CATT LABORATORY

RITIS User Group

Web Meeting | February 24, 2022

In collaboration with THE EASTERN TRANSPORTATION COALITION

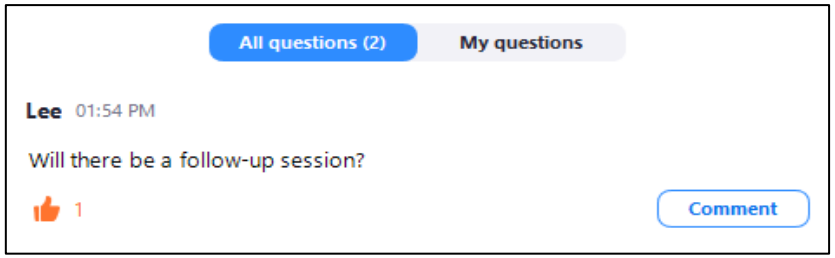
Welcome!

- 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 Esther directly via email (ekleit@kmjinc.com)
- The **Chatbox** is not available to participants. Please use the **Q&A box** for questions to the presenters

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 either between presentations or at the end of the meeting
- You can keep track of your questions in the “My Questions” tab in the Q&A box

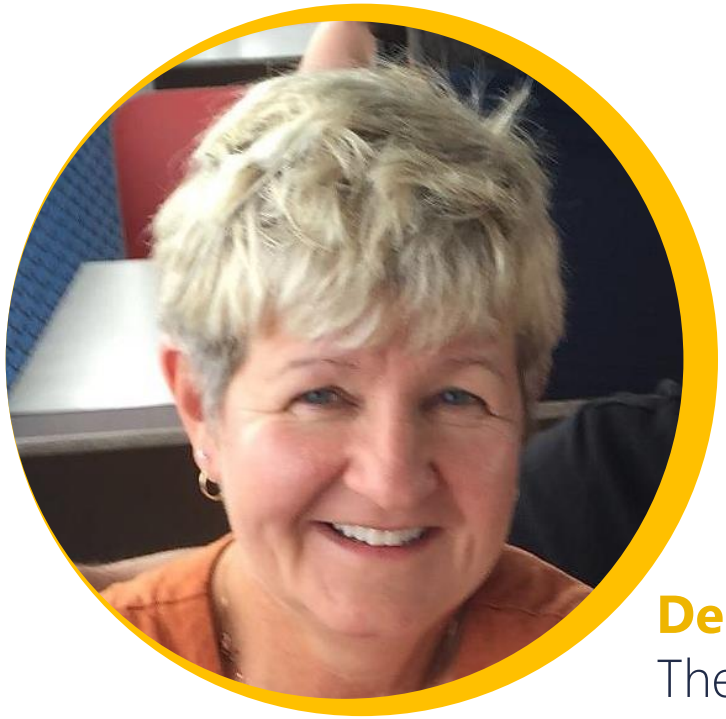


Asking Questions Verbally

- 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**

Coalition Update



THE EASTERN TRANSPORTATION COALITION

CONNECTING FOR SOLUTIONS

Denise Markow
The Eastern Transportation Coalition
TSMO Director

Coalition Update

RECENT

- ✓ **New Signal Technology, New Maintenance Needs Webinar** - November 4, 2021
- ✓ **Rebuilding the Causes of Congestion Pie Chart with Real-World Data** - November 10, 2021
- ✓ **Bi-Annual Waze Technical Working Group Web Meeting** - November 18, 2021
- ✓ **Transportation Data Marketplace State Point of Contact Bi-Annual Meeting** - December 7, 2021
- ✓ **Transportation Data Marketplace - State Debrief Meeting** - January 25, 2022

UPCOMING

- ➢ **Traveler Information Web Summit: Improving Safety - Implementing New Travel Information Services for Commercial Vehicles** - March 17, 2022
- ➢ **RITIS Product Enhancement Working Group Meeting -** April 6, 2022
- ➢ **Electric Vehicle Workshop** - April 12-13, 2022 (invite only)
- ➢ **RITIS Workshop: Building a Corridor Performance Summary Report** - March 29, 2022
- ➢ **RITIS User Group Meeting** - May 5, 2022

Transportation Data Marketplace Update

- The RFP process is nearing completion
- Many thanks to the numerous agency members that participated
- The new **Transportation Data Marketplace** will go live in July 2022!
  - 6 Data Sets
    - Travel Time & Speed
    - Volume
    - Conflation
    - Waypoint
    - Origin Destination
    - Freight

Welcome & Introductions

Matt Glasser
Assistant State Traffic Engineer, Georgia DOT
RITIS User Group Co-chair

Today's Meeting

Welcome and Introductions	Denise Markow, TETC Matt Glasser, Georgia DOT
Spotlight Presentation: Automating RITIS Travel Time Reporting on Specific Corridors	Corey O'Connor, Massachusetts DOT
Spotlight Presentation: Strategies for Assessing the Effectiveness of Law Enforcement Measures in Battling Excessive Speeds	Chi Mai, Oregon DOT
PDA Suite Performance Measures Working Group Update	John Allen, UMD CATT Lab
RITIS Product Enhancement Working Group Update	Matt Glasser
New RITIS Tools and Recent Enhancements	Michael Pack, UMD CATT Lab
Agency Input Session	Michael Pack
Wrap Up and Remaining Questions	Matt Glasser

Today's Speakers

Michael Pack
UMD CATT Lab
Director

Corey O'Connor,
Massachusetts DOT
Traffic Operations Engineer

Chi Mai
Oregon DOT
Transportation System Analysis Engineer

John Allen
UMD CATT Lab
Faculty Assistant, Outreach & Education

Matt Glasser
Georgia DOT
Assistant State Traffic Engineer

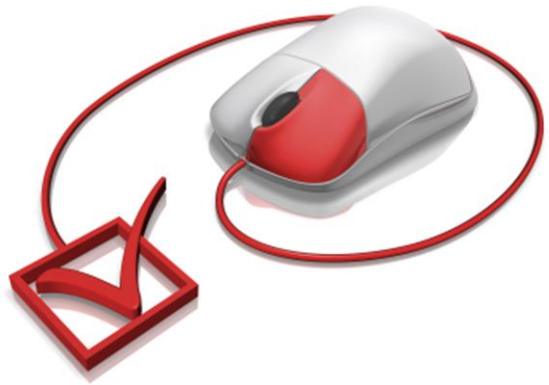
Meeting Participants

Agencies							
AASHTO	Chattanooga-Hamilton County/North Georgia TPO	Drive Engineering	Illinois DOT	Massachusetts DOT	NJTPA	Pinellas County Government (Kapsch)	St. Lucie TPO
Arapahoe County	City of Charlotte, NC	DVRPC	INRIX	MetroPlan Orlando	North Carolina CAMPO	Pioneer Valley Planning Commission	State of Rhode Island
Arizona DOT	City of East Point, GA	Federal Highway Administration	Iteris	Michigan DOT	North Carolina DOT	Portland Bureau of Transportation	Tennessee DOT
Atkins Global	City of Eugene, OR	Florida DOT	Jacobs Engineering	Mid America Regional Council	North Carolina State University	Rhode Island Division of Statewide Planning	Texas A&M Transportation Institute
Atlanta Regional Commission	City of Franklin, TN	Florida DOT	Kimley-Horn	Minnesota DOT	North Central PA Regional Planning & Development Commission	Rhode Island DOT	Umatilla County, OR
Augusta Regional Transportation Study MPO (GA)	City of Norwalk, CT	Florida Turnpike Enterprise	Knoxville Regional TPO	Modern Mobility Partners	Northern Virginia Transportation Authority	Richmond Regional Planning Agency	University of Maryland CATT Lab
Baltimore Metropolitan Council	City of Roswell, NM	Georgia DOT	Lehigh Valley Planning Commission	Montgomery County Planning Commission	Office of Intermodal Planning and Investment	SEDA-Council of Governments (SEDA-COG)	Vermont AOT
Cabarrus-Rowan MPO	City of Sandy Springs, GA	Georgia Institute of Technology	Louisiana DOTD	MWCOG	Ohio DOT	South Jersey Transportation Planning Organization	VHB
Capital District Transportation Committee	Connecticut DOT	Grand Valley MPO	Maryland DOT-SHA	MWVCOG	Old Colony Planning Council	Southern Georgia Regional Commission	Virginia DOT
Capital Region Planning Commission	DADN Associates	HDR	Maryland Transportation Authority	New Jersey DOT	Oregon DOT	Southwestern Pennsylvania Commission	
Central Massachusetts Regional Planning Commission	District DOT	HERE	Massachusetts Bay Transportation Authority	New York City DOT	Pennsylvania DOT	St. Charles County	

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

Answer Options:

1. 1-2 times per year
2. 3-4 times per year
3. This is my first meeting



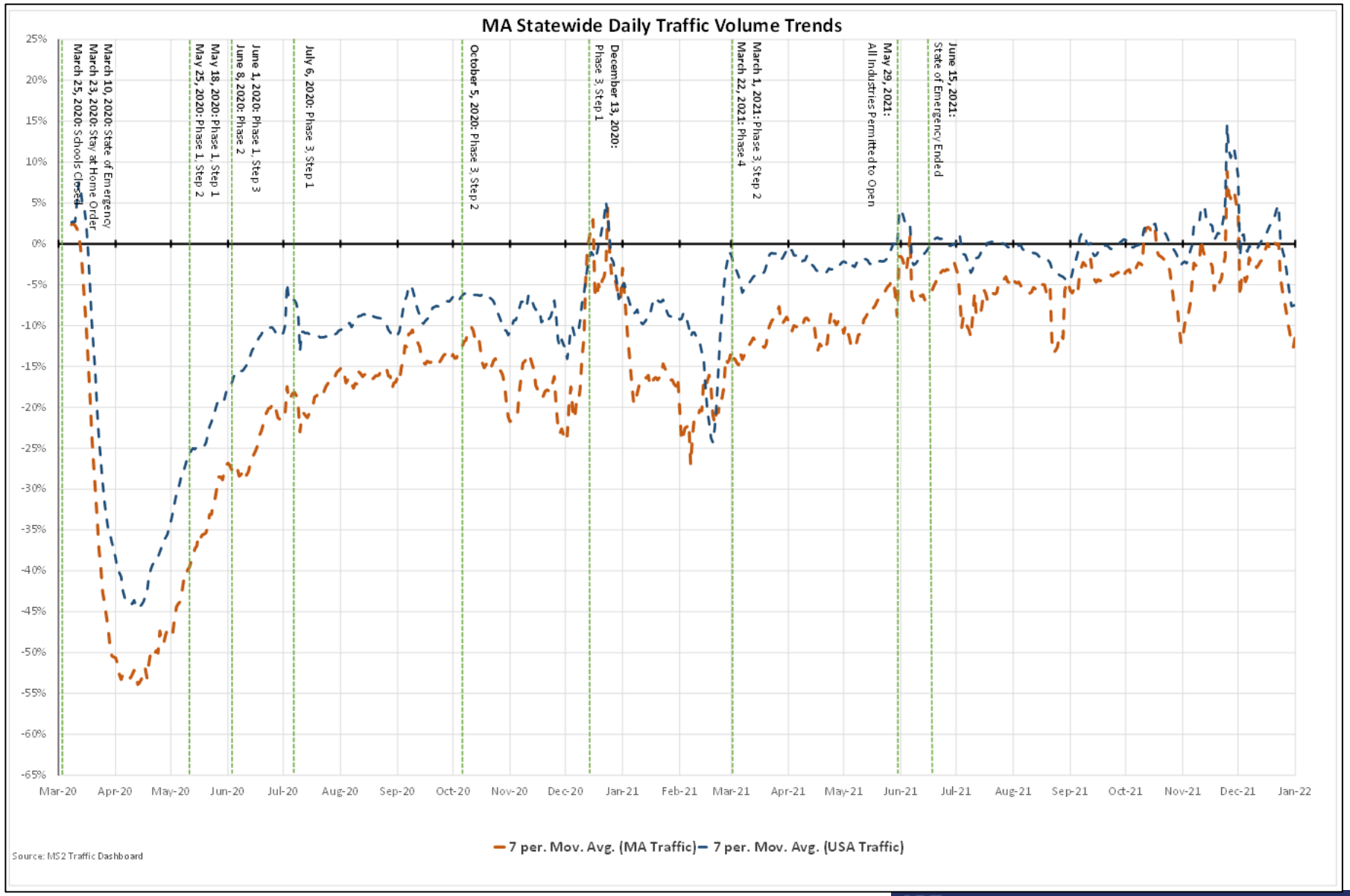
Automating RITIS Travel Time Reporting on Specific Corridors

Corey O'Connor, P.E.

Traffic Operations Engineer

MassDOT, Highway Division

COVID Effect on Traffic



Traffic volumes in MA down > 50% in April 2020

- Will traffic return?
- When will traffic return?
- Where is traffic returning?
- How is traffic returning?

MassDOT Weekly Traffic Report

28 page report reporting on:

Traffic Volumes *(from MS2 traffic data dashboard)*

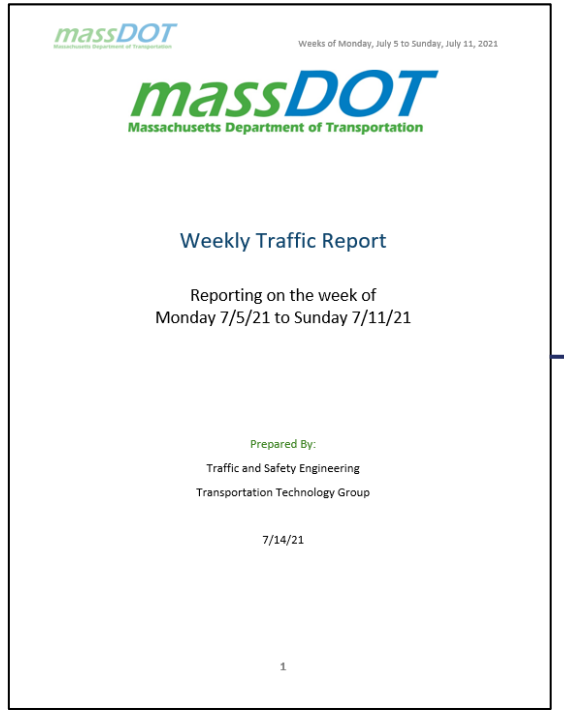
- Statewide daily volume
- Average daily traffic from over 40 select permanent count stations
- HOV lane usage

Congestion *(from RITIS)*

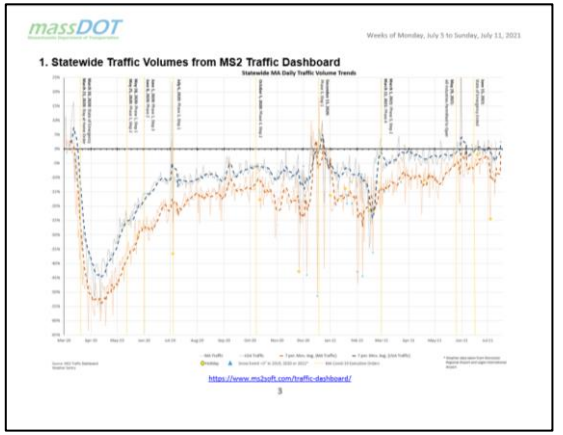
- Congestion scans for eastern and western MA

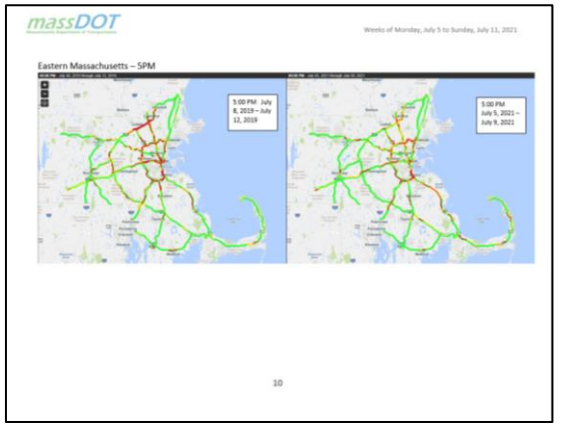
Travel Times *(from RITIS)*

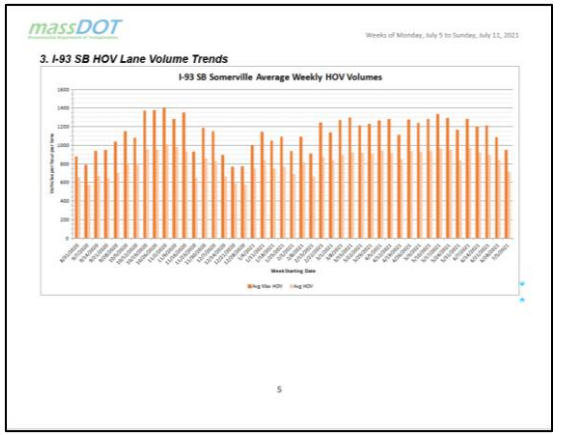
- 2019 vs recent travel times for 13 select corridors around Boston


massDOT
Weeks of Monday, July 5 to Sunday, July 11, 2021
massDOT
Massachusetts Department of Transportation
Weekly Traffic Report
Reporting on the week of
Monday 7/5/21 to Sunday 7/11/21
Prepared By:
Traffic and Safety Engineering
Transportation Technology Group
7/14/21
1

A lot of time and effort to assemble this technical, 28-page report on a weekly basis.

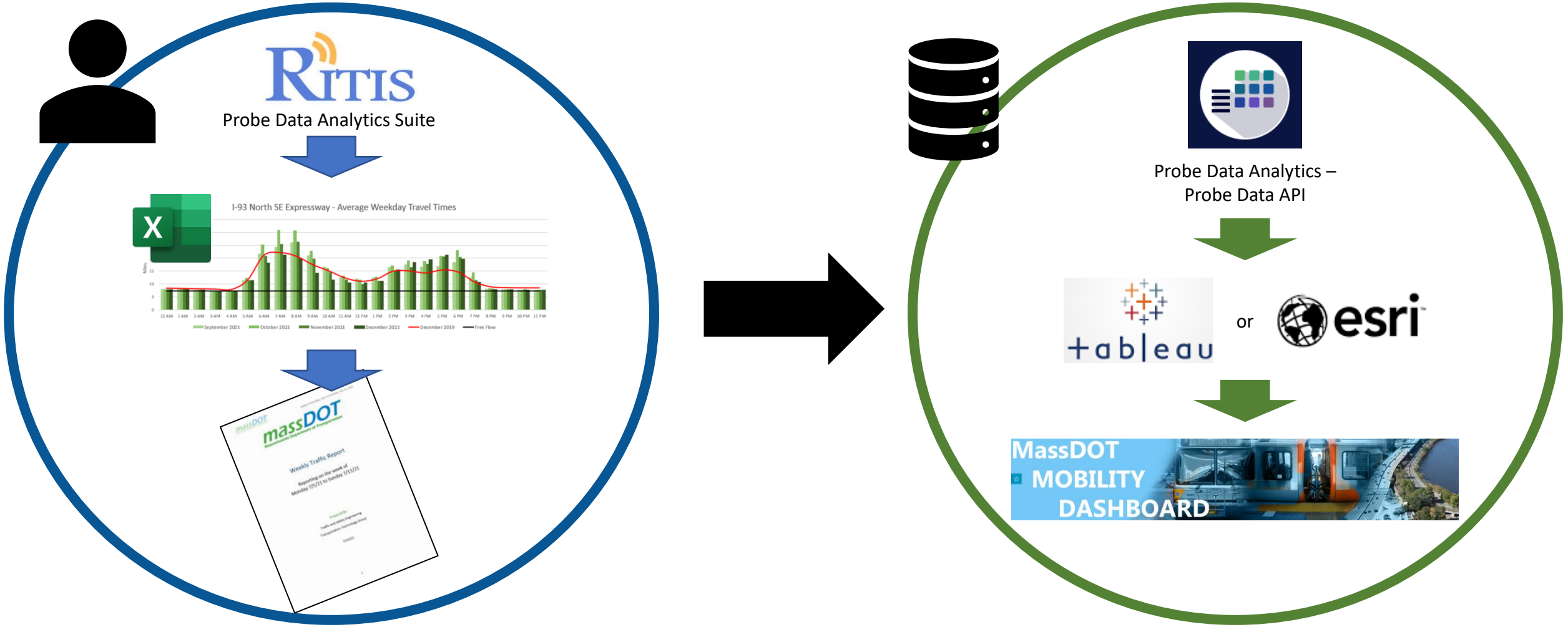






Traffic Reporting Objectives

- **Update and automate** parts of the Weekly Traffic Report using RITIS' Probe Data API



MassDOT Mobility Dashboard

Data Sources

Highway Division Volumes and Travel Times

MBTA Revenue and Ridership

Bluebike Rentals

Logan Airport Operations

Application Programming Interface

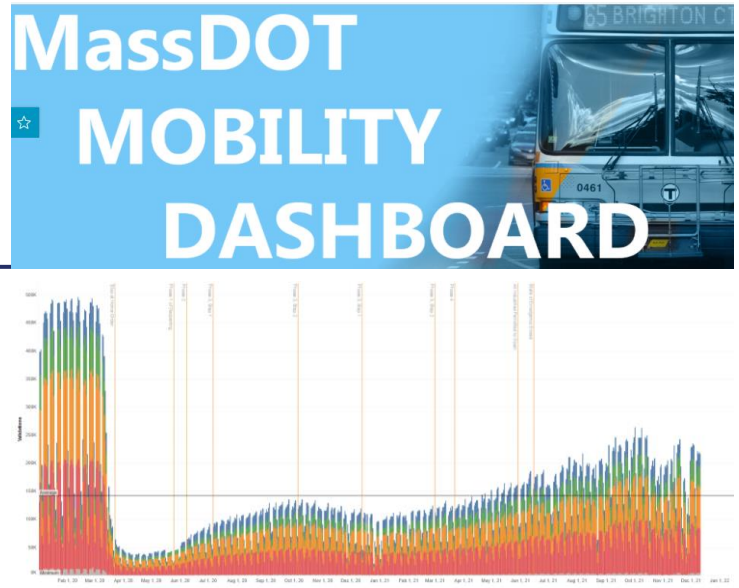
(API)

Data Visualization

tableau

esri

Power BI



https://mobility-massdot.hub.arcgis.com/

Travel Time Patterns Application Development

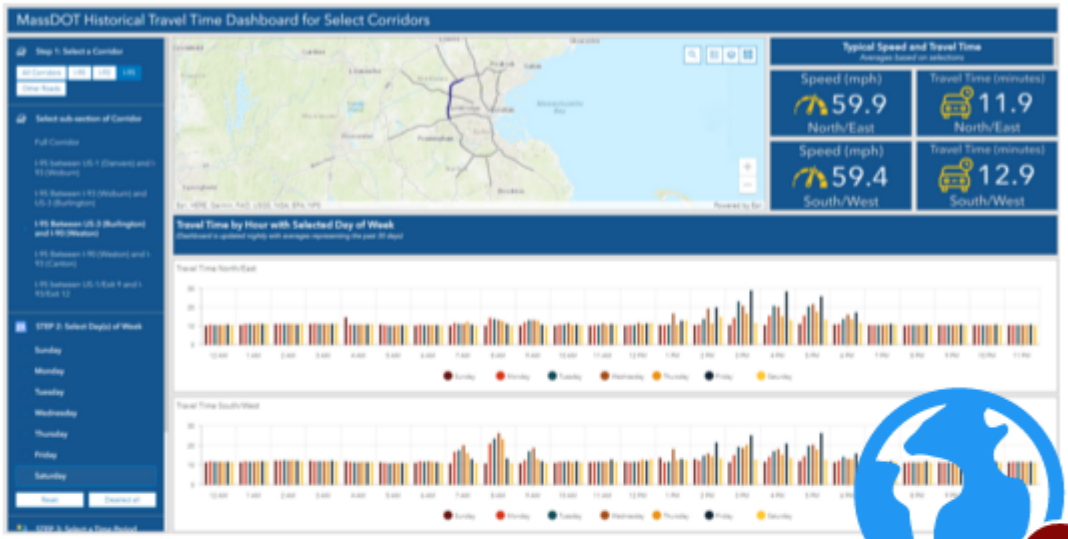
MassDOT Travel Time Dashboard Workflow

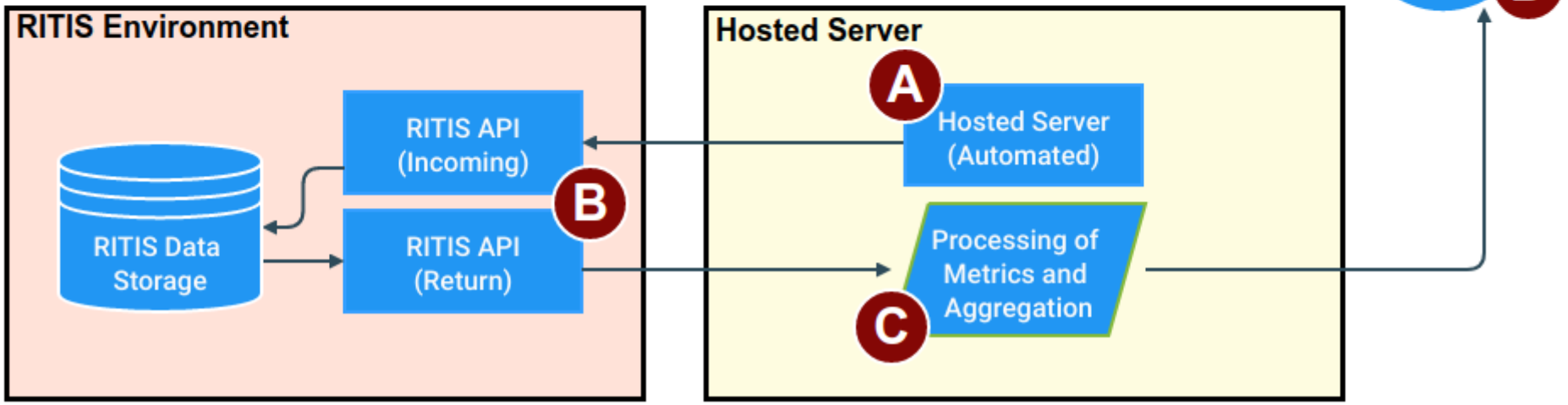
A. Night automation script from the hosted server, sends a request to the RITIS API

B. RITIS API pulls requested data meeting requirements and returns the data to the hosted server

C. At the hosted server the returned metrics are processed to update averages by hour, day of week, and overall. These values are staged into defined tables ready for spatial query and pushed to Dashboard

D. Dashboard is updated and ready for users to access the data and view metrics

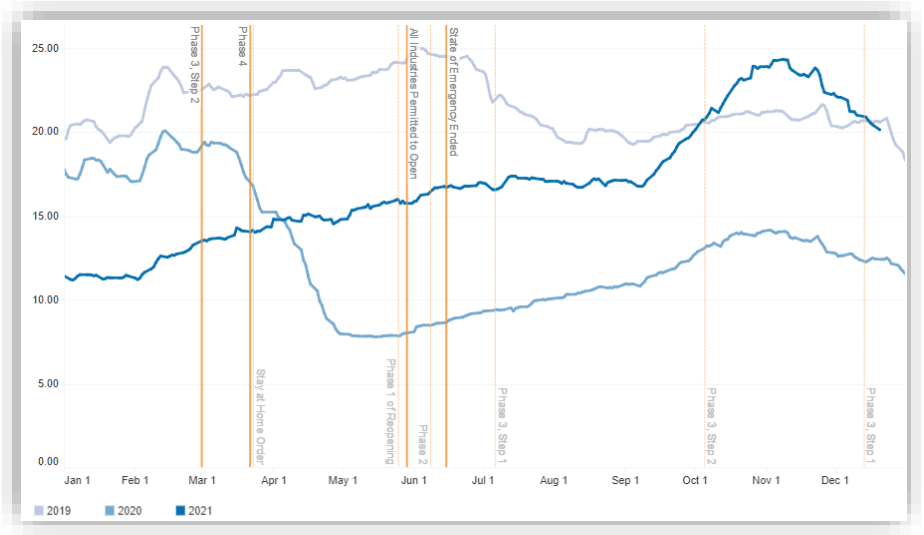




MassDOT RITIS Travel Time Dashboards

Historical Peak Period Travel Times

On MassDOT Mobility Dashboard



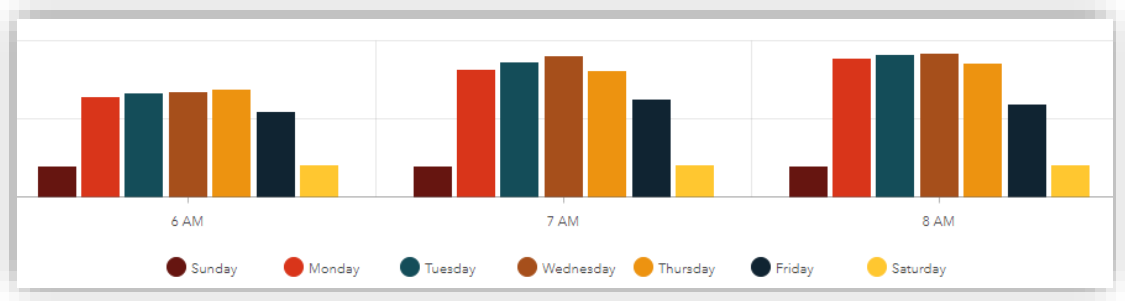
Compare historical 2019, 2020, and 2021 peak period travel times on select corridors, giving insight on how the Covid Pandemic affected travel times

Average travel time on a corridor during peak periods for every day since 2020

Typical Travel Times

Currently Internal Only (as of 2/24/2022)

Working to make viewable for the Public



Compare typical hourly travel times for each day of the week, giving insight on how to plan commutes or travel plans

Hour by hour typical travel times on a corridor for each day of the week

Live Demo of Dashboards

Next Steps

- Add more corridors to Historical Peak Period Travel Times and Typical Travel Times
- Get Typical Travel Times online and advertise it as a planning tool for public to use to plan their trips into the city to incentivize staggered commuting times

Appendix

- MassDOT RITIS Travel Time Dashboard Details
- MassDOT RITIS Travel Time Dashboard Highlights
- Typical Travel Time Application Development Details

MassDOT RITIS Travel Time Dashboard Details

Dashboard Name	Travel Time Difference Tool	Typical Travel Times Tool
Link	Mobility Dashboard https://mobility-massdot.hub.arcgis.com/	*CURRENTLY INTERNAL ONLY, UNDER I.T. REVIEW* *as of 2/24/2022*
Primary purpose	Compare historical 20019, 2020, and 2021 (2022 coming soon) peak period travel times on select corridors, giving insight on how the Covid Pandemic affected travel times.	Compare typical hourly travel times for each day of the week, giving insight on how to plan commutes or travel plans.
Extents of coverage	18 major corridors within I-495	18 major corridors within I-495
Type of Data	Average travel time	75% travel time (noted as 'typical')
Data presented	• Option to view data from 2019, 2020, and/or 2021 (2022 coming soon) • Time period options: Average for AM peak (5am – 10am), mid-day peak (10am – 2pm), or PM peak (2pm – 7pm) • Data can be presented Day-By-Day, 7-Day rolling Average, 30-Day rolling average • Data from weekdays or weekends is presented	• Data from the most recent 30 days used to calculate typical travel times • Hour-by-hour typical travel times for all 24 hours for each day of week is available • Options to only view peak period hours: AM peak (5am – 10am), mid-day peak (10am – 2pm), and PM peak (2pm – 7pm) • Selectable for any combination of days
Data Source	INRIX	INRIX
Update Frequency	Weekly (Wednesdays)	Daily

