

Joint Meeting of the MPO Policy Boards

January 30, 2020



Joint MPO Transportation Policy Priorities

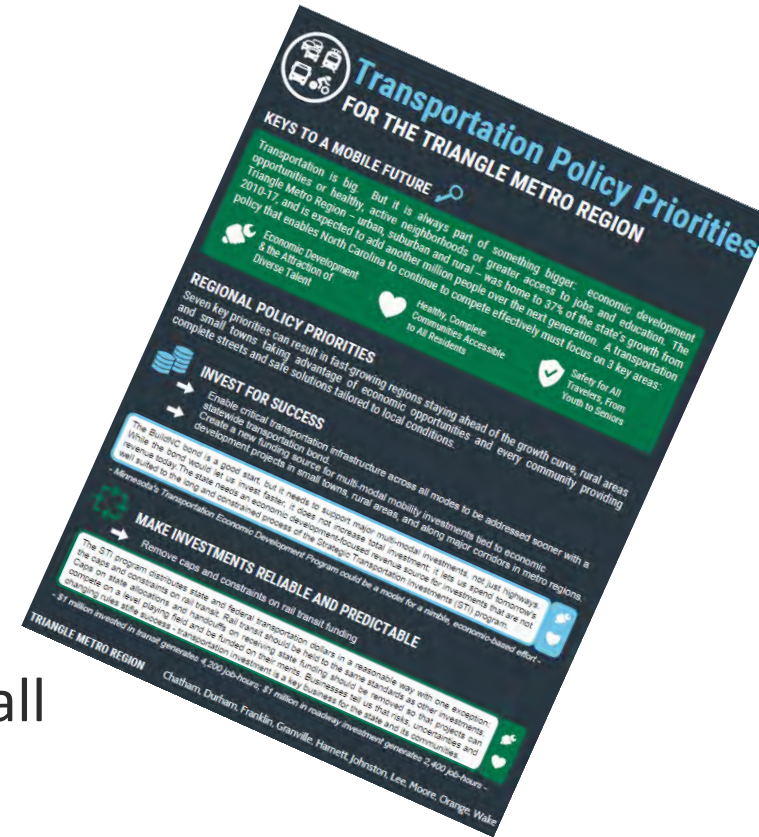
Joint MPO Policy Boards

January 30, 2020



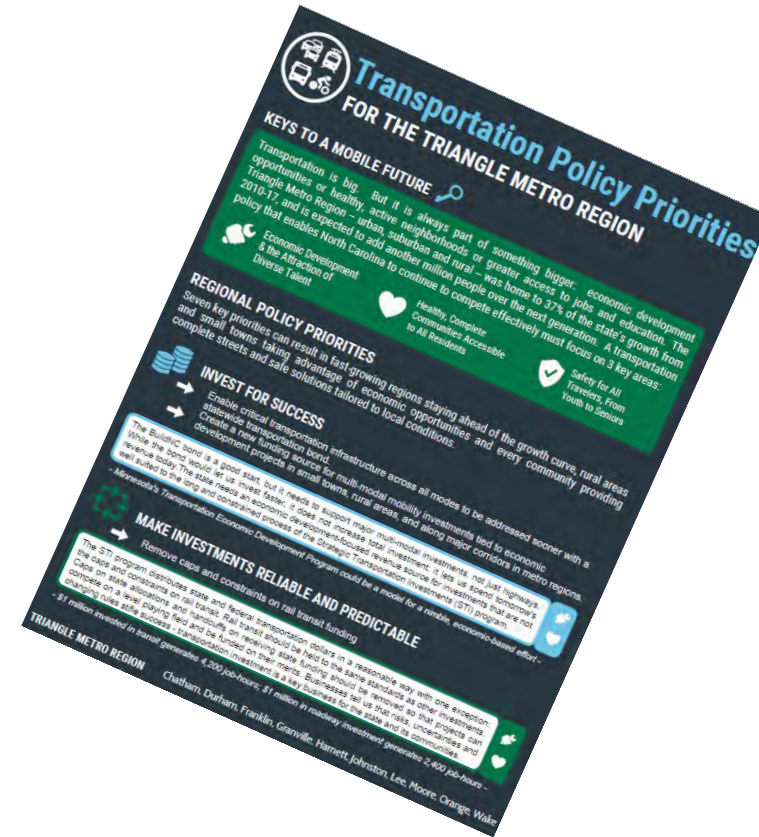
Triangle Regional Transportation Policy Priorities

- ❖ Invest for success
- ❖ Make investments reliable & predictable
- ❖ Enable critical corridor investments to be more cost effective
- ❖ Remove funding barriers for small towns and rural areas in division with large MPOs



Triangle Regional Transportation Policy Priorities

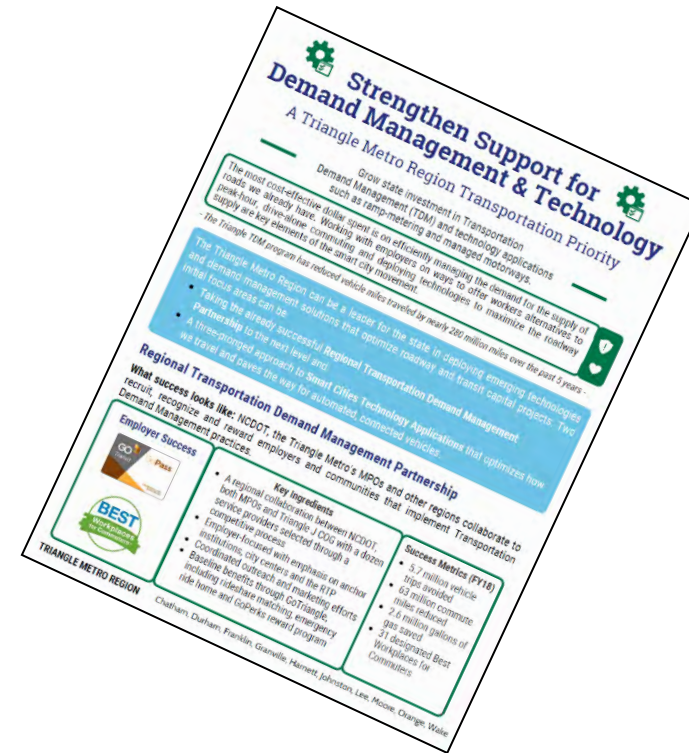
- ❖ Make NC a leader in active transportation investments
- ❖ Strengthen support for demand-management and technology
- ❖ Recognize statewide projects in all modes



Strengthen Support for Demand Management and Technology

❖ Demand Management

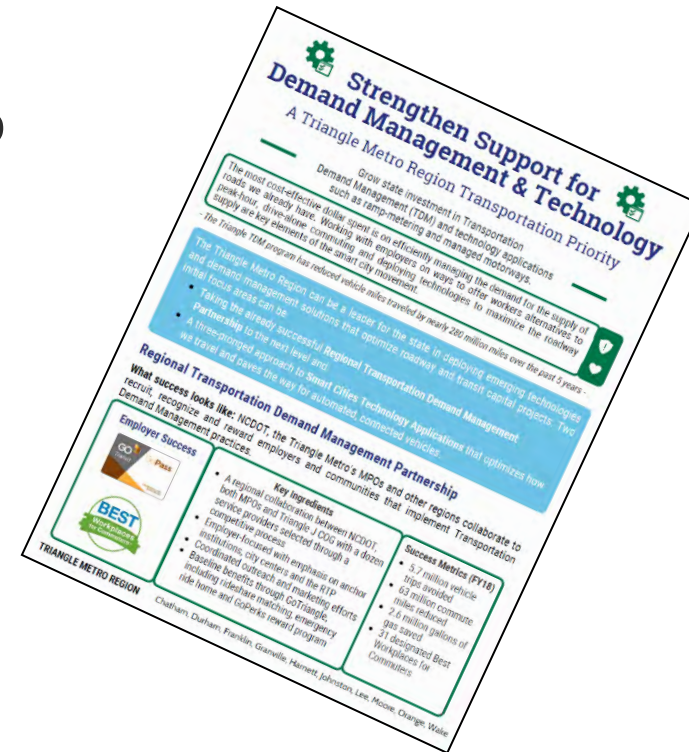
- ❑ Manage demand to more efficiently use existing roads
- ❑ Promote collaboration - NCDOT, MPOs, TJCOG and local service providers
- ❑ Engage employers and provide guidance and tools
- ❑ Work with state leaders to reinstate ability to adopt local ordinances



Strengthen Support for Demand Management and Technology

❖ Smart City Technologies

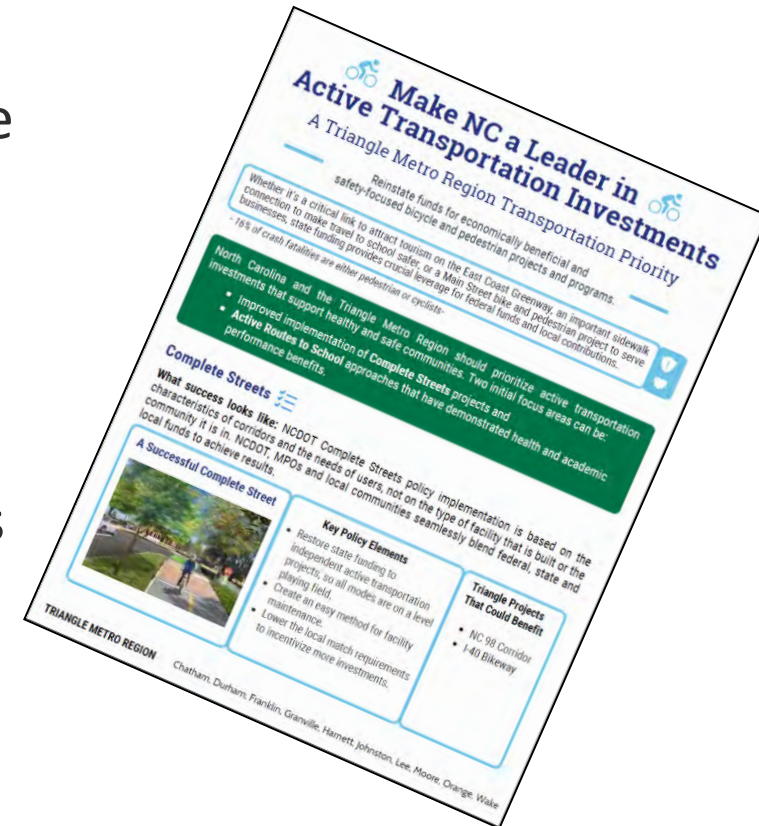
- ❑ Active Freeway Management to reduce delay and increase reliability
- ❑ Traffic Signal Systems into integrated, community-wide network
- ❑ Mobility in Regional Hubs such as city centers and universities, using technology, pricing, parking strategies



Make NC a Leader in Active Transportation Investments

❖ Complete Streets

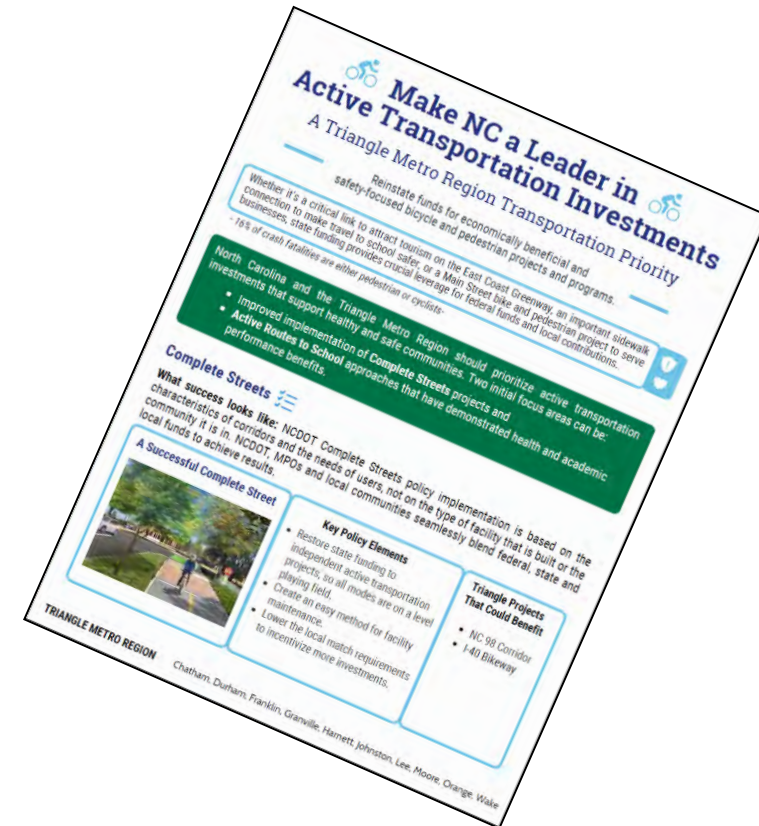
- ❑ Restore state funding for standalone bike and pedestrian projects
- ❑ Clarifies responsibilities for facility maintenance
- ❑ Lower the local match requirements to incentivize more investments
- ❑ Prioritize side paths for busy, high-speed roads



Make NC a Leader in Active Transportation Investments

❖ Safe Routes to Schools

- ❑ Impacts on learning and health
- ❑ Improves academic performance and classroom behavior
- ❑ NCDOT and MPOs can use flexible funding for SRTS investments and programs
- ❑ Site selection and design efficiencies / cost savings



NCDOT Complete Streets 2.0

❖ For STIP Projects:

- ❑ Commits NCDOT to pay full cost if bike/ped facility in a plan
- ❑ Requires Complete Streets Project Sheet with SPOT submission
- ❑ Recognizes NACTO and other design guidance
- ❑ Releasing Implementation Guide and FAQs soon (including maintenance questions)



Next Steps for Our Priorities?

(not asking to decide today, but to give guidance to staff)

- ❖ Develop more detail on other existing policy priorities?
- ❖ Consider additional policy priorities for the region?
- ❖ Retire any existing priorities?
- ❖ Other Steps?



