8

Project Assessment

The Study Area for the Eubanks Road Park-and-Ride Expansion Feasibility Study consists of the area bound by the following: Mt. Sinai Road and NC 86 to the North, Martin Luther King Jr. Boulevard to the east, Old NC 86 to the west and Homestead Road and to the South. The project location map in Figure 2-1 presents the Study Area, highlighting the intersections and the existing Park-and-Ride facility.

8.1 Demographics

The following sections present demographic information in four key areas: population, housing, economic trends, and travel patterns. This data shows a continued pattern of significant growth in potential transit and Park-and-Ride demand within the Town of Chapel Hill and the Chapel Hill Transit service area.

8.1.1 Population Trends

The Town of Chapel Hill is the largest community within Orange County, equaling 44% of the County's total population. According to the 2010 United States Census, the population of the Town of Chapel Hill's was 57,233 persons. The 2010 United State Census data shows the Town of Carrboro's population of 19,582. Table 8-1 presents the population of Chapel Hill and Carrboro between 1990 and 2010.

Table 8-1: Chapel Hill Population

				% Change	
Location	1990	2000	2010	1990-2000	2000-2010
Chapel Hill	38,719	48,715	57,233	25%	17.5%
Carrboro	11,582	16,782	19,582	45%	16.7%

Source: U.S. Census, 2010

Recent Population Growth

As the table above shows, the population of Chapel Hill and Carrboro has grown quickly since 1990.

- Between 1990 and 2000, the population in Chapel Hill grew by 9,996 people and in Carrboro by 5200 people;
- Between 2000 and 2010, the population in Chapel Hill grew by 8,518 people and in Carrboro by 2800 people

Although both communities have experienced rapid growth in absolute terms, they have grown more slowly than other communities in the region. The state of North Carolina population change between 2000 and 2010 was 18.5%. Even with this growth rate slightly below the state average, the Towns have experienced rapid changes in development density and transportation demand. In order to maintain a high quality of life, continued investment in transit capacity and facilities is needed to support growth.

Population Projections

Based on U.S. Census Bureau, NC Office of State Planning projections for years 2010 through 2035 the population growth has been estimated on an annual 1.5% growth rate. According to these projections, the population of Chapel Hill is expected to grow to 60,809 by 2015; to 70,571 by 2025; and to 81,901 by 2035. Similarly, by 2035 the population is anticipated to grow by 27% and reach 26,879 in Carrboro. This reinforces the historic growth trends and reinforces the need for increased transit facilities for the area.

Median Age

The median age in the Town of Chapel Hill was 25.6 years old in 2010, and in Carrboro it was 28.1 years old, compared to 35.3 years old statewide. Table 8-2 presents population by age in Chapel Hill, Carrboro, Orange County and North Carolina; therefore, expanded transit facilities are needed to support the younger, student-heavy population that has a stronger than average likelihood to use transit services as a primary mode of transportation.

Table 8-2: Median Age

2010 Population by Age	Chapel Hill %	Carrboro %	Orange County %	North Carolina %
Age Under 5 Years	4.2	5.8	5.1	6.6
Age Under 18 Years	17.4	21.5	20.9	23.9
Age Under 65 Years	69.2	67.4	64.4	56.6
Age 65 and Over	9.2	5.3	9.6	12.9

Source: U.S. Census, 2010

Population Density

As the population of Chapel Hill and the surrounding region has increased over past decades, the population density has correspondingly increased. Table 8-3 shows the population density (in person per square mile) in Chapel Hill, Carrboro, Orange County and the state of North Carolina.

Table 8-3: Population Density

Location	Square Miles	People per Square Mile
Chapel Hill	21.2	2,710
Carrboro	6.46	3,030
Orange County	398	336.2
North Carolina	48,618	196.1

Source: U.S. Census, 2010

The level of population density in Chapel Hill and Carrboro is much higher than either the State or County averages, suggesting a higher potential for transit utilization.

8.2 Market Analysis

8.2.1 Housing

According to the 2010 United States Census, the Town of Chapel Hill had total of 22,254 housing units and Town of Carrboro had 9,258 housing units. Table 8-4 shows housing units in Chapel Hill and Carrboro in comparison to Orange County and North Carolina. Table 8-5 shows demands and supply for housing units in Chapel Hill and Orange County.

Table 8-4: Housing Units

Location	2005-2009	2010	% Change
Chapel Hill	20,174	22,254	9.3%
Carrboro	8,418	9,258	9.1%
Orange County	50,010	55,597	10%
North Carolina	3,541,807	4,327,528	18%

Source: U.S. Census, 2010

Table 8-5: Housing Demand & Supply

Location	Demand	Supply
Chapel Hill	3,671	4,851
Orange County	3,506	5,517

Source: Residential Market Study, January 2010

8.2.2 Residential Market Analysis Review

In January 2010, the Town of Chapel Hill retained Development Concepts, Inc. to prepare an analysis of the local residential market.

Key observations and findings from this analysis include:

- From 2000 to early 2010, for-sale housing prices increased 32% in the Town of Chapel Hill;
- Factors that contributed to high housing prices in the Town of Chapel Hill include taxes, land cost, home size/construction costs, and housing demand;
- Households have increased by 3,671 (from 17,808 to 21,479) or 20.6 % between 2000 and 2008 in the Town of Chapel Hill, reflecting an increase of approximately 459 households per year; and
- Households are projected to increase by 4,410, (from 21,479 to 25,889) or 21% between 2008 and 2015 in the Town of Chapel Hill, or an increase of approximately 630 households per year.

