

North Carolina Turnpike Authority

Board of Directors Meeting

November 19, 2020



Opening Comments

Secretary Boyette
Chair

Executive Director Comments

JJ Eden
Executive Director



CERTIFICATE

OF APPRECIATION

This Certificate is Presented to

in service of the North Carolina Turnpike Authority for the initiatives of success on behalf of transportation in North Carolina



Signature

November 19, 2020

Date

Dennis Jernigan

Jennifer Harris

Kate Trimble

Operations Committee Report

Montell Irvin, PE
Operations Committee Chair

Finance Committee Report

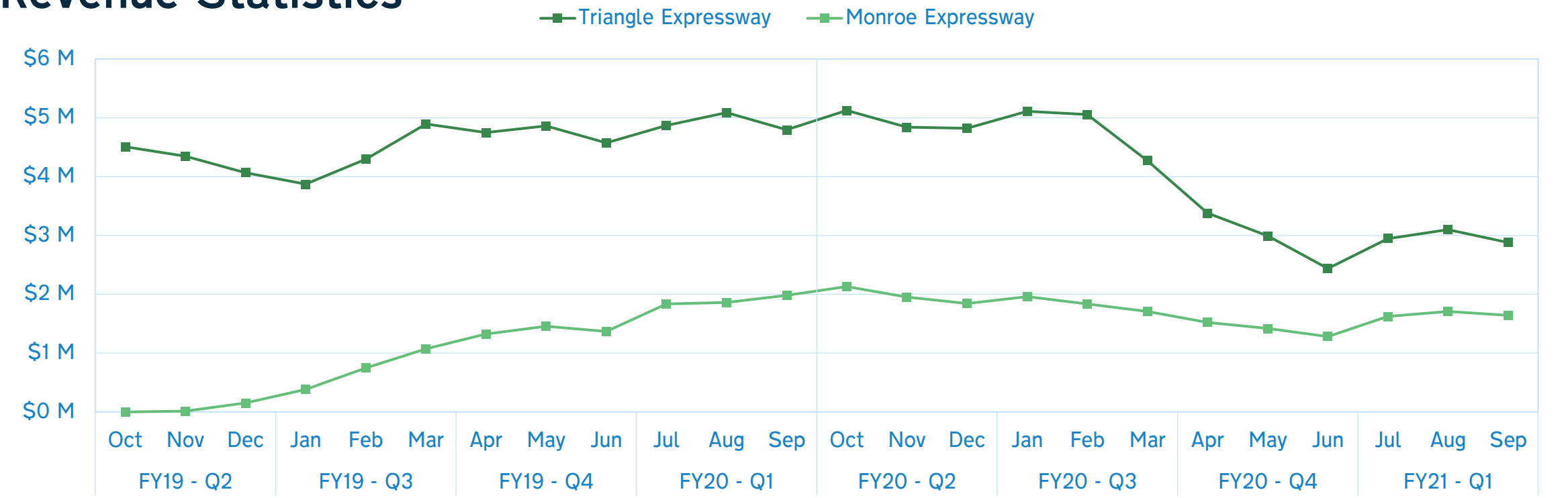
Robert Teer
Finance Committee Chair

Finance & Budget Update

David Roy

Director of Finance & Budget

Revenue Statistics



	FY19 – Q2	FY19 – Q3	FY19 – Q4	FY20 – Q1	FY20 – Q2	FY20 – Q3	FY20 – Q4	FY21 – Q1
Triangle Expressway Actual Revenue ¹	\$ 12,925,510	\$ 13,064,297	\$ 14,182,712	\$ 14,754,750	\$ 14,786,304	\$ 14,438,863	\$ 8,810,451	\$8,926,222
YOY Percent Change	9.4%	7.0%	9.2%	19.2%	14.4%	10.5%	-37.9%	-39.5%

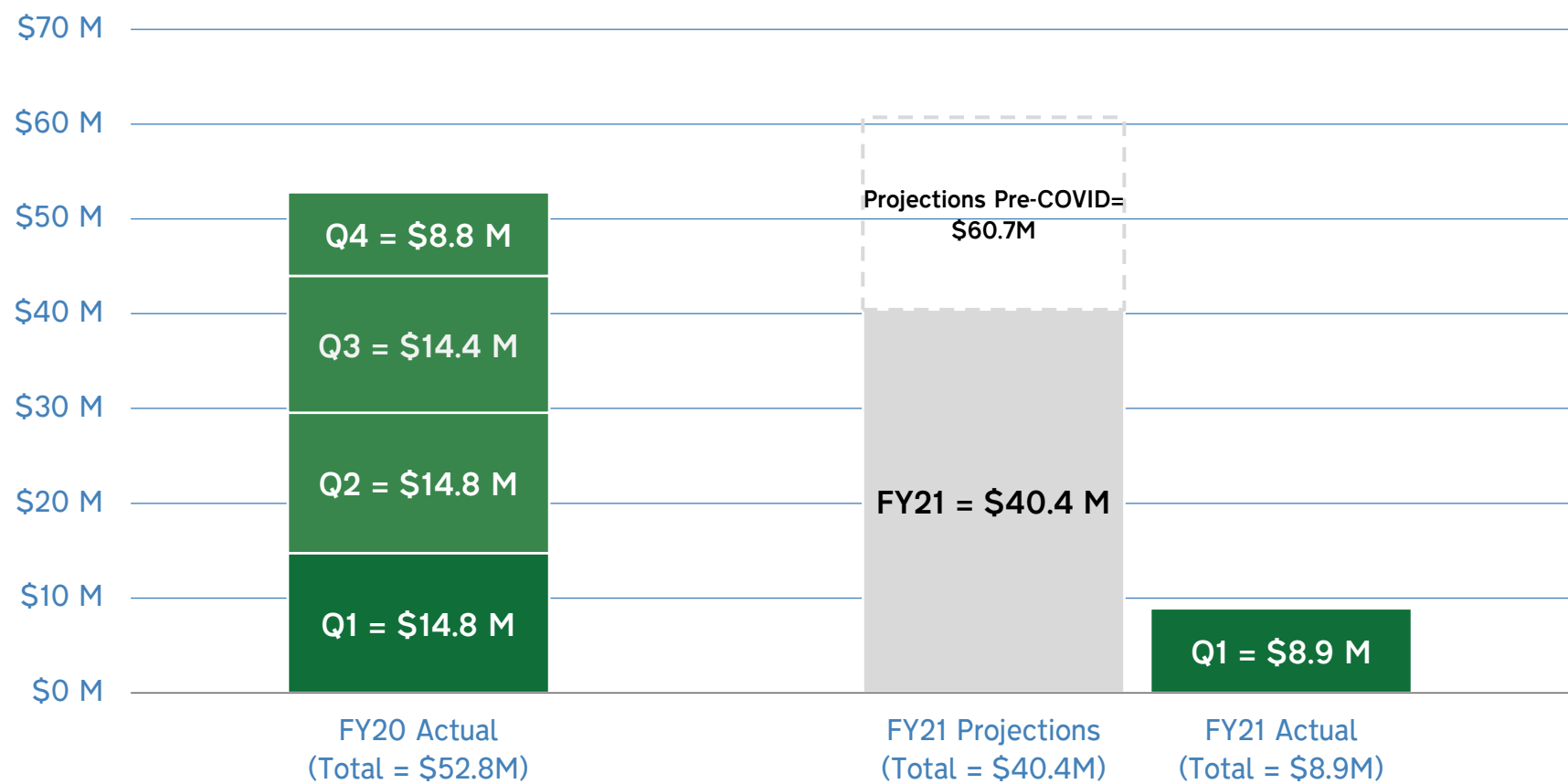
	FY19 – Q2	FY19 – Q3	FY19 – Q4	FY20 – Q1	FY20 – Q2	FY20 – Q3	FY20 – Q4	FY21 – Q1
Monroe Expressway Actual Revenue ¹	\$ 165,086	\$ 2,203,674	\$ 4,147,407	\$ 5,677,716	\$ 5,929,466	\$ 5,505,598	\$ 4,222,890	\$4,974,067
YOY Percent Change	-	-	-	-	-	-	1.8%	-12.4%

