

North Carolina Turnpike Authority

Operations Committee Meeting

July 21, 2022



Operations Committee



Montell W. Irvin
Operations Committee
Chairman



Mary N. Clayton
Operations Committee
Member



Sam Hunt IV
Operations Committee
Member



**Charles 'Chuck'
L. Travis III**
Operations Committee
Member

Other Board Members



J. Eric Boyette
Chairman of the Board



James 'Jim' Walker
Vice Chair of the Board



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



John Adcock
Board Member



**Dr. Pamela
Gibson Senegal**
Board Member

Opening Comments

JJ Eden

Executive Director

Complete 540 Construction Update

Dennis Jernigan, P.E.
Deputy Chief Engineer for Highway Operations































Temporary Detour for U.S. 70 West to N.C. 42 West & I-40 East





PPP, Inc.
4486 Industrial Park Rd.
Green Cove Springs, FL 32043
Office: 904.448.4074
Toll Free: 888.717.7771
Fax: 904.448.4076

To:
North Carolina Turnpike Authority
North Carolina Department of Transportation
1636 Gold Star Drive
Raleigh, NC 27607-3371

Attn: Alan Shapiro
Subject: LaneAlert 2x Production Hold

Dear Alan,

For the past 30-years, I have been dedicated to the distribution, discovery, and development of road safety infrastructure solutions. Solutions that potentially save the lives of our mothers, fathers, sons, and daughters that drive on our roads every day.

For the past 8-years, I have focused primarily on the problem of wrong-way driving. My intent and passionate pursuit was to develop what would eventually become a "simple", economical solution that could be effectively utilized regardless of budgets or borders. The concept was to develop a new class of pavement markings that provided overwhelming effective directional messaging and warning to errant drivers. From this pursuit came the LaneAlert 2x.

We have literally been overwhelmed by the response and interest in the LaneAlert 2x. Individuals of agencies that are dedicated to finding innovative ways to provide safety for those that use and work on our roads daily. Unfortunately, for the past 2-years, our efforts and success have been repeatedly thwarted. The most impactful has been the shortage of materials. No sooner do we find a solution to one developmental problem, does another come up due to the shortages. Thus, we seek, trial, and fast-track alternative materials causing added delays, costs, and problems. In recent weeks the supply chain further tightened. Every component of the LaneAlert 2x has been impacted by these shortages.

These shortages impede our ability to effectively provide a quality pavement marking system. Like many inventors and entrepreneurs do, I have poured my heart, soul, time, and financial resources into this pursuit. So it is with great difficulty that we reach the point where I must resign to the fact, that at this time, we must put the manufacturing of the LaneAlert 2x on hold. Although we are unsure of when we will be able to fulfill our previous commitments, we will make diligent efforts to do so as soon as these materials become available.

For now, we ask that you place any LaneAlert 2x related projects on hold. Likely, we will not have the proper materials needed in the 2022 striping season.

If you would like to withdraw your purchase order, we understand and will accept such requests. Regardless we will alert you immediately when our production is back on line.

Please accept my sincerest apology on this matter.

Greg Driskell
PPP, Inc. President/CEO



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Greg Driskell
PPP, Inc. President/CEO

www.pppcatalog.com

Community Outreach



2022 Complete 540 Outreach



Presentations

Nearly 500 participants
over 17 meetings



Informing Residents

Over 5,682 postcards
& 10 Nextdoor posts



Resident Inquiries

223 emails & 164 calls to
the Complete 540 Hotline

Upcoming Presentations: Knightdale Town Council,
Johnston County Building Industry Association,
Triangle Commercial Realtors Association

Interns Update

Sam Capps

Bio

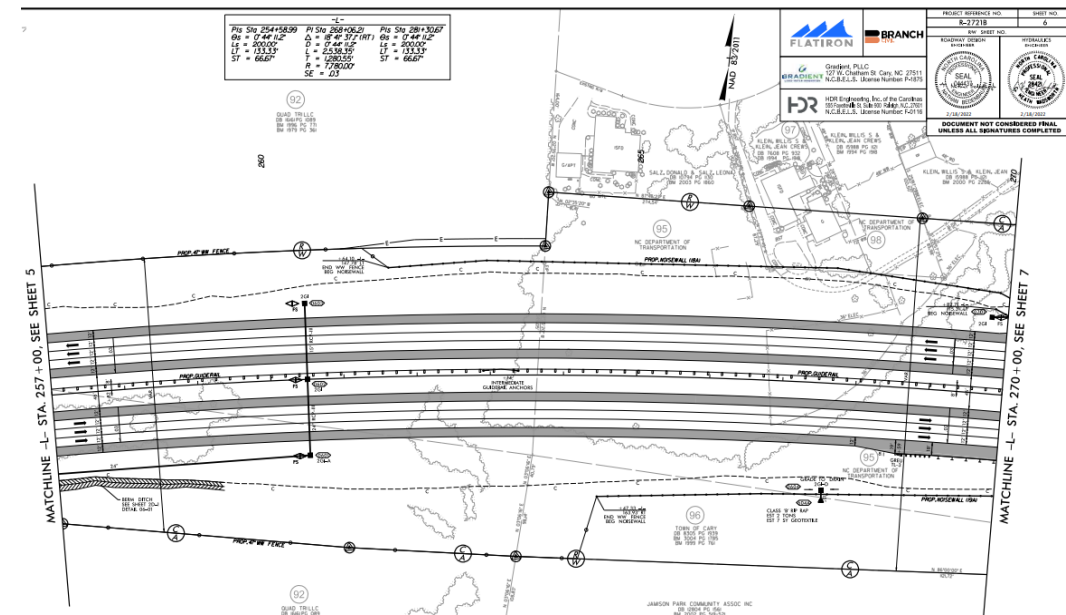
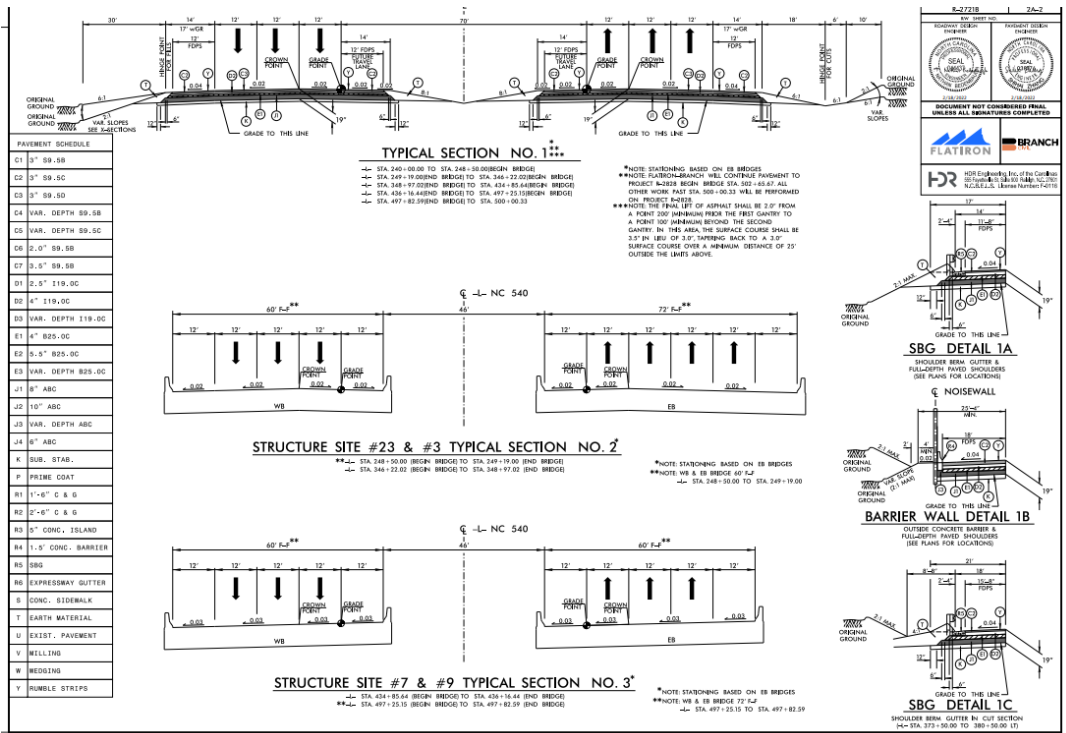


