

PROJECT DATA SHEET

Date: 06/25/17

Rev.:

TIP No.: U-5750	County: Wake County
Federal-aid No.: NA	WBS No.: 50170.1.1
NCDOT Division: 5	Scoping Meeting Date: TBD

Project Description:

- Length: approximately 1.2 miles
- Termini (US Hwy / SR): Shiloh Glenn Drive and Perimeter Park Drive
- MPO / RPO: Capital Area Metropolitan Planning Organization
- NEPA / 404 Merger Candidate? ☐ Yes ☐ No ☒ Unknown
- General Description of Project: Existing NC 54 would be improved from Shiloh Glenn Drive to Perimeter Park Drive through widening and providing additional turn lanes in the Town of Morrisville in Wake County, North Carolina.

Design Data (Existing Conditions):

- Functional Classification: Principal Arterial
- Strategic Highway Corridor: No
- CTP Designation (Facility Type): Principal Arterial
- Type of Access Control: None
- Typical Section:
 - NC 540 to Carrington Mill Boulevard – Four-Lane Median-Divided Roadway
 - Carrington Mill Boulevard to Perimeter Park Boulevard – Two Lane Roadway
- Right of Way: Varies 60' – 200'
- Posted Speed: 45 mph
- Structure Inventory (bridges, RCBC, Walls, etc): I-540/NC 540 overpass (existing), a 3'x3' box culvert (existing), McCrimmon Parkway overpass (proposed STIP No. U-5747).

Table 1: Other Nearby STIP Projects

STIP No.	Road/Route	Description	Schedule
EB-5814	SR 3015 (AIRPORT BOULEVARD)	MCCRIMMON PARKWAY TO FACTORY SHOPPES ROAD IN MORRISVILLE. CONSTRUCT SIDEWALK	Construction, 2020
I-5506	I-40	SR 1002 (AVIATION PARKWAY) INTERCHANGE. IMPROVE INTERCHANGE AND CONSTRUCT	ROW, 2017; Construction, 2018-2019

STIP No.	Road/Route	Description	Schedule
		AUXILIARY LANE ON I-40 WESTBOUND FROM SR 1002 TO SR 3015 (AIRPORT BOULEVARD)	
I-5700	I-40	SR 3015 (AIRPORT BOULEVARD). REVISE INTERCHANGE AND CONSTRUCT AUXILIARY LANE ON I-40 WESTBOUND FROM SR 3015 (AIRPORT BOULEVARD) TO I-540	ROW, 2019; Construction, 2020-2021
U-5828	MCCRIMMON PARKWAY	SR 3015 (AIRPORT BOULEVARD) TO SR 1002 (AVIATION PARKWAY) IN MORRISVILLE. WIDEN TO MULTILANES, PART ON NEW LOCATION	ROW, 2017; Construction, 2018-2021
U-5811	SR 1002 (AVIATION PARKWAY)	NC 54 TO I-40 IN MORRISVILLE. WIDEN TO MULTILANES WITH INTERCHANGE MODIFICATIONS AT I-40	ROW, 2020-2021; Construction, 2023-2025
U-5966	NC 147 EXTENSION	SR 1613 (MCCRIMMON PARKWAY) TO NC 540 IN MORRISVILLE. CONSTRUCT MULTILANE FACILITY ON NEW LOCATION	ROW, 2024; Construction, 2024
U-5747	NC 54; SR 1635 (MCCRIMMON PARKWAY)	CONVERT NC 54 AT-GRADE INTERSECTION TO GRADE SEPARATION, INCLUDING GRADE SEPARATION OF NS RAILROAD	ROW, 2021; Construction 2024*
P-5201	PIEDMONT CORRIDOR	MORRISVILLE PARKWAY GRADE SEPARATION AND TRACK REALIGNMENT	Under Construction

Source: Draft 2017-2027 State Transportation Improvement Program (STIP).

*Date has been adjusted in the P4.0 to ROW in 2019 and Construction in 2021.