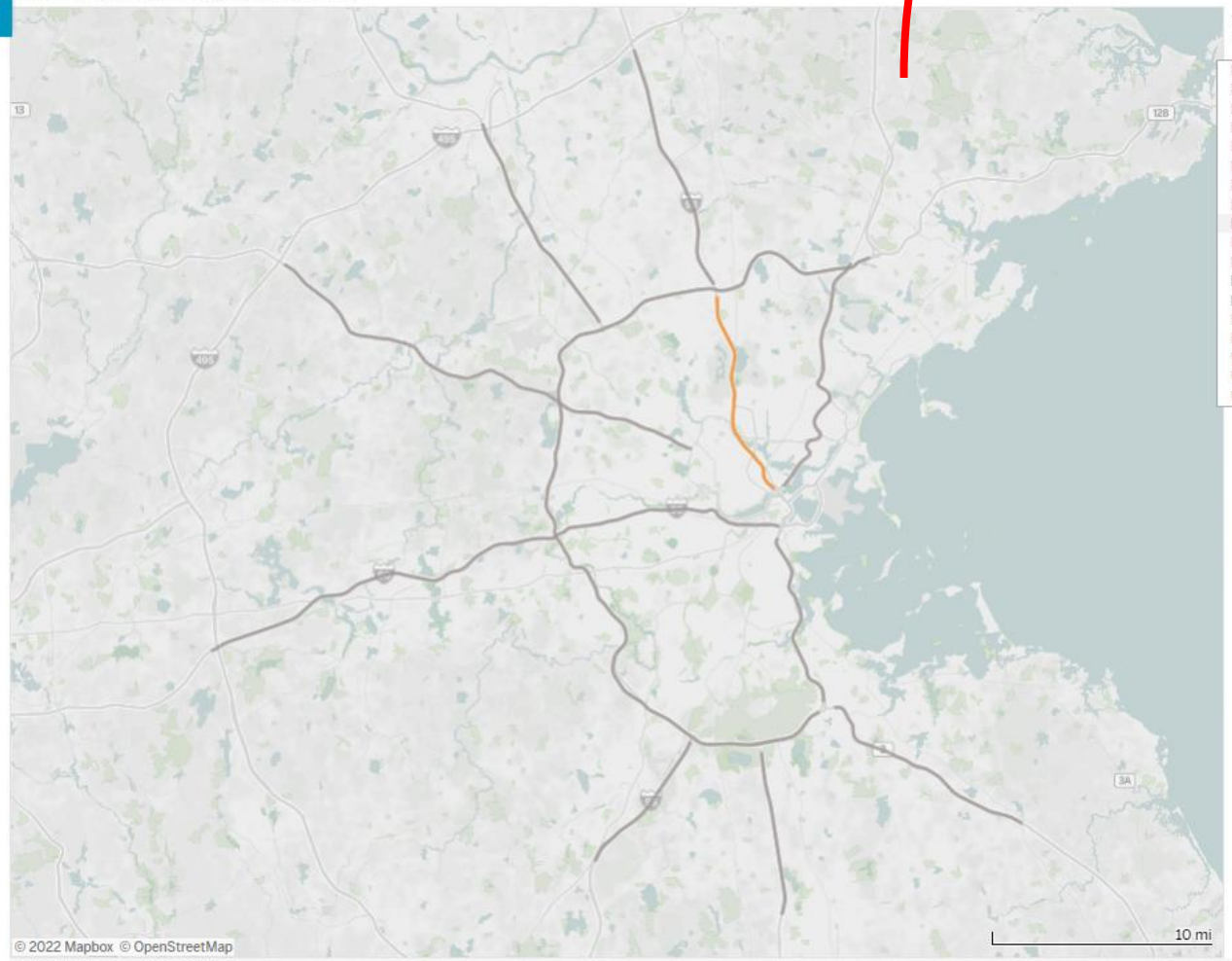
Travel Time Difference Tool Highlight

Select one of 18 corridors from map or dropdown

Travel Time Differences on Select Corridors, 2019 vs 2020 vs 2021

Update Frequency: Weekly

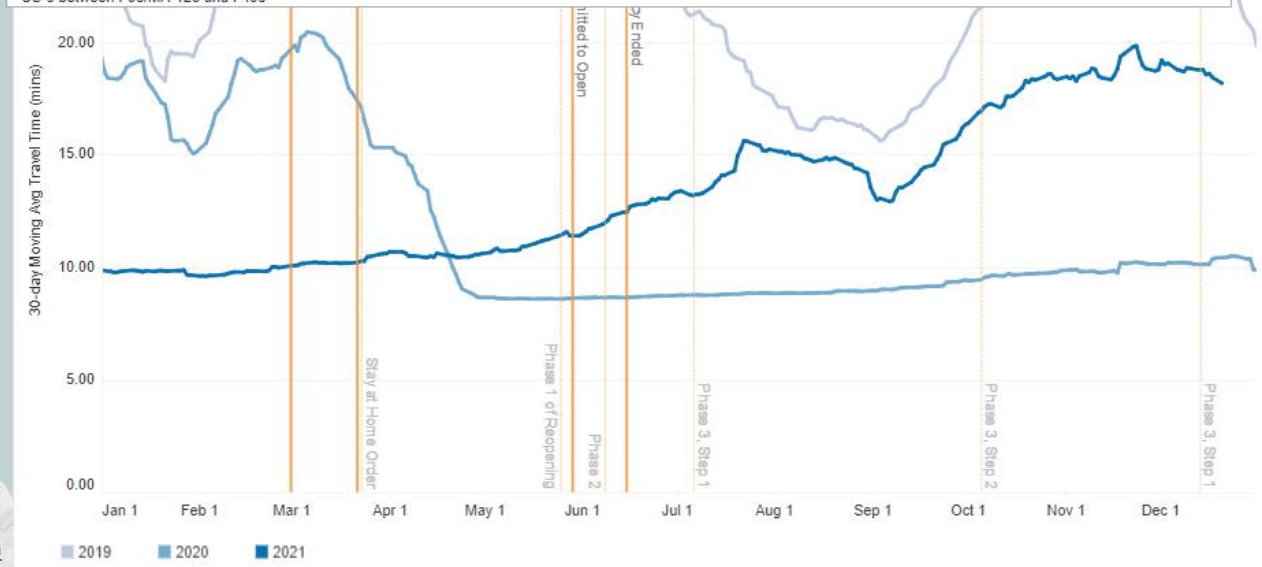
I-93 From I-95 to Zakim: Southbound



Sub-Corridor

I-93 From I-95 to Zakim

- I-90 Between I-95 (Weston) and I-495 (Hopkinton)
- I-90 from I-93 to I-95
- I-93 Between I-95 (Canton) and MA-3 (Braintree)
- I-93 Between I-95 (Woburn) and I-495 (Andover)
- I-93 From I-95 to Zakim
- I-93 SE Expressway
- I-95 Between I-90 (Weston) and I-93 (Canton)
- I-95 Between I-93 (Woburn) and US-3 (Burlington)
- I-95 between US-1 (Danvers) and I-93 (Woburn)
- I-95 between US-1 and I-93
- I-95 Between US-3 (Burlington) and I-90 (Weston)
- MA-3 between MA-53/Washington St and I-93
- MA-24 between MA-27 and I-93
- RT-2 Between I-95 (Lexington) and I-495 (Littleton)
- RT-2 Between I-95 (Lexington) and US-3/RT-16 (Cambridge)
- US-1 Between Copeland and I-93
- US-1 Between I-95 (Lynnfield) and Copeland Circle (Revere)
- US-3 between I-95/MA-128 and I-495

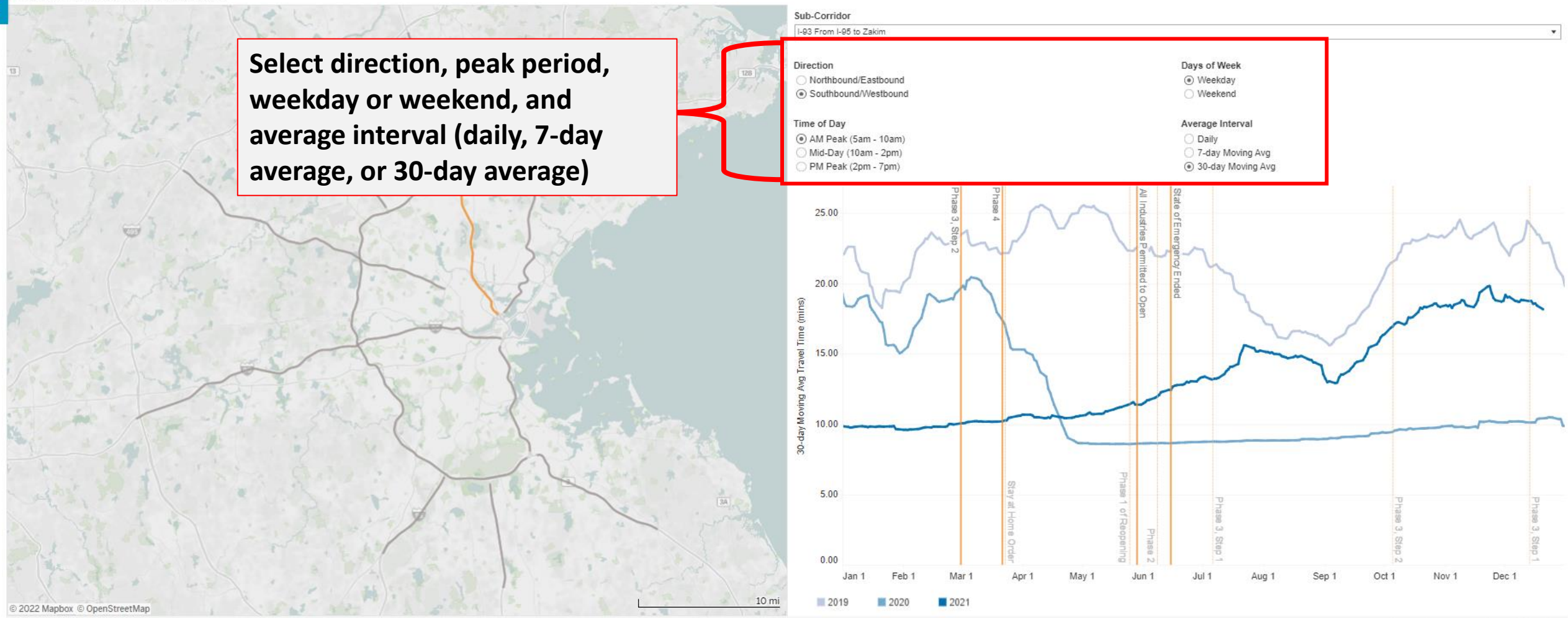


Travel Time Differences on Select Corridors, 2019 vs 2020 vs 2021

Update Frequency: Weekly

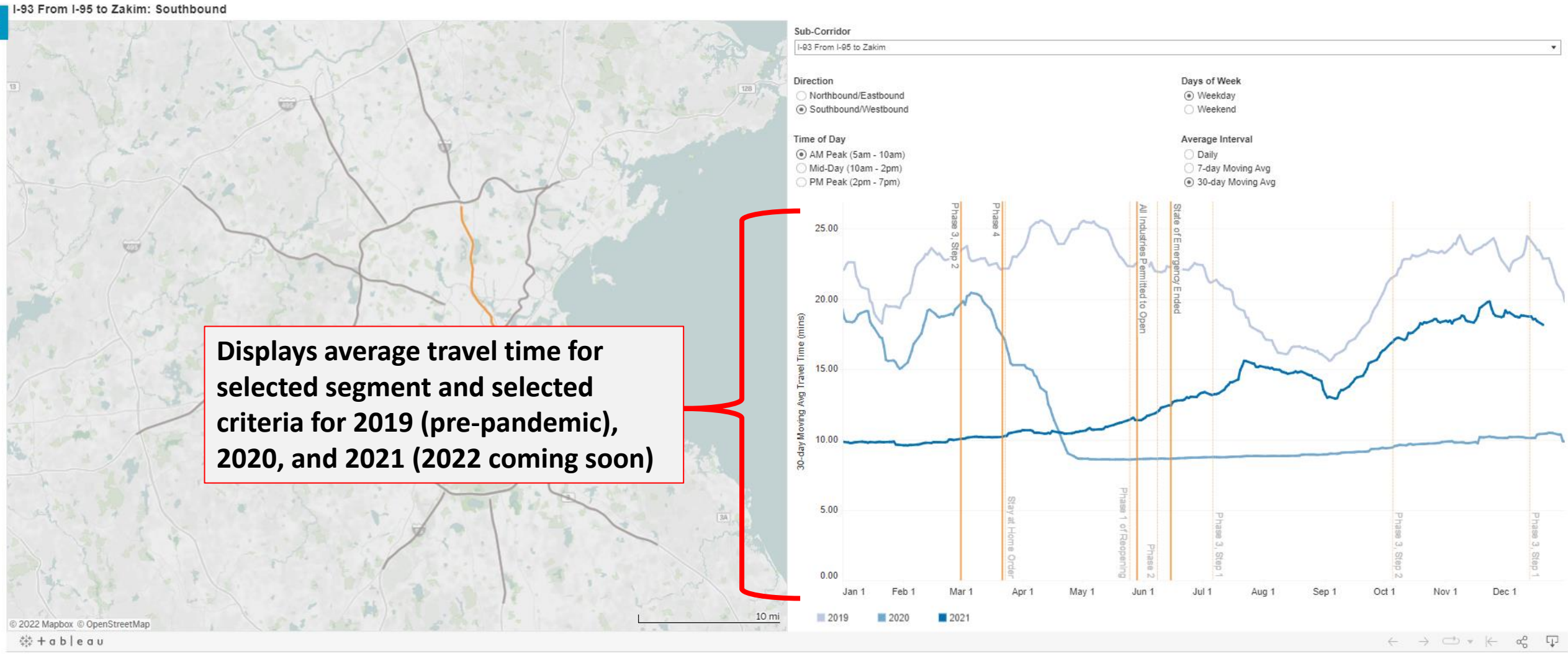
I-93 From I-95 to Zakim: Southbound

Select direction, peak period, weekday or weekend, and average interval (daily, 7-day average, or 30-day average)



Travel Time Differences on Select Corridors, 2019 vs 2020 vs 2021

Update Frequency: Weekly

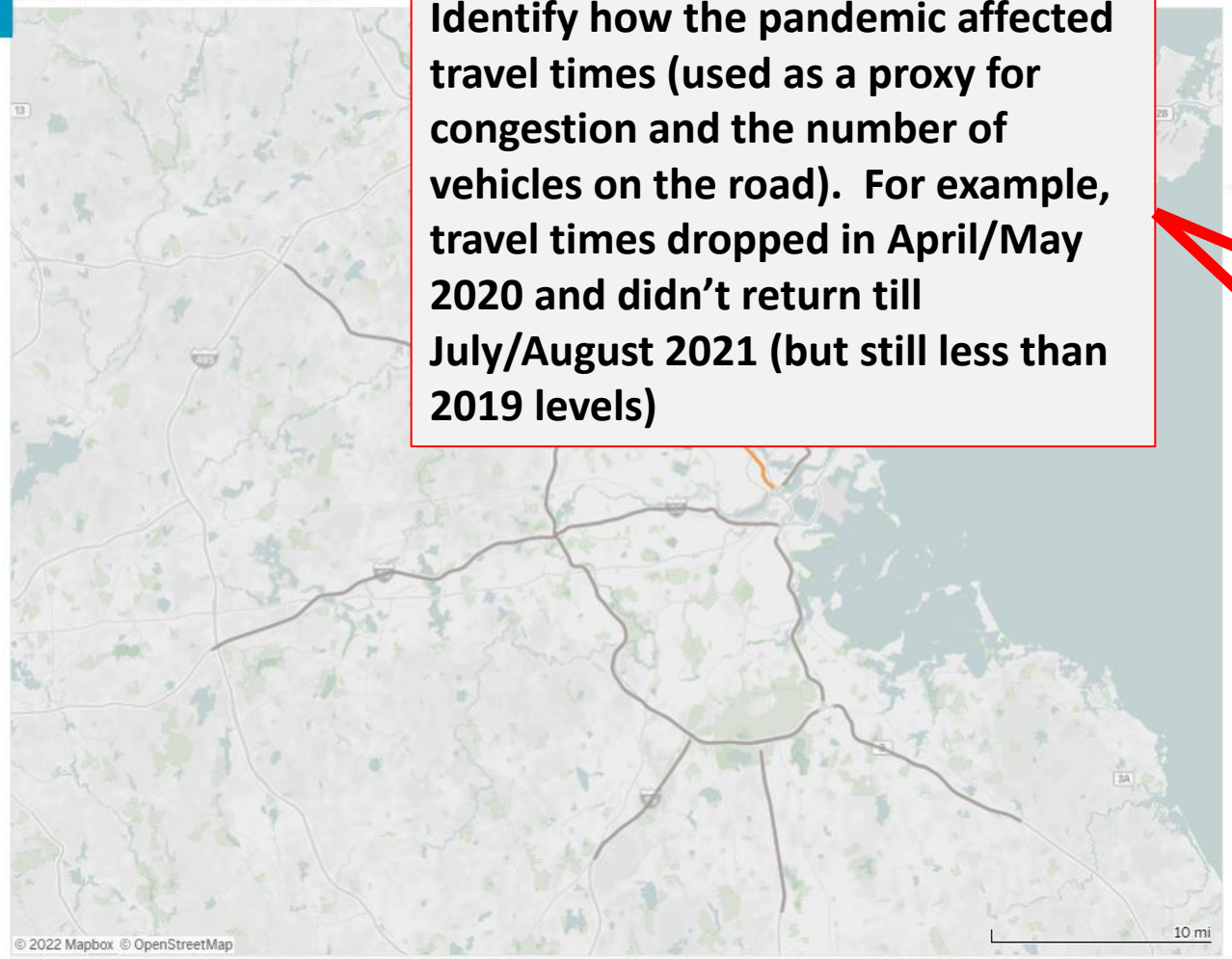


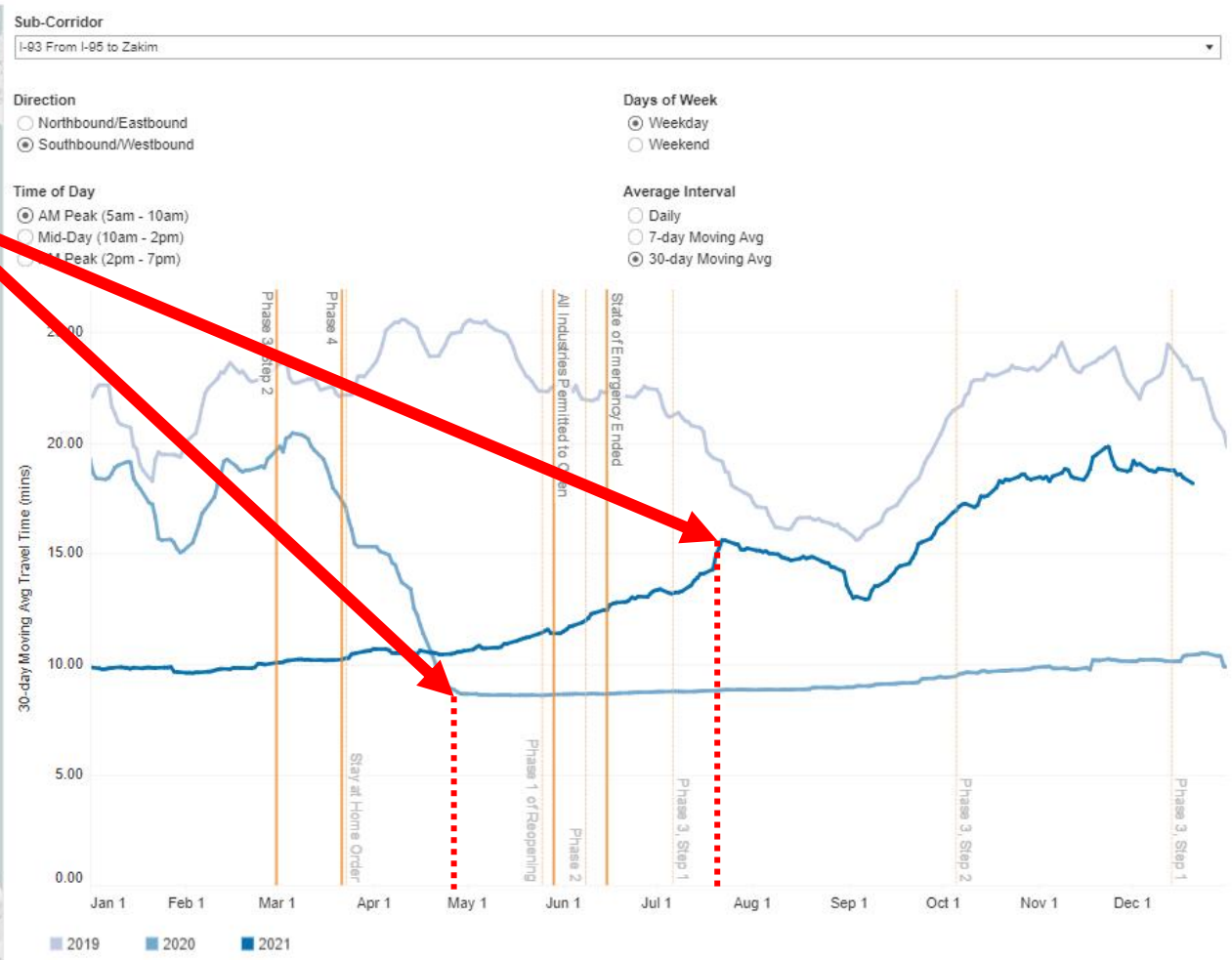
Travel Time Differences on Select Corridors, 2019 vs 2020 vs 2021

Update Frequency: Weekly

I-93 From I-95 to Zakim: Southbound

Identify how the pandemic affected travel times (used as a proxy for congestion and the number of vehicles on the road). For example, travel times dropped in April/May 2020 and didn't return till July/August 2021 (but still less than 2019 levels)





Typical Travel Times Tool Highlight

MassDOT Historical Travel Time Dashboard for Select Corridors

Step 1: Select a Corridor

All Corridors | I-90 | I-93 | I-95 | Other Roads

Select sub-section of Corridor

- I-95 Between I-90 (Weston) and I-93 (Canton)
- I-95 between US-1/Exit 9 and I-93/Exit 12
- I-93 Between I-95 (Woburn) and I-495 (Andover)
- I-93 From I-95 to Zakim
- **I-93 SE Expressway**
- I-93 Between I-95 (Canton) and MA-3 (Braintree)
- I-90 from I-93 to I-95
- I-90 Between I-95 (Weston) and I-495 (Hopkinton)

STEP 2: Select Day(s) of Week

- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

Reset | Deselect all

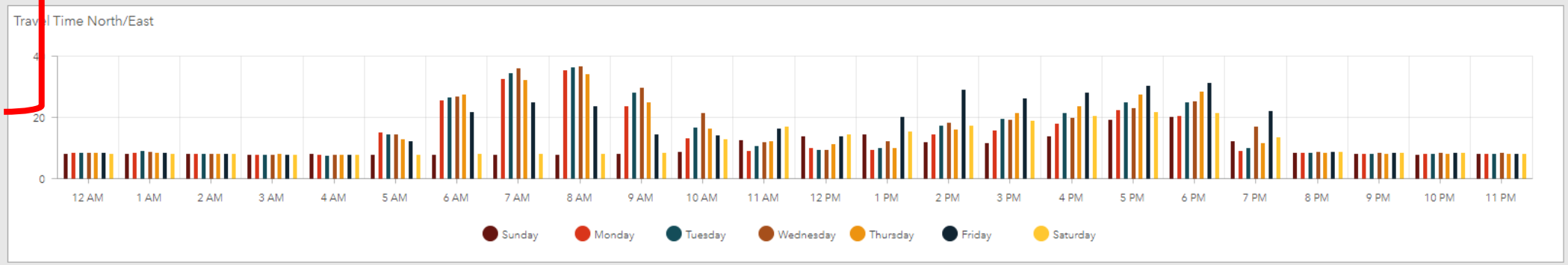
STEP 3: Select a Time Period

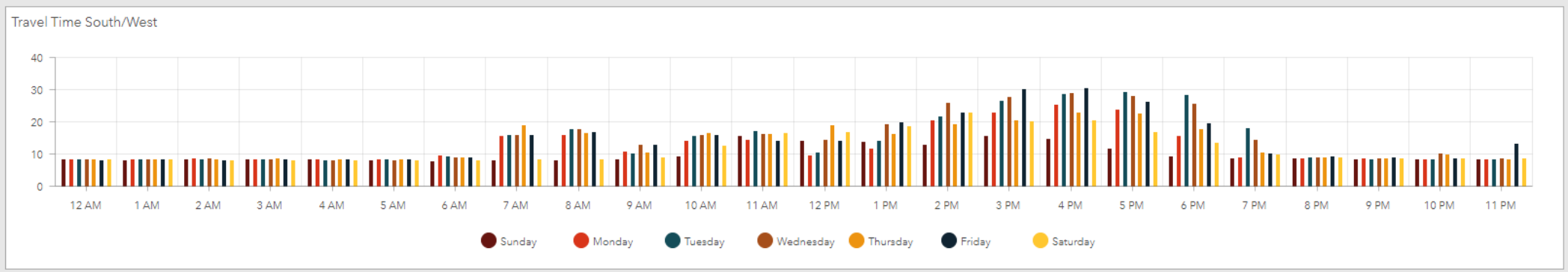
Select one of 18 corridors

Typical Speed and Travel Time
Averages based on selections

Speed (mph)	Travel Time (minutes)
43.4 North/East	14.4 North/East
46 South/West	13 South/West

Travel Time by Hour with Selected Day of Week
(Dashboard is updated nightly with averages representing the past 30 days)





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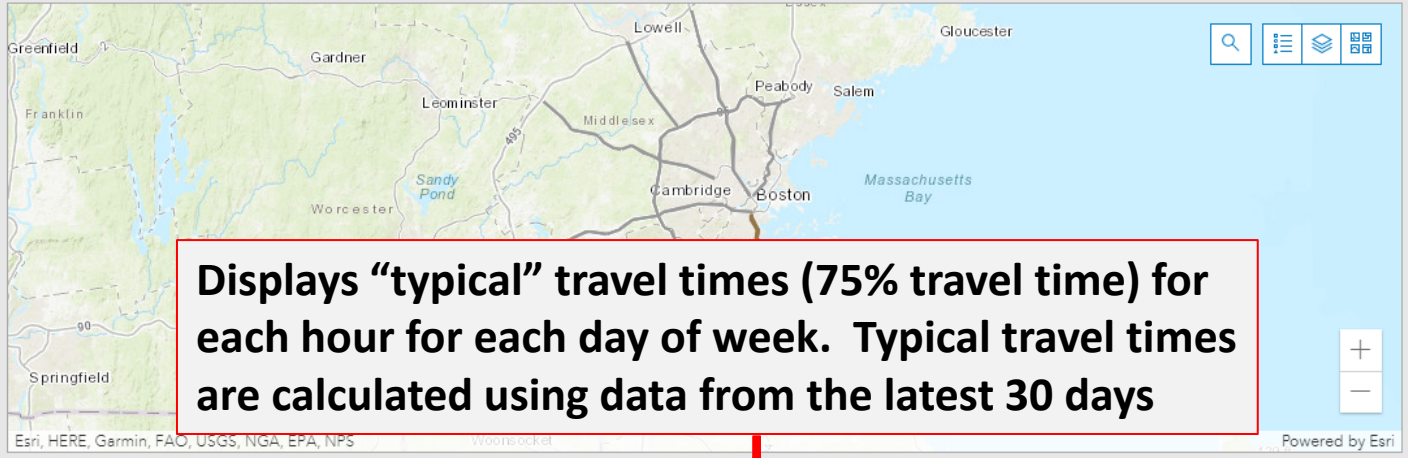

Displays "typical" travel times (75% travel time) for each hour for each day of week. Typical travel times are calculated using data from the latest 30 days

Typical Speed and Travel Time
Averages based on selections

Speed (mph)	Travel Time (minutes)
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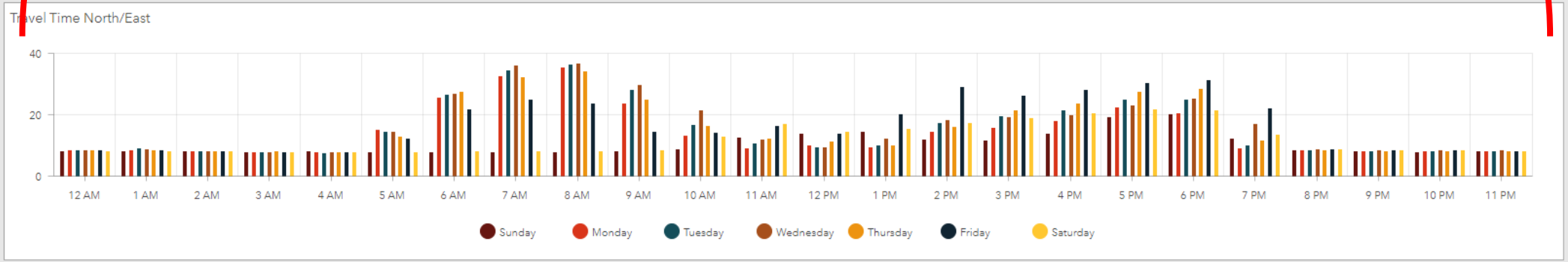

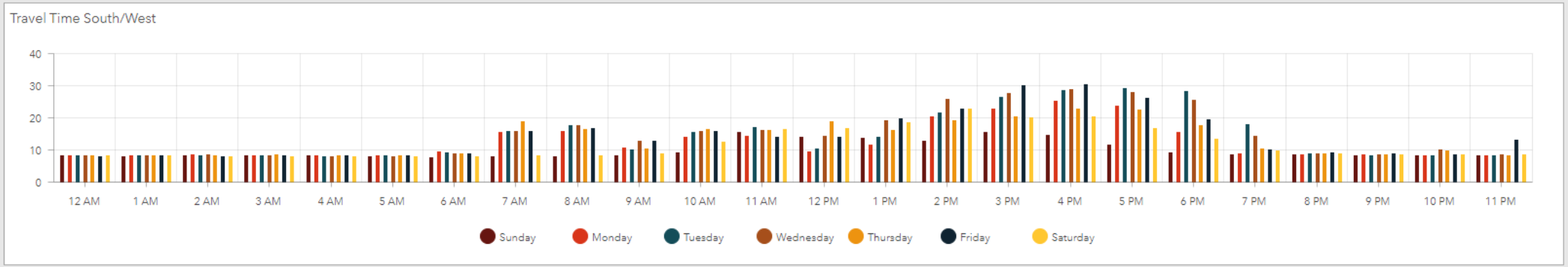

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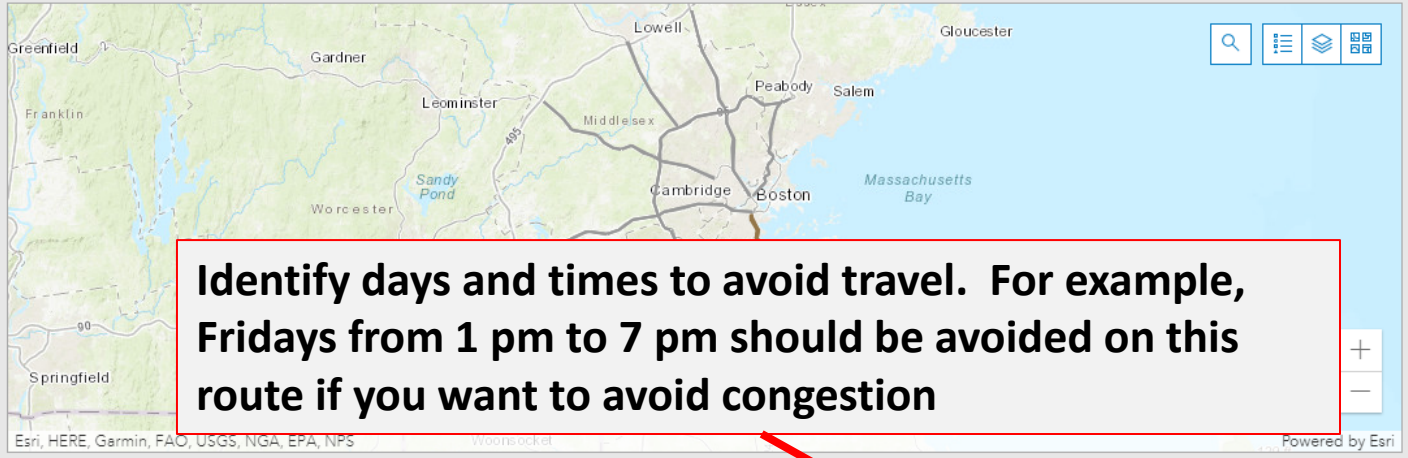

Identify days and times to avoid travel. For example, Fridays from 1 pm to 7 pm should be avoided on this route if you want to avoid congestion

Typical Speed and Travel Time
Averages based on selections

Speed (mph)	Travel Time (minutes)
43.4 North/East	14.4 North/East
46 South/West	13 South/West

