# 1 Introduction

The University of North Carolina at Chapel Hill (the "University") has proposed redevelopment of the Horace Williams tract as a new campus. Over the long term, 8 to 10 million square feet of additional campus development is proposed for the site. In the more immediate term, the University has outlined an 800,000 square foot development scenario which has been used as the basis for a 2015 (TIA Phase 1) impact analysis and a 3,000,000 square foot development scenario that has been used as the basis for a 2025 (TIA Phase 2)[1] impact analysis.

To inform the contents of a development agreement between the Town of Chapel Hill (the "Town") and the University, VHB has completed this Transportation Impact Assessment (TIA) on behalf of the Town. The TIA has been prepared with the active participation of Town and University staff. Many of the data and assumptions on which this TIA is based have been provided by the Town and the University. Additionally, it is anticipated that an update of this TIA will be completed in the fall of 2009, which will include new data collection and updates of items to reflect further definition of the development program and other aspects of the transportation system serving the Carolina North campus.

The University of North Carolina at Chapel Hill is consistently rated one of the nation's premier colleges and research universities with highly-rated graduate programs in a variety of disciplines. Founded in 1795, the University of North Carolina at Chapel Hill is the oldest public university in the country. The University's campus now occupies over 700 acres in the heart of Chapel Hill. The university has an enrollment of over 28,000 students, with 6,000 employees at the university, and an additional 3,700 employees at UNC Healthcare. In recent years, the University has begun a period of rapid expansion, spearheaded by the "Carolina First" campaign and a strong endowment. Future expansion at the Carolina North mixed-use campus promises to bring major changes to the distribution of uses and transportation access to the University.

Carolina North will be a world-class magnet to attract the best and brightest to North Carolina and will create tremendous economic benefits for the state and local communities. Carolina North is also envisioned to be a compact, mixed-use academic campus that achieves a high degree of sustainability. Some of the key transportation themes defining the characteristics of the plan include support for transit-oriented development, and providing local connections for bike, pedestrian, transit, and motor vehicles. The planning process for Carolina North to-date has been informed by stakeholder and public involvement. Although the vision for Carolina North is sure to bring numerous benefits, there are also impacts of the project that must be carefully considered and mitigated. Currently, the site is occupied by an airport and several other

[1] These dates and square footage estimates were established for analytical purposes and do not represent a prediction of the Carolina North development program.

low-intensity uses. Conversion of the site to a mixed-use campus environment of the scale envisioned will require improvements to the transportation facilities and services that provide access to the site.

This TIA describes the transportation-related aspects of the Carolina North project. It provides a comprehensive analysis of traffic, transit, pedestrian, and bicycle impacts to the Chapel Hill-Carrboro area. It is important to note that this TIA is unusual. The development program and timeline for Carolina North are not well defined given the need to respond to changing needs and conditions and the long-term planning horizon.

Typically, a TIA recommends specific transportation system improvements that are then implemented along with the development, or at specified dates. This TIA does not make recommendations for improvements that will be implemented as proposed. Instead, this TIA identifies the potential impacts and potential improvements that mitigate the impacts.

Given the timeframe of this development, these potential improvements will require more study and evaluation to determine the most appropriate measures at the time in question. In some cases, identified improvements may not be needed. In other cases, modified solutions that address then-current issues will be proposed. In still other cases, entirely different solutions may be identified and implemented.

In essence, this TIA provides an overall assessment of the potential impacts of the project, identifies solutions that address these impacts, establishes an order of magnitude of impacts and mitigation, informs the discussion of a development agreement for Carolina North, and is the first step in a continuing discussion between the Town and the University about transportation needs at Carolina North. Additionally, this TIA will be updated at regular intervals of development at Carolina North to reflect changes in the development program, the transportation system, and to refine the mitigation requirements at each interval.

## 1.1 Project Overview and Study Methodology

The University considers Carolina North a vital component in achieving its charge to lead a transformation in North Carolina's economy and to "compete with national peers for the talent and resources that drive innovation" in a setting that facilitates public-private partnerships, public engagement, and flexibility for collaborative research and interdisciplinary educational opportunities. The Town desires to accommodate this vision, but in a way that preserves the community's values.