Long Range Plan History:

The project is included in the Capital Area Metropolitan Transportation Organization (CAMPO) 2040 Metropolitan Transportation Plan (MTP) as project A222c. The project also aligns with the Morrisville Transportation Plan: 2009-2035, which states that NC 54 should be widened to four lanes in the project study area.

Traffic Data (AADT):

Current Year	2016 No-Build	14,600 – 29,800 vpd	3% dual	2% TTST
Design Year	2040 Build	25,600 – 41,200 vpd	3% dual	2% TTST
Source: U-5747/U-5750 Traffic Forecast (April 2017)				

Cost Estimates:

	Construction	Right-of-Way	Utilities	Total
Draft 2017-2027 STIP Estimate	\$15,000,000	\$9,000,000	\$236,000	\$24,236,000

Project Schedule:

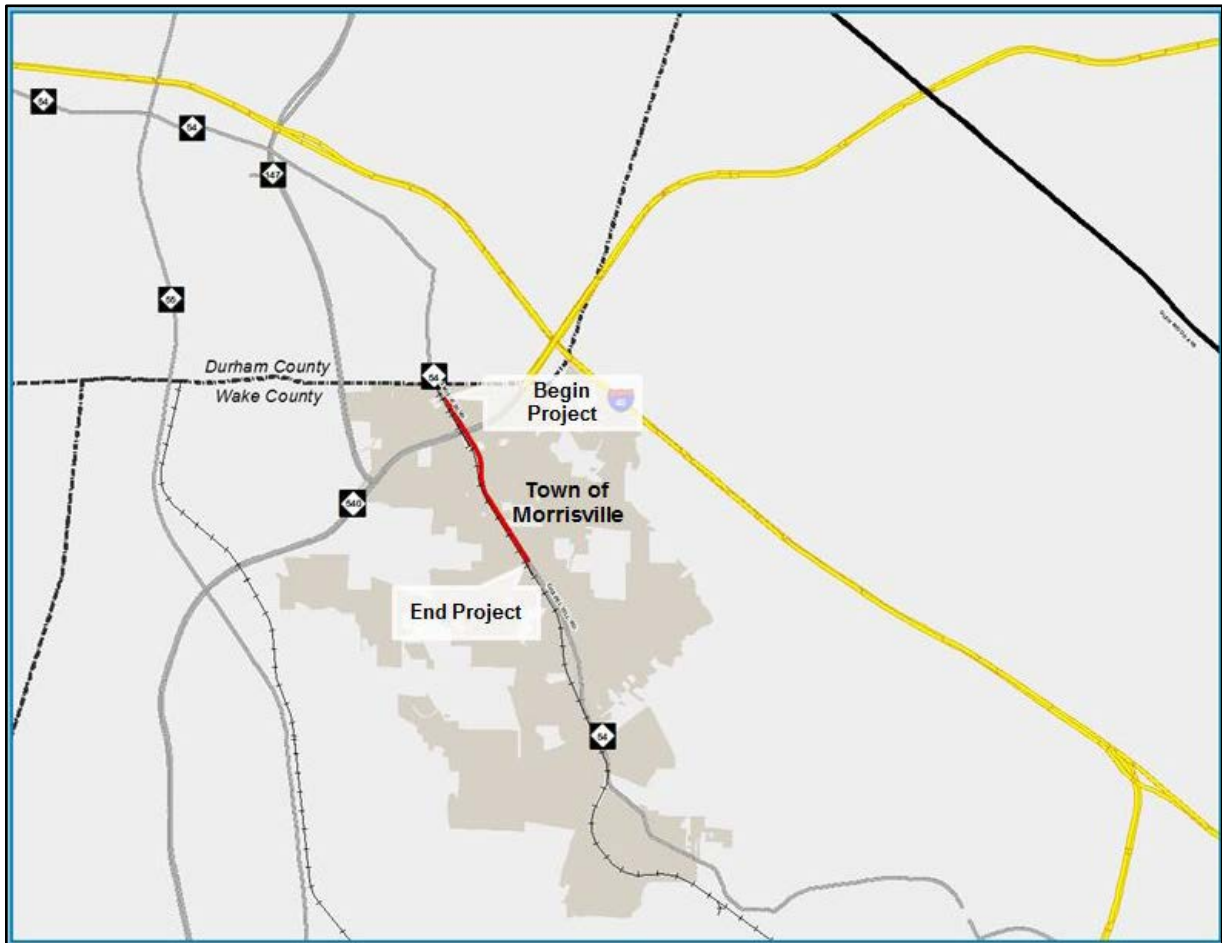
Environmental Document	8/31/2018
Right-of-Way	5/16/2020
Let	04/21/2021

