

August 15, 2024

Roadway & Exempt Subdivision Feasibility Report

for

Chatham County Parcels 76369 & 76374

Owner

John Oldham and Margret Glosson

448 Old Lystra Rd,
Chapel Hill, NC 27517

Engineer/Landscape Architect

Frank Land Design, PC

Attn: Garrett Frank, PE, PLA
120 Mosaic Blvd; Suite 200-21
Pittsboro, NC 27312

T: 919.698.6883

E: garrettfrank@franklanddesign.com



FRANK LAND DESIGN, PC

UNIQUE SOLUTIONS: YOUR VISION, OUR EXPERTISE



Residential Subdivision Investigation Report

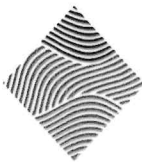
A. Zoning Details	
1. Property Address	Big Rock Drive, Chapel Hill, NC 27517
2. Property Pin	76369 & 76374
3. Existing Acreage	60.64 AC (Per GIS)
4. Overlay District	Upper New Hope Watershed (WS-IV PA)
5. Types of Subdivision	Exempt Subdivision – Per owner’s conversations with Chatham County, the Big Rock Access Easements would not classify as right-of way and this could qualify for an exempt subdivision with 10 acre parcels or greater. Minor Subdivisions (Verify with county if allowed) Any subdivisions containing five (5) lots or less with access to an existing public street, not involving any new street or road.
6. Private Driveway Easement Standards	Private Driveway Easements Private driveway easements may be used in place of public and/or private roads where proposed to provide access to two (2) or fewer lots. The minimum required easement width is 30 feet and shall have a centerline length of no more than 200 feet. Proposed driveway easements should be clearly identified on all plans and plats with a description of what lots the easement is proposed to serve. Final Plats creating driveway easements must contain a note that conveys maintenance responsibility of the easement to the home owners utilizing it to access their property. The note shall specifically state that the 68 easement(s) must be maintained to allow clear passage for emergency response vehicles. Driveway easements are not subject to the requirements for public or private roads.
7. Existing Zoning District	R1 This district is primarily for low to moderate density residential development within the residential-agricultural areas of the jurisdiction.
8. Future Land Uses Map	Rural Residential
9. Within Corporate Limits?	Within Chatham County Jurisdiction
10. When is a Private Road Allowed (Section 7.2.D.2)	Private Roads may be allowed when the following conditions exist. a. The subdivision does not include any part of a proposed thoroughfare or street shown on the Chatham County Thoroughfare Plan; and b. The developer shall reference on the Final Plat the recording of a roads instrument that provides the following: 55 i Guarantees full right of access via any private road in the subdivision to any lot served by that road. ii Specifies the standards to which private roads in the subdivision have been designed and constructed. iii Affirms the developer's responsibility to maintain the private roads in the subdivision to the specified standards until such responsibility is formally transferred to a legally constituted association of subdivision homeowners.



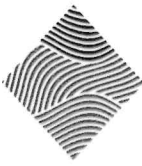
	iv Includes a road maintenance agreement which at a minimum establishes the following: • a legally constituted association of subdivision homeowners with specified authority to set and collect fees from members for road maintenance purposes • a sinking fund for emergency repair and long range improvement of subdivision roads • an association decision-making process • an association road maintenance policy with related standards. v If a large lot subdivision has 24 or less lots and the road is to be paved then it shall be constructed to state standards although not designed to state standards. vi If there is an established (prior to subdivision) 60 foot wide easement to adjacent land on property and the developer proposes to use the easement as the road of access, then the road shall be designed and built to state standards.
11. Standards for Private Road (Section 7.2.D.2)	a. The minimum width of right-of-ways shall be sixty (60) feet. Where necessary for adequate drainage additional right-of-way may be required. b. The travel way width shall be not less than eighteen (18) feet, shall be unobstructed, and at a minimum shall be constructed to the design specifications shown in figure 6. c. The ditch slope shall be established according to best management practices which deter erosion. d. Cut and fill slopes shall be established to maintain stability and provide for maintenance where necessary. e. The maximum grade of the travel way shall be ten (10) percent. Grades at stop intersections shall not be greater than four (4) percent for a distance not less than fifty (50) feet from the intersection of right-of-ways. f. Private roads that are cul-de-sacs shall have an adequate turn around which has a road bed with a radius not less than forty (40) feet. The radius of the right-of-way of the turn-around shall not be less than fifty-five (55) feet. The roadway into the cul-de-sac shall remain unobstructed. g. Sight distance easements at the intersection of private roads with public state maintained roads shall be equal to or greater than those required by the Division of Highways. h. Drainage and erosion control measures shall be equal to those required for public roads. i. All roads which will provide direct or indirect access to twenty-five (25) or more subdivision lots shall be designed to meet N.C. Division of Highways' standards for subdivision roads, and travel ways shall be constructed to said standards. (AT Some Point Big Rock will Exceed this requirement.)
12. Minimum Lot dimensions (Section 7.4.C)	Local Road Frontage on Street of Access: 30-ft Lot Width at Building Line : 75-ft Useable Lot Area without public water or sewer: 65,340
13. Zoning District Requirements (Section 10.3.R-1) Zoning Ord.	Minimum Required Lot Width - 100 feet Minimum Required Lot Width for a Two-Family Dwelling - 110 feet Minimum Required Front Setback - 40 feet



