CATT LABORATORY

RITIS User Group

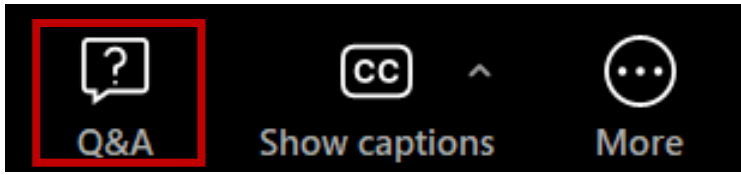
RITIS User Group Web Meeting

March 5, 2026

In collaboration with THE EASTERN TRANSPORTATION COALITION

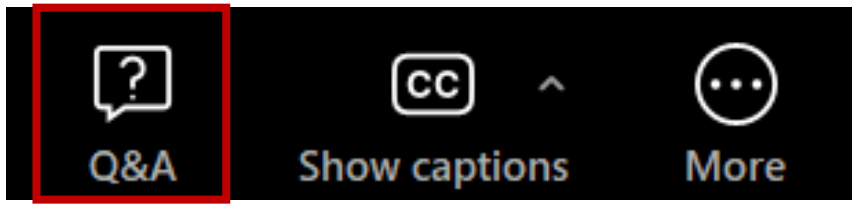
Welcome!

- We are using Zoom **Webinar**
- **AUDIO (Computer):** Use your computer speakers and microphone by clicking the "Join Audio" button at the bottom left of the screen. You will be muted.
- **Alternate Audio (Phone):** Call into the meeting by dialing the phone number based on your location (provided in the confirmation email) and enter the Meeting ID at the prompt. You will be muted.
- **This web meeting is being recorded.**
- **Questions** with the audio or web? Please contact Nicole directly via email (nforest@tetcoalition.org)
- Please use the **Q&A box** for questions to the presenters. The **Chatbox** is not available to participants.

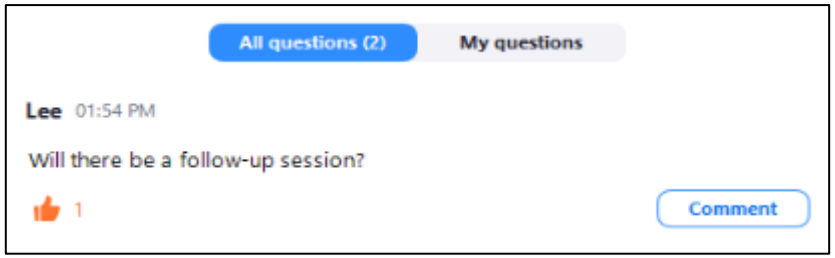


Asking Questions in the Q&A Box

- Click on the Q&A icon at the bottom of your screen



- The questions in the Q&A box will be monitored and answered at the end of each presentation or at the end of the meeting
- You can keep track of your questions in the “My Questions” tab in the Q&A box



Asking Questions Verbally

- Please raise your hand *(click on the hand icon at the bottom of the screen)* and a host will unmute you.

- Please give your name and agency before asking your question
- **Please mute yourself when you are finished speaking**

Welcome from the Coalition and upcoming RITIS Events!

Nicole Forest
The Eastern Transportation Coalition
TSMO Program Associate

Event	Date
RITIS User Group Web Meeting	June 4, 2026 1:30pm-3:00pm

Welcome & Introductions

DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION

Jesse Buerk

Associate Director, Capital Programs & Project Development

DVRPC

RITIS User Group Co-chair

Today's Meeting

Presentation	Presenter	Time
RITIS & Events Update Welcome & Introductions	Nicole Forest, The Eastern Transportation Coalition Jesse Buerk, RITIS User Group Co-chair	5 mins
Poll Questions	Jesse Buerk, RITIS User Group Co-chair	5 mins
What's New and Coming Soon	Michael Pack, Joe Strube, Charles Lattimer, & Greg Jordan, UMD CATT Lab	25 mins
PM3 Reporting Updates	Greg Jordan, UMD CATT Lab	5 mins
Agency Spotlight Presentations: 1. Work with RITIS Data – Ramp Metering 2. CMP Technical Report Story Map 3. Operations use-cases for Dashcam Images	1. William Morgan, GDOT 2. Ian Newman, MWCOG 3. Taran Hutchinson, MATOC	40 mins
User Feedback Session & Wrap Up	Michael Pack & Jesse Buerk	10 mins

Today's Speakers

Michael Pack
CATT Laboratory

Greg Jordan
CATT Laboratory

Joe Strube
CATT Laboratory

Charles Lattimer
CATT Laboratory

Taran Hutchinson
Facilitator
Metropolitan Area Transportation Operations Coordination

William Morgan
Transportation Specialist V (ITS)
Georgia Department of Transportation

Ian Newman
Program Manager, Travel Monitoring & Planning Assistance
Metropolitan Washington Council of Governments

Polls 1, 2, and 3

Poll 1: How often do you attend RITIS User Group Web Meetings?

a) 1-2 times per year
b) 3-4 times per year
c) This is my first meeting

Poll 2: How do you use the data and visualization results from RITIS tools (choose one)?

1. We use results directly from RITIS to develop products (reports, maps, etc.)
2. We download the data and use our own agency's in-house tools to create tables and visuals for product development
3. We do a little bit of both

Poll 3: Who is your primary audience for sharing information that was developed from RITIS and PDA Suite (choose one)?

1. Peers
2. Management
3. Executive Leadership
4. Elected Officials
5. General Public

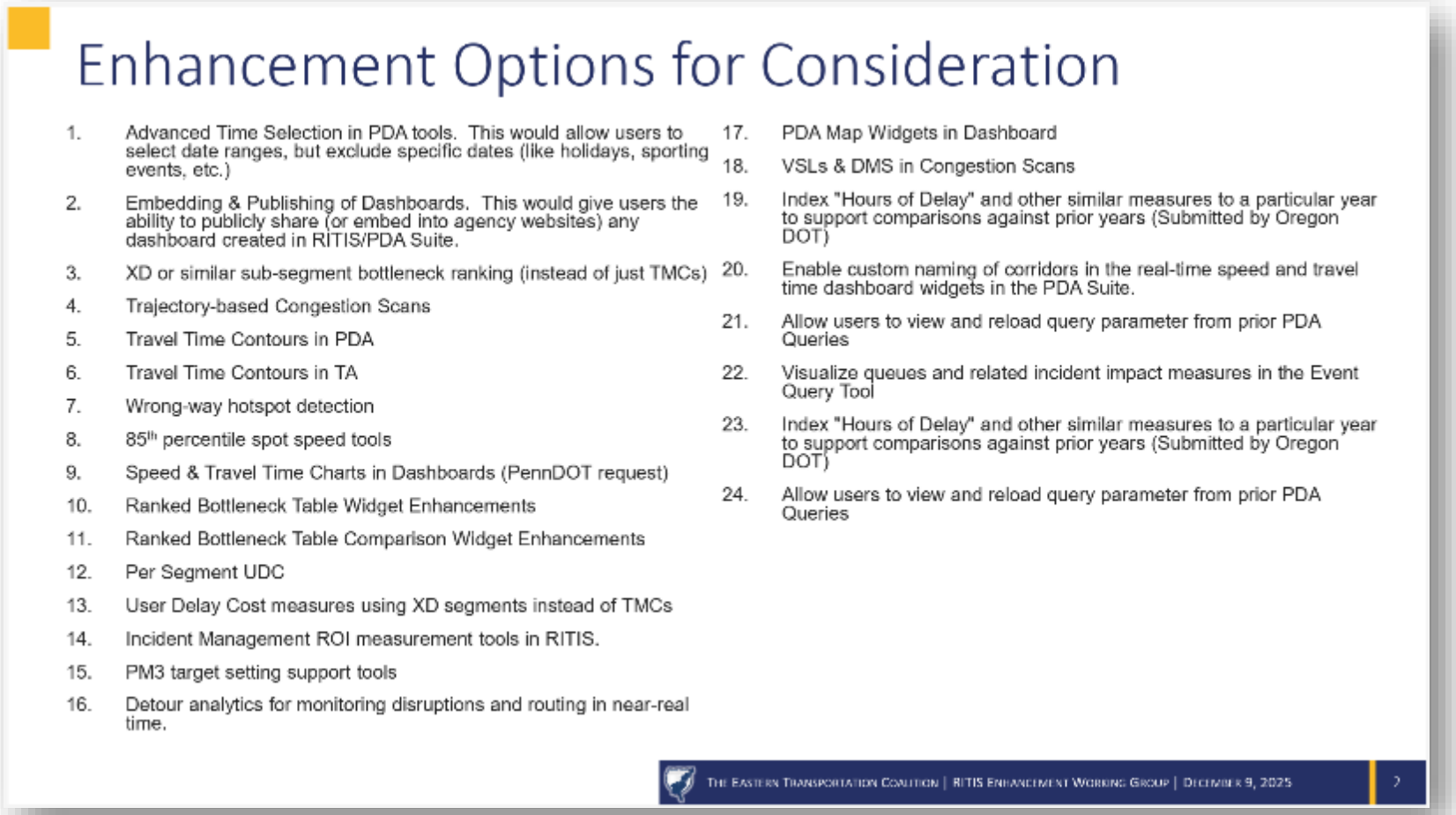
Demonstrations of Significant Work Updates

Michael Pack, Greg Jordan, & Charles Lattimer
Director

University of Maryland CATT Lab

Updates on Enhancement Group Voting

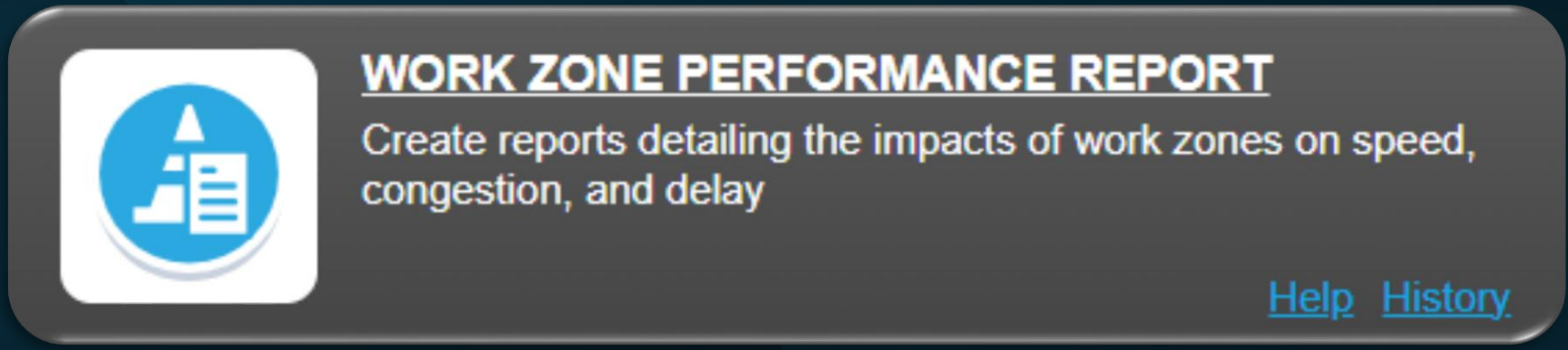
- Bob Frey with MassDOT chairing this group
- Pooled fund
- Voted on ~25 potential enhancements
- Voting finished last Friday
- Enhancement group meeting on March 12 to review the results



Enhancement Options for Consideration

1. Advanced Time Selection in PDA tools. This would allow users to select date ranges, but exclude specific dates (like holidays, sporting events, etc.)
2. Embedding & Publishing of Dashboards. This would give users the ability to publicly share (or embed into agency websites) any dashboard created in RITIS/PDA Suite.
3. XD or similar sub-segment bottleneck ranking (instead of just TMCs)
4. Trajectory-based Congestion Scans
5. Travel Time Contours in PDA
6. Travel Time Contours in TA
7. Wrong-way hotspot detection
8. 85th percentile spot speed tools
9. Speed & Travel Time Charts in Dashboards (PennDOT request)
10. Ranked Bottleneck Table Widget Enhancements
11. Ranked Bottleneck Table Comparison Widget Enhancements
12. Per Segment UDC
13. User Delay Cost measures using XD segments instead of TMCs
14. Incident Management ROI measurement tools in RITIS.
15. PM3 target setting support tools
16. Detour analytics for monitoring disruptions and routing in near-real time.
17. PDA Map Widgets in Dashboard
18. VSLs & DMS in Congestion Scans
19. Index "Hours of Delay" and other similar measures to a particular year to support comparisons against prior years (Submitted by Oregon DOT)
20. Enable custom naming of corridors in the real-time speed and travel time dashboard widgets in the PDA Suite.
21. Allow users to view and reload query parameter from prior PDA Queries
22. Visualize queues and related incident impact measures in the Event Query Tool
23. Index "Hours of Delay" and other similar measures to a particular year to support comparisons against prior years (Submitted by Oregon DOT)
24. Allow users to view and reload query parameter from prior PDA Queries

Work Zone Performance Report



Key Features Include:

- Launchable from from anywhere in RITIS
- Configurable performance goals for congestion, speed, and delay.
- Work zone analysis for upstream and downstream segments.
- Weather and traffic incident data for assessing influence on work zone performance.
- A dynamic three-to-seven-page PDF ready for export and distribution.

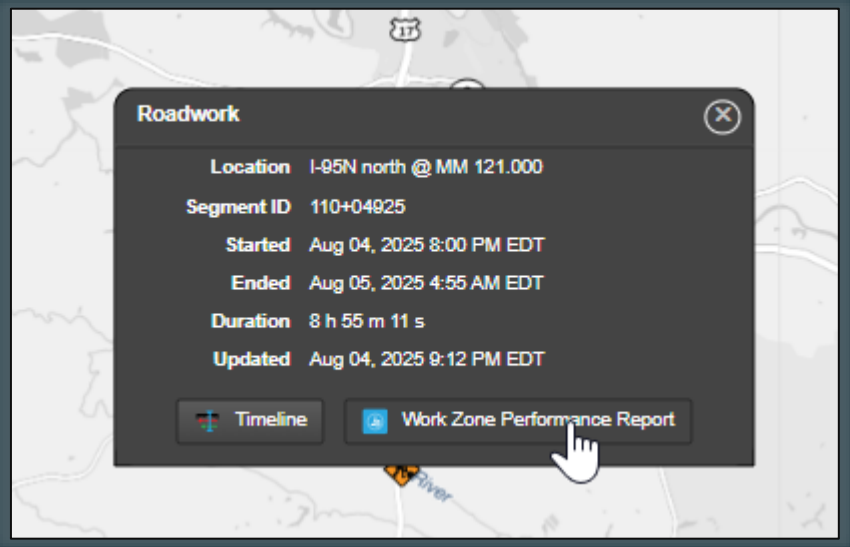
Switch to Demo

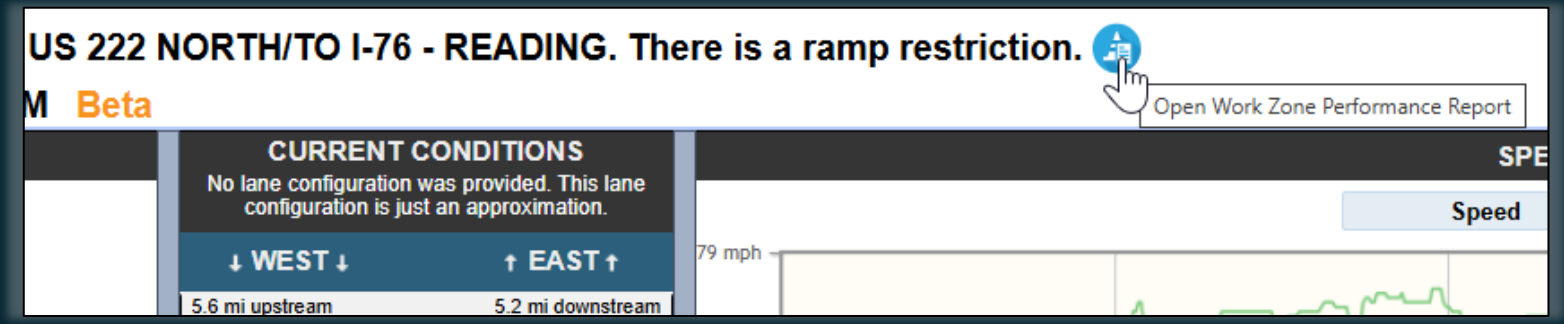
Live Demo - details

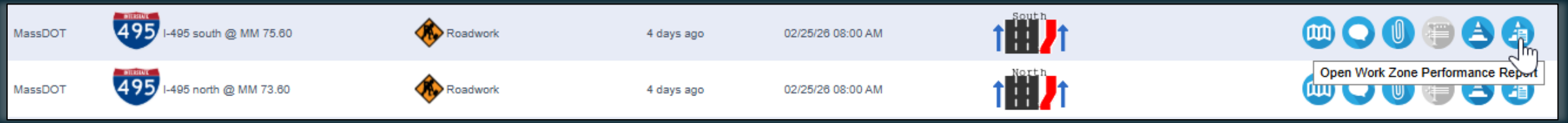
- Demo URL
- https://pda.ritis.org/suite/work-zone-performance-report/?uuid=403262a3-0def-4e3f-ace8-0bac5cec0d8f
- Work Zone information:
- Aug 3-7, 2025
- Interstate 95 Northbound | Exit 118 (Thornburg) to Exit 126 (Spotsylvania)
    - Sunday – Thursday, 9 p.m.-4:30 a.m. Alternating lane closures between mile markers 121-126 for milling and paving mobile operation.

- https://www.vdot.virginia.gov/news-events/news/fredericksburg-district/fredericksburg-district-weekly-traffic-alert-for-august-3---9-2025.php

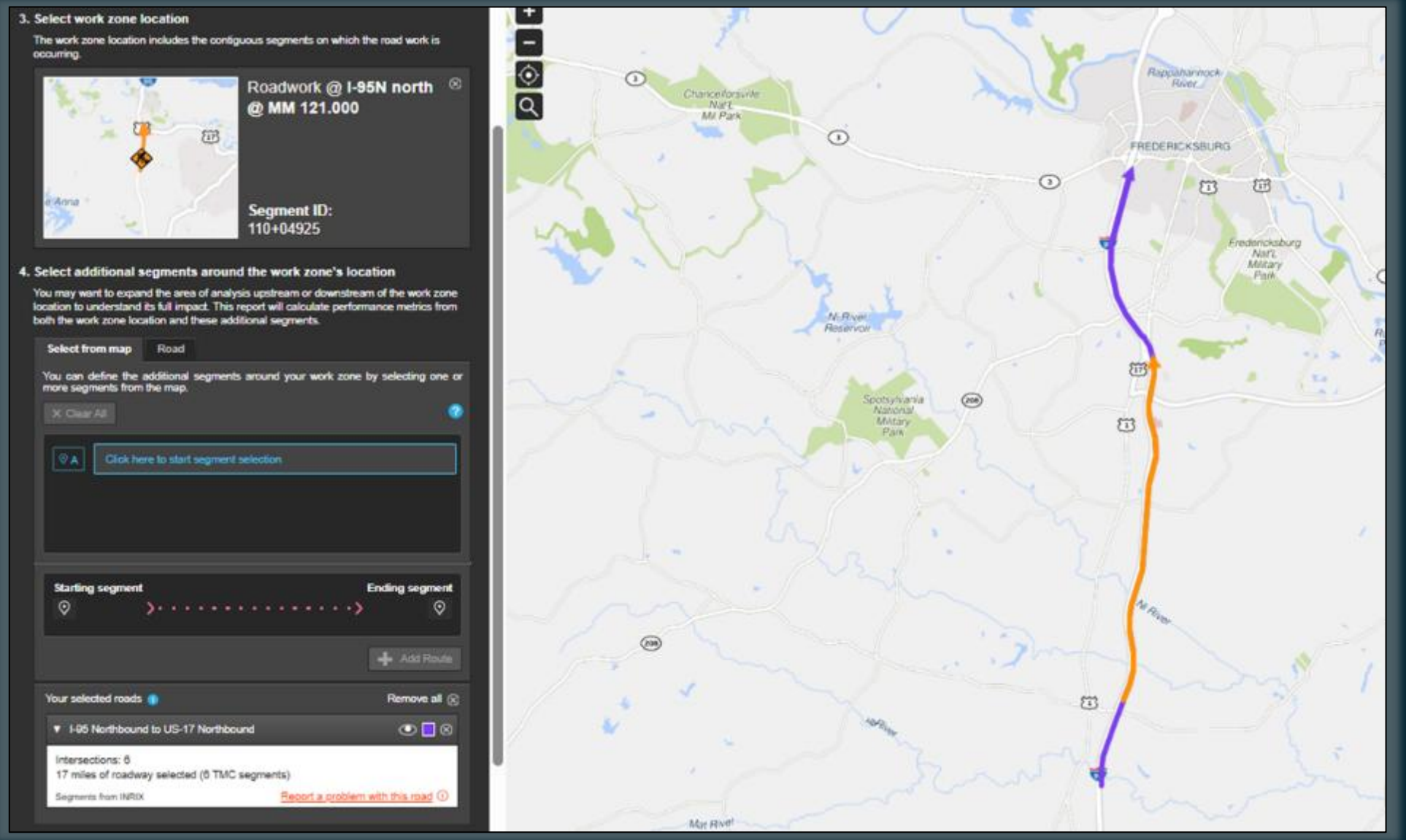
Launchable from anywhere in RITIS





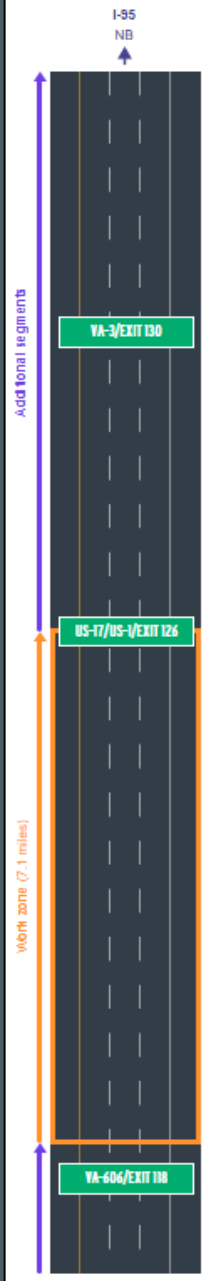


Upstream and Downstream Segments



Configurable performance goals

Congestion metrics (All segments)



Goal

No more than a collective:

1 miles

of congestion

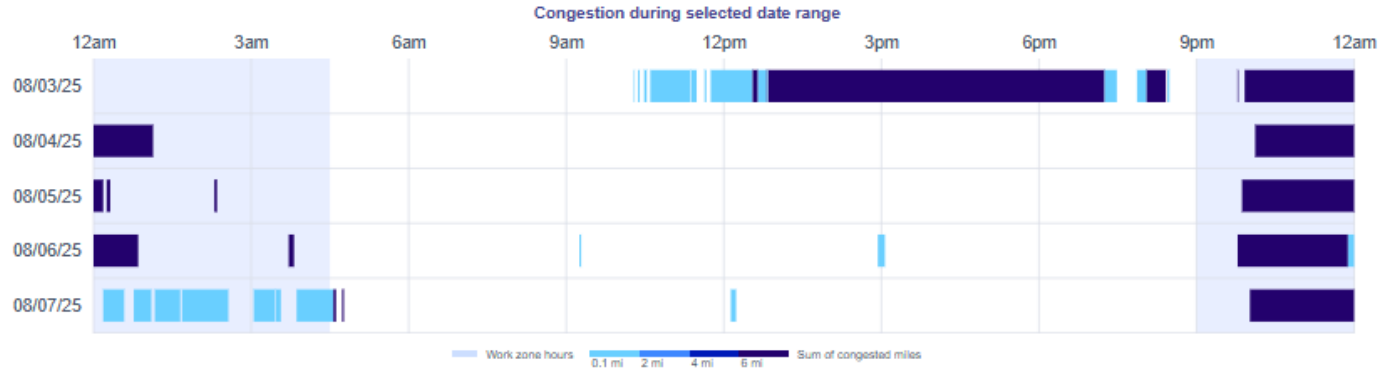
Lasting: > 10 mins

during the work zone hours of operation.

Work zone operations met this goal

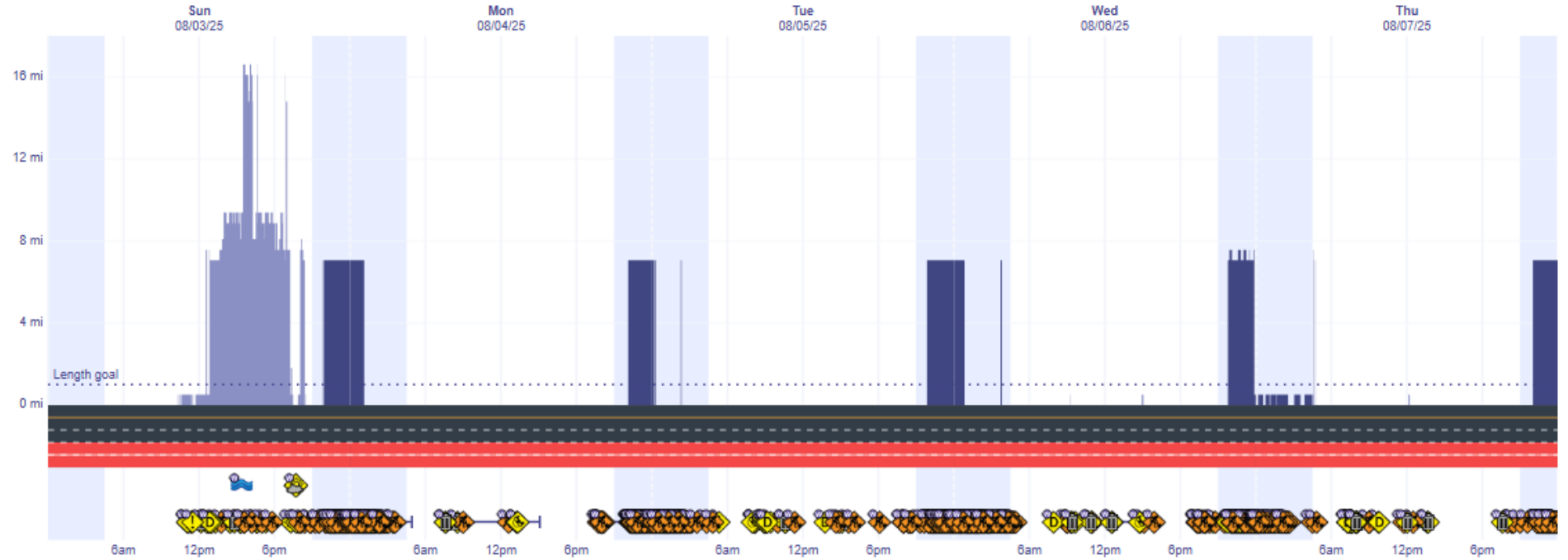
67.1%

of the time



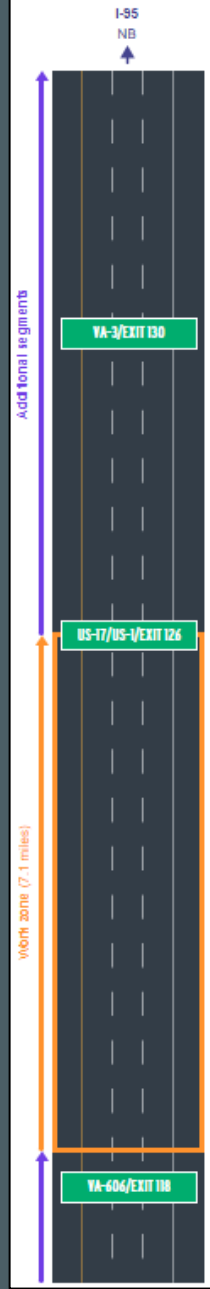
Collective length & duration of congestion

Aug 3, 2025 - Aug 7, 2025 | Work zone hours | Congestion outside hours of operation | Congestion during hours of operation | Duration



Sun 08/03/25	Mon 08/04/25	Tue 08/05/25	Wed 08/06/25	Thu 08/07/25
61 Roadwork	134 Roadwork	152 Roadwork	182 Roadwork	100 Roadwork
8 Incident	5 Debris	8 Disabled Vehicle	6 Disabled Vehicle	16 Debris
5 Debris	1 Disabled Vehicle	7 Debris	6 Debris	8 Disabled Vehicle
9 Other	1 Other	2 Other	6 Other	

Speed metrics



Goal

Don't let speeds drop below:

55 mph

Lasting: 5 mins

during the work zone's hours of operation.

Work zone operations met this goal

83.5%

of the time

Average speed approaching work zone

71 mph

Average speed through work zone

44 mph

Max speed through work zone

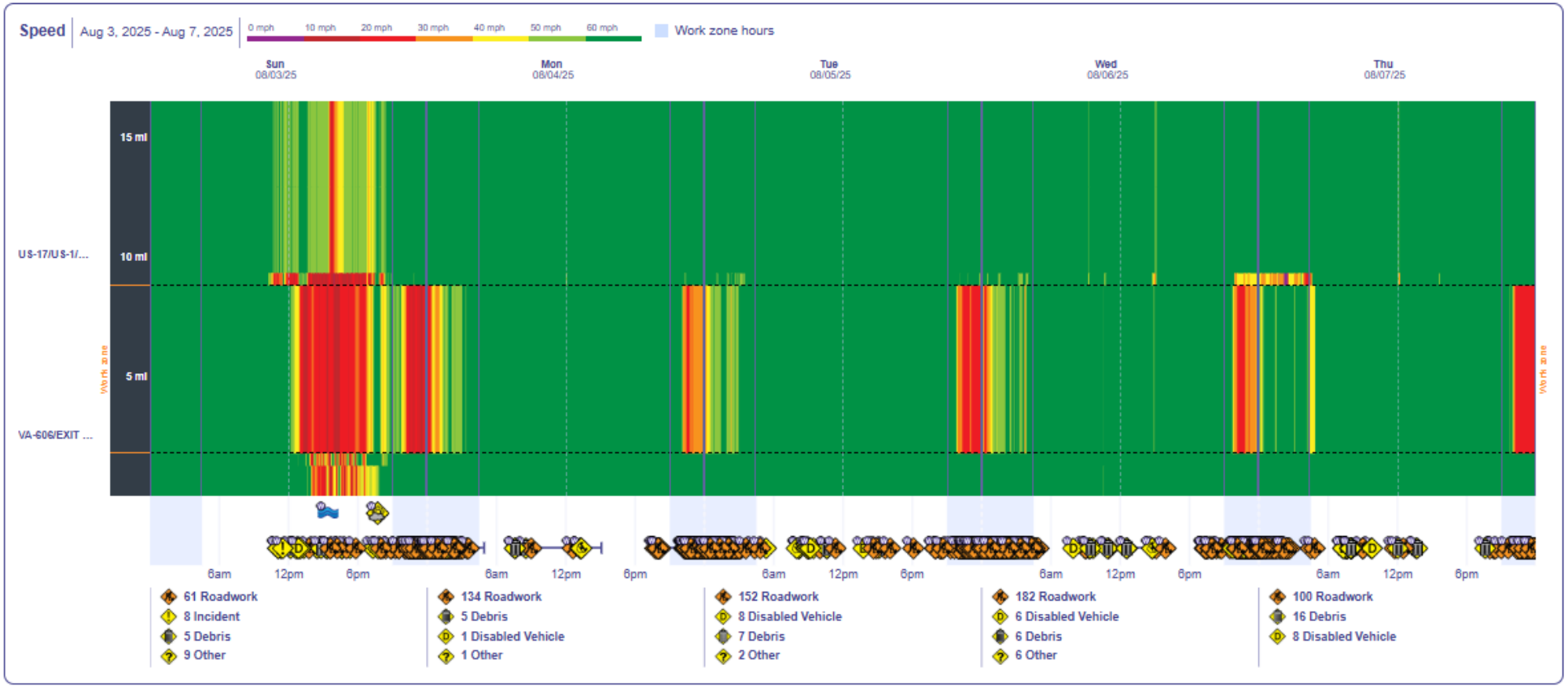
73 mph

Min speed through work zone

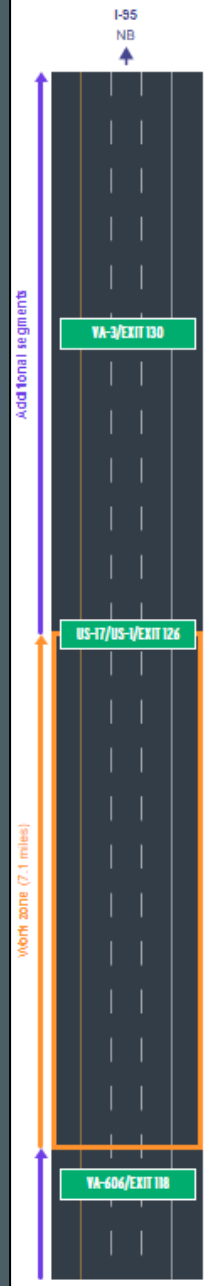
19 mph

Average travel time through work zone

10 min



Delay metrics (All segments)



Goal

Daily vehicle hours of delay no more than:

500 hrs

(or $16.3k UDC)

during the work zone's hours of operation.

