# PROBE DATA ANALYTICS SUITE

u s e r g r o u p

**Web Meeting** – May 7, 2020


With the widespread use of this web platform, some participants may experience delays or difficulty connecting, we appreciate your patience.

**We recommend that you use a phone line for the audio portion.**

Call Number: xxx-xxx-xxxx

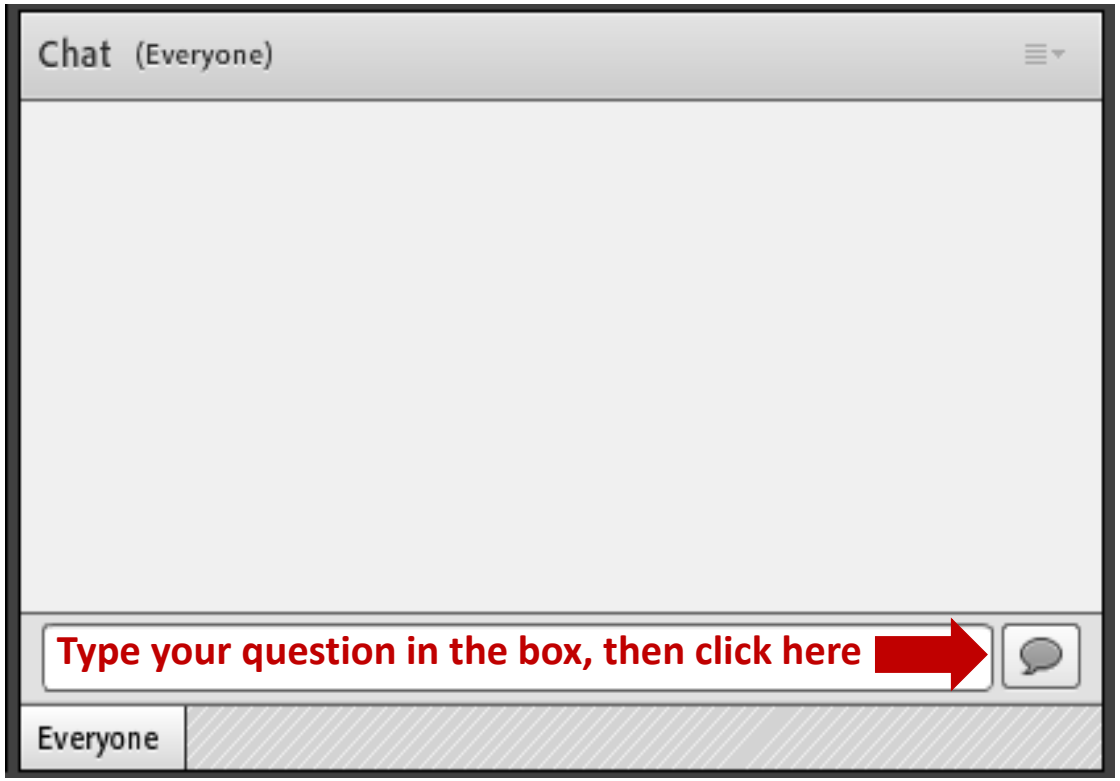
Enter xxxxxxx# at the prompt

# Webinar & Audio Information

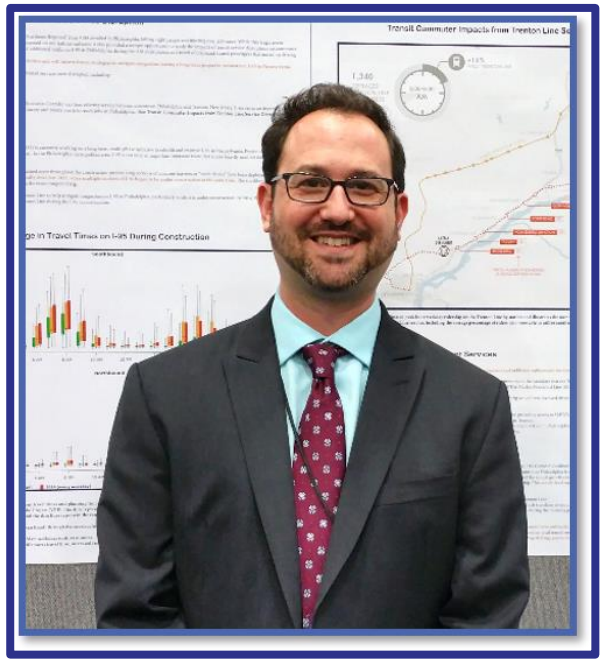
- With the widespread use of this web platform, some participants may experience delays or difficulty connecting, we appreciate your patience.
- We recommend that you use a phone line for the audio portion. The call-in phone number is:
- Participants will be in “Listen Only” mode throughout the webinar
- Please press *0 to speak to an operator for questions regarding audio
- Please call Justin for difficulties with the web or audio application
- **This webinar will be recorded**
- Presentations will be posted to the I-95 Corridor Coalition website. Participants will receive a link to the presentations after they are posted.

# Asking Questions

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



# Welcome & Introductions



**Jesse Buerk, Delaware Valley Regional Planning Commission**

User Group Co-chair

# Agenda

| Time | Topic | Speaker |
|---|---|---|
| 10:30-10:35am | Welcome & Introductions | Jesse Buerk, DVRPC & User Group Co-chair |
| 10:35-10:40am | Coalition Update | Denise Markow, I-95 Corridor Coalition (soon to be the Eastern Transportation Coalition) |
| 10:40-11:00am | Leveraging the new "Trip Analytics" to Better Understand Truck Trip Origins & Destinations within Rhode Island | Josh O'Neill & Ben Jacobs, Rhode Island Division of Statewide Planning |
| 11:00-11:20am | Probe Data Analytics Applications for Evaluating Operations and Safety in Washington DC | Tom Knofczynski, Sabra & Associates/Mead & Hunt for District DOT |
| 11:20-11:30am | Working Group Updates | Michael Pack, UMD CATT Lab |
| 11:30-11:45am | RITIS & PDA Suite Updates | Michael Pack, UMD CATT Lab |
| 11:45am-11:55am | Agency Input Session | All |
| 11:55am-12:00pm | Wrap Up | Jesse Buerk, DVRPC & User Group Co-chair |

# Introductions

**Josh O'Neill, AICP, CFM**
Rhode island Division of Statewide Planning
*Supervising Planner*

**Ben Jacobs, MCRP**
Rhode island Division of Statewide Planning
*Principal Research Technician*

**Tom Knofczynski, PE**
Sabra & Associates/ Mead & Hunt
(for District DOT)
*Project Engineer*

**Michael Pack**
UMD CATT Lab
*Director*

# Participants

| Agency | | | |
|---|---|---|---|
| AECOM/FTE | Florida DOT – District 5 | MWCOG | SJTPO |
| AEM | Gannett Fleming | New Jersey DOT | South Carolina DOT |
| Atkins | Georgia DOT | NJIT | Southeastern Regional Planning and Economic Development District |
| Atlanta Regional Commission | Georgia DOT (Atkins) | NJTPA | Southern GA Regional Commission |
| AutoReturn | I-95 Corridor Coalition | North Carolina DOT | Southern New Hampshire Planning Commission |
| Baltimore Metropolitan Council | INRIX | Northern VA Transportation Authority | Southwestern Pennsylvania Commission |
| Bend - MPO | KISNN Associates | NYC DOT | SRPEDD |
| CAMPO - Raleigh | KMJ Consulting, Inc. | NYS DOT | SwRI |
| CCRPC VT | Maricopa Association of Governments | Oregon DOT | Tennessee DOT |
| CHA | Maryland DOT – TTI | Pennsylvania DOT | TTI |
| City of Bend, Oregon | Maryland DOT SHA | Pennsylvania Turnpike Commission | UMD CATT Lab |
| Connecticut DOT | Maryland Transportation Authority | PVPC | UMD-CATT |
| Dad & Associates, LLC | Massachusetts DOT | Rhode Island – Division of Statewide Planning | Vermont AOT |
| Delaware DOT | Metric Engineering | RI MPO | VHB |
| Federal Highway Administration | Michael Baker International | Rockingham Planning Commission | Villanova University |
| FIU | Michigan DOT | RS&H | Virginia DOT/OIPI |
| Florida DOT | Modern Mobility Partners, LLC | Sabra & Associates | Virginia DOT/VTRC |

# Coalition Update

**Denise Markow, PE, I-95 Corridor Coalition** (soon to be the Eastern Transportation Coalition)

TSMO Director

# JULY 1st

*We "flip the switch"*

# The Eastern Transportation Coalition

# Coalition Update

RECENT

- ✓ Southern HOGs Exchange on Hurricane Plans- Regional Planning Call – April 30, 2020

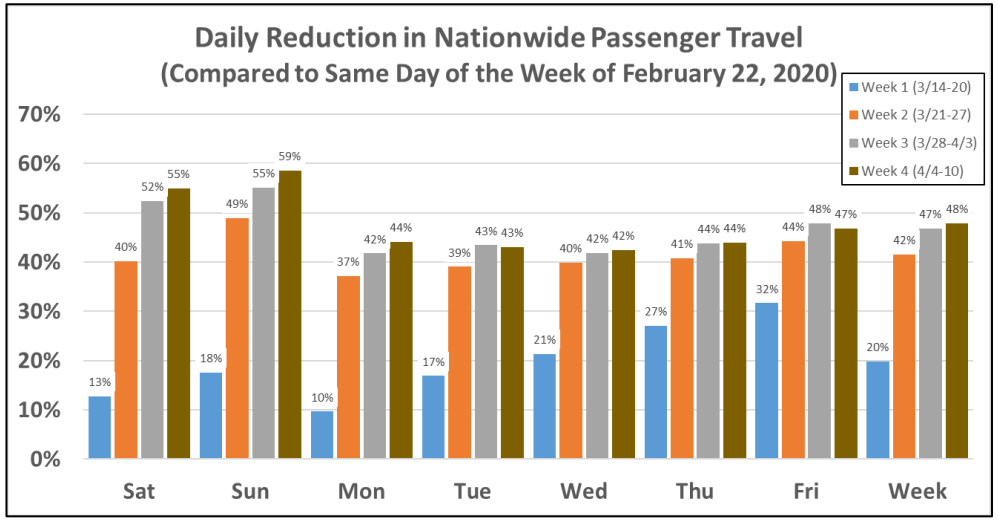
UPCOMING

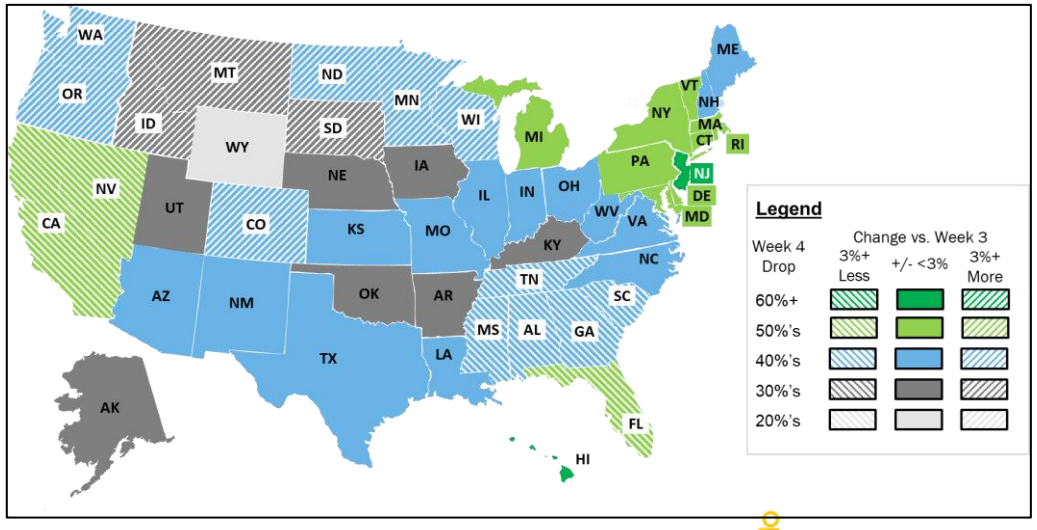
- ✓ TSMO Webinar – Protecting our Infrastructure – Tunnel Management and WIM's – May 28, 2020
- ✓ TSMO/CAV/Freight Strategic Planning Summit (via web) – June 16, 2020
- ✓ New Technologies providing Traveler Information Meeting (via web) – June 17, 2020
- ✓ RITIS-PDA Suite User Group Web Meeting – Summer 2020

# INRIX U.S. National Traffic Volume Synopsis

Free Weekly Blog Post at [www.inrix.com/blog](http://www.inrix.com/blog)

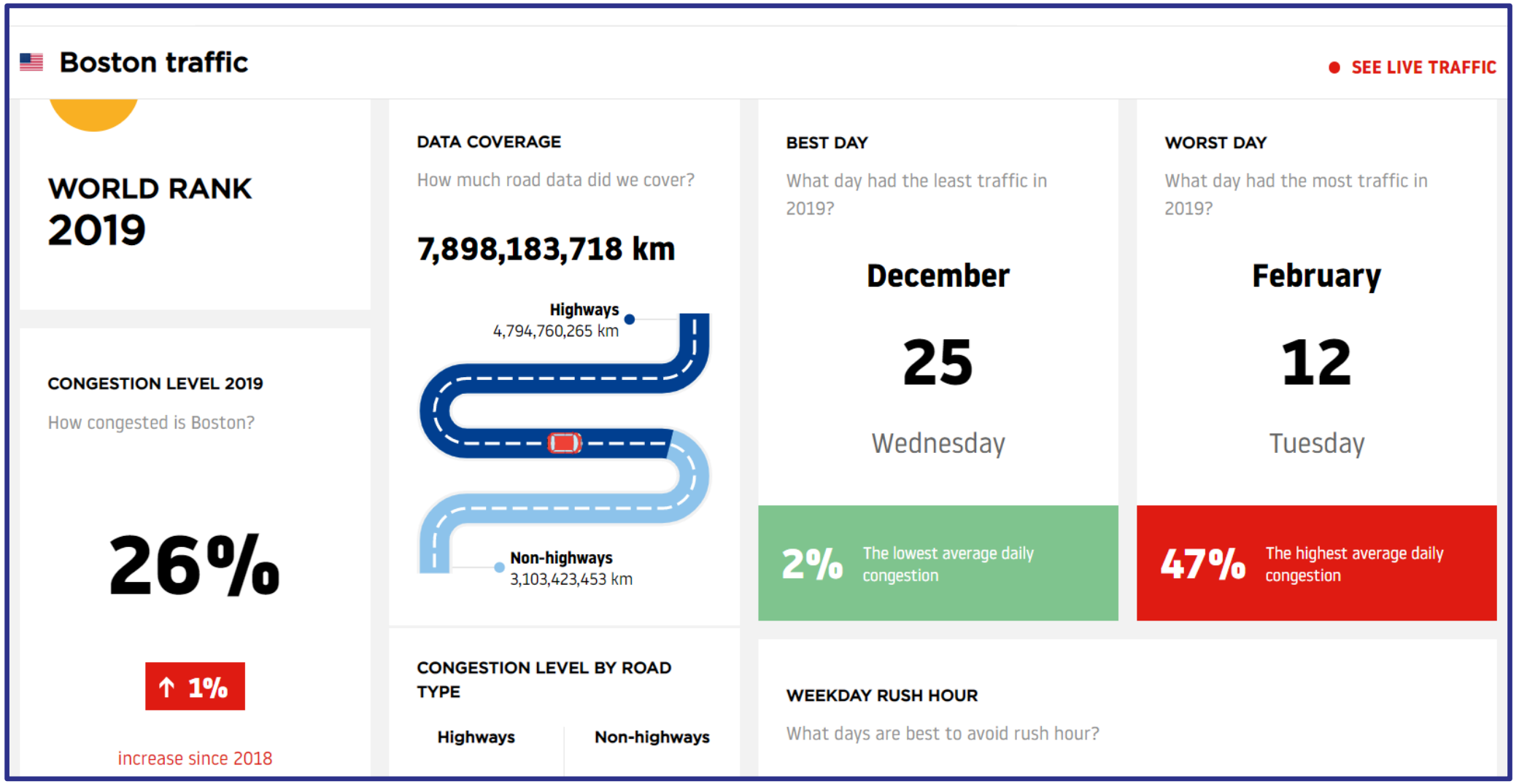
- Several COVID-19 related posts on blog
- Includes Weekly Volume Trends in US
  - Leverages INRIX Trips data
  - Posts each Monday – traffic through last Friday
  - Issue 1 posted on March 23
  - Will continue through COVID-impacted period
- Notable national, state, metro trends
  - Traffic Volume Dashboard Tool available for more detail/local analyses



# TomTom Live Traffic Dashboard

https://www.tomtom.com/en_gb/traffic-index/philadelphia-traffic



# INRIX VPP and New Options ('Ancillary Products')

Additional service options added as pre-negotiated fees, discounted from list price

## Real-Time Options

- ***Core Services – XD and TMC Real Time Data***

1. Highway Emergency Link Platform
   - Off-the-shelf emergency alerting service that establishes two-way communication with those stranded in trapped queues due to incidents, weather, etc.
2. Dangerous Slowdowns Real-Time API
   - Safety-focused back of queue alerts to agencies to augment current data or as a cost-effective option for rural states not involved presently in VPP
3. Commercial Vehicle Safety Alerts
   - Delivers queue and other safety warnings directly to truckers when heading towards slow/stopped traffic on highways and/or other agency-created safety information

## Historical Options

4. Trip Analytics and Datasets
   - Access to various trip-level data options to support freight and transportation planning
5. XD Segment Traffic Archive
   - Access to XD archives at a fraction of real-time data fees
6. State/County TMC Location Referencing Network Shapefile
7. Volume Profiles
   - Direct access to dataset that powers volume-weighted analyses. 15-min bins, total vehicle counts provided for every XD segment
8. Volume Archive Study Support
   - Cost-effective combination of Trip Dataset and XD Segment Archive to power UMD CATT process to create highly detailed and accurate volume archive for agencies
9. Signal Analytics
   - Enables focused analysis of signal networks, as granular as the intersection level

# HERE Tiered Support Services Framework

Does not apply | O Can be purchased as an option | Included in support level

| Support Feature | | Freemium | Gold ($) | Platinum ($) |
|---|---|---|---|---|
| Access to Knowledge / Communities | | | | |
| System Health [1] Status Notifications | | Status page | Proactive notifications | Proactive notifications |
| Customer Support Portal | | | | |
| Technical Support for Multiple Users | | | Up to 5 Named Contacts | Unlimited Named Contacts |
| Response Time | | | 16 hours | 8 hours |
| Technical Support Hours / Coverage [2] | | | | 24/5 'Follow the Sun' Support |
| Monthly SLA [1] Reports | | | | Custom [6] |
| Root Cause Analysis [3] | | | | |
| Authorized Technical Contact | | | | |
| Technical Support in Local Language | | | | |
| Add-on Services | Onboarding Support | | O | 3 days per term |
| | User Testing | | O | 5 days per term |
| | Orientation & Advisory | | O | 5 days per term |
| Quarterly Reviews [4] | | | | |
| Escalation Support [1] | | | | |
| Incident Response and Resolution Commitments [1,5] | | | | |

1) Applies to HERE Platform. Platform includes HLS (HERE location Services), OLP (Open location platform) and HERE SDKs; Monthly SLA Reports based on HLS SLAs and OLP SLAs.
2) Standard Business Hour support; 3) Written report for P1 and P2 incidents, upon request; 4) Support services review, part of QBRs driven by Sales AEs. 5) With committed incident response and resolution times; 6) Tailored to specific customer usage and use cases

## TomTom's expanded core bundle

**TomTom Live Traffic (TMC and OpenLR)**
Up-to-the-minute, granular updates from over 100 million U.S. probes at the lane level.

