

North Carolina Turnpike Authority

Operations Committee Meeting

April 18, 2024



Operations Committee



Montell W. Irvin
Operations Committee Chairman



Dr. Pamela Gibson Senegal
Operations Committee Member



Sam Hunt IV
Operations Committee Member



Charles 'Chuck' L. Travis III
Operations Committee Member

Other Board Members



Joey Hopkins
Chair



James 'Jim' Walker
Vice Chair of the Board



Robert D. Teer Jr.
Secretary & Treasurer of the Board



John Adcock
Board Member



Julie Eiselt
Board Member

Opening Comments

J.J. Eden
Executive Director

Chief Engineer Update

Patrick Norman, P.E. & Dennis Jernigan, P.E.
Chief Engineer & Deputy Chief Engineer

New Addition to the Turnpike Team!

- O'Shay Haynes
 - TMC Manager for Turnpike
 - Starting in May
- Zack Chambers promoted to Roadway Manager for Monroe Expressway



Complete 540 Phase 1

Complete 540 Phase 1

Toll Integration Update

- Upcoming testing with Kapsch
- Power to 3 of 6 sites
- Fiber complete on R-2721B
- Generator commissioning



Holly Springs Road Earthwork Before



Holly Springs Road Earthwork After



Railroad Bridges

Before



Railroad Bridges

After



Toll Site Construction on R-2828 Before



Toll Site Construction on R-2828 After



The background features a dark blue hexagonal grid pattern. Overlaid on this grid are several glowing, wavy trails of small particles in shades of light blue and green, creating a sense of motion and data flow.

Complete 540 Phase 2

Complete 540 Phase 2

Groundbreaking Ceremony

- Construction set to begin the week of May 6
- May 16 groundbreaking ceremony
 - After Board meeting with lunch in between



Roadside System Update

Jerry Eakes
Systems Manager

C540 – Toll System Installation Status

- 3 of 6 Toll Sites - Turned over to Kapsch (Sites 1 – 3)
- 2 of 6 Toll Sites – Turnover walkthrough occurred 4/15 (Sites 4-5)
- 1 of 6 Toll Sites – Waiting for an updated schedule (Site 6)

Typical Toll Site Installation Schedule

1. Contractor constructs toll site infrastructure
2. Toll site inspections occur and then toll site turnover
3. Toll integrator installs toll vault and overhead tolling equipment
4. Toll site testing begins
5. Final acceptance of toll site is reached



Contractor crews installing vault building at Site 4 on R-2828



Toll Site 1 ready for turnover on R-2721A



Kapsch crews installing overhead toll equipment at Site 3 on R-2721B

Complete 540 Toll System Challenges

Challenge	Solution	Benefits/Limitations
Compressed Integration Schedule	Remove in-pavement loops from the design and go with a loop-less installation	<ul style="list-style-type: none">• Eliminates approximately 3-4 days of work from each site• Reduces future maintenance cost for each toll site• Limits redundancy
Delayed Fiber Connectivity (End to End)	Use of external 5-G Modems	<ul style="list-style-type: none">• Initial testing can proceed as scheduled, limiting delay to the schedule• Limited to testing and likely to need fiber before "go-live"

I-485 Project Status

- Steering Committee Meeting held on 3/12/2024
- Initial project planning documents are complete
- The team's focus is on the detailed design documentation
- Required materials for Site 1 are procured
- The first toll site is scheduled for turnover on 4/12/2024
 - A turnover inspection will occur on 4/8/2024 with the construction group
 - The vendor will begin installation immediately to prepare for on-site Factory Acceptance Testing in June 2024



Conduit and Pull Boxes Installed, Concrete Pad Poured



Express Lane Gantry at Site 1

I-485 Project Details

- Indra's lane system will use all overhead technology with no sensors in the pavement
 - The detection system uses a 3D LiDAR detector
 - The information gathered from this sensor will be used to classify vehicles
 - And correlate other transaction elements such as images and tag reads.
- Indra will integrate the NCTA-provided ITS devices.
- Indra's Toll Reconciliation Host will be cloud-hosted in Microsoft Azure.
- The BOS-RTCS interface will support near real-time transmission of transactions from the lane to the Back Office using APIs

