

EXECUTIVE SUMMARY

The North Carolina Capital Area Metropolitan Planning Organization (NC Capital Area MPO) initiated the US 1 Corridor Study Phase II to examine approximately nine miles of US 1 from US 1A (Park Avenue) north to the Vance County line. This Phase II study examines a northern extension of the original US 1 Corridor Study (Phase I) completed in 2006 which ran from Interstate 540 (I-540) in Raleigh to US 1A (Park Avenue) in Youngsville. The study area is shown in Figure ES-1.

The Phase II Corridor Study was initiated in December 2011 by NC Capital Area MPO and Franklin County with the consultant team Parsons Brinckerhoff, Urban Collage, and Alta Planning/Greenways. The study development process included two committees, the Core Technical Team (CTT) and the Study Oversight Team (SOT) with a series of six meetings. The SOT and CTT were formed to provide insight and guidance to the Study Team through the study development process.

This executive summary provides a brief discussion of the findings and recommendations for this project. Chapters 1 through 8 include more detailed information on the project's process, and documents key factors included in developing the recommended alternative.

ES.1 INTRODUCTION

The goal of the US 1 Corridor Study Phase II project is to produce a well-coordinated plan for the US 1 corridor. The plan provides current and future improvement and policy recommendations for all modes of travel. A key focus of the effort was identifying an alternative that would meet the mobility needs of US 1, while providing access for existing and future development.

A carefully defined study and public involvement process was necessary to address these critical issues. The SOT and CTT participated in the evaluation of alternatives which also factored in the desires of the local community. It should be noted that the CTT included members of the US 1 Council of Planning that was created as part of the Phase I study.

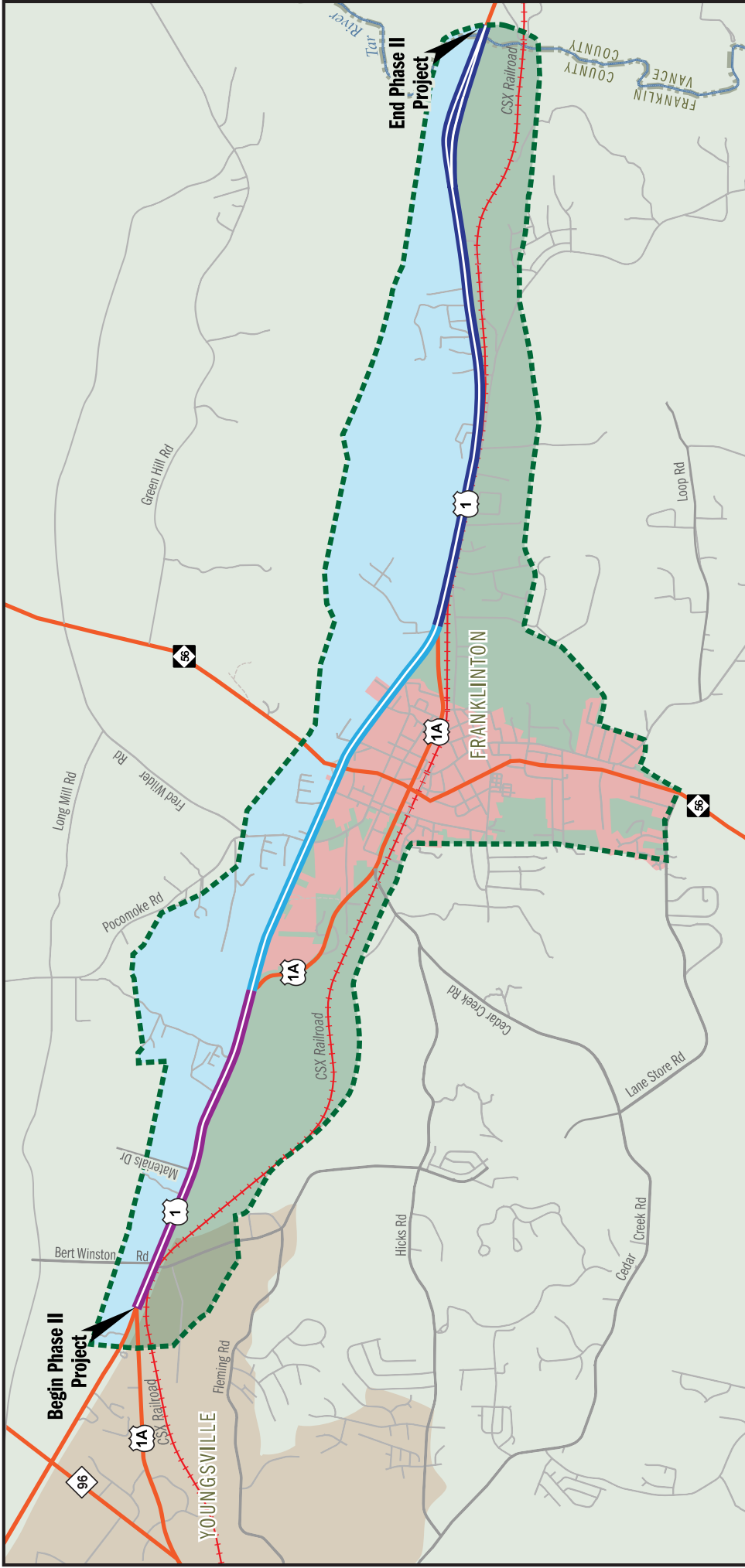
The elements of the study process included the evaluation of existing conditions and development of alternatives to improve safety and mobility while maintaining or enhancing access to adjacent land uses. The study examines interim and ultimate solutions as part of a phased project approach. All modes of travel were evaluated including vehicles, bicycles, pedestrians, transit, and rail.



North Corridor Study Phase II



Scale in miles

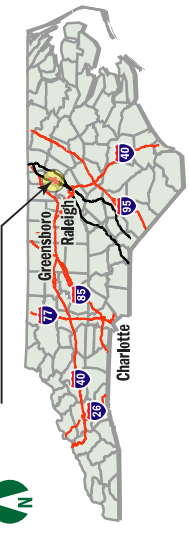


LEGEND

- Phase II Study Boundary
- South Segment
- Central Segment
- North Segment
- East Section
- West Section
- Franklin Town Limits



PROJECT STUDY AREA



US 1 Phase II Study - Franklin County



Study Area Map

Figure ES-1

ES.2 EXISTING CONDITIONS

The study area of US 1 Corridor Study Phase II is the approximate nine mile section of US 1 from US 1A (Park Avenue) to the Vance County line (See Figure ES-1). In this area, the primary transportation features are: the existing multi-lane US 1 highway; the two-lane US 1A Main Street through downtown Franklinton; the two-lane NC 56 which provides the primary east-west access between Creedmoor, Franklinton, and Louisburg; and the CSX Railroad which roughly parallels US 1 on the east.

ES.2.1 Project Sections

The US 1 corridor was divided into three distinct sections, taking into account the unique land use and traffic characteristics along US 1. These sections are discussed below:

- **South Section** – This section extends from US 1A (Park Avenue) in Youngsville to the US 1A South Main Street) junction south of the Town of Franklinton. This area is predominantly rural, consisting of isolated residences, light industrial facilities, and agricultural lands.
- **Central Section** – This section extends from the US 1A (South Main Street) junction south of the Town of Franklinton to the US 1A (North Main Street) junction north of Franklinton. This is the most developed area within the project limits, consisting of commercial establishments and established residential neighborhoods within the Franklinton town limits.
- **North Section** – This section extends from the US 1A (North Main Street) junction north of Franklinton to the Vance County line. This section is a rural area, which consists of low density residential neighborhoods and agricultural lands. The CSX railroad tracks are located just east of US 1, limiting development potential and the need for access from the east.

ES.2.2 Existing Land Use & Zoning, Environment, & Transportation

Land use and zoning, transportation and environmental data were collected and analyzed for this study. This included reviews of the Franklin County Comprehensive Plan and a series of stakeholder interviews. Key findings included:

- Current land use, existing zoning, regional development trends, and opportunities for future development were analyzed. Analysis of Franklin County's zoning indicates that the County desires: industrial uses along the south section; retail and highway oriented

development in the central section that is compatible with historic downtown Franklinton; and more agricultural and low density residential in the north section.

- Environmental data was inventoried for the study area via internet searches, geographic information system (GIS) review, site reconnaissance, interviews and other means. Analysis of the human environment considered land use, zoning, demographics (population, housing and economy), and cultural resource concerns (churches, schools, and historic resources). Analysis of the natural environment considered wetlands, streams, the Tar River basin and air quality.
- An analysis of existing and future capacity on US 1 confirmed that while US 1 has adequate capacity in 2012, improvements to US 1 will be needed, particularly south of NC 56. A crash analysis verified that the overall crash rate is highest in the south section, and that intersection related crashes are highest in the central section. As part of the study process, multiple transportation issues were also identified regarding the South East High Speed Rail currently planned for completion in 2020.

ES.3 SELECTION OF CONCEPTUAL US 1 ALTERNATIVES

Utilizing the data inventories, a traffic analysis of 2040 conditions, and input from the CTT and SOT, an evaluation and comparison of four conceptual alternatives for US 1 was conducted:

- No-Build (Rural Highway/High Speed Arterial) Alternative
- Superstreet Alternative
- Freeway Alternative
- Freeway with Local Street Enhancements Alternative

The four conceptual alternatives were evaluated and compared utilizing multiple criteria including:

- US 1 traffic operations and safety;
- Compatibility with US 1 long range plans;
- Provisions for bicycles and pedestrians;
- Balancing access needs and development potential with traffic operations;
- Impacts to the natural and human environments; and
- Preliminary Costs.

Identification of the conceptual alternatives for more detailed analysis was done with the insights of the CTT and SOT.

ES.4 ANALYSIS OF THE FUTURE ALTERNATIVE

The Superstreet and Freeway with Local Street Improvements conceptual alternatives were recommended for more detailed analysis.

- **Superstreet Alternative:** The Superstreet Alternative was highly rated. Although it does not meet the ultimate freeway vision, it is substantially less expensive and provides a potential interim solution.
- **Freeway with Local Street Improvements Alternative:** This alternative ranked highest and meets all goals of the forecast study. It involves numerous local street projects beyond improvements to US 1 itself resulting in increased impacts and higher costs. It may be possible, however, to offset some or most of the local street costs by involving private development with the construction or funding of access-related projects.

ES.5 FINAL RECOMMENDATIONS

The detailed final recommendations are presented in Chapter 5. The following summary of the recommendations is divided into each of the alternatives and modes evaluated.

ES.5.1 Land Use Recommendations

A key element of the study was the evaluation of land use and how to develop an improved US 1 corridor without impeding planned growth. Any future plans need to be consistent with the needs and desires of Franklinton and Franklin County, must consider desires of residents and businesses being served by US 1, and consider regional traffic including both vehicles and freight on US 1.

ES.5.1.1 Superstreet Alternative & Land Use Access

A Superstreet provides an interim solution that can initially serve existing development patterns oriented toward direct access from all adjacent lots to US 1. Over the long term, however, continuing with this development pattern along US 1 would decrease safety and mobility on US 1. The Superstreet could be utilized as an interim method for serving existing development while allowing for a transition period to a more permanent access pattern.

ES.5.1.2 Freeway with Local Streets Alternative & Land Use Access

The Freeway with Local Street Enhancements Alternative was considered because, unlike the Freeway Alternative (with no local streets), it adequately allows for access to the future

development in the study area. Under this alternative, enhanced or new local streets would provide access instead of US 1.