Source: NCDOT Division 5, P4.0.

Initial Scoping Comments:

To be determined

Figure 1: Project Vicinity Map



Purpose and Need Data

The North Carolina Department of Transportation (NCDOT) is proposing to improve NC 54 as a multi-lane, median-divided principal arterial with no control of access in Wake County, North Carolina. The project extends from Shiloh Glenn Drive, northwest of NC 540, to Perimeter Park Drive in the Town of Morrisville. The proposed action is listed in the Draft NCDOT 2017-2027 State Transportation Improvement Program (STIP) as Project Number U-5750. The project is included in CAMPO's 2040 MTP and aligns with the goals of the Morrisville 2009-2035 Transportation Plan.

Draft Project Need:

The primary need for the proposed action is:

- **Increasing congestion due to capacity deficiencies on NC 54.** According to the American Community Survey (ACS), the population of the Town of Morrisville has increased by 34.6 percent from 2010 to 2015, and local plans by the Town indicate more residential and commercial development is expected to occur. NC 54 is currently operating near capacity, and daily traffic is projected to increase by over 10,000 vehicles per day by 2040.

Draft Project Purpose:

The primary purpose of the proposed action is:

- To improve traffic flow and operations along NC 54 from Shiloh Glenn Drive to Perimeter Park Drive in the Town of Morrisville, by reducing anticipated delays as compared to those anticipated in the future no-build condition.

In addition to addressing the primary need, the potential exists for additional benefits as a result of the proposed action as follows:

- Provide a parallel alternative route to I-40 in the event of an accident or need for a temporary detour.

