the purpose therein contained.

Witness my hand and official seal, this 21 day of, June, 2004.

Janet Hester
Notary Public
My commission expires : Nov. 15, 2005

THIS TRANSFER IS EXEMPT FROM RECORDATION TAX PURSUANT TO TENN. CODE ANN.67-4-409(a) (3)(A): Creation or dissolution of tenancy by the entirety by the conveyance from one (1) spouse to the other; AND NO OATH OF VALUE SHALL BE REQUIRED FOR THIS TRANSACTION AS PROVIDED IN TENN. CODE ANN.67-4-409((5).

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

1118 DOVER DR
Property Address
Ownership and Mailing Address

INMAN BENJAMIN F JR
1118 DOVER DR
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 2**
BK **8** PG **82** BLOCK LOT **44** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **169.57X251.66 IRR**

TAX YEAR 2023
MAURY

060	066F	A	009.00		000
JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**
Map **066F** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1991**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**8**	Total Fixtures	**8**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **1**	Rental: Src		Year **0**		Amount **0**	Sched

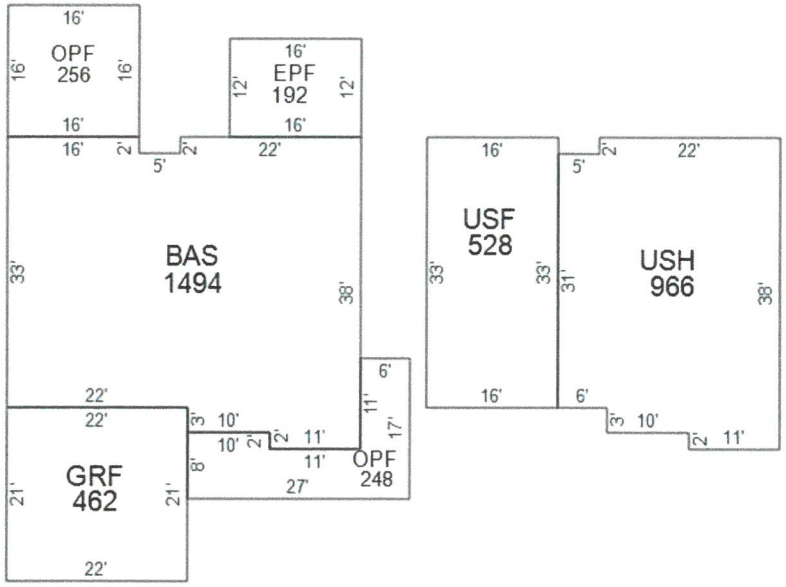
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**1+ : Average +**	Condition	**Average**	Class:	
Prorate	Date	Factor	% Comp	Cost & Design	**0**
Depr: Physical	**20**	Other Phys	Functional	External	% Good **80**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,494	**.996**	**1**	**1**	**1.07**	**2,602**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**198,520**	**187,770**	**386,290**	**148.46**	Dwelling Factor	**1**
RCNLD	**158,820**	**150,210**	**309,030**	**118.77**	Dwelling Value	**309,030**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,494**			
	USF	**528**	**100**	**113.13**	**59,730**
	EPF	**192**	**0**	**100.57**	**19,310**
	OPF	**256**	**0**	**37.70**	**9,650**
	OPF	**248**	**0**	**37.70**	**9,350**
	GRF	**462**	**0**	**62.84**	**29,030**
	USH	**966**	**60**	**62.84**	**60,700**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**314,600**
TOTAL APPRAISAL	**374,600**
GREENBELT APR	
ASSESSMENT	**93,650**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**374,600**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**1 Rolling**
Road Type	**0 Us Highway**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 32**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**3 TRANSITION**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**1991**	**1991**	**396**	**C**	**1**	**22X18**		**15.4798**	**AV**	**6,130**	**10**		**1**	**610**
DRW	**Driveway**	**1991**	**1991**	**1**	**C**	**1**			**3000**	**UN**	**3,000**	**100**		**1**	**3,000**
UTB	**Utility Building**	**2000**	**2000**	**140**	**C**	**1**	**10X14**		**25.2857**	**AV**	**3,540**	**56**		**1**	**1,980**

Total OBY Value **5,590**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**169**	**251**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
06/21/2004	**R1805**	**378**						**INMAN BENJAMIN F JR**
10/29/1999	**R1457**	**924**	**156,500**	**156,500**	**I**	**WD**	**A**	**INMAN BENJAMIN F JR ETUX**
10/24/1997	**1350**	**486**	**134,000**	**134,000**	**I**	**WD**	**A**	**MCSHURLEY BRUCE A ETUX**
06/29/1995	**1261**	**597**	**126,000**	**126,000**	**I**	**WD**	**A**	**GREEN JAMES ANTHONY ETUX**

NOTES

ADD OPF & UTB PER 32*FN06VI*QUAL TO 01 INCR LAND PRICE*R06FN*CHG AREA CODE*FN
CHG EYB INCR DRWY PRICE CHG OPF TO EPF*R10/32*FN - CHG EYB*R10/42*FN
R22: CHG DRW VAL PER 32 *CB

RE1001CH.L43
This Instrument Prepared By:
R. W. Hardison
Edwards & Hardison, Attorneys at Law
805 South Garden Street
Post Office Box 334
Columbia, Tennessee 38402-0334

GENERAL WARRANTY DEED

This indenture is made and entered into this 28th day of June, 1991 between Larry G. Reaves, and wife, Sharon G. Reaves (hereinafter referred to as "GRANTOR") and David Francis Goodness, and wife, Patsy Goodness (hereinafter referred to as "GRANTEE").

For and in consideration of Ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, cash in hand paid, Grantor does by these presents, sell, transfer and convey unto grantee, the following described tract or parcel of land:

SITUATE in the Third (3rd) Civil District of Maury County, Tennessee and being more particularly described as Lot 43 in the Carriage Hills Subdivision, Section 2, Phase 1, as shown by map of record in Plat Book 8 at page 82 in the Maury County, Tennessee Register of Deeds office.

BEING the same property conveyed to Larry G. Reaves, and wife, Sharon G. Reaves by instrument of record in Book 1109 at page 118 in the Maury County, Tennessee Register of Deeds office.

Tax Parcel # 66-66-8.00 P/O

To have and to hold the above-described tract or parcel of land, together with all rights, titles, interests, easements, appurtenances, and hereditaments thereto appertaining, to Grantee, its heirs and assigns forever in fee simple.

Grantor covenants with Grantee that Grantor is lawfully seized and possessed in fee simple of the above-described tract or parcel of land, that Grantor has the full, good and lawful right and authority to sell, transfer and convey the same, and that the above-described tract or parcel of land is unencumbered, except for covenants, conditions and restrictions of record in Book 853 at Page 210 in the Maury County, Tennessee Registers of Deeds Office.

And, Grantor does warrant, and hereby binds its successors to title, to forever defend the title to the above-described tract or parcel of land against the lawful claims of all persons whatsoever, unto Grantee, its heirs and assigns.

In Witness Whereof, Grantor has set its hand(s) the date first above-written.

Larry G. Reaves

Sharon G. Reaves

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

1116 DOVER DR	Subdivision **CARRIAGE HILLS SEC 2**	**TAX YEAR 2023**	**060**	**066F**	**A**	**008.00**	**000**
Property Address	BK **8** PG **82** BLOCK LOT **43** TRACT	**MAURY**	JUR	CONTROL MAP	GROUP	PARCEL	PI S/I
Ownership and Mailing Address	Alt Subdiv	City **60156 Columbia**	Map **066F**		Updated 10/27/2022		
GOODNESS DAVID FRANCIS	BK PG BLOCK LOT TRACT	SSD1	Dist **03**		Printed 03/17/2023		
ETUX PATSY	Additional Description	SSD2	Card: 1 of 1				
1116 DOVER DR	Dimensions **98.58X287.32 IRR**	Total Land Units **1**					
COLUMBIA TN 38401		Deed Acres **0**	Page: 1 of 1				
		Calculated Acres **0**					

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	**4 Full-Fin**
Heating Fuel			

Year Built **1991**	Eff Yr Built **2006**	Rooms **0**	Bedrooms **0**				
Full Baths	Half Baths	Add'l Fixtures **7**	Total Fixtures **7**				
Wood FP Stacks	Openings	Add'l Sty	PreFab	Add'l Sty			
Info Src **3**	Occ **1**	Rental: Src	Year **0**	Amount **0**	Sched		

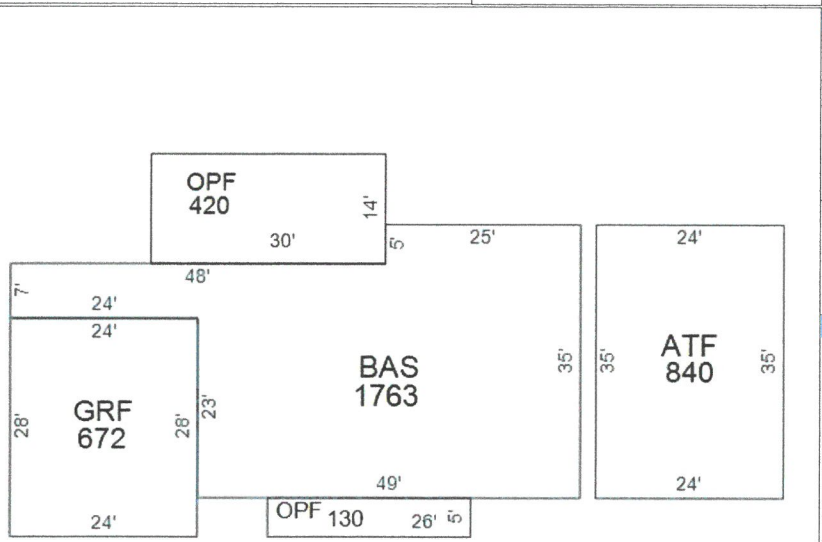
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**1+ : Average +**	Condition **Average**		Class:	
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**	

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,763	**1.157**	**1**	**1**	**1.07**	**1,763**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**223,960**	**84,080**	**308,040**	**174.72**	Dwelling Factor	**1**
RCNLD	**179,170**	**67,260**	**246,430**	**139.78**	Dwelling Value	**246,430**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,763**			
	OPF	**130**	**0**	**37.69**	**4,900**
	GRF	**672**	**0**	**62.84**	**42,230**
	ATF	**840**	**0**	**25.13**	**21,110**
	OPF	**420**	**0**	**37.71**	**15,840**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**247,400**
TOTAL APPRAISAL	**307,400**
GREENBELT APR	
ASSESSMENT	**76,850**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**307,400**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**1 Rolling**
Road Type	**0 Us Highway**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 32**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**3 TRANSITION**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1991**	**1991**	**1**	**C**	**1**			**1000**	**UN**	**1,000**	**100**		**1**	**1,000**

Total OBY Value **1,000**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**98**	**287**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
06/28/1991	**1121**	**421**	**98,900**	**98,900**	**I**	**WD**	**M**	**GOODNESS DAIVD FRANCIS**
01/09/1991	**1109**	**118**	**17,900**	**17,900**	**V**	**WD**	**H**	**REAVES LARRY G**
04/17/1990	**835**	**71**						**PARKS-REAVES PROPERTIES**

NOTES

ADD DRWY PER 32*FN06VI - INCR LAND PRICE*R06FN - CHG AREA CODE*R06JS
CHG AREA CODE*FN - R18: CHG QLTY PER 32 *CB - 19:CHG EYB PER 45*PB
21: ADD OPF PER 50 *CB

WARRANTY DEED

Mail:

BROKER TITLE & ESCROW LLC
1404 17TH AVE SO
NASHVILLE TN 37212

J-SB-P-20-1121

STATE OF TENNESSEE
COUNTY OF MAURY

THE ACTUAL CONSIDERATION OR VALUE, WHICHEVER IS GREATER, FOR THIS TRANSFER IS $278,000.00.

Affiant

SUBSCRIBED AND SWORN TO BEFORE ME, THIS THE 30th DAY OF JULY, 2020.

Notary Public

MY COMMISSION EXPIRES: 11.8.2021
(AFFIX SEAL)

GREG FAIRBETTER NOTARY PUBLIC DAVIDSON COUNTY TENNESSEE My Commission Expires NOV 8 2021

THIS INSTRUMENT WAS PREPARED BY
Rudy Title and Escrow, LLC
2012 21st Avenue South
Nashville, TN 37212

ADDRESS NEW OWNER (S) AS FOLLOWS:	SEND TAX BILLS TO:	MAP / PARCEL NUMBER (S)
Rafael De Jesus Garcia and Carla J. Martinez Macias	**New Owner**	
(NAME)	(NAME)	**066F-A-017.00**
1121 Dover Drive		
(ADDRESS)	(ADDRESS)	
Columbia, TN 38401		
(CITY) (STATE) (ZIP)	(CITY) (STATE) (ZIP)	

For and in consideration of the sum of TEN DOLLARS, cash in hand, paid by the hereinafter named Grantee(s), and other good and valuable consideration, the receipt of which is hereby acknowledged, **JMAY, LLC, A NEVADA LIMITED LIABILITY COMPANY, SERIES 35, THE 1121 DOVER DRIVE SERIES THEREOF,** hereinafter called the Grantor(s), has/have bargained and sold, and by these presents do/does transfer and convey unto **RAFAEL DE JESUS GARCIA AND CARLA J. MARTINEZ MACIAS, BOTH UNMARRIED,** hereinafter called the Grantee(s), his/her/its/their heirs, successors and assigns, that certain tract or parcel of land in **MAURY** COUNTY, STATE OF **TENNESSEE**, described as follows, to wit:

Land in Maury County, Tennessee, being Lot No. 52, The Carriage Hills Subdivision, Section 2, as shown on plat of record in Plat Book 8, Page 82, in the Register's Office for Maury County, Tennessee, to which plat reference is hereby made for a more complete description of said property.

Being the same property conveyed to Jmay, LLC, a Nevada Limited Liability Company, Series 35, The 1121 Dover Drive Series Thereof by Warranty deed from Music City Holdings, LLC, a Texas limited liability company of record in Book R2616, page 683, Register's Office for Maury County, Tennessee, dated February 18, 2020 and recorded on March 02, 2020.

This conveyance is subject to:
- Taxes for the year 2020, a lien not yet due and payable.
- Subject to all matters shown on the Plan of record in Plat Book 8, Page 82, Register's Office for Maury County, Tennessee.
- Covenants, Conditions and Restrictions of record in Book 853, Page 210, in the Register's Office for Maury County, Tennessee, but omitting any restriction, if any, based on race, color, religion, sex, handicap, familial status, or national origin unless and only to the extent that the restriction (a) is exempt under Title 42 of the United States Code, or (b) relates to handicap but does not discriminate against handicapped persons.
- Subject to the flow of any creeks, streams, or branches across subject property.
- Any and all existing easements and restrictions as shown of record not stated herein

This is **improved** property known as: **1121 Dover Drive, Columbia, Tennessee 38401**.

TO HAVE AND TO HOLD the said tract or parcel of land, with the appurtenances, estate, title and interest thereto belonging to the said GRANTEE(S), their heirs and assigns forever; and we do covenant with the said GRANTEE(S) that we are lawfully seized and possessed of said land in fee simple, have a good right to convey it and the same is unencumbered, unless otherwise herein set out; and we do further covenant and bind ourselves, our heirs and representatives, to warrant and forever defend the title to the said land to the said GRANTEE(S), their heirs and assigns, against the lawful claims of all persons whomsoever. Wherever used, the singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

BK/PG: R2663/419-420
20013163

2 PGS:AL-WARRANTY DEED	
NANCY BATCH: 232734	08/03/2020 - 10:00 AM
VALUE	278000.00
MORTGAGE TAX	0.00
TRANSFER TAX	1028.60
RECORDING FEE	10.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	1041.60

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

1121 DOVER DR
Property Address
Ownership and Mailing Address

GARCIA RAFAEL DE JESUS &
CARLA J MARTINEZ MACIAS
1121 DOVER DR
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 2**
BK **8** PG **82** BLOCK LOT **52** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **138.81X157.82 IRR**

TAX YEAR 2023
MAURY

JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
060	066F	A	017.00		000

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**

Map **066F** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**3 Part Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**12 Brick/Wood**	Attic	
Heating Fuel			

Year Built	**1999**	Eff Yr Built	**2010**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**8**	Total Fixtures	**8**
Wood FP Stacks		Openings		Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **1**	Rental: Src		Year **0**	Amount **0**		Sched

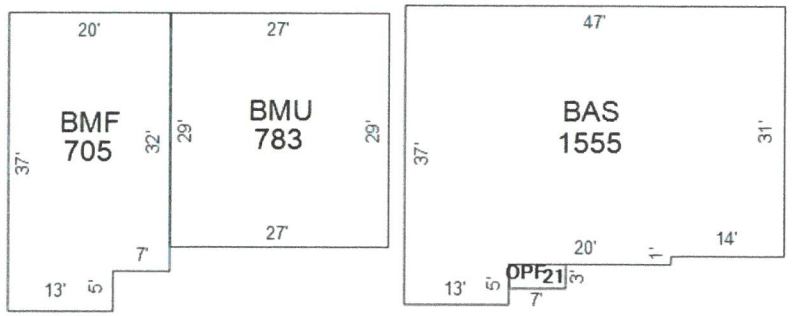
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**02 L-Shaped**
Cab/Millwork	**04 Above Average**		

Quality	**1+ : Average +**	Condition	**Average**	Class:	
Prorate	Date	Factor	% Comp	Cost & Design	**0**
Depr: Physical	**15**	Other Phys	Functional	External	% Good **85**

	Factors							
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,555	**1.033**	**1**	**1.021**	**1.07**	**1,555**	**2022**	**12**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**205,710**	**55,920**	**261,630**	**168.25**	Dwelling Factor	**1**
RCNLD	**174,850**	**47,530**	**222,380**	**143.01**	Dwelling Value	**222,380**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,555**			
	BMF	**705**	**0**	**50.28**	**35,450**
	OPF	**21**	**0**	**37.62**	**790**
	BMU	**783**	**0**	**25.13**	**19,680**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**225,000**
TOTAL APPRAISAL	**285,000**
GREENBELT APR	
ASSESSMENT	**71,250**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**285,000**
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units

Water/Sewer
03 Public / Individual
Electricity
01 Public
Gas
00 None

Topo **1 Rolling**
Road Type **0 Us Highway**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **01/01/2006** By **32**
Improvements **1**
Mobile Homes **0**
NH Trend **3 TRANSITION**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**1997**	**1997**	**120**	**C**	**1**	**10X12**		**20.8333**	**AV**	**2,500**	**25**		**1**	**630**
DRW	**Driveway**	**1997**	**1997**	**1**	**C**	**1**			**2000**	**UN**	**2,000**	**100**		**1**	**2,000**

Total OBY Value **2,630**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**138**	**157**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
07/30/2020	**R2653**	**419**	**278,000**	**278,000**	**I**	**WD**	**A**	**GARCIA RAFAEL DE JESUS &**
02/18/2020	**R2616**	**683**	**181,000**	**181,000**	**I**	**WD**	**N**	**JMAY LLC SERIES 35**
02/18/2020	**R2616**	**678**	**175,000**	**175,000**	**I**	**WD**	**N**	**MUSIC CITY HOLDINGS LLC**
07/12/2019	**R2568**	**487**	**176,278**	**176,278**		**TR**		**WILMINGTON SAVINGS FUND SOCIETY I**

NOTES

INCR LAND PR*R06FN*CHG AREA CO*R06JS*08:M/A CHG PER OWNER*JG
CHG AREA CODE*FN*INCR DRWY PRICE CHG EYB*FN*CHG EYB*R10/42*
FN*CHG M/A PER OWNR-NH*R14:32 CHG EFF AGE*LDS
R18: CHG QLTY PER 32 *CB.20*CHG MA C/O NEW OWNER-MS

PREPARED BY (JI)
Homeland Title LLC
126 Kedron Parkway
Spring Hill TN 37174

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, this indenture entered into between **Benjamin W. Farris and wife Rebecca R. Farris,** FIRST PARTY, which expression shall include heirs, personal representatives and assigns, and **Alan J. Doscher and Ashley J. Doscher, husband and wife, SECOND** PARTY, which expression shall include heirs, personal representatives and assigns.

WITNESSETH:

For the consideration of the sum of TEN DOLLARS ($10.00), and other good and valuable considerations, the receipt of all of which is hereby acknowledged, FIRST PARTY conveys unto SECOND PARTY the following described property:

> Land in Maury County, Tennessee, being Lot 53, SECTION 2, PHASE 1, CARRIAGE HILLS, as shown on plat of record in Plat Book 8, Page 82, in the Register's Office, Maury County, Tennessee, to which plat reference is hereby made for a more particular description of said property.
>
> Being the same property conveyed to Benjamin W. Farris and Rebecca R. Farris, husband and wife by Warranty Deed from Ryan Heichelbech and wife, Megan Heichelbech, recorded on the 23rd day of September, 2013 in Book R2251, Page 1361, in the Register's Office of Maury County, Tennessee.
>
> Map 66F, Group A, Parcel 18.00
>
> Same description as in prior deed
>
> Property Address (for approximate identification only): 1117 Dover Drive Columbia, TN 38401

TO HAVE AND TO HOLD said real estate unto SECOND PARTY together with all rights, titles, easements and appurtenances thereunto belonging, forever.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

1117 DOVER DR (Property Address)	Subdivision **CARRIAGE HILLS SEC 2**	**TAX YEAR 2023 MAURY**	060	066F	A	018.00	000
	BK **8** PG **82** BLOCK LOT **53** TRACT		JUR	CONTROL MAP	GROUP	PARCEL	PI S/I
Ownership and Mailing Address	Alt Subdiv	City **60156 Columbia**	Map **066F**		Updated 10/27/2022		
DOSCHER ALAN J ETUX ASHLEY J	BK PG BLOCK LOT TRACT	SSD1	Dist **03**		Printed 03/17/2023		
1117 DOVER DR	Additional Description	SSD2	Card: 1 of 1				
COLUMBIA TN 38401	Dimensions **100.00X159.39 IRR**	Total Land Units **1** / Deed Acres **0** / Calculated Acres **0**	Page: 1 of 1				

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**3 Part Basement**
Stories	**1 Story Frame**	Heating/Air	**7 Heat And Cooling Split**
Exterior Wall	**12 Brick/Wood**	Attic	
Heating Fuel			

Year Built **2002**	Eff Yr Built **2010**	Rooms **0**	Bedrooms **0**				
Full Baths	Half Baths	Add'l Fixtures **7**	Total Fixtures **7**				
Wood FP Stacks **1**	Openings **1**	Add'l Sty	PreFab	Add'l Sty			
Info Src **3**	Occ **1**	Rental: Src	Year **0**	Amount **0**	Sched		

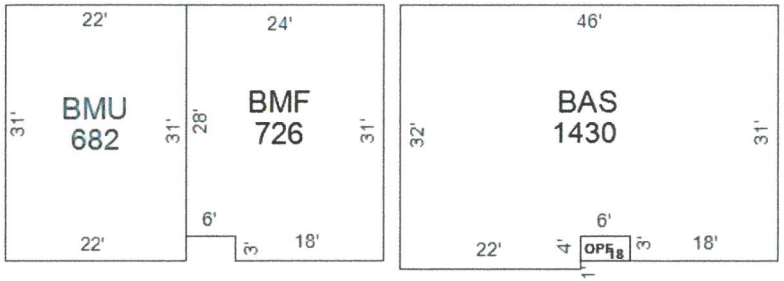
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**1+ : Average +**	Condition **Average**		Class:	
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **15**	Other Phys	Functional	External	% Good **85**	

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,430	**.958**	**1**	**1.021**	**1.07**	**1,430**	**2022**	**12**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**197,330**	**54,320**	**251,650**	**175.98**	Dwelling Factor	**1**
RCNLD	**167,730**	**46,180**	**213,910**	**149.59**	Dwelling Value	**213,910**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,430**			
	BMF	**726**	**0**	**50.28**	**36,500**
	BMU	**682**	**0**	**25.13**	**17,140**
	OPF	**18**	**0**	**37.78**	**680**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**216,500**
TOTAL APPRAISAL	**276,500**
GREENBELT APR	
ASSESSMENT	**69,125**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**276,500**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**1 Rolling**
Road Type	**0 Us Highway**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006** By **32**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**3 TRANSITION**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
PTO	**Patio**	**1991**	**1991**	**300**	**C**	**1**	**12 X 25**		**8.1667**	**AV**	**2,450**	**10**		**1**	**250**
WDK	**Wood Deck**	**1991**	**1991**	**140**	**C**	**1**	**10 X 14**		**20.8571**	**AV**	**2,920**	**10**		**1**	**290**
DRW	**Driveway**	**1991**	**1991**	**1**	**C**	**1**			**2000**	**UN**	**2,000**	**100**		**1**	**2,000**

Total OBY Value **2,540**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**100**	**159**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
04/02/2019	**R2549**	**776**	**260,000**	**260,000**	**I**	**WD**	**A**	**DOSCHER ALAN J ETUX ASHLEY J**
09/20/2013	**R2251**	**1361**	**178,000**	**178,000**	**I**	**WD**	**A**	**FARRIS BENJAMIN W ETUX**
11/14/2012	**R2211**	**1200**			**I**	**QC**	**A**	**HEICHELBECH RYAN ETUX**
08/23/2012	**R2202**	**866**	**69,470**	**69,470**	**I**	**TR**	**G**	**HEICHELBECH DAN**

NOTES

R14:32*LDS - R22: CHG DRW VAL PER 32 *CB - 22: CHG PTO, WDK, PP-UTB PER 51 *CB

Prepared by/Return to:
TransContinental Title Co.
4033 Tampa Rd Suite 101
Oldsmar, FL 34677
800-225-7897

BK/PG:R1884/1267-1269
05016113

3 PGS : AL - QUITCLAIM DEED	
SUSIE BATCH: 40684	
10/19/2005 - 09:20 AM	
VALUE	0.00
MORTGAGE TAX	0.00
TRANSFER TAX	0.00
RECORDING FEE	15.00
DP FEE	2.00
REGISTER'S FEE	0.00
TOTAL AMOUNT	17.00

STATE of TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

THIS INSTRUMENT PREPARED BY:
William E. Curphey & Associates
2605 Enterprise Road East
Suite 155
Clearwater, Florida 33759

D#10-340207-3
T-697680

QUIT CLAIM DEED

Return to mail tax statements to:
KELLIE L. CONGER
1109 DOVER DRIVE
COLUMBIA, TN 38401

Property Tax ID#: 066F-A-020-00

For and in consideration of Ten and 00/100 Dollars ($10.00) and other good and valuable consideration, KELLIE L. CONGER, Married To, KEVIN RAY CONGER, as Grantor, and KELLIE L. CONGER, a married person, KEVIN RAY CONGER, a married person, Joint Tenants w/ rights of survivorship as Grantee hereby conveys all right, title and interest that I may have in and to the following described real property located in MAURY County, Tennessee, to wit:

"SEE COMPLETE LEGAL ATTACHED AS EXHIBIT "A" INCLUDED HEREWITH AND MADE A PART HEREOF"

PROPERTY ADDRESS:
1109 DOVER DRIVE
COLUMBIA, TN 38401

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

1109 DOVER DR (Property Address)	Subdivision **CARRIAGE HILLS SEC 2**	**TAX YEAR 2023 MAURY**	060	066F	A	020.00	000
	BK **8** PG **82** BLOCK LOT **55** TRACT		JUR	CONTROL MAP	GROUP	PARCEL	PI S/I
Ownership and Mailing Address	Alt Subdiv BK PG BLOCK LOT TRACT	City **60156 Columbia**	Map **066F**		Updated 10/27/2022		
CONGER KELLIE L &	Additional Description	SSD1	Dist **03**		Printed 03/17/2023		
KEVIN RAY CONGER	Dimensions **104.94X160.97 IRR**	SSD2	Card: 1 of 1				
1109 DOVER DR		Total Land Units **1**					
COLUMBIA TN 38401		Deed Acres **0**	Page: 1 of 1				
		Calculated Acres **0**					

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built **1991**	Eff Yr Built **2006**	Rooms **0**	Bedrooms **0**				
Full Baths	Half Baths	Add'l Fixtures **7**	Total Fixtures **7**				
Wood FP Stacks **1**	Openings **1**	Add'l Sty	PreFab	Add'l Sty			
Info Src **3**	Occ **1**	Rental: Src	Year **0**	Amount **0**	Sched		

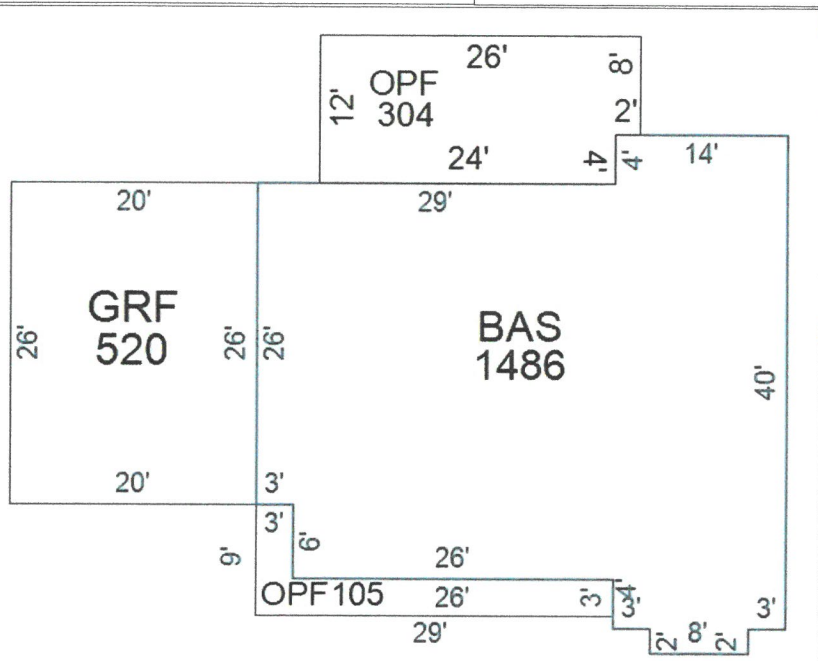
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**1+ : Average +**	Condition **Average**		Class:	
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**	

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,486	**.991**	**1**	**1**	**1.07**	**1,486**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**196,040**	**48,100**	**244,140**	**164.29**	Dwelling Factor	**1**
RCNLD	**156,830**	**38,480**	**195,310**	**131.43**	Dwelling Value	**195,310**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,486**			
	OPF	**105**	**0**	**37.71**	**3,960**
	GRF	**520**	**0**	**62.85**	**32,680**
	OPF	**304**	**0**	**37.70**	**11,460**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**198,700**
TOTAL APPRAISAL	**258,700**
GREENBELT APR	
ASSESSMENT	**64,675**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**258,700**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**1 Rolling**
Road Type	**0 Us Highway**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 32**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**3 TRANSITION**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**1991**	**2000**	**200**	**C**	**1**	**IRR**		**20.85**	**AV**	**4,170**	**34**		**1**	**1,420**
DRW	**Driveway**	**1991**	**1991**	**1**	**C**	**1**			**2000**	**UN**	**2,000**	**100**		**1**	**2,000**

Total OBY Value **3,420**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**104**	**160**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
10/07/2005	**R1884**	**1267**						**CONGER KELLIE L &**
08/31/1992	**1158**	**1**	**93,000**	**93,000**	**I**	**WD**	**A**	**CONGER KEVIN RAY**
07/29/1991	**1123**	**922**	**17,900**	**17,900**	**V**	**WD**	**M**	**ROSCOE MICHAEL**
04/17/1990	**835**	**71**						**PARKS-REAVES PROPERTIES**

NOTES

R22: CHG WDK EYB, DRW VAL PER 32 *CB - 22: ADD OPF PER 51 *CB

(1)

BK/PG: R2405/452-453
16016462

2 PGS:AL-WARRANTY DEED	
NANCY BATCH: 180095	12/02/2016 - 10:25 AM
VALUE	185000.00
MORTGAGE TAX	0.00
TRANSFER TAX	684.50
RECORDING FEE	10.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	697.50

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

mail to:
MID-STATE TITLE & ESCROW, INC.
128 HOLIDAY COURT
SUITE 125
FRANKLIN, TN 37067
(615) 790-3156

Prepared by:
Security Title & Escrow Co., LLC
Columbia, Tennessee 38402-1431

Return to Security Title & Escrow Company

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, this indenture entered into between **Charles L. Mann, Jr. or Hazel M. Mann, Trustees of the Charles L. Mann, Jr. and/or Hazel M. Mann Revocable Living Trust dated August 13, 2005,** FIRST PARTY, which expression shall include heirs, assigns and personal representatives, and **Wesley D. Andrews and Stephanie Andrews, husband and wife,** SECOND PARTY, which expression shall include heirs, assigns and personal representatives.

WITNESSETH:

For the consideration of the sum of TEN DOLLARS ($10.00), and other good and valuable considerations, the receipt of all of which is hereby acknowledged, FIRST PARTY conveys unto SECOND PARTY the following described property:

LOCATED in the Third (3rd) Civil District of Maury County, Tennessee and being Lot 41, Carriage Hills Subdivision, Section 2, Phase 1, as shown on plat of record in Plat Book 8, Page 82, Register's Office of Maury County, Tennessee.

BEING the same property conveyed to Charles L. Mann, Jr. or Hazel M. Mann, Trustees of the Charles L. Mann, Jr. and/or Hazel M. Mann Revocable Living Trust dated August 13, 2005 by deed dated May 11, 2009 of record in Book R2078, Page 206, Register's Office of Maury County, Tennessee.

Map 66F, Group A, Parcel 6

Property Address: 1108 Dover Drive, Columbia, TN 38401

TO HAVE AND TO HOLD said real estate unto SECOND PARTY together with all rights, title, easements and appurtenances thereunto belonging, forever.

FIRST PARTY COVENANTS with SECOND PARTY that he is lawfully seized and possessed of said real estate, that FIRST PARTY has a good and lawful right to convey the same, and that it is unencumbered except for easements and/or restrictions, if any, of record in the **MAURY** County, Tennessee Register of Deeds office.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

1108 DOVER DR
Property Address

Ownership and Mailing Address
ANDREWS WESLEY D ETUX STEPHANIE
1108 DOVER DR
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 2**
BK **8** PG **82** BLOCK LOT **41** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **131.04X175.00 IRR**

TAX YEAR 2023
MAURY

JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
060	066F	A	006.00		000

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**

Map **066F** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type **01 Single Family** Lower Level **1 No Basement**
Stories **2 Story Frame** Heating/Air **7 Heat And Cooling Split**
Exterior Wall **04 Siding Average** Attic
Heating Fuel

Year Built	Eff Yr Built	Rooms	Bedrooms
1991	**2006**	**0**	**0**

Full Baths	Half Baths	Add'l Fixtures	Total Fixtures
		9	**9**

Wood FP Stacks	Openings	Add'l Sty	PreFab	Add'l Sty

Info Src	Occ	Rental: Src	Year	Amount	Sched
3	**1**		**0**	**0**	

Foundation **02 Continuous Footing** Floor Finish **11 Carpet Combination**
Floor System **04 Wood W/ Sub Floor** Interior Finish **07 Drywall**
Party Wall **00 None** Paint/Decor **04 Above Average**
Struct. Frame **00 None** Bath Tile **00 None**
Roof Framing **02 Gable/Hip** Electrical **04 Above Average**
Roof Cov/Deck **03 Composition Shingle** Shape **01 Rectangular Design**
Cab/Millwork **04 Above Average**

Quality **1+ : Average +** Condition **Average** Class:

Prorate	Date	Factor	% Comp	Cost & Design
				0

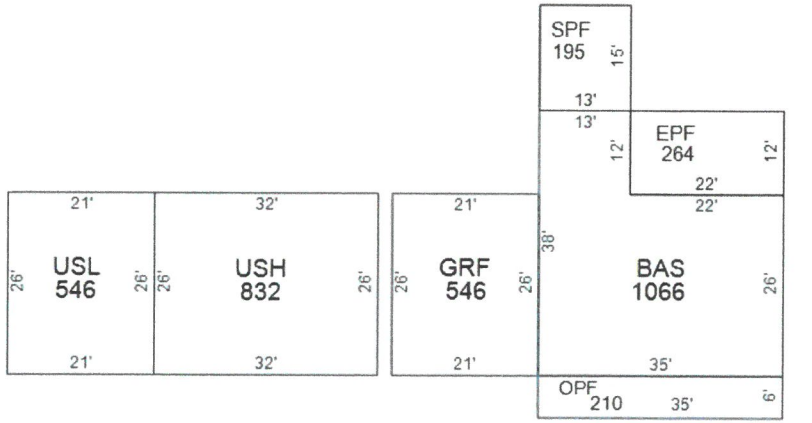
Depr: Physical	Other Phys	Functional	External	% Good
20				**80**

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,066	**.737**	**1**	**1**	**1.07**	**1,729**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt
RCN	**149,160**	**153,890**	**303,050**	**175.27**
RCNLD	**119,330**	**123,110**	**242,440**	**140.22**

% Complete
Dwelling Factor **1**
Dwelling Value **242,440**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,066**			
	OPF	**210**	**0**	**37.71**	**7,920**
	GRF	**546**	**0**	**62.84**	**34,310**
	USH	**832**	**60**	**62.84**	**52,280**
	USL	**546**	**30**	**37.71**	**20,590**
	EPF	**264**	**0**	**100.53**	**26,540**
	SPF	**195**	**0**	**62.82**	**12,250**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**248,100**
TOTAL APPRAISAL	**308,100**
GREENBELT APR	
ASSESSMENT	**77,025**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**308,100**
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units
Water/Sewer **03 Public / Individual**
Electricity **01 Public**
Gas **00 None**
Topo **1 Rolling**
Road Type **0 Us Highway**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **01/01/2006** By **32**
Improvements **1**
Mobile Homes **0**
NH Trend **3 TRANSITION**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**2006**	**2006**	**352**	**C**	**1**	**16 X 22**		**16.2784**	**AV**	**5,730**	**52**		**1**	**2,980**
DRW	**Driveway**	**1991**	**1991**	**1**	**C**	**1**			**1500**	**UN**	**1,500**	**100**		**1**	**1,500**
UTB	**Utility Building**	**1996**	**1996**	**100**	**C**	**1**	**10X10**		**25.3**	**AV**	**2,530**	**48**		**1**	**1,210**

Total OBY Value **5,690**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**131**	**175**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
11/29/2016	**R2405**	**452**	**185,000**	**185,000**	**I**	**WD**	**A**	**ANDREWS WESLEY D ETUX STEPHANIE**
05/11/2009	**R2078**	**206**						**MANN CHARLES L JR OR HAZEL**
07/26/1991	**1123**	**654**	**99,500**	**99,500**	**V**	**WD**	**M**	**MANN CHARLES LYNWOOD**
04/03/1991	**1114**	**474**	**17,900**	**17,900**	**V**	**WD**	**M**	**REAVES LARRY G**

NOTES

CHG SPU TO EPU PER 32*FN06VI*INCR LAND PRICE*R06FN
CHG AREA CODE*R06JS*CHG AREA CODE*FN*INCR DRWY PRICE
CHG EYB ON WD DECK*R10/32*FN*R2078-206 LIV TRUST*JG
15:32 CHG DWELLING REMEASURE HSE*LDS

BK/PG:R1721/940-941

03106048

2 PGS : AL - WARRANTY DEED	
SUSIE BATCH: 3583	
06/30/2003 - 08:48 AM	
VALUE	116000.00
MORTGAGE TAX	0.00
TRANSFER TAX	429.20
RECORDING FEE	10.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	442.20

STATE of TENNESSEE, MAURY COUNTY

L WAYNE WHITE
REGISTER OF DEEDS

PREPARED BY:
JAMES T. DUBOIS
ATTORNEY AT LAW
COLUMBIA, TENN.

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, this indenture entered into between Christ Our Savior Evangelical Lutheran Church, FIRST PARTY, which expression shall include successors and assigns, and Charles Alwin Westra and wife, Debra Dawn Westra, as tenants by the entirety, SECOND PARTY, which expression shall include heirs, assigns and personal representatives.

W I T N E S S E T H:

For the consideration of the sum of TEN DOLLARS ($10.00), and other good and valuable considerations, the receipt of all of which is hereby acknowledged, FIRST PARTY conveys unto SECOND PARTY the following described property:

> Located in the Third (3rd) Civil District of Maury County, Tennessee, and being Lot No. 19, Carriage Hills Subdivision, Section 1, as shown on plat of record in Plat Book 5, Page 282, Register's Office of Maury County, Tennessee.
>
> Being the same property conveyed to FIRST PARTY herein by deed of record in Book 1165, Page 208, Register's Office of Maury County, Tennessee.
>
> Map 66K, Group A, Parcel 34.

TO HAVE AND TO HOLD said real estate unto SECOND PARTY together with all rights, titles, easements and appurtenances thereunto belonging, forever.

FIRST PARTY COVENANTS with SECOND PARTY that it is lawfully seized and possessed of said real estate and that FIRST PARTY has a good and lawful right to convey the same, and that it is unencumbered except as follows: current year's property taxes which will be prorated as of the date of this deed and assumed by SECOND PARTY; building restrictions of record in Book 647, Page 280, as amended in Book 653, Page 511, and Book 733, Page 432, Register's Office of Maury County, Tennessee; and applicable utility and drainage easements, building setback lines and other matters as shown on recorded plat.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

1100 DOVER DR
Property Address
Ownership and Mailing Address

WESTRA CHARLES ALWIN ETUX
DEBRA DAWN
1100 DOVER DR
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 1**
BK **5** PG **282** BLOCK LOT **0019** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **140X134.37 IRR**

TAX YEAR 2023
MAURY

060	066K	A	034.00		000
JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**

Map **066F** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type **01 Single Family** Lower Level **4 Full Basement**
Stories **1 Story Frame** Heating/Air **8 Heat And Cooling Pkg**
Exterior Wall **11 Common Brick** Attic
Heating Fuel

Year Built	**1993**	Eff Yr Built	**2002**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**10**	Total Fixtures	**10**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **0**	Rental: Src		Year **0**		Amount **0**	Sched

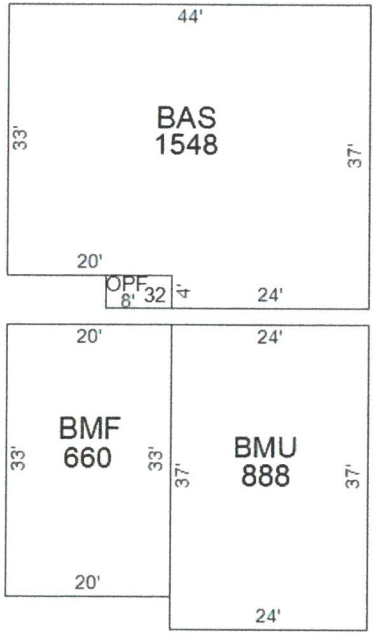
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**01 Floor Only**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality **2 : Above Average** Condition **Average** Class:
Prorate Date Factor % Comp Cost & Design **0**
Depr: Physical **20** Other Phys Functional External % Good **80**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,548	**1.028**	**1**	**1.07**	**1.21**	**1,548**	**2022**	**20**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**250,170**	**64,130**	**314,300**	**203.04**	Dwelling Factor	**1**
RCNLD	**200,140**	**51,300**	**251,440**	**162.43**	Dwelling Value	**251,440**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,548**			
	BMF	**660**	**0**	**56.86**	**37,530**
	OPF	**32**	**0**	**42.5**	**1,360**
	BMU	**888**	**0**	**28.42**	**25,240**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**253,500**
TOTAL APPRAISAL	**313,500**
GREENBELT APR	
ASSESSMENT	**78,375**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**313,500**
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units
Water/Sewer **01 Public / Public**
Electricity **01 Public**
Gas **00 None**
Topo **0 Level**
Road Type **3 Paved**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **01/01/2006** By **04**
Improvements **1**
Mobile Homes **0**
NH Trend **0 STABLE**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**1993**	**1993**	**224**	**C**	**1**	**14X16**		**19.8214**	**AV**	**4,440**	**13**		**1**	**580**
DRW	**Driveway**	**1993**	**2005**	**1**	**C**	**1**			**1500**	**UN**	**1,500**	**100**		**1**	**1,500**

Total OBY Value **2,080**

ENTRANCES

Date	Code	ID
07/09/2003	**01 Bldg Apr**	**45**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**140**	**134**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
06/26/2003	**R1721**	**940**	**116,000**	**116,000**	**I**	**WD**	**F**	**WESTRA CHARLES ALWIN ETUX**
11/16/1992	**1165**	**208**	**17,900**	**17,900**	**V**	**WD**	**A**	**CHRIST OUR SAVIOR EVANGELI**
04/17/1990	**835**	**71**	**10**	**10**	**V**	**WD**	**M**	**PARKS REAVES PROPERTIES**
04/16/1990	**835**	**65**	**355,750**	**355,750**	**V**	**WD**	**M**	**PARKS ROBERT S**

NOTES

INCR LAND PRICE*R06FN*AREA CODE R06BV*CHG AREA CODE*FN
CHG CAB,PAINT, ELEC, ADD FRPL*R10/32*FN - R22: CHG WDK EYB PER 32 *CB

STATE OF TENNESSEE
COUNTY OF MAURY

THE ACTUAL CONSIDERATION OR VALUE, WHICHEVER IS GREATER, FOR THIS TRANSFER IS $ 89,000.00

Diane McKee, GRI
Affiant

SUBSCRIBED AND SWORN TO BEFORE ME, THIS THE 19th DAY OF May 19 93

Carlene Messick
Notary Public

MY COMMISSION EXPIRES: 5-22-95
(AFFIX SEAL)

CARLENE MESSICK NOTARY PUBLIC STATE OF TENNESSEE LAW

THIS INSTRUMENT WAS PREPARED BY

Steltemeier & Westbrook, Attys, 2002 Richard Jones Rd., C-101, Nashville, Tn. 37215

ADDRESS NEW OWNER(S) AS FOLLOWS:	SEND TAX BILLS TO:	MAP-PARCEL NUMBERS
Cristi Secrest (NAME)	Atlantic Coast Mortgage Company (NAME)	MAP 066F
1104 Dover Drive (ADDRESS)	12700 Fair Lakes Circle, Suite 400 (ADDRESS)	GROUP A
Columbia, TN 38401 (CITY) (STATE) (ZIP)	Farifax, VA 22033 (CITY) (STATE) (ZIP)	PARCEL 00100

FOR AND CONSIDERATION OF THE SUM OF TEN DOLLARS, CASH IN HAND PAID BY THE HEREINAFTER NAMED GRANTEES, AND OTHER GOOD AND VALUABLE CONSIDERATIONS, THE RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED, WE, Richard L. Hawkersmith and wife, Dawn O. Hawkersmith

HEREINAFTER CALLED THE GRANTORS, HAVE BARGAINED AND SOLD, AND BY THESE PRESENTS DO TRANSFER AND CONVEY UNTO Cristi Secrest , a single person

HEREINAFTER CALLED THE GRANTEES, THEIR HEIRS AND ASSIGNS, A CERTAIN TRACT OR PARCEL OF LAND IN Maury COUNTY, STATE OF TENNESSEE, DESCRIBED AS FOLLOWS, TO-WIT:

Land in the Third (3rd) Civil District of Maury County, Tennessee, being Lot No. 38 on the Plan of Carriage Hills Subdivision, Section 2, Phase I, as of record in Plat Book 8, page 82, Register's Office for said County, to which plat reference is hereby made for a more complete and accurate legal description.

Being the same property conveyed to Richard L. Hawkersmith and wife, Dawn O. Hawkersmith by deed from Richard H. Fleeman of record in Book 1143, page 17, Register's Office for Maury County, Tennessee.

This conveyance is subject to any and all existing restrictions and easements of record.

MAURY COUNTY, STATE OF TENNESSEE
Received for record this 19 of May 19 93 at 2:10 o'clock P M
Note Book 15 Page 547 Receipt #22887 Recording Fee 8.00
State Tax 329.30 Probate Fee 1.00 Total 338.30
Book 1182 Page 102, Witness my Hand,
MAURY COUNTY REGISTER OF DEEDS L. Wayne White

unimproved ( )
This is improved (X) property, known as 1104 Dover Drive, Columbia, TN 38401
(House Number) (Street) (P.O. Address) (City or Town) (Postal Zip)

TO HAVE AND TO HOLD the said tract or parcel of land, with the appurtenances, estate, title and interest thereto belonging to the said GRANTEES, their heirs and assigns forever; and we do covenant with the said GRANTEES that we are lawfully seized and possessed of said land in fee simple, have a good right to convey it and the same is unencumbered, unless otherwise herein set out; and we do further covenant and bind ourselves, our heirs and representatives, to warrant and forever defend the title to the said land to the said GRANTEES, their heirs and assigns, against the lawful claims of all persons whomsoever. Wherever used, the singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

Witness our hand S this 26th day of February 19 93

Richard L. Hawkersmith

Dawn O. Hawkersmith

DCTTNOTW 12/86

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

1104 DOVER DR	Subdivision **CARRIAGE HILLS SEC 2**				**TAX YEAR 2023**	**060**	**066F**	**A**	**001.00**		**000**
Property Address	BK **8**	PG **82**	BLOCK	LOT **38**	TRACT	**MAURY**	JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
Ownership and Mailing Address	Alt Subdiv					City **60156 Columbia**		Map **066F**		Updated 10/27/2022	
SECREST CRISTI	BK	PG	BLOCK	LOT	TRACT	SSD1		Dist **03**		Printed 03/17/2023	
1104 DOVER DR	Additional Description					SSD2					
COLUMBIA TN 38401	Dimensions **137.30X130.55 IRR**					Total Land Units **1**		Card: 1 of 1			
						Deed Acres **0**					
						Calculated Acres **0**		Page: 1 of 1			

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built **1991**	Eff Yr Built **2006**	Rooms **0**	Bedrooms **0**				
Full Baths	Half Baths	Add'l Fixtures **6**	Total Fixtures **6**				
Wood FP Stacks **1**	Openings **1**	Add'l Sty	PreFab	Add'l Sty			
Info Src **2**	Occ **1**	Rental: Src	Year **0**	Amount **0**	Sched		

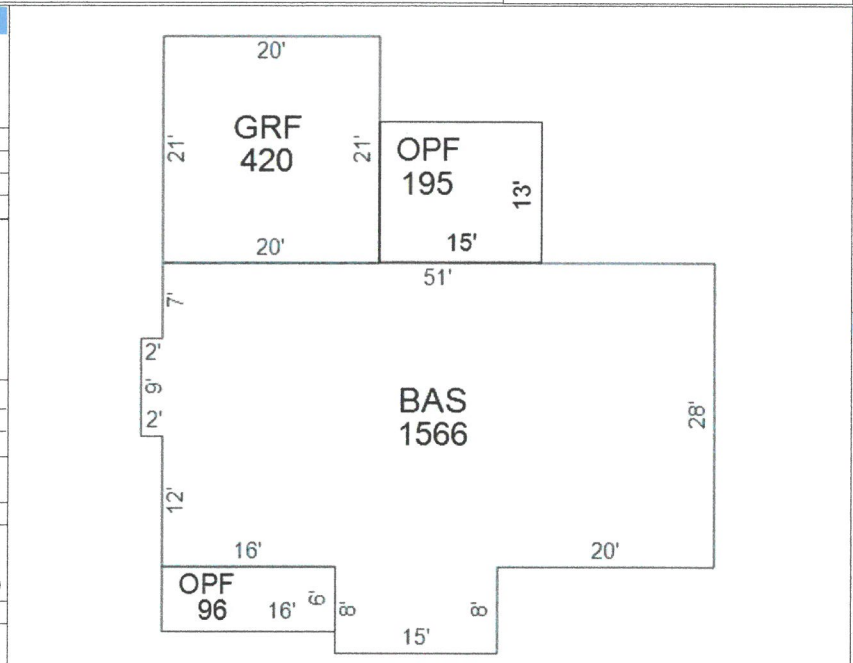
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition **Average**		Class:	
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**	

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,566	**1.039**	**1**	**1**	**1.21**	**1,566**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**230,410**	**42,250**	**272,660**	**174.11**	Dwelling Factor	**1**
RCNLD	**184,330**	**33,800**	**218,130**	**139.29**	Dwelling Value	**218,130**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,566**			
	OPF	**96**	**0**	**42.60**	**4,090**
	GRF	**420**	**0**	**71.07**	**29,850**
	OPF	**195**	**0**	**42.62**	**8,310**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**223,700**
TOTAL APPRAISAL	**283,700**
GREENBELT APR	
ASSESSMENT	**70,925**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**283,700**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**1 Rolling**
Road Type	**0 Us Highway**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 32**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**3 TRANSITION**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1991**	**1991**	**1**	**C**	**1**			**500**	**UN**	**500**	**100**		**1**	**500**
GAZ	**Gazebo**	**2006**	**2006**	**64**	**B**	**1**	**8 X 8**		**83.125**	**GD**	**5,320**	**76**		**1**	**4,040**
WDK	**Wood Deck**	**2010**	**2010**	**80**	**C**	**1**	**8 X 10**		**20.875**	**AV**	**1,670**	**64**		**1**	**1,070**

Total OBY Value **5,610**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**137**	**130**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
02/26/1993	**1182**	**102**	**89,000**	**89,000**	**I**	**WD**	**A**	**SECREST CRISTI**
03/18/1992	**1143**	**17**	**88,000**	**88,000**	**I**	**WD**	**A**	**HAWKERSMITH RICHARD L**
03/20/1991	**1113**	**333**	**17,900**	**17,900**	**V**	**WD**	**A**	**FLEEMAN RICHARD H**
04/17/1990	**835**	**71**						**PARKS-REAVES PROPERTIES**

NOTES

R14:32 DEL OPF, ADD GAZ, CHG EYB*LDS - R18: CHG QLTY, GAZ QLTY PER 32 *CB
22: ADD OPF, DEL WDK PER 51 *CB

This Instrument Prepared By:

William A. Graham
Columbia, TN 38401

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, this indenture entered into between PHOENIX HOMES, INC., a Tennessee corporation, FIRST PARTY, which expression shall include heirs, assigns and personal representatives, and SON MINH DO AND WIFE, KATHRINE M. DO, as tenants by the entirety, SECOND PARTY, which expression shall include heirs, assigns and personal representatives.

WITNESSETH:

For the consideration of TEN DOLLARS ($10.00), and other good and valuable considerations, the receipt of all of which is hereby acknowledged, FIRST PARTY conveys to SECOND PARTY the following described property:

Located in the Third (3rd) Civil District of Maury County, Tennessee, and being Lot 42, Carriage Hills Subdivision, Section 2, Phase 1, as shown on plat of record in Plat Book 8, Page 82, Register's Office of Maury County, Tennessee.

Legal Description obtained from prior deed.

This property is shown on the tax records of Maury County, Tennessee, as Map 66F, Group A, Parcel 7.

Being the same property conveyed to FIRST PARTY herein by deed of record in Deed Book 1111, Page 837, Register's Office of Maury County, Tennessee.

TO HAVE AND TO HOLD said real estate unto SECOND PARTY, together with all rights, titles, easements and appurtenances thereunto belonging, forever.

FIRST PARTY COVENANTS that it is lawfully seized and possessed of said real estate and that FIRST PARTY has a good and lawful right to convey the same, and that it is unencumbered, except for current year's property taxes, building restrictions of record in Book 853, Page 210, Register's Office of Maury County, Tennessee, and building setback lines and utility and drainage easements as shown on recorded plat.

FIRST PARTY FURTHER COVENANTS to forever warrant and defend the title to the above described property unto SECOND PARTY against the lawful claims of all persons whomsoever.

IN WITNESS WHEREOF, this conveyance has been executed on the 28 day of April, 1992.

PHOENIX HOMES, INC.

BY: _____
JOE GULLETT, JR. PRESIDENT

STATE OF TENNESSEE

COUNTY OF MAURY

Personally appeared before me, the undersigned, a Notary Public in and for the State and County aforesaid, JOE GULLETT, JR., with whom I am

LIBER 1146 PAGE 961

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

1112 DOVER DR	Subdivision **CARRIAGE HILLS SEC 2**	**TAX YEAR 2023**	**060**	**066F**	**A**	**007.00**	**000**
Property Address	BK **8** PG **82** BLOCK LOT **42** TRACT	**MAURY**	JUR	CONTROL MAP	GROUP	PARCEL	PI S/I
Ownership and Mailing Address	Alt Subdiv	City **60156 Columbia**	Map **066F**		Updated 10/27/2022		
DO SON MINH	BK PG BLOCK LOT TRACT	SSD1	Dist **03**		Printed 03/17/2023		
ETUX KATHERINE M	Additional Description	SSD2	Card: 1 of 1				
1112 DOVER DR	Dimensions **100.00X392.48 IRR**	Total Land Units **1**	Page: 1 of 1				
COLUMBIA TN 38401		Deed Acres **0**					
		Calculated Acres **0**					

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**7 Heat And Cooling Split**
Exterior Wall	**11 Common Brick**	Attic	**4 Full-Fin**
Heating Fuel			

Year Built **1992**	Eff Yr Built **2002**	Rooms **0**	Bedrooms **0**				
Full Baths	Half Baths	Add'l Fixtures **10**	Total Fixtures **10**				
Wood FP Stacks **1**	Openings **1**	Add'l Sty	PreFab	Add'l Sty			
Info Src **3**	Occ **1**	Rental: Src	Year **0**	Amount **0**	Sched		

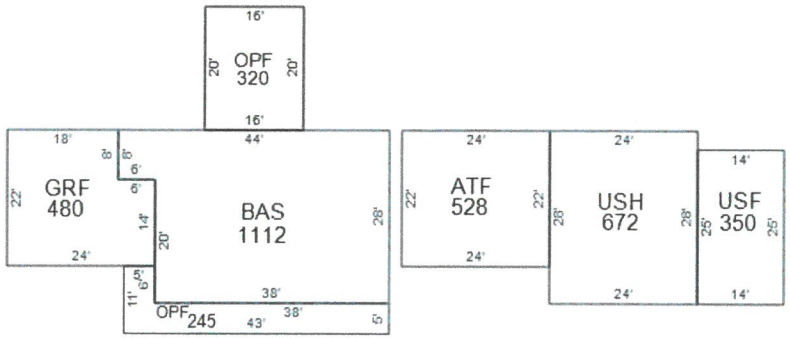
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**1+ : Average +**	Condition **Average**	Class:		
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**	

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,112	**.765**	**1**	**1.07**	**1.07**	**1,865**	**2022**	**20**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**170,250**	**146,560**	**316,810**	**169.87**	Dwelling Factor	**1**
RCNLD	**136,200**	**117,250**	**253,450**	**135.90**	Dwelling Value	**253,450**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,112**			
	USF	**350**	**100**	**113.11**	**39,590**
	OPF	**245**	**0**	**37.71**	**9,240**
	GRF	**480**	**0**	**62.83**	**30,160**
	USH	**672**	**60**	**62.84**	**42,230**
	ATF	**528**	**0**	**25.13**	**13,270**
	OPF	**320**	**0**	**37.72**	**12,070**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**261,000**
TOTAL APPRAISAL	**321,000**
GREENBELT APR	
ASSESSMENT	**80,250**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**321,000**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**1 Rolling**
Road Type	**0 Us Highway**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 32**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**3 TRANSITION**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**2014**	**2014**	**300**	**C**	**1**	**20 X 15**		**17.4333**	**AV**	**5,230**	**76**	**1**	**1**	**3,980**
DRW	**Driveway**	**1992**	**1992**	**1**	**C**	**1**			**2000**	**UN**	**2,000**	**100**	**1**	**1**	**2,000**
UTB	**Utility Building**	**1997**	**1997**	**120**	**C**	**1**	**10X12**		**25.25**	**AV**	**3,030**	**50**	**1**	**1**	**1,520**

Total OBY Value **7,500**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**100**	**392**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
04/28/1992	**1146**	**961**	**17,900**	**17,900**	**V**	**WD**	**A**	**DO SON MINH**
02/28/1991	**1111**	**837**	**17,900**	**17,900**	**V**	**WD**	**A**	**PHOENIX HOMES INC**
04/17/1990	**835**	**71**						**PARKS-REAVES PROPERTIES**

NOTES

CHG OPF TO SPF INCR LAND PRICE*R06FN*CHG AREA CODE*R06JS
CHG AREA CODE*FN*INCR DRWY PRICE*R10/32*FN
15:32 ADD OPF/CHG WD DECK/CHG QUA*LDS - 21: ADD TO BAS PER 50 *CB

Title Realty Title

BK/PG:R2354/298-299

16000486

2 PGS : AL - WARRANTY DEED
SUSIE BATCH: 168364
01/13/2016 - 09:35 AM

VALUE	170000.00
MORTGAGE TAX	0.00
TRANSFER TAX	629.00
RECORDING FEE	10.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	642.00

STATE of TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

THIS INSTRUMENT PREPARED BY:
PAUL B. PLANT, ATTY. AT LAW
225 MAHR AVENUE
LAWRENCEBURG, TN. 38464
File #151249BR

FROM: LILLIE ELAINE TRUITT, A MARRIED PERSON, JEFFREY TRUITT, A MARRIED PERSON, SARA SMITH, A MARRIED PERSON AND JACOB POWELL, A MARRIED PERSON

TO: ALISON EPPS AND ANDREW C. EPPS, WIFE AND HUSBAND

WARRANTY DEED

For and in consideration of the sum of ONE HUNDRED SEVENTY THOUSAND AND NO/100--- ($170,000.00) ---DOLLARS, cash in hand paid, the receipt of which is hereby acknowledged, We, LILLIE ELAINE TRUITT, A MARRIED PERSON, JEFFREY TRUITT, A MARRIED PERSON, SARA SMITH, A MARRIED PERSON AND JACOB POWELL, A MARRIED PERSON, have bargained and sold, and by these presents, do transfer and convey unto the said ALISON EPPS AND ANDREW C. EPPS, WIFE AND HUSBAND, their heirs and assigns, a certain tract or parcel of land located in Maury County, Tennessee, being more fully described as follows:

Land in Maury County, Tennessee, being Lot 37, Carriage Hills Subdivision, Section 2, as shown on plat of record in Plat Book 8, Page 82, in the Register's Office, Maury County, Tennessee, to which plat reference is hereby made for a more particular description of said property.

Subject to all matters as shown on plat of record in Book 8, Page 82, Register's Office of Maury County, Tennessee.

Subject to Restrictions of record in Book 853, Page 210, Register's Office of Maury County, Tennessee.

This being the same property conveyed to Lillie Elaine Truitt, Jeffrey Truitt, Sara Smith and Jacob Powell, as equal tenants in common by Warranty Deed from Bryan P. Rider, unmarried, recorded on the 8th day of October, 2014 in Deed Book R2294, Page 542, in the Register's Office of Maury County, Tennessee.

SUBJECT PROPERTY IS NOT THE GRANTORS USUAL PLACE OF RESIDENCE.

MAP 66FA, PARCEL 2.00

PROPERTY ADDRESS: 1004 GRAYSON PLACE, COLUMBIA, TN 38401

To have and to hold the said tract or parcel of land, with the appurtenances, estate title and interest, thereto belonging to the said ALISON EPPS AND ANDREW C. EPPS, WIFE AND HUSBAND, their heirs and assigns forever. And we do covenant with the said ALISON EPPS AND ANDREW C. EPPS, WIFE AND HUSBAND, that we are lawfully seized and

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

1004 GRAYSON PL Property Address Ownership and Mailing Address **EPPS ALISON ETVIR ANDREW C** **1004 GRAYSON PL** **COLUMBIA TN 38401**	Subdivision **CARRIAGE HILLS SEC 2** BK **8** PG **82** BLOCK LOT **37** TRACT Alt Subdiv BK PG BLOCK LOT TRACT Additional Description Dimensions **117.89X158.75 IRR**	**TAX YEAR 2023** **MAURY**	**060**	**066F**	**A**	**002.00**		**000**
		JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I	
		City **60156 Columbia**	Map **066F**	Updated 10/27/2022				
		SSD1	Dist **03**	Printed 03/17/2023				
		SSD2	Card: 1 of 1					
		Total Land Units **1** Deed Acres **0** Calculated Acres **0**	Page: 1 of 1					

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built **1991**	Eff Yr Built **2006**	Rooms **0**	Bedrooms **0**				
Full Baths	Half Baths	Add'l Fixtures **7**	Total Fixtures **7**				
Wood FP Stacks	Openings	Add'l Sty	PreFab	Add'l Sty			
Info Src **3**	Occ **1**	Rental: Src	Year **0**	Amount **0**	Sched		

Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality **2 : Above Average** Condition **Average** Class:

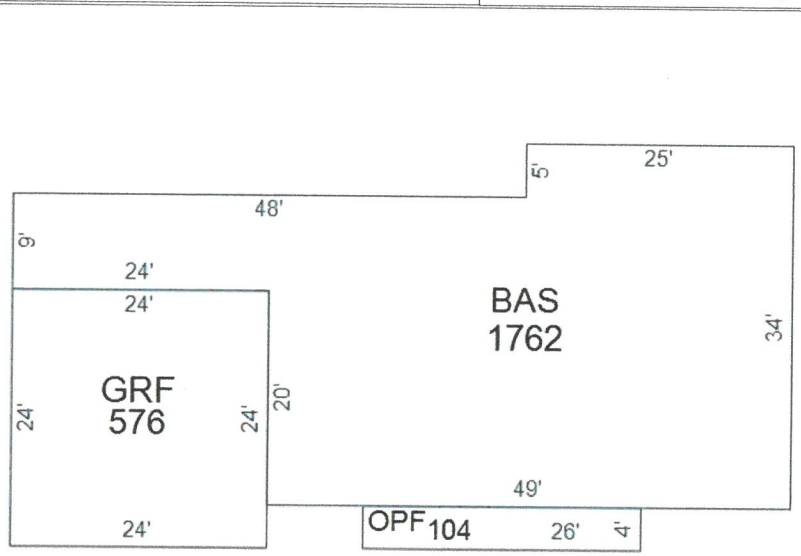
Prorate Date Factor % Comp Cost & Design **0**

Depr: Physical **20** Other Phys Functional External % Good **80**

	Factors							
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,762	**1.156**	**1**	**1**	**1.21**	**1,762**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**253,060**	**45,360**	**298,420**	**169.36**	Dwelling Factor	**1**
RCNLD	**202,450**	**36,280**	**238,730**	**135.49**	Dwelling Value	**238,730**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,762**			
	OPF	**104**	**0**	**42.60**	**4,430**
	GRF	**576**	**0**	**71.06**	**40,930**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**244,200**
TOTAL APPRAISAL	**304,200**
GREENBELT APR	
ASSESSMENT	**76,050**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**304,200**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**1 Rolling**
Road Type	**0 Us Highway**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 32**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**3 TRANSITION**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1991**	**1991**	**1**	**C**	**1**			**500**	**UN**	**500**	**100**		**1**	**500**
WDK	**Wood Deck**	**2020**	**2020**	**300**	**C**	**1**	**15 X 20**		**17.4333**	**AV**	**5,230**	**94**		**1**	**4,920**

Total OBY Value **5,420**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**117**	**158**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
01/08/2016	**R2354**	**298**	**170,000**	**170,000**	**I**	**WD**	**A**	**EPPS ALISON ETVIR ANDREW C**
10/07/2014	**R2294**	**542**	**95,000**	**95,000**	**I**	**WD**	**A**	**TRUITT LILLIE ELAINE ETAL JEFFREY TI**
03/24/1995	**1248**	**687**	**102,000**	**102,000**	**I**	**WD**	**A**	**RIDER BRYAN P**
08/31/1993	**1194**	**182**	**95,000**	**95,000**	**I**	**WD**	**A**	**TAMEZ RAUL ETUX**

NOTES

R18: CHG QLTY PER 32 *CB - 22: REPL WDK PER 51 *CB

BK/PG: R2623/1073-1074

20005431

2 PGS:AL-WARRANTY DEED	
SUSIE BATCH: 227082	04/03/2020 - 09:30 AM
VALUE	260000.00
MORTGAGE TAX	0.00
TRANSFER TAX	962.00
RECORDING FEE	10.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	975.00

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

WARRANTY DEED

KIMBERLY HOLLINGSHEAD STATE OF TENNESSEE NOTARY PUBLIC WILLIAMSON COUNTY

STATE OF TENNESSEE
COUNTY OF WILLIAMSON
THE ACTUAL CONSIDERATION OR VALUE, WHICHEVER IS GREATER FOR THIS TRANSFER IS $260,000.00

AFFIANT

SUBSCRIBED AND SWORN TO ME ON THE 30TH DAY OF MARCH, 2020.

NOTARY PUBLIC

MY COMMISSION EXPIRES 2/12/23

THIS INSTRUMENT PREPARED BY
Jim R. Vanderpool, P.C., 256 Seaboard Lane, G-104, Franklin, TN 37067
file # 20-1707KH

ADDRESS OF NEW OWNER	SEND TAX BILLS TO (If left blank please use the address of the new owner)	MAP-PARCEL
Hunter L. Tyree and Lauren Tyree	Legacy Mutual Home Mortgage	66F-A-003.00
1008 Grayson Place	3503 Paesanos Parkway	
Columbia, TN 38401	San Antonio, TX 78231	

FOR AND CONSIDERATION OF THE SUM OF TEN DOLLARS, CASH IN HAND PAID BY THE HEREINAFTER NAMED GRANTEES, AND OTHER GOOD AND VALUABLE CONSIDERATION, THE RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED, WE,

MARTY TYREE AND JAMIE TYREE

HEREINAFTER CALLED THE GRANTORS, HAVE BARGAINED AND SOLD, AND BY THESE PRESENTS DO TRANSFER AND CONVEY UNTO:

HUNTER L. TYREE AND LAUREN TYREE, MARRIED COUPLE

HEREINAFTER CALLED THE GRANTEES, THEIR HEIRS AND ASSIGNS, A CERTAIN TRACT OR PARCEL OF LAND IN MAURY COUNTY, TENNESSEE, DESCRIBED AS FOLLOWS TO-WIT:

SEE EXHIBIT "A"

This is property known as 1008 Grayson Place, Columbia, TN 38401

TO HAVE AND TO HOLD the said tract or parcel of land, with the appurtenances, estate, title and interest thereto belonging to the said GRANTEE(S), their heirs and/or assigns forever; and we do covenant with the said GRANTEE(S) that we are lawfully seized and possessed of said land in fee simple, have a good right to convey it and the same is unencumbered, unless otherwise herein set out; and we do further covenant and bind ourselves, our heirs and representatives, to warrant and forever defend the title to the said land to the said GRANTEE(S), their heirs and/or assigns, against the lawful claims of all persons whomsoever. Wherever used, the singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

Witness hand on the 30th day of March, 2020.

Marty Tyree

Jamie Tyree

STATE OF TENNESSEE
COUNTY OF WILLIAMSON

Personally appeared before me, the undersigned, a Notary Public, in and for said County and State, the within named, MARTY TYREE AND JAMIE TYREE, the bargainor(s), with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence) and who acknowledged that executed the within instrument for the purposes therein contained.

Witness my hand and official seal at Franklin, Tennessee, this 30th day of March, 2020.

Notary Public

My Commission Expires: 2/12/23

KIMBERLY HOLLINGSHEAD STATE OF TENNESSEE NOTARY PUBLIC WILLIAMSON COUNTY

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

1008 GRAYSON PL Property Address Ownership and Mailing Address **TYREE HUNTER L ETUX LAUREN** **1008 GRAYSON PL** **COLUMBIA TN 38401**	Subdivision **CARRIAGE HILLS SEC 2** BK **8** PG **82** BLOCK LOT **36** TRACT Alt Subdiv BK PG BLOCK LOT TRACT Additional Description Dimensions **102.09X161.98 IRR**	**TAX YEAR 2023** **MAURY**	060	066F	A	003.00		000
			JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
		City **60156 Columbia**	Map **066F**	Updated 10/27/2022				
		SSD1	Dist **03**	Printed 03/17/2023				
		SSD2	Card: 1 of 1					
		Total Land Units **1** Deed Acres **0** Calculated Acres **0**	Page: 1 of 1					

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**4 Full Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**12 Brick/Wood**	Attic	
Heating Fuel			

Year Built **1991**	Eff Yr Built **2006**	Rooms **0**	Bedrooms **0**				
Full Baths	Half Baths	Add'l Fixtures **7**	Total Fixtures **7**				
Wood FP Stacks **1**	Openings **1**	Add'l Sty	PreFab	Add'l Sty			
Info Src **3**	Occ **1**	Rental: Src	Year **0**	Amount **0**	Sched		

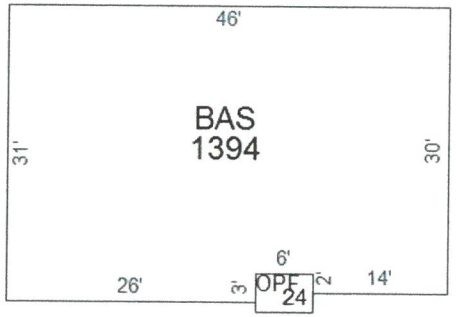
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

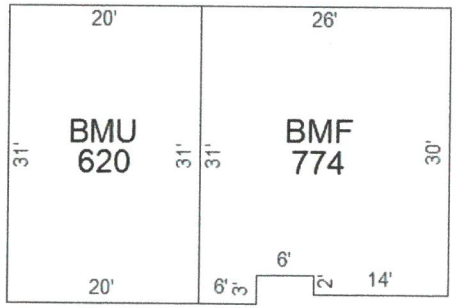
Quality	**2 : Above Average**	Condition **Average**		Class:	
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**	

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,394	**.936**	**1**	**1.021**	**1.21**	**1,394**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**213,910**	**62,650**	**276,560**	**198.39**	Dwelling Factor	**1**
RCNLD	**171,130**	**50,130**	**221,260**	**158.72**	Dwelling Value	**221,260**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,394**			
	BMF	**774**	**0**	**56.86**	**44,010**
	OPF	**24**	**0**	**42.5**	**1,020**
	BMU	**620**	**0**	**28.42**	**17,620**





APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**222,600**
TOTAL APPRAISAL	**282,600**
GREENBELT APR	
ASSESSMENT	**70,650**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**282,600**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**1 Rolling**
Road Type	**0 Us Highway**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 32**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**3 TRANSITION**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**1991**	**1991**	**240**	**C**	**1**	**12X20**		**19.2083**	**AV**	**4,610**	**10**		**1**	**460**
DRW	**Driveway**	**1991**	**1991**	**1**	**C**	**1**			**900**	**UN**	**900**	**100**		**1**	**900**

Total OBY Value **1,360**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**102**	**161**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
03/30/2020	**R2623**	**1073**	**260,000**	**260,000**	**I**	**WD**	**B**	**TYREE HUNTER L ETUX LAUREN**
09/26/1995	**1266**	**736**	**110,500**	**110,500**	**I**	**WD**	**A**	**TYREE MARTY G ETUX**
06/19/1992	**1152**	**31**	**90,000**	**90,000**	**I**	**WD**	**A**	**STAFFORD DENNIS R**
08/12/1991	**1125**	**214**	**17,900**	**17,900**	**V**	**WD**	**M**	**REAVES LARRY G**

NOTES

INCR LAND PRICE*R06FN*CHG AREA CODE*R06JS*CHG AREA CODE*FN
CHG QUAL ON FRPL*R10/32*FN

File:

This instrument prepared by: Marshall Title & Escrow 104 West 6th Street PO Box 8150 Columbia, Tennessee 38402	Name and Address of New Property Owner: Margaret H. Tinsley 112 Lenox Drive Columbia, TN 38401 Person or Agency Responsible for Taxes: Same Map 066K-A-035.00

WARRANTY DEED

THIS INDENTURE, made and entered into on this 15th day of June, 2007, by and between the Grantors, **Mackey Cutler and wife, Brenda Cutler** and the Grantee, **Margaret H. Tinsley, unmarried...**

That for and in consideration of **One Hundred Sixty Five Thousand and no/100 ($165,000.00)** and other good and valuable considerations, the receipt of all of which is hereby acknowledged, Grantors have conveyed the described property unto Grantee:

BK/PG:R1990/563-564
07010209
2 PGS : AL - WARRANTY DEED
30318 BATCH: 67536
06/19/2007 - 10:06 AM
VALUE 165000.00
MORTGAGE TAX 0.00
TRANSFER TAX 610.50
RECORDING FEE 10.00
DP FEE 2.00
REGISTER'S FEE 1.00
TOTAL AMOUNT 623.50
STATE of TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

Land in Maury County, Tennessee, being Lot 20, SECTION 1, CARRIAGE HILLS Subdivision, as shown on plat of record in Plat Book 5, Page 282, in the Register's Office, Maury County, Tennessee, to which plat reference is hereby made for a more particular description of said property.

Being the same property conveyed by Quitclaim Deed from James W. Wilson and Linda M. Wilson to Mackey Cutler and Brenda Cutler as recorded on the 3rd day of May, 2006 in Book R1916, Page 611 and General Warranty Deed from Daniel L. Kendall and wife Lisa R. Kendall to James W. Wilson and wife, Linda M. Wilson as recorded on the 19th day of July, 1999 in Book R1442, Page 236, in the Register's Office of Maury County, Tennessee.

TO HAVE AND TO HOLD said property to Grantee and, her heirs and assigns, together with all rights, titles, easements, hereditaments, and appurtenances forever in fee simple.

The Grantors does hereby covenant with the Grantee that they are lawfully seized in fee of said property; that they have a good right to sell and convey the same; that the same is unencumbered except

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

112 LENOX DR	Subdivision **CARRIAGE HILLS SEC 1**	**TAX YEAR 2023**	060	066K	A	035.00		000
Property Address	BK **5** PG **282** BLOCK LOT **0020** TRACT	**MAURY**	JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
Ownership and Mailing Address	Alt Subdiv	City **60156 Columbia**	Map **066F**	Updated 10/27/2022
TINSLEY MARGARET H	BK PG BLOCK LOT TRACT	SSD1	Dist **03**	Printed 03/17/2023
112 LENOX DR	Additional Description	SSD2		Card: 1 of 1
COLUMBIA TN 38401	Dimensions **137.50X165 IRR**	Total Land Units **1** / Deed Acres **0** / Calculated Acres **0**		Page: 1 of 1

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built **1988**	Eff Yr Built **2006**	Rooms **0**	Bedrooms **0**				
Full Baths	Half Baths	Add'l Fixtures **9**	Total Fixtures **9**				
Wood FP Stacks **1**	Openings **1**	Add'l Sty	PreFab	Add'l Sty			
Info Src **3**	Occ **1**	Rental: Src	Year **0**	Amount **0**	Sched		

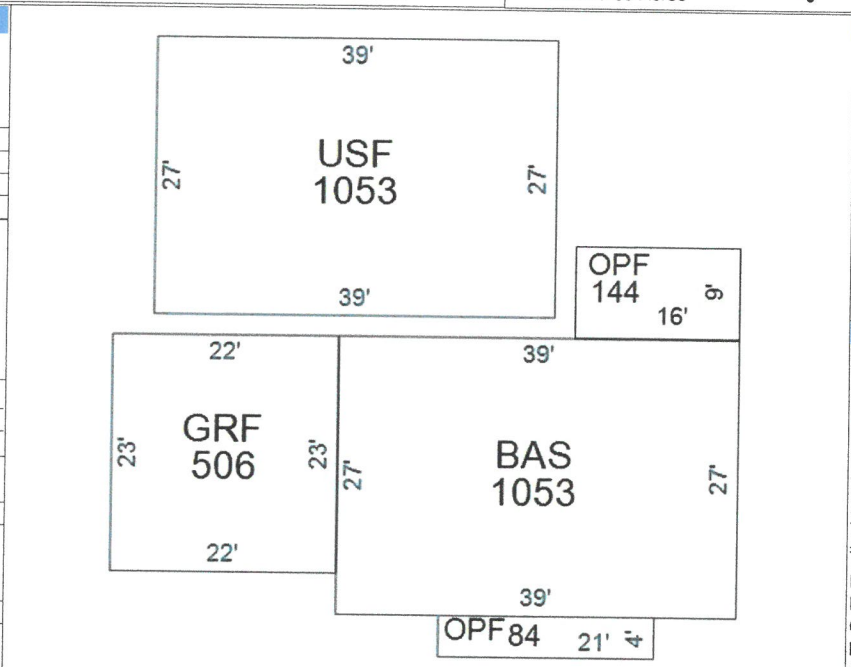
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition **Average**		Class:	
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**	

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,053	**.729**	**1**	**1**	**1.21**	**2,106**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**168,110**	**180,380**	**348,490**	**165.47**	Dwelling Factor	**1**
RCNLD	**134,490**	**144,300**	**278,790**	**132.38**	Dwelling Value	**278,790**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,053**			
	USF	**1,053**	**100**	**127.92**	**134,700**
	OPF	**84**	**0**	**42.62**	**3,580**
	GRF	**506**	**0**	**71.07**	**35,960**
	OPF	**144**	**0**	**42.64**	**6,140**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**282,900**
TOTAL APPRAISAL	**342,900**
GREENBELT APR	
ASSESSMENT	**85,725**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**342,900**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**2006**	**2006**	**192**	**C**	**1**	**12X16**		**20.8333**	**AV**	**4,000**	**52**		**1**	**2,080**
DRW	**Driveway**	**1988**	**1988**	**1**	**C**	**1**			**2000**	**UN**	**2,000**	**100**		**1**	**2,000**

Total OBY Value **4,080**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**137**	**165**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
06/15/2007	**R1990**	**563**	**165,000**	**165,000**	**I**	**WD**	**A**	**TINSLEY MARGARET H**
05/02/2006	**R1916**	**611**						**CUTLER MACKEY &**
07/12/1999	**R1442**	**236**	**135,000**	**135,000**	**I**	**WD**	**A**	**WILSON JAMES W ETUX**
09/08/1998	**R1417**	**341**						**KENDALL DANIEL L ETUX**

NOTES

R2014:32 CHG QUALITY*LDS*15:32 ADD OPF/CHG QUA*LDS - R22: CHG DRW VAL PER 32 *CB
R22: CHG QLTY PER 51 *CB

QUITCLAIM DEED

STATE OF TENNESSEE
COUNTY OF WILLIAMSON

The actual consideration for this transfer is $0.

Affiant

Subscribed and sworn to before me on this 23rd day of February, 2022.

NOTARY PUBLIC

STACY NEISLER
STATE OF TENNESSEE NOTARY PUBLIC
MAURY COUNTY

My Commission Expires: 05/22/2023

File.

This Instrument Was Prepared By:
Stacy S. Neisler / The Law Office of Stacy S. Neisler PLLC
2011 Wall Street Spring Hill TN 37174 / (615) 302-3300

New Owner Address: Melissa Sorrento as Trustee of the Sorrento Family Trust dated February 23, 2022
100 Lenox Drive
Columbia, Tennessee 38401

Send Tax Bills To: Melissa Sorrento as Trustee of the Sorrento Family Trust dated February 23, 2022
100 Lenox Drive
Columbia, Tennessee 38401

NOW, THEREFORE, for and in consideration of the sum of One Dollar ($1.00), cash in hand paid, and other good and valuable consideration, **MELISSA D. SORRENTO, an unmarried person, the Grantor,** does hereby convey, remise, release and forever quitclaim unto **MELISSA SORRENTO AS TRUSTEE OF THE SORRENTO FAMILY TRUST DATED FEBRUARY 23, 2022, the Grantee,** her successors and assigns, all of her right, title and interest in and to a certain tract of land in Maury County, Tennessee described as follows:

> Land in Maury County, Tennessee, being Lot No. 14, on the Plan of Carriage Hills, Section 1, of record in Plat Book 5, Page 282, Register's Office for said County, to which plan reference is hereby made for a more complete description.
>
> Being the same property and legal description conveyed to Melissa D. Sorrento by Warranty Deed dated September 22, 2015, of record in Book R2339, Pages 1188-1189 in the Register's Office for Maury County, Tennessee.
>
> **Map 066F, Control Map 066K, Group A, Parcel 029.00**
>
> This property is improved property known as **100 Lenox Drive, Columbia, Tennessee 38401**.
>
> *The legal description herein was taken from the prior deed of record.*
>
> *All information contained herein was provided to the preparer of this instrument by Grantor. A title examination was not performed or requested by either party.*

Said property is conveyed subject to such limitations, taxes, rights of way, by-laws, restrictions and encumbrances as may affect the premises.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

TAX YEAR 2023	060	066K	A	029.00		000
MAURY	JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I

100 LENOX DR
Property Address

Ownership and Mailing Address
SORRENTO FAMILY TRUST
MELISSA SORRENTO TRUSTEE
100 LENOX DR
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 1**
BK **5** PG **282** BLOCK LOT **14** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **152.32X172.53 IRR.**

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**

Map **066F** Updated 03/29/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**7 Heat And Cooling Split**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1986**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**8**	Total Fixtures	**8**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **0**	Rental: Src		Year **0**	Amount **0**		Sched

Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

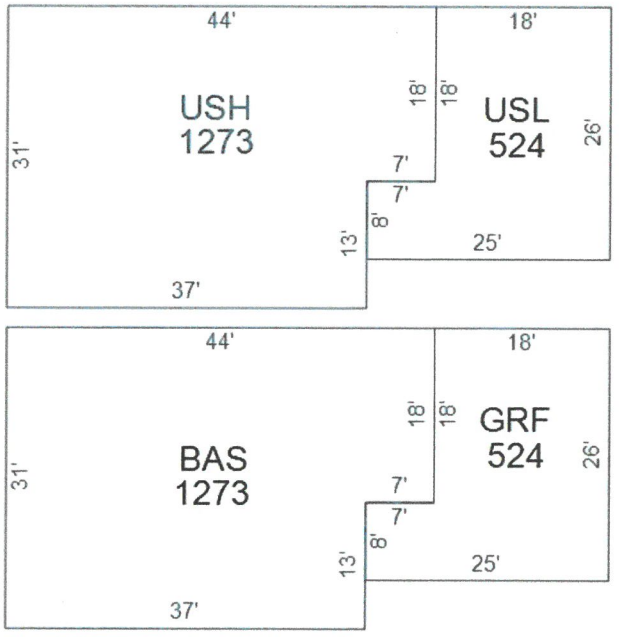
Quality **2 : Above Average** Condition **Average** Class:

Prorate	Date	Factor	% Comp	Cost & Design **0**
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**

	Factors							
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,273	**.863**	**1**	**1**	**1.21**	**2,194**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**199,450**	**150,040**	**349,490**	**159.29**	Dwelling Factor	**1**
RCNLD	**159,560**	**120,030**	**279,590**	**127.43**	Dwelling Value	**279,590**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,273**			
	GRF	**524**	**0**	**71.07**	**37,240**
	USH	**1,273**	**60**	**71.06**	**90,460**
	USL	**524**	**30**	**42.63**	**22,340**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**284,100**
TOTAL APPRAISAL	**344,100**
GREENBELT APR	
ASSESSMENT	**86,025**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**344,100**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**2006**	**2006**	**204**	**C**	**1**	**12X17**		**20.6373**	**AV**	**4,210**	**52**		**1**	**2,190**
STP	**Stoop**	**1990**	**1990**	**28**	**C**	**1**	**4X7**		**21.0714**	**AV**	**590**	**60**		**1**	**350**
DRW	**Driveway**	**1990**	**1990**	**1**	**C**	**1**			**2000**	**UN**	**2,000**	**100**		**1**	**2,000**

Total OBY Value **4,540**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**152**	**172**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
02/23/2022	**R2819**	**986**				**QC**		**SORRENTO FAMILY TRUST**
09/22/2015	**R2339**	**1188**	**186,500**	**186,500**	**I**	**WD**	**A**	**SORRENTO MELISSA D**
10/31/1990	**849**	**121**	**87,500**	**87,500**	**I**	**WD**	**G**	**PHILPOT JOHN A**
12/09/1987	**783**	**527**	**91,500**	**91,500**	**I**	**WD**	**A**	**WILSON DONALD KEVIN**

NOTES

CHG EYB INCR LAND PRICE*R06FN*AREA CODE R06BV *CHG AREA CODE*FN
CHG DECK EYB*R10/32*JG* R18: CHG QLTY PER 32 *CB - R22: PP-UTB PER 51 *CB

PREPARED BY
JAMES T. DuBOIS
ATTORNEY AT LAW
COLUMBIA, TENN.

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, this indenture entered into between Golden Brothers, a partnership consisting of Taylor R. Golden and Terry W. Golden, by and through his Attorney in Fact, Taylor R. Golden, whose Power of Attorney is of record in Book 1206, Page 160, Register's Office of Maury County, Tennessee, FIRST PARTY, which expression shall include heirs, assigns and personal representatives, and Donald E. Feyers and wife, Linda Feyers, as tenants by the entirety, SECOND PARTY, which expression shall include heirs, assigns and personal representatives.

W I T N E S S E T H:

For the consideration of the sum of TEN DOLLARS ($10.00), and other good and valuable considerations, the receipt of all of which is hereby acknowledged, FIRST PARTY conveys unto SECOND PARTY the following described property:

> Located in the Third (3rd) Civil District of Maury County, Tennessee, and being Lot No. 57, Carriage Hills Subdivision, Section 3, Phase I, as shown on plat of record in Plat Book 9, Page 139, Register's Office of Maury County, Tennessee.
>
> Being the same property conveyed to FIRST PARTY herein by deed of record in Book 1209, Page 741, Register's Office for Maury County, Tennessee.
>
> Map 66F, Group 13, Parcel 1.

TO HAVE AND TO HOLD said real estate unto SECOND PARTY together with all rights, titles, easements and appurtenances thereunto belonging, forever.

FIRST PARTY COVENANTS with SECOND PARTY that they are lawfully seized and possessed of said real estate and that FIRST PARTY has a good and lawful right to convey the same, and that it is unencumbered except as follows: current year's property taxes which will be prorated as of the date of this deed and assumed by SECOND PARTY; building restrictions of record in Book 1180, Page 595, Register's Office of Maury County, Tennessee; and applicable

MAURY COUNTY, STATE OF TENNESSEE
Received for record this 22 of JUNE 1994 at 3:56 o'clock P M
Note Book 16 Page 217 Receipt # 40819 Recording Fee 12.00
State Tax 299.33 Probate Fee 1.00 Total 312.33
Book 1225 Page 082, Witness my Hand,
MAURY COUNTY REGISTER OF DEEDS
L. Wayne White

BOOK 1225 PAGE 082

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

122 LENOX DR
Property Address
Ownership and Mailing Address

FEYERS DONALD E ETUX
LINDA
122 LENOX DR
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 3**
BK **9** PG **139** BLOCK LOT **57** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **103.82X269.15 IRR**

TAX YEAR 2023
MAURY

060	066F	B	001.00		000
JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**

Map **066F** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type **01 Single Family** Lower Level **1 No Basement**
Stories **1 Story Frame** Heating/Air **8 Heat And Cooling Pkg**
Exterior Wall **04 Siding Average** Attic
Heating Fuel

Year Built	Eff Yr Built	Rooms	Bedrooms
1994	2000	0	0

Full Baths	Half Baths	Add'l Fixtures	Total Fixtures
		6	6

Wood FP Stacks	Openings	Add'l Sty	PreFab	Add'l Sty
1	1			

Info Src	Occ	Rental: Src	Year	Amount	Sched
0	0		0	0	

Foundation **02 Continuous Footing** Floor Finish **11 Carpet Combination**
Floor System **03 Wood W/O Sub Floor** Interior Finish **07 Drywall**
Party Wall **00 None** Paint/Decor **04 Above Average**
Struct. Frame **00 None** Bath Tile **00 None**
Roof Framing **02 Gable/Hip** Electrical **04 Above Average**
Roof Cov/Deck **03 Composition Shingle** Shape **01 Rectangular Design**
Cab/Millwork **04 Above Average**

Quality **2 : Above Average** Condition **Average** Class:

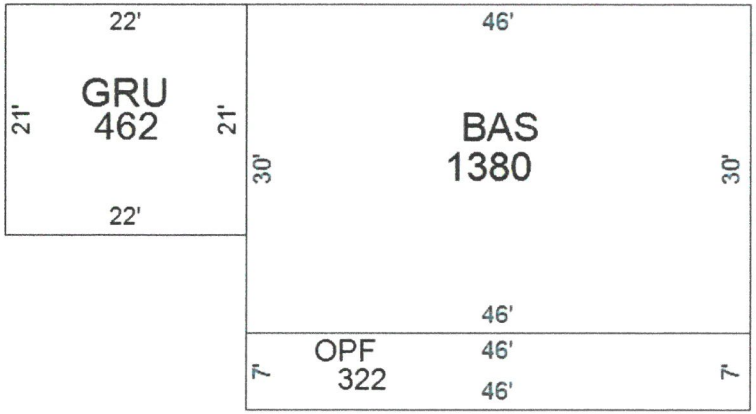
Prorate	Date	Factor	% Comp	Cost & Design
				0

Depr: Physical	Other Phys	Functional	External	% Good
27.5				72.5

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,380	.927	1	1	1.21	1,380	2022	22	1.00

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete
RCN	206,070	33,430	239,500	173.55	Dwelling Factor 1
RCNLD	149,400	24,230	173,630	125.82	Dwelling Value 173,630

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	1,380			
	OPF	322	0	42.64	13,730
	GRU	462	0	42.64	19,700



APPRAISED VALUES

LAND	60,000
IMPROVEMENTS	177,800
TOTAL APPRAISAL	237,800
GREENBELT APR	
ASSESSMENT	59,450
ASSESSED @	25%
APPROACH	COST VALUE

Value Correlation

	Value
COST	237,800
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units
Water/Sewer **03 Public / Individual**
Electricity **01 Public**
Gas **00 None**
Topo **0 Level**
Road Type **3 Paved**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **01/01/2006** By **32**
Improvements **1**
Mobile Homes **0**
NH Trend **3 TRANSITION**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	Driveway	1994	1994	1	C	1			3000	UN	3,000	100		1	3,000
STP	Stoop	1994	1994	28	C	1	4X7		21.0714	AV	590	65		1	380
WDK	Wood Deck	1994	1994	270	C	1	15 X 18		18.2593	AV	4,930	16		1	790

Total OBY Value 4,170

ENTRANCES

Date	Code	ID
01/01/2002	01 Bldg Apr	32

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	U	22	01		103	269	1	60,000.00							100	60,000.00	60,000
					Totals:		1										60,000

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
06/22/1994	1225	82	80,900	80,900	I	WD	N	FEYERS DONALD E ETUX
01/19/1994	1209	741	17,900	17,900	V	WD	A	GOLDEN BROTHERS
04/17/1990	835	71						PARKS-REAVES PROPERTIES

NOTES

R22: CHG DRW VAL PER 32 *CB - R22: CHG QLTY, CORR BAS, ADD WDK PER 51 *CB

This instrument prepared by:

Jerry C. Colley
Colley and Colley
P.O. Box 1476
Columbia TN 38402-1476

Person or Agency Responsible
for payment of taxes:

Jesse L. Hogan
724 Sir Winston Place
Franklin TN 37064

BK/PG:R2294/1267-1269
14011578

3 PGS : AL - WARRANTY DEED
SUSIE BATCH: 152069
10/14/2014 - 02:22 PM

VALUE	112200.00
MORTGAGE TAX	0.00
TRANSFER TAX	415.14
RECORDING FEE	15.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	433.14

STATE of TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

WARRANTY DEED

FOR AND IN CONSIDERATION of Ten Dollars ($10.00), cash in hand paid, and other good and valuable considerations, the receipt and sufficiency of which is hereby acknowledged, I, **TODD LOVETT**, have this date, bargained and sold, and do hereby transfer and convey unto **JESSE L. HOGAN**, his heirs and assigns, the following described real estate located in the 3rd Civil District of Maury County, Tennessee, and more particularly described as follows:

> Lot 24 of the Carriage Hills Subdivision, Section 1 as shown by a map of record in Plat Book 5, page 282, ROMCT.
>
> Being the same property conveyed to Doris Lovett and wife, Mary R. Lovett, by deed of record in Deed Book R2132, Page 1418, ROMCT. Mary R. Lovett predeceased Doris Lovett who is also deceased. Doris Lovett devised this property to his son, Todd Lovett, by will of record in Case Number P-291-13, Maury County Chancery Court. The address for this property is 109 Lennox Drive, Columbia TN 38401. This is the same description used in the previous deed. See Map 066K, Parcel 025.00, Maury County Tax Assessors Office.

TO HAVE AND TO HOLD the above described real estate together with all rights, titles, interests, easements, hereditaments and appurtenances thereunto appertaining unto **JESSE L. HOGAN**, his heirs and assigns, forever.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

109 LENOX DR
Property Address
Ownership and Mailing Address

HOGAN JESSE L
724 SIR WINSTON PL
FRANKLIN TN 37064

Subdivision **CARRIAGE HILLS SEC 1**
BK **5** PG **282** BLOCK LOT **24** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **149.65X170 IRR.**

TAX YEAR 2023
MAURY

060	066K	A	025.00		000
JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**

Map **066F** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**11 Common Brick**	Attic	
Heating Fuel			

Year Built	**1985**	Eff Yr Built	**2002**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**6**	Total Fixtures	**6**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **0**	Rental: Src **0**		Year **0**	Amount **700**	Sched **1**	

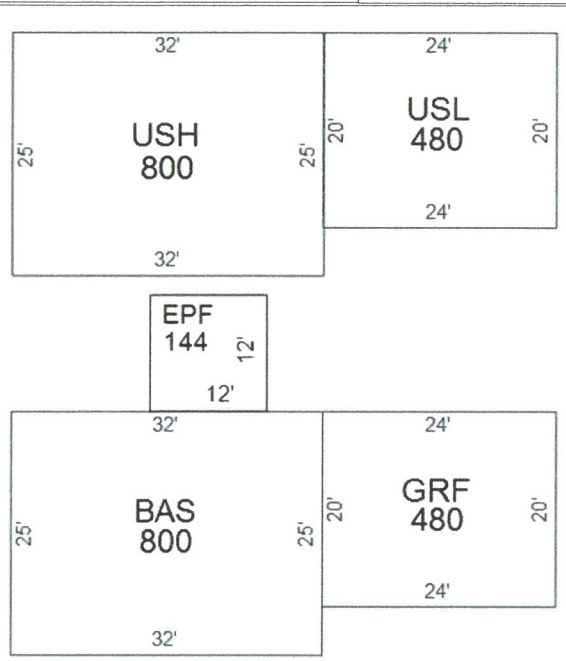
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality **2 : Above Average** Condition **Average** Class:
Prorate Date Factor % Comp Cost & Design **0**
Depr: Physical **20** Other Phys Functional External % Good **80**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
800	**.573**	**1**	**1.07**	**1.21**	**1,424**	**2022**	**20**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**137,640**	**127,800**	**265,440**	**186.40**	Dwelling Factor	**1**
RCNLD	**110,110**	**102,250**	**212,360**	**149.13**	Dwelling Value	**212,360**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**800**			
	GRF	**480**	**0**	**71.06**	**34,110**
	USH	**800**	**60**	**71.06**	**56,850**
	USL	**480**	**30**	**42.65**	**20,470**
	EPF	**144**	**0**	**113.68**	**16,370**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**214,100**
TOTAL APPRAISAL	**274,100**
GREENBELT APR	
ASSESSMENT	**68,525**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**274,100**
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units
Water/Sewer **01 Public / Public**
Electricity **01 Public**
Gas **00 None**
Topo **0 Level**
Road Type **3 Paved**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **01/01/2006** By **04**
Improvements **1**
Mobile Homes **0**
NH Trend **0 STABLE**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1986**	**1986**	**1**	**C**	**1**			**1000**	**UN**	**1,000**	**100**		**1**	**1,000**
WDK	**Wood Deck**	**1986**	**1986**	**252**	**C**	**1**	**12X21**		**18.8095**	**AV**	**4,740**	**10**		**1**	**470**
STP	**Stoop**	**1989**	**1989**	**24**	**C**	**1**	**4X6**		**20.8333**	**AV**	**500**	**58.75**		**1**	**290**

Total OBY Value **1,760**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**31**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**149**	**170**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
10/13/2014	**R2294**	**1264**	**112,200**	**112,200**	**I**	**WD**	**A**	**HOGAN JESSE L**
10/25/2010	**R2132**	**1418**	**105,000**	**105,000**	**I**	**WD**	**A**	**LOVETT DORRIS ETUX**
10/31/1997	**1351**	**639**	**104,000**	**104,000**	**I**	**WD**	**A**	**BURNS RICKY L ETUX**
06/15/1995	**1256**	**726**	**97,000**	**97,000**	**I**	**WD**	**A**	**FLUEALLEN ANTHONY BYRON**

NOTES

14*M/A CHG PER SON TODD LOVETT-MS.14*NAME CHG PER WILL P291-13-MS
22: ADD EPF PER 51 *CB

Pltr Brooke Biase

QUITCLAIM DEED

From: **PRESTON MURRAY**

To: **COLLEEN KATHLEEN MORONEY**

This instrument prepared by:
M. Stuart Saylor
Fort, Holloway & Rogers, LLC
517 Cummins Street
Franklin, TN 37064

NO TRANSFER TAX IS DUE ON THIS CONVEYANCE PURSUANT TO T.C.A. § 67-4-409(a)(3)(F) AND NO OATH OF VALUE IS REQUIRED PURSUANT TO T.C.A. § 67-4-409(a)(5)

Address New Owner:	Send Tax Bills To:	Map-Group-Parcel Nos.
Colleen Kathleen Moroney 129 Lenox Drive Columbia, TN 38401	Same	066F-B-006.00

FOR AND IN CONSIDERATION of the sum of zero ($0.00) dollars in accordance with the terms and conditions of the Final Decree of Divorce in that certain case styled *Colleen Moroney-Murray v. Donald Preston Murray*, Chancery Court for Maury County, Tennessee, Docket No. 22-231, **Preston Murray** (the "Grantor"), by these presents hereby sells, assigns and quitclaims unto **Colleen Kathleen Moroney** (the "Grantee") all of Grantor's right, title and interest in and to certain improved lot located at 129 Lenox Drive, Columbia, Tennessee 38401, in Williamson County, Tennessee, to-wit:

> Land in Maury County, Tennessee, being Lot No. 62, as shown on the map entitled Final Plat, Carriage Hills, Section 3, of record in Plat Book 9, page 139, in the Register's Office of Maury County, Tennessee, to which plat reference is hereby made for a more complete description.
>
> Being the same property conveyed to **Colleen Kathleen Murray-Moroney** and **Preston Murray, wife and husband**, by Warranty Deed from **Joseph B. Ward, a married man**, recorded on April 5, 2021, of record in Book R2722, Page 1194, in the Register's Office of Maury County, Tennessee.

NO BOUNDARY SURVEY WAS MADE AT THE TIME OF THIS CONVEYANCE WITH THE LEGAL DESCRIPTION BEING THE SAME AS THE PREVIOUS DEED OF RECORD.

THIS DEED PREPARED SOLELY UPON INFORMATION FURNISHED BY THE PARTIES. THERE HAS BEEN NO TAX ADVICE, INCLUDING, BUT NOT LIMITED TO, INCOME OR GIFT TAX ADVICE OF THE TRANSFER OF THIS PROPERTY NOR THE FILING (IF REQUIRED) OF ANY TAX RETURNS, NOR MEDICAID ADVICE GIVEN ON THIS TRANSFER. THE PREPARER OF THIS DEED HAS NEITHER BEEN REQUESTED TO CONDUCT A TITLE SEARCH NOR HAS THE PREPARER CONDUCTED A TITLE SEARCH OR AN INSPECTION OF THE PROPERTY TRANSFERRED HEREBY. NO REPRESENTATIONS OR WARRANTIES AS TO THE STATUS OF TITLE OR CONDITION OF THE PROPERTY HAVE BEEN MADE BY THE PREPARER.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

129 LENOX DR Property Address	Subdivision **CARRIAGE HILLS SEC 3**				**TAX YEAR 2023** **MAURY**	060	066F	B	006.00	000
Ownership and Mailing Address	BK **9**	PG **139**	BLOCK	LOT **62**	TRACT	JUR	CONTROL MAP	GROUP	PARCEL	PI S/I
MORONEY COLLEEN KATHLEEN **129 LENOX DR** **COLUMBIA TN 38401**	Alt Subdiv BK	PG	BLOCK	LOT	TRACT	City **60156 Columbia** SSD1 SSD2	Map **066F** Dist **03**		Updated 11/07/2022 Printed 03/17/2023	
	Additional Description					Total Land Units **1** Deed Acres **0** Calculated Acres **0**	Card: 1 of 1 Page: 1 of 1			
	Dimensions **179.63X231.10 IRR**									

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	
Stories	**2 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built **2019**	Eff Yr Built **2019**	Rooms	Bedrooms		
Full Baths **2**	Half Baths **1**	Add'l Fixtures **1**	Total Fixtures **9**		
Wood FP Stacks	Openings	Add'l Sty	PreFab **1**	Add'l Sty	
Info Src **3** Occ **0**	Rental: Src	Year **0**	Amount **0**	Sched	

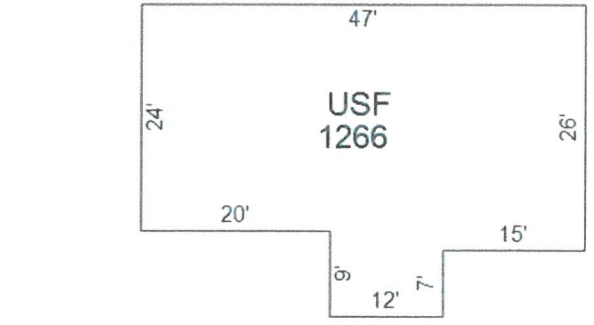
Foundation	Floor Finish
Floor System	Interior Finish
Party Wall	Paint/Decor
Struct. Frame	Bath Tile
Roof Framing	Electrical
Roof Cov/Deck	Shape
Cab/Millwork	

Quality **2 : Above Average**	Condition **Average**		Class:	
Prorate	Date	Factor	% Comp	Cost & Design **0**
Depr: Physical **3.75**	Other Phys	Functional	External	% Good **96.25**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
732	**.53**	**1**	**1**	**1.21**	**1,998**	**2022**	**3**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**123,050**	**222,430**	**345,480**	**172.91**	Dwelling Factor	**1**
RCNLD	**118,440**	**214,090**	**332,530**	**166.43**	Dwelling Value	**332,530**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**732**			
	USF	**1,266**	**100**	**127.92**	**161,950**
	OPF	**105**	**0**	**42.67**	**4,480**
	GRF	**788**	**0**	**71.07**	**56,000**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**342,100**
TOTAL APPRAISAL	**402,100**
GREENBELT APR	
ASSESSMENT	**100,525**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**402,100**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006** By **32**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**3 TRANSITION**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1996**	**1996**	**1**	**C**	**1**			**4000**	**UN**	**4,000**	**100**		**1**	**4,000**
WDK	**Wood Deck**	**2019**	**2019**	**260**	**C**	**1**	**20 X 13**		**18.5769**	**AV**	**4,830**	**91**		**1**	**4,400**
PTO	**Patio**	**2019**	**2019**	**130**	**C**	**1**	**10 X 13**		**9.6154**	**AV**	**1,250**	**91**		**1**	**1,140**

Total OBY Value **9,540**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**179**	**231**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
10/24/2022	**R2883**	**1026**				**QC**		**MORONEY COLLEEN KATHLEEN**
03/26/2021	**R2722**	**1194**	**360,000**	**360,000**	**I**	**WD**	**A**	**MURRAY-MORONEY COLLEEN KATHLEI**
05/20/2019	**R2557**	**631**	**62,000**	**62,000**	**I**	**WD**	**M**	**WARD JOSEPH B**
11/30/2001	**R1584**	**94**	**127,000**	**127,000**	**I**	**WD**	**A**	**HENSON TRAVIS E**

NOTES

15:32 CHG QUA/ADD OPU*LDS - 19: CHG QLTY & EYB, ADD OTH PHYS PER 49 *CB
19: HSE DEMO'D, LEFT FOUNDATION-MK - 20: HOUSE REBUILT PER 50 *CB
21: CHG DRW PER 32 *CB - 22: ADD PTO, CHG WDK PER 51 *CB
R22:CHG QUALITY PER 51*PB

Prepared by: Charles H. Patton, Attorney at Law, 5100 Poplar Avenue, Suite 2723, Memphis, TN 38137, (901) 685-8475

QUIT CLAIM DEED

KNOW ALL MEN BY THESE PRESENTS, that we, **DOUGLAS (M.) and REBA (T.) LaFOND,** for and in consideration of Ten Dollars ($10.00) cash in hand paid, together with other good and valuable consideration, receipt of which is hereby acknowledged, do hereby bargain, sell, remise, release, quit claim, and convey all of our right, title and interest in and to the below-described property to **THE DOUGLAS AND REBA LaFOND REVOCABLE LIVING TRUST,** dated APR 1 1 2017, **DOUGLAS & REBA LaFOND,** Trustees or their successors in trust and any amendments thereto. Said property is real property situated in the State of Tennessee, County of Maury, and is more particularly described as follows, to wit:

Situate in the Third civil District of Maury County, Tennessee, and being more particularly described as follows:

Lot 60 of the Carriage Hills Subdivision, Section e as shown by a map of record in Plat Book 9 at page 139 in the Maury County, Tennessee Register of Deeds office.

Being the same property conveyed to the Grantors by Special Warranty Deed of record at Instrument 05001427, and Book R1839, pages 1216-1217, in the Register's Office of Maury County, Tennessee.

The Trustees of said trust (or any successor trustees) to have full power to sell, mortgage, rent, lease and convey, without the purchaser lender, mortgagee, or tenant being required to see to the distribution and application of any proceeds of sale, loan, or rent.

This instrument is prepared without benefit of title search or abstract, and the preparer gives no opinion as to title

IN TESTIMONY WHEREOF, we have executed this instrument this date APR 1 1 2017.

DOUGLAS LaFOND

REBA LaFOND

STATE OF TENNESSEE
COUNTY OF MAURY

Before me, a Notary Public in and for said state and county, duly commissioned and qualified, personally appeared **DOUGLAS and REBA LaFOND,** personally known to me (or

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

121 LENOX DR Property Address	Subdivision **CARRIAGE HILLS SEC 3**				**TAX YEAR 2023** **MAURY**	060	066F	B	004.00		000
	BK **9**	PG **139**	BLOCK	LOT **60**	TRACT	JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
Ownership and Mailing Address	Alt Subdiv				City **60156 Columbia**	Map **066F**		Updated 10/27/2022			
LAFOND DOUGLAS & REBA REVOC LIVING TRUST **DOUGLAS OR REBA LAFOND TRUSTEES** **121 LENOX DR** **COLUMBIA TN 38401**	BK	PG	BLOCK	LOT	TRACT	SSD1		Dist **03**		Printed 03/17/2023	
	Additional Description					SSD2					
	Dimensions **111.51X275.85 IRR**				Total Land Units **1** Deed Acres **0** Calculated Acres **0**			Card: 1 of 1 Page: 1 of 1			

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**4 Full Basement**
Stories	**1 Story Frame**	Heating/Air	**7 Heat And Cooling Split**
Exterior Wall	**11 Common Brick**	Attic	
Heating Fuel			

Year Built	**1994**	Eff Yr Built	**2002**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**10**	Total Fixtures	**10**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **0**	Occ **0**	Rental: Src		Year **0**		Amount **0**	Sched

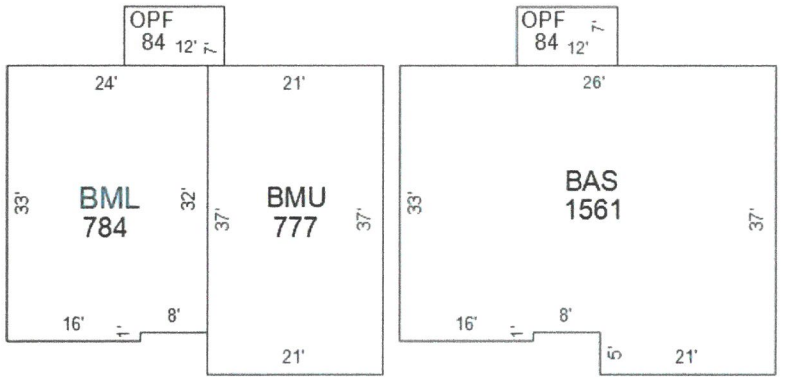
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**03 Wood W/O Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**1+ : Average +**	Condition **Average**		Class:	
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**	

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,561	**1.036**	**1**	**1.07**	**1.07**	**2,345**	**2022**	**20**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**227,020**	**84,990**	**312,010**	**133.05**	Dwelling Factor	**1**
RCNLD	**181,620**	**68,000**	**249,620**	**106.45**	Dwelling Value	**249,620**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,561**			
	BML	**784**	**100**	**75.41**	**59,120**
	OPF	**84**	**0**	**37.74**	**3,170**
	BMU	**777**	**0**	**25.14**	**19,530**
	OPF	**84**	**0**	**37.74**	**3,170**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**255,700**
TOTAL APPRAISAL	**315,700**
GREENBELT APR	
ASSESSMENT	**78,925**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**315,700**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 32**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**3 TRANSITION**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
STP	**Stoop**	**1996**	**1996**	**112**	**B**	**1**	**8X14**		**14.8214**	**GD**	**1,660**	**67.5**		**1**	**1,120**
DRW	**Driveway**	**1994**	**1994**	**1**	**C**	**1**			**5000**	**UN**	**5,000**	**100**		**1**	**5,000**

Total OBY Value **6,120**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**111**	**275**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
04/11/2017	**R2427**	**531**				**QC**		**LAFOND DOUGLAS & REBA REVOC LIVI**
01/28/2005	**R1839**	**1216**	**188,000**	**188,000**	**I**	**WD**	**A**	**LAFOND DOUGLAS M ETUX**
05/04/1993	**1180**	**643**	**17,900**	**17,900**	**V**	**WD**	**A**	**HALL ROGER S**
04/17/1990	**835**	**71**						**PARKS-REAVES PROPERTIES**

NOTES

CHG EYB GRF/BMU*R10/32*FN - R14:32 CHG BMF/BSF*LDS - R18: CHG QLTY PER 32 *CB
R18: CHG EYB PER 32 *CB - R22: CHG DRW VAL PER 32 *CB
22: CHG BSF/BML, ADD OPF PER 51 *CB

BK/PG:R2895/1246-1248
23000209

3 PGS : WARRANTY DEED	
NANCY MCMEEN 295914 - 23000209	
01/05/2023 - 10:19 AM	
VALUE	
MORTGAGE TAX	0.00
TRANSFER TAX	0.00
RECORDING FEE	15.00
DP FEE	2.00
REGISTER'S FEE	0.00
TOTAL AMOUNT	17.00

STATE of TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

This Instrument Prepared by:
Oath Law
1214 East 33rd Street
Tulsa, Oklahoma 74105

Taxes To:
Roger D. and Brenda M. Goodwin
113 Lenox Drive
Columbia, Tennessee 38401

TENNESSEE WARRANTY DEED

STATE OF TENNESSEE

COUNTY OF MAURY

KNOW ALL MEN BY THESE PRESENTS, that the grantor, **Roger Dale Goodwin** and **Brenda M. Goodwin**, husband and wife, whose address is: 113 Lenox Drive, Columbia, Tennessee 38401 for and in consideration of the sum of Ten and No/100 Dollars ($10.00) to me in hand paid and the receipt of which is hereby acknowledged, has granted, sold, and conveyed, and by these presents do grant, sell, and convey to the grantee, **Roger D. Goodwin and Brenda M. Goodwin Trustees of the Goodwin Protection Trust dated December 12, 2022 (referred to herein as "Grantee" whether one or more).** whose address is: 113 Lenox Drive, Columbia, Tennessee 38401

Located in the Third (3rd) Civil District of Maury County, Tennessee, and being Lot No. 22, Carriage Hills Subdivision, Section 1, as shown on plat of record in Plat Book 5, page 282, Register's Office of Maury County, Tennessee.

Derivation Clause: Said property being one and the same property conveyed to Granter herein by way of deed of record at Book 835, Page 490-491, in the Register's Office of Maury, Tennessee.