Metropolitan Transportation Plans

Framework

Joint MPO Policy Boards

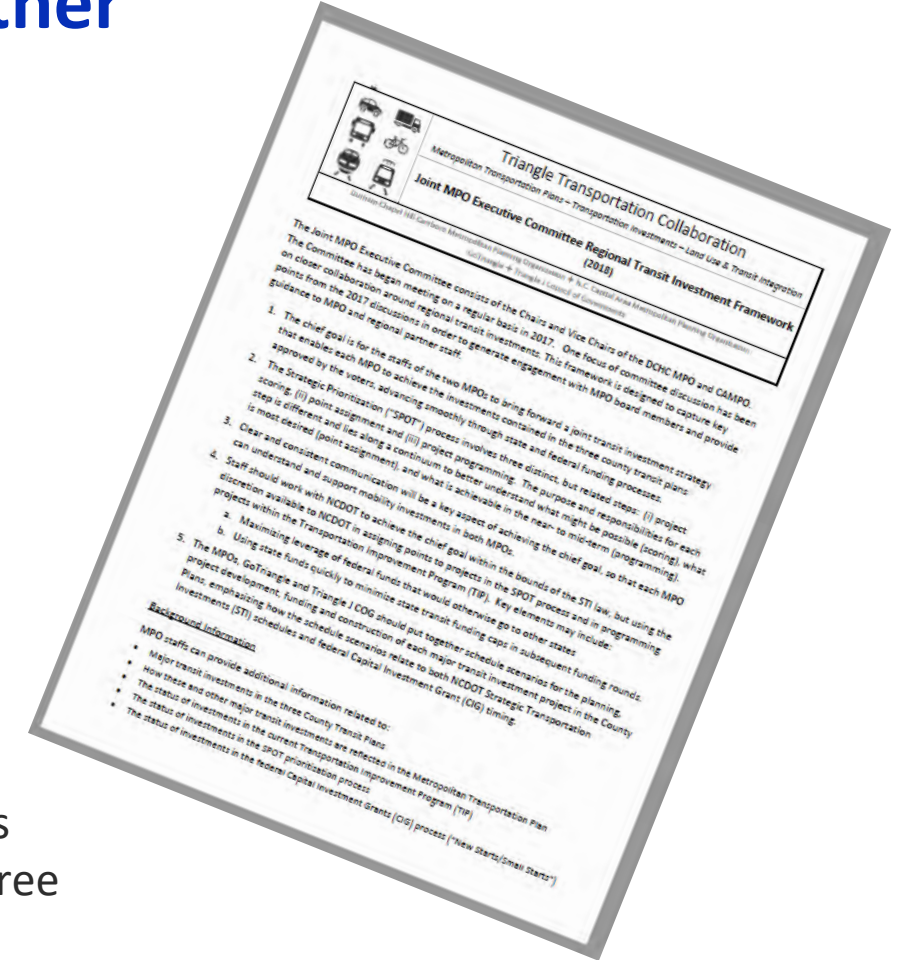
January 30, 2020



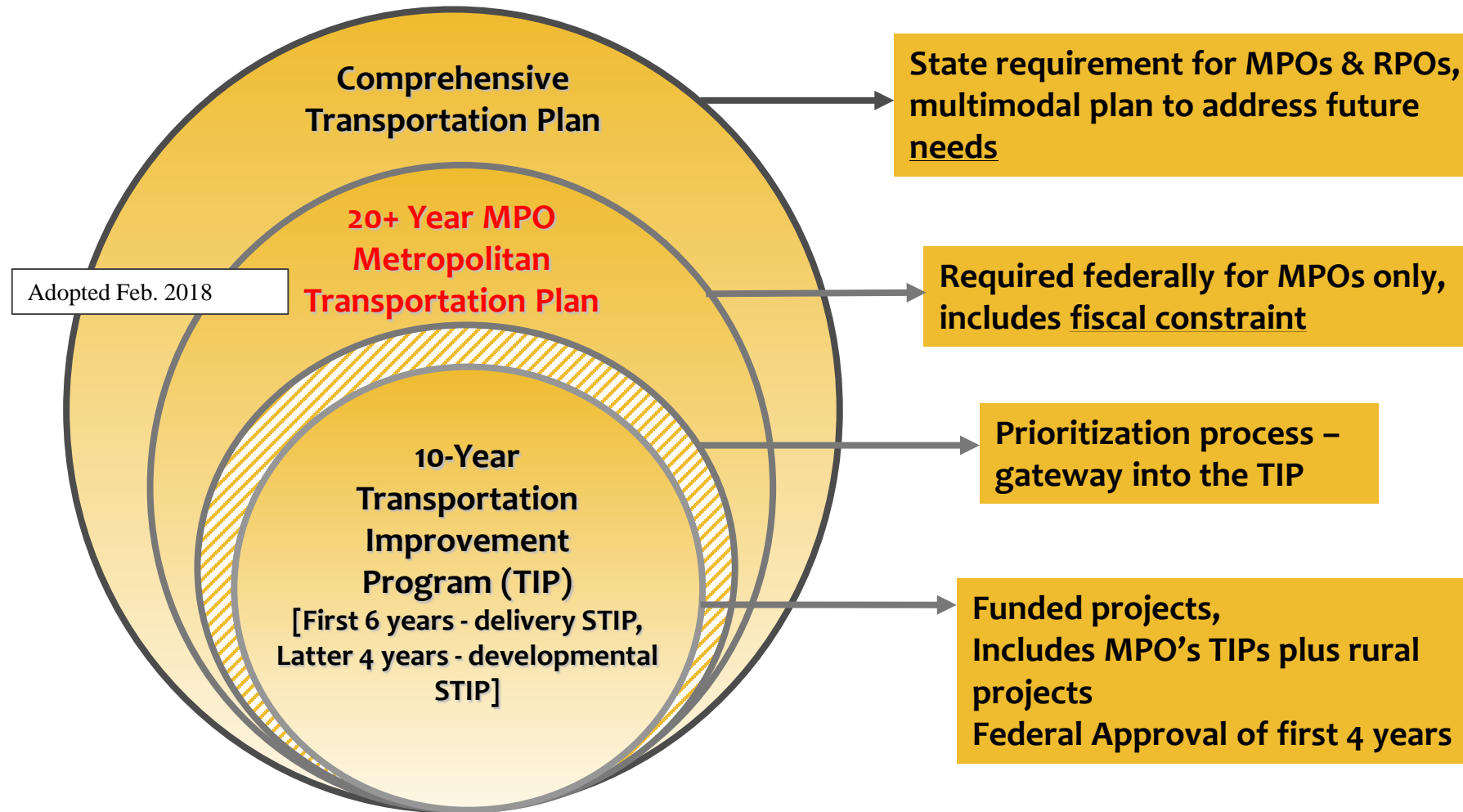


How We Plan Together

- ❖ Joint MPO Executive Committee (MPO chairs & vice-chairs, technical committee chairs, lead staff)
- ❖ Commitment to closer collaboration and clearer communication at policy, technical and staff levels
- ❖ **Joint meetings of MPO Policy Boards**
- ❖ Joint documents:
 - ❑ Policy Priorities
 - ❑ Joint Executive Committee Transit Investment Framework
 - Chief Goal: “joint transit investment strategy that enables each MPO to achieve the investments contained in the three county transit plans approved by the voters, advancing smoothly through state and federal funding processes.”



What We Plan Together

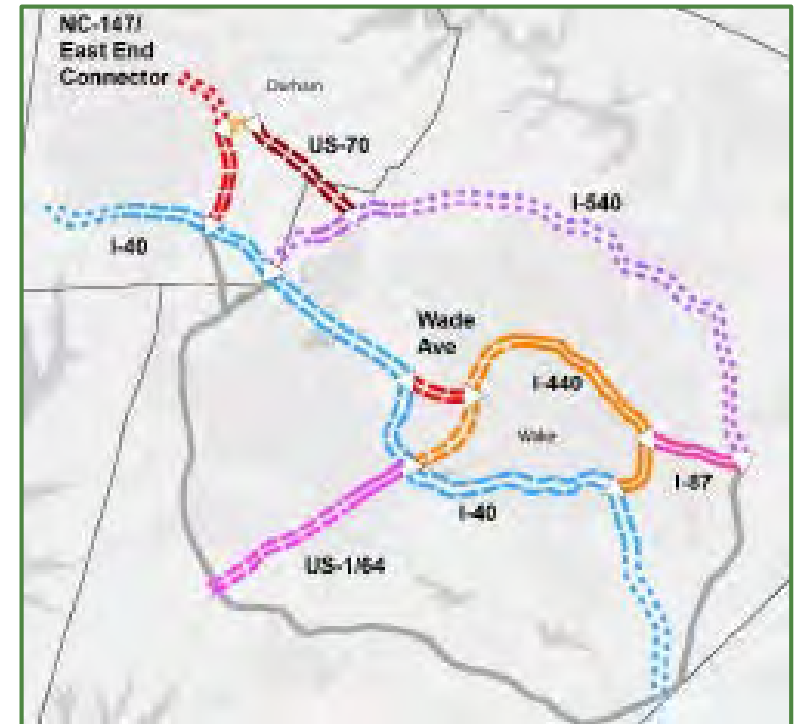


Regional Collaboration

- ▶ TRM (Triangle Regional Model)
 - Forecasting tool developed and managed by the two MPOs, GoTriangle, and NCDOT

- ▶ Coordination for NCDOT Prioritization
 - Limited State/Federal funding
 - MPOs/RPOs/NCDOT Divisions

- ▶ Coordinated Special Studies
 - Corridor Studies
 - Triangle Regional Freight Plan – Feb 2018
 - Triangle Strategic Tolling Study – Oct 2019
 - Managed Motorways – I-6001 *ongoing*
 - Triangle Region ITS Deployment Plan - *ongoing*



Major Transit Infrastructure

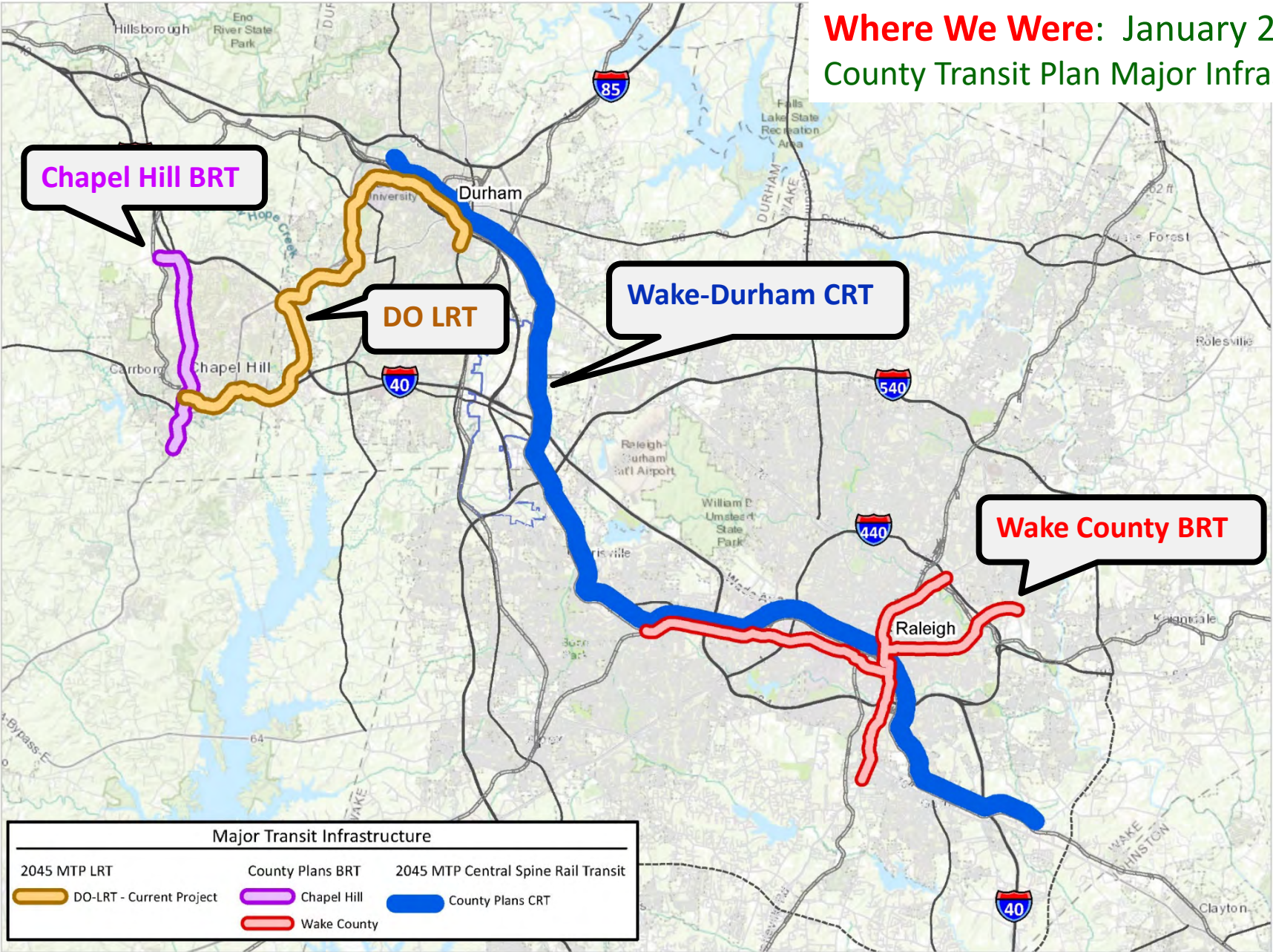
Status in County Plans & 2045 Metropolitan Transportation Plan

