North Carolina Turnpike Authority

Board of Directors Meeting

August 18, 2021



Opening Comments

Secretary Boyette
Chair

Executive Director Comments

JJ Eden
Executive Director





Operations Committee Report

Montell Irvin, P.E.
Operations Committee Chair

Finance Committee Report

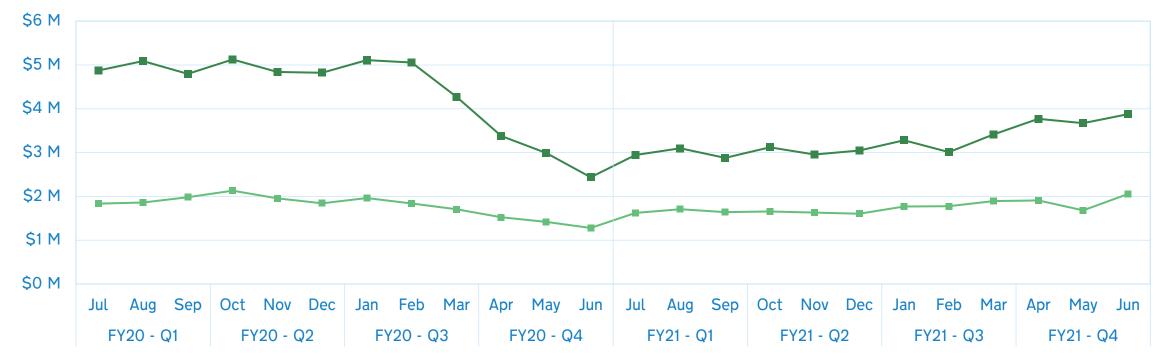
Robert Teer
Finance Committee Chair

Finance & Budget Update

David Roy
Chief Financial Officer

Revenue Statistics





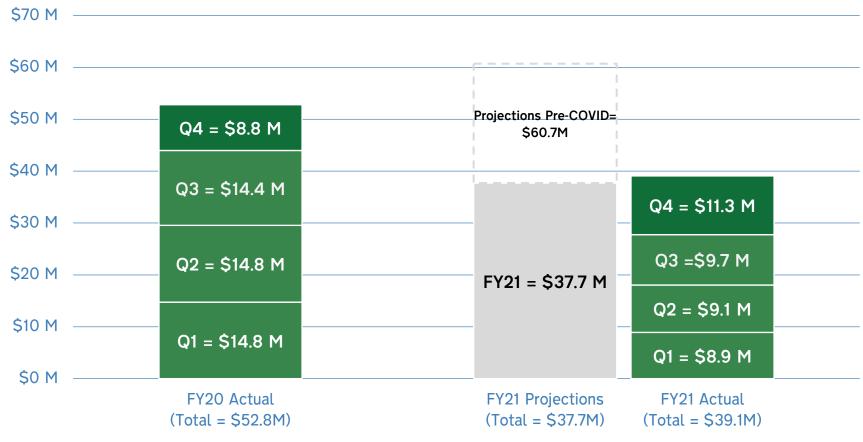
	FY20 - Q1	FY20 - Q2	FY20 – Q3	FY20 - Q4	FY21 – Q1	FY21 – Q2	FY21 – Q3	FY21 - Q4
Triangle Expressway Actual Revenue ¹	\$ 14,754,750	\$ 14,786,304	\$ 14,438,863	\$ 8,810,451	\$8,926,222	\$9,125,206	\$9,710,112	\$11,317,045
YOY Percent Change	19.2%	14.4%	10.5%	-37.9%	-39.5%	-38.3%	-32.8%	28.5%
	FY20 - Q1	FY20 - Q2	FY20 - Q3	FY20 - Q4	FY21 - Q1	FY21 – Q2	FY21 – Q3	FY21 – Q4
Monroe Expressway Actual Revenue ¹	FY20 - Q1 \$ 5,677,716	FY20 - Q2 \$ 5,929,466	FY20 - Q3 \$ 5,505,598	FY20 - Q4 \$ 4,222,890	FY21 - Q1 \$4,974,067	FY21 - Q2 \$4,890,642	FY21 - Q3 \$5,438,045	FY21 - Q4 \$5,647,673

¹Actual revenue is reported on a cash basis

Revenue Statistics

Triangle Expressway

YTD revenues down 26.0% year-over-year

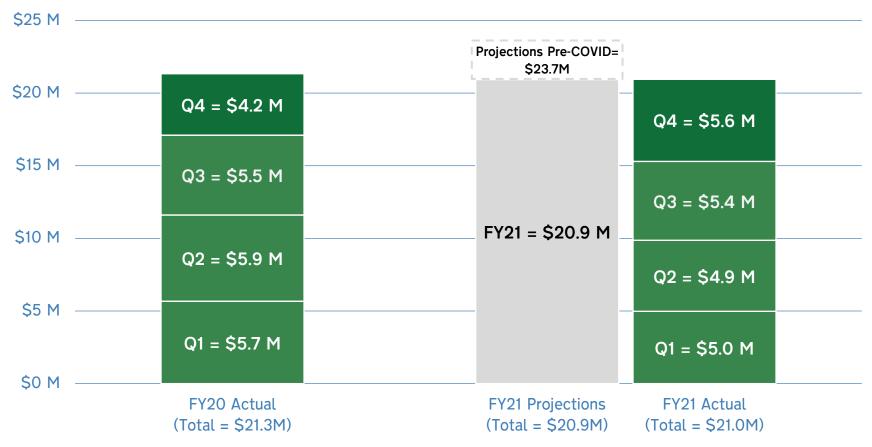


- · Revenue figures are inclusive of all toll revenue and fees
- · Actual revenues reported on a cash basis

Revenue Statistics

Monroe Expressway

YTD revenues down 1.8% year-over-year

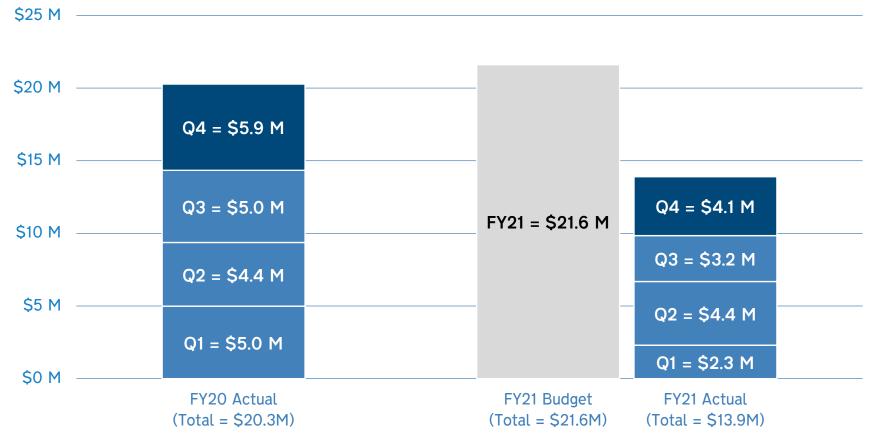


- Revenue figures are inclusive of all toll revenue and fees
- · Actual revenues reported on a cash basis

