PROBE DATA ANALYTICS SUITE

u s e r g r o u p

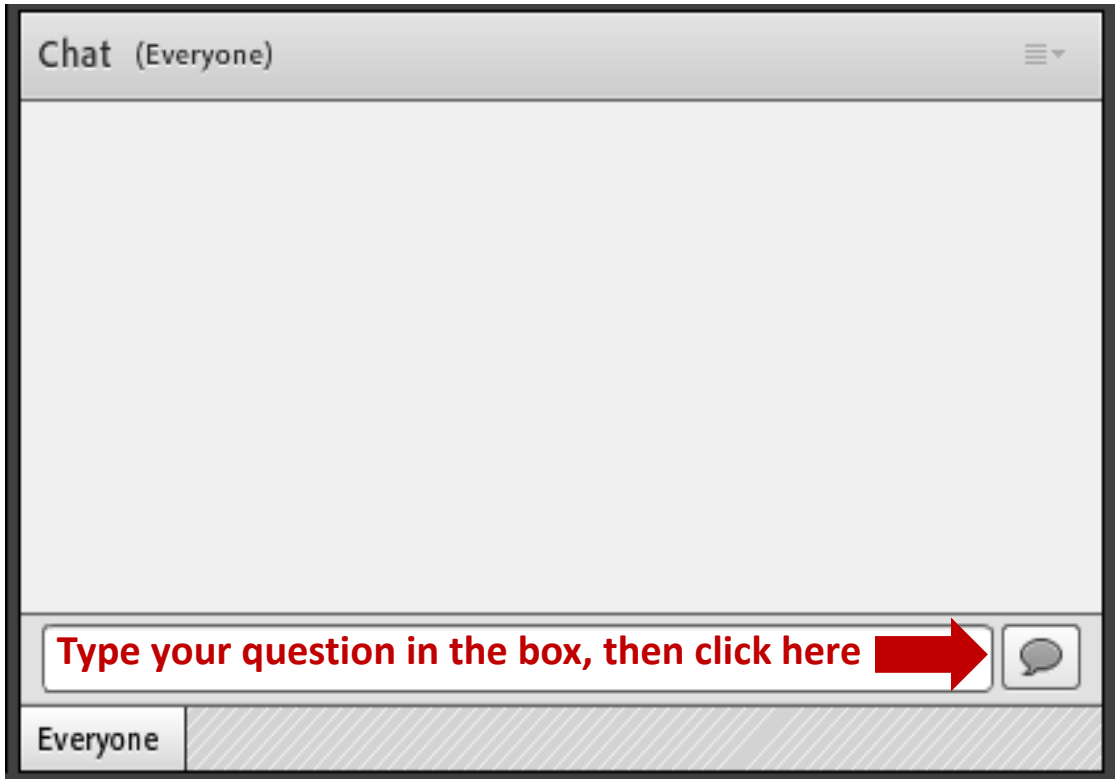
Web Meeting – July 25, 2019

Webinar & Audio Information

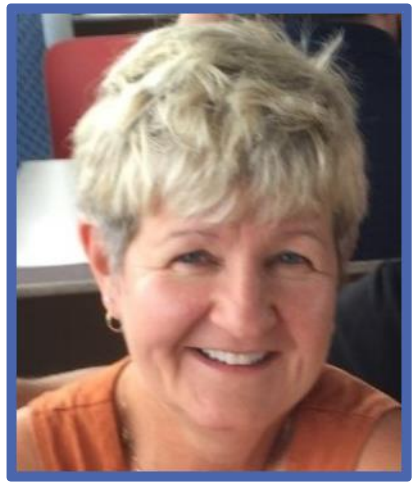
- The call-in phone number is: 1-xxx-xxx-xxxx & enter xxxxxxx# at the prompt
- Participants will be in "Listen Only" mode throughout the webinar
- Please press *0 to speak to an operator for questions regarding audio
- Please call Justin Ferri at xxx-xxx-xxxx for difficulties with the web or audio application
- This webinar will be recorded
- Presentations will be posted to the I-95 Corridor Coalition website. Participants will receive a link to the presentations after they are posted.

Asking Questions

- Please pose your questions using the **chat box**
- Questions will be monitored then answered by the speakers either at the end of the presentation or at the end of the webinar



Welcome & Coalition Update



Denise Markow, PE, I-95 Corridor Coalition

TSMO Director

Thank You!

Kelly Wells, PE, North Carolina Department of Transportation

Welcome to our new co-chair!

Matthew Glasser, PE, Georgia Department of Transportation

Regional Traffic Operation Program Manager

Coalition Update – Recent & Upcoming Events

RECENT

- ✓ **TDADS (Transportation Disruption and Disaster Statistics) Steering Committee web meeting** – May 16, 2019
- ✓ **Mobility as a Service Webinar** – July 11, 2019

UPCOMING

- ✓ **Mid-Atlantic HOGS Resiliency Exchange** – August 14, 2019
- ✓ **TSMO Arterial Management Webinar –** August 22, 2019
- ✓ **VTM Steering Committee Webinar** – August 27, 2019

- ✓ **CAV Webinar: Regulating the Unknown – Balancing Safety and Promoting Innovation** – September 26, 2019

Introductions & Agenda

Kelly Wells, North Carolina Department of Transportation

Agenda

Welcome & Coalition and User Group Update	Denise Markow, I-95 Corridor Coalition
Introductions & Agenda	Kelly Wells, North Carolina DOT
Prioritizing Project Selections for Operations within Michigan	Jason Firman, Michigan DOT
Using RITIS to support project prioritization in Georgia	Shahram Malek, ARCADIS for Georgia DOT
RITIS and PDA Suite Features – What's New & What's Coming	Michael Pack, UMD CATT Laboratory
Agency Input Session – questions, comments…..	All
Wrap Up	Matt Glasser, Georgia DOT & User Group Co-chair

Introductions

Jason Firman
Michigan DOT
Congestion and Reliability
Section Manager

Shahram Malek, PhD, PE
ARCADIS
Vice President
(presenting for Georgia DOT)

Michael Pack
UMD CATT Lab
Director

Participants

Agency			
AECOM	DVRPC	Maryland DOT – SHA	Pennoni
AEM	Eland Engineering	Maryland Emergency Management Agency	Pennsylvania DOT
Arcadis	FHWA	Maryland Transportation Authority	Public Works
Baltimore Metropolitan Council	Florida DOT	Massachusetts DOT	Rhode Island Division of Statewide Planning
Capital Area MPO (NC)	Gannett Fleming	Michigan DOT	Rhode Island DOT
CATT Lab	Georgia DOT	Missouri DOT	Rhode Island Division of Statewide Planning
City of Charlotte, NC	HNTB	MWCOG	SJTPO
Connecticut DOT	INRIX	Naugatuck Valley Council of Governments	South Carolina DOT
Core MPO	Iteris	New Jersey DOT	Southern Georgia Regional Commission
Dad & Associates LLC	Kimley-Horn	New York City DOT	Southern New Hampshire Planning Commission
DCHC MPO	Korea Transport Institute	NJIT	VHB
Delaware DOT	Manatee County	NJTPA	Virginia DOT
District DOT	Maricopa Association of Governments	North Carolina DOT	Wolverton, Inc.
Dover/Kent County MPO	Marlin Engineering	Nrel	I-95 Corridor Coalition

In the spotlight…

Prioritizing Project Selections for Operations

Jason Firman

Congestion and Reliability Section Manager
Michigan Department of Transportation

Prioritizing Project Selections for Operations

Transportation Systems Management and Operations -TSMO

- TSMO led the way
- Performed a self assessment on the Capability Maturity Model for TSMO
- The **6 dimensions** are:
    1. Business Processes
    2. Systems and Technology
    3. Performance Measurement
    4. Culture
    5. Organization and Staffing
    6. Collaboration

Transportation Systems Management and Operations -TSMO

- Minor reorganization – TSMO Division
  - Signals under ITS
  - Traffic and Safety under TSMO
  - Created/revised templates all under TSMO
    - Operations Set-Aside
    - ITS
    - Safety
    - Traffic Signals
    - Non-Freeway Reliability and Operations
    - Freeway Operations

TSMO

- Each Template is a program with an annual allotted amount to use on their own goals and strategies.

- **Non-Freeway Reliability and Operations**
  - This program will focus on improving travel reliability and safe flow of traffic on the existing permanent, through travel lanes along non-freeway state trunkline corridors.

- **Freeway Operations**
  - This program will focus on improving travel reliability and safe flow of traffic on Tier I (Interstate) and Tier II (Non-Interstate Freeway) state trunkline corridors.

Funding

- Michigan approved funding increase in 2015
  - Phased in approved with full funding by 2021
  - Federal Surface Transportation Program
  - National Highway Performance Program
  - Highway Safety Improvement Program (HSIP)
  - CMAQ
  - State funds

- Received $50 million annually (FY 2024)
  - $10 million Non-Freeway Reliability and Operations
  - $40 million Freeway Operations

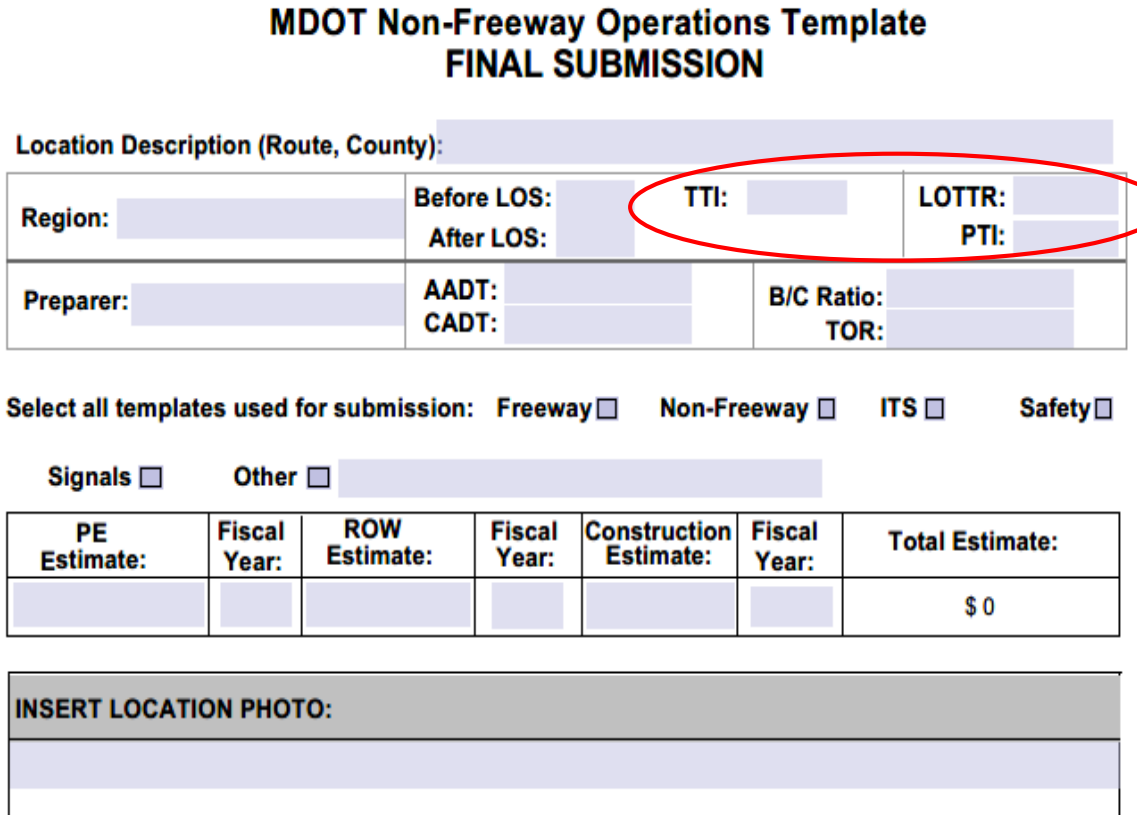
Incorporating Reliability

- FHWA requiring Reliability Targets
- Needed mechanism to address them

Measure	Baseline from Jan 2017 to May 2018 (Source: NPMRDS – RITIS)	Recommended 2-Year Target(s) CYE 12/31/2019	Recommended 4-Year Target(s) CYE 12/31/2021
Interstate Travel Time Reliability	2017 - 85.2% 2018 – 85.8%	75%	75%
Non-Interstate NHS Travel Time Reliability	2017 - 86.1% 2018 – 85.8%	--	70%
Freight Reliability	2017 - 1.38 2018 – 1.49	1.75	1.75

Non-Freeway Reliability and Operations

- FY 22 through FY 25
- $33 million available
- Almost 60 projects were submitted
- Went through a prescreening process first



MDOT Non-Freeway Operations Template
FINAL SUBMISSION

Location Description (Route, County):

Region:	Before LOS: / After LOS:	TTI:	LOTTR: / PTI:
Preparer:	AADT: / CADT:		B/C Ratio: / TOR:

Select all templates used for submission: Freeway ☐ Non-Freeway ☐ ITS ☐ Safety ☐

Signals ☐ Other ☐

PE Estimate:	Fiscal Year:	ROW Estimate:	Fiscal Year:	Construction Estimate:	Fiscal Year:	Total Estimate:
						$ 0

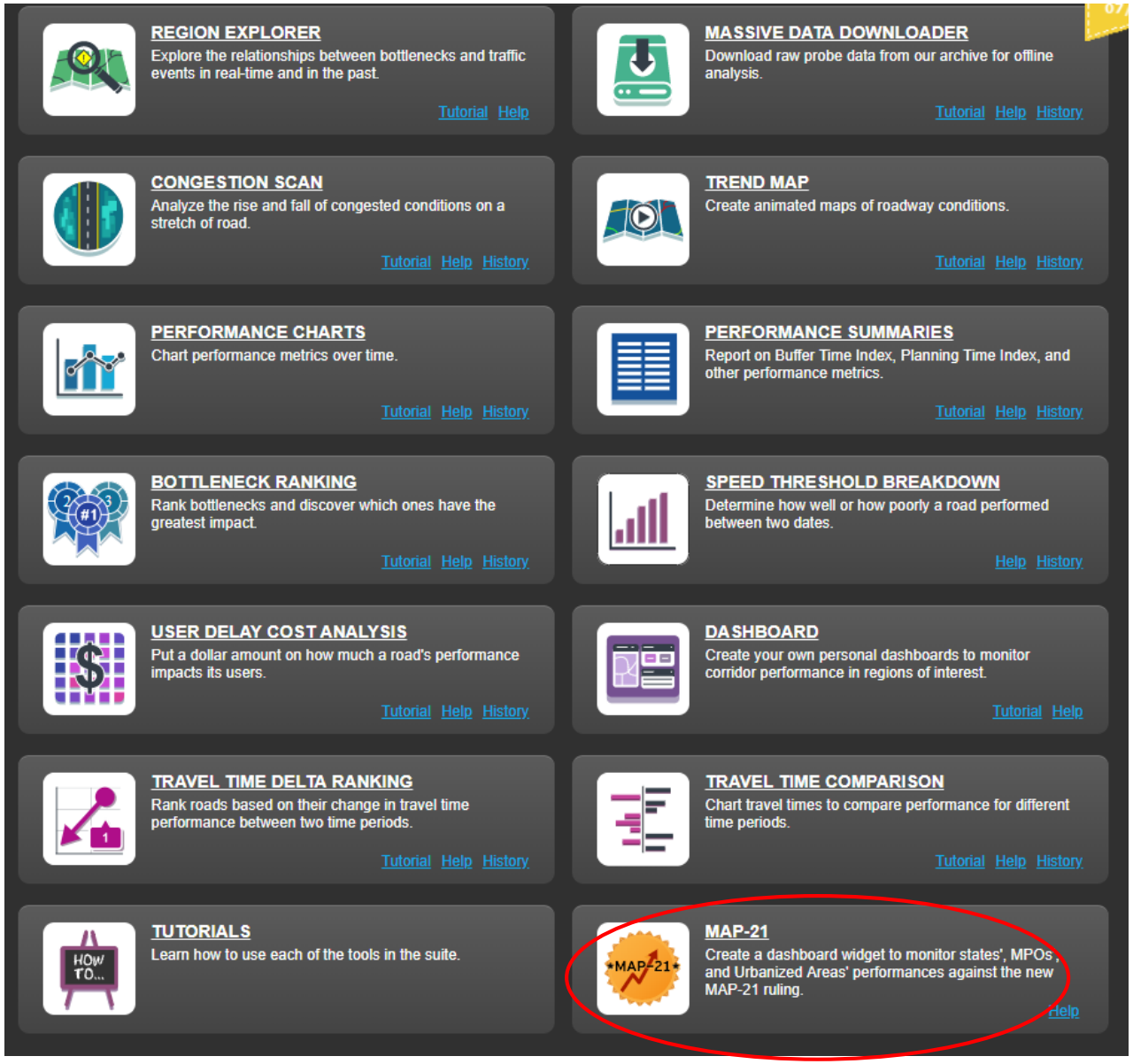
INSERT LOCATION PHOTO:

Non-Freeway Reliability and Operations

- Summary of project
- Detail of the benefits over 20 years
- Severity of existing congestion, safety and reliability
- Describe the improvements to operations, safety and/or reliability
- Included with another road/bridge project
- Describe all alternatives considered

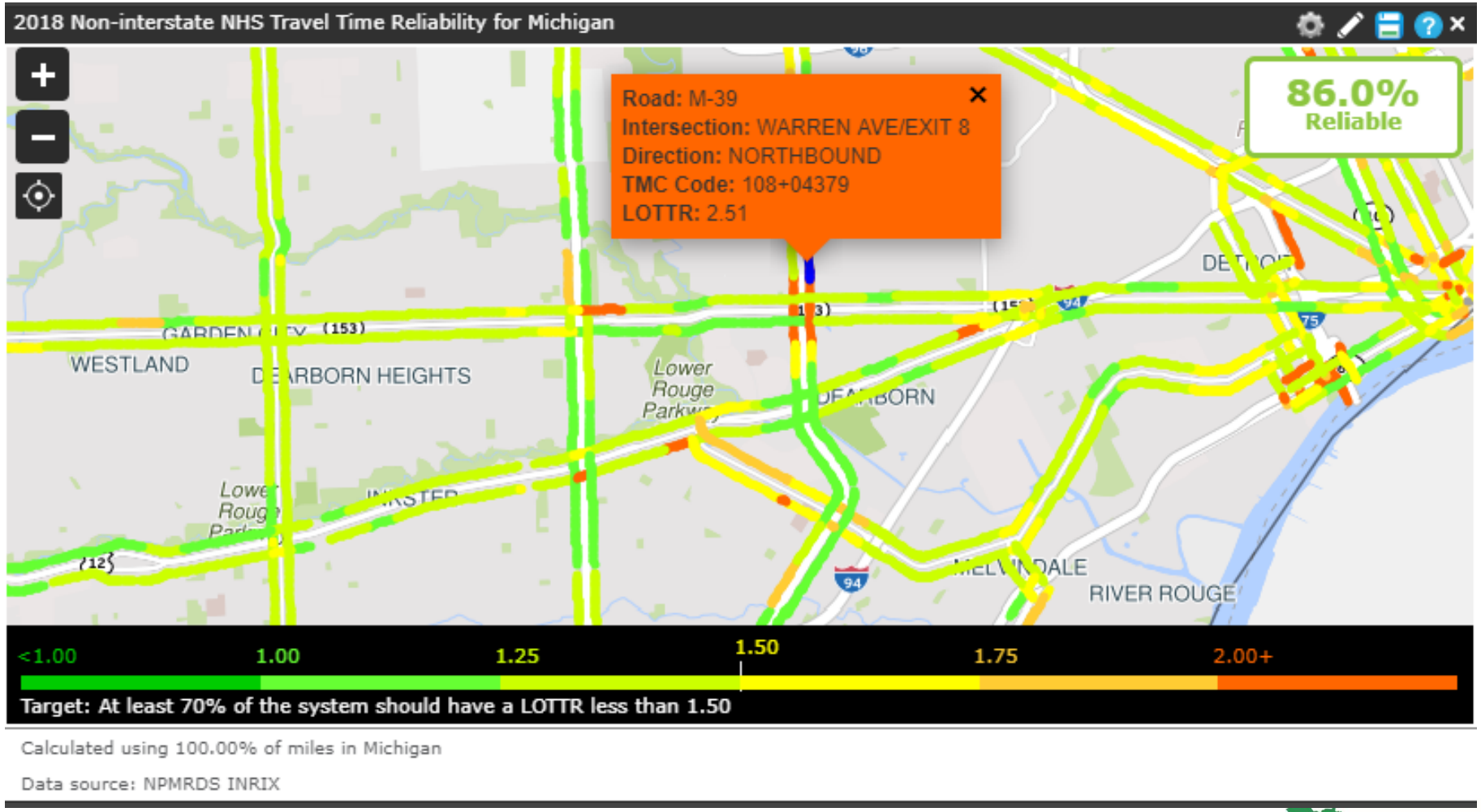
Non-Freeway Scoring

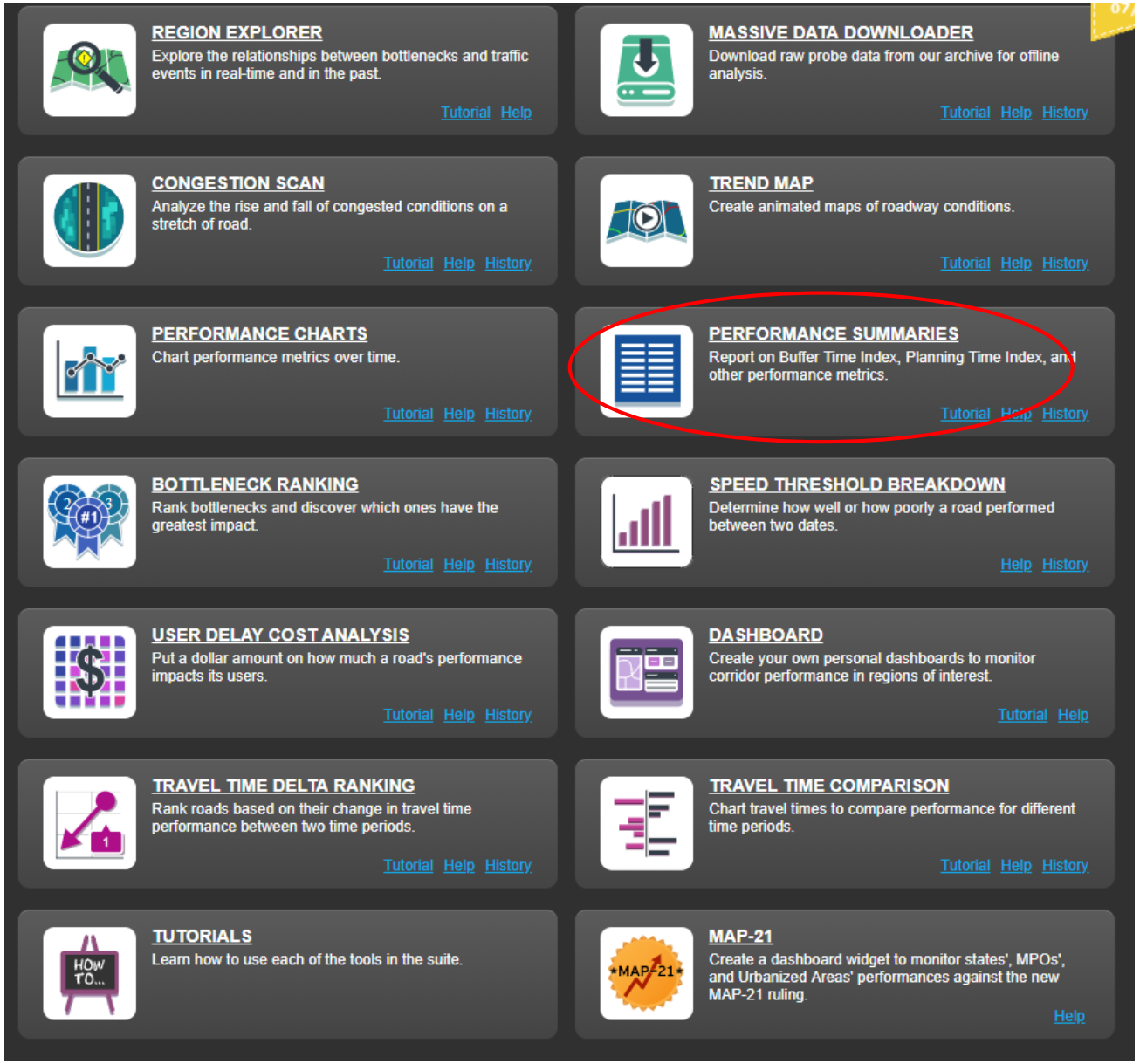
- (30 points) Benefit/Cost Ratio
- (25 points) Overall Benefit
- (20 points) Duration since last awarded project in Region
- (10 points) Safety Benefit based on Time of Return
- (5 points) PTI > 2 or LOTTR > 1.5
- (5 points) Level of Service: E or F, or TTI > 1.5
- (5 points) Combining with an existing Project



