



Transportation Advisory Board

Date: December 1st, 2016

7:30 pm

Room 109

Meeting called by:

Colleen Barclay, Chair

Facilitator: Bergen Watterson, Transportation Planner

Attendees:

Carrboro Transportation Advisory Board Members

----- Agenda Topics -----

Joint advisory board review:

- 610 Homestead Road SUP

Advisory boards
(Board Room)

7:30

1. Call to order

Colleen

8:15

2. Approval of minutes (November 17th)

TAB

8:17

3. Discuss 610 Homestead Road SUP

TAB

8:20

4. Biking/walking safety in Town

TAB

8:50

5. Other Business/Staff Report

TAB/Staff

9:05

6. Adjourn

TAB

9:15

Other Information

Attachment A: November 17th draft meeting minutes

Attachment B: 610 Homestead Road plans

Next meeting: December 15th, 2016

TOWN HALL IS ACCESSIBLE FOR PERSONS WITH DISABILITIES.

FOR MORE INFORMATION, CONTACT BERGEN WATTERSON AT 919-918-7329.

JOINT REVIEW BOARDS

AGENDA ITEM ABSTRACT

MEETING DATE: DECEMBER 1ST, 2016

SUBJECT: JOINT REVIEW FOR THE 610 HOMESTEAD ROAD ARCHITECTURALLY INTEGRATED SUBDIVISION SPECIAL USE PERMIT.

| | |
|--|--|
| DEPARTMENT: PLANNING DEPARTMENT | PUBLIC HEARING: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| ATTACHMENTS: A. STAFF REPORT B. PROJECT PLANS C. APPLICANT RESPONSES TO ADVISORY BOARD CONCEPT PLAN COMMENTS D. TRANSPORTATION IMPACT LETTER E. NEIGHBORHOOD INFORMATION MEETING INFO F. TREE REMOVAL JUSTIFICATION LETTER G. TREE CANOPY EXHIBIT H. BMP AMENITY EXHIBIT I. RESPONSES TO TOWN POLICY DOCUMENTS J. RESPONSES TO ARCHITECTURAL STANDARDS | FOR INFORMATION CONTACT: JEFF KLEAVELAND, 918-7332 |

PURPOSE

The Berryhill Group as represented by Veteran Engineering Associates, Inc., has submitted an application for the construction of a 12 lot Architecturally Integrated Subdivision residential development located at to above referenced addresses (Attachment B).

INFORMATION

The Special Use Permit, if approved, would allow the creation of a 12 lot residential subdivision, with common shared open spaces, recreation amenities and supporting infrastructure. The subject property is zoned R-20 and contains two parcels for a combined acreage of about 7.09 acres. These parcels are identified by Orange County PINs 9779182544, 9779184700. For a vicinity map, see cover sheet of Attachment B

STAFF RECOMMENDATION

The staff recommends that the Advisory Boards offer comments as needed (including review of the following staff recommendations) and prepare summary recommendations for a Special Use Permit to allow the construction of the proposed 610 Homestead Road AIS. Staff recommendations are as follows:

1. That Certificates of Occupancy for the final the two units may not be issued until such time as the *payment in lieu* for 1.8 affordable units is made (in accordance with the Town's fee schedule at the time of payment). A note to this effect shall be required on the final plat.
2. Prior to construction plan approval, the plans need to include a standard detail, per section 15-291 of the LUO, demonstrating that each lot can provide off-street parking sufficient to accommodate two cars, excluding those spaces provided within the garage.

3. That flexibility be allowed in the execution of the street tree planting plan (subject to the approval of public works and the planning department), such that the combination of existing and proposed trees along all publicly dedicated streets in the subdivision meet the street tree requirements of Section 15-315 of the Land Use Ordinance and that the final arrangement is such that 1/3rd of the street trees retained and/or proposed for this purpose are evergreen.
4. That the applicant shall provide to the Zoning Division, prior to the recordation of the final plat for the project or before the release of a bond if some features are not yet in place at the time of the recording of the final plat, Mylar and digital as-builts for the stormwater features of the project. Digital as-builts shall be in DXF format and shall include a base map of the whole project and all separate plan sheets. As-built DXF files shall include all layers or tables containing storm drainage features. Storm drainage features will be clearly delineated in a data table. The data will be tied to horizontal controls.
5. Per Section 15-263.1, that the developer shall include a detailed stormwater system maintenance plan, specifying responsible entity and schedule. The plan shall include scheduled maintenance activities for each stormwater BMP in the development, performance evaluation protocol, and frequency of self-reporting requirements (including a proposed self-reporting form) on maintenance and performance. The plan and supporting documentation shall be submitted to Town engineer and Environmental Planner for approval prior to construction plan approval.
6. That, prior to issuance of a CO, a final plat, or the certification of a stormwater BMP, the Town may require a performance security be posted for a period of two years per the provisions of Section 15-263(i).
7. That utilities shall be installed underground per the provisions or 15-246 of the Land Use Ordinance.
8. That the developer provide a written statement from the electrical utility stating that electric service can be provided to all locations shown on the construction plans prior to the approval of the construction plans;
9. That fire flow calculations must be submitted and approved by the Town Engineer and Town Fire Department prior to construction plan approval.
10. That the applicant submit a Voluntary Annexation Petition prior to final plat approval.
11. That the applicant receive(s) CAPS from the Chapel Hill-Carrboro City Schools district pursuant to Article IV, Part 4 of the Carrboro Land Use Ordinance prior to construction plan approval.
12. That, prior to final plat approval, the Homeowner's declarations and covenants shall satisfy the applicable provisions of the Land Use Ordinance subject to review and approval of the Town Attorney.

STAFF REPORT

TO: Advisory Boards

DATE: December 14, 2016

PROJECT: 610 Homestead Rd Architecturally Integrated Subdivision
Special Use Permit

APPLICANT
And OWNERS: The Berryhill Group, LLC
104 Painted Turtle Lane
Chapel Hill, NC 27516

PURPOSE: To acquire a Special Use Permit for the construction of a 12
lot single family residential subdivision

EXISTING ZONING: R-20.

TAX MAP NUMBER: 9779182544, 9779184700

LOCATION: 610 Homestead Rd & 8802 Lake Hogan Farm Rd

TRACT SIZE: 7.09 acres, combined (approximately 308,862 sf)

EXISTING LAND USE: Vacant & Single Family Home (to be removed)

PROPOSED LAND USE: 1.110 Residential, Single Family Detached, One dwelling
unit/lot

SURROUNDING
LAND USES: North: R-20; *single-family residential*
South: Homestead R/W, R-15; *single-family residential*
West: R-15; *single-family residential*
East: R-20; *single-family residential*

ZONING HISTORY: R-20 Since 1980

ANALYSIS

Background, Concept Plan

Background

The Berryhill Group as represented by Veteran Engineering Associates, Inc., has submitted an application for the construction of a 12 lot Architecturally Integrated Subdivision residential development located at to above referenced addresses (Attachment B).

The Special Use Permit, if approved, would allow the creation of a 12 lot residential subdivision, with common shared open spaces, recreation amenities and supporting infrastructure.

The subject property is zoned R-20 and contains two parcels for a combined acreage of about 7.09 acres. These parcels are identified by Orange County PINs 9779182544, 9779184700. For a vicinity map, see cover sheet of Attachment B

Concept Plan

Before formal plans were submitted, the applicant prepared a concept plan as required by Section 15-48.1 of the LUO. The conceptual design ordinance requires the designer to describe in detail their project and receive feedback from the Joint Advisory Boards (Planning Board, Appearance Commission, Economic Sustainability Commission, Environmental Advisory Board & the Transportation Advisory Board). The project was presented to these Boards on October 1st, 2015. As required, the applicant provide written responses to the advisory board's comments. These written responses are attached (Attachment C).

Density, Affordable Housing

Density.

As stated previously, the 12 unit density pursued by this project is below the 15 unit maximum base density allowed in the R-20 zoning district at 1 unit/20,000 sf of lot area. The applicant is not seeking any density bonus units.

Size-Restricted Units

Section 15-188 of the LUO includes provisions that require that the developer build a percentage of "size-limited" units between 1,350 and 1,100 square feet as a strategy to provide some affordable housing on the market. These provisions apply only for developments of at least 13 dwelling units thereby exempting the 610 Homestead Road subdivision from this requirement.

Affordable Housing

Per the provisions of Section 15-54.1 of the LUO, the applicant is providing a payment-in-lieu of affordable housing. This section states a goal of 15% affordable housing for new development, to this end, the applicant is proposing a payment in lieu of affordable units

equivalent to 15% of the 12 lots proposed, for a total of 1.8 units. These number of units, per the Town's fee schedule, amounts to a payment in lieu amount of 1.8 x \$32,167/point or **\$57,900.60**. The following condition provides a mechanism to assure the Town that it receives this payment.

- That Certificates of Occupancy for the final the two units may not be issued until such time as the *payment in lieu* for 1.8 affordable units is made (in accordance with the Town's fee schedule at the time of payment). A note to this effect shall be required on the final plat.

CONCLUSION – The project meets all the requirements of the Land Use Ordinance pertaining to density and affordable housing subject to the conditions mentioned above.

Streets & Sidewalks, Connectivity, Traffic Analysis, Traffic Calming, Greenways Transit, Parking:

Streets & Sidewalks

The proposed sub-collector street is built according to the public street standard of Article XIV of the LUO; this requires a minimum 26' wide pavement section with curb and gutter, and sidewalks on both side of the street; no bike lanes are required. The new street is about 665' in length and ties into Lake Hogan Farms Road about 380 feet from Homestead Road. Section 15-218 prefers a minimum intersection separation distance of 400 feet (instead of 380) but goes on to allow deviations from this standard when there is no other access alternative. To this end, the designer has maximized the available intersection separation.

Connectivity

In guiding Carrboro's growth, Town policy supports the development of an interconnected matrix of public streets. Section 15-214 of the Land Use Ordinance (LUO) requires new subdivisions to tie into anticipated streets outside the development, thereby providing "connectivity" to the Town's public road system. The 610 Homestead AIS has addressed this provision by ending the new street with a tee intersection that is configured to allow for a future extension to Homestead Road in the vicinity of Stratford Drive. This tee is built to the sub-collector standard.

Traffic Analysis

Vehicular traffic to the 12 new homes will be served off of Lake Hogan Farms Road about These dwellings are expected to add approximately 120 trips per day onto Lake Hogan Farms Road and the surrounding road network.

The additional traffic generated by this development is not expected to exceed the capacity of the surrounding road network. Lake Hogan Farms Road is a collector street which are generally designed to handle between 800 and 6000 trips per day. The most recent traffic counts taken by Town Staff in this area of Lake Hogan Farms road were approximately 2100 trips per day in 2003. This count was taken in association with a traffic calming request in 2003 that resulted in the installation of some stop signs and speed tables along Lake Hogan Farm Road.

Homestead Road is classified as an arterial with a design capacity of 11,000 trips per day. The 2015 NCDOT Annual Average Daily Traffic (AADT) counts on Homestead Road in this area show an average of 5200 trips per day. For comparison, the AADT for Jones Ferry Road between the NC 54 bypass and Main Street is 8300 trips per day.

NCDOT's review of the project did not mention any issues associated with impacts to Homestead Road's capacity. Because of the small number of additional trips generated by the development, NCDOT did not require that the applicant do an intersection analysis to see if signalization is required. The applicant has provided the attached traffic impact analysis (Attachment D)

At the Neighborhood Information Meeting a few of the citizens in the area reported peak morning and evening congestion at the Lake Hogan Farms/Homestead Road intersection (Attachment E). The proposed subdivision could someday alleviate some of this congestion at such time as it is extended to connect to Homestead in the vicinity of Stratford Drive. This connection would be the responsibility of the property owner to the south and not the applicant.

Traffic Calming

The Lake Hogan Farms subdivision has at this time only two main entrances; Hogan Hills Road located off Old NC 86 and Lake Hogan Farms Rd off of Homestead Road. This arrangement creates a bottleneck situation during peak travel periods. Future roadway connections as detailed in the Town's Connector Road plan could help alleviate some of these problems in the future. As street connections are completed, impacted streets, such as the proposed sub-collector will likely have an interest in traffic calming measures. The Town has requested that the applicant include traffic calming measures on the street to anticipate this future connection. The applicant does not wish to do this at this time. The Board may wish to discuss this matter in further detail with the applicant.

NCDOT and the Town Transportation Planner has reviewed and approved the configuration of the roads as shown on the plans. The developer will need to obtain a driveway permit which may include additional encroachment agreements from Public Works prior to construction plan authorization.

Greenways

No greenway facilities are being constructed on the site. Early in the review process the applicant and staff discussed the possibility of a pedestrian/bicycle path along the Homestead Road frontage.

Transit

Chapel Hill Transit has been notified of the proposed project and has no immediate plans in the vicinity that require the project to provide a bus stop.

Parking:

Per section 15-291 each lot will be required to park two cars safely outside of the street right-of-way. The parking spaces within the garage cannot be counted toward this requirement. Because of this the following condition is required:

- Prior to construction plan approval, the plans need to include a standard detail, per section 15-291 of the LUO, demonstrating that each lot can provide off-street parking sufficient to accommodate two cars, excluding those spaces provided within the garage.

