Planning Board

Regular Meeting Agenda
May 9, 2022, 6:30 p.m.

1. Call to Order

2. Approval of April 11, 2022, Meeting Minutes

3. City Council Actions Update

4. *Continued from April 11th Planning Board Meeting:*

   Request to establish R-12(CD) zoning +/- 148.98 acres for a Planned Unit Development of 308 single-family homes and 184 townhomes, by rezoning 2570 S NC 119 (GPIN 9803664499) from R-20; rezoning an adjacent unaddressed property (GPIN 9803752741) from B-2 and R-20 and establishing zoning on a portion of the property not zoned by the City of Mebane; rezoning portions of an adjacent unaddressed property (GPIN 9803578931) from R-20; and, rezoning portions of 2502 S NC 119 (GPIN 9803677687) from B-2 by Leoterra Development, Inc.

   AND

   Request for a Special Use Permit for a Special Purpose Lot to allow for a public sewer pump station on the unaddressed property (GPIN 9803752741) by Leoterra Development, Inc.

5. Comprehensive text amendments to the Mebane Unified Development Ordinance including Article 2-7, 10, 12, Appendix A, Appendix G, and the Zoning Map.

6. New Business

7. Adjournment

Planning Board

Minutes to the Meeting
April 11, 2022, 6:30 p.m.

The Planning Board meeting was held at the Mebane Arts and Community Center located at 633 Corregidor Street, Mebane, NC 27302 and livestreamed via YouTube. The video can be accessed through the following link: https://www.youtube.com/watch?v=ccahB1Oge2Y

Members Present:

Chairman Edward Tulauskas
Judy Taylor, Vice Chair
Gale Pettiford
Susan Semonite
Kurt Pearson
Keith Hoover
Larry Teague
William Chapman

City Staff Present:

Audrey Vogel, Planner
Ashley Ownbey, Planner
Cy Stober, Development Director
Kirk Montgomery, IT Director

1. **Call to Order**
   At 6:30 p.m. Chairman Edward Tulauskas called the meeting to order.

2. **Swearing - In of Newly Appointed Planning Board Member William Chapman**
   Stephanie Shaw, City Clerk, swore in William Chapman to take an oath for his term as a new member of the Planning Board.

3. **Approval of March 14, 2022, Meeting Minutes**
   Kurt Pearson made a motion to approve the meeting minutes. Gale Pettiford seconded the motion which passed unanimously.

4. **City Council Actions Update**
   Cy Stober, Development Director, provided an update on the City Council's recent action at the April City Council meeting

5. **Request to establish R-12(CD) zoning +/- 148.98 acres for a Planned Unit Development of 308 single-family homes and 184 townhomes, by rezoning 2570 S NC 119 (GPIN 9803664499) from R-20; rezoning an adjacent unaddressed property (GPIN 9803752741) from B-2 and R-20 and establishing zoning on a portion of the property not zoned by the City of Mebane; rezoning portions of an adjacent unaddressed property (GPIN 9803578931) from R-20; and, rezoning portions of 2502 S NC 119 (GPIN 9803677687) from B-2 by Leoterra Development, Inc.;**
   AND
   Request for a Special Use Permit for a Special Purpose Lot to allow for a public sewer pump station on the unaddressed property (GPIN 9803752741) by Leoterra Development, Inc.

   Leoterra Mebane, LLC, is requesting to rezone the properties to R-12(CD) (Residential Conditional District) to allow for a Planned Unit Development of 184 townhomes and 308 single-family homes. The properties are in Alamance County outside of the City limits. Leoterra Mebane, LLC, owns the largest property and has all portions of the other properties under contract for purchase, contingent upon approval of the conditional rezoning.

Proposed onsite amenities, waiver requests and traffic improvements are detailed in the meeting agenda packet available here: https://cityofmebanenc.gov/meetings/planning-board-meeting-april-11-2022/. The Technical Review Committee (TRC) has reviewed the site plan five (5) times and the applicant has revised the plan and TIA to reflect the comments.

Ashley Ownbey provided an overview and PowerPoint presentation of the request.

Attorneys La-Deidre Matthews and Craig Turner of Fox Rothschild LLP (101 N. Tryon St. Suite 1300 Charlotte, NC 28246) representing the applicant provided a detailed presentation of request. Craig Turner presented the rezoning request which included a discussion of the surrounding land use, traffic conditions and improvements. La-Deidre Matthews presented the special use permit request. During the presentation, Ms. Matthews explained that the request would meet the following criteria for a Special Use Permit:

a) Will not materially endanger the public health or safety;
b) Will not substantially injure the value of adjoining or abutting property;
c) Will be in harmony with the area in which it is located; and
d) Will be consistent with the objectives and goals in the City's adopted plans

The applicant Buddy Lyons of Leoterra Development, Inc. introduced himself to the Planning Board and public and went into detail about the home products and architectural standards they intent to use and the proposed onsite amenities.

Rami Al-Chacar, 3010 Bluebird Lane, asked how what the proposed density would be and if it would be small lots. Mr. Lyons responded that it would be 3.3 units per acre and the lot size is pretty standard compared to newer developments in the area.

Francis Fredette, 2531 Farrell Rd, expressed concerns about increased traffic in the area, specifically the already troublesome intersection of Turner Rd and S NC HWY 119. Mr. Fredette recounted his experience of leaving 30 minutes early just to get on 119 from Turner Rd and asked if there would be a traffic light added at this intersection. He added that an entrance to the proposed development on Farrell Rd would prohibit those residents from easily accessing Turner Road as well.

Buddy Lyons explained his Engineering team was required to complete a traffic impact analysis (TIA) to for the project, which was reviewed and approved by the City of Mebane and the NC Department of Transportation (NCDOT). He noted that the goal of the TIA and design is to minimize the traffic impact, and added that the impacts to the road network would not take place for many years ahead due to supply chain delays and project phasing. Mr. Fredette (2531 Farrell Rd).

Alex Carter, P.E., an engineer at Leoterra Development, Inc spoke about the traffic study. He stated that the Ramey Kemp traffic engineer that conducted TIA was not able to attend the meeting. He explained that per the TIA the developer will provide a number of improvements on NC119 including a traffic light at NC 119 and Kimrey Rd.

Heather Merritt, 2170 Farrell Rd shared disappointment over the prospect of the "beautiful farmland" across from her home being turned into more "cookie cutter homes." Ms. Merritt commented that speeding is unsafe on Farrell Rd and more homes in the area will make the road more unsafe and increase traffic on an already congested system. Ms. Merritt inquired when the TIA was completed and if it took COVID impacts into consideration - now that people are going back to work traffic has been worse than ever. She stated that a traffic signal at NC 119 and Kimrey Rd would benefit only the people living in the proposed development. She reiterated that a signal at NC 119 and Turner Rd is necessary and that school traffic in the morning is burdensome. The impact to schools will also be problematic, noting increasing class sizes at the elementary school and longer bus rides. Ms. Merritt also expressed disappointment that neighbors were notified about the project two weeks in advance. She urged the Planning Board to consider the impact to the surrounding neighbors and the already strained road network.

Christopher Cole, 2200 Farrell Rd, echoed the concerns about density and traffic congestion in the area. Mr. Cole also spoke about the wildlife that currently exists on the subject property, such as bald eagles and turkeys. He concluded that traffic and growth in the area is "getting out of hand" and is unsustainable.

Tara Cole, 2200 Farrell Rd shared similar concerns about traffic and congestion on NC 119, Turner and Farrell Rd. She also asked whether the TIA considered recent traffic conditions since people have returned to working in person. She noted that a light at NC 119 and Kimrey can only do so much when the road needs to be widened. She added that Alamance County doesn't maintain Farrell Rd, so more cars on the street will cause more problems. Ms. Cole commented that she moved to Farrell Rd for the appeal of rural living and she was not ever aware that the subject property was for sale and commented that Mebane has changed so much over the last 10 years with respect to population growth, open space and traffic.

Kurt Pearson asked Alex Carter, P.E. to answer some questions about the Hawfields Landing TIA and clarified that he is not from Ramey Kemp (the firm that conducted the TIA). Mr. Carter explained that a traffic signal at the NC 119 and Kimrey Rd intersection will help to improve the level of service (LOS) by creating a "gating effect" for the flow of traffic. He clarified that there are no direct improvements proposed on Turner Road. Kurt Pearson read from the TIA that no-build and build conditions both have the same LOS for the major and minor roads.
Buddy Lyons commented that the road network and improvements are based on what is required by the City and CCDOT, and any additional staff feedback during the TRC process. He added that he would be happy to have a conversation with the City about additional traffic improvements.

Kurt Pearson asked why the development was going to have an entrance on Farrell Road? Cy Stober answered that NC State fire code requires two points of access for developments of more than 100 homes. Mr. Pearson noted that it would be likely that residents of the proposed development would use Turner and Farrell roads and asked what would trigger an improvement to Turner Rd. Cy Stober responded regardless of the development the Turner Road intersection has a LOS F. Mr. Sober continued that the NCDOT has initiated an express design project for S NC 119, but it would take at

least 10 years for any improvements to be realized. He recognized that the traffic on this road is already a significant challenge and there is no remedy at this time for the NCDOT controlled road.

Keith Hoover asked when the TIA was completed. Mr. Stober responded that the TIA was updated twice, most recently this year in March 2022 to reflect the latest traffic conditions. He added that the developer of Cambridge Park is already required to add a turn late at the NC 119 intersection. Acquiring right of way to add a turn lane on NC 119 is already challenge due to historic preservation constraints at the Hawfields Presbyterian Church and cemetery. Kurt Pearson asked if a stoplight at Turner Road intersection is warranted? Cy Stober confirmed that it is warranted per the signal warrant analysis, but it would need to go through the NCDOT Congestion Management and Division 7 and it is unclear how it would be funded.

Buddy Lyons noted that he would be willing to explore improvements on Turner Road at the City's direction. He also emphasized that the core purpose of the Planning Board meeting is to discuss land use and the property's current state it could be used for a range of higher intensity commercial uses that may generate even more traffic or truck traffic. Mr. Lyons also explained that his team has worked to meet the requirements of the Mebane UDO and TRC, but would be interested in holding another meeting with the neighbors prior to the City Council public hearing to address concerns about setbacks, density, etc.

Gale Pettiford asked when the Cambridge Park improvements discussed earlier would begin. Cy Stober responded that it would within the next two phases.

Cy Stober reminded the Planning Board that NC State law prohibits municipalities from considering making land use decisions based on public schools.

Mr. Fredette, 2531 Farrell Rd, asked how long it would take to see a traffic light at Turner Rd if it is left up to the state. Cy Stober answered the NCDOT express design project could take at least 10 years.

Kurt Pearson asked what the City takes into account when making a recommendation for land use and zoning decisions. Cy Stober referred to Ashley Ownbey's presentation earlier noting that they look at harmony with surrounding land use and zoning in the area and adopted long range plans. He added that there is State case law that dictates single family residential adjoining single family residential, despite lot sizes is to be considered harmonious.

Susan Semonite asked if increasing the minimum setbacks would decrease the number of lots in the development and how it would impact the home products? Buddy Lyons responded that it would have a bigger impact on the homebuilder and the products, but it does not necessarily reduce the number of homes.

Buddy added that he is happy to look at increasing setbacks, buffer, landscaping and making some density concessions prior to the City Council meeting. He added that he hopes to get a contact sheet of those who have attended the meeting to get in touch and work with folks to address concerns.

He emphasized the importance of addressing the concerns of the neighbors and meeting people in the middle.

Larry Teague asked how many acres are proposed to be developed with homes. Buddy responded that about 50 acres are being reserved for open space with about 100 acres for development.

Judy Taylor asked about the price point for the townhomes. Buddy responded that it would likely be low 400's. He elaborated on the dramatic increase in prices and property values over the last year or so due to inflation.

Judy Taylor commented on the property being classified as the G2 growth area in the Comprehensive Land Development Plan. She noted that this growth area is intended to have activity centers with opportunities for residential development and employment so that people can live and work close by. Ms. Taylor added that people that do work close by at the distribution centers probably can't afford homes in the 400k range.

Buddy Lyons responded that he would be willing to get a lower price point, but they wouldn't be able to achieve the City's desired architectural conditions.

Tom Boney of the Alamance news asked for more information on the history of the project. Cy Stober responded that the project was originally brought to TRC by another developer over 4 years ago, with plans that included 560 homes with apartments. This never came to Planning Board. Leoterra took over the project and reduced the density.

Kurt Pearson asked if Leoterra makes changes to the plans, do they need to return to the Planning Board prior to City Council. Cy Stober explained that it depends if the changes significantly alter the design of the project.

Buddy reiterated that beyond traffic improvements which warrants further discussion with the City and DOT, he is considering a reduction in the number of homes, increasing setbacks and the addition of more landscaping and buffers, particularly around the cemetery. He also discussed changes to the architectural standards. Buddy opined that none of which would create a substantial change. He also reiterated his intent to meet with surrounding residents.

Tom Boney asked how many homes would be eliminated. Buddy responded that he would need to run the numbers, but it would probably be in the 10s.

Cy Stober provided clarification that per state law the City is prohibited from regulating the architecture of single-family homes. Cy explained the precedent that private developers often offer architectural commitments to City Council as part of their conditional rezoning request, but that is strictly between the developer and City Council.

Tara Cole asked for clarification about "flexibility in design" for Planned Unit Developments. She also emphasized the need to consider the average income in the area to insure these homes are

affordable. Cy Stober clarified that the flexibility in design for PUDs allows certain deviations from the City's development standards, but once the project is approved it must adhere to the conditional approval and the site plan may not change without approval from the City Council at a public hearing.

Tara Cole asked if anyone on the Board has been to the cemetery on the property and commented that the design around the cemetery was not favorable.

Buddy Lyons proposed to the Planning Board to make the following changes to the rezoning request

- Increase minimum side setback from 10 to 14 feet;
- reduce the number of homes by at least 20 lots
- improve the design of the area surrounding the cemetery; and
- publicly dedicate the walking trail

Buddy also repeated his intent to meet with the neighbors to discuss further including landscaping and buffers.

Chairman Tulauskas invited more members of the public ask questions and provide comments. He reminded everyone that the City Council will have the final say and the project will be considered at a public hearing.

Janet Eckelbarger, 2872 Nereus Dr, commented that the purpose of the meeting is to consider the zoning – which is currently B-2 along NC 119 with some R-20 in the back. Ms. Eckelbarger explained the property was zoned B-2 for a reason and should stay that way citing the need to commercial services in the area and the future growth strategy areas in the Comprehensive Plan. She also commented that the developer should provide public recreation in the area and that a payment-in-lieu is not acceptable. She concluded that R-12 is too dense and a less traditional type of development would be a better fit for the area.

William Currin, 431 E Mcpherson Dr and owns property on Farrell Rd echoed the concern that too many homes are being proposed and remarked on how much Mebane has changed. He also asked about the annexation of the property and how it would impact neighbors. Cy Stober clarified that only the subject property would be annexed. Mr. Currin also asked about the cost to extend sewer to the development. Buddy Lyons explained that this is a developer's expense.

Bhavna Hilligrass, 1262 Valdosta Dr, shared concerns about the degradation and loss of habitat and environmental resources. Ms. Hilligrass referenced the conservation area identified in the CLP and the goal and objectives in the CLP that support tree preservation and environmental conservation. Ms. Hilligrass also referenced the City's tree protection ordinance. Ms. Hilligrass requested that the developer provide an onsite walk through with neighbors. She also suggested the developer provide more nature-based amenities geared towards conservation. She concluded by asking the Board to consider the project and how it can be in harmony with nature, and how conservation strategies can help protect their health and environment.

Matt Lawrence, 3015 S NC 119 HWY, commented that he's lived in the area for more than 40 years and is on the Board of Directors for the Hawfields Child Care and Development Center. His concern is that the growth in the area has not been supported by adequate infrastructure. He commented on the bottleneck on NC 199 between the Hawfields Presbyterian Church and historic cemetery, noting that until that bottleneck is resolved no traffic light will fix the problem. He elaborated that the roads cannot accommodate new and or already approved sources of traffic on NC119 including amazon trucks, the new high school, Summerhaven, and Cambridge park. He said all of our interest is to make a place that people want to come and work and live and if we don't do it responsibly people won't want to live here anymore.

Judy Taylor asked if City staff provided any guidance or feedback to the developer regarding the required public recreation dedication of 14 acres and the proposed payment in lieu. Buddy Lyons responded that the public recreation was determined prior to him taking over the project but was open to feedback on the matter. Judy Taylor emphasized the importance of the Planning Board meeting to give neighboring residents and the developer an opportunity share ideas and concerns prior to the City Council meeting.

Concluding the public comment period of the meeting, Buddy Lyons spoke about the feedback he received and stated that he would be willing to do an onsite walk through prior to the Council Meeting and that we would get a signup sheet/ list of contact information from interested members of the public in attendance. He also said that they were required to do a stream and wetland study for the project, and Leoterra Development, Inc. has their own grading and utility and simple site construction division, which gives them full control over the site development and any impacts to stream, wetlands, wildlife, etc.

Craig Turner reminded the Planning Board that the site plan brought forward for the rezoning request is something that has been reviewed extensively by City staff and has been approved by the TRC. He added that Mr. Lyons has shown that he is more than willing to cooperate with City staff and the community to address number of concerns related to the project and that the ultimate authority is the City Council which will hear these concerns as well. Mr. Turner asked that the Planning Board approve the request as presented with the conditions that Mr. Lyons agreed to and allow the City Council to negotiate with the Developer further. Buddy Lyons restated the conditions he would add to the site plan prior to City Council:

- Increase minimum side setback from 10 to 14 feet;
- reduce the number of homes by at least 20 lots
- improve the design of the area surrounding the cemetery; and
- publicly dedicate the walking trail / make it ADA accessible

Kurt Pearson questioned if it would be appropriate for them to continue to Council given the number of proposed changes and suggested tabling the request for a month to allow the developers to make the discussed changes. Cy Stober responded that the developer has the right to seek Council Action after the Planning Board has had 30 days to consider the request.

Buddy Lyons explained that he hoped the Planning Board would make a recommendation and then the Developer team would use the time before the City Council hearing to make sure they address the concerns raised during the meeting. Buddy added that he would be happy to table the request for the Planning Board but ultimately comes down to Council.

Kurt Pearson raised the concern that there are two requests on the table – the rezoning and the special use permit request which puts the Planning Board in a difficult position. Attorney La-Deidre Matthews clarified that the special use permit request is to be considered separately from the rezoning request and will have a separate quasi-judicial public hearing before the City Council.

Attorney Craig Turner requested a two-minute break, which was granted by Chairman Tulauskas. Following the brief intermission, Mr. Turner made a request for the requests to be tabled for a month to allow the development team time to make the above discussed changes to the site plan and hold an onsite meeting and walk through with the concerned neighbors. Buddy Lyons thanked the members of the public that attended the meeting for their professionalism and for sharing their concerns.

Per this discussion, Kurt Person made a motion to continue the rezoning and special use request by Leoterra Development, Inc. to the May Planning Board meeting. Judy Taylor seconded the motion which passed unanimously.

6. New Business

Audrey Vogel, City Planner, shared the following new business items:

- Kevin Brouwer stepped down from the Planning Board due to increased time commitment and travel at work.
- City Council Budget Work Session to be held on May 13
- City offices closed Friday, April 15

7. Adjournment

Chairman Edward Tulauskas adjourned the meeting at 8:45 p.m.

AGENDA ITEM #4

RZ 22-03

SU 22-03

Conditional Rezoning & Special Use Request

Hawfields Landing

Presenter

Ashley Ownbey, City Planner

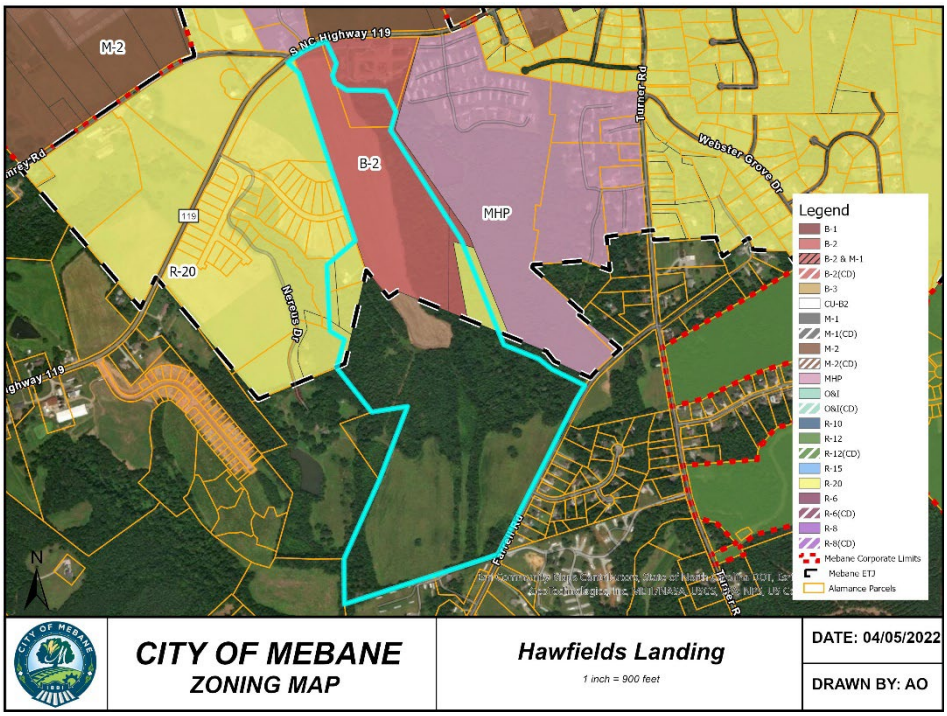
Applicant

Leoterra Mebane, LLC
110-A Shields Park Drive
Kernersville, NC 27284

Public Hearing

Yes ☒ No ☐

Zoning Map



Property

Unaddressed

2502 S NC 119

2570-K S NC 119

GPINs: 9803752741; 9803578931; 9803677687; 9803664499

Proposed Zoning

R-12(CD)

Current Zoning

R-20, B-2, No Zoning

Size

+/-148.98 acres

Surrounding Zoning

R-20, MHP, M-2, R-12

Adjacent Land Uses

Healthcare Facility, Single-Family Residential, Manufactured Home/RV Park, Warehouse

Utilities

To be extended at developer's expense

Floodplain

No

Watershed

No

City Limits

No

Summary

Leoterra Mebane, LLC, is requesting approval to conditionally rezone four (4) properties totaling +/- 148.98 acres located at S NC 119 and Farrell Road. Two of the properties are currently zoned R-20 (Residential District); one property is zoned B-2 (General Business District); and, the largest property is split-zoned R-20 (Residential District) and B-2 (General Business District), with an additional portion of this property outside of the Mebane ETJ and therefore not zoned by Mebane. Annexation of the property is required prior to action on the rezoning request.

The proposed request is to rezone the properties to R-12(CD) (Residential Conditional District) to allow for a Planned Unit Development of 184 townhomes and ~~308~~ 288 single-family homes. The properties are in Alamance County outside of the City limits. Leoterra Mebane, LLC, owns the largest property and has all portions of the other properties under contract for purchase, contingent upon approval of the conditional rezoning.

The proposed onsite amenities & dedications include the following:

- The construction of all internal roads with 5' sidewalks;
- The construction of a 10'-wide public, multi-use path along the NC 119 frontage and for a certain distance on Street "A";
- The construction of a 8'-wide paved, public walking path running behind Lots 288-259;
- The construction of a swimming pool, cabana, playground, paved walking path, multi-purpose field, dog park, grill areas, picnic shelter with fire pit, and recreational games, including permanent cornhole stations and pickle ball courts, to exclusively serve development residents.
- The construction of a 400-gallons per minute public sewer pump station on a special purpose lot to be dedicated to the City of Mebane that will serve the development and the surrounding area's utility needs. Per municipal utility policy, petition for annexation is required to access City water or sewer services. The pump station shall be screened and fenced as required by the City's Unified Development Ordinance (UDO).

Requested waivers:

- The development standards for Planned Unit Developments (PUDs) require side yards of 10' for "individual and unattached buildings". The applicant is requesting a minimum side setback of ~~5'~~ 7' for single-family, detached homes.
- The development standards for PUDs specify the front setback should be "similar to the underlying zoning district." The R-12 Zoning District front setback is 30'. The applicant is requesting 20' front setbacks for the townhome buildings and single-family, detached homes.
- The development standards for PUDs specify periphery lots adjacent to single-family homes should meet minimum standards for the zoning district. The applicant is not showing any deviation in lot sizes for those on the periphery of the property adjoining residential properties to the west or properties along Farrell Road. Common elements do separate the proposed homes from the existing single-family homes.
- The UDO calculates that the applicant should provide ~~14.06~~ 13.49 acres of public recreation area, and the applicant is requesting to provide ~~0.51~~ 1.52 acres in a 10' multi-use path and 8' paved walking path, along with a payment *in lieu* of ~~$130,707~~ $115,466.

Furthermore, consistent with the Traffic Impact Analysis (TIA) conducted by Ramey Kemp Associates and reviewed by the NCDOT and the City's consulting traffic engineer with VHB, the applicant will be providing the following transportation improvements:

NC 119 and Kimrey Road/Site Driveway

- Install a traffic signal at the intersection of NC 119 & Kimrey Road.
- Provide a right-turn lane on northbound NC 119 with 100' of storage and appropriate taper.
- Provide a left-turn lane on southbound NC 119 with 100' of storage and appropriate taper.
- Construct the site driveway with one ingress lane and two egress lanes, consisting of a shared left/through lane and an exclusive right-turn lane.

NC 119 and Trollingwood-Hawfields Road/Old Hillsborough Road

- Subject to available right-of-way and environmental/cultural constraints, provide a right-turn lane on eastbound Trollingwood-Hawfields Road with 100' of storage and appropriate taper.

The Technical Review Committee (TRC) has reviewed the site plan five (5) times and the applicant has revised the plan and TIA to reflect the comments.

The initial request was presented to the Mebane Planning Board on April 11, 2022. Per the applicant's request, the Planning Board continued the rezoning and special use permit requests to the May meeting. The request has since been revised to reflect the following changes:

- The minimum lot width for single-family homes has increased from 51' to 55' to allow for 14' building separation with 7' side setbacks. This resulted in a loss of 20 single-family lots, including lots removed around the cemetery.
- The walking paths are now shown as paved, with the path behind lots 259-288 dedicated as public recreation.
- The width of the common elements/streetscape/berm along Farrell Road has increased from 30' to 50' to allow for additional height of the berm running parallel with the street.
- Recreation and common elements calculations have been updated to reflect the above changes.

Financial Impact

The developer will be required to make all of the improvements at his own expense.

Recommendation

The Planning staff has reviewed the request for harmony with the zoning of the surrounding area and consistency with the City's adopted plans and recommends approval.

Suggested Motion

1. Motion to approve the R-12(CD) zoning as presented. It is consistent with the objectives and goals in the City's Comprehensive Land Development Plan *Mebane By Design*. Specifically, the request:

    - ☐ Is for a property within the City's G-2 Residential Growth Area (Jones Drive and Mebane Oaks Residential) and is "…seen as an area where future residential growth is likely…" (Mebane CLP, p.78);

- ☐ Provides a greenway and open space in a developing area and promotes connections to other locations, consistent with Open Space and Natural Resource Protection Goal 4.3 (p. 17, 89, & 90).

2. Motion to approve the Special Use request for a Special Purpose Lot for a public sewer pump station as presented; and

3. Motion to find that the request is both reasonable and in the public interest because it finds that it:
   a. Will not materially endanger the public health or safety;
   b. Will not substantially injure the value of adjoining or abutting property;
   c. Will be in harmony with the area in which it is located; and
   d. Will be consistent with the objectives and goals in the City's 2017 Comprehensive Land Development Plan *Mebane By Design*.

OR

4. Motion to **deny** the R-12(CD) rezoning as presented due to a lack of

   a. Harmony with the surrounding zoning

   OR

   b. Consistency with the objectives and goals in the City's 2017 Comprehensive Land Development Plan *Mebane By Design* or any of the City's other adopted plans.

OR

5. Motion to deny the Special Use Permit as presented due to a failure to satisfy any one of the four criteria required for approval (**NOTE: criterion for failure must be specified**)

Attachments

1. Zoning Amendment Application
2. Special Use Permit Application
3. Zoning Map
4. Site Plan
5. Planning Project Report
6. Preliminary Water and Sewer System Approval Letter
7. Technical Memorandum – City Engineering Review
8. Traffic Impact Analysis Recommendations
   a. Traffic Impact Analysis (TIA)
   b. NCDOT Review of TIA
   c. VHB Review of TIA

RECEIVED
12/09/2021

APPLICATION FOR A ZONING AMENDMENT

Application is hereby made for an amendment to the Mebane Zoning Ordinance as follows:

Name of Applicant: Leoterra Development, Inc.

Address of Applicant: 110-A Shields Park Dr. Kernersville, NC 27284

Address and brief description of property to be rezoned: Undeveloped land in county at parcels 174153, 159686, and portoin of 159687. And 177865.

Applicant's interest in property: (Owned, leased or otherwise) Contract for purchase

*Do you have any conflicts of interest with: Elected/Appointed Officials, Staff, etc.?

Yes ___ Explain: _____ No No

Type of re-zoning requested: R-12 CD

Sketch attached: Yes Yes No _____

Reason for the requested re-zoning: Develop single family and townhome community

Signed: _____

Date: _____

Action by Planning Board: _____

Public Hearing Date: _____ Action: _____

Zoning Map Corrected: _____

The following items should be included with the application for rezoning when it is returned:

1. Tax Map showing the area that is to be considered for rezoning.
2. Names and addresses of all adjoining property owners within a 300' radius (Include those that are across the street).
3. $300.00 Fee to cover administrative costs.
4. The information is due 15 working days prior to the Planning Board meeting. The Planning Board meets the 2nd Monday of each month at 6:30 p.m. Then the request goes to the City Council for a Public Hearing the following month. The City Council meets the 1st Monday of each month at 6:00 p.m.

APPLICATION FOR A SPECIAL USE PERMIT

Application is hereby made for an amendment to the Mebane Zoning Ordinance as follows:

Name of Applicant: Leoterra Mebane, LLC

Address of Applicant: 110-A Shields Park Drive, Kernersville, NC 27284

Address and brief description of property: S NC 119 HWY, Access to Special Purpose Lot

for a proposed sanitary sewer pump station will be provided off of Farrell Road.

Applicant's interest in property: (Owned, leased or otherwise) Owned

*Do you have any conflicts of interest with: Elected/Appointed Officials, Staff, etc.?

Yes ___ Explain: _____ No X

Type of request: Special Purpose Lot

Sketch attached: Yes X No _____

Reason for the request: The Special Purpose Lot is required to serve the Hawfields Landing

Subdivision proposed public sewer pumping station.

Signed: _____

Date: 3/10/2022

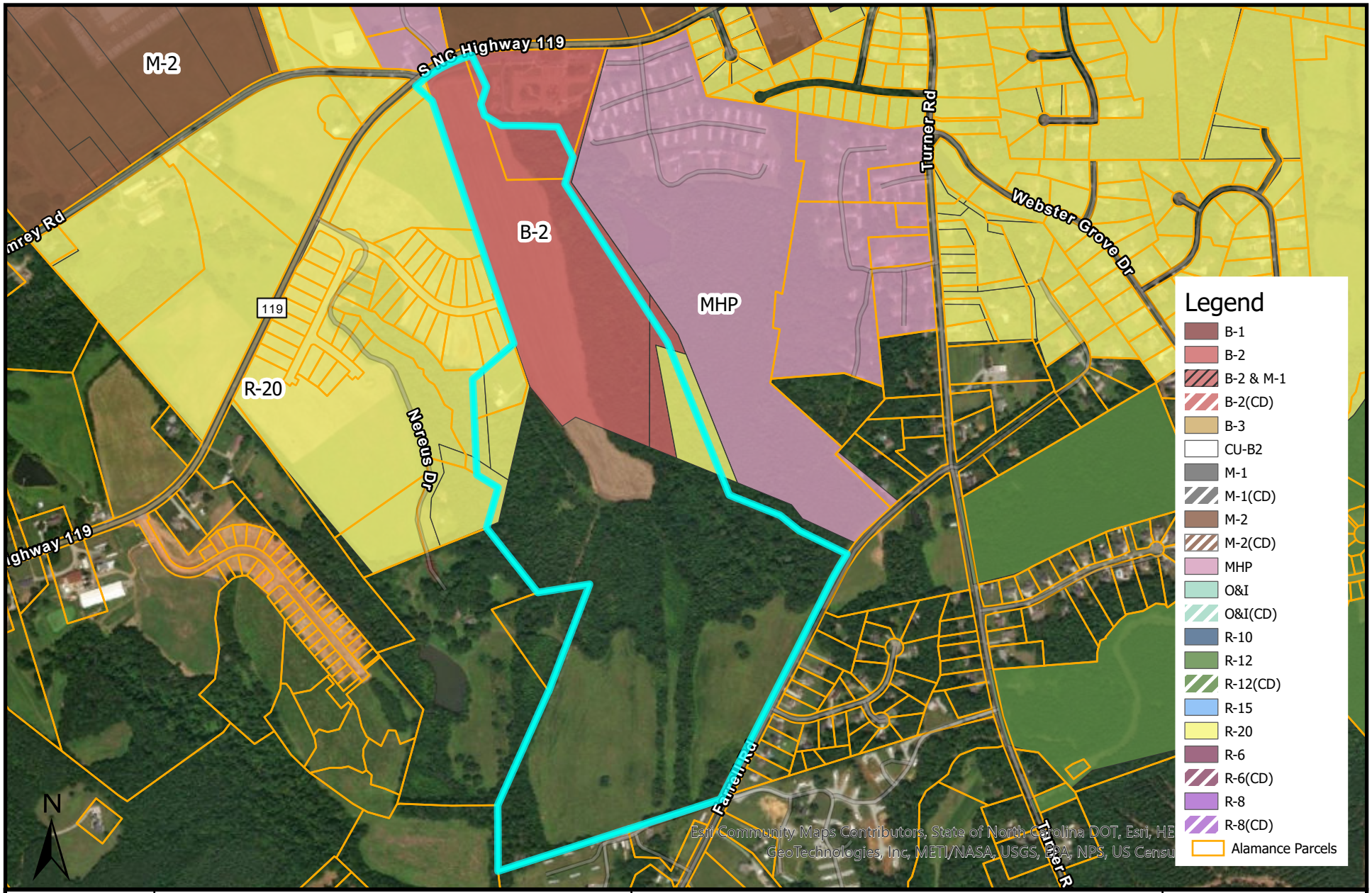
Action by Planning Board: _____

Public Hearing Date: _____ Action: _____

Zoning Map Corrected: _____

The following items should be included with the application for rezoning when it is returned:

1. Tax Map showing the area that is to be considered.
2. Names and addresses of all adjoining property owners within a 300' radius (Include those that are across the street).
3. $400.00 Fee to cover administrative costs.
4. The information is due 15 working days prior to the Planning Board meeting. The Planning Board meets the 2nd Monday of each month at 6:30 p.m. Then the request goes to the City Council for a Public Hearing the following month. The City Council meets the 1st Monday of each month at 6:00 p.m.