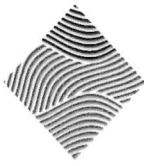
	Minimum Required Side Setback - 25 feet. Where a two-family dwelling is placed such that the units are on separate lots with a common fire wall, no side yard shall be required at the common wall. Minimum Required Rear Setback - 25 feet Maximum Building Height - 60 feet
14. Existing Easements	Existing access easement – Title Search for property recommended. Recommend ALTA Survey
15. Covenants	Request title work from Land Use Attorney or Title Work Company from purchase.
B. <u>Engineering Details</u>	Upper New Hope Watershed (WS-IV PA) – Morgan Creek
16. Water	None Directly Adjacent. Lots will require Wells
17. Sewer	None Directly Adjacent. Lots will require Septic
18. Stormwater Requirements (Watershed Protection Ordinance WS-IV Protected Area)	Single Family Residential--development <u>shall not exceed one (1) dwelling unit per acre, as defined on a project by project basis</u>, except within conservation subdivisions that shall not exceed two (2) dwelling units per acre, as defined on a project by project basis. No residential lot shall be less than 40,000 square feet or 65,340 square feet for lots with individual wells and individual wastewater disposal systems, except within an approved cluster development (#6), compact community, or conservation subdivision. (#12) <u>(b) All Other Residential and Non Residential--development shall not exceed twenty-four percent (24%) built-upon area on a project by project basis.</u> For projects without a curb and gutter street system, development shall not exceed thirty-six percent (36%) built-upon area on a project by project basis. In addition, in the portion of the WSIV PA draining to the state designated Cape Fear WSIV PA, non-residential uses may occupy ten percent (10%) of the PA with a seventy percent (70%) built upon area when approved as a special nonresidential intensity allocation (SNIA). The Watershed Administrator is authorized to approve SNIAs consistent with provisions of this ordinance for projects within the designated Moncure Megasite Watershed Overlay District. Projects that are approved for an SNIA must minimize built-upon surface area, direct stormwater away from surface waters, and incorporate Best Management Practices to minimize water quality impacts. For the purpose of calculating built-upon area, total project area shall include acreage in the tract on which the project is to be developed. No residential or nonresidential lot shall be less than 40,000 square feet, except within an approved cluster development (#6), compact community, or conservation subdivision. (#12) (c) Lots to be created for the express purpose of minor utilities are exempted from the Required Minimum Lot Area. Any noise producing equipment or generators must be stored within a structure, or must be setback a minimum fifty (50) feet from any public right-of-way or property line.