Sam Capps– Construction Engineering Intern

- North Carolina State University
- Class of 2025
- Civil Engineering

Experiences:

- Project Scope
- Survey
 - Grade
 - Drainage
 - Bridges
- Structures



Long Term Benefits

- School
- Career



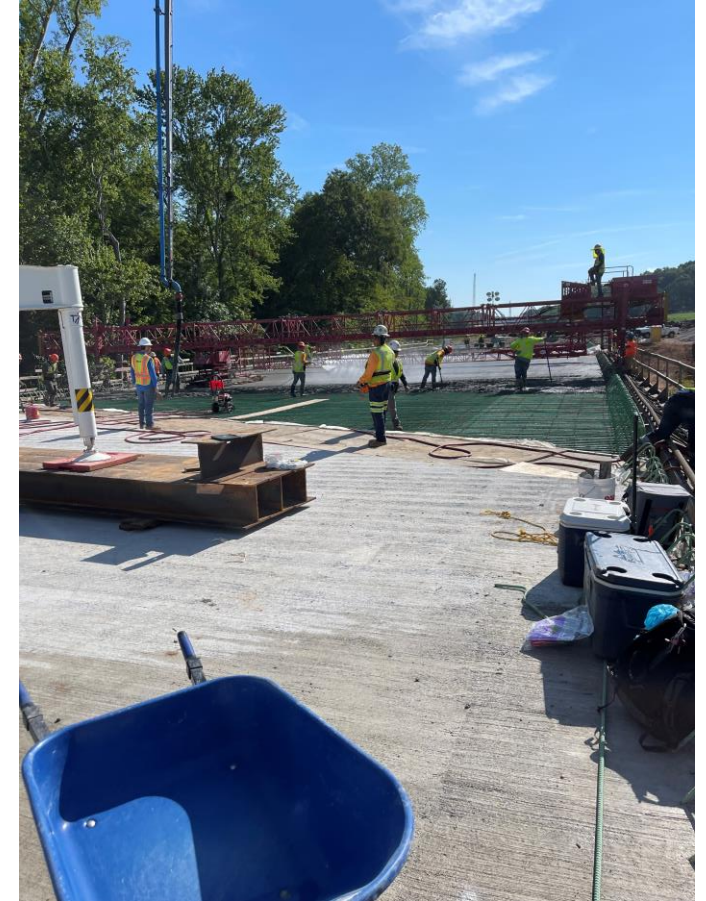
**NC STATE
UNIVERSITY**



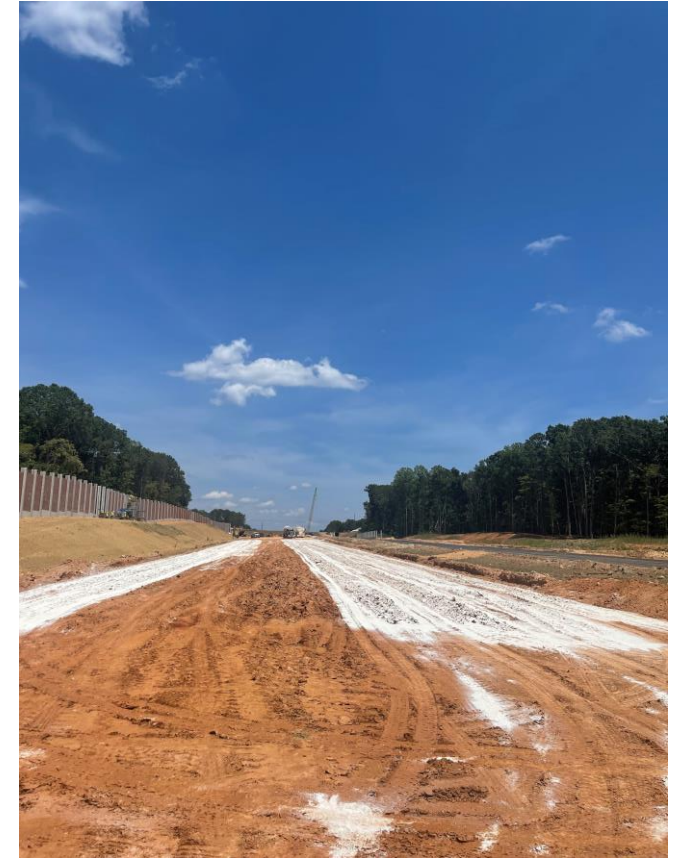
**COLLEGE OF
ENGINEERING**

Highlight of the Summer for me:

- Concrete Testing



Thank you



Complete 540 Phase 2 Update

David Roy
Chief Financial Officer

Dennis Jernigan, P.E.
Interim Chief Engineer

Complete 540

Open to traffic (42 miles)

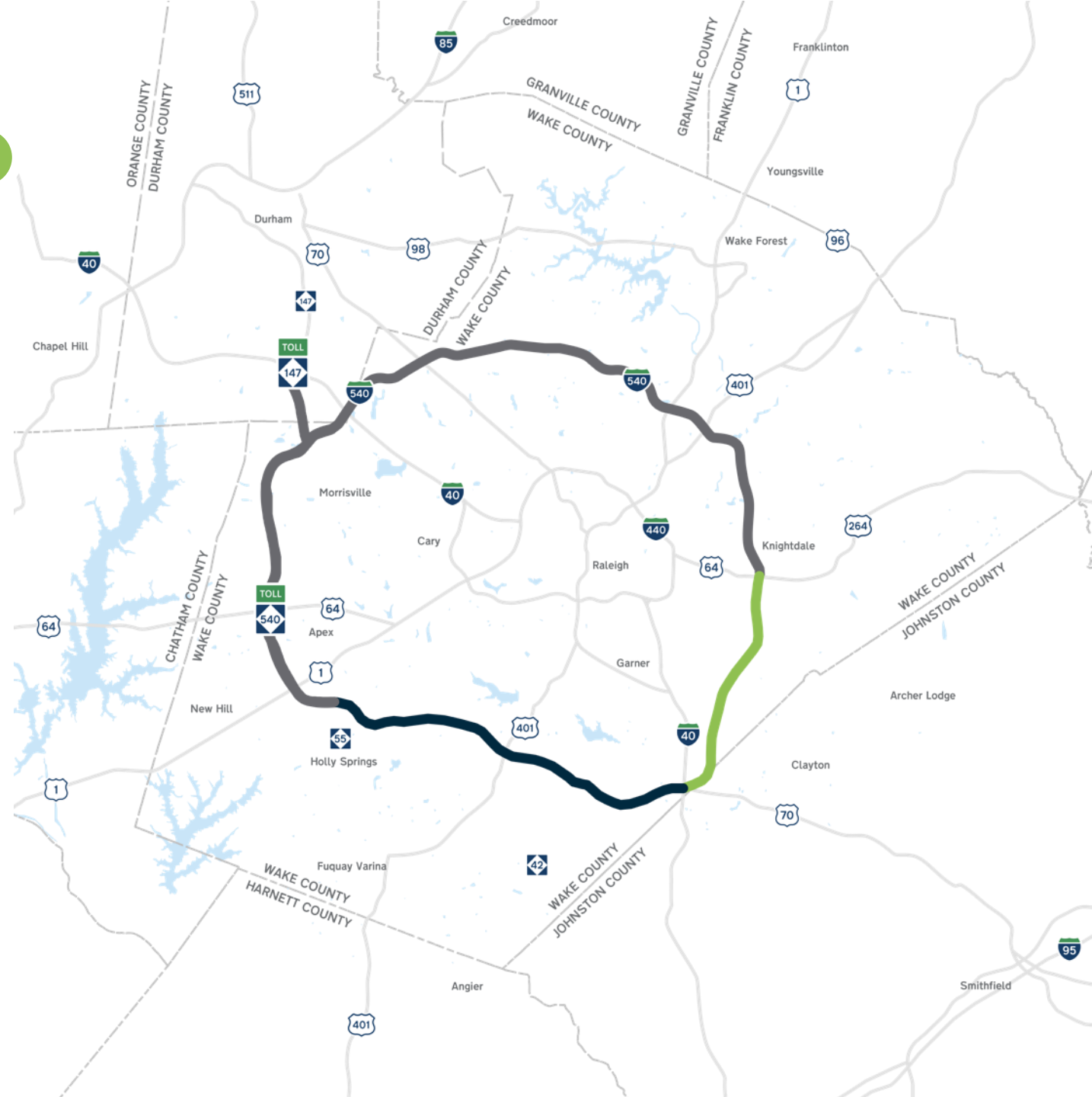
I-540 & Triangle Expressway

Under construction (18 miles)