LOTTR (Level of Travel Time Reliability)

LOTTR (Level of Travel Time Reliability)





Planning & Travel Time Index

Planning & Travel Time Index

- Latest full year of data
- Typically AM and PM weekday peaks
- Select the highest values per direction (only one time period and direction need to be above the threshold)
- Over time we will be evaluating the thresholds

Planning & Travel Time Index

M-37, 92nd St to Cherry Valley				
Planning Time Index				
	North		South	
	6-10 AM	3-7 PM	6-10 AM	3-7 PM
Monday	2.96	1.72	1.46	1.98
Tuesday	3.54	1.72	1.54	1.86
Wednesday	2.74	1.77	1.45	2.06
Thursday	2.7	1.83	1.4	1.95
Friday	2.26	1.81	1.51	1.82
Travel Time Index				
	North		South	
	6-10 AM	3-7 PM	6-10 AM	3-7 PM
Monday	1.36	1.15	1.1	1.31
Tuesday	1.47	1.18	1.15	1.31
Wednesday	1.33	1.17	1.1	1.32
Thursday	1.33	1.17	1.09	1.33
Friday	1.25	1.2	1.11	1.3

Eligible Work Types

- Center left turn lane
- Left or Right turn lanes
- Indirect left-turn or J-Turns
- Boulevards
- Roundabout
- Lane extensions
- Other geometric improvements
- Signal improvements (must add an operational element and not just modernization)
- ITS Device – Need approval from ITS as well
- Only limited by imagination but need good justification

Freeway Scoring

- (30 points) Benefit/Cost Ratio
- (30 points) Overall Benefit
- (15 points) Safety Benefit based on Time of Return
- (10 points) Combining with an existing Project
- (7.5 points) PTI > 2 or LOTTR > 1.5
- (7.5 points) TTI > 1.5

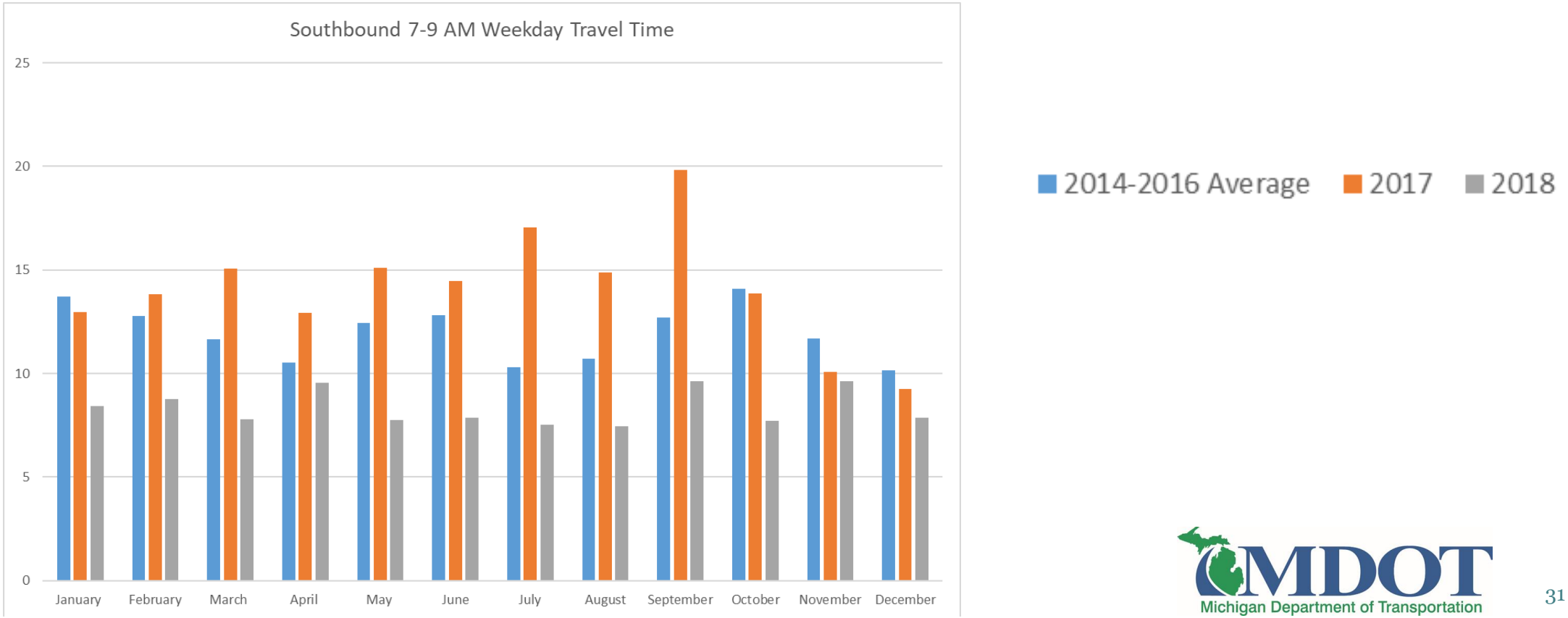
Eligible Work Types

- Ramp improvements
- Interchange improvement (DDI, SPUI, loop ramps, fly overs, etc.)
- Ramp metering
- Add Auxiliary/weave/merge lanes
- Crash investigation sites
- Reversable lanes
- Hard Shoulder Running
- Active Traffic Management Strategies – Need approval from ITS as well

Before and After Analysis

Before and After Analysis

- All projects will be evaluated on performance
- US-23 Flex route showing good results



MDOT Michigan Department of Transportation

Questions?

MDOT
Michigan Department of Transportation

Jason Firman
FirmanJ@Michigan.gov

In the spotlight…

Using RITIS to Support Project Prioritization in Georgia

Shahram Malek, PhD, PE

Vice President
ARCADIS (presenting for Georgia Department of Transportation)

GDOT
Georgia Department of Transportation

RITIS PERFORMANCE MEASURES

Shahram Malek
Catherine Johnson
Yukti Arora

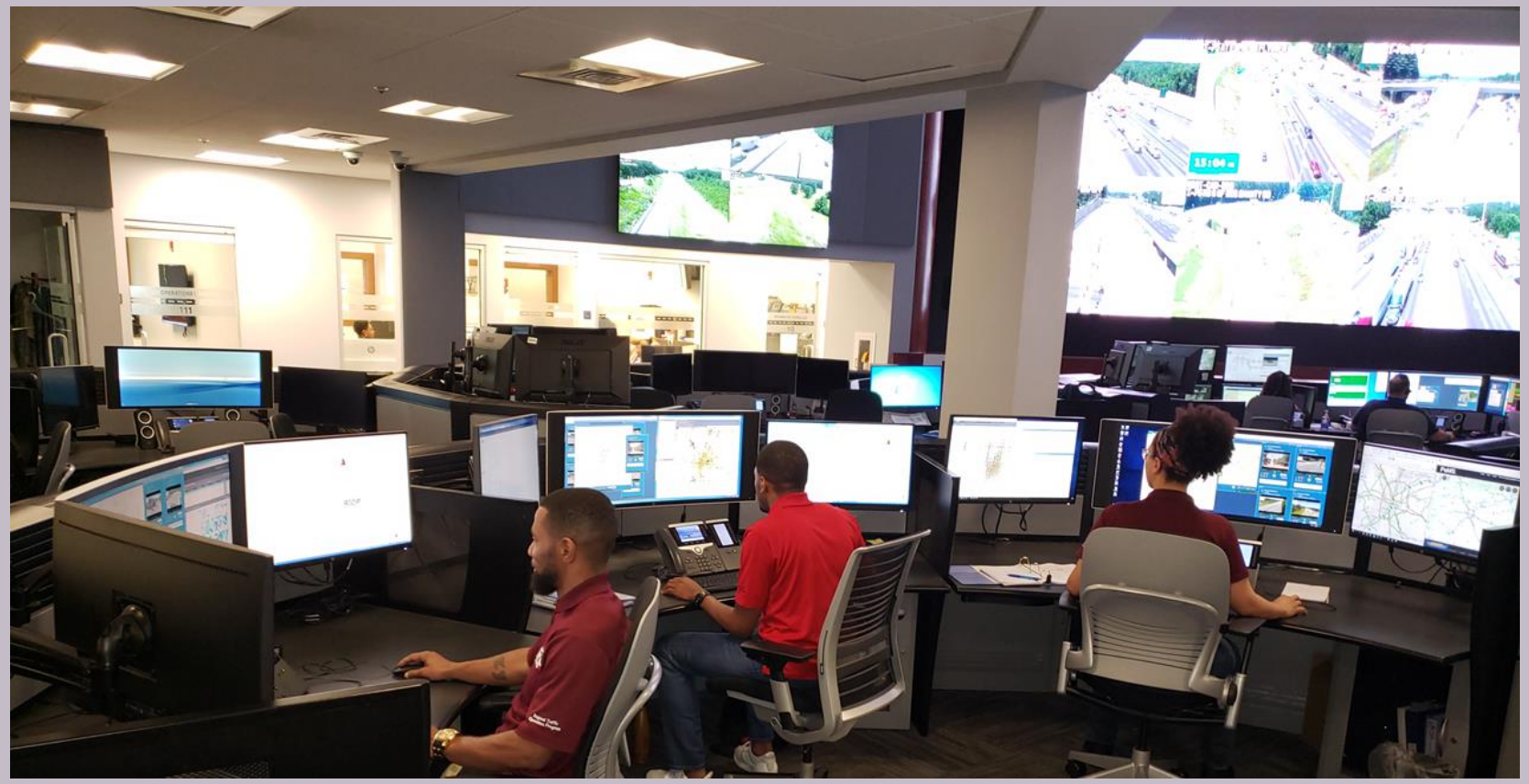
RTOP
Regional Traffic Operations Program

AGENDA

- Purpose
- Traffic Operations Monitoring
- Analytics
  - Quarterly Bottlenecks
  - Performance Assessments
  - Post-Event Analysis

PURPOSE

Provide extensive analysis of traffic operations and performance reports on arterials under the GDOT Regional Traffic Operations Program (RTOP).



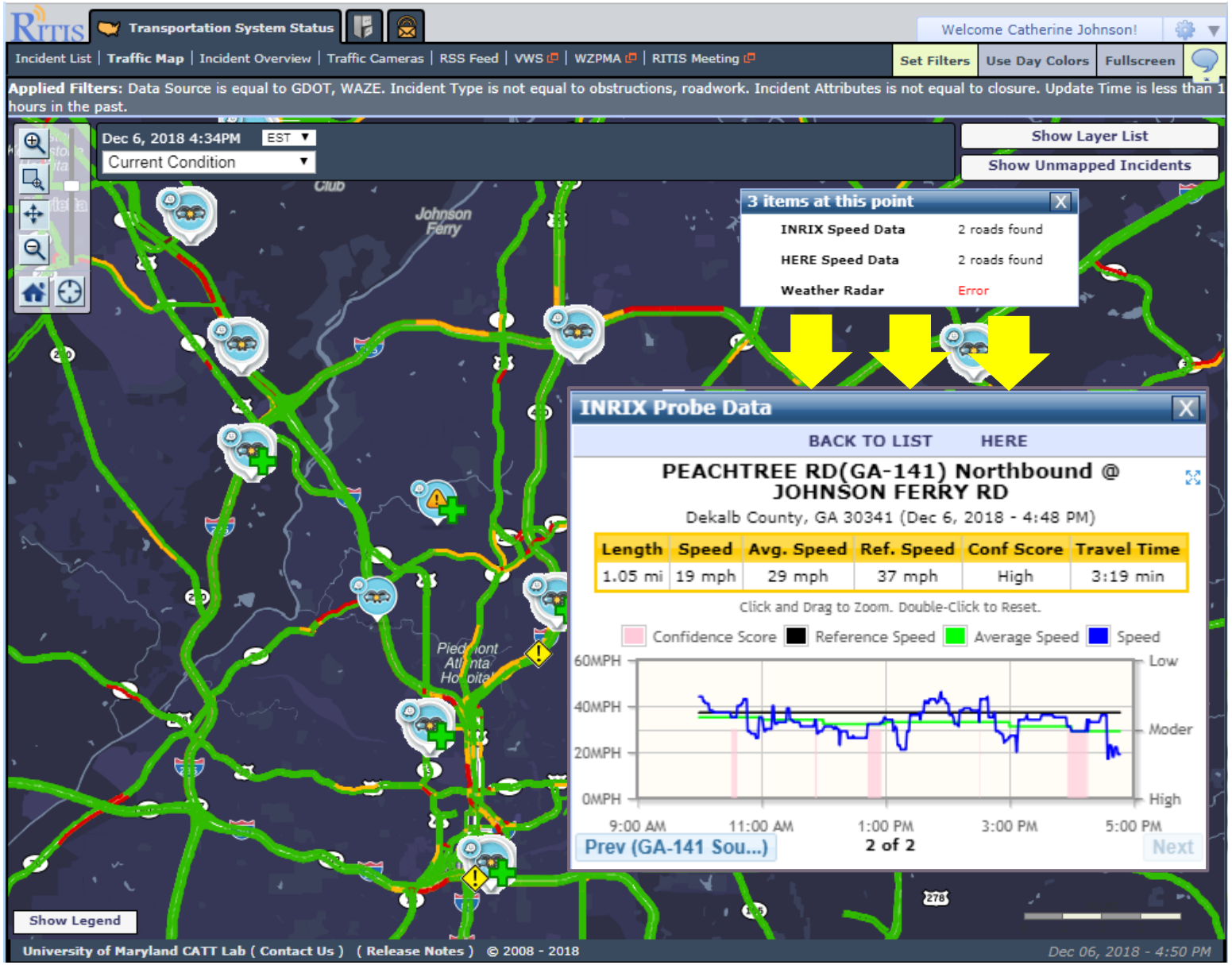
TRAFFIC OPERATIONS MONITORING

RTOP Traffic Signal Operations Specialists (TSOS) monitor Metro Atlanta for incidents and malfunctions

LIVE TRAFFIC MAP

How TSOS uses RITIS to monitor:

- Locating Incidents
- Pinpointing Congestion
- Investigating speed drops
- Viewing nearby CCTVS
- View weather on doppler radar



ANALYTICS

Corridor Impact Studies
Routine Reporting
Advanced Analysis

CORRIDOR IMPACT STUDY

Reports provided to give an overview of major interstate accidents that affect RTOP routes.

CORRIDOR IMPACT STUDY

Corridor Impact Study

RTOP Regional Traffic Operations Program — GDOT Georgia Department of Transportation

Executive Summary

On 06/14, a gas main break on SR 13 at Briarwood caused a user-cost delay of $624 from 12:47 PM - 3:13 PM.

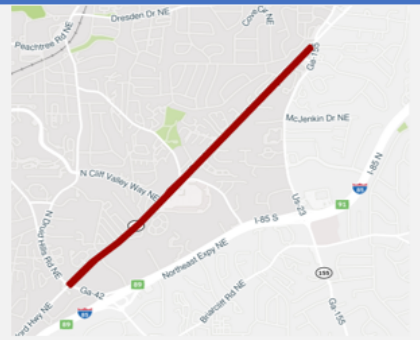
Incident Information

Revision Date 05/31/19

Incident Start Date:	6/14/2019	**Incident Start Time:**	12:47 PM
Incident End Date:	6/14/2019	**Incident End Time:**	3:13 PM
Incident Source:	511 Operator	**Road Type:**	State Route
Incident Type:	Accident	**Road Name:**	SR 13 N - Buford Hwy
Impacted RTOP Corridor(s)		**Direction:**	All
Impacted Location #1:	SR 13 N - Buford Hwy	**Relation:**	Past
Impacted Location #2:	N/A	**Cross Street:**	Briarwood

Incident Visual

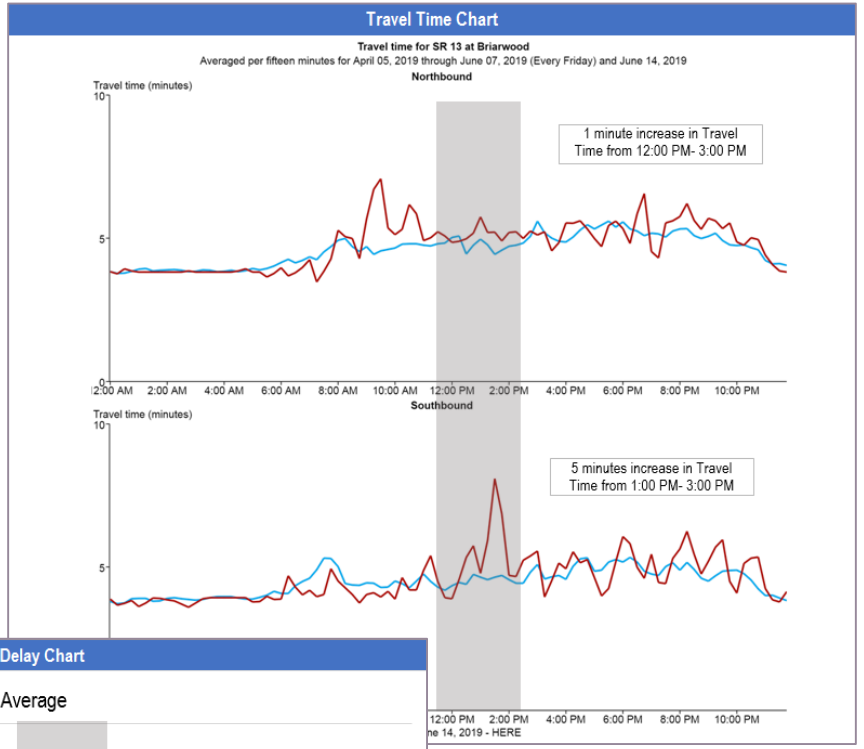
RITIS Route

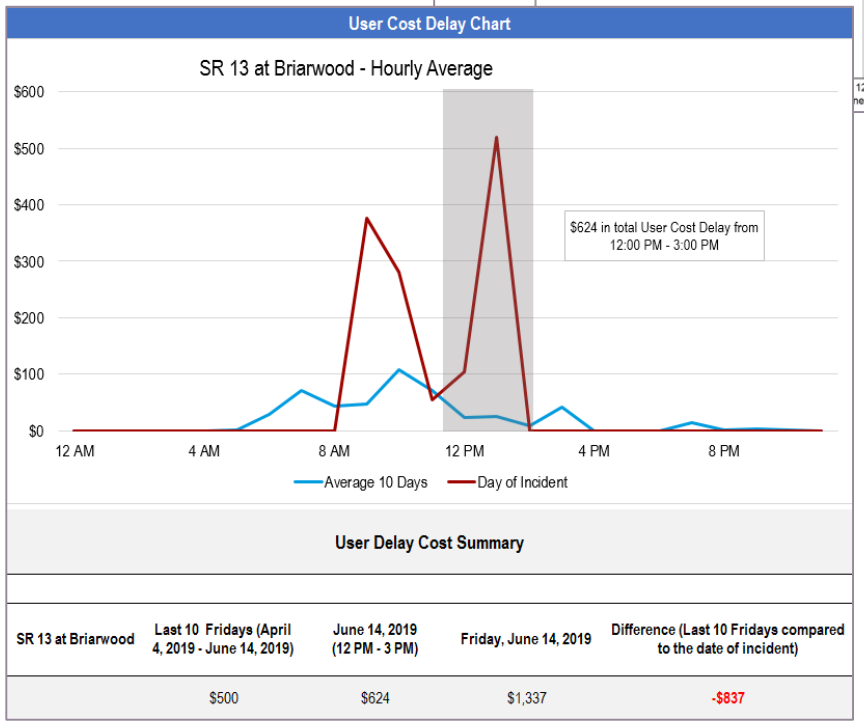


Incident Timeline/Comments

Time	Comments
4/16/19 12:47 PM	Gas main break reported.
4/16/19 12:52 PM	GA Power reported on scene.
4/16/19 12:54 PM	RTOP notified.
4/16/19 1:13 PM	TEAMS task created reported all lanes blocked on SR 13. Traffic being rerouted in the opposite direction.
4/16/19 2:30 PM	RTOP reported two southbound lanes closed, all northbound lanes open. No timing changes implemented.
4/16/19 2:59 PM	TEAMS task closed.
4/16/19 3:13 PM	Incident cleared.

RITIS Performance Charts and User Delay Cost utilized





User Delay Cost Summary

SR 13 at Briarwood	Last 10 Fridays (April 4, 2019 - June 14, 2019)	June 14, 2019 (12 PM - 3 PM)	Friday, June 14, 2019	Difference (Last 10 Fridays compared to the date of incident)
	$500	$624	$1,337	-$837

Gray highlights show time of incident

CORRIDOR IMPACT STUDY

Corridor Impact Study

Executive Summary

On 6/26/19, an accident at I-20 and Moreland Ave caused a user-cost delay of $1,030.54 from 9:00 AM to 11:00 AM.

Incident Information

Revision Date 05/31/19

Incident Start Date:	6/26/2019	Incident Start Time:	9:09 AM
Incident End Date:	6/26/2019	Incident End Time:	10:19 AM
Incident Source:	511 Operator	Road Type:	Interstate
Incident Type:	Accident	Road Name:	I-20

Impacted RTOP Corridor(s)

		Direction:	West
Impacted Location #1:	SR 154/10 – Memorial Dr.	Relation:	at
Impacted Location #2:	N/A	Cross Street:	Moreland Ave

Incident Visual 1

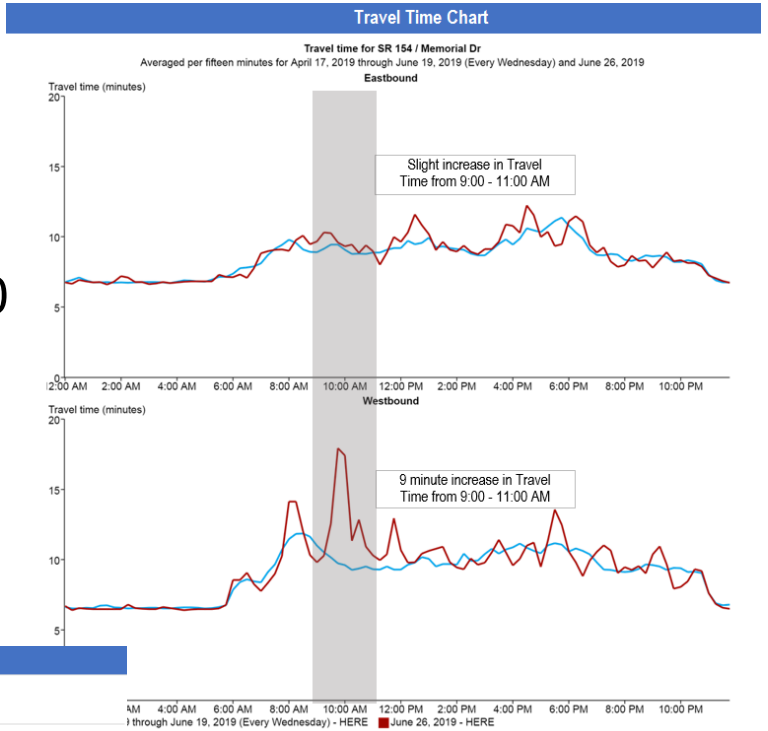
Incident Visual 2

Incident Timeline/Comments

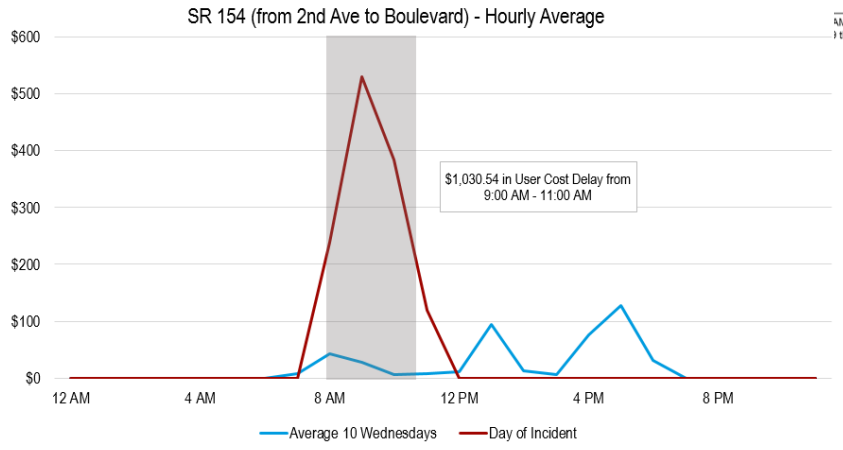
Time	Comments
6/26/19 9:09 AM	Incident began. Visual via Cam 357
6/26/19 9:10 AM	4 sedans, PD on scene. Injuries reported. Fire and EMS en route.
6/26/19 9:12 AM	Lanes 1, 2 & 3; 4 sedans,
6/26/19 9:18 AM	Fire on scene holding all lanes
6/26/19 9:18 AM	Traffic passing by on right shoulder
6/26/19 9:29 AM	Right shoulder and lanes 1 & 2 now open per visual
6/26/19 9:30 AM	TSOS notified Z5 ZM Robinson Nicol
6/26/19 9:32 AM	EMS on scene
6/26/19 9:43 AM	Lane 2 partially blocked but passable
6/26/19 9:51 AM	Lane 3 now open
6/26/19 9:55 AM	All lanes are now open
6/26/19 10:00 AM	TSOS has created a Pattern 115 with the following splits: (18,95,0,97,18,95,22,75,40,170) for SR 154 @ SR 42 and will run it until the incident is completely clear on I-20 @ SR 42
6/26/19 10:19 AM	511 reported that the incident was clear.