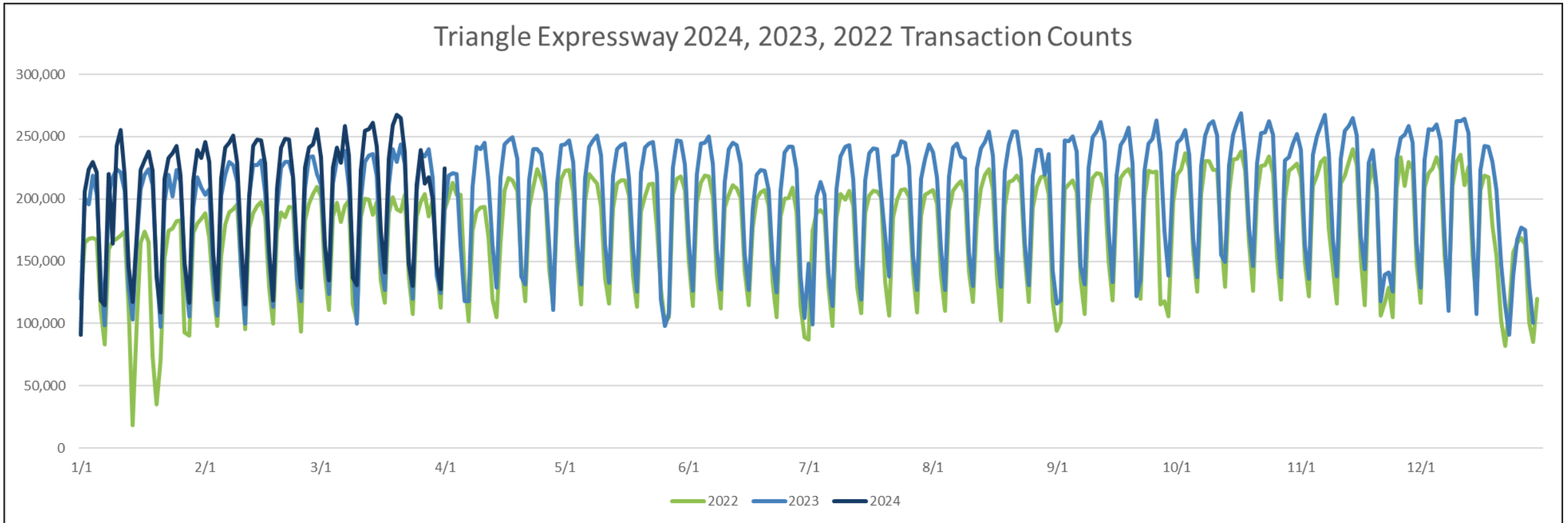
Triangle Expressway Traffic

Updates

Traffic Increase

2023 – 2024 Q1 – 5.8%
2022 – 2023 Q1 – 16.8%

Triangle Expressway 2024, 2023, 2022 Transaction Counts

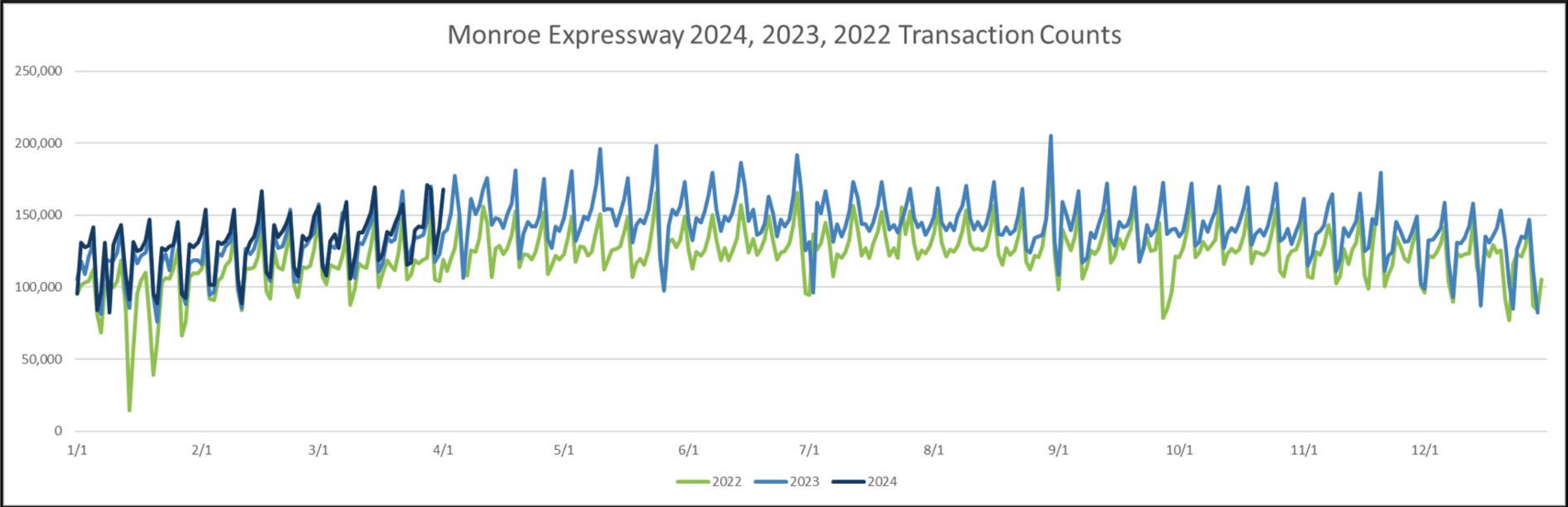


Monroe Expressway Traffic

Updates

Traffic Increase

2023 – 2024 Q1 – 3.6%
2022 – 2023 Q1 – 13.0%



Customer Service Center Update

Angela Queensland
Manager of Customer Service

NC Quick Pass Customer Service Centers and Walk-In Centers



Call Center Statistics

NC Quick Pass Program

Call Center Statistics

● Total Calls Presented to CSRs ● Total Calls Handled by IVR

Number of Calls

10K
5K
0K

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 19 20 21 22 23 24 25 26 27 28 29 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