19. NCDEQ Stormwater Mapper	Matches and Confirms Chatham County Ordinance is Applicable.																																				
C. <u>Transportation</u>																																					
20. Existing Conditions	Big Rock – 10-12-ft Gravel Drive. (30-ft Easement)																																				
21. NCDOT	Will need NCDOT to say update to Driveway Permit is not required for Big Rock Drive.																																				
22. Chatham County	Existing 30-ft Easement for Big Rock Drive. New Road requires 60-ft right of way and 18-ft path. Cul-de-sac requires 55-ft ROW minimum and 40-ft radius of pavement.																																				
23. Transportation Concerns	Recommend confirming with county that block perimeter requirements and existing easement widths do not require variance. Recommend showing proposed subdivision to county to determine if these existing conditions require any additional attention																																				
D. <u>Environmental</u>																																					
24. Blue Line Stream	Yes, per USGS Map – Club Creek																																				
25. Environmental Buffers	30’ ephemeral buffers, 50’ Wetlands, 50’ Intermittent, 100’ Perennial																																				
26. Wetlands	50’ Wetland Buffers																																				
27. Flood Plain	No FEMA Regulated Flood Plain. Likely a local flood plain that exist in Club Creek.																																				
28. Watershed	Upper New Hope Watershed (WS-IV PA) – Morgan Creek																																				
29. Water supply Water Shed	Yes – Upper New Hope Watershed (WS-IV PA) – Morgan Creek (Jordan)																																				
30. Soils	<table><tr><th>Map Unit Symbol</th><th>Map Unit Name</th><th>Acres in AOI</th><th>Percent of AOI</th></tr><tr><td>ChA</td><td>Chewacla and Wehadkee soils, 0 to 2 percent slopes, frequently flooded</td><td>3.8</td><td>2.5%</td></tr><tr><td>CrC</td><td>Creedmoor-Green Level complex, 6 to 10 percent slopes</td><td>14.6</td><td>9.6%</td></tr><tr><td>W</td><td>Water</td><td>1.0</td><td>0.7%</td></tr><tr><td>WeB</td><td>Wedowee sandy loam, 2 to 6 percent slopes</td><td>0.9</td><td>0.6%</td></tr><tr><td>WeC</td><td>Wedowee sandy loam, 6 to 10 percent slopes</td><td>12.0</td><td>7.9%</td></tr><tr><td>WeD</td><td>Wedowee sandy loam, 10 to 15 percent slopes</td><td>18.4</td><td>12.1%</td></tr><tr><td>WeE</td><td>Wedowee sandy loam, 15 to 25 percent slopes</td><td>101.1</td><td>66.7%</td></tr><tr><td colspan="2">Totals for Area of Interest</td><td>151.8</td><td>100.0%</td></tr></table>	Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	ChA	Chewacla and Wehadkee soils, 0 to 2 percent slopes, frequently flooded	3.8	2.5%	CrC	Creedmoor-Green Level complex, 6 to 10 percent slopes	14.6	9.6%	W	Water	1.0	0.7%	WeB	Wedowee sandy loam, 2 to 6 percent slopes	0.9	0.6%	WeC	Wedowee sandy loam, 6 to 10 percent slopes	12.0	7.9%	WeD	Wedowee sandy loam, 10 to 15 percent slopes	18.4	12.1%	WeE	Wedowee sandy loam, 15 to 25 percent slopes	101.1	66.7%	Totals for Area of Interest		151.8	100.0%
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI																																		
ChA	Chewacla and Wehadkee soils, 0 to 2 percent slopes, frequently flooded	3.8	2.5%																																		
CrC	Creedmoor-Green Level complex, 6 to 10 percent slopes	14.6	9.6%																																		
W	Water	1.0	0.7%																																		
WeB	Wedowee sandy loam, 2 to 6 percent slopes	0.9	0.6%																																		
WeC	Wedowee sandy loam, 6 to 10 percent slopes	12.0	7.9%																																		
WeD	Wedowee sandy loam, 10 to 15 percent slopes	18.4	12.1%																																		
WeE	Wedowee sandy loam, 15 to 25 percent slopes	101.1	66.7%																																		
Totals for Area of Interest		151.8	100.0%																																		
31. Hydric Soils	Yes – Per NRCS Soils Report (Wahadkee-WeB)																																				



32. Environmental Phase 1	Recommend & Typically Required for Bank Lending
E. <u>Executive Summary & Permitting Timeline</u>	
<u>Executive Summary</u>	
Overall, the development of this land into an exempt subdivision seems feasible per owner's conversations with county planning department. The lots will still need to comply with septic, well water, erosion control, and stormwater permits with the county. For the private roadway extension, the stream areas will need to be delineated by a third-party consultant and confirmed by Chatham County. After confirmation of environmental features, there will need to be a feasibility study performed on retaining wall height and cost versus environmental impact fees. A buffer authorization permit will be needed with Chatham County and Nationwide Environmental Impact Permit needed with US Army Corps of Engineers.	
<u>Permitting Timeline</u>	
<u>Step 1</u> - Consultation with Planning Department staff. Contact Paula Phillips, Land Use Administrator, 919-542-8276, e-mail paula.phillips@chathamnc.org <u>Step 2</u> - On-site riparian buffer review (pursuant to Section 304 of the Watershed Protection Ordinance). This is the first review conducted on the property and is performed prior to soil suitability or surveying work. Riparian buffers shall not be counted towards the minimum useable lot area. The Riparian Buffer Service Packet can be found on the Planning Department website at www.chathamnc.org/planning, Applications and Checklists, or copies may be obtained from the Planning Department. Applications are submitted to the Planning Department. A fee of \$50.00 plus \$50.00 per lot is required. Checks should be made payable to Chatham County. a) If the subdivision is five (5) lots or less and is 10 acres or less, contact Chatham County Watershed Protection department staff to perform the review. b) If the total subdivision area is greater than 10 acres, the applicant is required to hire a qualified consultant to perform the review and submit the required information for staff approval. A list of qualified consultants can be obtained from the Environmental Quality Department. Call 919-545-8394. Maps showing the findings of the on-site buffer review will be provided to the applicant. The applicant should provide the surveyor with a copy of the report. Riparian buffers must be accurately shown on the final plat along with required language and must be approved by Environmental Quality staff prior to approval of the plat. Staff will provide Environmental Health with a copy of the riparian buffer report. For more information or questions about riparian buffers, contact the Watershed Protection Department at 919-545-8394 or 919-542-8268. Floodplain Determination. The applicant applies for a floodplain determination from the Planning Department. The floodplain determination and riparian buffer review report are submitted to Environmental Health in the next step. For more information contact Paula Phillips at (919) 542-8276. <u>Step 3</u> - Wastewater Permits. Permit(s) or documentation shall be provided from one of the following: a) Environmental Health Section of the Chatham County Health Department. For more information contact (919) 545-8460. b) North Carolina Department of Environment and Natural Resources, Division of Water Quality, Aquifer Protection Section, Land Application Unit, (919) 733-3221 c) A water or wastewater treatment company regulated by the North Carolina Utilities Commission. <u>Step 4</u> - Stormwater: Please provide your surveyor with a copy of Riparian Buffer Report. Language will be provided to the surveyor to be placed on the plat.	