Operating Expenditures

Triangle Expressway

YTD expenditures **35.7%** lower than projected budget

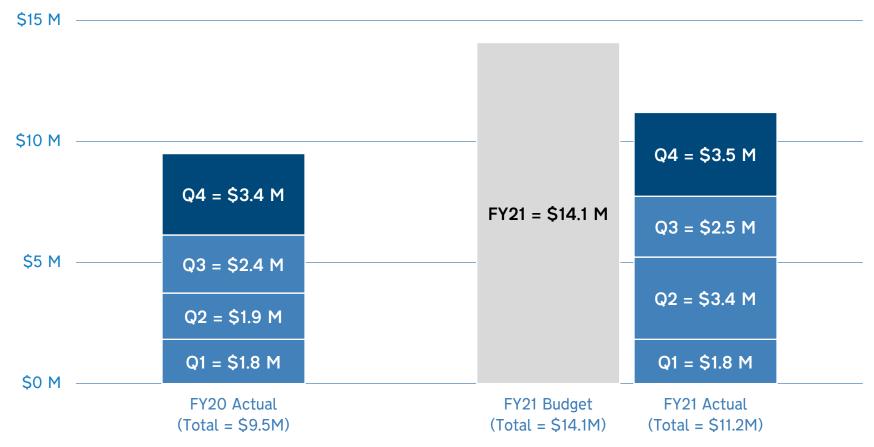


· Actual operating expenditures reported on a cash basis

YTD expenditures 20.5% lower than projected budget

Operating Expenditures

Monroe Expressway



· Actual operating expenditures reported on a cash basis

Complete 540 TIFIA Loan Interest Rate Reset

David RoyChief Financial Officer



Complete 540 Phase 1 TIFIA Loan – Rate Reset

- On December 17, 2019, the Authority completed the initial financing of the Complete 540 Phase 1 project
- Project funding included a Federal TIFIA Loan between USDOT and NCTA, in an amount not to exceed \$499,461,980 at an interest rate of 2.27%
- Due to the ongoing COVID-19 Pandemic, USDOT is allowed undrawn TIFIA Loans to undergo a rate reset to current interest rates, which are near historic lows
 - The Authority's TIFIA Loan is currently undrawn and will be drawn in full at the maturity of the Authority issued TIFIA Bond Anticipation Notes Series 2020 on February 1, 2024
- In October of 2020, the Authority submitted a Letter of Interest to USDOT for an interest rate reset on the Phase 1 TIFIA Loan
- On February 9, 2021, the Authority received an invitation to apply for an interest rate reset on the Phase 1
 TIFIA Loan
- On August 5, 2021, the TIFIA Loan rate was reset to 1.83% resulting in over \$40 million of PV Savings

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TIFIA Rate Reset Benefits

- The rate reset to 1.83% provides PV cash flow benefits of \$40.7 million
- The maximum balance on the TIFIA loan is reduced by \$6.0 million, due to reduced interest accrual prior to payment of debt service
- Total debt service on the TIFIA Loan is decreased by \$58.7 million

	Base Case	Rate Reset	Reduction
Max TIFIA Balance	529,918,083	523,892,306	6,025,776
Total Debt Service	789,762,698	731,073,347	58,689,351

	Base Case			Refinanced TIFIA			
FY	TIFIA DS	TIFIA DSRF	PV	TIFIA DS	TIFIA DSRF	PV	
2021							
2022							
2023							
2024		29,435,737	27,577,671		29,435,737	27,577,671	
2025							
2026	5,875,324	479,517	5,721,970	4,703,903		4,237,248	
2027	6,927,249	705,347	6,714,456	5,533,691		4,870,207	
2028	9,085,411	708,437	8,426,325	7,245,960		6,236,442	
2029	12,526,326	665,742	11,106,420	10,084,961	297,171	8,741,798	
2030	12,514,976	563,340	10,766,724	10,075,811	590,576	8,780,494	
2031	12,503,626	604,086	10,551,244	10,066,661	633,169	8,612,348	
2032	12,492,268	649,358	10,343,652	10,057,504	680,494	8,451,112	
2033	12,480,926	699,855	10,143,845	10,048,361	733,279	8,296,784	
2034	12,469,576	756,410	9,952,494	10,039,211	792,399	8,150,003	
2035	12,458,226	820,036	9,769,812	10,030,061	858,909	8,011,057	
2036	12,944,046	891,960	9,954,186	10,518,629	934,094	8,238,758	
2037	12,921,362	945,444	9,754,562	10,500,342	991,252	8,082,900	
2038	12,898,662	1,036,837	9,584,973	10,482,042	1,086,745	7,956,248	
2039	12,875,962	1,141,939	9,427,278	10,463,742	1,196,564	7,840,818	
2040	12,853,246	1,263,636	9,282,813	10,445,429	1,323,722	7,738,015	
2041	30,940,038	1,405,618	20,737,136	28,534,269	1,472,074	19,232,051	
2042	48,946,601	241,074	30,937,231	46,559,338	315,197	29,482,053	
2043	48,946,601	(1,135,555)	29,408,624	46,559,338	(1,053,612)	27,990,526	
2044	48,946,601	(1,286,962)	28,666,152	46,559,338	(1,194,094)	27,286,024	
2045	48,946,601	(1,470,814)	27,921,501	46,559,338	(1,364,678)	26,579,806	
2046	48,946,601	(1,697,093)	27,172,392	46,559,338	(1,574,629)	25,869,813	
2047	48,946,601	(1,979,942)	26,411,154	46,559,338	(1,837,067)	25,148,897	
2048	48,946,601	(2,339,931)	25,628,905	46,559,338	(2,171,079)	24,408,829	
2049	48,946,601	(2,807,918)	24,809,091	46,559,338	(2,605,295)	23,634,187	
2050	22,755,607	(3,431,899)	10,166,465	22,325,655	(3,184,250)	10,069,924	
2051	22,755,607	(197,531)	11,593,804	22,325,655	(193,799)	11,374,747	
2052	22,755,607	(253,969)	11,308,593	22,325,655	(249,170)	11,094,925	
2053	22,755,607	(338,625)	11,015,882	22,325,655	(332,227)	10,807,744	
2054	22,755,607	(474,075)	10,706,662	22,325,655	(465,118)	10,504,366	
2055	22,755,607	(711,113)	10,358,281	22,325,655	(697,677)	10,162,568	
2056	22,755,607	(1,185,188)	9,912,108	22,325,655	(1,162,795)	9,724,825	
2057	22,755,607	(2,370,376)	9,162,395	22,325,655	(2,325,589)	8,989,277	
2058	11,377,804	(21,333,382)	(4,396,831)	11,162,828	(20,930,302)	(4,313,756)	
Total	789,762,698		490,597,970	731,073,347	•	449,868,710	

PV Change of Cash Flows	40,729,259
PV Change of Cash Flows	40,729,2

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Estimated Costs of Issuance

Below is a high-level estimate of Costs of Issuance for the rate reset

Cost of Issuance	Amount (\$)
TIFIA Advisors*	150,000
NCTA Advisors**	155,000
Ratings	5,000
Miscellaneous	15,000
Total	325,000

^{*}Estimate for TIFIA Counsel

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^{**}Includes Financial Advisor and Counsel

Refunding Savings

Triangle Expressway

Transaction	Refunded Series (Maturities)	NPV Savings (\$)	NPV Savings (%)*
\$200,515,000 Triangle Expressway System Turnpike Revenue Refunding Bonds, Series 2017	Series 2009A (2020-2039)	\$32,153,069	13.72%
\$150,125,000 Triangle Expressway System Appropriation Revenue Refunding Bonds, Series 2018A	Series 2009B (2033-2039)	\$10,933,562	7.25%
\$161,759,000 Triangle Expressway System Appropriation Revenue Refunding Bonds, Series 2018B	Series 2009B (2022-2032)	\$18,854,944	11.67%
\$401,155,000 Triangle Expressway System Senior Lien Turnpike Revenue Refunding Bonds, Series 2018	2009 TIFIA Loan	\$10,245,388	2.38%
\$499,460,000 Triangle Expressway System Senior Lien Turnpike Revenue Bond Anticipation Notes, Series 2020**	Interim Funding to allow for TIFIA Restructure	\$4,745,518	0.95%
\$499,461,980 Triangle Expressway System TIFIA Loan, 2021	2019 TIFIA Loan (Interest Rate Reset)	\$40,729,259	8.15%
Total		\$117,661,740	

^{*}NPV Savings (%) is calculated based on the refunded par amount

^{**}Savings were originally estimated to be \$12.5 million (2.5%) and have been updated to reflect the impact of the reduced TIFIA Loan (and therefore, not double count savings). The TIFIA Loan would not have been eligible for the Rate Reset had the Series 2020 BANs not been issued as the TIFIA Loan would have been drawn upon.