**TomTom Incidents and Delays**
Access to traffic jams, road closures, accidents, expected delays, and more.

**TomTom Move: Route Monitoring**
Real-time monitoring of custom routes and broadcasting messages to drivers.

**TomTom Move: TrafficStats**
provides advanced tools for area and route-based road network analysis and bottleneck intelligence.

**TomTom Road Event Reporter**
Real-time map of current flow and incidents from which road authorities can update conditions to inform millions of road users in minutes via in-car information about events affecting traffic flow.

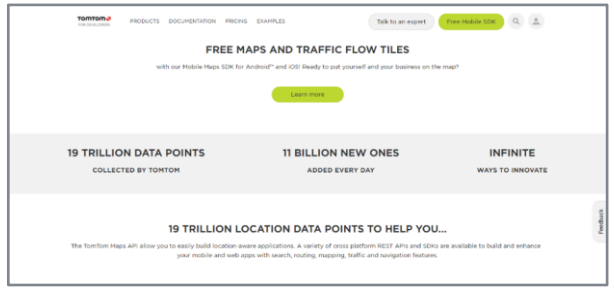
**TomTom Developers Portal**
Free access to TomTom's traffic and data APIs for research and testing developer.tomtom.com

## New Ancillary Products

| Safety | Prediction | Lane Level | Customized Traffic KPI Dashboard |
|---|---|---|---|
| **Jam Ahead Warnings** Messages for dangerous jam tails. | **Jam Tendency Prediction** Expected time the jam will remain. | **Turn-Dependent Jams** Flag added to indicate a conditional jam to a specific lane. | **TomTom City*** Custom dashboard for monitoring and evaluating the overall road network. Samples for starting points are located city.tomtom.com |
| **Weather-related Delays** Messages for delays due to rain/snow. | **Jam Lifetime Prediction** Incidents that are bound to happen in the future. | **HOV Land Speed** Flow speed for HOV lanes. | |
| **Dynamic Speed Limits** Message for Speed Limit changes via variable message signs. | **Future Events** Expected speed for the next 24 hours. | TomTom's VPP contract includes negotiated pricing for core real-time traffic data services and additional Ancillary Products available as separate options independent of the core service. These prices are the best available from TomTom for these services, discounted from standard pricing for Coalition members.<br>From the outset of VPP, the Coalition has supported a 'one agency pays, all agencies can use' model. Any member agency (including affiliate members) of the Coalition, neighboring agencies and partner agencies can access/use an INRIX, HERE or TomTom dataset licensed through the I-95 CC VPP Marketplace with no additional fees, so long as they have an executed VPP Data Use Agreement.<br>Contractors/consultants working for any member agency with an executed DUA that ties back to that member agency can also use this same data at no additional cost. | |
| **Roadworks Speed Limits** Message for Speed Limit changes due to roadworks. | **Predictive Flow** Expected speed for the next 24 hours. | | |

# Highest sampling rates of traffic conditions in the U.S. with more than 100 million probes

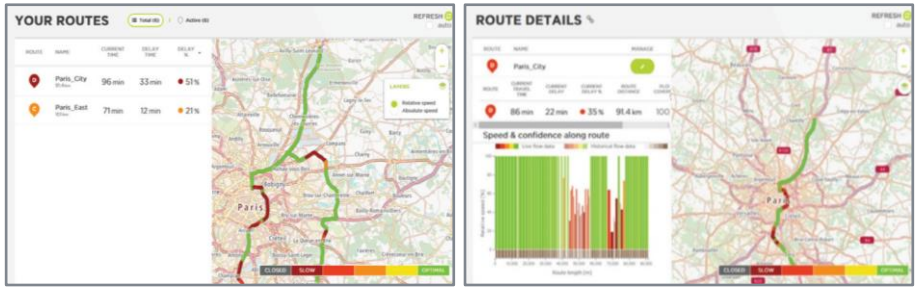
## Developers Portal




TOMTOM

## Customized KPI Dashboard


## Route Monitoring



# VPP III – Coming Summer 2021

## VPP III

- Current VPP expires in 2022 – Coalition goal is to have VPPIII operational by July 1, 2021
- Consisting of Data and Ancillary Products
- Validation Analyses
- Data Sharing and Use Agreements


## VPP III Next Steps

Step 1: Initial Vendor Meetings have been conducted

Step 2: Technical Requirements are under review

Step 3: Outreach to states to staff the Steering Committee

In the spotlight…

# Leveraging the new "Trip Analytics" to Better Understand Truck Trip Origins & Destinations within Rhode Island

Josh O'Neill, AICP, CFM
*Supervising Planner, Division of Statewide Planning, Department of Administration*
Ben Jacobs, MCRP
*Principal Research Technician, Division of Statewide Planning, Department of Administration*

STATE OF RHODE ISLAND
DEPARTMENT OF
ADMINISTRATION

# RHODE ISLAND TRUCK TRIP ORIGIN AND DESTINATION ANALYSIS

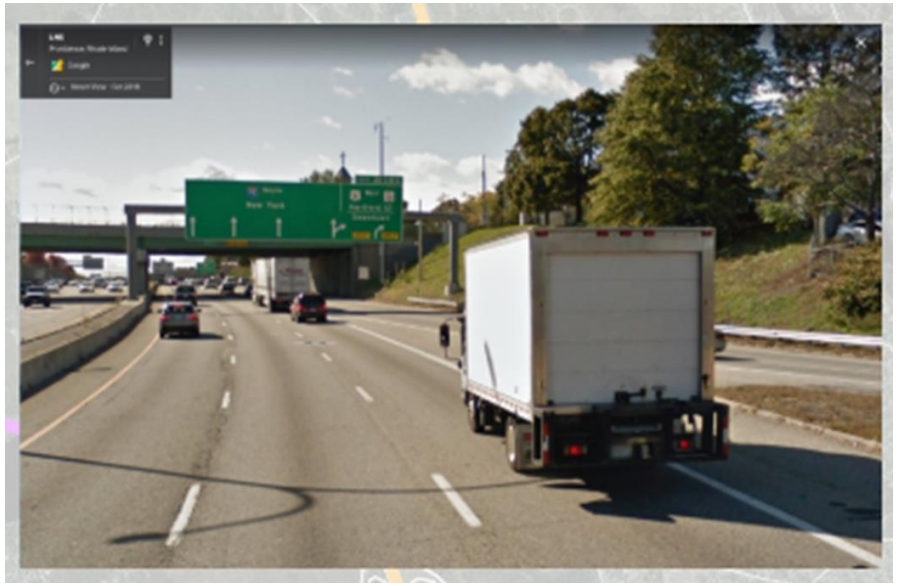
Josh O'Neill AICP, CFM

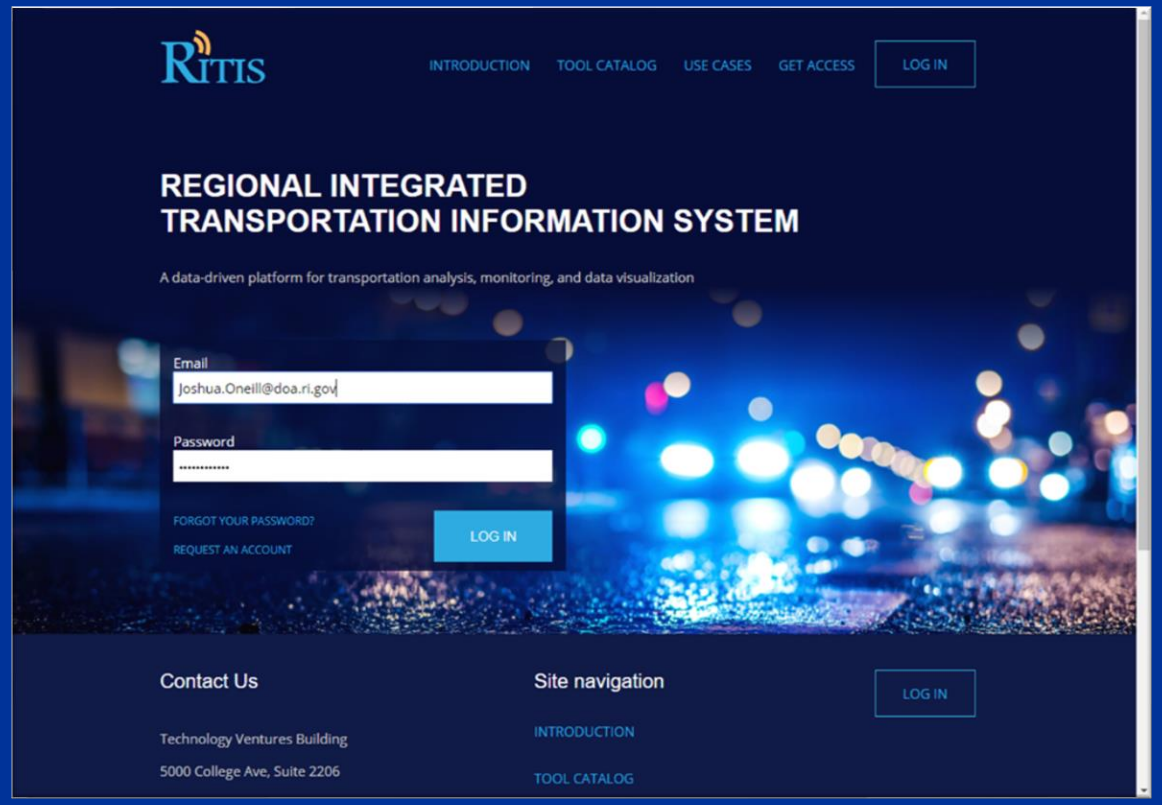
Benjamin Jacobs, MCRP

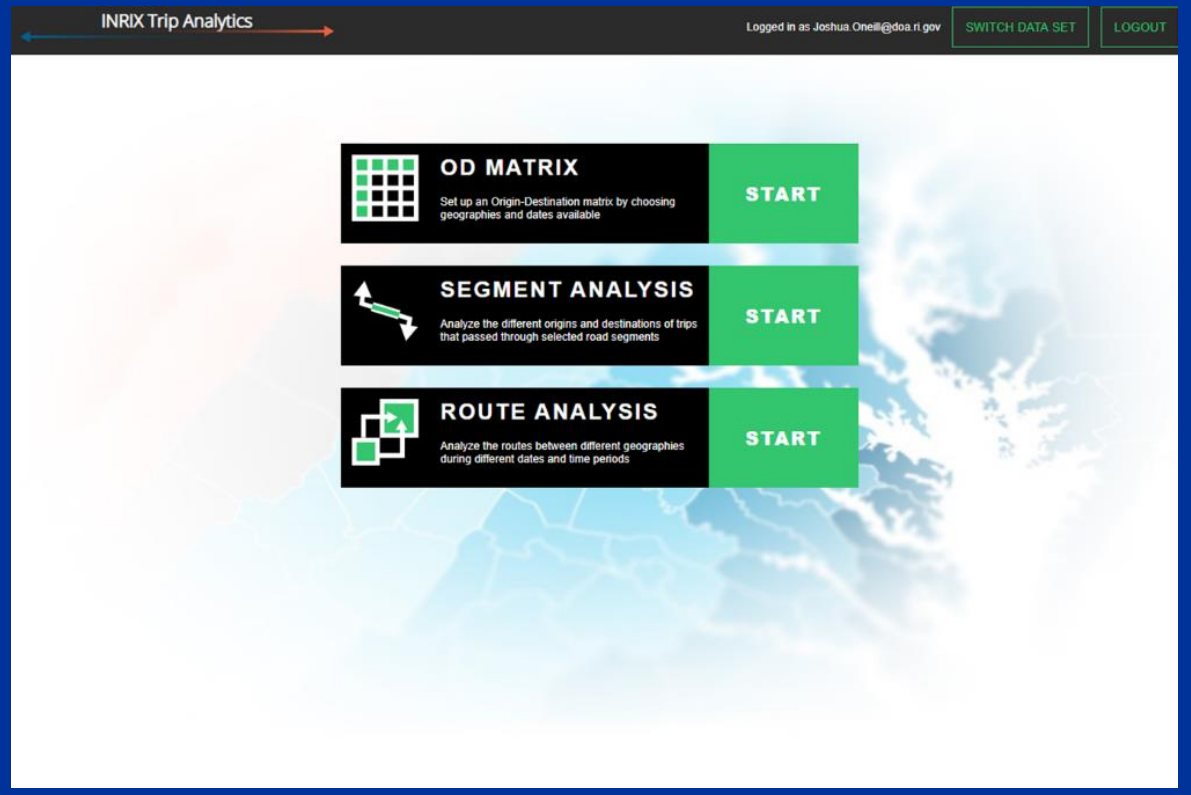
May 7, 2020

# Questions at the Outset

- We initially had some questions about truck travel patterns and where they relate to the top state freight generating companies.
- We know where some of these are, mostly near our Port areas. The big questions were:
  - Where and how were the freight origins and destinations concentrated?
  - What were the differences between heavy truck generators and medium truck generators?
  - What communities hosted the highest truck origin volume?
  - Which communities should be targeted for further study?

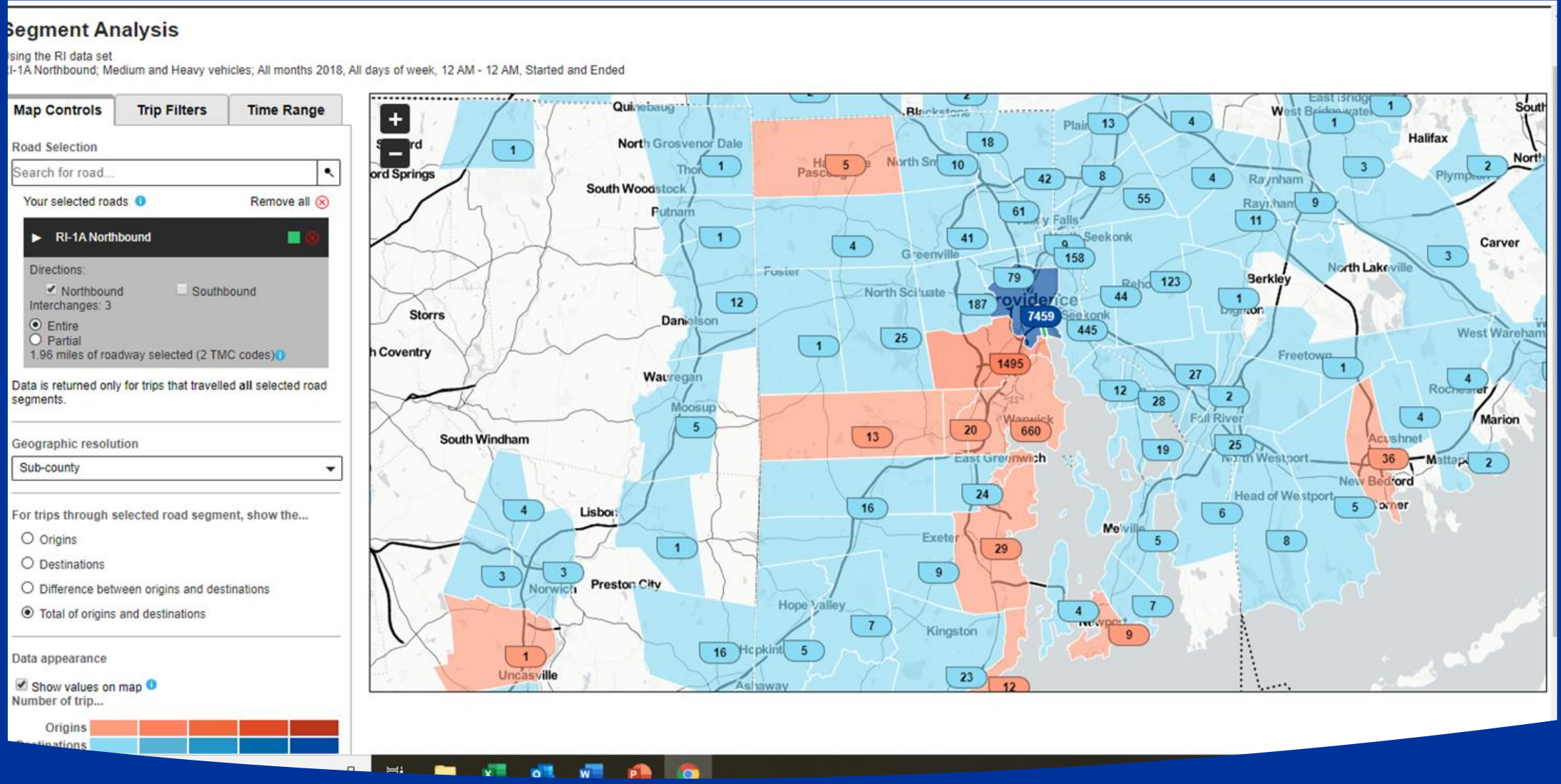




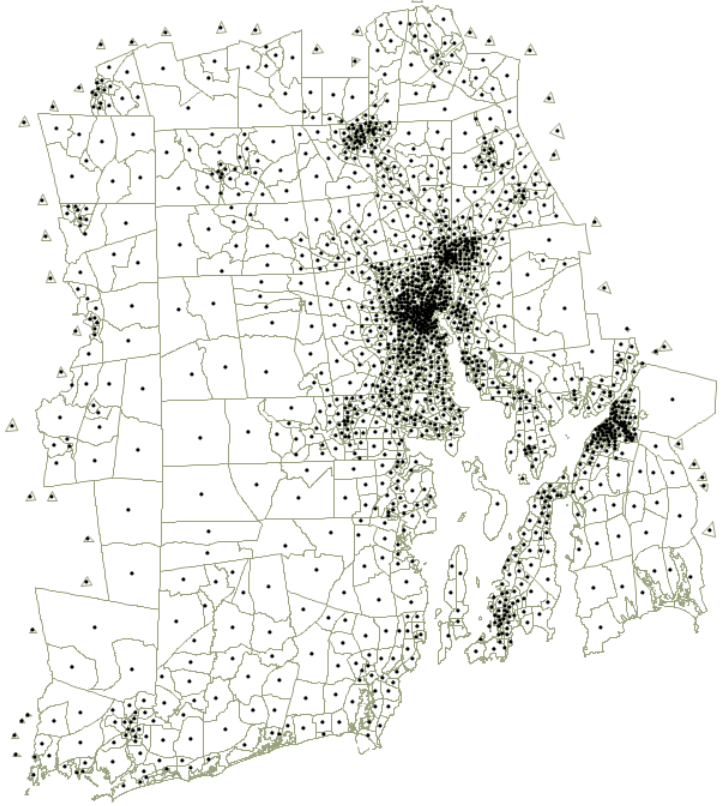

# Utilizing Probe Data to Analyze Truck Trip Origins and Destinations

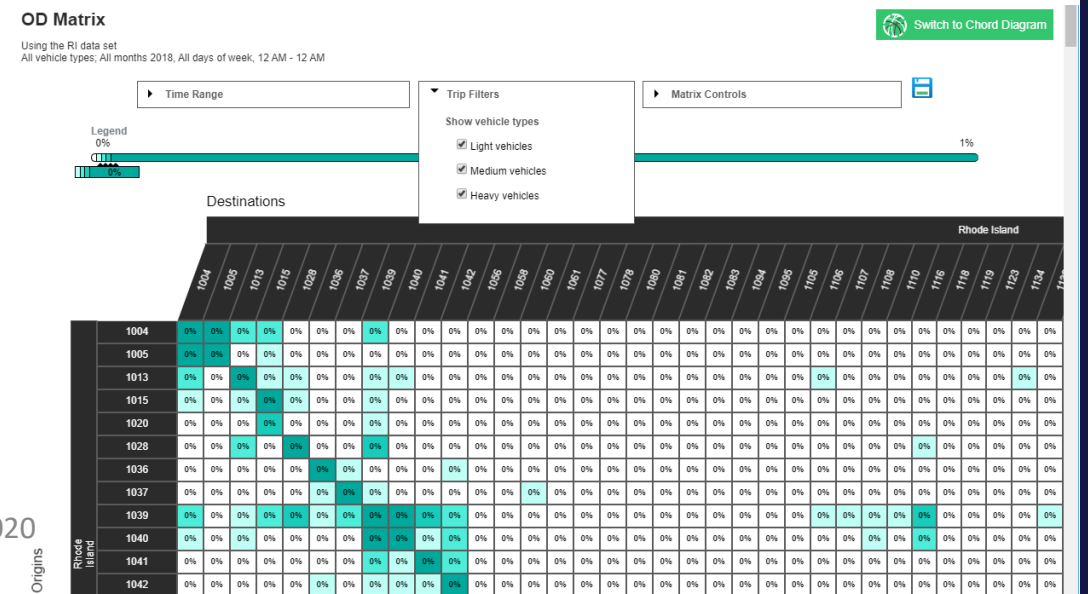
## The Importance of Creative Play in the Use of New Data