On 6/26/19, an accident at I-20 and Moreland Ave caused a user-cost delay of $1,000 from 9 to 11 AM.

Travel Time Chart



User Cost Delay Chart



User Delay Cost Summary

SR 154 (from 2nd Ave to Boulevard)	Last 10 Wednesdays (April 17, 2019 - June 19, 2019)	June 26, 2019 (9:00 AM - 11:00 AM)	Wednesday, June 26, 2019	Difference (Last 10 Wednesdays compared to the date of incident)
	$454.80	$1,030.54	$1,269.81	-$815

RITIS Performance Charts and User Delay Cost utilized.

ROUTINE REPORTING

Monthly Report
Quarterly Report
Holiday Analysis

Monthly Bottleneck Reports provide regular feedback on congestion status.

MONTHLY REPORT

User Delay Cost shown by:

- Average Cost per Hour (Chart)
- Daily Cost
- Monthly Cost

Zone 1

Major Routes	Centerline Miles	Intersections	CCTVs	Traffic Responsive Intersections	TACTICS / Adaptive Intersections
13	39	204	93	96	0

1 Zone Operations

1.1 Performance Metrics

Metrics	Goal	SR 9	SR 13/42/155	SR 141S	SR 237
Vehicle Detector Availability	> 95 %	74.3%	94.3%	✓	✓
Pedestrian Detector Availability	> 95 %	✓	✓	✓	✓
CCTV Availability	> 95 %	92.9%	94.4%	✓	✓
Communications Uptime	> 95 %	92.9%	90.7%	✓	✓
Traffic Volume	< 5 %	102.5%	24.4%	43.3%	16.2%
Arrivals on Green	> 80 %	✓	71.2%	77.4%	62.5%
Queue Spillback Rate	< 10 %	24.2%	11.8%	55.6%	29.5%
Split Failure**	< 5 %	✓	2.4%	✓	5.1%
Travel Time Index**	< 2.0	✓	✓	✓	✓
Planning Time Index	< 2.0	✓	✓	✓	✓
TEAMS Tasks (Unresolved)	< 49	24			

Performance Metrics Legend | ✓ = Met Goal | % = Did Not Meet Goal

1.2 Top 10 Bottlenecks

May 2019	Head Location (Approximate)	Direction	May 2018
1	NDH @ Azalea Cir	S	29
3	Piedmont St @ 14th St NE	S	2
4	SR 13 @ I-85	S	4
5	SR 237 @ Roswell Rd	N	13
6	Piedmont Cir @ Piedmont Rd NE	S	89
7	SR 237 @ I-85	S	55
9	SR 9 @ Collier Rd	N	105
11	SR 13 @ I-85	N	22
13	SR 9 @ SR 237	S	11
14	SR 237 @ SR 141 Conn	N	16

Figure 1: Top 10 Bottlenecks in May 2019

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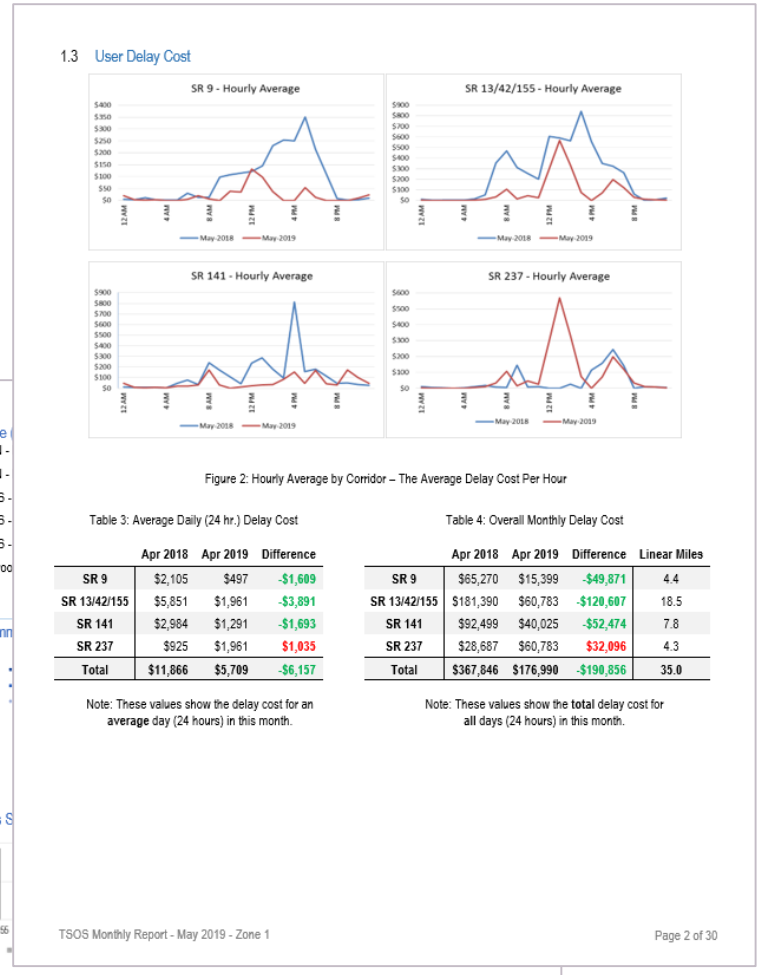

1.3 User Delay Cost

SR 9 - Hourly Average

SR 13/42/155 - Hourly Average

SR 141 - Hourly Average

SR 237 - Hourly Average

Figure 2: Hourly Average by Corridor – The Average Delay Cost Per Hour

Table 3: Average Daily (24 hr.) Delay Cost

	Apr 2018	Apr 2019	Difference
SR 9	$2,105	$497	-$1,609
SR 13/42/155	$5,851	$1,961	-$3,891
SR 141	$2,984	$1,291	-$1,693
SR 237	$925	$1,961	$1,035
Total	$11,866	$5,709	-$6,157

Note: These values show the delay cost for an **average** day (24 hours) in this month.

Table 4: Overall Monthly Delay Cost

	Apr 2018	Apr 2019	Difference	Linear Miles
SR 9	$65,270	$15,399	-$49,871	4.4
SR 13/42/155	$181,390	$60,783	-$120,607	18.5
SR 141	$92,499	$40,025	-$52,474	7.8
SR 237	$28,687	$60,783	$32,096	4.3
Total	$367,846	$176,990	-$190,856	35.0

Note: These values show the **total** delay cost for **all** days (24 hours) in this month.

TSOS Monthly Report - May 2019 - Zone 1 Page 2 of 30

2 Zone Devices

2.1 TEAMS Task Summ

2.2 CCTV Operations S

2.3 Detection Summary

Corridor	Reported	Resolved	Unresolved
SR 237	3	3	0
SR 9	27	27	0
SR 13	5	5	0
SR 42	3	3	0
SR 155	3	3	0
SR 141	31	31	0
Totals	72	72	0

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3 Zone Analysis / Rep

3.1 Holiday Reports

3.2 Impact Studies

3.3 Bottleneck Reports

3.4 Special Reports / As

3.5 Traffic Responsive /

3.1 Conflict Monitor Sta

3.2 FYA

4 Zone Interactions /

4.1 Zone Meetings

4.2 Zone Monitoring Hig

4.3 Field Work

4.4 MaxTime Firmware

4.5 Special Zone Task(s

TSOS Monthly Report - May 2019 - Zone 1 Page 4 of 30

QUARTERLY REPORT

Every Quarter, an analysis report provides and overview of:

- Reliability Comparison
- Speed Changes
- Delay Costs
- Bottlenecks

This helps stakeholders prioritize efforts and focus resources for a greater improvement.

RTOP 1 Performance Metrics Summary

RITIS Performance Metrics show a summary of **weekday** changes

Additional Comments:

- Weekend Midday (MD) Peak Times showed a 12% speed and TTI improvement
- Tuesday and Friday PM Peaks showed the most benefit, with a 11 - 12% speed increase

Reliability Comparison

↓7% TTI

↓ 44% BTI

↓12% PTI

Speed Change

AM Speeds Improved by 7%

PM Speeds Improved by 10%

Delay Costs

	Q1 2018	Q1 2019
Total Delay Cost	$6,226,534	$3,641,591

Quarterly Savings: $2,584,942

Zone 2 – Top 10 Bottlenecks

Quarter 1: January - March
Quarter 2: April - June
Quarter 3: July - September
Quarter 4: October - December

Q1 2019	Head Location (Approximate)	Direction	Q4 2018
1	SR 3 @ Ernest W Barrett Pkwy	S	1
2	SR 3 @ SR 176/Mars Hill Rd	N	2
3	SR 120 @ SR 176/Mars Hill Rd	W	5
4	SR 360 @ SR 120-Loop/Marietta Pkwy	N	19
5	SR 120 @ SR 176/Mars Hill Rd	E	22
6	SR 120 @ Johnson Ferry Rd	E	3
7	SR 3 @ Acworth Due West Rd	S	6
8	SR 3 @ Acworth Due West Rd	N	N/A
10	SR 120 @ John Ward Rd	W	13
11	SR 3 @ Kennesaw Due West Rd	N	12

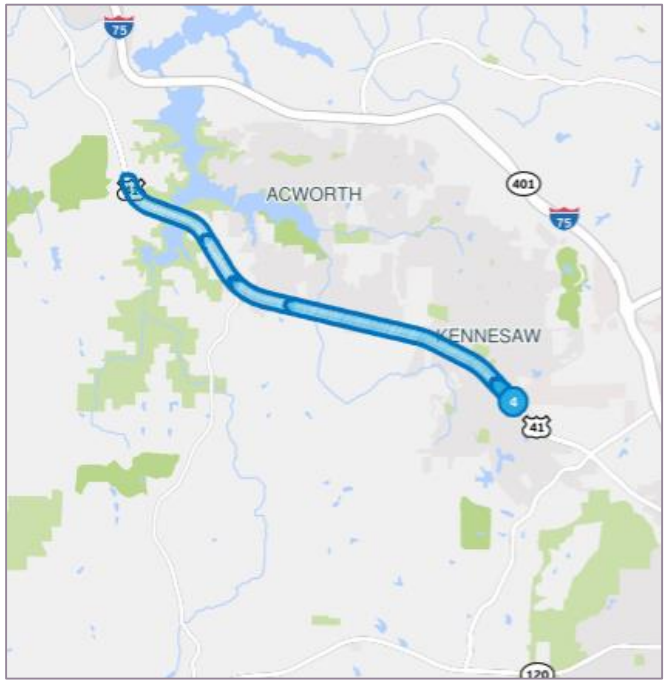
RITIS was utilized to determine the Top 10 Bottleneck Locations in Zone 2 (Northwest Atlanta). This allows Zone Managers to determine where to allocate resources.

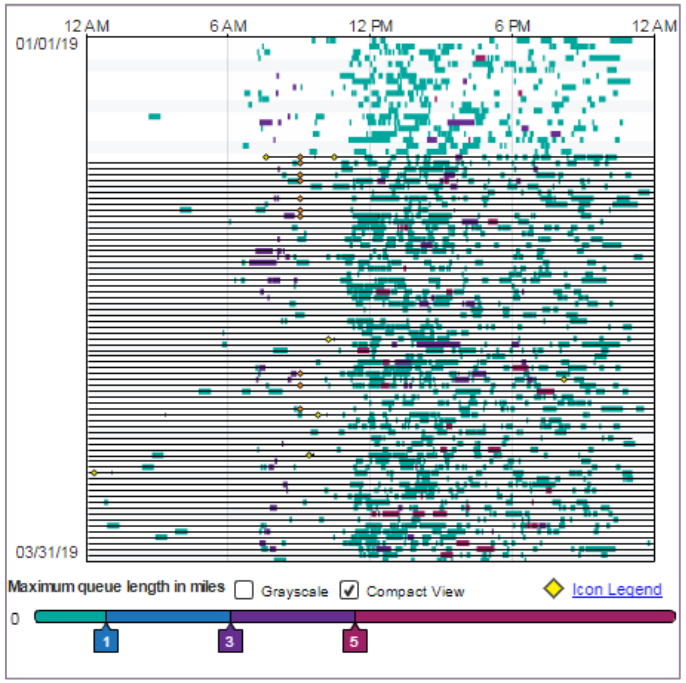
Off the List! SR 3 @ McCollum Pkwy

Quarter 1: January - March
Quarter 2: April - June
Quarter 3: July - September
Quarter 4: October - December

PM peak was retimed completely and we are now running a higher cycle length at McCollum and surrounding intersections. PM Peak optimized; NB progression offset plan is fully adaptive now.

This bottleneck rank has decreased below the top 10, therefore **resources can be allocated to different locations.**



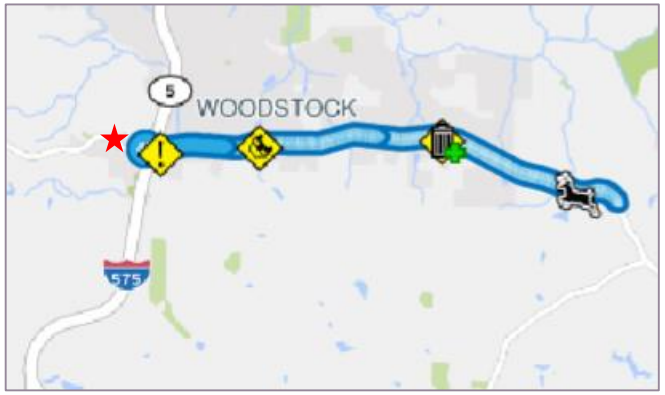


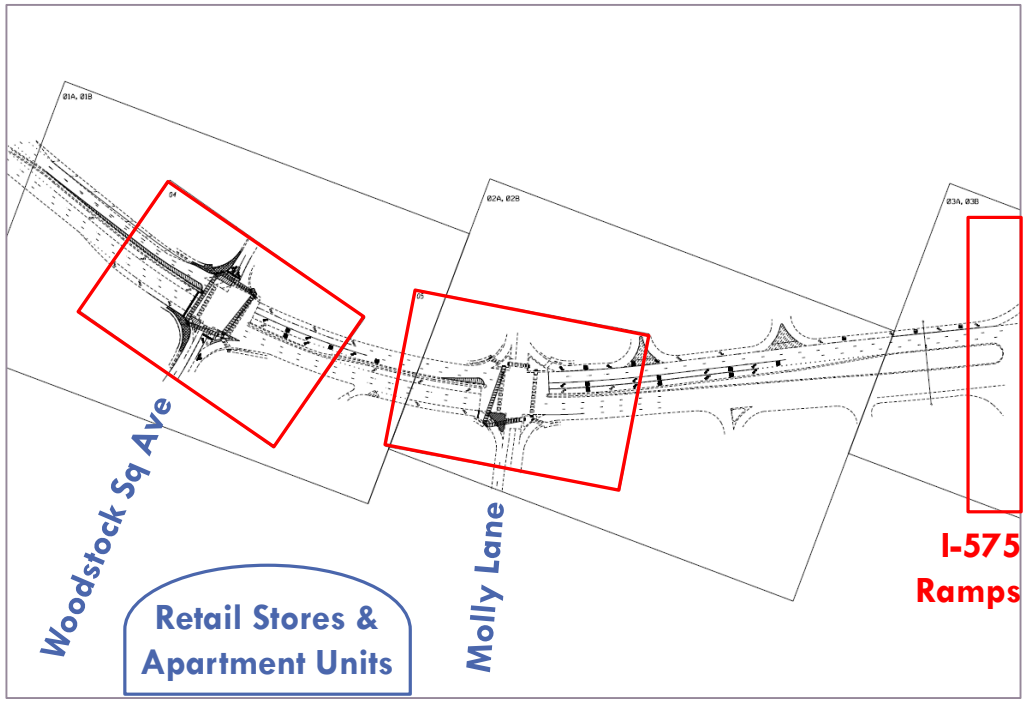
Bottleneck	Q4 2018: Rank 4	Q1 2019: Rank 14

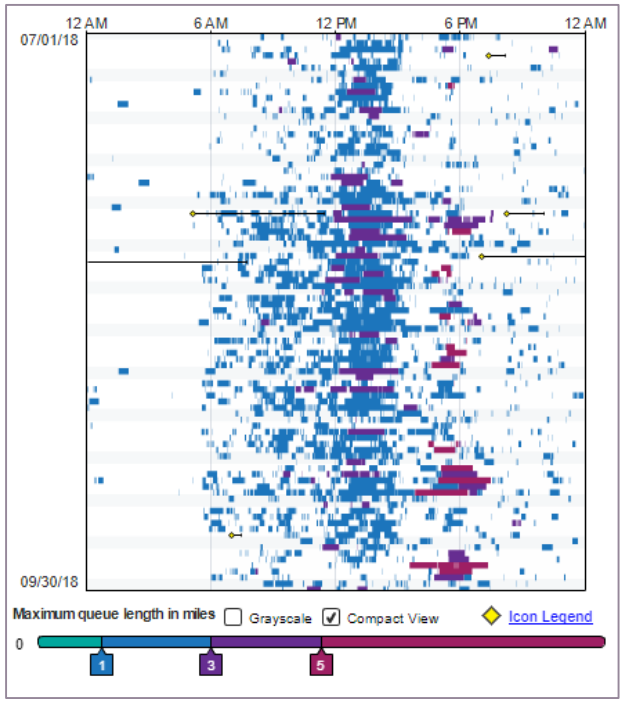
Changing More than Signal Timing

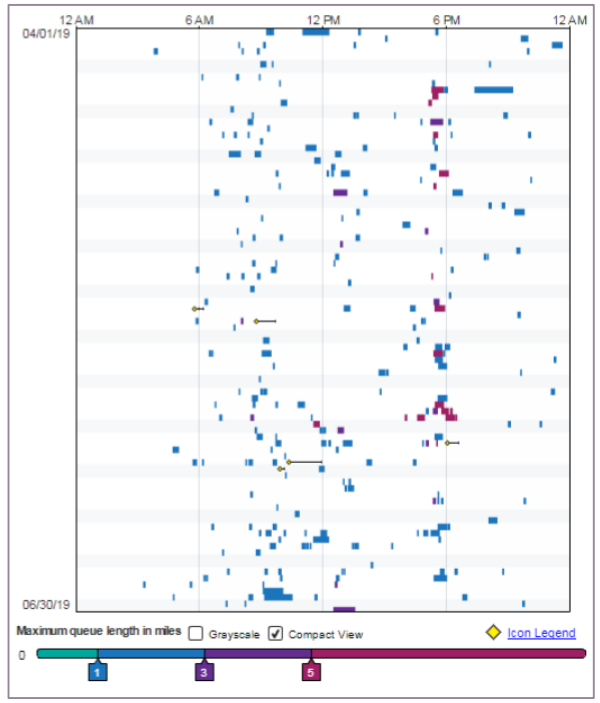
RITIS showed a bottleneck at I-575 traveling westbound. One cause of congestion was determined that several drivers were traveling past I-575 and turning left onto Woodstock Square Ave and Molly Lane.

As a quick response project, additional left turn lanes were added to reduce westbound congestion.









Intersection Improvement Drawing | **Q3 2018: Rank 5** | **Q2 2019: Rank 42**

HOLIDAY ANALYSIS

RTOP Holiday Analysis Report: Zone 1
Independence Day

S. GUNTUKA, C. JOHNSON (QA/QC)
06/19/19

This report contains analysis for Independence Day and speed data from 2017 to 2019 on RTOP Zone 1 corridors.

Independence Day occurs on July 4th. This federal holiday is the anniversary of publication of declaration of the independence from Great Britain in 1776. On Independence Day, higher vehicle volumes are observed due to increased traveling and commercial activity. During Independence Day, most schools and government offices are closed, but few businesses still operate.

1 Executive Summary

This analysis compares historical speeds, from Independence Day in 2
Thursdays) in 2019.

SR 9 / Peachtree Rd
- Lower speeds are expected in northbound and southbound AM P
- A balanced Weekend plan is currently configured for Independen accommodate traffic during AM Peaks (significant road closures a
- Road closure on Peachtree Rd from Lenox Rd to Peachtree Dunw

SR 13 / Buford Hwy
- Light traffic is anticipated on Independence Day.
- Various patterns are configured to run throughout the corridor o plans. **No plan changes recommended.**

SR 141 S / Peachtree Rd / Peachtree Blvd
- Typical weekday traffic activity is anticipated for Independence D
- TOD plan 10 (weekend balanced) is scheduled to run; therefore,

SR 155 / Clairmont Rd
- Historical data shows light activity. No heavy traffic is anticipated
- Traffic Responsive software is currently active. Independence Day **changes are recommended** for this corridor.

SR 237 / Piedmont Rd
- Lower speeds are expected on Independence Day during AM Peal
- Typical Monday traffic activity is anticipated for Independence Da
- TOD plan 10 (weekend balanced) is presently configured for Inde for this corridor.

4 Traffic Speed Analysis

SR 9, SR 13, SR 155, SR 141, and SR 237 were analyzed for the holidays as they are major corridors within Zone 1 and have significant vehicle throughput. These corridors are shown in Figure 1.

Figures 2 - 6 show speed data for each corridor during the time intervals found in Section 3 – Plan of Action.

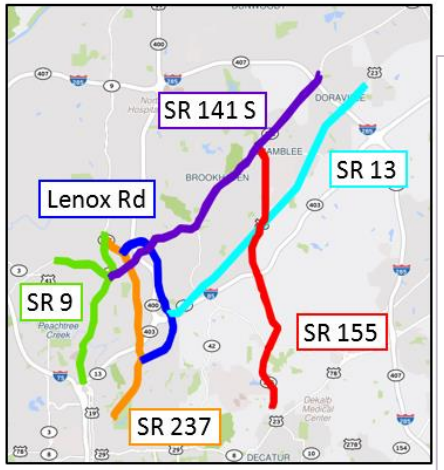


Figure 1: Zone 1 Selected Corridors of Analysis

RITIS can be used to create area maps!

RTOP Zone 1 – Independenc

4.1 Independence Day Speed Analysis

The following graphs for historical speeds on The Independence Day as well as "work week" traffic speeds in 2019 are shown below for their respective corridors in Figures 2 - 6. Comments and observations are marked and highlighted in gray within the graphs.