This TIA is necessary to inform discussions between the Town and the University regarding the transportation impacts of the proposed Carolina North development program. It provides an analysis of the project impacts during two horizon years: 2015 (TIA Phase 1) and 2025 (TIA Phase 2). Additional analyses are included to show the impacts if the development program is adjusted to provide different amounts of on-site parking at different points in the build out. The Town of Chapel Hill retained VHB in March 2009 to complete this TIA using a methodology intended to capture the phased build-out of the site and changing transportation behavior over time. The key defining characteristics of this methodology are summarized below.

- **Development Scenarios and Horizon Years**. The TIA is based on two development conditions, an 800,000 square foot scenario modeled in 2015 (TIA Phase 1) and a 3,000,000 square foot scenario modeled in 2025 (TIA Phase 2). These scenarios were selected for analysis purposes and are not a prediction of the development pace.
- **Other Development and Regional Growth**. The TIA includes growth associated with other development projects within the Town and additional growth for the region.
- **Parking and Travel Choices**. The TIA reflects a base analysis condition for each horizon year and includes sensitivity analysis to reflect the impact of different levels of parking availability on the project site.
- **Distribution of Trips**. The TIA estimates the origin or destination of new trips generated by the Carolina North project.
- **Traffic Impacts**. The TIA estimates the impact of Carolina North on traffic conditions within the study area and identifies potential mitigation to offset the impacts of the project. The TIA also summarizes traffic safety conditions near the project site.
- **Transit Impacts**. The TIA estimates the impact of Carolina North on the Chapel Hill Transit system and identifies potential service changes so that adequate transit capacity is available to serve the development.

- **Pedestrian and Bicycle Access**. The TIA evaluates the pedestrian and bicycle facilities available within the study area and discusses improvements to these systems.

## 1.2 Site Location

Carolina North occupies approximately 250 acres on the southeastern portion of the Horace Williams tract, on the west side of Martin Luther King, Jr. Blvd. Overall, the Horace Williams tract contains over 1,000 acres in both Chapel Hill and Carrboro. Carolina North is located two miles north of the University's Main Campus and less than three miles south of Interstate 40. Due to the transformation impacts of this project, which will have a profound impact on how people move about, the study area extends well beyond the immediate vicinity of the property. A preliminary study area was defined by the Town as a starting point for this study. This preliminary study area contains 52 intersections throughout Chapel Hill and Carrboro and is illustrated in Figure 1-1.

## 1.3 Description of Site

The site is located on the northwest side of Chapel Hill and is bounded on the east by NC-86 Martin Luther King, Jr. Blvd. Estes Drive provides a critical east-west connection at the southern end of the tract, connecting east Chapel Hill and Martin Luther King, Jr. Blvd with Carrboro. Seawell School Road bisects the tract on a north-south axis, linking Estes Drive to the south with Homestead Road to the north. Rail tracks also operate on a north-south access and connect downtown Carrboro and the University Plant to the regional freight rail network. Currently, the property contains the Horace Williams airport, located in the south-east portion of the site. The remainder of the property is forested. A number of facilities and public works activities occur in the southeast quadrant of Martin Luther King, Jr. Blvd and Estes Drive. The University also maintains a long-term parking lot for students between the airport and Estes Drive. Three public schools are located adjacent to the property on Seawell School Road: Chapel Hill High School, Smith Middle School, and Seawell Elementary School. Residential areas border the tract to the north, south, and west.

The primary access to the site in the 2015 (TIA Phase 1) scenario is a new roadway in the approximate location of Municipal Drive, opposite Piney Mountain Road. Another roadway connection is planned for the 2025 (TIA Phase 2) scenario to Estes Drive, opposite Airport Drive. In addition to these primary access points, a roadway limited to public transit vehicles connects to Martin Luther King, Jr. Boulevard between the Piney Mountain Road and Estes Drive intersections.


**Legend**

- 2009, 2015, 2025
- 2009, 2025
- 2009 only
- Unsignalized Intersection
- Pedestrian and Bicycle Count Locations
- Roadway Segment Counts

**Note:**

2015 study area intersections are also part of the 2025 study.

