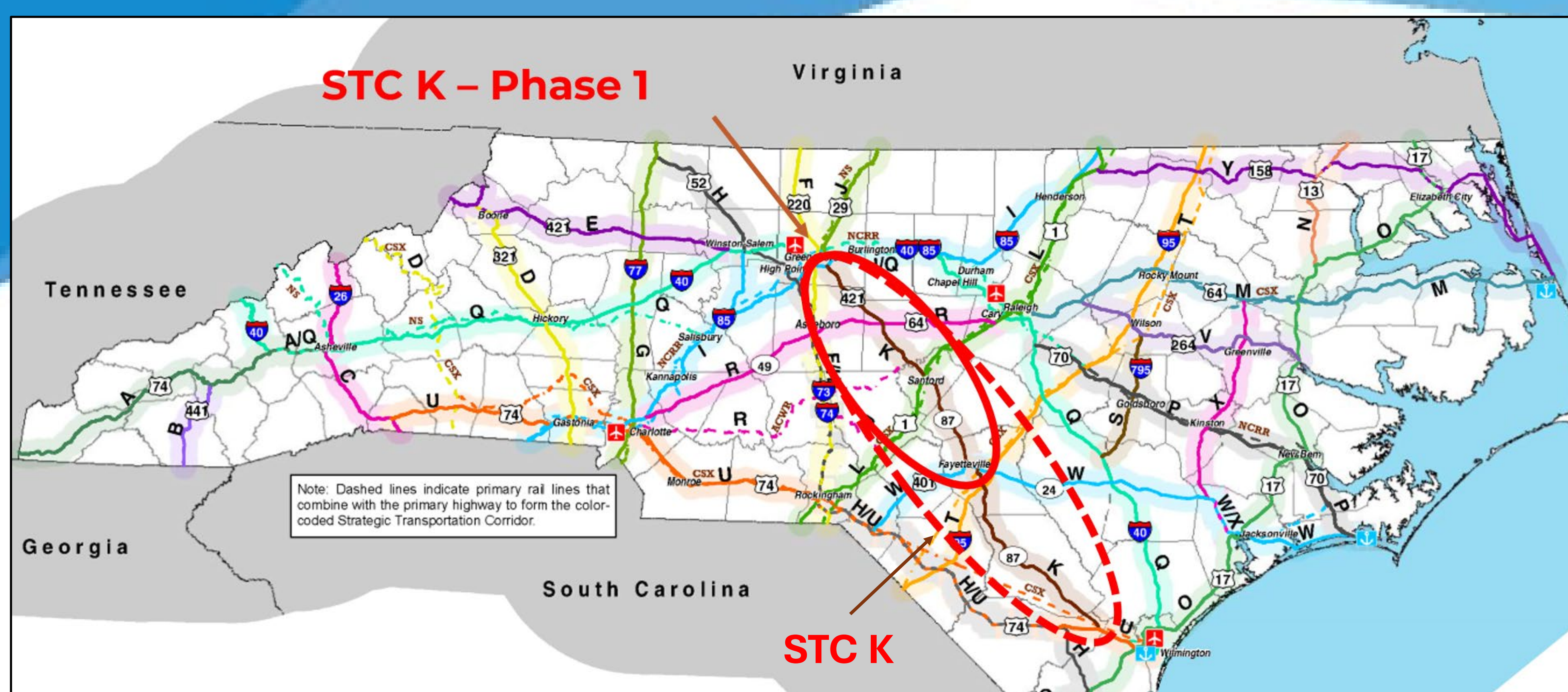


Welcome!

What is STC K?

- Strategic Transportation Corridor (STC) K is a route within NCDOT's STC network.
- The STC routes are a network of critical multimodal transportation corridors considered the backbone of the state's transportation system.
- STC K serves the Piedmont and Coastal Plain regions, as shown on the STC Map.
- STC K begins at I-40 in Greensboro in Guilford County and ends at US 117 in Wilmington in Hanover County.
- The corridor crosses through Sanford and Fayetteville, moving goods to the port of Wilmington, and military assets from Fort Bragg.



The 25 STC corridors in NC move most of our freight and people, link critical centers of economic activity to international air and sea ports, and support interstate commerce. They must operate well to help North Carolina attract new businesses, grow jobs and catalyze economic development.

Why a Master Plan for STC K?

- All STC's require the development of a corridor master plan.
- This master plan is for Phase I of the corridor; the extent from I-40 in Greensboro to I-95 in Cumberland or Harnett County.
- The master plan is needed to develop a consistent transportation vision for the corridor.
- This vision is based on –
 - Stakeholder input
 - Technical assessment
 - Economic development objectives
 - Regional planning
 - Corridor project development activities

We are HERE!

How a Road Gets Built in NC



Years of extensive planning, study and work occur before the N.C. Department of Transportation ever begins building a roadway.

The in-depth, six-phased process begins with NCDOT assisting municipalities and regions to develop long-term plans that identify area transportation needs and priorities. STC Master Plans are a tool intended to inform long range planning.

Once a project is programmed for funding, NCDOT initiates studies and the project enters into a development phase – a process that includes getting feedback from the public and analyzing how a proposed road might affect people living and working in the area as well as its impact on the environment.

Once development is complete and engineers have determined how and exactly where a road will be built, NCDOT typically begins acquiring any necessary property to accommodate the project and then awards a construction contract. During this time, existing utilities in conflict with the proposed design are moved.

Only then does construction begin.

Throughout the process, NCDOT's Value Management Office ensures the department responsibly and efficiently uses resources and funding.

Study Team

NCDOT Transportation Planning Office
AECOM
Cambridge Systematics

Corridor Steering Committee (CSC)

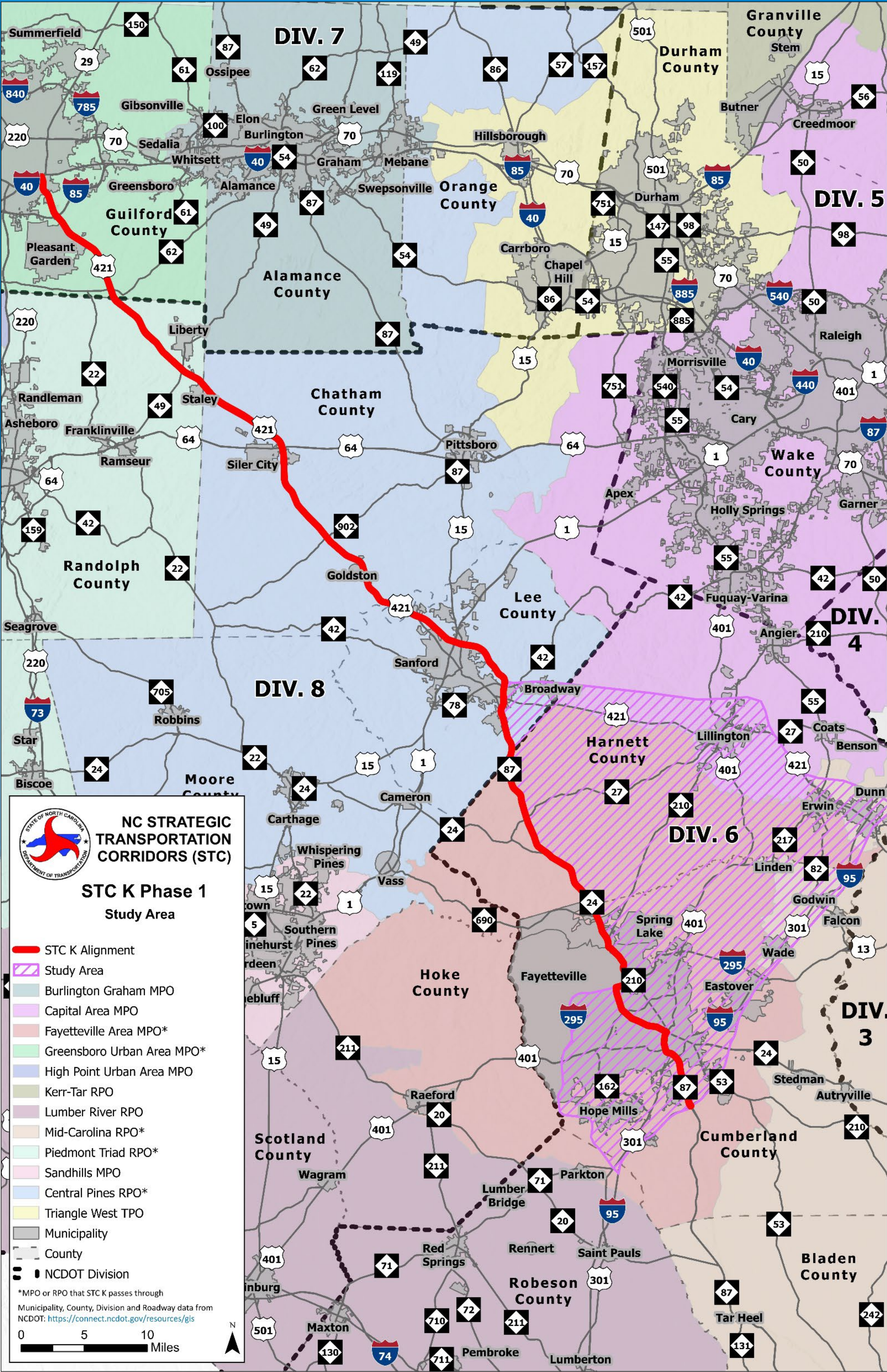
- Greensboro Urban Area (GUAMPO)
- Capital Area MPO (CAMPO)
- Piedmont Triad RPO (PTRPO)
- Mid-Carolina RPO (MCRPO)
- Central Pines RPO (CPRPO)
- NCDOT Rail Division
- NCDOT Integrated Mobility Division
- NCDOT Transportation Mobility and Safety
- NCDOT Office of Strategic Initiatives and Program Support
- NCDOT Division of Planning and Programming
- NCDOT Transportation Planning Office
- NCDOT Highway Division 6
- NCDOT Highway Division 7
- NCDOT Highway Division 8
- FHWA
- Fort Bragg



