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LAND DEVELOPMENT CONSULTANTS

**Property Evaluation**

**101 Weaver Dairy Extension  
Chapel Hill, NC**

**April 8, 2013**

**Project No. 20008**



**Prepared For:**

**Town of Chapel Hill  
405 Martin Luther King, Jr. Blvd.  
Chapel Hill, NC 27514**

## **Property Evaluation**

### **101 Weaver Dairy Extension Chapel Hill, NC**

#### **Purpose**

The subject of this study is a 4.11-acre parcel of land located at 101 Weaver Dairy Extension in Chapel Hill, NC. The subject property is owned by the Town of Chapel Hill and contains Chapel Hill's Fire Station #4.

The purpose of this study is to (1) provide analysis of primary regulatory and physical constraints applicable to the subject property; (2) provide property-specific guidance about reasonable types and intensities of future land uses for the property; and (3) discuss other identified issues or opportunities relevant to potential property development.

#### **Assumptions and Qualifications**

This study is based on current Town of Chapel Hill zoning designations, the Town of Chapel Hill 2020 Land Use Plan (2020 Plan), the Town of Chapel Hill Land Use Management Ordinance (LUMO), other applicable land development regulations and policies, typical interpretations relating to the foregoing, mapping and other information provided by the owner, and other available public information. Unless otherwise indicated, the determinations, opinions, and recommendations herein assume that current regulatory conditions will not change in a manner that will adversely or significantly affect future development of the subject property. In addition, this study does not consider the full range of issues that may affect the current or future development potential of the property.

#### **General Site Conditions**

The subject property lies at the southwestern quadrant of the intersection of Martin Luther King, Jr. Blvd. and Weaver Dairy Extension. It consists of approximately 4.11 acres, and contains a municipal fire station, known as Chapel Hill Fire Station #4. The majority of the parcel, about 3.88 acres, lies on the south side of Weaver Dairy Extension. A small residual portion of the property resulting from dedication of Weaver Dairy Extension right-of-way lies on the north side of the street. The subject property has about 210 feet of frontage on Martin Luther King, Jr. Blvd. and about 760 feet of frontage on Weaver Dairy Extension. The property is served by a two driveway connections to Weaver Dairy Extension.

The ground surface slopes generally from east to west across the property, with slopes mostly in the range of 2% to 12%. According to the Chapel Hill zoning map, the property is not in the Watershed Protection overlay zoning district. No streams or surface waterbodies are indicated on or near the property by the USGS Quadrangle map; but the Soil Conservation Service (SCS) Orange County Soil Survey indicates an “intermittent” stream on the southwestern portion of the property. Therefore, a riparian buffer is presumed to be present for this drainage feature, pursuant to Jordan Lake watershed protection regulations. To verify or remove this presumed buffer, and to locate the upper limit of this feature, a field determination will be required by the NC DENR Division of Water Quality, or their delegated authority.

Mapping provided by the owner indicates this same drainage feature as a “perennial” stream, with Resource Conservation District (RCD) having only a 50 foot wide “streamside corridor”. Per LUMO Table 3.6.3-1, a perennial stream has a 150 foot total corridor width. In addition, the mapping provided indicates the perennial stream extending further uphill than the upper limit of the associated RCD. For current analysis purposes, this drainage feature is considered to be “perennial” with full 150 foot corridors, using a stream termination point that is consistent with the streamside corridor shown. Since RCD determinations are made by the Town of Chapel Hill, we recommend that Town staff make a field determination of this feature for a more refined analysis. If this drainage feature is determined to have a different classification, or terminate in a different location than what has been assumed, the maximum intensities for floor area and impervious surface will be altered accordingly, and perhaps dramatically.

**Parcel Summary Data**

The following table summarizes information relative to existing conditions and various land development parameters for the subject parcel:

Street Address:	101 Weaver Dairy Extension
Parcel Identification (PIN):	9880250693
Parcel Acreage:	4.11
Current Land Use:	Fire Station
Zoning Jurisdiction:	Town of Chapel Hill
Current Zoning:	OI-2
Overlay Zoning:	RCD
Transitional Controls Apply?	Yes
2020 Land Use:	Development Opportunity
Flood Restrictions:	None
River Basin:	Cape Fear (Jordan Lake)
Street Authority (MLK Blvd.):	NCDOT
Street Authority (Weaver Dairy):	Town of Chapel Hill
Future Focus Discussion Area?	Yes; North MLK / I-40

### **Regulatory Jurisdiction**

The subject property lies within the municipal limits of the Town of Chapel Hill, and is therefore subject to the Town's ordinances, including land development regulations and related policies. Zoning and land development regulations are established by the Chapel Hill LUMO. Public water and sanitary sewer service for the properties is regulated and provided by the Orange Water and Sewer Authority (OWASA). Martin Luther King, Jr. Blvd. (NC Highway 86) is regulated and maintained by the North Carolina Department of Transportation (NCDOT). Weaver Dairy Extension is regulated and maintained by the Town of Chapel Hill.

Any land development proposal for the subject property will require review by the Town of Chapel Hill (involving various Town departments, boards and commissions), NCDOT, OWASA, other utility providers, Orange County, and possibly various State and Federal agencies.

### **Flood Hazard Areas**

According to published flood mapping (FIRM Panel 9880, dated Feb. 2, 2007), no regulated flood hazard areas are present on the subject property, nor adjacent to the property.

### **Potable Water Service**

According to utility information provided, an 8-inch diameter public water main exists in the Weaver Dairy Extension right-of-way, and a 16-inch diameter public water main exists in the Martin Luther King, Jr. Blvd. right-of-way along the property's street frontages. In addition, a 6-inch diameter public water main extends across Weaver Dairy Extension to serve a fire hydrant located on the south side of the street. Additional property development may require installation of a new potable water main and/or water service line, connected to one of the existing water mains and extended into the site to serve project-specific demands for both potable water service and fire protection service. Insufficient information is known regarding the pressure and flow capacity characteristics of the existing water system at the site, to verify its adequacy for any specific future land use. This question may be partially addressed by physical testing of the existing water system, which is typically done as part of due diligence work for a specific development proposal. Fully answering this question requires specific knowledge about the type and size of the proposed development.