This conveyance is made by a transferor of real estate to a revocable living trust created by the same transferor or by a spouse of the transferor. This transfer constitutes a nontaxable exchange pursuant to T.C.A. §67-4-409(3)(F).

IN WITNESS WHEREOF, the undersigned has caused this instrument to be executed on **December 12, 2022**

Roger Dale Goodwin, GRANTOR

Brenda M. Goodwin, GRANTOR

STATE OF TENNESSEE)

COUNTY OF WILLIAMSON)

Before me, the undersigned, a Notary Public of the State and County aforesaid, personally appeared Roger Dale Goodwin and Brenda M. Goodwin, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who, upon oath, acknowledged them to be the persons described in and who executed the foregoing instrument, and acknowledged that they executed the same as their free act and deed.

WITNESS my hand and Official Seal at office this December 12, 2022.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

113 LENOX DR (Property Address)	Subdivision **CARRIAGE HILLS SEC 1**	**TAX YEAR 2023 MAURY**	**060** JUR	**066K** CONTROL MAP	**A** GROUP	**022.00** PARCEL	**000** PI / S/I
Ownership and Mailing Address	BK **5** PG **282** BLOCK LOT **0022** TRACT	City **60156 Columbia**	Map **066F**	Updated 01/24/2023			
GOODWIN PROTECTION TRUST **ROGER D & BRENDA M GOODWIN--TRUSTEES** **113 LENOX DR** **COLUMBIA TN 38401**	Alt Subdiv BK PG BLOCK LOT TRACT	SSD1	Dist **03**	Printed 03/17/2023			
	Additional Description	SSD2	Card: 1 of 1				
	Dimensions **145.15X356.93 IRR.**	Total Land Units **1** Deed Acres **0** Calculated Acres **0**	Page: 1 of 1				

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**7 Heat And Cooling Split**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1986**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**8**	Total Fixtures	**8**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **0**	Rental: Src		Year **0**	Amount **0**		Sched

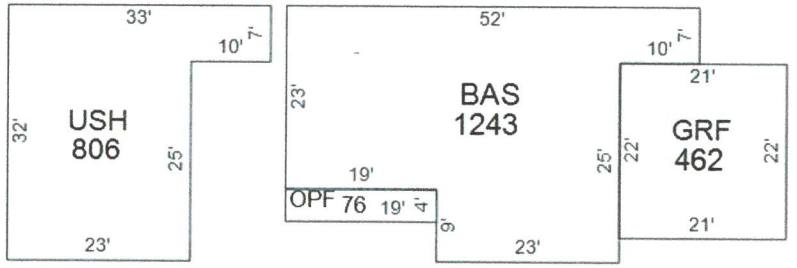
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition **Average**		Class:	
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**	

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,243	**.845**	**1**	**1**	**1.21**	**1,727**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**195,470**	**93,350**	**288,820**	**167.24**	Dwelling Factor	**1**
RCNLD	**156,380**	**74,670**	**231,050**	**133.79**	Dwelling Value	**231,050**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,243**			
	OPF	**76**	**0**	**42.63**	**3,240**
	GRF	**462**	**0**	**71.06**	**32,830**
	USH	**806**	**60**	**71.07**	**57,280**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**239,800**
TOTAL APPRAISAL	**299,800**
GREENBELT APR	
ASSESSMENT	**74,950**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**299,800**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**1986**	**1986**	**240**	**C**	**1**	**8X30**		**19.2083**	**AV**	**4,610**	**10**		**1**	**460**
DRW	**Driveway**	**1986**	**1986**	**1**	**C**	**1**			**3000**	**UN**	**3,000**	**100**		**1**	**3,000**
UTB	**Utility Building**	**2019**	**2019**	**240**	**C**	**1**	**12 X 20**		**23.5833**	**AV**	**5,660**	**94**		**1**	**5,320**

Total OBY Value **8,780**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**145**	**356**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
12/12/2022	**R2895**	**1246**						**GOODWIN PROTECTION TRUST**
04/30/1990	**835**	**490**	**89,700**	**89,700**	**I**	**WD**	**A**	**GOODWIN ROGER DALE**
01/28/1987	**767**	**381**	**85,500**	**85,500**	**I**	**WD**	**A**	**BARNES VAN C**
05/15/1986	**753**	**642**	**12,000**	**12,000**	**V**	**WD**	**A**	**PRONGHORN CONSTRUCTION**

NOTES

R22: CHG DRW VAL PER 32 *CB - 22: ADD PTO PER 51*CB
***R2895-1246 WD WITH 0 CONSID-MV**

This instrument prepared by Robin Courtney, Attorney, Columbia, Tennessee.

DEED

For and in the consideration of the sum of Ten Dollars ($10.00), cash in hand paid, and other good and valuable considerations, the receipt and sufficiency of all of which are hereby acknowledged, We, Robert S. Parks and Paul Scribner, have bargained and sold and do by these presents sell, transfer and convey unto Robert Lofton Fox and wife, Shirley Ann Fox, as tenants by the entirety, their heirs and assigns, the following described tract or parcel of land lying and being in the Third (3rd) Civil District of Maury County, Tennessee, and within the City of Columbia, more fully described as follows:

> Being Lot No. 21 of Carriage Hills Subdivision, Section 1, a plat of which appears of record in Plat Book 5, Page 282 of the Register's Office of Maury County, Tennessee.
>
> Being a portion of the property conveyed to the Grantors by deeds of record in Book 631, Page 347 and Book 809, Page 567 of the said Register's Office.

TO HAVE AND TO HOLD the above described tract or parcel of land, together with all rights, titles, interests, easements, appurtenances and hereitaments thereunto belonging and pertaining unto the said Robert Lofton Fox and wife, Shirley Ann Fox, as tenants by the entirety, their heirs and assigns, in fee simple forever.

We covenant with the said Robert Lofton Fox and wife, Shirley Ann Fox, that we are lawfully seized and possessed of the above described tract or parcel of land, have a good and lawful right to sell and convey same, and that it is unencumbered, except for subdivision restrictions recorded in Book 647, Page 280, amended by instrument recorded in Book 653, Page 511 of said Register's Office, and all matters, including building setback lines and utility and drainage easements imposed by the plat of said subdivision; and we do further covenant and bind ourselves, our heirs and personal representatives, to forever warrant and

Maury County, State of Tennessee
Received for record the 15 day of June 1989 at 3:59 o'clock P M
Note Book 12 Pg 345 Receipt#38768 Recording Fee 8.00
State Tax 52.80 Probate Fee 504 Total 61.30
Book ____ Page ____ Witness my hand Jannette Andrews
Register

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

115 LENOX DR Property Address	Subdivision **CARRIAGE HILLS SEC 1** BK **5** PG **282** BLOCK LOT **0021** TRACT	**TAX YEAR 2023** **MAURY**	**060** JUR	**066K** CONTROL MAP	**A** GROUP	**023.00** PARCEL	PI	**000** S/I
Ownership and Mailing Address **FOX ROBERT LOFTON** **ETUX SHIRLEY ANN** **115 LENOX DR** **COLUMBIA TN 38401**	Alt Subdiv BK PG BLOCK LOT TRACT Additional Description Dimensions **130X340.05 IRR.**	City **60156 Columbia** SSD1 SSD2 Total Land Units **1** Deed Acres **0** Calculated Acres **0**	Map **066F** Dist **03** Card: 1 of 1 Page: 1 of 1		Updated 10/27/2022 Printed 03/17/2023			

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1989**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**11**	Total Fixtures	**11**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **1**	Rental: Src		Year **0**	Amount **0**		Sched

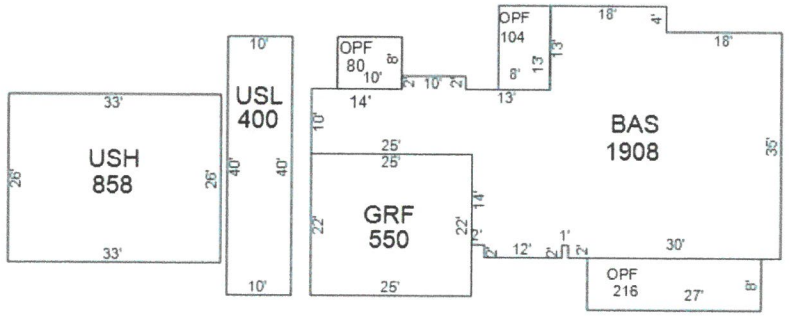
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition **Average**		Class:	
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**	

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,908	**1.243**	**1**	**1**	**1.21**	**2,543**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**283,180**	**134,160**	**417,340**	**164.11**	Dwelling Factor	**1**
RCNLD	**226,540**	**107,330**	**333,870**	**131.29**	Dwelling Value	**333,870**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,908**			
	OPF	**104**	**0**	**42.60**	**4,430**
	OPF	**216**	**0**	**42.64**	**9,210**
	GRF	**550**	**0**	**71.05**	**39,080**
	USH	**858**	**60**	**71.06**	**60,970**
	USL	**400**	**30**	**42.65**	**17,060**
	OPF	**80**	**0**	**42.63**	**3,410**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**339,500**
TOTAL APPRAISAL	**399,500**
GREENBELT APR	
ASSESSMENT	**99,875**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**399,500**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**1989**	**1999**	**288**	**C**	**1**	**12X24**		**17.7431**	**AV**	**5,110**	**31**		**1**	**1,580**
DRW	**Driveway**	**1989**	**1989**	**1**	**C**	**1**			**4000**	**UN**	**4,000**	**100**		**1**	**4,000**

Total OBY Value **5,580**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**130**	**340**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
06/15/1989	**815**	**10**	**16,000**	**16,000**	**V**	**WD**	**A**	**FOX ROBERT LOFTON**
04/03/1989	**809**	**567**	**230,000**	**230,000**	**V**	**WD**	**M**	**PARKS ROBERT S**
06/21/1979	**631**	**347**						**HITCH TOM J ETAL**

NOTES

R14:32 ADD OPF*LDS - R18: CHG QLTY PER 32 *CB
R22: CHG DRW VAL, WDK EYB PER 32 *CB - 22: CHG OPF, ADD UTB PER 51 *CB

PREPARED BY:
File JASON A. GOLDEN
ATTORNEY AT LAW
COLUMBIA TENN

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, this indenture entered into between Jeffery T. Whitley, FIRST PARTY, which expression shall include heirs, assigns and personal representatives, and Wayne D. Crowley, Sr. and wife, Gail Crowley, as tenants by the entirety, SECOND PARTY, which expression shall include heirs, assigns and personal representatives.

W I T N E S S E T H:

For the consideration of the sum of TEN DOLLARS ($10.00), and other good and valuable considerations, the receipt of all of which is hereby acknowledged, FIRST PARTY conveys unto SECOND PARTY the following described property:

> Located in the Third (3rd) Civil District of Maury County, Tennessee, and being Lot No. 59, Carriage Hills Subdivision, Section 3, as shown on plat of record in Plat Book 9, Page 139, Register's Office of Maury County, Tennessee.
>
> Being the same property conveyed to FIRST PARTY by deed of record in Book 1324, Page 418, Register's Office of Maury County, Tennessee.
>
> Map 66F, Group B, Parcel 3.

TO HAVE AND TO HOLD said real estate unto SECOND PARTY together with all rights, titles, easements and appurtenances thereunto belonging, forever.

FIRST PARTY COVENANTS with SECOND PARTY that he is lawfully seized and possessed of said real estate and that FIRST PARTY has a good and lawful right to convey the same, and that it is unencumbered except as follows: current year's property taxes which will be prorated as of the date of this deed and assumed by SECOND PARTY; building restrictions of record in Book 1180, Page 596, Register's Office of Maury County, Tennessee; and applicable utility and drainage easements, building setback lines, a 20 ft. sewer easement along the north property line, and other matters as shown on recorded plat.

18 177 7 AUG 97 1:15 P
12345
1340 480.63 883 1.00 493.63

BOOK 1340 PAGE 883

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

130 LENOX DR	Subdivision **CARRIAGE HILLS SEC 3**	**TAX YEAR 2023 MAURY**	060	066F	B	003.00		000
Property Address	BK **9** PG **139** BLOCK LOT **59** TRACT		JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
Ownership and Mailing Address	Alt Subdiv BK PG BLOCK LOT TRACT	City **60156 Columbia**	Map **066F**	Updated 10/27/2022
CROWLEY WAYNE D SR ETUX	Additional Description	SSD1	Dist **03**	Printed 03/17/2023
GAIL	Dimensions **200.38X221.97 IRR**	SSD2		Card: 1 of 1
130 LENOX DR		Total Land Units **1**		
COLUMBIA TN 38401		Deed Acres **0**		Page: 1 of 1
		Calculated Acres **0**		

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**3 Part Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**12 Brick/Wood**	Attic	
Heating Fuel			

Year Built **1997**	Eff Yr Built **2010**	Rooms **0**	Bedrooms **0**				
Full Baths	Half Baths	Add'l Fixtures **9**	Total Fixtures **9**				
Wood FP Stacks **1**	Openings **1**	Add'l Sty	PreFab	Add'l Sty			
Info Src **3**	Occ **1**	Rental: Src	Year **0**	Amount **0**	Sched		

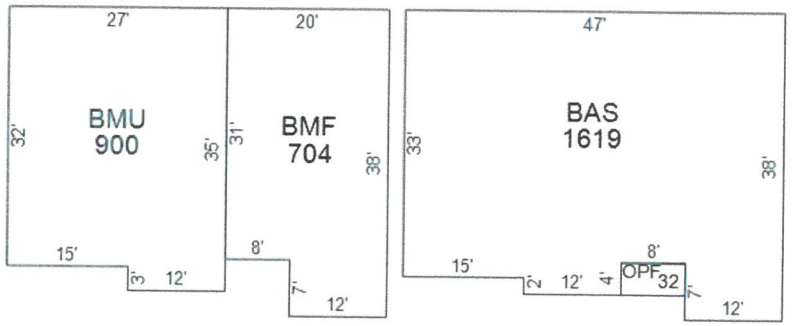
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**02 L-Shaped**
Cab/Millwork	**04 Above Average**		

Quality	**1+ : Average +**	Condition **Average**	Class:			
Prorate	Date	Factor	% Comp	Cost & Design **0**		
Depr: Physical **15**	Other Phys	Functional	External	% Good **85**		

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,619	**1.071**	**1**	**1.021**	**1.07**	**1,619**	**2022**	**12**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**218,670**	**59,230**	**277,900**	**171.65**	Dwelling Factor	**1**
RCNLD	**185,870**	**50,350**	**236,220**	**145.90**	Dwelling Value	**236,220**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,619**			
	BMF	**704**	**0**	**50.28**	**35,400**
	OPF	**32**	**0**	**37.81**	**1,210**
	BMU	**900**	**0**	**25.13**	**22,620**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**239,900**
TOTAL APPRAISAL	**299,900**
GREENBELT APR	
ASSESSMENT	**74,975**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**299,900**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 32**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**3 TRANSITION**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**1997**	**1997**	**130**	**C**	**1**	**13X10**		**20.8462**	**AV**	**2,710**	**25**		**1**	**680**
DRW	**Driveway**	**1997**	**1997**	**1**	**C**	**1**			**3000**	**UN**	**3,000**	**100**		**1**	**3,000**

Total OBY Value **3,680**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**99**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**200**	**221**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
08/07/1997	**1340**	**883**	**129,900**	**129,900**	**I**	**WD**	**A**	**CROWLEY WAYNE D SR ETUX**
03/24/1997	**1324**	**418**	**17,900**	**17,900**	**V**	**WD**	**A**	**WHITLEY JEFFERY T**
05/12/1994	**1220**	**924**	**10**	**10**	**V**	**WD**	**P**	**PARKS ROBERT S**
04/17/1990	**835**	**71**						**PARKS-REAVES PROPERTIES**

NOTES

R06FN*CHG AREA CO*R06JS*CHG AREA CODE*FN - R18: CHG QLTY PER 32 *CB
R22: CHG DRW VAL PER 32 *CB

RE1001CH.L61
This Instrument Prepared By:
R. W. Hardison, Attorney at Law
710 North Main Street
Post Office Box 1967
Columbia, Tennessee 38402-1967

File

GENERAL WARRANTY DEED

This indenture is made and entered into this 4 day of May, 1993 between Parks-Reaves Properties, a Tennessee General Partnership (hereinafter referred to as "GRANTOR") and Michael J. White, and wife, Yvonne White (hereinafter referred to as "GRANTEE").

For and in consideration of Ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, cash in hand paid, Grantor does by these presents, sell, transfer and convey unto grantee, the following described tract or parcel of land:

SITUATE in the Third (3rd) Civil District of Maury County, Tennessee and being more particularly described as Lot 61 in the Carriage Hills Subdivision, Section 3, as shown by map of record in Plat Book 9 at page 139 in the Maury County, Tennessee Register of Deeds office.

BEING a portion of the same property conveyed to Parks-Reaves Properties by instrument of record in Book 835 at page 71 in the Maury County, Tennessee Register of Deeds office. See also Certificate of Partnership of record in Book 835 at page 77 in the same said office.

Tax Parcel # 66-66-8.00 P/O

NOTE: The legal description set forth above is a portion of the same property as contained in Grantor's previous deed of record and is derived from a plat dated 3/29/93 by James D. Webb, Registered Land Surveyor (No. 596) of Maury, County, Tennessee.

To have and to hold the above-described tract or parcel of land, together with all rights, titles, interests, easements, appurtenances, and hereditaments thereto appertaining, to Grantee, its heirs and assigns forever in fee simple.

Grantor covenants with Grantee that Grantor is lawfully seized and possessed in fee simple of the above-described tract or parcel of land, that Grantor has the full, good and lawful right and authority to sell, transfer and convey the same, and that the above-described tract or parcel of land is unencumbered, except for covenants, conditions and restrictions of record in Book 1180 at Page 596 in the Maury County, Tennessee Registers of Deeds Office.

And, Grantor does warrant, and hereby binds its successors to title, to forever defend the title to the above-described tract or parcel of land against the lawful claims of all persons whatsoever, unto Grantee, its heirs and assigns.

MAURY COUNTY, STATE OF TENNESSEE
Received for record this 5 of May 1993 at 3:31 o'clock P M
Note Book 15 Page 535 Receipt # 27250 Recording Fee 8.00
State Tax 66.23 Probate Fee 1.00 Total 75.23
Book 1180 Page 600, Witness my Hand,
MAURY COUNTY REGISTER OF DEEDS

BOOK 1180 PAGE 600

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

| | | |

Mail Stafford Land Title
549 Heritage Pointe Dr
Ste A
Clarksville TN 37042

Name and Address of New Owner:
Briana Ryelle Waldrum and Bronson R. Waldrum
(B) 126 Lenox Dr
Columbia TN 38401

Send Tax Bills To:
Briana Ryelle Waldrum and Bronson R. Waldrum
(B) 126 Lenox Dr
Columbia TN 38401

This Instrument Prepared By:
Devan Spinelli
CLOSED LLC
1212 East Broward Boulevard
Suite 202
Fort Lauderdale, FL 33301

Map & Parcel No: 066F-B-002.00

BK/PG: R2651/1340-1342
20012833

3 PGS:AL-WARRANTY DEED	
JANE BATCH: 232483	07/29/2020 - 10:15 AM
VALUE	267000.00
MORTGAGE TAX	0.00
TRANSFER TAX	987.90
RECORDING FEE	15.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	1005.90

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

WARRANTY DEED

FOR AND IN CONSIDERATION of the sum of Ten Dollars ($10.00) cash in hand paid, and other good and valuable consideration, the receipt and legal sufficiency of which are hereby irrevocably acknowledged, **Spencer Valdez and Jessica Valdez, husband and wife**, "the Grantor," has this day bargained and sold and by these presents does hereby sell, give, transfer and convey unto **Briana Ryelle Waldrum and Bronson R. Waldrum, wife and husband,** "the Grantees," the following described real estate in Maury County, Tennessee:

Land in Maury County, Tennessee being Lot No. 58, on the Plan of Carriage Hills, Section 3 of record in Plat Book 9, Page 139, in the Register's Office for Maury County, Tennessee, to which plan reference is hereby made for a more complete description of the property.

Being the same property conveyed to Spencer Valdez and Jessica Valdez, Husband and Wife from Laura J. Valdez by Quitclaim Deed dated the 6th day of November, 2017, in the Register's Office of Maury County, Tennessee. ref R2465 Pg 684

The real estate being conveyed is subject to all terms, matters and conditions as shown on the aforementioned plat of record and restrictive covenants of record in the Register's Office for Maury County, Tennessee.

TO HAVE AND TO HOLD said real estate unto the Grantees, and the Grantees' successors, heirs and assigns, forever in fee simple.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

126 LENOX DR
Property Address

Ownership and Mailing Address
WALDRUM BRIANA RYELLE ETVIR BRONSON R
126 LENOX DR
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 3**
BK **9** PG **139** BLOCK LOT **58** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **100.00X250.30 IRR**

TAX YEAR 2023
MAURY

060	066F	B	002.00		000
JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**

Map **066F** Updated 10/27/2022
Dist **03** Printed 03/17/2023

Card: 1 of 1

Page: 1 of 1

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1996**	Eff Yr Built	**2010**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**9**	Total Fixtures	**9**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **0**	Rental: Src		Year **0**		Amount **0**	Sched

Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

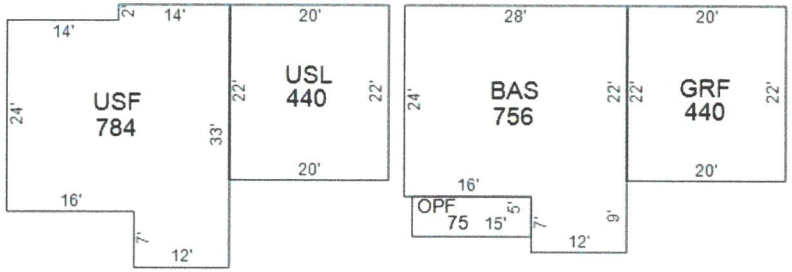
Quality	**1+ : Average +**	Condition **Average**		Class:	
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **15**	Other Phys	Functional	External	% Good **85**	

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
756	**.545**	**1**	**1**	**1.07**	**1,672**	**2022**	**12**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt
RCN	**113,290**	**135,760**	**249,050**	**148.95**
RCNLD	**96,300**	**115,400**	**211,700**	**126.61**

% Complete
Dwelling Factor **1**
Dwelling Value **211,700**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**756**			
	USF	**784**	**100**	**113.13**	**88,690**
	OPF	**75**	**0**	**37.73**	**2,830**
	GRF	**440**	**0**	**62.84**	**27,650**
	USL	**440**	**30**	**37.70**	**16,590**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**214,300**
TOTAL APPRAISAL	**274,300**
GREENBELT APR	
ASSESSMENT	**68,575**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**274,300**
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units
Water/Sewer **03 Public / Individual**
Electricity **01 Public**
Gas **00 None**
Topo **0 Level**
Road Type **3 Paved**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **01/01/2006** By **32**
Improvements **1**
Mobile Homes **0**
NH Trend **3 TRANSITION**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**1996**	**1996**	**130**	**C**	**1**	**10X13**		**20.8462**	**AV**	**2,710**	**22**		**1**	**600**
DRW	**Driveway**	**1996**	**1996**	**1**	**C**	**1**			**2000**	**UN**	**2,000**	**100**		**1**	**2,000**

Total OBY Value **2,600**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**100**	**250**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
07/24/2020	**R2651**	**1340**	**267,000**	**267,000**	**I**	**WD**	**A**	**WALDRUM BRIANA RYELLE ETVIR BRO**
11/06/2017	**R2465**	**684**				**QC**		**VALDEZ SPENCER ETUX JESSICA**
01/11/2016	**R2354**	**281**	**189,000**	**189,000**	**I**	**WD**	**A**	**VALDEZ JESSICA K ETVIR SPENCER &**
04/16/2010	**R2112**	**1116**	**145,900**	**145,900**	**I**	**WD**	**A**	**CARROLL JEFFREY M**

NOTES

CHG LAND UNIT PRICE R06BV*R2055-504 TRUSTEE DEED*JG
CHG AREA CODE*FN*CHG SE*R10/32*FN*JG - R18: CHG QLTY PER 32 *CB
R22: CHG DRW VAL PER 32 *CB

file Title Assoc of Columbia

WARRANTY DEED	STATE OF TENNESSEE COUNTY OF WILLIAMSON THE ACTUAL CONSIDERATION OR VALUE, WHICHEVER IS GREATER, FOR THIS TRANSFER IS $309,000.00. Affiant SUBSCRIBED AND SWORN TO BEFORE ME, THIS THE 18TH DAY OF AUGUST, 2020. Notary Public MY COMMISSION EXPIRES: _____ (AFFIX SEAL)

TERESA J. SMITH
State of Tennessee Notary Public
MAURY COUNTY
MY COMMISSION EXPIRES AUGUST 25, 2021

THIS INSTRUMENT WAS PREPARED BY
Foundation Title & Escrow Franklin , 7112 Crossroads Blvd, Ste. 100, Brentwood, TN 37027

ADDRESS NEW OWNER(S) AS FOLLOWS:	SEND TAX BILLS TO:	MAP-PARCEL NO.(S)
Matthew Turner and Sara Denise Kueck	SAME AS Owner	66K-A-024.00 & 66K-A-021.00
(NAME) 111 Lenox Drive	(NAME)	
(ADDRESS) Columbia, TN 38401	(ADDRESS)	
(CITY) (STATE) (ZIP)	(CITY) (STATE) (ZIP)	

For and in consideration of the sum of Ten and No/100 Dollars ($10.00), cash in hand paid by the hereinafter named Grantees, and other good and valuable considerations, the receipt of which is hereby acknowledged, WE, **Josh Koziura and Kristin James, also known as Kristin Elizabeth James, husband and wife**, hereinafter called the Grantors, have bargained and sold, and by these presents do transfer and convey unto **Matthew Turner, husband and Sara Denise Kueck, wife**, hereinafter called the Grantees, their heirs and assigns, a certain tract or parcel of land in Maury County, State of Tennessee, described as follows, to-wit:

Land in Maury County, Tennessee, being Lot Nos. 23 and 35 on the Plan of Carriage Hills Subdivision, Section 1, of record in Plat Book 5, page 282, in the Register's Office for Maury County, Tennessee, to which Plan reference is hereby made for a more complete description of the property.

Being the same property conveyed to Josh Koziura and Kristin James, husband and wife, by Warranty Deed from Tom C. Lunn and wife, Christina Lunn, dated August 5, 2016 and recorded on August 9, 2016 in Book R2385, page 282, Register's Office for Maury County, Tennessee.

This conveyance is subject to (a) all restrictions of record; (b) all easements of record; (c) all visible easements; (d) all matters appearing on the plan(s) of record; and (e) all matters referenced in the master deed and by-laws; and (f) all applicable government and zoning regulations.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

111 LENOX DR Property Address	Subdivision **CARRIAGE HILLS SEC 1** BK **5** PG **282** BLOCK LOT **23** TRACT	**TAX YEAR 2023** **MAURY**	**060**	**066K**	**A**	**024.00**		**000**
			JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
Ownership and Mailing Address **TURNER MATTHEW ETUX SARA DENISE KUECK** **111 LENOX DR** **COLUMBIA TN 38401-7203**	Alt Subdiv BK PG BLOCK LOT TRACT	City **60156 Columbia**	Map **066F**		Updated 10/27/2022			
		SSD1	Dist **03**		Printed 03/17/2023			
	Additional Description	SSD2	Card: 1 of 1					
	Dimensions **199.93X188.74 IRR**	Total Land Units **1.4** Deed Acres **0** Calculated Acres **1.4**	Page: 1 of 1					

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**3 Part Basement**
Stories	**2 Story Frame**	Heating/Air	**7 Heat And Cooling Split**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built **1987**	Eff Yr Built **2006**	Rooms **0**	Bedrooms **0**				
Full Baths	Half Baths	Add'l Fixtures **6**	Total Fixtures **6**				
Wood FP Stacks **1**	Openings **1**	Add'l Sty	PreFab	Add'l Sty			
Info Src **3**	Occ **0**	Rental: Src	Year **0**	Amount **0**	Sched		

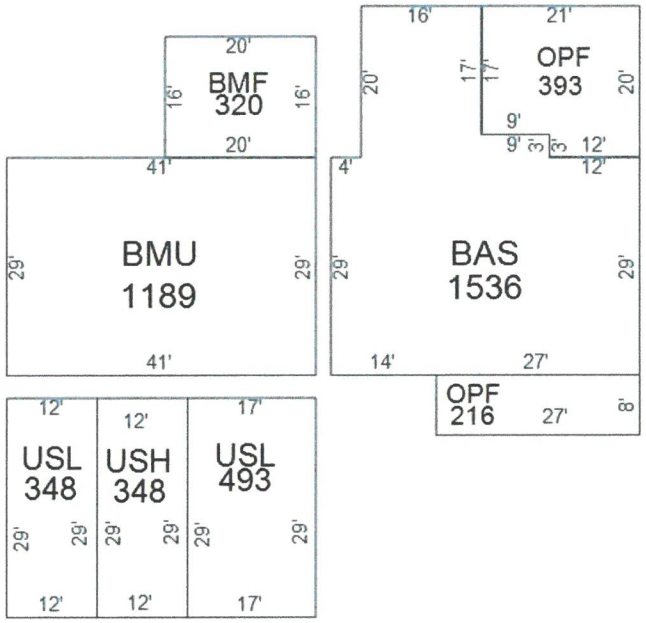
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition **Average**		Class:	
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**	

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,536	**1.021**	**1**	**1**	**1.21**	**1,997**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**231,130**	**138,540**	**369,670**	**185.11**	Dwelling Factor	**1**
RCNLD	**184,900**	**110,830**	**295,730**	**148.09**	Dwelling Value	**295,730**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,536**			
	BMF	**320**	**0**	**56.84**	**18,190**
	OPF	**216**	**0**	**42.64**	**9,210**
	OPF	**393**	**0**	**42.65**	**16,760**
	BMU	**1,189**	**0**	**28.42**	**33,790**
	USH	**348**	**60**	**71.06**	**24,730**
	USL	**348**	**30**	**42.64**	**14,840**
	USL	**493**	**30**	**42.64**	**21,020**



APPRAISED VALUES

LAND	**69,100**
IMPROVEMENTS	**300,100**
TOTAL APPRAISAL	**369,200**
GREENBELT APR	
ASSESSMENT	**92,300**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**369,200**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**05/23/2022 By 51**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**2006**	**2006**	**336**	**C**	**1**	**14X24**		**16.6071**	**AV**	**5,580**	**52**		**1**	**2,900**
DRW	**Driveway**	**2006**	**2006**	**1**	**C**	**1**			**1500**	**UN**	**1,500**	**100**		**1**	**1,500**

Total OBY Value **4,400**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**				**1.4**	**49,357.14**							**100**	**49,357.14**	**69,100**
						Totals:	**1.4**										**69,100**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
08/18/2020	**R2657**	**1412**	**309,000**	**309,000**	**I**	**WD**	**P**	**TURNER MATTHEW ETUX SARA DENISE**
08/05/2016	**R2385**	**282**	**229,900**	**229,900**	**I**	**WD**	**P**	**KOZIURA JOSH & KRISTIN JAMES**
05/21/2007	**R1985**	**1202**						**LUNN TOM C ETUX**
09/06/2006	**R1940**	**700**	**200,000**	**200,000**	**I**	**WD**	**P**	**LUNN TOM C ETUX**

NOTES

INCR LAND PRICE*R06FN*AREA CODE R06BV*R1940-700 ALSO LOT 21*R1985-1202 CORRECTION*JG*CHG AREA CODE*FN CHG EYB FRPL & DECK*R10/32*JG*CHG EYB*R10/42*FN R2385-282 ALSO 66K-A-21*JG R18: CHG QLTY PER 32 *CB.*R2657-1412 INCLDS 66K-A-21-MS FOR 22:DELETE 66K-A-21.00 & COMBINE W/THIS PCL PER OWNERS REQUEST*PB

THIS INSTRUMENT WAS PREPARED BY	STATE OF TENNESSEE COUNTY OF Davidson
Bankers Title & Escrow Corp. 5107 Maryland Way, Ste. 115 Brentwood, TN 37027 P18-9664-BW	THE ACTUAL CONSIDERATION OR VALUE, WHICHEVER IS GREATER, FOR THIS TRANSFER IS $ 250,000.00. Affiant SUBSCRIBED AND SWORN TO BEFORE ME, THIS THE 21 DAY OF December 2018 Notary Public MY COMMISSION EXPIRES: 7-26-21 (AFFIX SEAL)

JODI JACKSON STATE OF TENNESSEE NOTARY PUBLIC WILLIAMSON COUNTY

WARRANTY DEED

ADDRESS NEW OWNER(S) AS FOLLOWS:	SEND TAX BILLS TO:	MAP-PARCEL NUMBERS
Trevin J. Tolbert	Fairway Mortgage	MAP
104 Lenox Drive	4201 Marsh Lane	PARCEL 066K-A-031.00
Columbia, TN 38401	Carrollton, TX 75007	
(CITY) (STATE) (ZIP)	(CITY) (STATE) (ZIP)	

FOR AND CONSIDERATION OF THE SUM OF TEN DOLLARS, CASH IN HAND PAID BY THE HEREINAFTER NAMED GRANTEES, AND OTHER GOOD AND VALUABLE CONSIDERATIONS. THE RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED, WE, **Jason Anderson, a unmarried man**

HEREINAFTER CALLED THE GRANTORS, HAVE BARGAINED AND SOLD, AND BY THESE PRESENTS DO TRANSFER AND CONVEY UNTO **Trevin J. Tolbert and wife, Megan R. Tolbert**

HEREINAFTER CALLED THE GRANTEES, THEIR HEIRS AND ASSIGNS, A CERTAIN TRACT OR PARCEL OF LAND IN MAURY COUNTY, STATE OF TENNESSEE, DESCRIBED AS FOLLOWS, TO-WIT:

Tract 1:

Located in the Third (3rd) Civil District of Maury County, Tennessee, and more particularly described as all of Lot 16 in the Carriage Hills Subdivision, Section 1, as shown by a map of record in Plat Book 5, Page 282, Register's Office of Maury County, Tennessee.

Tract 2:

Located in the Third (3rd) Civil District of Maury County, Tennessee, and more particularly described as follows: Being a 5 foot easement running contiguous with and parallel to the Southerly boundary of Lot 17, Carriage Hills Subdivision, Section 1, Plat Book 5, Page 282, and being a portion of said Lot 17, for the purpose of driveway benefiting Lot 16, Carriage Hills Subdivision, Section 1, Plat Book 5, Page 282, Register's Office of Maury County, Tennessee

Being the same property conveyed to Jason Anderson, a married man by Warranty deed from Mary Graham Lane, a single person of record in Book R2265, page 253, Register's Office for Maury County, Tennessee, dated February 04, 2014 and recorded on February 05, 2014. The said Jason Anderson having since divorced on May 4, 2017 by Final Decree, docket number 17143, Chancery Court for Cheatham County, Tennessee by which former spousal marital interest was terminated.

THIS CONVEYANCE IS SUBJECT TO: (1) Taxes which have been prorated and assumed by Grantee; (2) All restrictions of record; (3) All easements of record; (4) All visible easements; (5) All matters appearing on the plan of record; (6) All applicable governmental and zoning regulations.

This is () UNIMPROVED

(X) IMPROVED property known as **104 Lenox Drive, Columbia, TN 38401.**

Mail:
FOUNDATION TITLE AND ESCROW SERIES
277 MALLORY STATION RD
STE 102
FRANKLIN TN 37067

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

104 LENOX DR Property Address Ownership and Mailing Address **TOLBERT TREVIN J ETUX MEGAN R** **104 LENOX DR** **COLUMBIA TN 38401**	Subdivision **CARRIAGE HILLS SEC 1** BK **5** PG **282** BLOCK LOT **16** TRACT Alt Subdiv BK PG BLOCK LOT TRACT Additional Description Dimensions **130X175 IRR.**	**TAX YEAR 2023** **MAURY**	060 JUR	066K CONTROL MAP	A GROUP	031.00 PARCEL	000 PI S/I
		City **60156 Columbia**	Map **066F**	Updated 10/27/2022			
		SSD1	Dist **03**	Printed 03/17/2023			
		SSD2	Card: 1 of 1				
		Total Land Units **1** Deed Acres **0** Calculated Acres **0**	Page: 1 of 1				

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1988**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**6**	Total Fixtures	**6**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **1**	Rental: Src		Year **0**	Amount **0**		Sched

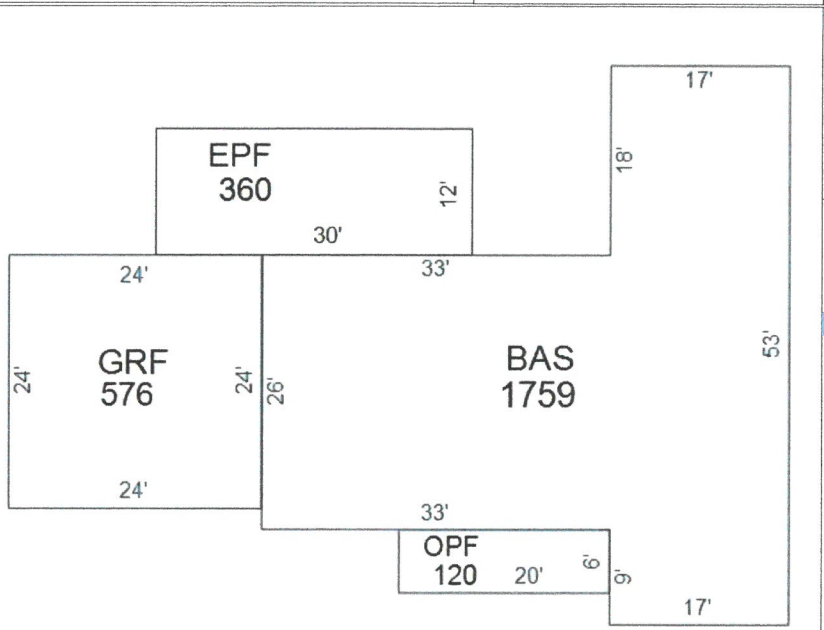
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**04 Irregular Shape**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition	**Average**	Class:	
Prorate	Date	Factor	% Comp	Cost & Design	**0**
Depr: Physical	**20**	Other Phys	Functional	External	% Good **80**

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,759	**1.154**	**1**	**1**	**1.21**	**1,759**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**255,420**	**86,980**	**342,400**	**194.66**	Dwelling Factor	**1**
RCNLD	**204,340**	**69,580**	**273,920**	**155.72**	Dwelling Value	**273,920**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,759**			
	OPF	**120**	**0**	**42.67**	**5,120**
	GRF	**576**	**0**	**71.06**	**40,930**
	EPF	**360**	**0**	**113.69**	**40,930**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**280,800**
TOTAL APPRAISAL	**340,800**
GREENBELT APR	
ASSESSMENT	**85,200**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**340,800**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**1989**	**1989**	**192**	**C**	**1**	**12X16**		**20.8333**	**AV**	**4,000**	**10**		**1**	**400**
DRW	**Driveway**	**1989**	**1989**	**1**	**C**	**1**			**1500**	**UN**	**1,500**	**100**		**1**	**1,500**
GUD	**Detached Garage Unfi**	**1995**	**1995**	**240**	**C**	**1**	**12X20**		**44.625**	**AV**	**10,710**	**46**		**1**	**4,930**

Total OBY Value **6,830**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**130**	**175**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
12/21/2018	**R2534**	**1032**	**250,000**	**250,000**	**I**	**WD**	**A**	**TOLBERT TREVIN J ETUX MEGAN R**
02/04/2014	**R2265**	**253**	**172,900**	**172,900**	**I**	**WD**	**A**	**ANDERSON JASON**
02/07/2003	**R1681**	**958**	**137,500**	**137,500**	**I**	**WD**	**A**	**LANE MARY GRAHAM**
09/07/1999	**R1450**	**949**	**109,680**	**109,680**	**I**	**WD**	**B**	**CHEEK HUBERT**

NOTES

R18: CHG QLTY PER 32 *CB - 22: ADD EPF PER 51 *CB

THIS INSTRUMENT WAS PREPARED BY:
J. Blake Freeman, Attorney
Priority Escrow Services, Inc.
51 Century Boulevard, Suite 110
Nashville, TN 37214-3614

Mail

WARRANTY DEED

FOR AND IN CONSIDERATION of the sum of Ten Dollars, cash in hand paid by the hereinafter named Grantees, and other good and valuable consideration, the receipt of which is hereby acknowledged, **JAMES S. WHEELER and wife, MARY A. WHEELER**, hereinafter called the Grantors, have bargained and sold and by these presents do hereby transfer and convey unto PAUL A. TAYLOR and wife, BRENDA K. TAYLOR hereinafter called the Grantees, their heirs and assigns, a certain tract or parcel of land in **Maury County, Tennessee**, described as follows, to-wit:

LOCATED in the Third (3rd) Civil District of Maury County, Tennessee, and being Lot No. 25, Carriage Hills Subdivision, Section 1, as shown on Plat of record in Plat Book 5, page 282, of the Register's Office of Maury County, Tennessee.

BEING the same property conveyed to James S. Wheeler and wife, Mary A. Wheeler by deed from Wayne Smith and Gary Smith, of record in Book 783, page 561, Register's Office for Maury County, Tennessee.

THIS property is conveyed subject to all applicable local government planning, building and zoning regulations; Restrictive covenants filed of record in Book 653, page 511; and all matters as shown on the recorded plat.

This is a duplicate original of deed dated December 31, 1994, which was inadvertently lost and not recorded.

This is improved property known as: **107 Lenox Drive, Columbia, TN 38401**

TO HAVE AND TO HOLD the same tract or parcel of land, with the appurtenances, estate, title and interest thereto belonging to the said Grantees, their heirs and assigns, forever; and we do covenant with the said Grantees that we are lawfully seized and possessed of said land in fee simple, have a good right to convey it, and the same is unencumbered, unless otherwise herein set out; and we do further covenant and bind ourselves and our heirs and representatives, to warrant and forever defend the title to the said land to the said Grantees, their heirs and assigns, against the lawful claims of all persons whomsoever. Wherever used, the singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

WITNESS our hands this 22 day of September, 1996

James S. Wheeler

Mary A. Wheeler

MAURY COUNTY, STATE OF TENNESSEE
Received for record this 30 of Sept. 1996 at 11:55 o'clock A M
Note Book 17 Page 411 Receipt # 75051 Recording Fee 8.00
State Tax 357.05 Probate Fee 1.00 Total 366.05
Book 1305 Page 951, Witness my Hand,
MAURY COUNTY REGISTER OF DEEDS

L. Wayne White

BOOK 1305 PAGE 951

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

TAX YEAR 2023 MAURY	060	066K	A	026.00		000
	JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I

107 LENOX DR
Property Address

Ownership and Mailing Address

TAYLOR PAUL A ETUX
BRENDA K
107 LENOX DR
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 1**
BK **5** PG **282** BLOCK LOT **0025** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **140X170**

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**

Map **066F** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**4 Full Basement**
Stories	**2 Story Frame**	Heating/Air	**7 Heat And Cooling Split**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1987**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**9**	Total Fixtures	**9**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **1**	Rental: Src		Year **0**	Amount **0**		Sched

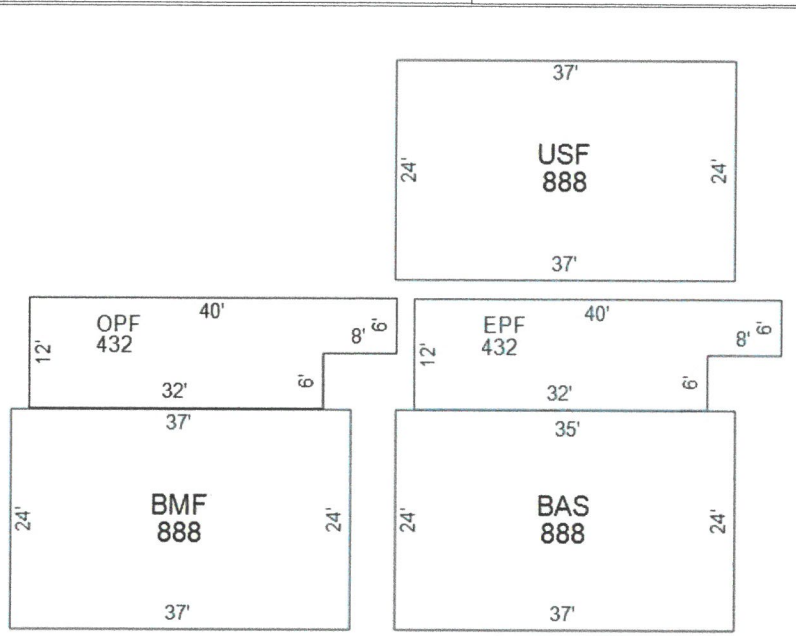
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition	**Average**	Class:	
Prorate	Date	Factor	% Comp	Cost & Design	**0**
Depr: Physical	**20**	Other Phys	Functional	External	% Good **80**

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
888	**.627**	**1**	**1**	**1.21**	**1,776**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**148,780**	**231,620**	**380,400**	**214.19**	Dwelling Factor	**1**
RCNLD	**119,020**	**185,300**	**304,320**	**171.35**	Dwelling Value	**304,320**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**888**			
	USF	**888**	**100**	**127.92**	**113,590**
	BMF	**888**	**0**	**56.86**	**50,490**
	EPF	**432**	**0**	**113.70**	**49,120**
	OPF	**432**	**0**	**42.64**	**18,420**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**311,100**
TOTAL APPRAISAL	**371,100**
GREENBELT APR	
ASSESSMENT	**92,775**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**371,100**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1992**	**1992**	**1**	**C**	**1**			**4000**	**UN**	**4,000**	**100**		**1**	**4,000**
STP	**Stoop**	**1992**	**1992**	**35**	**C**	**1**	**5X7**		**20.8571**	**AV**	**730**	**62.5**		**1**	**460**
PTO	**Patio**	**1997**	**1997**	**192**	**C**	**1**	**12X16**		**9.5833**	**AV**	**1,840**	**25**		**1**	**460**
WDK	**Wood Deck**	**1992**	**2014**	**120**	**C**	**1**	**IRR**		**20.8333**	**AV**	**2,500**	**76**		**1**	**1,900**

Total OBY Value **6,820**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**140**	**170**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
09/22/1996	**1305**	**951**	**96,500**	**96,500**	**I**	**WD**	**A**	**TAYLOR PAUL A ETUX**
12/10/1987	**783**	**561**	**92,000**	**92,000**	**I**	**WD**	**A**	**WHEELER JAMES S**
08/19/1986	**759**	**110**	**15,000**	**15,000**	**V**	**WD**	**A**	**SMITH WAYNE &**

NOTES

R14:32 ADD EPF INCREASE DRWY*LDS - R18: CHG QLTY PER 32 *CB
R22: CHG DRW, WDK EYB PER 32 *CB - 22: ADD OPF PER 51 *CB

PREPARED BASED ON PRIOR DEED. TITLE SEARCH NOT PROVIDED

Prepared and Return to:
Amy Cross Nance Attorney at Law, PLLC
103 Forrest Crossing Blvd Suite 205
Franklin, Tennessee 37064
615-794-5644

STATE OF TENNESSEE
COUNTY OF WILLIAMSON

THE ACTUAL CONSIDERATION FOR THIS TRANSFER IS $0.00.

Affiant

SUBSCRIBED AND SWORN TO BEFORE ME, THIS THE 5th DAY OF March, 2019.

Notary Public
My Commission Expires: 1-21-20

Dana Thomas
State of Tennessee Notary Public
Maury County

BK/PG: R2545/397-398
19003298

2 PGS:AL-QUITCLAIM DEED

SUSIE BATCH: 210847	03/11/2019 - 10:35 AM
VALUE	0.00
MORTGAGE TAX	0.00
TRANSFER TAX	0.00
RECORDING FEE	10.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	0.00
TOTAL AMOUNT	12.00

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

Address New Owner	Send Tax Bills	Map-Parcel Numbers
Fay G. & Dianne Hazen **Lacey J. Hazen** **105 Lenox Dr** **Columbia, TN 38401**	**Same**	**066K A 02700**

QUITCLAIM DEED

FOR AND IN consideration of the sum of One Dollar ($1.00) cash in hand paid and other good and valuable consideration, the receipt of which is hereby acknowledged that Fay G. Hazen and Dianne Hazen have bargained and sold, and do hereby convey, remise, release and forever quitclaim a life estate without right to sell to Fay G. Hazen and Dianne Hazen and the remainder interest to Lacey J. Hazen their heirs and/or assigns, their entire right, title and interest in and to a certain tract of land in Maury County, Tennessee, described as follows:

Being Lot No. 26 Carriage Hills Subdivision Section 1 as shown on plat of record in Plat Book 5 Page 282 Register's Office for Maury County, Tennessee to which plan reference is hereby made for a more complete and accurate description.

Being the same property conveyed to Fay G. Hazen and wife Dianne Hazen by deed from Bailey Mortgage Company of record in Book 789 Page 212 Register's Office for Maury County, Tennessee

This is improved property known as 105 Lenox Dr. Columbia, TN 38401

This instrument and the interest released and quitclaimed are subject to such limitations, restrictions and encumbrances as may affect the premises.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

105 LENOX DR
Property Address

Ownership and Mailing Address

HAZEN FAY G & DIANNE HAZEN &
LACEY J HAZEN
105 LENOX DR
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 1**
BK **5** PG **282** BLOCK LOT **26** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description **LIFE ESTATE**
Dimensions **135X170**

TAX YEAR 2023
MAURY

060	066K	A	027.00		000
JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**

Map **066F** Updated 10/27/2022
Dist **03** Printed 03/17/2023

Card: 1 of 1

Page: 1 of 1

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**7 Heat And Cooling Split**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1987**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**9**	Total Fixtures	**9**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src	**3**	Occ **1**	Rental: Src	Year	**0**	Amount **0**	Sched

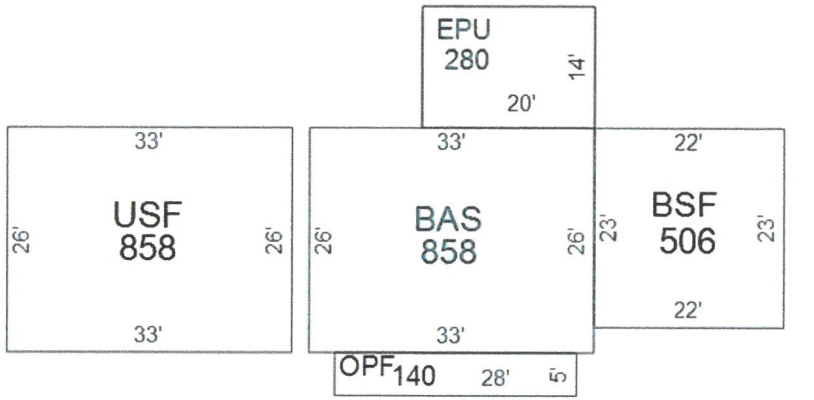
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality **2 : Above Average** Condition **Average** Class:
Prorate Date Factor % Comp Cost & Design **0**
Depr: Physical **20** Other Phys Functional External % Good **80**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
858	**.609**	**1**	**1**	**1.21**	**2,222**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**144,790**	**197,140**	**341,930**	**153.88**	Dwelling Factor	**1**
RCNLD	**115,830**	**157,710**	**273,540**	**123.11**	Dwelling Value	**273,540**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**858**			
	BSF	**506**	**100**	**113.70**	**57,530**
	USF	**858**	**100**	**127.93**	**109,760**
	OPF	**140**	**0**	**42.64**	**5,970**
	EPU	**280**	**0**	**85.29**	**23,880**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**285,100**
TOTAL APPRAISAL	**345,100**
GREENBELT APR	
ASSESSMENT	**86,275**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**345,100**
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units
Water/Sewer **01 Public / Public**
Electricity **01 Public**
Gas **00 None**
Topo **0 Level**
Road Type **3 Paved**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **01/01/2006** By **04**
Improvements **1**
Mobile Homes **0**
NH Trend **0 STABLE**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1990**	**1990**	**1**	**C**	**1**			**3000**	**UN**	**3,000**	**100**		**1**	**3,000**
GUD	**Detached Garage Unfi**	**1990**	**1990**	**744**	**C**	**1**	**24X31**		**30.7661**	**AV**	**22,890**	**36**		**1**	**8,240**
WDK	**Wood Deck**	**1990**	**1990**	**1**	**C**	**1**			**300**	**UN**	**300**	**100**		**1**	**300**

Total OBY Value **11,540**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**135**	**170**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
03/05/2019	**R2545**	**397**				**QC**		**HAZEN FAY G & DIANNE HAZEN &**
03/28/1988	**789**	**212**	**94,000**	**94,000**	**I**	**WD**	**I**	**HAZEN FAY G**
08/31/1987	**777**	**605**	**72,125**	**72,125**	**I**	**AO**	**D**	**BAILEY MORTGAGE COMPANY**
10/09/1986	**761**	**472**						**COHENOUR JULIAN S JR**

NOTES

CHG EYB INCR LAND PRICE*R06FN*CHG AREA CODE*FN*R14:32 DEL OPU/ADD EPU*LDS
R18: CHG QLTY PER 32*CB*R2545-397 LIFE EST TO FAY & DIANNE REMAINDER TO LACEY*JG
R22: CHG DRW VAL PER 32 *CB - R22: PP-UTB PER 51 *CB

This Instrument Prepared by:
Delilah A. Speed, Attorney at Law, 710B North Main Street, P.O. Box 973, Columbia, Tennessee 38402-0973.

BK/PG:R1759/397-399

03113905

3 PGS : AL - QUITCLAIM DEED
SUSIE BATCH: 10063
10/30/2003 - 01:04 PM

VALUE	0.00
MORTGAGE TAX	0.00
TRANSFER TAX	0.00
RECORDING FEE	15.00
DP FEE	2.00
REGISTER'S FEE	0.00
TOTAL AMOUNT	17.00

STATE of TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

Person or Agency Responsible For Payment of Taxes:

P/U BY:

TINA MARIE GREEN
103 LENOX DRIVE
COLUMBIA, TN 38401

QUITCLAIM DEED

For and in consideration of the sum of Ten Dollars ($10.00) Dollars, cash in hand paid, the receipt and sufficiency of which is hereby acknowledged, I, **BRUCE W. GREEN**, have this day bargained and sold and by these presents do hereby transfer and convey all my right, title and interest that I might have in and to the following described property unto **TINA GREEN**, said property lying and being in the 3RD **CIVIL DISTRICT** of Maury County, Tennessee being more particularly described as follows:

TAX MAP AND PARCEL NO'S. 66K-A-2A.

Being Lot number 27 of the Carriage Hill Subdivision, Section 1, a plat of which appears of record in Plat Book 5, page 282, Register's Office of Maury County, Tennessee.

Being the same property conveyed to Bruce W. Green and Tina Green by Deed from Bob P. Keith and wife, Lisa E. Keith of record Book 1343, page 693, Register's office for Maury County, Tennessee.

TO HAVE AND TO HOLD said interest that I might have in said property to the said **TINA GREEN**, together with all rights, titles, claims, interests, easements,

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

103 LENOX DR	Subdivision **CARRIAGE HILLS SEC 1**	**TAX YEAR 2023**	060	066K	A	028.00		000
Property Address	BK **5** PG **282** BLOCK LOT **0027** TRACT	**MAURY**	JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
Ownership and Mailing Address	Alt Subdiv	City **60156 Columbia**	Map **066F**		Updated 10/27/2022			
GREEN TINA	BK PG BLOCK LOT TRACT	SSD1	Dist **03**		Printed 03/17/2023			
103 LENOX DR	Additional Description	SSD2	Card: 1 of 1					
COLUMBIA TN 38401	Dimensions **135.03X175.75 IRR.**	Total Land Units **1** / Deed Acres **0** / Calculated Acres **0**	Page: 1 of 1					

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**11 Common Brick**	Attic	
Heating Fuel			

Year Built	**1980**	Eff Yr Built	**2002**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**6**	Total Fixtures	**6**
Wood FP Stacks		Openings		Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **0**	Rental: Src		Year **0**	Amount **0**		Sched

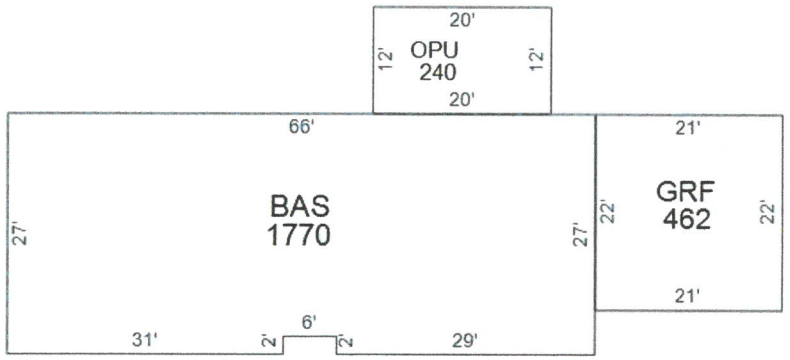
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition	**Average**	Class:	
Prorate	Date	Factor	% Comp	Cost & Design	**0**
Depr: Physical	**20**	Other Phys	Functional	External	% Good **80**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,770	**1.161**	**1**	**1.07**	**1.21**	**1,770**	**2022**	**20**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**269,780**	**37,950**	**307,730**	**173.86**	Dwelling Factor	**1**
RCNLD	**215,820**	**30,360**	**246,180**	**139.08**	Dwelling Value	**246,180**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,770**			
	GRF	**462**	**0**	**71.06**	**32,830**
	OPU	**240**	**0**	**21.33**	**5,120**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**249,700**
TOTAL APPRAISAL	**309,700**
GREENBELT APR	
ASSESSMENT	**77,425**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**309,700**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year Recorded

App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1986**	**1986**	**1**	**C**	**1**			**3000**	**UN**	**3,000**	**100**		**1**	**3,000**
STP	**Stoop**	**1986**	**1986**	**48**	**C**	**1**	**6X8**		**20.8333**	**AV**	**1,000**	**55**		**1**	**550**

Total OBY Value **3,550**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**15**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**135**	**175**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
10/29/2003	**R1759**	**397**						**GREEN TINA**
08/27/1997	**1343**	**693**	**95,500**	**95,500**	**I**	**WD**	**A**	**GREEN BRUCE W ETUX**
05/11/1993	**1182**	**87**	**88,900**	**88,900**	**I**	**WD**	**A**	**KEITH BOB P**
03/20/1991	**1113**	**276**	**89,900**	**89,900**	**I**	**WD**	**A**	**MCGRADY CLIFFORD E**

NOTES

CHG EYB INCR LAND PRICE*R06FN*AREA CODE R06BV*CHG AREA CODE*FN
R2014:32 CHG DRWY*LDS - R18: CHG QLTY PER 32 *CB - R22: CHG DRW VAL PER 32 *CB

RE1001.115
This Instrument Prepared By:
R. W. Hardison, Attorney at Law
710 North Main Street
Post Office Box 1967
Columbia, Tennessee 38402-1967

GENERAL WARRANTY DEED

This indenture is made and entered into this 27 day of December, 1993 between Robert M. Young, and wife, Joan M. Young (hereinafter referred to as "GRANTOR") and Sandra C. Taylor, and husband, Robert M. Taylor (hereinafter referred to as "GRANTEE").

For and in consideration of Ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, cash in hand paid, Grantor does by these presents, sell, transfer and convey unto grantee, the following described tract or parcel of land:

SITUATE in the Third (3rd) Civil District of Maury County, Tennessee and being more particularly described as Lot 18 in the Carriage Hills Subdivision, Section 1, as shown by map of record in Plat Book 5 at page 282 in the Maury County, Tennessee Register of Deeds office.

BEING the same property conveyed toRobert M. Young, and wife, Joan M. Young by instrument of record in Book 811 at page 547 in the Maury County, Tennessee Register of Deeds office.

Tax Parcel # 66F-A-66K-33.00

NOTE: The legal description set forth above is the same property as contained in Grantor's previous deed of record and no new boundary survey is available.

To have and to hold the above-described tract or parcel of land, together with all rights, titles, interests, easements, appurtenances, and hereditaments thereto appertaining, to Grantee, its heirs and assigns forever in fee simple.

Grantor covenants with Grantee that Grantor is lawfully seized and possessed in fee simple of the above-described tract or parcel of land, that Grantor has the full, good and lawful right and authority to sell, transfer and convey the same, and that the above-described tract or parcel of land is unencumbered, except for covenants, conditions and restrictions of record in Book 647 at Page 280 and as amended in Book 653 at page 511 and Book 733 at page 432 in the Maury County, Tennessee Registers of Deeds Office.

And, Grantor does warrant, and hereby binds its successors to title, to forever defend the title to the above-described tract or parcel of land against the lawful claims of all persons whatsoever, unto Grantee, its heirs and assigns.

In Witness Whereof, Grantor has set its hand(s) the date first above-written.

Robert M. Young

Joan M. Young

216115

BOOK 1207 PAGE 749

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

108 LENOX DR Property Address	Subdivision **CARRIAGE HILLS SEC 1** BK **5** PG **282** BLOCK LOT **0018** TRACT	**TAX YEAR 2023** **MAURY**	060 JUR	066K CONTROL MAP	A GROUP	033.00 PARCEL	PI	000 S/I
Ownership and Mailing Address **TAYLOR SANDRA C ETVIR** **ROBERT M** **108 LENOX DR** **COLUMBIA TN 38401**	Alt Subdiv BK PG BLOCK LOT TRACT Additional Description Dimensions **159.93X185 IRR.**	City **60156 Columbia** SSD1 SSD2 Total Land Units **1** Deed Acres **0** Calculated Acres **0**	Map **066F** Dist **03**	Updated 10/27/2022 Printed 03/17/2023 Card: 1 of 1 Page: 1 of 1				

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1988**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**7**	Total Fixtures	**7**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **1**	Rental: Src		Year **0**		Amount **0**	Sched

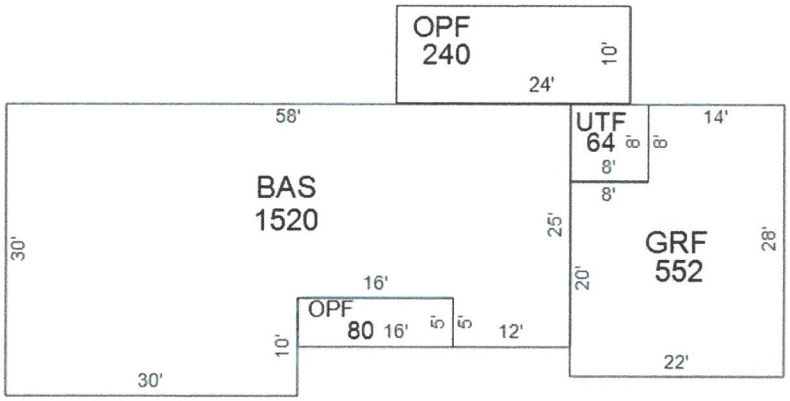
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition	**Average**	Class:	
Prorate	Date	Factor	% Comp	Cost & Design	**0**
Depr: Physical	**20**	Other Phys	Functional	External	% Good **80**

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,520	**1.012**	**1**	**1**	**1.21**	**1,520**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**226,250**	**57,420**	**283,670**	**186.63**	Dwelling Factor	**1**
RCNLD	**181,000**	**45,930**	**226,930**	**149.30**	Dwelling Value	**226,930**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,520**			
	UTF	**64**	**0**	**71.09**	**4,550**
	OPF	**80**	**0**	**42.63**	**3,410**
	GRF	**552**	**0**	**71.07**	**39,230**
	OPF	**240**	**0**	**42.63**	**10,230**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**229,200**
TOTAL APPRAISAL	**289,200**
GREENBELT APR	
ASSESSMENT	**72,300**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**289,200**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**1989**	**1989**	**120**	**C**	**1**	**10X12**		**20.8333**	**AV**	**2,500**	**10**		**1**	**250**
DRW	**Driveway**	**1989**	**1989**	**1**	**C**	**1**			**2000**	**UN**	**2,000**	**100**		**1**	**2,000**

Total OBY Value **2,250**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**159**	**185**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
12/27/1993	**1207**	**749**	**106,900**	**106,900**	**I**	**WD**	**A**	**TAYLOR SANDRA C ETVIR**
05/05/1989	**811**	**547**	**91,000**	**91,000**	**I**	**WD**	**M**	**YOUNG ROBERT M**
10/20/1988	**801**	**115**	**20,000**	**20,000**	**V**	**WD**	**C**	**SCRIBNER PAUL**
06/21/1978	**631**	**347**						**HITCH TOM J ETAL**

NOTES

R18: CHG EYB PER 32 *CB - R22: CHG DRW VAL PER 32 *CB
22: ADD OPF PER 51 *CB

BK/PG:R2791/1165-1168
21025325

4 PGS : QUITCLAIM DEED	
BECKY BUCHANAN 262730 - 21025325	
11/19/2021 - 08:10 AM	
VALUE	10.00
MORTGAGE TAX	0.00
TRANSFER TAX	0.00
RECORDING FEE	20.00
DP FEE	2.00
REGISTER'S FEE	0.00
TOTAL AMOUNT	22.00

STATE of TENNESSEE, MAURY COUNTY

JOHN FLEMING
REGISTER OF DEEDS

New Owner

Prepared By:	Record and Return To:	New Owner Name and Tax Mailing Address:
Vidmar & Hardesty, Ltd., John Vidmar (TN Bar#032525) P.O. Box 211031 Columbus, Ohio 43221	**CHURCHILL TITLE SOLUTIONS** 4501 Charlotte Park Drive Suite 120 Charlotte, NC 28217	Barbara Jean McArthur 102 Lenox Dr. Columbia, TN 38401

Order Number: CTSL-BC906TN

QUIT-CLAIM DEED

KNOW ALL MEN BY THESE PRESENTS, that the Grantor(s) **Barbara Jean McArthur , fka Barbara Jean Woodard, , an unmarried woman,** for Ten Dollars ($10.00) and other valuable consideration paid, does hereby bargain, sell, remise, release, quit claim, and convey unto the Grantee(s), **Barbara Jean McArthur, an unmarried woman,** whose address is 102 Lenox Dr., Columbia, TN 38401, the following described real property located in Third 3rd Civil District of Maury County, State of Tennessee and further described as follows:

Being more particularly described as Lot 15 in the Carriage Hills Subdivision, Section 1, as shown by map of record in Plat Book 5 at Page 282 in the Maury County, Tennessee register of Deeds Office.

Said Lot No. 15 fronts 150.00 feet on the Easterly margin of Lenox Drive and extends back between unparallel lines, then Northerly boundary line measuring 175.00 feet thereon and the Southerly boundary line measuring 145.00 feet thereon to the rear boundary line which measures 117. 71 feet thereon.

Be the same more or less, but subject to all legal highways.

This description is the same as the description contained in the prior deed referenced herein.

Subject to all easements, restrictions and other matters of record, zoning ordinances, real estate taxes and assessments, if any, prorated to the date of this deed.

County Parcel Numbers: 066K A 030.00
Street address of property: 102 Lenox Dr., Columbia, TN 38401

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

102 LENOX DR Property Address Ownership and Mailing Address **MCARTHUR BARBARA JEAN** **102 LENOX DR** **COLUMBIA TN 38401**	Subdivision **CARRIAGE HILLS SEC 1** BK **5** PG **282** BLOCK LOT **15** TRACT Alt Subdiv BK PG BLOCK LOT TRACT Additional Description Dimensions **150X175 IRR**	**TAX YEAR 2023** **MAURY**	060 JUR	066K CONTROL MAP	A GROUP	030.00 PARCEL	000 PI S/I		
		City **60156 Columbia** SSD1 SSD2	Map **066F** Dist **03**	Updated 10/27/2022 Printed 03/17/2023					
		Total Land Units **1** Deed Acres **0** Calculated Acres **0**	Card: 1 of 1 Page: 1 of 1						

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1987**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**6**	Total Fixtures	**6**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **1**	Rental: Src		Year **0**		Amount **0**	Sched

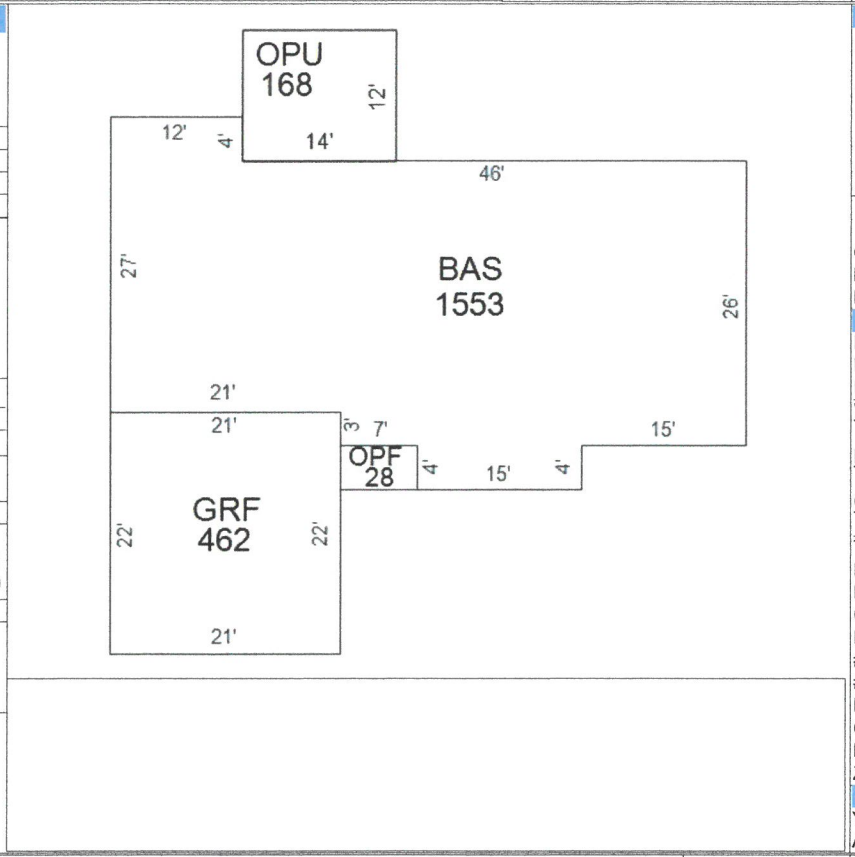
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**2 : Above Average**	Condition	**Average**	Class:	
Prorate	Date	Factor	% Comp	Cost & Design	**0**
Depr: Physical	**20**	Other Phys	Functional	External	% Good **80**

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,553	**1.031**	**1**	**1**	**1.21**	**1,553**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**228,680**	**37,600**	**266,280**	**171.46**	Dwelling Factor	**1**
RCNLD	**182,940**	**30,070**	**213,010**	**137.16**	Dwelling Value	**213,010**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,553**			
	OPF	**28**	**0**	**42.5**	**1,190**
	GRF	**462**	**0**	**71.06**	**32,830**
	OPU	**168**	**0**	**21.31**	**3,580**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**214,800**
TOTAL APPRAISAL	**274,800**
GREENBELT APR	
ASSESSMENT	**68,700**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**274,800**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**01 Public / Public**
Electricity	**01 Public**
Gas	**00 None**
Topo	**0 Level**
Road Type	**3 Paved**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 04**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**0 STABLE**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**1987**	**1987**	**160**	**C**	**1**	**10X16**		**20.8125**	**AV**	**3,330**	**10**		**1**	**330**
DRW	**Driveway**	**1987**	**1987**	**1**	**C**	**1**			**1500**	**UN**	**1,500**	**100**		**1**	**1,500**

Total OBY Value **1,830**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**32**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**150**	**175**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**	
					Totals:		**1**										**60,000**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
11/12/2021	**R2791**	**1165**				**QC**		**MCARTHUR BARBARA JEAN**
08/07/2020	**R2655**	**495**				**QC**		**WOODARD BARBARA JEAN**
08/23/2016	**R2388**	**373**	**171,500**	**171,500**	**I**	**WD**	**A**	**WOODARD BARBARA JEAN ETVIR DAVI**
05/03/2005	**R1854**	**1392**	**100,000**	**100,000**	**I**	**WD**	**A**	**MARBET LEE BOULDIN ETUX**

NOTES

14:CHG M/A PER RET ACN*LDS - R18: CHG EYB & QLTY PER 32 *CB
22: ADD OPU PER 51*CB

Return To:
McCann & Hubbard
1804 Williamson Ct, Suite 201
Brentwood, TN 37027
615-377-3319

(6)

DEVIN OAKLEY
TENNESSEE NOTARY PUBLIC
My Comm Exp. 03/21/26
COUNTY OF WILLIAMSON

STATE OF TENNESSEE
COUNTY OF Maury

The actual consideration or value, whichever is greater, for this transfer is $330,000.00

Affiant

Subscribed and sworn to before me, this 17th day of June, 2022.

Notary Public

My commission expires: 3-21-26

THIS INSTRUMENT WAS PREPARED BY
Lakeside Title & Escrow Series, LLC
854 Wren Road
Goodlettsville, TN 37072

WARRANTY DEED

Address of New Owner(s) as follows:	Send Tax Bills To:	Map-Parcel Numbers:
Caroline Lewis	**New Owner**	**066F-A-015.00**
124 Saxon Court		
Columbia, TN 38401		

FOR AND IN CONSIDERATION OF THE SUM OF TEN DOLLARS, CASH IN HAND PAID BY THE HEREINAFTER NAMED GRANTEES, AND OTHER GOOD AND VALUABLE CONSIDERATIONS, THE RECEIPT OF WHICH IS HEREBY ACKNOWLEDGED, WE, **Betty L. Thompson, LaSonya P. Thompson, Sherronda D. Thompson, Yolanda S. Knight, LaTosha M. Thompson, and the heirs at law of Larry N. Thompson, joined herein by Betty L. Thompson, Administrator of the Estate of Larry N. Thompson**, HEREINAFTER REFERRED TO AS THE GRANTORS, HAVE BARGAINED AND SOLD, AND BY THESE PRESENTS DO TRANSFER AND CONVEY UNTO **Caroline Lewis** HEREINAFTER CALLED THE GRANTEES, THEIR HEIRS AND ASSIGNS, A CERTAIN TRACT OR PARCEL OF LAND IN **Maury** COUNTY, STATE OF TENNESSEE, DESCRIBED AS FOLLOWS, TO-WIT:

Situate in the Third (3rd) Civil District of Maury County, Tennessee, and more particularly described as all of Lot 50 in the Plan of Carriage Hills Subdivision, Section 2, as shown by a map of record in Plat Book 8 at page 82, in the Maury County, Tennessee Register of Deeds Office.

Being the same property conveyed to Larry N. Thompson by Quitclaim Deed from Millicent Y. Thompson, dated 12/01/1997 and recorded 12/03/1997 in Book 1355, Page 435, Register's Office for Maury County, Tennessee. The said Larry N. Thompson is deceased as of 10/15/2021. A probate estate for Larry N. Thompson was opened in the Chancery Court for Maury County, Tennessee, Case No. P-337-21). Pursuant to the Petition to Probate and to Affidavits of Heirship recorded of record in Book R2854, Page 241, and Book R2854, Page 243, and Book R2854, Page 245, and Book R2854, Page 247, and Book R2854, Page 249, Register's Office for Maury County, Tennessee. Larry N. Thompson was survived by the following heirs at law: Betty L. Thompson, LaSonya P. Thompson, Sherronda D. Thompson, Yolanda S. Knight, and LaTosha M. Thompson. Betty L. Thompson also joins in this conveyance as Administrator of the Estate of Larry N. Thompson.

Tax Map/Parcel ID: 066F-A-015.00

THIS CONVEYANCE IS MADE SUBJECT TO: (1) all easements, restrictive covenants and conditions, and other matters of record, including all items set out on any applicable plat of record; (2) any and all applicable governmental and/or zoning regulations; (3) taxes which have been pro-rated as of the date of closing and assumed by the Grantee herein.

This is improved property known as: 124 Saxon Court, Columbia, TN 38401.

TO HAVE AND TO HOLD the said tract or parcel of land, with the appurtenances, estate, title and interest thereto belonging to the said GRANTEES, their heirs and assigns forever; and we do covenant with the said GRANTEES that we are lawfully seized and possessed of said land in fee simple, have a good right to convey it and the same in

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

124 SAXON CT Property Address Ownership and Mailing Address **LEWIS CAROLINE** **124 SAXON CT** **COLUMBIA TN 38401**	Subdivision **CARRIAGE HILLS SEC 2** BK **8** PG **82** BLOCK LOT **50** TRACT Alt Subdiv BK PG BLOCK LOT TRACT Additional Description Dimensions **208.18X118.33 IRR**	**TAX YEAR 2023** **MAURY**	060 JUR	066F CONTROL MAP	A GROUP	015.00 PARCEL	000 PI S/I		
		City **60156 Columbia** SSD1 SSD2	Map **066F** Dist **03**		Updated 08/05/2022 Printed 03/17/2023				
		Total Land Units **1** Deed Acres **0** Calculated Acres **0**	Card: 1 of 1 Page: 1 of 1						

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1991**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**9**	Total Fixtures	**9**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **1**	Rental: Src		Year **0**	Amount **0**	Sched	

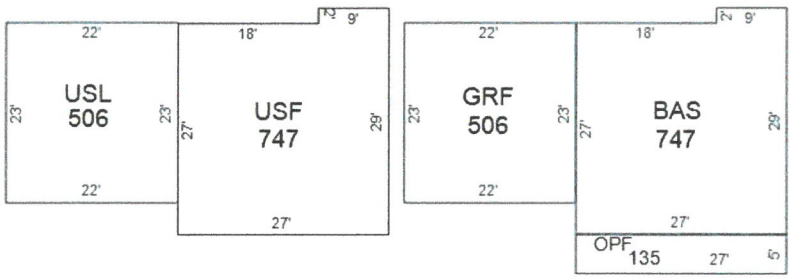
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**1+ : Average +**	Condition	**Average**	Class:	
Prorate	Date	Factor	% Comp	Cost & Design	**0**
Depr: Physical	**20**	Other Phys	Functional	External	% Good **80**

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
747	**.539**	**1**	**1**	**1.07**	**1,646**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**112,140**	**140,470**	**252,610**	**153.47**	Dwelling Factor	**1**
RCNLD	**89,710**	**112,370**	**202,080**	**122.77**	Dwelling Value	**202,080**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**747**			
	OPF	**135**	**0**	**37.70**	**5,090**
	GRF	**506**	**0**	**62.85**	**31,800**
	USL	**506**	**30**	**37.71**	**19,080**
	USF	**747**	**100**	**113.12**	**84,500**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**204,400**
TOTAL APPRAISAL	**264,400**
GREENBELT APR	
ASSESSMENT	**66,100**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**264,400**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**1 Rolling**
Road Type	**0 Us Highway**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 32**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**3 TRANSITION**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1991**	**1991**	**1**	**C**	**1**			**1000**	**UN**	**1,000**	**100**	**1**	**1**	**1,000**
WDK	**Wood Deck**	**2006**	**2006**	**120**	**C**	**1**	**10X12**		**20.8333**	**AV**	**2,500**	**52**	**1**	**1**	**1,300**

Total OBY Value **2,300**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**208**	**118**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
06/23/2022	**R2854**	**251**	**330,000**	**330,000**	**I**	**WD**	**J**	**LEWIS CAROLINE**
06/23/2022	**R2854**	**249**				**HR**		**THOMPSON LARRY N HEIRS**
06/23/2022	**R2854**	**247**				**HR**		**THOMPSON LARRY N HEIRS**
06/22/2022	**R2854**	**245**				**HR**		**THOMPSON LARRY N HEIRS**

NOTES

R18: CHG QLTY PER 32 *CB - 22: ADD TO USF PER 51 *CB. *R2854-251 LARRY THOMPSON DOD 10-15-21-MS

File:

This instrument prepared by:	Name and Address of New Property Owner:
Marshall Title & Escrow 28 Public Square PO Box 8150 Columbia, Tennessee 38402	Mr. & Mrs. Arbie Ford 112 Saxon Court Columbia, TN 38401 **Person or Agency Responsible for Taxes:** SAME **Map:** 66F, **Group** A, **Parcel:** 12.00

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, this indenture entered into on the 27 day of May, 2005, between **Johnny L. Brooks and wife, Martha M. Brooks, by and through Johnny Brooks, her Attorney in Fact, whose Power of Attorney is of record in Book ____, Page ____,** R1859 815 **Register's Office of Maury County, Tennessee,** GRANTORS, which expression shall include heirs, assigns and personal representatives, and **Arbie Ford and wife, Shelby Jean Ford,** as tenants by the entirety, GRANTEES, which expression shall include heirs, assigns and personal representatives.

WITNESSETH:

That for and in consideration of the sum of One Hundred Fifty One Thousand Five Dollars and No/100's ($151,500.00), and other good and valuable considerations, the receipt of all of which is hereby acknowledged, GRANTOR conveys unto GRANTEES the following described property:

Tract 1:
Located in the Third (3rd) Civil District of Maury County, Tennessee, and being more particularly described as Lot No. 47, Carriage Hills Subdivision, Section 2, Phase 1, as shown by plat of record in Plat Book 8, Page 82, Register's Office of Maury County, Tennessee.
Map 66F, Group A, Parcel 12.00

Tract 2:
Located in the Third (3rd) Civil District of Maury County, Tennessee, and being more particularly described as Tract 1 as shown on minor plat for Clark Bennett of record in Plat Book P14, Page 147, Register's Office of Maury County, Tennessee.
Map 66F, Group A, Parcel 12.00-001

Being all of the same property and legal description conveyed to Johnny L. Brooks and wife, Martha M. Brooks by deed of record in Book R1835, Page 1389, Register's Office of Maury County, Tennessee.

TO HAVE AND TO HOLD said real estate unto GRANTEES together with all rights, titles, easements and appurtenances thereunto belonging, forever.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

112 SAXON CT Property Address	Subdivision **CARRIAGE HILLS SEC 2** BK **8** PG **82** BLOCK LOT **47** TRACT	**TAX YEAR 2023** **MAURY**	060 JUR	066F CONTROL MAP	A GROUP	012.00 PARCEL	000 PI S/I
Ownership and Mailing Address	Alt Subdiv BK PG BLOCK LOT TRACT	City **60156 Columbia**	Map **066F**	Updated 10/27/2022			
FORD ARBIE ETUX **SHELBY JEAN** **112 SAXON CT** **COLUMBIA TN 38401**	Additional Description	SSD1	Dist **03**	Printed 03/17/2023			
	Dimensions **55.45X139.44 IRR**	SSD2	Card: 1 of 1				
		Total Land Units **1** Deed Acres **0** Calculated Acres **0**	Page: 1 of 1				

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1991**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**7**	Total Fixtures	**7**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **1**	Rental: Src		Year **0**		Amount **0**	Sched

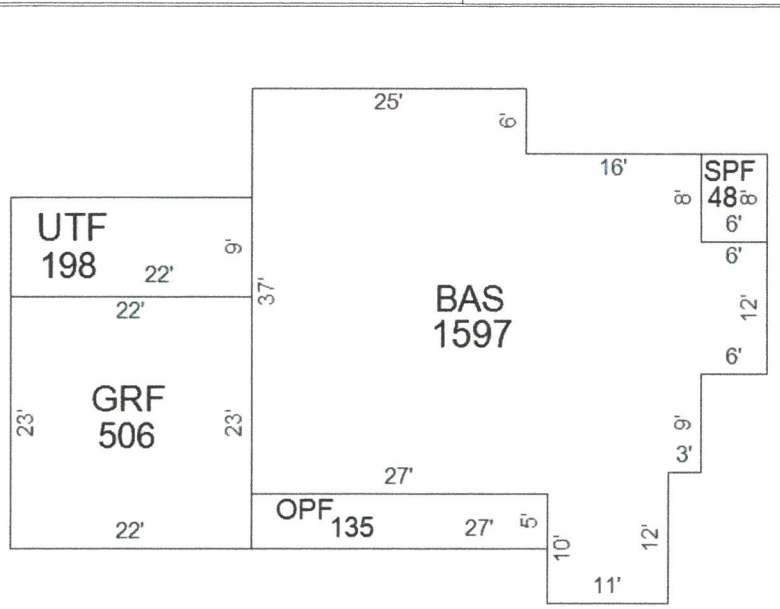
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**02 L-Shaped**
Cab/Millwork	**04 Above Average**		

Quality	**1+ : Average +**	Condition **Average**		Class:	
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**	

	Factors							
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,597	**1.058**	**1**	**1**	**1.07**	**1,597**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**208,930**	**52,350**	**261,280**	**163.61**	Dwelling Factor	**1**
RCNLD	**167,140**	**41,880**	**209,020**	**130.88**	Dwelling Value	**209,020**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,597**			
	UTF	**198**	**0**	**62.83**	**12,440**
	SPF	**48**	**0**	**62.92**	**3,020**
	OPF	**135**	**0**	**37.70**	**5,090**
	GRF	**506**	**0**	**62.85**	**31,800**



APPRAISED VALUES

LAND	**41,400**
IMPROVEMENTS	**223,700**
TOTAL APPRAISAL	**265,100**
GREENBELT APR	
ASSESSMENT	**66,275**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**265,100**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**1 Rolling**
Road Type	**0 Us Highway**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 32**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**3 TRANSITION**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
WDK	**Wood Deck**	**1991**	**1991**	**220**	**C**	**1**	**11X20**		**19.9545**	**AV**	**4,390**	**10**	**1**	**1**	**440**
DRW	**Driveway**	**1991**	**1991**	**1**	**C**	**1**			**1000**	**UN**	**1,000**	**100**	**1**	**1**	**1,000**
GUD	**Detached Garage Unfi**	**2005**	**2005**	**600**	**C**	**1**	**20X30**		**33.5**	**AV**	**20,100**	**66**	**1**	**1**	**13,270**

Total OBY Value **14,710**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value	Class
1	**U**	**22**	**01**		**55**	**139**	**1**	**60,000.00**					**69**		**100**	**41,400.00**	**41,400**	
					Totals:		**1**										**41,400**	

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
05/27/2005	**R1859**	**817**	**151,500**	**151,500**	**I**	**WD**	**P**	**FORD ARBIE ETUX**
12/31/2004	**R1835**	**1389**	**140,000**	**140,000**	**I**	**WD**	**P**	**BROOKS JOHNNY L &**
06/13/2003	**R1717**	**147**						**BENNETT SONJA R**
04/13/1992	**1145**	**412**	**111,000**	**111,000**	**I**	**WD**	**A**	**BUTTREY SONJA R**

NOTES

DECR LAND PRICE*R06FN*R06:ADD DGUVI06BG*CHG AREA CO*R06JS*FOR 09:INCR LAND PRICE*FN*CHG AREA CODE*FN FOR 09:INCR LAND PRICE*FN*CHG AREA CODE*FN*CHG SE EYB & DECR LAND PRICE*R10/32*FN*CHG EYB*R10/42*FN

mail to: Anchor Title
6910 Moores Ln
Brentwood TN 37027

BK/PG: R2667/312-313
20016935

2 PGS:AL-WARRANTY DEED	
BECKY BATCH: 235498	09/22/2020 - 10:50 AM
VALUE	289900.00
MORTGAGE TAX	0.00
TRANSFER TAX	1072.63
RECORDING FEE	10.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	1.00
TOTAL AMOUNT	1085.63

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

Prepared by:
Security Title & Escrow Co., LLC
1517 Hatcher Lane, Ste A
Columbia, Tennessee 38401

WARRANTY DEED

KNOW ALL MEN BY THESE PRESENTS, this indenture entered into between **John K. Layden and wife, Wendy J. Layden** , FIRST PARTY, which expression shall include heirs, assigns and personal representatives, and **Gerard M. Edwards and Marlene B. Edwards,** SECOND PARTY, which expression shall include heirs, assigns and personal representatives.

WITNESSETH:

For the consideration of the sum of TEN DOLLARS ($10.00), and other good and valuable considerations, the receipt of all of which is hereby acknowledged, FIRST PARTY conveys unto SECOND PARTY the following described property:

LOCATED in the Third (3rd) Civil District of Maury County, Tennessee, being Lot No. 48, Carriage Hills Subdivision, Section 2, Phase 1, of record in Plat Book 8, Page 82, Register`s Office of Maury County, Tennessee.

Being the same property conveyed to John K. Layden and Wendy J. Layden by deed dated June 11, 2019, of record in Book R2561, Page 1406, Register`s Office of Maury County, Tennessee. See also deed dated July 18, 1991, of record in Book 1123, Page 1, Register`s Office of Maury County, Tennessee.

Map 66F, Group A, Parcel 13

Property Address: 116 Saxon Court, Columbia, Tennessee 38401

TO HAVE AND TO HOLD said real estate unto SECOND PARTY together with all rights, title, easements and appurtenances thereunto belonging, forever.

FIRST PARTY COVENANTS with SECOND PARTY that it is lawfully seized And possessed of said real estate and that FIRST PARTY has a good and lawful right to convey the same, and that it is unencumbered except for easements and/or restrictions, if any, of record in the Maury County, Tennessee Register of Deeds office.

FIRST PARTY FURTHER COVENANTS to forever warrant and defend the title to said real estate unto SECOND PARTY against the lawful claims of all persons whomsoever.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

116 SAXON CT
Property Address
Ownership and Mailing Address
EDWARDS GERARD M & MARLENE B EDWARDS
116 SAXON CT
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 2**
BK **8** PG **82** BLOCK LOT **48** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **54.87X181.28 IRR**

TAX YEAR 2023
MAURY

JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
060	066F	A	013.00		000

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**
Map **066F** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**1 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**11 Common Brick**	Attic	
Heating Fuel			

Year Built	**1991**	Eff Yr Built	**2002**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**8**	Total Fixtures	**8**
Wood FP Stacks	**1**	Openings	**1**	Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **1**	Rental: Src		Year **0**	Amount **0**		Sched

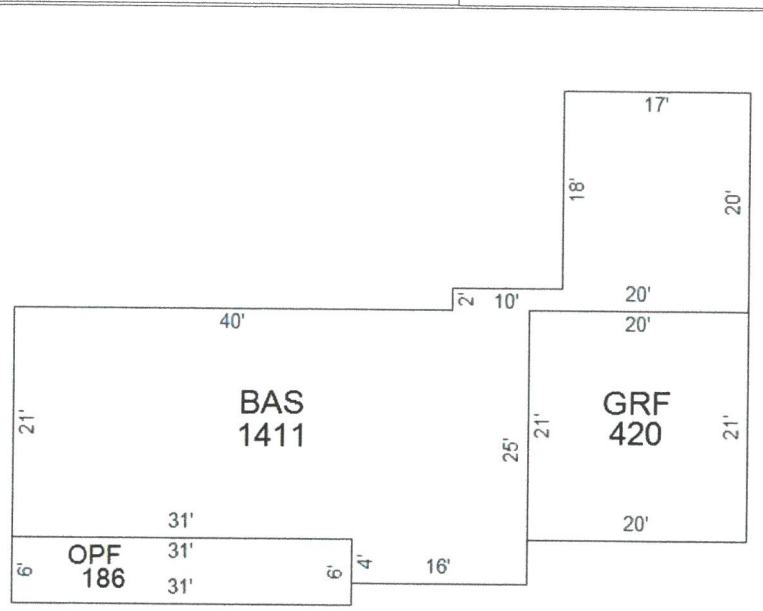
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality **1+ : Average +** Condition **Average** Class:
Prorate Date Factor % Comp Cost & Design **0**
Depr: Physical **20** Other Phys Functional External % Good **80**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,411	**.946**	**1**	**1.07**	**1.07**	**1,411**	**2022**	**20**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete
RCN	**201,380**	**33,400**	**234,780**	**166.39**	Dwelling Factor **1**
RCNLD	**161,100**	**26,720**	**187,820**	**133.11**	Dwelling Value **187,820**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,411**			
	OPF	**186**	**0**	**37.69**	**7,010**
	GRF	**420**	**0**	**62.83**	**26,390**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**190,400**
TOTAL APPRAISAL	**250,400**
GREENBELT APR	
ASSESSMENT	**62,600**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**250,400**
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units
Water/Sewer
03 Public / Individual
Electricity
01 Public
Gas
00 None
Topo **1 Rolling**
Road Type **0 Us Highway**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **01/01/2006** By **32**
Improvements **1**
Mobile Homes **0**
NH Trend **3 TRANSITION**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
UTB	**Utility Building**	**1991**	**1991**	**320**	**E**	**1**	**16X20**		**8.5**	**PR**	**2,720**	**10**	**1**	**1**	**270**
DRW	**Driveway**	**1991**	**1991**	**1**	**C**	**1**			**1000**	**UN**	**1,000**	**100**	**1**	**1**	**1,000**
WDK	**Wood Deck**	**2002**	**2002**	**160**	**C**	**1**	**IRR**		**20.8125**	**AV**	**3,330**	**40**	**1**	**1**	**1,330**

Total OBY Value **2,600**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**54**	**181**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
08/27/2020	**R2667**	**312**	**289,900**	**289,900**	**I**	**WD**	**A**	**EDWARDS GERARD M & MARLENE B ED**
06/11/2019	**R2561**	**1406**	**250,000**	**250,000**	**I**	**WD**	**A**	**LAYDEN JOHN K ETUX WENDY J**
07/18/1991	**1123**	**1**	**108,500**	**108,500**	**I**	**WD**	**M**	**PETERSON VICTOR N**
01/09/1991	**1109**	**126**	**17,900**	**17,900**	**V**	**WD**	**H**	**REAVES LARRY G**

NOTES

ADD DRWY PER 32*FN06VI*INCR LAND PRICE*R06FN* CHG AREA CO*R06JS*CHG AREA CODE*FN
20: ADD WDK PER 49 *CB

Prepared by:
Centennial Title Company, Inc.
30 Burton Hills Blvd., #165
Nashville, TN 37215

39-B
File #20-1352

WARRANTY DEED

FOR AND IN CONSIDERATION of the sum of Ten Dollars, cash in hand paid by the hereinafter named Grantee, and other good and valuable consideration, the receipt of which is hereby acknowledged, the undersigned **Martin T. Bryant, married,** hereinafter called the **Grantor**, has bargained and sold, and by these presents does hereby transfer and convey unto **Mia Costa and Jose Costa** hereinafter called the **Grantee**, Grantee's heirs and assigns, a certain tract or parcel of land in Maury County, Tennessee, described as follows: **To Wit:**

Land in the Third (3rd) Civil District of Maury County, Tennessee, being Lot No. 45 on the Plan of Final Plat of Carriage Hills, Section 2, Phase 1 of record in Plat Book 8, Page 82, in the Register's Office for Maury County, Tennessee, to which Plan reference is hereby made for a more complete description of the property.

Being a portion of the same property conveyed to Martin T. Bryant, unmarried by Warranty Deed from Lewis Eugene Lindsay a/k/a Lewis E. Lindsey, of record in Book R2091, Page 359, Register's Office for Maury County, Tennessee, dated August 20, 2009 and recorded on September 04, 2009. Martin T. Bryant is now married to Casey Bryant who joins in this conveyance to convey any and all marital interest in subject property.

The property conveyed herein is subject to matters shown on the recorded plan, matters set out in the above referenced Declarations and By-Laws, if any, and to applicable easements, conditions, assessments and restrictions therein, and Property Taxes for the current year.

This is improved property, known as: 104 Saxon Court, Columbia, TN 38201.

TO HAVE AND TO HOLD the said tract or parcel of land, with the appurtenances, estate, title and interest thereto belonging to the said Grantee, Grantee's heirs or assigns, forever. Grantor covenant with the said Grantee that Grantor is lawfully seized and possessed of said land in fee simple, has good right to convey it, and the same is unencumbered, unless otherwise herein set out. Grantor further covenants and binds Grantor, Grantor's heirs and representatives, to warrant and forever defend the title to the said land to the said Grantee, Grantee's heirs and assigns, against the lawful claims of all persons whomsoever. Wherever used, the singular number shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders.

Mail:
CONCORD TITLE
3000 MERIDIAN BLVD
STE 140
FRANKLIN TN 37067

NEW OWNER:	RESPONSIBLE FOR TAX PAYMENT	TAX MAP-PARCEL #:
Mia Costa **104 Saxon Court** **Columbia, TN 38201**	Northpointe Bank 3333 Deposit Drive NE Grand Rapids, MI 49546	**066F-A-010.00-000**

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

104 SAXON CT
Property Address
Ownership and Mailing Address
COSTA MIA & JOSE COSTA
104 SAXON CT
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 2**
BK **8** PG **82** BLOCK LOT **45** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description
Dimensions **58.52X251.66 IRR**

TAX YEAR 2023
MAURY

JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
060	066F	A	010.00		000

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**
Map **066F** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type **01 Single Family** Lower Level **1 No Basement**
Stories **1 Story Frame** Heating/Air **8 Heat And Cooling Pkg**
Exterior Wall **04 Siding Average** Attic
Heating Fuel

Year Built **1991** Eff Yr Built **2006** Rooms **0** Bedrooms **0**
Full Baths Half Baths Add'l Fixtures **9** Total Fixtures **9**
Wood FP Stacks **1** Openings **1** Add'l Sty PreFab Add'l Sty
Info Src **3** Occ **1** Rental: Src Year **0** Amount **0** Sched

Foundation **02 Continuous Footing** Floor Finish **11 Carpet Combination**
Floor System **04 Wood W/ Sub Floor** Interior Finish **07 Drywall**
Party Wall **00 None** Paint/Decor **04 Above Average**
Struct. Frame **00 None** Bath Tile **00 None**
Roof Framing **02 Gable/Hip** Electrical **04 Above Average**
Roof Cov/Deck **03 Composition Shingle** Shape **01 Rectangular Design**
Cab/Millwork **04 Above Average**

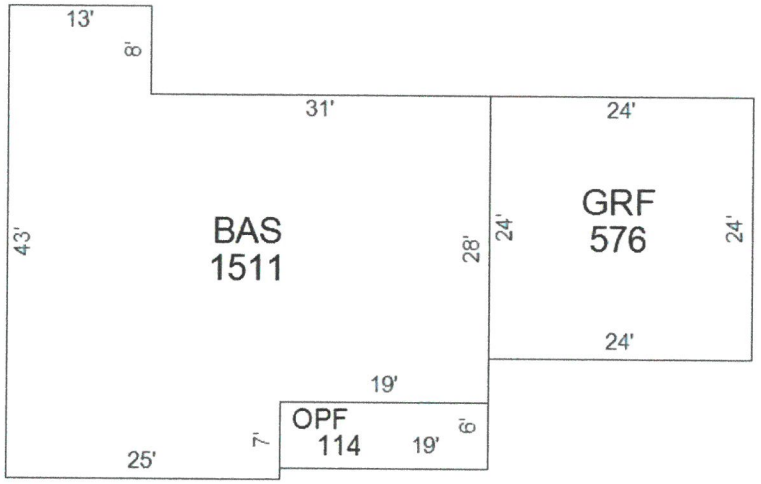
Quality **1+ : Average +** Condition **Average** Class:
Prorate Date Factor % Comp Cost & Design **0**
Depr: Physical **20** Other Phys Functional External % Good **80**

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,511	1.006	1	1	1.07	1,511	2022	16	1.00

	Base Dwelling	Add'l Areas	Total	$/SqFt
RCN	201,940	40,500	242,440	160.45
RCNLD	161,550	32,400	193,950	128.36

% Complete
Dwelling Factor **1**
Dwelling Value **193,950**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	1,511			
	OPF	114	0	37.72	4,300
	GRF	576	0	62.85	36,200



APPRAISED VALUES

LAND	41,400
IMPROVEMENTS	196,100
TOTAL APPRAISAL	237,500
GREENBELT APR	
ASSESSMENT	59,375
ASSESSED @	25%
APPROACH	COST VALUE

Value Correlation

	Value
COST	237,500
INCOME	
MARKET	

PARCEL DATA

NBHD **C64**
Review Flag
Living Units
Water/Sewer **03 Public / Individual**
Electricity **01 Public**
Gas **00 None**
Topo **1 Rolling**
Road Type **0 Us Highway**
Delete Next Year
Greenbelt Review **N**
Land Apr Date **01/01/2006** By **32**
Improvements **1**
Mobile Homes **0**
NH Trend **3 TRANSITION**
Other
Land Use Code **11**
Zoning

GREENBELT

Year Recorded
App# Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
PTO	Patio	1991	1991	192	C	1	12X16		9.5833	AV	1,840	10		1	180
DRW	Driveway	1991	1991	1	C	1			2000	UN	2,000	100		1	2,000

Total OBY Value 2,180

ENTRANCES

Date	Code	ID
01/01/2002	01 Bldg Apr	34

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	U	22	01		58	251	1	60,000.00					69		100	41,400.00	41,400
					Totals:		1										41,400

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
08/04/2020	R2654	820	278,000	278,000	I	WD	P	COSTA MIA & JOSE COSTA
08/20/2009	R2091	359	131,500	131,500	I	WD	P	BRYANT MARTIN T
08/08/2003	R1736	852	4,400	4,400	V	WD	P	LINDSAY LEWIS EUGENE
04/16/2001	R1533	839						LINDSAY LEWIS EUGENE

NOTES

DECR LAND PRICE*R06FN - CHG AREA CODE*R06JS*09:INCR LAND PRICE*FN
CHG AREA CODE*FN*CHG EYB*R10/32*FN*CHG EYB*R10/42*FN
R2091-359 ALSO SI001*JG - R18: CHG QLTY PER 32 *CB*FOR 21:R2654-820 ALSO SI 001
ADD REF:R2719-298 QC (CORRECTION DEED) CORRRECTING LEGAL IN R2654-820*PB
R22: CHG DRW VAL PER 32 *CB

This instrument Prepared by Gene Hallworth, Attorney at Law, Columbia, Tennessee
Upon information furnished by the parties, no title Examination Requested

Address New Owner:	Send Tax Bill to:	Tax Parcel Identification:
P/u Brandon Blalock 120 Saxon ~~County~~ Court Columbia, Tennessee 38401	New Owner	Map/Parcel 066F-A-014.00

QUIT-CLAIM DEED

For and in consideration of the sum of Ten Dollars ($10.00), cash in hand paid, and other good and valuable considerations I, **AMIE MURA BLALOCK**, do hereby sell, transfer, quitclaim, and convey unto **BRANDON CODY BLALOCK**, all my interest in the following real property. Said property is described as follows:

> Land if Maury County, Tennessee, being Lot No. 49 on the Plan of Final Plat Carriage Hills, Section 2 of record in Plat Book 8, Page 82, in the Register's Office for Maury County, Tennessee, to which Plan reference is hereby made for a more complete description of the property.
>
> Being the same property conveyed in Book R2602, Page 1399 of the Register's Office for Maury County, Tennessee.
>
> This is improved property known as 120 Saxon County, Columbia, Tennessee 38401.

TO HAVE AND TO HOLD said tract or parcel unto the Grantee, his heirs and assigns, together with all of the rights, titles, interests, easements, and appurtenances thereunto belonging.

IN WITNESS WHEREOF, we have hereunto set our hands, this 25th day of June, 2021.

Amie Blalock
Amie Mura Blalock

BK/PG: R2746/221-222
21013814

2 PGS:AL-QUITCLAIM DEED	
JANE BATCH: 251314	06/25/2021 - 03:01 PM
VALUE	10.00
MORTGAGE TAX	0.00
TRANSFER TAX	0.00
RECORDING FEE	10.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	0.00
TOTAL AMOUNT	12.00

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

120 SAXON CT	Subdivision **CARRIAGE HILLS SEC 2**	**TAX YEAR 2023**	**060**	**066F**	**A**	**014.00**		**000**
Property Address	BK **8** PG **82** BLOCK LOT **49** TRACT	**MAURY**	JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I
Ownership and Mailing Address	Alt Subdiv	City **60156 Columbia**	Map **066F**	Updated 10/27/2022				
BLALOCK BRANDON CODY	BK PG BLOCK LOT TRACT	SSD1	Dist **03**	Printed 03/17/2023				
120 SAXON CT	Additional Description	SSD2	Card: 1 of 1					
COLUMBIA TN 38401	Dimensions **54.25X181.28 IRR**	Total Land Units **1** / Deed Acres **0** / Calculated Acres **0**	Page: 1 of 1					

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**8 Heat And Cooling Pkg**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1991**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**9**	Total Fixtures	**9**
Wood FP Stacks		Openings		Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **1**	Rental: Src		Year **0**	Amount **0**		Sched

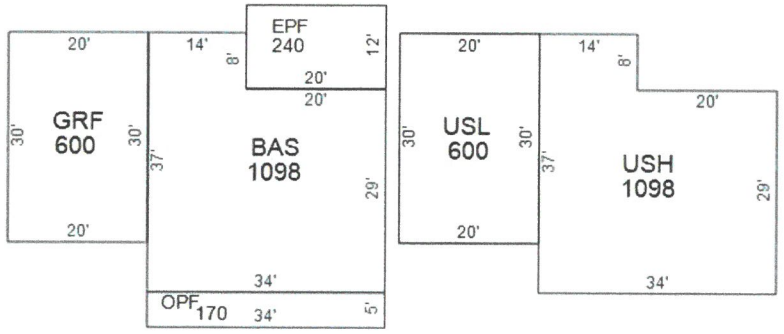
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**1+ : Average +**	Condition **Average**		Class:		
Prorate	Date	Factor	% Comp	Cost & Design **0**		
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**		

Factors								
GFLA	Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,098	**.756**	**1**	**1**	**1.07**	**1,937**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**149,860**	**159,860**	**309,720**	**159.90**	Dwelling Factor	**1**
RCNLD	**119,890**	**127,890**	**247,780**	**127.92**	Dwelling Value	**247,780**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,098**			
	OPF	**170**	**0**	**37.71**	**6,410**
	GRF	**600**	**0**	**62.83**	**37,700**
	USH	**1,098**	**60**	**62.84**	**69,000**
	EPF	**240**	**0**	**100.54**	**24,130**
	USL	**600**	**30**	**37.7**	**22,620**



APPRAISED VALUES

LAND	**60,000**
IMPROVEMENTS	**248,800**
TOTAL APPRAISAL	**308,800**
GREENBELT APR	
ASSESSMENT	**77,200**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**308,800**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**1 Rolling**
Road Type	**0 Us Highway**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 32**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**3 TRANSITION**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1991**	**1991**	**1**	**C**	**1**			**1000**	**UN**	**1,000**	**100**		**1**	**1,000**

Total OBY Value **1,000**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**54**	**181**	**1**	**60,000.00**							**100**	**60,000.00**	**60,000**
					Totals:		**1**										**60,000**

AGRICULTURAL / GREENBELT LAND

#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
06/25/2021	**R2746**	**221**				**QC**		**BLALOCK BRANDON CODY**
12/18/2019	**R2602**	**1399**	**313,500**	**313,500**	**I**	**WD**	**A**	**BLALOCK BRANDON ETUX AMIE**
03/02/2007	**R1970**	**1124**	**171,500**	**171,500**	**I**	**WD**	**A**	**BROOKS JOHN E &**
04/28/2000	**R1481**	**885**	**131,900**	**131,900**	**I**	**WD**	**A**	**BOND STANLEY ETUX**

NOTES

ADD DRWY PER 32*FN06VI*INCR LAND PRICE*R06FN - CHG AREA CO*R06JS*JG
CHG AREA CODE*FN - CHG EYB*R10/32*FN - CHG EYB*R10/42*FN
15:32 ADD SPF/CHG QUA/DEL WD DECK*LDS - 21: CHG SPF/EPF PER 50 *CB

BK/PG: R2563/163-164
19008811

2 PGS:AL-QUITCLAIM DEED	
SUSIE BATCH: 214676	06/21/2019 - 10:30 AM
VALUE	0.00
MORTGAGE TAX	0.00
TRANSFER TAX	0.00
RECORDING FEE	10.00
ARCHIVE FEE	0.00
DP FEE	2.00
REGISTER'S FEE	0.00
TOTAL AMOUNT	12.00

STATE OF TENNESSEE, MAURY COUNTY
JOHN FLEMING
REGISTER OF DEEDS

THIS INSTRUMENT WAS PREPARED BY: W. Faye Novelly, UAW-FCA-Ford-General Motors Legal Services Plan 3011 Harrah Drive, Suite B, Spring Hill, TN 37174		
NAMES AND ADDRESS OF NEW OWNERS: Jose A. Yrabien and Janet L. Yrabien 108 Saxon Court Columbia, TN 38401	**SEND TAX BILLS TO:** New Owners	**TAX IDENTIFICATION ID:** **Map: 066F** **Group: A** **Parcel: 011.00**

QUITCLAIM DEED

KNOW ALL BY THESE PRESENTS that I, JOSE A. YRABIEN, for and in consideration of the sum of Ten and No/100 Dollars ($10.00), cash in hand paid, the receipt of which is hereby acknowledged, have bargained and sold, and do hereby convey, remise, release and forever quitclaim unto myself, JOSE A. YRABIEN, and wife, JANET L. YRABIEN, such right, title and interest as is required to vest title in us as tenants by the entirety, in and to certain tracts or parcels of land located in the Third (3rd) Civil District of Maury County, Tennessee, to-wit:

FIRST PARCEL:

Being Tract 2 as shown on Minor Plat for Clark Bennett of record in Plat Book P14, Page 325, Register's Office of Maury County, Tennessee, consisting of 26,557 square feet or .610 acres by survey of A.E. Adkins, R.L.S. #1075, 606 South James M. Campbell Blvd., Columbia, Tennessee.

Map 066F, Group A, Parcel 011.00

SECOND PARCEL:

Situated in the Third (3rd) Civil District of Maury County, Tennessee and being more particularly described as Lot 46 in the Carriage Hills Subdivision, Section 2, Phase I, as shown by map of record in Plat Book 8 at page 82 in the Maury County, Tennessee Register of Deeds Office.

Map 066F, Group A, Parcel 011.00 001

Being the same property conveyed to JOSE A. YRABIEN from JULIA YRABIEN by deed dated November 17, 2016, of record in Book R2402, Page 1044, Register's Office of Maury County, Tennessee.

This is improved property known as 108 Saxon Court, Columbia, TN 38401.

This instrument was prepared in accordance with the information provided by the Grantor without the benefit of a title search or survey. The preparer was not responsible for determining the status of the title, the accuracy of the description or the accuracy of any other information provided by the Grantor.