AECOM



Study Description



Study Area

- The study area is a 300-foot corridor around the existing STC K corridor from Greensboro to Fayetteville.
- This corridor is made up of two main routes -
 - US 421/US 421 Bypass
 - NC 87 and NC 24
- After this 98.6-mile stretch, the study area expands east and south of the interchange of the US 421 Bypass and NC 87.
- The study area south of Sanford is roughly bounded by -
 - NC 24 and NC 87
 - The town of Lillington
 - I-95/ US 421 east of the town of Dunn
 - I-95 / I-295 south of Fayetteville

Goals

- Promote regional connectivity between Greensboro, Fayetteville and Wilmington
- Promote a direct interstate connection between Greensboro and I-95
- Improve corridor efficiency and reduce congestion for all users
- Improve safety for all users
- Reduce congestion near Fort Bragg

Objectives

Ranked by Public Survey #1 (April 2025)

1. Promote regional connectivity between Greensboro, Fayetteville, and Wilmington
2. Promote a direct interstate connection between Greensboro and I-95
3. Improve corridor efficiency and reduce congestion for all users
4. Improve safety for all users
5. Provide a new bypass around Spring Lake to reduce congestion near Fort Bragg
6. Enhance development opportunities and quality of life for residents, workers, and visitors by improving roadway access to areas along the corridor
7. Provide a direct connection to megasites and major activity centers and destinations
8. Enhance direct access for the military and base staff at Fort Bragg
9. Improve air quality by minimizing vehicle-miles traveled (VMT) and vehicle emissions
10. Enhance pedestrian and bicycle safety and connectivity across the corridor and to regional trails.

Vision Statement

The Strategic Transportation Corridor (STC) K Master Plan Phase 1 envisions a safe, efficient, and resilient transportation corridor that connects communities, supports economic growth, enhances military mobility, and preserves environmental and cultural resources. The corridor aims to provide reliable access for freight, commuters, and multimodal users while fostering regional prosperity and sustainability.

I-685 Clarification

- The Intermodal Surface Transportation Efficiency Act of 1991 added I-685 as a new High Priority Corridor on The National Highway System:

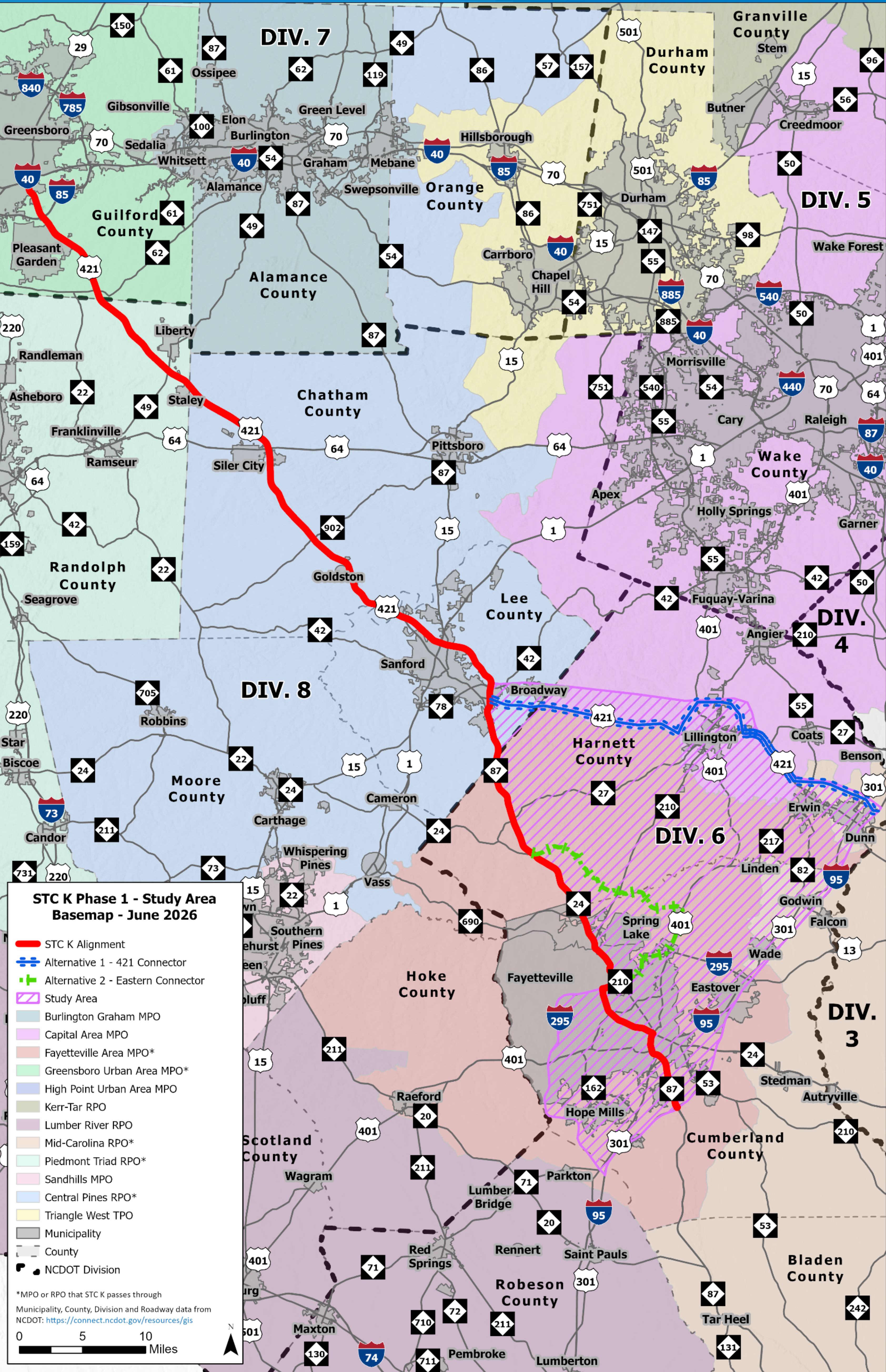
“United States Route 421 from the interchange with Interstate Route 85 in Greensboro, North Carolina, to the interchange with Interstate Route 95 in Dunn, North Carolina.”
- I-685 is not currently funded by the state and is not part of this STC K study.
- Several plans show I-685 following US 421 to I-95:
 - The 2024 Harnett Horizons CTP
 - The current (2026-2035) STIP
- The federal description of I-685 does not include Old US 421 (I-40 to I-85), which is the northernmost portion of the existing STC K alignment, which is the beginning of this study’s corridor in Greensboro.
- Although a portion of proposed I-685 overlaps with the 421 Connector alternative, each project would have independent facility expectations.
- **STC K does not necessarily need to be a freeway or interstate (with controlled access) to meet the primary project objectives.**



