CATT Laboratory

RITIS User Group

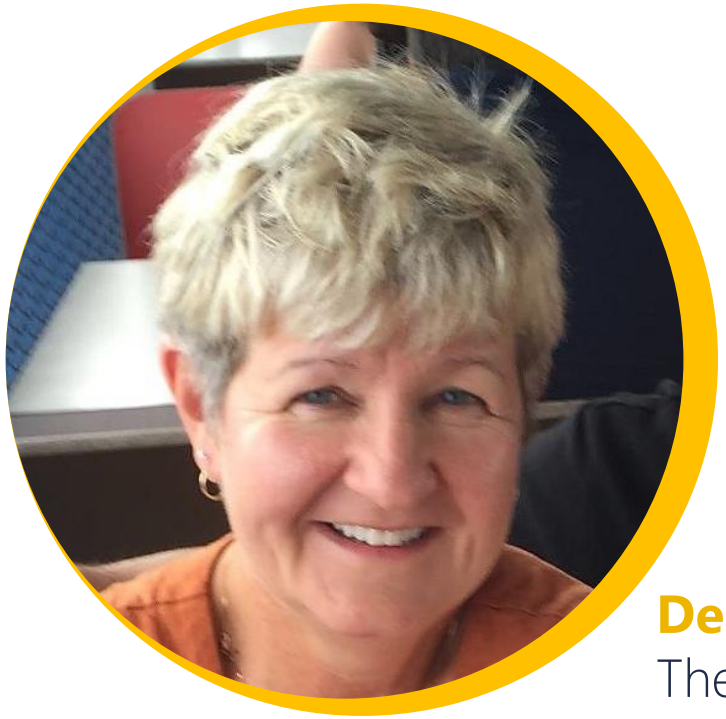
Web Meeting | May 4, 2023

In collaboration with The Eastern Transportation Coalition

Godspeed Denise! Enjoy your adventures!

HOGs, Trav Info, Data, TIMS, Resiliency, TMC Ops – You did it all!

Coalition Update



THE EASTERN TRANSPORTATION COALITION

Denise Markow
The Eastern Transportation Coalition
TSMO Program Director

Coalition Update – Recent & Upcoming Events

RECENT

- ✓ Transportation Data Marketplace (TDM)
  - TDM Analytics Platform Vendor Forums *(invite only)* - February 9 & 23, 2023
  - TDM Bike and Ped Data Vendor Forum – April 12, 2023
- ✓ RITIS
  - Enhancement Working Group Meeting (*invite only*) - March 2, 2023
  - Workshop #4 – Trip Analytics – April 20, 2023
- ✓ Travel Information Virtual Summit - March 16, 2023
- ✓ TSMO Strategic Planning Sessions *(invite only)* - April 13 and May 5, 2023

UPCOMING

- ➢ Distracted Driving/Move Over Conference: *A Unified Approach to Driving Change on the Roadway* - May 8-10, 2023
- ➢ TDM Vendor Forum *(invite only)* - Volume Data - May 25, 2023
- ➢ Info Sharing Event: Considerations for Digital Infrastructure – June 28, 2023

Transportation Data Marketplace Update

- TDM Webpage (https://tetcoalition.org/projects/transportation-data-marketplace/)
- 6 Data Sets: Travel Time & Speed, Volume, Conflation, Origin Destination, Waypoint, and Freight
- 12 Vendors
- Automated DUA process (https://dua.tdmmarketplace.com/)

Welcome & Introductions

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

Today's Meeting

Welcome and Introductions	Denise Markow, TETC Jesse Buerk, DVRPC
Spotlight Presentation 1: Using RITIS to Assess the benefits of ITS Deployments in Louisiana	Julius Codjoe, Louisiana Transportation Research Center & Stephen Mensah, Stantec
Spotlight Presentation 2: Before and After Ribbon-cutting: Documentation Of Demand Shift and Travel Time Improvements for a New Freeway Link	Greg Jordan, UMD CATT Lab
PDA Suite Performance Reporting Working Group Update	John Allen, UMD CATT Lab
RITIS Product Enhancement Working Group with RITIS Updates	Bob Frey, Massachusetts DOT Michael Pack, UMD CATT Lab
Additional RITIS Tools and Enhancements	Michael Pack
Agency Input Session/Wrap Up and Remaining Questions	Jesse Buerk

Today's Speakers

Michael Pack
UMD CATT Lab
Director

Julius Codjoe
Louisiana Transportation Research Center
Special Studies Research Administrator

Stephen Mensah
Stantec
Associate, Traffic Engineer

Greg Jordan
UMD CATT Lab
Senior Faculty Specialist

John Allen
UMD CATT Lab
Faculty Assistant, Outreach & Education

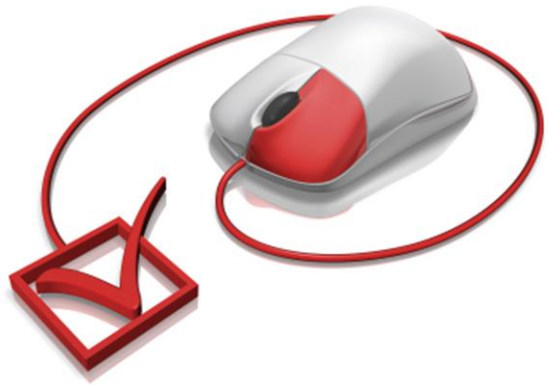
Bob Frey
Massachusetts DOT
Director of Project-Oriented Planning

Meeting Participants

Agencies					
AASHTO	City of Franklin, TN	INRIX	Miami Dade County	North Carolina DOT	SRPEDD
Arizona DOT	Connecticut DOT	International Bridge Tunnel and Turnpike Association (IBTTA)	Michigan DOT	Northern Virginia Transportation Authority	Stantec
Atlanta Regional Commission	Corpus Christi MPO	Kentucky Transportation Cabinet	Minnesota DOT	Office of Intermodal Planning and Investment	Tennessee DOT
Baltimore Metropolitan Council	DCHC MPO	KIPDA	MWCOG	Ohio DOT	Texas A&M Transportation Institute
CAMPO	District DOT	Louisiana Transportation Research Center	Nashville DOT	Oregon DOT	Texas DOT
Capital Region Planning Commission	DVRPC	Madera County Transportation Commission	New Jersey DOT	Pennsylvania DOT	University of Maryland CATT Lab
CCMPO	Florida DOT	Maryland Department of Energy	New York City DOT	PVPC	Virginia DOT
Chatham County - Savannah Metropolitan Planning Commission	Florida's Turnpike Commission	Maryland DOT-SHA	New York State DOT	Rhode Island Division of Statewide Planning	Wisconsin DOT
Chattanooga TPO	Georgia Environmental Protection Division	Maryland Transportation Authority	New York State Thruway Authority	RTC of Southern Nevada	
City of Charlotte, NC	Illinois DOT	Massachusetts DOT	NJTPA	Southwestern Pennsylvania Commission	

Poll 1: What types of presentations/topics would you like to hear about during these meetings?

Please place your response in the pop-up box



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

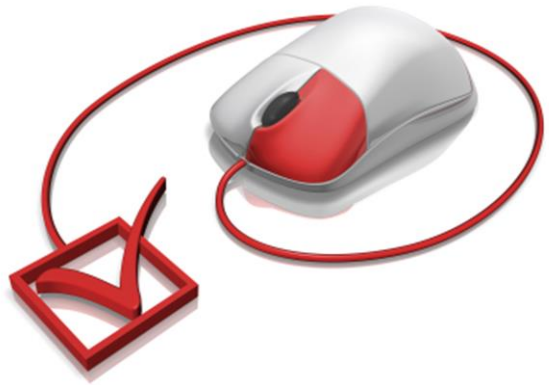
Response Options:

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)?

Response Options:

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



Using RITIS to Assess the Benefits of ITS Deployments in Louisiana

Julius Codjoe, Special Studies Research Administrator
Louisiana Transportation Research Center

Stephen Mensah, Associate, Traffic Engineer
Stantec

Benefits of ITS Deployment:

Evaluating an ITS Deployment using RITIS Tools

Stephen Mensah

Stantec Consulting Services

DOTD ITS Assets

DOTD ITS Assets

- TMCs
- Cameras
- DMS
- Radar Detectors
- Bluetooth Detectors
- Fiber Optic Communications
- Queue Warning Systems
- Ramp Meters
- Software (ATMS, ATIS, VDMS)
- MAP

By the Numbers…

- CCTV Cameras (457)
- DMS (105)
- TTMS (1)
- Ramp Meters (24)
- VDS (11,490)
- Flashing Beacons (3)
- Water Level (ZETRON)*
- Motorist Assistance Patrol*

* Not directly managed by ATMS

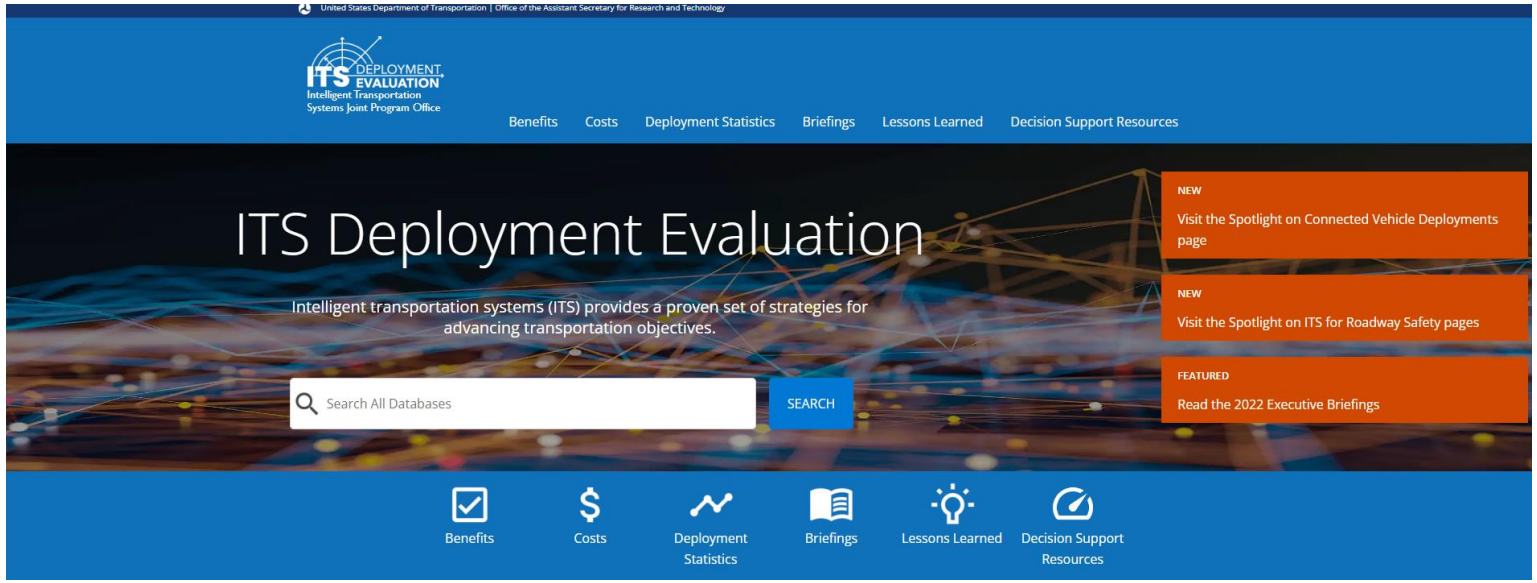
What we want to know

What is the total value of ITS assets?

What total benefits have accrued?

What is the benefit-cost ratio?

What are the impacts of these ITS deployments?

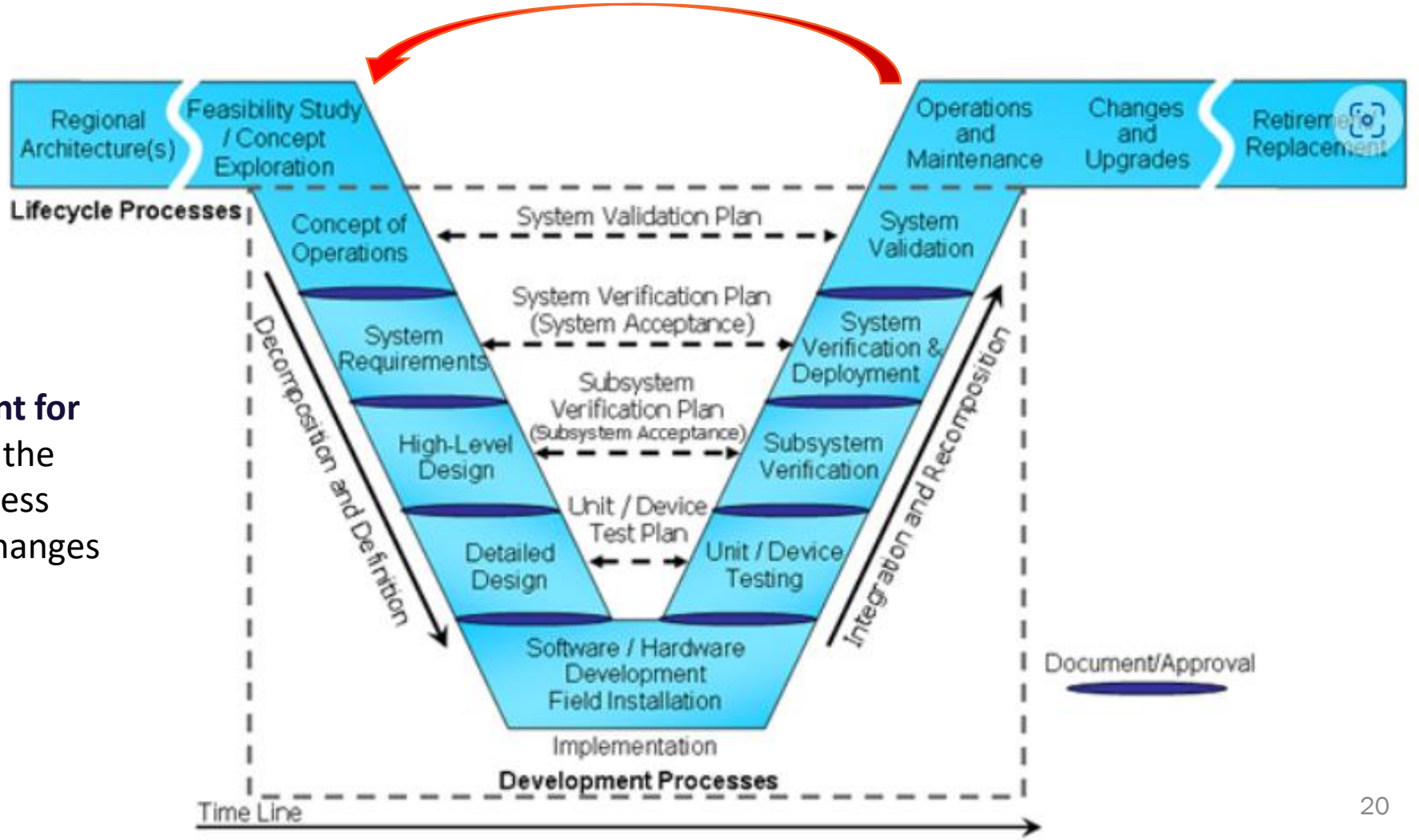


https://www.itskrs.its.dot.gov/

http://www.cmfclearinghouse.org/index.cfm

ITS Deployments Process

There is no requirement for a formal evaluation of the ITS deployments to assess the before-and-after changes in mobility and safety.



Motivation

01

How can we determine if project goals were met?

02

What operational strategies work?

03

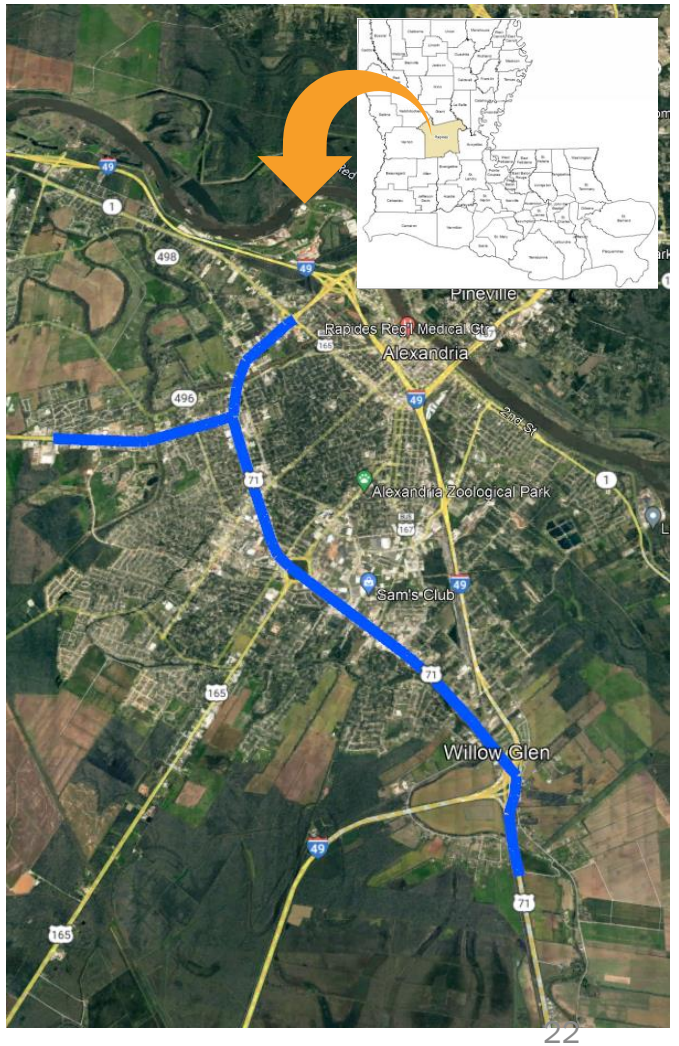
How will deployment outcomes impact DOTD ITS decision making?

During the System Engineering Analysis phase, we have better information to evaluate potential alternatives based on actual outcomes of ITS deployments in the State of Louisiana.

Transportation Systems Management and Operations (TSMO) strategies focus on optimizing existing transportation network to improve capacity, safety, and reliability.

Case Study - Alexandria Phase 3 Deployment

- US 71 Corridor
- Project Scope
  - DMS
  - Cameras
  - Signal Communications Upgrades
- Devices were commissioned October 2020



Analysis

- Using the RITIS platform, we conducted a **Before-and-After Study** to compare performance measures for October 2019 (pre-deployment) and October 2022 (post-deployment)

- Days selected: Tuesdays, Wednesdays and Thursdays

- Time Periods: 6:00AM – 8:00 AM; 1:00 PM-3:00 PM; 4:00PM - 6:00PM

Traffic Counts

List View | All DIRs

Record 1 of 1 Goto Record go

Location ID	103201	MPO ID	
Type	SPOT	HPMS ID	
On NHS		On HPMS	
LRS ID	999_US 71_1_1_010	LRS Loc Pt.	65.23375
SF Group	SF3	Route Type	U.S.
AF Group	FC3UR	Route	0071
GF Group	GFC 3	Active	Yes
Class Dist Grp	CDF3	Category	Routine
Seas Clss Grp	SCF-State		
WIM Group	WIM 3-7		
QC Group	Default		
Fnct'l Class	Other Principal Arterial	Milepost	
Located On	US 71		
Loc On Alias			
AT	65.23		
More Detail			

STATION DATA

Directions: 2-WAY NB SB

AADT

	Year	AADT	DHV-30	K %	D %	PA	BC	Src
	2022	16,876[3]		8	52	14,984 (89%)	1,892 (11%)	Grown from 2021
	2021	17,561[3]		8	52	14,768 (84%)	2,793 (16%)	Grown from 2020
	2020	16,215	1,345	8	52	13,362 (82%)	2,853 (18%)	
	2019	21,478[3]				18,493 (86%)	2,985 (14%)	Grown from 2018
	2018	20,593[3]						Grown from 2017

|<< < > >>| 1-5 of 23

Travel Demand Model

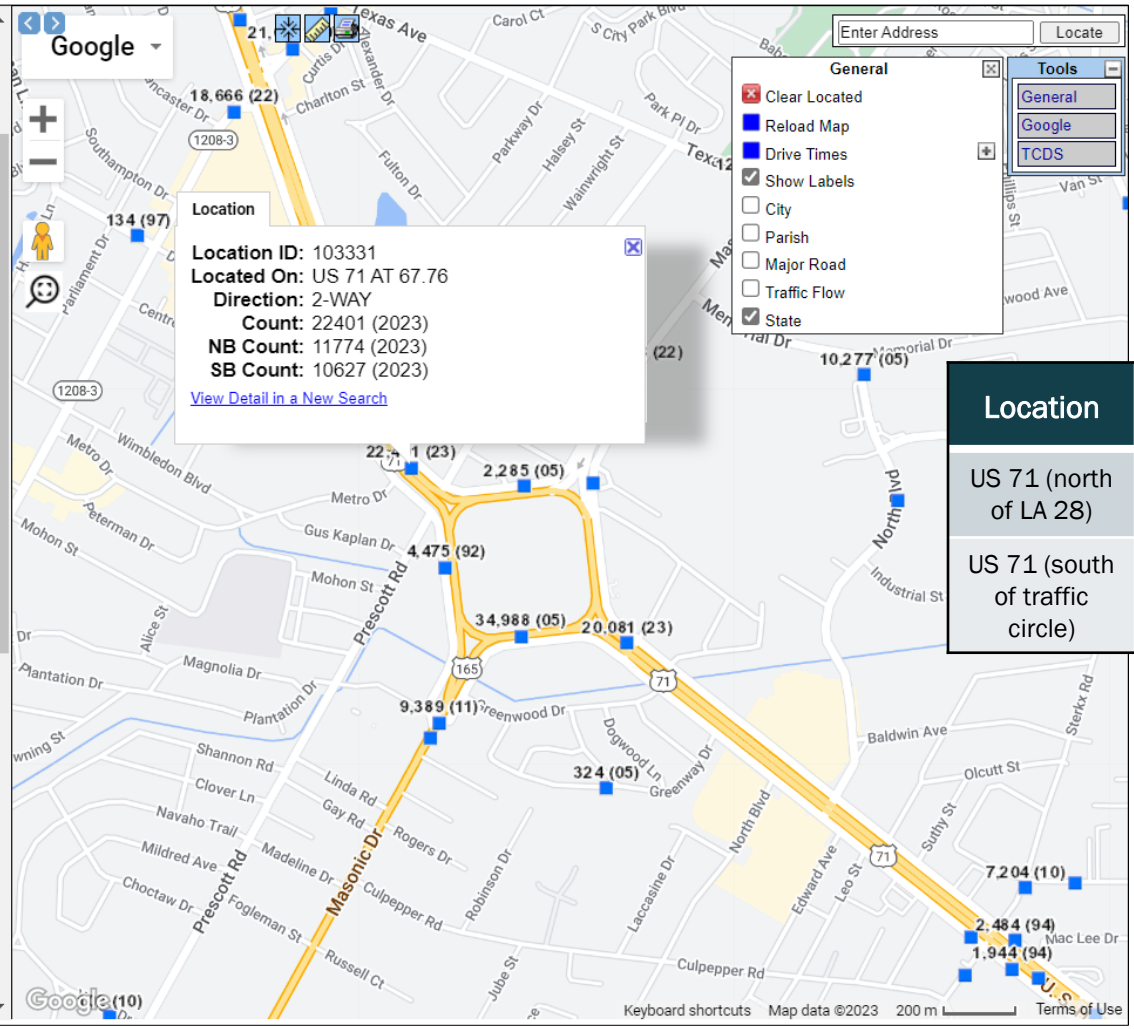
	Model Year	Model AADT	AM PHV	AM PPV	MD PHV	MD PPV	PM PHV	PM PPV	NT PHV	NT PPV

VOLUME COUNT

	Date	Int	Total

VOLUME TREND

Year	Annual Growth



Location	AADT 2018	AADT 2019	AADT 2020	AADT 2022
US 71 (north of LA 28)	40299			40596
US 71 (south of traffic circle)		23755		20375

Probe Data Analytics Suite

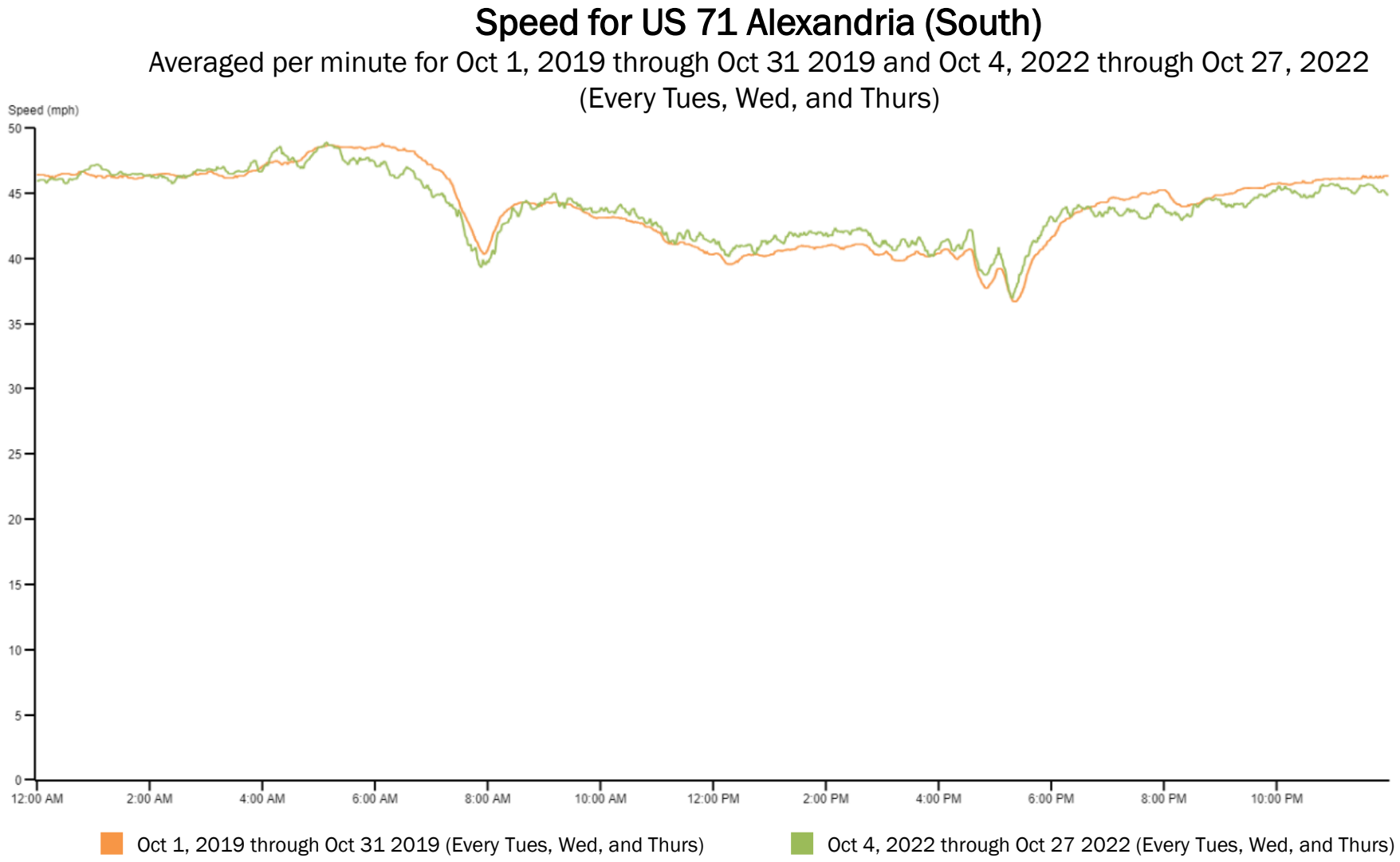
Here's the tools we used from PDA Suite…

Probe Data Analytics Suite Results

Speed Results (southbound)

Speeds are higher in the AM peak for 2019

Speeds are higher in the midday and PM peaks for 2022



Speed Results (southbound)

Speeds are higher in the AM peak for 2019

Speeds are higher in the midday and PM peaks for 2022

Speed for US 71 Alexandria (South)

Averaged per minute for Oct 1, 2019 through Oct 31 2019 and Oct 4, 2022 through Oct 27, 2022 (Every Tues, Wed, and Thurs)

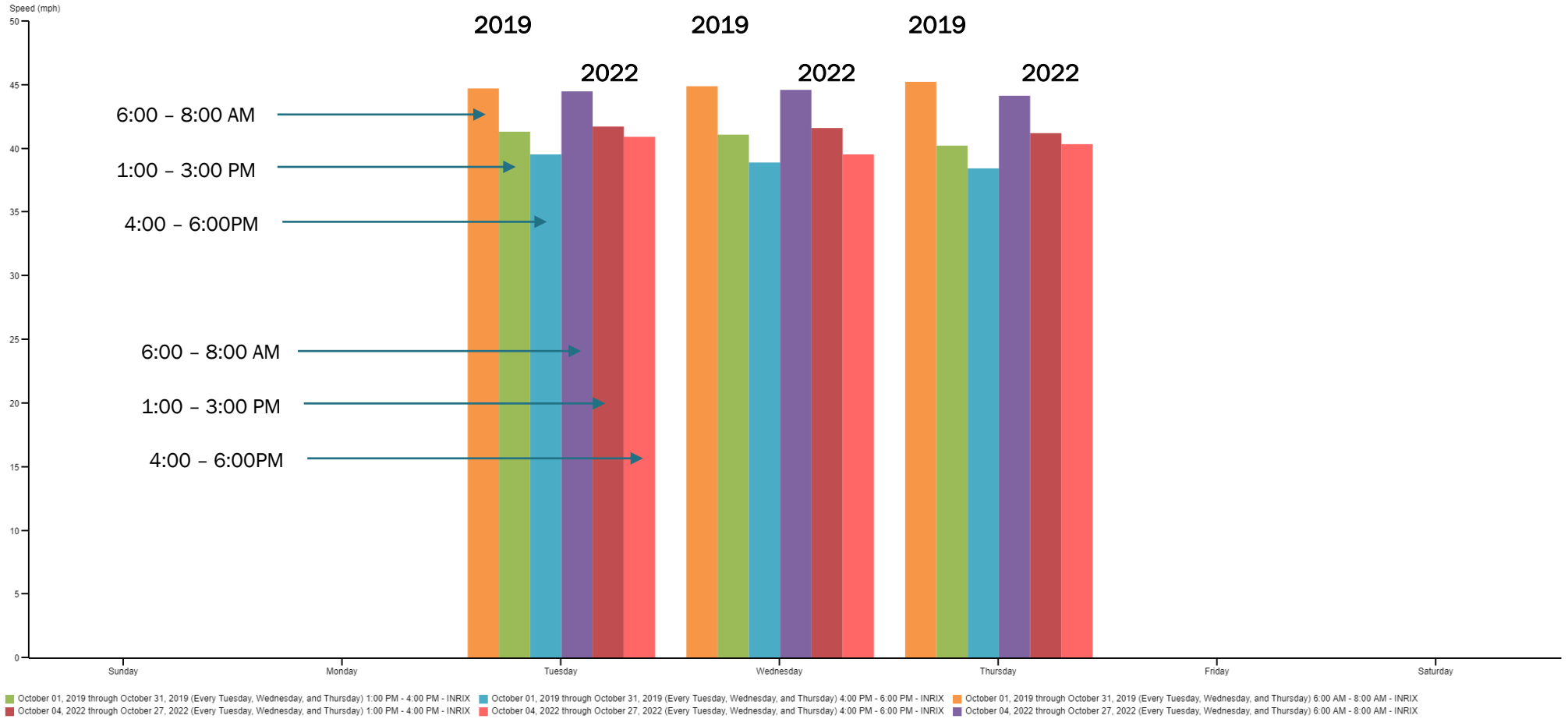
Oct 1, 2019 through Oct 31 2019 (Every Tues, Wed, and Thurs)

Oct 4, 2022 through Oct 27 2022 (Every Tues, Wed, and Thurs)

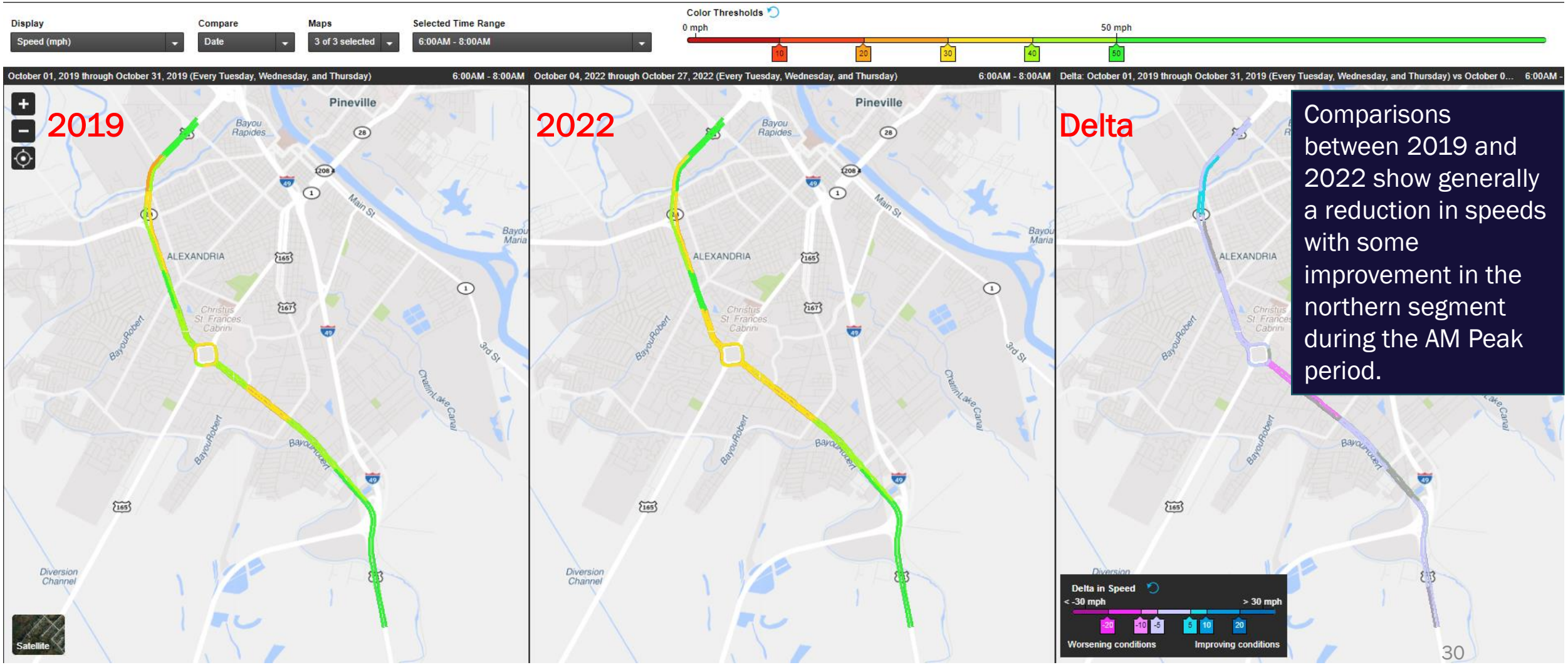
Speed Results (southbound)

Speed for US 71 Alexandria Southbound

Averaged per minute for Oct 1, 2019 through Oct 31 2019 and Oct 4, 2022 through Oct 27, 2022
(Every Tues, Wed, and Thurs) – Southbound

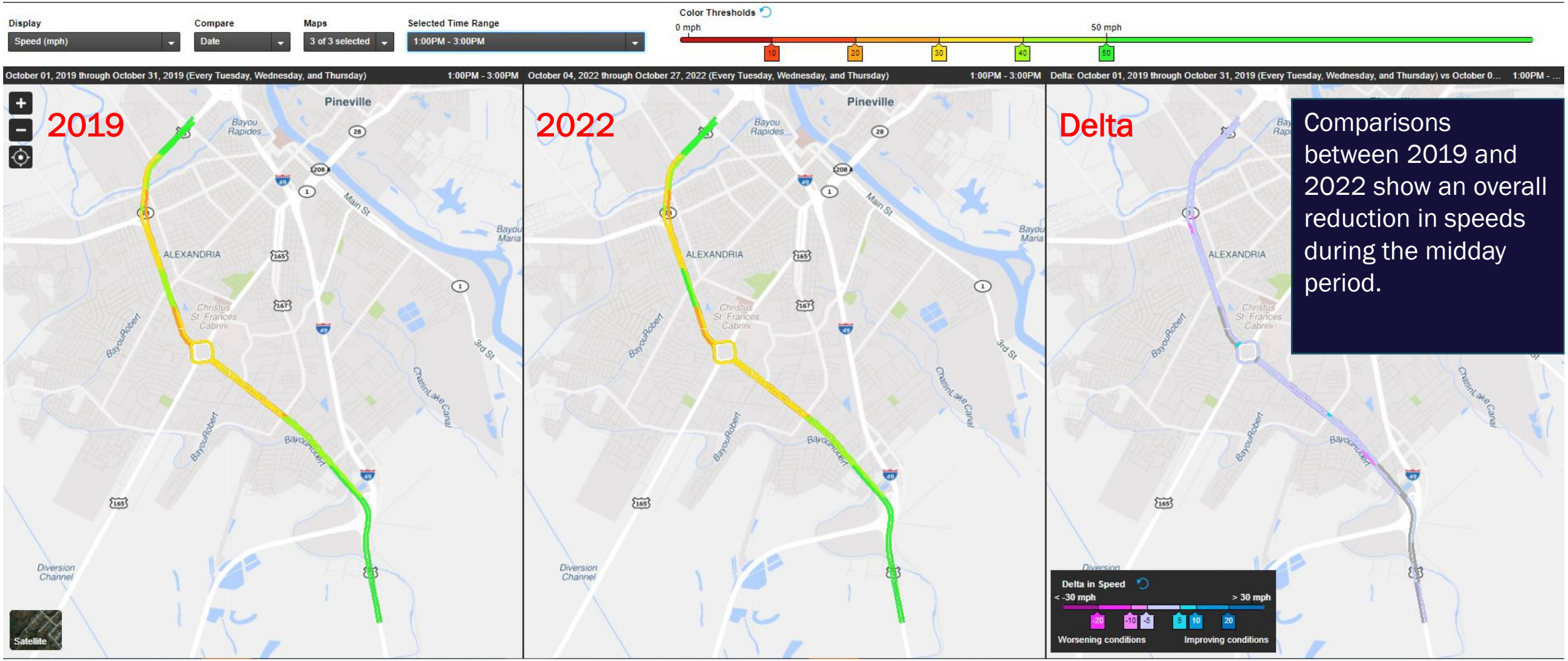


Temporal Comparison – Speed (6:00 - 8:00 AM)



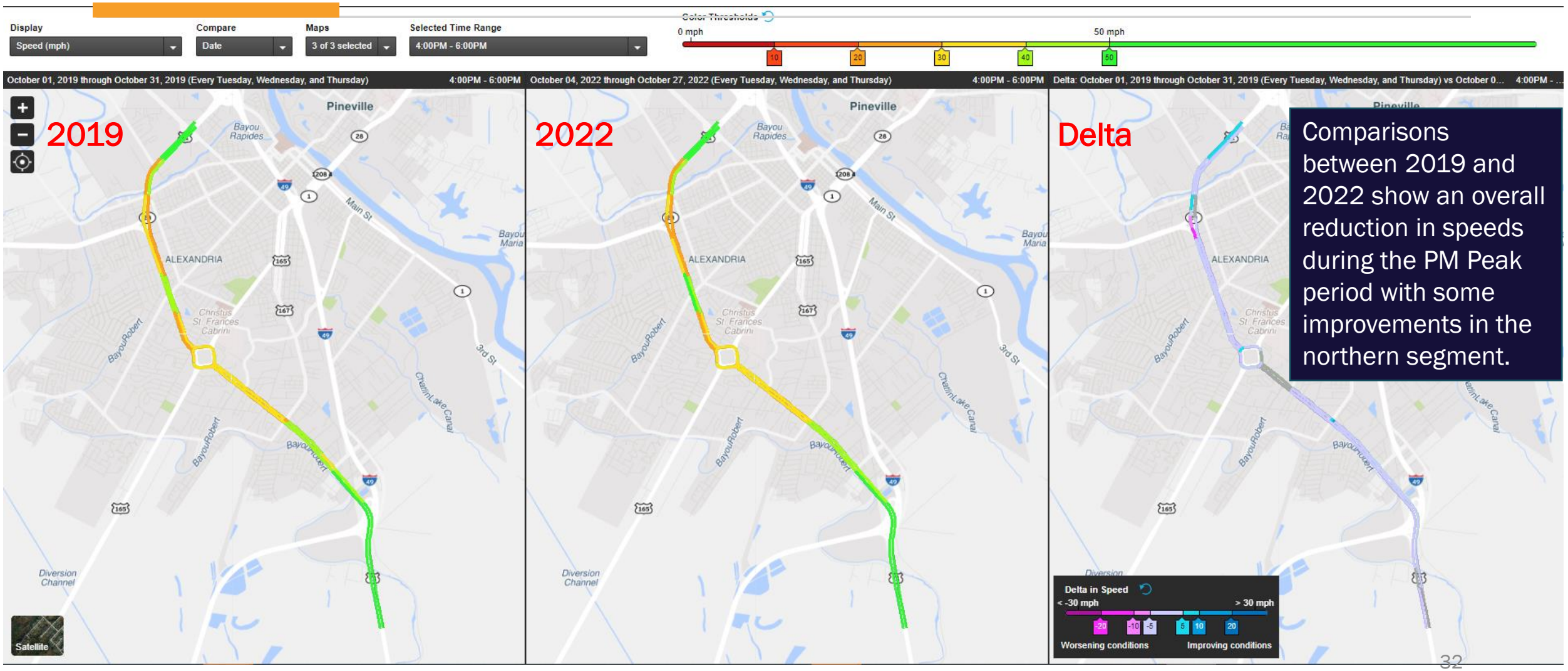
Comparisons between 2019 and 2022 show generally a reduction in speeds with some improvement in the northern segment during the AM Peak period.