¹Actual revenue is reported on a cash basis

Revenue Statistics

Triangle Expressway

YTD revenues down **39.5%**
year-over-year

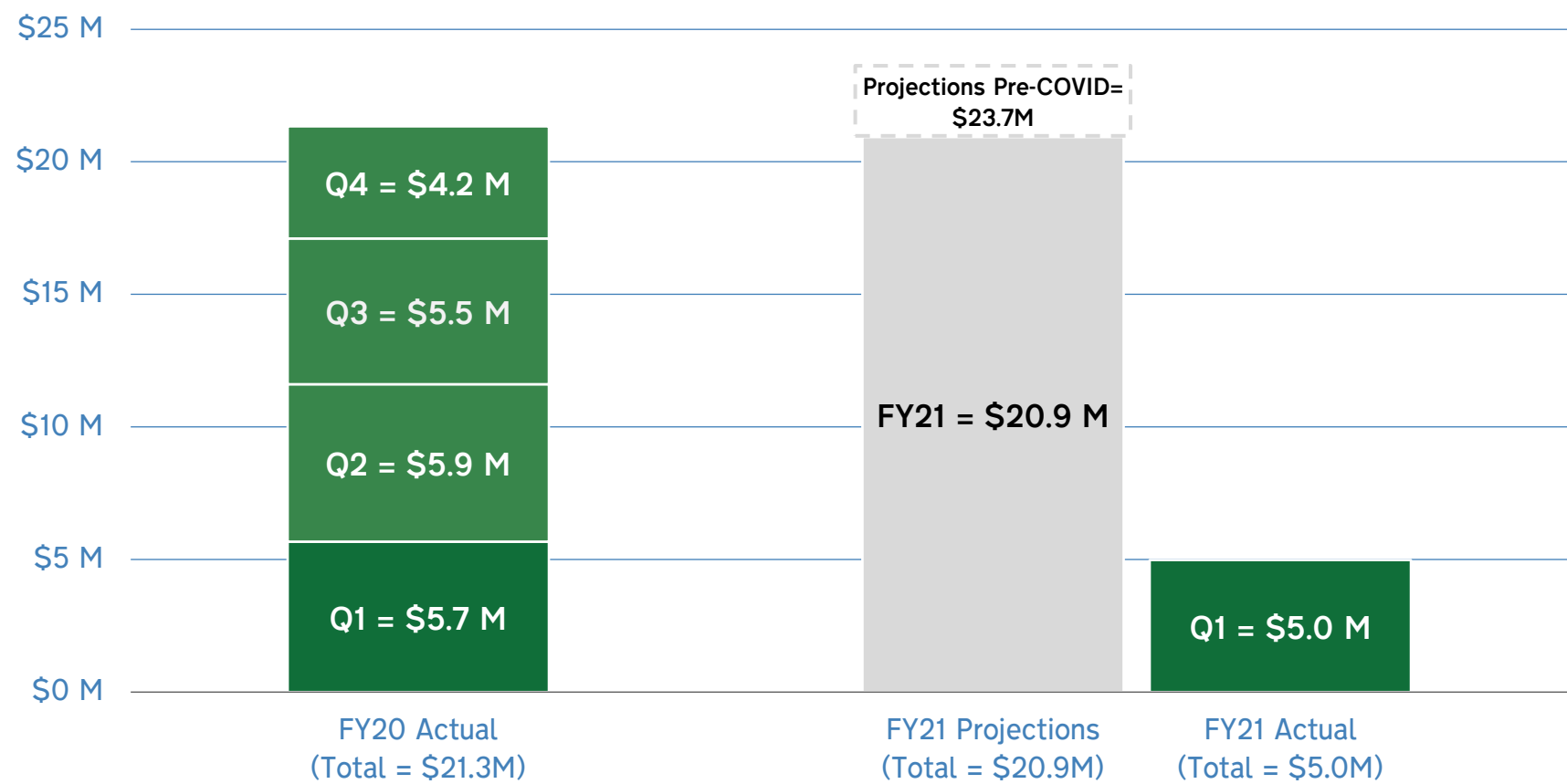


- Revenue figures are inclusive of all toll revenue and fees
- Actual revenues reported on a cash basis

Revenue Statistics

Monroe Expressway

YTD revenues down **12.4%**
year-over-year

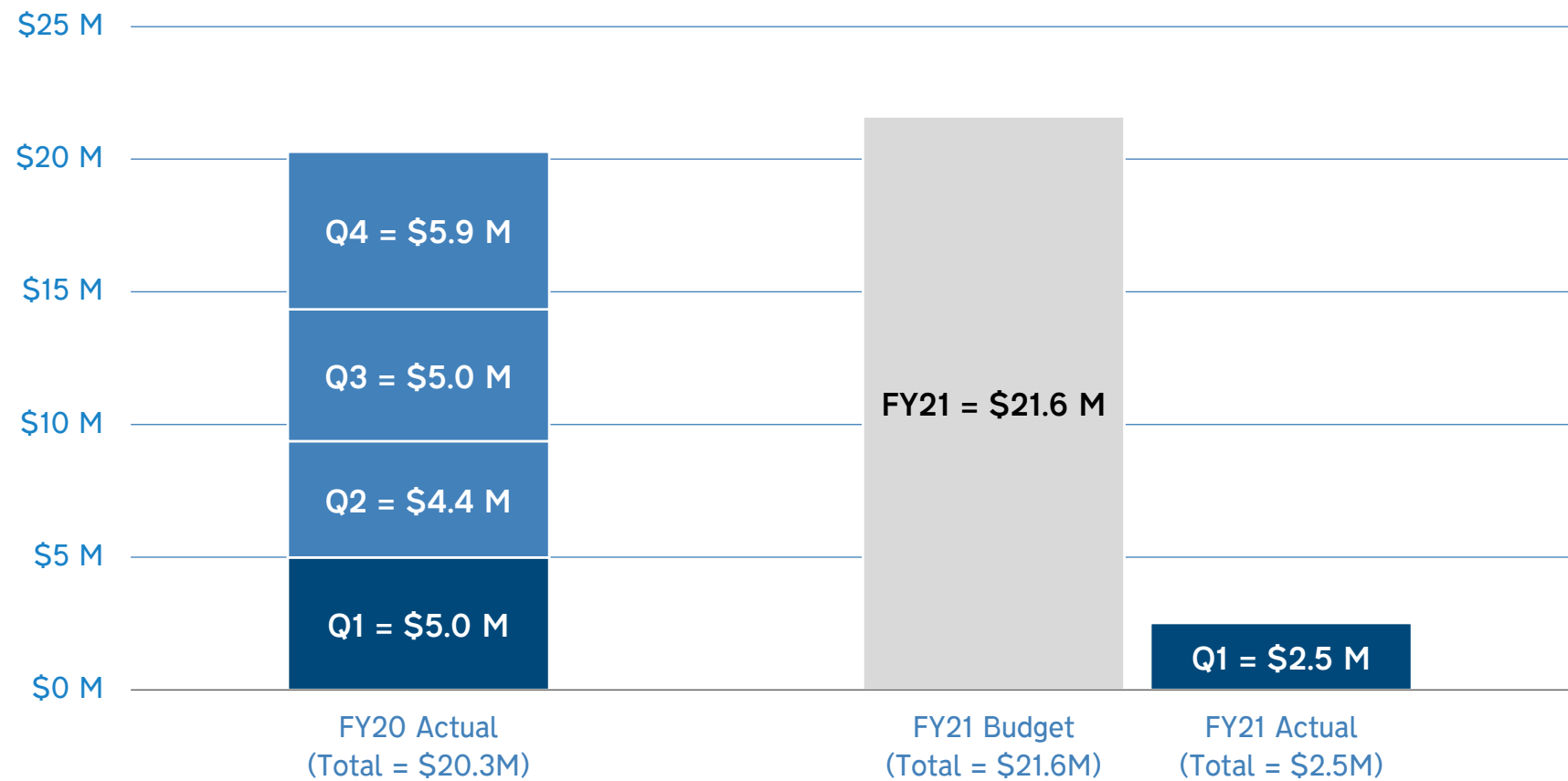


- Revenue figures are inclusive of all toll revenue and fees
- Actual revenues reported on a cash basis

Operating Expenditures

Triangle Expressway

YTD expenditures **51.5%**
lower than projected budget

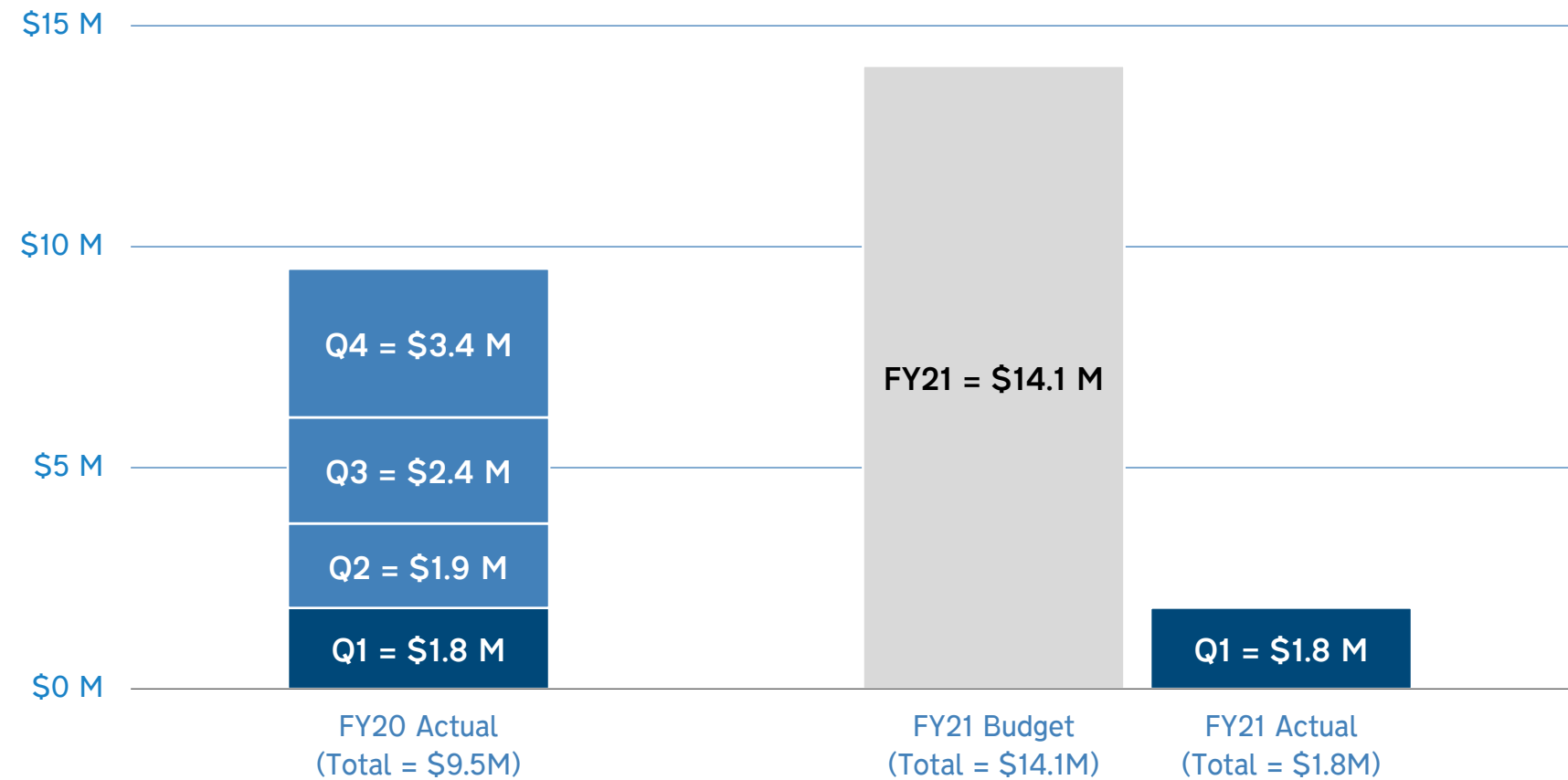


• Actual operating expenditures reported on a cash basis

Operating Expenditures

Monroe Expressway

YTD expenditures **48.8%**
lower than projected budget



• Actual operating expenditures reported on a cash basis



Triangle Expressway System Senior Lien BANs, Series 2020: Pricing Summary

- On October 15, 2020, the Series 2020 BANs were priced.
- During the order period, the underwriters received 47 orders in the amount of \$4,354,520,000 or 872% of the par amount of the BANs.
- The top ten investors are listed below, as well as the final pricing results of the BANs