Joint MPO Policy Boards

January 30, 2020

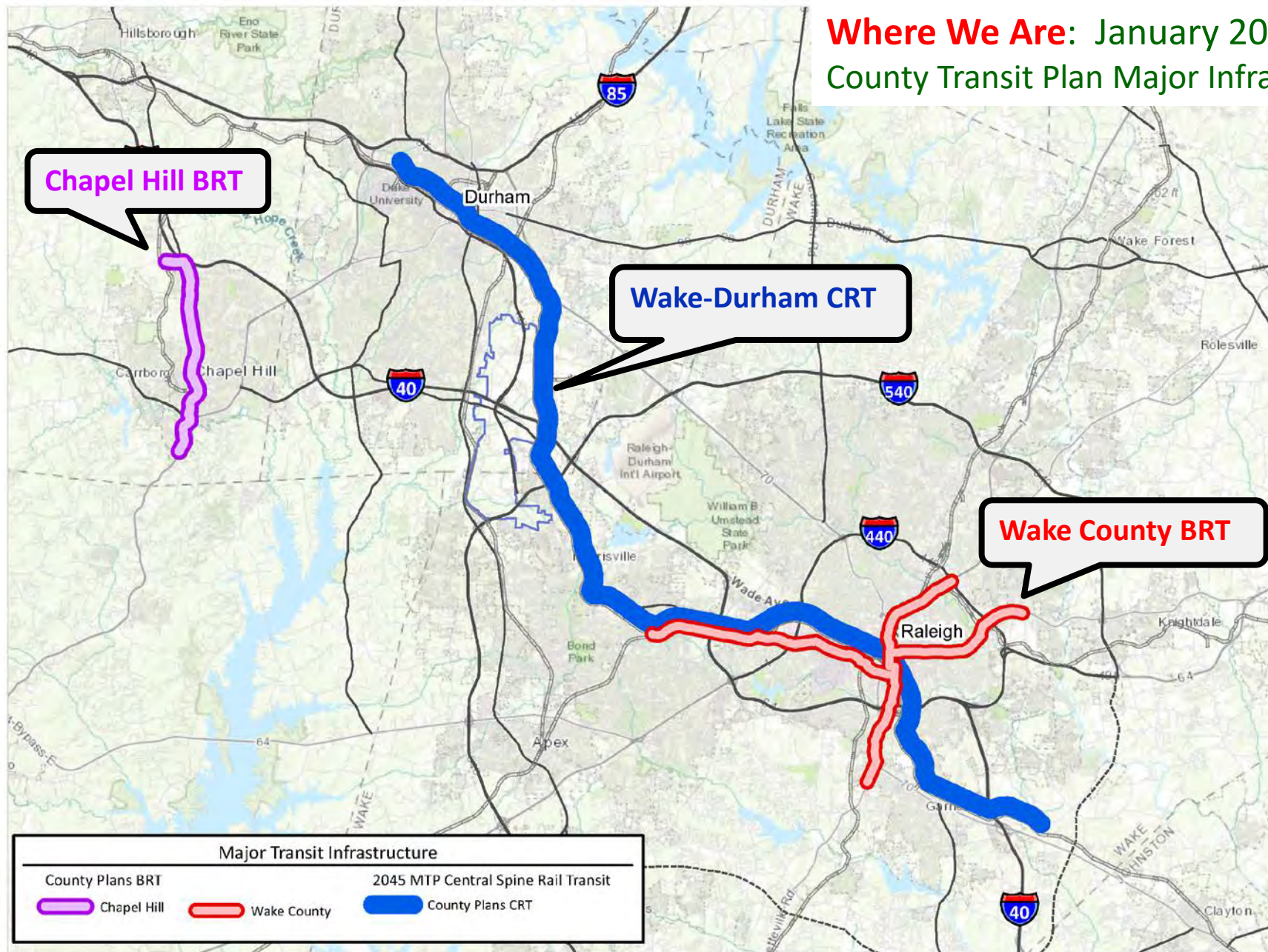


Where We Were: January 2019
County Transit Plan Major Infrastructure

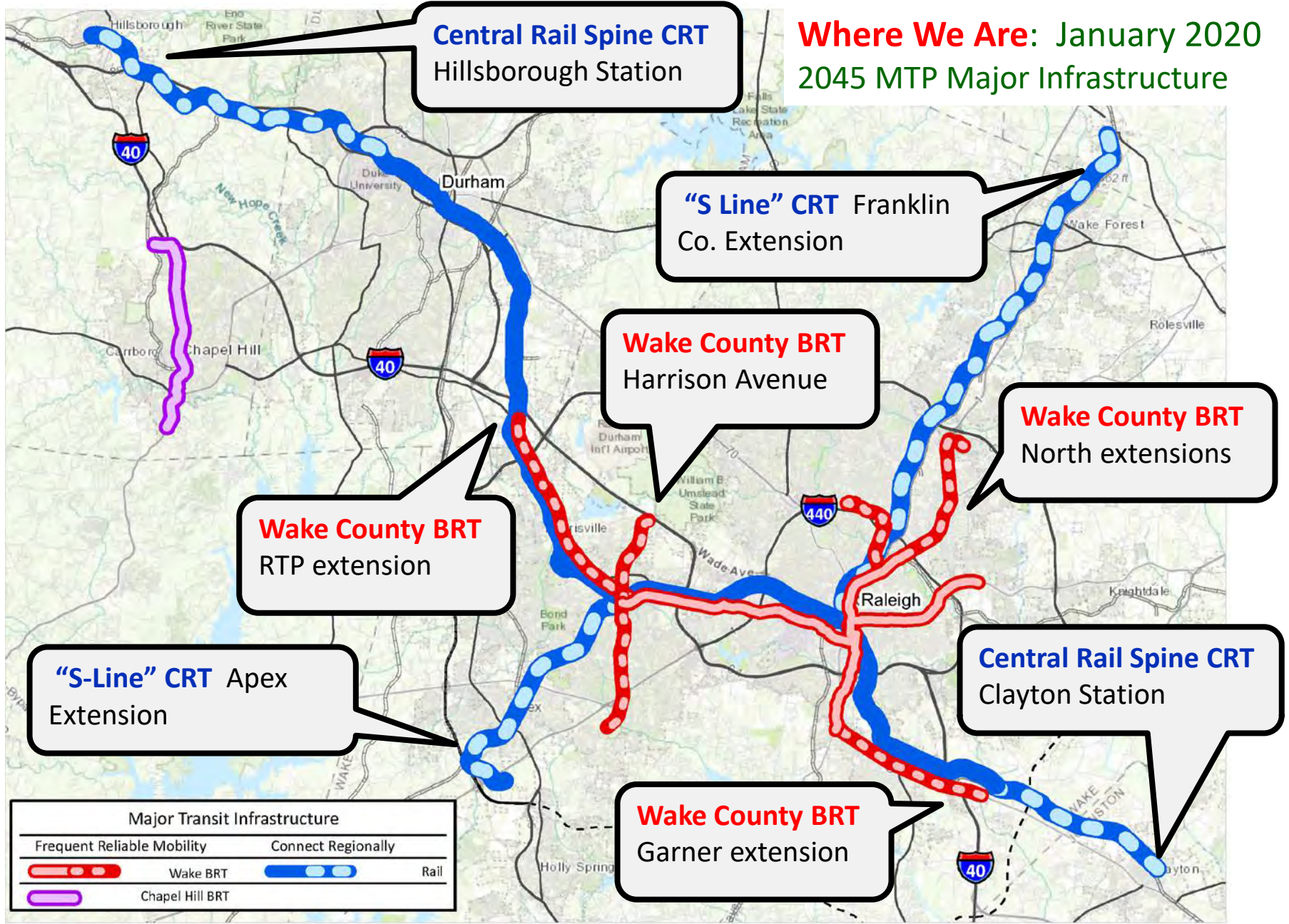


Where We Are: January 2020

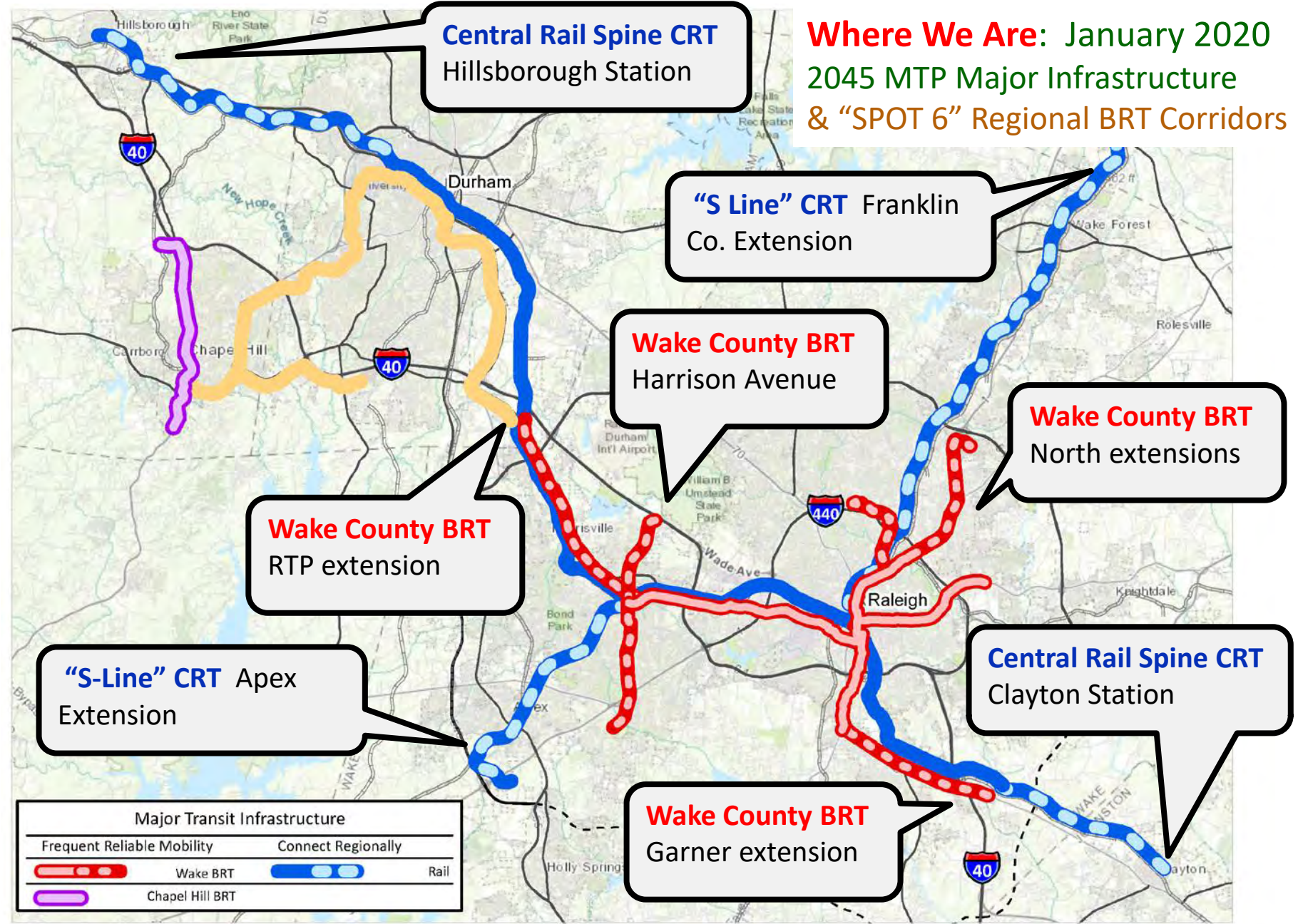
County Transit Plan Major Infrastructure



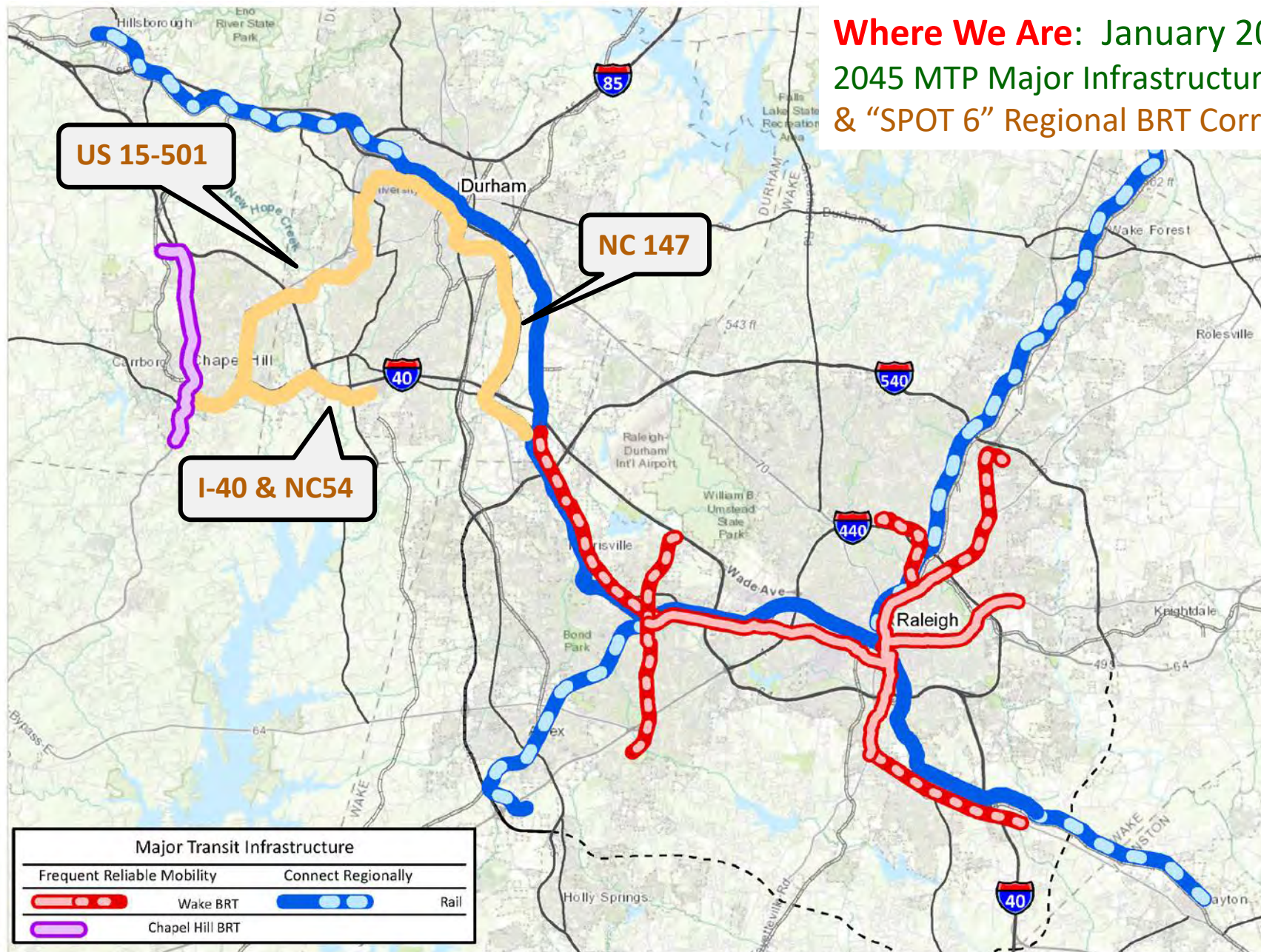
Where We Are: January 2020
2045 MTP Major Infrastructure



Where We Are: January 2020
2045 MTP Major Infrastructure
& “SPOT 6” Regional BRT Corridors



Where We Are: January 2020
2045 MTP Major Infrastructure
& "SPOT 6" Regional BRT Corridors



“Spine Corridor” Commuter Rail

Joint MPO Policy Boards

January 30, 2020



Existing Rail Corridor

Freight Rail – Heavy Rail

- Freight operation constitutes the movement of goods and cargo in freight rolling stock (e.g., boxcars, flatcars), which are typically hauled by diesel-powered locomotives.
- The North Carolina Railroad Company (NCRR) owns the 317-mile corridor and Class I freight rail provider Norfolk Southern operates and maintains the railroad through a long-term lease with NCRR



Intercity Rail – Heavy Rail, Shared Track

- Intercity transit mode services covering longer distances than commuter or regional trains
- The main provider of intercity passenger rail service in the U.S. is Amtrak
- Four intercity passenger service routes run on the North Carolina Railroad including the Carolinian and the Piedmont which are sponsored by NCDOT



The North Carolina Railroad is built for the service it currently offers

Added capacity, including commuter rail, would require additional infrastructure, including added tracks

Previous Study: CRT Major Investment Study

This study of the 37-mile corridor completed in May 2019 showed:

- Taking commuter rail in the corridor would be faster and more reliable than driving at rush hour or taking a bus.
- The operating scenario providing service every 30 minutes in peak periods and limited service midday and evenings was the most productive among the scenarios studied.
- 16 potential candidate station zones would be appropriate for further analysis
- Ridership results would be consistent with those from similar commuter rail systems.
- Additional analysis would be needed to refine ridership estimates and to identify infrastructure required to support any commuter rail operating plans.

Current Study: Greater Triangle Commuter Rail Study

What do we hope to take away from this study?

- Provide elected officials the data needed to decide whether to take the project to the next phase of development
- Examine scenarios adding Johnston County/Selma and Orange County/Mebane
- Refresh and update ridership estimates, infrastructure assumptions, and cost estimates that were included in prior high-level planning studies
- Identify additional activities necessary before initiating project design and implementation

Preliminary Findings of the In-Progress Study



- Further detailed railroad capacity modeling would be needed to confirm infrastructure requirements
- Cost estimates require further definition
 - Cost estimates are planning-level
 - No engineering has been performed yet as part of this study
 - Cost estimates would be refined once preliminary engineering work and railroad capacity modeling is completed
- Ridership estimates would require further refinement

This is a Preliminary Feasibility Study. All information is subject to refinement as additional phases of study and design are completed.

All Commuter Rail Scenarios Studied Necessitate Another Track

Existing/Planned Traffic

- 27 freight and intercity passenger trains per day

Scenario 1: Three round trips in the peak periods

- +14 commuter trains per day (7 round trips)

Scenario 2: Five round trips in the peak periods

- +24 commuter trains per day (12 round trips)

Scenario 3: Eight round trips in the peak periods

- +40 commuter trains per day (20 round trips)

To be eligible for federal funding, project must score a Medium rating

End Points	Weekday Round Trips	Service Level	Expected Score	“Upside” Score	“Downside” Score
Mebane-Selma	20	8-2-8-2	Medium-Low	Medium	Medium-Low
Mebane-Selma	12	5-1-5-1	Medium-Low	Weak Medium	Medium-Low
Mebane-Selma	7	3-1-3	Medium-Low	Weak Medium	Medium-Low
Durham-Garner	20	8-2-8-2	Medium	Medium	Medium-Low
Durham-Garner	12	5-1-5-1	Weak Medium	Weak Medium	Medium-Low
Durham-Garner	7	3-1-3	Weak Medium	Weak Medium	Medium-Low
Hillsb.-Clayton	20	8-2-8-2	Weak Medium	Medium	Medium-Low
Durham-Clayton	20	8-2-8-2	Medium	Medium	Medium-Low

Note: Scenarios rated as “Weak Medium” are projected to score at the low end of the Medium range, meaning that if any single component score is reduced, the overall score would fall below the eligibility requirements



Critical Next Steps

Public meetings with County boards and MPOs

- Local decision-making on next steps

Memorandum of Understanding for next phase of work (early project development activities):

- NCRR, GoTriangle, Counties, MPOs, NCDOT

Focus on Risk Management

- **Requirements Risk:**
 - Difficulty of succinctly and fully developing project requirements
 - Differences in project stakeholder goals
- **Design Risk:**
 - Design-related assumptions change
 - Situations where unknown factors cause designs to change
- **Market Risk:**
 - Open market pricing and/or contract packaging strategies
- **Construction Risk:**
 - Site activities
 - Coordination of contractors

Next Phase of Study: Key Focus Areas

Local Engagement: Build a foundation for sustained regional cooperation

Further Refine Project Concept: Define infrastructure and frequency of trains

Metrics: Provide monetary costs, non-monetary costs, and benefits

Railroad Buy-in: Rail network modeling, determine necessary requirements

Capacity Building: Develop management plan and procure consultant support

FTA Funding Eligibility: Ridership modeling and economic development potential

Cost Share: Obtain commitment of 100% of non FTA funds

MPO Policy Board Member Discussion

- What are you hearing in your community about Commuter Rail?
- What questions do you have that you'd like more information about?
- What initial thoughts do you have about Commuter Rail investment?