Step 5 - Erosion Control: An erosion control permit may be required if there will be more than 20,000 square feet of disturbance (cumulative) on the property. For questions, contact the Erosion Control Officer at 919-545-8343.

Step 6 - Public Water Availability review. The applicant must contact the Public Works Water Utilities Staff to determine if public water is available to the subdivision. In the event that public water is required to be extended to the site (other than a service line) the subdivision must follow the major subdivision process. A determination from the Public Works Water Utilities Staff shall be provided with the plat. For more information contact (919) 542-8239.

Step 7 - If more than two (2) lots are to be accessed by a perpetual easement, the easement must be named. Contact 911 Addressing to obtain forms and/or procedure information. The Board of Commissioners must officially approve the road name prior to the plat being signed. For more information call (919) 545-8163 or (919) 545-8161. Easements shall be constructed to meet the standards as specified in Section 7.4 B (3) of the Chatham County Subdivision Regulations.

Step 8 - A Commercial Driveway Permit may be required. Contact Frank Hodges, NCDOT, at (336) 318-4000.

Step 9 - Contact a surveyor to have the final plat prepared. The surveyor should provide staff with a paper copy or a pdf copy of the plat for review prior to submitting the mylar for approval.

Step 10 - Submit the original (mylar) copy and one (1) paper copy of the plat with the required minor subdivision review fee and recreation exaction fee (if required) to the Planning Department for approval and signature. The paper copy is retained by the Planning Department. a) A disapproval of a minor subdivision by staff may be appealed to the Board of Commissioners if filed within ten (10) days of the decision.

Step 11 - Take the original, signed copy of the plat to the Tax Mapping Department for the Review Officer's signature.

Step 12 - Record the plat in the Office of the Register of Deeds within sixty (60) days of approval by the Planning Department. Additional Steps after Recording Plat:

Step 13 - After recording the plat at the Office of the Register of Deeds, ask a Register of Deeds staff for a copy of the plat.

Step 14 - Carry the copy of the recorded plat to your attorney and have him or her to create a new deed.

Estimated Site Design and Permitting Timeline for Exempt Subdivision: 8 Months

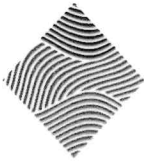
Disclaimer: Frank Land Design has no control over review time periods published or changed by Durham County or other Authorities having Jurisdiction.



CONCEPT PLAN



ORDER NO.: JOB NO.: 1006 SHEET NO.: CONCEPT	OLDHAM EXEMPT SUBDIVISION 448 OLD LYSTRA ROAD, CHAPEL HILL, NC CHATHAM COUNTY PLANNING JURISDICTION		DESIGN / PERMIT BY: C. FRANK AS SHOWN	LANDSCAPE ARCHITECTURE CIVIL ENGINEERING CHECKED BY: C. FRANK DATE: 08.15.2024	NOT FOR CONSTRUCTION 	PRELIMINARY  FRANK LAND DESIGN, PC UNIQUE SOLUTIONS. YOUR VISION. OUR EXPERTISE.	120 MOSAIC BLVD, SUITE 200-47, PITTSBORO, NC 27331 LICENSE #C-5114 WWW.FRANKLANDDESIGN.COM
	CONCEPT EXEMPT SUBDIVISION PLAN			REVISIONS: DATE:			



