



NORTH CAROLINA
Department of Transportation



NORTH CAROLINA
Turnpike Authority

Capital Boulevard

CAMPO Request - Tolling Analysis

March 19, 2025

Connecting people, products and places safely and efficiently with customer focus, accountability and environmental sensitivity to enhance the economy and vitality of North Carolina

Agenda

1

North Carolina Turnpike Authority

2

Capital Boulevard Tolling Analysis

North Carolina Turnpike Authority



N.C. Turnpike Authority

- Created by the General Assembly in 2002 to allow tolls “to speed the implementation of needed transportation improvements”
- Plays a critical role in NCDOT’s operations by studying, planning, developing, building, operating and maintaining toll facilities on behalf of communities
- NC’s toll facilities serve more than 2 million customers annually



What Are Our Roles & Responsibilities?

1

Project Development

Lead the study, design and construction of Turnpike Authority projects

2

Finance & Reporting

Develop and execute plans of finance for Turnpike Authority projects and manage compliance and reporting (financial and legislative)

3

Toll Operations

Maintain and operate toll collections systems (including toll systems/back office, storefront/call center, payment processing, etc.)

4

Roadway Maintenance

Fund and manage fence-to-fence maintenance operations of project facilities



Tolling in NC

1

Local Decision

2

More
Travel Options

3

Improved
Travel Times

4

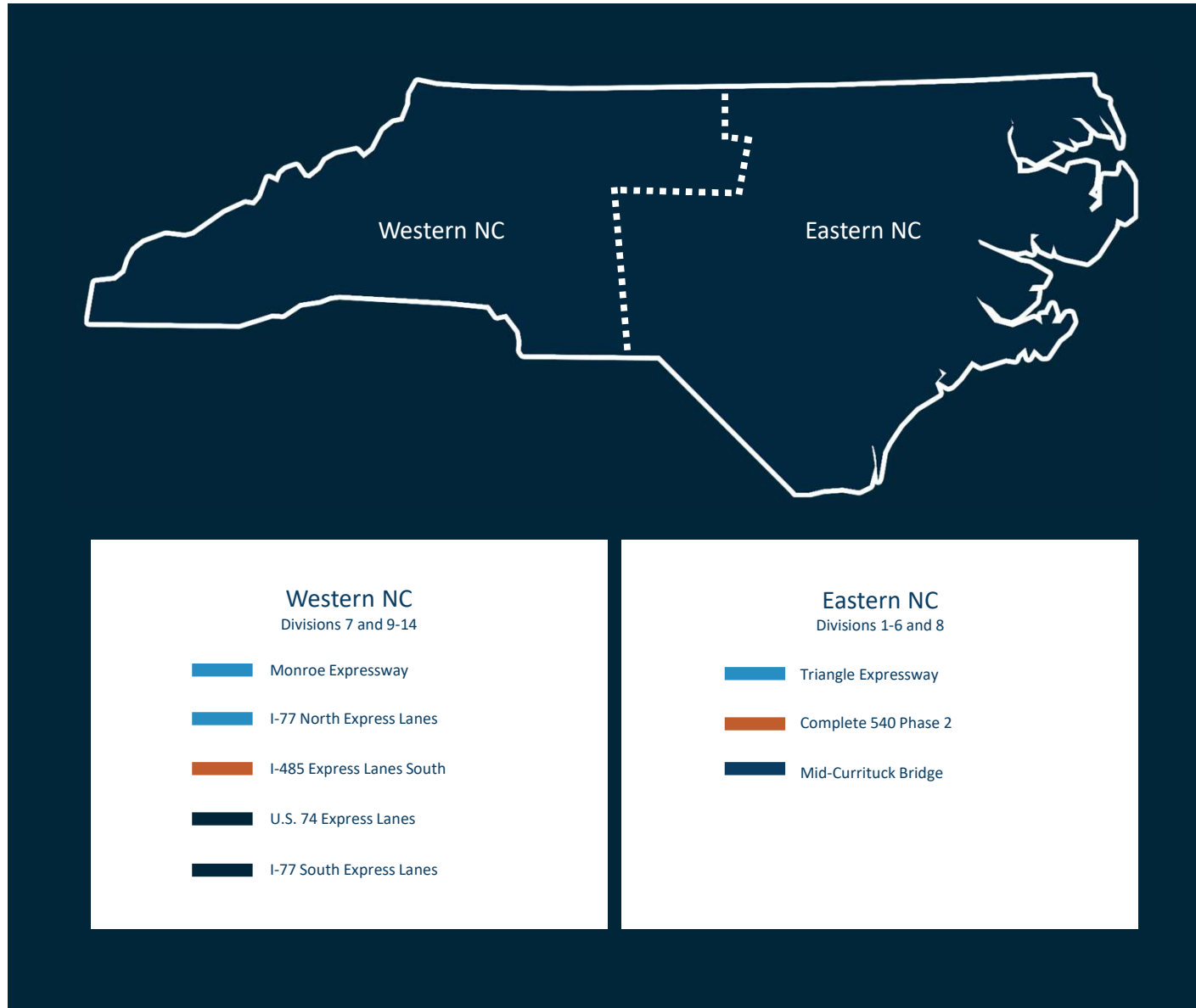
Additional Funding
Source

5

Support
Growing Populations

Turnpike Authority Projects

- 3 | Open to Traffic
- 2 | Under Construction
- 3 | Under Development



Capital Boulevard Tolling Analysis

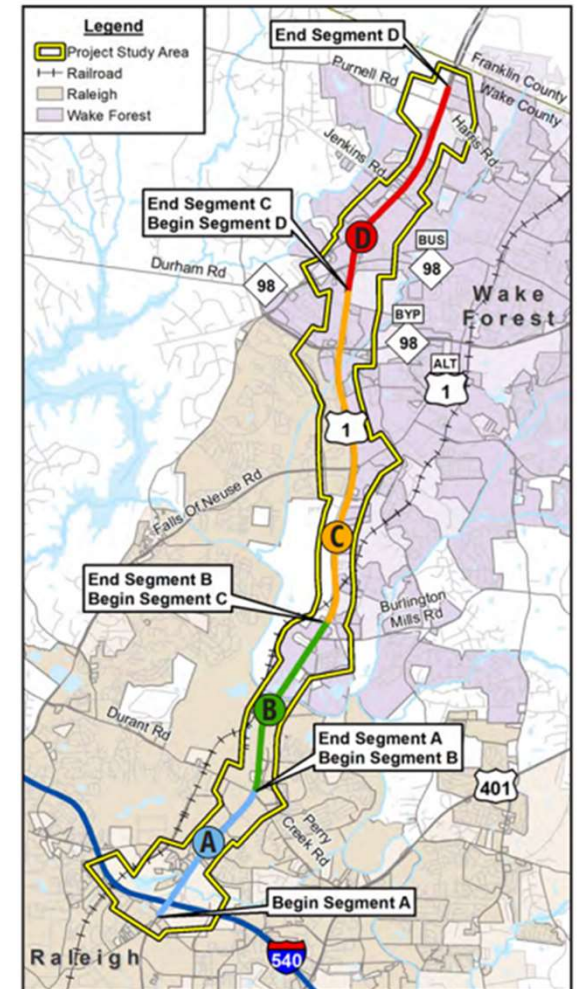
Capital Boulevard North Upgrade

U-5307 - Overview

U-5307 would upgrade and convert Capital Boulevard (US 1) into a controlled-access highway between I-540 and Purnell/Harris Road

Roadway is broken into four (4) segments:

- Segment A: I-540 to Durant Road / Perry Creek Road
- Segment B: Durant Road / Perry Creek Road to Burlington Mills Road
- Segment C: Burlington Mills Road to N.C. 98 Business (Durham Road)
- Segment D: N.C. 98 Business (Durham Road) to Purnell Road / Harris Road