CITY OF MEBANE
ZONING MAP

Hawfields Landing

1 inch = 900 feet

DATE: 04/05/2022

DRAWN BY: AO

PARCEL DATA:

PIN # 9803752741, 9803664499, 9803677687(PORTION) & 9803578931(PORTION)
TOTAL ACREAGE: 148.98 AC. +/-
DEED REF: D.B. 4257 PG. 409
D.B. 3982 PG. 238 (PORTION)
D.B. 4260 PG. 852 (PORTION)
D.B. 3937 PG. 569
PLAT REF: P.B. 78, PG. 312-313
EXISTING ZONING: B-2 & R-20 CITY OF MEBANE ETJ & PORTION ALAMANCE COUNTY WITH NO ZONING
EXISTING USE: VACANT & SINGLE FAMILY RESIDENTIAL (159686)
PROPOSED USE: PLANNED UNIT DEVELOPMENT (PUD)
PROPOSED ZONING: R-12(CD) ; WITH SINGLE-FAMILY DETACHED & TOWNHOME DWELLING UNITS

QUANTITIY DATA:

A) TOTAL LF OF STREETS: 17,366 LF

B) TOTAL LF SIDEWALKS:
PUBLIC STREETS: 19,880 LF
10' MULTI USE PATH: 2,188 LF
FARRELL ROAD: 1,760 LF

C) LF STORM DRAINAGE: 24,436 LF

D) LF WATER LINE
12" ONSITE: 6,230 LF
12" OFFSITE: 5,986 LF
6" & 8" ONSITE: 10,808 LF
TOTAL 23,024 LF

E) LF GRAVITY SEWER 19,744 LF
LF FORCEMAIN ONSITE: 5,696 LF
LF FORCEMAIN OFFSITE: 2,185 LF

F) SERVICE CONNECTIONS
SINGLE FAMILY
OF WATER SERVICES 288
OF SEWER SERVICES 288
TOWNHOMES
OF WATER SERVICES 184
OF SEWER SERVICES 184

G) NUMBER OF DRIVEWAYS
SINGLE FAMILY: 288
TOWNHOMES: 184

H) NUMBER OF ENGINEERED STORMWATER DEVICES: 9 DEVICES

TOTAL # OF BEDROOMS 1704
TOWNHOMES 552
(ASSUMED 3 BEDROOMS PER UNIT FOR TOWNHOMES)
SINGLE FAMILY 1152
(ASSUMED 4 BEDROOMS PER UNIT FOR SINGLE FAMILY)

AREA DATA:

TOTAL SINGLE FAMILY AREA: 116.22 AC
AREA IN LOTS: 54.19 AC
AREA IN SPECIAL PURPOSE LOT (PUMP STATION): 0.21 AC
AREA IN CEMETERY LOT: 0.55 AC
AREA IN R/W: 14.86 AC
TOTAL AREA OPEN SPACE: 46.40 AC
(REC AREA INCLUDED): (11.16 AC)
(COMMON ELEMENTS, PASSIVE): (35.24 AC)

EX. AREA 15% OR GREATER SLOPES: 0.71 AC
AREA IN PROP. LANDSCAPE BUFFERS: 4.26 AC
EX. AREA IN STREAM BUFFERS: 14.61 AC

COMMON ELEMENTS REQUIRED: (MIN SQFT - AVG SQFT)# LOTS
(12,000 – 8,197)288 LOTS = 25.14 AC
PUBLIC REC AREA REQUIRED: 288 x 1/35 AC = 8.23 AC

TOTAL AREA IN TOWNHOMES: 32.76 AC
AREA IN LOTS: 8.00 AC
AREA IN R/W: 5.60 AC
TOTAL AREA OPEN SPACE: 19.16 AC
(COMMON ELEMENTS, PASSIVE): (15.40 AC)
(REC AREA): (3.76 AC)
(REC AREA 5 FROM SINGLE FAMILY SECTION TO BE USED TO MEET REC AREA REQUIREMENT)

COMMON ELEMENTS REQUIRED: (500 SF/UNIT)184 UNITS
500 x 184 = 2.11 AC
PUBLIC REC AREA REQUIRED: 184 x 1/35 AC = 5.26 AC

A PAYMENT IN-LIEU WILL BE REQUIRED FOR PUBLIC RECREATION AREA.
TOTAL PUBLIC RECREATION REQUIRED = 13.49 AC
TOTAL PUBLIC RECREATION PROVIDED = 1.52 AC
(10' MULTI-USE TRAIL) 0.51 AC
(PAVED WALKING PATH) 1.01 AC
REMAINING PUBLIC RECREATION REQUIRED = 11.97 AC
PAYMENT IN-LIEU=11.97 AC x 59,646.32 = $115,466.45

Property	Pin #	Assessed Value/AC	Acreage	Weight	
Compass Realty Hawfields, LLC	9803677687	$ 42,748.00	4.31	2.89	$ 123,670.21
Jeanie Kemodle	9803664499	$ 14,051.00	2.59	1.74	$ 24,427.50
Leoterra Mebane, LLC	9803752741	$ 8,562.00	141.99	95.31	$ 816,027.91
Christian Education Society	9803578931	$ 8,389.00	0.09	0.06	$ 506.79
			148.98	100	$ 964,632.41
				Weighted Value/AC	$ 9,646.32

TOTAL SUBDIVISION OPEN SPACE: 65.56 AC
(COMMON ELEMENTS, PASSIVE): 50.64 AC
(REC AREA): 14.92 AC

SINGLE FAMILY LOT DIMENSIONAL DATA PROPOSED:

MIN. LOT SIZE=6,000 S.F.
MIN. LOT WIDTH AT BUILDING LINE = 55'
MIN. LOT WIDTH AT STREET = 35'
FRONT SETBACK: 21' GARAGE TO PROPERTY LINE
20' HOUSE TO PROPERTY LINE
SIDE SETBACK: 7'
SIDE STREET: 15'
REAR SETBACK: 15'
MAXIMUM BUILDING HEIGHT: 35'; TWO STORY MAX.
MAXIMUM LOT BUILDING COVERAGE: 40%
SINGLE FAMILY PARKING DATA:

288 UNITS PROPOSED

REQ'D PARKING 2 SPACES/ UNIT + .5 SPACES/BEDROOM OVER 2
ASSUMING 4 BEDROOM PER UNIT = 3/UNIT = 288 x 3 = 864 REQUIRED

PROP.PARKING = 4 SPACES PER UNIT (2 DRIVEWAY & 2 GARAGE)
288 x 4 = 1152 SPACES PROVIDED

TOWNHOME DIMENSIONAL DATA PROPOSED:

FRONT SETBACK: 20' HOUSE TO PROPERTY LINE/23' GARAGE TO PROPERTY LINE
BUILDING SEPARATION: 20'
SIDE STREET: 15'
REAR SETBACK: 20' PERIMETER PROPERTY LINE
MAXIMUM BUILDING HEIGHT: 35' (TWO STORY)
UNITS 35-39, 40-44, 50-53 & 54-57 FRONT SETBACK WILL BE INCREASED TO MAINTAIN A 25' SEPARATION BETWEEN INTERSECTION SIGHT ESMT. AND FRONT OF GARAGE.
TOWNHOME PARKING DATA:

184 UNITS PROPOSED

REQ'D PARKING 2 SPACES/ UNIT + .5 SPACES/BEDROOM OVER 2
ASSUMING 3 BEDROOM PER UNIT = 2.5/UNIT = 184 x 2.5 = 460 REQUIRED

PROP.PARKING = 2 SPACES PER UNIT (1 DRIVEWAY & 1 GARAGE)
184 x 2 = 368+99 = 468 SPACES PROVIDED

FLOOD INFORMATION:

PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD AREA PER FIRM MAP 3710980300J, DATED 09-06-06.

FLOOD STUDY WILL BE REQUIRED DURING CONSTRUCTION DRAWINGS PROCESS.

PROPOSED 8' PAVED WALKING PATHS (6' MIN. FOR CREEK CROSSING OR NEAR ENVIRONMENTALLY SENSITIVE AREAS). IT IS THE INTENT OF THE APPLICANT TO PROVIDE ADA ACCESSIBILITY ALONG THE MAIN WALKING PATH FROM LOT 288/STREET A TO LOT 259/STREET G, THE ROUTE OF THE MAIN WALKING PATH TO BE EVALUATED DURING CONSTRUCTION PLAN DESIGN. THE SPUR PATH TO STREET I AND STREET A BESIDE LOT 270 MAY NOT BE ABLE TO MEET ADA REQUIREMENTS DUE TO EXISTING GROUND SLOPES, HOWEVER THE TRAILS WILL STILL BE PAVED. A 14' TRAIL EASEMENT WILL BE PROVIDED OVER ALL TRAILS FOR POSSIBLE FUTURE MAINTENANCE BY THE CITY OF MEBANE AS PART OF THE LARGER TRAIL NETWORK. AT SUCH TIME, THE CITY OF MEBANE MAY ACQUIRE PERMANENT MAINTENANCE OF A TRAIL/TRAILS THAT SERVES THE GREATER TRAIL NETWORK. THE MASTER HOA WILL MAINTAIN ALL TRAILS UNTIL SUCH TIME THE CITY OF MEBANE DEEMS THAT THE TRAIL/TRAILS CAN BECOME A PART OF A LARGER TRAIL NETWORK.

DEVELOPMENT & UTILITY NOTES:

1. ALL NEW UTILITIES TO BE LOCATED UNDERGROUND.
2. ALL PUBLIC UTILITIES AND CONNECTIONS TO PUBLIC UTILITIES SHALL CONFORM TO THE CITY OF MEBANE STANDARDS AND SPECIFICATIONS.
3. FIRE HYDRANT AND VALVE LOCATIONS TO BE SHOWN ON CONSTRUCTION DRAWINGS UPON INPUT FROM THE CITY OF MEBANE FIRE AND ENGINEERING DEPT.
4. ALL UTILITIES AND BMP DEVICES SHOWN ARE PRELIMINARY AND ARE SUBJECT TO CHANGE DURING THE CONSTRUCTION DESIGN PROCESS.
5. EASEMENTS MEETING CITY OF MEBANE STANDARDS SHALL BE LOCATED ON ALL PUBLIC UTILITIES LOCATED OUTSIDE OF RIGHT-OF WAY. NO FENCING OF PUBLIC UTILITY EASEMENTS WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY OF MEBANE. A NOTE SHALL BE ADDED TO THE HOA DOCUMENTS TO THIS EXTENT.
6. 10' UTILITY EASEMENT REQUIRED ALONG PUBLIC STREET RIGHT OF WAY.
7. AS A HIGH DENSITY SUBDIVISION THIS DEVELOPMENT SHALL COMPLY WITH NPDES PHASE II STORMWATER REGULATIONS, RIPARIAN BUFFER ORDINANCE AND THE CITY OF MEBANE STORM DRAINAGE DESIGN MANUAL
8. ANY LANDSCAPE BUFFERS ON PRIVATE LOTS SHALL BE IN EASEMENTS MAINTAINED BY THE HOMEOWNER'S ASSOCIATION.
9. PRESERVED TREE AREAS WILL BE FENCED OFF AND UNDISTURBED DURING CONSTRUCTION.
10. ALL COMMON ELEMENTS ARE THE RESPONSIBILITIES OF THE HOA.
11. OBTAIN NCDOT DRIVEWAY PERMIT FOR PROPOSED ACCESSES FOR NC 119 AND FARRELL ROAD PRIOR TO CONSTRUCTION.
12. OBTAIN NCDOT THREE-PARTY ENCROACHMENT AGREEMENT FOR PROPOSED/STIPULATED WATER AND SEWER CONSTRUCTION AND ANY SIDEWALK, MULTI-USE PATHS AND RELATED APPURTENANCES.
13. PARCEL TO BE ANNEXED INTO THE CITY OF MEBANE CORPORATE LIMITS. ANY AREA OF PARCEL NOT LOCATED IN THE CITY OF MEBANE CORPORATE LIMITS OR ETJ., WILL NEED TO BE ANNEXED BY THE CITY PRIOR TO ANY ZONING ACTION BY THE CITY COUNCIL.
14. FLOOD STUDY WILL BE REQUIRED AT THE CONSTRUCTION DRAWING PHASE
15. OVERALL SUBDIVISION SPEED LIMIT TO BE 25 MPH.
16. UTILITIES TO BE SCREENED WITH EVERGREEN PLANTS (PUMP STATION, TRANSFORMERS, AC UNITS, ETC.)
17. THE CITY OF MEBANE WILL ONLY MAINTAIN ITEMS SUCH AS SIDEWALKS, WATER, SEWER, STREET, PUMP STATIONS AND STORM DRAINS THAT ARE IN PUBLIC RIGHT-OF WAY OR SPECIFICALLY HAVE AN EASEMENT DEDICATED TO THE CITY OF MEBANE FOR OWNERSHIP AND MAINTENANCE OR A DEDICATED PARCEL OF LAND. HOWEVER, ALL LANDSCAPING IS WITH THE HOA TO MAINTAIN EXCEPT WHERE LOCATED ON PUMP STATION PARCEL.
18. LANDSCAPING AND LIGHTING PLANS TO BE PROVIDED WITH CONSTRUCTION DRAWINGS.

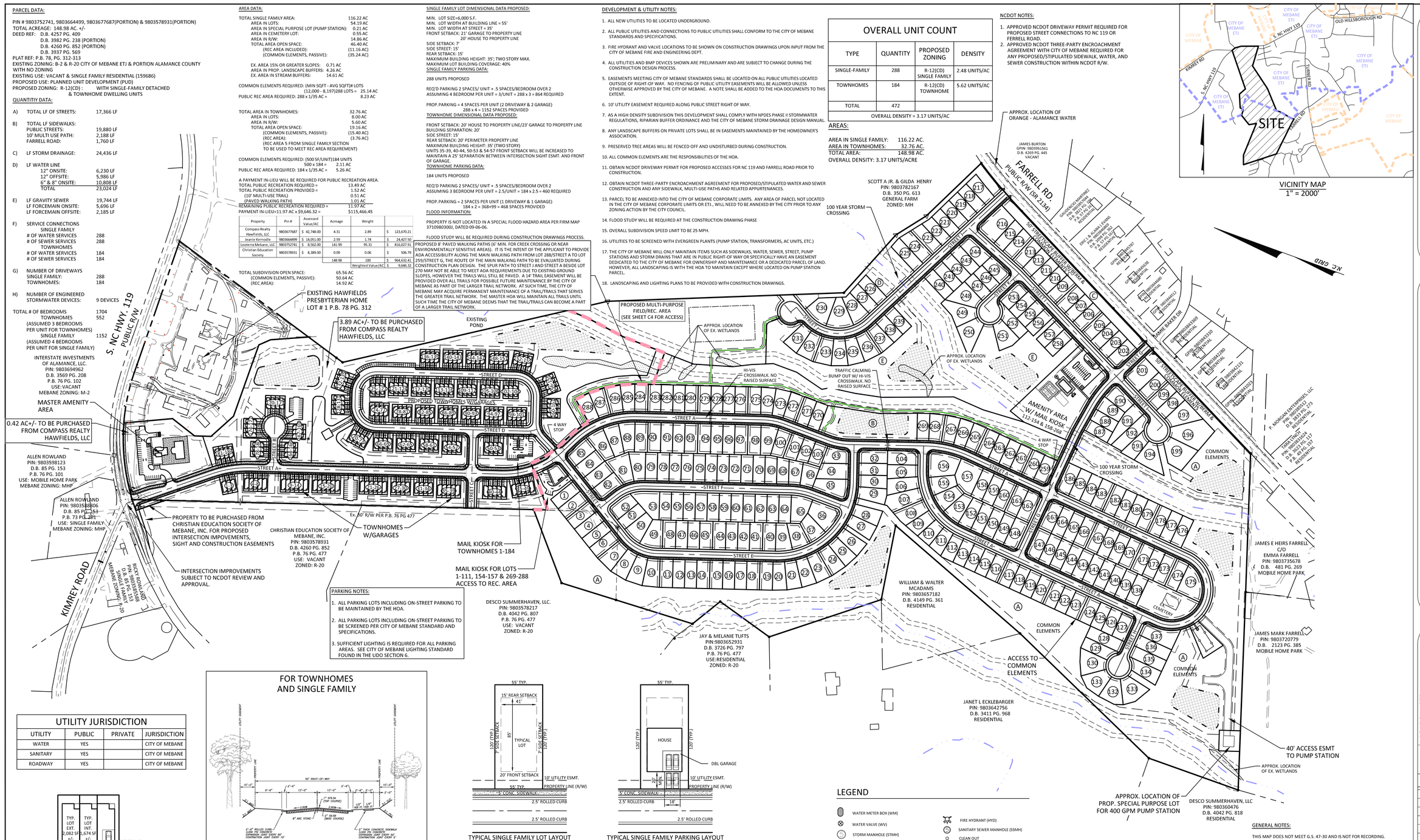
OVERALL UNIT COUNT			
TYPE	QUANTITY	PROPOSED ZONING	DENSITY
SINGLE-FAMILY	288	R-12(CD) SINGLE FAMILY	2.48 UNITS/AC
TOWNHOMES	184	R-12(CD) TOWNHOME	5.62 UNITS/AC
TOTAL	472		
OVERALL DENSITY = 3.17 UNITS/AC			

AREAS:

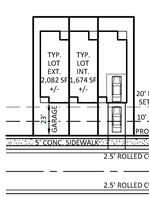
AREA IN SINGLE FAMILY: 116.22 AC.
AREA IN TOWNHOMES: 32.76 AC.
TOTAL AREA: 148.98 AC.
OVERALL DENSITY: 3.17 UNITS/ACRE

NCDOT NOTES:

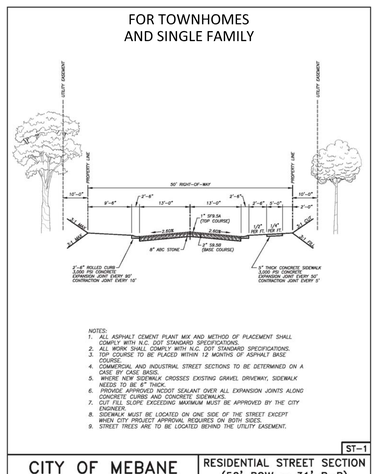
1. APPROVED NCDOT DRIVEWAY PERMIT REQUIRED FOR PROPOSED STREET CONNECTIONS TO NC 119 AND FERRELL ROAD.
2. APPROVED NCDOT THREE-PARTY ENCROACHMENT AGREEMENT WITH CITY OF MEBANE REQUIRED FOR ANY PROPOSED/STIPULATED SIDEWALK, WATER, AND SEWER CONSTRUCTION WITHIN NCDOT R/W.

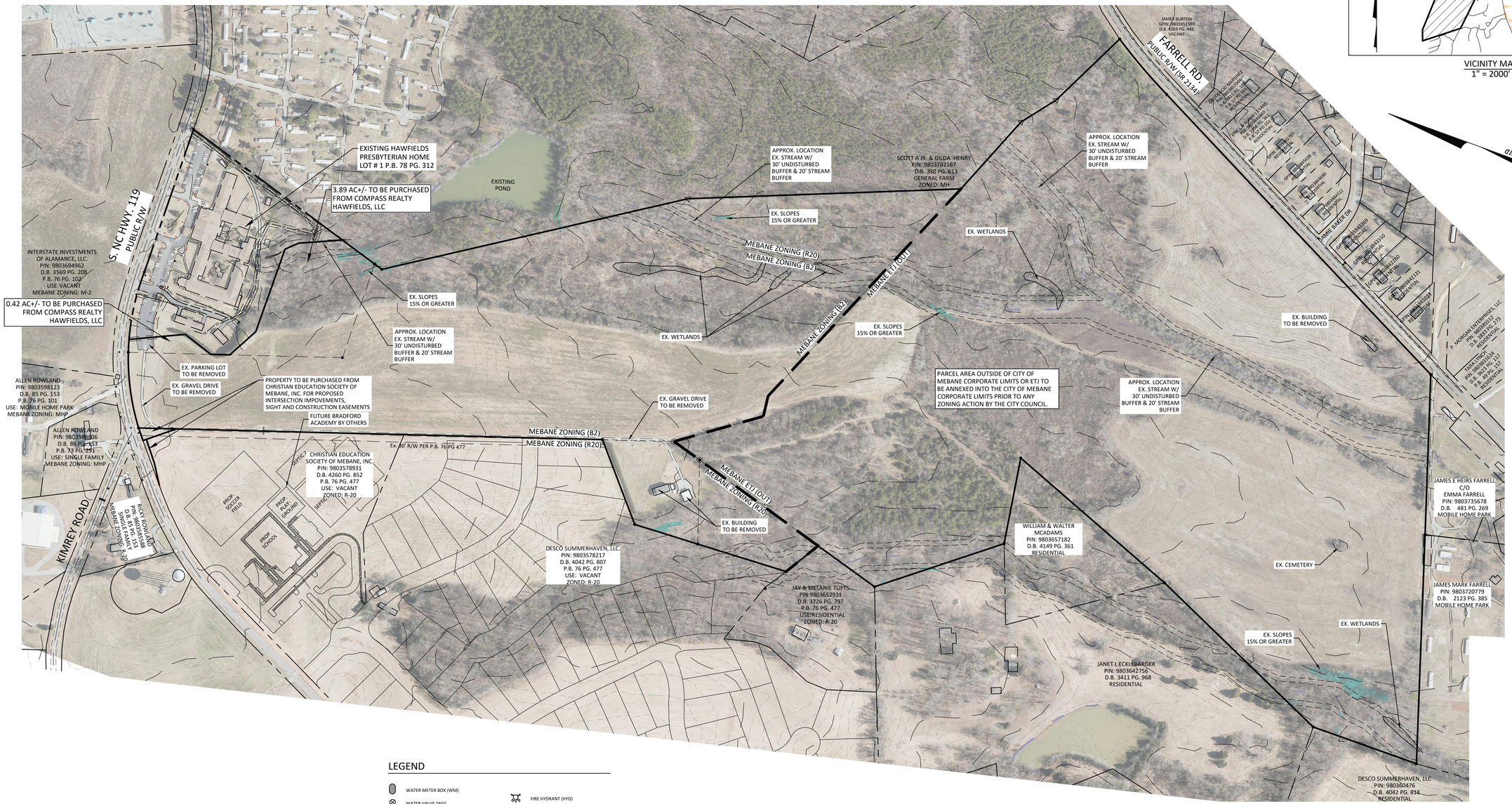


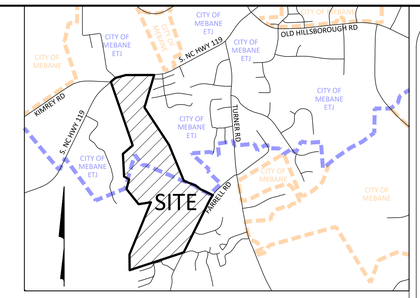
UTILITY JURISDICTION			
UTILITY	PUBLIC	PRIVATE	JURISDICTION
WATER	YES		CITY OF MEBANE
SANITARY	YES		CITY OF MEBANE
ROADWAY	YES		CITY OF MEBANE



TYPICAL TOWNHOME LOT LAYOUT
SCALE 1"=50'


FOR TOWNHOMES AND SINGLE FAMILY
UTILITY EASEMENT
PROPERTY LINE
50' RIGHT-OF-WAY
10'-0"
5'-6"
12'-0"
12'-0"
5'-6"
10'-0"
2'-6"
2'-6"
2.0%
2.0%
2.0%





VICINITY MAP
1" = 2000'

Aden R. Stoltzfus, PE C-3812
aden@seiengineering.com
336-904-0207
683 Gralin Street
Kernersville, NC 27284

Stoltzfus Engineering Inc.
Civil Engineering Consultants

HAWFIELDS LANDING

EXISTING CONDITIONS PLAN

PROPERTY OWNER INFORMATION:
LEOTERRA MEBANE, LLC
1120 A SHIELDS PARK DRIVE
KERNERSVILLE, NC 27284

PROJECT LOCATION:
STATE: NORTH CAROLINA
COUNTY: ALAMANCE
TOWNSHIP: MELVILLE

NO	DATE	REVISION NOTE
3	08/11/21	MEBANE COMMENTS
4	11/17/21	MEBANE COMMENTS
5	12/17/21	MEBANE COMMENTS
6	03/22/22	MEBANE COMMENTS
7	03/24/22	MEBANE COMMENTS
8	04/22/22	MEBANE COMMENTS

DRAWING FILE PATH: SEI Projects\2201.05\dwg\ecr-hawfields-master plan.dwg

DRAWN BY: SDT
CHECKED BY: ARS
DATE: 11/09/2020
PROJECT NO.: 2201.05
REF. NO.:
SCALE: 1"=200'

NORTH CAROLINA PROFESSIONAL SEAL 029467 04/22/2022 ENGINEER ADEN R. STOLTZFUS

C2

2 OF 7

LEGEND

- WATER METER BOX (WM)
- WATER VALVE (WV)
- STORM MANHOLE (STMH)
- UTILITY POLE
- LIGHT POLE
- GROUND LIGHT
- GUY WIRE
- YARD INLET (YI)
- GAS VALVE
- OHU — OVERHEAD POWER LINE
- G — GAS LINE
- W — WATER LINE
- UE — UNDERGROUND ELECTRICAL
- X — FENCE LINE
- WOODSLINE (TYP.)
- FIRE HYDRANT (HYD)
- SANITARY SEWER MANHOLE (SSMH)
- CLEAN OUT
- DB DEED BOOK
- PB PLAT BOOK
- PG PAGE
- R/W RIGHT-OF-WAY
- E/P EDGE OF PAVEMENT
- E/G EDGE OF GRAVEL
- CONC CONCRETE
- RCP REINFORCED CONCRETE PIPE
- DI DROP INLET
- CI CURB INLET
- FFE FINISH FLOOR ELEVATION
- BSMT BASEMENT
- TPED TELEPHONE PEDESTAL
- THH TELEPHONE HAND HOLD
- DMUE DRAINAGE MAINTENANCE & UTILITY EASEMENT
- PROP. BMP
- 15%+ SLOPES

ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT

811

BEFORE YOU DIG !
CALL 811 N.C. ONE-CALL CENTER
IT'S THE LAW !

GRAPHIC SCALE

200 0 100 200 400 800

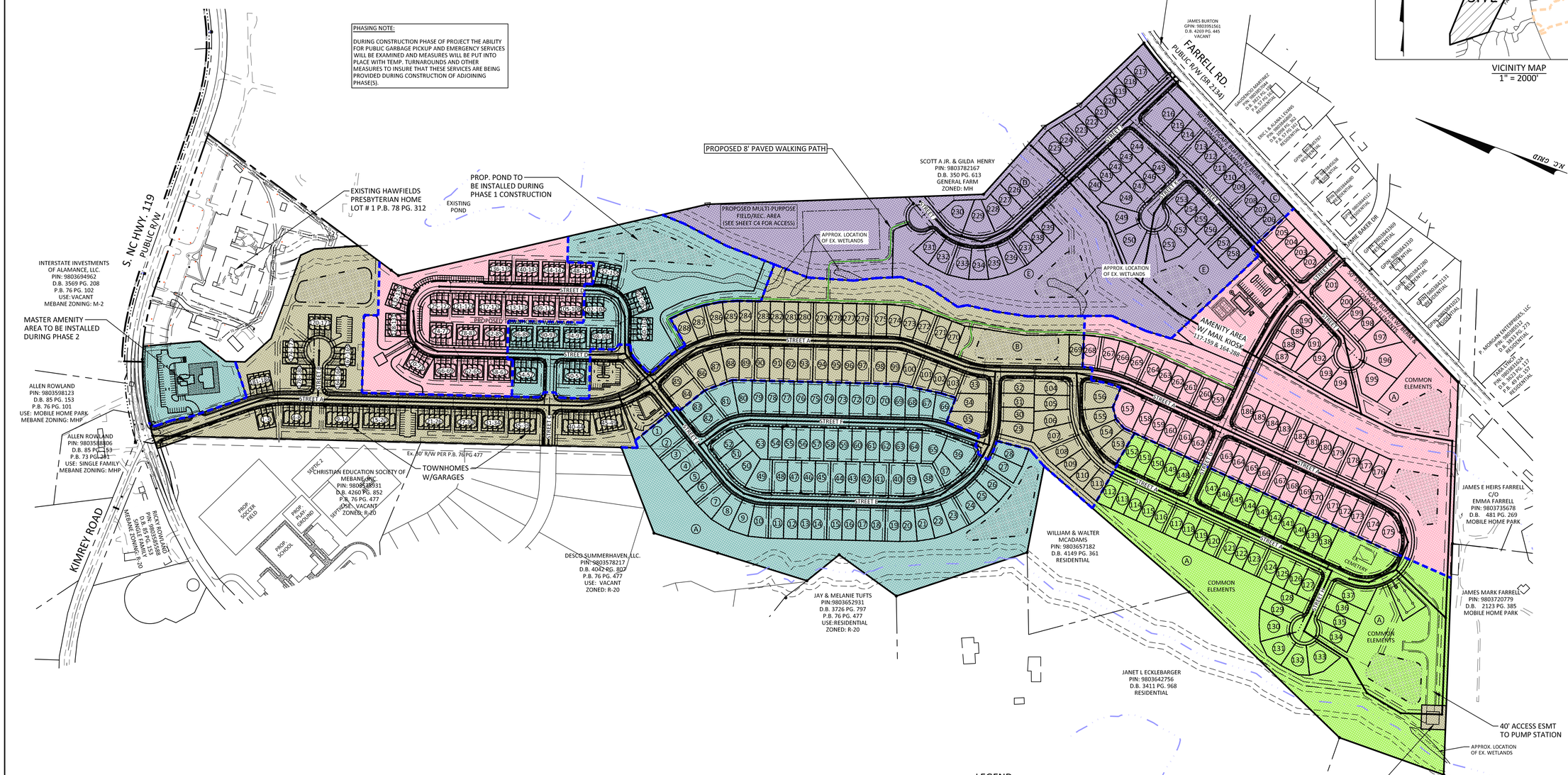
(IN FEET)
1 inch = 200 ft.

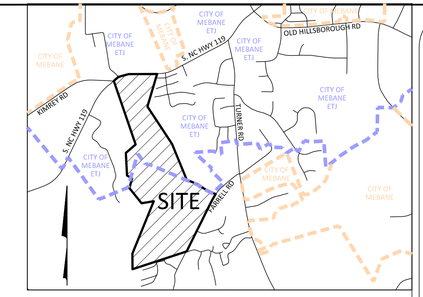
PHASED UNIT COUNT

PHASE	SINGLE FAMILY LOTS	TOWNHOME UNITS	
1	59	70	
2	76	39	
3	59	75	
4	53		
5	41		

PHASING NOTE:

DURING CONSTRUCTION PHASE OF PROJECT THE ABILITY FOR PUBLIC GARBAGE PICKUP AND EMERGENCY SERVICES WILL BE EXAMINED AND MEASURES WILL BE PUT INTO PLACE WITH TEMP. TURNAROUNDS AND OTHER MEASURES TO INSURE THAT THESE SERVICES ARE BEING PROVIDED DURING CONSTRUCTION OF ADJOINING PHASE(S).





VICINITY MAP
1" = 2000'

LEGEND

- WATER METER BOX (WM)
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200 0 100 200 400 800

(IN FEET)
1 inch = 200 ft.

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336-904-0207
683 Gralin Street
Kernersville, NC 27284

Stoltzfus Engineering Inc.
Civil Engineering Consultants

HAWFIELDS LANDING

OVERALL PRELIMINARY PHASING PLAN

PROPERTY OWNER INFORMATION:
LEOTERRA MEBANE, LLC
1123 A SHELLS PARK DRIVE
KERNERSVILLE, NC 27284

PROJECT LOCATION:
STATE: NORTH CAROLINA
COUNTY: ALAMANCE
TOWNSHIP: MELVILLE

NO.	DATE	REVISION NOTE
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6	04/22/22	MEBANE COMMENTS

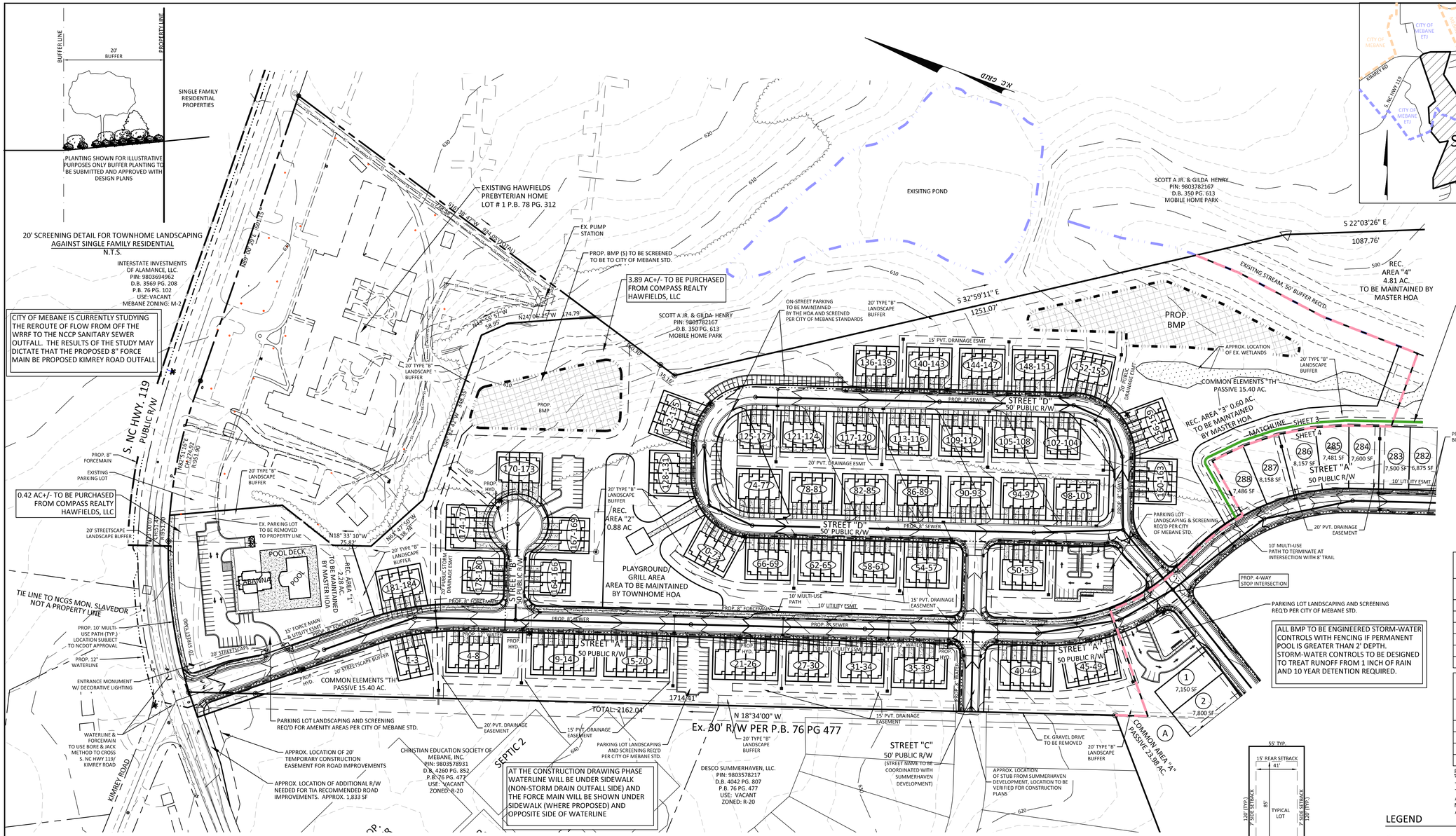
DRAWING FILE PATH: SEI Projects \2201-05\dwg\rev hawfields master plan.dwg

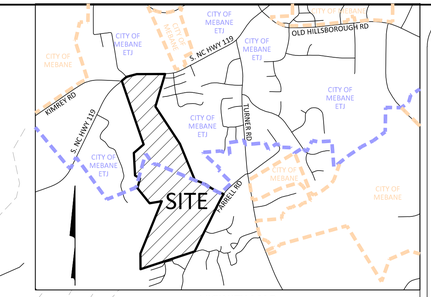
DRAWN BY: SDT
CHECKED BY: ARS
DATE: 11/09/2020
PROJECT NO.: 2201.05
REF. NO.:
SCALE: 1"=200'

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ADEN R. STOLTZFUS
04/22/2022

C3

3 OF 7





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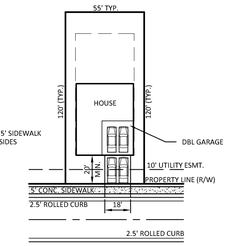
1" = 2000'

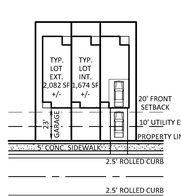


TYPICAL SINGLE FAMILY PARKING LAYOUT
SCALE 1"=50'

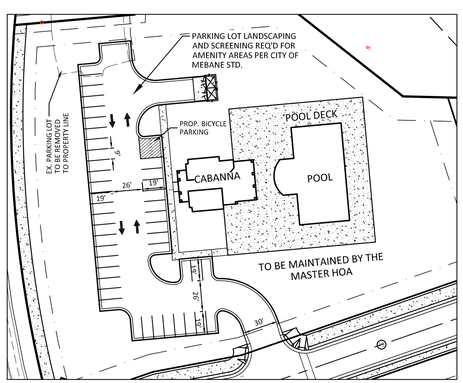
SINGLE FAMILY COMMON AREA			
REC. AREA		COMMON ELEMENTS (PASSIVE)	
4	4.81 AC.	A	23.98 AC.
5	3.94 AC.	B	1.28 AC.
6	2.13 AC.	C	0.63 AC.
7	0.28 AC.	D	1.32 AC.
		E	8.03 AC.
TOTAL	11.16 AC.	TOTAL	35.24 AC.

TOWNHOME COMMON AREA			
REC. AREA		COMMON ELEMENTS (PASSIVE)	
1	2.28 AC.	TH*	15.40 AC
2*	0.88 AC.		
3	0.60 AC.		
TOTAL	3.76 AC.	TOTAL	15.40 AC.

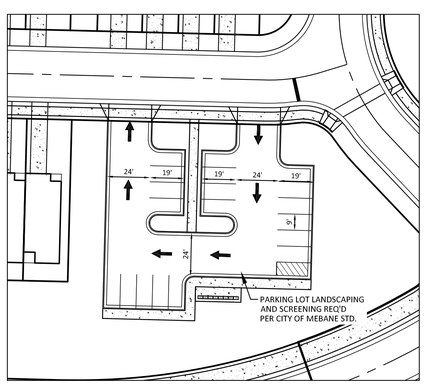
RECREATION AREA & COMMON ELEMENTS NOTE:
*AREAS MARKED WITH ASTERISK TO BE USED BY TOWNHOME RESIDENTS ONLY AND MAINTAINED BY THE TOWNHOME SUB-ASSOCIATION. ALL OTHER RECREATION AREAS/COMMON ELEMENTS WILL BE OWNED AND MAINTAINED BY THE MASTER ASSOCIATION FOR USE AND ENJOYMENT OF ALL RESIDENTS.