February

2024

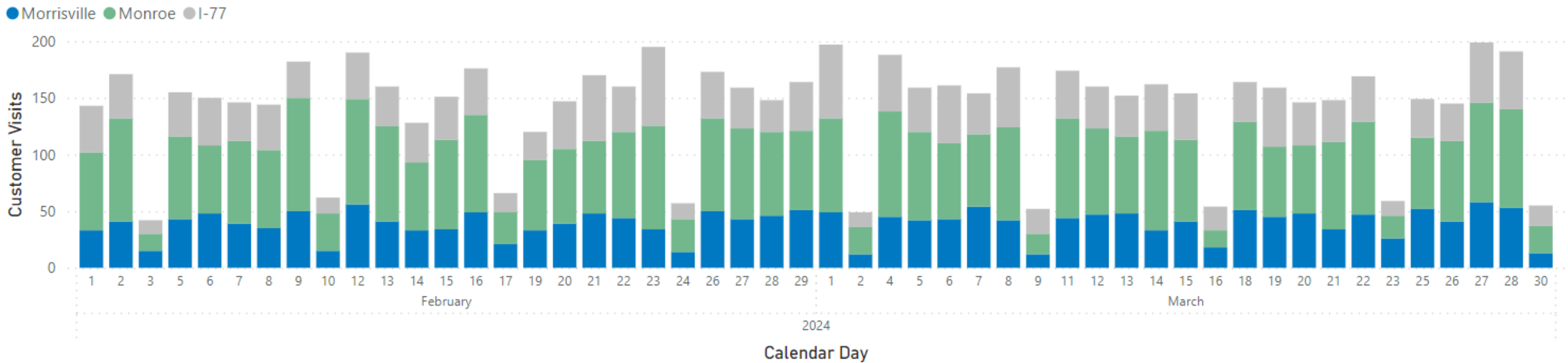
March

Calendar Day

Walk-In Center Statistics

NC Quick Pass Program

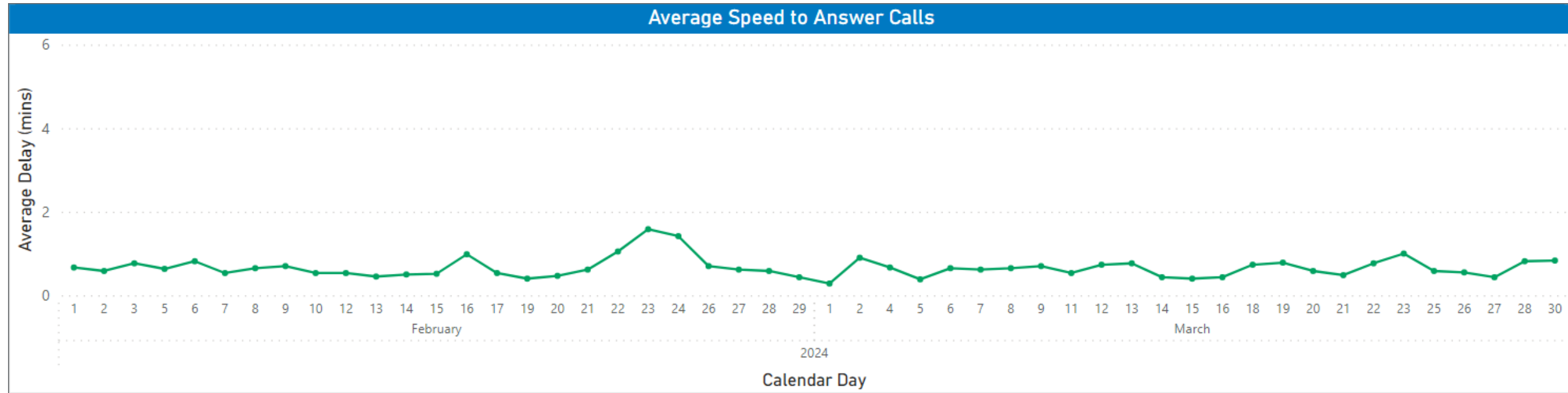
Walk In Center Statistics



Average Speed to Answer Calls

NC Quick Pass Program

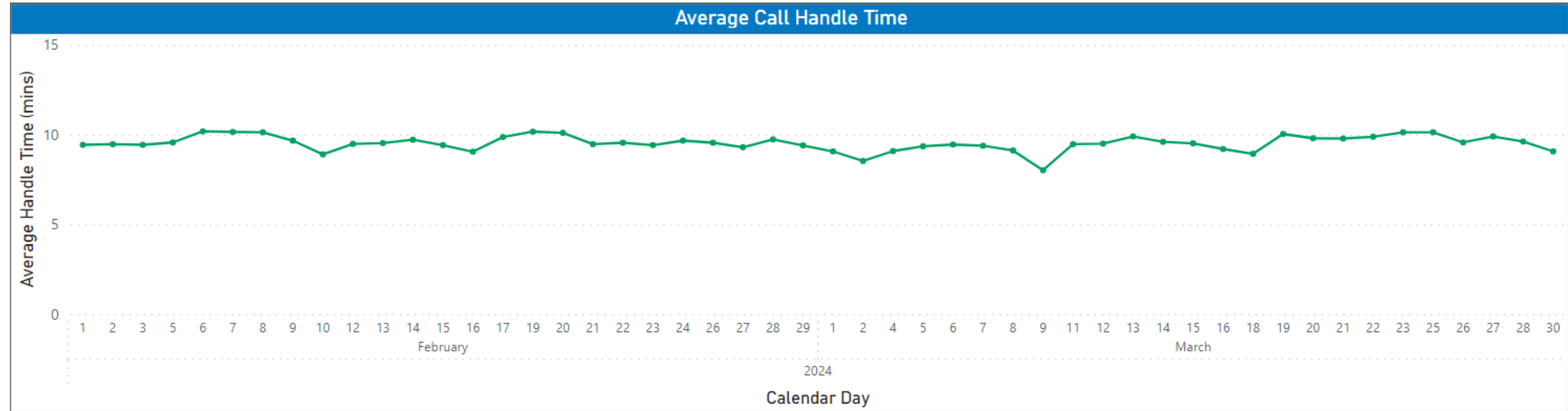
Average Speed to Answer Calls



Average Call Handle Time

NC Quick Pass Program

Average Call Handle Time



Marketing & Communications Update

Logen Hodges
Marketing & Communications Director



Complete 540

Mapping the First Half of 2024



Complete 540 Phase 2 Groundbreaking

- May 16
- 2:00 p.m. following NCTA Board Meeting





540 FEST

[#KeepNorthCarolinaMoving](#)