Request to Assess Tolling Alternatives

Analysis Request

- In February 2024, CAMPO requested NCDOT and NCTA to study tolling as a potential way to accelerate delivery of the proposed Capital Boulevard upgrades
- CAMPO & NCDOT signed an agreement in March 2024 to share costs of a Traffic and Revenue Study to evaluate tolling on U-5307
- CDM Smith developed planning level (level 2) traffic and revenue forecasts for both Expressway and Express Lane models that served as a basis for the analysis
- NCTA analyzed four (4) scenarios for financial viability:
 - **Scenario 1: All-tolled Expressway; Standalone**
 - **Scenario 2: All-tolled Expressway; added to the Triangle Expressway System**
 - **Scenario 3: One Express Lane in each direction; Standalone**
 - **Scenario 4: One Express Lane in each direction; added to the Triangle Expressway System**



Types of Road Pricing

Expressway (Scenarios 1 & 2)

- All users of facility pay
 - Drivers can choose to use alternative route instead
- Toll rates are generally a fixed rate per mile
 - Rates based on vehicles' axles
- Examples: Triangle Expressway and Monroe Expressway



Express Lanes (Scenarios 3 & 4)

- Only express lane users pay
 - Drivers can choose to use general purpose lanes instead
- Dynamic pricing
 - Rates vary depending on traffic demand
 - Express Lanes must maintain 45 mph speed
- Intended to manage congestion and provide drivers with reliable travel times
- Examples: I-77 North Express Lanes and future I-485 Express Lanes



Financial Analysis

Financing Highlights	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Roadway Type	Expressway	Expressway	Express Lanes	Express Lanes
Triangle Expressway System Expansion	No	Yes	No	Yes
Contract Award & Financial Close ¹	Spring 2027	Spring 2027	Fall 2030	Fall 2027
Projected Opening ¹	Spring 2033	Spring 2033	Fall 2036	Fall 2033
Capital Cost Estimate ² (\$YOE)	~\$1.65B	~\$1.65B	~\$1.90B	~\$1.80B
Financing Capacity ³	~\$800M	~\$1.40B	<\$100M	~\$600M
State Funding ⁴ (all or portion of)	Segments A/B	Segment A	Segments A/B/C/D	Segments A/B/C

¹Schedule assumes CAMPO action and any necessary legislative changes by 7/1/2025 followed by 9-15 month environmental reevaluation process depending on scenario. Also assumes availability of funding to advance early work efforts consistent with C540 projects

²Cost estimates for express lanes scenarios do not reflect complete engineer's estimate; based on current estimates plus factor for additional work

³Based on planning level (level 2) T&R forecasts; bonding capacity less issuance costs, including capitalized interested and required reserves

⁴Based on draft 2026-2035 STIP released 1/31/2025

Key Considerations

Key Considerations	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Roadway Type	Expressway	Expressway	Express Lanes	Express Lanes
Triangle Expressway System Expansion	No	Yes	No	Yes
Toll Rate Structure	Fixed	Fixed	Dynamic	Dynamic
NEPA Reevaluation	Lower Schedule Risk	Lower Schedule Risk	Higher Schedule Risk	Higher Schedule Risk
Diversion Impacts¹	Some	Some	Negligible	Negligible
Toll Revenue Roadway Maintenance Funding	All Lanes	All Lanes	Express Lanes Only	Express Lanes Only
Bonus Allocation	\$100M	\$100M	<\$50M	\$100M
Legislative Needs²	Conversion of non-tolled highways	Conversion of non-tolled highways Allowable use of revenues	None	Allowable use of revenues

¹When compared against project being delivered as non-tolled

²NCGS 136-89.187; NCGS 136-89.188(a)

Diversions Analysis - 2040

Falls of Neuse

Time Period	AM (7-9A)		PM (3:30-6:30P)	
Direction	Southbound		Northbound	
Value	Travel Time (min)	Average Speed	Travel Time (min)	Average Speed
Distance (mi)	7.41			
No Build	12.9	34	13.1	34
Build Toll Free	11.6	38	11.7	38
Build Tolloed	12.5	36	12.6	35