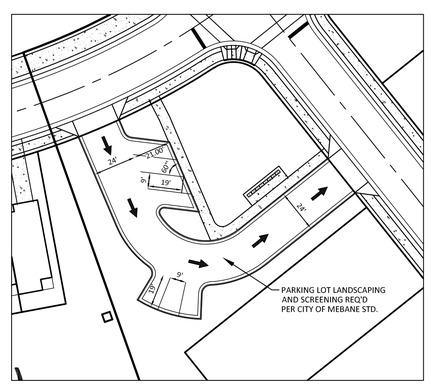
TYPICAL TOWNHOME LOT LAYOUT
SCALE 1"=50'



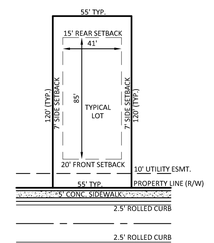
MASTER AMENITY AREA
SCALE: 1"=60'
TO BE CONSTRUCTED DURING PHASE 2



MAIL KIOSK AREA
SCALE: 1"=40'



MAIL KIOSK AREA
SCALE: 1"=40'



TYPICAL SINGLE FAMILY LOT LAYOUT
SCALE 1"=50'

LEGEND

- WATER METER BOX (WM)
- WATER VALVE (WV)
- STORM MANHOLE (STMH)
- UTILITY POLE
- LIGHT POLE
- GROUND LIGHT
- GUY WIRE
- YARD INLET (YI)
- GAS VALVE
- OVERHEAD POWER LINE
- GAS LINE
- WATER LINE
- UNDERGROUND ELECTRICAL
- FENCE LINE
- WOODSLINE (TYP.)
- FIRE HYDRANT (HYD)
- SANITARY SEWER MANHOLE (SSMH)
- CLEAN OUT
- DB DEED BOOK
- PB PLAT BOOK
- PG PAGE
- R/W RIGHT-OF-WAY
- E/P EDGE OF PAVEMENT
- E/G EDGE OF GRAVEL
- CONC CONCRETE
- RCP REINFORCED CONCRETE PIPE
- DI DROP INLET
- CI CURB INLET
- FFE FINISH FLOOR ELEVATION
- BSMT BASEMENT
- TPED TELEPHONE PEDESTAL
- THH TELEPHONE HAND HOLD
- DMUE DRAINAGE MAINTENANCE & UTILITY EASEMENT
- PROP. BMP
- MATCH LINE

ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT
811
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GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

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Civil Engineering Consultants

HAWFIELDS LANDING

PRELIMINARY SITE PLAN

PROPERTY OWNER INFORMATION:
LEOTERRA MEBANE, LLC
1210 A SHELLE PARK DRIVE
KERNERSVILLE, NC 27284

PROJECT LOCATION:
STATE: NORTH CAROLINA
COUNTY: ALAMANCE
TOWNSHIP: MELVILLE

NO	DATE	REVISION NOTE
1	08/11/21	MEBANE COMMENTS
2	11/17/21	MEBANE COMMENTS
3	12/17/21	MEBANE COMMENTS
4	03/22/22	MEBANE COMMENTS
5	03/24/22	MEBANE COMMENTS
6	04/22/22	MEBANE COMMENTS

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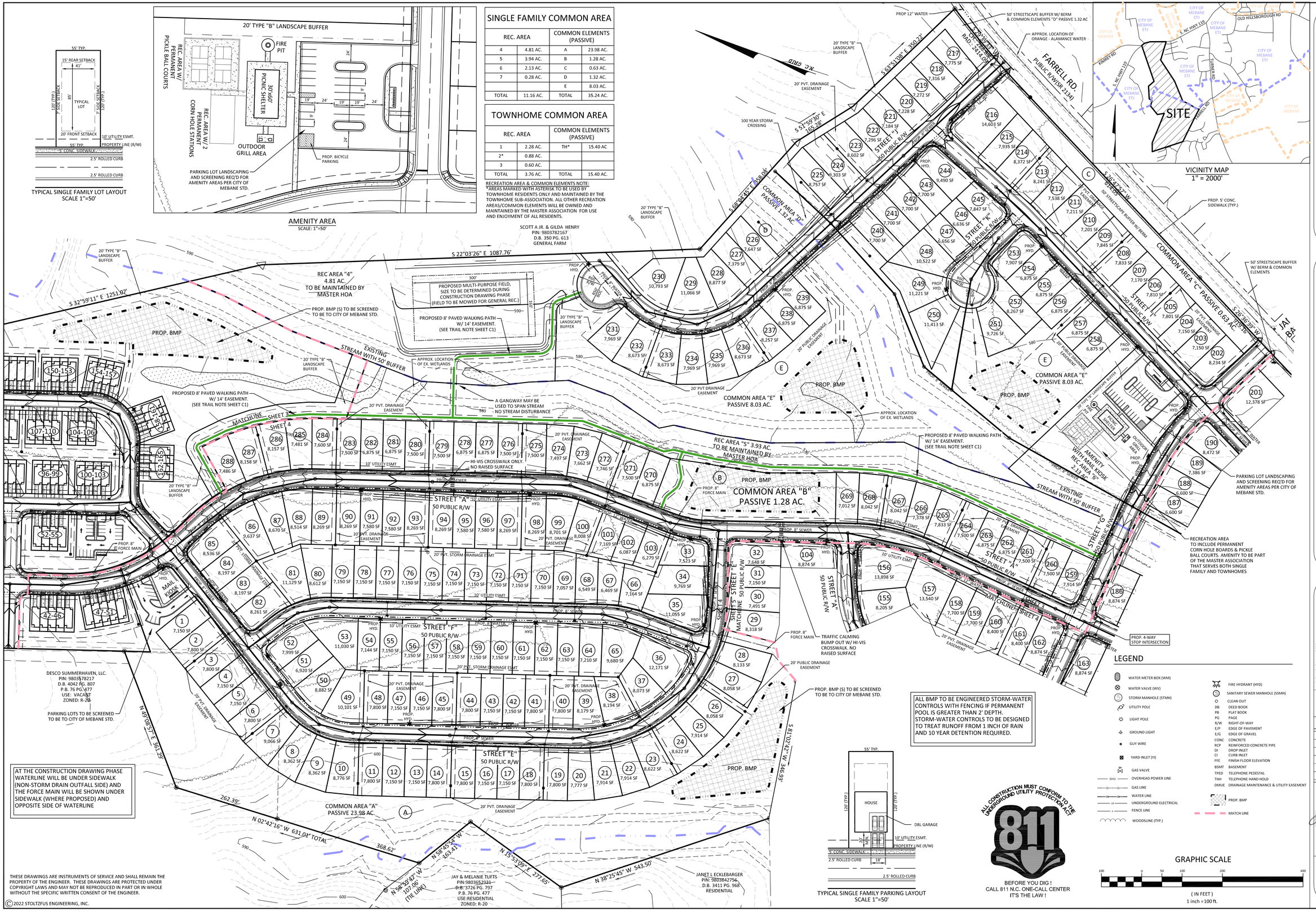
DRAWN BY: SDT
CHECKED BY: ARS
DATE: 11/09/2020
PROJECT NO.: 2201.05
REF. NO.:
SCALE: 1"=100'

NORTH CAROLINA PROFESSIONAL SEAL 004 ENGINEER ADEN R. STOLTZFUS
04/22/2022

C4
4 OF 7



SINGLE FAMILY COMMON AREA

REC. AREA		COMMON ELEMENTS (PASSIVE)	
4	4.81 AC.	A	23.98 AC.
5	3.94 AC.	B	1.28 AC.
6	2.13 AC.	C	0.63 AC.
7	0.28 AC.	D	1.32 AC.
		E	8.03 AC.
TOTAL	11.16 AC.	TOTAL	35.24 AC.

TOWNHOME COMMON AREA

REC. AREA		COMMON ELEMENTS (PASSIVE)	
1	2.28 AC.	TH*	15.40 AC
2*	0.88 AC.		
3	0.60 AC.		
TOTAL	3.76 AC.	TOTAL	15.40 AC.

RECREATION AREA & COMMON ELEMENTS NOTE:
*AREAS MARKED WITH ASTERISK TO BE USED BY TOWNHOME RESIDENTS ONLY AND MAINTAINED BY THE TOWNHOME SUB-ASSOCIATION. ALL OTHER RECREATION AREAS/COMMON ELEMENTS WILL BE OWNED AND MAINTAINED BY THE MASTER ASSOCIATION FOR USE AND ENJOYMENT OF ALL RESIDENTS.

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Kernersville, NC 27284

Stoltzfus Engineering Inc.
Civil Engineering Consultants

HAWFIELDS LANDING

PRELIMINARY SITE PLAN

PROPERTY OWNER INFORMATION:
LEOTERRA MEBANE, LLC
1210 ASHFIELD PARK DRIVE
KERNERSVILLE, NC 27284

PROJECT LOCATION:
STATE: NORTH CAROLINA
COUNTY: ALAMANCE
TOWNSHIP: MELVILLE

NO.	DATE	REVISION NOTE
1	08/11/21	MEBANE COMMENTS
2	11/17/21	MEBANE COMMENTS
3	12/17/21	MEBANE COMMENTS
4	03/22/22	MEBANE COMMENTS
5	04/22/22	MEBANE COMMENTS

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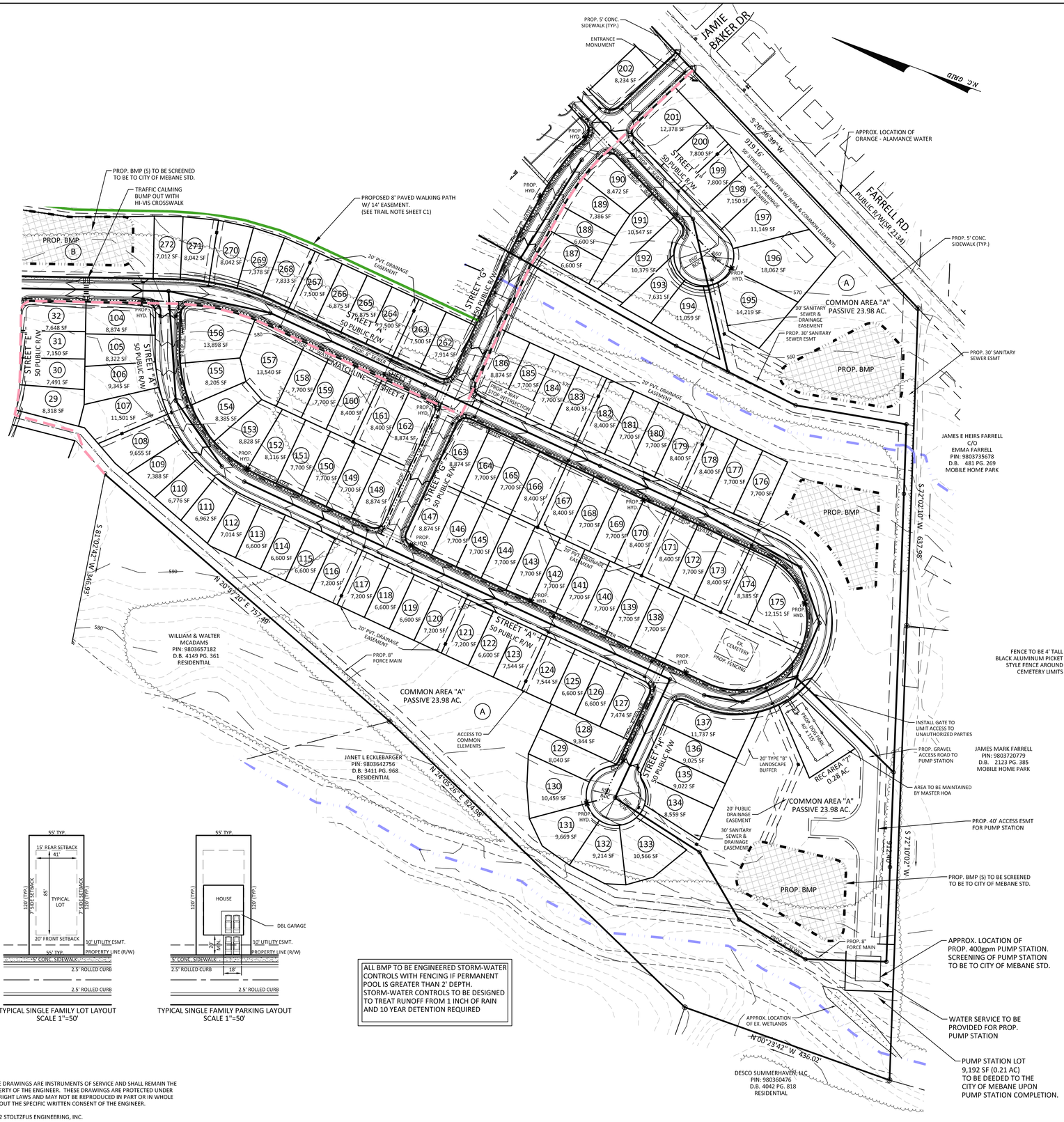
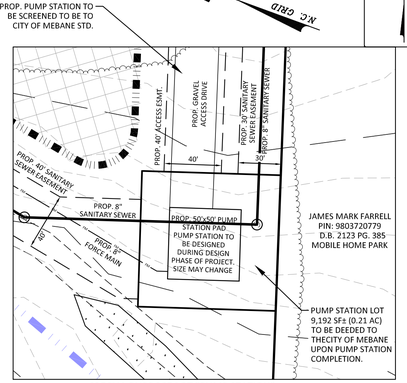
DRAWN BY: SDT
CHECKED BY: ARS
DATE: 11/09/2020
PROJECT NO.: 2201.05
REF. NO.:
SCALE: 1"=100'

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ADEN R. STOLTZFUS
04/22/2022

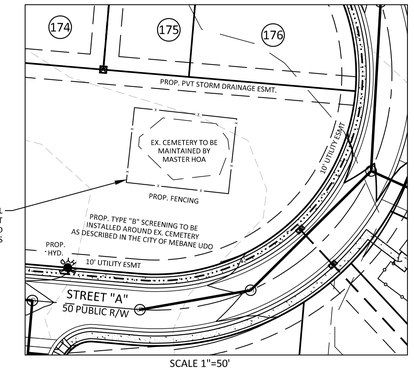
C5

5 OF 7

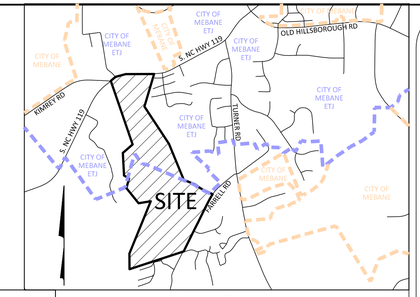




SPECIAL PURPOSE LOT "PUMP STATION"
SCALE 1"=50'



SCALE 1"=50'
CEMETERY LOT TO BE MAINTAINED BY THE MASTER HOA



VICINITY MAP
1" = 2000'

SINGLE FAMILY COMMON AREA			
REC. AREA		COMMON ELEMENTS (PASSIVE)	
4	4.81 AC.	A	23.98 AC.
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TOWNHOME COMMON AREA			
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TYPICAL SINGLE FAMILY LOT LAYOUT
SCALE 1"=50'

TYPICAL SINGLE FAMILY PARKING LAYOUT
SCALE 1"=50'

ALL BMP TO BE ENGINEERED STORM-WATER CONTROLS WITH FENCING IF PERMANENT POOL IS GREATER THAN 2' DEPTH. STORM-WATER CONTROLS TO BE DESIGNED TO TREAT RUNOFF FROM 1 INCH OF RAIN AND 10 YEAR DETENTION REQUIRED

LEGEND

- WATER METER BOX (WM)
- WATER VALVE (WV)
- STORM MANHOLE (STMH)
- UTILITY POLE
- LIGHT POLE
- GROUND LIGHT
- GUY WIRE
- YARD INLET (YI)
- GAS VALVE
- OHU — OVERHEAD POWER LINE
- G — GAS LINE
- W — WATER LINE
- UE — UNDERGROUND ELECTRICAL
- x — FENCE LINE
- WOODSLINE (TYP.)
- FIRE HYDRANT (HYD)
- SANITARY SEWER MANHOLE (SSMH)
- O — CLEAN OUT
- DB — DEED BOOK
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- PG — PAGE
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- E/P — EDGE OF PAVEMENT
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(IN FEET)
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HAWFIELDS LANDING

PRELIMINARY SITE PLAN

PROPERTY OWNER INFORMATION:
LEOTERRA MEBANE, LLC
1120 A SHELLIE PARK DRIVE
KERNERSVILLE, NC 27284

PROJECT LOCATION:
STATE: NORTH CAROLINA
COUNTY: ALAMANCE
TOWNSHIP: MELVILLE

NO.	DATE	REVISION NOTE
1	08/11/21	MEBANE COMMENTS
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3	12/17/21	MEBANE COMMENTS
4	03/22/22	MEBANE COMMENTS
5	03/24/22	MEBANE COMMENTS
6	04/22/22	MEBANE COMMENTS

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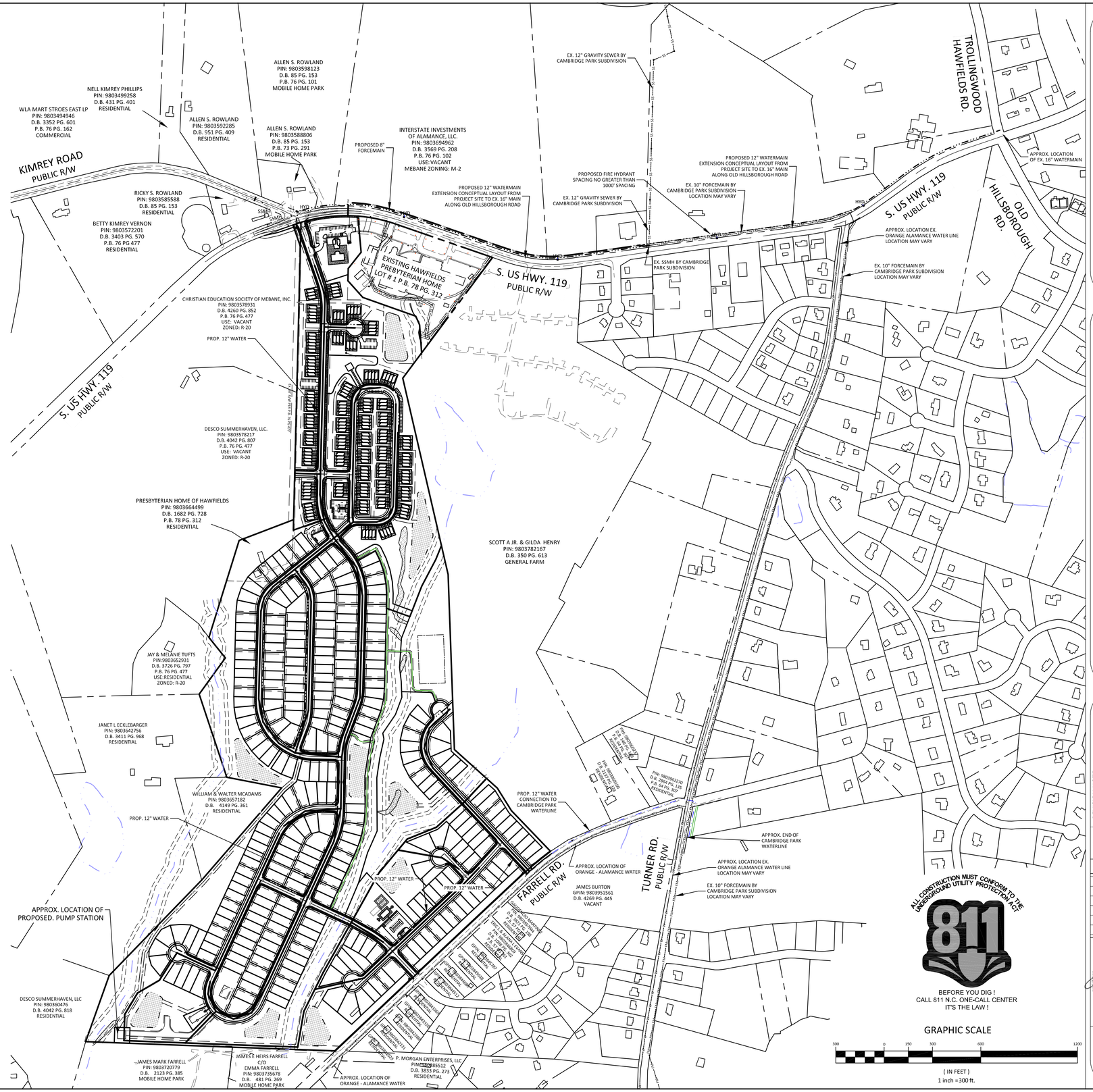
DRAWN BY: SDT
CHECKED BY: ARS
DATE: 11/09/2020
PROJECT NO.: 2201.05
REF. NO.:
SCALE: 1"=100'

NORTH CAROLINA PROFESSIONAL SEAL 004 ENGINEER ADEN R. STOLTZFUS
04/22/2022

C6

6 OF 7



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- STORM MANHOLE (STMH)
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- TPED — TELEPHONE PEDESTAL
- THH — TELEPHONE HAND HOLD
- DMUE — DRAINAGE MAINTENANCE & UTILITY EASEMENT
- PROP. BMP
- PRODUCT TYPE BOUNDARY

NOTES:

THIS MAP DOES NOT MEET G.S. 47-30 AND IS NOT FOR RECORDING.

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THIS MAP WAS PREPARED WITH OUT THE BENEFIT OF A TITLE REPORT AND DOES NOT NECESSARILY INDICATE ALL ENCUMBRANCES UPON THIS PROPERTY.

TOPOGRAPHIC INFORMATION TAKEN FROM ALAMANCE COUNTY GIS

BOUNDARY INFORMATION TAKEN FROM BOUNDARY SURVEY BY ALLRED LAND SURVEYING, PLLC

NO SURVEYING OR SUBSURFACE INVESTIGATIONS PERFORMED BY STOLTZFUS ENGINEERING, INC.

THE SANITARY SEWER SHOWN IS APPROXIMATE SIZE AND SUBJECT TO DETAILED STUDY. THE DEVELOPER DOES REQUEST CITY OF MEBANE COMPENSATION FOR INFRASTRUCTURE ABOVE REQUIRED TO SERVE THE PROPOSED PROJECT TO INCLUDE UPSIZE IN WATER AND SANITARY SEWER INFRASTRUCTURE THAT WILL BENEFIT THE SURROUNDING AREA.

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Civil Engineering Consultants

HAWFIELDS LANDING

PRELIMINARY OFFSITE SEWER & WATER PLAN

PROPERTY OWNER INFORMATION:
LEOTERRA MEBANE, LLC
1120 A SHIELDS PARK DRIVE
KERNERSVILLE, NC 27284

PROJECT LOCATION:
STATE: NORTH CAROLINA
COUNTY: ALAMANCE
TOWNSHIP: WELVILLE

NO	DATE	REVISION NOTE
2	08/11/21	MEBANE COMMENTS
3	11/17/21	MEBANE COMMENTS
4	12/17/21	MEBANE COMMENTS
5	03/22/22	MEBANE COMMENTS
7	03/24/22	MEBANE COMMENTS
8	04/22/22	MEBANE COMMENTS

DRAWING FILE PATH: SEI Projects\2201.05\dwg\nov hawfields master plan.dwg

DRAWN BY: SDT
CHECKED BY: ARS
DATE: 11/09/2020
PROJECT NO.: 2201.05
REF. NO.:
SCALE: 1"=300'

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER ADEN R. STOLTZFUS
004/22/2022

C7

PLANNING PROJECT REPORT

DATE	03/31/22
PROJECT NUMBER	RZ 22-03; SU 22-03
PROJECT NAME	Hawfields Landing
APPLICANT	Leoterra Mebane, LLC 110-A Shields Park Drive Kernersville, NC 27284

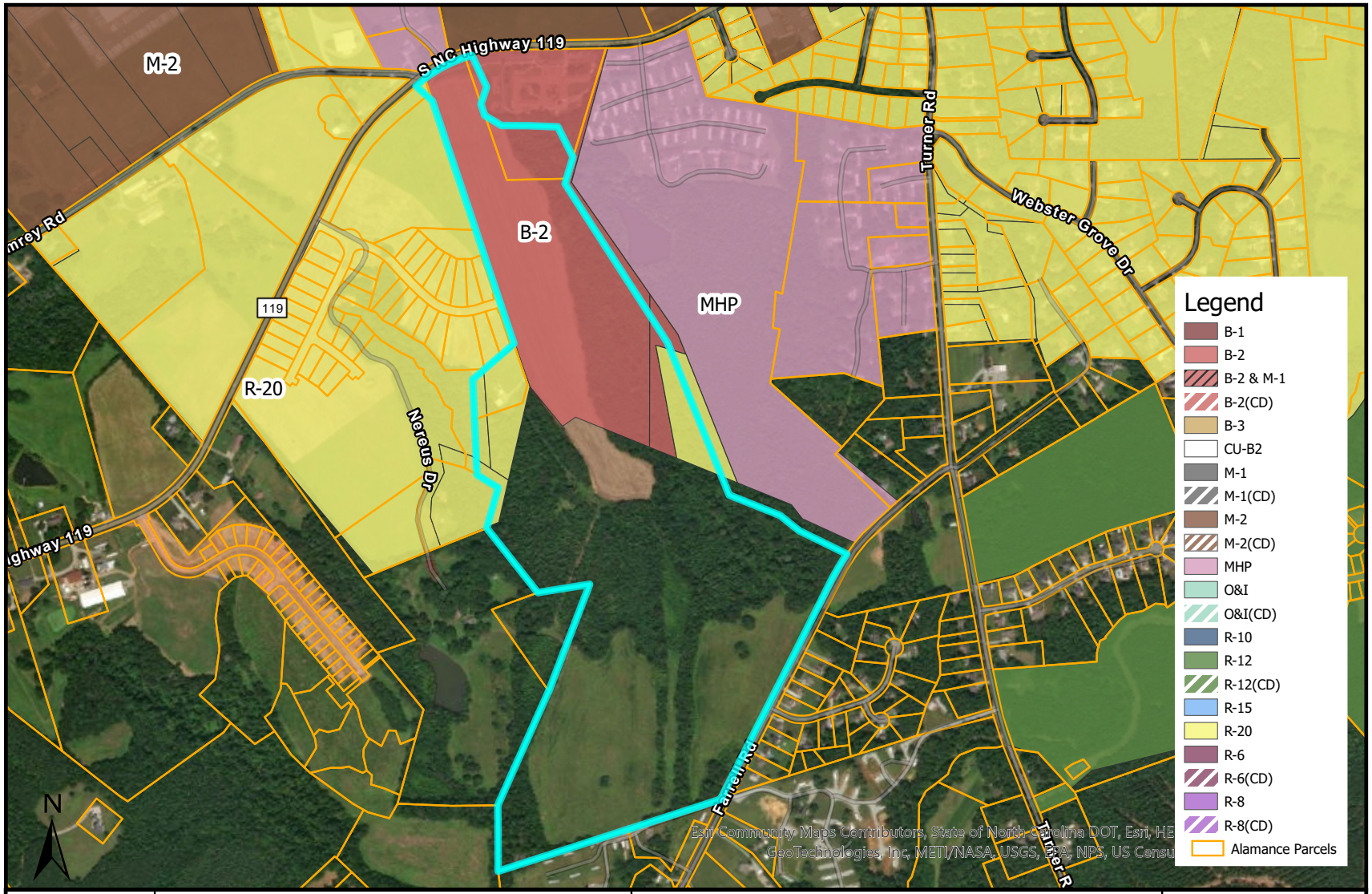
CONTENTS

PROJECT NAME & APPLICANT ..... PAGE 1
ZONING REPORT ..... PAGE 2
LAND USE REPORT ..... PAGE 5
UTILITIES REPORT ..... PAGE 8
STAFF ZONING REQUEST RECOMMENDATION ..... PAGE 12

ZONING REPORT

EXISTING ZONE	B-2 (General Business District); R-20 (Residential District); Portion in Alamance County without Mebane Zoning
REQUESTED ACTION	Rezoning to R-12 (CD) (Residential Conditional District) to allow for a Planned Unit Development (PUD) Application for a Special Use Permit for a Special Purpose Lot to allow for a public sewer pump station
CONDITIONAL ZONE?	☒YES ☐NO
CURRENT LAND USE	Vacant, Forested, & Single-Family Residential
PARCEL SIZE	+/-148.98 acres
PROPERTY OWNERS	Leoterra Mebane, LLC 110-A Shields Park Dr. Kernersville, NC 27284 GPIN: 9803752741 Compass Realty Hawfields, LLC Attn: Todd Nunn 2206 W. Market St. Greensboro, NC 27403 GPIN: 9803677687 Christian Education Society of Mebane, Inc. 417 S. Fourth St. Mebane, NC 27302 GPIN: 9803578931 Jeanie Kernodle 2570-K S. NC Hwy 119 Mebane, NC 27302 GPIN: 9803664499
LEGAL DESCRIPTION	Request to establish R-12(CD) zoning on +/- 148.98 acres for a Planned Unit Development of 288 single-family homes and 184 townhomes, by rezoning 2570 S NC 119 (GPIN 9803664499) from R-20; rezoning an adjacent unaddressed property (GPIN 9803752741) from B-2 and R-20 and establishing zoning on a portion of the property not zoned by the City of Mebane; rezoning portions of an adjacent unaddressed property (GPIN 9803578931) from R-20; and, rezoning portions of 2502 S NC 119 (GPIN 9803677687) from B-2 by Leoterra Development, Inc. Request for a Special Use Permit for a Special Purpose Lot to allow for a public sewer pump station on the unaddressed property (GPIN 9803752741) by Leoterra Development, Inc.
AREA ZONING & DISTRICTS	The surrounding zoning is varied. Properties north of the site are zoned M-2 (Light Manufacturing), MHP (Manufactured Home Park), and R-20 (Residential District). A R-20 (Residential District) zoning district is to the west and a MHP (Manufactured Home Park) zoning district is to the east of the site. Properties south of the site are outside of Mebane's Extraterritorial Jurisdiction and not zoned by Mebane.
SITE HISTORY	Most of the site is either vacant or forested and was formerly used for agriculture. The site includes wetlands and a stream. Additionally, a home and small cemetery are present. The proposal includes rezoning of undeveloped portions of two adjacent properties, with one currently occupied by a healthcare and rehabilitation facility and the other approved for a private school.

STAFF ANALYSIS		
CITY LIMITS?	☐YES ☒NO	
PROPOSED USE BY-RIGHT?	☐YES ☒NO	
SPECIAL USE?	☒YES ☐NO	Required for public sewer pump station
EXISTING UTILITIES?	☐YES ☒NO	The applicant is proposing off-site water and sewer improvements.
POTENTIAL IMPACT OF PROPOSED ZONE	The proposed zoning district will support single-family residential use, consistent with surrounding residential zoning. It is similar to the nearby R-12 zoning for Cambridge Park, a Planned Unit Development with a mix of single-family detached and townhome units. The proposed zoning district introduces greater residential density than the immediately adjacent zoning districts and unzoned properties.	



CITY OF MEBANE
ZONING MAP

Hawfields Landing

1 inch = 900 feet

DATE: 04/05/2022

DRAWN BY: AO

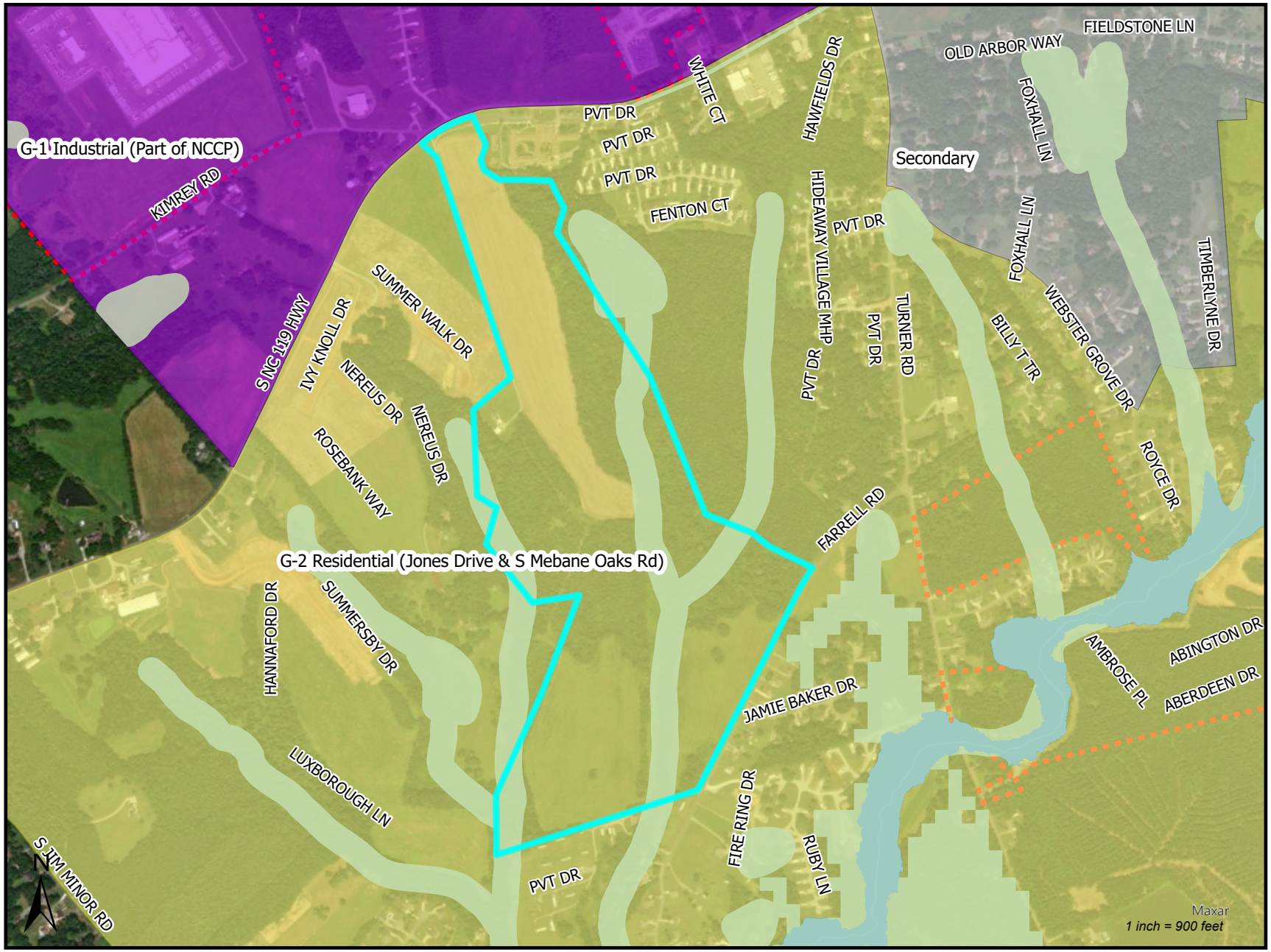
LAND USE REPORT

EXISTING LAND USE	Vacant, Forested, & Single-Family Residential
PROPOSED LAND USE & REQUESTED ACTION	The applicant is requesting a conditional rezoning to develop +/-148.98 acres for a Planned Unit Development that includes 184 townhome units and 288 single-family, detached homes.
PROPOSED ZONING	R-12(CD) (Residential Conditional District)
PARCEL SIZE	+/-148.98 acres
AREA LAND USE	The North Carolina Commerce Park is north of the site, across NC 119, and includes warehouse uses. Manufactured home parks exist to the north, east, and south, along with a RV park south of the site. Recently approved developments are immediately west of the site and include Summerhaven, a residential subdivision with minimum lot sizes of 20,000 square feet; and Bradford Academy, a private school. Additionally, large-lot, single-family residential properties border the site to the west. Single-family residential neighborhoods, with average lot sizes ranging from a half-acre to an acre, are south of the site along Farrell Road. Cambridge Park, a 731-unit Planned Unit Development with townhomes and single-family, detached homes, is south of the site across Turner Road.
ONSITE AMENITIES & DEDICATIONS	The applicant proposes to provide +/-2,188 linear feet of a 10' public multi-use path along the eastern portion of the site's frontage on NC 119 and for a certain distance along one side of Street "A". The applicant is proposing the multi-use path terminate upon connection to an internal walking path. The walking path will be paved and 8' in width, with the width narrowing to 6' for a creek crossing. The applicant is proposing to dedicate a portion of the walking path (from Lot 288 to Lot 259) to the City of Mebane as part of the subdivision's public recreational requirements. Areas of the path not constructable to ADA requirements are proposed to remain private. The applicant is proposing to construct a public sewer pump station (400 GPM) on a special purpose lot, to be dedicated to the City of Mebane, in the southernmost corner of the lot. The applicant is proposing the following private amenities: swimming pool, cabana, playground, walking path, multi-purpose field, dog park, grill areas, picnic shelter with fire pit, and recreational games, including permanent cornhole stations and pickle ball courts.
WAIVER REQUESTED	☒YES ☐NO
DESCRIPTION OF REQUESTED WAIVER(S)	The development standards for Planned Unit Developments (PUDs) permit deviations from typical lot area, lot coverage, lot width, and building setback requirements. Certain dimensions are specified in the standards and the applicant is requesting waivers from the following:

- The development standards for PUDs require side yards of 10' for "individual and unattached buildings". The applicant is requesting a minimum side setback of 7' for single-family, detached homes.
- The development standards for PUDs specify the front setback should be "similar to the underlying zoning district." The R-12 Zoning District front setback is 30'. The applicant is requesting 20' front setbacks for the townhomes and single-family, detached homes.
- The development standards for PUDs specify periphery lots adjacent to single-family homes should meet minimum standards for the zoning district. The applicant is not showing any deviation in lot sizes for those on the periphery of the property adjoining residential properties to the west or properties along Farrell Road. Common elements do separate the proposed homes from existing single-family homes.

A payment *in lieu* of providing 11.97 acres of required public recreational space.