Temporal Comparison – Speed (1:00 - 3:00 PM)



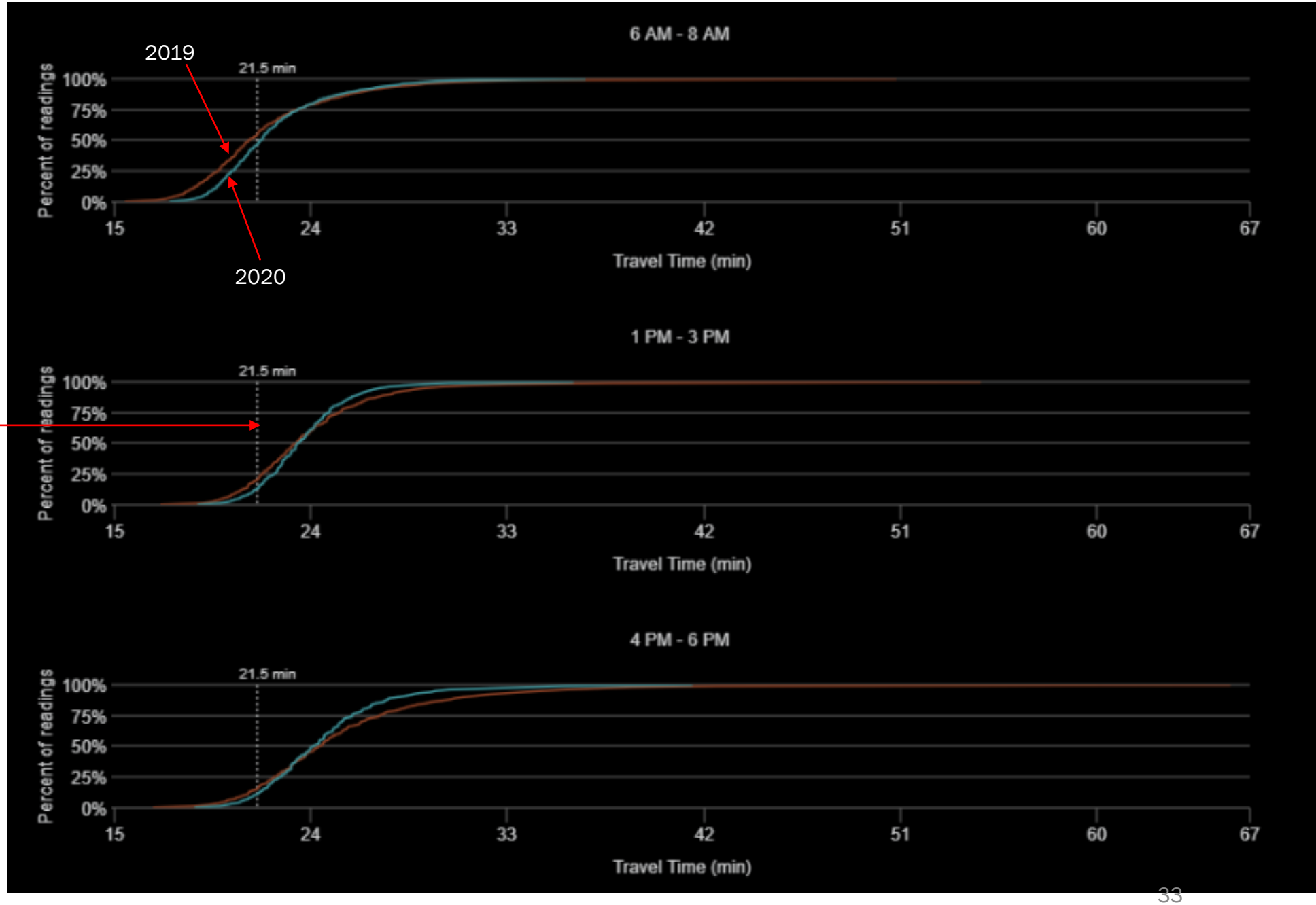
Comparisons between 2019 and 2022 show an overall reduction in speeds during the midday period.

Temporal Comparison – Speed (4:00-:600 PM)



Comparisons between 2019 and 2022 show an overall reduction in speeds during the PM Peak period with some improvements in the northern segment.

Travel Time Comparison



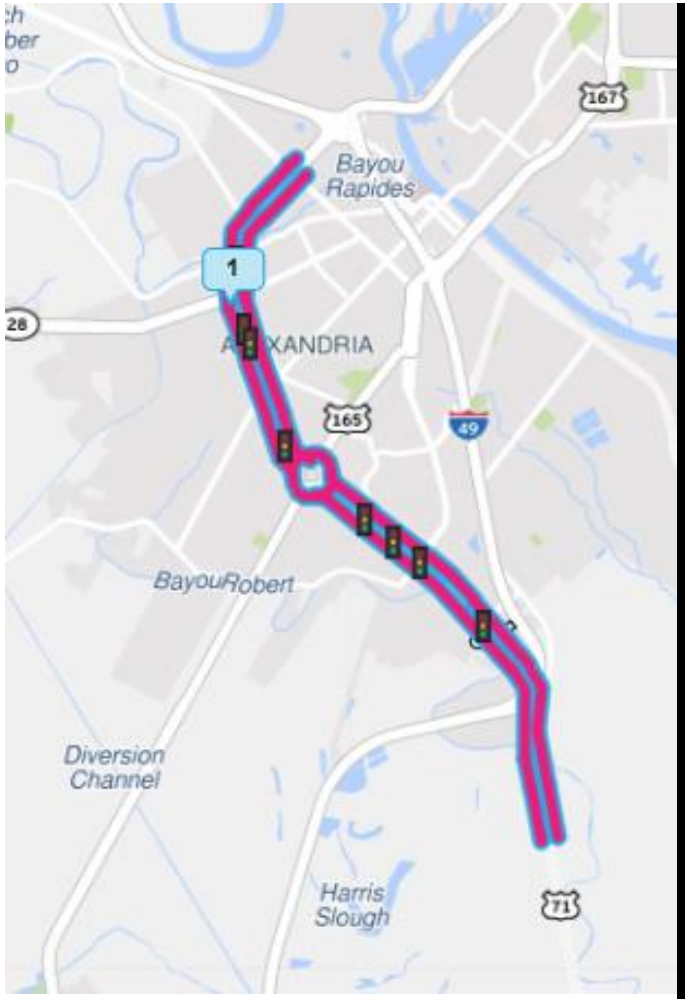
Vertical line shows the speed limit travel time

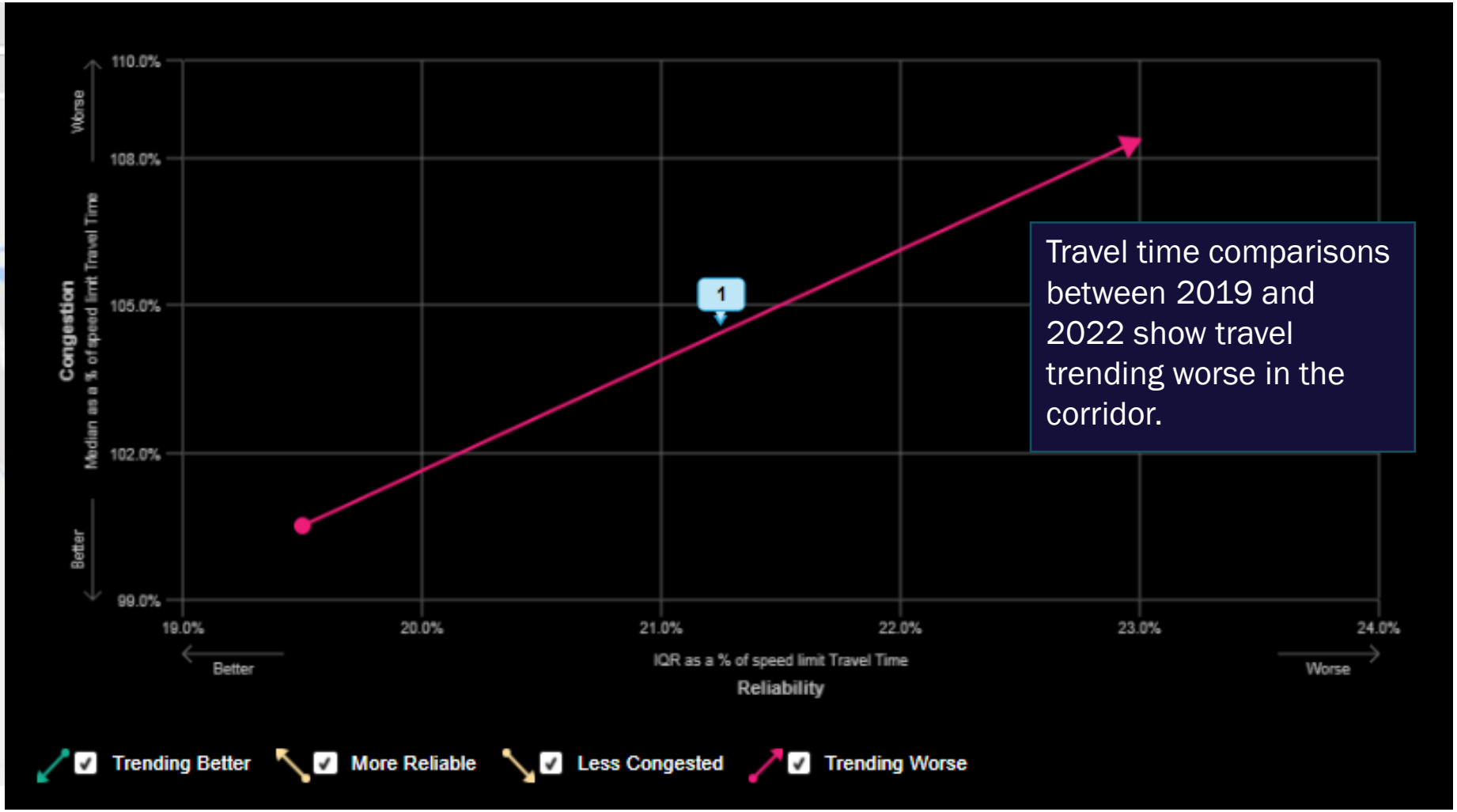
Chart shows cumulative distribution of travel time for time of day.

A shift to the left implies reduced travel time (less congestion)

A steeper curve implies higher reliability.

Travel Time Delta Ranking – Reliability





Performance Summaries (2019 vs 2022)

Performance Summaries (2019)

October 01, 2019 through October 31, 2019 (Every Tuesday, Wednesday, and Thursday)

	Speed (mph)			Buffer time (minutes)			Buffer index			Planning time (minutes)			Planning time index			PSL - Planning time index			Travel time (minutes)			Travel time index			PSL - Travel time index			
	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	
Mon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Mon
Tue	44.70	41.80	39.50	5.97	2.85	7.06	0.26	0.11	0.27	29.36	29.02	33.46	1.28	1.26	1.46	N/A	N/A	N/A	22.09	23.67	25.05	0.96	1.03	1.09	N/A	N/A	N/A	Tue
Wed	44.90	41.50	38.90	4.80	3.09	8.48	0.20	0.12	0.32	28.27	29.11	34.91	1.23	1.27	1.52	N/A	N/A	N/A	22.01	23.79	25.44	0.96	1.03	1.11	N/A	N/A	N/A	Wed
Thu	45.20	40.60	38.40	5.02	5.79	7.55	0.21	0.22	0.27	28.43	32.01	35.19	1.24	1.39	1.53	N/A	N/A	N/A	21.86	24.33	25.71	0.95	1.06	1.12	N/A	N/A	N/A	Thu
Fri	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Fri
Weekdays	45.00	41.30	38.90	5.37	3.14	7.75	0.23	0.12	0.29	28.80	29.27	34.57	1.25	1.27	1.50	N/A	N/A	N/A	21.99	23.93	25.40	0.96	1.04	1.10	N/A	N/A	N/A	Weekdays

Performance Summaries (2022)

October 04, 2022 through October 27, 2022 (Every Tuesday, Wednesday, and Thursday)

	Speed (mph)			Buffer time (minutes)			Buffer index			Planning time (minutes)			Planning time index			PSL - Planning time index			Travel time (minutes)			Travel time index			PSL - Travel time index			
	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	6:00 AM - to - 8:00 AM	1:00 PM - to - 3:00 PM	4:00 PM - to - 6:00 PM	
Mon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Mon
Tue	44.50	41.80	40.90	4.28	3.38	3.58	0.19	0.14	0.14	27.25	27.82	28.75	1.27	1.30	1.34	N/A	N/A	N/A	22.22	23.64	24.18	1.04	1.10	1.13	N/A	N/A	N/A	Tue
Wed	44.60	42.00	39.50	4.75	2.31	7.84	0.21	0.09	0.31	27.61	26.91	32.85	1.29	1.25	1.53	N/A	N/A	N/A	22.16	23.55	25.03	1.03	1.10	1.17	N/A	N/A	N/A	Wed
Thu	44.10	41.50	40.30	5.52	2.06	2.35	0.24	0.08	0.09	28.00	27.34	29.34	1.31	1.27	1.37	N/A	N/A	N/A	22.44	23.82	24.52	1.05	1.11	1.14	N/A	N/A	N/A	Thu
Fri	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Fri
Weekdays	44.40	41.80	40.20	5.11	2.38	3.94	0.22	0.10	0.15	27.88	27.15	29.66	1.30	1.27	1.38	N/A	N/A	N/A	22.27	23.67	24.57	1.04	1.10	1.15	N/A	N/A	N/A	Weekdays

Performance Summaries (2019 vs 2022)

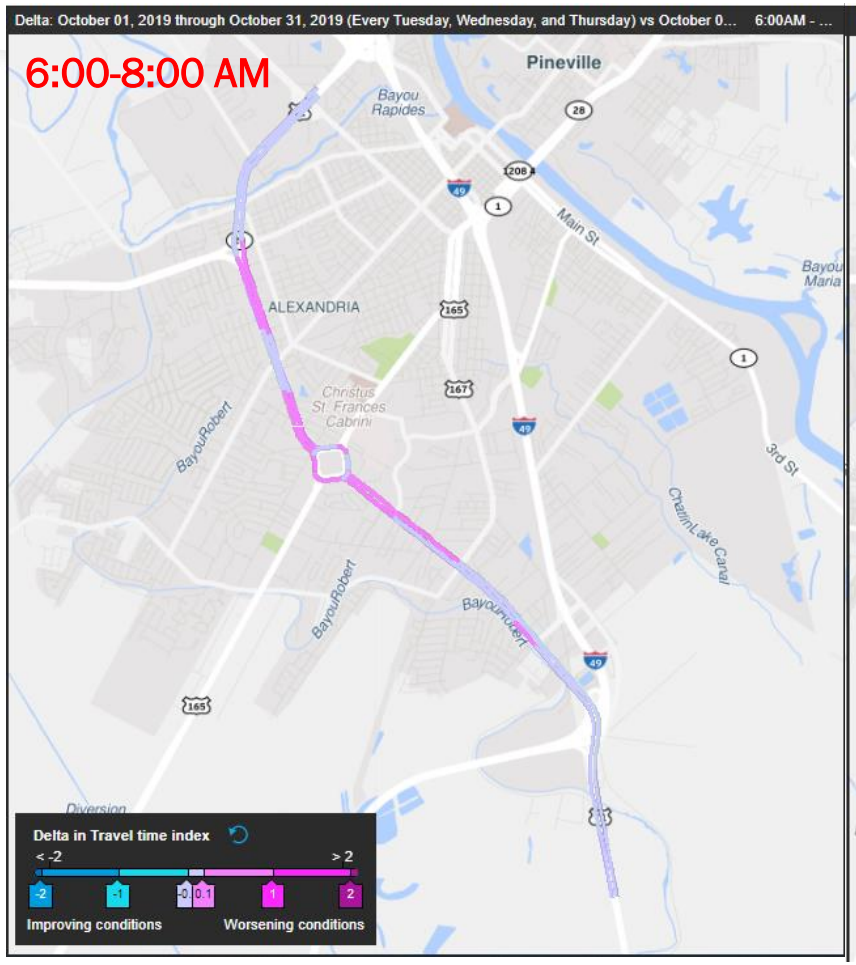
Travel Time Index consistently increases in 2022 compared to 2019

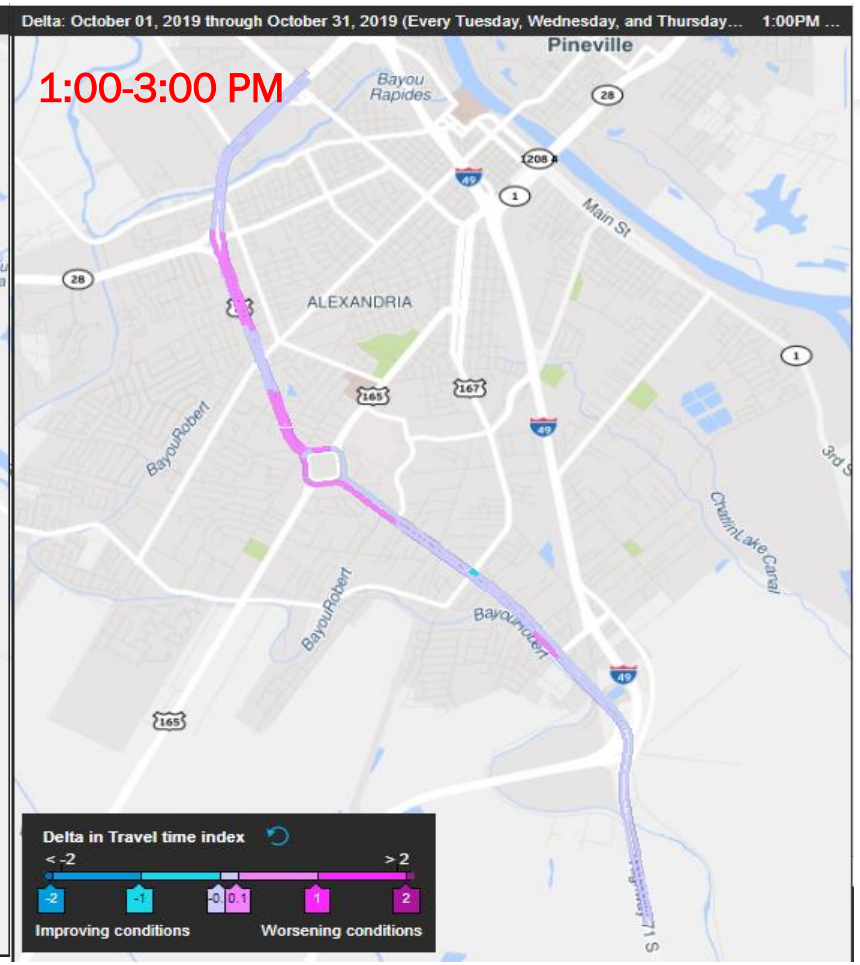
Buffer Index however consistently decreases

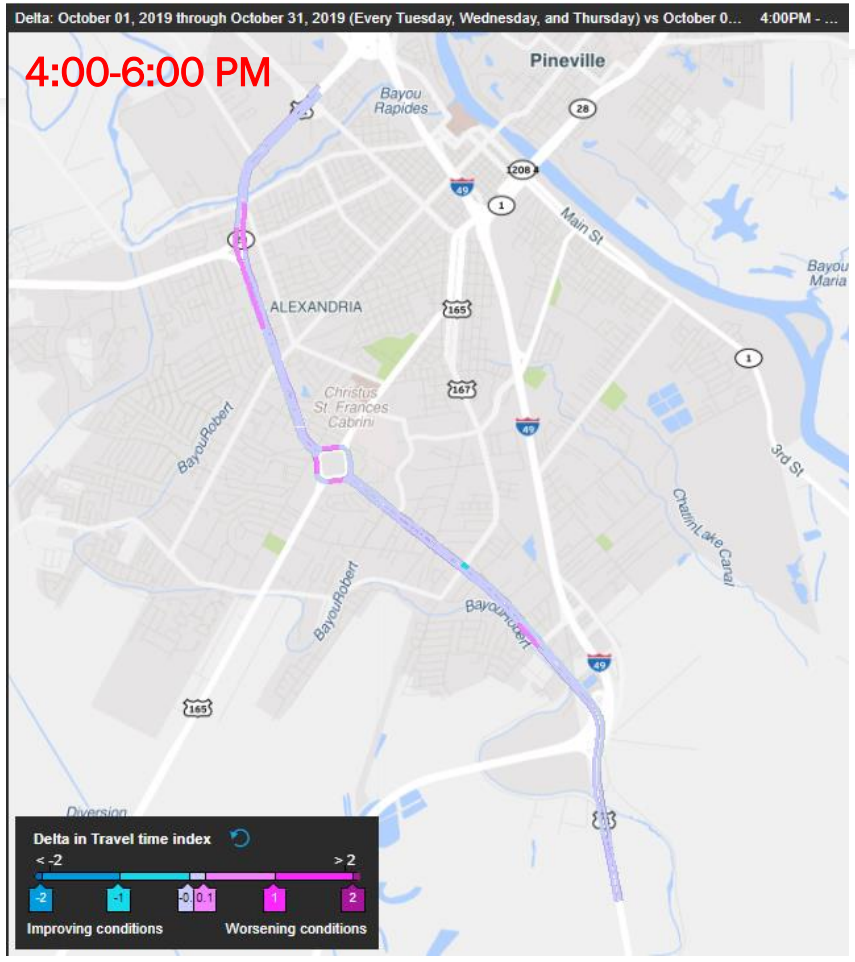
Planning Time Index shows mixed results with better performance in AM of 2019, and better performance in the PM of 2022

	6:00-8:00 AM	1:00-3:00 PM	4:00-6:00 PM
		Travel Time Index	
October 2019	0.96	1.04	1.10
October 2022	1.04	1.10	1.15
		Buffer Index	
October 2019	0.23	0.12	0.29
October 2022	0.22	0.10	0.15
		Planning Time Index	
October 2019	1.25	1.27	1.50
October 2022	1.30	1.27	1.38

Temporal Comparison – Deltas (Travel Time Index)

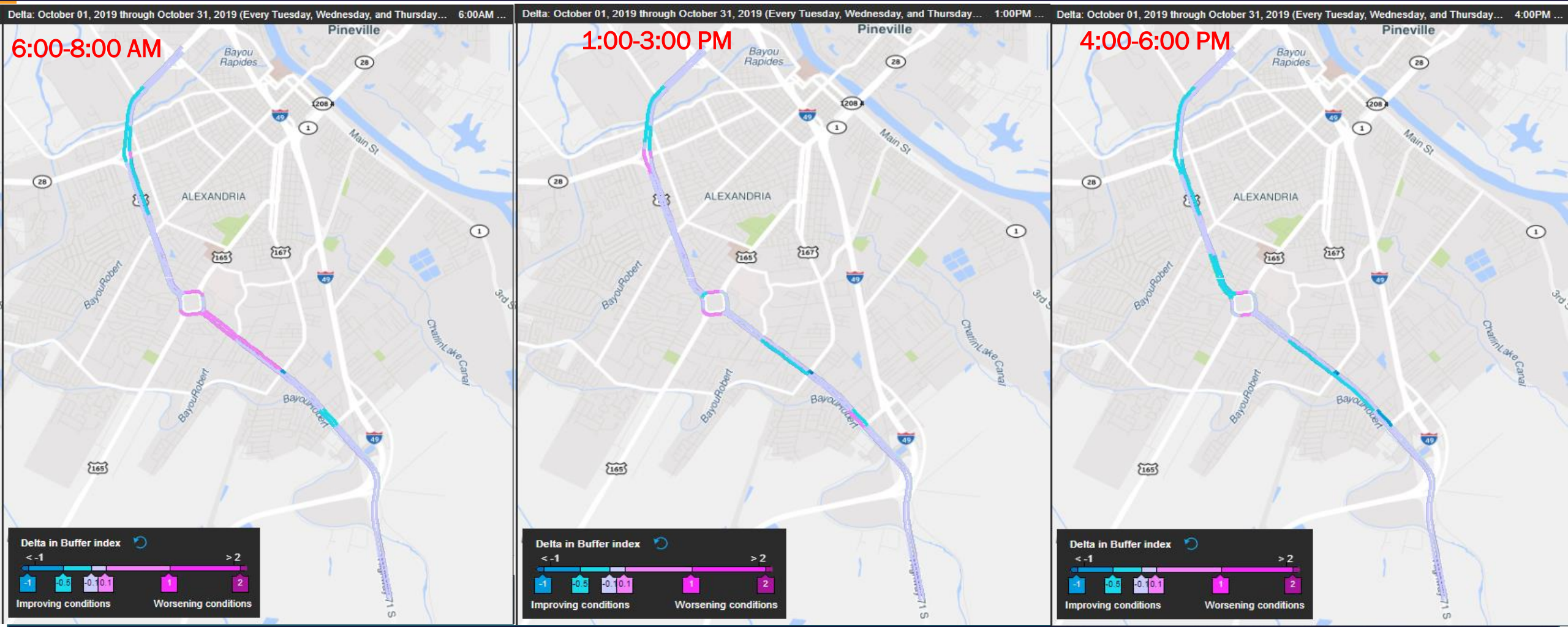






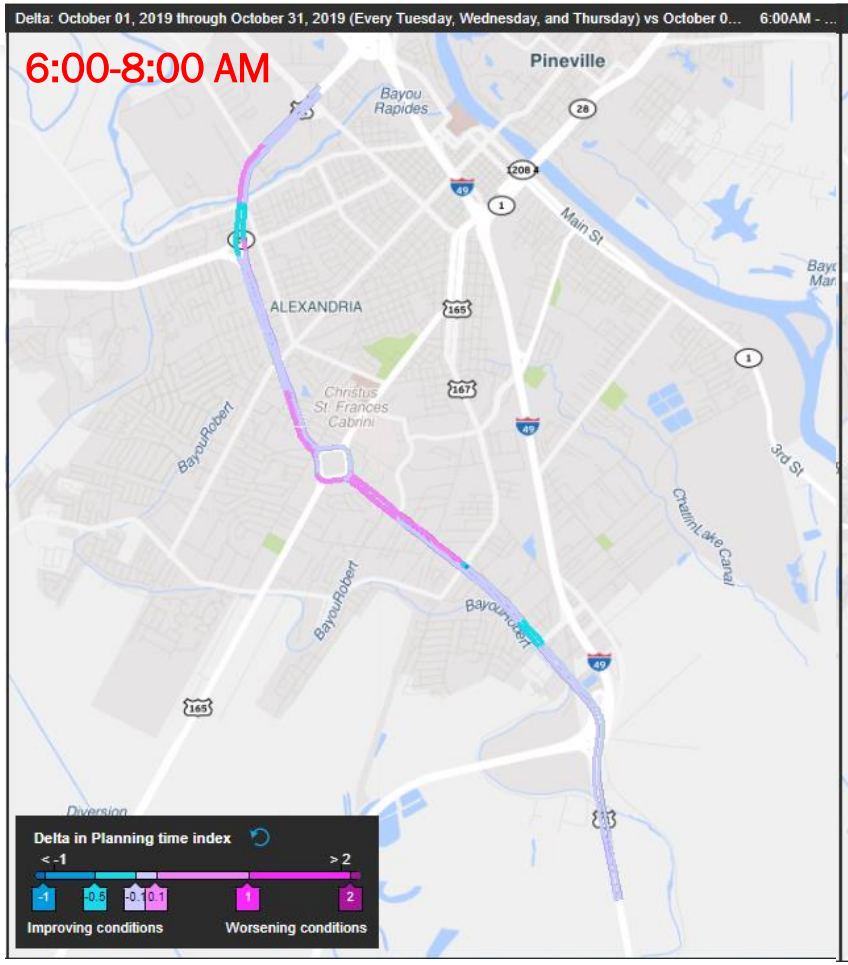
Travel Time Index comparisons between the AM Peak / Midday / PM Peak periods show TTI to be worse in 2022 compared to 2019

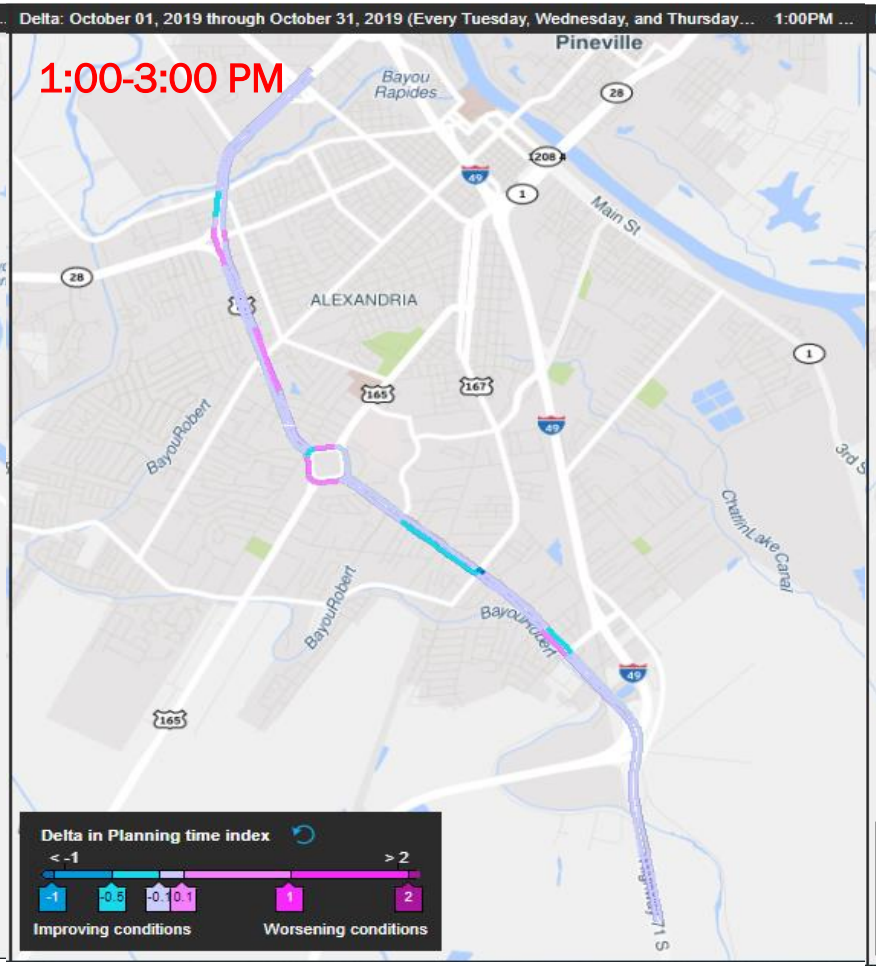
Temporal Comparison – Deltas (Buffer Index)

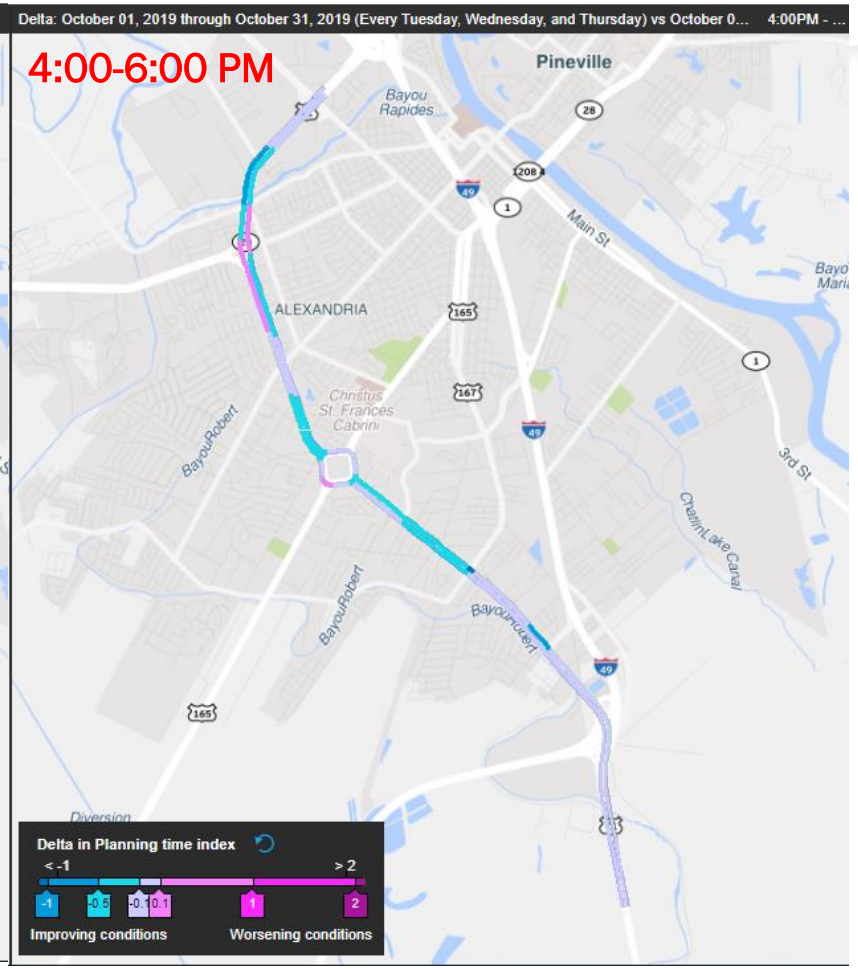


Buffer Index comparisons between the AM Peak / Midday / PM Peak periods show better performance in 2022 than 2019

Temporal Comparison–Deltas (Planning Time Index)

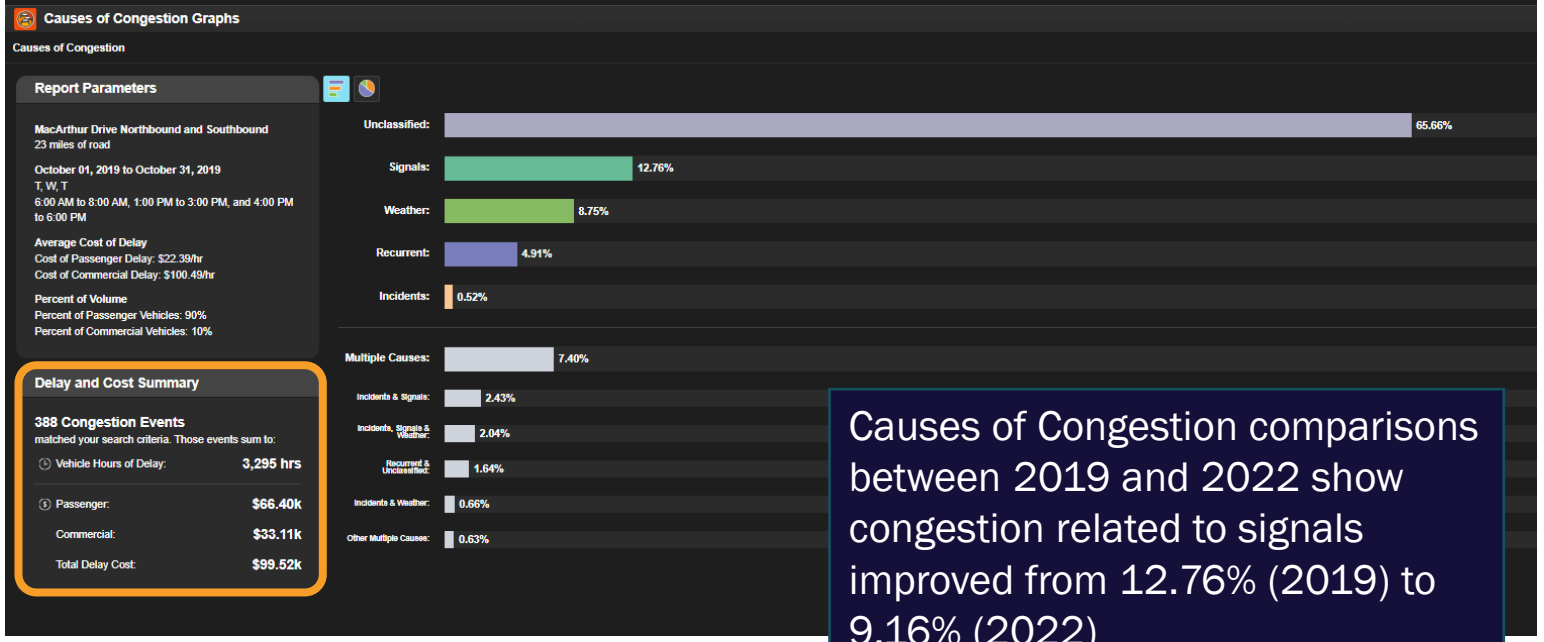






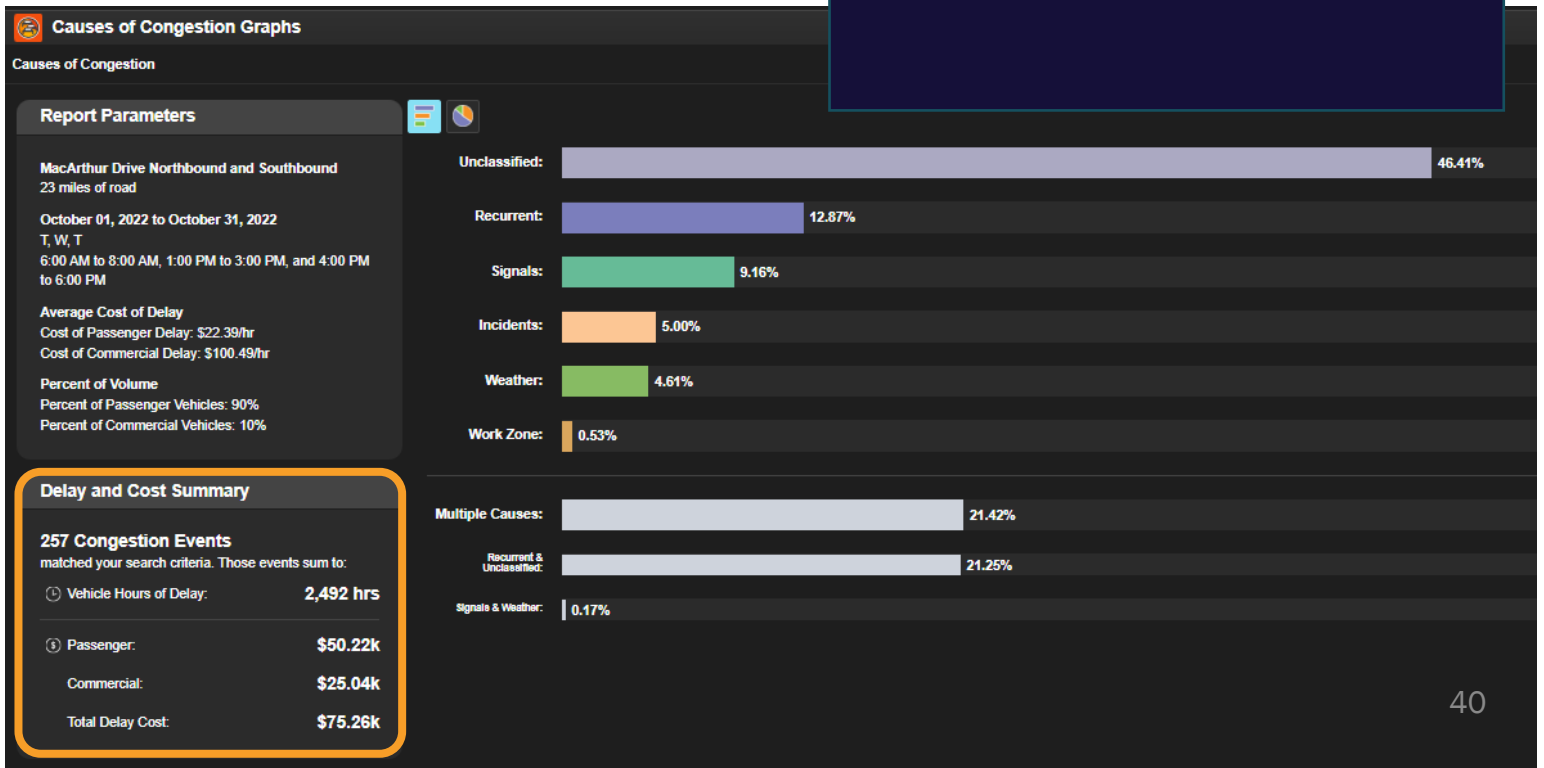
Planning Time Index comparisons between the AM Peak / Midday / PM Peak periods show more improvement in PM Peak

Causes of Congestion (2019)



Causes of Congestion comparisons between 2019 and 2022 show congestion related to signals improved from 12.76% (2019) to 9.16% (2022)

Causes of Congestion (2022)



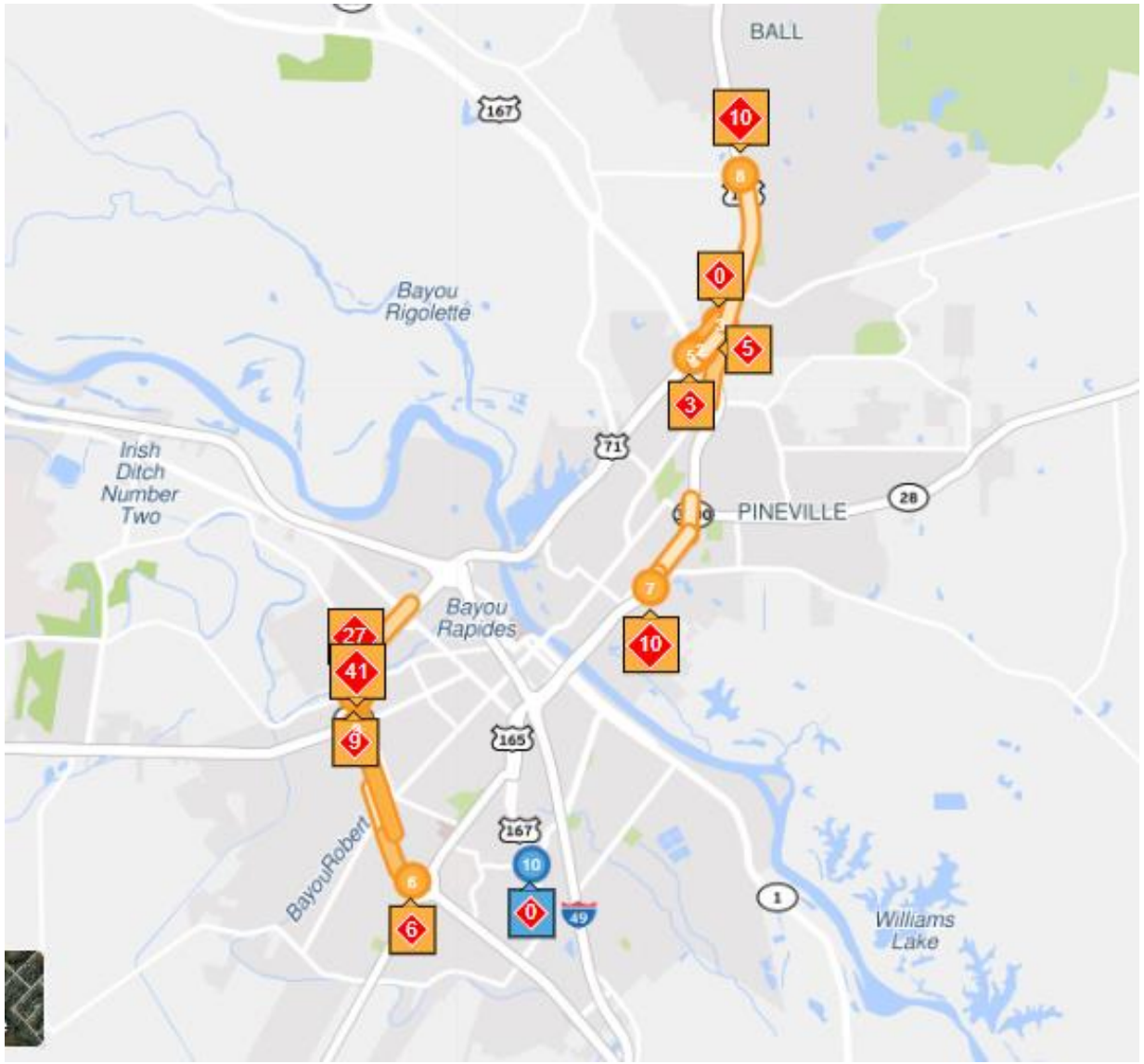
Conclusion

Results for travel time reliability appear to be mixed (some positives and negatives)

We will continue to monitor locations and refine our evaluation processes

RITIS tools, along with ITS deployment framework, with help us better target locations and evaluate benefits

Key Take Away - Bottleneck Ranking



Rank	Head Location
1	US-165 S @ LA-496/RAPIDES AVE/BAYOU RAPIDES RD
2	US-165 N @ US-167/COTTINGHAM EXPY
3	US-165-BR N @ US-165/MONROE HWY
4	US-165 N @ LA-496/RAPIDES AVE/BAYOU RAPIDES RD
5	US-165 S @ US-167/COTTINGHAM EXPY
6	US-165 S @ MACARTHUR DRIVE SOUTH TRAFFIC CIR
7	US-167 S @ LA-107
8	US-165 N @ PARADISE RD
9	US-165 N @ LA-28/MONROE ST
10	US-167-BR S @ N MALL DR/BROADWAY AVE

The bottleneck ranking results helps identify locations with challenges and those corridors can be targeted for ITS deployments for rapid incident detection and management.