### **Sanitary Sewer Service**

According to utility information provided, an 8-inch diameter public sanitary sewer main exists within the adjoining Weaver Dairy Extension right-of-way. This sewer main appears to be situated in a manner that allows gravity sewer service to all usable areas of the property. Since the existing sewer main is located on the north side of the roadway, any future connection to the main from the developable portion of the property will require utility construction within and/or underneath the roadway surface.

## **Driveway Access and Roadway Improvements**

The Town of Chapel Hill will continue to control vehicular access to the subject property from Weaver Dairy Road Extension. No vehicular access should be expected from Martin Luther King, Jr. Blvd. in any case, due to its classification and traffic volume, the limited amount of frontage, and the availability of access from Weaver Dairy Extension.

Both existing driveways connecting to Weaver Dairy Extension are located with good sight distance, however, the eastern-most driveway is extremely close to the intersection, and appears to be primarily used as an emergency (fire truck) access. If the future property use does not include a fire station component, this driveway will probably not be allowed to persist. There are no driveways on the north side of Weaver Dairy Extension opposite the property, so turning conflicts with opposing driveways are not a concern. As part of property re-development, the western driveway may be required to be shifted to a more westerly location, to provide better separation from the intersection. Given the small size of the property, it may be ultimately limited to only one access connection to Weaver Dairy Extension.

The Martin Luther King, Jr. Blvd. corridor already has a generous cross-section and very good functional characteristics in the project area, as does Weaver Dairy Road Extension. However, additional public roadway improvements will probably be required as a condition of any future property development approvals. These requirements cannot be determined without specific project type and density information, and a detailed traffic study. Possible requirements may include installation of a Bus Rapid Transit (BRT) lane along the property's Boulevard frontage, and other improvements relative to pedestrian / bike / bus transportation modes. Recommendations in the Northern Area Task Force Report include incorporating Transit Oriented Design (TOD) principles into future development in the project area. Site development expectations for this site should reflect Chapel Hill's emphasis on TOD and "Complete Streets" design principles, as applicable to this section of the Boulevard. Additional street right-of-way dedication may be required to accommodate new infrastructure improvements.

## **Soil Conditions**

According to the Soil Conservation Service (SCS) Soil Survey of Orange County, the soil type in the developable portions of the subject property is Georgeville silt loam. This soil type is commonly found in the Chapel Hill area, is typically well-drained, and is characterized by SCS as being "fair" for general site development purposes.

This level of analysis is not sufficient to properly assess the engineering properties of the onsite soils, especially where the current surface soils may not be native soil, and may not be the actual soil that was sampled (in the early 1970's) for the referenced Soil Survey mapping. Any judgments about the suitability of onsite soils for specific development purposes can only be made on the basis of an onsite geotechnical subsurface investigation, which is typically done as part of due diligence work for a specific development proposal, and is beyond the scope of this study.

## **Environmental Considerations**

The scope of this study does not include environmental investigations for the subject property. The owner may choose to conduct a standard “Phase 1 Environmental” investigation for planning or marketing efforts. Such a study would look at available environmental database records and site conditions to determine if there are any apparent environmental concerns associated with the property, or with neighboring properties, that warrant further investigation.

## **Zoning**

The subject property is zoned Office / Institutional-2 (OI-2) with limited RCD as an overlay zoning district. The OI-2 district is intended for medium intensity office and institutional development. The 2020 Plan indicates this property as a Development Opportunity area. The property lies adjacent to, but not within, the Joint Planning Area with Orange County.

Properties to the north (across Weaver Dairy Extension) are zoned R-1A, and properties to the west and southwest are zoned R-1, both of which are fairly low-density residential districts. These properties appear to be used in a manner that is consistent with their respective zoning designations.

The 2020 Plan designates this property as a Development Opportunity site. The property is included as part of the North MLK, Jr. Blvd. / I-40 Future Focus Discussion Area, for which active discussions have not yet begun. It is also included in the Northern Area Task Force (NATF) Report. The Development Opportunity designation is non-specific but refers to the NATF Report. This report makes future land use recommendations for many properties in the vicinity, but does not explicitly do so for the subject property. Rather, the recommendation for this site is to “Consider Town coordinated redevelopment of the Fire Station which incorporates the existing facility and TOD principles”; and to provide “Gateway Treatment” on the site near Martin Luther King, Jr. Blvd. The report generally recommends that buildings be placed closer to streets and transit corridors (which may conflict with traditional “Transitional Controls” stipulated in LUMO 3.8.4 for non-residential property development adjacent to residential zoning districts).

In addition, this property is included as part of “Site 3” in the 2035 Chapel Hill / Carrboro Long Range Transit Plan, which visualizes the property being combined with property to the South and re-developed as a mixed use facility with strong presence on the intersection corner. The property to the south has recently been approved as a mixed-use project, and appears very unlikely to be developed in conjunction with the subject property. Therefore, no such joint development is contemplated by this analysis.

## **Site Re-Development Potential**

A Site Analysis Plan is attached as Exhibit 1, depicting approximate property boundaries, existing development footprints, RCD limits, and regulatory building setbacks based on current

zoning. For any future zoning district that is more intense than the current zoning, building setbacks will generally be less than shown on this plan. Also, perimeter buffers are not considered for this analysis since they can be highly variable based on proposed and adjacent land uses, and are generally able to be diminished in width if designed to provide “as good or better” buffering relative to the normative width. The resulting interior “buildable area” for the property is approximately 2.1 acres, or about one-half of the total property acreage. The subject property appears to have substantial potential for re-development or additional development, which would be constrained by several physical and regulatory factors.