Top 10 Investors					
Accounts	# Orders	# Full Orders	Total Orders	% Par	% Total Orders
JP Morgan Asset Management	1	1	499,460,000	100.00%	11.47%
THE VANGUARD GROUP INC	1	1	499,460,000	100.00%	11.47%
PNC Bank	1	0	400,000,000	80.09%	9.19%
Susquehanna Capital Group	1	0	400,000,000	80.09%	9.19%
Federated Investors Inc.	1	0	235,000,000	47.05%	5.40%
Capital Guardian Trust Company	1	0	225,000,000	45.05%	5.17%
Fidelity Investments	1	0	175,000,000	35.04%	4.02%
Mackay Shields Financial Corporation	1	0	175,000,000	35.04%	4.02%
T. ROWE PRICE INV	1	0	160,000,000	32.03%	3.67%
Neuberger Berman	1	0	150,000,000	30.03%	3.44%
	10	2	\$2,918,920,000	584.42%	67.04%

Interpolated MMD
10/14/20
0.18%

Final Pricing Scale					
Maturity	Principal	Coupon	Yield	Price	Spread
2/1/2024	499,460,000	5.00%	0.90%	113.123	72 bps



Triangle Expressway System Senior Lien BANs, Series 2020: Results

- The BANs transaction resulted in net present value benefits of \$12,471,142 for the Authority
 - This is primarily due to the reduction in TIFIA Debt Service of \$45.8 million, as the BANs effectively restructure the TIFIA Loan.
- The final sources and uses are in the table below

Sources

Par Amount	499,460,000.00
Premium	65,544,135.80
Total Proceeds	565,004,135.80

Uses

Construction Fund Deposit	481,897,717.40
Capitalized interest	81,300,988.89
Cost of Issuance	773,300.00
Underwriter's Discount	1,032,129.51
Total	565,004,135.80

Toll Technology & Customer Service Update

Manish Chourey
Chief Technology Officer

Angela Queenland
Customer Service Manager

Project Timeline Projections

- Roadside System
 - Morrisville Interchange Go-Live Aug 8th
 - I485 RFP Issued Aug 20th
- Backoffice System
 - Punch List corrections
 - Data Migration Dry Run
- Technology Initiatives
 - Connected Vehicle Pilot

- Roadside System
 - Tri-Ex Ret. Start Install
 - I485 RFP responses due
- Backoffice System
 - Complete Functional Test
 - Data Migration Iteration-1
- Technology Initiatives
 - Automate Audit Functions

- Roadside System
 - Tri-Ex Ret. Continue Install
 - I485 Vendor selection
- Backoffice System
 - Complete Integration Test
 - Data Migration Iteration-2
- Technology Initiatives
 - Automate Audit Functions

- Roadside System
 - Tri-Ex Ret. Install Complete
 - I485 Toll system design
- Backoffice System
 - CSR Training
 - Performance Test
 - System Transition & Cutover

- Roadside System
 - C540 Toll system design
 - I485 Development work
- Backoffice System
 - System stabilization phase
- Technology Initiatives
 - Integrated Data Platform



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

Roadside System: Triangle Expressway Retrofit Updates

Upcoming Milestones

- ✓ Onsite Integration Testing completed
- ✓ NCTA Employees and Audit Staff Training complete
- Toll Zone Retrofit Planned Dates
 - a. First Toll zones technology retrofit started on September 2020
 - b. Remaining Toll zones retrofit are sequenced
 - c. All toll zones are expected to be retrofitted by Fall 2021
- ITS Field Device Installation (All fixed mount CCTV have been replaced)

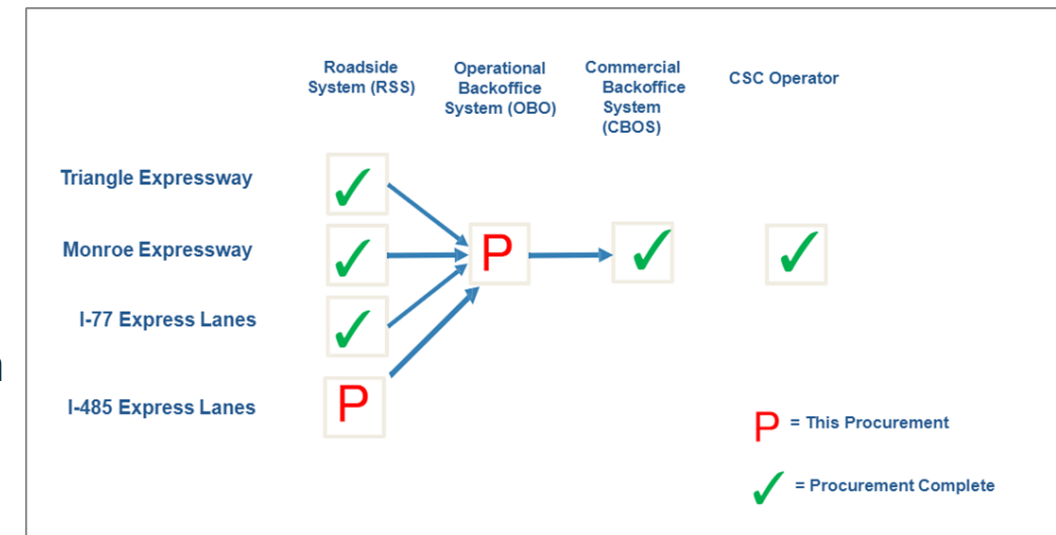
I-485 Express Lanes Toll System Procurement Update

Request for proposal (RFP)

- Issued on August 20, 2020
- Proposal Due (Technical and price) on December 10, 2020

The project phases are:

- Implementation Phase: Starts at Notice to Proceed (NTP) through Operations Go-live.
- Operations and Maintenance Phase (Base contract 5 years): Starts at Operations Go-live and continues through the end of the Contract.
- Options to Extension phase: Includes two (2) three (3)-year optional to be executed at the sole discretion of NCTA, with the first



Customer Service Update

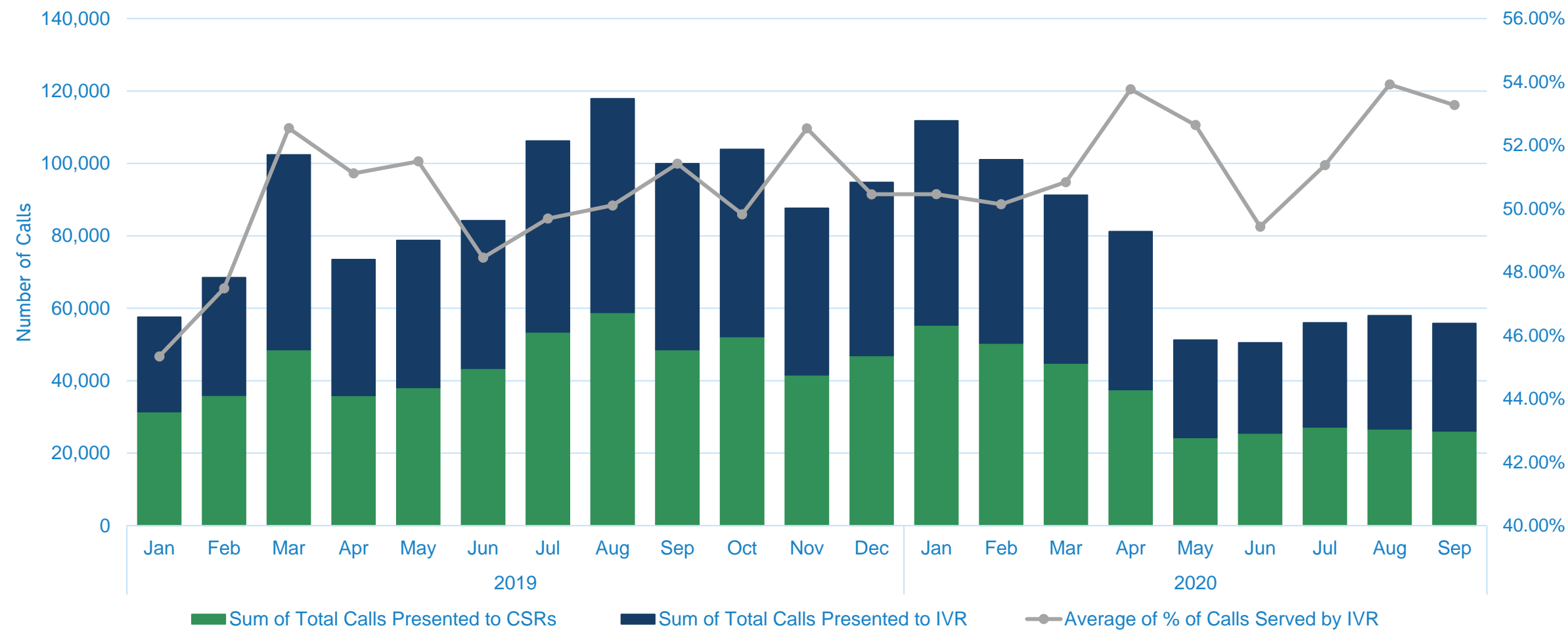
- Employees and Embedded Consultants continue to work remotely
- Effective October 26, Resumed invoice escalation and plate registration stops business policies
- Turnpike continues to monitor state guidelines to lift suspension on pursuing new debt 3rd party collections