ADDITIONAL MAPS

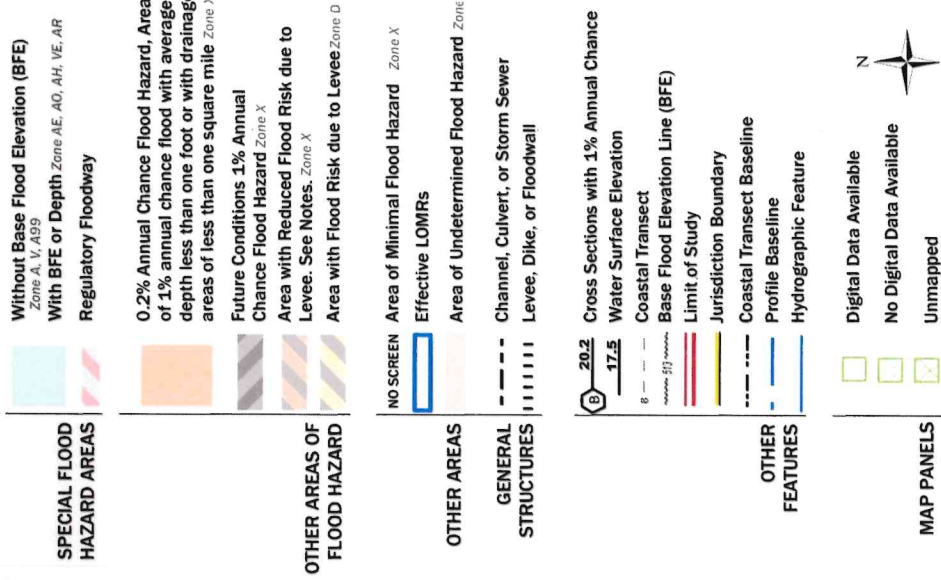
National Flood Hazard Layer FIRMette



79°4'25"W 35°5'11"N

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT



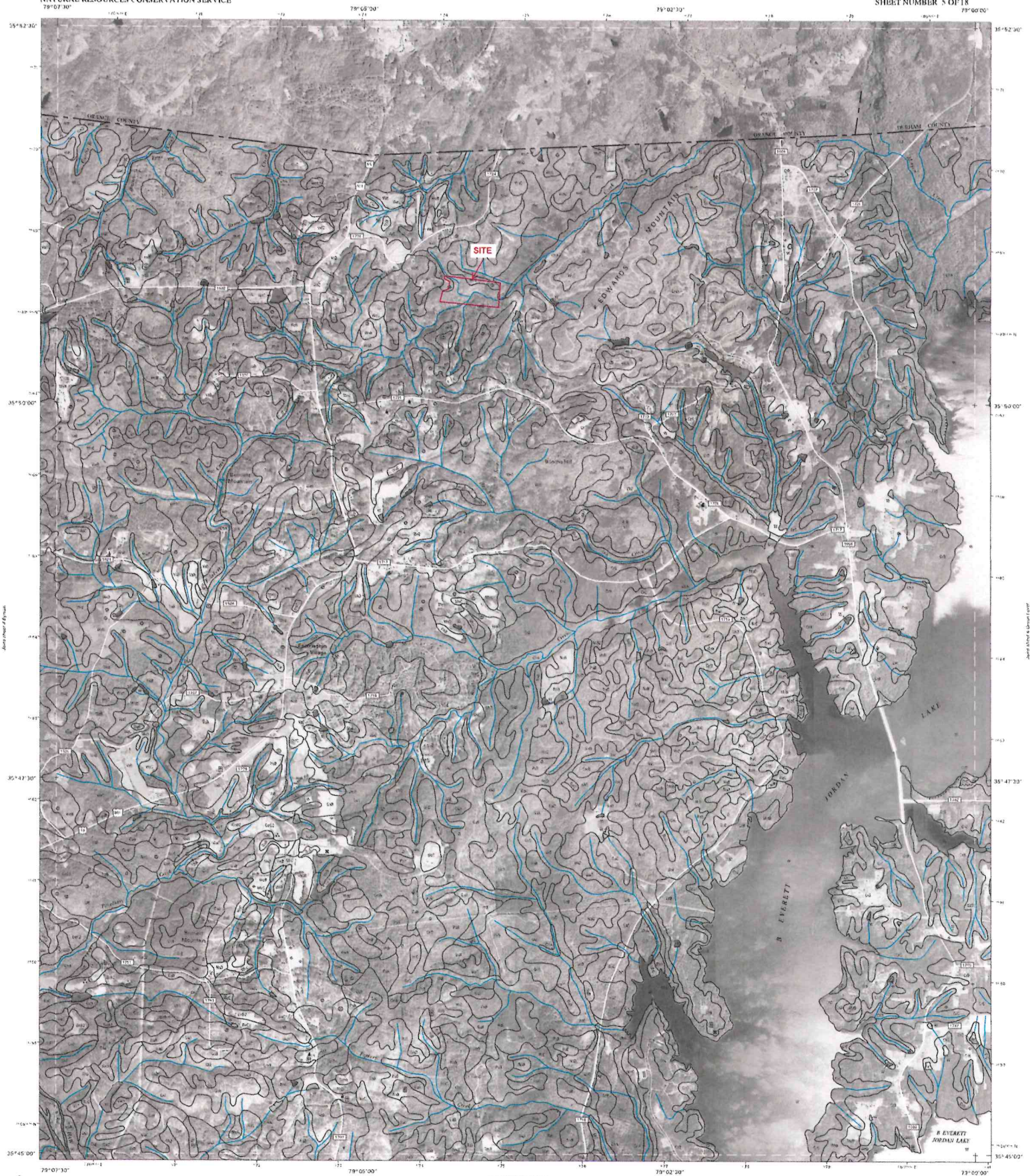
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/24/2024 at 11:56 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

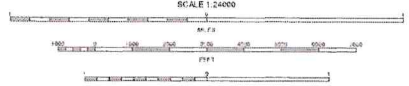
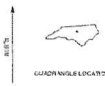
This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.





This soil survey was compiled by the U.S. Department of Agriculture, Natural Resources Conservation Service and cooperating agencies. Base maps are orthorectified maps prepared by the U.S. Department of the Interior, Geological Survey, from 1973-1978 aerial photography. Administrative boundaries were acquired from the State of North Carolina. Boundaries may have been revised to conform with features represented on the publication or to enhance the clarity of the soil information.

