



NORTH CAROLINA
Department of Transportation

Mid-Currituck Bridge Update

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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 Project Overview

2 Federal Grant Application

3 Comparative Analysis Update

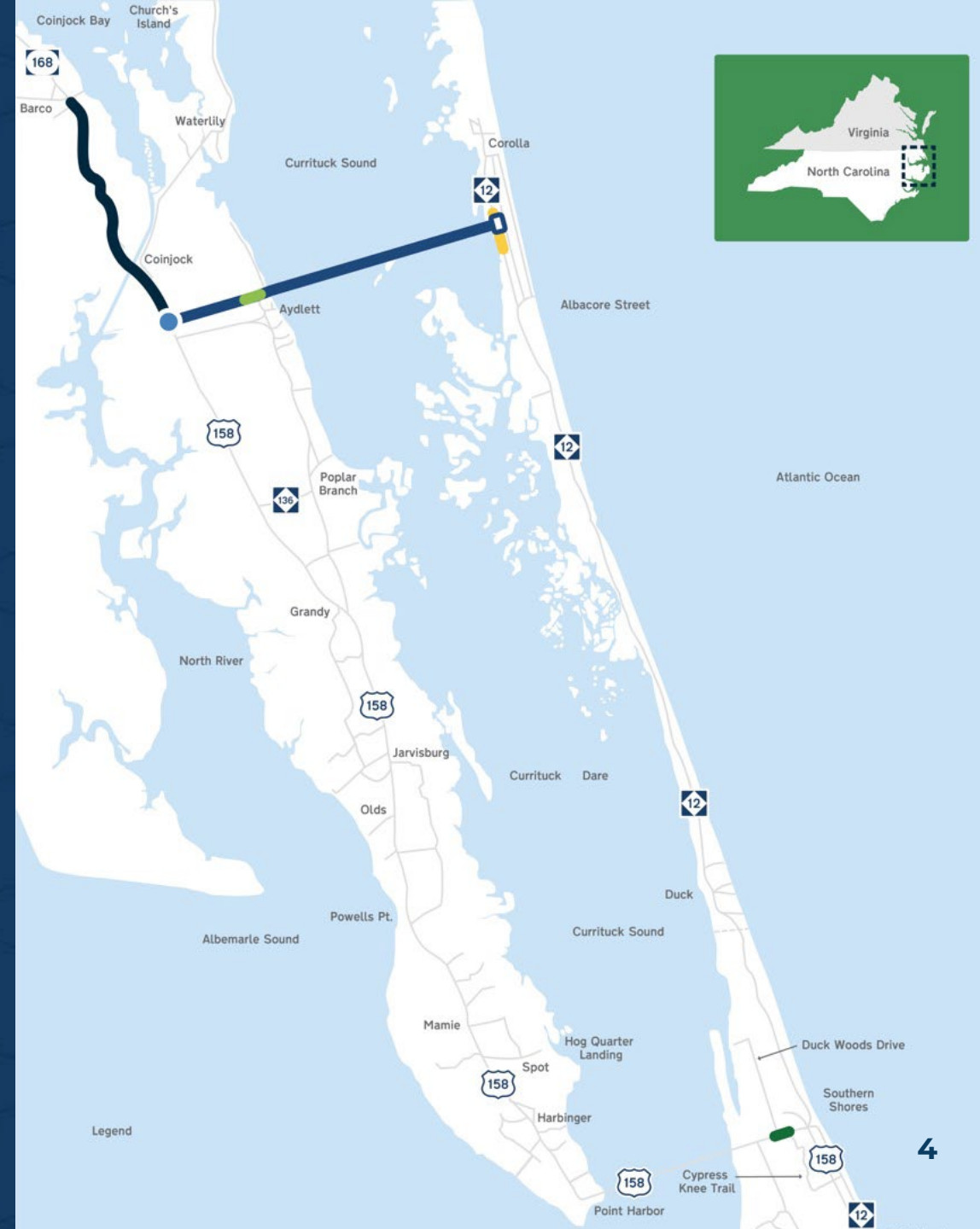
4 Toll Discount Programs

5 Next Steps

1. Project Overview

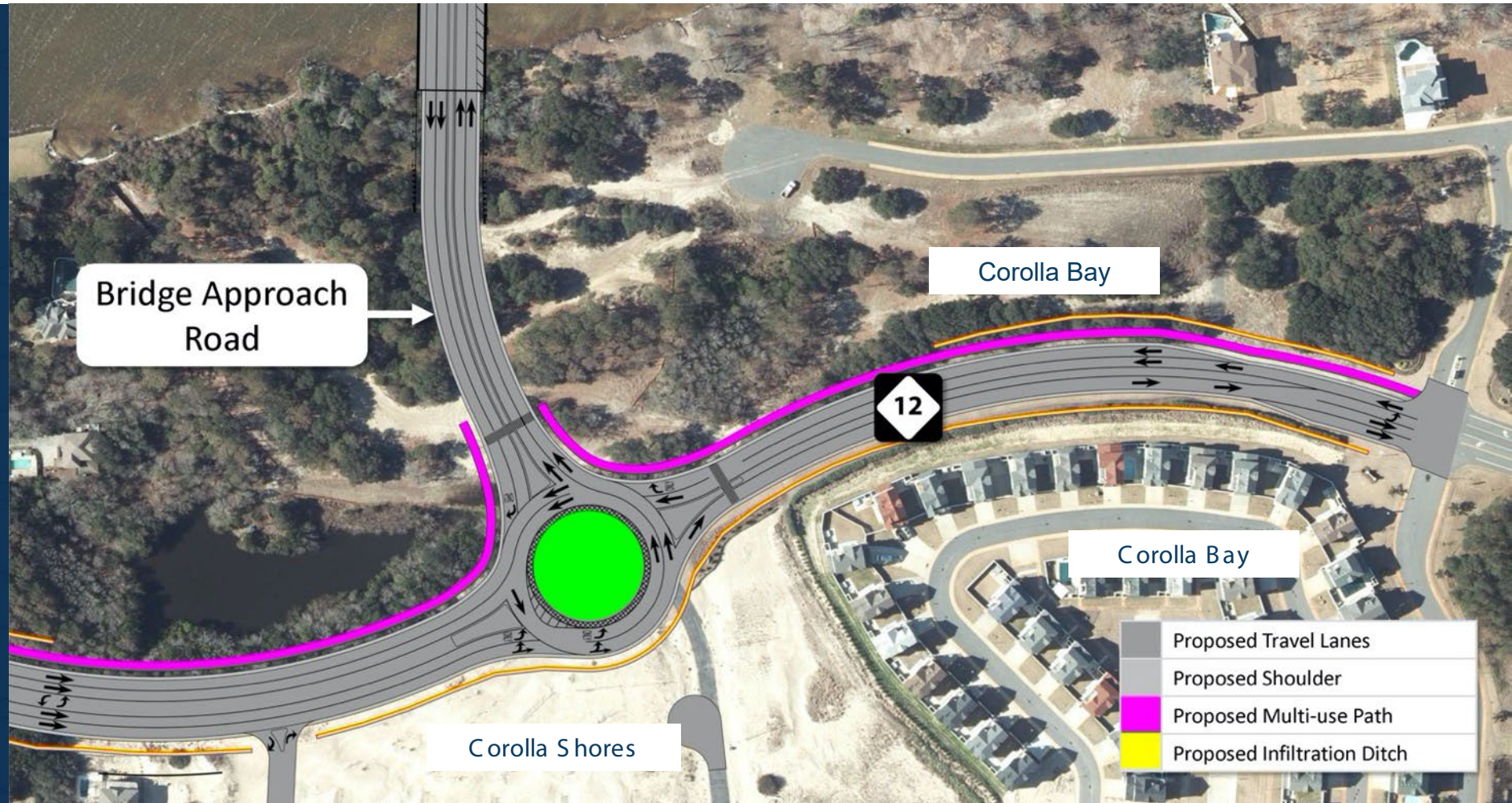
Mid-Currituck Bridge

- 4.7 mile bridge over Currituck Sound
- 1.5 mile bridge over Maple Swamp
- New interchange at U.S. 158 western terminus
- Roundabout at NC 12 eastern terminus
- 0.7 mile widening along NC 12
- Hurricane evacuation clearance time reduction features
- Improvements to U.S. 158 near Southern Shores
- Left turn lane on Albacore Street
- Single toll location charging tolls for each direction (ETC/Cash)