540 Fest

- June 22
- 10k bike race
- 5k run/walk
- Stakeholder remarks
- Music & refreshments
- Invite scheduled after 540 Phase 2 groundbreaking

Register at:

540fest.itsyourrace.com



NC Quick Pass Campaigns

Customer Campaigns

Schedule and Results

Campaign	Date	Results
Sticker Transponder – 19 States - A	April 1 – April 5	68% Open Rate – 270K Emails
BOS2 One-Year Anniversary	April 8 – April 14	Ongoing
MoneyGram and LPA Announcement	April 15 – April 20	Ongoing
Update Notification Preferences	TBD	
Sticker Transponder – 19 States - B	TBD	
Charlotte Travel	May	
Summer Travel	June	

Proposed Toll Rate Schedules

David Roy
Director of Innovative Finance

Proposed Change to Pre-paid Discount

- NCTA is proposing to increase the pre-paid toll discount to ~50% on all NCTA operated roadways
 - Currently, pre-paid customers receive a discount of ~35% on tolls
 - Post-paid Bill by Mail (BBM), or Video, transactions cost approximately 3x more to process than pre-paid, transponder based, transactions
- This proposed change would more appropriately allocate costs to a customer's chosen payment method and encourage greater pre-paid account adoption rates
 - Proposed change would increase the BBM rate by 30% and keep ETC rates unchanged
 - The anticipated gross revenue impact is less than +5% and the transaction impact is no more than -5%
- CDM Smith, as Traffic and Revenue Consultant, has provided revised forecasts and letters of no negative impact for both the Triangle Expressway System and Monroe Expressway, consistent with the Policy for Adopting Toll Schedules and Adjustments to Toll Schedules
- The proposed change would be effective January 1, 2025

Encouraging NC Quick Pass Adoption

REMOVING HURDLES

- NCTA is looking to lower prepaid account minimum from \$20 to \$10 in 2024



WIDER AVAILABILITY

- NCTA is pushing to get transponders in retailers to make getting a transponder easier

EASIER PAYMENTS

- NCTA currently is accepting payments at select License Plate Agency (LPA) locations and is looking to offer at more locations
- NCTA has expanded payment options to include platforms like MoneyGram

EASE OF ACCESS

- Deployed new NC Quick Pass website and app (IOS & Google Play) to allow customers quick, easy access to sign-up and manage their account

Proposed Triangle Expressway System Toll Schedule

- As part of the Complete 540 Phase 2 financing, CDM Smith provided a Traffic & Revenue Study in September 2023 which includes a toll rate schedule for the entire Triangle Expressway System
- Toll rate schedules have not yet been formally adopted for the Complete 540 Phase 1 or Phase 2 sections of the Triangle Expressway System
- The proposed rate schedule for the existing Triangle Expressway includes relatively small changes in incremental annual increases beginning in 2035 to align with the proposed rate schedule for Complete 540 Phase 1 and Phase 2
- Toll rates increase annually on January 1st
 - Class 2 (3 axle vehicles) are two times Class 1 toll rates
 - Class 3 (4+ axle vehicles) are four times Class 1 toll rates

Scheduled Average Toll Rate Increases			
Years	Existing Triangle	Phase 1	Phase 2
2025-2035	3.0%	3.0%	3.0%*
2035-2045	2.1%	2.1%	2.1%
2045-2064	2.1%	2.1%	2.1%

*Phase 2 is not anticipated to open until 2029 so rates indicated are from 2029-2035