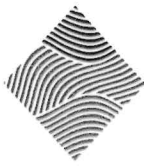
North American Datum of 1983 (NAD83). GRS80 Spheroid 1600-meter scale Universal Transverse Mercator, Zone 17. Coordinates and ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



1	2	3	4
1	2	3	4
5	6	7	8
9	10	11	12

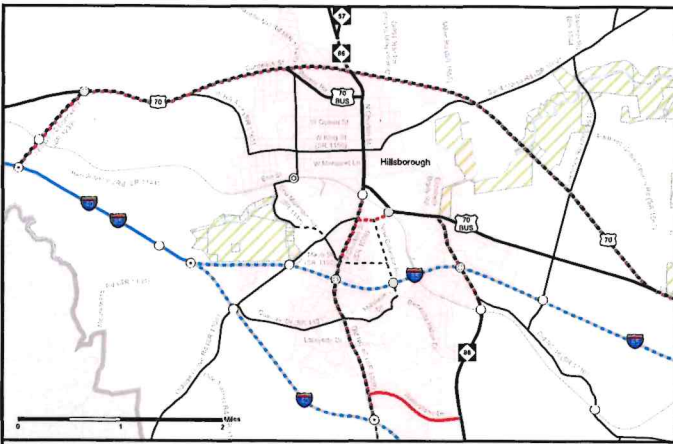
FARRINGTON, NORTH CAROLINA
7.5-MINUTE SERIES
SHEET NUMBER 5 OF 18

Soil map data (series) according to the digital soil map data (series) are for reference only and are included on adjacent map sheets.



ADDITIONAL ZONING INFORMATION

DCHC MPO - CTP ADOPTION SHEET AND HIGHWAY MAP



Hillsborough Inset

Adopted by:

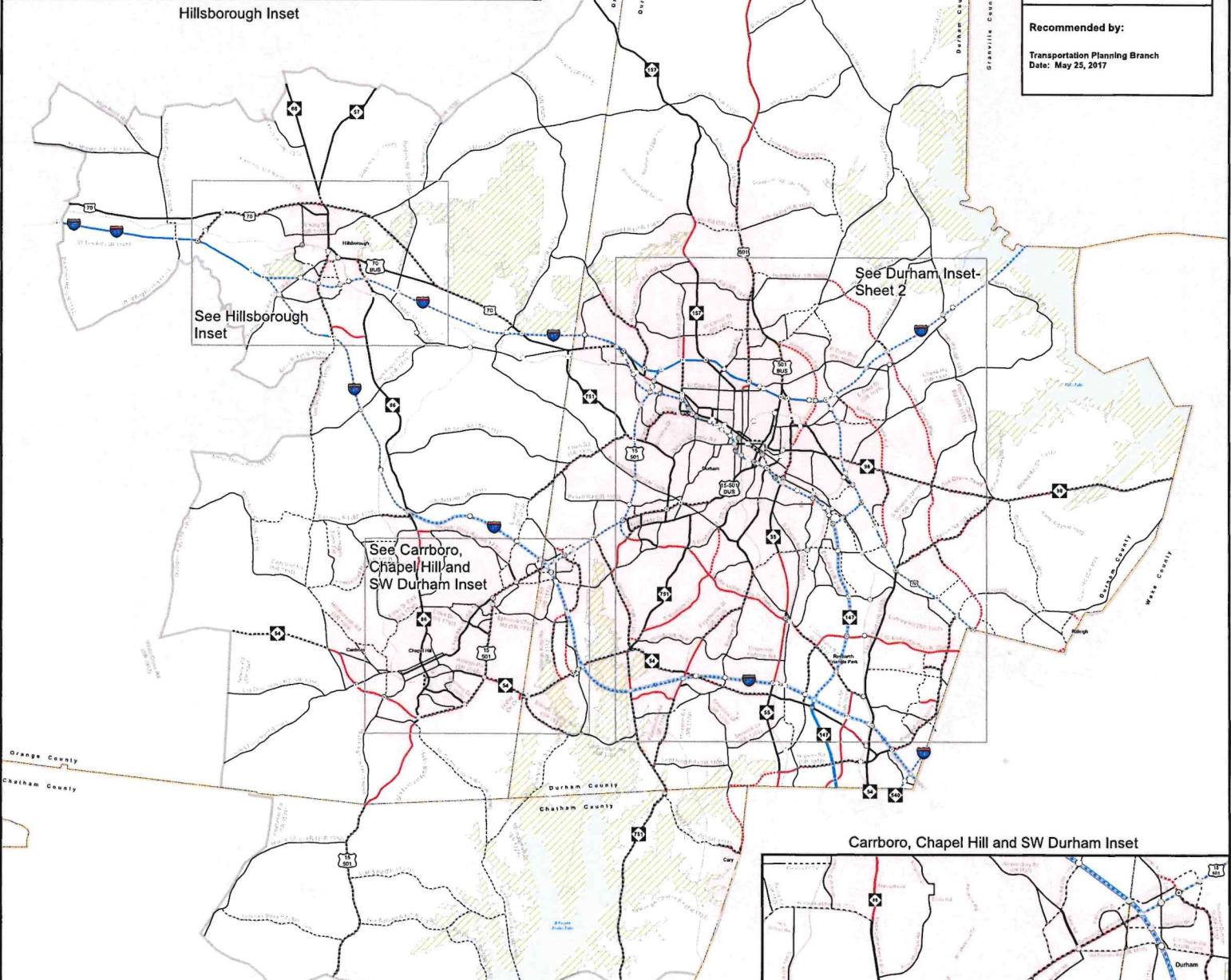
Durham-Chapel Hill-Carrboro MPO
Date: May 10, 2017