**CAROLINA NORTH TIA**
*Chapel Hill, North Carolina*

Figure 1-1
Preliminary Study Area

Chapel Hill, North Carolina
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## 1.4 Development Program

The Carolina North development program has several proposed uses, including academic, research, private sector, residential, and medical facilities. The University envisions a build-out of 8.0 million square feet over a 50 year period, with 3.0 million square feet analyzed in 2025 (TIA Phase 2). An interim step would develop 800,000 square feet analyzed in 2015 (TIA Phase 1). The potential school on the Carolina North site is not included in either scenario and would be the subject of separate study.

### 1.4.1 2015 (TIA Phase 1) Development Program

In 2015 (TIA Phase 1) a little over half of the planned 800,000 square feet development will be academic buildings, with most of the rest of the development split between private development and 200 housing units, and a small amount of civic/retail space. To support this development, approximately 1,525 parking spaces are planned. These parking spaces serve a variety of different activities on the site as summarized in Table 1-1.

**Table 1-1: 2015 (TIA Phase 1) Carolina North Development Program**

| | Development (Sq ft) | | Parking Spaces* | | Approx. Population |
|---|---|---|---|---|---|
| Land Use | Size | Percent | Number | Percent | Emp./Stud./Res. |
| Academic | 410,000 | 51% | 705 | 46% | 820 |
| Private | 180,000 | 23% | 450 | 30% | 540 |
| Civic /Retail | 10,000 | 1% | 15 | 1% | 20 |
| Recreation fields (3) | n/a | n/a | 105 | 7% | n/a |
| Housing | 200,000 (200 units) | 25% | 250 | 16% | 400 |
| Health Care | 0 | 0% | 0 | 0% | n/a |
| **Total** | **800,000** | **100%** | **1,525** | **100%** | **1,780** |

Source: University of North Carolina at Chapel Hill, as compiled by VHB.
*Based on Main Campus ratios for similar uses.

The parking supply defined in Table 1-1 was determined using the following parking ratios:

- 0.5 parking spaces per person (University main campus ratio) for 820 academic employees
- 0.25 spaces per commuting student (main campus ratio) for 850 students
- 0.20 spaces per 1,000 square feet for academic visitors
- 2.5 spaces per 1,000 square feet for private uses
- 1.5 spaces per 1,000 square feet for civic/retail buildings

- 1.25 spaces per housing unit (main campus ratio)
- 35 spaces per recreational field