CONCLUSION – The project meets all the requirements of the Land Use Ordinance pertaining to Streets & Sidewalks, Connectivity, Traffic Analysis, Traffic Calming, Greenways, Transit, & Parking.

Tree Protection, Street Trees, Homestead Road Buffer, Tree Canopy

Tree Protection

The site is almost completely wooded with primarily pines and a few hardwoods. Large trees, as defined by the LUO, having a diameter of 18 inches or greater are to be retained whenever possible (15-316). A complete tree survey has been performed identifying 10 such trees on these properties and all of them require removal to accommodate the installation of the road and related infrastructure as shown on the site plan. The development of individual lots will require additional tree removal. Trees on the lots will be retained at the discretion of the home builder and the developer. As required, the applicant has provided the attached tree removal justification letter (Attachment F).

Street Trees

The landscape plan proposes 43 large street trees, 21 of which are Red Maples and the remainder, Willow Oak. These are shown to demonstrate compliance with the street screening requirements of section 15-308. None of the proposed plantings are on the Town's List of Invasive Plant Species on Appendix E-17 of the LUO. These plans will be reviewed further during construction plan review.

Section 15-315 of the LUO provides guidelines for the planting and retention of trees adjacent-to and within street R/W's where an offer of dedication has been made to the Town. The landscape plan proposes a street tree layout primarily within the R/W with a fairly uniform pattern. However, because existing trees may be preserved during the construction process staff recommends that the proposed layout be considered only as a possible scheme and that the street tree requirement be revised as needed so that it may be field adjusted as conditions warrant. Additionally, the Town's policy is to require that 1/3rd of all such trees be evergreen. For these reasons, the following condition is recommended:

- That flexibility be allowed in the execution of the street tree planting plan (subject to the approval of public works and the planning department), such that the combination of existing and proposed trees along all publicly dedicated streets in the subdivision meet the street tree requirements of Section 15-315 of the Land

Use Ordinance and that the final arrangement is such that 1/3rd of the street trees retained and/or proposed for this purpose are evergreen.

Homestead Road Buffer

Section 15-312 requires that developments adjacent to Homestead Road (and others) to preserve an undisturbed Protective Buffer that is a minimum of 50' in width and an average of 100' in width. Further this Section requires that a Type A screen be provided on the development side of this buffer in places where the existing vegetation is insufficient. The proposed subdivision has existing dense vegetation in the vicinity of the road buffer. No additional screening should be required to meet the provisions of 15-312. These road buffer screening requirements are a continuous obligation of the permit; should the existing screening fail through fire or disease, the permit will require that it be replaced in accordance with the provisions of 15-312.

Tree Canopy

Section 15-319 requires that residential developments maintain a tree canopy equivalent to 40% of the lot area. The applicant has provided the attached exhibit demonstrating that they have satisfied this requirement by providing 41% tree canopy coverage (Attachment G).

CONCLUSION – The project meets all the requirements of the Land Use Ordinance pertaining to Tree Protection, Street Trees, the Homestead Road Buffer, and Tree Canopies.

Drainage and Water Quality, Stormwater Bonding, Stream Buffers, Grading, Erosion Control, and Phasing

Drainage and Water Quality

Section 15-263 of the LUO establishes stormwater management criteria that must be met for any project requiring a CUP. In particular the applicant must meet stormwater runoff standards with respect to water quality, quantity, and volume.

To this end, the grading and drainage plan show a system of curb and gutter, catch basins and pipes that collect and direct water to a large bioretention basin east of the lots. This basin and its associated appurtenance will be located off-site within a private stormwater easement on the adjacent lot.

Section 15-263 also regulates the *volume* increase of stormwater runoff as a result of the new development. In this instance, the LUO allows for a 400% increase in stormwater volume runoff. The project has been satisfactorily reviewed for compliance with this section and the bioretention facility has been designed to maximize infiltration of the stormwater by allowing additional volume storage.

Relative to the Town satisfying state requirements pertaining to the National Pollutant Discharge Elimination System (NPDES) Phase II permit, the following conditions are required:

- That the applicant shall provide to the Zoning Division, prior to the recordation of the final plat for the project or before the release of a bond if some features are not yet in place at the time of the recording of the final plat, Mylar and digital as-builts for the stormwater features of the project. Digital as-builts shall be in DXF format and shall include a base map of the whole project and all separate plan sheets. As-built DXF files shall include all layers or tables containing storm drainage features. Storm drainage features will be clearly delineated in a data table. The data will be tied to horizontal controls.
- Per Section 15-263.1, that the developer shall include a detailed stormwater system maintenance plan, specifying responsible entity and schedule. The plan shall include scheduled maintenance activities for each stormwater BMP in the development, performance evaluation protocol, and frequency of self-reporting requirements (including a proposed self-reporting form) on maintenance and performance. The plan and supporting documentation shall be submitted to Town engineer and Environmental Planner for approval prior to construction plan approval.

Stormwater Bonding

Section 15-263 (i) enables the Town to require the developer post a security to the Town to assure that the stormwater BMPs perform as designed; because of this, the following condition is recommended.

- That, prior to issuance of a CO, a final plat, or the certification of a stormwater BMP, the Town may require a performance security be posted for a period of two years per the provisions of Section 15-263(i).

Stream Buffers

The proposed grading and stormwater plan does not encroach into stream buffers.

Grading

The grading plan limits the grading disturbance to the installation of the street, stormwater devices and the walking path. Additional minor grading would be expected on the individual lots during home construction.

Erosion Control

A simple erosion control plan has been provided which is provisionally satisfactory to Orange County Erosion Control. Additional details will be provided as part of the Construction Plan review process.

Phasing

The project is not phased.

CONCLUSION – The project meets all the requirements of the Land Use Ordinance pertaining to Drainage and Water Quality, Stormwater Bonding, Stream Buffers, Grading, Erosion Control, and Phasing, subject to the conditions mentioned above.

Utilities, Fire Safety, Lighting, Refuse Collection

Utilities

The water and sewer plans have been reviewed by OWASA and meet with their general approval. OWASA will review the plans in greater detail during construction plan review.

The plans show that the applicant intends to tie into an existing waterline within Lake Hogan Farms Road while their proposed sewer connection will tie into the existing sewer stub-out at the north end of Stratford Drive via a 30' OWASA easement. This arrangement has been reviewed and provisionally approved both OWASA and NCDOT. Construction plans will require further approval.

Regarding electric and gas, utilities, the applicant has submitted letters by the respective providers indicating that they can serve the development.

Per Section 15-246 of the LUO, the plans must specify that all electric, gas, telephone, and cable television lines are to be located underground in accordance with the specifications and policies of the respective utility companies. Because of this the following condition is recommended:

- That utilities shall be installed underground per the provisions or 15-246 of the Land Use Ordinance.

The Public Works Department prefers to receive written confirmation from the electrical utility prior to construction plan approval. Because of this, staff recommends the following condition.

- That the developer provide a written statement from the electrical utility stating that electric service can be provided to all locations shown on the construction plans prior to the approval of the construction plans;

Fire Safety

The CUP plans have been reviewed and provisionally approved by the Fire Department subject to further review during construction plans. One new fire hydrants is provided in the mid-block section of the new road and one existing fire hydrant is available about 150 feet south on Lake Hogan Farms Road.

Fire flow calculations must be submitted and approved by the Town Engineer and Fire Department prior to construction plan approval. A condition to this effect shall be entered onto the permit.

- That fire flow calculations must be submitted and approved by the Town Engineer and Town Fire Department prior to construction plan approval.

Lighting

The Town's Street Lighting Policy regulates the lighting requirements for the proposed new street. To this end the applicant has proposed three street lights that satisfy the Town's current requirements.

Refuse Collection

The project's waste arrangements have been reviewed by both Public Works and Orange County. The Town and County will provide trash and recycling collection services for the development while the County will be involved in managing construction waste.

Waste management during construction requires from the County an approved Solid Waste Management Plan as well as a permit. The Solid Waste Management Plans and permit will be obtained prior to construction.

CONCLUSION – The project meets all the requirements of the Land Use Ordinance pertaining to Utilities, Fire Safety, Lighting and Refuse Collection subject to the conditions mentioned above.

Open Space, Recreation,Open Space

Per the provisions of 15-198, every residential development is required to set aside at least 40% of the total area of the development in permanent open space. "Open Space" as defined by the LUO excludes some parts of the development from being so defined. In particular the 30-40' in width area along the northern property line (located behind the lots) cannot be claimed as open space.

In order to satisfy the 40% requirement, the applicant is therefore claiming the area associated with the off-site BMP as illustrated in the exhibit on SP-1 of the attached project plans (Attachment B). In order for this facility to counted toward open space it must be improved in such a way as to be "conducive to actual use for passive recreation purposes by residents of the development where located" (15-198); to this end the applicant has provided the walking trail and gazebo rest-stations around the BMP and has taken steps to design the facility to be an attractive natural feature (Attachment H).

Note that during the concept plan phase of the project, primary and secondary conservation areas as defined by 15-198 are identified and prioritized for protection prior to locating lots and infrastructure. The small amount of primary constraints (19.2%) on the subject parcels results in a lot layout that preserves this constraint within the common open space.

Recreation

The proposed 12 residential dwelling units combine to require 124.68 recreation points, per Section 15-196 of the LUO. The applicant satisfies this requirement by providing a total of 127.32 points (80.37 points: walking trail, 46.94 points: two "gazebo" bench/shelters). As required per 15-196-f, 10% of the amenities must be suitable for

children under the age of 12; this amounts of 12.5 points; the applicant proposes that the walking path will serve to satisfy these regulations.

CONCLUSION – The project meets all the requirements of the Land Use Ordinance pertaining to Open Space and Recreation subject to conditions as needed.

Miscellaneous

Construction Management

Prior to construction plan approval the Town will inform the applicant and contractor of the requirements of the Town Code pertaining to construction noise and hours of operation and obstructing or excavating within public street rights of way. Section 15-49 (c-1) further enables the Town to require the applicant submit a construction management plan prior to construction plan approval.

Town Planning Documents

Regarding the following Town’s long range planning documents the applicant has provided the attached written responses (Attachment I).

- a. Connector Roads Policy
- b. Facilitated Small Area Plan for Carrboro’s Northern Study Area
- c. Vision 2020

Architectural Standards

The recommended architectural standards provisions of Section 15-177 of the LUO uses examples and descriptions of the Town’s existing “vernacular” housing stock to exemplify coherent design standards. These standards are considered recommended due to changes in the state legislature that prohibit municipalities from regulating architectural design. The intention of this section is to support cohesive building design that is either in the Carrboro vernacular “style”, or, is of another equally cohesive design language. In response to these provisions, the applicant has provided the attached letter along with representative examples of the proposed housing types (Attachment J).

Voluntary Annexation

The Town typically requests that a Voluntary Annexation Petition be submitted prior to Final Plat Approval. Because of this the following condition is recommended:

- That the applicant submit a Voluntary Annexation Petition prior to final plat approval.

CAPS

Per Article IV, Part 4 of the LUO, the applicant must receive the required Certificate(s) of Adequacy of Public School Facilities (CAPS) from the Chapel Hill Carrboro City Schools District prior to construction plan approval. The CAPS for the 610 Homestead Road subdivision were provisionally approved by the Board of Education on October, 6, 2016. This process will need to be reconfirmed prior to construction plan approval. Because of this the following condition is recommended.

- That the applicant receive(s) CAPS from the Chapel Hill-Carrboro City Schools district pursuant to Article IV, Part 4 of the Carrboro Land Use Ordinance prior to construction plan approval.

Neighborhood Information Meeting

The applicant conducted a neighborhood information meeting on November 1st, 2016. Staff was in attendance at this meeting. Seven (or so residents) attended the presentation by the developer and his two consultants. Attached are the minutes and sign-in sheet from the meeting (Attachment E).

Homeowner's Association Documents

Prior to construction plan approval Homeowner's Associations Declarations and Covenants will need to be submitted to the Town for review and approval by the Town Attorney. Section 15-83.36 of the LUO specifically prevents these documents from prohibiting "devices that generate or conserve energy or water". Photovoltaic panels and clotheslines are such devices that cannot be regulated by homeowner's associations. Because of this the following condition is recommended:

- That, prior to final plat approval, the Homeowner's declarations and covenants shall satisfy the applicable provisions of the Land Use Ordinance subject to review and approval of the Town Attorney.

CONCLUSION – The project meets all the requirements of the Land Use Ordinance pertaining to categories listed above subject to the aforementioned conditions.

STAFF RECOMMENDATIONS:

The staff recommends that the Advisory Boards offer comments as needed (including review of the following staff recommendations) and prepare summary recommendations for a Special Use Permit to allow the construction of the proposed 610 Homestead Road AIS. Staff recommendations are as follows:

1. That Certificates of Occupancy for the final the two units may not be issued until such time as the *payment in lieu* for 1.8 affordable units is made (in accordance with the Town's fee schedule at the time of payment). A note to this effect shall be required on the final plat.
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12. That, prior to final plat approval, the Homeowner's declarations and covenants shall satisfy the applicable provisions of the Land Use Ordinance subject to review and approval of the Town Attorney.