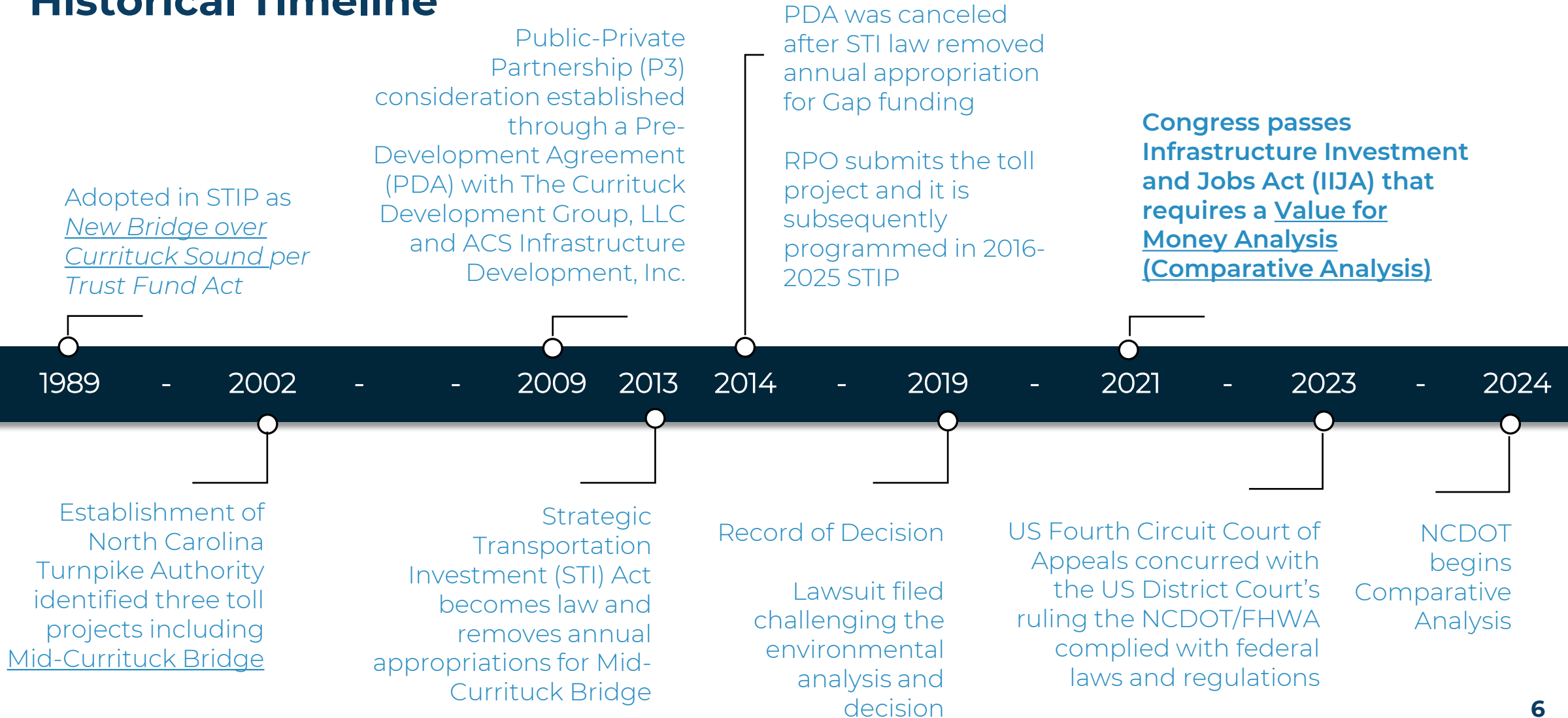


NC 12 Improvements

- Approach road between Mid-Currituck Bridge and NC 12
- Roundabout at bridge terminus and NC 12
- Widen NC 12 to four lanes for 0.7 mile between Devils Bay and North Harbor View Drive
- Marked pedestrian crossings at NC 12 bridge terminus and North Harbor View Drive
- Proposed multi-use path between Ocean Forest Court and Start of Corolla Light Path
- 35 mile per hour design speed