Table 8-6: Building Permits by Units

Durham-Chapel Hill MSA Building Permits by Units 2005 - 2010							
Type	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**Total**
Single Family	4,239	3,486	3,006	2,173	1,372	1,542	15,818
Multifamily	154	887	248	325	1,285	371	3,270
Total	**4,393**	**4,373**	**3,254**	**2,498**	**2,657**	**1,913**	**19,088**

Orange County Building Permits by Units 2005 - 2010							
Type	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**Total**
Single Family	320	522	398	490	244	269	2,243
Multifamily	0	0	32	122	478	83	715
Total	**320**	**522**	**430**	**612**	**722**	**352**	**2,958**

Town of Chapel Hill Building Permits by Units 2005 - 2010							
Type	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**Total**
Single Family	220	101	43	166	22	57	609
Multifamily	0	0	32	122	396	24	574
Total	**220**	**101**	**75**	**288**	**418**	**81**	**1,183**

Source: U.S. Census Bureau Building Permit data, BBP LLC 2011

Continued residential growth influences the continued increase in travel demand. Mobility needs throughout the area can only be met through comprehensive modal choices for residents which include quality transit service and adequate facilities.

8.2.3 Retail

In 2010, the Town of Chapel Hill performed a Retail Market Analysis using Claritas' Retail Market Power database to analyze and calculate retail gap potential by supply and demand per category. The analysis showed the opportunity for retail expansion in the Town of Chapel Hill.

Retail Market Analysis Review

Key observations and findings are the following:

- Over-supplied in restaurants, building materials and grocery stores;
- Growth potential in retail categories of approximately 17.87% by 2014;
- Estimated current market gap of 31.13% based on market gap of $337,881,446; and
- Approximately 1,669,519 square feet would be able to be supported based on the existing leakages in all retail categories, based on a national average of $200 sales per square foot, according to Claritas data

In Table 8-7, retail categories were combined, and show a midpoint supportable square feet of 620,526. The top three retail categories with the largest supportable square feet are Department Stores, General Merchandise, and (all) Clothing Stores. In addition, Table 8-8 lists the categories that were excluded.

Table 8-7: Chapel Hill Retail Market – Potential Supportable Square Feet

Chapel Hill - Retail Market Potential Supportable Square Feet						
		Range of Sales/SF		Supportable Square Feet		
	Leakage	Low	High	High	Low	Midpoint
Department Stores	$46,894,824	$150	$300	312,632	156,316	**234,474**
General Merchandise	$48,220,725	$300	$450	160,736	107,157	**133,946**
Clothing Stores (all)	$38,638,154	$250	$500	154,553	77,276	**115,914**
Electronics Stores	$8,307,757	$325	$600	25,562	13,846	**19,704**
Home Furnishing Stores	$7,369,209	$225	$325	32,752	22,674	**27,713**
Sporting Goods, Hobby, & Musical Instrument Stores	$11,876,356	$150	$350	79,176	33,932	**56,554**
Drinking Places - Alcoholic Beverages	$5,577,189	$325	$800	17,161	6,971	**12,066**
Computer & Software Stores	$2,497,009	$250	$950	9,988	2,628	**6,308**
Pharmacies & Drug Stores	$2,188,672	$125	$215	17,509	10,180	**13,845**
Total	$171,569,895			**810,069**	**430,983**	**620,526**

Source: *Retail Market Analysis Chapel Hill North Carolina; HdL Companies; BBP LLC, 2011*

Table 8-8: Chapel Hill Retail - Categories Excluded Based on Development Needs

Chapel Hill - Categories Excluded Based on Development Needs
Categories Excluded
Automotive Dealers
Electronic Shopping, Mail Order Houses
Warehouse Clubs and Super Stores
Other Gas Stations
Other Motor Vehicle Dealers
Gasoline Stations with Convenience Stores
Automotive Parts, Accessories & Tire Stores
Vending Machine Operators
Optical Good Stores

Source: Retail Market Analysis Chapel Hill North Carolina, 2010; BBP LLC, 2011

The feasibility of expanding the Park-and-Ride facility included an evaluation of the potential for economic development. Retail market potential stems from understanding the dollar leakage out of the study area in combination with the identification of underserved consumer market needs.

8.2.4 Office

In January 2010, the Town of Chapel Hill retained Strategy 5, LLC to prepare an analysis of the local office market, with attention paid to regional and other dynamics affecting supply and demand for office space within the Town limits.

Office Market Analysis Review

Key Office Market Analysis Review observations and findings are the following:

- Approximately 2.2 million square feet of office space is located within the Town of Chapel Hill, accounting for nearly 100 separate properties;
- Total office space within the Research Triangle is estimated to include approximately 50 million square feet;
- Approximately 70,000 square feet of office space has been absorbed on an average annualized basis between 1969 and 2007 within the Town limits of Chapel Hill;
- Based on planned and forecast projects, it is reasonable that the Town of Chapel Hill office market may see the addition of approximately 500,000 to 700,000 square feet of leasable space over the next 5 – 10 years;
- If 500,000 to 700,000 square feet of leasable space is projected to be absorbed over the next 5 years, that would amount to a mid-point of 120,000 leasable square feet annually.

A multi-modal center with transit-supportive development includes a balance of residential, retail and office land uses. The feasibility of expanding the Park-and-Ride facility in conjunction with a development project requires a determination of the probability of success for the land development. Knowing this market potential will classify the viability of economic development on the site.