CSC Operation is in Code Yellow

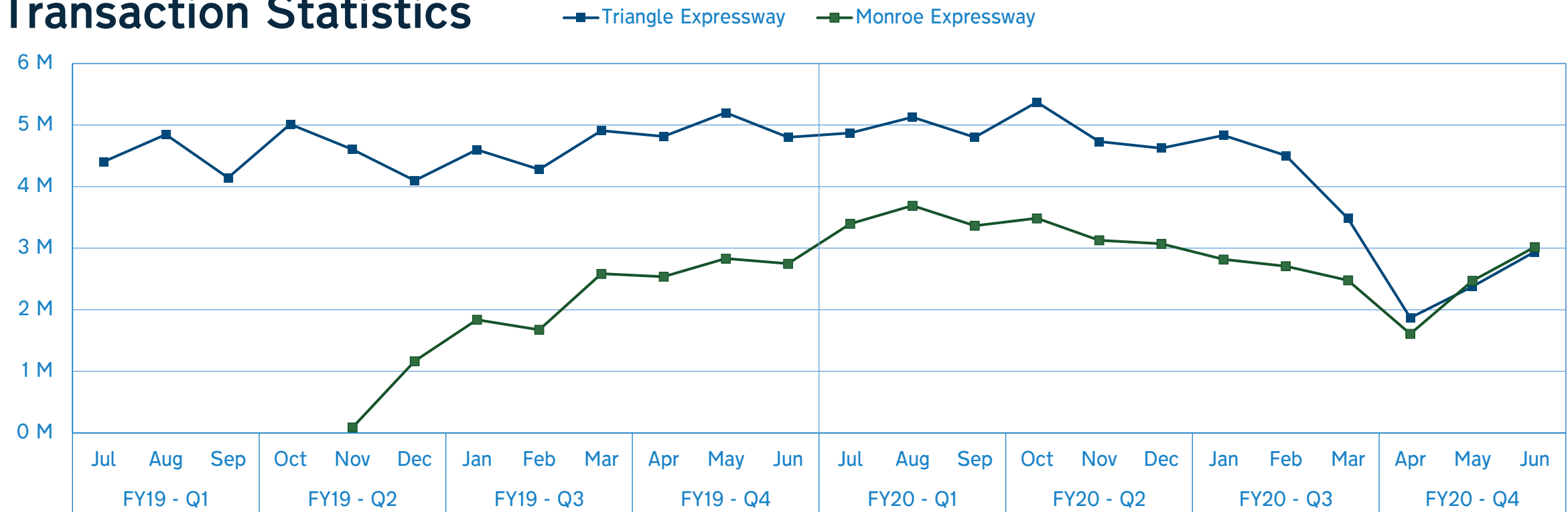
- Walk-in Centers at Charlotte (1,331 visits) and Monroe (2,605 visits) have reopened on August 10, serving total of – 3,936 customer visits as of November 3, 2020
- CSR's are spaced out to meet social distancing (6+ feet)
- CSC is keeping current with incoming workload (Image reviews, Customer Calls and requests, fulfillment)
- Website trends indicate slight increase in traffic since previous months
- Call volumes remain at 50-60% compared to Pre Covid-19 volumes

NC Quick Pass Customer Service Update

Call Center Statistics



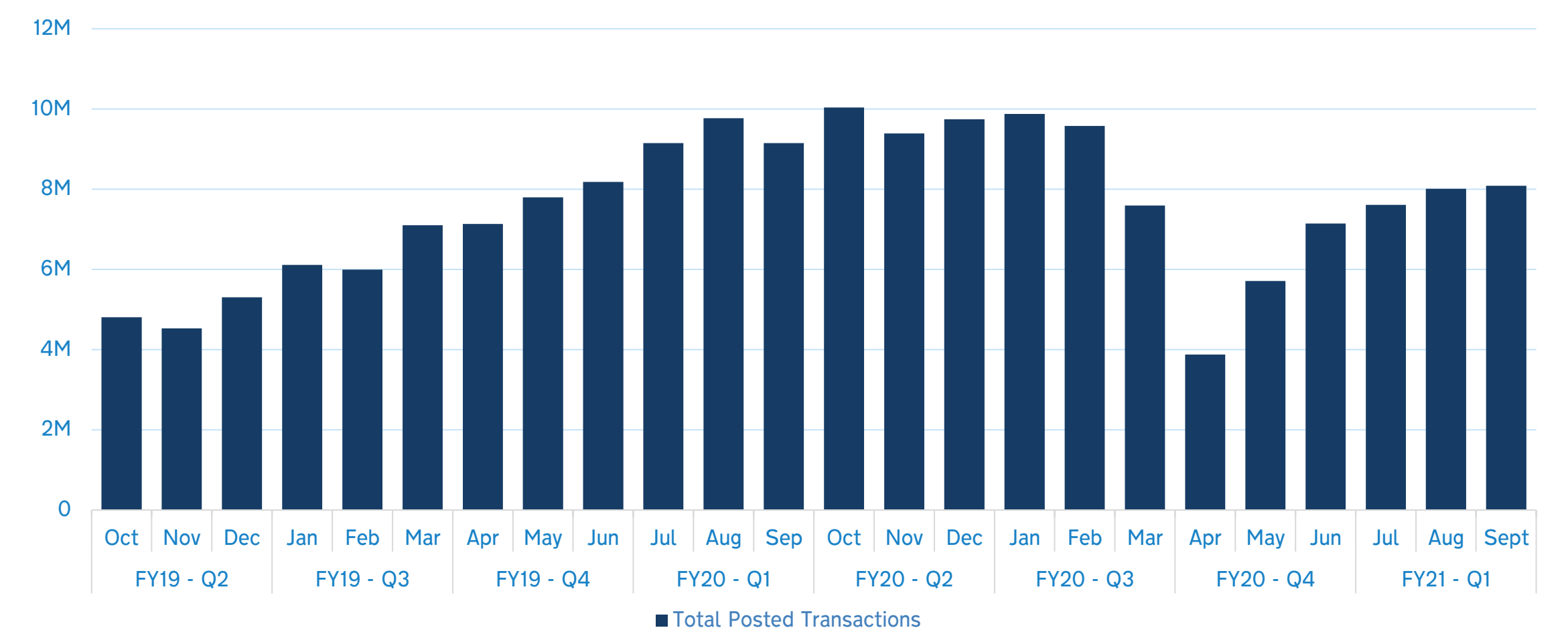
Transaction Statistics



	FY19 – Q1	FY19 – Q2	FY19 – Q3	FY19 – Q4	FY20 – Q1	FY20 – Q2	FY20 – Q3	FY20 – Q4
Triangle Expressway Transactions	13,394,773	13,712,458	13,787,834	14,816,341	14,798,679	14,727,149	12,821,214	7,181,798
YOY Percent Change	6.6%	8.3%	12.7%	7.5%	10.5%	7.4%	-7.0%	-51.5%
	FY19 – Q1	FY19 – Q2	FY19 – Q3	FY19 – Q4	FY20 – Q1	FY20 – Q2	FY20 – Q3	FY20 – Q4
Monroe Expressway Transactions	-	1,253,524	6,096,550	8,115,596	10,453,336	9,686,088	8,003,844	7,097,242
YOY Percent Change	-	-	-	-	-	-	31.3%	-12.5%