Refunding Savings

Triangle Expressway & Monroe Expressway

Transaction	Closing	Refunded Series (Maturities)	NPV Savings (\$)	NPV Savings (%)*
\$200,515,000 Triangle Expressway System Turnpike Revenue Refunding Bonds, Series 2017	March 30, 2017	Series 2009A (2020-2039)	\$32,153,069	13.72%
\$150,125,000 Triangle Expressway System Appropriation Revenue Refunding Bonds, Series 2018A	May 10, 2018	Series 2009B (2033-2039)	\$10,933,562	7.25%
\$161,759,000 Triangle Expressway System Appropriation Revenue Refunding Bonds, Series 2018B	December 31, 2018	Series 2009B (2022-2032)	\$18,854,944	11.67%
\$401,155,000 Triangle Expressway System Senior Lien Turnpike Revenue Refunding Bonds, Series 2018	December 12, 2018	2009 TIFIA Loan	\$10,245,388	2.38%
\$499,460,000 Triangle Expressway System Senior Lien Turnpike Revenue Bond Anticipation Notes, Series 2020**	October 29, 2020	Interim Funding to allow for TIFIA Restructure	\$4,745,518	0.95%
\$73,985,000 Monroe Expressway System State Appropriation Revenue Refunding Bonds, Series 2021 (Forward Delivery)	Preliminary Closing: December 8, 2020	Series 2011 (2022-2041)	\$29,273,595	30.81%
\$499,461,980 Triangle Expressway System TIFIA Loan, 2021	August 5, 2021	2019 TIFIA Loan (Interest Rate Reset)	\$40,729,259	8.15%
Total			\$146,935,335	

^{*}NPV Savings (%) is calculated based on the refunded par amount

^{**}Savings were originally estimated to be \$12.5 million (2.5%) and have been updated to reflect the impact of the reduced TIFIA Loan (and therefore, not double count savings). The TIFIA Loan would not have been eligible for the Rate Reset had the Series 2020 BANs not been issued as the TIFIA Loan would have been drawn upon.

Roadway Operations Update

Dennis Jernigan, P.E.

Deputy Chief Engineer of Highway Operations

Mainline Traffic Statistics Triangle Expressway

147 540 40 96.2% Increase 540 FY20 Q4 AWT = 8,870 FY21 Q4 AWT = 17,400 63.4% Increase **5**4 40 $\overline{\text{FY20}}$ Q4 AWT = 25,420 FY21 Q4 AWT = 41,540 Morrisville 540 66.7% Increase **5**4 Cary FY20 Q4 AWT = 20,500 FY21 Q4 AWT = 34,180 40 64 64 **59.4%** Increase Apex FY20 Q4 AWT = 11,410 FY21 Q4 AWT = 18,190 Interchange 20

Q4: April – June

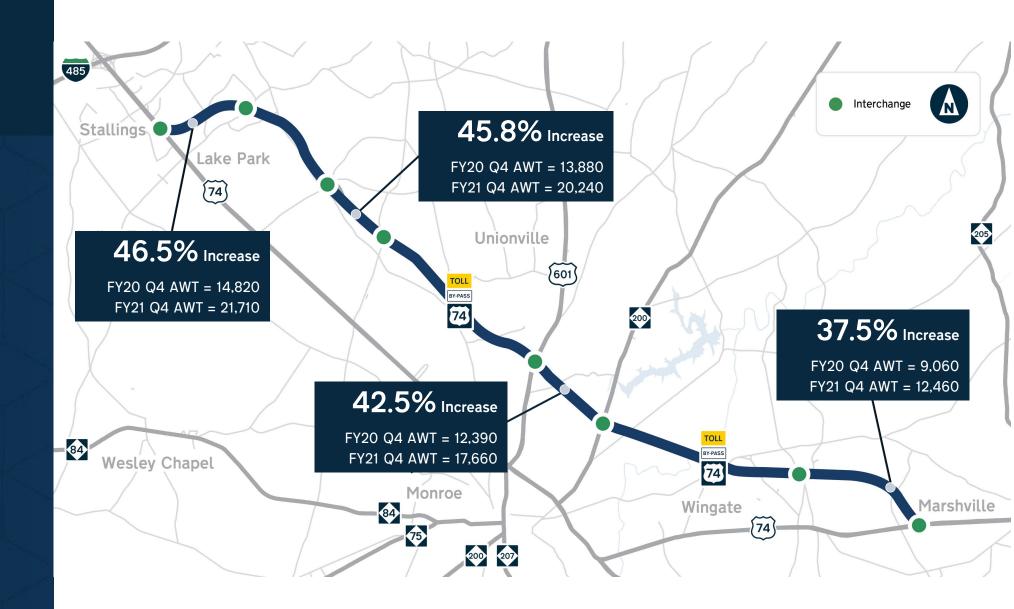
AWT: Average Weekday Traffic

Roadway Maintenance Statistics

Triangle Expressway

	FY 2021 Q1	FY 2021 Q2	FY 2021 Q3	FY 2021 Q4	Rolling Rate
Road Surface	96.3	96.2	90.5	96.8	95.1
Unpaved Shoulders and Ditches	96.5	98.8	99.3	99.3	98.6
Drainage Structures	89.2	87.6	88.6	94.0	89.9
Roadside	91.1	89.1	90.6	95.5	91.6
Traffic Control Devices	84.0	85.2	82.2	92.5	86.3
Overall	90.7	90.7	88.9	95.2	91.6

Mainline Traffic Statistics Monroe Expressway



Q4: April – June

AWT: Average Weekday Traffic

Roadway Maintenance Statistics

Monroe Expressway

	FY 2021 Q4
Road Surface	100.0
Unpaved Shoulders and Ditches	90.6
Drainage Structures	93.1
Roadside	95.1
Traffic Control Devices	98.0
Overall	96.3

Wall Overlap Access



Chief Engineer's Update

Rodger Rochelle, P.E.
Chief Engineer

The guy who digs in Dirt

By: Jacob Harris

What I did with dirt?

- Tested it
- Compacted it
- Felt it
- Smelt it
- Cooked it
- Wore it
- Tasted it
- Ate it!

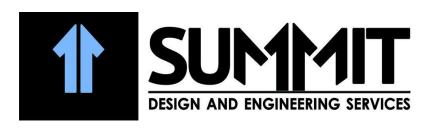
What I learned?