Joint MPO Meeting – CAMPO – DCHC | January 30, 2020

Wake Bus Rapid (BRT) Update

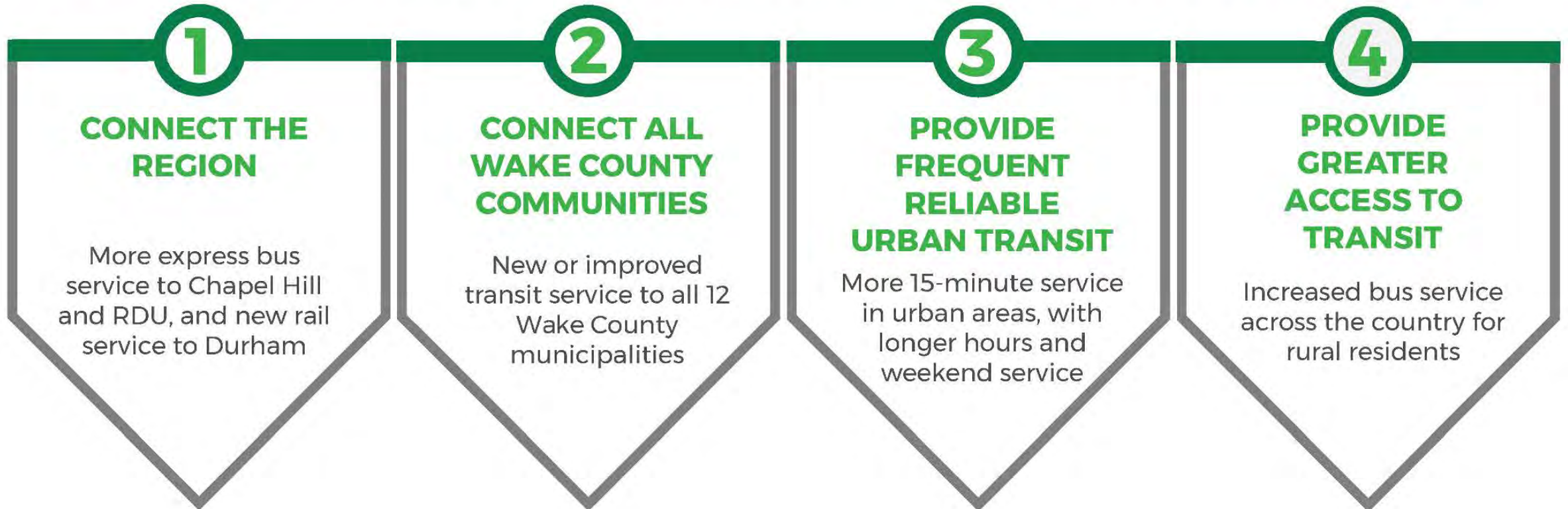
- Wake Transit Plan
- Wake BRT Program Update
- Wake BRT: New Bern Avenue
- Next Steps/Future Public Engagement



Wake Transit Plan

Four Big Moves

The Wake County Transit Plan Includes Four **“BIG MOVES”**





Project Status

Wake BRT: Northern Corridor

Project Milestones:

- Initiate route selection in Fall 2020

Wake BRT: Western Corridor

Status:

- Currently working on route selection

Project Milestones:

- Initiate Project Development in Summer 2020

Wake BRT: New Bern Avenue

Status:

- Currently in design phase (10%)

Project Milestones:

- 30 % design by Spring 2020
- Final design by Summer 2021
- Revenue service by end of 2023

Raleigh BRT: Equitable Development Around Transit

Status:

- Creating policy for land use along all BRT corridors
- Final report, proposed regulatory changes in Spring 2020

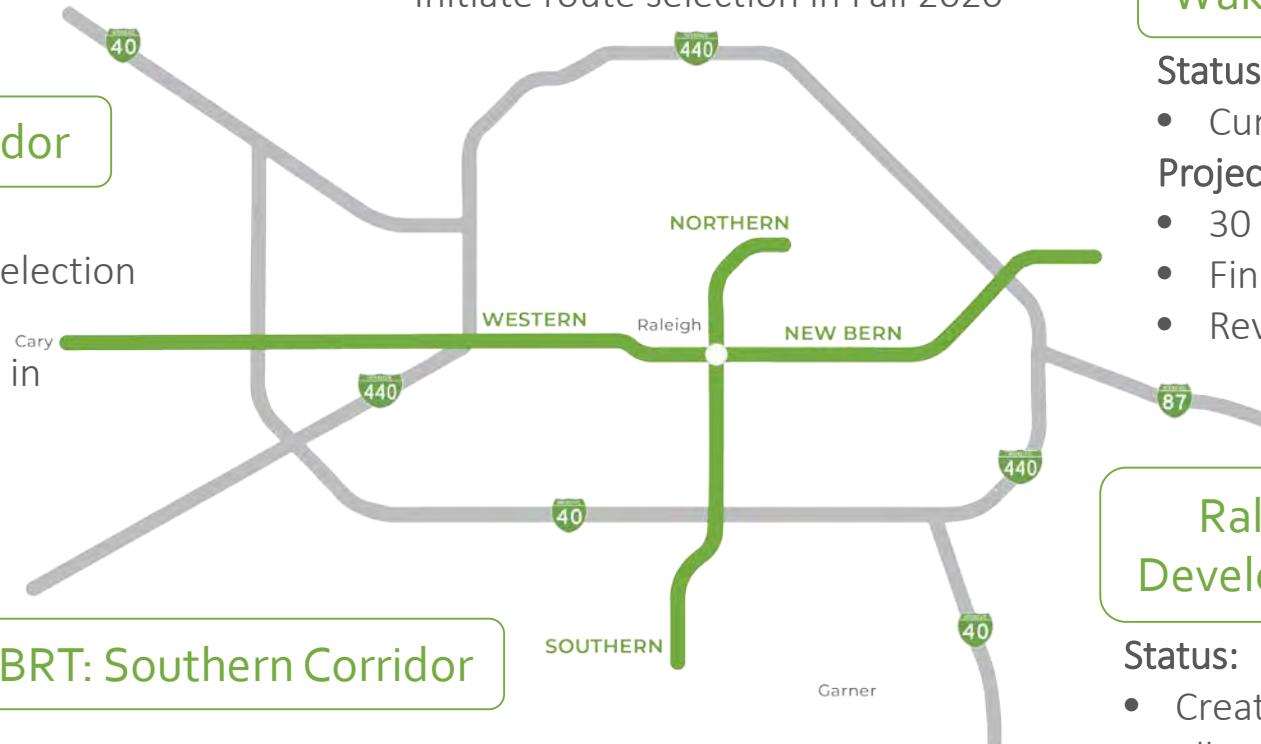
Wake BRT: Southern Corridor

Status:

- Currently working on route selection

Project Milestones:

- Initiate Project Development in Summer 2020



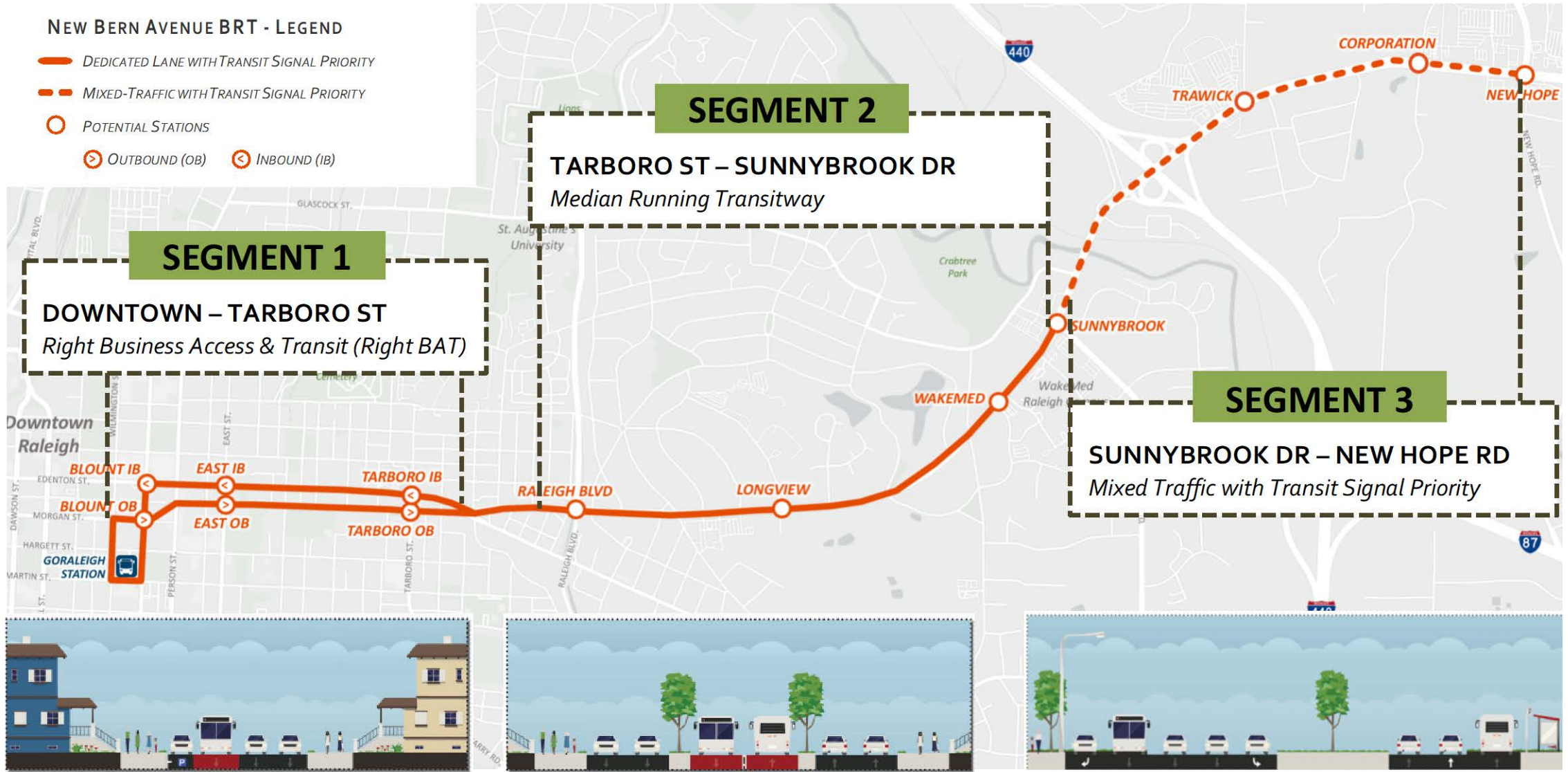


Wake BRT: New Bern Avenue

Current Design

NEW BERN AVENUE BRT - LEGEND

- DEDICATED LANE WITH TRANSIT SIGNAL PRIORITY
- MIXED-TRAFFIC WITH TRANSIT SIGNAL PRIORITY
- POTENTIAL STATIONS
- OUTBOUND (OB)
- INBOUND (IB)





Wake BRT: New Bern Avenue

Project Statistics



GoRaleigh Station to New Hope/New Bern (East Raleigh Transit Center, P&R)



Total 5.1 miles, **3.3 miles of dedicated lanes**



Ten (10) station pairs, in addition to GoRaleigh Station



Mon-Fri from **4am to midnight** and Sat-Sun from **5:30 am to midnight**



Target revenue service/opening year – end of **2023**



\$71.4 Million (YOE)



\$2.5 Million – estimated operating cost in first full year of operations



Wake BRT: New Bern Avenue

Current Observations / Public Focus

- Station access information: universal design, safety and ADA (offset median stations)
- System "look and feel"
 - Branding
 - Vehicles
 - Station design
- Corridor context specific public engagement



Wake BRT: New Bern Avenue

Station Access



ADA Design / Universal Access

Sidewalk features:



1. Tactile warning strip near sidewalk curb
2. Audible crossing announcement
3. Standard NCDOT curb ramps

Station area features:



1. ADA ramp with hand rail leading from sidewalk to station waiting area
2. Braille and/or raised text station signage
3. Bus-level station platform - with additional tactile warning strips - to allow for seamless boarding

Station amenities:



1. Auditory cues and Braille detailing on ticket kiosks
2. Auditory announcements for approaching buses
3. Seating areas with wheelchair-accessible spaces



Wake BRT: New Bern Avenue

Final Design Approach

Wake BRT System Design

- **Design Standards**
 - Station Typologies / Structures
 - Site-Specific Design
 - ADA / Access Standards
 - Bike-Ped / Complete Streets
 - Kit of Parts / Structures
- **Branding**
 - Identity / Placemaking
- **User Experience**
 - Customer Experience
 - Employee Experience
 - Station Wayfinding / Access
 - Prototyping
- **Art Integration**
 - Type / Area of Application
- **Marketing / Communications**
 - Community Engagement
 - Stakeholder Outreach
 - Consensus Building
 - Public Relations
- **Safety & Security**
 - Infrastructure Specifications
- **Technology/Innovation**
 - Infrastructure Specifications

Wake BRT: New Bern Avenue

- **Final Design (100%)**
 - Transit Runningway Design
 - Roadway Design
 - Signal Design
 - Stormwater Design
 - Crosswalks / Bike-Ped Design
 - Structures / Vertical Elements
 - Construction Plans
 - Utilities / Fiber
- **Phasing / Implementation**
 - Corridor Phasing Strategy
 - Federal Process
 - Implementation Timeline
- **Safety & Security**
 - Cameras
 - Lighting
- **Agency Coordination**
 - NEPA Documentation
 - FTA Coordination
 - NCDOT Coordination
- **Cost Estimates**
 - Design Cost Estimate
 - Construction Cost Estimate



Next Steps

Future Public Engagement

February 2020

Wake BRT: Southern Corridor Kick Off & Design Open House #1

- February 20th – Garner Senior Center 4-7pm
- February 24th – Victory Church 4-7pm

Raleigh Equitable Development Around Transit Design Open House #3

- Two meetings (tentative dates February 27th and 29th)

April 2020

Wake BRT: Western Boulevard Corridor Study Open House #2

Wake BRT: New Bern Avenue Design Open House #3

Thank You

**Chapel Hill
transit**

Get on Board!

