



# Board of Directors

## Operations Committee

April 16, 2020

# Opening Comments



J.J. Eden

Executive Director

# February Statistics

## Triangle Expressway

- Transactions – 4.5 million
  - 5.3% year-over-year increase
- Revenue - \$5.1 million
  - 17.7% year-over-year increase

## Monroe Expressway

- Transactions – 2.7 million
- Revenue - \$1.8 million

## Transponders

- Over 18,500 distributed
- Nearly 808,000 distributed program-to-date as of February 29, 2020

# Complete 540 Construction Update

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Dennis Jernigan, P.E.  
Director of Highway Operations

# Complete 540 Design

## R-2828

- 8.6 miles
- 323 design submittals, including final roadway design plans, hydraulics design plans, MOT plans, structure design plans
- Construction plans roughly 85% complete

## R-2721B

- 4.9 miles
- 129 design submittals, including final roadway design plans, hydraulics design plans, structure design plans
- Construction plans roughly 70% complete

## R-2721A

- 4.3 miles
- 167 design submittals, including final roadway plans, hydraulics design plans, culvert survey reports
- Construction plans roughly 60% complete

# Complete 540 Right of Way

## R-2721A

- 211 parcels
- 187 parcels settled
- 24 parcels remaining

## R-2721B

- 221 parcels
- 186 parcels settled
- 35 parcels remaining

## R-2828

- 210 parcels
- 105 parcels settled
- 105 parcels remaining





















**First virtual neighborhood meeting**  
April 22nd



**COVID-19 Responses**



**Resident communications**

# Triangle Expressway Paint Contract Update

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Dennis Jernigan, P.E.  
Director of Highway Operations







# Program Development Update

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**Andy Lelewski, P.E.**

Director of Program Development

# I-485 Express Lanes Progress

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# Division 10 Construction Update

- First Johnston Road direct connector bridge started construction on January 6, 2020.
- Over 25 miles of portable concrete barrier have been installed.
- Approximately 6,000 LF of pipe have been constructed.



Johnston Road Direct  
Connect Bridge

# Division 10 Construction Update

- Over 5 miles of median widening is under construction.
- Soil stabilization has begun with stone and asphalt to follow.



Segment C soil  
stabilization

# Division 10 Construction Update

- John St. interchange has been cleared, and grading has begun.



# Toll Collection System

## Will provide:

- Design, test, installation, operations, and maintenance of the Roadside Toll Collection System (RTCS)
- Dynamic pricing system
- Operations and maintenance of some components of the Intelligent Transportation System (ITS)

# NCTA Activities

## Recent NCTA Accomplishments

- Review of numerous Toll Zone Infrastructure, Intelligent Transportation System, Toll Collection Signing/Pavement Marking submittals

## Upcoming NCTA Work

- Continue review of submittals
- Monitoring of Early Work along the corridor
- Development of RTCS Request for Proposals

## Schedule

- Spring 2020 – Release of RTCS Request for Proposals
- Fall 2022 – Commencement of tolling



# Morrisville Parkway Interchange Construction



# NC-540 Mainline Toll Zones



# Toll Zone Spanning Trusses



# NCTA Activities

## Recent NCTA Accomplishments

- Toll zones turned over to Roadside Toll System Manager on March 25
- Intelligent Transportation System turned over to Roadside Toll System Manager on April 3

## Upcoming NCTA Work

- Installation of spanning trusses
- Installation of roadside and overhead toll equipment

## Schedule

- Spring 2020 – Begin truss and toll system installation
- Summer 2020 – Commencement of tolling

# Wrong-Way Driver Detection Pilot

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# Wrong-way Driver Detection Pilot

**Goal: To field evaluate wrong way detection systems for the possible implementation on NCTA facilities**

## Current deployments:

- Tri-Ex – Davis Drive Off-Ramp (2018)
- Tri-Ex – S. Salem Street Off-Ramp (2018)
- Tri-Ex – Green Level West Mainline Toll Sites (2018)
- Tri-Ex – NC-54 Off-Ramp (2018)
- Monroe – Two Mainline Toll Sites (2019)

# MH Corbin / Bosch Deployment

## Recent demonstration of a wrong way detection system on the Triangle Expressway

### Demonstration:

- April 2, 2020 - At Green Level West interchange
- Coordination with NCTA Traffic Management Center, Wake County Sherriff's office, MH Corbin, NCTA staff & consultants
- Numerous wrong way driver test scenarios including varying speeds and ramp corrections.