Property Type: **00 Residential**

ASSESSOR OF PROPERTY - PROPERTY RECORD CARD

TAX YEAR 2023	060	066F	A	011.00		000
MAURY	JUR	CONTROL MAP	GROUP	PARCEL	PI	S/I

108 SAXON CT
Property Address
Ownership and Mailing Address

YRABIEN JOSE A ETUX JANET L
108 SAXON CT
COLUMBIA TN 38401

Subdivision **CARRIAGE HILLS SEC 2**
BK **8** PG **82** BLOCK LOT **46** TRACT
Alt Subdiv
BK PG BLOCK LOT TRACT
Additional Description **INSIDE CITY**
Dimensions **107.48X174.63 IRR**

City **60156 Columbia**
SSD1
SSD2
Total Land Units **1**
Deed Acres **0**
Calculated Acres **0**

Map **066F** Updated 10/27/2022
Dist **03** Printed 03/17/2023
Card: 1 of 1
Page: 1 of 1

DWELLING DATA

Improv Type	**01 Single Family**	Lower Level	**1 No Basement**
Stories	**2 Story Frame**	Heating/Air	**7 Heat And Cooling Split**
Exterior Wall	**04 Siding Average**	Attic	
Heating Fuel			

Year Built	**1991**	Eff Yr Built	**2006**	Rooms	**0**	Bedrooms	**0**
Full Baths		Half Baths		Add'l Fixtures	**8**	Total Fixtures	**8**
Wood FP Stacks		Openings		Add'l Sty		PreFab	Add'l Sty
Info Src **3**	Occ **1**	Rental: Src		Year **0**		Amount **0**	Sched

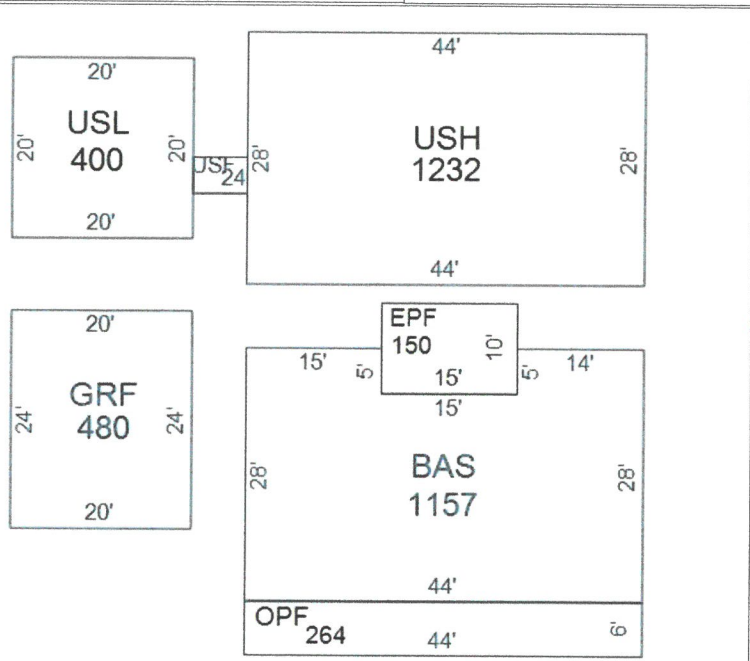
Foundation	**02 Continuous Footing**	Floor Finish	**11 Carpet Combination**
Floor System	**04 Wood W/ Sub Floor**	Interior Finish	**07 Drywall**
Party Wall	**00 None**	Paint/Decor	**04 Above Average**
Struct. Frame	**00 None**	Bath Tile	**00 None**
Roof Framing	**02 Gable/Hip**	Electrical	**04 Above Average**
Roof Cov/Deck	**03 Composition Shingle**	Shape	**01 Rectangular Design**
Cab/Millwork	**04 Above Average**		

Quality	**1+ : Average +**	Condition **Average**		Class:	
Prorate	Date	Factor	% Comp	Cost & Design **0**	
Depr: Physical **20**	Other Phys	Functional	External	% Good **80**	

GFLA	Factors: Area	Story	Const	Grade	SFLA	Depr Yr	Eff Age	County Factor
1,157	**.792**	**1**	**1**	**1.07**	**2,040**	**2022**	**16**	**1.00**

	Base Dwelling	Add'l Areas	Total	$/SqFt	% Complete	
RCN	**158,460**	**150,400**	**308,860**	**151.40**	Dwelling Factor	**1**
RCNLD	**126,770**	**120,320**	**247,090**	**121.12**	Dwelling Value	**247,090**

AREAS: Lower Floor	First & Above	Area	% SFLA	Rate	RCN
	BAS	**1,157**			
	EPF	**150**	**0**	**100.53**	**15,080**
	USF	**24**	**100**	**112.92**	**2,710**
	OPF	**264**	**0**	**37.69**	**9,950**
	GRF	**480**	**0**	**62.83**	**30,160**
	USH	**1,232**	**60**	**62.84**	**77,420**
	USL	**400**	**30**	**37.7**	**15,080**



APPRAISED VALUES

LAND	**41,400**
IMPROVEMENTS	**272,000**
TOTAL APPRAISAL	**313,400**
GREENBELT APR	
ASSESSMENT	**78,350**
ASSESSED @	**25%**
APPROACH	**COST VALUE**

Value Correlation

	Value
COST	**313,400**
INCOME	
MARKET	

PARCEL DATA

NBHD	**C64**
Review Flag	
Living Units	
Water/Sewer	**03 Public / Individual**
Electricity	**01 Public**
Gas	**00 None**
Topo	**1 Rolling**
Road Type	**0 Us Highway**
Delete Next Year	
Greenbelt Review	**N**
Land Apr Date	**01/01/2006 By 32**
# Improvements	**1**
# Mobile Homes	**0**
NH Trend	**3 TRANSITION**
Other	
Land Use Code	**11**
Zoning	

GREENBELT

Year	Recorded
App#	Book/Pg

OUTBUILDINGS and YARD ITEMS

Code	Description	Yr Blt	Eff Yr	Area	Grade	Units	Add'l Description	Class	Rate	Cnd	RCN	%Good	Prort	Adj Fact	Value
DRW	**Driveway**	**1991**	**1991**	**1**	**C**	**1**			**2000**	**UN**	**2,000**	**100**		**1**	**2,000**
GUD	**Detached Garage Unfi**	**2005**	**2005**	**320**	**C**	**1**	**16X20**		**43.4063**	**AV**	**13,890**	**66**		**1**	**9,170**
WDK	**Wood Deck**	**2020**	**2020**	**700**	**C**	**1**	**25 X 28**		**12.2143**	**AV**	**8,550**	**94**		**1**	**8,040**
CUD	**Detached Carport Unf**	**2021**	**2021**	**480**	**C**	**1**	**20 X 24**		**12.1042**	**AV**	**5,810**	**98**		**1**	**5,690**

Total OBY Value **24,900**

ENTRANCES

Date	Code	ID
01/01/2002	**01 Bldg Apr**	**34**

BUILDING PERMITS

Date	Type	Status	Last Visit

MARKET LAND

#	Type	Table	Code	Acc	Front	Depth	Units	Rate	Infl	Fld	Topo	Loc	Size	Mkt	Dep	Adj Rate	Value Class
1	**U**	**22**	**01**		**107**	**174**	**1**	**60,000.00**					**69**		**100**	**41,400.00**	**41,400**
					Totals:		**1**										**41,400**

AGRICULTURAL / GREENBELT LAND

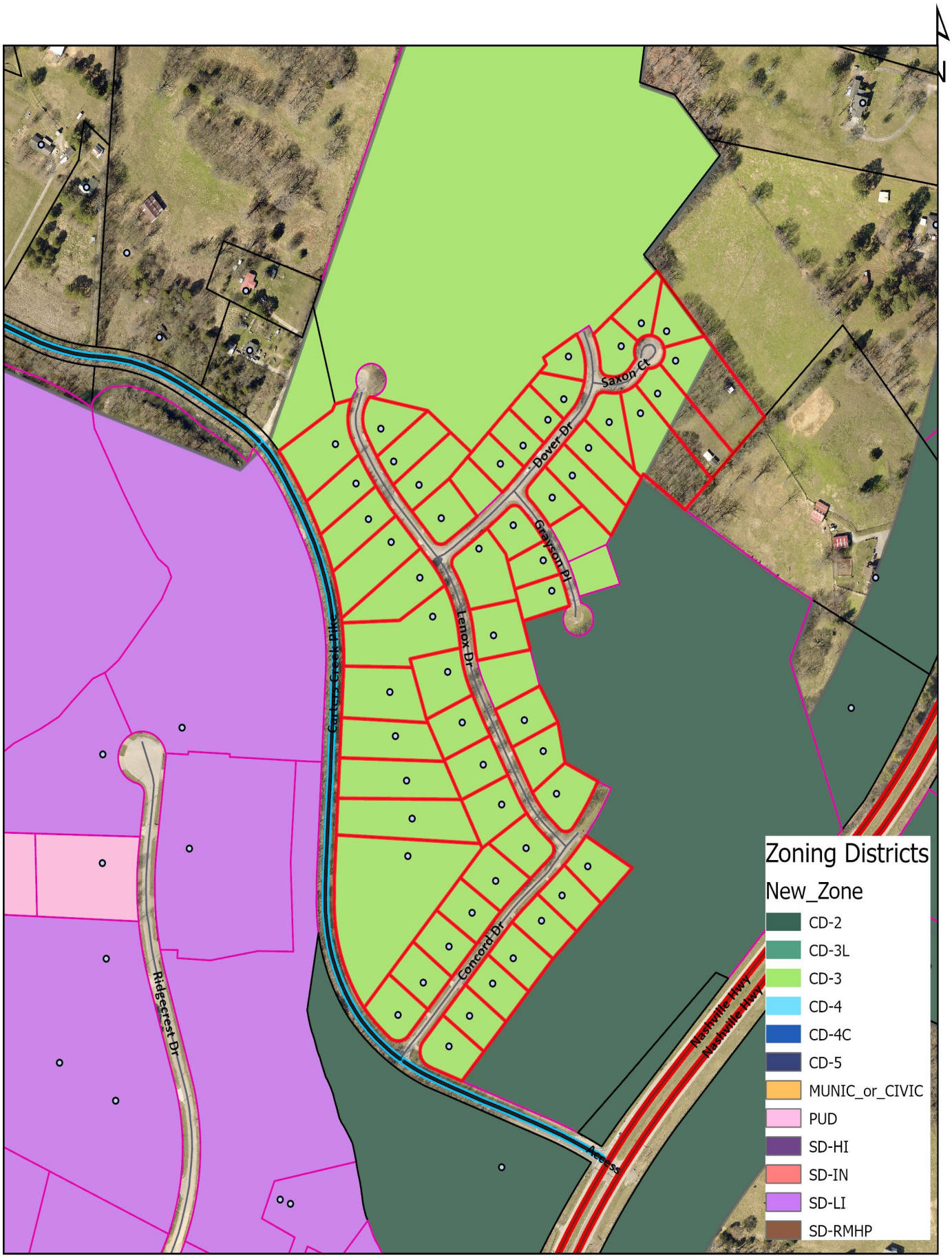
#	Mkt Line	Use Type	Soil Type	Access	Acres	Rate	Use Value
				Totals:			

SALES

Date	Book	Page	Price	Adj Price	V/I	Instr	A/R	Owner
06/21/2019	**R2563**	**163**				**QC**		**YRABIEN JOSE A ETUX JANET L**
11/17/2016	**R2402**	**1044**				**QC**		**YRABIEN JOSE A**
08/08/2003	**R1736**	**850**	**3,965**	**3,965**	**V**	**WD**	**P**	**YRABIEN JOSE A ETUX**
10/22/1993	**1200**	**327**	**109,500**	**109,500**	**I**	**WD**	**A**	**YRABIEN JOSE A ETUX**

NOTES

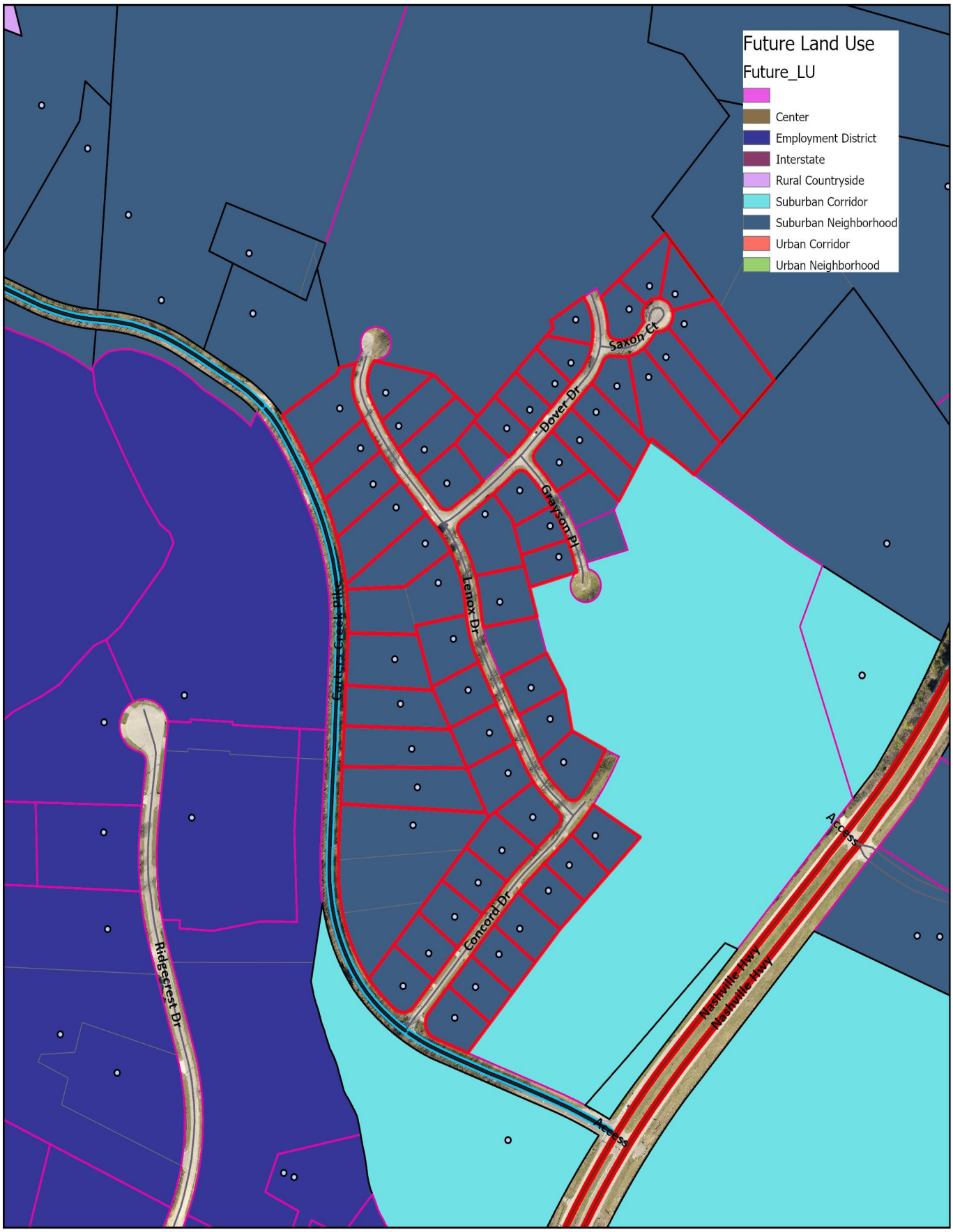
14:32 CHG OPF TO USF/ INCR LND*LDS*R2563-163 ALSO SI001*JG
R22: ADD HVAC, CHG DRW VAL PER 32 *CB - 22: ADD WDK, CUD PER 51 *CB



23-0093
Carriage Hills Subdivision

CITY OF COLUMBIA TENNESSEE

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



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DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
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Petition to [action]

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Action petitioned for	We, the undersigned residents of Carriage Hills Subdivision in the City of Columbia request the Columbia Municipal Planning Commission and the Columbia City Council approve rezoning Carriage Hills Subdivision from CD-3 to CD3L (2 units per acre) and minimum lot widths of 100-feet which the parcels in Carriage Hills Subdivision already are.

	Printed Name	Signature	Address	Phone # Or Email Address	Date
1	Pat O. Coleman Jr	Pat O. Coleman Jr	214 Carters Creek Pike	698-5948	5-11-23
2	Kathy Langley	Kathy Langley	210 Carters Creek Pike	446-3643	5-11-23
3	Amy B Vaught	Amy B. Vaught	208 Carters Creek Pike	698-6237	5-11-23
4	Perry M Langley	Perry M Langley	210 Carters Creek Pk	446-3845	5-11-23
5	Brenda Coleman	Brenda Coleman	214 Carters Creek Pike	931-626-5253	5/11/23
6	George W. Waggoner	George W. Waggoner	212 CARTERS CREEK PIKE	931-381-0503	5/11/23
7	Deborah Waggoner	Deborah Waggoner	212 Carters Creek Pike	921 334-1644	3/11/23
8	Kelly Smith	Kelly Smith	206 Carters Creek Pike	615-595-4391	3/11/23
9	David Smith	David Smith	206 Carters Creek Pike	615-598-0482	3/11/23
10	Tabitha Philpott	Tabitha Philpott	109 Concord Dr.	931-334-3611	3/14/23
11	Greg Philpott	Greg Philpott	109 Concord Dr.	931-334-3611	3/14/23

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	Printed Name	Signature	Address	Phone # Or Email Address	Date
12	Melissa Sorrento	Melissa Sorrento	100 Lenox Dr	615-927-4583	3/12/23
13	Hunter Tyree	Hunter Tyree	1008 Grayson Place	931-374-0131	3-12-23
14	Lauren Tyree	Lauren Tyree	1008 Grayson Place	931-212-0700	3-12-23
15	Doug Lafond	Doug Lafond	121 Lenox DR	931-446-7483	3/12/23
16	Caroline Lewis	Caroline Lewis	124 Saxon Ct.	919-710-1717	3-12-23
17	Kathryn York	Kathryn York	106 Concord Dr.	615-243-3101	3-12-23
18	Megan Tolbert	Megan Tolbert	104 Lenox Dr	615-772-8531	3-13-23
19	Trevin Tolbert	Trevin Tolbert	104 Lenox Dr	256-603-6685	3-13-23
20	Colleen Moroney	Colleen Moroney	129 Lenox DR.	(949) 922-7874	3.13.23
21	Bobby Fox	Bobby Fox	115 Lenox	931 698-1647	3-13-23
22	Jesse Hogan	Jesse L Hogan	109 Lenox Dr	615-429-7506	3/13/23

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	Printed Name	Signature	Address	Phone # Or Email Address	Date
23	Patsy Goodness	Patsy Goodness	1116 Dover Dr.	931374-0935	3-11-23
24	Benjamin Inman	B. F. Inman Jr	1118 Dover Drive	931 334 5970	3.11.23
25	Jane Love	Jane Love	105 Concord Drive	931-626-1124	3-11-23
26	Tim Love	Tim Love	105 Concord Dr.	931-215-3765	3-11-23
27	Shelby J Ford	Shelby J Ford	117 Saxon Ct.	931-380-0705	3-12-23
28	H Rbie Ford	Orbie Ford	112 Saxon Ct	931 380 0205	3-12-23
29	SON MINH DO	SON MINH DO	1112 DOVER DR	931-384-0066	3-12-23
30	Kathrina M. D	Kathrina M. D	1112 Dover Dr	931-384-0247	3/12/23
31	Kim Doscher		1117 Dover Dr	205-757-7404	3/12/23
32	Briana Waldrum		120 Lenox Drive	717-793-7933	3/13/23
33	Branson Waldrum		126 Lenox Drive	931-446-8036	03/13/23

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	Printed Name	Signature	Address	Phone # Or Email Address	Date
34	Ted Ford	Ted Ford	103 Concord Dr	theoford01@gmail.com	Mar 11, 23
35	Barbara Ford	Barbara Ford	103 Concord Dr	931-380-0244	Mar, 11, 23
36	Harvey Nicholson	Harvey Nicholson	101 Concord Dr	374-1055	Mar 11
37	Eddie Kelley	Eddie Kelley	107 concord dr	388-0067	Mar 11
38	Tina Green	Tina L	103 Lenox Drive	615-973-7805	3/11/23
39	SANDY TAYLOR	Sandra C. Taylor	108 LENOX DRIVE	931-446-3787	3/11/23
40	Debra Westra	Debra Westra	1100 Dover Dr	931-380-3968	3/11/23
41	WAYNE CROWLEY	WAYNE Crowley	130 LENOX DR	931 840 0218	3/11/23
42	GAIL CROWLEY	Gail Crowley	130 LENOX DR	931 840 0218	3/11/23
43	Kellie Conger	Kellie Conger	1109 Dover Dr	931 505 2300	3/11/23
44	DAVID GOODNESS	David Goodness	1116 DOVER DRIVE	931 881 7803	3/11/23

Petition to [action]

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	Printed Name	Signature	Address	Phone # Or Email Address	Date
45	Robert G. Marshall	Robert G. Marshall	102 Concord Dr. Columbia, Tn 38401	rdjmarshall@bellsouth.net	03-11-23
46	Donna J. Marshall	Donna J Marshall	102 Concord Dr. Columbia TN 38401	rdjmarshall@bellsouth.net	03-11-23
47	Adam York	Adam York	106 Concord Dr Columbia, TN	theadamyork@gmail.com	03-11-23
48	Rudy A. Holzer	Rudy A. Holzer	109 Concord Dr Columbia TN	rudyholzer@gmail.com	03/11-23
49	Valerie Holzer	Valerie Holzer	108 Concord Dr Columbia, TN 38401		3/11/23
50	Fay Hazen	Fay Hazen	105 Lenox DR Columbia TN	Fay.Hazen@yahoo.com	3/11/23
51	Dianne Hazen	Dianne Hazen	105 Lenox DR. Tn Columbia		3-11-23
52	Reba LaFond	Reba LaFond	121 Lenox Dr Col.		3-11-23
53	Margaret Tinsley	Margaret Tinsley	112 Lenox Dr.	Mheymattinsley@bellsouth.net	3-11-23
54	Brad Imburgia	Brad Imburgia	1113 Dover Dr.	bimburgia@gmail	3-11-23
55	Michelle Imburgia	Michelle Imburgia	1113 Dover Dr.	mimburgia@gmail.com	3-11-23

Petition to [action]

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	Printed Name	Signature	Address	Phone # Or Email Address	Date
56	Robert Fesser		1121 Dover	(615) 637-6262	3/10
57	Carol Lucero	Carol J. Lucero	1125 DOVER	505) 553-6636	3/10
58	EDWARDS MARLENE	Marlene Edwards	116 Lenox CT	949 351-3320	3/10
59	GERARD EDWARDS		116 Lenox CT	949 351-3291	3/10
60	BRENDA Taylor	Brenda Taylor	107 LENOX	931-381-4561	3/10
61	PAUL Taylor	Paul Taylor	107 LENOX	931-381-4561	3/10
62	Hector Guzman	Hector Guzman	111 Concord Dr;	931-626-4119	3-11-23
63	Cristi SECREST		1104 DOVER DR	931-334-3352	3/12/23
64	Chuck Weston	Chuck Weston	1100 Dover Dr.	931-446-3968	3/12/23
65	Roger D Goodwin	Roger D Goodwin	113 LENOX DR	931 381 4619	3/12/23
66	Brenda Goodwin	Brenda Goodwin	113 Lenox Dr.	931-381-4619	3/12/23

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	Printed Name	Signature	Address	Phone # Or Email Address	Date
67	Nita L. Burdett	Nita L Burdett	112 Concord Dr Columbia	(931) 626-7312	3/10/23
68	VERNON L BURDETT	Vernon L. Burdett	112 CONCORD DR COLUMBIA	(931) 374-2295	3/10/2023
69	ROBERT STEPHENSON	Robert Stephenson	110 CONCORD DR COLUMBIA	931-446-5337	3/10/2023
70	Matthew Turner		111 Lenox Drive	931-398-8666	3/11/23
71	Sara Kueck	Sara Kueck	111 Lenox Dr.	931-215-2985	3/11/23
72	Shirley Fox (Shirley Fox)	Shirley Fox	115 Lenox Dr	931-388-6168	3/11/23
73	ASHLEY DOSCHER	Ashley Drescher	1117 Dover Drive	708-212-7132	3/11/23
74	Jared Yabsley	Jared R Yabsley	108 Saxon Ct	931-698-2382	3/11/23
75	[illegible]	Susan Stephenson	110 Concord Drive	sucintennk@gmail.com	3/11/23
76	Zachary Colburn		100 Concord Drive	(530) 210-0469	3-11-23
77	Lindsay Wilburn		100 Concord drive	615-785-5961	3/11/23

Petition to [action]

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	Printed Name	Signature	Address	Phone # Or Email Address	Date
78	Michael Johnson	Michael Johnson	104 Concord Dr Columbia	615-533-6546	3/11/23
79	JOSE A. YRABIEN	Jose A. Yrabien	108 SAXON CT COLUMBIA	(931) 215-5354	03/11/23
80	KEVIN CONGER	Kevin Conger	1109 DOVER DR.	(931) 505-1317	3/11/23
81	Brandon Blalock	Brandon Blalock	120 Saxon Dr.	931-676-7652	3/12/23
82	Alison Christie	Alison Christie	1004 Grayson Pl	214-229-3589	3/12/23
83	Michael White	Michael White	125 Lenox Dr	931-334-0867	3/12/23
84	Yvonne White	Yvonne White	125 Lenox Dr.	931 334-0866	3-12-23
85	Linda Feyers	Linda Feyers	122 Lenox Dr.	931-[illegible]626-3441	3-12-23
86	Barb McArthur	Barb McArthur	102 Lenox Dr	303-881-6629	3-12-23
87	Jose Costa		104 Saxon CT	6156389286	3/12/23
88	Mik Cofer		104 Saxon CT	9316752558	3/12/23

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Printed Name	Signature	Address	Phone # Or Email Address	Date
Stephanie Andrews		1108 Dover Dr.	S_Sluder13@yahoo.com 931-626-3361	3/12/2023
Wesley Andrews		1108 Dover Dr	Wesmgd@yahoo.com 931-626-3361	3/12/2023

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 on a USB thumb drive or CD (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"

ADDRESS/LOCATION	Carriage Hills Subdivision		
	TAX MAP:	GROUP:	PARCEL:
SUMMARY OF NATURE OF REQUEST AND WORK	Rezone from CD-3 to CD3L Carriage Hills is Suburban Neighborhood		

DATE OF PRE-APPLICATION CONFERENCE		*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
☐ Annexation ☑ Rezoning ☐ Preliminary Plat ☐ Final Plat ☐ PUD Preliminary Master Plan ☐ PUD Final Site Plan ☐ Multi-Family Site Plan ☐ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations/Rezoning/PUD's:** ☑ Written Legal Description copy ☑ Requested Zone Listed ☑ Compliance with Comprehensive Plan ☐ Annexation Permission Form ☐ Plans and/or Plats conforming to City standards with check list completed ☐ Columbia Water System Availability Letter **Plats/PUDs:** ☐ Project Name (include Sections & Phases) _____ ☐ Total Number of Lots _____ ☐ Total acreage _____

Rev. 4/14/2022

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 meetings 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	SUSAN STEPHENSON	PHONE	931-446-1337
ADDRESS	110 CONCORD DRIVE	EMAIL	sueintenn@gmail.com

PROPERTY OWNER NAME	CARRIAGE HILLS SUBDIVISION	PHONE	—
ADDRESS	—	EMAIL	—

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.

SUSAN STEPHENSON		3/20/2023
APPLICANT NAME	APPLICANT SIGNATURE	DATE
CARRIAGE HILLS SUBDIVISION	—	—
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	

(1)

Results

Click rows to view property details

Displaying **1 - 50 of 59**

	Parcel ID▲	Owner Name	Address	PT	Appraisal	Jur	Future	Taxyr
☐	066F A 00100 000	SECREST CRISTI	1104 DOVER DR	00	$283,700	060	N	2023
☐	066F A 00200 000	EPPS ALISON ETVIR ANDREW...	1004 GRAYSON PL	00	$304,200	060	N	2023
☐	066F A 00300 000	TYREE HUNTER L ETUX LAUR...	1008 GRAYSON PL	00	$282,600	060	N	2023
☐	066F A 00400 000	PARKS ROBERT S	GRAYSON PL	00	$60,000	060	N	2023
☐	066F A 00500 000	PARKS ROBERT S	GRAYSON PL	00	$60,000	060	N	2023
☐	066F A 00600 000	ANDREWS WESLEY D ETUX ST...	1108 DOVER DR	00	$308,100	060	N	2023
☐	066F A 00700 000	DO SON MINH	1112 DOVER DR	00	$321,000	060	N	2023
☐	066F A 00800 000	GOODNESS DAVID FRANCIS	1116 DOVER DR	00	$307,400	060	N	2023
☐	066F A 00900 000	INMAN BENJAMIN F JR	1118 DOVER DR	00	$374,600	060	N	2023
☐	066F A 01000 000	COSTA MIA & JOSE COSTA	104 SAXON CT	00	$237,500	060	N	2023
☐	066F A 01100 000	YRABIEN JOSE A ETUX JANE...	108 SAXON CT	00	$313,400	060	N	2023
☐	066F A 01200 000	FORD ARBIE ETUX	112 SAXON CT	00	$265,100	060	N	2023
☐	066F A 01300 000	EDWARDS GERARD M & MARLE...	116 SAXON CT	00	$250,400	060	N	2023
☐	066F A 01400 000	BLALOCK BRANDON CODY	120 SAXON CT	00	$308,800	060	N	2023
☐	066F A 01500 000	LEWIS CAROLINE	124 SAXON CT	00	$264,400	060	N	2023
☐	066F A 01600 000	LUCERO PATRICK ETUX CAROL	1125 DOVER DR	00	$313,500	060	N	2023
☐	066F A 01700 000	GARCIA RAFAEL DE JESUS &	1121 DOVER DR	00	$285,000	060	N	2023
☐	066F A 01800 000	DOSCHER ALAN J ETUX ASHL...	1117 DOVER DR	00	$276,500	060	N	2023
☐	066F A 01900 000	IMBURGIA BRADLEY J ETUX ...	1113 DOVER DR	00	$319,700	060	N	2023
☐	066F A 02000 000	CONGER KELLIE L &	1109 DOVER DR	00	$258,700	060	N	2023
☐	066F A 02100 000	PARKS ROBERT S	DOVER DR	00	$60,000	060	N	2023
☐	066F B 00100 000	FEYERS DONALD E ETUX	122 LENOX DR	00	$237,800	060	N	2023
☐	066F B 00200 000	WALDRUM BRIANA RYELLE ET...	126 LENOX DR	00	$274,300	060	N	2023
☐	066F B 00300 000	CROWLEY WAYNE D SR ETUX	130 LENOX DR	00	$299,900	060	N	2023
☐	066F B 00400 000	LAFOND DOUGLAS & REBA RE...	121 LENOX DR	00	$315,700	060	N	2023
☐	066F B 00500 000	WHITE MICHAEL J ETUX	125 LENOX DR	00	$292,900	060	N	2023
☐	066F B 00600 000	MORONEY COLLEEN KATHLEEN	129 LENOX DR	00	$402,100	060	N	2023
☐	066K A 00100 000	COLBURN ZACHARY ETUX LIN...	100 CONCORD DR	00	$302,200	060	N	2023
☐	066K A 00200 000	MARSHALL ROBERT G	102 CONCORD DR	00	$297,900	060	N	2023
☐	066K A 00300 000	JOHNSON MICHAEL	104 CONCORD DR	00	$299,300	060	N	2023

(2)

☐	066K A 00400 000	YORK ADAM ETUX KATHRYN	106 CONCORD DR	00	$358,100	060	N	2023
☐	066K A 00500 000	HOLZER RUDY A ETUX	108 CONCORD DR	00	$377,300	060	N	2023
☐	066K A 00600 000	STEPHENSON ROBERT F	110 CONCORD DR	00	$412,500	060	N	2023
☐	066K A 00700 000	BURDETT VERNON ETUX NITA...	112 CONCORD DR	00	$308,000	060	N	2023
☐	066K A 00800 000	GUZMAN HECTOR	111 CONCORD DR	00	$323,600	060	N	2023
☐	066K A 00900 000	PHILPOTT GREGORY F ETUX	109 CONCORD DR	00	$334,400	060	N	2023
☐	066K A 01000 000	KELLEY EDDIE D ETUX	107 CONCORD DR	00	$306,700	060	N	2023
☐	066K A 01100 000	LOVE TIMOTHY ETUX	105 CONCORD DR	00	$292,400	060	N	2023
☐	066K A 01200 000	FORD BARBARA J	103 CONCORD DR	00	$325,300	060	N	2023
☐	066K A 01300 000	NICHOLSON HARVEY P ETUX	101 CONCORD DR	00	$323,100	060	N	2023
☐	066K A 01600 000	SMITH RONNIE ETUX KELLY ...	206 CARTERS CREEK PIKE	00	$299,000	060	N	2023
☐	066K A 01700 000	VAUGHT AMY B ETVIR JOSEP...	208 CARTERS CREEK PIKE	00	$363,800	060	N	2023
☐	066K A 01800 000	LANGLEY PERRY MICHAEL ET...	210 CARTERS CREEK PIKE	00	$338,900	060	N	2023
☐	066K A 01900 000	WAGGONER GEORGE W JR	212 CARTERS CREEK PIKE	00	$329,500	060	N	2023
☐	066K A 02000 000	COLEMAN PAT O JR ETUX	214 CARTERS CREEK PIKE	00	$356,300	060	N	2023
☐	066K A 02200 000	GOODWIN PROTECTION TRUST	113 LENOX DR	00	$299,800	060	N	2023
☐	066K A 02300 000	FOX ROBERT LOFTON	115 LENOX DR	00	$399,500	060	N	2023
☐	066K A 02400 000	TURNER MATTHEW ETUX SARA...	111 LENOX DR	00	$369,200	060	N	2023
☐	066K A 02500 000	HOGAN JESSE L	109 LENOX DR	00	$274,100	060	N	2023
☐	066K A 02600 000	TAYLOR PAUL A ETUX	107 LENOX DR	00	$371,100	060		

Results

Click rows to view property details

Displaying **51 - 59 of 59**

(3)

	Parcel ID▲	Owner Name	Address	PT	Appraisal	Jur	Future	Taxyr
☐	066K A 02700 000	HAZEN FAY G & DIANNE HAZ...	105 LENOX DR	00	$345,100	060	N	2023
☐	066K A 02800 000	GREEN TINA	103 LENOX DR	00	$309,700	060	N	2023
☐	066K A 02900 000	SORRENTO FAMILY TRUST	100 LENOX DR	00	$344,100	060	N	2023
☐	066K A 03000 000	MCARTHUR BARBARA JEAN	102 LENOX DR	00	$274,800	060	N	2023
☐	066K A 03100 000	TOLBERT TREVIN J ETUX ME...	104 LENOX DR	00	$340,800	060	N	2023
☐	066K A 03200 000	PARKS ROBERT S	106 LENOX DR	00	$60,000	060	N	2023
☐	066K A 03300 000	TAYLOR SANDRA C ETVIR	108 LENOX DR	00	$289,200	060	N	2023
☐	066K A 03400 000	WESTRA CHARLES ALWIN ETUX	1100 DOVER DR	00	$313,500	060	N	2023
☐	066K A 03500 000	TINSLEY MARGARET H	112 LENOX DR	00	$342,900	060	N	2023

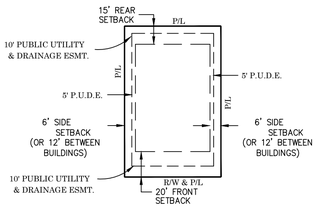
print Printable Version

Results Page: keyboard_arrow_left 1 **2**

GENERAL NOTES

1.) THE PURPOSE OF THIS PLAT IS TO CREATE A 29 LOT SUBDIVISION.
2.) ALL DISTANCES SHOWN HEREON ARE BASED UPON A FIELD—RUN SURVEY USING E.D.M. EQUIPMENT AND OR ALL GPS, AND ARE ADJUSTED FOR TEMPERATURE.
3.) UTILITIES, IF SHOWN WERE TAKEN FROM VISIBLE STRUCTURES AT THE SITE, VERIFICATION OF THEIR EXISTENCE, LOCATION, SIZE, AND DEPTH SHOULD BE MADE BEFORE MAKING DECISIONS REGARDING THEM. AVAILABILITY OF SERVICE SHOULD BE CONFIRMED WITH APPROPRIATE LOCAL UTILITY COMPANY. TENNESSEE ONE CALL (811) SHOULD BE CALLED BEFORE ANY CONSTRUCTION OR DIGGING.
4.) THIS SURVEY WAS MADE WITHOUT THE BENEFIT OF A TITLE REPORT. IT IS THEREFORE SUBJECT TO THE FINDINGS OF AN ACCURATE TITLE REPORT.
5.) THIS PROPERTY IS SUBJECT TO BOTH RECORDED EASEMENTS, AND TO THOSE UNKNOWN TO THIS SURVEYOR.
6.) THE SUBJECT PROPERTY LIES IN A ZONE "X" (AREAS OUTSIDE OF THE 100 YEAR FLOOD PLAIN) AS SHOWN ON FIRM MAP 47119C0285E DATED 04-16-2007.
7.) PROPERTY ZONED CD-4. SETBACKS ARE FRONT=6'/20'; SIDE =6' TOTAL; REAR=15'
8.) THERE IS A 10' P.U.D.E. ON ALL PROPERTY LINES PARALLEL AND ABUTTING PUBLIC ROADS AND 5' P.U.D.E. ALONG ALL INTERIOR LOT LINES.
9.) POWER & WATER SERVED BY CPWS COLUMBIA POWER & WATER SYSTEMS.
10.) SEWER IS SERVED BY COLUMBIA WASTEWATER DEPARTMENT.
11.) NO DRIVEWAY ACCESS OFF WILLIAMSPORT PIKE.
12.) ALL STORM WATER RUNOFF WILL FLOW AWAY FROM THE ROAD AND TOWARD THE STREAM. FOR CALCULATIONS SEE D1 & D2 STORM WATER PLAN ENGINEERING PLAN IN THE CONSTRUCTION DRAWINGS.
13.) ALL FIRST FLOOR ELEVATIONS AND MECHANICAL SYSTEMS TO BE ABOVE 622' ELEVATION DUE TO POSSIBLE FLOODING.
14.) TOPOGRAPHY DATUM BASED ON NAVD 1988 TAKEN FROM TENNESSEE LIDAR MAPPING AND FIELD CHECKED.

TYPICAL LAYOUT (LOTS 146-174)



LOT(S) AREA

LOT #	SQ FT
LOT 146	5,996 ft²
LOT 147	8,106 ft²
LOT 148	5,444 ft²
LOT 149	5,909 ft²
LOT 150	6,150 ft²
LOT 151	9,990 ft²
LOT 152	5,915 ft²
LOT 153	5,119 ft²
LOT 154	4,998 ft²
LOT 155	5,000 ft²
LOT 156	5,000 ft²
LOT 157	5,029 ft²
LOT 158	5,088 ft²
LOT 159	5,140 ft²
LOT 160	5,184 ft²
LOT 161	5,218 ft²
LOT 162	5,239 ft²
LOT 163	5,248 ft²
LOT 164	5,249 ft²
LOT 165	5,249 ft²
LOT 166	5,786 ft²
LOT 167	5,690 ft²
LOT 168	5,622 ft²
LOT 169	5,579 ft²
LOT 170	5,554 ft²
LOT 171	5,529 ft²
LOT 172	5,525 ft²
LOT 173	5,518 ft²
LOT 174	5,561 ft²

TYPICAL PAVEMENT SECTION

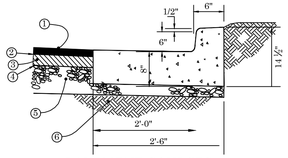
GENERAL NOTE:
1. PLACEMENT OF SIDEWALK SHALL BE IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS OF THE CITY OF COLUMBIA, LATEST VERSION.
2. CONSTRUCTION SHALL CONFIRM TO THE CITY OF COLUMBIA ENGINEERING DEPARMENT SPECIFICATIONS, LATEST REVISION.

(NOT TO SCALE)

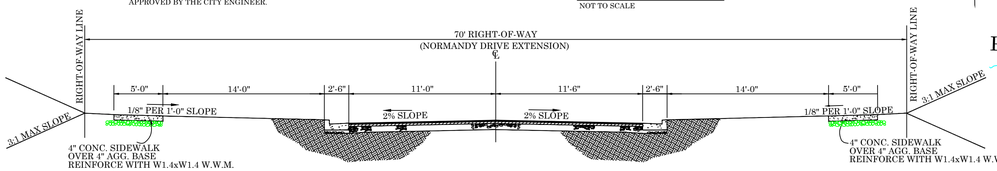
MINIMUM REQUIREMENTS:

① 11/2" ASPHALTIC CONCRETE SURFACE (GRADING E) ITEM NO. 411-01.11
② TACK COAT (RS-2) ITEM NO. 403-01
③ 2" ASPHALTIC CONCRETE BASE (GRADING B) ITEM NO. 307-01.06
④ PRIME COAT (AE-P) ITEM NO. 402-01
⑤ 10" STONE (GRADING D PUG MILL MIX) ITEM NO. 303-01
⑥ APPROVED COMPACTED SUBGRADE

ITEM NUMBERS ARE TO MEET TOOT SPECIFICATIONS
NOTES:
ADDITIONAL RIGHT-OF-WAY MAY BE REQUIRED NEAR INTERSECTIONS
ELEMENTS OF THIS TYPICAL SECTION MAY BE REVISED IF APPROVED BY THE CITY ENGINEER.



PAVEMENT COURSES
NOT TO SCALE



PROPOSED NORMANDY DRIVE R.O.W LOT CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	160.00'	62.88'	62.48'	S 41°24'44" E	22°31'03"
C2	160.00'	136.88'	132.74'	S 05°38'47" E	49°00'50"
C3	20.00'	31.00'	27.99'	N 66°12'02" E	88°49'15"
C4	182.03'	18.40'	18.40'	S 72°17'07" E	5°47'33"
C5	182.03'	44.58'	44.47'	S 82°11'50" E	14°01'52"
C6	90.00'	7.40'	7.40'	S 86°20'58" E	4°42'41"
C7	90.00'	144.17'	129.24'	S 38°06'16" E	91°46'45"
C8	90.00'	17.41'	17.38'	S 13°19'32" W	11°04'50"
C9	9817.04'	13.87'	13.87'	S 18°54'22" W	0°04'51"
C10	9817.04'	50.03'	50.03'	S 19°05'34" W	0°17'31"
C11	9817.04'	50.00'	50.00'	S 19°23'04" W	0°17'30"
C12	9817.04'	50.00'	50.00'	S 19°40'35" W	0°17'31"
C13	9817.04'	50.00'	50.00'	S 19°58'05" W	0°17'31"
C14	9817.04'	50.00'	50.00'	S 20°15'36" W	0°17'31"
C15	9817.04'	35.01'	35.01'	S 20°30'29" W	0°12'16"
C16	9887.04'	14.62'	14.62'	N 20°34'05" E	0°05'05"
C17	9887.04'	50.03'	50.03'	N 20°22'50" E	0°17'24"
C18	9887.04'	50.14'	50.14'	N 20°05'25" E	0°17'26"
C19	9887.04'	50.03'	50.03'	N 19°48'01" E	0°17'24"
C20	9887.04'	50.00'	50.00'	N 19°30'37" E	0°17'23"
C21	9887.04'	50.13'	50.13'	N 19°13'13" E	0°17'26"
C22	9887.04'	36.11'	36.11'	N 18°58'13" E	0°12'33"
C29	25.08'	38.01'	34.48'	N 65°22'51" E	86°51'16"
C30	25.01'	35.92'	32.91'	S 19°22'37" E	82°17'39"

PROPOSED NORMANDY DRIVE LOT LINE TABLE

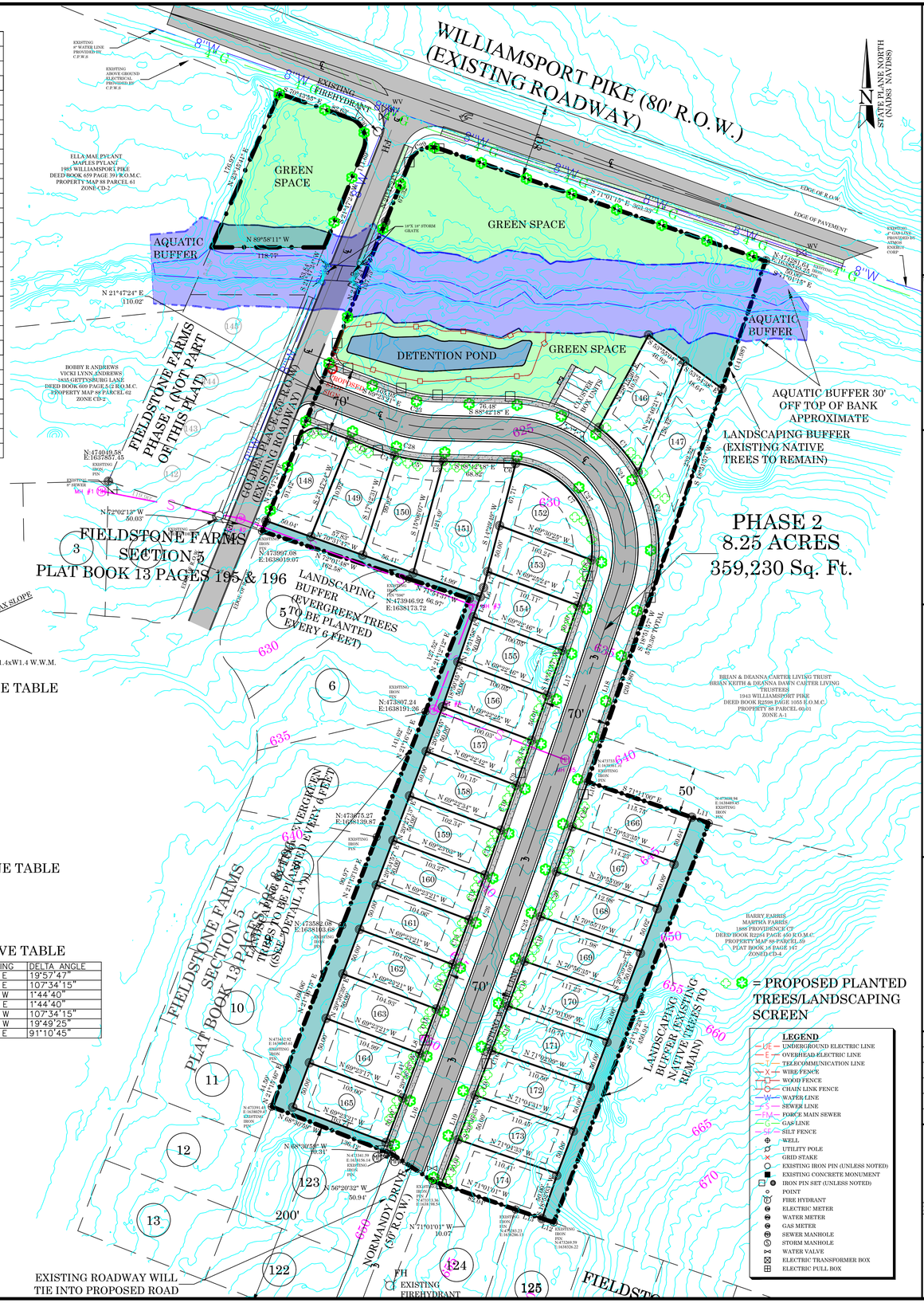
LINE	BEARING	DISTANCE
L1	S 69°23'21" E	30.42'
L2	S 69°23'21" E	31.66'
L3	S 88°42'18" E	7.32'
L4	S 18°51'57" W	32.64'
L5	N 19°20'05" E	22.58'
L6	N 19°19'11" E	9.99'
L7	N 14°29'46" E	17.43'
L8	S 20°36'33" W	14.99'
L9	N 20°36'33" E	35.46'
L10	N 18°51'57" E	13.93'
L11	S 71°11'00" E	19.00'
L12	N 71°12'13" W	12.98'
L13	N 71°12'13" W	29.36'
L14	S 20°36'39" W	9.10'
L15	N 21°47'24" E	11.76'

PROPOSED NORMANDY DRIVE R.O.W LINE TABLE

LINE	BEARING	DISTANCE
L16	N 20°36'33" E	130.19'
L17	N 18°51'57" E	218.79'
L18	N 18°51'57" E	218.79'
L19	S 20°36'33" W	130.19'

PROPOSED NORMANDY DRIVE R.O.W CURVE TABLE

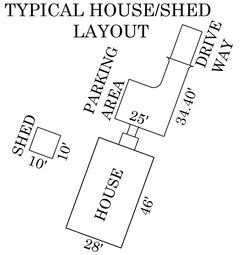
CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C23	112.03'	39.03'	38.84'	S 79°22'14" E	19°57'47"
C24	160.00'	300.39'	258.18'	S 34°55'11" E	107°34'15"
C25	9887.04'	301.04'	301.03'	S 19°44'17" W	1°44'40"
C26	9817.04'	298.91'	298.90'	N 19°44'17" E	1°44'40"
C27	92.50'	173.67'	149.26'	N 34°55'11" W	107°34'15"
C28	182.03'	62.98'	62.67'	N 79°18'03" W	19°49'25"
C31	20.00'	31.83'	28.57'	S 23°47'58" E	91°10'45"


WILLIAMSPORT PIKE (80' R.O.W.)
(EXISTING ROADWAY)
EXISTING 8" WATER LINE PROVIDED BY C.P.W.S.
EXISTING ABOVE GROUND ELECTRICAL PROVIDED BY C.P.W.S.
EXISTING FIREHYDRANT
8"W
WV
ELLA MAE PYLANT
MAPLES PYLANT
1985 WILLIAMSPORT PIKE
DEED BOOK 659 PAGE 391 R.O.M.C.
PROPERTY MAP 88 PARCEL 61
ZONE CD-2
GREEN SPACE
AQUATIC BUFFER
N 80°58'11" W
118.77'
N 21°47'24" E
110.02'
EDGE OF R.O.W.
EDGE OF PAVEMENT
EXISTING 4" GAS LINE PROVIDED BY ATMOS ENERGY CORP
N 71°01'01" W
S 71°01'15" E 369.03'
18"X 18" STORM GRATE
DETENTION POND
GREEN SPACE
AQUATIC BUFFER
AQUATIC BUFFER 30' OFF TOP OF BANK APPROXIMATE
LANDSCAPING BUFFER (EXISTING NATIVE TREES TO REMAIN)
BOBBY R ANDREWS
VICKI LYNN ANDREWS
1833 GETTYSBURG LANE
DEED BOOK 659 PAGE 542 R.O.M.C.
PROPERTY MAP 88 PARCEL 62
ZONE CD-2
FIELDSTONE FARMS PHASE 1 (NOT PART OF THIS PLAT)
GOLDEN PLACE (50' R.O.W.) (EXISTING ROADWAY)
70'
N:474019.58
E:1637857.45
N 72°02'13" W
50.03'
FIELDSTONE FARMS
SECTION 5
PLAT BOOK 13 PAGES 195 & 196
LANDSCAPING BUFFER (EVERGREEN TREES TO BE PLANTED EVERY 6 FEET)
N:473997.08
E:1638019.07
N:473946.92
E:1638173.72
N:473875.27
E:1638139.87
N:473582.08
E:1638163.68
PHASE 2
8.25 ACRES
359,230 Sq. Ft.
BRIAN & DEANNA CARTER LIVING TRUST
BRIAN KEITH & DEANNA DAWN CARTER LIVING TRUSTEES
1943 WILLIAMSPORT PIKE
DEED BOOK R2598 PAGE 1055 R.O.M.C.
PROPERTY 56 PARCEL 60.01
ZONE A-1
N:473733.13
E:1638955.23
EXISTING IRON PIN
N:473807.24
E:1638191.26
N:473875.27
E:1638139.87
N:473582.08
E:1638163.68
N:473343.92
E:1638045.43
N:473391.45
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E:1638955.23

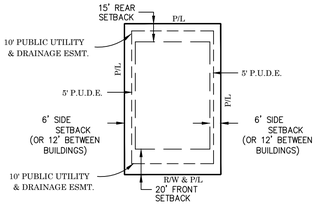
GENERAL NOTES

1.) THE PURPOSE OF THIS PLAT IS TO CREATE A 29 LOT SUBDIVISION.
2.) ALL DISTANCES SHOWN HEREON ARE BASED UPON A FIELD–RUN SURVEY USING E.D.M. EQUIPMENT AND OR ALL GPS, AND ARE ADJUSTED FOR TEMPERATURE.
3.) UTILITIES, IF SHOWN WERE TAKEN FROM VISIBLE STRUCTURES AT THE SITE, VERIFICATION OF THEIR EXISTENCE, LOCATION, SIZE, AND DEPTH SHOULD BE MADE BEFORE MAKING DECISIONS REGARDING THEM. AVAILABILITY OF SERVICE SHOULD BE CONFIRMED WITH APPROPRIATE LOCAL UTILITY COMPANY. TENNESSEE ONE CALL (811) SHOULD BE CALLED BEFORE ANY CONSTRUCTION OR DIGGING.
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7.) PROPERTY ZONED CD-4. SETBACKS ARE FRONT=6'/20'; SIDE =6' TOTAL; REAR=15'
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10.) SEWER IS SERVED BY COLUMBIA WASTEWATER DEPARTMENT.
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13.) ALL FIRST FLOOR ELEVATIONS AND MECHANICAL SYSTEMS TO BE ABOVE 622' ELEVATION DUE TO POSSIBLE FLOODING.
14.) TOPOGRAPHY DATUM BASED ON NAVD 1988 TAKEN FROM TENNESSEE LIDAR MAPPING AND FIELD CHECKED.
15.) ALL FACADES ON STRUCTURES SHALL CONFORM TO STANDARDS IN TABLE 4.3.1-D AND TABLE 4.3.8.B OF THE ZONING ORDINANCE. CONFORMITY WILL BE CONFIRMED AT BUILDING PERMIT.
16.) MAINTENANCE AND UPKEEP OF COMMON SPACE TO BE MANAGED BY H.O.A.
17.) ALL PRIVATE LANDSCAPING WILL CONFORM TO SECTION 4.3.16 OF THE ZONING ORDINANCE.
18.) FUTURE REMOVAL OF TREES DEPICTED ON THE PLAN WILL REQUIRE APPROVAL BY THE PLANNING COMMISSION PER SECTION 4.3.16.C.1 OF THE ZONING ORDINANCE.
19.) LIGHTING AT FRONTAGE LINES WILL NOT EXCEED 1.0 FOOT CANDLE AND ONSITE OUTDOOR LIGHTING WILL CONFORM TO THE STANDARDS OF SECTION 4.3.17.B OF THE ZONING ORDINANCE.
20.) URBAN NEIGHBORHOOD STREET THOROUGHFARE TO BE UTILIZED.
21.) VEHICLE PARKING IS TO BE OFF STREET AND ACCOMMODATE 2 VEHICLES.
22.) ALL LOTS ARE TO HAVE 1 SINGLE FAMILY DWELLING UNIT PER LOT.
23.) NO FENCE, STRUCTURE, WALL OR ANY OTHER SEPARATING DEVICE SHALL BE PERMITTED BEYOND THE FRONT SIDE OF THE HOUSE. NO FENCES ARE ALLOWED IN FRONT YARDS. IN THE CASE OF RESIDENCES LOCATED ON CORNER LOTS, THE RESTRICTIONS SHALL APPLY TO THE MIDLINE OF THE SIDE OF THE HOUSE FACING THE STREET. ALL SUCH FENCES, STRUCTURE WALLS, HEDGES OR OTHER SEPARATING DEVICES REQUIRE APPROVAL BY THE DECLARANT OR HOME OWNERS ASSOCIATION PRIOR TO INSTALLATION. UNLESS OTHERWISE APPROVED, CHAIN LINK FENCES SHALL NOT EXCEED FOUR (4) FEET IN HEIGHT, WOOD PRIVACY FENCES SHALL NOT EXCEED SIX (6) FEET IN HEIGHT.
24.) ALL RESIDENCES TO BE WOOD FRAME, SINGLE STORY BUILDINGS. DRIVEWAYS ARE TO BE CONCRETE.
25.) THIS DEVELOPMENT TO BE GOVERNED UNDER H.O.A REGULATIONS.
26.) HOMEOWNERS ARE TO BE RESPONSIBLE FOR INDIVIDUAL REFUSE SERVICE.

TYPICAL HOUSE/SHED LAYOUT



TYPICAL LAYOUT (LOTS 146–174)



PROPOSED NORMANDY DRIVE LOT LINE TABLE

LINE	BEARING	DISTANCE
L1	S 69°23'21" E	30.42'
L2	S 69°23'21" E	31.66'
L3	S 88°42'18" E	7.32'
L4	S 18°51'57" W	32.64'
L5	N 19°20'05" E	22.58'
L6	N 19°19'11" E	9.99'
L7	N 14°29'46" E	17.43'
L8	S 20°36'33" W	14.99'
L9	N 20°36'33" E	35.46'
L10	N 18°51'57" E	13.93'
L11	S 71°11'00" E	19.00'
L12	N 71°12'13" W	12.98'
L13	N 71°12'13" W	29.36'
L14	S 20°36'39" W	9.10'
L15	N 21°47'24" E	11.76'

PROPOSED NORMANDY DRIVE R.O.W LOT CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	160.00'	62.88'	62.48'	S 41°24'44" E	22°31'03"
C2	160.00'	136.88'	132.74'	S 05°38'47" E	49°00'50"
C3	20.00'	31.00'	27.99'	N 66°12'02" E	88°49'15"
C4	182.03'	18.40'	18.40'	S 72°17'07" E	5°47'33"
C5	182.03'	44.58'	44.47'	S 82°11'50" E	14°01'52"
C6	90.00'	7.40'	7.40'	S 86°20'58" E	4°42'41"
C7	90.00'	144.17'	129.24'	S 38°06'16" E	91°46'45"
C8	90.00'	17.41'	17.38'	S 13°19'32" W	11°04'50"
C9	9817.04'	13.87'	13.87'	S 18°54'22" W	0°04'51"
C10	9817.04'	50.03'	50.03'	S 19°05'34" W	0°17'31"
C11	9817.04'	50.00'	50.00'	S 19°23'04" W	0°17'30"
C12	9817.04'	50.00'	50.00'	S 19°40'35" W	0°17'31"
C13	9817.04'	50.00'	50.00'	S 19°58'05" W	0°17'31"
C14	9817.04'	50.00'	50.00'	S 20°15'36" W	0°17'31"
C15	9817.04'	35.01'	35.01'	S 20°30'29" W	0°12'16"
C16	9887.04'	14.62'	14.62'	N 20°34'05" E	0°05'05"
C17	9887.04'	50.03'	50.03'	N 20°22'50" E	0°17'24"
C18	9887.04'	50.14'	50.14'	N 20°05'25" E	0°17'26"
C19	9887.04'	50.03'	50.03'	N 19°48'01" E	0°17'24"
C20	9887.04'	50.00'	50.00'	N 19°30'37" E	0°17'23"
C21	9887.04'	50.13'	50.13'	N 19°13'13" E	0°17'26"
C22	9887.04'	36.11'	36.11'	N 18°58'13" E	0°12'33"
C29	25.08'	38.01'	34.48'	N 65°22'51" E	86°51'16"
C30	25.01'	35.92'	32.91'	S 19°22'37" E	82°17'39"

LOT(S) AREA

LOT #	SQ FT	RESIDENCE SQ FT	RATIO
LOT 146	5,996 ft²	1,288 ft²	21.5%
LOT 147	8,106 ft²	1,288 ft²	15.9%
LOT 148	5,444 ft²	1,288 ft²	23.7%
LOT 149	5,909 ft²	1,288 ft²	21.8%
LOT 150	6,150 ft²	1,288 ft²	20.9%
LOT 151	9,990 ft²	1,288 ft²	12.9%
LOT 152	5,915 ft²	1,288 ft²	21.8%
LOT 153	5,119 ft²	1,288 ft²	25.2%
LOT 154	4,998 ft²	1,288 ft²	25.8%
LOT 155	5,000 ft²	1,288 ft²	25.8%
LOT 156	5,000 ft²	1,288 ft²	25.8%
LOT 157	5,029 ft²	1,288 ft²	25.6%
LOT 158	5,088 ft²	1,288 ft²	25.3%
LOT 159	5,140 ft²	1,288 ft²	25.1%
LOT 160	5,184 ft²	1,288 ft²	24.8%
LOT 161	5,218 ft²	1,288 ft²	24.7%
LOT 162	5,239 ft²	1,288 ft²	24.6%
LOT 163	5,248 ft²	1,288 ft²	24.5%
LOT 164	5,249 ft²	1,288 ft²	24.5%
LOT 165	5,249 ft²	1,288 ft²	24.5%
LOT 166	5,786 ft²	1,288 ft²	22.3%
LOT 167	5,690 ft²	1,288 ft²	22.6%
LOT 168	5,622 ft²	1,288 ft²	22.9%
LOT 169	5,579 ft²	1,288 ft²	23.1%
LOT 170	5,554 ft²	1,288 ft²	23.2%
LOT 171	5,529 ft²	1,288 ft²	23.3%
LOT 172	5,525 ft²	1,288 ft²	23.3%
LOT 173	5,518 ft²	1,288 ft²	23.3%
LOT 174	5,561 ft²	1,288 ft²	23.2%

IMPERVIOUS AREA CHART:

	AREA IN Sq. Ft.
PROPOSED DRIVE IMPERVIOUS AREA:	7,653 Sq. Ft. 0.18 Acres
PROPOSED PARKING IMPERVIOUS AREA:	17,638 Sq. Ft. 0.40 Acres
PROPOSED ROAD IMPERVIOUS AREA:	24,334 Sq. Ft. 0.56 Acres
PROPOSED SIDEWALK IMPERVIOUS AREA:	11,386 Sq. Ft. 0.26 Acres
PROPOSED CURB IMPERVIOUS AREA:	1,113 Sq. Ft. 0.03 Acres
PROPOSED CLUSTERBOX PARKING & DRIVE IMPERVIOUS AREA:	2,654 Sq. Ft. 0.06 Acres
PROPOSED HOUSE IMPERVIOUS AREA:	37,352 Sq. Ft. 0.86 Acres
PROPOSED SHED IMPERVIOUS AREA:	2,900 Sq. Ft. 0.07 Acres
TOTAL IMPERVIOUS AREA:	104,805 Sq. Ft. 2.41 Acres

FIELDSTONE FARMS PHASE II AREA TO BE DEVELOPED:

	AREA IN Sq. Ft.
COMBINED LOT AREA:	164,812 Sq. Ft. 3.78 Acres
AQUATIC BUFFER AREA:	34,144 Sq. Ft. 0.78 Acres
COMMON SPACE AREA:	22,902 Sq. Ft. 0.53 Acres
GREEN SPACE AREA:	55,542 Sq. Ft. 1.28 Acres
DETENTION POND AREA:	5,236 Sq. Ft. 0.12 Acres
R.O.W AREA:	76,594 Sq. Ft. 1.76 Acres
TOTAL AREA TO BE DEVELOPED:	359,230 Sq. Ft. 8.25 Acres

UTILITY OWNERS

ELECTRIC
OWNER: COLUMBIA POWER & WATER
ADDRESS: 201 PICKENS LANE
ADDRESS: COLUMBIA, TN 38401
PHONE # (931) 388-4833

WATER
OWNER: COLUMBIA POWER & WATER
ADDRESS: 201 PICKENS LANE
ADDRESS:COLUMBIA, TN 38401
PHONE # (931) 388-4833

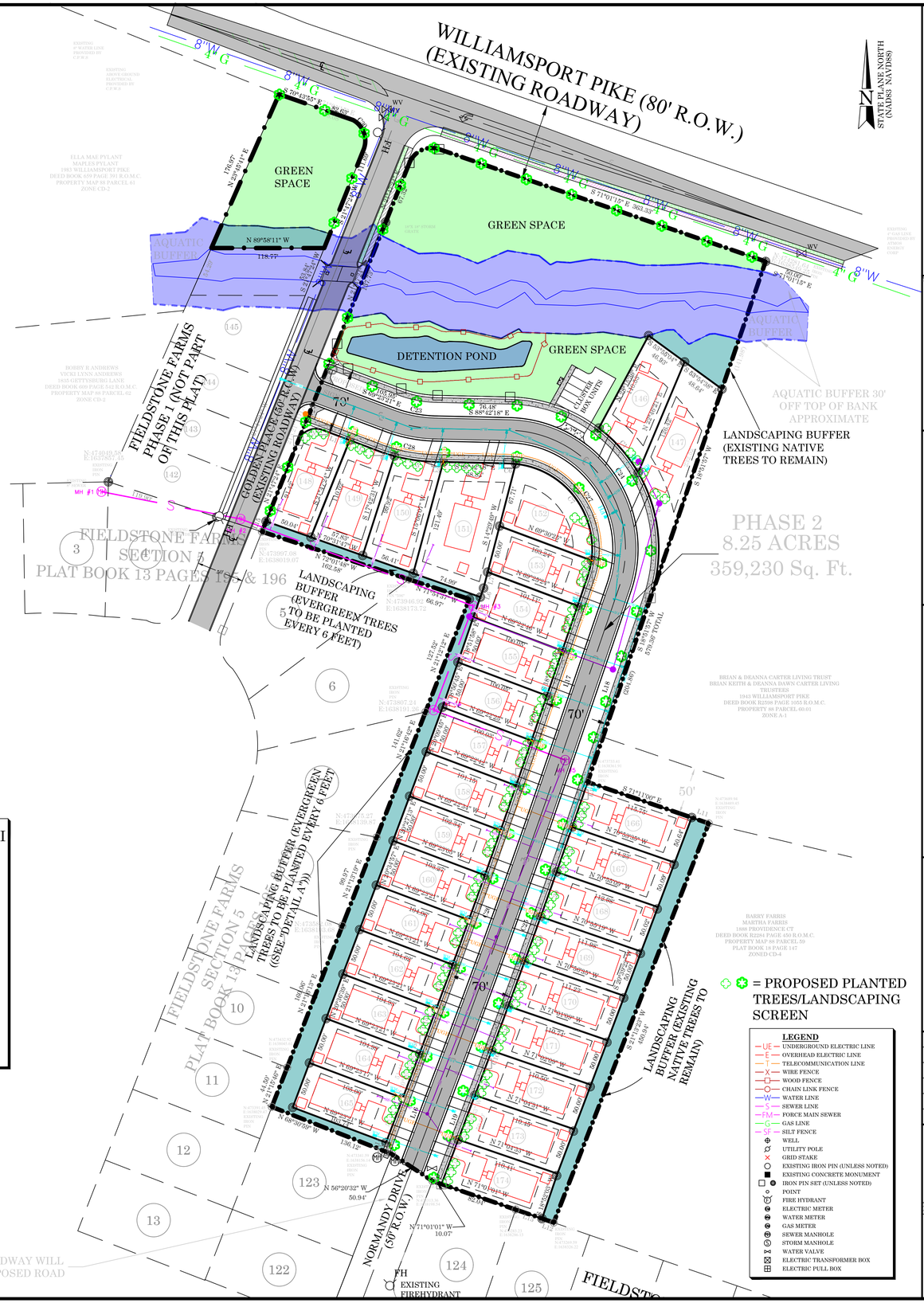
SEWER
OWNER: COLUMBIA WASTEWATER SYSTEM
ADDRESS: 1244 TREATMENT PLANT ROAD
ADDRESS: COLUMBIA, TN 38401
PHONE # (931) 388-4833

GAS
OWNER:ATMOS ENERGY CORP
ADDRESS: 810 NASHVILLE HWY
ADDRESS: COLUMBIA, TN 38401
PHONE # (931) 388-9136

TELEPHONE
OWNER: CPWS
ADDRESS:201 PICKENS LANE
ADDRESS: COLUMBIA, TN 38401
PHONE # (931) 388-4833

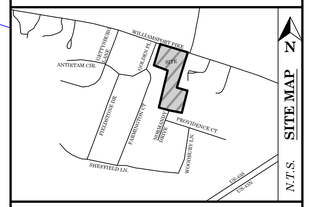
811
IF YOU DIG TENNESSEE...
CALL US FIRST!
811
TENNESSEE ONE CALL IT'S THE LAW

SEWER STRUCTURE	
EXISTING MH #1	MH TOP 619.97' 8" S. IN 616.59' 8" E. IN 614.23' 8" W. OUT 614.17'
EXISTING MH #2	MH TOP 624.65' 4" PLASTIC SE. IN 621.65' 8" E. IN 616.90' 8" W. OUT 616.88'
EXISTING MH #3	MH TOP 630.31' 8" S. IN 623.51' 8" W. OUT 623.35'
EXISTING MH #4	MH TOP 633.24' 8" E. IN 627.13' 8" N. OUT 627.03'
EXISTING MH #5	MH TOP 636.35' 8" S. IN 630.74' 8" W. OUT 630.66'



CHAPDELAINE & ASSOCIATES
LAND SURVEYING

7376 WALKER ROAD,
FAIRVIEW, TENNESSEE 37062
(615) 799-8104
chapsurveyors@msn.com
Randolph L. Chapdelaine
TN R.L.S. #1444





CERTIFICATE OF ACCURACY

I HEREBY CERTIFY THAT THIS IS A CATEGORY IV SURVEY AND THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION, THIS SURVEY WAS DONE IN COMPLIANCE WITH CURRENT TENNESSEE MINIMUM STANDARDS OF PRACTICE, AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THE SURVEY:

a. REAL TIME KINEMATIC & BASE SOKKIA GRX 3
b. POSITIONAL ACCURACY: 0.05 FEET
c. DATE OF SURVEY: 02/01/2021
d. DATUM / EPOCH: NAD83 (2011) EPOCH
e. PUBLISHED / FIXED CONTROL: TDOT CORS NETWORK
f. GEOID MODEL: GEOID 12B
g. COMBINED GRID FACTOR: 0.99992837

5/22/2023

RANDOLPH L. CHAPDELAINE, R.L.S. # 1444 DATE

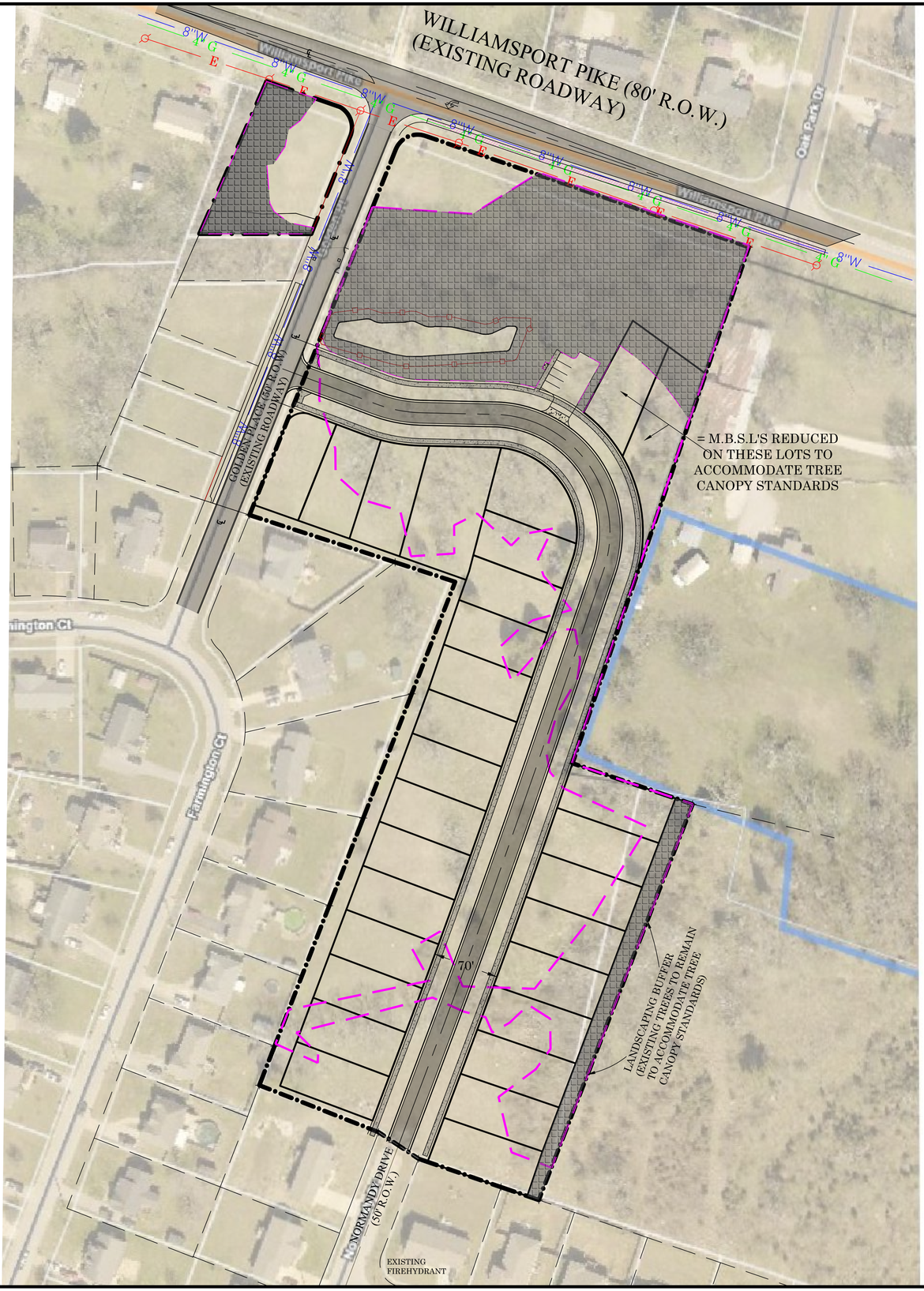
HABITAT FOR HUMANITY
(615) 550-5619
WILLIAMSON-MAURY
WILLIAMSPORT PIKE
p/o DEED BOOK R-2425 *PAGE* 1181
R.O.M.C.
9th *CIVIL DISTRICT OF MAURY COUNTY, TENNESSEE*
PROPERTY MAP 88 PARCEL 70.01
ZONING: CD-4
TOTAL ACRES 8.25
TOTAL AREA BEING DEVELOPED: 8.25 ACRES
CITY OF COLUMBIA

REVISION #	DATE
REVISION # 2	5/22/2023
REVISION # 1	4/17/2023
DATE:	JANUARY 17, 2023
DRAWN BY:	NAB
JOB #:	6171
SCALE:	1" = 60'

0 60 120

V-2.0

SITE DEVELOPMENT PLAN-MAJOR SUBDIVISION FOR FIELDSTONE FARMS SECTION 5 PHASE 2



EXISTING TREE CANOPY

TREE CANOPY

UNDISTURBED AREA

TREE CANOPY CALCULATIONS

	AREA IN ft²
TOTAL PROPERTY AREA	359,230'
TOTAL TREE CANOPY	186,104' (52%)
PERCENTAGE OF TREE CANOPY TO BE RETAINED	45%
TOTAL DISTURBED TREE CANOPY	110,016' (59%)
TOTAL UNDISTURBED TREE CANOPY	85,153' (45.8%)

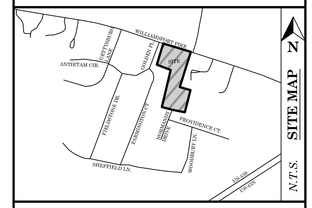
STATE PLANE NORTH (NAD83 NAVD88)

LEGEND

- UE — UNDERGROUND ELECTRIC LINE
- E — OVERHEAD ELECTRIC LINE
- T — TELECOMMUNICATION LINE
- X — WIRE FENCE
- WOOD FENCE
- CHAIN LINK FENCE
- W — WATER LINE
- S — SEWER LINE
- FM — FORCE MAIN SEWER
- G — GAS LINE
- SF — SILT FENCE
- WELL
- UTILITY POLE
- GRID STAKE
- EXISTING IRON PIN (UNLESS NOTED)
- EXISTING CONCRETE MONUMENT
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- ELECTRIC METER
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- STORM MANHOLE
- WATER VALVE
- ELECTRIC TRANSFORMER BOX
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chapsurveyors@msn.com
Randolph L. Chapdelaine
TN R.L.S. #1444



RANDOLPH L. CHAPDELAINE
REGISTERED LAND SURVEYOR
AGRICULTURE
TENNESSEE
5/22/2023

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g. COMBINED GRID FACTOR: 0.99992837

5/22/2023

RANDOLPH L. CHAPDELAINE, R.L.S. # 1444 DATE

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TOTAL AREA BEING DEVELOPED: 8.25 ACRES
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REVISION # 2	5/22/2023
REVISION # 1	4/17/2023

DATE: JANUARY 17, 2023
DRAWN BY: NAB
JOB #: 6171
SCALE: 1" = 60'

0 60 120

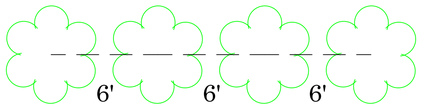
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TREE CANOPY EXHIBIT-SITE DEVELOPMENT PLAN-MAJOR SUBDIVISION FOR FIELDSTONE SECTION 5 PHASE 2

* OVERHEAD VIEW

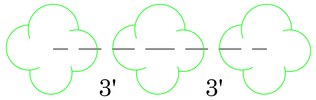
LANDSCAPING BUFFER AREA

AMERICAN HOLLY
(LLEX OPACA)



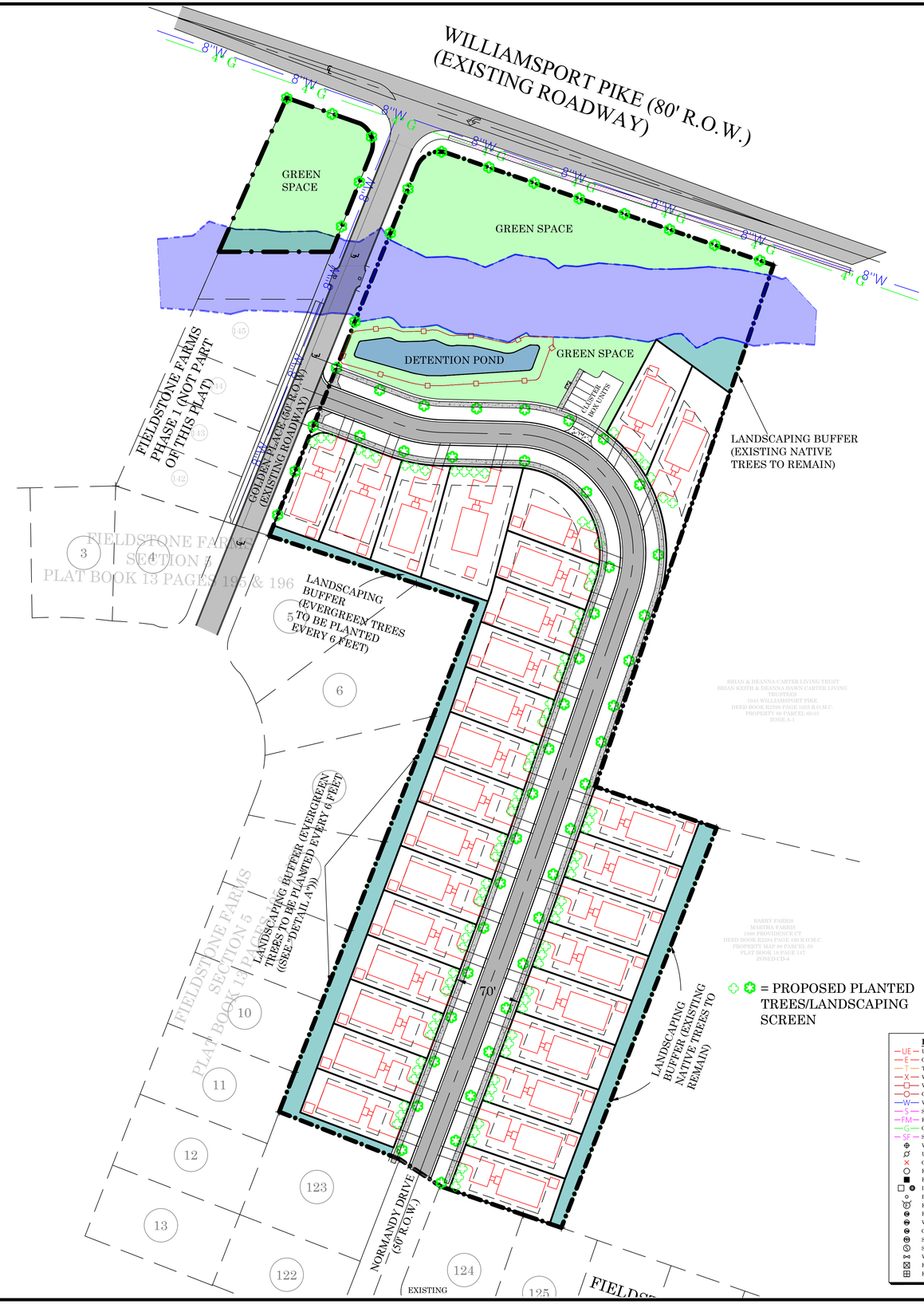
PARKING AREA LANDSCAPING

SWEET LEAF BUSHES
(SYMPLOCUS EINCTORIA)



DETAIL A

PROPOSED LANDSCAPING CHART:	QUANTITY TO BE PLANTED
SHORT LEAF PINE/ PINUS ECHINATA (4"):	21
LOBLOLLY PINE/ PINUS TAEDA (4"):	20
EASTERN WHITE PINE/ PINUS STROBUS (4"):	20
TOTAL NUMBER OF TREES TO BE PLANTED:	61
TOTAL NUMBER OF SWEET LEAF (SYMPLOCUS EINCTORIA) BUSHES TO BE PLANTED (6"-9") :	88
TOTAL NUMBER OF AMERICAN HOLLY (LLEX OPACA) EVERGREEN TREES TO BE PLANTED (12"):	134
TOTAL AREA OF LANDSCAPING TO BE PLANTED/RETAINED:	29, 941 Sq. Ft.



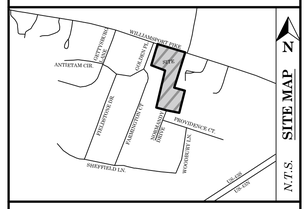
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5/22/2023

RANDOLPH L. CHAPDELAINE, R.L.S. # 1444 DATE

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R.O.M.C.
9th *CIVIL DISTRICT OF MAURY COUNTY, TENNESSEE*
PROPERTY MAP 88 PARCEL 70.01
ZONING: CD-4
TOTAL ACRES 8.25
TOTAL AREA BEING DEVELOPED: 8.25 ACRES
CITY OF COLUMBIA

REVISION #	DATE
REVISION # 2	5/22/2023
REVISION # 1	4/17/2023

DATE: JANUARY 17, 2023
DRAWN BY: NAB
JOB #: 6171
SCALE: 1" = 60'

0 60 120

V-4.0

LANDSCAPING PLAN EXHIBIT-SITE DEVELOPMENT PLAN-MAJOR SUBDIVISION FOR FIELDSTONE FARMS SECTION 5 PHASE 2

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, May 9, 2023

ITEM NO.
23-0018

DESCRIPTION: 35 Lot Subdivision.

RECOMMENDATION: For final recommendation please see staff report.

COMMENTS:

Planning

1. Typical lot layout shows 30' front setback but max is 20'. Corrected.
2. Will need Development Plan showing Civic Space types, playground areas, and tree preservation plan
3. Please correct number of lots listed in notes on plat. Corrected.
4. Section 5.3.3.B (p. 335) of the Zoning Ordinance requires a playground within 800 feet of each lot or building site in residential use. Please add playground spaces and show distance from all residential lots/building sites.
5. Note indicates 18 lots, application and preliminary plat depicts 36. Corrected.
6. Due to site altering comments re submittal will need Development Review
7. Two concurrent submittals are required: Preliminary Plat and Site Development Plan. The Preliminary Plat should be provided as a single document which provides all information in Section 2.2.8 C of the SubRegs. The Site Development Plan should provide the information required of a CD-4 zoned Development Parcel per 8.5.6 and other provisions of the Zoning Ordinance. Understood.
8. I am unable to discern the extent of the property to be subdivided and developed. Understood.
9. This proposal is not ready to proceed to advance to Planning Commission. The project may be best served by withdrawing this application and scheduling a pre-application meeting with staff to talk through the requirements for a complete Preliminary Plat/Site Development Plan submittal.
10. One of the documents mislabels the subject property as a PUD. Corrected.

Engineering

11. Cross section should match the applicable detail in the ESS for the zoning. See Zoning Code TABLE 5.2.2.G-1 for applicable street sections for CD-4. Corrected.
12. Lots adjacent to a river, stream, waterbody, aquatic buffer, or large drainage channel that do not have a base flood elevation established shall at minimum be elevated two (2.0) feet above the nearest top of bank for the entire building footprint of any primary and accessory structure. Corrected.
13. Lots 146-149 should be padded up to a minimum elevation of 623. Understood.

14. Eliminate the ditch that runs parallel to/and behind the sidewalk. Corrected.
15. Subject to Construction Plans. Understood.
16. 3H:1V maximum for manmade slopes. Understood.
17. Preliminary plat shall be signed and dated. Understood.
18. Applicant has submitted what appears to be full construction plans. Unless requested only supply information as required in the subdivision regulations for Preliminary Plats. Understood.
19. Transition from existing roadway to new roadway shall hold the same centerline. Understood.

Building

20. No comments.

Police

21. No comments provided.

Columbia Power

22. Columbia Power System has an existing power line near your proposed residential development. 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. Understood.
23. Columbia Power System has an existing power line near your proposed residential development. 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. Understood.

Maury County E911

24. Normandy Drive and Golden PL connection Maury County 911 have no comment to add.
25. Golden Place and Normandy Drive street names are both correct.

Atmos Energy

26. No comment provided.

Maury County Schools

27. Baker Elementary School, Whitthorne Middle School, Central High School. 1) No residence is guaranteed zone to a specific school. 2) All zones are subject to change yearly. 3) No concerns with neighborhood design.
28. Baker Elementary, Whitthorne Middle, Central High School. See Attached Capacity Numbers. 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.

Wastewater

29. Columbia Wastewater does not allow grinder pump systems. Understood.
30. The plans show a 1.5 - inch force main that indicaters a low-pressure system (grinder pumps). Our department will not take ownership of the system as a whole or in part. It will remain the responsibility of the homeowner/resident. Make sure this is understood before occupancy. Understood.

Public Works

31. No comment.

Duck River Electric Membership Corp

32. No comments provided.

Columbia Water

33. "A Water Availability Letter was issued February 14, 2023, it expires after 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 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." Understood.

Fire

34. Need to upload the water availability letter to this permit. Understood.

ATT

35. Plans to serve.

Maury County Highway Dept.

36. No comment.

ATTACHMENTS: Preliminary Plat and Site Development Plan

NOTE: All submittals shall be compliant with City standards prior to Planning Commission review. Items that are not adhering to the regulations and/or comments for that request will not be forwarded to the next agenda until such items are amended.

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, May 9, 2023

ITEM NO.
23-0018

DESCRIPTION: 32 (?) Lot Subdivision.

COMMENTS:
Planning

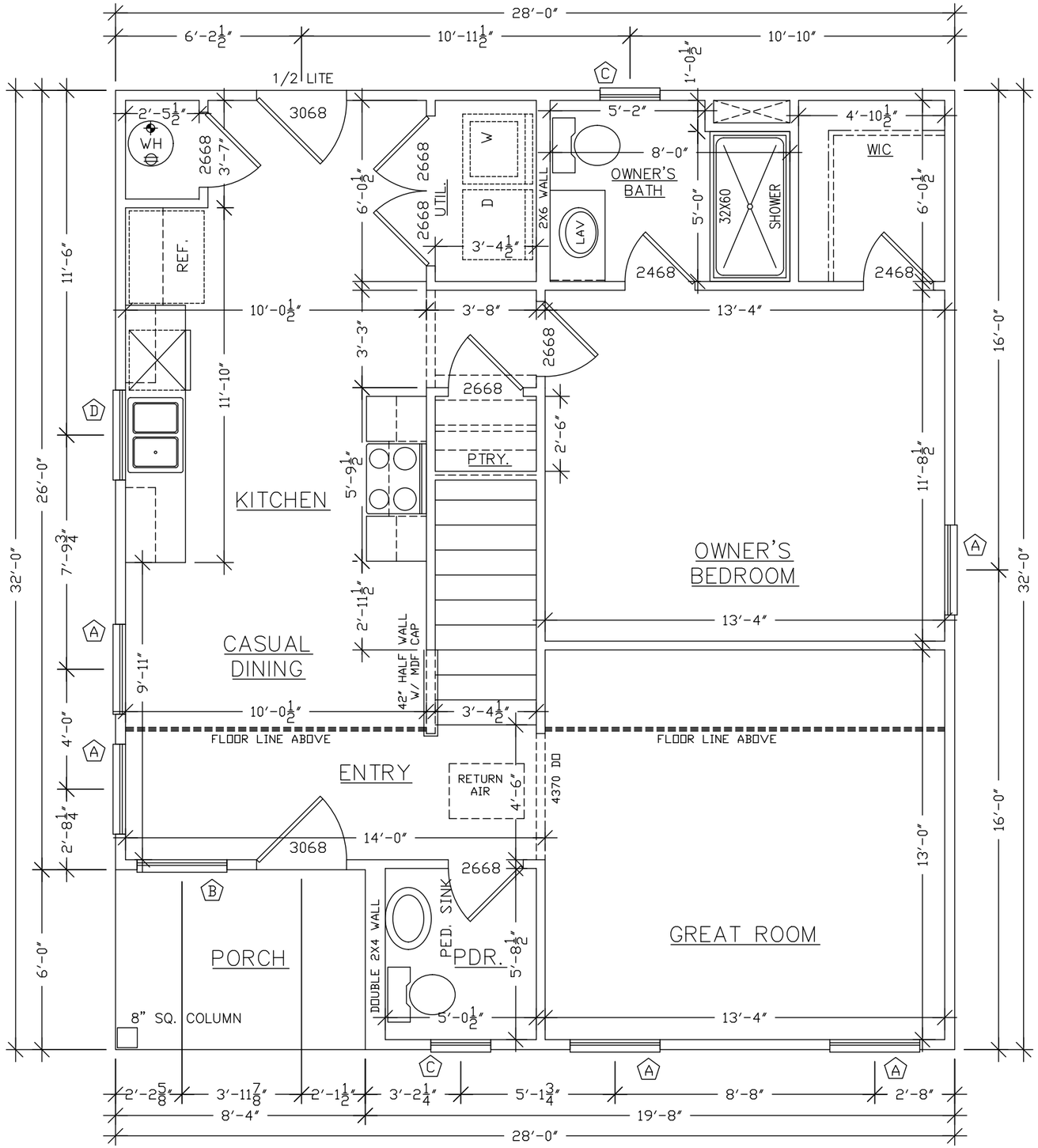
1. Please revise typical lot layout and verify that all reference to the CD-4 standards conform to Table 4.3.1-D of the Ordinance (p.76-85). For example, the minimum front MBSL is 6', the maximum is 20'; C1.0 lists a minimum lot area (there is none) but does not identify the minimum lot width (50'). Revised.
2. Please verify that reference to lot numbers are consistent throughout the submittal (e.g. Note #1 on C0.0 indicates 32 lots, note #1 on C1.0 indicates 31 lots). Verified.
3. Two concurrent submittals are required: Preliminary Plat and Site Development Plan. The Preliminary Plat should be provided as a single document which provides all information in Section 2.2.8 C of the SubRegs. The Site Development Plan should provide the information required of a CD-4 zoned Development Parcel per 8.5.6 and other provisions of the Zoning Ordinance.
    - In this case the Site Development Plan should be fairly simple and should consist of a cover sheet, a general layout, a tree preservation plan, and notes indicating how the development will conform with the standards of the Zoning Ordinance for residential development in a CD-4 character district. The site development plan should how the layout and character of the area to be developed. The plan should identify all lots and building sites and demonstrate conformity with the CD-4 standards. You may provide additional information as applicable. Understood.
    - The Site Development Plan should depict all common areas, open spaces, and civic areas (if provided) and note ownership as well as plans for maintenance and upkeep.
    - Please indicate the Thoroughfare type to be utilized (note where adjustments must be approved by the City Engineer) from Article 5. Understood.
    - Please add note acknowledging the design and façade standards of Table 4.3.1-D (p.78-85) and Table 4.3.8.B (p. 210) of the Zoning Ordinance and indicate that structures will conform. Conformity will be confirmed at building permit. Added.
    - Please note that all private landscaping will conform to section 4.3.16 of the Zoning Ordinance. Added.
    - At resubmittal, please indicate Tree Save Areas as described in 4.3.16.L (p.294) (include the recent aerial image identifying tree cover). If replacements are necessary please indicate which plantings function as replacements in compliance with 4.3.16.L.4.e (p.295) of the Zoning Ordinance. Please indicate areas which may be at risk of being disturbed during construction. Indicated.
    - Please add note to Site Development Plan acknowledging requirement at 4.3.16.C.1 (p. 290) of the Zoning Ordinance that future removal of trees depicted on the plan will require approval by Planning Commission. Added.

- Please include a note on the Site Development Plan indicating that lighting at frontage lines will not exceed 1.0 foot candle and that on-site outdoor lighting will conform to the standards of 4.3.17.B (p.297) of the Zoning Ordinance (to be confirmed at building permit). Note Added.
- If a mail kiosk is needed, please provide detail of the mail center and associated parking conforming to ESS detail MD-03. Understood.

4. Please indicate the extent of the subject property to be divided and developed. Understood.
5. If the applicant team determines that this proposal will not be ready to resubmit and advance to Planning Commission without additional review, the project may be well served by withdrawing this application and scheduling a pre-application meeting with staff to talk through the requirements for a complete Preliminary Plat/Site Development Plan submittal. Understood.

ATTACHMENTS:

NOTE: All submittals shall be compliant with City standards prior to Planning Commission review. Items that are not adhering to the regulations and/or comments for that request will not be forwarded to the next agenda until such items are amended.



FIRST FLOORPLAN 1/4"=1'-0"

WINDOW SCHEDULE:

A. 3050 SH
B. 3050 SH TEMPERED
C. 2020 FXD
D. 3030 SLIDER

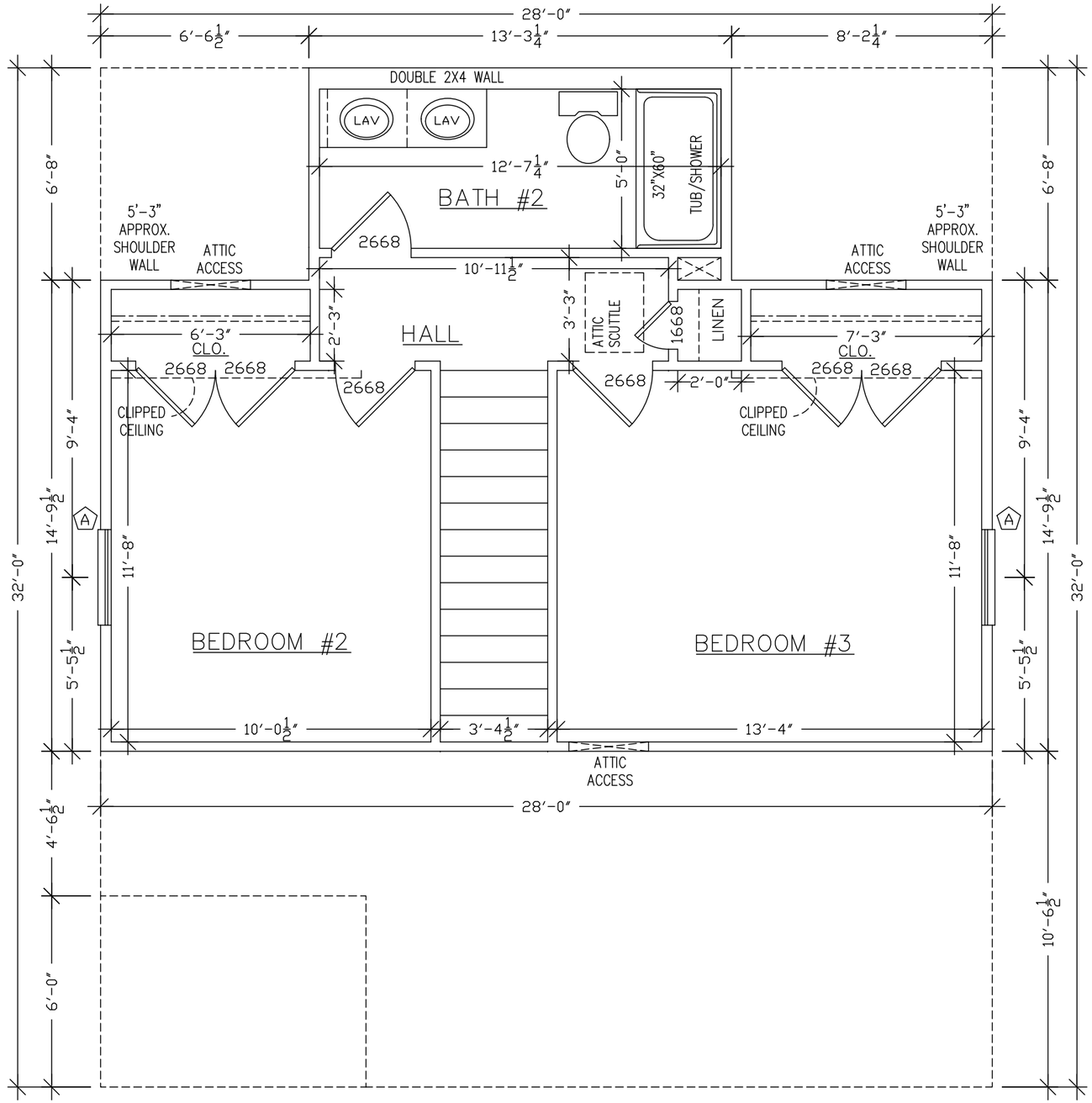
ALL WINDOWS FEATURE SINGLE HUNG, DOUBLE PANE W/ LOW E GLASS & VINYL CONSTRUCTION.

Project	
HABITAT	
Spec. Revision Date:	
Lot #	Market Home or Home Owner
#	Name:
Plan Name:	
AUTUMN	
Sheet Name:	
FLOOR PLAN	

Habitat for Humanity of Williamson/Maury

Drawn By: BSR	
Scale: 1/4"=1'-0"	
Date:	
Revision Dates:	
00/00/00	

A1.0



WINDOW SCHEDULE:

A. 3050 SH
B. 3050 SH TEMPERED
C. 2020 FXD
D. 3030 SLIDER

ALL WINDOWS FEATURE SINGLE HUNG, DOUBLE PANE W/ LOW E GLASS & VINYL CONSTRUCTION.

SECOND FLOORPLAN 1/4"=1'-0"

Project	
HABITAT	
Spec. Revision Date:	
Lot #	Market Home or Home Owner
#	Name:
Plan Name:	
AUTUMN	
Sheet Name:	
FLOOR PLAN	

Habitat for Humanity of Williamson/Maury

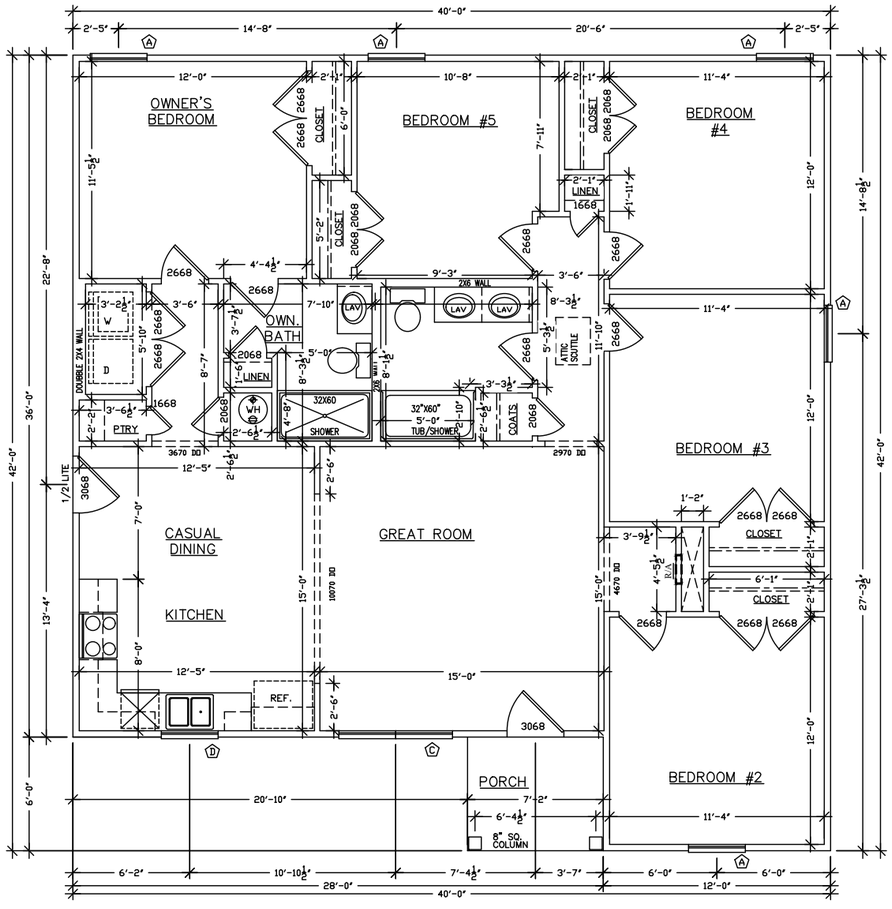
Drawn By: BSR	
Scale: 1/4"=1'-0"	
Date:	
Revision Dates:	
00/00/00	

A2.0

WINDOW SCHEDULE:

A. 3050 SH
B. 3050 SH TEMPERED
C. 3050 SH TWIN
D. 3030 SLIDER

ALL WINDOWS FEATURE SINGLE HUNG, DOUBLE PANE W/ LOW E GLASS & VINYL CONSTRUCTION.



FIRST FLOORPLAN 1/8"=1'-0"

Project

HABITAT

Spec. Revision Date:

Lot #	Market Home or Home Owner
#	Name:

Plan Name:

DAHLIA

Sheet Name:

FLOOR PLAN

Habitat for Humanity of Williamson/Maury

Drawn By: BSR

Scale: 1/8"=1'-0"

Date:

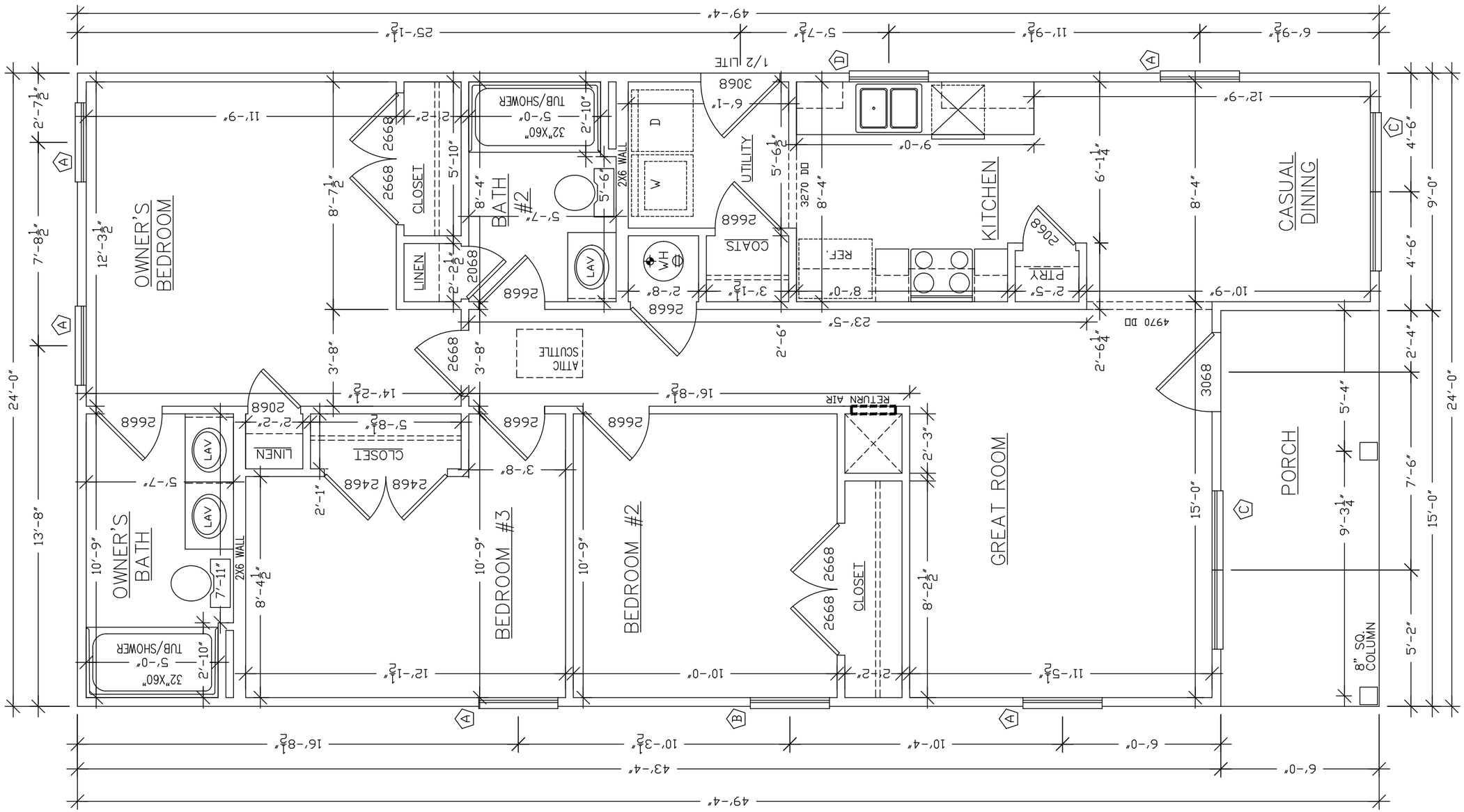
Revision Dates:
00/00/00

A1.0

WINDOW SCHEDULE:

A. 3050 SH
B. 3050 SH TEMPERED
C. 3050 SH TWIN
D. 3030 SLIDER

ALL WINDOWS FEATURE SINGLE HUNG, DOUBLE PANE W/ LOW E GLASS & VINYL CONSTRUCTION.



FIRST FLOORPLAN 1/4"=1'-0"

Project

HABITAT

Spec. Revision Date:

Lot #	Market Home or Home Owner
#	Name:

Plan Name:

LEIGH

Sheet Name:

FLOOR PLAN

Habitat for Humanity of Williamson/Maury

Drawn By: BSR

Scale: 1/4"=1'-0"

Date:

Revision Dates:

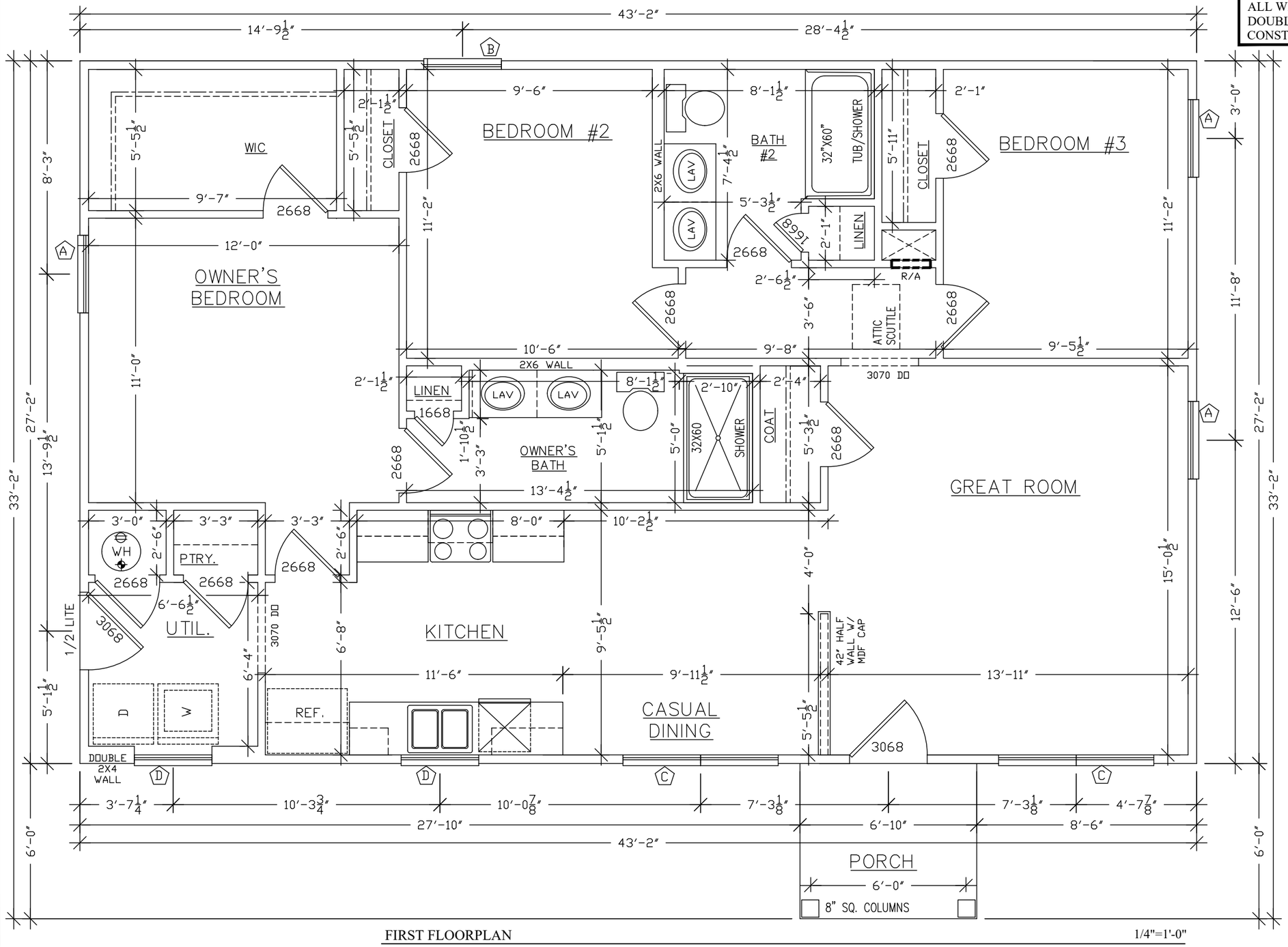
00/00/00

A1.0

WINDOW SCHEDULE:

A. 3050 SH
B. 3050 SH TEMPERED
C. 3050 SH TWIN
D. 3030 SLIDER

ALL WINDOWS FEATURE SINGLE HUNG, DOUBLE PANE W/ LOW E GLASS & VINYL CONSTRUCTION.



FIRST FLOORPLAN 1/4"=1'-0"

Project

HABITAT

Spec. Revision Date:

Lot # | Market Home or Home Owner

| Name:

Plan Name:

SADIE

Sheet Name:

FLOOR PLAN

Habitat for Humanity of Williamson/Maury

Drawn By: BSR

Scale: 1/4"=1'-0"

Date:

Revision Dates:
00/00/00

A1.0

Site Development Plan Proposed Houses.

1.Proposed Floor Area:

a At this time, we don't know which home will go on each lot since the size of the home is tied to the family who qualifies for our program. However, we have seven house plans that we would choose from, making sure to bring diversity to the curb appeal.

b Our smallest plan is a 3 bed/ 2 bath (1046 sq. ft.) and our largest is a 5 bed/2 bath (1458 sq. ft.). To estimate, I would say 80% of the homes we build are 3 bed/ 2 bath homes.

2. Dimensions:

MODEL	SQ. FOOTAGE	DIMENSIONS	STORIES
Leigh	1046 sq. ft.	24 ft. front & back, 49ft. 4 inches sides	1
Sadie	1125 sq. ft.	43ft. 2 inches front & back, 33ft. 2 inches sides	1
Autumn	1226 sq. ft.	28 ft. front & back, 32 ft. sides	2
Dahlia	1458 sq. ft.	40 ft. front & back, 42 ft. sides	1



Sadie Floor Plan



Autumn Floor Plan



Dahlia Floor Plan



Leigh Floor Plan

3. **Floor Elevations:**
   Typically, crawl space is 48 inches of block to the finished floor, depending on grade.

4. **Floor-to-Ceiling Heights:**
   Floor to ceiling height of all models is 8 feet.

5. **Height of each Building:**

MODEL	HEIGHT OF EACH MODEL
Leigh	18 ft, 4 inches
Sadie	19 ft, 4 inches
Autumn	26 ft, 4 inches
Dahlia	22 t, 9 inches

6. **Private Frontage and Façade Elements**
   a. We use LP Smartside, which will blend in with the other sections of the neighborhood whose homes have vinyl siding.
   b. Our craftsman-style homes have wood columns, front porches, and gutters, which match the other homes in the neighborhood.

7.

Building Roof Type & Pitch:

MODEL	BUILDING ROOF TYPE	PITCH
Leigh	asphalt shingle	6 to 12
Sadie	asphalt shingle	5 to 12
Autumn	asphalt shingle	12 to 12
Dahlia	asphalt shingle	6 to 12

Private Landscaping – Each home comes with a mulched landscape bed near the porch. Grass seed and straw will be added to both the front and back yards.

a. **Walls** – We will only install retaining walls if needed.
b. **Fencing** – Our HOA rules state the following:

> No fence, structure, wall, or any other separating device shall be permitted beyond the front side of the house. No fences are allowed in front yards. In the case of residences located on corner lots, the restriction shall apply to the midline of the side of the house not facing the street. All such fences, structure walls, hedges or other separating devices require approval by the Declarant or Homeowners Association prior to installation. Unless otherwise approved, chain-link fences shall not exceed four (4) feet in height, wood privacy fences shall not exceed six (6) feet in height.

8. Ground Floor Elevation above grade for each Building:

MODEL	GROUND FLOOR ELEVATION
Leigh	68 inches
Sadie	68 inches
Autumn	68 inches
Dahlia	68 inches

CITY OF COLUMBIA
TENNESSEE

WASTEWATER DEPARTMENT

8 March 2023

Zack Harvill
Chapdelaine and Associates Land Surveying
7376 Walker Road
Fairview, TN 37062

RE: Map 88, Parcel 70.01

Zack,

This letter serves as confirmation that the City of Columbia Wastewater Department has the available capacity to service the above-referenced 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. Grinder Pump systems are not allowed by the City of Columbia. 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. 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





Model #: WRB684217 MPN #: 1570-16DBAF

Vital Cluster Box Unit, 16 Mailboxes, 2 Parcel Lockers, Dark Bronze

View All Vital™ Pedestal Mounted Outdoor Cluster Mail Box Units

| Questions & Answers (0)

Purchase Information

PRICE

$2,411.00

SELECT COLOR

Brown Tan Gray Black

Get the best in centralized mail delivery with this USPS Approved Outdoor Cluster Mail Box Unit. This free-standing Cluster Mail Box Unit is an Official Licensed Product of the US Postal Service and is theft, vandal and impact resistant. Heavy gauge, welded construction protects mail from the

See more details

Easy online or call-in returns. **Read return policy**

Product Information

Get the best in centralized mail delivery with this USPS Approved Outdoor Cluster Mail Box Unit. This free-standing Cluster Mail Box Unit is an Official Licensed Product of the US Postal Service and is theft, vandal and impact resistant. Heavy gauge, welded construction protects mail from the elements and ensures years of worry-free delivery. Large mail compartments accept most sizes of mail and periodicals without damage, and the parcel compartments accommodate packages for tenant pickup. Installation is hassle-free with an included heavy-duty pedestal. Warranty of 5 years.

Specifications

Weights & Dimensions

2nd Parcel Box Dimensions (W x D x H)	12" x 15" x 18"
Weight	175 lbs
Mailbox Dimensions (W x D x H)	12" x 15" x 3-1/4"
Collection Box Dimensions (W x D x H)	12" x 15" x 3-1/4"

Height	62 in
Parcel Box Dimensions (W x D x H)	12" x 15" x 15"
Depth	17-7/8 in
Width	30-1/2 in

Product Details

Assembly Required	Unassembled
Type	Front/Front Loading Master Access
Color	Brown
Series	Vital™
Style	Type III
Mounting Location	Pedestal (Included)
Material	Aluminum

Package Quantity	1
Number of Collection Boxes	1
Manufacturers Part Number	1570-16DBAF
Number of Parcel Boxes	2
Brand	Florence
Number of Mailboxes	16

Warranty

Warranty	5 yr

Compliance & Certifications

Certifications	CDSEQ-08-B-0012

March 3, 2023

Mr. Joe Chapdelaine
Chapdelaine and Associates
7376 Walker Rd
Fairview, TN 37062
Sent via email: chapsurveyors@msn.com

RE: Water Availability Letter
Fieldstone Farms Phase 2 Section 5 – 35 Units
Tax Map 88, Parcel 70.01
Columbia, Maury County, TN

Dear Mr. Chapdelaine:

Columbia Power and 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, various Planning Commissions and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies, water service will be made available on a first-come, first-served basis, 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 consists of 35 single-family units. CPWS has evaluated the projected water demands for the proposed residential development in the water system hydraulic model and is able to meet a fire-flow capacity of 1,000 gpm at 20 psi while maintaining the existing level of service and pressures in this portion of the distribution system. CPWS can provide water for the proposed development according to the following requirements:

- Domestic waterline connection will be made to the existing 8-inch water mains located on Golden Place and Normandy Drive.
- Minimum size 8-inch water mains will be required.

All of the above requirements are to be constructed and paid for by the Applicant and dedicated to CPWS once complete up to and including the meter. No construction of CPWS infrastructure shall be initiated until final construction plans have been approved by TDEC and all parties have fully executed a water service agreement.

Once you have received this Water Availability Letter, next steps in the process to obtain water service from CPWS are as follows:

- Present the attached hydrant analysis report for coordination and approval of development from the Columbia Fire & Rescue Fire Marshall.
- 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.
- Prior to expiration of this water availability letter in 120 days, remit to CPWS new water service fees:

New Water Service Fee: $1,500 + $370 per SFU (35 SFUs)	$14,450.00

- CPWS will then develop water construction drawings and submit to TDEC for approval. Upon approval by TDEC and payment of meter and impact fees by the applicant, applicant may then schedule a pre-construction meeting with CPWS. Pre-construction meeting will not be scheduled until fees are paid in full or surety is provided in lieu of full payment. Final meter and impact fees are subject to change based on final design and meter size determination. Meter fees are subject to change based on market costs at time of purchase. Meters will not be set until meter and impact fees are paid. Meter and Impact Fees are as follows:

Meter Fee: $540 per 3/4" meter (35 meters)	$18,900.00
Impact Fee: $4,500 per 3/4" meter (35 meters)	$157,500.00
Total Meter and Impact Fees Due =	**$176,400.00**

- After the pre-construction meeting, CPWS will then issue a formal notice to proceed. No construction of CPWS infrastructure may take place prior to the pre-construction meeting.
- Applicant is then 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.

- Subsequent phases will require individual applications and associated fees. Should this letter expire prior to payment of the New Water Service Fee for this phase of the development, a new application will be required to evaluate current conditions before proceeding.

If you have any questions, please feel free to contact me at 423-774-0349 or eric.king@inflodesign.com. This letter is valid for one-hundred twenty (120) days from the date of this letter.