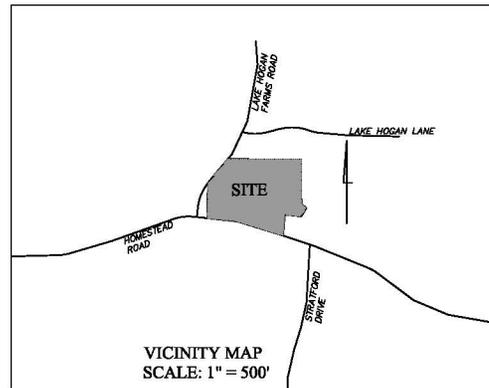
610 HOMESTEAD ROAD

SPECIAL USE PERMIT - A.I.S.

SITE DEVELOPMENT DATA

| SITE DATA | |
|---|--|
| EXISTING ZONING | R-20 |
| TOTAL AREA (APPROVED) | 308862 SF 7.09 ACRES |
| PROPOSED DENSITY | 12 D.U. |
| MAXIMUM ALLOWED DENSITY (1 D.U. / 50,000 SF) | 15 D.U. |
| TOTAL NO. OF PROPOSED LOTS | 12 LOTS |
| ACREAGE IN LOTS | 3.137 AC |
| ACREAGE IN R/W | 0.83 AC |
| OPEN SPACE AREA REQUIRED (40% OF GROSS) | 2,836 ACRES = 123544 SF |
| OPEN SPACE PROVIDED | 2,836 ACRES = 123544 SF |
| ONSITE OPEN SPACE: | 2,436 AC = 106,129 SF |
| OFFSITE OPEN SPACE (BMP): | 0.40 AC = 17,724 SF |
| % SITE IN PRIMARY CONSTRAINT | 18.2% - 59240 SF = 1.36 AC |
| % SITE IN SECONDARY CONSTRAINT | 80.8% - 249622 SF = 5.73 AC |
| PRESERVED PRIMARY CONSTRAINT | 100.0% |
| PRESERVED SECONDARY CONSTRAINT | 21.9% |
| TREE CANOPY COVERAGE | 45.7% |
| BUILDING HEIGHT MAXIMUM | 35 FEET |
| REQ'D RECREATION POINTS (10.39 PTS/D.U. x 12 D.U.) | 124.68 |
| PROVIDED RECREATION POINTS | TRAIL = 5023.32 SQ. FT. x 0.016 PT/SQ. FT. = 80.37 PT COURT = 2 X (8' X 9') SQ. FT. x 0.326 PT/SQ. FT. = 46.94 PT 80.37 + 46.94 = 127.32 |
| PROVIDED RECREATION POINTS | 127.32 |
| SURPLUS RECREATION POINTS | 127.32 - 124.68 = 2.64 PT SURPLUS POINTS TO BE APPLIED TO FUTURE DEVELOPMENT OF HOMESCAPE DEVELOPMENT COMPANY, INC. TRACT |
| BUILDING SETBACKS | SIDE YARD = 10 FEET REAR/FRONT = 20 FEET |
| MIN. LOT WIDTH | 80 FEET |
| MIN. LOT AREA | 10,000 S.F. |
| IMPERVIOUS IN R/W | 0.68 AC |
| IMPERVIOUS IN LOT (ASSUMED) | 3500 SF/LOT 1.52 AC |
| SITE % IMPERVIOUS | 100 X 2.2/7.09 = 31.0% |
| SEWER FLOW FOR DEVELOPMENT | = 5,700 GPD [4 BEDROOM / D.U. x 120 G.P.D.] |
| WATERLINE TAKEOFF: | 790 LF - 8" D.I.W.L. 1 FIRE HYDRANT |
| SEWER SERVICES: | 12 SERVICE TAPS 3/4" |
| SEWER TAKEOFF: | 1615 LF - 8" D.I.S.S.; 8 - 4" MH |
| SEWER SERVICES: | 12 SERVICE TAPS |
| STREET LENGTH | 828 LF |
| THERE ARE NO DENSITY REDUCTION ADJUSTMENTS REQUIRED ON THIS SITE DUE TO THE ABSENCE OF THE FEATURES DESCRIBED IN SECTION 15-182.3(C1-C8). | |
| THIS SUBDIVISION IS NOT SUBJECT TO THE SMALL HOUSE PROVISIONS OF 15-188. | |
| EACH LOT IS REQUIRED TO BE ABLE TO PARK TWO CARS SAFELY OUT OF THE STREET RIGHT-OF-WAY, IN ADDITION TO ANY PARKING PROVIDED ON THE LOT WITHIN A GARAGE. | |
| ALL OPEN SPACE IS PRIVATE | |
| PROPOSED USE CATEGORY: 26.200, MAJOR SUBDIVISION, CONSISTING OF 1.11, SINGLE-FAMILY HOMES. | |
| EXISTING PARCEL SIZE = 4.65 & 1.99 ACRES = 6.64 ACRES = 289328 SF | |
| PARCEL SIZE AFTER RECOMBINATION = 7.09 ACRES = 308840 SF | |
| PIN NUMBERS: 9779-18-2544 & 9779-18-4700 | |
| CURRENT LAND USE: RESIDENTIAL - VACANT | |
| PROPOSED NEW RESIDENCES: 12 SINGLE FAMILY RESIDENCES | |
| A 100' AVERAGE ROADWAY BUFFER IS PROPOSED ADJACENT TO HOMESTEAD ROAD. | |

OFF SITE HARDWOODS REMOVED
DUE TO INSTALLATION OF BMP: 15054 SF = 0.35 AC



1ST ISSUE FOR REVIEW: 3/16/16
2ND ISSUE FOR REVIEW: 7/12/16
3RD ISSUE FOR REVIEW: 9/14/16
4TH ISSUE FOR REVIEW 10/20/16

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THIS PLAN IS A FINAL DESIGN - NOT
RELEASED FOR CONSTRUCTION UNLESS
INITIALED/DATED AS APPROVED:

APPROVED: _____ / _____
INITIALS / DATE

SHEET INDEX

| | |
|---------|---|
| SHEET 1 | C1 - COVER SHEET |
| SHEET 2 | EX1 - EXISTING CONDITIONS |
| SHEET 3 | EX2 - EXISTING CONDITIONS |
| SHEET 4 | EX3 - EXISTING CONDITIONS |
| SHEET 5 | SP1 - SITE PLAN |
| SHEET 6 | EC1 - GRADING / DRAINAGE EROSION CONTROL PLAN |
| SHEET 7 | PP1 - ROADWAY PLAN AND PROFILE |
| SHEET 8 | PP2 - SANITARY SEWER OUTFALL PLAN AND PROFILE |
| SHEET 9 | D1 - EROSION CONTROL DETAILS |

ENGINEERING FIRM:

PLANS PREPARED BY: **VETERAN ENGINEERING ASSOCIATES, INC. (C-3527)**
ADDRESS: **POST OFFICE BOX 1625 DURHAM N.C. 27701**
PHONE: **(919) 201-2175**
ATTN: **Thomas R. Kagorice, P.E., as President (11622)**

DEVELOPER: **THE BERRYHILL GROUP, LLC**
ADDRESS: **104 PAINTED TURTLE LANE
CHAPEL HILL, NC 27516**

PHONE: **(919) 730-6078**
ATTN: **JAMES BRANDEWIE, as Manager**

PRELIMINARY PLANS
NOT RELEASED FOR
CONSTRUCTION

GENERAL NOTES

- BOUNDARY, TREE AND TOPOGRAPHIC SURVEY BY R.S. JONES & ASSOCIATES, INC. CIVIL PLANS PREPARED, DESIGNED AND DRAWN BY VETERAN ENGINEERING ASSOCIATES, INC.
- DEVELOPER SHALL COORDINATE A PRE-CONSTRUCTION CONFERENCE PRIOR TO ANY SITE DISTURBANCES WITH ALL APPROPRIATE PERMIT-ISSUING AUTHORITIES. THIS CONFERENCE WILL BE ATTENDED BY A REPRESENTATIVE FROM THE DEVELOPER, ENGINEER, CONTRACTOR, ZONING DIVISION, PUBLIC WORKS, AND THE CITY ENGINEER.
- AN OFFSITE BIO-RETENTION FACILITY ("BMP") IS PROPOSED WITH THIS PROJECT. THE BMP IS LOCATED WITHIN AN BASEMENT AND SAID BMP WILL SERVE NOT ONLY THIS PROJECT, BUT ALSO SERVE THE SITE WHEREIN IT IS SITUATED. THE BMP WAS SITED IN AN AREA WHERE FINE TREES EXIST SO AS TO AVOID HARDWOOD DEVELOPMENT CONSTRAINTS.
- IF ANY UTILITY IN ANY RIGHT-OF-WAY IS INSTALLED BY A UTILITY COMPANY, THE COMPANY SHALL MAINTAIN ACCURATE AS-BUILT DRAWINGS OF THE UTILITY'S INSTALLATION AND PROVIDE A COPY OF THESE CERTIFIED ACCURATE DRAWINGS TO THE TOWN.
- THE APPLICANT SHALL PROVIDE TO THE ZONING DIVISION PRIOR TO THE RECORDATION OF THE FINAL PLAN FOR THE PROJECT OR BEFORE THE RELEASE OF A BOND IF SOME FEATURES ARE NOT YET IN PLACE AT THE TIME OF THE RECORDING OF THE FINAL PLAN, MYLAR AND DIGITAL AS-BUILTS FOR THE HYDRAULIC FEATURES OF THE PROJECT. DIGITAL AS-BUILTS SHALL BE IN DXF FORMAT AND SHALL INCLUDE A BASE MAP OF THE WHOLE PROJECT AND ALL SEPARATE PLAN SHEETS. AS-BUILT DXF FILES SHALL INCLUDE ALL LAYERS OR TABLES CONTAINING STORM DRAINAGE FEATURES. STORM DRAINAGE FEATURES SHALL BE CLEARLY DELINEATED IN A DATA TABLE. THE DATA WILL BE TIED TO HORIZONTAL CONTROLS. ALL INSTALLED BMP (WATER QUALITY AND DETENTION DEVICES) MUST BE CERTIFIED BY THE ENGINEER OF RECORD AS CONSTRUCTED PER THE APPROVED CONSTRUCTION PLANS PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY AND THAT AS-BUILT CONSTRUCTION PLANS WILL BE SUBMITTED TO THE TOWN.

FIRE DEPARTMENT NOTES:

- NO TRAINING MAY BEGIN UNTIL FIRE HYDRANTS ARE OPERATIONAL.
- AN ALL WEATHER 30' WIDE TRAVEL SURFACE MUST BE IN PLACE PRIOR TO RECEIVING FINAL PLAN APPROVAL OR ANY BUILDING PERMIT.
- THE 2" DISCHARGE FROM ANY FIRE HYDRANT SHALL BE A MINIMUM OF 21 INCHES ABOVE FINAL GRADE.
- FIRE ACCESS ROAD MUST BE AN ALL WEATHER SURFACE AND MAINTAINED DURING DURING CONSTRUCTION.
- NO BURNING IS ALLOWED ON THE PROPERTY. ANY BRUSH OR TRASH SHALL BE HAULED FROM THE SITE OR MULCHED ON SITE.
- ANY BLASTING REQUIRES A BLASTING PERMIT FROM THE FIRE DEPARTMENT.

CONSTRUCTION WASTE NOTES:

- BY ORANGE COUNTY ORDINANCE CLEAN WOOD WASTE, SCRAP METAL AND CORRUGATED CARDBOARD ALL PRESENT IN CONSTRUCTION WASTE MUST BE RECYCLED.
- BY ORANGE COUNTY ORDINANCE, ALL HAULERS OF CONSTRUCTION WASTE MUST BE PROPERLY LICENSED.
- ALL EXISTING STRUCTURES 500 SQUARE FEET AND LARGER SHALL BE ASSSESSED PRIOR TO THE ISSUANCE OF A DEMOLITION PERMIT TO ENSURE COMPLIANCE WITH THE COUNTY'S REGULATED RECYCLABLE MATERIALS ORDINANCE (ORMO) AND TO ASSESS THE POTENTIAL FOR DECONSTRUCTION AND/OR THE REUSE OF SALVAGEABLE MATERIALS.
- PURSUANT TO THE COUNTY'S ORMO, CLEAN WOOD WASTE, SCRAP METAL, AND CORRUGATED CARDBOARD PRESENT IN CONSTRUCTION OR DEMOLITION WASTE MUST BE RECYCLED.
- PURSUANT TO THE COUNTY'S ORMO, ALL HAULERS OF MIXED CONSTRUCTION AND DEMOLITION WASTE WHICH INCLUDES ANY REGULATED RECYCLABLE MATERIALS SHALL BE LICENSED BY ORANGE COUNTY.
- PRIOR TO ANY DEMOLITION OR CONSTRUCTION ACTIVITY ON THE SITE, THE APPLICANT SHALL HOLD A PRE-DEMOLITION/PRE-CONSTRUCTION CONFERENCE WITH SOLID WASTE STAFF. THIS MAY BE THE SAME PRE-CONSTRUCTION MEETING HELD WITH OTHER DEVELOPMENT/ENFORCEMENT OFFICIALS.
- THE PRESENCE OF ANY ASBESTOS CONTAINING MATERIALS (ACM) AND/OR OTHER HAZARDOUS MATERIALS SHALL BE HANDLED IN ACCORDANCE WITH ANY AND ALL LOCAL, STATE, AND FEDERAL REGULATIONS AND GUIDELINES.