AECOM

CAMBRIDGE
SYSTEMATICS

Alternative Development



Performance Measures Studied

A collection of measures were used between 2025 and 2045 to compare alternatives –

- Crash rates
- Vehicle travel time between Greensboro and Wilmington and other locations along the corridor
- Volume-to-Capacity Ratio (for congestion)
- Vehicle miles traveled
- Population and Employment around the corridor
- New sidewalks and bike lanes

Note on Fort Bragg / Western Area

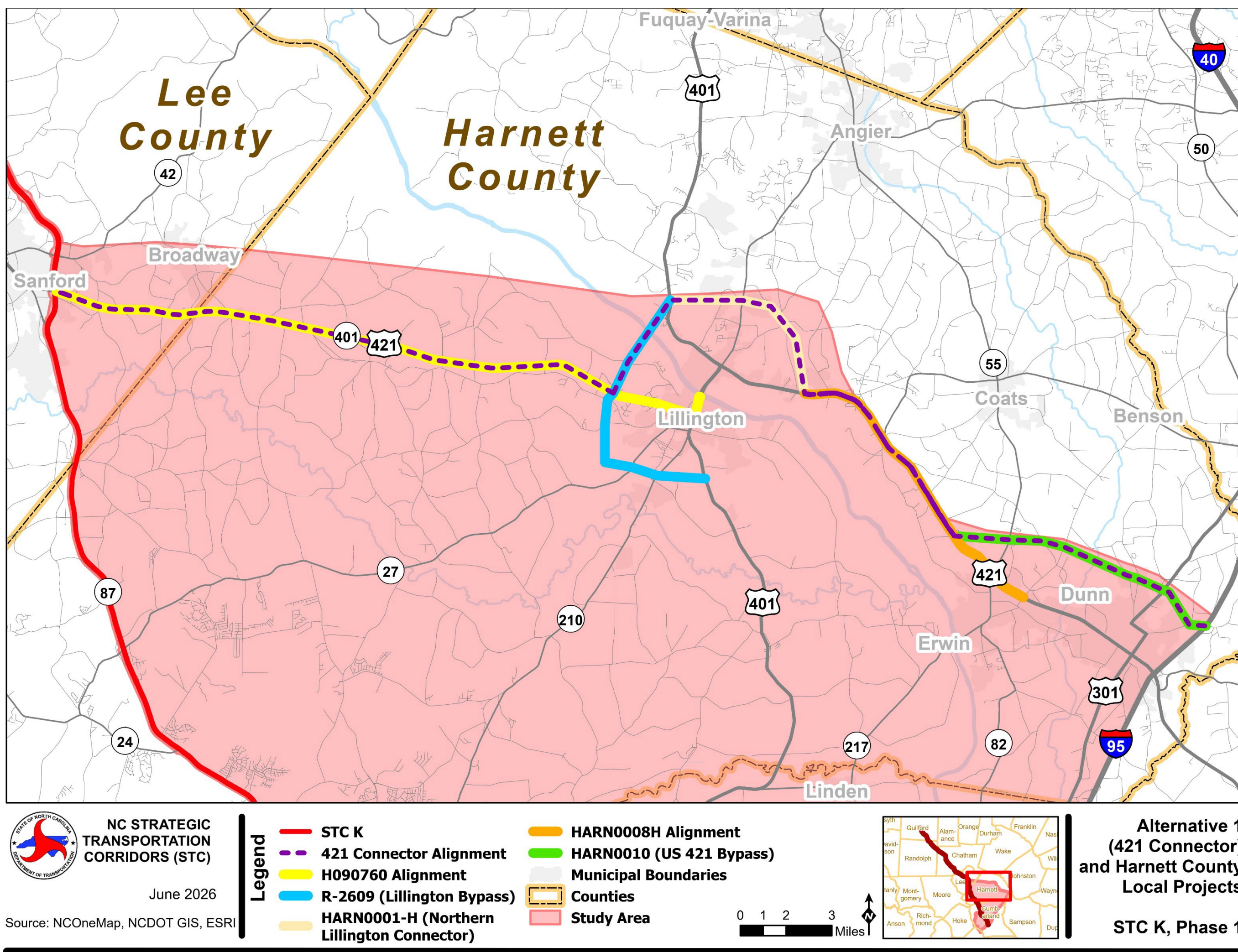
- Alternatives were initially discussed in the area west of Spring Lake, within Fort Liberty/Bragg.
- Over several months, the study team held meetings with NCDOT and Fort Bragg to design a feasible alternative in this area.
- This area was eventually abandoned as there was no adequate path among the natural resources and areas reserved for the military.

Alternative 1 - 421 Connector

The alignment of the 421 Connector was made of several recommendations from the Harnett County CTP, primarily improvements planned for existing US 421 and new location with the Lillington & Dunn Bypasses, as shown on the map below.

Design Criteria:

4-lane divided highway with a posted speed limit of 60-65 mph



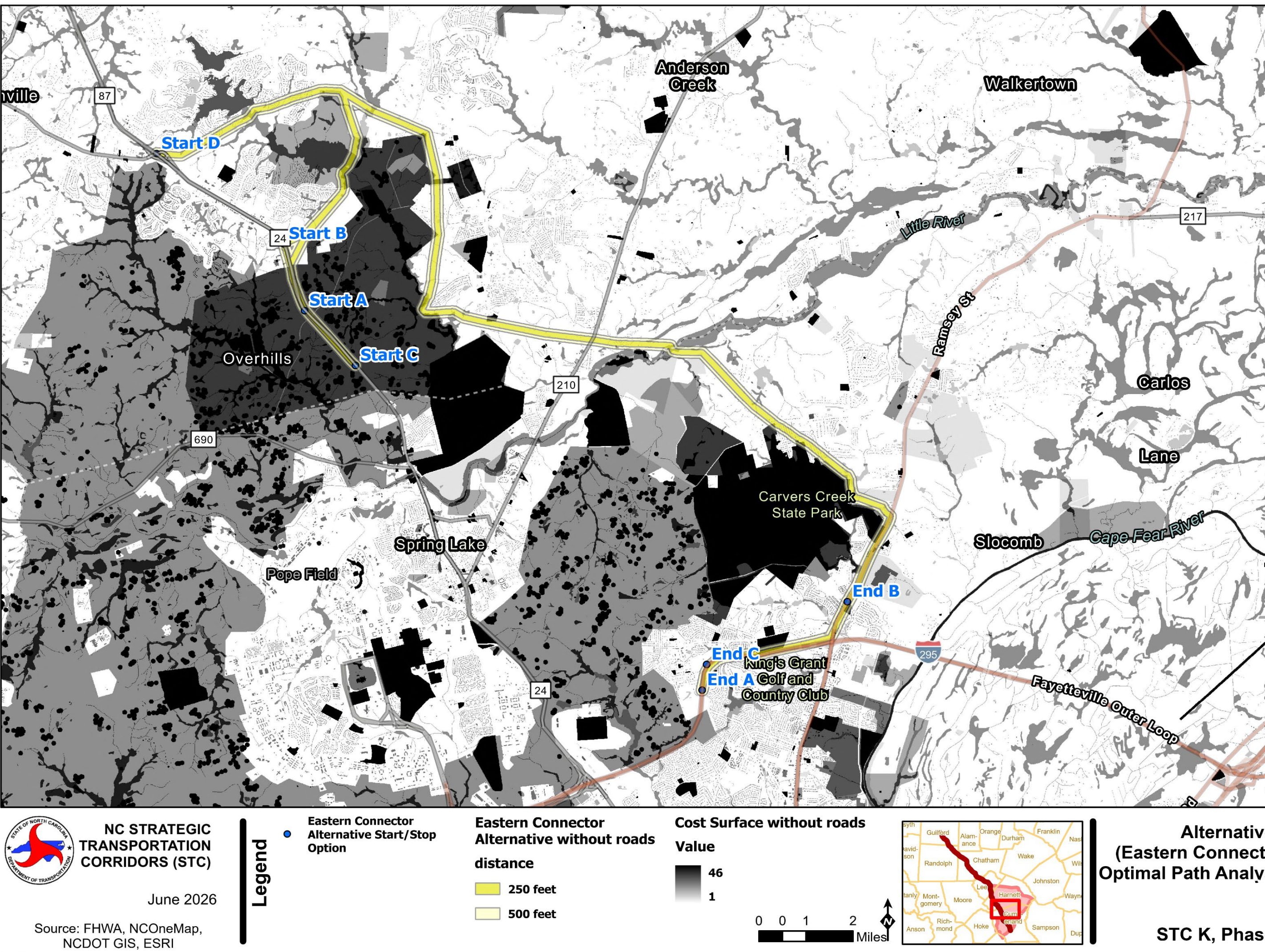
Alternative 2 - Eastern Connector

The Eastern Connector alignment was created using a Geographic Information System (GIS) tool that created an optimal path to minimize overlap with a collection of environmental (protected natural areas, wetlands, floodplains, etc.) and community (historic, school, hospital, etc.) resources.

Design Criteria:

New sections: 2 additional 12' through lanes, 12' paved outside shoulder, 4' paved inside shoulder, 46' depressed median.

Spout Springs to John Ryan Road – Full access control, 70 mph posted, 4 lane
John Ryan Road to Nursery Road – Partial/No access control, 45 mph, 4 lane
Nursery Road to US-401 - Partial/No access control, 55 mph, 4 lane



Alternative 3 - STC K Alignment Improvements

This alternative is the existing corridor, with the addition of STIP project H-0020, which adds 2 lanes to NC 87, north of Fayetteville, between Nursery Road and Manchester Road, increasing the road's capacity from 4-lanes to 6-lanes in this stretch. The remaining existing corridor is a mix of 4/5 lane principal arterials to 2-lane rural highways.