- I learned **how** to work!
- Importance and privilege of work from others around me



Overall

- Really enjoyed the internship and the work I did during it
- View it as a big success based on the goals I set with my ambassador
- Developed skills that will benefit me beyond the job







Cape Fear Memorial Bridge Unsolicited Proposal



The Need: Replace Aging Infrastructure

- The Cape Fear Memorial Bridge was Constructed in 1969
 - 51 Year Old Structure
- Existing structure requires costly routine maintenance
 - Fixed Span Major Rehabilitation Required every 20 years
 - Moveable Span Major Rehabilitation Required every 10 years
 - The recent major rehabilitation in 2019 cost ~ \$15M
 - Yearly maintenance costs \$550k/year
- Growing Volumes of Traffic
 - Projected 81,900 vehicles per day (2045)

Unsolicited Proposal - Overview

Funding

- Fully Funded by Developer
- Bonus Allocation To Be Determined

Procurement

- "Progressive" PPP
- Would Likely Require Certain Hold Points and Exit Ramps

Developer Responsibilities

- · Work to Inform NEPA, Design, Public Outreach
- Permitting
- Construction (and Demolition)
- Operations and Maintenance (O&M)

Developer Assumption of Risks

- NEPA and Permitting
- Design, Construction, and O&M Costs
- Schedule
- Revenue

Contract Term

- Five Year Schedule
- 50 Year Tolling Duration

Team

- National Caliber Design, Engineering and Construction Firms (with PPP experience)
- Experience in North Carolina and Coastal Areas

Tolling

- Minimize Toll Rates
- Provide Customer Service and Invoicing Services

Next Steps – If WMPO Desires



MPO Coordination and Resolution(s) of Support

2

Continued Analysis



Prescreening Assessment

- Identify Legislative Needs
- STIP and MPO Amendments
- Prescreening Guidelines/Flow Chart
- Early Public Involvement
- Traffic and Revenue Study
- Prioritization (SPOT)
- Identify/Secure "Seed" PE Funds

Unsolicited Proposal Coordination

Presentations

• May 26th WMPO

• June 30th WMPO

July 12th Leland Town Council

July 13th New Hanover County Commissioners

• July 20th City of Wilmington

July 21st Brunswick County Commissioners

July 27th Wilmington Chamber of Commerce

July 28th WMPO Vote

Complete 540



R-2828

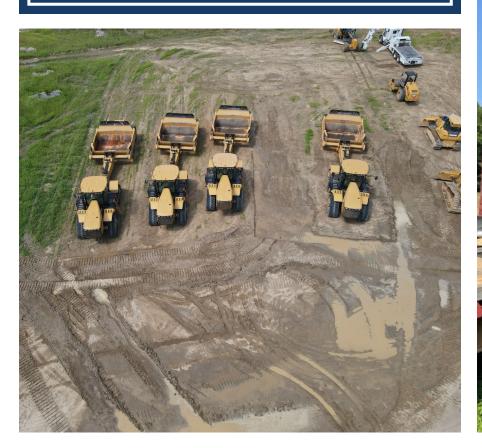
Settlement and Release Agreement

- Eliminates Claims Related to
 - Extended Overhead
 - Idle Equipment
 - Labor Inefficiencies
 - Equipment Inefficiencies
- Includes Design and Construction of Additional Bridge at Interchange with I-40
- Eliminates Substantial Completion Bonus
- Provides a Contract Time Extension