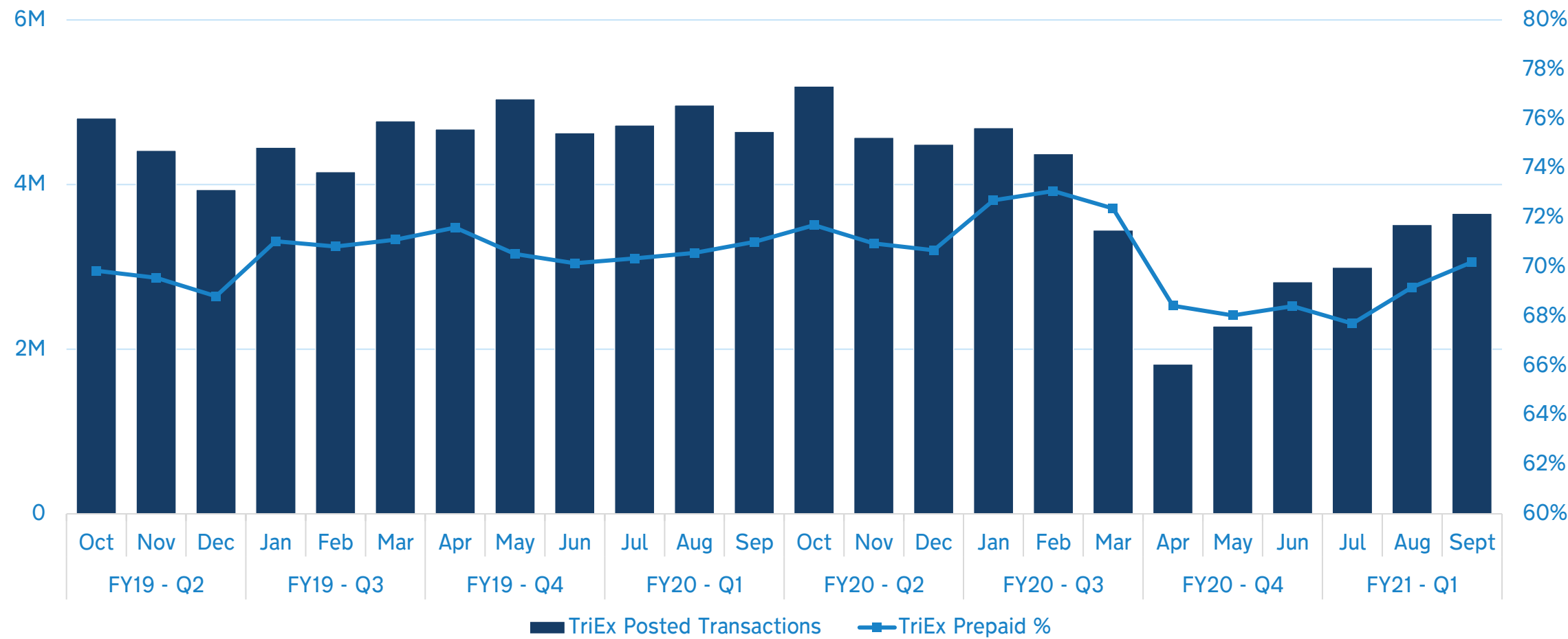
Total Posted Transactions

NC Quick Pass Program



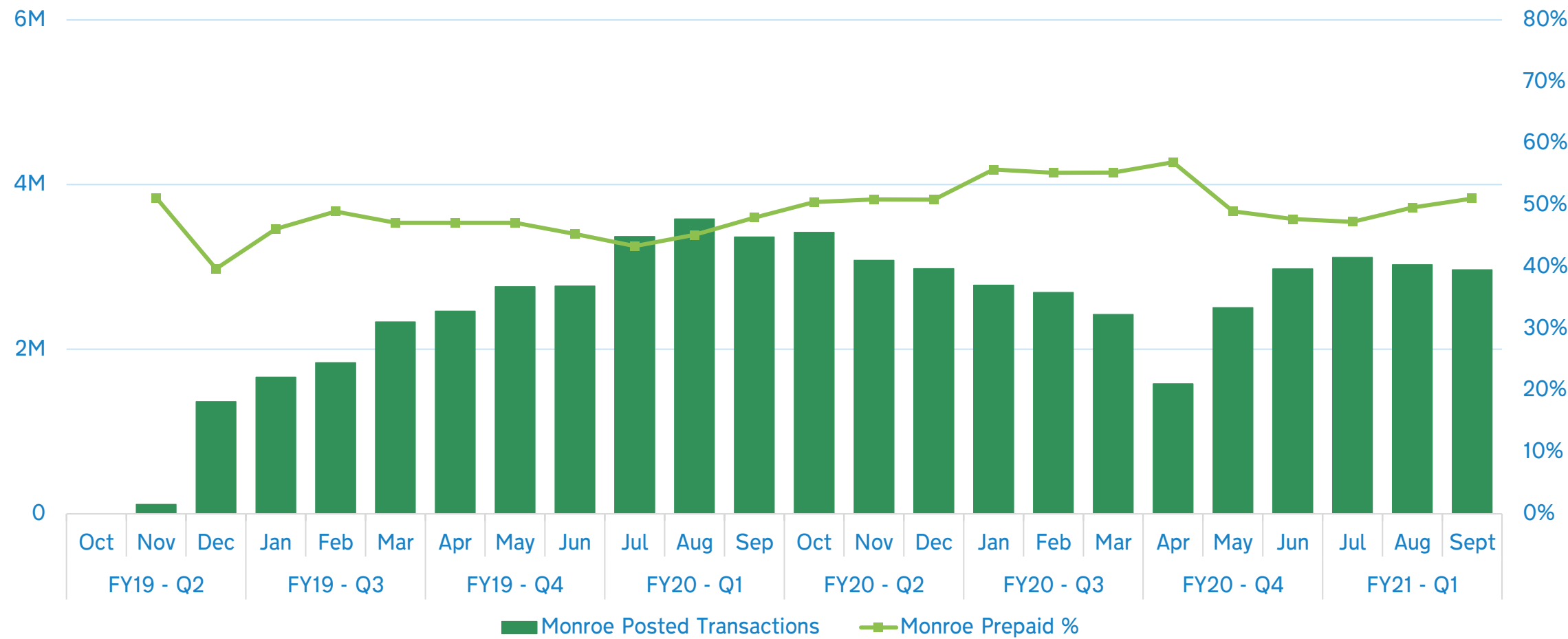
Total Posted Transactions

Triangle Expressway



Total Posted Transactions

Monroe Expressway

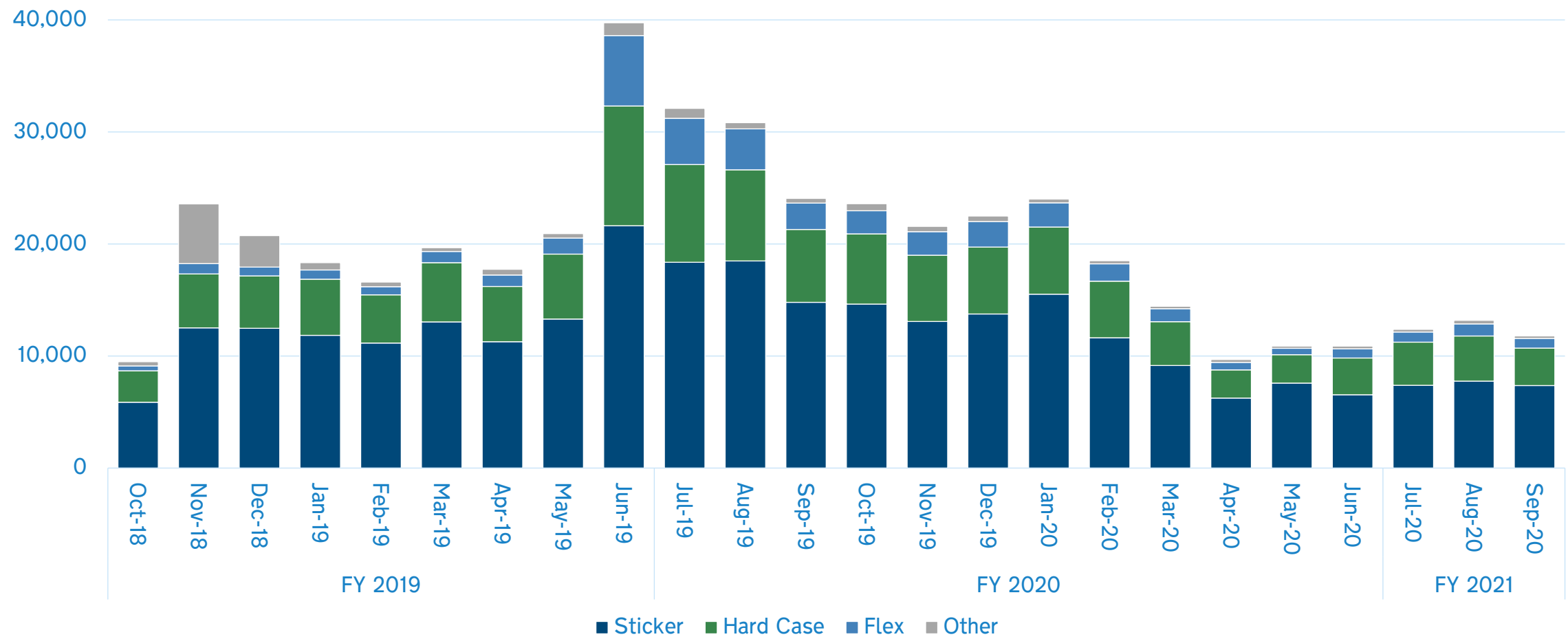


Monthly Transponders Distributed

NC Quick Pass Program

891,187

Total Transponders Distributed as of September 30, 2020



Roadway Operations Update

Dennis Jernigan, P.E.
Director of Highway Operations

Roadway Operations Update

Dennis Jernigan, P.E.
Director of Highway Operations

Mainline Traffic Statistics

Triangle Expressway

37.6% Decrease
FY20 Q1 AWT = 53,810
FY21 Q1 AWT = 33,560

40.7% Decrease
FY20 Q1 AWT = 23,560
FY21 Q1 AWT = 13,980

32.8% Decrease
FY20 Q1 AWT = 41,280
FY21 Q1 AWT = 27,760

27.7% Decrease
FY20 Q1 AWT = 20,120
FY21 Q1 AWT = 14,550



Q1: July – September
AWT: Average Weekday Traffic

Roadway Maintenance Statistics

Triangle Expressway

	FY 2020 Q2	FY 2020 Q3	FY 2020 Q4	FY 2021 Q1	Rolling Rate
Road Surface	89.5	94.9	93.8	96.3	93.5
Unpaved Shoulders and Ditches	99.1	98.7	92.5	96.5	96.7
Drainage Structures	98.1	91.9	92.5	89.2	93.0
Roadside	96.2	94.7	91.7	91.1	93.4
Traffic Control Devices	90.9	90.4	86.8	84.0	88.2
Overall	93.6	93.6	91.0	90.7	92.2