Work zone operations met this goal

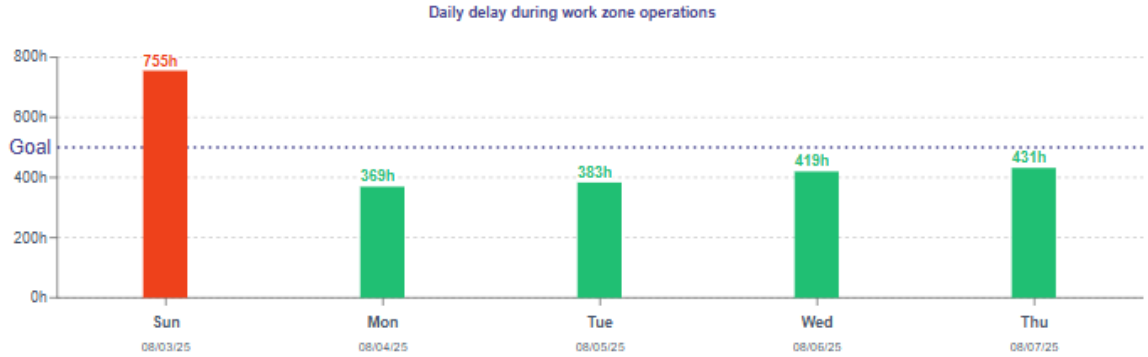
80.0%

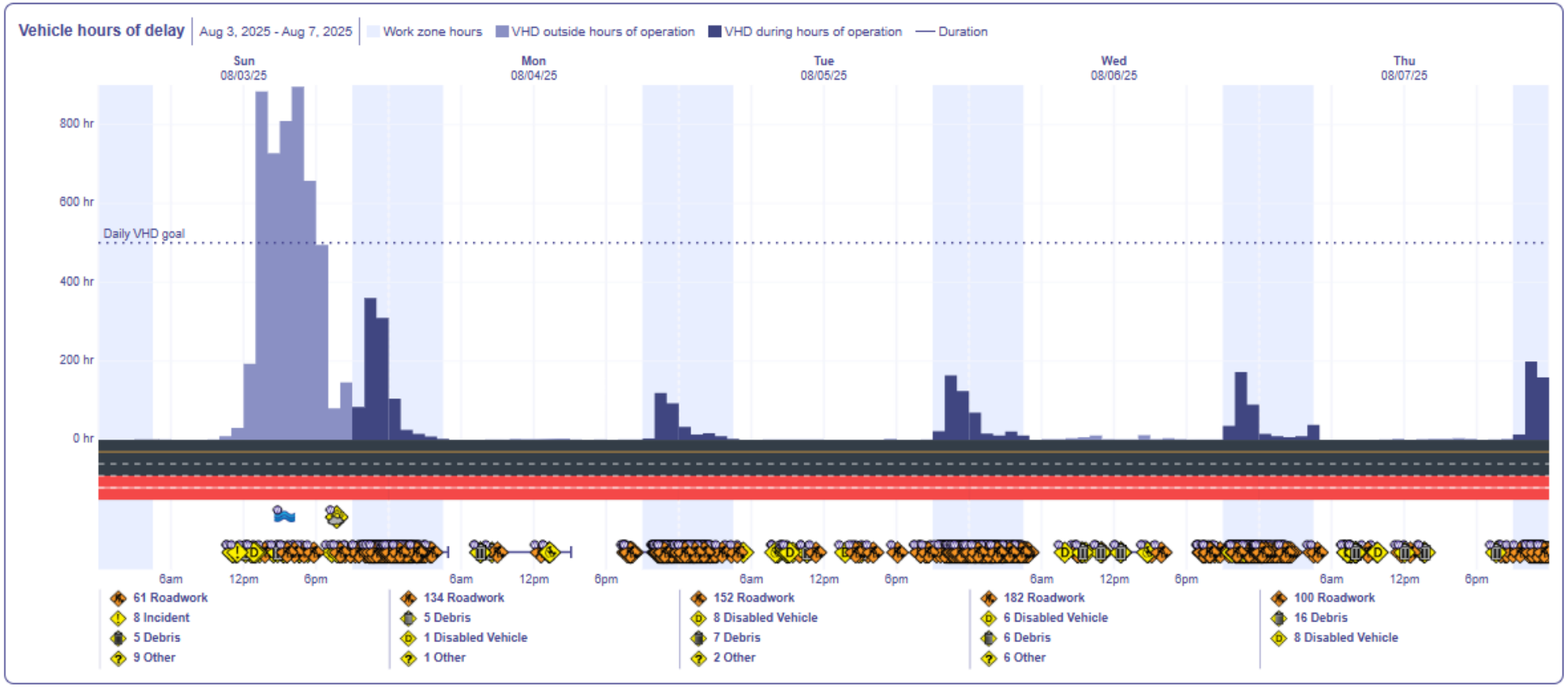
of the time

Average daily vehicle hours of delay

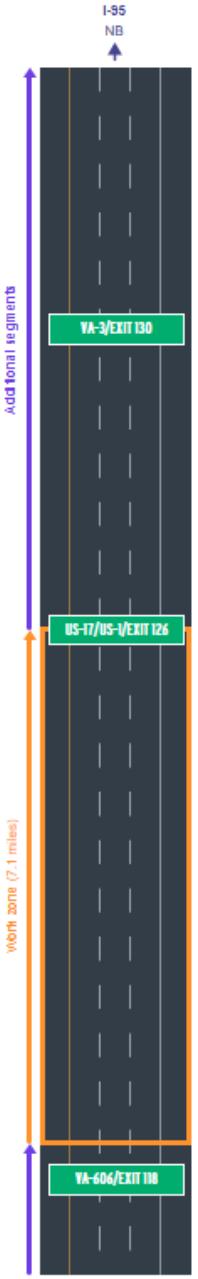
472 hrs

(or 15.3k UDC)





Delay metrics (All segments)



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during the work zone's hours of operation.

Work zone operations met this goal

80.0%

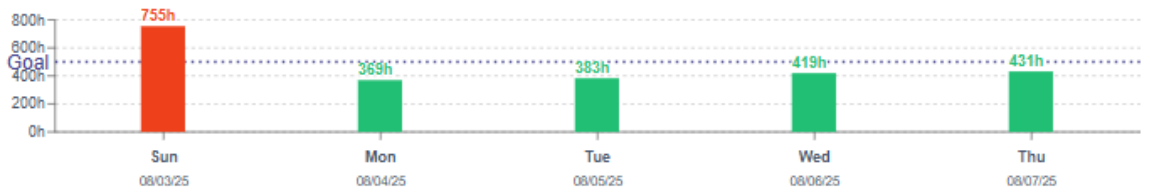
of the time

Average daily vehicle hours of delay

472 hrs

(or 15.3k UDC)

Daily delay during work zone operations



Vehicle hours of delay & user delay cost

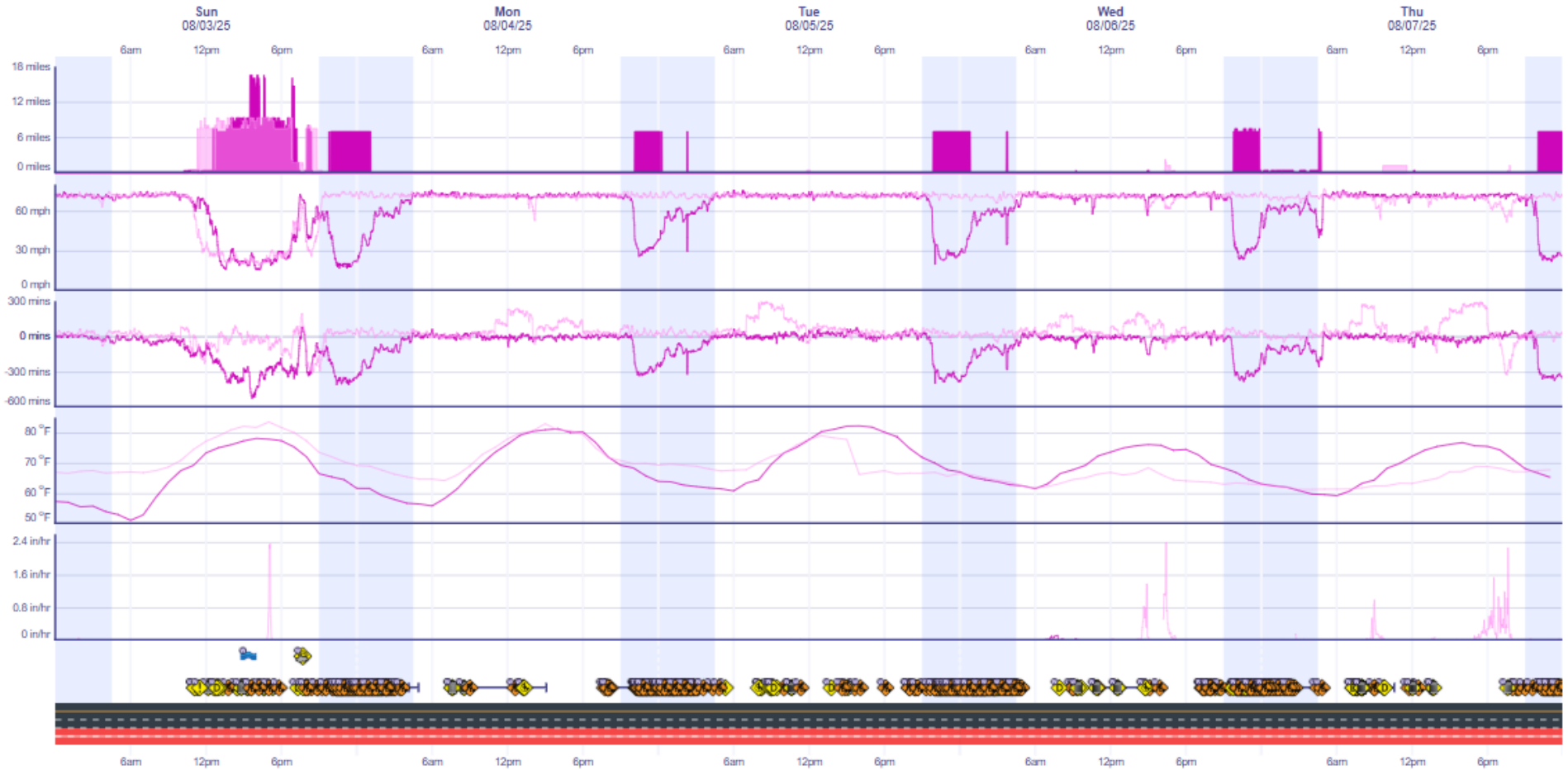
Lowest hours/cost — Highest hours/cost

Work zone hours

	12am	1am	2am	3am	4am	5am	6am	7am	8am	9am	10am	11am	12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm	
08/03/25 Sun	0 h	0 h	0 h	1 h	1 h	1 h	0 h	0 h	0 h	1 h	9 h	30 h	193 h	884 h	727 h	809 h	896 h	657 h	495 h	80 h	146 h	84 h	360 h	309 h	5.7K h
08/04/25 Mon	104 h	25 h	15 h	9 h	3 h	0 h	0 h	0 h	1 h	1 h	3 h	2 h	2 h	2 h	3 h	1 h	0 h	1 h	0 h	1 h	1 h	3 h	119 h	93 h	389 h
08/05/25 Tue	33 h	14 h	17 h	9 h	2 h	0 h	0 h	1 h	1 h	1 h	1 h	1 h	0 h	0 h	0 h	0 h	0 h	2 h	0 h	0 h	1 h	22 h	164 h	124 h	393 h
08/06/25 Wed	69 h	17 h	11 h	21 h	12 h	0 h	1 h	2 h	4 h	7 h	11 h	2 h	1 h	1 h	12 h	2 h	4 h	2 h	1 h	1 h	1 h	35 h	172 h	90 h	479 h
08/07/25 Thu	15 h	9 h	7 h	9 h	38 h	0 h	0 h	0 h	0 h	0 h	1 h	3 h	0 h	2 h	3 h	3 h	4 h	3 h	0 h	1 h	3 h	14 h	199 h	159 h	473 h
VHD	222 h	65 h	50 h	49 h	55 h	2 h	2 h	4 h	6 h	10 h	25 h	38 h	196 h	889 h	745 h	815 h	905 h	665 h	496 h	83 h	152 h	158 h	1K h	774 h	7,419.4 hours
08/03/25 Sun	$0	$6.64	$8.67	$44.51	$52.70	$44.32	$7.71	$17.04	$2.12	$54.50	$404.13	$1.3K	$8.4K	$38.4K	$31.5K	$35.3K	$39K	$28.6K	$21.7K	$3.5K	$6.4K	$3.7K	$16.3K	$14.3K	$249.2K
08/04/25 Mon	$5.1K	$1.3K	$818.66	$471.09	$135.83	$0	$0	$1.38	$56.36	$44.89	$127.97	$95.71	$85.77	$91.53	$155.54	$54.75	$3.11	$45.97	$2.67	$36.51	$46.97	$155.55	$6.1K	$4.9K	$19.8K
08/05/25 Tue	$1.8K	$783.75	$1K	$559.30	$137.56	$7.54	$0	$45.74	$48.93	$48.34	$45.38	$41.29	$0	$0	$0	$0	$0	$111.04	$0.29	$0	$56.32	$1.1K	$8.6K	$8.8K	$21.2K
08/06/25 Wed	$3.9K	$974.56	$663.86	$1.3K	$660.40	$13.53	$72.75	$108.26	$196.19	$329.77	$546.20	$108.26	$52.97	$52.45	$556.83	$106.87	$211.66	$99.92	$43.70	$66.39	$30.54	$1.8K	$9K	$4.9K	$25.7K
08/07/25 Thu	$866.43	$550.08	$434.81	$566.36	$2.1K	$25.56	$0.33	$0	$0	$0	$61.68	$135.80	$13.95	$71.90	$136.86	$136.38	$195.90	$117.57	$0	$38.91	$135.07	$669.65	$10K	$8.2K	$24.5K
UDC	$11.6K	$3.6K	$2.9K	$2.9K	$3.1K	$90.95	$80.80	$172.42	$303.61	$475.50	$1.2K	$1.7K	$8.5K	$38.6K	$32.4K	$35.6K	$39.4K	$29K	$21.8K	$3.7K	$6.7K	$7.5K	$50.1K	$39K	$340,452.65

Line chart comparison

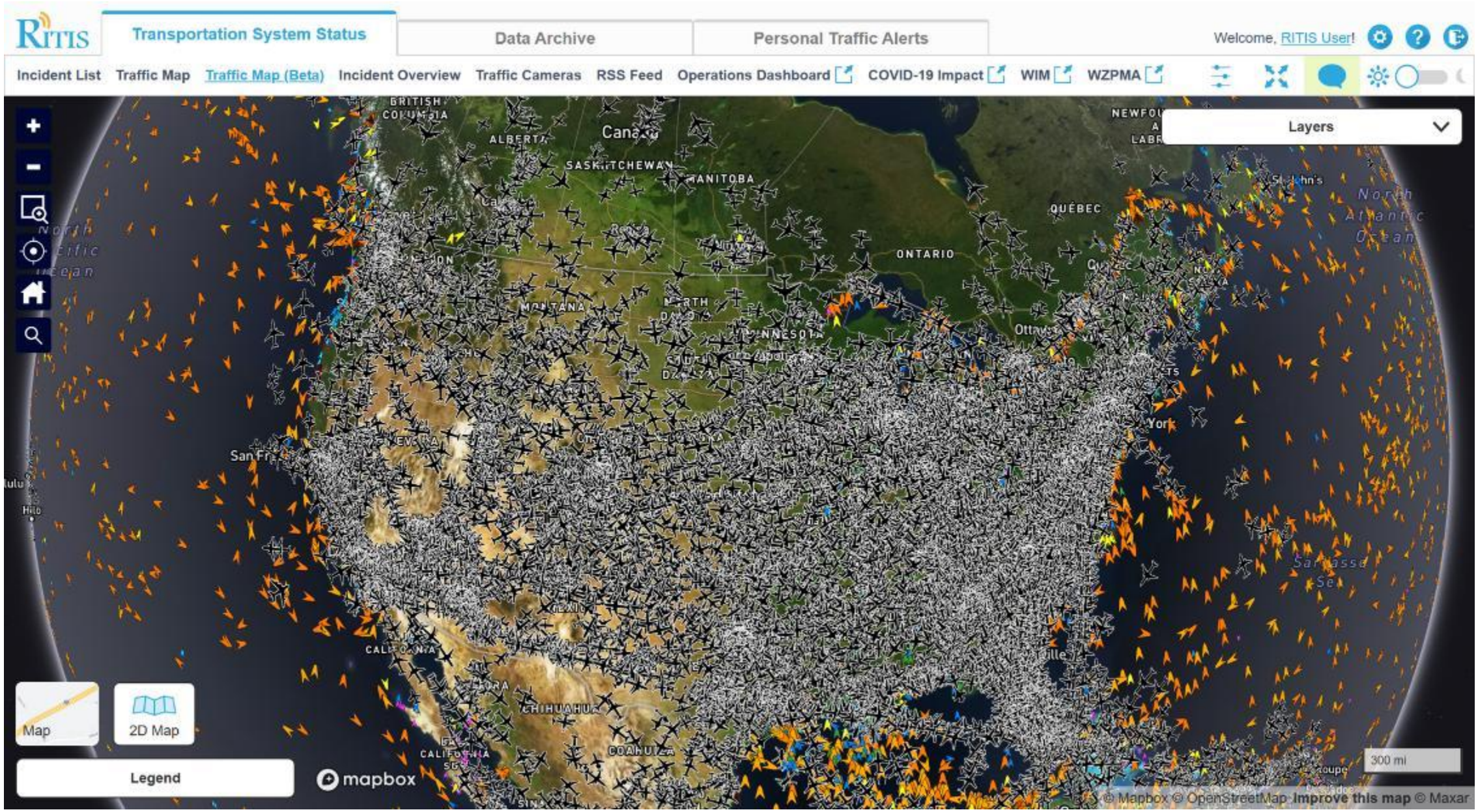
I-95 Northbound at US-17/US-1/EXIT 126



Want to Know More:

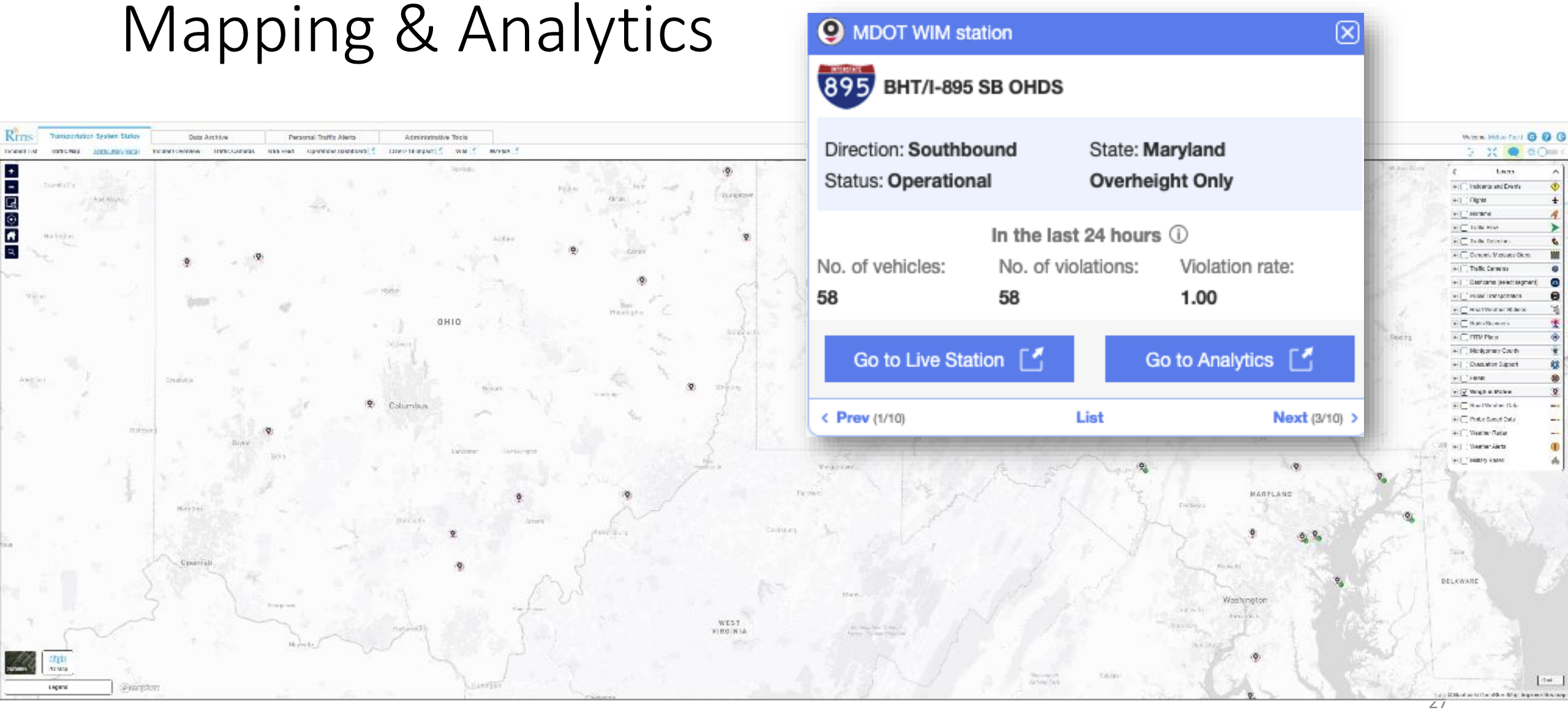
https://help.ritis.org/hc/en-us/articles/431992136185 87-Work-Zone-Performance-Report-Overview

New Real-time Map (Beta) with improved performance



Probe Speed Pop-up Interactions

Weigh-in-Motion / Virtual Weigh Station Mapping & Analytics



Live WIM / VWS interface

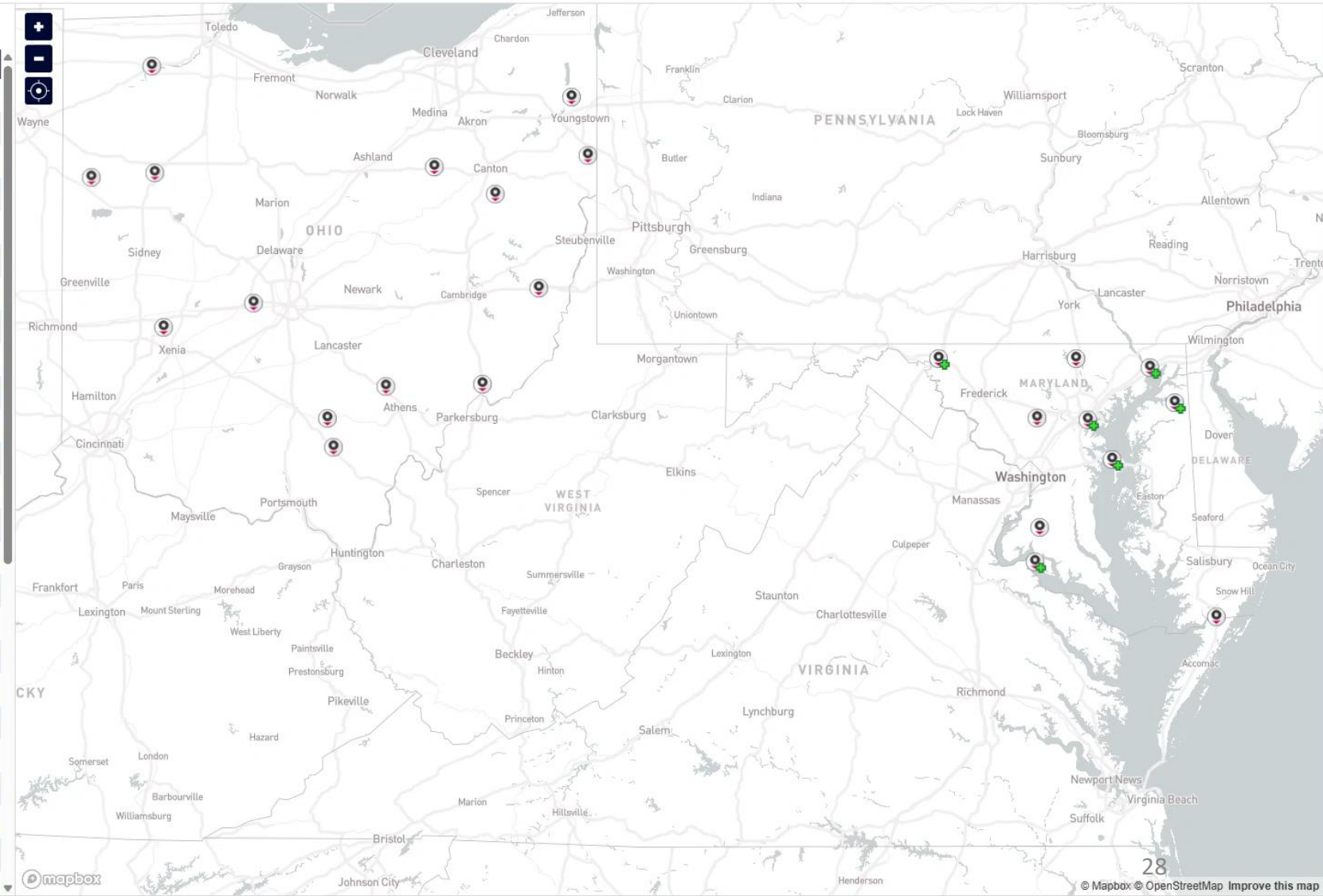
RITIS Weigh in Motion | Station list | Analytics

Welcome, Michael!