### 1.4.2 2025 (TIA Phase 2) Development Program

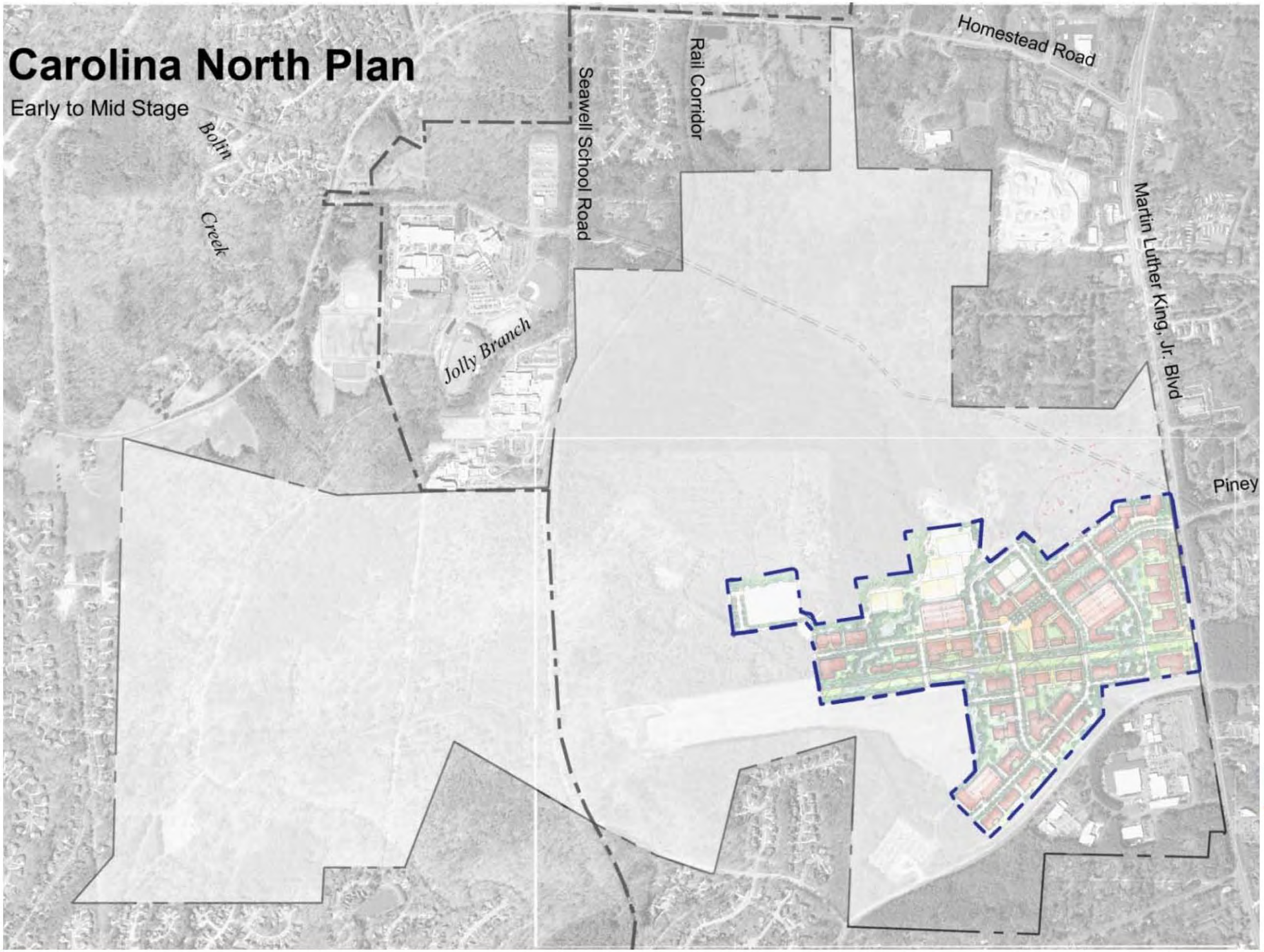
Between the 2015 (TIA Phase 1) and 2025 (TIA Phase 2) scenarios, an additional 2.2 million square feet of development would be developed by the University (see Table 1-2). Academic space will add nearly 900,000 square feet and will continue to be the single largest use at Carolina North. In 2025 (TIA Phase 2) it will account for a smaller share of the total development (roughly one-third), compared with over 50 percent of the development in 2015 (TIA Phase 1). Private development and housing units each add 520,000 and 550,000 square feet of space, respectively, and will continue to account for roughly one-quarter of the development. Between 2015 (TIA Phase 1) and 2025 (TIA Phase 2), health care uses are introduced into Carolina North and will account for nearly 10 percent of the development. Civic and retail space will represent a larger share of the Carolina North development plan, though still a small portion of the total. The proposed 2025 (TIA Phase 2) development program is depicted in Figure 1-2.

Additional parking spaces will be added between 2015 (TIA Phase 1) and 2025 (TIA Phase 2), bringing the total to 5,835 parking spaces, as summarized in Table 1-2. The parking ratios used to derive the 2025 (TIA Phase 2) parking supply are the same as those described for 2015 (TIA Phase 1) with the addition of the following for the Health Care building program:

- 0.5 parking spaces per health care employee
- 2.5 spaces per 1,000 square feet for health care patients and visitors

**Table 1-2: 2025 (TIA Phase 2) Carolina North Development Program**

| | Development (Sq ft) | | Parking Spaces | |
|---|---|---|---|---|
| Land Use | Size | Percent | Number | Percent |
| Academic | 1,280,000 | 43% | 2,035 | 35% |
| Private | 700,000 | 23% | 1,750 | 30% |
| Civic /Retail | 70,000 | 2% | 210 | 2% |
| Recreation fields (3) | n/a | n/a | 105 | 2% |
| Housing | 750,000 | 25% | 940 | 16% |
| Health Care | 200,000 | 7% | 900 | 15% |
| **Total** | **3,000,000** | **100%** | **5,835** | **100%** |

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*Source: University of North Carolina at Chapel Hill*

**CAROLINA NORTH TIA**
*Chapel Hill, North Carolina*

Figure 1-2
Phase Two Carolina North Program

Chapel Hill, North Carolina
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## 1.5 Existing and Committed Transportation Network

The existing transportation network in the vicinity of Carolina North is composed of roads, pedestrian/bicycle facilities, and transit routes. A brief summary of the existing transportation system is described below and a more detailed review is provided in Chapter 2. Transportation improvements included approved development improvements and committed transportation improvements, which are described in brief below and in greater detail in Chapter 3.