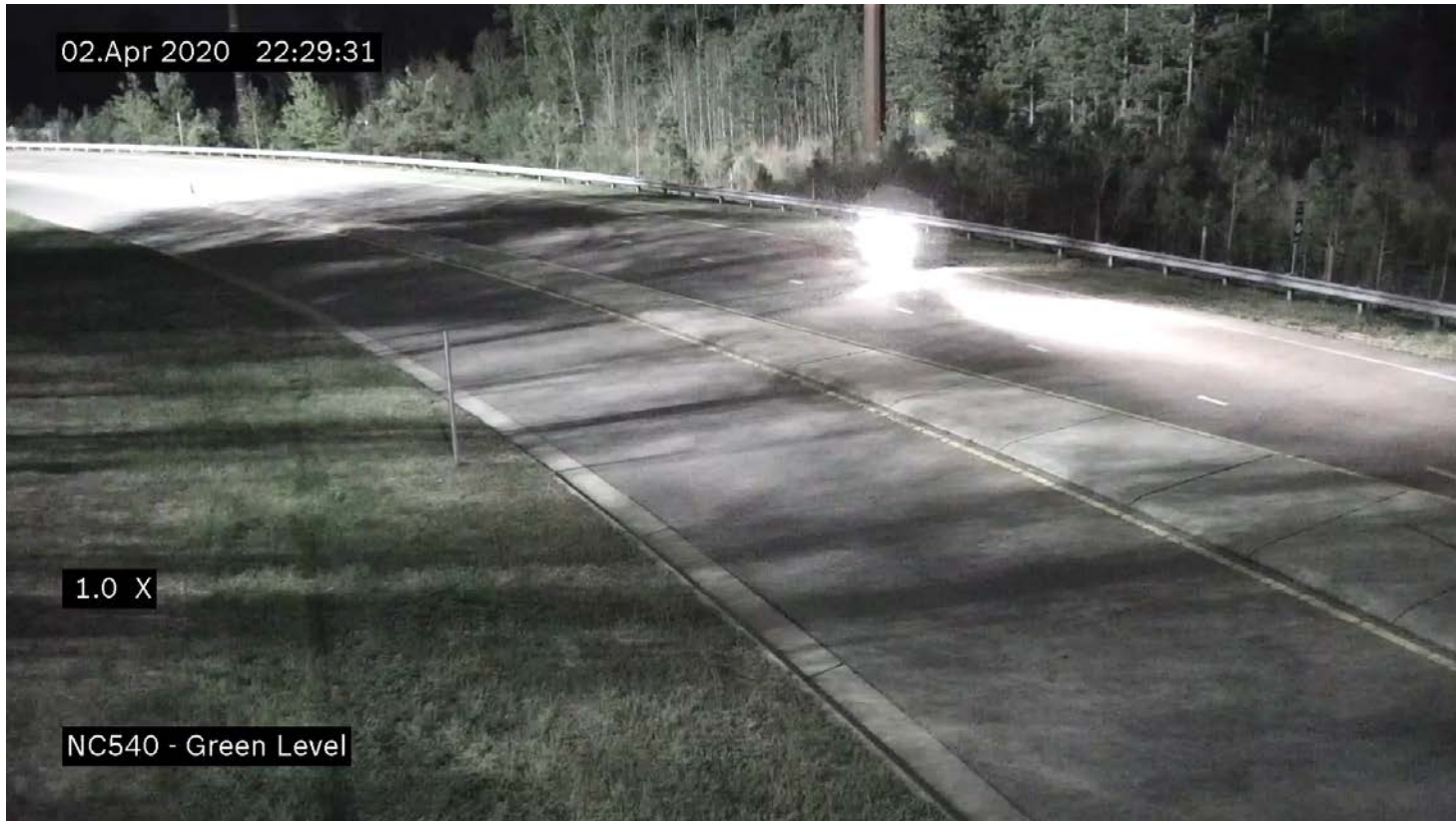
# MH Corbin / Bosch Deployment

**Pole mounted  
LIDAR detection and  
Bosch “tracking”  
camera to detect  
and provide alert  
and seamless event  
video to NCTA traffic  
management  
operators.**