CONSISTENCY WITH *MEBANE BY DESIGN* STRATEGY	
LAND USE GROWTH STRATEGY DESIGNATION(S)	G-2 Residential Growth Area (Jones Drive & South Mebane Oaks Road) Conservation Area
MEBANE BY DESIGN GOALS & OBJECTIVES SUPPORTED	OPEN SPACE AND NATURAL RESOURCE PROTECTION 4.3 Support park, greenway, and open space expansion in developed and developing areas, prioritizing connectivity between each location.
MEBANE BY DESIGN GOALS & OBJECTIVES NOT SUPPORTED	

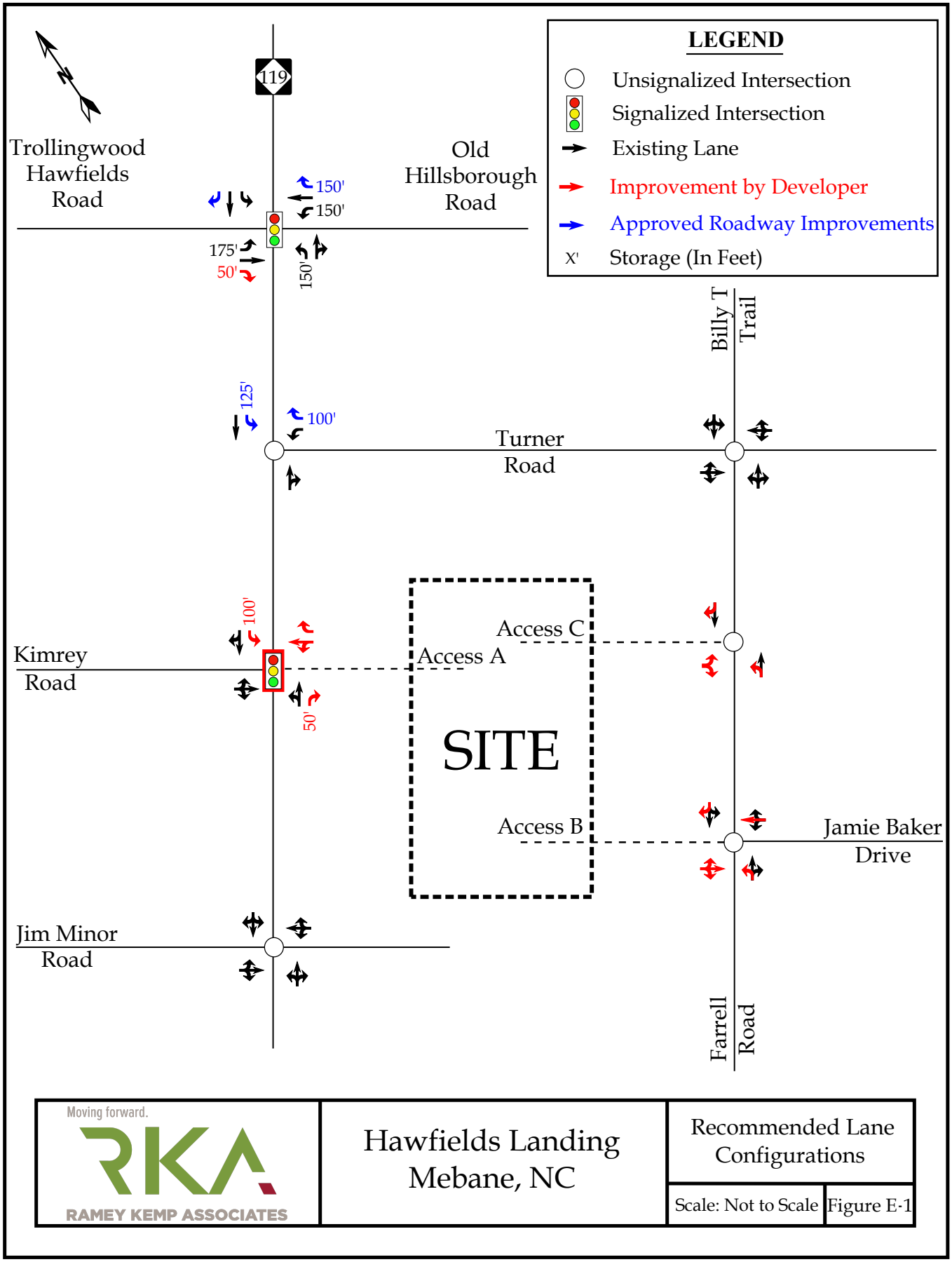

G-1 Industrial (Part of NCCP)
KIMREY RD
S NC 119 HWY
IVY KNOLL DR
SUMMER WALK DR
NEREUS DR
NEREUS DR
ROSEBANK WAY
PVT DR
PVT DR
PVT DR
FENTON CT
WHITE CT
HAWFIELDS DR
HIDEAWAY VILLAGE MHP
PVT DR
PVT DR
PVT DR
TURNER RD
FARREILL RD
G-2 Residential (Jones Drive & S Mebane Oaks Rd)
HANNAFORD DR
SUMMERSBY DR
LUXBOROUGH LN
S JIM MINOR RD
PVT DR
FIRE RING DR
RUBY LN
JAMIE BAKER DR
Secondary
OLD ARBOR WAY
FIELDSTONE LN
FOXHALL LN
FOXHALL LN
WEBSTER GROVE DR
BILLY T TR
TIMBERLYNE DR
ROYCE DR
AMBROSE PL
ABINGTON DR
ABERDEEN DR
N
Maxar
1 inch = 900 feet

UTILITIES REPORT

AVAILABLE UTILITIES	☒YES ☐NO
PROPOSED UTILITY NEEDS	Per the memorandum from Franz Holt of AWCK, the project has an estimated domestic water and sewer demand of 73,800 gallons per day (gpd) to support the development's 492 dwelling units. The estimated sewer demand of 73,800 gpd is according to historical data. Per the NCDEQ 2T rules, the permitted wastewater flow totals 214,080 gpd for all residences. Water service requires off-site extension of a 12-inch public water main along NC 119 and connections to improvements of the Cambridge Park subdivision. Internal water lines will be 8-inch, with 6-inch lines on short cul-de-sacs. Sewer service requires construction of a public sewer pump station, 8-inch force main, and 8-inch gravity collection system. The pump station has a design capacity of 230,400 gpd, with allowance for an increase in capacity with the change of pump impeller size only. The public sewer pump station will be constructed on a Special Purpose Lot, with adequate screening, fencing, and access easements. All on- and off-site water and sewer lines and pump station improvements will be City-maintained when completed in accordance with requirements.
UTILITIES PROVIDED BY APPLICANT	Applicant has pledged to provide all on-site utilities, including a publicly-dedicated sewer pump station as described in AWCK's Technical Memo.
MUNICIPAL CAPACITY TO ABSORB PROJECT	The City has adequate water & sewer supply to meet the domestic and fire flow demands of the project. Per City policy to limit accumulated paper flow, the permitting of wastewater will be by individual phase, with 50% of home starts (paid system development fees) before permitting the next phase. Additionally, the City is pursuing a flow reduction study to reduce the State's 120 GPD per bedroom to 80 GPD per bedroom to match with Mebane's Water Resource Recovery Facility.
CONSISTENCY WITH MEBANE LONG RANGE UTILITY PLAN?	☒YES ☐NO
ADEQUATE STORMWATER CONTROL?	☒YES ☐NO
INNOVATIVE STORMWATER MANAGEMENT?	☐YES ☒NO
	TRANSPORTATION NETWORK STATUS
CURRENT CONDITIONS	The proposed development includes three driveway connections, with one on S NC Hwy 119 and two on Farrell Road.

	North Carolina 119 is a primary north-south route in the Mebane area, operating as a two-lane undivided highway between Trollingwood-Hawfields Road and Kimrey Road. In 2019, the average daily traffic volume in this area was 12,500 trips. North of the subject property, NC 119 registers a Safety Score of 66.7, reflecting a history of traffic incidents. South of the site, the Safety Score slightly improves to 55.5. This stretch of NC 119 is currently operating at a Level of Service D, which is expected to degrade in the next twenty years due to the presence of the new Alamance County high school. By 2026, the NCDOT is expected to complete a project to widen NC 119 north of Trollingwood-Hawfields Road/Old Hillsborough Road. Additionally, the developer of Cambridge Park is expected to provide improvements at the Trollingwood-Hawfields Road/Old Hillsborough Road intersection and construct an exclusive southbound left turn lane at the intersection with Turner Road. Farrell Road and Turner Road are state-maintained secondary routes. NCDOT average daily traffic counts are only available for the portion of Turner Road between NC 119 and Webster Grove Drive, which recorded 2,700 daily trips in 2019. The TIA estimates 500 daily trips on Farrell Road during 2019. Turner Road has a poor safety score of 66.8 and recorded a fatal crash involving a pedestrian in 2020. The developers of Cambridge Park are to install a westbound left-turn lane on Turner Road at the intersection with NC 119.
TRAFFIC IMPACT ANALYSIS REQUIRED?	☒YES ☐NO
DESCRIPTION OR RECOMMENDED IMPROVEMENTS	The TIA forecasts the NC 119 and Kimrey Road intersection to degrade in service under the “Build” scenario forecast. The applicant will install a traffic signal, provide a southbound left-turn lane with 100’ of storage, and a northbound right-turn lane with 100’ of storage at the intersection of NC 119 and the site driveway. Subject to available right-of-way and environmental/cultural constraints, the applicant will provide an eastbound right-turn lane with 100’ of storage at the intersection of NC 119 and Trollingwood-Hawfields/Old Hillsborough Road. The applicant will construct the site driveway at NC 119 with one ingress and two egress lanes, consisting of a shared left/through lane and an exclusive right-turn lane.
CONSISTENCY WITH THE MEBANE BICYCLE AND	☒YES ☐NO

PEDESTRIAN TRANSPORTATION PLAN?	
MULTIMODAL IMPROVEMENTS PROVIDED BY APPLICANT?	☒YES ☐NO
DESCRIPTION OF MULTIMODAL IMPROVEMENTS	The applicant proposes to provide +/-2,188 linear feet of a 10' public multi-use path, including along frontage with NC 119 as required by the City of Mebane *Bicycle and Pedestrian Transportation Plan*. The multi-use path will continue for a certain distance along Street "A". The applicant is proposing internal traffic calming, including four-way stop conditions and high-visibility crosswalks on Street "A".


LEGEND
Unsignalized Intersection
Signalized Intersection
Existing Lane
Improvement by Developer
Approved Roadway Improvements
X' Storage (In Feet)
119
Trollingwood Hawfields Road
Old Hillsborough Road
150'
150'
175'
50'
150'
Billy T Trail
125'
100'
Turner Road
100'
Kimrey Road
50'
Access C
Access A
SITE
Access B
Jamie Baker Drive
Jim Minor Road
Farrell Road
Moving forward.
RKA
RAMEY KEMP ASSOCIATES
Hawfields Landing
Mebane, NC
Recommended Lane Configurations
Scale: Not to Scale
Figure E-1

STAFF RECOMMENDATION

STAFF ZONING RECOMMENDATION	☒ APPROVE ☐ DISAPPROVE
STAFF SPECIAL USE FINDING	☒ CONSISTENT ☐ NOT CONSISTENT.....WITH *MEBANE BY DESIGN*
RATIONALE	The proposed development "Hawfields Landing" is consistent with the guidance provided within *Mebane By Design*, the Mebane Comprehensive Land Development Plan. Specifically, the site is in a residential growth strategy area and serves Goal 4.3. The proposed project will be developed as a Planned Unit Development and is in harmony with the single-family residential uses of nearby properties. The Special Purpose Lot supporting this residential growth shall be screened and fenced in accordance with the City's UDO and is consistent with the City's adopted plans, including the Long-Range Utility Plan.

PUBLIC INTEREST CONFORMANCE?	
ENDANGER PUBLIC HEALTH OR SAFETY?	☐YES ☐NO
SUBSTANTIALLY INJURE THE VALUE OF ADJOINING OR ABUTTING PROPERTY?	☐YES ☐NO
HARMONIOUS WITH THE AREA IN WHICH IT IS LOCATED?	☐YES ☐NO
CONSISTENT WITH *MEBANE BY DESIGN*, THE MUNICIPAL COMPREHENSIVE LAND DEVELOPMENT PLAN?	☐ The application is consistent with the objectives and policies for growth and development contained in the City of Mebane Comprehensive Land Development Plan, *Mebane By Design*, and, as such, has been recommended for approval.
	☐ The application is not fully consistent with the objectives and policies for growth and development of the City of Mebane Comprehensive Land Development Plan, *Mebane By Design*, but is otherwise in the public interest and has been recommended for approval. The Comprehensive Land Development Plan must be amended to reflect this approval and ensure consistency for the City of Mebane's long-range planning objectives and policies.
	☐ The application is not consistent with the objectives and policies for growth and development of the City of Mebane Comprehensive Land Development Plan, *Mebane By Design*, and, as such, has been recommended for denial.

May 3, 2022

Aden Stoltzfus, PE
Stoltzfus Engineering Inc.
683 Gralin Street
Kernersville, NC 27284

Subject: Hawfields Landing – Water and Sewer System

Regarding the subject Preliminary Subdivision Plans and in accordance with the UDO, this letter indicates that I have reviewed the preliminary water and sewer system layout and find it acceptable and meets City standards based on the following:

A. Water system – The developer plans to extend a public 12-inch water main along 119 from the intersection with Hawfields Trollingwood Road. The 12-inch line will loop through the development, Farrell Road, and Turner Road connecting with the Cambridge Park water line extension when completed. Other internal water lines will be 8-inch with 6-inch lines on short cul-de-sacs. The city does not need the proposed 8-inch stub to Summerhaven served by Orange-Alamance Water System, Inc. All on and off-site water lines will be public, and city maintained when completed. The City has adequate water capacity available to meet the domestic demand at approximately 73,800 gallons per day (gpd) at 150 gpd per residence and fire flow requirements.

B. Sanitary Sewer system – The developer plans to serve the project with a 400 gallon per minute (gpm) public pump station, an 8-inch force main, and 8-inch gravity collection system. The pump station will have a design capacity of 230,400 gpd. However, the design shall allow for an increase in capacity (1.5 times initial capacity) with the change of pump impeller size only. All on and off-site sewer line and pump station improvements will be city maintained when completed. The proposed pump station requires its own "*special purpose lot*" with adequate landscape buffering, fencing, access easement, as shown with the plans. The construction design must also ensure that equipment-producing noise or sound more than seventy decibels shall be located no closer than one hundred feet to the nearest residence.

   The permitted wastewater flow based on 184 3-bedroom townhomes at 360 gpd or 120 gpd per bedroom per NCDEQ 2t rules is 66,240 gpd. Additionally, the 288 4-bedroom homes at 480 gallons per day or 120 gpd per bedroom per NCDEQ 2t rules totals 138,240 gpd for a grand total of 204,480 gpd for all proposed residences. Based on a historical water usage of less than 150 gpd per residence the anticipated sewer flow when tributary is approximately 73,800 gallons per day.

   Wastewater will flow through Mebane and Graham sewer lines and receive treatment at the Graham WWTP per interlocal agreement which allows for 0.75 million gallons per day. Per city policy to limit accumulated paper flow the permitting of wastewater will be by individual phase with 50% home starts (paid system development fees) before permitting the next phase. In addition, the city is pursuing a flow reduction study to reduce the state's 120 gpd per bedroom to 80 gpd per bedroom to match Mebane's Water Resource Recovery Facility.

If there are any questions, please let me know.

Sincerely,

Franz K. Holt, City Engineer

CC: Cy Stober, Development Director
Kyle Smith, Utilities Director

Technical Memorandum

Date: May 3, 2022
To: Cy Stober, Development Director
From: Franz K. Holt, P.E.
Subject: Hawfields Landing – City Engineering review

The Engineering Department has reviewed preliminary plans for Hawfields Landing Subdivision dated April 22, 2022, prepared by Aden Stoltzfus with Stoltzfus Engineering Inc. located in Kernersville, NC. Our technical review comments are as follows:

A. General

The Hawfields Landing Subdivision is a proposed 472 unit phased residential development which includes 184 townhomes (attached) and 288 single family homes (non-attached) on 149-acres located south of S. NC Hwy. 119 (119) near Kimrey Road Intersection.

The project includes stormwater management controls (SCMs) as planned built upon area exceeds 24%. The city requires fencing SCMs with two feet of pool depth. Proposed SCMs will treat the runoff from a 1-inch rain with 10-year peak flow detention. The city will also require a flood study with the construction plan submittal which may result in greater detention requirements.

Water service requires off-site extension of a 12-inch water line along 119 from the intersection with Hawfields Trollingwood Road and in agreement with the city's long range utility plan. In addition, the city requires these proposed improvements looped through the development and connecting to the Cambridge Park improvements on Turner Road. Typical oversizing review will occur for water line sizes greater than project need per city policy.

Sewer service requires a sewer pump station at the low point on site. The proposed pump station and related sewer force main (which proposes to discharge at the same location of the Cambridge Park force main discharges on 119) is also in agreement with the city's long range utility plan. The city requires public pump stations being located on a special purpose lot with landscape buffers, fencing, an appropriate lot size and access, and sound or noise limitations. The public pump station will be able to serve other property draining to it and city maintained when completed.

Proposed internal streets are to be public and to the city standard of 31-ft. b-b roll curb for and gutter section for local residential streets. The preliminary plans show sidewalks on both sides of the streets that connect 119 to Farrell Road and on one side of all other streets. A ten' wide multi-use path will extend along the 119 frontage, along proposed Street A, and terminate at the intersection with the proposed eight' wide trail. Roadway connections are at 119, Farrell Road, and the adjacent Summerhaven residential subdivision.

The developer will need to acquire easements for proposed off-site utility improvements. In addition, the developer will need to acquire easements and or right-of-way may for the proposed turn lane and signal improvements on 119.

The developer will apply for NCDOT driveway permits and encroachment agreements for related improvements and street connections.

Amenities include a pool, internal walking path, play field, picnic shelter, outdoor grill, fire pit, corn hole and pickle ball courts all being private, and HOA maintained.

Any proposed stream and wetland impacts will require USACE and NCDEQ approvals. The City of Mebane conducts review and authorization of any proposed buffer impacts.

An existing private cemetery is located on site and will have its own dedicated lot with a fence around the grave sites.

B. Water and Sewer System Layout

Regarding the subject Preliminary Subdivision Plans and in accordance with the UDO, I have reviewed the preliminary water and sewer system layout and find it acceptable and meets City standards based on the following:

1. Water system – The developer plans to extend a public 12-inch water main along 119 from the intersection with Hawfields Trollingwood Road. The 12-inch line will loop through the development, Farrell Road, and Turner Road connecting with the Cambridge Park water line extension when completed. Other internal water lines will be 8-inch with 6-inch lines on short cul-de-sacs. The city does not need the proposed 8-inch stub to Summerhaven served by Orange-Alamance Water System, Inc. All on and off-site water lines will be public, and city maintained when completed. The City has adequate water capacity available to meet the domestic demand at approximately 73,800 gallons per day (gpd) at 150 gpd per residential unit and fire flow requirements.

2. Sanitary Sewer system – The developer plans to serve the project with a 400 gallon per minute (gpm) public pump station and an 8-inch force main and 8-inch gravity collection system. The pump station will have a design capacity of 230,400 gpd. However, the design shall allow for an increase in capacity (1.5 times initial capacity) with the change of pump impeller size only. All on and off-site sewer line and pump station improvements will be city maintained when completed. The proposed pump station requires its own "***special purpose lot***" with adequate landscape buffers, fencing, access easement, as shown with the plans. The construction design must also ensure that equipment-producing noise or sound more than seventy decibels shall be located no closer than one hundred feet to the nearest residence.

The permitted wastewater flow based on 184 3-bedroom townhomes at 360 gpd or 120 gpd per bedroom per NCDEQ 2t rules is 66,240 gpd. Additionally, the 288 4-bedroom homes at 480 gallons per day or 120 gpd per bedroom per NCDEQ 2t rules totals 138,240 gpd for a grand total of 204,480 gpd for all proposed residences. Based on a historical water usage of less than 150 gpd per home the anticipated sewer flow when tributary is approximately 73,800 gallons per day.

Wastewater will flow through Mebane and Graham sewer lines and receive treatment at the Graham WWTP per interlocal agreement (which allows for 0.75 million gallons per day). Per city policy to limit accumulated paper flow the permitting of wastewater will be by individual phase with 50% home starts (paid system development fees) before permitting the next phase. In addition, the city is pursuing a flow reduction study to reduce the state's 120 gpd per bedroom to 80 gpd per bedroom to match Mebane's Water Resource Recovery Facility.

C. Watershed Overlay District and Phase II Stormwater Requirements

1. Watershed Overlay District requirements provided under Sec. 5.2 of the UDO.
   These requirements in the UDO are for the Back-Creek Watershed, which includes the Graham-Mebane Lake. The Hawfields Landing project is tributary to Haw Creek, a Class V watershed and the Watershed Overlay District requirements do not apply to this project. This type of watershed classification (Class V) does not have density restrictions or built upon restrictions as required for the Graham-Mebane Lake watershed.

2. Phase II Stormwater Post Construction Ordinance
   Sec. 5.4 in the UDO provides standards for Storm Water Management and 5.4.F requires compliance with the Mebane Post Construction Runoff Ordinance (which is a stand-alone ordinance titled the Phase II Stormwater Post Construction Ordinance (SPCO)). The standards in the UDO are general standards as the Ordinance itself provides detailed standards. The SPCO does apply to this project as it will disturb more than one acre of land and will have built upon area more than 24% of the site. The project proposes nine engineered storm water control devices (noted as bmps on plans) which will require fencing if constructed as wet ponds or if bio retention, sand filter, and or wetlands storing two feet or more of surface water. These devices are HOA maintained with financial guarantees provided to the City to ensure maintenance.

D. Storm Drainage System

Sec. 5-4. D. in the UDO provides requirements for storm drainage systems. The preliminary site plans include a preliminary piping layout that indicates certain pipe locations, inlets, and discharge points to engineered storm water control devices.

E. Street Access and TIA

All internal streets are to be public, and city maintained when completed. The city standard for local residential streets is a 31-ft. b-b roll curb and gutter section. Street connections are to 119, Farrell Road, and Summerhaven residential subdivision. Sidewalks and multi-sue paths shown will be city maintained when completed.

The developer provided a Traffic Impact Analysis required for the project. City and NCDOT review agree with the recommended improvements as follows:

NC 119 and Trollingwood Hawfields Road/Old Hillsborough Road

- Subject to available right of way and environmental constraints, provide an exclusive eastbound right-turn lane with one hundred feet of storage and appropriate deceleration taper.

NC 119 and Kimrey Road

- Install traffic signal.
- Provide an exclusive northbound right-turn lane on NC 119 with one hundred feet of storage and appropriate deceleration taper.
- Provide exclusive northbound and southbound left-turn lanes on NC 119 with one hundred feet of storage and appropriate transitions.
- Construct Access A with one ingress lane and two egress lanes consisting of a shared left/through lane and an exclusive right-turn lane.

Farrell Road and Jamie Baker Drive/Access B

- Construct Access B with one ingress lane and one egress lane under stop control.

Farrell Road and Access C

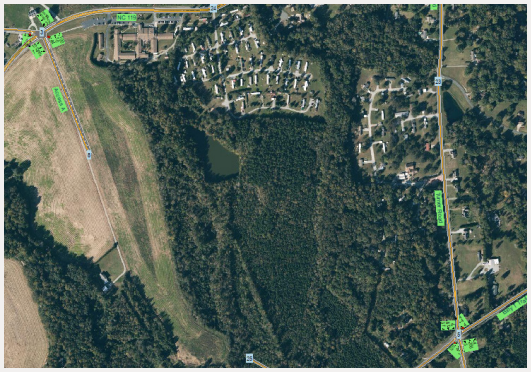
- Construct Access C with one ingress lane and one egress lane under stop control.

F. Construction Plan Submittal

The UDO indicates that construction plans for all street facilities, including water and sewer facilities, shall follow preliminary plat or site plan approval (not at this stage). The provided utility plan shows the proposed water lines, sewer lines, and storm drainage and stormwater management devices to indicate that the project is feasible for utility service and providing stormwater management. Appendix E of the UDO includes a Construction Document checklist. The project engineer provides this check list with construction plan submittal. Based on city engineering review of the referenced preliminary site plans, it is my opinion that said plans are in substantial compliance with the UDO.

RAMEY KEMP ASSOCIATES

Moving forward.



Hawfields Landing

Mebane, NC

Traffic Impact Analysis

rameykemp.com

Transportation
Consulting
that moves us
forward.

TRAFFIC IMPACT ANALYSIS

FOR

HAWFIELDS LANDING

LOCATED

IN

MEBANE, NC

Prepared For:
Agency Partners, LLC
P.O. Box 667
Elon, NC 27244

Prepared By:
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609
License #C-0910

February 2022

NORTH CAROLINA PROFESSIONAL SEAL 047945 ENGINEER CHASE T. SMITH

2-14-2022

RKA Project No. 22062

Prepared By: AMI

Reviewed By: CTS

TRAFFIC IMPACT ANALYSIS
HAWFIELDS LANDING
MEBANE, NORTH CAROLINA

EXECUTIVE SUMMARY

This report summarizes the findings of the Traffic Impact Study (TIA) that was conducted for the proposed Hawfields Landing development to be located south of NC 119 and west of Turner Road in Mebane, North Carolina. The purpose of this study is to determine the potential impact to the surrounding transportation system caused by the traffic generated by the development.

The proposed development, anticipated to be completed in 2025, is assumed to consist of up to 351 single family homes and 160 townhomes. Access to the proposed development is to be provided via three (3) new full movement driveway connections: one (1) on NC 119 [located opposite Kimrey Road] and two (2) on Farrell Road [one located opposite Jamie Baker Drive and the other located approximately 1,000 feet to the north]

It is estimated that the proposed development could generate up to 4,470 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 329 trips (80 entering and 249 exiting) will occur during the weekday AM peak hour and 429 trips (271 entering and 158 exiting) will occur during the weekday PM peak hour.

The study area for the TIA was determined through coordination with the North Carolina Department of Transportation (NCDOT) and the City of Mebane (City) and consists of the following existing intersections:

- NC 119 and Trollingwood Hawfields Road / Old Hillsborough Road (signalized)
- NC 119 and Turner Road (unsignalized)
- NC 119 and Kimrey Road (unsignalized)
- NC 119 and Jim Minor Road (unsignalized)
- Turner Road and Farrell Road / Billy T Trail (unsignalized)
- Farrell Road and Jamie Baker Drive (unsignalized)

Through coordination with the City and NCDOT, it was determined that there are six (6) adjacent developments that could affect the study area upon build out of the proposed development and should be accounted for in this study.

Several scenarios were analyzed using traffic analysis software, Synchro 10. Traffic operations during the AM and PM peak hours were modeled for each scenario. The results of each scenario were compared in order to determine impacts from background traffic growth and the proposed development. The following scenarios were modeled: 2021 Existing Traffic Conditions, 2025 No-Build Traffic Conditions, and 2025 Build Traffic Conditions.

Based on the findings of this study, specific geometric improvements have been identified and are recommended to accommodate future traffic conditions. See a more detailed description of the recommended improvements below. Refer to Figure E-1 for an illustration of the recommended lane configuration for the proposed development.

NC 119 and Trollingwood Hawfields Road / Old Hillsborough Road

- Provide an exclusive eastbound right-turn lane with at least 50 feet of storage and appropriate taper.

NC 119 and Kimrey Road / Access A

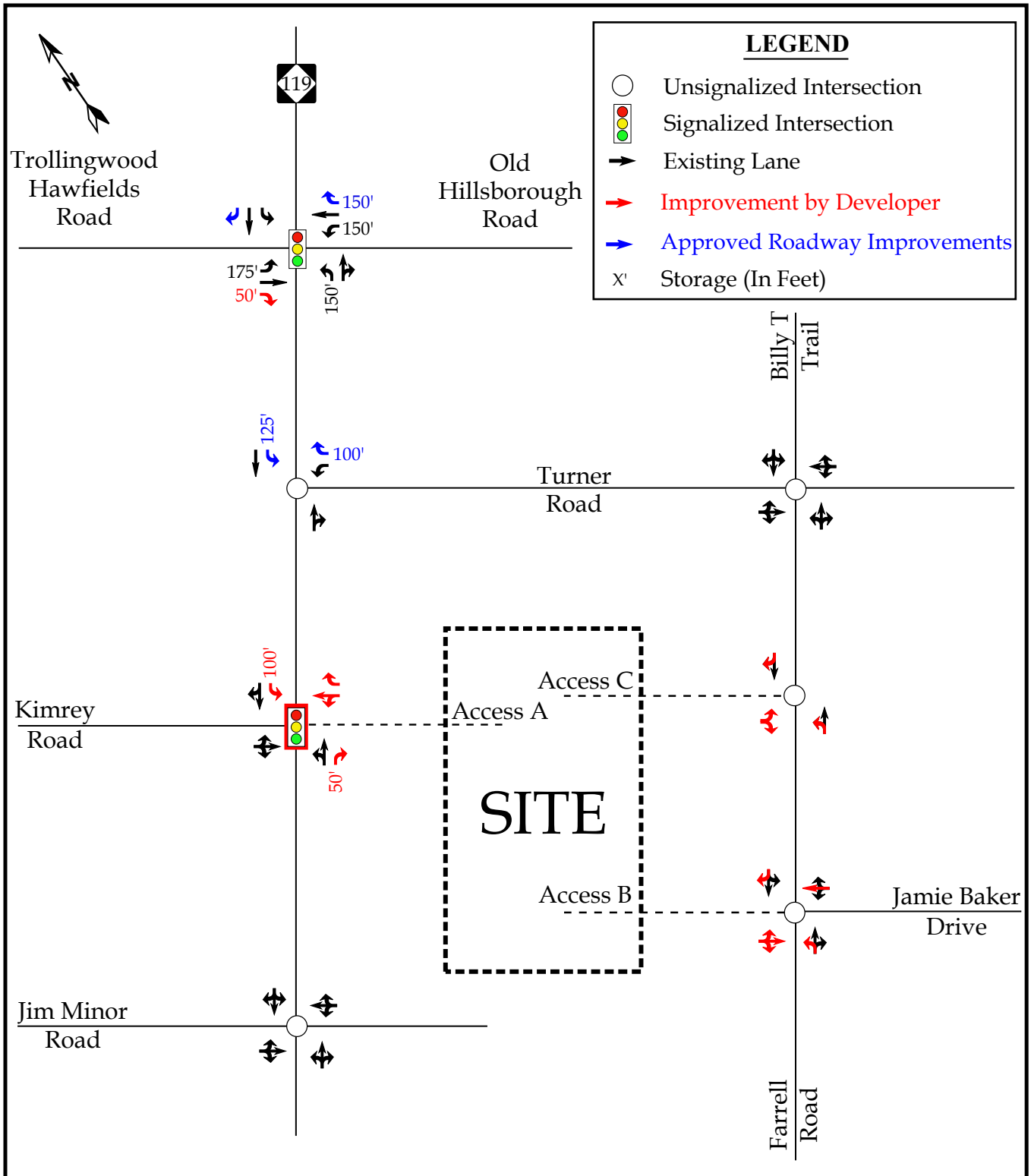
- Install traffic signal.
- Provide an exclusive northbound right-turn lane on NC 119 with at least 50 feet of storage and appropriate taper.
- Provide an exclusive southbound left-turn lane on NC 119 with at least 100 feet of storage and appropriate decel and taper.
- Construct Access A with one ingress lane and two egress lanes striped as a shared left/through lane and an exclusive right-turn lane.

Farrell Road and Jamie Baker Drive / Access B

- Construct Access B with one ingress lane and one egress lane.

Farrell Road and Access C

- Construct Access C with one ingress lane and one egress lane.



Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Hawfields Landing
Mebane, NC

Recommended Lane Configurations

Scale: Not to Scale | Figure E-1

TABLE OF CONTENTS

1. INTRODUCTION 1
1.1. Site Location and Study Area 1
1.2. Proposed Land Use and Site Access 2
1.3. Adjacent Land Uses 2
1.4. Existing Roadways 2
2. 2021 EXISTING PEAK HOUR CONDITIONS 7
2.1. 2021 Existing Peak Hour Traffic Volumes 7
2.2. Analysis of 2021 Existing Peak Hour Traffic Conditions 7
3. 2025 NO-BUILD PEAK HOUR CONDITIONS 9
3.1. Ambient Traffic Growth 9
3.2. Adjacent Development Traffic 9
3.3. Future Roadway Improvements 9
3.4. 2025 No-Build Peak Hour Traffic Volumes 10
3.5. Analysis of 2025 No-Build Peak Hour Traffic Conditions 10
4. SITE TRIP GENERATION AND DISTRIBUTION 14
4.1. Trip Generation 14
4.2. Site Trip Distribution and Assignment 15
5. 2025 BUILD TRAFFIC CONDITIONS 18
5.1. 2025 Build Peak Hour Traffic Volumes 18
5.2. Analysis of 2025 Build Peak Hour Traffic Conditions 18
6. TRAFFIC ANALYSIS PROCEDURE 20
6.1. Adjustments to Analysis Guidelines 20
7. CAPACITY ANALYSIS 21
7.1. NC 119 and Trollingwood Hawfields Road / Old Hillsborough Road 21
7.2. NC 119 and Turner Road 23
7.3. NC 119 and Kimrey Road/Access A 25
7.4. NC 119 and Jim Minor Road 27
7.5. Turner Road and Farrell Road/Billy T Trail 29
7.6. Farrell Road and Jamie Baker Drive/Access B 30
7.7. Farrell Road and Access C 31
8. CONCLUSIONS 32

9. RECOMMENDATIONS 36

LIST OF FIGURES

Figure 1 – Site Location Map 4
Figure 2 – Preliminary Site Plan 5
Figure 3 – Existing Lane Configurations 6
Figure 4 – 2021 Existing Peak Hour Traffic 8
Figure 5 – 2025 Projected Peak Hour Traffic 11
Figure 6 – Adjacent Development Trips 12
Figure 7 – 2025 No-Build Peak Hour Traffic 13
Figure 8 – Site Trip Distribution 16
Figure 9 –Site Trip Assignment 17
Figure 10 – 2025 Build Peak Hour Traffic 19
Figure 11 – Recommended Lane Configurations 37

LIST OF TABLES

Table 1: Existing Roadway Inventory 3
Table 2: Trip Generation Summary 14
Table 3: Highway Capacity Manual – Levels-of-Service and Delay 20
Table 4: Analysis Summary of NC 119 and Trollingwood Hawfields Road / Old Hillsborough Road 21
Table 5: Analysis Summary of NC 119 and Turner Road 23
Table 6: Analysis Summary of NC 119 and Kimrey Road/Access A 25
Table 7: Analysis Summary of NC 119 and Jim Minor Road 27
Table 8: Analysis Summary of Turner Road and Farrell Road/Billy T Trail 29
Table 9: Analysis Summary of Farrell Road and Jamie Baker Drive/Access B 30
Table 10: Analysis Summary of Farrell Road and Access C 31

TECHNICAL APPENDIX

Appendix A:	Scoping Documentation
Appendix B:	Traffic Counts
Appendix C:	Signal Plans
Appendix D:	Adjacent Development Information
Appendix E:	Capacity Calculations – NC 119 and Trollingwood Hawfields Road / Old Hillsborough Road
Appendix F:	Capacity Calculations – NC 119 and Turner Road
Appendix G:	Capacity Calculations – NC 119 and Kimrey Road / Access A
Appendix H:	Capacity Calculations – NC 119 and Jim Minor Road
Appendix I:	Capacity Calculations – Turner Road and Farrell Road / Billy T Trail
Appendix J:	Capacity Calculations – Farrell Road and Jamie Baker Drive / Access B
Appendix K:	Capacity Calculations – Farrell Road and Access C
Appendix L:	SimTraffic Queueing Reports
Appendix M:	Signal Warrant Analysis

Due to the size of the document, technical appendix items can be viewed and downloaded through the following link:

https://cityofmebane.sharefile.com/d-s5d494b331c29403ba8de5f2a9c19c785

TRAFFIC IMPACT ANALYSIS
HAWFIELDS LANDING
MEBANE, NORTH CAROLINA

1. INTRODUCTION

The contents of this report present the findings of the Traffic Impact Analysis (TIA) conducted for the proposed Hawfields Landing development to be located south of NC 119 and west of Turner Road in Mebane, North Carolina. The purpose of this study is to determine the potential impacts to the surrounding transportation system created by traffic generated by the proposed development, as well as recommend improvements to mitigate the impacts.

The proposed development, anticipated to be completed in 2025, is assumed to consist of up to 351 single family homes and 160 townhomes.

The study analyzes the weekday AM and PM peak hours for the following scenarios:

- 2021 Existing Traffic Conditions
- 2025 No-Build Traffic Conditions
- 2025 Build Traffic Conditions

1.1. Site Location and Study Area

The development is proposed to be located between NC 119 and Farrell Road in Mebane, North Carolina. Refer to Figure 1 for the site location map.

The study area for the TIA was determined through coordination with the North Carolina Department of Transportation (NCDOT) and the City of Mebane (City) and consists of the following existing intersections:

- NC 119 and Trollingwood Hawfields Road / Old Hillsborough Road (signalized)
- NC 119 and Turner Road (unsignalized)
- NC 119 and Kimrey Road (unsignalized)
- NC 119 and Jim Minor Road (unsignalized)
- Turner Road and Farrell Road / Billy T Trail (unsignalized)

- Farrell Road and Jamie Baker Drive (unsignalized)

Refer to Appendix A for the approved scoping documentation.

1.2. Proposed Land Use and Site Access

The proposed development, anticipated to be completed in 2025, is assumed to consist of up to 351 single family homes and 160 apartments. Access to the proposed development is to be provided via three (3) new full movement driveway connections: one (1) on NC 119 [located opposite Kimrey Road] and two (2) on Farrell Road [one located opposite Jamie Baker Drive and the other located approximately 1,000 feet to the north]. Refer to Figure 2 for a copy of the preliminary site plan.

1.3. Adjacent Land Uses

The proposed development is located in an area consisting primarily of undeveloped land and residential development. The Audrey W Garrett Elementary School and Hawfields Middle School are located to the north of Old Hillsborough Road and east of NC 119 in close proximity of the study area. Two large distribution centers are located on Senator Ralph Scott Parkway [off of Trollingwood Hawfields Road]. Residential land uses are located throughout the study area but are most dense east and south of the property along Turner Road and Jim Minor Road.