### 1.5.1 Existing Road Network

The road network serving Carolina North includes Martin Luther King, Jr. Blvd to the east, Estes Drive to the south, Seawell School Road to the west, and Homestead Road to the north.

Martin Luther King, Jr. Blvd is a major arterial road on a north-south axis that links Interstate 40 with downtown Chapel Hill. It is a five-lane road, with two lanes in the northbound direction, two lanes in the southbound direction, and one center turn lane/median. The posted speed limit on Martin Luther King, Jr. Blvd at Carolina North is 35 mph.

- At the signalized intersection with Estes Drive, Martin Luther King, Jr. Blvd has three northbound and three southbound lanes (one left-turn lane, one thru lane, and one share thru lane/right-turn lane).
- At the signalized intersection with Homestead Road, Martin Luther King, Jr. Blvd has four northbound lanes (two left-turn lanes, one thru lane, and one shared thru lane/right-turn lane) and four southbound lanes (one left-turn lane, two thru lanes, and one right-turn lane).

Estes Drive is a minor arterial road on an east-west axis that connects East Chapel Hill with Carrboro. It is a two-lane road with a posted speed limit of 35 mph.

- At the signalized intersection with Martin Luther King, Jr. Blvd, Estes Drive has three lanes in both the eastbound and westbound directions (left turn, thru, and right turn).
- At the signalized intersection with Seawell School Road, Estes Drive has two westbound lanes (one thru lane and one right-turn lane) and two eastbound lanes (one thru lane and one left-turn lane).

Homestead Road is a minor arterial road on an east-west axis that connects Martin Luther King, Jr. Blvd with Carrboro and points to the west. It is a two-lane road with a posted speed limit of 35 mph.

- At the signalized intersection with Martin Luther King, Jr. Blvd, Homestead Road has three lanes in the westbound directions (left turn, shared left turn/thru lane, and right turn lane).
- At the signalized intersection with Seawell School Road, Homestead Road has two lanes in the westbound direction (one left-turn lane and one thru lane) and a shared left turn/thru lane in the eastbound direction.

Seawell School Road is a collector/minor arterial road on a north-south axis that connects Homestead Road to the north with Estes Drive to the south. It is a two-lane road with a posted speed limit of 35 mph.

- At the signalized intersection with Homestead Road, Seawell School Road has two lanes in the northbound direction (one left-turn lane and one right-turn lane).
- At the signalized intersection with Estes Drive, Seawell School Road has two lanes in the southbound direction (one left-turn lane and one right-turn lane).
-

Eubanks Road is a minor arterial road on an east-west axis that connects Old Chapel Hill Hillsborough Road (Old NC 86) to the west to Martin Luther King, Jr. Blvd (NC 86). It is a two-lane road with a posted speed limit of 35.

- At the signalized intersection with Martin Luther King, Jr. Blvd, Eubanks Road has two lanes in the eastbound direction (one left-turn lane and one right-turn lane).
-

Weaver Dairy Road is a minor arterial on an east-west axis that connects Martin Luther King, Jr. Blvd and the residential communities to the west of Martin Luther King, Jr. Blvd) to Fordham Boulevard (US 15-501) via Erwin Road. The cross-section of Weaver Dairy Road varies depending whether you are to the east or west of its intersection with Martin Luther King, Jr. Blvd. To the west of Martin Luther King, Jr. Blvd, the cross-section of Weaver Dairy Road is two-lanes (one in each direction) with a raised median. To the east, it has a three-lane cross-section (center lane is two-way left-turn-lane (TWLTL)) closest to Martin Luther King, Jr. Blvd, then the roadway changes to two-lane undivided. The posted speed limit is 35 mph.

- At the signalized intersection with Martin Luther King, Jr. Blvd, Weaver Dairy Road has three lanes in the westbound direction (two left turn and a shared right turn/thru lane), and three lanes in the eastbound direction (a left turn, and thru lane and a right turn lane).
-

Kingston Drive is a collector on a north-south axis that connects Weaver Dairy Road to points south of Weaver Dairy Road. It is a two-lane road with a posted speed limit of 25 mph.