NCDOT

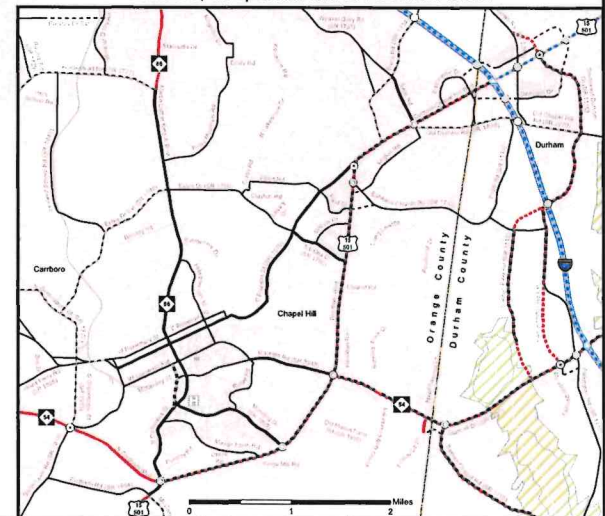
Date: August 3, 2017

Recommended by:

Transportation Planning Branch
Date: May 25, 2017



Carrboro, Chapel Hill and SW Durham Inset



<http://tinyurl.com/DCHC-CTP>



Note: The Strategic Transportation Investments (STI) law (House Bill 817) established design elements that emphasize safety, mobility, complete streets, and accessibility for multiple modes of travel. The "Typical" highway cross sections used in this CTP were updated on May 5, 2014 in response to STI law.

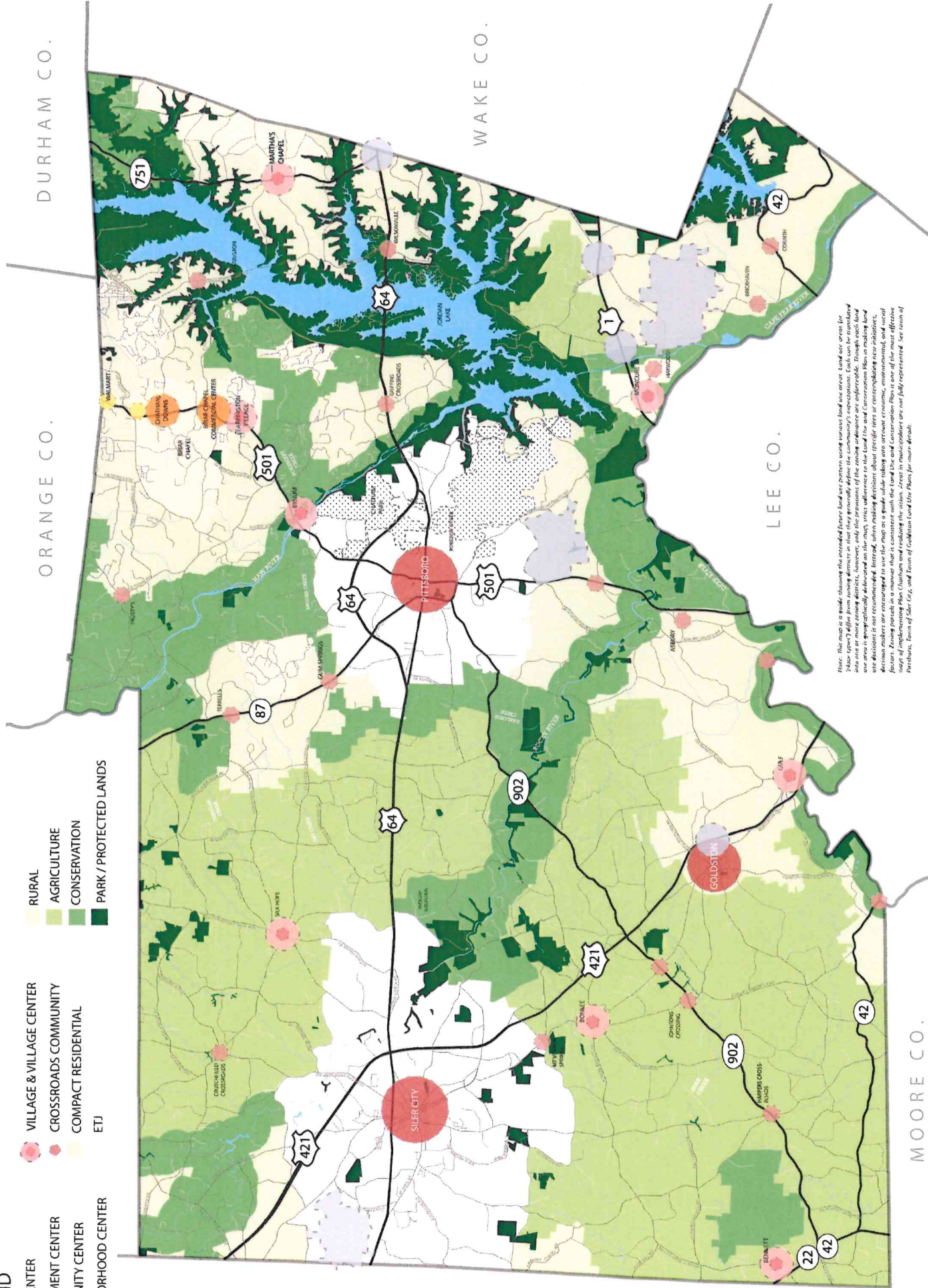
NCDOT's Complete Streets Policy requires that NCDOT's planners and designers will consider and incorporate multimodal alternatives in the design and improvement of all appropriate transportation projects within a growth area of a town or city unless exceptional circumstances exist. (For more information on Complete Streets, go to <http://www.completestreets.org/>.)