In addition to access, the analysis identified opportunities for enhancing the development plan for the corridor. The three following themes were identified:

- Encouraging industrial development in the southern section of the corridor to take advantage of access to US 1 as well as the CSX rail line for freight access. The proposed Bert Winston Extension interchange included in the CTP presents an opportunity for a more focused development node. Development opportunities for the Bert Winston Extension node are illustrated in Figure ES-2.
- The central section is focused between the proposed NC 56 Bypass and the existing NC 56 interchange. The current expectations for this area are that highway oriented development would occur, expanding on both sides of US 1. From an access standpoint, local streets linking NC 56 and the NC 56 Bypass could create a development node within the Franklinton area. Development opportunities for the NC 56 Bypass/ Franklinton node are illustrated in Figure ES-3.
- The northern section is rural with isolated agricultural land use as well as some isolated residential development. The general desire is that the area remains similar without retail or industrial development. Residential development is planned although it would be lower density subdivisions due to development restrictions in the Tar River basin. In addition, opportunities for open space exist including the Persons-McGhee Farm property along both sides of US 1 in the northern limits of the project.

ES.5.2 US 1 Alternative Recommendations

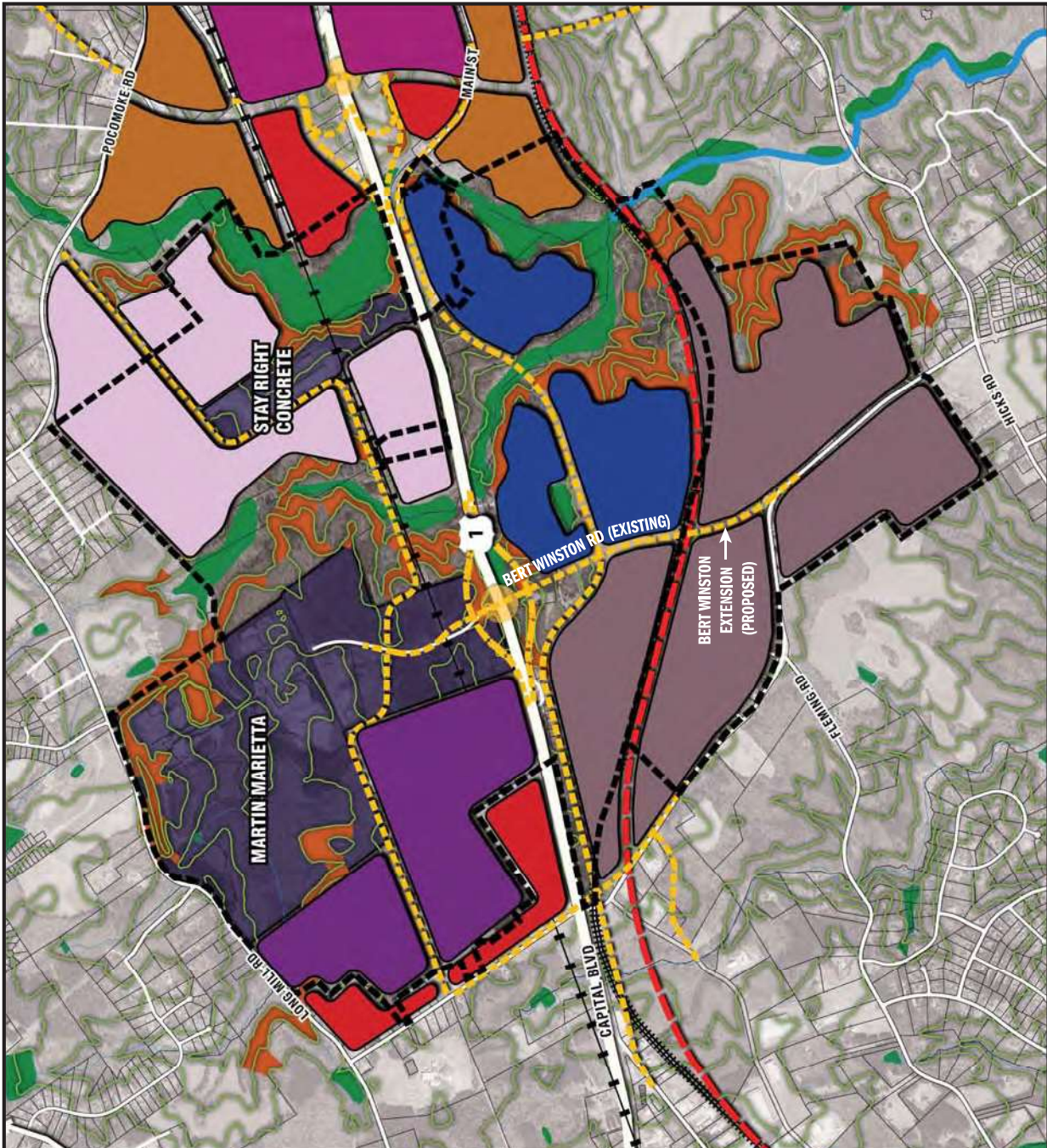
The Superstreet Alternative could be constructed as an interim solution, but it would not meet the ultimate needs of the corridor. In contrast, the Freeway with Local Street Enhancements Alternative meets the ultimate needs for mobility on US 1, but would be difficult to implement as a single project with both freeway and local street construction occurring at the same time. Therefore, the recommended project alternative utilizes the superstreet concept to provide a transition to an ultimate freeway. Similarly, local street projects are envisioned as being incrementally constructed to provide access for new developments on the corridor.

ES.5.2.1 Recommended US 1 Superstreet Alternative - Interim

The interim improvements would incorporate all modes of transportation (roadway, bicyclist, pedestrian, and transit if necessary) and would consider proposed improvements that can easily be redeveloped to accommodate the future build condition.



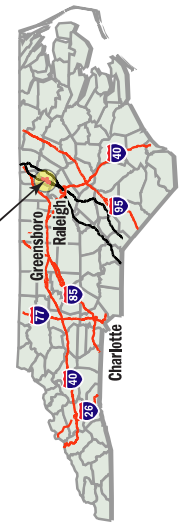
US1 North Corridor Study Phase II



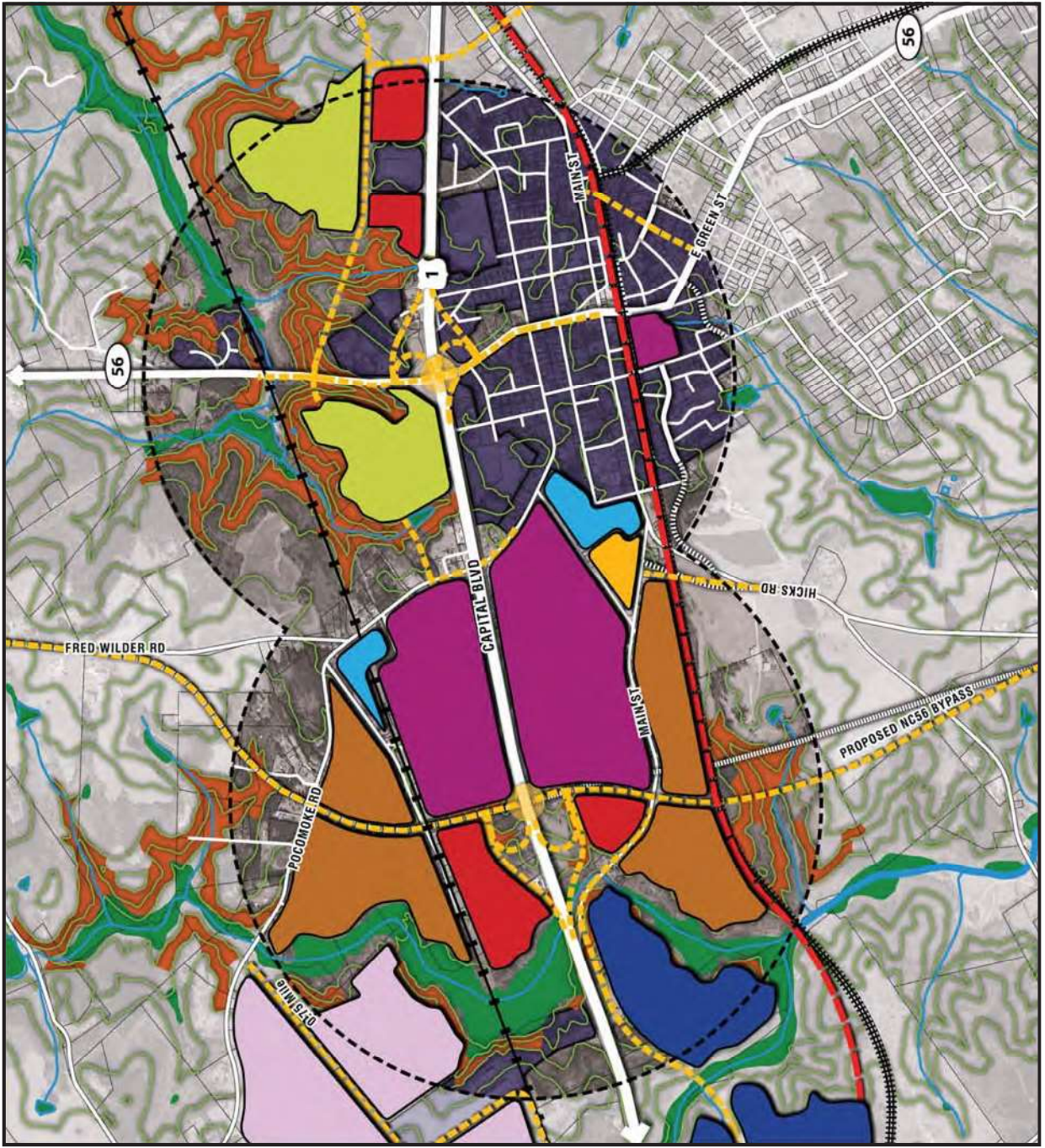
- LEGEND**
- Node Potential Impact Boundary (Premise: Industrial Zoning District)
 - Commercial
 - Office / R&D
 - Mixed-Use
 - Mixed Residential
 - Heavy Industrial
 - Light Industrial / Warehousing
 - Rail-based Industrial
 - Proposed Interchange
 - Proposed Road / Street
 - Possible SEHSR Alignment
 - Contour Elevation Lines



PROJECT STUDY AREA



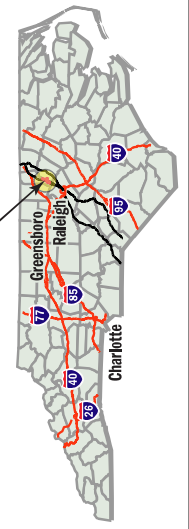
Foreseeable Development: Bert Winston Extension Node



- LEGEND**
- Node Potential Impact Boundary (Premise: Accessibility)
 - Commercial
 - Office / R&D
 - Mixed-Use / TOD
 - Institutional / Public Utility
 - Cluster Residential
 - Low-Density / Traditional Residential
 - Mixed Residential
 - Light Industrial / Warehousing
 - Proposed Interchange
 - Proposed Road / Street
 - Possible SEHSR Alignment
 - Contour Elevation Lines



PROJECT STUDY AREA



An interim Superstreet Plan is shown in Figures ES-4A, ES-4B, and ES-4C for the south, central, and north sections, respectively. It illustrates locations for dual leftovers, single leftovers, and signalized superstreet intersections. The Superstreet Plan figures also include details illustrating the intersection layout and traffic operations at each of these intersection types.

Note that a full superstreet conversion for the entire study area is not proposed as part of a single project. Instead a phasing plan has been identified which incrementally improves US 1 to a superstreet while also encouraging the construction of local street sections. These local streets are independent of the needs of the Superstreet, but are illustrated to demonstrate the incremental construction of the local street network. The proposed phasing plan and related project costs are presented in Section ES.5.4 and Section ES.5.5, respectively.

ES.5.2.2 Recommended US 1 Freeway Alternative - Ultimate

The long term ultimate improvements for the US 1 corridor provide a multi-modal transportation plan that is consistent with regional transportation and land use plans. In order to meet these requirements, the Freeway with Local Street Enhancements was selected as the preferred conceptual alternative.