- At the signalized intersection with Weaver Dairy Road, Kingston Drive has two lanes in the northbound direction (one left-turn lane and one right-turn lane).

Piney Mountain Road is a collector on a north-south axis that connects Martin Luther King Jr. Blvd. to points south and east of Weaver Dairy Road and Martin Luther King Jr. Blvd., respectively. It is a two-lane road with a posted speed limit of 35 mph.

- At the signalized intersection with Martin Luther King Jr. Blvd., Piney Mountain Road has three lanes on the westbound approach (two left turn and a shared right turn/thru lane).
-

Hillsborough Street is collector on north-south axis that connects Martin Luther King Jr. Blvd. to Rosemary Street. It is a two lane road with a speed limit of 25 mph.

- At the signalized intersection with Martin Luther King Jr. Blvd., Hillsborough Street has two lanes on the westbound approach (a left turn and a shared right turn/thru lane) and two lanes one the eastbound approach (a left turn and a shared right turn/thru lane)

### 1.5.2 Pedestrian/Bicycle Network

The sidewalk network and crossing locations bordering the Horace Williams tract are limited. There are no sidewalks on the west side of Martin Luther King, Jr. Blvd, between Estes Drive and Critz Road, nor along Estes Drive west of Martin Luther King, Jr. Blvd. Sidewalks are provided along the east side of Martin Luther King, Jr. Blvd, however, they are not continuous from Homestead Rd to just north of the Timber Hollow apartment complex. There are crosswalks at the intersections of Martin Luther King, Jr. Blvd and Homestead Rd and Martin Luther King, Jr. Blvd and Northfield Drive. There is a crosswalk along Martin Luther King, Jr. Blvd on just the eastern leg of the intersection with Estes Drive. There are no dedicated bicycle lanes on Martin Luther King, Jr. Blvd or Estes Drive in the vicinity of Carolina North.

### 1.5.3 Transit Service

Chapel Hill Transit operates six bus routes in the vicinity of Carolina North: A Route, G Route, HS Route, NS Route, NU Route, and T Route.

The A Route is a local bus service that runs on 30 minute headways throughout most of the day, linking the Northside neighborhood with Homestead Road and North Forest Hills, via the University main campus and downtown Chapel Hill. In the vicinity of Carolina North it runs along Martin Luther King, Jr. Blvd and Homestead Road. Service begins at 6:25 am and ends at 7:59 pm. Bus stops serving Carolina North are located on Martin Luther King, Jr. Blvd at Shadowood and Timber Hollow.

The G Route is a local bus service that runs on 20 to 30 minute headways during peak periods and 60 minute headways during off-peak period. It connects the Briarcliff neighborhood with the Booker Creek area, via the University main campus and

downtown Chapel Hill. In the vicinity of Carolina North it runs along Martin Luther King, Jr. Blvd and Estes Drive. Service begins at 5:55 am and ends at 9:07 pm. The only bus stop serving Carolina North is located at Martin Luther King, Jr. Blvd at YMCA.

The HS Route is a local bus service that runs on 30 minute headways during the morning and afternoon. It connects Chapel Hill High School and downtown Chapel Hill. In the vicinity of Carolina North it runs along Martin Luther King, Jr. Blvd, Estes Drive, and Seawell School Road. Service runs from 7:05 am to 9:05 am and from 3:51 pm to 5:51 pm. The only bus stop serving Carolina North is located at Airport Drive at Estes Drive Ext.

The NS Route is a local bus service that runs on 20 minute peak and 30 minute off-peak headways throughout the day. It connects the Eubanks Road park-and-ride lot with the Southern Village park-and-ride lot, via the University and downtown Chapel Hill. In the vicinity of Carolina North it runs along Martin Luther King, Jr. Blvd. Service begins at 5:50 am and ends at 10:37 pm. Bus stops serving Carolina North are located on Martin Luther King, Jr. Blvd at Shadowood and Timber Hollow.

The NU Route is a local bus service that runs on 20 minute peak and 40 minute off-peak headways throughout the day. It connects the PR Lot with the University and downtown Chapel Hill. In the vicinity of Carolina North it runs along Martin Luther King, Jr. Blvd, Airport Drive, and Estes Drive. Service begins at 7:05 am and ends at 10:40 pm. The only bus stop serving Carolina North is located at Airport Drive at Estes Drive Ext.