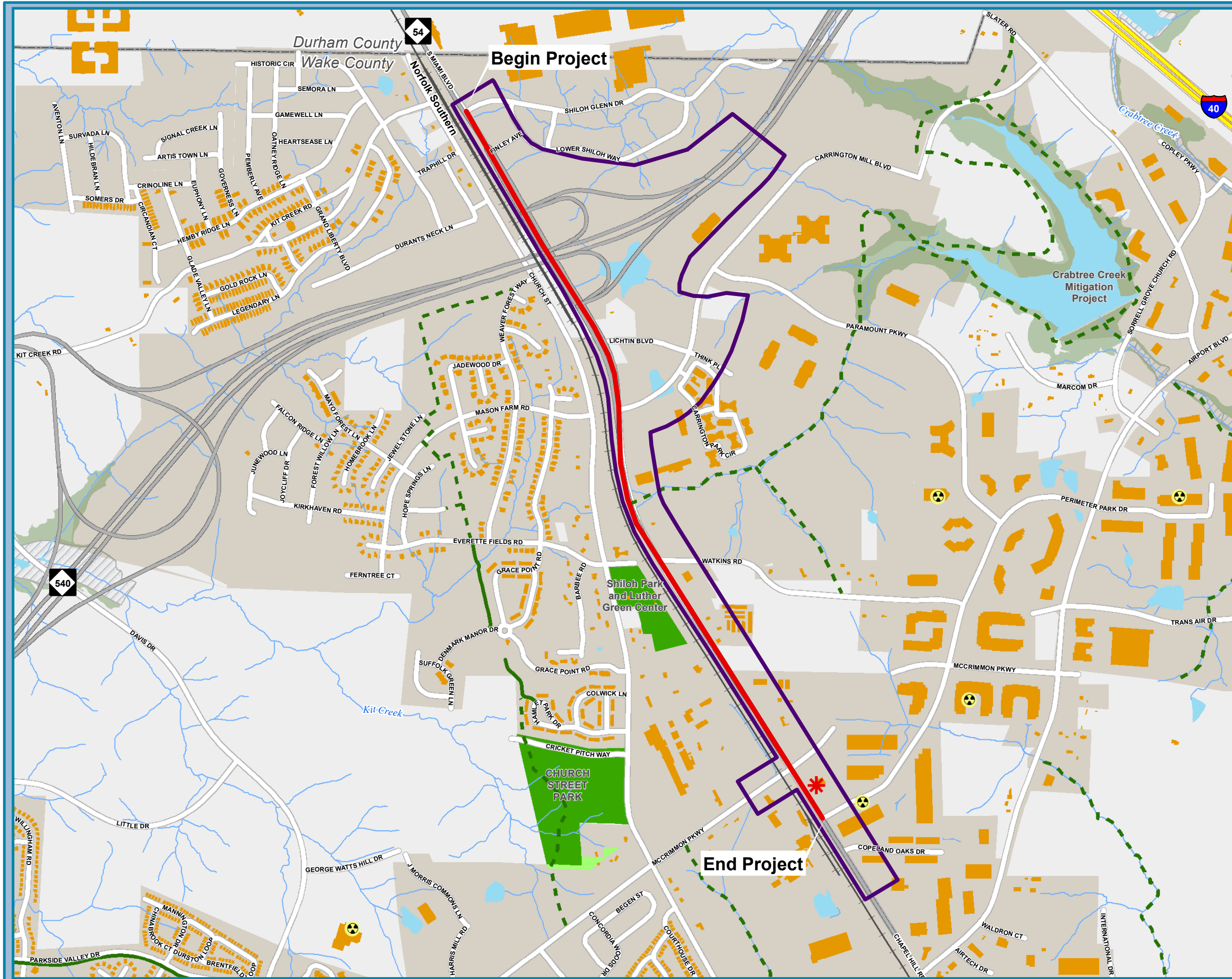
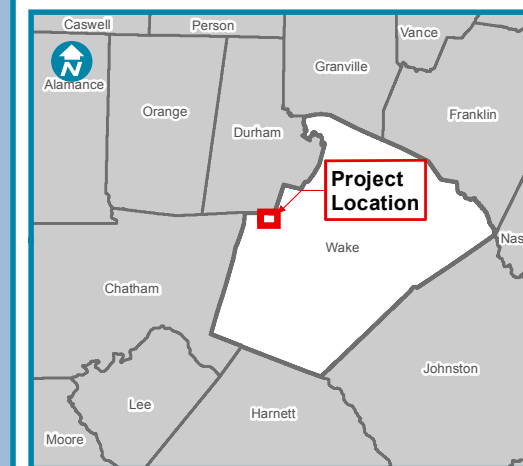


Figure 2:
Environmental features

Legend

- U-5750
- Study Area
- Interstate
- NC Route
- Local Streets
- Railroad
- Existing Greenway
- Proposed Greenway
- Streams
- Hazardous Waste Sites
- Fire Station
- County
- Wake County Building Footprints
- Waterbodies
- FEMA Floodway
- 100 Year Floodplain
- Open Space
- Park
- Town of Morrisville



AECOM

September 2016

This map is for reference only.
Sources: Data was received by
NC Department of Transportation,
ESRI, NCFPM, AECOM