Note: The concepts shown on a CTP are for planning purposes and are subject to change. These concepts will need additional analysis to meet state and federal environmental regulations, to determine final locations and designs, and to be funded for implementation. Local zoning or subdivision ordinances may require the dedication of right of way based on the concepts shown on the CTP and local collector street plans, based on N.C.G.S. § 136-66.2 and § 136-66.15.

Sheet 1 Adoption Sheet and Highway Map Sheet 2 Highway Map Inset Sheet 3 Public Transportation and Rail Map Sheet 4 Bicycle and Pedestrian Map Sheet 5 Bicycle and Pedestrian Map Inset	Legend - Schools - Airports - Hospitals - Railroads - Roads - County Boundaries - Rivers and Streams - Water Bodies - Parks and Camplands - Municipalities - MPO Boundaries	Freeways - Existing - Needs Improvement - Recommended - Freeways with Managed Lanes - Existing - Needs Improvement - Recommended - Expressways - Existing - Needs Improvement - Recommended - Boulevards - Existing - Needs Improvement - Recommended	Other Major Thoroughfares - Existing - Needs Improvement - Recommended - Minor Thoroughfares - Existing - Needs Improvement - Recommended - Interchanges (in Intersections) - Grade Separations - Existing - Needs Improvement - Recommended - Interchanges with Managed Lanes Access - Existing - Needs Improvement - Recommended	Scale: 0 1 2 Miles North Arrow Sheet 1 of 5 Base map date: December 14, 2016 Refer to CTP document for more details	Adoption Sheet/ Highway Map Durham-Chapel Hill-Carrboro MPO Chapel Hill, Durham and Orange Counties Comprehensive Transportation Plan Plan date: May 10, 2017
--	---	---	---	--	---

LEGEND

- TOWN CENTER
- EMPLOYMENT CENTER
- COMMUNITY CENTER
- NEIGHBORHOOD CENTER
- VILLAGE & VILLAGE CENTER
- CROSSROADS COMMUNITY
- COMPACT RESIDENTIAL
- ETJ
- RURAL
- AGRICULTURE
- CONSERVATION
- PARK / PROTECTED LANDS



This map is a guide showing the intended future land use pattern using various land use areas. Land use areas for future growth are shown in red, orange, yellow, and green. These areas are shown in general terms and are not intended to be a final determination of land use. The map is intended to provide a general overview of the future land use pattern and is not intended to be a final determination of land use. The map is intended to provide a general overview of the future land use pattern and is not intended to be a final determination of land use.



PERMITTING CONTACTS PAGE

Chatham County

Planning

Paula Phillips
80 East St A,
Pittsboro, NC 27312
Phone: (919) 542-8276
Email: paula.phillips@chathamcountync.gov

County Engineering

Thanh Schado
964 East St, Pittsboro, NC 27312
Phone: (919) 542-8207
Email: Thanh.Schado@chathamcountync.gov

County – Stormwater Engineer

Juston Hasenfus
80 East St A,
Pittsboro, NC 27312
Phone: (919) 545-8344
Email: justin.hasenfus@chathamcountync.gov

County – Septic

Brad Jones, R.E.H.S
80 East St A,
Pittsboro, NC 27312
Phone: (919) 545-8375
Email: brad.jones@chathamcountync.gov