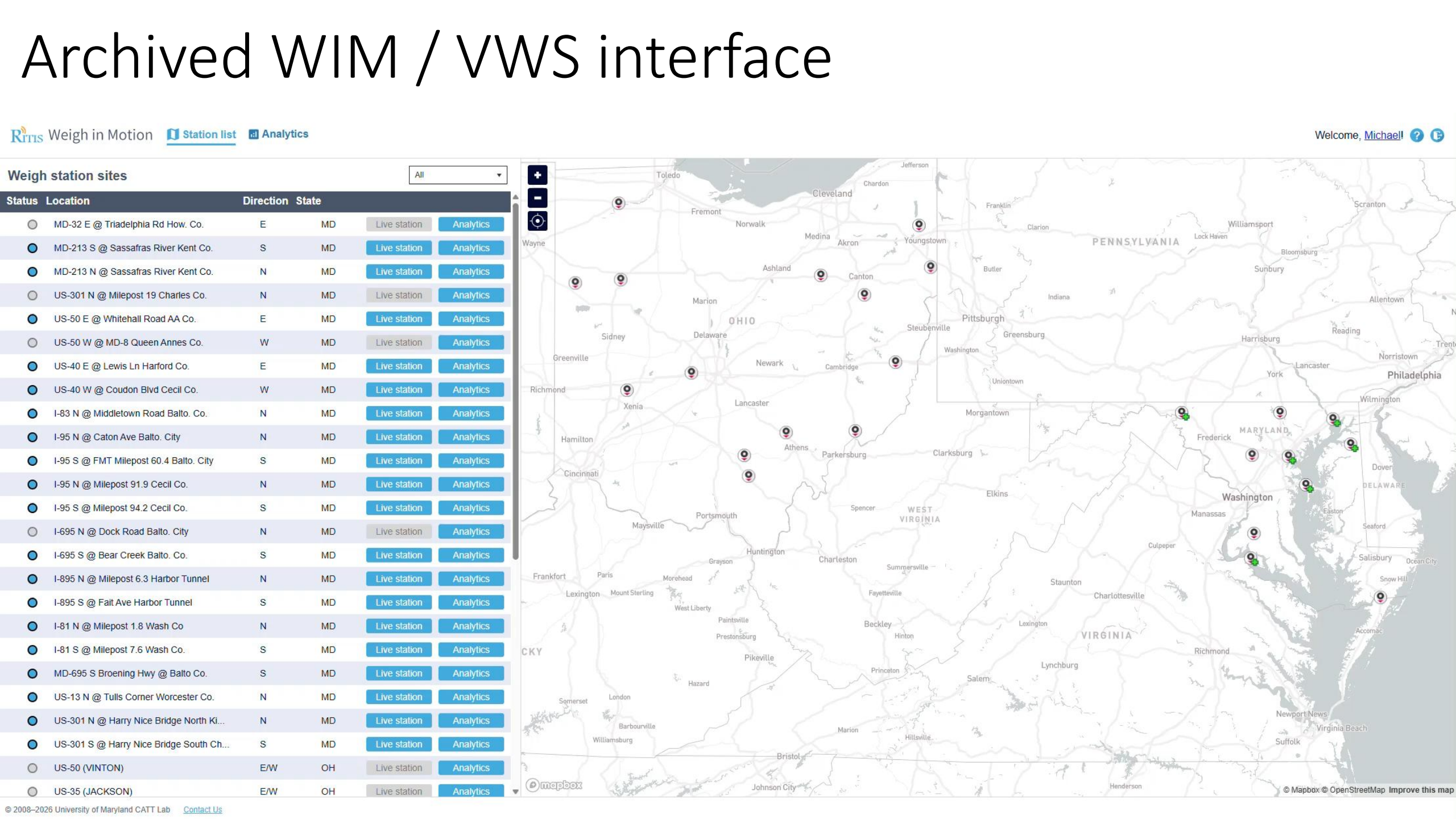
Weigh station sites

All

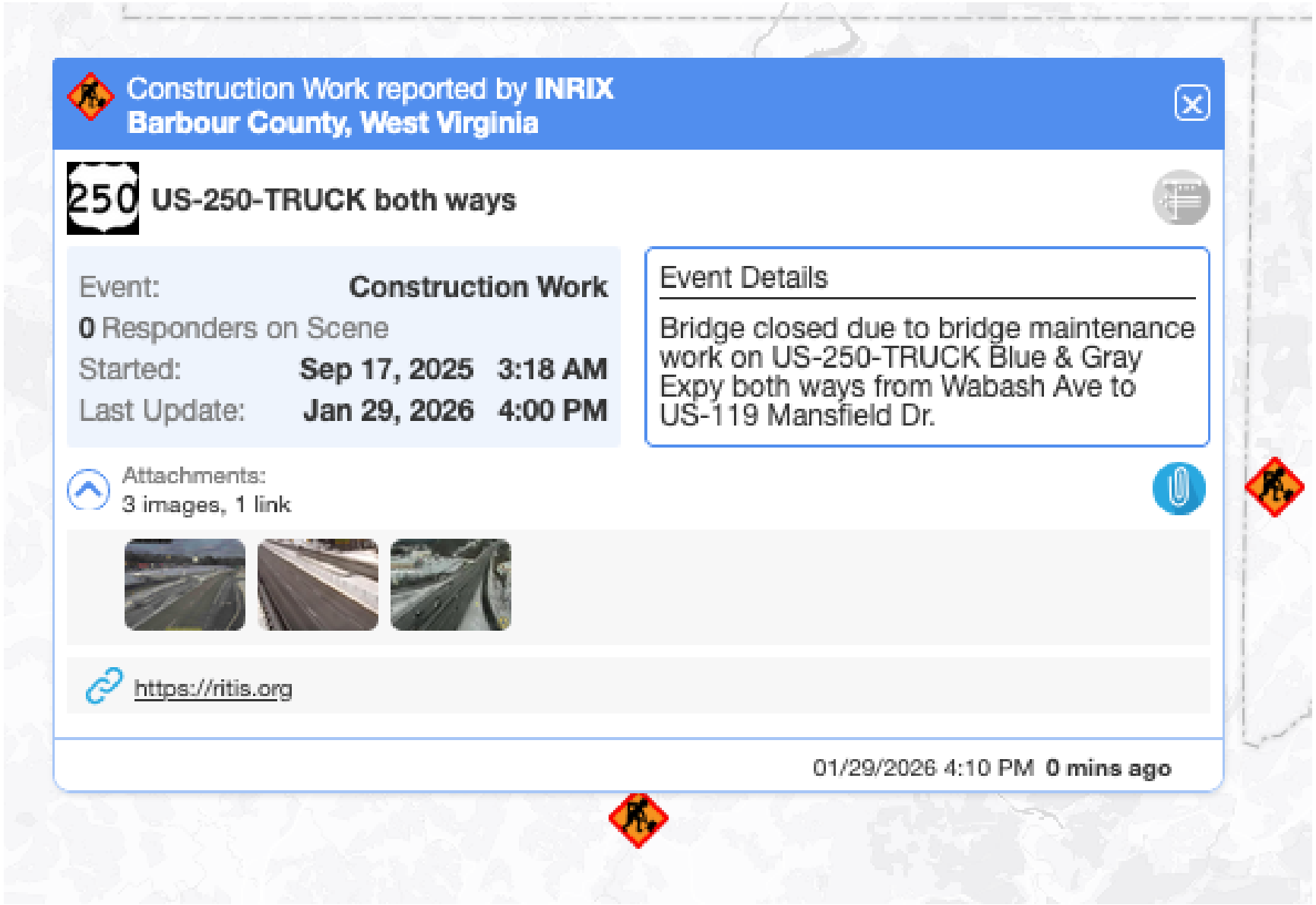
Status	Location	Direction	State		
○	MD-32 E @ Triadelphia Rd How. Co.	E	MD	Live station	Analytics
●	MD-213 S @ Sassafras River Kent Co.	S	MD	Live station	Analytics
●	MD-213 N @ Sassafras River Kent Co.	N	MD	Live station	Analytics
○	US-301 N @ Milepost 19 Charles Co.	N	MD	Live station	Analytics
●	US-50 E @ Whitehall Road AA Co.	E	MD	Live station	Analytics
○	US-50 W @ MD-8 Queen Annes Co.	W	MD	Live station	Analytics
●	US-40 E @ Lewis Ln Harford Co.	E	MD	Live station	Analytics
●	US-40 W @ Coudon Blvd Cecil Co.	W	MD	Live station	Analytics
●	I-83 N @ Middletown Road Balto. Co.	N	MD	Live station	Analytics
●	I-95 N @ Caton Ave Balto. City	N	MD	Live station	Analytics
●	I-95 S @ FMT Milepost 60.4 Balto. City	S	MD	Live station	Analytics
●	I-95 N @ Milepost 91.9 Cecil Co.	N	MD	Live station	Analytics
●	I-95 S @ Milepost 94.2 Cecil Co.	S	MD	Live station	Analytics
○	I-695 N @ Dock Road Balto. City	N	MD	Live station	Analytics
●	I-695 S @ Bear Creek Balto. Co.	S	MD	Live station	Analytics
●	I-895 N @ Milepost 6.3 Harbor Tunnel	N	MD	Live station	Analytics
●	I-895 S @ Fait Ave Harbor Tunnel	S	MD	Live station	Analytics
●	I-81 N @ Milepost 1.8 Wash Co	N	MD	Live station	Analytics
●	I-81 S @ Milepost 7.6 Wash Co.	S	MD	Live station	Analytics
●	MD-695 S Broening Hwy @ Balto Co.	S	MD	Live station	Analytics
●	US-13 N @ Tulls Corner Worcester Co.	N	MD	Live station	Analytics
●	US-301 N @ Harry Nice Bridge North Ki...	N	MD	Live station	Analytics
●	US-301 S @ Harry Nice Bridge South Ch...	S	MD	Live station	Analytics
○	US-50 (VINTON)	E/W	OH	Live station	Analytics
○	US-35 (JACKSON)	E/W	OH	Live station	Analytics



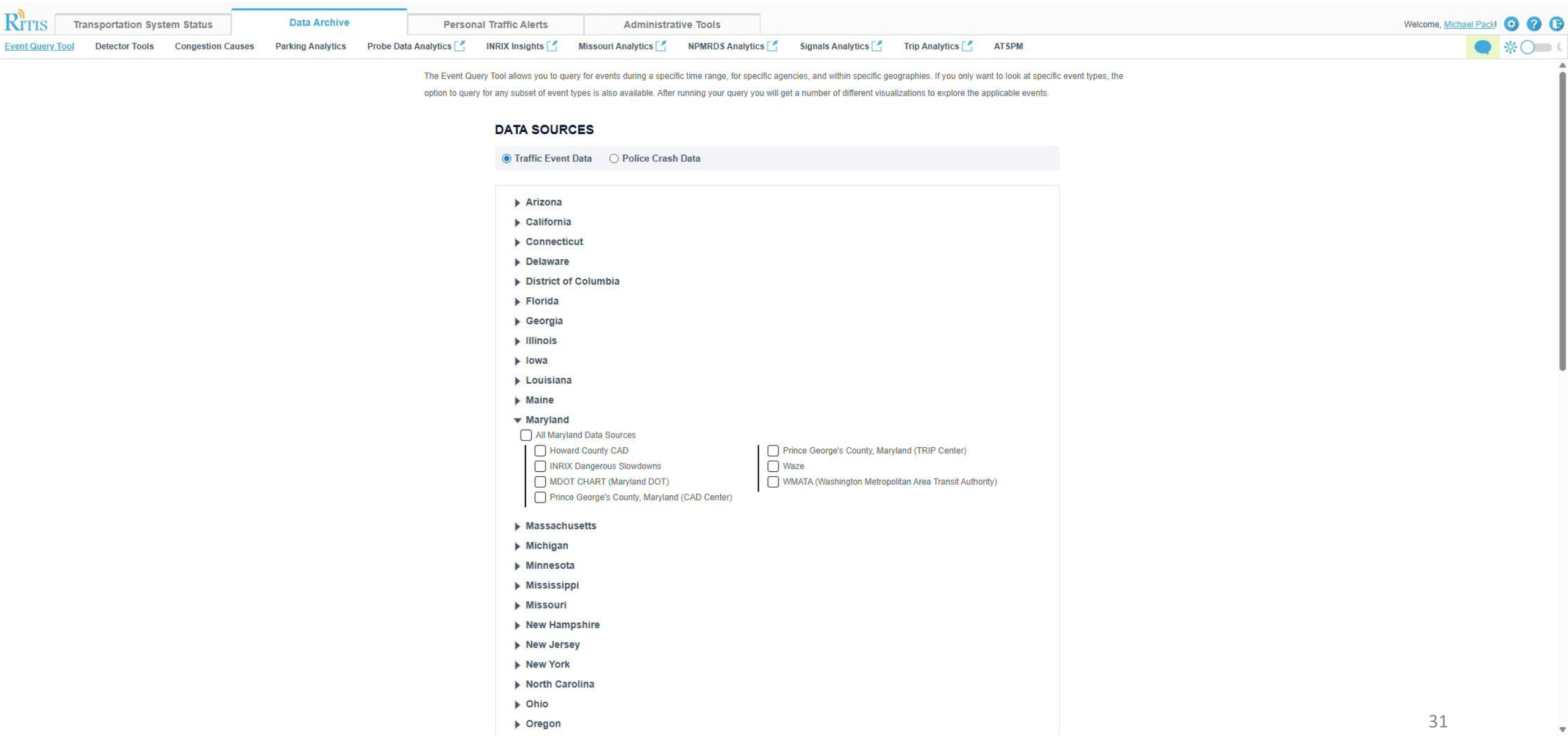
Archived WIM / VWS interface



Media Attachments Interactions

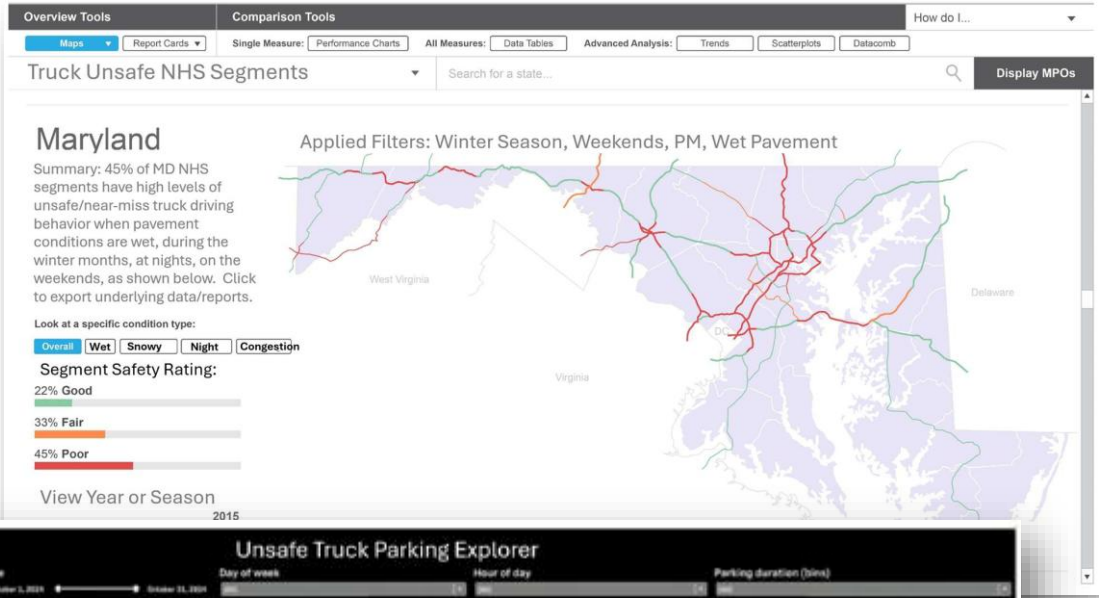


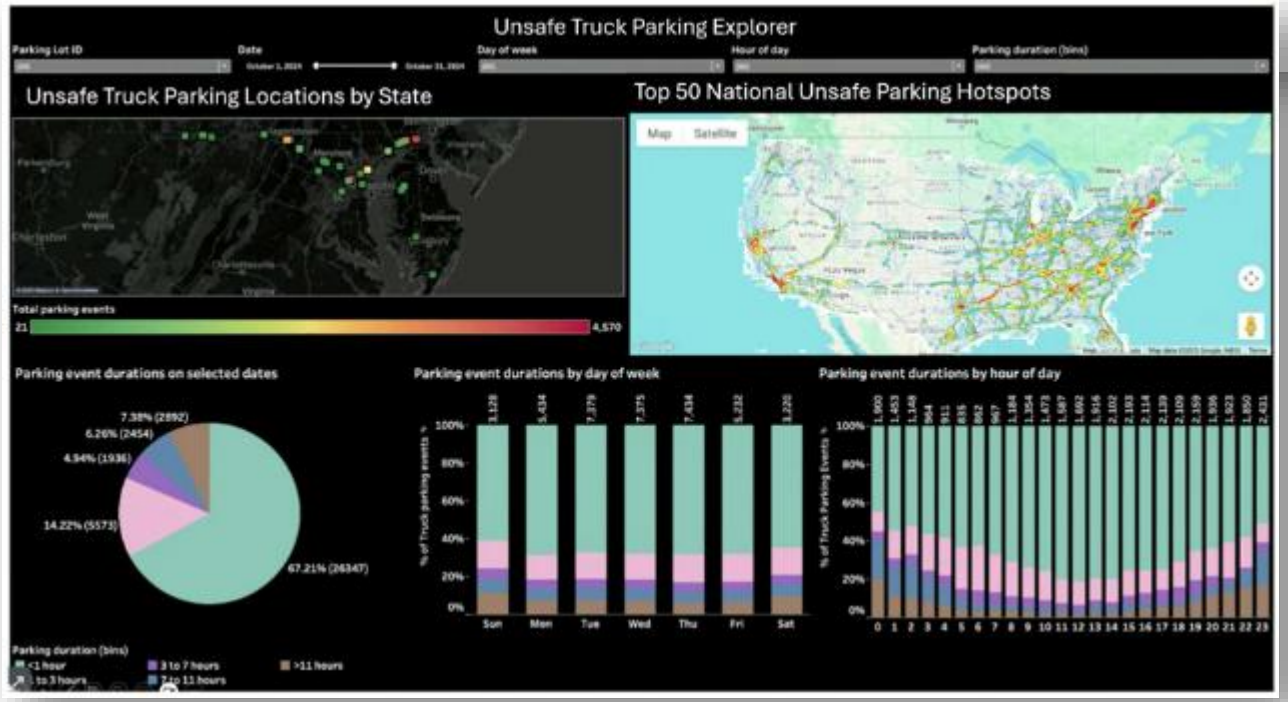
Dangerous Slowdowns Added

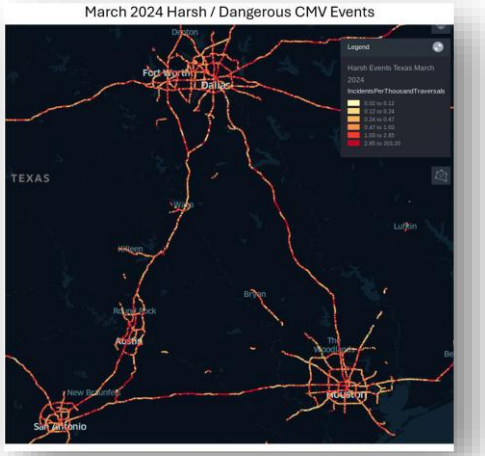


FMCSA: High Priority for CMVs grant program

- “National COMPASS”
  - National Comprehensive Analytics Safety Suite
- National-level Commercial Vehicle Safety Suite focusing on
  - Truck Parking Analytics (blending of data from multiple vendors)
  - Truck Safety Events Analytics
  - Special studies related to safety in
    - Work Zones
    - Rural Areas





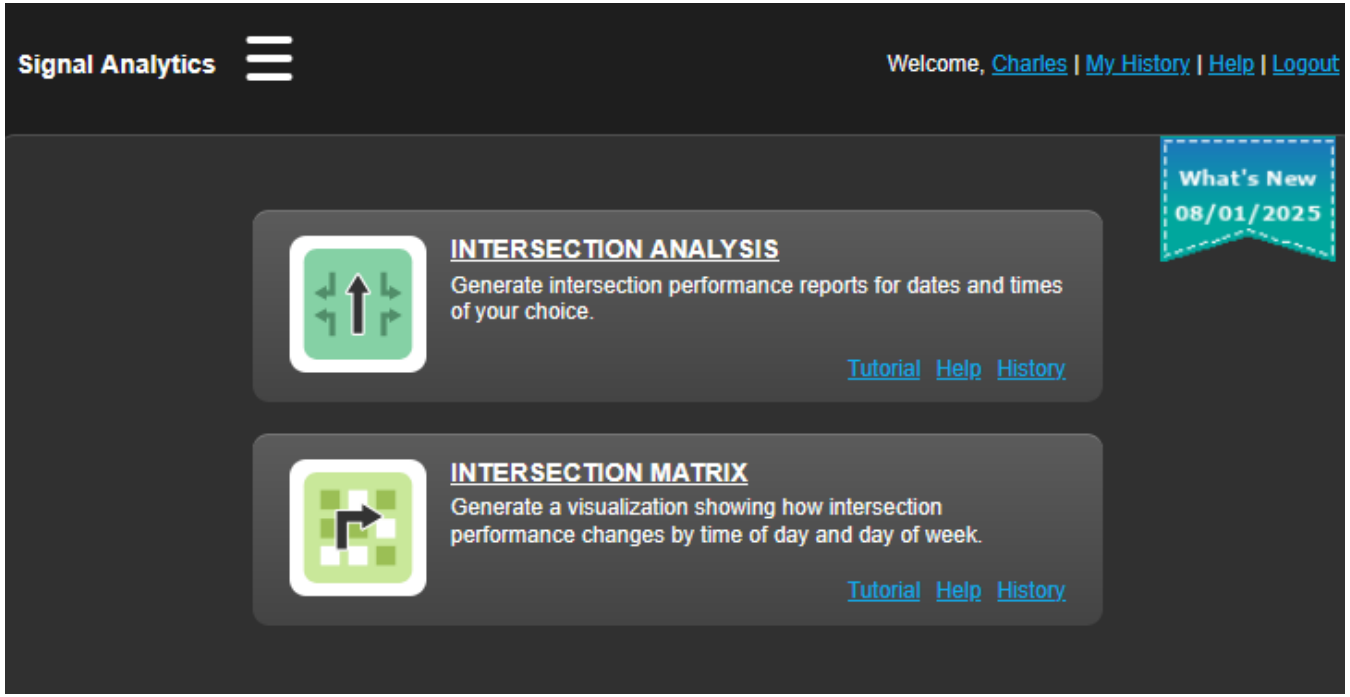


Signals

New Features, Significant Updates, &
a New Offering

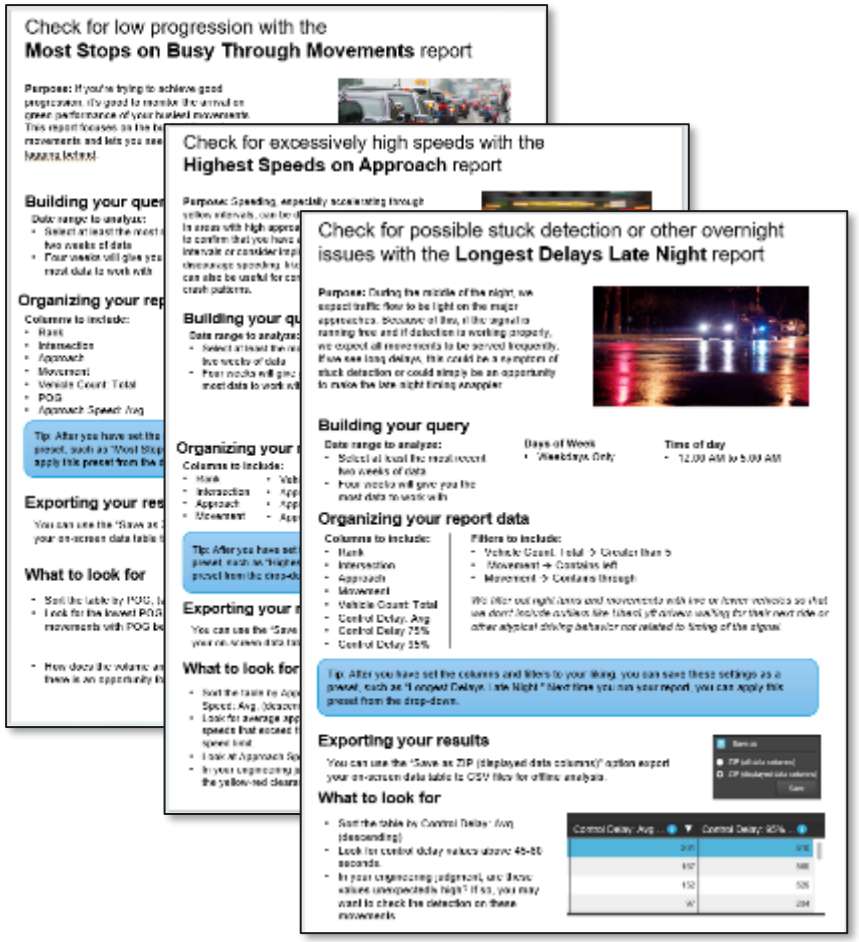
Signal Analytics: new and coming soon

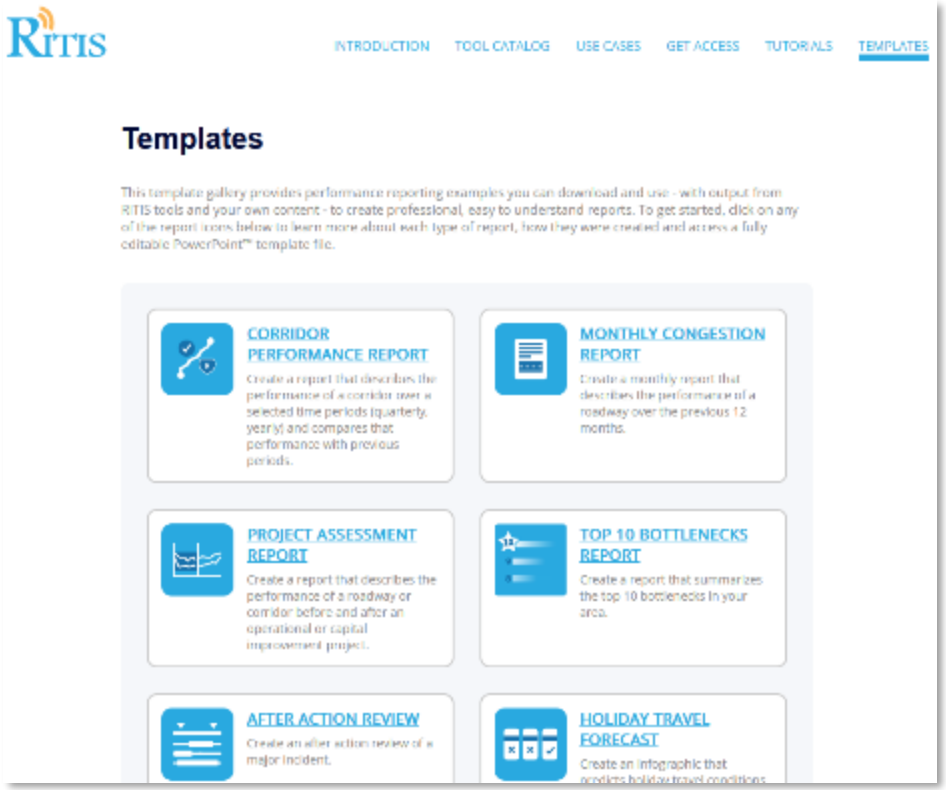
- **Recent enhancements**
  - Intersection Analysis presets
  - Performance enhancements
- **Coming soon**
  - Trend Charts
  - ATSPM Version 5.0



Recent enhancements

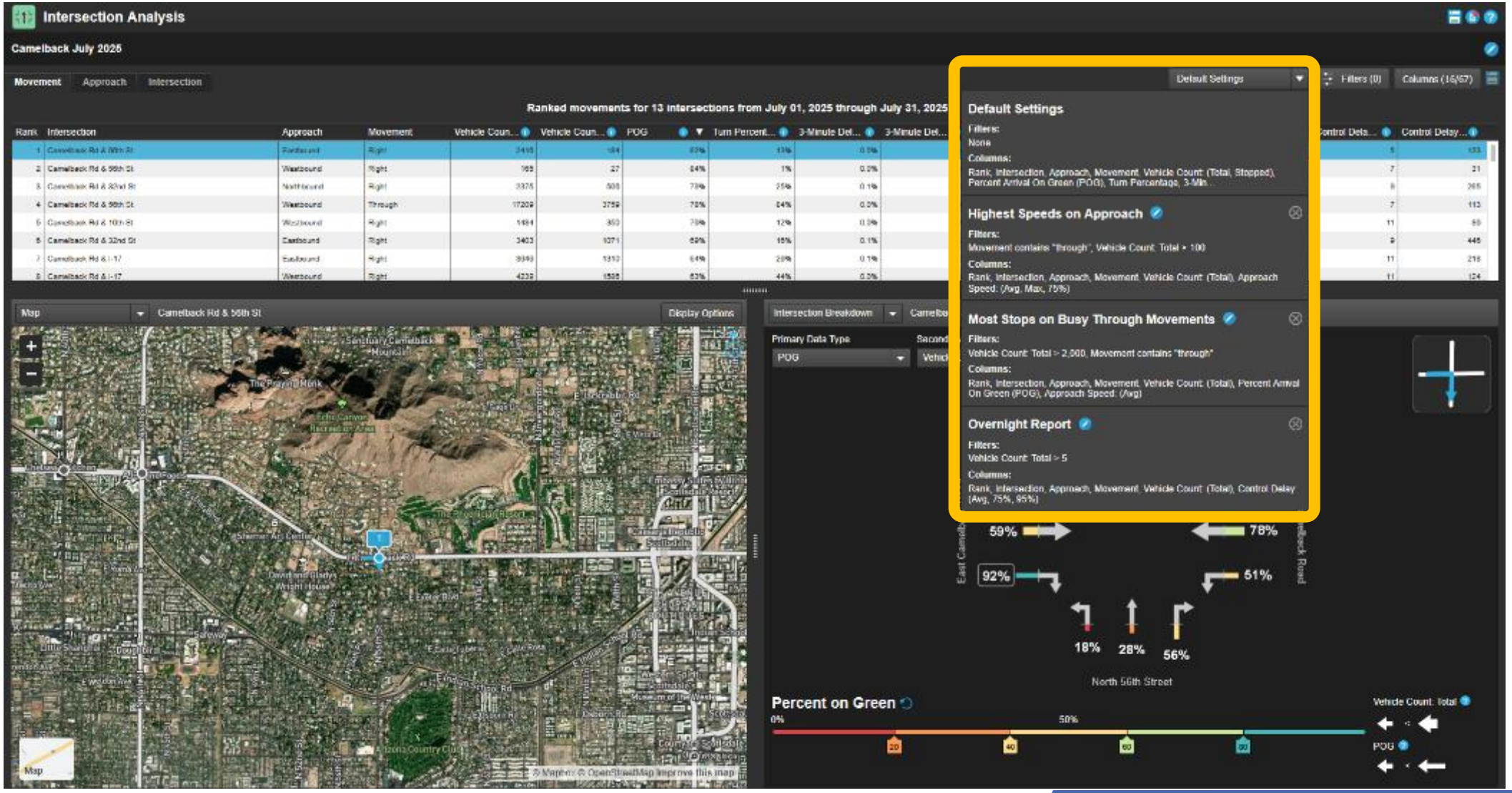
Intersection Analysis: preset instructions





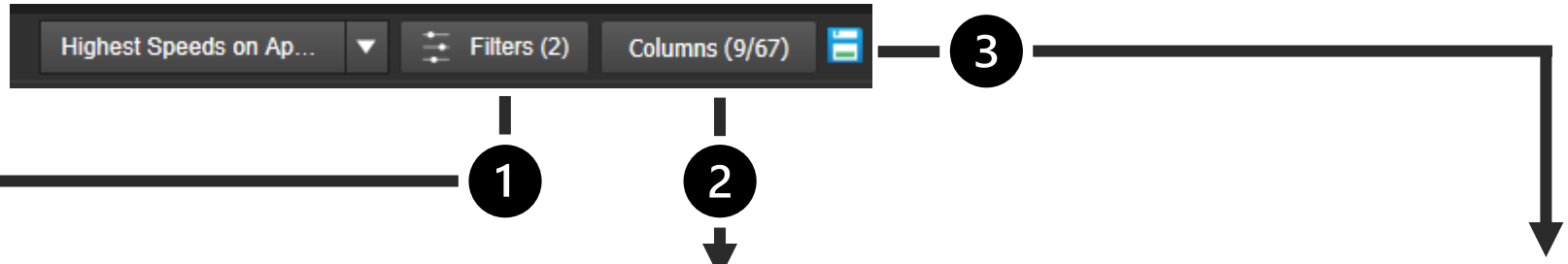
learn.ritis.org/reports

Intersection Analysis: Custom Presets

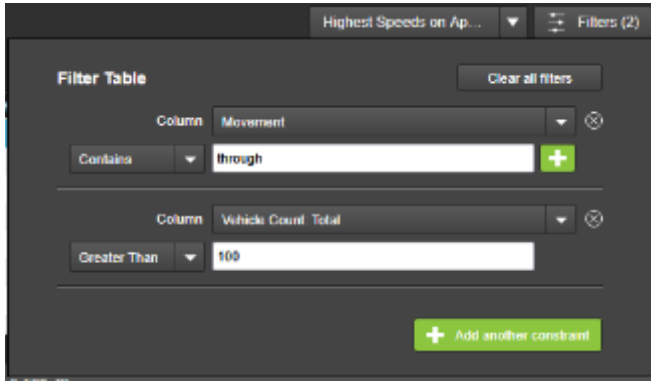


Intersection Analysis: Custom Presets

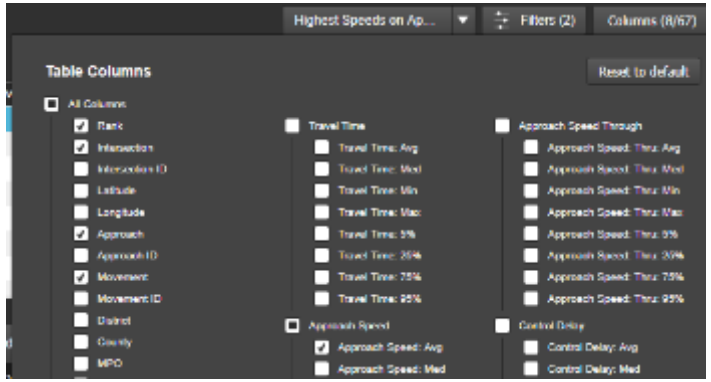
Note: all presets are user-created—here's how to build your own.