RESIDENTIAL COLLECTION NOTES:

- RESIDENTIAL WASTE SHALL BE COLLECTED BY USING BOLL OUT CONTAINERS.

SIGNAGE NOTES:

- NO SIGNAGE IS PROPOSED AT THIS TIME.

A COPY OF THE APPROVED SITE PLAN MUST BE DISPLAYED IN A KIOSK AT THE SITE SHOWING LOT CONFIGURATION, BASEMENTS, STREETS, AMENITIES, AND OTHER DESIGN FEATURES (WATER, SEWER, OPEN SPACE, ETC). PUBLIC INFORMATION SIGNS ALSO MUST BE ERECTED ON THE SITE PRIOR TO FINAL PLAN APPROVAL.

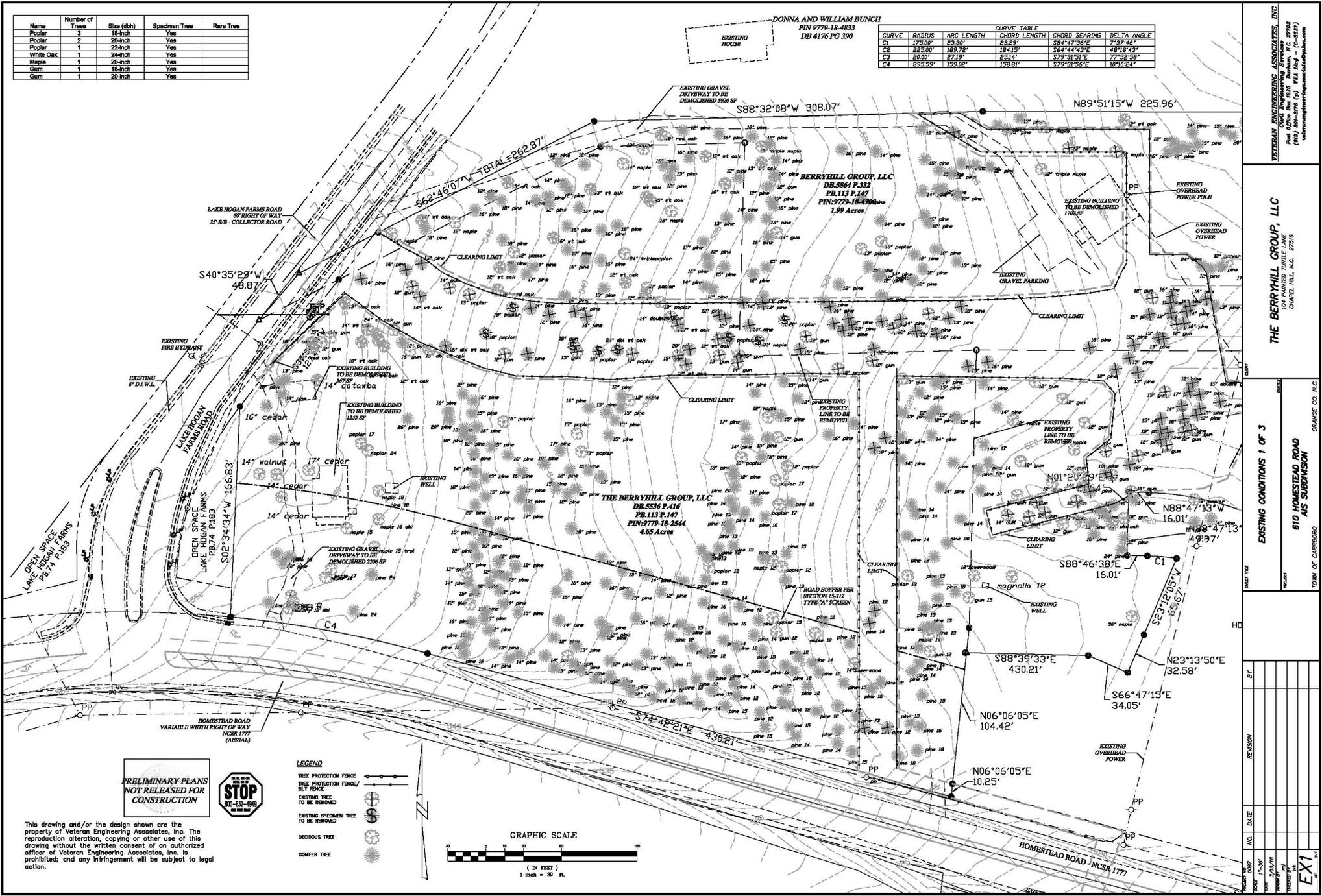
PUBLIC WORKS NOTES:

- DEVELOPER/OWNER IS RESPONSIBLE FOR SCHEDULING AND COORDINATING AN ON-SITE PRE-CONSTRUCTION MEETING WITH ALL APPLICABLE AGENCIES PRIOR TO ANY SITE DISTURBANCES. THIS PRE-CONSTRUCTION MEETING SHOULD BE IN PLACE AT TIME OF MEETING, (I.E.: TOWN OF CARRBORO - ZONING, ENGINEER AND PUBLIC WORKS, ORANGE COUNTY EROSION CONTROL, ORANGE WATER AND SEWER AUTHORITY, ETC.)
- AT NO TIME SHALL CONSTRUCTION RELATED VEHICLES, EQUIPMENT, TRAILER OR MATERIALS BE PARKED OR STORED WITHIN THE PUBLIC RIGHT-OF-WAY FOR EXISTING PUBLIC STREETS, SIDEWALKS AND BIKEWAYS AREAS, WITHOUT PRIOR APPROVAL FROM ERIC NESMITH, CONSTRUCTION INSPECTOR, 919-865-0016.
- THE DEVELOPER/OWNER/CONTRACTORS SHALL BE RESPONSIBLE FOR THE PROMPT REMOVAL OF ANY AND ALL MUD, SOILS, STONE AND/OR CONSTRUCTION RELATED MATERIALS DEPOSITED UPON THE SIDEWALK AND STREET SURFACES IN CONNECTION WITH ANY AND ALL CONSTRUCTION ACTIVITIES. THIS WOULD INCLUDE MAINTENANCE AS NEEDED FOR THE REQUIRED CONSTRUCTION DRIVE ACCESS, DESIGNATED CONSTRUCTION ENTRANCE.
- THE DEVELOPER/OWNER/CONTRACTOR SHALL FURNISH AND MAINTAIN WORK ZONE TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR WORK ZONE OPERATIONS WITHIN ALL PUBLIC STREET RIGHT-OF-WAYS.
- PRIVATE STORM DRAINAGE FACILITIES SHALL BE MAINTAINED BY PRIVATE HOMEOWNERS AND/OR A HOMEOWNERS ASSOCIATION.

TRUTH IN DRAINAGE STATEMENT: THE PROPOSAL MEETS OR EXCEEDS LOCAL AND STATE DESIGN GUIDELINES.

| Name | Number of Trees | Size (dbh) | Specimen Tree | Rare Tree |
|-----------|-----------------|------------|---------------|-----------|
| Poplar | 3 | 18-inch | Yes | |
| Poplar | 2 | 20-inch | Yes | |
| Poplar | 1 | 22-inch | Yes | |
| White Oak | 1 | 24-inch | Yes | |
| Maple | 1 | 20-inch | Yes | |
| Gum | 1 | 18-inch | Yes | |
| Gum | 1 | 20-inch | Yes | |

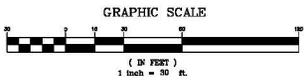
| CURVE | RADIUS | ARC LENGTH | CURVE TABLE | | |
|-------|---------|------------|--------------|---------------|-------------|
| | | | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
| C1 | 175.00' | 23.39' | 83.29' | S84°47'35"E | 7°37'46" |
| C2 | 225.00' | 169.72' | 184.15' | S64°44'43"E | 48°18'43" |
| C3 | 200.00' | 27.15' | 26.14' | S79°31'01"E | 77°32'38" |
| C4 | 895.59' | 159.25' | 158.81' | S79°31'35"E | 10°10'54" |



**PRELIMINARY PLANS
NOT RELEASED FOR
CONSTRUCTION**



- LEGEND**
- TREE PROTECTION FENCE
 - TREE PROTECTION FENCE / SILENT FENCE
 - EXISTING TREE TO BE REMOVED
 - EXISTING SPECIMEN TREE TO BE REMOVED
 - DECIDUOUS TREE
 - CONIFER TREE



VETERAN ENGINEERING ASSOCIATES, INC.
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veteranengineering.com

THE BERRYHILL GROUP, LLC
104 PAINTED TURTLE LANE
CHAPEL HILL, N.C. 27616

EXISTING CONDITIONS 1 OF 3

610 HOMESTEAD ROAD
AUS SUBDIVISION

TOWN OF CARROBORO
ORANGE CO. N.C.

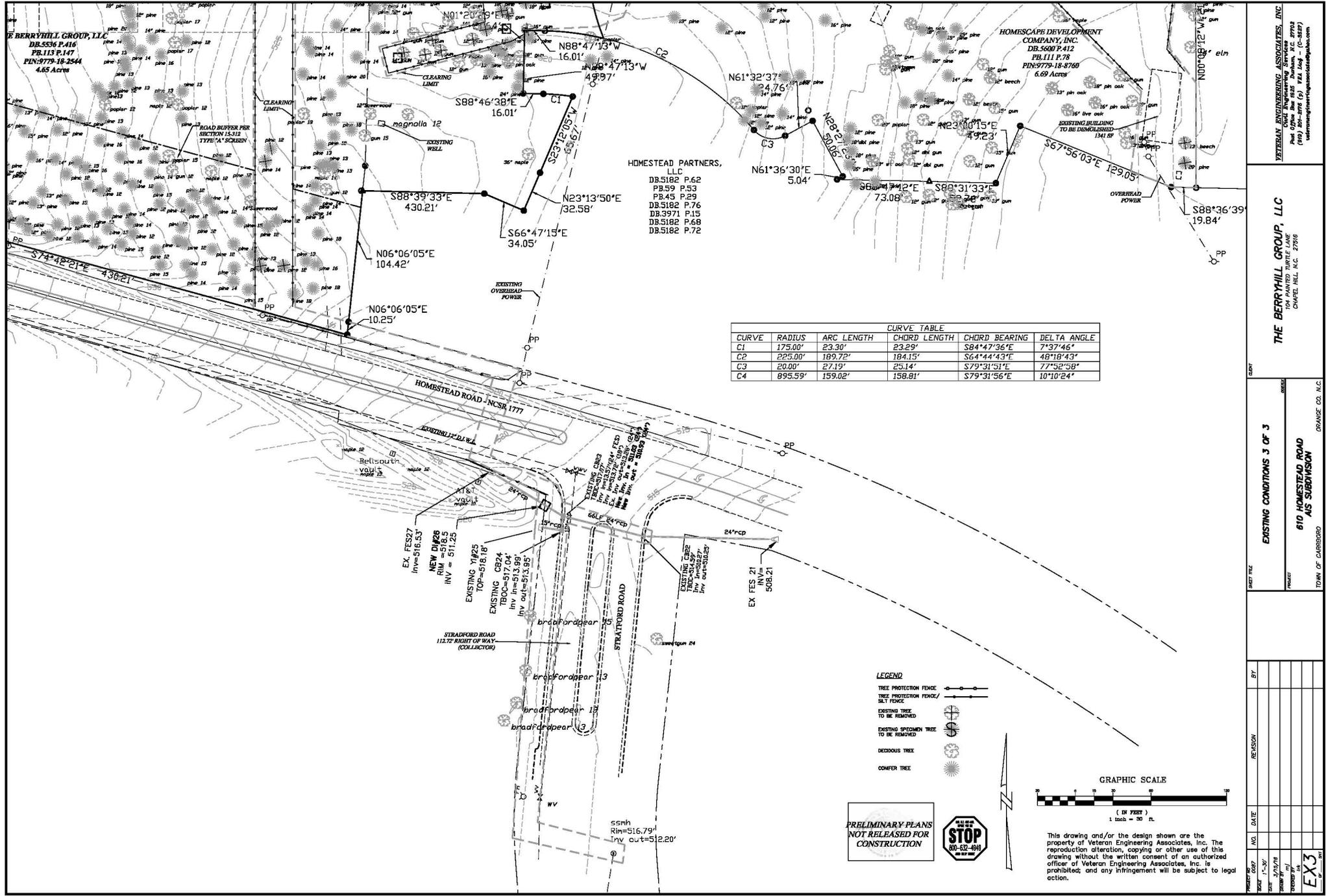
PROJECT: 170718
DATE: 11/27/18
DRAWN BY: [Signature]
CHECKED BY: [Signature]
SCALE: AS SHOWN

BY: [Signature]

REVISION:

NO. DATE

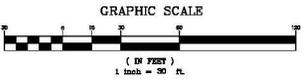
EX-1



CURVE TABLE

| CURVE | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
|-------|---------|------------|--------------|---------------|-------------|
| C1 | 175.00' | 23.30' | 23.29' | S84°47'36"E | 7°37'46" |
| C2 | 225.00' | 189.72' | 184.15' | S64°44'43"E | 48°18'43" |
| C3 | 20.00' | 27.15' | 25.14' | S72°31'51"E | 77°52'58" |
| C4 | 895.59' | 159.02' | 158.81' | S79°31'56"E | 10°10'24" |

PRELIMINARY PLANS
NOT RELEASED FOR
CONSTRUCTION



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 veadrawing@veteranengineering.com

THE BERRYHILL GROUP, LLC
 104 PAINTED TURTLE LANE
 CHARLE HILL, N.C. 27616

EXISTING CONDITIONS 3 OF 3

**610 HOMESTEAD ROAD
AUS SUBDIVISION**

TOWN OF CARROLL

ORANGE CO. N.C.