AECOM

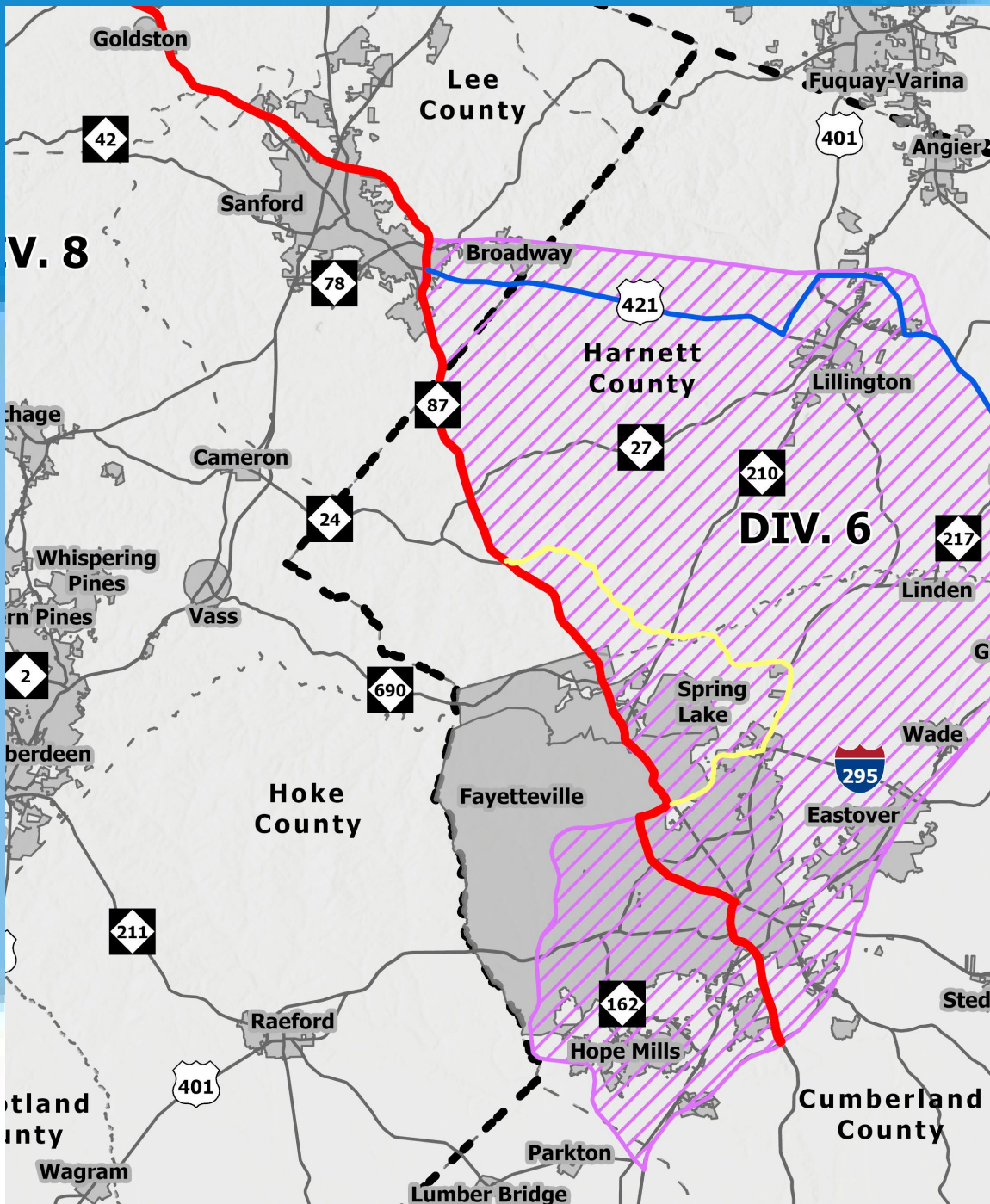
CAMBRIDGE
SYSTEMATICS

Alternatives Analysis Results 1

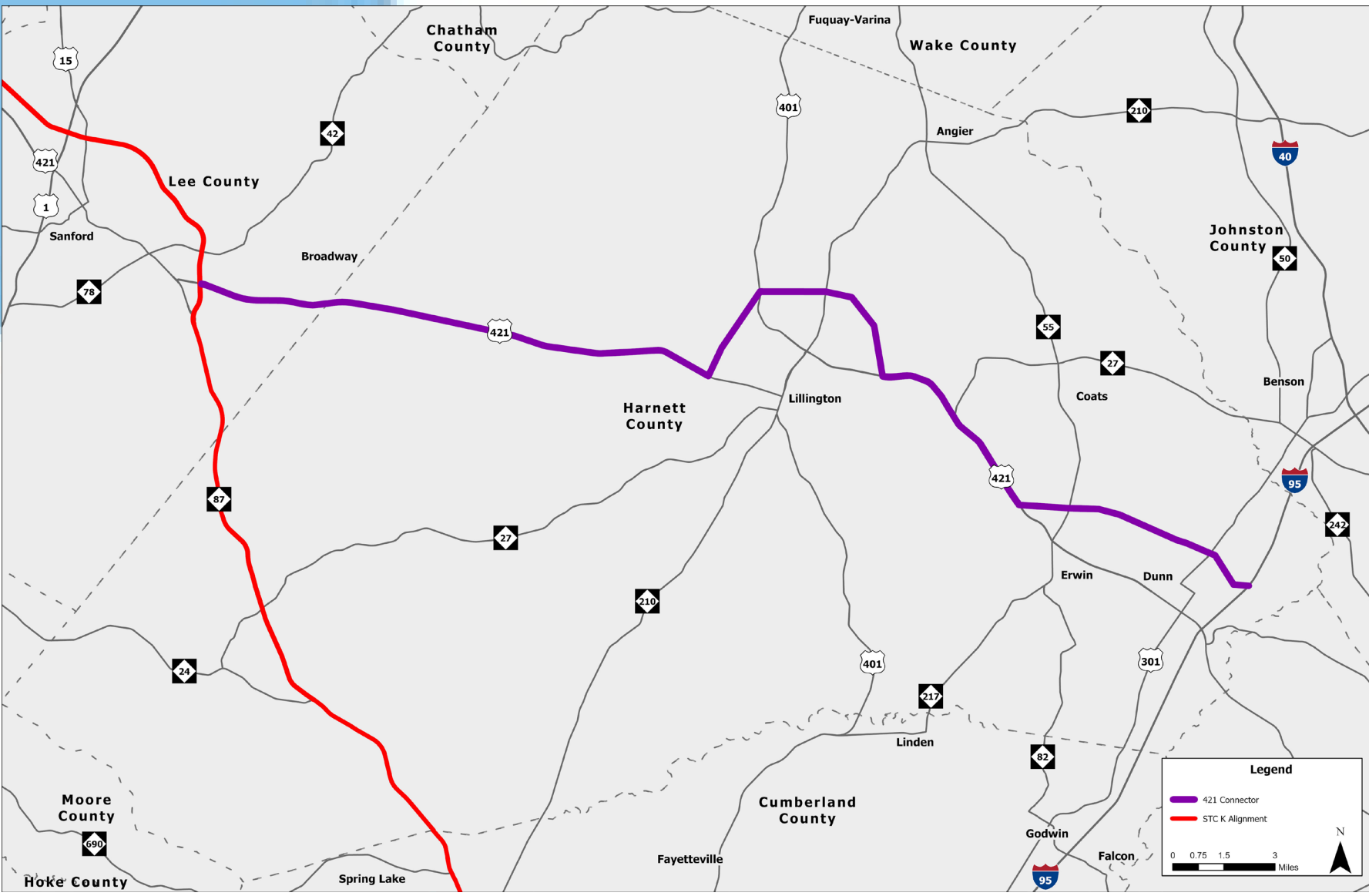
Environmental and Community Resource Analysis Results

Resources within 150 feet of the center line of each alternative alignment were assessed using available GIS data within the Project Study Area, beginning in Sanford at the US 421 Bypass and NC 87 interchange, and ending at I-295 (for Eastern Connector and STC K Alignment Improvements) and I-95 (for the 421 Connector). Additional details can be found in the Draft Master Plan.

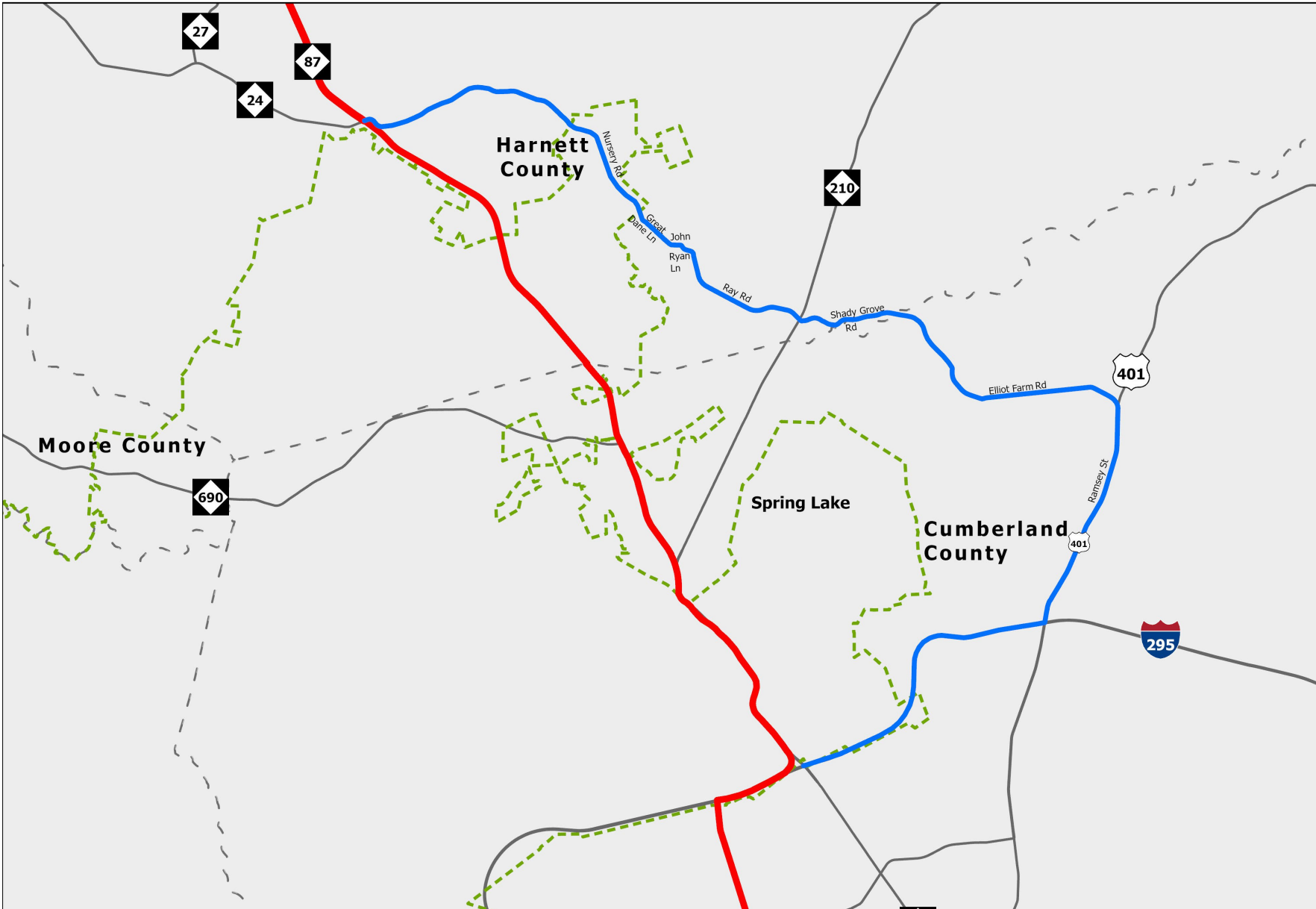
STC K Alignment



421 Connector



Eastern Connector



Resource	Alternative with Greatest Impact		
	STC K Alignment Improvements	421 Connector	Eastern Connector
NCNHP Natural Area	X		
NCNHP Managed Area			X
Red-Cockaded Woodpecker Habitat	X		
Flood Inundation Points			X
100 Year Floodplain		X	
Wetlands		X	
Rivers, streams, and creeks		X	
SHPO National Register Historic Point		X	
SHPO National Register Historic District	X		
Colleges and University		X	
EMS	X	X	
Fire Stations		X	
Schools			X
Government Offices			X
Places of Worship		X	

NCNHP = NC Natural Heritage Program

SHPO = State Historic Preservation Office

EMS = Emergency Medical Services

All three alternatives had no measurable impact on:

- Critical Habitat
- SHPO Local Historic Districts
- Libraries
- Law Enforcement facilities
- Hospitals

Traffic Analysis Results

The traffic analysis covered several performance measures and compared each proposed alternative to the existing STC K corridor. Each assumes the traffic forecast in year 2045.