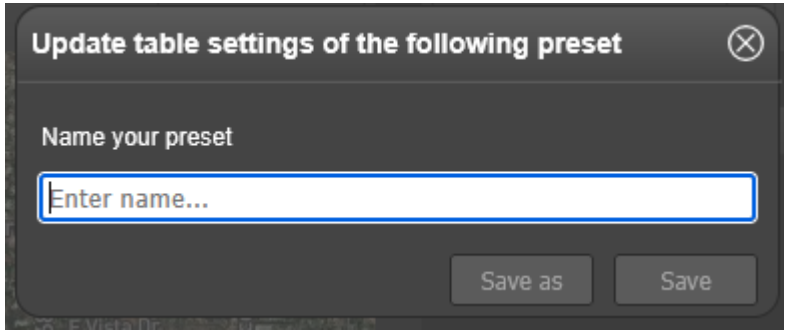
Step 1: Apply filters (optional)



Step 2: Choose columns



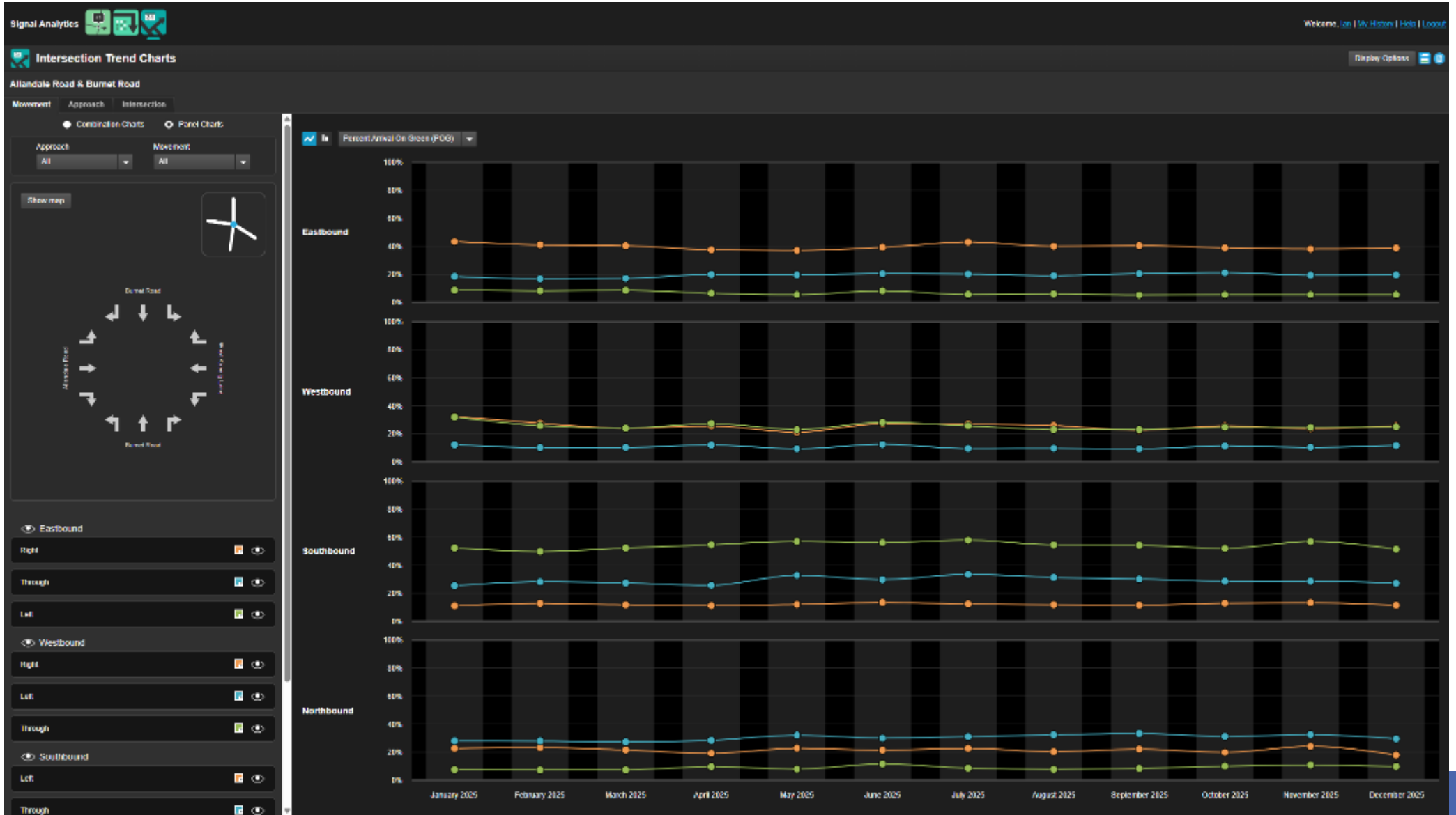
Step 3: Save preset



Recent enhancements

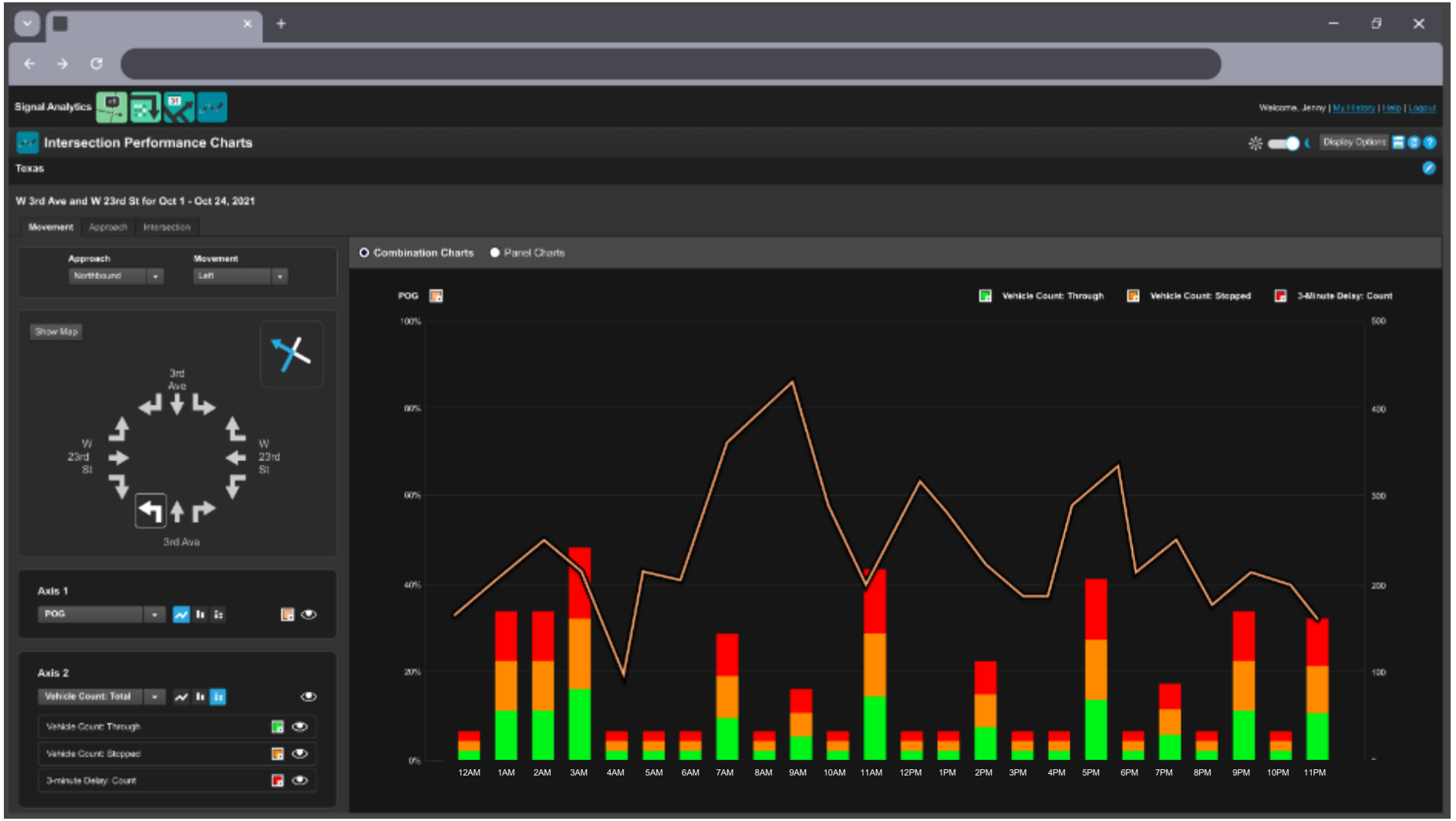
Performance improvements

On the way:
Trend Charts



On the way:

Intersection Performance Charts

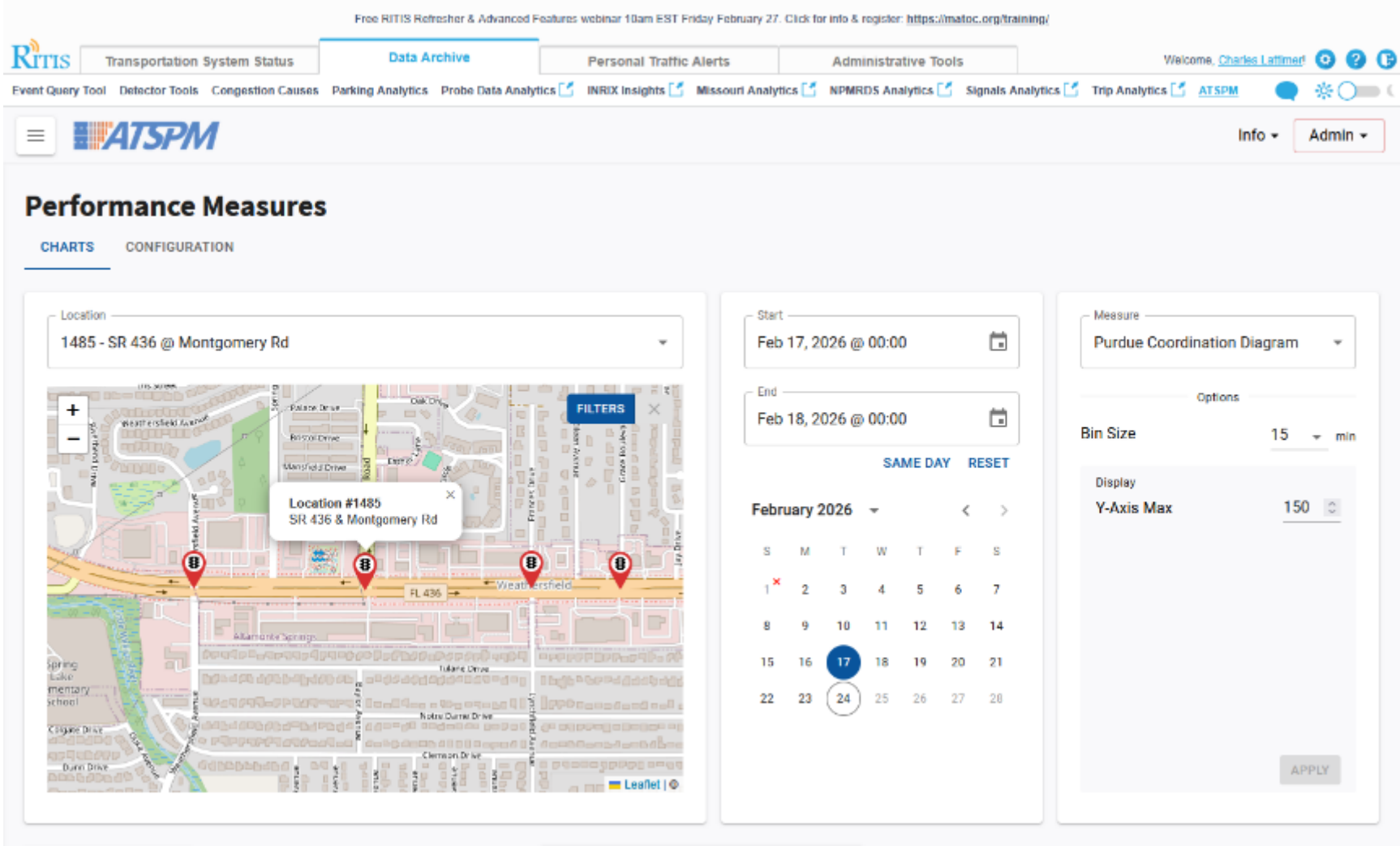


New offering:
ATSPM Version 5.0

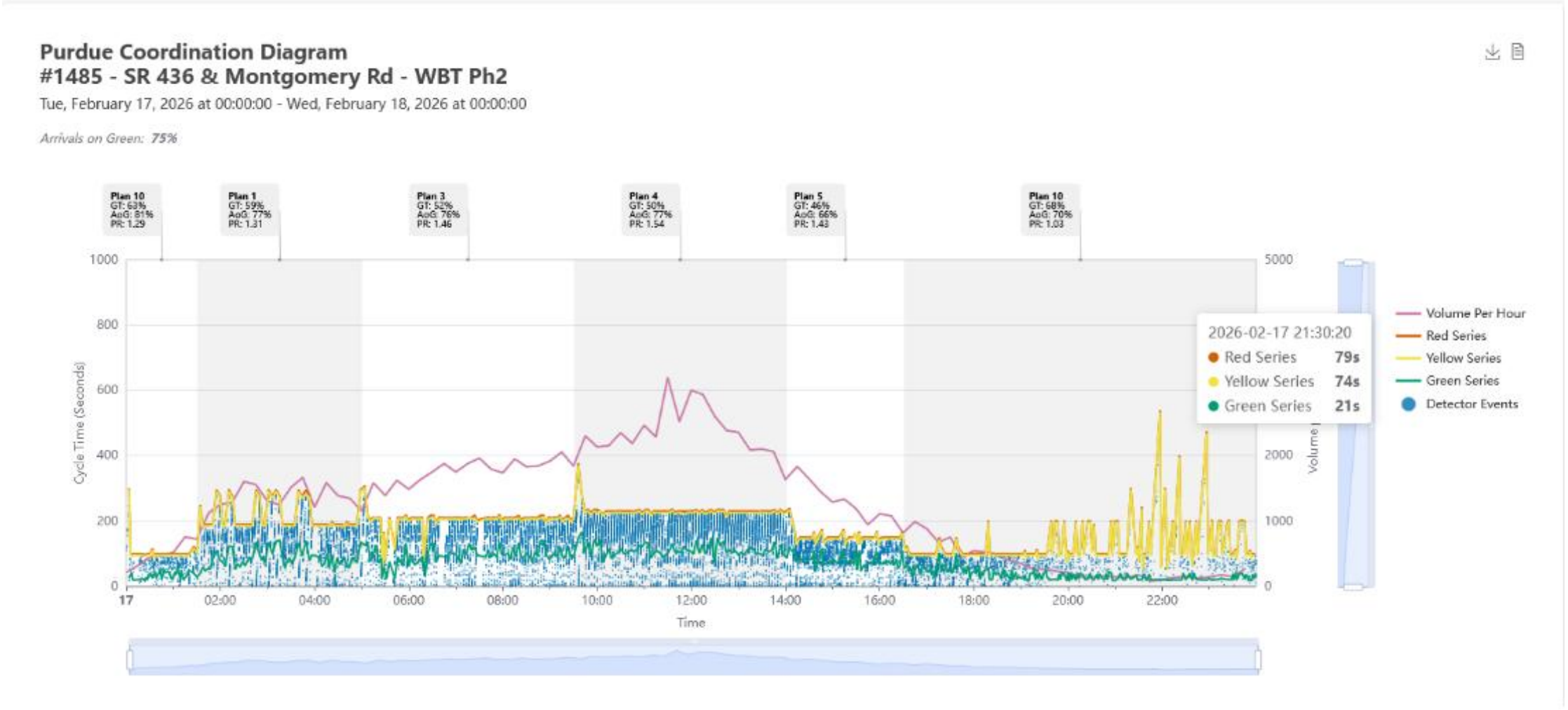
Cloud-hosted ATSPM
- UDOT 5.0 software
- Data storage

Pulls high-resolution log files from central, agency-specified location

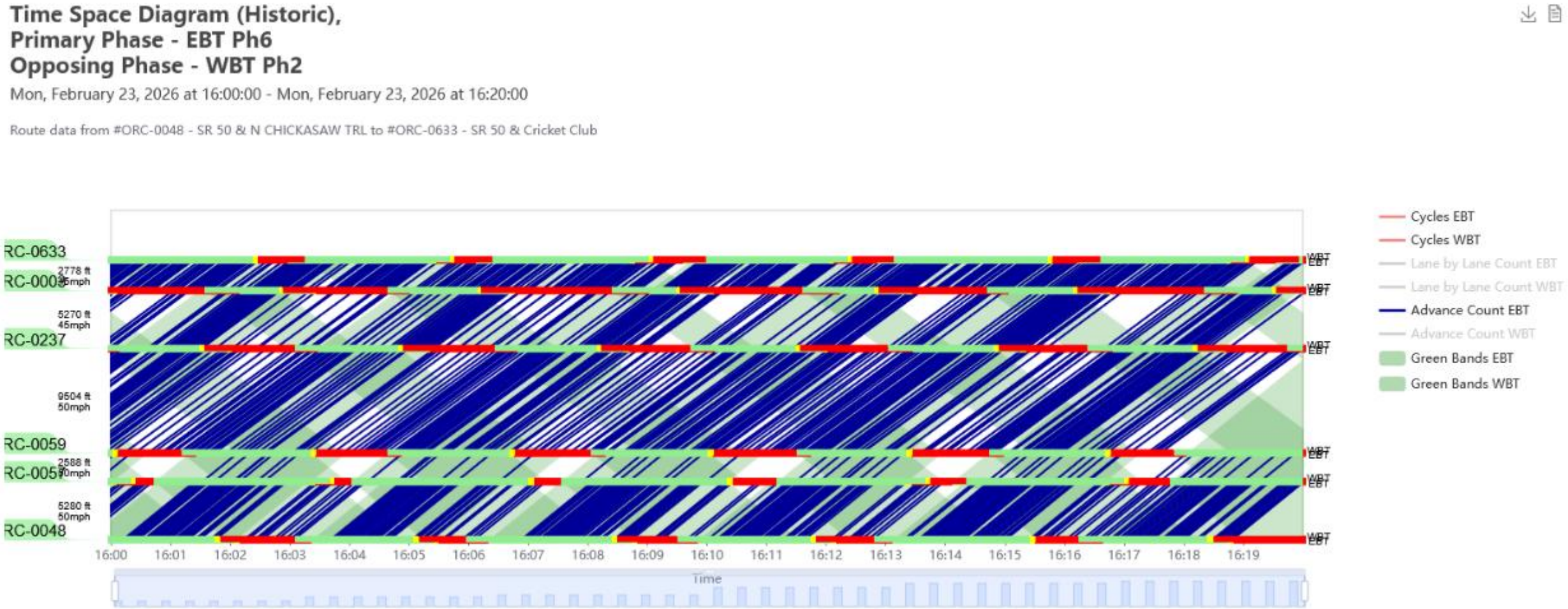
For Full RITIS customers



New offering:
ATSPM Version 5.0



New offering:
ATSPM Version 5.0



New offering:
ATSPM Version 5.0

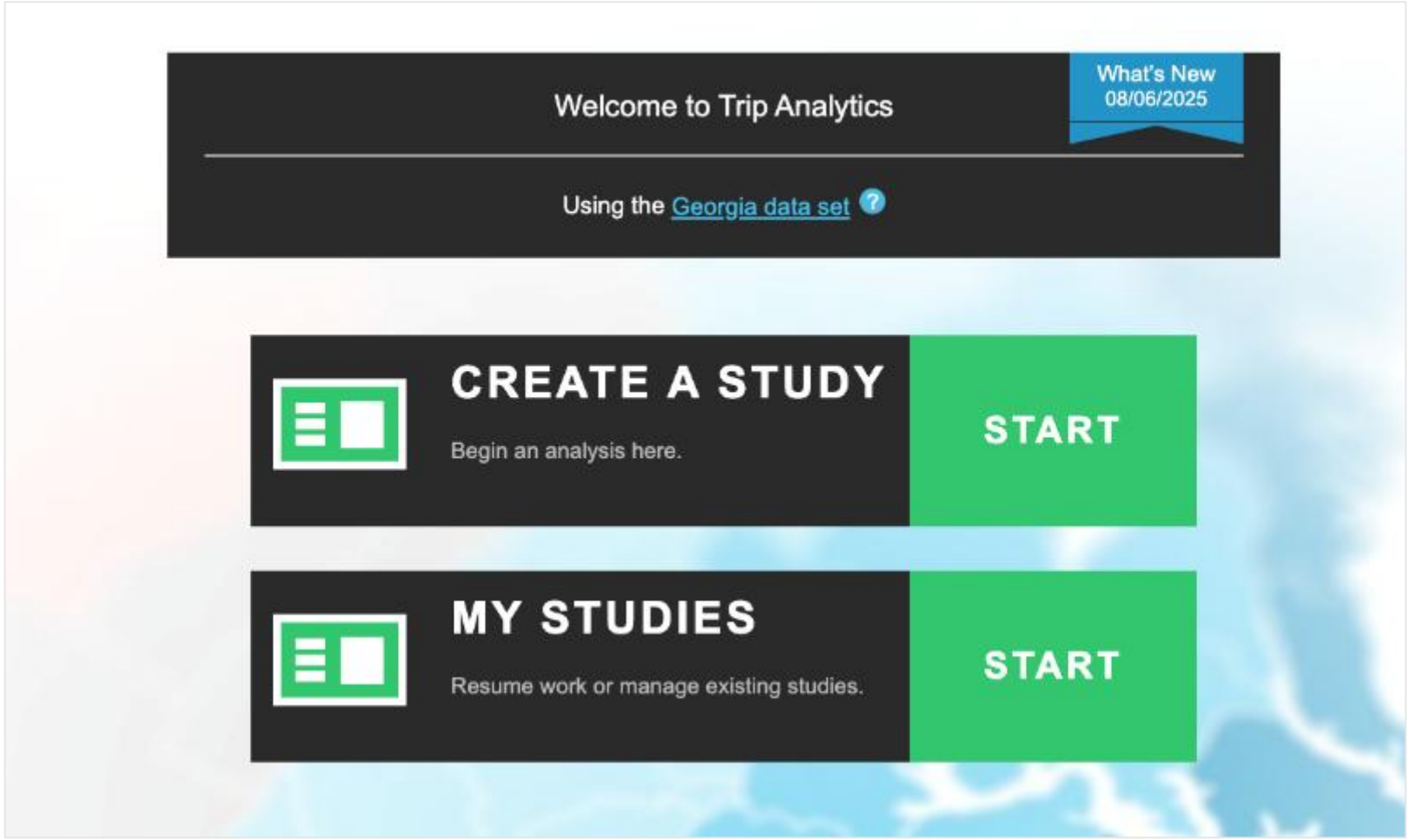
Approach Link Comparison

PCD Options	Link	Approaches		Upstream AOG			Downstream AOG			Total Link AOG			Delta
		Upstream	Downstream	Existing	Predicted	Change	Existing	Predicted	Change	Existing	Predicted	Change	
⌄	1	5519 - ORC-0048 - SR 50 N CHICKASAW TRL	5578 - ORC-0057 - SR 50 CONSTANTINE ST	1181 (75%)	1181 (75%)		1194 (80%)	1194 (80%)		2375 (77%)	2375 (77%)		0
⌄	2	5578 - ORC-0057 - SR 50 CONSTANTINE ST	5582 - ORC-0059 - SR 50 ECONLOCKHATCHEE TRL N	1323 (81%)	1383 (85%)		40 (98%)	41 (100%)		1363 (82%)	1424 (85%)		16
⌄	3	5582 - ORC-0059 - SR 50 ECONLOCKHATCHEE TRL N	5833 - ORC-0237 - SR 50 ROUSE RD	156 (82%)	183 (96%)		929 (59%)	912 (57%)		1085 (61%)	1095 (62%)		15
⌄	4	5833 - ORC-0237 - SR 50 ROUSE RD	5801 - ORC-0003 - SR 50 SR 434	1180 (70%)	1199 (71%)		584 (56%)	577 (56%)		1764 (65%)	1776 (66%)		2
⌄	5	5801 - ORC-0003 - SR 50 SR 434	5302 - ORC-0633 - SR 50 Cricket Club	635 (50%)	749 (59%)		1584 (86%)	1534 (83%)		2219 (71%)	2283 (73%)		12

Trip Analytics

New Features & Significant Updates

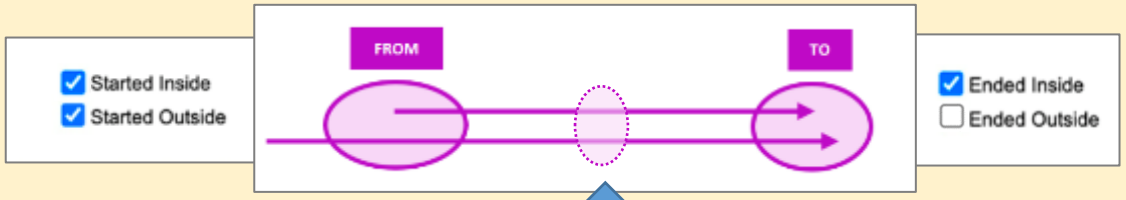
Expanded spatial filtering in TRIP ANALYTICS



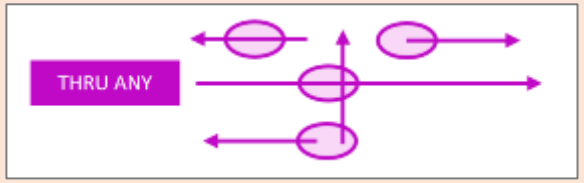
There will soon be four modes for Spatial Filtering:

1. **SINGLE mode**

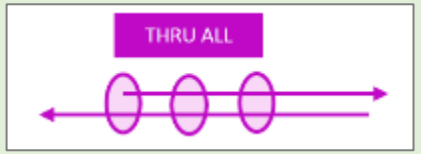
2. **FROM / TO mode**



3. **ANY mode**

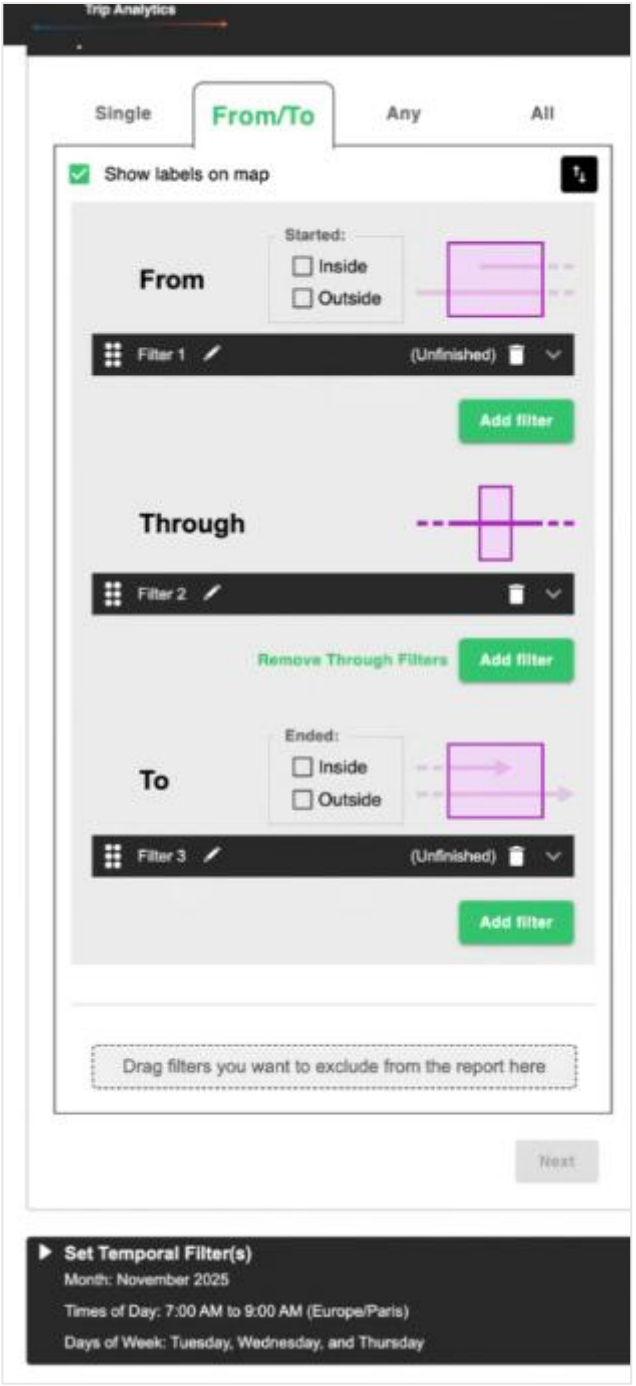


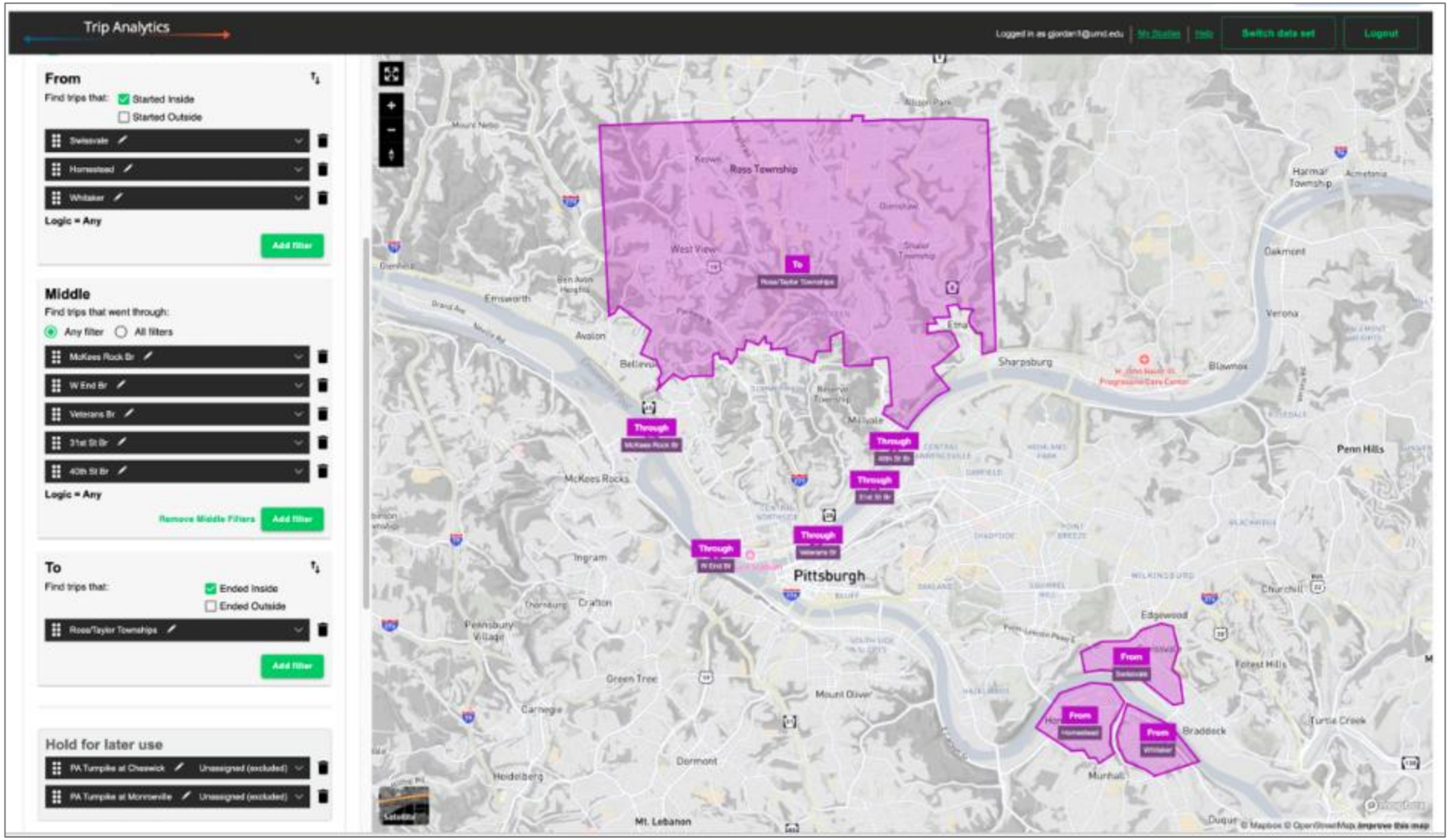
4. **ALL mode**



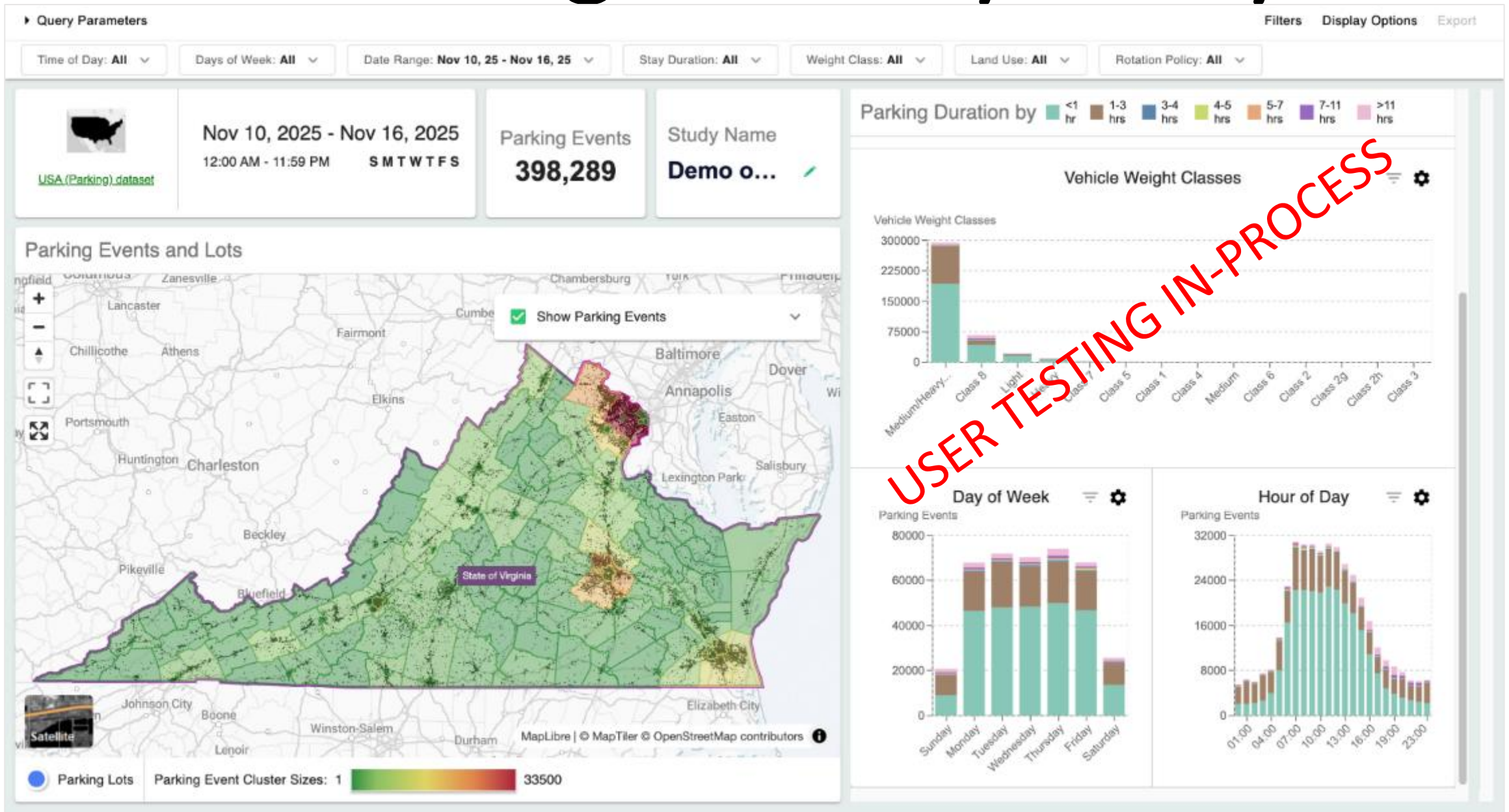
ANY or **ALL** spatial filter sets can also be used as middle filter sets in **From/To** mode

From / To report example:



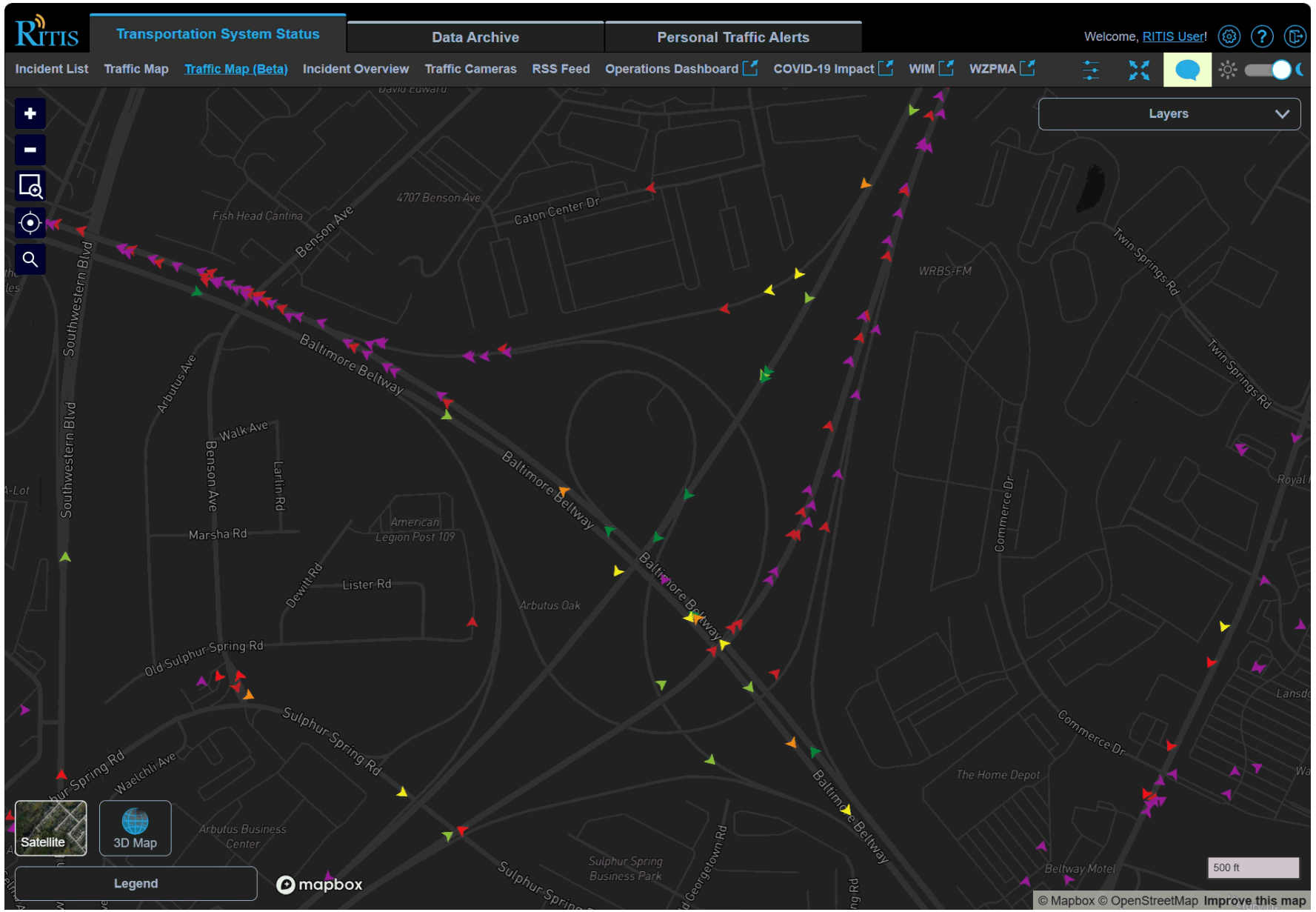


Truck Parking & Safety Analytics

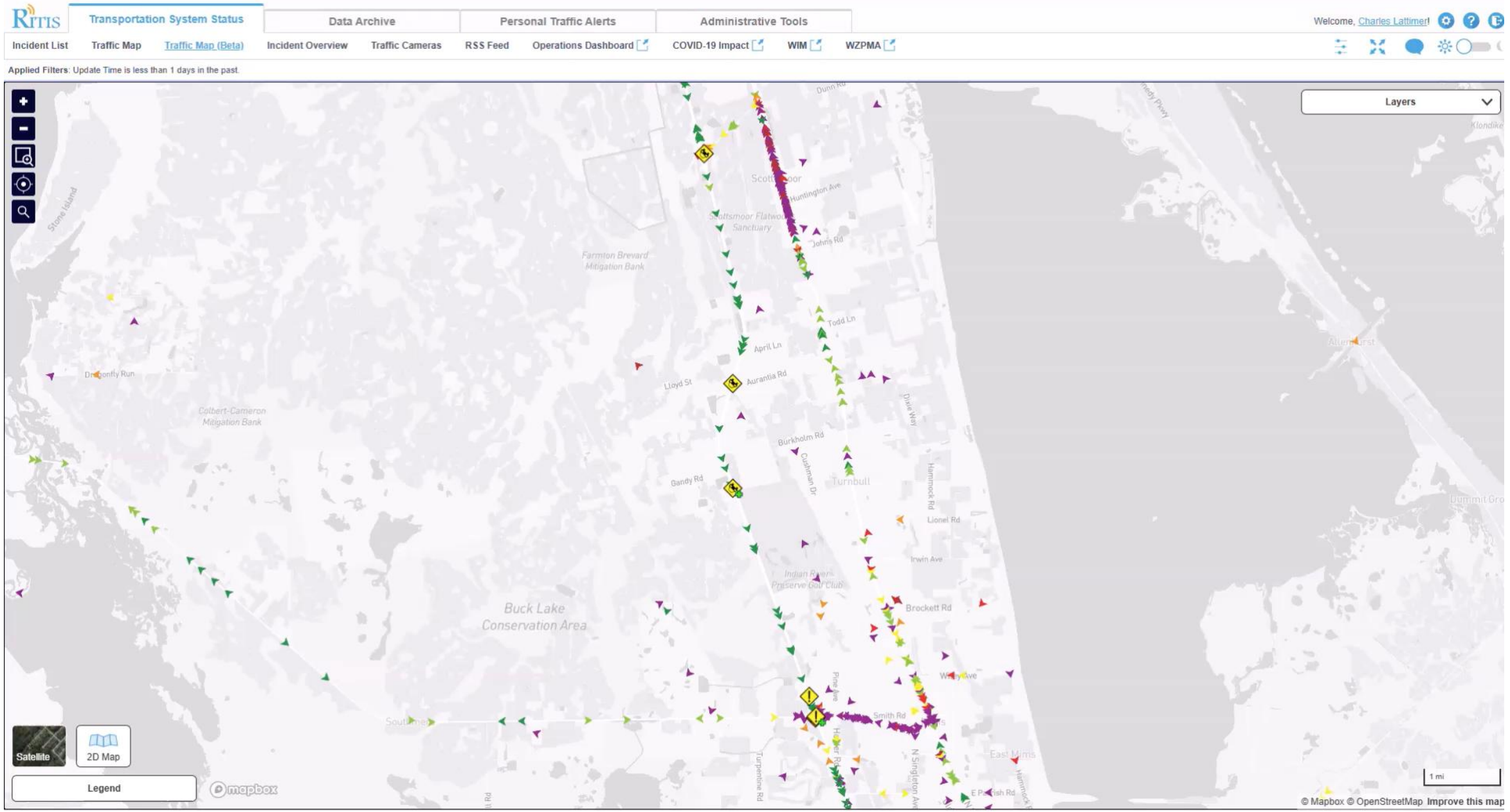


Real-time Vehicle Movements

Traffic Flow Added (for testing / eval)



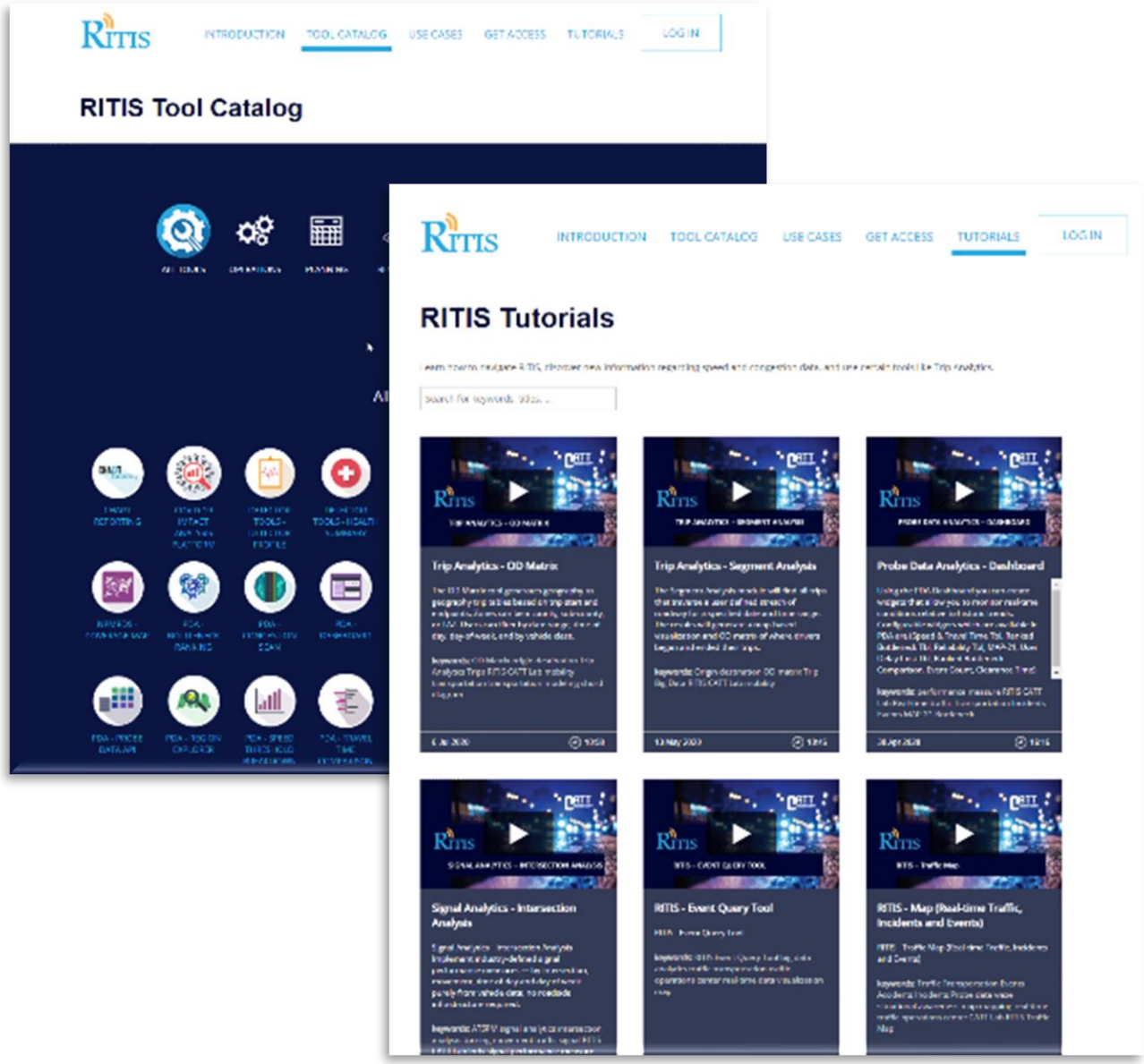
Real-time Crash Detour Behavior



RITIS Resources

- RITIS Reporting Templates Page
  - https://ritis.org/tools
- RITIS Tool Catalog
  - https://learn.ritis.org/reports
- RITIS Tutorials
  - https://ritis.org/tutorials

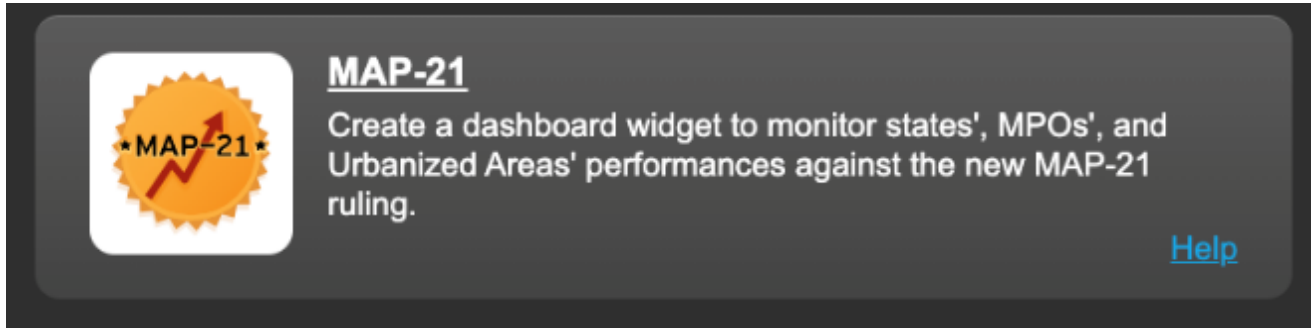
- RITIS Support: support@ritis.org



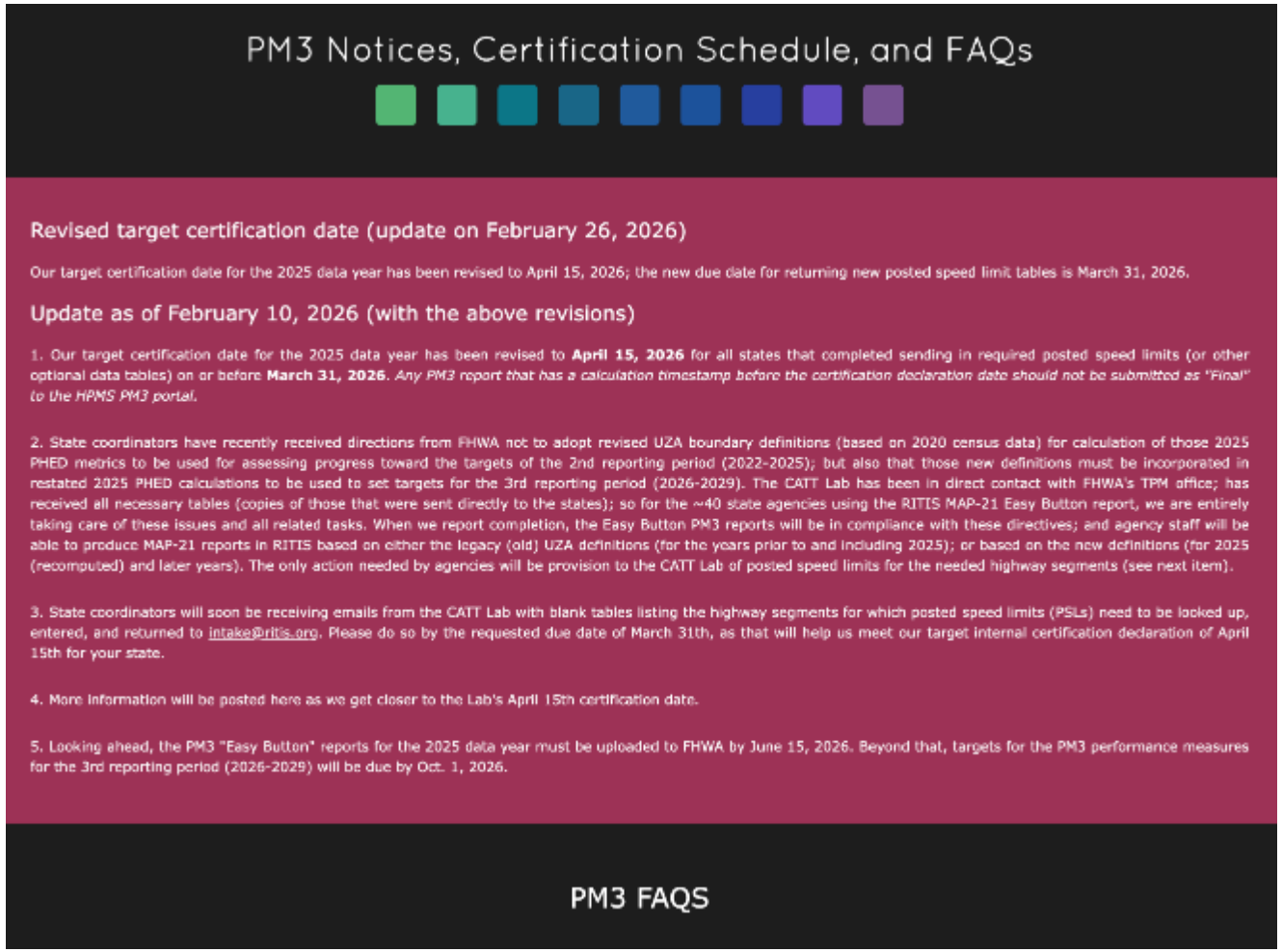
PM3 Reporting Updates

Greg Jordan
CATT Lab

Part 1: MAP-21 / PM3 reporting update



https://pda.ritis.org/suite/data-certification-schedule/



Key dates coming up:

Submit any missing posted speed limits – **March 31st**

Expected certification date – **April 15th**

FHWA / HPMS PM3 submission deadline -- **June 15th**

Remember:

1) Perform test submissions to FHWA portal beforehand;

2) Share any error or warning messages with support@ritis.org

3) Final version to upload after your certification date

FHWA notice re: handling PHED looking backward and forward

Looking backward:

2nd 4-year reporting period (2022-2025):

2021 (basis for new targets)

2022 – Year 1

2023 – Year 2

2024 – Year 3

2025 – Year 4 (expiring UZA definitions)

Looking forward:

3rd 4-year reporting period (2026-2029):

2025 (basis for new targets / new UZA definitions)

2026 – Year 1

2027 – Year 2

2028 – Year 3

2029 – Year 4

FHWA notice to all states re: calculating the excessive delay metric (PHED) looking backward and forward:

A	B	C	D	E	F	G	H	I	J
State	StateId	Tmc	RouteId	BeginPoint	EndPoint	UrbanId	LegacyUrbanId	SPEED_LIMIT	PHED_for_2025TTM
Illinois	17	119+05547	001 10172 000000	2.379	9.281	99999	99999	70	
Illinois	17	119+08881	001 20063 000000	0.13	0.263	99998	99998	35	
Illinois	17	119+08888	001 20317 000000	8.46	13.33	99999	99999	55	
Illinois	17	119+08883	001 20063 000000	1.68	2.85	99998	99998	40	
Illinois	17	119+08887	001 20317 000000	2.411	8.46	99999	99999	55	
							99998	55	
							99999	55	
							99999	55	
							99998	40	
							99998	30	

Table 2 – Reporting Segment Criteria for PHED Metric Value Submission Expected in 2025 TTM

State	Reporting Segment Criteria
Alabama	(StateId = 1) AND (LegacyUrbanId = 7786 OR UrbanId = 7786)
Alaska	(StateId = 2) AND (LegacyUrbanId = 2305)
Arizona	(StateId = 4) AND nId IN (4549, 69184, 88732) OR (69184, 69192, 88732)
	5) AND anId = 56116 OR UrbanId = 56116)
	6) AND nId IN (2683, 4681, 19504, 31843, 41347, 47611, 51445, 06, 60799, 66673, 75340, 77068, 78661, 78904, 79039, 09, 79498, 85087, 87490, 90541, 90946) OR (2683, 4681, 19504, 31843, 41347, 50533, 51445, 57709, 73, 67140, 75340, 77068, 78661, 78904, 79039, 79282, 98, 85087, 87004, 87490, 90541)
	8) AND anId IN (23527, 30628) OR UrbanId IN (23527, 30628))
	9) AND nId IN (10162, 37243, 62407, 64135, 83926, 97291) OR

Urban ID Transition in 2025 Travel Time Metrics (TTM) Table

1. Background

The FHWA Division Offices and FHWA Office of Planning reviewed and approved state-adjusted 2020 Decennial Census **Urban Area boundaries** (geospatial polygon data) during 2024 and into March 2025.

For the 2024 Highway Performance Monitoring System (HPMS) data (submitted in 2025), State DOTs submitted **Urban ID Road Events records** that spatially coincided with the HEPP-approved adjusted urban area boundaries and complied with the 2020 Decennial Census Urban Area codes.

Consequently, those boundary updates and adjustments are expected to be reflected in the **Urban ID field values for reporting segments in the Travel Time Metrics** (TTM) tables to meet the requirements of 23 CFR 490.103(b), 23 CFR 490.105(e)(8)(ii) & (iii) and 23 CFR 490.105(f)(5)(ii) & (iii), and 23 CFR 490.711(f).