Travel Time by Hour with Selected Day of Week
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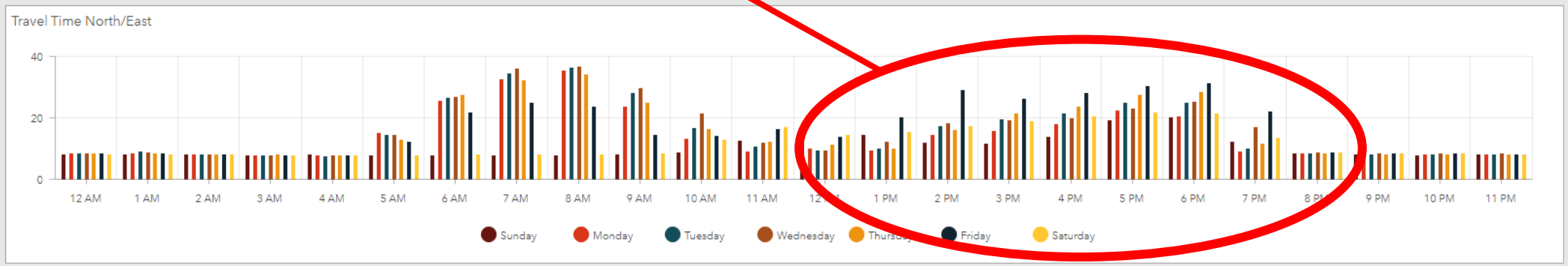

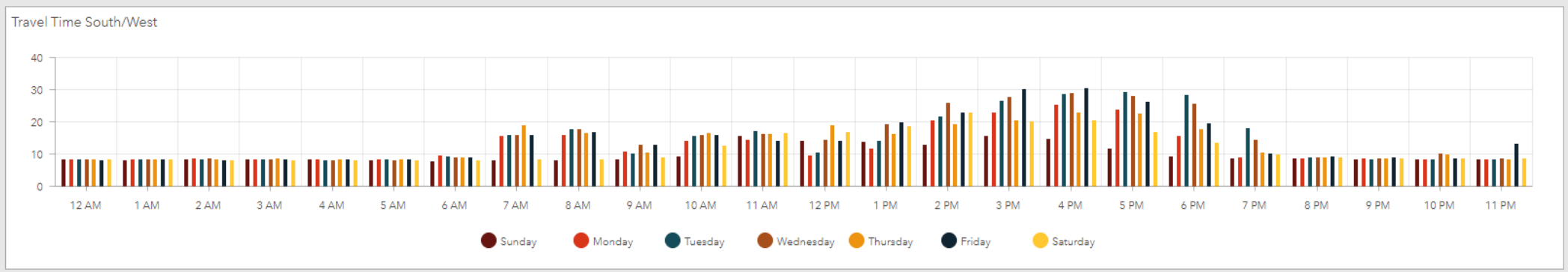

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Select sub-section of Corridor

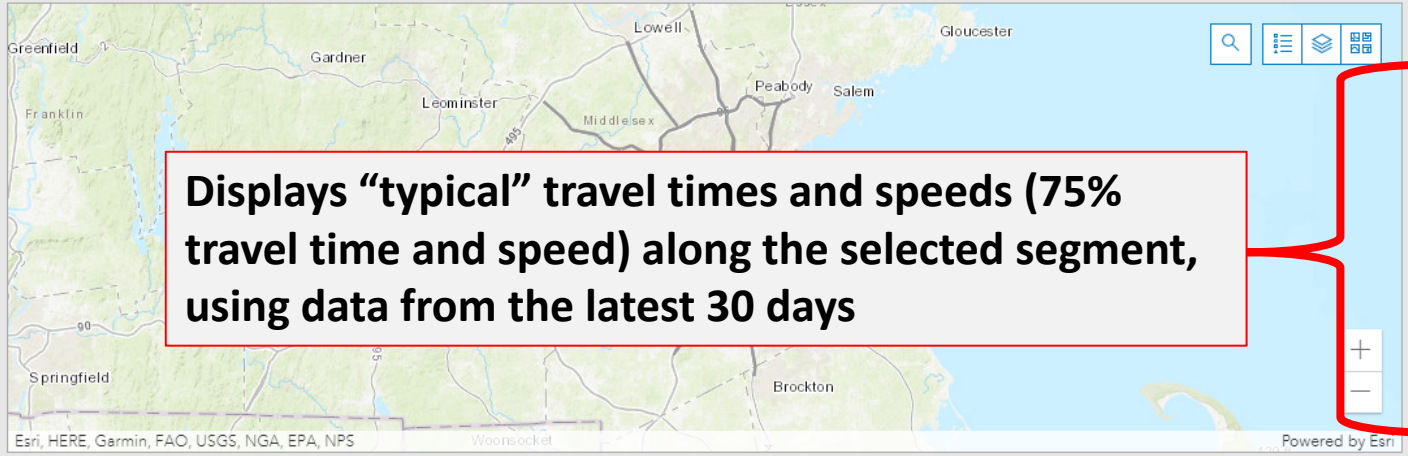
- I-95 Between I-90 (Weston) and I-93 (Canton)
- I-95 between US-1/Exit 9 and I-93/Exit 12
- I-93 Between I-95 (Woburn) and I-495 (Andover)
- I-93 From I-95 to Zakim
- **I-93 SE Expressway**
- I-93 Between I-95 (Canton) and MA-3 (Braintree)
- I-90 from I-93 to I-95
- I-90 Between I-95 (Weston) and I-495 (Hopkinton)

STEP 2: Select Day(s) of Week

- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

Reset | Deselect all

STEP 3: Select a Time Period

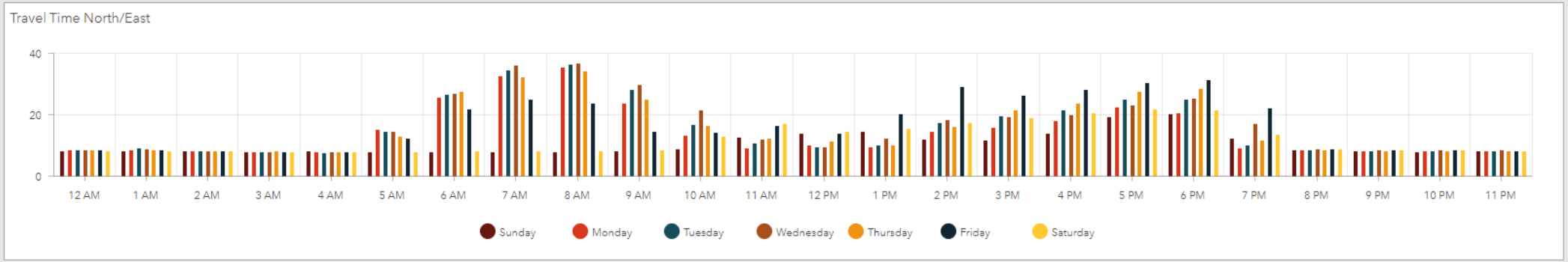


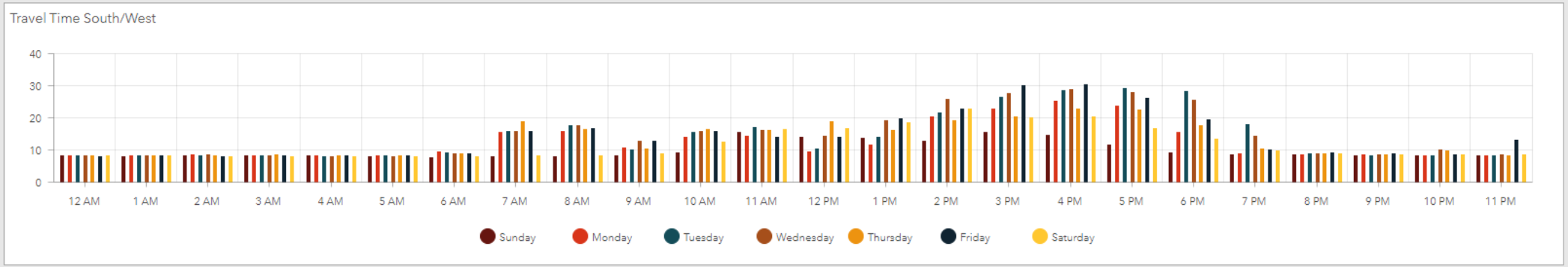
Displays "typical" travel times and speeds (75% travel time and speed) along the selected segment, using data from the latest 30 days

Typical Speed and Travel Time
Averages based on selections

Speed (mph)	Travel Time (minutes)
43.4 North/East	14.4 North/East
46 South/West	13 South/West

Travel Time by Hour with Selected Day of Week
(Dashboard is updated nightly with averages representing the past 30 days)





Typical Travel Time Application Development Details

- Technical Details:
- Step A
  - Starting from VHB's cloud hosted server, an automated script is launched nightly at 2:30 AM from a .NET CORE application. This initial script is used to call the RITIS API and pass parameters including the Date & Time range of data to request for the last 30 day range and the appropriate TMC (data segments) which represent the corridors available in the dashboard.
- Step B
  - The API has been made available to allow direct query of the database containing the MassDOT INRIX data. This API is a standard Restful API call which has been designed and configured by RITIS to allow external users and agencies to directly query metrics.
  - The API accepts several parameters which have been configured to be automatically passed along with those noted in step A. These include:
    - Date Range (Defined in Step A)
    - Day of Week (DOW)
    - Granularity – used to define the buckets of data, for this dashboard it is defined as hourly
    - Data Source – defined as INRIX
    - Percentiles – Used to collect values at various thresholds such as 75^{th} or 95^{th} percentile
    - TMC – Unique segment ID (Defined in Step A)
  - The API collects this information and processes the information into a .ZIP file which contains the results of the API query in a Comma Separated Value (CSV) format which is returned as the final step of the API request
- Step C
  - The returned package of data and metrics are returned to the Hosted Server where the automated script continues by taking the response package and unzipping to make the CSV available and ready for use. At this step, the data is then processed into further metrics through the .NET application which aggregates the data by day of week and hour into an average for the 30 days on a per corridor level.
  - This combination step includes aggregation of TMC (segments) into the larger corridors which are used in the dashboard. Allowing for the output to a clean and simplified table containing corridor level aggregates. Once this process has been completed a new CSV containing this information is placed on the server and the .NET performs a final clean up of the artifacts and temporary information used in the calculation
  - After the new CSV has been placed, a PYTHON script utilizing ESRI's ARCPY Library is called which collects this output CSV and attaches the updated information to the feature class of corridors. This step allows the table to be quickly checked for consistency before using ESRI's publishing abilities to automatically update the service containing the corridor information in ESRI's ArcGIS Online where the final feature service is served.
- Step D
  - As the final step of publishing the data is completed, the updated service in ArcGIS Online is made available for the Dashboard to allow users to directly interact with the information without requiring any additional actions be taken to access the updated information

Questions?

Corey O'Connor, P.E.
Massachusetts
Highway Division, Traffic Operations Engineer
corey.oconnor@state.ma.us

Strategies for Assessing the Effectiveness of Law Enforcement Measures in Battling Excessive Speeds

Chi Mai, Transportation System Analysis Engineer

Oregon DOT

Oregon Department of Transportation

Strategies for Assessing the Effectiveness of Law Enforcement Measures in Battling Excessive Speeds

TETC – RITIS User Group Web Meeting

Chi Mai, P.E.

February 24, 2022

Oregon Department of Transportation

County Safety Corridors (High Speed Crashes)

Safety Measures

- Signing
- Enforcement
- Education

INRIX as a data source for evaluation

- Supplements traditional speed data collection
- Pros: can analyze data for longer period, more segments of highway
- Cons: data represents a fraction of total users of facility
- Watch for major data influx

Oregon Department of Transportation

County Safety Corridors

Close examination of INRIX data (major data influx in Summer 2020)

Total Probe Data Points (London Road 2-way)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017	8,019	6,105	8,574	7,808	10,670	9,460	11,831	11,749	8,861	9,305	8,934	13,324
2018	10,884	8,558	10,391	13,079	16,484	15,528	15,931	15,240	13,985	13,383	12,541	18,421
2019	19,567	14,180	23,768	22,249	17,852	89,150	138,531	127,666	113,572	106,416	103,140	112,041
2020	122,295	115,578	140,249	166,054	224,747	298,117	348,766	346,420	370,390	483,895	460,709	419,190
2021	394,153	373,768	455,809	432,272	433,965	453,527	483,349	432,773	440,182	422,148	427,787	406,950
2022	417,340											

Total Probe Data Points (McKay-Yergen-Ehlen 2-way)

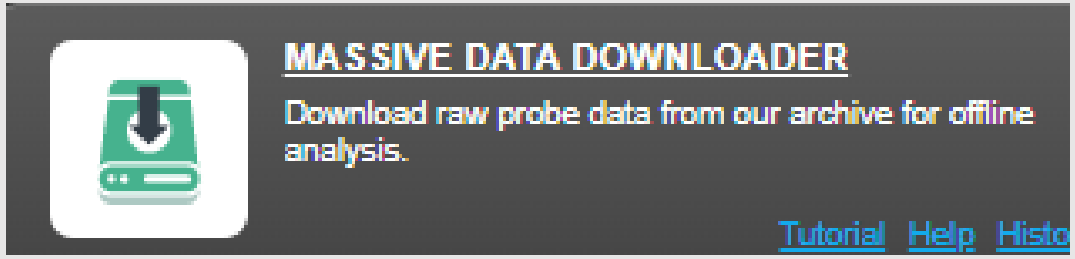
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017	330,398	322,423	378,230	366,870	382,785	396,445	398,716	417,554	353,979	367,642	317,338	345,780
2018	382,119	361,961	438,007	419,832	377,648	347,698	382,581	427,281	357,761	370,085	292,966	244,454
2019	286,109	191,623	219,889	249,889	252,168	610,734	869,504	858,365	801,797	836,108	769,774	767,358
2020	803,356	810,626	771,878	694,776	798,531	867,208	907,096	885,640	1,093,993	1,147,164	1,086,707	1,113,332
2021	1,138,235	1,019,946	1,139,481	1,042,967	1,088,119	1,060,359	1,111,444	1,071,267	1,036,682	1,055,288	1,010,182	1,063,290
2022	1,036,773											

Oregon Department of Transportation

Data Steps

RITIS PDA – Massive Data Downloader Tool

- Selected INRIX XD, corridor, date range



Speed bin analysis using R:

- Analysis conducted outside of RITIS
- Screened data points with confidence score of 30 only
- Developed speed bins: >70mph, >65mph, >60mph

Normalized data:

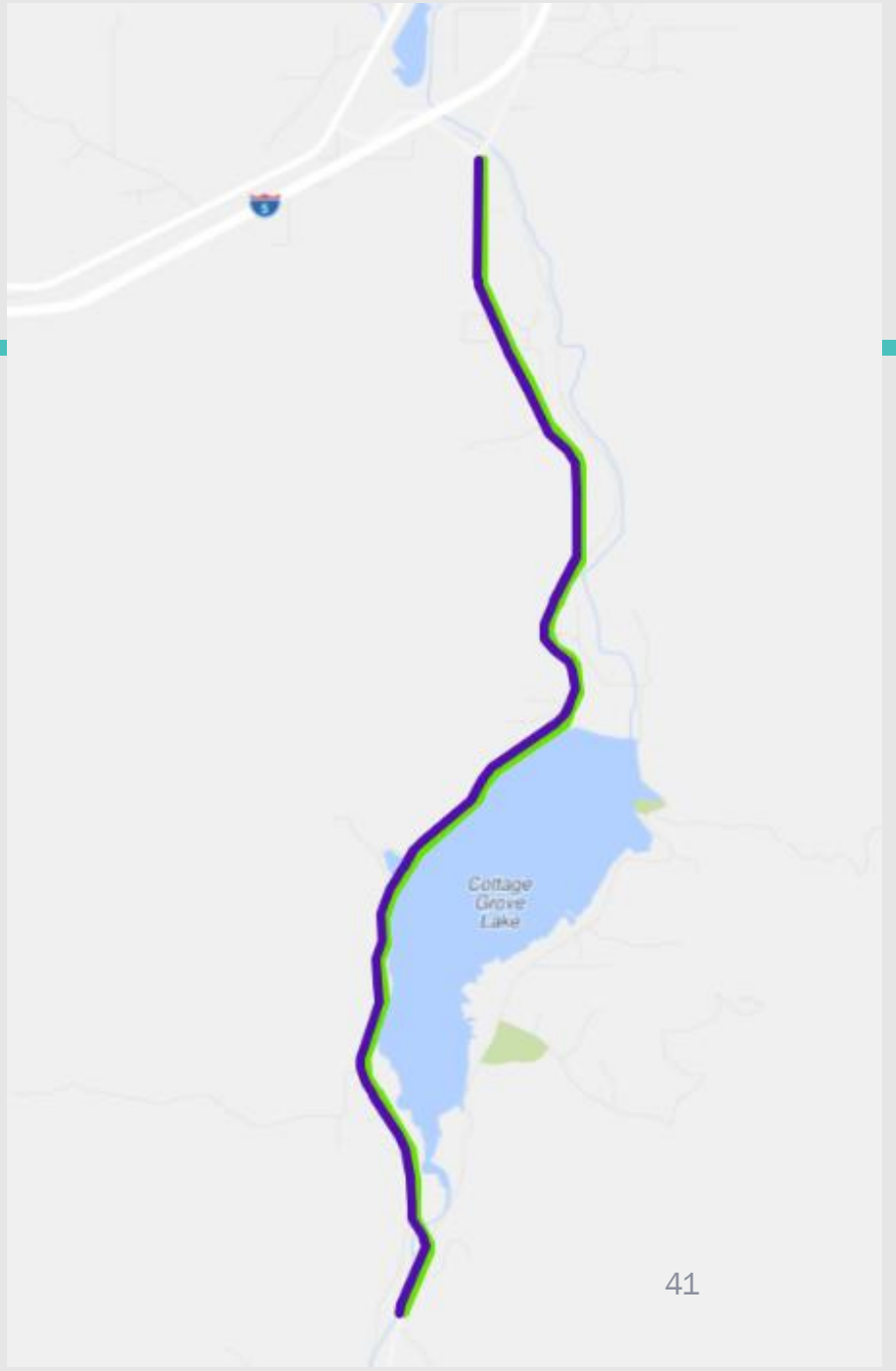
$$\frac{\text{tally of data points greater than ##mph}}{\text{total data points}}$$

Oregon Department of Transportation

Safety Corridor: London Road

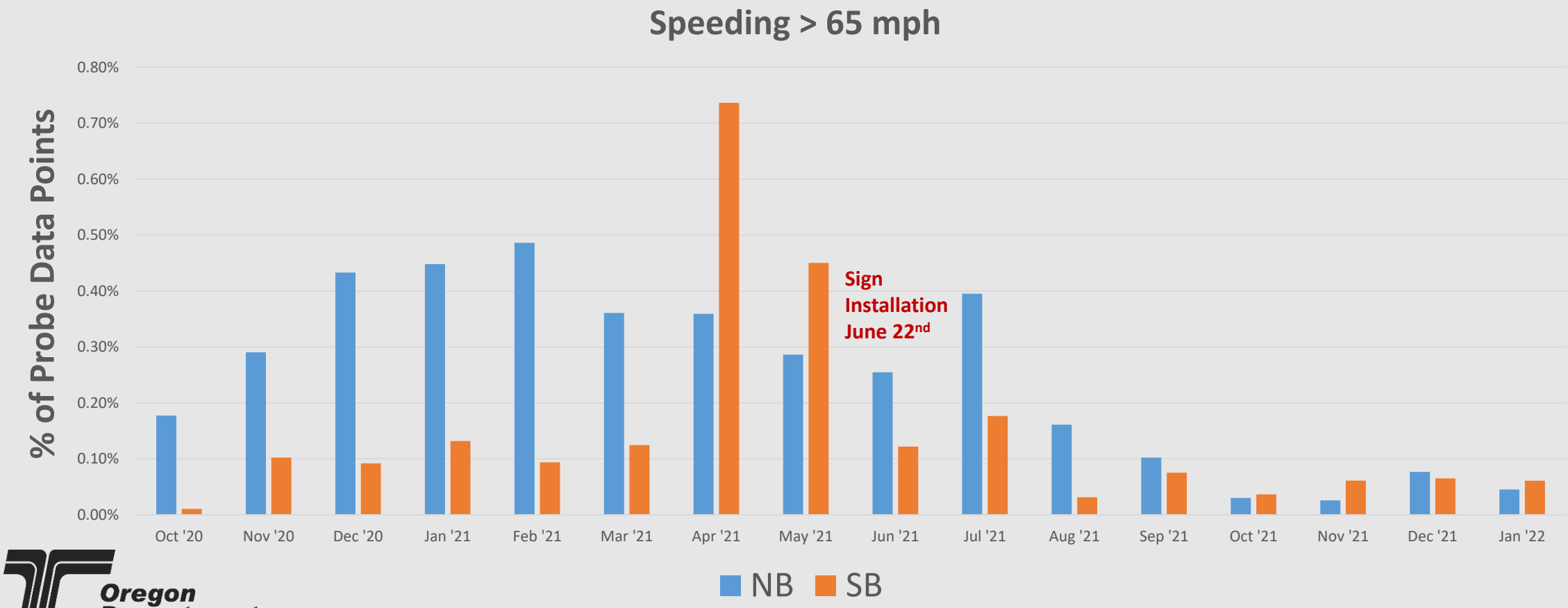
London Road: Lantham Road to Cottage Grove Reservoir Road

- ~7 miles (11 INRIX XD segments per direction)
- 55mph speed zone
- 3,300 ADT
- Safety sign installation: June 22, 2021



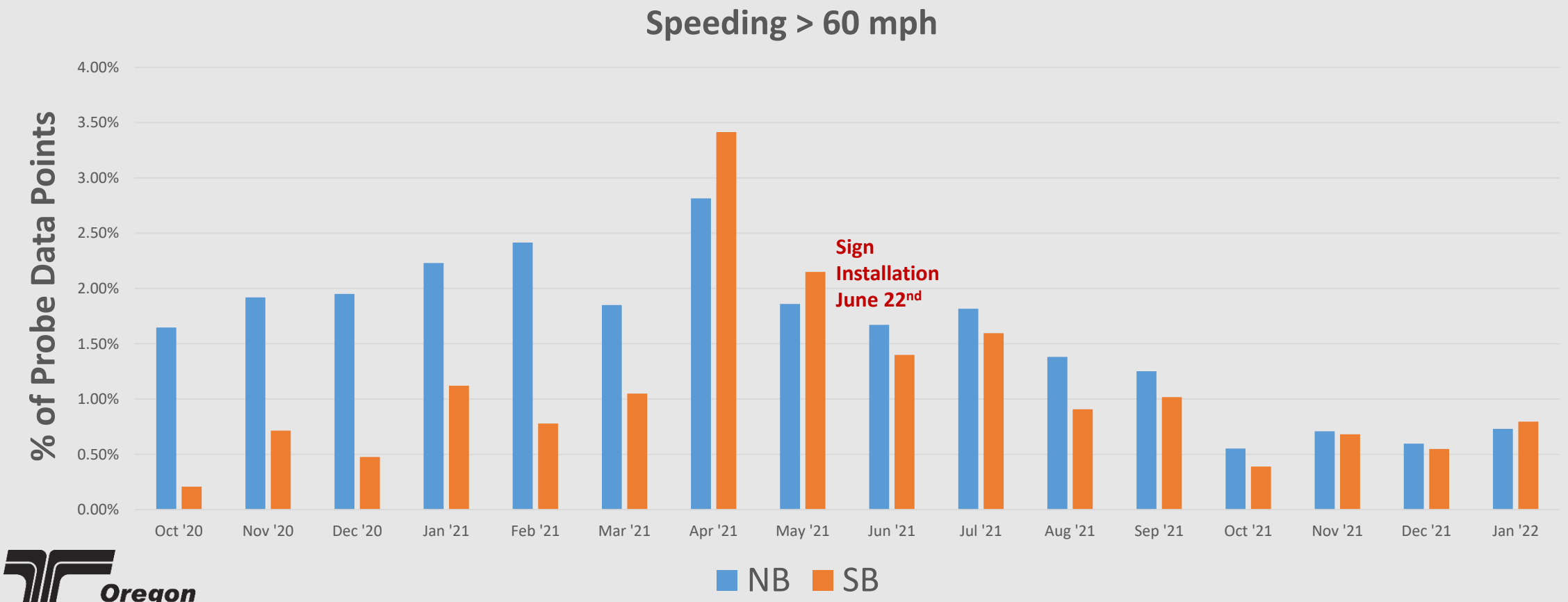
Oregon Department of Transportation

London Road



Oregon Department of Transportation

London Road



Oregon Department of Transportation

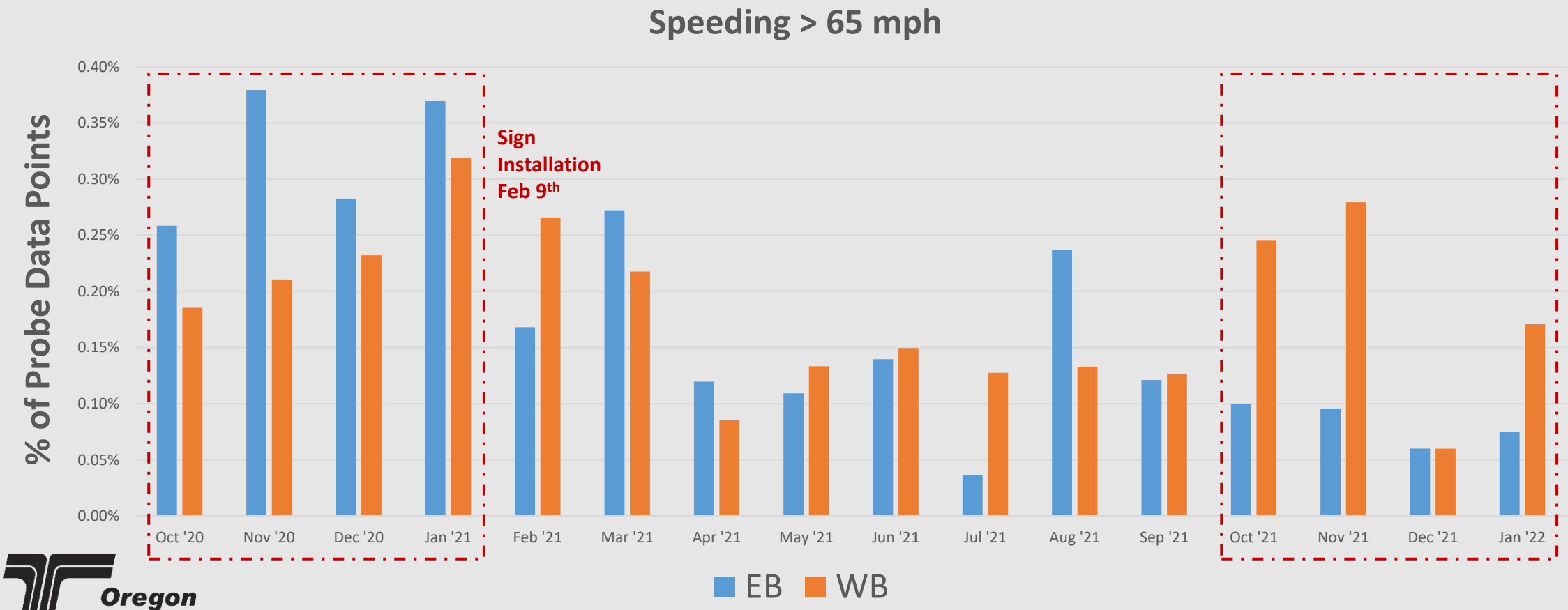
Safety Corridor: McKay-Yergen-Ehlen Roads

McKay-Yergen-Ehlen Rds: I-5 to OR219

- ~ 7 miles (14 INRIX XD segments per direction)
- 55mph speed zone
- 7,500 - 10,500 ADT
- Sign Installation: February 9, 2021

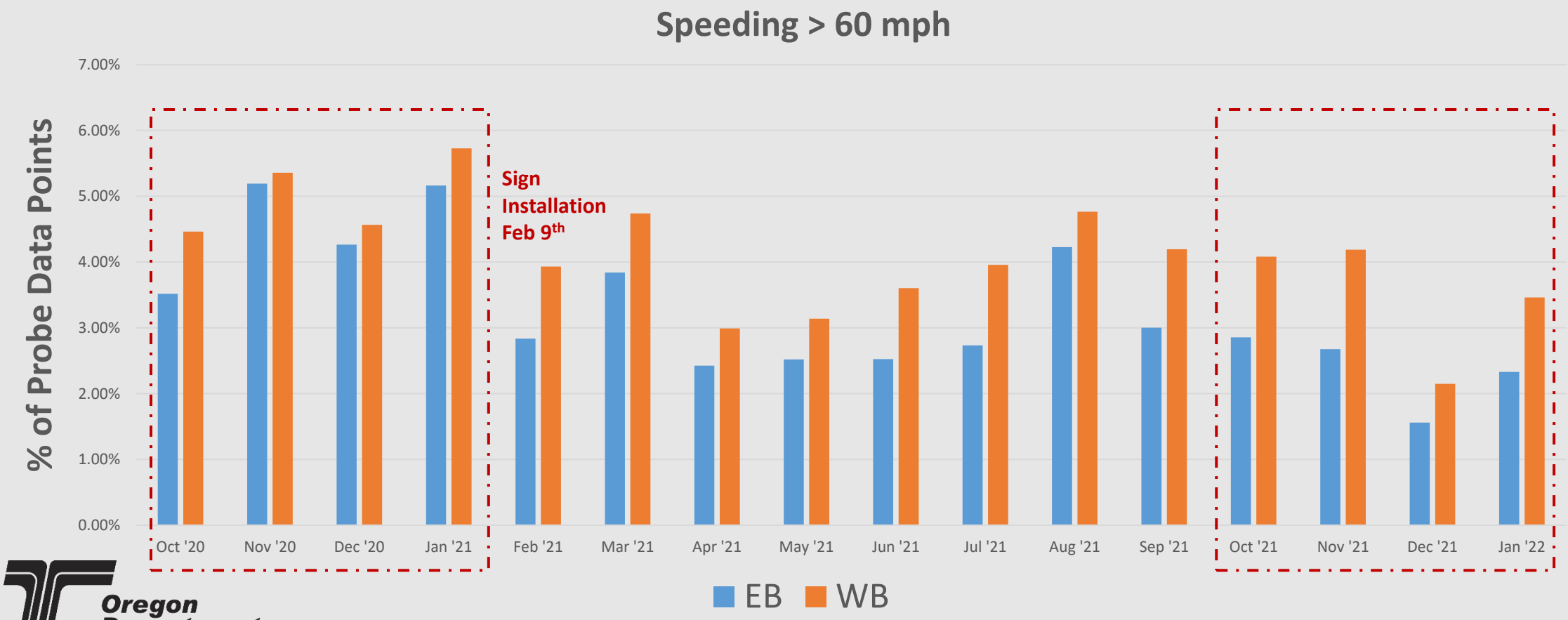
Oregon Department of Transportation

McKay-Yergen-Ehlen Roads



Oregon Department of Transportation

McKay-Yergen-Ehlen Roads



Oregon Department of Transportation

Summary

High Interest in Excessive Speed Analysis

- Presentations to numerous groups
- Continue to update analysis and monitor trends
- Advocate for this calculation to be incorporated into the RITIS tool

Oregon Department of Transportation

Questions?