4.1.1 SR 9

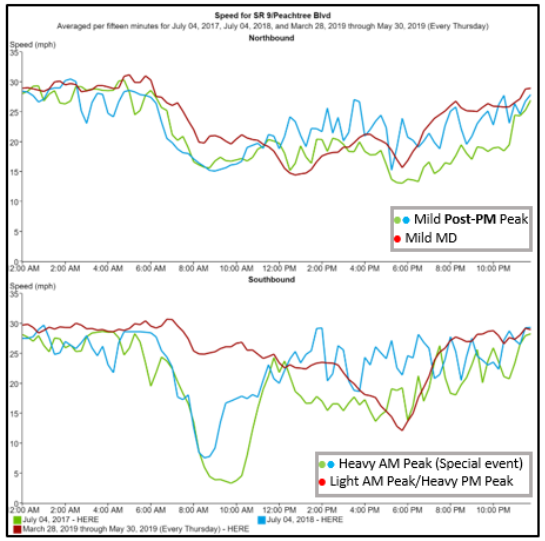


Figure 2 – Independence Day: Vehicle Speeds (mph) for SR 9

RTOP Zone 1 – Independence Day Analysis - Page 4

Historical data from 2017 and 2018 display road conditions from past holiday events.

Data from 2019 is included to understand how traffic operates in an average weekday or "work week" setting.

ADVANCED ANALYTICS

Specialized analysis are frequently requested for timing improvements

TIMING CHANGE RESULTS

To show results from timing changes implemented in traffic signal software, RTOP utilized a combination of RITIS and Automated Traffic Signal Performance Measures (ATSPM).

OBJECTIVE: Analyze the effect of implemented timing changes on SR 3

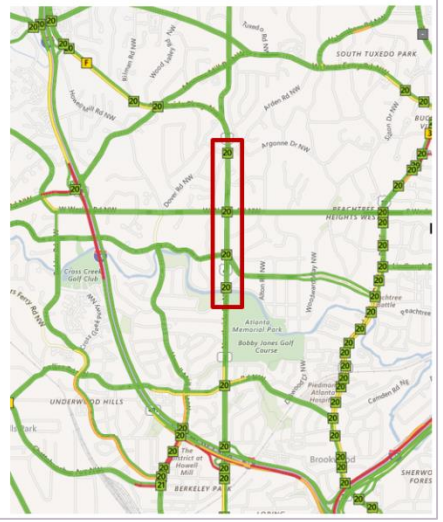
Timing Change: The Cycle Length at each intersection was shortened 40 seconds on the AM & PM Peak

Time period:

- 09/17 - 09/21, 2018 (Referred to as "Before")
- 03/01 - 03/31, 2019 (Referred to as "After")

Intersections (listed top to bottom):

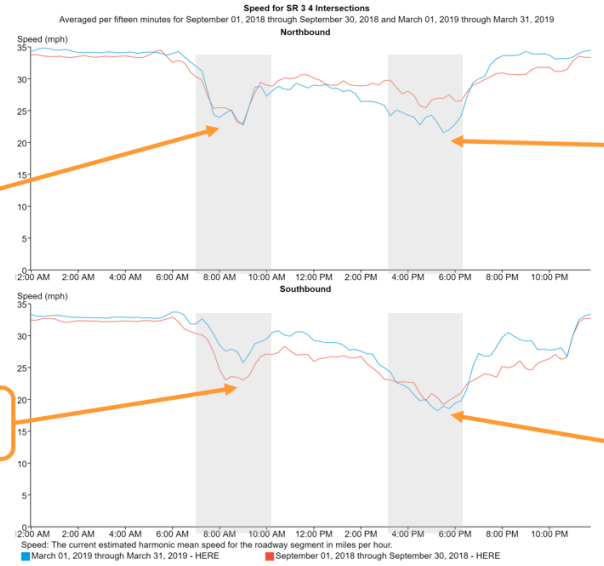
- SR 3 @ Arden (7145)
- SR 3 @ W Wesley (7144)
- SR 3 @ Peachtree Battle (7146)
- SR 3 @ Woodward Way (7147)



RITIS PERFORMANCE CHARTS

09/01 - 09/30, 2018 "Before"

03/01 - 03/31, 2019 "After"



Minimal Change in AM Peaks for Northbound

"After" Speeds decreased by ~5mph

"After" Speeds increased by 3 mph

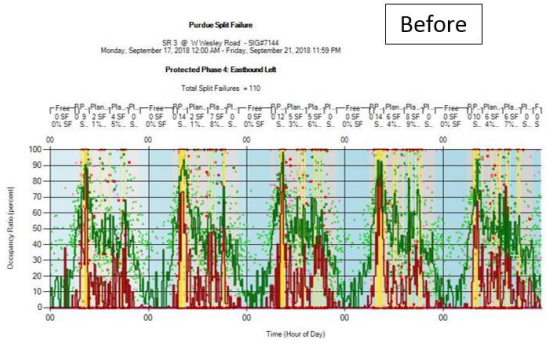
Minimal Change in PM Peaks for Southbound

SR 3 @ W WESLEY ROAD

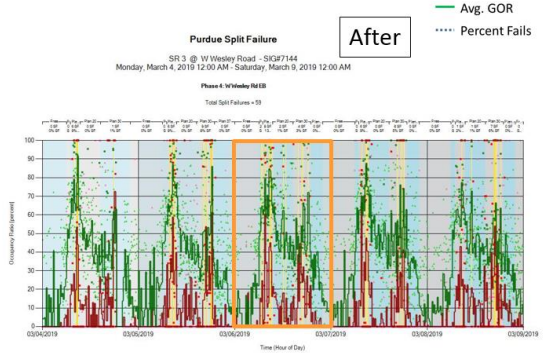
PHASE 4 (EB)

Split Failure
GOR - Gap Out
GOR - Force Off
ROR - Gap Out
ROR - Force Off
Avg. ROR
Avg. GOR
Percent Fails

Before



After

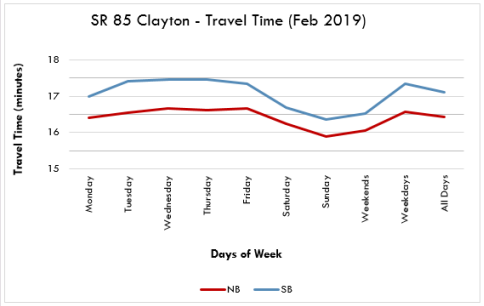


Comments:

- "After" data shows unusual PM SF increase on Wednesday (highlighted)
- AM Peaks show high amounts of SF
- "After" data shows overall **increase in SF**

BEFORE TIMING CHANGES

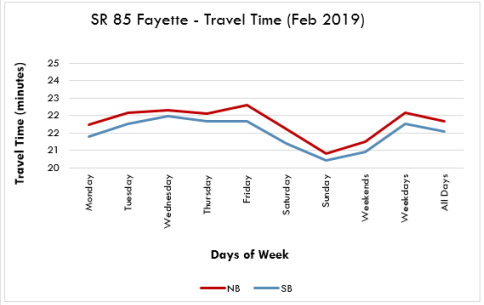
To provide a current level of status before retiming a corridor, a performance report was created.



Travel Time (Feb 19)	NB	SB
Monday	16.4	16.98
Tuesday	16.54	17.42
Wednesday	16.67	17.45
Thursday	16.62	17.46
Friday	16.66	17.35
Saturday	16.24	16.68
Sunday	15.89	16.36

<u>SR 85 Clayton Comments</u>

- Higher Travel Time is observed during weekends in SB.



Travel Time (Feb 19)	NB	SB
Monday	21.99	21.43
Tuesday	22.51	22.03
Wednesday	22.65	22.38
Thursday	22.49	22.12
Friday	22.88	22.14
Saturday	21.77	21.1
Sunday	20.64	20.35

<u>SR 85 Fayette Comments</u>

- NB and SB follow similar trends.

OVERVIEW

- Executive Summary
- Bottleneck Rankings
- Performance Charts by Month
- Performance Charts by Year
- Performance Summaries
- Overview of RITIS

SR 85 – TOP 5 BOTTLENECKS – MARCH

	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5
Head Location (on SR 85)	Garden Walk Blvd	SR 138	Main St	SR 92	Bethsaida Rd
Direction	SB	SB	NB	NB	NB
Average max length (miles)	1.01	0.59	1.36	0.95	0.5
Average daily duration	2 h 35 m	4 h 44 m	2 h 35 m	2 h 38 m	4 h 14 m
All Events/ Incidents	0	1	1	0	1

- Vehicle Fire
- Collision
- Incident
- Roadwork

PERFORMANCE ASSESSMENTS

Local Stakeholders
Social Media

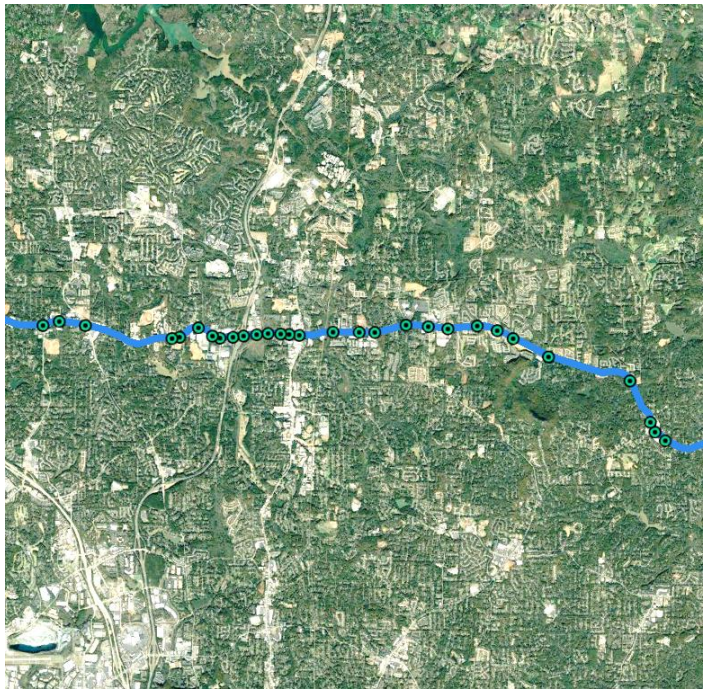
SR 92 / Alabama Road Project Assessment Summary

Alabama Rd. is a vital, east-west, highway in Cherokee and Cobb County that provides a continuous route between Woodstock and Alpharetta. This urban arterial interchanges with I-575 to the north and several cross-county arterial routes. It encompasses a 11-mile, 29-intersection stretch of SR 92.

The Regional Traffic Operations Program, or RTOP, is a multi-jurisdictional, cutting-edge signal timing program focused on improving traffic flow and reducing vehicle emissions through improved signal timing. **After implementing the Traffic Responsive System, the average speed improvement was 2-3 mph and there was a 1 hour reduction in total congestion time daily.**

Project Timeline

- **7/10** — GDOT develops RTOP
- **4/16** — Engineers enable smart-timing initiatives
- **8/17 – 1/18** — Retimed traffic signals on RTOP corridors
- **9/18 – 10/18** — Deployed Traffic Responsive* System operations on State Route 92



Project Details

29 intersections
10.6 miles long
49,000 vehicles/day
Major commuter route

**The Traffic Responsive System (TR) uses intelligent algorithms to regularly monitor traffic patterns and update signal timing in real-time to harmonize traffic flow. TR moves vehicles efficiently by monitoring actual demands of road traffic.*

This Summary incorporates data, analyses, and reports by various GDOT Units, including: Data Development, Safety, Mobility and Systems Engineering, Project Management and Systems Planning.

Provided by RITIS

Results

Speed Change

AM and PM peak hours had the heaviest congestion. Peak hours are defined as 6:00-10:00 AM and 3:00-7:00 PM.

AM Average Speed: ***Improved by 5%***

PM Average Speed: ***Improved by 6%***

Average Daily Speed: improved by 2-3 mph

Delay Costs

The project was further evaluated for changes in Delay Cost (total per vehicle and per person), Hours of Delay (person-hours, vehicle-hours, and per vehicle), and Vehicles Miles Traveled (VMT) using the PDA User Delay Cost Analysis module.

Grand Total and Average

	March 2018	March 2019	Difference
Delay per VMT	0.0163 min/mile	0.0104 min/mile	0.0059 min/mile
Total Delay Cost	$79,365	$53,610	$25,755

Monthly Savings: $25,755

Reliability Comparison

Travel Time Index (TTI)**-** the time it takes to drive along a stretch of road
Buffer Time Index (BTI)- the extra time you must add to the average trip to ensure an on- time arrival
Planning Time Index (PTI)- the **total** time you should allow to ensure on-time arrival

↓8% TTI **↓60% BTI** **↓15% PTI**

Alabama Rd at Trickum Rd Bottleneck Congestion

The bottleneck travels eastbound from the intersection of Alabama Rd (SR 92) and Trickum Rd. After adjusting signal timing along this corridor, the bottleneck experienced a **one hour reduction in total congestion time.**

Total daily congestion time decreased by

1 hour and 16 minutes

Smart Signals along SR 92 / Alabama Road

In September of 2018, the Regional Traffic Operations Program, or RTOP, implemented the Traffic Responsive System along Alabama Rd (from Wade Green Rd to Mabry Rd) to improve traffic flow.
Here are the results:

$25,755
in monthly delay cost savings

Total daily congestion time decreased by approximately **1 hr**

8%
reduction in weekday travel time

SPEED CHANGE

5% *improvement in southbound AM average speed*

6% *improvement in northbound PM average speed*

2-3 mph *improvement in average daily speed*

Project Details:

29 intersections

11 miles long

49,000 vehicles/day

GDOT Georgia Department of Transportation

RTOP

QUESTIONS?

ADDITIONAL POST-EVENT ANALYSIS EXAMPLES

Analytics: TSOS Active Management

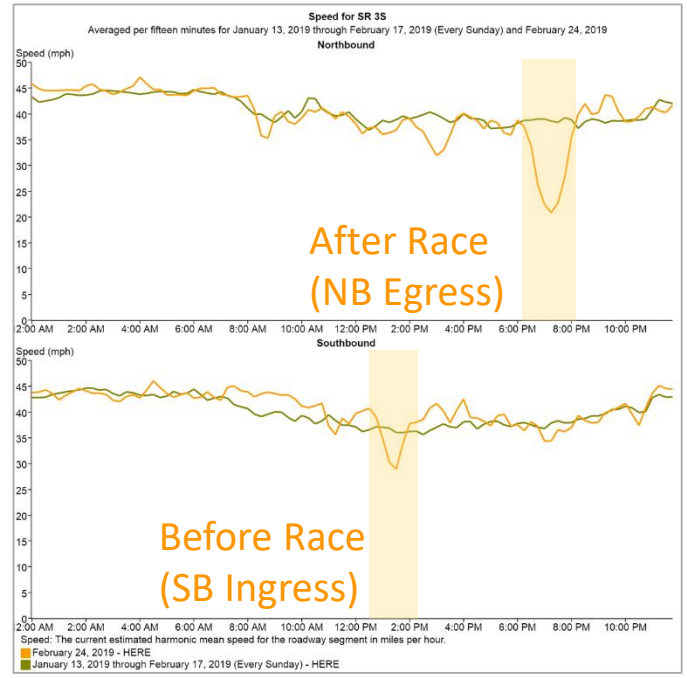
02/24/2019 – Atlanta Motor Speedway (AMS) Race

A special events traffic team was responsible for maintaining operations for the AMS races, including timing changes and field support.

Before the races, TSOS provided a report detailing traffic speeds from the 2018 AMS Race. This allowed specialized traffic plans to be developed for the surrounding area.

During the event, TSOS monitored during the weekend and provided assistance as needed. Afterwards, a report was created to provide an overview of Sunday.

During ingress to the event, heavy police presence was noticed with road guiding equipment. After the races ended, a speed drop of 20 mph was observed during the NB egress.



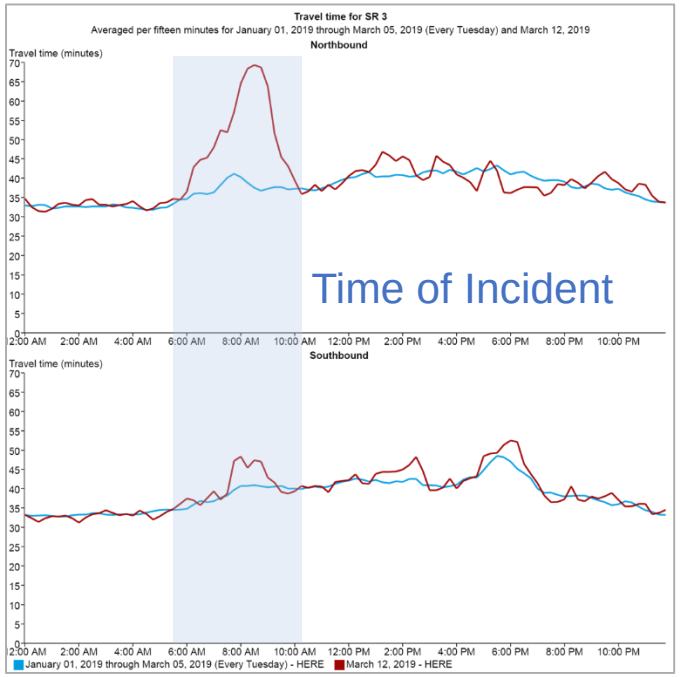
Analytics: TSOS Active Management

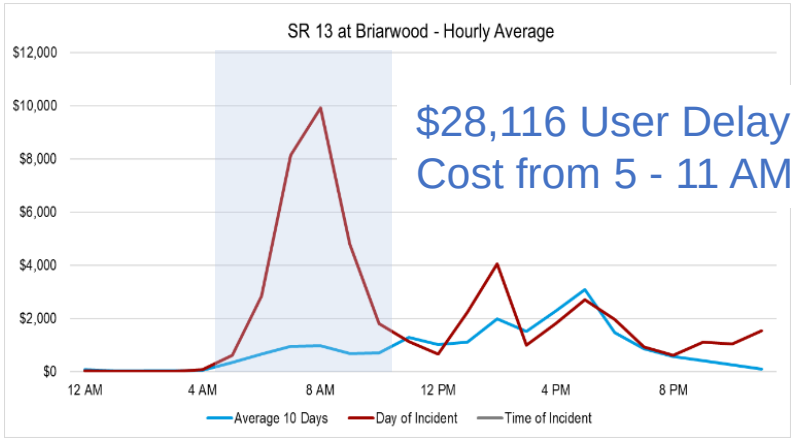
03/12/2019 - SR 3 @ SR 54 Pedestrian Fatality

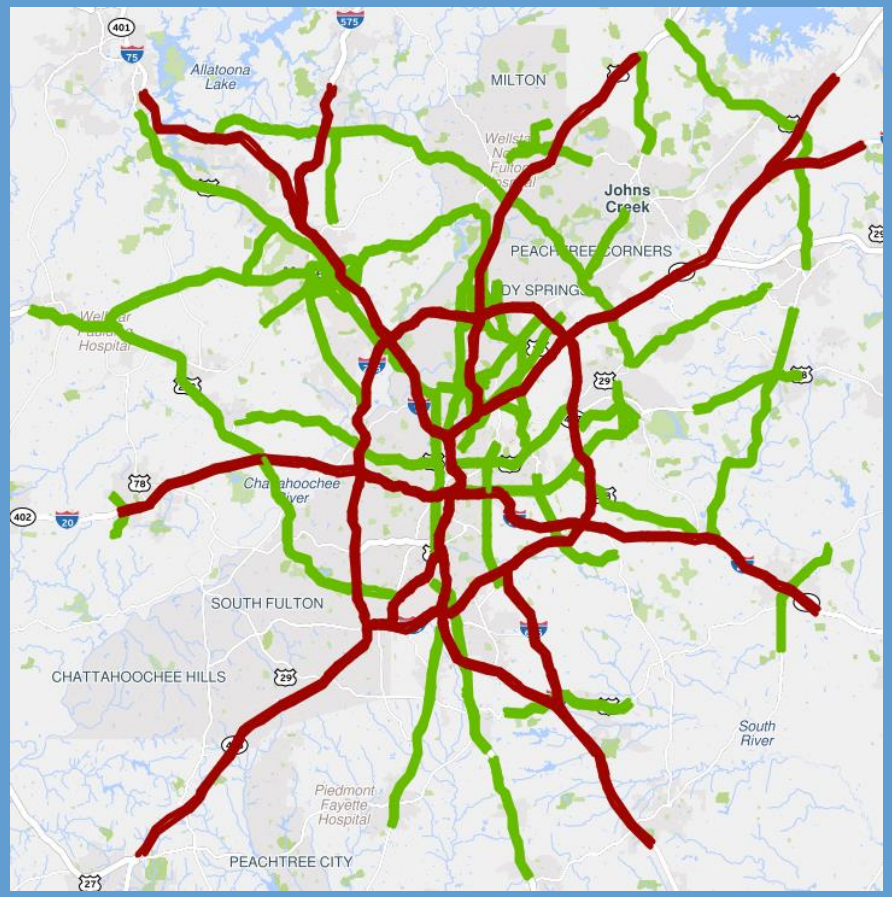
Due to a fatality investigation, SR 3 @ SR 54 was temporarily closed for investigation. The resulting congestion extended approximately 3 miles in the northbound direction.

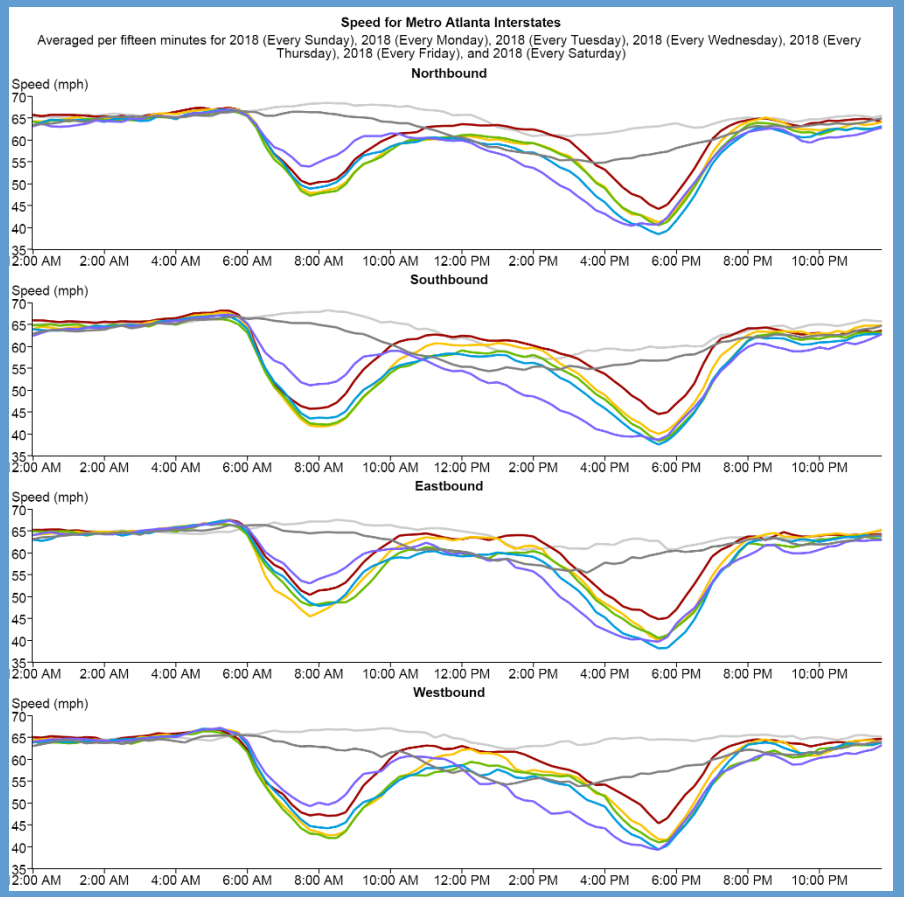
The incident was continuously monitored by RTOP operators and the corridor manager. After the incident cleared, TSOS enacted pattern 80 (255 sec inbound flush) once the incident was cleared.

RITIS analysis showed a 35 minute travel time increase and $28,000 user delay cost during the incident.









Regional Traffic Operations Program

Georgia Department of Transportation

QUESTIONS?