The Ultimate Freeway with Local Streets plan is shown in Figures ES-5A for the South Section, ES-5B for the Central Section and ES-5C for the North Section. A series of typical sections is shown in Figure ES-6 for the freeway and local streets in the South, Central, and North Sections.

Interchange Locations & Types

A freeway is a roadway with access only provided at interchanges. In developing a freeway alternative for comparison, the initial considerations were the locations for the interchanges access and type of interchanges for each location. Three interchange locations are proposed as part of the Franklin County CTP. In addition, the CTT indicated that an interchange would be required on the northern section of the corridor. After evaluation of trip patterns, it was determined that the preferred location would be in northern Franklin County at a proposed new roadway planned for the Southeast High Speed Rail (SEHSR).

For the locations that interchanges are proposed, multiple interchange types were investigated. Several issues were examined including:

- Interchange Traffic Operations
- Impacts to Local Roads
- Provisions for Bicycles and Pedestrians
- Providing Local Access for Land Use

- Natural Environment Impacts
- Human Environment Impacts
- Conceptual Cost

These comparison measures were utilized in evaluating potential interchange types. The preferred interchange locations and types include:

- **Bert Winston Road Extension/Materials Drive:** Simple Diamond
- **NC 56 Bypass:** Partial Cloverleaf with Loops in the southwest and southeast quadrants
- **NC 56:** Partial Cloverleaf with Loops in the northwest and northeast quadrants (Note: The existing interchange does not meet minimum interchange standards for access to a freeway due to poor traffic operations, safety issues, and geometric design standards.
- **Swan Street/ SEHSR Connector between Montgomery Road and US 1:** Partial Cloverleaf with Loops in the southwest and southeast quadrants

East-West Connectors on Bridges over US 1

When the ultimate freeway is completed, it will be necessary to provide overpass bridges at three locations (separate from the interchange locations). The overpasses will serve to link the local roadway network on the west and east sides of US 1. The bridges will also provide linkage for bicycle and pedestrian facilities. The recommended bridges over US 1 are:

- **Overpass at the existing Bert Winston Road over US 1:** This improvement will require a bridge over the realigned SEHSR as well as a bridge crossing of both US 1 and the US 1A extension from Park Avenue in Youngsville.
- **Overpass at the existing Cheatham Street/ Pocomoke Road intersection over US 1:** This is a key linkage within the anticipated Franklinton development node which will include commercial, retail, and other highway oriented development.
- **Overpass for a proposed connector from US 1A in northern Franklinton to the proposed Western Service Road:** The alignment for this connector is expected to cross US 1 on a new alignment between Cheatham Street and US 1A Main Street. On the east, this connector ties into a proposed new rail grade separation connecting US 1A and Winston Street and the long term the Proposed East-West connector.

ES.5.2.3 Recommended Local Street Network – Ultimate

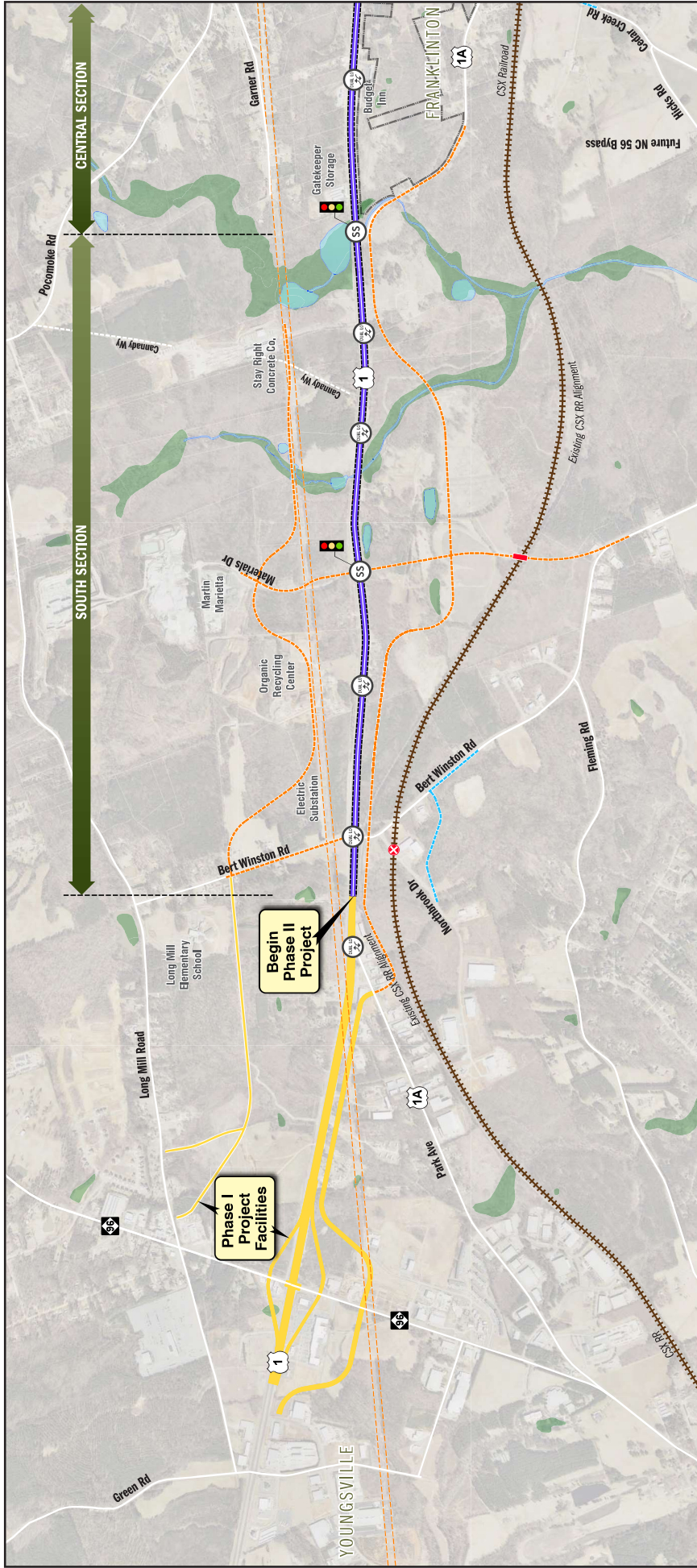
Local streets are a key element of the long range plan for the US 1 Corridor in Franklin County. The local streets will serve as the primary access for development, both businesses and



North Corridor Study Phase II



0 400 800 1,600 ft
Scale in feet



LEGEND

Municipal Boundary	US 1 Corridor	Phase I Proposed Ramp Improvement (Phase I)	Preferred Alternative (Local Street)	Left Over	Future SEHSR / CSX Rail	Surface Waters
US 1 Section (Superstreet)	Traffic Signal	Proposed Local Street (CTP or SEHSR)	Proposed Local Street	Dual Left Over	Proposed Closing of At-Grade Rail Crossing	Wetlands
	SEHR Pedestrian Crossings	Overpass	Super Street	SEHR Pedestrian Crossings	Electric Transmission Line Easement	Utilities
	Close Median Openings		Close Median Openings			

PROJECT STUDY AREA

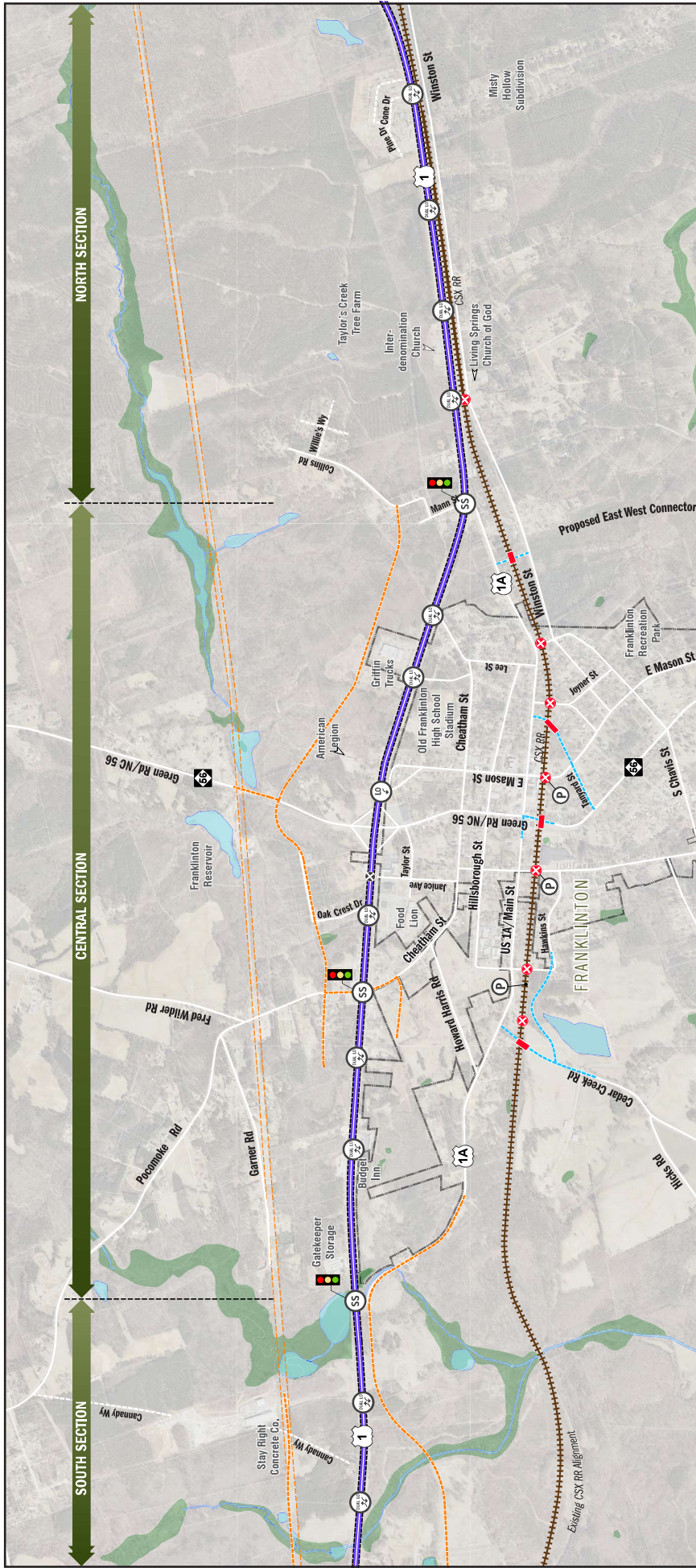
Back of Figure ES-4A (11x17 figure)



North Corridor Study Phase II

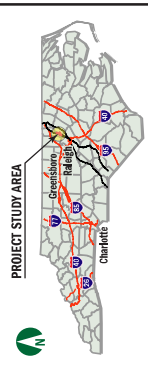


0 400 800 1,600 ft
Scale in feet



LEGEND

- Municipal Boundary
- US 1 Corridor
- US 1 Section (Superstreet)
- Other Roadways and Streets
 - Phase I Proposed Ramp Improvement (Phase I)
 - Prefeared Alternative (Local Street)
 - Proposed Local Street (CTP or SEHSR)
 - Traffic Signal
 - Overpass
- Railroad
 - Future SEHSR / CSX Rail
 - Proposed Closing of At-Grade Rail Crossing
- Environment
 - Surface Waters
 - Wetlands
 - Utilities
 - Electric Transmission Line Easement
- Left Over
- Dual Left Over
- Super Street
- SEHR Pedestrian Crossings
- Close Median Openings