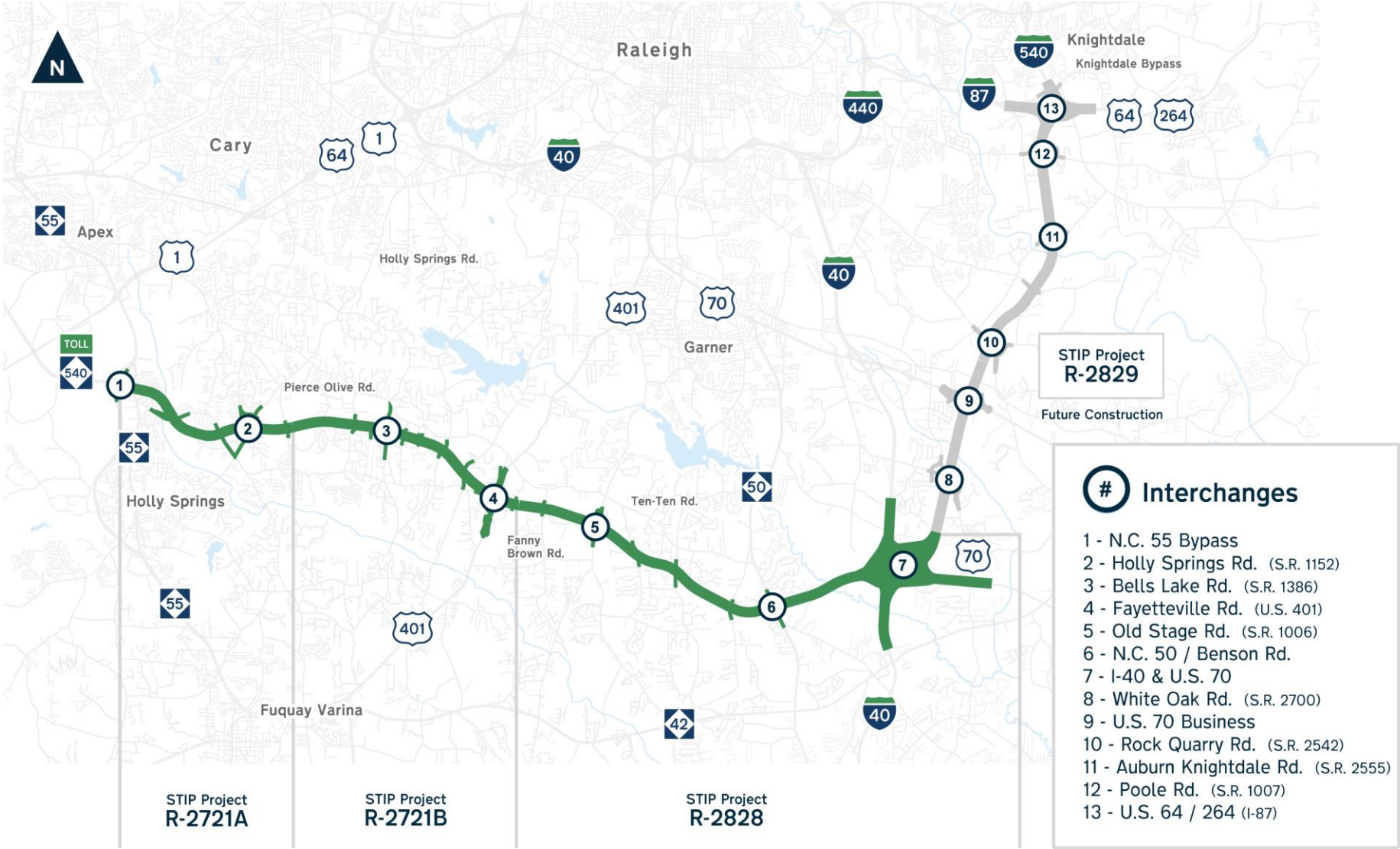
Complete 540 Phase 1
R-2721A, R-2721B, R-2828

Missing link (11 miles)

Complete 540 Phase 2
R-2829



Complete 540 Phases 1 and 2



Projects Under Development

Initial Draft 2024-2033 State Transportation Improvement Program (STIP)

Fiscal Year that Funding Begins

1

Complete 540 Phase 2
R-2829

2026 - ROW, Utilities
2028 - Construction

2

Mid-Currituck Bridge
R-2576

2024 - ROW, Utilities, Construction

3

U.S. 74 Express Lanes
U-6103 and U-2509

2027 - ROW, Utilities
2030 - Construction

4

I-77 South Express Lanes
I-5718

Funded for Preliminary Engineering Only

Complete 540 Phase 2 - Preconstruction Activities

Completed Activities

- Environmental Document
- Section 404/401 Corridor Permits
- Biological Opinion
- Air Quality Conformity
- Final Surveys
- Traffic Forecasts and Analysis
- Service Road Study
- Confirmation of Environmental Mitigation Availability
- Roadway and Structure Geotechnical Investigations

Activities Underway

- Refining Preliminary Design
- Developing Pavement Design and Life Cycle Analyses
- Advanced Acquisition of Certain Right-of-Way Parcels
- Coordination with Owners of Towers Regarding Needed Relocations
- Planning for Community Water and Sewer Conflict Resolutions
- Railroad Coordination
- Planning for Other Long Lead-Time Items

Future Preconstruction Activities

- Update Project Cost Estimate
- Complete Pavement Design and Life Cycle Cost Analyses
- Refine Plans for Right-of-Way Acquisition
- Utility Coordination
- Developer Coordination
- Industry Coordination
- Design-Build Procurement

Complete 540 Phase 2 - Financing Activities

Items Completed

- Submitted Letter Of Intent (LOI) to TIFIA
- Invited into creditworthiness by TIFIA
- Provided responses to TIFIA's due diligence questions with CDM Smith support

Items in Progress

- Discussions beginning around loan agreement amendments
- Preliminary Plan of Finance in development
 - Fundings sources may include Revenue Bonds, TIFIA Loan, NC GARVEE Proceeds (From NCDOT), State and Local Match
- Discussions with department surrounding GAP funding and STIP timeline
- Discussions with division and department surrounding project acceleration

I-485 Express Lanes Update

Rachel Ruiz
Implementation Manager

Brian Davis, P.E.
Resident Engineer

Manish Chourey
Chief Technology Officer

I-485 Express Lanes



General Construction Update

Brian Davis, P.E.
Resident Engineer

Division 10 Construction

Westinghouse Excavation



Division 10 Construction

Ballantyne Commons Parkway Bridge



Division 10 Construction

Johnston Road Interchange



Division 10 Construction

Design-Build Project Budget (as of 06/17/2022)

	Amount
Initial Contract Award	\$346,000,000.00
Total Amount Paid to Date (Contact Award)	\$215,017,764.84
Supplemental Agreement Amount	\$5,837,639.23
Total Amount Paid to Date (Supplemental Agreement)	\$1,691,464.82
Total Contract Value	\$351,837,639.23