The property could possibly be a candidate for a mixed use project, but it is rather small for this purpose without combination with other property. Also, it appears that the recently-approved mixed use project to the south doesn’t make any provision for vehicular connectivity or other kind of functional interface with the subject property. For these reasons, the window of opportunity may have passed for the subject property to be developed in a mixed use manner.

Two zoning scenarios are considered by this study. In both cases, the property is assumed to be used in a non-residential manner, specifically as some type of institutional or office. Either of these uses could potentially be further characterized as public, private, or some combination thereof.

The current OI-2 zoning designation allows a significant amount of additional development intensity for the property, so the first scenario assumes that the current OI-2 zoning designation will not be changed. Exhibit 2 indicates that approximately 30,000 square feet of additional floor area could be built on the property under the current zoning, for a total floor area of approximately 41,000 square feet. This amount of increase would essentially quadruple the existing site development intensity, as measured by floor area. (If measured by traffic generation, the increase would be much larger.) Based on the apparent physical buildable area on the site, this amount of floor area could be accommodated, albeit very tightly, in a multi-story building of three levels, using conventional onsite surface parking, and using slightly below-average parking ratios for office and institutional uses.

Due to physical limitations on municipal growth limits, the importance of attaining threshold densities to support alternative transportation modes, and the numerous benefits of optimizing the yield of developed area footprints, it seems reasonable to expect that this property could be rezoned to allow a higher development density. The second zoning scenario therefore considers that the property’s zoning will be changed to the OI-3 district.

Exhibit 3 indicates that OI-3 zoning would allow approximately 76,000 square feet of additional floor area on the property, for a total floor area of approximately 87,000 square feet. Maximum development under this scenario would represent about an eight-fold increase in the existing site density, as measured by floor area. Using the property for this level of intensity would require a substantial amount of structured parking. Existing elevation changes across the site appear to be generally conducive to structured parking.

## **Recommendations**

We recommend that the Town of Chapel Hill perform a field review of the drainage feature on the southwestern portion of the property, to determine the type and extent of any RCD in this area. We also recommend that the owner request DWQ perform a field review of the same feature to verify the presence and extent of riparian buffer in this area. These actions will allow a more refined analysis of development potential for the subject property.

We recommend that once discussions begin for the North MLK, Jr. Blvd. / I-40 Future Focus Discussion Area, the Town actively participate in this process as the owner of this significant property. This ownership role would be in addition to, but distinct from, other roles that the Town might assume in these discussions.

Our office is available to provide additional research, site investigations, conceptual planning, regulatory liaison, or related services that could provide a more detailed understanding of the subject property's development potential.