Contact

E-mail: chi.mai@odot.oregon.gov

RITIS | PROBE DATA ANALYTICS SUITE

PDA Suite Performance Measures Working Group

John Allen
UMD CATT Lab
Faculty Assistant, Outreach & Education

Today's topics

Performance Reporting Working Group Follow-up Actions:

- Baltimore Metropolitan Council: Quarterly Congestion Analysis Report
- RITIS Template pages
- RITIS Workshop – Building a Corridor Performance Report

Thanksgiving 2021 Agency Travel Advisories

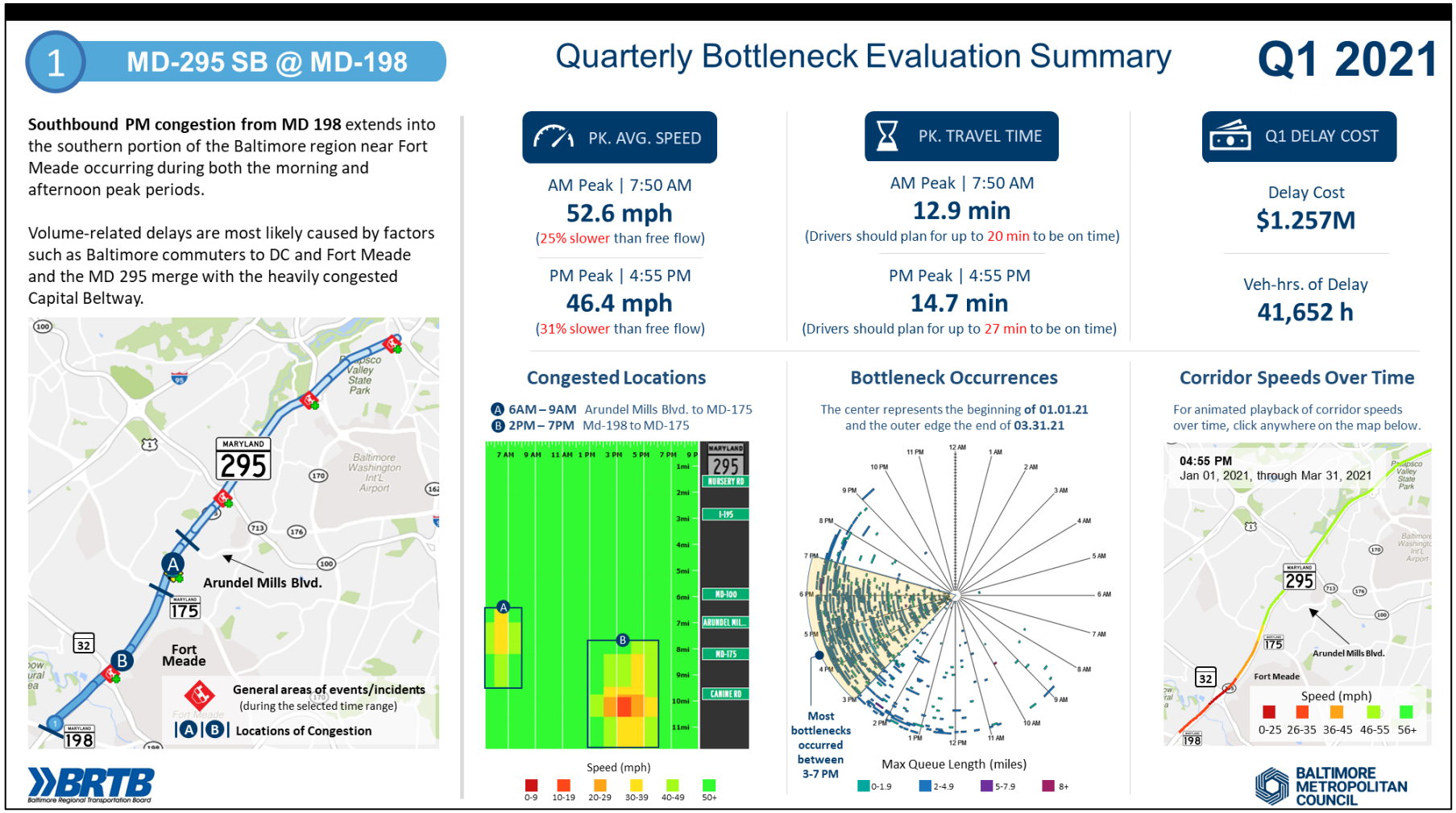
BMC's Quarterly Bottleneck Evaluation Summary

In the past, Ed Stylc (BMC) created a quarterly congestion report that over time, grew to 75 pages

We helped reimagine Ed's report to be more streamlined, informative, manageable and much shorter (by 50-67%)

There are two options:

- Technically-oriented (right)
- High level (next)



BMC's Quarterly Bottleneck Evaluation Summary (more high level)

1 MD-295 S @ MD-198

Southbound PM congestion from MD 198 extends into the southern portion of the Baltimore region near Fort Meade occurring during both the morning and afternoon peak periods.

Volume-related delays are most likely caused by factors such as:

- Baltimore commuters to DC and Fort Meade, and;
- The MD 295 merge with the heavily congested Capital Beltway.

BRTB Baltimore Regional Transportation Board

Quarterly Congestion Analysis Report Q1 2021

Click on an icon for more detail

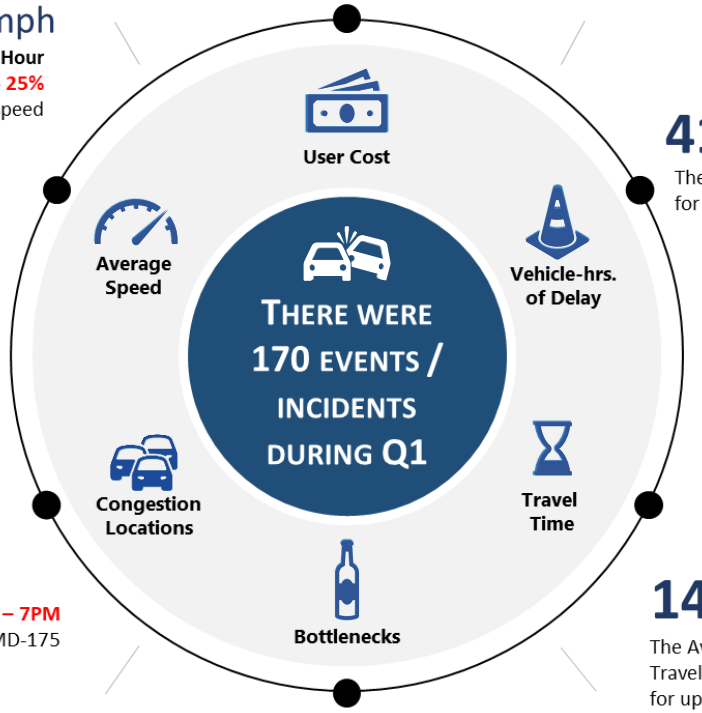
$1.25M
The Total Delay Cost for Q1 of 2021

52.6mph
The Average **AM Peak Hour** Speed, @ 7:50 AM - **25%** **lower** than free flow speed

46.4mph
The Average **PM Peak Hour** Speed, @ 4:55 PM - **31%** **lower** than free flow speed

A 6AM – 9AM
Arundel Mills Blvd. to MD-175

B 2PM – 7PM
Md-198 to MD-175



41,652hr
The Vehicle-hrs. of Delay for Q1 of 2021

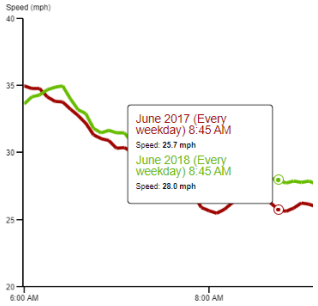
13.0min
The Average **AM Peak Hour** Travel Time. Drivers should plan for up to **20 min** to be on time

14.7min
The Average **PM Peak Hour** Travel Time. Drivers should plan for up to **27 min** to be on time

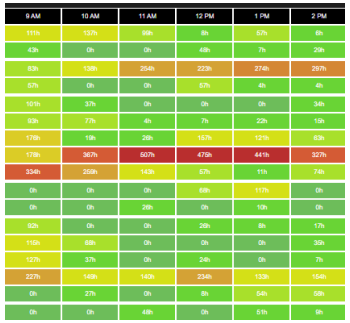
3pm-7pm
Most of the Bottlenecks along this roadway occurred between these times

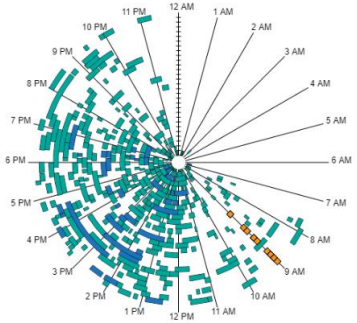
BALTIMORE METROPOLITAN COUNCIL

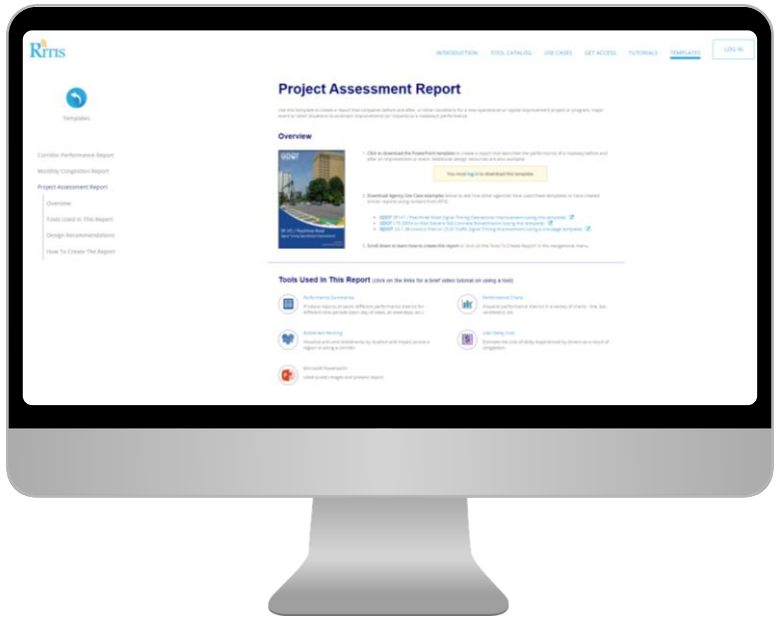
Performance reporting templates are live!

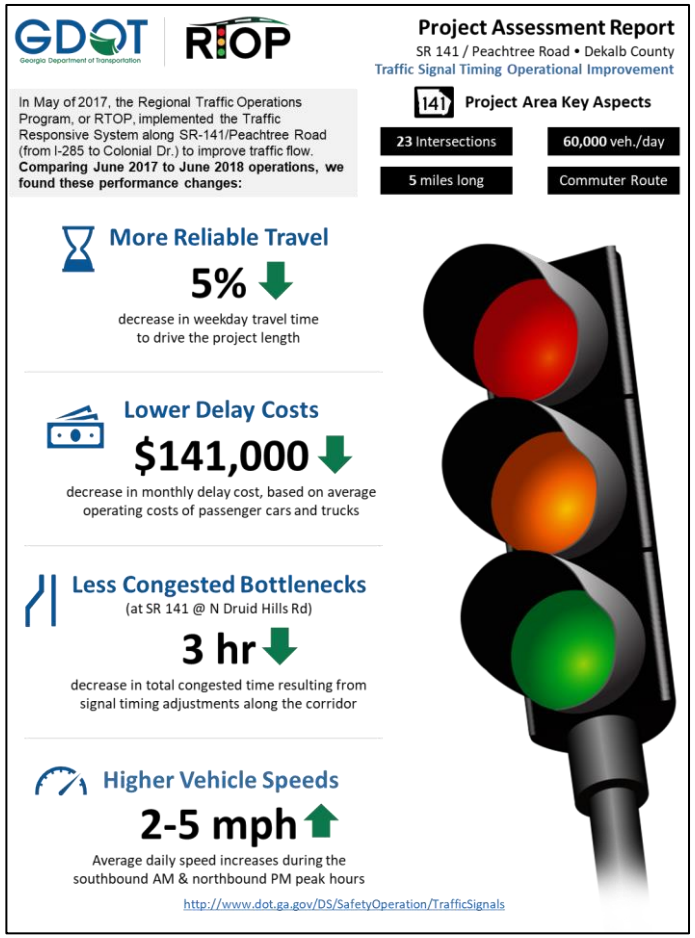


	Speed (mph)	Buffer time (minutes)	Buffer index
	12:00 AM - to - 12:00 AM	12:00 AM - to - 12:00 AM	12:00 AM - to - 12:00 AM
Mon	30.69	7.02	0.33
Tue	30.27	7.67	0.35
Wed	30.02	7.85	0.36
Thu	30.20	7.60	0.35
Fri	30.00	7.83	0.36
Weekdays	30.22	7.69	0.36
Sat	32.39	5.93	0.29
Sun	34.06	4.98	0.26
Weekends	33.11	5.63	0.28
All Days	31.03	7.41	0.35



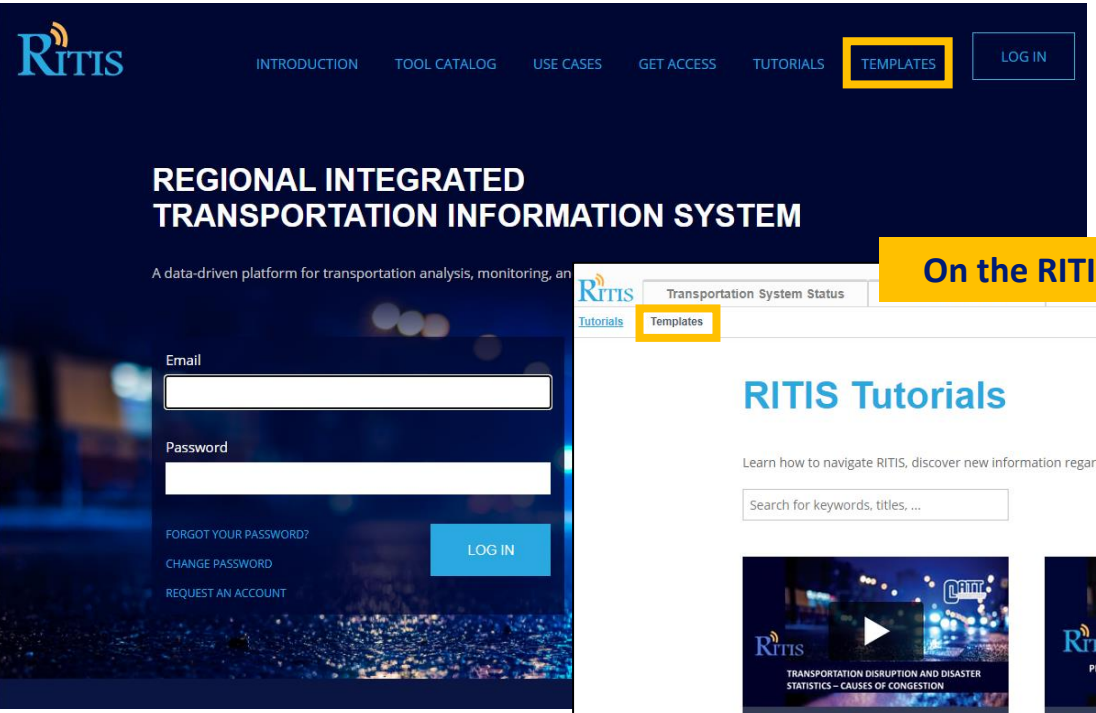






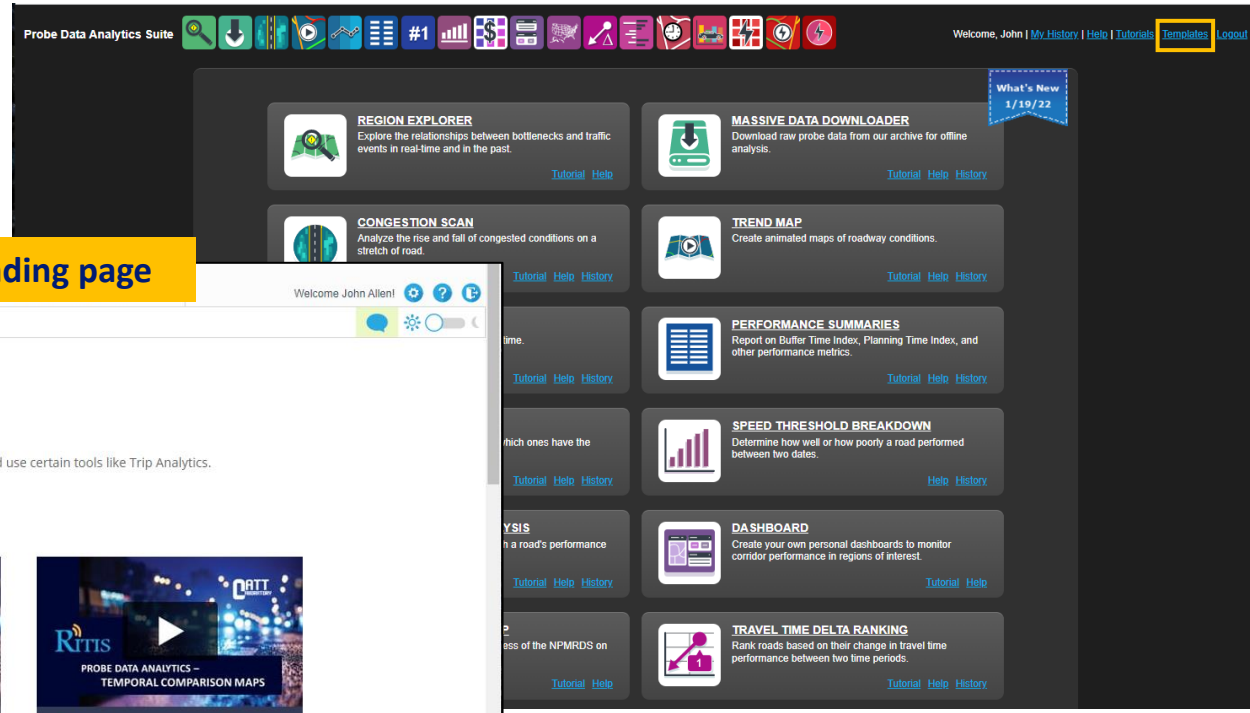
Three ways to access the templates…

On the RITIS login screen



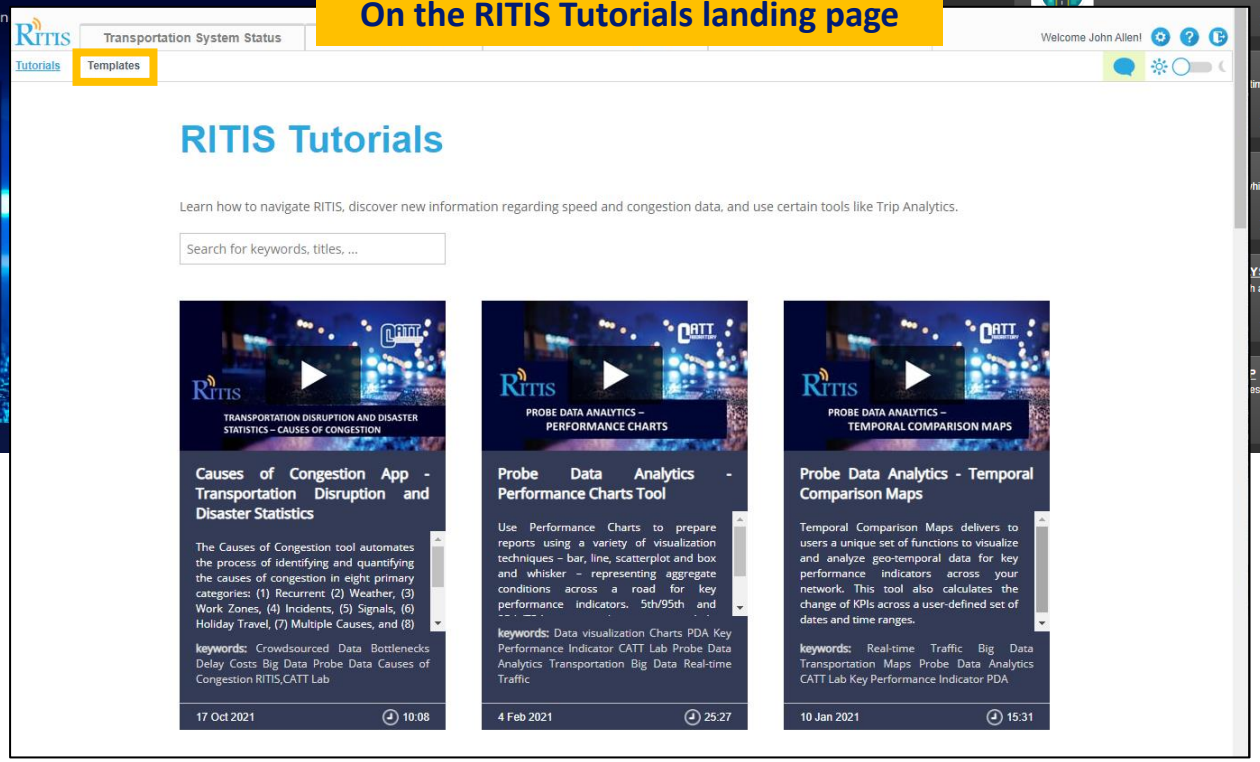
https://ritis.org/login

On the PDA Suite landing page



https://pda.ritis.org/suite/

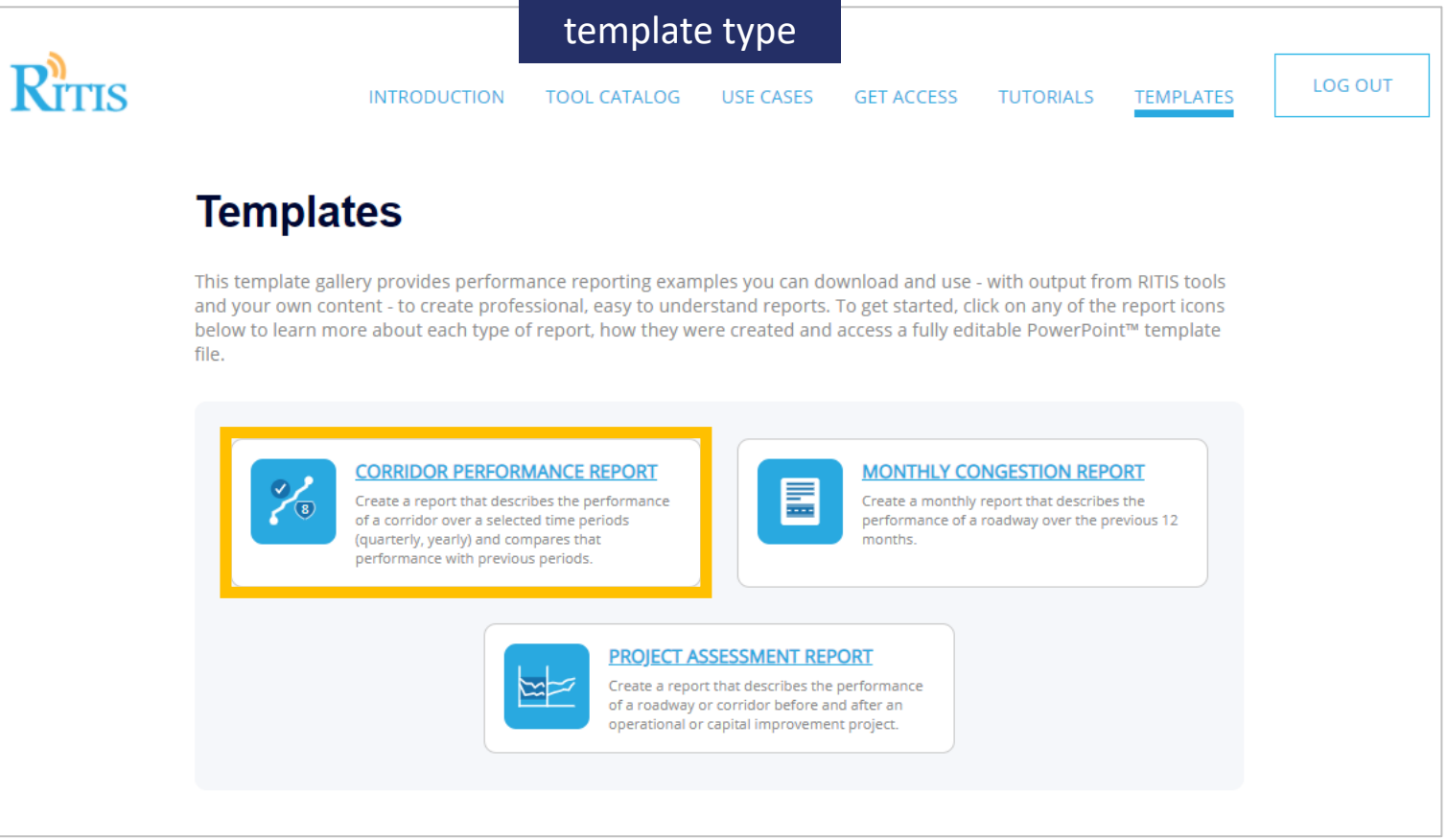
On the RITIS Tutorials landing page



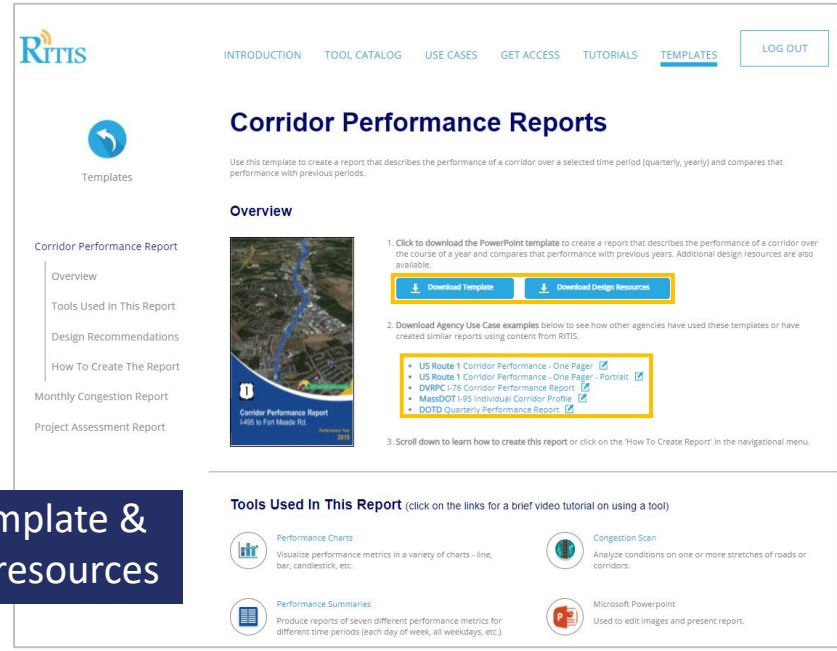
https://ritis.org/help/tutorials/

Build a report in three easy steps…

1 Choose a template type



2 D/L template & design resources



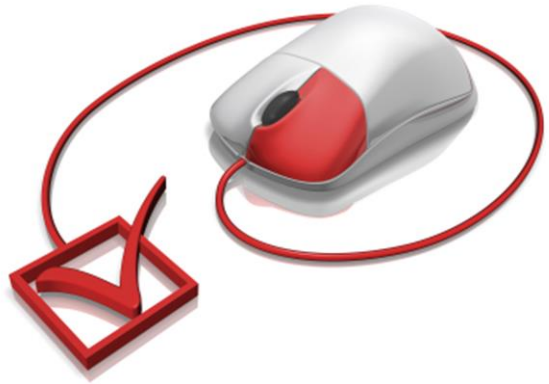
3 Follow the How-to guide

https://learn.ritis.org/reports

Poll 2: In addition to **Corridor Performance, Project Assessment and Monthly Congestion** reports already available on the templates page, which reporting would you like to see covered next?

Answer Options:

1. After Action Reviews
2. Holiday Travel
3. Top 10 (Bottlenecks, etc.)
4. TSMO Tracking
5. Work Zones



Mark your calendars…

RITIS Workshop

Session 1 | **Building a Corridor Performance Report**

When: March 29, 2022 • 1:00 pm to 3:30 pm (ET)

Come join us for a workshop on how to build a corridor performance report, using results from RITIS tools and a reporting template.

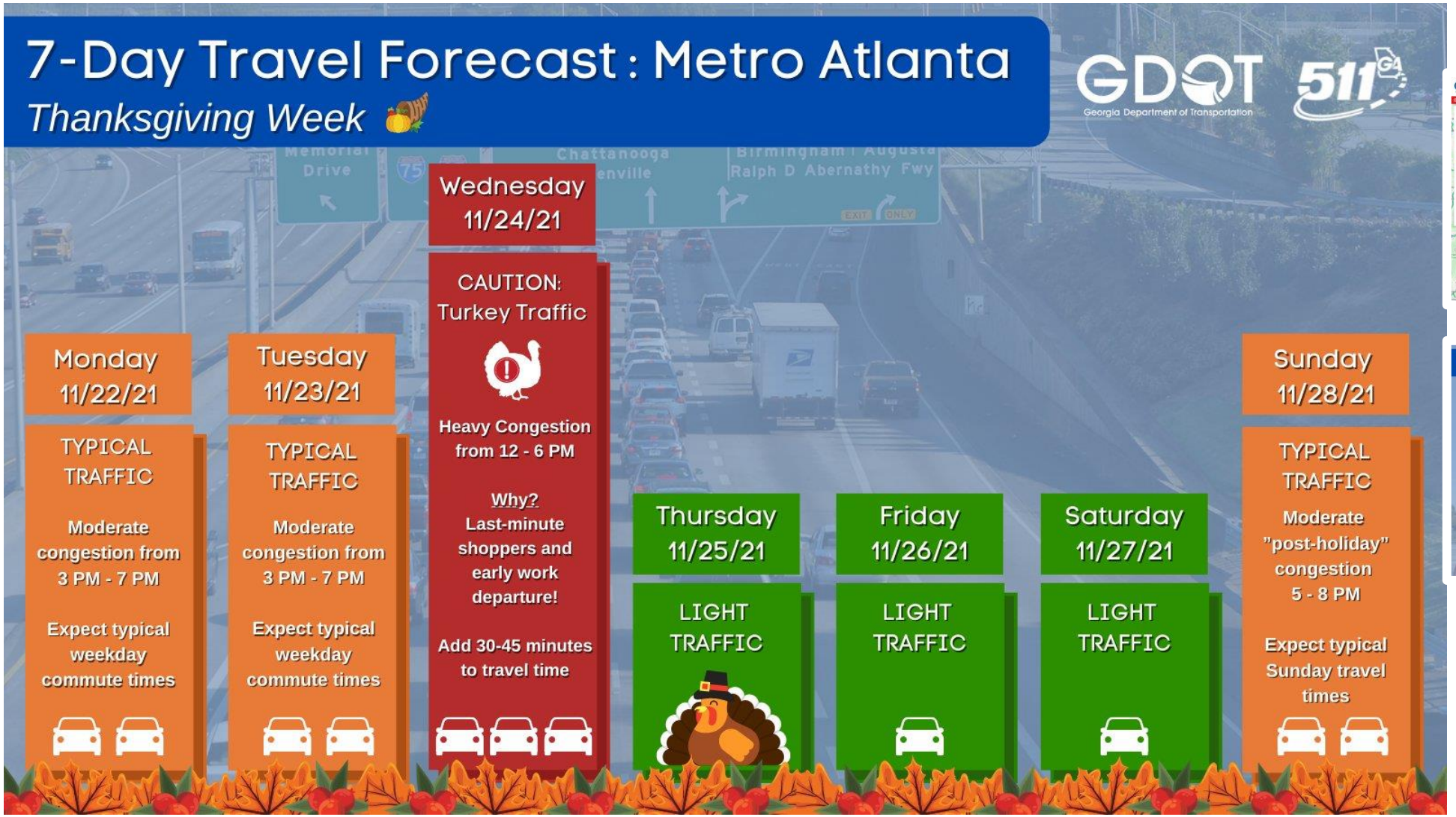
(You will receive an invite shortly after the meeting today)

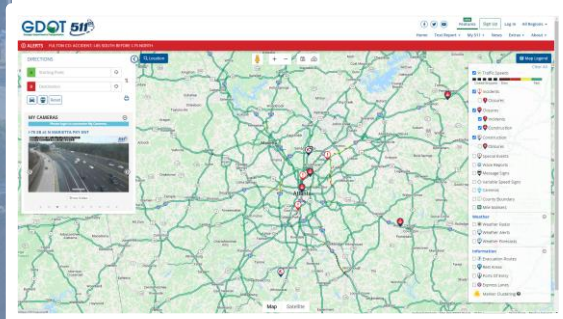
Thanksgiving 2021

Agency Holiday Travel Advisory Examples

(Using vehicle probe data from previous Thanksgivings to predict the best days and times to travel)

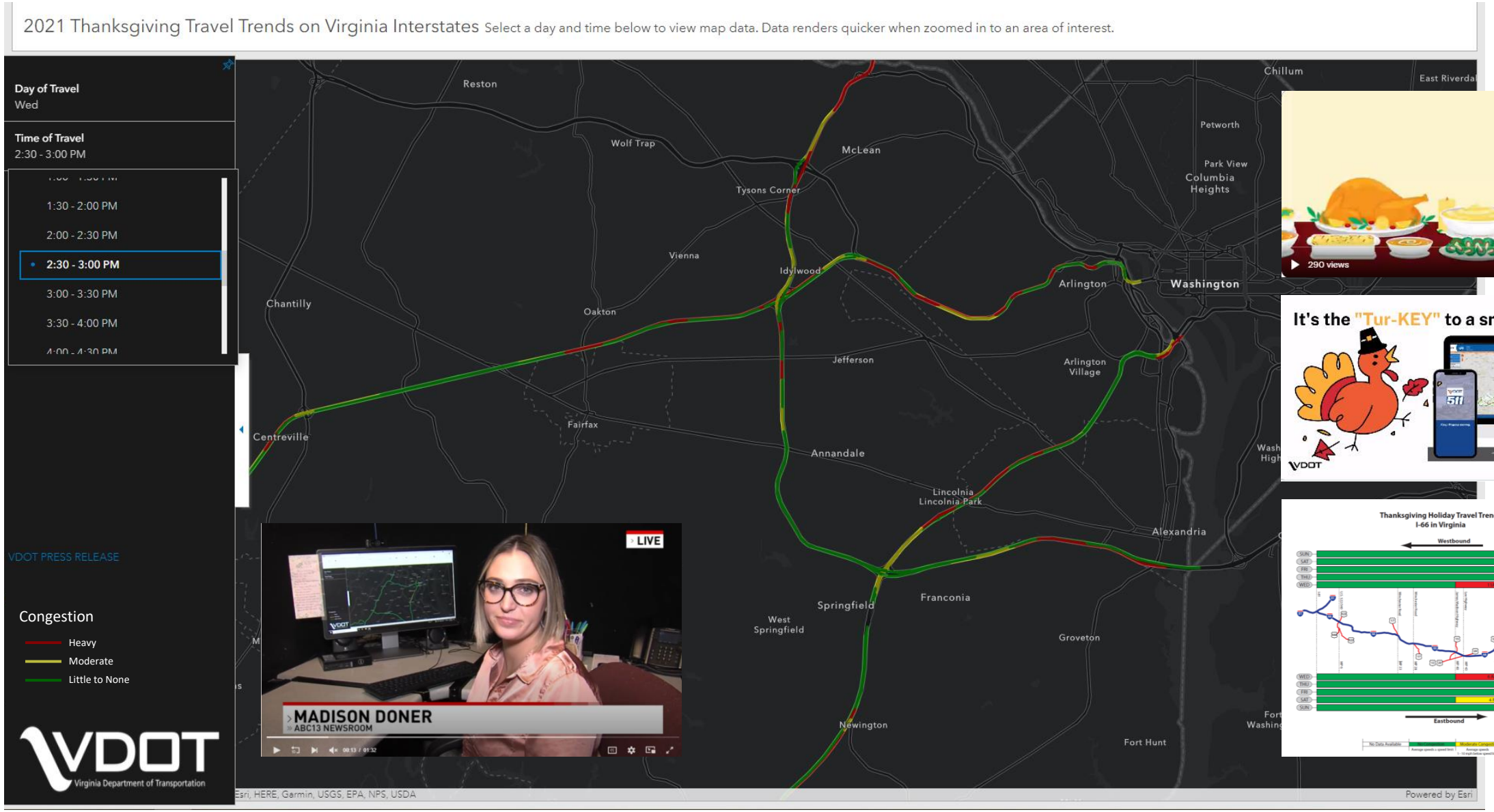
Website, Facebook, Twitter, Mass media | Travel info / Safety tips / Holiday wishes


7-Day Travel Forecast : Metro Atlanta
Thanksgiving Week
GDOT Georgia Department of Transportation
511
Monday 11/22/21
TYPICAL TRAFFIC
Moderate congestion from 3 PM - 7 PM
Expect typical weekday commute times
Tuesday 11/23/21
TYPICAL TRAFFIC
Moderate congestion from 3 PM - 7 PM
Expect typical weekday commute times
Wednesday 11/24/21
CAUTION: Turkey Traffic
Heavy Congestion from 12 - 6 PM
Why?
Last-minute shoppers and early work departure!
Add 30-45 minutes to travel time
Thursday 11/25/21
LIGHT TRAFFIC
Friday 11/26/21
LIGHT TRAFFIC
Saturday 11/27/21
LIGHT TRAFFIC
Sunday 11/28/21
TYPICAL TRAFFIC
Moderate "post-holiday" congestion 5 - 8 PM
Expect typical Sunday travel times




Thanksgiving Travel Safety Tips
GDOT 511
Don't drive distracted
Avoid speeding
Drive defensively
Drive with a full tank of gas

Website, Facebook, Twitter, Mass media | Interactive map / Travel info / 511 / Safety Tips



QUESTIONS?