BY: _____

REVISION: _____

NO. DATE: _____

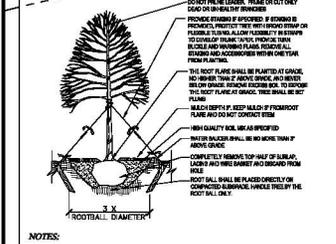
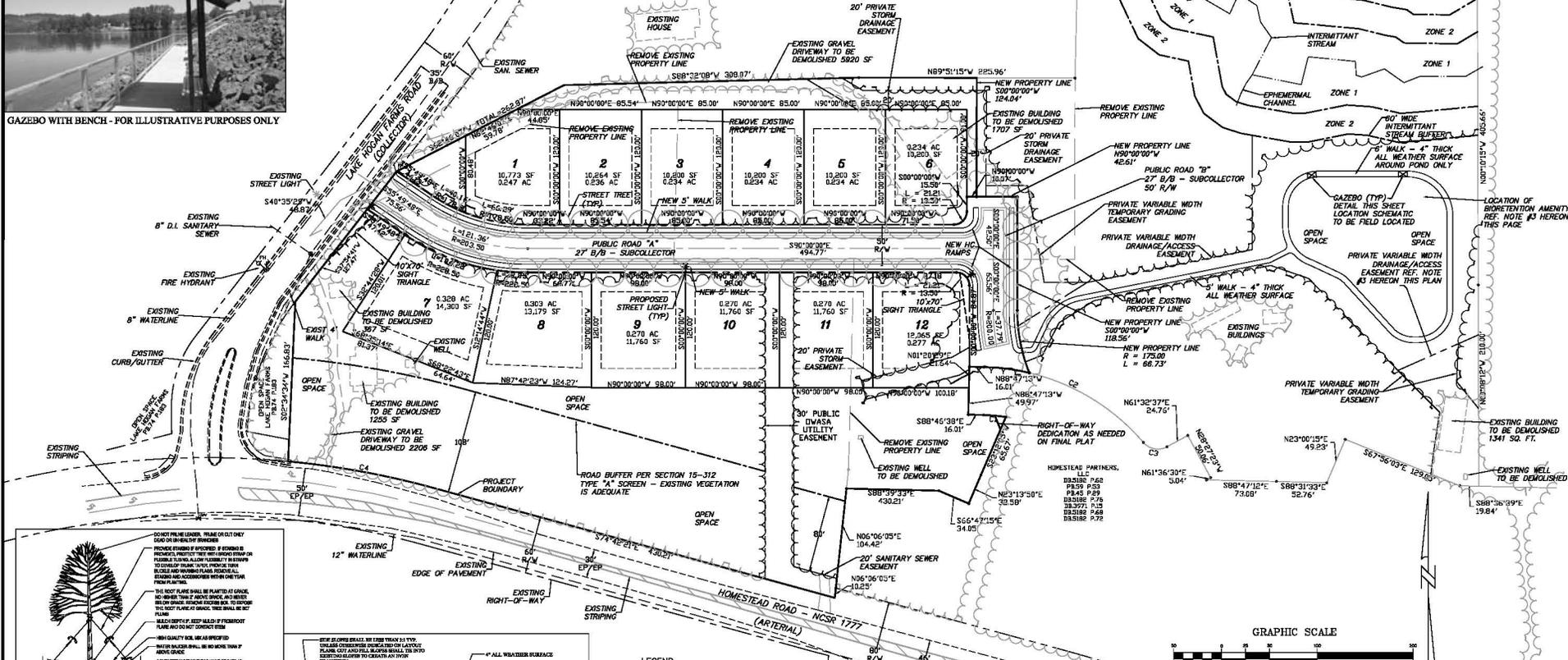
DATE: 1/27/24

PROJECT: EX3

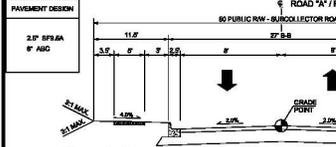
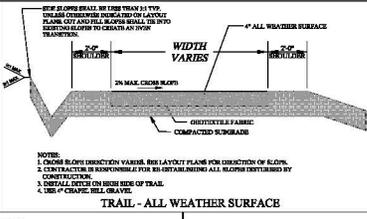


GAZEBO WITH BENCH - FOR ILLUSTRATIVE PURPOSES ONLY

| CURVE TABLE | | | | | |
|-------------|---------|------------|--------------|---------------|-------------|
| CURVE | RADIUS | ARC LENGTH | CHORD LENGTH | CHORD BEARING | DELTA ANGLE |
| C1 | 175.00' | 23.30' | 23.29' | S84°47'36"E | 7°37'45" |
| C2 | 225.00' | 189.72' | 184.15' | S54°44'43"E | 49°18'43" |
| C3 | 250.00' | 12.19' | 25.14' | S72°31'01"E | 77°05'59" |
| C4 | 893.59' | 159.68' | 188.81' | S72°31'56"E | 10°10'24" |



NOTES:
 1. CONTRACTOR IS RESPONSIBLE FOR ADEQUATE DRAINAGE OF ALL PLANTING PITS. (POSITIVE DRAINAGE A WAY FROM PIT)
 2. ALLOWED TO STAND IN THE TOWN OF CARBORO (2) THESE MANUALLY
 3. STREET TREES MUST BE 2" CALIBER AT INSTALLATION WITH A 5" MINIMUM FIRST BRANCH HEIGHT.
 4. PLANTING SEASON OCTOBER - APRIL.
 5. ELECTRICAL OUTLETS AND OTHER UTILITIES ARE PROVIDED IN THE PLANTING AREA IMMEDIATELY SURROUNDING THE TREE.



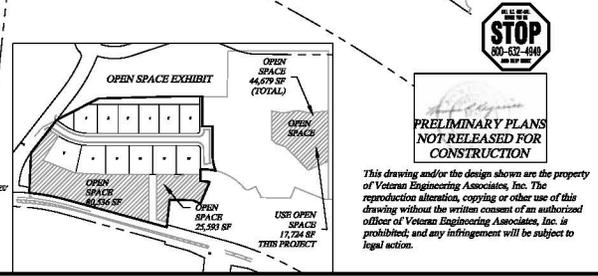
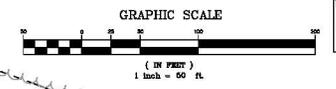
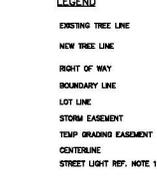
WORKS POSSIBLE EXISTING TREES SHALL BE RELIED UPON FOR STREET TREE REQUIREMENTS. TREES WILL BE PLANTED PER THE SCHEDULE SHOWN HEREIN THIS PLAN AS NECESSARY TO COMPLY WITH SECTION 15-114 OF THE CARBORO Z.O.C. THIS STREET TREE SCHEDULE HEREIN THIS PLAN ARE NECESSARY TO COMPLY WITH SECTION 15-114 OF THE CARBORO Z.O.C. AS BEST, THE TREES SHOWN IN THIS CHART ARE A MAXIMUM NUMBER OF TREES TO BE PLANTED, AND, IF EXISTING TREES CAN BE USED, THEN THE AMOUNT OF STREET TREES WILL BE ADJUSTED ACCORDINGLY.
 CONTRACTOR SHALL NOT PLANT SAME SPECIES OF TREE SIDE BY SIDE. IN REGARD TO THE RED MAPLE, CONTRACTOR WILL PROVIDE AN ALTERNATIVE STREET TREE, IF AVAILABLE, COMPLYING WITH THE TOWN OF CARBORO APPROVED LIST OF STREET TREES IN ORDER TO PROVIDE SUSTAINABLE DIVERSITY.

PLANTING CHART

| Tree Name | Species | Variety | Quantity | Caliper | On Center Spacing | Container of/bb |
|------------|---------|---------|----------|---------|-------------------|-----------------|
| Red Maple | Quercus | Osceola | 21 | 2.5" | 30' o.c. | bb |
| Willow Oak | Quercus | Phellos | 22 | 2.5" | 30' o.c. | bb |

GENERAL NOTES:
 1. BOUNDARY AND TOPOGRAPHIC SURVEY PROVIDED BY: R.S. JONES & ASSOCIATES, INC.
 2. THE PURPOSE OF THE PLANS IS TO SUBDIVIDE THE LAND INTO TWELVE (12) NEW RESIDENTIAL LOTS.
 3. AN OFFSITE BIO-RETENTION FACILITY ("BMP") IS PROPOSED WITH THIS PROJECT. THE BMP IS LOCATED WITHIN AN EASEMENT AND SHD BMP WILL SERVE NOT ONLY THIS PROPOSED SITE BUT ALSO SERVE THE SITE WHEEN IT IS SITUATED. THE BMP WAS SITED IN AN AREA WHERE THE TREES EXIST SO AS TO AVOID HARDWOOD DEVELOPMENT CONSTRAINTS.
 4. MAINTAIN APPROPRIATE AND REQUIRED TRAFFIC CONTROL DEVICES AT ALL PUBLIC ROADWAY CONNECTIONS. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "MCDOT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
 5. ALL SOIL FILL MATERIAL SHALL BE SUITABLE, STABLE SOILS THAT ARE FREE OF ORGANIC MATERIAL AND CONTAIN NO ROCKS LARGER THAN 6" IN DIAMETER. SOIL SHALL BE PLACED WITH APPROXIMATELY 10% MOISTURE. THE BMP IS LOCATED IN AN AREA WHERE THE TREES EXIST SO AS TO AVOID HARDWOOD DEVELOPMENT CONSTRAINTS. DEVELOPER SHALL FURNISH A SOILS ENGINEERING AND TESTING PLAN TO GENERATE AND PERSONALLY TEST ALL MATERIAL FOR OPTIMAL PLACEMENT AND COMPACTION. COPIES OF ALL REPORTS, CONTAINING OBSERVATION AND GENSITY TEST RESULTS, SHALL BE FORWARDED TO THE ENGINEERING DEPARTMENT.
 6. THERE ARE EXISTING UNDERGROUND UTILITIES ON THIS SITE. CONTRACTOR SHALL CALL, NO-NO-DIGS AND LOCAL AUTHORITIES TO VERIFY ALL UTILITY LOCATIONS PRIOR TO BEGINNING CONSTRUCTION.

7. ALL ROADS LOCATED IN THIS DEVELOPMENT ARE PUBLIC. UNLESS OTHERWISE SPECIFIED, ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE TOWN OF CARBORO STANDARDS AND SPECIFICATIONS.
 8. THERE IS NO FEMA 100 YEAR FLOOD PLAIN ON THIS SITE.
 9. THE CONTRACTOR WILL FIELD LOCATE ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION. ANY EXISTING UTILITIES SHOWN HEREON ARE TO BE CONSIDERED APPROXIMATE. SHOULD THE CONTRACTOR FIND THAT THERE MAY BE A CONFLICT WITH INFORMATION SHOWN IN THESE CONTRACT DOCUMENTS, THE CONTRACTOR WILL REPORT THE INFORMATION FOUND TO THE ENGINEER OF RECORD AND THEN AWAIT FURTHER DIRECTION FROM THE ENGINEER OF RECORD.
 10. STREET LIGHTS: USE HIGH PRESSURE SODIUM (HPS) 8,500 LUMENS (100 WATTS) MOUNTED ON 20" BRASSLESS POLES. THE STANDARD LIGHT FIXTURE SHALL BE THE COBRA-HEAD STYLE OR TOWN APPROVED EQUAL.
 11. ALL TREES PLANTED AND MAINTAINED WITHIN THE PUBLIC RIGHT-OF-WAY SHALL PROVIDE A CLEAR ZONE BETWEEN 2' AND 7' ABOVE GROUND TO PREVENT THE TREE CONTRACT LINES, DRIVeways AND TO ACCOMMODATE PEDESTRIANS.
 12. PROVIDE CONCRETE TRAIL ACROSS EMERGENCY SPILLWAY.



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 info@veteraneng.com; veteraneng.com

THE BERRYHILL GROUP, LLC
 610 HOMESTEAD ROAD
 A15 SUBDIVISION
 ORANGE CO. N.C.