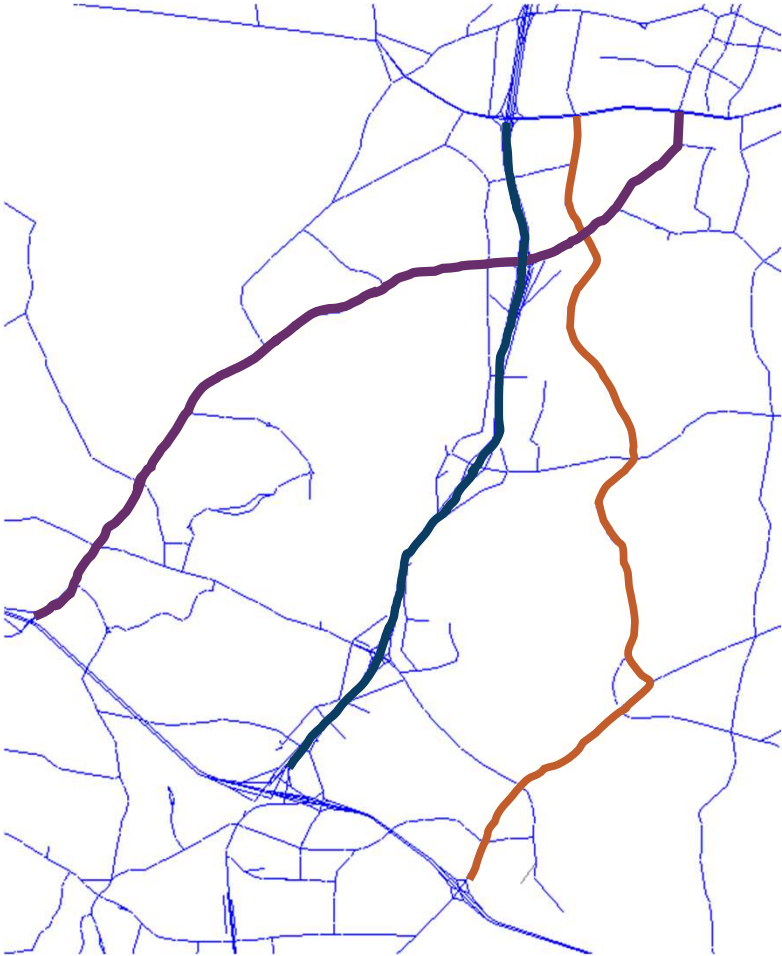
US 1

Time Period	AM (7-9A)		PM (3:30-6:30P)	
Direction	Southbound		Northbound	
Value	Travel Time (min)	Average Speed	Travel Time (min)	Average Speed
Distance (mi)	6.20			
No Build	9.8	38	9.7	38
Build Toll Free	5.6	66	5.6	66
Build Tolloed	5.5	67	5.6	67

US 401-Ligon Mill

Time Period	AM (7-9A)		PM (3:30-6:30P)	
Direction	Southbound		Northbound	
Value	Travel Time (min)	Average Speed	Travel Time (min)	Average Speed
Distance (mi)	7.43			
No Build	11.6	38	12	37
Build Toll Free	11.3	39	11.5	39
Build Tolloed	11.7	38	12.2	37

Note: The No Build condition in 2040 assumes no improvements are made to US 1 related to U-5307



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Summary

- NCDOT and NCTA are not advocating for a particular path forward
- Four toll scenarios analyzed at the request of CAMPO, including both expressway and express lane scenarios
- Three of the four scenarios analyzed could likely provide some level of financial flexibility and an accelerated delivery schedule¹
- Three of the four scenarios would likely require legislative changes if CAMPO were to choose to pursue them
- NCDOT and NCTA will continue to provide support as CAMPO evaluates the scenarios and determines the best path forward for the region



¹When compared against non-tolled project schedule included in draft 2026-2035 STIP released 1/31/2025

Thank you!