Significant Supplemental Agreements

- SA #1 Required Storm Drain Cleanout - \$359,000.00
- SA #11 Design Cost to Lengthen Weddington Rd Bridge - \$235,354.48
- SA #12 Design Cost to Extend E. John St. North - \$215,734.13
- SA #13 12" Water Main at Elm Lane - \$713,185.72
- SA #17 Duke Access Road at Ballantyne Commons Parkway - \$204,196.01
- Weddington Road Interchange, Ingress / Egress Weave Lengths, Utilities, Delay 4C Meeting, Delay of Hydraulics Plans. These items are in negotiations as part of a global settlement agreement

Tolls and ITS Update

Rachel Ruiz
Implementation Manager

Toll and ITS Progress

Toll Zones

- Gantry Foundation and Conduit
7 sites Completed 1 site In Progress 1 sites Pending
- Pull-Off Area
2 sites Completed 1 site In Progress 5 sites Pending
- Power and Communication
4 sites scheduled for delivery of power services
Communication conduit in progress

Intelligent Transportation System (ITS)

- Electronic Message Signs
Foundations – 11 signs Completed 18 signs Pending
- Detectors, Cameras, Power and Communication
Communication conduit in progress
Geotechnical test in progress



I-485 Toll System Procurement

Manish Chourey
Chief Technology Officer

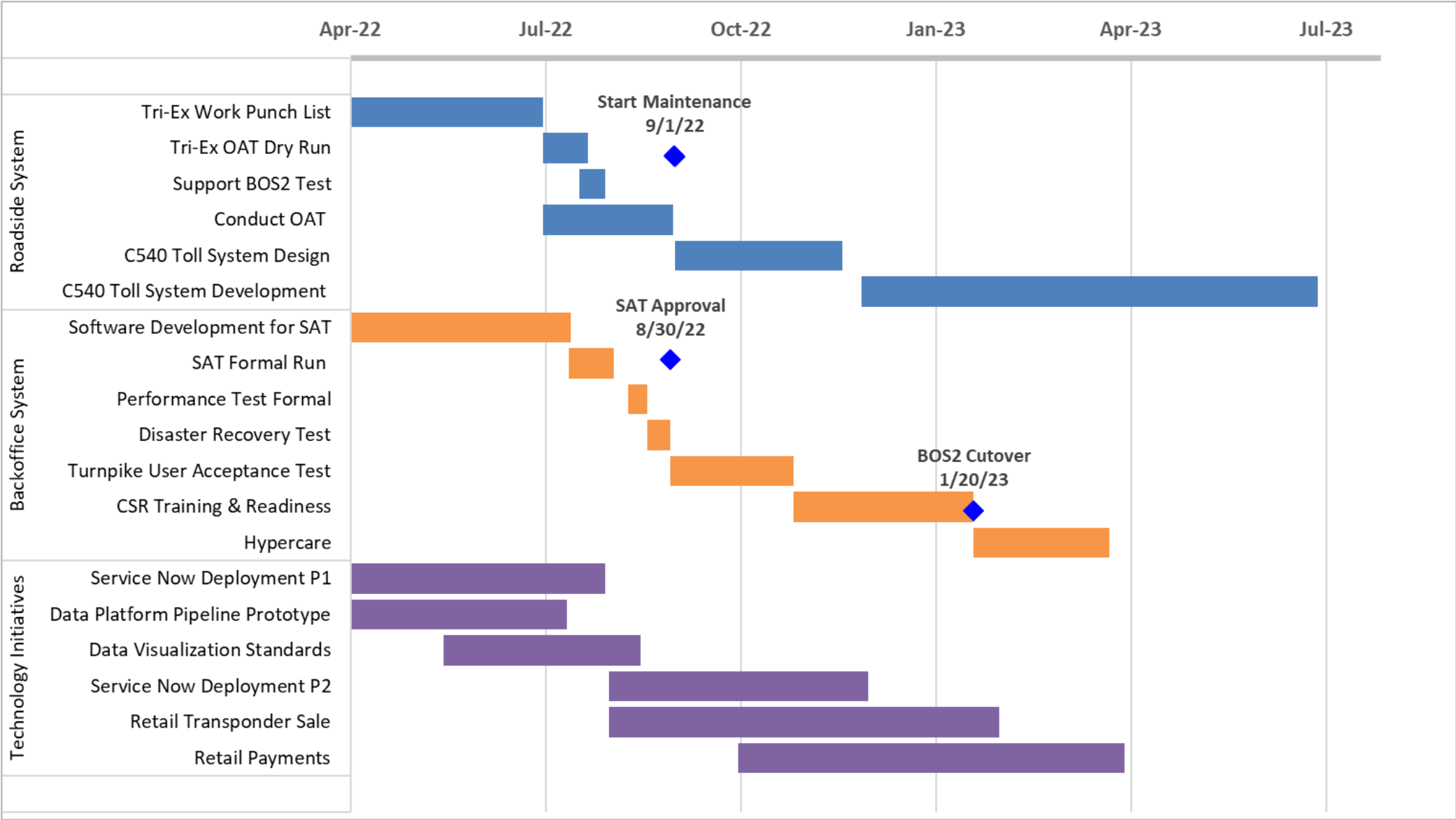
I-485 Express Lanes Toll System Procurement – Cancellation

- NCTA canceled I-485 RFP on 6/20/22
- Key considerations:
 - Growth of NCTA's portfolio and future projects
 - Align future roadside projects with its business architecture and platform approach
 - Prepare for future roadside technologies in streaming data and connected vehicle technologies
- Anticipate a new RFP to be released in early fall 2022 with an expected system delivery in Spring 2024