Matt Cecil

Transit Development Manager

Chapel Hill Transit

(919) 969-4916

mcecil@townofchapelhill.org

To Learn More: <https://nsbrt.org/>

January 30, 2020

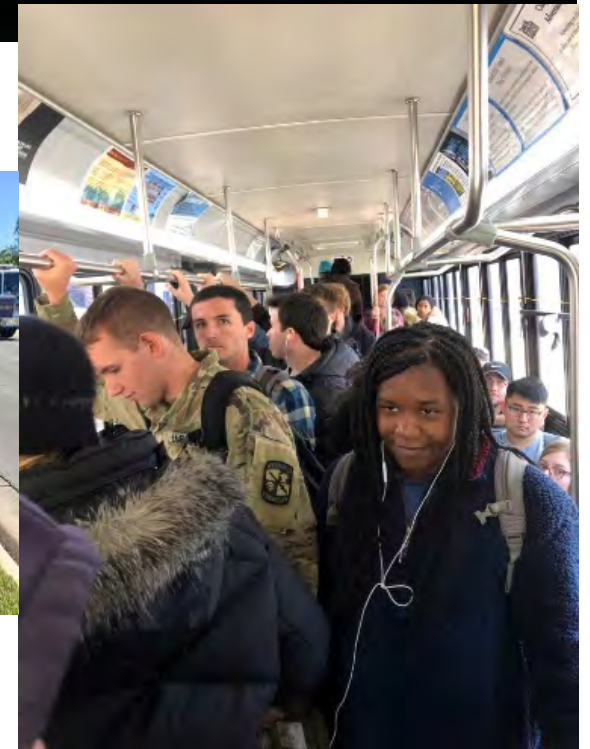
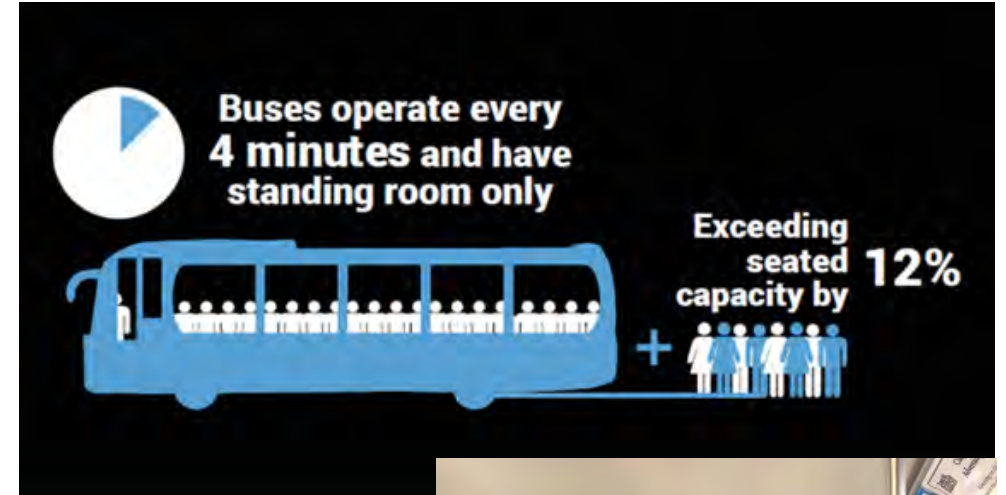
NORTHBUS RAPID TRANSIT
SOUTHBUS RAPID TRANSIT



Context and Vision

Prepares the Town to meet mobility demand as the region continues to grow:

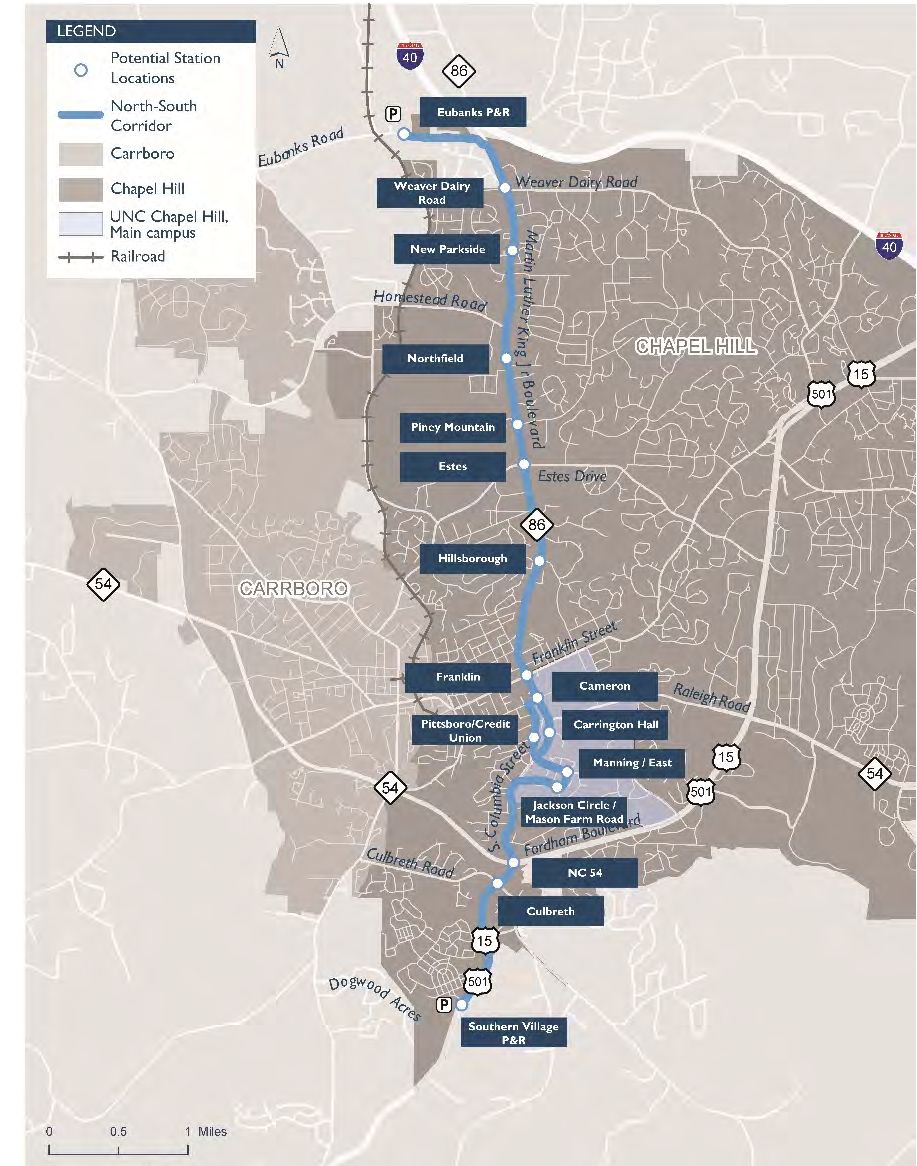
- Current system operates close to maximum capacity
- Proposed system provides a long-term, scalable solution available to residents and visitors of the community
- Connects to regional transit options
- Supports current & planned development in the corridor with a multi-modal system that serves cyclists, pedestrians and other users





NEPA and 30% Design Schedule

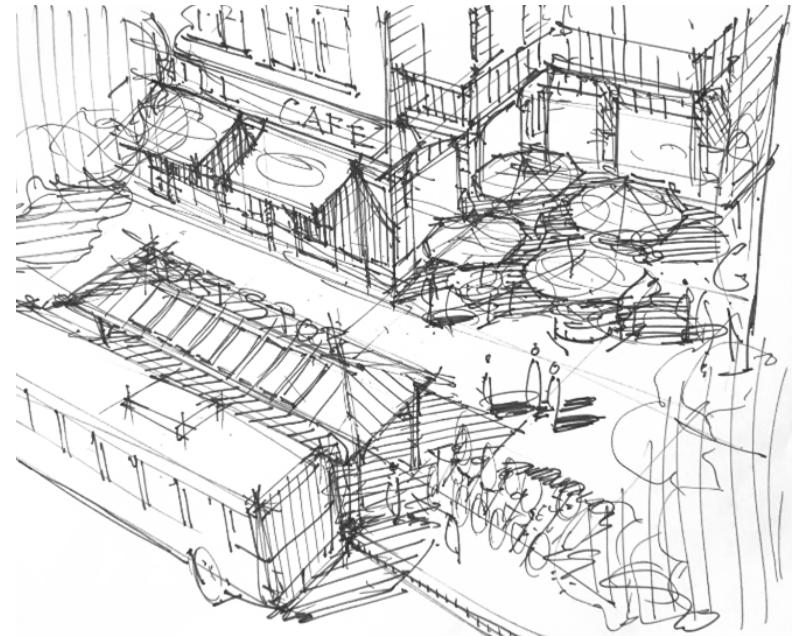
- Applied for rating with FTA on August 23, 2019
- **Spring 2020** – LPA finalized
- **Late Spring 2020** – Request Revised NEPA Class of Action
- **Spring 2020** – Draft 30% design plans handed over to NEPA Team
- **Late Spring 2020** – 30% design plans are finalized based on FTA feedback
- **Fall 2020** – NEPA document published for review





NSBRT Corridor

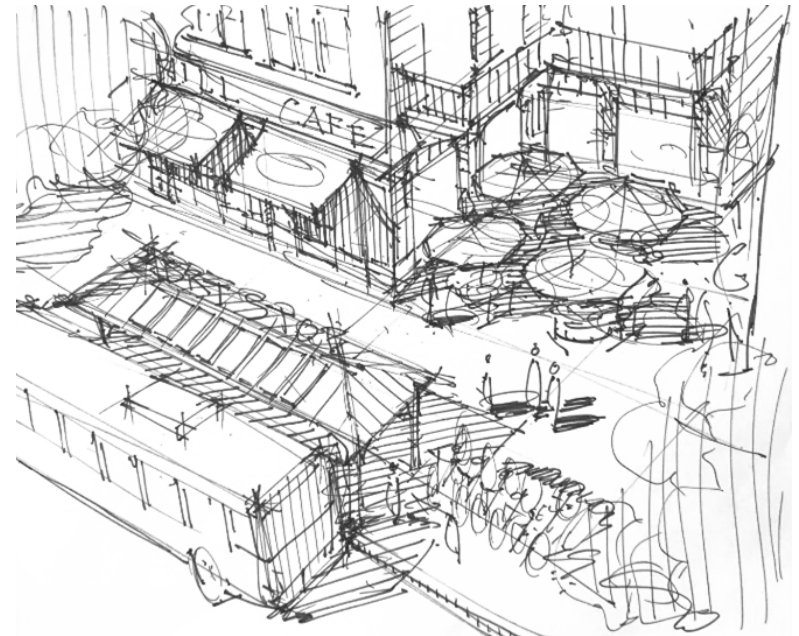
- 8.2 miles
- Eubanks P&R to Southern Village P&R
- Connections with:
 - UNC Hospital
 - UNC Campus
 - Downtown Chapel Hill
- Regional connections
- 33 minute travel time
- Opening 2025
- 7,500 daily riders opening year
- \$5.9M annual O&M





Operating Plans

- 27 stations
- NSBRT will operate 7 days a week
- 7.5 minute peak frequency
- 10 minute off-peak frequency
- 20 minute night and weekend frequency
- 60% dedicated guideway
- 82% pedestrian and bicycle facilities





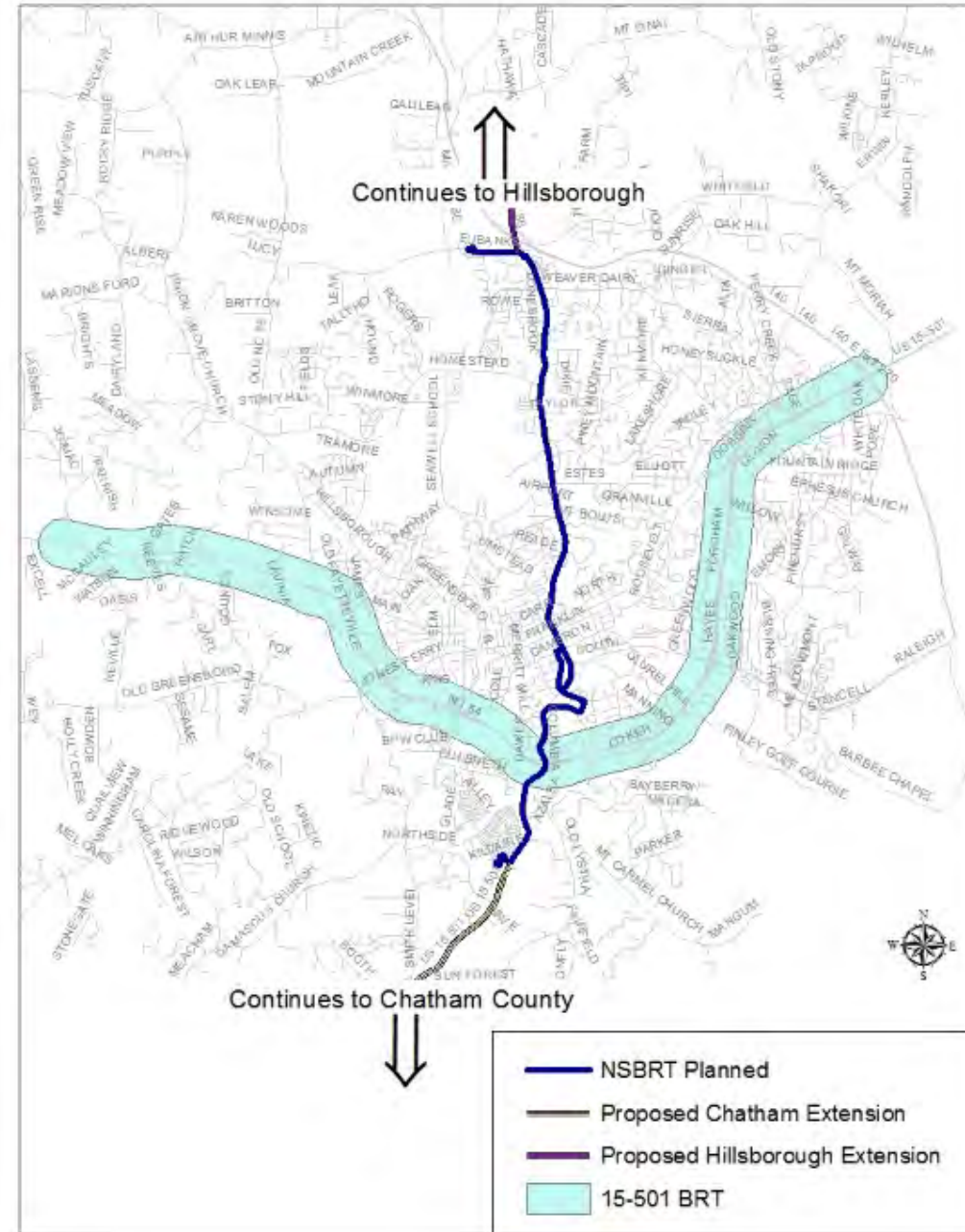
Funding

- Current financial plan assumes \$100M of project funding to come through Federal Sources, \$41M from non-federal sources

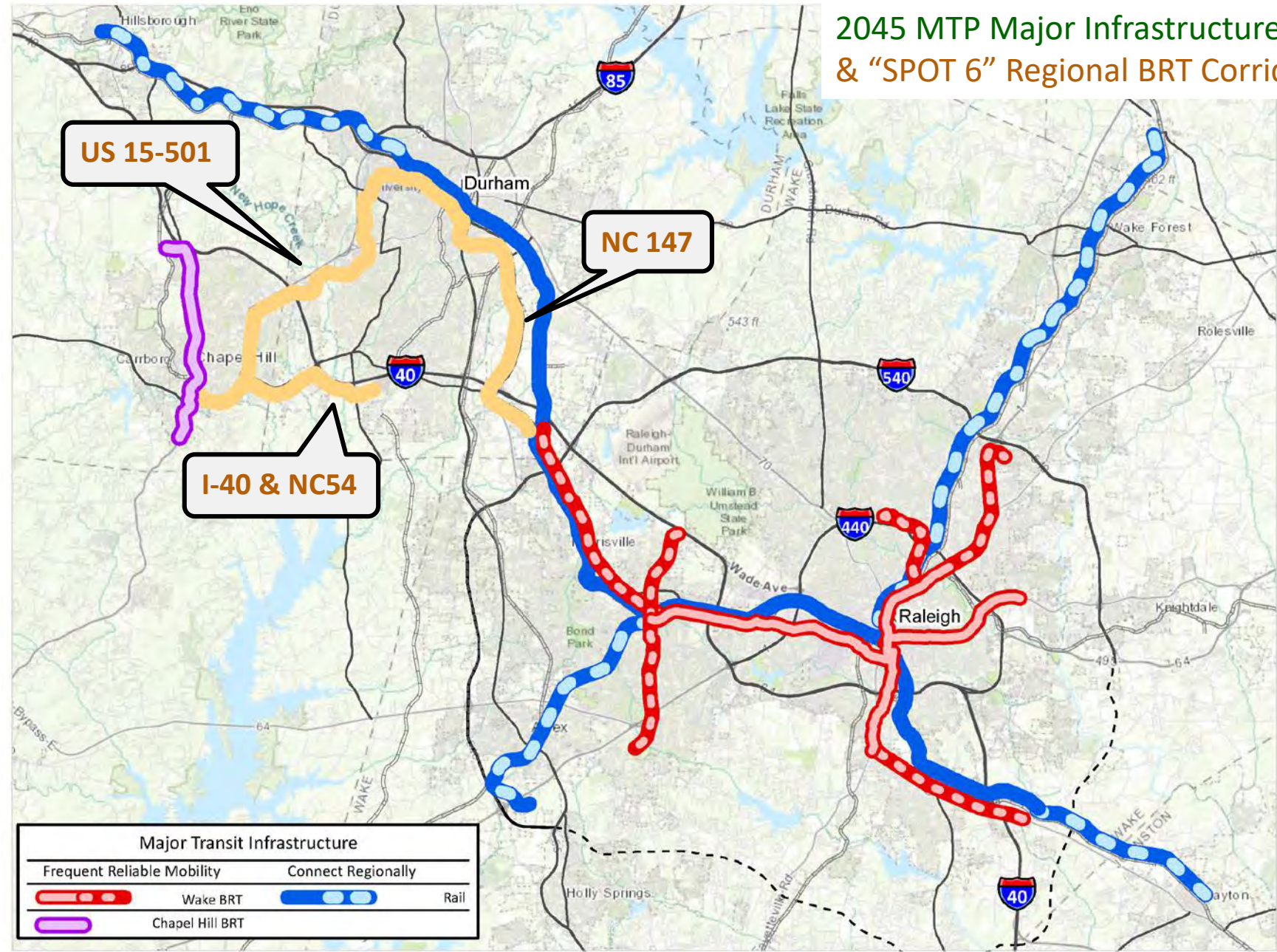
Currently we have \$14.1M of non-federal funds committed through the Orange County Transit Plan Project and will be submitted for \$35M in State funding as part of the SPOT process.