Construction Equipment

Daily Idle Rates

MTS 2020 3630T & MT-28 \$2,570



LINK BELT 298HSL-25 \$3,105



CAT 2019 D9T *\$1,780*

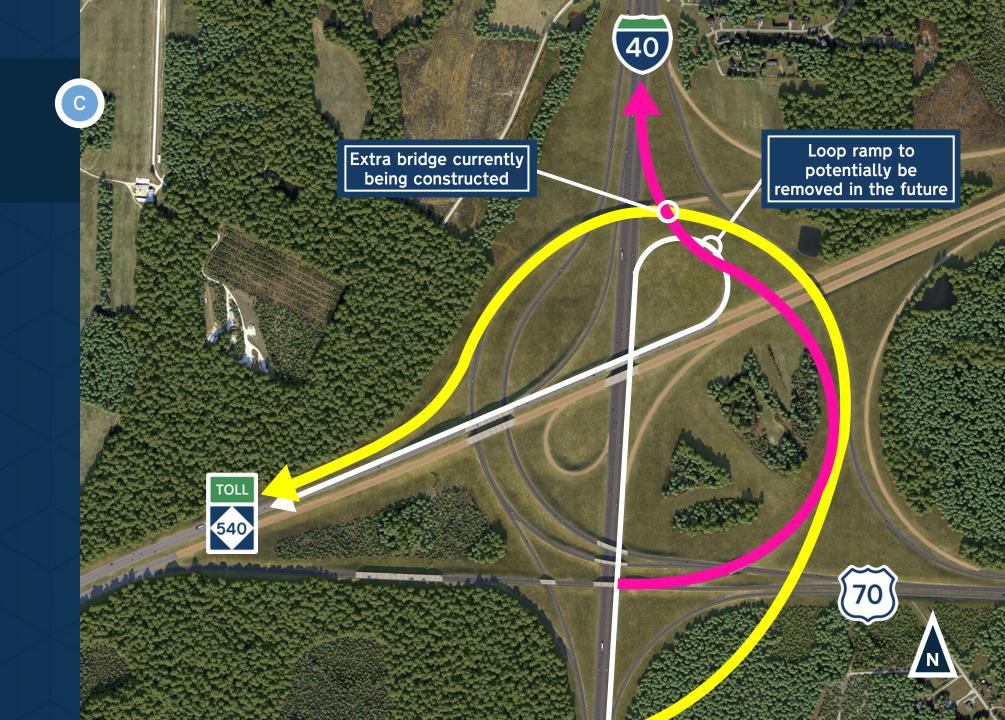


Interchange I-40 / U.S. 70









R-2828

Substantial Completion Date

October 24, 2023

> Final Completion Date

November 23, 2023

> Settlement/Bridge Compensation \$ ~23M

R-2828







\$403.2M

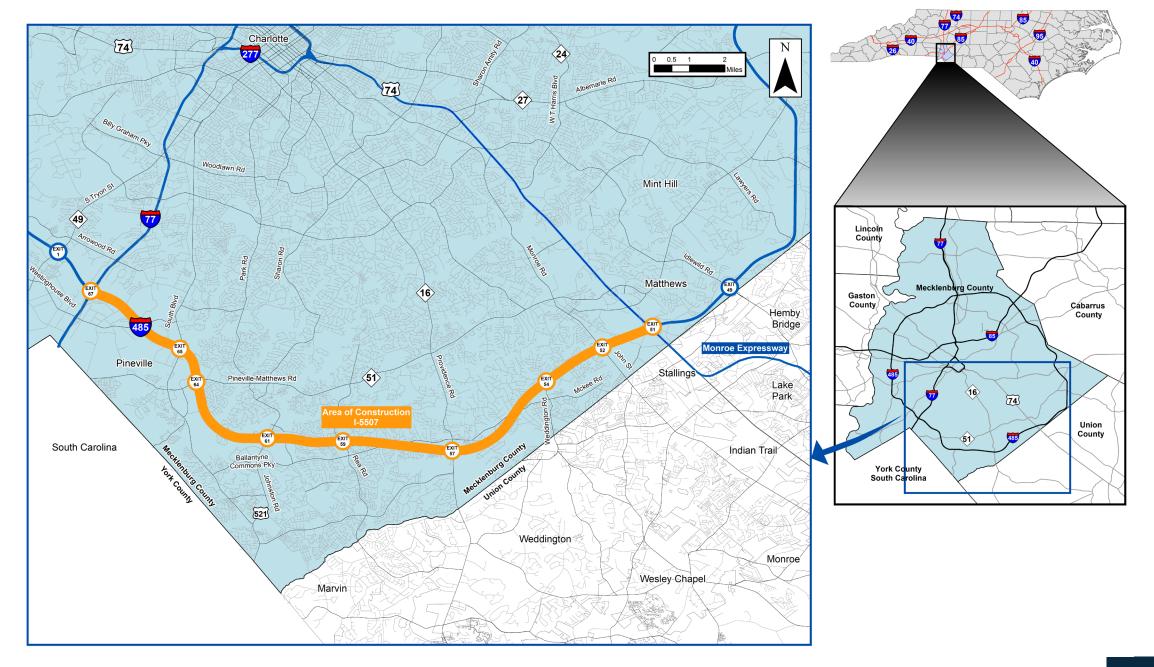
Cost of Contract

40.6% Complete As of 6/30/2021

Program Development Update

Andy Lelewski, P.E.
Director of Program Development

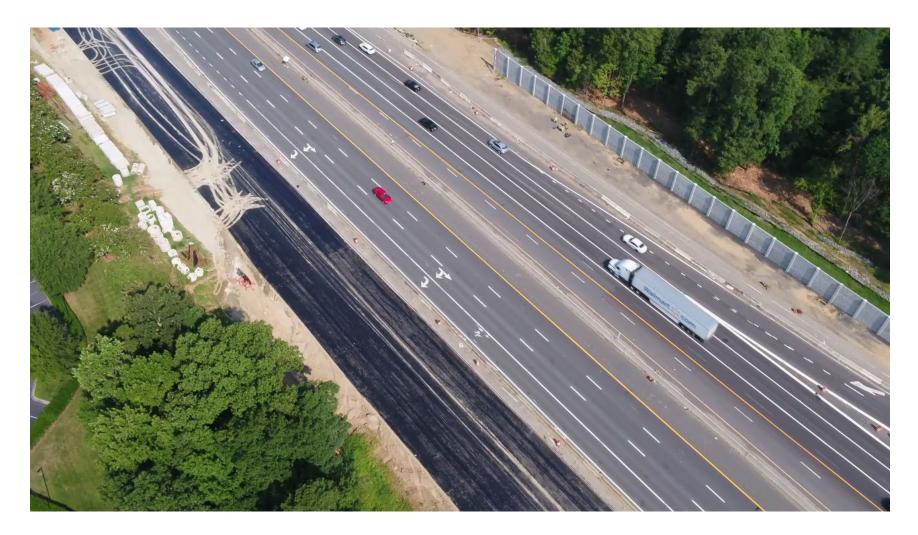
I-485 Express Lanes Update



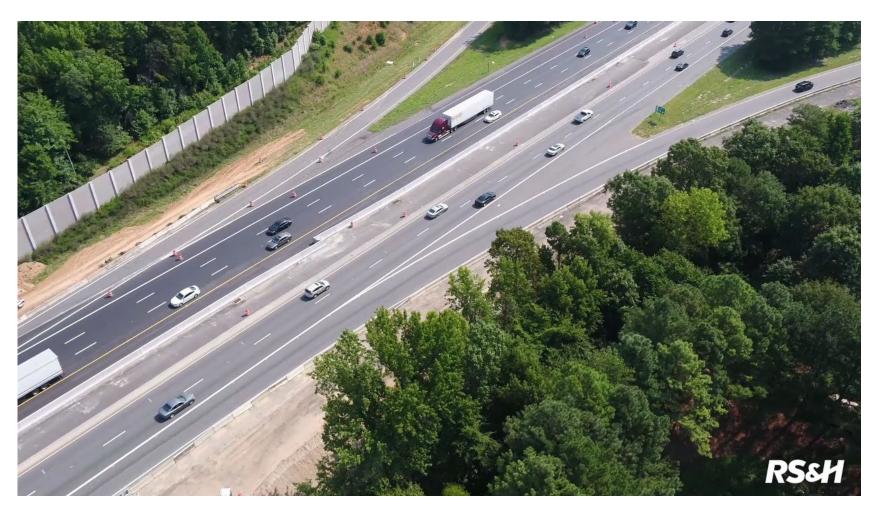
Westinghouse Boulevard Direct Connector



McAlpine Creek Bridge & Johnston Rd. Direct Connect



Elm Lane Overpass



US 74 Interchange



Progress before last meeting
Progress since last meeting

- > Toll-Related Construction Progress
 - Toll Rate Message Signs (17)
 - Static Toll Sign Groups (78)
 - Power Services (47)
 - ITS/AET Conduit (25.3 mi)
 - AET Toll Gantry (9)
 - ITS Devices (217)

Complete: 0	Under Construction: 7
Complete: 0	Under Construction: 33

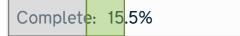
Complete:	0	Under	Construction: 0
	•		



Complete: 0	Under Construction: 2
complete: O	Under Construction: 2

Complete: 0 Under Construction: 0

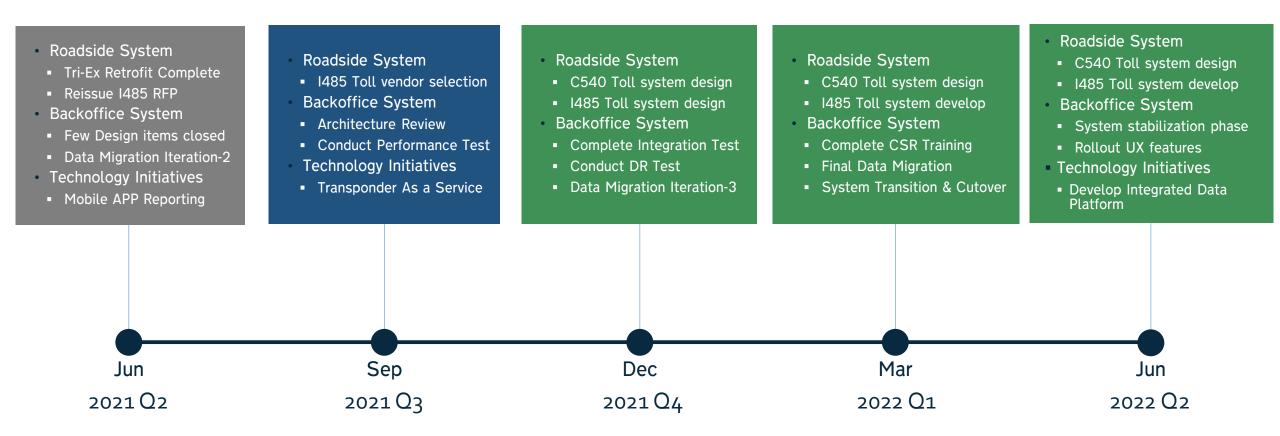
- > Overall Construction Progress
 - Asphalt Paving



Toll Technology & Customer Service Center Update

Manish Chourey
Chief Technology Officer

Technology Project Timeline Projections



Timeline provides Plan dates – subject to changes based on actual activities

On Call Consultant Letter of Intent (LOI)

- ➤ Issued on April-1st 2021
- > Responses were received from 9 separate firms
- Selected multiple firms with focus in specialized work areas:
 - 1. Business and technical operations audit and compliance
 - 2. Application support
 - 3. Technical program/project management
 - 4. Development, Implementation, and Management of As-A Service Offerings
- Developing scope of work with selected firms

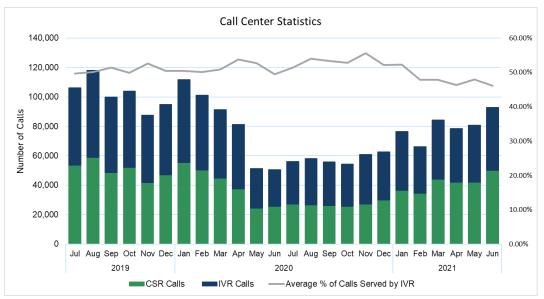
Selected On Call Firms
Atkins Global
CDM Smith
Deloitte
Gannett Fleming
RK&K
RS&H

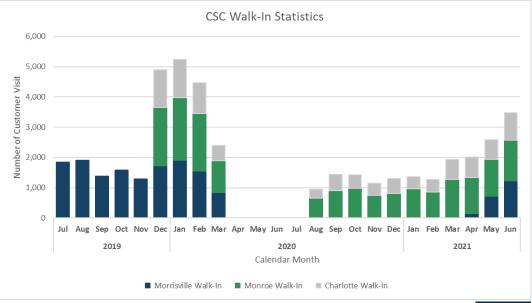
I-485 Express Lanes Toll Collection System Procurement Schedule