SUP - SITE PLAN

DATE: 10/27/24
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 PER TOWN COMMENTS: [Signature]
 PER TOWN COMMENTS: [Signature]
 PER TOWN COMMENTS: [Signature]

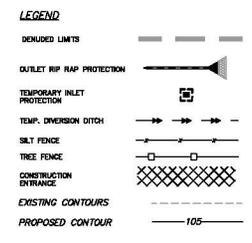
PROJECT NO: [Number]
 SHEET NO: 20 OF 42
 SCALE: AS SHOWN

STOP
 800-532-4949
 PRELIMINARY PLANS
 NOT RELEASED FOR
 CONSTRUCTION

SP1

- CONSTRUCTION SEQUENCE:**
1. SUBMIT DOCUMENTATION REQUIRED UNDER THE SITE NOTES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITY (NCO10000) TO STORMWATER INSPECTIONS THROUGHOUT THE PROJECT. INSTALL TREE PROTECTION FENCING.
 2. PRIOR TO BEGINNING CONSTRUCTION, CALL INSPECTOR STEVE KALTENBACH (919) 245-2586 TO SCHEDULE AN ON-SITE PRE-CONSTRUCTION MEETING WITH ORANGE COUNTY AND THE ENGINEER OF RECORD.
 3. USE EXISTING GRAVEL ACCESS DRIVEWAY (ACCESS FROM HOMESTEAD ROAD) AT SOUTHEAST CORNER OF THE HOMESCAPE DEVELOPMENT COMPANY INC PROPERTY, TO ACCESS THE SITE IN ORDER TO CONSTRUCT THE SILT FENCE AND SILT FENCE OUTLETS AND PROPOSED SEDIMENT BASIN AND IT ASSOCIATED APPURTENANCES.
 4. CLEAR AS NECESSARY TO INSTALL CONSTRUCTION ENTRANCE.
 5. BEGIN CLEARING AND GRUBBING THE ROADWAY RIGHT OF WAY. INSTALL TEMPORARY DIVERSIONS AND SILT FENCES AS CLEARING PROGRESSES.
 6. CLEAR AROUND THE PERIPHERY OF THE STORMWATER BMP TO INSTALL THE SILT FENCE AND SILT FENCE OUTLETS. CLEAR AND GRUB THE AREA WHERE THE STORMWATER FACILITY WILL BE CONSTRUCTED AND CONSTRUCT THE STORMWATER BMP.
 7. BEGIN CONSTRUCTION OF THE PROPOSED WATERLINES, SANITARY SEWER COLLECTORS AND THE STORM DRAINAGE PIPES. INSTALL ALL INLET PROTECTIONS AT THE STORM INLETS AS PROPOSED.
 8. ONCE THE UPSTREAM SITE HAS BEEN STABILIZED THEN CONVERT THE SEDIMENT BASIN TO THE PERMANENT BIO-RETENTION FACILITY AND STABILIZE THE DENUDEED AREA IMMEDIATELY.
 9. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AND MAINTAINED AS REQUIRED.
 10. STABILIZATION IS REQUIRED WITHIN 14 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING OR INACTIVITY ON PROJECT SITE.
 11. THE CONTRACTOR WILL KEEP RECORDS REQUIRED BY NPDES OF ALL EROSION CONTROL DEVICES. THE CONTRACTOR WILL CHECK EACH DEVICE AFTER EVERY SIGNIFICANT RAINFALL EVENT (1" OR MORE OF RAINFALL). THE CONTRACTOR WILL SUBMIT THESE RECORDS TO THE OWNER. THE CONTRACTOR WILL MAKE HIMSELF AWARE OF NPDES REQUIREMENTS FOR RECORD KEEPING.
 12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO KEEP SEDIMENT FROM LEAVING THE SITE.

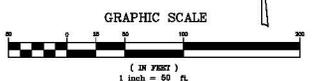
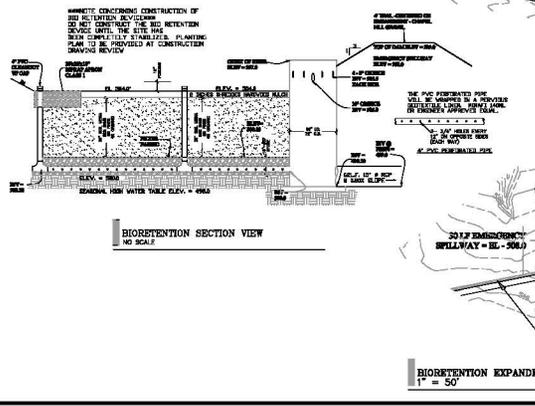
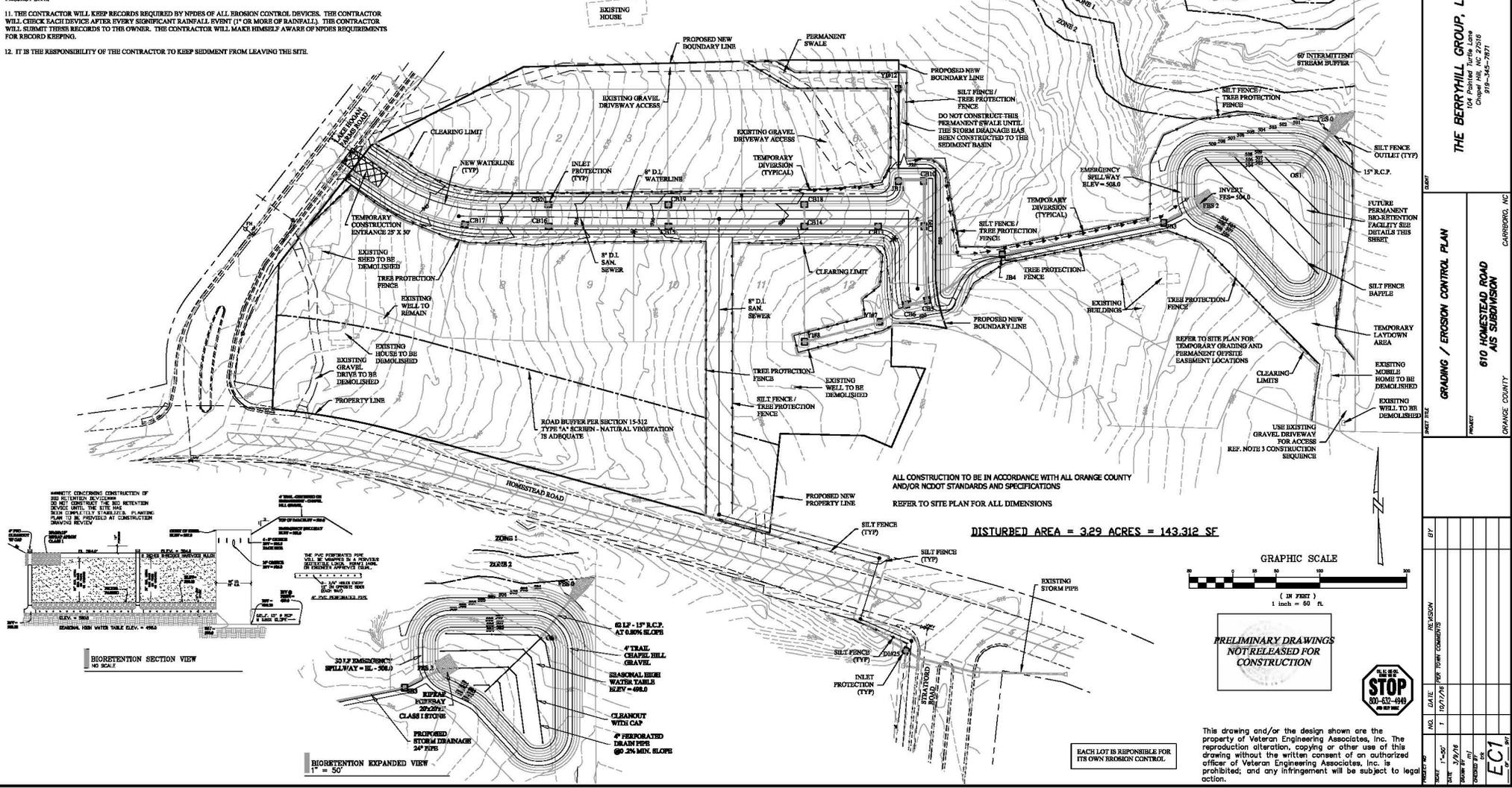
| STRUCTURE NO. | DEPTH | WIDTH | LENGTH | AREA | SL. SLOPE |
|---------------|--------|--------|--------|------|-----------|
| 810-2 | 506.00 | 504.50 | 47.0 | 34 | 0.84 |
| 410-3 | 216.00 | 209.00 | 106.00 | 20 | 2.26 |
| 310-4 | 222.00 | 215.00 | 109.00 | 20 | 1.11 |
| 610-5 | 222.00 | 211.00 | 110.00 | 22.0 | 1.25 |
| 710-6 | 217.00 | 212.00 | 112.00 | 24.0 | 1.18 |
| 810-7 | 207.00 | 215.00 | 112.00 | 23.0 | 1.23 |
| 910-8 | 203.00 | 211.00 | 110.00 | 22.0 | 1.09 |
| 1010-9 | 201.00 | 212.00 | 111.00 | 22.0 | 1.25 |
| 1110-10 | 203.00 | 212.00 | 112.00 | 22.0 | 0.81 |
| 1210-11 | 212.00 | 212.00 | 112.00 | 22.0 | 0.96 |
| 1310-12 | 205.00 | 214.00 | 113.00 | 23.0 | 0.98 |
| 1410-13 | 204.00 | 214.00 | 113.00 | 23.0 | 0.98 |
| 1510-14 | 203.00 | 214.00 | 113.00 | 23.0 | 1.42 |
| 1610-15 | 201.00 | 213.00 | 112.00 | 22.0 | 1.00 |
| 1710-16 | 202.00 | 213.00 | 112.00 | 22.0 | 0.92 |
| 1810-17 | 203.00 | 213.00 | 112.00 | 22.0 | 0.81 |
| 1910-18 | 201.00 | 213.00 | 112.00 | 22.0 | 0.81 |
| 2010-19 | 201.00 | 213.00 | 112.00 | 22.0 | 0.81 |



RIP RAP APRON DIMENSION DATA

| STRUCTURE NO. | D | Q | L | UPSTREAM WIDTH | DOWNSTREAM WIDTH | D 50 | D MAX | DEPTH |
|---------------|----|------|-----|----------------|------------------|------|-------|-------|
| FES#0 | 15 | 12 | 18' | 3.8 | 18 | 12 | 18 | 24.0 |
| FES#2 | 24 | 12.5 | 18' | 5.0 | 18 | 12 | 18 | 24.0 |

DO NOT CONSTRUCT THE RIPRAP APRON AT FES-2 UNTIL THE UPSTREAM SITE IS STABILIZED AND CONVERSION FROM THE SEDIMENT BASIN TO THE BIO-RETENTION FACILITY IS COMPLETE.



PRELIMINARY DRAWINGS
NOT RELEASED FOR
CONSTRUCTION



EACH LOT IS RESPONSIBLE FOR ITS OWN EROSION CONTROL.

VETERAN ENGINEERING ASSOCIATES, INC.
Civil Engineering Services
104 Painted Turtle Lane
Orange, NC 27618
(919) 201-2775 (F) 919-201-2776 (C) 919-201-2777
www.veteranengineering.com

THE BERRYHILL GROUP, LLC
104 Painted Turtle Lane
Orange, NC 27618
(919) 201-2776

GRAVING / EROSION CONTROL PLAN

**610 HOMESTEAD ROAD
A15 SUBDIVISION**

CARRBORO, NC
ORANGE COUNTY

| NO. | DATE | REVISION |
|-----|----------|-------------------|
| 1 | 10/27/16 | PER TOWN COMMENTS |

PROJECT NO: 16-001
DATE: 10/27/16
SCALE: AS SHOWN
DRAWN BY: JTB
CHECKED BY: JTB
DATE: 10/27/16

EC1

TOWN OF CARRBORO



Environmental Advisory Board
301 West Main Street, Carrboro, North Carolina 27510

R E C O M M E N D A T I O N

THURSDAY, NOVEMBER 5, 2015

Motion was made by Reddy and seconded by Turner that the EAB recommends that the applicant consider the following input as part of the concept review for the Preserve at Lake Hogan Farm.

One or more of the existing wells be used for irrigation or other purposes. In an effort to reduce impervious surface, limit sidewalks to one side of the road. Locate stormwater facilities to minimize impacts to hardwood and mature pine stands. **One well is to be used for irrigation B.M.P. located in pine stand.**

The EAB is also forwarding on, for the applicant's reference and as a separate document, a checklist that the EAB intends to use for the final review prior to the public hearing.