Shahram Malek
Catherine Johnson
Yukti Arora

RITIS & PROBE DATA ANALYTICS SUITE

u s e r g r o u p

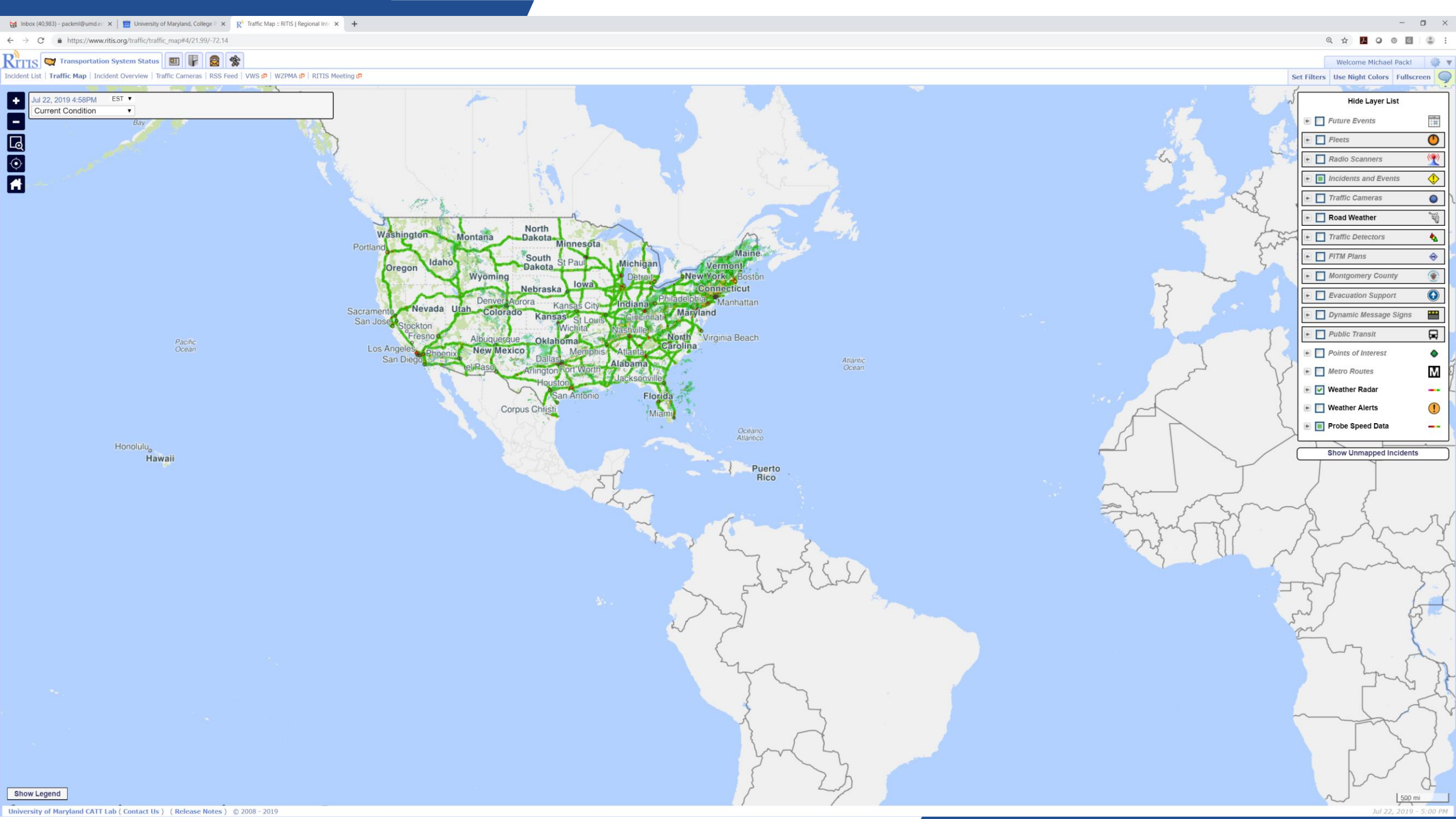
What's new & what's coming

Michael Pack
UMD CATT Laboratory
Director

CATT LABORATORY

RITIS Recent Deployments

- New Tiling Infrastructure (June 23rd)
  - **Major** update for faster display and better reliability of RITIS maps and layers, especially on larger screens showing many layers.
  - Smoother zooming transitions
  - Paves the way for agency-specific tiles and reduces dependence on 3rd party mapping providers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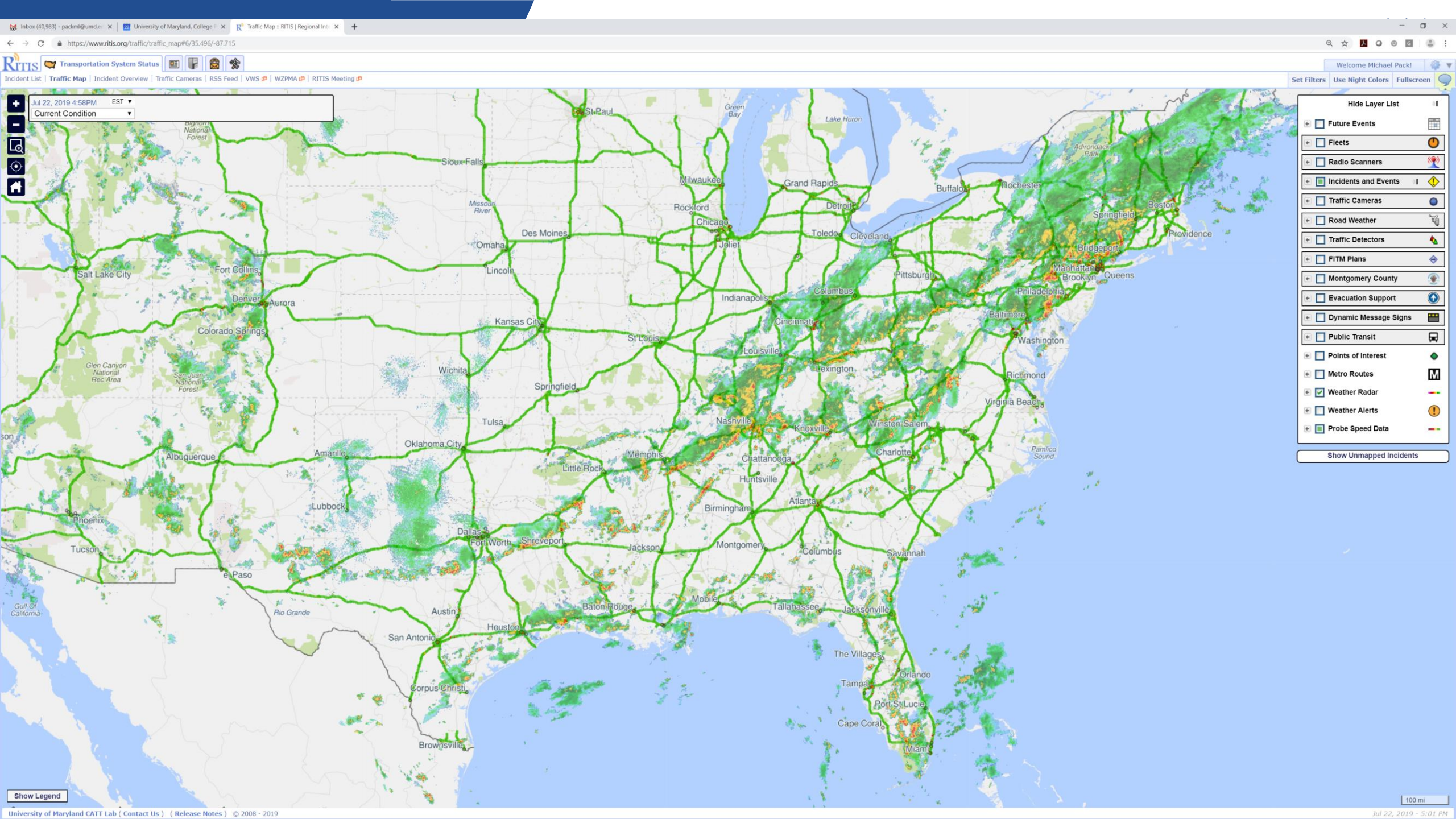
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Toledo
Cleveland
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Brooklyn
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Pittsburgh
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Jacksonville
Austin
Houston
San Antonio
The Villages
Orlando
Tampa
Port St Lucie
Cape Coral
Miami
Corpus Christi
Brownsville
Rio Grande
Gulf Of California
Green Bay
Lake Huron
Missouri River
Glen Canyon National Rec Area
San Juan National Forest
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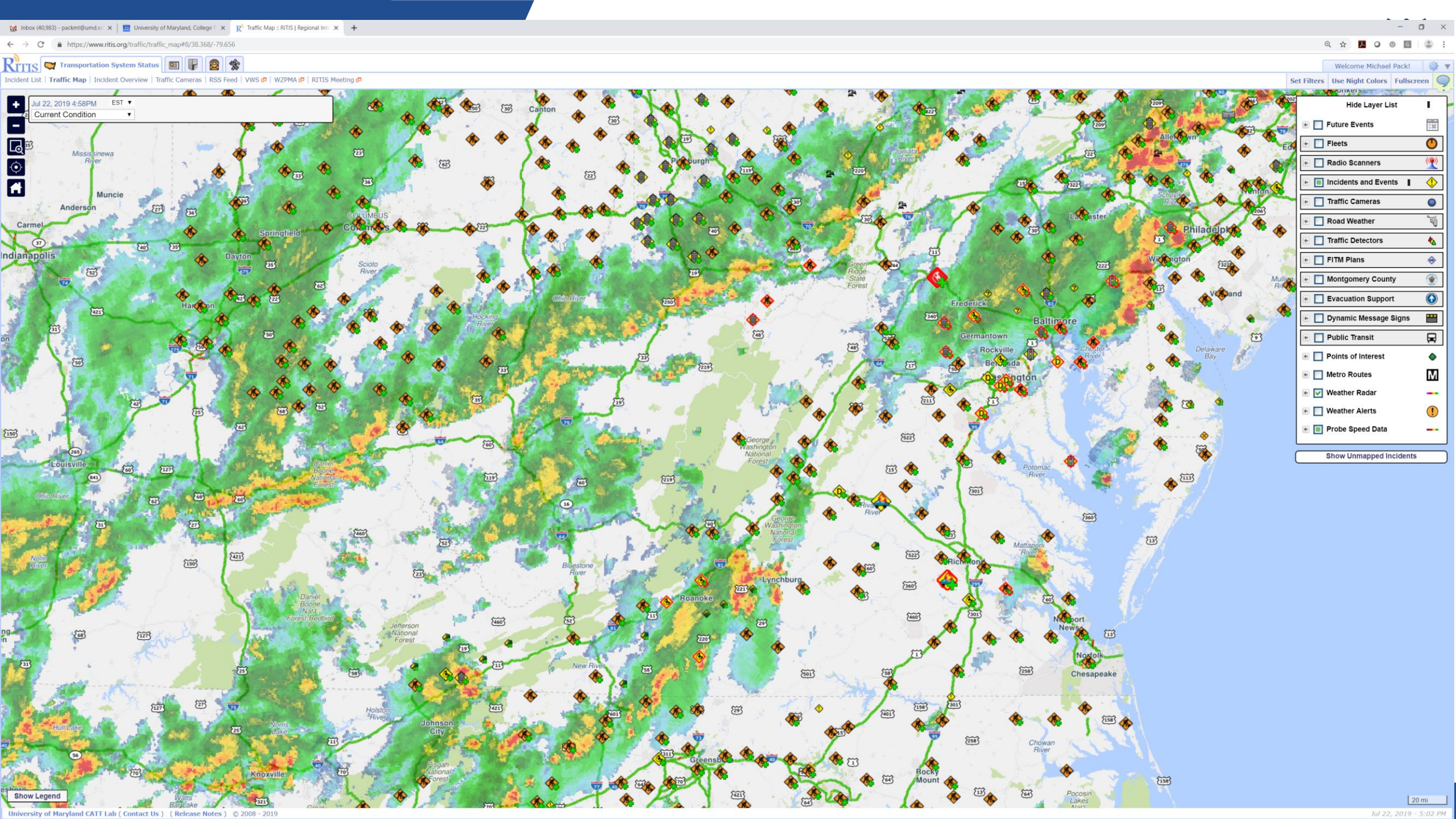
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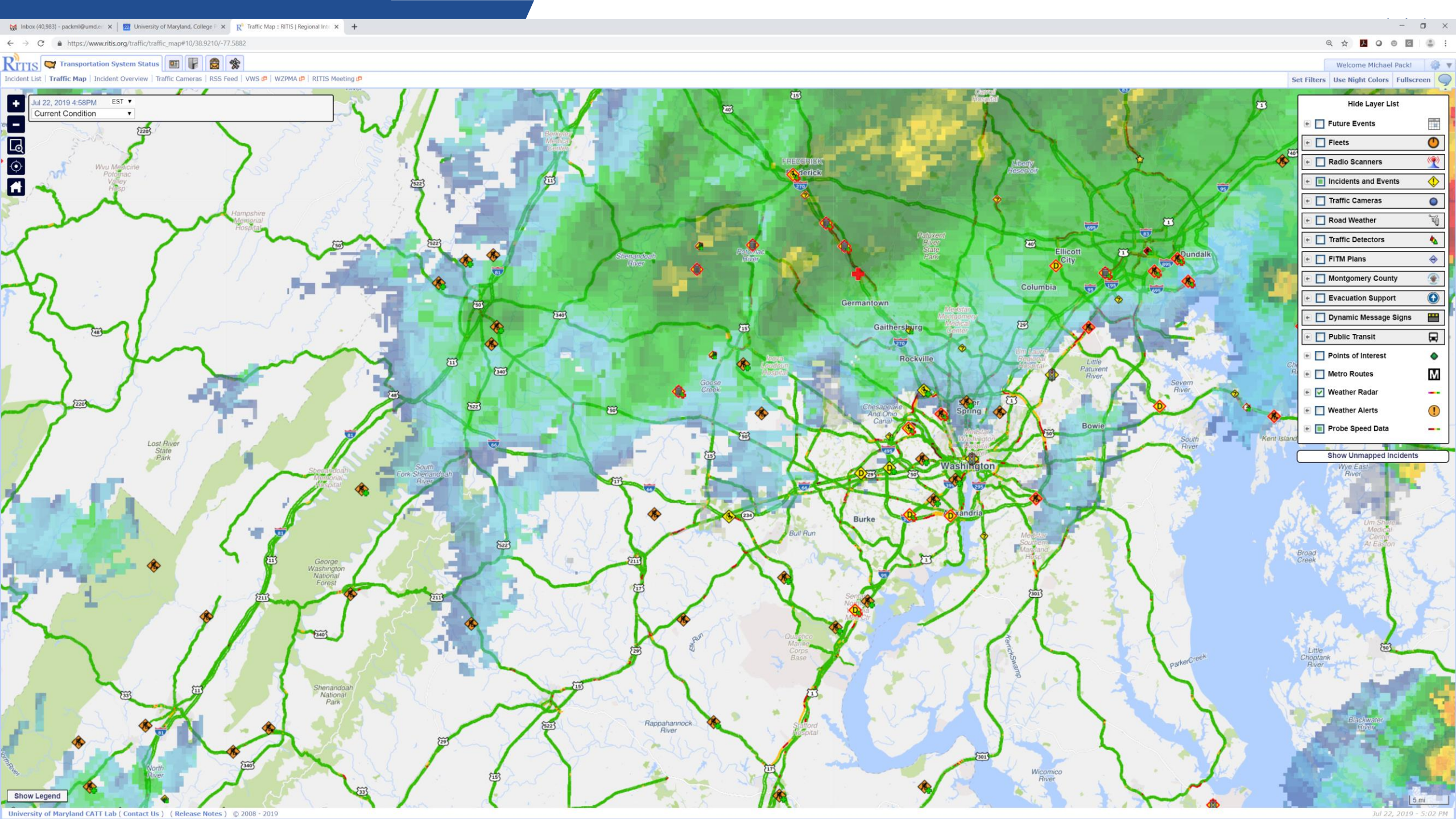
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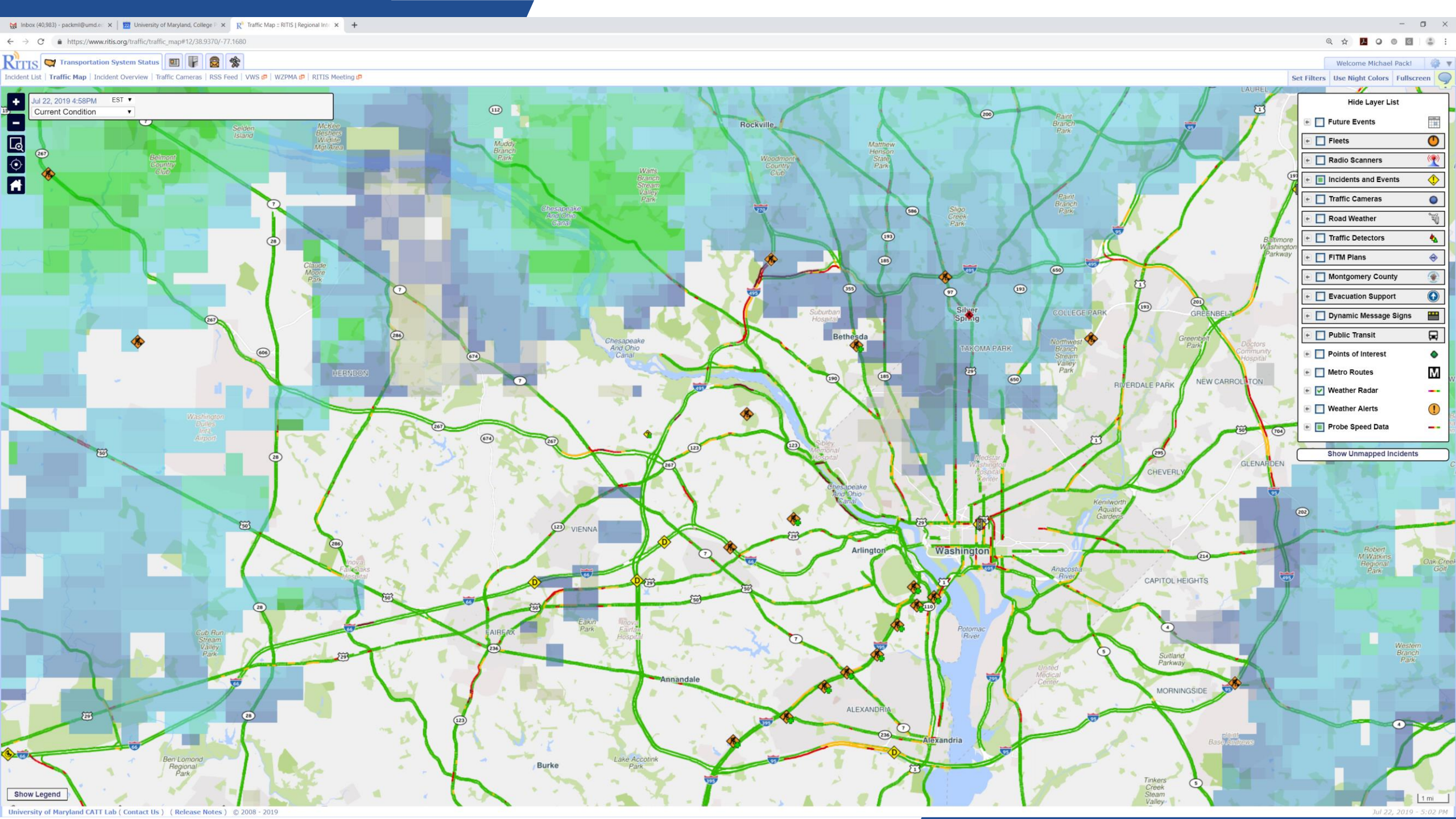
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Traffic Detectors
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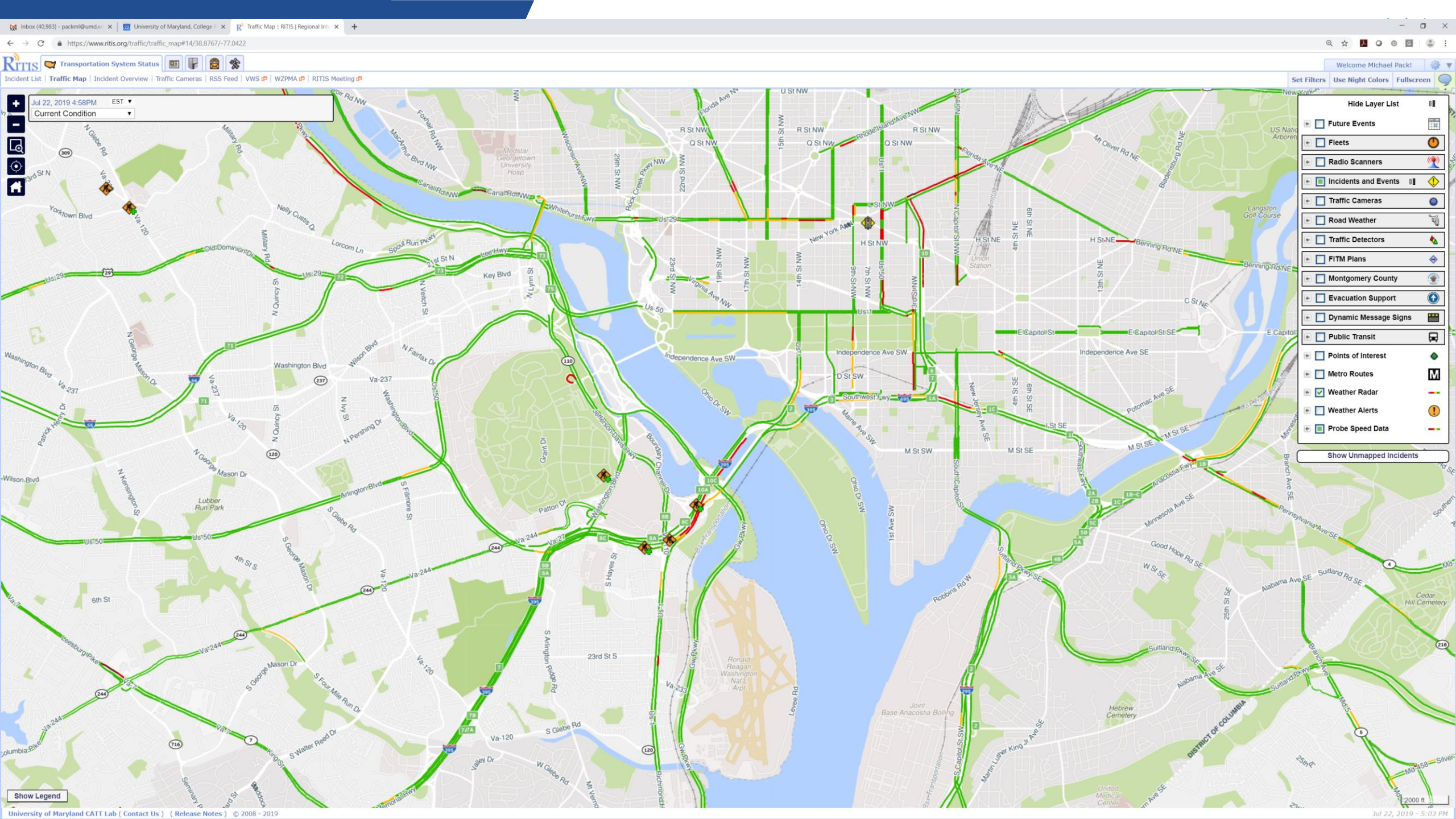
Montgomery County
Evacuation Support
Dynamic Message Signs
Public Transit
Points of Interest
Metro Routes
Weather Radar
Weather Alerts
Probe Speed Data
Show Unmapped Incidents
Show Legend
Rockville
Bethesda
Silver Spring
COLLEGE PARK
GREENBELT
TAKOMA PARK
RIVERDALE PARK
NEW CARROLLTON
CHEVERLY
GLENARDEN
HERNDON
VIENNA
Arlington
Washington
CAPITOL HEIGHTS
FAIRFAX
Annandale
ALEXANDRIA
Alexandria
MORNINGSIDE
Burke
University of Maryland CATT Lab (Contact Us) (Release Notes) © 2008 - 2019
Jul 22, 2019 - 5:02 PM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University of Maryland, College Park
Traffic Map :: RITIS | Regional Integrated Transportation Information System
https://www.ritis.org/traffic/traffic_map#14/38.8767/-77.0422
RITIS
Transportation System Status
Welcome Michael Pack!
Incident List | Traffic Map | Incident Overview | Traffic Cameras | RSS Feed | VMS | WZPMA | RITIS Meeting
Set Filters
Use Night Colors
Fullscreen
Jul 22, 2019 4:58PM EST
Current Condition
Hide Layer List
Future Events
Fleets
Radio Scanners
Incidents and Events
Traffic Cameras
Road Weather
Traffic Detectors
FITM Plans
Montgomery County
Evacuation Support
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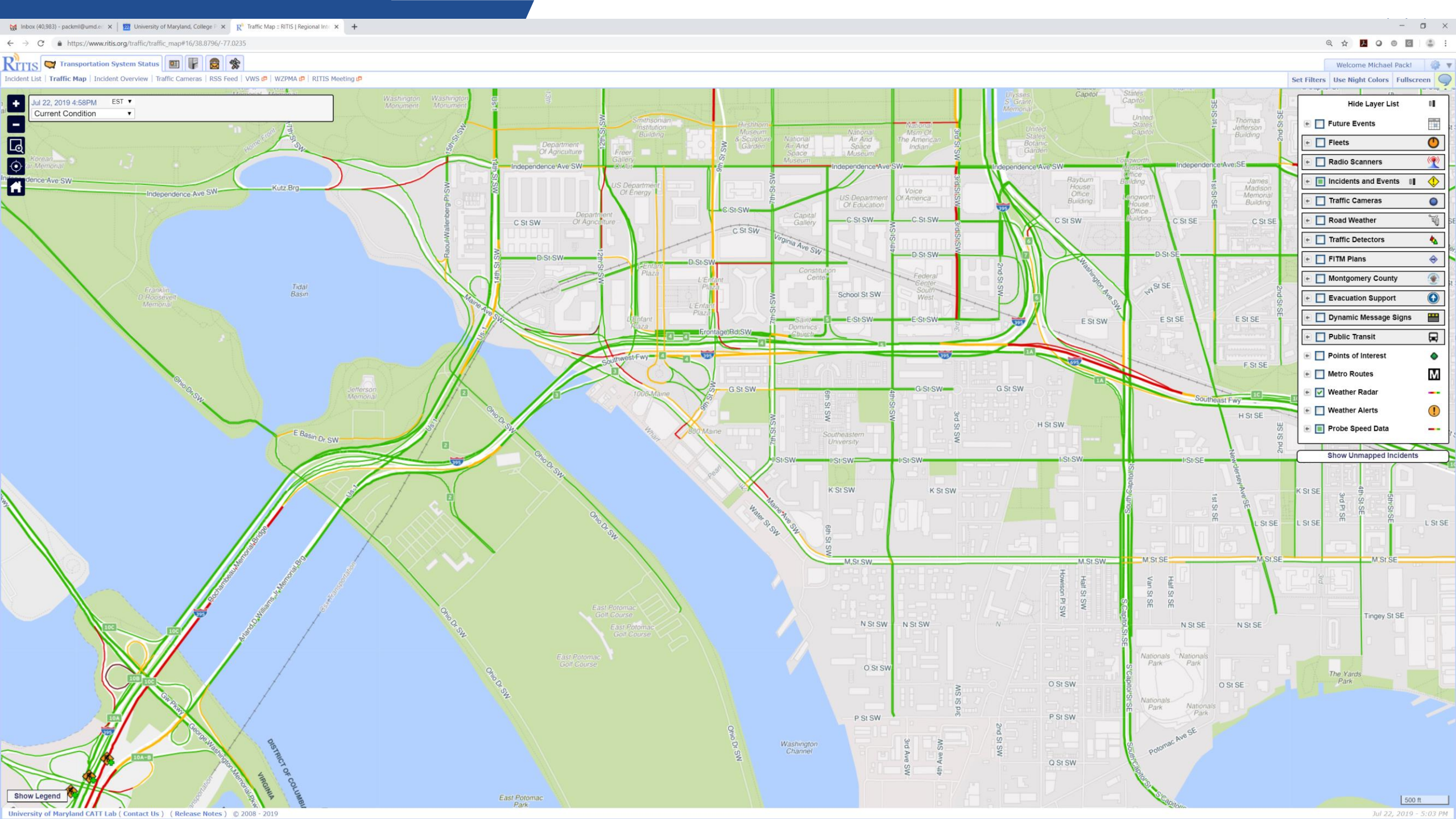
University of Maryland CATT Lab (Contact Us) (Release Notes) © 2008 - 2019
Jul 22, 2019 - 5:03 PM