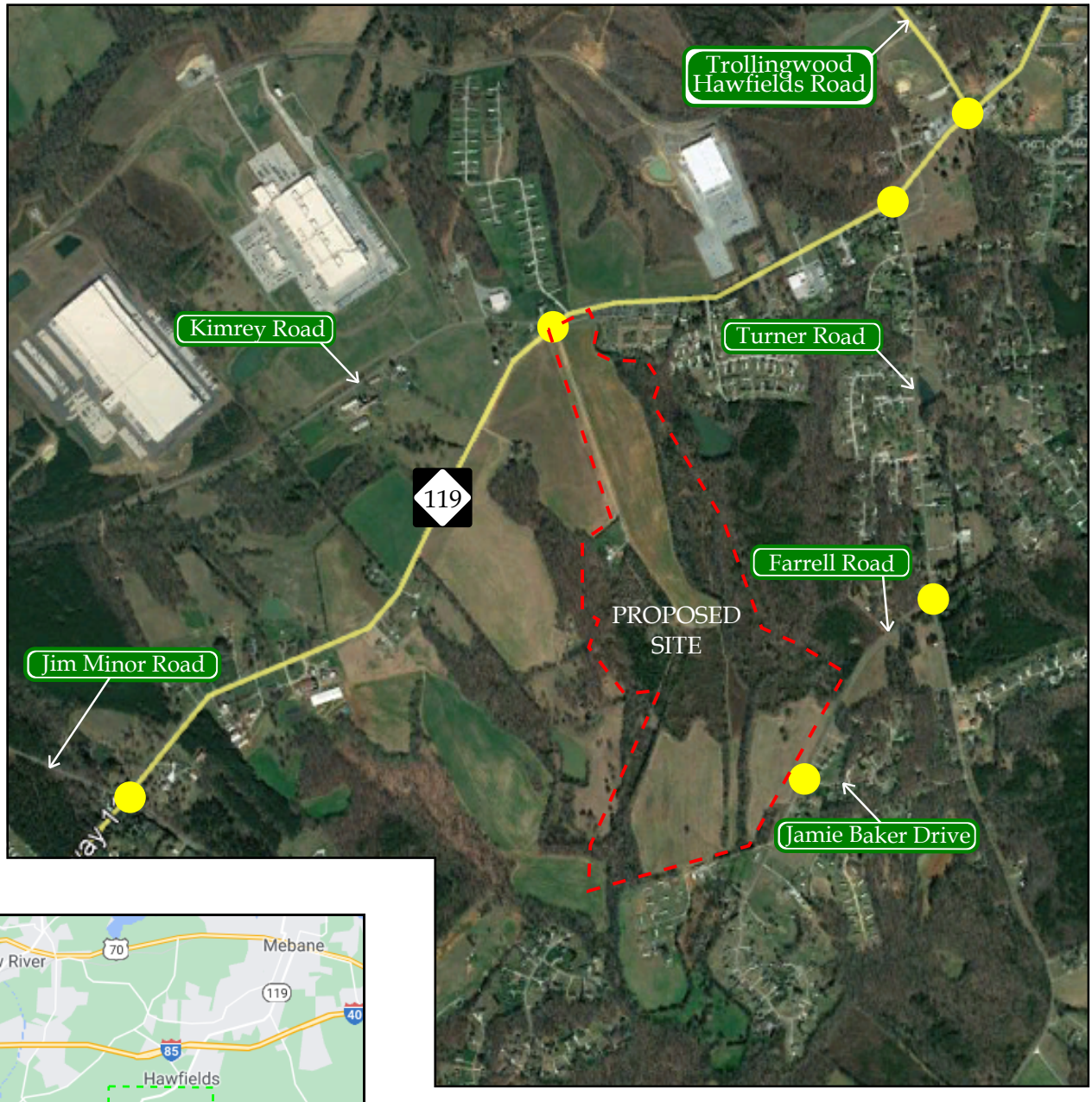
1.4. Existing Roadways

Existing lane configurations (number of traffic lanes on each intersection approach), lane widths, storage capacities, and other intersection and roadway information within the study area are shown in Figure 3. Table 1 provides a summary of this information, as well.

Table 1: Existing Roadway Inventory

Road Name	Route Number	Typical Cross Section	Speed Limit	Maintained By	2019 AADT (vpd)
NC 119	NC 119	2-lane undivided	40 mph	NCDOT	12,500
Trollingwood Hawfields Road	SR 1984	2-lane undivided	45 mph	NCDOT	10,000
Old Hillsborough Road	SR 2126	2-lane undivided	45 mph	NCDOT	7,400
Turner Road	SR 2133	2-lane undivided	45 mph	NCDOT	2,700
Kimrey Road	SR 2125	2-lane undivided	45 mph (assumed)	NCDOT	1230*
Jim Minor Road	SR 2135	2-lane undivided	45 mph	NCDOT	2,100
Farrell Road	SR 2134	2-lane undivided	40 mph	NCDOT	500*
Jamie Baker Drive	SR 2612	2-lane undivided	25 mph (assumed)	NCDOT	80*
Billy T Trail	N/A	2-lane undivided	25 mph (assumed)	City	70*

*ADT based on the traffic counts from 2021 and assuming the weekday PM peak hour volume is 10% of the average daily traffic.



N

LEGEND

- Proposed Site Location
- Study Intersection
- Study Area

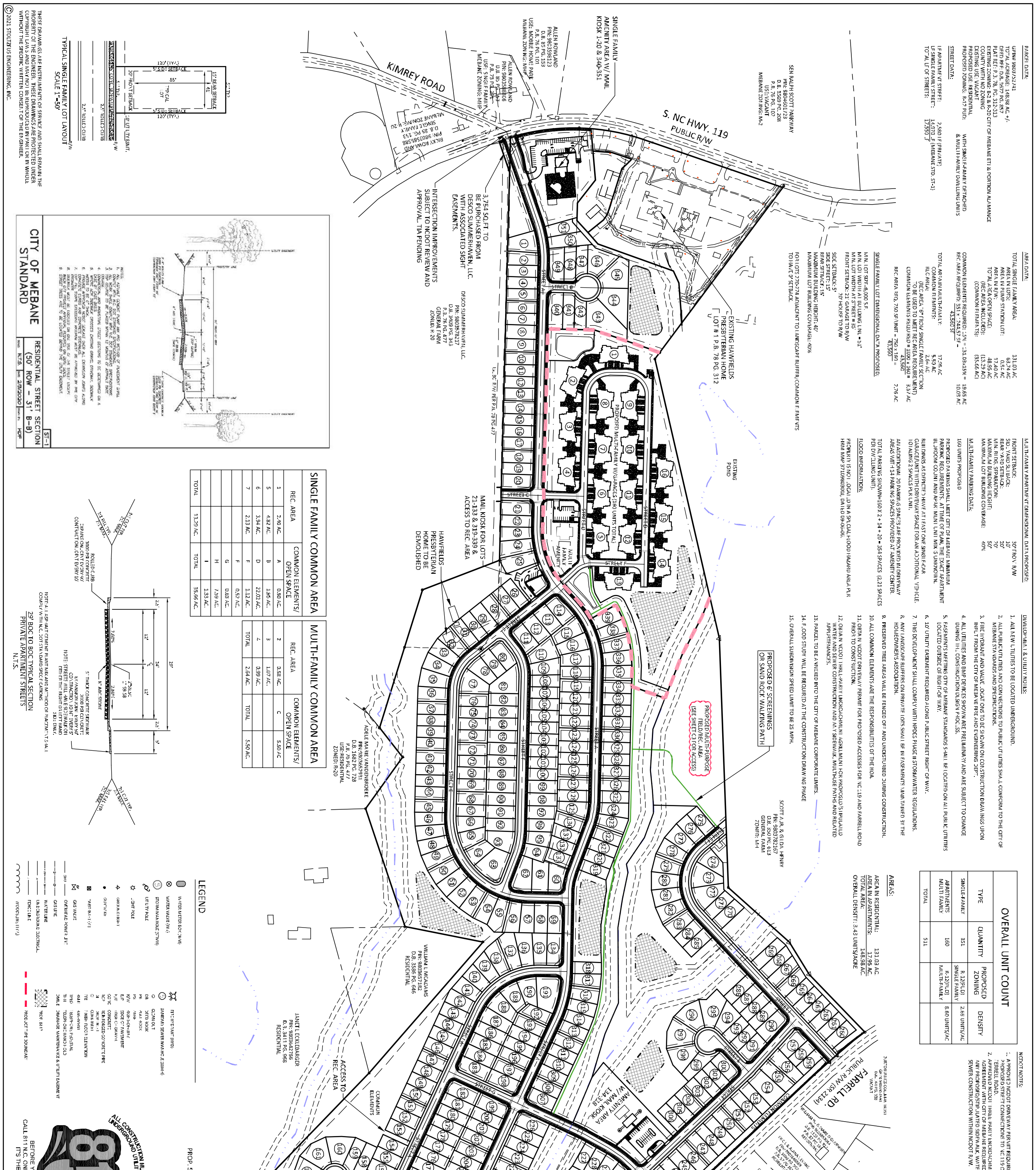
Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Hawfields Landing
Mebane, NC

Site Location Map

Scale: Not to Scale

Figure 1



NO.	DATE	REVISION NOTE
1	02/12/21	MEBANE COMMENTS

DRAWN BY: SDT
CHECKED BY: ARS
DATE: 11/09/2020
PROJECT NO.: 2201.05
REF. NO.:
SCALE: 1"=200'

HAWFIELDS LANDING

OVERALL CONCEPTUAL SITE PLAN

PROJECT LOCATION:
STATE: NORTH CAROLINA
COUNTY: ALAMANCE
TOWNSHIP: MELVILLE

PROPERTY OWNER INFORMATION:
AGENCY PARTNERS, LLC
537 HUFFMAN MILL ROAD, SUITE E
BURLINGTON, NC 27215

SEI Stoltzfus Engineering Inc.
Civil Engineering Consultants

Aden R. Stoltzfus, PE C-3812
aden@seiengineering.com
336-904-0207
747 Park Lawn Court
Kernersville, NC 27284

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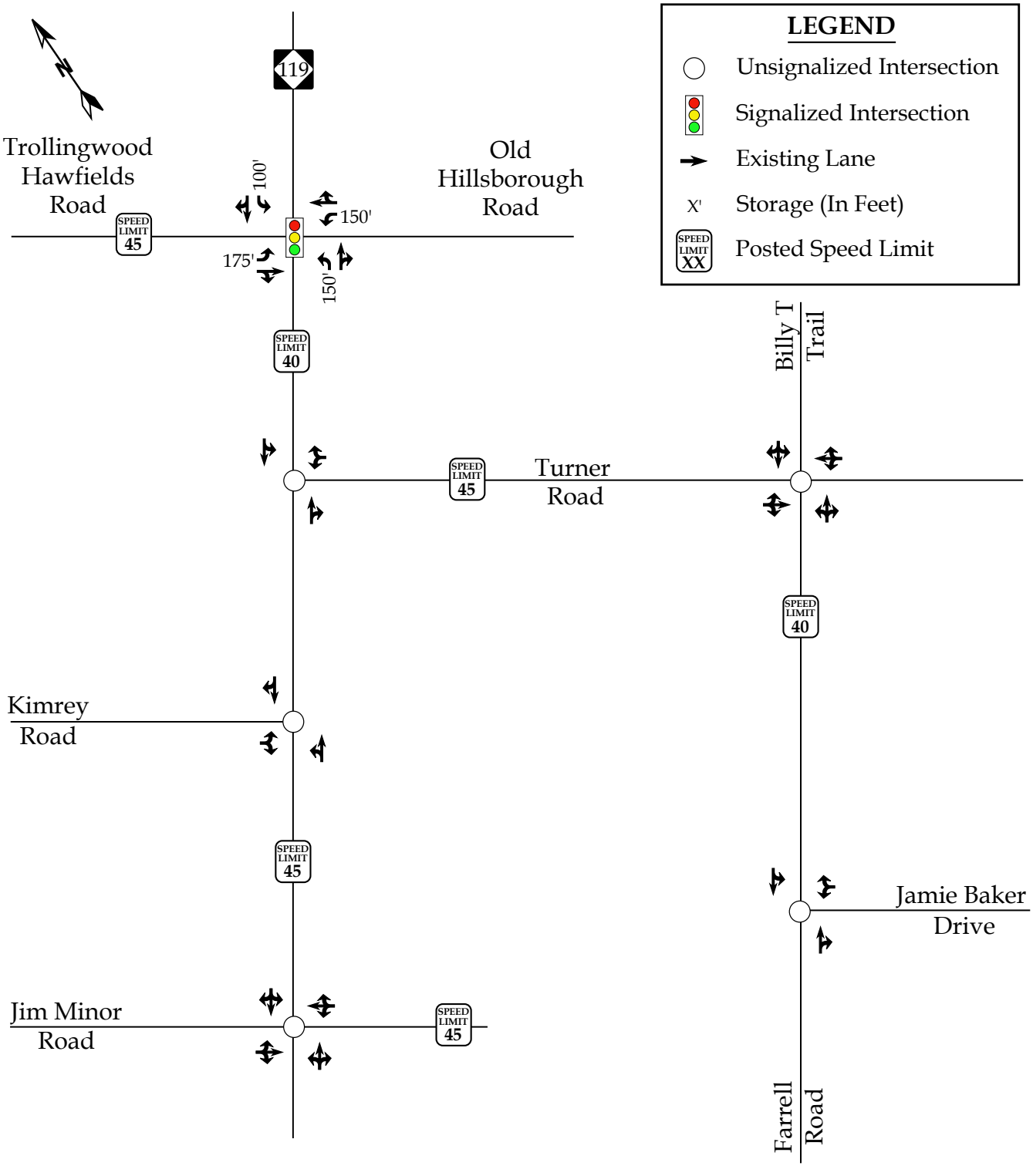


Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Hawfields Landing
Mebane, NC

2021 Existing
Lane Configurations

Scale: Not to Scale

Figure 3

2. 2021 EXISTING PEAK HOUR CONDITIONS

2.1. 2021 Existing Peak Hour Traffic Volumes

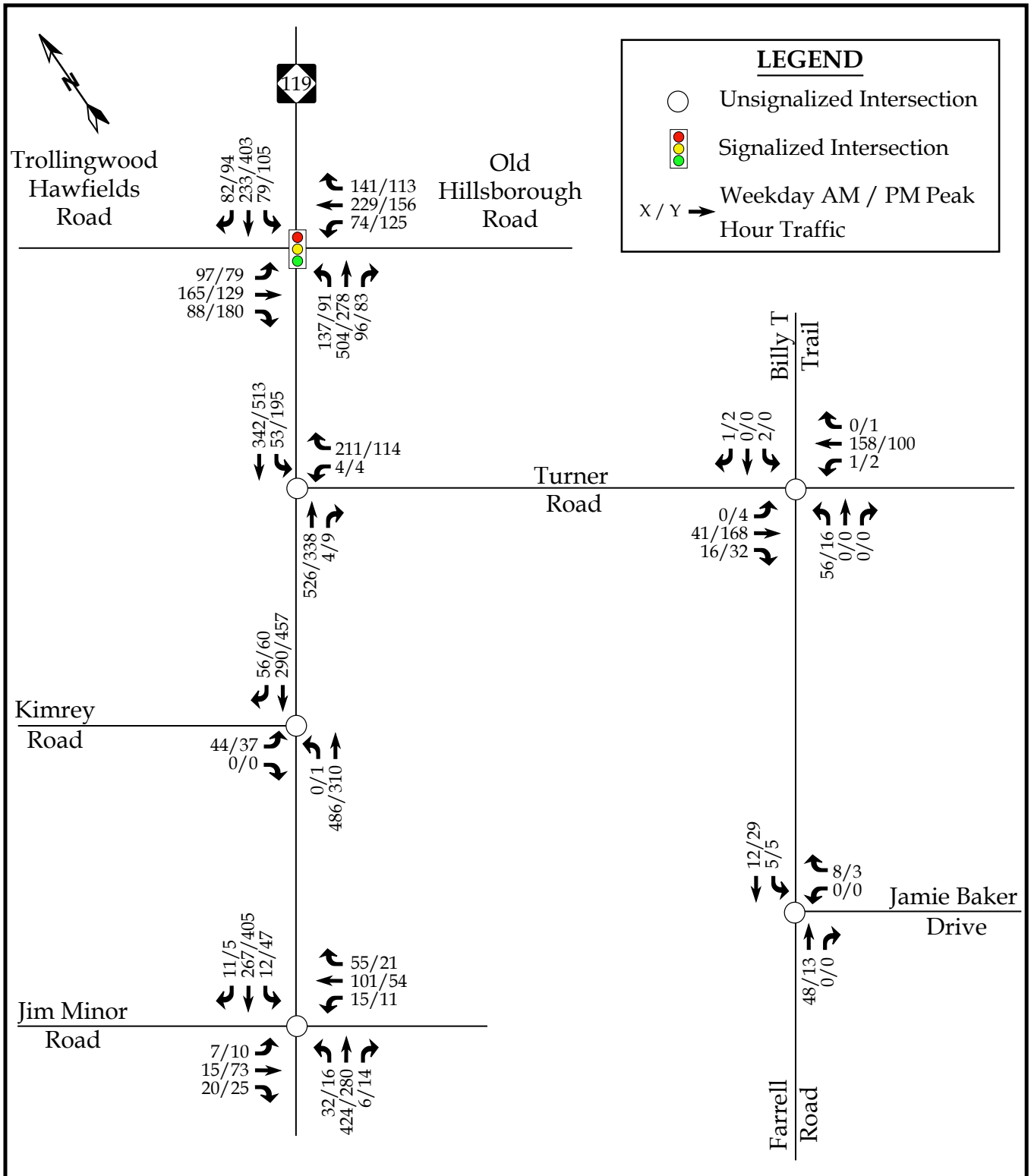
Existing peak hour traffic volumes were determined based on traffic counts conducted at the study intersections listed below, in October of 2017 or 2018 during typical weekday AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak periods:

- NC 119 and Trollingwood Hawfields Road / Old Hillsborough Road (10/16/18)
- NC 119 and Turner Road (10/10/17)
- NC 119 and Kimrey Road (10/16/18)
- NC 119 and Jim Minor Road (10/16/18)
- Turner Road and Farrell Road / Billy T Trail (10/25/17)
- Farrell Road and Jamie Baker Drive (10/25/17)

All counts were projected to 2021 with an annual growth rate of 1%. Weekday AM and PM traffic volumes were balanced between study intersections. Refer to Figure 4 for the 2021 existing weekday AM and PM peak hour traffic volumes. A copy of the count data is located in Appendix B of this report.

2.2. Analysis of 2021 Existing Peak Hour Traffic Conditions

The 2021 existing weekday AM and PM peak hour traffic volumes were analyzed to determine the current levels of service at the study intersections under existing roadway conditions. Signal information was obtained from NCDOT and is included in Appendix C. The results of the analysis are presented in Section 7 of this report.



Moving forward.
RKA
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Hawfields Landing
Mebane, NC

2021 Existing
Peak Hour Traffic

Scale: Not to Scale

Figure 4

3. 2025 NO-BUILD PEAK HOUR CONDITIONS

In order to account for growth of traffic and subsequent traffic conditions at a future year, no-build traffic projections are needed. No-build traffic is the component of traffic due to the growth of the community and surrounding area that is anticipated to occur regardless of whether or not the proposed development is constructed. No-build traffic is comprised of existing traffic growth within the study area and additional traffic created as a result of adjacent approved developments.

3.1. Ambient Traffic Growth

Through coordination with the City and NCDOT, it was determined that an annual growth rate of 1% would be used to generate 2025 projected weekday AM and PM peak hour traffic volumes. Refer to Figure 5 for the 2025 projected peak hour traffic volumes.

3.2. Adjacent Development Traffic

Through coordination with the City and NCDOT, it was determined that there are six (6) adjacent developments that could affect the study area upon build out of the proposed development and should be accounted for in this study: Cambridge Park (residential), The Meadows (residential), Magnolia Glen (residential), Bradford Academy (school), Summerhaven Subdivision (residential) and Alamance County High School. Peak hour traffic associated with each of the adjacent developments was determined based on each developments TIA's and distributed to the roadway network accordingly. It should be noted that dismissal peak times for Bradford Academy and Alamance County High School are outside of the 4pm – 6pm PM peak hour, therefore only AM peak site trips were included. Total adjacent development traffic is illustrated in Figure 6. Adjacent development information can be found in Appendix D.

3.3. Future Roadway Improvements

Based on the traffic studies for the aforementioned adjacent developments and information provided by NCDOT, the following improvements were assumed to be in place at the study intersections upon full build out of the proposed development, and therefore were included in all future analyses:

NC 119 and Trollingwood Hawfields Road / Old Hillsborough Road

- Extend the existing southbound left turn lane on NC 119 to provide 225 feet of full storage and appropriate transitions [Cambridge Park TIA].
- Construct an exclusive westbound right turn lane on Old Hillsborough Road with 150 feet of full storage and appropriate deceleration taper [Cambridge Park TIA].
- Widen NC 119, north of Trollingwood Hawfields Road / Old Hillsborough Road to allow for a full southbound right turn lane {NCDOT State Transportation Improvement Program (STIP) project U-6013].

NC 119 and Turner Road

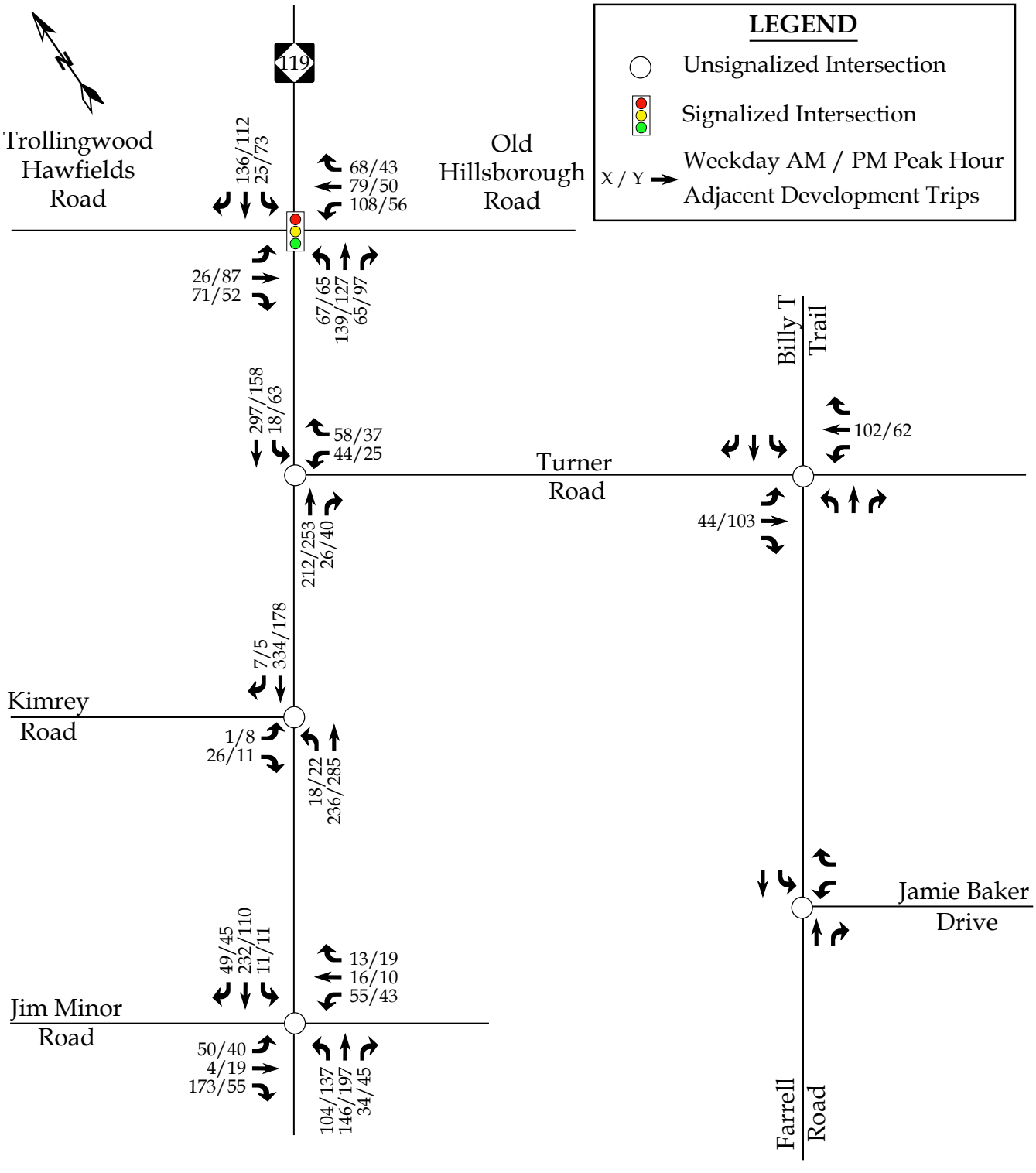
- Construct an exclusive westbound right turn lane on Turner Road with 100 feet of full storage and appropriate deceleration taper [Cambridge Park TIA].
- Construct an exclusive southbound left turn lane on NC 119 with 125 feet of full storage and appropriate transitions [Cambridge Park TIA].

3.4. 2025 No-Build Peak Hour Traffic Volumes

The 2025 no-build traffic volumes were determined by adding the adjacent development trips to the 2025 projected traffic volumes. Refer to Figure 7 for an illustration of the 2025 no-build peak hour traffic volumes at the study intersections.

3.5. Analysis of 2025 No-Build Peak Hour Traffic Conditions

The 2025 no-build AM and PM peak hour traffic volumes at the study intersections were analyzed with future geometric roadway conditions and traffic control. The analysis results are presented in Section 7 of this report.



Moving forward.

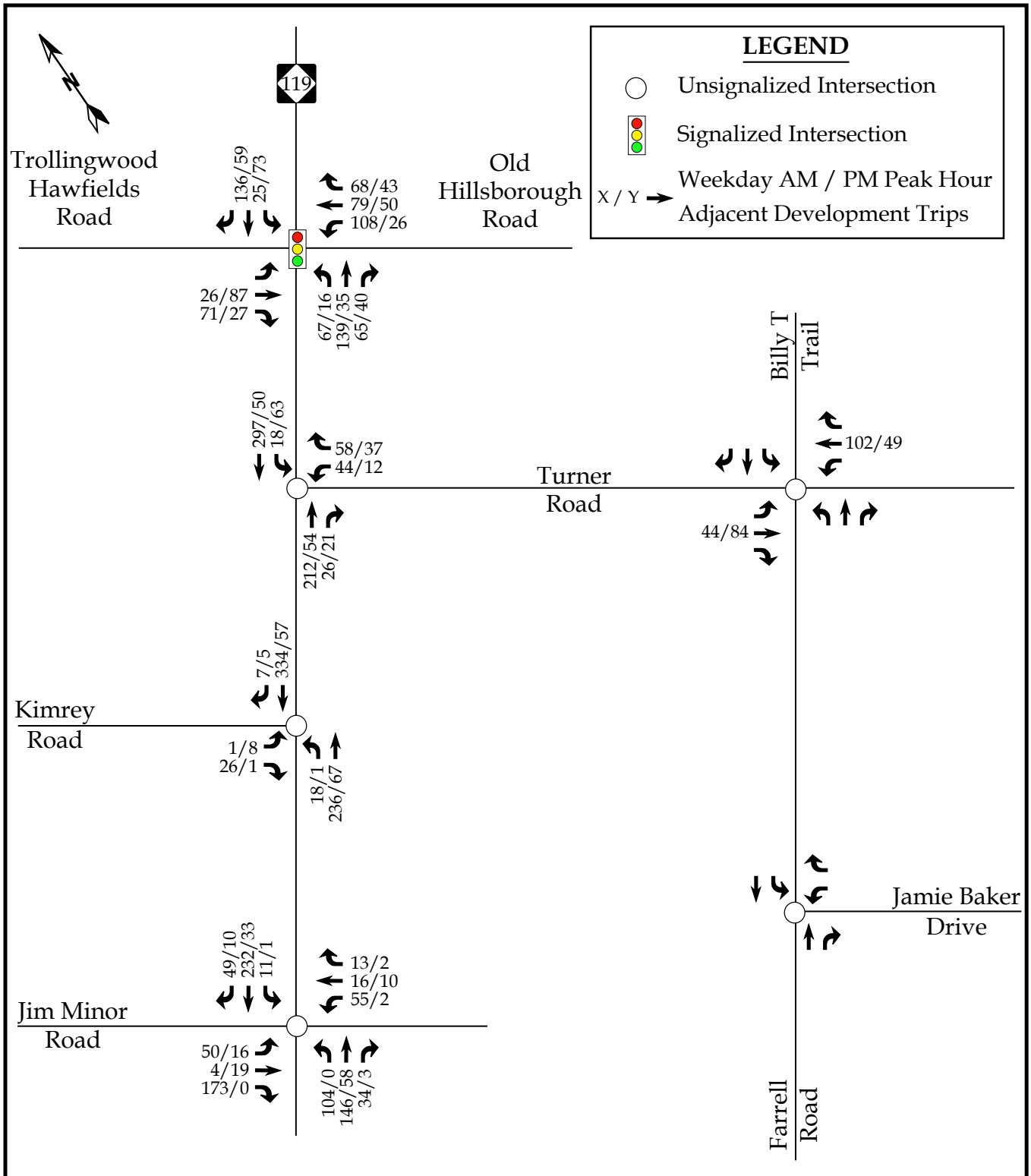
RAMEY KEMP ASSOCIATES

Hawfields Landing
Mebane, NC

Peak Hour Adjacent
Developement Trips

Scale: Not to Scale

Figure 6



Moving forward.

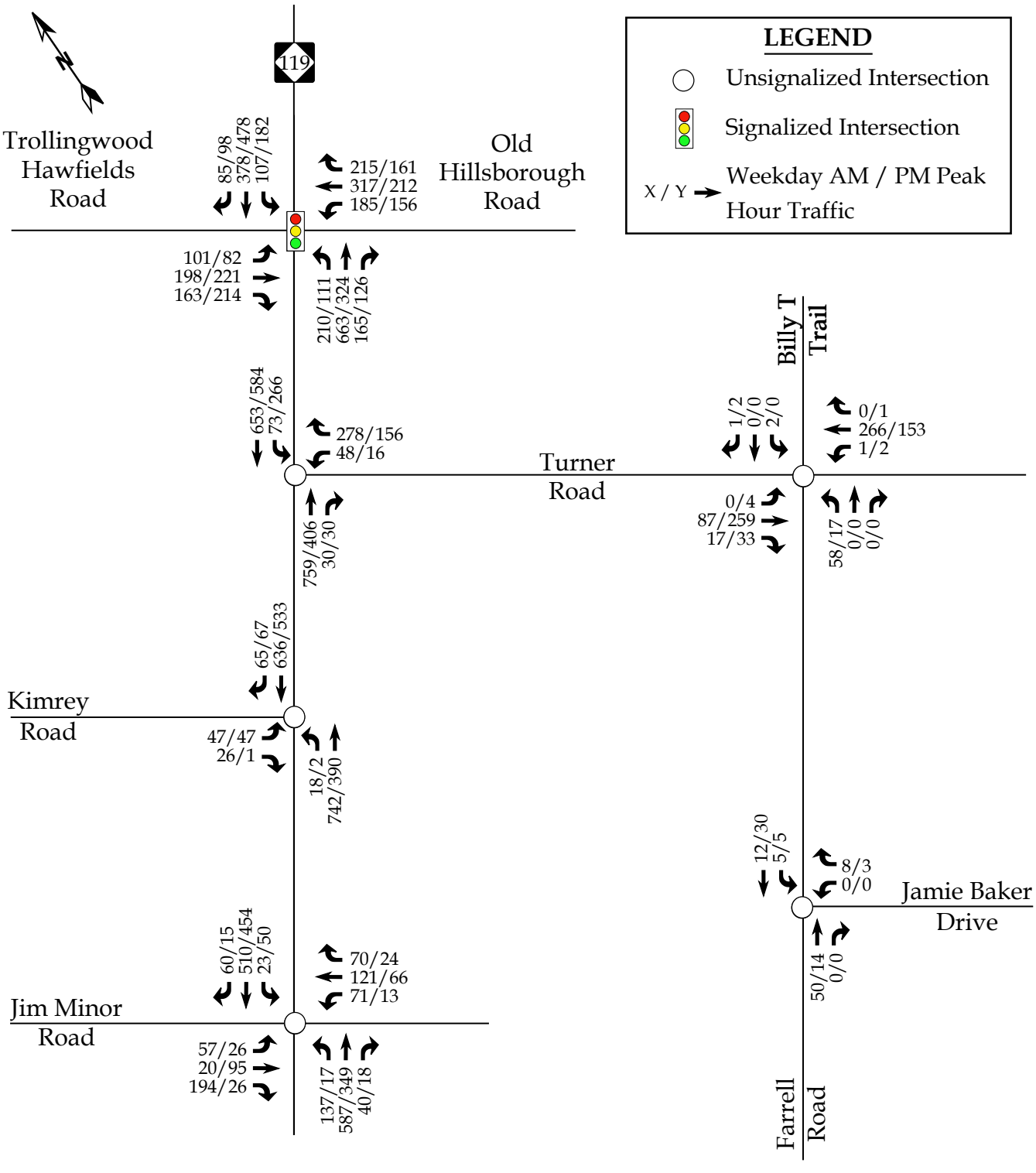
RAMEY KEMP ASSOCIATES

Hawfields Landing
Mebane, NC

Peak Hour Adjacent
Developement Trips

Scale: Not to Scale

Figure 6



Moving forward.

RAMEY KEMP ASSOCIATES

Hawfields Landing
Mebane, NC

2025 No-Build
Peak Hour Traffic

Scale: Not to Scale

Figure 7

4. SITE TRIP GENERATION AND DISTRIBUTION

4.1. Trip Generation

The proposed development is assumed to consist of up to 351 single family homes and 160 townhomes. Average weekday daily, AM peak hour, and PM peak hour trips for the proposed development were estimated using methodology contained within the ITE *Trip Generation Manual*, 10th Edition. Table 2 provides a summary of the trip generation potential for the site.

Table 2: Trip Generation Summary

Land Use (ITE Code)	Intensity	Daily Traffic (vpd)	Weekday AM Peak Hour Trips (vph)		Weekday PM Peak Hour Trips (vph)	
			Enter	Exit	Enter	Exit
Single-Family Detached Housing (210)	351 DU	3,301	63	191	214	125
Low-Rise Multifamily Housing (220)	160 DU	1,169	17	58	57	33
Total Trips		**4,470**	**80**	**249**	**271**	**158**

*Utilizing methodology contained in the NCHRP Report 684.

It is estimated that the proposed development could generate up to 4,470 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 329 trips (80 entering and 249 exiting) will occur during the weekday AM peak hour and 429 trips (271 entering and 158 exiting) will occur during the weekday PM peak hour.

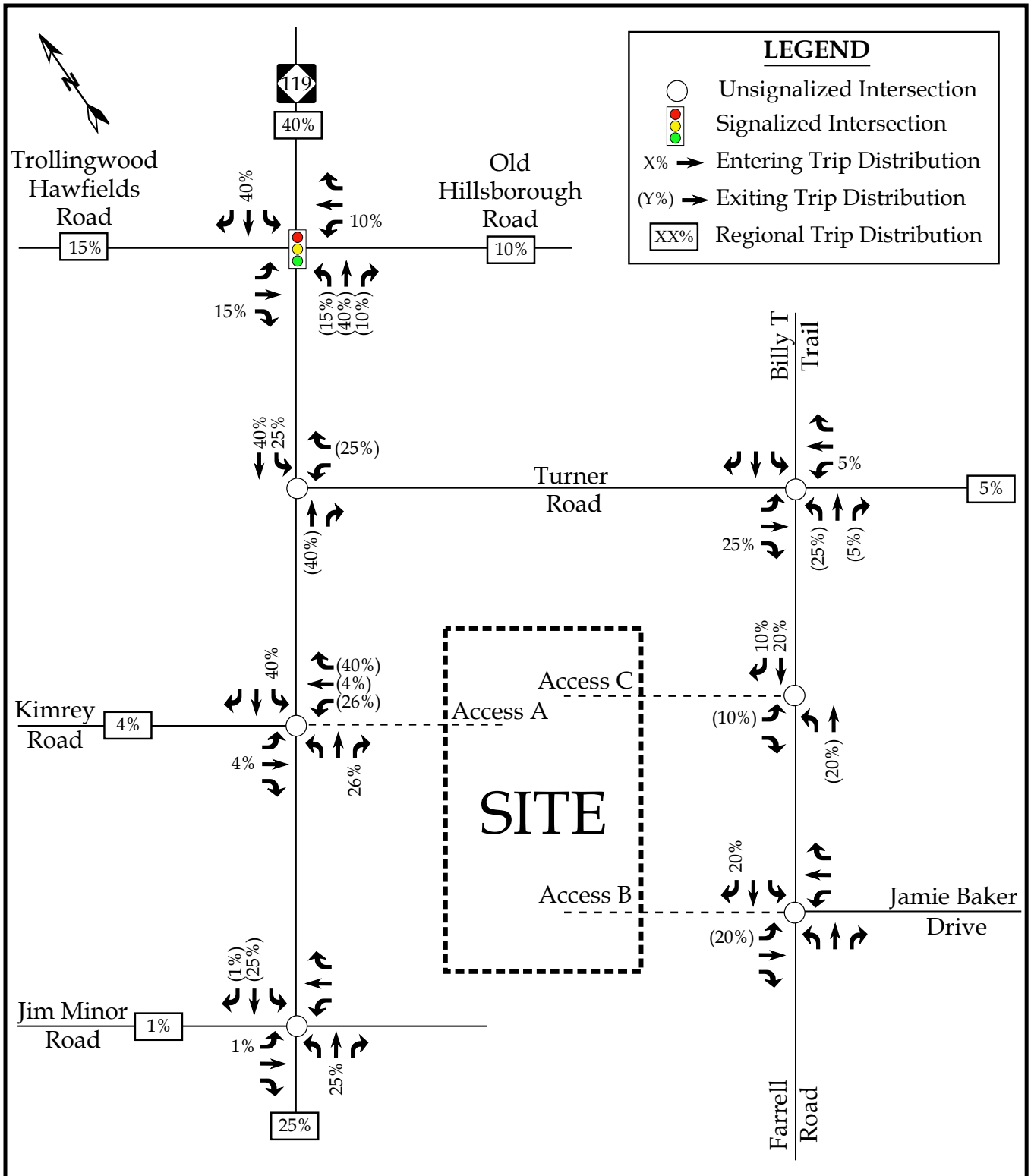
4.2. Site Trip Distribution and Assignment

Trip distribution percentages used in assigning site traffic for this development were estimated based on a combination of existing traffic patterns and engineering judgment.