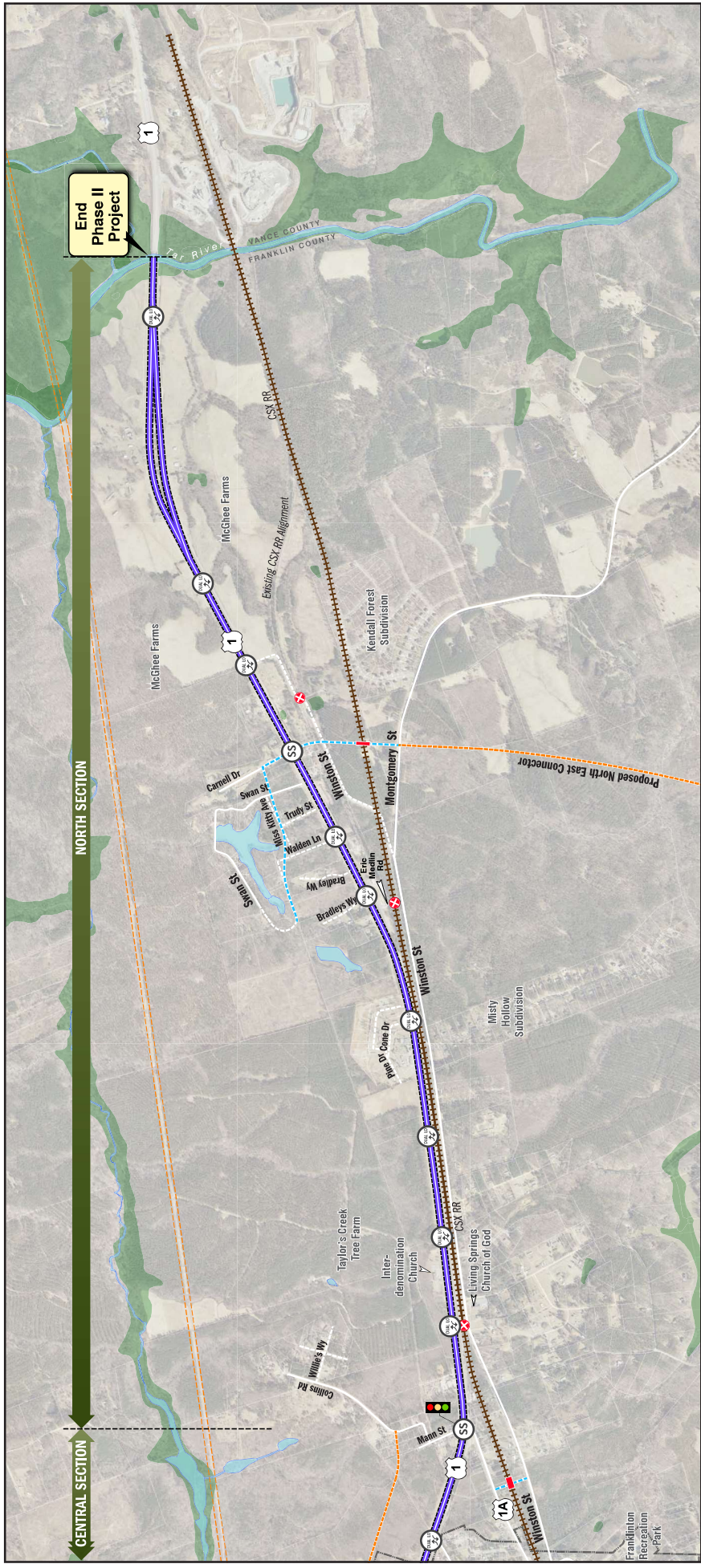
Back of Figure ES-4B (11x17 figure)



North Corridor Study Phase II



0 400 800 1,600 ft
Scale in feet



LEGEND

- Municipal Boundary
- US 1 Corridor
- US 1 Section (Superstreet)
- Other Roadways and Streets
 - Phase I Proposed Ramp Improvement (Phase I)
 - Preferred Alternative Local Street
 - Proposed Local Street (CTP or SEHSR)
 - Traffic Signal
 - Overpass
- Railroad
 - Future SEHSR / CSX Rail
 - Proposed Closing of At-Grade Rail Crossing
- Environment
 - Surface Waters
 - Wetlands
 - Utilities
 - Electric Transmission Line Easement
- Left Over
- Dual Left Over
- Super Street
- SEHR Pedestrian Crossings
- Close Median Openings



US 1 Phase II Study - Franklin County

**PARSONS
BRINCKERHOFF**

US 1 Interim Design - Superstreet in North Section

Figure ES-4C
Sheet 3 of 3

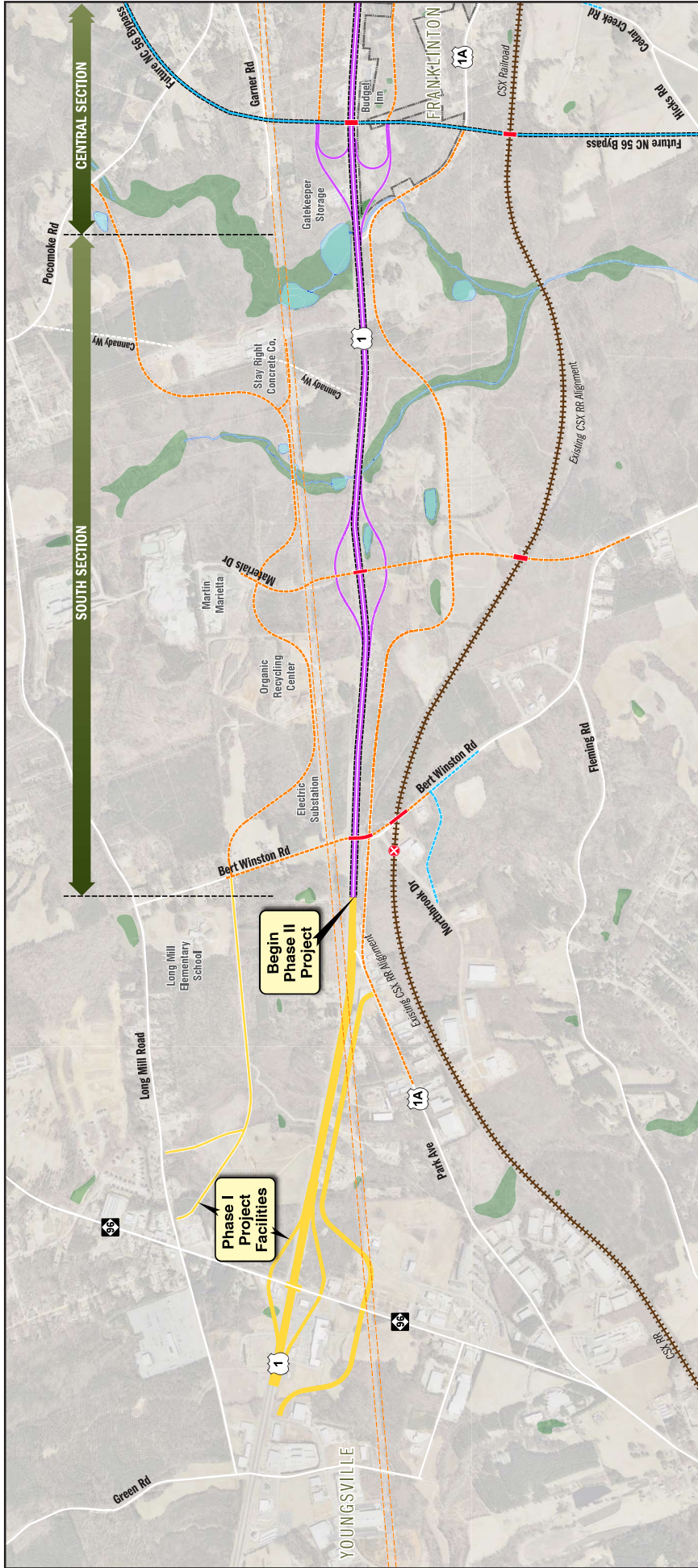
Back of Figure ES-4C (11x17 figure)



North Corridor Study Phase II

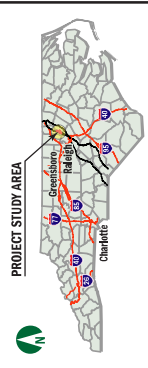


0 400 800 1,600 ft
Scale in feet



LEGEND

US 1 Corridor (Freeway)	Other Roadways and Streets	Future SEHSR / CSX Rail	Railroad	Surface Waters	Environment
US 1 Interchanges	Proposed Boulevard (CTP)	Existing CSX RR Alignment	Proposed Crossing of At-Grade	Wetlands	Utilities
Phase I Proposed Improvement	Preferred Alternative (Local Street)	Rail Crossing	Overpass	Electric Transmission Line Easement	
Municipal Boundary	Proposed Local Street (CTP or SEHSR)	SEHR Pedestrian Crossings			



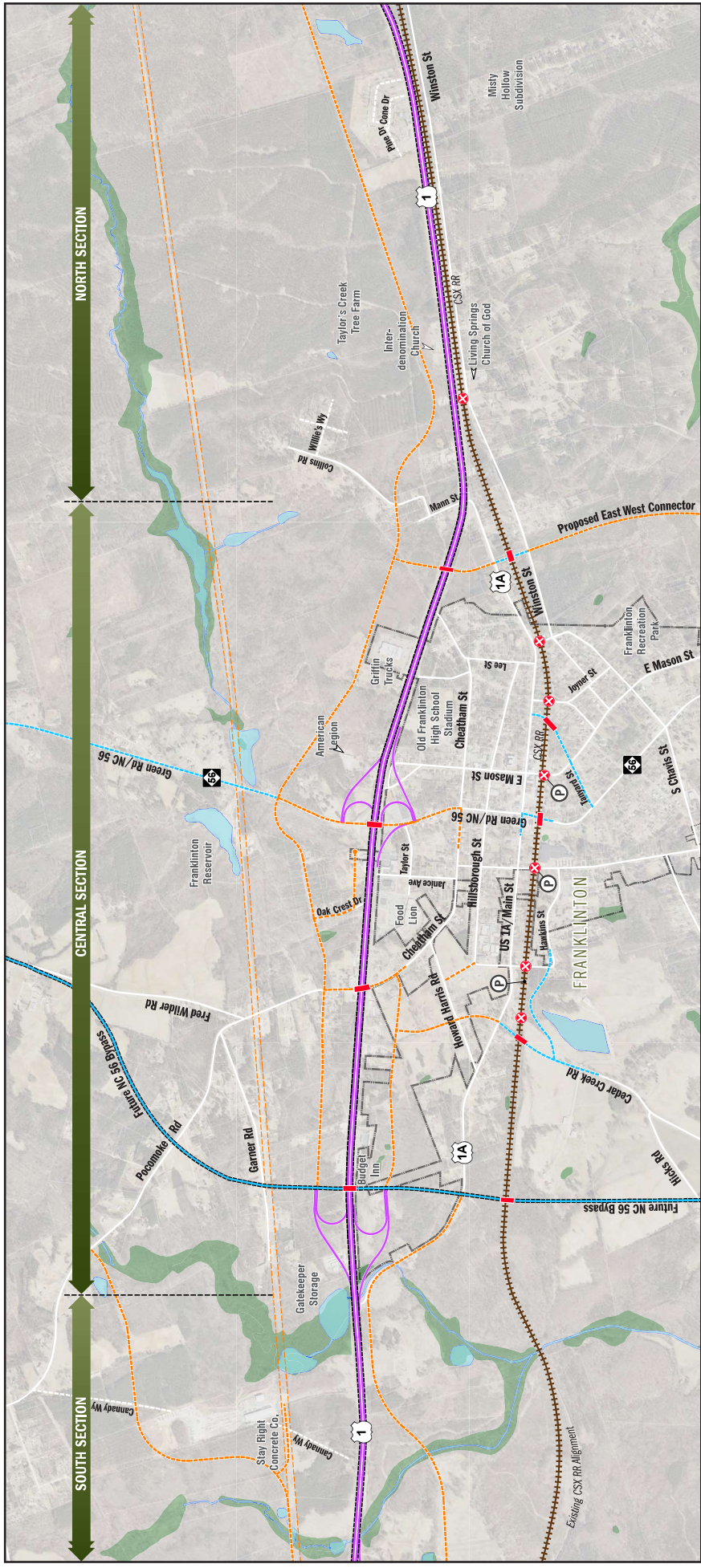
Back of Figure ES-5A (11x17 figure)