Category	Date
✓ RFP Issued	April 14, 2021
✓ Mandatory Pre-Proposal Scope of Services Meeting	April 30, 2021 (1:00 p.m. to 3:00 p.m. ET)
✓ Proposer Questions Due	May 14, 2021 (4:00 p.m. ET)
✓ Proposals (Technical and Price) Due	July 12, 2021 (4:00 p.m. ET)
Notification of Proposers Shortlisted for Oral Presentations	August 19, 2021
Oral Presentations and Interviews	Week of September 6, 2021
Ranking of Proposers for Negotiations	September 10, 2021
Notice to Proceed / Award of Contract	September 22, 2021

Customer Service Update

- CSC Operations trending back to normalcy
 - Employees and Embedded Consultants plan to return to CSC
 - CSRs are spaced out to meet social distancing (6+ feet)
 - CSC is keeping current with incoming workload (Service requests, Customer Calls and fulfillments)
 - Few CSR's will continue to Work From Home (WFH)
- Call volumes are close to Pre-Covid
- Morrisville Walk-In center opened on April-21st
- Effective July-2021: All efforts are resumed to collect outstanding debt

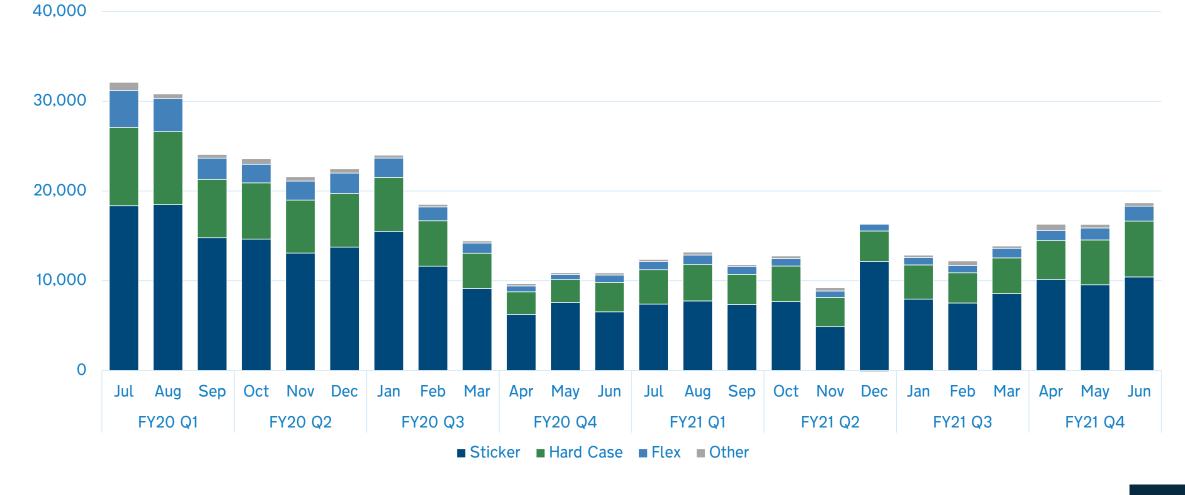




Monthly Transponders Distributed

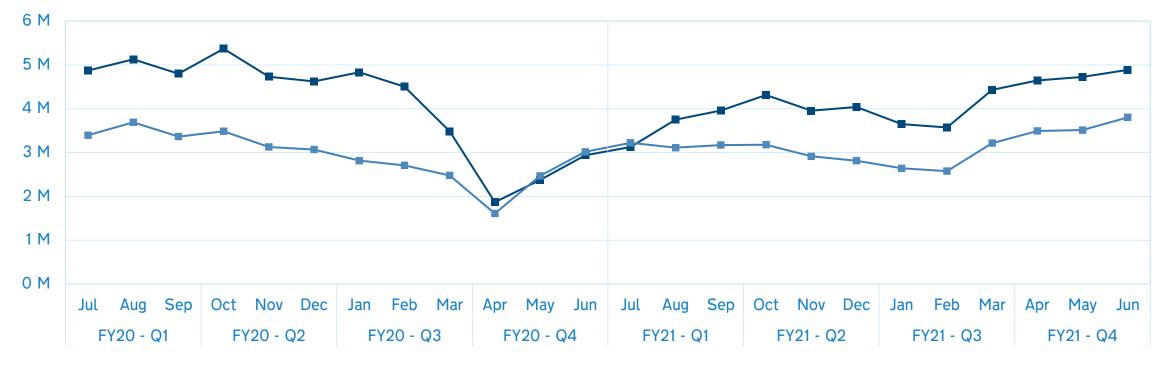
NC Quick Pass Program

1,017,701
Transponders Distributed as of June 30, 2021



Transaction Statistics

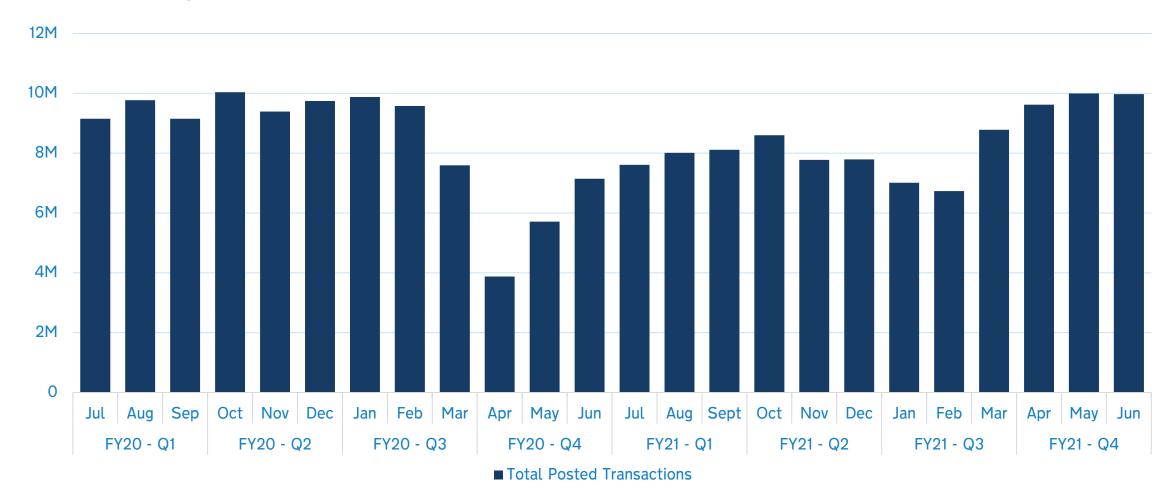




	FY20 - Q1	FY20 - Q2	FY20 - Q3	FY20 - Q4	FY21 - Q1	FY21 – Q2	FY21 - Q3	FY21 – Q4
Triangle Expressway Transactions	14,798,679	14,727,149	12,821,214	7,181,798	10,839,235	12,310,656	11,656,459	14,262,318
YOY Percent Change	10.5%	7.4%	-7.0%	-51.5%	-26.8%	-16.4%	-9.1%	98.6%
	FY20 - Q1	FY20 – Q2	FY20 - Q3	FY20 – Q4	FY21 - Q1	FY21 - Q2	FY21 - Q3	FY21 – Q4
Monroe Expressway Transactions	FY20 - Q1 10,453,336	FY20 - Q2 9,686,088	FY20 - Q3 8,003,844	FY20 - Q4 7,097,242	FY21 - Q1 9,508,138	FY21 - Q2 8,907,741	FY21 - Q3 8,435,990	FY21 - Q4 10,809,987