8.3 Economic Trends

Median income, percentage of persons in poverty, and employment are three key indicators of the economic health of a community. The economic growth provides a foundation for the future and helps businesses to be profitable, which generates employment and income. The result of the economic growth is an increase in population which, in turn, drives the need for Park-and-Ride expansion to support this growth if the current mode split is to be maintained. The following are key economic statistics regarding the Chapel Hill economy:

- In 2009, the median household income in Chapel Hill was $47,356, which was higher than the North Carolina median household income of $43,754;
- In 2009, 26% of all persons in Chapel Hill were living with incomes below the Federal poverty level. That was higher than the percentage in Orange County and the State of North Carolina;
- The average unemployment rate in Chapel Hill in 2009 was 4.66% according to the data published by the Bureau of Labor Statistics. This was lower than the rate in the State of North Carolina as a whole (5.51%);

According to Orange County Economic Development Commission and the Town of Chapel Hill, the largest employers in Orange County in 2007 were:

- University of North Carolina (11,036 employees)
- UNC Hospitals (6,475 employees)
- Chapel Hill – Carrboro City Schools (2,618 employees)
- Blue Cross/Blue Shield of NC (1,373 employees)
- Orange County Schools (1,253 employees)
- Orange County Government (740 employees)
- Town of Chapel Hill (676 employees)
- General Electric Company, Inc. (525 employees)
- Harris Teeter, Inc. (434 employees)
- Wal-Mart Stores, Inc. (426 employees)
- Orange – Person – Chatham Mental Health (400 employees)
- Aramark Services (380 employees)
- PHE, Inc. (369 employees)
- A Southern Season (341 employees)
- Magnolia Gardens (300 employees)

Table 8-9 presents median household income and a comparison of poverty status in Chapel Hill, Carrboro, Orange County and the State of North Carolina in 2009.

Table 8-9: Median Family and Household Income Comparison

Location	Median Household Income 2009	% of People In Poverty 2009
Chapel Hill	$47,356	26.0%
Carrboro	$39,366	15.1%
Orange County	$51,944	16.9%
North Carolina	$43,754	16.2%

Source: U.S. Census, 2010

These demographic and concentration of employment among a few large employers suggest a higher than average likelihood of increasing transit utilization in the service area.

Table 8-10 presents a comparison of the unemployment rate in Chapel Hill, Orange County and the State of North Carolina in 2009. This suggests the potential for a higher than average population dependent on transit for work and other transportation due to their economic capacity.

Table 8-10: Unemployment Rate Comparison 2009

Location	Labor Force	Persons Unemployed	Unemployment Rate
Chapel Hill	47,150	2,200	4.7%
Orange County	68,821	4,650	6.8%
North Carolina	7,373,374	406,535	5.5%

Source: Bureau of Labor Statistics (BLS)

Stable high level of employment opportunity suggests that transit investment may improve access to jobs within the Town.

8.4 Travel Patterns

Generally commuting time within or into Chapel Hill is low. Table 8-11 presents a comparison of the travel time to work in Chapel Hill and the State of North Carolina in 2010. Shorter trips to Chapel Hill are consistent with the concentration of population and employment centers than the State and County averages, which reinforces the potential for increased utilization of transit services and the Park-and-Ride facilities.

Table 8-11: Commuting Time 2010

2010 Travel Time to Work	Chapel Hill	North Carolina
Less than 15 minutes	35.9%	24.7%
15-29 minutes	40.3%	40.2%
30-59 minutes	21.0%	28.4%
60+ minutes	2.8%	6.7%

Source: CCR Search Website

Data collected during this study provides refined information relative to travel patterns. The directional distribution of the vehicular traffic approaching and departing the Park-and-Ride site is a function of residential population densities, employment centers, and retail areas. Since the project is an expansion of an existing Park-and-Ride lot, the directional distribution of traffic is expected to be generally consistent with the existing approach and departure patterns for the facility, which is outlined in Table 8-12.

The turning movement volumes at the surrounding intersections during the AM, midday, and PM peak hours were analyzed to gain an understanding of the existing travel patterns. In addition, a directional count was performed at the existing driveways of the Park-and-Ride lot to gain an understanding of how much traffic ultimately approaches the site from the east or west on Eubanks Road. The directional counts and the travel pattern analysis revealed the following conclusions:

Table 8-12: Traffic Directional Distribution

Approach	Percentage
From the west on Eubanks Road	20%
From the east on Eubanks Road, with the following breakdown:	80%
• from the south on Martin Luther King, Jr. Boulevard	8%
• from the north on NC 86	18%
• from the north/west on I-40	32%
• from the south/east on I-40	22%

8.5 Land Use

The Land Use section describes the existing land uses, market trends and the planning tools and agencies that regulate the development and use of land in the Town of Chapel Hill.

8.5.1 Existing Land Uses

The Chapel Hill land use patterns are shaped by a policy enacted in 1986 as part of a joint planning agreement among Chapel Hill, Carrboro and Orange County. The agreement establishes an Urban

Services Area, totaling about 16,000 acres for Chapel Hill, within which urban services such as community water and sewer systems, fire and police protection, and similar services are provided. The Town's corporate limits now include about 13,500 acres with the remaining area to be annexed as development occurs. About 53 percent of the land use within the Urban Services Area is residential; 21 percent institutional; 5 percent commercial; 11 percent parks and open space; 7 percent undeveloped; and the balance in a variety of uses. The existing Park-and-Ride facility is located within the existing Urban Services Area.

The centerpiece of a local planning program is a Comprehensive Plan that provides an overview of current development and serves as a guide for future development policy. The current plan is organized by the following 12 major themes:

- Maintain the Urban Services Area/Rural Buffer Boundary
- Participate in the regional planning process
- Conserve and protect existing neighborhoods
- Conserve and protect the natural setting of Chapel Hill
- Identify areas where there are creative development opportunities
- Encourage desirable forms of non-residential development
- Create and preserve affordable housing opportunities
- Cooperatively plan with the University of North Carolina
- Work toward a balanced transportation system
- Complete the bikeway / greenway / sidewalk systems
- Provide quality community facilities and services
- Develop strategies to address fiscal issues

Expanding the Park-and-Ride facility and transit services is consistent with these stated goals.

Chapel Hill has three local historic districts: Franklin/Rosemary Historic District, Cameron/McCauley Historic District and Gimghoul Historic District. In addition, there are seven Established Neighborhood Conservation Districts (NCD): Northside, Greenwood, Kings Mill-Morgan Creek, Pine Knolls, Mason Farm/Whitehead Circle, Coker Hills and Highland Woods. None of the historic districts fall within the sites under consideration. Preservation restricts parking expansion within these districts which in turn increases the need elsewhere such as at Eubanks Road.