It is estimated that the site trips will be regionally distributed as follows:

- 40% to/from the north via NC 119
- 25% to/from the south via NC 119
- 15% to/from the west via Trollingwood Hawfields Road
- 10% to/from the east via Old Hillsborough Road
- 4% to/from the west via Kimrey Road
- 1% to/from the west via Jim Minor Road
- 5% to/from the east via Turner Road

Refer to Figures 8 and 9 for illustrations of the site trip distribution and assignment, respectively.



Moving forward.

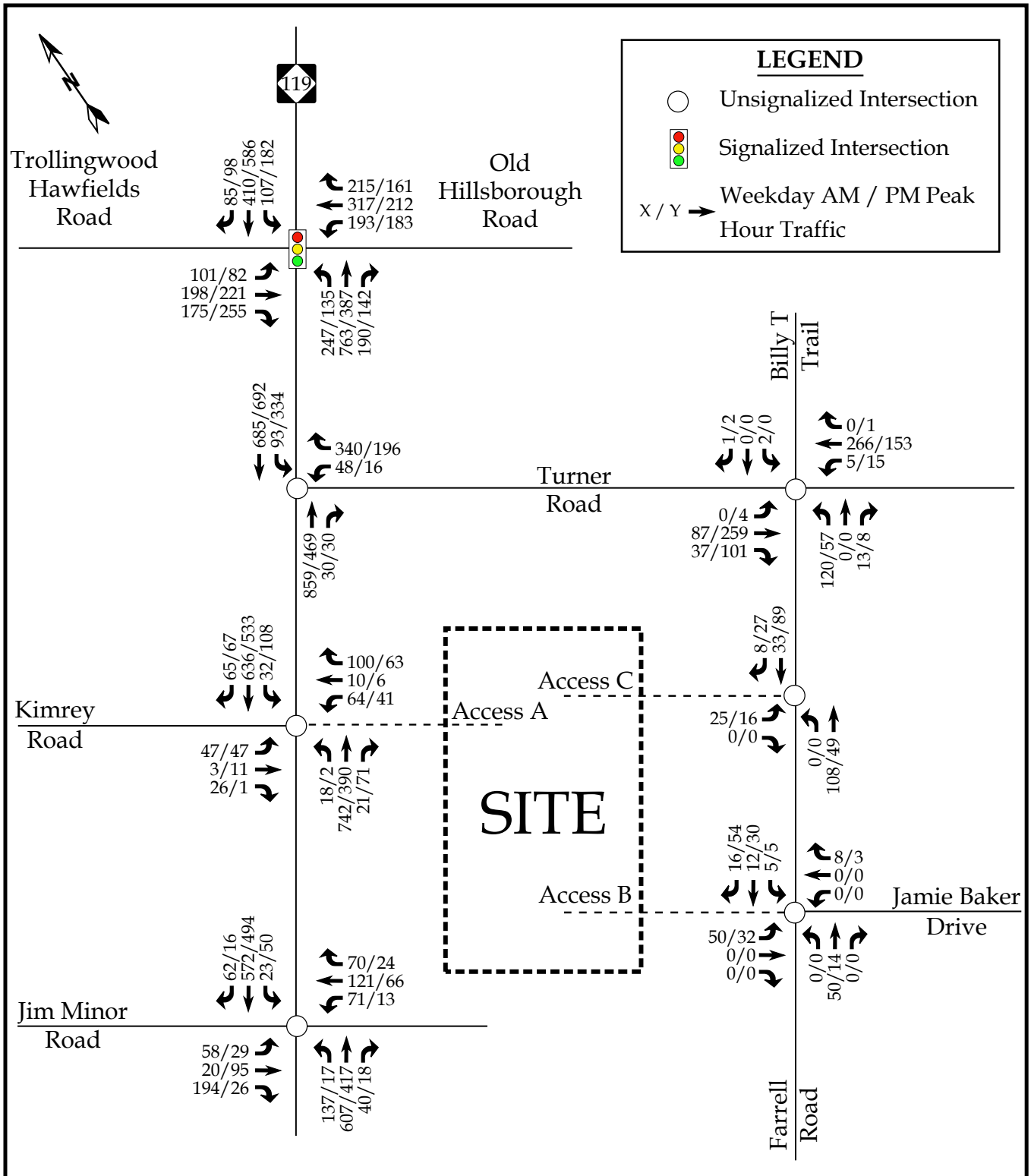
RAMEY KEMP ASSOCIATES

Hawfields Landing
Mebane, NC

Site Trip Distribution

Scale: Not to Scale

Figure 8



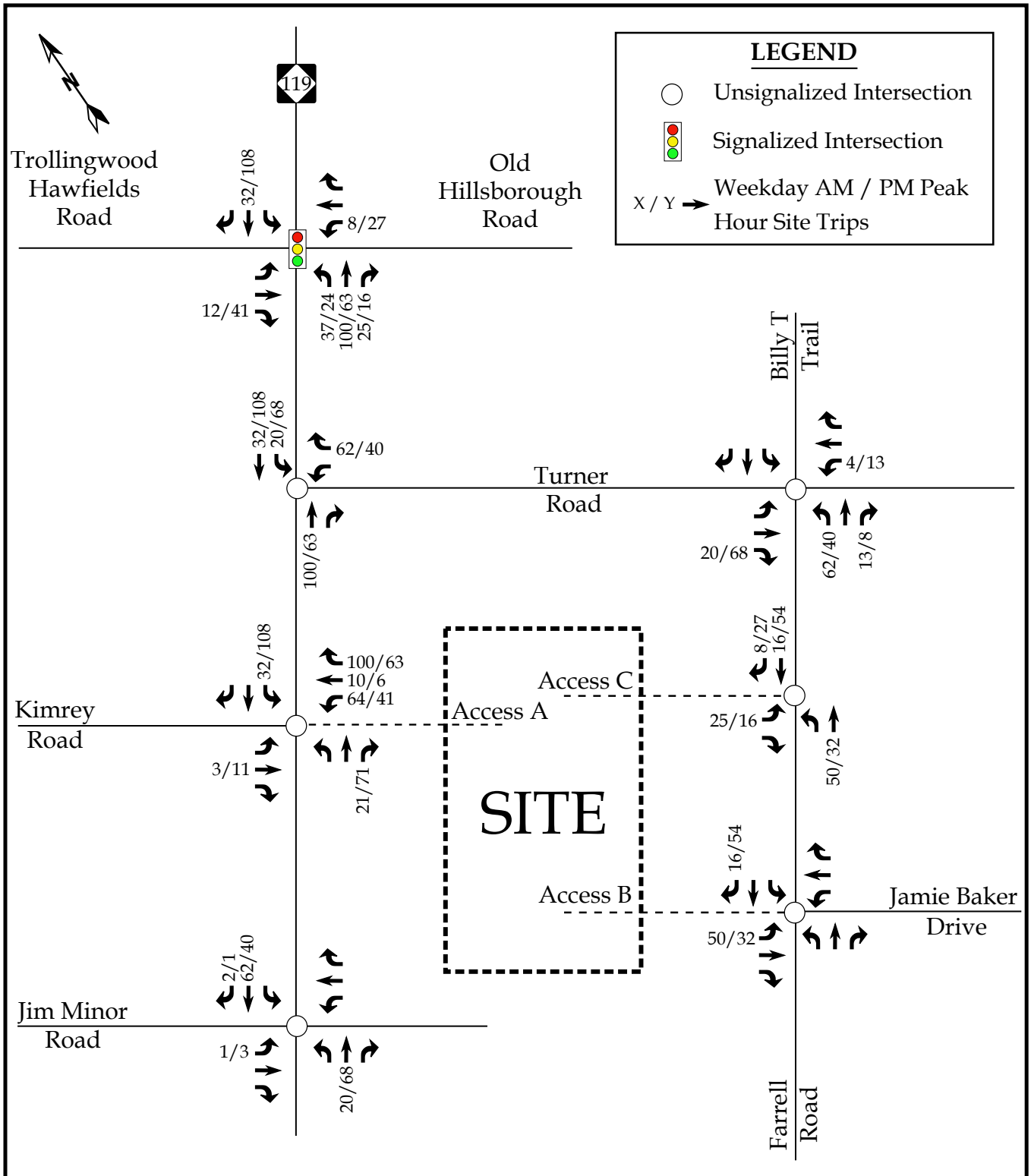
Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Hawfields Landing
Mebane, NC

2025 Build
Peak Hour Traffic

Scale: Not to Scale

Figure 10



Moving forward.

RKA

RAMEY KEMP ASSOCIATES

Hawfields Landing
Mebane, NC

Site Trip Assignment

Scale: Not to Scale

Figure 9

5. 2025 BUILD TRAFFIC CONDITIONS

5.1. 2025 Build Peak Hour Traffic Volumes

To estimate traffic conditions with the site fully built-out, the total site trips were added to the 2025 no-build traffic volumes. Refer to Figure 10 for an illustration of the 2025 build peak hour traffic volumes with the proposed site fully developed.

5.2. Analysis of 2025 Build Peak Hour Traffic Conditions

Study intersections were analyzed with the 2025 build traffic volumes using the same methodology previously discussed for existing and no-build traffic conditions. The results of the capacity analysis for each intersection are presented in Section 7 of this report.

6. TRAFFIC ANALYSIS PROCEDURE

Study intersections were analyzed using the methodology outlined in the *Highway Capacity Manual* (HCM), 6th Edition published by the Transportation Research Board. Capacity and level of service are the design criteria for this traffic study. A computer software package, Synchro (Version 10.3), was used to complete the analyses for most of the study area intersections. Please note that the unsignalized capacity analysis does not provide an overall level of service for an intersection; only delay for an approach with a conflicting movement.

The HCM defines capacity as "the maximum hourly rate at which persons or vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway, traffic, and control conditions." Level of service (LOS) is a term used to represent different driving conditions and is defined as a "qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers." Level of service varies from Level "A" representing free flow, to Level "F" where breakdown conditions are evident. Refer to Table 3 for HCM levels of service and related average control delay per vehicle for both signalized and unsignalized intersections. Control delay as defined by the HCM includes "initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay". An average control delay of 50 seconds at a signalized intersection results in LOS "D" operation at the intersection.

Table 3: Highway Capacity Manual – Levels-of-Service and Delay

UNSIGNALIZED INTERSECTION		SIGNALIZED INTERSECTION	
LEVEL OF SERVICE	AVERAGE CONTROL DELAY PER VEHICLE (SECONDS)	LEVEL OF SERVICE	AVERAGE CONTROL DELAY PER VEHICLE (SECONDS)
A	0-10	A	0-10
B	10-15	B	10-20
C	15-25	C	20-35
D	25-35	D	35-55
E	35-50	E	55-80
F	>50	F	>80

6.1. Adjustments to Analysis Guidelines

Capacity analysis at all study intersections was completed according to the NCDOT Congestions Management Guidelines.

7. CAPACITY ANALYSIS

7.1. NC 119 and Trollingwood Hawfields Road / Old Hillsborough Road

The existing signalized intersection was analyzed under all traffic conditions with the lane configurations and traffic control shown in Table 4. Refer to Table 4 for a summary of the analysis results. Refer to Appendix E for the Synchro capacity analysis reports and Appendix L for SimTraffic queue reports.

Table 4: Analysis Summary of NC 119 and Trollingwood Hawfields Road / Old Hillsborough Road

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2021 Existing	EB	1 LT, TH-RT	D (36.3)	D (39.4)	D (46.5)	C (34.3)
	WB	1 LT, TH-RT	D (54.9)		D (37.4)	
	NB	1 LT, TH-RT	D (38.3)		C (26.4)	
	SB	1 LT, TH-RT	C (26.6)		C (30.3)	
2025 No-Build	EB	1 LT, TH-RT	F (115.3)	F (83.9)	E (73.2)	E (60.8)
	WB	1 LT, 1 TH, *1 RT*	E (79.5)		D (49.5)	
	NB	1 LT, TH-RT	F (85.2)		E (68.6)	
	SB	1 LT, 1 TH, <u>1 RT</u>	E (61.5)		D (54.6)	
2025 Build	EB	1 LT, TH-RT	F (155.4)	F (104.5)	F (93.3)	F (82.2)
	WB	1 LT, 1 TH, *1 RT*	F (96.4)		E (63.5)	
	NB	1 LT, TH-RT	F (109.4)		F (93.0)	
	SB	1 LT, 1 TH, <u>1 RT</u>	E (64.5)		F (78.9)	
2025 Build – Improvements	EB	1 LT, TH, **1 RT**	F (101.7)	F (81.1)	D (54.2)	D (51.3)
	WB	1 LT, 1 TH, *1 RT*	F (103.1)		D (49.1)	
	NB	1 LT, TH-RT	E (73.2)		E (55.6)	
	SB	1 LT, 1 TH, <u>1 RT</u>	D (54.3)		D (47.6)	

NC 119 = NB / SB, Trollingwood Hawfields Road / Old Hillsborough Road = EB / WB
- *Improvement recommended in an approved development TIA.*
- <u>Improvement from STIP U-6013</u>
- **Proposed improvements and/or revised lane configurations denoted in bold.**

Capacity analysis indicated that under existing conditions, the overall intersection and approaches operate at LOS D or better during the AM and PM peak hours.

Under no-build traffic conditions [with the addition of the adjacent development traffic volumes], the overall intersection is expected to operate at LOS F and LOS E during the AM

and PM peak hours, respectively. All intersection approaches are expected to operate at LOS E or better with the exception of the northbound approach of NC 119 during the PM peak hour. Significant queuing issues are expected during the AM and PM peak hours under no-build traffic conditions.

Under build traffic conditions [with the addition of the proposed development traffic], the overall intersection is expected to operate at LOS F during the AM and PM peak hours. Additionally, each intersection approach is expected to experience increased delays and less than desirable levels of operation.

Due to the increased delays and expected less than desirable levels of operation, mitigation was considered at this intersection. With the addition of an exclusive eastbound right turn lane on the eastbound approach of Trollingwood-Hawfields Road, the signalized intersection and its approaches are expected operate at similar levels as those expected under no-build conditions. This improvement is pending SHPO and NCDOT approval due to existing right of way constraints.

Although the intersection is expected to operate at a less than desirable level of operation, this is only expected to last for a short time during the AM peak hour that correlates with the student drop-off times for the surrounding schools; therefore, no additional improvements are recommended.

7.2. NC 119 and Turner Road

The existing unsignalized intersection was analyzed under all traffic conditions with the lane configurations and traffic control shown in Table 5. Refer to Table 5 for a summary of the analysis results. Refer to Appendix F for the Synchro capacity analysis reports and Appendix L for SimTraffic queue reports.

Table 5: Analysis Summary of NC 119 and Turner Road

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2021 Existing	WB[2] NB SB[1]	1 LT-RT 1 TH-RT 1 LT-TH	C (18.7) -- A (8.9)	N/A	B (13.1) -- A (8.8)	N/A
2025 No-Build	WB[2] NB SB[1]	1 LT, *1 RT* 1 TH-RT *1 LT*, 1 TH	F (61.7) -- B (10.2)	N/A	C (18.7) -- A (9.6)	N/A
2025 Build	WB[2] NB SB[1]	1 LT, *1 RT* 1 TH-RT *1 LT*, 1 TH	F (167.7) -- B (11.0)	N/A	D (26.8) -- B (10.6)	N/A

NC 119 = NB / SB, Turner Road = WB
- *Improvement recommended in an approved development TIA.*
- **Proposed improvements and/or revised lane configurations denoted in bold.**

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis indicates that under existing conditions, the major street left turn movement operates at LOS A during the AM and PM peak hours. Additionally, the minor street approach stop-controlled approach is expected to operate at LOS C or better during the AM and PM peak hours.

Under no-build traffic conditions [with the addition of the adjacent development traffic volumes], the major street left turn movement is expected to at LOS B or better during the AM and PM peak hours. Additionally, the minor street approach is expected to operate at LOS F during the AM peak hour and LOS C during the PM peak hour. There is expected to be significant queuing issues during the AM peak hour under no-build traffic conditions. It should be noted that northbound queues at the signalized intersection are expected to queue

into the intersection of NC 119 and Turner Road and cause significant westbound queues along Turner Road.

Under build traffic conditions [with the addition of the proposed development traffic], the major street left turn movement is expected to at LOS B during the AM and PM peak hours. Additionally, the minor street approach is expected to continue operating at LOS F during the AM peak hour and is expected to operate at an acceptable LOS D during the PM peak hour.

Although the stop-controlled approach is expected to operate at a less than desirable level of operation, this is only expected to last for a short time during the AM peak hour that correlates with the student drop-off times for the surrounding schools; therefore, no additional improvements are recommended.

It should be mentioned that a traffic signal warrant analysis [as requested by the City] was completed for this intersection. Under no-build traffic conditions [without the proposed developments site trips], a signal is warranted. Therefore, NCDOT and the City should consider the installation of a traffic signal. See Appendix M for the traffic signal warrant calculations.

7.3. NC 119 and Kimrey Road/Access A

The existing unsignalized intersection of was analyzed under all traffic conditions with the lane configurations and traffic control shown in Table 6. Refer to Table 6 for a summary of the analysis results. Refer to Appendix G for the Synchro capacity analysis reports and Appendix L for SimTraffic queue reports.

Table 6: Analysis Summary of NC 119 and Kimrey Road/Access A

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2021 Existing	EB[2] NB[1] SB	1 LT-RT 1 LT-TH 1 TH-RT	C (18.4) A (8.1) --	N/A	C (18.2) A (8.6) --	N/A
2025 No-Build	EB[2] NB[1] SB	1 LT-RT 1 LT-TH 1 TH-RT	F (54.2) A (9.4) --	N/A	C (23.2) A (8.9) --	N/A
2025 Build	EB[2] WB[2] NB[1] SB[1]	1 LT-TH-RT 1 LT-TH, **1 RT** 1 LT-TH, **1 RT** **1 LT**, 1 TH-RT	F (395.9) F (149.6) A (9.4) A (9.8)	N/A	F (92.2) D (32.6) A (8.9) A (8.9)	N/A
2025 Build - Improvements **(Signal)**	EB[2] WB[2] NB[1] SB[1]	1 LT-TH-RT 1 LT-TH, **1 RT** 1 LT-TH, **1 RT** **1 LT**, 1 TH-RT	D (47.2) C (29.2) C (21.5) B (11.6)	B (19.2)	D (37.2) B (18.2) C (21.2) B (16.8)	B (19.4)

NC 119 = NB / SB, Kimrey Road = EB, Access A = WB
- **Proposed improvements and/or revised lane configurations denoted in bold.**
1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis indicates that the major street left turn movements are expected to operate at LOS A during the AM and PM peak hours under all traffic conditions.

Under existing traffic conditions, the minor street approach of Kimrey Road operates at LOS C during the AM and PM peak hours.

Under no-build traffic conditions [with the addition of the adjacent development traffic volumes], the minor street approach of Kimrey Road is expected to operate at LOS F during the AM peak hour and LOS C during the PM peak hours.

Under build traffic conditions [with the addition of the proposed development traffic], the minor street approach of Kimrey Road is expected to operate at LOS F during the AM and PM peak hours, while the minor street approach of the proposed site access is expected to operate at LOS F and LOS D during the AM and PM peak hours, respectively.

Exclusive northbound right and southbound left turn lanes on NC 119 were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways* and are warranted on both approaches.

Although heavy delays could be expected for the side-street approaches during the AM and PM peak hours, this is only expected to last for a short time during the AM peak hour that correlates with the student drop-off times for the surrounding schools. Additionally, based on the SimTraffic Performance Reports [which takes into accounts gaps created by nearby signals], delays are not expected to exceed 68.0 seconds under build traffic conditions. Excessive queues are also not expected to be an issue at this intersection; therefore, additional improvements were not recommended.

It should be mentioned that a traffic signal warrant analysis [as requested by the City] was completed for this intersection. Under build traffic conditions, a signal is warranted. Therefore, a traffic signal is recommended. With the traffic signal, the overall intersection is expected to operate at LOS B during the build improvement traffic conditions for the AM and PM peak hours. See Appendix M for the traffic signal warrant calculations.

7.4. NC 119 and Jim Minor Road

The existing unsignalized intersection was analyzed under all traffic conditions with the existing lane configurations and traffic control shown in Table 7. Refer to Table 7 for a summary of the analysis results. Refer to Appendix H for the Synchro capacity analysis reports and Appendix L for Simtraffic queue reports.

Table 7: Analysis Summary of NC 119 and Jim Minor Road

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2021 Existing	EB[2] WB[2] NB[1] SB[1]	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	C (18.5) D (31.3) A (8.0) A (8.4)	N/A	D (27.6) C (24.9) A (8.3) A (8.0)	N/A
2025 No-Build	EB[2] WB[2] NB[1] SB[1]	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	* F (2276.6) A (9.5) A (9.1)	N/A	F (73.9) E (42.7) A (8.5) A (8.3)	N/A
2025 Build	EB[2] WB[2] NB[1] SB[1]	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	* F (3109.2) A (9.9) A (9.2)	N/A	F (140) F (66.3) A (8.7) A (8.5)	N/A

NC 119 = NB / SB, Jim Minor Road = EB / WB
- **Proposed improvements and/or revised lane configurations denoted in bold.**

*Due to limitations of Synchro, LOS could not be calculated.
1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis indicates that the major street left turn movements are expected to operate at LOS A during the AM and PM peak hours under all traffic conditions.

Under existing traffic conditions, the minor street approaches of Jim Minor Road operate at LOS D or better.

Under no-build traffic conditions [with the addition of the adjacent development traffic volumes], the minor street approaches of Jim Minor Road are expected to experience significant and operate at LOS E or LOS F during the AM and PM peak hours.

Although the proposed development is expected to add traffic to this intersection under build traffic conditions, it is only expected to contribute approximately 4% and 9% of the total traffic at the intersection during the AM and PM peak hours, respectively. Due to the excessive delays expected with the construction of the two new nearby schools, and the relatively low traffic volume impact from the proposed development, no improvements are being recommended. Additionally, due to historical properties located adjacent to the intersection, limited right-of-way is anticipated.

It should be mentioned that a traffic signal warrant analysis [as requested by the City] was completed for this intersection. Under no-build traffic conditions [without the proposed developments site trips], a signal is warranted. Therefore, NCDOT and the City should consider the installation of a traffic signal. See Appendix M for the traffic signal warrant calculations.

7.5. Turner Road and Farrell Road/Billy T Trail

The existing unsignalized intersection was analyzed under all traffic conditions with the existing lane configurations and traffic control in Table 8. Refer to Table 8 for a summary of the analysis results. Refer to Appendix I for the Synchro capacity analysis reports and Appendix L for Simtraffic queue reports.

Table 8: Analysis Summary of Turner Road and Farrell Road/Billy T Trail

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2021 Existing	EB[1] WB[1] NB[2] SB[2]	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	A (7.6) A (7.3) B (10.7) B (10.1)	N/A	A (7.4) A (7.7) B (11.0) A (8.8)	N/A
2025 No-Build	EB[1] WB[1] NB[2] SB[2]	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	A (7.9) A (7.5) B (12.6) B (11.4)	N/A	A (7.6) A (7.9) B (12.6) B (11.7)	N/A
2025 Build	EB[1] WB[1] NB[2] SB[2]	1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT 1 LT-TH-RT	A (7.9) A (7.5) B (14.3) B (11.5)	N/A	A (7.6) A (8.2) B (14.8) B (12.4)	N/A

Turner Road = EB / WB, Farrell Road / Billy T Trail = NB / SB

1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis indicates that the major street left turn movements and the minor street approaches are expected to operate at LOS B or better during the AM and PM peak hours, respectively.

Due to minimal impacts of the site trips to the intersection, no improvements are recommended.

7.6. Farrell Road and Jamie Baker Drive/Access B

The existing unsignalized intersection was analyzed under all traffic conditions with the lane configurations and traffic control shown in Table 9. Refer to Table 9 for a summary of the analysis results. Refer to Appendix J for the Synchro capacity analysis reports and Appendix L for SimTraffic queue reports.

Table 9: Analysis Summary of Farrell Road and Jamie Baker Drive/Access B

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2021 Existing	WB[2] NB SB[1]	1 LT-RT 1 TH-RT 1 LT-TH	A (8.7) -- A (7.3)	N/A	A (8.4) -- A (7.3)	N/A
2025 No-Build	WB[2] NB SB[1]	1 LT-RT 1 TH-RT 1 LT-TH	A (8.7) -- A (7.3)	N/A	A (8.6) -- A (7.3)	N/A
2025 Build	EB[2] WB[2] NB[1] SB[1]	**1 LT-TH-RT** 1 LT-**TH**-RT **1 LT**-TH-RT 1 LT-TH-**RT**	A (9.5) A (9.1) A (7.3) A (7.3)	N/A	A (9.4) A (9.2) A (7.4) A (7.3)	N/A

Farrell Road = NB / SB, Farrell Road = WB, Access B = EB
Proposed improvements and/or revised lane configurations denoted in bold.
1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach.

Capacity analysis indicates that the major street left turn movements and the side street approaches are expected to operate at LOS A during the AM and PM peak hours under all traffic conditions.

Turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways* and are not warranted based on AM and PM peak hour traffic volumes.

7.7. Farrell Road and Access C

The proposed unsignalized intersection of Farrell Road and Access C was analyzed under 2025 build traffic conditions with the lane configurations and traffic control shown in Table 10. Refer to Table 10 for a summary of the analysis results. Refer to Appendix K for the Synchro capacity analysis reports and Appendix L for SimTraffic queue reports.

Table 10: Analysis Summary of Farrell Road and Access C

ANALYSIS SCENARIO	APPROACH	LANE CONFIGURATIONS	WEEKDAY AM PEAK HOUR LEVEL OF SERVICE		WEEKDAY PM PEAK HOUR LEVEL OF SERVICE	
			Approach	Overall (seconds)	Approach	Overall (seconds)
2025 Build	EB[2] NB SB[1]	**1 LT-RT** **1 LT**-TH 1 TH-**RT**	A (9.4) A (7.3) --	N/A	A (9.4) A (7.5) ---	N/A

Farrell Road = NB / SB, Access C = EB
Proposed improvements and/or revised lane configurations denoted in bold.
1. Level of service for major-street left-turn movement.
2. Level of service for minor-street approach

Capacity analysis of 2025 build traffic conditions indicates that the major-street left turn movements and the side-street approach of Access C are expected to operate at LOS A during the weekday AM and PM peak hours.

Turn lanes were considered based on the NCDOT *Policy on Street and Driveway Access to North Carolina Highways* and are not warranted based on AM and PM peak hour traffic volumes.

8. CONCLUSIONS

This TIA was conducted to determine the potential traffic impacts of the proposed Hawfields Landing development to be located south of NC 119 and west of Turner Road in Mebane, North Carolina. The proposed development, anticipated to be completed in 2025, is assumed to consist of up to 351 single family homes and 160 townhomes. Access to the proposed development is to be provided via three (3) new full movement driveway connections: one (1) on NC 119 [located opposite Kimrey Road] and two (2) on Farrell Road [one located opposite Jamie Baker Drive and the other located approximately 1,000 feet to the north].

The study analyzes traffic conditions during the weekday AM and PM peak hours for the following scenarios:

- 2021 Existing Traffic Conditions
- 2025 No-Build Traffic Conditions
- 2025 Build Traffic Conditions

Trip Generation

It is estimated that the proposed development could generate up to 4,470 total site trips on the roadway network during a typical 24-hour weekday period. Of the daily traffic volume, it is anticipated that 329 trips (80 entering and 249 exiting) will occur during the weekday AM peak hour and 429 trips (271 entering and 158 exiting) will occur during the weekday PM peak hour.

Multimodal Analysis

Based on coordination with the City, it was noted that there is no transit system in the area; therefore, the transit mode was not taken into account for this study. There are currently no accommodations for pedestrian and bicycle modes on NC 119. Based on information provided by the developer, in order to accommodate the pedestrian and bicycle modes, sidewalks will be provided internally within the site as well as along the entire frontage of the subject property on NC 119.

Adjustments to Analysis Guidelines

Capacity analysis at all study intersections was completed according to NCDOT Congestion Management Guidelines. Refer to section 6.1 of this report for a detailed description of any adjustments to these guidelines made throughout the analysis.

Intersection Capacity Analysis Summary

All the study area intersections (including the proposed site driveways) are expected to operate at acceptable levels-of-service under existing and future year conditions with the exception of the intersections listed below. A summary of the study area intersections that are expected to need improvements are as follows:

NC 119 and Trollingwood Hawfields Road / Old Hillsborough Road

Under no-build traffic conditions [with the addition of the adjacent development traffic volumes], the overall intersection is expected to operate at LOS F and LOS E during the AM and PM peak hours, respectively. All intersection approaches are expected to operate at LOS E or better with the exception of the northbound approach of NC 119 during the PM peak hour. Significant queuing issues are expected during the AM and PM peak hours under no-build traffic conditions.

Under build traffic conditions [with the addition of the proposed development traffic], the overall intersection is expected to operate at LOS F during the AM and PM peak hours. Additionally, each intersection approach is expected to experience increased delays and less than desirable levels of operation.

With the addition of an exclusive eastbound right turn lane on the eastbound approach of Trollingwood-Hawfields Road, the signalized intersection and its approaches are expected operate at similar levels as those expected under no-build conditions.

NC 119 and Turner Road

Under no-build traffic conditions [with the addition of the adjacent development traffic volumes], the major street left turn movement is expected to at LOS B or better during the AM and PM peak hours. Additionally, the minor street approach is expected to operate at LOS F during the AM peak hour and LOS C during the PM peak hour. There is expected to be significant queuing issues during the AM peak hour under no-build traffic conditions. It should be noted that northbound queues at the signalized intersection are expected to queue into the intersection of NC 119 and Turner Road and cause significant westbound queues along Turner Road.

Under build traffic conditions [with the addition of the proposed development traffic], the major street left turn movement is expected to at LOS B during the AM and PM peak hours. Additionally, the minor street approach is expected to continue operating at LOS F during the AM peak hour and is expected to operate at an acceptable LOS D during the PM peak hour.

NC 119 and Kimrey Road / Access A

Under no-build traffic conditions [with the addition of the adjacent development traffic volumes], the minor street approach of Kimrey Road is expected to operate at LOS F during the AM peak hour and LOS C during the PM peak hours.

Under build traffic conditions [with the addition of the proposed development traffic], the minor street approach of Kimrey Road is expected to operate at LOS F during the AM and PM peak hours, while the minor street approach of the proposed site access is expected to operate at LOS F and LOS D during the AM and PM peak hours, respectively.

A traffic signal warrant analysis was completed for this intersection. Under build traffic conditions and a signal is warranted.

NC 119 and Jim Minor Road

Under no-build traffic conditions [with the addition of the adjacent development traffic volumes], the minor street approaches of Jim Minor Road are expected to experience significant and operate at LOS E or LOS F during the AM and PM peak hours.

The proposed development is only expected to contribute approximately 4% and 9% of the total traffic at the intersection during the AM and PM peak hours, respectively.

9. RECOMMENDATIONS

Based on the findings of this study, specific geometric improvements have been identified and are recommended to accommodate future traffic conditions. See a more detailed description of the recommended improvements below. Refer to Figure 11 for an illustration of the recommended lane configuration for the proposed development.

Recommended Improvements by Developer

NC 119 and Trollingwood Hawfields Road / Old Hillsborough Road

- Provide an exclusive eastbound right-turn lane with at least 50 feet of storage and appropriate taper.

NC 119 and Kimrey Road / Access A

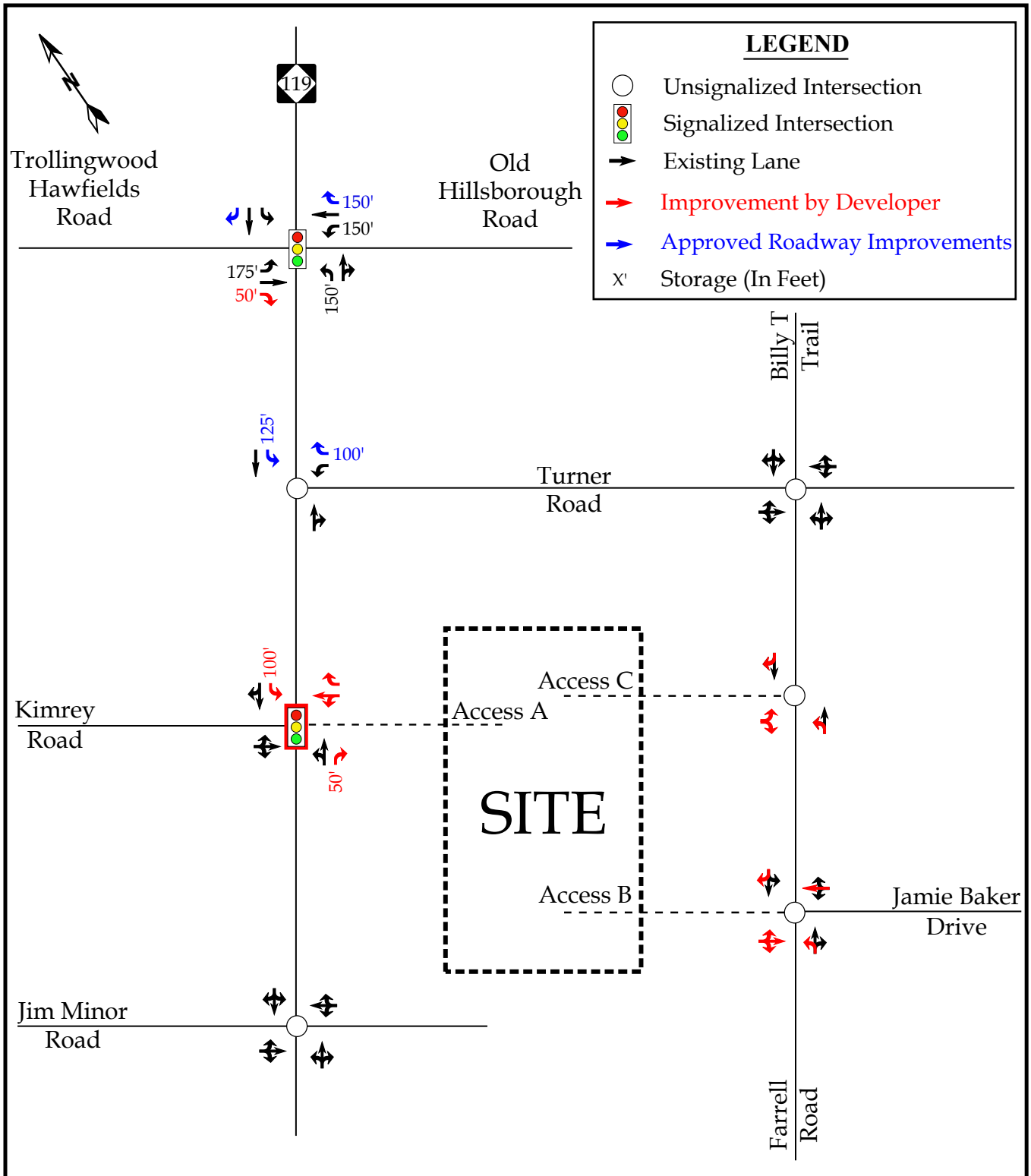
- Install traffic signal.
- Provide an exclusive northbound right-turn lane on NC 119 with at least 50 feet of storage and appropriate taper.
- Provide an exclusive southbound left-turn lane on NC 119 with at least 100 feet of storage and appropriate decel and taper.
- Construct Access A with one ingress lane and two egress lanes striped as a shared left/through lane and an exclusive right-turn lane.

Farrell Road and Jamie Baker Drive / Access B

- Construct Access A with one ingress lane and one egress lane.

Farrell Road and Access C

- Construct Access C with one ingress lane and one egress lane.



Moving forward.
RKA
RAMEY KEMP ASSOCIATES

Hawfields Landing
Mebane, NC

Recommended Lane Configurations

Scale: Not to Scale | Figure 11

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

March 23, 2022

ALAMANCE COUNTY

Chase Smith, PE
Ramey Kemp & Associates, Inc.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609

Subject: Proposed Hawfields Landing Located on NC 119 and Farrell Road (SR 2134).
Review of TIA Dated February 2022

Dear Mr. Smith,

NCDOT staff has completed a collaborative review with the City of Mebane of the above subject. Based on the information provided we offer the following comments with regards to the State Road network.

General:
The proposed development is to be located south of NC 119 and west of Turner Road in Mebane, North Carolina. This site will consist of up to 351 single family homes and 160 apartments and would be accessed via three site driveways: one along NC 119 and two along Farrell Road. This site is expected to generate approximately 4,470 new daily trips at full build-out in 2025.

NCDOT Committed Improvements:
NCDOT Transportation Improvement Project U-6013 includes widening NC 119 to multi-lanes, north of Trollingwood Hawfields Road / Old Hillsborough Road. This project is scheduled to let in 2023 with completion in 2026.

This improvement was considered in future analysis scenarios.

Future Roadway Improvements By Others:
At the intersection of NC 119 and Trollingwood Hawfields Road / Old Hillsborough Road, extend the existing southbound left turn lane on NC 119 to provide 225 feet of full storage and appropriate transitions and construct an exclusive westbound right turn lane

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
DIVISION 7, DISTRICT 1
PO BOX 766
GRAHAM, NC 27253-0766

Telephone: (336) 570-6833
Fax: (336) 570-6873
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
115 EAST CRESCENT SQUARE DRIVE
GRAHAM, NC 27253

on Old Hillsborough Road with 150 feet of full storage and appropriate deceleration taper as part of the Cambridge Park project.