0 500 1,000
Feet

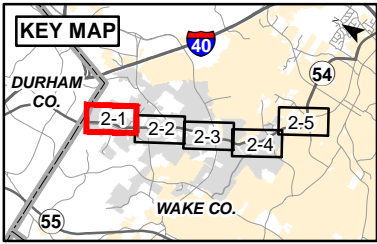
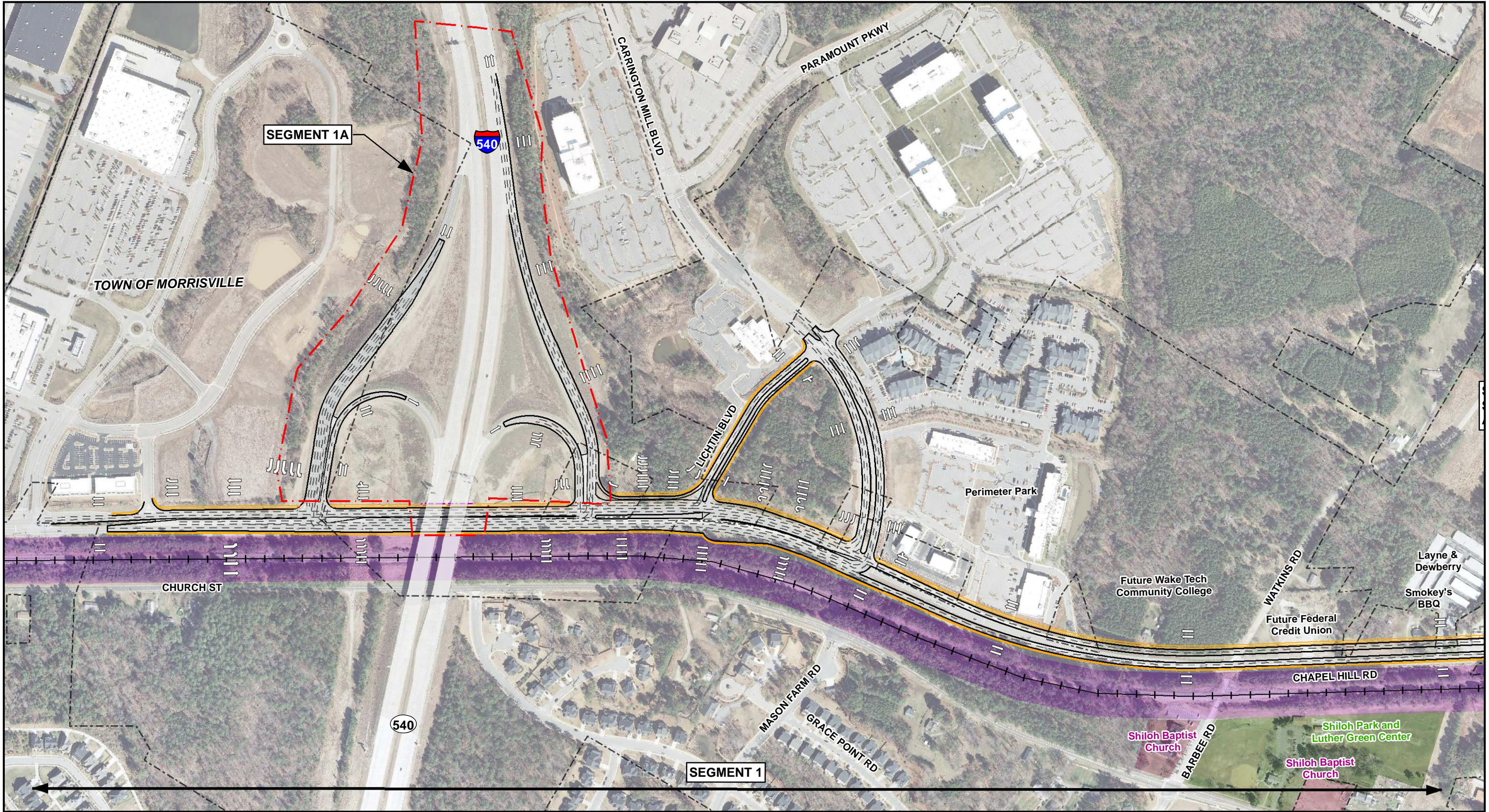


Alternatives Previously Considered

Design Data (Proposed Conditions):