Transportation System Status
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Probe Speed Data
Show Unmapped Incidents
Show Legend
500 ft
University of Maryland CATT Lab (Contact Us) (Release Notes) © 2008 - 2019
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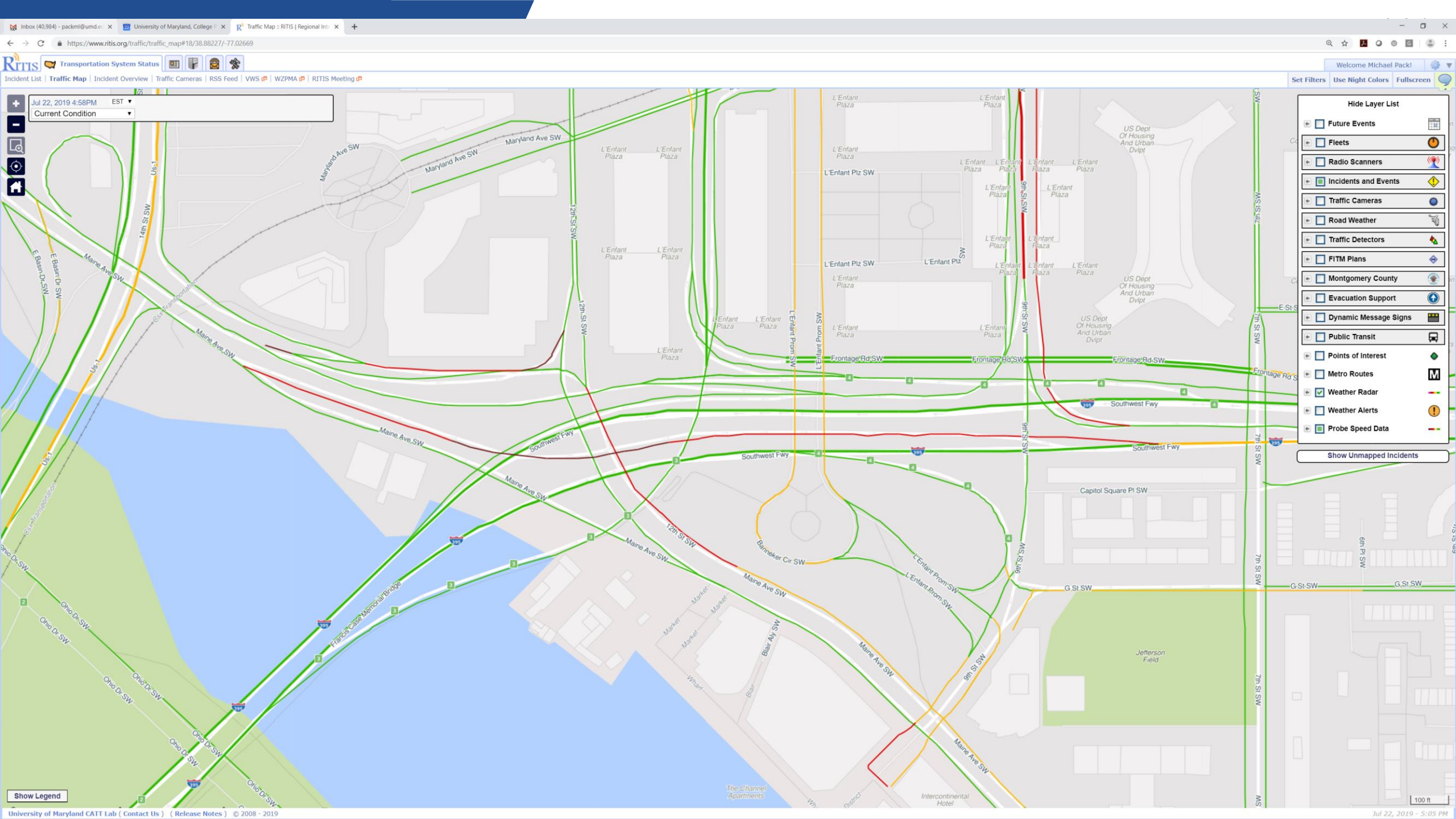
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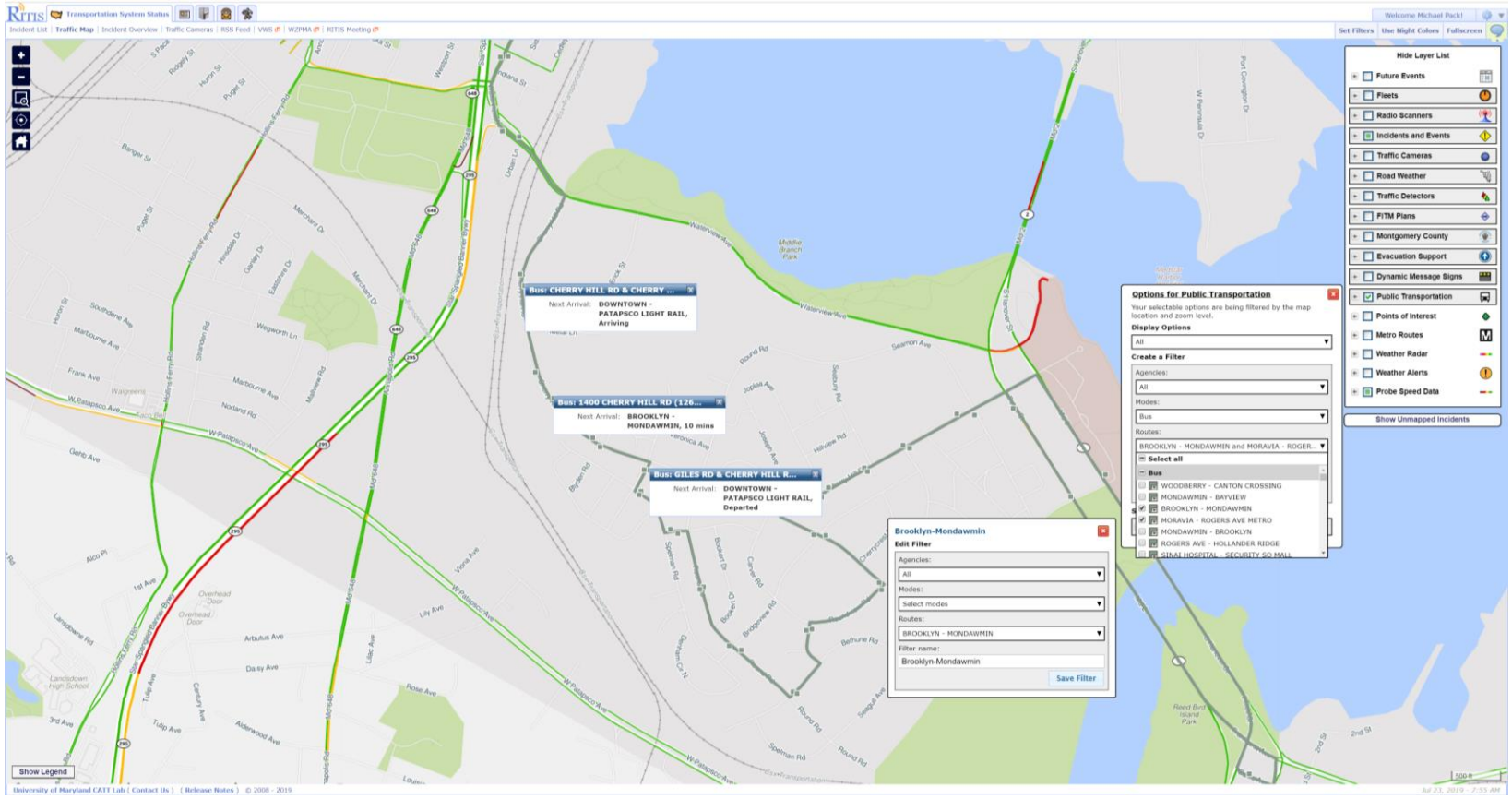
Show Unmapped Incidents
Show Legend
Maryland Ave SW
14th St SW
12th St SW
Us-1
E Basin Dr SW
Maine Ave SW
East Transportation
L'Enfant Plaza
L'Enfant Plz SW
L'Enfant Prom SW
9th St SW
7th St SW
Frontage Rd SW
Southwest Fwy
Capitol Square Pl SW
Benneker Cir SW
Francis Case Memorial Bridge
Ohio Dr SW
Market
Blair Aly SW
Wharf
G St SW
6th Pl SW
Jefferson Field
The Channel Apartments
Intercontinental Hotel
US Dept Of Housing And Urban Dvlpt
100 ft
University of Maryland CATT Lab (Contact Us) (Release Notes) © 2008 - 2019
Jul 22, 2019 - 5:05 PM

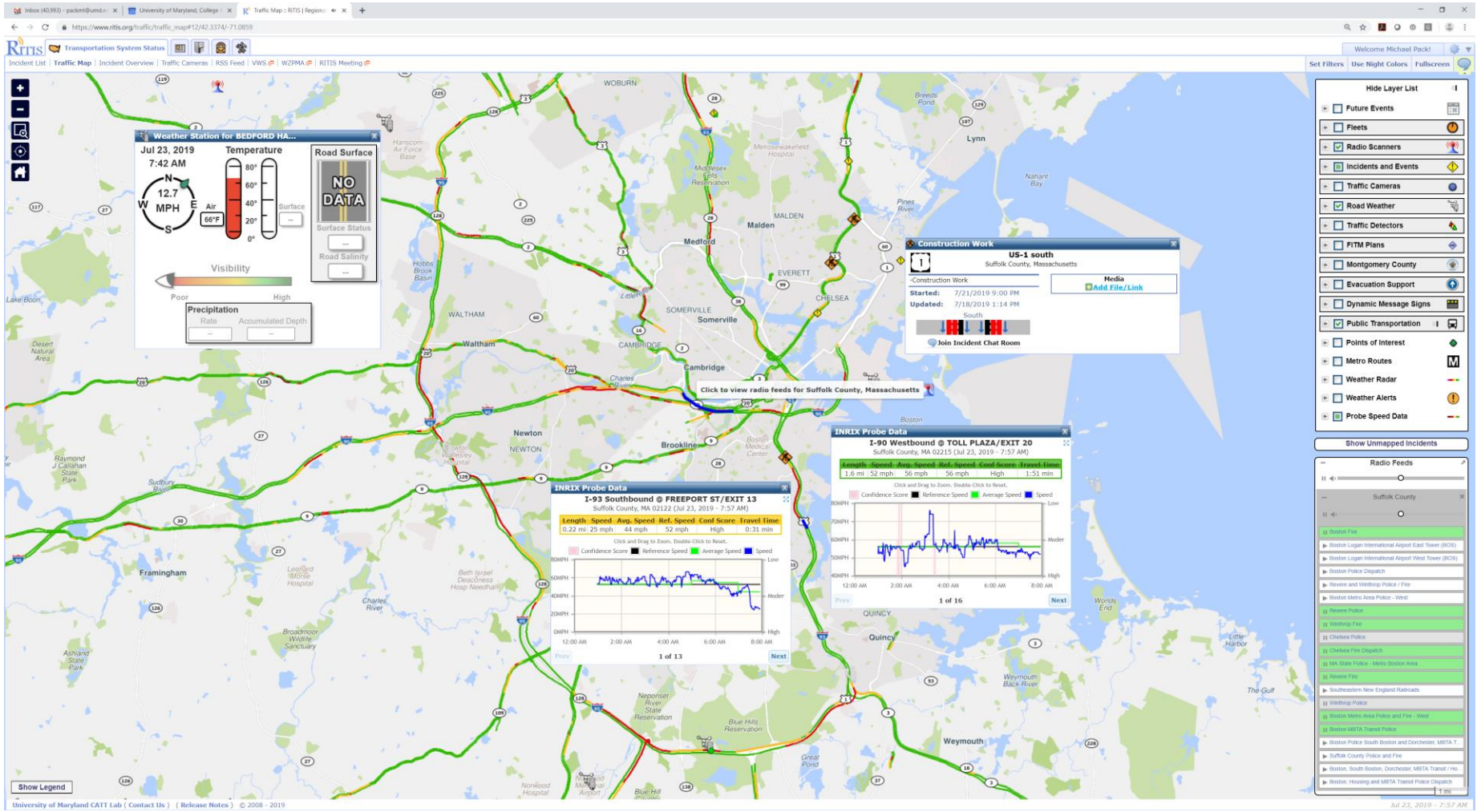
RITIS Recent Deployments

- New Transit Routes (and more coming)
- Point us to your GTFS feeds so we can integrate them support@ritis.org



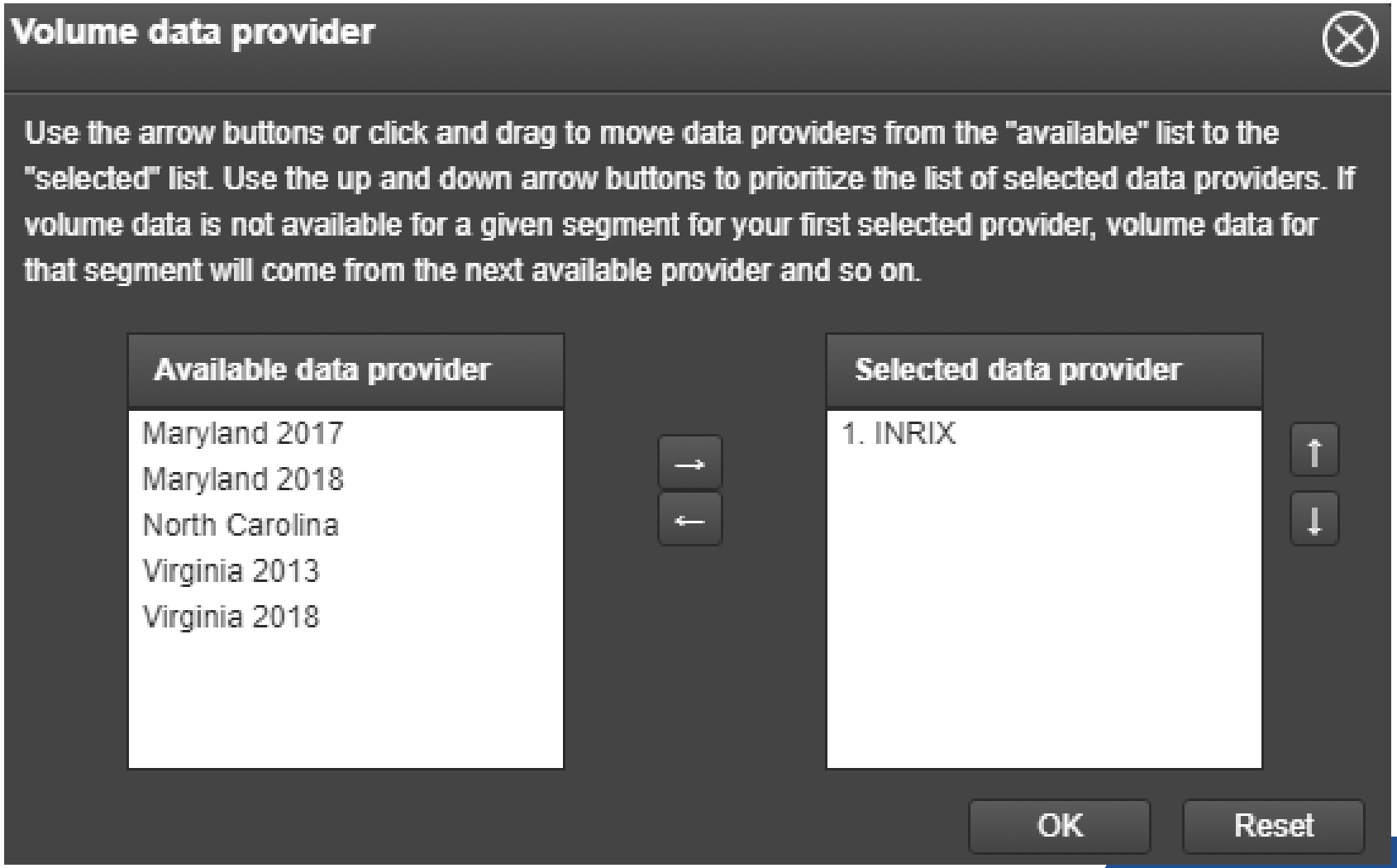
RITIS Recent Deployments

- Added Illinois Sensor Data
- MassDOT joins RITIS

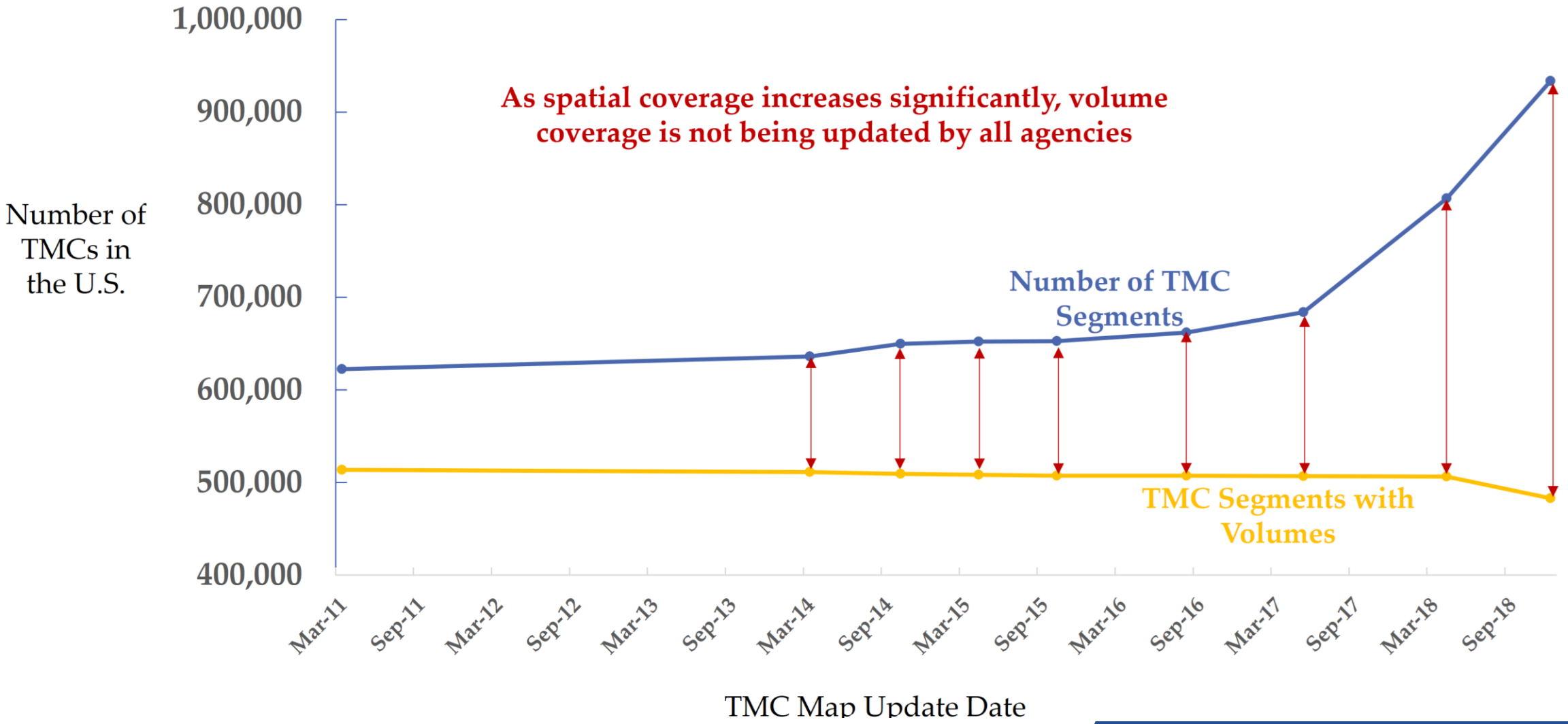


RITIS Recent Deployments

- New Volumes updates for MD and VA.