North Corridor Study Phase II

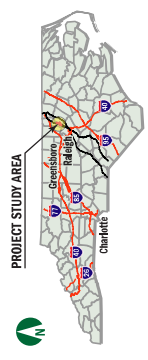


0 400 800 1,600 ft
Scale in feet



LEGEND

- US 1 Corridor (Freeway)
- US 1 Interchanges
- Phase I Proposed Improvement
- Municipal Boundary
- Other Roadways and Streets
 - Proposed Boulevard (CTP)
 - Preferred Alternative (Local Street)
 - Proposed Local Street (CTP or SEHSR)
 - Overpass
 - SEHR Pedestrian Crossings
- Railroad
 - Future SEHSR / CSX Rail
 - Proposed Casing of At-Grade
 - Rail Crossing
- Environment
 - Surface Waters
 - Wetlands
 - Utilities
 - Electric Transmission Line Easement



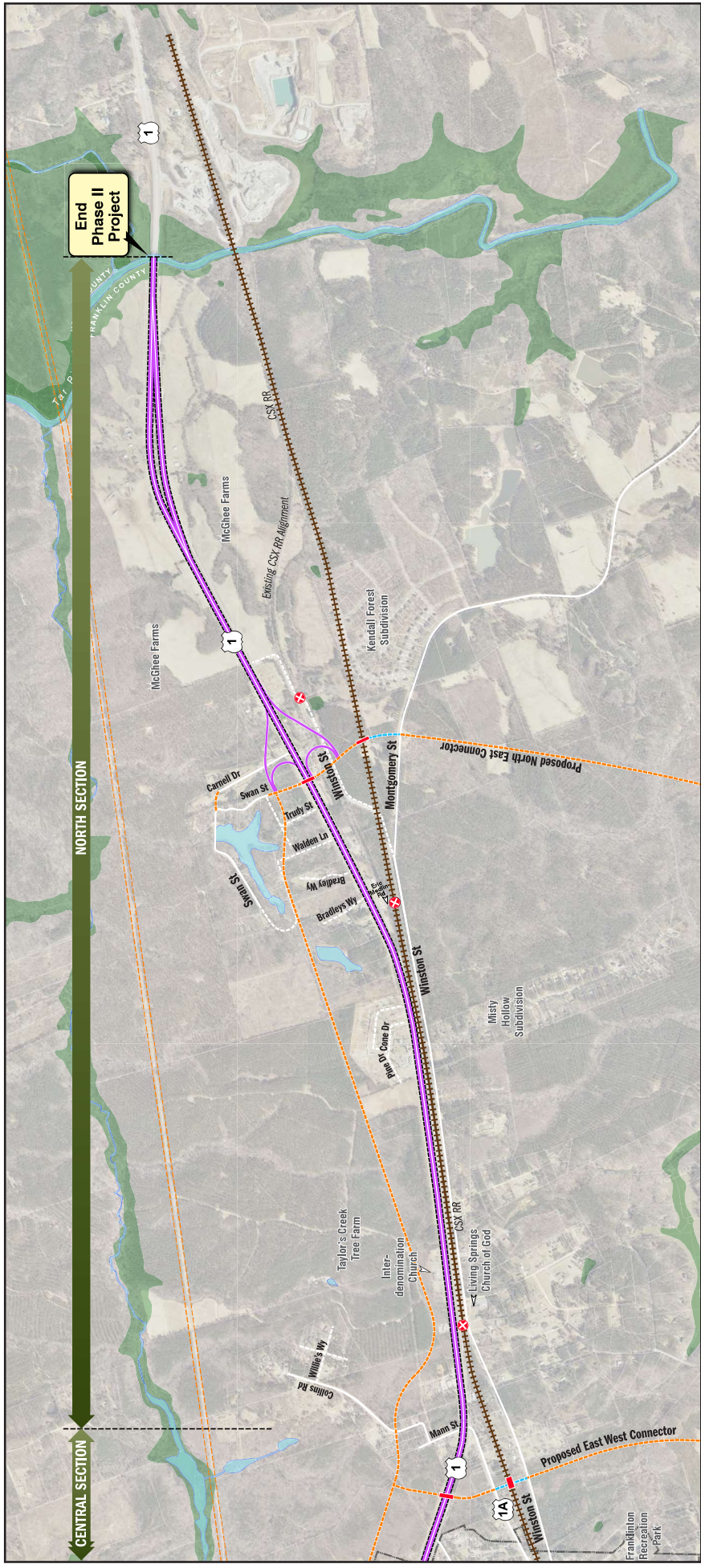
Back of Figure ES-5B (11x17 figure)



North Corridor Study Phase II



0 400 800 1,600 ft
Scale in feet



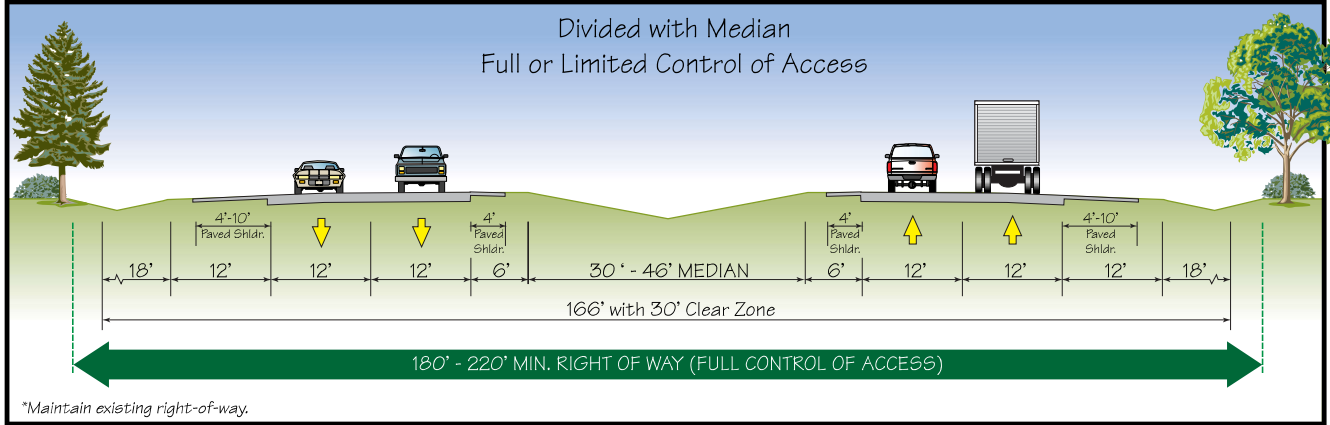
LEGEND

US 1 Corridor (Freeway)	Other Roadways and Streets	Railroad	Environment
US 1 Interchanges	Proposed Boulevard (CTP)	Future SEHSR / CSX Rail	Surface Waters
Phase I Proposed Improvement	Preferred Alternative (Local Street)	Proposed Casing of At-Grade	Wetlands
Municipal Boundary	Proposed Local Street (CTP or SEHSR)	Rail Crossing	Utilities
	Overpass	SEHR Pedestrian Crossings	Electric Transmission Line Easement

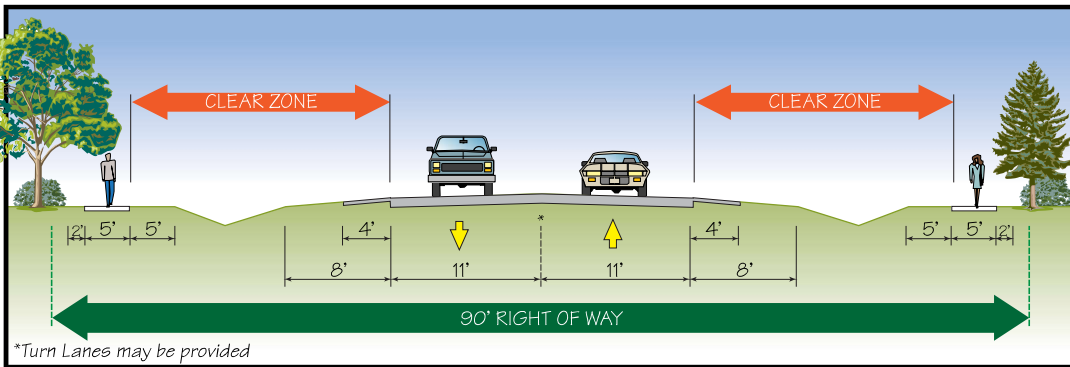
PROJECT STUDY AREA

Back of Figure ES-5C (11x17 figure)

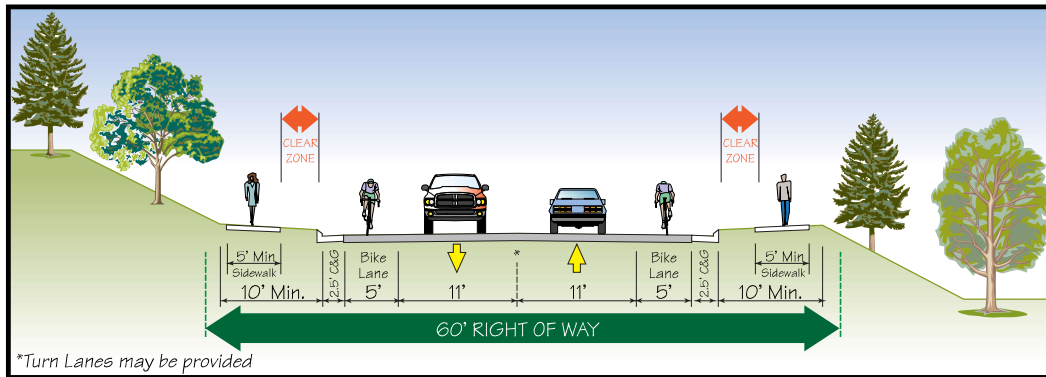
FREEWAY/EXPRESSWAY



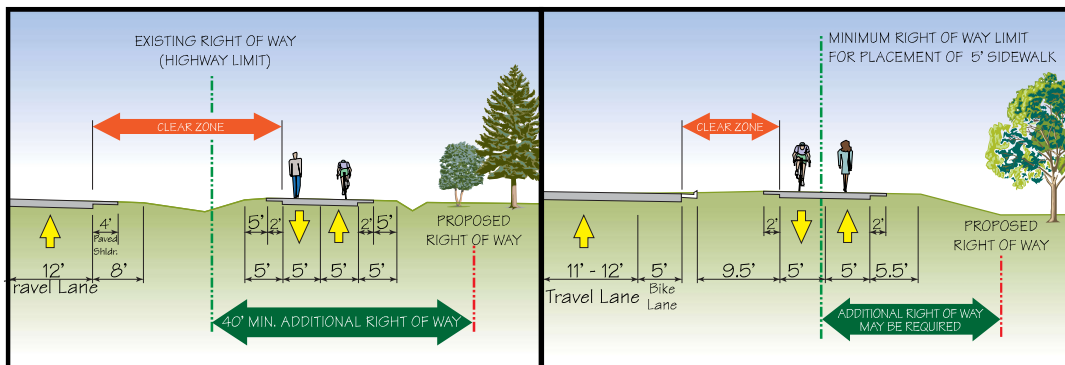
LOCAL STREET WITH SHOULDER



LOCAL STREET WITH CURB AND GUTTER



PEDESTRIAN/BIKE SIDEPATH



residential, located both east and west of US 1. The local streets are envisioned as being phased in incrementally as development occurs in the study area. In addition, it is anticipated that substantial sections of the local street network connections could be constructed with funding assistance, dedication of right of way, and/or construction by prospective development.