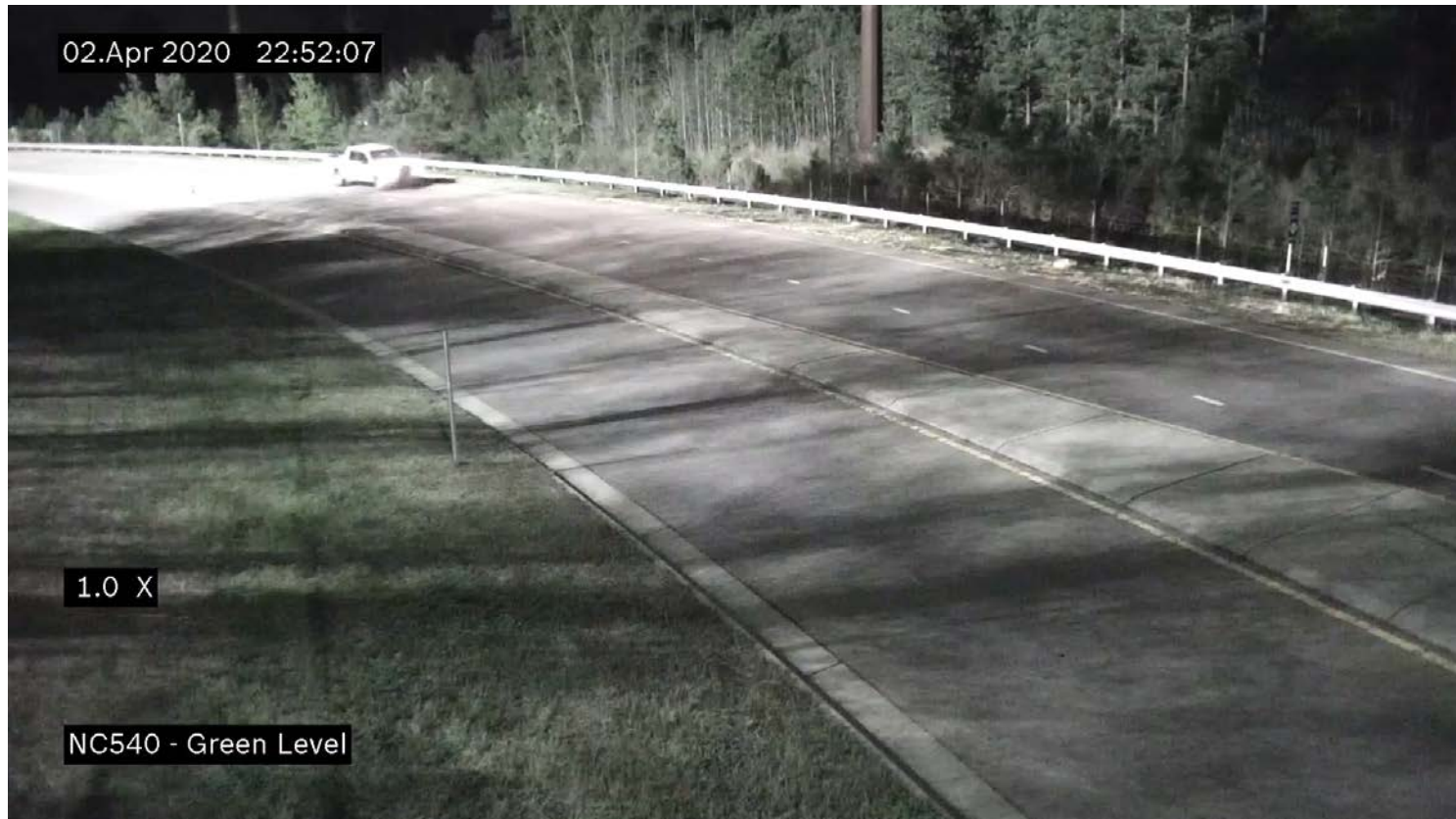


# MH Corbin / Bosch Deployment