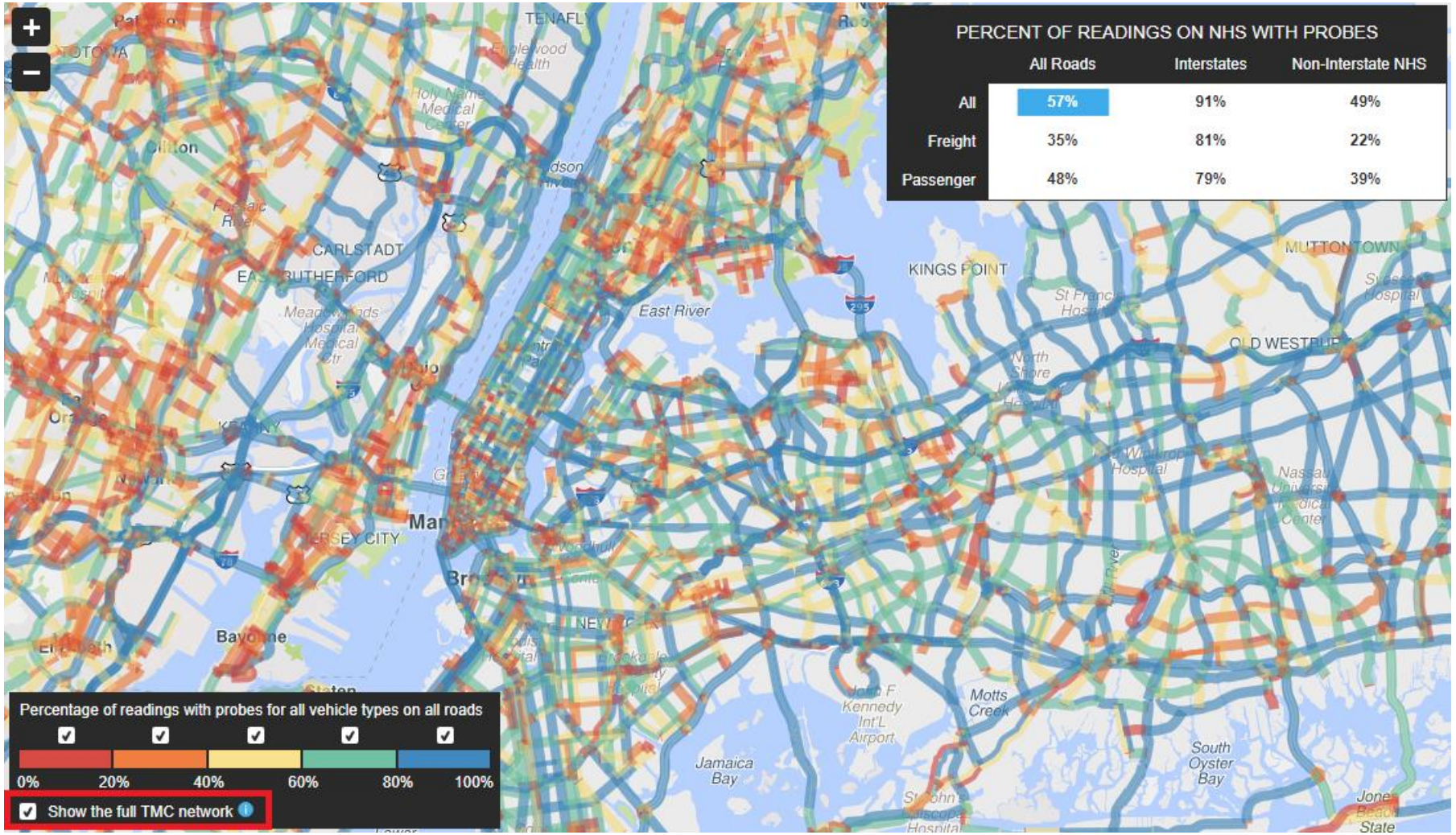


Providing us your volume data is important!!!



RITIS Recent Deployments

- Option for expanded NPMRDS added
- Full TMC Network coverage visible for NPMDS map



RITIS Recent Deployments

- Fixed 50+ bugs including:
  - Added backwards compatibility for the old map urls so they get converted to the new map url format.
  - Fixed an issue where icons on evacuation layer were being displayed much smaller than other icons.
  - Fixed an issue where probe data popups more accurately display TMC data when zoomed in.
  - Fixed an issue where zoom controls were missing from subscription maps.
  - Fixed an issue where the layer markers stacking don't respect the layer list order.
  - Fixed an issue where the incident view list doesn't sync up with the current map view.
  - Fixed an issue where CAD layer doesn't show up on the incident view map.
  - Fixed an issue where the probe data layers don't respect the layerlist order.
  - Increased the maximum zoom level of the map.
  - Fixed an issue where the radio player doesn't load the playlists for some counties.

Work in Progress

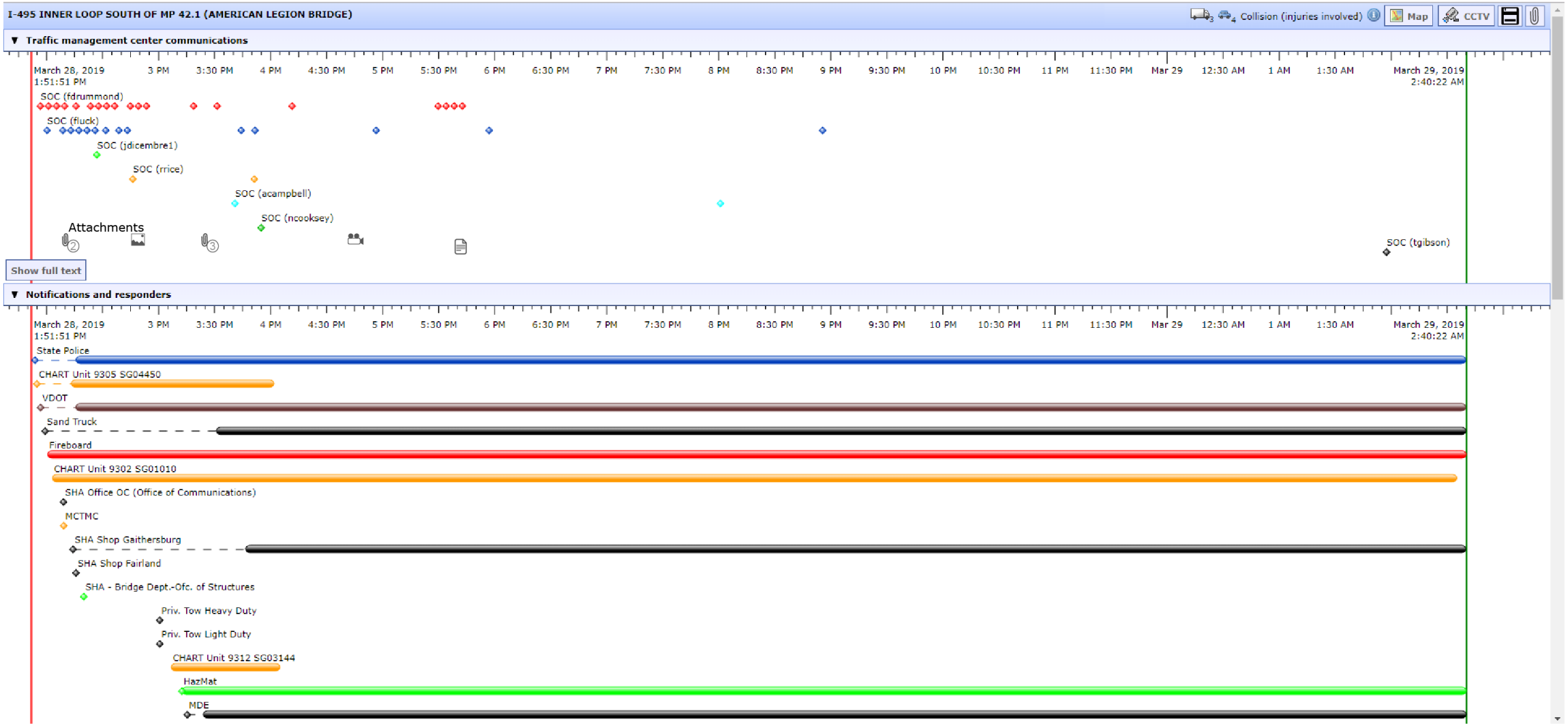
- Bottleneck Ranking (deploying soon!)
- Advanced Road Selection
- Detector Tools
- Timeline Media Redesign
- AARs in EQT
- Route Analysis in Trajectory Analytics
- Causes of Congestion
- Reliability Widgets
- Additional Transit Layers

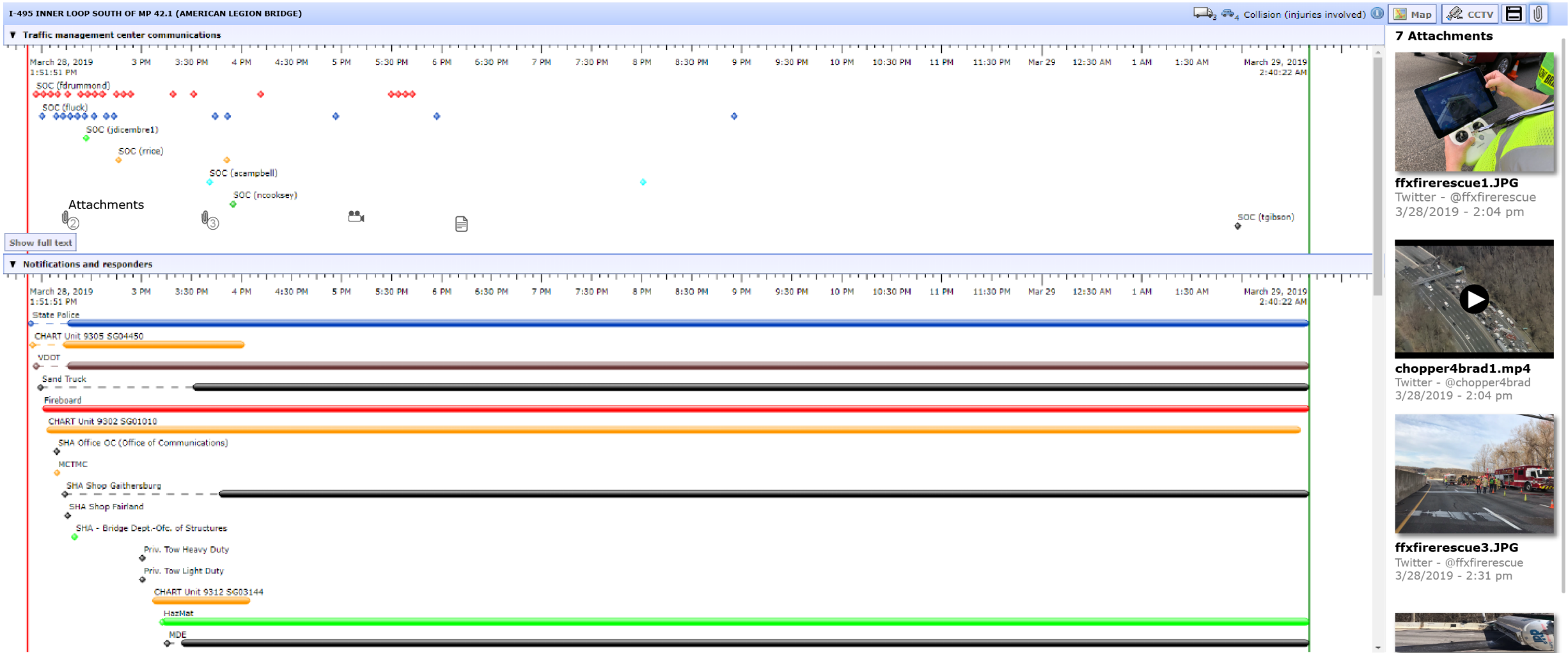
RITIS

PROBE DATA ANALYTICS SUITE

u s e r g r o u p

Attachments in Timeline and EQT


I-495 INNER LOOP SOUTH OF MP 42.1 (AMERICAN LEGION BRIDGE)
Collision (injuries involved)
Map
CCTV
Traffic management center communications
March 28, 2019 1:51:51 PM
3 PM
3:30 PM
4 PM
4:30 PM
5 PM
5:30 PM
6 PM
6:30 PM
7 PM
7:30 PM
8 PM
8:30 PM
9 PM
9:30 PM
10 PM
10:30 PM
11 PM
11:30 PM
Mar 29
12:30 AM
1 AM
1:30 AM
March 29, 2019 2:40:22 AM
SOC (fdrummond)
SOC (fluck)
SOC (jdicembre1)
SOC (rrice)
SOC (acampbell)
SOC (ncooksey)
Attachments
SOC (tgibson)
Show full text
Notifications and responders
State Police
CHART Unit 9305 SG04450
VDOT
Sand Truck
Fireboard
CHART Unit 9302 SG01010
SHA Office OC (Office of Communications)
MCTMC
SHA Shop Gaithersburg
SHA Shop Fairland
SHA - Bridge Dept.-Ofc. of Structures
Priv. Tow Heavy Duty
Priv. Tow Light Duty
CHART Unit 9312 SG03144
HazMat
MDE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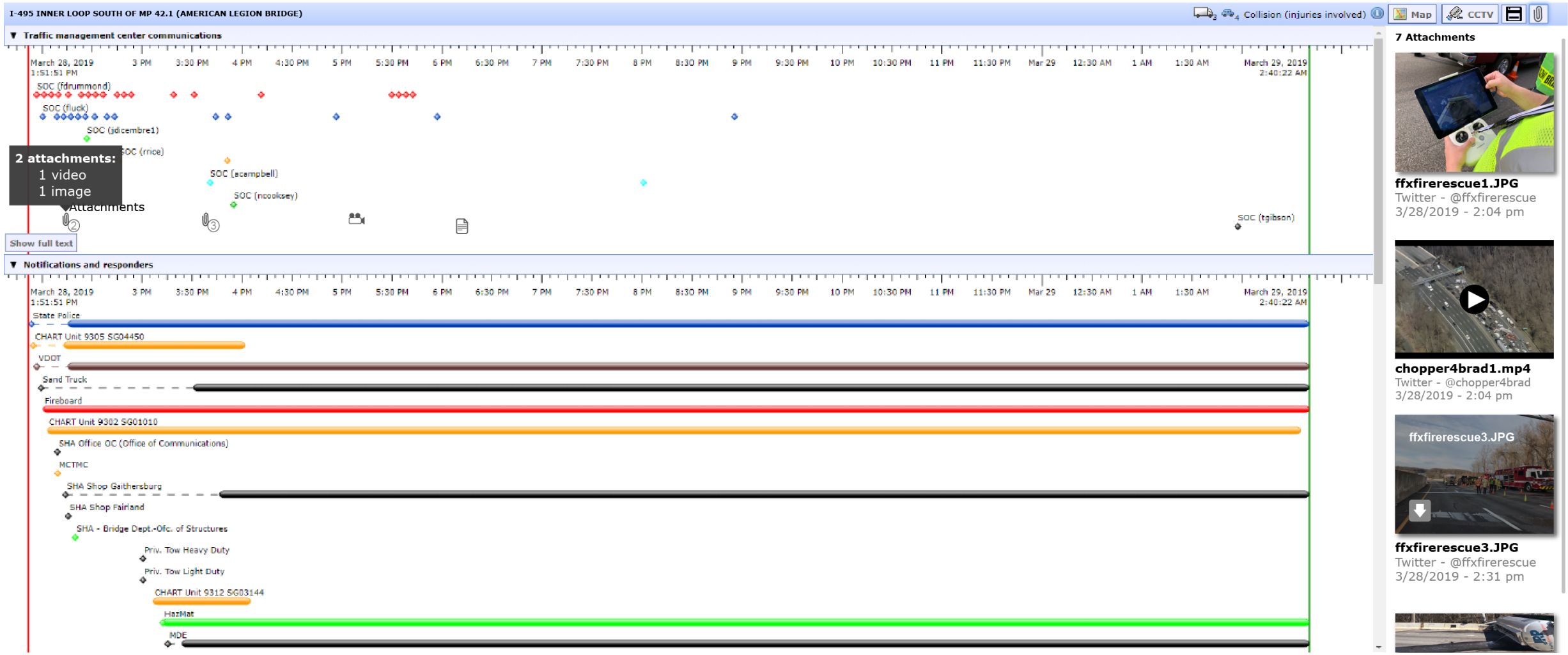
SHA Shop Gaithersburg
SHA Shop Fairland
SHA - Bridge Dept.-Ofc. of Structures
Priv. Tow Heavy Duty
Priv. Tow Light Duty
CHART Unit 9312 SG03144
HazMat
MDE
7 Attachments
ffxfirerescue1.JPG
Twitter - @ffxfirerescue
3/28/2019 - 2:04 pm
chopper4brad1.mp4
Twitter - @chopper4brad
3/28/2019 - 2:04 pm
ffxfirerescue3.JPG
Twitter - @ffxfirerescue
3/28/2019 - 2:31 pm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Mar 29
12:30 AM
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2 attachments:
1 video
1 image
Attachments
Show full text
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Twitter - @ffxfirerescue
3/28/2019 - 2:04 pm
chopper4brad1.mp4
Twitter - @chopper4brad
3/28/2019 - 2:04 pm
ffxfirerescue3.JPG
Twitter - @ffxfirerescue
3/28/2019
2:31 pm
I-495 IL at the American Legion Bridge - Tractor Trailor Crash With Injury - 03282019
Twitter - @ffxfirerescue
3/28/2019 - 2:04 PM
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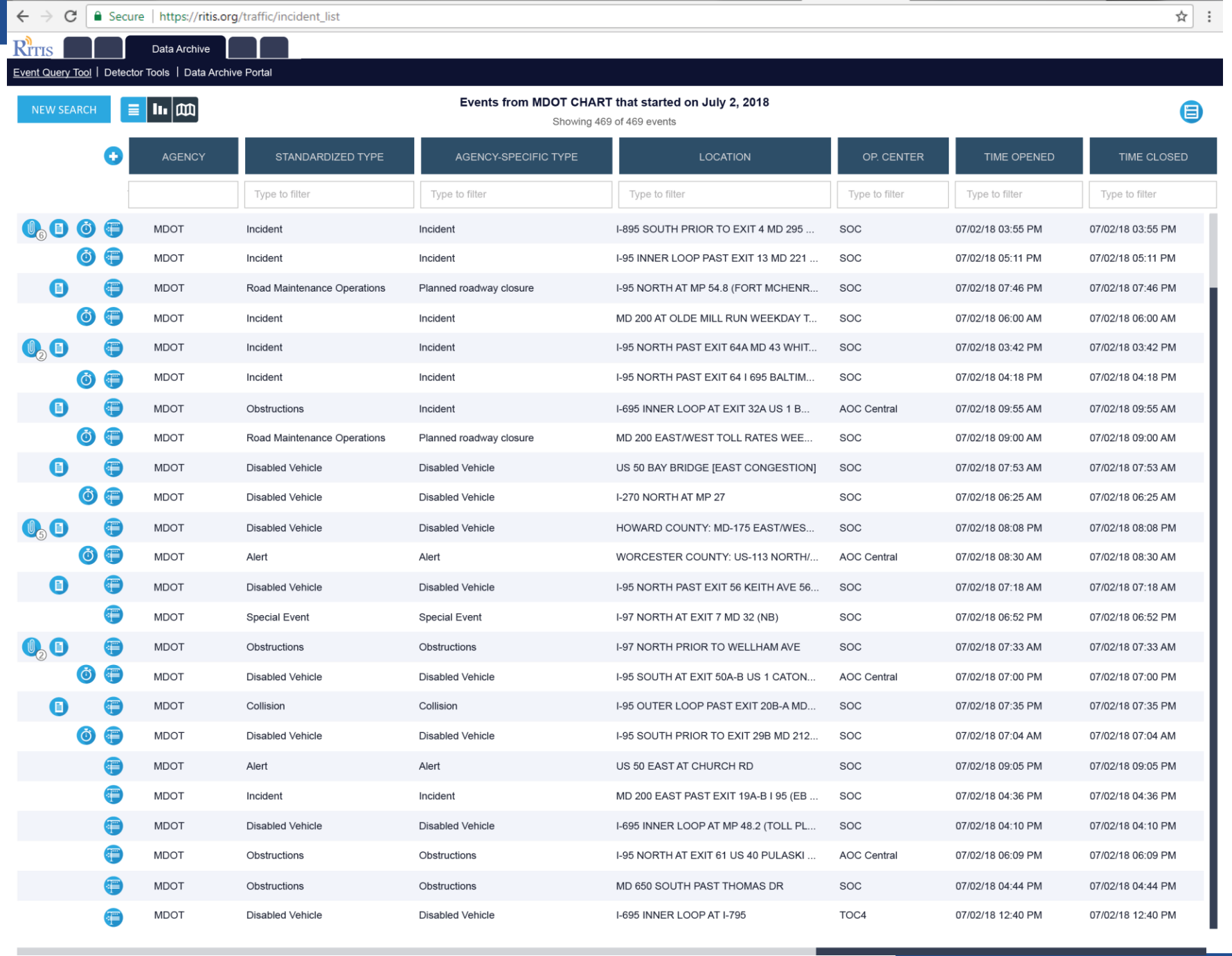
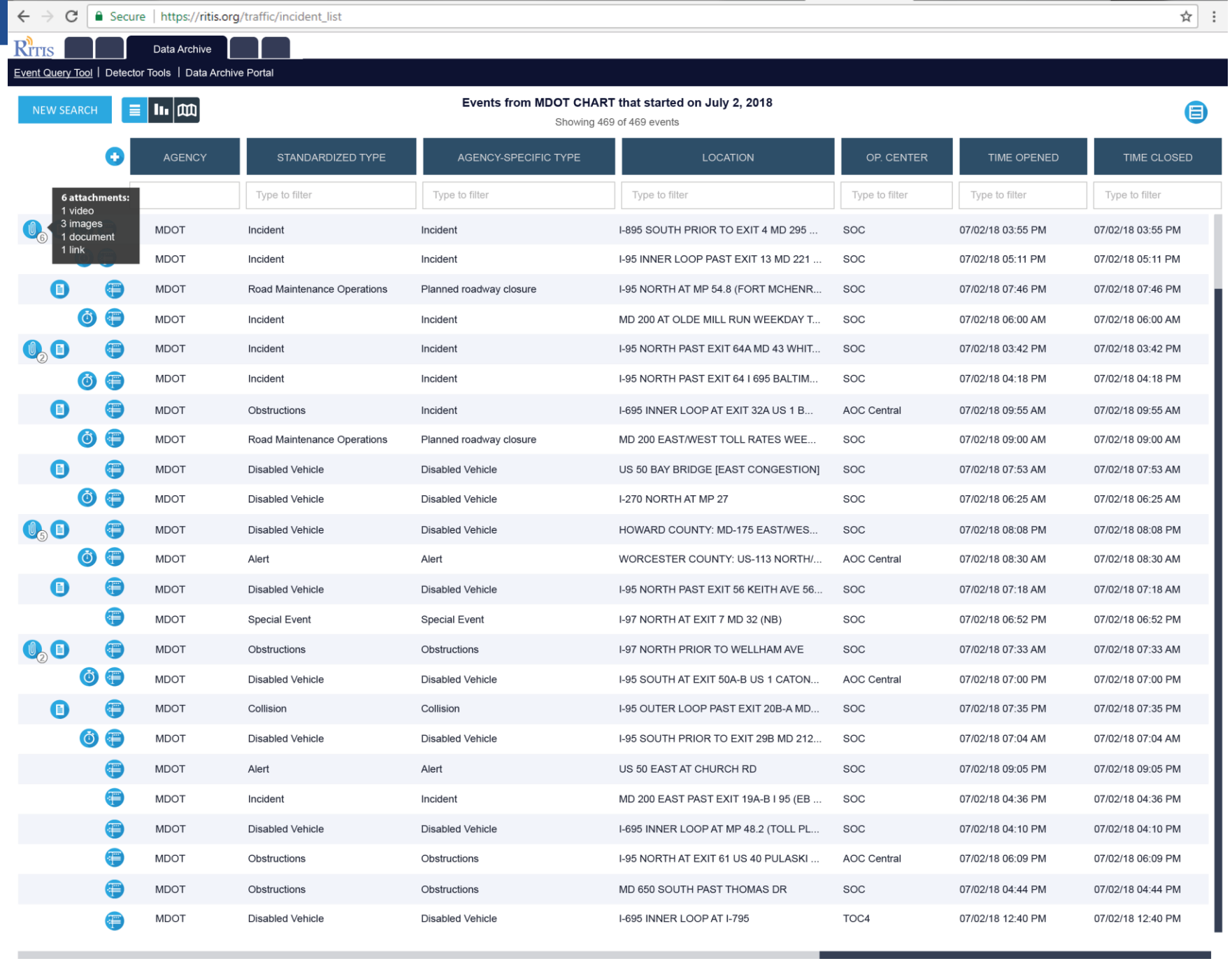
1 of 4