Mainline Traffic Statistics

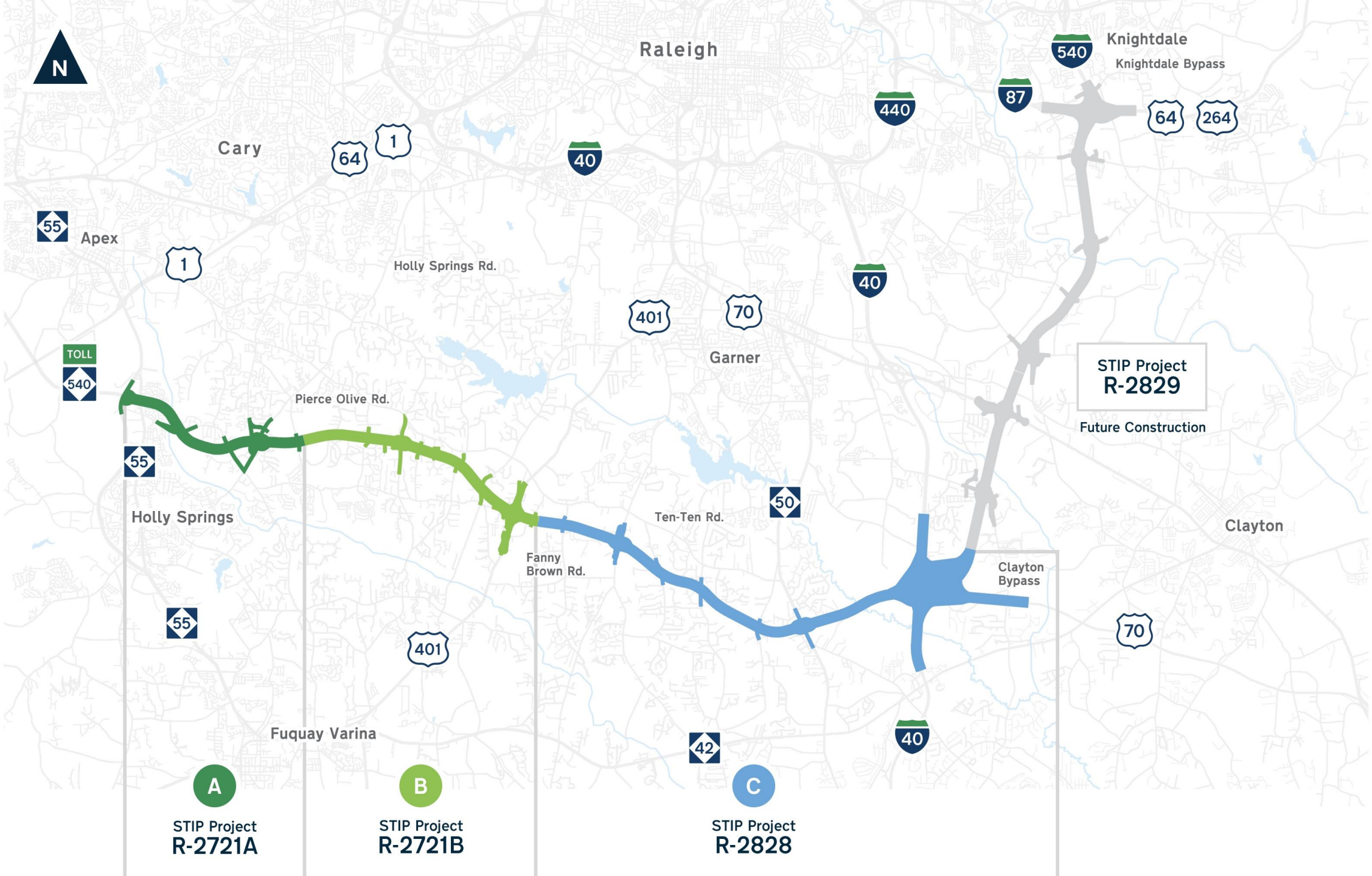
Monroe Expressway





Complete 540 Construction Update

Dennis Jernigan, P.E.
Director of Highway Operations



A
STIP Project
R-2721A

B
STIP Project
R-2721B

C
STIP Project
R-2828

STIP Project
R-2829
Future Construction

R-2721A

BRANCH
CIVIL

FLATIRON

 Gannett Fleming

A

88%

Plans for
Construction

4.3 miles

Length of Project

\$183.5M

Cost of Contract

205

Design Submittals

99%

Parcels with Access

R-2721B

BRANCH
CIVIL

FLATIRON



B

94%

Plans for
Construction

4.9 miles

Length of Project

\$160.0M

Cost of Contract

198

Design Submittals

97%

Parcels with Access

R-2828



99%

Plans for
Construction

8.6 miles

Length of Project

\$403.2M

Cost of Contract

438

Design Submittals





Interchanges

- 1 - N.C. 55 Bypass
- 2 - Holly Springs Rd. (S.R. 1152)
- 3 - Bells Lake Rd. (S.R. 1386)
- 4 - Fayetteville Rd. (U.S. 401)
- 5 - Old Stage Rd. (S.R. 1006)
- 6 - N.C. 50 / Benson Rd.
- 7 - I-40 & U.S. 70 Clayton Bypass





















Community Outreach

Complete 540 Outreach



Virtual Meetings

2021 TRB Annual Meeting (Virtual)

Resident Communications

CHARTING A NEW ROAD
NORTH CAROLINA TURNPIKE AUTHORITY

P 16

Charting a New Road

North Carolina Turnpike Authority to complete Raleigh's Outer Loop through new \$2.2 billion expansion

Looking back to the west from East Williams Street
towards existing Triangle Expressway

Responsible for studying, planning, developing and building toll roads to reduce congestion and leveraging innovative financing to accelerate future improvement projects, the North Carolina Turnpike Authority began the expansive transformation of the Raleigh, North Carolina, area's transportation infrastructure late last year with the Complete 540 project.

The new 28 mile, six-lane expressway will traverse seven cities and extend North Carolina's first modern toll road, the Triangle Expressway, from the N.C. 55 bypass in Apex to the U.S. 64/U.S. 264/I-87 interchange in Knightdale. This will complete the southern section of the outer loop around Raleigh and provide the city and its surrounding neighborhoods with improved mobility, reduced congestion and seamless connectivity.

North Carolina
Turnpike AuthorityCHIEF ENGINEER
Rodger RochelleLOCATION
Raleigh, North Carolina

"[Complete 540] will extend [Triangle Expressway] further around the south and toward the east of Raleigh," says Rodger Rochelle, Chief Engineer for the North Carolina Turnpike Authority. "There are a number of suburbs around Raleigh, and the project provides the linkages for those communities, but it will really provide improved mobility in the entire region... This also relieves a lot of traffic congestion on relatively narrow two-lane roads that exist in the southern part of Wake County, south of Raleigh."

16 DDCJOURNAL.COM FALL 2020

as the lead
and HDR
lead design

Throughout the entire process, the North Carolina Turnpike Authority has emphasized communication with the community, including virtual question-and-answer sessions and map programs to help citizens understand activity in their areas.

"We had our first community virtual meeting, where we had not only Turnpike staff, but also the staff from the contractor," Rochelle says. "There was a presentation, and the citizens from that neighborhood could ask questions through the chat box or verbally, and we provided contact information if they had any follow-up questions. That's the first time the NCDOT or Turnpike has done a virtual meeting, and we're preparing for the next one. We're trying to do what we can to not only meet with the mayors and the town councils periodically, but also the citizens of each and every neighborhood." ■



West Lake Road area, Colonial Pipeline's laydown area



Construction of 2 of the 2 bridges across I-95



Culvert being constructed just west of Peach Lake Road



Backfilled completed culvert

16 DDCJOURNAL.COM FALL 2020



SAFE, SMART, SIMPLE SOLUTIONS

Chief Engineer's Update

Rodger Rochelle, P.E.
Chief Engineer

I-77 Express Lanes

Toll Rate Multiplier Schedule for Extended Vehicles

Rodger Rochelle, P.E.
Chief Engineer



Amendment 9

No cost amendment

Near-term contract improvements as discussed by the local advisory group, including

Increased Toll Rate Transparency

Pilot program for medium-size truck usage of managed lanes

Allowance for NCDOT Toll Rebate Program

Truck Usage Pilot Program

Pilot Program

No cost to the department

Pilot program due to lack of long-term managed lanes data and operational characteristics

Reasons for the Program

Responds to local stakeholders concerns regarding trucks being limited to general purpose lanes

Provides access and options for businesses wishing to use the I-77 Express Lanes

Expires After 3 Years

Unless terminated earlier or extended by mutual agreement of the Parties, or

Terminated earlier by either party due to a material adverse impact to the safety or operational performance of the corridor

Financials

Developer will incur all costs for modifying necessary signing on corridor and any additional maintenance costs (pavement, striping, etc.) resulting from larger vehicle usage

Department will receive 34% of the additional revenue generated from extended vehicles

Extended Vehicles

Adding a New Vehicle Class

Adds a user classification for “extended vehicles”

Extended vehicles would be any two-axle motor vehicle, with or without a one-axle trailer, greater than 22 feet in length

Vehicle Restrictions

Currently, vehicles longer than 20 feet are not permitted

An increase to 22 feet would permit extended cab pickup trucks and similar vehicles

Extended Vehicles Toll Rates

Toll Rate Multiplier

Toll rate multiplier allows Developer to continue to manage traffic speed and driver expectations in the managed lanes (larger vehicles require more space in the lanes)

Variance in the Multiplier

Multiplier could vary by project sections and by time of the day

Toll Rate Schedule

Schedule would be published online and updates no more frequently than once per week

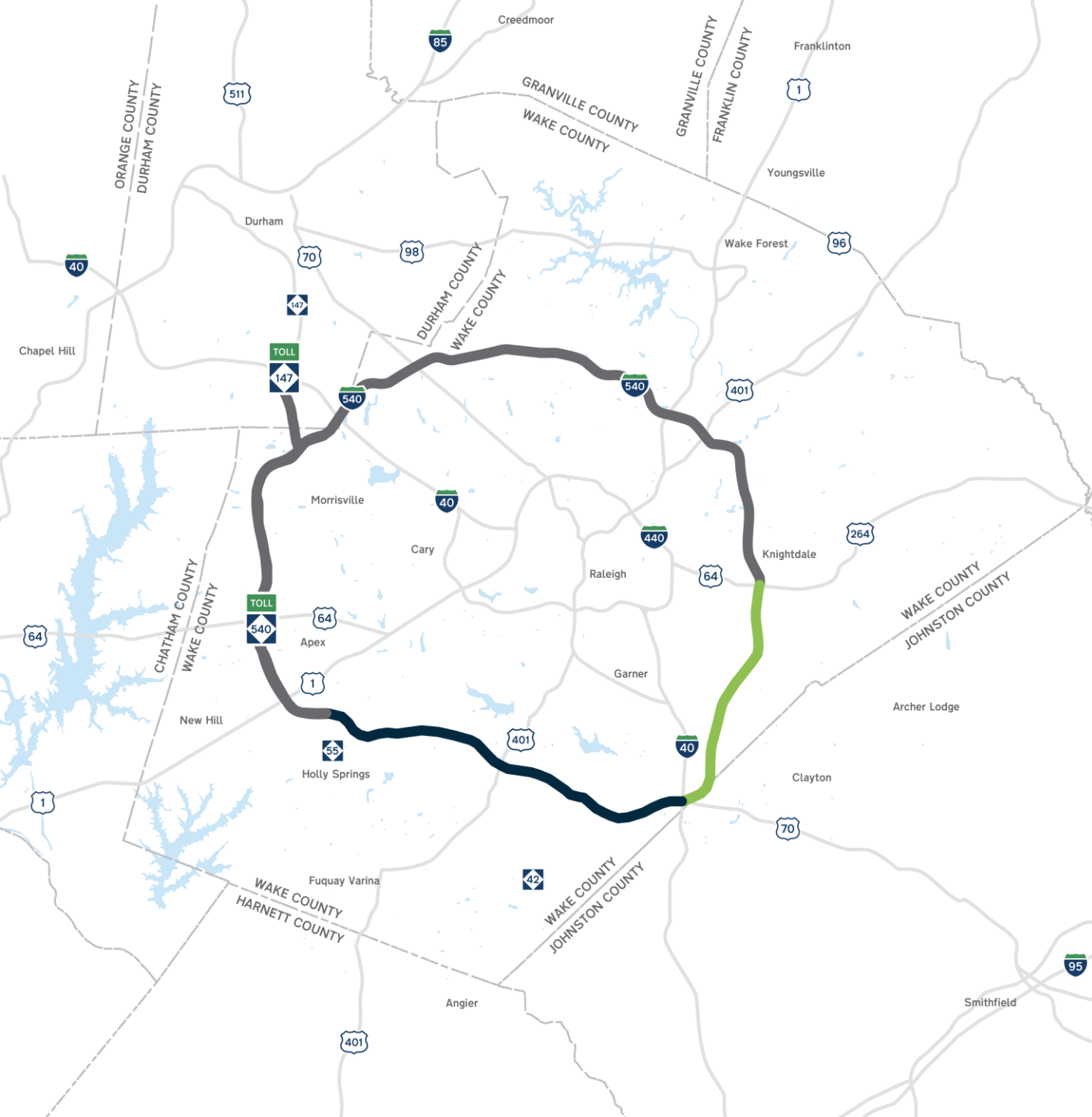
I-77 Express Lanes Toll Rate Multiplier Schedule for Extended Vehicles