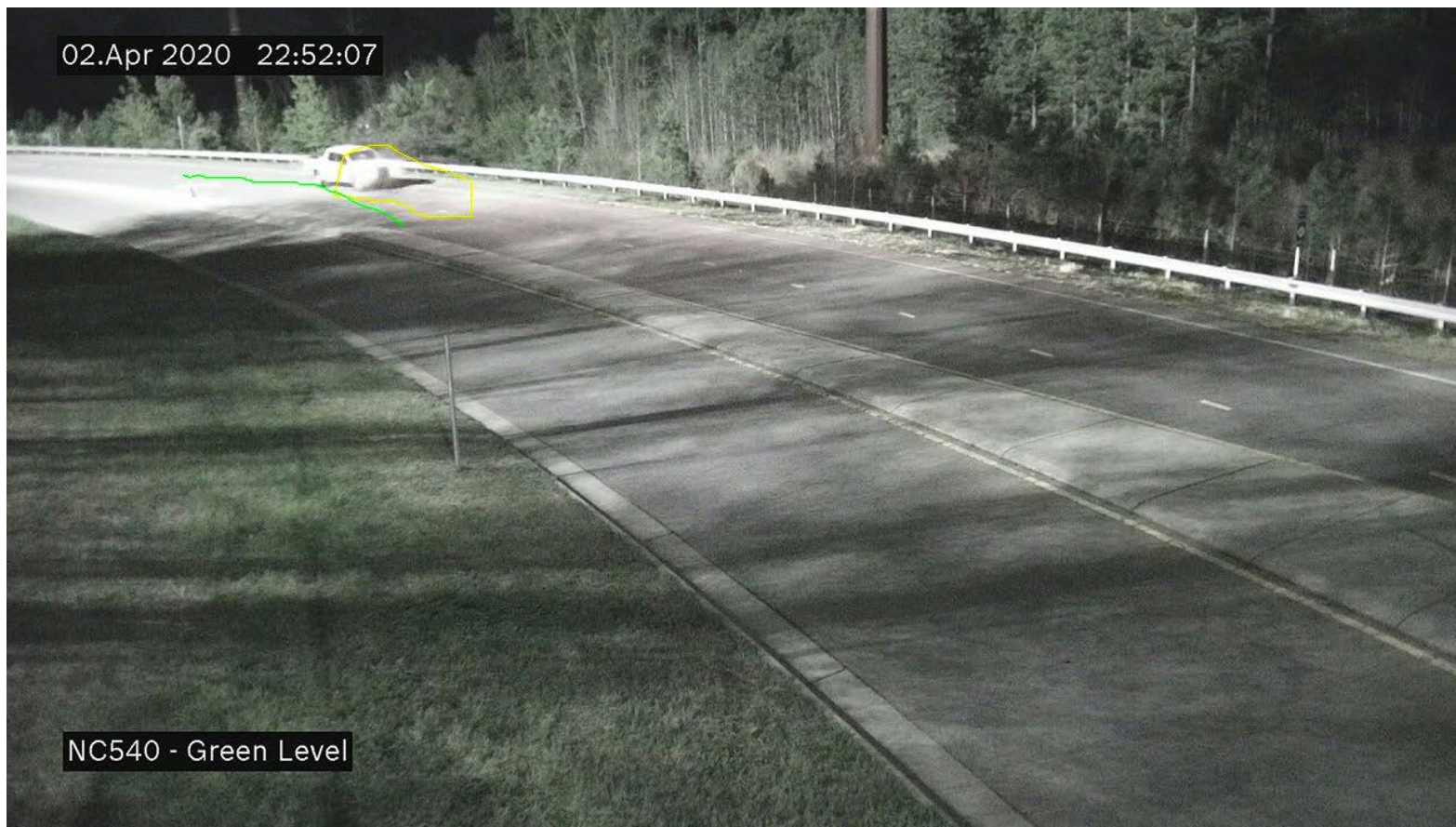
**Video 1: Motorcycle correcting by turning around**