# We started out with an analysis of Truck Origin and Destinations for Allens Avenue/ Port of Providence

- We quickly realized that we wanted statewide Origin Destinations and a “Heat Mapping Perspective” to determine the locations of the top freight generators and destination patterns within and outside of Rhode Island

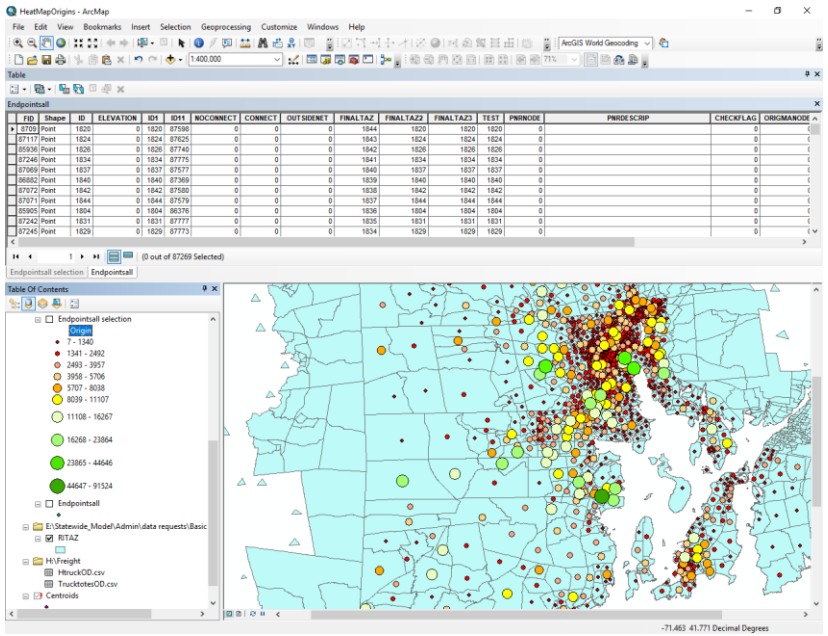




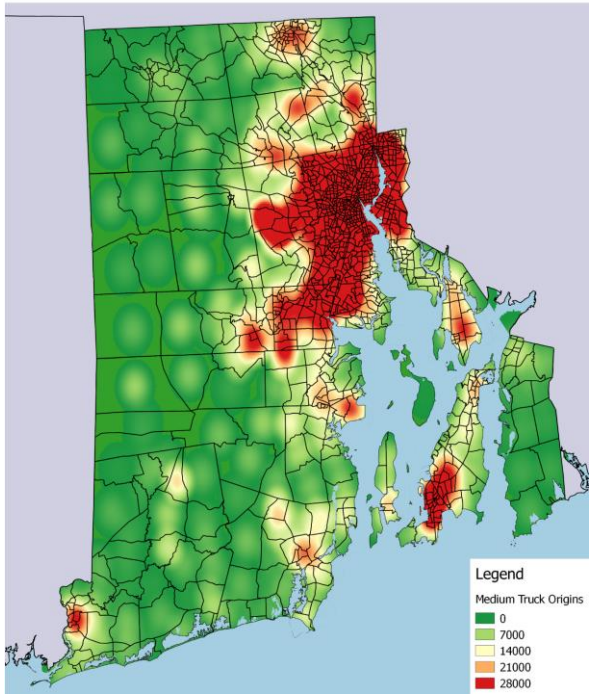

# Available Data

- **TAZ Layer:**
  - ID Codes
  - Centroid Points
  - Border Geometry

- **Trip Analytics:**
  - Origin and Destination by TAZ
  - Vehicle Classes: Light Medium and Heavy



Medium Truck Origins in Rhode Island



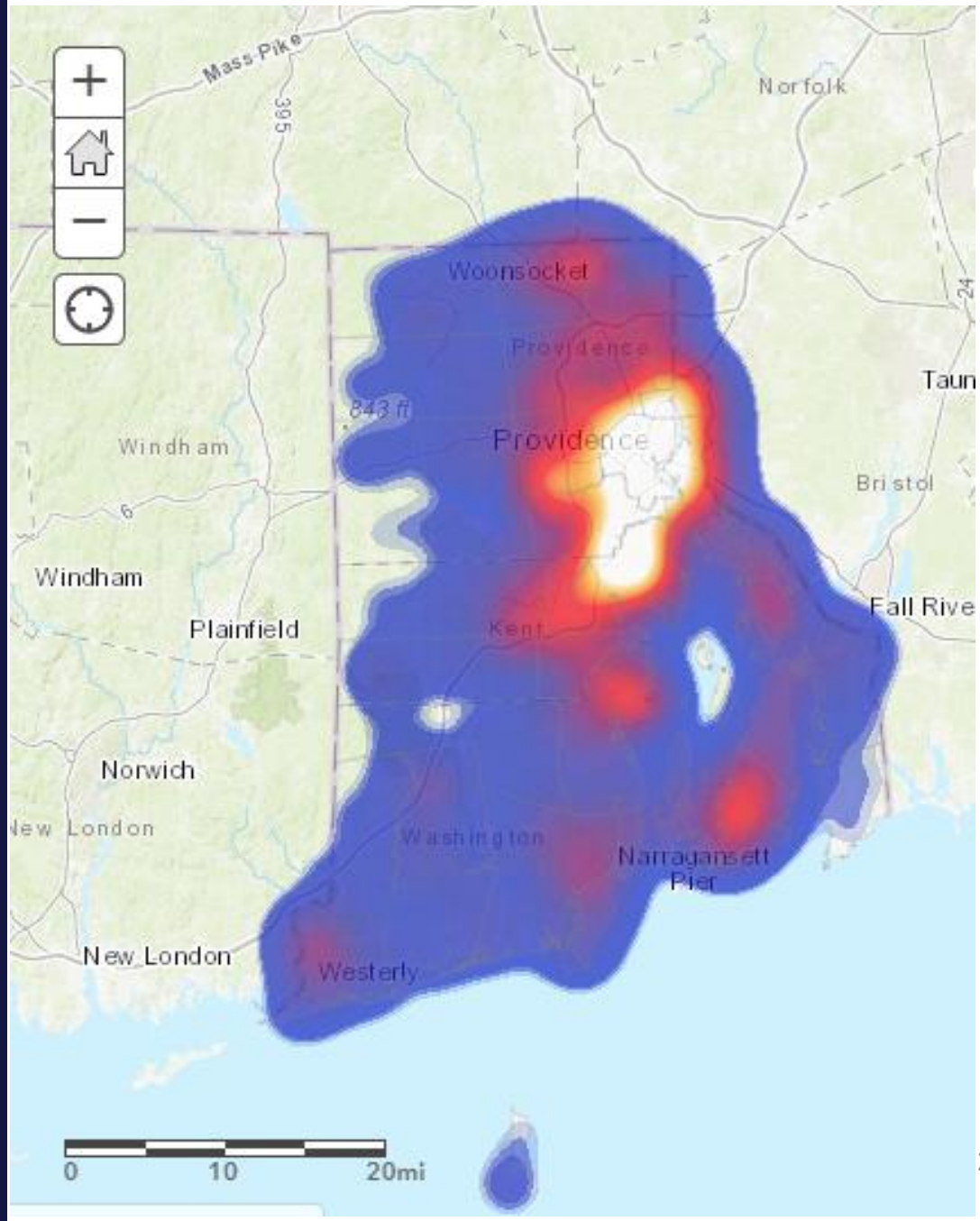

# Basic Methodology

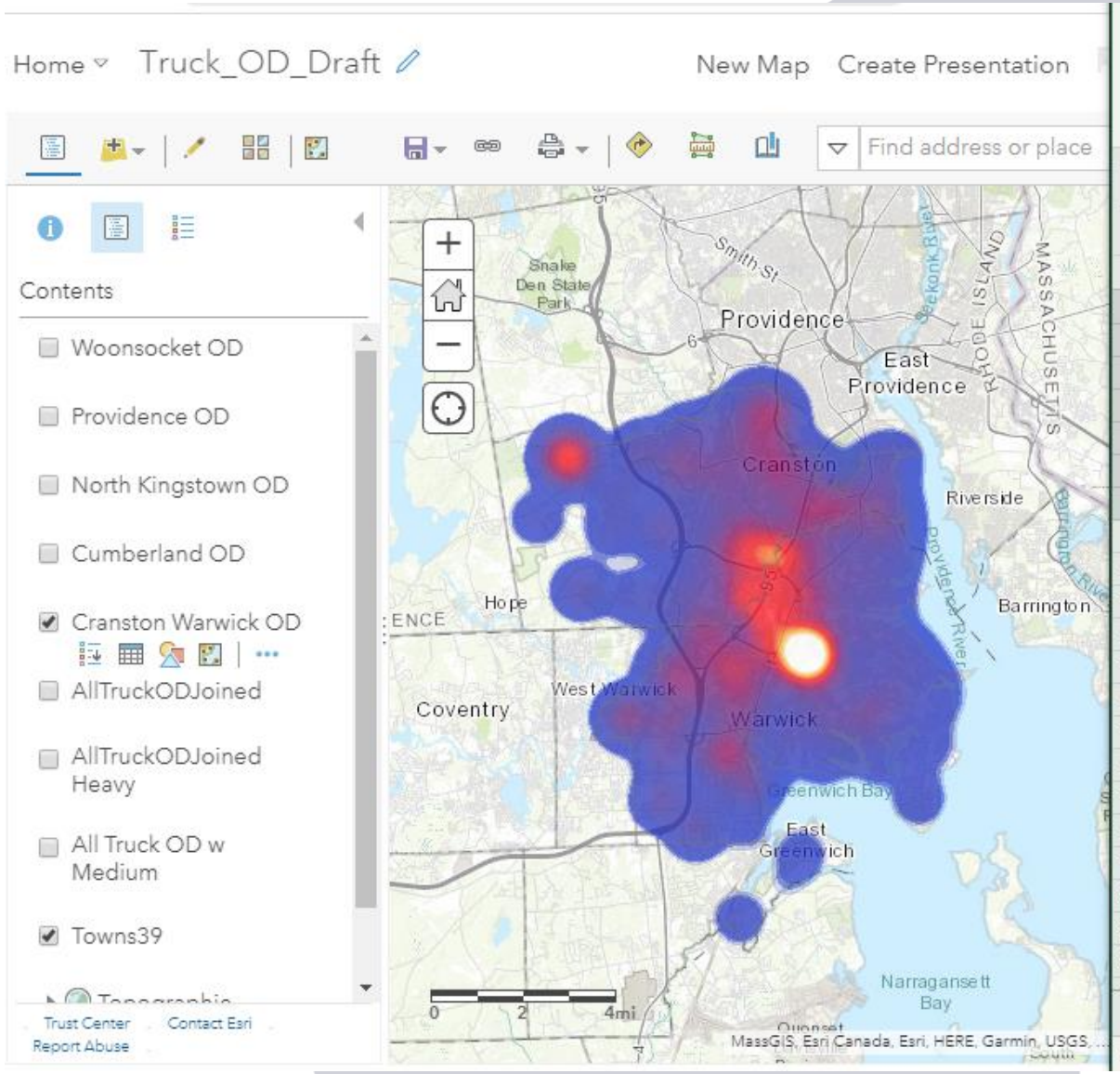
- **Download full TAZ matrix from Trip Analytics**
- **Configure into two fields using TransCAD:**
  - Origin by Destination
  - Destination by Origin
- **Join origin data to TAZ Centroid Layer**
- **Create basic heat map Repeat for destination data**
- **Repeat for different weight classes**

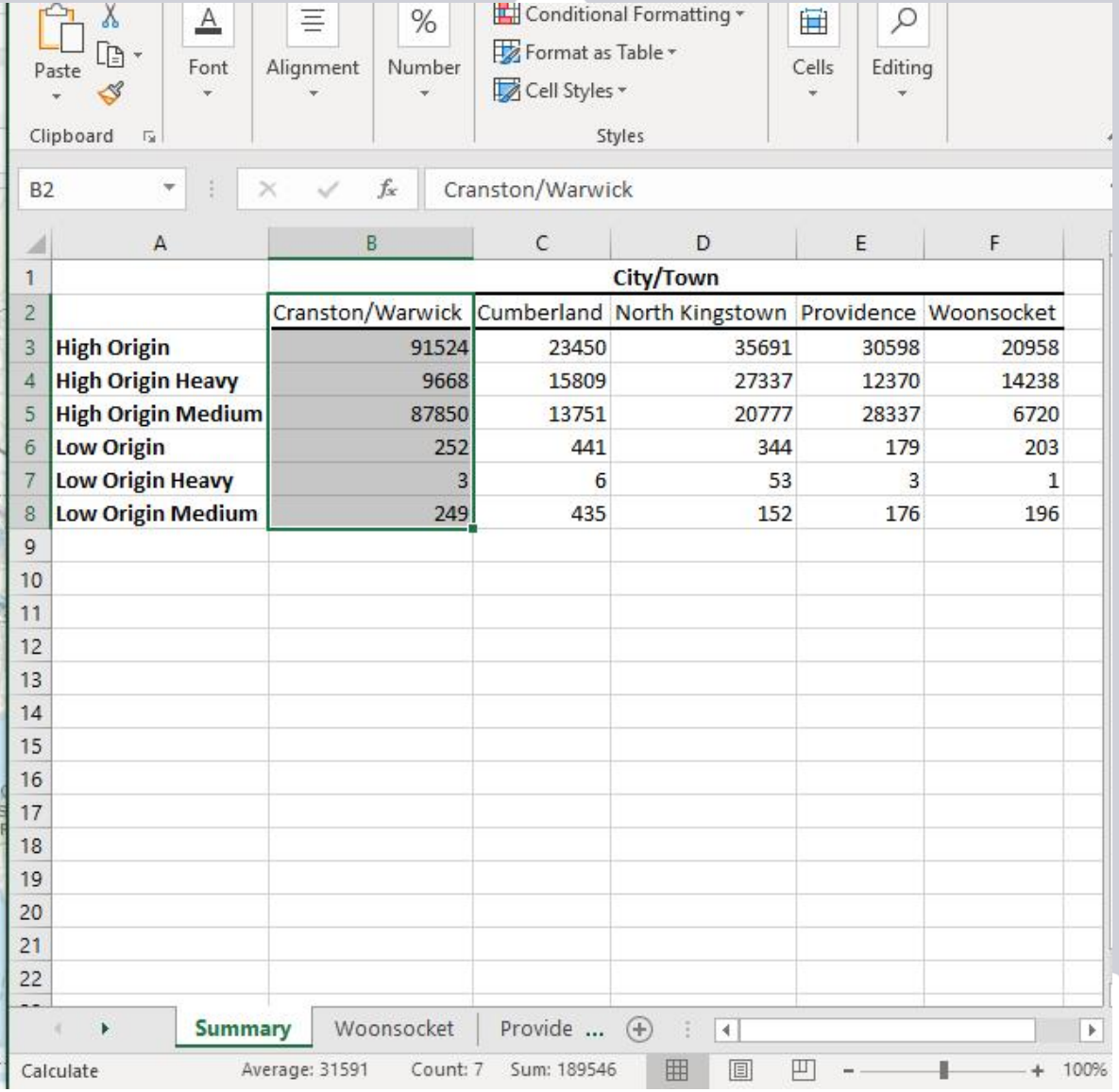
- **<u>Nothing is Ever Easy</u>**

# ArcGIS Online

- Used QGIS for statewide mapping
- We utilized ArcGIS Online to display local heat mapping
- More granularity – broke out by municipal boundaries to display hot spots
- Using TAZ centroids allowed us to pinpoint our count data within each municipal boundary