Crash Rates

- STC K Alignment Improvements experienced the largest increase in the overall injury crash rate (+0.9%), and the Eastern Connector the largest decrease (-9.5%) in the entire study area
- Eastern Connector would reduce the overall injury crash rate the most on the STC K alignment (-36.2%)

Vehicle Miles Traveled

- 421 Connector increased vehicle miles traveled the most across the study area (+17.6 million miles / 2.9%)

Vehicle Travel Time

- 421 Connector reduced the most travel time between Greensboro and Wilmington (-2.6 minutes / -1.3%)
- 421 Connector reduced the most travel time between key destinations (-4.5 minutes / -5.5%)
- 421 Connector reduced the most megasite-related travel time (-2.4 minutes / -3.4%)
- Eastern Connector reduced the most Fort-Bragg related travel time (-1.8 minutes / -2.9%)

New Sidewalks and Bike Lanes

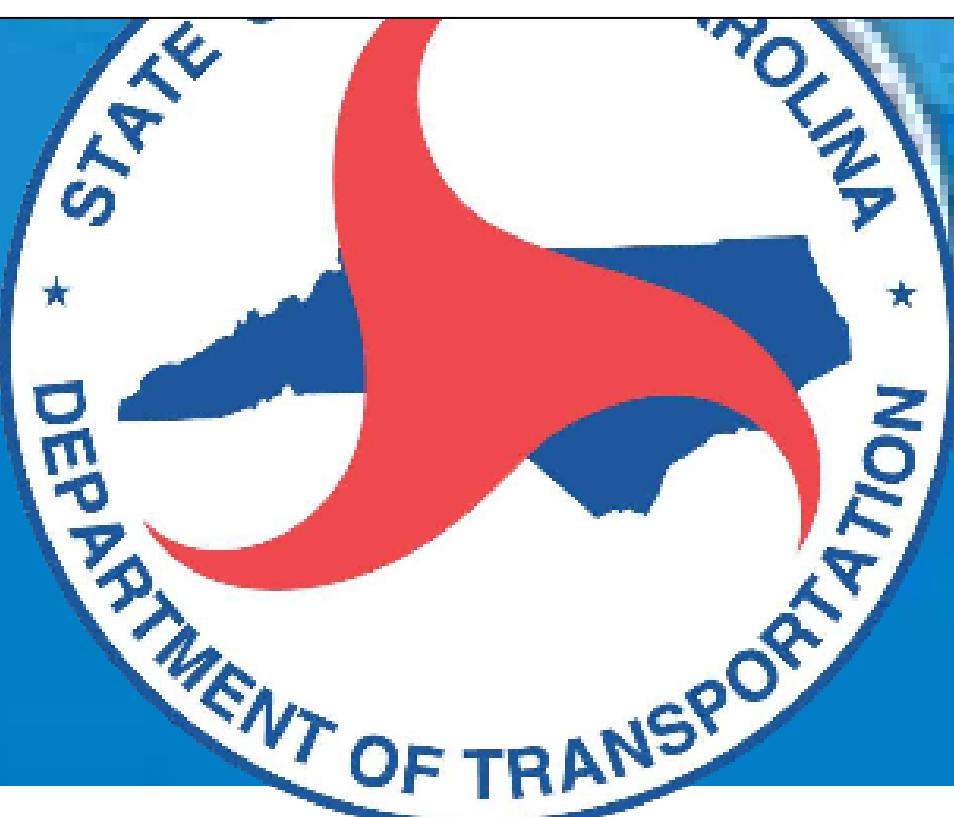
- New bike /pedestrian connections are programmed to be built across STC K Alignment Improvements.

Peak Volume-to-Capacity Ratio

- 421 Connector reduced congestion the most across the whole study area (4%) and within the Sanford-Benson-I-295 regional triangle (-12.4%)
- Eastern Connector reduced congestion the most along NC 87 between Sanford and Fayetteville (-10.9%)

Population and Employment (within 2 miles)