# MH Corbin / Bosch Deployment



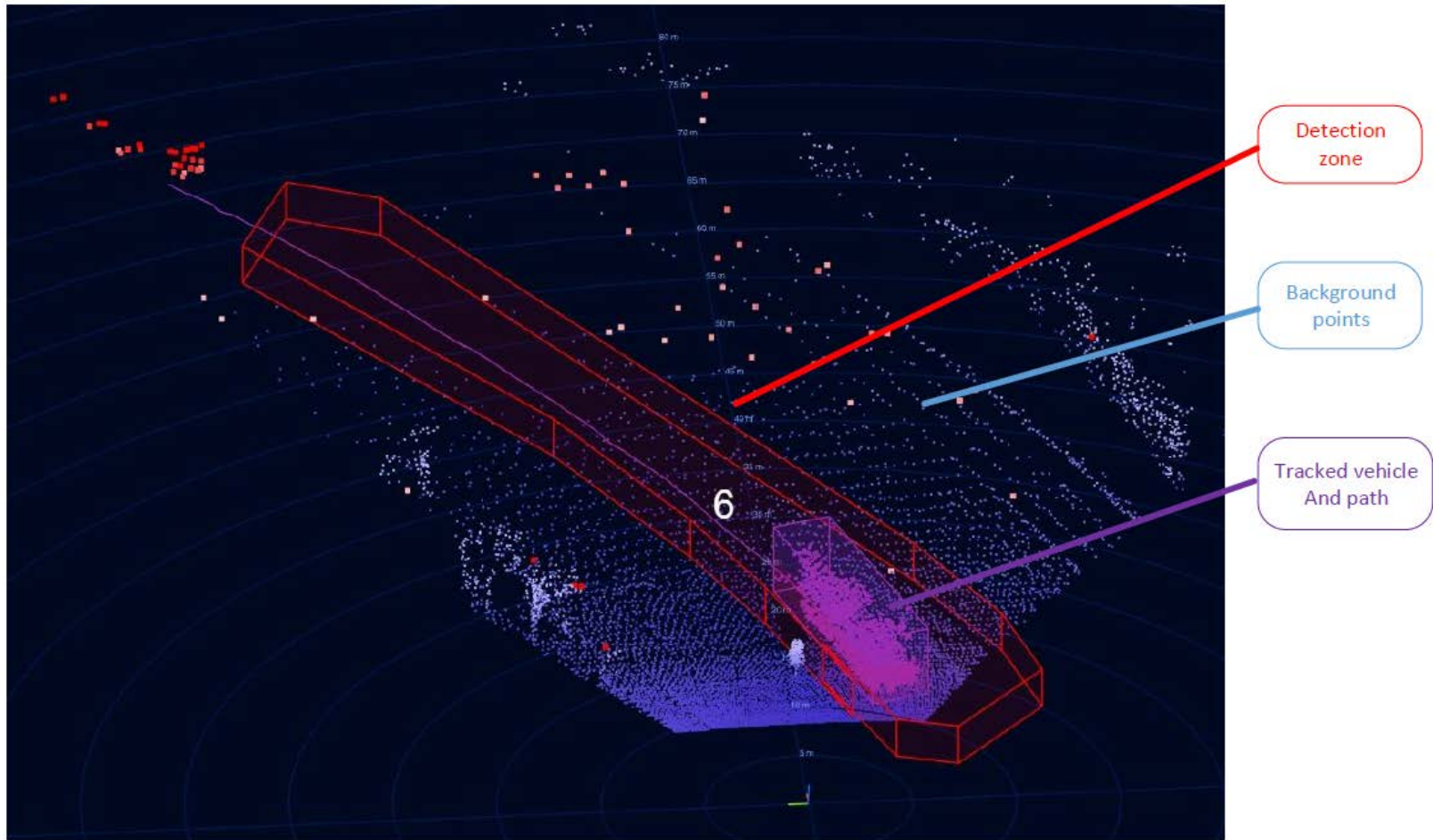
**Video 2: Pickup truck correcting by jumping the median**

# MH Corbin / Bosch Deployment



Vehicle tracking snapshot show LIDAR Detection of wrong-way travel for previous video

# MH Corbin / Bosch Deployment



Sample dashboard report showing definition of LIDAR detection zone

# Wrong-way Driver Detection Pilot

## Recent NCTA Accomplishments

- MH Corbin / Bosch demonstration

## Upcoming NCTA Work

- Finalize report concluding the Tri-Ex and Monroe Pilot Program
- Finalize report defining the rollout of the full Program on all facilities
- Submit I-85 FAST BUILD grant to include NCTA Tri-Ex & Complete 540 ramp sites

## Schedule

- Issue Pilot Program report – May 2020
- Submit BUILD Grant application – Mid-May 2020
- Issue full Program report – Summer 2020

# Toll Technology Update

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**Manish Chourey**

Chief Technology Officer

# Toll Collection System Updates

## Morrisville Interchange Schedule

- April 2020 – Begin truss and toll system installation
- June 2020 – Completion of toll system testing
- July 2020 – Commencement of tolling

## I-485 Toll Collection System

- Development of RTCS Request for Proposals
- Summer 2020 – Release of RTCS Request for Proposals
- Fall 2022 – Commencement of tolling

## Back Office System Test Schedule

- May 2020 – Continue Application Test
- Summer 2020 – Interface and Performance Test
- Fall 2020 – System cutover

# CSC Updates

## Pandemic Update

- Employees and Embedded Consultants working remotely
- Website trends indicate 25%-30% reduction in traffic
- New debt collections suspended effective 3/30/2020
- NCTA suspended processing fees and civil penalties (4/3/2020)