- Functional Classification: Principal Arterial
- Strategic Highway Corridor: No
- CTP Designation (Facility Type): Principal Arterial
- Type of Access Control: None
- Typical Section:
 - Alternative 1: Four Lane Divided with a 30' Grass Median, 5' sidewalk west of NC 54, 10' sidewalk east of NC 54
 - Alternative 2: Four Lane Divided with Narrow Median
- Right of Way: 130' Minimum
- Posted Speed: 45 mph

The following initial alternatives have been developed by NCDOT:
(SEE ATTACHED MAP FROM FEASIBILITY STUDY)

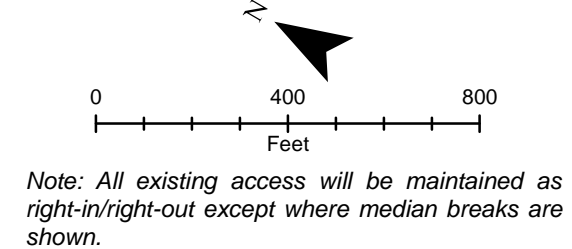


- Legend**
- Project Segment
 - National Historic Register Structures
 - National Historic Register Districts
 - National Historic Register Study List Districts
 - Municipal Boundaries

- Church / Cemetery
- School
- Public Park / Open Space
- Railroad Corridor
- Railroad

- Proposed Improvements**
- Proposed Roadway Bridge
 - Proposed Edge of Pavement
 - Proposed Concrete Island

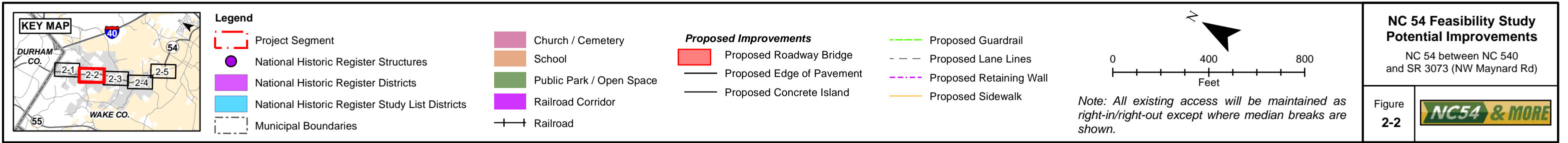
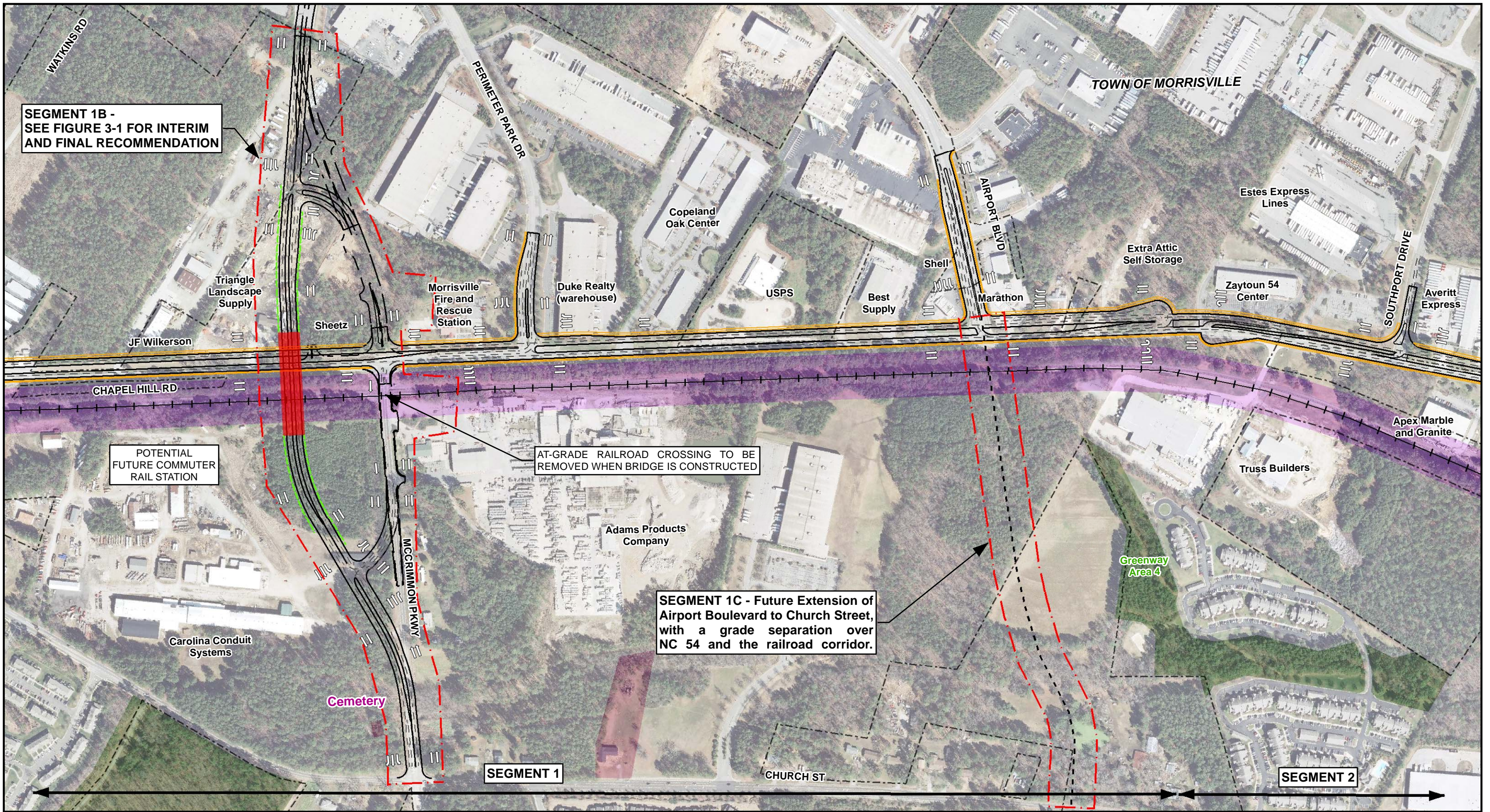
- Proposed Guardrail
- Proposed Lane Lines
- Proposed Retaining Wall
- Proposed Sidewalk