- Developer provided an initial toll rate multiplier schedule
- Multiplier schedule was transmitted to the NCTA Board in September
- Toll rate multiplier for every 30-minute period for every day
- Peak weekday periods (6:30-9:30AM, 3:00-7:00PM) are 3 times the established toll rate
- Non-peak weekday periods and weekends are 2 times the established toll rate

Complete 540 Phase II

Rodger Rochelle, P.E.
Chief Engineer



Open to traffic (42 miles)

I-540 & Triangle Expressway

Under construction (18 miles)

Southern Wake Expressway (Phase I)

Missing link (11 miles)

Eastern Wake Expressway (Phase II)

Eastern Wake Expressway - Project Activities

Completed Activities

- Environmental Document
- Section 404/401 Corridor Permits
- Biological Opinion
- Air Quality Conformity
- Preliminary Design/Public Hearing Map
- Final Surveys
- Interchange Access Reports
- Service Road Study

Activities Underway

- Reevaluation of Traffic Forecasts and Analysis
- Refining Preliminary Design
- Confirming Environmental Mitigation Availability
- Traffic and Revenue Studies
- Roadway and Structure Geotechnical Investigations

Future Preconstruction Activities

- Refining Project Cost Estimate
- Other Financial Preparations
- Pavement Design and Life Cycle Cost Analyses
- Plans for right-of-way acquisition (no MAP Act)
- Utility Coordination
- Railroad Coordination
- Procurement Strategy
- Industry Coordination

Project Readiness

NEPA Document

- Record of Decision for the entire corridor
- Legal challenge settled
- Implementation of settlement commitments on track

Permits

- Construction permits for Southern Wake included impacts for Eastern Wake
- Only permit modification required to reflect final design of Eastern Wake

Mitigation

- Wetland and stream mitigation is available on accelerated schedule

Final Surveys

- Completed for Eastern Wake
- Allows final design to progress once Design-Build contract(s) executed

Geotechnical Investigations

- Roadway and structure investigations completed for Eastern Wake
- Enables final design to progress once Design-Build contract(s) executed

Preliminary Designs Complete

- Designs are at sufficient stage to advance a Design-Build contract procurement.

Right-of-Way Acquisition

- Processes and tools established with Southern Wake
- Eastern Wake early acquisition will leverage these tools and momentum from Southern Wake
- Map Act does not apply to Eastern Wake

Industry Will Be Ready

- Disadvantaged Business Enterprises (\$75M/\$60M)
- Competitive Bidding

Finance Benefits

Construction Inflation Cost Savings

- **Estimate \$20 Million in inflation cost avoidance for each year** that Eastern Wake can be accelerated
- Allows for a reduction in Trust Fund dollars allocated to the project

Market Interest Rate Savings

- Acceleration would leverage historically low interest rates for minimization of Trust Fund allocation
- Changes in interest rates, one-half percent (50 basis points) or less, could result in tens of millions of dollars in increased project costs
- For example, the TIFIA loan rate for Triangle Expressway in 2009 was 4.25%, today that rate is ~1.40%
- Rate certainty is extremely valuable

Refinance Benefits

- Accelerating Eastern Wake would help facilitate the refinancing of the \$500 Million TIFIA loan for Southern Wake
- Based on today's TIFIA rate (~1.40%), refinancing could yield **over \$90M in net present value savings**
- Statute allows TIFIA to refinance existing loans if funds are used to add additional capacity

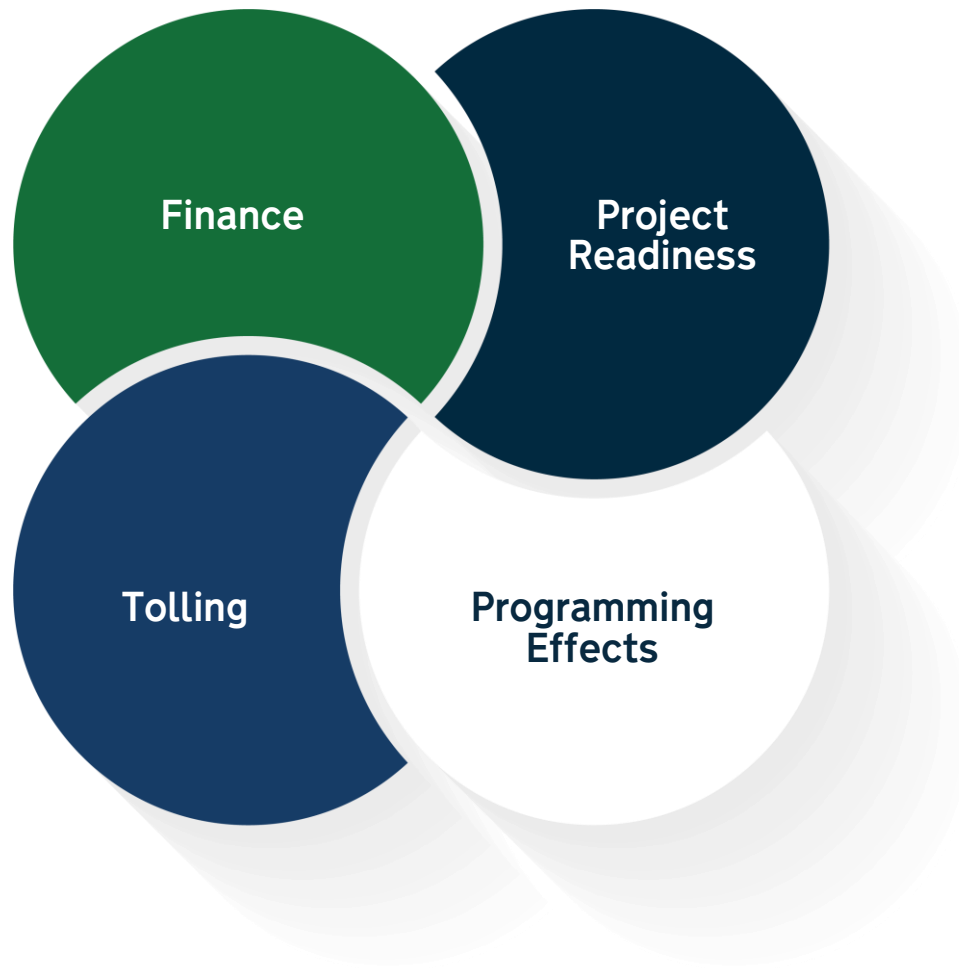
Plan of Finance Momentum

- Coordination with USDOT and the due diligence required to secure a TIFIA loan can be a lengthy process
- Process was recently completed for Southern Wake, an earlier re-engagement with the USDOT will streamline the approval process and require less cost to secure the loan for Eastern Wake



Reduction in Trust Fund Allocation

- Project acceleration, resultant cost avoidance
- Leveraging potential refinancing of Southern Wake USDOT TIFIA loan
- Acceleration of small tranche of Trust Fund dollars results in **\$300+ Million in Trust Fund dollars available for other projects in the future**



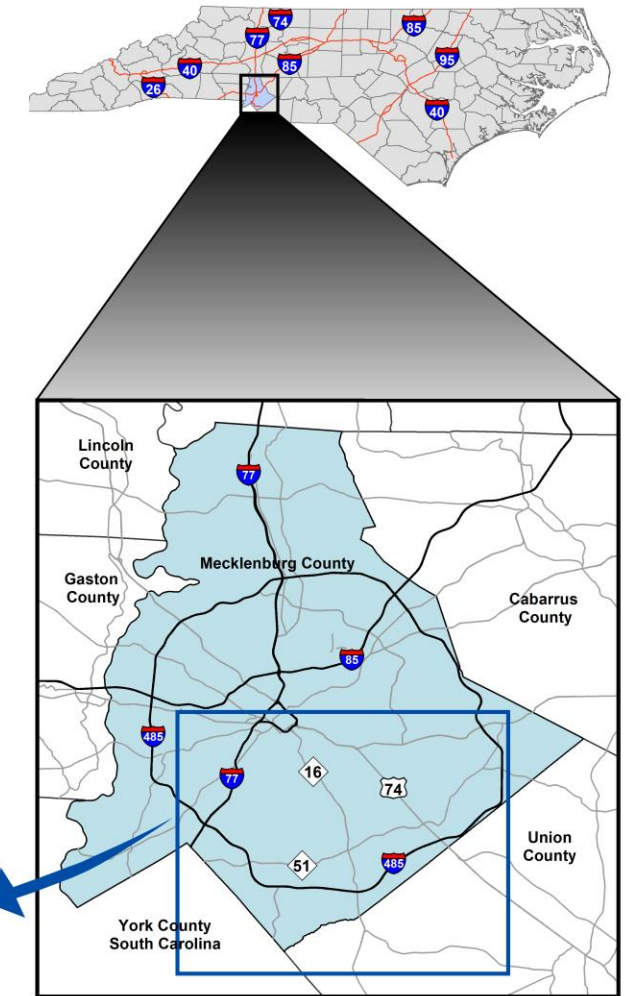
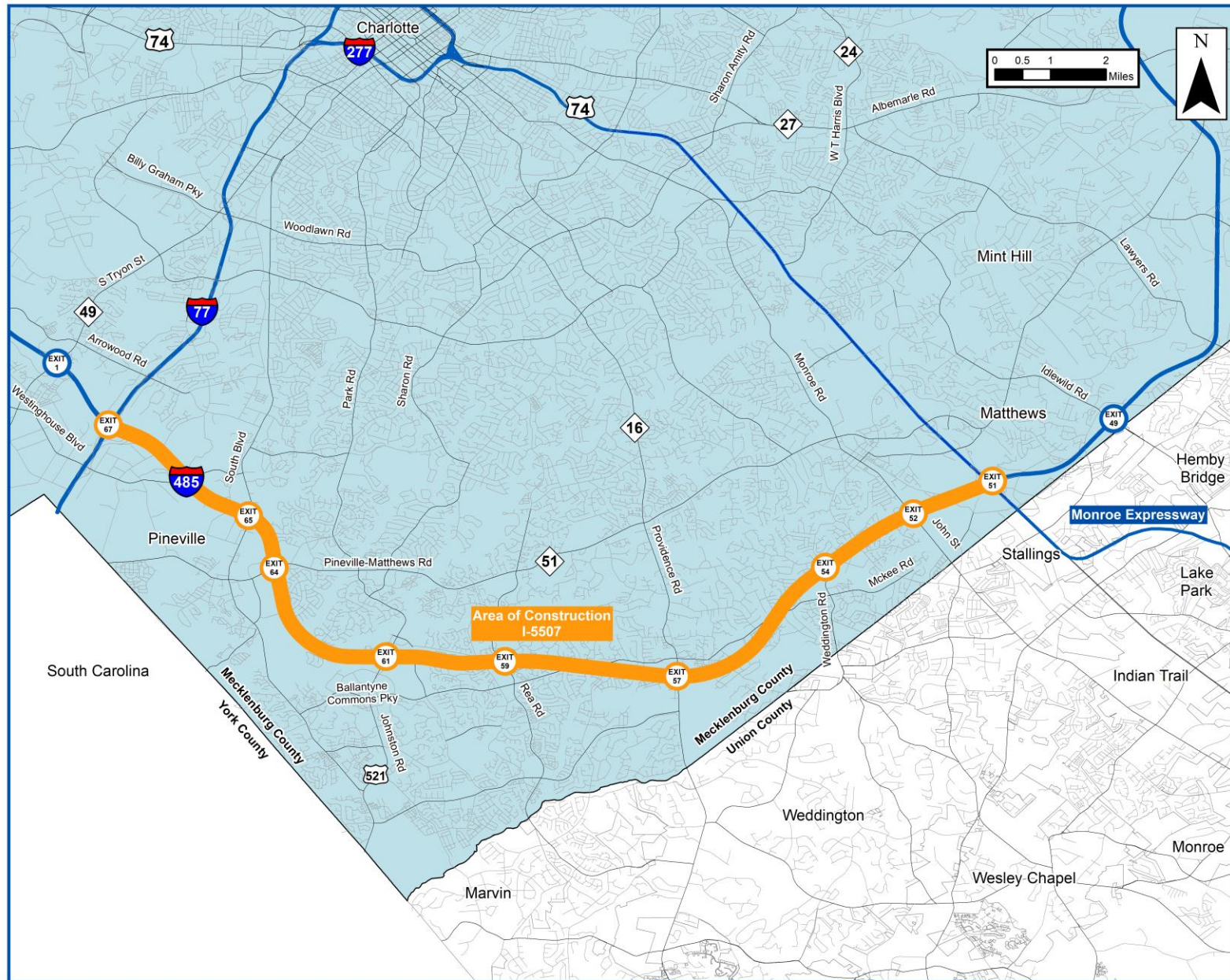
- The Project is ready
- Completes the missing link
- Accelerates the systemwide benefits
- No impact on other projects
- Reduce overall cost and Trust Fund Allocation
- Unlock \$100M in Bonus Allocation
- Exploit historically low interest rates
- Reduced risk
- Synchronize tolling; remove tolling on the corridor ~10 years earlier
- Direct and indirect benefits to the local economy
- USDOT TIFIA Loan Momentum