VOTE:**AYES:** Cotter, Crook, O'Connor, Patrick, Reddy, Sinclair, Turner**ABSENT/EXCUSED:** None**NOES:** None**ABSTENTIONS:** None

Bruce Sinclair 11/5/15

 (Chair) (Date)



TOWN OF CARRBORO PLANNING BOARD

301 West Main Street, Carrboro, North Carolina 27510

Thursday, January 7, 2016

PLANNING BOARD COMMENTS - CONCEPT PLAN FOR 610 HOMESTEAD ROAD (Tentatively called The Preserve at Lake Hogan Farms)

The Planning Board would like to see the applicant consider further the possibilities available in the lot and the options provided for an Architecturally Integrated Subdivision. In particular, the Concept Plan would be improved upon if:

- the subdivision were designed to relate to the surrounding residential areas not as a copy but as a complement. **noted**
- the plan were revised to include a variety of lot sizes and housing types. **noted**
- the plan were revised to include more lots, greater unit density, and at least one affordable unit. **noted**
- the plan went beyond the minimum requirements for pedestrian and bicycle connectivity not only within the development but to surrounding areas, including sidewalk along Lake Hogan Farms Road and Homestead Road. **noted**
- the plan looked forward to future road connectivity to surrounding areas. **noted**

Moved: Adamson

Seconded: Tiemann

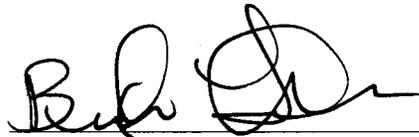
Vote:

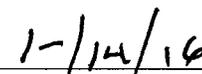
Ayes (8) Foushee, Adamson, Clinton, Haggerty, Hunt, Pendergrass, Tiemann, Whittemore

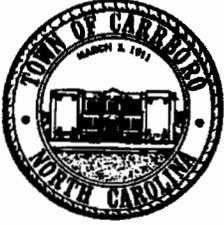
Noes: (0)

Absent/Excused: (2) Cohen, Poulton

Abstentions: (0)


Chair


Date



TOWN OF CARRBORO

Transportation Advisory Board

301 West Main Street, Carrboro, North Carolina 27510

THURSDAY, OCTOBER 1, 2015

Transportation Advisory Board Recommendation re: Preserve at Lake Hogan Farms Concept Plan

The Transportation Advisory Board discussed the concept plan for the Preserve at Lake Hogan Farms subdivision. The TAB offers the following comments:

- 1) Please consider providing an easement or other accommodations on site for a future bike/ped path from the stub street, through the Litchfield property, connecting to Stratford Road. It is understood that the Litchfield property is not under your control, so this comment refers to the parts of your property that a path would pass through. **noted**
- 2) Consider constructing a 12'-15' wide multi-use path along the property frontage on Homestead Road, beginning at the end of the sidewalk at the corner of Homestead and Lake Hogan Farm Rd. The approximate length of this path would be .1 miles. **noted**
- 3) Please plan to accommodate on-street parking when designing the lots and driveway locations. **noted**
- 4) Consider narrowing the width of the street to reduce speeding in the neighborhood.
town requires 27' b/b in 50' r/w for sub-collector

For Linda Haac

Transportation Advisory Board Chair

10/8/15

Date

VETERAN ENGINEERING ASSOCIATES, INC.

Civil Engineering Services

Post Office Box 1625 Durham, North Carolina 27702

919-201-2175 (phone) email: tom@veteranengineeringassociates.com

610 Homestead Road Transportation Impact Statement

1. The proposed residential development contemplates twelve new dwellings. The proposed roadway connects to existing Lake Hogan Farms Road approximately 380 [as measured from Centerline to Centerline] feet North of the intersection of Lake Hogan Farms Road and Homestead Road. According to 2015 ANNUAL AVERAGE DAILY TRAFFIC MAP generated by the TRAFFIC SURVEY GROUP it appears that Homestead Road has an average daily traffic count of approximately 5200 trips per day. Furthermore, according to the Town of Carrboro Transportation Planner the CTP contemplates a design capacity of 11,000 trips per day on Homestead Road thought to be reached in the year 2040.

As per Chuck Edwards, NCDOT the proposed site would generate approximately 12 peak hour trips and in accord with the Town of Carrboro TRIP GENERATION RATES table, the proposed site would generate approximately 120 trips per day.

As per the Town of Carrboro planning department, it appears that Lake Hogan Farms subdivision has approximately 452 residential lots and two points of ingress/egress at Lake Hogan/Homestead intersection and Hogan Hills/Old 86 [Hillsborough Road] intersection. If one divides the number of lots in half then that would generate approximately 226 peak hour trips at Lake Hogan Farms Road/Homestead Road intersection.

The increase of peak hour trips at the intersection of Lake Hogan Farms Road/Homestead Road is approximately 2.5-5.0% increase.

The proposal is in conformance with the Town of Carrboro's long range policies in terms of Connector Roads. According to said policies, The Town of Carrboro desires connector roadways [sub-collector] to be constructed connecting the intersection at Stratford Road/Homestead Road to Lake Hogan Farms Road. Furthermore, Lucas Lane is to be connected to said roadway

and the development proposes the construction of said connector road within the limits of the property. The future connection would provide for two additional points of connection to Homestead Road which will be a benefit to the residents of the Town of Carrboro.

2. In accord with the Town of Carrboro's Transportation planning, the proposed roadway is required to be a sub-collector road in a fifty-foot right of way. And said roadway will have sidewalk on each side of the road and the cross section is twenty-seven feet back to back [curb and gutter]. Examining average daily traffic it appears that Lake Hogan Farms receives approximately 2,260 ADT [10 x (452/2)]. The newly proposed twelve lot subdivision would provide approximately 120 ADT. That is an approximate increase of 5 percent. Sight triangle looking Southward towards Homestead Road at the intersection of Lake Hogan Farms Road and the New proposed roadway is proposed. The existing roadway configuration allows ample sight distance to the North. Additionally, a stop sign is proposed on the New proposed roadway at the intersection with Lake Hogan Farms Road. An analysis of accident data in the vicinity of Homestead Road and Lake Hogan Farms Road and a detailed conversation with the Carrboro Police Department about the available accident data reveals that only one accident occurred between automobiles over the last five years. That accident occurred in 2013. Given all the data presented herein, no additional safety measures appear to be warranted.

3. As per previous item, the proposed roadway contemplates five feet sidewalk both sides of the street to accommodate pedestrian use. The proposal also contemplates the construction of an all weather surface trail system that is connected to the sidewalk system and can accommodate bicycle uses extending towards the Eastern property line.

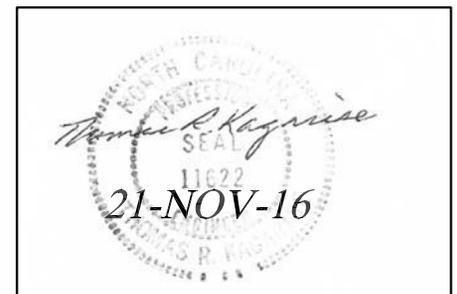
4. The Developer contacted the Chapel Hill transit system and found that they have no plans to extend bus service to this area.

Sincerely,

Veteran Engineering Associates, Inc. (C-3527)

by, Thomas Ray KAGARISE, P.E. (011622)

Veteran Engineering Associates, Inc.



| <u>Name</u> | <u>Address</u> |
|---------------|------------------------|
| POLO MUELLER | 114 HOGAN WOODS CIR |
| Maurice Blom | 102 LAKE MANOR RD CH |
| Derek Solum | 113 Shadow Ridge Place |
| Bree Horant | 604 Lake Hogan Lane CH |
| LUCIA SHWARTZ | 644 Lake Hogan Lane CH |
| Steve Shaw | 131 Larkik Lane |
| Shawn Powers | 137 S Fields Cir, CH |

| | |
|----------------|---------------------|
| Jim Brandewie | owner/developer |
| Tom Kagarise | Veteran Engineering |
| Michael Dykes | Veteran Engineering |
| Jeff Kleveland | Town of Carrboro |

Two projects

→ 600 Homestead Rd @ Lake Hogan Farm
Public Information Meeting 11/1/16 6PM Town Hall

→ 716 Homestead Rd

- Road system discussed. Town Plan for connectivity Litchfield approved, not built.
- Parcels discussed (3)
 - 1) 610 Homestead Rd.
 - 2) 716 " " "
 - 3) 8802 Lake Hogan Farms Rd. 716 Homestead Rd property
Easement (Existing) from ~~existing~~ home to Lake Hogan Farm Rd
to be abandoned because no longer necessary
- Discussion of Burch position regarding the above
- All parcels zoned R-20
27-40 lots on 125 to 13 acres (too intense, want less dense)
- Reasons for road location
Too close to Lake Hogan Farm Rd to access Homestead Rd
- 100' average buffer along Homestead Rd
- Tee (Hammerhead), instead of cul-de-sac
- Eventual extension to Homestead @ Stratford per Town Requirement
- Lots 13-17 on 716 property

Q • What happened to Litchfield? 2008 crash

Q • Would property touching on Lake Hogan Lane ever be developed? No, if current project approved

Q • Concern about congestion. "When will Planning Board stop it?"
17 lots instead of 27-40 allowed
Develop within the rules
Board wanted more density

Q • Did Lake Hogan Farm HOA have to approve road connection? No

Q • Future widening of Homestead Rd - how would it impact buffer?

Q • What size lots? What size houses? 1/4 acre average houses similar to Lake Hogan estates
Similar to Copperleaf
Price range similar to Estate section of Lake Hogan
Set backs discussed

- Q What is the name of project? developer considered being
 • Lake Hogen Farm HOA asked if ~~wanted to be~~ included
 in Lake Hogen Farm community
- Met with HOA on several occasions (\$35,000 payment)
 Recreation point sharing of excess points discussed.
 Payment in lieu Discussion
 Trail system and gazebos around BMP proposed
 Discussion of value to being in Lake Hogen Farms
 452 homes in CUP (original)
 Lake Hogans Farms would control entrance
- Q Could BMP be moved if recreation points were no longer needed.
 Discussion of BMP location
- Q How wide is the road? 50' ROW 27' Back to back, SW both sides
- Q Where are we in the renew process?
 12 → ^{Concept plan} SUP Town & Advisory Board, 4 reviews to staff, Dec Advisory Bd
 5 → Concept plan & Bd of Adjustment hopefully
- Break ground 2 QTR 2017 hopefully
- Q Water? Sewer? Issues with Litchfield, Pump station
 Sewer connection in Wexford
- * Q Traffic issues @ Lake Hogen Farm Rd and Homestead Rd
 "Town needs to upgrade infrastructure" townwide
 Jeff suggests HOA prepare exhibit of traffic concerns
 When was last traffic impact study done on Homestead Rd?
- Q How will trees be saved? 100' buffer, 40'+ open space, street trees

Will trees be saved on each lot? ^{some yes but builder decision}
 "Sea of mud" - likened to other projects along Homestead
 Control of house builders clearing trees? - developer part of ARB

Q Why has Homestead Rd become a development corridor?

Q Sight distance requirements discussed

More road?

Q What will pond look like? Planted, not grassed, ^{bio retention & pollinator garden}

Q Is there a town limit on size of a house that can be built?

Jeff's permitting process controls that for infill, residents need to raise the issue.

AIS setbacks set by developer

Q Is 500' notification enough? developer decided to increase notification area

Q Shared driveways? not marketable

Q How far are houses in 5 lot phase off road?

From: [Tom Kagarise](#)
To: [Jeff Kleaveland](#)
Cc: ["Tom Kagarise"](#)
Subject: 610 Homestead Road
Date: Thursday, September 22, 2016 1:18:23 PM

On behalf of the developer, please find the following narrative response for removal of specimen trees.

Tree Removal Narrative/Justification:

In considering the design of a road system to serve this development, the alignment flexibility is limited due to several factors. The parcel shape is generally rectangular and is longer (east to west) than wide (north to south). With no ability to access the site from the north (developed lots) or south (NCDOT won't allow access from Homestead Rd), the only access point is from the west off Lake Hogan Farm Road. Due to the narrow width of the parcel, the access point off Lake Hogan Farm Road has been pushed as far away (north) from the intersection with Homestead Road as possible. This condition relates to public safety in terms of distance between intersections.