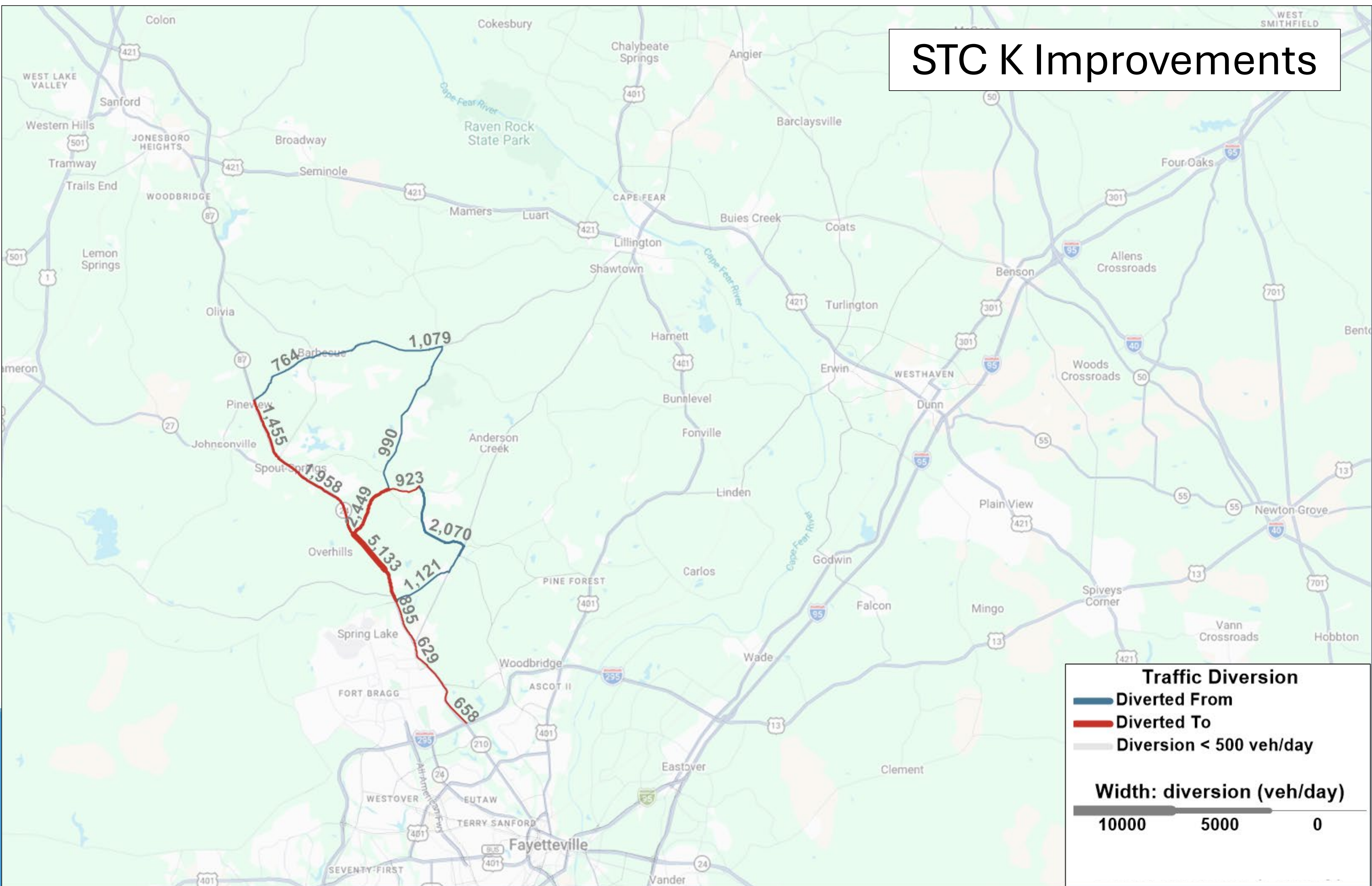
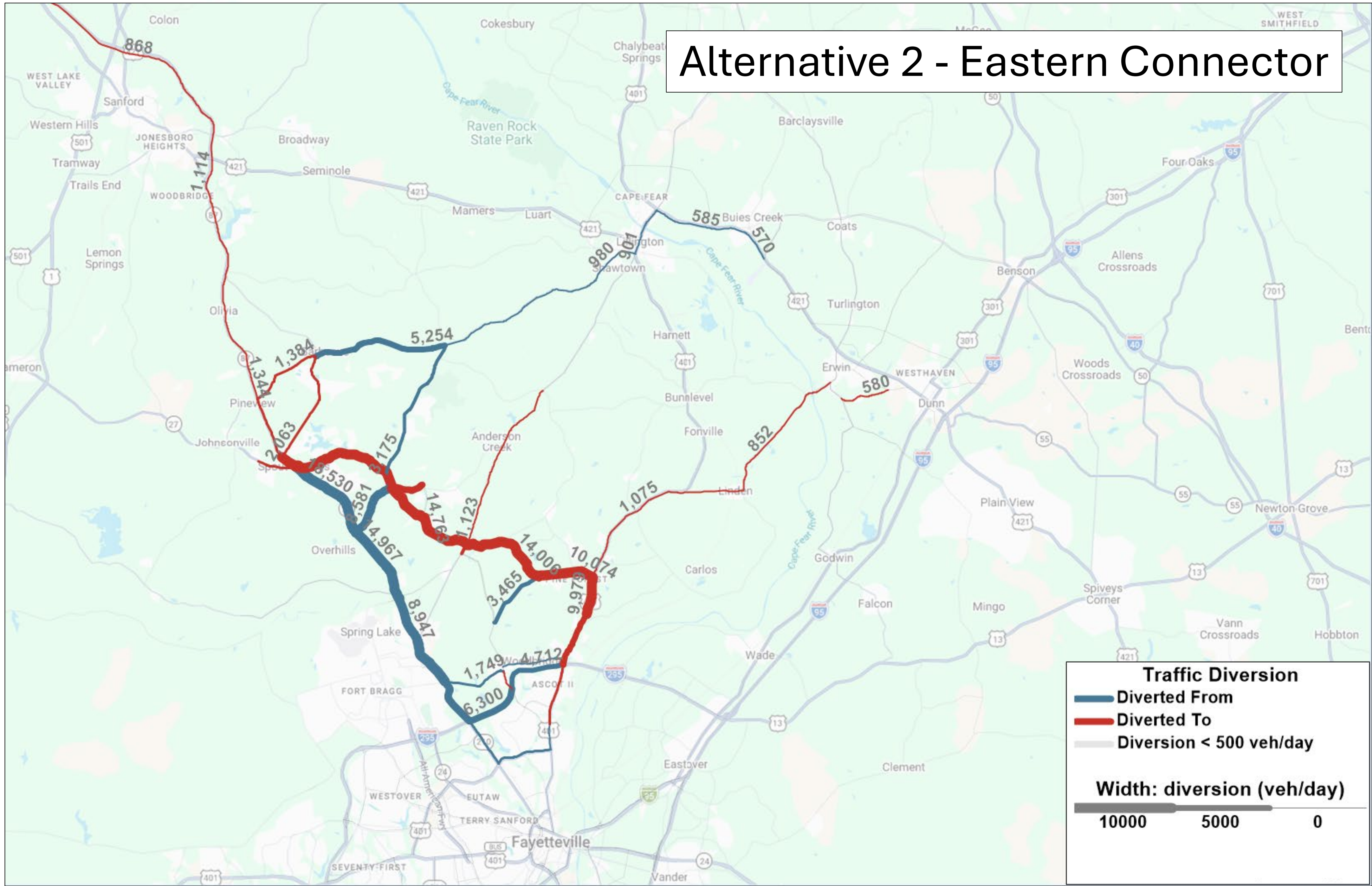
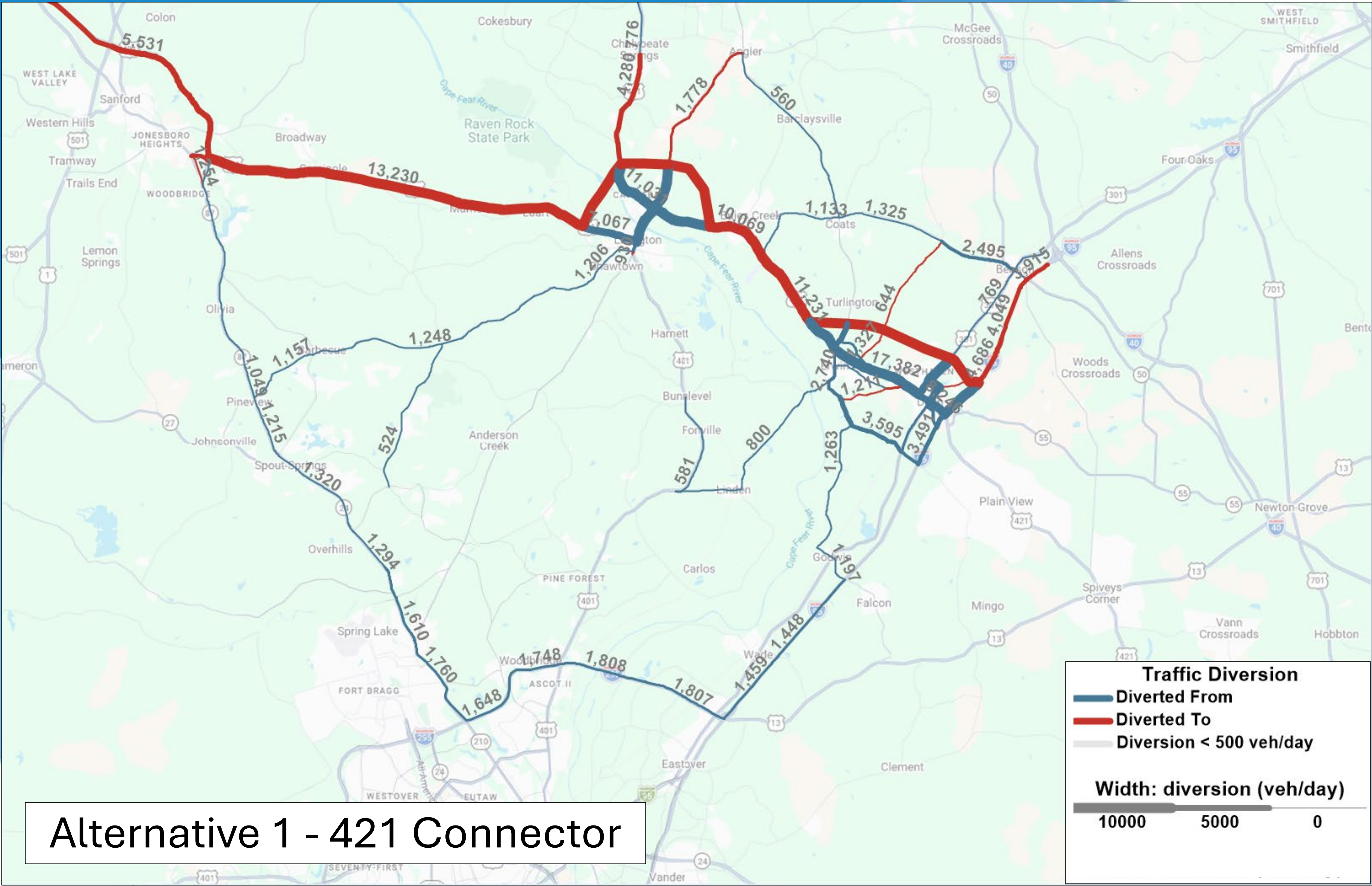
- 421 Connector is expected to experience the greatest population increase (+39%)
- 421 Connector is also expected to experience the greatest employment increase (+36%)



Alternatives Analysis Results 2

Traffic Diversion

The figures below show the amount of traffic (vehicles/day) that would be diverted from the STC K corridor and surrounding roadways to each segment of each proposed 4-lane alternative, compared to the existing STC K corridor. Each assumes the traffic forecast in 2045.



Would the Eastern Connector Function with only 2-lanes (to minimize impacts)?