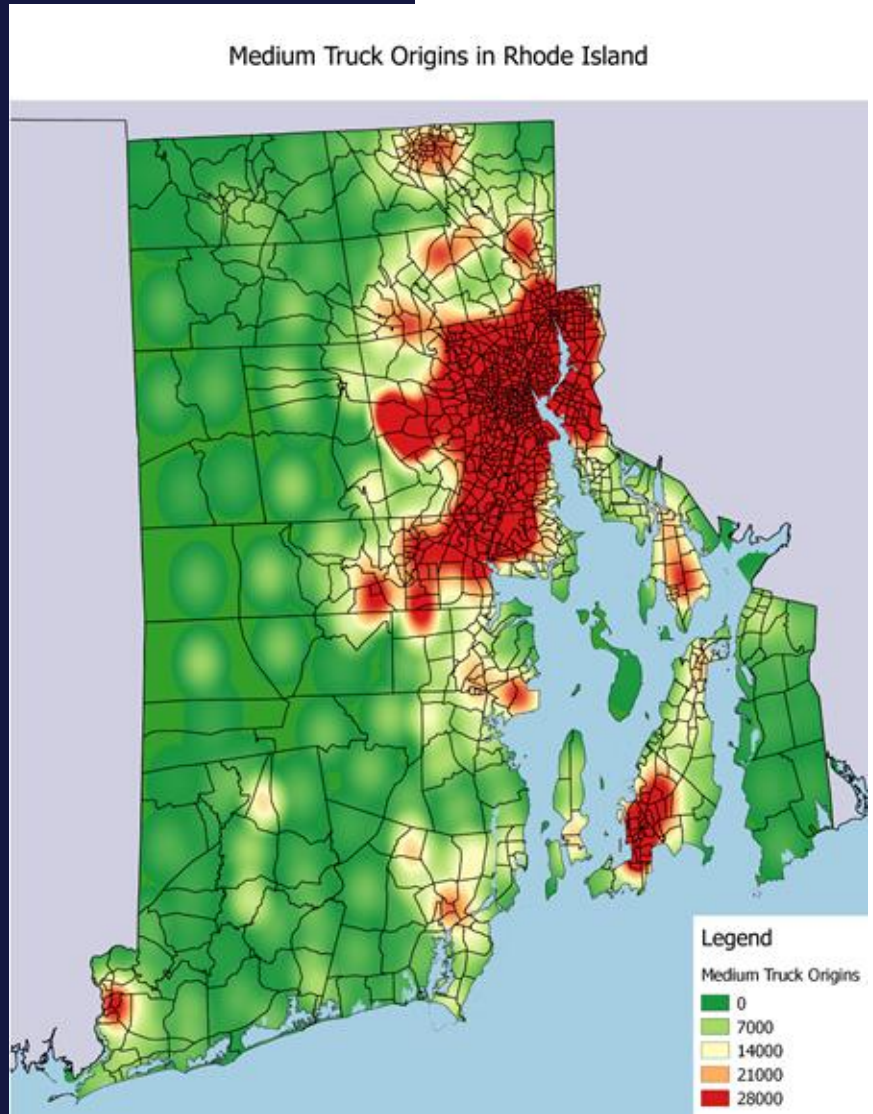

| | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| 1 | | City/Town | | | | |
| 2 | | Cranston/Warwick | Cumberland | North Kingstown | Providence | Woonsocket |
| 3 | High Origin | 91524 | 23450 | 35691 | 30598 | 20958 |
| 4 | High Origin Heavy | 9668 | 15809 | 27337 | 12370 | 14238 |
| 5 | High Origin Medium | 87850 | 13751 | 20777 | 28337 | 6720 |
| 6 | Low Origin | 252 | 441 | 344 | 179 | 203 |
| 7 | Low Origin Heavy | 3 | 6 | 53 | 3 | 1 |
| 8 | Low Origin Medium | 249 | 435 | 152 | 176 | 196 |

# Issues

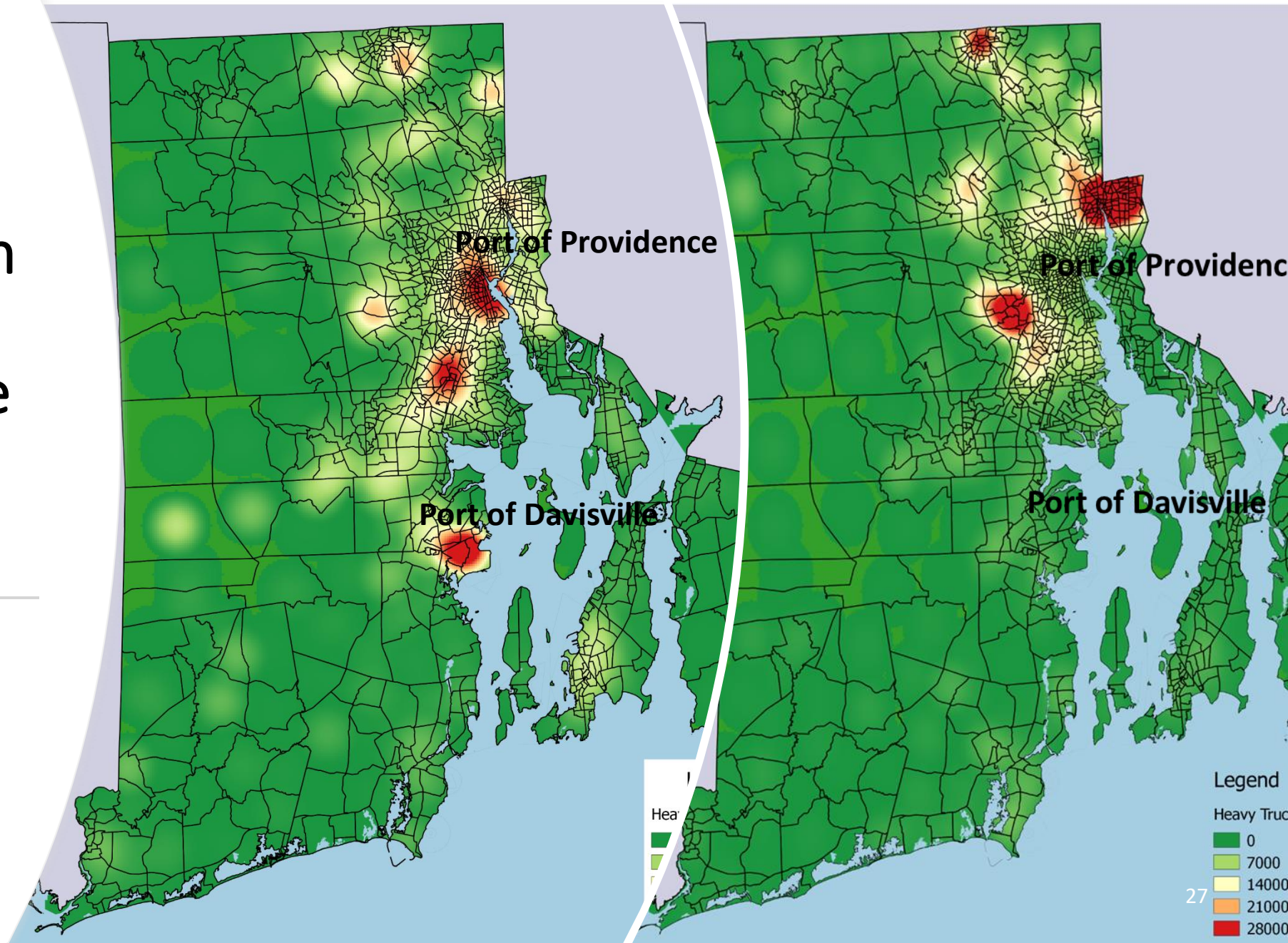
- **Points not random**
- **Trip Balancing?**
- **Data Sufficiency?**

# Replies

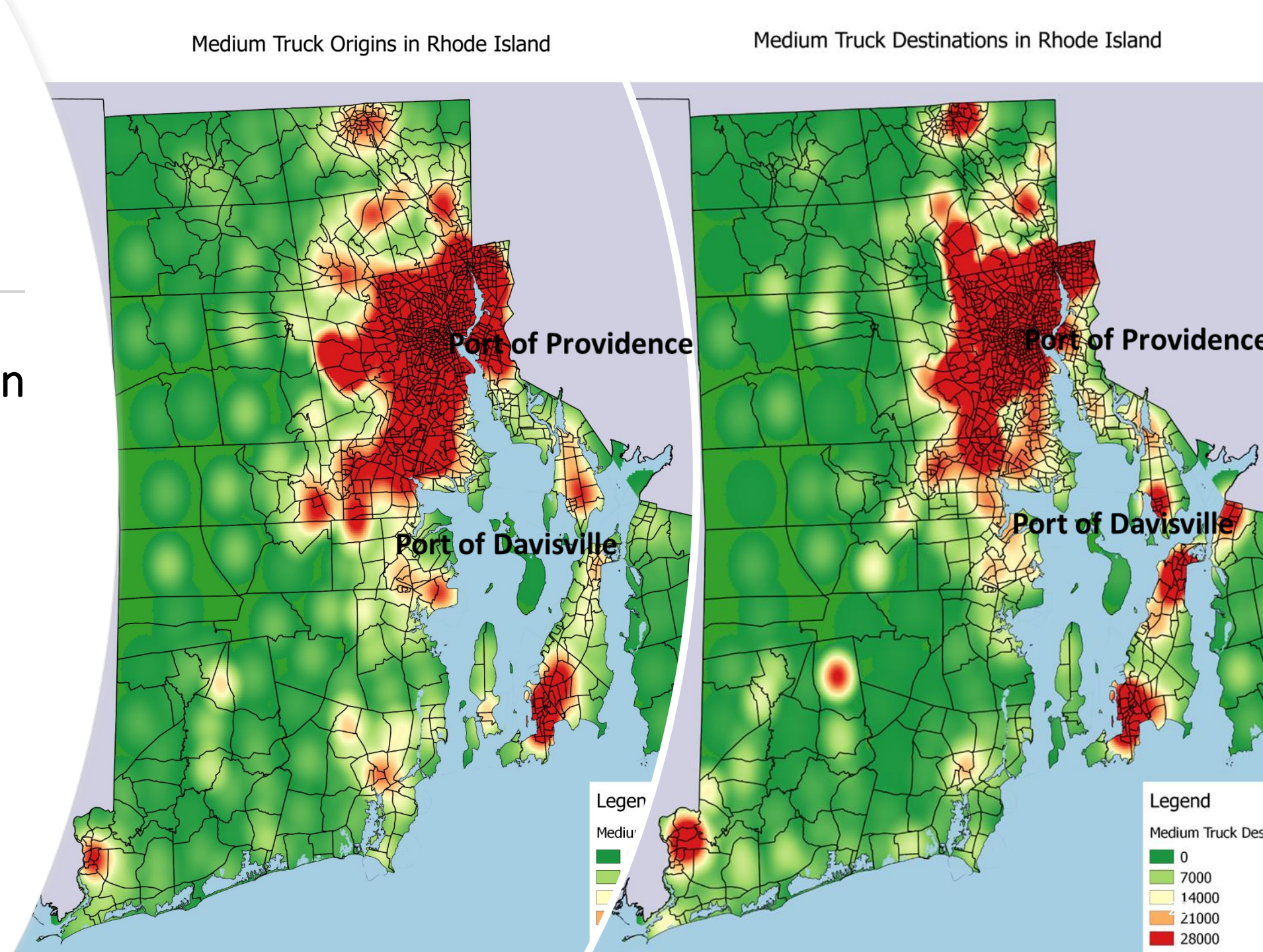
**<u>Right tool for the right job</u>**



# Heavy Truck Origin and Destination Analysis Statewide Heat Map



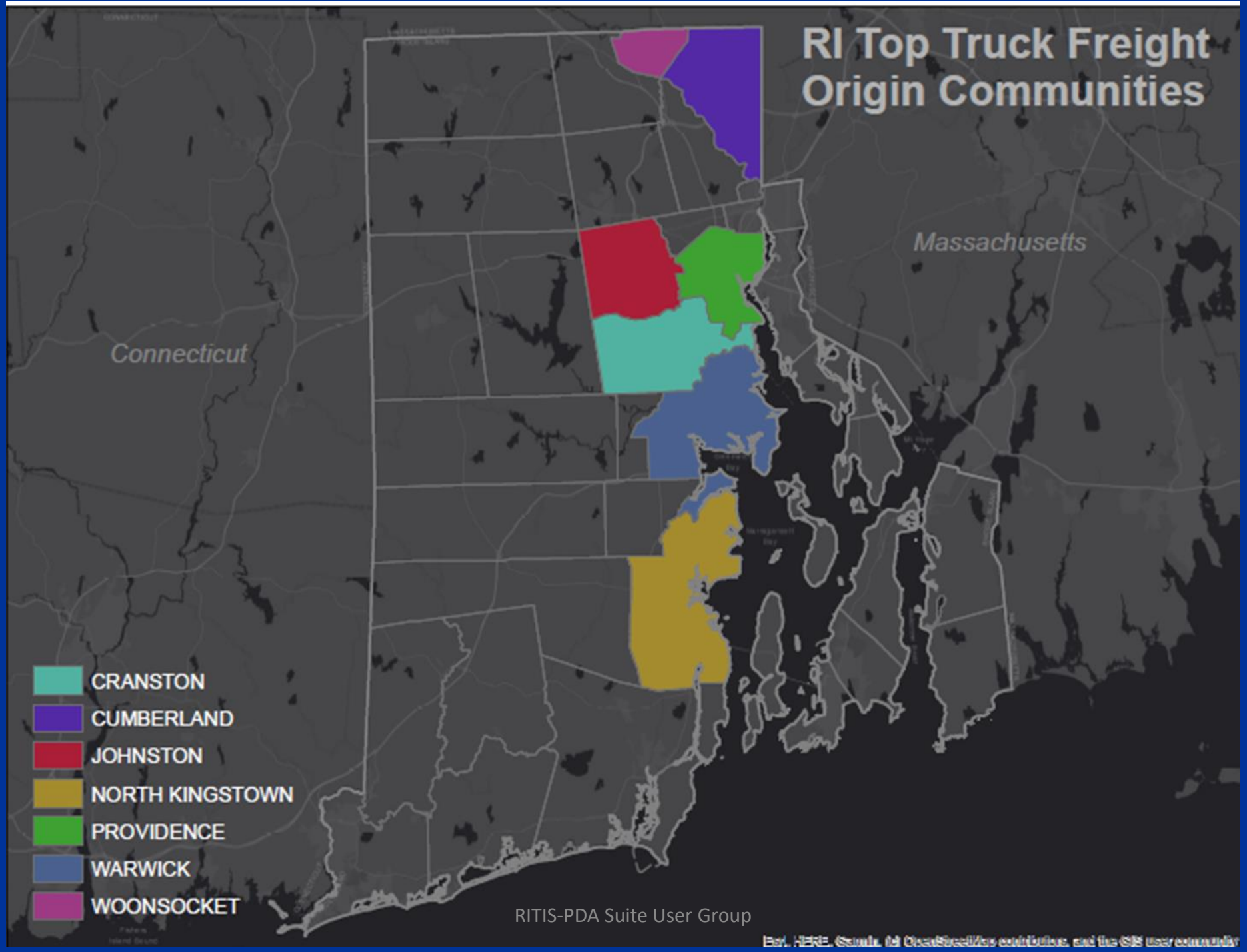
# Medium Truck Origin and Destination Analysis Statewide Heat Map




May 7, 2020

# Truck Origin Freight Generators Overview

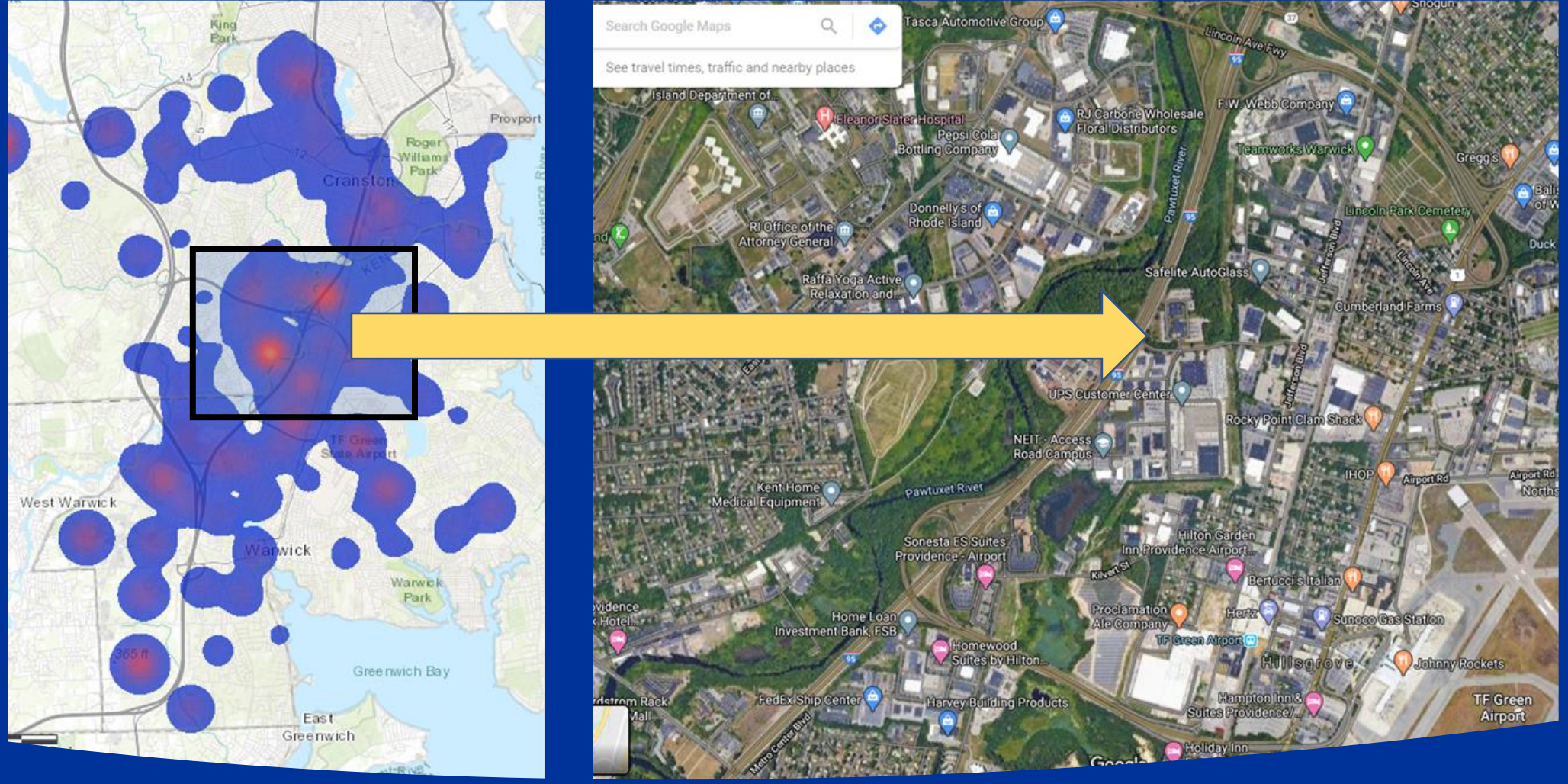
Top Origin Locations Within the State of Rhode Island


RI Top Truck Freight
Origin Communities
Massachusetts
Connecticut
CRANSTON
CUMBERLAND
JOHNSTON
NORTH KINGSTOWN
PROVIDENCE
WARWICK
WOONSOCKET