Future Chapel Hill BRT

- NSBRT extension to Chatham County
- NSBRT extension to Hillsborough
- Cross town BRT connecting White Cross/NC 54 with Eastowne/15-501



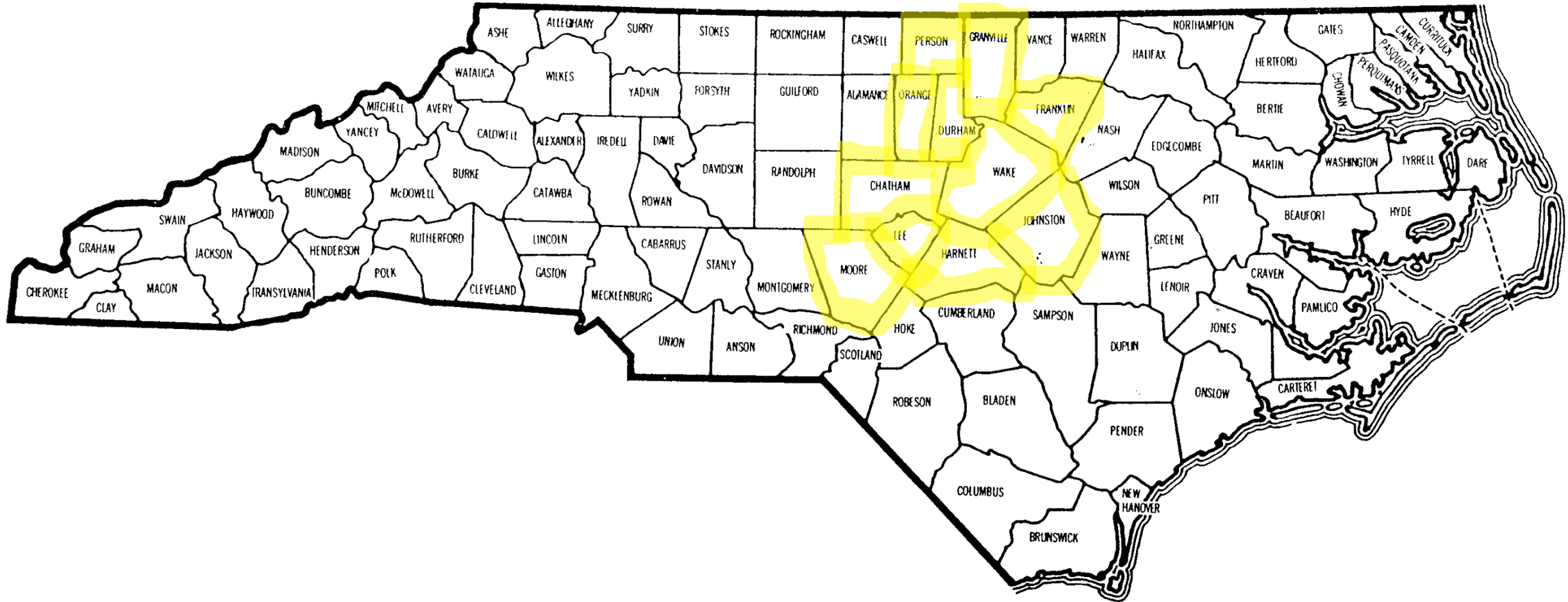
2045 MTP Major Infrastructure
& “SPOT 6” Regional BRT Corridors



Triangle Trails Initiative

The Triangle Trails Initiative is a program of the East Coast Greenway Alliance.
This work is funded by a grant from the AJ Fletcher Foundation.





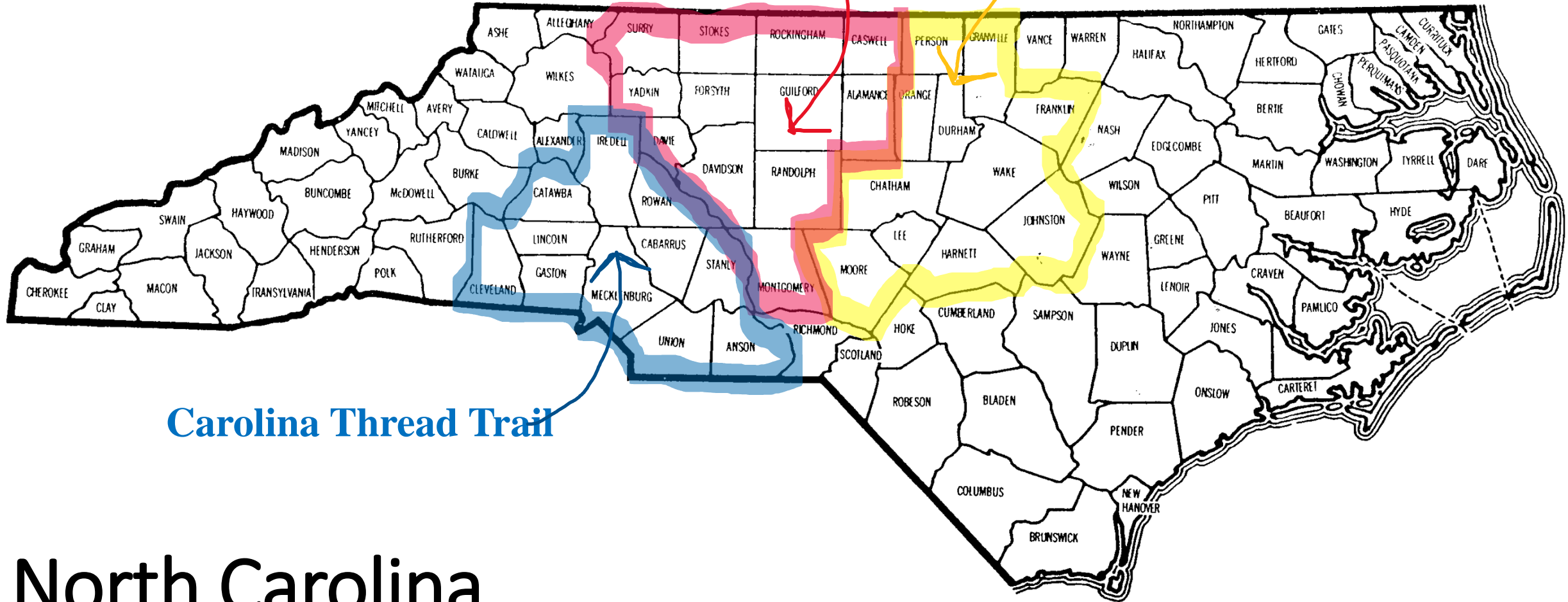
Triangle Trails Initiative: Regional Footprint

Triangle Trails Initiative – Expanded Footprint

- **Chatham County (confirmed)**
- **Durham County (confirmed)**
- Franklin County (2020 meet)
- **Harnett County (confirmed)**
- Granville County (Feb. 14)
- **Johnston County (confirmed)**
- **Cumberland (considering)**
- **Lee County (confirmed)**
- Moore County (2020 meet)
- **Orange County (confirmed)**
- **Person County (confirmed)**
- Vance County (Feb. 14)
- **Wake County (confirmed)**
- Warren County (Feb. 19)

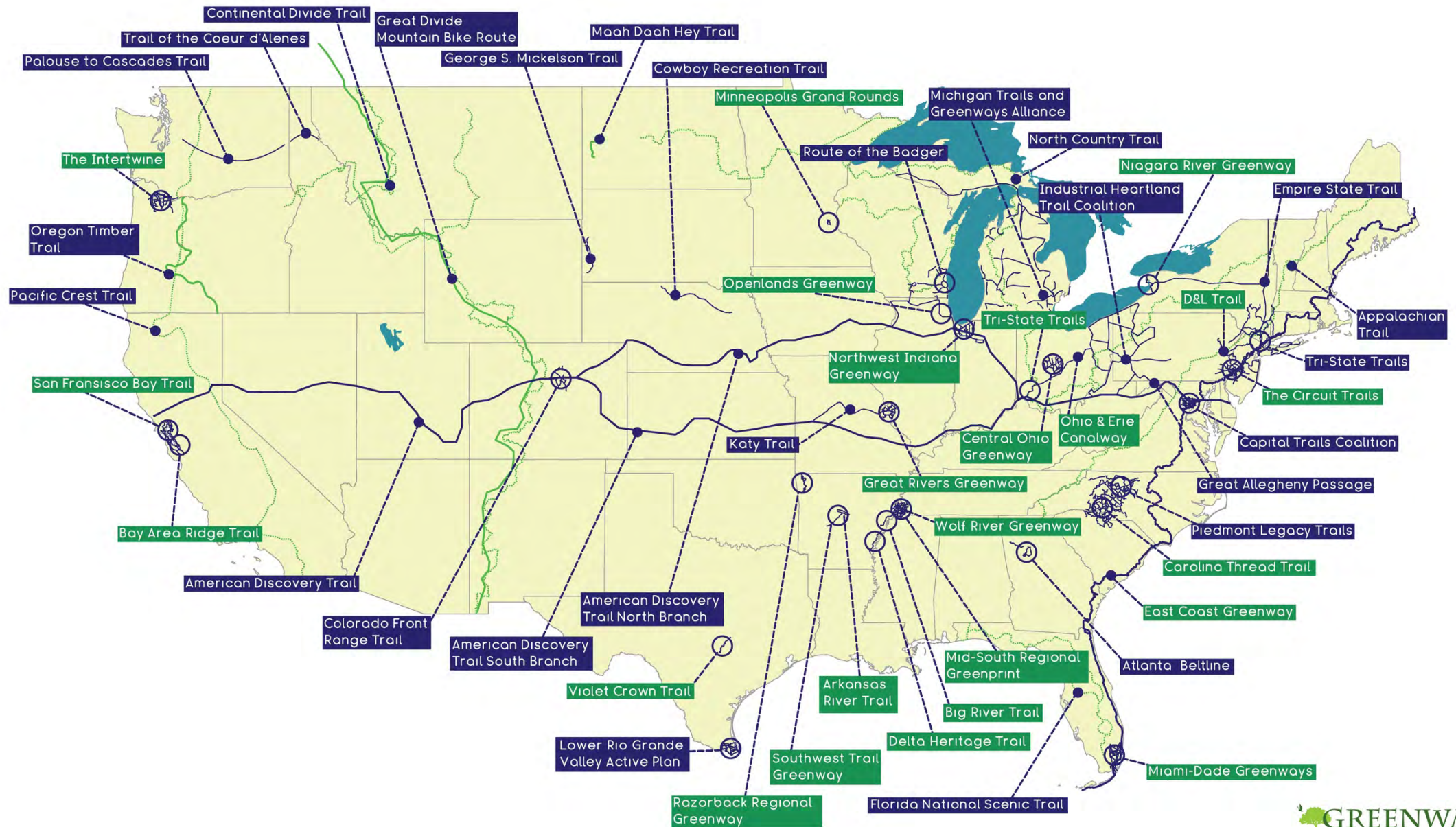
Piedmont Legacy Trails

Triangle Trails Initiative



Carolina Thread Trail

North Carolina Regional Greenway Initiatives



Triangle Trails Initiative: Mission Statement

“Triangle Trails is a collaboration between government, business, institutions and civic leaders to make the Research Triangle Region a national leader in greenways and trails.”

Triangle Trails Initiative

Marketing Tag Line:

“Connecting people and communities with investments that keep us active and engaged with nature and our neighborhoods.”