Stephen Mensah

Stantec

EMAIL:
Stephen.Mensah@stantec.com

QUESTIONS?

Before and After Ribbon-cutting: Documentation Of Demand Shift and Travel Time Improvements for a New Freeway Link

Gregory W. Jordan

Senior Faculty Specialist

UMD CATT Lab

Travel Time Study Areas in *Trip Analytics* for Operations Analyses

RITIS Users Group

Greg Jordan

May 4, 2023

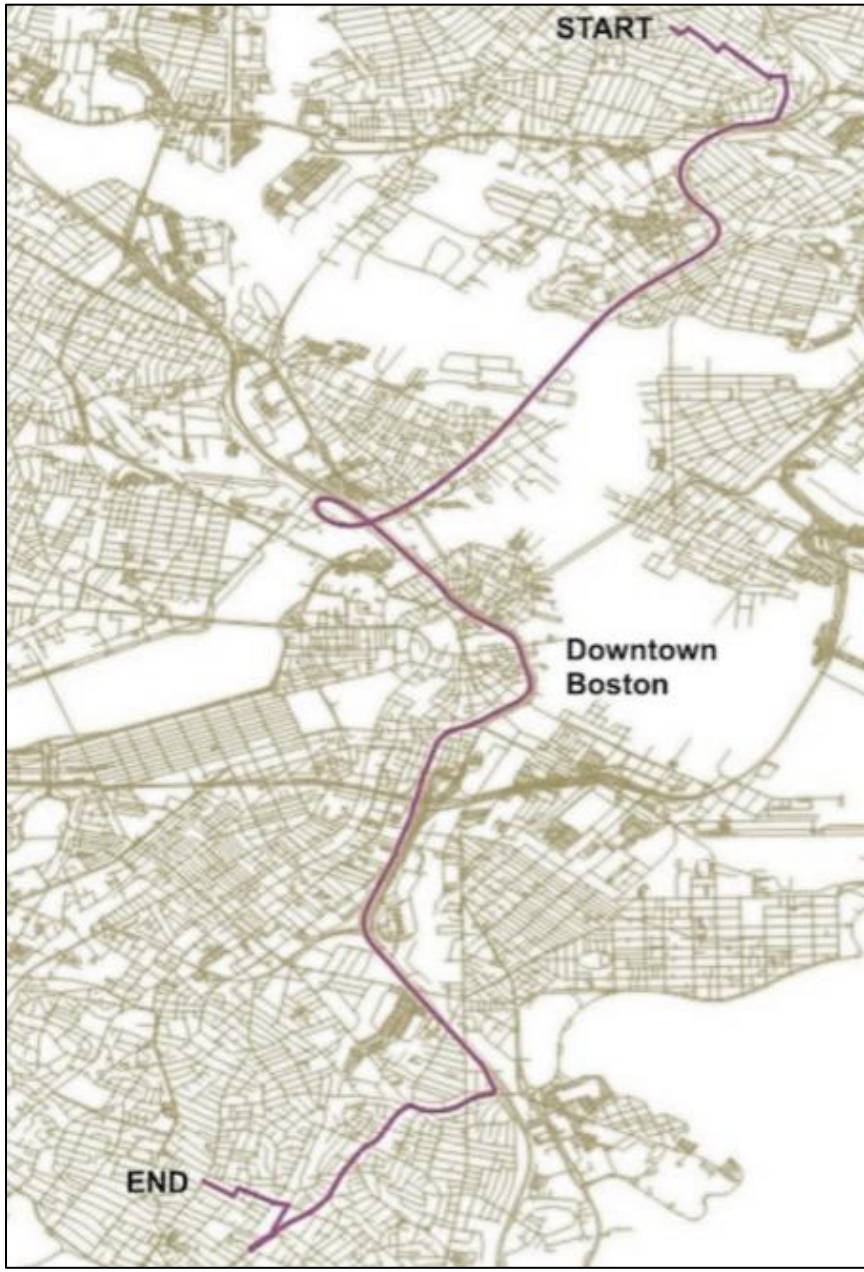
Data Analytics, Decision Support, Information Visualization, and User Interface Design Research happening in the CATT Lab

The Big Picture – What are we doing here?

- We want to learn about patterns of how things move – in this case, cars or trucks on highways – by analyzing samples of real-world trips

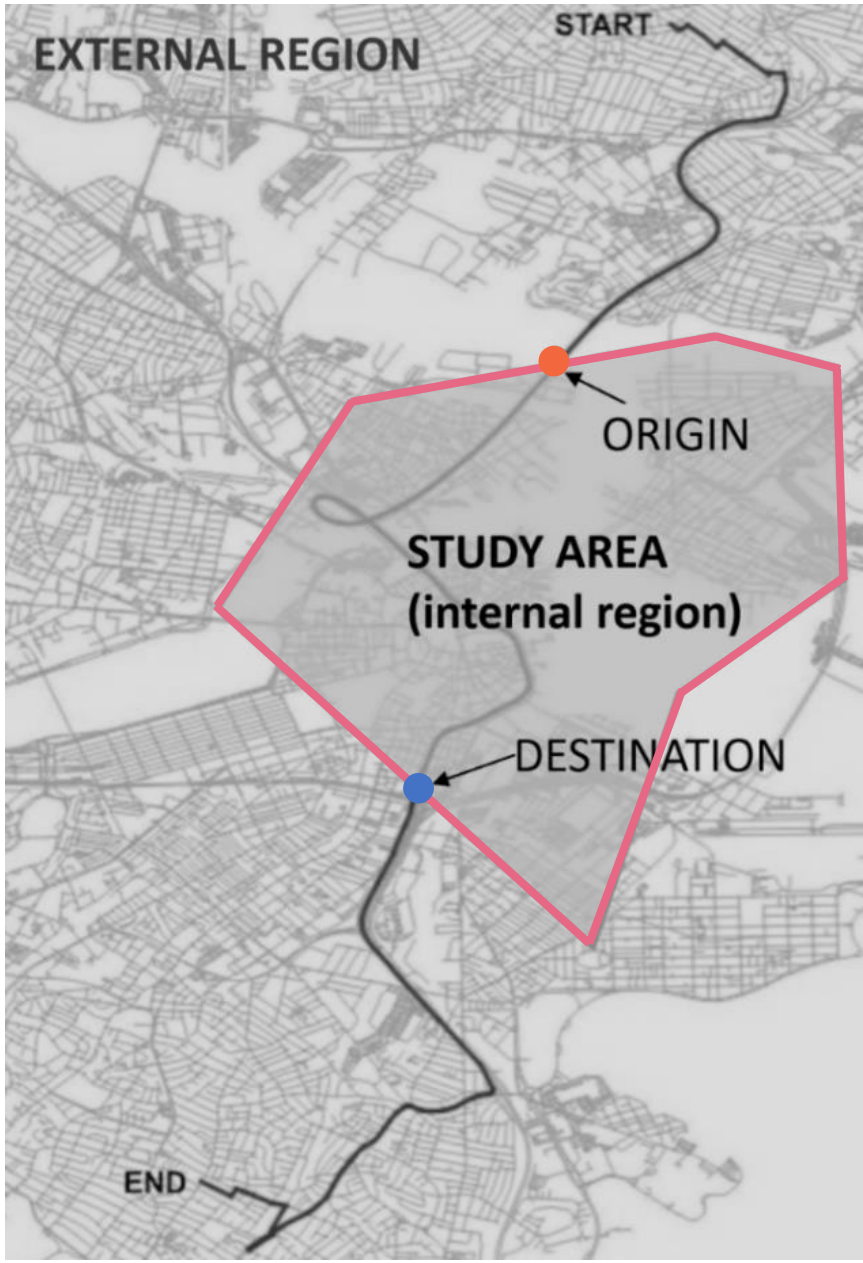
- Data sources are GPS pings from cell phones, connected vehicles and trucking fleets, etc., fitted to roadway networks

- When datasets like this includes full pathways, more insight can be gained than when only the start- and endpoints are provided

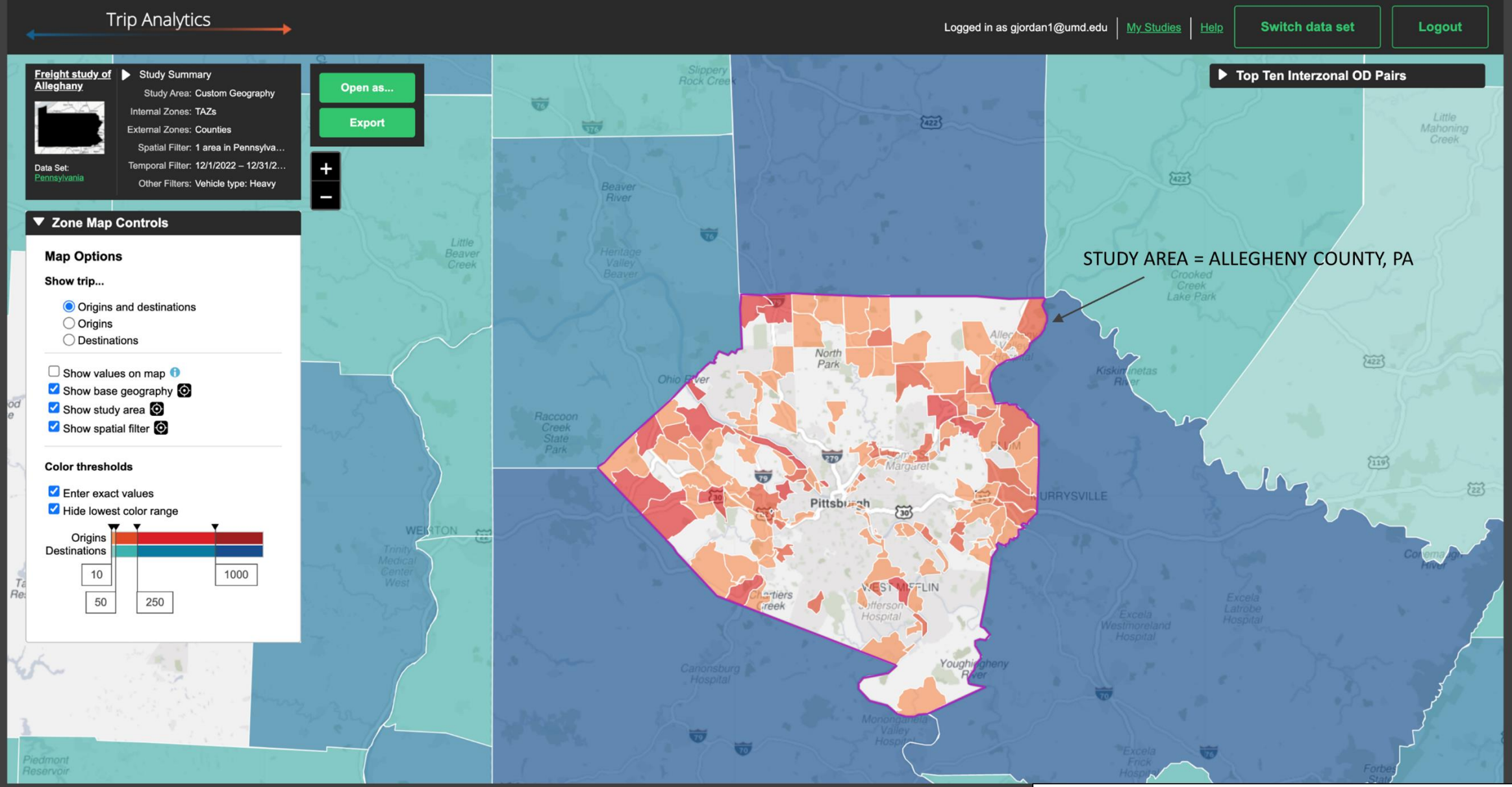


All investigations begin by defining a ***study area:***

- Any polygon can serve as a bounded study area; this divides the map into internal and external regions



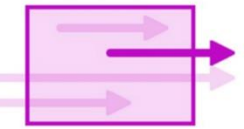
Zone Map report



ZONE MAP of freight OD counts leaving Allegheny County

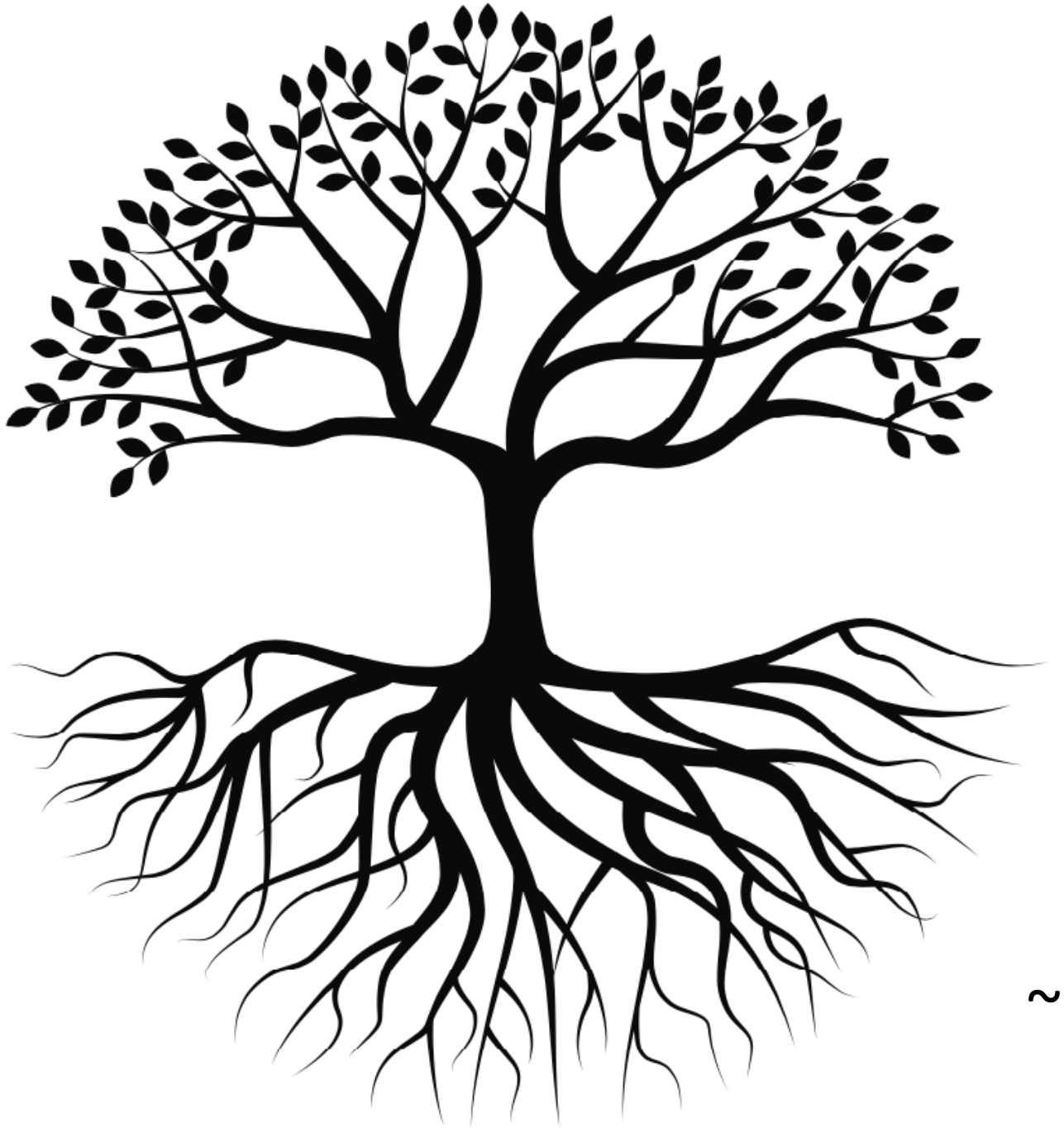
SPATIAL FILTER PASS-THROUGH SETTINGS:

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



(For this query, the study area was chosen as the spatial filter)

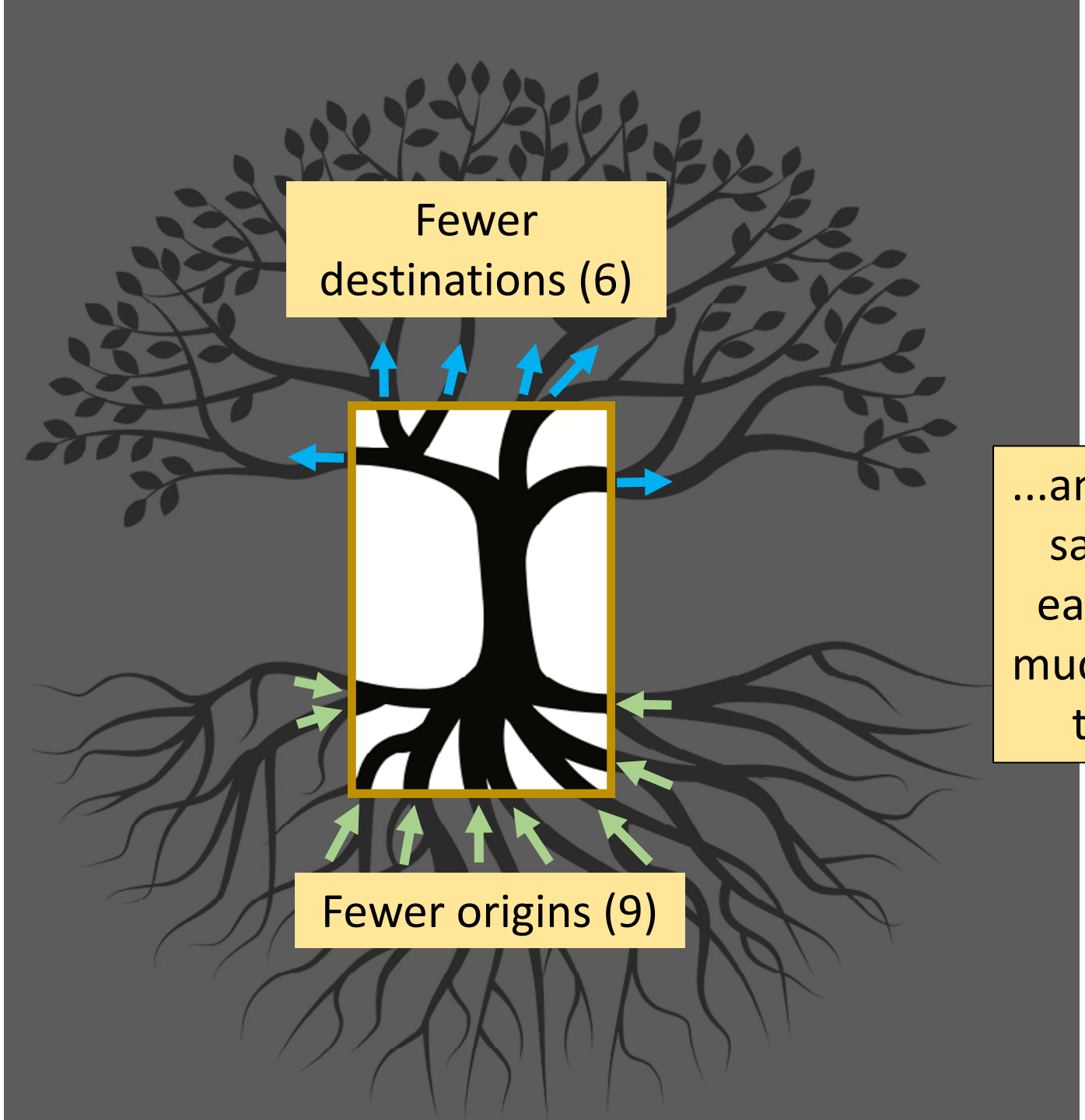
TRAVEL TIME STUDY AREAS



Distributor
network
~1,000
destinations

Collector
network
~ 1,000 origins

For Travel Time Study Areas, trim away the roots and the branches...

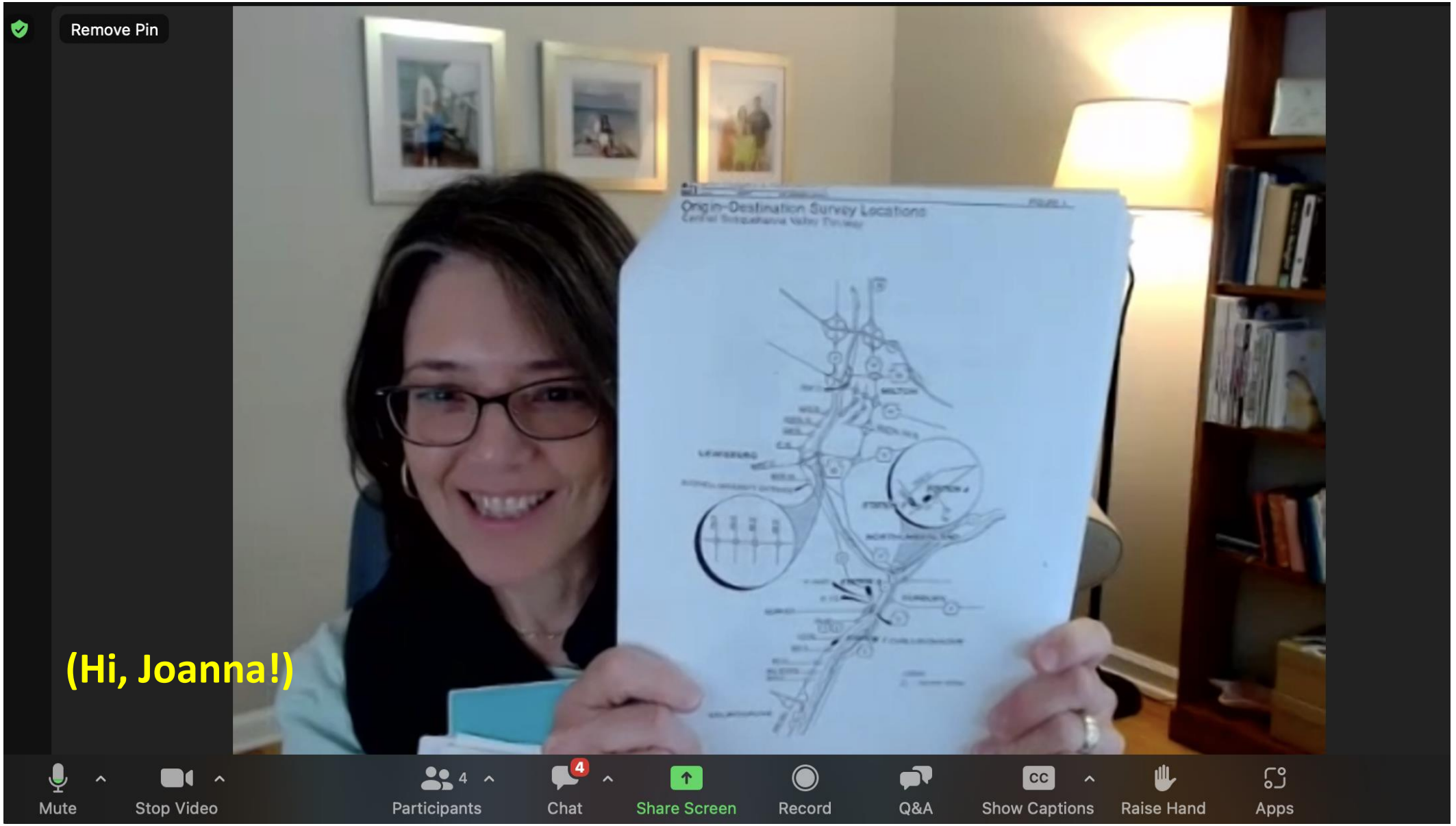


...and much bigger sample size for each OD pair, so much better travel time metrics

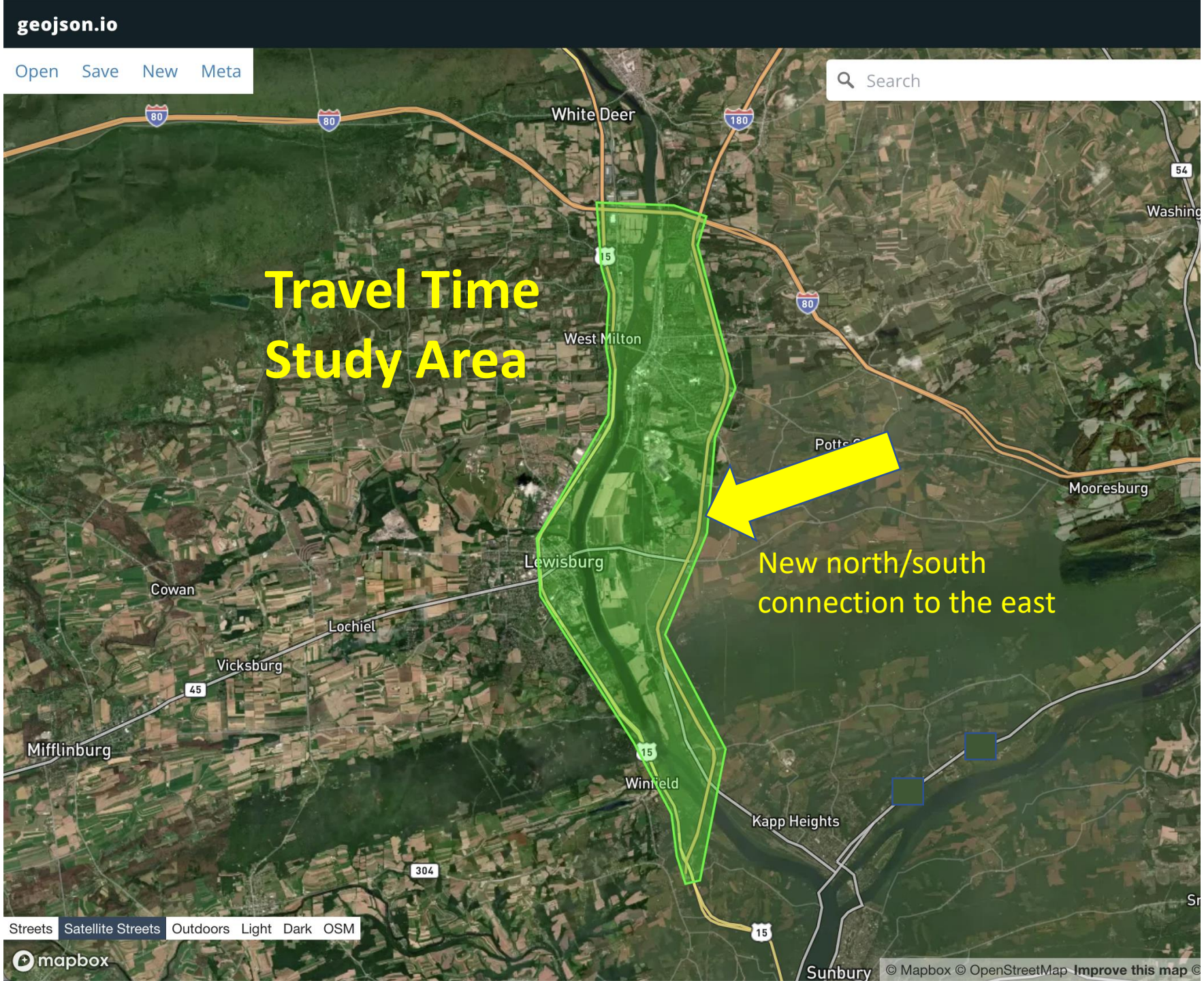
Before & After Ribbon-cutting:

How routes and travel times have changed

(CSVT Project / Route 147)



Postcard O-D survey while planning for this improvement in 1995!


geojson.io
Open
Save
New
Meta
Search
Travel Time
Study Area
New north/south
connection to the east
White Deer
West Milton
Lewisburg
Cowan
Lochiel
Vicksburg
Mifflinburg
Winfield
Kapp Heights
Mooresburg
Sunbury
Streets
Satellite Streets
Outdoors
Light
Dark
OSM
mapbox
© Mapbox © OpenStreetMap Improve this map

Trip Analytics

Logged in as gjordan1@umd.edu | My Studies | Help | Switch data set | Logout

Using the Pennsylvania data set

Switch data set

1. Study: PA CSVT Travel Time Study Area from US 15 / Rte 147 split to I-80

Define Study Area
Option 3: Using Custom Geography as Study Area
Number of study area OD gates: 163

Specify Internal Zones for Origins and Destinations
Subcounties

Specify External Zones
Counties

Name Study

The study name will keep related analyses together for easy retrieval in My Studies.

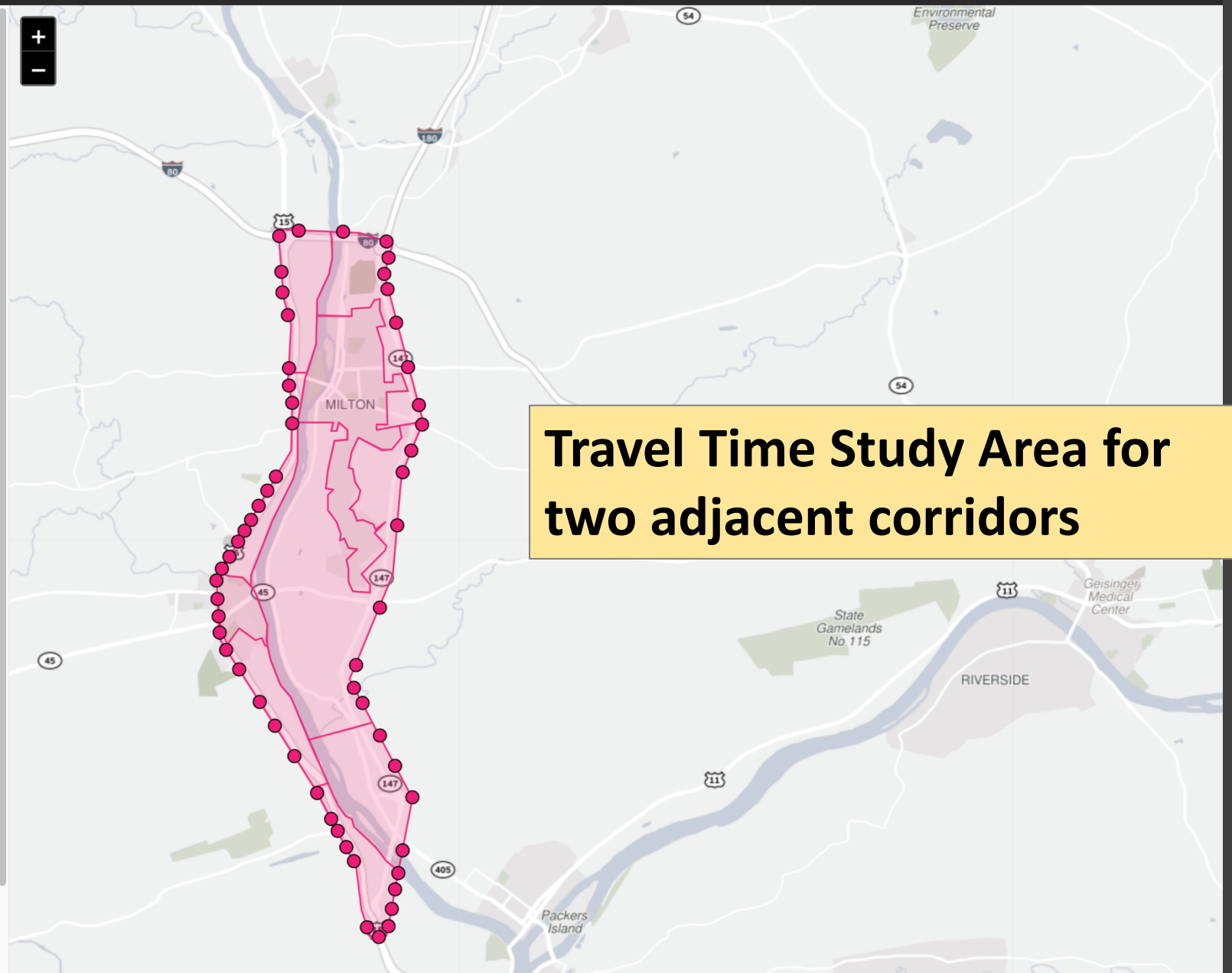
PA CSVT Travel Time Study Area from US 15 / Rte 147 split to I-80

Notes *(optional)*:

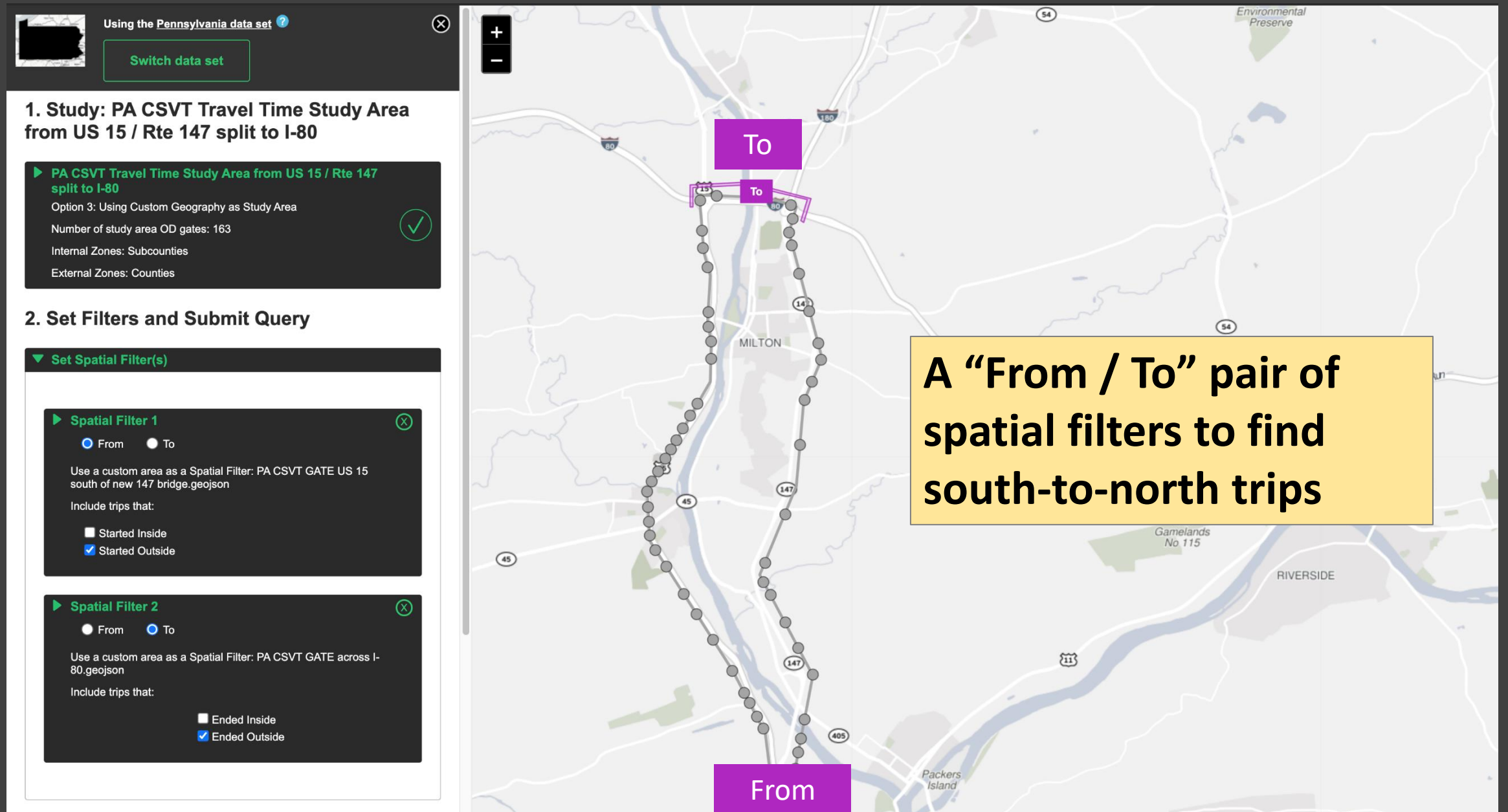
Save Changes | Create Clone Study | Cancel

2. Set Filters and Submit Query

Filter(s)
Spatial Filter(s):
From
Use a custom area as a Spatial Filter: PA CSVT GATE US 15 south of new 147 bridge.geojson
Include trips that: Started Outside
To
Use a custom area as a Spatial Filter: PA CSVT GATE across I-



Travel Time Study Area for two adjacent corridors


Using the Pennsylvania data set
Switch data set
1. Study: PA CSVT Travel Time Study Area from US 15 / Rte 147 split to I-80
PA CSVT Travel Time Study Area from US 15 / Rte 147 split to I-80
Option 3: Using Custom Geography as Study Area
Number of study area OD gates: 163
Internal Zones: Subcounties
External Zones: Counties
2. Set Filters and Submit Query
Set Spatial Filter(s)
Spatial Filter 1
From
To
Use a custom area as a Spatial Filter: PA CSVT GATE US 15 south of new 147 bridge.geojson
Include trips that:
Started Inside
Started Outside
Spatial Filter 2
From
To
Use a custom area as a Spatial Filter: PA CSVT GATE across I-80.geojson
Include trips that:
Ended Inside
Ended Outside
To
To
From
MILTON
RIVERSIDE
Environmental Preserve
Gamelands No 115
Packers Island
A “From / To” pair of spatial filters to find south-to-north trips

Trip Analytics

Logged in as gjordan1@umd.edu | My Studies | Help | Switch data set | Logout

PA CSVT Travel Time Stud…
Data Set: Pennsylvania
Study Area: Custom Geography
Internal Zones: Subcounties
External Zones: OD gates
Spatial Filter: 2 custom areas in Pennsyl…
Temporal Filter: 4/4/2022 – 4/15/2022
Other Filters: Vehicle type: all

4,408 trips in 75 rout

20 min.