Historical Timeline



Key Benefits



Traffic Flow

Substantially improve traffic flow

- Reduces congestion
- Reduces travel demand above road capacity on summer weekend day
- Shortens duration of summer weekend congestion on NC 12
- Improved traffic flow on NC 12 is likely to result in reduction of through traffic on local streets



Travel Time

Substantially reduce travel time

Using Mid-Currituck Bridge

- 10 plus-minute trip from mainland to the Outer Banks

Using Existing Roads

- A reduction of more than 45 minutes for same trip during typical summer **weekday**
- A reduction of over an hour and a half for same trip during typical summer **weekend day**



Hurricane Evacuation

Substantially reduce hurricane evacuation times from the Outer Banks

- Hurricane Evacuation Model indicates savings of ~5 hours:
 - ~32 hour clearance time with bridge
 - ~37 hour clearance time without the bridge

2. Federal Grant Application

Federal Grant Application

- NCTA applied for a \$425 million Multimodal Project Discretionary Grant (MPDG) in May.
 - More than 10 communities and community organizations wrote letters of support and were included in the application for the grant
 - Currently anticipate grant awards will be announced by USDOT later this year.

Multimodal Project Discretionary Grant

Mid-Currituck Bridge
STIP Project No. R-2576

Project Type: Seven Mile Toll Bridge
Location: Currituck Sound, Currituck County, NC

Contact: David Roy
Chief Financial Officer
North Carolina Turnpike Authority
1 South Wilmington Street
Raleigh, NC 27601
droy@ncdot.gov

Project Description

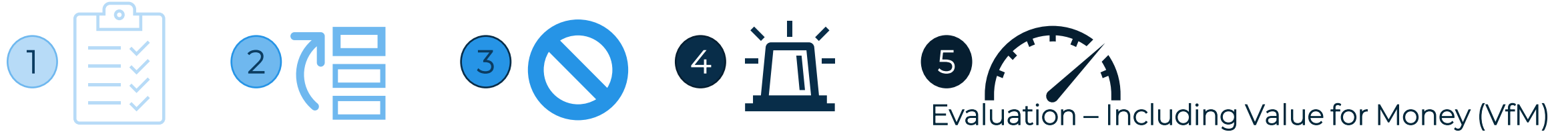
The North Carolina Turnpike Authority (NCTA) seeks \$425 million in Fiscal Year 2025/2026 Multimodal Project Discretionary Grant (MPDG) INFRA, MEGA or Rural funds to implement the Mid-Currituck Bridge project in Currituck County, North Carolina. MPDG funding will greatly accelerate the construction of the project, which will add resiliency by providing a second crossing of the Currituck Sound to the northern portion of North Carolina's Outer Banks (also known as OBX). This project will substantially reduce travel times for visitor and freight traffic. The Mid-Currituck Bridge will also provide a vital second evacuation point in the event of a hurricane.

Federal Grant Application

- NCDOT is exploring additional grant opportunities:
 - **Promoting Resilient Operations for Transformative, Efficient, and Cost-Savings Transportation (PROTECT) Discretionary Grant Program** – make surface transportation more resilient to natural hazards, including climate change, sea level rise, flooding, extreme weather events, and other natural disasters through support of planning activities, resilience improvements, **community resilience and evacuation routes**, and at-risk coastal infrastructure.
 - Approximately \$300 million available nationally
 - **Pre-Disaster Mitigation (PDM) Grant Program** – FEMA funds that are made available to state, local, tribal, and territorial governments to plan for and implement sustainable cost-effective measures. These mitigation efforts are **designed to reduce the risk to individuals** and property from future natural hazards.
 - Total of \$190 million available nationally

3. Comparative Analysis Update

Comparative Analysis – Overview



Define Project Goals & Delivery Objectives

Analyze and Weight Priorities Associated with Each Goal

Establish Project Constraints

Define Key Project Risks

- **Qualitative VfM Analysis:** Compares the financial and non-financial impacts of using the traditional toll delivery or P3 toll approach for the project.
- **Quantitative VfM Analysis⁽¹⁾:** Compares the present value of forecast cashflows for the project to and from the State under the traditional toll delivery and the P3 toll approach.