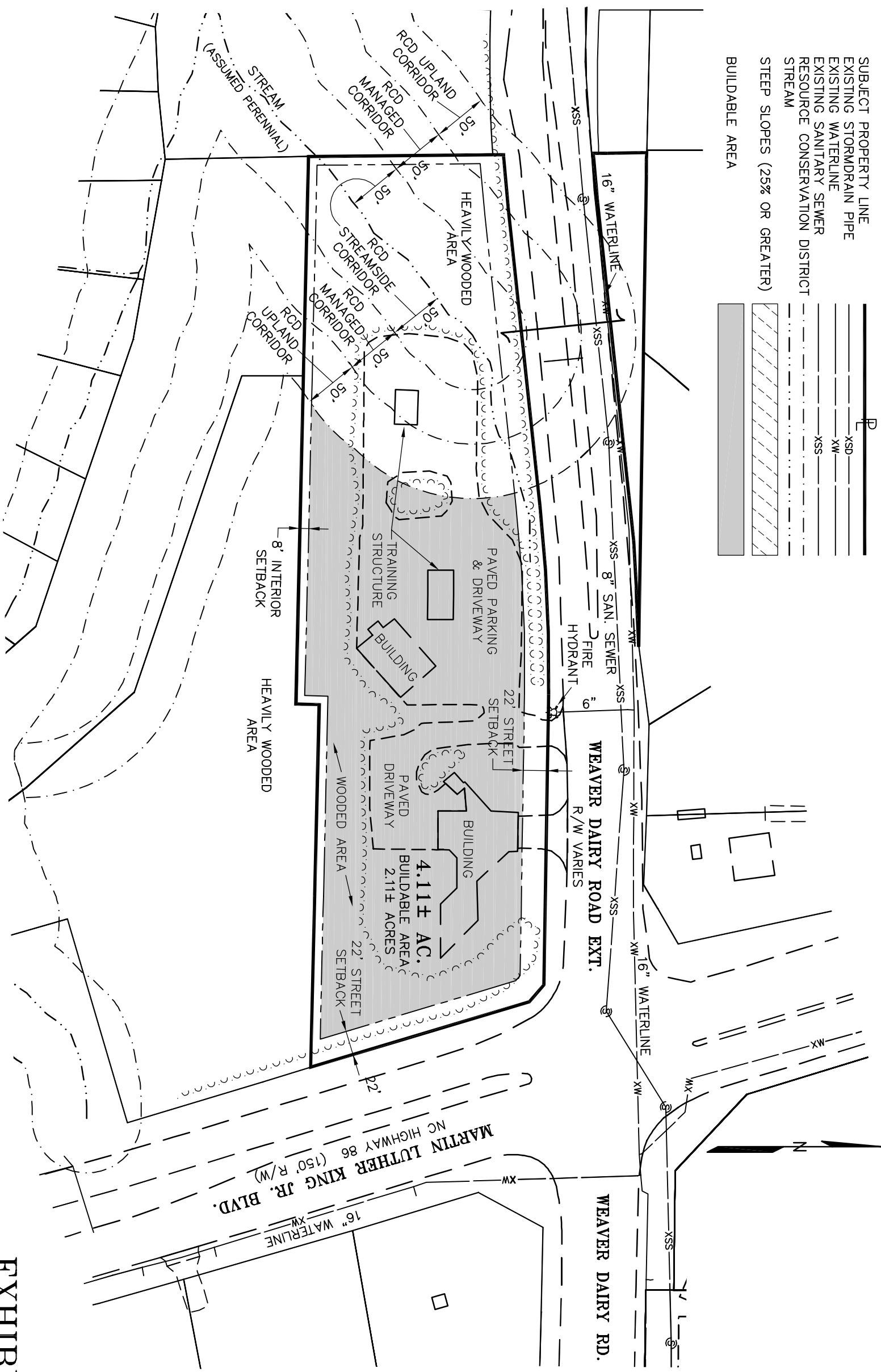
## **Attached Exhibits**

1. Site Analysis Plan (1 page)
2. Development Intensity Summary – Under Current OI-2 Zoning (1 page)
3. Development Intensity Summary – If Re-Zoned to OI-3 (1 page)
4. Miscellaneous Maps and Supporting Information (multiple pages)

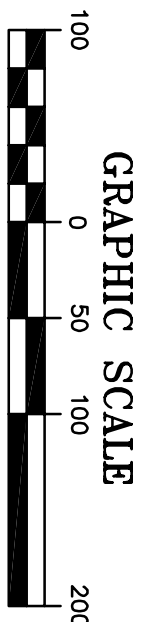


**LEGEND**

- SUBJECT PROPERTY LINE
- EXISTING STORMDRAIN PIPE
- EXISTING WATERLINE
- EXISTING SANITARY SEWER
- RESOURCE CONSERVATION DISTRICT
- STREAM
- STEEP SLOPES (25% OR GREATER)
- BUILDABLE AREA



**EXHIBIT 1**



**TOWN OF CHAPEL HILL**  
**FIRE STATION #4**  
 101 Weaver Dairy Road Ext.  
 Chapel Hill, North Carolina  
**SITE ANALYSIS PLAN**

**civil consultants**  
**LAND PLANNERS + CIVIL ENGINEERS**  
 WWW.CIVIL-CONSULTANTS.COM  
 3708 LYCKAN PARKWAY • SUITE 201 • DURHAM, NC 27707  
 PHONE: 919.490.1645 Lic. #C-1030

DATE:	APRIL 5, 2013
HORIZ. SCALE:	1" = 100'
VERT. SCALE:	N.A.
PROJ. MANAGER:	MAF
DRAWN BY:	RAM
PROJECT NO.:	20008
DRAWING NAME:	20008.DWG

REV.	DATE	DESCRIPTION	BY

SHEET NO.  
**EX1**



**Exhibit 2**

Project Name: Chapel Hill Property Evaluations  
 Project Number: 20008  
 Client: Town of Chapel Hill  
 Date: April 1, 2013

Property Address: **101 Weaver Dairy Road Extension**  
 Reported Area: 4.14 Acres (4.11 acres used for this analysis)  
 Current Zoning District: OI-2  
 Land Use Plan Category: Non-Specific "Development Opportunity"  
 Assumed Zoning District: OI-2<sup>1</sup>  
 Transitional Controls Apply? Yes (Residential setbacks and building heights apply unless modified<sup>5</sup>)

Parameter	Value	Units	RCD - Stream Side <sup>3</sup>	RCD - Managed Use <sup>3</sup>	RCD - Upland <sup>3</sup>	Non-RCD	% of NLA
Net Land Area:	179,000	Sq. ft.	23,800	19,600	16,000	119,600	
Credited Street Area:	17,900	Sq. ft.				17,900	10.0%
Credited Open Space:	0	Sq. ft.					0.0%
<b>Gross Land Area:</b>	<b>196,900</b>	<b>Sq. ft.</b>	23,800	19,600	16,000	137,500	110.0%
Max. Floor Area Ratio:			0.010	0.019	0.264	0.264	
Max. Base Floor Area:	41,134	Sq. ft.					
Existing Floor Area:	10,700	Sq. ft.	(Floor area value provided by owner)				
<b>Allowable New Floor Area:</b>	<b>30,434</b>	<b>Sq. ft.</b>					
Max. Imperv. Surface Ratio:			0.100	0.200	0.200	0.700	
Max. Imperv. Surface Area:	105,750	Sq. ft.	(Based on Non-residential Use with High-Density Option) <sup>6</sup>				
Existing Imperv. Surf. Area:	55,000	Sq. ft.	(Approximation only; taken from review of aerial photo)				
<b>Allowable New ISA:</b>	<b>50,750</b>	<b>Sq. ft.</b>					

Footnotes:

1. This analysis does not consider the option of property re-zoning.
2. This analysis does not consider any residential use of the property.
3. Mapping provided by the owner shows a "perennial" stream with a 50' RCD limit at the southwest corner of the property. A perennial stream typically has a 150' RCD per LUMO requirements. Further study is required to verify actual RCD limits. For this analysis, the larger RCD is assumed. If the drainage feature has a lesser classification, maximum land use intensities for floor area and impervious surface will be larger than indicated.
4. All projected intensities are based on data taken from available mapping, etc., and are preliminary in nature.
5. Increased setbacks from Transitional Controls conflict with some recommendations of the NATF report.
6. The calculated Maximum Impervious Surface area exceeds the estimated buildable area for the site.