Another key element to the local streets plan is the proposed implementation of Complete Streets philosophies on all local streets. As a result, all local roads on new alignments would be constructed to provide safe and efficient service for all users of the facility, not just cars and trucks. For this reason, the term local street is also utilized in this document.

Local Streets Parallel to US 1

In order to provide an alternate access to US 1, it is necessary to run local streets on both the west and east sides of US 1. The recommended local streets running parallel to US 1 include:

- Western Service Road South
- Western Backage Road
- Western Service Road Central
- US 1A Extension from Youngsville to Franklinton

Local Streets Proposed by SEHSR

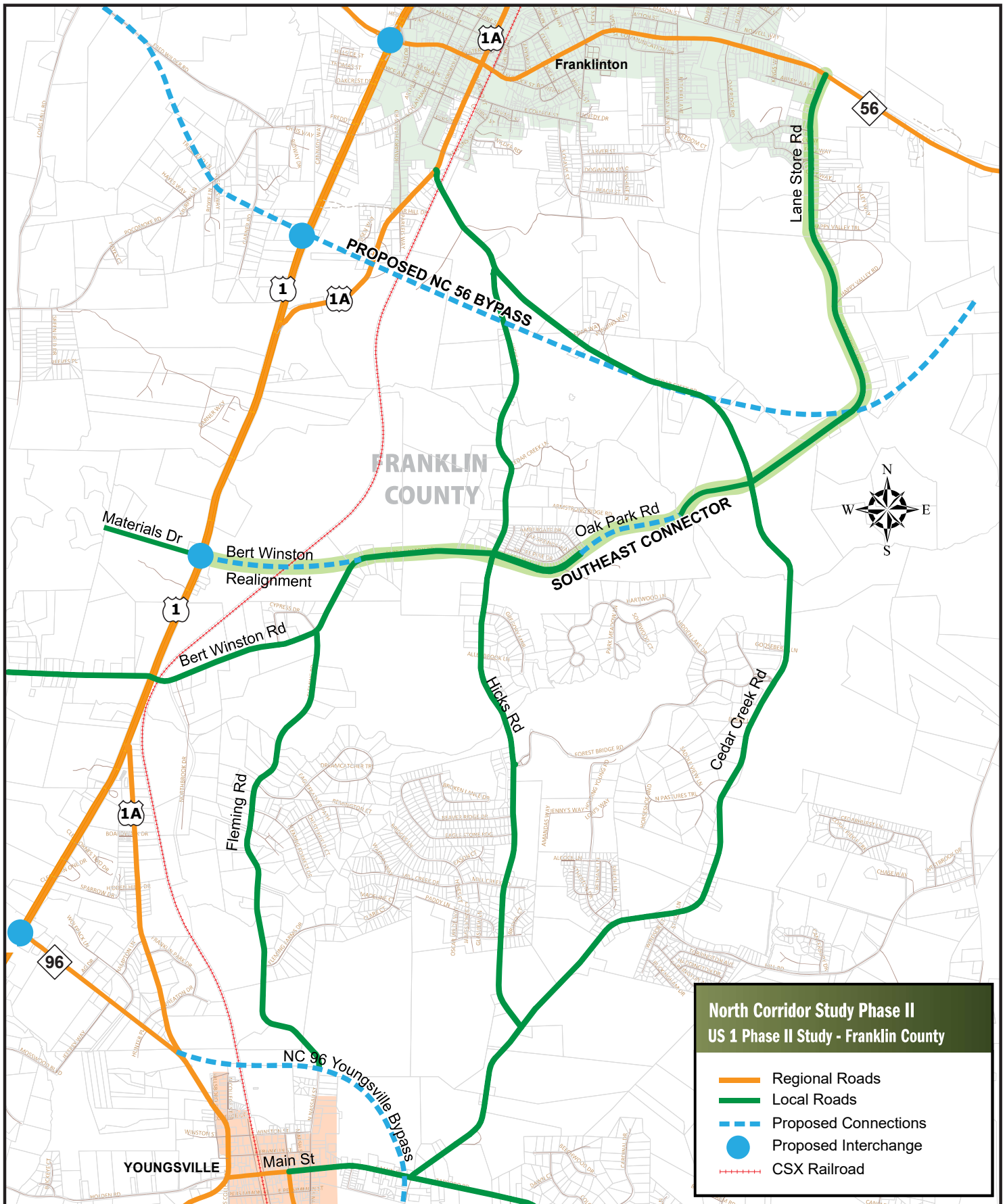
Several local street projects included in the Freeway Plan with Local Street enhancements are proposed as part of the SEHSR project. Although these do provide additional local access and are utilized to improve connectivity, the primary purpose of the SEHSR roadway project is to mitigate impacts to the local street network caused by the closure of nine at-grade crossings located in Franklinton and Franklin County. Of these SEHSR local street projects, the following three projects are critical elements of the Ultimate US 1 Freeway with Local Streets plan:

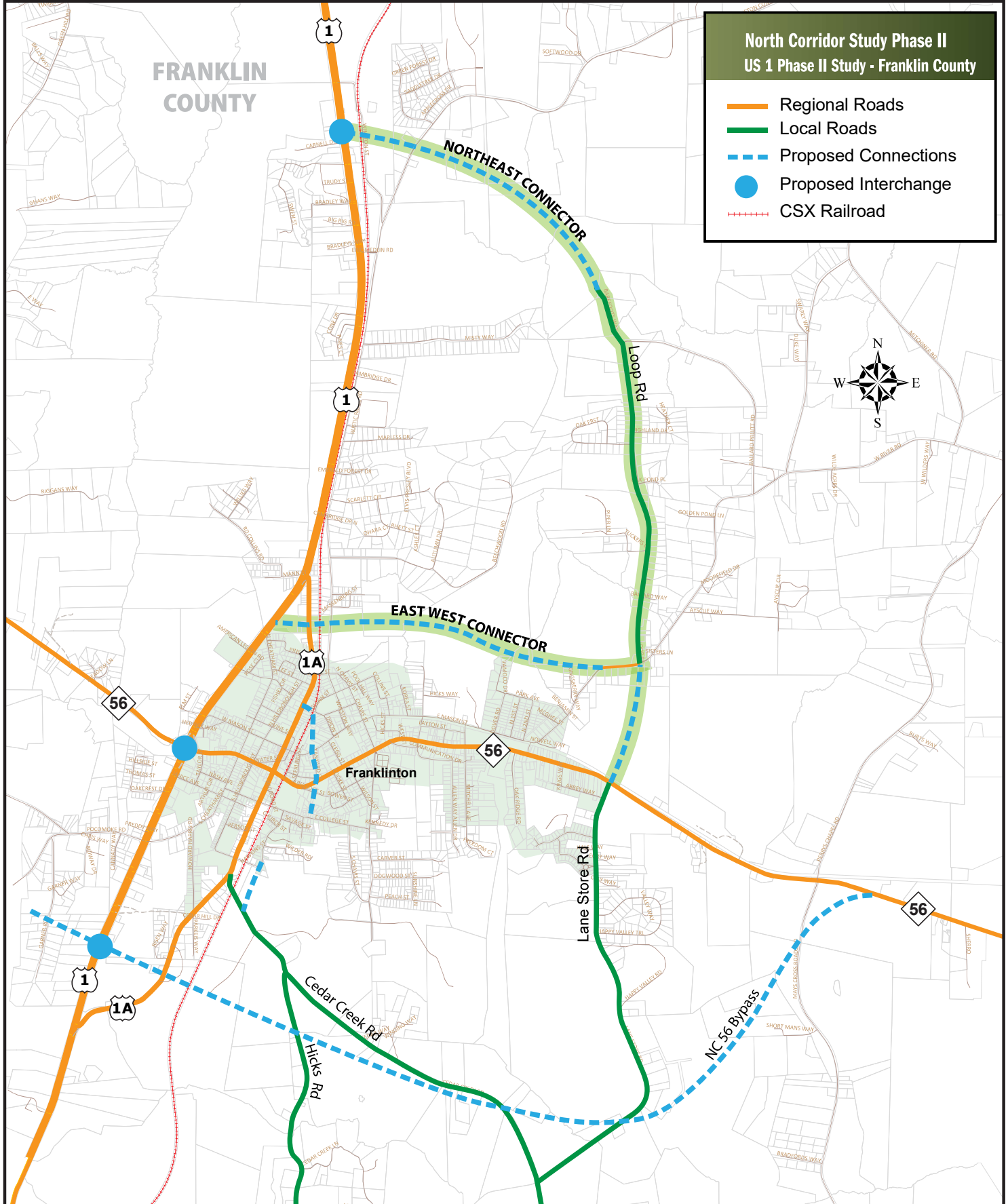
- Realignment of Bert Winston Road Extension
- NC 56 Green Street improvements at the NC 56/ US 1A intersection.
- Connector from Montgomery Street to US 1A

Local Streets Serving Eastern Franklinton

Three local street traffic improvements would improve local connectivity, improve connections to proposed SEHSR and railroad grade separations, and indirectly reduce traffic on NC 56 and US 1. These three projects are identified below and illustrated in Figures ES-7 and ES-8.

- Southeast Connector





- Northeast Connector
- East-West Connector

ES.5.2.4 NC 56 Bypass

The most significant project planned for the study area is the NC 56 Bypass. Envisioned as an Expressway as part of the 2035 CTP, this project would provide a four-lane divided high speed route crossing US 1 roughly one mile south of the existing NC 56 interchange. The project is projected to carry more than 20,000 vpd east of US 1 and less than 10,000 vpd west of US 1.

The NC 56 Bypass is considered as a separate project from the US 1 Corridor Study. Nevertheless, it has been included in the phasing and funding analysis for this study.

ES.5.3 Bicycle, Pedestrian, Transit, & Rail Plan

These proposed improvements are shown in Figure ES-9A, ES-9B and ES-9C for the South, Central, and North sections, respectively.

ES.5.3.1 Bicycle & Pedestrian

Long-term bicycle and pedestrian recommendations would include greenways, multi-use paths, and side-paths. High priority projects identified for the study area include:

- All local streets will be planned and constructed applying Complete Streets philosophy including accommodations for bicycle and pedestrian modes.
- All bridges crossing US 1 will have bicycle and pedestrian features to facilitate safe movements across US 1 for all users.
- A Multi-use Greenway (north-south) along the SEHSR that may be incorporated into the East Coast Greenway. It is divided into two sections: south and north of Franklinton.
- An east-west greenway utilizing an abandoned CSX railroad from downtown Franklinton heading to Louisburg (north of NC 56). This has been identified as a rails-to-trails project. A side-path is also proposed on Cedar Creek Road from the Bert Winston intersection to the west end of the grade-separated crossing over the SEHSR.

ES.5.3.2 Transit

The goals of providing future transit services in the US 1 Phase II corridor study area for the interim improvements can be summarized as follows:

- Provide transit mobility for US 1 corridor commuters
- Connect the Town of Franklinton with regional destinations to the south

- Identify short-term park & ride locations in the study area to support transit services and transit-oriented developments

The current demographics would not support interim service such as an Express Bus service. It is recommended, however, that consideration be given to providing a temporary Park-and-Ride lot to encourage carpooling or vanpooling. This interim treatment would require setting up a shared use agreement for up to 25 spaces in the Food Lion shopping plaza parking lot. It is also recommended that the Kerr Area Rural Transportation System (KARTS) continue to provide para-transit and on-demand service in Franklin County.

Longer term transit options examined included the Express Bus service, a local circulator, and the provision of a commuter rail station. At this stage the recommendation for each of these possible transit provisions is to study their potential in more detail as both a local area and regional service. All recommendations would be subject to more rigorous demand testing and cost analysis before specific routes or alternatives could be provided.

ES.5.3.3 Southeast High Speed Rail (SEHSR)

The SEHSR project is considered part of the interim scenario since it is anticipated to be complete between 2020 through 2025. The primary purpose of the SEHSR is to mitigate the closure of nine rail crossings in Franklinton and Franklin County. In order to mitigate for the closures, the SEHSR has proposed seven local roadway projects and bridge separated crossings of the railroad tracks as presented in Table ES-1 with coordination issues to be resolved between the SEHSR and US 1 Corridor Study on specific projects.