Toll Technology Update

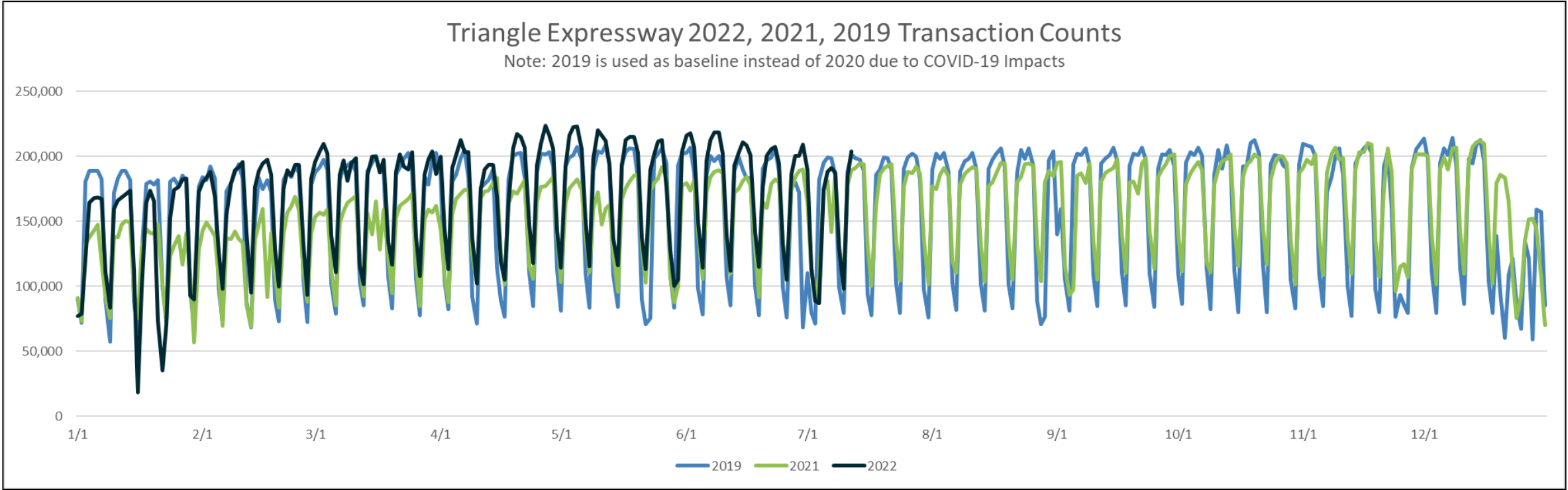
Manish Chourey
Chief Technology Officer

Toll Technology Project Timeline

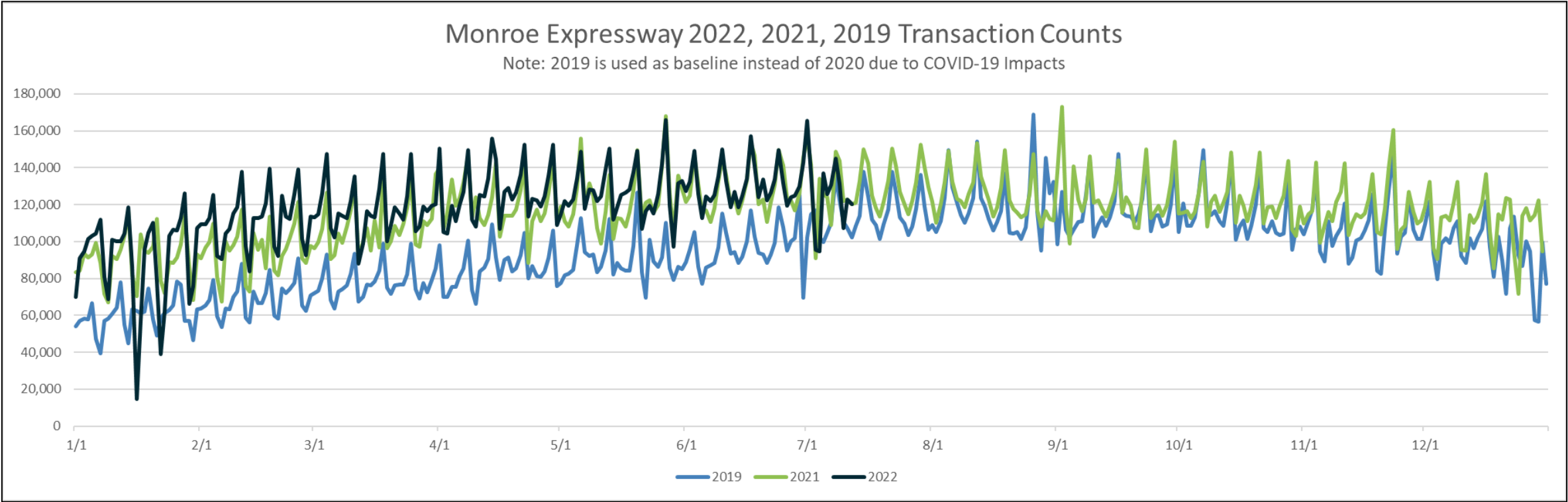


The timeline provides plan dates – subject to changes based on actual activities

Triangle Expressway Traffic



Monroe Expressway Traffic



Interns Update

Areeba Khokhar



Areeba Khokhar
Technology Intern

- Rising Junior at the University of North Carolina - Chapel Hill
- Pursuing a Computer Science B.S and Business Administration B.S.B.A
- Second-year returning intern with HNTB and NCTA
- Continuing work with Power BI and automatic data refresh for dashboards

Develop and Automate Dashboards

- The goal is to consolidate traffic reporting across all roadways
- Expansion of Power BI dashboards to Monroe and GoToll transactions
- This project has given me a chance to further develop my work and skills from last summer and learn about how data is visualized and used differently at technical and business levels

Date	Toll Zone	Total Transactions	AVI Reads	Sample	Duplicate Count	Spurious Count	Missing Images	AVI Read Fail	Class Fail	Image Fail	AVI Rate	Failed Transactions	KPI
Saturday, January 01, 2022	T29	882	646	188	1	0	0	2	0	0	73.24	2	98
Sunday, January 02, 2022	T29	826	642	218	0	0	0	1	0	0	77.72	1	99
Monday, January 03, 2022	T29	1709	1257	506	1	0	0	6	0	0	73.55	6	98
Tuesday, January 04, 2022	T29	2069	1487	597	1	1	1	6	0	0	71.87	6	98
Wednesday, January 05, 2022	T29	2090	1533	630	2	1	0	8	0	0	73.35	8	98
Thursday, January 06, 2022	T29	2224	1589	606	3	0	0	4	0	0	71.45	4	99
Friday, January 07, 2022	T29	2093	1473	600	0	0	0	6	0	0	70.38	6	99
Saturday, January 08, 2022	T29	1290	964	336	0	1	0	1	0	0	74.73	1	99
Sunday, January 09, 2022	T29	1044	783	230	1	0	0	4	0	0	75.00	4	98
Monday, January 10, 2022	T29	1971	1440	606	0	0	0	3	0	0	73.06	3	99
Tuesday, January 11, 2022	T29	2032	1449	588	0	1	0	2	0	0	71.31	2	99
Wednesday, January 12, 2022	T29	2079	1518	600	1	1	0	5	0	0	73.02	5	99
Thursday, January 13, 2022	T29	2048	1441	575	1	0	0	1	0	0	70.36	1	99
Friday, January 14, 2022	T29	1975	1381	515	1	1	0	2	0	0	69.92	2	99
Saturday, January 15, 2022	T29	1223	885	304	1	0	0	3	0	0	72.36	3	99
Sunday, January 16, 2022	T29	174	132	46	0	0	0	0	0	0	75.86	0	100
Monday, January 17, 2022	T29	1099	820	283	0	0	0	2	0	0	74.61	2	99
Tuesday, January 18, 2022	T29	1888	1311	519	0	2	0	2	0	0	69.44	2	99
Wednesday, January 19, 2022	T29	2189	1557	666	0	0	1	3	0	0	71.13	3	99
Thursday, January 20, 2022	T29	1945	1396	631	0	0	0	3	0	0	71.77	3	99
Friday, January 21, 2022	T29	621	432	167	1	0	0	2	0	0	69.57	2	98
Saturday, January 22, 2022	T29	375	279	85	0	0	1	1	0	0	74.40	1	98
Sunday, January 23, 2022	T29	787	597	209	0	0	0	0	0	0	75.86	0	100
Monday, January 24, 2022	T29	1600	1164	491	0	0	0	1	0	0	72.75	1	99
Tuesday, January 25, 2022	T29	2192	1582	657	1	1	0	1	0	0	72.17	1	99
Wednesday, January 26, 2022	T29	2174	1572	694	0	1	0	2	0	0	72.31	2	99
Thursday, January 27, 2022	T29	2134	1531	636	1	1	0	3	0	0	71.74	3	99
Friday, January 28, 2022	T29	2207	1564	632	1	0	0	2	0	0	70.87	2	99
Saturday, January 29, 2022	T29	1032	772	271	0	0	0	1	0	0	74.81	1	99
Sunday, January 30, 2022	T29	1583	1164	491	0	0	0	1	0	0	72.75	1	99
Total		331663	235058	94984	163	59	57	241	25	0	71.24	266	99

Date

1/1/20226/19/2022

Toll Zone

T01T05T09T13T15T17T21T25T29T31T33T02T06T10T14T16T18T22T26T30T32T34

Interns Update

Shubhankar Shindgikar



**Shubhankar
Shindgikar, M.S.**
Advanced Technology Intern

- Currently pursuing a Ph.D. in Civil Engineering – Transportation at University of South Florida, Tampa, FL
- Researching on Connected and Automated Vehicle (CAV) Technology
- Aim is to making informed decisions about impact of these new technologies through data -based modelling, analysis and simulation
- Future goal is to leverage my interdisciplinary knowledge towards a safer, equitable, accessible and greener transportation ecosystem

Dashboards for Insights into Back Office Systems (BOS) and Operations

- Utilize big data generated through the BOS and provide visualizations for easier understanding and deeper insights into operations and keep track of key performance indicators
- Developed 4 dashboards – Accounts, Case Management, Payments, Operations