## CSC is still in Code Yellow

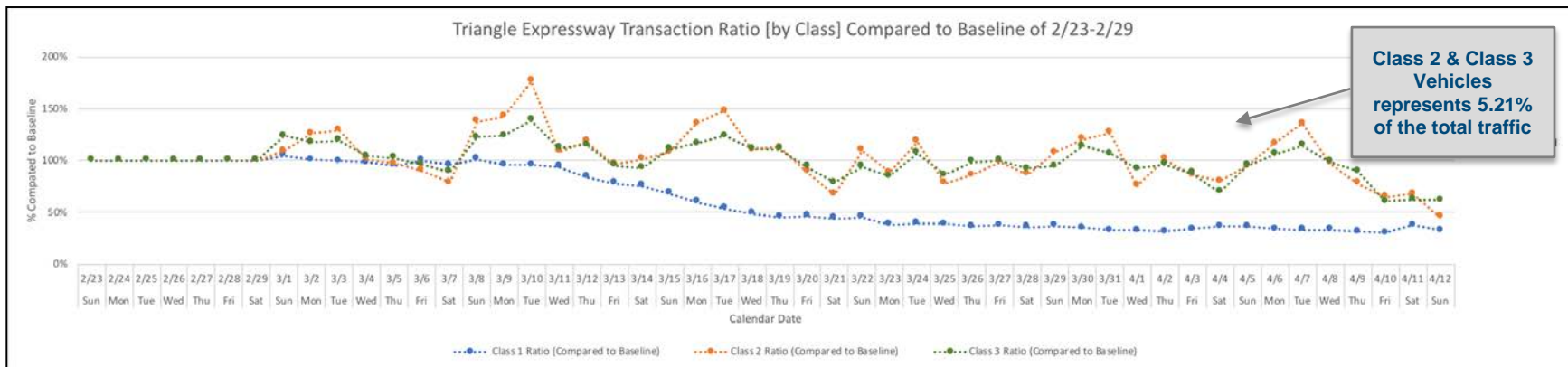
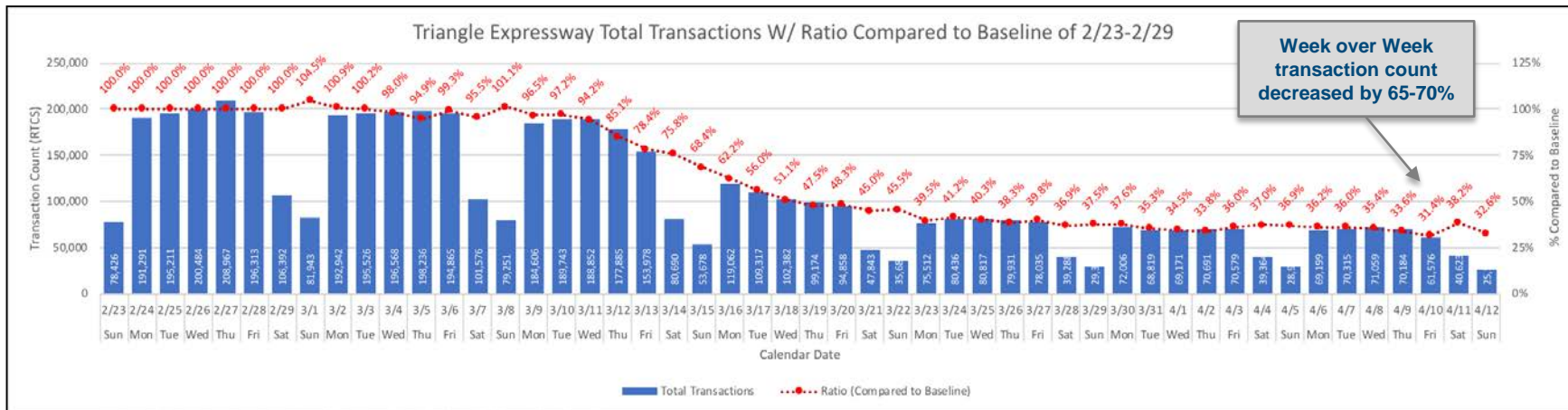
- Walk-in Centers are shutdown since 3/18
- CSR's have been spaced out to meet social distancing (6+ feet)
- Preparations underway to implement Remote work force
- Keeping current with Image review, customer disputes and complaints