**NC 54 Feasibility Study
Potential Improvements**

NC 54 between NC 540
and SR 3073 (NW Maynard Rd)

Figure
2-1



Preliminary Corridor Resources Inventory Table

Resource/Measure	Project Study Area
Length of project (miles)	1.2
Potential for Interchanges or RR crossings (#)	2 interchanges (NC 540 – existing, and McCrimmon Pkwy – proposed)
Other Infrastructure (# of wastewater treatment plants, transmission pipelines, etc.)	unknown
Suspected/known Hazardous Material sites (#)	0
National Register or eligible sites, districts, or other historic properties (#)	0
Community facilities such and hospitals, nursing homes, churches, schools, cemeteries, etc.) (#)	1 fire station
Potentially Affected Residential Properties	3
Potentially Affected Business Properties	10
Wetlands (est. acres rounded to whole acre)	2
Major Streams (# of streams/total linear feet)	0/0
Critical Water Supply Watersheds (rounded to nearest acre)	0
Riparian Buffer rules apply (yes/no/part)*	Part
Area in active agriculture (nearest acre)**	0
Parks, Greenways, Game Lands, Land and Water Conservation Fund Properties, etc.) (#)***	1
Identified Critical habitat/species under ESA (yes/no/part)	No
FEMA Buyout Properties	0
Other known/suspected resources or issues (e.g., low-income or minority community)	None

* Buffer impacts assumed to be proportional to the stream impacts.

** Agricultural impacts based on parcels with active agricultural operations.

*** A proposed greenway would intersect the road between Carrington Mill Boulevard and Watkins Road.

NOTE: This table is to be used in conjunction with the Environmental Features Map for the purposes of evaluating the feasibility of potential corridors. Use of the table without the aid of mapping may lead to misinformed decisions.