8.6 Land Use Planning and Regulation

Chapel Hill Comprehensive Plan serves as the guide for land planning in the Town. The Town is currently developing an update of the 2006 Comprehensive Plan.

The most recent revision to the Land Use Plan from June 13, 2011 lists land use categories:

- Rural Residential, 1 unit/5ac
- Rural residential, 1 unit 2 to 5 ac
- Low residential, 1 unit/ac

- Low residential, 1-4 units/ac
- Medium residential, 4-8 units/ac
- High residential, 8-15 units/ac
- Commercial
- Mixed Use, Office/Commercial Emphasis
- Mixed Use, Office Emphasis
- Town/Village Center
- Institutional
- Office
- University
- Parks/Open Space
- Landfill Activities

Zoning is a tool used to protect the rights of property owners while promoting the general welfare of the community. The current site has the potential to support a variety of these land uses. Later in this study, alternative sites include a review of zoning potential within the site screening.

8.7 Natural Resources and the Environment

The Natural Resources and the Environment section summarizes existing conditions relevant to the Eubanks Road Park-and-Ride facility. It focuses on three areas: Groundwater Resources; Surface Waters, Wetlands and Floodplains; and Conservation Lands and Parks.

8.7.1 Groundwater Resources

Groundwater is the sole source of water for approximately 40 percent of the citizens of Orange County. Orange County has a history of proactive measures regarding the investigation and protection of surface water and groundwater resources.

Currently, groundwater level information is being collected from six bedrock wells located in different bedrock lithologies across Orange County. This network of wells is known as Orange Well Net. Sites north of I-40 will rely on wells and aquifers as sources for water; making this information important in the screening process.

8.7.2 Surface Waters, Wetlands, and Floodplains

Surface Waters

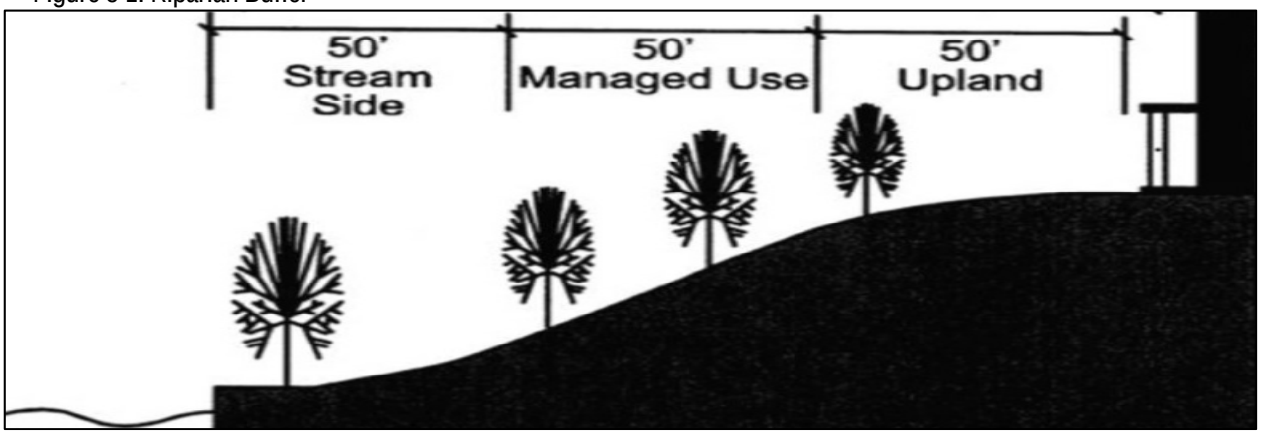
Notable lakes in the Chapel Hill area include: Eastwood Lake, Falls Lake, B. Everett Jordan Lake, Crabtree Lake, Cane Creek Reservoir, and University Lake.

In August 2009, the North Carolina General Assembly passed the Jordan Lake Nutrient Management Strategy, commonly known as the Jordan Lake Rules. Restoration and protection of the lake is essential because it serves as a water supply for several thriving communities, as well as a prime recreation area for more than a million visitors each year. The lake and surrounding forests also

provide critical habitat for many plant and animal species. New buffer (streamside vegetation) requirements have been establish and affect how property owners maintain and develop their land.

All waterways in Chapel Hill and its planning jurisdiction flow into the Upper New Hope Arm of Jordan Lake. This area of the lake experiences frequent algal blooms due to overloads of nitrogen and phosphorous. Riparian buffers are important in providing vegetation to filter stormwater runoff and to stabilize streambanks. They reduce erosion and sedimentation and the corresponding pollutants that flow into streams and the lake.

Figure 8-1: Riparian Buffer



Source: Chapel Hill website

The Chapel Hill Land Use Management Ordinance (LUMO) was amended on December 6, 2010 to include Section 5.18 Jordan Watershed Riparian Buffer Protection provides buffer protection along intermittent and perennial streams, and perennial waterbodies. According to unconfirmed GIS the existing Park-and-Ride site is bordered to the north and east by intermittent and perennials streams that may be limiting factors for the future development.

These setbacks and regulatory requirements will influence the layout and permitting requirements for Park-and-Ride sites and may have differing levels of influence on each site.

Wetlands

The desktop analysis is an important and effective tool during the alternatives analysis stage of the project, as doing detailed work may not be appropriate or even possible at this time. Any proposed impacts to wetlands and/or streams will require compensatory mitigation, unless impacts are less than 0.10 acre of wetlands or 150 linear feet of perennial and/or ephemeral/intermittent stream.