At the intersection of NC 119 and Turner Road, construct an exclusive westbound right turn lane on Turner Road with 100 feet of full storage and appropriate deceleration taper and construct an exclusive southbound left turn lane on NC 119 with 125 feet of full storage and appropriate transitions as part of the Cambridge Park project.

These improvements were considered in future analysis scenarios.

Findings and Requirements:
Based on the information provided, the developer will be required to construct the following road improvements to mitigate the anticipated impacts of site traffic.

NC 119 and Trollingwood Hawfields Road / Old Hillsborough Road

- Subject to available right of way and environmental constraints, provide an exclusive eastbound right-turn lane with 100 feet of storage and appropriate deceleration taper.

NC 119 and Kimrey Road / Access A

- Install traffic signal.
- Provide an exclusive northbound right-turn lane on NC 119 with 100 feet of storage and appropriate deceleration taper.
- Provide exclusive northbound and southbound left-turn lanes on NC 119 with 100 feet of storage and appropriate transitions.
- Construct Access A with one ingress lane and two egress lanes consisting of a shared left/through lane and an exclusive right-turn lane.

Farrell Road and Jamie Baker Drive / Access B

- Construct Access B with one ingress lane and one egress lane under stop control.

Farrell Road and Access C

- Construct Access C with one ingress lane and one egress lane under stop control.

Multi-modal and Streetscape Enhancements:
Any locally stipulated multi-modal enhancements including but not limited to sidewalk, bike lanes, bus pull offs, lighting, landscaping etc. on State maintained routes are subject to NCDOT requirements and approval through the encroachment process.

General Requirements:
It is necessary to obtain an approved driveway permit and/or encroachment agreement(s) prior to performing work on the NCDOT right of way. As a condition of the permit, the permitee shall be responsible for design and construction of the above stipulated improvements in accordance with NCDOT requirements. An approved permit will be issued upon receipt of approved site plan, roadway and signal construction plans as needed, inspection fee, and any necessary performance and indemnity bonds.

The applicant shall dedicate any additional right of way necessary to accommodate the required road improvements or future improvements as stipulated.

All pavement markings shall be long life thermoplastic. Pavement markers shall be installed if they previously existed on the roadway.

The permitee shall be responsible for the installation and relocation of any additional highway signs that may be necessary due to these improvements and shall comply with the requirements of the MUTCD.

Feel free to contact me if you have any questions.

Sincerely,

C. N. Edwards Jr., PE
District Engineer

CNE/jlh
Cc: W.R. Archer, III, PE, Division Engineer
D.M. McPherson, Division Traffic Engineer
Brian Thomas, Congestion Management
City of Mebane

Memorandum

To: Cy Stober, AICP
Development Director
City of Mebane
106 East Washington Street
Mebane, NC 27302

Date: March 30, 2022

Project #: 39160.00

From: Baohong Wan, PhD, PE

Re: Hawfields Landing TIA – 2nd Review
Mebane, NC

A revised Traffic Impact Analysis (TIA) was prepared by Ramey Kemp & Associates (RKA) for the proposed Hawfields Landing development located south of NC 119 and west of Turner Road in Mebane, North Carolina. VHB is contracted by the City of Mebane to conduct an independent review of the Hawfields Landing TIA. This memo provides a summary of critical findings, followed by a detailed review of the study process and analysis results.

List of Mitigation Recommendations

The following items in red should be considered in addition to mitigation measures that have been identified within the Hawfields Landing TIA.

› NC 119 and Trollingwood Hawfields Road/Old Hillsborough Road (signalized)
- Provide a right-turn lane on eastbound Trollingwood Hawfields Road with 100' of storage and appropriate taper
- Intersection widening on the church side of Trollingwood Hawfield Road could be constrained due to right-of-way and utility concerns. As a result, the applicant may need to consider widening on the opposite site or symmetric widening to fit the required right-turn lane. The Old Hillsborough Road approach may need to be modified to accommodate potential lane shift. Traffic signal modification may also be needed to accommodate the geometric changes.

› NC 119 and Kimrey Road/Access A (signalized full movement intersection)
- Provide a right-turn lane on northbound NC 119 with 100 feet of storage and appropriate taper.
- Provide a left-turn lane on southbound NC 119 with 100 feet of storage and appropriate taper.
- Construct Access A with one ingress lane and two egress lanes, striped as a shared left/through lane and an exclusive right-turn lane, with an internal protected stem (IPS) length of 200 feet.
- Install a traffic signal.

› Farrell Road and Jamie Baker Drive / Access B (unsignalized)
- Construct Access B with one ingress lane and one egress lane.

› Farrell Road and Access C (unsignalized)
- Construct Access C with one ingress lane and one egress lane.

› Multimodal Considerations: Compliance of multimodal transportation requirements should be examined to ensure adequacy of pedestrian, bike, and transit facilities along internal streets and roadways along the property frontage.

Additional Comments (For Information Only)

› The intersection of NC 119 and Jim Minor Road is outside the City of Mebane ETJ, and it has been flagged by NCDOT for potential frontal impact crash concerns, although funding for improvements is uncertain at this time.

- NC 119 at Turner Road. Once the committed turn lanes are constructed by Cambridge Park at this intersection, a traffic signal may no longer be warranted due to shift of warrant threshold and discount of right-turn vehicles with improvement in operations. Widening to the north and west sides may be desired at this intersection to avoid disturbance to the cemetery.

Development Plan

The proposed development is anticipated to consist of up to 351 single-family homes and 160 apartments. Access to the proposed site is to be provided via one (1) full movement/RCI driveway on NC 119 and two (2) full movement driveways on Farrell Road.

Study Area and Analysis Scenarios

The TIA included the following intersections through coordination with NCDOT and the City of Mebane:

- NC 119 and Trollingwood Hawfields Road/Old Hillsborough Road (signalized)
- NC 119 and Turner Road (unsignalized)
- NC 119 and Kimrey Road (unsignalized)
- NC 119 and Jim Minor Road (unsignalized)
- Turner Road and Farrell Road/Billy T Trail (unsignalized)
- Farrell Road and Jamie Baker Drive (unsignalized)

The buildout is expected to occur in 2025. The TIA included capacity analyses during the weekday AM and PM peak hours under the following scenarios:

- Existing Year (2021)
- No-Build (2025)
- Build (2025)

Existing Volume and Background Assumptions

Existing (2021) analysis was conducted based on traffic counts conducted in October 2017 and October 2018 during typical weekday AM (7 to 9 AM) and PM (4 to 6 PM) peak hours. All counts were grown to the existing year (2021) utilizing a one percent (1%) annually compounded growth rate.

The No-Build (2025) scenario included an annual growth rate of one percent (1%) between the existing year (2021) and the future analysis year (2025), as well as site traffic associated with the following six (6) adjacent developments:

- Cambridge Park (residential)
- The Meadows (residential)
- Magnolia Glen (residential)
- Bradford Academy (institutional)
- Summerhaven Subdivision (residential)
- Alamance County High School (institutional)

Based on coordination with the NCDOT and the Town, it was determined that the following roadway improvements associated with the background developments should be considered with this study:

NC 119 and Trollingwood Hawfields Road/Old Hillsborough Road

- Extend the existing southbound left-turn lane to provide at least 225 feet of storage and appropriate taper (Cambridge Park TIA)
- Construct a westbound right-turn lane with 150 feet of storage and appropriate taper (Cambridge Park TIA)
- Widen NC 119, north of Trollingwood Hawfields Road/Old Hillsborough Road to allow for a continuous southbound right-turn lane (NCDOT STIP Project No. U-6013)

NC 119 and Turner Road

- Construct a westbound right-turn lane with 100 feet of storage and appropriate taper (Cambridge Park TIA).
- Construct a southbound left-turn lane with 125 feet of storage and appropriate taper (Cambridge Park TIA)

Trip Generation & Distribution

Trip generation potential was determined based on methodology outlined in the *ITE Trip Generation Manual, 10th Edition*. ITE Land Use Code (LUC) 210 (Single-Family Detached Housing) and LUC 220 (Low-Rise Multifamily Housing) were used based on the proposed land uses. Based on the TIA, the proposed development is projected to generate 4,470 vehicles per day on a typical weekday with 329 AM peak hour trips (80 entering, 249 exiting) and 429 PM peak hour trips (271 entering, 158 exiting).

Based on a combination of existing traffic patterns, coordination with the site team, population centers adjacent to the study area, and engineering judgment, passenger vehicle site traffic for this development were distributed as follows:

- 40% to/from the east via NC 119
- 25% to/from the west via NC 119
- 15% to/from the west via Trollingwood Hawfields Road
- 10% to/from the east via Old Hillsborough Road
- 4% to/from the west via Kimrey Road
- 1% to/from the west via Jim Minor Road
- 5% to/from the east via Turner Road

Capacity Analysis Results

Capacity analyses were performed using Synchro based on the Highway Capacity Manual method. Capacity analyses in the TIA were conducted following the NCDOT Congestion Management Capacity Analysis Guidelines. LOS, delay, and queue are reported and summarized for stop-controlled approaches at unsignalized intersections.

The analysis results and mitigation determinations are summarized below for each individual intersection. Individual approach level of service and delay should be summarized for stop-controlled approach at unsignalized intersections.

NC 119 and Trollingwood Hawfields Road/Old Hillsborough Road

Intersection and Approach	Traffic Control	Existing (2021)		No-Build (2025)		Build (2025)		Build (2025) with Improvements	
		AM	PM	AM	PM	AM	PM	AM	PM
NC 119 and Trollingwood Hawfields Road/ Old Hillsborough Road	Signalized	**D (39.4)**	**C (34.3)**	**F (83.9)**	**E (60.8)**	**F (104.5)**	**F (82.2)**	**F (81.1)**	**D (51.3)**
Eastbound		D-36.3	D-46.5	F-115.3	E-73.2	F-155.4	F-93.3	F-101.7	D-54.2
Westbound		D-54.9	D-37.4	E-79.5	D-49.5	F-96.4	E-63.5	F-103.1	D-49.1
Northbound		D-38.3	C-26.4	F-85.2	E-68.6	F-109.4	F-93.0	E-73.2	E-55.6
Southbound		C-26.6	C-30.3	E-61.5	D-54.6	E-64.5	E-78.9	D-54.3	D-47.6

The TIA indicated that this intersection is expected to operate at LOS F during the AM peak hour and LOS E during the PM peak hour under the No-Build conditions despite the transportation improvements planned by NCDOT and nearby developments. The addition of site trips is expected to cause delay increases, and the intersection is projected to operate at LOS F during both peak hours under the buildout conditions. The following improvement was recommended in the TIA for the intersection:

› Construct an exclusive eastbound right-turn lane with at least 50 feet of storage and appropriate taper.

Since 95th percentile queue length for the eastbound right-turn movement will exceed 250 feet during peak hours, the storage for the proposed eastbound right-turn lane should be extended to at least 100 feet.

NC 119 and Kimrey Road/Access A

Intersection and Approach	Traffic Control	Existing (2021)		No-Build (2025)		Build (2025)		Build (2025) with Improvements	
		AM	PM	AM	PM	AM	PM	AM	PM
NC 119 and Kimrey Road/Access A	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Eastbound		C-18.4	C-18.2	F-54.2	C-23.2	F-391.1	F-92.2	F-391.1	F-92.2
Westbound		---	---	---	---	F-149.6	D-32.6	F-149.6	D-32.6

The TIA indicated that this planned site access is expected to operate at LOS F during the AM peak hour and LOS D during the PM peak hour under the Build conditions, and Kimrey Road is expected to operate at LOS F during both peak hours with the site access in place. The following improvements were recommended in the TIA for the intersection:

› Construct a right-turn lane on northbound NC 119 with at least 50 feet of storage and appropriate taper.

› Construct a left-turn lane on southbound NC 119 with at least 100 feet of storage and appropriate taper.

› Construct Access A with one ingress lane and two egress lanes striped as a shared left/through lane and an exclusive right-turn lane.

Based on queueing analysis along Access A, an internal protected stem length of 200 feet should be provided. In addition, the signal warrant analysis included in the revised TIA indicates a traffic signal is not fully warranted at this

location. Nevertheless, installation of a traffic signal should be considered due to the horizontal curve along NC 119 and the skewed intersection angle at Access A/Kimrey Road.

Farrell Road and Jamie Baker Drive/Access B

Intersection and Approach	Traffic Control	Existing (2021)		No-Build (2025)		Build (2025)		Build (2025) with Improvements	
		AM	PM	AM	PM	AM	PM	AM	PM
Farrell Road and Jamie Baker Drive/Access B	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Eastbound		---	---	---	---	A-9.5	A-9.4	A-9.5	A-9.4
Westbound		A-8.7	A-8.4	A-8.7	A-8.6	A-9.1	A-9.2	A-9.1	A-9.2

The TIA indicated that this planned site access is expected to operate at LOS A under the Build conditions. The future estimated AADT along Farrell Road is expected to be well under 4,000 vehicles per day (vpd); therefore, no turn lane improvements are recommended at this intersection. The following improvements were recommended in the TIA for the intersection:

› Construct Access B with one ingress lane and one egress lane.

Farrell Road and Access C

Intersection and Approach	Traffic Control	Existing (2021)		No-Build (2025)		Build (2025)		Build (2025) with Improvements	
		AM	PM	AM	PM	AM	PM	AM	PM
Farrell Road and Access C	Unsignalized	**-**	**-**	**-**	**-**	**N/A**	**N/A**	**N/A**	**N/A**
Eastbound		---	---	---	---	A-9.4	A-9.4	A-9.4	A-9.4

The TIA indicated that this planned site access is expected to operate at LOS A under the Build conditions. The future estimated AADT along Farrell Road is expected to be well under 4,000 vpd; therefore, no turn lane improvements are recommended at this intersection. The results and determinations appear satisfactory. The following improvements were recommended in the TIA for the intersection:

› Construct Access C with one ingress lane and one egress lane.

NC 119 and Turner Road

Intersection and Approach	Traffic Control	Existing (2021)		No-Build (2025)		Build (2025)		Build (2025) with Improvements	
		AM	PM	AM	PM	AM	PM	AM	PM
NC 119 and Turner Road	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Westbound		C-18.7	B-13.1	F-61.7	C-18.7	F-167.7	D-26.8	F-167.7	D-26.8

The TIA indicated that stop-controlled Turner Road is expected to operate at LOS F during the AM peak hour and LOS D during the PM peak hour under the future year conditions despite the committed turn lane improvements by Cambridge Park. As shown in the signal warrant analysis included in the revised TIA, a traffic signal is warranted under the future year conditions. However, cnce the committed turn lanes are constructed by Cambridge Park at this intersection, a traffic signal may no longer be warranted due to shift of warrant threshold and discount of right-turn vehicles. Therefore, a traffic signal is not required to be constructed at this time. Widening to the north and west sides may be desired at this intersection to avoid disturbance to the cemetery.

Memorandum

NC 119 and Jim Minor Road

Intersection and Approach	Traffic Control	Existing (2021)		No-Build (2025)		Build (2025)		Build (2025) with Improvements	
		AM	PM	AM	PM	AM	PM	AM	PM
NC 119 and Jim Minor Road	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Eastbound		C-18.5	D-27.6	---	F-73.9	---	F-140.0	---	F-140.0
Westbound		D-31.3	C-24.9	F-2276.6	E-42.7	F-3109.2	F-66.3	F-3109.2	F-66.3

The TIA indicated that this intersection is expected to operate at LOS F during both peak hours under the No-Build and Build conditions. As shown in the signal warrant analysis included in the revised TIA, a traffic signal is warranted under the future year conditions. However, traffic congestion is mostly related with school traffic at this intersection. since the intersection of NC 119 and Jim Minor Road is outside the City's ETJ, improvements are not by this development. It should be noted that this intersection has been flagged by NCDOT for potential frontal impact crash concerns, although funding for improvements is uncertain at this time.

Turner Road and Farrell Road/Billy T Trail

Intersection and Approach	Traffic Control	Existing (2021)		No-Build (2025)		Build (2025)		Build (2025) with Improvements	
		AM	PM	AM	PM	AM	PM	AM	PM
Turner Road and Farrell Road/ Billy T Trail	Unsignalized	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
Northbound		B-10.7	B-11.0	B-12.6	B-12.6	B-14.3	B-14.8	B-14.3	B-14.8
Southbound		B-10.1	A-8.8	B-11.4	B-11.7	B-11.5	B-12.4	B-11.5	B-12.4

The stop-controlled approaches at this intersection are expected to operate at LOS B during both peak hours under the No-Build and Build conditions. No improvements should be required at this intersection.

Cc: C. N. Edwards Jr., PE, NCDOT Highway Division 7 District 1

AGENDA ITEM #5

Comprehensive Amendments to the Unified Development Ordinance

Presenter

Cy Stober, Development Director

Public Hearing

Yes☒ No☐

Summary

The Planning Board shall advise and comment on the request to amend portions of Articles 2 – 7, 10, and 12, the Official Zoning Map, and Appendices A and G of the Unified Development Ordinance (UDO). The proposed amendments are the result of six months of collaborative discussions and work with Green Heron Consulting, LLC, and a two-month public input process to ensure that the Mebane UDO is A) responsive to local concerns and priorities, most notably the goals and objectives stated in plans adopted by the City Council; B) reflective of City staff concerns on application and interpretation of the existing language in the UDO; and C) bringing the UDO into alignment with current professional practices and standards.

The proposed amendments are the first of a two-phased approach to updating and amending the Mebane UDO; the second set of amendments will be presented later this calendar year. Staff is presenting a suite of amendments in Phase 1, provided in the attachments, but perhaps most prominently featuring changes to the Tables of Permitted Uses, Dimensional Standards, Perimeter Landscaping, and Streetscaping; introducing several new uses, some with development standards; providing definitions for all permitted uses; proposing a new Zoning Map that is compliant with NCGS 160D; reconfiguring existing language for improved reference and application by staff and the public; and providing clearer guidance on issues of nonconformance.

Background

The City of Mebane UDO regulates all development and land use in the City and extraterritorial jurisdiction. The City adopted the UDO in 2008 and has regularly amended it to reflect current and emerging needs; most UDOs are replaced every 15 – 20 years. The most significant recent change was to make the UDO consistent with North Carolina General Statutes (NCGS) 160D, adopted into law in 2019. While there a small number of amendments – all noted – required to keep the Mebane UDO compliant with State and Federal laws, the majority of the proposed amendments presented are voluntary and reflective of public input, professional opinions of staff and the City consultant, or updates consistent with contemporary best practices.

Concurrent with staff efforts on recommendations, a series of eight surveys on specific topics were released to the public to good response – the City received >150 responses to Fence standards. The feedback of these surveys is summarized and attached. Most of the feedback was informative regarding aesthetics and accessibility in the City, and the results guided staff recommendations on some specifics regarding some of the recommended amendments (e.g. fence materials).

Several of the proposed Mebane UDO amendments are likely to generate more discussion than others. In an effort to distribute comments and shepherd through amendments in a timely manner, staff has opted to present changes to the UDO in two "phases". Staff is presenting a suite of amendments in Phase 1, detailed below, but generally features changes to the Tables of Permitted Uses, Dimensional Standards, Perimeter Landscaping, and Streetscaping; introducing several new uses, some with development standards; providing definitions for all permitted uses; reconfiguring existing language for improved reference and application by staff and the public; and providing clearer guidance on issues of nonconformance. Staff will be presenting the Phase 2 round of amendments later this year, which will feature 1) an entirely new set of sign standards, 2) new parking requirements, and 3) the inclusion of new supporting illustrations to aid in public and staff interpretation of the UDO. Furthermore, should the Planning Board take more than one meeting for discussion and deliberation on the proposed amendments, staff is requesting immediate action on the subjects of Accessory Structures, Walls and Fences, and Definitions, as well as the Official Zoning Map. A summary of the of the proposed changes is provided.

Summary of Proposed Amendments

Article 2

There are three recommended amendments to Article 2:

1) Clarify plot plan requirements;

2) Incorporate pedestrian access concerns, as recommended by the City's adopted *Bicycle and Pedestrian Transportation Plan*; and

3) Relocate the Developer Agreements requirement for all Major Subdivisions, Conditional Zonings, and Special Use approvals from the City to a more logical location in the UDO. No changes to the text are recommended in this amendment – it is simply a translocation.

Article 3

The needs of Article 3 are largely "good housekeeping":

1) A new zoning map (see attached) that brings the City's zoning into conformance with NCGS 160D, which eliminated conditional use (CU) districts, and brings the City zoning map's symbology into consistency with the profession's best practices;

2) Recommended revisions to the descriptions of the "Office/Institutional" (O/I) and "Commercial Business District" (B-1) zoning districts to accurately reflect their applied use; and

3) Relocation of the Mobile Home Overlay ("MHO") overlay district standards currently detailed in Article 5 to their more appropriate locations in Articles 3 and 4, where they are currently cross-referenced to the Article 5 language rather than stated. The current approach creates redundancies and muddles the purpose of Article 5, which is otherwise environmental regulations.

Article 4

Article 4 has substantial recommended amendments, including multiple changes to the Tables of Permitted Uses ("TPU") and Dimensional Standards, as well as several new land use types, including three with development standards. City staff recommendations are as follows:

1) Proposed elimination of the RA-20 zoning district due to A) its lack of use; and B) the broad exemptions to local land use regulations offered by NC General Statutes for *bona fide* farms.

2) Change the current key to the TPU so it is more user-friendly and consistent with general professional practice, switching "Z" for "P" for uses "Allowed in the Zoning district", and "CC" for "S" for a "Special Use Permit before the City Council".

3) Switching of the M-1 and M-2 districts so that the former is "Light Manufacturing" and the latter is "Heavy Manufacturing", which is both more logical and consistent with zoning classification practices in general (the higher number, the more intensive the use).

4) Elimination of all accessory uses that are regulated in Section 4-2.

5) Elimination of uses that are not presented to staff often, are obsolete, and/or are redundant with other, more comprehensive uses:

    - Bingo Parlor
    - Fishing Lake
    - Orphanage
    - Blacksmith
    - Photocopying and Duplicating Services
    - Photofinishing Laboratory
    - Roofing Shop
    - Newsstand
    - Video Tape Rental and Sales, except Adult Video Store
    - Printing and Publishing, Incidental to a Newspaper Office
    - Manufacturing or Industrial, not listed elsewhere
    - Commercial Feeder/Breeder Operation
    - Billboard, Outdoor Advertising Sign
    - Planned Multiple Occupancy Group (Commercial, Office or Industrial)

6) Reassignment of several uses as having to meet the development standards provided in the UDO but, technically, not currently enforceable to due to the symbology of the Table showing them allowed by-right.

7) Introduction of the following new "Educational/Institutional" Uses:

    - Crematorium
    - Urgent Care Facility
    - Wellness Center
    - Vocational, Business, or Technical School (relocated from Service menu)

8) Introduction of the following new "Business, Professional, and Personal Services" uses:

    - Automobile, ATV, and Motorcycle Repair Services, Minor
    - Automobile Repair Services, Major
    - Craft Studio
    - Makerspace
    - Medical or Dental Offices
    - Medical Office Park
    - Tattoo Parlor & Body Piercing

9) Introduction of "Other Hazardous Materials Trade and Storage" to the Wholesale Trade uses.

10) Introduction of the following new "Transportation, Warehousing, and Utilities" uses:

    - Broadcast Station
    - Broadcast Studio
    - Composting Facility (as a prohibited use)
    - Data Center
    - Distribution Center
    - Junkyard or Recycling Facility (as a prohibited use)
    - Landfill, Construction & Demolition Debris (as a prohibited use)
    - Landfill, Municipal Waste (as a prohibited use)
    - Landfill, Land Clearing & Inert Debris (as a prohibited use)

- Railyard
- Telephone Exchange, Transformer Stations
- Transfer Station, Municipal Solid Waste

11) Introduction of the following new "Temporary" uses:
    - Health Care Structure
    - Temporary Debris Storage and Reduction Sites
12) Reallocation of multiple B-3 uses to O/I to reflect the need for larger parcels and potential impacts to neighboring properties for several uses.
13) Requirement of Special Use Permits for the following Manufacturing Uses:
    - Batteries
    - Carpets, Bedding (M-2 only)
    - Chemicals, Paints, and Allied Products
    - Furniture and Fixtures (M-2 only)
    - Hardware and Housewares (M-2 only)
    - Manufactured Housing and Wood Buildings
    - Paper Products (M-2 only)
    - Rubber and Plastics
    - Tobacco Products
14) Identification of the following land uses as not being permitted anywhere in Mebane:
    - Four categories of Junkyards/Landfills
    - Compost Facilities
    - Mining/Extraction
15) Established the "Microbrewery/Microdistillery" use, allowed by right in M-1 and M-2 districts and as a special use in B-1 and B-2 districts. It establishes a "micro" establishment as one having 15,000 barrels of beer or 50,000 gallons of spirit produced per site per year, as now defined in Article 12.
16) Amendment to Table of Dimensional Standards to reflect City needs resulting from an analysis of twelve peer communities. These amendments will allow for
    - narrower residential lots with homes closer to the street in higher zoning districts;

- more appropriately allow office and business zoning districts on properties sized to accommodate them;
- bring businesses closer to the street by reducing front setbacks so that the frontage will primarily be the façade and landscaping; and
- appropriately locate large employers in Manufacturing zones farther from the street and their non-Manufacturing neighbors

17) Clarify that garages/carports are allowed in side yards.

18) Clarify that high-quality metal is allowed to be used as a building material for accessory structures (see also Article 6 for details).

19) Relocate Dumpster criteria (without change) to focus other discussion concentrating on accessory uses and structures from its current location in Article 6-3 "Landscaping".

20) Revision to Fence/Wall standards for clarity, which is largely informed by the public survey regarding materials and height for side yards on corner lots.
    - Prohibit welded wire as a fencing material
    - Restrict the use of chain link on residential lots to side and rear yards
    - Reduce from 15' to 5' the distance a corner lot side yard is allowed to have a 6' fence

21) Consolidation of all Single Family Lot Standards – including Flag Lots – here, from where they are currently located in Article 7, with the few recommended changes shown. These lot standards are universal and should not be relegated to events of "subdivision"; nonconforming lots can be addressed as allowed by Article 10.

22) Require that Flag Lots – unless allowed by statutory exemption – to require a BOA public hearing.

23) Provide reference to Article 7 standards (water and sewer, sidewalk, street, and TIA requirements) for universal application, which will accordingly allow for their universal application.

24) Provide a cross-reference to the City Ordinance for Noise Levels and remove any/all quantitative criteria from the UDO. Noise is a police matter already addressed by the City Ordinance.

25) As discussed in Article 3 amendments, Mobile Home standards are proposed to be relocated to 4-7.3.A, where they were already reserved and cross-referenced to Article 5.

26) Allow for Patio Homes, Townhomes, Multifamily complexes (for rent and sale) to be placed closer to each other (10' vs. 20'), reflecting contemporary practices.

27) Provide for bicycle and pedestrian access, as recommended by the City's adopted *Bicycle and Pedestrian Transportation Plan*.

28) Allow all B-1 uses in PUDs and TNDs, as well as for Live/Work situations.

29) Remove some burdensome development standards for the Live/Work land use.

30) Reduce lot area threshold to allow for a detached ADU to required lot size for zoning district from the current 150% minimum lot area requirement.

31) Eliminate Development Standards for Public parks, though any stadiums, athletic fields, swimming pools, or other large, constructed features would remain subject to the development standards of those separate, defined uses.

32) Introduction of Farm Supplies and Equipment development standards – largely based on existing criteria for "Superstores" – to respond to market demand for these establishments in B-2 districts.

33) Introduction of Warehouse (self-storage) development standards – largely based on Burlington and Greensboro's standards – to respond to market demand for these establishments in B-2 districts.

34) Introduction of Temporary Health Care Structures as a by-right use for all residential districts, as required by NCGS 160D-910.

35) Provide eliminate the Planned Multiple Occupancy Group land use, which is satisfactorily served already by the Shopping Center criteria (which restrict uses for facilities <15,000 s.f. in gross area and require special use permits if larger), and by the Planned Nonresidential Group standards of Section 4-4, which allows for multiple buildings on a single property by right, provided they meet development standards.

36) Relocation of the Highway Corridor Overlay ("MHO") overlay district standards currently detailed in Article 5 to their more appropriate location in Article 4. The current approach places all land use types in Article 4, including overlay districts, and eliminates redundancies with Article 5, which is otherwise environmental regulations

Article 5

The only proposed amendments are the elimination of the Mobile Home and Highway Corridor Overlay districts to focus article on environmental regulations, with the descriptions relocated to Article 3 and MHO standards relocated to Article 4.

Article 6

Staff has not provided any proposed changes to the Sign standards except to bring the "Non-Commercial" signs into consistency with Supreme Court rulings (Reed v. Town of Gilbert). The following amendments are otherwise proposed:

1) Reference to relevant Article 7 standards here and for universal application.

2) Reduction of the building size to which architectural standards are applied to make it consistent with the thresholds elsewhere established for greater scrutiny (e.g. footprint to qualify as a "Neighborhood Shopping Center").

3) Architectural Standards definitions have been relocated to Article 12.

4) Establish that the front entrance to a building must face a street.

5) Allow for high-quality metals, as described, as an exterior building material.

6) Provide amendments as recommended by the City's adopted *Bicycle and Pedestrian Transportation Plan*.

7) Reduce the redevelopment threshold from 45% to 35% to require landscaping conformance.

8) Clarifying the small lot exemption for landscaping.

9) Provide reference to NCSU and NCDA documents regarding what plants quality as "invasive" and are prohibited in Mebane (note that Appendix G has been correspondingly amended).

10) Eliminate the 50% landscaping reduction for development next to vacant lots and simply establish standards for that situation, as proposed in Table 6-3-1.

11) Proposed increases to perimeter buffers for Manufacturing zones in Table 6-3-1.

12) Provide for two new uses that have specified Land Use Classes for buffering and relocate "Adult Establishments" and "Warehousing" from Class 6 to Class 7.

13) Clarify the planting standards for Type B and Type C buffers (staff will be presenting new illustrations to support this written description to be presented in Phase 2).

14) Increase the streetscape requirements for Manufacturing zones and streetscaping along the interstate corridor.

15) Clarify the Tree Survey requirements and purpose to reflect staff application and contemporary practices/technology.

16) Relocation of Dumpster criteria to Article 4.

17) Proposed parking amendments to accommodate more modes of transportation and simplify Table 6-4-2 while allowing for more standard 9'x18' perpendicular parking spaces.

18) Allow curb and gutter waiver for parking areas by City Engineer rather than City Council.

19) Proposed restructuring of the Open Space and Recreation requirements to allow for simpler interpretation while not significantly altering current approach, except to require public recreation dedication by for-rent multifamily and townhome developments; and create new standards for B-1 and infill development types so that they do not have impossible recreation and open space criteria to meet in small, constrained lots.

20) Removing stormwater wet ponds as creditable open space, and giving 50% credit for other environmental features (floodplains, steep slopes, etc.).

Article 7

1) Repeat subdivision exemptions in this section so that they are not only located in the definition for "Subdivision" in Article 12.

2) Relocate Lot Standards to Article 4 for universal application with very few changes.

3) Address driveway requirement at 50+ lots, to ensure that staff is evaluating these for constructability prior to getting to City Council discussion.

4) Expressly discourage private streets.

Article 10

1) Clarifying nonconformance language for staff enforceability purposes.

2) Clarify that the condemnation/acquisition process – whether voluntary or forced – allows for continued nonconformance of affected lots and structures, including signs.

3) Allow for continued improvement of nonconforming structures without penalty until property is redeveloped.

4) Clarify need for sign and site conformance with redevelopment/improvement.

5) Clarify application of planning police powers to address nonconformances by establishing thresholds for enforcement that also allow for minor improvements to sites and structures, including the provision of conforming features (e.g. new signs).

Article 12

1) Integrates all Permitted Uses and Architectural definitions into definitions

2) Provides statutory cross-references for Adult Uses, Temporary Health Care Structures, and Hazardous Waste facilities.

3) Provide clarity on lot frontages, yards, and setbacks. Currently, the UDO is either ambiguous or contradictory on whether staff should recognize only one "front" to a lot or that every street frontage of a lot should be treated as a "front", with the appropriate setbacks, landscaping, etc., applied. The definitions proposed are intended to clarify the matter and make it clear that every lot in Mebane has one front; all other frontages are "sides", including dual frontage and corner lots. The definition provides an iterative approach to making the determination on which frontage is the primary frontage.

Appendix A

Brings Plot Plan requirements up to date with staff needs and to maintain NPDES Phase II and MS4 compliance, ensuring that onsite drainage accesses private and public stormwater infrastructure.

Appendix G

Updates Plant list to eliminate invasive species and promote Native species

Financial Impact

N/A

Staff Recommendation

Staff recommends approval of the presented amendments for amendment of the Mebane UDO.

Suggested Motion

Motion to approve the amendments to the City of Mebane Unified Development Ordinance as presented. The amendments are consistent with the objectives and policies for growth and development in the Comprehensive Land Development Plan *Mebane By Design*, and are mostly required by State law.

Attachments

1. UDO Survey Report
2. Proposed new Zoning Map
3. Proposed amendments to the Table of Permitted Uses
4. Proposed text amendments to the Unified Development Ordinance

SUMMARY OF UDO SURVEY RESPONSES

As part of the Planning Department's efforts to revise the Mebane Unified Development Ordinance (UDO), we launched a series of surveys to gather input on the following topics:

- Fences and Accessory Structures
- Property Standards
- Open Space and Landscaping
- Parking
- Signs
- Table of Permitted Uses
- Nonconformities

These surveys were open from mid-January 2022 through the end of February. They were advertised on the City's website and Facebook page.

This report summarizes the responses from the following surveys:

- Parking - Page 2
- Property Standards - Page 3
- Fences and Accessory Structures - Pages 4&5
- Open Space and Landscaping - Page 6

Copies of each survey form are provided in a separate appendix.

Prior to launching the surveys, the Planning Department held an open house and information session on December 13th, 2021. Posters on each topic were presented during the open house. These posters influenced the design of the public input surveys and are available on the City's Website: https://cityofmebanenc.gov/udo-info-posters/.

PARKING STANDARDS

WHAT DID WE ASK?

We asked respondents to consider where more parking is needed for bicycles, ADA spaces, electric vehicle charging stations, and compact cars.

We asked if there were any locations with too much or too little parking for standard motor vehicles.

WHO RESPONDED?

- 97 survey responses
- 96% of respondents live in or around Mebane
- 9% own a business in Mebane

WHAT DID WE LEARN?

Respondents would like to see MORE...

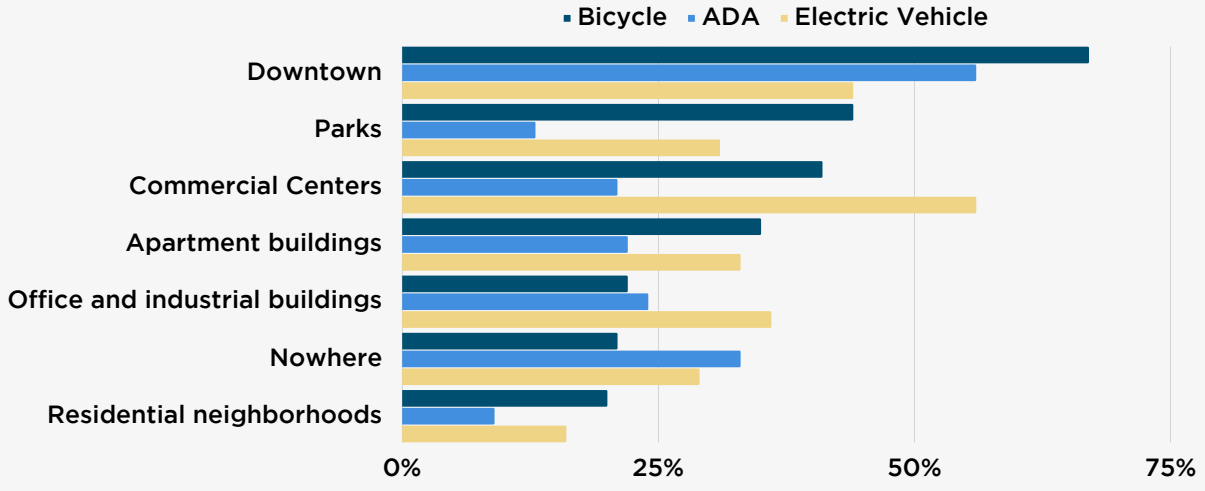
- Bike parking in Downtown, at Parks, and in Commercial Centers.
- ADA spaces in Downtown.
- Electric vehicle charging in Commercial Centers and Downtown.

A majority of respondents do not want dedicated compact car parking.

Large commercial sites were often mentioned as having too much parking for standard motor vehicles. While, Downtown was listed as having too little parking for standard motor vehicles.

WHERE IS MORE PARKING NEEDED?

Percentages are calculated from 97 unique responses. Respondents could select multiple options.



PROPERTY STANDARDS

WHAT DID WE ASK?

We asked respondents to consider four illustrations of development and asked if those are preferred near Downtown and other commercial centers, on the fringes of Mebane, nowhere, or other.

WHO RESPONDED?

- 123 survey responses
- 97% of respondents live in or around Mebane.
- 6% own a business in Mebane.
- 6% work in Mebane as developer, engineer, etc.

WHAT DID WE LEARN?

Outside of Mebane's Downtown and commercial centers, respondents indicated a preference for larger lot developments. Walkability is preferred nearer Downtown.

Respondents were in general agreement on the following:

- Houses with bigger yards are preferred on the fringes of Mebane (82.1%).
- Parking in driveways is preferred on the fringes of Mebane (61.8%).
- On-street parking is not desired (65.9%).
- Walkability to businesses is preferred near Downtown and other commercial centers (72.4%).
- Neighborhoods with privacy and quiet is preferred on the fringes of Mebane (79.7%).