## GC Services Transition

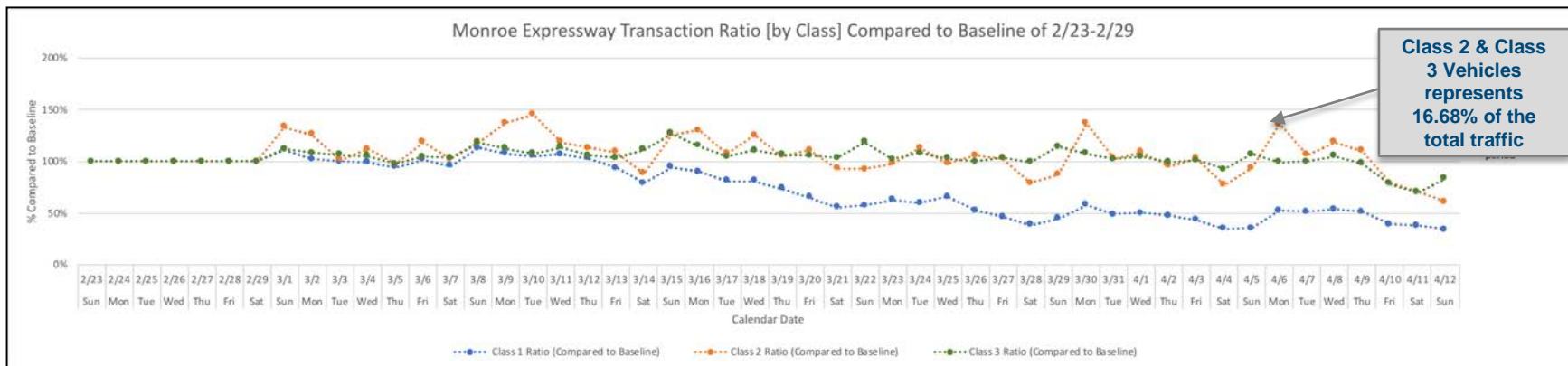
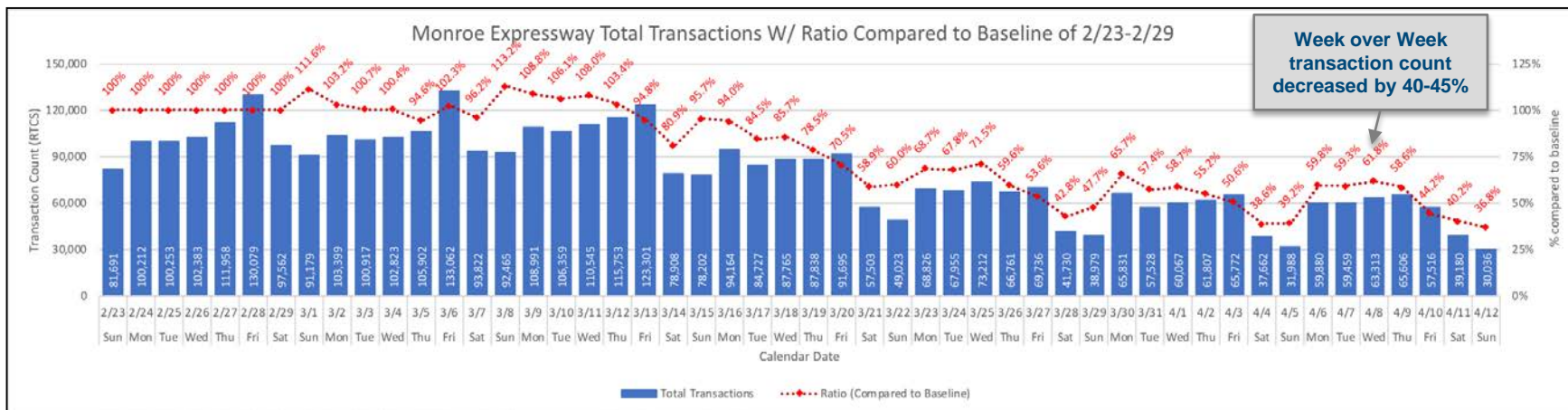
- Key Staff hired and participating in transition activities
- Daily / weekly coordination meetings
- Transition date is 30-May-2020