A desktop analysis of potential wetland and stream resources was conducted for the Eubanks Road Park-and-Ride expansion feasibility study using the following resources:

- Existing Orange County and Town of Chapel Hill GIS mapping (aerial photography and topographic mapping)
- U.S. Fish and Wildlife Service online National Wetland Inventory Mapping (NWI)
- Orange County Soil Survey Report

- Palmer Drought Index Monitor
- U.S. Geological Survey Quadrangles
- Google Earth aerial photograph

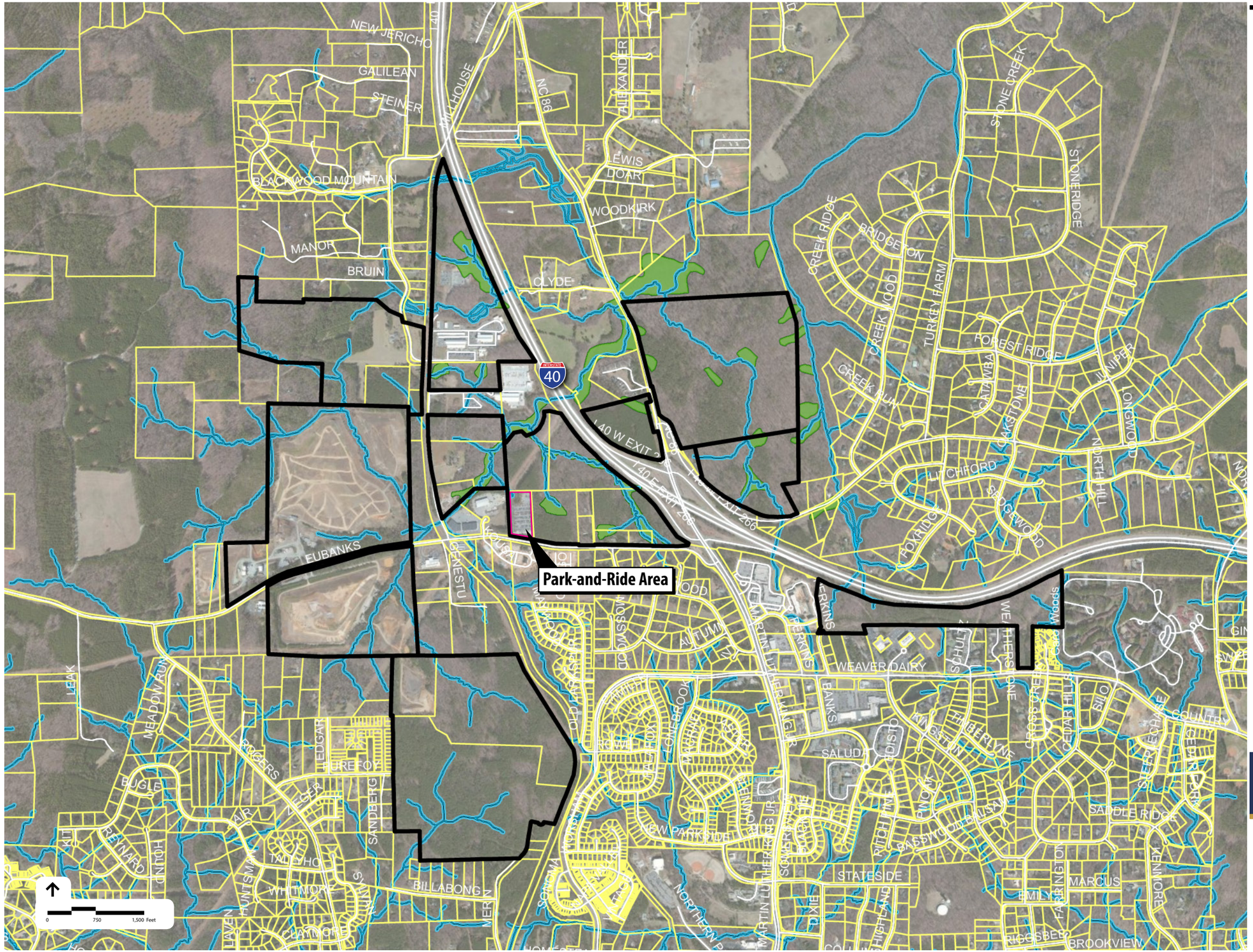
Figure 8-2 shows streams and potential wetlands within the project area. This figure should be used for planning purposes only. A detailed wetland and stream delineation should be conducted for a more substantial due diligence of a selected site.

Floodplains

Aquatic resources located inside the Eubanks Road Park-and-Ride Expansion project fall under the Town of Chapel Hill planning jurisdiction. Due to Town of Chapel Hill providing funding for the project, North Carolina Division of Water Quality (DWQ) will assume jurisdiction per Jordan Lake Water Supply Watershed Buffer Rules. The Town of Chapel Hill has mandatory buffers associated with aquatic resources depicted as Resource Conservation Districts (RCD) as described in the Chapel Hill Land Use Management Ordinance. Buffers associated with these RCD can extend to 150 feet on each side of the stream. The Town of Chapel Hill buffers associated with "Regulatory Floodplains" are defined as a resource conservation district elevation that is established and defined to be the elevation three feet above the 100-year floodplain elevation. Figure 8-3 shows floodplains within project area.

RCD provisions limits or eliminate structures and development within riparian buffers, which may range from 50 to 150 feet from intermittent or perennial streams. Therefore, careful consideration of Town of Chapel Hill buffer requirements should be incorporated into the feasibility study and planning considerations as the use of land in an identified riparian buffer is significantly restricted. For all cases, development or any land disturbance in the RCD may not occur without first getting a Compliance Permit for an RCD encroachment from the Planning Department. Orange County may be involved in some capacity because of the jurisdictional overlaps within the current study area. However, the Town of Chapel Hill is the most restrictive regarding riparian buffers and final design will be based upon its guidance.