Less agreement existed for three of the illustrations:

- Houses closer to the street are slightly preferred nowhere.
- Limited businesses in neighborhoods is not clearly preferred in a particular area.
- Tight knit, walkable neighborhoods are not clearly preferred in a particular area.

FENCE MATERIALS AND LOCATION

WHAT DID WE ASK?

We asked respondents to consider if various types of fence materials should be permitted in residential yards.

We asked if fences greater than four feet in height should be setback a certain distance from the street.

WHO RESPONDED?

- 142 survey responses
- 98% of respondents live in or around Mebane
- 3% own a business in Mebane
- 2% work in Mebane as developer, engineer, etc.

WHAT DID WE LEARN?

Most respondents indicated that the following should be permitted fence materials:

- Aluminum, Iron, Steel (86%)
- Vinyl (68%)
- Wood & Welded Wire (63%)
- Wood (61%)

About half of the respondents indicated that chain link and vinyl-coated chain link should be a permitted fence materials. 40% of respondents indicated that these chain link materials should only be permitted for use in rear and side yards.

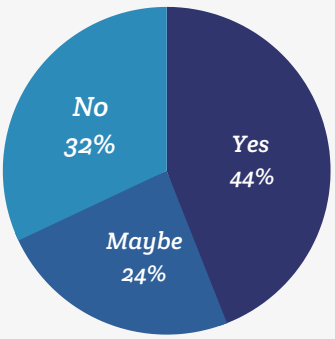
The following themes about fence materials emerged among the public comments:

- Any non-hazardous materials should be allowed.
- More affordable materials should not be prohibited.
- Fences should be neat and in good repair.

Responses varied for the questions about fence height and location, however some key themes emerged:

- Fences should not impede visibility at intersections.
- Property owners should be able to have privacy and maximize the use of their land.

Should fences greater than 4 ft in height be set back a certain distance from the street or sidewalk?



METAL AS A BUILDING MATERIAL

WHAT DID WE ASK?

We asked respondents to consider if metal should be a permitted building material for residential accessory buildings and commercial buildings.

WHO RESPONDED?

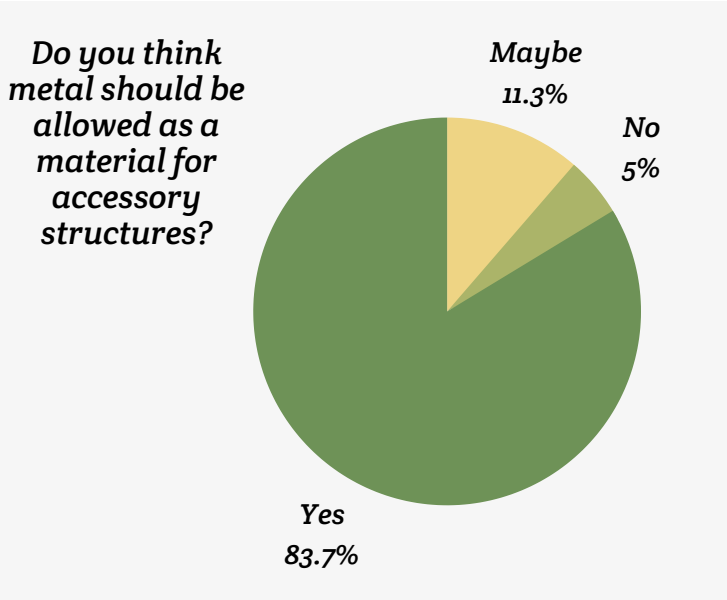
- 142 survey responses
- 98% of respondents live in or around Mebane
- 3% own a business in Mebane
- 2% work in Mebane as developer, engineer, etc.

WHAT DID WE LEARN?

84% of respondents indicated that metal should be allowed as a material for accessory structures and 76% said it should be allowed for commercial buildings.

The following themes emerged among the public comments:

- Commercial buildings should be held to a higher standard if metal is permitted and should be in harmony with surrounding businesses.
- Metal structures must be well maintained.
- Metal can be attractive and cost effective.



OPEN SPACE & LANDSCAPING

WHO RESPONDED?

- 102 survey responses
- 98% of respondents live in or around Mebane.
- 5% own a business in Mebane.
- 5% work in Mebane as developer, engineer, etc.

OPEN SPACE

WHAT DID WE ASK?

We asked respondents to determine if various types of outdoor areas typically provided in major residential developments should be considered as and counted towards "open space" requirements.

WHAT DID WE LEARN?

- 70% of respondents consider landscaping to be open space.
- 68% of respondents consider recreation areas to be open space.
- 32% of respondents consider stormwater devices to be open space.

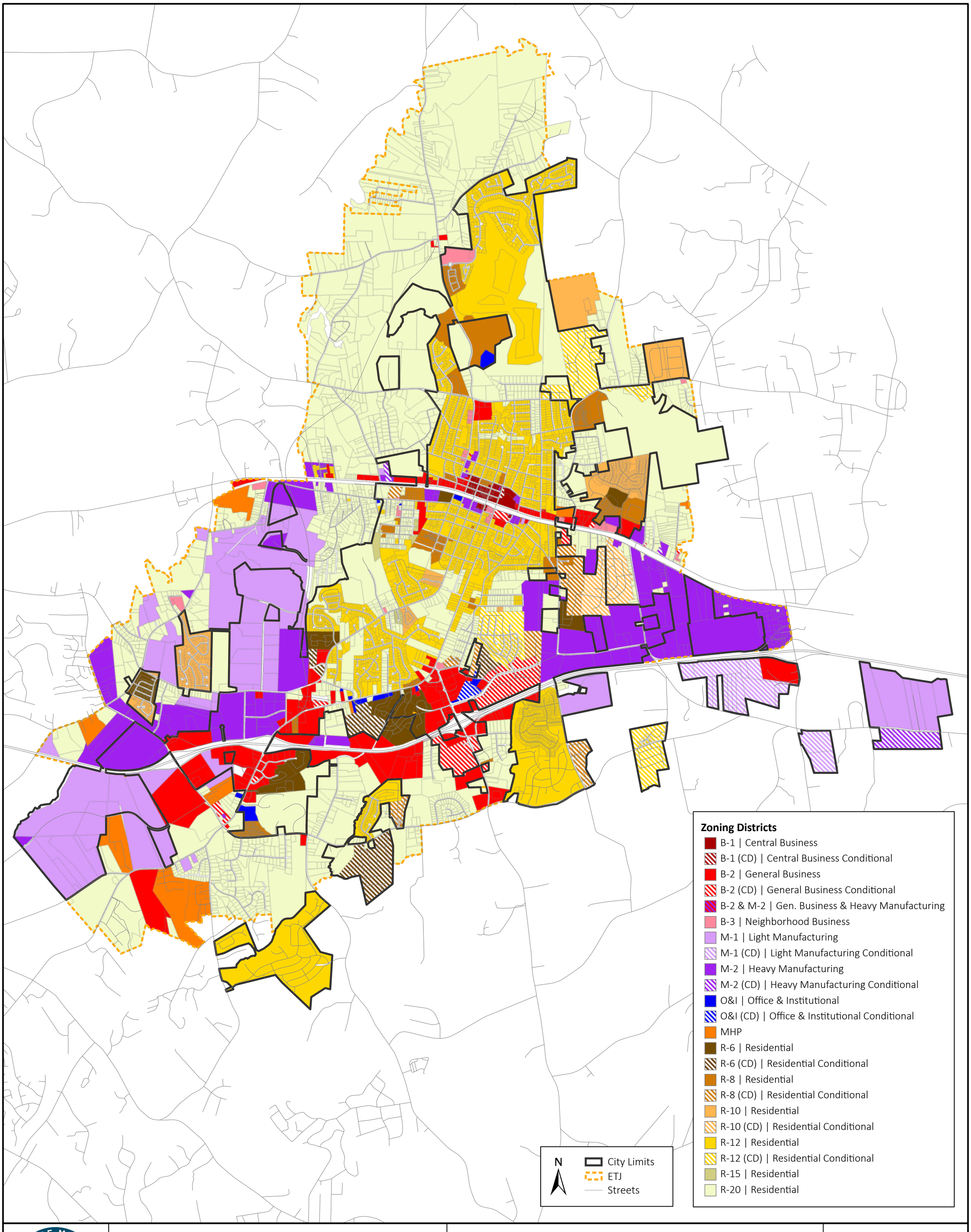
LANDSCAPE BUFFERS

WHAT DID WE ASK?

We asked respondents to consider some examples that illustrate the City's current buffering requirements for a variety of land uses.

WHAT DID WE LEARN?

- 65% of respondents indicated that a 50-ft buffer between residential and industrial uses is not enough.
- 65% of respondents indicated that a 40-ft buffer between higher and lower density residential is not enough.
- 48% percent of respondents indicated that a 40-ft buffer between residential non-residential uses such as bank or a church is not enough.



CITY OF MEBANE

Proposed Zoning Symbology

1 inch = 3,000 feet

DATE: 04/19/2022

DRAWN BY: AV

4-1-1 Table of Permitted Uses

02/04/08;amended 04/07/08,05/03/10,07/11/11,08/05/13, 04/07/14, 10/06/14; 07/09/18; 11/05/18; 03/04/19; 10/17/19; 06/01/20	Ref.	*Development*	Zoning Districts												
	SIC	*Standards*	~~RA20~~	R20	R15	R12	R10	R8	R6	OI	B1	B2	B3	M1	M2
RESIDENTIAL USES															
Single Unit Residential															
Single-Family Detached Dwelling	0000		~~P~~	P	P	P	P	P	P						
Modular Home	0000		~~P~~	P	P	P	P	P	P						
Manufactured Home, on individual lot (within MH Overlay District Only)	0000	*Sec. 4-7.3 A*					S								
Patio Home Dwelling	0000	*Sec. 4-7.3 B*						D	D						
Multiple Unit Residential															
Condominium, less than 2 acres in area	0000	*Sec. 4-7.3 C*						D	D		D				
Condominium, 2 or more acres in area	0000	*Sec. 4-7.3 C*						D	D		D				
Manufactured Home Park (within MH Overlay District Only)	0000	*Sec. 4-7.3 D*					S								
Multifamily Dwelling, less than 2 acres in area	0000	*Sec. 4-7.3 E*						D	D		D				
Multifamily Dwelling, 2 or more acres in area	0000	*Sec. 4-7.3 E*						D	D		D				
Townhouse Dwelling, less than 2 acres in area	0000	*Sec. 4-7.3 F*					D	D	D		D				
Townhouse Dwelling, 2 or more acres in area	0000	*Sec. 4-7.3 F*					D	D	D		D				
Two-Family Dwelling (duplex)	0000							P	P						
Group Residential															
Boarding and Rooming House	7021	*Sec. 4-7.3 G*	~~D~~								D	D			
Family Care Home	8361	*Sec. 4-7.3 H*	~~D~~	D	D	D	D	D	D						
Group Care Facility	8361	*Sec. 4-7.3 I*								D		D			
Temporary Emergency Shelter	0000	*Sec. 4-7.3 L*	~~D~~	D	D	D	D	D	D	D	D	D	D	D	D
~~Nontraditional~~ Innovative Residential Developments															
Live/Work Combination Dwelling & Nonresidential Use	0000	*Sec. 4-7.3 M*						D	D	D	D	D	D		
Planned Unit Development	0000	*Sec. 4-7.3 N*		D	D	D	D	D	D	D	D				
Residential Cluster Development	0000	*Sec. 4-7.3 O*		D	D	D	D	D	D						
Traditional Neighborhood Development	0000	*Sec. 4-7.3 P*		D	D	D	D	D	D						
ASESSORY USES AND STRUCTURES															
Accessory Dwelling Unit (on single-family lots)	0000	*Sec. 4-7.4 A*	~~D~~	D	D	D	D	D	D						
Accessory Dwelling Unit to an Office Use	0000	*Sec. 4-7.4 B*								~~BA~~ D	P	D			
Accessory Uses and Structures (customary)	0000	*Sec. 4-1 G*	~~P~~	P	P	P	P	P	P	P	P	P	P	P	P
~~Automatic Teller Machine~~	~~6099~~									~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~
Caretaker Dwelling	0000	*Sec. 4-7.4 C*	~~D~~	D	D	D	D	D	D	D	D	D	D	D	D
Communication Tower Under 50' in Height	0000	*Sec. 4-7.4 D*	~~D~~	D	D	D	D	D	D		P	P	P	P	P
~~Fence, Wall~~	~~0000~~	~~*Sec. 4-2 C*~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~

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	SIC	*Standards*	~~RA20~~	R20	R15	R12	R10	R8	R6	OI	B1	B2	B3	M1	M2
Home Occupation	0000	*Sec. 4-7.4 E*	~~D~~	D	D	D	D	D	D		D				
Satellite Dish Antenna	0000	*Sec. 4-7.4 F*	~~D~~	D	D	D	D	D	D	P	P	P	P	P	P
~~Signs~~	~~0000~~	~~*Sec. 6-6*~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~
~~Swimming Pool~~	~~0000~~	~~*Sec. 4-2 B*~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~		~~P~~	~~P~~	~~P~~	~~P~~	~~P~~
RECREATIONAL USES															
Amusement or Water Parks, Fairgrounds	7996														
Athletic Fields	0000	*Sec. 4-7.5 A*	~~S~~	S	S	S	S	S	S			S		S	S
Auditorium, Coliseum or Stadium	0000	*Sec. 4-7.5 B*									~~S~~	S		S	S
Batting Cages, Outdoor	7999	*Sec. 4-7.5 C*	~~D~~									D		D	
Batting Cages, Indoor	7999											P			
Billiard Parlor, Pool Hall	7999										P	P	P		
~~Bingo Parlor~~	~~7999~~										~~P~~	~~P~~			
Bowling Center	7933											P		P	P
Campground/RV Park	7033	*Sec. 4-7.5 D*		BA										BA	~~BA~~
Civic, Social and Fraternal Clubs and Lodges	8641	*Sec. 4-7.5 E*	~~BA~~	BA	BA	BA	BA	BA	BA	BA	D	D	D		
Indoor Recreation featuring Coin-Operated Amusements and similar entertainment, except Adult Arcade & Video Gaming Arcade	7993										P	P	P		
Community Center	7999	*Sec. 4-7.5 F*	~~BA~~	BA	BA	BA	BA	BA	BA	BA					
Country Club with Golf Course	7997	*Sec. 4-7.5 G*	~~BA~~	BA	BA	BA	~~BA~~	~~BA~~	~~BA~~	BA		BA	BA		
~~Dance School, Music Instruction~~ School for the Arts	7911										P	P	P		
~~Fishing Lake~~	~~7999~~													~~P~~	~~P~~
Fortune Tellers, Astrologers	7999										P	P	P		
Go-Cart Raceway	7999														P
Golf Course, Outdoor	7992	*Sec. 4-7.5 H*	~~BA~~	BA	BA	BA	~~BA~~	~~BA~~	~~BA~~			BA	~~BA~~	BA	BA
Golf Course, Miniature	7999											P	P	P	
Golf Driving Range	7999											P		P	
~~Physical Fitness Center, Training Center~~ Health Club or Gym	7991									~~P~~	P	P	P	~~P~~	~~P~~
Private Club or Recreational Facility, ~~Other~~ Outdoor	7997	*Sec. 4-7.5 I*	~~D~~	D	D	D	D	D	D	~~P~~ D	~~P~~ D	P	~~P~~ D	~~P~~	P
Public Park ~~or Recreational Facility, Other~~	7990	~~*Sec. 4-7.5 I*~~	~~D~~	~~D~~ P	~~D~~ P	~~D~~ P	~~D~~ P	~~D~~ P	~~D~~ P	~~D~~ P	~~D~~ P	~~D~~ P	~~D~~ P	~~D~~ P	~~D~~ P
Race Track Operation	7948	*Sec. 4-7.5 J*													S
Riding Academy, Riding Stables, Equestrian Facility	7999	*Sec. 4-7.5 H*	~~S~~	S	S										S
Shooting Range, Indoor	7999	*Sec. 4-7.5 L*												D	D
Skating Rink	7999											P		P	

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	SIC	*Standards*	~~RA20~~	R20	R15	R12	R10	R8	R6	OI	B1	B2	B3	M1	M2
Sports and Recreation Club, Indoor	7997									~~P~~	P	P	P	~~P~~	
Swim and Tennis Club	7997	*Sec. 4-7.5 N*	~~BA~~	BA	BA	BA	BA	BA	BA		~~P~~ D	P	~~P~~ D	P	P
EDUCATIONAL AND INSTITUTIONAL USES															
Ambulance Service	4119									~~P~~	~~P~~	P	~~P~~	~~P~~	~~P~~
Cemetery, Columbarium or Mausoleum (Principal Use)	0000	*Sec. 4-7.6 A*	~~S~~	S	S	S	S					D		P	P
Cemetery, Columbarium or Mausoleum on Same Property as Church or Other Place of Worship	0000	*Sec. 4-7.6 B*	~~D~~	D	D	D	D	D	D	D	D	D	D	P	P
Church Or Other Place of Worship	8661	*Sec. 4-7.6 C*	~~D~~	D	D	D	D	~~D~~	~~D~~	~~D~~		P		S	S
College, University, Technical Institute	8220	*Sec. 4-7.6 D*								S	~~S~~	~~S~~		~~D~~	~~D~~
Crematorium												~~S~~		~~P~~	
Day Care Center, Adult and Child, 5 or Less Clients (accessory use)	8322	*Sec. 4-7.6 F*	~~D~~	D	D	D	D	D	D	P	P	P	P	P	P
Day Care Center, Adult and Child, 6 -12 Clients (principal use)	8322	*Sec. 4-7.6 G*	~~S~~	S	S	S	S	S	S	~~P~~	~~P~~	P	~~P~~	P	P
Day Care Center, Adult and Child, 13 or More Clients (principal use)	8322	*Sec. 4-7.6 G.1*	~~S~~	S	S					~~D~~	~~D~~	P	~~D~~	~~S~~	~~S~~
Elementary or Secondary School	8211	*Sec. 4-7.6 H*	~~BA~~	BA	BA	BA	BA	BA	BA	BA		BA	BA		
Fire Station/Emergency Medical Service	9224	*Sec. 4-7.6 I*	~~D~~	D	D	D	D	D	D	P	~~P~~ D	P	~~P~~ D	P	P
Government Office	9000									P	~~P~~	~~P~~	~~P~~	P	P
Hospital	8062									P					
Library	8231	*Sec. 4-7.6 J*	~~D~~	D	D	D	D	D	D	P	~~P~~ D	P	~~P~~ D		
Museum or Art Gallery	8412									P	P	P	~~P~~		
National Guard /Military Reserve Center	0000									~~P~~	P			P	P
Nursing and Convalescent Home, Rest Home	8050	*Sec. 4-7.6 K*	~~D~~	~~D~~ S	~~D~~ S	~~D~~ S	~~D~~ S	~~D~~ S	~~D~~ S	~~P~~ S		~~P~~ S	~~P~~ S		
~~Orphanage~~	~~8361~~	~~*Sec. 4-7.6 L*~~	~~D~~	~~D~~	~~D~~	~~D~~	~~D~~	~~D~~	~~D~~	~~P~~		~~P~~			
Police Station	9221									P	P	P	P	P	P
Post Office	0000									P	P	P	P	P	P
Retreat/Conference Center	0000	*Sec. 4-7.6 M*	~~D~~							P		P		~~D~~	
School Administration Facility	9411									P		P		P	P
Urgent Care Facility	8093									~~P~~		~~P~~		~~P~~	
Vocational, Business or Technical ~~Secretarial~~ School	8240									~~P~~		~~P~~		~~P~~	
Wellness Center	8052									~~P~~	BA	~~P~~	BA	~~P~~	
BUSINESS, PROFESSIONAL and PERSONAL SERVICES															
Advertising, Outdoor Services	7312										~~P~~	P	P	P	
~~Automobile~~ Parking Lot ~~(Commercial)~~	7521									~~P~~	P	P	~~P~~	P	P

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	SIC	*Standards*	~~RA20~~	R20	R15	R12	R10	R8	R6	OI	B1	B2	B3	M1	M2
Automobile Rental or Leasing	7510										~~P~~ S	P		P	P
Automobile, ATV, and Motorcycle Repair Services, Minor	0000	*Sec. 4-7.7 A*									S	~~P~~ D	S	~~P~~ D	P
Automobile Repair Services, Major	0000	*Sec. 4-7.7 A*												S	S
Automobile Towing and Storage Services	7549													P	P
Bank, Savings and Loan, or Credit Union, inc. ATMs	6000									P	P	P	P		
Barber Shop, Beauty Shop, Cosmetic Tattoos	7241	*Sec. 4-1.G*								P	P	P	P		
Bed and Breakfast ~~or Tourist Home~~	7011	*Sec. 4-7.7 B*	~~D~~	D	D	D	D			P	D	P	~~P~~ D		
Bicycle~~, Motorcycle~~ Repair	3751										P	P	P	P	
~~Blacksmith~~	~~7699~~											~~P~~		~~P~~	
Boat Repair	3730													P	P
Car Wash, Auto Detailing	7542											P	~~P~~		P
Clothing Alteration or Repair	0000										P	P	P		
Contractor Office with Outside Storage Yard	0000	*Sec. 4-7.7 C*												D	D
Computer Maintenance and Repair	7378										P	P	P	~~P~~	
Craft Studio											P	P	S	P	
Equipment Rental and Leasing (no outside storage)	7350											P		P	P
Equipment Rental and Leasing (with outside storage)	7350	*Sec. 4-7.7 D*												D	D
Equipment Repair	7690											P		P	
Funeral Home, Crematorium	7261									P	P	P			
Furniture Refinishing and Repair, Upholstery Shops	7641													P	P
Furniture Display and Showrooms	0000									P		P			
Hotel or Motel, except Adult Motel**	7011									P	P	P			
Insurance Agency, no On-site Claims Inspections	6411									P	P	P	P		
Insurance Agency, with On-site Claims Inspections	6411											P		P	
Kennels, with Outside Runs	0752			S	S									S	S
Kennels, with No Outside Runs	0752	*Sec. 4-7.7 E*		S	S							P		P	P
Landscape and Horticultural Services	0780											P		P	
Laundromat, Coin-Operated	7215										P	P	P		
Laundry or Dry Cleaning Plant	7211														P
Laundry or Dry Cleaning, Retail Facility	7212									P	P	P	P		~~P~~
Locksmiths, Gunsmiths	7699										P	P	P		
Makerspace											P	P	S	P	
Martial Arts Instructional School	7999									P	P	P	P		
Medical or Dental Laboratory	8071										P	P	~~P~~	P	
Medical or Dental Offices	8021									P	P	P	P		

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	SIC	*Standards*	~~RA20~~	R20	R15	R12	R10	R8	R6	OI	B1	B2	B3	M1	M2
Medical Office Park	8011									P		P		P	
Offices, General	0000									P	P	P	P		
Office Uses Not Listed Elsewhere	0000									P	P	P			
Pest or Termite Control Services	7342											P		P	
~~Photocopying and Duplicating Services~~	~~7334~~									~~P~~	~~P~~	~~P~~	~~P~~	~~P~~	
~~Photofinishing Laboratory~~	~~7384~~											~~P~~		~~P~~	~~P~~
Photography, Commercial Studio	7335									P	P	P	P		
~~Refrigerator or Large~~ Appliance Repair	7623													P	P
~~Research, Development or Testing Services~~	~~8730~~													~~P~~	~~P~~
~~Roofing Shop~~	~~1761~~													~~P~~	
Services, Miscellaneous Not Listed Elsewhere	7699									BA		P		P	
Shoe Repair or Shoeshine Shop	7251										P	P	P		
Stock, Security, and Commodity Brokers	62									P	P	P	P		
Tattoo Parlor & Body Piercing											P	P	S		
Television, Radio or Electronics Repair	7620											P	~~P~~	P	P
Theater (indoor), except Adult Theater**	7832									P	P	P			
Theater (outdoor)	7833									P		P			
Tire Recapping	7534													P	P
Truck Driving School	8249													P	P
Truck and Utility Trailer Rental and Leasing	0000													P	P
Truck Washing	7542														S
Veterinary Clinic	0742									P		P		P	
~~Vocational, Business or Secretarial School~~	~~8240~~									~~P~~		~~P~~		~~P~~	
Watch, Clock, and Jewelry Repair	7631									P	P	P	P		
Welding Shop	0000														P
RETAIL TRADE															
ABC Store (packaged liquor)	5921										P	P			
Antique Store	5932										P	P	P		
Apparel and Accessory Store	5600										P	P	P		
Appliance Store	5722										P	P	P		
Arts and Crafts	0000										P	P	P		
Auto Supply Sales	5531										P	P			
Bakery	5461										P	P	P		
Bar, Night Club, Tavern, Brewpub	5813	*Sec. 4-7.8 A*									P	~~P~~ D	D		
Bicycle, ~~Motorcycle~~ Sales	5571										P	P		P	

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	SIC	*Standards*	~~RA20~~	R20	R15	R12	R10	R8	R6	OI	B1	B2	B3	M1	M2
Boat Sales	5551											P		P	~~P~~
Bookstore, except Adult Bookstore**	5942									P	P	P	P		
Building Supply Sales	5211	*Sec. 4-7.8 B*										D		D	D
Convenience Store, no Gas Pumps	5411										P	P	P	P	P
Convenience Store, with Gas Pumps	5411	*Sec. 4-7.8 C*									BA	P	BA	P	P
Department, Variety or General Merchandise	5300										P	P			
Drugstore or Pharmacy	5912									P	P	P	P		
Farm Supplies and Equipment	0000	*Sec. 4-7.8 H*										D		P	P
~~Floor Covering, Drapery or Upholstery~~ Interior Decorating	5710										P	P	P	P	
Florist	5992									P	P	P	P		
Food Stores	54	*Sec. 4-7.8 D*									~~P~~ D	P	~~P~~ D	P	
Fuel Oil Sales	5980											P		P	P
Furniture Sales	5712									P	P	P			
Garden Center or Retail Nursery	5261											P	P	P	
Hardware Store	5251										P	P	P	P	
Home Furnishings, Miscellaneous	5719										P	P	P		
Manufactured Home Sales	5271	*Sec. 4-7.8 E*										S		S	
~~Miscellaneous Shopping Goods Stores, not listed elsewhere~~	~~594~~										~~P~~	~~P~~	~~P~~		
Motor Vehicle Sales (new and used)	5511										~~P~~ BA	P		P	P
~~Newsstand~~	~~5994~~										~~P~~	~~P~~	~~P~~		
Office Supplies and Equipment	5999									P	P	P	P	P	
Optical Goods Sales	5995									P	P	P	P		
Paint and Wallpaper Sales	5231										P	P	P	P	
Pawnshop or Used Merchandise Store	5932										P	P	P		
Pet Store	5999										P	P	P		
Radio, Television, Consumer Electronics, and Music Stores	5731										P	P	P		
Retail Sales, Miscellaneous not listed elsewhere	5999										P	P	P		
Recreational Vehicle Sales	5561											P		P	P
Restaurant (drive-in or take out window only)	5812	*Sec. 4-7.8 F*									D	D	D	P	P
Restaurant (with drive-through)	5812	*Sec. 4-7.8 G*									D	D	D	P	P
Restaurant (without drive-through)	5812									S	P	P	~~P~~ S	P	P
Service Station, Gasoline Sales	5541	*Sec. 4-7.8 I*									BA	P	BA	P	P
Shopping Center	0000	*Sec. 4-7.8 J*										D			
Superstore	0000	*Sec. 4-7.8 K*										D		D	

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	SIC	*Standards*	~~RA20~~	R20	R15	R12	R10	R8	R6	OI	B1	B2	B3	M1	M2
Tire Sales	5531											S		P	P
Truck Stop, Travel Plazas	5541	*Sec. 4-7.8 L*													S
~~Video Tape Rental and Sales, except Adult Video Store**~~	~~7841~~										~~P~~	~~P~~	~~P~~		
Retail Stores <3,000 square feet (s.f.)											P	P	P		
Retail Stores 3,000 s.f. - 20,000 s.f.											P	P			
Retail Stores 20,000 s.f. - 50,000 s.f.												P			
WHOLESALE TRADE															
Farm Product Raw Materials	515														P
Hardware	5072									S		P		P	P
Petroleum and Petroleum Products, Bulk Storage	517	*Sec. 4-7.9 B*												~~BA~~	BA
Other Hazardous Materials Trade and Storage	4953														BA
Wholesale Trade, not listed elsewhere	0000													P	P
TRANSPORTATION, WAREHOUSING AND UTILITIES															
Airport or Air Transportation Facility	4500	*Sec. 4-7.9 A*												~~S~~	S
Bulk Mail and Packaging	4212													P	P
Bus Terminal	4100									S				P	P
Broadcast Station	4800											P		P	P
~~Communication or~~ Broadcast~~ing~~ Studio ~~Facility~~	4800										P	P		P	P
Communications Tower, Public Safety	0000	*Sec. 4-7.9 C*	~~D~~	D	D	D	D	D	D	D	D	D	D	D	D
Communications Tower and All Other Radio, Television Towers Over 50' In Height	0000	*Sec. 4-7.9 D*	~~S~~											S	S
Composting Facility															
Courier Service	4215											P		P	P
Data Center														S	P
Distribution Center	4220													P	P
Farm Product Warehousing and Storage	4221													P	P
Junkyard or Recycling Facility	5093														
Landfill, Construction & Demolition Debris	5093														
Landfill, Municipal Waste															
Landfill, Land Clearing & Inert Debris	4953														
Moving and Storage Service	4214											S		P	P
Outside Storage	0000											S		P	P
Public Works and Public Utility Facilities Essential to the Immediate Area	0000	*Sec. 4-7.9 H*	~~S~~	S	S	S	S	S	S	S	S	S	S	S	S
Railroad Station	4010									S	S	S		P	P

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	SIC	*Standards*	~~RA20~~	R20	R15	R12	R10	R8	R6	OI	B1	B2	B3	M1	M2
Railyard														S	P
Recycling Collection Station or Point	0000													P	P
~~Sewage~~ Wastewater Treatment Plant (Water Resource Recovery Facility)	4952	*Sec. 4-7.9 I*												S	S
Small Wireless Facility	23713	*Sec. 4-7.9.F*	~~D~~	D	D	D	D	D	D	D	D	D	D	D	D
Solar Farms		*Sec. 4-7.9 G*	~~S~~											S	S
Taxi Terminal	4121										P	P			
Telephone Exchange, Transformer Stations	0000	*Sec. 4-7.9 K*	BA	BA	BA	BA	BA	BA	BA		BA	BA		BA	BA
Transfer Station, Municipal Solid Waste	4953														BA
Transformer Stations	0000	*Sec. 4-7.9 K*	~~BA~~	BA	BA	BA	BA	BA	BA	BA		BA		BA	BA
Trucking or Freight Terminal	4213														P
Warehousing & Distribution ~~(general storage, enclosed)~~	4220													P	P
Indoor Warehouse (self-storage)	4225											D		P	P
Water Treatment Plant	0000	*Sec. 4-7.9 L*												S	S
Wireless Communications Facility	23713	*Sec. 4-7.9.E*	~~D~~	D	D	D	D	D	D	D	D	D	D	D	D
MANUFACTURING and INDUSTRIAL USES															
Apparel and Finished Fabric Products	2300													P	P
Bakery Products	2050											S		P	P
Batteries	3691														~~P~~ S
Beverage Products	2086											P		P	P
Cabinet and Woodworking Shops	2434											S		P	P
Carpets, Bedding	0000													S	P
Chemicals, Paints and Allied Products	2800														~~P~~ S
Computer and Office Equipment	3570													P	P
Asphalt, Concrete, Cut Stone and Clay Products	3200														~~P~~ S
Dairy Products	2020													~~P~~	P
Drugs and Pharmaceuticals	283													P	P
Electronic and Other Electrical Equipment	36														P
Food Preparation and Related Products, Miscellaneous	209													P	P
Furniture and Fixtures	2500													S	P
Glass	3200														P
Hardware and Housewares	0000													S	P
Heating, Equipment and Plumbing Fixtures	3430														P
Ice	2097											P		P	P
Industrial and Commercial Machinery	3500														P

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4-1-1 Table of Permitted Uses

02/04/08;amended 04/07/08,05/03/10,07/11/11,08/05/13, 04/07/14, 10/06/14; 07/09/18; 11/05/18; 03/04/19; 10/17/19; 06/01/20	Ref.	*Development*	Zoning Districts												
	SIC	*Standards*	~~RA20~~	R20	R15	R12	R10	R8	R6	OI	B1	B2	B3	M1	M2
Jewelry and Silverware Fabrication, No Plating	3915										P	P		P	
Machine Shop	3599											S		P	P
Manufactured Housing and Wood Buildings	2450													~~P~~ S	P
Metal Fabricating	0000														P
Microbrewery/Microdistillery											S	S		P	P
Millwork, Plywood and Veneer	2430														P
Paper Products	2670													S	P
Printing and Publishing	2700											S		P	P
~~Printing and Publishing, Incidental to a Newspaper Office~~	~~2700~~										~~P~~	~~P~~			
Research & Development ~~or Testing Services~~	8730										S	S		P	P
Rubber and Plastics, Miscellaneous	3000														~~P~~ S
Sheet Metal Shop	0000													~~P~~	P
Signs	3993											P		P	P
Soaps and Cosmetics	2840														P
Sporting Goods and Toys	3940													P	P
Textiles	2200														P
Tobacco Products	2110														~~P~~ S
Industry, Light	0000													S	P
Industry, Heavy	0000														S
~~Manufacturing or Industrial, not listed elsewhere~~	~~0000~~														~~P~~
AGRICULTURAL USES															
Bona fide farm operation except commercial feeder/breeder operation	0000	*Sec. 1-5*	~~E~~	E	E	E	E	E	E	E	E	E	E	E	E
~~Commercial Feeder/Breeder Operation*~~	~~0000~~	~~*Sec. 4-7.11 A*~~	~~S~~												
MINING USES															
Mining, Quarrying, Sand Pits, Clay and Mineral Extraction	1000	*Sec. 4-7.12 A*													~~S~~
TEMPORARY USES															
Arts and Crafts Show	0000									P	P	P	P		
Carnivals and Fairs	7999	*Sec. 4-7.13 A*	~~S~~							S	~~S~~	~~S~~ D		~~S~~ D	~~S~~ D
Farm Products, Christmas Tree, Pumpkin, Seafood, Firework Stand and Similar Outdoor Seasonal Sales	0000	*Sec. 4-7.13 D*								~~P~~ D	~~P~~ D	~~P~~ D	~~P~~ D	P	P
Concerts, Stage Show	7920	*Sec. 4-7.13 B*									D	~~S~~ D			
Convention, Trade Show	0000										P	P	P	P	P
~~Corn Maze, Hay Rides, and Similar Temporary Uses Associated with a Bona Fide Farm Operation~~ Agritourism	0000	*Sec. 4-7.13 C*	~~D~~	D											

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	SIC	*Standards*	~~RA20~~	R20	R15	R12	R10	R8	R6	OI	B1	B2	B3	M1	M2
~~Fireworks Stand~~	~~0000~~	~~*Sec. 4-7.13 D*~~									~~D~~	~~D~~	~~D~~	~~P~~	~~P~~
Health Care Structure		*Sec. 4-7.13 F*		D	D	D	D	D	D						
Horse Show, Rodeo	7999			S										P	P
~~Outdoor Fruit and Vegetable Market, Seasonal~~ Farmers Market	5431	*Sec. 4-7.13 E*	~~D~~	D	D						D	D	D	D	
Outdoor Religious Event	0000	*Sec. 4-7.13 G*		S						S	S D	S D		~~S~~ D	~~S~~ D
Temporary Debris Storage and Reduction Sites		*Sec. 4-7.13 L*		D						D	D	D	D	D	D
Temporary ~~Construction, Storage or Office;~~ Real Estate Sales or Rental Office (with concurrent building permit for permanent building)	0000		~~P~~	P	P	P	P	P	P	P	P	P	P	P	P
Temporary Construction Office or Security Residence	0000	*Sec. 4-7.13 H*	~~D~~	D	D	D	D	D	D	D		D		P	P
Temporary Portable Storage Containers	0000	*Sec. 4-7.13 K*	D	D	D	D	D	D	D	D	D	D	D	D	D
Temporary and Special Events not Listed Elsewhere	0000	*Sec. 4-7.13 I*								D	D	D	D	D	D
Turkey Shoot	0000	*Sec. 4-7.13 J*												D	D
Yard Sale	0000		P	P	P	P	P	P	P						
MISCELLANEOUS USES															
Adult Establishment**	0000	*Sec. 4-7.14 B*													S
Animal Shelter	0752													P	P
~~Billboard, Outdoor Advertising Sign~~	~~0000~~	~~*Sec. 4-7.14 A*~~												~~D~~	~~D~~
~~Planned Multiple Occupancy Group (Commercial, Office or Industrial)~~	~~0000~~	~~*Sec. 4-7.14 C*~~								~~S~~	~~S~~	~~S~~	~~S~~	~~S~~	~~S~~
Video Gaming Arcade	0000	*Sec. 4-7.14 D*										S			

**** Chapter 4 of the City of Mebane Ordinances regulates the keeping of certain animals within the corporate limits of the City of Mebane. Consequently, some animal operations may not be permissible within Zoning districts that are located within the corporate limits.***

*** Adult Establishment includes adult arcade, adult bookstore, adult video store, adult cabaret, adult motel, massage parlor, adult motion picture theater, adult theater, escort agency, sexual encounter studio, or any combination of the foregoing. See Definition in Article 12*

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A copy of the UDO with redline markup of the proposed revisions is available in the electronic version at https://cityofmebanenc.gov/documents/udo-2021-revisions-mark-up/.