Display Options | Open as... | Export

Map	Rank	Route	# of Trips ▼	Light Vehicles	Medium Vehicles	Heavy Vehic…	…ngth	Travel Time	Avg TT	Min TT	Max TT	Reliability
☑	1	US 15; Westbranch Highway, US 15; South Derr Drive, US 15; North Derr Drive, US 15	3423	3125	152	146		16 m	17 m	9 m	4 h 15 m	1.09
☑	2	US 15; Westbranch Highway, US 15; South Derr Drive, US 15; North Derr Drive, US 15	405	320	49	36	13…	17 m	18 m	13 m	1 h 34 m	1.11
☑	3	US 15; Westbranch Highway, US 15; South Derr Drive, US 15; North Derr Drive, US 15; I 80; I 180	310	218	49	43	15 mi	20 m	21 m	14 m	3 h 07 m	1.09
☑	4	US 15; Westbranch Highway, US 15; South Derr Drive, US 15; North Derr Drive, US 15; I 80	48	27	21	0	15 mi	19 m	19 m	15 m	30 m	1.09
	Total		4408	3894	285	229						

≡

Chrome File Edit View History Bookmarks Profiles Tab Window Help zoom Thu Feb 16 3:19 PM

PA CSVT Travel Time Stud…

Data Set: Pennsylvania

Study Area: Custom Geography
Internal Zones: Subcounties
External Zones: OD gates

Spatial Filter: 2 custom areas in Pennsyl…
Temporal Filter: 12/5/2022 – 12/16/2022
Other Filters: Vehicle type: all

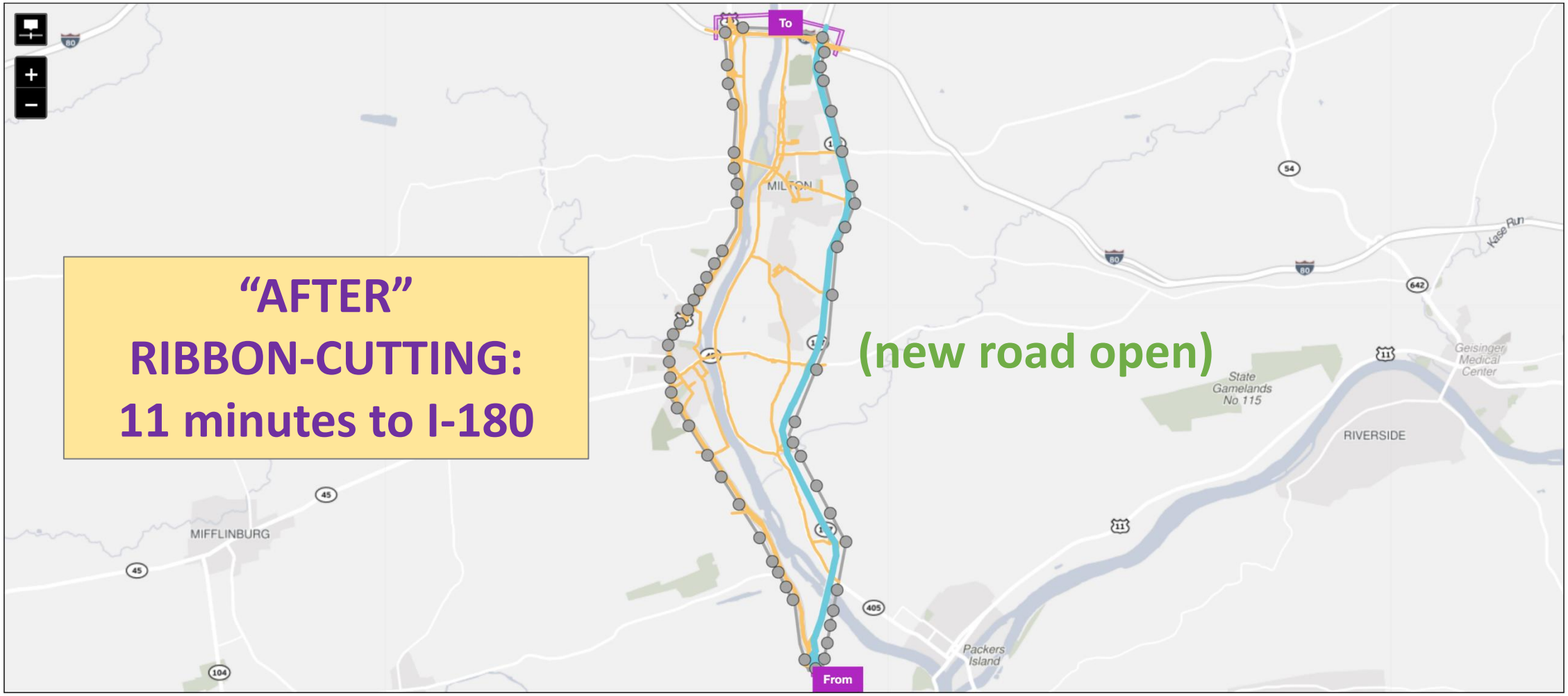
3,085 trips in 135 routes

11 min.

Display Options | Open as... | Export

Map	Rank	Route	# of Trips ▼	Light Vehicles	Medium Vehicles	Heavy Vehicles	Leng…	…ver Time	Avg TT	Min TT	Max TT	Reliability
☑	1	▶ US 15; Westbranch Highway, US 15; Central Susquehanna Valley Thruway, PA 147; Central Susquehanna Valley	1404	849	330	225	12 mi	11 m	11 m	8 m	51 m	1.06
☑	2	US 15; Westbranch Highway, US 15; South Derr Drive, US 15; North Derr Drive, US 15	851	701	84	66	13 mi	16 m	17 m	11 m	1 h 37 m	1.1
☑	3	▶ US 15; Westbranch Highway, US 15; Central Susquehanna Valley Thruway, PA 147; Central Susquehanna Valley	265	217	39	9	14 mi	12 m	13 m	11 m	37 m	1.06
☑	4	US 15; Westbranch Highway, US 15; South Derr Drive, US 15; North Derr Drive, US 15	121	81	17	23	13 mi	17 m	18 m	13 m	26 m	1.09
	Total		3085	2153	563	369						

≡



LIVE DEMO

OTHER APPLICATIONS

Travel-time study area
to measure arterial corridor travel times
before and after signal re-timing

King-of-Prussia, PA (US-202)

Google STREET VIEW

Trip Analytics

Logged in as gjordan1@umd.edu | My Studies | Help | Switch data set | Logout

Using the Pennsylvania data set

Switch data set

1. Study: PA Signal Retiming US 202 corridor between I-76 and Norrisville

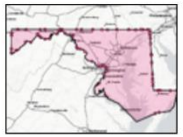
Define Study Area

Your study area may be bounded or unbounded. If bounded, c
for trips that started or ended externally are reported as the ro
those trips crossed the boundary line (these are called *OD gates*). Otherwise,
internal zones are used to report all origins and destinations.

Choose one of the following options:

Option 1

Do not bound the study area.



Option 2

Use the data set's base geography to bound the study area.

Option 3

Use a custom geography to bound the study area.

○ Use Predefined Areas ◉ Load File

Upload a GeoJSON file to replace PA US202 corridor King of P to Norrisville.geojson with a new area.
The file must contain only a single polygon or multi-polygon. Geometry and feature collections are not accepted.

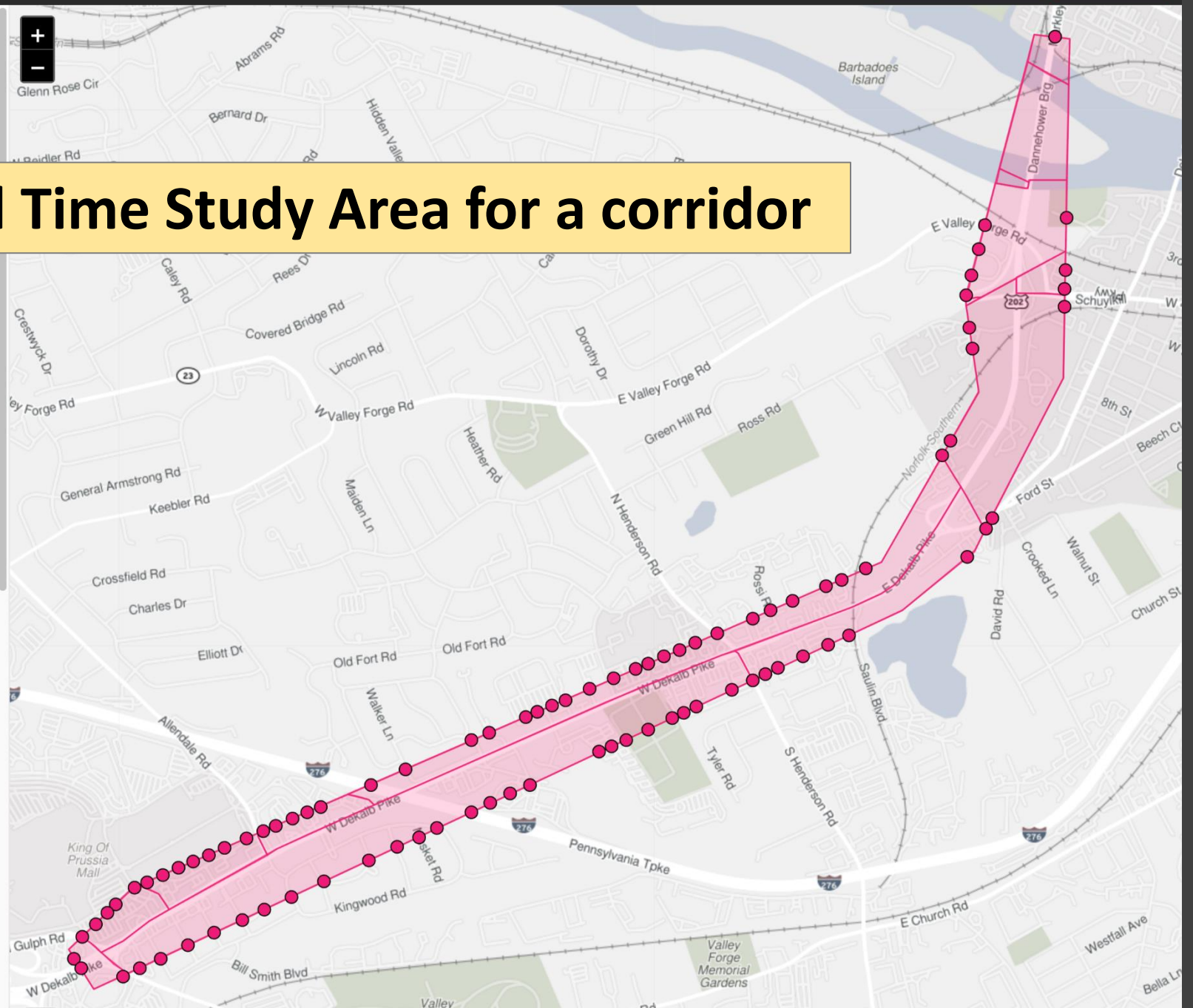
Choose File No file chosen

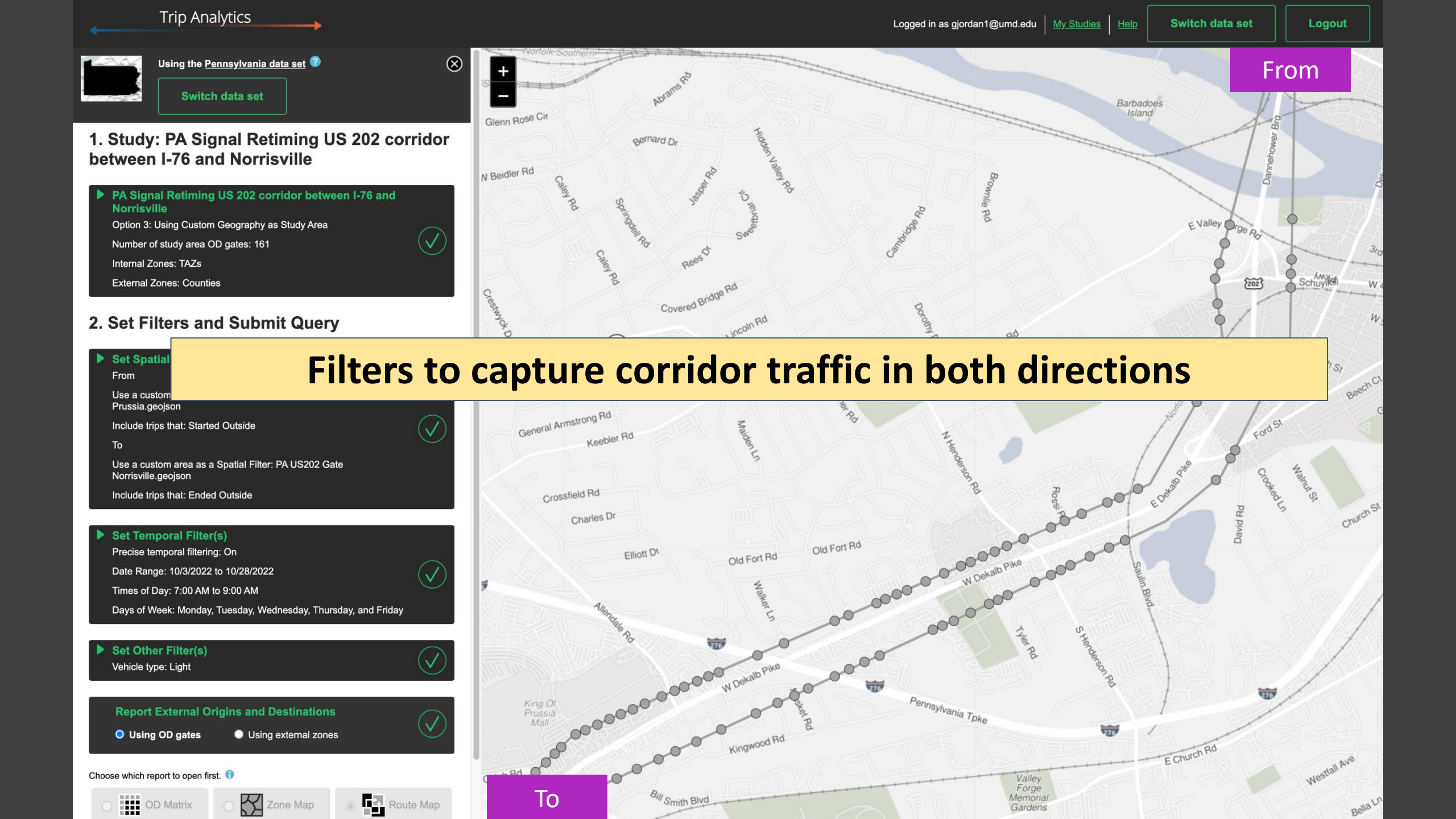
If a multipolygon is used for the study area, only the largest polygon will be used to generate OD gates.

Next

Specify Internal Zones for Origins and Destinations

Travel Time Study Area for a corridor




Trip Analytics
Logged in as gjordan1@umd.edu
My Studies
Help
Switch data set
Logout
Using the Pennsylvania data set
Switch data set
1. Study: PA Signal Retiming US 202 corridor between I-76 and Norrisville
PA Signal Retiming US 202 corridor between I-76 and Norrisville
Option 3: Using Custom Geography as Study Area
Number of study area OD gates: 161
Internal Zones: TAZs
External Zones: Counties
2. Set Filters and Submit Query
Set Spatial
From
Use a custom
Prussia.geojson
Include trips that: Started Outside
To
Use a custom area as a Spatial Filter: PA US202 Gate Norrisville.geojson
Include trips that: Ended Outside
Set Temporal Filter(s)
Precise temporal filtering: On
Date Range: 10/3/2022 to 10/28/2022
Times of Day: 7:00 AM to 9:00 AM
Days of Week: Monday, Tuesday, Wednesday, Thursday, and Friday
Set Other Filter(s)
Vehicle type: Light
Report External Origins and Destinations
Using OD gates
Using external zones
Choose which report to open first.
OD Matrix
Zone Map
Route Map
From
To
Filters to capture corridor traffic in both directions
Norfolk Southern
Abrams Rd
Glenn Rose Cir
Bernard Dr
Hidden Valley Rd
N Beidler Rd
Caley Rd
Springdell Rd
Jasper Rd
Sweetbriar Cir
Rees Dr
Cambridge Rd
Brownlie Rd
Barbadoes Island
Dannehower Brg
E Valley Forge Rd
Schuylkill
Covered Bridge Rd
Lincoln Rd
Dorothy Rd
General Armstrong Rd
Keebler Rd
Maiden Ln
N Henderson Rd
Ford St
Crossfield Rd
Charles Dr
Elliott Dr
Old Fort Rd
Old Fort Rd
E Dekalb Pike
Crooked Ln
Walnut St
Church St
David Rd
W Dekalb Pike
Walker Ln
Allendale Rd
Saulin Blvd
Tyler Rd
S Henderson Rd
King Of Prussia Mall
W Dekalb Pike
Pennsylvania Tpke
Kingwood Rd
E Church Rd
Bill Smith Blvd
Valley Forge Memorial Gardens
Westfall Ave
Bella Ln

BEFORE RETIMING

0:05:54

April 1-30 weekdays 2022, US 202 from I-76 to Norrisville (EB / light vehicles)

Rank	Route	# of Trips	Light Vehicles	Length	Travel Time	Avg TT	Min TT	Max TT	Reliability	
1	West Dekalb Pike, US 202; Dekalb Pike; William F. Dannehower M	283	283	3.29	0:05:54	0:07:06	0:03:24	1:24:47	1.18	Through-lanes at origin
2	North Gulph Road; West Dekalb Pike, US 202; Dekalb Pike; Willian	65	65	3.33	0:05:32	0:05:44	0:03:34	0:11:08	1.25	Left lane at origin
3	William F. Dannehower Memorial Bridge, US 202; Dekalb Pike, US	13	13	6.48	0:29:57	0:59:08	0:23:33	4:57:06	1.84	
4	Dekalb Street; West Dekalb Pike, US 202; William F. Dannehower	3	3	3.62	0:34:21	0:34:32	0:32:46	0:36:29	1.06	
5	West Dekalb Pike, US 202; North Gulph Road; Saulin Boulevard; D	2	2	1.62	0:12:32	0:15:04	0:12:32	0:17:37	1.4	
6	West De									
7	West De									
8	North G									
9	North G									
10	William									
11	William F. Dannehower Memorial Bridge, US 202; Dekalb Pike, US									
12	West Dekalb Pike, US 202; Long Road; Wilson Road; Forge Road; F	1	1	2.32	0:05:20	0:05:20	0:05:20	0:05:20	1	
13	West Dekalb Pike, US 202; Allendale Road; William F. Dannehowe	1	1	4.76	1:11:44	1:11:44	1:11:44	1:11:44	1	
14	West Dekalb Pike, US 202; Dekalb Pike; William F. Dannehower M	1	1	5.92	1:39:37	1:39:37	1:39:37	1:39:37	1	
15	William F. Dannehower Memorial Bridge, US 202; Dekalb Pike, US	1	1	6.29	2:02:15	2:02:15	2:02:15	2:02:15	1	

BEFORE RETIMING: Median "through" travel time: 5 minutes 54 seconds (3.29 miles)

AFTER RETIMING

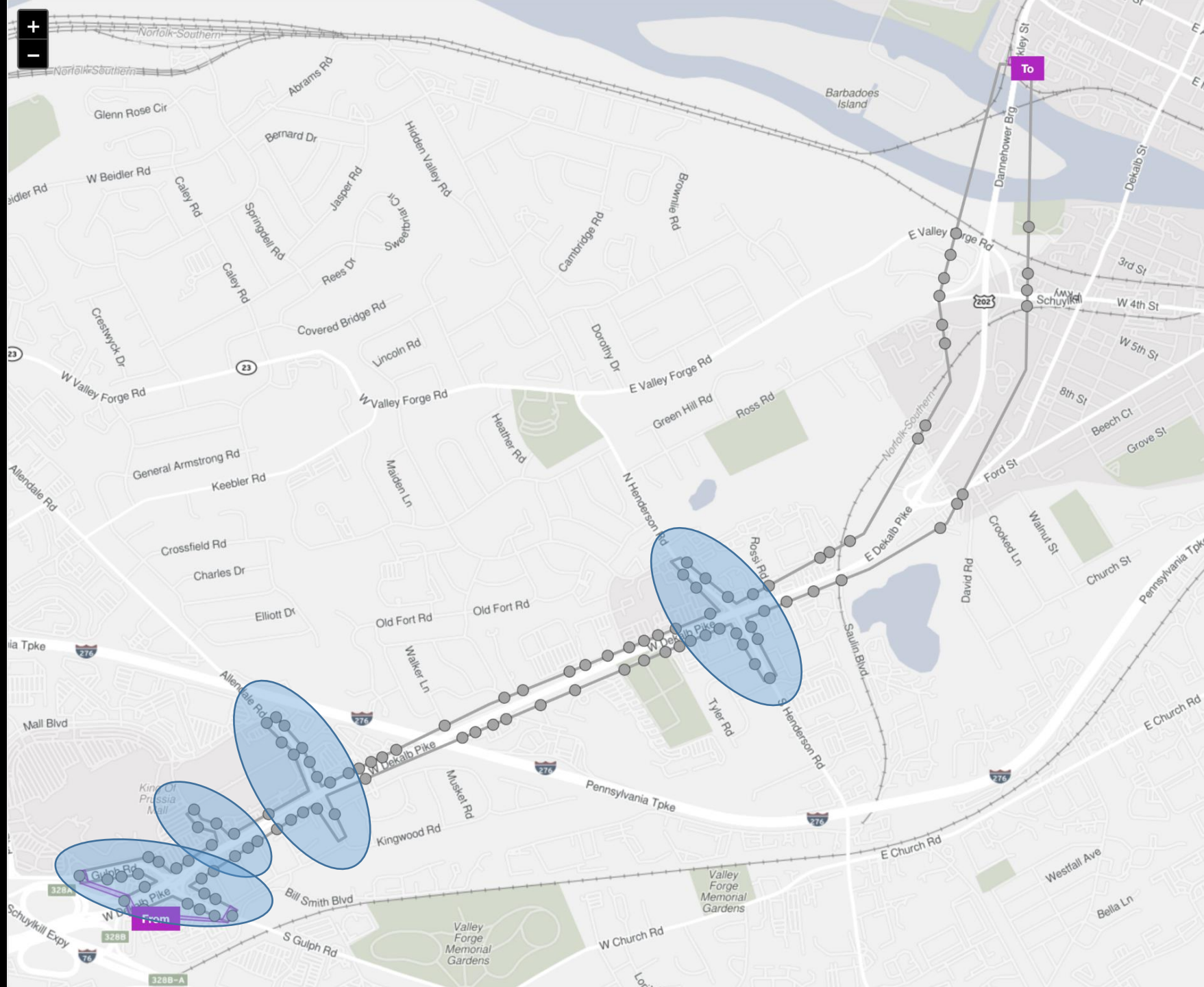
0:05:20

Nov 28 - Dec 22 weekdays 2022, US 202 from I-76 to Norrisville (EB / light vehicles)

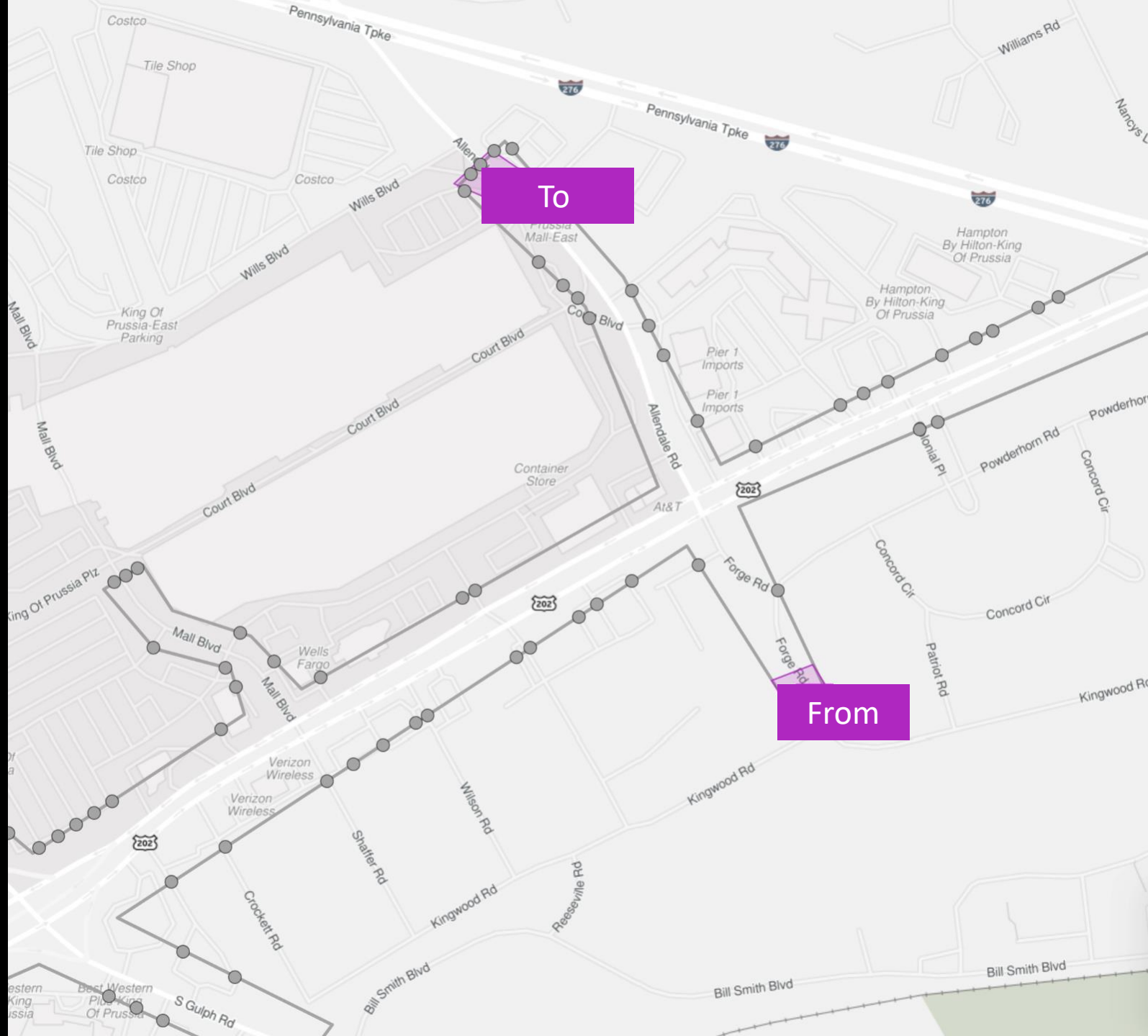
Rank	Route	# of Trips	Light Vehicles	Length	Travel Time	Avg TT	Min TT	Max TT	Reliability	
1	West Dekalb Pike, US 202; Dekalb Pike; William F. Dannehower M	136	136	3.29	0:05:20	0:06:27	0:03:10	1:11:12	1.25	Through-lanes at origin
2	North Gulph Road; West Dekalb Pike, US 202; Dekalb Pike; Willian	34	34	3.33	0:05:10	0:05:17	0:03:15	0:09:39	1.2	Left lane at origin
3	West Dekalb Pike, US 202; Dekalb Pike; William F. Dannehower M	7	7	6.44	0:24:47	0:27:08	0:19:19	0:38:38	1.37	
4	West Dekalb Pike, US 202; US 202; Dekalb Street, US 202; Ross Ro	1	1	1.72	0:21:54	0:21:54	0:21:54	0:21:54	1	
5	West Dekalb Pike, US 202; Brandywine Lane; Dekalb Pike; William	1	1	4.42	0:27:21	0:27:21	0:27:21	0:27:21	1	
6	North G									
7	West De									
8	William									
9	King Circle; West Dekalb Pike, US 202; William F. Dannehower Me	1	1	3.91	1:47:18	1:47:18	1:47:18	1:47:18	1	
10	North Gulph Road; West Dekalb Pike, US 202; Dekalb Pike; Willian	1	1	6.16	0:34:49	0:34:49	0:34:49	0:34:49	1	
11	North Gulph Road; West Dekalb Pike, US 202; Dekalb Pike	1	1	1.06	0:02:30	0:02:30	0:02:30	0:02:30	1	
12	West Dekalb Pike, US 202; William F. Dannehower Memorial Bridg	1	1	1.75	0:33:14	0:33:14	0:33:14	0:33:14	1	
13	West Dekalb Pike, US 202; Dekalb Pike, US 202; Dekalb Pike; Willi	1	1	3.25	0:05:51	0:05:51	0:05:51	0:05:51	1	

AFTER RETIMING: <u>34 seconds faster</u>

What if we redraw the travel-time study area to evaluate cross street travel times?



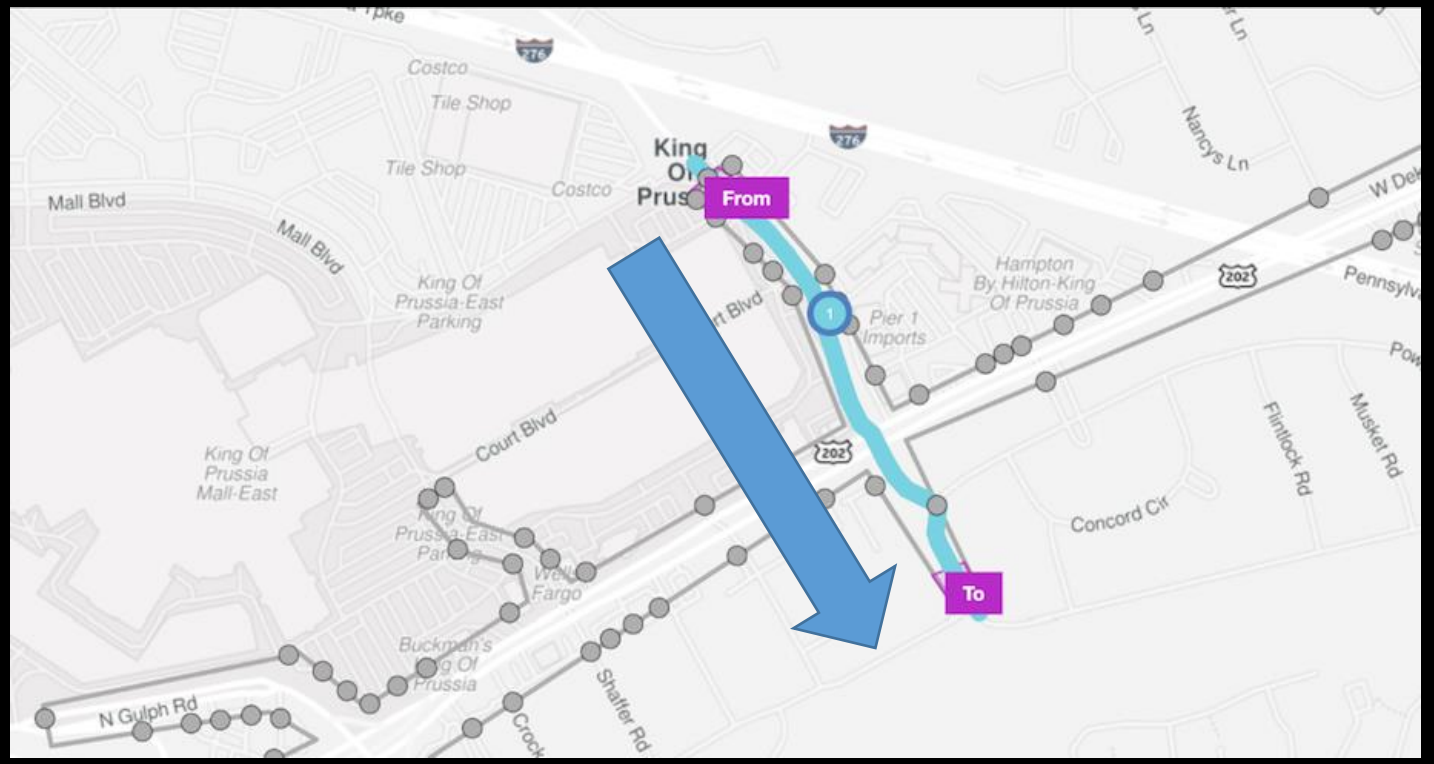
Filters to capture crossing traffic in both southbound and northbound directions



2022 WEEKDAY EVENINGS, 4-6 PM

NOV 28 – DEC 22

Southbound across US-202 at Allendale / Forge



BEFORE

# of Trips ▼	Light Vehicles	Length	Avg TT	5% TT	50% TT	95% TT	Reliability
67	67	0 mi	2 m	1 m	2 m	4 m	1.27

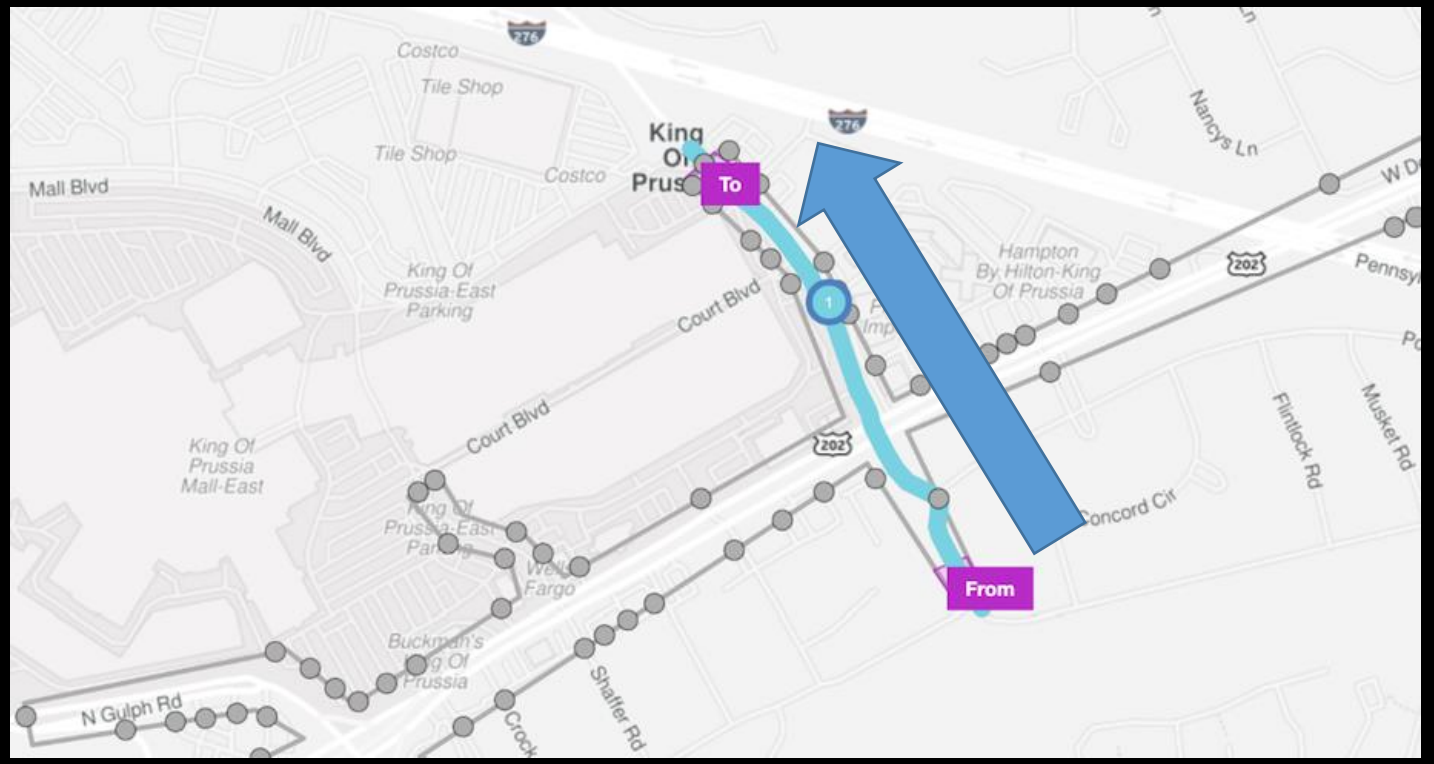
AFTER

# of Trips ▼	Light Vehicles	Length	Avg TT	5% TT	50% TT	95% TT	Reliability
40	40	0 mi	2 m	1 m	1 m	2 m	1.43

2022 WEEKDAY EVENINGS, 4-6 PM

NOV 28 – DEC 22

Northbound across US 202 at Allendale / Forge



BEFORE

# of Trips ▼	Light Vehicles	Length	Avg TT	5% TT	50% TT	95% TT	Reliability
76	76	0 mi	2 m	1 m	2 m	4 m	1.43

AFTER

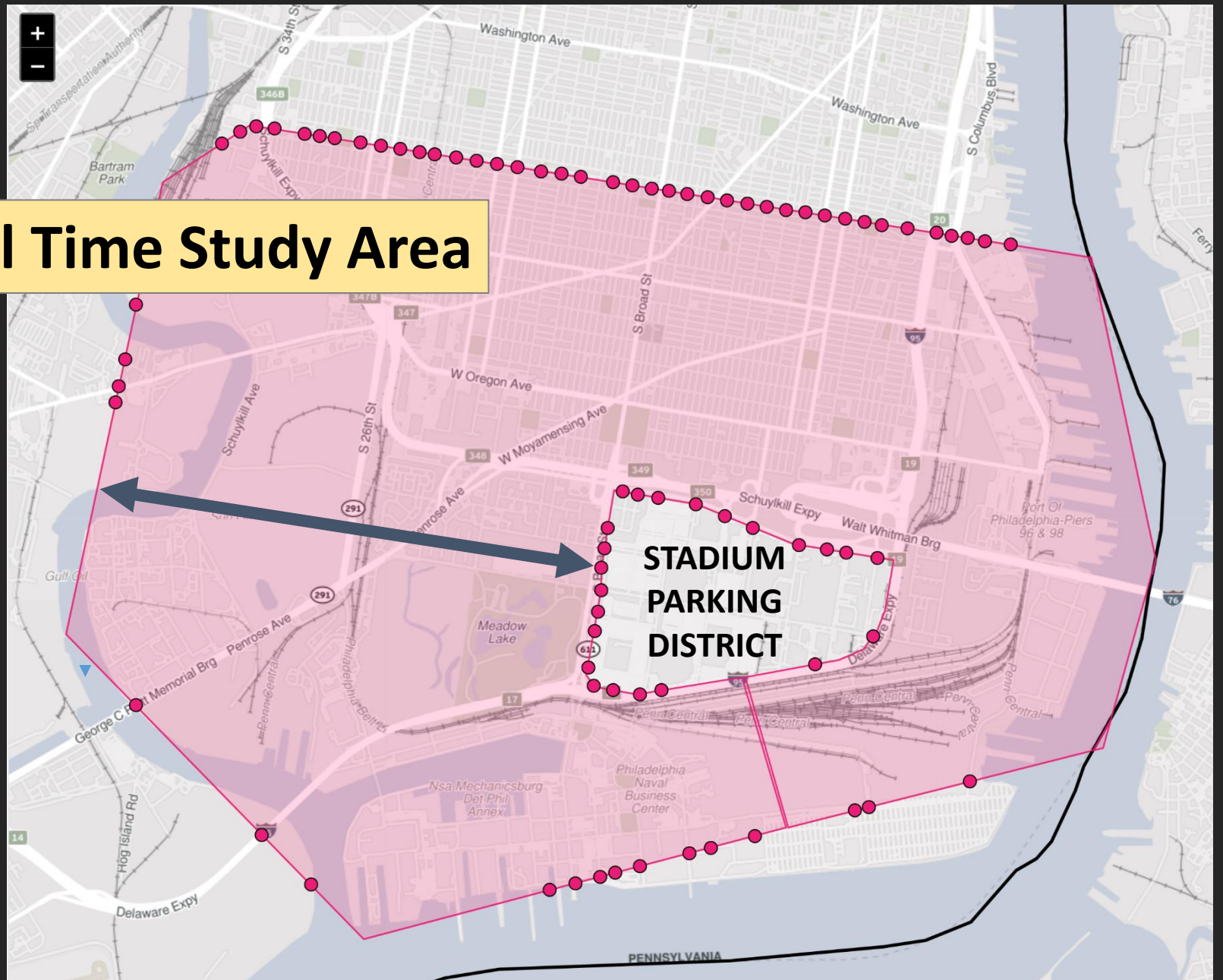
# of Trips ▼	Light Vehicles	Length	Avg TT	5% TT	50% TT	95% TT	Reliability
27	27	0 mi	3 m	1 m	3 m	6 m	1.43