Sincerely,
Eric King, P.E.
Inflo Design Group, LLC
on behalf of Columbia Power and Water Systems

cc: Jonathan Hardin, CPWS
File 23-013

Columbia Fire & Rescue

Fire Flow Requirements

Water Purveyor: Columbia Power & Water System

Date: 2/10/2023
Name: Randolph L. Chapdelain
Phone: 615-799-8104
Email: chapsurveyors@msn.com
Address/Parcel ID: Map 088, Parcel 8.14
Property Type: (•) Residential ( ) Commercial ( ) Industrial
Construction Type: Single Family Homes
Enclosed Area (ft^2): < 3,600

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

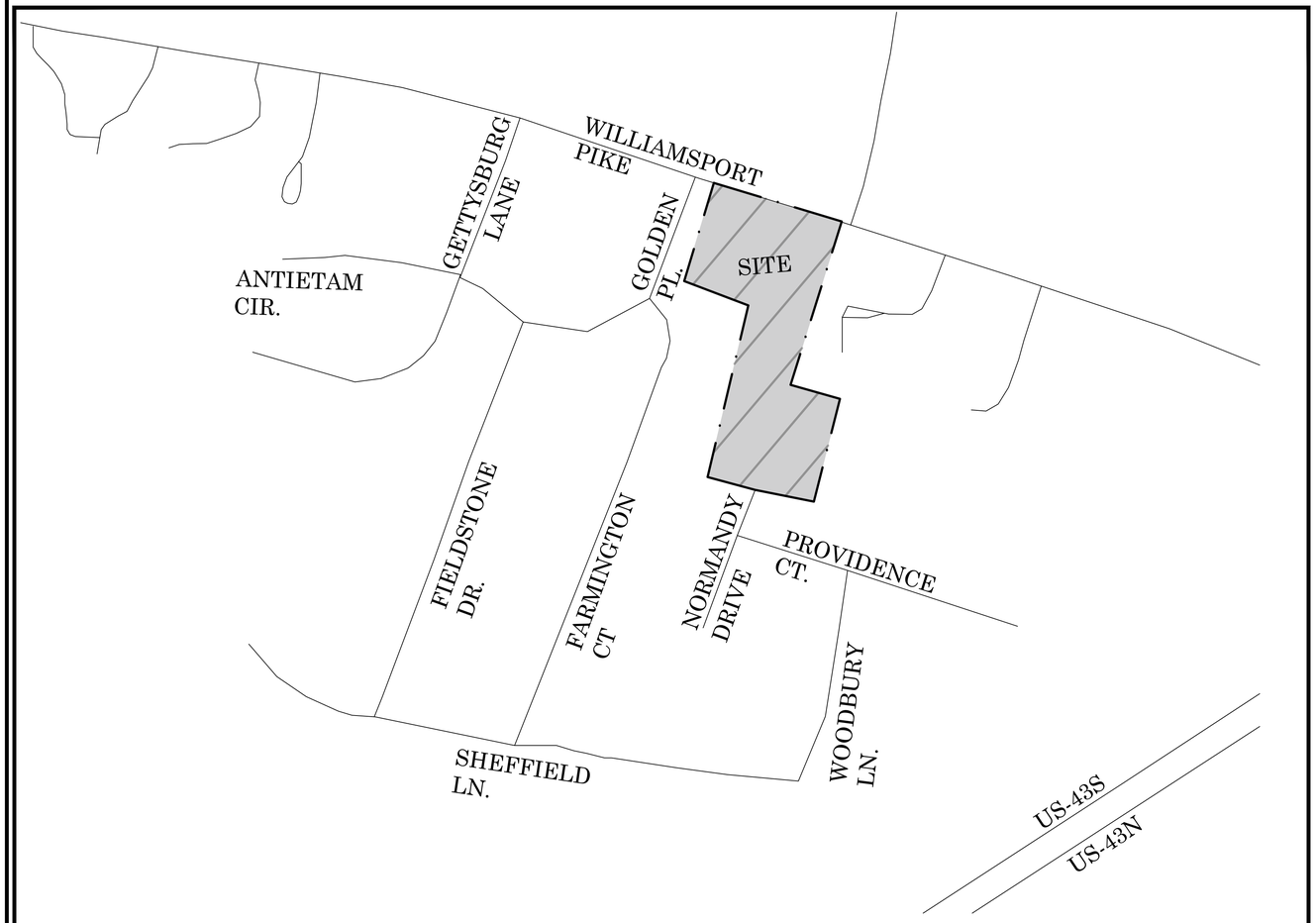
Fire Hydrant Location and Distribution (International Fire Code Appendix C)

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Average spacing between hydrants: 500 ft.

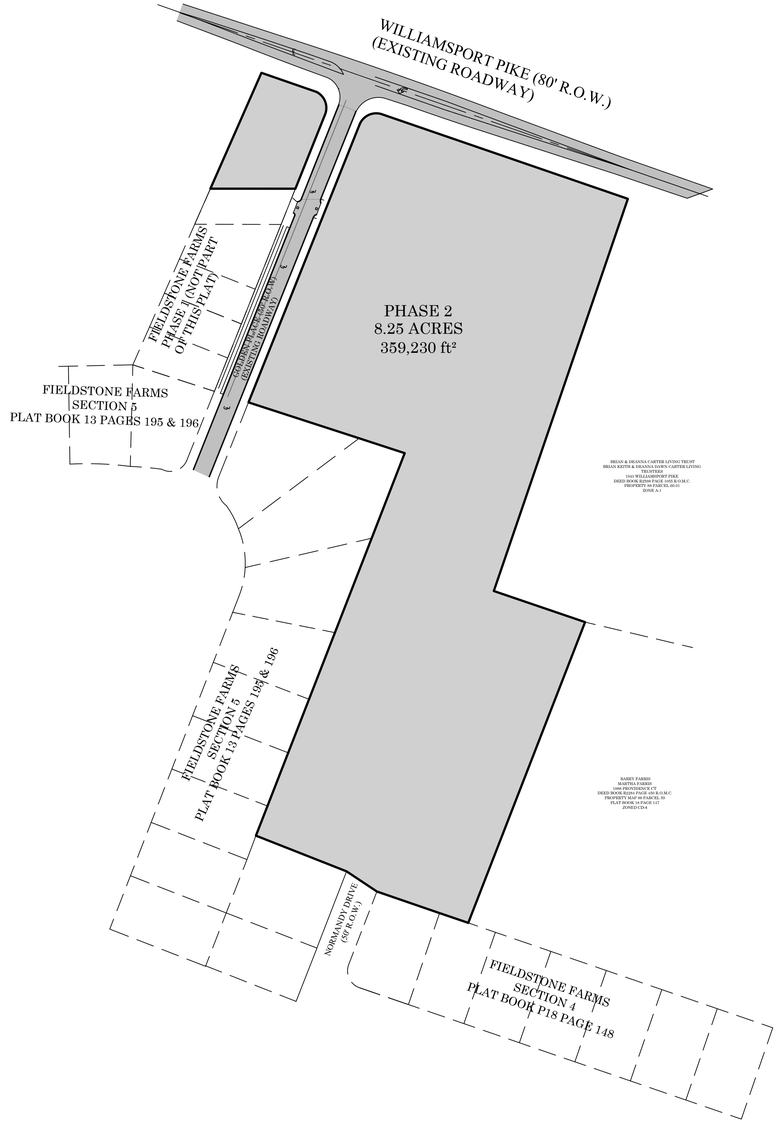
Maximum distance from frontage to hydrant: 250 ft.

Fire Plan Reviewer: Brad Massey Date: 2/13/2023



SITE MAP SCALED 1:200'

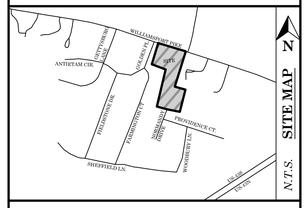
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SHEET INDEX	
V-0.0	COVER SHEET
V-1.0	SUBDIVISION
V-2.0	SITE DEVELOPMENT PLAN
V-3.0	TREE CANOPY EXHIBIT
V-4.0	LANDSCAPING PLAN

CHAPDELAINE & ASSOCIATES
LAND SURVEYING

7376 WALKER ROAD,
FAIRVIEW, TENNESSEE 37062
(615) 799-8104
chapsurveyors@msn.com
Randolph L. Chapdelaine
TN R.L.S. #1444





CERTIFICATE OF ACCURACY

I HEREBY CERTIFY THAT THIS IS A CATEGORY IV SURVEY AND THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION, THIS SURVEY WAS DONE IN COMPLIANCE WITH CURRENT TENNESSEE MINIMUM STANDARDS OF PRACTICE, AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THE SURVEY:

a. REAL TIME KINEMATIC & BASE SOKKIA GRX 3
b. POSITIONAL ACCURACY: 0.05 FEET
c. DATE OF SURVEY: 02/01/2021
d. DATUM / EPOCH: NAD83 (2011) EPOCH
e. PUBLISHED / FIXED CONTROL: TDOT CORS NETWORK
f. GEOID MODEL: GEOID 12B
g. COMBINED GRID FACTOR: 0.99992837

Randolph L. Chapdelaine 5/22/2023

RANDOLPH L. CHAPDELAINE, R.L.S. # 1444 DATE

HABITAT FOR HUMANITY
WILLIAMSON-MAURY
WILLIAMSPORT PIKE
p/o DEED BOOK R-2425 *PAGE* 1181
R.O.M.C.
9th *CIcivil DISTRICT OF MAURY COUNTY, TENNESSEE*
PROPERTY MAP 88 PARCEL 70.01
ZONING: CD-4
TOTAL ACRES 8.25
TOTAL AREA BEING DEVELOPED: 8.25 ACRES
CITY OF COLUMBIA

REVISION #	DATE
REVISION # 2	5/22/2023
REVISION # 1	4/17/2023

DATE: JANUARY 17, 2023
DRAWN BY: NAB
JOB #: 6171
SCALE: 1" = 60'

0 100 200

V-0.0

COVER SHEET-MAJOR SUBDIVISION FOR FIELDSTONE SECTION 5 PHASE 2

Return To:
McCann & Hickman
1804 Williamson Ct, Suite 201
Brentwood, TN 37027
615-377-3319

This Instrument Prepared By:
K. Brian Hay, Attorney at Law
104 W. 6th Street, Ste. 200
Columbia, TN 38401

Name and Address of New Owner:	Name and Address of Entity Responsible for Payment of Real Property Taxes
Habitat for Humanity Williamson-Maury	SAME AS NEW OWNER
1804 Williamson Pike, Suite 201	
Brentwood, TN 37027	

WARRANTY DEED

FOR AND IN CONSIDERATION OF One Dollar ($1.00) and other good and valuable consideration, the receipt and legal sufficiency of all of which are hereby acknowledged, **LPT, LLC, a Tennessee limited liability company** *(herein called "Grantor")*, has this day bargained and sold, transferred and conveyed and by these presents does bargain, sell, transfer and convey unto **Habitat for Humanity Williamson-Maury** *(herein called "Grantee")* the following described property situated and located in Maury County, Tennessee, to wit:

SITUATE in the NINTH (9TH) Civil District of Maury County, Tennessee and being more particularly described as follows:

Being a parcel of land in Maury County, Tennessee and the remaining property of Cyril Evers property as shown on Tax Map 88, page 70.01 and recorded in Deed Book R2093, page 230 in the Register's Office Of Maury County, TN and more particularly described as follows:

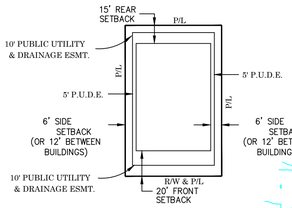
Beginning at an iron pin found at the north west corner of Brian and Deanna Carter as recorded in Deed Book R1852, page 1487, said point being the north east corner of the tract herein described and lying on the south margin of Williamsport Pike (Highway 50);
Thence with the west line of aforesaid Carter, South 18°52'24" West a distance of 579.27' to a found pinch pipe;
Thence with south line of Carter, South 71°10'56" East a distance of 134.80' to a found iron pin (596);
Thence with the west line of Barry and Martha Farris as recorded in Deed Book R2083, page 720, South 21°17'34" West a distance of 451.23' to a found iron pin (596);
Thence with the north line of Fieldstone Farms, Section 4 as recorded in Plat Book P18, page 147, North 70°57'14" West a distance of 134.94' to an iron pin found (596);
Thence with the same, N 56°18'55" West a distance of 50.98' to an iron pin found (596);
Thence with the same, North 68°32'14" West a distance of 136.14' to an iron pin found (596);
Thence with the east line of Fieldstone Farms, Section 1 as recorded in Plat Book P13, page 195, North 21°15'39" East a distance of 573.86' to an iron pin found;
Thence with the same, North 72°02'43" West a distance of 229.69' to an iron pin found (596);
Thence crossing Golden Place Road, North 72°01'17" West a distance of 50.02' to an iron pin found (596);
Thence with the north line of Fieldstone Farms, Section 1 as recorded in Plat Book P13, page 195, North 72°01'07" West a distance of 119.95' to an iron pin found;
Thence with the east line of Bobby and Vicki Andrews as recorded in Deed Book 609, page 542, North 23°49'39" East a distance of 446.61' to an iron pin found;
Thence with the south margin of Williamsport Pike (Highway 50), South 70°57'35" East a distance of 541.09' to the point of beginning, having an area of 414,563 square feet, 9.52 acres, according to survey dated March 31, 2016 prepared by Allen B. O'Leary, TN RLS #1987.

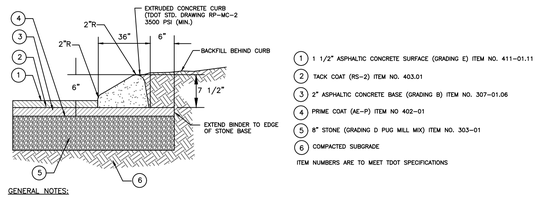
Book R2425 Page 1181

GENERAL NOTES

1.) THE PURPOSE OF THIS PLAT IS TO CREATE A 31 LOT SUBDIVISION.
2.) ALL DISTANCES SHOWN HEREON ARE BASED UPON A FIELD-RUN SURVEY USING E.D.M. EQUIPMENT AND OR ALL GPS, AND ARE ADJUSTED FOR TEMPERATURE.
3.) UTILITIES, IF SHOWN WERE TAKEN FROM VISIBLE STRUCTURES AT THE SITE, VERIFICATION OF THEIR EXISTENCE, LOCATION, SIZE, AND DEPTH SHOULD BE MADE BEFORE MAKING DECISIONS REGARDING THEM. AVAILABILITY OF SERVICE SHOULD BE CONFIRMED WITH APPROPRIATE LOCAL UTILITY COMPANY. TENNESSEE ONE CALL (811) SHOULD BE CALLED BEFORE ANY CONSTRUCTION OR DIGGING.
4.) THIS SURVEY WAS MADE WITHOUT THE BENEFIT OF A TITLE REPORT. IT IS THEREFORE SUBJECT TO THE FINDINGS OF AN ACCURATE TITLE REPORT.
5.) THIS PROPERTY IS SUBJECT TO BOTH RECORDED EASEMENTS, AND TO THOSE UNKNOWN TO THIS SURVEYOR.
6.) THE SUBJECT PROPERTY LIES IN A ZONE "X" (AREAS OUTSIDE OF THE 100 YEAR FLOOD PLAIN) AS SHOWN ON FIRM MAP 47119C0285E DATED 04-16-2007.
7.) PROPERTY ZONED CD-4
SETBACKS ARE FRONT=6'/20'; SIDE =6' TOTAL; REAR=15'
8.) THERE IS A 10' P.U.D.E. ON ALL PROPERTY LINES PARALLEL AND ABUTTING PUBLIC ROADS AND 5' P.U.D.E. ALONG ALL INTERIOR LOT LINES.
9.) POWER & WATER SERVED BY CPWS COLUMBIA POWER & WATER SYSTEMS.
10.) SEWER IS SERVED BY COLUMBIA WASTEWATER DEPARTMENT.
11.) NO DRIVEWAY ACCESS OFF WILLIAMSPORT PIKE.
12.) ALL STORM WATER RUNOFF WILL FLOW AWAY FROM THE ROAD AND TOWARD THE STREAM. FOR CALCULATIONS SEE C3.0 STORM WATER PLAN ENGINEERING PLAN.
13.) ALL FIRST FLOOR ELEVATIONS AND MECHANICAL SYSTEMS TO BE ABOVE 622' ELEVATION DUE TO POSSIBLE FLOODING.
14.) TOPOGRAPHY DATUM BASED ON NAVD 1988 TAKEN FROM TENNESSEE LIDAR MAPPING AND FIELD CHECKED.

TYPICAL LAYOUT (LOTS 146-176)



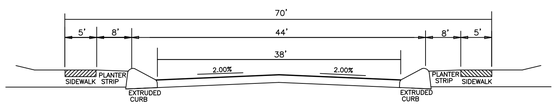


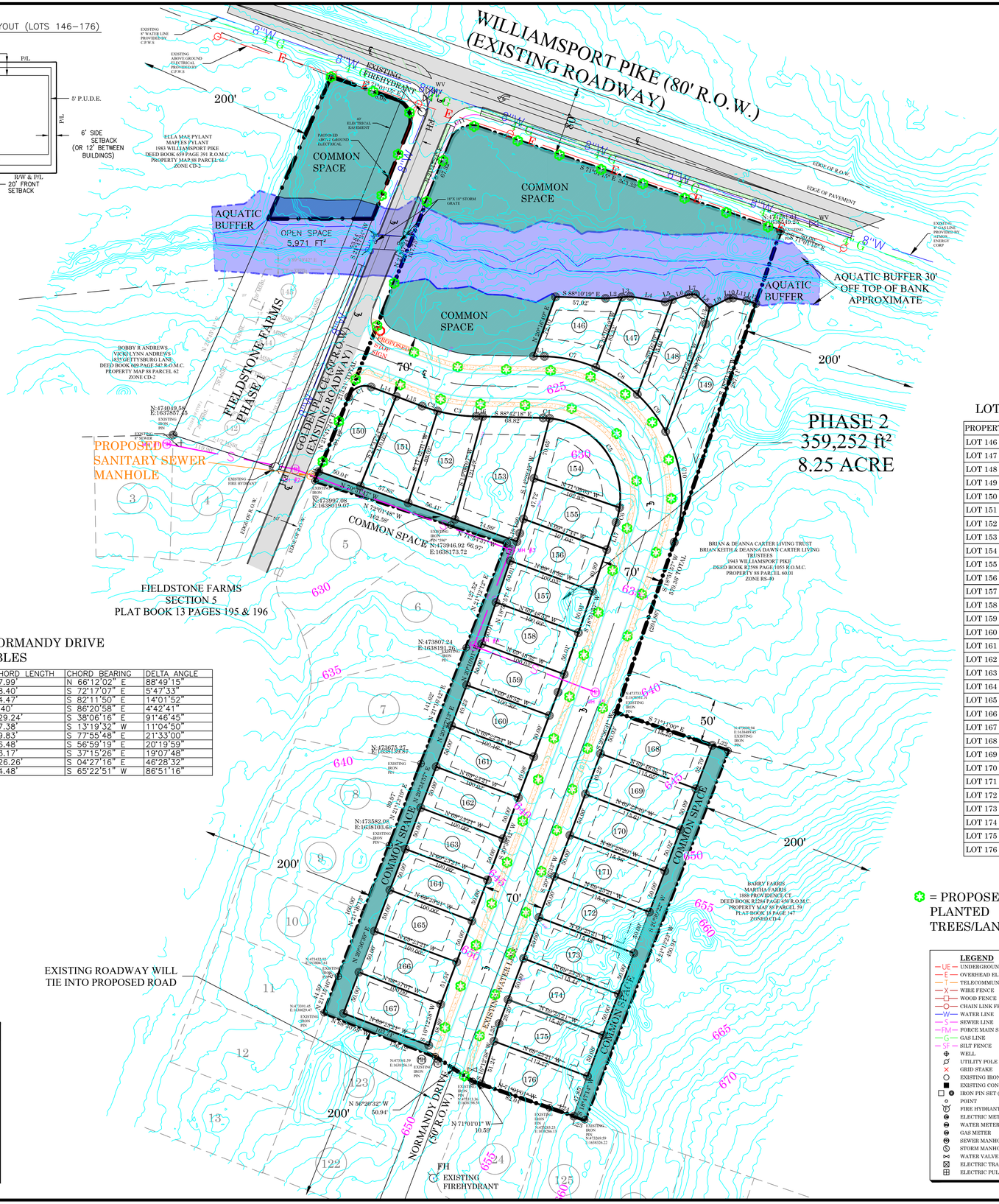
GENERAL NOTES:

1. EXPANSION JOINTS TO BE SPACED A MAXIMUM OF 100 FEET APART AND ALIGN WITH RAMPS, INLETS AND OTHER REQUIRED TARGET POINTS.
2. CONTRACTION/CONSTRUCTION JOINTS ARE REQUIRED AND ARE TO BE CUT INTO CURB EVERY 10 FEET.
3. DETAILS SHALL MEET THE STANDARDS AS SET FORTH IN THE LATEST VERSION OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION ROADWAY DESIGN GUIDELINES.
4. THE EXTRUDED 6" MOUNTABLE CONCRETE CURB IS TO BE USED ONLY IN SPECIAL CONDITIONAL SUCH AS LOW SPEED VOLUME LOCAL STREETS AND WHEN TRYING TO SIMILAR CURBS ON SUBDIVISION STREETS OR IN PARKING LOTS.
5. WHERE CONCRETE MEDIAN PAVEMENT IS POURED BEHIND EXTRUDED 6" MOUNTABLE CONCRETE CURB, IT MAY BE POURED MONOLITHICALLY WITH THE CURB.

TYPICAL STREET SECTION

NOT TO SCALE





PROPOSED NORMANDY DRIVE
LOT LINE TABLES

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	20.00'	31.00'	27.99'	N 66°12'02" E	88°49'15"
C2	182.03'	18.40'	18.40'	S 72°17'07" E	5°47'33"
C3	182.03'	44.58'	44.47'	S 82°11'50" E	14°01'52"
C4	90.00'	7.40'	7.40'	S 86°20'58" E	4°42'41"
C5	90.00'	144.17'	129.24'	S 38°06'16" E	91°46'45"
C6	90.00'	17.41'	17.38'	S 13°19'32" W	11°04'50"
C7	160.00'	60.18'	59.83'	S 77°55'48" E	21°33'00"
C8	160.00'	56.78'	56.48'	S 56°59'19" E	20°19'59"
C9	160.00'	53.42'	53.17'	S 37°15'26" E	19°07'48"
C10	160.00'	129.78'	126.26'	S 04°27'16" E	46°28'32"
C11	25.08'	38.01'	34.48'	S 65°22'51" W	86°51'16"

LINE	BEARING	DISTANCE
L1	N 85°42'19" W	12.41'
L2	N 85°33'52" E	18.56'
L3	N 85°33'52" E	9.64'
L4	S 81°01'19" E	40.27'
L5	N 72°20'30" E	8.68'
L6	N 72°20'30" E	19.29'
L7	N 87°44'21" E	8.15'
L8	S 45°59'59" E	22.01'
L9	N 63°44'16" E	23.88'
L10	N 83°33'07" E	5.44'
L11	S 78°02'23" E	15.52'
L12	S 72°54'29" E	11.08'
L13	S 13°27'51" W	19.05'
L14	S 69°23'21" E	30.42'
L15	S 69°23'21" E	31.66'
L16	S 88°42'18" E	7.32'
L17	S 18°51'57" W	32.64'
L18	N 19°19'11" E	23.33'
L19	N 19°19'11" E	9.99'
L20	N 14°29'46" E	16.77'
L21	N 21°47'24" E	11.76'
L22	S 71°11'00" E	19.00'
L23	N 71°12'13" W	12.98'
L24	N 71°12'13" W	29.36'
L25	N 16°12'38" E	20.77'

LOT(S) AREA

PROPERTY	SQ FT
LOT 146	5,344 ft²
LOT 147	5,381 ft²
LOT 148	6,141 ft²
LOT 149	9,776 ft²
LOT 150	5,544 ft²
LOT 151	5,909 ft²
LOT 152	6,148 ft²
LOT 153	9,990 ft²
LOT 154	6,066 ft²
LOT 155	5,002 ft²
LOT 156	5,002 ft²
LOT 157	5,001 ft²
LOT 158	5,001 ft²
LOT 159	5,017 ft²
LOT 160	4,973 ft²
LOT 161	5,003 ft²
LOT 162	5,000 ft²
LOT 163	4,999 ft²
LOT 164	4,999 ft²
LOT 165	4,999 ft²
LOT 166	5,066 ft²
LOT 167	5,023 ft²
LOT 168	5,946 ft²
LOT 169	5,743 ft²
LOT 170	5,780 ft²
LOT 171	5,777 ft²
LOT 172	5,775 ft²
LOT 173	5,773 ft²
LOT 174	5,771 ft²
LOT 175	5,752 ft²
LOT 176	5,575 ft²

= PROPOSED PLANTED TREES/LANDSCAPING

LEGEND

- UE UNDERGROUND ELECTRIC LINE
- E OVERHEAD ELECTRIC LINE
- T TELECOMMUNICATION LINE
- X WIRE FENCE
- WOOD FENCE
- CHAIN LINK FENCE
- W WATER LINE
- S SEWER LINE
- FM FORCE MAIN SEWER
- G GAS LINE
- SF SILT FENCE
- WELL
- UTILITY POLE
- GRID STAKE
- EXISTING IRON PIN (UNLESS NOTED)
- EXISTING CONCRETE MONUMENT
- IRON PIN SET (UNLESS NOTED)
- POINT
- FIRE HYDRANT
- ELECTRIC METER
- WATER METER
- GAS METER
- SEWER MANHOLE
- STORM MANHOLE
- WATER VALVE
- ELECTRIC TRANSFORMER BOX
- ELECTRIC PULL BOX

UTILITY OWNERS

ELECTRIC
OWNER: COLUMBIA POWER & WATER
ADDRESS: 201 PICKENS LANE
ADDRESS: COLUMBIA, TN 38401
PHONE # (931) 388-4833

WATER
OWNER: COLUMBIA POWER & WATER
ADDRESS: 201 PICKENS LANE
ADDRESS:COLUMBIA, TN 38401
PHONE # (931) 388-4833

SEWER
OWNER: COLUMBIA WASTEWATER SYSTEM
ADDRESS: 1244 TREATMENT PLANT ROAD
ADDRESS: COLUMBIA, TN 38401
PHONE # (931) 388-4833

GAS
OWNER:ATMOS ENERGY CORP
ADDRESS: 810 NASHVILLE HWY
ADDRESS: COLUMBIA, TN 38401
PHONE # (931) 388-9136

TELEPHONE
OWNER: CPWS
ADDRESS:201 PICKENS LANE
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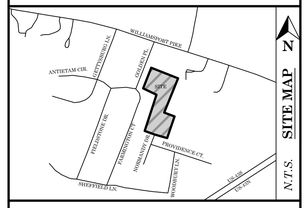
SEWER STRUCTURE	
EXISTING MH #1	MH TOP 619.97' 8" S. IN 616.59' 8" E. IN 614.23' 8" W. OUT 614.17'
EXISTING MH #2	MH TOP 624.65' 4" PLASTIC SE. IN 621.65' 8" E. IN 616.90' 8" W. OUT 616.88'
EXISTING MH #3	MH TOP 630.31' 8" S. IN 623.51' 8" W. OUT 623.35'
EXISTING MH #4	MH TOP 633.24' 8" E. IN 627.13' 8" N. OUT 627.03'
EXISTING MH #5	MH TOP 636.35' 8" S. IN 630.74' 8" W. OUT 630.66'

FIELDSTONE FARMS PHASE II
AREA TO BE DEVELOPED:

	AREA IN Sq. Ft.
COMBINED LOT AREA:	177,276 Sq. Ft. 4.07 Acres
AQUATIC BUFFER AREA:	34,079 Sq. Ft. 0.78 Acres
COMMON SPACE AREA (19.8% OF DEVELOPMENT):	71,303 Sq. Ft. 1.64 Acres
R.O.W AREA:	76,594 Sq. Ft. 1.76 Acres
TOTAL AREA TO BE DEVELOPED:	359,252 Sq. Ft. 8.25 Acres

CHAPDELAINE & ASSOCIATES
LAND SURVEYING

7376 WALKER ROAD,
FAIRVIEW, TENNESSEE 37062
(615) 799-8104
chapsurveyors@msn.com
Randolph L. Chapdelaine
TN R.L.S. #1444





CERTIFICATE OF ACCURACY

I HEREBY CERTIFY THAT THIS IS A CATEGORY IV SURVEY AND THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION, THIS SURVEY WAS DONE IN COMPLIANCE WITH CURRENT TENNESSEE MINIMUM STANDARDS OF PRACTICE, AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THE SURVEY:

a. REAL TIME KINEMATIC & BASE SOKKIA GRX 3
b. POSITIONAL ACCURACY: 0.05 FEET
c. DATE OF SURVEY: 02/01/2021
d. DATUM / EPOCH: NAD83 (2011) EPOCH
e. PUBLISHED / FIXED CONTROL: TDOT CORS NETWORK
f. GEOID MODEL: GEOID 12B
g. COMBINED GRID FACTOR: 0.99992837

RANDOLPH L. CHAPDELAINE, R.L.S. # 1444 DATE

HABITAT FOR HUMANITY
WILLIAMSON-MAURY
WILLIAMSPORT PIKE
DEED BOOK R-2495 *PAGE* 1181
R.O.M.C.
9th *CIVIL DISTRICT OF MAURY COUNTY, TENNESSEE*
PROPERTY MAP 88 PARCEL 70.01
ZONE CD-4
TOTAL ACRES 8.14
TOTAL AREA BEING DEVELOPED: 8.14 ACRES
CITY OF COLUMBIA

REVISION #	DATE
REVISION # 1	4/17/2023

DATE: JANUARY 17, 2023
DRAWN BY: NAB
JOB #: 6171
SCALE: 1" = 60'

0 60 120

V-1.1

P.U.D PRELIMINARY PLAT-MAJOR SUBDIVISION FOR FIELDSTONE SECTION 5 PHASE 2

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, February 7, 2023

ITEM NO.
23-0018

DESCRIPTION: 35 Lot Subdivision.

RECOMMENDATION: For final recommendation please see staff report.

COMMENTS:

Fire

1. You will need to get a required fire flow letter from the Fire Marshal's Office. Received fire flow letter 2/13/2023.
2. Once you get the required fire flow letter, you will need to send that to Columbia Power & Water System to get a water availability letter. Received water availability letter 3/3/2023.

Planning

3. Typical lot layout shows 30' front setback but max is 20'. Front setback is set at 20'.
4. Will need Development Plan showing Civic Space types, playground areas, and tree preservation plan. A landscaping plan will be provided.
5. Please correct number of lots listed in notes on plat. Corrected to 31 lots.
6. Section 5.3.3.B (p. 335) of the Zoning Ordinance requires a playground within 800 feet of each lot or building site in residential use. Please add playground spaces and show distance from all residential lots/building sites. Does not apply because 20 acres is needed for Section 5.3.3.B. to apply regarding the playground.
7. Note indicates 18 lots, application and preliminary plat depicts 36. Corrected to 31 lots.
8. Due to site altering comments re submittal will need Development Review. Concurred.

Engineering

9. Preliminary Plat shall be submitted and stamped by a registered engineer. Signed sealed preliminary plat will be submitted.
10. Provide proposed contours at vertical intervals of not more than two (2) feet. One foot contours are provided.
11. Minimum horizontal curvature for roadways is 125 ft. Horizontal curves are at min. 125'.
12. Cross section should match the applicable detail in the ESS for the zoning. Typical cross section is corrected.
13. Aquatic buffer shall be located in open space. A 30' buffer from top of back is shown on the plan.

14. Reverse curves shall be separated by a minimum tangent length of fifty (50) feet. Horizontal curves are min. 50’ apart.
15. Lots adjacent to a river, stream, waterbody, aquatic buffer, or large drainage channel that do not have a base flood elevation established shall at minimum be elevated two (2.0) feet above the nearest top of bank for the entire building footprint of any primary and accessory structure. Proposed grading concurs with the requirement.
16. This item will return to Development Review Committee. Understood.

Building

17. No comments.

Police

18. No comments provided.

City Attorney

19. No comments provided.

Columbia Power

20. Columbia Power System has an existing power line near your proposed residential development. 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. Information will be provided to Columbia Power System.

Maury County E911

21. Normandy Drive and Golden PL connection Maury County 911 have no comment to add.

Atmos Energy

22. Gas Available on TN Hwy 50. Contact Bradie Armstrong 615-485-6377.

Maury County Schools

23. Baker Elementary School, Whittorne Middle School, Central High School. 1) No residence is guaranteed zone to a specific school. 2) All zones are subject to change yearly. 3) No concerns with neighborhood design.

Wastewater

24. Columbia Wastewater does not allow grinder pump systems.

Public Works

25. No comment.

Duck River Electric Membership Corp

26. No comments provided.

Columbia Water

27. "The project is within Columbia Power and Water's service area, however a water availability letter had not been issued at the time of the writing. 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. CPWS will study the existing infrastructure and determine its ability to serve the proposed development. Should adequate facilities not currently exist the study will determine any required off-site improvements necessary to serve your development. Off-site improvements needed to serve a development are the responsibility of the developer/owner. All 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." Received water availability letter 3/3/2023.

Maury County Highway Department (Collier Engineering Company, Inc.)

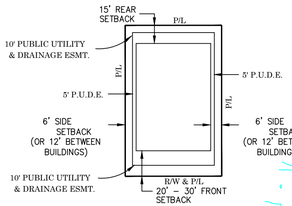
28. No comment.

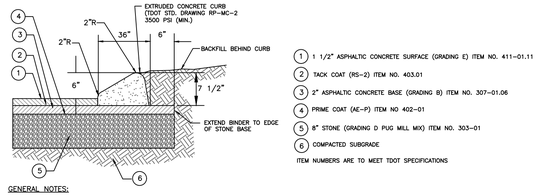
NOTE: All submittals shall be compliant with City standards prior to Planning Commission review. Items that are not adhering to the regulations and/or comments for that request will not be forwarded to the next agenda until such items are amended.

GENERAL NOTES

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2.) ALL DISTANCES SHOWN HEREON ARE BASED UPON A FIELD-TO-RUN SURVEY USING E.D.M. EQUIPMENT AND OR ALL GPS, AND ARE ADJUSTED FOR TEMPERATURE.
3.) UTILITIES, IF SHOWN WERE TAKEN FROM VISIBLE STRUCTURES AT THE SITE, VERIFICATION OF THEIR EXISTENCE, LOCATION, SIZE, AND DEPTH SHOULD BE MADE BEFORE MAKING DECISIONS REGARDING THEM. AVAILABILITY OF SERVICE SHOULD BE CONFIRMED WITH APPROPRIATE LOCAL UTILITY COMPANY. TENNESSEE ONE CALL (811) SHOULD BE CALLED BEFORE ANY CONSTRUCTION OR DIGGING.
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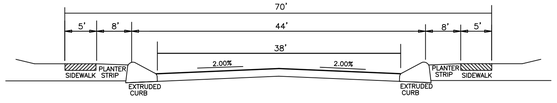
ITEM NUMBERS ARE TO MEET TDOT SPECIFICATIONS

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5. WHERE CONCRETE MEDIAN PAVEMENT IS POURED BEHIND EXTRUDED 6" MOUNTABLE CONCRETE CURB, IT MAY BE POURED MONOLITHICALLY WITH THE CURB.

TYPICAL STREET SECTION

NOT TO SCALE



UTILITY OWNERS

ELECTRIC
OWNER: COLUMBIA POWER & WATER
ADDRESS: 201 PICKENS LANE
ADDRESS: COLUMBIA, TN 38401
PHONE # (931) 388-4833

WATER
OWNER: COLUMBIA POWER & WATER
ADDRESS: 201 PICKENS LANE
ADDRESS:COLUMBIA, TN 38401
PHONE # (931) 388-4833

SEWER
OWNER: COLUMBIA WASTEWATER SYSTEM
ADDRESS: 1244 TREATMENT PLANT ROAD
ADDRESS: COLUMBIA, TN 38401
PHONE # (931) 388-4833

GAS
OWNER:ATMOS ENERGY CORP
ADDRESS: 810 NASHVILLE HWY
ADDRESS: COLUMBIA, TN 38401
PHONE # (931) 388-9136

TELEPHONE
OWNER: CPWS
ADDRESS:201 PICKENS LANE
ADDRESS: COLUMBIA, TN 38401
PHONE # (931) 388-4833

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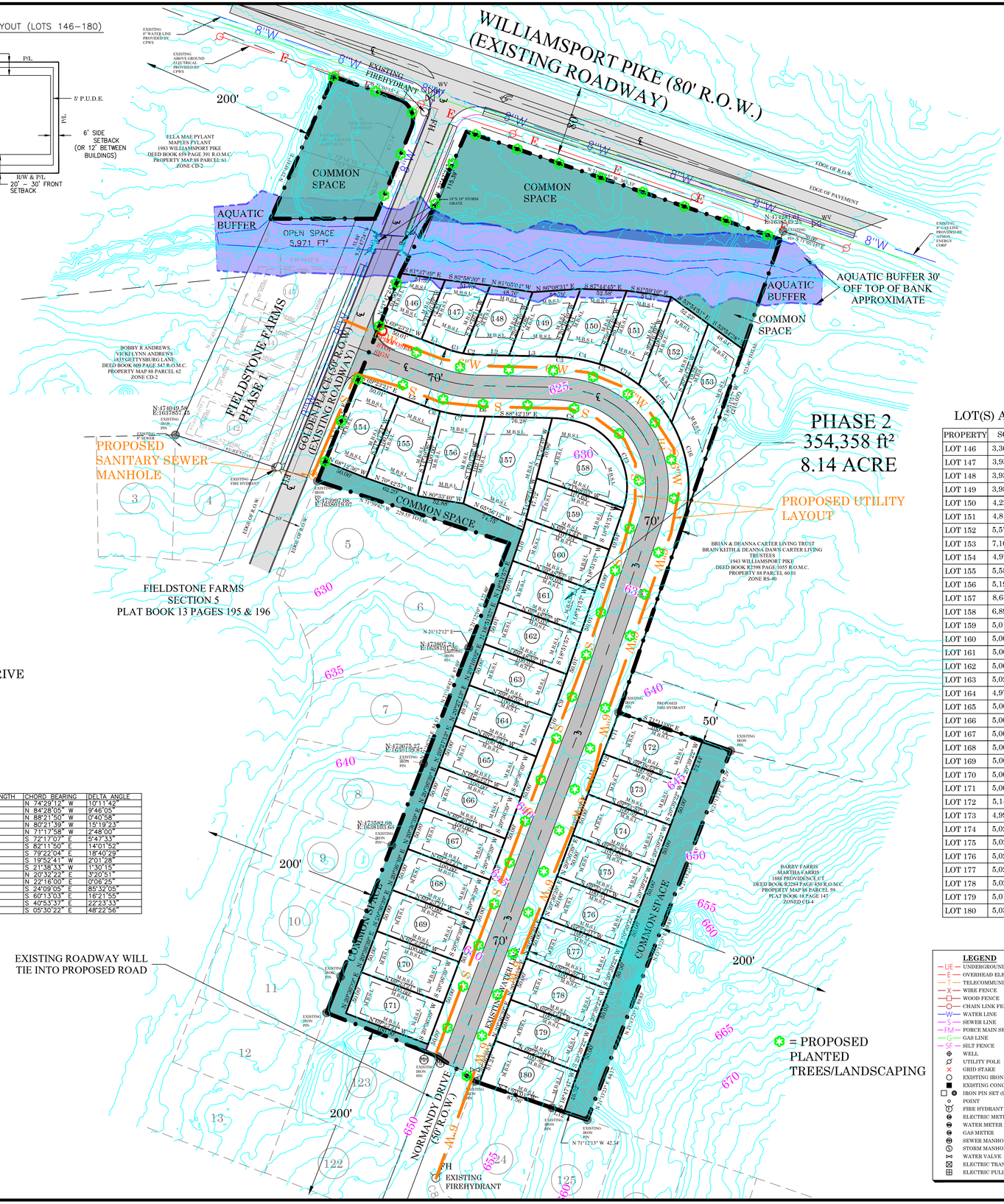
PROPOSED NORMANDY DRIVE
R.O.W TABLES

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L4	N 69°23'21" W	40.68'
L5	S 69°23'21" E	31.66'
L6	N 88°42'19" W	7.32'
L7	S 14°29'49" W	13.31'
L8	S 18°51'57" E	22.24'
L9	S 20°36'39" W	29.35'
L10	N 18°51'57" E	36.77'
L11	N 20°36'39" E	47.65'
L12	N 71°12'13" W	14.36'

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING	DELTA ANGLE
C1	112.03'	19.93'	19.91'	N 74°29'12" W	10°11'42"
C2	112.03'	19.10'	19.08'	N 84°28'05" W	9°46'05"
C3	190.80'	2.27'	2.27'	N 88°21'50" W	0°40'58"
C4	190.80'	51.03'	50.87'	N 80°21'39" W	15°19'23"
C5	190.80'	9.32'	9.32'	N 71°17'58" W	2°48'00"
C6	182.03'	18.40'	18.40'	S 72°17'07" E	5°47'33"
C7	182.03'	44.58'	44.47'	S 82°11'50" E	14°01'52"
C8	120.80'	39.37'	39.20'	S 79°22'04" E	18°40'29"
C9	785.97'	27.77'	27.77'	S 19°52'41" W	2°01'28"
C10	785.97'	20.63'	20.63'	S 21°38'33" W	1°30'15"
C11	855.97'	50.01'	50.00'	N 20°32'22" E	3°20'51"
C12	855.97'	1.60'	1.60'	N 22°16'00" E	0°06'25"
C13	75.91'	114.82'	104.45'	S 24°09'05" E	85°32'05"
C14	144.90'	41.39'	41.25'	S 60°13'03" E	16°21'55"
C15	146.91'	57.42'	57.05'	S 40°53'37" E	22°23'53"
C16	146.91'	124.06'	120.41'	S 05°30'22" E	48°22'56"

FIELDSTONE FARMS PHASE II
AREA TO BE DEVELOPED:

	AREA IN Sq. Ft.
COMBINED LOT AREA:	176,182 Sq. Ft. 4.04 Acres
AQUATIC BUFFER AREA:	31,363 Sq. Ft. 0.72 Acres
COMMON SPACE AREA (19.7% OF DEVELOPMENT):	69,858 Sq. Ft. 1.60 Acres
R.O.W AREA:	77,055 Sq. Ft. 1.77 Acres
TOTAL AREA TO BE DEVELOPED:	354,358 Sq. Ft. 8.135 Acres



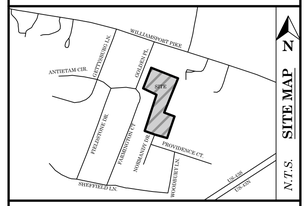
LOT(S) AREA

PROPERTY	SQ FT
LOT 146	3,367 ft²
LOT 147	3,932 ft²
LOT 148	3,931 ft²
LOT 149	3,982 ft²
LOT 150	4,227 ft²
LOT 151	4,815 ft²
LOT 152	5,570 ft²
LOT 153	7,105 ft²
LOT 154	4,975 ft²
LOT 155	5,583 ft²
LOT 156	5,196 ft²
LOT 157	8,648 ft²
LOT 158	6,892 ft²
LOT 159	5,011 ft²
LOT 160	5,006 ft²
LOT 161	5,001 ft²
LOT 162	5,001 ft²
LOT 163	5,025 ft²
LOT 164	4,976 ft²
LOT 165	5,004 ft²
LOT 166	5,000 ft²
LOT 167	5,000 ft²
LOT 168	5,000 ft²
LOT 169	5,000 ft²
LOT 170	5,000 ft²
LOT 171	5,000 ft²
LOT 172	5,143 ft²
LOT 173	4,992 ft²
LOT 174	5,028 ft²
LOT 175	5,026 ft²
LOT 176	5,024 ft²
LOT 177	5,022 ft²
LOT 178	5,020 ft²
LOT 179	5,018 ft²
LOT 180	5,036 ft²

LEGEND
- UE — UNDERGROUND ELECTRIC LINE
- E — OVERHEAD ELECTRIC LINE
- T — TELECOMMUNICATION LINE
- X — WIRE FENCE
- WOOD FENCE
- CHAIN LINK FENCE
- W — WATER LINE
- S — SEWER LINE
- FM — FORCE MAIN SEWER
- G — GAS LINE
- SF — SILT FENCE
- WELL
- UTILITY POLE
- GRID STAKE
- EXISTING IRON PIN (UNLESS NOTED)
- EXISTING CONCRETE MONUMENT
- IRON PIN SET (UNLESS NOTED)
- POINT
- FIRE HYDRANT
- ELECTRIC METER
- WATER METER
- GAS METER
- SEWER MANHOLE
- STORM MANHOLE
- WATER VALVE
- ELECTRIC TRANSFORMER BOX
- ELECTRIC PULL BOX

CHAPDELAINE & ASSOCIATES
LAND SURVEYING

7376 WALKER ROAD,
FAIRVIEW, TENNESSEE 37062
(615) 799-8104
chapsurveyors@msn.com
Randolph L. Chapdelaine
TN R.L.S. #1444



RANDOLPH L. CHAPDELAINE TENNESSEE REGISTERED LAND SURVEYOR AGRICULTURE COMMERCE TENNESSEE NO. 1444

CERTIFICATE OF ACCURACY

I HEREBY CERTIFY THAT THIS IS A CATEGORY IV SURVEY AND THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION, THIS SURVEY WAS DONE IN COMPLIANCE WITH CURRENT TENNESSEE MINIMUM STANDARDS OF PRACTICE, AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THE SURVEY:

a. REAL TIME KINEMATIC & BASE SOKKIA GRX 3
b. POSITIONAL ACCURACY: 0.05 FEET
c. DATE OF SURVEY: 02/01/2021
d. DATUM / EPOCH: NAD83 (2011) EPOCH
e. PUBLISHED / FIXED CONTROL: TDOT CORS NETWORK
f. GEOID MODEL: GEOID 12B
g. COMBINED GRID FACTOR: 0.99992837

RANDOLPH L. CHAPDELAINE, R.L.S. # 1444 DATE

HABITAT FOR HUMANITY
WILLIAMSON-MAURY
WILLIAMSPORT PIKE
DEED BOOK R-2495 *PAGE* 1181
R.O.M.C.
9th *CIVIL DISTRICT OF MAURY COUNTY, TENNESSEE*
PROPERTY MAP 88 PARCEL 70.01
ZONE CD-4
TOTAL ACRES 8.14
TOTAL AREA BEING DEVELOPED: 8.14 ACRES
CITY OF COLUMBIA

REVISION #	DATE

DATE: JANUARY 17, 2023
DRAWN BY: NAB
JOB #: 6171
SCALE: 1" = 60'

0 60 120

V-1.1

P.U.D PRELIMINARY PLAT-MAJOR SUBDIVISION FOR FIELDSTONE SECTION 5 PHASE 2

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: 23-0018

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
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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.

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TENNESSEE

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

- ❑ Legal Description of Property
- ❑ Owner's Affidavit
- ❑ List of all variances 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

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:

Zack Harvill	Zack Harvill	5/22/2023
Print Name	Signature	Date

Rev. 6/7/2022

PRELIMINARY CONCEPT PLAN

REZONING REQUEST OF THE
LARRY OWENS PROPERTY
9TH CIVIL DISTRICT OF MAURY COUNTY
TAX MAP 99, PARCEL 59.04
DEED BOOK R2857, PAGE 60
PLAT BOOK P23, PAGE 12 (TRACT-2)
R.O.M.C.

NOTES:
1. THE PURPOSE OF THIS PLAT IS TO ILLUSTRATE THE SUBDIVISION OF DEED BOOK 409, PAGE 182 INTO TWO TRACTS AND REQUEST REZONING FROM CD-3L TO CD-3

2. I, TRACY SEIBER, HEREBY CERTIFY THAT THIS MAP WAS DRAWN FROM AN CAT IV GPS SURVEY AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THE SURVEY:
   A. TYPE OF SURVEY: RTK
   B. POSITIONAL ACCURACY: 0.05'
   C. PUBLISHED/FIXED CONTROL: TDOT CORS NETWORK
   D. GEOID MODEL: GEOID 12B
   E. DATUM/EPOCH: NAD83(2011)
   F. GPS: CARLSON BRX7 (BASE/ROVER)
   G. DISTANCES: GRID

3. SUBJECT PARCELS ARE NOT WITHIN A FLOOD ZONE ACCORDING TO FIRM MAP 47119C0285E DATED 4/16/2007.

4. PROPERTY IS CURRENTLY ZONED CD-3L CITY OF COLUMBIA ZONING ORDINANCE.
BUILDING SETBACKS:
FRONT 30'
REAR 30'
SIDE 12'
REQUESTING CD-3
FRONT 25'
REAR 25'
SIDE 8'

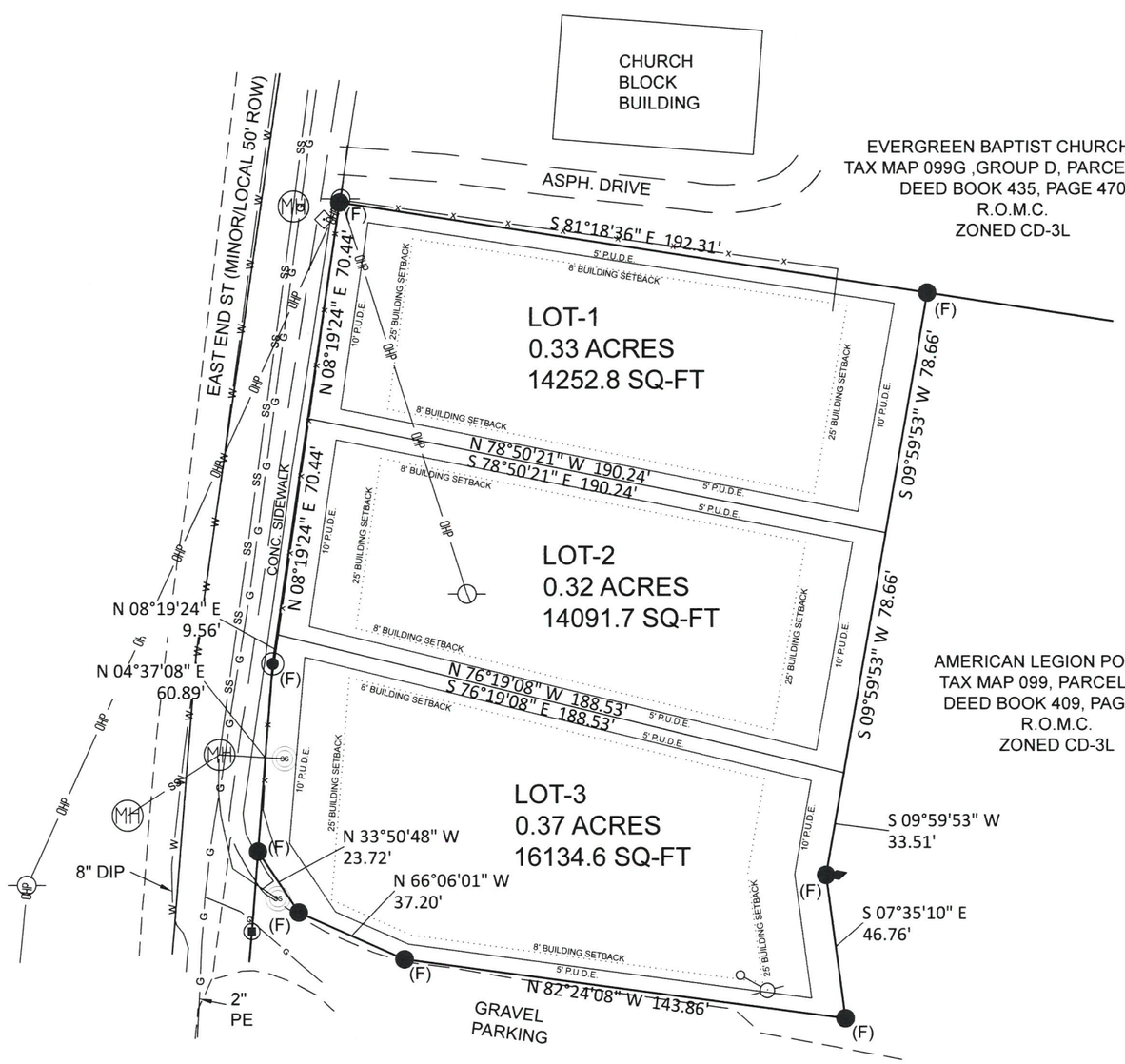
5. THIS PROPERTY IS SUBJECT TO ANY AND ALL RIGHT-OF-WAYS, EASEMENTS, EXCEPTIONS, AND/OR RESTRICTIONS, RECORDED AND UNRECORDED, WHICH MAY AFFECT THIS PROPERTY.

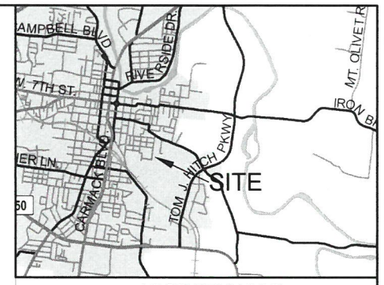
6. PROPERTY ADDRESS:
1205 E. END ST
COLUMBIA, TN 38401

7. ALL UNDERGROUND UTILITIES ARE NOT VERIFIED BY UTILITY OWNERS AND BASED ONLY ON FIELD EVIDENCE AND SCALED FROM UTILITY OWNER MAPS. CALL 811 BEFORE ANY EXCAVATION.

8. ELECTRIC & WATER PROVIDED BY
COLUMBIA POWER AND WATER
201 PICKENS LN
COLUMBIA, TN 38401

9. 10' PUDE ON PARALLEL OR ABUTTING STREET AND 5' PUDE ON INTERIOR LOT LINES.





VICINITY MAP
(NOT TO SCALE)

N

TN-NAD83

LEGEND

- GAS METER
- SEWER METER
- SEWER MANHOLE
- IRON PIN FOUND (F)
- IRON PIN SET (S)
- WATER METER
- RAIL ROAD SPIKE
- LIGHT POLE
- UTILITY POLE
- ANT. ANCHOR
- ANT. SUPPORT
- SANITARY SEWER
- OVERHEAD POWER
- GAS LINE
- WATER LINE
- RIGHT OF WAY
- ZONING SETBACK
- FENCE
- EASEMENT

TRACY K SEIBER
REGISTERED LAND SURVEYOR
STATE OF TENNESSEE
AGRICULTURE COMMERCE
TENNESSEE NO. 2397

CERTIFICATE OF SURVEY ACCURACY

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 Class"C" 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.

5/17/2023
Date

TRACY SEIBER, RLS #2397

0 30 60 90

TRACY SEIBER

102 AVALON DRIVE
COLUMBIA, TN 38401
SEIBERSURVEYING@GMAIL.COM (931)446-6677

DRAWING BY: T. SEIBER	DATE: 1/25/2023
SCALE:1"=30'	JOB NO.:57-2022
R1	

RECEIVED
MAY 18 2023
By: 23-0104

G2G PROPERTIES
REAL ESTATE
GENERATION 2 GENERATION LLC.
P.O. BOX 1372 Columbia, TN 38402
g2gpropertiesllc@mail.com

Being a landlord and owning multiple properties, I have daily inquiries from residents in Maury County that are in need of housing. With Maury County growing and new out of state residents moving into the city, there will be a high demand for housing around this area. I feel like building these three properties will help provide housing for those who are searching for it. It will also bring a new look into an area that hasn't seen "new" in a long time. I have been in the business for over 20 years and my ultimate goal is to contribute to the GROWTH of Columbia!

Larry Owens

1205 East End St.
Columbia, TN 38401

RECEIVED
MAY 18 2023
By: 23-0104

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, May 9, 2023

ITEM NO.
23-0104

DESCRIPTION: Request Comp Plan , Rezoning to CD-3

RECOMMENDATION: For final recommendation please see staff report.

COMMENTS:

Planning

1. Please provide a full legal description as a separate document.
2. As a note: The previous zoning classification and setbacks are shown as (R-20) in note field. The concept plan misidentifies the proposed zoning of the property. Please revise.
3. The water availability letter provided with this application will expire on July 15th, before this request reaches second reading at Council in August. Please provide an updated letter at resubmittal.
4. The proposed amendment to the future land use plan reduces the potential intensity of development in the core area of Columbia. The subject property is not contiguous with any other property with a future land use classification of Suburban Neighborhood. At resubmittal, please provide a narrative justification for the change to the city's land use policies. Please specifically respond to the approval criterion: "how the proposed change would be consistent with the intent, goals, objectives, policies, guiding principles" of Connect Columbia (8.5.20.F.1; p. 450 of the Zoning Ordinance).

Fire

5. We will not require the fire hydrant that is on the water letter. They use information that is given to them from our office and we misspoke on this. There is a fire hydrant within less than 400' of the proposed structures. This hydrant can provide coverage.

Engineering

6. No comments on rezoning. To develop as conceptually shown the Preliminary and Final Plat will require Planning Commission approval.

ATT

7. No comment.

Maury County Highway Dept.

8. No comment.

Wastewater

9. There is an 8-inch gravity main in East End Street for connection after all fees are paid and permits applied for. Wastewater approves this request.

Police

10. No comments provided.

City Attorney

11. No comments provided.

Building

12. No comments.

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.

Columbia Water

14. "A Water Availability Letter was issued March 21, 2023, it expires after 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 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."

Maury County E911

15. 1. East End Street shows on our street list E. End St. 2. Tax Map 099-5904, if it splits into 3 lots, there is not enough unique addresses available. Evergreen church is 1201 E. End Street. & American Legion is 1207 E. End. St.

Public Works

16. No comment.

Maury County Schools

17. No comment.

Atmos Energy

18. No comment provided.

Duck River Electric Membership Corp

19. No comment provided.

ATTACHMENTS: Concept Plan

NOTE: All submittals shall be compliant with City standards prior to Planning Commission review. Items that are not adhering to the regulations and/or comments for that request will not be forwarded to the next agenda until such items are amended.

CPWS

May 19, 2023

Mr. Larry Owens
Generation 2 Generation LLC
Columbia, TN 38401
Sent via email: g2gpropertiesllc@gmail.com

RE: **Water Availability Letter**
Larry Owens Development – 2 New Units
1205 E. End St. Columbia, TN 38401
Tax Map 99, Parcel 059.04
Columbia, Maury County, TN

Dear Mr. Owens:

Columbia Power and 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, various Planning Commissions and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies, water service will be made available on a first-come, first-served basis, 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 rezoning and subdivision of an existing lot with a single service to three lots, with two new services requested. CPWS has evaluated the projected water demands for the proposed residential development in the water system hydraulic model and is able to meet a fire-flow capacity of 1,000 gpm at 20 psi while maintaining the existing level of service and pressures in this portion of the distribution system. CPWS can provide water for the proposed development according to the following requirements:

- Domestic waterline connection will be made to the existing 8-inch water main located on East End Street.

201 Pickens Lane • Columbia, TN 38401 • (931) 388-4833
Columbia Power and Water Systems is an Equal Opportunity Provider and Employer

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MAY 18 2023
By: 23-0104

CPWS

- No existing hydrants are located within 250 feet of the entire frontage of the parcel. If required by the Fire Marshall, a single public hydrant may be installed at the edge of right-of-way of East End Street, equidistant from existing system hydrants at Hardwick Avenue and E 11th St. Any additional hydrants required to meet fire protection requirements for the development will be considered private hydrants and must be located on the customer side of a fire protection meter.

All of the above requirements are to be constructed and paid for by the Applicant and dedicated to CPWS once complete up to and including the meter. No construction of CPWS infrastructure shall be initiated until final construction plans have been approved by TDEC and all parties have fully executed a water service agreement.

Once you have received this Water Availability Letter, next steps in the process to obtain water service from CPWS are as follows:

- Present the attached hydrant analysis report for coordination and approval of development from the Columbia Fire & Rescue Fire Marshall.
- 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.
- Remit to CPWS new water service fees:

New Water Service Fee: $250 + $370 per SFU (2 SFUs)	$990.00

- CPWS will then develop water construction drawings and submit to TDEC for approval. Upon approval by TDEC and payment of meter and impact fees by the applicant, applicant may then schedule a pre-construction meeting with CPWS. Pre-construction meeting will not be scheduled until fees are paid in full or surety is provided in lieu of full payment. Final meter and impact fees are subject to change based on final design and meter size determination. Meter fees are subject to change based on market costs at time of purchase. Meters will not be set until meter and impact fees are paid.

Meter Fee: $1,000 per 3/4" meter (2 meters, tap and service by CPWS)	$2,000.00
Impact Fee: $4,500 per 3/4" meter (2 meters)	$9,000.00
Total Meter and Impact Fees Due =	**$11,000.00**

- After the pre-construction meeting, CPWS will then issue a formal notice to proceed. No construction of CPWS infrastructure may take place prior to the pre-construction meeting.
- Applicant is then 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.

RECEIVED
MAY 19 2023
By: 23.0104

CPWS

If you have any questions, please feel free to contact me at 423-774-0349 or eric.king@inflodesign.com. This letter is valid for one-hundred twenty (120) days from the date of this letter.

Sincerely,

Eric King

Eric King, P.E.
Inflo Design Group, LLC
on behalf of Columbia Power and Water Systems

cc: Jonathan Hardin, CPWS
File 23-018

RECEIVED
MAY 19 2023
By: .....

Item # II 1.

Case Number: 23-0104

Request from Larry Owens for comprehensive plan amendment from Urban Neighborhood to Suburban Neighborhood to Suburban Neighborhood along with rezoning from CD-3L (Neighborhood Large Lot Character District) to CD-3 (Neighborhood Character District) at 1205 East End Street.

Comment:

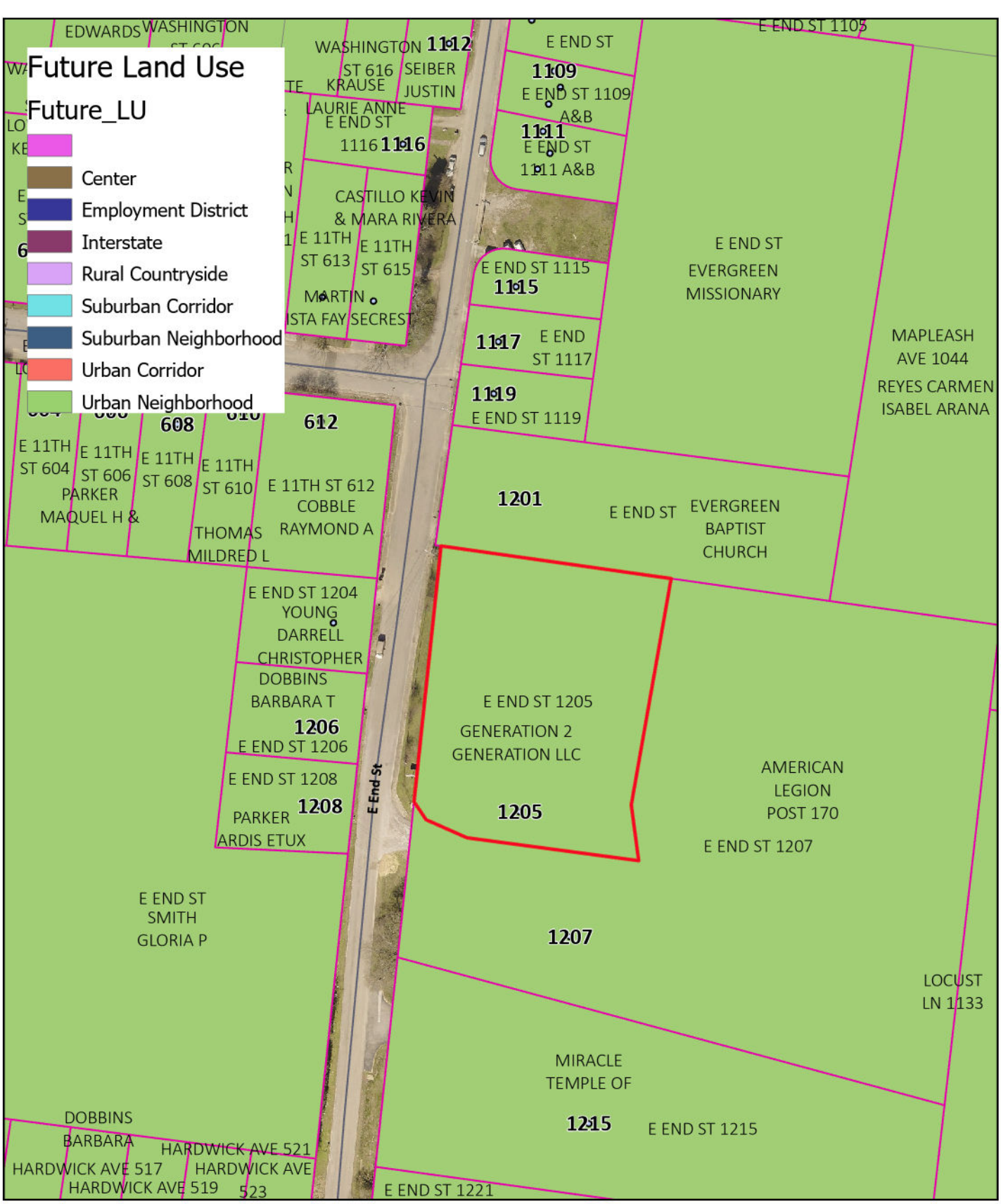
In response to Maury County 911 item 2 comment:

Crystal from 911 stated that it is not a problem, one will just have to be 1203, 1205A and 1205B.

Larry Owens



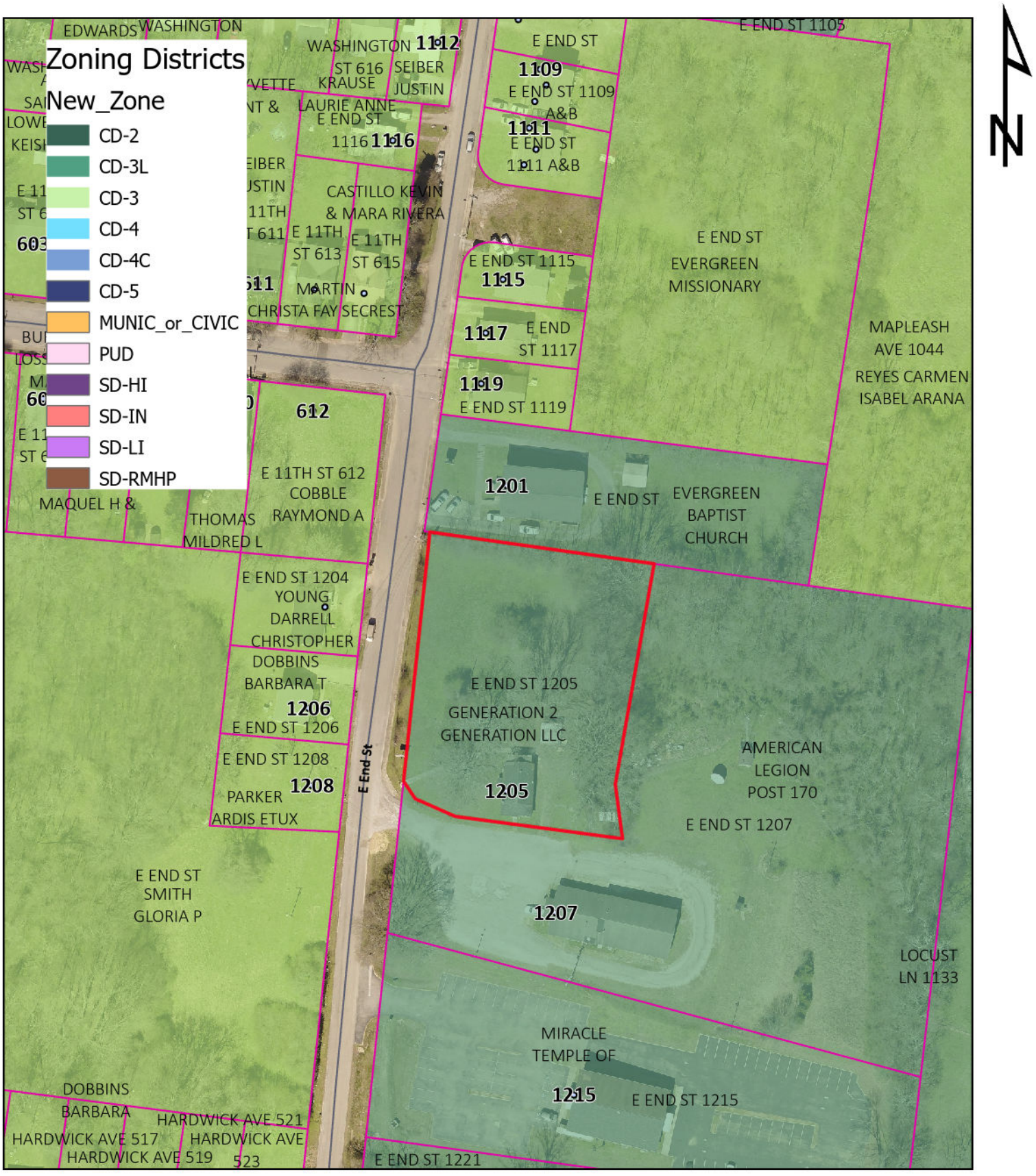
RECEIVED
MAY 18 2023
By: 23-0104



23-0104
1205 E. End Street

CITY OF COLUMBIA TENNESSEE

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



23-0104
1205 E. End Street

CITY OF COLUMBIA TENNESSEE

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

PRELIMINARY CONCEPT PLAN

REZONING REQUEST OF THE
LARRY OWENS PROPERTY
9TH CIVIL DISTRICT OF MAURY COUNTY
TAX MAP 99, PARCEL 59.04
DEED BOOK 409, PAGE 182
PLAT BOOK P23, PAGE 12 (TRACT-2)
R.O.M.C.

NOTES:
1. THE PURPOSE OF THIS PLAT IS TO ILLUSTRATE THE SUBDIVISION OF DEED BOOK 409, PAGE 182 INTO TWO TRACTS AND REQUEST REZONING FROM CD-3L TO CD-3

2. I, TRACY SEIBER, HEREBY CERTIFY THAT THIS MAP WAS DRAWN FROM AN CAT IV GPS SURVEY AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THE SURVEY:
   A. TYPE OF SURVEY: RTK
   B. POSITIONAL ACCURACY: 0.05'
   C. PUBLISHED/FIXED CONTROL: TDOT CORS NETWORK
   D. GEOID MODEL: GEOID 12B
   E. DATUM/EPOCH: NAD83(2011)
   F. GPS: CARLSON BRX7 (BASE/ROVER)
   G. DISTANCES: GRID

3. SUBJECT PARCELS ARE NOT WITHIN A FLOOD ZONE ACCORDING TO FIRM MAP 47119C0285E DATED 4/16/2007.

4. PROPERTY IS ZONED R-20 CITY OF COLUMBIA ZONING ORDINANCE.
BUILDING SETBACKS:
FRONT 30'
REAR 30'
SIDE 12' TOTAL EQUALS 30'

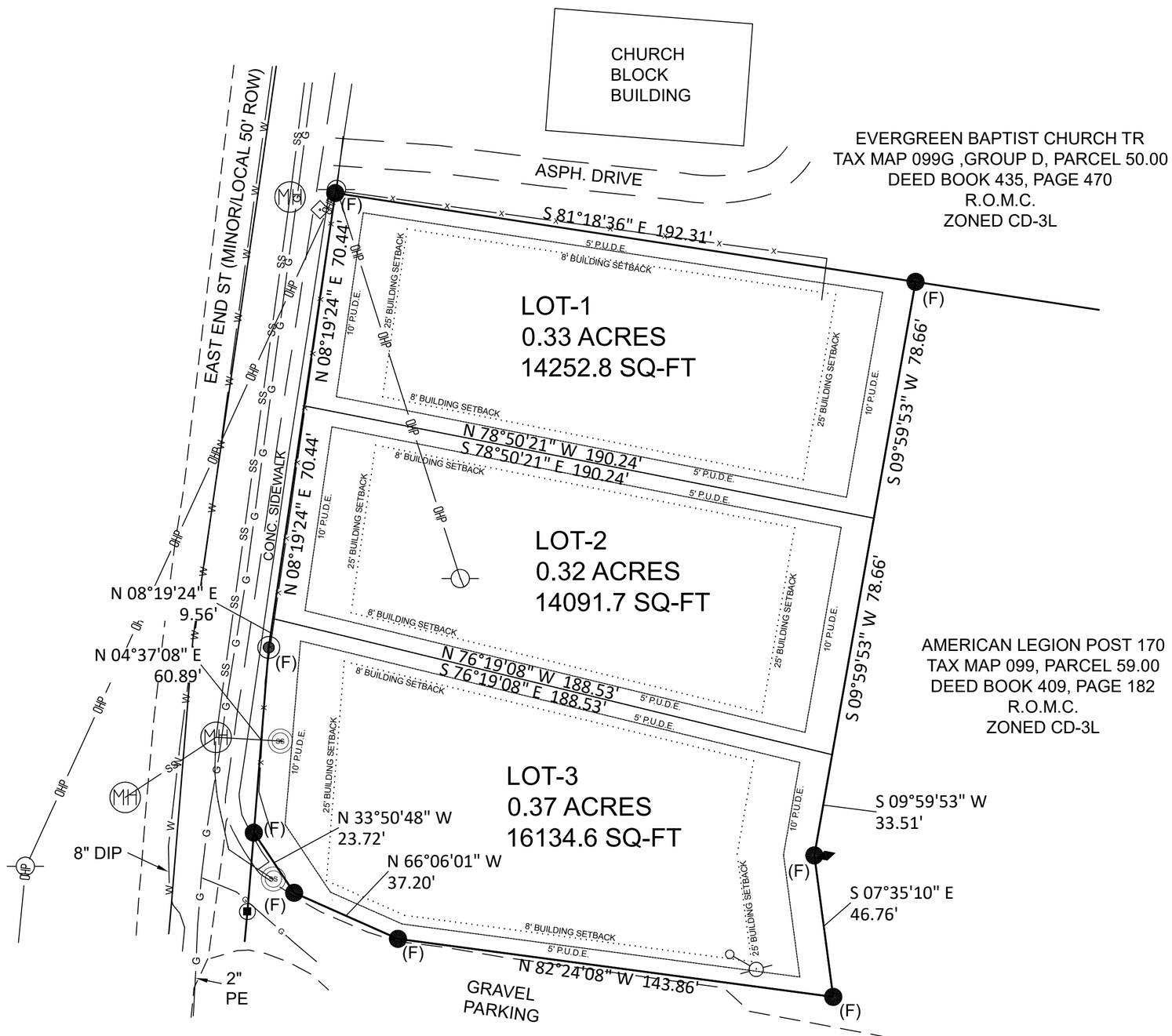
5. THIS PROPERTY IS SUBJECT TO ANY AND ALL RIGHT-OF-WAYS, EASEMENTS, EXCEPTIONS, AND/OR RESTRICTIONS, RECORDED AND UNRECORDED, WHICH MAY AFFECT THIS PROPERTY.

6. PROPERTY ADDRESS:
1205 E. END ST
COLUMBIA, TN 38401

7. ALL UNDERGROUND UTILITIES ARE NOT VERIFIED BY UTILITY OWNERS AND BASED ONLY ON FIELD EVIDENCE AND SCALED FROM UTILITY OWNER MAPS. CALL 811 BEFORE ANY EXCAVATION.

8. ELECTRIC & WATER PROVIDED BY
COLUMBIA POWER AND WATER
201 PICKENS LN
COLUMBIA, TN 38401

9. 10' PUDE ON PARALLEL OR ABUTTING STREET AND 5' PUDE ON INTERIOR LOT LINES.

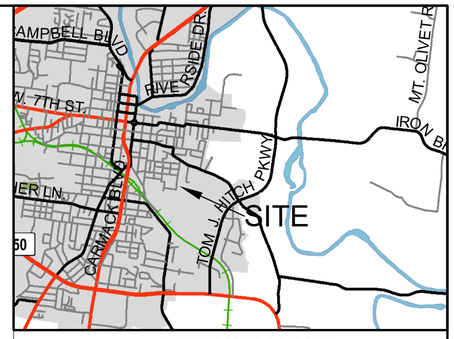


EVERGREEN BAPTIST CHURCH TR
TAX MAP 099G ,GROUP D, PARCEL 50.00
DEED BOOK 435, PAGE 470
R.O.M.C.
ZONED CD-3L

AMERICAN LEGION POST 170
TAX MAP 099, PARCEL 59.00
DEED BOOK 409, PAGE 182
R.O.M.C.
ZONED CD-3L

AMERICAN LEGION POST 170
TAX MAP 099, PARCEL 59.00
DEED BOOK 409, PAGE 182
R.O.M.C.
ZONED CD-3L

AMERICAN LEGION POST 170
BLOCK BUILDING



VICINITY MAP
(NOT TO SCALE)

N

TN-NAD83

LEGEND

GM	GAS METER
SS	SEWER METER
MH	SEWER MANHOLE
(F)	IRON PIN FOUND
(S)	IRON PIN SET
	WATER METER
	RAIL ROAD SPIKE
	LIGHT POLE
	UTILITY POLE
	ANT. ANCHOR
	ANT. SUPPORT
SS	SANITARY SEWER
OHP	OVERHEAD POWER
G	GAS LINE
W	WATER LINE
	RIGHT OF WAY
	ZONING SETBACK
X	FENCE
	EASEMENT

TRACY K SEIBER
REGISTERED LAND SURVEYOR
XVI
AGRICULTURE
COMMERCE
TENNESSEE NO. 2397

CERTIFICATE OF SURVEY ACCURACY

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 Class"C" 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.

1/25/2023
Date

TRACY SEIBER, RLS #2397

0 30 60 90

TRACY SEIBER

102 AVALON DRIVE
COLUMBIA, TN 38401
SEIBERSURVEYING@GMAIL.COM (931)446-6677

DRAWING BY: T. SEIBER	DATE: 1/25/2023
SCALE:1"=30'	JOB NO.:57-2022
R0	

March 17, 2023

Mr. Larry Owens
Generation 2 Generation LLC
Columbia, TN 38401
Sent via email: g2gpropertiesllc@gmail.com

RE: Water Availability Letter
Larry Owens Development – 2 New Units
1205 E. End St. Columbia, TN 38401
Tax Map 99, Parcel 059.04
Columbia, Maury County, TN

Dear Mr. Owens:

Columbia Power and 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, various Planning Commissions and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies, water service will be made available on a first-come, first-served basis, 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 rezoning and subdivision of an existing lot with a single service to three lots, with two new services requested. CPWS has evaluated the projected water demands for the proposed residential development in the water system hydraulic model and is able to meet a fire-flow capacity of 1,000 gpm at 20 psi while maintaining the existing level of service and pressures in this portion of the distribution system. CPWS can provide water for the proposed development according to the following requirements:

- Domestic waterline connection will be made to the existing 8-inch water main located on East End Street.

- No existing hydrants are located within 250 feet of the entire frontage of the parcel. A single public hydrant may be installed at the edge of right-of-way of East End Street, equidistant from existing system hydrants at Hardwick Avenue and E 11th St. Any additional hydrants required to meet fire protection requirements for the development will be considered private hydrants and must be located on the customer side of a fire protection meter.

All of the above requirements are to be constructed and paid for by the Applicant and dedicated to CPWS once complete up to and including the meter. No construction of CPWS infrastructure shall be initiated until final construction plans have been approved by TDEC and all parties have fully executed a water service agreement.

Once you have received this Water Availability Letter, next steps in the process to obtain water service from CPWS are as follows:

- Present the attached hydrant analysis report for coordination and approval of development from the Columbia Fire & Rescue Fire Marshall.
- 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.
- Remit to CPWS new water service fees:

New Water Service Fee: $250 + $370 per SFU (2 SFUs)	$990.00

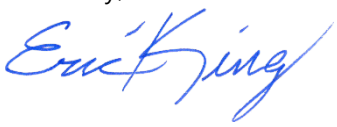
- CPWS will then develop water construction drawings and submit to TDEC for approval. Upon approval by TDEC and payment of meter and impact fees by the applicant, applicant may then schedule a pre-construction meeting with CPWS. Pre-construction meeting will not be scheduled until fees are paid in full or surety is provided in lieu of full payment. Final meter and impact fees are subject to change based on final design and meter size determination. Meter fees are subject to change based on market costs at time of purchase. Meters will not be set until meter and impact fees are paid.

Meter Fee: $1,000 per 3/4" meter (2 meters, tap and service by CPWS)	$2,000.00
Impact Fee: $4,500 per 3/4" meter (2 meters)	$9,000.00
Total Meter and Impact Fees Due =	**$11,000.00**

- After the pre-construction meeting, CPWS will then issue a formal notice to proceed. No construction of CPWS infrastructure may take place prior to the pre-construction meeting.
- Applicant is then 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.

If you have any questions, please feel free to contact me at 423-774-0349 or eric.king@inflodesign.com. This letter is valid for one-hundred twenty (120) days from the date of this letter.

Sincerely,



Eric King, P.E.
Inflo Design Group, LLC
on behalf of Columbia Power and Water Systems

cc: Jonathan Hardin, CPWS
File 23-018

The following is a legal description of 1205 East End Street, Columbia, TN (Tax Map 99, , Parcel 59.04, Deed Book R2857, Page 60, Plat Book P23, Page 12), 9th Civil District of Maury County, Tennessee. Being more particularly described as follows:

beginning at an iron pin (set) in the East margin of East End St., being the Northwest corner of this described property and the Southwest corner of the Evergreen Baptist Church property (Tax Map 99G, Group D, Parcel 50.00, Deed Book 435, Page 470); thence with the church's South line S81°18'36"E a distance of 192.31' to an iron pin (set), point being the Northeast corner of this described property and the Northwest corner of the American Legion Post 170 property (Tax Map 99, Parcel 59.00, Deed Book 409, Page 182, Plat Book P23, Page 12); thence leaving the church's South line and following the American Legion's West and North line S09°59'53"W a distance of 190.83' to an iron pin (set); thence S07°35'10"E a distance of 46.76' to an iron pin (set), point being the Southeast corner of this described property; thence N82°24'08"W a distance of 143.86' to an iron pin (set); thence N66°06'01"W a distance of 37.20' to an iron pin (set); thence N33°50'48"W a distance of 23.72' to an iron pin (set) in the East margin of East End St., point being the Southwest corner of this described property; thence following the East End St. East margin N04°37'08"E a distance of 60.89' to an iron pipe (found); thence N08°19'24"E a distance of 150.44' to the point of beginning containing 44478.8 square feet, 1.021 acres more or less according to a survey by Tracy K. Seiber, RLS2397, dated 4/20/2022.

This property is subject to any and all easements, recorded and unrecorded which may affect this property.

All bearings and distances are based on the Tennessee NAD-83 Grid Coordinate System.

Tracy Seiber, RLS#2397
102 Avalon Drive
Columbia, TN 38401
Seibersurveying@gmail.com
(931)446-6677

RECEIVED
MAY 18 2023
By: 23-0104

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: 1205 E END ST

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
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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.

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PUD Specific Items

- ❑ Legal Description of Property
- ❑ Owner's Affidavit
- ❑ List of all variances 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

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:

LARRY OWENS		
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

** 1 hard copy of all materials for submittal + PDF copy on a USB thumb drive or CD (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"

ADDRESS/LOCATION	1205 E EDN, COLUMBIA, TN 38401		
	TAX MAP: 099	GROUP:	PARCEL: 59.04
SUMMARY OF NATURE OF REQUEST AND WORK	REQUEST AMENDMENTS TO COMP PLAN REQUEST RE ZONING TO CD-3 Urban neighborhood to Suburban neighborhood.		

DATE OF PRE-APPLICATION CONFERENCE		*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
☐ Annexation ☒ Rezoning ☐ Preliminary Plat ☐ Final Plat ☐ PUD Preliminary Master Plan ☐ PUD Final Site Plan ☐ Multi-Family Site Plan ☒ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations/Rezoning/PUD's:** ☒ Written Legal Description copy ☒ Requested Zone Listed ☒ Compliance with Comprehensive Plan ☒ Annexation Permission Form ☒ Plans and/or Plats conforming to City standards with check list completed ☒ Columbia Water System Availability Letter **Plats/PUDs:** ☒ Project Name (include Sections & Phases) OWENS PRELIMINARY CONCEPT PLAN ☒ Total Number of Lots THREE ☒ Total acreage 1.02 ACRES

23-0104

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 meetings 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	LARRY OWENS	PHONE	(615)924-5337
ADDRESS	2458 STEVE DR, COLUMBIA	EMAIL	g2gpropertiesllc@mail.com

PROPERTY OWNER NAME	GENERATION 2 GENERATION LLC	PHONE	(615)924-5337
ADDRESS	2458 STEVE DR, COLUMBIA	EMAIL	g2gpropertiesllc@mail.com

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.

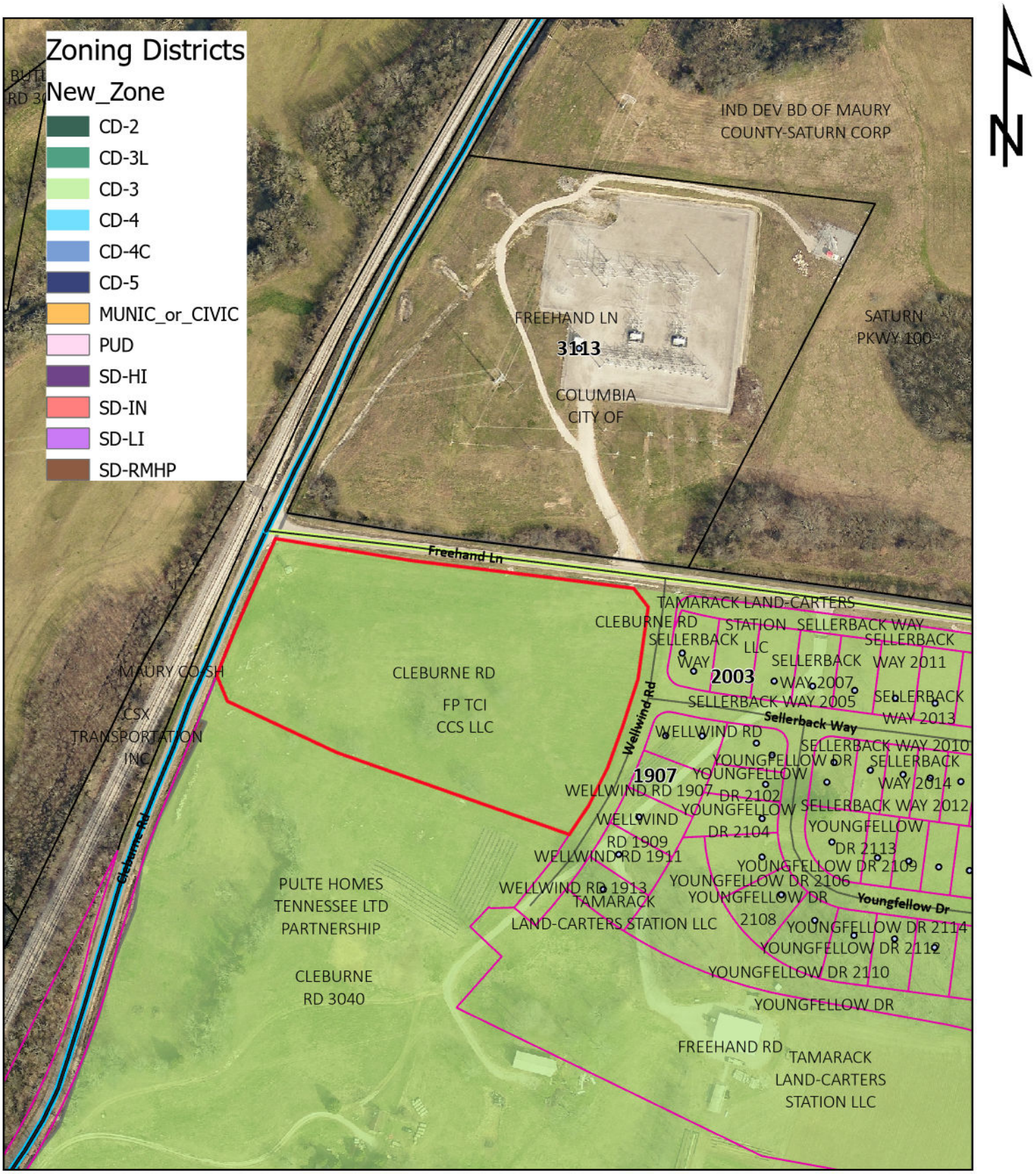
LARRY OWENS		3-21-23
APPLICANT NAME	APPLICANT SIGNATURE	DATE
GENERATION 2 GENERATION LLC		
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE

STAFF USE ONLY

DOCKET NO.	23-0104	FEE PAID	$500.00
RECEIPT NO.	10091211	REQUESTED AGENDA	

DATE NOTICES SENT TO ADJACENT PROPERTY OWNERS	
DATE OF PUBLIC NOTICES IN DAILY HERALD	

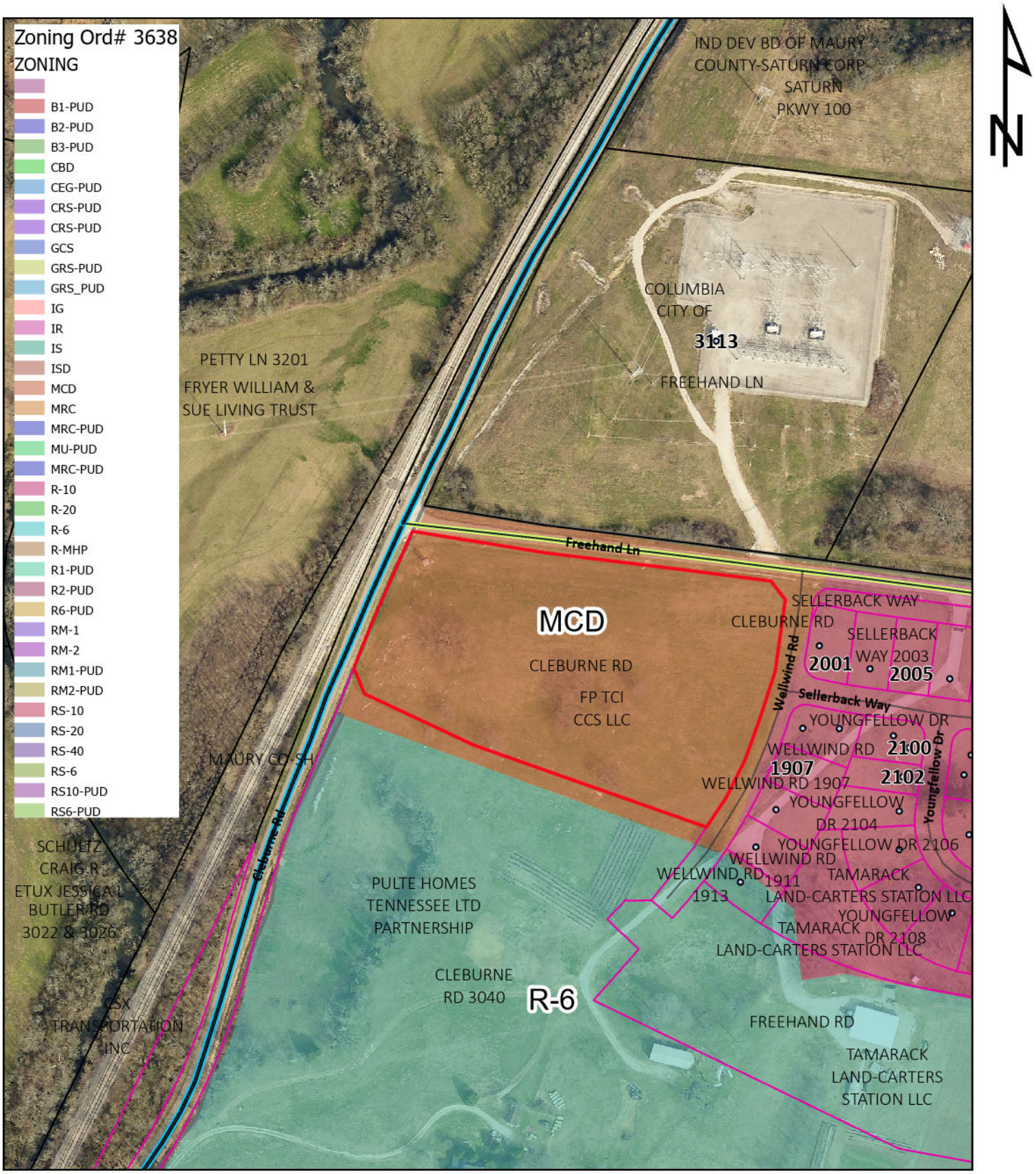
BOARD ACTION	



23-0134
Cleburne Rd & Freehand Ln

CITY OF COLUMBIA TENNESSEE

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



23-0134
Cleburne Rd & Freehand Ln

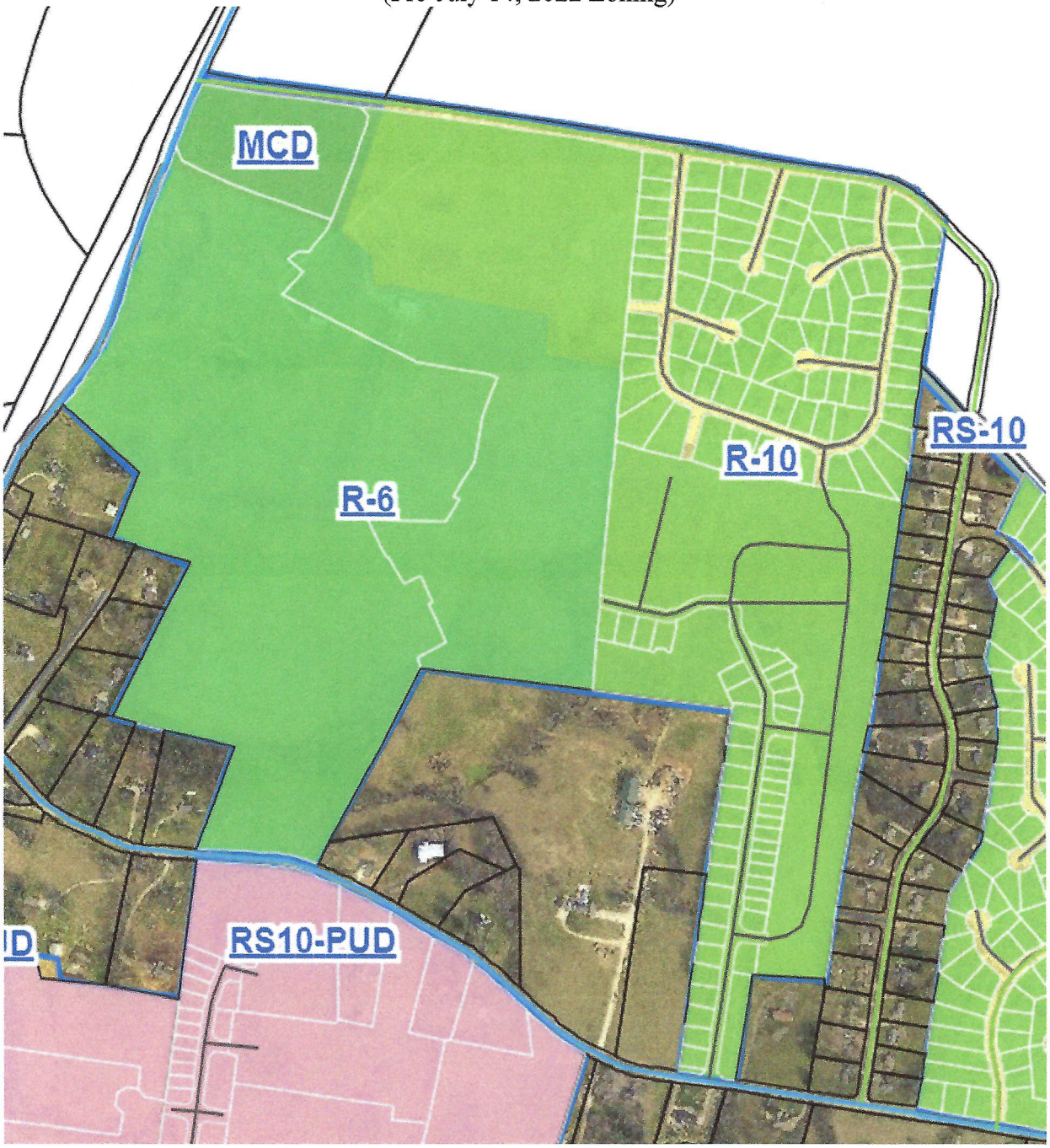
CITY OF COLUMBIA TENNESSEE

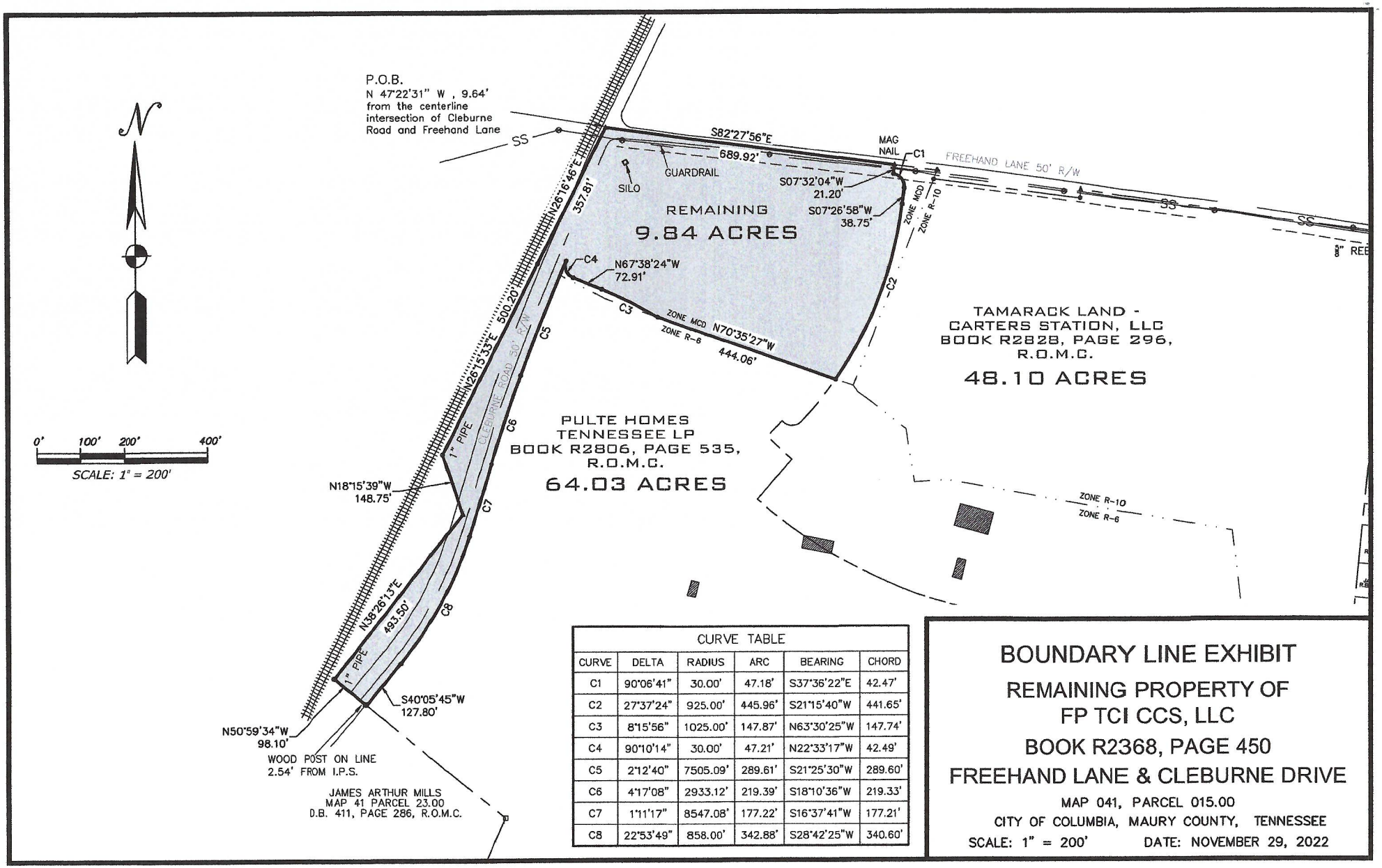
DEVELOPMENT SERVICES
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COLUMBIA, TN 38401
PHONE: (931) 560-1560
FAX: (931) 560-1541

Current Zoning Designation: CD-3



Former Zoning Designation
(Pre-July 14, 2022 Zoning)





CURVE TABLE					
CURVE	DELTA	RADIUS	ARC	BEARING	CHORD
C1	90°06'41"	30.00'	47.18'	S37°36'22"E	42.47'
C2	27°37'24"	925.00'	445.96'	S21°15'40"W	441.65'
C3	8°15'56"	1025.00'	147.87'	N63°30'25"W	147.74'
C4	90°10'14"	30.00'	47.21'	N22°33'17"W	42.49'
C5	2°12'40"	7505.09'	289.61'	S21°25'30"W	289.60'
C6	4°17'08"	2933.12'	219.39'	S18°10'36"W	219.33'
C7	1°11'17"	8547.08'	177.22'	S16°37'41"W	177.21'
C8	22°53'49"	858.00'	342.88'	S28°42'25"W	340.60'

BOUNDARY LINE EXHIBIT

REMAINING PROPERTY OF FP TCI CCS, LLC

BOOK R2368, PAGE 450

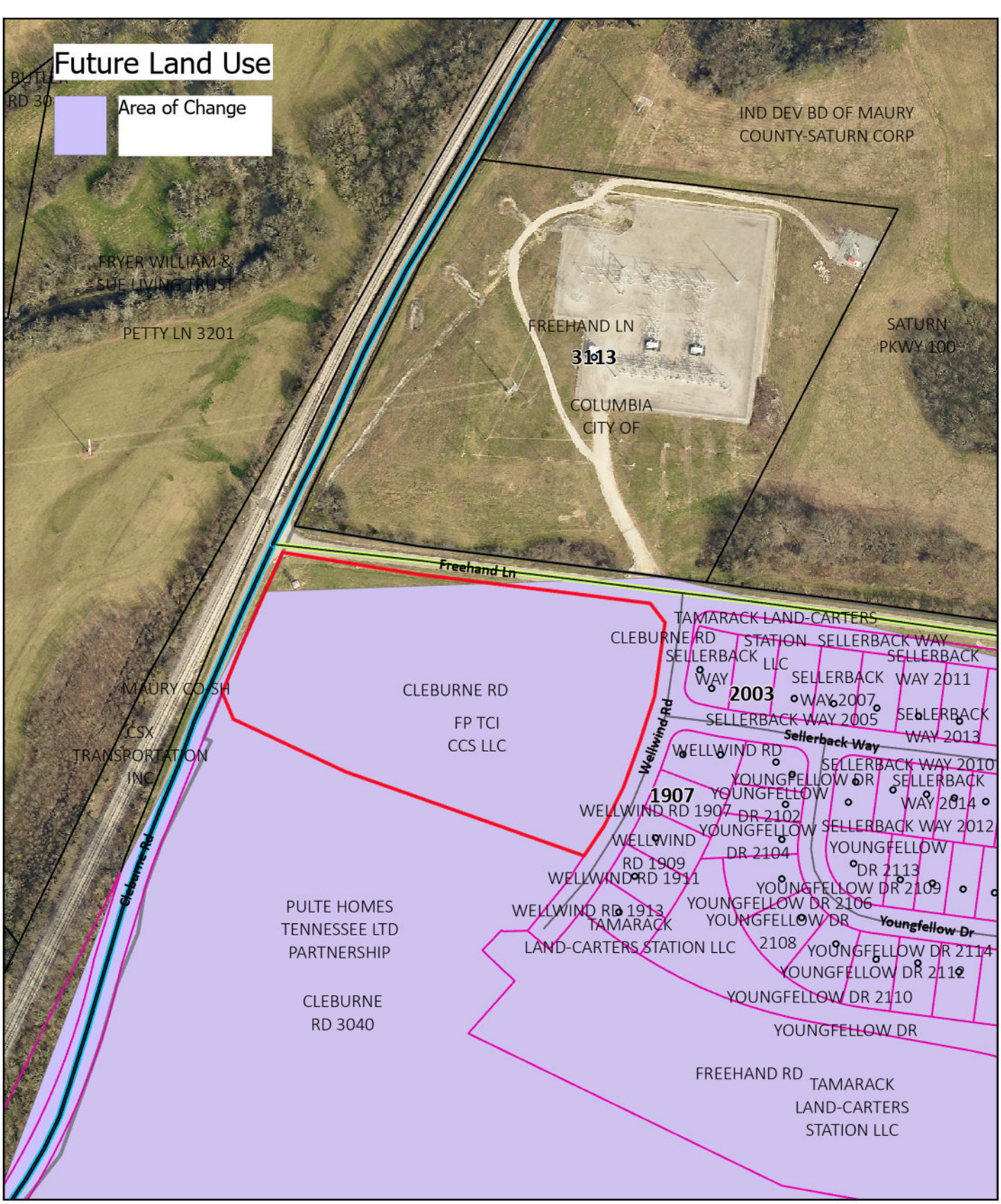
FREEHAND LANE & CLEBURNE DRIVE

MAP 041, PARCEL 015.00

CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

SCALE: 1" = 200' DATE: NOVEMBER 29, 2022

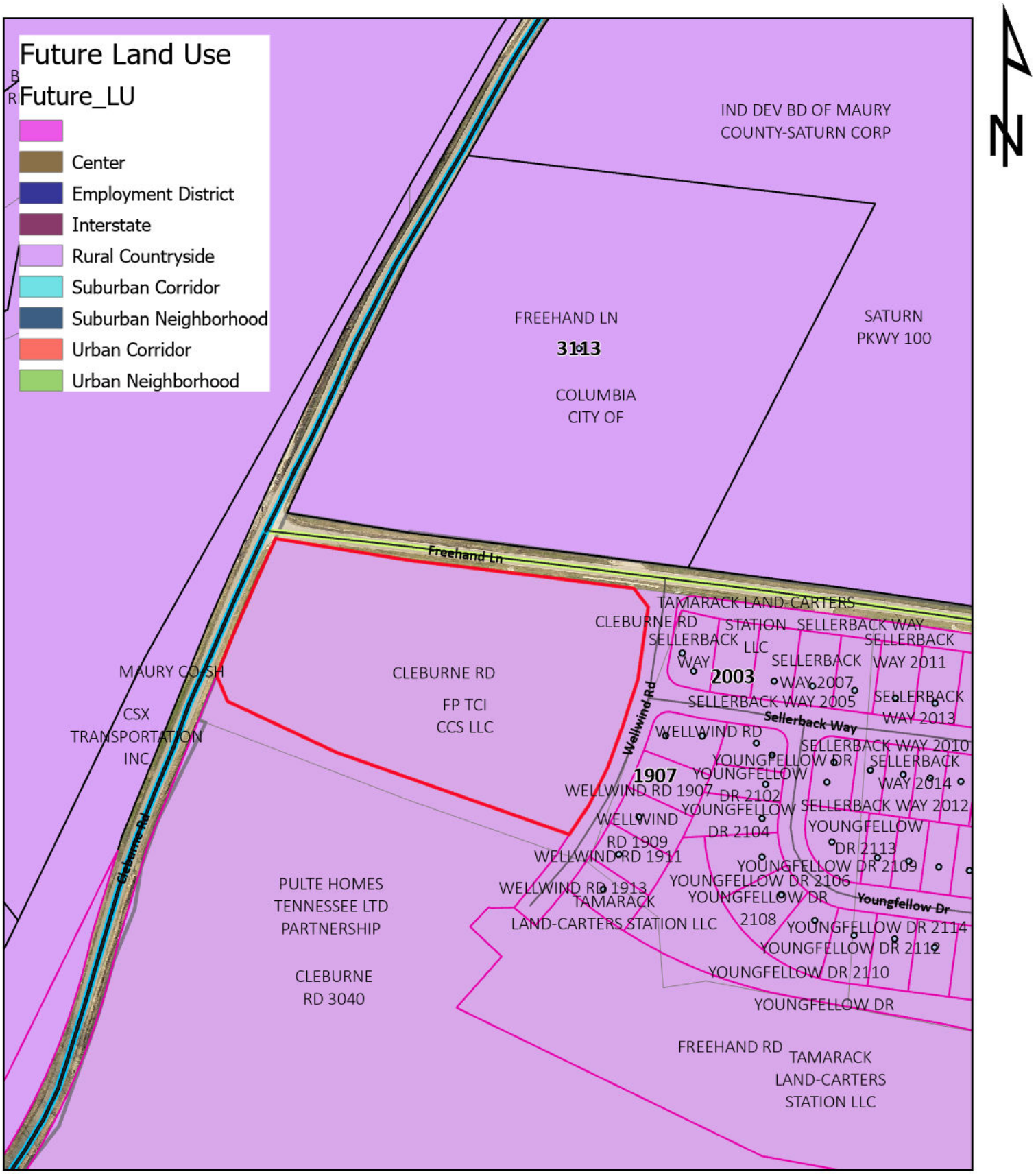
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23-0134
Cleburne Rd & Freehand Ln

CITY OF COLUMBIA TENNESSEE

DEVELOPMENT SERVICES
700 NORTH GARDEN STREET
COLUMBIA, TN 38401
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23-0134
Cleburne Rd & Freehand Ln

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PLANNING COMMISSION
PROJECT DEVELOPMENT APPLICATION

SUBMITTAL REQUIREMENTS

** 1 hard copy of all materials for submittal + PDF copy on a USB thumb drive or CD (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"

ADDRESS/LOCATION			
	TAX MAP: 41	GROUP:	PARCEL: 015.00
SUMMARY OF NATURE OF REQUEST AND WORK	Correct zoning classification from CD3 to CD4 to be consistent with old regulation zoning of MRC		

DATE OF PRE-APPLICATION CONFERENCE		*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
☐ Annexation ☒ Rezoning ☐ Preliminary Plat ☐ Final Plat ☐ PUD Preliminary Master Plan ☐ PUD Final Site Plan ☐ Multi-Family Site Plan ☐ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations/Rezoning/PUD's:** ☐ Written Legal Description copy ☐ Requested Zone Listed ☐ Compliance with Comprehensive Plan ☐ Annexation Permission Form ☐ Plans and/or Plats conforming to City standards with check list completed ☐ Columbia Water System Availability Letter **Plats/PUDs:** ☐ Project Name (include Sections & Phases) _____ ☐ Total Number of Lots _____ ☐ Total acreage _____

Rev. 4/14/2022

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 meetings 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	G. Nelson Crowe	PHONE	615-969-6080
ADDRESS	135 Hampton Pl. Nashville, Tn 37215	EMAIL	nelson@fortunallc.net

PROPERTY OWNER NAME	FP TCI CCS, LLC	PHONE	615-969-6080
ADDRESS	135 Hampton Pl. Nashville, Tn 37215	EMAIL	nelson@fortunallc.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.

G. Nelson Crowe		4/12/23
APPLICANT NAME	APPLICANT SIGNATURE	DATE
FP TCI CCS, LLC		4/12/23
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	

May 22, 2023

Paul Keltner, Director
Development Services
City of Columbia, TN

RE: Re-Submittal River Road Property Rezoning Request – **City of Columbia Project #23-0136**

Dear Mr. Keltner,
The accompanying documents are for the re-submittal associated with the above referenced project. A response to the Technical Review Comments can be found below.

Please note that we've included a new sheet in the Rezoning Request Packet (Sheet L1.1). This sheet provides additional context for this parcel and highlights points from Connect Columbia that we feel are being met with our rezoning request and concept plan. Additionally, we have made adjustments to the concept plan in order to explore other design options in response to Staff Comments. We look forward to continuing the plan refinement with Staff with a successful rezoning outcome. Please let me know if you need anything additional for this re-submittal.

Included in the submittal are the following:

1. One full-size (24x36) copy of the Rezoning Request and Concept Plan (Sheets L1.0 and L1.1)
2. Required Mailing Fee: $270 check
3. Flash Drive with digital copy of submittal

Technical Review Comments – Dated May 9, 2023
Engineering:

1. *No comments on rezoning.* **Response: Noted.**
2. *Access locations will be governed by the Access Management Ordinance.* **Response: Noted.**

Planning:

3. *There is a typo in the concept plan design criteria section (should read CD-5 rather than CD4).* **Response: this has been updated on L1.0.**
4. *The water availability letter provided with the application will expire on June 3rd, before this item would advance to the planning commission and city council. Please provide an updated letter at resubmittal.* **Response: The applicant has requested an updated water availability letter and will provide this letter to Staff upon receipt. It is anticipated that the letter will be received prior to the Planning Commission meeting.**
5. *Advisory for future Site Development Plan: at least 50% of each Civic Space's perimeter (exceptions for Playgrounds or Community Gardens) must enfront a thoroughfare. An alley is not a throroughfare.* **Response: Zoning Ordinance 5.3.3C applies to development parcels**

greg.gamble@gdc-tn.com | 615.975.5765 cell | 3020 Stansberry Lane, Suite 201, Franklin, TN 37069

greg.gamble@gdc-tn.com
615.975.5765 cell
3020 Stansberry Lane, Suite 201
Franklin, TN 370

of 20 acres or more. However, the applicant agrees that this pocket park would be best placed on the River Road ROW. An adjustment has been made to the concept plan showing the intent of moving this open space to the frontage.

6. *Advisory for future Site Development Plan: The parking area adjacent to Taylor Bend Road will need to be in the Third Layer and will require a streetscreen.* **Response: Noted. The applicant will continue to refine the site plan with staff.**

Fire:

7. *No Comments.* **Response: Noted**

ATT

8. *Plan to serve.* **Response: Noted**

Building:

9. *No Comments.* **Response: Noted**

Police:

10. *No Comments.* **Response: Noted**

Wastewater:

11. *Wastewater approves this request as per the Sewer Availability Letter dated February 28, 2023.* **Response: Noted**

Maury County Highway Department:

12. *No Comments.* **Response: 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.* **Response: Noted**

Columbia Water:

14. *"IDG issued a water availability letter on 2-3-23, it will expire prior to the City Commission meeting. For the project to move forward the availability letter must be current. 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 stated in the water availability letter are the responsibility of the developer/owner. All 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: Noted. An updated letter has been requested and is expected prior to Planning Commission.**

DEVELOPMENT PLANNING
DESIGN
MANAGEMENT

greg.gamble@gdc-tn.com
615.975.5765 cell
3020 Stansberry Lane, Suite 201
Franklin, TN 370

Public Works:

15. *No comment on rezoning but as an F.Y.I. we will not be able to service the townhome with individual garbage receptacles. Private sanitation services are an option. Please see attached dumpster guidelines and accessibility requirements for dumpster service.* **Response: Noted**

Maury County E911:

16. *Contact Maury County 911 for street name approval. cgideon@maury911.org.* **Response: Noted. Street name will be submitted/approved with site development plan process.**

Maury County Schools:

17. *No Comments. Provided current enrollment/capacity for County Schools.* **Response: Noted. Based on the attachment, it appears that the property is currently zoned for Riverside Elementary School (82.6% capacity); Cox Middle School (71% capacity); and Columbia Central High School (82.5% capacity).**

Atmos Energy:

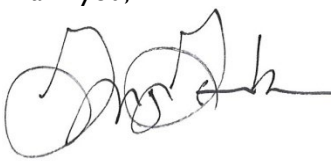
18. *No Comments.* **Response: Noted**

Duck River Electric Membership Corp:

19. *No Comments.* **Response: Noted**

If there are any questions or additional information needed, please feel free to reach out to me, or Keli Frymire (keli@gdc-tn.com) in my office.

Thank you,



Gamble Design Collaborative
Greg Gamble

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, May 9, 2023

ITEM NO.
23-0136

DESCRIPTION: Rezoning request for A 5.88 ac parcel which was previously a portion of a now expired mixed use PUD.

RECOMMENDATION: For final recommendation please see staff report.

COMMENTS:

Engineering

1. No Comment on rezoning
2. Access locations will be governed by the Access Management Ordinance

Planning

3. There is a typo in the concept plan design criteria section (should read CD-5 rather than CD-4).
4. The water availability letter provided with the application will expire on June 3rd, before this item would advance to the Planning Commission and City Council. Please provide an updated letter at resubmittal.
5. Advisory for future Site Development Plan: at least 50% of the each Civic Space's perimeter (exceptions for Playgrounds or Community Gardens) must enfront a Thoroughfare (§5.3.3C). An Alley is not a Throroughfare (§ 9.3; p. 480).
6. Advisory for future Site Development Plan: The Parking Area adjacent to Taylor Bend Road will need to be in the Third Layer and will require a streetscreen (Table 4.3.1-F; p. 105).

Fire

7. No comments

ATT

8. Plan to serve.

Building

9. No comment.

Police

10. No comments.

Wastewater

11. Wastewater approves this request as per the Sewer Availability Letter dated February 28, 2023.

Maury County Highway Dept.

12. No comment.

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.

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16. Contact Maury County 911 for street name approval. cgideon@maury911.org.