(1) The overall evaluation approach also considers the Value from Money (VfM) guidance that was included in the 2021 Infrastructure Investment and Jobs Act (IIJA).

Considerations for the Comparative Analysis

Traditional Toll Delivery vs. P3 Toll Delivery



Funding and Cost

- Ability to minimize public funds
- Procurement schedule acceleration / risk
- Total real construction and operations cost



Construction and Project Risk

- Upfront value engineering
- Project delivery schedule acceleration / risk
- Scope change flexibility
- Performance enforceability
- Latent defect risk
- Lifecycle cost optimization
- Ability to transfer full lifecycle project risk



Tolling Policy and Risks

- Department control and flexibility
- Ability to transfer toll integration risk
- Ability to transfer transaction processing / collection risk
- Control of toll policy / toll rates
- Public acceptance



Other Factors

- Competitive contractor environment

Delivery Approaches

Summary of Delivery Approaches that were Analyzed:

	Traditional Toll Delivery	P3 Toll Delivery
Description	<ul style="list-style-type: none"> State Owned, Operated and Tolloed Bridge NCDOT/NCTA would be responsible for design, construction, financing, operations, and maintenance of the Bridge 	<ul style="list-style-type: none"> State Owned, Developer Operated and Tolloed Bridge A private entity (a Developer) designs, builds, finances, operates, and maintains (DBFOM) the Project under an Agreement with the State
Project Funding	<ul style="list-style-type: none"> Public Toll Revenue Backed Debt State Funds 	<ul style="list-style-type: none"> Private Toll Revenue Backed Debt Private Equity State Funds
Procurement	<ul style="list-style-type: none"> Design-Build <i>(Non-tolloed Marc Basnight and Rodanthe Bridges)</i> 	<ul style="list-style-type: none"> DBFOM
Other NC Toll Projects with Similar Delivery	<ul style="list-style-type: none"> Triangle Expressway Monroe Expressway 	<ul style="list-style-type: none"> I-77 Express Lanes

Qualitative Analysis – Non-Financial Factors

Program Impact	Traditional Toll	P3 Toll
Innovation	✓	✓
Program Flexibility	✓	
Public Sentiment	✓	✓

✓ Indicates possible positive impact vis-a-vis the other approach

Definitions

- **Innovation:** Incentivizes and allows innovations to improve operations and maintenance, traffic flows and revenue.
- **Program Flexibility:** Ability to address changing market needs (i.e., regulation, consumer behavior, etc.)
- **Public Sentiment:** Degree of approval/willingness of the community to accept the project.

Qualitative Analysis – Financial Factors

Program Impact	Traditional Toll	P3 Toll
Construction Risk	✓	✓
Contractual Issues (Disputes, Compensation, etc.)	✓	
Operations & Maintenance and Lifecycle Risk		✓
Project Delivery	✓	✓
Project Funding & Public Financing Capacity		✓
Revenue Risk*		✓

✓ Indicates possible positive impact vis-a-vis the other approach

*The difference in revenue cases is not likely to be as significant. Any revenue upside would be transferred to a Developer

Definitions

- **Construction Risk:** Transfer of risk associated with construction delays, overruns, quality, and unforeseen events.
- **Contractual Issues (Disputes, Compensation, etc.):** Lower probability of disputes and lower financial impact associated with them.
- **Operations & Maintenance and Lifecycle Risks:** Transfers long-term risk and provides more incentive to optimize condition.
- **Project Delivery:** Ability to achieve value through competition, accelerated project delivery, and design/construction risk transfer.
- **Project Funding & Public Financing Capacity:** Ability to attract new funding and financing sources for the project and leverage existing public funding sources.
- **Revenue Risk:** Transfer of risk associated with traffic and revenue underperformance / outperformance.