**Exhibit 3**

Project Name: Chapel Hill Property Evaluations  
 Project Number: 20008  
 Client: Town of Chapel Hill  
 Date: April 1, 2013

Property Address: **101 Weaver Dairy Road Extension**  
 Reported Area: 4.14 Acres (4.11 acres used for this analysis)  
 Current Zoning District: OI-2  
 Land Use Plan Category: Non-Specific "Development Opportunity"  
 Assumed Zoning District: OI-3 <sup>1</sup>  
 Transitional Controls Apply? Yes (Residential setbacks and building heights apply unless modified <sup>5</sup>)

Parameter	Value	Units	RCD - Stream Side <sup>3</sup>	RCD - Managed Use <sup>3</sup>	RCD - Upland <sup>3</sup>	Non-RCD	% of NLA
Net Land Area:	179,000	Sq. ft.	23,800	19,600	16,000	119,600	
Credited Street Area:	17,900	Sq. ft.				17,900	10.0%
Credited Open Space:	0	Sq. ft.					0.0%
<b>Gross Land Area:</b>	<b>196,900</b>	<b>Sq. ft.</b>	23,800	19,600	16,000	137,500	110.0%
Max. Floor Area Ratio:			0.010	0.019	0.566	0.566	
Max. Base Floor Area:	87,491	Sq. ft.					
Existing Floor Area:	10,700	Sq. ft.	(Floor area value provided by owner)				
<b>Allowable New Floor Area:</b>	<b>76,791</b>	<b>Sq. ft.</b>					
Max. Imperv. Surface Ratio:			0.100	0.200	0.200	0.700	
Max. Imperv. Surface Area:	105,750	Sq. ft.	(Based on Non-residential Use with High-Density Option) <sup>6</sup>				
Existing Imperv. Surf. Area:	55,000	Sq. ft.	(Approximation only; taken from review of aerial photo)				
<b>Allowable New ISA:</b>	<b>50,750</b>	<b>Sq. ft.</b>					

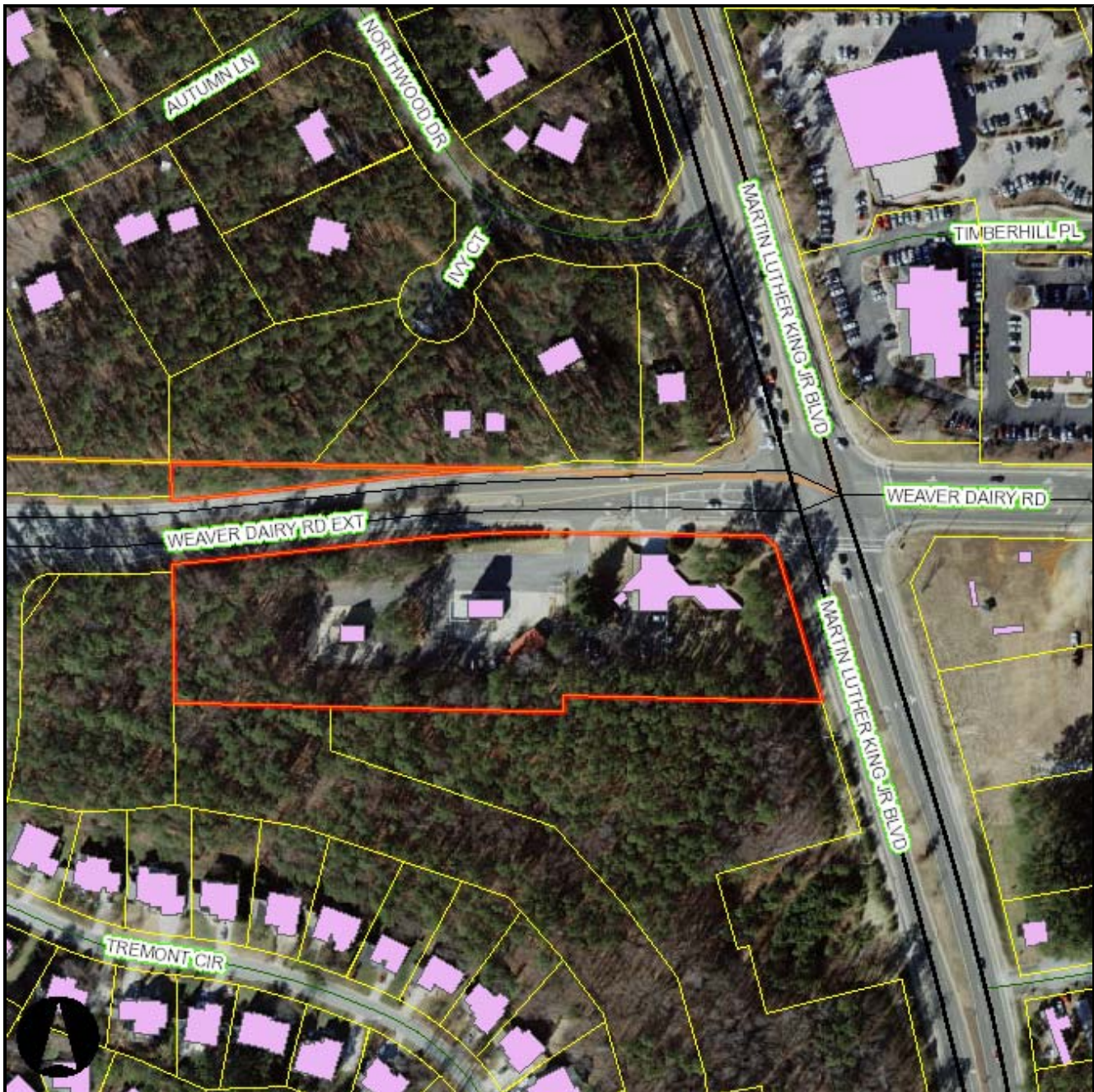
Footnotes:

1. This analysis assumes the property is re-zoned to OI-3.
2. This analysis does not consider any residential use of the property.
3. Mapping provided by the owner shows a "perennial" stream with a 50' RCD limit at the southwest corner of the property. A perennial stream typically has a 150' RCD per LUMO requirements. Further study is required to verify actual RCD limits. For this analysis, the larger RCD is assumed. If the drainage feature has a lesser classification, maximum land use intensities for floor area and impervious surface will be larger than indicated.
4. All projected intensities are based on data taken from available mapping, etc., and are preliminary in nature.
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6. The calculated Maximum Impervious Surface area exceeds the estimated buildable area for the site.