Maury County Schools

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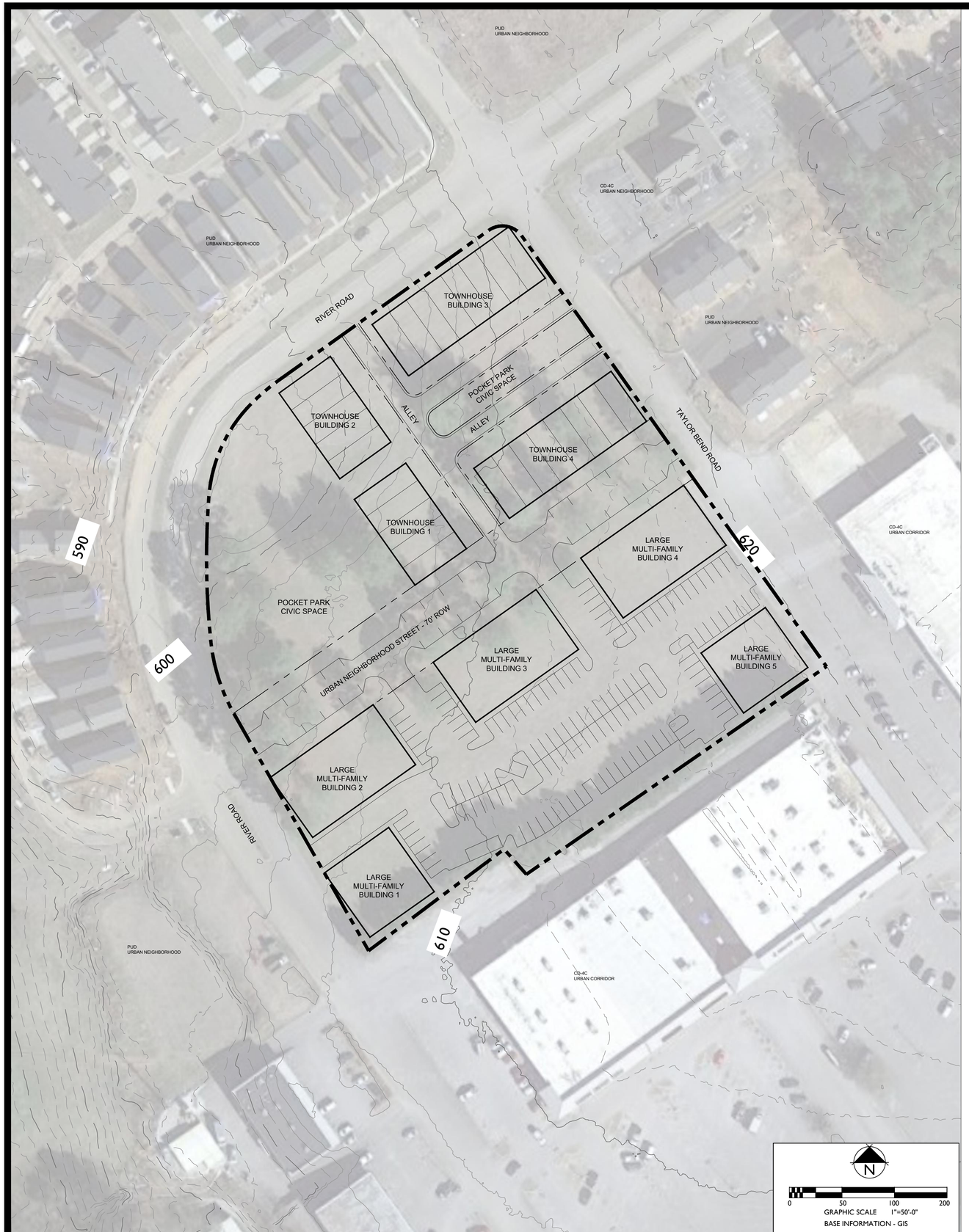
18. No comment provided.

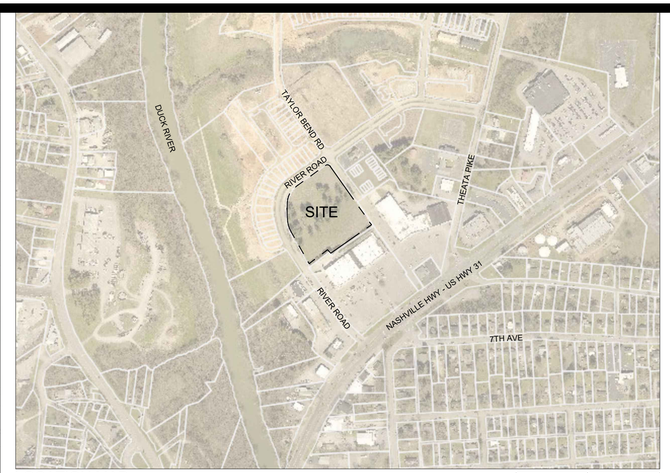
Duck River Electric Membership Corp

19. No comments provided.

ATTACHMENTS: Concept Plan

NOTE: All submittals shall be compliant with City standards prior to Planning Commission review. Items that are not adhering to the regulations and/or comments for that request will not be forwarded to the next agenda until such items are amended.





LOCATION MAP

PROJECT INFORMATION:

PARCEL: MAP 90 PARCEL 7.08
ADDRESS: RIVER ROAD
AREA: +/-5.88 AC

APPLICANT/LANDSCAPE ARCHITECT:
GREG GAMBLE OR KELI FRYMIRE
GAMBLE DESIGN COLLABORATIVE
3020 STANSBERRY LANE, SUITE 201
FRANKLIN, TN 37069
615-975-5765
greg.gamble@gdc-tn.com
keli@gdc-tn.com

DEVELOPER:
CLIFF SMITH
CPS LAND
213 OVERLOOK CIRCLE, SUITE B2
BRENTWOOD, TN 37027
615.477.3186

LEGAL DESCRIPTION OF PROPERTY:

23-0080

DAVID TAYLOR PROPERTY
PROPERTY MAP 090, PARCEL 007.08
RIVER ROAD / GANDER CROSSING
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

Being a certain tract or parcel of land lying and being in the Ninth (9th) Civil District of Maury County, city of Columbia, Tennessee and being more particularly described as follows:

Being the 6.16-acre tract as shown on the final plat entitled "Final Minor Subdivision Plat for Patricia Taylor Clayborne, Glenda Taylor Marshall, Julie Taylor Thompson, & David Charles Taylor" of record in Plat Book 11, page 173, Register's Office for Maury County, Tennessee to which plat reference is hereby made for a more complete description of the subject property.

Included in the above-described property, but expressly excluded is the 0.28-acre tract as shown on the final plat entitled "Final Minor Subdivision Plat for David Taylor Enterprises, LLC" of record in Plat Book 11, page 356, Register's Office for Maury County, Tennessee.

Said 0.28-acre tract being a portion of the same property conveyed to David Taylor Enterprises, LLC from David Charles Taylor by Quitclaim Deed of record in Record Book R1428, page 657, Register's Office for Maury County, Tennessee.

Containing approximately 5.88 acres, as calculated by information contained in the above-referenced plats of record. No field work has been performed by Ragan-Smith-Associates to verify the accuracy of the property lines, corners or areas shown on said recorded plats.

Being a portion of the same property conveyed to David Charles Taylor from David Charles Taylor, Patricia Lee Taylor Clayborne, Glenda Kaye Taylor Marshall and Julie Ann Taylor Thompson by Quitclaim Deed of record in Book 1389, page 58, Register's Office for Maury County, Tennessee.

REZONING REQUEST:

EXISTING ZONING: PUD-MU
FUTURE LAND USE: URBAN NEIGHBORHOOD
REQUESTED ZONING: CD-5

SKETCH PLAN REQUEST THE FOLLOWING USES, COMPLIANT WITH CD-5 ZONING: TOWN HOMES AND MULTI-FAMILY RESIDENTIAL

URBAN NEIGHBORHOOD: THE URBAN NEIGHBORHOOD CHARACTER AREA IS APPROPRIATE FOR LOW, MEDIUM AND HIGH DENSITY RESIDENTIAL INTERMIXED WITH COMPATIBLE CIVIC USES. GREEN SPACES LOCATED IN POCKET/COMMUNITY PARKS AND PEDESTRIAN CONNECTIONS ARE ALSO CHARACTERISTICS OF THIS LAND USE CATEGORY.

THE CONCEPT PLAN DEMONSTRATES A RESIDENTIAL NEIGHBORHOOD CONSISTING OF MULTI-FAMILY BUILDINGS ADJACENT TO EXISTING COMMERCIAL USES AND TOWN HOMES ADJACENT TO EXISTING TOWN HOMES AND SINGLE-FAMILY HOMES. THE PLAN INCORPORATES CIVIC SPACE/POCKET PARKS, PROVIDES A MIX OF ON-STREET PARKING AND PARKING AREAS IN THE 3RD LAYER (BEHIND) THE BUILDINGS. SIDEWALKS THROUGH OUT THE NEIGHBORHOOD WOULD CONNECT PEDESTRIANS WITHIN THE SITE AND TO THE LARGER AREA AND CITY PARK TO THE SOUTH AT CARTER STREET AND RIVERSIDE DRIVE.

THE EXISTING ZONING FOR THIS PARCEL IS PUD. THE PUD IS NOW EXPIRED AND A PORTION OF THE PREVIOUS PUD HAS BEEN INCORPORATED INTO A NEW PUD, WHICH IS UNDER CONSTRUCTION. AS THE INTENT OF THIS DEVELOPMENT IS A CENTRALLY LOCATED, RESIDENTIAL INFILL DEVELOPMENT, THE APPLICANT SEEKS TO REZONE THE PROPERTY TO A ZONING DISTRICT CONSISTENT WITH THE URBAN NEIGHBORHOOD LAND USE DISTRICT: CD-5 ZONING. THIS DISTRICT ALLOWS AN URBAN FORMED TRANSITION FROM THE COMMERCIAL CORRIDOR ALONG NASHVILLE HWY TO THE TOWN HOME AND SMALL-LOT SINGLE FAMILY DEVELOPMENT TO THE NORTH. THE DENSITY TRANSITIONS ACROSS THE SITE AND FOCUSES THE PARKING AND SERVICE AREAS OF THIS DEVELOPMENT TOWARDS THE SERVICE AREAS OF THE ADJACENT COMMERCIAL DEVELOPMENT.

ROADWAYS: THE FRONTAGE OF THE PROPERTY IS ON RIVER ROAD (MAJOR LOCAL) AND TAYLOR BEND ROAD (MAJOR LOCAL), WHICH TERMINATES INTO THE PARKING LOT OF THE ADJACENT COMMERCIAL PROPERTY.

HISTORY: THIS PARCEL WAS ORIGINALLY PART OF THE WATERS EDGE AT TAYLOR BEND PUD, APPROVED UNDER ORDINANCE 3619 IN 2005. THIS DEVELOPMENT WAS A MIXED-USE PUD, WHICH INCLUDED MULTI-FAMILY RESIDENTIAL. WHILE THE OLDER PLAN IS DIFFICULT TO READ, THIS PARCEL APPEARS TO HAVE THREE LARGE-SCALE MULTI-FAMILY RESIDENTIAL BUILDINGS. BASED ON THE BUILDING FOOTPRINTS, THIS LIKELY YIELDED BETWEEN 150-176 UNITS WITH A THREE STORY BUILDING OR 98-117 UNITS WITH A TWO STORY BUILDING.

SKETCH PLAN CD-4 DESIGN CRITERIA:

GROSS SITE AREA: +/-5.88 AC
GROSS DENSITY: 20.7 DUA
TOTAL UNITS: 122 UNITS
- 26 TOWN HOME
- 96 MULTI-FAMILY UNITS (12 TO 24 UNITS PER BUILDING)

PROVIDED CIVIC SPACE: 0.92 AC (15.6% GROSS AREA)
- CIVIC SPACE REQUIREMENT: 5% TO 20% OF GROSS SITE

IMPERVIOUS SURFACE COVERAGE: 100% MAX.

CONCEPT PLAN LOT DIMENSIONS:

TYPICAL TOWN HOME LOT
- UNIT WIDTH: 20'
- UNIT DEPTH: 60'
- FRONT SETBACK: 0-15'
- SIDE SETBACK: 0-24'
- REAR SETBACK: NOT REGULATED
- MAXIMUM BUILDING WIDTH: 8 ATTACHED UNITS MAX.
- PARKING PROVIDED IN GARAGE (THIRD LAYER), IN DRIVEWAY (THIRD LAYER), OR ON STREET.

MULTI-FAMILY BUILDING
- FRONT SETBACK: 0-15'
- SIDE SETBACK: 0-24'
- REAR SETBACK: NOT REGULATED
- MAXIMUM BUILDING WIDTH: 120'
- MAXIMUM UNITS PER BUILDING: 24
- PARKING PROVIDED IN SURFACE PARKED LOT (THIRD LAYER), OR ON STREET

GAMBLE DESIGN COLLABORATIVE
DEVELOPMENT PLANNING AND LANDSCAPE ARCHITECTURE

RIVER ROAD PARCEL
REZONING REQUEST & CONCEPTUAL DEVELOPMENT PLAN
Columbia, Tennessee

GREGORY C. GAMBLE
TENNESSEE
1723
LANDSCAPE ARCHITECT

Date: April 17, 2023
Revision Date
△
△
△

REZONING REQUEST
SHEET
L1.0

HYDRANT FLOW ANALYSIS

HYDRANT # & LOCATION: 1034 River Rd DATE: 2/3/2023

MODEL BY: Inflo Design Group, LLC SYS. DEMAND Max Day DURATION: 2 hrs.

WATER SUPPLIED BY: Columbia Power and Water Systems

PURPOSE OF TEST: River Road Residential

MODEL DATA

FLOW HYDRANT(S)	1034	n/a	n/a
GPM:	**1500**	0	0

TOTAL FLOW DURING SIMULATION: **1500** GPM

GAUGE HYDRANT

HYDRANT # & LOCATION: 1033 River Rd

CONDITION 1

STATIC 117 PSI RESIDUAL: 98 PSI

CONDITION 2

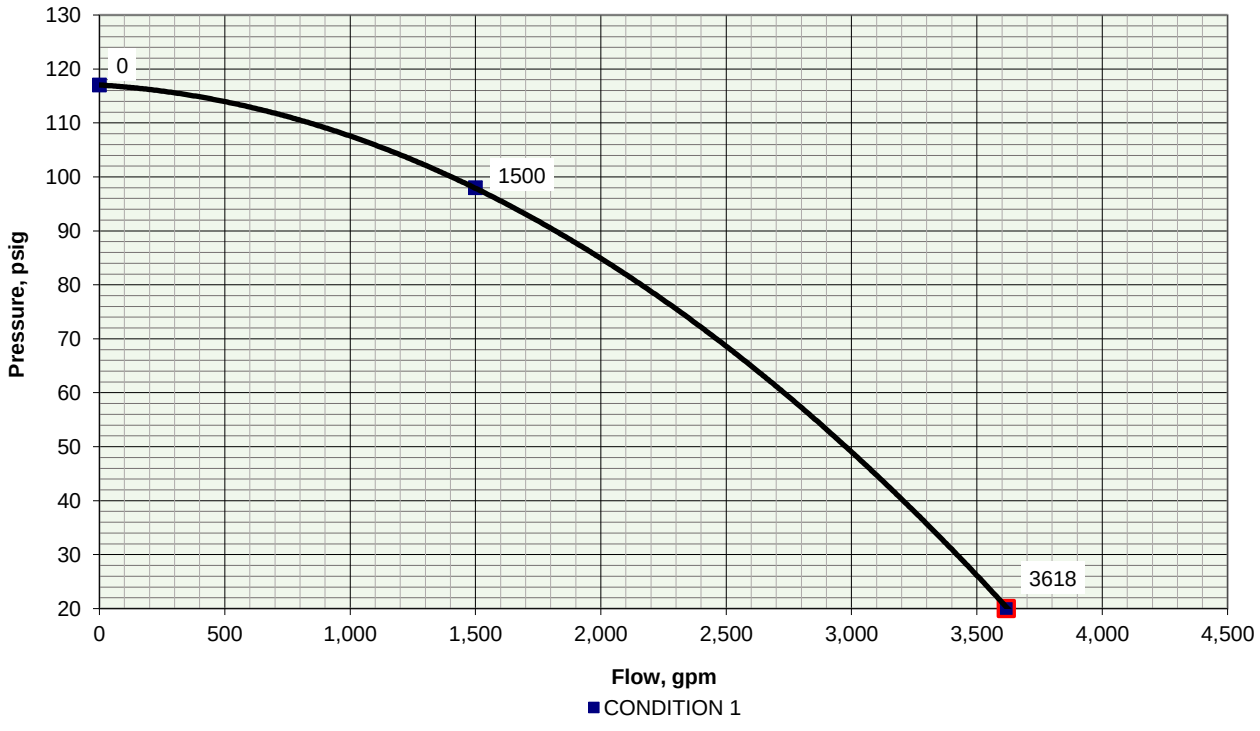
STATIC _____ PSI RESIDUAL: _____ PSI

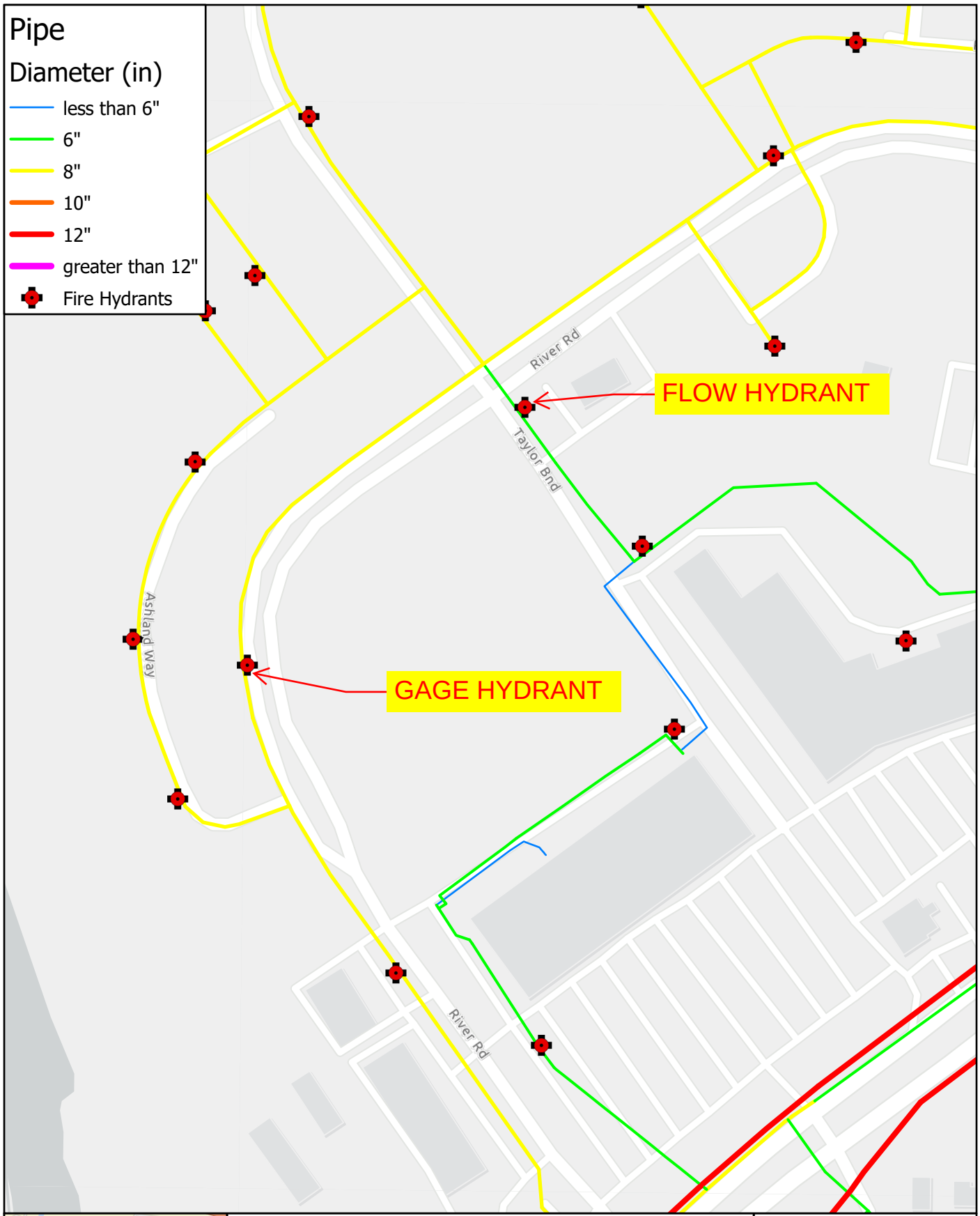
RESULTS: AT 20 PSI RESIDUAL

CONDITION 1 **3618** GPM

CONDITION 2 **---** GPM

REMARKS: Performance based on service elevation of 597' and current CPWS water infrastructure and does not account for additional losses associated with development piping.







Hydrant Analysis Location Map

River Road Residential

Tax Map 90, Parcel 7.08

Esri Community Maps Contributors, Tennessee STS GIS, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA

2023

Coordinate System: NAD 1983 StatePlane Tennessee FIPS 4100 Feet

N

0 0.02 0.04 Mi

0 0.04 0.07 Km

CPWS

February 3, 2023

Mr. Cliff Smith
CPS Land, LLC
213 Overlook Circle
Brentwood, TN 37027
Sent via email: cliff.smith@cpsland.com; sbernick@ragansmith.com

RE: Water Availability Letter
River Road Residential, Single- and Multi-Family
Tax Map 90, Parcel 7.08
Columbia, Maury County, TN

Dear Mr. Smith:

Columbia Power and 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, various Planning Commissions and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies, water service will be made available on a first-come, first-served basis, provided the applicant complies with all rules and regulations of CPWS and conditions set out herein.

The proposed development is mixed single-family townhomes (45) and multi-family apartment buildings (55 units). CPWS has evaluated the projected water demands for the proposed residential development in the water system hydraulic model and is able to meet a fire-flow capacity of 1,500 gpm at 20 psi while maintaining the existing level of service and pressures in this portion of the distribution system. CPWS can provide water for the proposed development according to the following requirements:

- Domestic waterline connections will be made to the existing 8-inch water main located on River Road and the existing 6-inch water main on Taylor Bend.

- Townhomes will be served with gang meter vaults. Multi-family buildings will be served with redundant master meters, one at each entrance.

All of the above requirements are to be constructed and paid for by the Applicant and dedicated to CPWS once complete up to and including the meter. No construction of CPWS infrastructure shall be initiated until final construction plans have been approved by TDEC and all parties have fully executed a water service agreement.

Once you have received this Water Availability Letter, next steps in the process to obtain water service from CPWS are as follows:

- Present the attached hydrant analysis report for coordination and approval of development from the Columbia Fire & Rescue Fire Marshall.
- 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.
- Remit to CPWS new water service fees:

New Water Service Fee: $1,500 + $370 per SFU (164.2 SFUs)	$62,254.00

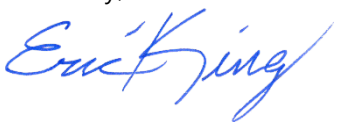
- CPWS will then develop water construction drawings and submit to TDEC for approval. Upon approval by TDEC and payment of meter and impact fees by the applicant, applicant may then schedule a pre-construction meeting with CPWS. Pre-construction meeting will not be scheduled until fees are paid in full or surety is provided in lieu of full payment. Final meter and impact fees are subject to change based on final design and meter size determination. Meter fees are subject to change based on market costs at time of purchase. Meters will not be set until meter and impact fees are paid.

Meter Fee (cost of meter): TBD per 6" meter (2 meters)	TBD
Vault Fee: $2,500 per meter vault, 2" or larger (2 vaults)	$5,000.00
Impact Fee: $375,000 for a 6" metered connection	$375,000.00
Meter Fee: $540 per 3/4" meter (45 meters)	$24,300.00
Impact Fee: $4500 per 3/4" meter (45 meters)	$202,500.00
Total Meter and Impact Fees Due =	**$606,800.00**

- After the pre-construction meeting, CPWS will then issue a formal notice to proceed. No construction of CPWS infrastructure may take place prior to the pre-construction meeting.
- Applicant is then 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.

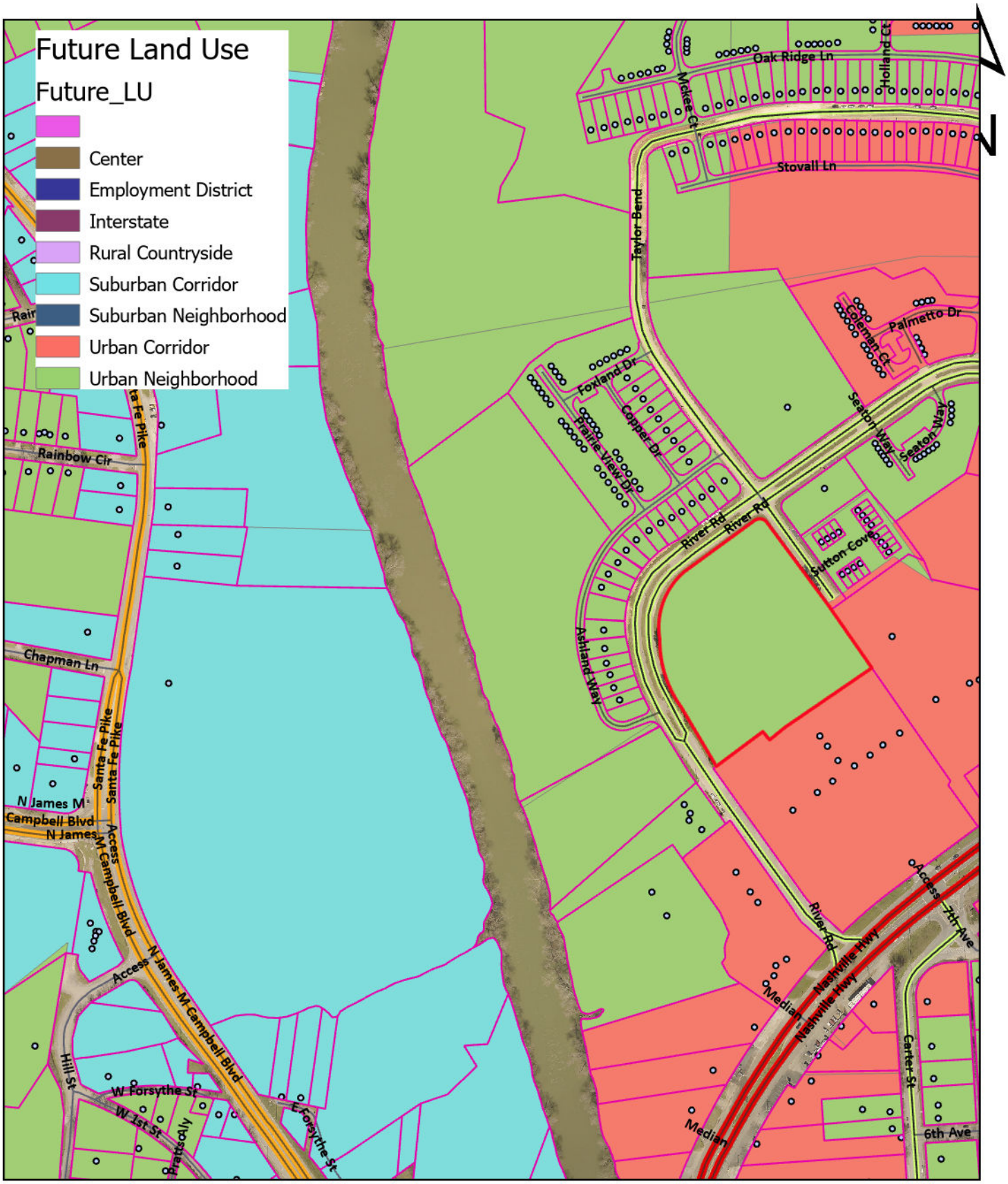
If you have any questions, please feel free to contact Mr. Jonathan Hardin or myself at 423-774-0349 or eric.king@inflodesign.com. This letter is valid for one-hundred twenty (120) days from the date of this letter.

Sincerely,



Eric King, P.E.
Inflo Design Group, LLC
on behalf of Columbia Power and Water Systems

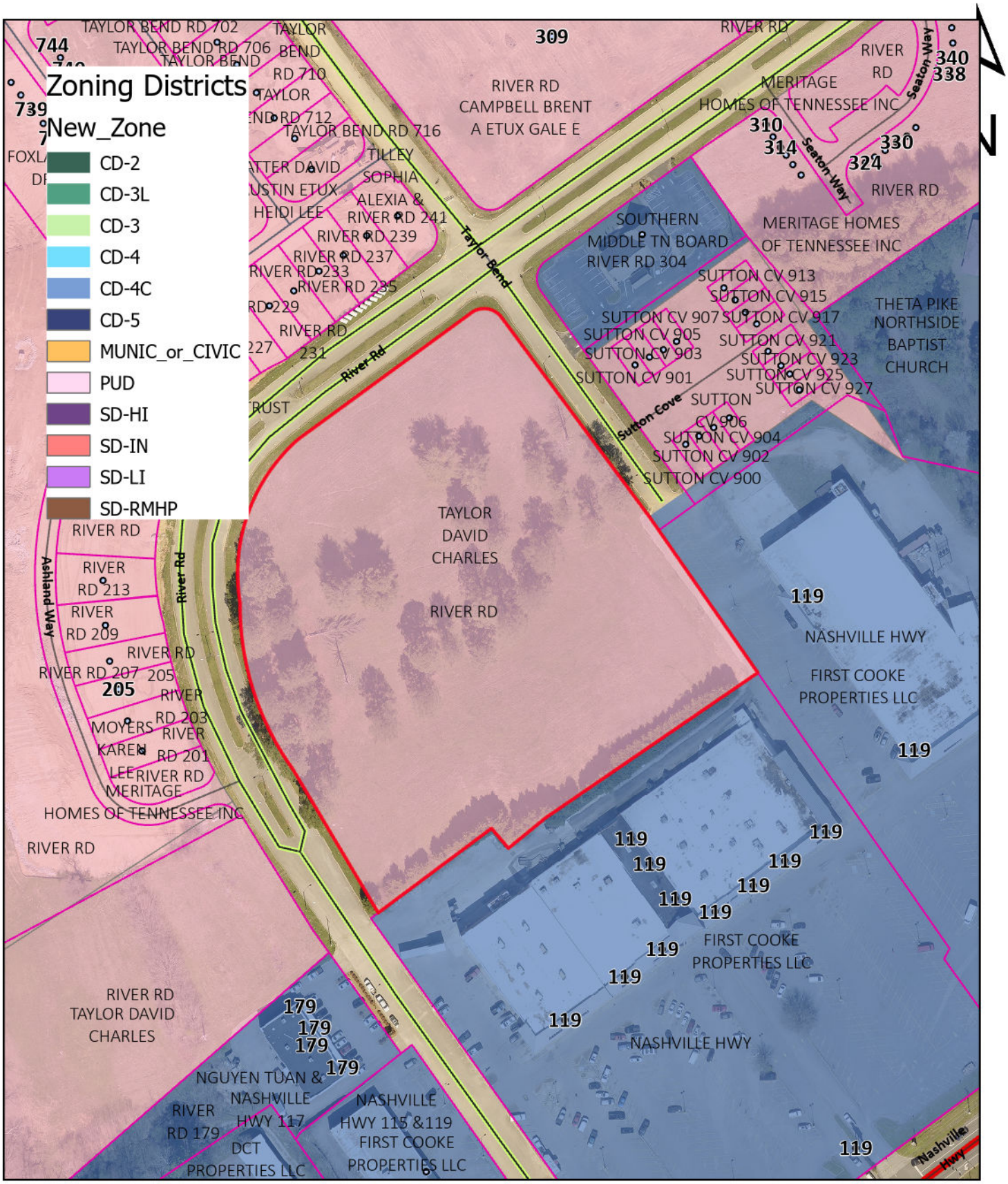
cc: Jonathan Hardin, CPWS
File 22-093



23-0136
River Road

CITY OF COLUMBIA TENNESSEE

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



23-0136
River Road

CITY OF COLUMBIA
TENNESSEE

DEVELOPMENT SERVICES
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PHONE: (931) 560-1560
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DAVID TAYLOR PROPERTY
PROPERTY MAP 090, PARCEL 007.08
RIVER ROAD / GANDER CROSSING
CITY OF COLUMBIA, MAURY COUNTY, TENNESSEE

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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 on a USB thumb drive or CD (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"

ADDRESS/LOCATION	RIVER ROAD		
	TAX MAP: 090	GROUP:	PARCEL: 7.08
SUMMARY OF NATURE OF REQUEST AND WORK	REZONING REQUEST FOR A +/-5.88 AC PARCEL, WHICH WAS PREVIOUSLY A PORTION OF A NOW EXPIRED MIXED-USE PUD. REQUEST FOR CD-5 ZONING, WHICH IS CONSISTENT WITH THE URBAN NEIGHBORHOOD LAND USE DISTRICT. INTENT TO DEVELOP MULTI-FAMILY AND TOWNHOMES.		

DATE OF PRE-APPLICATION CONFERENCE	4.5.2023	*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
❑ Annexation ☒ Rezoning ❑ Preliminary Plat ❑ Final Plat ❑ PUD Preliminary Master Plan ❑ PUD Final Site Plan ❑ Multi-Family Site Plan ❑ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations/Rezoning/PUD's:** ☒ Written Legal Description copy ☒ Requested Zone Listed ☒ Compliance with Comprehensive Plan ❑ Annexation Permission Form ☒ Plans and/or Plats conforming to City standards with check list completed ☒ Columbia Water System Availability Letter **Plats/PUDs:** ❑ Project Name (include Sections & Phases) _____ ❑ Total Number of Lots _____ ❑ 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 meetings 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	GREG GAMBLE	PHONE	615.975.5765
ADDRESS	3020 STANSBERRY LANE, SUITE 201 FRANKLIN, TN 37069	EMAIL	INFO@GDC-TN.COM

PROPERTY OWNER NAME	DAVID TAYLOR	PHONE	931-619-1103
ADDRESS	3006 KNOWLDR	EMAIL	DAVIDCTAYLOR46@GMAIL.COM

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.

GREG GAMBLE		APRIL 17, 2023
APPLICANT NAME	APPLICANT SIGNATURE	DATE
DAVID TAYLOR		3-10-23
PROPERTY OWNER NAME	PROPERTY OWNER SIGNATURE	DATE

STAFF USE ONLY

DOCKET NO.		FEE PAID	
RECEIPT NO.		REQUESTED AGENDA	

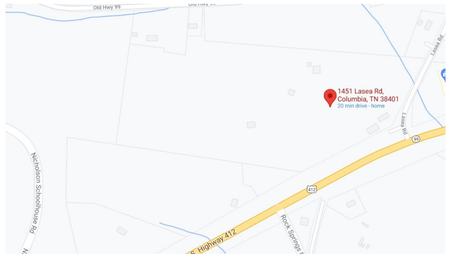
DATE NOTICES SENT TO ADJACENT PROPERTY OWNERS	
DATE OF PUBLIC NOTICES IN DAILY HERALD	

BOARD ACTION	

PRELIMINARY DEVELOPMENT PLAN
LIBERTY POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, TENNESSEE
MAP 73, PARCEL 51

SHEET INDEX

C0.0-COVER SHEET
C1.0- GENERAL NOTES
C2.0-EXISTING CONDITIONS
C3.0-SITE PLAN
C4.0-UTILITY PLAN
C5.0-GRADING PLAN
C6.0-CIVIC SPACE PLAN
C9.0-TREE PRESERVATION PLAN



VICINITY MAP
NTS

OWNER

IMER DEVELOPMENT, LLC
1909 COLUMBIA AVENUE
FRANKLIN, TN 37064
615-788-1320

UTILITY COMPANIES

WATER

COLUMBIA POWER & WATER SYSTEM
201 PICKENS LANE
COLUMBIA, TN 38401
931-388-4833

SEWER

COLUMBIA WASTEWATER SYSTEM
1244 TREATMENT PLANT ROAD
COLUMBIA, TN 38401
931-560-1011

NATURAL GAS

ATMOS ENERGY
810 NASHVILLE HWY.
COLUMBIA, TN 38401
931-388-9136

ELECTRIC

COLUMBIA POWER & WATER SYSTEM
201 PICKENS LANE
COLUMBIA, TN 38401
931-388-4833

Ahler & Associates, LLC
CONSULTING ENGINEERS & LAND SURVEYORS
P.O. BOX 1636
SPRING HILL, TN 37174
PH 615.481.3106
FAX: 615.523.1517
SURVEYING
PLANNING
DESIGN
CIVIL

SEAL
JOSEPH E AHLER
REGISTERED ENGINEER
LICENSE
CERTIFICATE
NO. 14745
STATE OF TENNESSEE

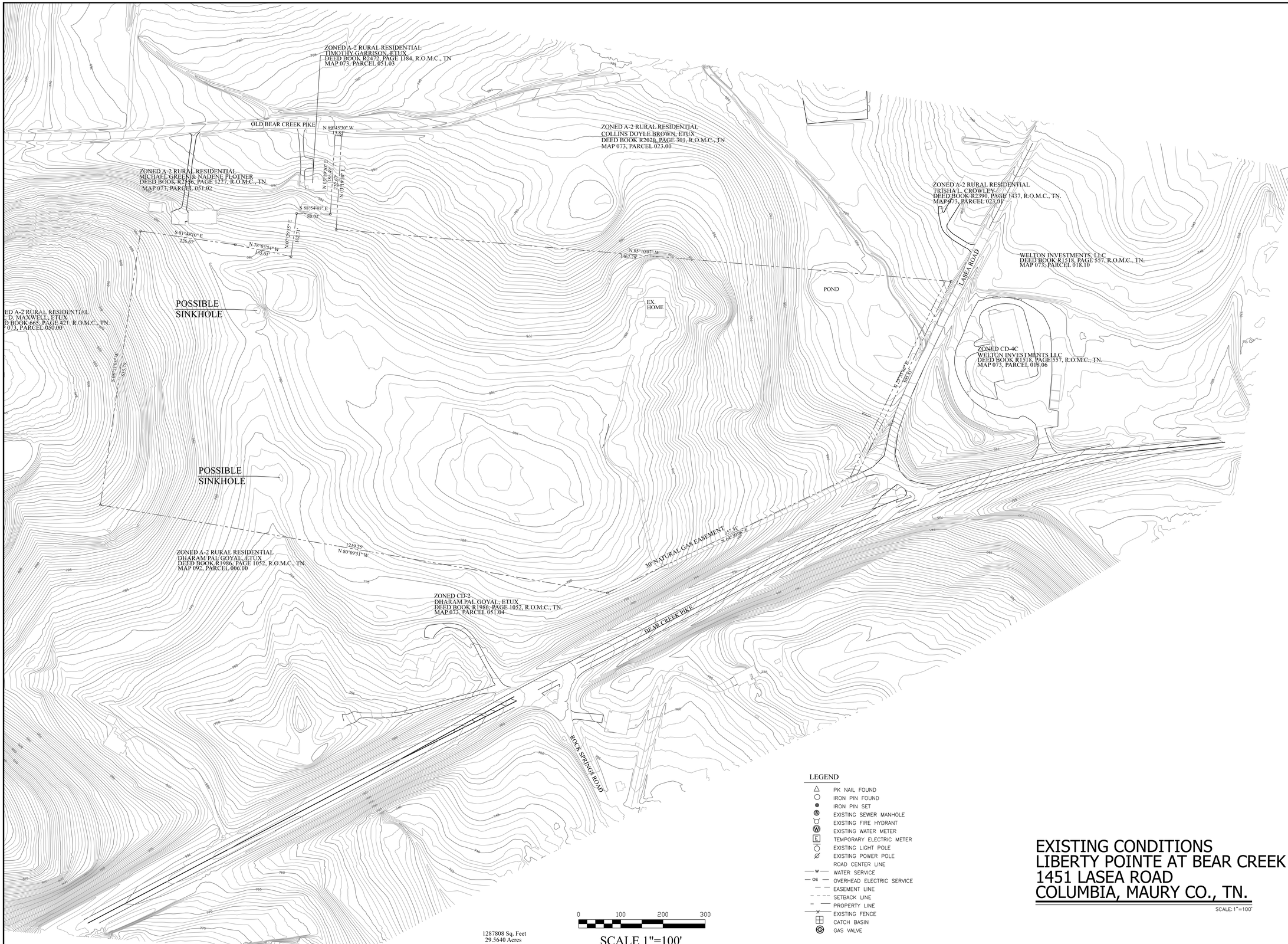
LIBERTY POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA,MAURY CO., TN

ISSUE:	MARK	DATE	DESCRIPTION
	-	1/17/23	ORIGINAL ISSUE

PROJECT NO:	NUMBER
DWG. FILE:	DWGFILE
DRAWN BY:	JEA
CHK'D BY:	JEA

SHEET DESCRIPTION
COVER SHEET
-

C0.0



EXISTING CONDITIONS
LIBERTY POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, MAURY CO., TN.

SCALE: 1"=100'

Ahler & Associates, LLC
CONSULTING ENGINEERS & LAND SURVEYORS
P.O. BOX 1636
SPRING HILL, TN 37174
PH 615.481.3106
FAX: 615.523.1517
SURVEYING
PLANNING
DESIGN
CIVIL

SEAL

JOSEPH E AHLER
REGISTERED ENGINEER
No. 109424
STATE OF TENNESSEE
No. 1474S

LIBERTY POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA,MAURY CO., TN

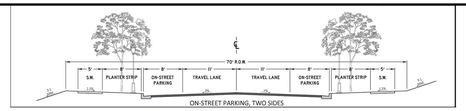
ISSUE:	MARK	DATE	DESCRIPTION
	-	1/04/23	ORIGINAL ISSUE

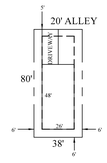
PROJECT No:	NUMBER
DWG. FILE:	DWGFILE
DRAWN BY:	JEA
CHK'D BY:	JEA

SHEET DESCRIPTION

EXISITING CONDITIONS

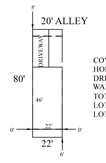
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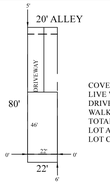
COVERAGE
HOME 1248 SQ. FT
DRIVE 312 SQ. FT
WALK 30 SQ. FT.
TOTAL 1590 SQ. FT.
LOT AREA 3040 SQ. FT
LOT COVERAGE= 52.3%

TYPICAL LOT LAYOUT
SINGLE FAMILY



COVERAGE
HOME 1012 SQ. FT
DRIVE 336 SQ. FT
WALK 30 SQ. FT.
TOTAL 1378 SQ. FT.
LOT AREA 1760 SQ. FT
LOT COVERAGE= 78%

TYPICAL LOT LAYOUT
TOWNHOME



COVERAGE
LIVE WORK 1012 SQ. FT.
DRIVE 366 SQ. FT
WALK 30 SQ. FT.
TOTAL 1378 SQ. FT.
LOT AREA 1760 SQ. FT
LOT COVERAGE= 78%

TYPICAL LOT LAYOUT
LIVE/WORK

ZONED A-2 RURAL RESIDENTIAL
TIMOTHY GARRISON, ETUX
DEED BOOK R2472, PAGE 1184, R.O.M.C., TN
MAP 073, PARCEL 051.03

OLD BEAR CREEK PIKE

N 89°45'30" W
15.81'

ZONED A-2 RURAL RESIDENTIAL
COLLINS DOYLE BROWN, ETUX
DEED BOOK R2020, PAGE 301, R.O.M.C., TN
MAP 073, PARCEL 023.00

ZONED A-2 RURAL RESIDENTIAL
MICHAEL GREEN & NADENE PLOTNER
DEED BOOK R2556, PAGE 1227, R.O.M.C., TN.
MAP 073, PARCEL 051.02

N 03°19'20" E
186.49'

N 03°19'20" E
212.25'

S 88°54'41" E
80.02'

N 07°25'55" E
102.71'

S 81°48'10" E
226.67'

N 78°03'54" W
135.01'

NOTE: SINGLE FAMILY UNITS WILL HAVE TRASH CAN PICKUP AND TOWNHOMES/WORK/LIVE UNITS WILL UTILIZE DUMPSTER COLLECTION THREE TIMES PER WEEK.

ZONED A-2 RURAL RESIDENTIAL
JOEL D. MAXWELL, ETUX
DEED BOOK 665, PAGE 421, R.O.M.C., TN.
MAP 073, PARCEL 050.00

S 89°21'05" W
655.79'

N 85°11'07" W
1462.28'

DUMPSTER

PLAYGROUND #2

OPEN SPACE

ALLEY (20' ROW)

FRANKLIN BRIDGE DRIVE (70' ROW) (PUBLIC)

PINE CREEK DRIVE (70' ROW) (PUBLIC)

ALLEY (20' ROW)

ALLEY (20' ROW)

ALLEY (20' ROW)

CHESTNUT BRIDGE DRIVE (70' ROW) (PUBLIC)

PLAYGROUND #1

OPEN SPACE

OPEN SPACE

STREAM BUFFER

30'

30'

GREEN SPACE
64716 SQ. FT.
1.4857 AC.

LASEA ROAD

ZONED A-2 RURAL RESIDENTIAL
TRISHA L. CROWLEY
DEED BOOK R2390, PAGE 1437, R.O.M.C., TN.
MAP 073, PARCEL 023.01

WELTON INVESTMENTS, LLC
DEED BOOK R1518, PAGE 557, R.O.M.C., TN.
MAP 073, PARCEL 018.10

ZONED CD-4C
WELTON INVESTMENTS LLC
DEED BOOK R1518, PAGE 557, R.O.M.C., TN.
MAP 073, PARCEL 018.06

MAIL KIOSK

S 17°39'00" E
67.31'

12.5' RIGHT-OF-WAY DEDICATION

OPEN SPACE

30' NATURAL GAS EASEMENT

S 64°30'06" E
657.31'

1219.25'
N 80°09'51" W

ZONED A-2 RURAL RESIDENTIAL
DHARAM PAL GOYAL, ETUX
DEED BOOK R1986, PAGE 1052, R.O.M.C., TN.
MAP 092, PARCEL 006.00

ZONED CD-2
DHARAM PAL GOYAL, ETUX
DEED BOOK R1986, PAGE 1052, R.O.M.C., TN.
MAP 073, PARCEL 051.04

BEAR CREEK PIKE

ROCK SPRINGS ROAD

THE STRUCTURES WILL CONFORM TO THE DESIGN AND FACADE STANDARDS OF TABLE 4.3.1-D AND TABLE 4.3.8.B OF THE ZONING ORDINANCE. EXTERIOR LIGHTING PLANS MAY BE REQUIRED AT SITE CONSTRUCTION PLAN REVIEW AND WILL MEET THE STANDARDS UNDER 4.3.17.B

CENTERLINE CURVE DATA

CURVE NO.	DELTA	RADIUS	LENGTH	CHORD	CH. BRG
C1	100°04'12"	250.17'	436.94'	383.48'	S 65°00'41" W
C2	49°25'51"	125.00'	107.84'	104.53'	S 39°43'25" W
C3	35°20'03"	333.00'	205.36'	202.12'	S 82°10'07" W
C4	90°17'32"	125.00'	197.98'	177.23'	N 34°02'50" W
C5	90°00'01"	125.00'	196.35'	176.78'	N 53°38'24" E
C6	6°17'57"	333.00'	36.61'	36.19'	S 77°02'57" E
C7	42°43'00"	333.00'	248.27'	242.56'	S 05°17'33" E
C8	47°53'01"	70.00'	58.50'	56.81'	N 39°33'05" E
C9	92°16'14"	70.02'	112.76'	100.93'	N 29°36'47" W
C10	5°43'30"	70.00'	6.99'	6.99'	N 76°45'15" W
C11	114°55'42"	70.00'	140.41'	118.03'	S 42°22'21" W
C12	89°55'28"	70.00'	109.86'	98.93'	N 54°52'25" E
C13	89°58'26"	70.00'	109.92'	98.97'	S 35°10'38" E
C14	44°04'23"	209.22'	160.94'	157.01'	S 78°37'33" W
C15	17°35'32"	333.00'	102.24'	101.84'	N 88°57'37" W
C16	02°08'00"	70.00'	2.61'	2.61'	N 81°13'54" W

SITE COVERAGE
DEVELOPED AREA =866408.4 SQ. FT OR 19.89 ACRES
TOTAL AREA=1287808 SQ. FT. OR 29.5640 ACRES
COVERAGE =67%

NEW IMPERVIOUS AREA= 472760.0 SQ. FT OR 10.85 ACRES

CIVIC SPACE PROVIDED
GREEN SPACE 1.48 ACRES
PLAYGROUND #1 0.14 ACRES
PLAYGROUND #2 0.30 ACRES
TOTAL 1.92 ACRES OR 6.5%

1287808 Sq. Feet
29.5640 Acres

0 100 200 300

SCALE 1"=100'

LEGEND
- PK NAIL FOUND
- IRON PIN FOUND
- IRON PIN SET
- EXISTING SEWER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- TEMPORARY ELECTRIC METER
- EXISTING LIGHT POLE
- EXISTING POWER POLE
- ROAD CENTER LINE
- —W— WATER SERVICE
- —OE— OVERHEAD ELECTRIC SERVICE
- EASEMENT LINE
- SETBACK LINE
- PROPERTY LINE
- EXISTING FENCE
- CATCH BASIN
- GAS VALVE

PROPERTY IS ZONED CD-4

PROPOSED DEVELOPMENT
LOTS 60-87, LOTS 118-39 TOWN HOMES =53 UNITS OR 37.9%
LOTS 1-59, SINGLE FAMILY HOMES= 59 UNITS OR 42.1%
LOTS 88-115 LIVE/WORK UNITS=28 UNITS OR 20.0%

DENSITY= 140 UNITS/29.56 AC=4.74 DU/AC (12.0 DU/AC ALLOWED)

BUILDING BREAKDOWN
10-5 UNIT TOWNHOME BUILDINGS
1-3 UNIT TOWNHOME BUILDINGS

BUILDING FRONTAGE BREAKDOWN
TOWNHOMES=1166' OR 35.2%
SINGLE FAMILY=1534' OR 46.3%
LIVE/WORK=616 OR 18.6%

59-SINGLE FAMILY HOMES
5-5 UNIT LIVE/WORK BUILDINGS
1-3 UNIT LIVE/WORK BUILDING

28,336 SQ. FT. OF NON-RESIDENTIAL WORK SPACE
REQUIRED PARKING 57 SPACES
PROPOSED ON STREET PARKING
IN FRONT OF UNITS=35 SPACES
PARKING AT REAR OF THE LIVE/WORK UNITS=56 SPACES

PARKING SUMMARY
REAR PARKING 2/UNIT= 286 SPACES
STREET PARKING= 290 SPACES*
TOTAL=574 SPACES
REQUIRED 2/UNIT
*NOTE = ENTRY DRIVE SLOPE EXCEEDS 8%
NO PARKING ALONG THAT REACH WAS COUNTED

SITE PLAN
LIBERTY POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, MAURY CO., TN.

SCALE: 1"=100'

Ahler & Associates, LLC
CONSULTING ENGINEERS & LAND SURVEYORS
P.O. BOX 1636
SPRING HILL, TN 37174
PH 615.481.3106
FAX: 615.523.1517

SURVEYING
PLANNING
DESIGN
CIVIL

SEAL
JOSEPH E AHLER
REGISTERED ENGINEER
AGRICULTURE
OCTOBER 14, 2003
No. 114745
STATE OF TENNESSEE

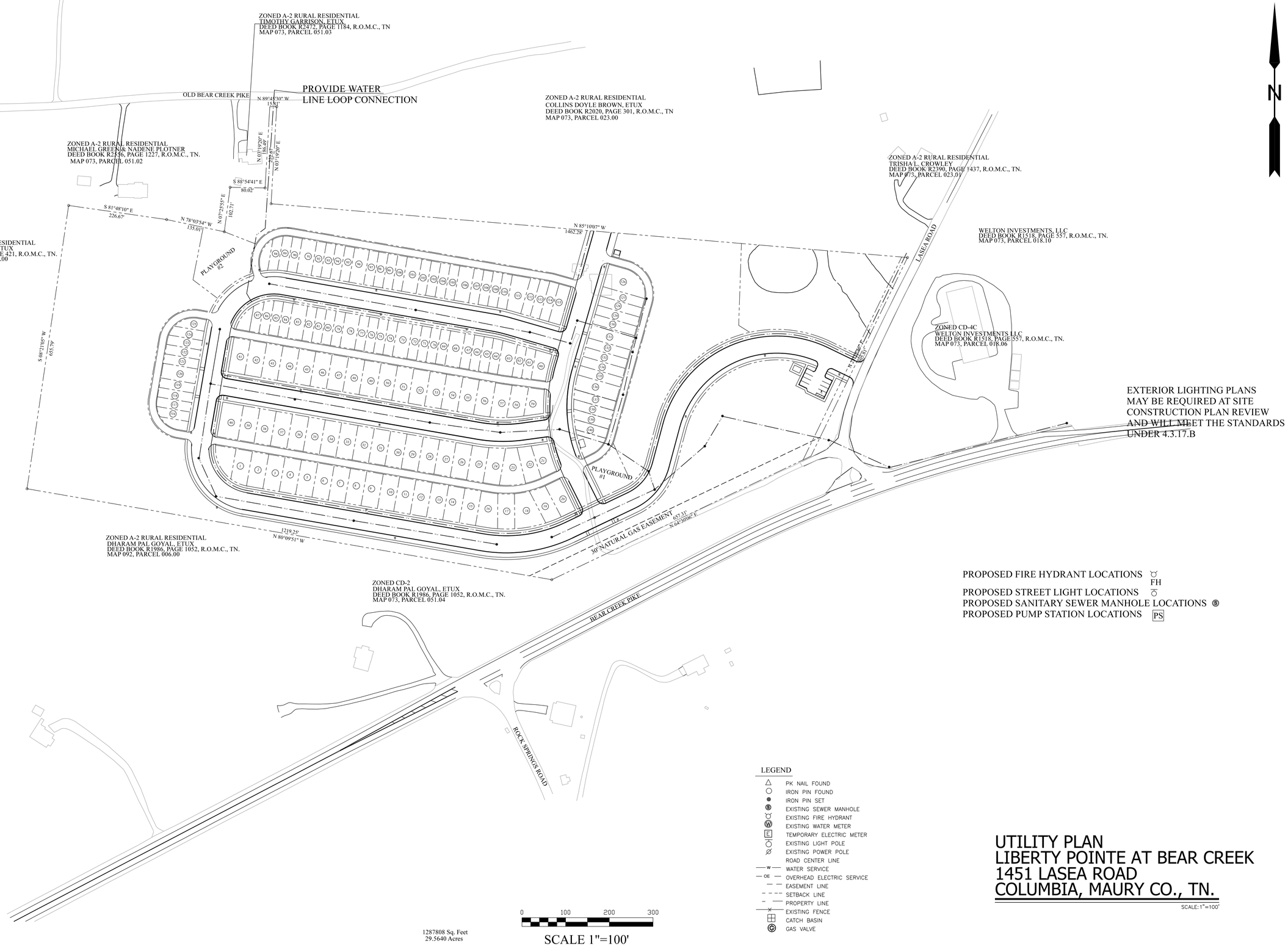
LIBERTY POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA,MAURY CO., TN

ISSUE:	MARK	DATE	DESCRIPTION
	-	4/10/23	ORIGINAL ISSUE

PROJECT NO:	NUMBER
DWG. FILE:	DWGFILE
DRAWN BY:	JEA
CHK'D BY:	JEA

SHEET DESCRIPTION
SITE PLAN
-

C3.0



UTILITY PLAN
LIBERTY POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, MAURY CO., TN.

SCALE: 1"=100'

Ahler & Associates, LLC
CONSULTING ENGINEERS & LAND SURVEYORS
P.O. BOX 1636
SPRING HILL, TN 37174
PH 615.481.3106
FAX: 615.523.1517
SURVEYING
PLANNING
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CIVIL

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JOSEPH E AHLER
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AGRICULTURE
CIVIL
STATE OF TENNESSEE

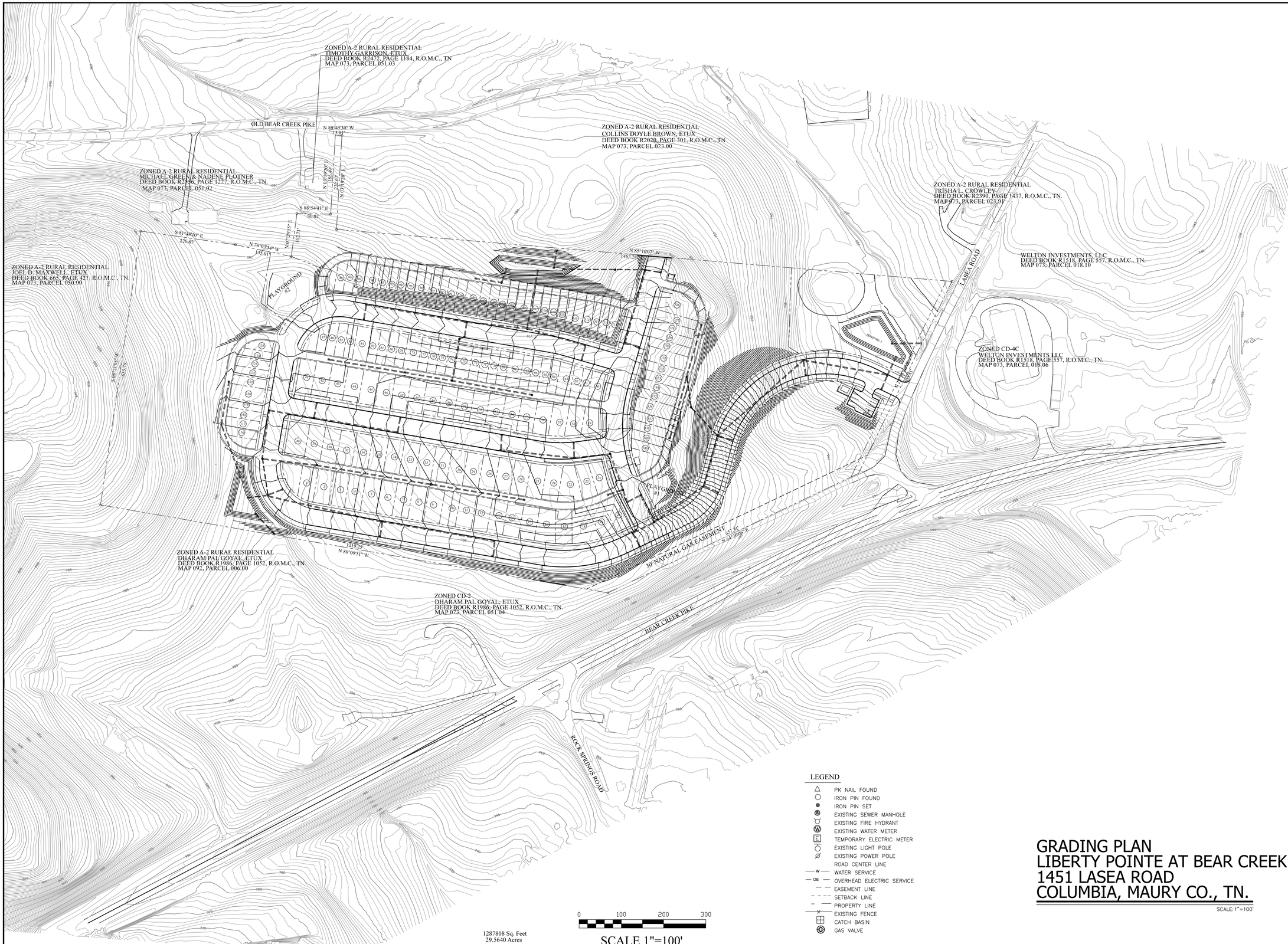
LIBERTY POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA,MAURY CO., TN

ISSUE:	MARK	DATE	DESCRIPTION
	-	10.4.23	ORIGINAL ISSUE

PROJECT NO:	NUMBER
DWG. FILE:	DWGFILE
DRAWN BY:	JEA
CHK'D BY:	JEA

SHEET DESCRIPTION
UTILITY PLAN
-

C4.0



GRADING PLAN
LIBERTY POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, MAURY CO., TN.

SCALE: 1"=100'

Ahler & Associates, LLC
CONSULTING ENGINEERS & LAND SURVEYORS
P.O. BOX 1636
SPRING HILL, TN 37174
PH 615.481.3106
FAX: 615.523.1517
SURVEYING
PLANNING
DESIGN
CIVIL

SEAL

JOSEPH E AHLER
REGISTERED ENGINEER
AGRICULTURE
STATE OF TENNESSEE

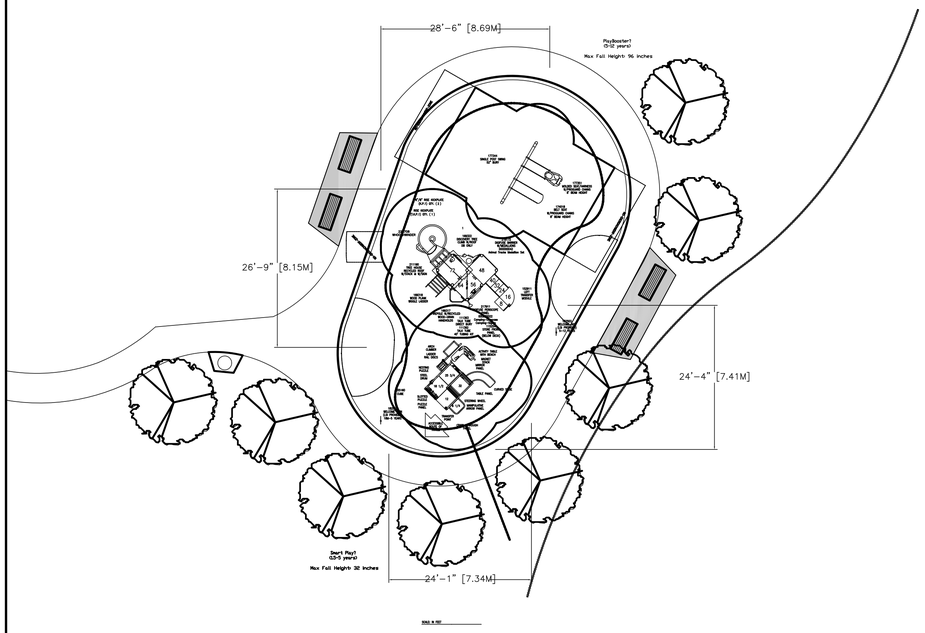
LIBERTY POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA,MAURY CO., TN

ISSUE:	MARK	DATE	DESCRIPTION
	-	7/04/23	ORIGINAL ISSUE

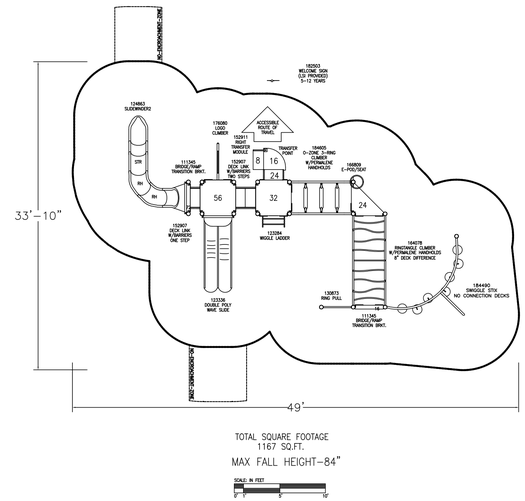
PROJECT NO:	NUMBER
DWG. FILE:	DWGFILE
DRAWN BY:	JEA
CHK'D BY:	JEA

SHEET DESCRIPTION
GRADING PLAN
-

C5.0



PLAYGROUND NO. 2
NTS



TOTAL SQUARE FOOTAGE
1167 SQ.FT.
MAX FALL HEIGHT-84"

SCALE: IN FEET
0 5 10

PLAYGROUND NO. 1
NTS



LEGEND

- PK NAIL FOUND
- IRON PIN FOUND
- IRON PIN SET
- EXISTING SEWER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- TEMPORARY ELECTRIC METER
- EXISTING LIGHT POLE
- EXISTING POWER POLE
- ROAD CENTER LINE
- W — WATER SERVICE
- OE — OVERHEAD ELECTRIC SERVICE
- EASEMENT LINE
- SETBACK LINE
- PROPERTY LINE
- EXISTING FENCE
- CATCH BASIN
- GAS VALVE

GREEN SPACE
SCALE
1"=50'

CIVIC SPACE
LIBERTY POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, MAURY CO., TN.

SCALE: NTS

Ahler & Associates, LLC
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DESIGN
CIVIL

SEAL
JOSEPH E AHLER
REGISTERED ENGINEER
AGRICULTURE
CIVIL
STATE OF TENNESSEE

LIBERTY POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA,MAURY CO., TN

ISSUE:	MARK	DATE	DESCRIPTION
	-	4/10/23	ORIGINAL ISSUE

PROJECT NO:	NUMBER
DWG. FILE:	DWGFILE
DRAWN BY:	JEA
CHK'D BY:	JEA

SHEET DESCRIPTION
CIVIC SPACE PLAN

C6.0

APPROXIMATE TOTAL TREE CANOPY(UNDEVELOPED)=23.9 ACRES
APPROX. TOTAL TREE CANOPY(REMAININGG)=7.2 ACRES
TOTAL TREE CANOPY(UNDEVELOPED)=23.9/29.5=81%
TOTAL TREE CANOPY(RETAINED)=7.2/23.9=30.1%

AERIAL PHOTOGRAPHY FROM 2021 BY MAPTECH, LLC

ZONED A-2 RURAL RESIDENTIAL
TIMOTHY GARRISON, ETUX
DEED BOOK R2472, PAGE 1184, R.O.M.C., TN
MAP 073, PARCEL 051.03

OLD BEAR CREEK PIKE

N 89°58'30" W
73.85'

ZONED A-2 RURAL RESIDENTIAL
COLLINS DOYLE BROWN, ETUX
DEED BOOK R2020, PAGE 301, R.O.M.C., TN
MAP 073, PARCEL 025.00

ZONED A-2 RURAL RESIDENTIAL
MICHAEL GREEN & NADENE PLOTNER
DEED BOOK R2546, PAGE 1272, R.O.M.C., TN.
MAP 073, PARCEL 051.02

N 03°09'20" E
251.63'
N 03°09'20" E
251.63'

S 88°54'45" E
30.02'

S 81°38'00" E
226.67'

N 78°03'54" W
185.01'

N 07°25'55" E
102.73'

TREE SAVE AREA

N 85°10'07" W
146.21'

ZONED A-2 RURAL RESIDENTIAL
TRISHA L. CROWLEY
DEED BOOK R2560, PAGE 1437, R.O.M.C., TN.
MAP 073, PARCEL 023.01

WELTON INVESTMENTS, LLC
DEED BOOK R1518, PAGE 557, R.O.M.C., TN
MAP 073, PARCEL 018.10

LASEA ROAD

GREEN SPACE
64716 SQ FT
1.4857 AC

ZONED CD-4C
WELTON INVESTMENTS LLC
DEED BOOK R1518, PAGE 557, R.O.M.C., TN.
MAP 073, PARCEL 018.06

N 25°00'00" E
67.81'

PLAYGROUND #2

PLAYGROUND #1

TREE SAVE AREA

TREE SAVE AREA

EXISTING TREE CANOPY LIMITS

LIMITS OF DISTURBANCE

ZONED A-2 RURAL RESIDENTIAL
DHARAM PAL GOYAL, ETUX
DEED BOOK R1986, PAGE 1052, R.O.M.C., TN.
MAP 092, PARCEL 006.00

1219.25'
N 80°09'51" W

10' NATURAL GAS EASEMENT
S 64°30'00" E
657.45'

ZONED CD-2
DHARAM PAL GOYAL, ETUX
DEED BOOK R1986, PAGE 1052, R.O.M.C., TN.
MAP 073, PARCEL 051.04

BEAR CREEK PIKE

ROCK SPRINGS ROAD

1287808 Sq. Feet
29.5640 Acres

0 100 200 300
SCALE 1"=100'

LEGEND

- PK NAIL FOUND
- IRON PIN FOUND
- IRON PIN SET
- EXISTING SEWER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- TEMPORARY ELECTRIC METER
- EXISTING LIGHT POLE
- EXISTING POWER POLE
- ROAD CENTER LINE
- WATER SERVICE
- OVERHEAD ELECTRIC SERVICE
- EASEMENT LINE
- SETBACK LINE
- PROPERTY LINE
- EXISTING FENCE
- CATCH BASIN
- GAS VALVE

PER SECTION 4.3.16C.1 OF THE ZONING ORDINANCE, FUTURE TREE REMOVAL WITHIN THE TREE SAVE AREAS WILL REQUIRE APPROVAL BY THE PLANNING COMMISSION.

TREE PRESERVATION PLAN
LIBERTY POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, MAURY CO., TN.

SCALE: 1"=100'

Ahler & Associates, LLC
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PH 615.481.3106
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SURVEYING
PLANNING
DESIGN
CIVIL

SEAL
JOSEPH E AHLER
REGISTERED ENGINEER
AGRICULTURE
OF
TENNESSEE
No. 14745
STATE OF TENNESSEE

LIBERTY POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA,MAURY CO., TN

ISSUE:	MARK	DATE	DESCRIPTION
	1	4/10/23	ORIGINAL ISSUE

PROJECT NO:	NUMBER
DWG. FILE:	DWGFILE
DRAWN BY:	JEA
CHK'D BY:	JEA

SHEET DESCRIPTION
TREE PRESERVATION PLAN

C9.0

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, May 9, 2023

ITEM NO.
23-0144

DESCRIPTION: CD-4 RESIDENTIAL DEVELOPMENT

RECOMMENDATION: For final recommendation please see staff report.

COMMENTS:

Engineering

1. Subject to construction plans and traffic impact study.
2. Stormwater detention area(s) appear to be small for the amount of added impervious surface.
3. Label aquatic buffers and provide dimensions. Pumpkin creek is exceptional and will require a 60 foot buffer average 30 ft minimum from the top of bank for each side of the creek.
4. Provide geotechnical report evaluating the presence of karst features on site, suitability of soils/rock formation for construction, and recommendations.
5. Label roadways as public or private (minor local)
6. Minimum horizontal centerline radius is 125 ft. (C4, C5, C6,)
7. 50 foot tangent required between reverse curves. (C1, C2)
8. Provide roadway cross section.
9. Inlets shall be located a minimum of every three hundred (300) feet of roadway for each side of the roadway, unless specific hydraulic analysis of spread is provided.
10. Provide survey signed and sealed by a Registered Land Surveyor.
11. Remove EPSC sheets
12. Lot numbers on Utility Sheet do not match the rest of the plan.
13. Slope along southern property line exceeds 3H:1V

Wastewater

14.
15. Wastewater does not approve this request. The Department would like to discuss the possibility of gravity flor to the Bear Creek Pike instead of two pump stations as shown on the plans.

Planning

16. Provide 800' radius for playgrounds and basic facilities to be added.
17. Provide details of Civic Space Green area, typical facilities. Please revise to provide sufficient detail for the Planning Commission to determine that the Green and Playground spaces meet

the standards for such areas in the Ordinance (e.g. show typical facilities and sufficient detail to discern that "landscape consists of lawn and trees, naturalistically disposed" etc).

18. Show live/work locations and extra parking for the commercial space (1:500 sf). Parlong locations must conform with § 4.3.12.B.3 (p. 268).
19. Please note on the plan which thoroughfare is being used and that structures shall comply with Article 4.3.1-D of Ordinance 4400.
20. In the typical lot layout please illustrate the series of Townhomes with the spacing between sets of units. Please include the lot layout for 32' wide townhome units (appears to be end units).
21. The water availability letter is dated January 13th and is set to expire before the June Planning Commission meeting. Please provide an updated letter at resubmittal.
22. Please provide Site Development Plan as a separate document (See sec. 8.5.6, p. 408-422 of the Zoning Ordinance). Site Development Plan should respond to planning comments and address all applicable standards of the Zoning Ordinance, including civic space and tree preservation requirements.
23. Please add note acknowledging the design and façade standards of Table 4.3.1-D (p.78-85) and Table 4.3.8.B (p. 212) of the Zoning Ordinance and indicate that structures will conform. Conformity will be confirmed at building permit.
24. Please add note to site development plan referencing the private lighting standards at Table 4.3.17.B (p. 297) of the Zoning Ordinance. Note should acknowledging that exterior lighting plans may be required as appropriate at site construction plan review/building permit (§ 8.5.6.G.4.p).
25. Please add note to tree preservation page pf Site Development Plan acknowledging requirement at 4.3.16.C.1 (p. 290) of the Zoning Ordinance that future removal of trees depicted on the plan will require approval by Planning Commission.
26. Please provide the ariel image referenced in the tree preservation plan.
27. Please indicate how solid waste will be handled. If dumpsters are to be utilized, please provide location and details (See ESS detail MD-01, Table 4.3.1-D and §4.3.15 of the Zoning Ordinance).
28. Please indicate the square footage of non-residential area in the Live-Work units (§ 8.5.6.H.3.C).
29. The Site Development Plan should include a Civic Space page. Please label pedestrian shed(s) and identify the "Main Civic Space" for each. The Main Civic Space must be a Green, Square, or Plaza (§ 5.3.3; p. 335).
30. Please show detail of mail kiosk area conforming to ESS detail MD-03.
31. The Site Development Plan portion of this application should be reviewed by the Development Review Committee again for completeness before advancing to the Planning Commission agenda. At resubmittal, the Preliminary Plat should be more legible and clear of matters not pertinent to the items listed at 2.2.8 of the Subdivision Regulations.

Fire

32. No comment

Building

33. No comments.

Police

34. No comments provided.

City Attorney

35. No comments provided.

ATT

36. Plan to serve.

Maury County Highway Dept.

37. No comment.

Columbia Power

38. Columbia Power System does not have existing power facilities near your proposed development within our service territory. DREMC will be the service provider for this area.

Columbia Water

39. "A water availability letter was issued on 1-13-23, it will expire prior to the Commission meeting. For the project to move forward the availability letter must be current. 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 stated in the water availability letter are the responsibility of the developer/owner. All 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."

Public Works

40. For the 54 townhomes and 28 live/work units, we recommend two 8 yd dumpsters serviced 3 times a week. Please see attached dumpster guidelines and accessibility requirements. Private

sanitation services (including individual garbage receptacles) are an option for townhomes and live/work units. Single family homes will receive our trashcan service.

Maury County E911

41. Contact Maury County 911 for subdivision and street name request. cgideon@maury911.org

Atmos Energy

42. No comment provided.

Maury County Schools

43. Howell Elementary, Cox Middle School, Spring Hill High School. See Attached Capacity Numbers. 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.

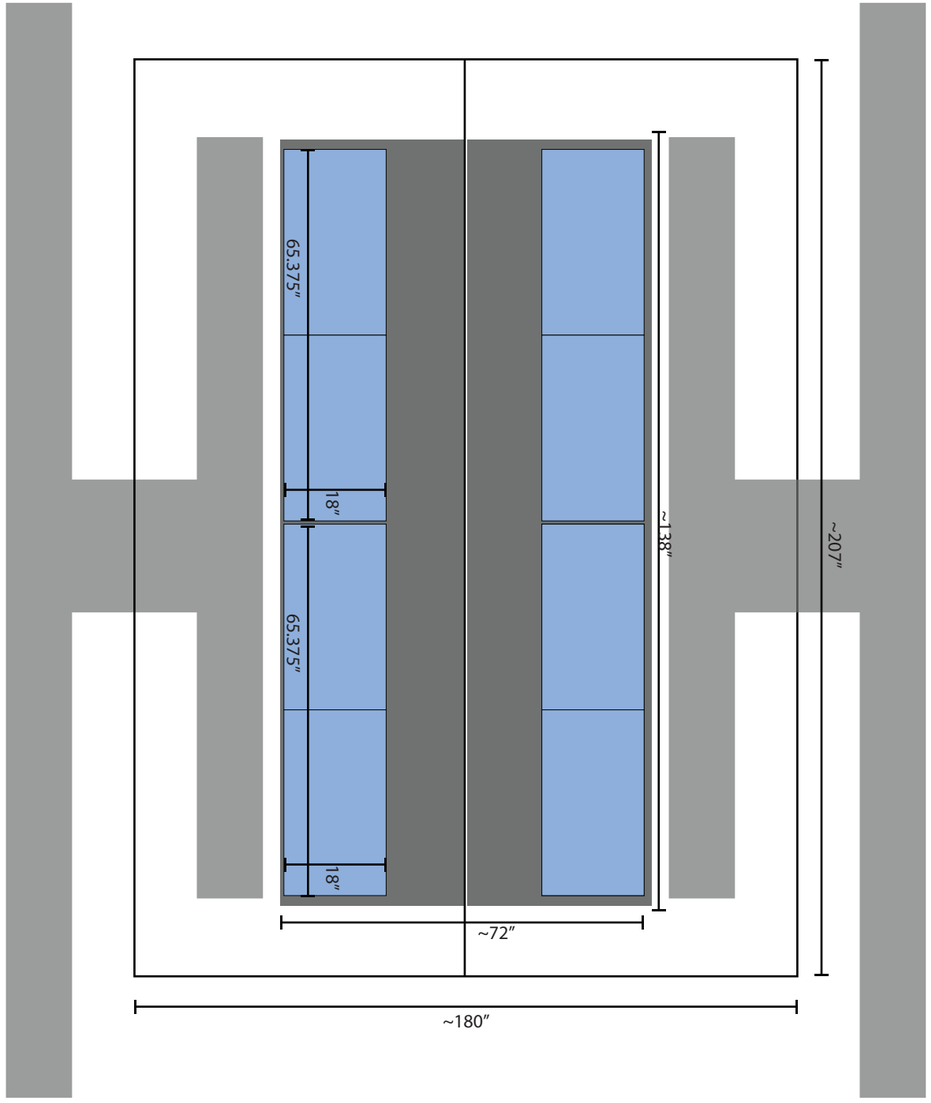
Duck River Electric Membership Corp

44. No comment provided.

ATTACHMENTS:

NOTE: All submittals shall be compliant with City standards prior to Planning Commission review. Items that are not adhering to the regulations and/or comments for that request will not be forwarded to the next agenda until such items are amended.







HEIGHT:

Unit height is 72 1/16"
WIDTH:

Unit width is 32 11/16"
DEPTH:

Unit depth is 18"

Florence Versatile 4C Depot Cabinet
4C16D-20-D

Quantity	Compartment Name	Compartment Type	Compartment Height	Compartment Width	Compartment Depth
20	1H Tenant	Standard Mail	3"	12"	15"
2	15" Parcel	Parcel Locker	15"	12"	15"
1	1H Outgoing	Outgoing Mail Slot	3"	12"	15"
1	1H Master	Master Collection	3"	12"	15"

Southern Consulting

Engineering • Materials Testing • Environmental Services

Project:	1451 Lasea Road (Columbia)	Date:	May 17, 2023
Engineering Technician:	TJ Randolph	Weather:	Clear

Condition of Site at Arrival:

Project property still has some exisiting structures on it with the vast majority of the property covered in dense foliage.

Inspection Activities:	_ Concrete Placement	_ Concrete/Mortar	_ Conc/Grout
_ Subgrade Suitable Soils	_ Proofroll	_ Moisture Density	_ Footing/SCP
_ Foundation Static Probe	_ Foundation Steel	_ Foundation Size/Depth	_ Steel/Weld
_ Frame	**X** Other (Describe): Sinkhole investigation		

Test(s) Location(s):

See attached image for testing locations

Testing Performed and Results:

- Visual observation of alleged sinkholes to make remediation recommendations if necessary.

REQUIREMENTS:

- Indications of a sinkhole would be a depression and area where water would drain with no surface outfall.
- If it is determined that there is a sinkhole the specification for sinkhole repair would be to undercut the location of the sinkhole until the opening in bedrock or "throat" is found and the placement of lean concrete to plug throat, a non-woven geotextile fabric for soil rock seperation and backfilled with large stone decreasing in size incrementally to the surface.

OBSERVATIONS:

- Technician traversed the majority site with a surveying employee, Chris, of Joe Ahler and Associates beginning at the exisiting home structure located on the attached drawing heading westward through the vegetation until coordinates of several individual locations designated by Joe Ahler were reached.
- At the first location Location 1 on attached image) there was a small area of standing water that was off of the target property approximately 20 feet to the North which had the potential to be a cause for concern.
- Technician continued to traverse the site to the two other locations (locations 2 and 3) on the attached image and at each location nothing was observed that would indicate the existence of a sinkhole on the property.

CONCLUSION:

- During this visit other than the original location that was deemed to be off our target property, no evidence of a sinkhole was observed.

RECOMMENDATIONS:

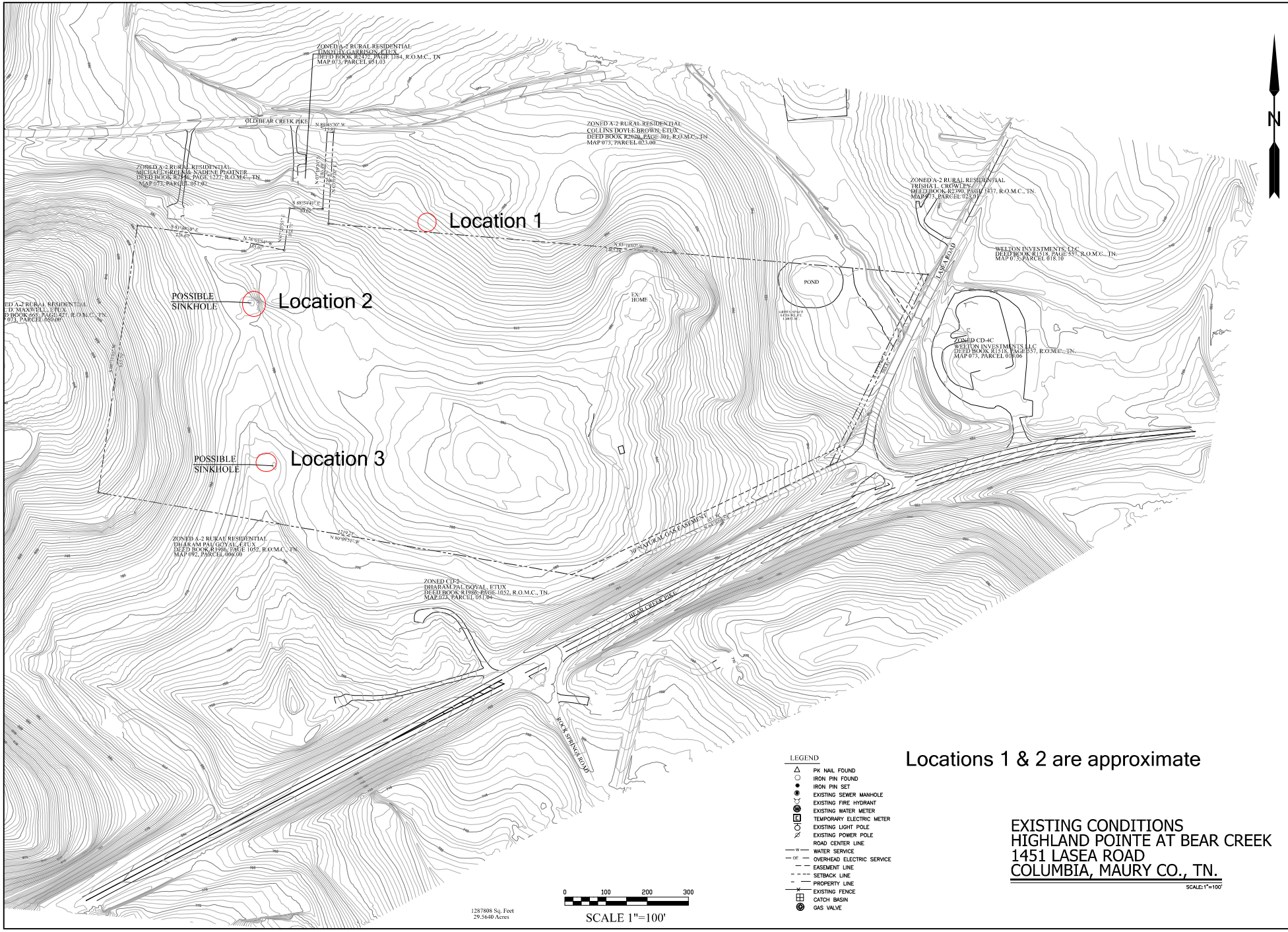
- No further recommendations at this time.

This document does not indicate final test results. Test results are not considered final until they are reviewed and signed by a Southern Consulting Registered Engineer.

TJ Randolph
Southern Consulting Engineering Technician

Trent Smith
Southern Consulting Engineer

1208 Hwy 47 E • Dickson, Tennessee 37055 • Phone: 615-740-8777 • Fax: 615-441-8776



Locations 1 & 2 are approximate

EXISTING CONDITIONS
HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, MAURY CO., TN.

SCALE:1"=100'

Ahler & Associates, LLC
CIVIL ENGINEERS & LAND SURVEYORS
P.O. BOX 6356
SPRING HILL, TN. 37174
PH: 615.861.3066
FAX: 615.523.1517
SURVEYING
PLANNING
DESIGN
CIVIL

SEAL
JOSEPH E. AHLER
REGISTERED ENGINEER
No. 14740
STATE OF TENNESSEE

HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, MAURY CO., TN

ISSUE:	MARK	DATE	DESCRIPTION
	-	04/23	ORIGINAL ISSUE

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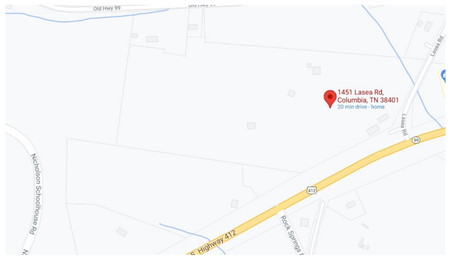
SHEET DESCRIPTION
EXISITING CONDITIONS
-

C2.0

PRELIMINARY DEVELOPMENT PLAN
HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, TENNESSEE
MAP 73, PARCEL 51

SHEET INDEX

C0.0-COVER SHEET
C1.0- GENERAL NOTES
C2.0-EXISTING CONDITIONS
C3.0-SITE PLAN
C4.0-UTILITY PLAN
C5.0-GRADING PLAN
C6.0-EROSION CONTROL PLAN-PH. 1
C7.0-EROSION CONTROL PLAN-PH. 2
C8.0-EROSION CONTROL PLAN-PH. 3
C9.0-TREE PRESERVATION PLAN



VICINITY MAP
NTS

OWNER

IMER DEVELOPMENT, LLC
1909 COLUMBIA AVENUE
FRANKLIN, TN 37064
615-788-1320

UTILITY COMPANIES

WATER

COLUMBIA POWER & WATER SYSTEM
201 PICKENS LANE
COLUMBIA, TN 38401
931-388-4833

SEWER

COLUMBIA WASTEWATER SYSTEM
1244 TREATMENT PLANT ROAD
COLUMBIA, TN 38401
931-560-1011

NATURAL GAS

ATMOS ENERGY
810 NASHVILLE HWY.
COLUMBIA, TN 38401
931-388-9136

ELECTRIC

COLUMBIA POWER & WATER SYSTEM
201 PICKENS LANE
COLUMBIA, TN 38401
931-388-4833

Ahler & Associates, LLC
CONSULTING ENGINEERS & LAND SURVEYORS
P.O. BOX 1636
SPRING HILL, TN 37174
PH 615.481.3106
FAX: 615.523.1517
SURVEYING
PLANNING
DESIGN
CIVIL

SEAL
JOSEPH E AHLER
REGISTERED ENGINEER
LICENSE
CERTIFICATE
NO. 14745
STATE OF TENNESSEE

HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA,MAURY CO., TN

ISSUE:	MARK	DATE	DESCRIPTION
	-	1/17/23	ORIGINAL ISSUE

PROJECT No: NUMBER
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DRAWN BY: JEA
CHK'D BY: JEA

SHEET DESCRIPTION
COVER SHEET
-

C0.0

GENERAL NOTES

1) THE LOCATION OF EXISTING UTILITIES, INCLUDING UNDERGROUND UTILITIES, IF INDICATED ON THE DRAWINGS ARE SO SHOWN INSOFAR AS THEIR EXISTENCE AND LOCATION WERE KNOWN AT THE TIME OF PREPARATION OF THE DRAWINGS. HOWEVER, NOTHING IN THESE CONTRACT DOCUMENTS SHALL BE CONSTRUED AS A GUARANTEE THAT SUCH UTILITIES ARE IN THE LOCATION INDICATED OR THAT THEY ACTUALLY EXIST, OR THAT OTHER UTILITIES ARE NOT WITHIN THE AREA OF OPERATIONS. THE CONTRACTOR SHALL MAKE ALL NECESSARY INVESTIGATIONS TO DETERMINE THE EXISTENCE AND LOCATIONS OF SUCH UTILITIES FAR ENOUGH IN ADVANCE TO ALLOW FOR ADJUSTMENTS DUE TO CONFLICTS IN THE HORIZONTAL AND VERTICAL LOCATION OF THE PIPE. THE CONTRACTOR WILL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR MAINTENANCE AND PROTECTION OF EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL OBTAIN FIELD UTILITY LOCATIONS BY CALLING "TENNESSEE ONE CALL" (1-800-351-1111) AND ALL OTHER UTILITIES 3 DAYS PRIOR TO WORKING IN THE VICINITY OF EXISTING UTILITIES. THE FIELD UTILITY LOCATIONS MUST BE SUBMITTED TO THE ENGINEER.

2) ALL WORK SHALL BE IN ACCORDANCE WITH THESE DRAWINGS AND THE TECHNICAL SPECIFICATIONS. THE CONTRACTOR SHALL MAINTAIN A COPY OF BOTH THE DRAWINGS AND SPECIFICATIONS AT THE SITE AT ALL TIMES.

3) ANY FENCING WHICH IS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE IMMEDIATELY REPLACED OR SUPPLEMENTED BY TEMPORARY FENCING OR BARRICADE SUITABLE FOR INTENDED PURPOSE OF EXISTING FENCING OR BARRICADE. CONTRACTOR SHALL PROMPTLY REPAIR AND/OR REPLACE DAMAGED FENCING TO EQUAL OR BETTER CONDITIONS.

4) PHYSICAL CONDITIONS DISTURBED BY WORK SHALL BE RESTORED TO CONDITIONS EQUAL OR BETTER THAN THOSE EXISTING PRIOR TO THE WORK. REPAIR DAMAGES TO STRUCTURES AND UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. RESTORATION INCLUDES, BUT IS NOT LIMITED TO, FINE GRADING, SEEDING, PAVEMENT REPLACEMENT, AND DRAINAGE STRUCTURES.

5) THE CONTRACTOR SHALL MAKE EVERY ATTEMPT POSSIBLE TO MAINTAIN THROUGH TRAFFIC AT ALL TIMES. ALL CONSTRUCTION OPERATIONS SHALL BE SCHEDULED TO KEEP TRAFFIC DELAYS TO A MINIMUM. THE CONTRACTOR SHALL NOT CLOSE OR EXCAVATE WITHIN THE RIGHT-OF-WAY OF A STREET OR ALLEY WITHOUT OBTAINING THE APPROVAL OF AND THE REQUIRED PERMITS FROM THE LOCAL GOVERNING AUTHORITIES AND PROVIDING EVIDENCE OF SUCH APPROVAL TO ENGINEER. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN, AT HIS EXPENSE ALL WARNING DEVICES AND FLAG MEN REQUIRED TO CONTROL AND PROTECT TRAFFIC PASSING THROUGH THE WORK ZONE. THE CONTRACTOR SHALL PROVIDE PILOT TRUCKS AND DRIVERS WHEN NEEDED. ALL METHODS OF CONTROLLING AND PROTECTING THE TRAFFIC SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL GOVERNING AUTHORITIES.

TRENCH EXCAVATION NOTES

1) CONTRACTOR IS REQUIRED TO TAKE ALL NECESSARY AND POTENTIAL PRECAUTIONARY MEASURES TO ASSURE THAT NO DAMAGE (TO PERSONAL AND PRIVATE PROPERTY) WILL RESULT FROM THE EXCAVATION OF ROCK - INCLUDING THROUGH USE OF EXPLOSIVES. PRE-BLASTING STUDIES MUST BE PERFORMED. ADDITIONALLY, CONTRACTOR MUST PROVIDE A PLAN OF ACTION TO THE ENGINEER AT LEAST ONE (1) WEEK PRIOR TO BLASTING. THE PLAN OF ACTION MUST IDENTIFY MEANS AND METHODS TO FULLY PROTECT ALL ADJACENT REAL AND PERSONAL PROPERTY OWNED BY OTHERS. ENGINEER WILL NOT AND DOES NOT ACCEPT ANY LIABILITY ASSOCIATED WITH ADEQUACY OF PLAN.

2) CONTRACTOR IS STRONGLY URGED TO TAKE ALL PRECAUTIONS TO AVOID DAMAGE TO PERSONAL AND REAL PROPERTY. ALL DAMAGE RESULTING FROM CONTRACTORS OPERATION OR CONTRACTOR'S AGENTS MUST BE FULLY REPAIRED OR REPLACED TO A CONDITION EQUAL TO OR BETTER THAN ORIGINALLY EXISTED.

3) TRENCH WIDTH AT THE GROUND SURFACE MAY VARY WITH AND DEPEND UPON DEPTH, TYPE OF SOILS, AND POSITION OF SURFACE STRUCTURES. THE MINIMUM CLEAR WIDTH OF THE TRENCH, SHEETED OR UNSHEETED, MEASURED AT THE SPRING LINE OF THE PIPE SHOULD BE ONE FOOT (1') GREATER THAN THE OUTSIDE DIAMETER OF THE PIPE. THE MAXIMUM CLEAR WIDTH OF THE TRENCH AT THE TOP OF THE PIPE SHOULD NOT EXCEED A WIDTH EQUAL TO THE OUTSIDE DIAMETER PLUS TWO FEET (2'). IF THE ABOVE DEFINED TRENCH WIDTHS MUST BE EXCEEDED, OR IF THE PIPE IS INSTALLED IN A COMPACTED EMBANKMENT, PIPE EMBEDMENT SHOULD BE COMPACTED TO A POINT OF AT LEAST 2.5 PIPE DIAMETERS FROM THE PIPE ON BOTH SIDES OF THE PIPE OR THE TRENCH WALLS, WHICHEVER IS LESS. EXCAVATION AT MANHOLES AND SIMILAR STRUCTURES SHALL BE SUFFICIENT TO PROVIDE 12-INCHES IN THE CLEAR BETWEEN THE OUTSIDE OF THE STRUCTURE AND THE EMBANKMENT OR SHEETING.

4) THE TRENCH SHALL BE EXCAVATED TO THE DEPTH REQUIRED AND SHALL PROVIDE A FIRM, STABLE, AND UNIFORM SUPPORT FOR THE FULL LENGTH OF PIPE ON SOLID OR UNDISTURBED SOIL. BELL HOLES AND DEPRESSIONS SHALL BE PROVIDED TO PERMIT PROPER JOINT ASSEMBLY AND PIPE SUPPORT. ANY PART OF THE TRENCH BOTTOM EXCAVATED BELOW THE ESTABLISHED PIPE GRADE SHALL BE BACKFILLED AND COMPACTED AS REQUIRED TO PROVIDE FIRM PIPE SUPPORT. LEDGE ROCK, BOULDERS, AND LARGE STONES SHALL BE REMOVED TO PROVIDE SIX INCHES (6") OF SOIL CUSHION ON ALL SIDES OF THE PIPE, INCLUDING THE BOTTOM, AND ON ALL SIDES OF ACCESSORIES. ALL UNDERCUT TRENCH EXCAVATION SHALL BE BACKFILLED AND COMPACTED WITH APPROVED GRANULAR MATERIAL.

5) THE BOTTOM OF THE TRENCH SHALL BE EXCAVATED TO A MINIMUM DEPTH OF TWO TO FOUR INCHES (4") BELOW THE BOTTOM OF THE PIPE TO PROVIDE FOR THE SPECIFIED PIPE BEDDING FOR THE ENTIRE LENGTH OF PIPELINE. ANY PART OF THE TRENCH BOTTOM THAT IS EXCAVATED BELOW THE REQUIRED LEVEL SHALL BE BACKFILLED WITH APPROVED GRANULAR MATERIAL AND COMPACTED/ CONSOLIDATED.

6) WHEN AN UNSTABLE SUBGRADE CONDITION IS ENCOUNTERED, WHICH WILL NOT PROVIDE ADEQUATE PIPE SUPPORT, ADDITIONAL TRENCH DEPTH SHALL BE EXCAVATED TO A STABLE FOUNDATION AND BACKFILLED WITH APPROVED GRANULAR MATERIAL. BACKFILL, REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL SHALL BE AT THE CONTRACTOR'S EXPENSE.

7) THE CONTRACTOR SHALL REMOVE ALL ROCK THAT IS SHATTERED BELOW GRADE AND REFILL. THE EXCAVATION TO THE REQUIRED GRADE WITH COMPACTED GRAVEL. LEDGE ROCK, BOULDERS, OR LARGE STONES WILL BE REMOVED TO PROVIDE A MINIMUM CLEARANCE OF 4 INCHES BELOW AND ON EACH SIDE OF PIPE. ALL LOOSE DIRT AND ROCK WILL BE REMOVED FROM THE TRENCH BOTTOM BEFORE PLACEMENT OF BEDDING MATERIAL.

8) DEBRIS, FROZEN MATERIAL, LARGE CLODS OR STONE, ORGANIC MATERIAL OR OTHER UNSTABLE MATERIALS SHALL NOT BE USED FOR FINAL BACKFILL WITHIN 2 FEET OF THE TOP OF THE PIPE.

9) THE INTERIOR OF THE PIPE, AS THE WORK PROGRESSES, SHALL BE CLEANED OF ALL DIRT, JOINTING MATERIAL, AND SUPERFLUOUS MATERIAL OF EVERY DESCRIPTION.

10) PIPE CROSSING OF ALL PROPOSED AND/OR EXISTING STREETS, AND PARKING AREAS WILL BE BACKFILLED WITH TDOT No. 57 STONE TO THE TOP OF THE TRENCH SURFACE.

11) MINIMUM COVER OVER WATER PIPE IN DEVELOPED AREAS IS TO BE 36" UNLESS OTHERWISE NOTED.
MINIMUM COVER OVER VALVE NUT IS TO BE 12": MAXIMUM COVER IS TO BE 36".

12) THE ENGINEER AND OWNER MAY APPROVE EXTRA DEPTH TRENCHING WHERE VERTICAL BENDS ARE IDENTIFIED. WHERE EXTRA DEPTH TRENCHING IS APPROVED, THE CONTRACTOR SHALL NOT EXCEED THE MAXIMUM DEFLECTION OF THE PIPE JOINTS RECOMMENDED BY THE PIPE MANUFACTURER.

PROJECT LAYOUT

PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL LAYOUT ALL WORK. THE CONTRACTOR SHALL SET TRENCH LINE STATIONS AHEAD OF TRENCHING. THESE STATIONS SHALL BE SET AT 100 FOOT INTERVALS ALONG THE CENTER OF THE PIPELINE AND AT THE LOCATIONS OF PIPELINE ACCESSORIES (VALVES, HYDRANTS, FITTINGS,....).
PRIOR TO EXCAVATION, THE CONTRACTOR SHALL CONTACT THE LOCAL UTILITY OFFICE AND ANY OTHER APPLICABLE UTILITY COMPANY WHICH MAY HAVE UNDERGROUND UTILITIES ON OR IN CONTIGUOUS TO, THE PROJECT SITE.
THE CONTRACTOR IS RESPONSIBLE FOR MANAGING STORM WATER RUNOFF AND EROSION DURING CONSTRUCTION AS REQUIRED BY ORDINANCES SET FORTH BY CITY OF COLUMBIA AND ANY OTHER RESPONSIBLE AGENCIES.
CONSTRUCTION INSPECTION AND CERTIFICATION SHALL BE PROVIDED BY THE LOCAL UTILITY IF SO DESIRED/REQUIRED. NO TRENCHES SHALL BE BACKFILLED UNTIL THE LOCAL UTILITY AND/OR DESIGN ENGINEER HAS APPROVED THE GRADE AND ALIGNMENT OF THE WATER LINE.
THE LAYOUT OF THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

GENERAL EROSION CONTROL NOTES

1. SEDIMENT BARRIERS SHALL BE PLACED AS INDICATED ON THE PLAN PRIOR TO ANY GRADING WORK.

2. DUST CONTROL ON SITE SHALL BE KEPT WITHIN ACCEPTABLE LIMITS BY SPRINKLING WITH WATER OR BY OTHER APPROPRIATE METHODS.

3. ADDITIONAL EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF THE CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

4. THE LOCATIONS OF EROSION CONTROL DEVICES SHALL BE ADJUSTED AS CONSTRUCTION PROGRESSES TO MAINTAIN A FUNCTIONAL EROSION CONTROL SYSTEM.

5. ANY FAILURE OF ANY EROSION CONTROL DEVICE TO FUNCTION AS INTENDED FOR ANY REASON SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

6. INSPECTIONS
A. AN INSPECTION SHALL BE CONDUCTED AT LEAST TWICE EACH CALENDAR WEEK AND AT LEAST 72 HOURS APART. PERMITTEE MUST PROVIDE WRITTEN NOTIFICATION TO LOCAL ENVIRONMENTAL FIELD OFFICE.
B. INSPECTIONS SHALL INCLUDE OBSERVATIONS OF THE FOLLOWING:
1. DISTURBED AREAS THAT HAVE NOT BEEN FINALLY STABILIZED
2. AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION
3. EROSION AND SEDIMENT CONTROL DEVICES
4. OUTFALL POINTS
C. INADEQUATE CONTROL MEASURES OR MEASURES IN DISREPAIR SHOULD SHALL BE MODIFIED OR REPAIRED WITHIN SEVEN (7) DAYS OF THE NEED BEING IDENTIFIED.
D. PERSON CONDUCTING INSPECTION MAY BE LICENSED ENGINEER OR LANDSCAPE ARCHITECT,
CPESC, OR COMPLETED TDEC LEVEL II OR LEVEL I.

7. EROSION CONTROL DEVICES SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A FUNCTIONAL EROSION CONTROL SYSTEM.

8. EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED AND THEN REMOVED SO THAT DRAINAGE OF THE SITE IS NOT IMPAIRED.

9. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 15 DAYS SHALL BE STABILIZED WITH TEMPORARY SEEDING AND MULCHING.

10. SILT BARRIERS TO BE CLEANED WHEN THEY ARE APPROXIMATELY 50% OBSTRUCTED BY SEDIMENT OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. SILT BARRIERS SHALL BE REPLACED AS EFFECTIVENESS IS SIGNIFICANTLY REDUCED.

11. SEDIMENT BASIN/POND TO BE CLEANED OF DEPOSITS WHEN CAPACITY HAS REACHED 50% OF VOLUME THROUGH OUT ALL PHASES OF CONSTRUCTION OR AS DIRECTED BY THE OWNERS REPRESENTATIVE.

12. TOPSOIL SHALL BE SPREAD TO A MINIMUM DEPTH OF 4 INCHES.

13. ALL DISTURBED AREAS SHALL BE SEEDED AND RESEEDED AS NECESSARY TO PROVIDE A STABILIZED SITE.

14. REMOVE ALL SEDIMENT FROM ALL DRAINAGE STRUCTURES PRIOR TO ACCEPTANCE BY THE OWNER.

15. CONTRACTOR TO INSTALL ALL EROSION CONTROL DEVICES IN ACCORDANCE WITH LOCAL CODES.

16. CONTRACTOR TO PROVIDE A RAIN GAUGE, MONITOR, AND RECORD RAIN DATA DAILY AND MONITOR AND RECORD THE START AND END TIME FOR EACH RAIN EVENT.

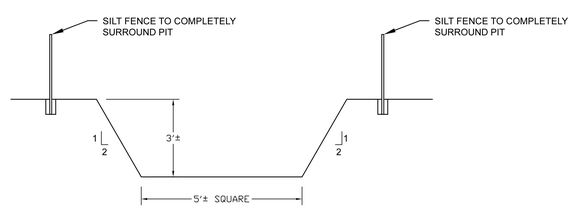
GENERAL GRADING NOTES:

1. ALL SUBGRADE AREAS TO BE PROOF ROLLED WITH FULLY LOADED TANDEM AXLE TRUCK WITH NO PUMPING OR YIELDING SOILS.
2. ALL SUBGRADE AREAS UNDER ROADWAY, PARKING, AND BUILDING EXTENDING OUT FIVE FEET RECOMMENDED TO BE TESTED FOR COMPACTION WITH A PASS/FAIL CRITERIA AS FOLLOWS:
> 98% COMPACTION RELATIVE TO STANDARD PROCTOR, AND
MOISTURE WITHIN - 1% AND 3+% OF OPTIMUM.
3. STONE TESTED FOR COMPACTION WITH A PASS/FAIL CRITERIA AS FOLLOWS:
> 95% COMPACTION RELATIVE TO STANDARD PROCTOR, AND
MOISTURE WITHIN - 1% AND 3+% OF OPTIMUM.
4. AT THE END OF EACH WORKING DAY (WHEN RAIN IS FORECAST), THE SOILS MUST BE SEALED BY AN APPROPRIATE METHOD, E.G., SMOOTH ROLLING.
5. PRIOR TO INITIATING ANY CONSTRUCTION ACTIVITY, CONTRACTOR TO OBTAIN CONSTRUCTION STORM WATER PERMIT AND CONTACT TENNESSEE ONE-CALL AT (800) 351-1111.
6. CONTRACTOR TO INSTALL ALL EROSION AND SEDIMENT CONTROL PROTECTION PRIOR TO GRADING AND PROVIDE CONTINUOUS MAINTENANCE OF SAME.
7. CONTRACTOR TO PLACE FILL IN MAXIMUM 8-INCH LIFTS.

MISCELLANEOUS NOTES

ALL CONSTRUCTION MATERIALS AND METHODS PERFORMED ON THIS PROJECT SHALL CONFORM TO THE FOLLOWING DOCUMENTS:
A: THE CONSTRUCTION PLANS AS APPROVED BY CITY OF COLUMBIA, TN.
B: THE CITY OF COLUMBIA, TN APPROVAL LETTERS.
C: APPROVED SHOP DRAWINGS.
D: ANY SPECIAL SPECIFICATIONS OF SPECIAL PROVISIONS THAT MAY BE ASSIGNED TO THIS PROJECT.
SHOULD CIRCUMSTANCES EXIST WHERE THE CONSTRUCTION MATERIALS' AND/OR METHODS ARE NOT SPECIFICALLY REFERENCED, THE CONTRACTOR SHALL ADMINISTER RECOMMENDATIONS DEVELOPED BY THE ENGINEER AND APPROVED BY THE LOCAL UTILITY.
E. CITY OF COLUMBIA, TN STANDARD SPECIFICATIONS AND DETAILS.

CONTRACTOR TO PROVIDE AND SHALL ALWAYS USE A CONCRETE WASHDOWN CONTROL AS SHOWN BELOW.



NOTE: CONTRACTOR TO CLEAN WHEN WASHOUT MATERIAL ACCUMULATES TO A DEPTH OF 18 INCHES.

Ahler & Associates, LLC
CONSULTING ENGINEERS & LAND SURVEYORS
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SPRING HILL, TN 37174
PH 615.481.3106
FAX: 615.523.1517
SURVEYING
PLANNING
DESIGN
CIVIL

SEAL
JOSEPH E. AHLER
REGISTERED ENGINEER
AGRICULTURE
STATE OF TENNESSEE
No. 14736

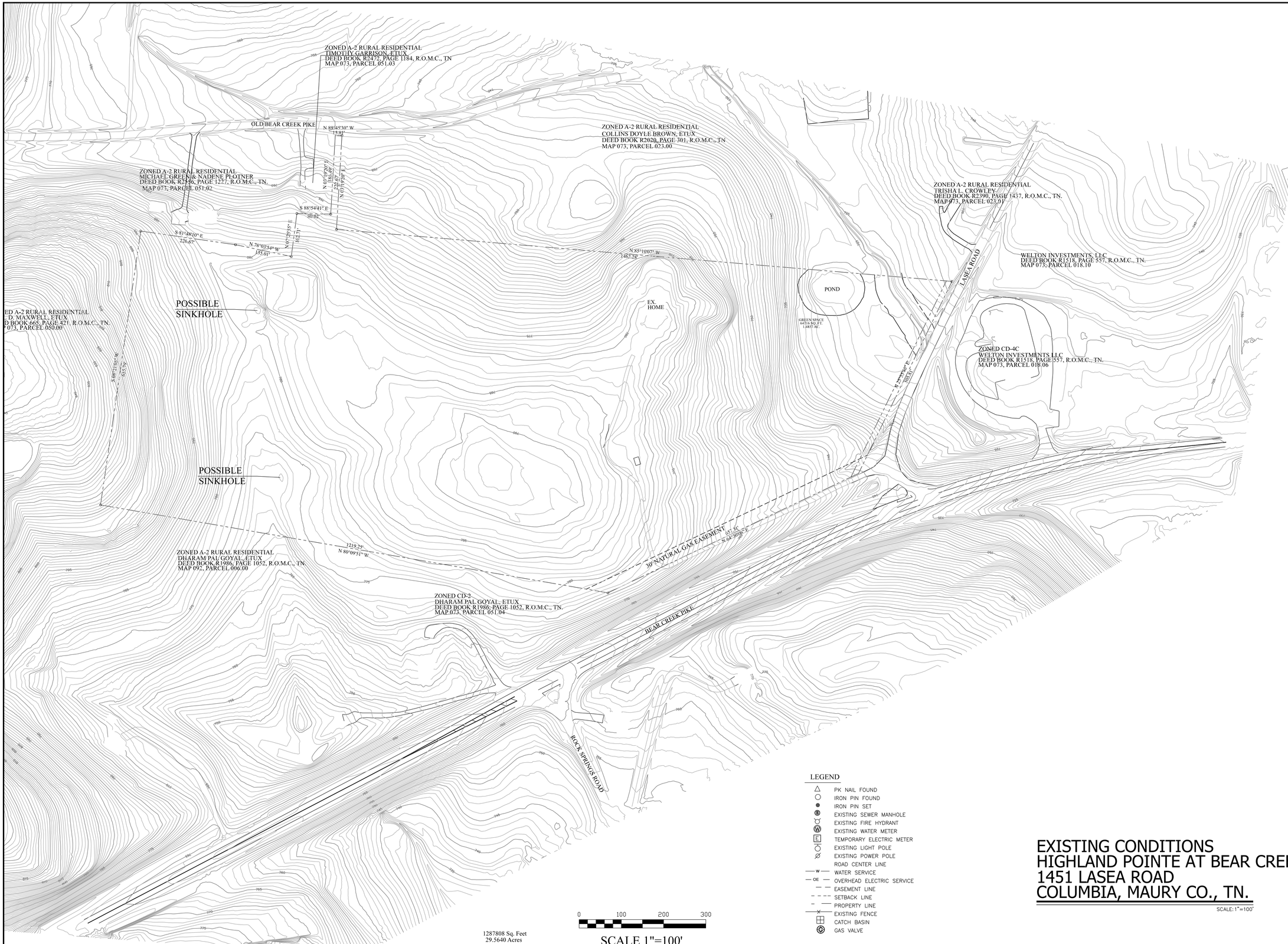
HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA,MAURY CO., TN

ISSUE:	MARK	DATE	DESCRIPTION
	-	1/17/23	ORIGINAL ISSUE

PROJECT No:	NUMBER
DWG. FILE:	DWGFILE
DRAWN BY:	JEA
CHK'D BY:	JEA

SHEET DESCRIPTION
COVER SHEET
-

C0.0



EXISTING CONDITIONS
HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, MAURY CO., TN.

SCALE: 1"=100'

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SEAL

JOSEPH E AHLER
REGISTERED ENGINEER
No. 109024
STATE OF TENNESSEE
No. 14745

HIGHLAND POINTE AT BEAR CREEK

1451 LASEA ROAD
COLUMBIA,MAURY CO., TN

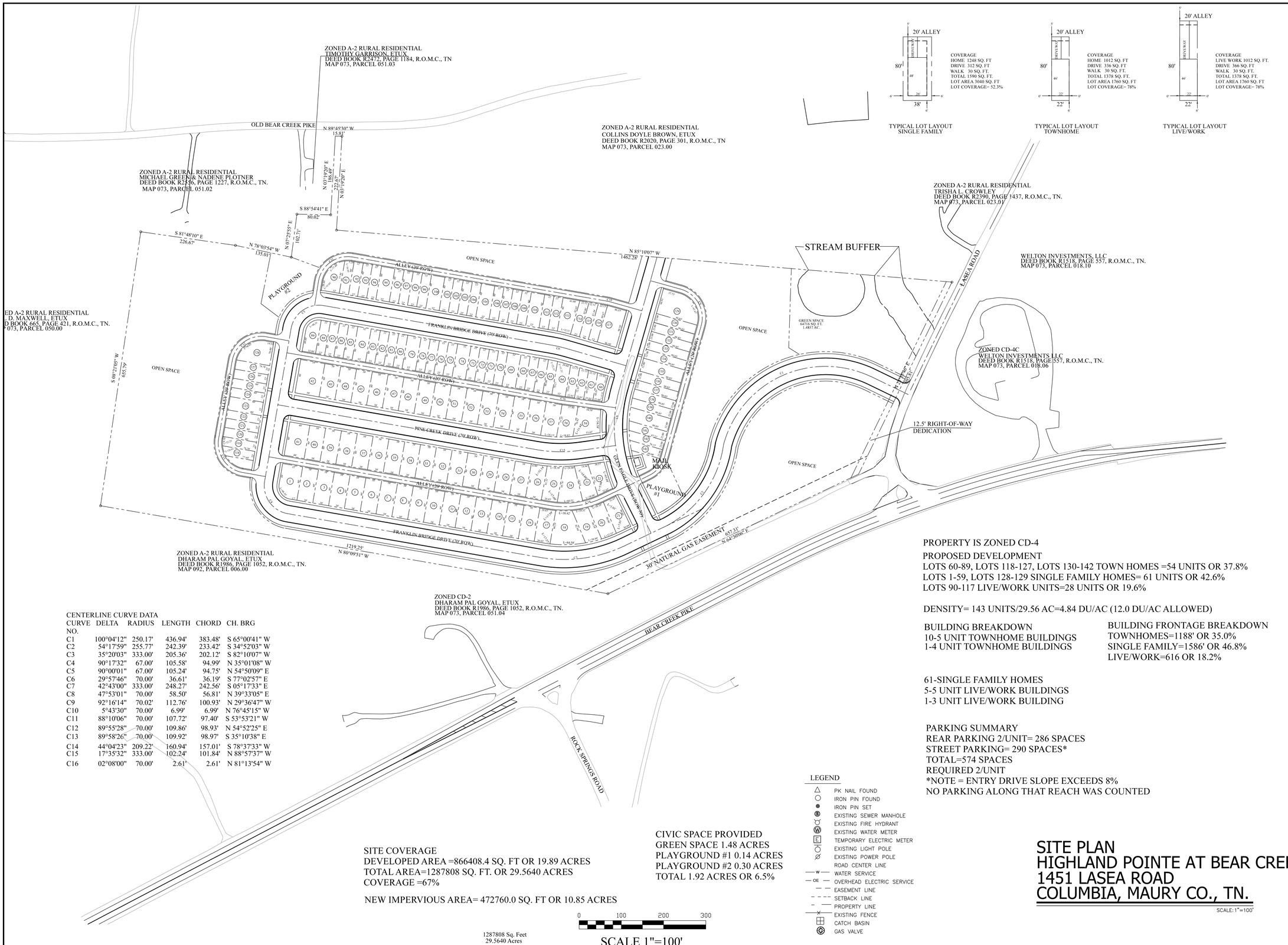
ISSUE:	MARK	DATE	DESCRIPTION
	1	/04/23	ORIGINAL ISSUE

PROJECT NO:	NUMBER
DWG. FILE:	DWGFILE
DRAWN BY:	JEA
CHK'D BY:	JEA

SHEET DESCRIPTION

EXISITING CONDITIONS
-

C2.0



CENTERLINE CURVE DATA

CURVE NO.	DELTA	RADIUS	LENGTH	CHORD	CH. BRG
C1	100°04'12"	250.17'	436.94'	383.48'	S 65°00'41" W
C2	54°17'59"	255.77'	242.39'	233.42'	S 34°52'03" W
C3	35°20'03"	333.00'	205.36'	202.12'	S 82°10'07" W
C4	90°17'32"	67.00'	105.58'	94.99'	N 35°01'08" W
C5	90°00'01"	67.00'	105.24'	94.75'	N 54°50'09" E
C6	29°57'46"	70.00'	36.61'	36.19'	S 77°02'57" E
C7	42°43'00"	333.00'	248.27'	242.56'	S 05°17'33" E
C8	47°53'01"	70.00'	58.50'	56.81'	N 39°33'05" E
C9	92°16'14"	70.02'	112.76'	100.93'	N 29°36'47" W
C10	5°43'30"	70.00'	6.99'	6.99'	N 76°45'15" W
C11	88°10'06"	70.00'	107.72'	97.40'	S 53°53'21" W
C12	89°55'28"	70.00'	109.86'	98.93'	N 54°52'25" E
C13	89°58'26"	70.00'	109.92'	98.97'	S 35°10'38" E
C14	44°04'23"	209.22'	160.94'	157.01'	S 78°37'33" W
C15	17°35'32"	333.00'	102.24'	101.84'	N 88°57'37" W
C16	02°08'00"	70.00'	2.61'	2.61'	N 81°13'54" W

SITE COVERAGE
DEVELOPED AREA =866408.4 SQ. FT OR 19.89 ACRES
TOTAL AREA=1287808 SQ. FT. OR 29.5640 ACRES
COVERAGE =67%

NEW IMPERVIOUS AREA= 472760.0 SQ. FT OR 10.85 ACRES

CIVIC SPACE PROVIDED
GREEN SPACE 1.48 ACRES
PLAYGROUND #1 0.14 ACRES
PLAYGROUND #2 0.30 ACRES
TOTAL 1.92 ACRES OR 6.5%

LEGEND
- PK NAIL FOUND
- IRON PIN FOUND
- IRON PIN SET
- EXISTING SEWER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- TEMPORARY ELECTRIC METER
- EXISTING LIGHT POLE
- EXISTING POWER POLE
- ROAD CENTER LINE
- WATER SERVICE
- OVERHEAD ELECTRIC SERVICE
- EASEMENT LINE
- SETBACK LINE
- PROPERTY LINE
- EXISTING FENCE
- CATCH BASIN
- GAS VALVE

1287808 Sq. Feet
29.5640 Acres

0 100 200 300
SCALE 1"=100'

PROPERTY IS ZONED CD-4

PROPOSED DEVELOPMENT
LOTS 60-89, LOTS 118-127, LOTS 130-142 TOWN HOMES =54 UNITS OR 37.8%
LOTS 1-59, LOTS 128-129 SINGLE FAMILY HOMES= 61 UNITS OR 42.6%
LOTS 90-117 LIVE/WORK UNITS=28 UNITS OR 19.6%

DENSITY= 143 UNITS/29.56 AC=4.84 DU/AC (12.0 DU/AC ALLOWED)

BUILDING BREAKDOWN
10-5 UNIT TOWNHOME BUILDINGS
1-4 UNIT TOWNHOME BUILDINGS

BUILDING FRONTAGE BREAKDOWN
TOWNHOMES=1188' OR 35.0%
SINGLE FAMILY=1586' OR 46.8%
LIVE/WORK=616 OR 18.2%

61-SINGLE FAMILY HOMES
5-5 UNIT LIVE/WORK BUILDINGS
1-3 UNIT LIVE/WORK BUILDING

PARKING SUMMARY
REAR PARKING 2/UNIT= 286 SPACES
STREET PARKING= 290 SPACES*
TOTAL=574 SPACES
REQUIRED 2/UNIT
*NOTE = ENTRY DRIVE SLOPE EXCEEDS 8%
NO PARKING ALONG THAT REACH WAS COUNTED

SITE PLAN
HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, MAURY CO., TN.