The 2025 National Performance Management Research Data Set (NPMRDS) provided Urban ID field values (in UrbanCode Field) for the 2025 TTM table (to be submitted in 2026); however, those values were derived from the state-submitted 2023 HPMS Urban ID Road Events data (submitted in

Spotlight Presentation:

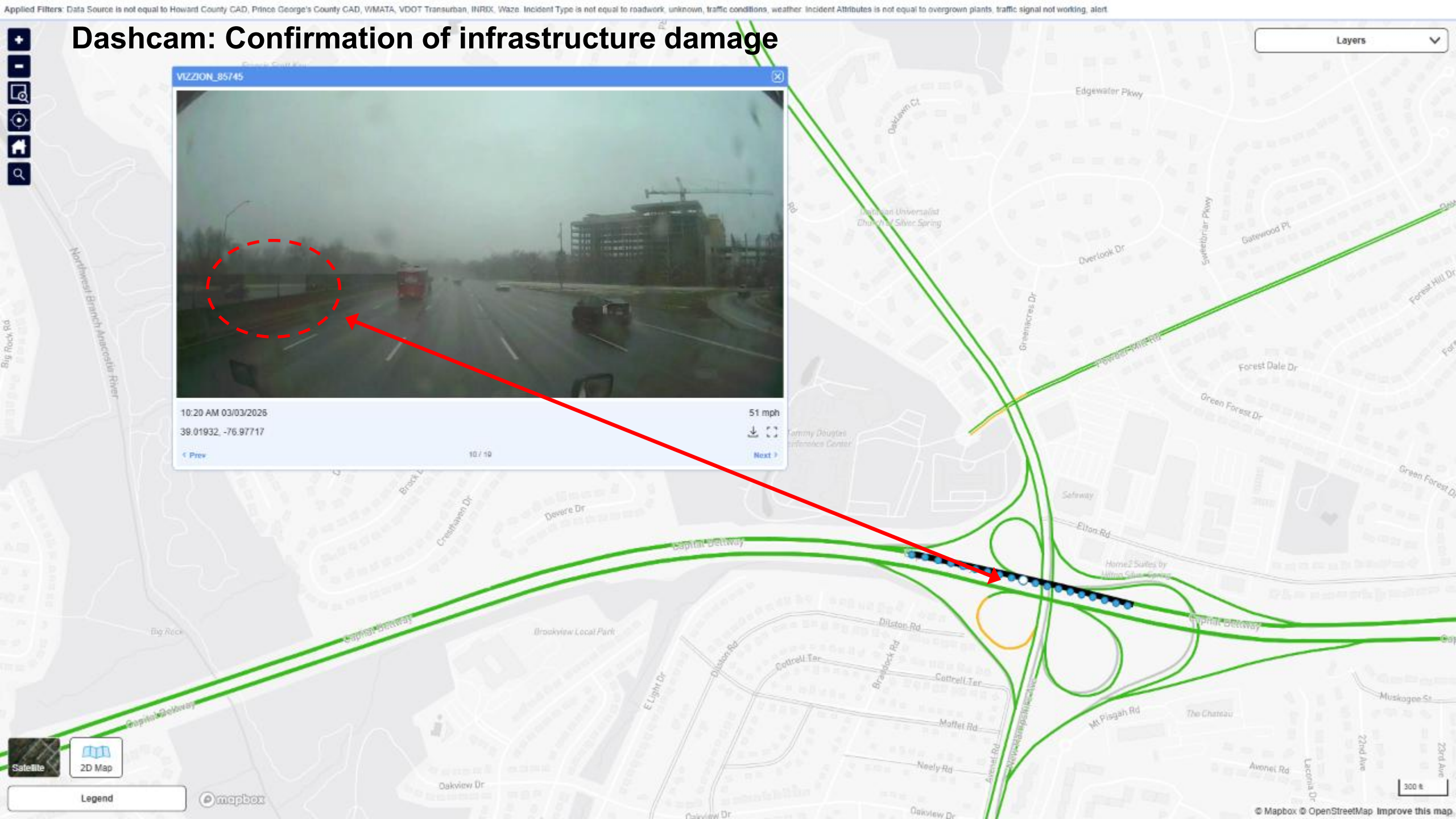
Operations Use-cases for Dashcam Imagery

Taran Hutchinson

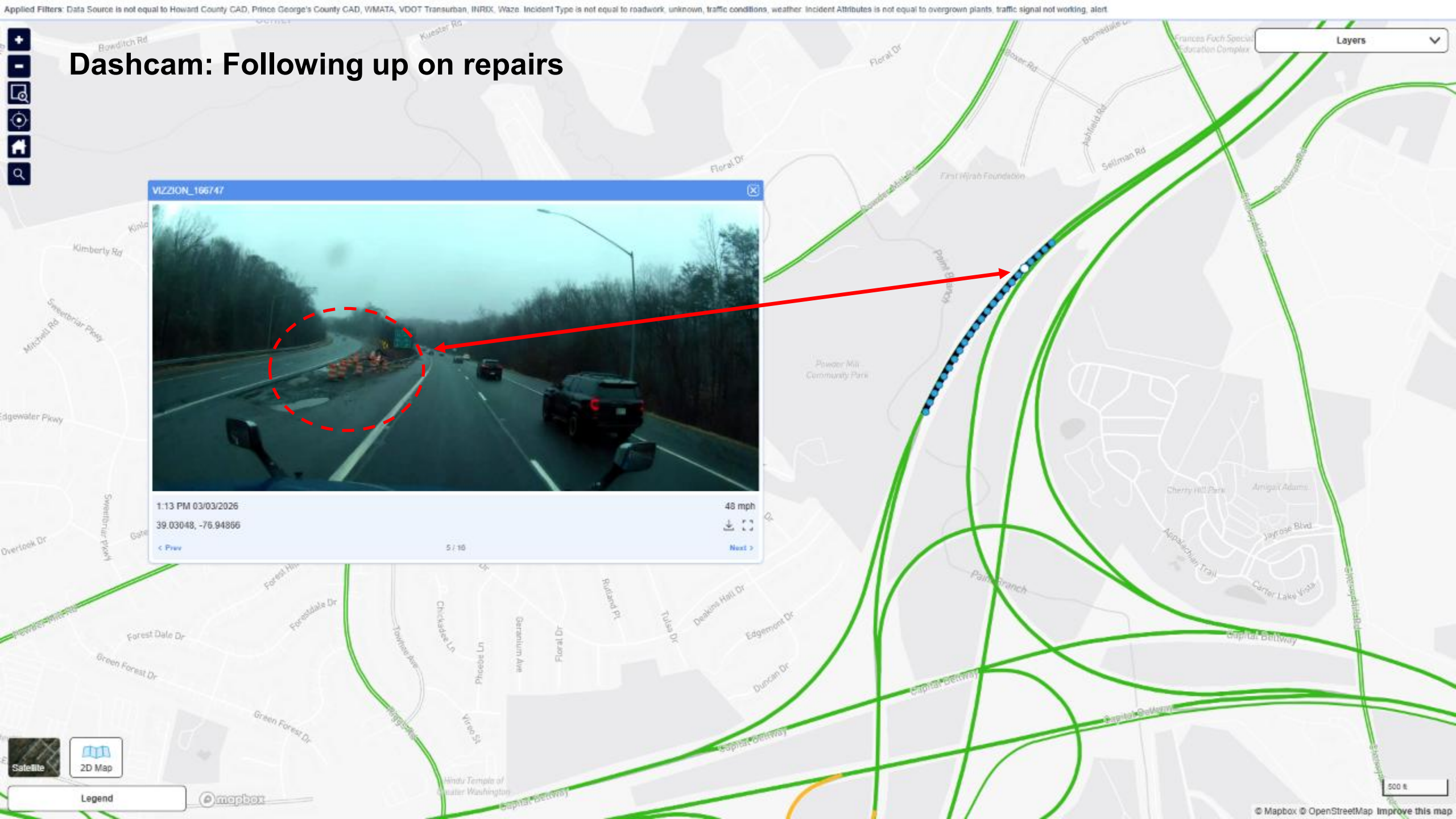
Facilitator

National Capital Region MATOC Program

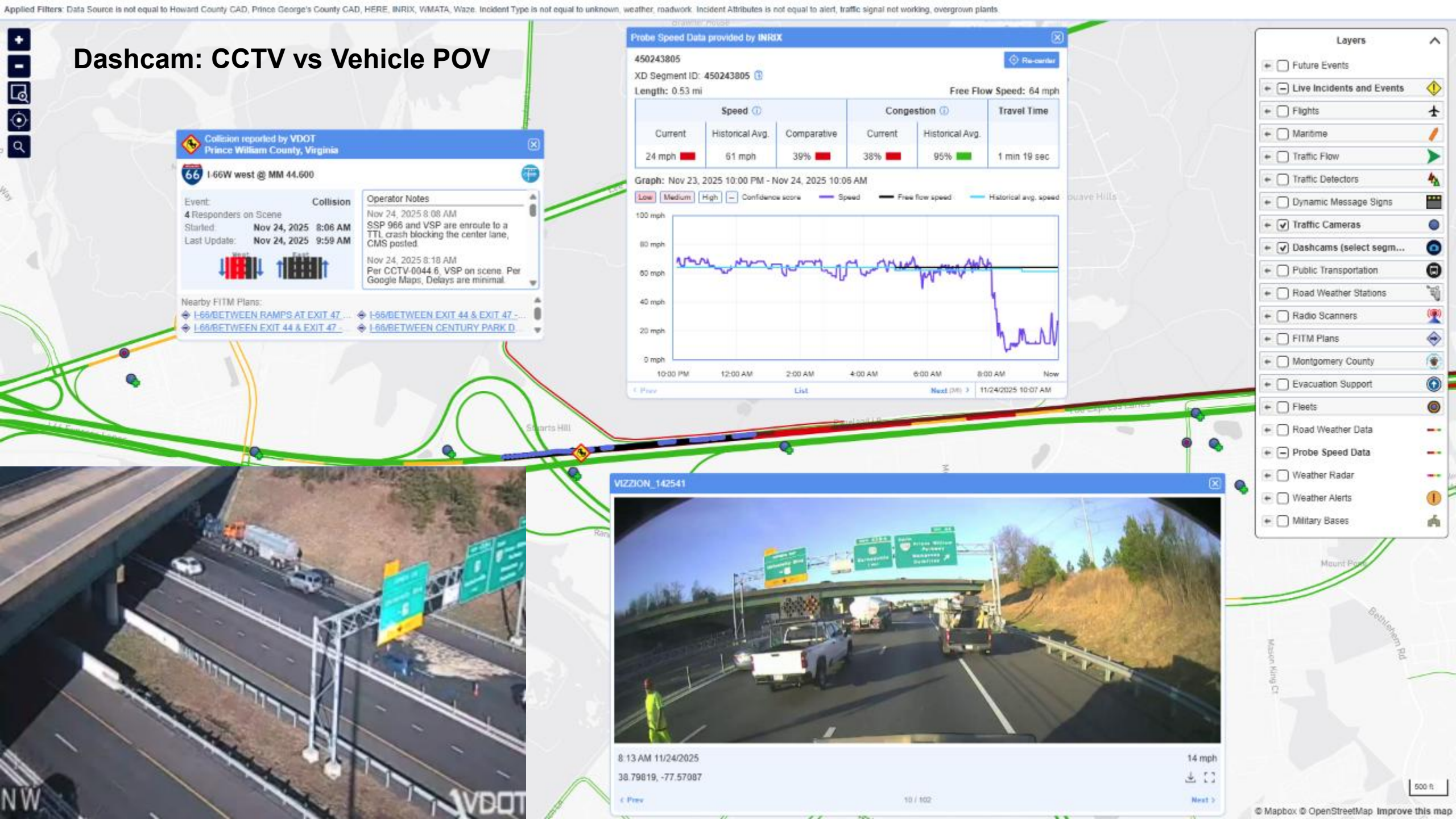
Dashcam: Confirmation of infrastructure damage



Dashcam: Following up on repairs



Dashcam: CCTV vs Vehicle POV



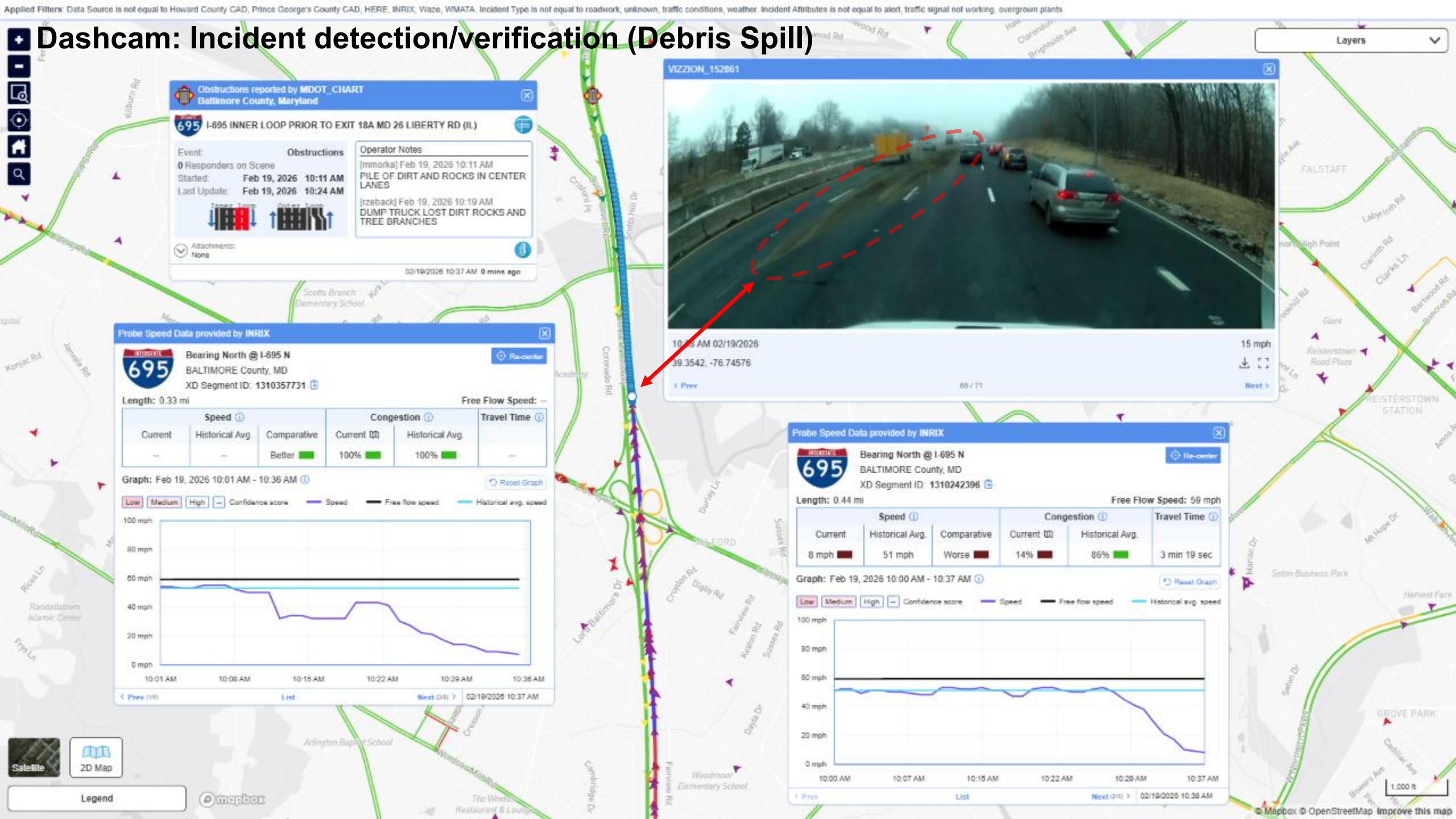

Agency CCTV
MCDOT


Agency PIO

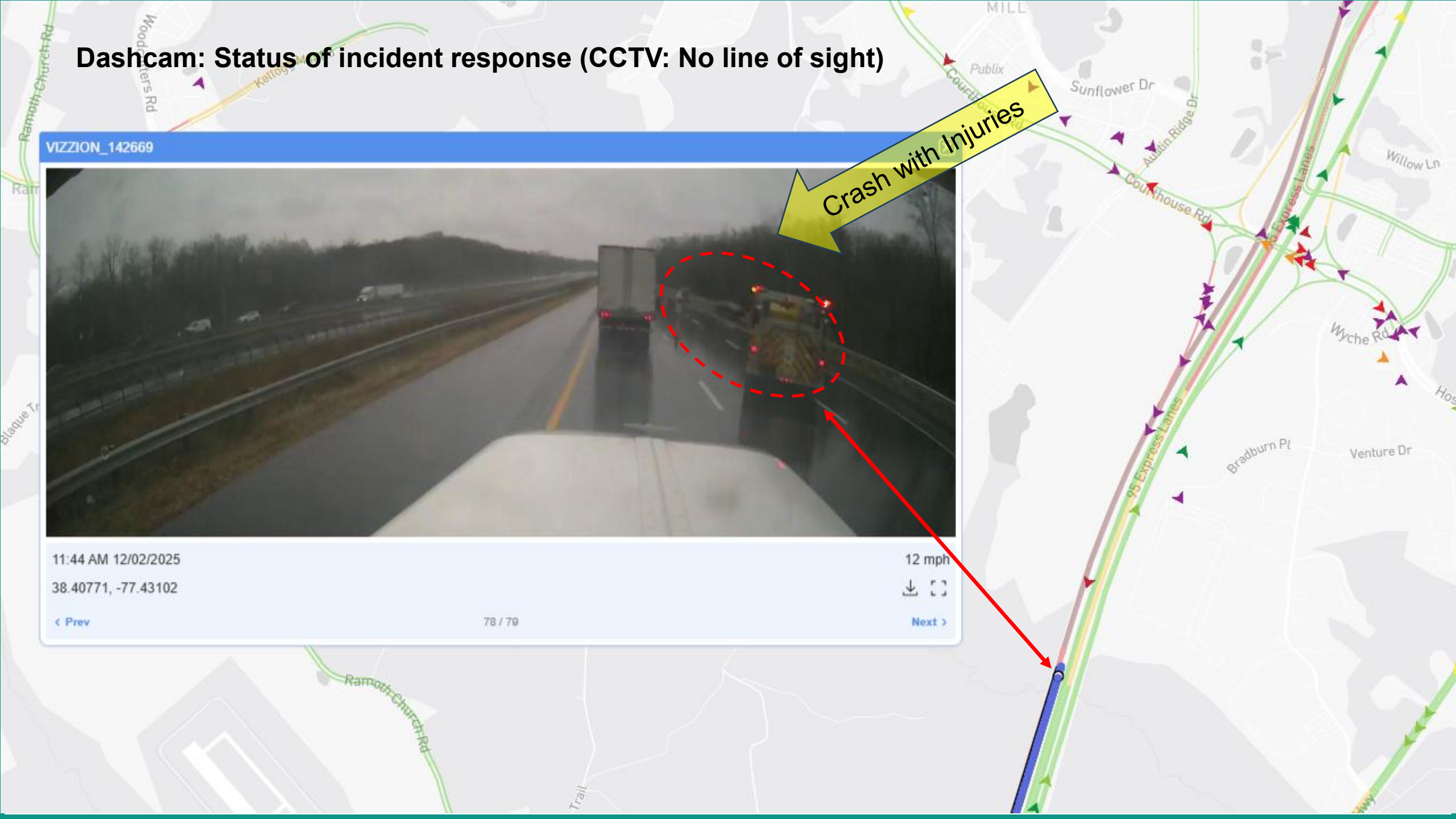

Agency CCTV


Dashcam: Incident caught on camera

Dashcam: Incident detection/verification (Debris Spill)

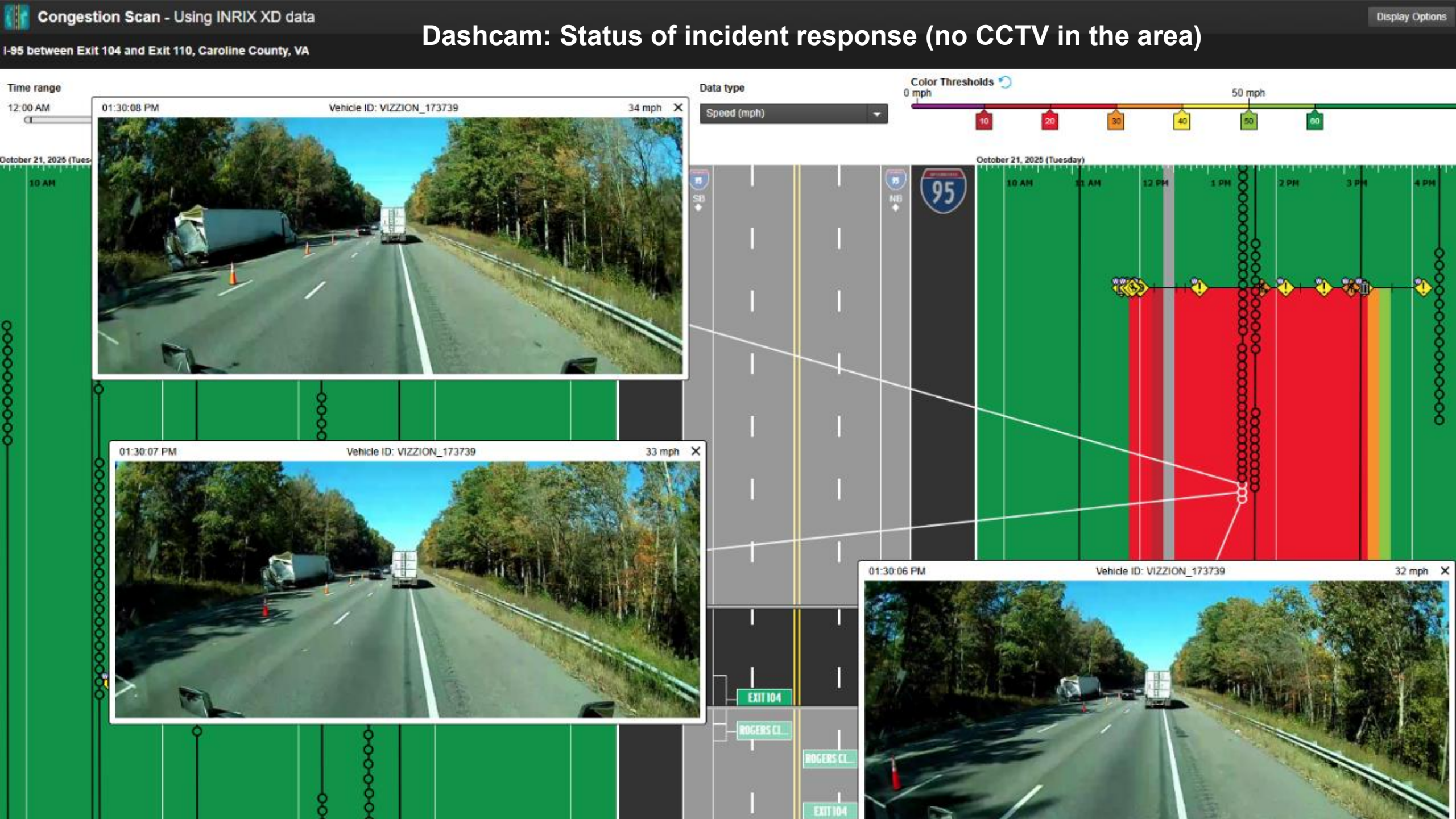


Dashcam: Status of incident response (CCTV: No line of sight)



Dashcam: Status of incident response (no CCTV in the area)

Dashcam: Status of incident response (no CCTV in the area)



Probe Data Analytics Suite

Welcome, Taran | My History | Help | Tutorials | Templates | Logout

Congestion Scan - Using INRIX XD data

Dashcam: Road Conditions after winter weather event (rural area)

Display Options | Open with...

I-22 between Byhalia and Holly Springs, Mississippi - January 26-28, 2026

Time range: 12:00 AM | 12:00 PM | 12:00 AM

Data type: Speed (mph)

Color Thresholds: 0 mph – 50 mph (10, 20, 30, 40, 50, 60)

January 26, 2026 (Monday)

12 AM 1 AM 2 AM 3 AM 4 AM 5 AM 6 AM 7 AM 8 AM 9 AM 10 AM 11 AM 12 PM 1 PM 2 PM 3 PM 4 PM 5 PM 6 PM 7 PM 8 PM 9 PM 10 PM 11 PM

1mi 2mi 3mi 4mi 9mi 10mi

22 WB EB EXIT 21 EXIT 18

Probe Data Analytics Suite

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Congestion Scan - Using INRIX XD data

Dashcam: Road Conditions before & after highway closure (snow)

Display Options | Open with...

I-79 between Zelienople and Cranberry Township, PA - February 6, 2026

Time range: 12:00 AM | 12:00 PM | 12:00 AM (6:00 AM – 12:00 AM)

Data type: Speed (mph)

Color Thresholds: 0 mph | 10 | 20 | 30 | 40

February 06, 2026 (Friday)

6 AM | 7 AM | 8 AM | 9 AM | 10 AM | 11 AM | 12 PM | 1 PM | 2 PM | 3 PM | 4 PM | 5 PM | 6 PM | 11 PM

SB | NB

PERRY HWY

LINDSAY RD

EXIT 83

1mi | 2mi | 3mi

Show
- [ ] Left graph
- [x] Right graph
- [x] Traffic events
  - [x] Agency-reported events
  - [x] Waze events
- [x] Precipitation pattern

0 in/hr (Low) – 0.165+ in/hr (High)

Light Rain | Heavy Rain | Light Snow | Heavy Snow

- [x] Dash Cameras
- [x] Graph Data

Zooming
- [ ] Use advanced zooming options
- [x] Zoom time range with mouse wheel
- [x] Zoom road with mouse wheel

Clear all tooltips

09:55:21 AM | Vehicle ID: VIZZION_90431 | 55 mph

03:46:21 PM | Vehicle ID: VIZZION_95401 | 53 mph

Questions

Taran Hutchinson
MATOC Facilitator
Metropolitan Area Transportation Operations Coordination Program
5000 College Avenue, Suite 3121
College Park, MD 20742
Phone: 301-405-7841
taran.hutchinson@matoc.org

Spotlight Presentation:

RITIS Data Ramp Metering

William Morgan

Transportation Specialist V (ITS), Transportation Management Center

Georgia Department of Transportation

Ramp Meters in Georgia

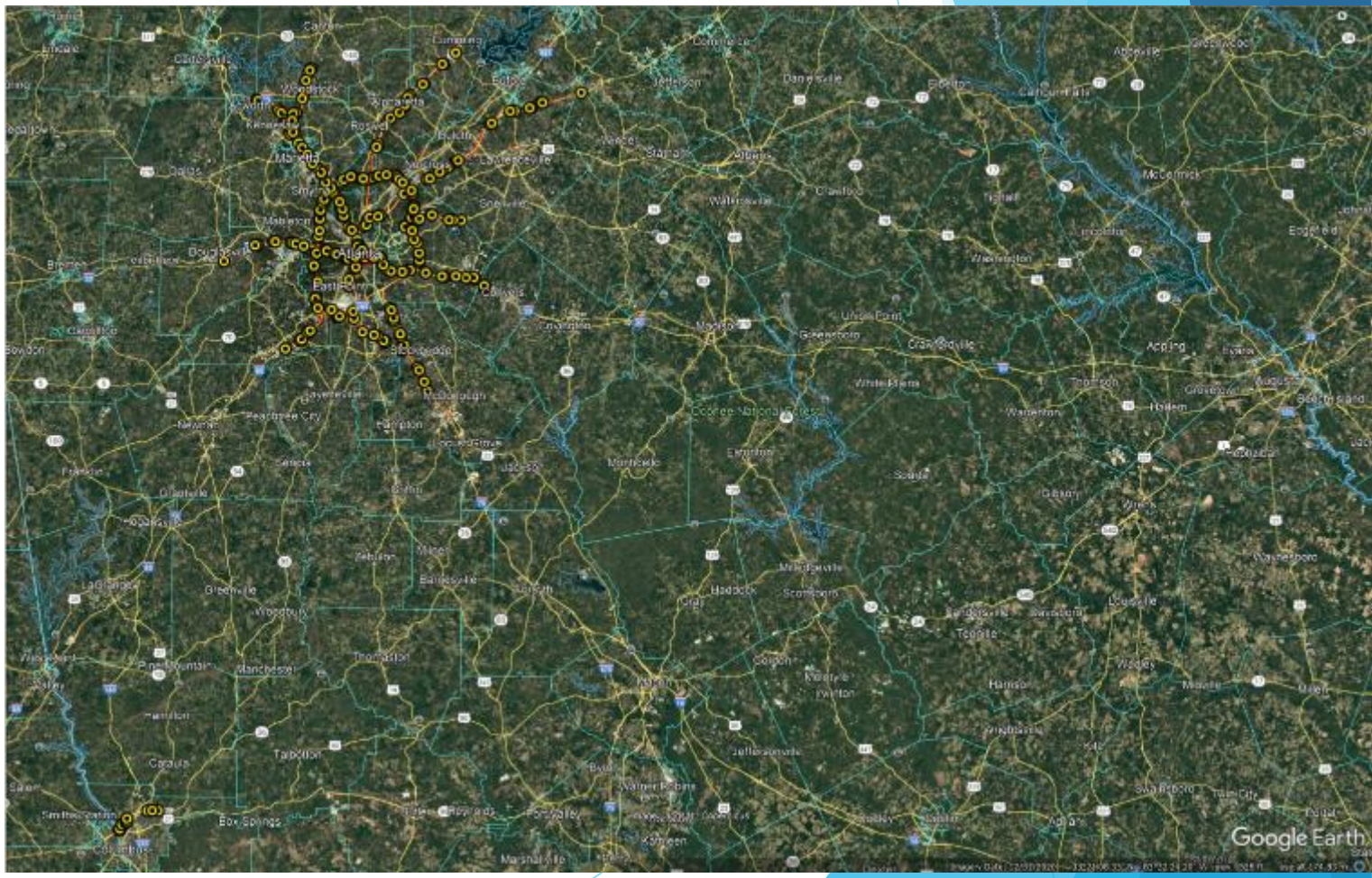
William Morgan, EIT

Transportation Specialist V (ITS), Transportation Management Center

GDOT
Georgia Department of Transportation

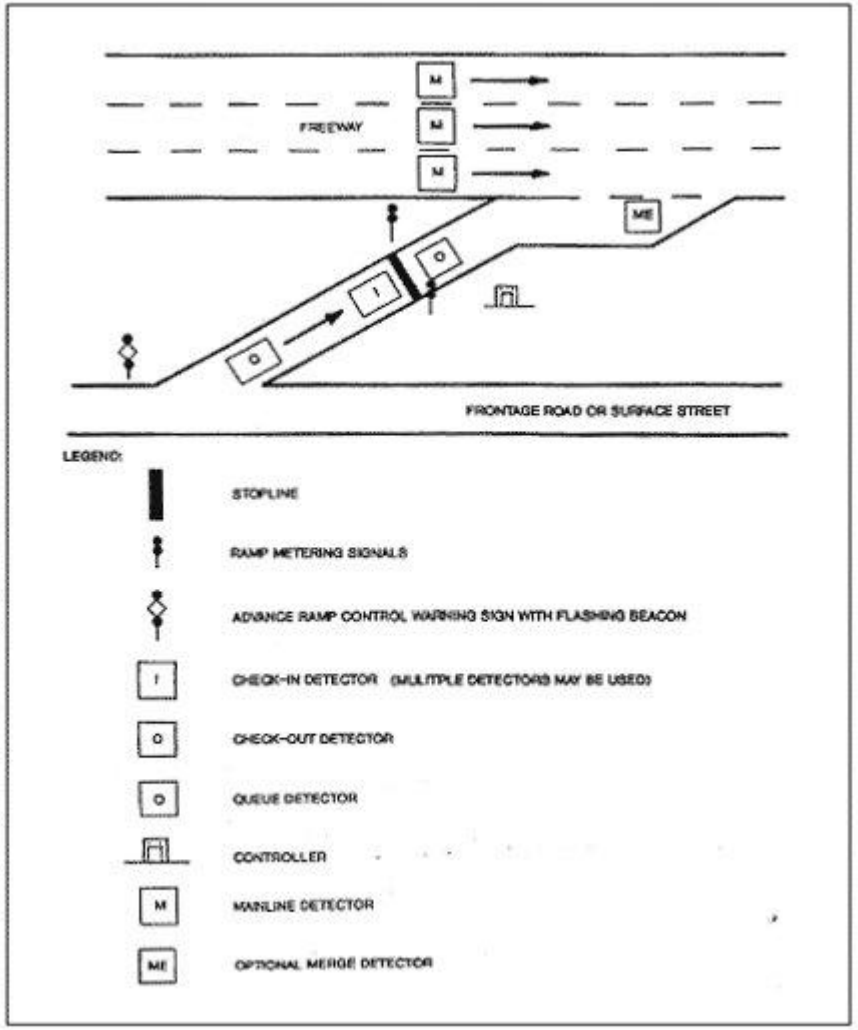
Ramp Metering in Georgia

- 235 locations
  - Mostly in Metro Atlanta
  - Columbus has a few
- Mostly single or double lane meters
  - A few three-lane meters
  - One four-lane meter
- No freeway-to-freeway meters*
  - Mostly avoided installing meters on Collector-Distributor ramps
  - One metered entrance to the reversible toll lanes