Secure | https://ritis.org/traffic/incident_list
RITIS
Data Archive
Event Query Tool | Detector Tools | Data Archive Portal
NEW SEARCH
Events from MDOT CHART that started on July 2, 2018
Showing 469 of 469 events
AGENCY
STANDARDIZED TYPE
AGENCY-SPECIFIC TYPE
LOCATION
OP. CENTER
TIME OPENED
TIME CLOSED
Type to filter
MDOT | Incident | Incident | I-895 SOUTH PRIOR TO EXIT 4 MD 295 ... | SOC | 07/02/18 03:55 PM | 07/02/18 03:55 PM
MDOT | Incident | Incident | I-95 INNER LOOP PAST EXIT 13 MD 221 ... | SOC | 07/02/18 05:11 PM | 07/02/18 05:11 PM
MDOT | Road Maintenance Operations | Planned roadway closure | I-95 NORTH AT MP 54.8 (FORT MCHENR... | SOC | 07/02/18 07:46 PM | 07/02/18 07:46 PM
MDOT | Incident | Incident | MD 200 AT OLDE MILL RUN WEEKDAY T... | SOC | 07/02/18 06:00 AM | 07/02/18 06:00 AM
MDOT | Incident | Incident | I-95 NORTH PAST EXIT 64A MD 43 WHIT... | SOC | 07/02/18 03:42 PM | 07/02/18 03:42 PM
MDOT | Incident | Incident | I-95 NORTH PAST EXIT 64 I 695 BALTIM... | SOC | 07/02/18 04:18 PM | 07/02/18 04:18 PM
MDOT | Obstructions | Incident | I-695 INNER LOOP AT EXIT 32A US 1 B... | AOC Central | 07/02/18 09:55 AM | 07/02/18 09:55 AM
MDOT | Road Maintenance Operations | Planned roadway closure | MD 200 EAST/WEST TOLL RATES WEE... | SOC | 07/02/18 09:00 AM | 07/02/18 09:00 AM
MDOT | Disabled Vehicle | Disabled Vehicle | US 50 BAY BRIDGE [EAST CONGESTION] | SOC | 07/02/18 07:53 AM | 07/02/18 07:53 AM
MDOT | Disabled Vehicle | Disabled Vehicle | I-270 NORTH AT MP 27 | SOC | 07/02/18 06:25 AM | 07/02/18 06:25 AM
MDOT | Disabled Vehicle | Disabled Vehicle | HOWARD COUNTY: MD-175 EAST/WES... | SOC | 07/02/18 08:08 PM | 07/02/18 08:08 PM
MDOT | Alert | Alert | WORCESTER COUNTY: US-113 NORTH/... | AOC Central | 07/02/18 08:30 AM | 07/02/18 08:30 AM
MDOT | Disabled Vehicle | Disabled Vehicle | I-95 NORTH PAST EXIT 56 KEITH AVE 56... | SOC | 07/02/18 07:18 AM | 07/02/18 07:18 AM
MDOT | Special Event | Special Event | I-97 NORTH AT EXIT 7 MD 32 (NB) | SOC | 07/02/18 06:52 PM | 07/02/18 06:52 PM
MDOT | Obstructions | Obstructions | I-97 NORTH PRIOR TO WELLHAM AVE | SOC | 07/02/18 07:33 AM | 07/02/18 07:33 AM
MDOT | Disabled Vehicle | Disabled Vehicle | I-95 SOUTH AT EXIT 50A-B US 1 CATON... | AOC Central | 07/02/18 07:00 PM | 07/02/18 07:00 PM
MDOT | Collision | Collision | I-95 OUTER LOOP PAST EXIT 20B-A MD... | SOC | 07/02/18 07:35 PM | 07/02/18 07:35 PM
MDOT | Disabled Vehicle | Disabled Vehicle | I-95 SOUTH PRIOR TO EXIT 29B MD 212... | SOC | 07/02/18 07:04 AM | 07/02/18 07:04 AM
MDOT | Alert | Alert | US 50 EAST AT CHURCH RD | SOC | 07/02/18 09:05 PM | 07/02/18 09:05 PM
MDOT | Incident | Incident | MD 200 EAST PAST EXIT 19A-B I 95 (EB ... | SOC | 07/02/18 04:36 PM | 07/02/18 04:36 PM
MDOT | Disabled Vehicle | Disabled Vehicle | I-695 INNER LOOP AT MP 48.2 (TOLL PL... | SOC | 07/02/18 04:10 PM | 07/02/18 04:10 PM
MDOT | Obstructions | Obstructions | I-95 NORTH AT EXIT 61 US 40 PULASKI ... | AOC Central | 07/02/18 06:09 PM | 07/02/18 06:09 PM
MDOT | Obstructions | Obstructions | MD 650 SOUTH PAST THOMAS DR | SOC | 07/02/18 04:44 PM | 07/02/18 04:44 PM
MDOT | Disabled Vehicle | Disabled Vehicle | I-695 INNER LOOP AT I-795 | TOC4 | 07/02/18 12:40 PM | 07/02/18 12:40 PM



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MDOT	Incident	Incident	I-95 INNER LOOP PAST EXIT 13 MD 221 ...	SOC	07/02/18 05:11 PM	07/02/18 05:11 PM
MDOT	Road Maintenance Operations	Planned roadway closure	I-95 NORTH AT MP 54.8 (FORT MCHENR...	SOC	07/02/18 07:46 PM	07/02/18 07:46 PM
MDOT	Incident	Incident	MD 200 AT OLDE MILL RUN WEEKDAY T...	SOC	07/02/18 06:00 AM	07/02/18 06:00 AM
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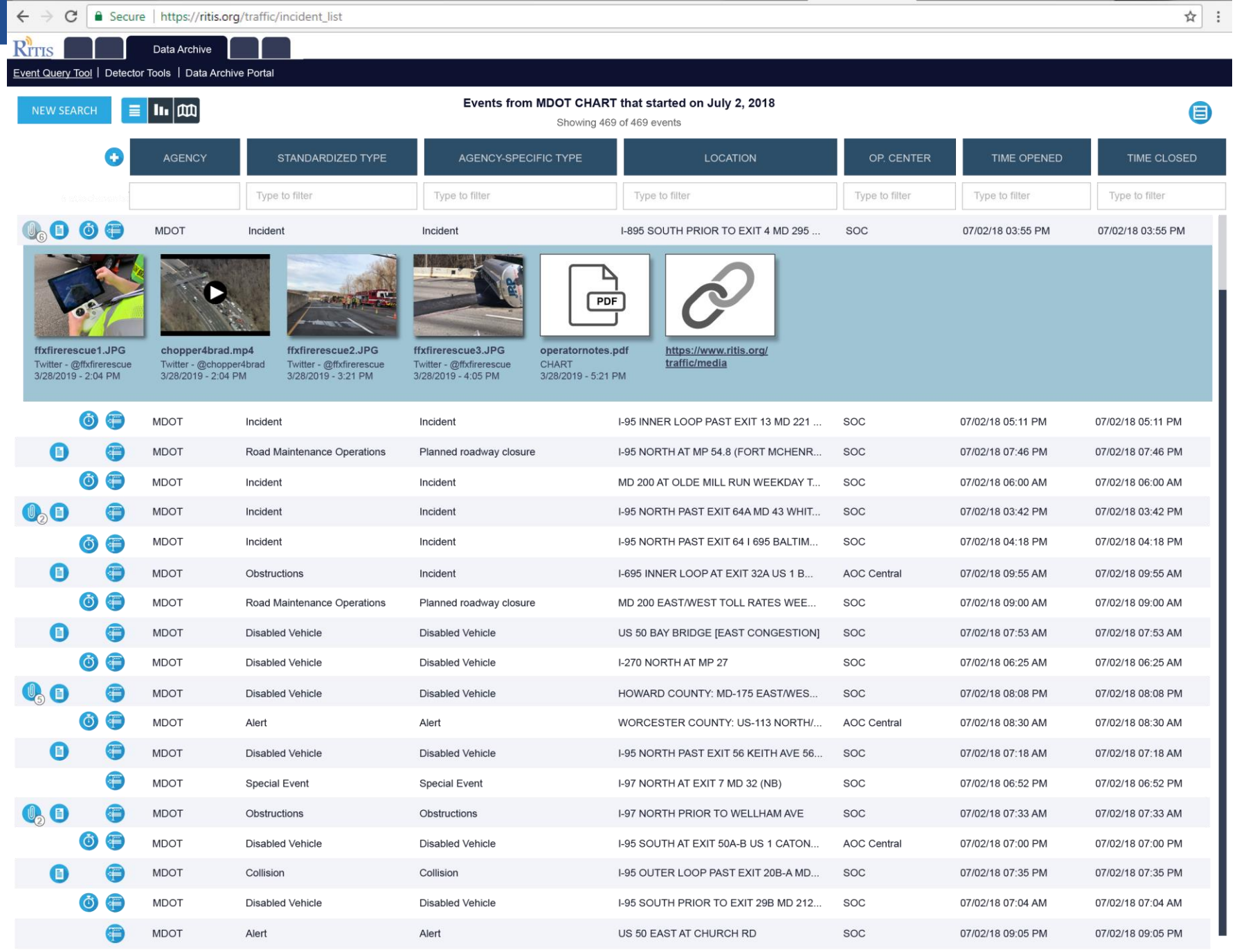
MDOT	Obstructions	Obstructions	I-95 NORTH AT EXIT 61 US 40 PULASKI ...	AOC Central	07/02/18 06:09 PM	07/02/18 06:09 PM
MDOT	Obstructions	Obstructions	MD 650 SOUTH PAST THOMAS DR	SOC	07/02/18 04:44 PM	07/02/18 04:44 PM
MDOT	Disabled Vehicle	Disabled Vehicle	I-695 INNER LOOP AT I-795	TOC4	07/02/18 12:40 PM	07/02/18 12:40 PM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ffxfirerescue2.JPG
Twitter - @ffxfirerescue
3/28/2019 - 3:21 PM
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Twitter - @ffxfirerescue
3/28/2019 - 4:05 PM
PDF
operatornotes.pdf
CHART
3/28/2019 - 5:21 PM
https://www.ritis.org/traffic/media
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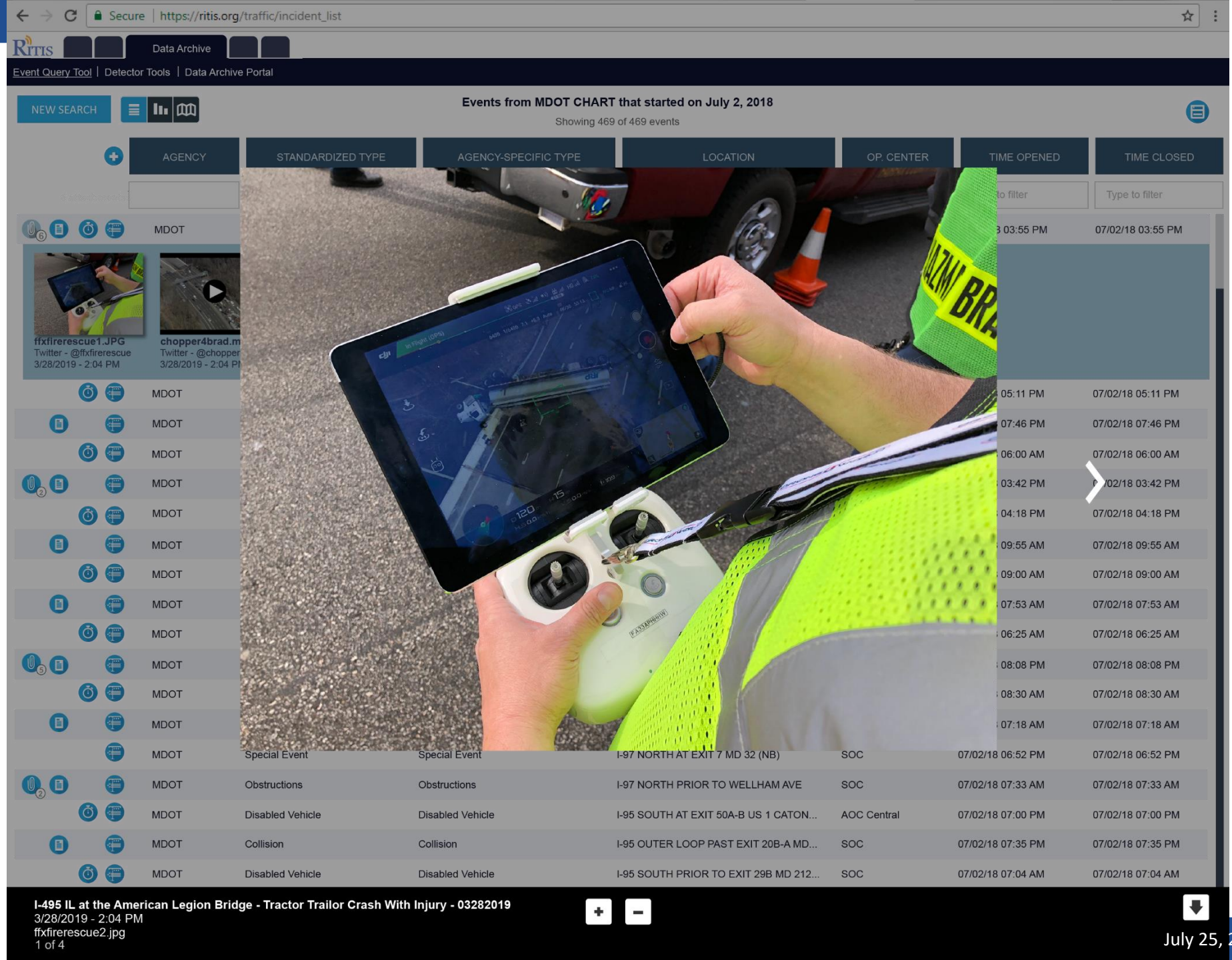
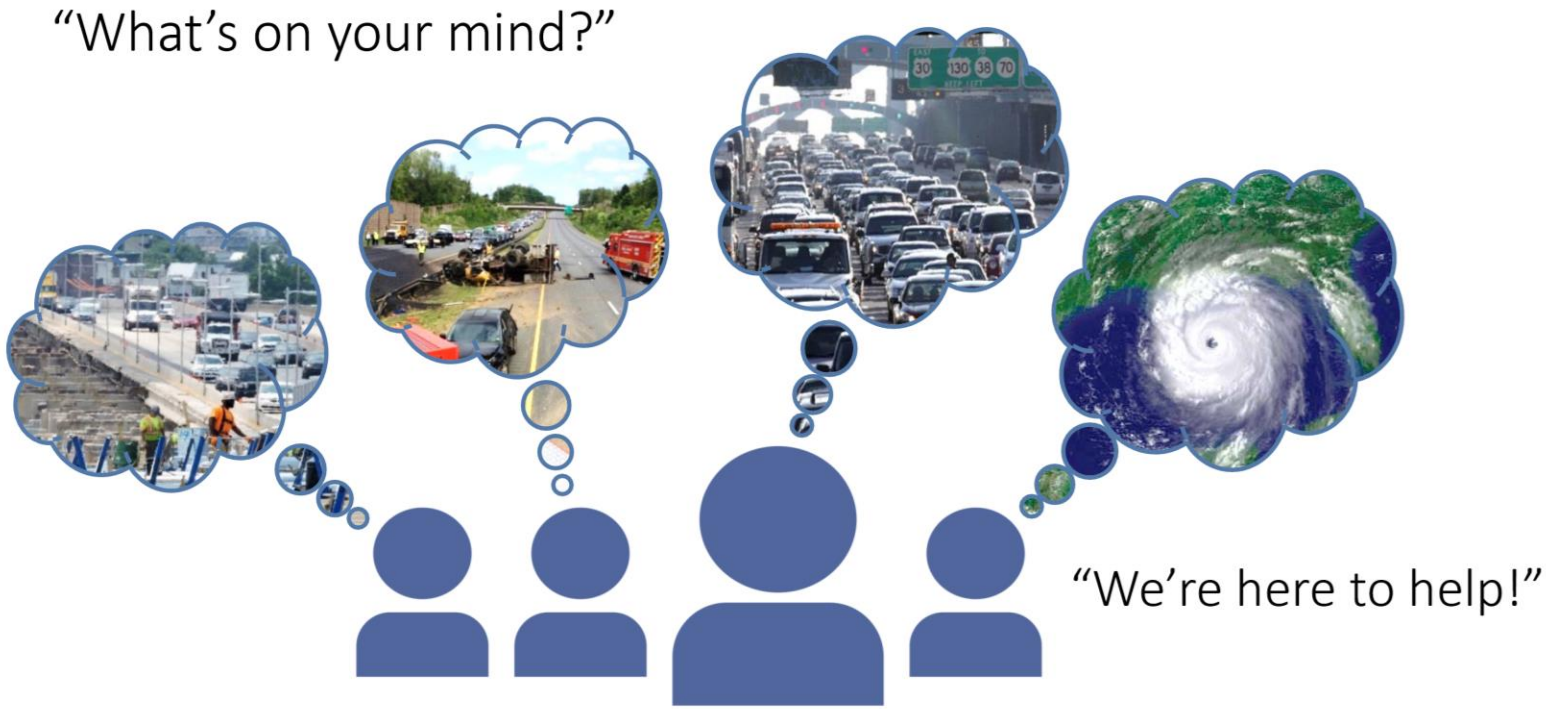
MDOT | Road Maintenance Operations | Planned roadway closure | I-95 NORTH AT MP 54.8 (FORT MCHENR... | SOC | 07/02/18 07:46 PM | 07/02/18 07:46 PM
MDOT | Incident | Incident | MD 200 AT OLDE MILL RUN WEEKDAY T... | SOC | 07/02/18 06:00 AM | 07/02/18 06:00 AM
MDOT | Incident | Incident | I-95 NORTH PAST EXIT 64A MD 43 WHIT... | SOC | 07/02/18 03:42 PM | 07/02/18 03:42 PM
MDOT | Incident | Incident | I-95 NORTH PAST EXIT 64 I 695 BALTIM... | SOC | 07/02/18 04:18 PM | 07/02/18 04:18 PM
MDOT | Obstructions | Incident | I-695 INNER LOOP AT EXIT 32A US 1 B... | AOC Central | 07/02/18 09:55 AM | 07/02/18 09:55 AM
MDOT | Road Maintenance Operations | Planned roadway closure | MD 200 EAST/WEST TOLL RATES WEE... | SOC | 07/02/18 09:00 AM | 07/02/18 09:00 AM
MDOT | Disabled Vehicle | Disabled Vehicle | US 50 BAY BRIDGE [EAST CONGESTION] | SOC | 07/02/18 07:53 AM | 07/02/18 07:53 AM
MDOT | Disabled Vehicle | Disabled Vehicle | I-270 NORTH AT MP 27 | SOC | 07/02/18 06:25 AM | 07/02/18 06:25 AM
MDOT | Disabled Vehicle | Disabled Vehicle | HOWARD COUNTY: MD-175 EAST/WES... | SOC | 07/02/18 08:08 PM | 07/02/18 08:08 PM
MDOT | Alert | Alert | WORCESTER COUNTY: US-113 NORTH/... | AOC Central | 07/02/18 08:30 AM | 07/02/18 08:30 AM
MDOT | Disabled Vehicle | Disabled Vehicle | I-95 NORTH PAST EXIT 56 KEITH AVE 56... | SOC | 07/02/18 07:18 AM | 07/02/18 07:18 AM
MDOT | Special Event | Special Event | I-97 NORTH AT EXIT 7 MD 32 (NB) | SOC | 07/02/18 06:52 PM | 07/02/18 06:52 PM
MDOT | Obstructions | Obstructions | I-97 NORTH PRIOR TO WELLHAM AVE | SOC | 07/02/18 07:33 AM | 07/02/18 07:33 AM
MDOT | Disabled Vehicle | Disabled Vehicle | I-95 SOUTH AT EXIT 50A-B US 1 CATON... | AOC Central | 07/02/18 07:00 PM | 07/02/18 07:00 PM
MDOT | Collision | Collision | I-95 OUTER LOOP PAST EXIT 20B-A MD... | SOC | 07/02/18 07:35 PM | 07/02/18 07:35 PM
MDOT | Disabled Vehicle | Disabled Vehicle | I-95 SOUTH PRIOR TO EXIT 29B MD 212... | SOC | 07/02/18 07:04 AM | 07/02/18 07:04 AM
MDOT | Alert | Alert | US 50 EAST AT CHURCH RD | SOC | 07/02/18 09:05 PM | 07/02/18 09:05 PM


Secure | https://ritis.org/traffic/incident_list
RITIS
Data Archive
Event Query Tool | Detector Tools | Data Archive Portal
NEW SEARCH
Events from MDOT CHART that started on July 2, 2018
Showing 469 of 469 events
AGENCY
STANDARDIZED TYPE
AGENCY-SPECIFIC TYPE
LOCATION
OP. CENTER
TIME OPENED
TIME CLOSED
Type to filter
ffxfirerescue1.JPG
Twitter - @ffxfirerescue
3/28/2019 - 2:04 PM
chopper4brad.m
Twitter - @chopper
3/28/2019 - 2:04 PM
MDOT
07/02/18 03:55 PM
07/02/18 05:11 PM
07/02/18 07:46 PM
07/02/18 06:00 AM
07/02/18 03:42 PM
07/02/18 04:18 PM
07/02/18 09:55 AM
07/02/18 09:00 AM
07/02/18 07:53 AM
07/02/18 06:25 AM
07/02/18 08:08 PM
07/02/18 08:30 AM
07/02/18 07:18 AM
MDOT Special Event Special Event I-97 NORTH AT EXIT 7 MD 32 (NB) SOC 07/02/18 06:52 PM 07/02/18 06:52 PM
MDOT Obstructions Obstructions I-97 NORTH PRIOR TO WELLHAM AVE SOC 07/02/18 07:33 AM 07/02/18 07:33 AM
MDOT Disabled Vehicle Disabled Vehicle I-95 SOUTH AT EXIT 50A-B US 1 CATON... AOC Central 07/02/18 07:00 PM 07/02/18 07:00 PM
MDOT Collision Collision I-95 OUTER LOOP PAST EXIT 20B-A MD... SOC 07/02/18 07:35 PM 07/02/18 07:35 PM
MDOT Disabled Vehicle Disabled Vehicle I-95 SOUTH PRIOR TO EXIT 29B MD 212... SOC 07/02/18 07:04 AM 07/02/18 07:04 AM
I-495 IL at the American Legion Bridge - Tractor Trailor Crash With Injury - 03282019
3/28/2019 - 2:04 PM
ffxfirerescue2.jpg
1 of 4

Your Input is Needed!

- All features and functionality are driven by state/mpo users.
- You are welcome to join any of our User Groups / Working Groups / Listening Sessions to brainstorm/define these new features and functionality.
- You can also type your comments to us today either in the chat box below, or with an email to support@ritis.org



Agency Input Session

"What's on your mind?"

Wrap Up

Matthew Glasser, Georgia Department of Transportation

User Group Co-chair

Questions?

Please contact:

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RITIS or PDA Suite – Michael Pack at PackML@umd.edu

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PDA Suite Technical Support – pda-support@ritis.org

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I-95 CORRIDOR COALITION

CATT LABORATORY