SCALE: 1"=100'

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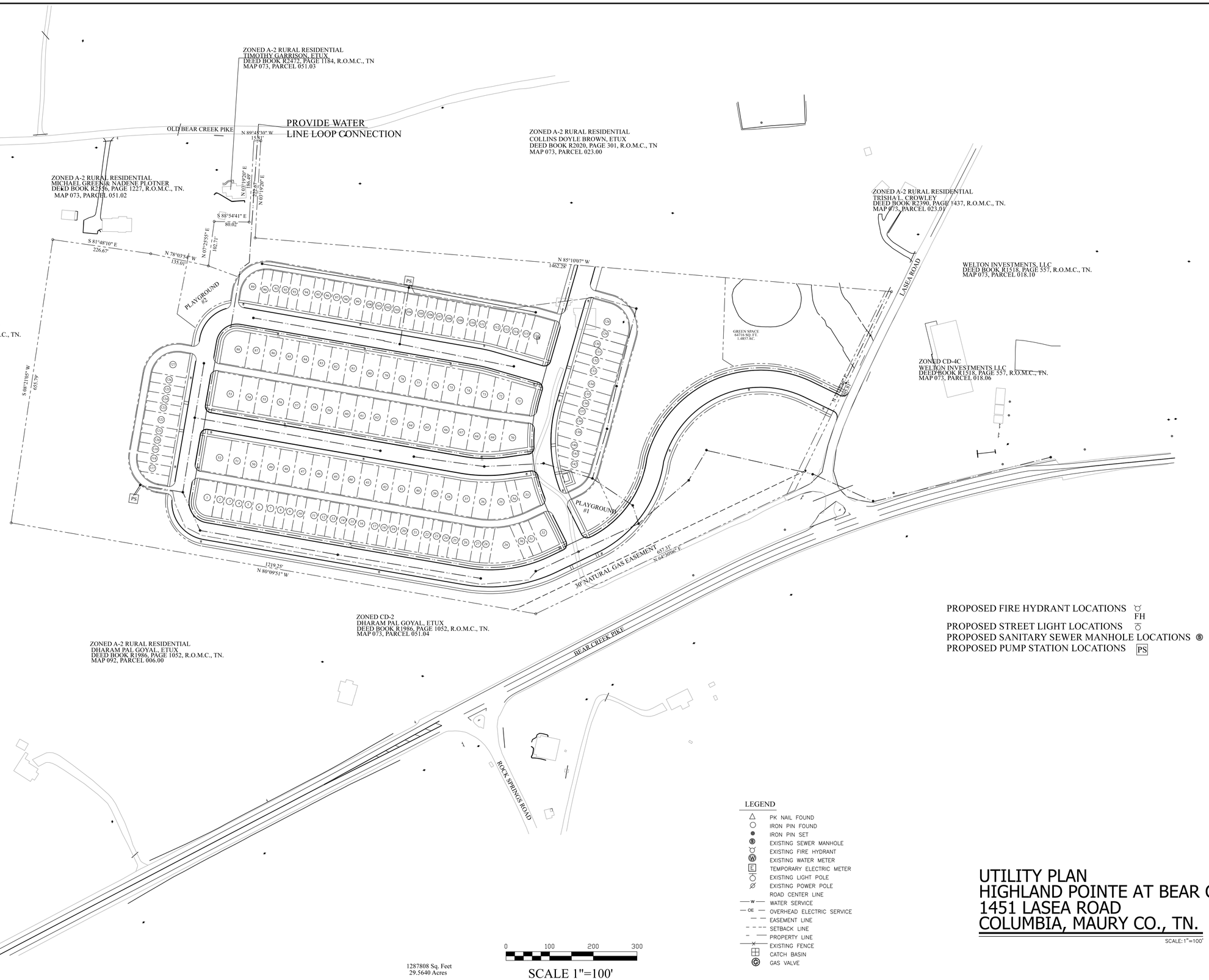
HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA,MAURY CO., TN

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PROJECT NO:	NUMBER
DWG. FILE:	DWGFILE
DRAWN BY:	JEA
CHK'D BY:	JEA

SHEET DESCRIPTION
SITE PLAN
-

C3.0



UTILITY PLAN
HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, MAURY CO., TN.

SCALE: 1"=100'

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No. 14745
STATE OF TENNESSEE

HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA,MAURY CO., TN

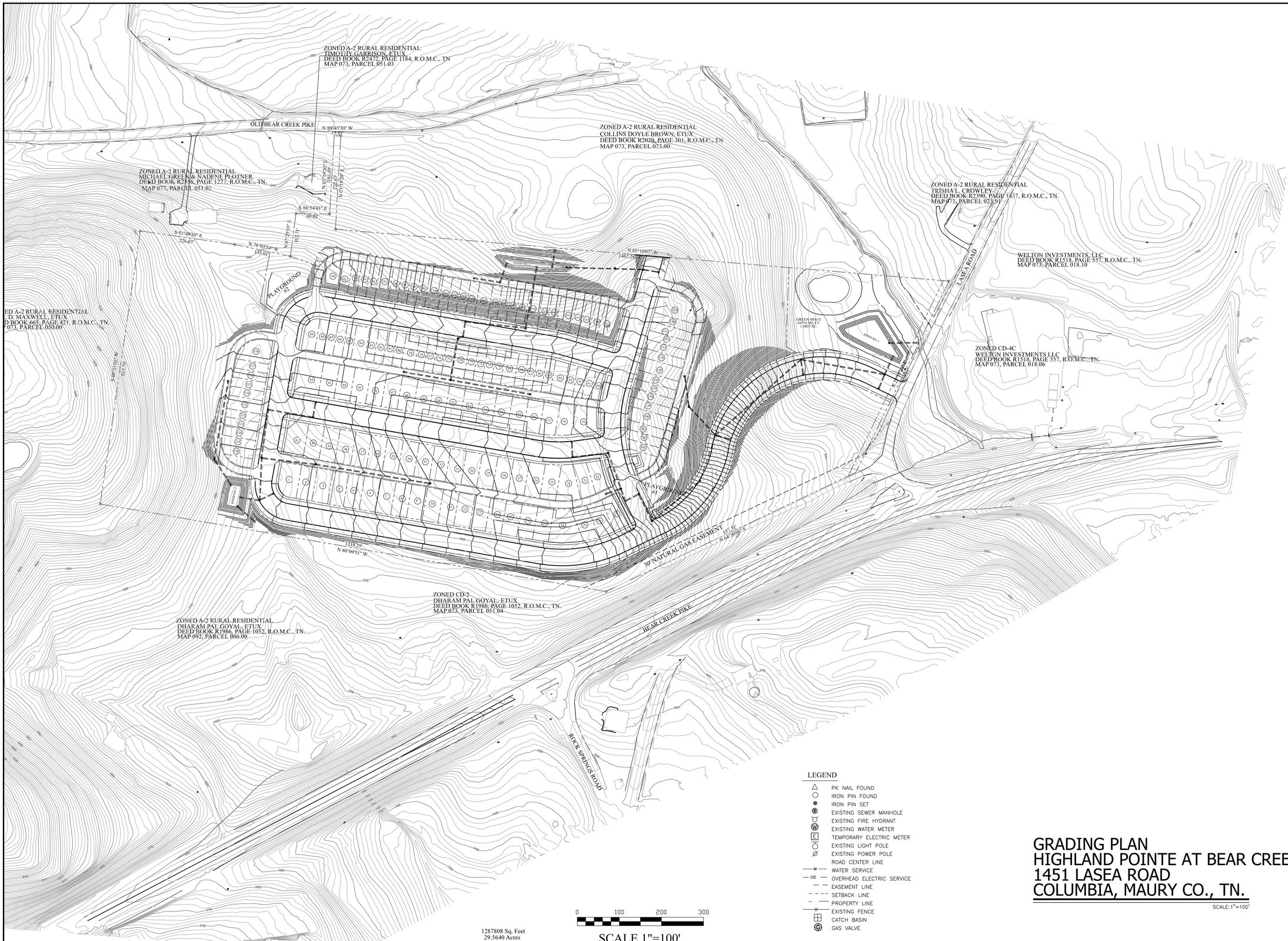
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DRAWN BY:	JEA
CHK'D BY:	JEA

SHEET DESCRIPTION

UTILITY PLAN
-

C4.0



GRADING PLAN
HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, MAURY CO., TN.

SCALE: 1"=100'

Ahler & Associates, LLC
CONSULTING ENGINEERS & LAND SURVEYORS
P.O. BOX 1636
SPRING HILL, TN 37174
PH 615.481.3106
FAX: 615.523.1517

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CIVIL

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JOSEPH E AHLER
REGISTERED ENGINEER
AGRICULTURE
CERTIFICATE NO. 14745
STATE OF TENNESSEE

HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA,MAURY CO., TN

ISSUE:	MARK	DATE	DESCRIPTION
	-	7/04/23	ORIGINAL ISSUE

PROJECT NO:	NUMBER
DWG. FILE:	DWGFILE
DRAWN BY:	JEA
CHK'D BY:	JEA

SHEET DESCRIPTION

GRADING PLAN
-

C5.0

TENNESSEE GENERAL CONSTRUCTION PERMIT NO. TNR

ZONED A-2 RURAL RESIDENTIAL
TIMOTHY GARRISON, ETUX
DEED BOOK R2472, PAGE 1184, R.O.M.C., TN
MAP 073, PARCEL 051.03

OLD BEAR CREEK PIKE

N 89°45'30" W
15.81'

ZONED A-2 RURAL RESIDENTIAL
MICHAEL GREEN & NADENE PLOTNER
DEED BOOK R2556, PAGE 1227, R.O.M.C., TN.
MAP 073, PARCEL 051.02

N 03°19'20" E
186.49'

N 03°19'20" E
212.15'

S 88°54'41" E
80.02'

N 07°25'55" E
102.71'

S 81°48'10" E
226.67'

N 78°03'54" W
135.01'

ZONED A-2 RURAL RESIDENTIAL
L. D. MAXWELL, ETUX
D BOOK 665, PAGE 421, R.O.M.C., TN.
073, PARCEL 050.00

S 08°21'05" W
653.79'

ZONED A-2 RURAL RESIDENTIAL
COLLINS DOYLE BROWN, ETUX
DEED BOOK R2020, PAGE 301, R.O.M.C., TN
MAP 073, PARCEL 023.00

N 85°10'07" W
1462.24'

ZONED A-2 RURAL RESIDENTIAL
TRISHA L. CROWLEY
DEED BOOK R2390, PAGE 1437, R.O.M.C., TN.
MAP 073, PARCEL 023.01

LASEA ROAD

WELTON INVESTMENTS, LLC
DEED BOOK R1518, PAGE 557, R.O.M.C., TN.
MAP 073, PARCEL 018.10

GREEN SPACE
64716 SQ.FT.
1.4857 AC.

ZONED CD-4C
WELTON INVESTMENTS LLC
DEEDBOOK R1518, PAGE 557, R.O.M.C., TN.
MAP 073, PARCEL 018.06

N 17°55'-E
200.00'

INSTALL
CONSTRUCTION
ENTRANCE

INSTALL
SILT FENCE

LIMITS OF
DISTURBANCE

1219.25'
N 80°09'51" W

30' NATURAL GAS EASEMENT

657.31'
N 64°30'06" E

ZONED CD-2
DHARAM PAL GOYAL, ETUX
DEED BOOK R1986, PAGE 1052, R.O.M.C., TN.
MAP 073, PARCEL 051.04

ZONED A-2 RURAL RESIDENTIAL
DHARAM PAL GOYAL, ETUX
DEED BOOK R1986, PAGE 1052, R.O.M.C., TN.
MAP 092, PARCEL 006.00

BEAR CREEK PIKE

ROCK SPRINGS ROAD

TOTAL AREA=1287808 SQ. FT OR 29.56 ACRES
TOTAL DISTURBED AREA=913481 SQ. FT. OR 20.97 ACRES

1287808 Sq. Feet
29.5640 Acres

0 100 200 300
SCALE 1"=100'

LEGEND

- PK NAIL FOUND
- IRON PIN FOUND
- IRON PIN SET
- EXISTING SEWER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- TEMPORARY ELECTRIC METER
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- ROAD CENTER LINE
- WATER SERVICE
- OVERHEAD ELECTRIC SERVICE
- EASEMENT LINE
- SETBACK LINE
- PROPERTY LINE
- EXISTING FENCE
- CATCH BASIN
- GAS VALVE

GENERAL EROSION CONTROL NOTES

1. SEDIMENT BARRIERS SHALL BE PLACED AS INDICATED ON THE PLAN PRIOR TO ANY GRADING WORK.
2. DUST CONTROL ON SITE SHALL BE KEPT WITHIN ACCEPTABLE LIMITS BY SPRINKLING WITH WATER OR BY OTHER APPROPRIATE METHODS.
3. ADDITIONAL EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF THE CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
4. THE LOCATIONS OF EROSION CONTROL DEVICES SHALL BE ADJUSTED AS CONSTRUCTION PROGRESSES TO MAINTAIN A FUNCTIONAL EROSION CONTROL SYSTEM.
5. ANY FAILURE OF ANY EROSION CONTROL DEVICE TO FUNCTION AS INTENDED FOR ANY REASON SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
6. EROSION CONTROL DEVICES SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND AT LEAST DAILY DURING PROLONGED PERIODS OF CONTINUOUS RAINFALL. MINIMUM CLEANING AND REPAIR FREQUENCY SHALL BE ONCE PER MONTH.
7. EROSION CONTROL DEVICES SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A FUNCTIONAL EROSION CONTROL SYSTEM.
8. EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED AND THEN REMOVED SO THAT DRAINAGE OF THE SITE IS NOT IMPAIRED.
9. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 15 DAYS SHALL BE STABILIZED WITH TEMPORARY SEEDING AND MULCHING.
10. SILT BARRIERS TO BE CLEANED WHEN THEY ARE APPROXIMATELY 50% OBSTRUCTED BY SEDIMENT OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. SILT BARRIERS SHALL BE REPLACED AS EFFECTIVENESS IS SIGNIFICANTLY REDUCED.
11. TOPSOIL SHALL BE SPREAD TO A MINIMUM DEPTH OF 4 INCHES.
12. ALL DISTURBED AREAS SHALL BE SEEDED AND RESEEDED AS NECESSARY TO PROVIDE A STABILIZED SITE.
13. REMOVE ALL SEDIMENT FROM ALL DRAINAGE STRUCTURES PRIOR TO ACCEPTANCE BY THE OWNER.
14. CONTRACTOR TO INSTALL ALL EROSION CONTROL DEVICES IN ACCORDANCE WITH LOCAL CODES.

SEEDING NOTES:

1. SOIL TO BE TILLED TO A DEPTH OF 4-INCHES.
2. SEED MIX TO BE A DROUGHT TOLERANCE FESCUE BLEND.
3. SEED TO BE SOWN AT A RATE OF 6#/1,000 S.F.
4. A 10-10-10 FERTILIZER IS TO BE SPREAD AT A RATE OF 10#/1,000 S.F.
5. LIME IS TO BE SPREAD AT A RATE OF 1,000#/ACRE.
6. STRAW TO BE PLACED AT A RATE OF 2 BALES/1,000 S.F.
7. CONTRACTOR IS RESPONSIBLE FOR RESEEDING BARE UNTIL AN ACCEPTABLE STAND OF GRASS IS ACHIEVED.

PHASE ONE
EROSION AND SEDIMENT CONTROL PLAN
HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, MAURY CO., TN.

SCALE: 1"=100'

Ahler & Associates, LLC
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SEAL
JOSEPH E AHLER
REGISTERED ENGINEER
AGRICULTURE
OCTOBER 19, 1982
STATE OF TENNESSEE

HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA,MAURY CO., TN

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DRAWN BY:	JEA
CHK'D BY:	JEA

SHEET DESCRIPTION
EROSION CONTROL PLAN

C6.0

TENNESSEE GENERAL CONSTRUCTION PERMIT NO. TNR

ZONED A-2 RURAL RESIDENTIAL
TIMOTHY GARRISON, ETUX
DEED BOOK R2472, PAGE 1184, R.O.M.C., TN
MAP 073, PARCEL 051.03

OLD BEAR CREEK PIKE

ZONED A-2 RURAL RESIDENTIAL
MICHAEL GREEN & NADENE PLOTNER
DEED BOOK R2556, PAGE 1227, R.O.M.C., TN.
MAP 073, PARCEL 051.02

ZONED A-2 RURAL RESIDENTIAL
COLLINS DOYLE BROWN, ETUX
DEED BOOK R2020, PAGE 301, R.O.M.C., TN
MAP 073, PARCEL 023.00

ZONED A-2 RURAL RESIDENTIAL
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DEED BOOK R2390, PAGE 1437, R.O.M.C., TN.
MAP 073, PARCEL 023.01

WELTON INVESTMENTS, LLC
DEED BOOK R1518, PAGE 557, R.O.M.C., TN.
MAP 073, PARCEL 018.10

ZONED CD-4C
WELTON INVESTMENTS LLC
DEEDBOOK R1518, PAGE 557, R.O.M.C., TN.
MAP 073, PARCEL 018.06

ED A-2 RURAL RESIDENTIAL
. D. MAXWELL, ETUX
D BOOK 665, PAGE 421, R.O.M.C., TN.
073, PARCEL 050.00

LASEA ROAD

INSTALL
CONSTRUCTION
ENTRANCE

INSTALL
SILT FENCE

LIMITS OF
DISTURBANCE

ZONED CD-2
DHARAM PAL GOYAL, ETUX
DEED BOOK R1986, PAGE 1052, R.O.M.C., TN.
MAP 073, PARCEL 051.04

ZONED A-2 RURAL RESIDENTIAL
DHARAM PAL GOYAL, ETUX
DEED BOOK R1986, PAGE 1052, R.O.M.C., TN.
MAP 092, PARCEL 006.00

BEAR CREEK PIKE

ROCK SPRINGS ROAD

30' NATURAL GAS EASEMENT

TOTAL AREA=1287808 SQ. FT OR 29.56 ACRES
TOTAL DISTURBED AREA=913481 SQ. FT. OR 20.97 ACRES

1287808 Sq. Feet
29.5640 Acres

0 100 200 300
SCALE 1"=100'

IP PROVIDE INLET PROTECTION

OP PROVIDE OUTLET PROTECTION

LEGEND
- PK NAIL FOUND
- IRON PIN FOUND
- IRON PIN SET
- EXISTING SEWER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- TEMPORARY ELECTRIC METER
- EXISTING LIGHT POLE
- EXISTING POWER POLE
- ROAD CENTER LINE
- WATER SERVICE
- OVERHEAD ELECTRIC SERVICE
- EASEMENT LINE
- SETBACK LINE
- PROPERTY LINE
- EXISTING FENCE
- CATCH BASIN
- GAS VALVE

GENERAL EROSION CONTROL NOTES

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11. TOPSOIL SHALL BE SPREAD TO A MINIMUM DEPTH OF 4 INCHES.
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13. REMOVE ALL SEDIMENT FROM ALL DRAINAGE STRUCTURES PRIOR TO ACCEPTANCE BY THE OWNER.
14. CONTRACTOR TO INSTALL ALL EROSION CONTROL DEVICES IN ACCORDANCE WITH LOCAL CODES.

SEEDING NOTES:

1.SOIL TO BE TILLED TO A DEPTH OF 4-INCHES.
2. SEED MIX TO BE A DROUGHT TOLERANCE FESCUE BLEND.
3. SEED TO BE SOWN AT A RATE OF 6#/1,000 S.F.
4. A 10-10-10 FERTILIZER IS TO BE SPREAD AT A RATE OF 10#/1,000 S.F.
5. LIME IS TO BE SPREAD AT A RATE OF 1,000#/ACRE.
6. STRAW TO BE PLACED AT A RATE OF 2 BALES/1,000 S.F.
7. CONTRACTOR IS RESPONSIBLE FOR RESEEDING BARE UNTIL AN ACCEPTABLE STAND OF GRASS IS ACHIEVED.

PHASE TWO
EROSION AND SEDIMENT CONTROL PLAN
HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, MAURY CO., TN.

SCALE: 1"=100'

Ahler & Associates, LLC
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AGRICULTURE
CERTIFICATE NO. 114745
STATE OF TENNESSEE

HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA,MAURY CO., TN

ISSUE:	MARK	DATE	DESCRIPTION
	-	4/10/23	ORIGINAL ISSUE

PROJECT NO:	NUMBER
DWG. FILE:	DWGFILE
DRAWN BY:	JEA
CHK'D BY:	JEA

SHEET DESCRIPTION
EROSION CONTROL PLAN

C7.0

TENNESSEE GENERAL CONSTRUCTION PERMIT NO. TNR

STABILIZATION SYMBOLS

VM VEGETATIVE MAT AND SEED

SS SEED AND STRAW(ALL AREAS BETWEEN CURB & SIDEWALK)

AP ASPHALT PAVING

ZONED A-2 RURAL RESIDENTIAL
TIMOTHY GARRISON, ETUX
DEED BOOK R2472, PAGE 1184, R.O.M.C., TN
MAP 073, PARCEL 051.03

OLD BEAR CREEK PIKE

ZONED A-2 RURAL RESIDENTIAL
MICHAEL GREEN & NADENE PLOTNER
DEED BOOK R2556, PAGE 1227, R.O.M.C., TN.
MAP 073, PARCEL 051.02

ZONED A-2 RURAL RESIDENTIAL
COLLINS DOYLE BROWN, ETUX
DEED BOOK R2020, PAGE 301, R.O.M.C., TN
MAP 073, PARCEL 023.00

ZONED A-2 RURAL RESIDENTIAL
TRISHA L. CROWLEY
DEED BOOK R2390, PAGE 1437, R.O.M.C., TN.
MAP 073, PARCEL 023.01

ED A-2 RURAL RESIDENTIAL
. D. MAXWELL, ETUX
D BOOK 665, PAGE 421, R.O.M.C., TN.
073, PARCEL 050.00

WELTON INVESTMENTS, LLC
DEED BOOK R1518, PAGE 557, R.O.M.C., TN.
MAP 073, PARCEL 018.10

ZONED CD-4C
WELTON INVESTMENTS LLC
DEEDBOOK R1518, PAGE 557, R.O.M.C., TN.
MAP 073, PARCEL 018.06

LASEA ROAD

REMOVE CONSTRUCTION ENTRANCE

REMOVE SILT FENCE

LIMITS OF DISTURBANCE

ZONED CD-2
DHARAM PAL GOYAL, ETUX
DEED BOOK R1986, PAGE 1052, R.O.M.C., TN.
MAP 073, PARCEL 051.04

ZONED A-2 RURAL RESIDENTIAL
DHARAM PAL GOYAL, ETUX
DEED BOOK R1986, PAGE 1052, R.O.M.C., TN.
MAP 092, PARCEL 006.00

BEAR CREEK PIKE

ROCK SPRINGS ROAD

10' NATURAL GAS EASEMENT

IP REMOVE INLET PROTECTION

OP PROVIDE OUTLET PROTECTION

LEGEND

- PK NAIL FOUND
- IRON PIN FOUND
- IRON PIN SET
- EXISTING SEWER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING WATER METER
- TEMPORARY ELECTRIC METER
- EXISTING LIGHT POLE
- EXISTING POWER POLE
- ROAD CENTER LINE
- WATER SERVICE
- OVERHEAD ELECTRIC SERVICE
- EASEMENT LINE
- SETBACK LINE
- PROPERTY LINE
- EXISTING FENCE
- CATCH BASIN
- GAS VALVE

GENERAL EROSION CONTROL NOTES

1. SEDIMENT BARRIERS SHALL BE PLACED AS INDICATED ON THE PLAN PRIOR TO ANY GRADING WORK.
2. DUST CONTROL ON SITE SHALL BE KEPT WITHIN ACCEPTABLE LIMITS BY SPRINKLING WITH WATER OR BY OTHER APPROPRIATE METHODS.
3. ADDITIONAL EROSION CONTROL DEVICES SHALL BE INSTALLED IMMEDIATELY AFTER GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF THE CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
4. THE LOCATIONS OF EROSION CONTROL DEVICES SHALL BE ADJUSTED AS CONSTRUCTION PROGRESSES TO MAINTAIN A FUNCTIONAL EROSION CONTROL SYSTEM.
5. ANY FAILURE OF ANY EROSION CONTROL DEVICE TO FUNCTION AS INTENDED FOR ANY REASON SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
6. EROSION CONTROL DEVICES SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND AT LEAST DAILY DURING PROLONGED PERIODS OF CONTINUOUS RAINFALL. MINIMUM CLEANING AND REPAIR FREQUENCY SHALL BE ONCE PER MONTH.
7. EROSION CONTROL DEVICES SHALL BE REPAIRED AS NECESSARY TO MAINTAIN A FUNCTIONAL EROSION CONTROL SYSTEM.
8. EROSION CONTROL DEVICES SHALL BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED AND THEN REMOVED SO THAT DRAINAGE OF THE SITE IS NOT IMPAIRED.
9. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 15 DAYS SHALL BE STABILIZED WITH TEMPORARY SEEDING AND MULCHING.
10. SILT BARRIERS TO BE CLEANED WHEN THEY ARE APPROXIMATELY 50% OBSTRUCTED BY SEDIMENT OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. SILT BARRIERS SHALL BE REPLACED AS EFFECTIVENESS IS SIGNIFICANTLY REDUCED.
11. TOPSOIL SHALL BE SPREAD TO A MINIMUM DEPTH OF 4 INCHES.
12. ALL DISTURBED AREAS SHALL BE SEEDED AND RESEEDED AS NECESSARY TO PROVIDE A STABILIZED SITE.
13. REMOVE ALL SEDIMENT FROM ALL DRAINAGE STRUCTURES PRIOR TO ACCEPTANCE BY THE OWNER.
14. CONTRACTOR TO INSTALL ALL EROSION CONTROL DEVICES IN ACCORDANCE WITH LOCAL CODES.

SEEDING NOTES:

1.SOIL TO BE TILLED TO A DEPTH OF 4-INCHES.
2. SEED MIX TO BE A DROUGHT TOLERANCE FESCUE BLEND.
3. SEED TO BE SOWN AT A RATE OF 6#/1,000 S.F.
4. A 10-10-10 FERTILIZER IS TO BE SPREAD AT A RATE OF 10#/1,000 S.F.
5. LIME IS TO BE SPREAD AT A RATE OF 1,000#/ACRE.
6. STRAW TO BE PLACED AT A RATE OF 2 BALES/1,000 S.F.
7. CONTRACTOR IS RESPONSIBLE FOR RESEEDING BARE UNTIL AN ACCEPTABLE STAND OF GRASS IS ACHIEVED.

TOTAL AREA=1287808 SQ. FT OR 29.56 ACRES
TOTAL DISTURBED AREA=913481 SQ. FT. OR 20.97 ACRES

1287808 Sq. Feet
29.5640 Acres

0 100 200 300
SCALE 1"=100'

PHASE THREE
EROSION AND SEDIMENT CONTROL PLAN
HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, MAURY CO., TN.

SCALE: 1"=100'

Ahler & Associates, LLC
CONSULTING ENGINEERS & LAND SURVEYORS
P.O. BOX 1636
SPRING HILL, TN 37174
PH 615.481.3106
FAX: 615.523.1517
SURVEYING
PLANNING
DESIGN
CIVIL

SEAL
JOSEPH E AHLER
REGISTERED ENGINEER
AGRICULTURE
CERTIFICATE NO. 114745
STATE OF TENNESSEE

HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
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SHEET DESCRIPTION

EROSION CONTROL PLAN

C8.0

APPROXIMATE TOTAL TREE CANOPY(UNDEVELOPED)=23.9 ACRES
APPROX. TOTAL TREE CANOPY(REMAININGG)=7.2 ACRES
TOTAL TREE CANOPY(UNDEVELOPED)=23.9/29.5=81%
TOTAL TREE CANOPY(RETAINED)=7.2/23.9=30.1%

AERIAL PHOTOGRAPHY FROM 2021 BY MAPTECH, LLC

ZONED A-2 RURAL RESIDENTIAL
TIMOTHY GARRISON, ETUX
DEED BOOK R2472, PAGE 1184, R.O.M.C., TN
MAP 073, PARCEL 051.03

OLD BEAR CREEK PIKE

N 89°58'30" W
75.81'

ZONED A-2 RURAL RESIDENTIAL
MICHAEL GREEN & NADENE PLOTNER
DEED BOOK R2586, PAGE 1272, R.O.M.C., TN.
MAP 073, PARCEL 051.02

N 03°19'20" E
25.00'
N 03°19'20" E
25.00'
S 88°54'45" E
30.02'
S 81°38'00" E
226.67'
N 78°03'54" W
185.01'
N 07°25'55" E
102.73'

TREE SAVE AREA

PLAYGROUND #2

ZONED A-2 RURAL RESIDENTIAL
D. MAXWELL, ETUX
DEED BOOK 665, PAGE 421, R.O.M.C., TN.
MAP 073, PARCEL 050.00

N 15°51'55" W
92.53'

EXISTING TREE CANOPY LIMITS

TREE SAVE AREA

LIMITS OF DISTURBANCE

1219.25'
N 80°09'51" W

ZONED A-2 RURAL RESIDENTIAL
COLLINS DOYLE BROWN, ETUX
DEED BOOK R2020, PAGE 301, R.O.M.C., TN
MAP 073, PARCEL 025.00

N 85°10'07" W
1462.71'

TREE SAVE AREA

GREEN SPACE
64316 SQ FT
1.4857 AC

PLAYGROUND #1

30' NATURAL GAS EASEMENT

657.36'
S 04°30'00" E

ZONED A-2 RURAL RESIDENTIAL
TRISHA L. CROWLEY
DEED BOOK R2949, PAGE 1437, R.O.M.C., TN.
MAP 073, PARCEL 022.01

LASEA ROAD

WELTON INVESTMENTS, LLC
DEED BOOK R1518, PAGE 557, R.O.M.C., TN
MAP 073, PARCEL 018.10

ZONED CD-4C
WELTON INVESTMENTS LLC
DEEDBOOK R1518, PAGE 557, R.O.M.C., TN.
MAP 073, PARCEL 018.06

ZONED CD-2
DHARAM PAL GOYAL, ETUX
DEED BOOK R1986, PAGE 1052, R.O.M.C., TN.
MAP 073, PARCEL 051.04

ZONED A-2 RURAL RESIDENTIAL
DHARAM PAL GOYAL, ETUX
DEED BOOK R1986, PAGE 1052, R.O.M.C., TN.
MAP 092, PARCEL 006.00

BEAR CREEK PIKE

ROCK SPRINGS ROAD

1287808 Sq. Feet
29.5640 Acres

0 100 200 300
SCALE 1"=100'

LEGEND

- PK NAIL FOUND
- IRON PIN FOUND
- IRON PIN SET
- (S) EXISTING SEWER MANHOLE
- EXISTING FIRE HYDRANT
- (W) EXISTING WATER METER
- [E] TEMPORARY ELECTRIC METER
- EXISTING LIGHT POLE
- EXISTING POWER POLE
- ROAD CENTER LINE
- —W— WATER SERVICE
- —OE— OVERHEAD ELECTRIC SERVICE
- EASEMENT LINE
- SETBACK LINE
- PROPERTY LINE
- EXISTING FENCE
- CATCH BASIN
- (G) GAS VALVE

TREE PRESERVATION PLAN
HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA, MAURY CO., TN.

SCALE: 1"=100'

Ahler & Associates, LLC
CONSULTING ENGINEERS & LAND SURVEYORS
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SURVEYING
PLANNING
DESIGN
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SEAL
JOSEPH E AHLER
REGISTERED ENGINEER
AGRICULTURE
OF
TENNESSEE
No. 14745
STATE OF TENNESSEE

HIGHLAND POINTE AT BEAR CREEK
1451 LASEA ROAD
COLUMBIA,MAURY CO., TN

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DRAWN BY:	JEA
CHK'D BY:	JEA

SHEET DESCRIPTION
TREE PRESERVATION PLAN

C9.0

TRAFFIC IMPACT STUDY

Crichton Property Development

Map 112 Parcel 003.00
Columbia, TN

T2-Eng.com

T-SQUARE ENGINEERING

TRAFFIC IMPACT STUDY

1451 Lasea Road Development
Tax Map 73 Parcel 51
Columbia, TN

Prepared for:

NASON HOMES

1909 Columbia Avenue
Franklin, TN 37064

Prepared by:

T-SQUARE ENGINEERING

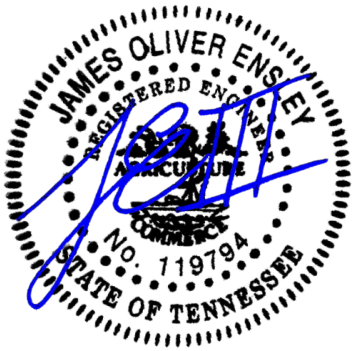
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1329 West Main Street
Franklin, TN 37064
615.678.8212

www.T2-Eng.com

Certification

I certify that this Traffic Impact Study has been prepared by me and under my immediate supervision and that I have the experience and training in the field of traffic and transportation engineering.



10/18/21

James O. Ensley, III, P.E.
T-Square Engineering, Inc.
Project Manager – Traffic Division

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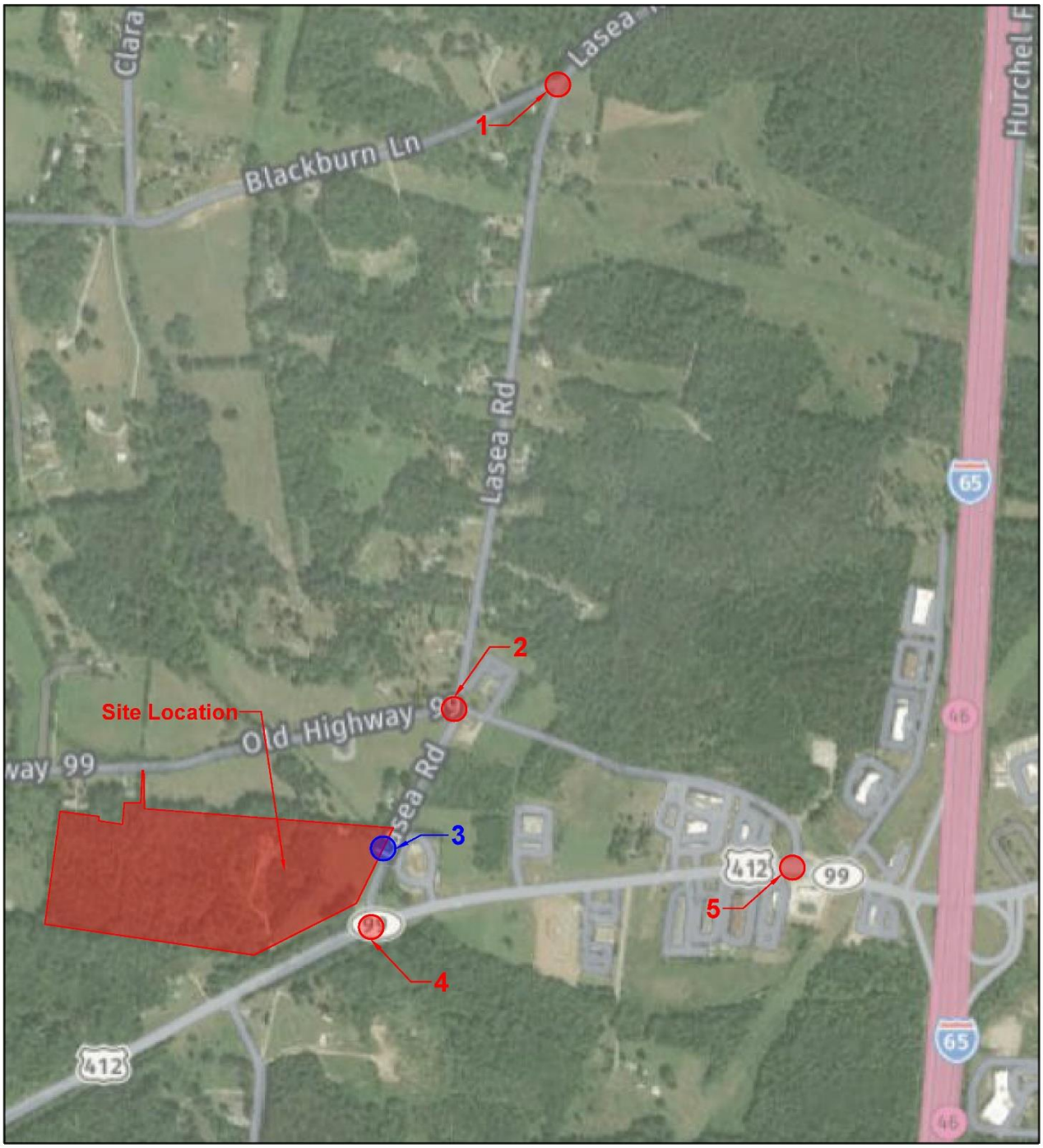
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Introduction

The purpose of this study is to analyze the traffic impacts on the surrounding roadway network associated with the proposed 1451 Lasea Road Development along Lasea Road in Columbia, TN. The proposed development will consist of approximately 208 multi-family (low-rise) housing units.

As shown on the Location Map and Preliminary Site Plan on Figures 1 and 2, respectively, the proposed development is located along the west side of Lasea Road in Columbia, TN. The development is proposing one (1) site access located approximately 400 feet north of the intersection of Lasea Road and Bear Creek Pike. The surrounding area is predominantly residential.

This study analyzes the existing and projected traffic operations of the roadway networks and intersections surrounding the proposed development. To evaluate the projected traffic operations, existing traffic volumes were grown (background traffic volumes) to a 2023 design year based on average traffic growth rates and combined with the generated traffic volumes from nearby background developments and estimated trips generated from the proposed development. Lastly, improvement recommendations were presented to alleviate the anticipated traffic volumes' effect on the existing roadway network near the site.



LEGEND
- Existing Study Intersection
- Proposed Study Intersection

N.T.S.

Figure 1
Location Map

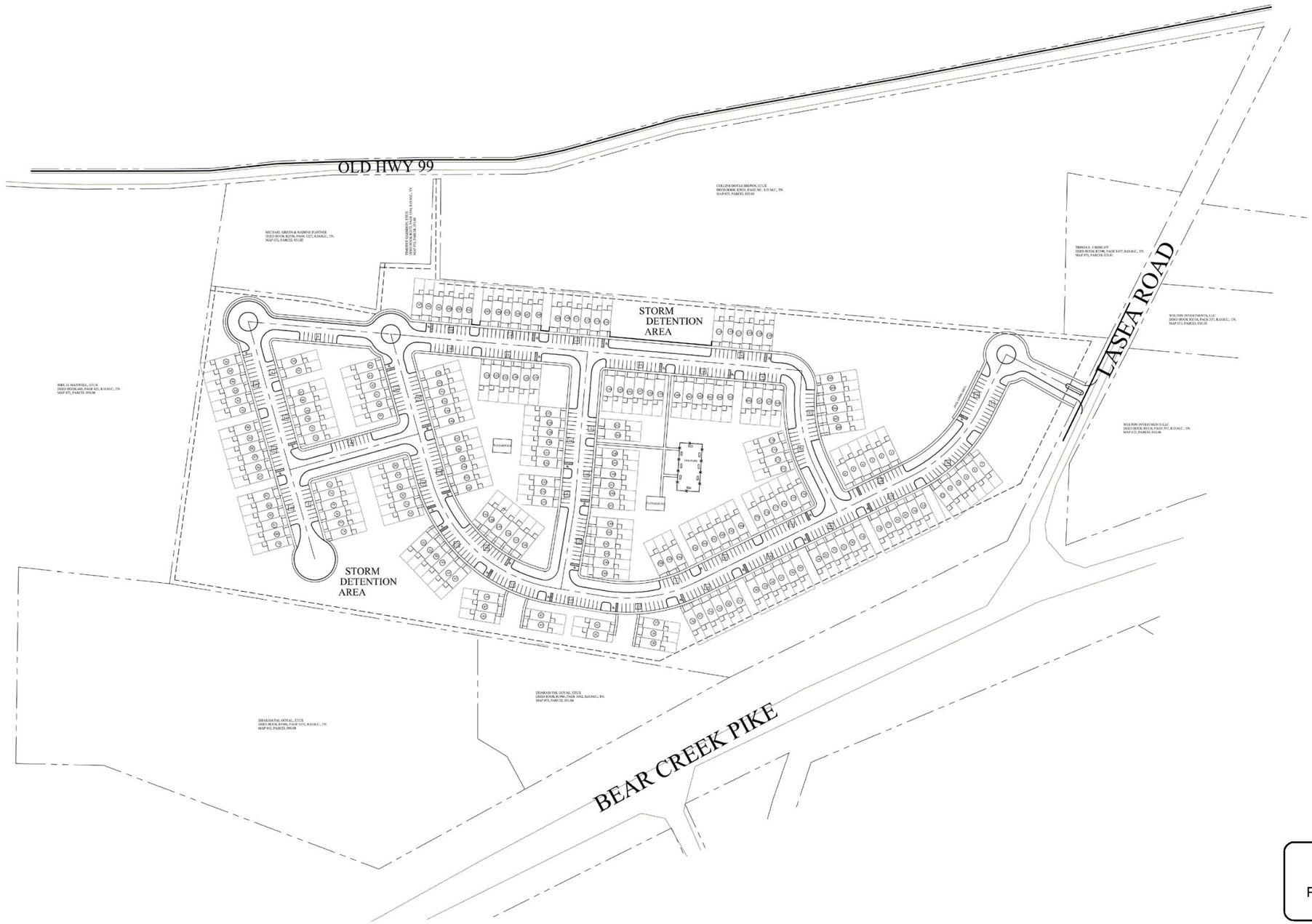


Figure 2
Preliminary Site Plan

Existing Study Area

Existing Roadway Network

The existing roadway network surrounding the proposed Quail Run Meadows Subdivisions includes Lasea Road, Bear Creek Pike (US-412), Old Highway 99, and Blackburn Lane. Below is a description of each roadway. Below is a description of each roadway serving the proposed development:

Lasea Road

Lasea Road is not functionally classified in the City of Columbia, and therefore assumed to be classified as a local roadway. Lasea Road is oriented in a north-south direction and provides a connection between Bear Creek Pike (US-412) to the south and Joe Brown Road to the north. Near the project site, Lasea Road is a two (2) lane roadway with one (1) ten (10) foot travel lane in each direction (northbound and southbound) and three (3) foot shoulders. There is no posted speed limit along Lasea Road. The assumed speed limit for Lasea Road is 35 MPH.



Looking south along Lasea Road

Bear Creek Pike (US-412)

Bear Creek Pike (US-412) is functionally classified by the City of Columbia as an arterial roadway. Bear Creek Pike (US-412) is oriented in an east-west direction and provides a connection between I-65 to the east and Nashville Highway to the west. Near the project site, Bear Creek Pike (US-412) is a three (3) lane roadway with one (1) twelve (12) foot travel lane in each direction (eastbound and westbound), a center two-way left turn lane (TWLTL), and four (4) foot shoulders. The posted speed limit along Bear Creek Pike (US-412) is 45 MPH.



Looking east along Bear Creek Pike (US-412)

Old Highway 99

Old Highway 99 is functionally classified by the City of Columbia as a collector roadway. Near the project site, Old Highway 99 is oriented in an east-west direction and provides a connection to Bear Creek Pike (US-412) to the east and west. Near the project site, Old Highway 99 is a two (2) lane roadway with one (1) nine (9) foot travel lane in each direction (eastbound and westbound) and one (1) foot shoulders. The posted speed limit along Old Highway 99 is 25 MPH.



Looking east along Old Highway 99

Blackburn Lane

Blackburn Lane is not functionally classified in the City of Columbia, and therefore assumed to be classified as a local roadway. Near the project site, Blackburn Lane is oriented in an east-west direction and provides a connection from Lasea Road to the east and Old Highway 99 to the west. Blackburn Lane is a two (2) lane roadway with one (1) nine (9) foot travel lane in each direction (eastbound and westbound). No shoulders currently exist along Blackburn Lane. The posted speed limit along Blackburn Lane is 45 MPH.



Looking west along Blackburn Lane

Existing Intersections

This study analyzed four (4) existing intersections within the vicinity of the project site. The intersections analyzed are listed below with a brief description of each, and Figure 3 shows the existing lane geometry at the intersections.

Lasea Road and Bear Creek Pike (US-412)


Looking west along Bear Creek Pike (US-412) toward its intersection with Lasea Road

The existing intersection of Lasea Road and Bear Creek Pike (US-412) is an unsignalized intersection with three (3) approaches. The southbound approach of Lasea Road has one (1) shared lane for left and right turn movements operating under a stop condition. The eastbound approach of Bear Creek Pike (US-412) has one (1) exclusive lane for left turn movements that transitions into a two-way left-turn lane and one (1) exclusive lane for through movements operating under a free-flow condition. The westbound approach of Bear Creek Pike (US-412) has one (1) shared lane for through and right turn movements operating under a free-flow condition.

Old Highway 99 and Bear Creek Pike (US-412)


Looking south along Old Highway 99 toward its intersection with Bear Creek Pike (US-412)

The existing intersection of Old Highway 99 and Bear Creek Pike (US-412) is an unsignalized intersection with three (3) approaches. The southbound approach of Old Highway 99 has one (1) shared lane for left and right turn movements operating under a stop condition. The eastbound approach of Bear Creek Pike (US-412) has one (1) exclusive lane for left turn movements that transitions into a two-way left-turn lane and one (1) exclusive lane for through movements operating under a free-flow condition. The westbound approach of Bear Creek Pike (US-412) has one (1) shared lane for through and right turn movements operating under a free-flow condition.

Lasea Road and Old Highway 99

The existing intersection of Lasea Road and Old Highway 99 is an unsignalized intersection with four (4) approaches. The southbound approach of Lasea Road has one (1) shared lane for left turn, through, and right turn movements operating under a stop condition. The northbound approach of Lasea Road has one (1) shared lane for left turn, through, and right turn movements operating under a stop condition. The eastbound approach of Old Highway 99 has one (1) shared lane for left turn, through, and right turn movements operating under a stop condition. The westbound approach of Old Highway 99 has one (1) shared lane for left turn, through, and right turn movements operating under a stop condition.



Looking north along Lasea Road toward its intersection with Old Highway 99

Lasea Road and Blackburn Lane

The existing intersection of Lasea Road and Blackburn Lane is an unsignalized intersection with three (3) approaches. The eastbound approach of Blackburn Lane has one (1) shared lane for left and right turn movements operating under a stop condition. The northbound approach of Lasea Road has one (1) shared lane for left turn and through movements operating under a free-flow condition. The southbound approach of Lasea Road has one (1) shared lane for through and right turn movements operating under a free-flow condition.



Looking east along Blackburn Lane toward its intersection with Lasea Road

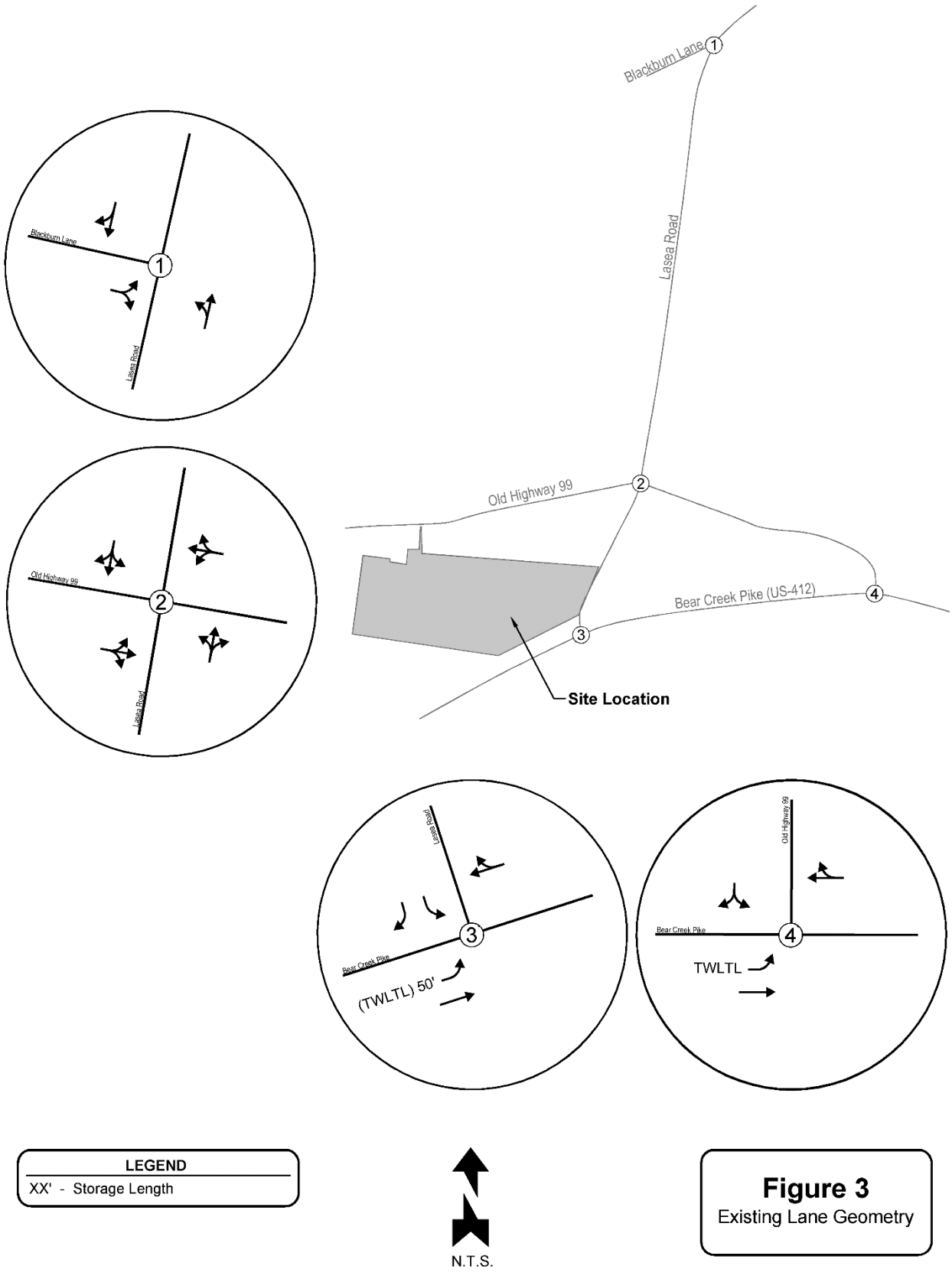


Figure 3
Existing Lane Geometry

Existing Traffic Volumes

To establish existing traffic volumes within the study area (as requested and provided by the City of Columbia), T-Square Engineering utilized the turning movement counts conducted by T-Square Engineering as part of the Quail Run Meadows Traffic Impact Study (TIS) in February 2018 for the following intersections:

- Lasea Road and Blackburn Lane
- Lasea Road and Old Highway 99
- Bear Creek Pike (US-412) and Old Highway 99

To establish existing (2021) traffic volumes, it should be noted that the traffic count volumes for the above intersections were grown for four (4) years by a rate of 2.00% which was determined based on information provided by the City of Columbia regarding growth within the surrounding area. The AM and PM peak hour traffic volumes for these intersections were established and determined to occur between 6:45 AM – 7:45 AM and 4:15 PM – 5:15 PM, respectively.

In addition, as requested by the City of Columbia, T-Square Engineering utilized the turning movement counts conducted by Ragan-Smith Associates as part of the 1449 Rock Springs Road PUD Traffic Impact Study (TIS) in April 2021 for the following intersection:

- Lasea Road and Bear Creek Pike (US-412)

For this analysis, the AM and PM peak hour traffic volumes for this intersection was established and determined to occur between 6:45 AM – 7:45 AM and 4:00 PM – 5:00 PM, respectively. As outlined in the 1449 Rock Springs Road PUD Traffic Impact Study (TIS), the AM peak hour volumes were grown by approximately 1.121 to account for the changes int ravel patterns due to COVID-19. Figure 4 shows the adjusted existing peak hour totals at the study intersections for the AM and PM peak hour periods. Appendix A contains the adjusted peak hour turning movement counts.

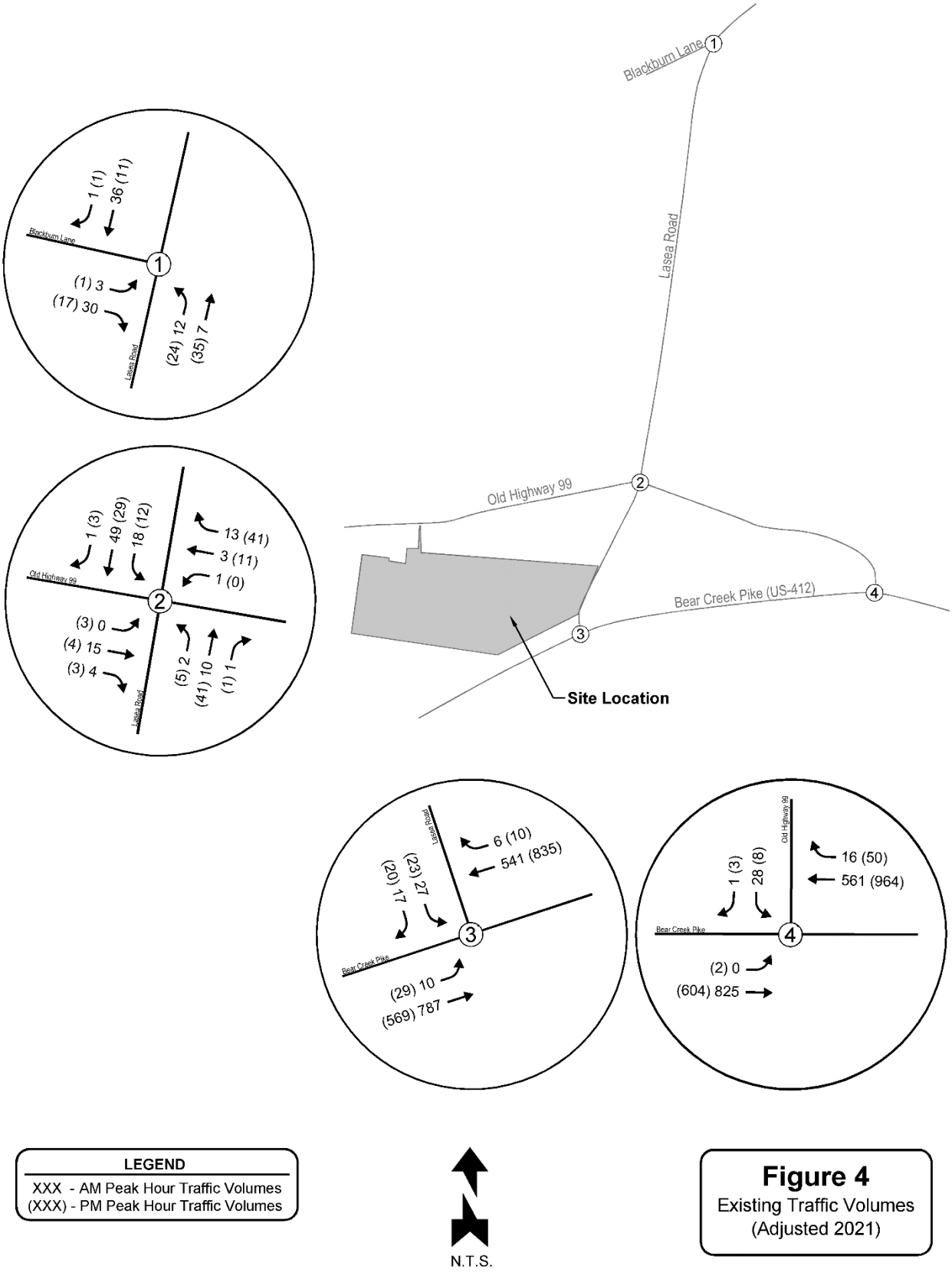


Figure 4
Existing Traffic Volumes
(Adjusted 2021)

Existing Capacity Analysis

To evaluate the existing traffic operations at the study intersections within the vicinity of the project site, AM and PM peak hour capacity analyses were performed per the calculations outlined in the Highway Capacity Manual[1](HCM). Levels of service (LOS), corresponding average delays, and 95th percentile queues were calculated for each turning movement. An LOS is a qualitative measure or grade used to distinguish how traffic is serviced at an intersection or along a roadway. The range of LOS is A to F, with A being the highest and F the lowest. The 95th percentile queue is the queue length (in vehicles) that has only a five (5) percent probability of being exceeded during the analysis period. The 95th percentile queue is not typical of what an average driver would experience, and driver experiences would be better characterized by the mean queue length. The table below details each LOS for signalized and unsignalized intersections, as specified within the HCM.

Table 1. Level of Service (LOS) Details

Level of Service*	Average Control Delay (seconds per vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50
Source: HCM 2010, Exhibits 18-4 and 19-1		

To determine the effectiveness of traffic operations within the study area a minimum LOS or baseline needs to be established. Any LOS below the established baseline will be considered unsatisfactory. LOS C is generally acceptable for typical roadway function while LOS D is typically considered to be the minimum acceptable LOS. According to the City of Columbia's *Transportation Master Plan (2018)*, "In urban areas, LOS D is typically considered to be the minimum acceptable level of service." The following conditions shall be considered unsatisfactory for the purposes of this study:

1. Overall intersections with an LOS E or F.
2. Individual traffic movements with an LOS E or F.

The existing intersections within the study area were analyzed with existing traffic volumes under existing roadway conditions/geometries. The existing capacity analyses were conducted using *Synchro/SimTraffic* software by Trafficware for the unsignalized intersections. Appendix C contains the detailed capacity analyses results.

[1] Transportation Research Board (TRB). Highway Capacity Manual, 5th Edition (2010). Washington, DC: 2010

Table 2. Existing Capacity Analyses

Study Intersection	Control	Approach	2021 Existing Conditions					
			AM Peak Hour			PM Peak Hour		
			LOS	Delay (s)	Queue (ft)	LOS	Delay (s)	Queue (ft)
1. **Lasea Road and Bear Creek Pike (US-412)**	TWSC	SB Left/Right	C	17.6	59	C	20.5	56
		EB Left	A	8.7	19	B	10.1	41
2. **Bear Creek Pike (US-412) and Old Highway 99**	TWSC	SB Left/Right	C	20.0	51	C	21.3	35
		EB Left	A	0.0		B	10.7	9
3. **Lasea Road and Old Highway 99**	TWSC	NB L/T/R	A	7.1	16	A	7.4	26
		SB L/T/R	A	7.4	48	A	7.4	50
		EB L/T/R/	A	7.1	34	A	7.1	28
		WB L/T/R	A	6.8	38	A	6.9	56
4. **Lasea Road and Blackburn Lane**	TWSC	NB Left/Thru	A	7.3	10	A	7.3	9
		EB Left/Right	A	8.7	37	A	8.5	22

The following assessments are based on the results of the Existing Capacity Analyses as shown in the table above:

- All critical movements to the study intersections surrounding the proposed development currently operate at a minimum of LOS C during the AM and PM peak hours with adjusted 2021 existing traffic volumes.

Background Traffic Volumes

To account for traffic growth within the vicinity of the project site prior to the completion of the proposed 1451 Lasea Road Development, background traffic volumes were established. A growth trend was used as a multiplication factor to grow the existing traffic volumes to the 2023 design year (expansion completion). The turning movement counts conducted by T-Square Engineering as part of the Quail Run Meadows Subdivision Traffic Impact Study (TIS) in February 2018 were grown for six (6) years by a rate of 2.00% to establish 2023 background traffic volumes. The turning movement counts conducted by Ragan-Smith Associates as part of the 1449 Rock Springs Road PUD Traffic Impact Study (TIS) in April 2021 were grown by +2.00% per year for two (2) years to establish 2023 background traffic volumes. Figure D1 in Appendix D shows the 2023 background peak hour totals at the study intersections for the AM and PM peak hour periods.

To account for the additional traffic growth within the vicinity of the project site, the generated traffic volumes from previously conducted Traffic Studies near the project site were added to the grown 2023 background traffic volumes. These Traffic Studies include the following:

- Quail Run Meadows Subdivision Traffic Impact Study in February 2018
- Bear Creek Hotel Traffic Impact Study in July 2018
- I-65 and Bear Creek Pike Traffic Impact Study in December 2020
- 1449 Rock Springs Road PUD Traffic Impact Study in April 2021

The generated traffic volumes from each development above are shown on Figures D2-D5 in Appendix D. The 2023 background traffic volumes as shown on Figure D1 were combined with the generated traffic volumes from each development above as shown on Figures D2, resulting in the total combined background peak hour traffic volumes for the study intersections, as shown on Figure 5.

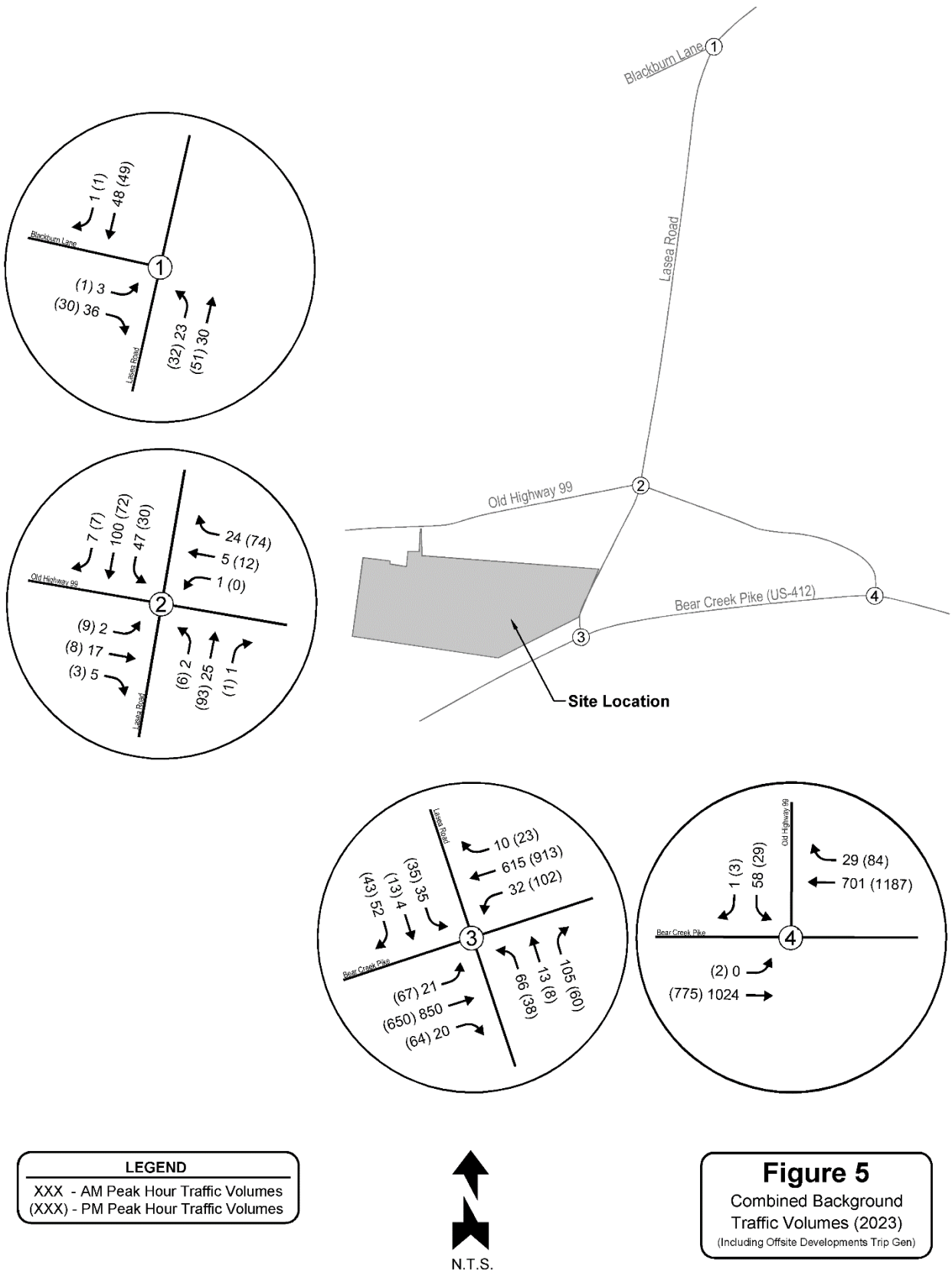


Figure 5
Combined Background Traffic Volumes (2023)
(Including Offsite Developments Trip Gen)

Background Capacity Analyses

To evaluate the background traffic operations at the study intersections within the vicinity of the project site, the AM and PM peak hour capacity analyses were performed based on calculations outlined in the Highway Capacity Manual (HCM). Levels of service (LOS), corresponding average delays, and 95th percentile queues were calculated for each turning movement.

The previously conducted Traffic Studies for the background developments resulted in multiple recommended roadway improvements to the study intersections. These recommended improvements will be utilized as part of the background roadway conditions and have been included in the background capacity analyses. The improvements are listed below by intersection. Figure 6 shows a summary of the off-site improvements from previously conducted traffic studies for background developments.

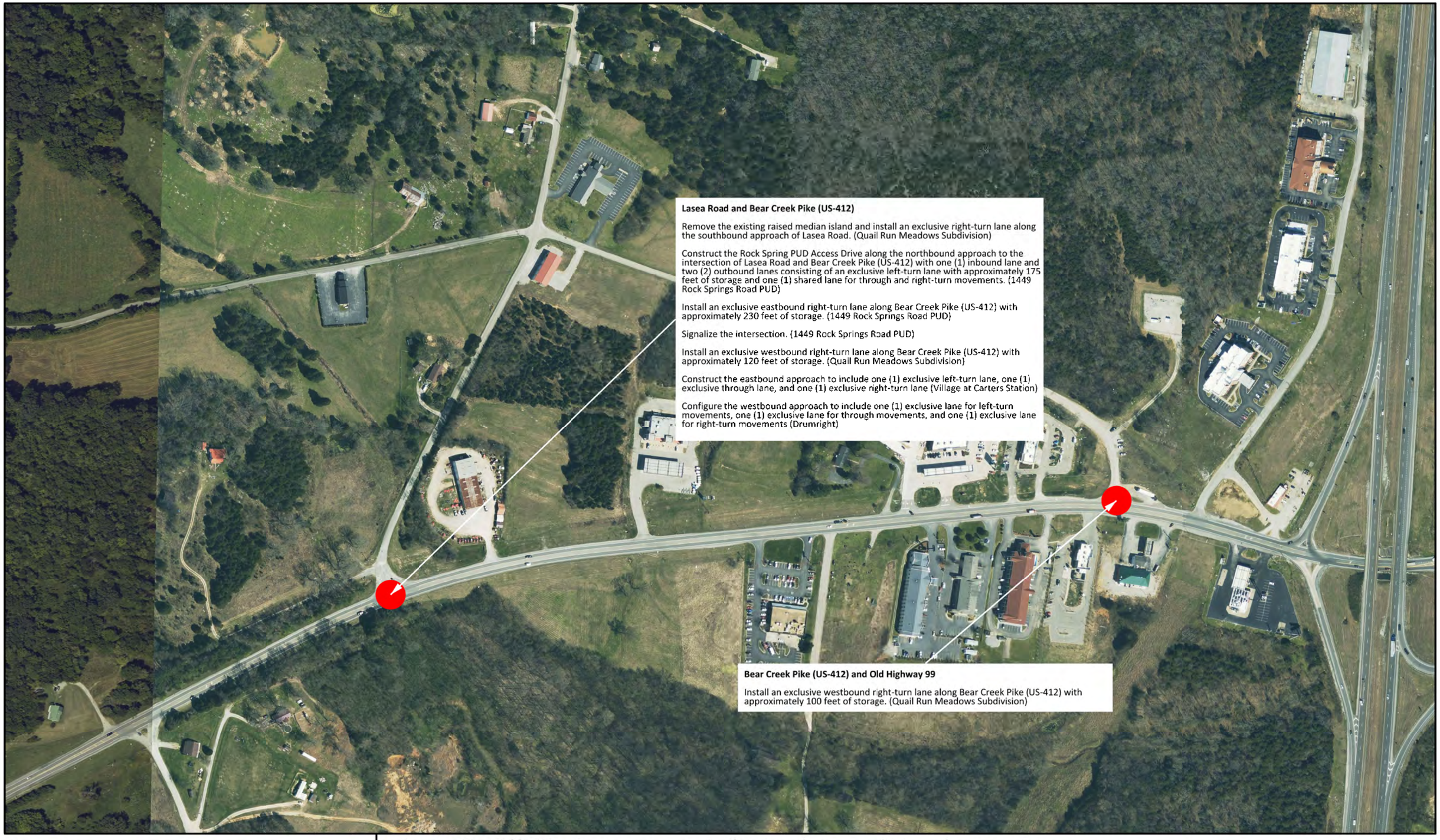
<u>Lasea Road and Bear Creek Pike (US-412)</u>

- Remove the existing raised median island and install an exclusive right-turn lane along the southbound approach of Lasea Road. (Quail Run Meadows Subdivision)
- Construct the Rock Spring PUD Access Drive along the northbound approach to the intersection of Lasea Road and Bear Creek Pike (US-412) with one (1) inbound lane and two (2) outbound lanes consisting of an exclusive left-turn lane with approximately 175 feet of storage and one (1) shared lane for through and right-turn movements. (1449 Rock Springs Road PUD)
- Install an exclusive eastbound right-turn lane along Bear Creek Pike (US-412) with approximately 230 feet of storage. (1449 Rock Springs Road PUD)
- Signalize the intersection. (1449 Rock Springs Road PUD)
- Install an exclusive westbound right-turn lane along Bear Creek Pike (US-412) with approximately 120 feet of storage. (Quail Run Meadows Subdivision)

<u>Bear Creek Pike (US-412) and Old Highway 99</u>

- Install an exclusive westbound right-turn lane along Bear Creek Pike (US-412) with approximately 100 feet of storage. (Quail Run Meadows Subdivision).

The study intersections were analyzed based on background roadway conditions and lane geometries. It should be noted that optimized traffic signal timings were utilized at the intersection of Lasea Road and Bear Creek Pike (US-412) for this analysis. The background capacity analyses were conducted using *Synchro/SimTraffic* software by Trafficware for both signalized and unsignalized intersections. Appendix C contains the detailed capacity analyses results.



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Figure 6 - Off-Site Improvements for Background Developments

1451 Lasea Road Development • Columbia, TN • Approximate Scale: 1" = 300'

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300' 150' 0' 300'

1 inch = 300 feet

Table 3. Background Capacity Analyses

Study Intersection	Control	Approach	2023 Background Conditions					
			AM Peak Hour			PM Peak Hour		
			LOS	Delay (s)	Queue (ft)	LOS	Delay (s)	Queue (ft)
1. **Lasea Road and Bear Creek Pike (US-412)**	Signal	NB Left	C	34.3	65	D	37.6	52
		NB Thru/Right	D	46.3	113	D	47.7	58
		SB Left	C	33.2	47	D	36.0	51
		SB Thru/Right	D	38.1	48	D	41.0	57
		EB Left	B	11.4	32	C	21.0	125
		EB Thru	C	28.3	388	B	15.8	254
		EB Right	A	9.6	28	A	9.3	39
		WB Left	B	18.5	82	B	11.6	192
		WB Thru	B	15.2	219	C	33.0	475
		WB Right	A	9.2	108	A	8.7	83
		Overall	**C**	**25.0**	**--**	**C**	**25.8**	**--**
2. **Bear Creek Pike (US-412) and Old Highway 99**	TWSC	SB Left/Right	D	30.2	152	D	31.4	73
		EB Left	A	9.4	0	B	12.3	9
3. **Lasea Road and Old Highway 99**	TWSC	NB L/T/R	A	7.4	28	A	7.9	46
		SB L/T/R	A	8.1	67	A	8.0	63
		EB L/T/R/	A	7.4	37	A	7.7	32
		WB L/T/R	A	7.1	42	A	7.4	60
4. **Lasea Road and Blackburn Lane**	TWSC	NB Left/Thru	A	7.4	9	A	7.4	10
		EB Left/Right	A	8.8	43	A	8.7	37

The following assessments are based on the results of the Background Capacity Analyses as shown in the table above:

- All critical movements to the study intersections surrounding the proposed development currently operate at a minimum of LOS D during the AM and PM peak hours with background 2023 traffic volumes.

Impacts

Trips were generated to establish projected traffic volumes for the proposed 1451 Lasea Road Development. Daily and peak hour trips were generated by formulas presented in the Trip Generation Manual[2] based on the number of proposed housing units by the development. As previously stated, the development will consist of approximately 208 multi-family (low-rise) housing units. The Multi-Family (Low-Rise) Housing (220) ITE Land Use was used to estimate the generated traffic volumes. The table below provides the new trips generated for the proposed development. Appendix B contains detailed trip generation calculations.

Table 4. Crichton Property Development Trip Generation

ITE Land Use (Code)	Size	Generated Traffic Volumes				
		Daily	AM Peak		PM Peak	
			Enter	Exit	Enter	Exit
Multi-Family (Low-Rise) Housing (220)	208 Units	1,532	22	74	71	42

Projected Traffic Distribution and Assignments

For the purposes of this study, estimated directional distributions shown on Figure 7 were established for the proposed development's generated traffic volumes. The development of these directional distributions was established based on the following:

- Conducted hourly turning movement counts
- Proposed land use characteristics
- Existing roadway network
- Existing lane geometry of surrounding intersections
- The developments proposed access locations
- Locations of populations centers within the surrounding area

The primary trips generated were assigned to the existing roadway network per the distributions shown on Figure 7, resulting in the generated peak hour traffic volumes shown on Figure 8. The generated peak hour traffic volumes were then added to the 2023 background volumes as shown on Figure 5, resulting in the total projected peak hour traffic volumes in Figure 9.

[2] Institute of Transportation Engineers (ITE). Trip Generation Manual, 10th Edition. Washington, DC: ITE, 2018

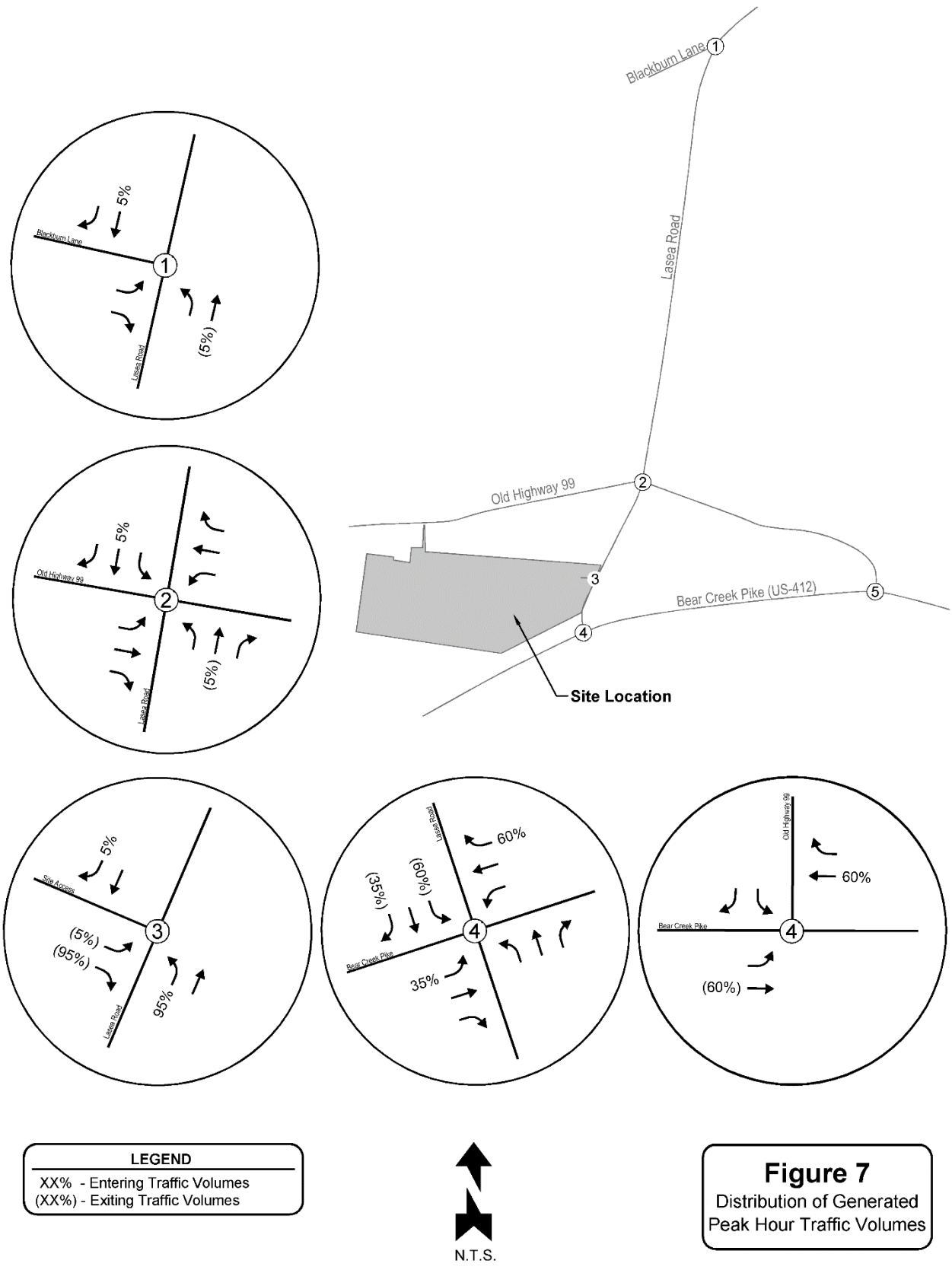


Figure 7
Distribution of Generated
Peak Hour Traffic Volumes

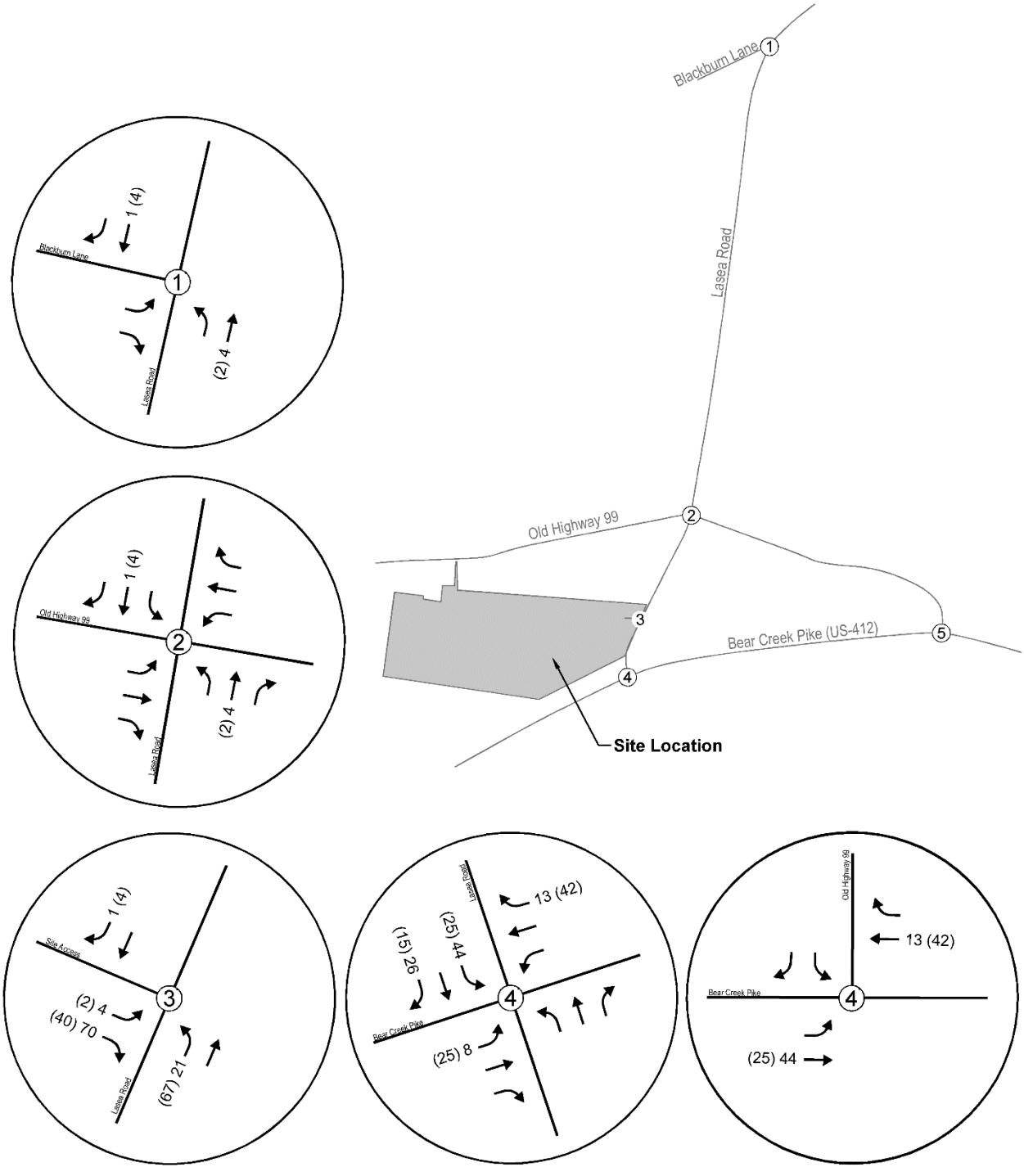


Figure 8
Assignment of Generated Peak Hour Traffic Volumes

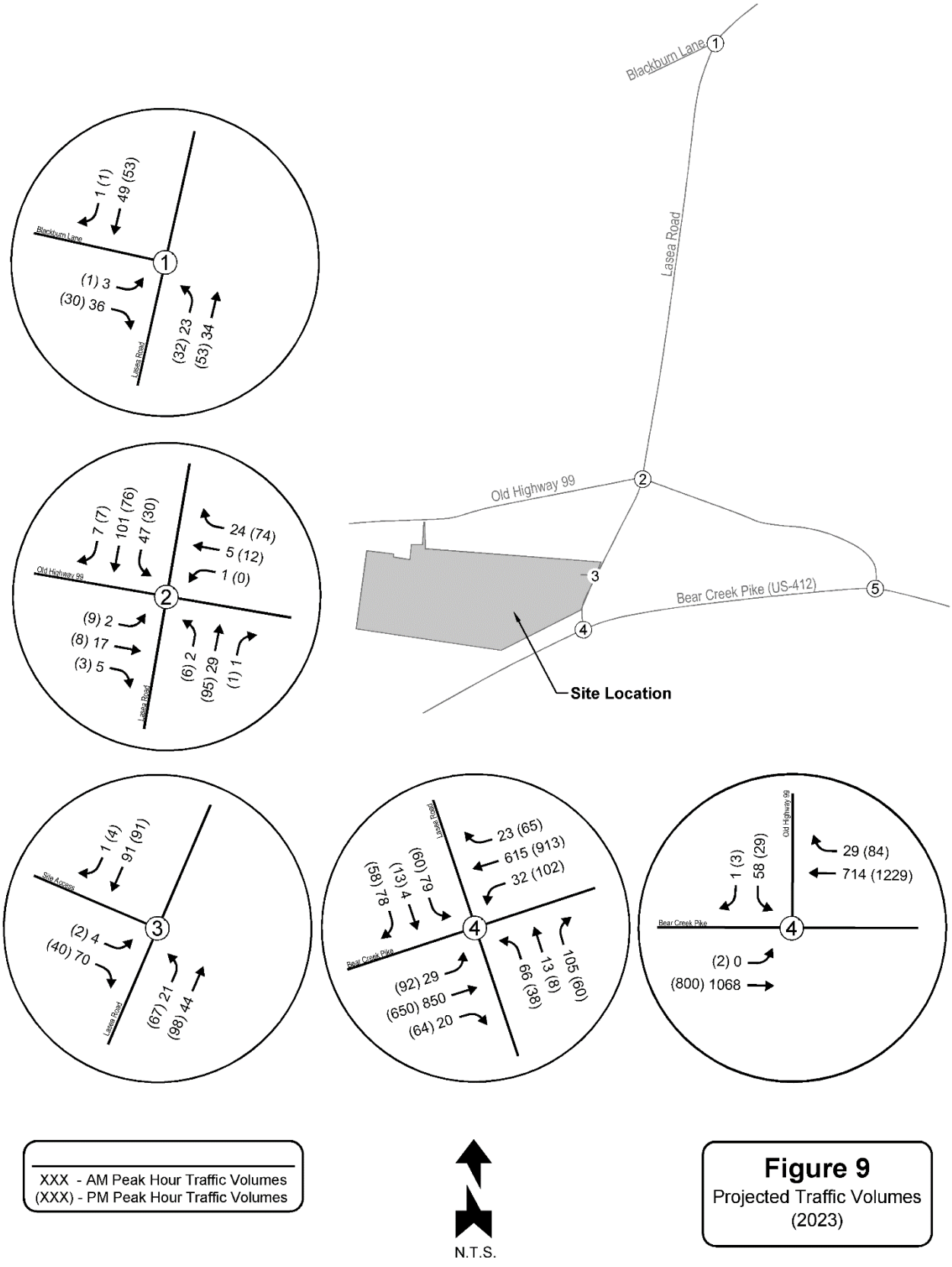


Figure 9
Projected Traffic Volumes
(2023)

Projected Capacity Analysis

To evaluate the projected traffic operations at the study intersections within the vicinity of the project site, AM and PM peak hour capacity analyses were performed. The capacity analyses include the total projected traffic volumes generated from the proposed development in addition to background traffic volumes. Levels-of-service (LOS), corresponding average delays, and 95th percentile queues were calculated for each turning movement. The intersections were analyzed based on background roadway conditions and lane geometries as outlined previously with projected traffic volumes.

The intersections were analyzed based on background roadway conditions and lane geometries as outlined in the Background Traffic Volumes section above. It should be noted that optimized traffic signal timings were utilized at the intersection of Lasea Road and Bear Creek Pike (US-412) for this analysis. The projected capacity analyses were conducted using *Synchro/SimTraffic* software by Trafficware for both signalized and unsignalized intersections. Appendix C contains the detailed capacity analyses results.

Table 5. Projected Capacity Analyses

Study Intersection	Control	Approach	2023 Projected Conditions					
			AM Peak Hour			PM Peak Hour		
			LOS	Delay (s)	Queue (ft)	LOS	Delay (s)	Queue (ft)
1. **Lasea Road and Bear Creek Pike (US-412)**	Signal	NB Left	D	35.3	64	D	38.2	49
		NB Thru/Right	D	47.6	94	D	48.3	56
		SB Left	C	34.9	84	D	37.4	74
		SB Thru/Right	D	39.6	62	D	42.8	45
		EB Left	B	12.0	101	C	22.6	138
		EB Thru	C	29.7	354	B	15.7	289
		EB Right	A	10.0	8	A	9.2	36
		WB Left	B	19.2	44	B	11.6	237
		WB Thru	B	16.2	241	C	33.9	913
		WB Right	A	9.9	29	A	9.2	176
		Overall	**C**	**26.4**	**--**	**C**	**26.2**	**--**
2. **Bear Creek Pike (US-412) and Old Highway 99**	TWSC	SB Left/Right	D	31.9	122	D	33.2	51
		EB Left	A	0.0	0	B	12.6	19
3. **Lasea Road and Old Highway 99**	TWSC	NB L/T/R	A	7.4	28	A	8.0	39
		SB L/T/R	A	8.1	65	A	8.1	53
		EB L/T/R/	A	7.4	39	A	7.7	26
		WB L/T/R	A	7.1	50	A	7.4	50
4. **Lasea Road and Blackburn Lane**	TWSC	NB Left/Thru	A	7.4	0	A	7.4	0
		EB Left/Right	A	8.8	38	A	8.7	34
5. **Lasea Road and Site Access**	TWSC	NB Left/Thru	A	7.4	10	A	7.5	26
		EB Left/Right	A	9.2	44	A	9.1	50

The following assessments are based on the results of the Projected Capacity Analyses as shown in the table above:

- All critical movements to the study intersections surrounding the proposed development currently operate at a minimum of LOS D during the AM and PM peak hours with projected 2023 traffic volumes.

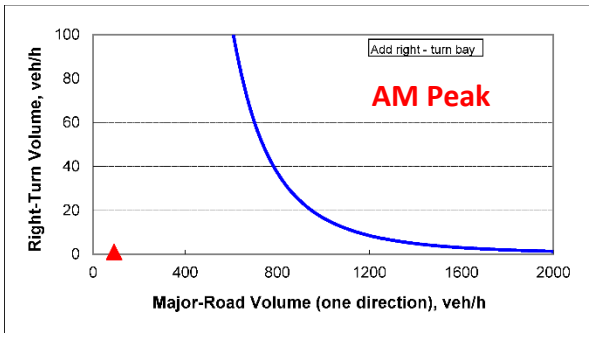
Intersection Assessments (Projected Conditions)

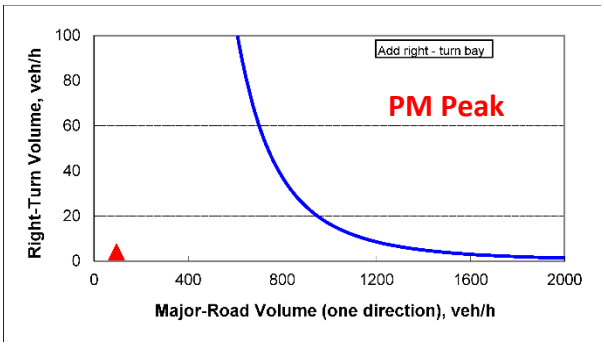
Engineering assessments were performed on the intersections within the study area to identify underlying inefficiencies and solutions to alleviate any concerns associated with intersection geometries and traffic volumes along the roadway network. Major-road approach left-turn lane warrants were performed based on Figures 2-5 and 2-6 in the *NCHRP Report 457 – Evaluating Intersection Improvements: An Engineering Study Guide*[3] and projected traffic volumes. Minor-road approach geometric warrants were performed based on Figure 2-4 in the *NCHRP Report 457 – Evaluating Intersection Improvements: An Engineering Study Guide*[4]. The results of the warrants are shown below.

Lasea Road and Site Access

Table 6. Major-Road Approach Geometry, SBR Lasea Road at Site Access

Variable	AM Peak	PM Peak
Major-road speed, mph:	35	35
Major-road volume (one direction), veh/h:	92	95
Major-road right-turn volume, veh/h:	1	4
Limiting right-turn volume, veh/h:	1000+	1000+
Right-turn bay warranted:	**NO**	**NO**
Source: *NCHRP Report 457: Evaluating Intersection Improvements: An Engineering Study Guide*		





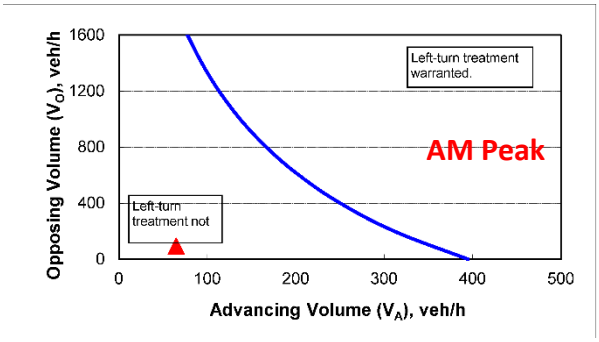
As shown in Table 6 and the corresponding graphs, it was determined that a southbound right-turn lane is not warranted along Lasea Road at its intersection with the proposed Site Access during either of the peak hour periods with projected traffic volumes.

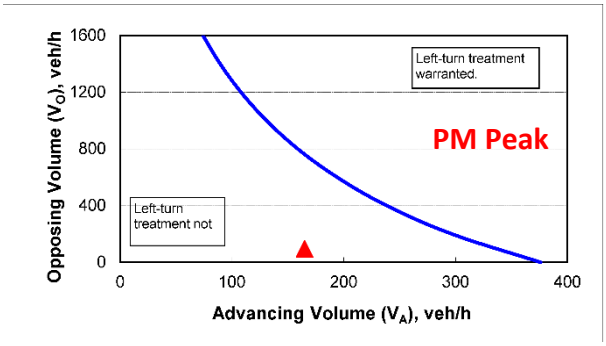
[3] Transportation Research Board (TRB). Evaluating Intersection Improvements: An Engineering Study Guide. Washington, DC: 2001

[4] Transportation Research Board (TRB). Evaluating Intersection Improvements: An Engineering Study Guide. Washington, DC: 2001

Table 7. Major-Road Approach Geometry, NBL Lasea Road at Site Access

Variable	AM Peak	PM Peak
85th percentile speed, mph:	35	35
Percent of left-turns in advancing volume (V_A), %:	32%	41%
Advancing volume (V_A), veh/h:	65	165
Opposing volume (V_O), veh/h:	92	95
Limiting advancing volume (V_A), veh/h:	353	335
Left-turn bay warranted:	**NO**	**NO**
Source: *NCHRP Report 457: Evaluating Intersection Improvements: An Engineering Study Guide*		

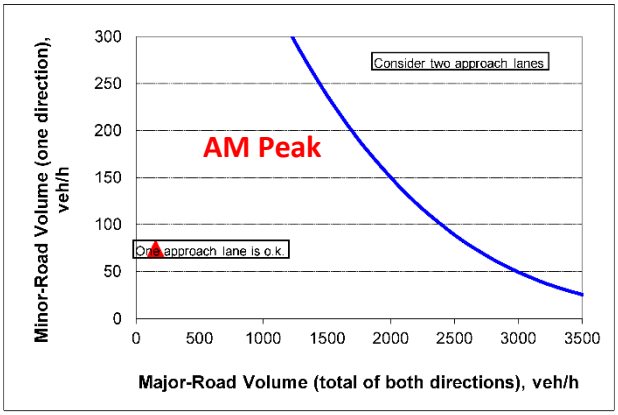


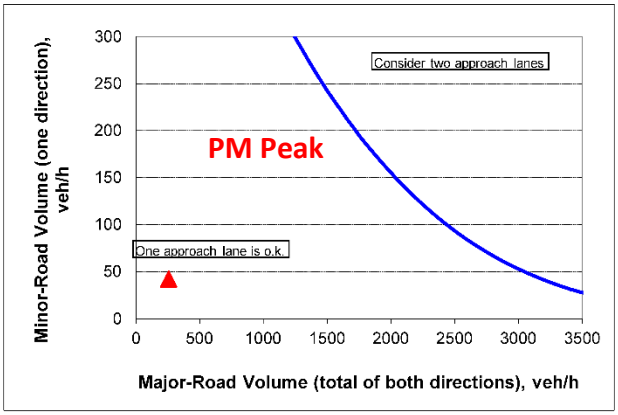


As shown in Table 7 and the corresponding graphs, it was determined that a northbound left-turn lane is not warranted along Lasea Road at its intersection with the proposed Site Access during either of the peak hour periods with projected traffic volumes.

Table 8. Minor-Road Approach Geometry, EBR Site Access at Lasea Road

Variable	AM Peak	PM Peak
Major-road volume (total both directions), veh/h:	157	260
Percentage of right-turns on minor road, %:	95%	95%
Minor-road volume (one direction), veh/h:	74	42
Limiting minor-road volume (one direction), veh/h:	673	628
Right-turn bay warranted:	**One (1) approach lane is sufficient**	**One (1) approach lane is sufficient**
Source: *NCHRP Report 457: Evaluating Intersection Improvements: An Engineering Study Guide*		





As shown in Table 8 and the corresponding graphs, it was determined that one (1) shared lane for left-turn and right-turn movements on the eastbound approach of the proposed Site Access at its intersection with Lasea Road is sufficient with projected traffic volumes.

Conclusions

Existing Conditions

Intersection Capacity Analyses

- All critical movements to the study intersections surrounding the proposed development currently operate at a minimum of LOS C during the AM and PM peak hours with adjusted 2021 existing traffic volumes.

Background Conditions

Intersection Capacity Analyses

- All critical movements to the study intersections surrounding the proposed development currently operate at a minimum of LOS D during the AM and PM peak hours with background 2023 traffic volumes.

Projected Conditions

Intersection Capacity Analyses

- All critical movements to the study intersections surrounding the proposed development currently operate at a minimum of LOS D during the AM and PM peak hours with projected 2023 traffic volumes.

Turn Lane Analyses

- It was determined that the eastbound approach of the proposed Site Access at its intersection with Lasea Road will be sufficient with one (1) shared lane for left-turn and right-turn movements with projected traffic volumes.

Recommendations

Based on the analyses within this study, and a review of the proposed development's access plan, the recommendations below have been presented to be implemented as part of the proposed 1451 Lasea Road Development in Columbia, TN. These recommendations will be implemented in addition to the various improvements at the study intersections outlined in previously conducted traffic studies within the area. Figure 10 shows a summary of the recommended improvements for this development and other nearby developments.

Improvement Recommendations for the 1451 Lasea Road Development

Lasea Road and Bear Creek Pike (US-412)

- No improvements are recommended for this intersection as part of the construction of the 1451 Lasea Road Development.

Bear Creek Pike (US-412) and Old Highway 99

- No improvements are recommended for this intersection as part of the construction of the 1451 Lasea Road Development.

Lasea Road and Old Highway 99

- No improvements are recommended for this intersection as part of the construction of the 1451 Lasea Road Development.

Lasea Road and Blackburn Lane

- No improvements are recommended for this intersection as part of the construction of the 1451 Lasea Road Development.

Lasea Road and Site Access

- Construct the proposed Site Access along Lasea Road with one (1) inbound lane and one (1) outbound lane operating under a stop condition for Lasea Road according to MUTCD, AASHTO, TDOT, and City of Columbia standards.
- All radii for the proposed access shall be designed via coordination with the City of Columbia to accommodate the largest turning vehicle requirements that will service the development according to MUTCD, AASHTO, TDOT, and City of Columbia standards.
- Ensure the departure sight distance triangles for all driveways, internal intersections, and site access intersections are designed to be clear of all sight obstructions (including vegetation) as specified by AASHTO. The design of proposed internal roadway system should be completed according to the MUTCD, AASHTO, TDOT, and City of Columbia standards.