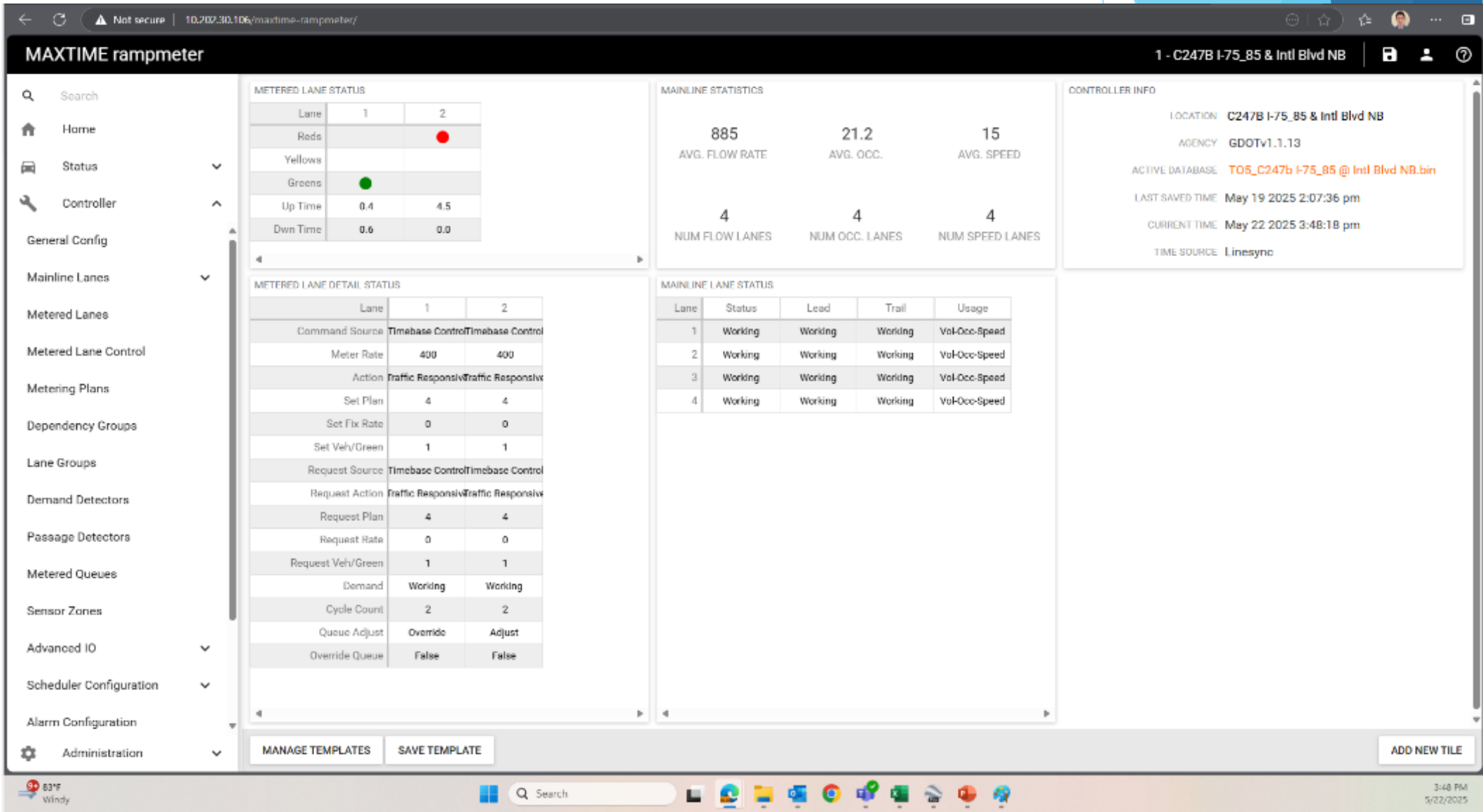
Ramp Meter Components in Georgia

- Caltrans 334-spec Cabinet
- Signals
- Advance Warning Sign(s)
- Mainline Detection
- Ramp Detection
  - Passage Detectors
  - Demand Detectors
  - Excessive (and Intermediate) Queue Detectors
- Signage
  - “Stop Here on Red”
  - “One Car per Green”



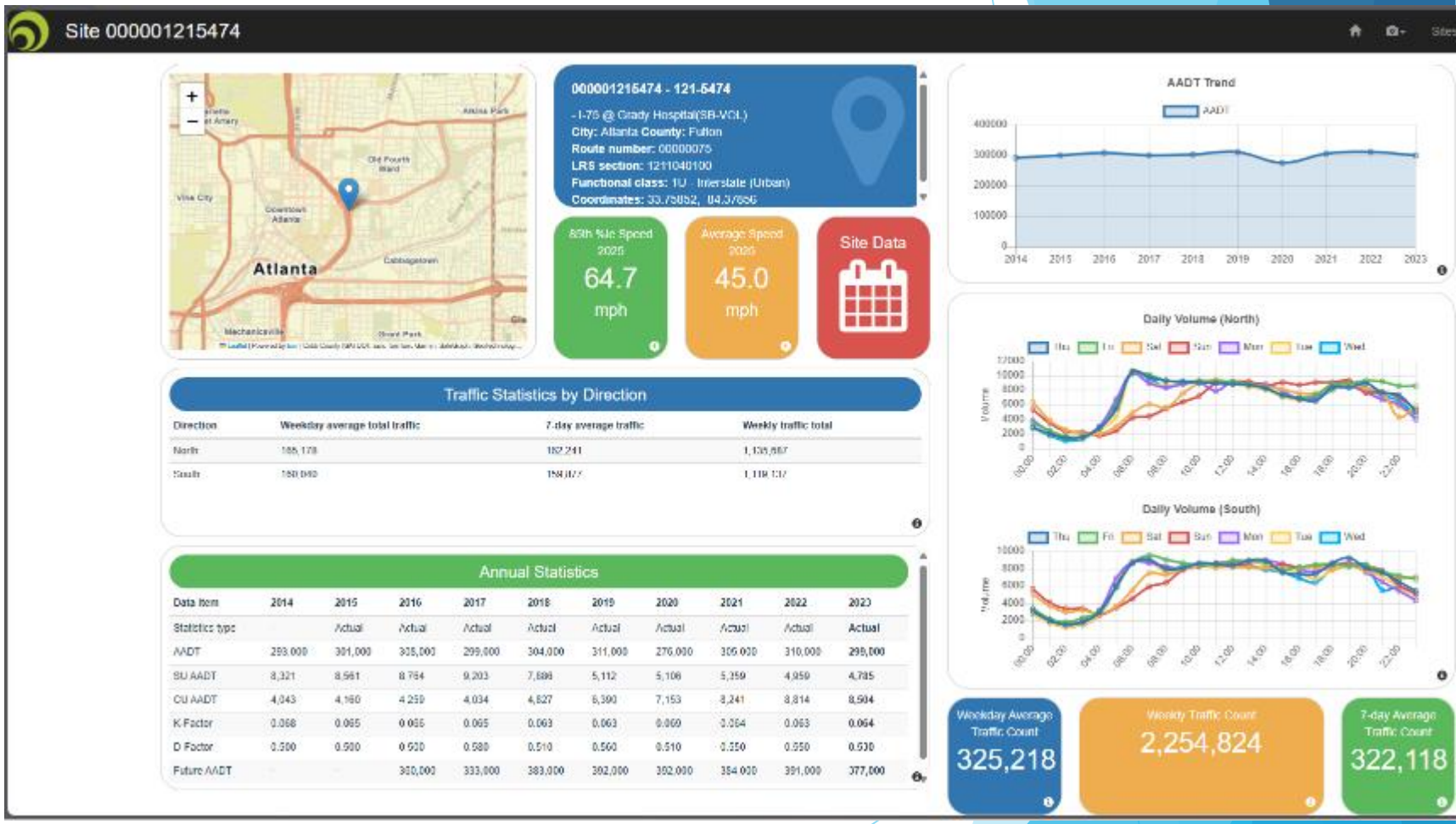
Ramp Meter Software in Georgia

- QFree Maxtime (Maxview)

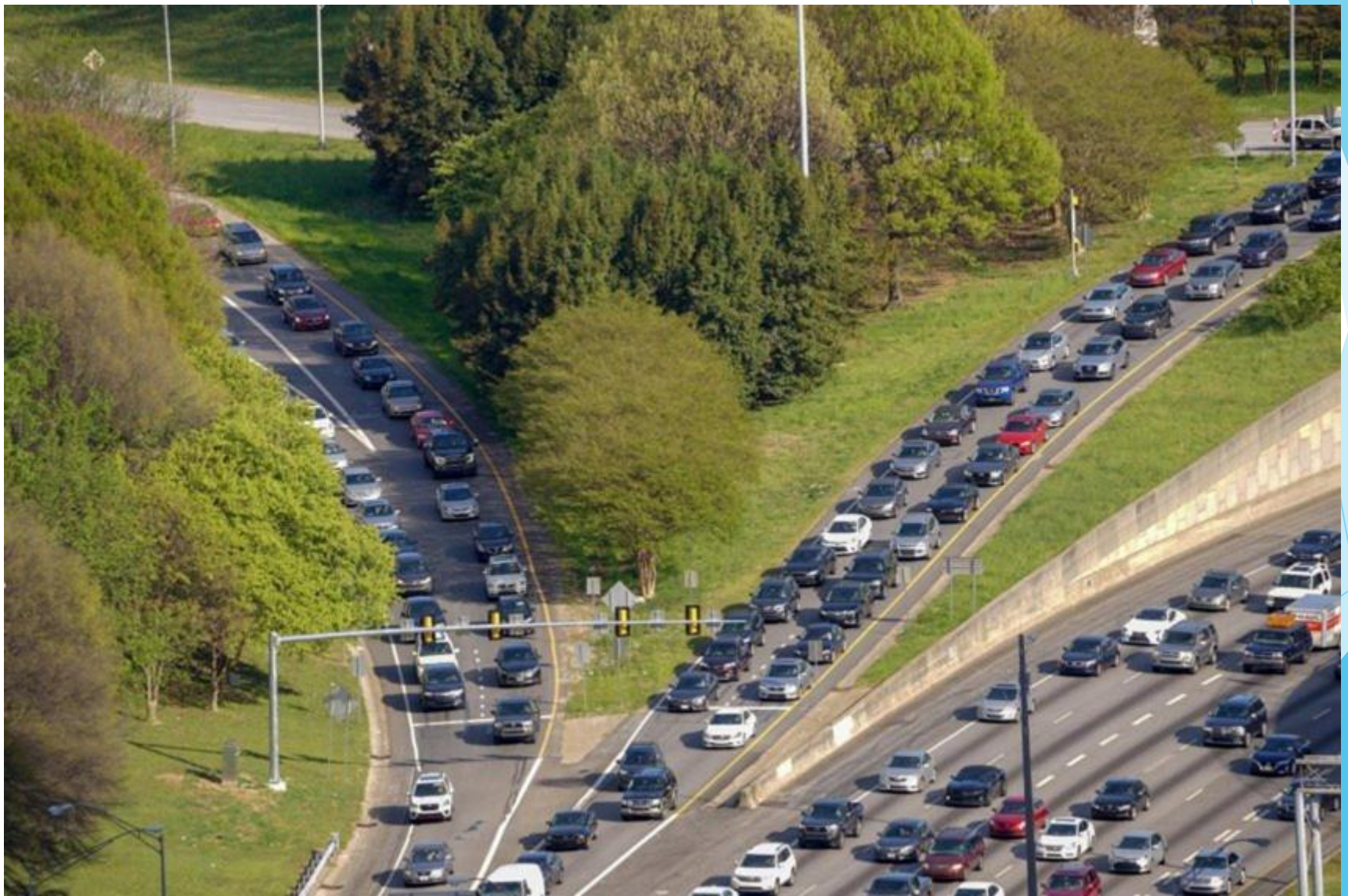


Ramp Meter Operations in Georgia

- Goal is to reduce overall congestion
  - This is accomplished by increasing throughput on the freeway
  - Without causing gridlock on the signalized roads
- Ramp Meters in Georgia are local traffic responsive
  - Metering rates are set by time of day
  - Along with speeds and occupancy of the freeway
- How do we evaluate performance?
  - Ideally, using count data
  - Otherwise, using speeds from probe data

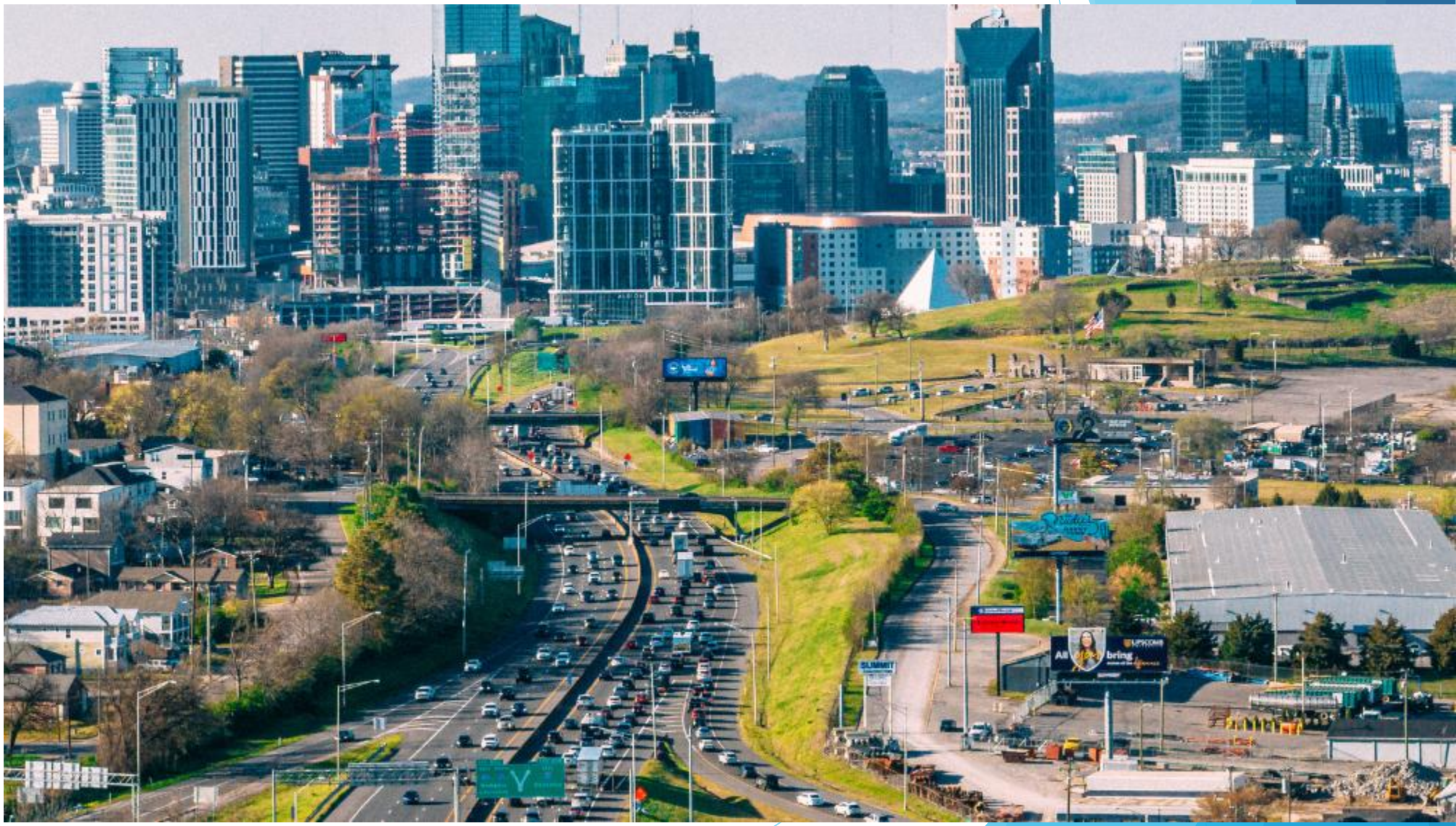


Ramp Metering: How it Works

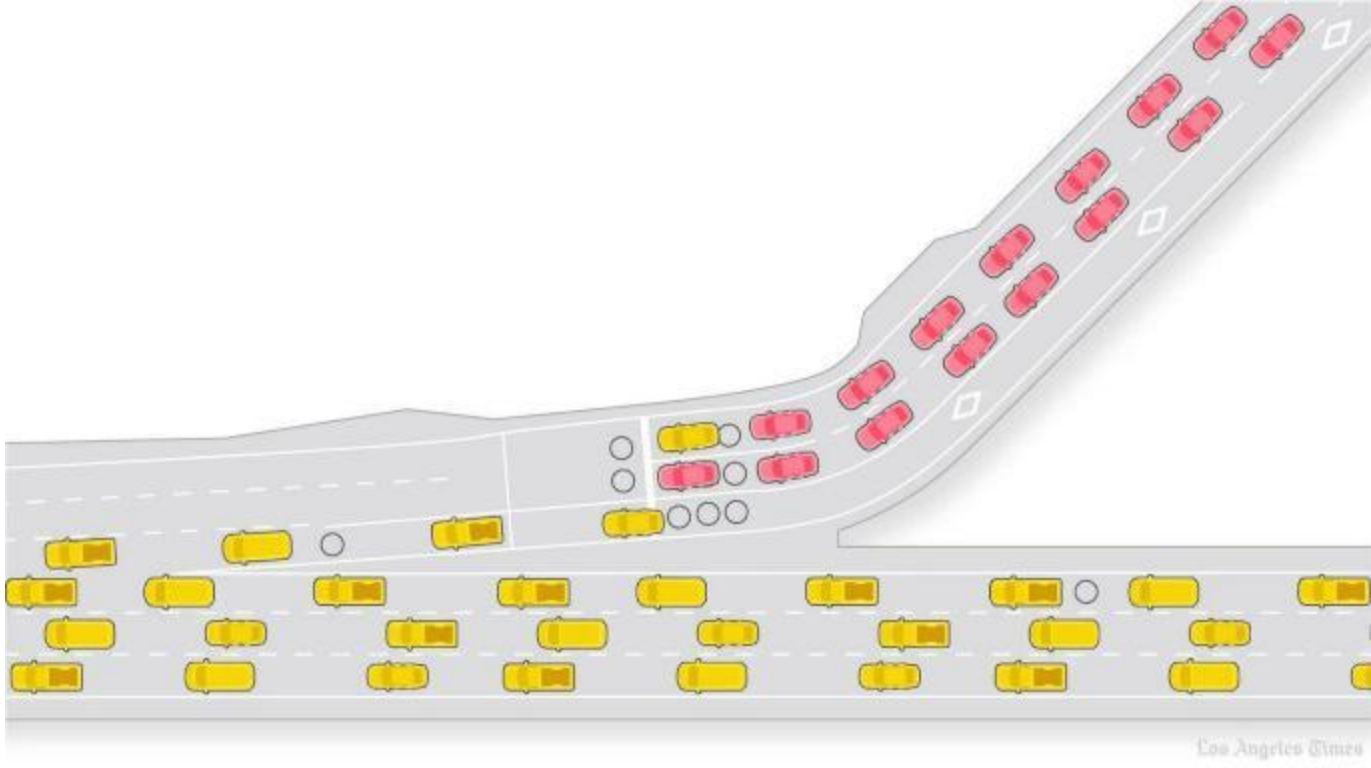


Why do we meter?

- To mitigate automotive traffic congestion
- By maximizing flow on freeways



How does metering help?



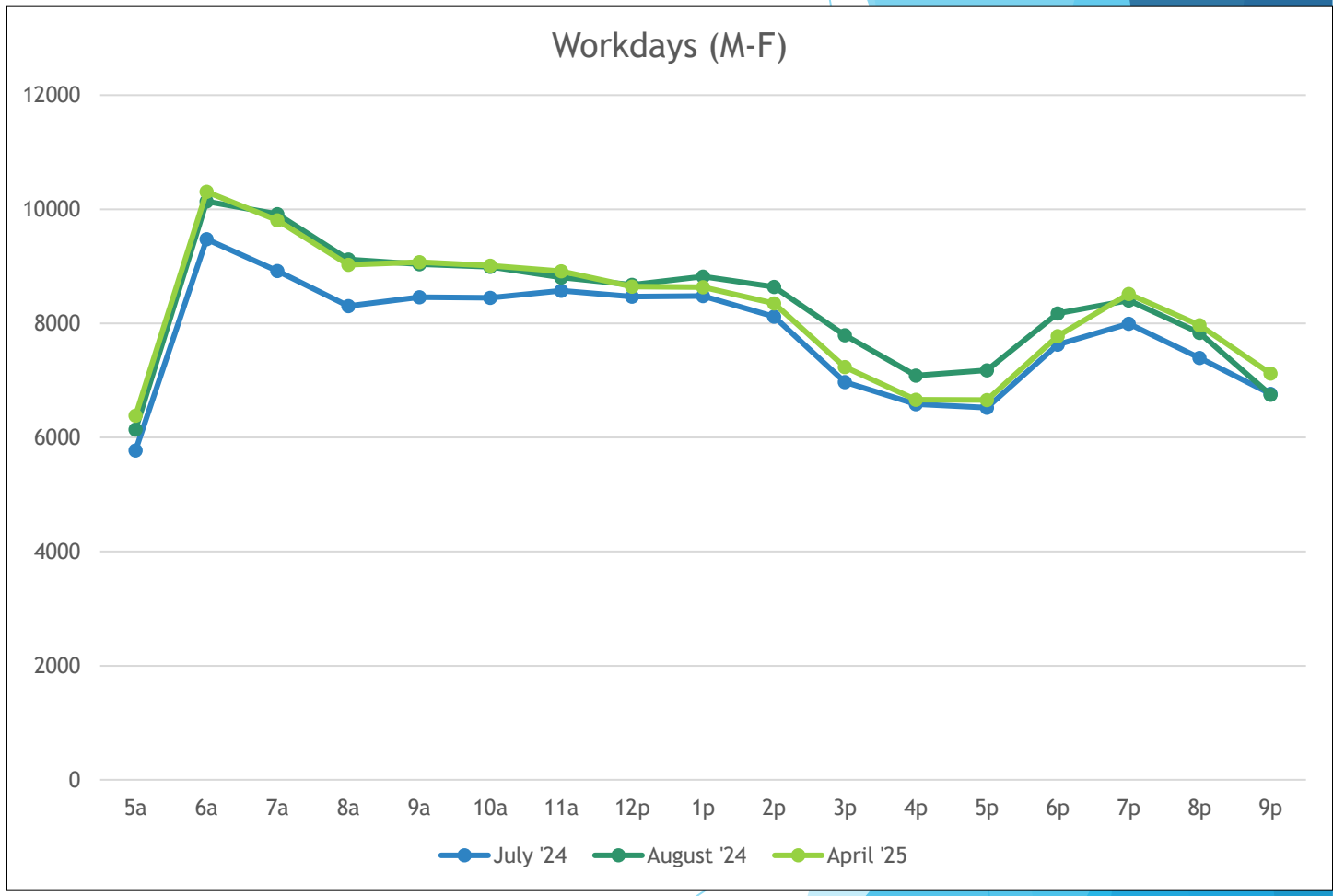
- Main Causes of Freeway Congestion
  - Incidents/Accidents
  - Queues of exiting vehicles spill onto freeway
  - Bottlenecks
  - Flow disrupted by platooned entering vehicles (shockwaves)
- Ramp Meters can mitigate the latter two causes
  - By reducing the volume of entering vehicles at bottlenecks, where demand for the downstream segment exceeds the service rate provided by that segment
  - By chopping up platoons, space is created between vehicles to smooth out the merging process, thereby lowering the density of vehicles at the merge point

How does lowering the density of vehicles at the merge point help?

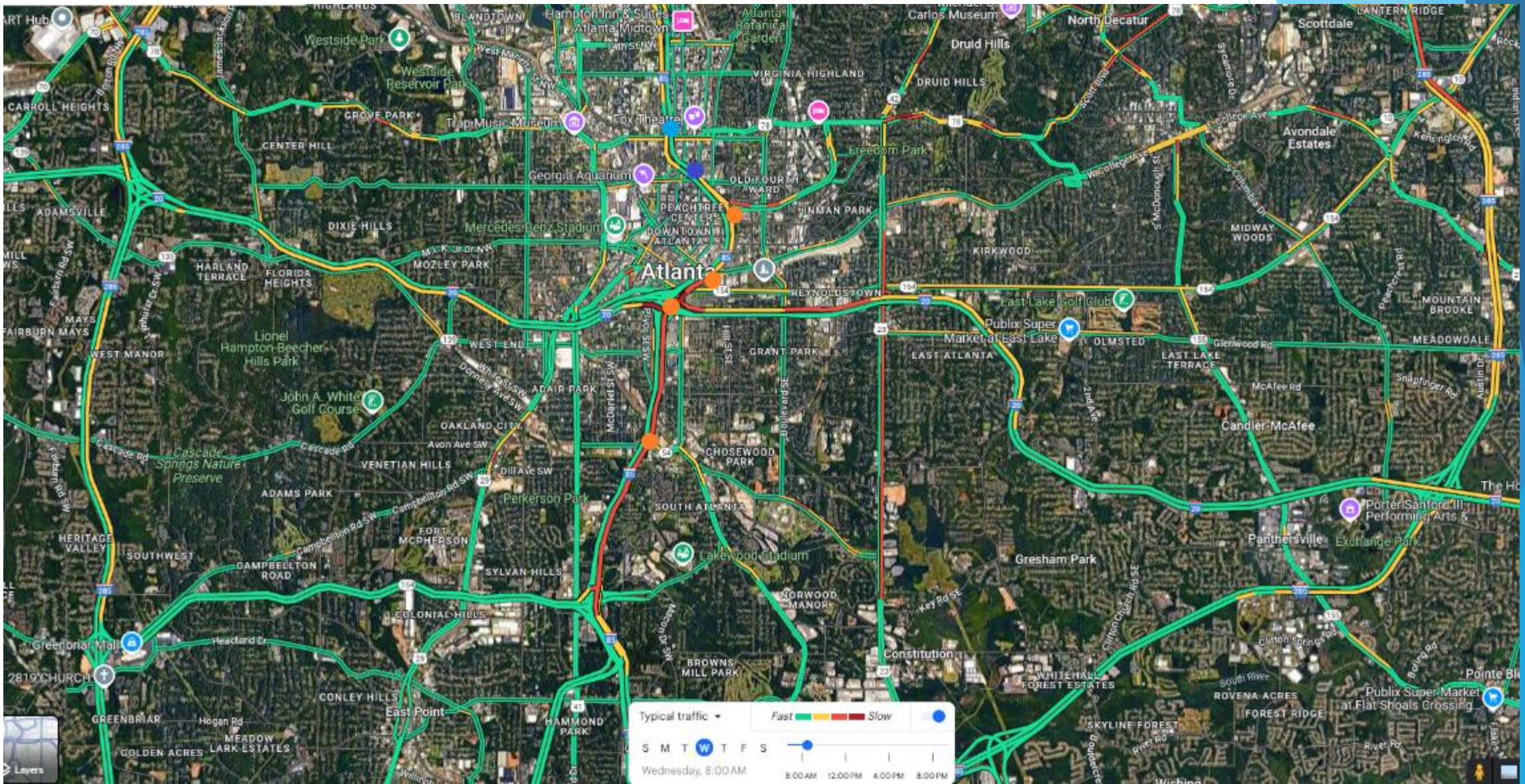
- It delays bottleneck formation
- It increases throughput when the bottleneck is active
- It speeds up the recovery of flow after peak periods
- However, beware that there is such a thing as too low of a metering rate
  - You may “starve” the bottleneck, where the downstream segment is not pushing through as many vehicles as possible
  - You may redirect trips to enter the freeway at less desirable locations, with larger negative impacts on throughput

Any proof?

- Yes!
  - ATL Downtown Connector NB
    - July 2024: Spring/Linden/Ivan Allen/Williams Ramp Meter was disabled
    - August 2024: It was enabled
    - April 2025: Improvements mostly sustained
      - Except PM Peak
    - 6.5% -> 5.4% improvement in overall throughput
    - 11.2% -> 10.0% peak hourly improvement in throughput (7 AM)



Location


Atlanta
Georgia Aquarium
Mercedes-Benz Stadium
Fox Theatre
Freedom Park
Piedmont Park
Atlanta Botanical Garden
Westside Park
Westside Reservoir Park
Trap Music Museum
Hampton Inn & Suites Atlanta-Midtown
Carlos Museum
Druid Hills
North Decatur
Scottdale
Avondale Estates
Lionel Hampton-Beecher Hills Park
John A. White Golf Course
Cascade Springs Nature Preserve
Perkerson Park
Lakewood Stadium
Publix Super Market at East Lake
East Lake Golf Club
Candler-McAfee
Porter Sanford III Performing Arts & Exchange Park
Gresham Park
Panthersville
Greenbriar Mall
East Point
Publix Super Market at Flat Shoals Crossing
Typical traffic
Fast
Slow
S M T W T F S
Wednesday, 8:00 AM
8:00 AM
12:00 PM
4:00 PM
8:00 PM
Layers

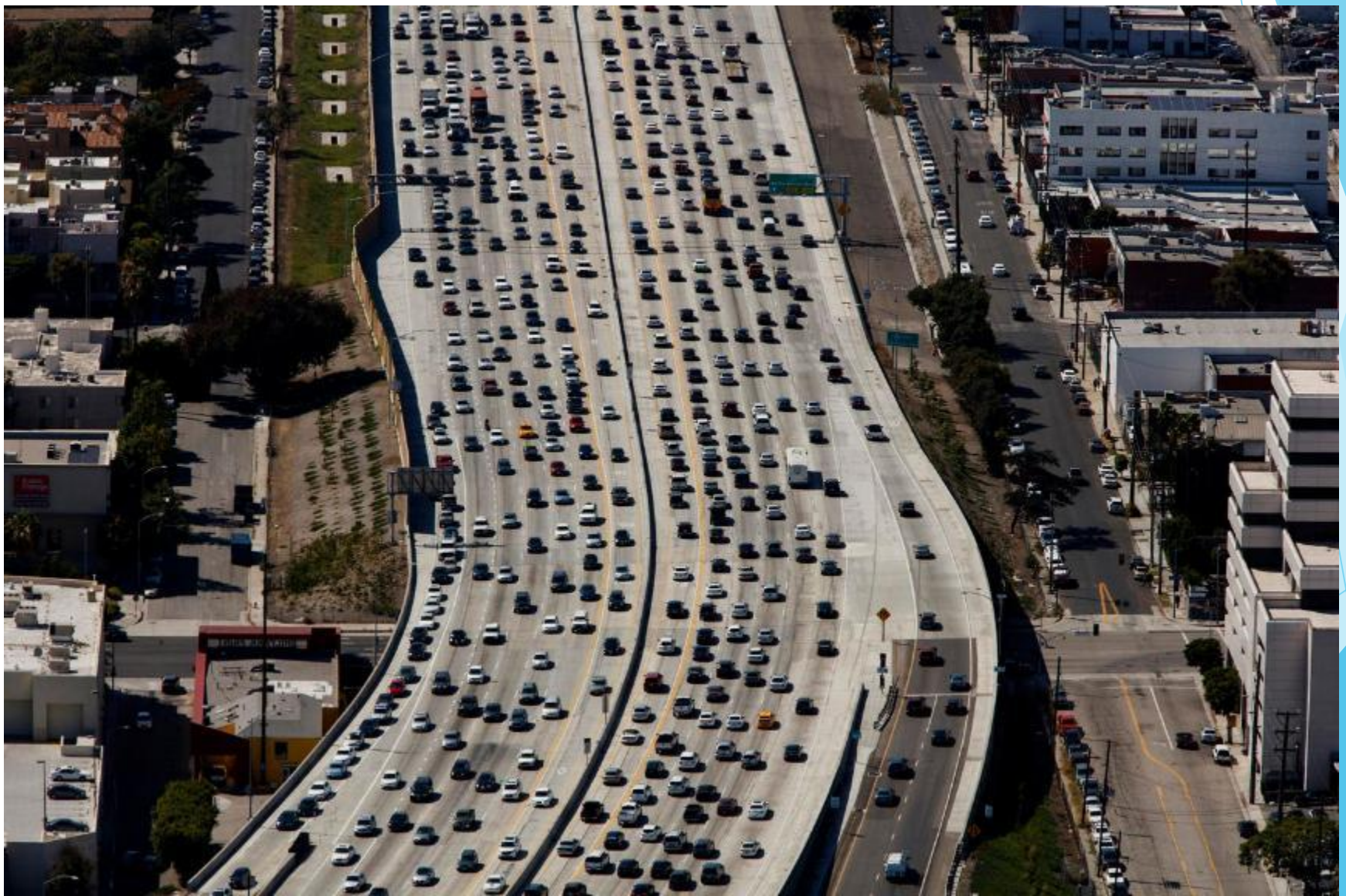
Restrictive Ramp Metering

- When the metering rate is set below the non-metered ramp volume
  - Should only be done post-breakdown of mainline flow
  - Done to shift freeway arrivals to more desirable (from a system perspective) access points
  - To properly pull this off, adequate ramp storage must be provided (>5-10% PHV)