In order to satisfy the requirement for connectivity, the designed road system must extend west to east from the western access point off Lake Hogan Farm Road to the eastern border with Homescape Development Company and southern border with Homestead Partners. A west to east road system design allowing for houses on both sides of the road is further constrained by a 20' setback along the northern border and a 100' average setback from Homestead Road along the southern border. Given the fact that the parcel has trees with diameters of 12" or greater throughout the site, it is necessary to remove some of these trees when constructing a road

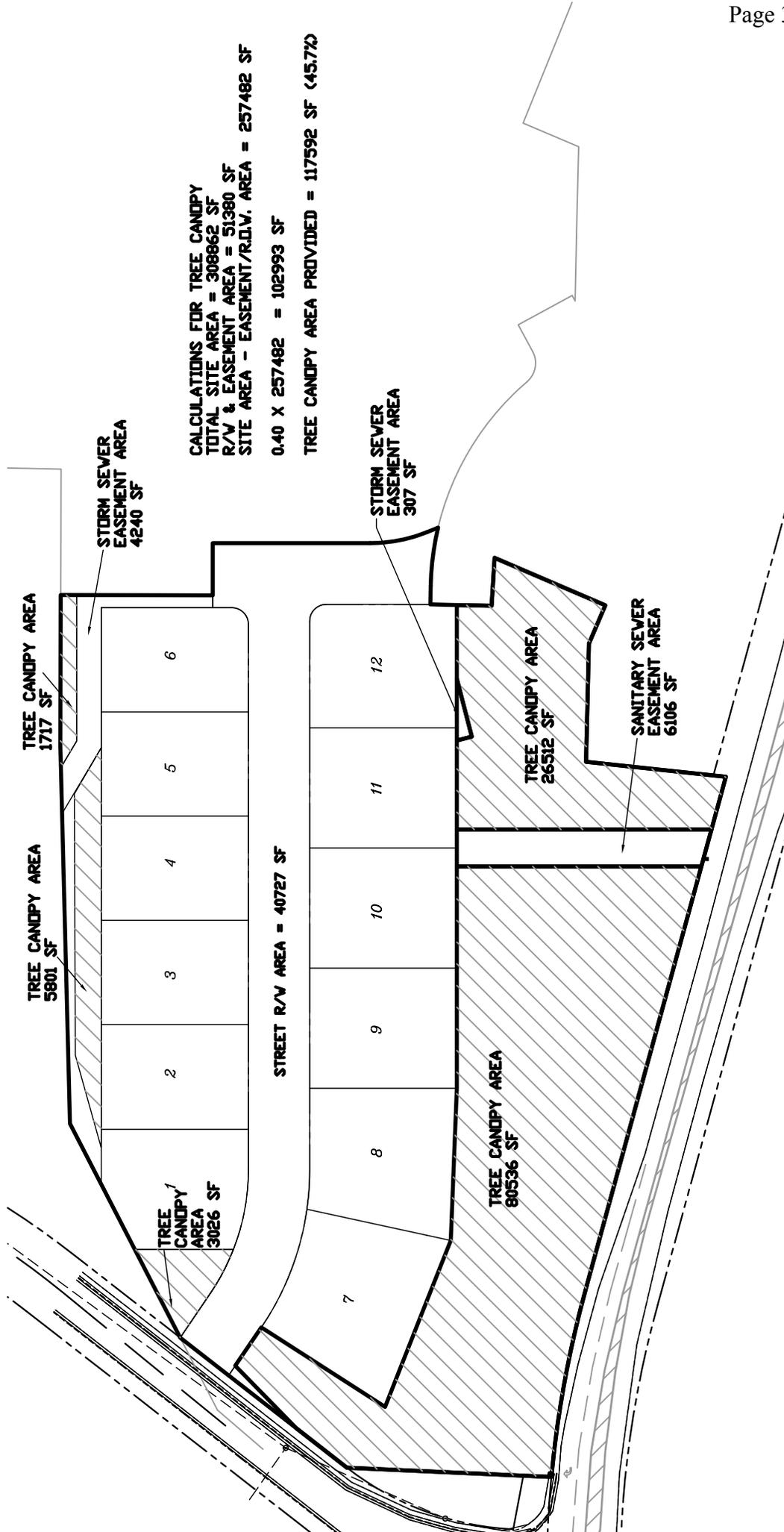
system for this project. Given the constraints detailed above, the ability to shift the road system north or south is very limited. With several specimen trees just outside of the roadway clearing limit, shifting the road system north or south would not result in the removal of fewer specimen trees and, in some cases, necessitate the removal of more specimen trees than currently proposed.

Sincerely,

Veteran Engineering Associates, Inc. (C-3527)

by, Thomas Ray KAGARISE, P.E. (011622)

Veteran Engineering Associates, Inc.
Post Office Box 1625
Durham, North Carolina 27702
919-201-2175 (phone)



CALCULATIONS FOR TREE CANOPY
TOTAL SITE AREA = 308662 SF
R/W & EASEMENT AREA = 51380 SF
SITE AREA - EASEMENT/R.D.V. AREA = 257482 SF
0.40 X 257482 = 102993 SF
TREE CANOPY AREA PROVIDED = 117592 SF (45.7%)



Applicant responses to the applicable provisions/recommendations and goals of the

following planning documents (which can be found here: <http://www.ci.carrboro.nc.us/750/Planning-Library>)

- a. Connector Roads Policy
- b. Facilitated Small Area Plan for Carrboro's Northern Study Area
- c. Vision 2020

Connector Road Policy:

The proposed project complies completely with this policy as it contemplates future connectivity with Lake Hogan Farms and Stratford - which are respectively Connectors but are classified as Collectors according to the Town of Carrboro Transportation department. This proposal supports a construction and maintenance of a sound traffic plan for the Town.

Small Area Plan

The proposed project contemplates the goals of the small area plan to provide access to Homestead Road from Lake Hogan Farms. Said connection to Homestead Road shall be made in the future; however, this project contemplates this connection as approximately 100 feet of new roadway is proposed stubbing toward the South to be connected at the intersection of Homestead Road and Stratford Road.

The proposal contemplates sidewalks on both sides of the proposed roadway as well as a "nature walk/trail" from the proposed subdivision to the BMP. Said sidewalks run the full length of the

With regard to trend of the reduction of Federal moneys, the proposal adds tax base in support of maintenance and thus lessens the possibility of increased ad valorem tax. Also the projects provides for the adequate flow of bus, auto, bicycle, and pedestrian traffic in addition to the proposed nine hundred feet of unpaved nature trail.

The proposal contemplates contiguous wooded areas to remain undisturbed on the North and South sides of the site.

Vision 2020

The proposal provides for preservation of the natural environment - especially along the Homestead Road corridor as the proposal contemplates more than one-hundred feet of natural preserved open space in excess of the required buffer. Also, the proposal intends to maintain the character of the existing surrounding neighborhoods such as Lake Hogan Farms and Wexford.

Regarding pedestrian access, proposal contemplates the addition of sidewalks on both sides of the new public sub-collector.

From: [Jim Brandewie](#)
To: [Jeff Kleaveland](#)
Cc: [Thomas Kagarise](#); tom@veteranengineeringassociates.com
Subject: Homestead Road development
Date: Thursday, September 15, 2016 11:51:20 AM

Jeff,

The narrative below indicates how we plan to adhere to Carrboro's vernacular architectural standards. Will this suffice as an accompaniment to the housing style pictures submitted previously?

Thanks,
Jim

Homestead Road development: Architectural Narrative

The Architectural Guidelines for the Homestead Road development at Lake Hogan Farms have been established to assure that improvements are constructed in a manner that provides for harmony of external design with utmost respect for the natural features and topography of the land. The Homestead Road project will amalgamate the Vernacular Architectural Standards (VAS) which define Carrboro's unique sense of place and the existing architectural features predominant in Lake Hogan Farms to create a neighborhood of aesthetically pleasing homes and landscape.

Home facades will showcase front porches with a minimum depth of seven (7) feet with beautiful detailing including old style columns, wrought iron railings and hardscaping of brick and stone composition. Diversity in size and shapes of front porches or entryways will add character to each home.

Garages will be set behind the front façade of the home with every intention of any double garage to be turned away from the street in a side loading capacity. Garage roofs will offer similar roof pitches to the homes and any special detailing on the home will carry through to the garage design.

The main goal of the exterior design is to combine appropriate scaling of homes with the proper massing and textures. Exterior materials will include a mix of brick and stone as well as hardiplank siding and shakes. Special attention will be given to assure window sizes are properly proportioned and spaced. Simulated divided light grilles will enhance historical accuracy to the VAS. Details such as colonial styled moldings, wrought iron railings, moderate roof overhangs will be showcased throughout the streetscape.

From: Jim Brandewie
To: Jeff Kleaveland
Subject: Homestead Road project: representative house renderings (1 of 2)
Date: Thursday, September 15, 2016 1:36:31 PM

Jeff, representative house renderings for the Homestead Road project are shown below. Thanks, Jim





**TRANSPORTATION ADVISORY BOARD
MINUTES**

Thursday, November 17, 2016

BOARD MEMBERS PRESENT

Colleen Barclay, Chair
Rob Dow
Diana McDuffee, Vice-Chair
Kurt Štolka
John Nicopoulos
Linda Haac

STAFF PRESENT

Bergen Watterson

BOARD MEMBERS ABSENT

Bethany Chaney
Derek Powers

GUESTS

Julie McClintock

I. Call to order

Colleen called the TAB meeting to order at 7:37 pm.

II. Approval of Minutes (November 3rd, 2016)

Rob moved to approve the minutes; Diana seconded the motion. All voted in favor.

III. Discussion of Estes Drive/N. Greensboro intersection improvements

Kurt, Rob and Diana attended the Estes/N. Greensboro public meeting on Monday. Rob said that he wondered why the designers could not continue the bike lane through the roundabout on the Frances Shetley side, rather than funneling bicycles onto the multiuse path. Bergen told the group that when she recommended that the South Green developers install sharrows in the roundabout that they are building that NCDOT told them that bike lanes are not allowed in roundabouts. She said that she did not recall what the source of that information was but that she would check. Kurt said that his primary concern was cars going too quickly through the right turns and putting pedestrians in danger. Some in the group discussed moving the crosswalks farther away from the roundabout, but others observed that cars would likely be moving faster as they exited the circle and would be less likely to see the pedestrians crossing. Kurt suggested installing Rectangular Rapid Flashing Beacons at the crosswalks.

The group agreed that the bike lane on the west edge of the roundabout should start at the bottom of the hill, since there appears to be more than sufficient pavement. Colleen asked how the roundabout will affect the future Estes Drive bike and pedestrian improvements that the Town is

planning. Bergen answered that, if funded, it will be the Town's project (as opposed to a NCDOT project) and we can integrate the improvements however we want. Diana said that she thought that the roundabout will be an improvement for vehicle movement through the intersection. Rob said that he would like for the TAB to submit formal recommendations to NCDOT and have Bergen deliver them at her meeting with NCDOT on 12/12.

Kurt reported that the NCDOT staff said that the Town could landscape the roundabout. The group agreed that this is a gateway to Town and the roundabout should be beautiful—a visual gateway cue with a sculpture, fountain or notable planting.

Bergen will send Rob these rough recommendations for him to wordsmith and send back to her:

- Concerned about the speed of cars making right turns – would like to see pedestrian safety addressed through RRFBS
- Street lighting in this area is currently poor; please improve it as part of the project
- Start bike lane just west of the roundabout since there is the width
- Would like to see users delineated in the multiuse path (peds and bikes)
- Curb cut and bollards at end of Frances Shetley so bikes can enter the roundabout/enter bikepath
- Keep speed limit on N. Greensboro going east at 20mph, and lower the speed limit on eastbound N. Greensboro west of roundabout to 30mph before it goes down to 20mph for the roundabout
- Fountain, sculpture or planting in the roundabout
- 11' wide maximum lanes through the roundabout

IV. Bike priorities

Julie McClintock, from Friends of Bolin Creek, introduced herself and said that she participated in a working group on the Carolina North agreement. There was very little in the agreement to do with biking. The legislature has not funded Carolina North to the degree that would trigger everything she worked for. She showed a map of current and proposed bicycling infrastructure in the Northern Carrboro area, with a disclaimer that it is not completely current. Bergen noted that Town staff supplied Julie with up-to-date data, but Julie said that she has not had an opportunity to update the map yet. Julie said that she would like to see the DCHC-MPO raise the Campus-to-Campus Connector on their priority list because it would be a great route for bicyclists to get from Northern Carrboro to Downtown. She showed the group some of the greenways that have been built in the Carolina North forest.

Bergen explained to the group that Carrboro and Chapel Hill submitted several joint bike and ped projects to the MPO for submission to the NCDOT prioritization process—Seawell School, Homestead Road, Estes Drive and Eubanks Road. These projects all were submitted with the

same priority-level; it was the state prioritization process that elevated Estes above the others based on the data-driven formula that is used to score projects. She attempted to show the group the scoring criteria online but was only able to find the Division Level Highway criteria. She will send the website to the group at a later date if she can find it. Kurt showed the group on the map the route that was discussed at the last Greenways Commission meeting—a greenway alongside the railroad tracks and then adjacent to Seawell School Road. Linda and Julie commented that the topography of that area would likely not allow that alignment.

The group went through the comments from the 2016 Open Streets bike safety forum. Diana said that she thinks that we should go through the priorities from the various sources and decide which should remain priorities for the next bike plan. Linda noted that there are at least three lists of priority locations – 2015 pedestrian safety forum, 2016 bike safety forum, bike/ped WikiMap, and the 2009 Bike Plan. She asked the group how would be the best way to combine them and weed some out. Rob offered to take the first swipe at this. Bergen will send him the lists. Linda commented that she likes that the group is working from the grassroots up, rather than a consultant coming in and dictating the priorities. Julie said that she would like planners look at regional connections, particularly to/from Chapel Hill. She noted that Ruth Heaton, the Town's GIS Analyst, said that she can only map Carrboro's data because she can verify it.

V. Other Business/Staff Report

Bergen told the group that the Dero bike repair stands arrived and that she needs to meet with Public Works and Rec and Parks to finalize locations and plan installation. Kurt said that the Dero stands at UNC only have only Shrader valves and that they had to install Presta valves themselves. Bergen will check on this with the new stands.

Bergen said that the pre-construction meeting for the S. Greensboro pipe installation is next Wednesday and the Town will know more about the schedule for road and lane closures after that date.

Kurt said that the utility connections in the bike lane at Shelton Station are not flush with the pavement anymore and wondered if the developer will fix them. Bergen said that she can check with the inspector about that.

Bergen and Kurt shared with the group that they have been in UNC/Carrboro/Chapel Hill working group to develop a Request for Information for a regional bike share system. They are planning on posting the RFI on 11/22 and will keep it open until 12/9. This is to get program details and cost estimates from different companies. Linda shared with the group that she has had seven unpaid interns at a time. She worked with career services at UNC and recommends this approach to Bergen to help with some of the projects she has.

VI. Adjourn

Colleen adjourned the meeting at 9:02pm

DRAFT