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Figure 10 - Recommended Improvements for 1451 Lasea Road Development

1451 Lasea Road Development • Columbia, TN • Approximate Scale: 1" = 600'

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600' 300' 0' 600'

1 inch = 600 feet

APPENDIX

APPENDIX A – DETAILED TURNING MOVEMENT COUNTS

Location: Maury County (Columbia)
Count Type: Turning Movement Counts (TMCs) - Ragan Smith and Assoc

Count Sites: 4
Intersection #: 1
Intersection: Lasea Road and Bear Creek Pike (US-412)

Southbound: Lasea Road
Westbound: Bear Creek Pike (US-412)
Northbound: N/A
Eastbound: Bear Creek Pike (US-412)

Lat/Long: N/A

Count Date: 3/4/2021

Time Period: 0600 - 0900 (Weekday AM Peak)

Figure 1 - Turning Movement Designation

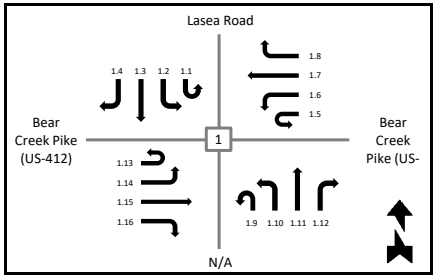
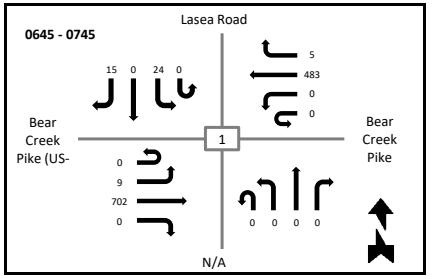


Figure 2 - AM Peak Hour TMC



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	Southbound						Westbound						Northbound						Eastbound					
	Lasea Road						Bear Creek Pike (US-412)						N/A						Bear Creek Pike (US-412)					
Time	U-Turn 1.1	Left 1.2	Thru 1.3	Right 1.4	Peds X-Walk	App Total	U-Turn 1.5	Left 1.6	Thru 1.7	Right 1.8	Peds X-Walk	App Total	U-Turn 1.9	Left 1.10	Thru 1.11	Right 1.12	Peds X-Walk	App Total	U-Turn 1.13	Left 1.14	Thru 1.15	Right 1.16	Peds X-Walk	App Total
0600 - 0615	0	8	0	0	0	8	0	0	47	0	0	47	0	0	0	0	0	0	0	3	137	0	0	140
0615 - 0630	0	2	0	6	0	8	0	0	93	2	0	95	0	0	0	0	0	0	0	1	132	0	0	133
0630 - 0645	0	5	0	4	0	9	0	0	76	0	0	76	0	0	0	0	0	0	0	1	179	0	0	180
0645 - 0700	0	6	0	5	0	11	0	0	113	0	0	113	0	0	0	0	0	0	0	2	187	0	0	189
0700 - 0715	0	7	0	6	0	13	0	0	111	0	0	111	0	0	0	0	0	0	0	3	172	0	0	175
0715 - 0730	0	6	0	2	0	8	0	0	116	2	0	118	0	0	0	0	0	0	0	0	175	0	0	175
0730 - 0745	0	5	0	2	0	7	0	0	143	3	0	146	0	0	0	0	0	0	0	4	168	0	0	172
0745 - 0800	0	4	0	2	0	6	0	0	119	0	0	119	0	0	0	0	0	0	0	3	151	0	0	154
0800 - 0815	0	4	0	3	0	7	0	0	109	4	0	113	0	0	0	0	0	0	0	4	158	0	0	162
0815 - 0830	0	4	0	5	0	9	0	0	95	1	0	96	0	0	0	0	0	0	0	1	131	0	0	132
0830 - 0845	0	3	0	6	0	9	0	0	93	0	0	93	0	0	0	0	0	0	0	1	106	0	0	107
0845 - 0900	0	4	0	1	0	5	0	0	73	1	0	74	0	0	0	0	0	0	0	3	129	0	0	132
Grand Total	**0**	**58**	**0**	**42**	**0**	**100**	**0**	**0**	**1188**	**13**	**0**	**1201**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**26**	**1825**	**0**	**0**	**1851**
Peak Hour Total																								
0645 - 0745	**0**	**24**	**0**	**15**	**0**	**39**	**0**	**0**	**483**	**5**	**0**	**488**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**702**	**0**	**0**	**711**
App %	0.00%	58.00%	0.00%	42.00%			0.00%	0.00%	98.92%	1.08%			0.00%	0.00%	0.00%	0.00%			0.00%	1.40%	98.60%	0.00%		
Int %	0.00%	1.84%	0.00%	1.33%		3.17%	0.00%	0.00%	37.69%	0.41%		38.10%	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%	0.82%	57.90%	0.00%		58.72%
Cars Total	0	58	0	42			0	0	1188	13			0	0	0	0			0	26	1825	0		
Heavy Total	0	0	0	0			0	0	0	0			0	0	0	0			0	0	0	0		
% Cars	**0.00%**	**100.00%**	**0.00%**	**100.00%**			**0.00%**	**0.00%**	**100.00%**	**100.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**100.00%**	**100.00%**	**0.00%**		
% Heavy	**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**		

Location: Maury County (Columbia)
Count Type: Turning Movement Counts (TMCs) - Ragan Smith and Assoc

Count Sites: 4
Intersection #: 1
Intersection: Lasea Road and Bear Creek Pike (US-412)

Southbound: Lasea Road
Westbound: Bear Creek Pike (US-412)
Northbound: N/A
Eastbound: Bear Creek Pike (US-412)

Lat/Long: N/A

Count Date: 3/4/2021

Time Period: 1500 - 1800 (Weekday PM Peak)

Figure 1 - Turning Movement Designation

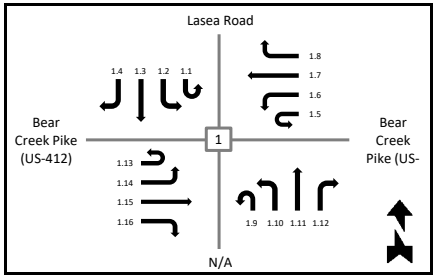
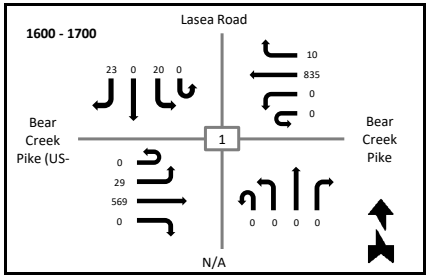


Figure 2 - PM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	Lasea Road						Bear Creek Pike (US-412)						N/A						Bear Creek Pike (US-412)					
Time	U-Turn 1.1	Left 1.2	Thru 1.3	Right 1.4	Peds X-Walk	App Total	U-Turn 1.5	Left 1.6	Thru 1.7	Right 1.8	Peds X-Walk	App Total	U-Turn 1.9	Left 1.10	Thru 1.11	Right 1.12	Peds X-Walk	App Total	U-Turn 1.13	Left 1.14	Thru 1.15	Right 1.16	Peds X-Walk	App Total
1500 - 1515	0	4	0	6	0	10	0	0	158	2	0	160	0	0	0	0	0	0	0	7	125	0	0	132
1515 - 1530	0	3	0	5	0	8	0	0	180	2	0	182	0	0	0	0	0	0	0	4	132	0	0	136
1530 - 1545	0	5	0	6	0	11	0	0	214	4	0	218	0	0	0	0	0	0	0	8	129	0	0	137
1545 - 1600	0	4	0	6	0	10	0	0	205	1	0	206	0	0	0	0	0	0	0	4	159	0	0	163
1600 - 1615	0	7	0	7	0	14	0	0	219	1	0	220	0	0	0	0	0	0	0	5	137	0	0	142
1615 - 1630	0	3	0	5	0	8	0	0	217	7	0	224	0	0	0	0	0	0	0	8	138	0	0	146
1630 - 1645	0	7	0	8	0	15	0	0	228	1	0	229	0	0	0	0	0	0	0	6	165	0	0	171
1645 - 1700	0	3	0	3	0	6	0	0	171	1	0	172	0	0	0	0	0	0	0	10	129	0	0	139
1700 - 1715	0	4	0	5	0	9	0	0	189	5	0	194	0	0	0	0	0	0	0	5	135	0	0	140
1715 - 1730	0	5	0	2	0	7	0	0	175	3	0	178	0	0	0	0	0	0	0	11	157	0	0	168
1730 - 1745	0	4	0	9	0	13	0	0	152	5	0	157	0	0	0	0	0	0	0	5	135	0	0	140
1745 - 1800	0	4	0	3	0	7	0	0	167	3	0	170	0	0	0	0	0	0	0	4	106	0	0	110
Grand Total	**0**	**53**	**0**	**65**	**0**	**118**	**0**	**0**	**2275**	**35**	**0**	**2310**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**77**	**1647**	**0**	**0**	**1724**
Peak Hour Total																								
1600 - 1700	**0**	**20**	**0**	**23**	**0**	**43**	**0**	**0**	**835**	**10**	**0**	**845**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**29**	**569**	**0**	**0**	**598**
App %	0.00%	44.92%	0.00%	55.08%			0.00%	0.00%	98.48%	1.52%			0.00%	0.00%	0.00%	0.00%			0.00%	4.47%	95.53%	0.00%		
Int %	0.00%	1.28%	0.00%	1.57%		2.84%	0.00%	0.00%	54.79%	0.84%		55.64%	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%	1.85%	39.67%	0.00%		41.52%
Cars Total	0	53	0	65			0	0	2275	35			0	0	0	0			0	77	1647	0		
Heavy Total	0	0	0	0			0	0	0	0			0	0	0	0			0	0	0	0		
% Cars	**0.00%**	**100.00%**	**0.00%**	**100.00%**			**0.00%**	**0.00%**	**100.00%**	**100.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**100.00%**	**100.00%**	**0.00%**		
% Heavy	**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**		

Location: Maury County (Columbia)
Count Type: Turning Movement Counts (TMCs)

Count Sites: 4
Intersection #: 2
Intersection: Bear Creek Pike (US-412) and Old Highway 99

Southbound: Old Highway 99
Westbound: Bear Creek Pike (US-412)
Northbound: N/A
Eastbound: Bear Creek Pike (US-412)

Lat/Long: N/A

Count Date: 9/6/2017

Time Period: 0600 - 0900 (Weekday AM Peak)

Figure 1 - Turning Movement Designation

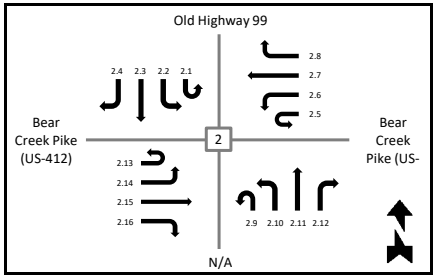
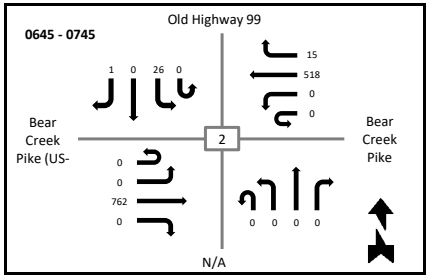


Figure 2 - AM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	Old Highway 99						Bear Creek Pike (US-412)						N/A						Bear Creek Pike (US-412)					
Time	U-Turn 2.1	Left 2.2	Thru 2.3	Right 2.4	Peds X-Walk	App Total	U-Turn 2.5	Left 2.6	Thru 2.7	Right 2.8	Peds X-Walk	App Total	U-Turn 2.9	Left 2.10	Thru 2.11	Right 2.12	Peds X-Walk	App Total	U-Turn 2.13	Left 2.14	Thru 2.15	Right 2.16	Peds X-Walk	App Total
0600 - 0615	0	13	0	0	0	13	0	0	69	1	0	70	0	0	0	0	0	0	0	0	260	0	0	260
0615 - 0630	0	7	0	0	0	7	0	0	81	0	0	81	0	0	0	0	0	0	0	0	204	0	0	204
0630 - 0645	0	3	0	0	0	3	0	0	104	3	0	107	0	0	0	0	0	0	0	1	190	0	0	191
0645 - 0700	0	8	0	1	0	9	0	0	110	1	0	111	0	0	0	0	0	0	0	0	201	0	0	201
0700 - 0715	0	10	0	0	0	10	0	0	144	2	0	146	0	0	0	0	0	0	0	0	200	0	0	200
0715 - 0730	0	4	0	0	0	4	0	0	142	5	0	147	0	0	0	0	0	0	0	0	191	0	0	191
0730 - 0745	0	4	0	0	0	4	0	0	122	7	0	129	0	0	0	0	0	0	0	0	170	0	0	170
0745 - 0800	0	8	0	1	0	9	0	0	108	2	0	110	0	0	0	0	0	0	0	0	152	0	0	152
0800 - 0815	0	8	0	0	0	8	0	0	100	2	0	102	0	0	0	0	0	0	0	0	158	0	0	158
0815 - 0830	0	2	0	1	0	3	0	0	106	3	0	109	0	0	0	0	0	0	0	1	139	0	0	140
0830 - 0845	0	6	0	1	0	7	0	0	107	4	0	111	0	0	0	0	0	0	0	0	135	0	0	135
0845 - 0900	0	5	0	0	0	5	0	0	103	1	0	104	0	0	0	0	0	0	0	1	102	0	0	103
Grand Total	**0**	**78**	**0**	**4**	**0**	**82**	**0**	**0**	**1296**	**31**	**0**	**1327**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**2102**	**0**	**0**	**2105**
Peak Hour Total																								
0645 - 0745	**0**	**26**	**0**	**1**	**0**	**27**	**0**	**0**	**518**	**15**	**0**	**533**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**762**	**0**	**0**	**762**
App %	0.00%	95.12%	0.00%	4.88%			0.00%	0.00%	97.66%	2.34%			0.00%	0.00%	0.00%	0.00%			0.00%	0.14%	99.86%	0.00%		
Int %	0.00%	2.22%	0.00%	0.11%		2.33%	0.00%	0.00%	36.88%	0.88%		37.76%	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%	0.09%	59.82%	0.00%		59.90%
Cars Total	0	78	0	4			0	0	1296	31			0	0	0	0			0	3	2102	0		
Heavy Total	0	0	0	0			0	0	0	0			0	0	0	0			0	0	0	0		
% Cars	**0.00%**	**100.00%**	**0.00%**	**100.00%**			**0.00%**	**0.00%**	**100.00%**	**100.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**100.00%**	**100.00%**	**0.00%**		
% Heavy	**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**		

Location: Maury County (Columbia)
Count Type: Turning Movement Counts (TMCs)

Count Sites: 4
Intersection #: 2
Intersection: Bear Creek Pike (US-412) and Old Highway 99

Southbound: Old Highway 99
Westbound: Bear Creek Pike (US-412)
Northbound: N/A
Eastbound: Bear Creek Pike (US-412)

Lat/Long: N/A

Count Date: 9/6/2017

Time Period: 1500 - 1800 (Weekday PM Peak)

Figure 1 - Turning Movement Designation

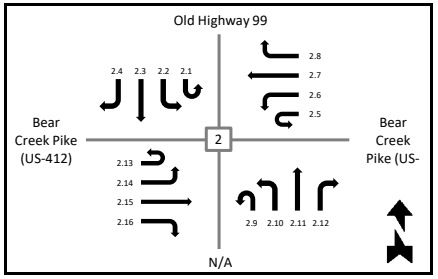
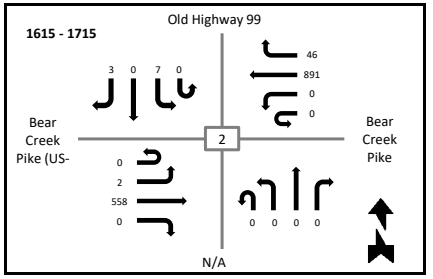


Figure 2 - PM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	Old Highway 99						Bear Creek Pike (US-412)						N/A						Bear Creek Pike (US-412)					
Time	U-Turn 2.1	Left 2.2	Thru 2.3	Right 2.4	Peds X-Walk	App Total	U-Turn 2.5	Left 2.6	Thru 2.7	Right 2.8	Peds X-Walk	App Total	U-Turn 2.9	Left 2.10	Thru 2.11	Right 2.12	Peds X-Walk	App Total	U-Turn 2.13	Left 2.14	Thru 2.15	Right 2.16	Peds X-Walk	App Total
1500 - 1515	0	4	0	0	0	4	0	0	171	3	0	174	0	0	0	0	0	0	0	0	128	0	0	128
1515 - 1530	0	3	0	1	0	4	0	0	170	4	0	174	0	0	0	0	0	0	0	0	137	0	0	137
1530 - 1545	0	8	0	3	0	11	0	0	190	16	0	206	0	0	0	0	0	0	0	2	127	0	0	129
1545 - 1600	0	2	0	3	0	5	0	0	179	11	0	190	0	0	0	0	0	0	0	0	112	0	0	112
1600 - 1615	0	5	0	4	0	9	0	0	196	9	0	205	0	0	0	0	0	0	0	0	125	0	0	125
1615 - 1630	0	2	0	0	0	2	0	0	212	10	0	222	0	0	0	0	0	0	0	1	148	0	0	149
1630 - 1645	0	3	0	2	0	5	0	0	232	16	0	248	0	0	0	0	0	0	0	0	121	0	0	121
1645 - 1700	0	1	0	1	0	2	0	0	233	9	0	242	0	0	0	0	0	0	0	1	148	0	0	149
1700 - 1715	0	1	0	0	0	1	0	0	214	11	0	225	0	0	0	0	0	0	0	0	141	0	0	141
1715 - 1730	0	4	0	0	0	4	0	0	205	10	0	215	0	0	0	0	0	0	0	0	129	0	0	129
1730 - 1745	0	4	0	0	0	4	0	0	204	13	0	217	0	0	0	0	0	0	0	0	133	0	0	133
1745 - 1800	0	5	0	1	0	6	0	0	177	13	0	190	0	0	0	0	0	0	0	1	118	0	0	119
Grand Total	**0**	**42**	**0**	**15**	**0**	**57**	**0**	**0**	**2383**	**125**	**0**	**2508**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**1567**	**0**	**0**	**1572**
Peak Hour Total																								
1615 - 1715	**0**	**7**	**0**	**3**	**0**	**10**	**0**	**0**	**891**	**46**	**0**	**937**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**558**	**0**	**0**	**560**
App %	0.00%	73.68%	0.00%	26.32%			0.00%	0.00%	95.02%	4.98%			0.00%	0.00%	0.00%	0.00%			0.00%	0.32%	99.68%	0.00%		
Int %	0.00%	1.02%	0.00%	0.36%		1.38%	0.00%	0.00%	57.60%	3.02%		60.62%	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%	0.12%	37.88%	0.00%		38.00%
Cars Total	0	42	0	15			0	0	2383	125			0	0	0	0			0	5	1567	0		
Heavy Total	0	0	0	0			0	0	0	0			0	0	0	0			0	0	0	0		
% Cars	**0.00%**	**100.00%**	**0.00%**	**100.00%**			**0.00%**	**0.00%**	**100.00%**	**100.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**100.00%**	**100.00%**	**0.00%**		
% Heavy	**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**		

Location: Maury County (Columbia)
Count Type: Turning Movement Counts (TMCs)

Count Sites: 4
Intersection #: 3
Intersection: Lasea Road and Old Highway 99

Southbound: Lasea Road
Westbound: Old Highway 99
Northbound: Lasea Road
Eastbound: Old Highway 99

Lat/Long: N/A

Count Date: 9/6/2017

Time Period: 0600 - 0900 (Weekday AM Peak)

Figure 1 - Turning Movement Designation

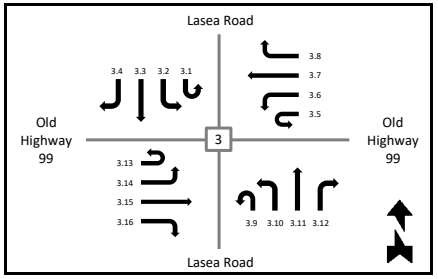
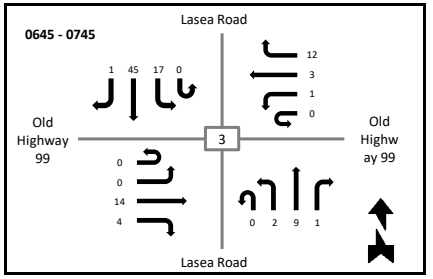


Figure 2 - AM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	Lasea Road						Old Highway 99						Lasea Road						Old Highway 99					
	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App	U-Turn	Left	Thru	Right	Peds	App
Time	3.1	3.2	3.3	3.4	X-Walk	Total	3.5	3.6	3.7	3.8	X-Walk	Total	3.9	3.10	3.11	3.12	X-Walk	Total	3.13	3.14	3.15	3.16	X-Walk	Total
0600 - 0615	0	8	15	0	0	23	0	0	1	0	0	1	0	0	1	0	0	1	0	0	5	1	0	6
0615 - 0630	0	5	15	0	0	20	0	0	0	0	0	0	0	1	3	0	0	4	0	0	1	1	0	2
0630 - 0645	0	5	10	0	0	15	0	1	0	1	0	2	0	0	3	0	0	3	0	2	0	3	0	5
0645 - 0700	0	3	11	0	0	14	0	0	0	2	0	2	0	0	4	0	0	4	0	0	6	2	0	8
0700 - 0715	0	5	9	1	0	15	0	0	0	2	0	2	0	0	0	1	0	1	0	0	4	1	0	5
0715 - 0730	0	5	14	0	0	19	0	0	2	4	0	6	0	1	2	0	0	3	0	0	2	1	0	3
0730 - 0745	0	4	11	0	0	15	0	1	1	4	0	6	0	1	3	0	0	4	0	0	2	0	0	2
0745 - 0800	0	9	7	0	0	16	0	0	1	2	0	3	0	1	2	0	0	3	0	0	1	1	0	2
0800 - 0815	0	4	6	0	0	10	0	0	1	2	0	3	0	0	3	0	0	3	0	0	3	1	0	4
0815 - 0830	0	1	5	0	0	6	0	0	2	1	0	3	0	0	8	0	0	8	0	0	1	0	0	1
0830 - 0845	0	5	10	1	0	16	0	0	1	3	0	4	0	0	5	0	0	5	0	0	0	0	0	0
0845 - 0900	0	6	4	0	0	10	0	0	0	2	0	2	0	0	2	0	0	2	0	0	2	0	0	2
Grand Total	**0**	**60**	**117**	**2**	**0**	**179**	**0**	**2**	**9**	**23**	**0**	**34**	**0**	**4**	**36**	**1**	**0**	**41**	**0**	**2**	**27**	**11**	**0**	**40**
Peak Hour Total																								
0645 - 0745	**0**	**17**	**45**	**1**	**0**	**63**	**0**	**1**	**3**	**12**	**0**	**16**	**0**	**2**	**9**	**1**	**0**	**12**	**0**	**0**	**14**	**4**	**0**	**18**
App %	0.00%	33.52%	65.36%	1.12%			0.00%	5.88%	26.47%	67.65%			0.00%	9.76%	87.80%	2.44%			0.00%	5.00%	67.50%	27.50%		
Int %	0.00%	20.41%	39.80%	0.68%		60.88%	0.00%	0.68%	3.06%	7.82%		11.56%	0.00%	1.36%	12.24%	0.34%		13.95%	0.00%	0.68%	9.18%	3.74%		13.61%
Cars Total	0	60	117	2			0	2	9	23			0	4	36	1			0	2	27	11		
Heavy Total	0	0	0	0			0	0	0	0			0	0	0	0			0	0	0	0		
% Cars	**0.00%**	**100.00%**	**100.00%**	**100.00%**			**0.00%**	**100.00%**	**100.00%**	**100.00%**			**0.00%**	**100.00%**	**100.00%**	**100.00%**			**0.00%**	**100.00%**	**100.00%**	**100.00%**		
% Heavy	**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**		

Location: Maury County (Columbia)
Count Type: Turning Movement Counts (TMCs)

Count Sites: 4
Intersection #: 3
Intersection: Lasea Road and Old Highway 99

Southbound: Lasea Road
Westbound: Old Highway 99
Northbound: Lasea Road
Eastbound: Old Highway 99

Lat/Long: N/A

Count Date: 9/6/2017

Time Period: 1500 - 1800 (Weekday PM Peak)

Figure 1 - Turning Movement Designation

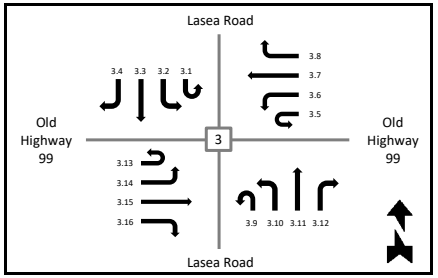
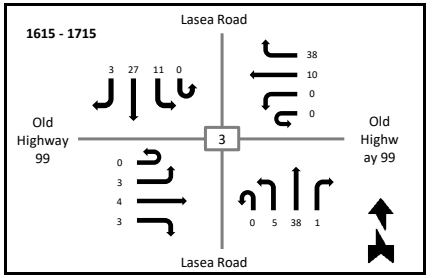


Figure 2 - PM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	Lasea Road						Old Highway 99						Lasea Road						Old Highway 99					
Time	U-Turn 3.1	Left 3.2	Thru 3.3	Right 3.4	Peds X-Walk	App Total	U-Turn 3.5	Left 3.6	Thru 3.7	Right 3.8	Peds X-Walk	App Total	U-Turn 3.9	Left 3.10	Thru 3.11	Right 3.12	Peds X-Walk	App Total	U-Turn 3.13	Left 3.14	Thru 3.15	Right 3.16	Peds X-Walk	App Total
1500 - 1515	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
1600 - 1615	0	2	2	0	0	4	0	0	1	4	0	5	0	2	8	0	0	10	0	0	0	1	0	1
1615 - 1630	0	3	7	0	0	10	0	0	2	9	0	11	0	2	14	0	0	16	0	1	3	1	0	5
1630 - 1645	0	4	8	2	0	14	0	0	1	15	0	16	0	0	8	0	0	8	0	1	1	0	0	2
1645 - 1700	0	1	10	0	0	11	0	0	3	9	0	12	0	3	10	1	0	14	0	1	0	0	0	1
1700 - 1715	0	3	2	1	0	6	0	0	4	5	0	9	0	0	6	0	0	6	0	0	0	2	0	2
1715 - 1730	0	1	4	0	0	5	0	0	4	5	0	9	0	1	10	0	0	11	0	1	1	1	0	3
1730 - 1745	0	3	9	0	0	12	0	0	2	13	0	15	0	1	6	0	0	7	0	0	1	1	0	2
1745 - 1800	0	2	7	0	0	9	0	0	5	7	0	12	0	3	7	0	0	10	0	1	0	0	0	1
Grand Total	**0**	**19**	**50**	**3**	**0**	**72**	**0**	**0**	**23**	**67**	**0**	**90**	**0**	**13**	**70**	**1**	**0**	**84**	**0**	**5**	**6**	**6**	**0**	**17**
Peak Hour Total																								
1615 - 1715	**0**	**11**	**27**	**3**	**0**	**41**	**0**	**0**	**10**	**38**	**0**	**48**	**0**	**5**	**38**	**1**	**0**	**44**	**0**	**3**	**4**	**3**	**0**	**10**
App %	0.00%	26.39%	69.44%	4.17%			0.00%	0.00%	25.56%	74.44%			0.00%	15.48%	83.33%	1.19%			0.00%	29.41%	35.29%	35.29%		
Int %	0.00%	7.22%	19.01%	1.14%		27.38%	0.00%	0.00%	8.75%	25.48%		34.22%	0.00%	4.94%	26.62%	0.38%		31.94%	0.00%	1.90%	2.28%	2.28%		6.46%
Cars Total	0	19	50	3			0	0	23	67			0	13	70	1			0	5	6	6		
Heavy Total	0	0	0	0			0	0	0	0			0	0	0	0			0	0	0	0		
% Cars	**0.00%**	**100.00%**	**100.00%**	**100.00%**			**0.00%**	**0.00%**	**100.00%**	**100.00%**			**0.00%**	**100.00%**	**100.00%**	**100.00%**			**0.00%**	**100.00%**	**100.00%**	**100.00%**		
% Heavy	**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**		

Location: Maury County (Columbia)
Count Type: Turning Movement Counts (TMCs)

Count Sites: 4
Intersection #: 4
Intersection: Lasea Road and Blackburn Lane

Southbound: Lasea Road
Westbound: N/A
Northbound: Lasea Road
Eastbound: Blackburn Lane

Lat/Long: N/A

Count Date: 9/7/2017

Time Period: 0600 - 0900 (Weekday AM Peak)

Figure 1 - Turning Movement Designation

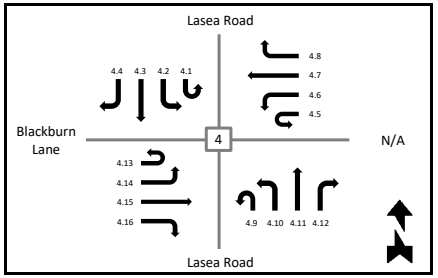
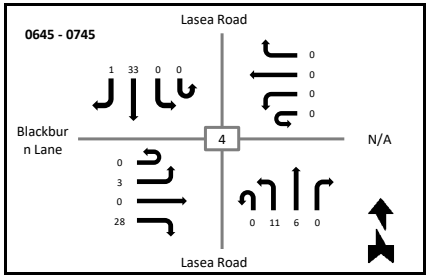


Figure 2 - AM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	Lasea Road						N/A						Lasea Road						Blackburn Lane					
Time	U-Turn 4.1	Left 4.2	Thru 4.3	Right 4.4	Peds X-Walk	App Total	U-Turn 4.5	Left 4.6	Thru 4.7	Right 4.8	Peds X-Walk	App Total	U-Turn 4.9	Left 4.10	Thru 4.11	Right 4.12	Peds X-Walk	App Total	U-Turn 4.13	Left 4.14	Thru 4.15	Right 4.16	Peds X-Walk	App Total
0600 - 0615	0	0	9	0	0	9	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	10	0	10
0615 - 0630	0	0	9	0	0	9	0	0	0	0	0	0	0	1	5	0	0	6	0	0	0	11	0	11
0630 - 0645	0	0	7	2	0	9	0	0	0	0	0	0	0	2	1	0	0	3	0	0	0	9	0	9
0645 - 0700	0	0	9	1	0	10	0	0	0	0	0	0	0	5	3	0	0	8	0	0	0	6	0	6
0700 - 0715	0	0	11	0	0	11	0	0	0	0	0	0	0	3	1	0	0	4	0	1	0	9	0	10
0715 - 0730	0	0	9	0	0	9	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	5	0	5
0730 - 0745	0	0	4	0	0	4	0	0	0	0	0	0	0	2	2	0	0	4	0	2	0	8	0	10
0745 - 0800	0	0	1	0	0	1	0	0	0	0	0	0	0	3	2	0	0	5	0	0	0	7	0	7
0800 - 0815	0	0	6	0	0	6	0	0	0	0	0	0	0	5	4	0	0	9	0	0	0	3	0	3
0815 - 0830	0	0	2	0	0	2	0	0	0	0	0	0	0	3	6	0	0	9	0	0	0	2	0	2
0830 - 0845	0	0	6	0	0	6	0	0	0	0	0	0	0	4	1	0	0	5	0	0	0	4	0	4
0845 - 0900	0	0	4	0	0	4	0	0	0	0	0	0	0	1	1	0	0	2	0	0	0	3	0	3
Grand Total	**0**	**0**	**77**	**3**	**0**	**80**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**32**	**26**	**0**	**0**	**58**	**0**	**3**	**0**	**77**	**0**	**80**
Peak Hour Total																								
0645 - 0745	**0**	**0**	**33**	**1**	**0**	**34**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**11**	**6**	**0**	**0**	**17**	**0**	**3**	**0**	**28**	**0**	**31**
App %	0.00%	0.00%	96.25%	3.75%			0.00%	0.00%	0.00%	0.00%			0.00%	55.17%	44.83%	0.00%			0.00%	3.75%	0.00%	96.25%		
Int %	0.00%	0.00%	35.32%	1.38%		36.70%	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%	14.68%	11.93%	0.00%		26.61%	0.00%	1.38%	0.00%	35.32%		36.70%
Cars Total	0	0	77	3			0	0	0	0			0	32	26	0			0	3	0	77		
Heavy Total	0	0	0	0			0	0	0	0			0	0	0	0			0	0	0	0		
% Cars	**0.00%**	**0.00%**	**100.00%**	**100.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**100.00%**	**100.00%**	**0.00%**			**0.00%**	**100.00%**	**0.00%**	**100.00%**		
% Heavy	**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**		

Location: Maury County (Columbia)
Count Type: Turning Movement Counts (TMCs)

Count Sites: 4
Intersection #: 4
Intersection: Lasea Road and Blackburn Lane

Southbound: Lasea Road
Westbound: N/A
Northbound: Lasea Road
Eastbound: Blackburn Lane

Lat/Long: N/A

Count Date: 9/7/2017

Time Period: 1500 - 1800 (Weekday PM Peak)

Figure 1 - Turning Movement Designation

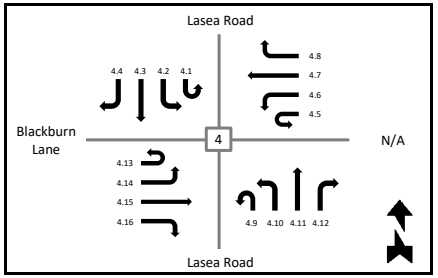
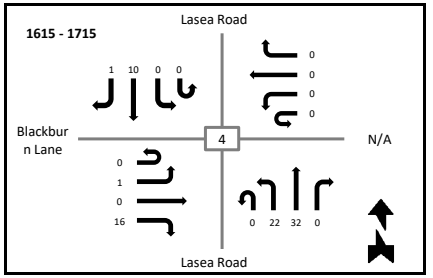


Figure 2 - PM Peak Hour TMC



T-SQUARE ENGINEERING

	Southbound						Westbound						Northbound						Eastbound					
	Lasea Road						N/A						Lasea Road						Blackburn Lane					
Time	U-Turn 4.1	Left 4.2	Thru 4.3	Right 4.4	Peds X-Walk	App Total	U-Turn 4.5	Left 4.6	Thru 4.7	Right 4.8	Peds X-Walk	App Total	U-Turn 4.9	Left 4.10	Thru 4.11	Right 4.12	Peds X-Walk	App Total	U-Turn 4.13	Left 4.14	Thru 4.15	Right 4.16	Peds X-Walk	App Total
1500 - 1515	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
1515 - 1530	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
1530 - 1545	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0
1545 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
1600 - 1615	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
1615 - 1630	0	0	2	0	0	2	0	0	0	0	0	0	0	5	4	0	0	9	0	0	0	3	0	3
1630 - 1645	0	0	4	0	0	4	0	0	0	0	0	0	0	6	10	0	0	16	0	0	0	3	0	3
1645 - 1700	0	0	2	0	0	2	0	0	0	0	0	0	0	4	8	0	0	12	0	0	0	4	0	4
1700 - 1715	0	0	2	1	0	3	0	0	0	0	0	0	0	7	10	0	0	17	0	1	0	6	0	7
1715 - 1730	0	0	4	0	0	4	0	0	0	0	0	0	0	5	6	0	0	11	0	1	0	5	0	6
1730 - 1745	0	0	5	0	0	5	0	0	0	0	0	0	0	7	7	0	0	14	0	0	0	7	0	7
1745 - 1800	0	0	2	0	0	2	0	0	0	0	0	0	0	9	3	0	0	12	0	0	0	2	0	2
Grand Total	**0**	**0**	**21**	**1**	**0**	**22**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**46**	**50**	**0**	**0**	**96**	**0**	**2**	**0**	**30**	**0**	**32**
Peak Hour Total																								
1615 - 1715	**0**	**0**	**10**	**1**	**0**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**22**	**32**	**0**	**0**	**54**	**0**	**1**	**0**	**16**	**0**	**17**
App %	0.00%	0.00%	95.45%	4.55%			0.00%	0.00%	0.00%	0.00%			0.00%	47.92%	52.08%	0.00%			0.00%	6.25%	0.00%	93.75%		
Int %	0.00%	0.00%	14.00%	0.67%		14.67%	0.00%	0.00%	0.00%	0.00%		0.00%	0.00%	30.67%	33.33%	0.00%		64.00%	0.00%	1.33%	0.00%	20.00%		21.33%
Cars Total	0	0	21	1			0	0	0	0			0	46	50	0			0	2	0	30		
Heavy Total	0	0	0	0			0	0	0	0			0	0	0	0			0	0	0	0		
% Cars	**0.00%**	**0.00%**	**100.00%**	**100.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**100.00%**	**100.00%**	**0.00%**			**0.00%**	**100.00%**	**0.00%**	**100.00%**		
% Heavy	**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**			**0.00%**	**0.00%**	**0.00%**	**0.00%**		

APPENDIX B – DETAILED TRIP GENERATION CALCULATIONS

1329 West Main Street
Franklin, TN 37064
615.678.8212
www.T2-eng.com

TRIP GENERATION

Project:	1451 Lasea Road – Columbia, TN
ITE Land Use:	Multi-Family Housing (Low-Rise)
ITE Code:	220
Trip Ends vs:	**ITE 220** – 208 DU
Daily Equation:	Weekday – Fitted Curve Equation
AM Equation:	Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 AM – Fitted Curve Equation
PM Equation:	Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 PM – Fitted Curve Equation

Time Period	Formula[1]	Calculation	Trips
Daily	$T = 7.56(X) - 40.86$	$T = 7.56(208) - 40.86$	1,532
AM Peak (Total)	$Ln(T) = 0.95Ln(X) - 0.51$	$Ln(T) = 0.95Ln(208) - 0.51$	96
AM Peak (Entering)	$T = 0.23(Total\ AM\ Trips)$	$T = 0.23(96)$	22
AM Peak (Exiting)	$T = 0.77(Total\ AM\ Trips)$	$T = 0.77(96)$	74
PM Peak (Total)	$Ln(T) = 0.89Ln(X) - 0.02$	$Ln(T) = 0.89Ln(208) - 0.02$	113
PM Peak (Entering)	$T = 0.63(Total\ PM\ Trips)$	$T = 0.63(113)$	71
PM Peak (Exiting)	$T = 0.37(Total\ PM\ Trips)$	$T = 0.37(113)$	42

[1] Institute of Transportation Engineers (ITE). Trip Generation Manual, 10th Edition. Washington, DC: ITE, 2020

Multifamily Housing (Low-Rise)
(220)

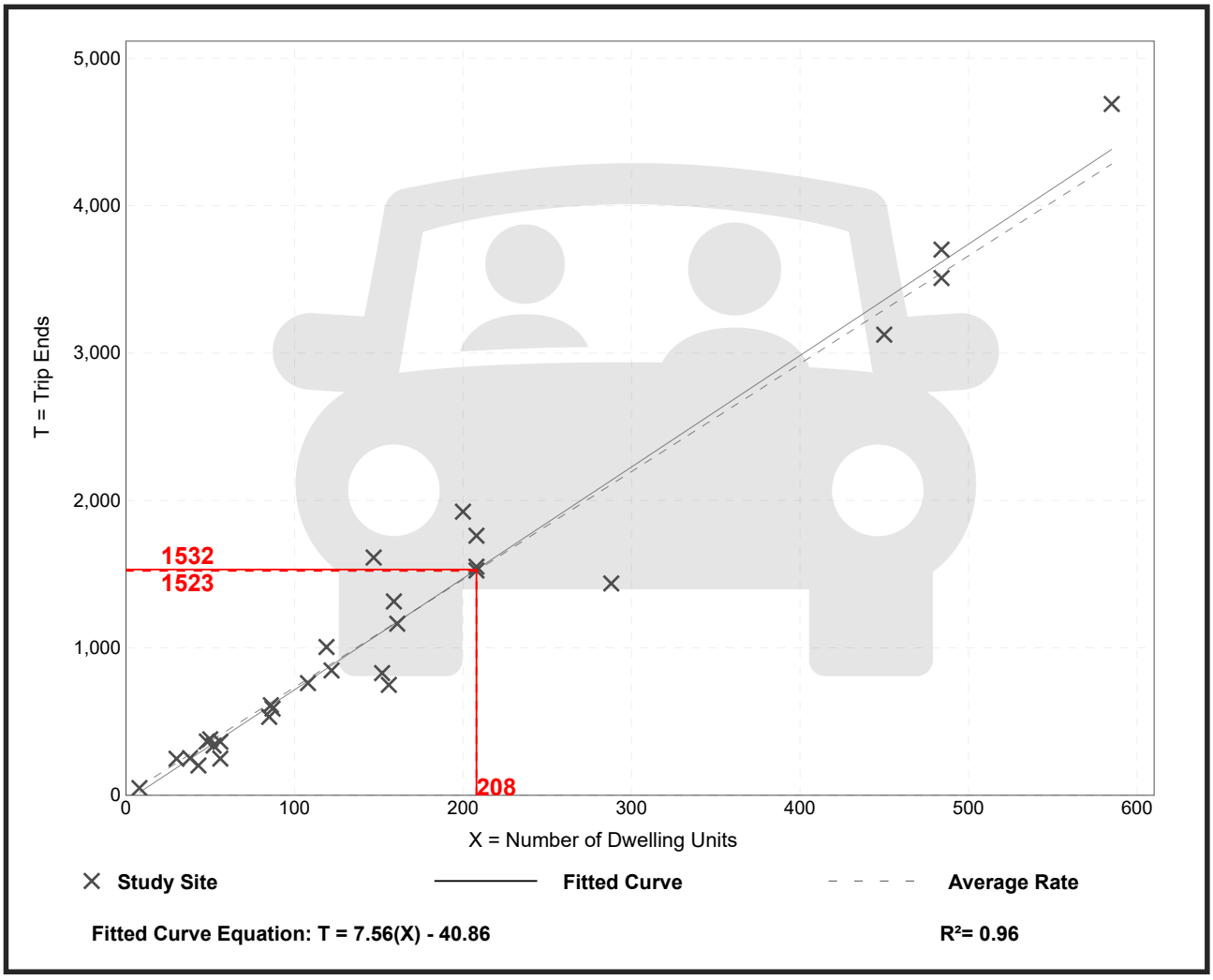
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 29
Avg. Num. of Dwelling Units: 168
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.32	4.45 - 10.97	1.31

Data Plot and Equation



Trip Gen Manual, 10th Ed + Supplement ● Institute of Transportation Engineers

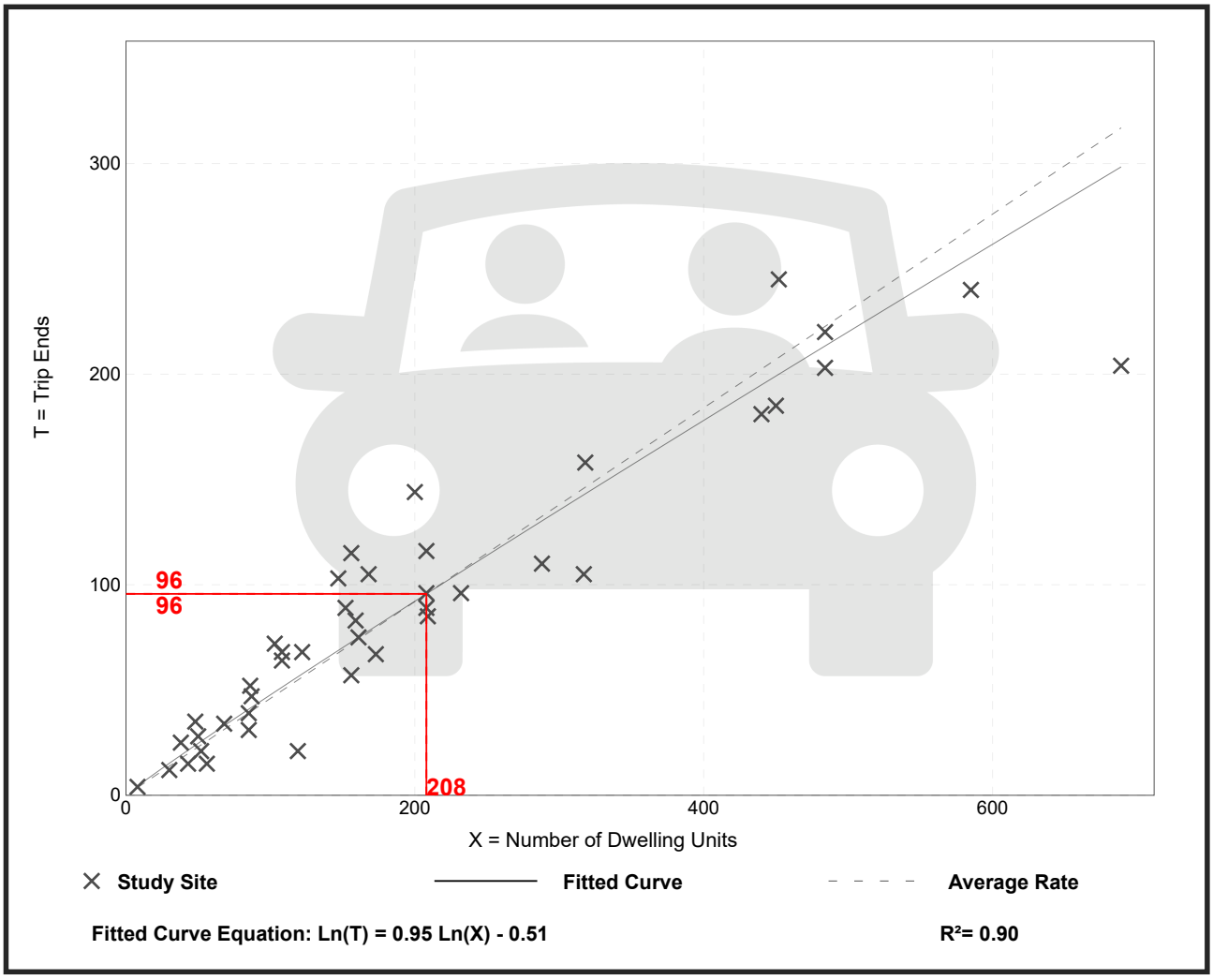
Multifamily Housing (Low-Rise)
(220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 42
Avg. Num. of Dwelling Units: 199
Directional Distribution: 23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.46	0.18 - 0.74	0.12

Data Plot and Equation



Trip Gen Manual, 10th Ed + Supplement ● Institute of Transportation Engineers

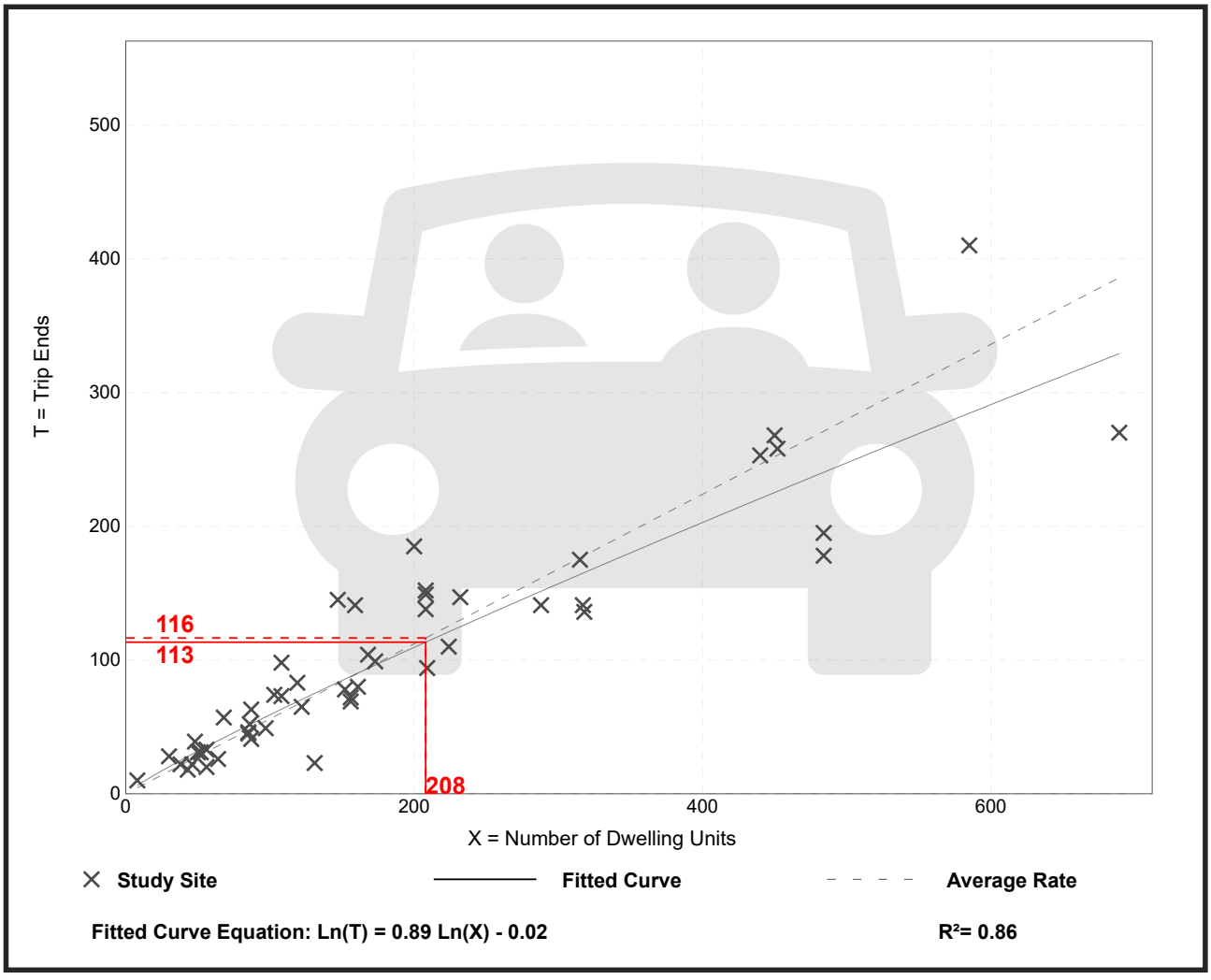
Multifamily Housing (Low-Rise)
(220)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 50
Avg. Num. of Dwelling Units: 187
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.56	0.18 - 1.25	0.16

Data Plot and Equation



Trip Gen Manual, 10th Ed + Supplement ● Institute of Transportation Engineers

APPENDIX C – CAPACITY ANALYSES

EXISTING CAPACITY ANALYSES

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	10	787	541	6	27	17
Future Vol, veh/h	10	787	541	6	27	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	855	588	7	29	18

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	595	0	-	0	1469	592
Stage 1	-	-	-	-	592	-
Stage 2	-	-	-	-	877	-
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	981	-	-	-	140	506
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	407	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	981	-	-	-	138	506
Mov Cap-2 Maneuver	-	-	-	-	274	-
Stage 1	-	-	-	-	547	-
Stage 2	-	-	-	-	407	-

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	17.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	981	-	-	-	333
HCM Lane V/C Ratio	0.011	-	-	-	0.144
HCM Control Delay (s)	8.7	-	-	-	17.6
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	825	561	16	28	1
Future Vol, veh/h	0	825	561	16	28	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	897	610	17	30	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	627	0	-	0	1516	619
Stage 1	-	-	-	-	619	-
Stage 2	-	-	-	-	897	-
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	955	-	-	-	131	489
Stage 1	-	-	-	-	537	-
Stage 2	-	-	-	-	398	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	955	-	-	-	131	489
Mov Cap-2 Maneuver	-	-	-	-	267	-
Stage 1	-	-	-	-	537	-
Stage 2	-	-	-	-	398	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	20
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	955	-	-	-	271
HCM Lane V/C Ratio	-	-	-	-	0.116
HCM Control Delay (s)	0	-	-	-	20
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	15	4	1	3	13	2	10	1	18	49	1
Future Vol, veh/h	0	15	4	1	3	13	2	10	1	18	49	1
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	16	4	1	3	14	2	11	1	20	53	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.1	6.8	7.1	7.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	0%	6%	26%
Vol Thru, %	77%	79%	18%	72%
Vol Right, %	8%	21%	76%	1%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	19	17	68
LT Vol	2	0	1	18
Through Vol	10	15	3	49
RT Vol	1	4	13	1
Lane Flow Rate	14	21	18	74
Geometry Grp	1	1	1	1
Degree of Util (X)	0.016	0.023	0.019	0.083
Departure Headway (Hd)	4.041	3.976	3.656	4.056
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	885	897	973	885
Service Time	2.071	2.017	1.699	2.074
HCM Lane V/C Ratio	0.016	0.023	0.018	0.084
HCM Control Delay	7.1	7.1	6.8	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0	0.1	0.1	0.3

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	30	12	7	36	1
Future Vol, veh/h	3	30	12	7	36	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	33	13	8	39	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	74	40	40	0	-	0
Stage 1	40	-	-	-	-	-
Stage 2	34	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	930	1031	1570	-	-	-
Stage 1	982	-	-	-	-	-
Stage 2	988	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	923	1031	1570	-	-	-
Mov Cap-2 Maneuver	923	-	-	-	-	-
Stage 1	974	-	-	-	-	-
Stage 2	988	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	4.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1570	-	1020	-	-
HCM Lane V/C Ratio	0.008	-	0.035	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection: 1: Bear Creek Pike & Lasea Road

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	28	104
Average Queue (ft)	4	20
95th Queue (ft)	19	59
Link Distance (ft)		1262
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: Bear Creek Pike & Old Highway 99

Movement	SB
Directions Served	LR
Maximum Queue (ft)	66
Average Queue (ft)	19
95th Queue (ft)	51
Link Distance (ft)	248
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Lasea Road & Old Highway 99

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	27	31	19	55
Average Queue (ft)	12	13	4	34
95th Queue (ft)	34	38	16	48
Link Distance (ft)	892	1948	1262	3595
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Lasea Road & Blackburn Lane

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	68	29
Average Queue (ft)	14	1
95th Queue (ft)	37	10
Link Distance (ft)	911	3595
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	569	835	10	23	20
Future Vol, veh/h	29	569	835	10	23	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	618	908	11	25	22

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	919	0	-	0	1596	914
Stage 1	-	-	-	-	914	-
Stage 2	-	-	-	-	682	-
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	743	-	-	-	117	331
Stage 1	-	-	-	-	391	-
Stage 2	-	-	-	-	502	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	743	-	-	-	112	331
Mov Cap-2 Maneuver	-	-	-	-	245	-
Stage 1	-	-	-	-	374	-
Stage 2	-	-	-	-	502	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	20.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	743	-	-	-	279
HCM Lane V/C Ratio	0.042	-	-	-	0.168
HCM Control Delay (s)	10.1	-	-	-	20.5
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	604	964	50	8	3
Future Vol, veh/h	2	604	964	50	8	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	657	1048	54	9	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1102	0	-	0	1736	1075
Stage 1	-	-	-	-	1075	-
Stage 2	-	-	-	-	661	-
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	633	-	-	-	96	267
Stage 1	-	-	-	-	328	-
Stage 2	-	-	-	-	514	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	633	-	-	-	96	267
Mov Cap-2 Maneuver	-	-	-	-	223	-
Stage 1	-	-	-	-	327	-
Stage 2	-	-	-	-	514	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	21.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	633	-	-	-	233
HCM Lane V/C Ratio	0.003	-	-	-	0.051
HCM Control Delay (s)	10.7	-	-	-	21.3
HCM Lane LOS	B	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	4	3	0	11	41	5	41	1	12	29	3
Future Vol, veh/h	3	4	3	0	11	41	5	41	1	12	29	3
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	4	3	0	12	45	5	45	1	13	32	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.1	6.9	7.4	7.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	30%	0%	27%
Vol Thru, %	87%	40%	21%	66%
Vol Right, %	2%	30%	79%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	47	10	52	44
LT Vol	5	3	0	12
Through Vol	41	4	11	29
RT Vol	1	3	41	3
Lane Flow Rate	51	11	57	48
Geometry Grp	1	1	1	1
Degree of Util (X)	0.058	0.012	0.057	0.055
Departure Headway (Hd)	4.097	4.029	3.64	4.104
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	874	882	977	872
Service Time	2.125	2.083	1.69	2.133
HCM Lane V/C Ratio	0.058	0.012	0.058	0.055
HCM Control Delay	7.4	7.1	6.9	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0	0.2	0.2

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	17	24	35	11	1
Future Vol, veh/h	1	17	24	35	11	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	18	26	38	12	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	103	13	13	0	-	0
Stage 1	13	-	-	-	-	-
Stage 2	90	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	895	1067	1606	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	934	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	880	1067	1606	-	-	-
Mov Cap-2 Maneuver	880	-	-	-	-	-
Stage 1	993	-	-	-	-	-
Stage 2	934	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1606	-	1055	-	-
HCM Lane V/C Ratio	0.016	-	0.019	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection: 1: Bear Creek Pike & Lasea Road

Movement	EB	WB	SB
Directions Served	L	TR	LR
Maximum Queue (ft)	49	22	79
Average Queue (ft)	20	1	20
95th Queue (ft)	41	7	56
Link Distance (ft)		2447	1262
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	100		
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 2: Bear Creek Pike & Old Highway 99

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	27	31
Average Queue (ft)	1	11
95th Queue (ft)	9	35
Link Distance (ft)		248
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Lasea Road & Old Highway 99

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	27	56	19	54
Average Queue (ft)	8	31	16	23
95th Queue (ft)	28	56	26	50
Link Distance (ft)	892	1948	1262	3595
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

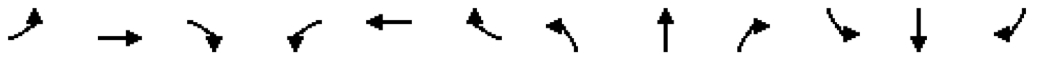
Intersection: 4: Lasea Road & Blackburn Lane

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	24	29
Average Queue (ft)	7	1
95th Queue (ft)	22	9
Link Distance (ft)	911	3595
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 0

BACKGROUND CAPACITY ANALYSES



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	850	20	32	615	10	66	13	105	35	4	52
Future Volume (veh/h)	21	850	20	32	615	10	66	13	105	35	4	52
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	23	924	22	35	668	11	72	14	114	38	4	57
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	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	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	349	1009	857	191	1024	870	267	18	149	212	12	166
Arrive On Green	0.02	0.54	0.54	0.03	0.55	0.55	0.05	0.10	0.10	0.06	0.11	0.11
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	176	1434	1774	105	1494
Grp Volume(v), veh/h	23	924	22	35	668	11	72	0	128	38	0	61
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	0	1610	1774	0	1599
Q Serve(g_s), s	0.5	40.6	0.6	0.8	22.7	0.3	3.2	0.0	7.0	1.7	0.0	3.2
Cycle Q Clear(g_c), s	0.5	40.6	0.6	0.8	22.7	0.3	3.2	0.0	7.0	1.7	0.0	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.89	1.00		0.93
Lane Grp Cap(c), veh/h	349	1009	857	191	1024	870	267	0	167	212	0	178
V/C Ratio(X)	0.07	0.92	0.03	0.18	0.65	0.01	0.27	0.00	0.76	0.18	0.00	0.34
Avail Cap(c_a), veh/h	404	1231	1046	232	1231	1046	280	0	322	468	0	524
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	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.4	18.8	9.6	18.1	14.2	9.2	33.7	0.0	39.3	32.8	0.0	37.0
Incr Delay (d2), s/veh	0.1	9.5	0.0	0.5	0.9	0.0	0.5	0.0	7.1	0.4	0.0	1.1
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	0.3	23.2	0.3	0.4	11.8	0.1	1.6	0.0	3.4	0.8	0.0	1.5
LnGrp Delay(d),s/veh	11.4	28.3	9.6	18.5	15.2	9.2	34.3	0.0	46.3	33.2	0.0	38.1
LnGrp LOS	B	C	A	B	B	A	C		D	C		D
Approach Vol, veh/h		969			714			200			99	
Approach Delay, s/veh		27.4			15.2			42.0			36.2	
Approach LOS		C			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	54.8	10.4	16.0	8.2	55.5	11.0	15.4
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	5.0	59.5	5.0	29.5	5.0	59.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	2.8	42.6	5.2	5.2	2.5	24.7	3.7	9.0
Green Ext Time (p_c), s	0.0	6.1	0.0	0.3	0.0	4.6	0.0	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	25.0
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1024	701	29	58	1
Future Vol, veh/h	2	1024	701	29	58	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	100	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	1113	762	32	63	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	794	0	-	0	1879	762
Stage 1	-	-	-	-	762	-
Stage 2	-	-	-	-	1117	-
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	827	-	-	-	78	405
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	313	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	827	-	-	-	78	405
Mov Cap-2 Maneuver	-	-	-	-	204	-
Stage 1	-	-	-	-	460	-
Stage 2	-	-	-	-	313	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	30.2
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	827	-	-	-	206
HCM Lane V/C Ratio	0.003	-	-	-	0.311
HCM Control Delay (s)	9.4	-	-	-	30.2
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	1.3

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	17	5	1	5	24	2	25	1	47	100	7
Future Vol, veh/h	2	17	5	1	5	24	2	25	1	47	100	7
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	18	5	1	5	26	2	27	1	51	109	8
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.4	7.1	7.4	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	8%	3%	31%
Vol Thru, %	89%	71%	17%	65%
Vol Right, %	4%	21%	80%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	24	30	154
LT Vol	2	2	1	47
Through Vol	25	17	5	100
RT Vol	1	5	24	7
Lane Flow Rate	30	26	33	167
Geometry Grp	1	1	1	1
Degree of Util (X)	0.035	0.031	0.036	0.19
Departure Headway (Hd)	4.156	4.295	3.923	4.092
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	853	839	918	874
Service Time	2.221	2.295	1.924	2.129
HCM Lane V/C Ratio	0.035	0.031	0.036	0.191
HCM Control Delay	7.4	7.4	7.1	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.1	0.7

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	36	23	30	48	1
Future Vol, veh/h	3	36	23	30	48	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	39	25	33	52	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	136	53	53	0	-	0
Stage 1	53	-	-	-	-	-
Stage 2	83	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	857	1014	1553	-	-	-
Stage 1	970	-	-	-	-	-
Stage 2	940	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	843	1014	1553	-	-	-
Mov Cap-2 Maneuver	843	-	-	-	-	-
Stage 1	954	-	-	-	-	-
Stage 2	940	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	3.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1553	-	998	-	-
HCM Lane V/C Ratio	0.016	-	0.042	-	-
HCM Control Delay (s)	7.4	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection: 1: Rock Springs Access Drive/Lasea Road & Bear Creek Pike

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	TR	L	TR
Maximum Queue (ft)	40	552	29	199	307	220	66	124	59	87
Average Queue (ft)	11	220	8	24	128	18	35	57	17	16
95th Queue (ft)	32	388	28	82	219	108	65	113	47	48
Link Distance (ft)		2212			2439			620	1247	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		230	100		120	175			40
Storage Blk Time (%)		20			10				6	2
Queuing Penalty (veh)		8			4				3	1

Intersection: 2: Bear Creek Pike & Old Highway 99

Movement	SB
Directions Served	LR
Maximum Queue (ft)	200
Average Queue (ft)	69
95th Queue (ft)	152
Link Distance (ft)	239
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Lasea Road & Old Highway 99

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	27	31	37	78
Average Queue (ft)	16	19	11	42
95th Queue (ft)	37	42	28	67
Link Distance (ft)	892	1948	1247	3595
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Lasea Road & Blackburn Lane

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	66	27
Average Queue (ft)	18	1
95th Queue (ft)	43	9
Link Distance (ft)	911	3595
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 17

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	650	64	102	913	23	38	8	60	35	13	43
Future Volume (veh/h)	67	650	64	102	913	23	38	8	60	35	13	43
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	73	707	70	111	992	25	41	9	65	38	14	47
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	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	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	200	1042	885	385	1052	894	214	14	98	210	33	112
Arrive On Green	0.05	0.56	0.56	0.05	0.56	0.56	0.04	0.07	0.07	0.06	0.09	0.09
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	196	1417	1774	376	1263
Grp Volume(v), veh/h	73	707	70	111	992	25	41	0	74	38	0	61
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	0	1613	1774	0	1640
Q Serve(g_s), s	1.5	24.5	1.8	2.4	45.0	0.6	1.9	0.0	4.1	1.7	0.0	3.2
Cycle Q Clear(g_c), s	1.5	24.5	1.8	2.4	45.0	0.6	1.9	0.0	4.1	1.7	0.0	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.88	1.00		0.77
Lane Grp Cap(c), veh/h	200	1042	885	385	1052	894	214	0	112	210	0	146
V/C Ratio(X)	0.37	0.68	0.08	0.29	0.94	0.03	0.19	0.00	0.66	0.18	0.00	0.42
Avail Cap(c_a), veh/h	215	1109	943	411	1130	960	249	0	320	464	0	560
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	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.9	14.2	9.2	11.2	18.4	8.7	37.2	0.0	41.2	35.6	0.0	39.1
Incr Delay (d2), s/veh	1.1	1.6	0.0	0.4	14.6	0.0	0.4	0.0	6.5	0.4	0.0	1.9
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	1.1	12.8	0.8	1.2	27.1	0.3	1.0	0.0	2.0	0.9	0.0	1.5
LnGrp Delay(d),s/veh	21.0	15.8	9.3	11.6	33.0	8.7	37.6	0.0	47.7	36.0	0.0	41.0
LnGrp LOS	C	B	A	B	C	A	D		D	D		D
Approach Vol, veh/h		850			1128			115			99	
Approach Delay, s/veh		15.7			30.4			44.1			39.1	
Approach LOS		B			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	56.7	9.2	14.1	10.2	57.2	11.0	12.3
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	6.0	54.0	5.0	31.0	5.0	55.0	18.0	18.0
Max Q Clear Time (g_c+I1), s	4.4	26.5	3.9	5.2	3.5	47.0	3.7	6.1
Green Ext Time (p_c), s	0.0	5.0	0.0	0.3	0.0	4.2	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	25.8
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	775	1187	84	29	3
Future Vol, veh/h	2	775	1187	84	29	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	100	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	842	1290	91	32	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1381	0	-	0	2136	1290
Stage 1	-	-	-	-	1290	-
Stage 2	-	-	-	-	846	-
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	496	-	-	-	54	200
Stage 1	-	-	-	-	258	-
Stage 2	-	-	-	-	421	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	496	-	-	-	54	200
Mov Cap-2 Maneuver	-	-	-	-	169	-
Stage 1	-	-	-	-	257	-
Stage 2	-	-	-	-	421	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	31.4
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	496	-	-	-	171
HCM Lane V/C Ratio	0.004	-	-	-	0.203
HCM Control Delay (s)	12.3	-	-	-	31.4
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.7

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	8	3	0	12	74	6	93	1	30	72	7
Future Vol, veh/h	9	8	3	0	12	74	6	93	1	30	72	7
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	9	3	0	13	80	7	101	1	33	78	8
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.7	7.4	7.9	8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	45%	0%	28%
Vol Thru, %	93%	40%	14%	66%
Vol Right, %	1%	15%	86%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	20	86	109
LT Vol	6	9	0	30
Through Vol	93	8	12	72
RT Vol	1	3	74	7
Lane Flow Rate	109	22	93	118
Geometry Grp	1	1	1	1
Degree of Util (X)	0.128	0.027	0.103	0.139
Departure Headway (Hd)	4.231	4.541	3.952	4.235
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	836	792	912	835
Service Time	2.317	2.545	1.952	2.318
HCM Lane V/C Ratio	0.13	0.028	0.102	0.141
HCM Control Delay	7.9	7.7	7.4	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.1	0.3	0.5

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	30	32	51	49	1
Future Vol, veh/h	1	30	32	51	49	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	33	35	55	53	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	179	54	54	0	-	0
Stage 1	54	-	-	-	-	-
Stage 2	125	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	811	1013	1551	-	-	-
Stage 1	969	-	-	-	-	-
Stage 2	901	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	792	1013	1551	-	-	-
Mov Cap-2 Maneuver	792	-	-	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	901	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	2.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1551	-	1004	-	-
HCM Lane V/C Ratio	0.022	-	0.034	-	-
HCM Control Delay (s)	7.4	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection: 1: Rock Springs Access Drive/Lasea Road & Bear Creek Pike

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	TR	L	TR
Maximum Queue (ft)	200	313	51	200	573	219	66	86	93	106
Average Queue (ft)	48	152	15	74	276	18	22	27	17	19
95th Queue (ft)	125	254	39	192	475	83	52	58	51	57
Link Distance (ft)		2212			2439			620	1247	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		230	100		120	175			40
Storage Blk Time (%)	0	12		0	24				6	4
Queuing Penalty (veh)	2	16		0	29				3	1

Intersection: 2: Bear Creek Pike & Old Highway 99

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	27	94
Average Queue (ft)	1	30
95th Queue (ft)	9	73
Link Distance (ft)		239
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Lasea Road & Old Highway 99

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	27	76	44	68
Average Queue (ft)	10	37	28	40
95th Queue (ft)	32	60	46	63
Link Distance (ft)	892	1948	1247	3595
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Lasea Road & Blackburn Lane

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	56	29
Average Queue (ft)	15	1
95th Queue (ft)	37	10
Link Distance (ft)	911	3595
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 52

PROJECTED CAPACITY ANALYSES

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	850	20	32	615	23	66	13	105	79	4	78
Future Volume (veh/h)	29	850	20	32	615	23	66	13	105	79	4	78
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	32	924	22	35	668	25	72	14	114	86	4	85
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	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	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	344	1004	854	185	1007	856	253	18	148	227	9	183
Arrive On Green	0.03	0.54	0.54	0.03	0.54	0.54	0.05	0.10	0.10	0.07	0.12	0.12
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	176	1434	1774	72	1522
Grp Volume(v), veh/h	32	924	22	35	668	25	72	0	128	86	0	89
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	0	1610	1774	0	1594
Q Serve(g_s), s	0.7	41.9	0.6	0.8	23.7	0.7	3.3	0.0	7.1	3.9	0.0	4.8
Cycle Q Clear(g_c), s	0.7	41.9	0.6	0.8	23.7	0.7	3.3	0.0	7.1	3.9	0.0	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.89	1.00		0.96
Lane Grp Cap(c), veh/h	344	1004	854	185	1007	856	253	0	166	227	0	192
V/C Ratio(X)	0.09	0.92	0.03	0.19	0.66	0.03	0.28	0.00	0.77	0.38	0.00	0.46
Avail Cap(c_a), veh/h	387	1201	1021	225	1201	1021	263	0	314	457	0	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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.8	19.5	9.9	18.8	15.2	9.9	34.7	0.0	40.3	33.8	0.0	37.8
Incr Delay (d2), s/veh	0.1	10.3	0.0	0.5	1.1	0.0	0.6	0.0	7.3	1.0	0.0	1.7
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	0.4	24.2	0.3	0.5	12.4	0.3	1.7	0.0	3.5	2.0	0.0	2.2
LnGrp Delay(d),s/veh	12.0	29.7	10.0	19.2	16.2	9.9	35.3	0.0	47.6	34.9	0.0	39.6
LnGrp LOS	B	C	A	B	B	A	D		D	C		D
Approach Vol, veh/h		978			728			200			175	
Approach Delay, s/veh		28.7			16.2			43.2			37.3	
Approach LOS		C			B			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	55.8	10.5	17.1	8.8	55.9	12.0	15.5
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	5.0	59.5	5.0	31.0	5.0	59.5	18.0	18.0
Max Q Clear Time (g_c+I1), s	2.8	43.9	5.3	6.8	2.7	25.7	5.9	9.1
Green Ext Time (p_c), s	0.0	5.9	0.0	0.4	0.0	4.6	0.1	0.4

Intersection Summary	
HCM 2010 Ctrl Delay	26.4
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	1068	714	29	58	1
Future Vol, veh/h	0	1068	714	29	58	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	100	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1161	776	32	63	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	808	0	-	0	1937	776
Stage 1	-	-	-	-	776	-
Stage 2	-	-	-	-	1161	-
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	817	-	-	-	72	397
Stage 1	-	-	-	-	454	-
Stage 2	-	-	-	-	298	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	817	-	-	-	72	397
Mov Cap-2 Maneuver	-	-	-	-	195	-
Stage 1	-	-	-	-	454	-
Stage 2	-	-	-	-	298	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	31.9
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	817	-	-	-	197
HCM Lane V/C Ratio	-	-	-	-	0.326
HCM Control Delay (s)	0	-	-	-	31.9
HCM Lane LOS	A	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	1.3

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	17	5	1	5	24	2	29	1	47	101	7
Future Vol, veh/h	2	17	5	1	5	24	2	29	1	47	101	7
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	18	5	1	5	26	2	32	1	51	110	8
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.4	7.1	7.4	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	8%	3%	30%
Vol Thru, %	91%	71%	17%	65%
Vol Right, %	3%	21%	80%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	24	30	155
LT Vol	2	2	1	47
Through Vol	29	17	5	101
RT Vol	1	5	24	7
Lane Flow Rate	35	26	33	168
Geometry Grp	1	1	1	1
Degree of Util (X)	0.04	0.031	0.036	0.192
Departure Headway (Hd)	4.158	4.308	3.936	4.096
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	853	836	915	874
Service Time	2.224	2.309	1.937	2.133
HCM Lane V/C Ratio	0.041	0.031	0.036	0.192
HCM Control Delay	7.4	7.4	7.1	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0.1	0.7

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	36	23	34	49	1
Future Vol, veh/h	3	36	23	34	49	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	39	25	37	53	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	141	54	54	0	-	0
Stage 1	54	-	-	-	-	-
Stage 2	87	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	852	1013	1551	-	-	-
Stage 1	969	-	-	-	-	-
Stage 2	936	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	838	1013	1551	-	-	-
Mov Cap-2 Maneuver	838	-	-	-	-	-
Stage 1	953	-	-	-	-	-
Stage 2	936	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1551	-	997	-	-
HCM Lane V/C Ratio	0.016	-	0.043	-	-
HCM Control Delay (s)	7.4	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	70	21	44	91	1
Future Vol, veh/h	4	70	21	44	91	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	76	23	48	99	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	194	100	100	0	-	0
Stage 1	100	-	-	-	-	-
Stage 2	94	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	795	956	1493	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	930	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	782	956	1493	-	-	-
Mov Cap-2 Maneuver	782	-	-	-	-	-
Stage 1	909	-	-	-	-	-
Stage 2	930	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	2.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1493	-	945	-	-
HCM Lane V/C Ratio	0.015	-	0.085	-	-
HCM Control Delay (s)	7.4	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection: 1: Rock Springs Access Drive/Lasea Road & Bear Creek Pike

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	TR	L	TR
Maximum Queue (ft)	199	360	25	64	265	30	85	120	126	88
Average Queue (ft)	21	232	1	16	143	8	32	47	42	23
95th Queue (ft)	101	354	8	44	241	29	64	94	84	62
Link Distance (ft)		2212			2442			620	364	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		230	100		120	175			40
Storage Blk Time (%)		20			12				18	4
Queuing Penalty (veh)		10			7				14	3

Intersection: 2: Bear Creek Pike & Old Highway 99

Movement	SB
Directions Served	LR
Maximum Queue (ft)	134
Average Queue (ft)	70
95th Queue (ft)	122
Link Distance (ft)	239
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Lasea Road & Old Highway 99

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	27	54	41	79
Average Queue (ft)	19	24	11	40
95th Queue (ft)	39	50	28	65
Link Distance (ft)	891	1948	820	3595
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Lasea Road & Blackburn Lane

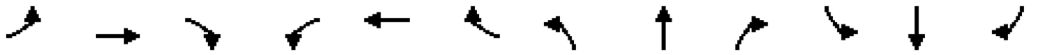
Movement	EB
Directions Served	LR
Maximum Queue (ft)	48
Average Queue (ft)	15
95th Queue (ft)	38
Link Distance (ft)	911
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Lasea Road & Site Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	48	31
Average Queue (ft)	26	1
95th Queue (ft)	44	10
Link Distance (ft)	316	364
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 34



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	650	64	102	913	65	38	8	60	60	13	58
Future Volume (veh/h)	92	650	64	102	913	65	38	8	60	60	13	58
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	100	707	70	111	992	71	41	9	65	65	14	63
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	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	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	1047	890	387	1049	892	200	14	98	210	27	119
Arrive On Green	0.05	0.56	0.56	0.05	0.56	0.56	0.04	0.07	0.07	0.06	0.09	0.09
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	196	1417	1774	296	1332
Grp Volume(v), veh/h	100	707	70	111	992	71	41	0	74	65	0	77
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	0	1613	1774	0	1628
Q Serve(g_s), s	2.1	24.6	1.9	2.4	45.7	1.9	1.9	0.0	4.1	3.1	0.0	4.1
Cycle Q Clear(g_c), s	2.1	24.6	1.9	2.4	45.7	1.9	1.9	0.0	4.1	3.1	0.0	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.88	1.00		0.82
Lane Grp Cap(c), veh/h	202	1047	890	387	1049	892	200	0	111	210	0	146
V/C Ratio(X)	0.49	0.68	0.08	0.29	0.95	0.08	0.21	0.00	0.67	0.31	0.00	0.53
Avail Cap(c_a), veh/h	210	1096	932	412	1116	949	234	0	316	458	0	550
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	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.8	14.2	9.2	11.2	18.7	9.2	37.7	0.0	41.7	36.6	0.0	39.9
Incr Delay (d2), s/veh	1.9	1.6	0.0	0.4	15.2	0.0	0.5	0.0	6.7	0.8	0.0	2.9
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	1.5	13.0	0.8	1.2	27.6	0.8	1.0	0.0	2.0	1.5	0.0	2.0
LnGrp Delay(d),s/veh	22.6	15.7	9.2	11.6	33.9	9.2	38.2	0.0	48.3	37.4	0.0	42.8
LnGrp LOS	C	B	A	B	C	A	D		D	D		D
Approach Vol, veh/h		877			1174			115			142	
Approach Delay, s/veh		16.0			30.3			44.7			40.3	
Approach LOS		B			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	57.6	9.2	14.2	10.6	57.7	11.1	12.3
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	6.0	54.0	5.0	31.0	5.0	55.0	18.0	18.0
Max Q Clear Time (g_c+I1), s	4.4	26.6	3.9	6.1	4.1	47.7	5.1	6.1
Green Ext Time (p_c), s	0.0	5.0	0.0	0.4	0.0	4.0	0.1	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	26.2
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	800	1229	84	29	3
Future Vol, veh/h	2	800	1229	84	29	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	100	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	870	1336	91	32	3

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1427	0	-	0	2210	1336
Stage 1	-	-	-	-	1336	-
Stage 2	-	-	-	-	874	-
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	477	-	-	-	49	188
Stage 1	-	-	-	-	245	-
Stage 2	-	-	-	-	408	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	477	-	-	-	49	188
Mov Cap-2 Maneuver	-	-	-	-	160	-
Stage 1	-	-	-	-	244	-
Stage 2	-	-	-	-	408	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	33.2
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	477	-	-	-	162
HCM Lane V/C Ratio	0.005	-	-	-	0.215
HCM Control Delay (s)	12.6	-	-	-	33.2
HCM Lane LOS	B	-	-	-	D
HCM 95th %tile Q(veh)	0	-	-	-	0.8

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	8	3	0	12	74	6	95	1	30	76	7
Future Vol, veh/h	9	8	3	0	12	74	6	95	1	30	76	7
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	9	3	0	13	80	7	103	1	33	83	8
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	7.7	7.4	8	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	45%	0%	27%
Vol Thru, %	93%	40%	14%	67%
Vol Right, %	1%	15%	86%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	102	20	86	113
LT Vol	6	9	0	30
Through Vol	95	8	12	76
RT Vol	1	3	74	7
Lane Flow Rate	111	22	93	123
Geometry Grp	1	1	1	1
Degree of Util (X)	0.13	0.028	0.103	0.145
Departure Headway (Hd)	4.235	4.557	3.967	4.236
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	834	790	909	835
Service Time	2.324	2.56	1.968	2.321
HCM Lane V/C Ratio	0.133	0.028	0.102	0.147
HCM Control Delay	8	7.7	7.4	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.1	0.3	0.5

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	30	32	53	53	1
Future Vol, veh/h	1	30	32	53	53	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	33	35	58	58	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	187	59	59	0	-	0
Stage 1	59	-	-	-	-	-
Stage 2	128	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	802	1007	1545	-	-	-
Stage 1	964	-	-	-	-	-
Stage 2	898	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	784	1007	1545	-	-	-
Mov Cap-2 Maneuver	784	-	-	-	-	-
Stage 1	942	-	-	-	-	-
Stage 2	898	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	2.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1545	-	998	-	-
HCM Lane V/C Ratio	0.023	-	0.034	-	-
HCM Control Delay (s)	7.4	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	40	67	98	91	4
Future Vol, veh/h	2	40	67	98	91	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	2	43	73	107	99	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	354	101	103	0	-	0
Stage 1	101	-	-	-	-	-
Stage 2	253	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	644	954	1489	-	-	-
Stage 1	923	-	-	-	-	-
Stage 2	789	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	611	954	1489	-	-	-
Mov Cap-2 Maneuver	611	-	-	-	-	-
Stage 1	875	-	-	-	-	-
Stage 2	789	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	3.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1489	-	929	-	-
HCM Lane V/C Ratio	0.049	-	0.049	-	-
HCM Control Delay (s)	7.5	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	0.2	-	-

Intersection: 1: Rock Springs Access Drive/Lasea Road & Bear Creek Pike

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	TR	L	TR
Maximum Queue (ft)	200	399	29	200	982	220	66	80	99	49
Average Queue (ft)	50	170	14	107	493	49	19	24	27	18
95th Queue (ft)	138	289	36	237	913	176	49	56	74	45
Link Distance (ft)		2212			2442			620	364	
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)	100		230	100		120	175			40
Storage Blk Time (%)		17		1	32				11	2
Queuing Penalty (veh)		26		9	54				8	1

Intersection: 2: Bear Creek Pike & Old Highway 99

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	48	64
Average Queue (ft)	3	23
95th Queue (ft)	19	51
Link Distance (ft)		239
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 3: Lasea Road & Old Highway 99

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	27	56	43	55
Average Queue (ft)	7	35	23	35
95th Queue (ft)	26	50	39	53
Link Distance (ft)	891	1948	820	3595
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: Lasea Road & Blackburn Lane

Movement	EB
Directions Served	LR
Maximum Queue (ft)	42
Average Queue (ft)	15
95th Queue (ft)	34
Link Distance (ft)	911
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 5: Lasea Road & Site Access

Movement	EB	NB
Directions Served	LR	LT
Maximum Queue (ft)	75	32
Average Queue (ft)	23	6
95th Queue (ft)	50	26
Link Distance (ft)	316	364
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 98

APPENDIX D – ADDITIONAL FIGURES

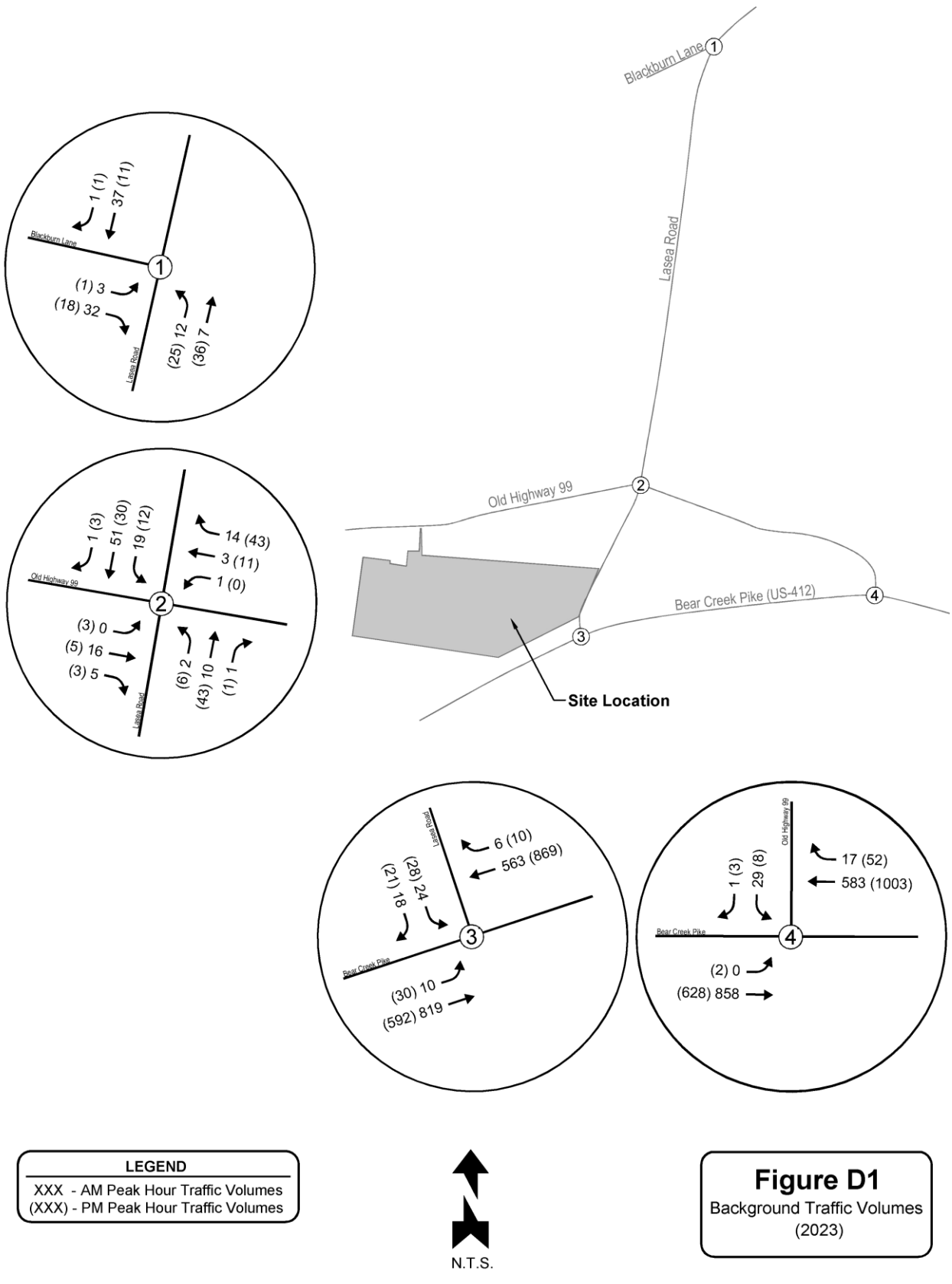


Figure D1
Background Traffic Volumes
(2023)

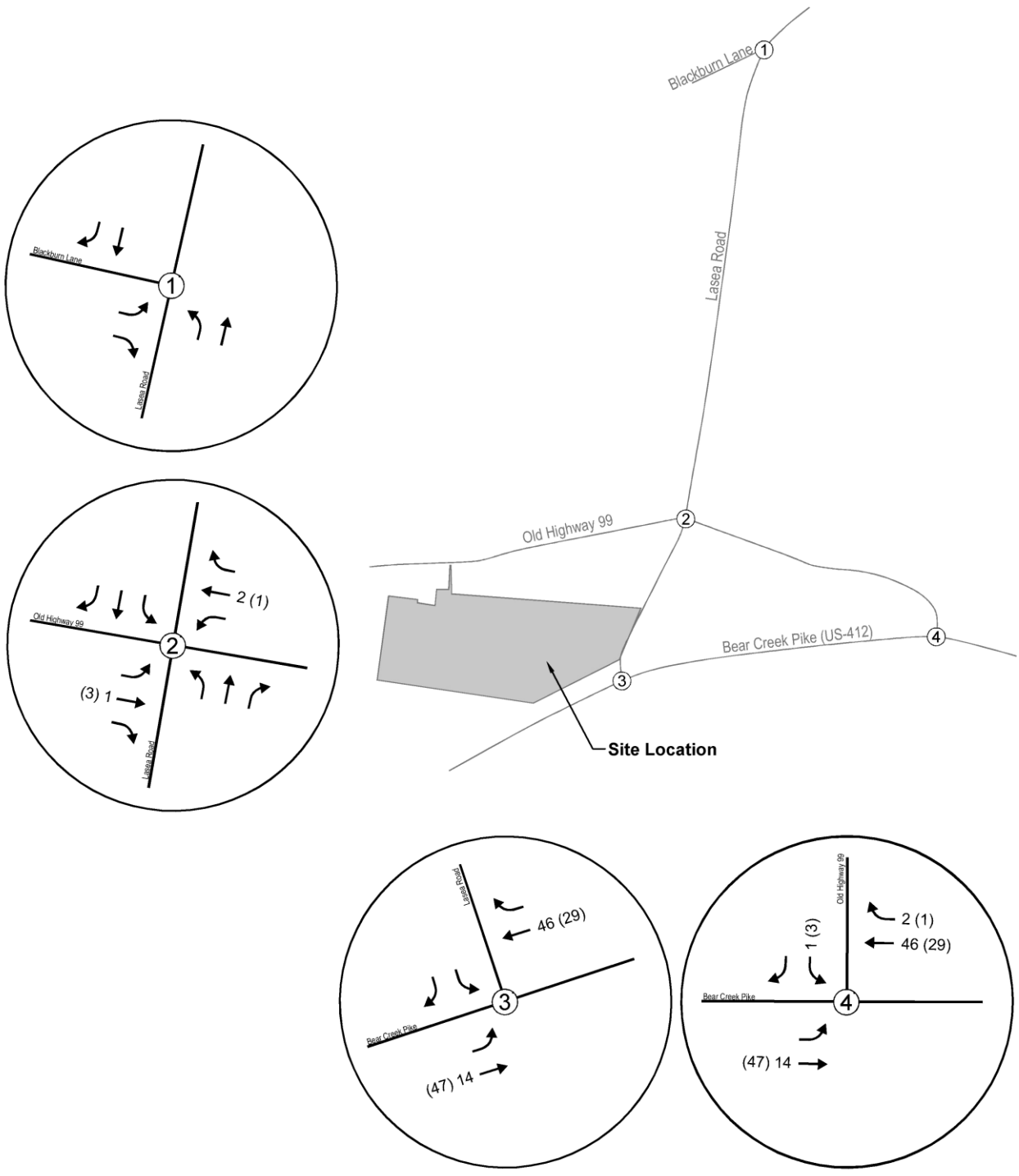
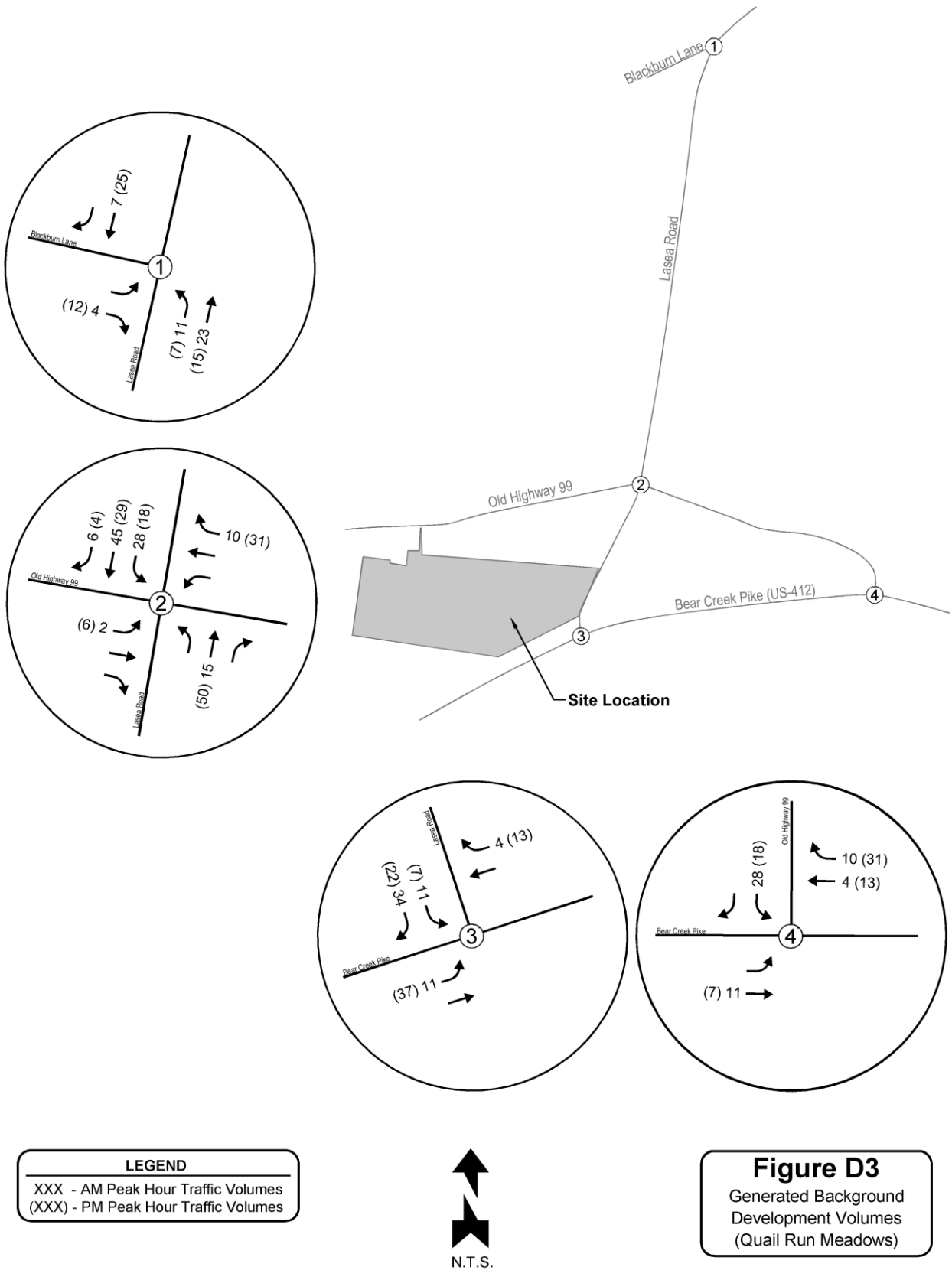


Figure D2
Generated Background Development Volumes (I-65 and Bear Creek Pike)


Blackburn Lane
1
Lasea Road
Old Highway 99
2
Bear Creek Pike (US-412)
4
3
Site Location
7 (25)
(12) 4
(7) 11
(15) 23
6 (4)
45 (29)
28 (18)
10 (31)
(6) 2
(50) 15
4 (13)
(22) 34
(7) 11
(37) 11
28 (18)
10 (31)
4 (13)
(7) 11
LEGEND
XXX - AM Peak Hour Traffic Volumes
(XXX) - PM Peak Hour Traffic Volumes
N.T.S.
Figure D3
Generated Background Development Volumes (Quail Run Meadows)

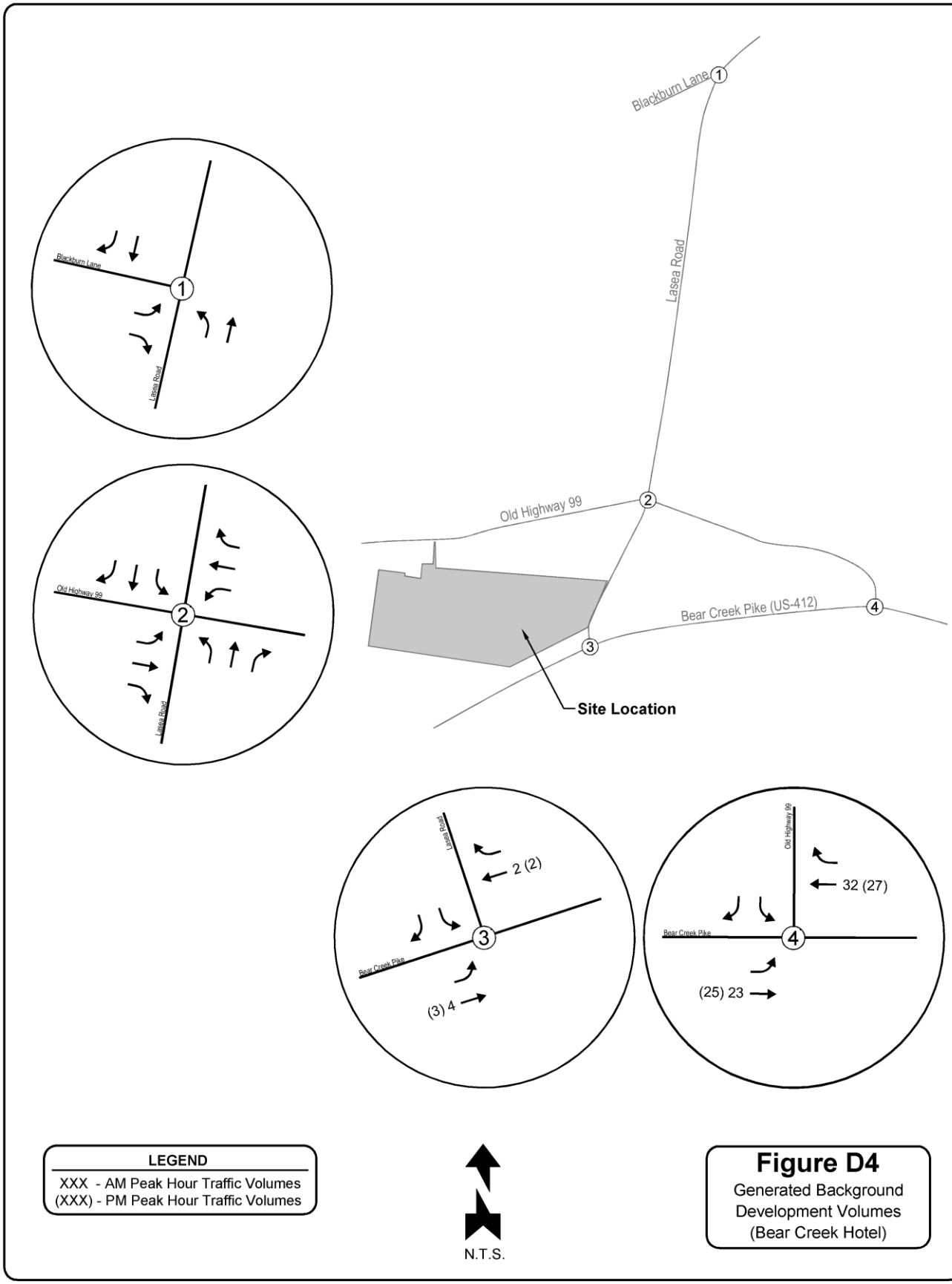


Figure D4
Generated Background Development Volumes (Bear Creek Hotel)

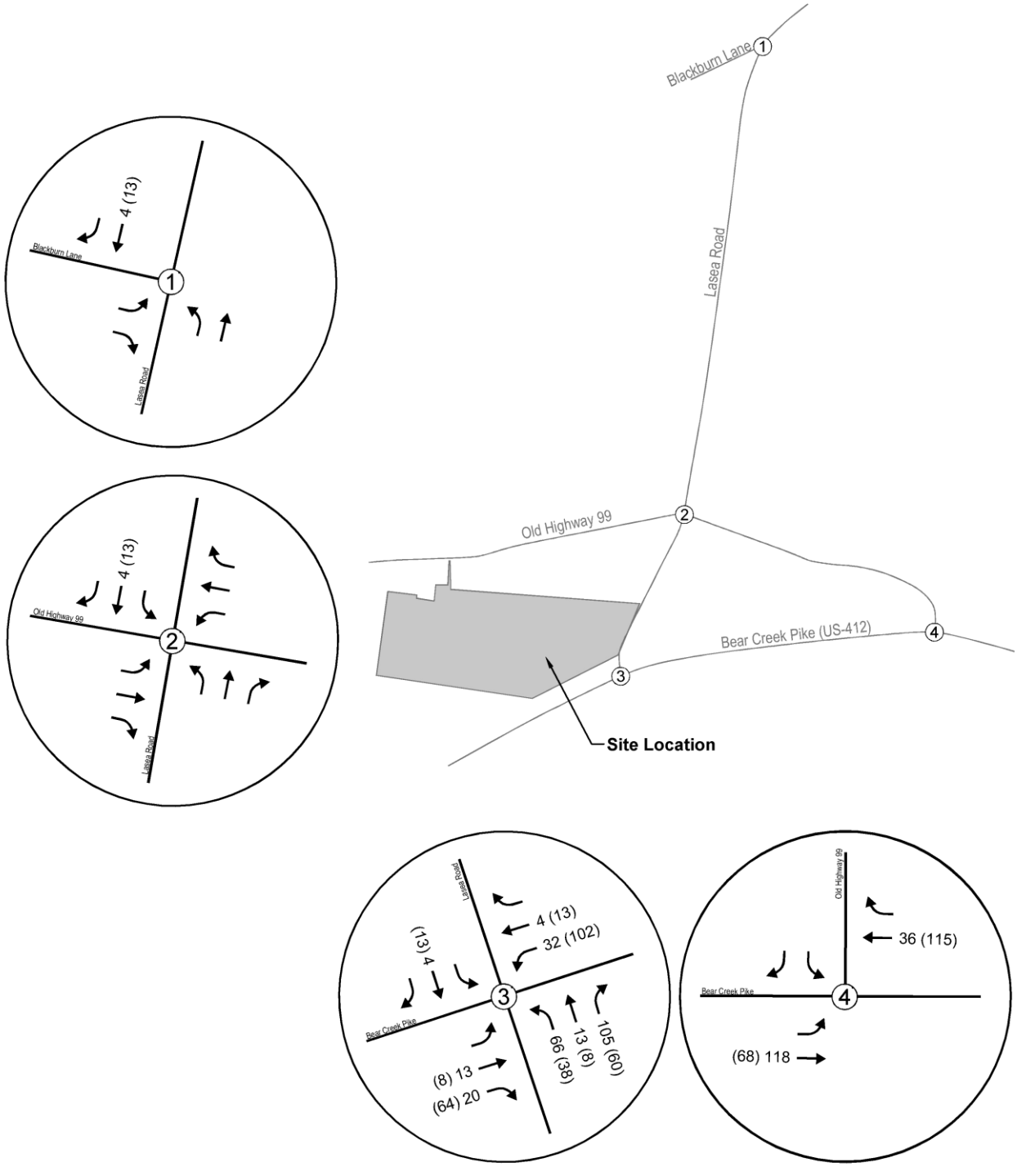


Figure D5
Generated Background Development Volumes
(1449 Rock Springs Rd PUD)

CPWS

January 13, 2023

Mr. Joseph Ahler
Ahler & Associates, LLC
Sent via email: joe.ahler@gmail.com

RE: Water Availability Letter
Highland Pointe at Bear Creek – 143 Lots
1451 Lasea Rd
Tax Map 73, Parcel 51
Columbia, Maury County, TN

Dear Mr. Ahler:

Columbia Power and 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, various Planning Commissions and other authorities in Cities and Counties. These Cities and Counties have also adopted rules and regulations. Subject to the payment of all charges and fees imposed by CPWS and the approval of any and all required governmental agencies, water service will be made available on a first-come, first-served basis, provided the applicant complies with all rules and regulations of CPWS and conditions set out herein.

The proposed development consists of 143 units. CPWS has evaluated the projected water demands for the proposed residential development in the water system hydraulic model and is able to meet a fire-flow capacity of 1,000 gpm at 20 psi while maintaining the existing level of service and pressures in this portion of the distribution system. CPWS can provide water for the proposed development according to the following requirements:

- Domestic waterline connections will be made to the existing 8-inch water main located on Lasea Road and the existing 6-inch water main located on Old Highway 99.
- Minimum size 8-inch, looped water mains are required throughout the development.

All of the above requirements are to be constructed and paid for by the Applicant and dedicated to CPWS once complete up to and including the meter. No construction of CPWS infrastructure shall be initiated until final construction plans have been approved by TDEC and all parties have fully executed a water service agreement.

Once you have received this Water Availability Letter, next steps in the process to obtain water service from CPWS are as follows:

- Present the attached hydrant analysis report for coordination and approval of development from the Columbia Fire & Rescue Fire Marshall.
- 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.
- Remit to CPWS new water service fees:

New Water Service Fee: $1,500 + $370 per SFU (143 SFUs)	$54,410.00

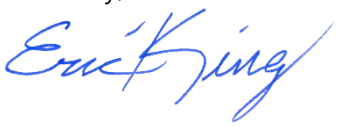
- CPWS will then develop water construction drawings and submit to TDEC for approval. Upon approval by TDEC and payment of meter and impact fees by the applicant, applicant may then schedule a pre-construction meeting with CPWS. Pre-construction meeting will not be scheduled until fees are paid in full or surety is provided in lieu of full payment. Final meter and capacity fees are subject to change based on final design and meter size determination. Meter fees are subject to change based on market costs at time of purchase. Meters will not be set until meter and impact fees are paid.

Meter Fee: $540 per ¾" meter (70 meters)	$77,220.00
Impact Fee: $4,500 per ¾" meter (70 meters)	$643,500.00
Total Meter and Impact Fees Due =	**$720,720.00**

- After the pre-construction meeting, CPWS will then issue a formal notice to proceed. No construction of CPWS infrastructure may take place prior to the pre-construction meeting.
- Applicant is then 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.

If you have any questions, please feel free to contact Mr. Jonathan Hardin or myself at 423-774-0349 or eric.king@inflodesign.com. This letter is valid for one-hundred twenty (120) days from the date of this letter.

Sincerely,



Eric King, P.E.
Inflo Design Group, LLC
on behalf of Columbia Power and Water Systems

cc: Jonathan Hardin, CPWS
File 22-103

CITY OF COLUMBIA
TENNESSEE

WASTEWATER DEPARTMENT

7 February 2023

Stuart Beattie
Imer Development, LLC
1909 Columbia Avenue
Franklin, TN 37064

RE: Map 73, Parcel 51
CC: Joseph Ahler

Stuart,

This letter serves as confirmation that the City of Columbia Wastewater Department has the available capacity to service the above-referenced development. Major or minor improvements to existing infrastructure may or may not be necessary to satisfactorily convey the additional sanitary sewer flow from the above-referenced proposed 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. Grinder Pump systems are not allowed by the City of Columbia. 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. 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

PLANNING COMMISSION
PROJECT DEVELOPMENT APPLICATION

SUBMITTAL REQUIREMENTS

** 1 hard copy of all materials for submittal + PDF copy on a USB thumb drive or CD (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"

ADDRESS/LOCATION	1451 Lasea Road, Columbia, TN		
	TAX MAP: 073	GROUP:	PARCEL: 051.00
SUMMARY OF NATURE OF REQUEST AND WORK	Preliminary Development Plan and Preliminary Plat of residential development		

DATE OF PRE-APPLICATION CONFERENCE	2/22/2023	*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
☐ Annexation ☐ Rezoning ☒ Preliminary Plat ☐ Final Plat ☐ PUD Preliminary Master Plan ☐ PUD Final Site Plan ☐ Multi-Family Site Plan ☒ Other: Preliminary Development plan **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations/Rezoning/PUD's:** ☐ Written Legal Description copy ☐ Requested Zone Listed ☐ Compliance with Comprehensive Plan ☐ Annexation Permission Form ☐ Plans and/or Plats conforming to City standards with check list completed ☐ Columbia Water System Availability Letter **Plats/PUDs:** ☐ Project Name (include Sections & Phases) Highland Point @ Bear Creek ☐ Total Number of Lots 143 ☐ Total acreage 29.5 acres

Rev. 4/14/2022

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 meetings 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	Joseph Ahler P.E., R.L.S.	PHONE	615-481-3106
ADDRESS	P.O. Box 1636, Spring Hill, TN 37174	EMAIL	joe.ahler@gmail.com

PROPERTY OWNER NAME	Imer Development, LLC	PHONE	615-788-1320
ADDRESS	1909 Columbia Ave.,Franklin TN, 37064	EMAIL	stuart@nasonhomes.com

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.

Joseph Ahler	Joseph Ahler	4/17/2023
APPLICANT NAME	APPLICANT SIGNATURE	DATE
Imer Development, LLC		4/17/2023
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	

Eric McNeely, PE
(615) 335-3172
254 Belgian Road
Nolensville, TN 37135

McNeely Civil Engineering Services

Mr. Kevin McCarthy
City of Columbia Development Services
700 North Garden Street
Columbia, TN 38401

RE: Drumwright PUD Final Master Plan revisions
Project Number: 23-0092

Kevin,

Please see in this letter comments responding to the city comments and discussions we have had concerning the Drumwright PUD Final Master Plan revision.

Comments from City of Columbia

DEVELOPMENT REVEW COMMITTEE MEETING
Tuesday, May 9th, 2023

ITEM NO.
23-0092

DESCRIPTION: Revise PUD 4 lots

RECOMMENDATION: For final recommendation please see staff report.

COMMENTS:

Planning

1. Berm not shown as approved along Nashville Highway, with regards to height. ** Sheet L1.01 not showing Nashville Hwy. elevations. (20-0238).

   The constructed berm height has been field checked and survey shows the berm has been constructed per the TDOT Grading permit plans along Hwy 31. City of Columbia staff advised that no new plantings would be allowed to be installed on any portion of the berms that were constructed within TDOT right of way. Field surveys are attached with this comment response.

2. Please revise notes to indicate that the scope of revision is limited to design of amenities.

   This item was discussed with the City Planner and note shown on master plan is correct and said note states that the total lot count for single family homes has reduced from 183 units to 179 units and design of the amenity area for a pool/bathhouse.

3. At resubmittal, please provide a statement indicating that the proposed Master Plan revision meets the criteria for minor modifications of PUD Master Plan during construction under Section 3.20.16 of Ordinance 3638 (the old zoning ordinance) and is the minimum necessary to fulfil the intent of the PUD.

   The proposed Master Plan revision meets the criteria for minor modifications of PUD Master Plan of the zoning ordinance that was in place at time of project approvals and the proposed revisions to the PUD fulfill the minimum necessary PUD requirements.

   Please confirm that the need for the modification was unforeseen at the time of initial approval and that the modification does not violate the basic policy of the approved PUD Master Plan.

   The addition of the amenity area for a swimming pool/bathhouse was not originally planned for the community and will not violate the basic policy of the approved PUD Master Plan.

Please also verify that the modifications **do not** result in a. An increase in residential density; b. An increase of more than 3% in the total ground area covered by buildings; or c. a reduction of more than 2% in the area set aside for open space.

So noted,

A. Residential density has decreased with reduction of 4 lots
B. There is not more than a 3 percent increase in total ground area covered by buildings.
C. There is not a reduction in open space but increase in open space with the addition of the amenity area and reduction of 4 single family lots.

Fire

4. No comments

Engineering

5. Clearly describe all revisions to the approved PUD
    - Four single family lots have been removed and an amenity for swimming pool/bathhouse is proposed.
    - The centralized mailbox location has been combined and shown at the amenity pool/bathhouse. The CBU's for both the single family and townhome units will be centrally located in the same location.
    - Planning staff worked with the developer to allow two entry monuments at the main entrance with only one allowed to have lettering per the city standards.
    - The privacy fence along Hwy 31 is proposed to be changed from a wooden privacy fence to a four-rail farm fence and is shown on the landscape plans.

6. Final Plat required to remove lots.
    Acknowledged. The developer understands that a final plat will be necessary to revise the previously recorded four single family lots and remove them from the final plat.

Building

7. No comments.

Police

8. No comments provided.

Maury County Schools

9. Current Zones and Capacity: Battle Creek Elementary School (87%), Battle Creek Middle School (77%), Spring Hill High School (102%). 1) No residence is guaranteed zone to a specific school. 2) All zones are subject to change yearly. 3) No concerns with neighborhood design.

   Acknowledged.

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 transformer appropriate for your development.

    Acknowledged.

Public Works

11. No comments.

Columbia Water

12. "Coordinate changes in water services/meters with CPWS".
    Developer has coordinated changes with CPWS.

Atmos Energy

13. Gas lines being installed in the development.

Maury County E911

14. Make sure street names are correct.
    cgideon@Maury911.org

ATT

15. No comment.

Wastewater

16. Columbia Wastewater has no concerns.

Duck River Electric Membership Corp

17. No comments.

Maury County Highway Dept.

18. No comments provided.

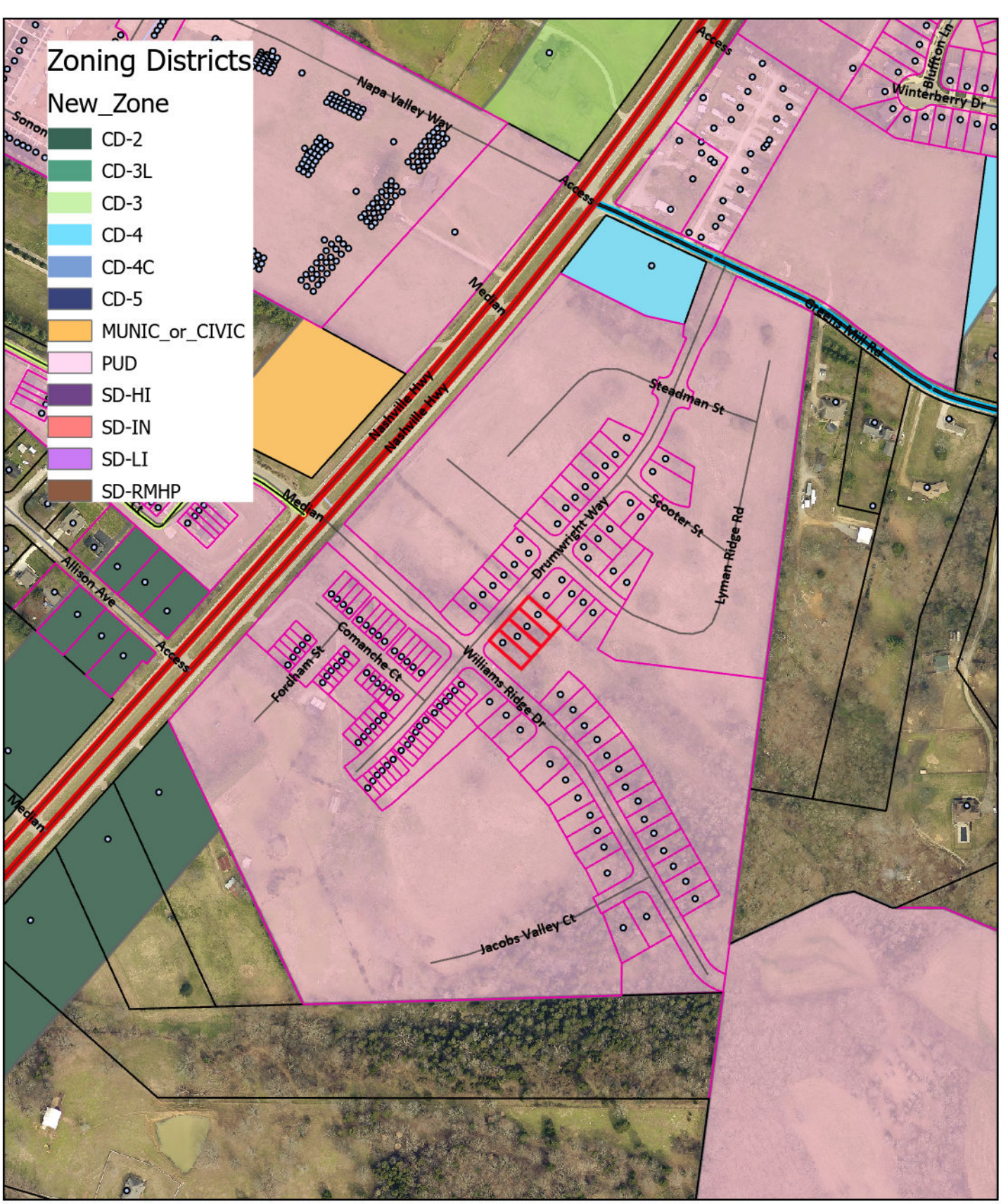
ATTACHMENTS: PUD

NOTE: All submittals shall be compliant with City standards prior to Planning Commission review. Items that are not adhering to the regulations and/or comments for that request will not be forwarded to the next agenda until such items are amended.

If you should have any further questions or comments regarding this comment response letter, please feel free to contact me at 615-335-3172.

Sincerely,

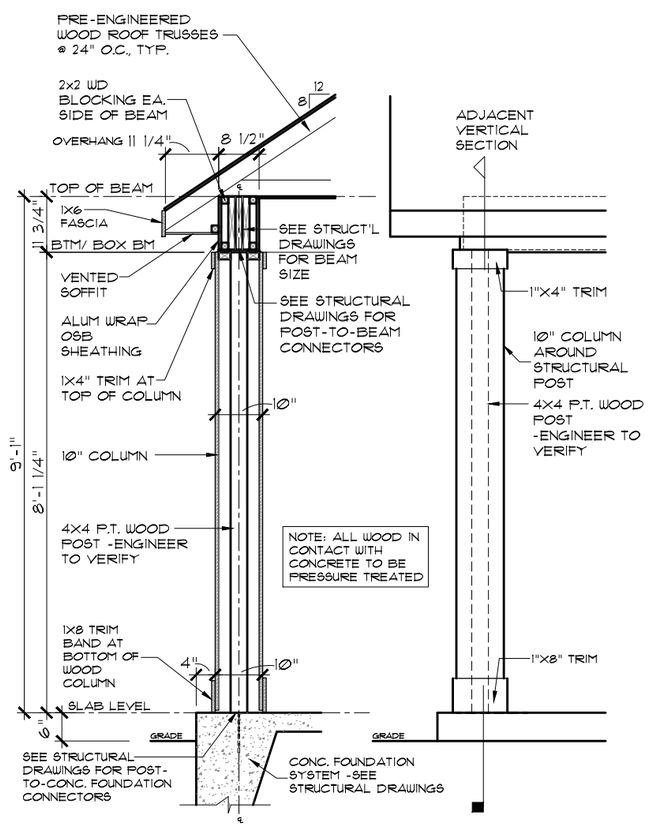
Eric McNeely, PE



23-0092
Drumwright PUD

CITY OF COLUMBIA TENNESSEE

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

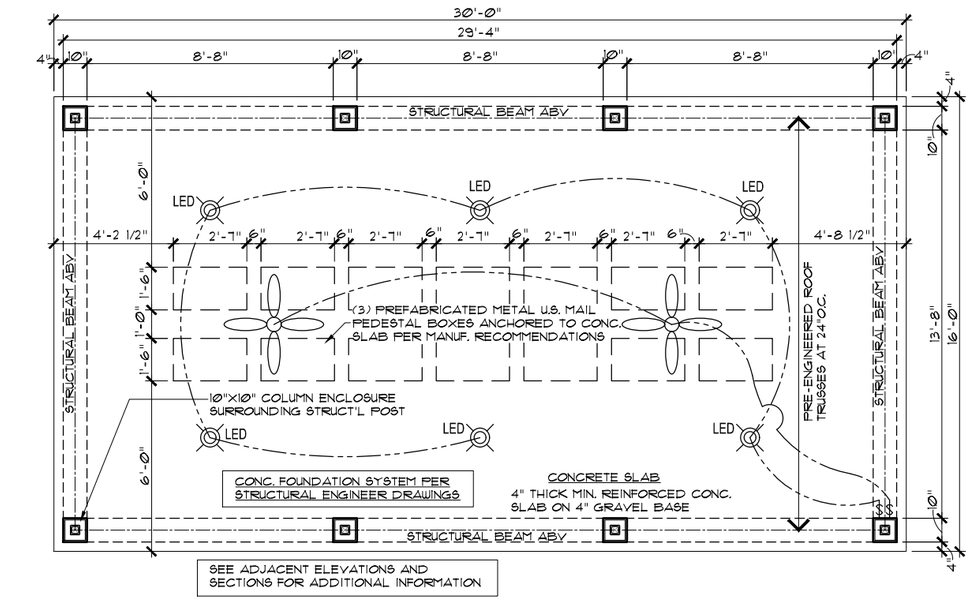


Column Section

SCALE: 1/2" = 1'-Ø"

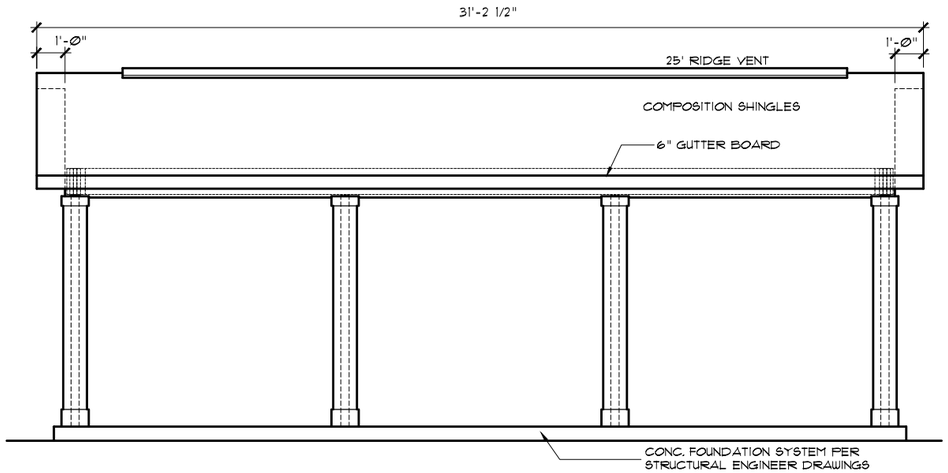
Column Elevation

SCALE: 1/2" = 1'-Ø"



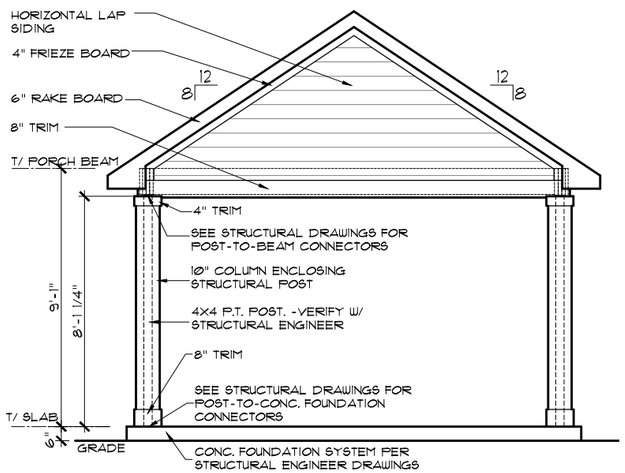
Floor Plan

SCALE: 1/4" = 1'-Ø"



Front Elevation

SCALE: 1/4" = 1'-Ø"



Side Elevation

SCALE: 1/4" = 1'-Ø"

NASHVILLE DIVISION

EVERYTHING'S INCLUDED

REV.NO.	DATE	REMARKS
1	3-6-23	
2		
3		
4		
5		

THESE PLANS AND THE DESIGNS CONTAINED HEREIN ARE THE SOLE PROPERTY OF LENNAR CORPORATION

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LENNAR®

SET NO.

DRAWN BY

COLLECTION **Symphony**

MODEL **16'x29'-6" MAIL KIOSK**

DRAWING TITLE

OPTION DESCRIPTION

SHEET NO.

A1

REQUIRED BUFFERS SUMMARY:

L1.01

80 FT. LANDSCAPE BUFFER (50% EVERGREEN)

TOTAL EVERGREEN TREES:	50
TOTAL DECIDUOUS TREES:	42

L1.02

25 FT. BUFFER WITH; 0.6 OPACITY

TOTAL LINEAR FEET:	1,021
REQUIRED CANOPY TREES:	30
PROVIDED CANOPY TREES:	30
REQUIRED ACCENT TREES:	60
PROVIDED ACCENT TREES:	60
REQUIRED SHRUBS:	340
PROVIDED SHRUBS:	355

L1.03

25 FT. BUFFER WITH; 0.6 OPACITY

TOTAL LINEAR FEET:	832
REQUIRED CANOPY TREES:	25
PROVIDED CANOPY TREES:	26
REQUIRED ACCENT TREES:	50
PROVIDED ACCENT TREES:	50
SHRUBS REQUIRED:	282
SHRUBS PROVIDED:	284

20 FT. BUFFER WITH; 0.4 OPACITY

TOTAL LINEAR FEET:	772
REQUIRED CANOPY TREES:	15
PROVIDED CANOPY TREES:	15
ACCENT REQUIRED TREES:	28
ACCENT PROVIDED TREES:	28
SHRUBS REQUIRED:	193
SHRUBS PROVIDED:	195

L1.04

20 FT. BUFFER WITH; 0.4 OPACITY

TOTAL LINEAR FEET:	715
REQUIRED CANOPY TREES:	14
PROVIDED CANOPY TREES:	15
REQUIRED ACCENT TREES:	28
PROVIDED ACCENT TREES:	31
REQUIRED SHRUBS:	178
PROVIDED SHRUBS:	187

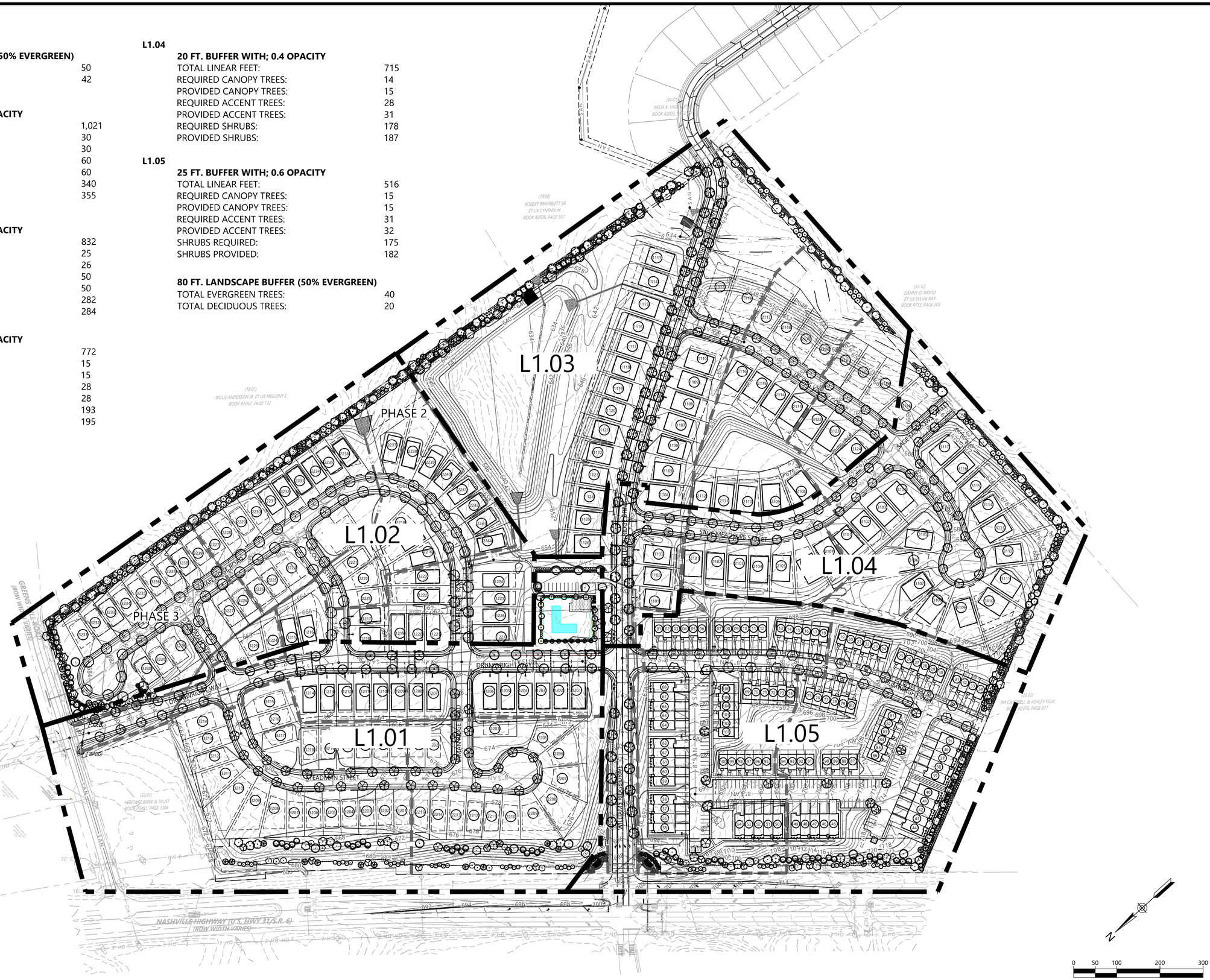
L1.05

25 FT. BUFFER WITH; 0.6 OPACITY

TOTAL LINEAR FEET:	516
REQUIRED CANOPY TREES:	15
PROVIDED CANOPY TREES:	15
REQUIRED ACCENT TREES:	31
PROVIDED ACCENT TREES:	32
SHRUBS REQUIRED:	175
SHRUBS PROVIDED:	182

80 FT. LANDSCAPE BUFFER (50% EVERGREEN)

TOTAL EVERGREEN TREES:	40
TOTAL DECIDUOUS TREES:	20



658 GRASSMERE PARK DR
SUITE 100
NASHVILLE, TN 37211
(615) 385-4144

LENNAR HOMES OF TENNESSEE, LLC.

381 Mallory Station Drive
SUITE 200
615-465-4328

JAMES M. BROUILLETTE
REGISTERED
LANDSCAPE ARCHITECT
STATE OF TENNESSEE
2/20/23

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	2/20/2023	Landcape Revisions per Owner	jmb	###	jmb

OVERALL SITE LANDSCAPE PLAN

CONSTRUCTION DOCUMENTS
FOR
DRUMWRIGHT PLANNED UNIT DEVELOPMENT
COLUMBIA, MAURY COUNTY, TENNESSEE

PROJECT NUMBER
5147-20-036

DRAWING NUMBER
L1.00

DRAWING PATH: E:\Knoxville-1430\Projects\2020\5147-20-036_CK_Drumright_Columbia\CAD\Construction\5147203036_L1.00-L1.05 LAN.dwg

PLANT SCHEDULE POOL AMENITY

CANOPY TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	SPREAD	REMARKS
	4	Acer saccharum `Green Mountain` TM	Green Mountain Sugar Maple	B & B	2"	10'-12'	3'-4'	Well branched w/ strong central leader
	3	Zelkova serrata `Green Vase`	Green Vase Sawleaf Zelkova	B & B	2"	10'-12'		
EVERGREEN TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CAL**	**SIZE**	**SPREAD**	**REMARKS**
	12	Magnolia virginiana `Green Shadow`	Green Shadow Magnolia	B & B	3" Total	10-12'	4-5'	Multi-trunk, 3 stem, balanced canopy, matched
STREET TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CAL**	**SIZE**	**SPREAD**	**REMARKS**
	3	Quercus lyrata `Highbeam`	Highbeam Overcup Oak	B & B	2"	12'-14'		
UNDERSTORY TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CAL**	**SIZE**	**SPREAD**	**REMARKS**
	8	Lagerstroemia indica `Natchez`	Natchez Crape Myrtle	#25 Cont.	2.5"Cal	10-12'		Multi-trunk (3 min.); Limb up 4' ht.