# Providence Freight Generators

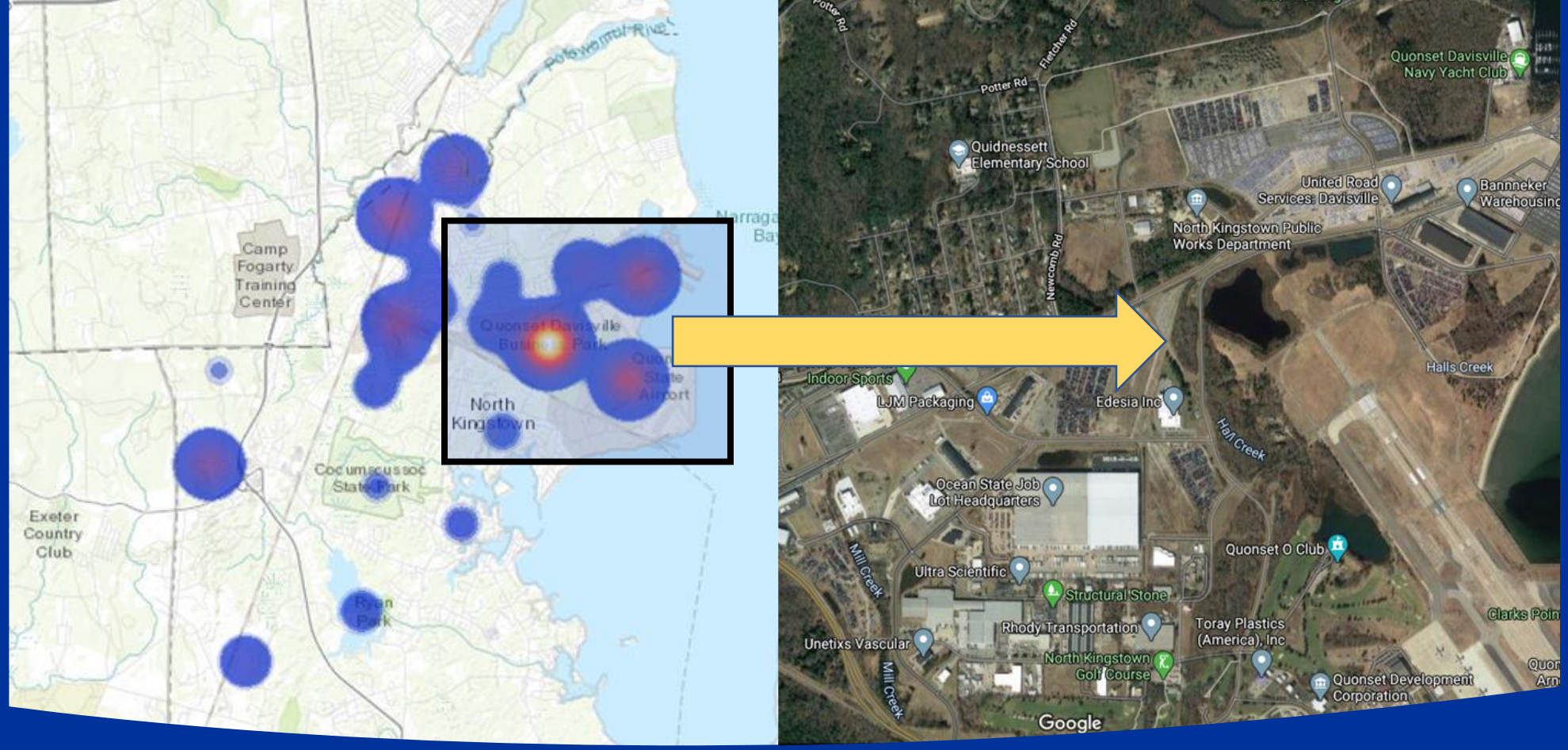
http://www.planning.ri.gov/planning-areas/transportation/freight-scans.php

1) Port of Providence
2) United States Postal Service
3) Coca Cola Bottling Company




# Warwick and Cranston Freight Generators

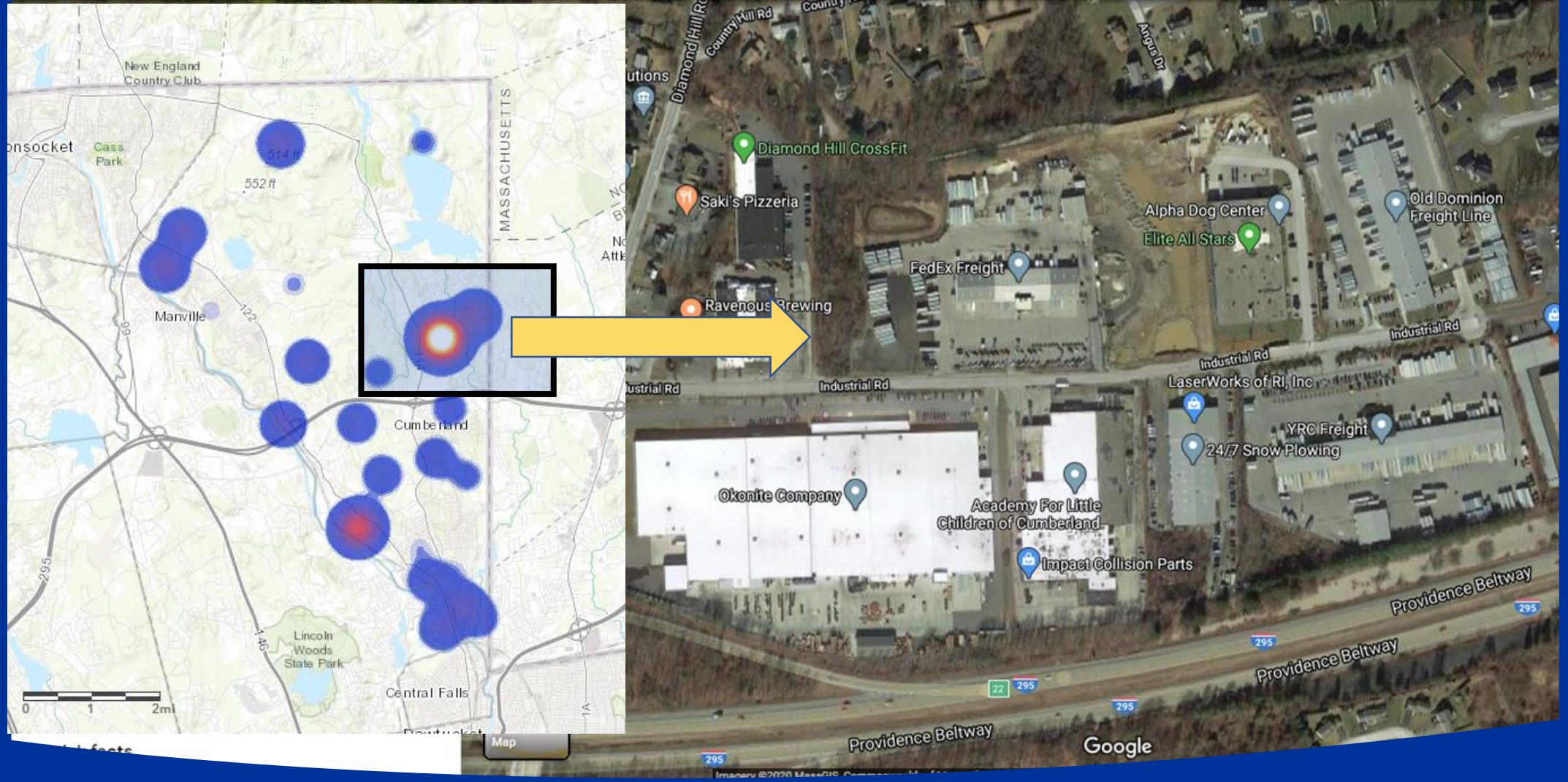
1) FedEx Freight
2) UPS
3) Dean Warehousing
4) Mclaughlin and Moran
5) Pepsi




# Quonset Freight Generators

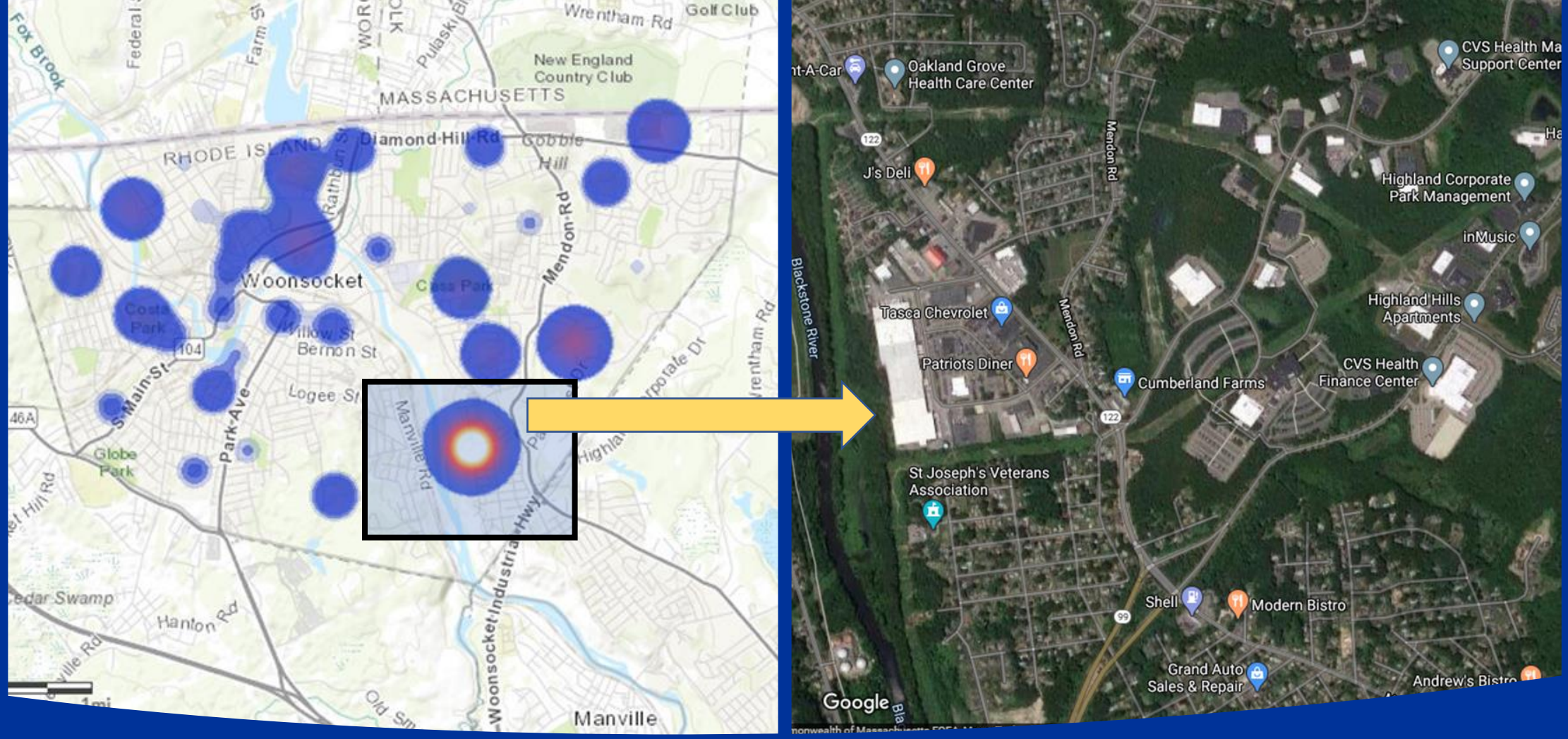
http://www.planning.ri.gov/planning-areas/transportation/freight-scans.php

1) NORAD
2) Ocean State Job Lot
3) Electric Boat
4) Edesia
5) Toray Plastics




# Cumberland Freight Generators

1) FedEx Freight
2) Old Dominion Freight Line
3) The Okonite Company
4) YRC Freight




# Woonsocket Freight Generators

1) CVS National Headquarters
2) CVS Distribution Center
3) CINTAS Facility Services

# Next Steps

- Continue to refine our analysis of the data for Truck Origins and Destinations
- Continue to utilize the Trip Analytics Tools for Creative Plan and as a Catalyst for Further Studies
- Continue to refine the new Truck Model of our State Travel Demand Model
- Continue outreach and coordination with local planners in the communities shown for continued planning around issues such as truck parking, truck idling, air quality and noise, and safety
- Expand our planning outreach to freight industry operators in the food and beverage industry

# QUESTIONS?


Josh O'Neill AICP,CFM

Supervising Planner

Division of Statewide Planning

Department of Administration

**Joshua.ONeill@doa.ri.gov**

www.doa.ri.gov

In the spotlight…

# Probe Data Analytics Applications for Evaluating Operations and Safety in Washington DC

Tom Knofczynski, PE

*Project Engineer, Sabra & Associates/Mead & Hunt (for District DOT)*

# *Probe Data Analytics Applications for Evaluating Operations and Safety in Washington DC*

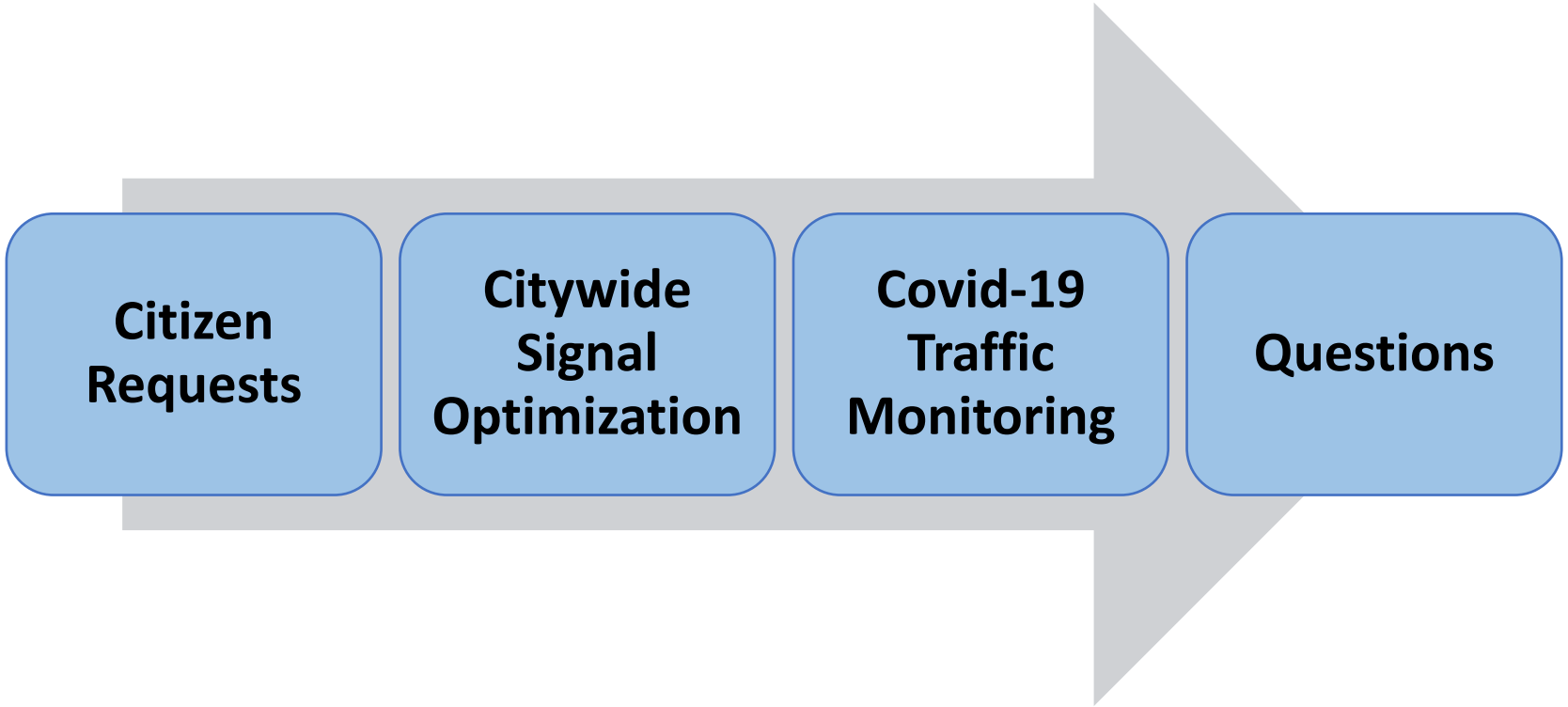
RITIS

RITIS-PDA Suite User Group Web Meeting

May 7, 2020

SABRA & ASSOCIATES
Engineering Innovative Solutions

# Agenda



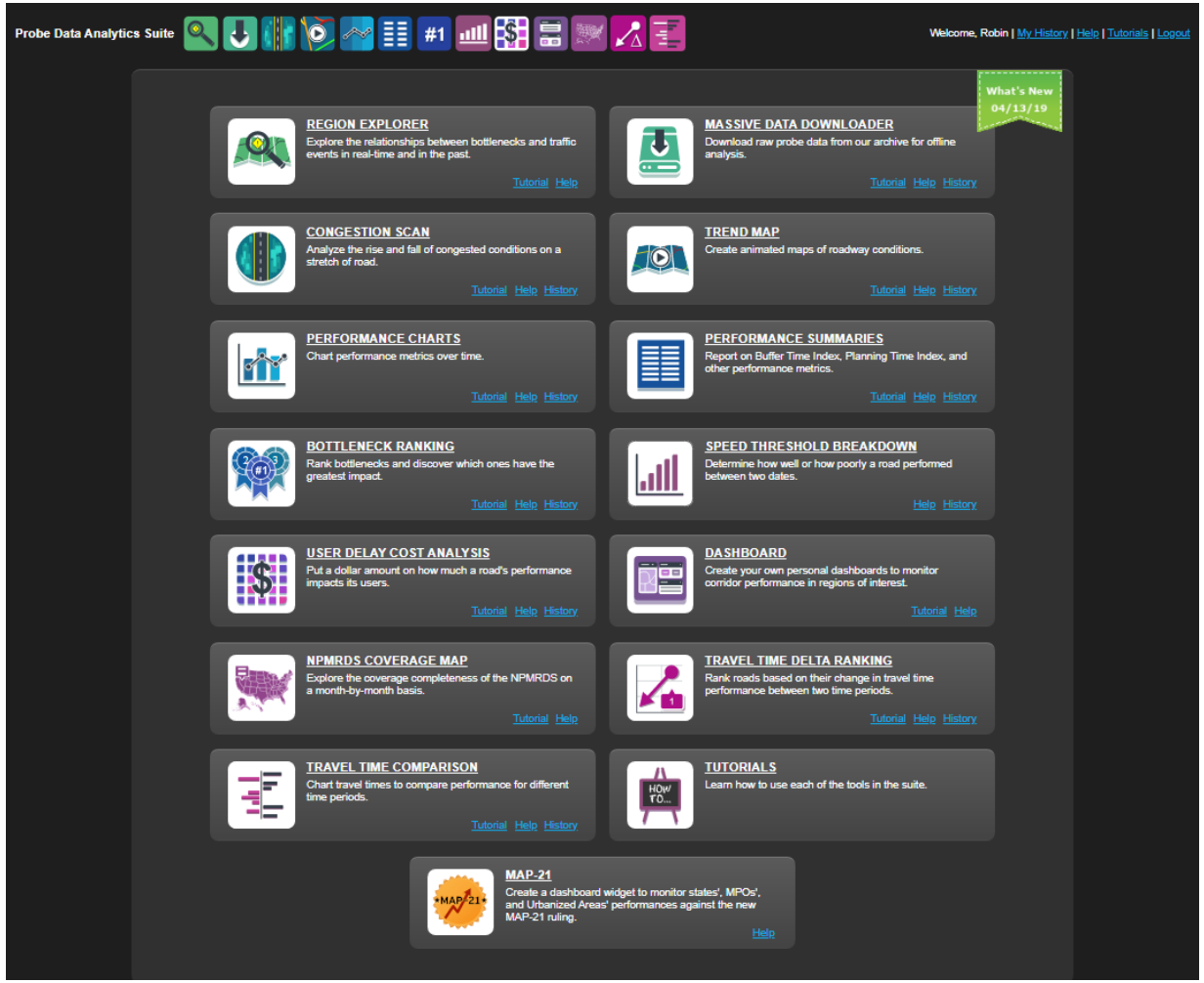



SABRA & ASSOCIATES
Engineering Innovative Solutions

# Background

The Probe Data Analytics.