Combining the wetlands, floodplain and utility easements, Figure 8-4 presents the site constraints on land development opportunity.



Potential Wetlands
Streams
Open Water

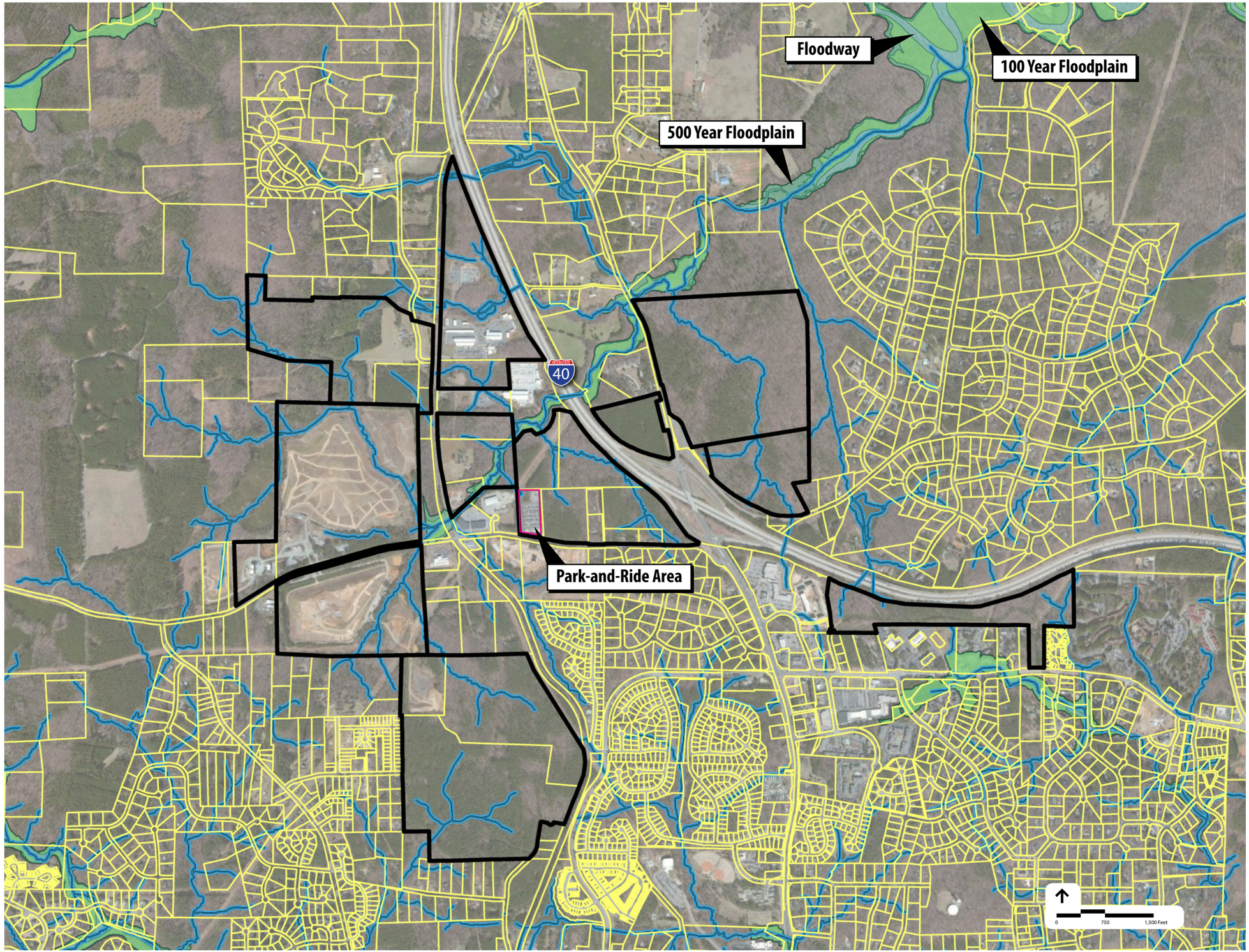
Eubanks Road Expansion Park-and-Ride Feasibility Study

Chapel Hill, North Carolina

Figure 8-2
Streams and Potential Wetlands

Chapel Hill, North Carolina

VHB Engineering NC, P.C.