# Orange County, NC GIS

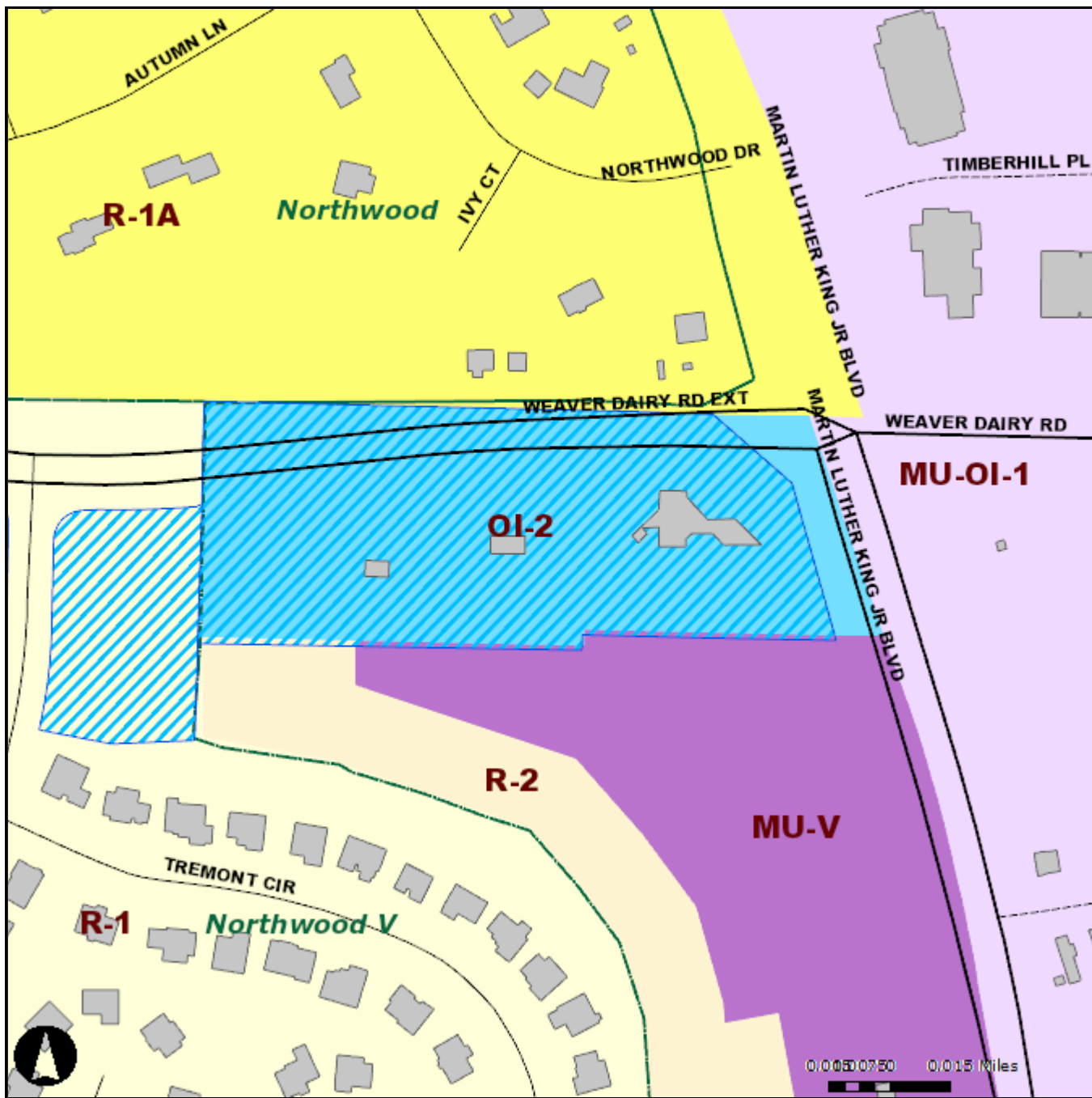
## 101 Weaver Dairy Ext - Aerial 1



1 inch = 200 feet

Created on 3/28/2013. Orange County, North Carolina.