As part of the SEHSR project there would also be the provision of three pedestrian crossings of the railroad in downtown Franklinton. Similar to the local street projects, the primary purpose of the pedestrian improvements is to provide a replacement for current access that is allowed at the location of at-grade crossings.

ES.5.4 Phasing Plan for Implementation

A detailed phasing plan was developed for implementation of the proposed US 1 improvements and associated projects on the local street network. This plan was developed examining a series of congestion thresholds in order to keep all network facilities operating at LOS D or better.

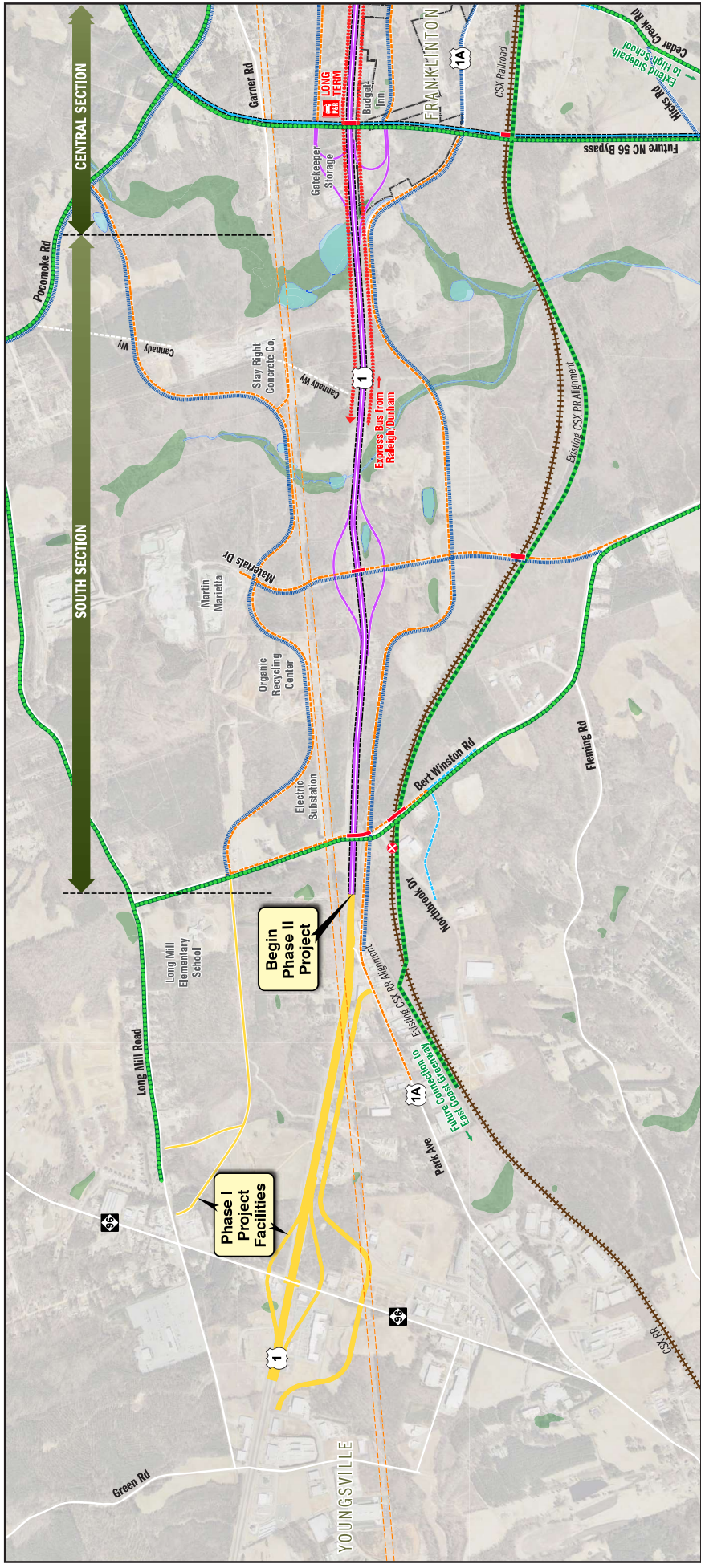
Phasing was examined for the US 1 Corridor Study looking from 2015 to beyond 2050. In this 35-year period, five phases separated by 10 years each were identified for the study. This includes projects required by 2020, 2030, 2040, 2050, and beyond 2050. The original scope of this study had identified 2040 as the horizon year, but given the lower volumes of traffic than other



North Corridor Study Phase II



0 400 800 1,600 ft
Scale in feet



LEGEND

- Municipal Boundary
- US 1 Corridor
- US 1 Corridor
- US 1 and Interchanges (Freeway)
- Phase I Proposed Ramp Improvement (Phase I)
- Other Roadways and Streets
 - Proposed Boulevard (CTP)
 - Proposed Alternative (Local Street)
 - Proposed Local Street (CTP or SEHSR)
 - SEHSR Pedestrian Crossings
 - Recommended Greenway
 - Recommended Sidewalk
- Railroad
 - Future SEHSR / CSX Rail
 - Proposed Closing of At-Grade Rail Crossing
- Recommended Sidewalk
- Existing Sidewalk
- Overpass
- Future CSX RR Alignment
- Future CSX RR Alignment
- Future CSX RR Alignment

On-Road Bike Recommendations

- Signed Bike Route
- Bike Lane / Paved Shoulder
- Sharrows

Transit

- Express Bus from Raleigh/Durham
- Potential Park & Ride

Environment

- Surface Waters
- Wetlands
- Utilities
- Electric Transmission Line Easement

PROJECT STUDY AREA

US 1 Phase II Study - Franklin County

US 1 Bicycle / Pedestrian / Transit Plan in South Section

Figure ES-9A
Sheet 1 of 3

PARSONS BRINCKERHOFF

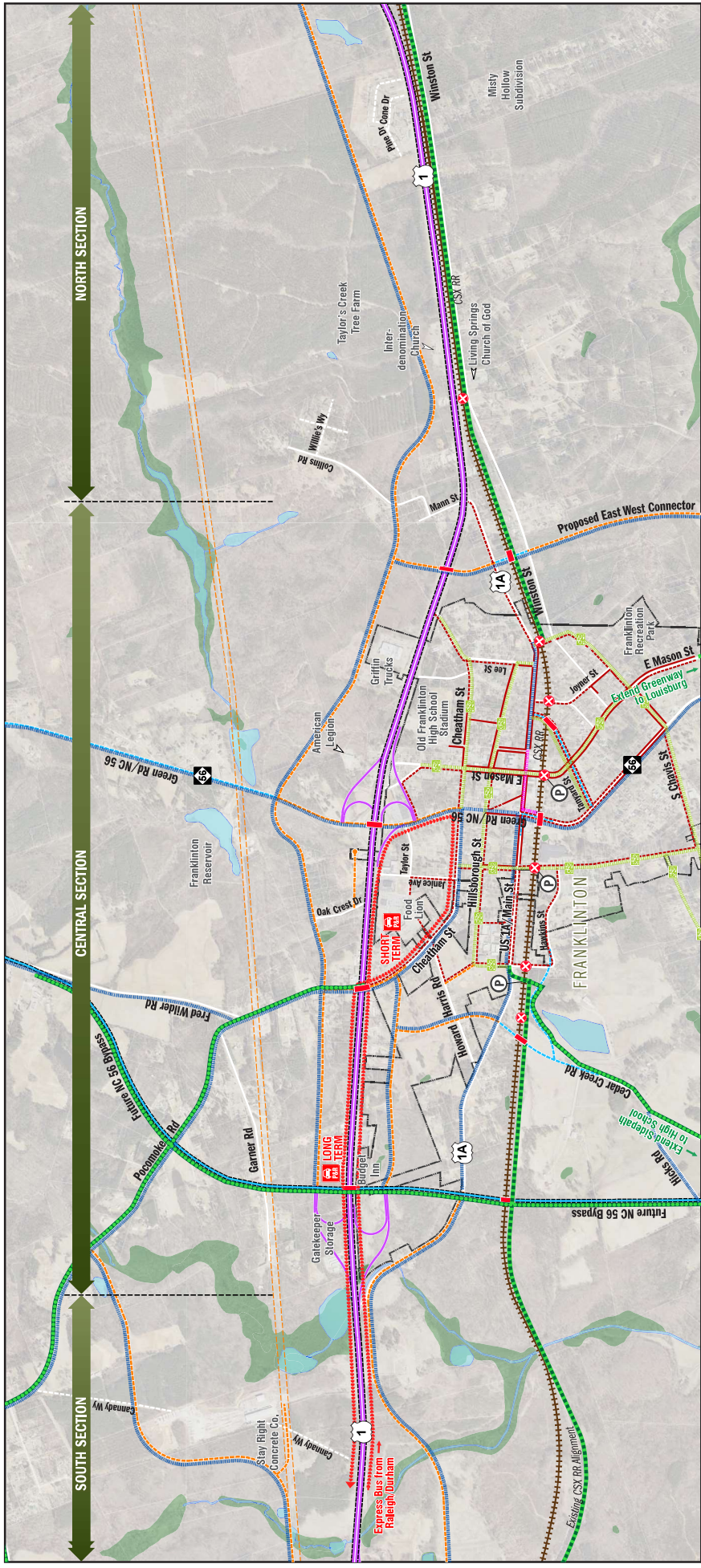
Back of Figure ES-9A (11x17 figure)



North Corridor Study Phase II



0 400 800 1,600 ft
Scale in feet



LEGEND

- Municipal Boundary
- US 1 Corridor
- US 1 Corridor
- US 1 and Interchanges (Freeway)
- Phase I Proposed Ramp Improvement (Phase I)

Other Roadways and Streets

- Proposed Boulevard (CTP)
- Preferred Alternative (Local Street)
- Proposed Local Street (CTP or SEHSR)
- SEHR Pedestrian Crossings
- Recommended Greenway
- Recommended Sidewalk