Quantitative Analysis – Overview

NCDOT has progressed an initial quantitative analysis with key drivers and inputs



Construction Costs & Schedule

- Construction cost estimate is ~\$1 billion in 2024 dollars.
- 5+ year design and construction timeline.



Traffic & Revenue (T&R)

- T&R forecasts over the operating term.



Operations & Maintenance (O&M) and Lifecycle Costs

- Operating and major maintenance cost estimates over the operating term.



Financing Structure and Costs

- Financing structures are being evaluated and considers debt and equity (in the case of the P3 Toll Delivery).
- Assumes the use of low cost and flexible TIFIA financing.

Quantitative Analysis – Ongoing Efforts

Market Feedback



- Contractor meetings to discuss design and construction optimization opportunities for both delivery approaches
- Developer meetings to discuss interest in the Project and funding considerations under a P3 delivery approach

Initial Findings:

- Design/Construction
 - Attractive project that is not technically complex will draw multiple bidders
 - Creating means and methods to speed up construction would save money
 - Would like NCDOT to provide more information on Geotechnical, Traffic and Revenue and environmental surveys
- Developer
 - Market capacity was not a concern (plenty of P3 equity)
 - Would want to do further analysis on out of state users
 - May be opportunities to adjust toll revenues broadly to increase revenue while having a frequent user discount program

Quantitative Analysis – Initial Outputs

Project Funding Update	Description		Traditional Toll	P3 Toll
Total Project Cost (YOE)	Total costs associated with delivering the Mid-Currituck Bridge	=	\$1,050 M	\$940 M
Net Cash Flow from Bridge Operations	The net present value of cash flow generated from toll revenues minus lifecycle costs (O&M, tolling, renewal and replacement) and financing costs (debt service)	-	\$200 M	\$200 M
Total Project Funding Gap		=	\$850 M	\$740 M
STIP Funding & Federal Grant Award Proceeds	Potential funding allocated at the division level and federal grant award proceeds	-	\$680 M	\$680 M
Total Project Funding Gap		=	\$170 M	\$60 M

Notes:

- Project Costs: The main cost difference between two approaches relates to the administration of the design and construction works.
- Net Cash Flows: The primary difference between the net cash flows from the traditional toll and P3 toll approach relates to the revenue forecast, as P3 developers can assume greater revenue risk due to their equity funding contribution.

Comparative Analysis Initial Key Takeaways

- For both a Traditional Toll and P3 Toll delivery, federal grant(s) funding would significantly close the funding gap
- A P3 Toll Delivery could further close the gap by more than \$100 million
- Time is money - Based on current inflationary expectations, the Project would likely increase in cost by \$4 to \$5 million per month

4. Toll Discount Programs

Toll Discounts - Examples

Discount Policies of Different State Tolling Agencies

- **In-State Pre-Paid:** Discount based upon having a registered local account (i.e., NC Quick Pass account). *Benefits in-state transponder account holders.*
- **Frequency:** Discount based upon the number (frequency) of trips; typically, the discounts are applied following a minimum number of monthly trips. *Benefits frequent Mid-Currituck Bridge drivers.*
- **Annual / Monthly Plan:** Plan provides customers with a fixed number of trips (can be unlimited) for a highly discounted annual/monthly fee. *Benefits frequent Mid-Currituck drivers.*
- **Time of Day:** Discount based upon time of day that customers use the facility (i.e., peak hour vs. off-peak hour price differences). *Typically, benefits drivers with flexibility to make the trip during less congested hours.*

NCDOT is collaborating with its T&R advisor to evaluate toll discount options.