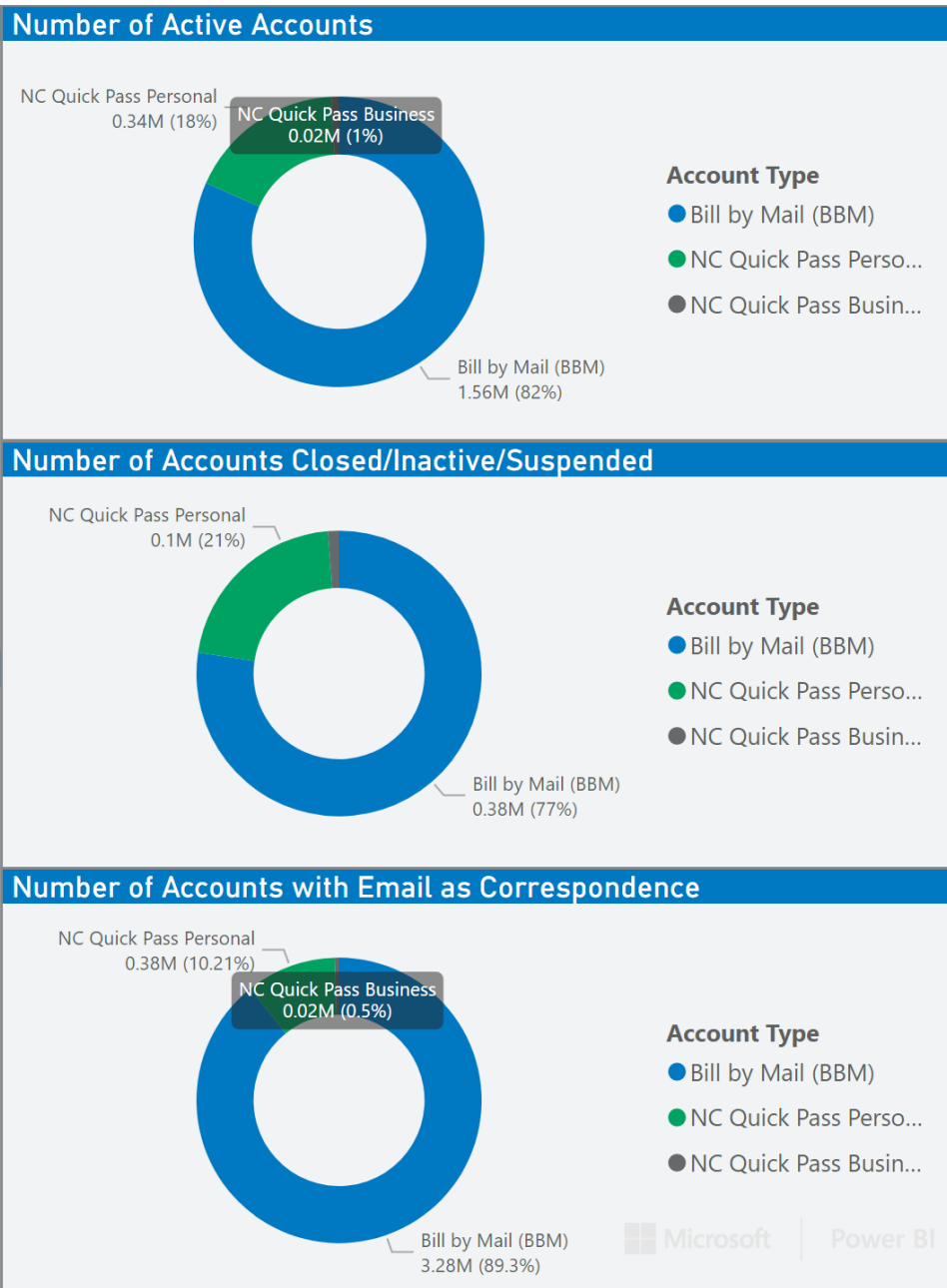
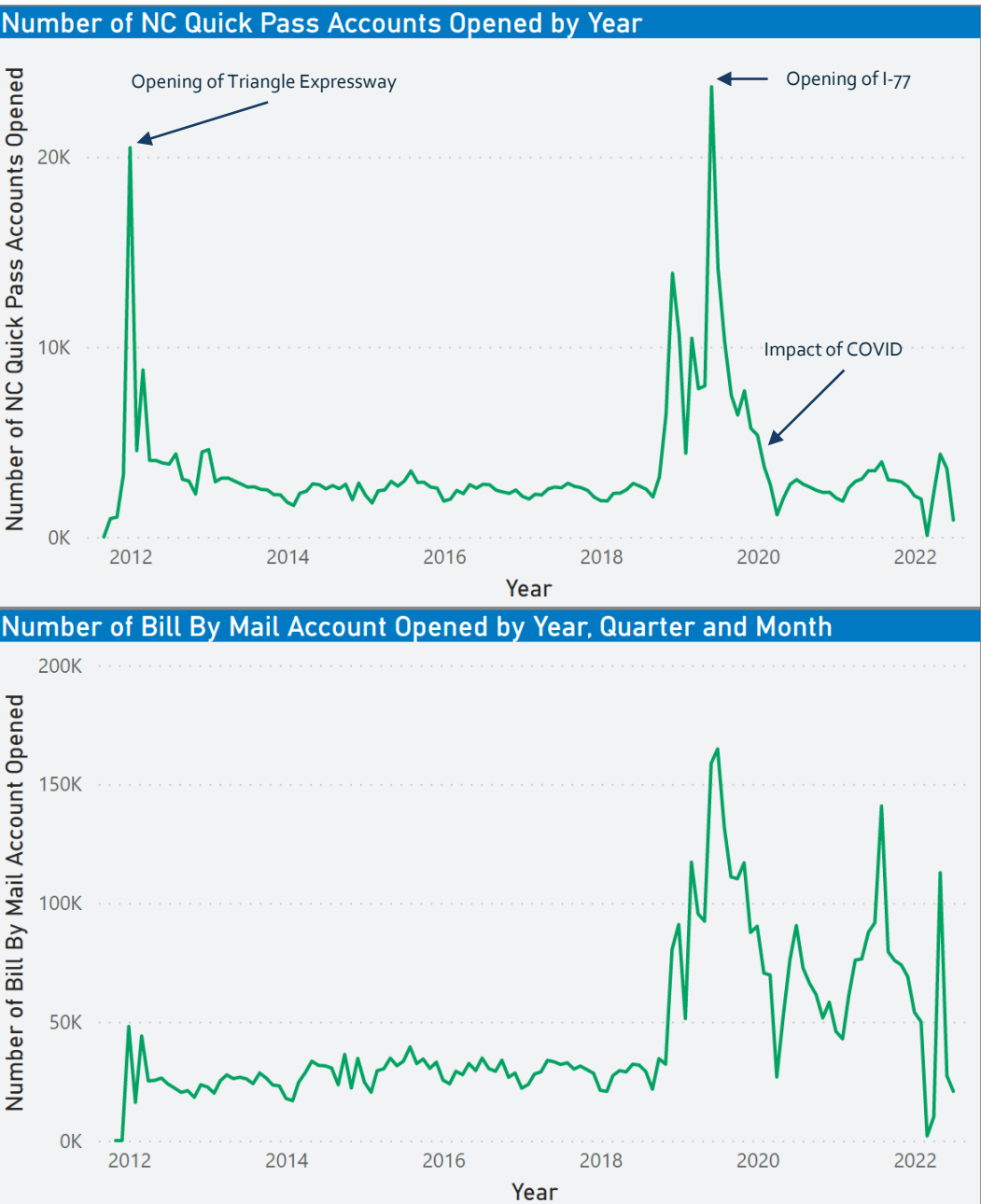
Automate Process for Data Ingestion into Power BI

- Develop tools and flows to automate data merge, migration and processing to design dashboards and reduce repetition of tasks

Accounts Dashboard

[View in Power BI](#)

- The purpose of the dashboards is to provide insights into the number of active/closed accounts by account type over time
- This dashboard also maps how the NCQP program is growing and indicates the location of customers