- Wide range of data and analysis tools.
- Supports tasks both large and small.
- Provides benefits no matter what stage the project is in.



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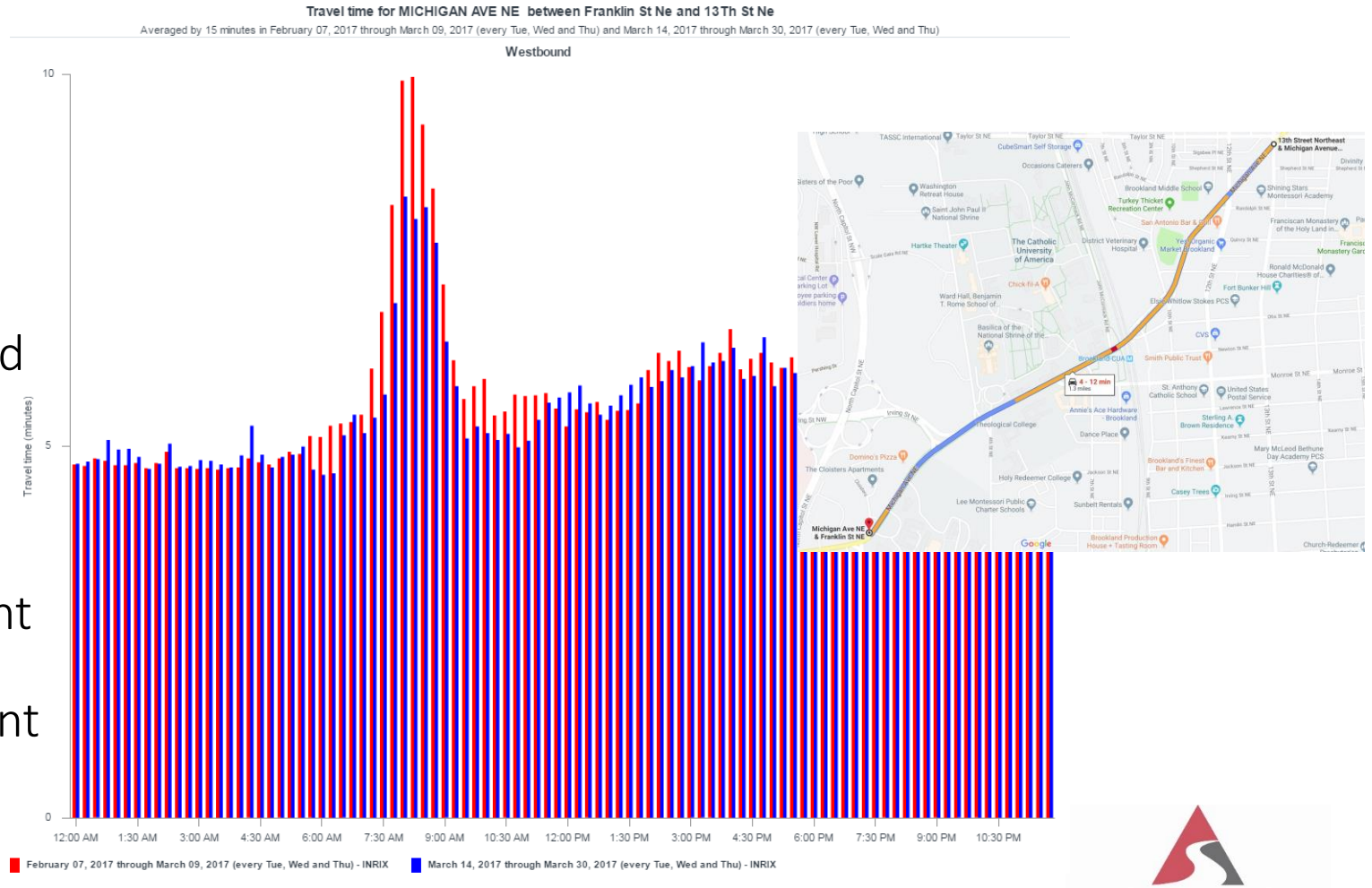
# Citizen Requests – Rapid Before/After Evaluations

- Early March 2017 Report from citizen of congestion along Michigan Avenue during AM
- Not optimized since 2005; network optimization scheduled for Fall 2017
- Quickly reviewed and updated timings for 4 intersections
- Achieved approximately 2 minute travel time improvement on 1.3 mile corridor
- Extremely low cost improvement & minimal before/after data collection cost to demonstrate benefits

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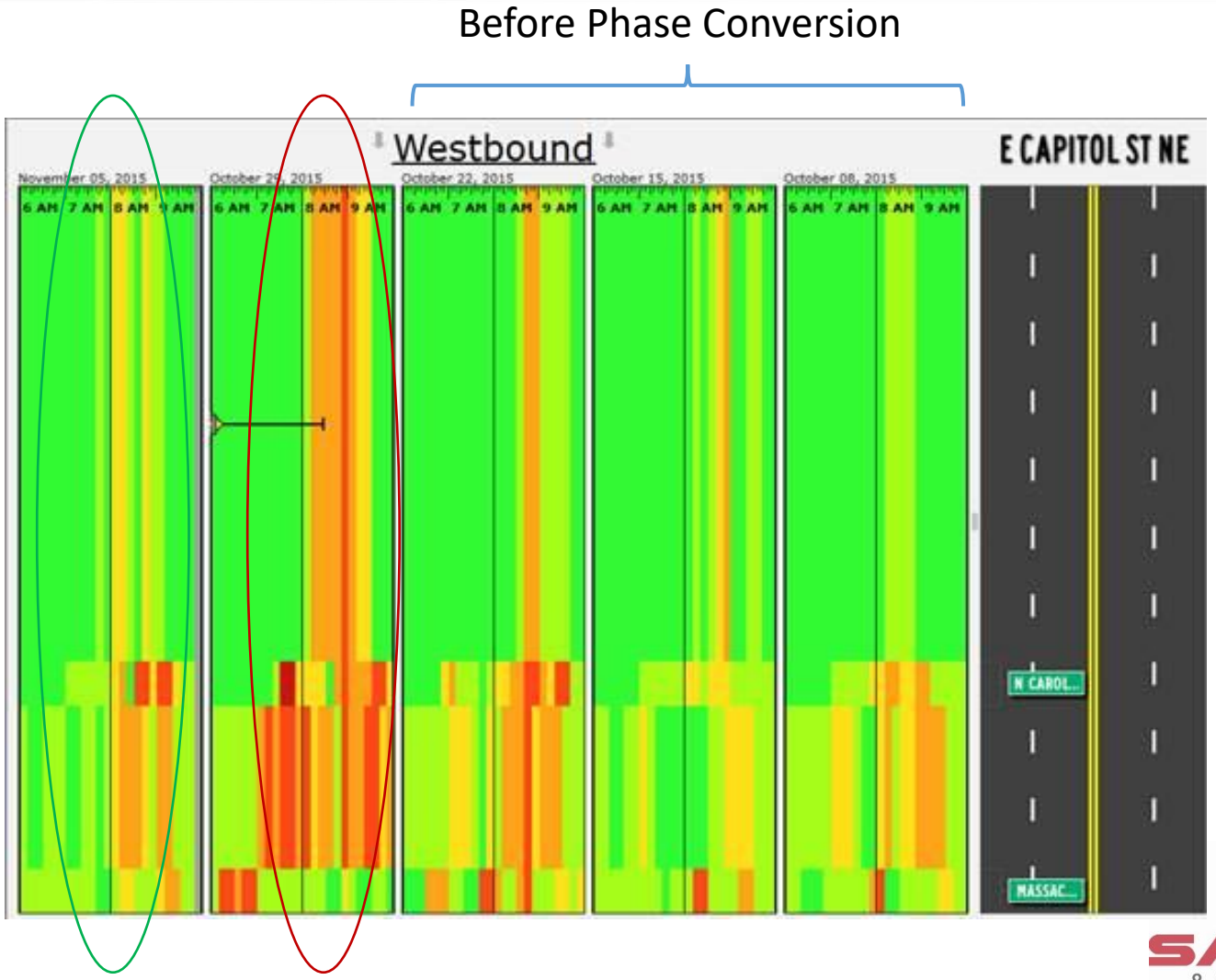
# Citizen Requests – Rapid Validation

Citizens note increase in congestion/travel after Phase Conversion

- Used RITIS data to validate the concern
- Resolved, and then rechecked the data



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# Analysis Results – User Costs

## PDA Suite User Delay Cost Tool

- Considered mainline traffic only

| US 1 (Rhode Island Ave) | Delay Costs |
|---|---|
| Average Day Before | $41,797 |
| Average Day After | $32,116 |
| Daily Savings | $9,681 (23%) |
| Annual Savings | $2,420,250 |

## Synchro-based Intersection Delay

- Considered all traffic approaches

| US 1 (Rhode Island Ave) | Delay (hours) |
|---|---|
| "Before" | 772,900 |
| "After" | 556,880 |
| Daily Benefit | 216,020 (28%) |
| Annual Benefit | $5,839,021 |



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# Downtown Optimization

## Downtown Optimization

- 600+ Signal Grid Network
- Overnight Implementation
- Cars, Buses, Peds, Bikes
  - 49 Travel Time Routes
  - 40+ Bus Routes
  - 1,500+ Signalized Crosswalks
  - 7,000+ Cycle Trips per Day

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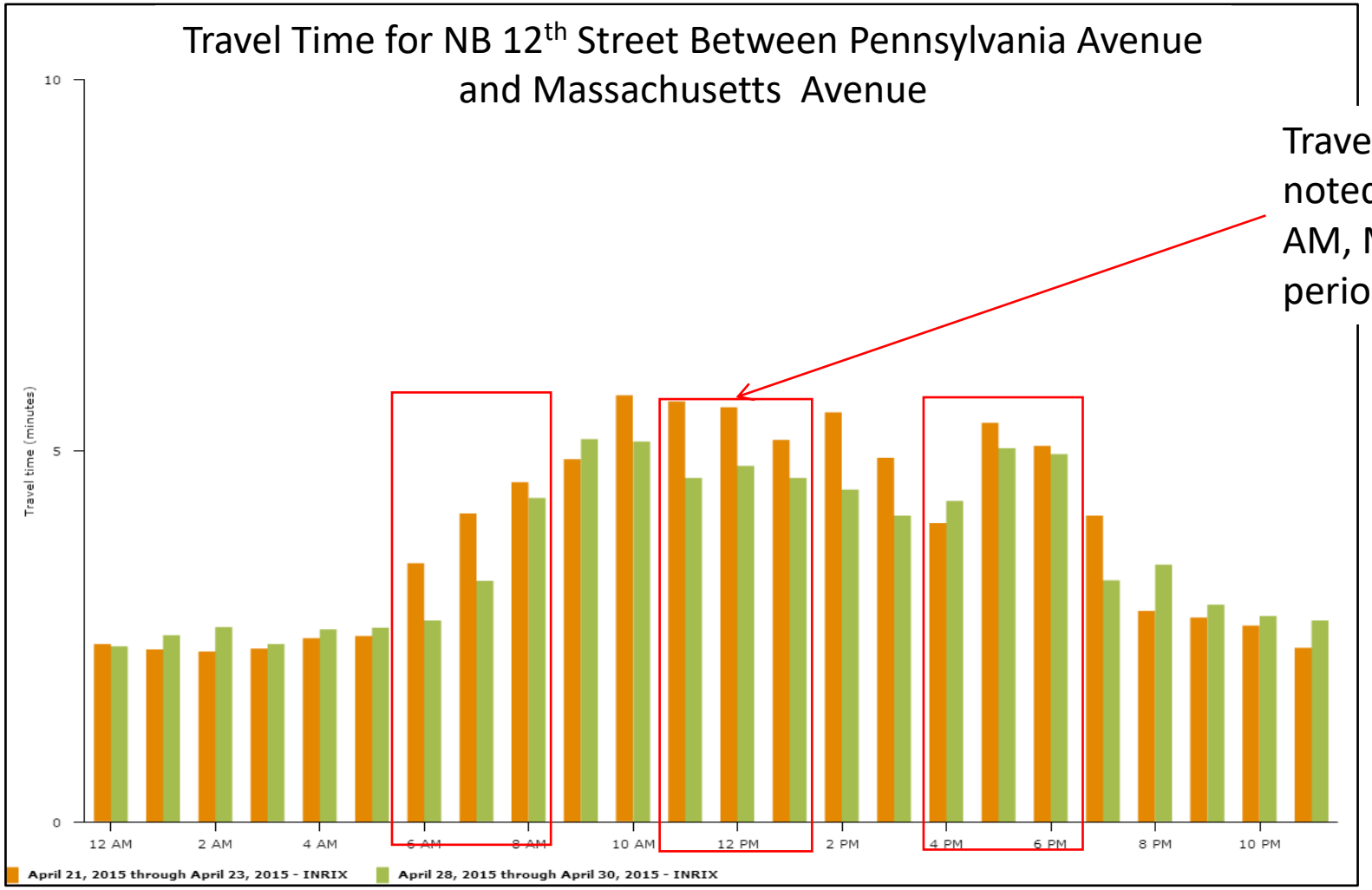
# Downtown Results – Vehicle Probe Project (VPP) Travel Time




Travel Time Savings noted during 'after' AM, Midday and PM period



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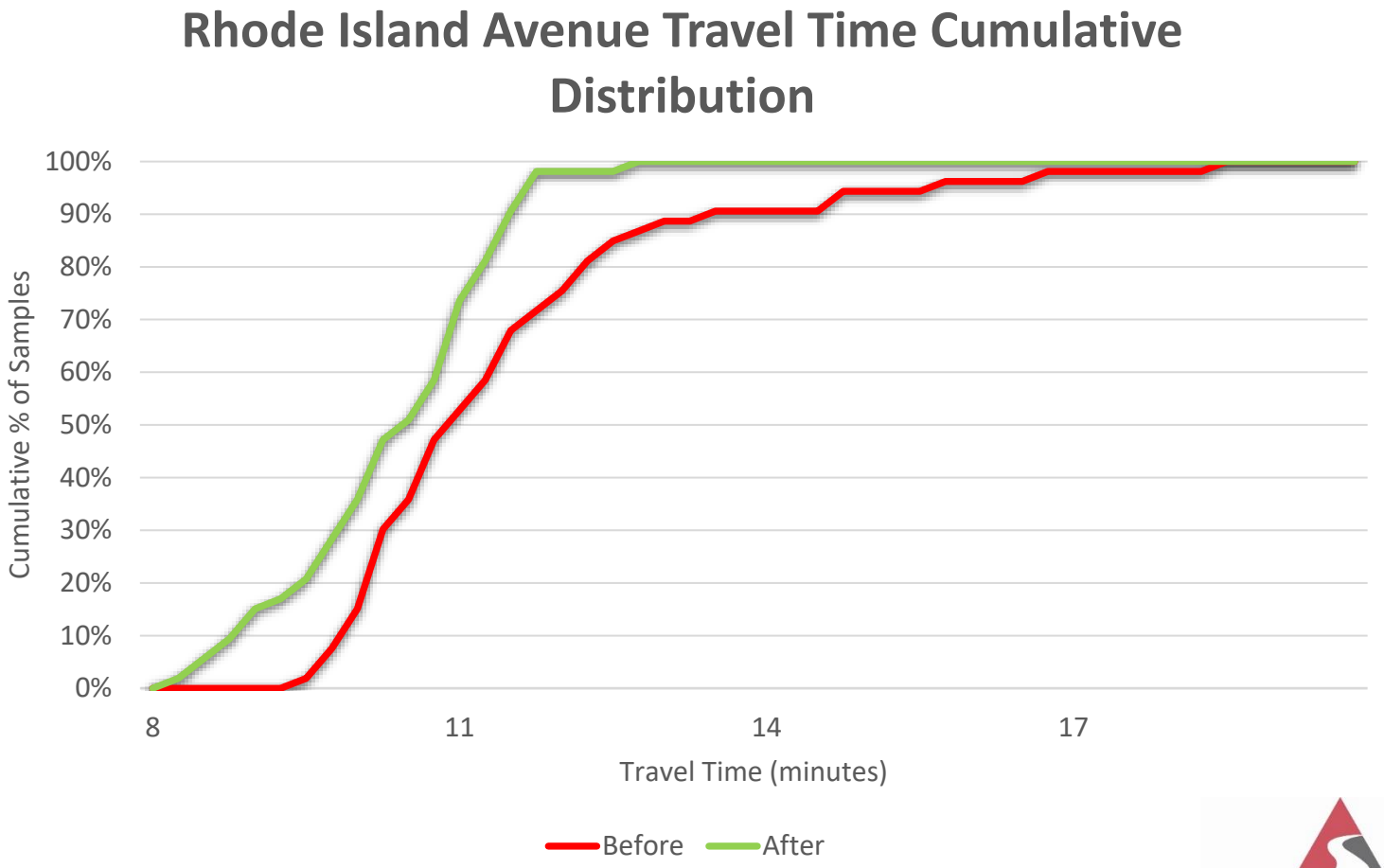
# Downtown Results – VPP Travel Time as CDFs

- CDFs provide a visual representation of travel time reliability
- Possible since PDA Suite provides many travel time data points
- With traditional floating car data (~6 runs per corridor) this is not possible