John C. Allen

jallen35@umd.edu

www.ritis.org

RITIS | PROBE DATA ANALYTICS SUITE

RITIS Enhancement Working Group

Matt Glasser
Assistant State Traffic Engineer
Georgia DOT

RITIS Enhancements Working Group

- **Purpose**:
  - Form a nimble group to fund RITIS enhancements & assist CATT Lab with prioritizing features
  - Provide stable funding
  - Connect agencies with similar needs

- **2021 Funding Commitments Came from:**
  - Georgia
  - Massachusetts
  - Oregon
  - Virginia
  - Michigan

3 Major Projects funded by RITIS Enhancements Working Group

1. **Waze Enhancements**
   - **Function:** Filtering in real-time RITIS, Integration into PDA Suite (Region Explorer/Congestion Scans/Trend Maps/Bottleneck Ranking), Integration into Event Timelines
   - **Status:**
     - **Event Query Tool:** Complete. Deploying next week. Demo today.
     - **RITIS Map Filters:** 95% complete. Anticipated release in March. Demo today.
     - **PDA Integration:** 80% complete. Anticipated release early March.
2. **Corridor Speed Graphs**
   - **Function:** New PDA tool for comparing how speeds change during different time periods along a given corridor
   - **Status:** 75% complete with functional prototype available. Anticipated final release by end of March. Demo today.
3. **Causes of Congestion Pie Chart Deep-Dive Analytics**
   - **Function:** Ability to develop 'causes of congestion' pie charts and UDC bar graphs for any geography and data range using agency owned data fused with other data sources
   - **Status:** In Development, anticipated release by end of June 2022.

Next Steps

- **Next meeting is Wednesday, April 6th from 2:30pm-3:30pm, ET**
  - If you are a member of the group you will receive an invitation
  - Interested in joining the group, please reach out to
    - Michael Pack - PackML@umd.edu
    - Denise Markow - dmarkow@tetcoalition.org

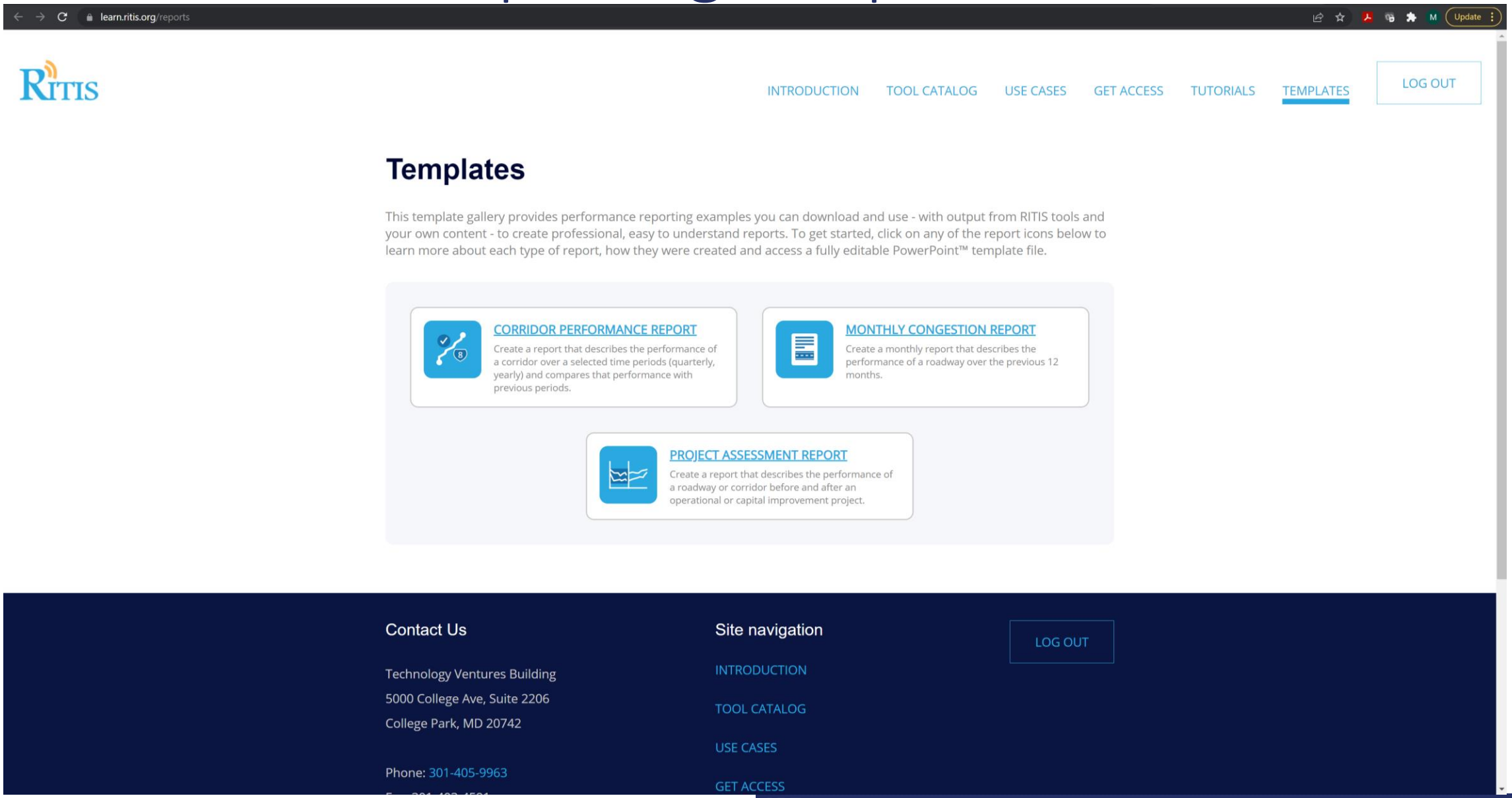
RITIS | PROBE DATA ANALYTICS SUITE

New RITIS Tools and Recent Enhancements

Michael Pack
UMD CATT Lab
Director


RITIS

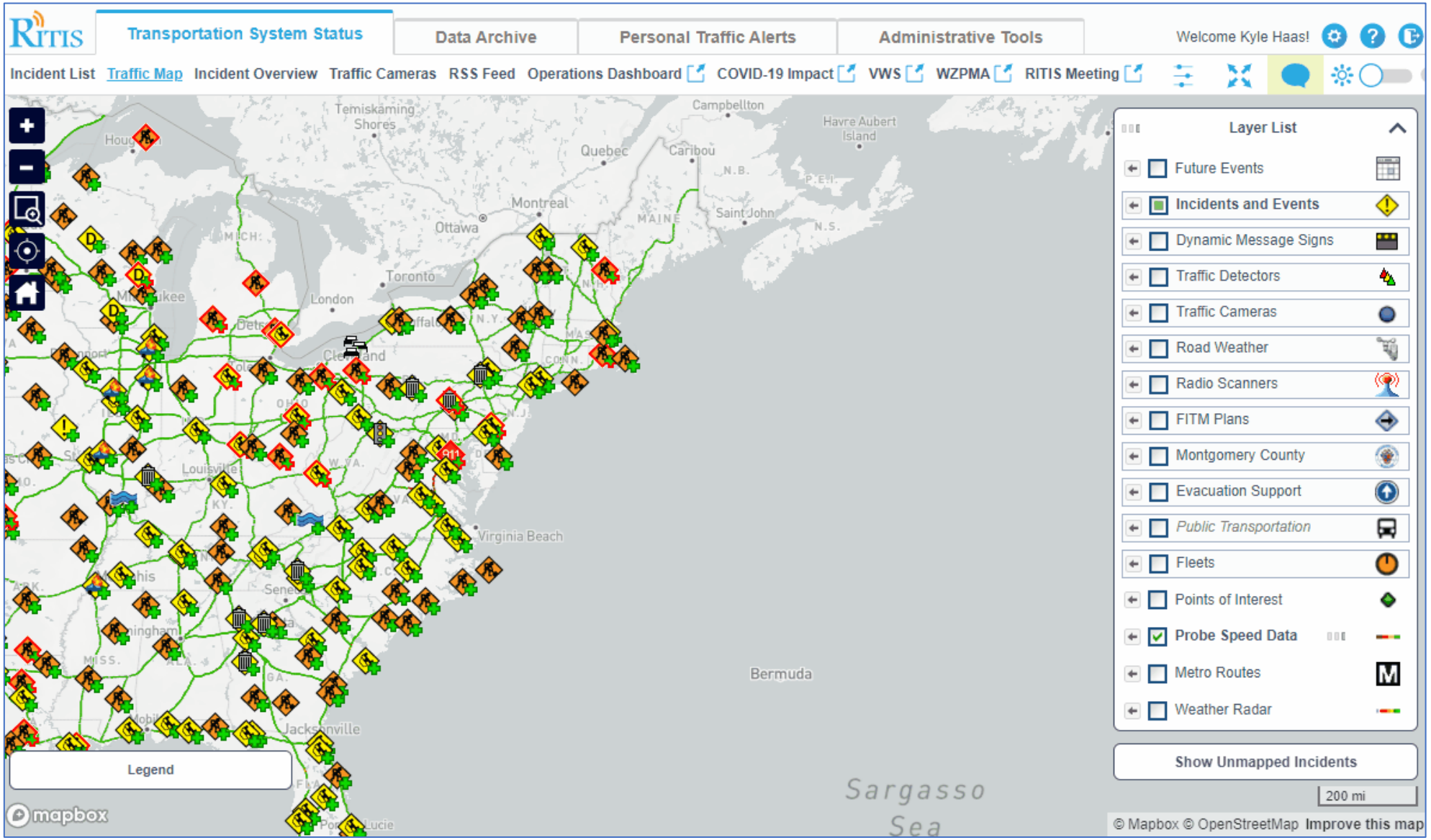
Performance reporting templates are live!



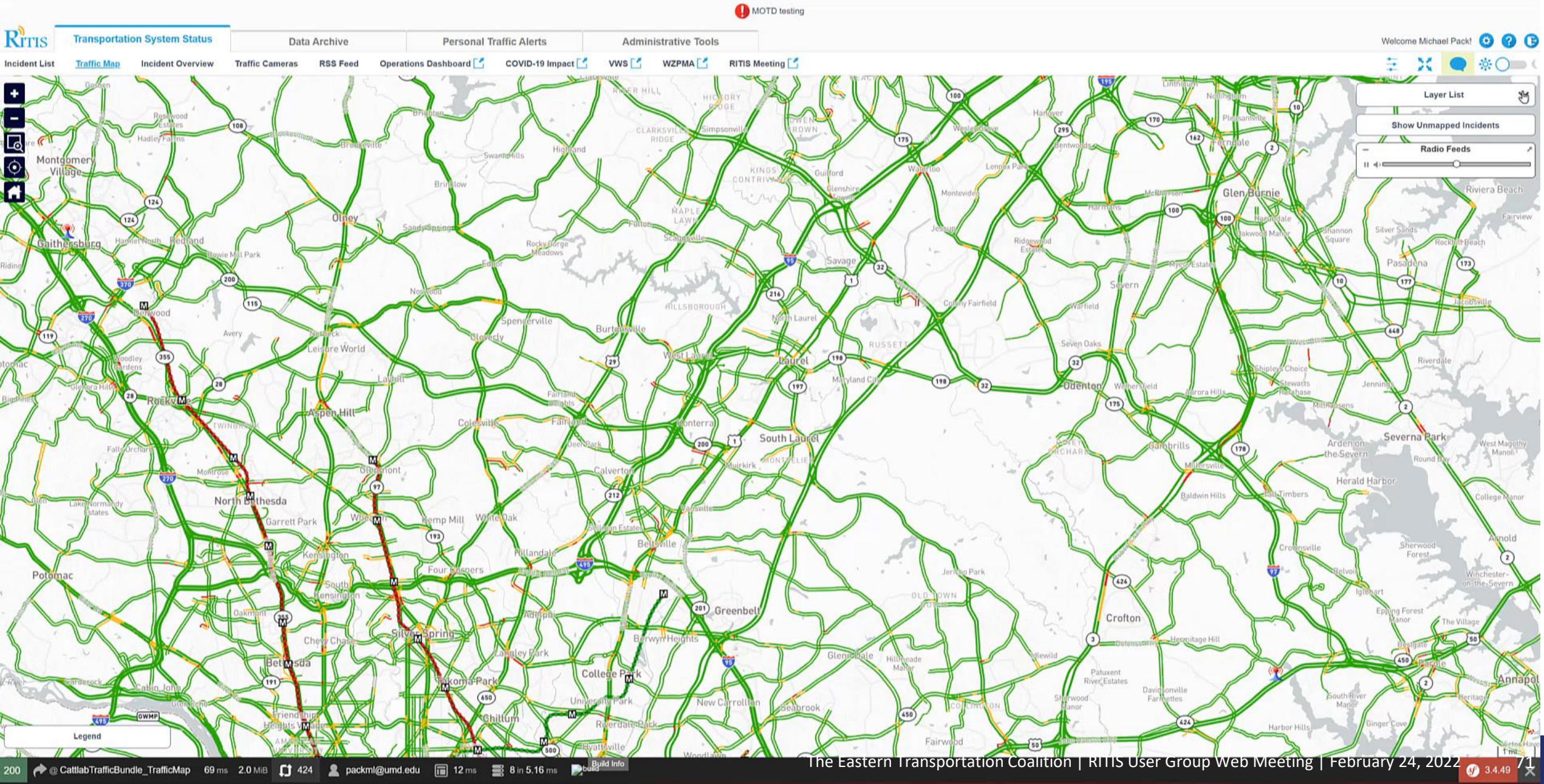
More modern mapping

Converted **RITIS** to use a more modern mapping infrastructure:

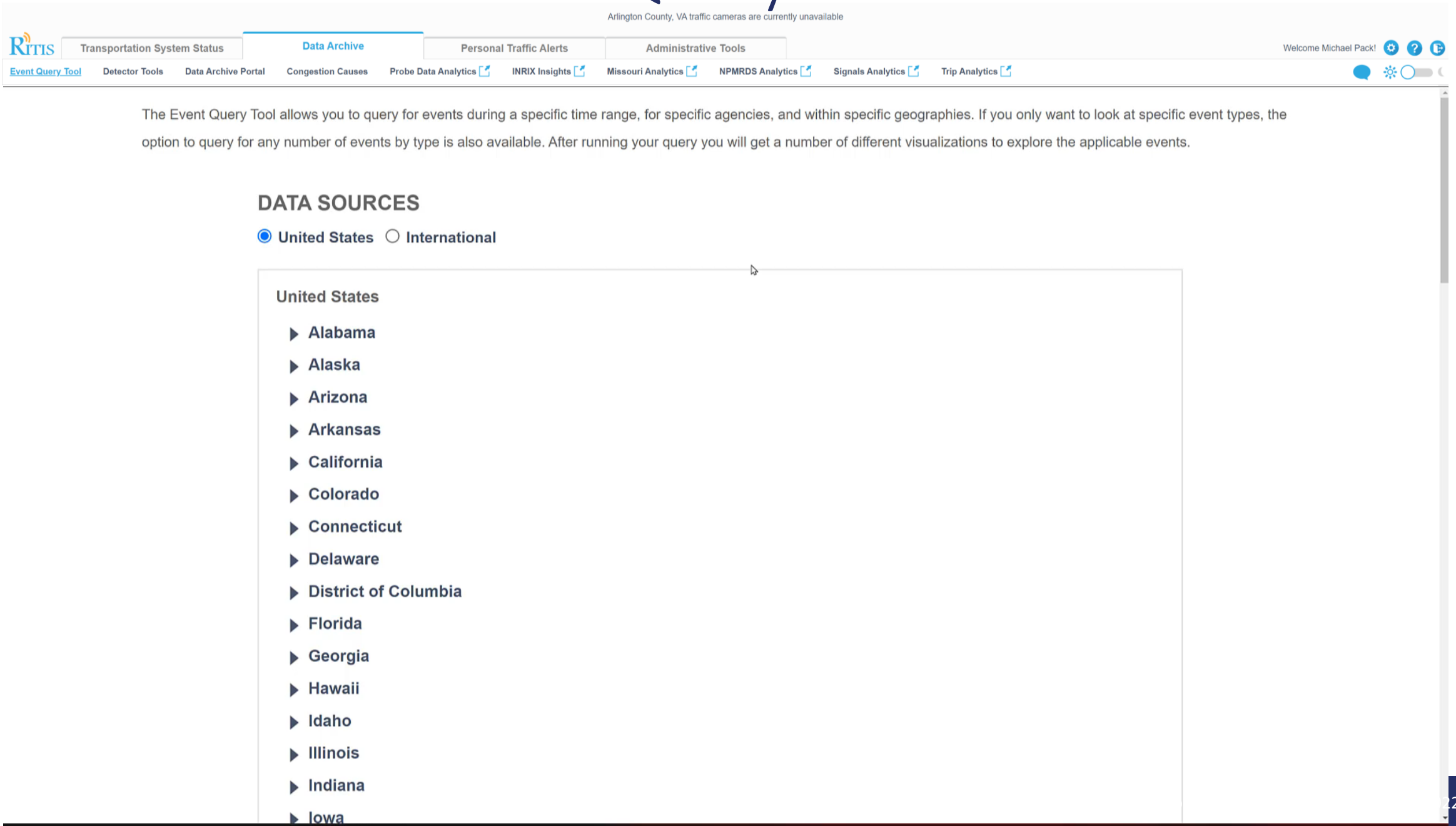
- Panning and zooming are now smoother,
- additional map features will be more easily implemented in the future.



Waze Filters in the Live RITIS Map



Waze Data in Event Query Tool



RITIS latest updates

Some important bug fixes/updates

- **Added CAD event icons** (on the Incident Overview map)
- **Improved map content display** (for legibility)
- **Improved map layering** (road labels & the Probe Speed Data layer now display over the Weather Radar layer)
- **More route shields** (added missing road shields to the new map)
- **Fixed road segment popups** on the Probe Speed Data map layer so they correctly display historical information when the HERE Probe Data sub-layer is enabled.

https://ritis.org/release_notes

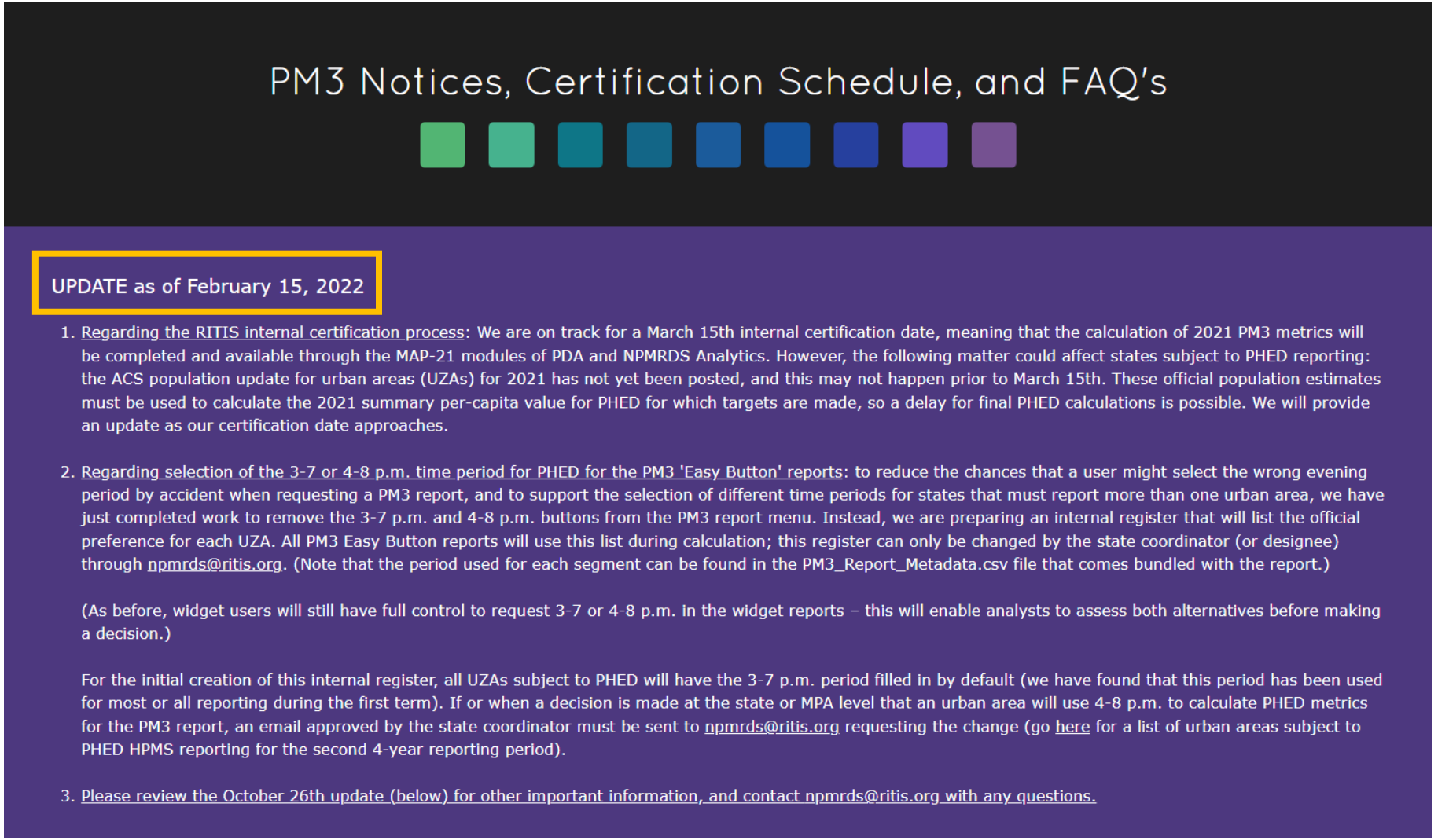
Probe Data Analytics Suite

PDA Suite latest updates

We've released an update to the PM3 Notices, Certification Schedule and FAQs

March 15th is the certification date for 2021; however…

Population data hasn't been released by the American Community Survey which effects PHED per capita in some of our widgets.



PM3 Notices, Certification Schedule, and FAQ's

UPDATE as of February 15, 2022

1. Regarding the RITIS internal certification process: We are on track for a March 15th internal certification date, meaning that the calculation of 2021 PM3 metrics will be completed and available through the MAP-21 modules of PDA and NPMRDS Analytics. However, the following matter could affect states subject to PHED reporting: the ACS population update for urban areas (UZAs) for 2021 has not yet been posted, and this may not happen prior to March 15th. These official population estimates must be used to calculate the 2021 summary per-capita value for PHED for which targets are made, so a delay for final PHED calculations is possible. We will provide an update as our certification date approaches.

2. Regarding selection of the 3-7 or 4-8 p.m. time period for PHED for the PM3 'Easy Button' reports: to reduce the chances that a user might select the wrong evening period by accident when requesting a PM3 report, and to support the selection of different time periods for states that must report more than one urban area, we have just completed work to remove the 3-7 p.m. and 4-8 p.m. buttons from the PM3 report menu. Instead, we are preparing an internal register that will list the official preference for each UZA. All PM3 Easy Button reports will use this list during calculation; this register can only be changed by the state coordinator (or designee) through npmrds@ritis.org. (Note that the period used for each segment can be found in the PM3_Report_Metadata.csv file that comes bundled with the report.)

   (As before, widget users will still have full control to request 3-7 or 4-8 p.m. in the widget reports – this will enable analysts to assess both alternatives before making a decision.)

   For the initial creation of this internal register, all UZAs subject to PHED will have the 3-7 p.m. period filled in by default (we have found that this period has been used for most or all reporting during the first term). If or when a decision is made at the state or MPA level that an urban area will use 4-8 p.m. to calculate PHED metrics for the PM3 report, an email approved by the state coordinator must be sent to npmrds@ritis.org requesting the change (go here for a list of urban areas subject to PHED HPMS reporting for the second 4-year reporting period).

3. Please review the October 26th update (below) for other important information, and contact npmrds@ritis.org with any questions.

PDA Suite latest updates

The **NPMRDS Q4 2021 Data Quality Report** has been added to the PDA Suite's "What's New" pages, and is available here:

https://pda.ritis.org/static/help/docs/NPMRDS_Data_Quality_Report_Q42021.pdf

Center for Advanced Transportation Technology Laboratory (CATT Lab)

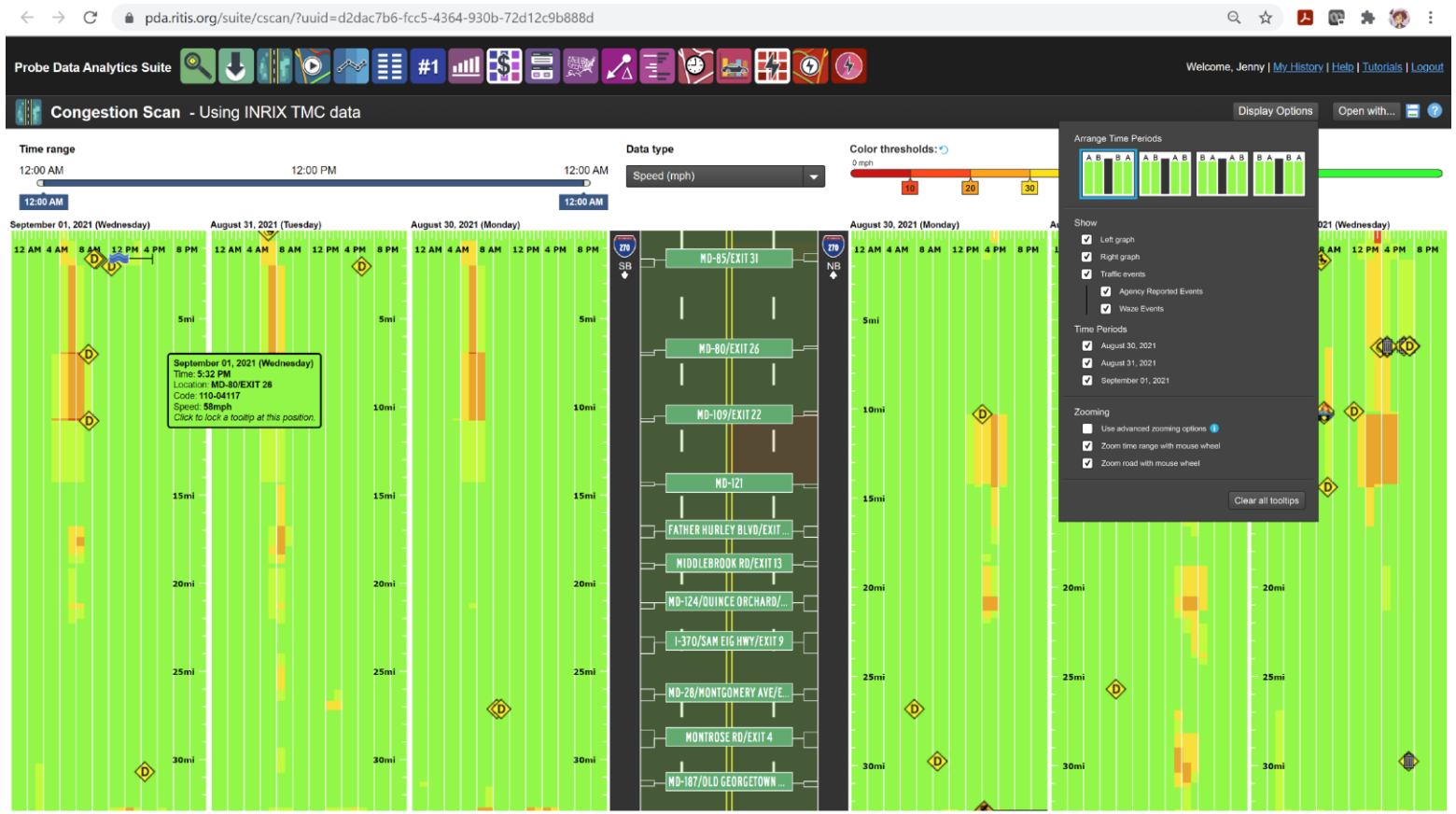
National Performance Management Research Data Set (NPMRDS)

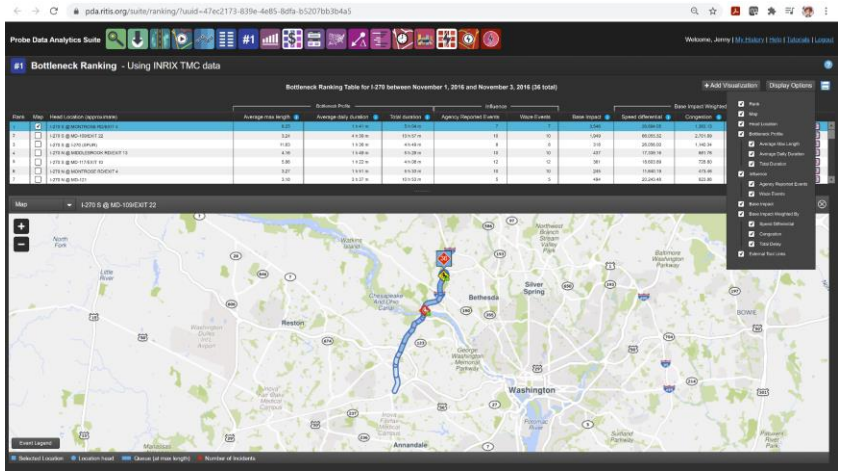
Data Quality Report

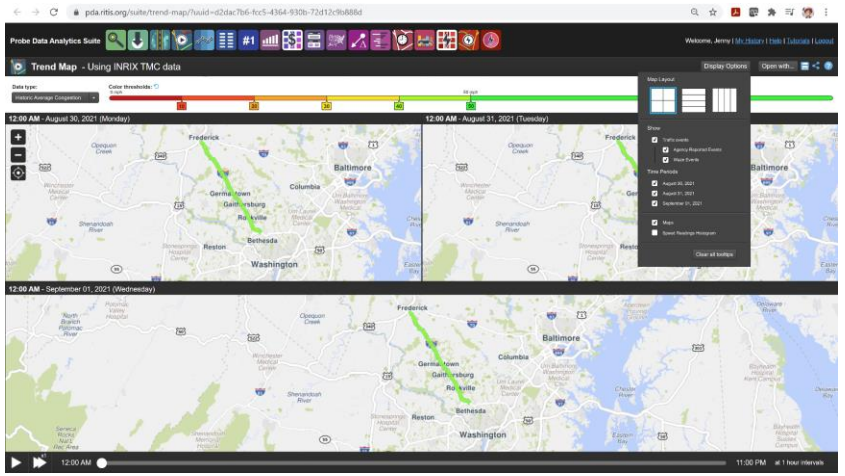
January 2022

Waze Events in PDA Suite

- Front-end complete. Waiting on backend optimization so the tools don’t appear to “slow down” while receiving event data.