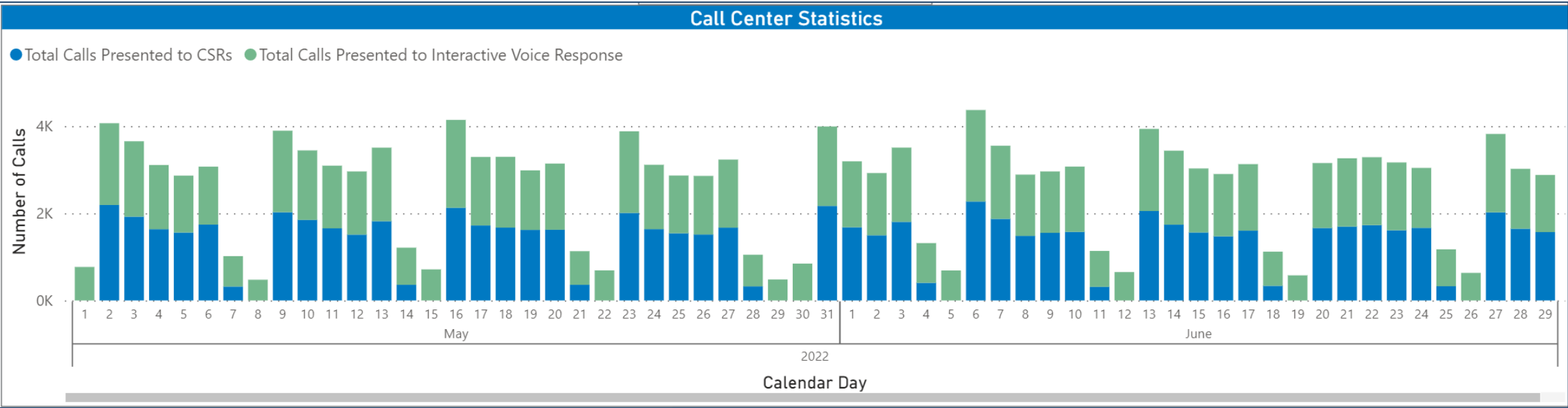


Customer Service Center Update

Angela Queensland
Customer Service Manager

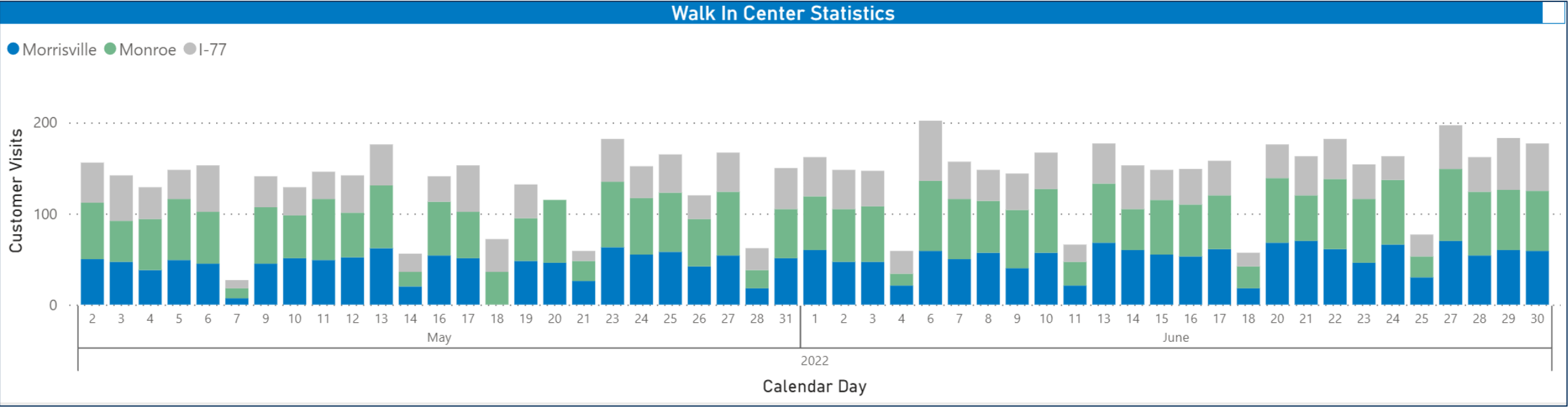
Call Center Statistics

NC Quick Pass Program



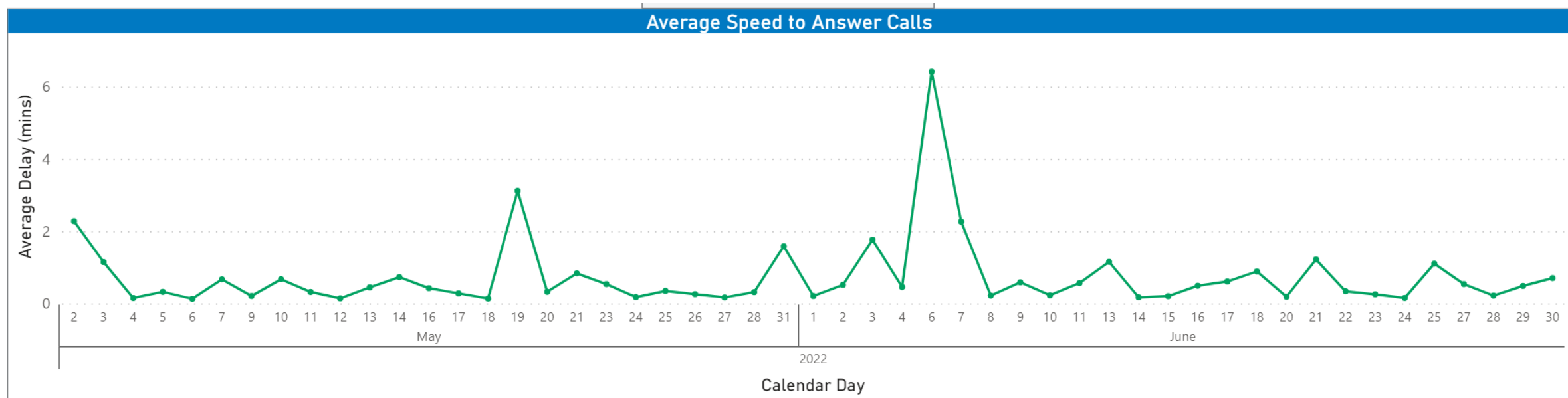
Walk-In Center Statistics

NC Quick Pass Program



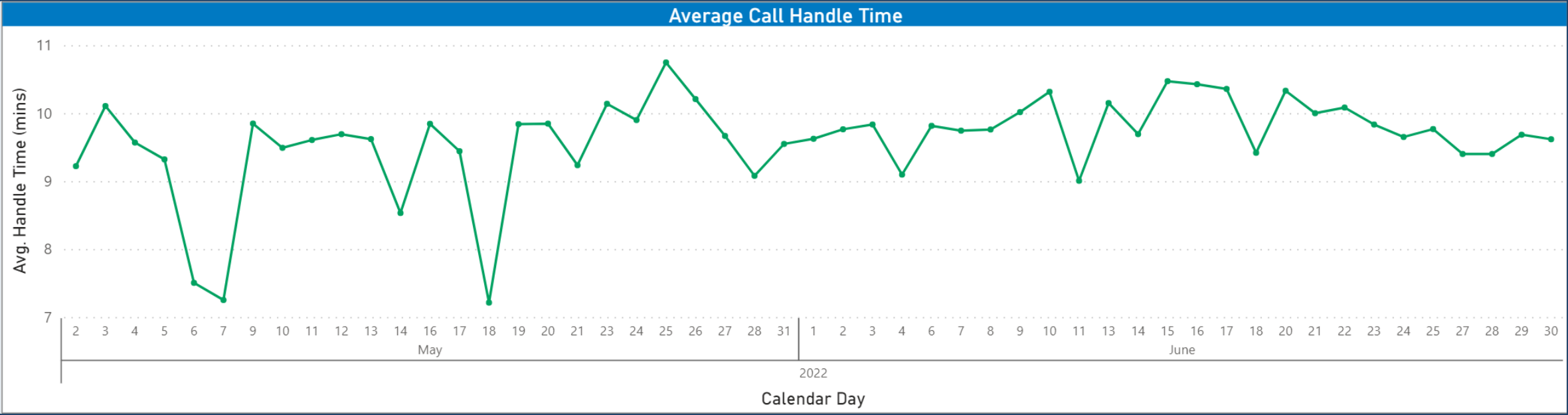
Average Speed to Answer Calls

NC Quick Pass Program



Average Call Handle Time

NC Quick Pass Program



Customer Service Update

CSC Operations

- Three of walk-in locations are serving customers
- Agents continue to maintain social distancing
- Few Agents continue to Work From Home (WFH)
- Few Agents are supporting from Overflow Call Center.