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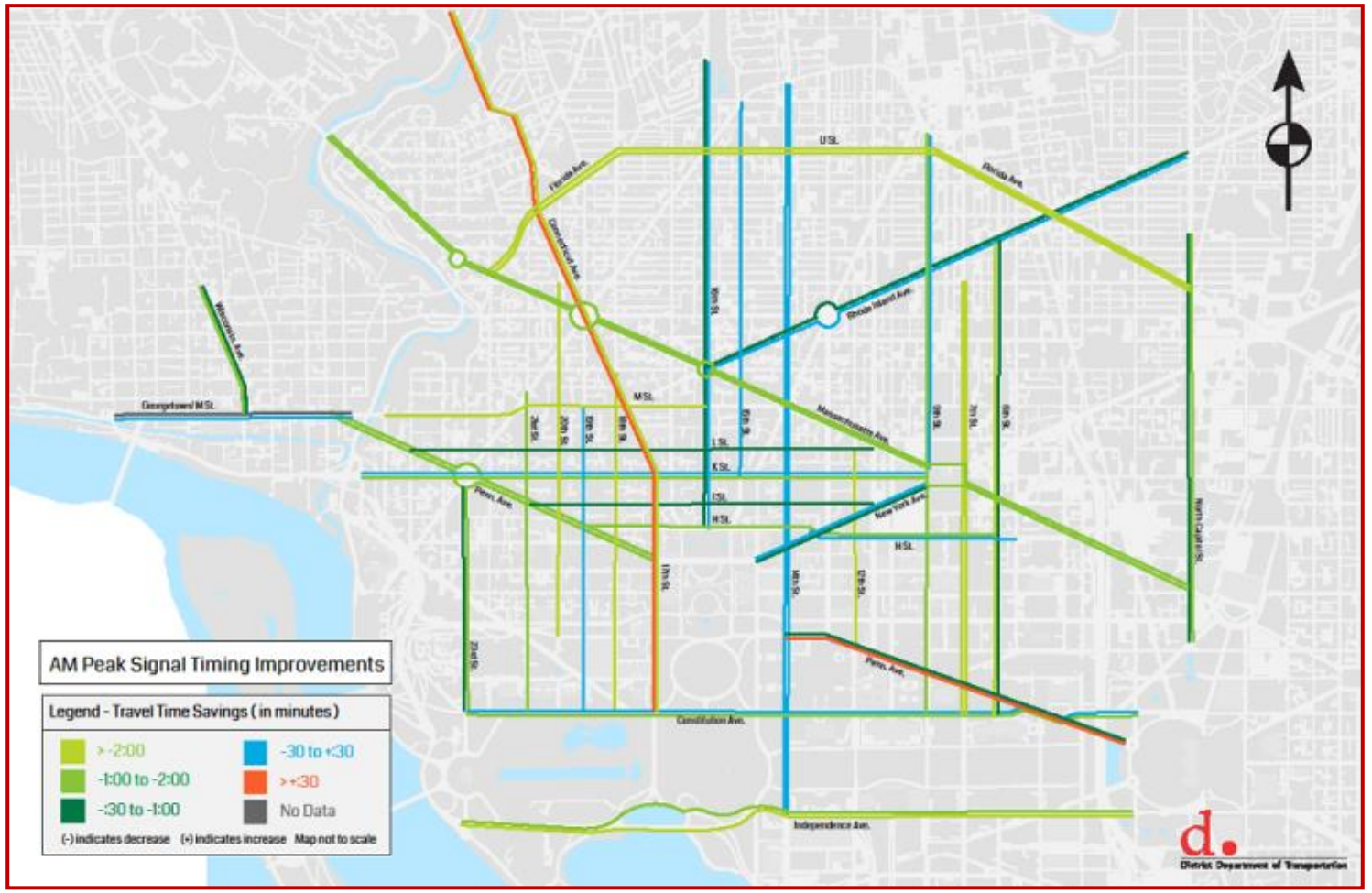
# Downtown Results – VPP Travel Times Mapped



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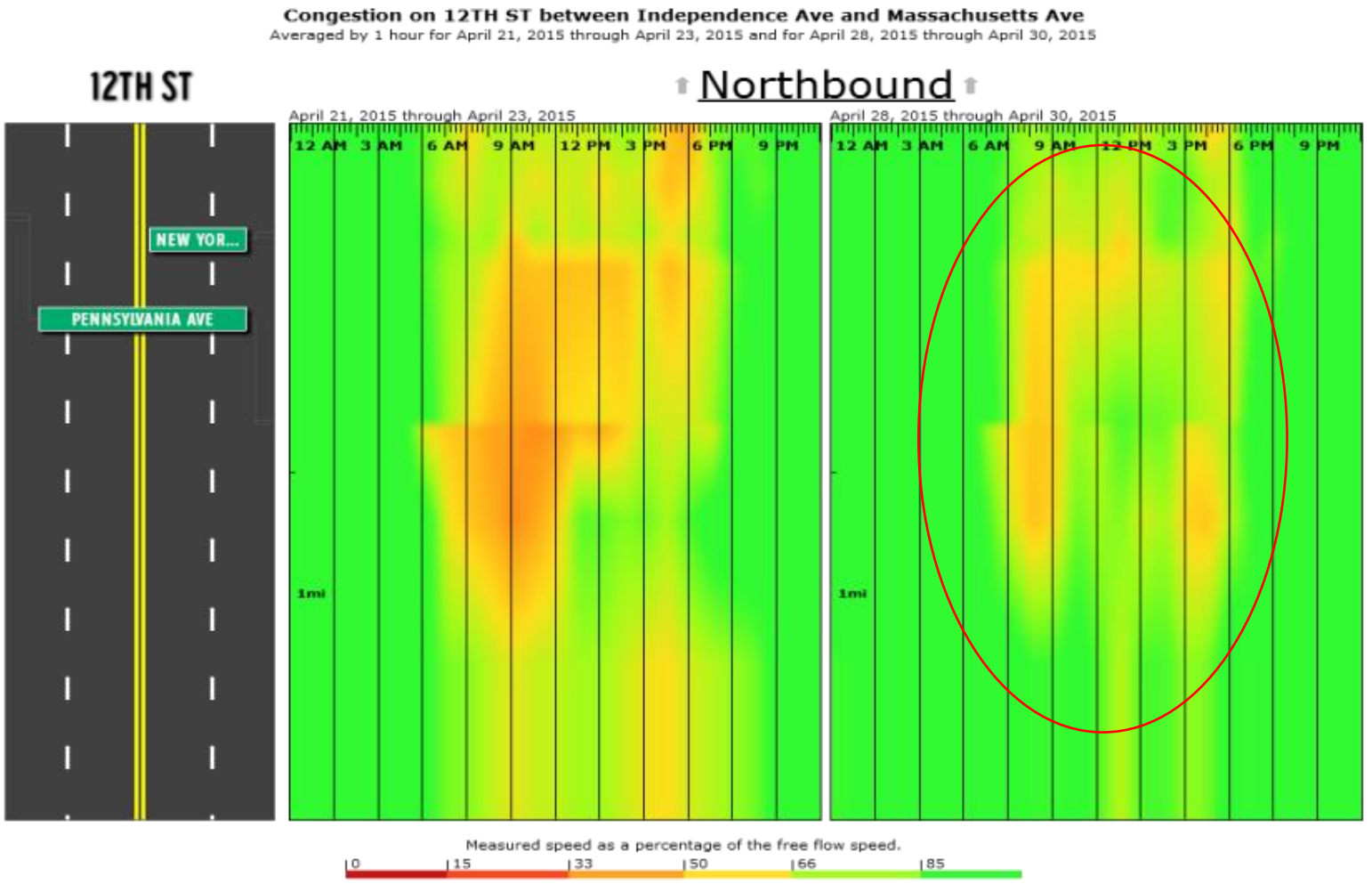
# Downtown Results – VPP Congestion




Before optimization

After optimization

Significantly reduced queuing and increased speeds noted during 'after' AM, Midday and PM period



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# Downtown Optimization 2019

- Same network as in 2015 but with a different focus.
  - “make DC traffic signals safer and friendlier for pedestrians and bicyclists… while minimizing negative impacts on traffic operations throughout the district.”
  - Pedestrian friendly operations implemented throughout downtown including half-cycles, signal pre-timing and Leading Pedestrian Intervals (LPIs).



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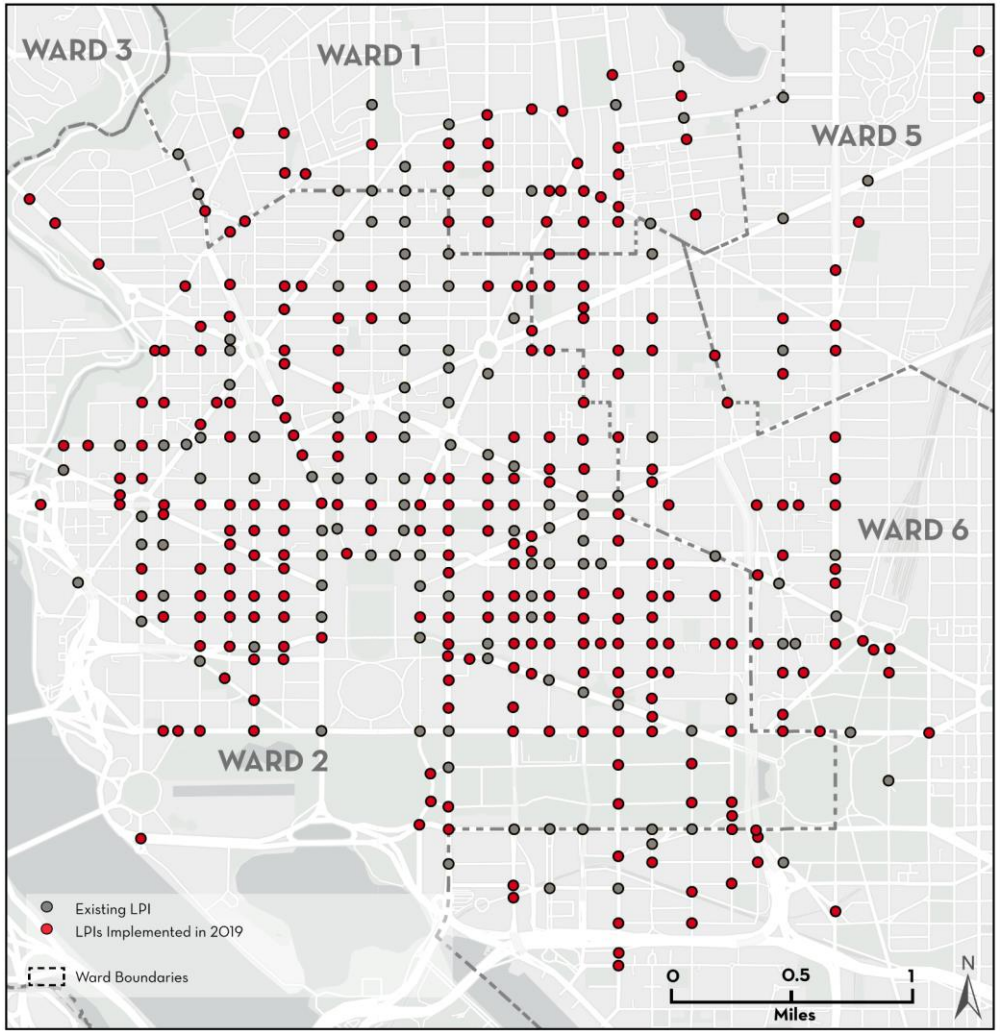
# Downtown Optimization - LPIs

LPIs are a proven and cost-effective tool to reduce pedestrian-vehicular conflicts and increase pedestrian convivence.

- 270 were installed during this project.
- LPI implementation at a typical intersection results in a 5% decrease in capacity at that intersection.



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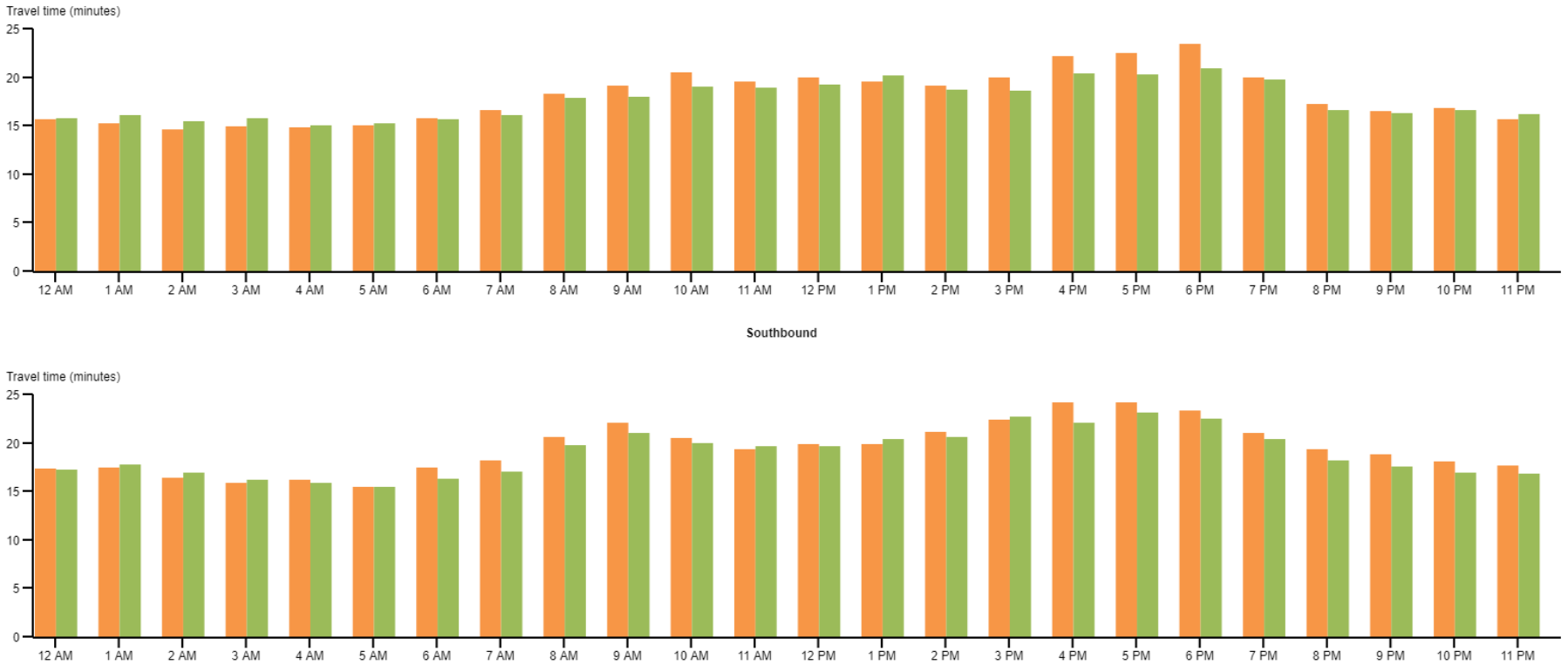
# Downtown Optimization – 7th Street, NW

Travel Time for 7th Street Between Maine Avenue, SW and Howard Pl, NW




Before:10/22/19 – 10/31/19

After: 12/03/2019 – 12/12/19



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# COVID-19 Traffic Monitoring

DC Major entry points

| Corridor | Average Speed Differential | Average Speed Current | Average Speed Historic | Travel Time Differential | Travel Time Current | Travel Time Historic |
|---|---|---|---|---|---|---|
| MASSACHUSETTS AVE NB between Cathedral Ave and Westmoreland Cir | ↑ 3 | 29 mph | 26 mph | ↓ 1 | 4 m | 5 m |
| MASSACHUSETTS AVE SB between Cathedral Ave and Ward Cir/Nebraska Ave | ↑ 4 | 29 mph | 25 mph | ↓ 1 | 4 m | 5 m |
| WISCONSIN AVE NW NB between 37Th St and 37Th St | ↓ 1 | 14 mph | 15 mph | ↑ 1 | 6 m | 5 m |
| WISCONSIN AVE NW SB between M St and M St | ↓ 2 | 17 mph | 19 mph | ↑ 1 | 5 m | 4 m |
| PENNSYLVANIA AVE SE NB between Southern Ave and Branch Ave | ↑ 8 | 27 mph | 19 mph | ↓ 1 | 2 m | 3 m |
| PENNSYLVANIA AVE SE SB between Southern Ave and Southern Ave | ↑ 2 | 22 mph | 20 mph | 0 | 2 m | 2 m |
| BENNING RD WB between 44Th St and Southern Ave | ↑ 3 | 19 mph | 16 mph | 0 | 4 m | 4 m |
| BENNING RD EB between E Capitol St Se and Southern Ave | ↑ 1 | 18 mph | 17 mph | 0 | 4 m | 4 m |
| MASSACHUSETTS AVE NB between 14Th St/Vermont Ave and Rock Creek Pkwy | ↑ 3 | 19 mph | 16 mph | ↓ 1 | 7 m | 8 m |
| MASSACHUSETTS AVE SB between 9Th St/Mount Vernon Pl and Sheridan Cir | 0 | 17 mph | 17 mph | 0 | 8 m | 8 m |
| 17TH ST SW NB between E St and E St | ↑ 5 | 20 mph | 15 mph | 0 | 1 m | 1 m |
| 17TH ST SW SB between US-50/Constitution Ave and US-50/Constitution Ave | ↓ 5 | 12 mph | 17 mph | 0 | 1 m | 1 m |
| RIGGS RD EB between Eastern Ave and Eastern Ave | 0 | 19 mph | 19 mph | 0 | 1 m | 1 m |
| RIGGS RD WB between South Dakota Ave and Eastern Ave | ↑ 8 | 24 mph | 16 mph | ↓ 1 | 1 m | 2 m |
| MD-650 NB | ↓ 1 | 22 mph | 23 mph | 0 | 2 m | 2 m |
| NEW HAMPSHIRE AVE SB between N Capitol St Ne and N Capitol St Ne | ↑ 2 | 21 mph | 19 mph | 0 | 2 m | 2 m |
| MICHIGAN AVE EB between South Dakota Ave and Eastern Ave | 0 | 19 mph | 19 mph | 0 | 2 m | 2 m |
| MICHIGAN AVE WB between 13Th St and Eastern Ave | ↑ 5 | 25 mph | 20 mph | 0 | 2 m | 2 m |
| NEW YORK AVE EB between South Dakota Ave and MD-295/Baltimore Washington Pk... | ↑ 4 | 49 mph | 45 mph | ↓ 1 | 2 m | 3 m |
| NEW YORK AVE WB between Bladensburg Rd and MD-295/Baltimore Washington Pkwy | ↑ 7 | 48 mph | 41 mph | ↓ 1 | 2 m | 3 m |
| RHODE ISLAND AVE SB between 13Th St/Brentwood Rd and Eastern Ave | ↑ 6 | 26 mph | 20 mph | ↓ 1 | 4 m | 5 m |
| RHODE ISLAND AVE NB between 20Th St and Eastern Ave | 0 | 20 mph | 20 mph | 0 | 5 m | 5 m |
| S CAPITOL ST NB between Atlantic St and Southern Ave | ↓ 1 | 21 mph | 22 mph | 0 | 2 m | 2 m |
| S CAPITOL ST SB between Southern Ave and Chesapeake St | 0 | 22 mph | 22 mph | 0 | 2 m | 2 m |
| NEW YORK AVE EB between I-395 and Bladensburg Rd | ↑ 3 | 26 mph | 23 mph | ↓ 1 | 6 m | 7 m |
| NEW YORK AVE WB between I-395 and Brentwood Pkwy | ↑ 1 | 24 mph | 23 mph | ↓ 1 | 6 m | 7 m |

Using INRIX data

Loading...

- Sabra & Associates asked to monitor traffic in the District as a result of policies changes enacted due to the COVID-19 pandemic :
  - Monitoring entrance routes into the city with lane reductions due to relaxed parking restrictions.
  - Monitoring locations where reversible lane operations were being suspended
  - Monitoring corridors with heavy pedestrian activity for excessive speeding due to lower than normal volumes.