Railroad

- Future SEHSR / CSX Rail
- Proposed Closing of At-Grade Rail Crossing

Environment

- Surface Waters
- Wetlands
- Utilities
- Electric Transmission Line Easement

On-Road Bike Recommendations

- Signed Bike Route
- Bike Lane / Paved Shoulder
- Sharrows

Transit

- Express Bus from Raleigh/Durham
- Potential Park & Ride

PROJECT STUDY AREA

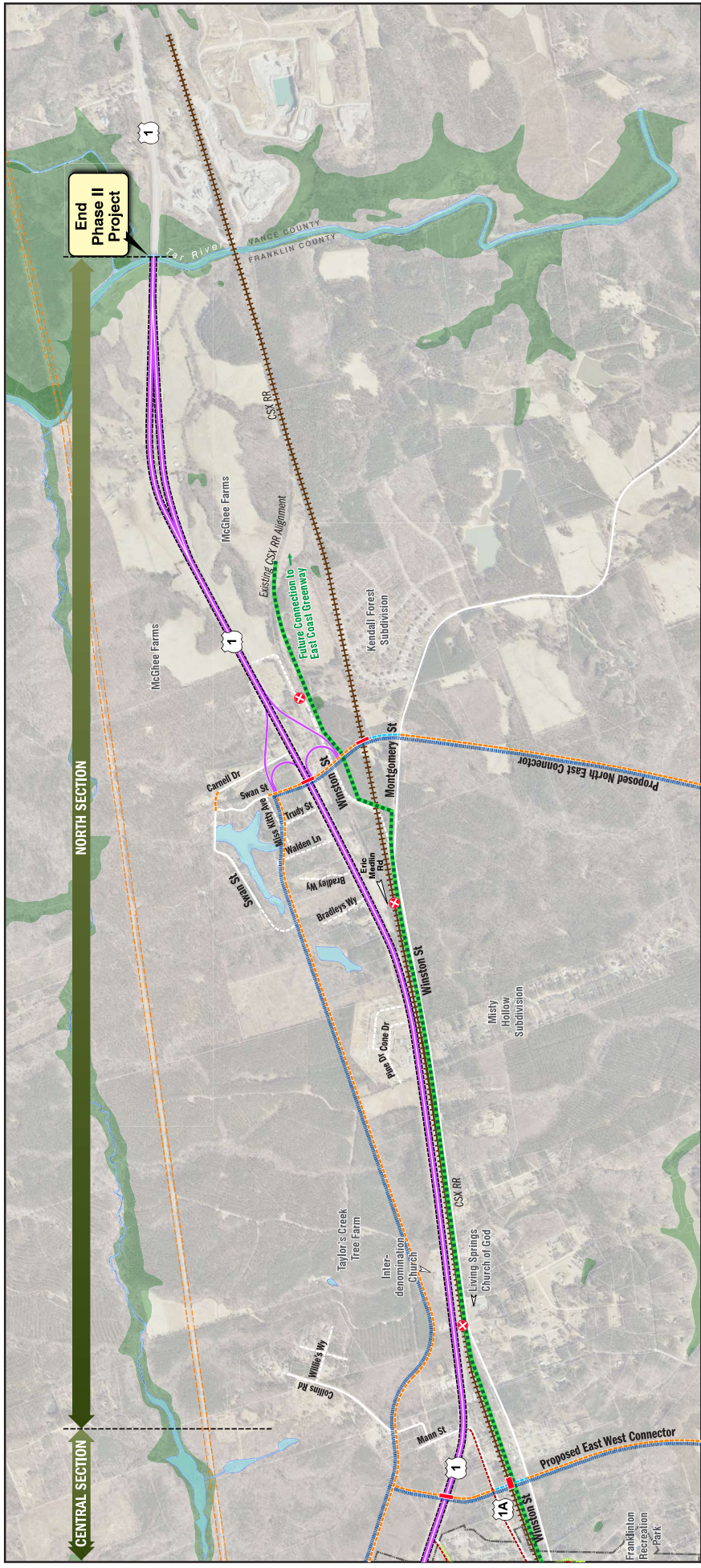
Back of Figure ES-9B (11x17 figure)



North Corridor Study Phase II



0 400 800 1,600 ft
Scale in feet



LEGEND

Municipal Boundary	Other Roadways and Streets Proposed Boulevard (CTP) Preferred Alternative (Local Street) Proposed Local Street (CTP or SEHSR)	Environment Surface Waters Wetlands	On-Road Bike Recommendations Signed Bike Route Bike Lane / Paved Shoulder Sharrows	Utilities Electric Transmission Line Easement
US 1 Corridor	Railroad Future SEHSR / CSX Rail Proposed Closing of At-Grade Rail Crossing	Transit Express Bus from Raleigh/Dunham Potential Park & Ride	Recommended Sidewalk Existing Sidewalk Overpass	
US 1 and Interchanges (Freeway) Phase I Proposed Ramp Improvement (Phase I)	Recommended Greenway Recommended Sidewalk			



Back of Figure ES-9C (11x17 figure)

Table ES-1. Southeast High Speed Rail Roadway Projects

SEHSR Project	Includes	Issues with US 1 Study
Existing Bert Winston and Northbrook Road realignment	<ul style="list-style-type: none"> Railroad bridge Closure of at-grade RR crossing New alignment for Northbrook Rd Revised alignment for Bert Winston Improved intersection at US 1 	Bert Winston RR overpass cannot be designed to allow both at-grade & grade separated crossing of US 1. Therefore, proposing that SEHSR build Bert Winston Rd Extension instead. Provide superstreet intersection improvements on US 1.
Cedar Creek Road realignment and railroad bridge	<ul style="list-style-type: none"> Railroad bridge Closure of at-grade RR crossing Revised alignment for Cedar Creek Improved intersection at US 1A 	Construct Cedar Creek horizontal alignment to avoid cemetery on west side of US 1A to allow future extension.
Hawkins Road extension	<ul style="list-style-type: none"> Local roadway 	None.
NC 56 Green Road Improvement	<ul style="list-style-type: none"> Local roadway railroad underpass Intersection improvements 	Intersection improvement required at US 1A at NC 56 traffic signal.
Tanyard Street improvements	<ul style="list-style-type: none"> Local roadway 	Town strongly desires extension of Tanyard Road to US 1A north of Mason Street with new RR overpass.
Local connector from US 1A to Winston St	<ul style="list-style-type: none"> Connection from US 1A to Winston St Railroad underpass 	Allow for 3-lane connector to provide turn lanes at both US 1A and Winston Street. Future East-West Connector will use this section. In addition, need pedestrian and bicycle provisions to connect East Coast Greenway under railroad.
Montgomery Road connector to US 1 and railroad bridge	<ul style="list-style-type: none"> Local roadway RR bridge New intersection at US 1 (superstreet type) 	Construct RR bridge to allow initial at-grade and ultimate grade separation at US 1. Provide superstreet intersection improvements at US 1.

sections of US 1 to the south, it was necessary to take a longer term view. In addition, the phasing includes an incremental provision of a superstreet which offset the need for freeway type improvements by approximately 10 years.

The key findings were:

- Superstreet improvements are proposed as early as 2020 in some locations. It is proposed that anyone affecting an intersection (developer or SEHSR) should improve the given intersection with a superstreet treatment and adjacent U-turns.
- The need for the NC 56 Bypass is likely sooner than the US 1 Freeway.
- A freeway section is proposed to be in place by 2040 on US 1 south of NC 56.

- On US 1 north of NC 56, an upgrade to a freeway section is likely needed by 2050, but could potentially be phased later. The key driver for the US 1 freeway need may be system continuity, compliance with existing plans, and safety instead of capacity.

The details of the phasing plan are presented in Section 5.3 and Appendix C.

ES.5.5 Funding & Cost Estimates

Cost estimates were prepared for each phase of roadway projects assuming each project identified was completed within each phase. In some cases it can be expected that projects may be delayed, particularly projects that will be incrementally constructed as part of development plans. Nevertheless, the following tables give a breakdown of costs for different types of facilities as well as potential funding sources. The cost estimates shown include construction costs, engineering and planning costs, and a planning-level estimate of right-of-way costs.

ES.5.5.1 Cost Estimates by Type of Facility

The overall total cost of the projects was identified as approximately \$354.2 Million. If the NC 56 Bypass project is excluded (including the US 1/ NC 56 Bypass interchange), the overall cost of the identified projects is \$273.9 Million. Table ES-2 provides a summary of cost estimates by phase and type of roadway facility.

ES.5.5.2 Cost Estimates by Potential Funding Sources

In order to quantify estimated costs required as part of the long term CTP development process, a breakdown of the potential funding mechanisms has been identified in Table ES-3. Note that the Public Funding has been split into four project types recognizing that different revenue sources may be required for each project type. Potential funding sources are the SEHSR project, developer participation, and more traditional public funding. Note that these allocations are based on multiple assumptions and assume relative success in getting developer contributions to the US 1 infrastructure.

ES.6 PUBLIC INVOLVEMENT

Engaging members of the public is essential to any effective and inclusive planning process and public involvement has been an integral part of this study. First, steering teams consisting of members of local and regional organizations were formed to guide the study process. These teams regularly met with and worked closely with the Study Team. Two public workshops were held to further involve the general public. Finally, project information and feedback opportunities were provided using a website and social media outlets. Each of these public involvement efforts are described below and additional materials may be found in Appendix D.

Table ES-2. Cost Estimates Broken Down by Phase and Type of Facility
(shown in millions of dollars)

Type of Facility	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	TOTAL	Percent
Local Streets/Roads	\$34.9M	\$27.0 M	\$18.6 M	\$18.3 M	\$21.8 M	\$120.6 M	34.0%
US-1 Superstreet	\$7.6 M	\$6.0 M	\$3.6 M	\$0	\$0	\$17.2 M	4.9%
US-1 Freeway Conversion	\$0	\$0	\$22.6 M	\$53.6 M	\$23.6 M	\$99.8 M	28.2%
Regional Roads - NC 56 Bypass	\$0	\$0	\$40.2 M	\$32.9 M	\$0	\$73.1 M	20.6%
Regional Roads - Local	\$4.2 M	\$13.8 M	\$0	\$0	\$7.7 M	\$25.7 M	7.3%
Bicycle/Pedestrians	\$0 M	\$5.6 M	\$4.0 M	\$4.4 M	\$3.8 M	\$17.8 M	5.0%
TOTAL	\$46.7 M	\$52.4 M	\$89.0 M	\$109.2 M	\$56.9 M	\$354.2 M	100.0%
Percent of Total Costs by Phase	13.2%	14.8%	25.1%	30.8%	16.1%	100.0%	
CUMULATIVE TOTAL	\$46.7 M	\$99.1 M	\$188.1 M	\$297.3 M	\$354.2 M		

Note: All costs are based on year 2012 cost estimates.

ES.7 IMPLEMENTATION TOOLKIT

The final chapter presents a project implementation “tool kit” that consists of policies, regulations, and strategy options that have been successfully used by other local governments to implement similar projects to the US 1 Corridor Study. Also included are example cases to demonstrate their manner of implementation. These tools have been provided to assist NC Capital Area MPO, Franklin County and the Town of Franklinton in their development of harmonized land use and transportation policies that will facilitate the ultimate vision for the US 1 corridor in the Phase II study area.

Table ES-3. Cost Estimates Broken Down by Phase and Potential Funding Sources
(shown in Millions of Dollars)

Potential Funding Sources	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	TOTAL	Percent
SEHSR	\$40.3	\$0.0	\$0.0	\$0.0	\$4.8	\$45.1	12.7%
Development	\$0.0	\$33.9	\$18.6	\$7.2	\$20.9	\$80.6	22.8%
US-1 Superstreet	\$2.2	\$6.0	\$3.6	\$0.0	\$0.0	\$11.8	3.3%
US-1 Freeway Conversion	\$0.0	\$0.0	\$0.0	\$64.7	\$23.6	\$88.3	24.9%
Regional Roads - Local	\$4.2	\$6.9	\$0.0	\$0.0	\$3.8	\$14.9	4.2%
Regional Roads - NC 56 Bypass	\$0.0	\$0.0	\$62.8	\$32.9	\$0.0	\$95.7	27.0%
Bicycle & Pedestrian	\$0.0	\$5.6	\$4.0	\$4.4	\$3.8	\$17.8	5.0%
TOTAL	\$46.7	\$52.4	\$89.0	\$109.2	\$56.9	\$354.2	100.0%
Percent of Total Costs by Phase	13.2%	14.8%	25.1%	30.8%	16.1%	100.0%	

Note: All costs are based on year 2012 cost estimates.

ES.7.1 Memorandum of Understanding

A key element of the implementation plan is the memorandum of understanding between agencies and municipalities along the US 1 corridor. First implemented in 2007 for the US 1 Phase I Corridor Study, the MOU established a common direction and vision, contained commitments, and identified the roles and responsibilities of the signatory agencies. For the Phase II project, the MOU has been updated to add the Town of Franklinton to the agreement.

The 2007 MOU also established the US 1 Council of Planning (COP), which is the advisory group with an oversight role on land use and transportation decisions along the US 1 corridor. In providing recommendations and guidance regarding a proposed development, the US 1 COP bylaws clearly indicate that the role of the COP is strictly advisory. Approval of development and the setting of conditions on a developer remains the responsibility of the approving agencies.

ES.7.2 Regulatory & Technical Information

The Phase II study recommends several congestion management strategies and project development concepts. A toolkit is provided with examples of regulatory methods that can be applied to manage development and encourage private funding. In addition to the regulatory guidance provided, introductory summaries are provided for multiple technical items.