Overflow Call Center at Rocky Mount

- Occupancy expected by late summer 2022
- Initial plan underway for CSC staffing and training

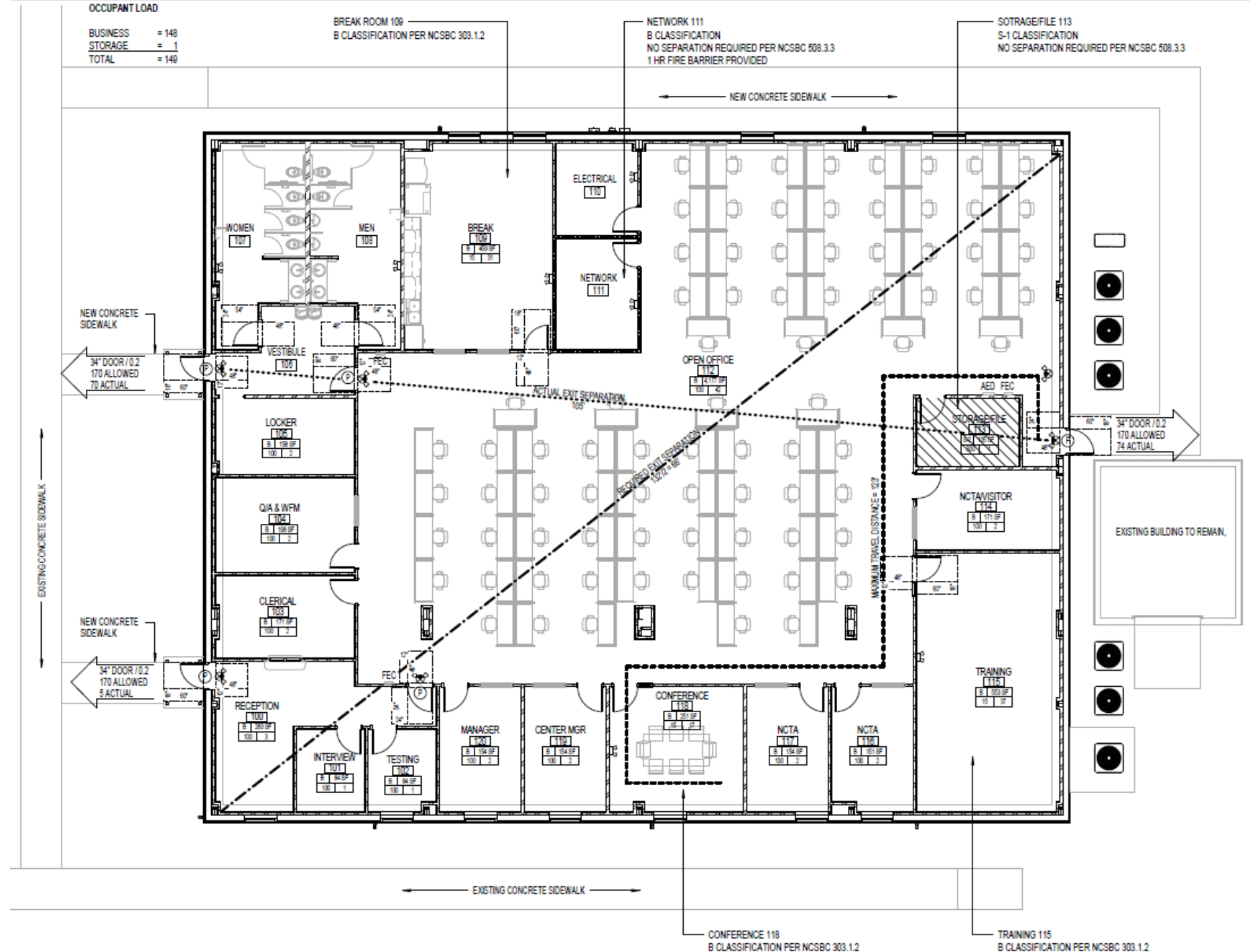
Expected benefits from Overflow Call Center

- Increase pool of resources
- Ability to scale up and down
- Business continuity

NC Quick Pass Rocky Mount Customer Service Center

Angela Queensland
Customer Service Manager

Call Center Floor Plan



Rocky Mount Call Center



Rocky Mount Call Center



Call Center Buildout

Project Schedule

Milestone	Date
Lease Executed	December 2021
Permit Issued from Town of Rocky Mount	March 2022
Notice to Proceed	April 2022
Certificate of Occupancy	September 2022
Ready for Operations	September 2022

Communications & Marketing Intern Update



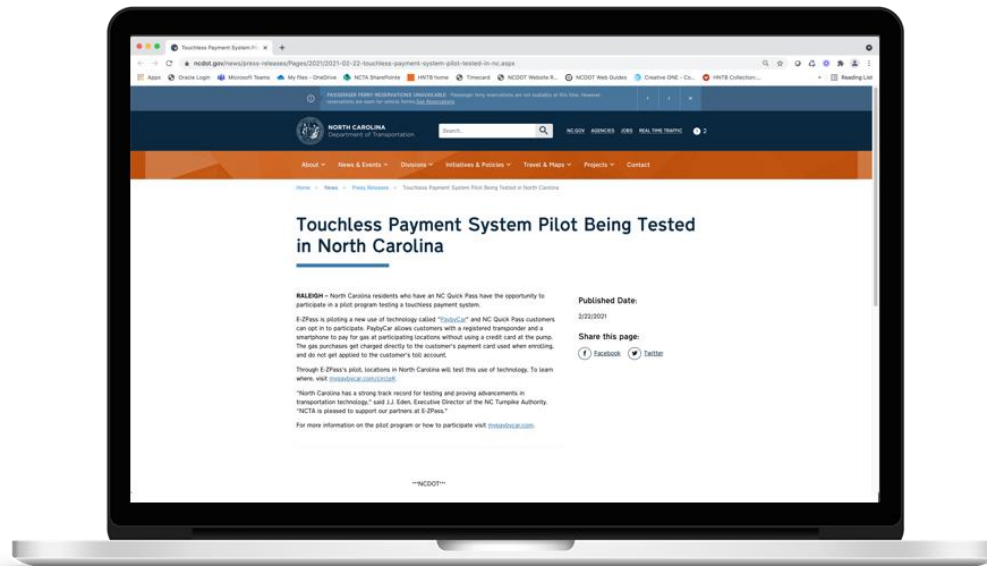
Jenna Hawkins
Communications Intern

- University of North Carolina Charlotte
- Class of 2025
- Pre-Business Major

Projects

1	Graphic Design and Communications Training
2	Complete 540 Grand Opening
3	NCTA Employee Reference Guide

Complete 540 Grand Opening



NCTA Employee Reference Guide

2021



North Carolina Turnpike Authority

An Enterprise Fund of the North Carolina Department of Transportation



Trainings



Technical Writing



Press Release Tips
and Tricks



Workplace Best Practices



Graphic Design

Contact Us



ncdot.gov/turnpike



[@NCTurnpike](https://twitter.com/NCTurnpike)

ncquickpass.com

[@NC_QuickPass](https://twitter.com/NC_QuickPass)

The background features a dark blue field with a subtle, repeating pattern of hexagons. Overlaid on this are several dynamic, glowing green particle trails. These trails consist of numerous small dots that form curved, flowing paths across the frame, giving a sense of motion and energy. The trails are more concentrated in the upper left and lower right areas, with some fading towards the center.

Thank you!