Proposed Triangle Expressway System Toll Rates

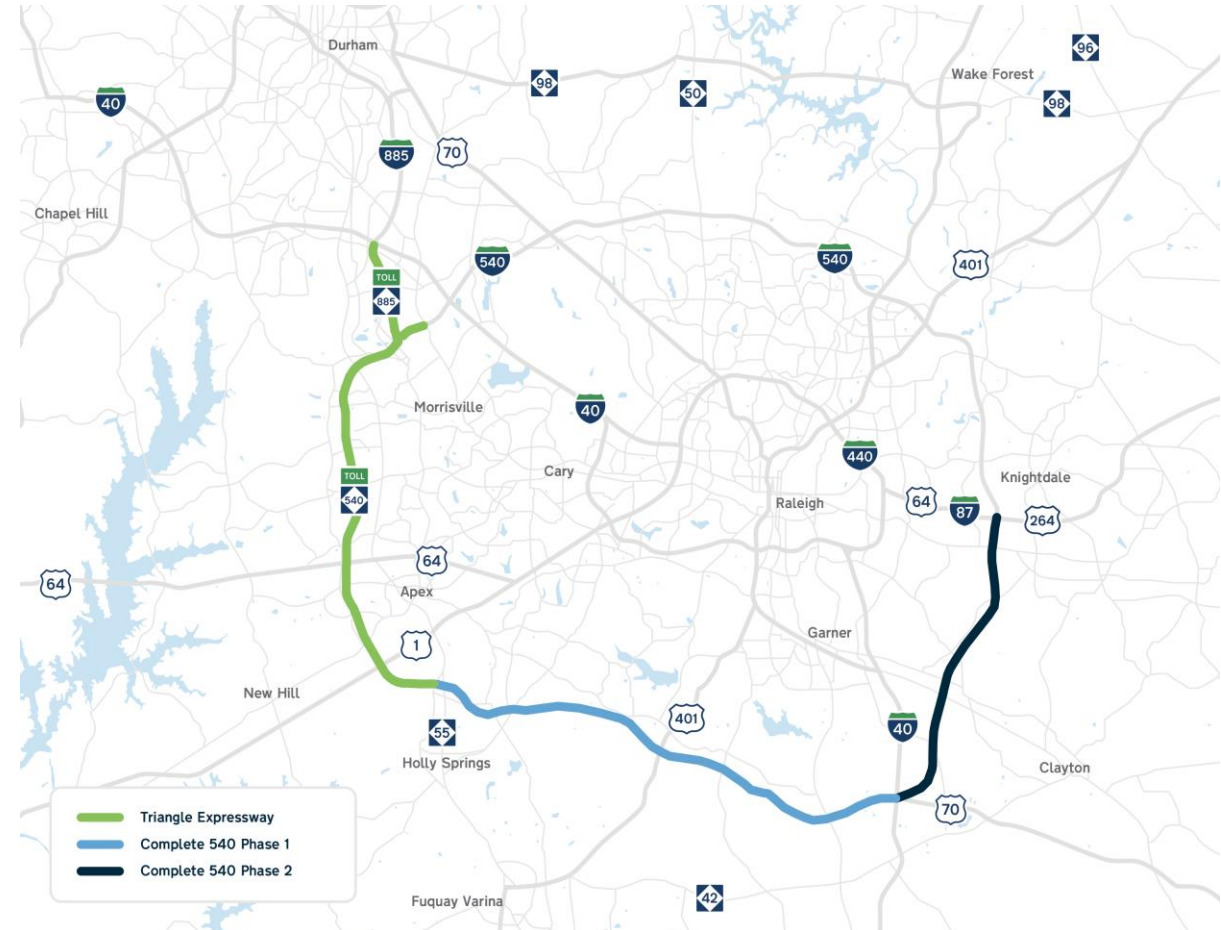
2025 Toll Rates

Class 1 Full Trip:	Existing Triangle Expressway	Complete 540 Phase 1	Complete 540 Phase 2 <i>1/1/2029</i>
ETC	\$4.05 ¹	\$4.19 ²	\$2.84 ²
BBM	6.21 ¹	6.45 ²	4.37 ²
BBM (Proposed)	8.10 ³	8.38 ³	5.68 ³