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	CALIPER	HEIGHT	SPREAD	SPACING	REMARKS
	2	Ilex verticillata `Red Sprite`	Red Sprite Winterberry	#3 Cont.		15"	15-18"	48" o.c.	
DECIDUOUS SHRUBS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CALIPER**	**HEIGHT**	**SPREAD**	**SPACING**	**REMARKS**
	17	Callicarpa americana	American Beautyberry	#5 Cont.				60" o.c.	spaced 48" o.c., when en mass
	7	Clethra alnifolia `Hummingbird`	Summersweet	#3 Cont.		12-15"	12"	36" o.c.	
	10	Fothergilla major `Mount Airy`	Mount Airy Fothergilla	#5 Cont.		21-24"	21-24"	48" o.c.	Full; Compact
	36	Hydrangea paniculata `Limelight` TM	Limelight Hydrangea	#5 Cont.		30-36"	24-27"	54" o.c.	
	13	Rosa x `Meidrifora`	Coral Drift Rose	#3 Cont.		10-12"	15-18"	30" o.c.	
	16	Viburnum x burkwoodii `Conoy`	Conoy Viburnum	#5 Cont.		2-3'	2-3'	60" o.c.	Space 5' o.c.
EVERGREEN SHRUBS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CALIPER**	**HEIGHT**	**SPREAD**	**SPACING**	**REMARKS**
	33	Abelia grandifolia `Rose Creek`	Rose Creek Abelia	#5 Cont.		21-24"	21-24"	54" o.c.	
	44	Ilex x meserveae `Berries Magic`	Berries Magic Holly	#5 Cont.				42" o.c.	

PLANT SCHEDULE L1.01

CANOPY TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	SPREAD	REMARKS
	7	Acer rubrum `Autumn Flame`	Autumn Flame Maple	B & B	2"	9-10'		
	6	Acer saccharum `Green Mountain` TM	Green Mountain Sugar Maple	B & B	2"	10'-12'	3'-4'	Well branched w/ strong central leader
	7	Quercus macrocarpa	Burr Oak	B & B	2"	12'-14'		
	1	Quercus phellos `Hightower`	Hightower Willow Oak	B & B	2"	12-14'		
EVERGREEN TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CAL**	**SIZE**	**SPREAD**	**REMARKS**
	1	Ilex opaca `Greenleaf`	Greenleaf American Holly	B & B	2"	6-7'		
	30	Magnolia grandiflora `Little Gem`	Dwarf Southern Magnolia	B & B	2"	8-10'		
	20	Pinus nigra	Austrian Black Pine	B & B	2"	8-9'	3.5-4'	Dense and full
STREET TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CAL**	**SIZE**	**SPREAD**	**REMARKS**
	39	Quercus lyrata `Highbeam`	Highbeam Overcup Oak	B & B	2"	12'-14'		
	37	Ulmus parvifolia `Athena Classic`	Athena Elm	B & B	2"	10'-12'		
UNDERSTORY TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CAL**	**SIZE**	**SPREAD**	**REMARKS**
	17	Cercis canadensis `Appalachian Red`	Appallachian Red Eastern Redbud	#25 Cont.	2"Cal	8'-10'		
	9	Cornus kousa "China Girl"	China Girl Kousa Dogwood	B & B	2"	8'-10'		
	11	Prunus x yedoensis	Yoshino Cherry	B & B	2"	8-9'	4-5'	Well branched crown; Mature Height: 40'-50' Ht.

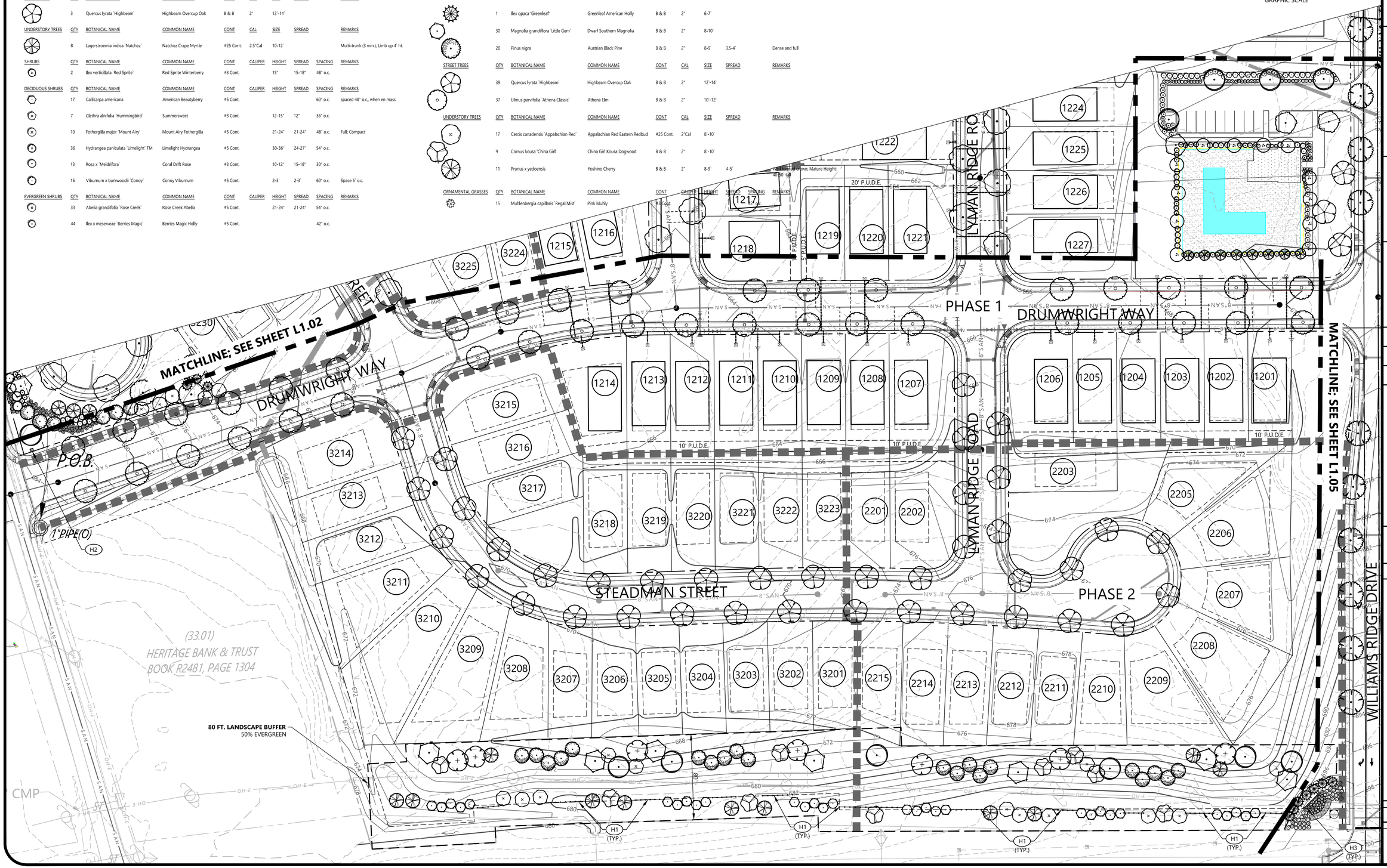
ORNAMENTAL GRASSES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CALIPER	HEIGHT	SPREAD	SPACING	REMARKS
	15	Muhlenbergia capillaris `Regal Mist`	Pink Muhly						

HARDSCAPE KEYNOTES

CODE	DESCRIPTION	DET #/SHT #
H1	4-BOARD FENCE	2/L2.01
H2	BRICK COLUMN	4/L2.01
H3	ENTRANCE WALL	1 AND 3/L2.01

Know what's below. Call before you dig.

0 20 40 80 120
GRAPHIC SCALE



658 GRASSMERE PARK DR
SUITE 100
NASHVILLE, TN 37211
(615) 385-4144

LENNAR HOMES OF TENNESSEE, LLC.
381 Mallory Station Drive
SUITE 200
615-465-4328

JASON M. BROUILLETTE
REGISTERED
LANDSCAPE ARCHITECT
STATE OF TENNESSEE
LICENSE NO. 329
2/20/23

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	2/20/2023	Landcape Revisions per Owner	jmb	###	jmb

DETAILED LANDSCAPE PLAN

CONSTRUCTION DOCUMENTS
FOR
DRUMWRIGHT PLANNED UNIT DEVELOPMENT
COLUMBIA, MAURY COUNTY, TENNESSEE

PROJECT NUMBER
5147-20-036

DRAWING NUMBER
L1.01

DRAWING PATH: E:\Knoxville-1430\Projects\2020\5147-20-036_CK_Drumwright_Columbia\CAD\Construction\514720036_L1.00-L1.05 LAN.dwg

PLANT SCHEDULE L1.02

CANOPY TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	SPREAD	REMARKS
	3	Acer rubrum `Autumn Flame`	Autumn Flame Maple	B & B	2"	9-10`		
	2	Acer saccharum `Green Mountain` TM	Green Mountain Sugar Maple	B & B	2"	10`-12`	3`-4`	Well branched w/ strong central leader
	8	Platanus x acerifolia `Bloodgood`	London Plane Tree	B & B	2"	10`-12`	3`-4`	
	12	Quercus phellos `Hightower`	Hightower Willow Oak	B & B	2"	12-14`		
	12	Zelkova serrata `Green Vase`	Green Vase Sawleaf Zelkova	B & B	2"	10`-12`		

EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	SPREAD	REMARKS
	2	Ilex opaca 'Greenleaf'	Greenleaf American Holly	B & B	2"	6-7`		
	20	Ilex x `Nellie R Stevens`	Nellie Stevens Holly	B & B	2"	6-7`	3-4`	Understory; Full to base
	10	Magnolia grandiflora `Little Gem`	Dwarf Southern Magnolia	B & B	2"	8-10`		
	15	Magnolia virginiana `Green Shadow`	Green Shadow Magnolia	B & B	3" Total	10-12`	4-5`	Multi-trunk; 3 stem, balanced canopy, matched
	10	Pinus nigra	Austrian Black Pine	B & B	2"	8-9`	3.5-4`	Dense and full

STREET TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	SPREAD	REMARKS
	62	Quercus phellos	Willow Oak	B & B	2"	13-14`		

UNDERSTORY TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	SPREAD	REMARKS
	16	Amelanchier x grandiflora `Autumn Brilliance`	`Autumn Brilliance` Serviceberry	B & B	2"	10-12`		
	12	Cornus florida `Cloud Nine`	Cloud Nine Eastern Dogwood	B & B	2"	8-10`	3-4`	
	6	Prunus x yedoensis	Yoshino Cherry	B & B	2"	8-9`	4-5`	Well formed crown; Mature Height: 40-50` tall

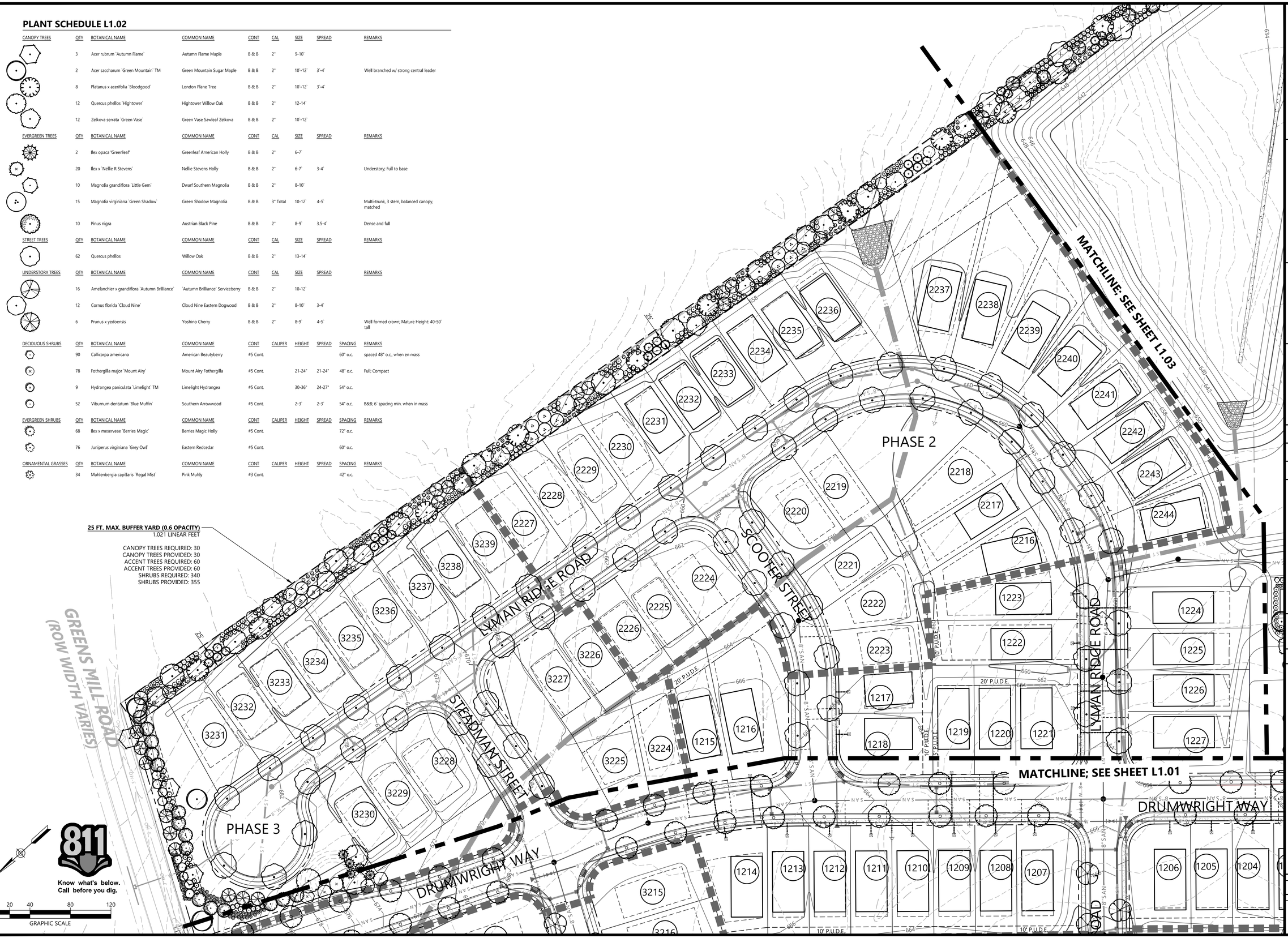
DECIDUOUS SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	CALIPER	HEIGHT	SPREAD	SPACING	REMARKS
	90	Callicarpa americana	American Beautyberry	#5 Cont.				60" o.c.	spaced 48" o.c., when en mass
	78	Fothergilla major `Mount Airy`	Mount Airy Fothergilla	#5 Cont.		21-24"	21-24"	48" o.c.	Full; Compact
	9	Hydrangea paniculata `Limelight` TM	Limelight Hydrangea	#5 Cont.		30-36"	24-27"	54" o.c.	
	52	Viburnum dentatum `Blue Muffin`	Southern Arrowwood	#5 Cont.		2-3`	2-3`	54" o.c.	B&B; 6` spacing min. when in mass

EVERGREEN SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	CALIPER	HEIGHT	SPREAD	SPACING	REMARKS
	68	Ilex x meserveae `Berries Magic`	Berries Magic Holly	#5 Cont.				72" o.c.	
	76	Juniperus virginiana `Grey Owl`	Eastern Redcedar	#5 Cont.				60" o.c.	

ORNAMENTAL GRASSES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CALIPER	HEIGHT	SPREAD	SPACING	REMARKS
	34	Muhlenbergia capillaris `Regal Mist`	Pink Muhly	#3 Cont.				42" o.c.	

25 FT. MAX. BUFFER YARD (0.6 OPACITY)
1,021 LINEAR FEET

CANOPY TREES REQUIRED: 30
CANOPY TREES PROVIDED: 30
ACCENT TREES REQUIRED: 60
ACCENT TREES PROVIDED: 60
SHRUBS REQUIRED: 340
SHRUBS PROVIDED: 355



811
Know what's below.
Call before you dig.

0 20 40 80 120
GRAPHIC SCALE

658 GRASSMERE PARK DR
SUITE 100
NASHVILLE, TN 37211
(615) 385-4144

LENNAR HOMES OF TENNESSEE, LLC.
381 Mallory Station Drive
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615-465-4328

JASON M. BROUILLETTE
REGISTERED
LANDSCAPE ARCHITECT
STATE OF TENNESSEE
LICENSE NO. 1
2/20/23

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	2/20/2023	Landcape Revisions per Owner	jmb	###	jmb

DETAILED LANDSCAPE PLAN

CONSTRUCTION DOCUMENTS
FOR
DRUMWRIGHT PLANNED UNIT DEVELOPMENT
COLUMBIA, MAURY COUNTY, TENNESSEE

PROJECT NUMBER
5147-20-036

DRAWING NUMBER
L1.02

DRAWING PATH: E:\Knoxville-1430\Projects\2020\5147-20-036_CK_Drumright_Columbia\CAD\Construction\51472036_L1.00-L1.05 LAN.dwg

PLANT SCHEDULE L1.03

CANOPY TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	SPREAD	REMARKS
	4	Acer saccharum `Green Mountain` TM	Green Mountain Sugar Maple	B & B	2"	10'-12'	3'-4'	Well branched w/ strong central leader
	7	Nyssa sylvatica `Wildfire`	Black Gum	B & B	2"	10-12'		
	9	Platanus x acerifolia `Bloodgood`	London Plane Tree	B & B	2"	10'-12'	3'-4'	
	5	Quercus phellos `Hightower`	Hightower Willow Oak	B & B	2"	12-14'		
	10	Quercus shumardii	Shumard Red Oak	B & B	2"	10-12'		
	4	Zelkova serrata `Green Vase`	Green Vase Sawleaf Zelkova	B & B	2"	10'-12'		

EVERGREEN TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	SPREAD	REMARKS
	15	Ilex x `Nellie R Stevens`	Nellie Stevens Holly	B & B	2"	6-7'	3-4'	Understory; Full to base
	16	Magnolia virginiana `Green Shadow`	Green Shadow Magnolia	B & B	3" Total	10-12'	4-5'	Multi-trunk, 3 stem, balanced canopy, matched
	14	Pinus nigra	Austrian Black Pine	B & B	2"	8-9'	3.5-4'	Dense and full

STREET TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	SPREAD	REMARKS
	29	Acer rubrum `October Glory` TM	October Glory Maple	B & B	2"	10'-12'		
	20	Ulmus parvifolia `Bosque`	Bosque Lacebark Elm	B & B	2"	10'-12'	4-5'	Well branched

UNDERSTORY TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	SPREAD	REMARKS
	4	Amelanchier x grandiflora `Autumn Brilliance`	`Autumn Brilliance` Serviceberry	B & B	2"	10-12'		
	10	Betula nigra `Heritage`	Heritage River Birch	B & B	2"	10'-12'		
	11	Prunus x yedoensis	Yoshino Cherry	B & B	2"	8-9'	4-5'	Well formed crown; Mature Height: 40-50' tall

DECIDUOUS SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	CALIPER	HEIGHT	SPREAD	SPACING	REMARKS
	54	Cornus sericea `Artic Fire`	Artic Fire Dogwood	#5 Cont.		30-36"	30-36"	48" o.c.	
	25	Callicarpa americana	American Beautyberry	#5 Cont.				60" o.c.	spaced 48" o.c., when en mass
	36	Cephalanthus occidentalis	Buttonbush	#5 Cont.				60" o.c.	
	62	Forsythia x "Gold Tides"	Golden Tide Forsythia	#5 Cont.		12-18"		48" o.c.	
	52	Fothergilla major `Mount Airy`	Mount Airy Fothergilla	#5 Cont.		21-24"	21-24"	48" o.c.	Full; Compact
	60	Viburnum dentatum `Blue Muffin`	Southern Arrowwood	#5 Cont.		2-3'	2-3'	54" o.c.	B&B; 6' spacing min. when in mass

EVERGREEN SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	CALIPER	HEIGHT	SPREAD	SPACING	REMARKS
	46	Abelia grandifolia `Rose Creek`	Rose Creek Abelia	#5 Cont.		21-24"	21-24"	54" o.c.	
	45	Ilex x meserveae `Berries Magic`	Berries Magic Holly	#5 Cont.				72" o.c.	
	32	Juniperus virginiana `Grey Owl`	Eastern Redcedar	#5 Cont.				60" o.c.	
	56	Prunus laurocerasus `Otto Luyken`	Otto Luykens Laurel	#5 Cont.		24-30"	24-30"	54" o.c.	

25 FT. MAX. BUFFER YARD (0.6 OPACITY)
832 LINEAR FEET

CANOPY TREES REQUIRED: 25
CANOPY TREES PROVIDED: 26
ACCENT TREES REQUIRED: 50
ACCENT TREES PROVIDED: 50
SHRUBS REQUIRED: 282
SHRUBS PROVIDED: 284

20 FT. BUFFER YARD (0.4 OPACITY)
772 LINEAR FEET

CANOPY TREES REQUIRED: 15
CANOPY TREES PROVIDED: 15
ACCENT TREES REQUIRED: 28
ACCENT TREES PROVIDED: 28
SHRUBS REQUIRED: 193
SHRUBS PROVIDED: 195

PHASE 1

PHASE 2

PHASE 3

MATCHLINE: SEE SHEET L1.02

MATCHLINE: SEE SHEET L1.04

WILLIAMS RIDGE DRIVE

JACOBS VALLEY COURT

SAGE MEADOW DRIVE

Know what's below. Call before you dig.

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GRAPHIC SCALE

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ALLISON M. BROUILLETTE
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STATE OF TENNESSEE
LICENSE NO. 346
2/20/23

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	2/20/2023	Landcape Revisions per Owner	jmb	###	jmb

DETAILED LANDSCAPE PLAN

CONSTRUCTION DOCUMENTS FOR
DRUMWRIGHT PLANNED UNIT DEVELOPMENT
COLUMBIA, MAURY COUNTY, TENNESSEE

PROJECT NUMBER
5147-20-036

DRAWING NUMBER
L1.03

DRAWING PATH: E:\Knoxville-1430\Projects\2020\5147-20-036_CK_Drumright_Columbia\CAD\Construction\5147200361_L1.00-L1.05 LAN.dwg

PLANT SCHEDULE L1.04

CANOPY TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	SPREAD	REMARKS
	3	Acer saccharum 'Green Mountain' TM	Green Mountain Sugar Maple	B & B	2"	10'-12'	3'-4'	Well branched w/ strong central leader
	5	Nyssa sylvatica 'Wildfire'	Black Gum	B & B	2"	10'-12'		
	2	Platanus x acerifolia 'Bloodgood'	London Plane Tree	B & B	2"	10'-12'	3'-4'	
	4	Quercus phellos 'Hightower'	Hightower Willow Oak	B & B	2"	12-14'		
	3	Zelkova serrata 'Green Vase'	Green Vase Sawleaf Zelkova	B & B	2"	10'-12'		
EVERGREEN TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CAL**	**SIZE**	**SPREAD**	**REMARKS**
	10	Cupressocyparis x leylandii	Leylandi Cypress	B & B	2"	8-9'	4-4.5'	Dense and full
	14	Magnolia virginiana 'Green Shadow'	Green Shadow Magnolia	B & B	3" Total	10-12'	4-5'	Multi-trunk, 3 stem, balanced canopy, matched
STREET TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CAL**	**SIZE**	**SPREAD**	**REMARKS**
	12	Acer rubrum 'October Glory' TM	October Glory Maple	B & B	2"	10'-12'		
	43	Ulmus parvifolia 'Bosque'	Bosque Lacebark Elm	B & B	2"	10'-12'	4-5'	Well branched
UNDERSTORY TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CAL**	**SIZE**	**SPREAD**	**REMARKS**
	10	Amelanchier x grandiflora 'Autumn Brilliance'	'Autumn Brilliance' Serviceberry	B & B	2"	10-12'		
	5	Betula nigra 'Heritage'	Heritage River Birch	B & B	2"	10-12'		

DECIDUOUS SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	CONT	CALIPER	HEIGHT	SPREAD	SPACING	REMARKS
	18	Cornus sericea 'Artic Fire'	Artic Fire Dogwood	#5 Cont.		30-36"	30-36"	48" o.c.	
	34	Cephalanthus occidentalis	Buttonbush	#5 Cont.				60" o.c.	
	22	Fothergilla major 'Mount Airy'	Mount Airy Fothergilla	#5 Cont.		21-24"	21-24"	48" o.c.	Full; Compact
	26	Viburnum x burkwoodii 'Conoy'	Conoy Viburnum	#5 Cont.		2-3'	2-3'	60" o.c.	Space 5' o.c.
EVERGREEN SHRUBS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CALIPER**	**HEIGHT**	**SPREAD**	**SPACING**	**REMARKS**
	19	Abelia grandifolia 'Rose Creek'	Rose Creek Abelia	#5 Cont.		21-24"	21-24"	54" o.c.	
	30	Juniperus chinensis 'Gold Coast' TM	Gold Coast Juniper	#5 Cont.		21-24"	24-30"	60" o.c.	
	49	Juniperus virginiana 'Grey Owl'	Eastern Redcedar	#5 Cont.				60" o.c.	

DANNY O. WOOD
ET UX SYLVIA KAY
BOOK R733, PAGE 203

JACOBS VALLEY COURT
SAGE MEADOWS STREET
WILLIAMS RIDGE DRIVE
JACOBS VALLEY COURT
SAGE MEADOWS STREET
DRUMM...

PHASE 2
PHASE 3

MATCHLINE; SEE SHEET L1.03

MATCHLINE; SEE SHEET L1.05

20 FT. BUFFER YARD (0.4 OPACITY)
369 LINEAR FEET

CANOPY TREES REQUIRED: 7
CANOPY TREES PROVIDED: 8
ACCENT TREES REQUIRED: 14
ACCENT TREES PROVIDED: 16
SHRUBS REQUIRED: 92
SHRUBS PROVIDED: 97

20 FT. BUFFER YARD (0.4 OPACITY)
346 LINEAR FEET

CANOPY TREES REQUIRED: 7
CANOPY TREES PROVIDED: 7
ACCENT TREES REQUIRED: 14
ACCENT TREES PROVIDED: 15
SHRUBS REQUIRED: 86
SHRUBS PROVIDED: 90

Know what's below.
Call before you dig.

0 20 40 80 120
GRAPHIC SCALE

658 GRASSMERE PARK DR
SUITE 100
NASHVILLE, TN 37211
(615) 385-4144

LENNAR HOMES OF TENNESSEE, LLC.
381 Mallory Station Drive
SUITE 200
615-465-4328

ALLISON M. BROUILLETTE
REGISTERED
LANDSCAPE ARCHITECT
STATE OF TENNESSEE
No. 3719
2/20/23

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	2/20/2023	Landcape Revisions per Owner	jmb	###	jmb

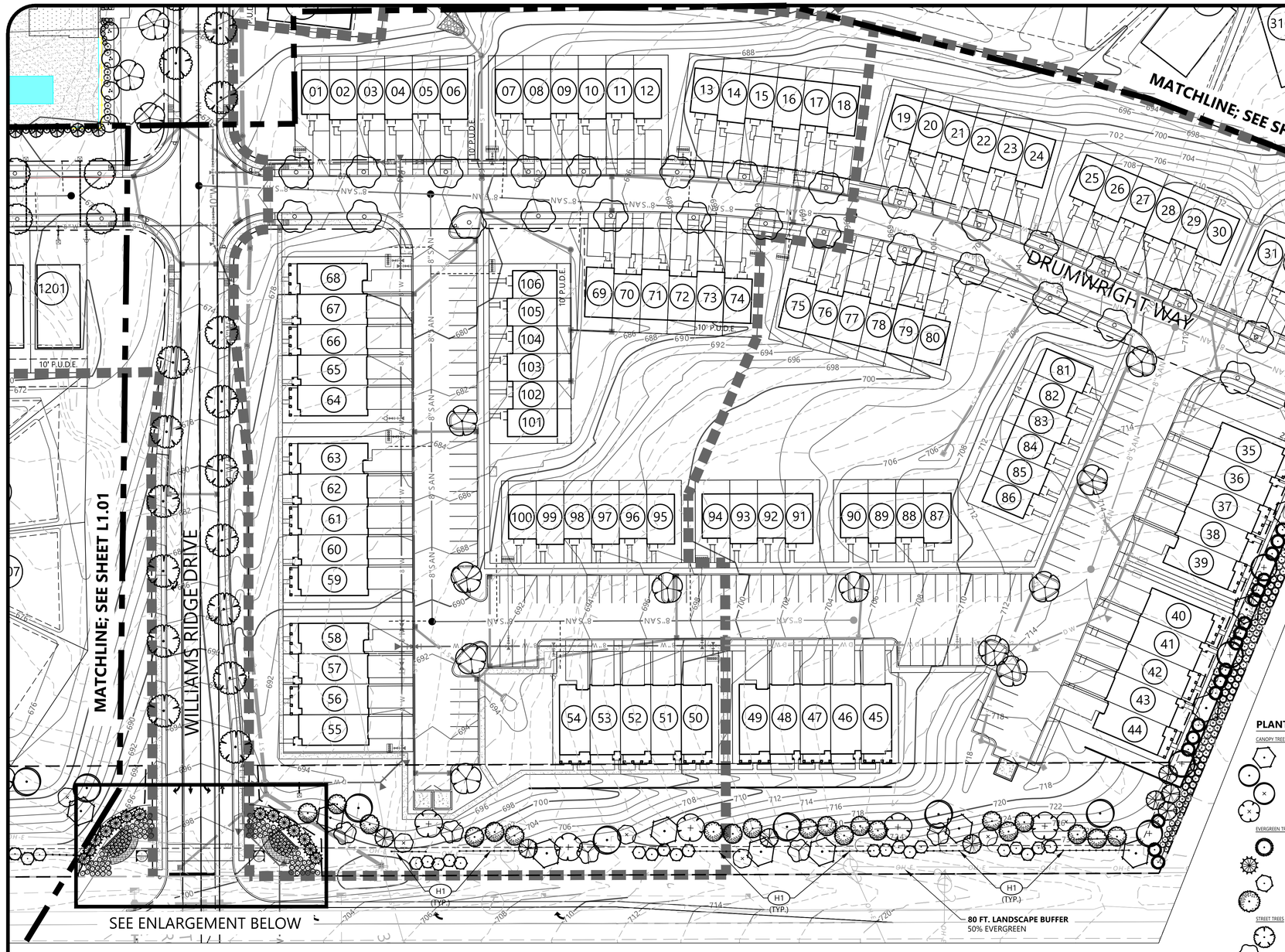
DETAILED LANDSCAPE PLAN

CONSTRUCTION DOCUMENTS
FOR
DRUMWRIGHT PLANNED UNIT DEVELOPMENT
COLUMBIA, MAURY COUNTY, TENNESSEE

PROJECT NUMBER
5147-20-036

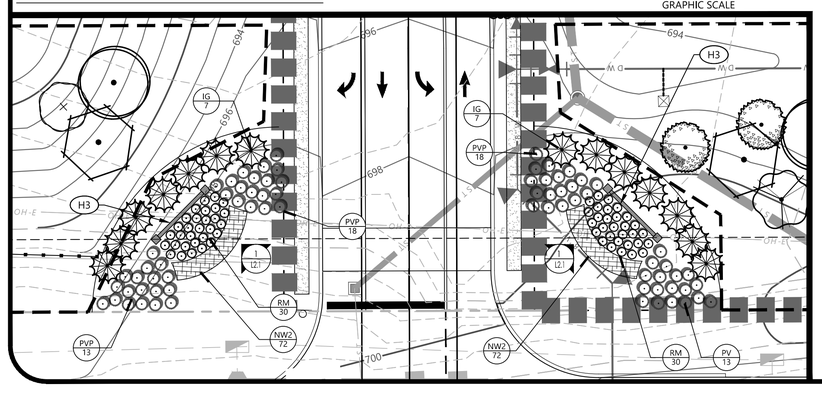
DRAWING NUMBER
L1.04

DRAWING PATH: E:\Knoxville-1430\Projects\2020\5147-20-036_CK_Drumright_Columbia\CAD\Construction\5147200936_L1.00-1.05 LAN.dwg



Know what's below. Call before you dig.

ENTRANCE ENLARGEMENT



HARDSCAPE KEYNOTES

CODE	DESCRIPTION	DET #/SHT #
H1	4-BOARD FENCE	2/L2.01
H2	BRICK COLUMN	4/L2.01
H3	ENTRANCE WALL	1 AND 3/L2.01

PLANT SCHEDULE L1.05

CANOPY TREES	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE	SPREAD	REMARKS
	13	Acer rubrum 'Autumn Flame'	Autumn Flame Maple	B & B	2"	9-10'		
	5	Acer saccharum 'Green Mountain' TM	Green Mountain Sugar Maple	B & B	2"	10'-12'	3'-4'	Well branched w/ strong central leader
	8	Liquidambar styraciflua 'Rotundiloba' TM	Round-Lobed Sweet Gum	B & B	2"	10'-12'	3'-4'	
	5	Quercus macrocarpa	Burr Oak	B & B	2"	12'-14'		
EVERGREEN TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CAL**	**SIZE**	**SPREAD**	**REMARKS**
	18	Cupressocyparis x leylandii	Leylandi Cypress	B & B	2"	8-9'	4-4.5'	Dense and full
	13	Ilex opaca 'Greenleaf'	Greenleaf American Holly	B & B	2"	6-7'		
	20	Magnolia grandiflora 'Little Gem'	Dwarf Southern Magnolia	B & B	2"	8-10'		
	20	Pinus nigra	Austrian Black Pine	B & B	2"	8-9'	3.5-4'	Dense and full
STREET TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CAL**	**SIZE**	**SPREAD**	**REMARKS**
	13	Acer rubrum 'October Glory' TM	October Glory Maple	B & B	2"	10'-12'		
	28	Ginkgo biloba 'Princeton Sentry'	Princeton Sentry Ginkgo	B & B	2"	10'-12'		
	11	Quercus lyrata 'Highbeam'	Highbeam Overcup Oak	B & B	2"	12'-14'		
UNDERSTORY TREES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CAL**	**SIZE**	**SPREAD**	**REMARKS**
	5	Cercis canadensis 'Appalachian Red'	Appalachian Red Eastern Redbud	#25 Cont.	2"Cal	8'-10'		
	5	Cornus kousa 'China Girl'	China Girl Kousa Dogwood	B & B	2"	8'-10'		
	18	Prunus x yedoensis	Yoshino Cherry	B & B	2"	8-9'	4-5'	Well formed crown; Mature Height: 40-50' tall
DECIDUOUS SHRUBS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CALIPER**	**HEIGHT**	**SPREAD**	**SPACING**	**REMARKS**
	48	Forsythia x 'Gold Tides'	Golden Tide Forsythia	#5 Cont.		12-18"		48" o.c.	
	42	Itea virginica 'Henry's Garnet'	Henry's Garnet Itea	#5 Cont.		27"	24"	60" o.c.	
	60	Rosa x 'Meidrifora'	Coral Drift Rose	#3 Cont.		10-12"	15-18"	30" o.c.	
EVERGREEN SHRUBS	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CALIPER**	**HEIGHT**	**SPREAD**	**SPACING**	**REMARKS**
	41	Abelia grandiflolia 'Rose Creek'	Rose Creek Abelia	#5 Cont.		21-24"	21-24"	54" o.c.	
	51	Juniperus chinensis 'Gold Coast' TM	Gold Coast Juniper	#5 Cont.		21-24"	24-30"	60" o.c.	
ORNAMENTAL GRASSES	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CALIPER**	**HEIGHT**	**SPREAD**	**SPACING**	**REMARKS**
	72	Panicum virgatum 'Prairie Sky'	Prairie Sky Switch Grass	#3 Cont.			42" o.c.	Space 42" o.c.	
GROUND COVERS	**CODE**	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**CONT**	**CALIPER**	**HEIGHT**	**SPREAD**	**SPACING**	**REMARKS**
	NW2	160	Nepeta x faassenii 'Walkers Low'	Walkers Low Catmint	#1 Cont.				16" o.c.	

658 GRASSMERE PARK DR
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LENNAR HOMES OF TENNESSEE, LLC.
381 Mallory Station Drive
SUITE 200
615-465-4328

JASON M. BROUILLETTE — REGISTERED LANDSCAPE ARCHITECT — STATE OF TENNESSEE — LICENSE NO. 329 — 2/20/23

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	2/20/2023	Landcape Revisions per Owner	jmb	###	jmb

DETAILED LANDSCAPE PLAN

CONSTRUCTION DOCUMENTS FOR DRUMWRIGHT PLANNED UNIT DEVELOPMENT COLUMBIA, MAURY COUNTY, TENNESSEE

PROJECT NUMBER
5147-20-036

DRAWING NUMBER
L1.05

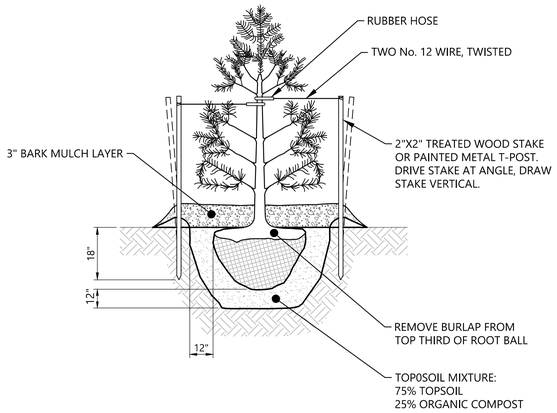
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PLANTING NOTES

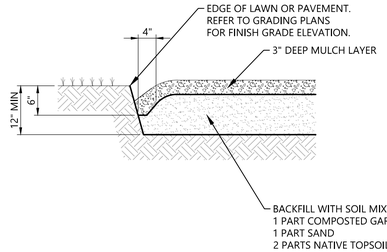
1. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO CONFIRM ALL MATERIAL QUANTITIES. IN THE EVENT OF A DISCREPANCY, THE QUANTITIES SHOWN ON THE PLAN SHALL TAKE PRECEDENCE OVER THE MATERIAL SCHEDULE.
2. NO SUBSTITUTIONS AS TO TYPE, SIZE, OR SPACING OF PLANT MATERIALS SPECIFIED ON THIS PLAN MAY BE MADE WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT.
3. THE CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES. TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN, REPAIR ANY DAMAGE ACCORDING TO LOCAL STANDARDS AND AT CONTRACTOR'S EXPENSE. COORDINATE ALL CONSTRUCTION WITH THE APPROPRIATE UTILITY COMPANY.
4. ALL PLANTING BEDS TO RECEIVE HARDWOOD MULCH. MULCH TO BE INSTALLED TO 3" DEPTH UNLESS OTHERWISE INDICATED ON THE PLANTING DETAILS.
5. NEW TREE PLANTINGS TO BE STAKED PER PLANTING DETAIL 1/L2.0.
6. DIMENSIONS LISTED FOR HEIGHTS, SPREAD AND TRUNK SPECIFICATIONS ON THE PLANT MATERIAL SCHEDULE ARE GENERAL GUIDE FOR THE MINIMUM REQUIRED SIZE OF EACH PLANT.
7. PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL PLANTING BEDS IMMEDIATELY PRIOR TO PLACEMENT OF MULCH FOR WEED CONTROL.
8. ALL DISTURBED AREAS OF THE SITE ARE TO BE SEEDED AND/OR SODDED IN ACCORDANCE WITH THE SPECIFICATIONS.
9. NO EXCAVATION OR PLANTING PIT SHALL BE LEFT OPEN OVERNIGHT.
10. THE LANDSCAPE CONTRACTOR SHALL OBTAIN ANY NECESSARY PERMITS, LICENSES, ETC. AND SHALL GIVE ALL NOTICES AND COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, CODES, RULES AND REGULATIONS DURING THE COURSE OF THE INSTALLATION OF THIS PROJECT.
11. ALL PLANT MATERIALS TO BE NURSERY GROWN AND TO COMPLY WITH THE AMERICAN STANDARD FOR NURSERY STOCK FOR SIZE AND QUALITY.
12. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REFUSE ANY PLANT MATERIAL OR ANY DEFECTIVE WORKMANSHIP.
13. ALL PLANTS SHALL HAVE A WELL-FORMED, SYMMETRICAL HEAD WITH MINIMUM CALIPER, HEIGHT AND SPREAD OF THE SIDE BRANCHES AS SHOWN ON THE PLANT LIST. TRUNKS SHALL BE UNDAMAGED AND SHAPE SHALL BE TYPICAL OF THE SPECIES.
14. MEASUREMENT OF CONIFER HEIGHT SHALL INCLUDE NOT MORE THAN FIFTY PERCENT (50%) OF THIS YEARS VERTICAL GROWTH (TOP CANDLE).
15. THE LANDSCAPE CONTRACTOR WILL BE RESPONSIBLE FOR STAKING AND LAYOUT OF PLANTINGS ON THIS PROJECT. THE LANDSCAPE ARCHITECT OR OWNER SHALL BE ADVISED WHEN STAKES ARE READY FOR INSPECTION ON VARIOUS PLANTING AREAS. ALL LAYOUT WORK SHALL BE INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT OR OWNER PRIOR TO OPENING ANY PLANT PITS.
16. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO VERIFY THAT EACH EXCAVATED TREE OR SHRUB PIT WILL PERCOLATE (DRAIN) PRIOR TO ADDING TOPSOIL AND INSTALLING TREES OR SHRUBS. THE CONTRACTOR SHALL FILL THE BOTTOM OF SELECTED HOLES WITH SIX INCHES OF WATER. THIS WATER SHOULD PERCOLATE OUT WITHIN A 24-HOUR PERIOD. THE OWNER OR LANDSCAPE ARCHITECT SHALL VERIFY ACCURACY AND EFFECT OF PERCOLATION TESTING. IF THE SOIL AT A GIVEN AREA DOES NOT DRAIN PROPERLY, A P V C DRAIN OR GRAVEL SUMP SHALL BE INSTALLED OR THE PLANTING RELOCATED.
17. SHOULD THE LANDSCAPE CONTRACTOR ENCOUNTER UNSATISFACTORY SURFACE OR OTHER SUBSURFACE DRAINAGE CONDITIONS, SOIL DEPTH, LATENT SOILS, HARD PAN, STEAM OF OTHER UTILITY LINES OR OTHER CONDITIONS THAT WILL JEOPARDIZE THE HEALTH AND VIGOR OF THE PLANTS, HE MUST ADVISE THE LANDSCAPE ARCHITECT IN WRITING OF THE CONDITIONS PRIOR TO INSTALLING THE PLANTS, OTHERWISE THE LANDSCAPE CONTRACTOR WARRANTS THAT THE PLANTING AREAS ARE SUITABLE PROPER GROWTH AND DEVELOPMENT OF THE PLANTS TO BE INSTALLED.
18. NO MATERIAL SHALL BE PLANTED BEFORE FINISH GRADING HAS BEEN COMPLETED.
19. EXISTING TREES TO BE PRESERVED ARE TO BE BARRICADED BEFORE BEGINNING CONSTRUCTION. IN ACCORDANCE WITH THE TREE PRESERVATION NOTES AND DETAILS ON THE LANDSCAPE PLAN.
20. SELECTIVE CLEARING CONSISTING OF REMOVAL OF VINES, SAPLINGS UNDER 1" DIAMETER AND UNDERBRUSH SHALL BE PERFORMED IN TREE PRESERVATION AREAS INTERNAL TO THE PROJECT AND NOTED ON PLANS.
21. PLANTS IDENTIFIED IN ALTERNATE AREAS ARE TO BE BID SEPARATELY.
22. ALL BEDS ARE TO BE TILLED TO A DEPTH OF 8" WITH THE ADDITION OF: (1) 6 CU. FT. BALE OR SPHAGNUM PEAT MOSS PER 40 SQ. FT. OF BED AREA; (25#) 10-10-10 FERTILIZER PER 1000 SQ. FT. If azaleas, rhododendrons or PIERIS ARE USED, ADD 1 3 CU. FT. FINELY GROUND "PINE" BARK MULCH PER 25 SQ. FT. OF BED AREA. ALL ADDITIONS ARE TO BE SPREAD AND TILLED INTO THE SOIL UNIFORMLY.
23. CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT WHEN THE PLANT MATERIALS ARE AVAILABLE AT THE JOB SITE FOR REVIEW BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.

LANDSCAPE NOTES

1. THE CONTRACTOR SHALL REVIEW PLANS TO BECOME THOROUGHLY FAMILIAR WITH SURFACE AND SUBSURFACE UTILITIES.
2. THE PLANT QUANTITIES SHOWN ON THE LANDSCAPE CONTRACT DOCUMENTS ARE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES AND REPORTING ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT FOR CLARIFICATION PRIOR TO CONTRACT AWARD AND COMMENCEMENT OF WORK.
3. ALL INSTALLATION OF PLANT MATERIAL SHALL COMPLY WITH APPLICABLE JURISDICTIONAL CODES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS ASSOCIATED WITH THIS WORK.
4. PRIOR TO PLANTING INSTALLATION, THE CONTRACTOR SHALL CONFIRM THE AVAILABILITY OF ALL THE SPECIFIED PLANT MATERIALS. SUBMIT DATED PHOTOGRAPHS OF ALL TREE MATERIAL AND SPECIMEN MATERIAL AS TO THE OWNER'S REPRESENTATIVE FOR REVIEW.
5. ALL PLANT MATERIAL SIZES SPECIFIED ARE MINIMUM SIZES. CONTAINER SIZE SHALL BE INCREASED IF NECESSARY TO PROVIDE OVERALL PLANT SIZE SPECIFIED.
6. IF PLANT MATERIAL DOES NOT COMPLY WITH THE REQUIREMENTS AS SPECIFIED HEREIN, THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT SUCH PLANTS AND REQUIRE THE CONTRACTOR TO REPLACE REJECTED WORK AND CONTINUE SPECIFIED MAINTENANCE UNTIL RE-INSPECTED AND FOUND TO BE ACCEPTABLE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR STABILITY AND PLUMB CONDITION OF ALL TREES AND SHRUBS, AND SHALL BE LEGALLY LIABLE FOR ANY DAMAGE CAUSED BY INSTABILITY OF ANY PLANT MATERIALS. STAKING OF TREES OR SHRUBS SHALL BE DONE IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.
8. THE CONTRACTOR SHALL INSURE ADEQUATE VERTICAL DRAINAGE IN ALL PLANT BEDS AND PLANTERS. IF INADEQUATE VERTICAL DRAINAGE IS ENCOUNTERED, THE CONTRACTOR SHALL SUBMIT RECOMMENDATIONS FOR PROVIDING ADEQUATE DRAINAGE TO THE OWNER'S REPRESENTATIVE.
9. PEG SOD ON SLOPES GREATER THAN 3:1.
10. CONTRACTOR SHALL PROTECT EXISTING VEGETATION TO REMAIN AS SHOWN ON DRAWINGS OR BY MEANS APPROVED BY THE OWNER'S REPRESENTATIVE.
11. CONTRACTOR TO CLEAN, PRUNE, AND SHAPE EDGES OF EXISTING VEGETATION AS DIRECTED BY OWNER'S REPRESENTATIVE. CREATE SMOOTH BED LINES AROUND EXISTING VEGETATION.
12. THE CONTRACTOR SHALL BEAR ALL COSTS OF TESTING OF SOILS, AMENDMENTS, ETC. ASSOCIATED WITH THE WORK. SEE SPECIFICATIONS FOR ADDITIONAL TESTING REQUIREMENTS.
13. CONTRACTOR SHALL FIELD-ADJUST LOCATION OF PLANT MATERIAL PRIOR TO INITIATING INSTALLATION FOR THE REVIEW AND APPROVAL OF THE OWNER'S REPRESENTATIVE.
14. ALL PLANT MATERIAL SHALL BE IN FULL AND STRICT ACCORDANCE WITH LOCAL CODES.
15. ALL PLANTING BEDS SHALL BE TOP-DRESSED WITH A 3" LAYER OF MULCH AS SPECIFIED.
16. CONTRACTOR SHALL COORDINATE ALL PLANTING WORK WITH IRRIGATION WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL HAND WATERING AS REQUIRED TO SUPPLEMENT IRRIGATION WATERING AND RAINFALL.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR HAND WATERING IN ALL PLANTING AREAS, REGARDLESS OF THE STATUS OF EXISTING OR PROPOSED IRRIGATION.
18. CONTRACTOR SHALL RE-GRADE ALL AREAS DISTURBED BY PLANT REMOVAL, RELOCATION, AND/OR INSTALLATION WORK.
19. CONTRACTOR SHALL REPLACE (BY EQUAL SIZE AND QUALITY) ANY AND ALL EXISTING PLANT MATERIAL DISTURBED OR DAMAGED BY PLANT REMOVAL, RELOCATION, AND/OR INSTALLATION WORK.
20. MAINTENANCE SHALL BEGIN AFTER EACH PLANT HAS BEEN INSTALLED AND SHALL CONTINUE UNTIL THE PROJECT HAS BEEN DEEMED SUBSTANTIALLY COMPLETE. MAINTENANCE INCLUDES WATERING, PRUNING, WEEDING, MULCHING, REPLACEMENTS OF SICK OR DEAD PLANTS, AND ANY OTHER CARE NECESSARY FOR THE PROPER GROWTH OF THE PLANT MATERIAL.
21. UPON COMPLETION OF ALL LANDSCAPING, AN INSPECTION FOR SUBSTANTIAL COMPLETION OF THE WORK SHALL BE HELD. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE FOR SCHEDULING THE INSPECTION AT LEAST SEVEN (7) DAYS PRIOR TO THE ANTICIPATED INSPECTION DATE.
22. CONTRACTOR SHALL SUBMIT WRITTEN GUARANTEE OF SURVIVABILITY OF ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM DATE OF SUBSTANTIAL COMPLETION.
23. CONTRACTOR MUST REVIEW AND ACCEPT, APPROVE ALL GRADED AREAS PRIOR TO THE COMMENCEMENT OF PLANTING.
24. TREES ADJACENT TO BUILDINGS SHOULD BE PLANTED AT LEAST THE DIAMETER OF THE TREE CANOPY OR A MIN. OF 10'-0" (WHICHEVER IS GREATER) AWAY FROM THE BUILDING WALL.
25. ALL PLANTING AREAS SHALL BE AMENDED WITH 4 CY CLASS I OR II COMPOST PER 1,000 SF. TILL IN TO A 8" DEPTH.
26. ALL LANDSCAPE WORK TO BE PERFORMED IN CONFORMANCE WITH THE CITY STANDARDS AND SPECIFICATIONS.



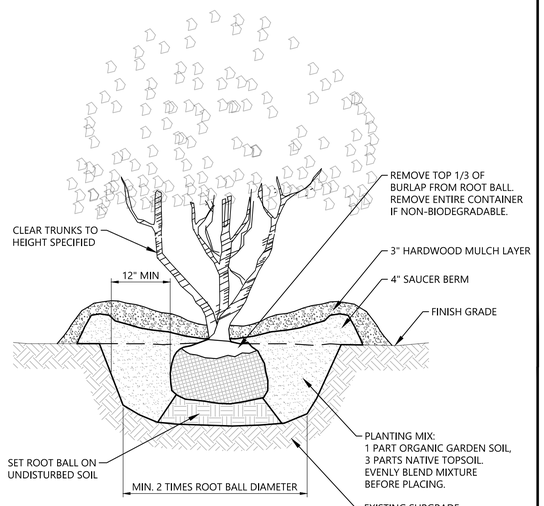
5 CONIFER PLANTING/STAKING
NO SCALE



6 SPADED BED EDGE
NO SCALE

IRRIGATION NOTES

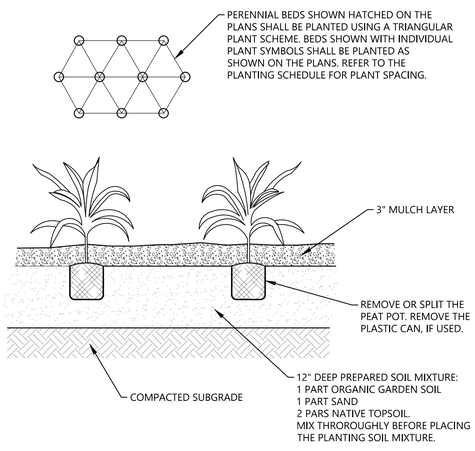
1. LANDSCAPE CONTRACTOR TO PROVIDE IRRIGATION SYSTEM ON A DESIGN/BUILD ARRANGEMENT FOR AREA NOTED ON THE PLAN. CONTRACTOR TO PREPARE DESIGN DRAWINGS IN ACCORDANCE WITH PERFORMANCE SPECIFICATIONS CONTAINED IN THE PROJECT MANUAL AND SUBMIT SAME FOR APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION.
2. CONTRACTOR TO CONFIRM ADEQUATE PRESSURE EXISTS TO OPERATE SYSTEM PRIOR TO INSTALLATION.
3. IRRIGATION SPRINKLER HEADS SHALL BE MANUFACTURED BY EITHER TORO OR RAINBIRD. IRRIGATION CONTROLLER SHALL BE TORO VISION II MODEL OR APPROVED EQUAL.
4. MAIN LINE TO BE CLASS 200 PVC PIPE. LATERAL LINES TO BE CLASS 150 PVC.
5. IRRIGATION SYSTEM TO BE OPERATIONAL BEFORE PLANTING MATERIALS MAY BE INSTALLED IN PLANTING BEDS.
6. INSTALL SPRINKLER HEADS ACCORDING TO MANUFACTURERS SPECIFICATIONS. FLUSH ALL LINES BEFORE INSTALLING NOZZLES.
7. WIRE CONNECTIONS TO BE MADE BY USING RAINBIRD MODEL ST-103/PT-ST SNAP-TITE CONNECTIONS.
8. LEAVE 18 INCHES OF ADDITIONAL WIRE AT EACH VALVE LOCATION. ROLL WIRE INTO COIL AT EACH LOCATION.
9. ALL VALVES SHALL BE LOCATED IN AMATEX 10 INCH CIRCULAR VALVE BOXES WITH COVER, OR EQUAL.
10. IRRIGATION CONTRACTOR TO COORDINATE PLACEMENT OF REQUIRED SLEEVES WITH GENERAL CONTRACTOR PRIOR TO PAVING AND CONCRETE INSTALLATION BEING COMPLETED.



PLANTING NOTES:

1. ALL TREES ARE TO BE NURSERY GROWN, BURLAP AND BALL (B&B). MINIMUM TREE SIZE SHALL BE PER THE PLANTING SCHEDULE, MEASURED 6" ABOVE THE ROOT BALL.
2. REMOVE ALL TREATED OR PLASTIC-COATED BURLAP, STRAPPING, WIRE OR NYLON TWINE FROM THE ROOT BALL. COMPLETELY REMOVE WIRE BASKET IF ONE EXISTS.
3. INSTALL THE TOP OF THE PLANT BALL FLUSH WITH OR 1" ABOVE THE ADJACENT GRADE.
4. SET THE TREE IN THE VERTICAL POSITION BEFORE STAKING IT IN PLACE.
5. SOAK THE ROOT BALL AND PIT IMMEDIATELY AFTER INSTALLATION. PLACE 4" TO 6" OF SEASONED MULCH OR PINE NEEDLES AROUND THE BASE OF THE TREE, 3' MINIMUM DIAMETER.

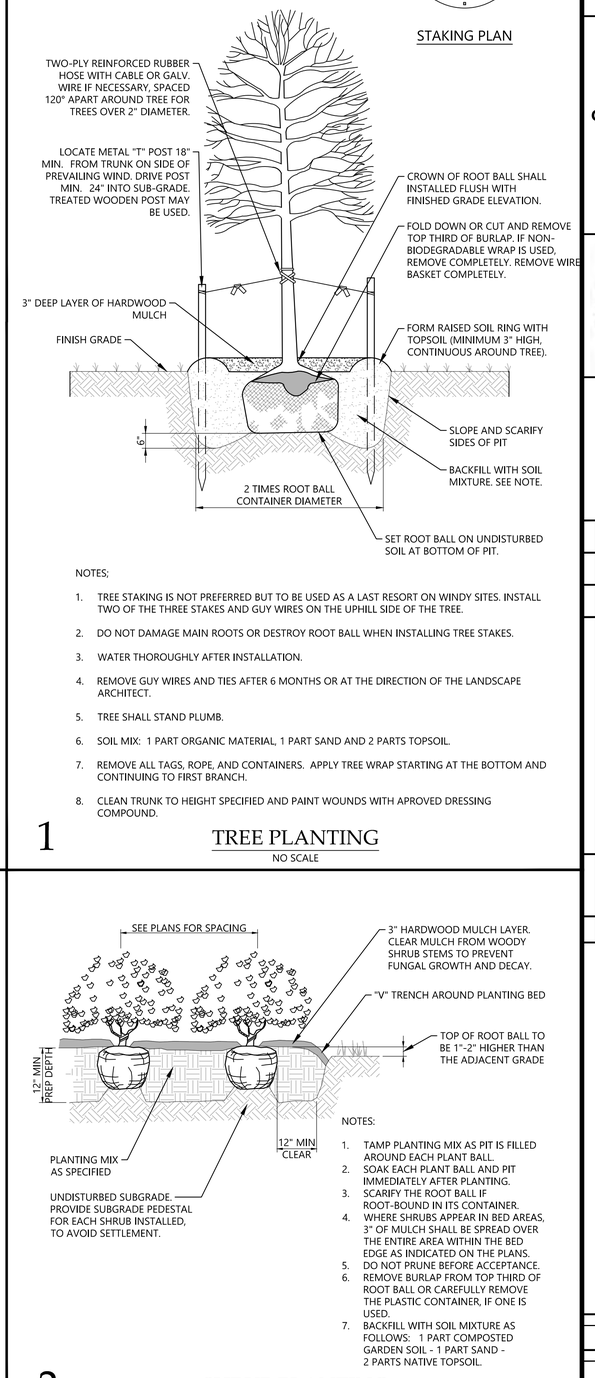
3 MULTI-TRUNK PLANTING
NO SCALE



4 PERENNIAL PLANTING
NO SCALE



STAKING PLAN



NOTES;

1. TREE STAKING IS NOT PREFERRED BUT TO BE USED AS A LAST RESORT ON WINDY SITES. INSTALL TWO OF THE THREE STAKES AND GUY WIRES ON THE UPHILL SIDE OF THE TREE.
2. DO NOT DAMAGE MAIN ROOTS OR DESTROY ROOT BALL WHEN INSTALLING TREE STAKES.
3. WATER THOROUGHLY AFTER INSTALLATION.
4. REMOVE GUY WIRES AND TIES AFTER 6 MONTHS OR AT THE DIRECTION OF THE LANDSCAPE ARCHITECT.
5. TREE SHALL STAND PLUMB.
6. SOIL MIX: 1 PART ORGANIC MATERIAL, 1 PART SAND AND 2 PARTS TOPSOIL.
7. REMOVE ALL TAGS, ROPE, AND CONTAINERS. APPLY TREE WRAP STARTING AT THE BOTTOM AND CONTINUING TO FIRST BRANCH.
8. CLEAN TRUNK TO HEIGHT SPECIFIED AND PAINT WOUNDS WITH APROVED DRESSING COMPOUND.

1 TREE PLANTING
NO SCALE

NOTES:

1. TAMP PLANTING MIX AS PIT IS FILLED AROUND EACH PLANT BALL.
2. SOAK EACH PLANT BALL AND PIT IMMEDIATELY AFTER PLANTING.
3. SCARIFY THE ROOT BALL IF ROOT-BOUND IN ITS CONTAINER.
4. WHERE SHRUBS APPEAR IN BED AREAS, 3" OF MULCH SHALL BE SPREAD OVER THE ENTIRE AREA WITHIN THE BED EDGE AS INDICATED ON THE PLANS.
5. DO NOT PRUNE BEFORE ACCEPTANCE.
6. REMOVE BURLAP FROM TOP THIRD OF ROOT BALL OR CAREFULLY REMOVE THE PLASTIC CONTAINER, IF ONE IS USED.
7. BACKFILL WITH SOIL MIXTURE AS FOLLOWS: 1 PART COMPOSTED GARDEN SOIL - 1 PART SAND - 2 PARTS NATIVE TOPSOIL.

2 SHRUB PLANTING
NO SCALE

658 GRASSMERE PARK DR
SUITE 100
NASHVILLE, TN 37211
(615) 385-4144

LENNAR HOMES OF TENNESSEE, LLC.
381 Mallory Station Drive
SUITE 200
615-465-4328



NO.	DATE	DESCRIPTION	BY	CHK	APV
1	2/20/2023	Landcape Revisions per Owner	jmb	###	jmb

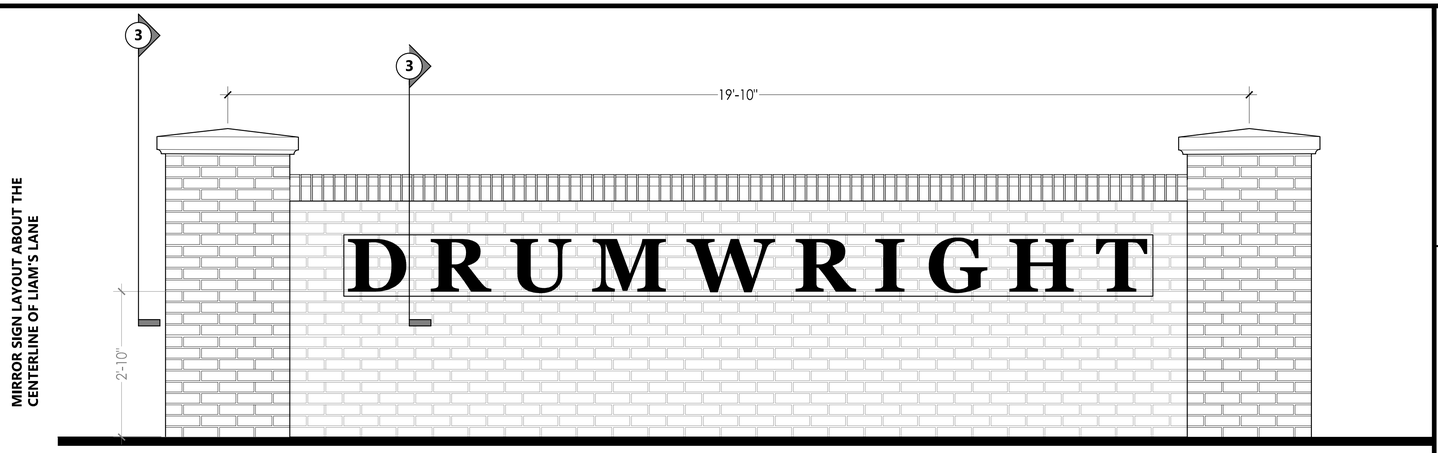
LANDSCAPE DETAILS

CONSTRUCTION DOCUMENTS FOR DRUMWRIGHT PLANNED UNIT DEVELOPMENT COLUMBIA, MAURY COUNTY, TENNESSEE

PROJECT NUMBER
5147-20-036

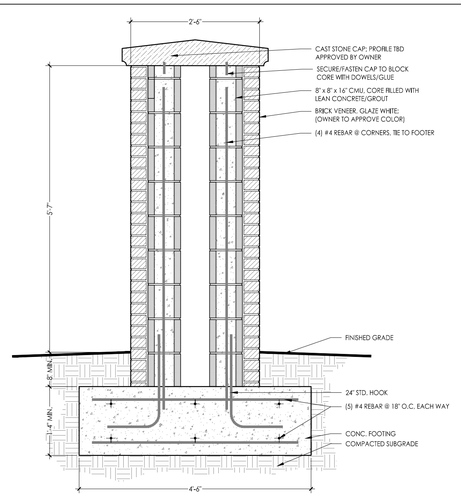
DRAWING NUMBER
L2.00

DRAWING PATH: E:\Knoxville-1430\Projects\2020\5147-20-036_CK_Drumright_Columbia\CAD\Construction\51472036_L2.00 LAN DET.dwg

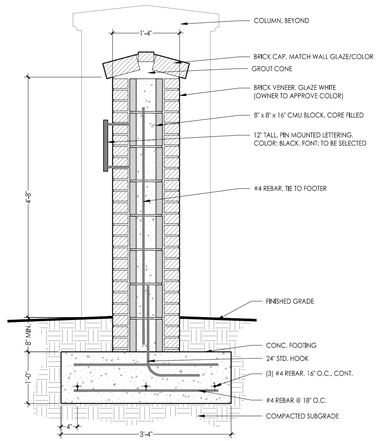


MIRROR SIGN LAYOUT ABOUT THE CENTERLINE OF LIAM'S LANE

1 MONUMENT WALL ELEVATION
SCALE: 3/4" = 1'-0"

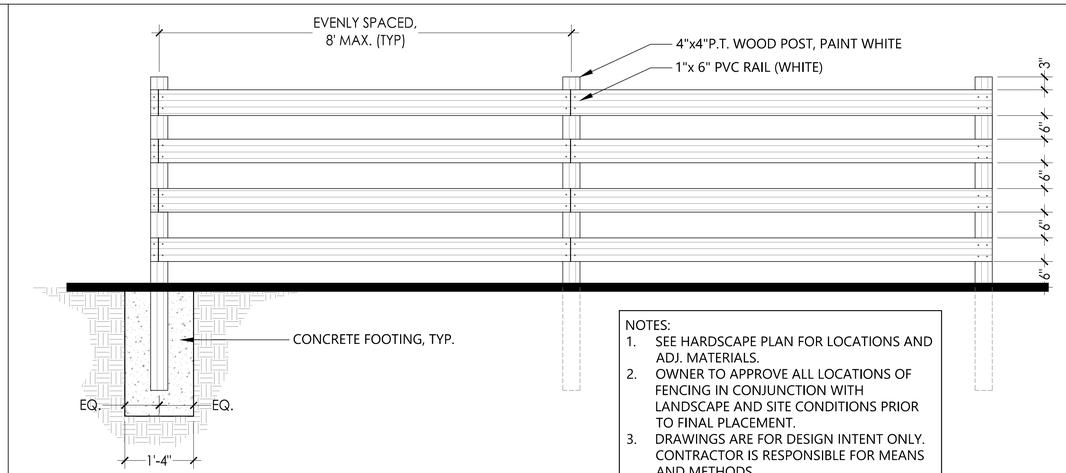


MONUMENT WALL COLUMN SECTION



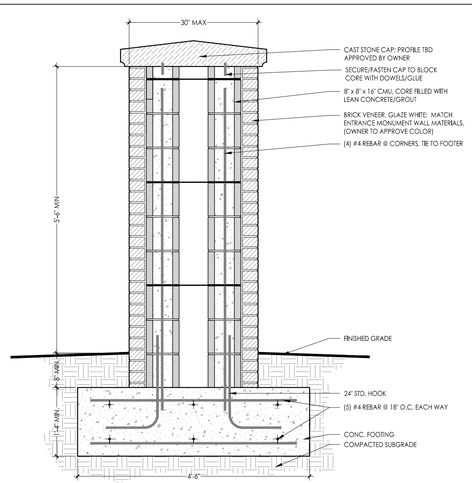
MONUMENT WALL SECTION

3 MONUMENT WALL DETAILS
SCALE: 3/4" = 1'-0"

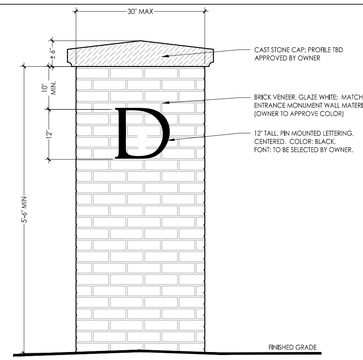


NOTES:
1. SEE HARDSCAPE PLAN FOR LOCATIONS AND ADJ. MATERIALS.
2. OWNER TO APPROVE ALL LOCATIONS OF FENCING IN CONJUNCTION WITH LANDSCAPE AND SITE CONDITIONS PRIOR TO FINAL PLACEMENT.
3. DRAWINGS ARE FOR DESIGN INTENT ONLY. CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS.

2 Four-Board Fence (Buffer Areas)
SCALE: 3/4" = 1'-0"



FREESTANDING COLUMN SECTION



FREESTANDING COLUMN ELEVATION

4 FREESTANDING COLUMN DETAILS
SCALE: 3/4" = 1'-0"

658 GRASSMERE PARK DR
SUITE 100
NASHVILLE, TN 37211
(615) 385-4144

LENNAR HOMES OF TENNESSEE, LLC.
381 Mallory Station Drive
SUITE 200
615-465-4328

JASON M. BROUILLETTE — REGISTERED — AMERICUS, GEORGIA — TENNESSEE NO. 3717 — LANDSCAPE ARCHITECT — 2/20/23

NO.	DATE	DESCRIPTION	BY	CHK	APV
1	2/20/2023	Landcape Revisions per Owner	jmb	###	jmb

HARDSCAPE DETAILS

CONSTRUCTION DOCUMENTS FOR DRUMWRIGHT PLANNED UNIT DEVELOPMENT COLUMBIA, MAURY COUNTY, TENNESSEE

PROJECT NUMBER
5147-20-036

DRAWING NUMBER
L2.01

DRAWING PATH: E:\Knoxville-1430\Projects\2020\5147-20-036_CK_Drumright_Columbia\CAD\Construction\5147200936_L2.00 LAN DET.dwg

LOT AREAS 41' WIDE LOTS	
LOT #	AREA (SF)
1201	4,223
1202	4,223
1203	4,223
1204	4,223
1205	4,223
1206	6,149
1207	6,576
1208	4,510
1209	4,510
1210	4,510
1211	4,508
1212	4,506
1213	4,501
1214	6,234
1215	5,400
1216	10,365
1217	4,070
1218	5,495
1219	4,428
1220	4,428
1221	6,454
1222	6,442
1223	6,239
1224	4,959
1225	4,931
1226	4,921
1227	7,206
2201	4,484
2202	6,612
2203	4,701
2205	6,325
2206	7,631
2207	6,465
2208	7,870
2209	6,991
2210	4,634
2211	4,433
2212	4,606
2213	4,709
2214	4,784
2215	4,502
2216	6,248
2217	5,754
2218	5,850
2219	4,223
2220	6,149
2221	4,170
2222	4,783
2223	4,030
2224	6,208
2225	4,263
2226	4,263
2227	4,223
2228	4,223
2229	4,223
2230	4,223
2231	4,223
2232	4,223
2233	4,223
2234	4,225
2235	4,368
2236	4,884
2237	14,869
2238	9,737
2239	7,013
2240	5,672
2241	4,989
2242	4,512
2243	5,268
2244	5,265
3201	4,216
3202	4,258
3203	4,242
3204	4,218
3205	4,218
3206	4,347
3207	4,326
3208	5,945
3209	7,871
3210	9,556
3211	6,829
3212	4,661
3213	4,515
3214	6,569
3215	6,935
3216	4,692
3217	4,333
3218	4,576
3219	4,609
3220	4,562
3221	4,515
3222	4,478
3223	4,467
3224	4,478
3225	4,783
3226	4,263
3227	4,253
3228	6,149
3229	4,223
3230	4,223
3231	4,223
3232	4,223
3233	4,223
3234	4,223
3235	4,223
3236	4,223
3237	4,223
3238	4,223
3239	4,223

AVG. LOT SIZE: 5,200 S.F.

LOT AREAS 51' WIDE LOTS	
LOT #	AREA (SF)
1101	5,631
1102	5,800
1103	8,071
1104	8,698
1105	7,099
1106	6,489
1107	6,122
1108	6,171
1109	6,082
1110	9,529
1111	11,554
1112	10,399
1113	6,120
1114	6,720
1115	6,720
1116	6,120
1117	6,093
1118	6,120
1119	6,120
1120	6,236
1121	6,309
1122	6,320
1123	6,351
1124	6,402
1125	6,474
1126	6,711
2101	6,235
2102	6,219
2103	6,210
2104	6,394
2105	7,787
2106	9,666
2107	7,541
2108	7,596
2109	7,596
2110	6,994
2111	6,120
2112	6,171
2113	6,244
2114	6,244
2115	6,244
2116	7,002
2117	8,454
2118	6,653
2119	5,687
2120	5,590
3101	7,092
3102	6,123
3103	6,120
3104	8,375
3105	8,527
3106	9,723
3107	20,372
3108	8,447
3109	11,228
3110	13,100
3111	9,046
3112	10,062
3113	10,921
3114	9,276
3115	6,984
3116	7,638
3117	9,096
3118	9,168
3119	8,938
3120	6,120
3121	6,049
3122	6,244
3123	7,251
3124	8,628

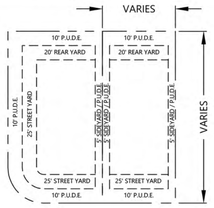
AVG. LOT SIZE: 7,702 S.F.

SITE USE SUMMARY SINGLE FAMILY

USE	ACRES	% SITE
41' LOTS (109)	13.49 ACRES	27.86 %
51' LOTS (70)	12.20 ACRES	25.20 %
ROAD R.O.W.	10.30 ACRES	21.27 %
OPEN SPACE	12.43 ACRES	25.67 %
TOTAL	48.42 ACRES	100 %

SITE USE SUMMARY TOWNHOMES

USE	ACRES	% SITE
ATTACHED SINGLE FAMILY LOTS	4.20	43.25%
PRIVATE ROADS/SIDEWALKS/ PARKING	1.39	14.32 %
OPEN SPACE	4.12	42.43 %
TOTAL	9.71 ACRES	100 %



LOT CONFIGURATION

P.U.D.E = PUBLIC USE AND DRAINAGE EASEMENT

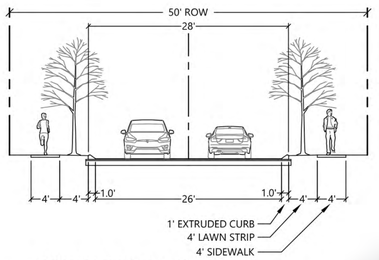
TOWNHOME PARKING SUMMARY

TYPE UNIT	UNIT QTY.	TOTAL BR'S	GARAGE PARKING PROVIDED (30% OF TOTAL)	DRIVEWAY PARKING PROVIDED	OFFSTREET PARKING PROVIDED
TYPE A (WITH DRIVEWAY)	46	138	NA	46	107
TYPE A (NO DRIVEWAY)	26	78			
TYPE B	34	102	18	68	0
TOTAL	106	318	18	114	107

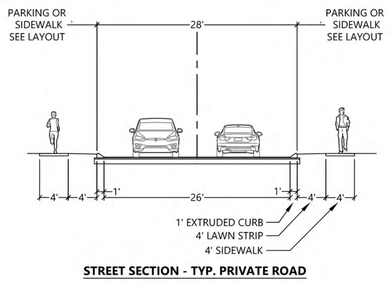
TOTAL PARKING PROVIDED.....18 + 114 + 107 = 239
TOTAL PARKING REQUIRED.....318/2 x 1.5 = 238.5

TOWNHOME OPEN SPACE SUMMARY

OPEN SPACE	AREA (AC)	PERCENT OF SITE	
OPEN SPACE	4.12	42.43%	
PRIVATE OPEN SPACE REQUIREMENTS			
UNIT TYPE	AREA REQUIRED	TOTAL REQUIRED	TOTAL PROVIDED
ATTACHED TOWNHOME	500 S.F./UNIT	106 x 500 = 53,000 S.F.	4.12 AC.



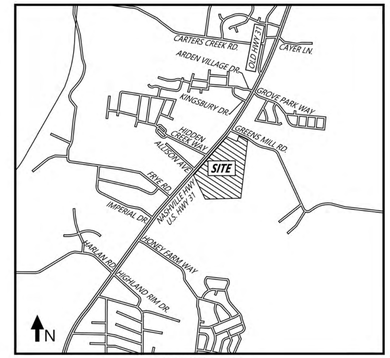
STREET SECTION - TYP. PUBLIC ROAD



STREET SECTION - TYP. PRIVATE ROAD

PROPOSED FEATURES LEGEND

WATER LINE — D W
FORCE MAIN LINE — 6" F M
SANITARY SEWER LINE WITH CLEANOUT — S A N
STORMWATER LINE — S T
FIRE HYDRANT
WATER LINE WITH 90° THRUST BLOCK
DRAINAGE PATH



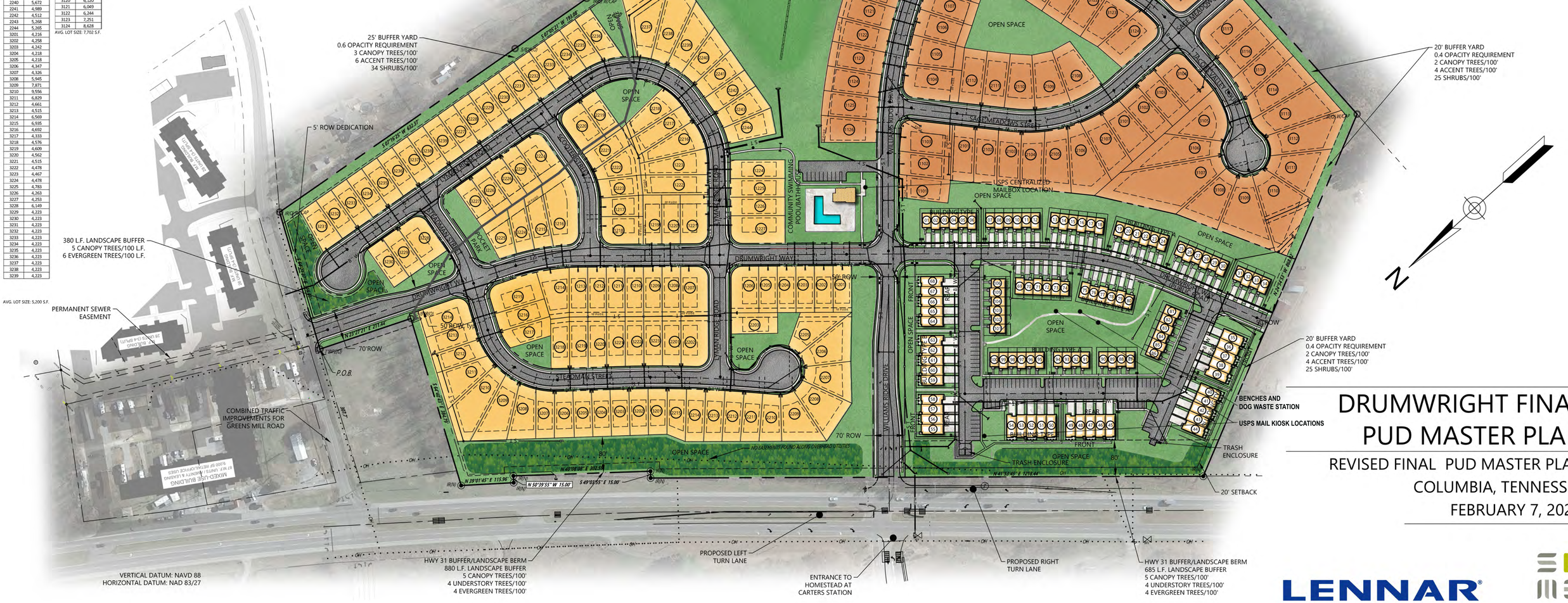
VICINITY MAP
NOT TO SCALE

PURPOSE OF SUBMITTAL - TO REVISE MASTER PUD PLAN FOR 106 ATTACHED TOWNHOME UNITS AND 179 SINGLE FAMILY RESIDENTIAL LOTS AND ADDITION OF COMMUNITY SWIMMING POOL/BATHHOUSE ON THE PROPERTY, PARCEL 32.00 IN TAX MAP 51

PROJECT DESCRIPTION - DEVELOP 106 ATTACHED TOWNHOME UNITS AND 179 SINGLE-FAMILY RESIDENTIAL LOTS AND COMMUNITY SWIMMING POOL/BATHHOUSE ON APPROXIMATELY 58.14 ACRES OF LAND

PROPERTY OWNER -
AG Essential Housing Mult State 1, LLC
8585 E. Hartford, Suite 118
Scottsdale, AZ 85255

THIS PROPERTY IS LOCATED WITHIN OTHER FLOOD AREAS ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% CHANCE FLOODPLAIN) AS SHOWN ON F.E.M.A. FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO 47119C0180E, DATED APRIL 16, 2007.



DRUMWRIGHT FINAL PUD MASTER PLAN

REVISED FINAL PUD MASTER PLAN
COLUMBIA, TENNESSEE
FEBRUARY 7, 2023

LENNAR®

A NEW AMENITY BUILDING
DRUMWRIGHT COMMUNITY
3000 DRUMWRIGHT WAY
COLUMBIA, TENNESSEE 38401

DAVID HEFLEY
HEFLEY ARCHITECTS, PLLC

SHEET INDEX:

A0.0- COVER SHEET
A0.1- PROJECT INFORMATION
LS1.1- LIFE SAFETY PLAN
A1.1- FOUNDATION PLAN
FIRST FLOOR PLAN
A1.2- ROOF PLAN
A2.1- EXTERIOR ELEVATIONS
A3.1- MISCELLANEOUS DETAILS
M0.1- HVAC LEGENDS & SCHEDULES
M2.1- HVAC NEW CONSTRUCTION PLAN
M3.1- HVAC DETAILS
M4.1- HVAC SPECIFICATIONS
E0.1- ELECTRICAL LEGENDS & SPECIFICATIONS
E1.1- ELECTRICAL SITE PLAN
E2.1- ELECTRICAL LIGHTING PLAN
E2.2- ELECTRICAL POWER PLAN
E3.1- ELECTRICAL RISER DIAGRAMS
P0.1- PLUMBING LEGENDS & SCHEDULES
PU2.1-PLUMBING UNDERGROUND PLAN
P2.1- PLUMBING PLAN
P3.1- PLUMBING DETAILS
P4.1- PLUMBING SPECIFICATIONS
P5.1- PLUMBING RISERS

DAVID HEFLEY
HEFLEY ARCHITECTS, PLLC
2122 WEST LINDEN AVENUE NASHVILLE, TENNESSEE 37212 615 415 7690 WWW.DAVIDHEFLEY.COM

A NEW AMENITY BUILDING

DRUMWRIGHT COMMUNITY

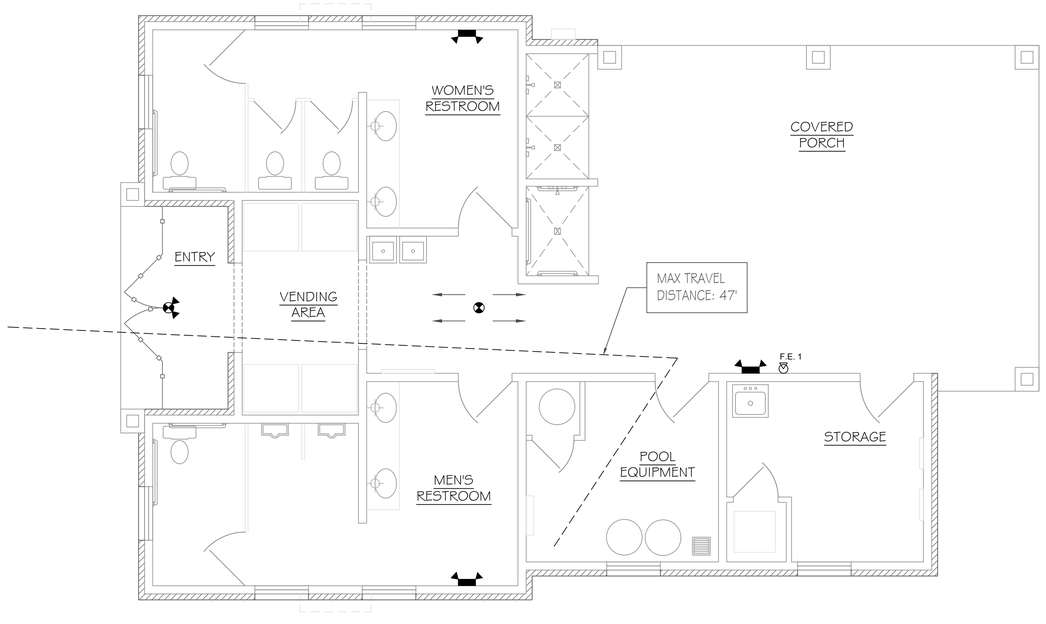
COLUMBIA, TENNESSEE 38401

SCHEMATIC DESIGN

A0.0

10 MARCH 2023

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LIFE SAFETY PLAN

SCALE: 1/4"-1'-0"

OCCUPANCY

OCCUPANCY CLASSIFICATION: ASSEMBLY GROUP A-4

PER 2018 I.B.C. TABLE 1004.5,
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT:

	FLOOR AREA IN SQ. FT. PER OCCUPANT:
POOL	150 GROSS
POOL DECK	50 GROSS
COVERED PORCH- TABLES AND CHAIRS	15 NET

EGRESS

EGRESS:
FRONT GATE
68" CLEAR WIDTH = 340 PERSONS PER EXIT
0.2" PER PERSON

REAR GATE
34" CLEAR WIDTH = 170 PERSONS PER EXIT
0.2" PER PERSON

= 510 TOTAL EXIT CAPACITY

PER 2018 I.B.C. TABLE 1017.2, EXIT ACCESS TRAVEL DISTANCE
DISTANCE FOR 'B' OCCUPANCY:
WITHOUT SPRINKLER SYSTEM = 200'
WITH SPRINKLER SYSTEM = 300'
PER 2018 I.B.C. TABLE 1006.2.1: GROUP B OCCUPANCY,
WITH SPRINKLER SYSTEM:
COMMON PATH OF EGRESS TRAVEL SHALL NOT BE MORE THAN 100'.
WITHOUT SPRINKLER SYSTEM:
OCCUPANT LOAD: LESS THAN/EQUAL TO 30: 100'
OCCUPANT LOAD: GREATER THAN 30: 75'

OCCUPANT LOAD CALCULATION

SPACE	GROSS AREA (SF)	FURNITURE DEDUCTION	EGRESS PATH DEDUCTION	NET AREA (SF)	FUNCTION OF SPACE	OCCUPANTS/ AREA	OCCUPANTS
POOL	1,800	-	-	-	SWIMMING	50 GROSS	36
POOL DECK	2,910	-	-	-	POOL ACCESS	15 GROSS	194
COVERED PORCH	411	110	150	151	TABLES AND CHAIRS	UNCONCENTRATED (TABLES AND CHAIRS) 15 NET	10
TOTAL OCCUPANT LOAD							240

LIFE SAFETY PLAN NOTES

1. SEE SHEET A0.1 FOR CONSTRUCTION TYPE AND FIRE RESISTANCE RATINGS.

2. ANY EQUIPMENT, INCLUDING FIRE EXTINGUISHER CABINETS, RECESSED IN A WALL MUST NOT COMPROMISE THE RATING OF THE WALL.

3. TYPE "A" HAZARD (ORDINARY HAZARD)
MAXIMUM TRAVEL DISTANCE- 75' TO EXTINGUISHER.

4. ALL EMERGENCY LIGHTING, EXIT SIGNS, AND OTHER SAFETY EQUIPMENT
SHALL COMPLY WITH THE REQUIREMENTS OF THE FIRE MARSHAL,
CURRENTLY ADOPTED INTERNATIONAL FIRE CODE, AND CURRENTLY
ADOPTED INTERNATIONAL BUILDING CODE.

LIFE SAFETY PLAN LEGEND

- F — FIRE ALARM MANUAL PULL STATION
- F — FIRE ALARM AUDIBLE AND VISIBLE
- P — FIRE ALARM VISUAL STATION- LIGHT ONLY
- F — FIRE ALARM HORN
- L — FLASHING LIGHT
- F.E.C. 1 — SEMI-RECESSED FIRE EXTINGUISHER CABINET
- F.E. 1 — WALL-MOUNTED FIRE EXTINGUISHER. 42" TO C.L. OF CABINET
- F.E. 2 — PORTABLE FIRE EXTINGUISHER TYPE 'CD' FOR ELECTRICAL ROOMS
- EXIT SIGN
- WALL MOUNTED EXIT SIGN
- EMERGENCY LIGHTS
- FACP — FIRE ALARM CONTROL PANEL

REQUIRED PLUMBING FIXTURES

OCCUPANT LOAD = 240 = 120 MEN AND 120 WOMEN

PER 2018 I.B.C. TABLE 2902.1-
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES

'A'	WATER CLOSETS		LAVATORIES	
	MALE	FEMALE	MALE	FEMALE
	1 PER 75	1 PER 50	1 PER 200	1 PER 150

REQUIRED:

MALE	FEMALE
2 WATER CLOSETS	3 WATER CLOSETS
1 LAVATORY	1 LAVATORY

1 SERVICE SINK

HI-LO DRINKING FOUNTAINS

RULES OF TENNESSEE DEPARTMENT OF HEALTH
BUREAU OF HEALTH SERVICES ADMINISTRATION
DIVISION OF GENERAL ENVIRONMENTAL HEALTH
CHAPTER 1200-23-5 PUBLIC SWIMMING POOLS

TYPE "B" SWIMMING POOL. LESS THAN 1,800 S.F.
LIFEGUARD NOT REQUIRED

BATHHOUSE FACILITIES:

	MALES	FEMALES
WATER CLOSETS	1/75**	1/50**
URINALS	1/75**	- - -
LAVATORIES	1/100**	1/100**
SHOWERS	1/50**	1/50**

** NUMBER OF SWIMMERS

REQUIRED:

MALE	FEMALE
2 WATER CLOSETS	3 WATER CLOSETS
2 LAVATORIES	2 LAVATORIES

3 SHOWERS

POOL CODE BATHHOUSE REQUIREMENTS GOVERN OVER IBC REQUIREMENTS

DAVID HEFLEY
HEFLEY ARCHITECTS, PLLC
2122 WEST LINDEN AVENUE NASHVILLE, TENNESSEE 37212 615 415 7690 WWW.DAVIDHEFLEY.COM

A NEW AMENITY BUILDING

DRUMWRIGHT COMMUNITY

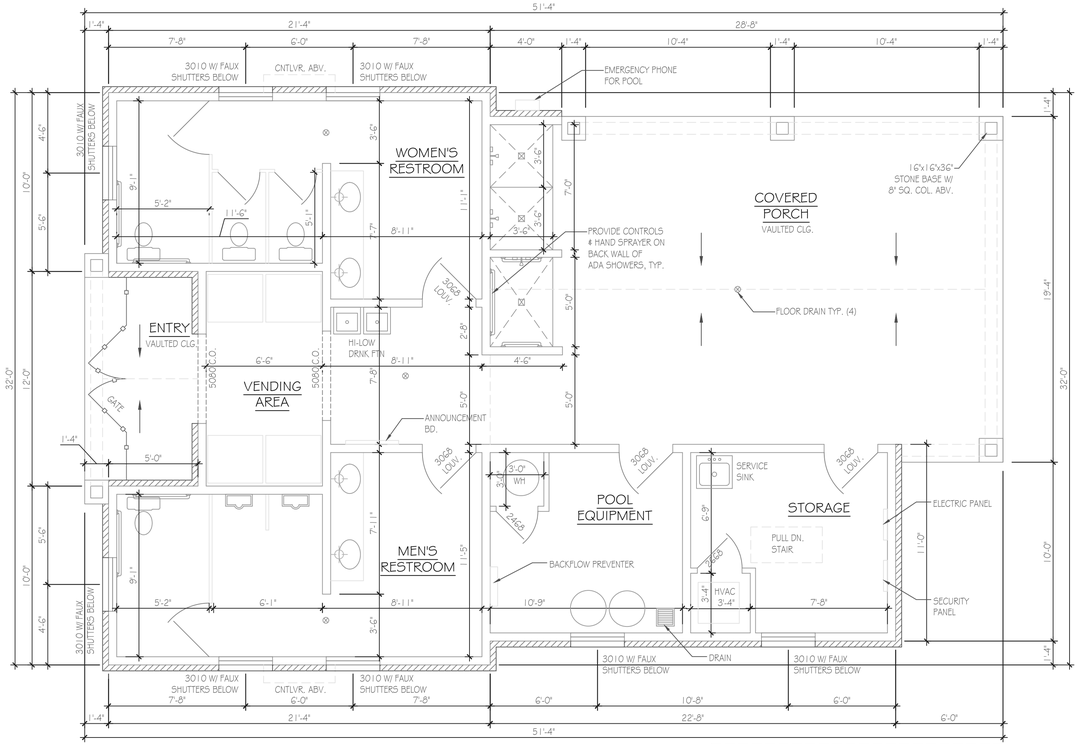
COLUMBIA, TENNESSEE 38401

SCHEMATIC DESIGN

LS1.1

10 MARCH 2023

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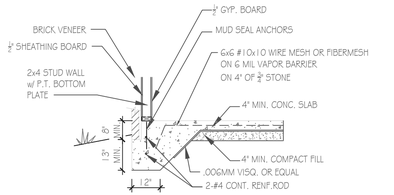


NORTH

APPROX. AREA	
POOL HOUSE	717
COVERED OUTDOOR SPACE	766
TOTAL UNDER ROOF	1483

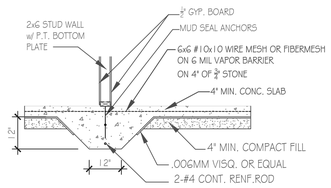
FIRST FLOOR PLAN

SCALE: ¼"-1'-0"



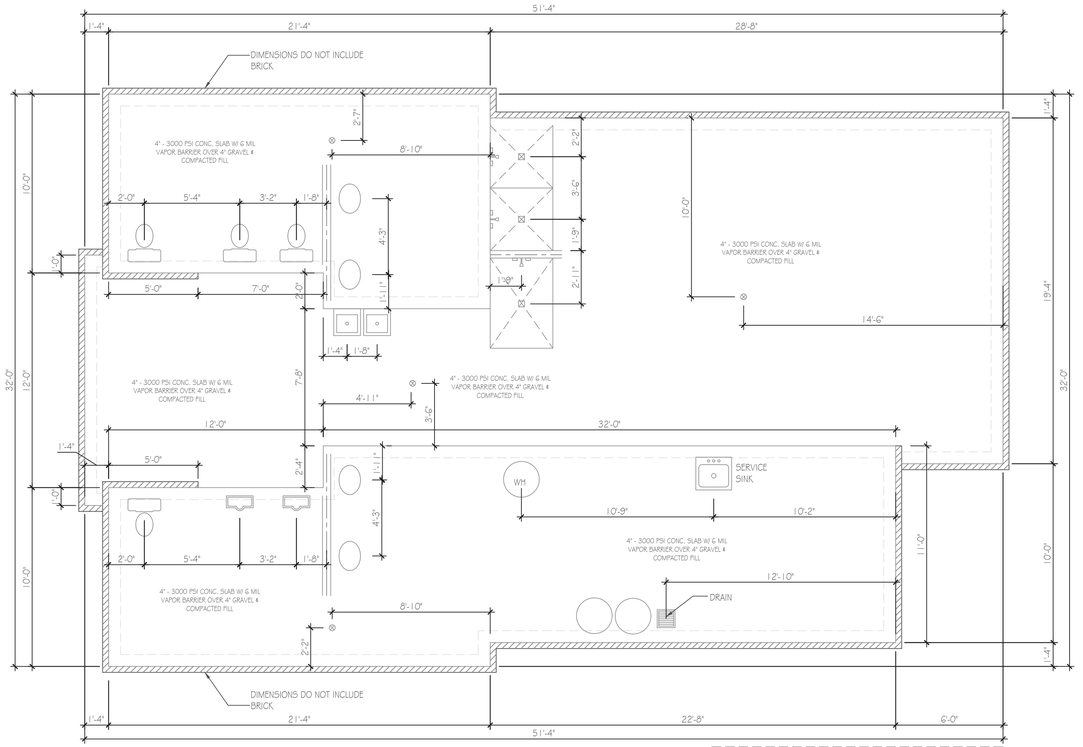
DETAIL: TYPICAL EXTERIOR WALL

NOT TO SCALE, TYPICAL



DETAIL: GRADE BEAM

NOT TO SCALE, TYPICAL



FOUNDATION PLAN

SCALE: ¼"-1'-0"

SEE STRUCTURAL NOTES, SHEET A3.1

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A NEW AMENITY BUILDING

DRUMWRIGHT COMMUNITY

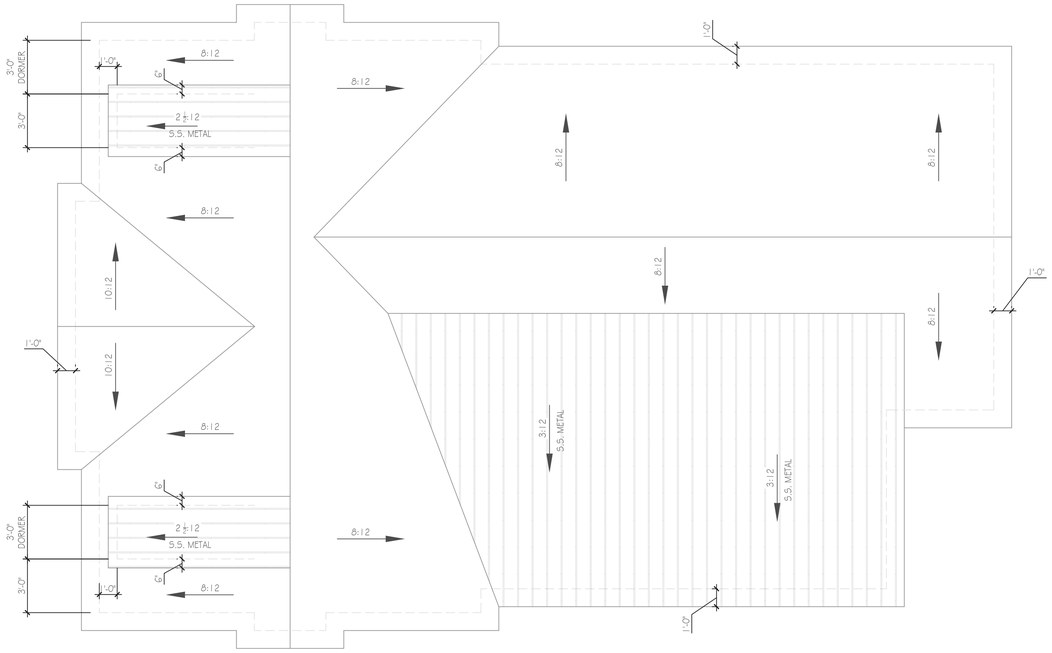
COLUMBIA, TENNESSEE 38401

SCHEMATIC DESIGN

A1.1

10 MARCH 2023

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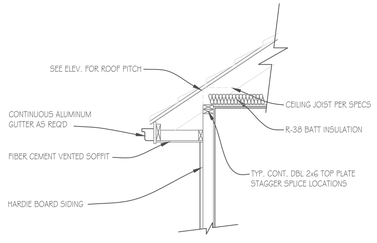


ELEVATION & ROOF NOTES

1. ROOF HAS 12" OVERHANGS UNLESS NOTED OTHERWISE
2. VENTS @ RIDGE VENTS PER BUILDER
3. GUTTERS & DOWNSPOUTS PER BUILDER
4. FLASHING AS REQ'D PER BUILDER
5. ICE & WATER SHIELD ON 3:12 & 4:12 ROOFS AS REQ'D

ROOF PLAN

SCALE: ¼"-1'-0"



DETAIL: ROOF FRAMED ON TOP OF PLATE

NOT TO SCALE, TYPICAL

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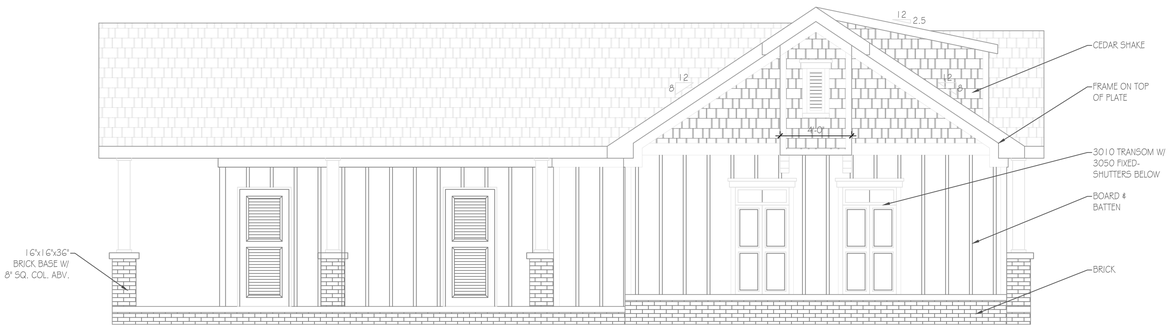
COLUMBIA, TENNESSEE 38401

SCHEMATIC DESIGN

A1.2

10 MARCH 2023

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NORTH ELEVATION

SCALE: $\frac{1}{4}$"-1'-0"



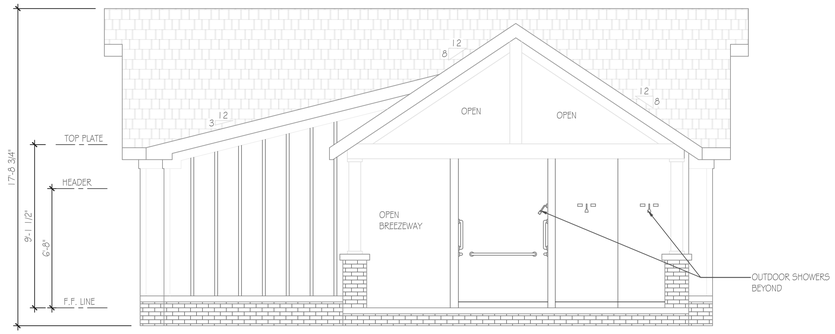
WEST ELEVATION

SCALE: $\frac{1}{4}$"-1'-0"



SOUTH ELEVATION

SCALE: $\frac{1}{4}$"-1'-0"



EAST ELEVATION

SCALE: $\frac{1}{4}$"-1'-0"

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A NEW AMENITY BUILDING

DRUMWRIGHT COMMUNITY

COLUMBIA, TENNESSEE 38401

SCHEMATIC DESIGN

A2.1

10 MARCH 2023

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STRUCTURAL NOTES

GENERAL

1. The building shall be constructed according to the latest Building Codes and standards as adopted by the local/state authorities.
2. Material, workmanship, and design shall conform to the referenced Building Code.
3. Coordinate dimensions not shown on the structural framing plans with Architect.
4. Contractor responsibilities include, but are not limited to, the following:
   - 4.1 Verify existing dimensions, elevations, and site conditions before starting work. Architect shall be notified of any discrepancy or omission.
   - 4.2 The structure is stable only in its completed form. Temporary supports required for stability during all intermediate stages of construction shall be designed, furnished, and installed by the Contractor.
   - 4.3 Contractor has sole responsibility for jobsite safety and complying with all health and safety precautions as required by any regulatory agency. In performing construction observation visits to the jobsite, the Architect will have no control over, nor responsibility for the Contractor's means, methods, sequences, techniques, or procedures in performing the work.

SITE PREPARATION

1. Strip vegetation and topsoil from building area.
2. Report any groundwater or soft unsuitable soil to Architect prior to construction.
3. Walls retaining more than 4' of earth shall not be backfilled until after floor framing is complete.
4. Prior to commencing construction, the building location shall be sited by the Contractor and the Owner. The drawings show a grade line for representational purposes only. Coordinate finish floor elevations with actual grade line prior to commencing construction.

REINFORCEMENT

1. Reinforcing Bars: ASTM A615, Grade 60
2. Welded Wire Reinforcement (WWR): ASTM A185, 8" minimum side and end laps
3. Reinforcement Placement (UNO)
   - 3.1 Concrete Reinforcement Cover

Below Grade:	Unformed	3" clear
	Formed	2" clear
Walls		3/4" clear
Columns (Ties)		1 1/2" clear
Beams/Girders (Stirrups)		1 1/2" clear
Slabs		3/4" clear

   - 3.2 Masonry reinforcing steel: Place in the center of CMU cells.
4. Reinforcement Splices
   - 4.1 Reinforcement marked "Continuous" can be spliced at locations determined by Contractor.
   - 4.2 Splice Lengths (UNO): #4 - 24" ; #5 - 30" ; #6 - 36"

CAST-IN-PLACE CONCRETE

1. Concrete Properties
   - 1.1 Normal Weight Structural Concrete

	28-Day, f'c (min.)	w/c Ratio (max.)	Entrained Air (min.)
Footings	3,000 psi	----	None Required
Slabs-on-grade	3,000 psi	0.48	None Required

2. Construction Joint Locations: No horizontal construction joints are permitted except as shown on the drawings. Obtain written consent for additional joints.
3. Special Finishes: Refer to Architectural Drawings for molds, grooves, ornaments, clips or grounds required to be encased in concrete and for location of floor finishes and slab depressions.
4. Defect Repair: Honey-combing, spalls, cracks, etc. shall be repaired. Extent of defective area to be determined by the Architect.

CONCRETE MASONRY

1. CMU Minimum Compressive Strength, f'm = 1,500 psi.
2. Mortar: Walls below grade Type M; Bearing walls Type M or S
3. Coarse Grout: 2,500 psi min. compressive strength conforming to ASTM C476. Grout solid bond beams, reinforced CMU cores, and CMU cores and wall cavities below grade.
4. Horizontal Joint Reinforcement: Two (2) No. 9 gage longitudinal wires at 16" vertically, UNO. Provide accessories for corners, intersections, etc.
5. Provide open bottom beam block units with 3" deep minimum web openings at horizontal reinforcement locations. A minimum clear space of one bar diameter shall be provided between the reinforcing bars and the face of masonry units.
6. Contraction Joints: Maximum spacing of 3 times of wall height or 30 feet (whichever is less) in all concrete masonry walls.
7. Minimum Vertical Wall Reinforcement (UNO): #4 @ 48"

WOOD

1. Structural framing plans depict the primary structural framing system. Contractor shall provide secondary and miscellaneous framing as required to complete the project (see architectural drawings).
2. Dressed Seasoned Lumber: S4S, 19% maximum moisture content at time of dressing.
   - 2.1 Interior and Exterior Loadbearing Walls: Spruce-Pine-Fir, No. 2 grade
   - 2.2 Lintels, Floor Joists and Beams: Southern Pine, No. 2 grade
   - 2.3 Wood in Contact with Concrete or Masonry or Exposed to Weather: Foundation grade pressure-treated. Use galvanized nails in pressure-treated wood.
3. Structural Glued Laminated Timber: Comply with American Institute of Timber Construction (AITC). Minimum allowable bending stress = 2,400 psi (dry).
4. Engineered Lumber Products

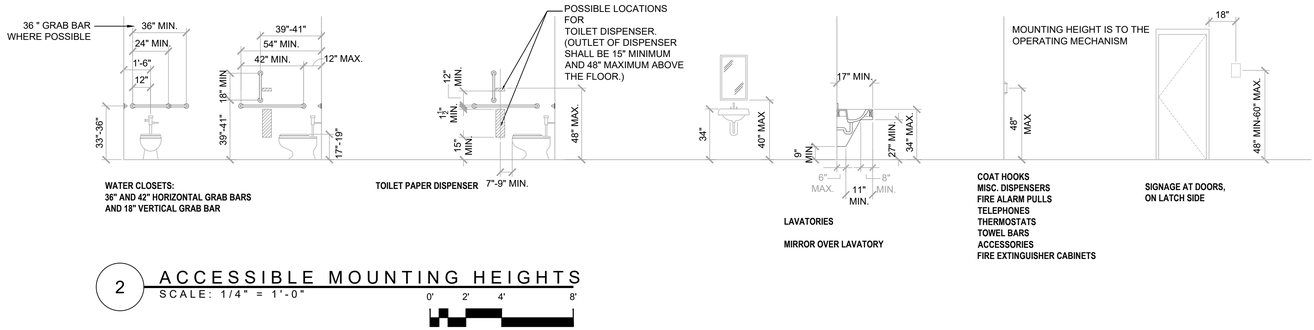
Parallel Strand Lumber (PSL):

Allowable bending stress	Fb = 2900 psi
Compression perpendicular to grain	Fcper = 750 psi
Compression parallel to grain	Fcpar = 2900 psi
Shear	Fv = 290 psi
Modulus of elasticity	E = 2,000,000 psi

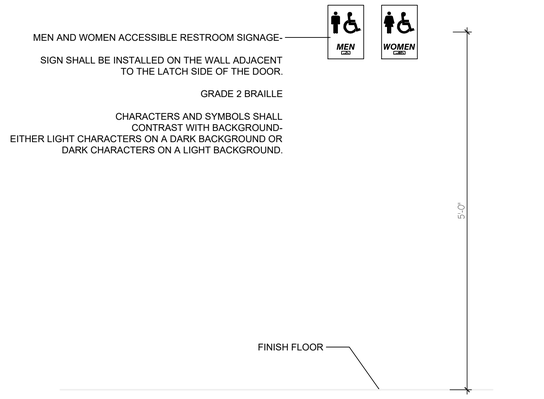
Laminated Veneer Lumber (LVL):

Allowable bending stress	Fb = 2250 psi
Compression perpendicular to grain	Fcper = 750 psi
Compression parellel to grain	Fcpar = 2200 psi
Shear	Fv = 285 psi
Modulus of elasticity	E = 1,500,000 psi

5. Wood I-Joists
   - 5.1 Wood I-joists shall be capable of supporting the following superimposed loads Dead Load = 10 psf; Live Load = 40 psf
   - 5.2 Submit manufacturers catalog indicating compliance of wood I-joists for required superimposed loads indicated in the Drawings.
   - 5.3 Framing details and erection procedures shall comply with manufacturers' recommendations.
6. Pre-Fabricated Roof Trusses
   - 6.1 Wood roof trusses shall be capable of supporting the superimposed loads as shown on the roof framing plan.
   - 6.2 Design of wood trusses shall be the sole responsibilty of the Truss Manufacturer as selected by the Contractor.
   - 6.3 Erection and temporary bracing shall conform to the recommendations of the Truss Manufacturer.
7. Structural Panels
   - 7.1 Floor Panels: 3/4" Tongue-and-groove APA rated Sturd-I-Floor. Floor panels shall be glued and nailed.
   - 7.2 Roof panels: 1/2" Radiant Barrier Sheathing
8. Wood Shear Walls - <u>All Exterior Framed Walls</u>
   - 8.1 Shear walls shall be constructed with APA 1/2" Structural I Southern Pine plywood panels. Panels shall be oriented with the long dimension in the vertical direction. Oriented strand board (OSB) may be used in lieu of plywood. OSB panels shall be APA rated and shall comply with Product Standard PS 2.
   - 8.2 Solid 2x blocking shall be provided at unsupported, horizontal panel edges.
   - 8.3 Nail panels with 8d nails spaced at 6 inches at the perimeter of the panels and at 12" at intermediate supports, UNO.
   - 8.5 Double 2x framing studs shall be used at the ends of each shear wall, UNO.
9. Connections for Structural Timber: Galvanized strong-tie connectors by the Simpson Company or approved equal.



2 ACCESSIBLE MOUNTING HEIGHTS
SCALE: 1/4" = 1'-0"
0' 2' 4' 8'



1 ACCESSIBLE RESTROOM SIGNAGE
SCALE: 1" = 1'-0"
0' 6" 1' 2'

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McNeely Civil Engineering Services

Transmittal Letter

To:	Paul Keltner	Date:	March 20, 2023
Company:	City of Columbia TN	Project No.:	210007
Address:	700 N Garden Street	Project Phase:	Revised Drumwright Master PUD Plan
City, State:	Columbia, TN 38401		
Project:	Revised Drumwright Master PUD Plan		

We are sending:

☒ Letter ☒ Drawings ☐ Contract ☐ Specifications

☐ Change Order ☒ Other

☐ Mail ☐ Courier ☐ Overnight

Purpose:

☒ Approval ☐ Your Use ☐ Your Records

☒ Review & Comment ☐ As Requested ☐ Bids Due

Description	Sets
Revised Drumwright Master PUD Plan	1
Drumwright Landscape Plans	1
Drumwright Amenity Building Plans	1
Drumwright Mailbox Kiosk Plans	1
Submittal Application	1
Review Fee check	Submitted to staff

Copies to:	City of Columbia	From:	Eric McNeely

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 on a USB thumb drive or CD (no multiple applications on one storage device)*
Fold hard copy submittals larger than 8½"x11"

ADDRESS/LOCATION	DRUMWRIGHT PUD MASTER PLAN		
	TAX MAP: 51	GROUP:	PARCEL: 32.00
SUMMARY OF NATURE OF REQUEST AND WORK	TO REVISE MASTER PUD PLAN FOR 106 ATTACHED TOWNHOME UNITS AND 179 SINGLE FAMILY RESIDENTIAL LOTS AND ADDITION OF COMMUNITY SWIMMING POOL/BATHHOUSE ON THE PROPERTY		

DATE OF PRE-APPLICATION CONFERENCE	1-11-2023	*Pre-application meetings are scheduled for Wednesdays.*

SELECT REQUEST	SUBMITTALS SHALL INCLUDE BUT NOT LIMITED TO:
☐ Annexation ☐ Rezoning ☐ Preliminary Plat ☐ Final Plat ☐ PUD Preliminary Master Plan ☒ PUD Final Site Plan REVISED MASTER FINAL PUD PLAN ☐ Multi-Family Site Plan ☐ Other: **File naming nomenclature examples:* *Freedom Point Site Plan* *Freedom Point Master Plan* *Freedom Point Final Plat*	**Annexations/Rezoning/PUD's:** ☐ Written Legal Description copy ☐ Requested Zone Listed ☐ Compliance with Comprehensive Plan ☐ Annexation Permission Form ☒ Plans and/or Plats conforming to City standards with check list completed ☒ Columbia Water System Availability Letter **Plats/PUDs:** ☒ Project Name (include Sections & Phases) REVISED DRUMWRIGHT FINAL PUD MASTER PLAN ☒ Total Number of Lots 106 ATTACHED SINGLE FAMILY TOWNHOMES 179 SINGLE FAMILY HOMESITES ☒ Total acreage 58.13 ACRES

Rev. 4/14/2022

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 meetings 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	Eric McNeely	PHONE	615-335-3172
ADDRESS	254 Belgian Road Nolensville, TN 37135	EMAIL	emcneely@smeinc.com

PROPERTY OWNER NAME	AG Essential Housing Mult State 1, LLC	PHONE	
ADDRESS	8585 E. Hartford, Suite 118 Scottsdale, AZ 85255	EMAIL	

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.

Eric McNeely	Eric McNeely	03-20-2023
APPLICANT NAME	APPLICANT SIGNATURE	DATE
AG Essential Housing Multi State 1, LLC	Steve Benson, Member	3.14.2023
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	

CITY OF COLUMBIA TENNESSEE

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

PLANNING FEE SCHEDULE

Payable upon submission of application
Non-refundable

AGENDA ITEMS

Annexation with RS/40 Base Zone	$300
Comprehensive Plan Amendment	$200
Textual Guideline Amendment	$200
Board of Zoning Appeals	$200

ZONING CHANGE

10 acres or less	$300
More than 10 acres	$500

ZONING COMPLIANCE AND SITE PLAN REVIEW: Does not require Planning Commission Approval

Residential	$20
Commercial/Industrial	$75

Paid with Building Permit

SUBDIVISIONS AND PLANS

Site Plan	$200 + $5 per unit
Planned Unit Development Master Plan	Residential: $300 + $5 per lot
Planned Unit Development Master Plan	Commercial: $300 + $50 per acre
Sketch Plat	$100
Preliminary Plat	$20 per lot
Final Plat	$15 per lot
Minor Plat	$125
Driveway Permit Exception*	$100

Zoning Ordinance #3638 Article 16
**Access Management Ordinance #4176*

Rev. 3/14/2018