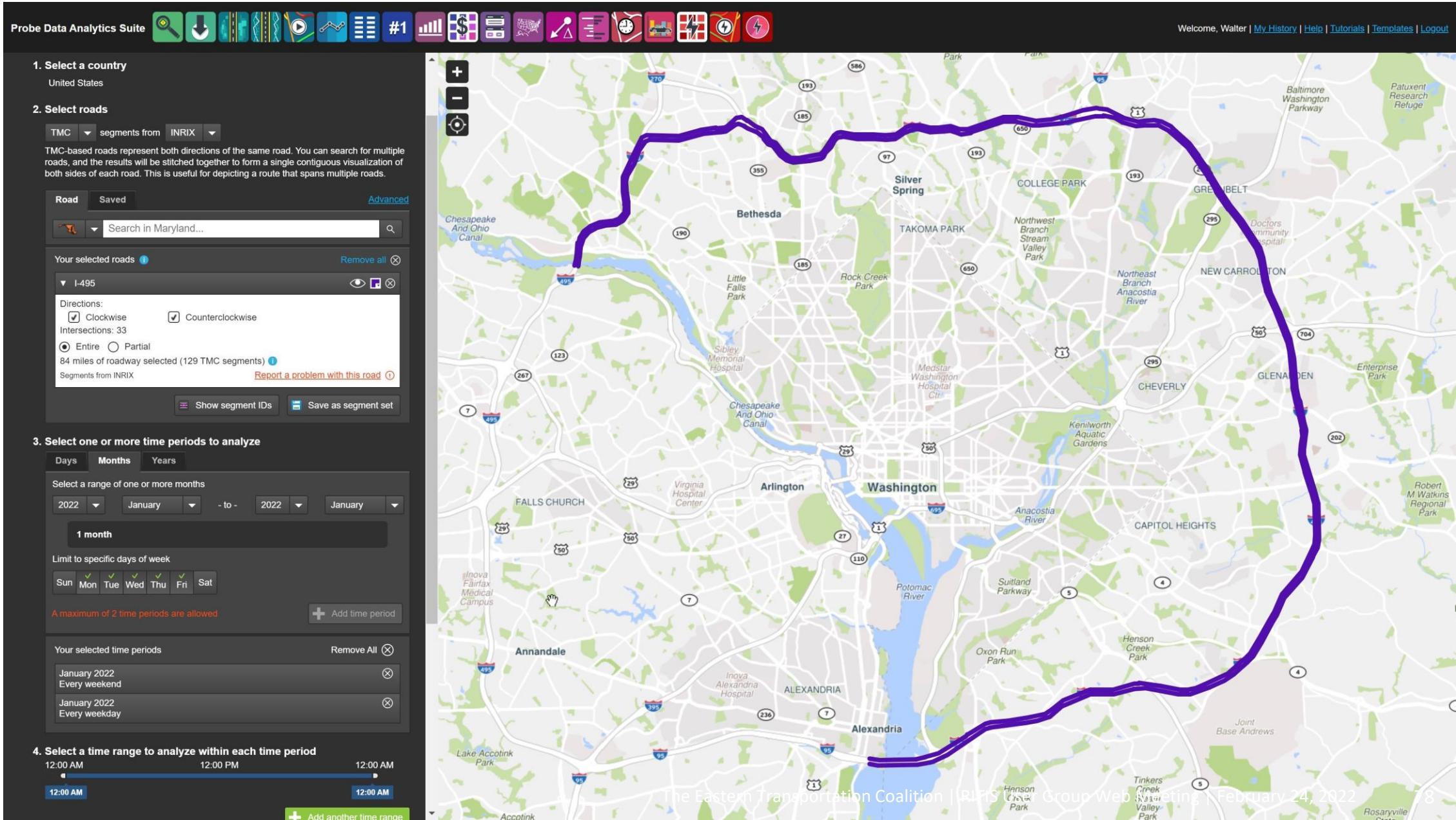






Also includes Region Explorer, Widgets, and more.

Corridor Speed Graphs



Corridor Time Comparison - Using INRIX TMC data

Display Options

Data type

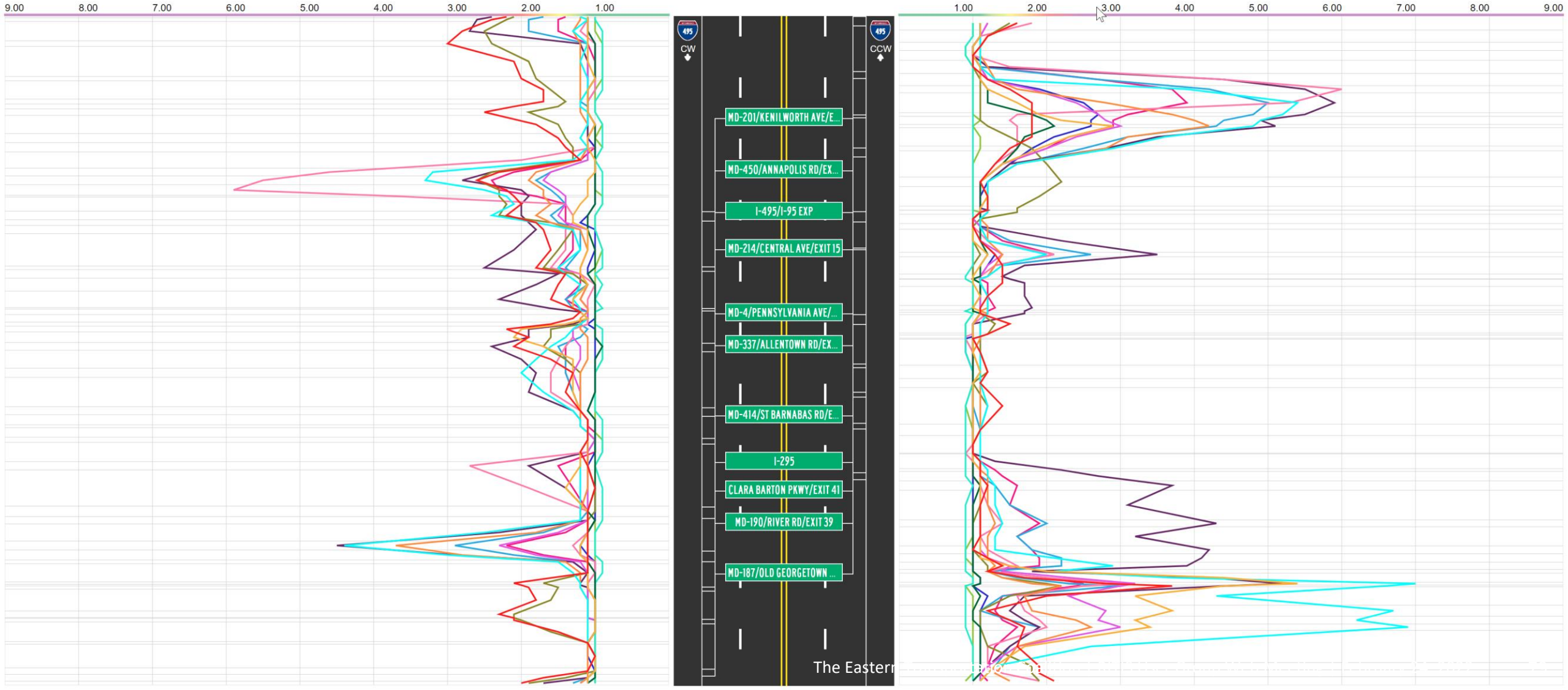
Travel time index

Time periods

All

Legend

- February 03, 2022 5:00 AM - 10:00 AM
- February 03, 2022 6:00 AM - 7:00 AM
- February 03, 2022 8:00 AM - 9:00 AM
- February 03, 2022 4:00 PM - 8:00 PM
- February 04, 2022 5:00 AM - 6:00 AM
- February 04, 2022 7:00 AM - 8:00 AM
- February 04, 2022 9:00 AM - 10:00 AM
- February 03, 2022 5:00 AM - 6:00 AM
- February 03, 2022 7:00 AM - 8:00 AM
- February 03, 2022 9:00 AM - 10:00 AM
- February 04, 2022 5:00 AM - 10:00 AM
- February 04, 2022 6:00 AM - 7:00 AM
- February 04, 2022 8:00 AM - 9:00 AM
- February 04, 2022 4:00 PM - 8:00 PM



Corridor Time Comparison - Using INRIX TMC data

Display Options

Data type

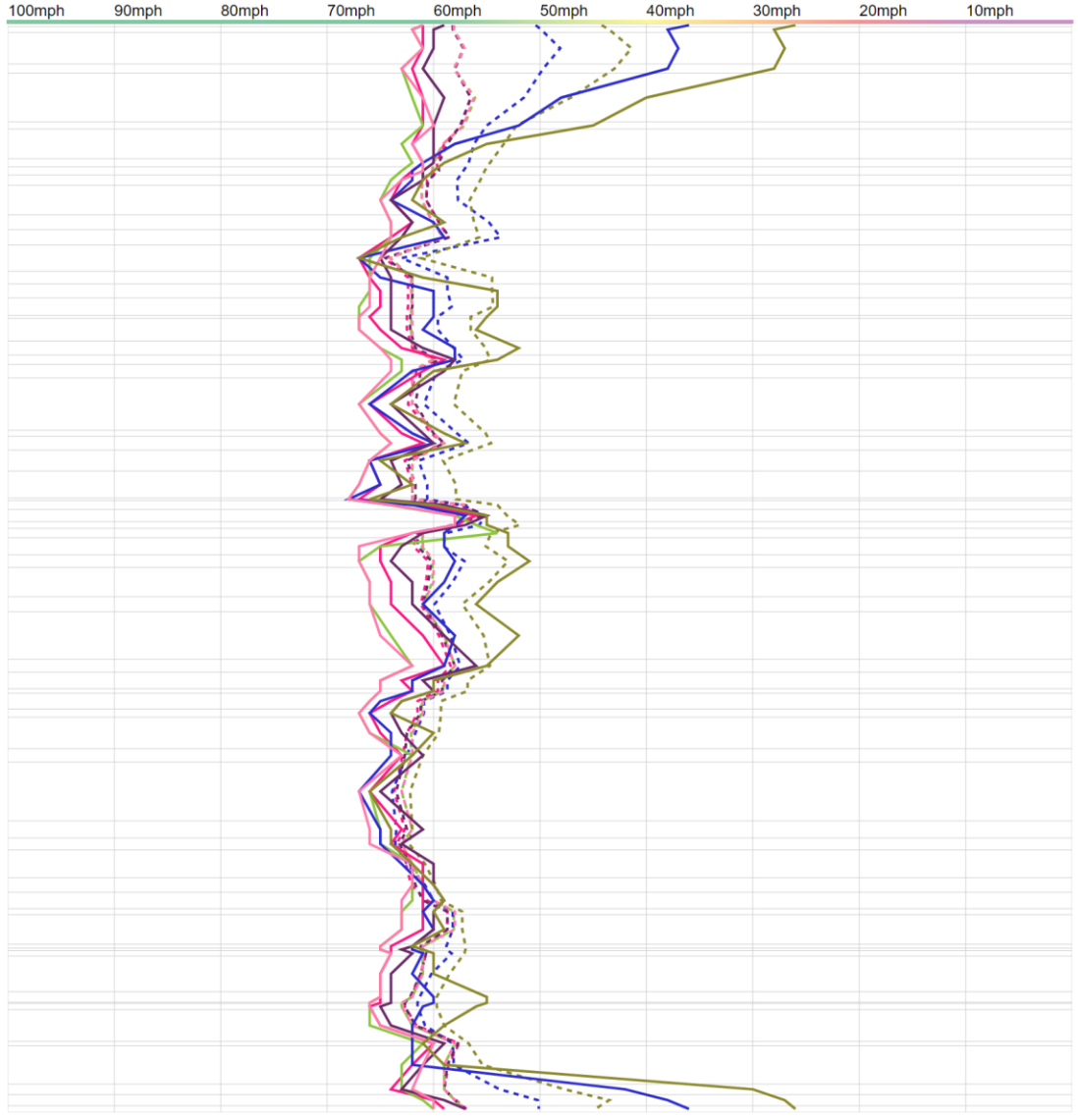
Speed (mph)

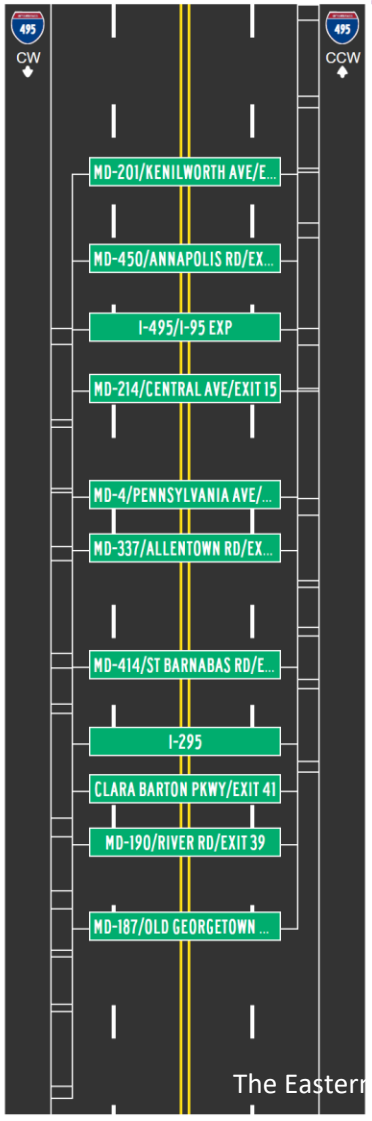
Time periods

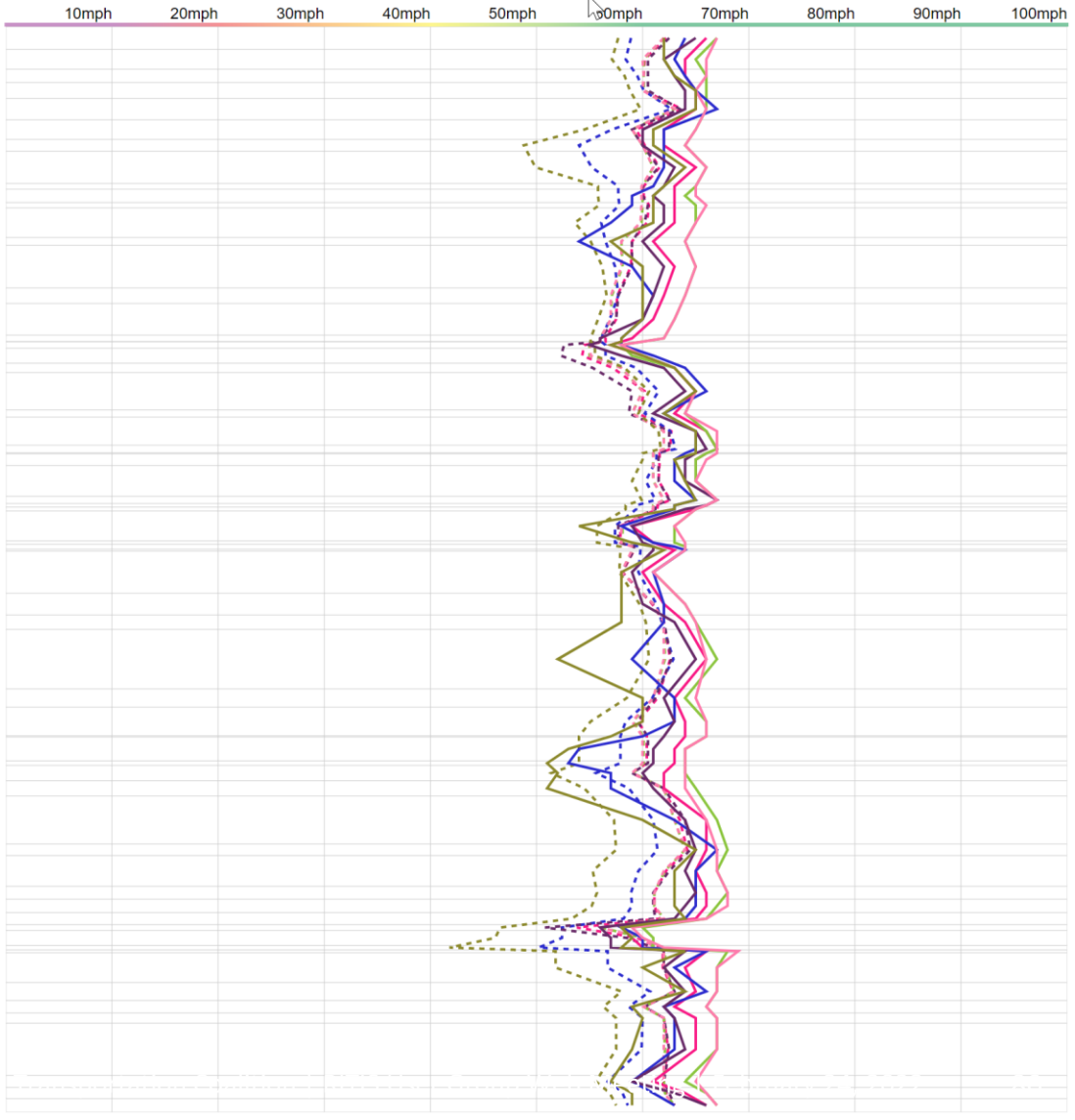
6 of 8

Legend

- February 06, 2022 through February 07, 2022 8:00 PM - 12:00 AM
- February 06, 2022 through February 07, 2022 12:00 AM - 5:15 AM
- February 06, 2022 through February 07, 2022 9:45 AM - 4:15 PM
- February 07, 2022 8:00 PM - 12:00 AM
- February 07, 2022 12:00 AM - 5:15 AM
- February 07, 2022 9:45 AM - 4:15 PM
- Historic Avg February 06, 2022 through February 07, 2022 8:00 PM - 12:00 AM
- Historic Avg February 06, 2022 through February 07, 2022 12:00 AM - 5:15 AM
- Historic Avg February 06, 2022 through February 07, 2022 9:45 AM - 4:15 PM
- Historic Avg February 07, 2022 8:00 PM - 12:00 AM
- Historic Avg February 07, 2022 12:00 AM - 5:15 AM
- Historic Avg February 07, 2022 9:45 AM - 4:15 PM







Corridor Time Comparison - Using INRIX TMC data

Display Options

Data type

Speed (mph)

Time periods

All

Legend

- January 2022 (Every weekend) 5:00 AM - 6:00 AM
- January 2022 (Every weekend) 6:00 AM - 8:00 AM
- January 2022 (Every weekend) 4:30 PM - 7:30 PM
- January 2022 (Every weekend) 12:00 AM - 12:00 AM
- January 2022 (Every weekday) 5:00 AM - 6:00 AM
- January 2022 (Every weekday) 6:00 AM - 8:00 AM
- January 2022 (Every weekday) 4:30 PM - 7:30 PM
- January 2022 (Every weekday) 12:00 AM - 12:00 AM
- Historic Avg January 2022 (Every weekend) 5:00 AM - 6:00 AM
- Historic Avg January 2022 (Every weekend) 6:00 AM - 8:00 AM
- Historic Avg January 2022 (Every weekend) 4:30 PM - 7:30 PM
- Historic Avg January 2022 (Every weekend) 12:00 AM - 12:00 AM
- Historic Avg January 2022 (Every weekday) 5:00 AM - 6:00 AM
- Historic Avg January 2022 (Every weekday) 6:00 AM - 8:00 AM
- Historic Avg January 2022 (Every weekday) 4:30 PM - 7:30 PM
- Historic Avg January 2022 (Every weekday) 12:00 AM - 12:00 AM

Graph display mode

Mirrored axis | Congruent axis

Show

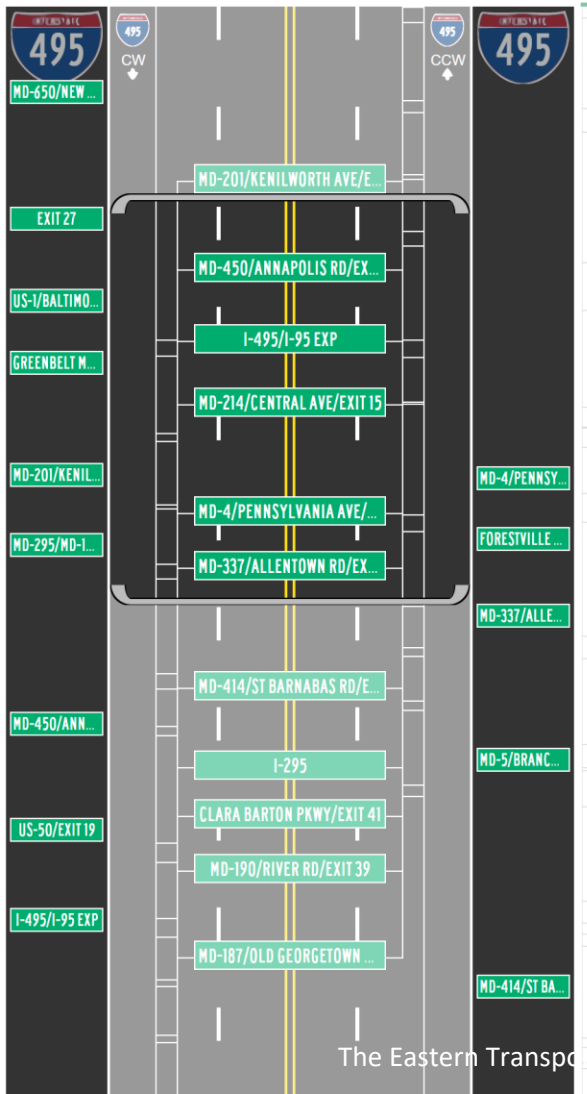
- [x] Left graph
- [x] Right graph
- [x] Historic average speed
- [x] Graph grid

Zooming

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

Clear all tooltips

100mph 90mph 80mph 70mph 60mph 50mph 40mph 30mph 20mph 10mph



100mph 90mph 80mph 70mph 60mph 50mph

The Eastern Transpo

Corridor Time Comparison - Using INRIX TMC data

Display Options

Data type

Speed (mph)

Time periods

All

Legend

- January 2022 (Every weekend) 5:00 AM - 6:00 AM
- January 2022 (Every weekend) 4:30 PM - 7:30 PM
- January 2022 (Every weekday) 5:00 AM - 6:00 AM
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- January 2022 (Every weekend) 6:00 AM - 8:00 AM
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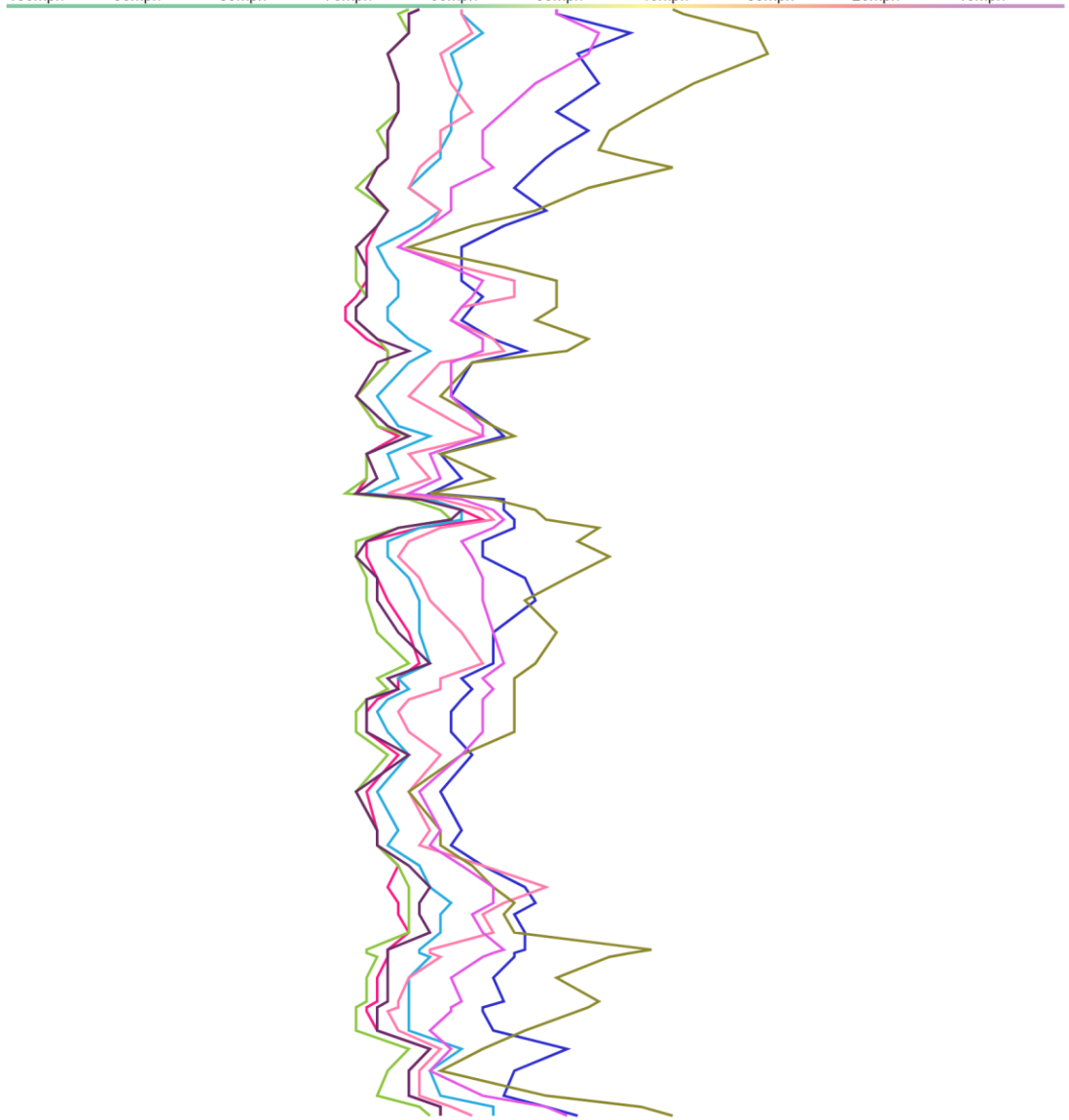
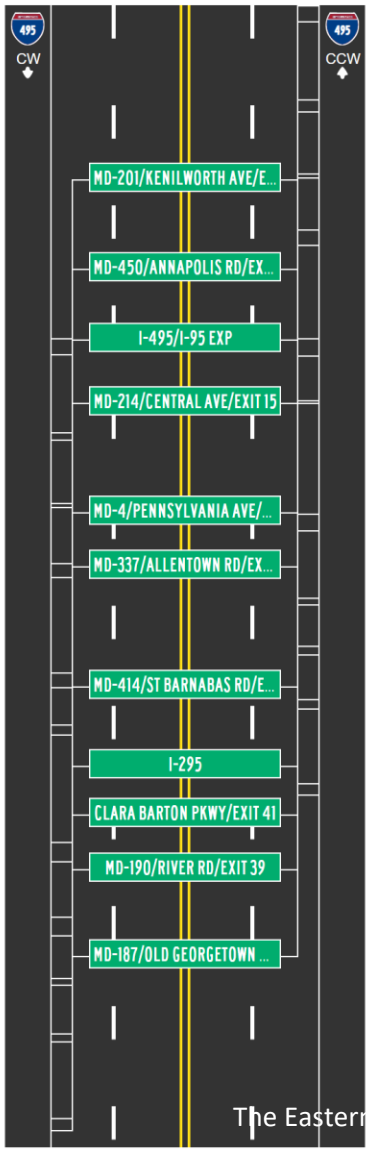
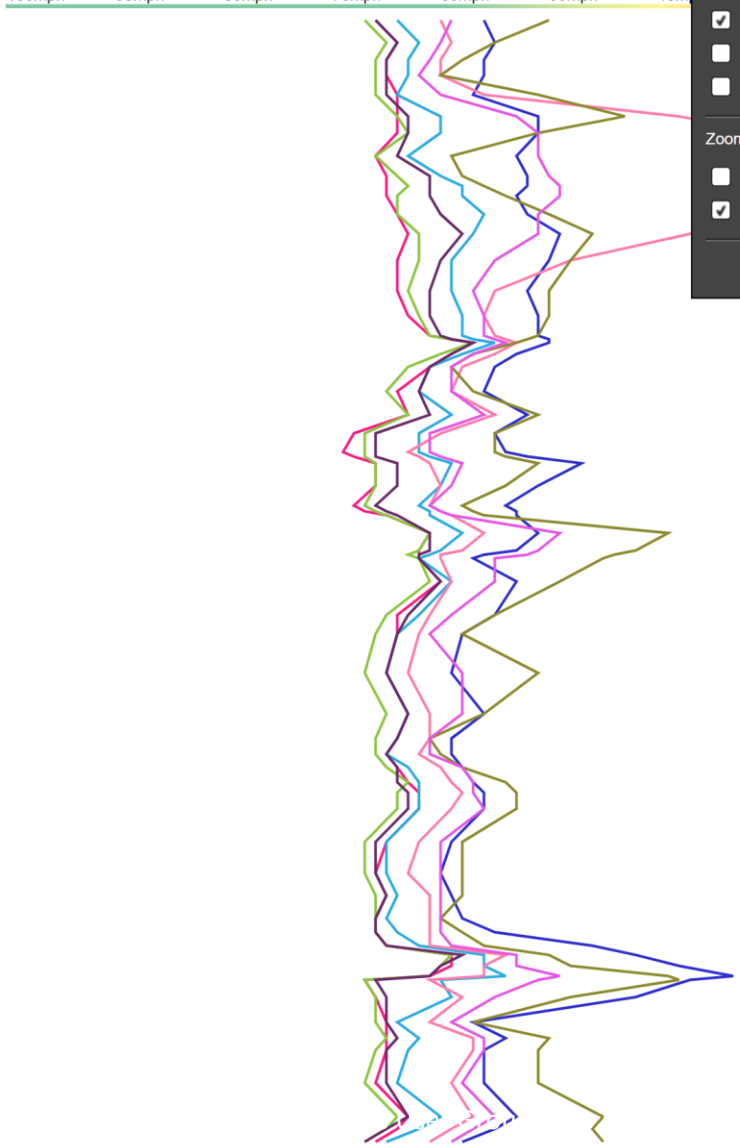
100mph 90mph 80mph 70mph 60mph 50mph 40mph 30mph 20mph 10mph