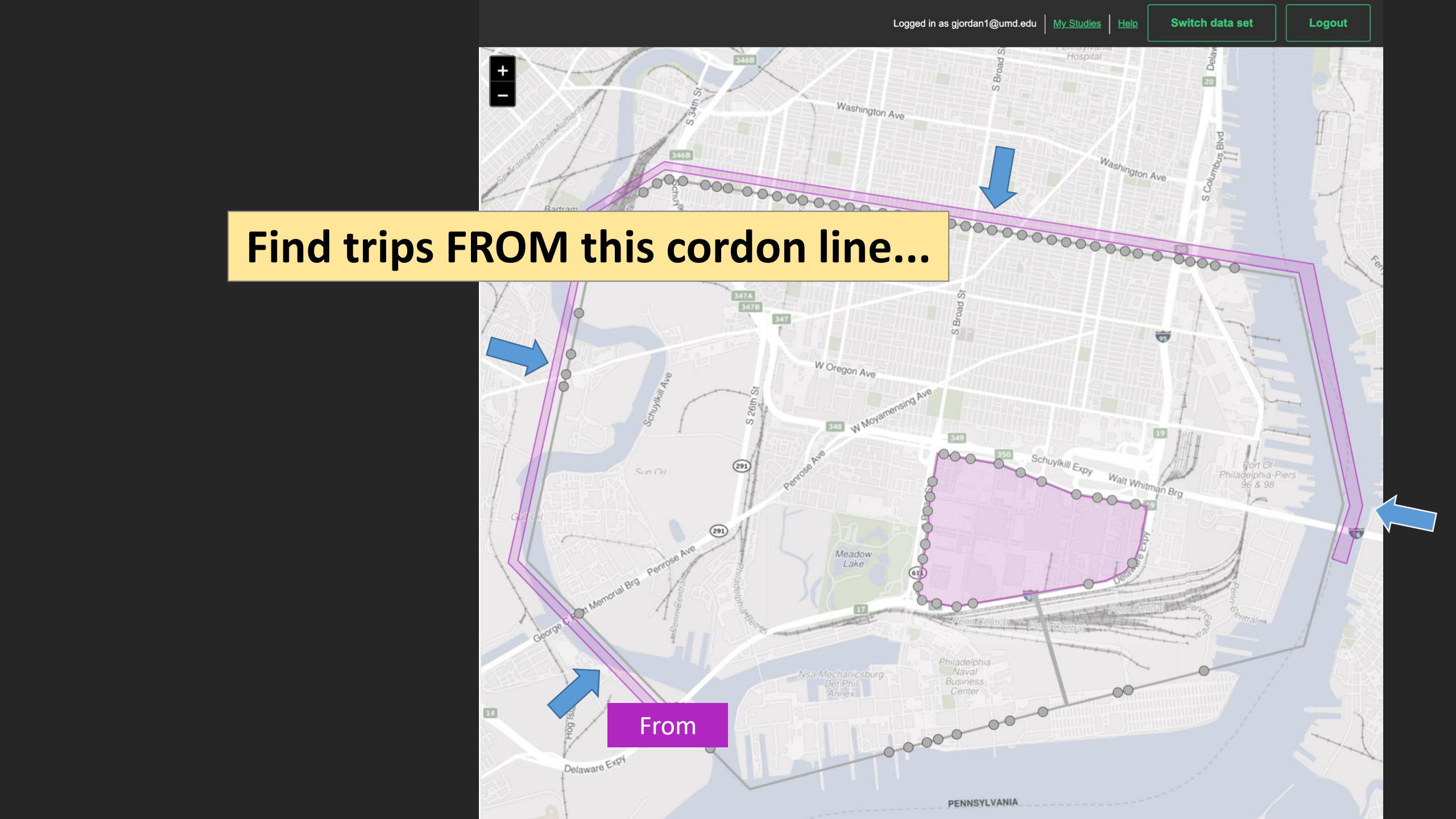
Last-Mile Travel Time Analysis

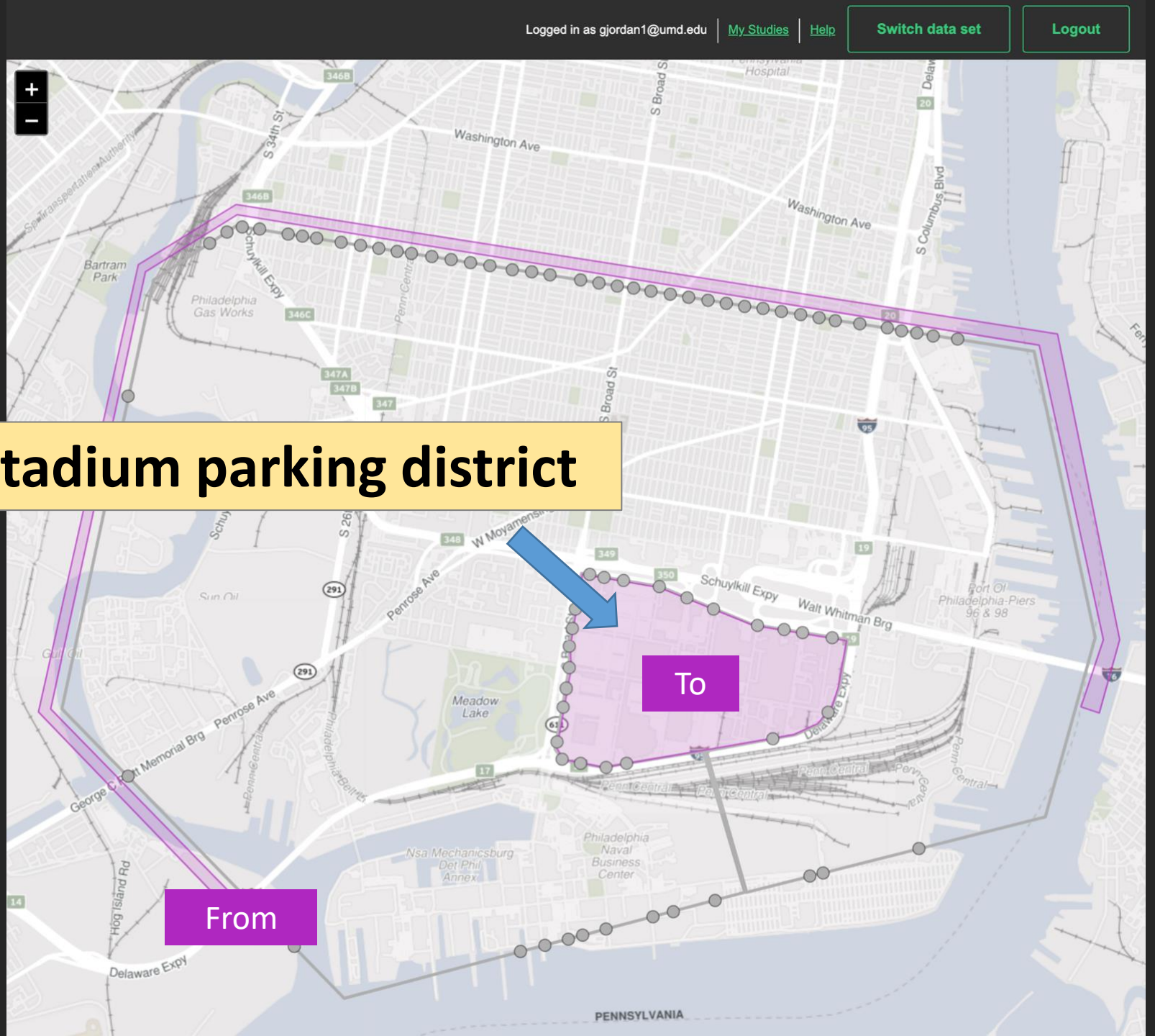
Philadelphia Stadium Parking District

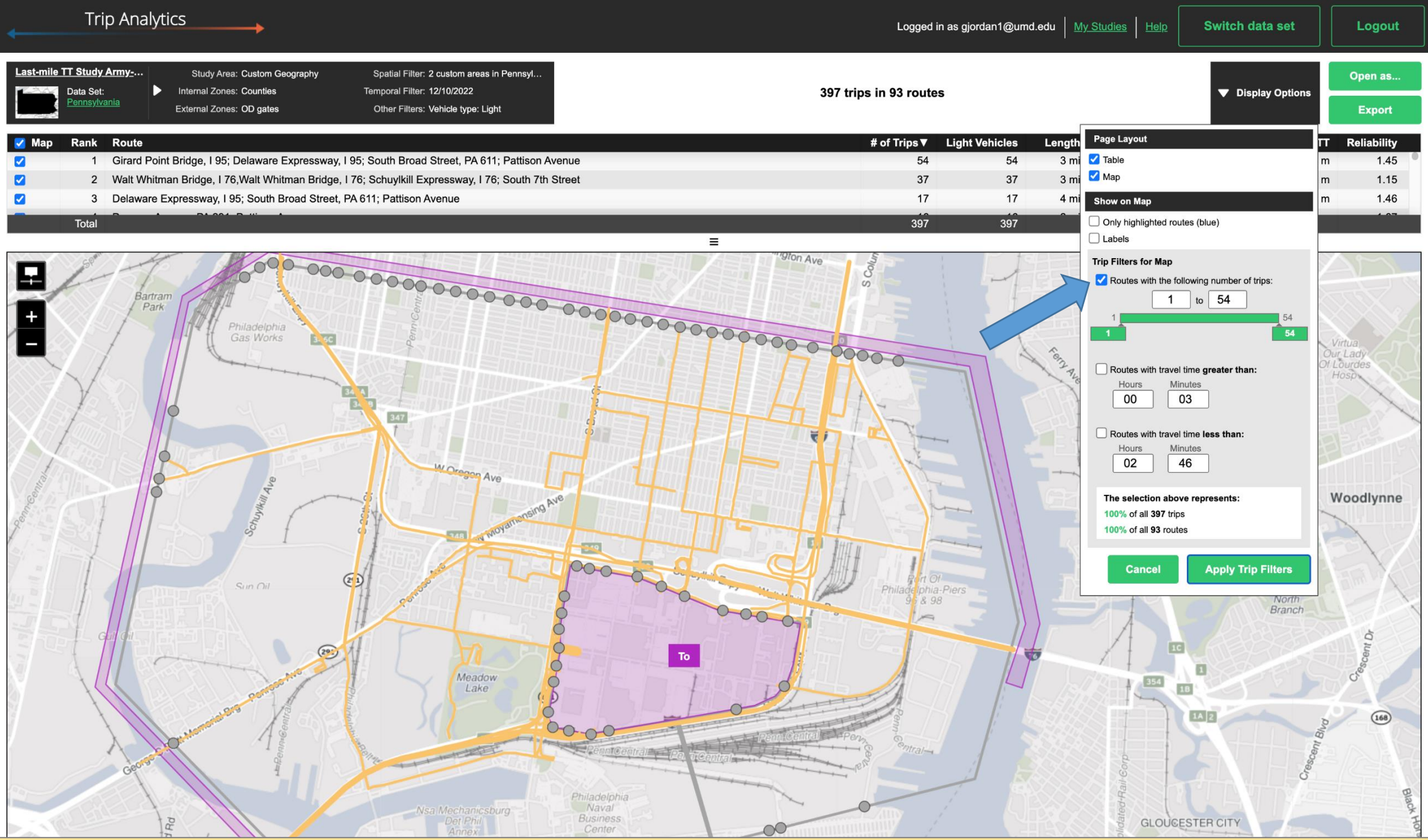
Pre-game Analysis for December 10, 2022

“Last-mile” Travel Time Study Area




Logged in as gjordan1@umd.edu
My Studies
Help
Switch data set
Logout
Find trips FROM this cordon line...
From
Washington Ave
S 34th St
S Broad St
S Columbus Blvd
W Oregon Ave
W Moyamensing Ave
Schuylkill Ave
S 26th St
Penrose Ave
Schuylkill Expy
Walt Whitman Brg
Delaware Expy
Meadow Lake
Philadelphia Naval Business Center
PENNSYLVANIA


Logged in as gjordan1@umd.edu
My Studies
Help
Switch data set
Logout
...to this stadium parking district
To
From
Washington Ave
Schuylkill Expy
Penrose Ave
Walt Whitman Brg
Delaware Expy
PENNSYLVANIA



(viewing all routes followed by the 397 trips found in the database)

Trip Analytics

Logged in as gjordan1@umd.edu | My Studies | Help | Switch data set | Logout

Last-mile TT Study Army-...
Data Set: Pennsylvania
Study Area: Custom Geography
Internal Zones: Counties
External Zones: OD gates
Spatial Filter: 2 custom areas in Pennsyl...
Temporal Filter: 12/10/2022
Other Filters: Vehicle type: Light

397 trips in 93 routes

Display Options | Open as... | Export

Map	Rank	Route	# of Trips ▼	Light Vehicles	Length	TT	Reliability
☑	1	Girard Point Bridge, I 95; Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	54	54	3 mi	m	1.45
☑	2	Walt Whitman Bridge, I 76,Walt Whitman Bridge, I 76; Schuylkill Expressway, I 76; South 7th Street	37	37	3 mi	m	1.15
☑	3	Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	17	17	4 mi	m	1.46
	Total		397	397			

Page Layout
- ☑ Table
- ☑ Map

Show on Map
- ☐ Only highlighted routes (blue)
- ☐ Labels

Trip Filters for Map
- ☑ Routes with the following number of trips: 2 to 54
- ☐ Routes with travel time **greater than:** Hours 00 Minutes 03
- ☐ Routes with travel time **less than:** Hours 02 Minutes 46

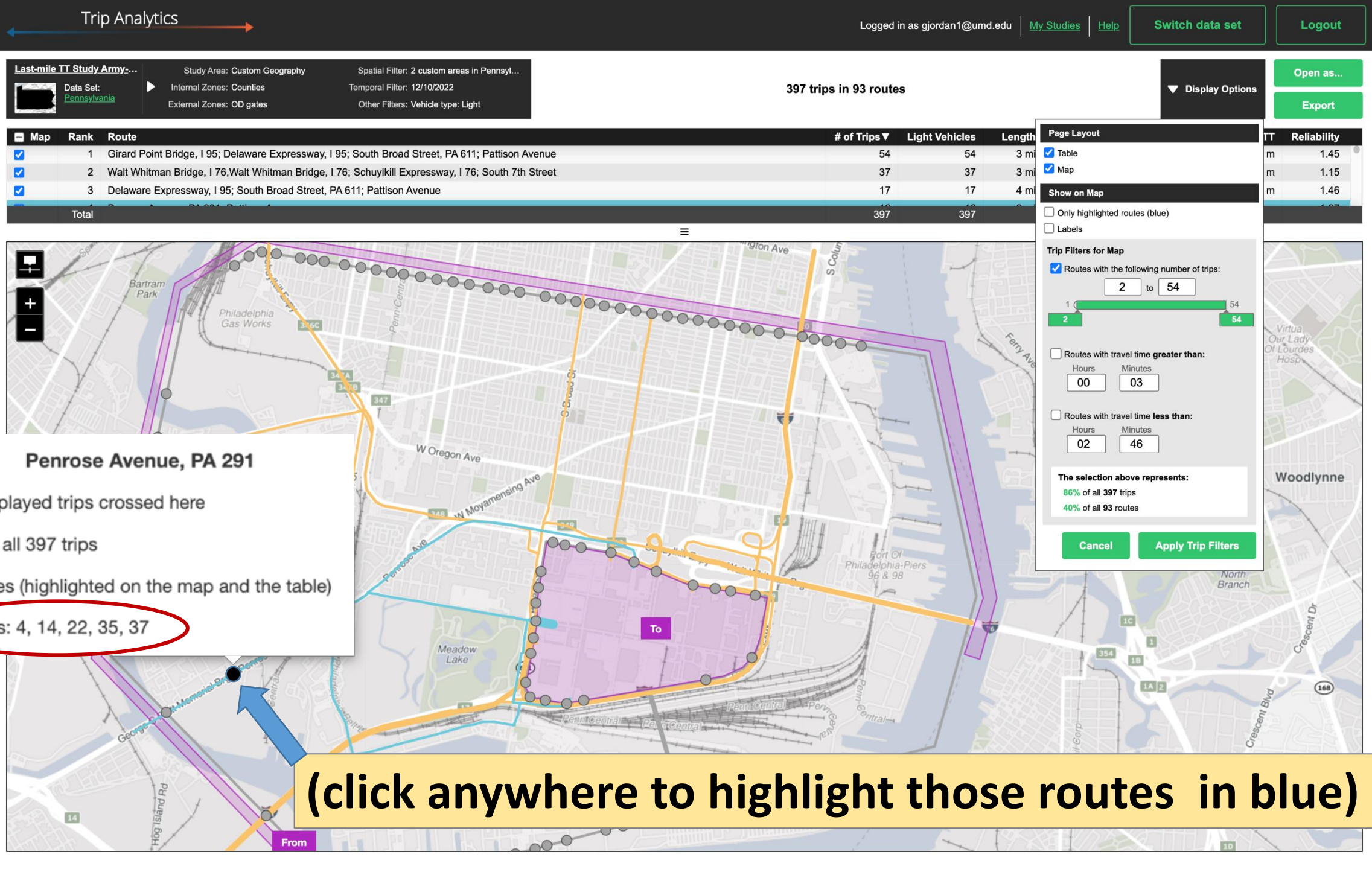
The selection above represents:
86% of all 397 trips
40% of all 93 routes

Cancel | Apply Trip Filters

To

From

(viewing only routes w/ 2+ trips)


Trip Analytics
Logged in as gjordan1@umd.edu
My Studies
Help
Switch data set
Logout
Last-mile TT Study Army-...
Data Set: Pennsylvania
Study Area: Custom Geography
Internal Zones: Counties
External Zones: OD gates
Spatial Filter: 2 custom areas in Pennsyl...
Temporal Filter: 12/10/2022
Other Filters: Vehicle type: Light
397 trips in 93 routes
Display Options
Open as...
Export
Map
Rank
Route
# of Trips
Light Vehicles
Length
TT
Reliability
1 Girard Point Bridge, I 95; Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue 54 54 3 mi m 1.45
2 Walt Whitman Bridge, I 76,Walt Whitman Bridge, I 76; Schuylkill Expressway, I 76; South 7th Street 37 37 3 mi m 1.15
3 Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue 17 17 4 mi m 1.46
Total 397 397
Page Layout
Table
Map
Show on Map
Only highlighted routes (blue)
Labels
Trip Filters for Map
Routes with the following number of trips:
2 to 54
Routes with travel time greater than:
Hours 00 Minutes 03
Routes with travel time less than:
Hours 02 Minutes 46
The selection above represents:
86% of all 397 trips
40% of all 93 routes
Cancel
Apply Trip Filters
Penrose Avenue, PA 291
34 displayed trips crossed here
9% of all 397 trips
5 routes (highlighted on the map and the table)
Routes: 4, 14, 22, 35, 37
To
From
(click anywhere to highlight those routes in blue)

Trip Analytics

Logged in as gjordan1@umd.edu | My Studies | Help | Switch data set | Logout

Last-mile TT Study Army-...

Data Set: Pennsylvania

Study Area: Custom Geography
Internal Zones: Counties
External Zones: OD gates

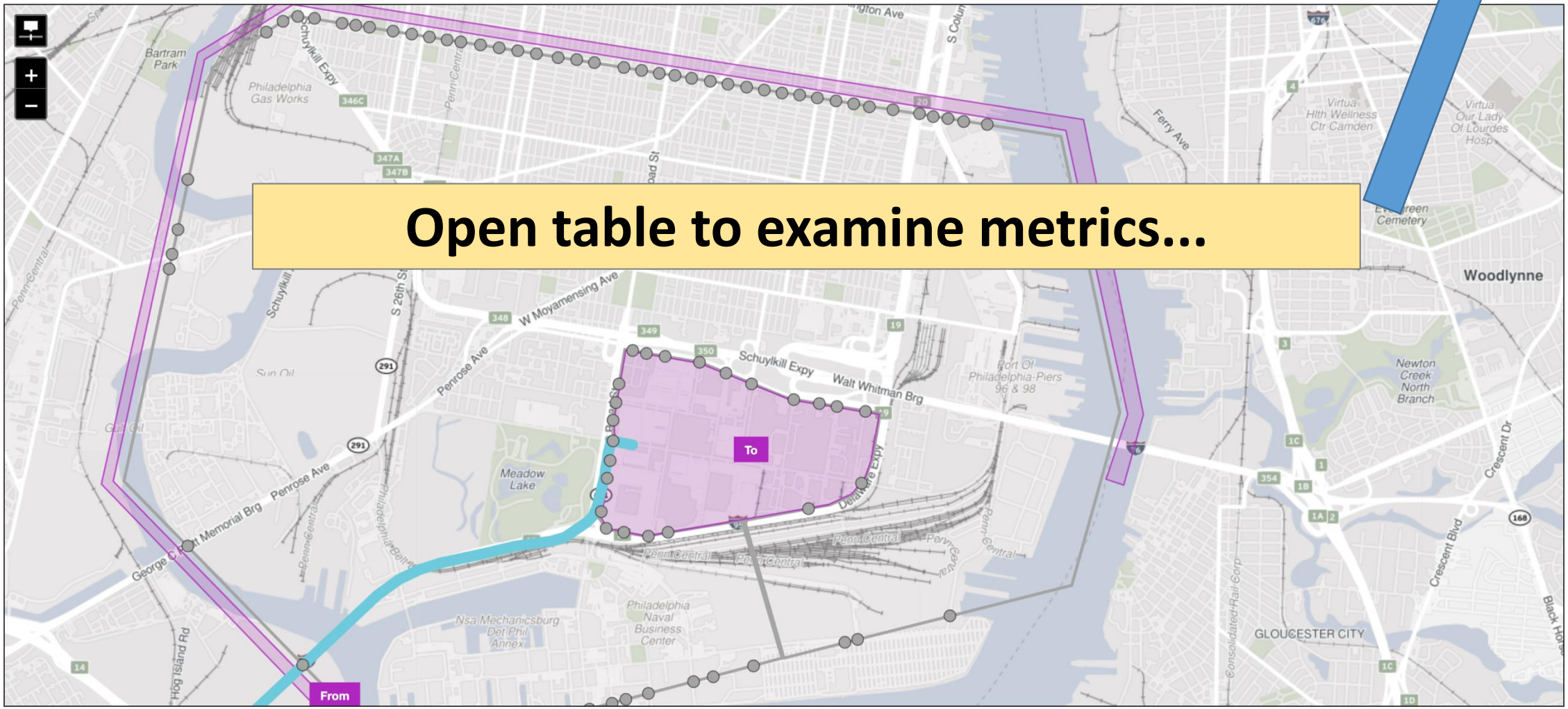
Spatial Filter: 2 custom areas in Pennsyl...
Temporal Filter: 12/10/2022
Other Filters: Vehicle type: Light

397 trips in 93 routes

Display Options | Open as... | Export

Map	Rank	Route	# of Trips ▼	Light Vehicles	Length	Travel Time	Avg TT	5% TT	95% TT	ity
☑	1	Girard Point Bridge, I 95; Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	54	54	3 mi	6 m	6 m	3 m	10 m	5
☑	2	Walt Whitman Bridge, I 76,Walt Whitman Bridge, I 76; Schuylkill Expressway, I 76; South 7th Street	37	37	3 mi	3 m	4 m	3 m	5 m	1.15
☑	3	Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	17	17	4 mi	8 m	9 m	6 m	15 m	1.46
	Total		397	397						

Open table to examine metrics...



Last-mile TT Study Army-Navy-routeSummaryTable - Excel

Home Insert Page Layout Formulas Data Review View Power Pivot Tell me what you want to do...

05:31 (28 mph)

A	B	C	D		F					K
Rank	Route	# of Trips	Light Vehicles	Leng	50%TT	Avg TT	5% TT	95% TT	Reliability	dian Speed
1	Girard Point Bridge, I 95; Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	54	54	2.59	0:05:31	0:05:58	0:03:25	0:09:31	1.45	28
2	Walt Whitman Bridge, I 76,Walt Whitman Bridge, I 76; Schuylkill Expressway, I 76; South 7th Street	37	37	3.3	0:03:20	0:03:31	0:02:42	0:05:04	1.15	59
3	Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	17	17	4.01	0:07:35	0:08:53	0:05:56	0:14:45	1.46	32
4	Penrose Avenue, PA 291; Pattison Avenue	16	16	2.46	0:05:04	0:06:16	0:03:28	0:15:17	1.67	29
5	Schuylkill Expressway, I 76; South Darien Street	15	15	3.04	0:04:07	0:04:14	0:03:45	0:05:04	1.1	44

#1) 5 min 31 sec (28 mph)

Trip Analytics

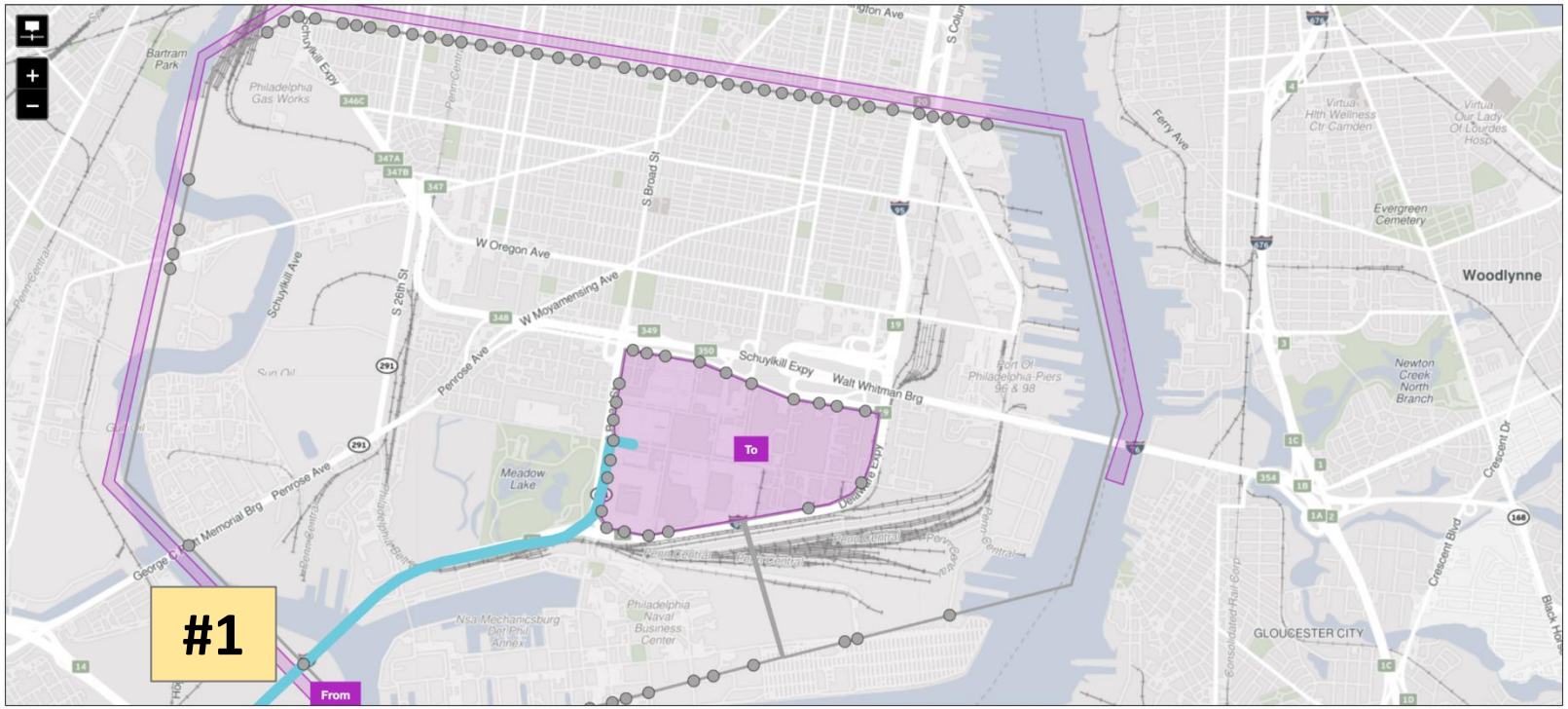
Logged in as gjordan1@umd.edu | My Studies | Help | Switch data set | Logout

Last-mile TT Study Army-... Data Set: Pennsylvania | Study Area: Custom Geography | Internal Zones: Counties | External Zones: OD gates | Spatial Filter: 2 custom areas in Pennsyl... | Temporal Filter: 12/10/2022 | Other Filters: Vehicle type: Light

397 trips in 93 routes

Display Options | Open as... | Export

Map	Rank	Route	# of Trips	Light Vehicles	Length	Travel Time	Avg TT	5% TT	95% TT	Reliability
☑	1	Girard Point Bridge, I 95; Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	54	54	3 mi	6 m	6 m	3 m	10 m	1.45
☑	2	Walt Whitman Bridge, I 76,Walt Whitman Bridge, I 76; Schuylkill Expressway, I 76; South 7th Street	37	37	3 mi	3 m	4 m	3 m	5 m	1.15
☑	3	Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	17	17	4 mi	8 m	9 m	6 m	15 m	1.46
		Total	397	397						



Last-mile TT Study Army-Navy-routeSummaryTable - Excel

Home Insert Page Layout Formulas Data Review View Power Pivot Tell me what you want to do...

03:20 (59 mph)

A	B	C	D	E	F	G	H	I	J	K
Rank	Route	# of Trips	Light Vehicles	Length	50%TT	Avg TT	5% TT	95% TT	Reliability	Median Speed
1	Girard Point Bridge, I 95; Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	54	54	2.[illegible]	0:05:31	0:05:58	0:03:25	0:09:31	1.45	28
2	Walt Whitman Bridge, I 76,Walt Whitman Bridge, I 76; Schuylkill Expressway, I 76; South 7th Street	37	37	3.3	0:03:20	0:03:31	0:02:42	0:05:04	1.15	59
3	Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	17	17	4.01	0:07:35	0:08:53	0:05:56	0:14:45	1.46	32
4	Penrose Avenue, PA 291; Pattison Avenue	16	16	2.46	0:05:04	0:06:16	0:03:28	0:15:17	1.67	29
5	Schuylkill Expressway, I 76; South Darien Street	15	15	3.04	0:04:07	0:04:14	0:03:45	0:05:04	1.1	44

#2) 3 min 20 sec (59 mph)

Trip Analytics

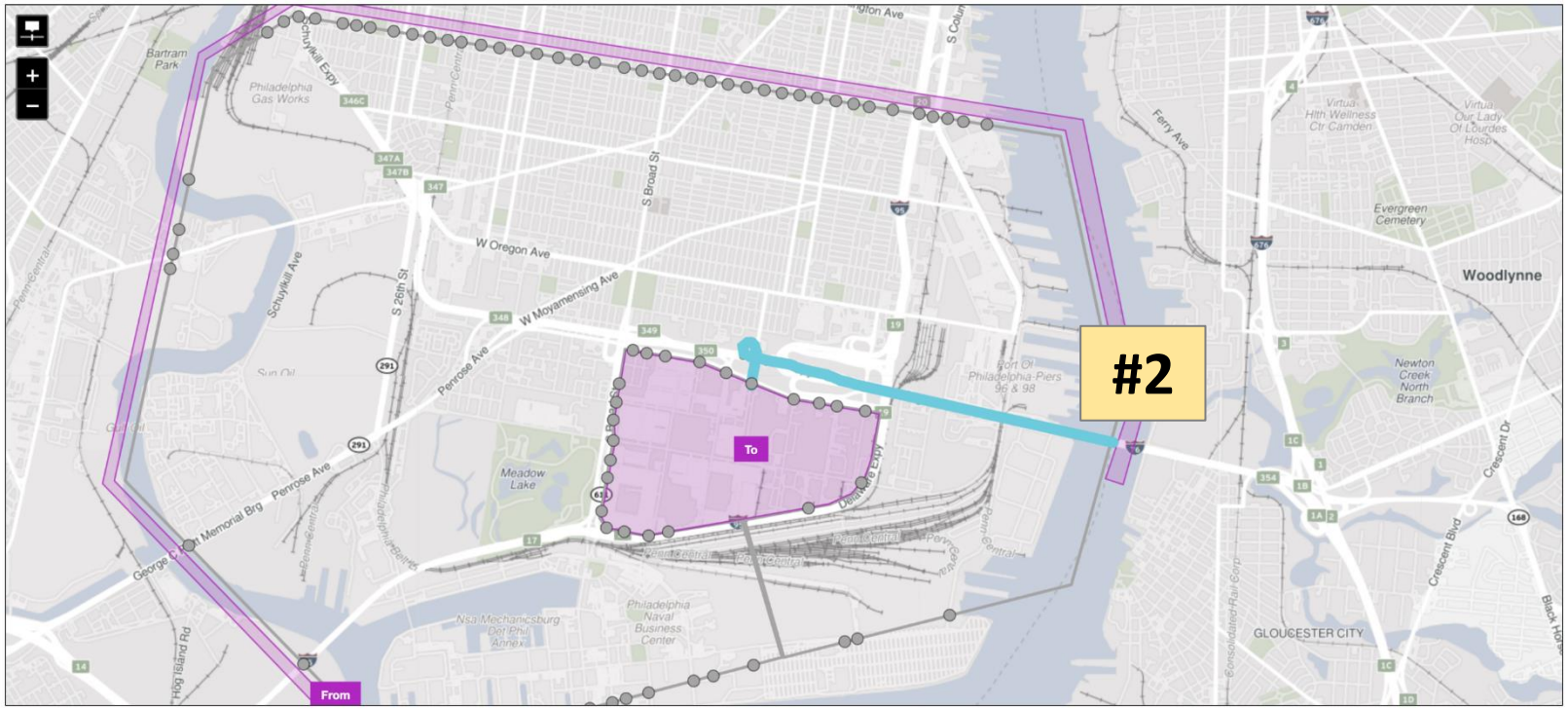
Logged in as gjordan1@umd.edu | My Studies | Help | Switch data set | Logout

Last-mile TT Study Army-... Data Set: Pennsylvania | Study Area: Custom Geography | Internal Zones: Counties | External Zones: OD gates | Spatial Filter: 2 custom areas in Pennsyl... | Temporal Filter: 12/10/2022 | Other Filters: Vehicle type: Light

397 trips in 93 routes

Display Options | Open as... | Export

Map	Rank	Route	# of Trips	Light Vehicles	Length	Travel Time	Avg TT	5% TT	95% TT	Reliability
☑	1	Girard Point Bridge, I 95; Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	54	54	3 mi	6 m	6 m	3 m	10 m	1.45
☑	2	Walt Whitman Bridge, I 76,Walt Whitman Bridge, I 76; Schuylkill Expressway, I 76; South 7th Street	37	37	3 mi	3 m	4 m	3 m	5 m	1.15
☑	3	Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	17	17	4 mi	8 m	9 m	6 m	15 m	1.46
		Total	397	397						



Last-mile TT Study Army-Navy-routeSummaryTable - Excel

Home Insert Page Layout Formulas Data Review View Power Pivot Tell me what you want to do...

07:35 (32 mph)

A	B	C	D	E	F	J	K
Rank	Route	# of Trips	Light Vehicles	Length	50%TT	Reliability	Median Speed
1	Girard Point Bridge, I 95; Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	54	54	[illegible]	0:05:31	1	28
2	Walt Whitman Bridge, I 76,Walt Whitman Bridge, I 76; Schuylkill Expressway, I 76; South 7th Street	37	37	[illegible]	0:03:20	1.15	59
3	Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	17	17	4.01	0:07:35	1.46	32
4	Penrose Avenue, PA 291; Pattison Avenue	16	16	2.46	0:05:04	1.67	29
5	Schuylkill Expressway, I 76; South Darien Street	15	15	3.04	0:04:07	1.1	44

#3) 7 min 35 sec (32 mph)

Trip Analytics

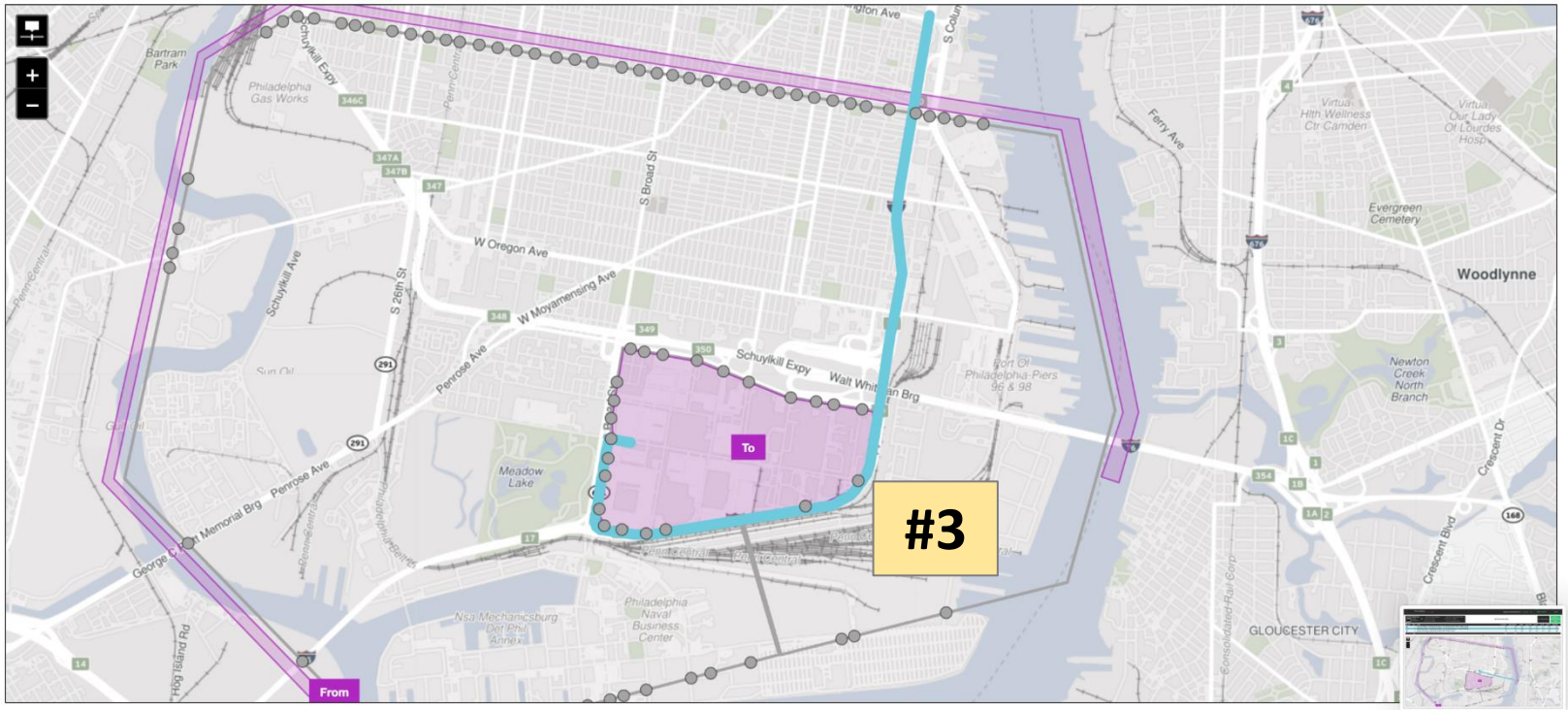
Logged in as gjordan1@umd.edu | My Studies | Help | Switch data set | Logout

Last-mile TT Study Army-... Data Set: Pennsylvania | Study Area: Custom Geography | Internal Zones: Counties | External Zones: OD gates | Spatial Filter: 2 custom areas in Pennsyl... | Temporal Filter: 12/10/2022 | Other Filters: Vehicle type: Light

397 trips in 93 routes

Display Options | Open as... | Export

Map	Rank	Route	# of Trips	Light Vehicles	Length	Travel Time	Avg TT	5% TT	95% TT	Reliability
☑	1	Girard Point Bridge, I 95; Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	54	54	3 mi	6 m	6 m	3 m	10 m	1.45
☑	2	Walt Whitman Bridge, I 76,Walt Whitman Bridge, I 76; Schuylkill Expressway, I 76; South 7th Street	37	37	3 mi	3 m	4 m	3 m	5 m	1.15
☑	3	Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	17	17	4 mi	8 m	9 m	6 m	15 m	1.46
	Total		397	397						



Last-mile TT Study Army-Navy-routeSummaryTable - Excel

Home Insert Page Layout Formulas Data Review View Power Pivot Tell me what you want to do...

05:04 (29 mph)

A	B	C	D	E	F				J	K
Rank	Route	# of Trips	Light Vehicles	Length	50%TT	Avg TT	5% TT	95% TT	Reliability	Median Speed
1	Girard Point Bridge, I 95; Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	54	54	2.59	0:05:31	0:05:58	0:03:25	0:09:31	1.45	28
2	Walt Whitman Bridge, I 76,Walt Whitman Bridge, I 76; Schuylkill Expressway, I 76; South 7th Street	37	37		0:03:20	0:03:31	0:02:42	0:05:04	1	59
3	Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	17	17	4.	0:07:35	0:08:53	0:05:56	0:14:45	1.46	32
4	Penrose Avenue, PA 291; Pattison Avenue	16	16	2.46	0:05:04	0:06:16	0:03:28	0:15:17	1.67	29
5	Schuylkill Expressway, I 76; South Darien Street	15	15	3.04	0:04:07	0:04:14	0:03:45	0:05:04	1.1	44

#4) 5 min 4 sec (29 mph)

Trip Analytics

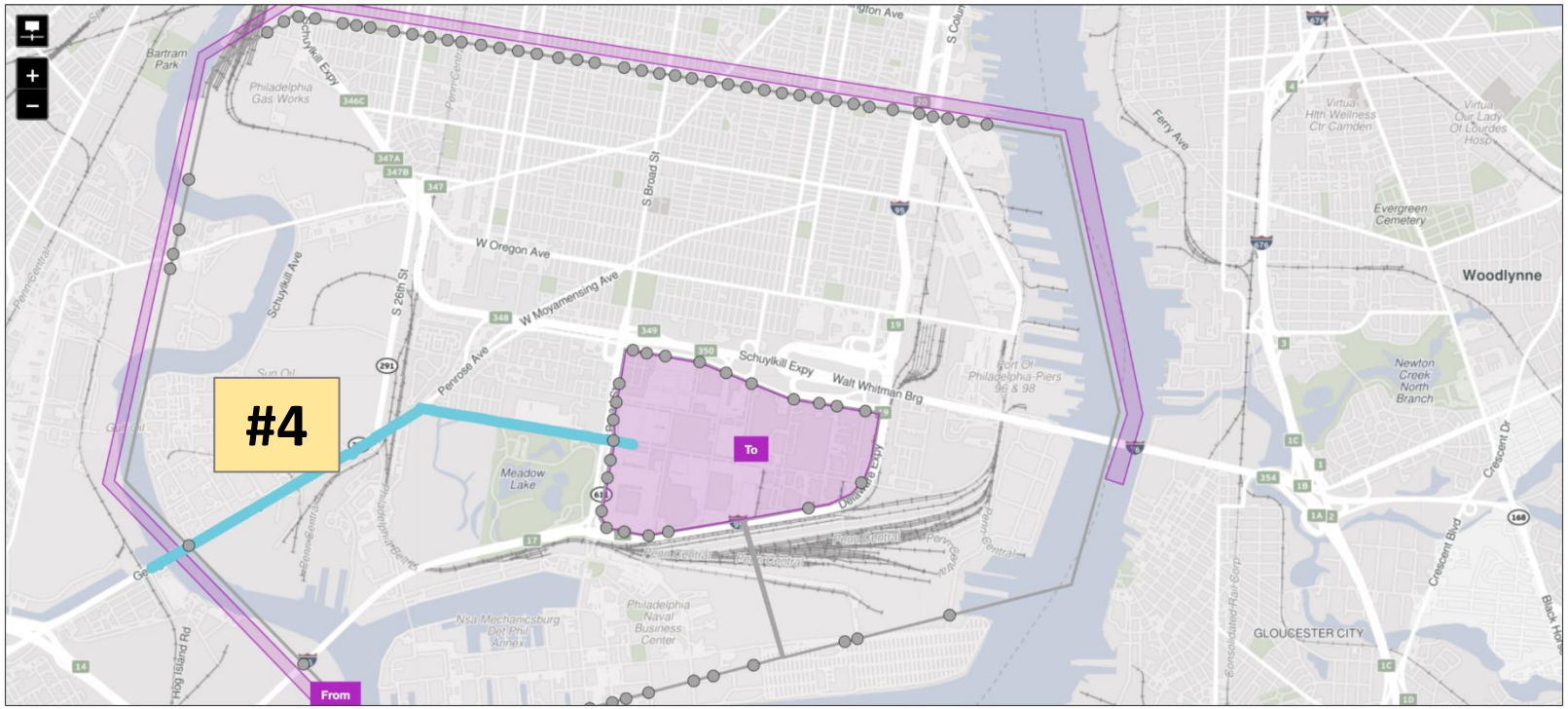
Logged in as gjordan1@umd.edu | My Studies | Help | Switch data set | Logout

Last-mile TT Study Army-... | Data Set: Pennsylvania | Study Area: Custom Geography | Internal Zones: Counties | External Zones: OD gates | Spatial Filter: 2 custom areas in Pennsyl... | Temporal Filter: 12/10/2022 | Other Filters: Vehicle type: Light

397 trips in 93 routes

Display Options | Open as... | Export

Map	Rank	Route	# of Trips	Light Vehicles	Length	Travel Time	Avg TT	5% TT	95% TT	Reliability
☑	4	Penrose Avenue, PA 291; Pattison Avenue	16	16	2 mi	5 m	6 m	3 m	15 m	1.67
☑	5	Schuylkill Expressway, I 76; South Darien Street	15	15	3 mi	4 m	4 m	4 m	5 m	1.1
☑	6	Delaware Expressway, I 95; South Front Street	15	15	2 mi	4 m	5 m	2 m	18 m	1.23
	Total		397	397						



Last-mile TT Study Army-Navy-routeSummaryTable - Excel

Home Insert Page Layout Formulas Data Review View Power Pivot Tell me what you want to do...