The consultant team evaluated this question and determined that, **No, the Eastern Corridor needs to be 4-lanes to adequately divert traffic from the existing STC K.**

Conclusions from this analysis:

- The 4-lane Eastern Corridor diverts a substantial amount of traffic from NC 24 and I-295 across the entire length of the corridor, from the northern end through the southern end.
- The 2-lane Eastern Corridor results in traffic diversion that is largely limited to the northern portion of the corridor, primarily along NC 24 and Nursery Rd. South of the NC 24 / Nursery Rd intersection, the diversion effect drops sharply and becomes negligible near the NC 24 / I-295 interchange.
- A direct comparison between the two scenarios shows that the 4-lane scenario produces a broader and stronger diversion effect than the 2-lane scenario.
- Summary: The 2-lane scenario provides limited traffic diversion benefits, both in geographic extent and magnitude, compared to the 4-lane scenario.**



AECOM

CAMBRIDGE
SYSTEMATICS

Public /Agency Involvement (to date)

CSC Meetings

The following meetings were held with members of the Corridor Steering Committee:

- September and October 2024 - Kickoff Meetings: Introduced the study and explained the role of the CSC.
- December 2024 - Individual Planning Organization Meetings: Discussed early findings of the study and decided which organizations to add to the focus group meetings.
- February 2025 - Vision and Performance Measures Meeting: Covered feedback received from the focus group meetings on challenges along the corridor. Recommendations from stakeholders and previous plans were also discussed.
- March 2025 - Alternative Development Meeting: Areas of interest for the alternative and the parameters used to determine the alternative alignments were decided.
- May 2025 – Alternative Changes Meeting: Discussions held with Fort Bragg were summarized for the CSC members. The bypass for the western area of Fort Bragg would replace the potential eastern bypass.
- December 2025 – Alternatives Carried Forward Meeting: The decision to attempt a western bypass was reversed. The two new alternatives, Eastern Connector and 421 Connector, were introduced to the CSC, as well as the methods used to create their alignments.
- March 2026 – MPO/RPO Alternatives Meeting: MPOs and RPOs in the area of project alternatives met to discuss in detail the Eastern and 421 Connector Alternatives.
- May 2026 – Alternatives Analysis Results Meeting: Findings from the environmental and community screenings, and performance metrics for each of the alternatives were discussed.

NCDOT Division 6 Meetings

Two meetings were held with Division 6 to discuss alternative development:

- April 2025 – Meeting: this was an update on alternative development by the team. Fort Liberty and the Division requested expansion of alternative options to the west of Spring Lake, within the military base but avoiding specific military resources. This began a several-month pivot in the project to find paths through the Base that would work with the military.
- February 2026 – Meeting: The team answered the Division’s questions on expected congestion, traffic diversion, and road width of the Eastern Connector. Concerns were expressed with continuing with the Eastern option in its present location. An alternative location (not on existing roads) located closer to Spring Lake was preferred.

Fort Bragg Meetings

Several meetings were held with members of the military to discuss how potential alternatives could be located around the base:

- March 2025 – Meeting: Potential areas for the alternatives were presented, and previous studies on access to the western side of the base were discussed. Fort Bragg suggested the alternative be located west of the base instead of east of the base.
- April 2025 – Meeting: An alternative that would cross Harnett County was presented to the military staff. The decision was made to abandon the eastern bypass alternative option because of environmental challenges and decreased traffic in the area.
- June 2025 – Meeting: The military decided to scrap the western bypass option; there were sensitive equipment and sites used by the base in the area that would be difficult to circumvent.

Focus Group Meetings

Three focus group meetings were held in January and February 2025 to provide information about the study and gather initial thoughts about the project from the attendees. The three meetings included:

- Local governments north of Sanford
- Local governments in Sanford and south of Sanford
- Economic development and conservation groups between Greensboro and Fayetteville.

Agency Comments

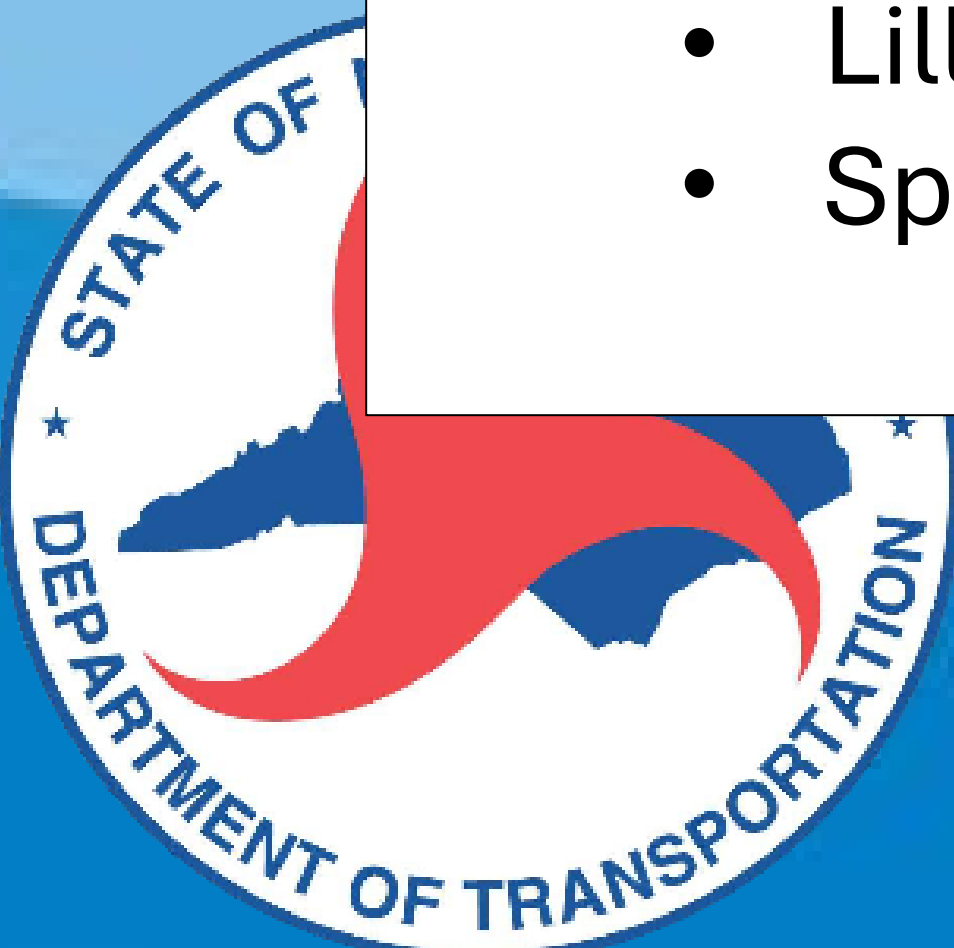
Letters were sent to state and federal environmental agencies in Dec 2024 requesting initial study scoping comments.

- SHPO indicated it was too early to comment, given there is no definitive project area yet.
- Fort Liberty provided a map of suspected cemeteries and other cultural resources in the study area.
- NCWRC indicated that avoiding red-cockaded woodpeckers would be critical to eventual USFWS project approval.
- NFS indicated there were no US forest lands near the project nor did they need to be consulted in the future for this project.
- USFWS indicated that, depending upon alternatives selected, there is potential to affect multiple federally listed species, including the federally threatened red-cockaded woodpecker (RCW) in and adjacent to Fort Liberty.

Local Government Meetings

Meetings were held with local governments to learn about the study and ask questions:

- Lillington and Harnett County – 8/4/26
- Spring Lake – 9/16/26



AECOM

CAMBRIDGE
SYSTEMATICS

Conclusions and Next Steps

- While a consistent transportation vision for Phase 1 of STC K was developed, there is no resulting preferred alternative to the existing corridor where alternatives were analyzed.
- The complexity of local needs and regional needs of connectivity are beyond the scope of an STC Master Plan study.
- The information in this master plan should be referenced as local and regional transportation plans are developed.
- If an alternative to the existing STC K Phase 1 alignment is determined to meet local needs better while also meeting regional transportation needs, the STC K can be updated from the existing alignment.
- As updates are made to the MTPs for FAMPO and CAMPO, and the CTPs for Chatham County, Harnett County, Randolph County, and Lee County, local input, along with this Master Plan, can inform selection of a preferred alternative.

Next Step Schedule

Milestone	Date
Comments on Draft Master Plan Due	November 11, 2026
Final CSC Meeting	December 2026
Final Master Plan Published	January 2027

Share Your Input!

- Make sure your voice is heard by filling out a comment sheet provided today. You can also complete this sheet online – just scan this QR Code.
- For more information on how to review the full Master Plan and the appendices, please contact Pam Cook (prcook@ncdot.gov).