¹ Based on current Board adopted toll rate schedule

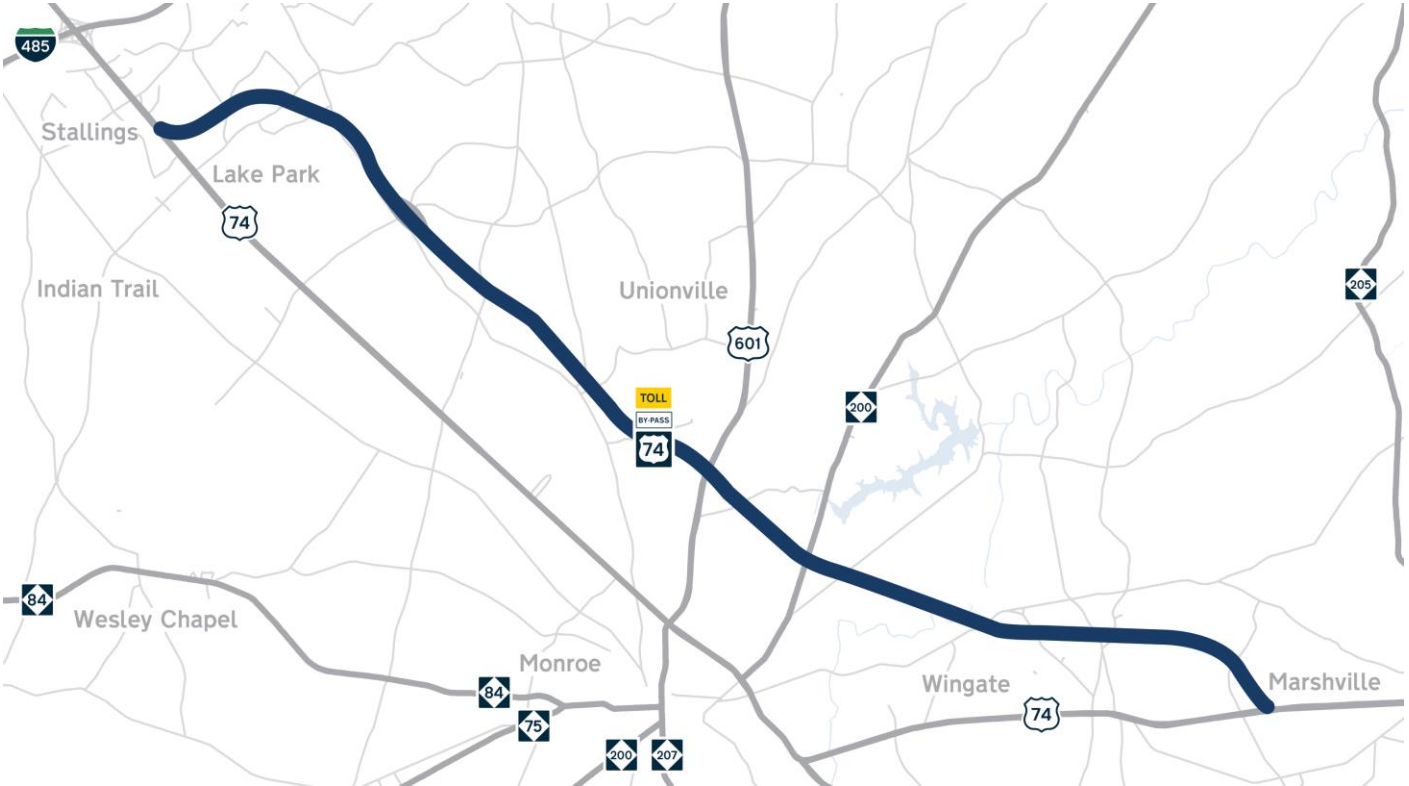
² Based on rate schedule included in September 2023 Triangle Expressway System Traffic and Revenue Study

³ Rate if proposed change in pre-paid discount rate is adopted



Proposed Monroe Expressway Toll Rates

2025 Toll Rate	
Class 1 Full Trip:	Monroe Expressway
ETC*	\$2.92 ¹
BBM*	4.49 ¹
BBM (Proposed)	5.84 ²



¹ Based on current Board adopted toll rate schedule

² Rate if proposed change in pre-paid discount rate is adopted

Contact Us



ncdot.gov/turnpike



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[@NorthCarolinaTurnpikeAuthority](https://www.youtube.com/@NorthCarolinaTurnpikeAuthority)



ncquickpass.com



Thank you!