04:07 (44 mph)

A	B	C	D	E	F		J	K
Rank	Route	# of Trips	Light Vehicles	Length	50%TT	Avg TT	Reliability	Median Speed
1	Girard Point Bridge, I 95; Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	54	54	2.59	0:05:31	0:05:58	1.45	28
2	Walt Whitman Bridge, I 76,Walt Whitman Bridge, I 76; Schuylkill Expressway, I 76; South 7th Street	37	37	3.3	0:03:20	0:03:31	1.15	59
3	Delaware Expressway, I 95; South Broad Street, PA 611; Pattison Avenue	17	17		0:07:35	0:08:53	1	32
4	Penrose Avenue, PA 291; Pattison Avenue	16	16		0:05:04	0:06:16	1.67	29
5	Schuylkill Expressway, I 76; South Darien Street	15	15	3.04	0:04:07	0:04:14	1.1	44

#5) 4 min 7 sec (44 mph)

Trip Analytics

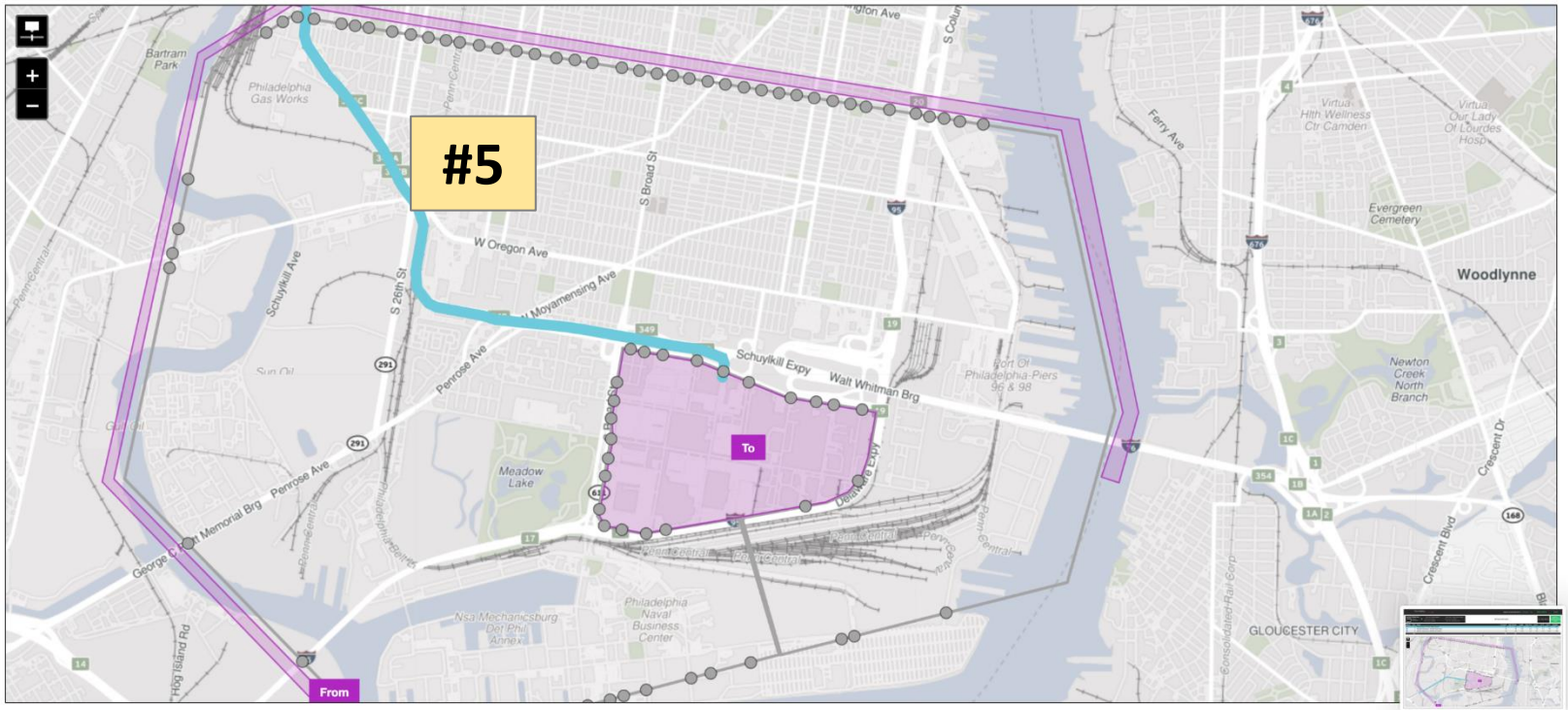
Logged in as gjordan1@umd.edu | My Studies | Help | Switch data set | Logout

Last-mile TT Study Army-... Data Set: Pennsylvania | Study Area: Custom Geography | Internal Zones: Counties | External Zones: OD gates | Spatial Filter: 2 custom areas in Pennsyl... | Temporal Filter: 12/10/2022 | Other Filters: Vehicle type: Light

397 trips in 93 routes

Display Options | Open as... | Export

Map	Rank	Route	# of Trips	Light Vehicles	Length	Travel Time	Avg TT	5% TT	95% TT	Reliability
☑	4	Penrose Avenue, PA 291; Pattison Avenue	16	16	2 mi	5 m	6 m	3 m	15 m	1.67
☑	5	Schuylkill Expressway, I 76; South Darien Street	15	15	3 mi	4 m	4 m	4 m	5 m	1.1
☑	6	Delaware Expressway, I 95; South Front Street	15	15	2 mi	4 m	5 m	2 m	18 m	1.23
	Total		397	397						



Investigation of Bay Bridge Traffic Complaints

EB US-50

July 2022

(Saturdays)

(File photo by Joshua McKerrow //Capital Gazette)


US-50
College Pkwy
Skidmore
Two corridors exist to (potentially) bypass mainline queue
Bay Bridge
College Pkwy
Woodland Cir
Hopkins Rd
Insey Rd
Log Inn Rd
Tydings Rd
Sandy Rd
Duvall Rd
Harmony Acres Ln
Ridout Rd
Holly Dr E
Holly Dr S
Weems Farm Rd
Whitehall Rd
Colbert Rd
Argone Rd
Carrs Rd
Woodlyn Rd
Ridout Creek
Whitehall Creek

Trip Analytics

Logged in as gjordan1@umd.edu | My Studies | Help | Switch data set | Logout

Bay Bridge Ramp Meter E...
Data Set: Maryland (Freight-only after 2019)
Study Area: Custom Geography
Internal Zones: Counties
External Zones: OD gates
Spatial Filter: 2 custom areas in Marylan...
Temporal Filter: 7/9/2022
Other Filters: Vehicle type: Medium

13 trips in 6 routes

Display Options | Open as... | Export

Map	Rank	Route	# of Trips ▼	Medium Vehicles	Length	Avg TT	5% TT	50% TT	95% TT	Reliability
☑	1	Blue Star Memorial Highway, US 50, US 301	6	6	3 mi	44 m	35 m	44 m	52 m	1.14
☑	2	College Parkway; East College Parkway; Blue Star Memorial Highway, US 50, US 301	3	3	3 mi	15 m	12 m	12 m	20 m	1.67
☑	3	Blue Star Memorial Highway, US 50, US 301; Saint Margarets Road, MD 179; Cape Saint Claire Road, MD 179; College Parkway; East College Parkway	1	1	4 mi	22 m	22 m	22 m	22 m	1
☑	4	Busch's Frontage Road; Whitehall Road; Skidmore Drive; Oceanic Drive; Blue Star Memorial Highway, US 50, US 301	1	1	3 mi	19 m	19 m	19 m	19 m	1
☑	5	Busch's Frontage Road; Whitehall Road; Blue Star Memorial Highway, US 50, US 301; Oceanic Drive	1	1	3 mi	15 m	15 m	15 m	15 m	1
☑	6	Busch's Frontage Road; Whitehall Road; Blue Star Memorial Highway, US 50, US 301	1	1	3 mi	25 m	25 m	25 m	25 m	1
	Total		13	13						

Confirmation summary – normal summer Saturday peak-delay period: 44 min. travel time on US-50 mainline

US-50 mainline = 44 min.

# of Trips ▼	Medium Vehicles	Length	Avg TT	5% TT	50% TT	95% TT	Reliability
6	6	3 mi	44 m	35 m	44 m	52 m	1.14
3	3	3 mi	15 m	12 m	12 m	20 m	1.67
1	1	4 mi	22 m	22 m	22 m	22 m	1
1	1	3 mi	19 m	19 m	19 m	19 m	1
1	1	3 mi	15 m	15 m	15 m	15 m	1
1	1	3 mi	25 m	25 m	25 m	25 m	1
13	13						

Other routes = < 25 min.

Trip Analytics

Logged in as gjordan1@umd.edu | My Studies | Help | Switch data set | Logout

Redo BB with cars

Data Set: Maryland (Freight-only after 2019)

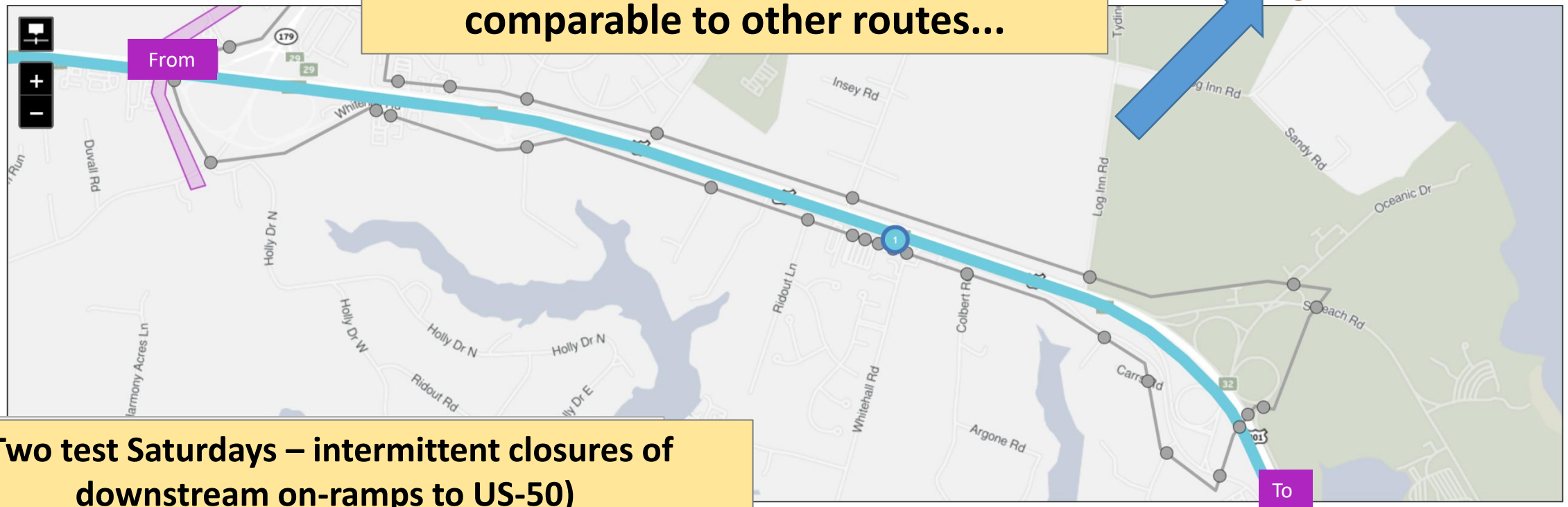
Study Area: Custom Geography | Spatial Filter: 2 custom areas in Marylan…
Internal Zones: Subcounties | Temporal Filter: 8/6/2022 – 8/13/2022
External Zones: OD gates | Other Filters: Vehicle type: Light

63 trips in 13 routes

Display Options | Open as... | Export

Map	Rank	Route	# of Trips▼	Light Vehicles	Length	Avg TT	5% TT	50% TT	95% TT	Reliability
☑	1	Blue Star Memorial Highway, US 50, US 301	37	37	3 mi	31 m	18 m	24 m	2 h 02 m	1.17
☐	2	Whitehall Road; Blue Star Memorial Highway, US 50, US 301	9	9	3 mi	16 m	9 m	16 m	25 m	1.42
☐	3	Whitehall Road; Skidmore Drive; Blue Star Memorial Highway, US 50, US 301	4	4	3 mi	19 m	17 m	18 m	24 m	1.34
☐	4	Busch's Frontage Road; Blue Star Memorial Highway, US 50, US 301	3	3	3 mi	25 m	21 m	26 m	30 m	1.13
☐	5	Busch's Frontage Road; Whitehall Road; Blue Star Memorial Highway, US 50, US 301	2	2	3 mi	23 m	20 m	20 m	26 m	1.32
☐	6	► College Parkway; Cape Saint Claire Road, MD 179; Saint Margarets Road, MD 179; Blue Star Memorial Highway, US 50, US	1	1	3 mi	32 m	32 m	32 m	32 m	1
☐	7	Whitehall Road; Blue Star Memorial Highway, US 50, US 301; Skidmore Drive	1	1	3 mi	20 m	20 m	20 m	20 m	1
☐	8	► Cape Saint Claire Road, MD 179; Saint Margarets Road, MD 179; Whitehall Road; Blue Star Memorial Highway, US 50, US 3	1	1	3 mi	17 m	17 m	17 m	17 m	1
☐	9	► College Parkway; Cape Saint Claire R				31 m	31 m	31 m	31 m	1
☐	10	► College Parkway; Cape Saint Claire R				1 h 22 m	1 h 22 m	1 h 22 m	1 h 22 m	1
☐	11	► College Parkway; Cape Saint Claire R				16 m	16 m	16 m	16 m	1
☐	12	Busch's Frontage Road; Whitehall Road;				28 m	28 m	28 m	28 m	1
	Total									

Test findings:
US-50 mainline (24 min)
comparable to other routes...



(Two test Saturdays – intermittent closures of downstream on-ramps to US-50)

Test days with intermittent closures of downstream on-ramps:
24 min. travel time on mainline

US-50 mainline = 24 min.

Other routes = comparable

# of Trips ▼	Light Vehicles	Length	Avg TT	5% TT	50% TT	95% TT	Reliability
37	37	3 mi	31 m	18 m	24 m	2 h 02 m	1.17
9	9	3 mi	16 m	9 m	16 m	25 m	1.42
4	4	3 mi	19 m	17 m	18 m	24 m	1.34
3	3	3 mi	25 m	21 m	26 m	30 m	1.13
2	2	3 mi	23 m	20 m	20 m	26 m	1.32
1	1	3 mi	32 m	32 m	32 m	32 m	1
1	1	3 mi	20 m	20 m	20 m	20 m	1
1	1	3 mi	17 m	17 m	17 m	17 m	1
1	1	2 mi	31 m	31 m	31 m	31 m	1
1	1	6 mi	1 h 22 m	1 h 22 m	1 h 22 m	1 h 22 m	1
1	1	3 mi	16 m	16 m	16 m	16 m	1
1	1	3 mi	28 m	28 m	28 m	28 m	1
63	63						

Q&A

Questions

Greg Jordan,

CATT Lab

gjordan1@umd.edu

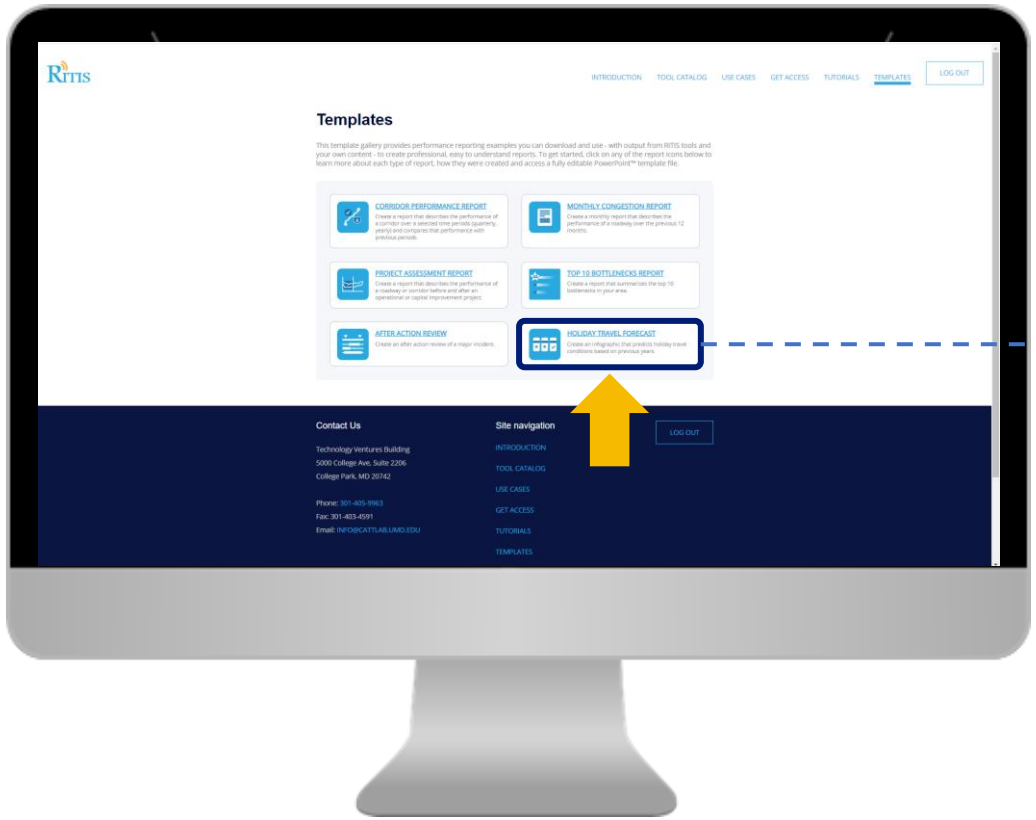
RITIS | PROBE DATA ANALYTICS SUITE

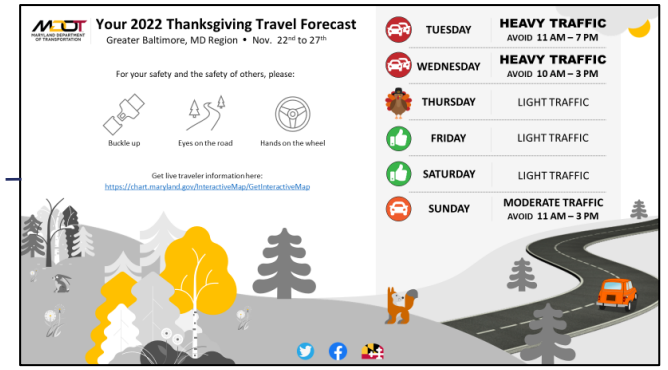
PDA Suite Performance Reporting Working Group

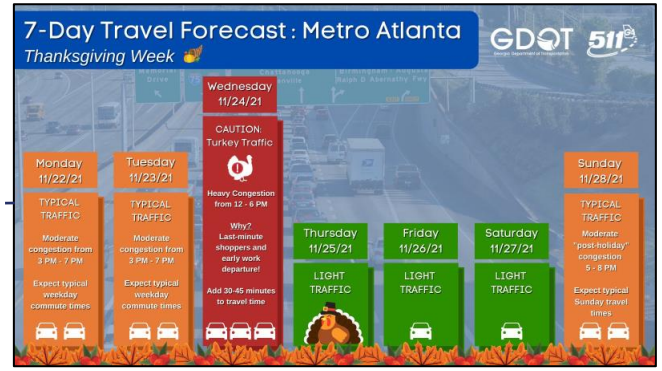
John Allen
Faculty Assistant, Outreach & Education
UMD CATT Lab

Performance Reporting Templates

The **Holiday Travel Forecast Reporting** package is now available on the [RITIS Templates page](#)…





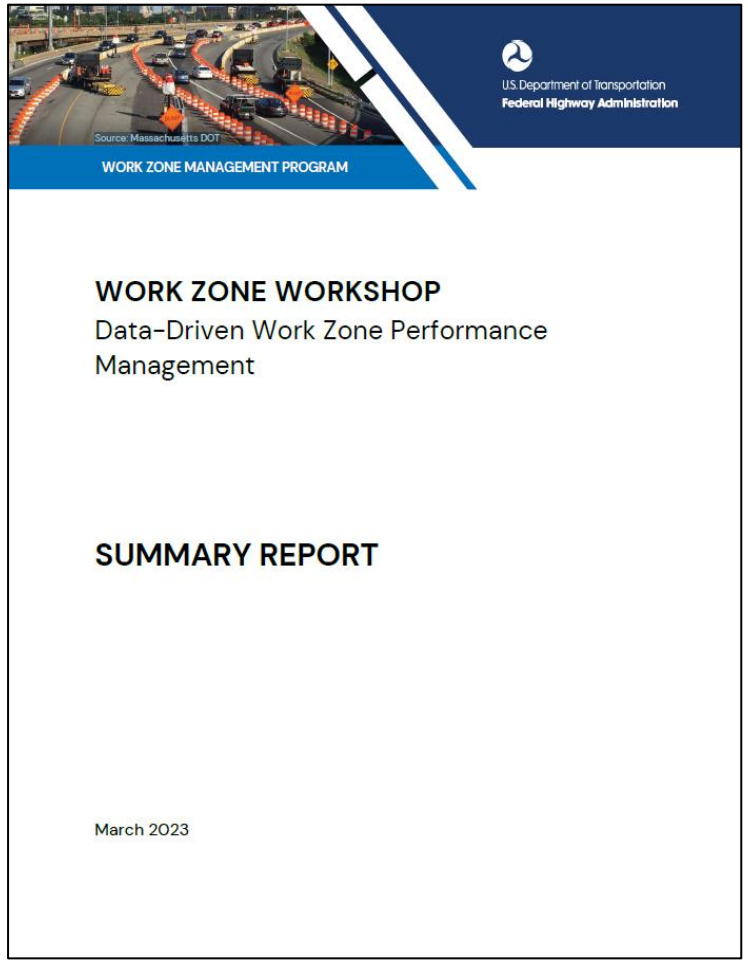


Work Zone Performance Reporting Templates

The Working Group will be meeting next week to focus on developing a work zone reporting package…

Work Zone Performance Reporting Templates

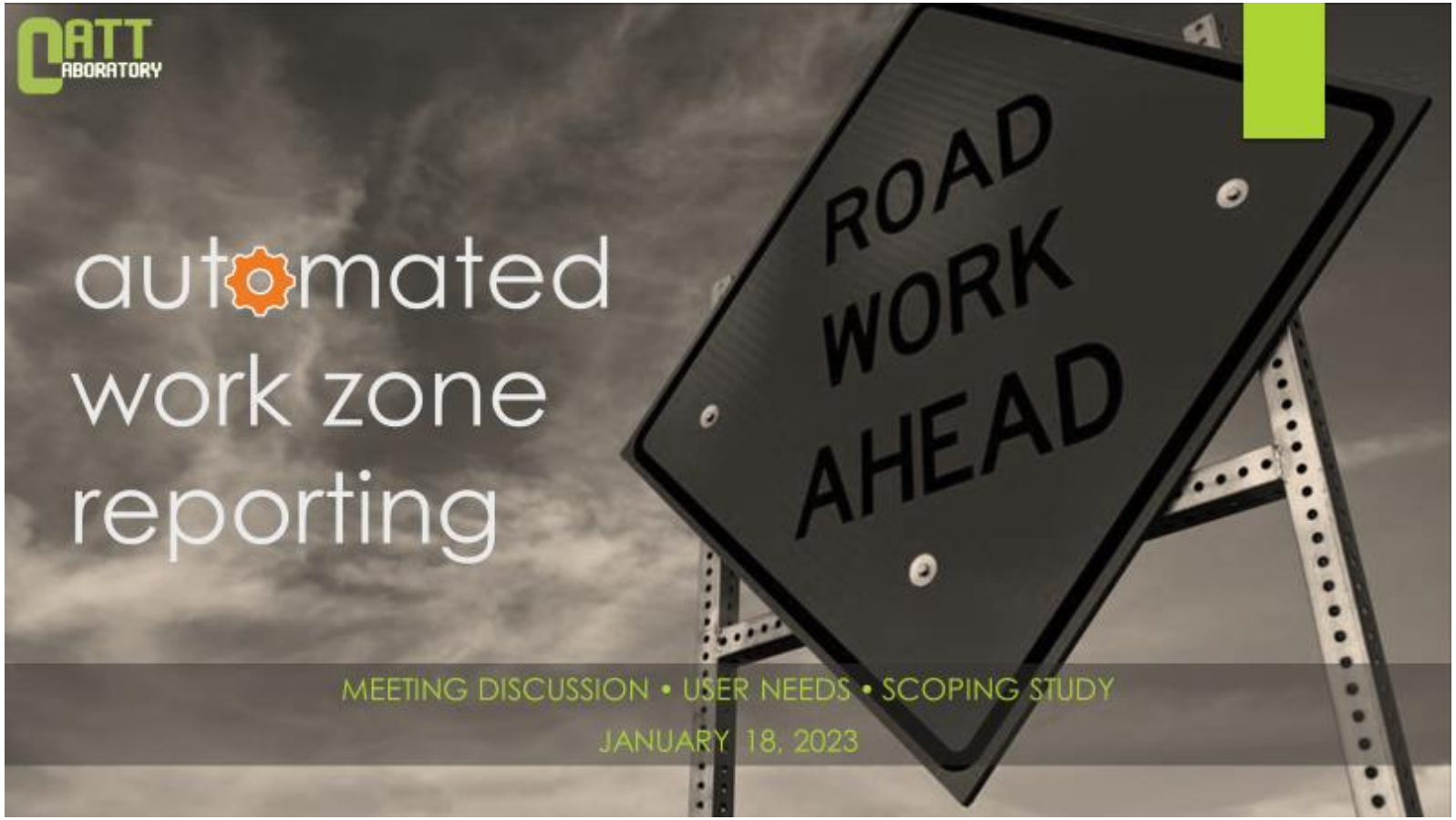
There's some excellent sources of work zone evaluation, in terms of agency state-of-the-practice and challenges…



Work Zone Performance Reporting Templates

And we're plugged into the CATT Lab's Automated Work Zone Reporting effort

Kick-off Meeting User Needs Summary



Design Iterations

Work Zone Performance Reporting Templates

Here are some early-on report categories & elements under consideration for both template and auto reporting:

Work Zone Profile

- **Location (Map)** in relation to the city and DMS used to message the work zone + detour routes
- **Spatial length** of the work zone
- **Duration** of the work zone (operating hours, start/end dates)
- **Work type** (repaving, guard rail repair, etc.)
- **Lanes** impacted
- **Types of countermeasures** deployed (barrels, arrow board, police, HAAS, etc.)

Performance Measures

- **Hourly speeds, delay**
- **Maximum and average queue length; duration**
- **Maximum and average travel time/planning time index** through work zone compared to typical
- **Cost of congestion** compared to typical cost of congestion

Safety

- **Number and type of incidents/fatalities** within work zone
- **Number and type of incidents/fatalities** within queue (may not be possible)

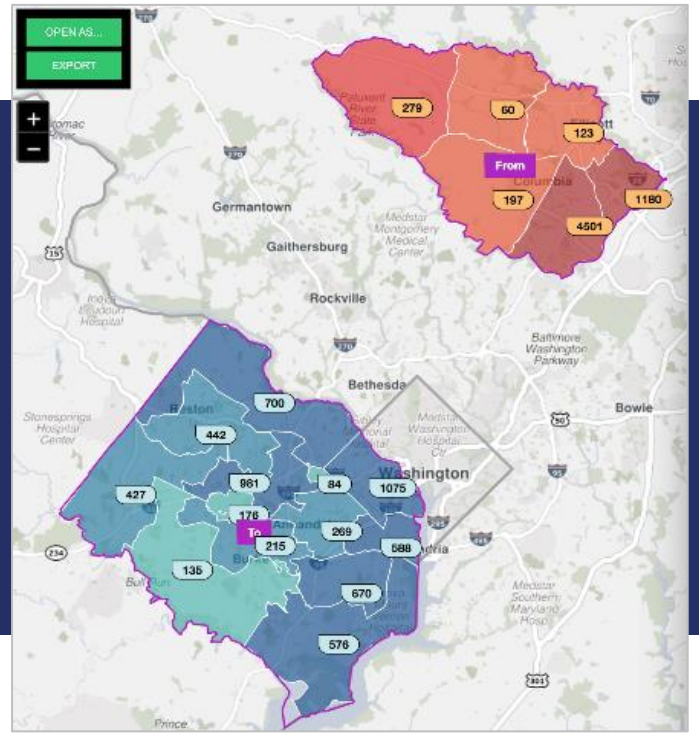
Agency-added/Misc.

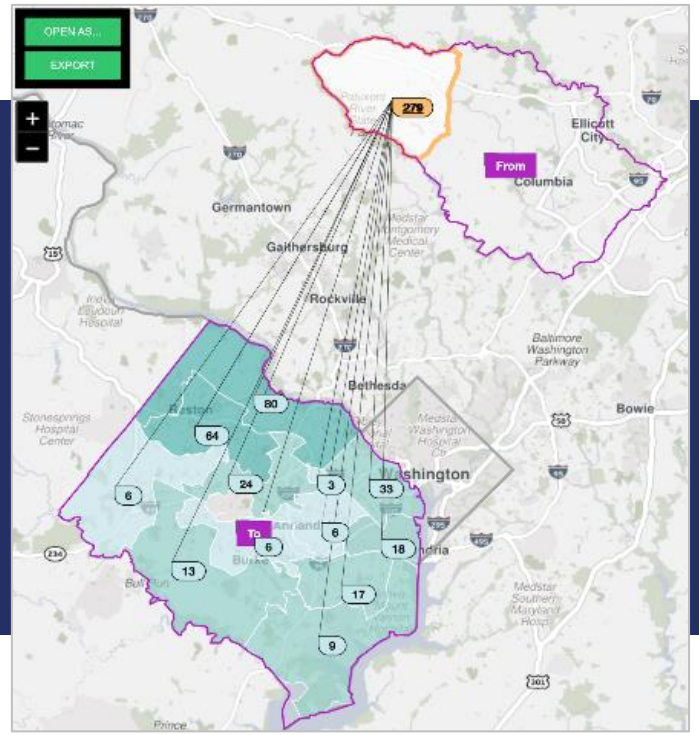
- **A block for a brief explanation** of key aspects (trends, operation, special event) of the work zone
- **Weather-related** information
- **Crash-related** information
- **Daily, Weekly, Monthly and/or Life of Work Zone** reporting periods

RITIS Workshop Series – Workshop #4

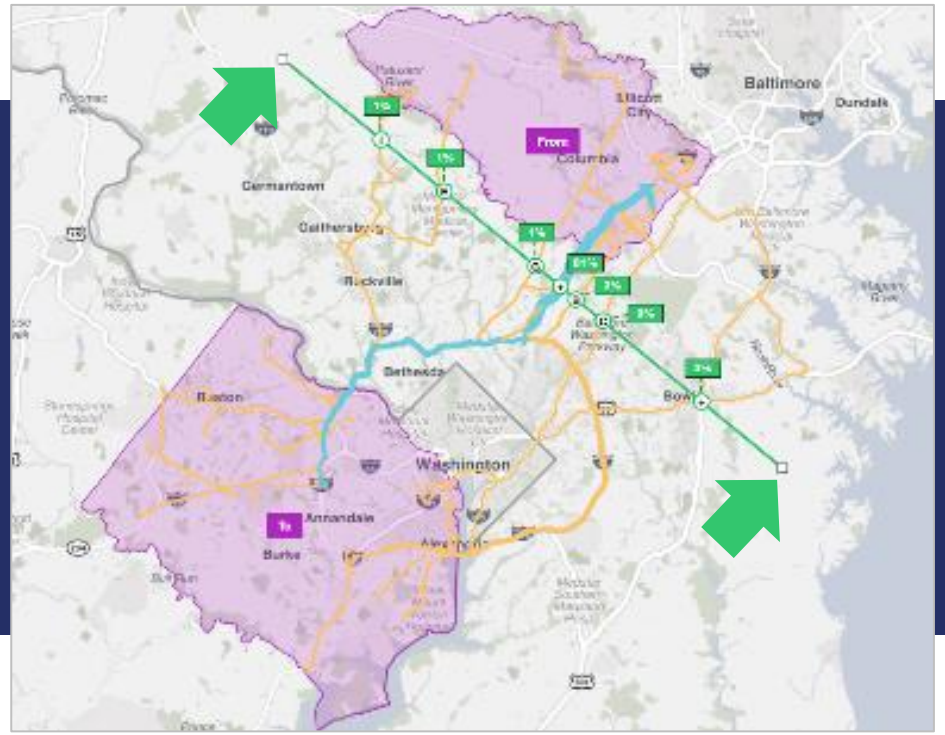
A Workshop was held April 20, 2023, for Operators and Planners to learn how to use Trip Analytics

Visualizing an OD Matrix





Route (Screenline) Analysis

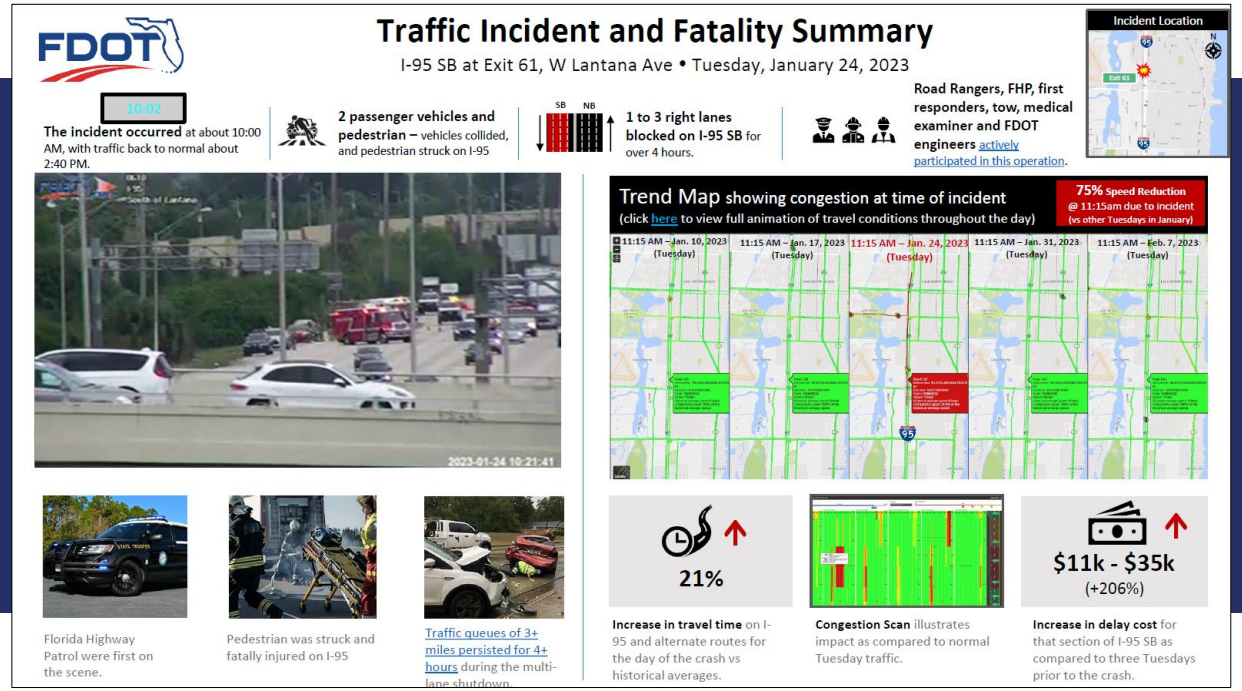


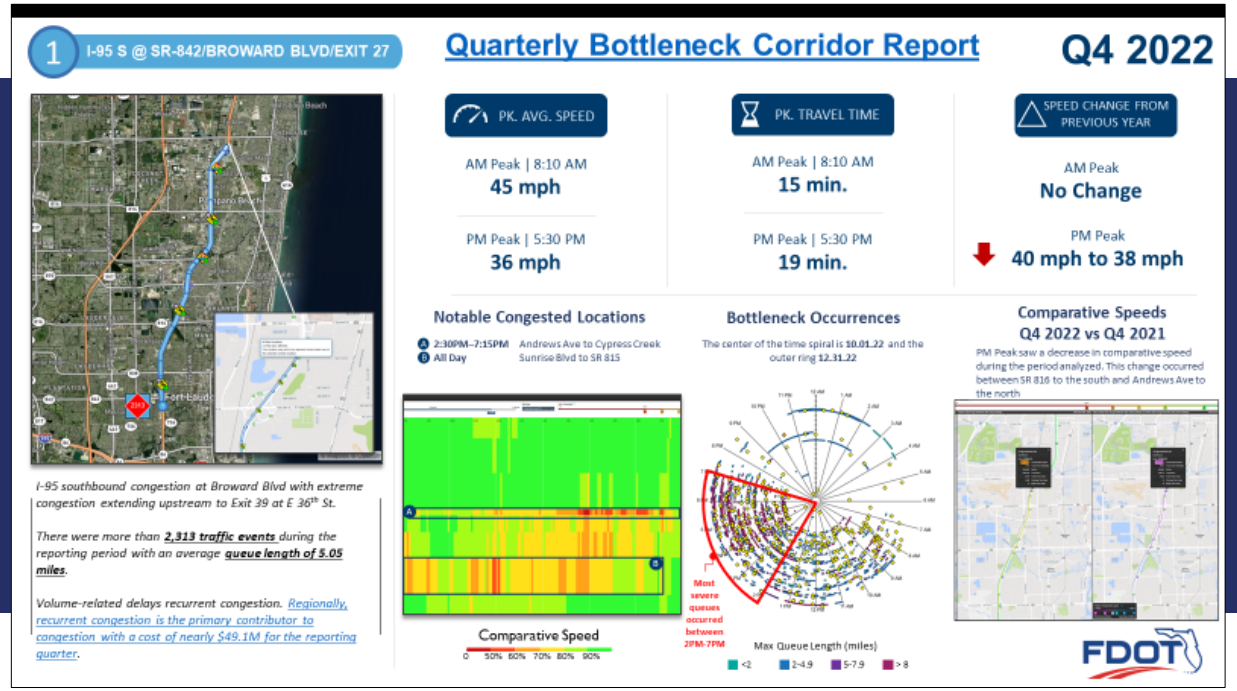
Example Uses Event Traffic "Last-mile" Travel Times • Test Ramp Metering • Signal Retiming Evaluation • Detour Route Compliance • Truck Route Compliance

For workshop slides & videos, click here and scroll down to "Workshops and Working Groups"

On-going RITIS Reporting Training

We've been running training sessions for interested agencies who want to use RITIS Reporting templates





On-demand Data Drill-down

- Incident Timeline
- Congestion Scan
- Trend Map
- Performance Charts

On-demand Data Drill-down

- Bottleneck Ranking
- Congestion Scan
- Trend Map

RITIS | PROBE DATA ANALYTICS SUITE

RITIS Product Enhancement Working Group with RITIS Updates

Bob Frey
Director of Project-Oriented Planning
Massachusetts DOT

Michael Pack
UMD CATT Lab
Director

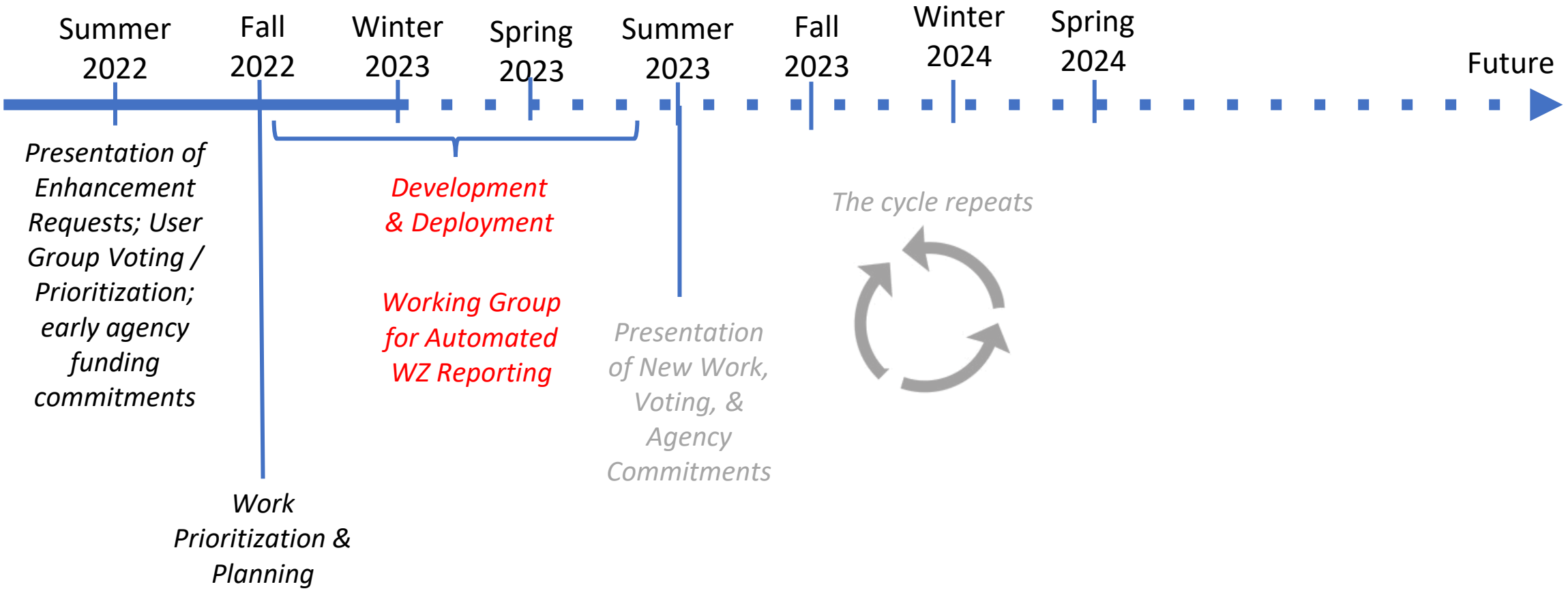
Enhancements Working Group Purpose and Goal

- Form and maintain a nimble “pooled fund” like group to:
  - Fund RITIS Enhancements
  - Assist with prioritization efforts for the CATT Lab
- Provide stable, annualized funding
- Connect agencies with similar needs

Current DOT Funding From:

- Georgia
- Massachusetts
- Michigan
- Oregon
- Virginia

Annual Enhancement Cycle: Current Status



Enhancements in Development: Priorities through August 2023

RITIS Enhancement Working Group Funds supporting:

Enhancement	Estimated Cost	
Aerial Photography in RITIS Maps	$10k	✓
Additional Reporting Templates	$35k	✓
Speed Tile Layers	$30k	✓
Sharing of Dashboards and Reports	$125k	In-development
Automated Work Zone Reports Scoping	$25k	Drafts ready for review
Causes of Congestion Enhancements	$50k	✓
Total =	$275k	

Other funds (grants) will support:

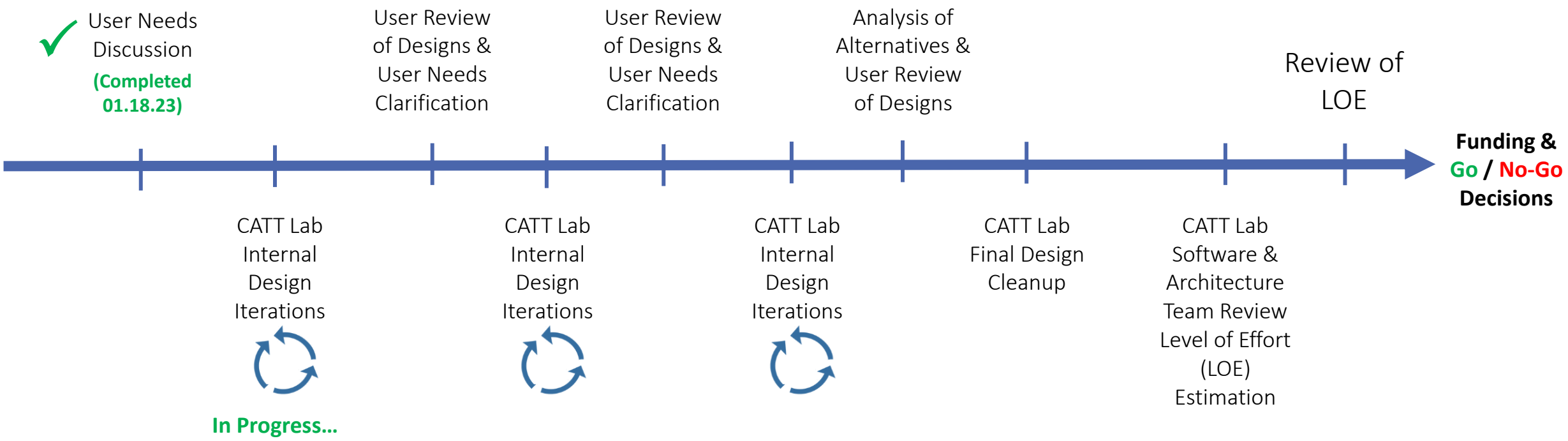
Enhancement	Estimated Cost	
Freight Movement & Safety Avoidance Analytics	$1M+	In-development
Safety Analytics (police crash reports) Partially funded	~$250k	In-development
Signal Analytics Enhancements	TBD	started
Trips Analytics Enhancements	TBD	✓
Energy Analytics Geographic Expansion	TBD	progress
Speed Bins Visualization (time permitting)	$75k	Almost done
Map Click Corridor Selection	TBD	✓
Total =	$$$	

Automated Work Zone Reporting

IN PROGRESS

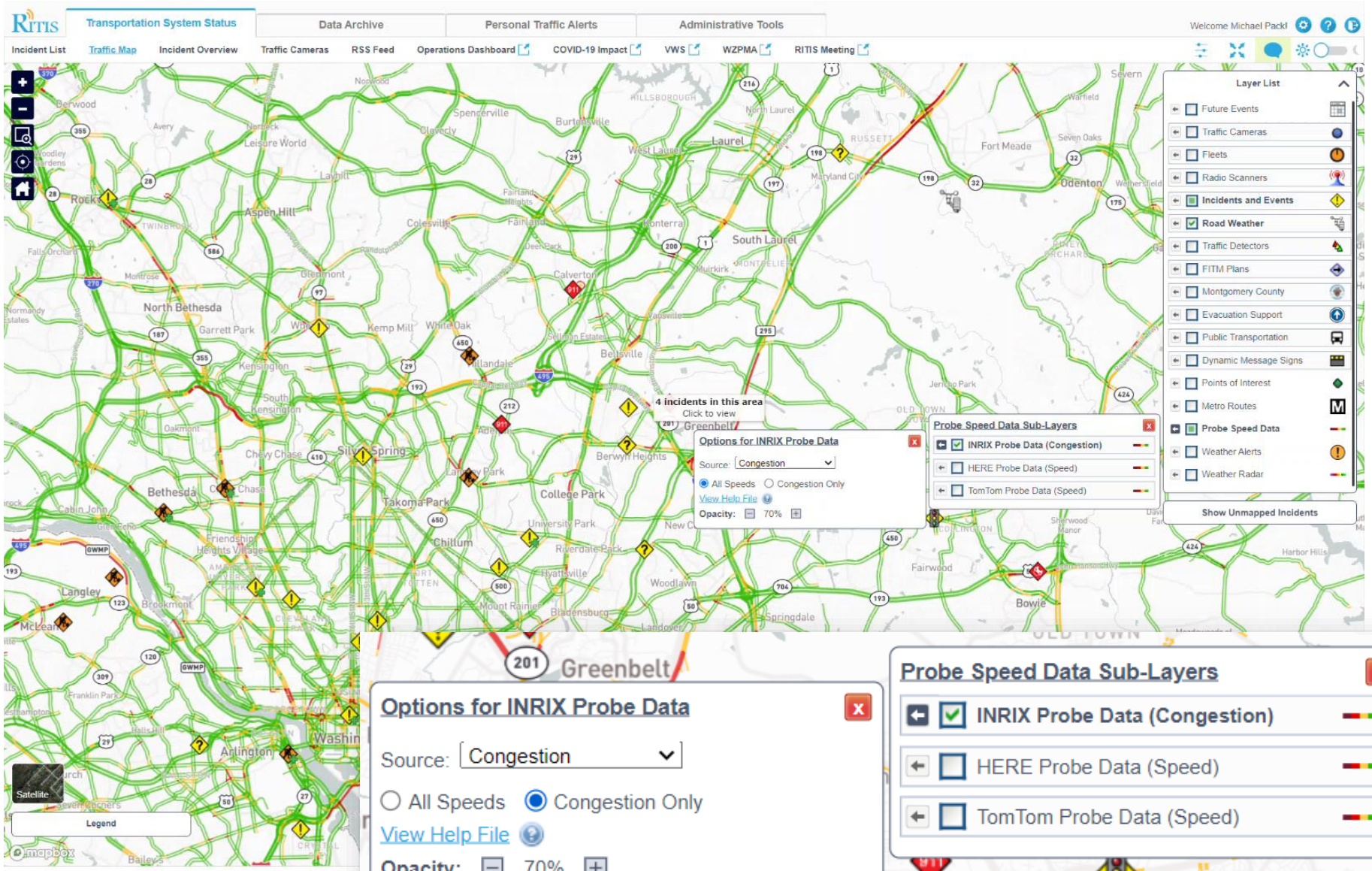
We've kicked off the scoping study design process w/partners from the RITIS Enhancement Working Group by having an in-depth User Needs Discussion

Scoping Study Design Process



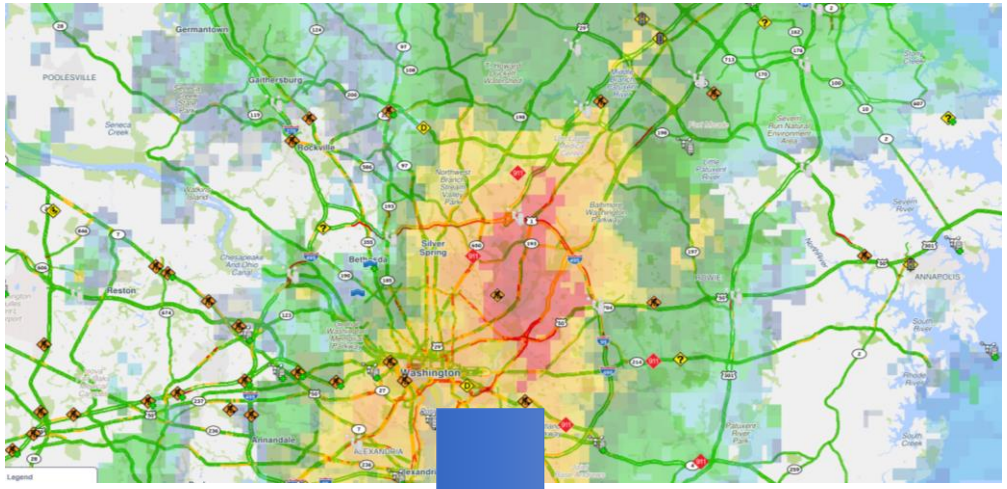
Congestion-Only Layer Option:

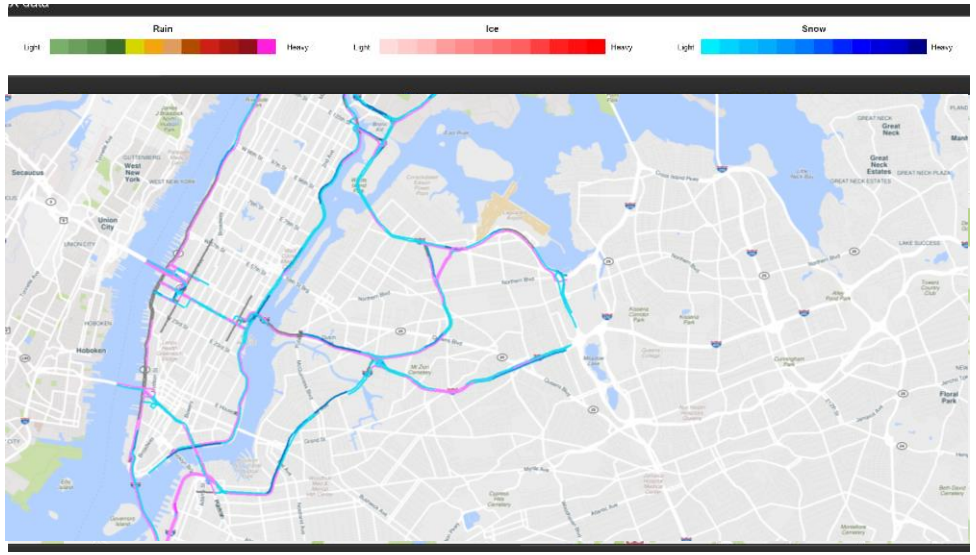
Complete

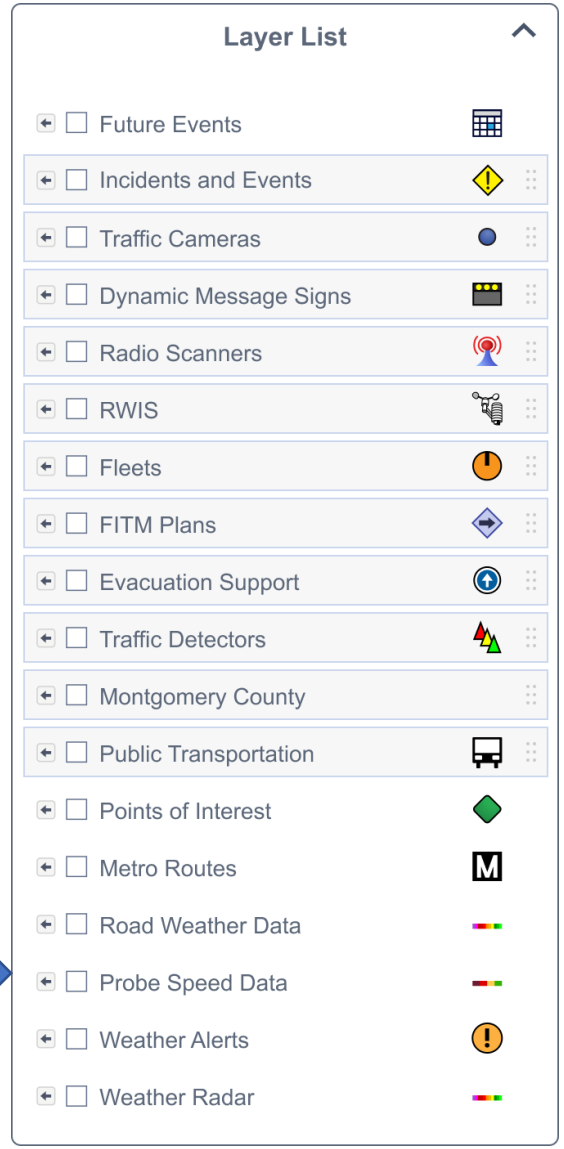


Road Weather Tile Layer Options:

Getting Close



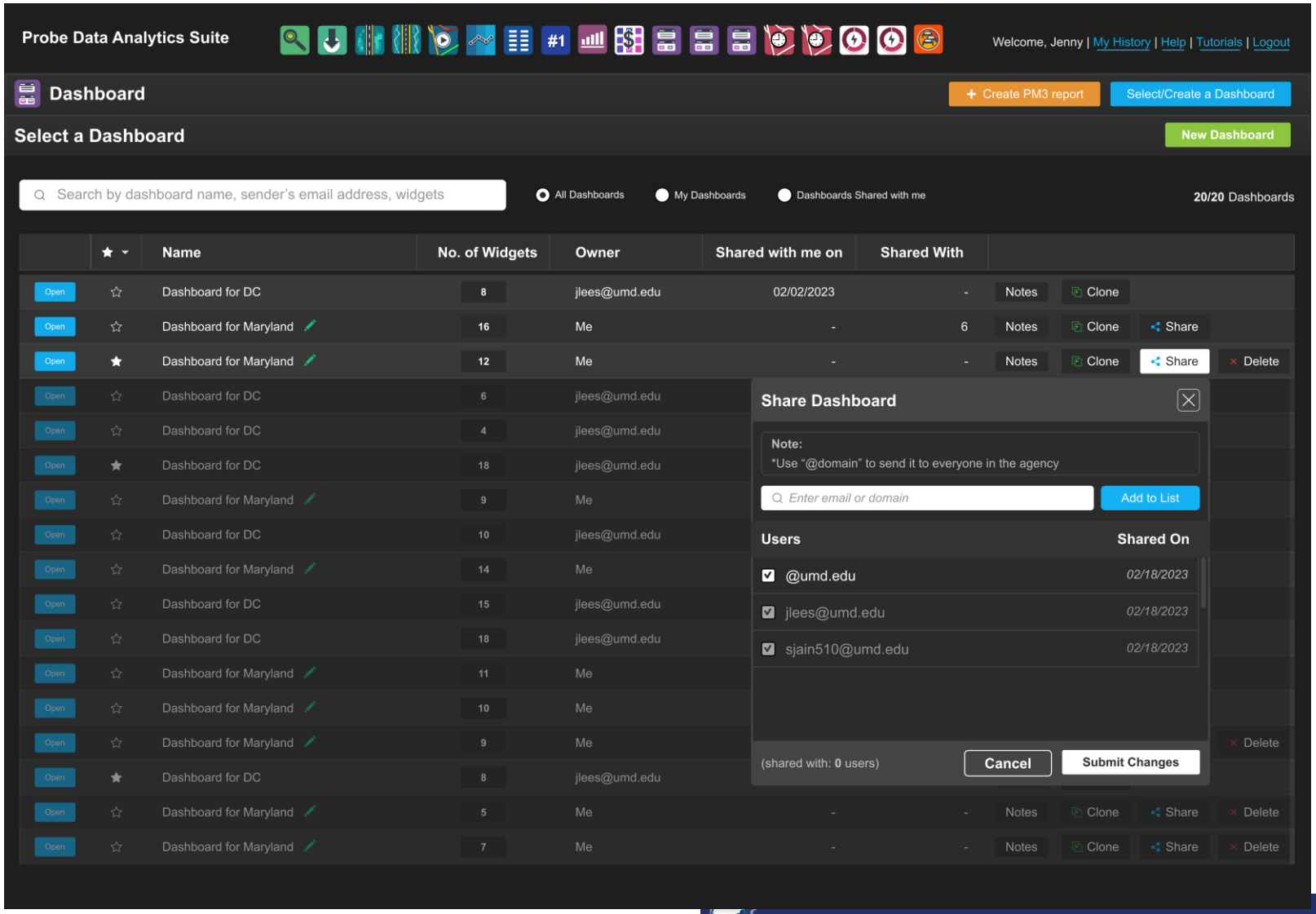




Sharing of Dashboards and Reports

In-development

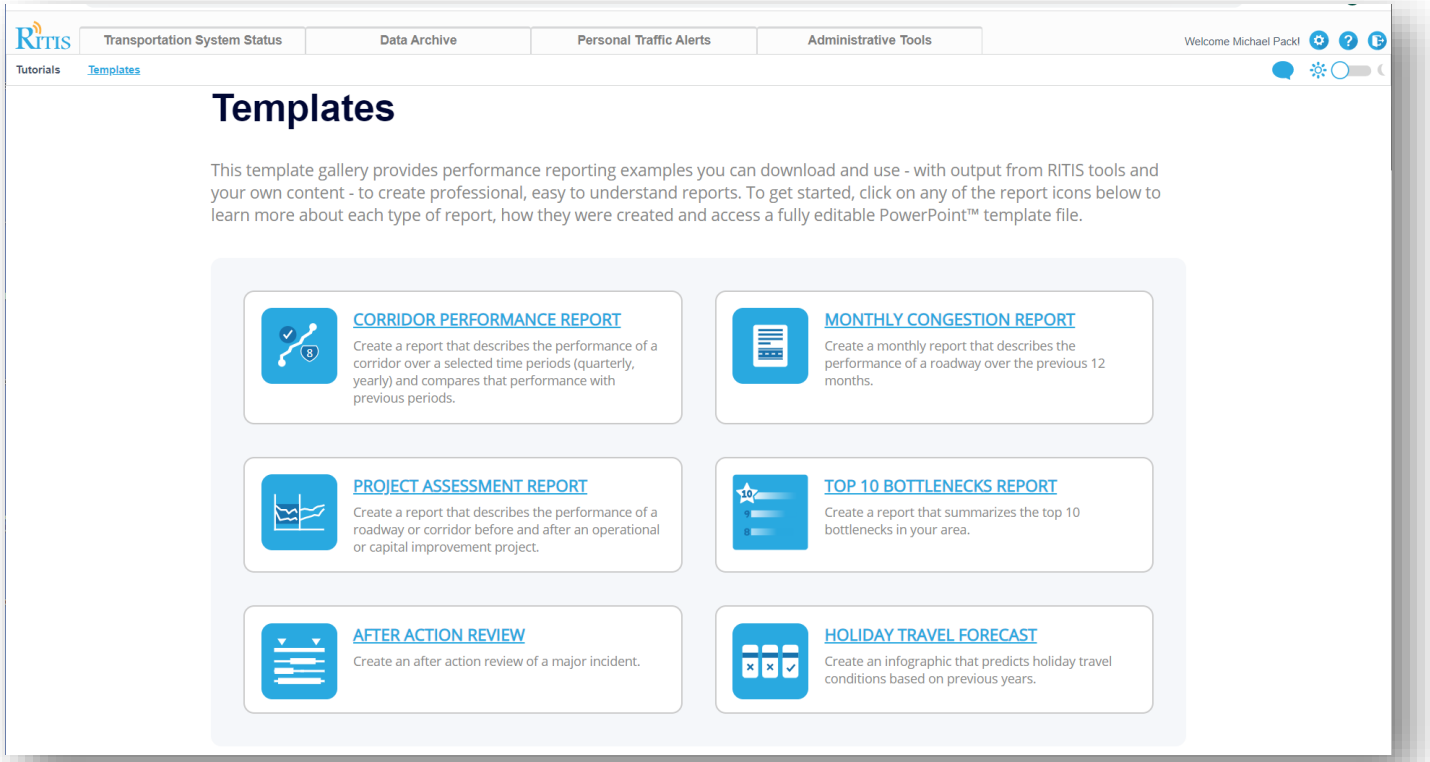
- Sharing with members of your organization



Build Additional Reporting Templates

Deployed (now working on Work Zones)

We're continuing to provide RITIS users with a wide range of performance reporting options for their mobility, safety and operational needs



After-action Review

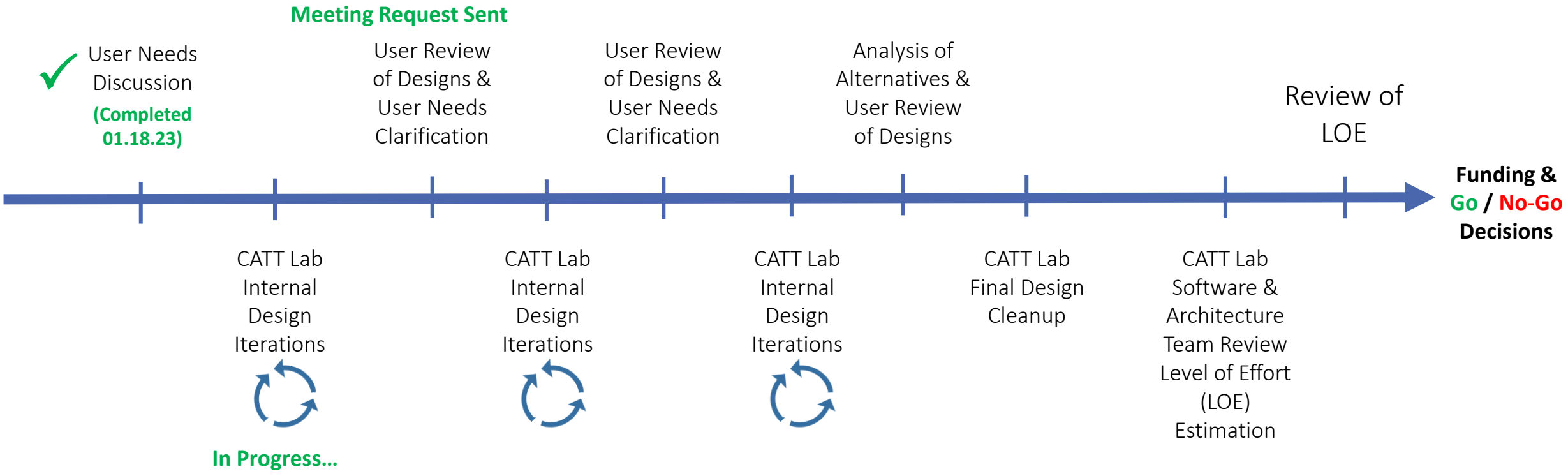
(CLICK HERE TO ACCESS **RITIS PERFORMANCE REPORTING** TEMPLATES, DESIGN RESOURCES, USE CASE EXAMPLES AND THE USER GUIDE)

Automated Work Zone Reporting

PROGRESS

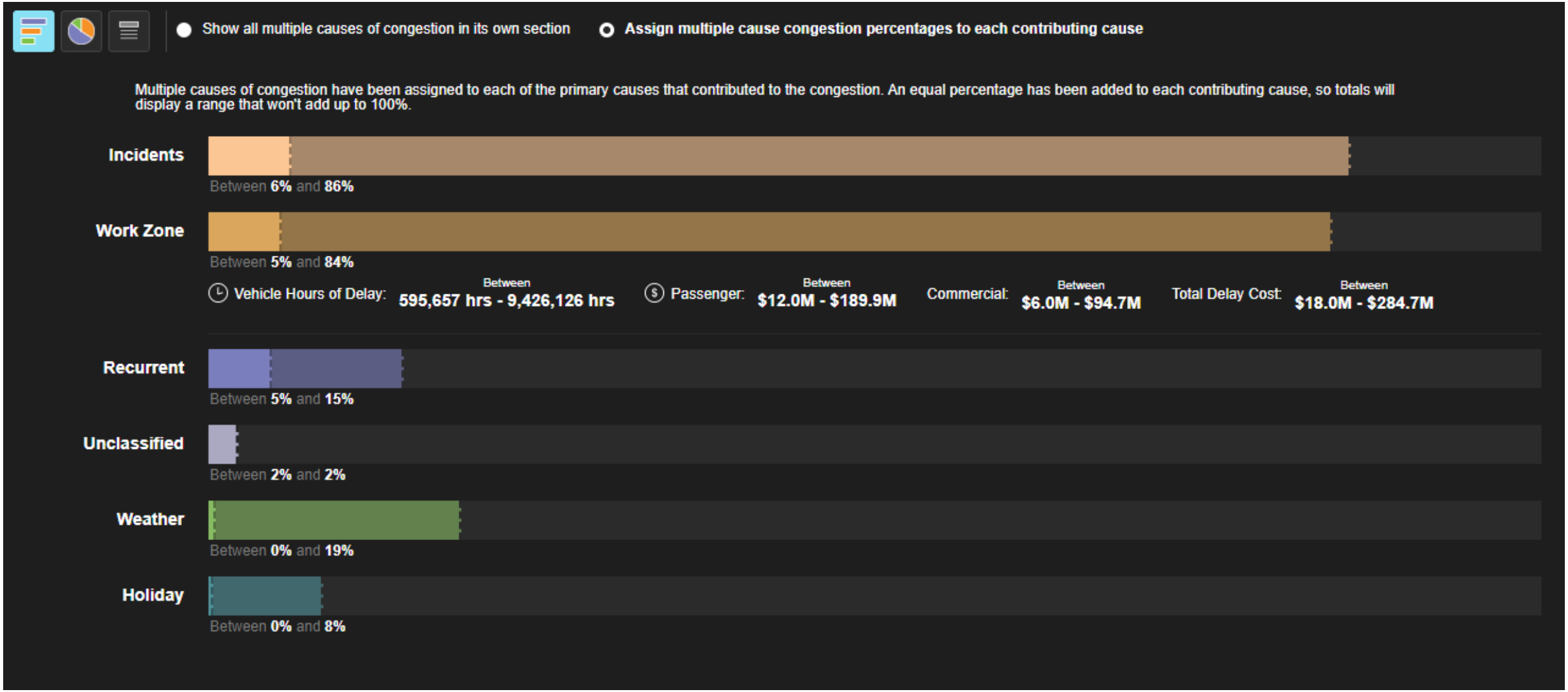
We've kicked off the scoping study design process w/partners from the RITIS Enhancement Working Group by having an in-depth User Needs Discussion

Scoping Study Design Process



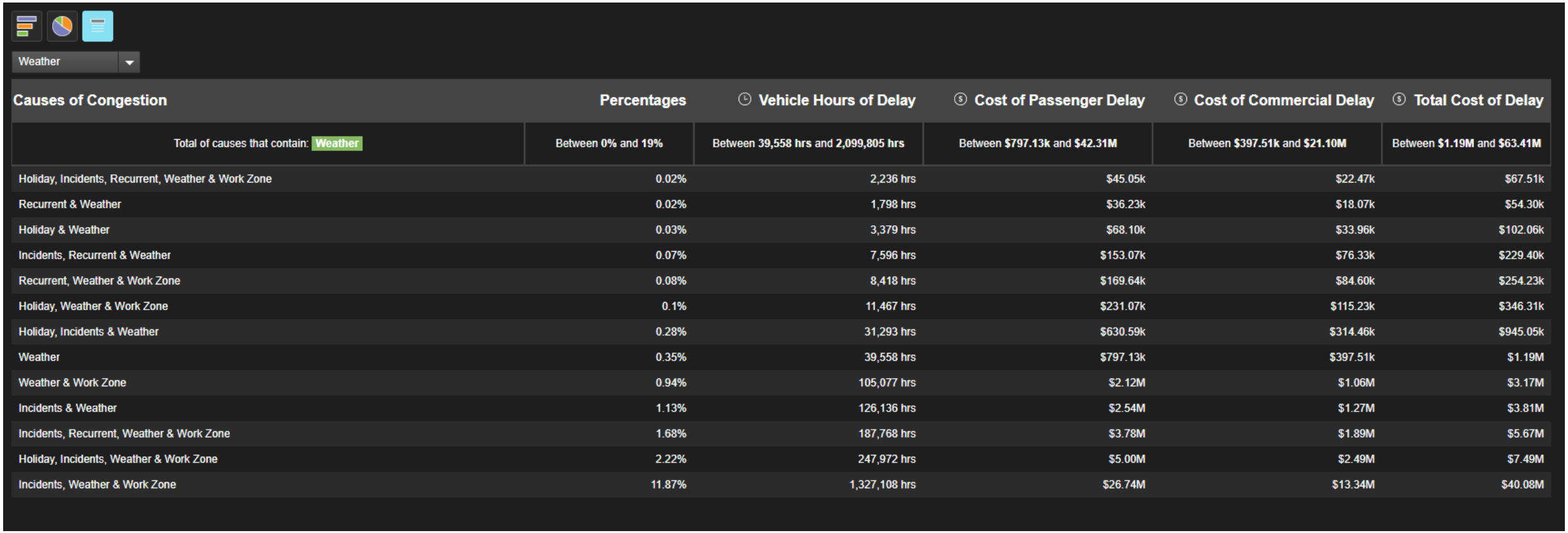
Causes of Congestion: Enhancements & Analysis

Deployed



Causes of Congestion: Enhancements & Analysis

Deployed



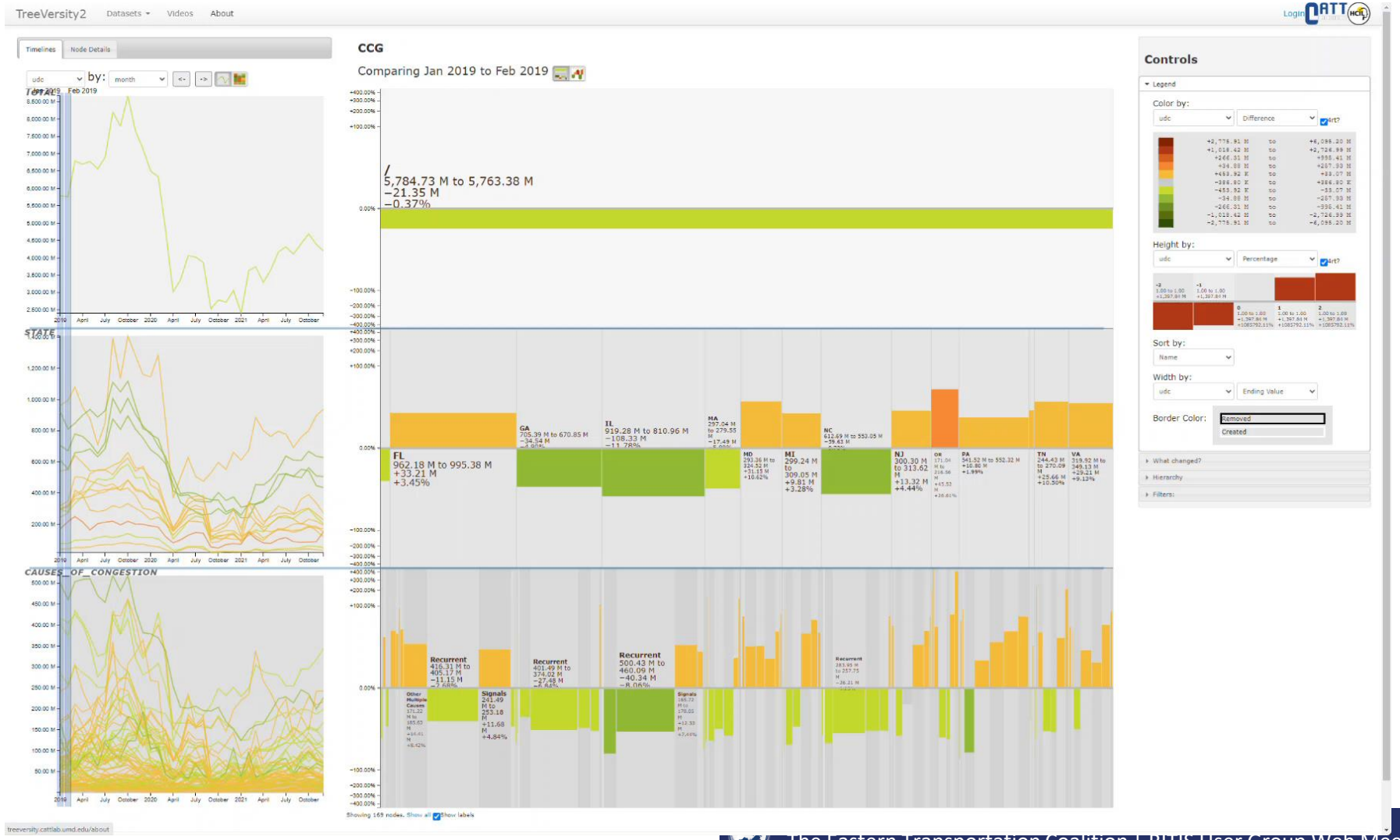
Weather

Causes of Congestion	Percentages	Vehicle Hours of Delay	Cost of Passenger Delay	Cost of Commercial Delay	Total Cost of Delay
Total of causes that contain: Weather	Between 0% and 19%	Between 39,558 hrs and 2,099,805 hrs	Between $797.13k and $42.31M	Between $397.51k and $21.10M	Between $1.19M and $63.41M
Holiday, Incidents, Recurrent, Weather & Work Zone	0.02%	2,236 hrs	$45.05k	$22.47k	$67.51k
Recurrent & Weather	0.02%	1,798 hrs	$36.23k	$18.07k	$54.30k
Holiday & Weather	0.03%	3,379 hrs	$68.10k	$33.96k	$102.06k
Incidents, Recurrent & Weather	0.07%	7,596 hrs	$153.07k	$76.33k	$229.40k
Recurrent, Weather & Work Zone	0.08%	8,418 hrs	$169.64k	$84.60k	$254.23k
Holiday, Weather & Work Zone	0.1%	11,467 hrs	$231.07k	$115.23k	$346.31k
Holiday, Incidents & Weather	0.28%	31,293 hrs	$630.59k	$314.46k	$945.05k
Weather	0.35%	39,558 hrs	$797.13k	$397.51k	$1.19M
Weather & Work Zone	0.94%	105,077 hrs	$2.12M	$1.06M	$3.17M
Incidents & Weather	1.13%	126,136 hrs	$2.54M	$1.27M	$3.81M
Incidents, Recurrent, Weather & Work Zone	1.68%	187,768 hrs	$3.78M	$1.89M	$5.67M
Holiday, Incidents, Weather & Work Zone	2.22%	247,972 hrs	$5.00M	$2.49M	$7.49M
Incidents, Weather & Work Zone	11.87%	1,327,108 hrs	$26.74M	$13.34M	$40.08M

Treeversity.cattlab.umd.edu Select CCG as data source and <switch to monthly>

Deployed

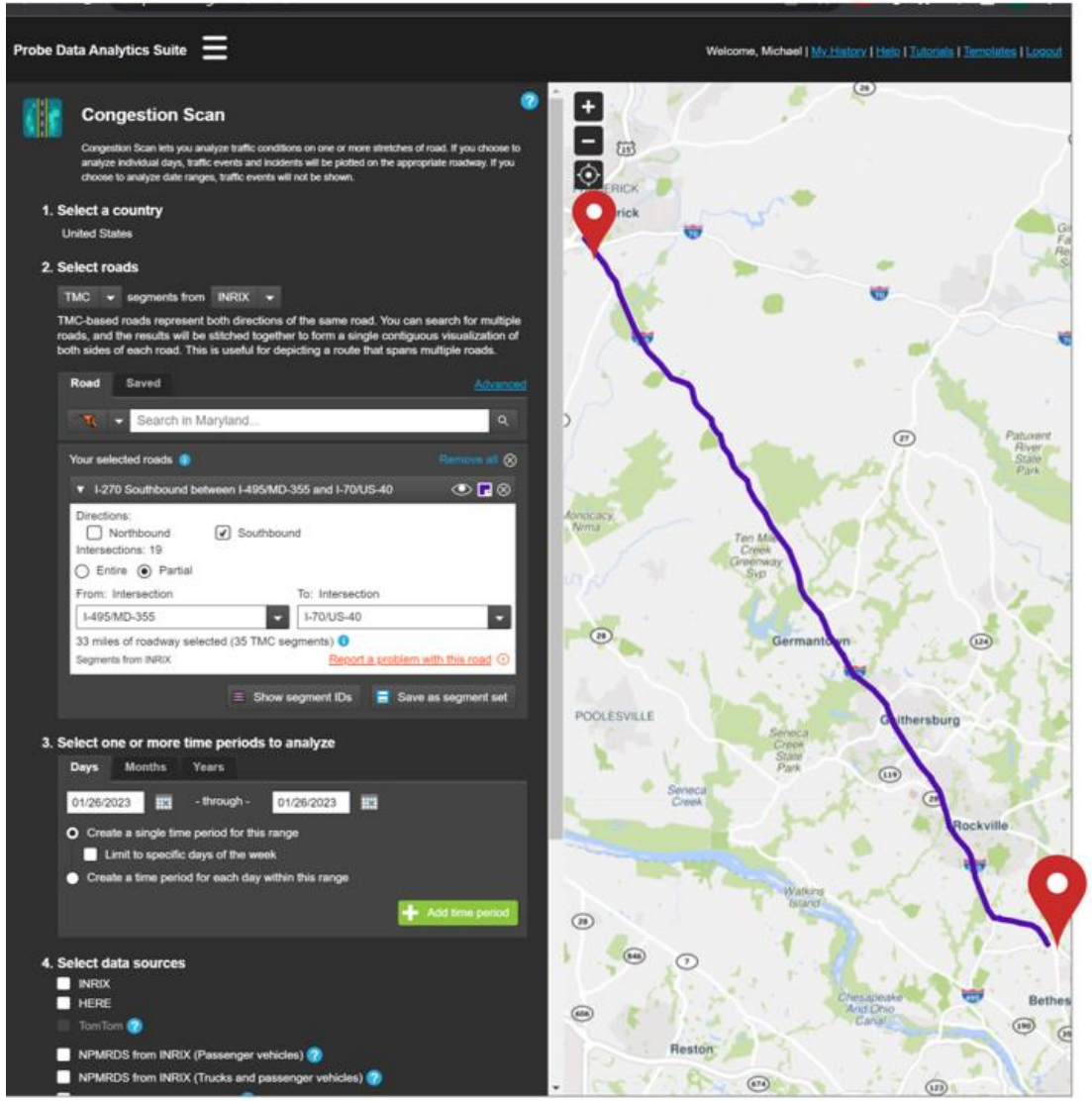
1920 x 1080 resolution needed



Map Click Corridor Selection

In-development

- Click start and end location, and the map automatically connects the points and selects all of the segments
- In-development (several months remain)
- Finished API and related back-end development
- Front-end designs are complete
- Front-end implementation is in progress



Trend Map

The Trend Map allows you to create animated maps showing changes in congestion over the course of time at various granularities. The maps can be exported to animated GIFs or MP4s.

1. Select roads

XD segments from INRIX

Roads | **Route** | Region | List of TMC codes | Saved TMC sets

Select a start, end, and waypoint segments on the map to generate a route. Tutorial

Clear All

A Northbound Segment A

Starting segment A Northbound Segment A

Ending segment

Add Route

2. Select one or more time periods to analyze

Day(s) | Month(s) | Year

A maximum of 7 days is allowed within a single date range

08/16/2016 - through - 08/16/2016

Create a single time period for this range

Limit to specific days of week

Sun | ✓ Mon | ✓ Tue | Wed | Thu | Fri | Sat

Create a time period for each day within this range

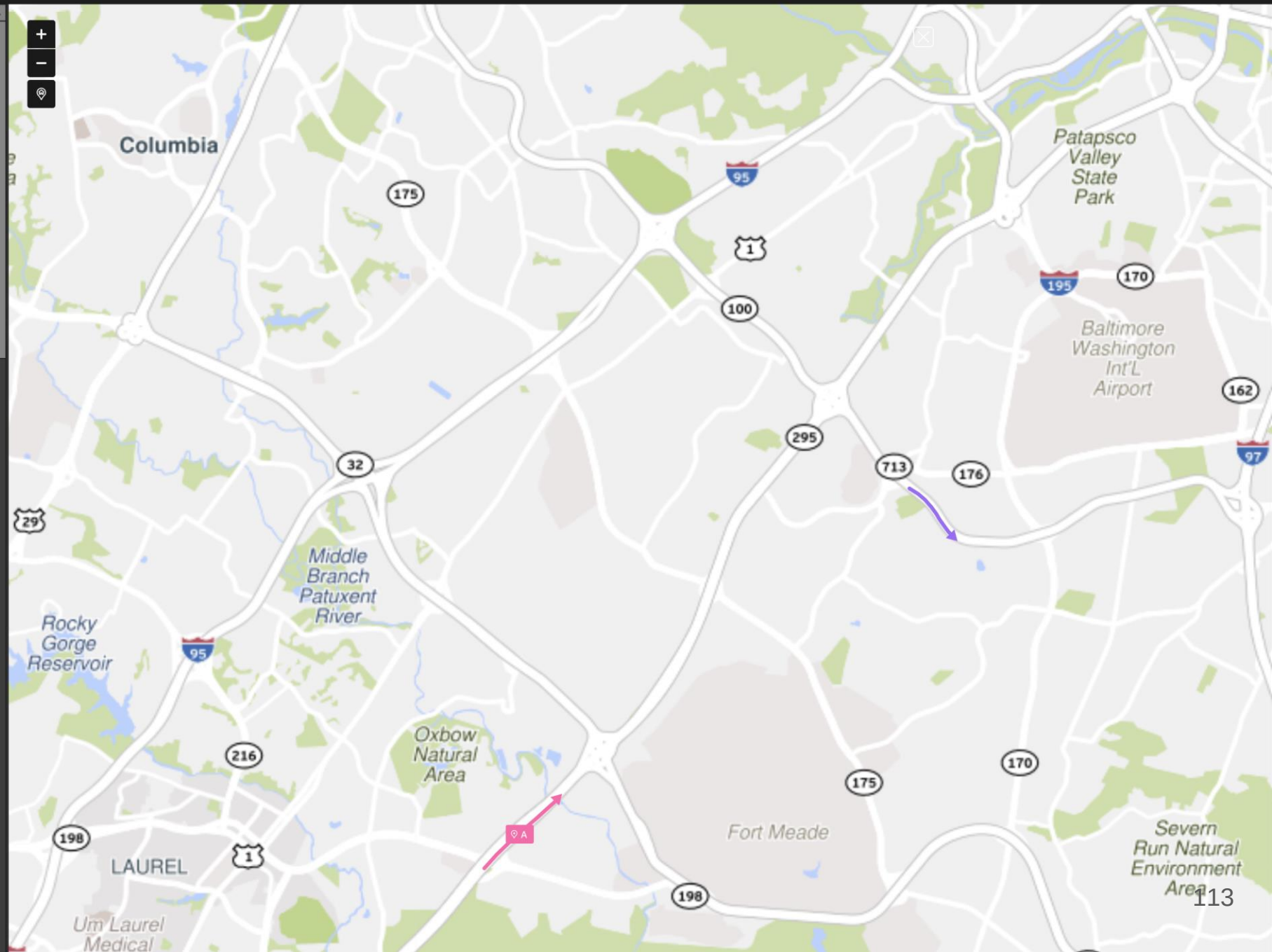
Add time period

3. Select data sources

DiTTlab

HERE

INRIX



Trend Map

The Trend Map allows you to create animated maps showing changes in congestion over the course of time at various granularities. The maps can be exported to animated GIFs or MP4s.