- Chuck Flink met with the Triangle Greenways Council board of directors to discuss a possible merger.
- The proposal to TGC:
 - A new life for the organization, becoming the name of a regional greenway and trail initiative
 - Would merge the TGC 501c3 with Triangle Trails Initiative – Triangle Greenways
 - TGC portfolio of land and associated funds would be transferred to Triangle Land Conservancy
 - Transition would begin in 2020 – if agreeable to TGC Board of Directors

TTI: Advisory Board Membership

(as of December 31, 2019)

- **Sig Hutchinson**, Wake County Commissioner
- **Scott Levitan**, President, Research Triangle Park
- **Mike Conlon**, Affordable Communities
- **Dennis Edwards**, VisitRaleighNC
- **Dennis Markatos-Soriano**, East Coast Greenway Alliance
- **Iona Thomas**, McAdams
- **Renee Price**, Orange County Commissioners
- **David Proper**, The Conservation Fund
- **Jule Smith**, Fred Smith and Company
- **Larry Zucchini**, Jdavis Architects
- **Coley Price**, Harnett County
- **Dan Lamontagne**, Chatham County

Work Accomplished in 2019

- Established an Advisory Board Membership – regional partners being added by invitation.
- Authored Advisory Board Duties, Roles and Responsibilities – will be circulated with the AB for review and feedback
- Completed Part 1 of Funding Strategy – matching funds for Fletcher Grant
- DRAFT work program for Program Manager
- DRAFT position description for Program Manager
- DRAFT work program for TTI

2020 Work Program

- Grow Regional Partnership (public and private sector)
- Meetings with Advisory Board (twice in 2020)
- Fund Raising (operating funds for TTI)
- Finalize Program Manager Work Tasks
- Advertise and Hire Program Manager (funding needed)
- Finalize Merger Proposal with TGC

Triangle Strategic Tolling Study

- ▶ <http://triangletollingstudy.com>
- ▶ Kenneth Withrow, AICP
Kenneth.Withrow@campo-nc.us
(919) 996-4394
- ▶ Andy Henry, AICP
Andrew.Henry@durhamnc.gov
(919) 560-4366, ext.36419



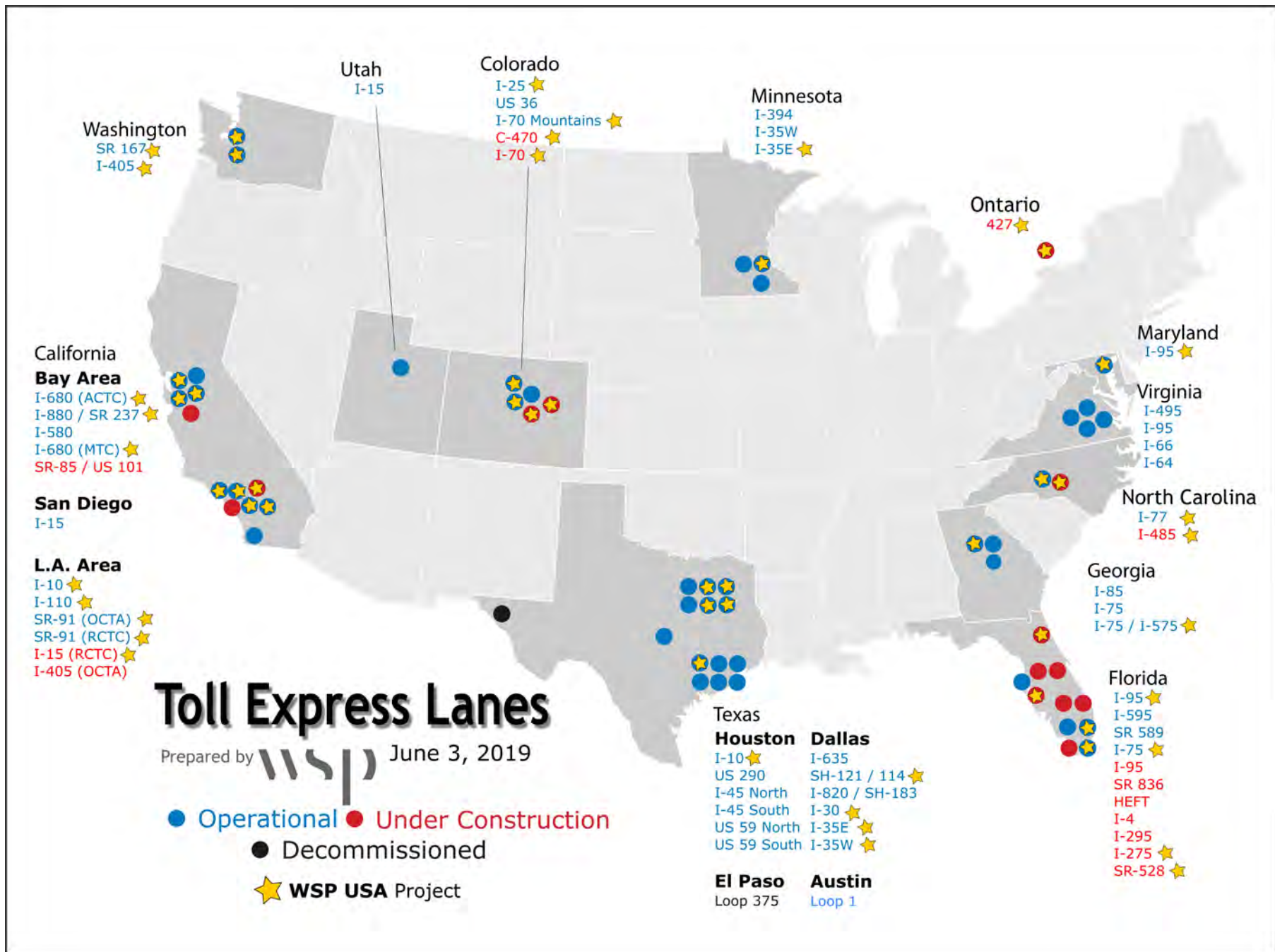
Toll Road vs. Express Toll Lanes



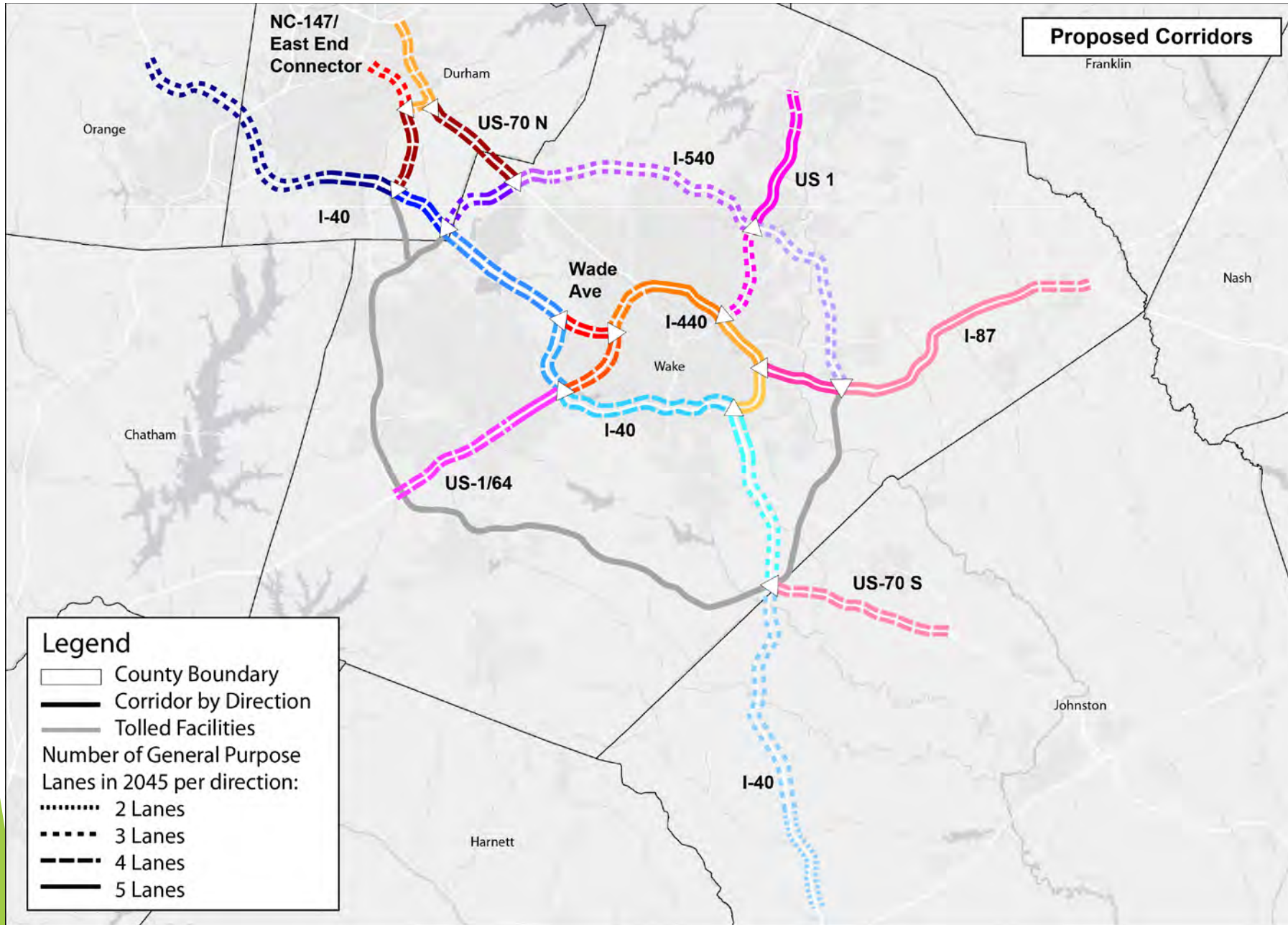
- ▶ Everyone pays a toll to use the facility
- ▶ **Route-based Choice:** option to use the Toll Road or use a different non-toll facility



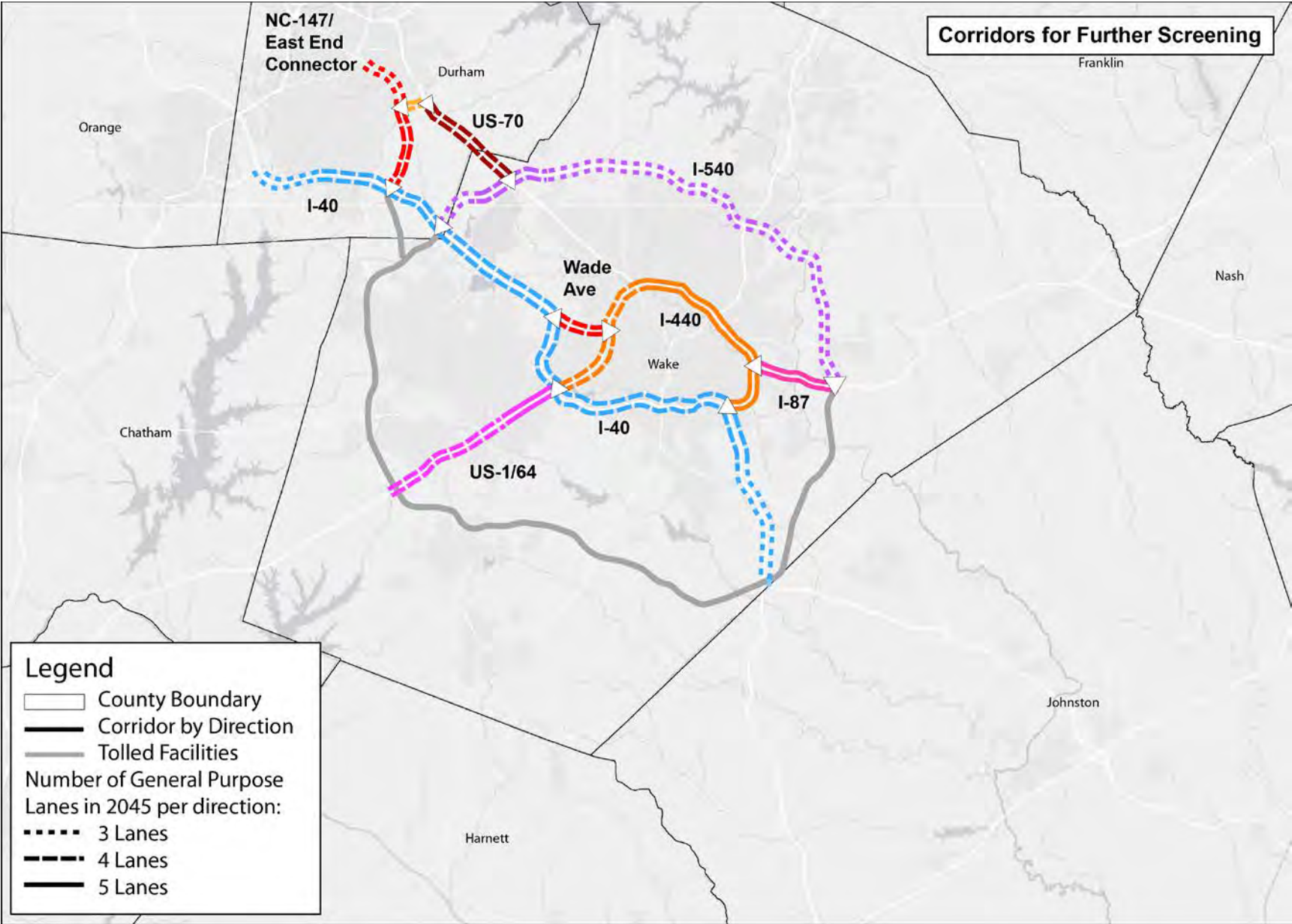
- ▶ Only Express Toll Lane users pay a toll
- ▶ **Lane-based Choice:** option to use the Express Toll Lanes or use the toll-free general purpose lanes



Initial Corridors

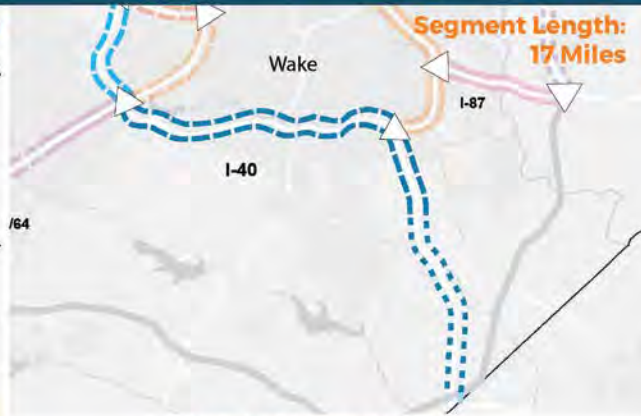
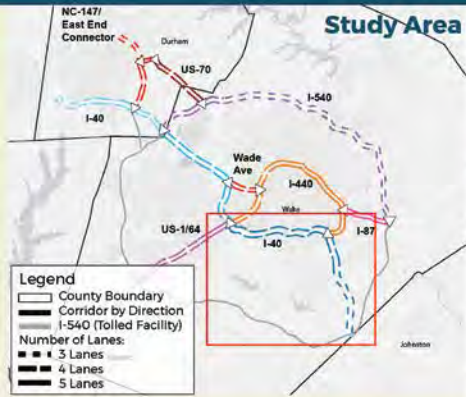


Corridors for Detailed Evaluation



TRIANGLE STRATEGIC TOLLING STUDY

I-40: US 1 - US 70



2045 Peak Travel Time Savings General Purpose vs Express Lanes

	AM Peak	PM Peak
East Bound	0.9 Min/Mile	0.1 Min/Mile
West Bound	0.1 Min/Mile	1.2 Min/Mile

2045 Annual Toll Revenues

East Bound	\$695,000/mile
West Bound	\$630,000/mile

Estimated Construction Cost

**\$8 - \$12
million/mile**

2045 Employees by Employment Type*

**230,000
TOTAL EMPLOYEES**

Industry	Service
Office	Retail

Travel Time Dependability (Buffer Time Index)

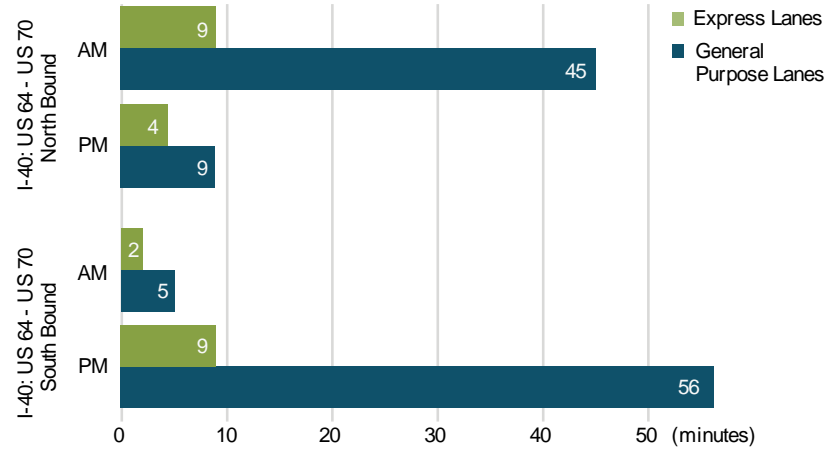


Buffer time is the extra time you must plan for when traveling during times of high traffic to make sure you arrive on time. This could be a trip to work, the airport for a flight, or picking up your child from daycare to avoid the penalty for arriving late. If a trip would take 20 minutes with no traffic, and the buffer time is 30 minutes, you should leave 50 minutes before needing to arrive. Using buffer time, you may arrive early, but it is a way of making sure bad traffic won't make you late.

Routes with high buffer times are less predictable than routes with lower buffer times. The fact that express lanes usually have less buffer time than general purpose lanes shows that express lanes have greater certainty in how it will perform from day to day. This is one of the key features of express lanes.