Program Development Update

Andy Lelewski, PE
Director of Program Development

I-485 Express Lanes Update

Andy Lelewski, PE
Director of Program Development



Division 10 Construction Update

- Eleven structures and four box culverts are under construction.
- One box culvert has been completed.
- Over 31 miles of portable concrete barrier have been installed.
- Approximately 23,000 LF of pipe has been constructed.



Segment C Median Widening near Providence Road

Division 10 Construction Update

- Over 11 miles of median widening is under construction.
- 11,400 LF of median barrier wall is complete.
- Soil stabilization, ABC placement, and asphalt paving is ongoing.
- Over 7,500 LF of conduit has been installed for ITS/AET facilities.



Segment D Median Widening and interchange construction near Weddington Road

Division 10 Construction Update

- Westinghouse Road interchange Direct Connector construction is ongoing.



Division 10 Construction Update

- Johnston Road interchange Direct Connector construction is ongoing.



Division 10 Construction Update

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: 0

Complete: 0

Under Construction: 0

Complete: 0

Under Construction: 0

Complete: 1.4

Under Construction: 0

Complete: 0

Under Construction: 0

Complete: 0

Under Construction: 0

NCTA Construction-Related Activities

Recent NCTA Accomplishments

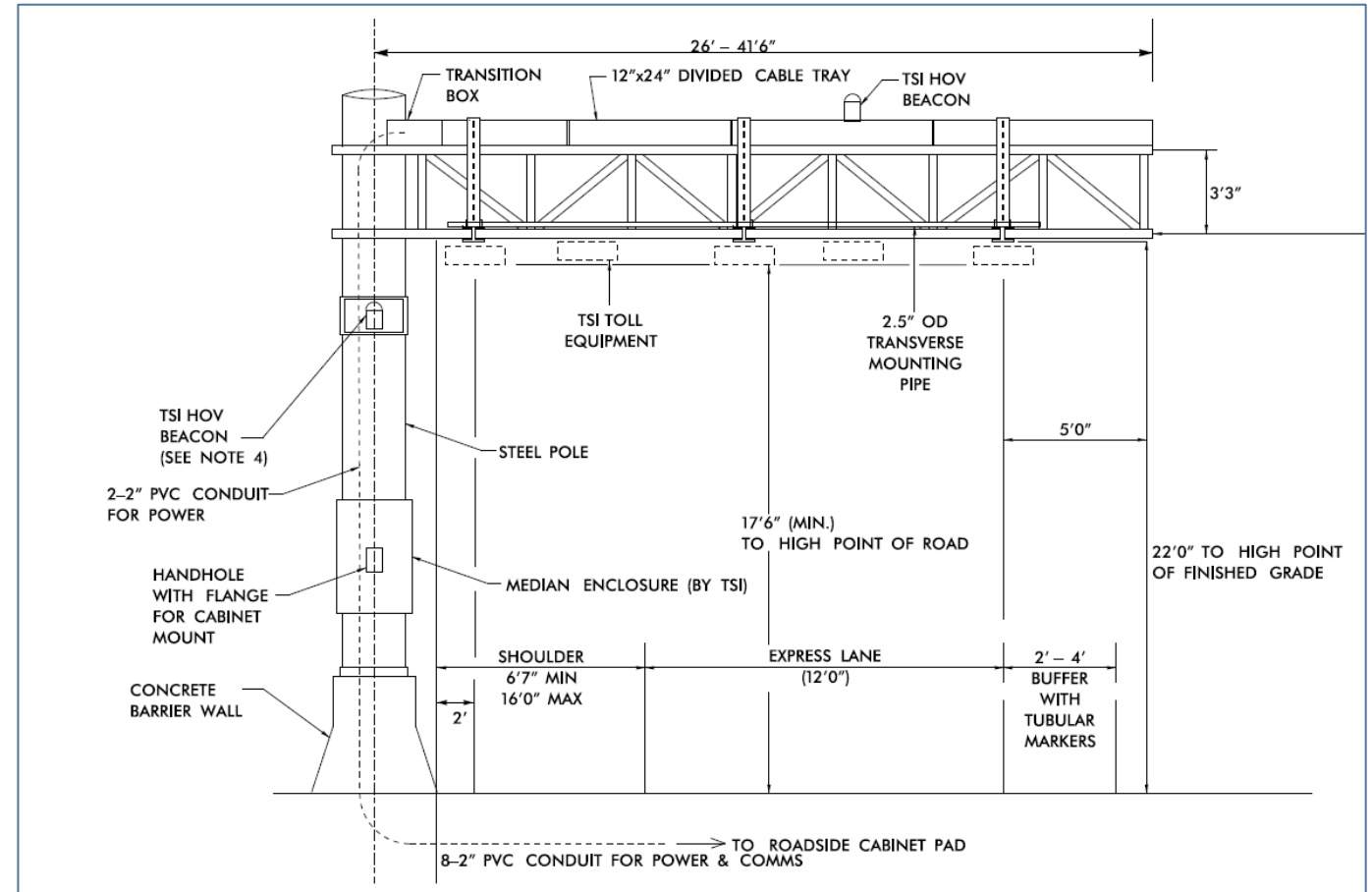
- Intelligent Transportation System design completed

Upcoming NCTA Work

- Continue review of signing & pavement marking design submittals
- Monitoring of toll-related work along the corridor
- Coordinate with roadside toll technology project

Schedule

- Fall 2022 – Commencement of tolling



NCTA Program Controls

Andy Lelewski, PE
Director of Program Development

NCTA Program Controls

NCTA 3-Year Work Plan

The Work Plan is a tool that will be used by NCTA staff to track and manage project schedules, budgets, and project funding sources. It is a living document that is developed through input from NCTA units and published annually to match up with NCTA's fiscal year.

Project Establishment & Change Procedures

These Procedures define the approval process within the organization for a new project to be added to the NCTA Work Plan or for an existing Work Plan project to be changed in schedule, scope, or budget.

Project Management Procedures

These Procedures will define the organizations project management processes for established projects. The Procedures will be defined for the management of scope, schedule, budget, quality, and reporting.

NCTA Policies & Procedures Management

The existing NCTA Policies and Procedures will be organized and catalogued. Written procedures will be developed for amending or enacting new NCTA policies and procedures.

FY 2022 NCTA 3-Year Work Plan

**The tool to be used by NCTA to track and program project schedules,
cost and funding sources.**

- Includes all NCTA projects organized by category. (ex. Construction, Project Development, Toll Operations, etc.)
- All NCTA Projects will tie to the current work plan – “Any project that requires a dollar”.
- Will carefully align with current finance activities for Bond Financed projects – Plan of Finance tracking, O&M / R&R plans, etc.
- Will identify funding sources and programmed year of need.
- Will be updated annually, to line up with NCTA fiscal year and annual NC appropriations.
- Schedule

Draft work plan to be distributed in January 2021.

Final work plan to be published in June 2021.

2021 Meeting Dates

Secretary Boyette
Chair

2021 Board & Committee Dates

Board of Directors

- February 11, 2021
- May 13, 2021
- August 12, 2021
- November 18, 2021

Finance Committee

- January 20, 2021
- April 21, 2021
- July 21, 2021
- October 20, 2021

Operations Committee

- January 21, 2021
- April 22, 2021
- July 22, 2021
- October 21, 2021

- All meetings will be held at 10:30 AM, unless otherwise noted

Contact Us



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Thank you!