1. Select roads

XD segments from INRIX

Roads | **Route** | Region | List of TMC codes | Saved TMC sets

Select a start, end, and waypoint segments on the map to generate a route. Tutorial

Clear All

A Northbound Segment A

B Eastbound Segment B

Starting segment: A Northbound Segment A

Calculating

Ending segment: B Eastbound Segment B

Add Route

2. Select one or more time periods to analyze

Day(s) | Month(s) | Year

A maximum of 7 days is allowed within a single date range

08/16/2016 - through - 08/16/2016

Create a single time period for this range

Limit to specific days of week

Sun | ✓ Mon | ✓ Tue | Wed | Thu | Fri | Sat

Create a time period for each day within this range

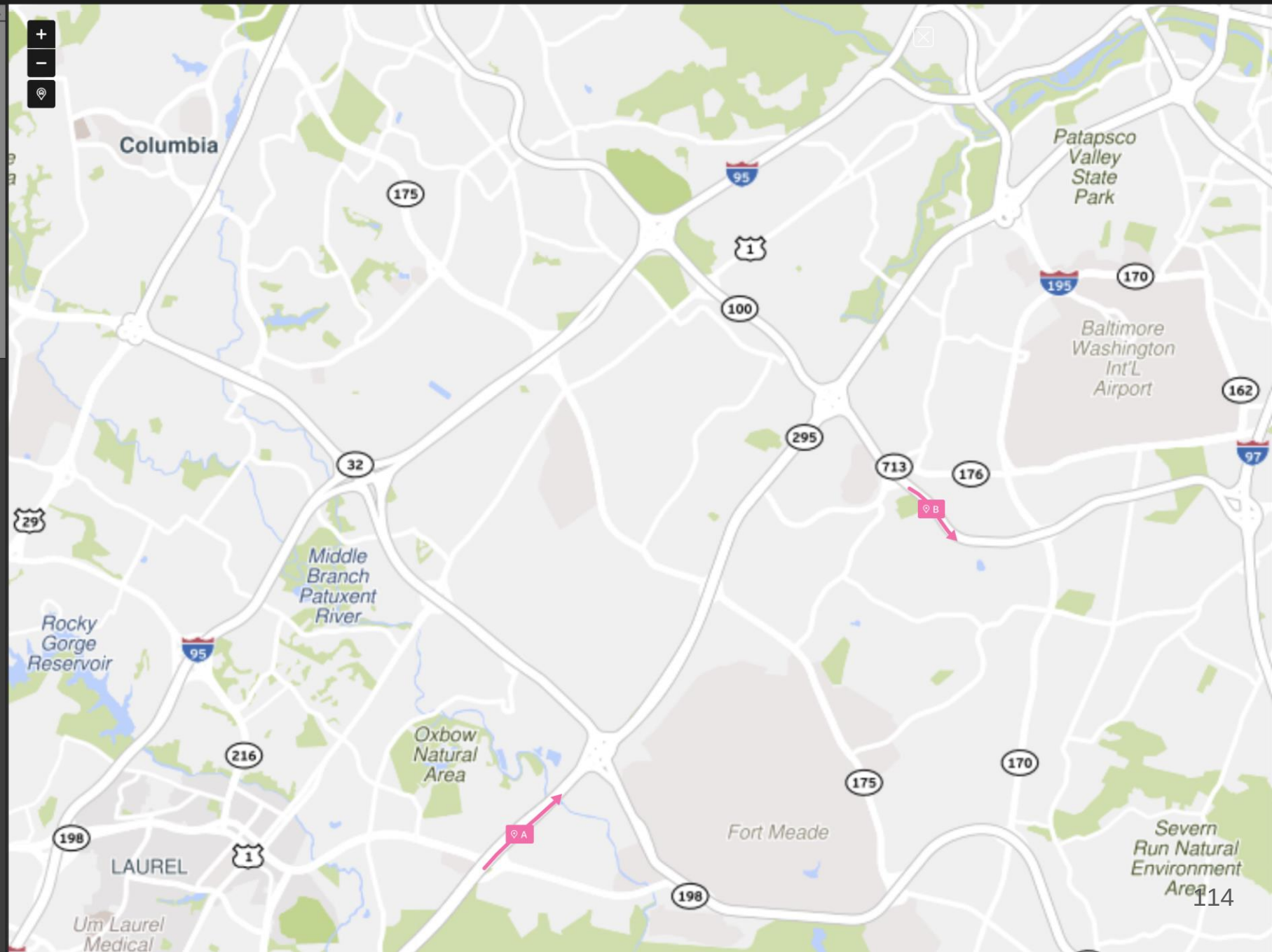
Add time period

3. Select data sources

DiTTlab

HERE

INRIX



Trend Map

The Trend Map allows you to create animated maps showing changes in congestion over the course of time at various granularities. The maps can be exported to animated GIFs or MP4s.

1. Select roads

XD segments from INRIX

Roads | **Route** | Region | List of TMC codes | Saved TMC sets

Select a start, end, and waypoint segments on the map to generate a route. Tutorial

Clear All

A Northbound Segment A

B Eastbound Segment B

Starting segment: A Northbound Segment A

X miles

Ending segment: B Eastbound Segment B

Add Route

2. Select one or more time periods to analyze

Day(s) | Month(s) | Year

A maximum of 7 days is allowed within a single date range

08/16/2016 - through - 08/16/2016

Create a single time period for this range

Limit to specific days of week

Sun | ✓ Mon | ✓ Tue | Wed | Thu | Fri | Sat

Create a time period for each day within this range

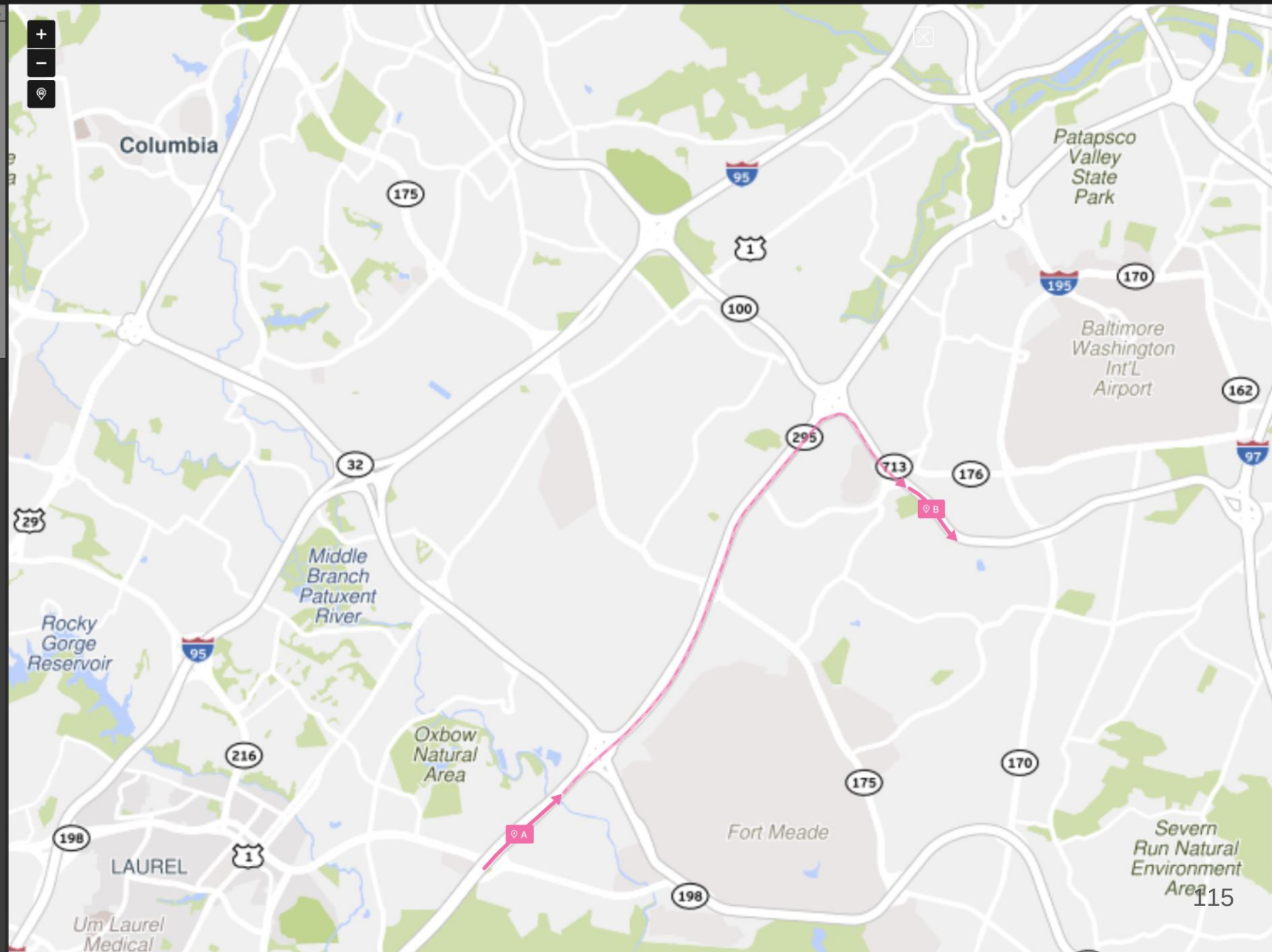
Add time period

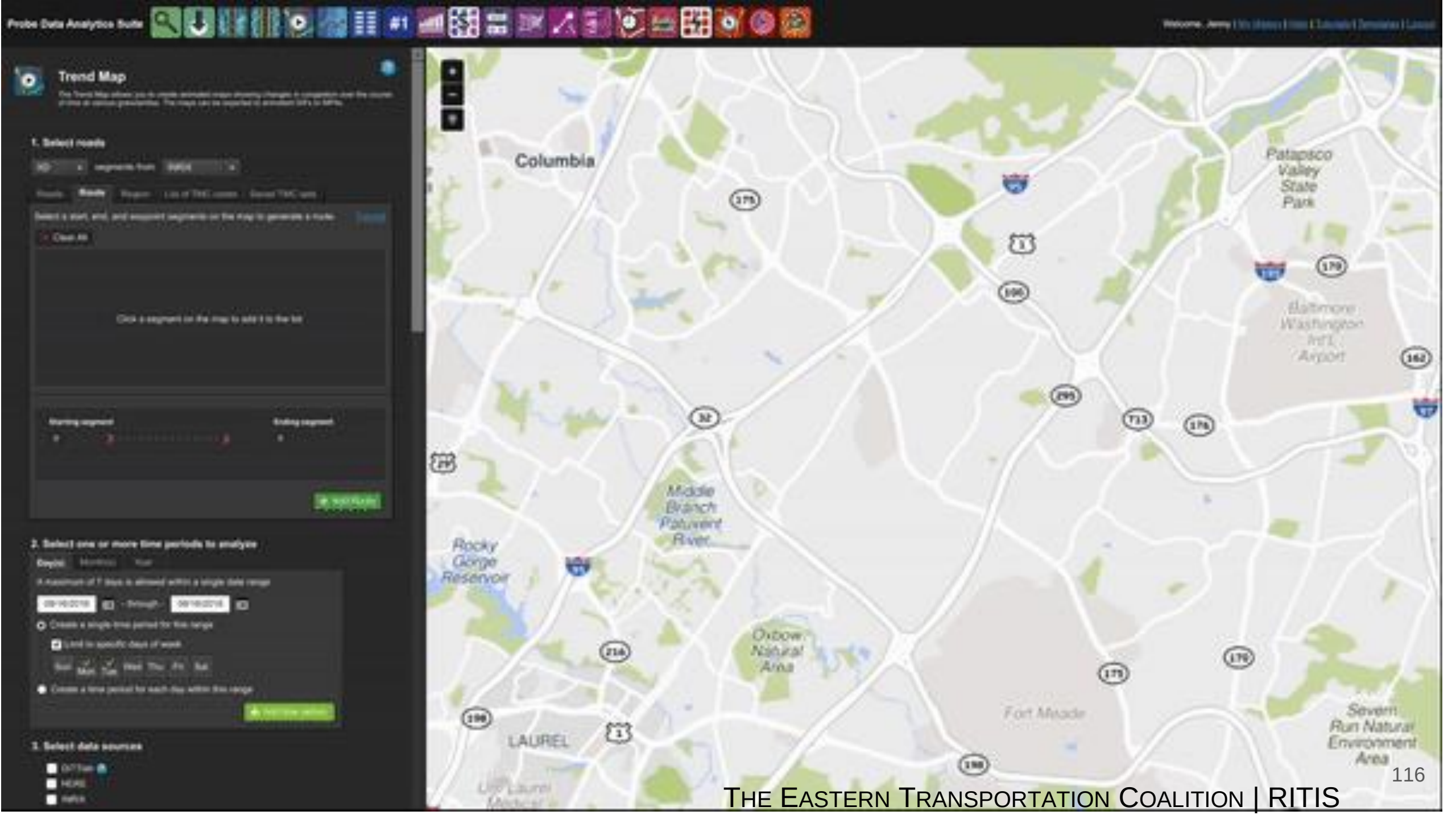
3. Select data sources

DiTTlab

HERE

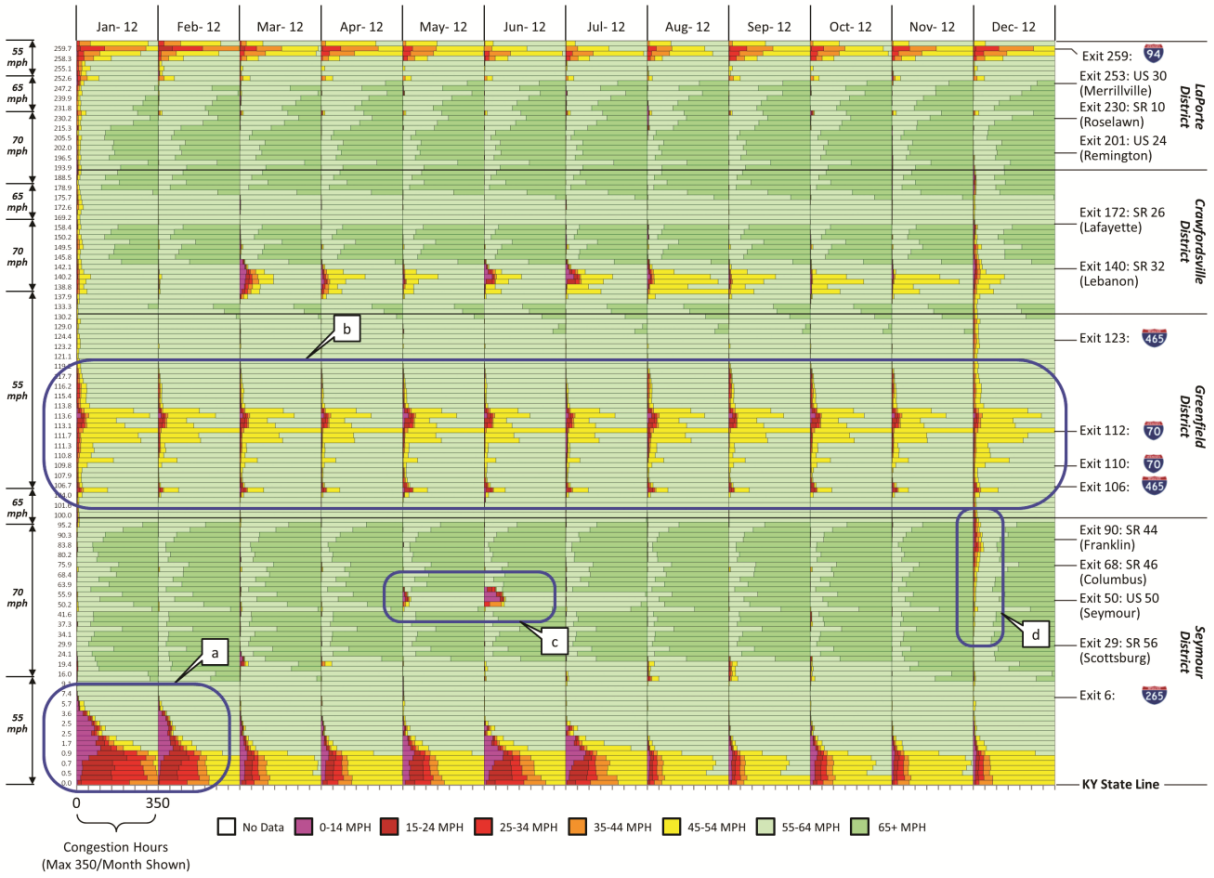
INRIX

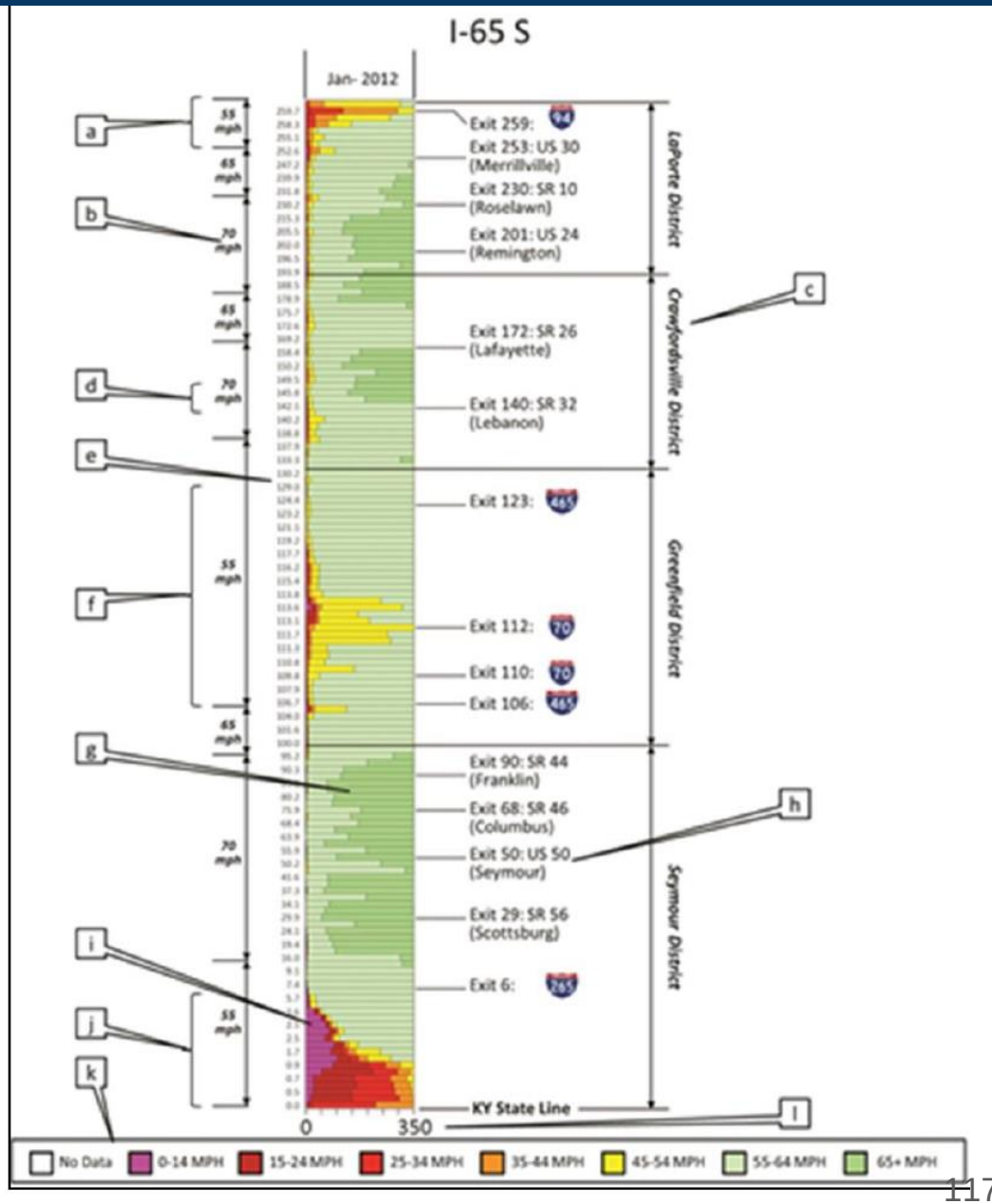



Probe Data Analytics Suite
Trend Map
1. Select roads
Click a segment on the map to add it to the list
2. Select one or more time periods to analyze
3. Select data sources
Columbia
Patapsco Valley State Park
Baltimore Washington Int'l Airport
Middle Branch Patuxent River
Rocky Gorge Reservoir
Oxbow Natural Area
Fort Meade
LAUREL
Severn Run Natural Environment Area

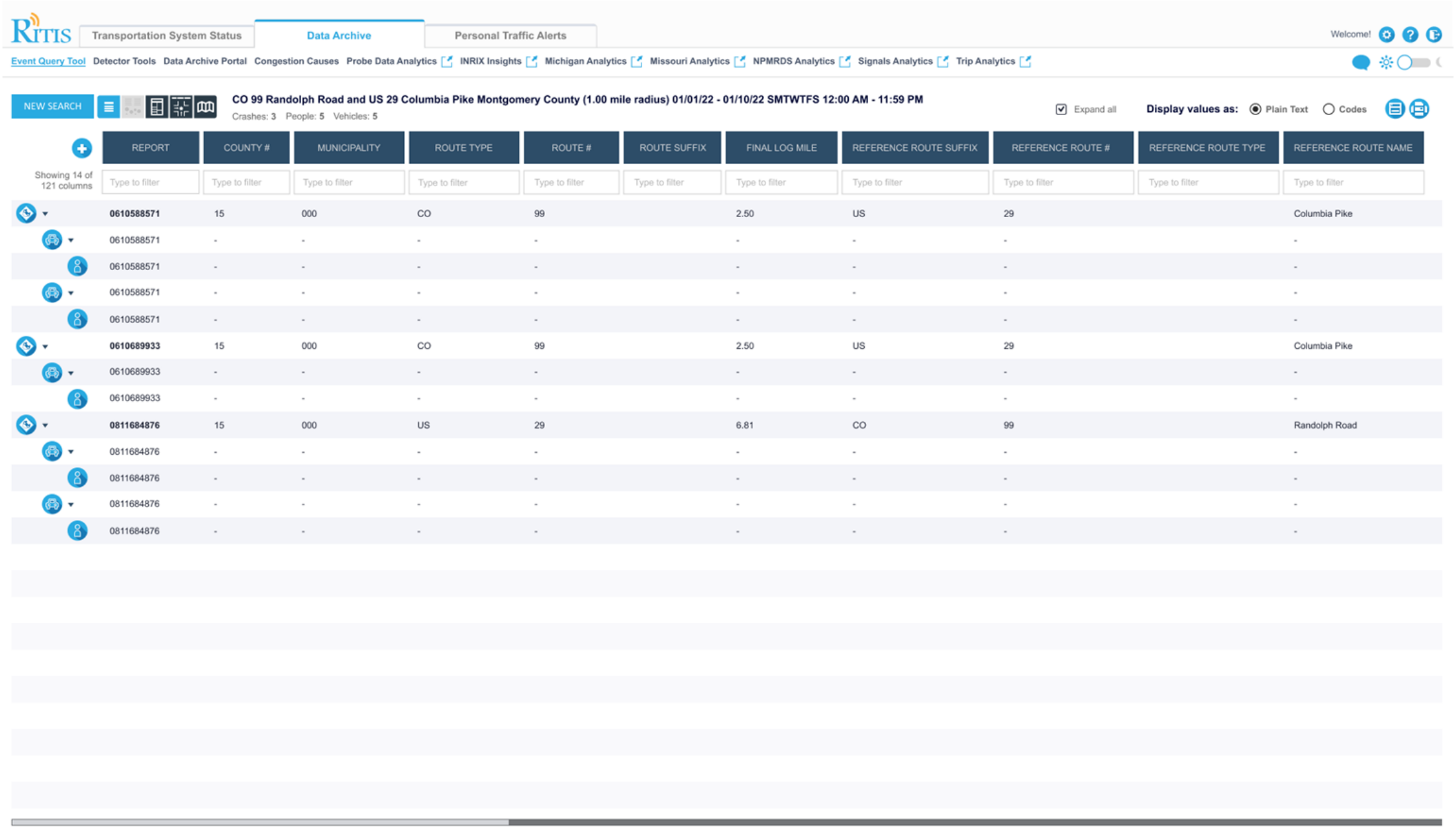
Corridor Speed Bins

Status:
Expected Deploy in May





Police Crash Data (safety analytics) in EQT


RITIS
Transportation System Status
Data Archive
Personal Traffic Alerts
Welcome!
Event Query Tool
Detector Tools
Data Archive Portal
Congestion Causes
Probe Data Analytics
INRIX Insights
Michigan Analytics
Missouri Analytics
NPMRDS Analytics
Signals Analytics
Trip Analytics
NEW SEARCH
CO 99 Randolph Road and US 29 Columbia Pike Montgomery County (1.00 mile radius) 01/01/22 - 01/10/22 SMTWTFS 12:00 AM - 11:59 PM
Crashes: 3 People: 5 Vehicles: 5
Expand all
Display values as: Plain Text Codes
Showing 14 of 121 columns
REPORT
COUNTY #
MUNICIPALITY
ROUTE TYPE
ROUTE #
ROUTE SUFFIX
FINAL LOG MILE
REFERENCE ROUTE SUFFIX
REFERENCE ROUTE #
REFERENCE ROUTE TYPE
REFERENCE ROUTE NAME
Type to filter
0610588571 15 000 CO 99 2.50 US 29 Columbia Pike
0610588571 - - - - - - - -
0610588571 - - - - - - - -
0610588571 - - - - - - - -
0610588571 - - - - - - - -
0610689933 15 000 CO 99 2.50 US 29 Columbia Pike
0610689933 - - - - - - - -
0610689933 - - - - - - - -
0811684876 15 000 US 29 6.81 CO 99 Randolph Road
0811684876 - - - - - - - -
0811684876 - - - - - - - -
0811684876 - - - - - - - -
0811684876 - - - - - - - -
© 2008-2020 University of Maryland CATT Lab
Contact Us
Release Notes

RITIS | Transportation System Status | Data Archive | Personal Traffic Alerts | Welcome!

Event Query Tool | Detector Tools | Data Archive Portal | Congestion Causes | Probe Data Analytics | INRIX Insights | Michigan Analytics | Missouri Analytics | NPMRDS Analytics | Signals Analytics | Trip Analytics

NEW SEARCH

US 29 Columbia Pike Howard and Montgomery County (51 Miles and 31 Intersections) 01/01/22 - 03/31/22 SMTWTFS 12:00 AM - 11:59 PM

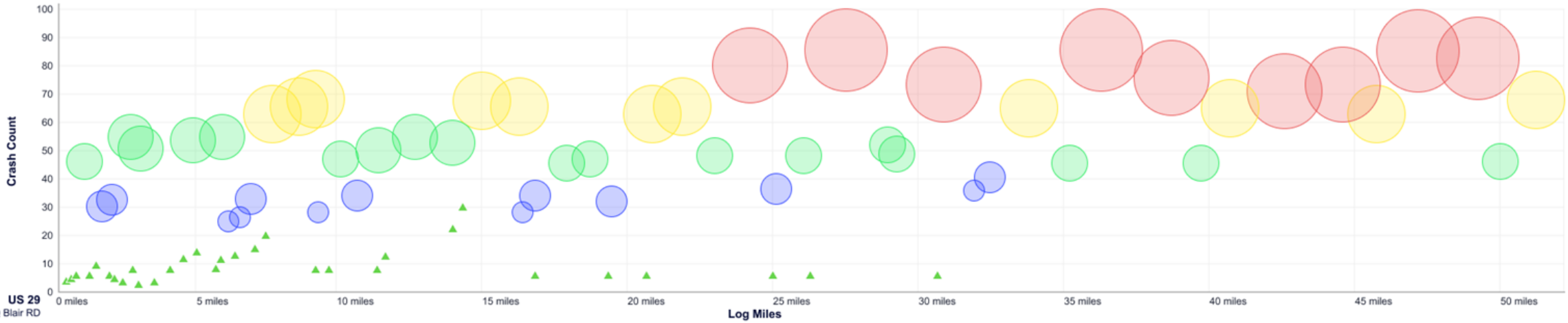
Crash Counts Per Mile — Increment: 0.1 miles (528 ft)

CRASH COUNT	START AT MILE MARKER	END AT MILE MARKER
85	0.00	0.00
69	0.10	0.10
90	0.20	0.20
58	0.30	0.30
59	0.40	0.40
41	0.50	0.50
37	0.60	0.60
41	0.70	0.70
54	0.80	0.80
55	0.90	0.90
58	1.00	1.00
58	1.10	1.10
36	1.20	1.20

Hot Interections — Radius: 0.05 miles (264 ft)

CRASH COUNT	MILE MAKER	ROUTE TYPE	ROUTE NUMBER
85	0.00	US	106
69	0.10	US	128
90	0.20	US	991
58	0.30	US	1161
59	0.40	US	1317
41	0.50	US	1318
37	0.60	US	1424
41	0.70	US	1582
54	0.80	US	1807
55	0.90	US	2129
58	1.00	US	2724
58	1.10	US	2857
36	1.20	US	2859

Bubble Chart — ○ Crashes Per Log Miles ▲ Crashes Per Intersection



NEW SEARCH | US 29 Columbia Pike Howard and Montgomery County (51 Miles and 31 Intersections) 01/01/22 - 03/31/22 SMTWTFS 12:00 AM - 11:59 PM

Select Report Type: General Crash Summary

Crash Summary

By: **User**
On: **Mon Feb 13, 2023**

Query: **Corridor** Dates: **01/01/23 - 03/31/22** County: **Howard and Montgomery County**

Road: **US 29 Columbia Pike**

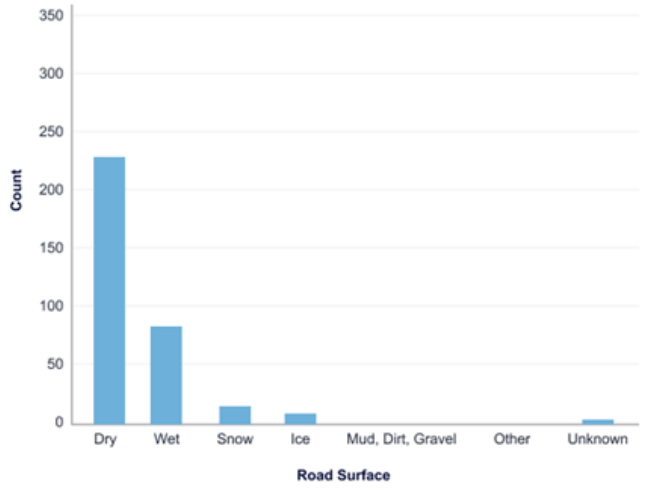
Total Crash Count	Total People Involved Count
321	623

Vehicle Occ. by Injury		Pedestrians by Injury	
Injury	Fatal Injury	Injury	Fatal Injury
142	7	8	0

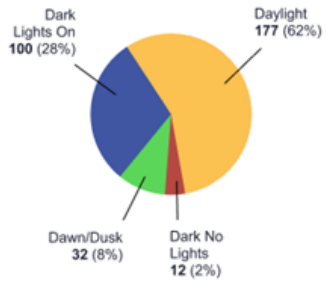
Harmful Event 1 List

Animal	0	Other Conveyance	0	Parked Vehicle	6
Bicycle	0	Other Non Collision	0	Pedestrian	1
Fixed Object	40	Other Object	1	Railway Train	0
Jackknife	0	Other Pedalcycle	1	Spilled Cargo	0
Off Road	1	Other Vehicle	265	Units Separated	0
Other	0	Overturn	4	Unknown	2

Road Surface Conditions



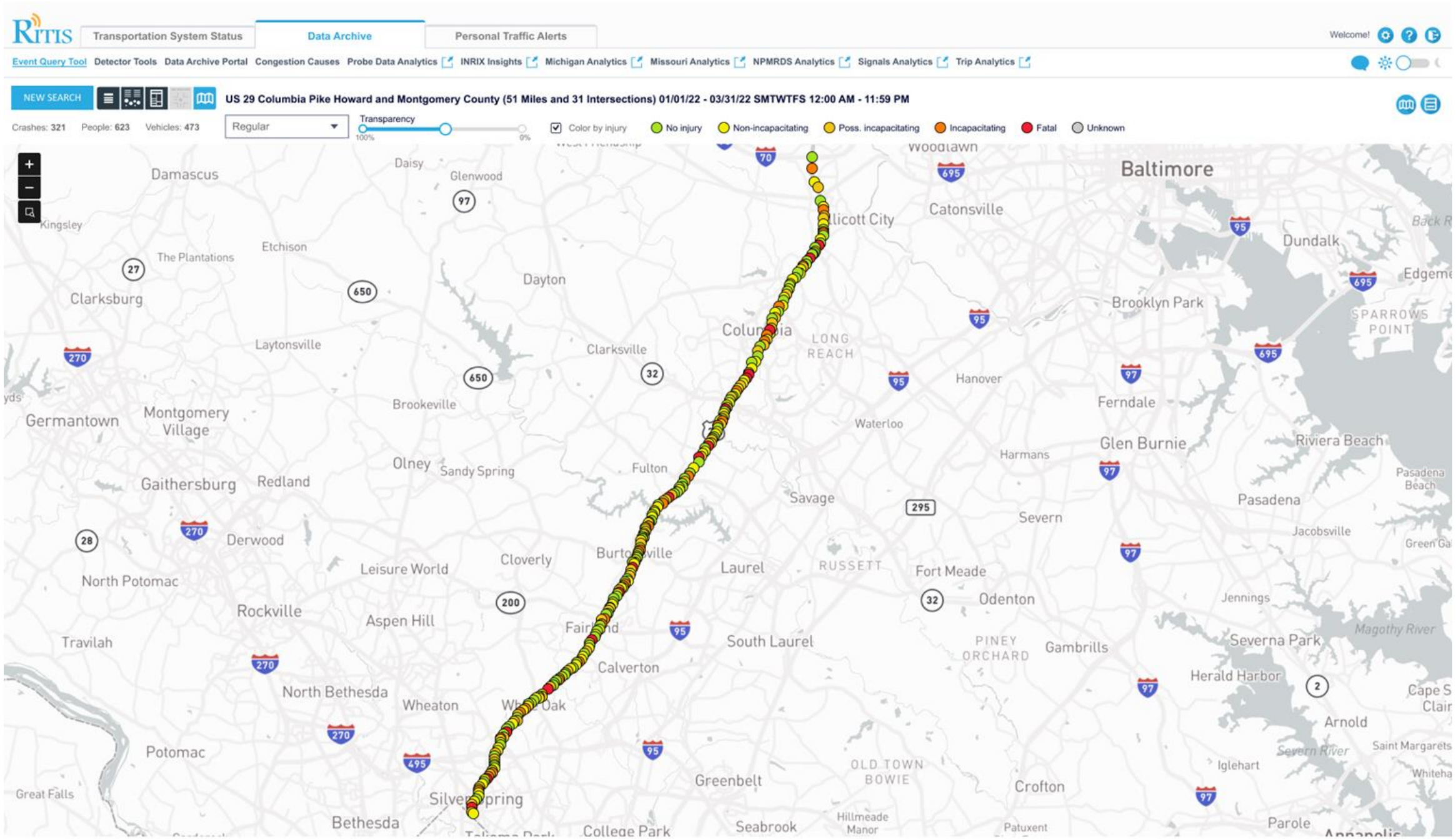
Crash by Light Conditions



Crashes by Collision Type

Head on	13
Head on Left Turn	36
Same Direction Rear End	182
Same Direction Rear End Right Turn	3
Same Direction Rear Edn Left Turn	6

Crashes by Hour of the Day


RITIS
Transportation System Status
Data Archive
Personal Traffic Alerts
Welcome!
Event Query Tool
Detector Tools
Data Archive Portal
Congestion Causes
Probe Data Analytics
INRIX Insights
Michigan Analytics
Missouri Analytics
NPMRDS Analytics
Signals Analytics
Trip Analytics
NEW SEARCH
US 29 Columbia Pike Howard and Montgomery County (51 Miles and 31 Intersections) 01/01/22 - 03/31/22 SMTWTFS 12:00 AM - 11:59 PM
Crashes: 321
People: 623
Vehicles: 473
Regular
Transparency
100%
0%
Color by injury
No injury
Non-incapacitating
Poss. incapacitating
Incapacitating
Fatal
Unknown
Damascus
Daisy
Glenwood
Kingsley
Etchison
The Plantations
Clarksburg
Dayton
Laytonsville
Clarksville
Columbia
LONG REACH
Woodlawn
Baltimore
Catonsville
Dundalk
Brooklyn Park
SPARROWS POINT
Hanover
Ferndale
Waterloo
Glen Burnie
Riviera Beach
Harmans
Pasadena
Pasadena Beach
Jacobsville
Severn
Germantown
Montgomery Village
Brookeville
Olney
Sandy Spring
Fulton
Gaithersburg
Redland
Savage
Derwood
Cloverly
Leisure World
North Potomac
Laurel
RUSSETT
Fort Meade
Odenton
Jennings
Rockville
Aspen Hill
Travilah
South Laurel
PINEY ORCHARD
Gambrills
Severna Park
Magothy River
Herald Harbor
Calverton
North Bethesda
Wheaton
Arnold
Potomac
Greenbelt
OLD TOWN BOWIE
Crofton
Iglehart
Great Falls
Bethesda
College Park
Seabrook
Hillmeade Manor
Patuxent
Parole
© 2008-2020 University of Maryland CATT Lab
Contact Us
Release Notes

In-development. Deploy expected this fall.

RITIS | PROBE DATA ANALYTICS SUITE

Additional RITIS Tools and Enhancements

Michael Pack
UMD CATT Lab
Director

Additional RITIS Enhancements

- **PDA**: https://pda.ritis.org/suite/updates/
- **Trips**: https://trips-beta.ritis.org/new
- **Signals**: https://signals.ritis.org/analytics/updates/
- **Everything Else in RITIS**: https://www.ritis.org/release_notes

RITIS | PROBE DATA ANALYTICS SUITE

Agency Input Session

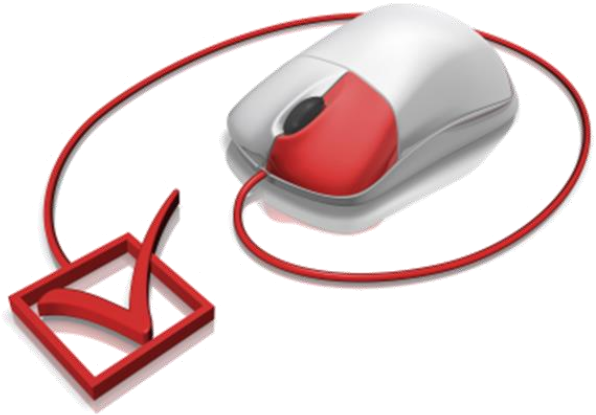
Michael Pack
UMD CATT Lab
Director

Agency Input – Polling and Open Discussion

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

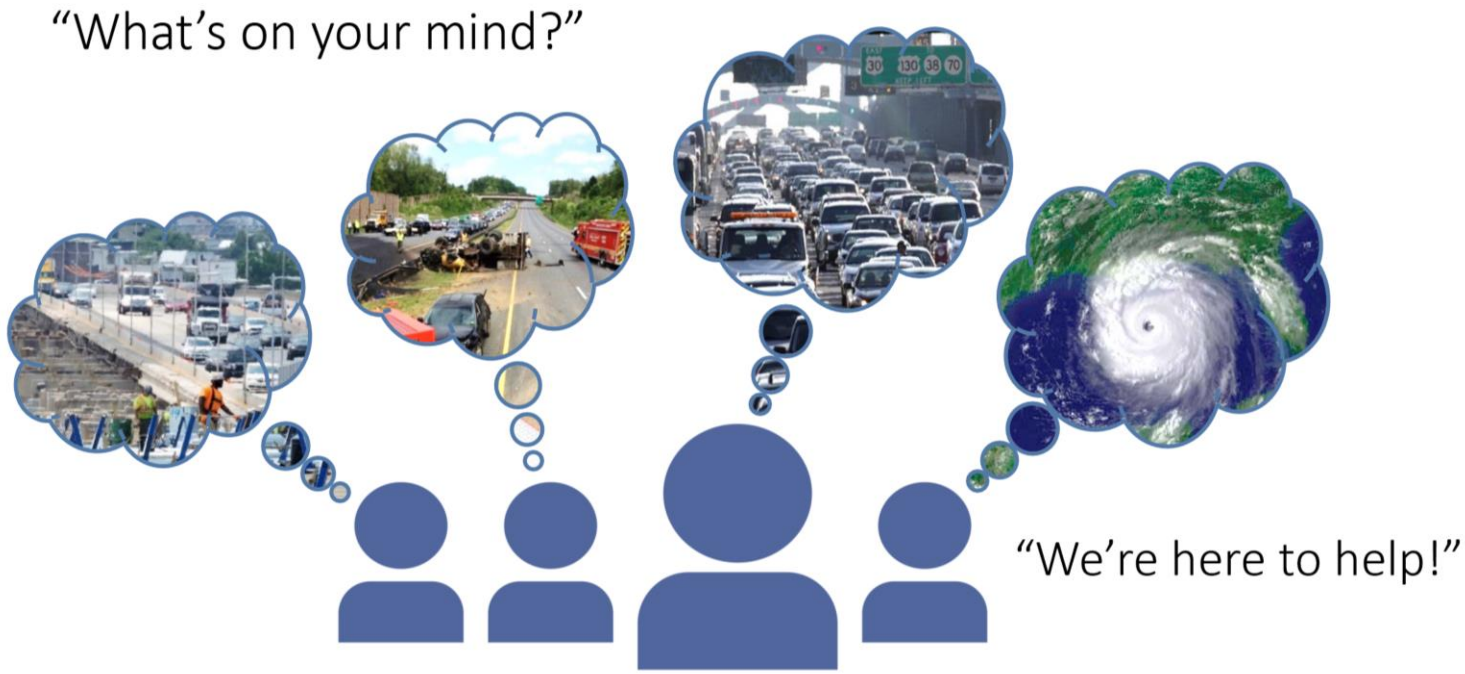
Poll 4 - What kinds of things are you currently doing with RITIS - Planning/Ops, presentations, project/funding justification, etc.- that you'd be willing to share at a future meeting?

Poll 5 - What features or functionality, if added to RITIS, would make your life easier?



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

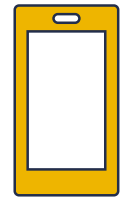


Wrap Up

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

Questions?





Denise Markow (TETC)	dmarkow@tetcoalition.org	301.789.9088
Joanna Reagle (Logistics)	jreagle@kmjinc.com	610.228.0760
Michael Pack (CATT Lab)	PackML@umd.edu	
RITIS Tech Support	support@ritis.org	
PDA Suite Tech Support	pda-support@ritis.org	