100mph 90mph 80mph 70mph 60mph 50mph 40m



The Easter

Graph display mode

- Mirrored axis
- Congruent axis

Show

- [x] Left graph
- [x] Right graph
- [ ] Historic average speed
- [ ] Graph grid

Zooming

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

Clear all tooltips

Corridor Time Comparison - Using INRIX TMC data

Display Options

Data type

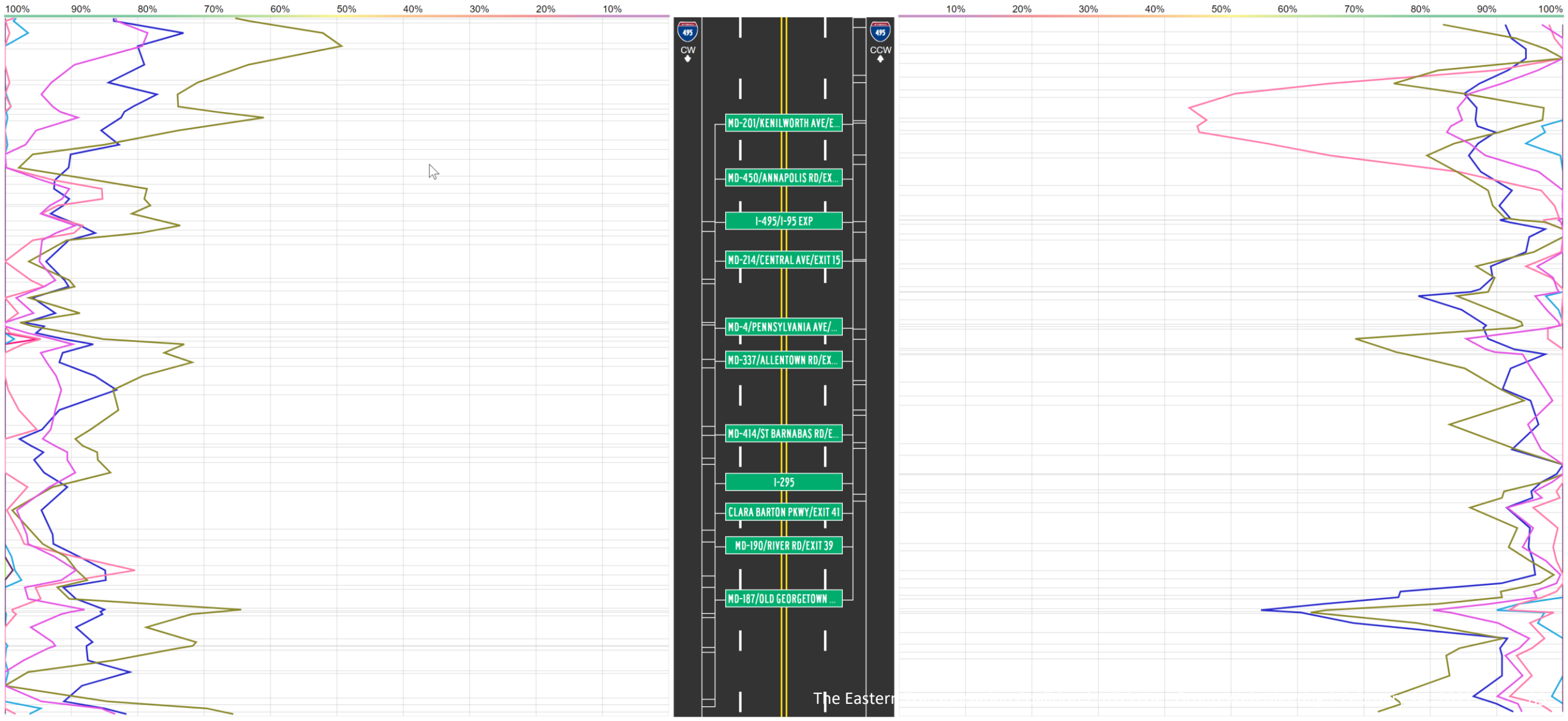
Congestion (%)

Time periods

All

Legend

- January 2022 (Every weekend) 5:00 AM - 6:00 AM
- January 2022 (Every weekend) 4:30 PM - 7:30 PM
- January 2022 (Every weekday) 5:00 AM - 6:00 AM
- January 2022 (Every weekday) 4:30 PM - 7:30 PM
- January 2022 (Every weekend) 6:00 AM - 8:00 AM
- January 2022 (Every weekend) 12:00 AM - 12:00 AM
- January 2022 (Every weekday) 6:00 AM - 8:00 AM
- January 2022 (Every weekday) 12:00 AM - 12:00 AM



Corridor Time Comparison - Using INRIX TMC data

Display Options

Data type

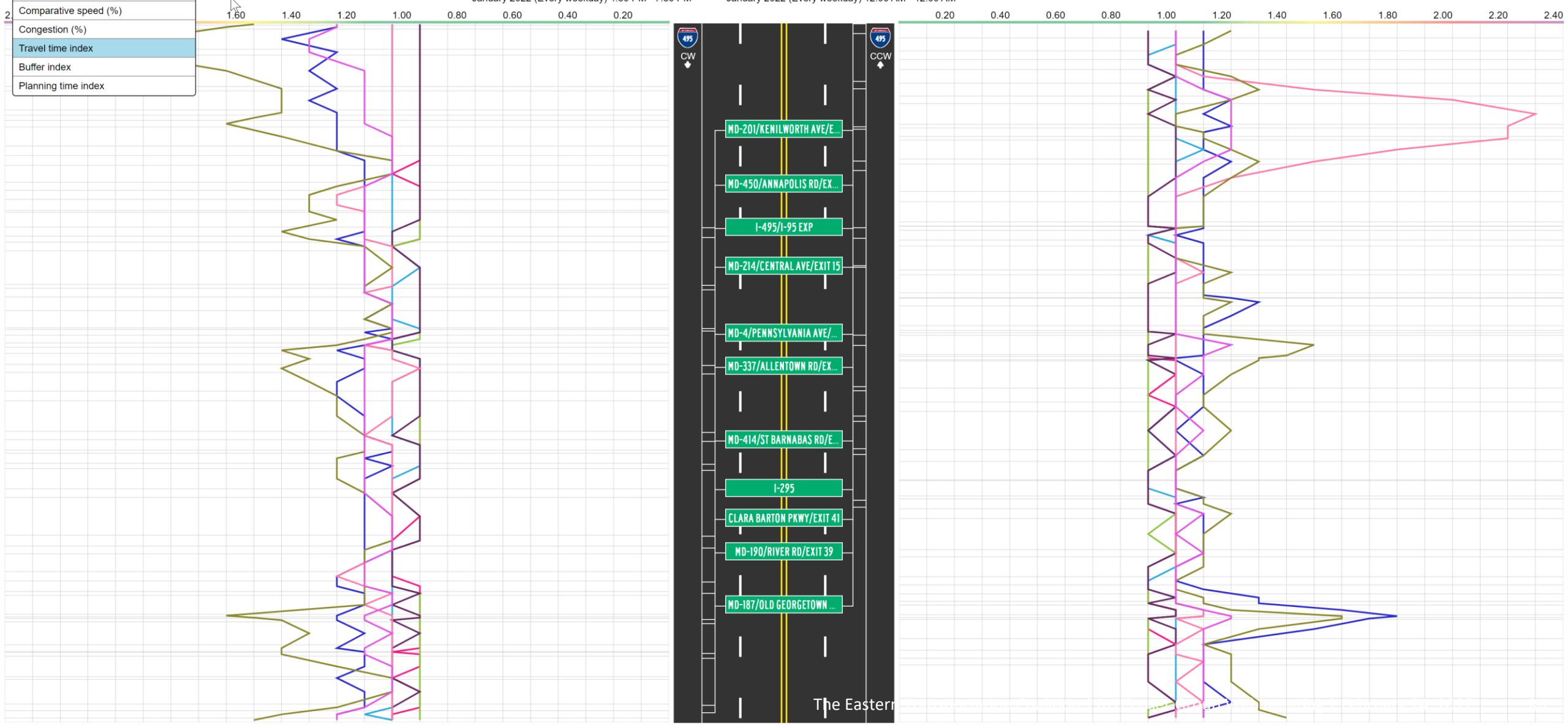
Travel time index
- Speed (mph)
- Comparative speed (%)
- Congestion (%)
- Travel time index
- Buffer index
- Planning time index

Time periods

All

Legend

- January 2022 (Every weekend) 5:00 AM - 6:00 AM
- January 2022 (Every weekend) 4:30 PM - 7:30 PM
- January 2022 (Every weekday) 5:00 AM - 6:00 AM
- January 2022 (Every weekday) 4:30 PM - 7:30 PM
- January 2022 (Every weekend) 6:00 AM - 8:00 AM
- January 2022 (Every weekend) 12:00 AM - 12:00 AM
- January 2022 (Every weekday) 6:00 AM - 8:00 AM
- January 2022 (Every weekday) 12:00 AM - 12:00 AM



Corridor Time Comparison - Using INRIX TMC data

Display Options

Data type

Speed (mph)

Time periods

January 2022 (Every weekend) 5:00 AM - 6:00 Al

- Select All
- [x] January 2022 (Every weekend) 5:00 AM - 6:00 AM
- [ ] January 2022 (Every weekend) 6:00 AM - 8:00 AM
- [x] January 2022 (Every weekend) 4:30 PM - 7:30 PM
- [ ] January 2022 (Every weekend) 12:00 AM - 12:00 A
- [x] January 2022 (Every weekday) 5:00 AM - 6:00 AM
- [ ] January 2022 (Every weekday) 6:00 AM - 8:00 AM
- [x] January 2022 (Every weekday) 4:30 PM - 7:30 PM
- [x] January 2022 (Every weekday) 12:00 AM - 12:00 A

Legend

- January 2022 (Every weekend) 5:00 AM - 6:00 AM
- January 2022 (Every weekend) 4:30 PM - 7:30 PM
- January 2022 (Every weekday) 5:00 AM - 6:00 AM
- January 2022 (Every weekday) 4:30 PM - 7:30 PM
- January 2022 (Every weekday) 12:00 AM - 12:00 AM
- Historic Avg January 2022 (Every weekend) 5:00 AM - 6:00 AM
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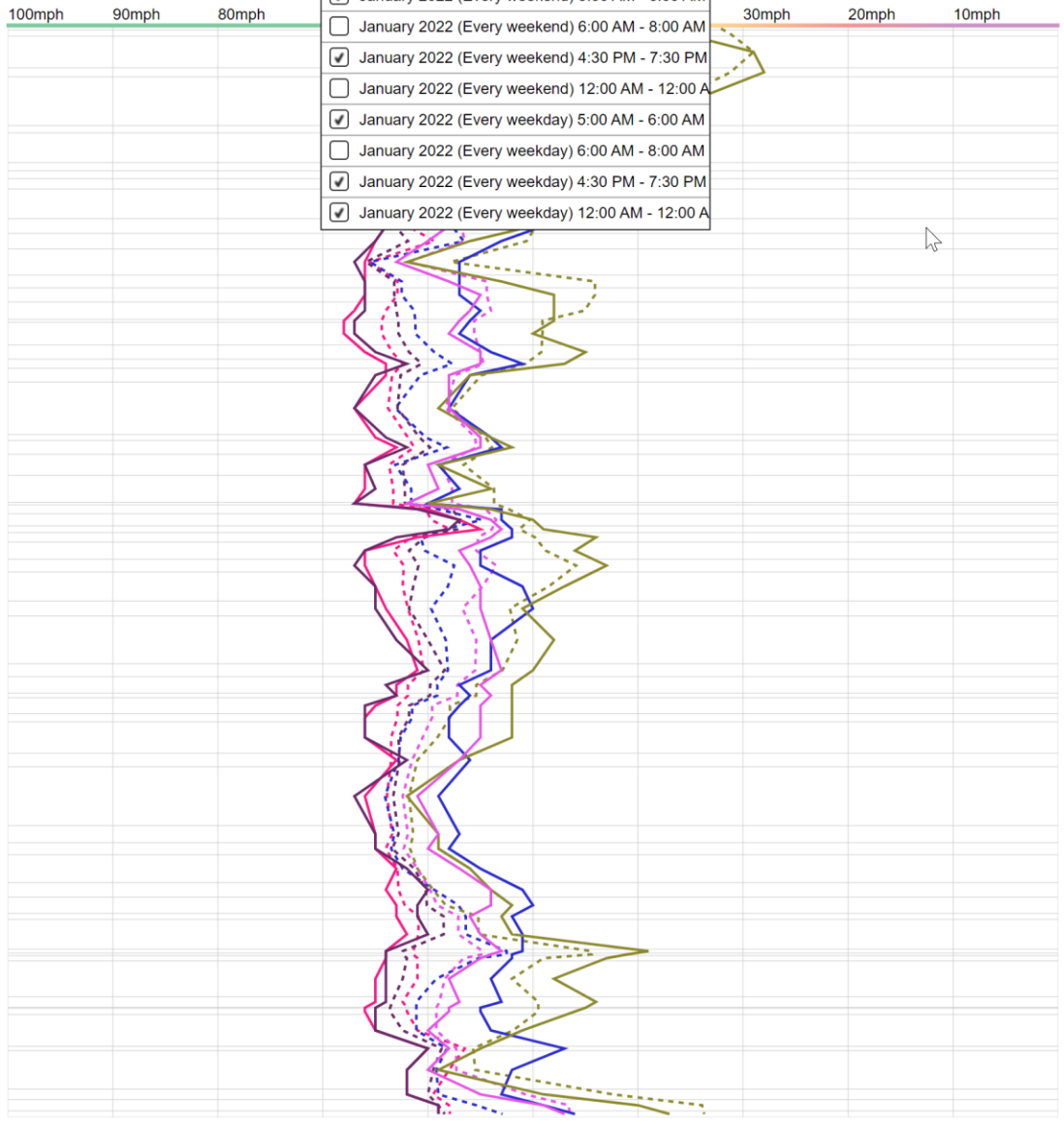
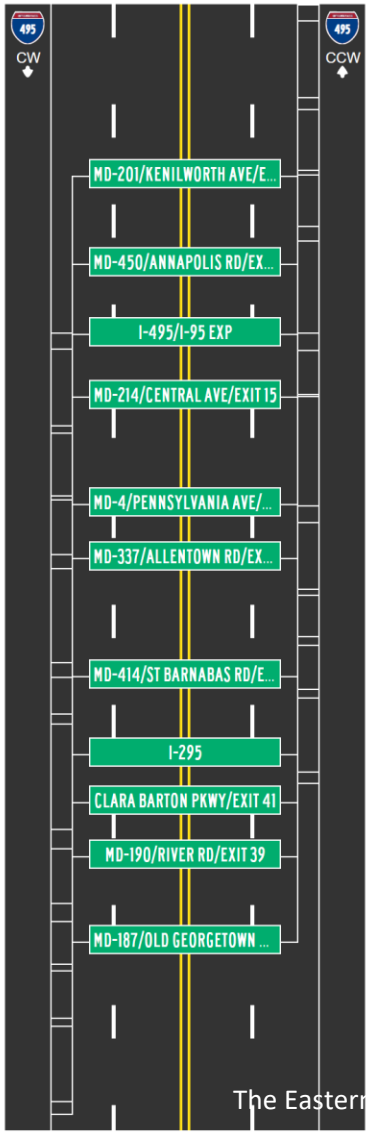
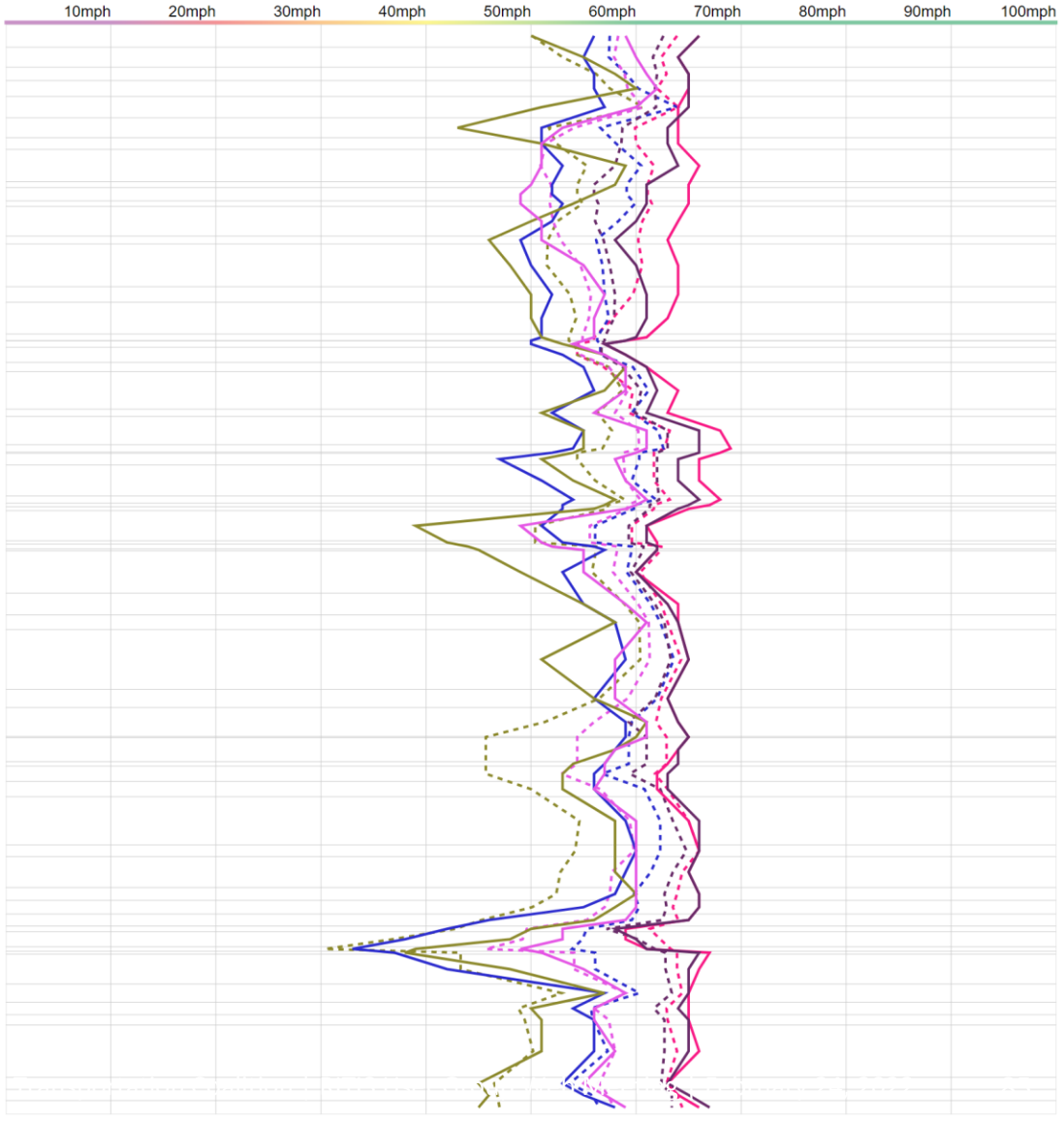
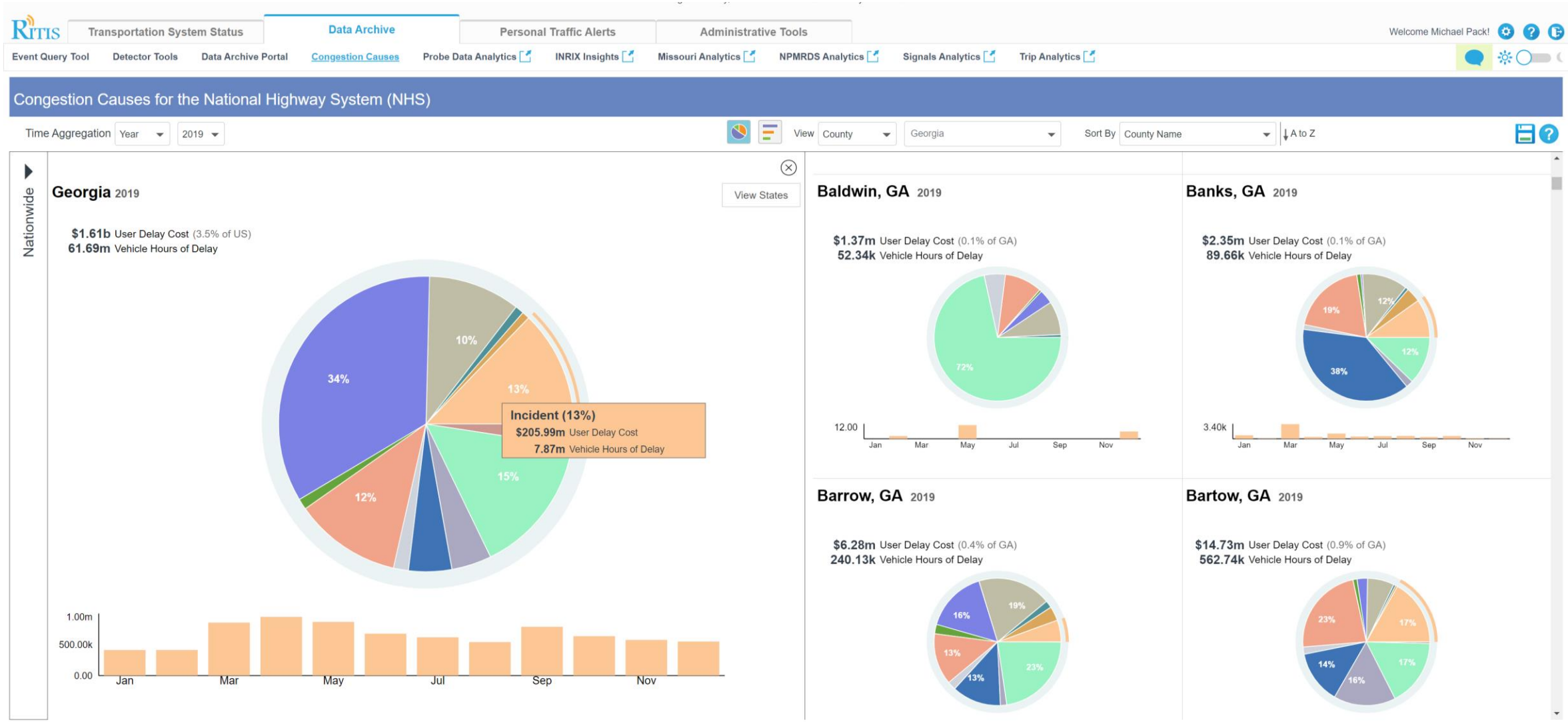
- Historic Avg January 2022 (Every weekday) 12:00 AM - 12:00 AM





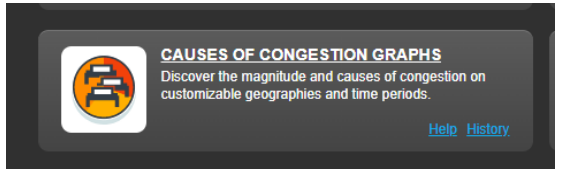


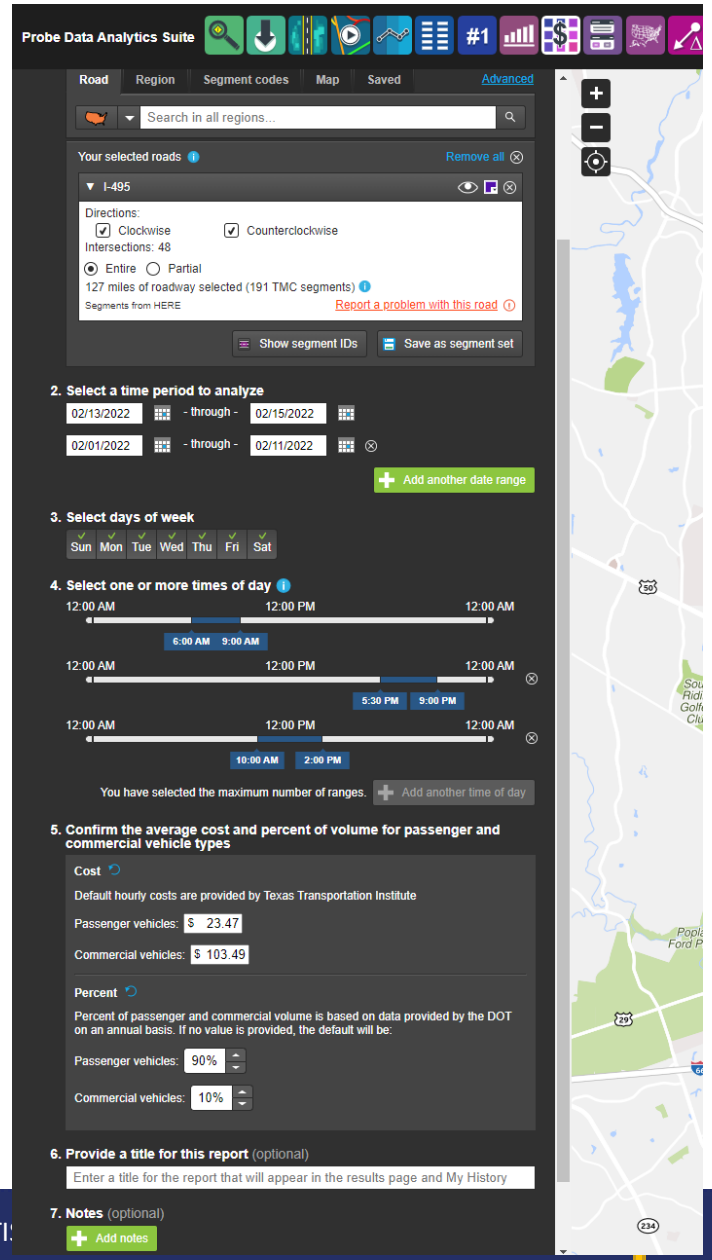
Causes of Congestion Pie Charts: Enhancements



Causes of Congestion Pie Charts: Deep-Dive Progress

- Work-in-Progress: Deploy expected summer 2022
- UI Design Complete
- Most front-end work is nearly complete
- Working on agency data integration (moving beyond Waze data)
- Significant backend work and optimization still to do.
- There are questions related to how to handle volumes and missing volumes





Volume Data is Needed!!!

Uses of Volume Data Include:

- MAP-21 reports (NHS only)
- User Delay Cost Metrics
- Causes of Congestion
- Etc.

Sources of Volume:

- NPMRDS annual conflation (NHS only, delayed a bit)
- YOU / Your Agency
- Your probe data vendor
- A different 3rd party vendor through the Coalition's Traffic Data Marketplace:
  - Future Mobility Labs
  - HERE
  - INRIX
  - Iteris
  - iTrafiQ
  - StreetLight

Status of Volumes

- Needed by April 1 to meet the Causes of Congestion deployment deadlines
- Volumes needed per each TMC segment as defined here:

State	Volume Data Source	TMC Volume Coverage	TMC Volume Mileage Coverage
	Age of Data	Combined Coverage from all providers	
DC	1. INRIX 2019	95.87%	96.99%
Florida	1. NPMRDS 2021	26.65%	36.29%
Georgia	1. GDOT 2018	75.64%	82.59%
Illinois	1. INRIX 2019	97.72%	99.28%
Louisiana	1. INRIX 2019	97.55%	97.21%
Maryland	1. MDOT 2018 2. INRIX 2019	98.02%	99.44%
Massachusetts	1. INRIX 2019	98.10%	99.65%
Michigan	1. MIDOT 2017 2. INRIX 2019	98.42%	99.00%
New Jersey	1. INRIX 2019	98.02%	98.47%
North Carolina	1. NCDOT 2016	73.29%	79.68%
Oregon	1. ODOT 2019 2. INRIX 2019	70.33%	84.34%
Pennsylvania	1. PennDOT 2019 2. INRIX 2019	90.32%	94.37%
Rhode Island	1. INRIX 2019	98.69%	99.38%
Tennessee	1. INRIX 2019	97.93%	98.21%
Virginia	1. VDOT 2018 2. INRIX 2019	93.33%	94.02%

PDA Suite latest updates

Some important bug fixes/updates

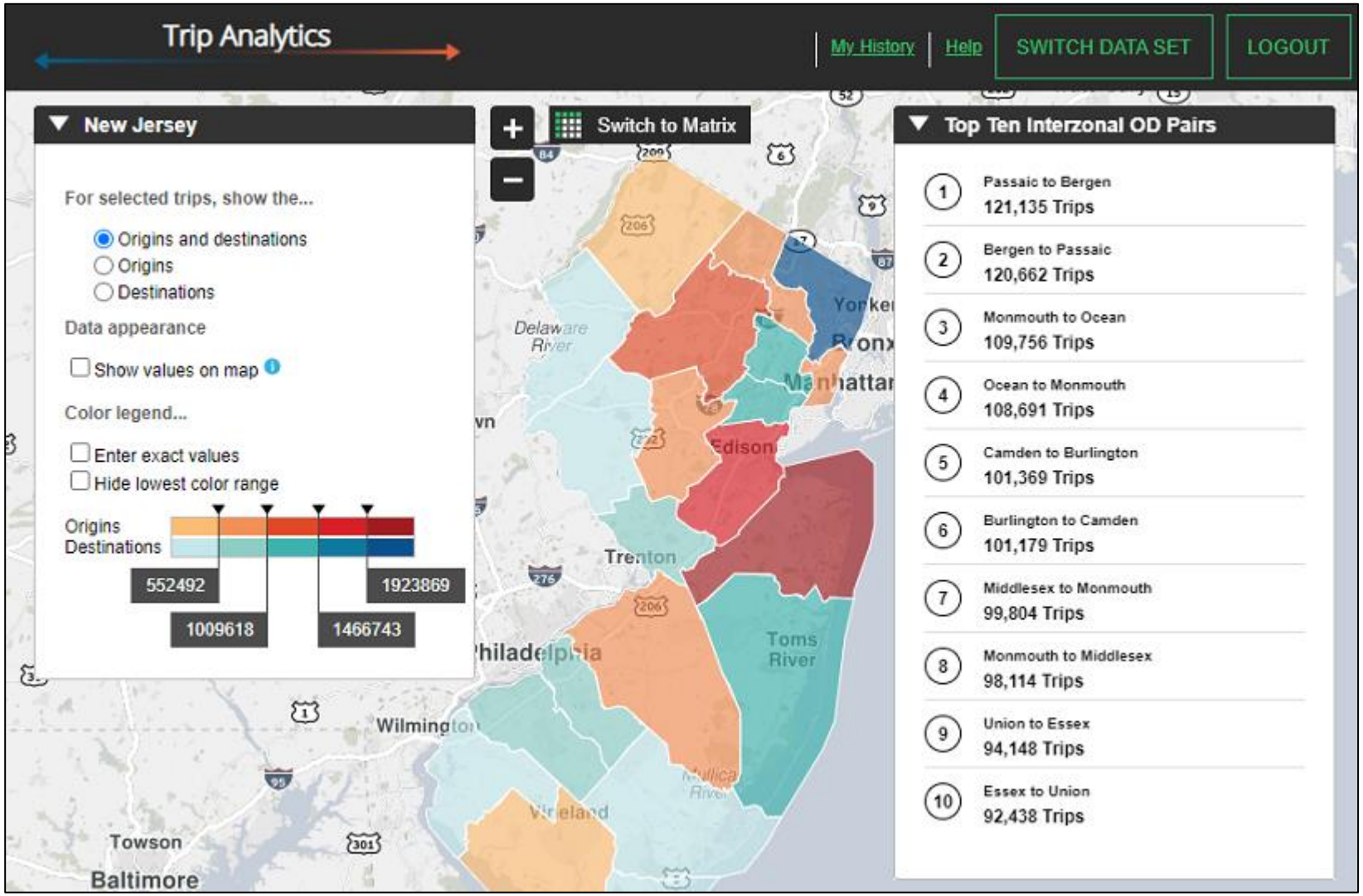
- **My History** (vast performance improvement for large histories)
- **Saved Segment Sets** (increased stability with loading large region-based saved sets), **and** resolved the cases in which the TMC count had been displayed multiple times for a saved segment set for the Reliability Table widget

https://pda.ritis.org/suite/updates/

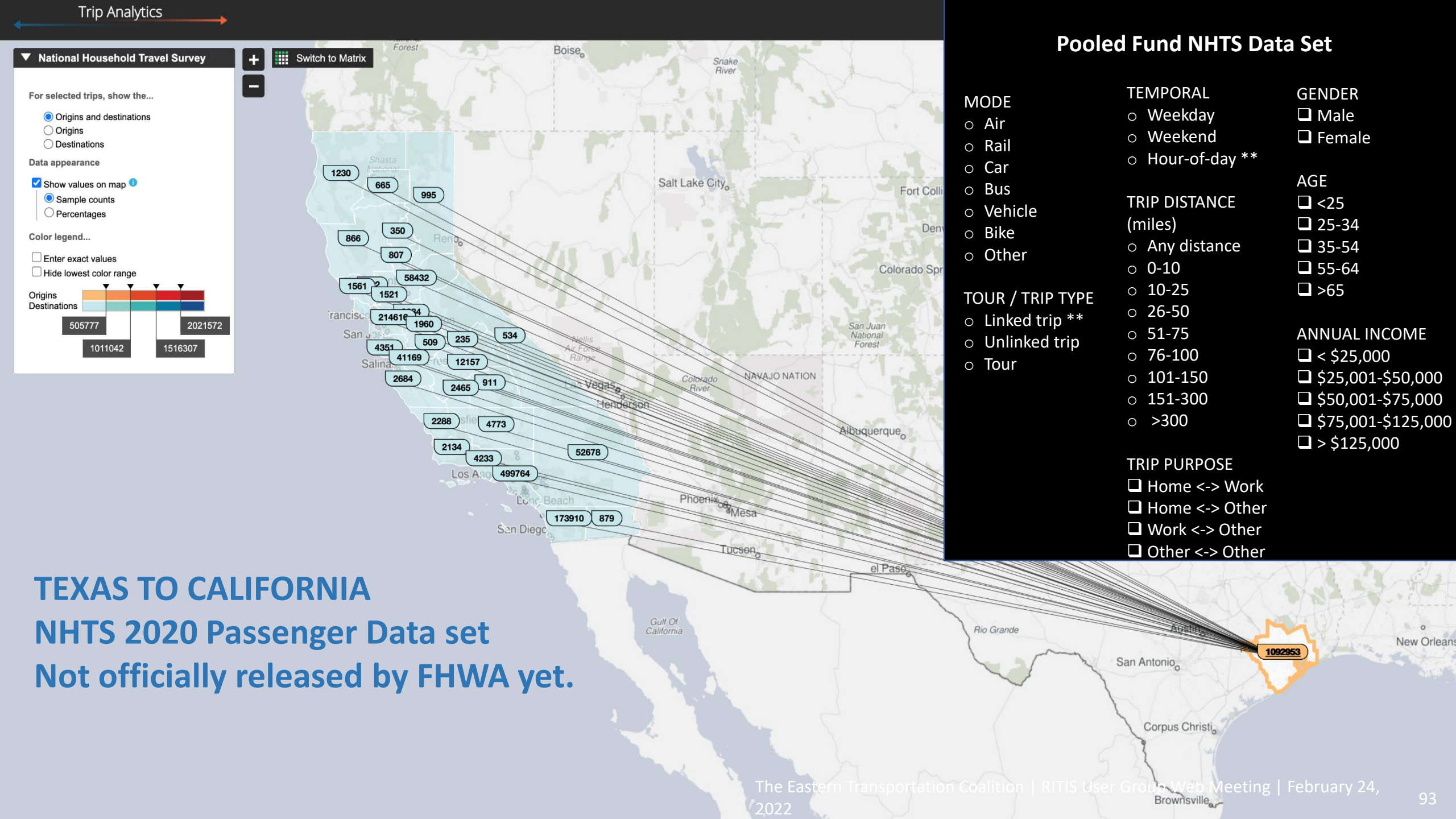
Trip Analytics

Trip Analytics latest updates

When a user hovers the cursor over a zone on the map, the origin-destination pair(s) associated with the zone that made the top ten will be highlighted on the list.