Travel Time Dependability (Buffer Time Index)



2045 Annual Toll Revenues

NB: **\$695,000/mile**

SB: **\$630,000/mile**



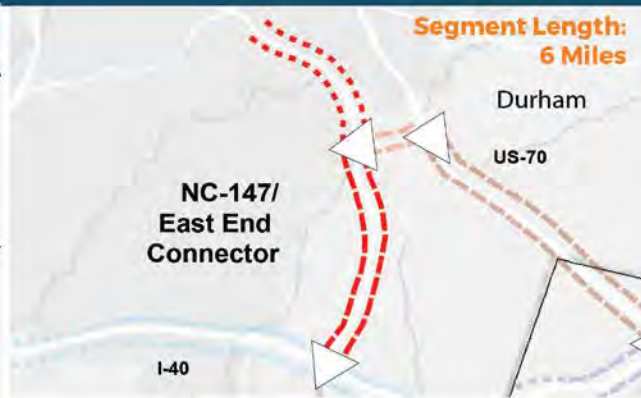
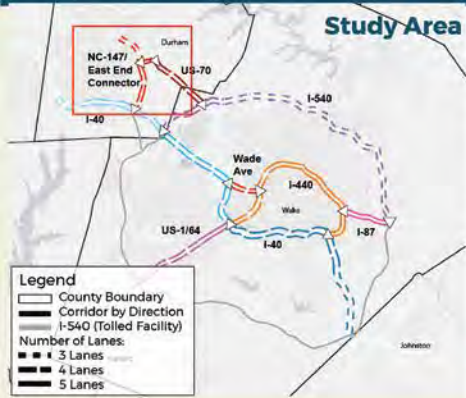
Transit
Supportive -
Future Year
Daily
Buses: **12**

**TRIANGLE
STRATEGIC
TOLLING STUDY**

* Within a 2 mile buffer from selected corridor. Based off the TriMet Regional Model.
** Routes that are along some segment of the corridor.

TRIANGLE STRATEGIC TOLLING STUDY

NC 147



2045 Peak Travel Time Savings General Purpose vs Express Lanes

	AM Peak	PM Peak
East Bound	0.2 Min/Mile	0.2 Min/Mile
West Bound	0.2 Min/Mile	0.3 Min/Mile

2045 Annual Toll Revenues

East Bound	\$140,000/mile
West Bound	\$145,000/mile

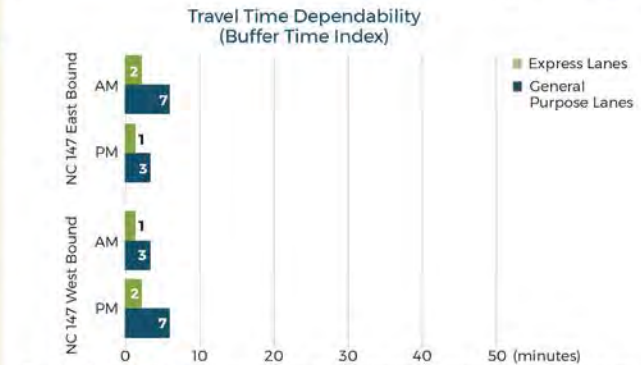
Estimated Construction Cost

\$10 - \$15 million/mile

2045 Employees by Employment Type*

165,000 TOTAL EMPLOYEES

Industry Service
Office Retail

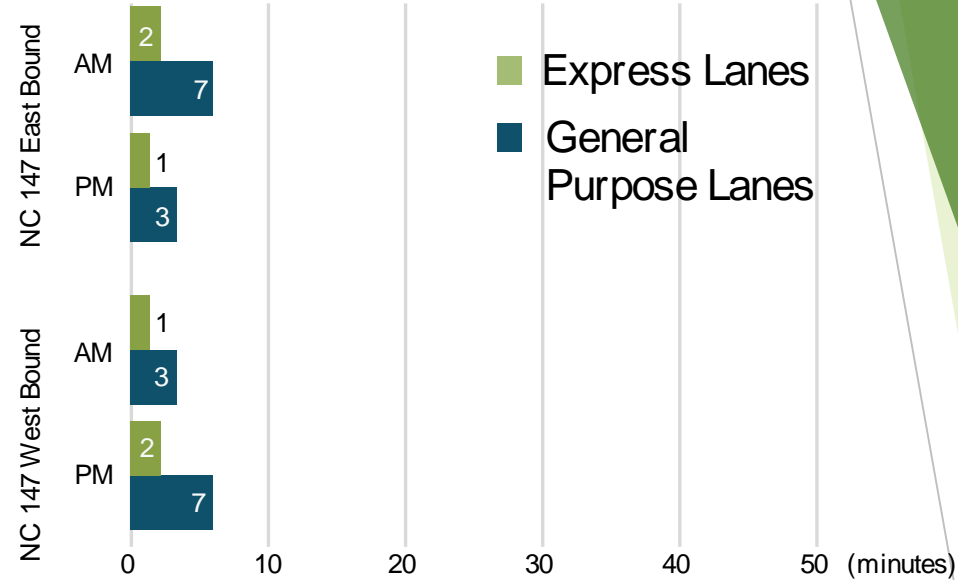


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Transit
Supportive -
Future Year
Daily Buses:

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* Within a 2 mile buffer from selected corridor based off the TriMet Regional Model
** Routes that are along some segment of the corridor

TRIANGLE STRATEGIC TOLLING STUDY

NC CAMPO | DCHC MPO | NCDOT

ABOUT THE STUDY

FAQS

DOCUMENT LIBRARY

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What is the Triangle Strategic Tolling Study?

The Triangle's governmental agencies are working together to enhance freeway reliability, reduce congestion, and improve regional mobility through self-sustaining and equitable funding mechanisms.

The Capital Area Metropolitan Planning Agency (CAMPO) and the Durham Chapel Hill Carrboro Metropolitan Planning Organization (DCHC MPO) are working with the North Carolina Department of Transportation (NCDOT) to conduct a study to evaluate the regional transportation network. The North Carolina Turnpike Authority (NCTA) is serving as a resource during the study. The study's purpose is to develop a toll lane and/or managed lane strategy to address current highway congestion and in anticipation of future capacity and funding deficiencies for the Triangle region.

This study will determine the feasibility and necessity of using tolling and traffic management concepts to achieve regional objectives associated with the Metropolitan Transportation Plan (the region's transportation plan that defines projects to be implemented over the next 20 years).

Public and stakeholder outreach efforts conducted as part of this study will inform citizens about toll and/or managed lanes while gathering feedback from Triangle residents. [Learn more about the study »](#)

Latest News

AUG 06 2017

A Latin professor at Hampden-Sydney College in Virginia, looked up one of the **more obscure Latin words**, consectetur, from a Lorem Ipsum passage.

AUG 06 2017

Hampden-Sydney College in Virginia, looked up one of the more obscure Latin words, consectetur, from a Lorem Ipsum passage, and going through the cites of the world in classical literature, discovered the undoubtable source.

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DCHC MPO @DCHCMPO
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Embed

View on Twitter

[About the Study](#) | [FAQs](#) | [Document Library](#) | [Contact Us](#)



TRIANGLE STRATEGIC TOLLING STUDY



What's Included

Managed Motorways in the Triangle

- Coordinated ramp meters
- Sensors
- Ramp improvements
- Command and control software
- Human intervention at Traffic Management Center
- Incident detection and CCTV surveillance
- Traveler information
- Can include lane management

More information:
dpkeilson@NCDOT.gov
Alex.Rickard@campo-nc.us
Will.Letchworth@wsp.com

Technology Changes - Managed Roadways



Image courtesy of
VicRoads



Image courtesy of Transport UK

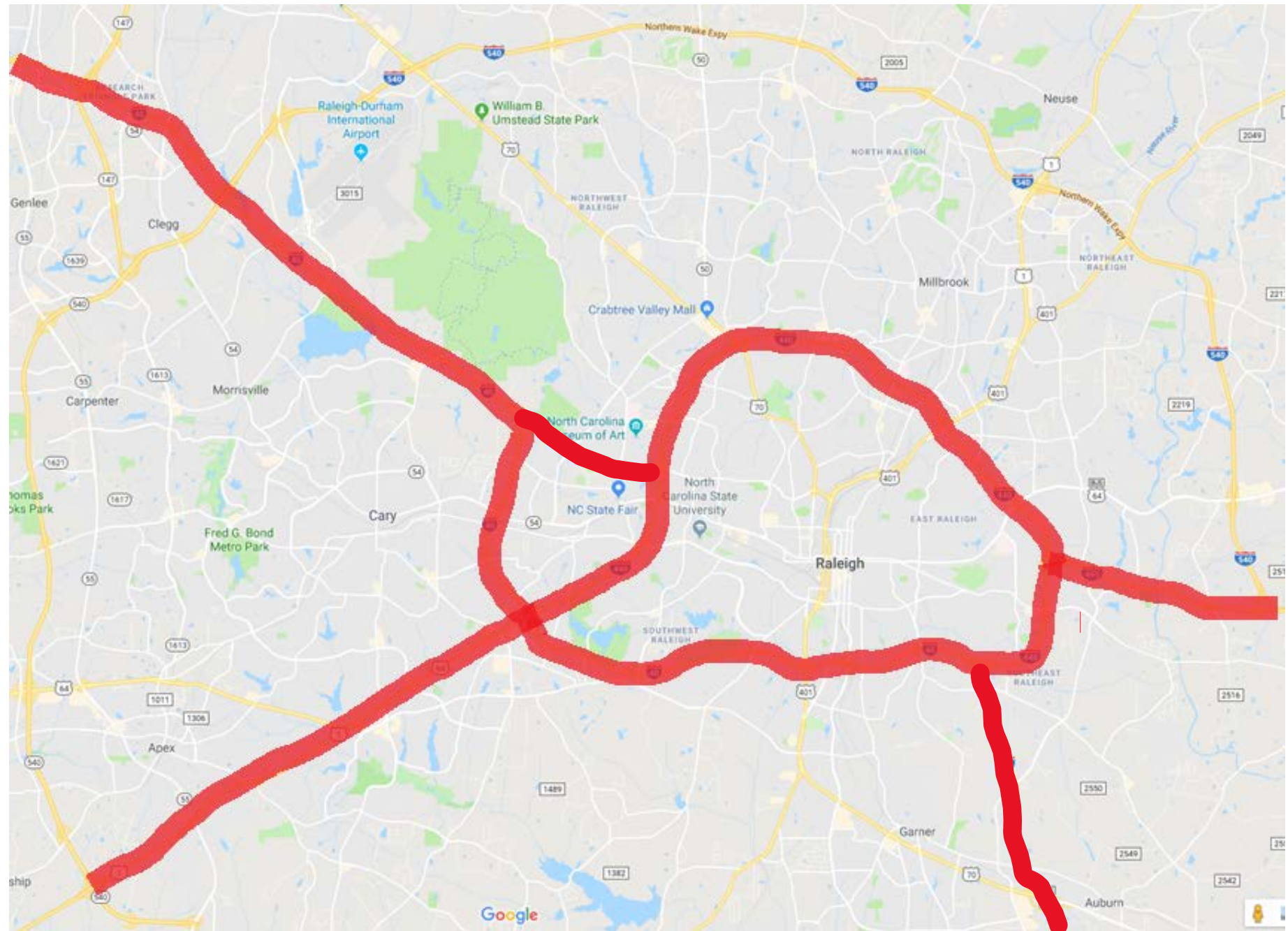
- Synchronizes flow of vehicles entering a freeway to available capacity on the freeway
- Provides real time demand management to manage traffic
- Interchanges coordinate with one another to prevent excessive wait times and queuing for all interchanges, metering rates differ for each ramp
- Future infrastructure to vehicle communications



Image courtesy of VicRoads

Triangle Region - Managed Roadways Phase 1

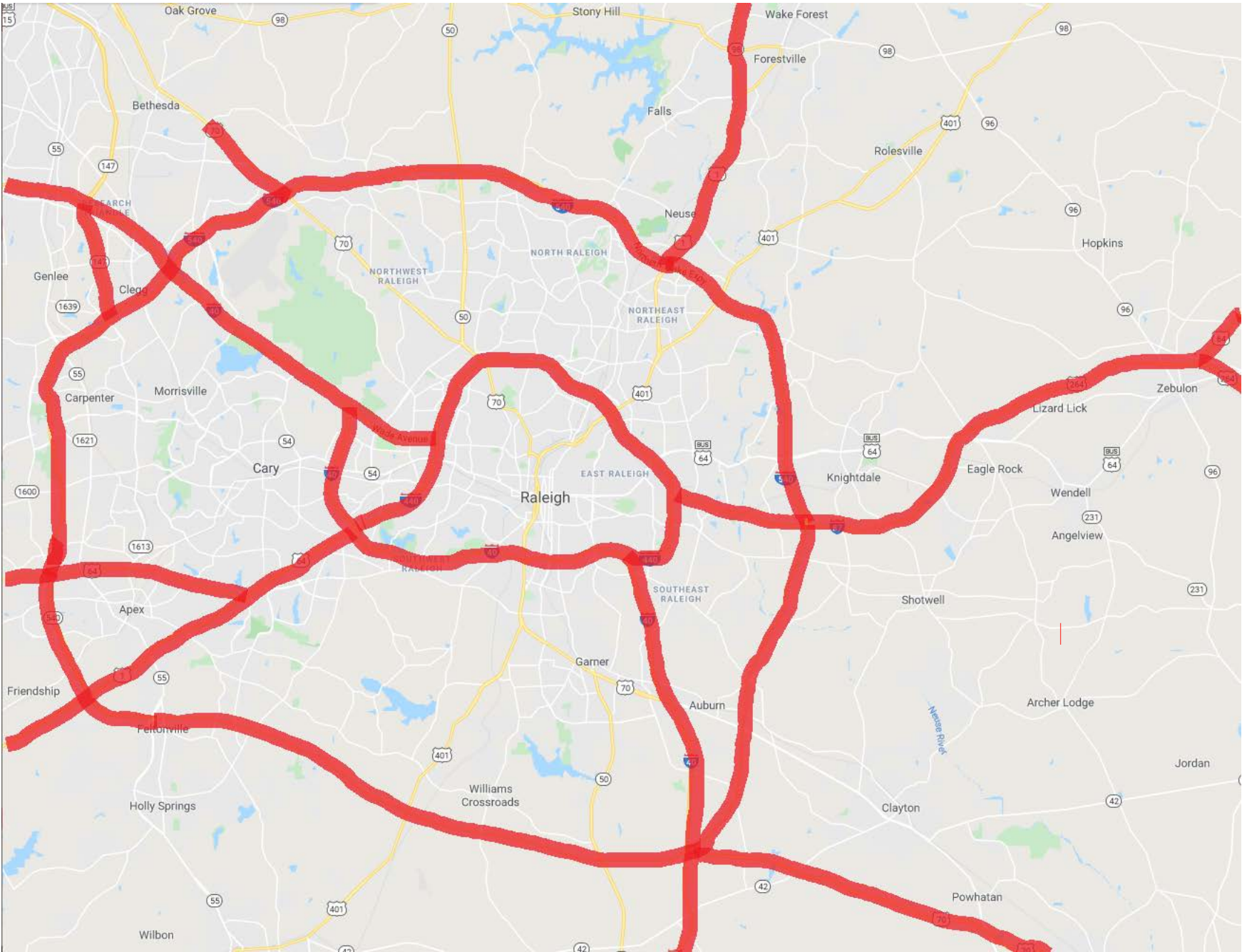
Project	ROW	CON
I-6006	2025	2025
U-6101	2026	2029



Triangle Region - Managed Roadways Future Phases

Project	ROW	CON
I-6006	2025	2025
U-6101	2026	2029

- Full freeway network coverage
- Coordinate with community ITS projects
- CV/AV compatibility
- Interoperability with neighboring regions



Joint Meeting of the MPO Policy Boards

January 30, 2020

For additional information, contact
the Durham-Chapel Hill-Carrboro MPO or the NC Capital Area MPO



<http://www.dchcmpo.org/>

<https://www.campo-nc.us/>