# Map



### Addresses

- Active
- Corner
- Pre-Assigned
- Retired
- Unverified

### Bus Stops



### Weekday Routes



### Weekday Routes (continued)

- CW
- CW,F
- CW,F,J
- CW,J
- D
- D,F
- D,J
- D,N,NS,V
- D,NS,V

### Orange County Misc. Parcel Lines

- Leader Line
- Miscellaneous
- Parcel Hook
- Sub Block Circle

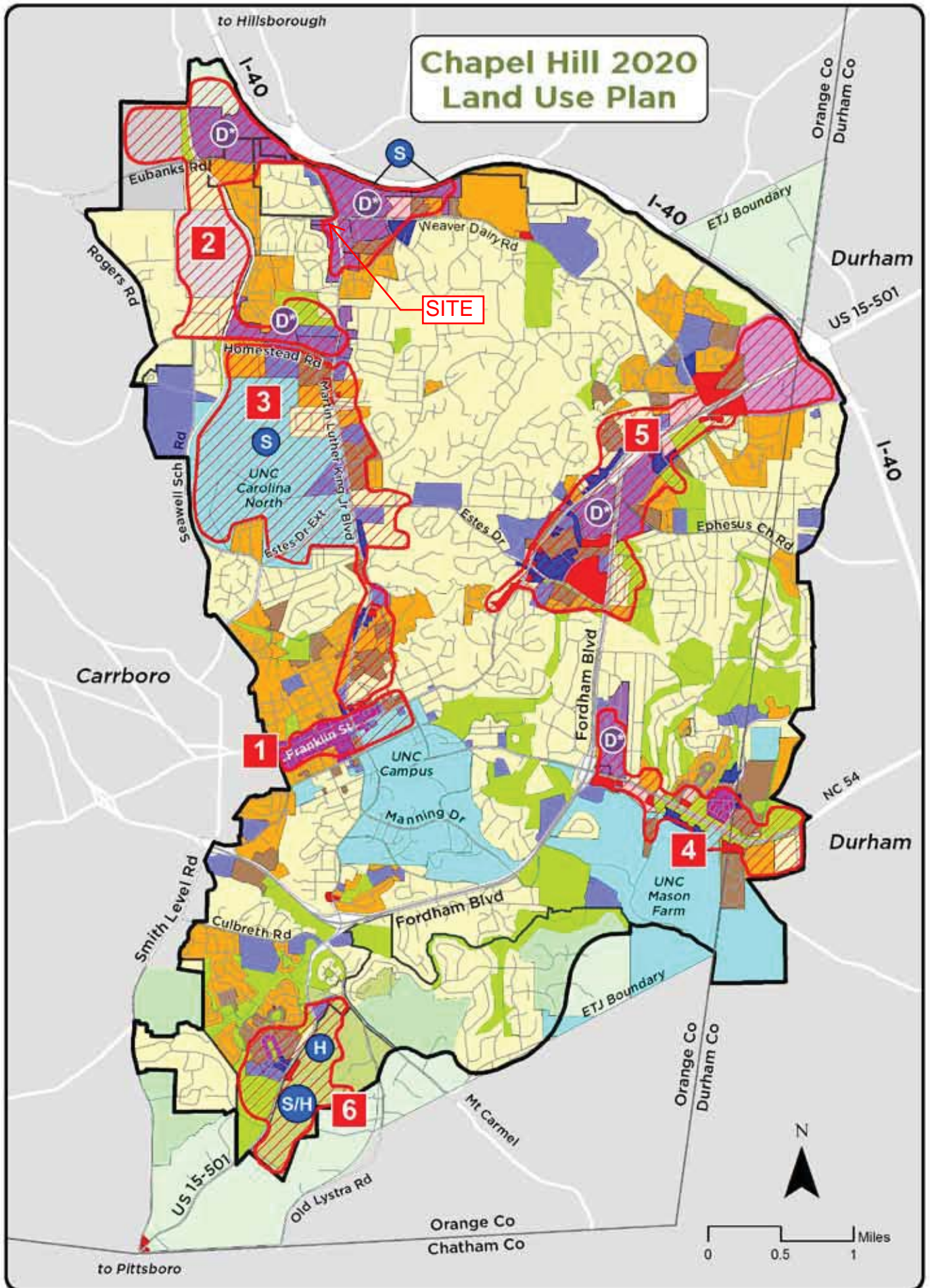
### Orange County Parcels

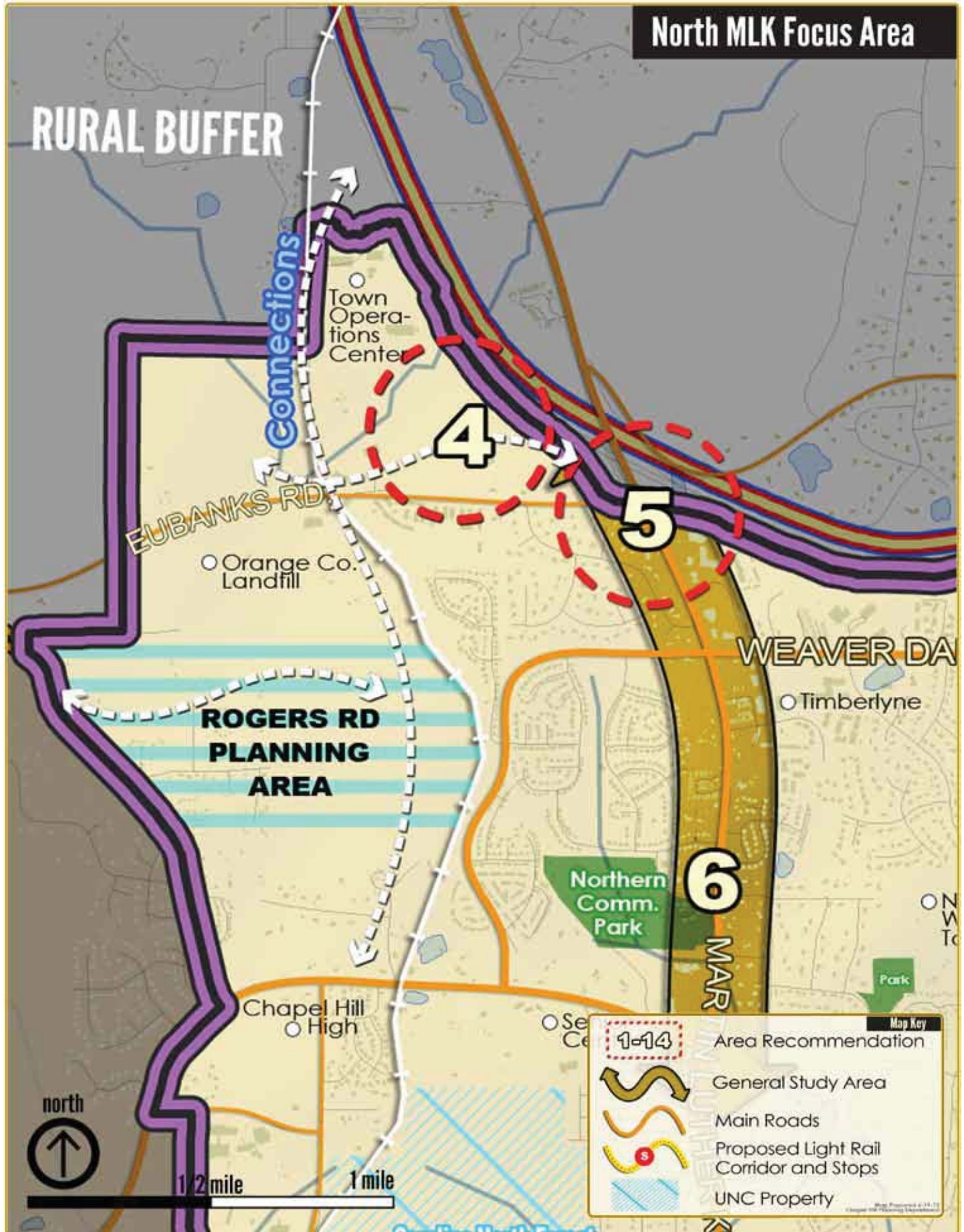


### Durham County Parcels

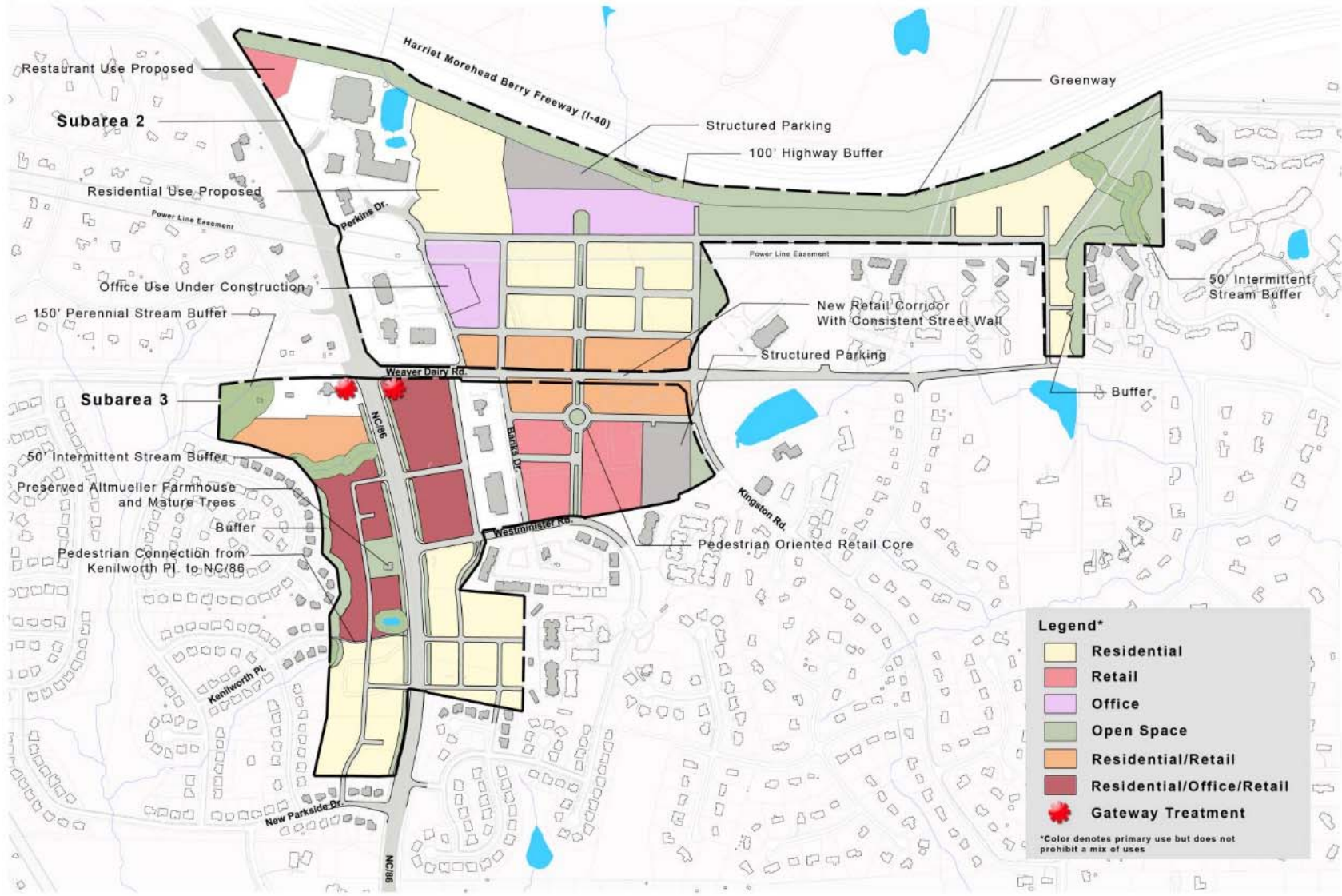


### Jordan Lake Watershed Protection District

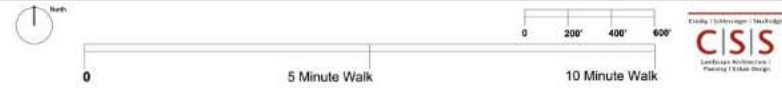




# FOCUS AREAS 2 AND 3



**Subareas 2 & 3 Conceptual Land Use & Block Plan**  
Chapel Hill T.O.D. Site Analysis







GRID NORTH

SCALE 1" = 500' (1 : 6,000)

NFIP

PANEL 9880J

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
 NORTH CAROLINA

NATIONAL FLOOD INSURANCE PROGRAM

**PANEL 9880**

(SEE LOCATOR DIAGRAM OR MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	CID No.	PANEL	SUFFIX
CHAPEL HILL TOWN OF	370180	9880	J
ORANGE COUNTY	370342	9880	J

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**EFFECTIVE DATE**  
**FEBRUARY 2, 2007**

**MAP NUMBER**  
**3710988000J**



State of North Carolina  
 Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)