Floodway
100 Year Floodplain
500 Year Floodplain
Streams
Open Water

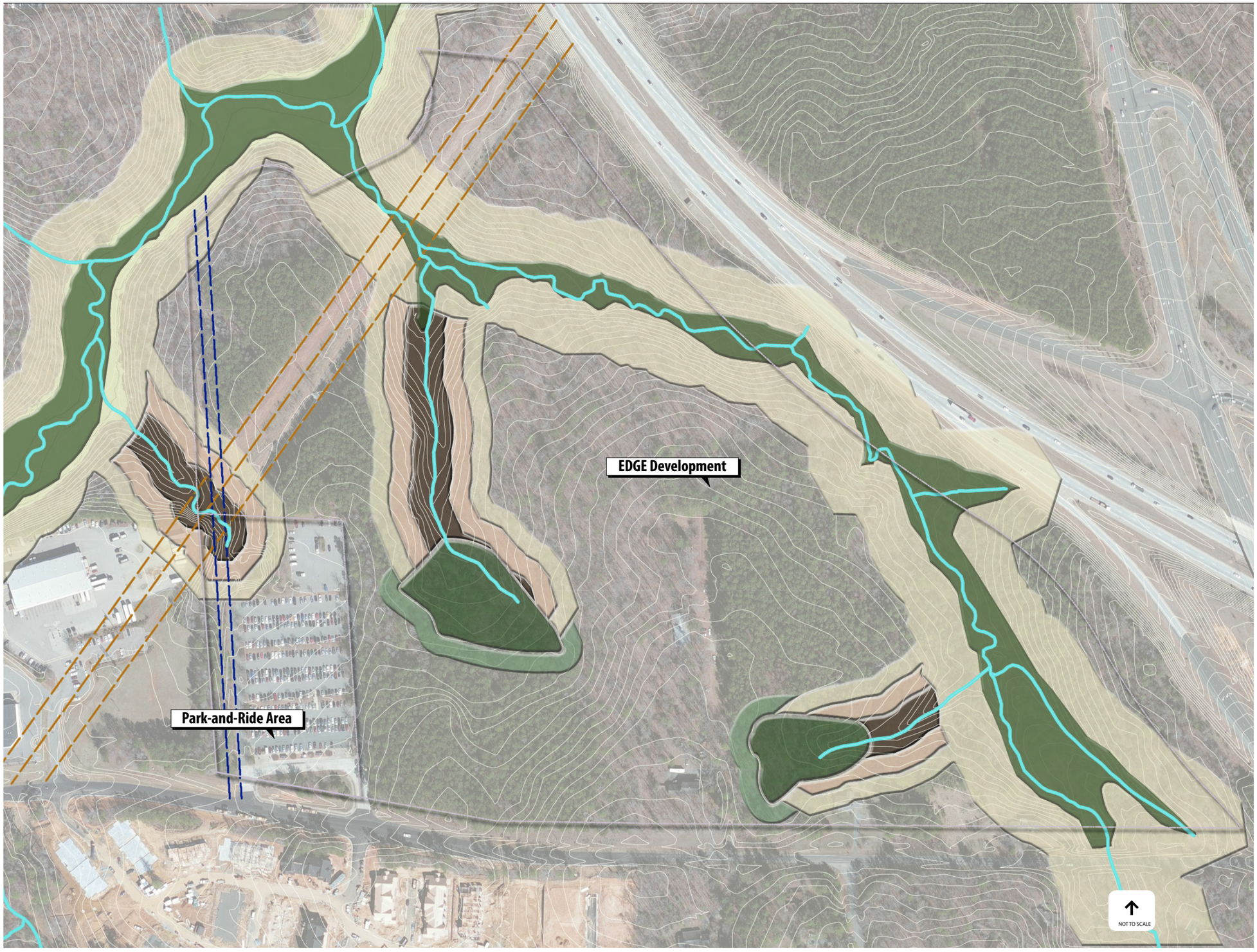
Eubanks Road Expansion Park-and-Ride Feasibility Study

Chapel Hill, North Carolina

Figure 8-3
Floodplains

Chapel Hill, North Carolina

VHB *Engineering NC, P.C.*



- Streams
- Potential Wetlands
- 50-Foot Wetland Buffer
- 50-Foot Stream Buffer
- 100-Foot Stream Buffer
- 150-Foot Stream Buffer
- Electric/Power Easement
- Sewer Easement

Eubanks Road Expansion Park-and-Ride Feasibility Study

Chapel Hill, North Carolina

Figure 8-4
Constraints Map

Chapel Hill, North Carolina

Engineering NC, P.C.

8.7.3 Conservation Lands, Parks, and Recreational Areas

Access to transit facilities from active transportation modes contributes to the sustainability of a region and enhances the quality of life of users. Ties between transit and trail systems within parks and trail systems are important elements in a regional transportation system. In 2002 Town of Chapel Hill adopted the Parks and Recreational Master Plan with a number of recommendations providing tools concerning new park facility development, existing facility renovations, expansions and upgrades, and possible land acquisition. The Master Plan provided assessment and analysis of existing parks, buildings and special facilities, identified community needs and recommendations related to: park types, land needs and improvements of existing facilities. There are four man-made corridors currently proposed or built within the Chapel Hill greenways system: Horace Williams Trail, North Trail (Interstate Trail), portions of NC 54, and Meadowmont Trail.

Two of the trails are located within the study area. The North Trail (Interstate Trail) offers a unique opportunity to preserve an approximately five miles long buffer along Interstate Highway, starting at Millhouse Road (Town Operations Center) and extending to NC 86. The Horace Williams Trail would continue from Eubanks Road through the Town's northern Park-and-Ride lot to the Town Operations Center. The trail would terminate at Millhouse Road just south of I-40. Figure 8-5 shows the location of the North Trail and Horace Williams Trail. Currently the Chapel Hill Parks and Recreation Department is preparing an update to the Parks and Recreational Master Plan that is expected to be completed in early 2012.

List of existing parks:

Community Parks:

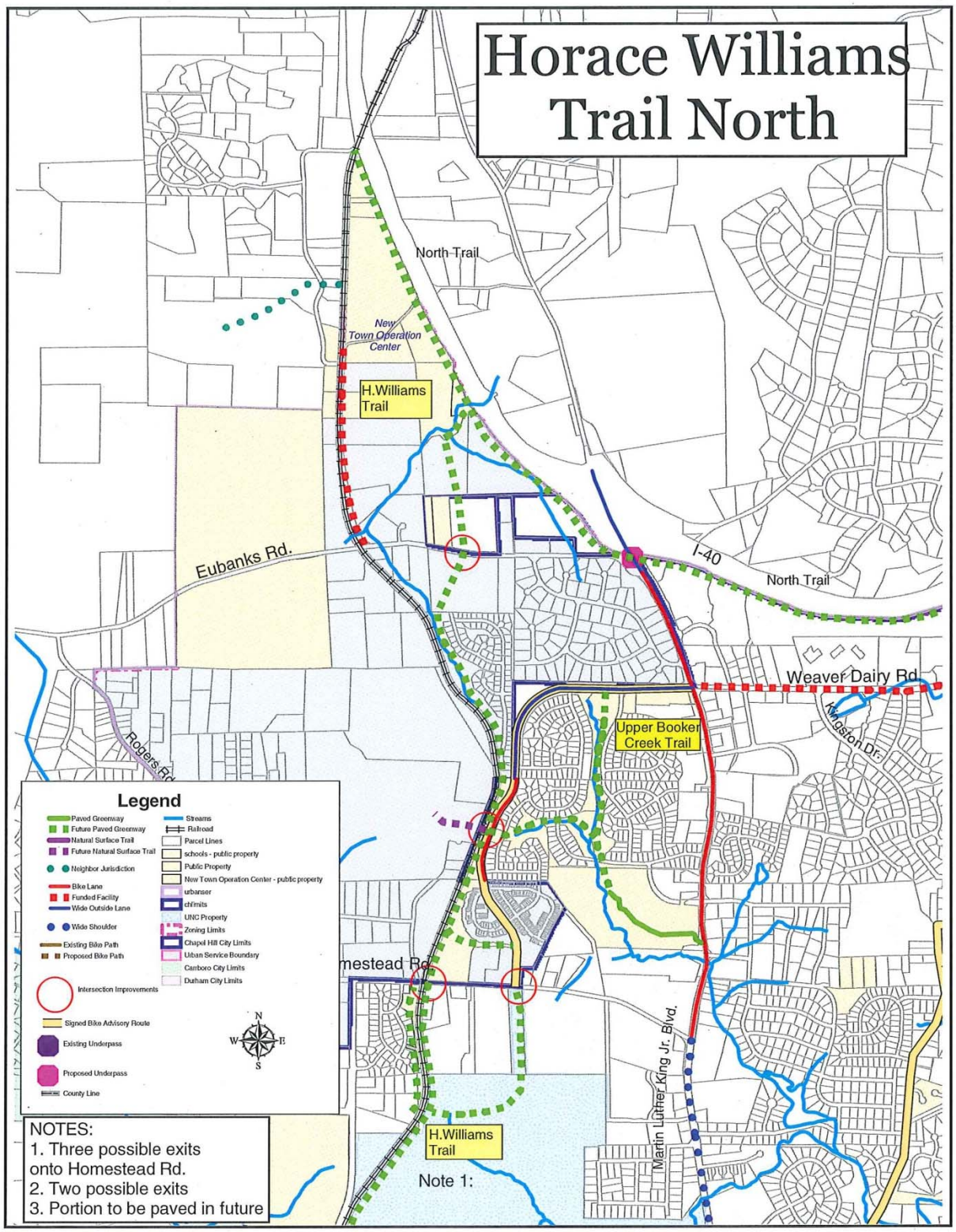
- Cedar Falls Park
- Homestead Park
- Umstead Park

Neighborhood Parks:

- Burlington Park
- Ephesus Park
- Jones Park
- North Forest Hills Park
- Oakwood Park
- Westwood Park

These parks do not fall within the study area; however, the information suggests there is a potential to incorporate a park into the planning of the larger sites where land development is restricted and typical park features could become accessible.

Figure 8-5: Horace Williams Trail North



Source: Chapel Hill Parks and Recreation website (http://www.ci.chapel-hill.nc.us/index.aspx?page=525)

Table 8-13: Trails

Trail	Surface	Miles
Battle Branch	Natural	1.50
Bolin Creek	Paved	1.50
Dry Creek	Natural	1.00
Fan Branch	Paved	1.20
Morgan Creek	Paved	0.85
Meadowmont	Paved	1.00
Tanyard Branch	Natural	0.40
Lower Booker Creek	Paved	0.80
Total		8.25

Source: Chapel Hill Parks & Recreational Department Website

The interconnectedness between transit and active transportation, walking and biking, provides a sustainable transportation system.

8.8 Summary of Park-and-Ride Considerations and Implications

The following table provides a summary of the background information considered in the feasibility study and the implications it has relative to the expansion of the Park-and-Ride and transit service.

Table 8-14: Summary of Park-and-Ride Considerations

Element	Implication
Population Growth	Investment in expanded transit capacity and facilities is needed to support 17% historic area growth and 1.5% annual growth projections.
Median Age	Expanded transit facilities are needed to support this younger, student-heavy, population that has a stronger than average likelihood to use transit services as a primary mode of transportation.
Population Density	The level of population density is much higher than either the state of county average suggesting a higher potential for increased transit utilization.

Table 8-14: Summary of Park-and-Ride Considerations (Cont)

Element	Implication
Household Income and People Below the Poverty Level	These demographics and concentration of employment among a few large employers suggests a higher than average likelihood of increasing transit utilization in the service area and a higher than average population dependent on transit for work due to their economic capacity.
Unemployment Rates	Stable, high level of employment opportunity suggests that transit investment may improve access to jobs within the Town where parking is limited and transit use is required.
Travel Patterns	Shorter trips are consistent with the high concentration of population and employment; and reinforce the potential for increased utilization of transit services and Park-and-Ride facilities.
Comprehensive Plan 12 Major Themes	Expanded Park-and-Ride and transit services are consistent with these goals.
Historic Districts	Preservation shies away from land development and increased parking in these districts. All sites considered are outside the Historic Districts, thus supporting preservation.
Residential, Retail and Office Market Analysis	Verification of the land development potential adjacent to or as a part of the expansion of the Park-and-Ride is important in understanding the viability of potential economic development when considering a potential joint development at a Park-and-Ride site.
Zoning	Zoning protects the rights of property owners while promoting the general welfare of the community. Zoning guides the compatibility of the multi-modal center with the adjacent property owners and the general service area.
Groundwater Resources	Sites north of I-40 will use groundwater as its resource for clean water.
Surface Waters, Wetlands, and Floodplains	These setbacks and regulatory requirements will influence the layout and permitting requirements at varying levels on the alternative sites.
Conservation Lands, Parks and Recreational Areas	None of the parks listed fall within the alternative sites. In combination of building public facilities, parks can be incorporated into development as a site amenity in otherwise constrained areas.
Trails	Trails provide alternative routes for non-motorized access to the expanded Park-and-Ride sites.