The T Route is a local bus service that runs on 30 to 40 minute headways throughout the day. It connects Weaver Dairy Road with The University and downtown Chapel Hill. In the vicinity of Carolina North it runs along Martin Luther King, Jr. Blvd. Service begins at 6:15 am and ends at 10:28 pm. Bus stops serving Carolina North are located on Martin Luther King, Jr. Blvd at Shadowood and Timber Hollow.

### 1.5.4 Committed Road Network

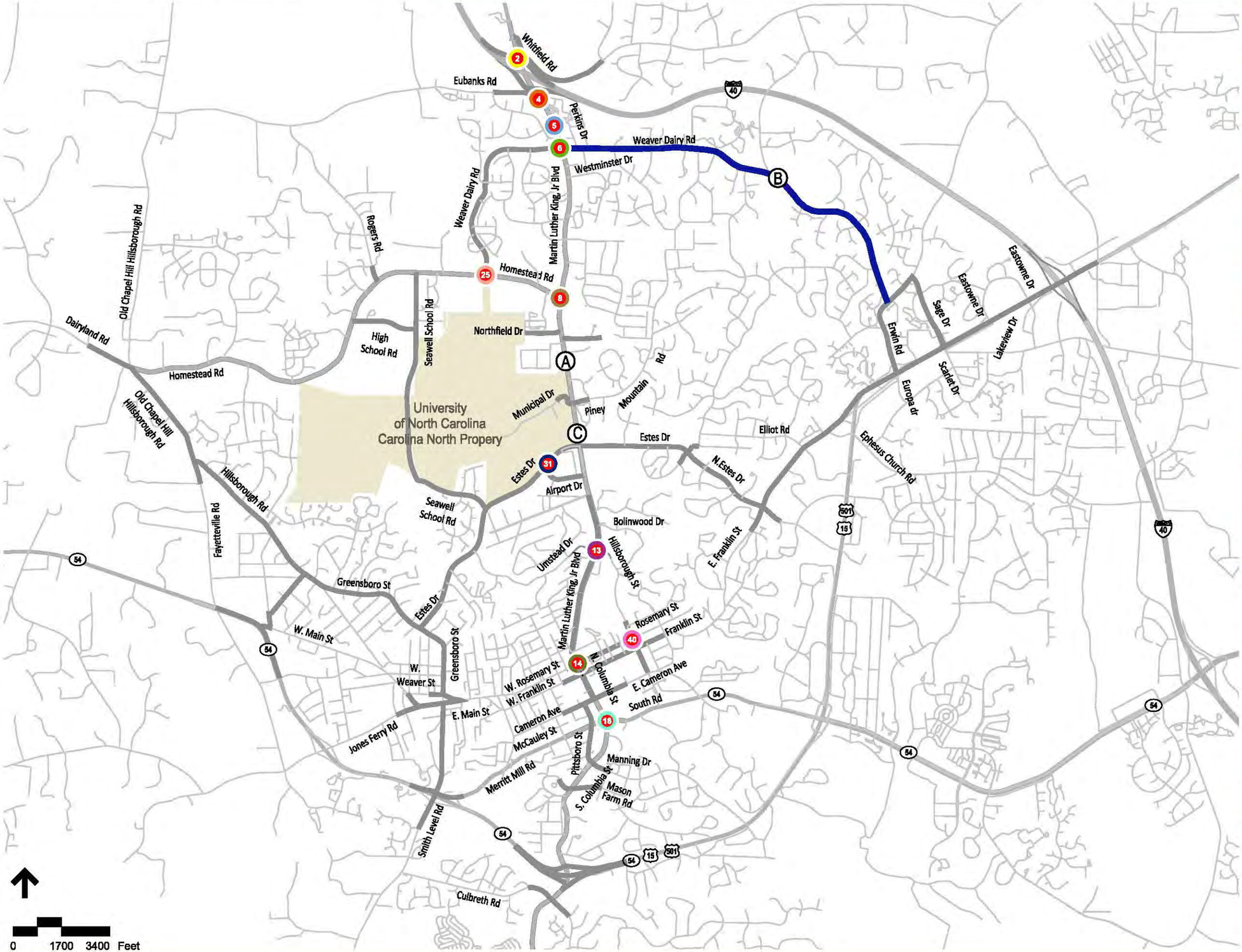
The future committed road network consists of a number of roadway improvements that are approved and will be constructed as part of local development projects or by the Town of Chapel Hill as part of their transportation planning program. Figure 1-3 shows the location of the following approved transportation network improvements that are associated with local development projects in the vicinity of the site. The locations are referenced by the intersection number in the map and described in more detail in Section 3 of this TIA.