Common arguments against ramp metering

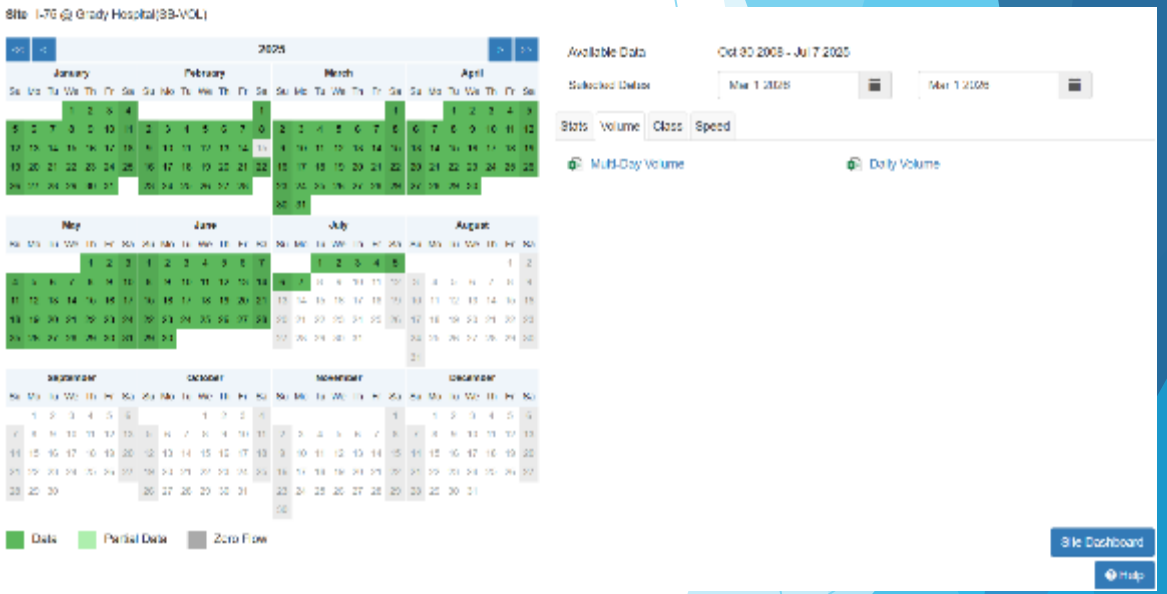
- Traffic Diversion
  - Metering should only be implemented on corridors where traffic diversion was happening due to the severity of congestion
  - When considering lowering meter rates, the increase in throughput on the freeway should be greater than the decrease in throughput on the ramp, thus causing a net decrease in diverted trips
- Equity (wealthy suburbanites are being prioritized over poor city dwellers)
  - Ramp meters do not promote longer trips
  - By restoring capacity lost due to congestion on the freeway, due to equilibrium effects, travel times on adjacent arterials should improve as travel times on the freeway improve
- Socio-economics (areas around freeways tend to be poorer)
  - Ramp meters do not shift traffic congestion and associated impacts from one location to another
  - The goal is to shorten the queue behind the bottleneck while keeping impacts confined to the ramp segment(s)

Using RITIS to Evaluate Ramp Meters



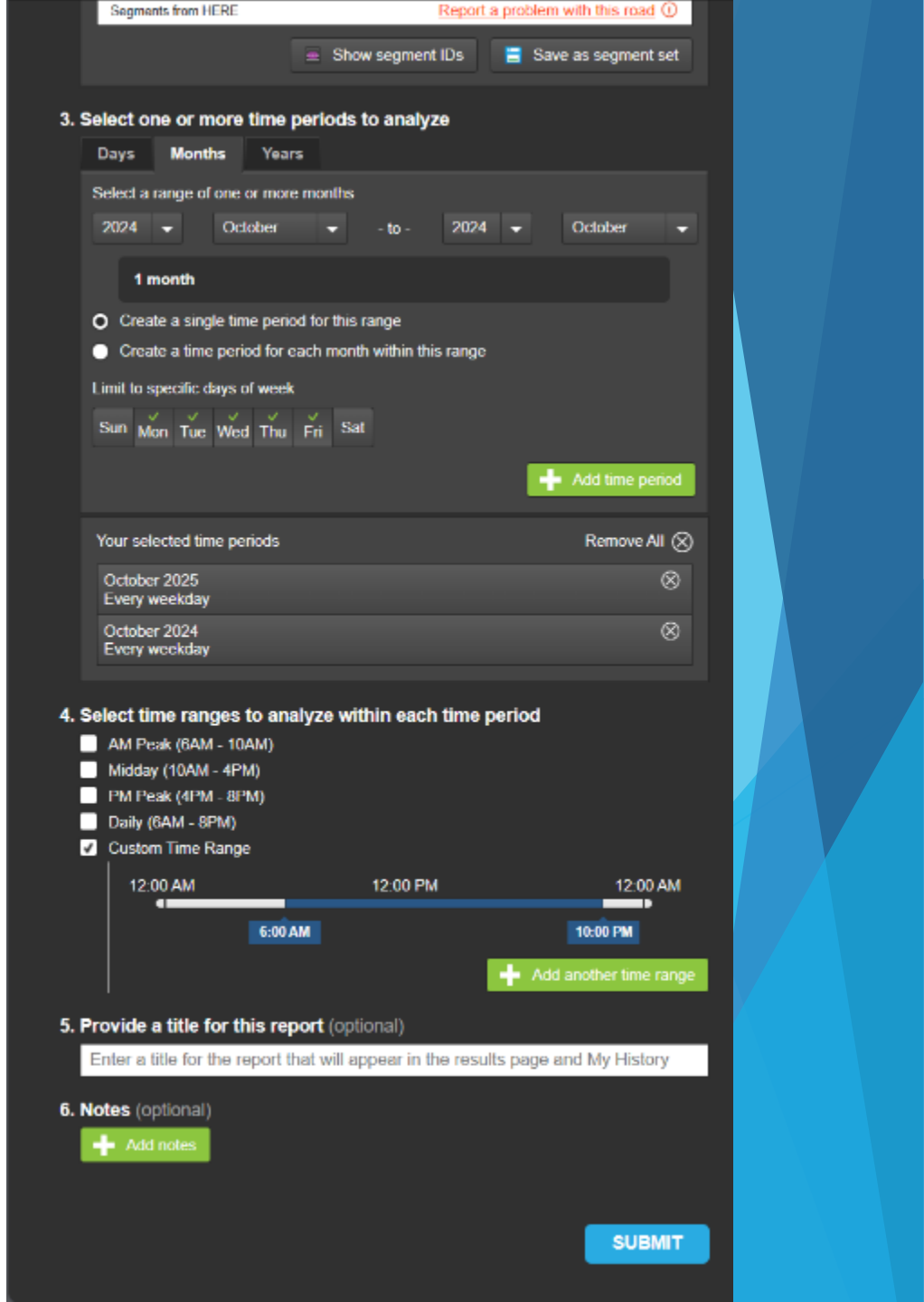
Background

- Continuous count station on the Downtown Connector (I-75/85) in Atlanta went down in July 2025 due to repaving
- After observing ramp meter operations, I decided to try implementing restrictive ramp metering at 3 locations along the northbound Connector at the end of September 2025
  - Freedom Parkway
  - Fulton Street
  - University Avenue
- Why?



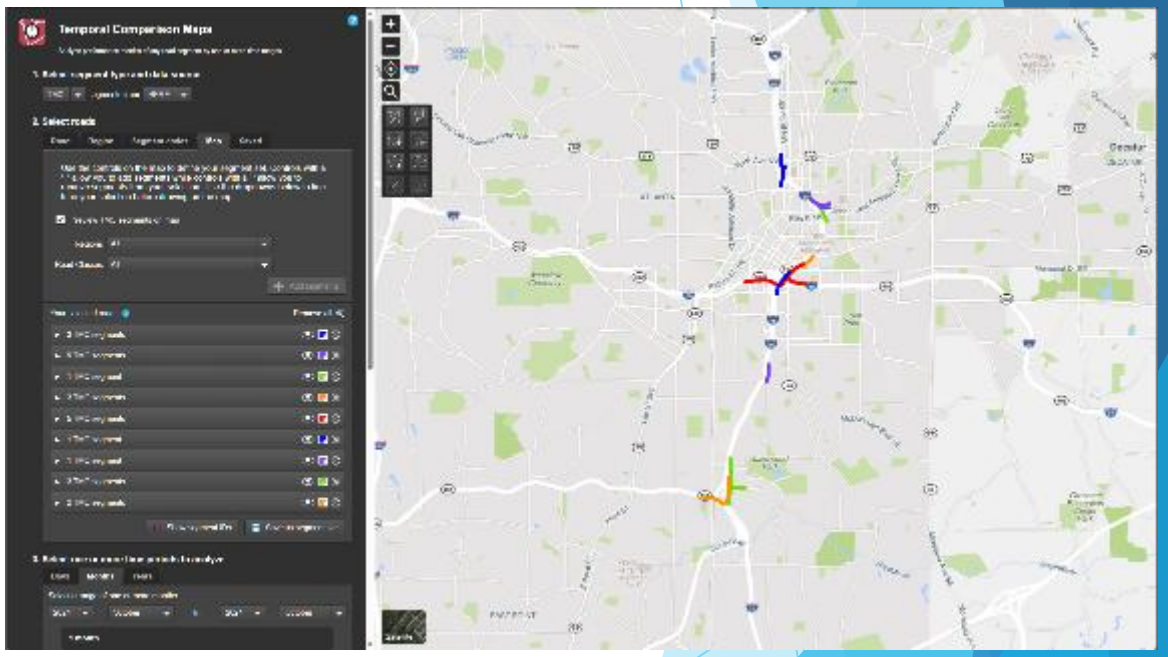
RITIS Probe Data Analytics

- Temporal Comparison Maps
  - I prefer year-over-year comparisons to filter out seasonal effects
  - In this case that would be October 2024 Every Weekday vs. October 2025 Every Weekday
  - Time Range: 6am-10pm (when the ramp meters are active/available)



Spatial Scope

- Started with Corridor in Question (Northbound Connector)
  - Ramps were selected using Map tool
- Then checked connecting freeways and continued upstream until improvement disappeared
  - I-20 (which led to I-285)
  - I-75
  - I-85
  - GA-166
- Essentially searching for reduction in rear of queue (presumably due to increased throughput)



Reduction in Delay Calculation

- For each segment, the average speed from each time period is entered into an Excel spreadsheet
- Next, I measured the length of each segment in Google Maps
- Then, I entered the AADT for each segment from GDOT's Traffic Analysis & Data Application (TADA)
- Using that information, the change in vehicle-hours of delay per day is calculated using the below formula:
- $\Delta Vehicle * hours = \left(\left(\frac{length}{speed_{2024}}\right) - \left(\frac{length}{speed_{2025}}\right)\right) * (AADT * F)$
- F is a factor used to convert AADT to approximate 6am-10pm counts

Excel Spreadsheet

Segment	Delta	2024	2025	Length	AADT	0.8345049	Ramp	Delta	2024	2025	Length	AADT	5280	Tail	Segment	Delta	2024	2025	Length	AADT	delta(veh*hrs/day)
Techwood	0	56	56	0.628977	361300	0.0	Spring	1	20	21	0.138447	29200	8.0	I-20WB	Connector	2	53	55	0.23125	199000	13.2
10th	1	49	50	0.664962	372000	42.1	Williams	3	22	25	0.285417	14600	19.0	I-20WB	Hill	1	39	40	0.407955	216000	23.6
North	0	40	40	0.069318	405000	0.0	Spring	3	9	12	0.047727	14600	16.2	I-20WB	Blvd	2	40	42	1.08	195000	104.6
Williams	1	36	37	0.268939	350000	29.5	Freedom	0	28	28	0.13428	21900	0.0	I-20EB	Connector	1	54	55	0.065909	176000	1.6
Spring	1	36	37	0.191477	339000	20.3	Ellis	-10	19	9	0.125189	10950	-66.9	I-20EB	Windsor	2	51	53	0.237121	190000	13.9
Pine	1	34	35	0.287879	360000	36.3	Intl	-2	32	30	0.082576	5475	-0.8	I-20EB	McDaniel	2	50	52	0.500758	205000	32.9
Freedom	2	26	28	0.176326	355000	71.8	Freedom	-1	7	6	0.083902	10950	-18.3	I-20EB	Lee	3	52	55	0.18428	186000	15.0
Dobbs	3	23	26	0.194318	319000	129.8	Freedom	-3	13	10	0.098295	5475	-10.4	I-20EB	JEL	3	51	54	0.688636	181000	56.7
Freedom	1	23	24	0.427083	307000	99.1	Highland	-2	15	13	0.13447	5475	-6.3	I-20EB	Langhorn	7	44	51	0.921591	168000	201.5
Edgewood	1	23	24	0.23447	343000	60.8	Dobbs	0	12	12	0.135038	7910	0.0	I-20EB	MLK	9	48	57	1.64	166000	373.7
MLK	2	21	23	0.187121	372000	120.3	MLK	-2	14	12	0.158523	10400	-16.4	I-20EB	HEH	4	58	62	0.855303	162000	64.3
I-20	2	22	24	0.263258	253000	105.3	MLK L	-2	18	16	0.033902	5200	-1.0	I-20EB	I-285	0	48	48	2.15	186000	0.0
Fulton	2	21	23	0.341477	238510	140.7	MLK R	-2	12	10	0.030303	5200	-2.2	I-20EB	Fulton Ind	0	34	34	1.59	156000	0.0
I-20	2	23	25	0.472917	296440	203.5	Fulton	-6	21	15	0.33447	7530	-40.0	I-20EB	Six Flags	3	32	35	0.502841	148000	83.2
Central	2	20	22	0.382386	326000	236.4	University	-3	17	14	0.215152	10400	-23.5	I-20EB	Riverside	4	32	36	2.66	134000	516.4
Pryor	3	19	22	0.315152	329340	310.8	I-20	0	14	14	0.263258	51200	0.0	I-20EB	Thornton	10	52	62	2.48	119000	381.9
University	4	23	27	1.53	317000	1303.5	I-20 L	1	7	8	0.499053	22925	170.5	I-285 NB	I-20	1	47	48	0.345455	143000	9.1
Lakewood	5	30	35	0.643182	259400	331.5	I-20 EB	3	35	38	0.150568	40500	11.5	I-285 NB	MLK	3	37	40	1.82	149000	229.4
I-85	3	41	44	0.011364	244000	1.9	I-20 R	2	12	14	0.140909	24100	33.7	I-285 NB	Cascade	5	40	45	2.24	146000	379.1
					Subtotal	3243.6	I-20 WB	4	22	26	0.20322	45200	53.6	I-285 NB	Lakewood	0	53	53	2.38	143000	0.0
							Lakewood	0	40	40	0.32197	22600	0.0	I-75 NB	Exit 242	-1	50	49	0.476136	134770	-10.9
							Lakewood L	-1	51	50	0.350758	11300	-1.3	I-75 NB	Exit 241	-1	62	61	0.348674	156000	-6.0
							Lakewood R	4	41	45	0.245455	11300	5.0	I-75 NB	Cleveland	2	67	69	1.54	177000	49.2
							Langford	2	42	44	0.360606	15400	5.0	I-75 NB	US-41	7	64	71	0.712879	154000	70.6
							Langford EB	1	45	46	0.108144	35100	1.5	I-75 NB	Ford	7	63	70	0.418561	154000	42.7
						I-285	Ramp	4	50	54	0.32822	27100	11.0	I-75 NB	I-285	6	64	70	0.212311	154000	18.3
						I-285	SB Ramp	-2	46	44	0.377841	16200	-5.0	I-75 NB	US-41	2	67	69	0.667235	171000	20.6
						I-285	NB Ramp	0	48	48	0.352083	11800	0.0	I-75 NB	I-285	2	67	69	0.256818	141200	6.5
						I-85NB	I-75	-1	41	40	0.722727	53100	-19.5	I-75 NB	GA-85	4	66	70	0.670833	223000	54.0
						I-85NB	US-41	0	50	50	0.11572	53100	0.0	I-75 NB	Forest	2	60	62	2.16	202000	97.9
						I-85NB	Lakewood	2	54	56	0.201136	74600	8.3	GA-166EB	Connector	5	53	58	0.168561	75860	8.7
												Subtotal	131.7	GA-166EB	Perkerson	5	57	62	0.274053	69510	11.2
												Excluding Tails	137.0							Subtotal	2862.9
																				Total	6238.1
																				Excluding Tails	3380.6

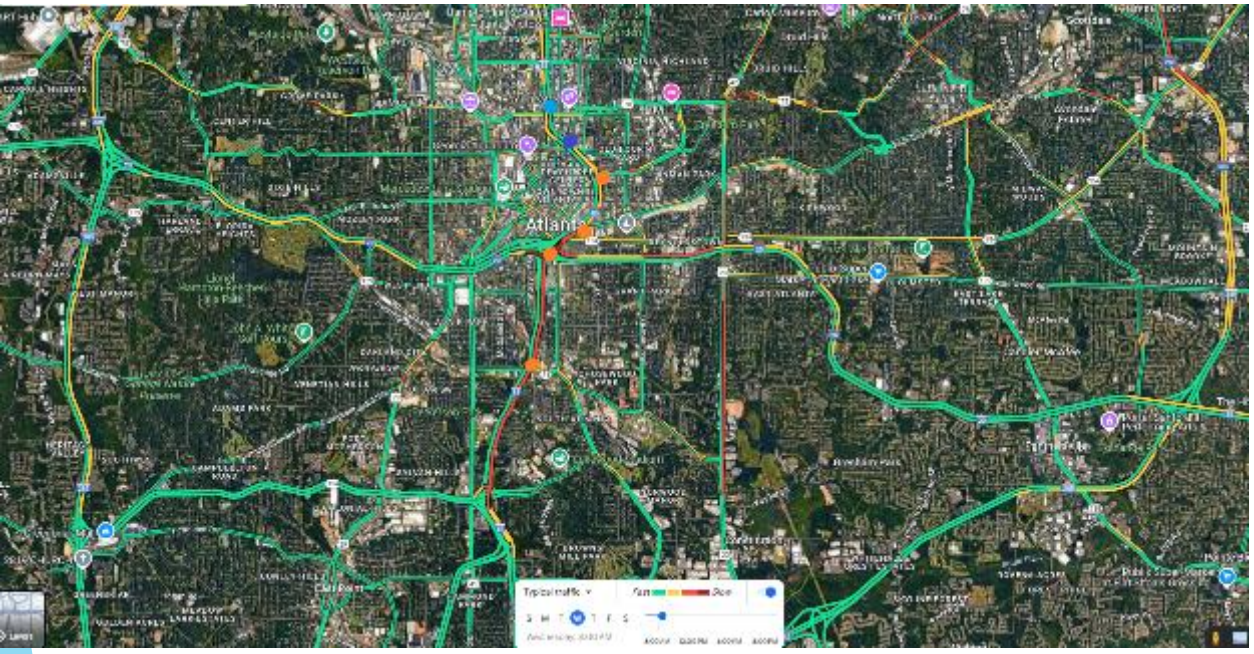
Results

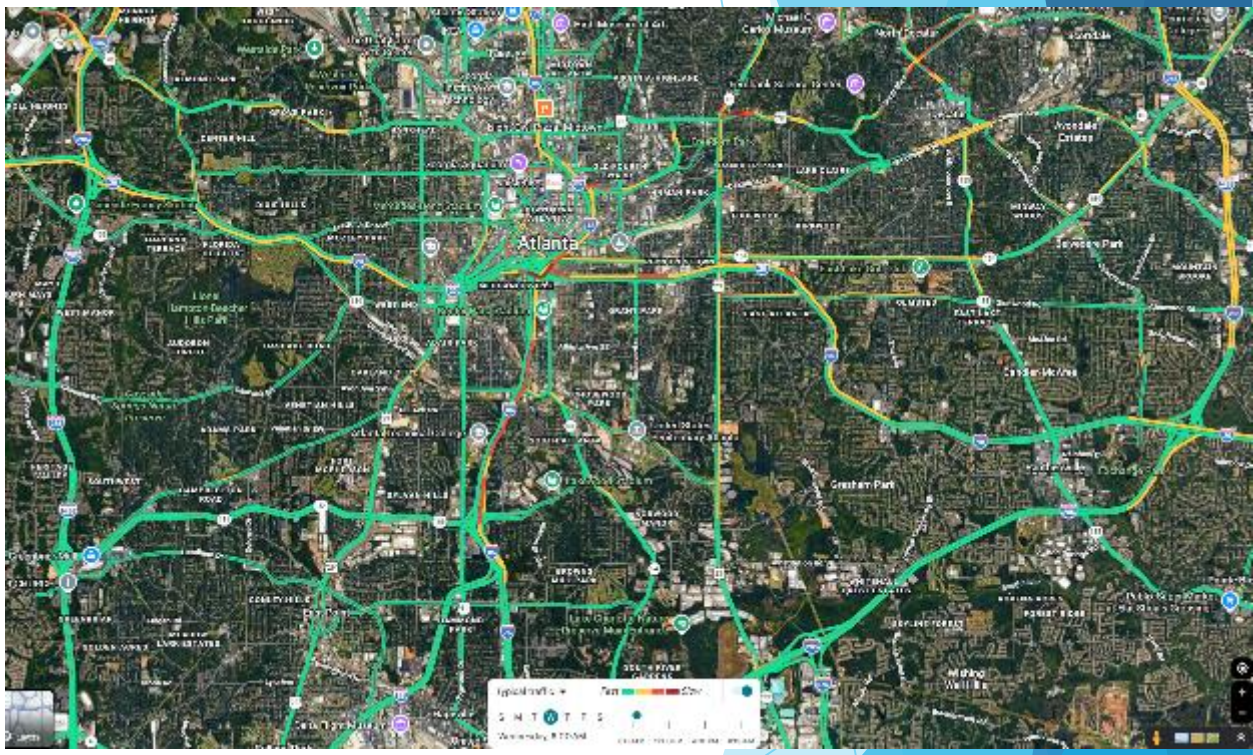
- The reduction in delay on the northbound Connector from October 2024 to October 2025 was 3380.6 vehicle-hours per weekday
- Including adjacent freeways, the reduction in delay could have been as much as 6238.1 vehicle-hours per weekday
- The reduction in delay on the freeway and freeway-to-freeway ramps outweighed the increase in delay on the metered ramps, in terms of vehicle-hours
  - This was calculated without even considering that volumes on the metered ramps probably decreased after dropping the rates
  - Which would make the delay reduction numbers look even better

Discussion

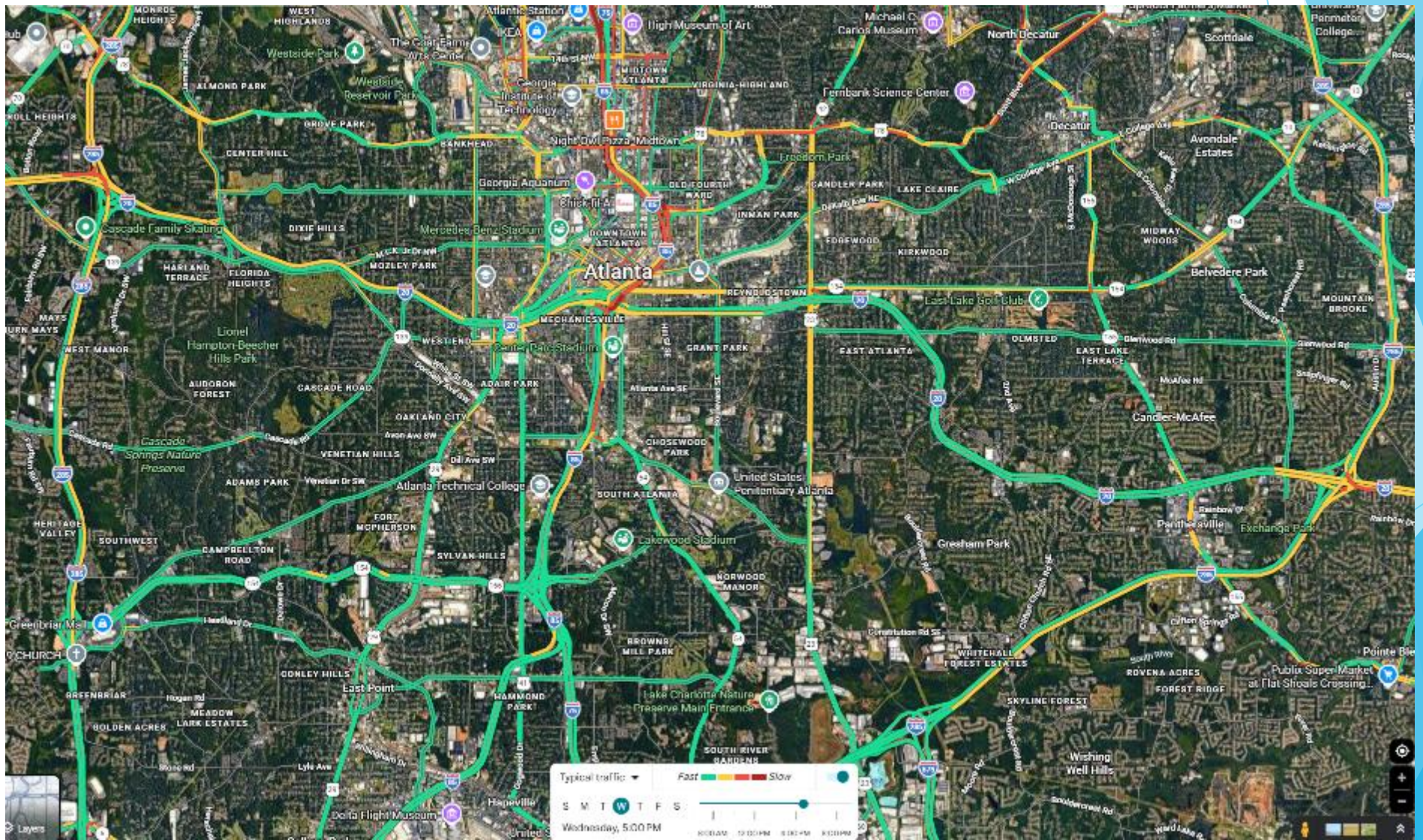
- Many simplifications! Including, but not limited to:
  - During rush hours, the queue spillback is known to go onto the adjacent arterials, but I did not query their changes in speeds for this analysis
  - I am assuming that the effects of crashes is mitigated by doing month-long analysis periods
  - Also, I am assuming that both analysis periods did not see major disruptions from construction activities
  - Behind the segments where the queue on the freeway was reduced, RITIS shows a drop in speed. I am assuming that drop in speed was not caused by the changes made to the ramp meters
  - I am also assuming that both analysis periods saw similar disruptions due to weather

Google Maps Corroboration: AM





Google Maps Corroboration: PM



Conclusion

- Lowering metering rates when the merge point is congested, and especially if there is also spare storage on the ramp, resulted in freeway queue reduction and overall delay reduction
- This suggests throughput was increased, which is our primary goal

Questions?

Spotlight Presentation:

RITIS Signal Analytics to Improve Traffic Signal Timing

Ian Newman

Metropolitan Washington Council of Governments (MWCOG)

RITIS | Probe Data Analytics suite

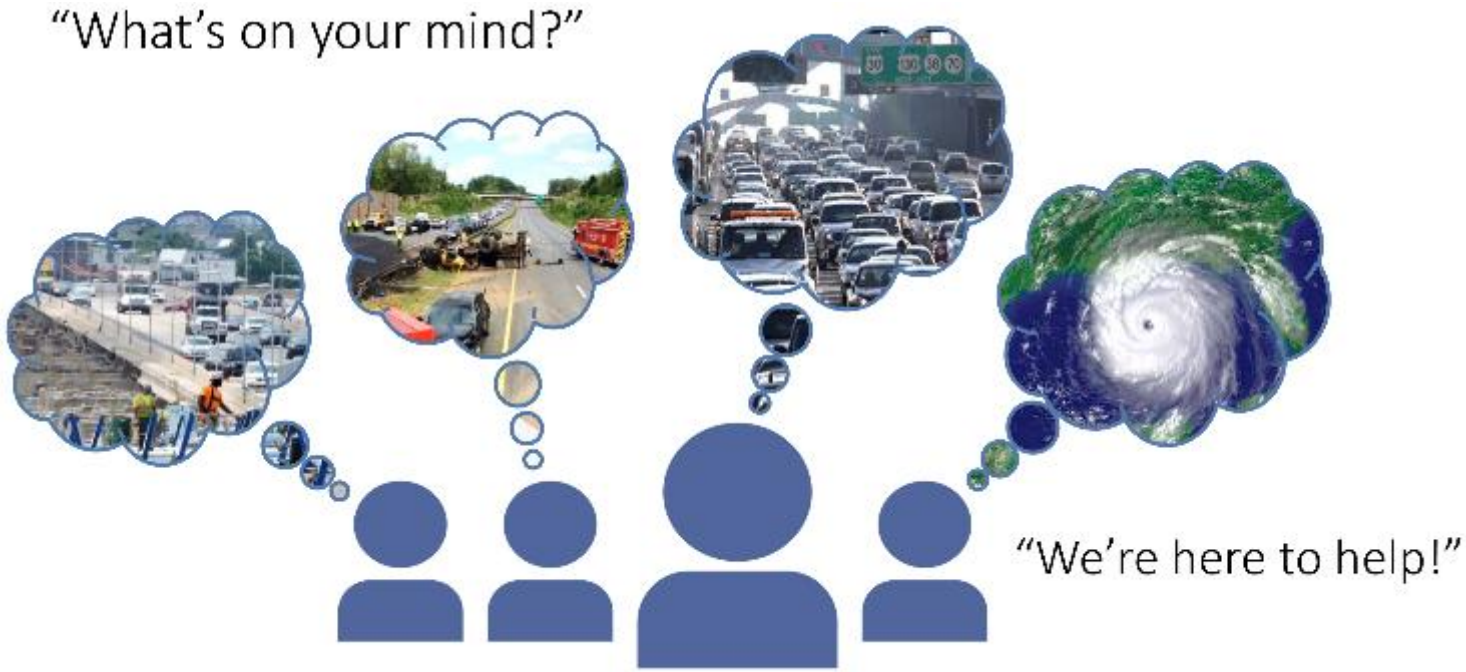
User Feedback Session, Q/A & Wrap Up

Michael Pack
Director
UMD CATT Lab

Jesse Buerk
Associate Director, Office of Capital Programs
DVRPC
RITIS User Group Co-chair

We want to hear from you!

- All features and functionality are driven by state/MPO users.
- Next Enhancement Group meeting is Tuesday, December 9th.
- 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 Q&A box or with an email to support@ritis.org



Agency Input – Polling and Open Discussion

Please type your answer under the question in the pop-up box.

Poll –

1. Is there any topic you would like to see added to a future User Group meeting?

2. Please provide detailed feedback on new features/capabilities you would like to see built out in the future.

Wrap Up

DELAWARE VALLEY dvrpc REGIONAL PLANNING COMMISSION

Jesse Buerk

Associate Director, Capital Programs & Project Development

DVRPC

RITIS User Group Co-chair

Questions?

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RITIS Tech Support	support@ritis.org