Toll Discounts - Examples

Discount Policies of Different State Tolling Agencies

State	Agency	Discount Type	Detail						
DE	Delaware Department of Transportation	Frequency	Period of 30 days with a qualifying 50% discount after completion of 30 transactions for passenger cars.						
FL	Tampa Hillsborough Expressway Authority / Central Florida Expressway Authority / Florida's Turnpike	Frequency	Each transponder with 35 or more paid transactions that occur within a calendar month automatically receives a 50% toll credit.						
MD	Maryland Transportation Authority	Frequency / In-State	Provides 65% discount to customers with valid Maryland registered transponders who make 50 trips. The plan ends after 45 days or when all the trips are used, whichever comes first. Valid only for passenger cars						
		Annual/Monthly Plan	Applicable to Thomas J.Hatem Bridge only. Provides drivers unlimited trips across the bridge for a annual fee of \$20. Valid only for passenger cars.						
ME	Maine Turnpike Authority	Frequency	<table border="0"> <tr> <td><u>Number of Trips per Month</u></td> <td><u>Discount</u></td> </tr> <tr> <td>30-39 account trips per month</td> <td>20% discount applied to monthly account trips</td> </tr> <tr> <td>40 + account trips per month</td> <td>40% discount applied to monthly account trips</td> </tr> </table>	<u>Number of Trips per Month</u>	<u>Discount</u>	30-39 account trips per month	20% discount applied to monthly account trips	40 + account trips per month	40% discount applied to monthly account trips
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NH	New Hampshire Department of Transportation	In-State	New Hampshire registered E-ZPass accounts for vehicle classes 1 to 4 receive a 30% discount. Classes 5 to 12 receive a 10% discount.						
NY	New York State Thruway Authority	Commuter	Commuter discount plans, ranging from a 40% to 82% discount, are available for New York E-Zpass customers who complete 20 or 35 trips per month through specific toll plazas.						
		Annual/Monthly Plan	Covers the first 30 miles of travel on the Thruway ticket system for a flat annual fee of \$88 if registered for entire year (pro-rated less for partial year). Travel over 30 miles is subject to normal tolls.						
		In-State	New York registered E-ZPass passenger and commercial vehicles receive a 75% discount on Thruway tolls.						
VA	Elizabeth River Crossings*	Frequency, Income	A 50% refund is credited to the E-ZPass who earn less than \$65,000 per year and take eight trips or more through facilities in one month. There is no limit on the number of discounted trips in a month.						

*This discount program also considers where the drivers are residents

5. Next Steps

Next Steps

- Continue with market feedback to optimize construction costs and opportunities at revenue upside
- Receive results of MPDG grant application and incorporate into analysis
- Explore new grant funding opportunities
- Finalize comparative analysis and distribute to ARPO
- ARPO to adopt a resolution to allow NCDOT to continue with the P3 delivery process for the Mid-Currituck Bridge and secure one of the remaining two allowable project slots
 - NCDOT will also continue evaluating a Traditional Toll delivery as part of the Comparative Analysis

Questions?



Appendix

Delivery Approaches – P3 Toll Delivery

P3 Tolling Description

State Owned, Developer Operated and Tolled Bridge

- A Public-Private Partnership (P3) is a long-term contract between the public and private sectors to deliver a public service or asset. The private entity assumes managerial responsibility and significant financial risk in exchange for a return. In the context of this project:
 - The Developer would design, build, finance, operate, and maintain the Project under a DBFOM Agreement.
 - The Developer would also assume risk related to revenue, funding, and the project's lifecycle cost.

	Procurement Type	Design	Construction	Financing	Operations	Maintenance	Demand
Alt. Delivery	CM/GC	✓	✓	✗	✗	✗	✗
	Progressive Design-Build	✓	✓	✗	✗	✗	✗
	Design-Build	✓	✓	✗	✗	✗	✗
P3 Models	DBF	✓	✓	✓	✗	✗	✗
	DBFOM (Availability)	✓	✓	✓	✓	✓	✗
	DBFOM (Revenue Risk)	✓	✓	✓	✓	✓	✓

Incorporates new funding source (private sector capital)

More Public

More Private

Key

- ✗ Responsibility of Public Sector
- ✓ Responsibility of Private Sector
- CM/GC: Construction Manager/General Contractor
- DBF: Design Build Finance
- DBFOM: Design Build Finance Operate Maintain