https://trips.ritis.org/new



Pooled Fund NHTS Data Set

MODE
- Air
- Rail
- Car
- Bus
- Vehicle
- Bike
- Other

TOUR / TRIP TYPE
- Linked trip **
- Unlinked trip
- Tour

TEMPORAL
- Weekday
- Weekend
- Hour-of-day **

TRIP DISTANCE (miles)
- Any distance
- 0-10
- 10-25
- 26-50
- 51-75
- 76-100
- 101-150
- 151-300
- >300

TRIP PURPOSE
- ❑ Home <-> Work
- ❑ Home <-> Other
- ❑ Work <-> Other
- ❑ Other <-> Other

GENDER
- ❑ Male
- ❑ Female

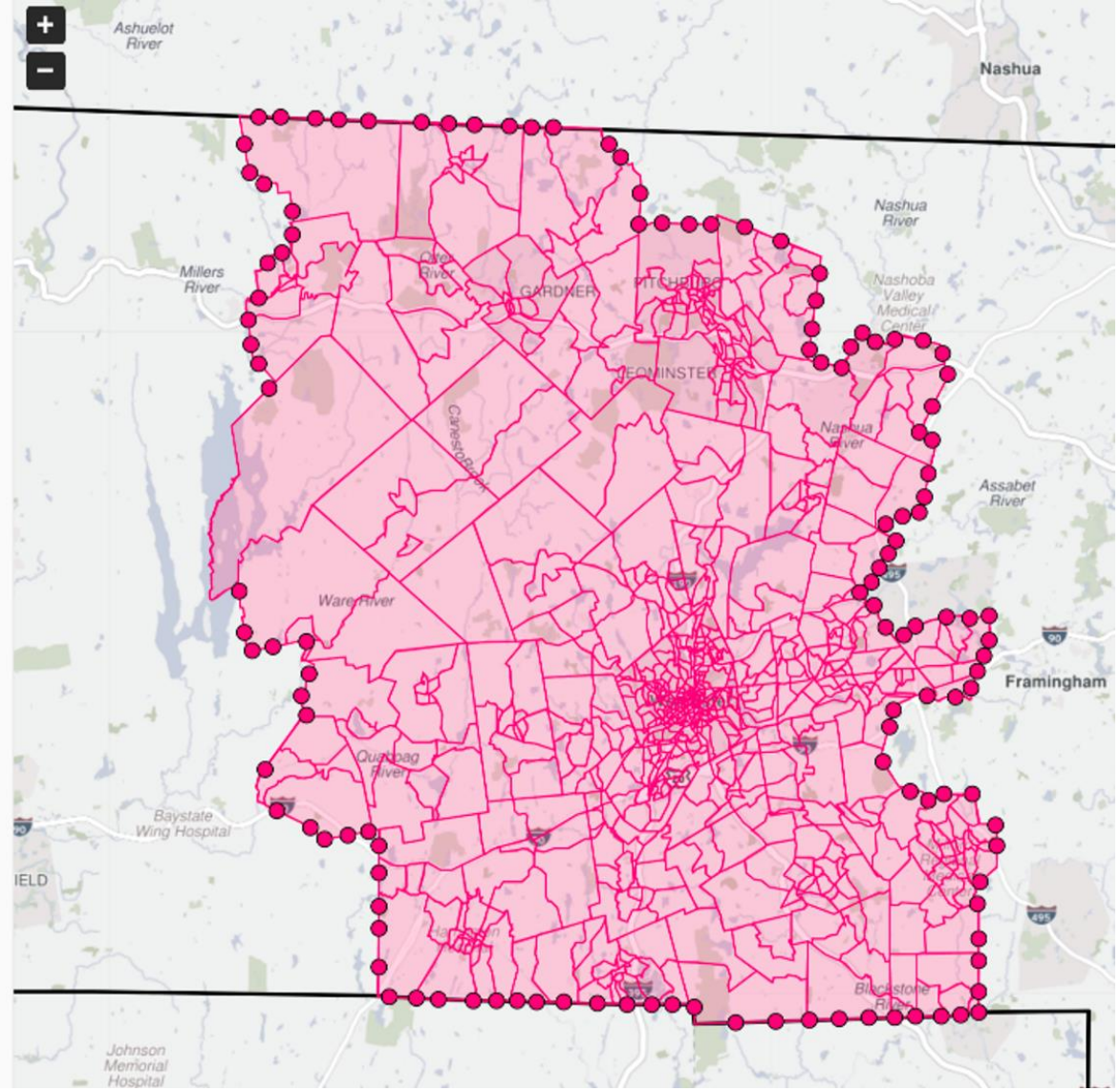
AGE
- ❑ <25
- ❑ 25-34
- ❑ 35-54
- ❑ 55-64
- ❑ >65

ANNUAL INCOME
- ❑ < $25,000
- ❑ $25,001-$50,000
- ❑ $50,001-$75,000
- ❑ $75,001-$125,000
- ❑ > $125,000

TEXAS TO CALIFORNIA
NHTS 2020 Passenger Data set
Not officially released by FHWA yet.

Coming in March

- **Study areas can be bounded, with external O's and D's reported where pathways crossed the boundary**
- **Looking for Beta Testers. Please contact Greg Jordan @ gjordan1@umd.edu if interested.**



From

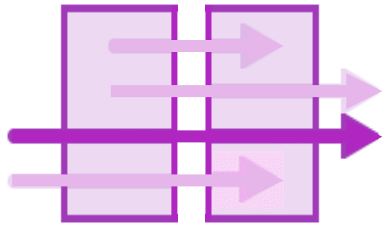
To

☐ Started Inside

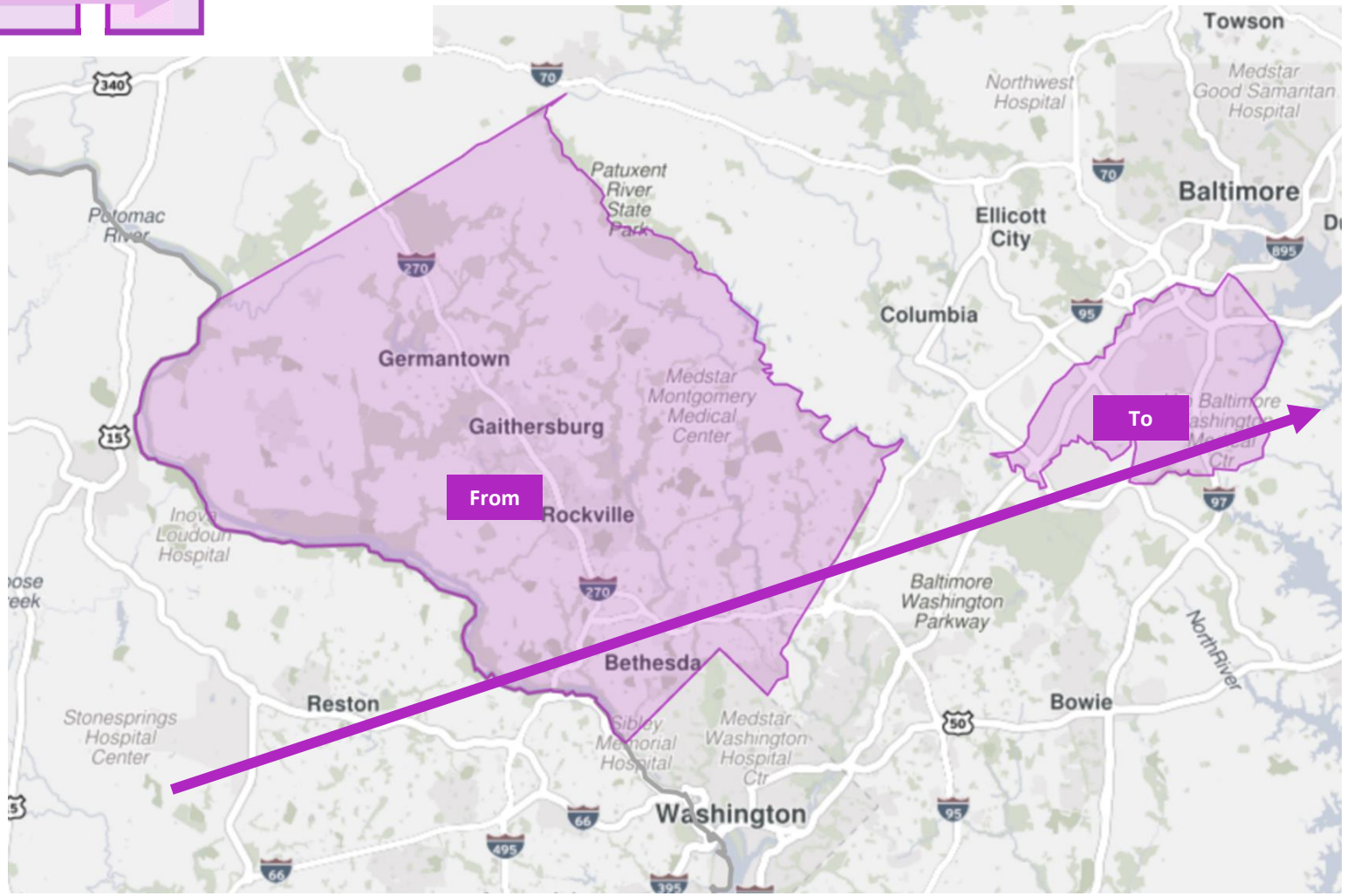
☐ Ended Inside

☑ Started Outside

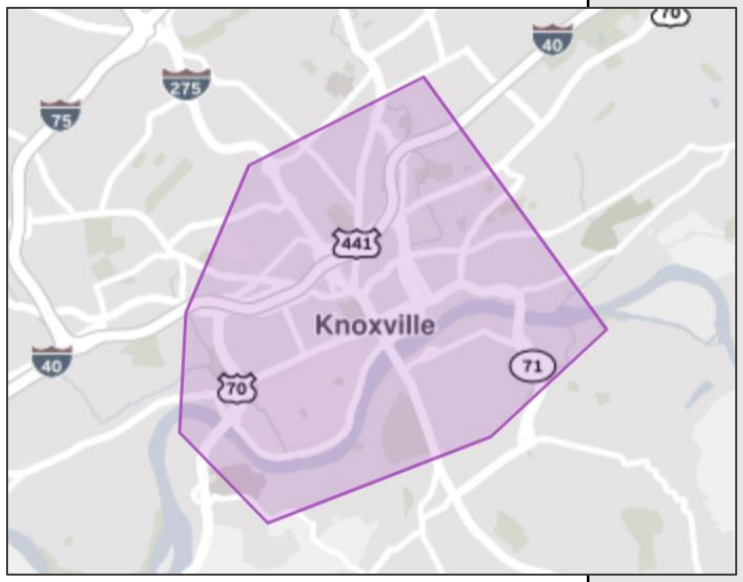
☑ Ended Outside



Advanced pass-through controls provide for easier and more powerful spatial filtering



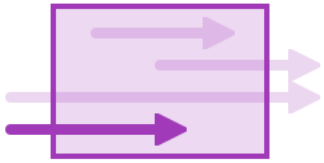
For example: for the Knoxville CBD, the analyst wants to isolate...



...commuter arrivals, 7-9 a.m.

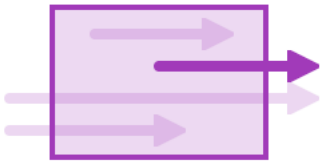
Select pass-through settings for this filter:

- [ ] Started Inside
- [x] Ended Inside
- [x] Started Outside
- [ ] Ended Outside



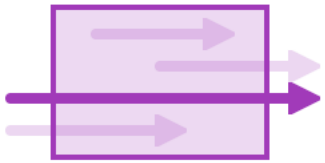
...commuter departures, 4-6 p.m.

- [x] Started Inside
- [ ] Ended Inside
- [ ] Started Outside
- [x] Ended Outside



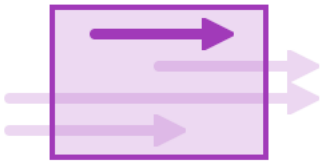
...cut-through traffic

- [ ] Started Inside
- [ ] Ended Inside
- [x] Started Outside
- [x] Ended Outside



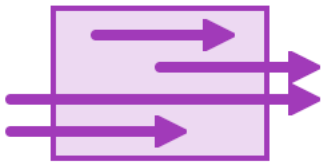
...local-only traffic

- [x] Started Inside
- [x] Ended Inside
- [ ] Started Outside
- [ ] Ended Outside



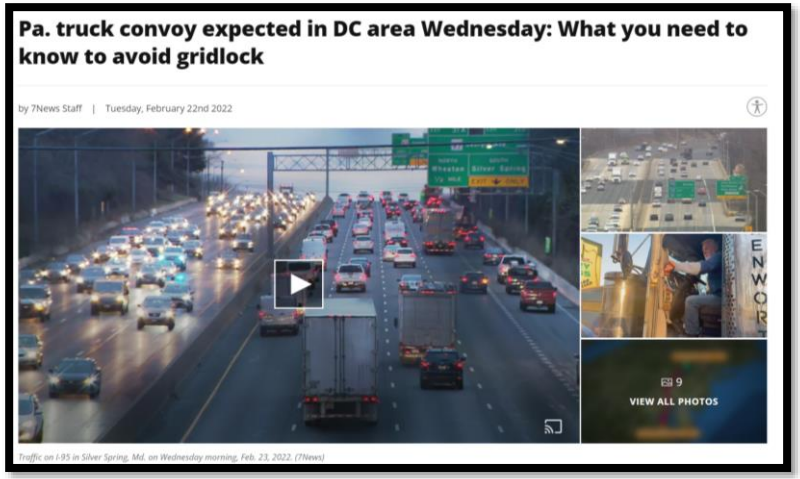
User wants all samples analyzed

- [x] Started Inside
- [x] Ended Inside
- [x] Started Outside
- [x] Ended Outside



Will that new toll road be effective? Is it covering where people really want to go?

From where are protestors arriving, and how is it impacting local traffic?



What's the impact of High Occupancy Tolling in VA on local roads??

What detours are people taking during a closure? Is it what we want them to do? Should we change our FITM plans?

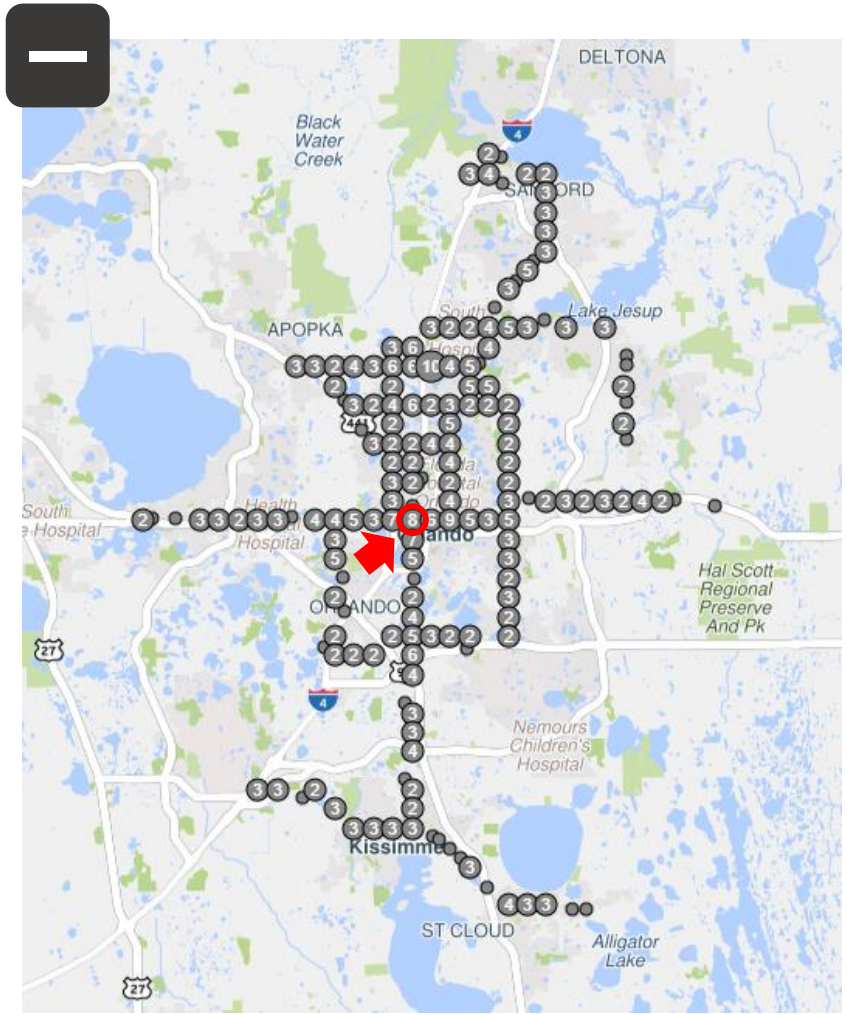
Is the WIM program impacting freight movement in MD? Are routes changing because of them?

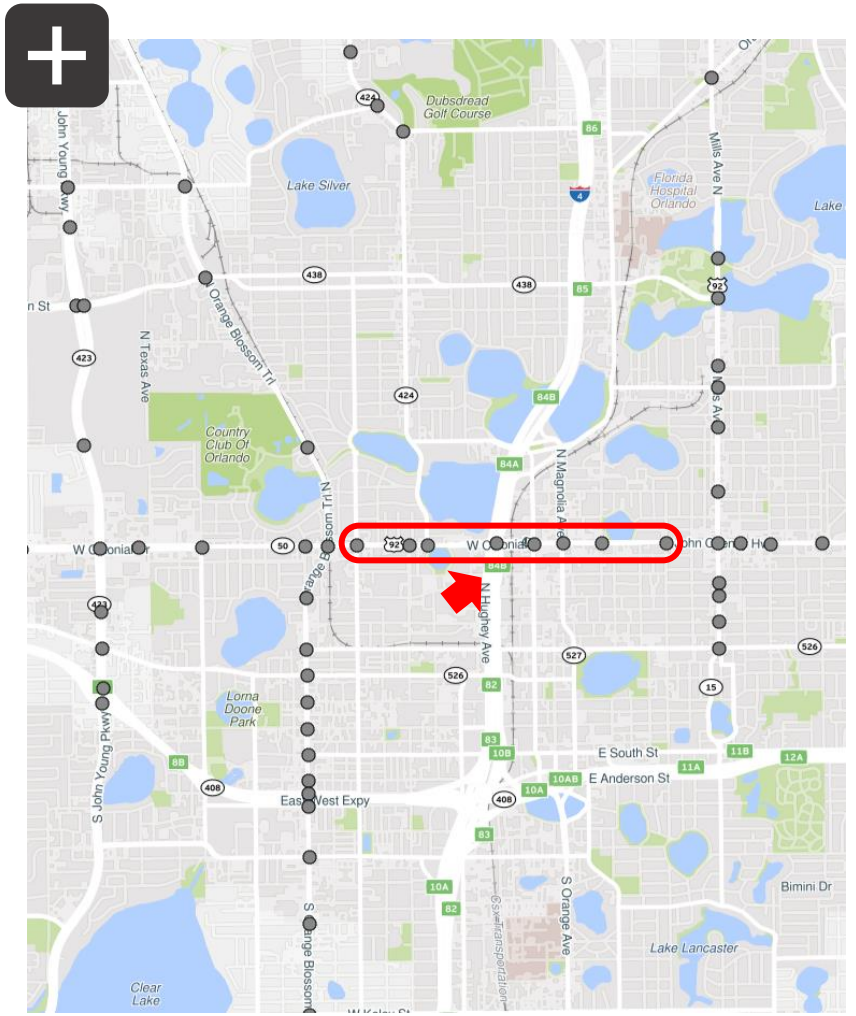
Where should a new bridge over the Potomac be built?

Signal Analytics

Signal Analytics latest updates

We've added intersection clustering for when intersection icons overlap at higher zoom levels.



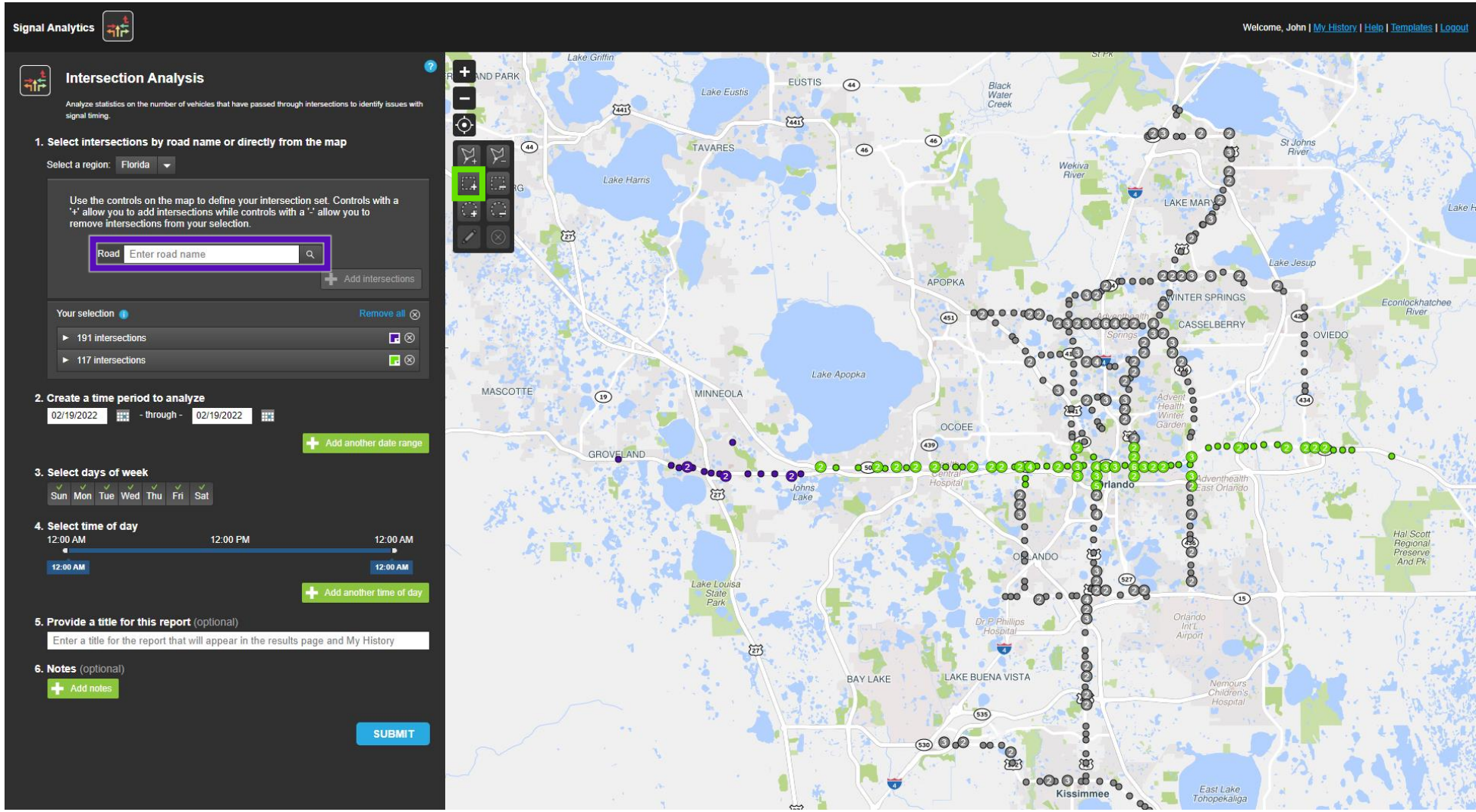


https://signals.ritis.org/analytics/updates/

Signal Analytics latest updates

When preparing to submit an analysis, the map now shows all available intersections. From these, you can select intersections using the road name filter and map controls.

- Road name filter
- Map controls (rectangle)



https://signals.ritis.org/analytics/updates/

RITIS | PROBE DATA ANALYTICS SUITE

What should be next?

Plan for FY 23 enhancement funds now.

Michael Pack
UMD CATT Lab
Director

Summary of Enhancements

1. Support for mobile devices
2. Aerial Photography/Satellite Views
3. Speed Tile Layer Options (congestion, bottlenecks, high-speeds)
4. Road Weather Tiles
5. Customization & Filtering of map features (road names, shields, etc.)
6. Map Search Options: $32k
7. Automated Work Zone Reporting
8. Safety Data Analytics
9. Historic Media Display Mgmt for Incidents
10. Focus Mode
11. Advanced Time Selection
13. Road Weather Integration
14. DMS on congestion scans
15. Custom Color Scales for UDC
16. XD Bottleneck Ranking
20. Embedding of Dashboards & Reports
21. Sharing of Dashboards
22. Speed Bins Visualization
23. Flight / Maritime Traffic
24. MAP-21 Project Prioritization / Target Setting Support Tool
25. Energy Analytics Dashboard & Vehicle Registration Expansion
26. Signalized intersection energy analytics
27. Emissions and Environmental Justice Tools
28. Transportation Equity Explorer
29. Multi-modal situational Analysis (airport/seaport/impacts)
30. Weigh-in-Motion / Weigh Station Analytics
31. Freight Movement and Safety Avoidance Analytics
32. Pandemic and People Movement Impact Analytics
33. Operations Impact Analytics (ROI tools)
34. Real-time trajectory data (OEM) visualizations
35. Transit Analytics
36. Others???

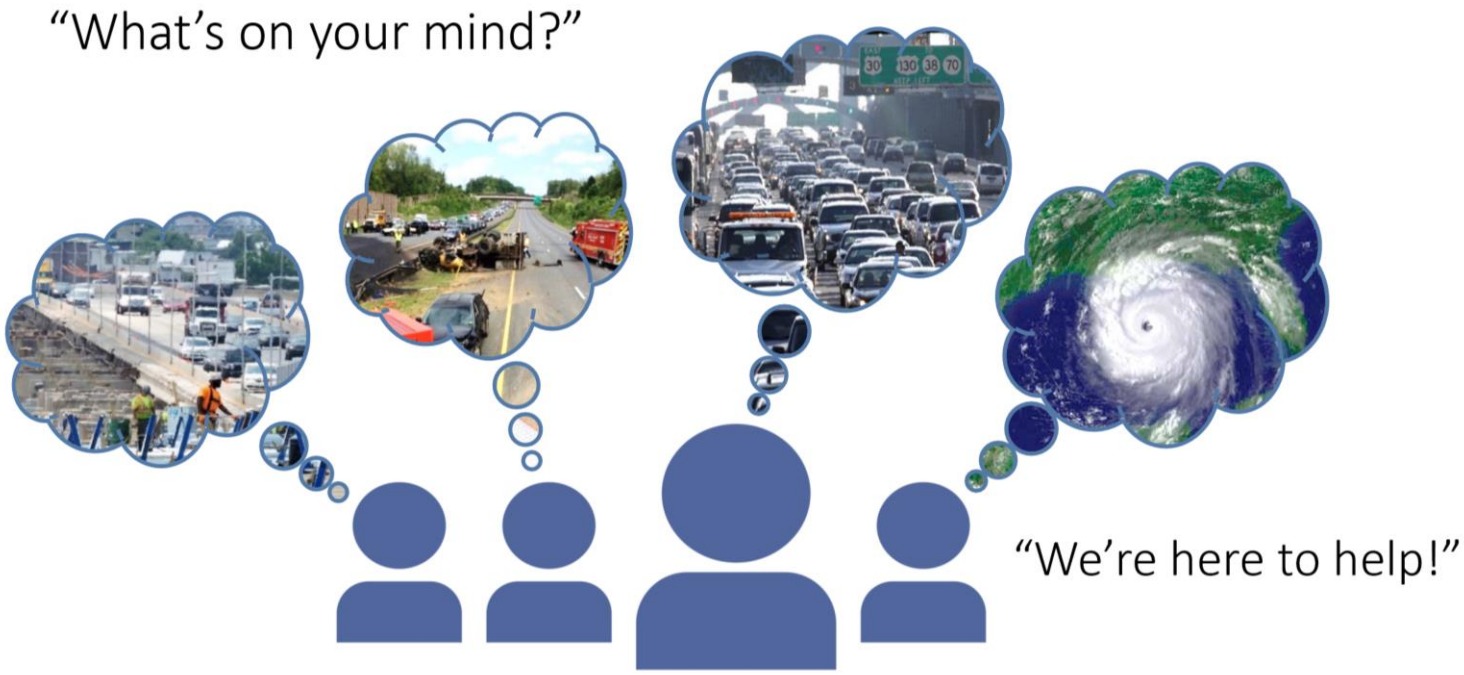
RITIS | PROBE DATA ANALYTICS SUITE

Agency Input Session

Michael Pack
UMD CATT Lab
Director

We want to hear from you!

- 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 Q&A box or with an email to support@ritis.org



Wrap Up

Matt Glasser
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RITIS User Group Co-chair

Questions?

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Thank you!

CATT LABORATORY

THE EASTERN TRANSPORTATION COALITION

CONNECTING FOR SOLUTIONS