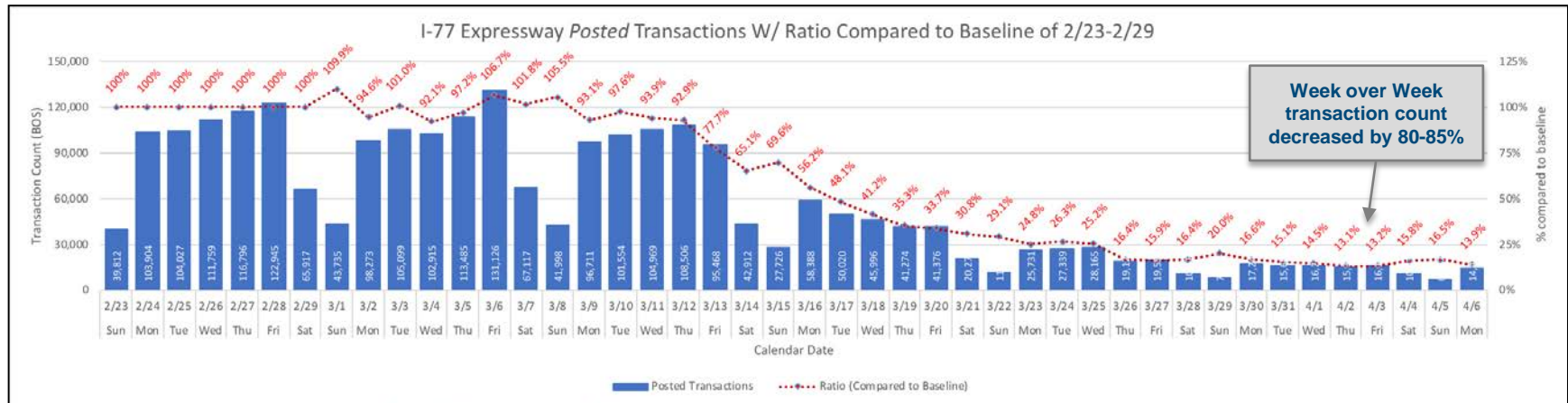
# Transaction Statistics



# Transaction Statistics

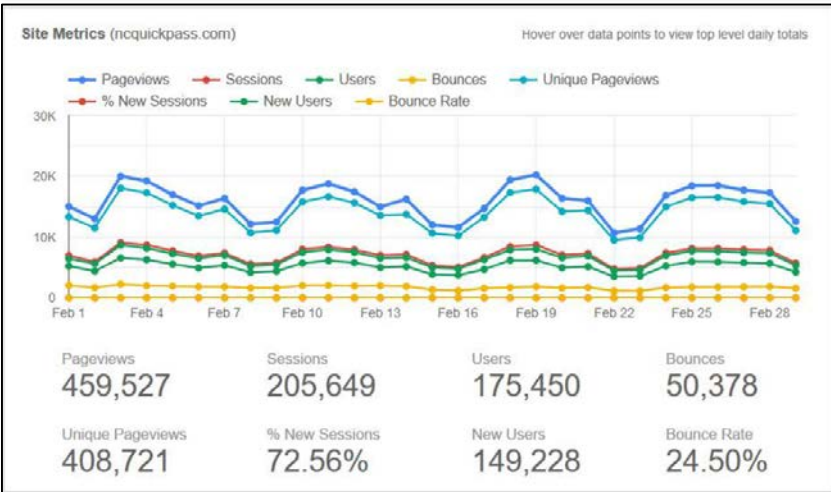


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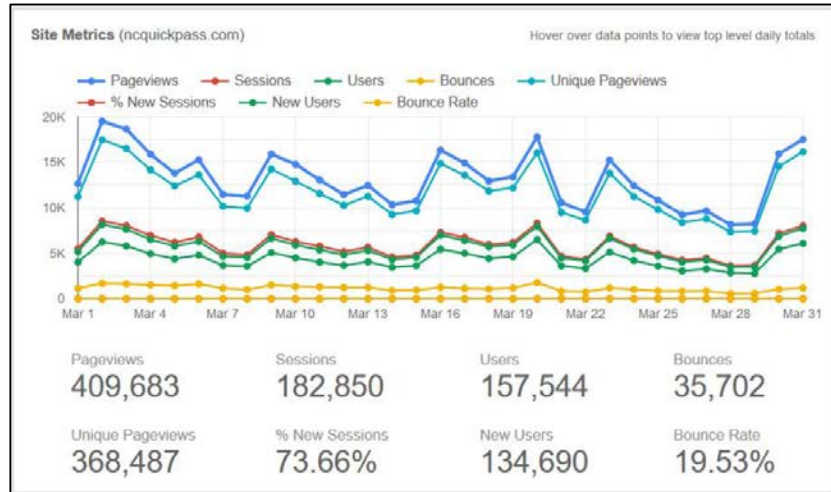


# NCTA Quick Pass Site Metrics

## Month of February 2020



## Month of March 2020



## Statistics on NC Quick Pass users by Region, Metro and City

### Users by Location (region / north carolina metro / north carolina city)

Use pagination to view more locations + click column headers to sort

Region	Users	Metro	Users	City	Users
North Carolina	118,816	Charlotte NC	52,887	Charlotte	27,782
South Carolina	12,314	Raleigh-Durham (Fayetteville) NC	50,231	Raleigh	13,029
New York	3,885	Greensboro-High Point-Winston Salem NC	8,407	Durham	6,496
Virginia	3,406	Wilmington NC	2,876	Cary	4,507
Georgia	2,680	Greenville-New Bern-Washington NC	1,912	Fayetteville	3,188

# Thank You!