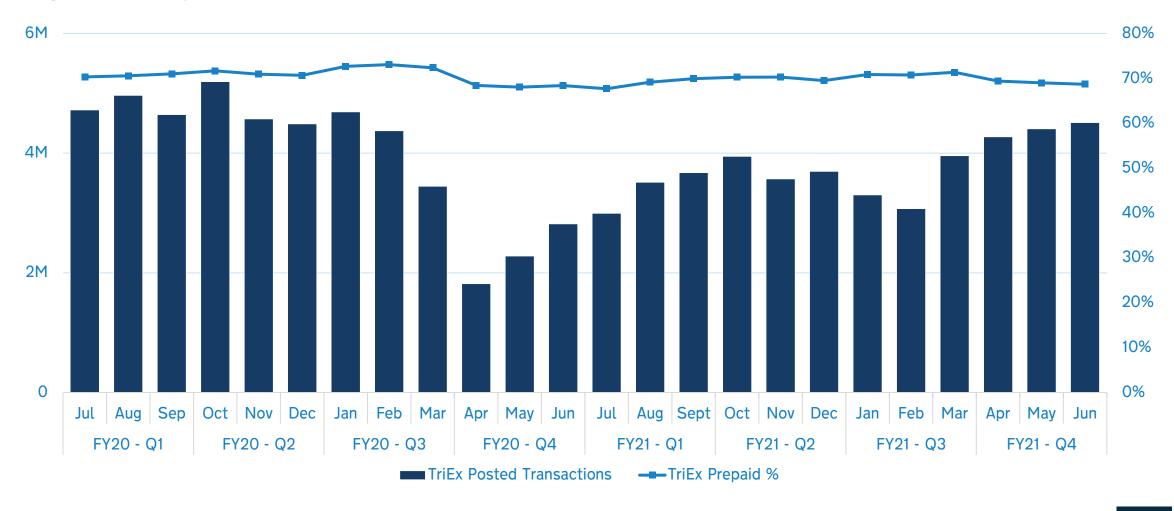
Total Posted Transactions

NC Quick Pass Program



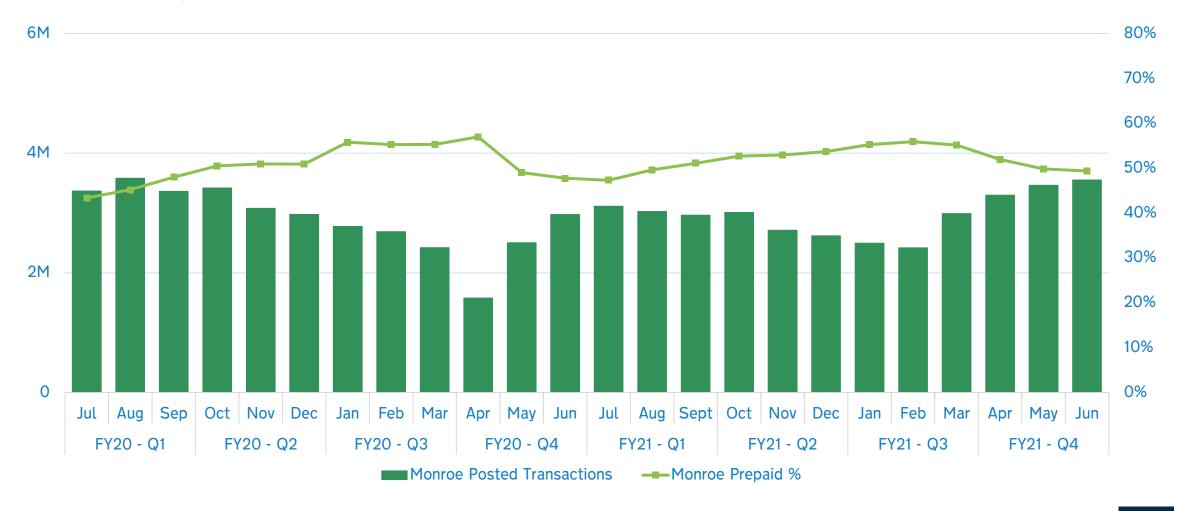
Total Posted Transactions

Triangle Expressway



Total Posted Transactions

Monroe Expressway

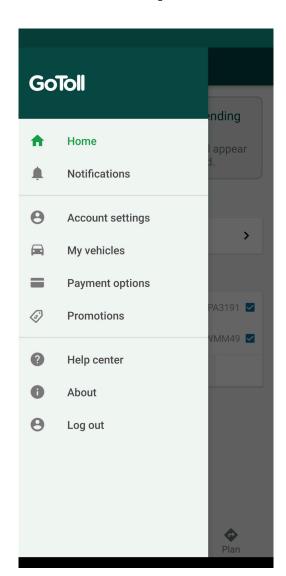


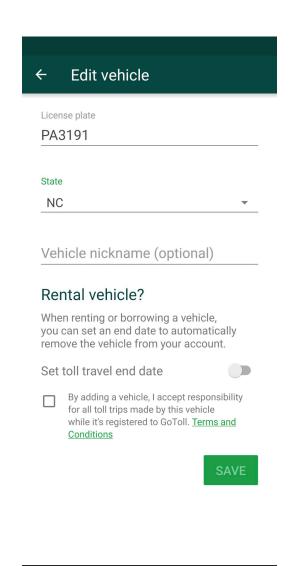
Mobile Payment Pilot Updates

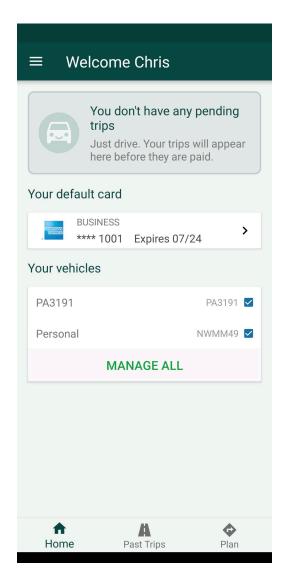
Project Overview and Goals

- What: Test Mobile Payments using License plate images using mobile app
- Target Market: Casual customer who wants to register with LPN and Payment Method
- NCTA Goals:
 - Test new payment options and platforms
 - Develop NCTA policy for new payment option
 - Determine how to integrate multiple providers
 - Determine policy for use on Interoperable Facilities and Express lanes