- Martin Luther King Jr./I-40 WB Ramps
- Martin Luther King Jr./Eubanks Road
- Martin Luther King Jr./Perkins Drive
- Martin Luther King Jr./Weaver Dairy Road
- Martin Luther King Jr./Homestead Road
- Martin Luther King Jr./Hillsborough Road

- Columbia Street/Rosemary Street
- Columbia Street/South Street
- Weaver Dairy Road/Homestead Road
- Estes Drive/Airport Drive
- Rosemary Street/Hillsborough Road

In addition to the approved roadway and intersection improvements, there are also two committed improvements. The Town of Chapel Hill has committed to making these transportation improvements and has identified funding sources for their implementation.

- Martin Luther King Jr. Boulevard signal system modernization to improve coordination and to provide transit priority.
- Martin Luther King Jr. Boulevard (near Shadow Wood Apartments) mid-block crosswalk addition.
- Weaver Dairy Road from NC 86 to Sage Rd




# Transportation Network Improvements

## Approved Development Improvements

**2 Martin Luther King Jr/I-40 WB Ramps**
- Add exclusive NBT lane to MLK (BG 6, 2012)

**4 Martin Luther King Jr/Eubanks Road**
- Add EBL turn lane to Eubanks Road (BG 6, 2012)
- Add SBR turn lane to MLK Blvd. (BG 6, 2012)
- Lengthen NBL turn lane to 300 ft. (BG 7, 2008 Implemented)
- Add paved 'flare' area to SBR turn lane on MLK Blvd. to accommodate tractor-trailers that may go off pavement to turn (BG 7, 2008, Implemented)

**5 Martin Luther King Jr/Perkins Drive**
- Add WBL turn lane to Perkins Drive (BG 6, 2012)

**6 Martin Luther King Jr/Weaver Dairy Road**
- Adjust signal timing plans and optimize (BG 4, 2007)

**8 Martin Luther King Jr/Homestead Road**
- Add NBR taper (BG8, 2019)

**13 Martin Luther King Jr/Hillsborough Road**
- Add exclusive WBR turn lane to Hillsborough Drive (BG 3, 2013)

**14 Columbia Street/Rosemary Street**
- Add dual EBL turn lane to Rosemary Street (BG 3, 2013)

**18 Columbia Street/South Street**
- Decrease radius of NBR turn lane on Columbia Street (leaving a pedestrian refuge island) and provide eastbound exclusive left-turn lane street (BG 1, 2008 , Implemented)
- Remove one vehicular travel lane, add an exclusive lane for buses and one for bicycles on the NB approach, between Manning Drive and South Road (BG 1, 2008, Implemented)

**25 Weaver Dairy Road/Homestead Road**
- Monitor for future signalization; warrants not met for future 2013 (BG 5, 2013)

**31 Estes Drive/Airport Drive**
- Add NBR and SBR turn bays (100 ft. minimum) on Airport Road (BG 12, 2007)
- Lengthen EBL turn lane to 500 ft. WBL turn lane to 300 ft., and EBR turn lane to 450 ft. for Estes Drive (BG 12, 2007)

**40 Rosemary Street/Hillsborough Road**
Adjust signal timing plans and optimize (BG 3, 2013)

## Committed Improvements

**(A) Mid-Block Pedestrian Crosswalk with Refuge Island on MLK Blvd near Shadowood Apartments**
Located between Estes Dr and Piney Mountain Rd and expected to be installed by fall 2009.

**(B) Weaver Dairy Road from NC 86 to Sage Rd**
Bike Lanes and sidewalk on both sides and turning lanes where needed. Scheduled for construction by 2010.

**(C) MLK Blvd Signal System Improvement Project**

# Carolina North TIA
*Chapel Hill, North Carolina*

Figure 1-3
Anticipated and Committed Transportation Improvements

Chapel Hill, North Carolina
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