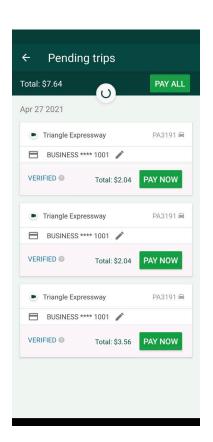
Customer Experience

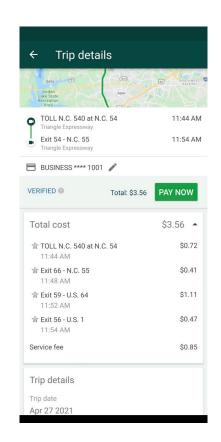


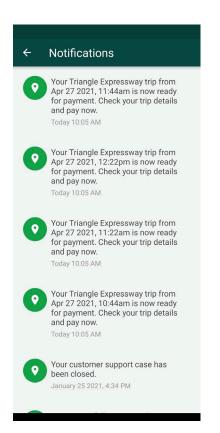


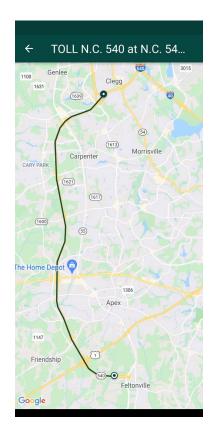


Trip Summary After Driving

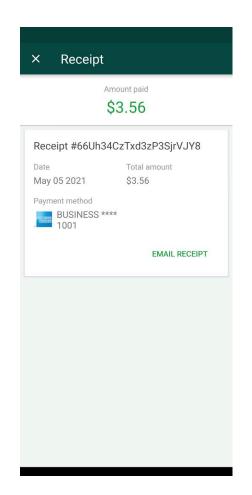


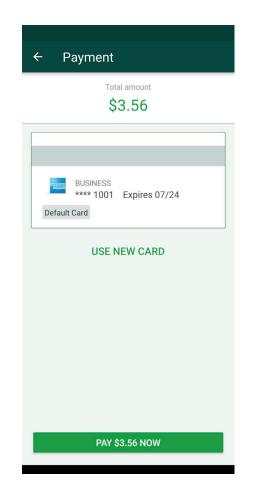


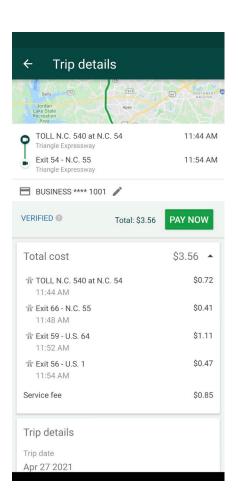




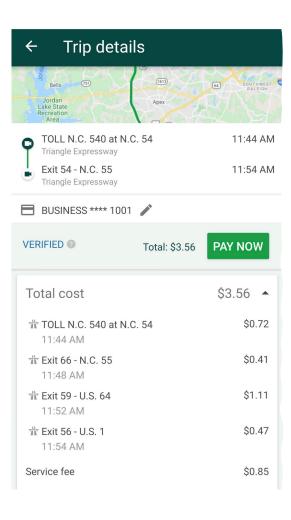
Make a Payment





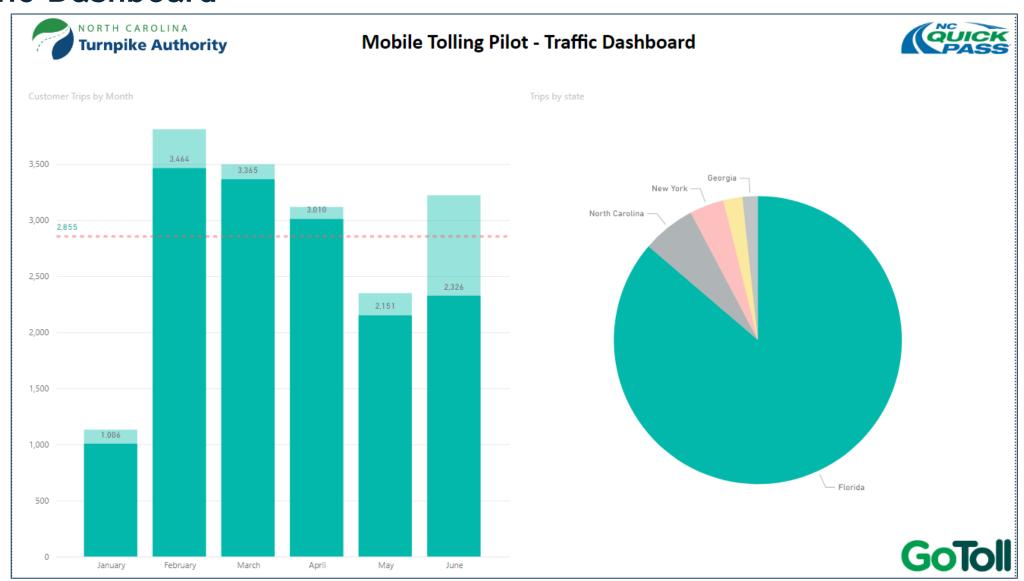


Trips Explained



- Trips for NCTA are developed at facility level and customers charged per trip.
 - Triangle Expressway is one trip
 - Monroe Expressway is one trip
- Trips are built for up to 30 minutes after the last transactions received the same direction for the same license plate.
- Trips prohibited on I-77 Express Lanes.

Traffic Dashboard



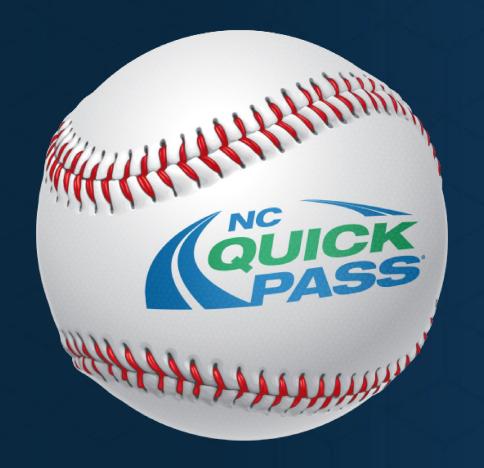
Communications & Marketing Update

Kimberlee Poulton

Marketing & Communications Director

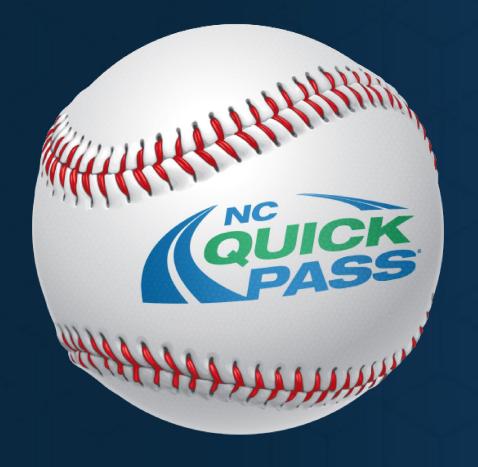
Logen Hodges

Marketing & Communications Manager







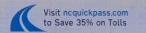














Marketing & Communications RFP

Three-year contract
Two one-year extensions
On-call services
Selection this fall





Complete 540 Outreach



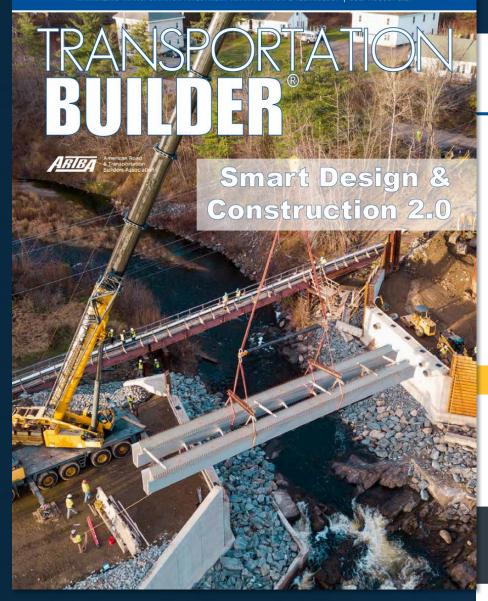
Virtual/In-Person Meetings

Resident Communications

Apex Town Council, Garner Town Council, Capital City Rotary

138,890

Total Impressions



THE FUTURE FOR **TOLLING** IS NOW

By James "J.J." Eden jjeden@ncdot.gov

The COVID-19 pandemic required the U.S. tolling industry to quickly pivot and adapt to new work situations focused on customer and employee safety, with increased touchless interactions due to social distancing. But this was simply the next step in an already accelerated and continued time of change.

With Cloud- and Blockchain-oriented technologies bringing new car-based functionalities into the mainstream and automakers increasing efforts to manufacture vehicles that provide consumers the option of cashless transactions and enabled payment across multiple platforms, it is incumbent that transportation leaders not only catch up, but also get ahead of this trend.

In the past, trends such as these have caught our industry off guard, making us late to adjust to the needs of our systems, and most importantly, our customers. Modern cars and accompanying technologies provide us with the opportunity to lead and become an integral part of the change.

Using ITS

Vehicles rolling off the assembly lines are computers on wheels, using Intelligent Transportation Systems (ITS) to continuously process and transmit data about itself, its surroundings, and



Photo: North Carolina Tumpike Authority

its passengers. This constant flow of data can help vehicles better navigate, manage systems, and/or deliver important communications and services to passengers.

For example, Hyundai recently announced a new in-car payment system that will debut in their lonig 5 crossover vehicle. It allows drivers to locate electric vehicle charging stations and pay for food and parking. The company says it plans to add more payment categories in the future to enhance the connected vehicle experience.

See Tolling, 34

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