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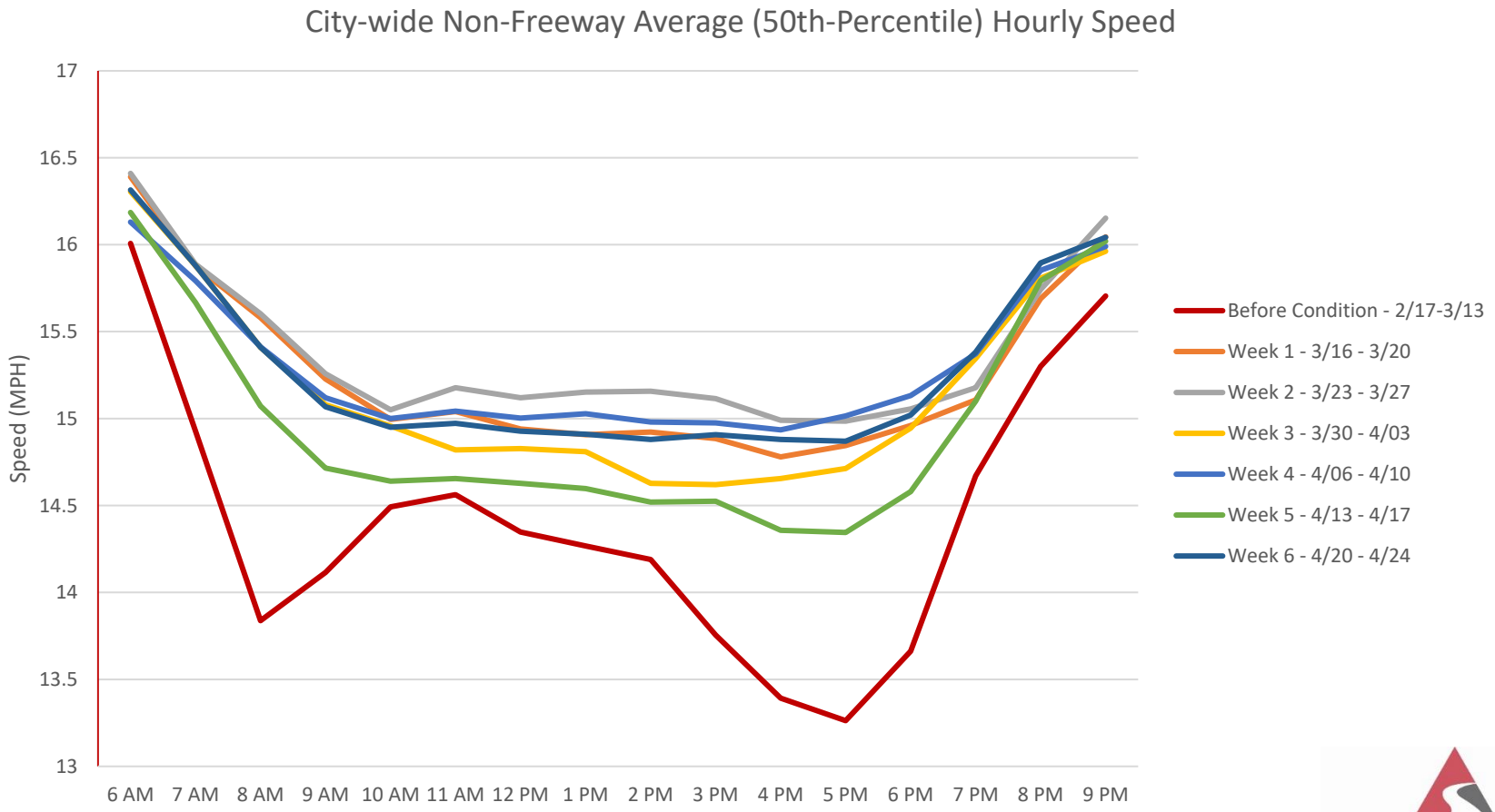
# COVID-19 Traffic Monitoring

After several weeks of observations we noticed a pattern and could map out the changes.



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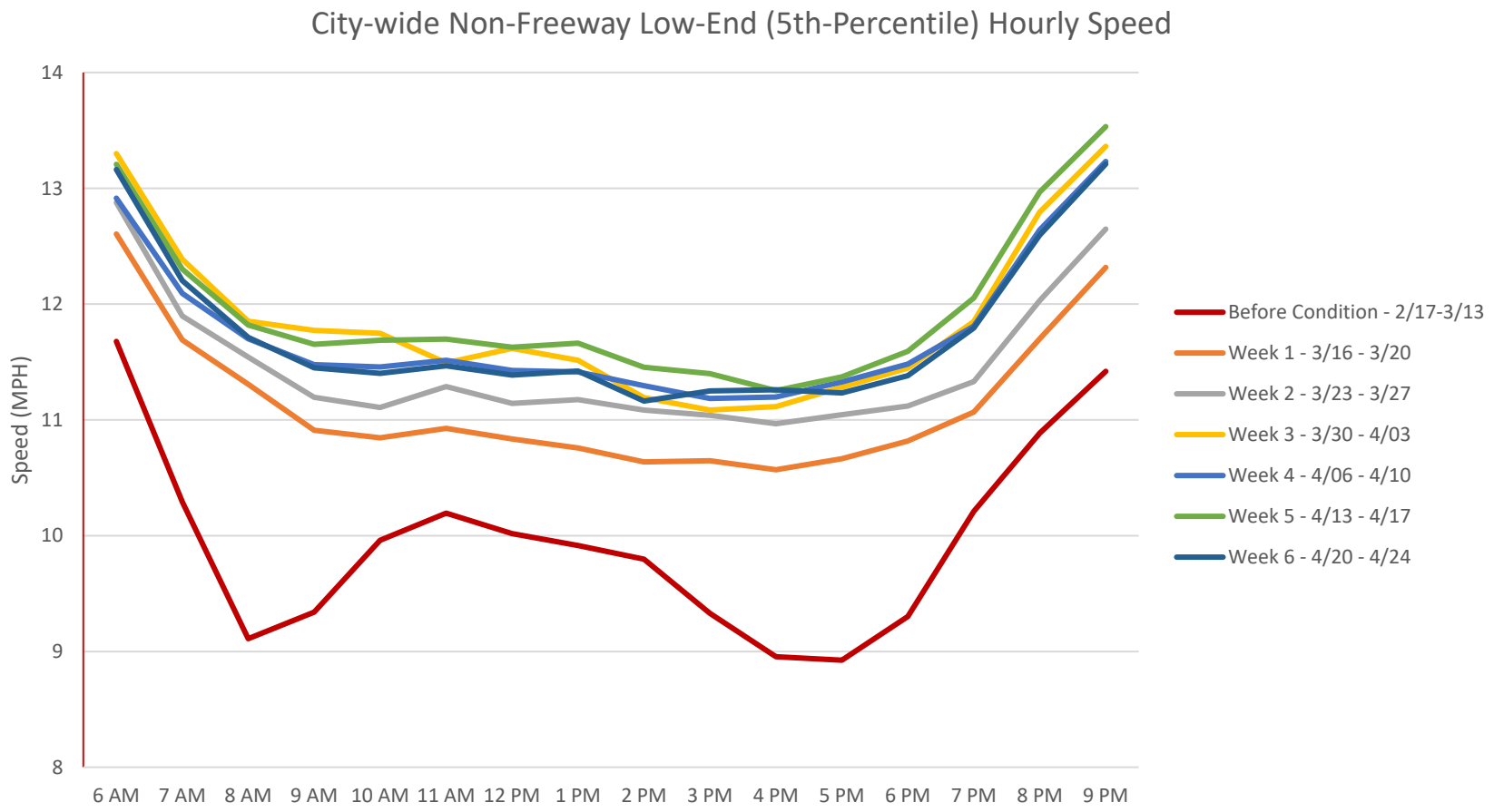
# COVID-19 Traffic Monitoring



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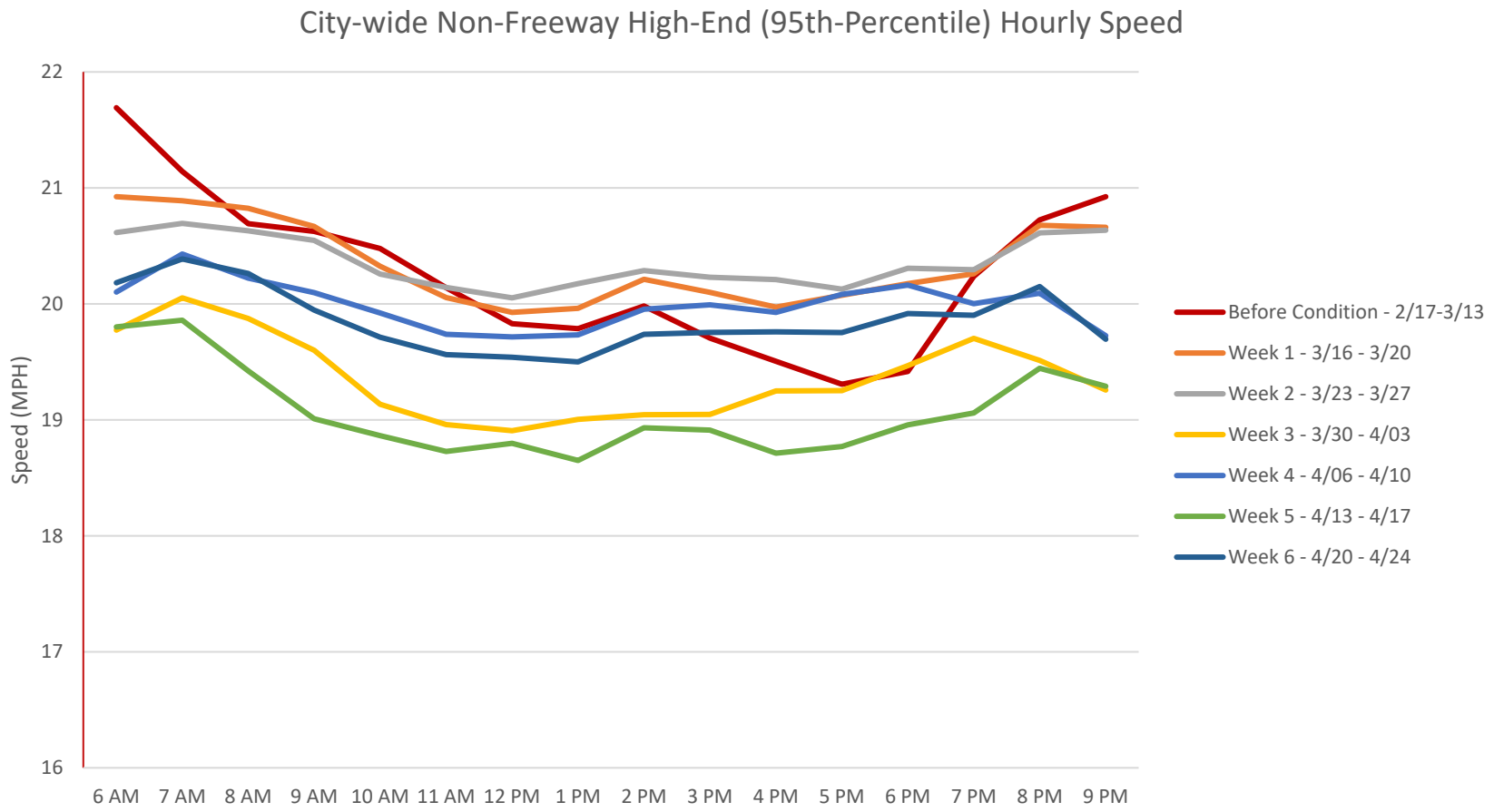
# COVID-19 Traffic Monitoring



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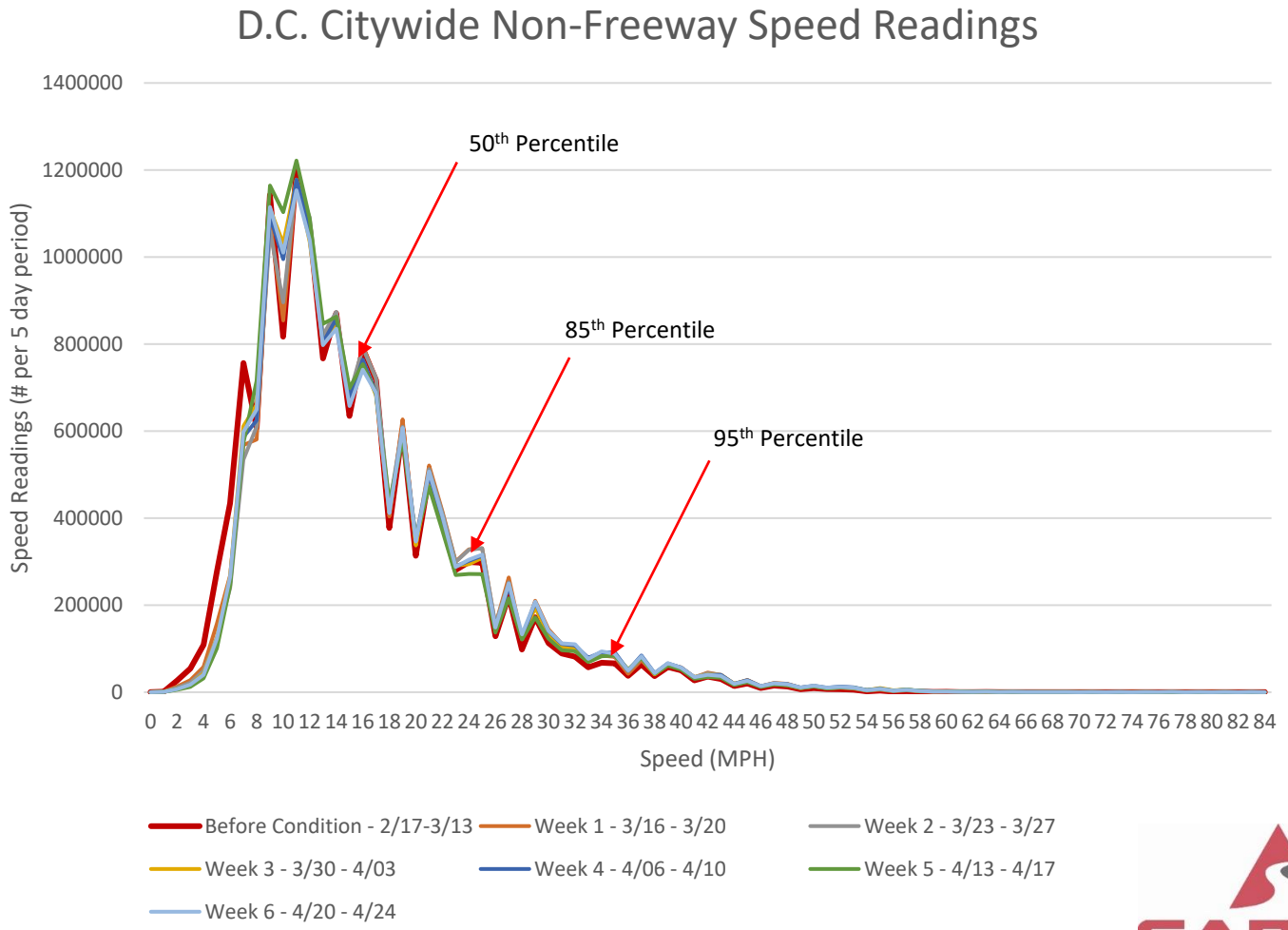
# COVID-19 Traffic Monitoring

How have the pandemic orders changed traffic speeds:

- Less traffic is going at the lowest speeds compared to the month before.
- The 50th & 85th percentile speeds have increased about 2 mph.



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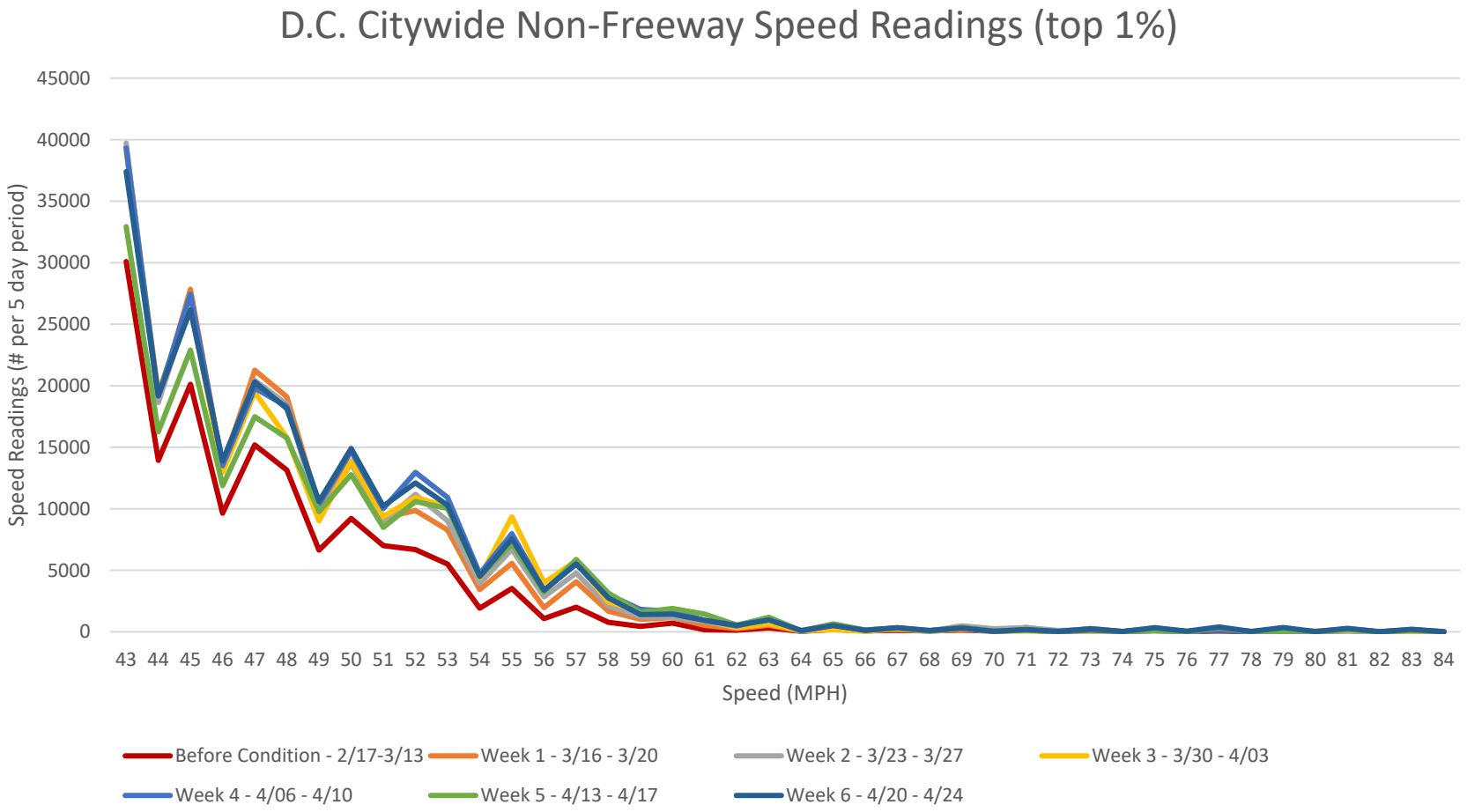
# COVID-19 Traffic Monitoring



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# Thank You

**Tom Knofczynski, PE, Project Engineer**
Sabra & Associates, Inc., a Mead & Hunt Company

Thomas.Knofczynski@meadhunt.com

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RITIS & PROBE DATA ANALYTICS SUITE

u s e r g r o u p

# What's new & what's coming

Michael Pack
UMD CATT Laboratory
Director

# What's New

- RITIS Tutorials
- Causes of Congestion
- COVID-19
- Signal Analytics
- Route Analytics (and major speed improvements)
- Detector Tools Modernization

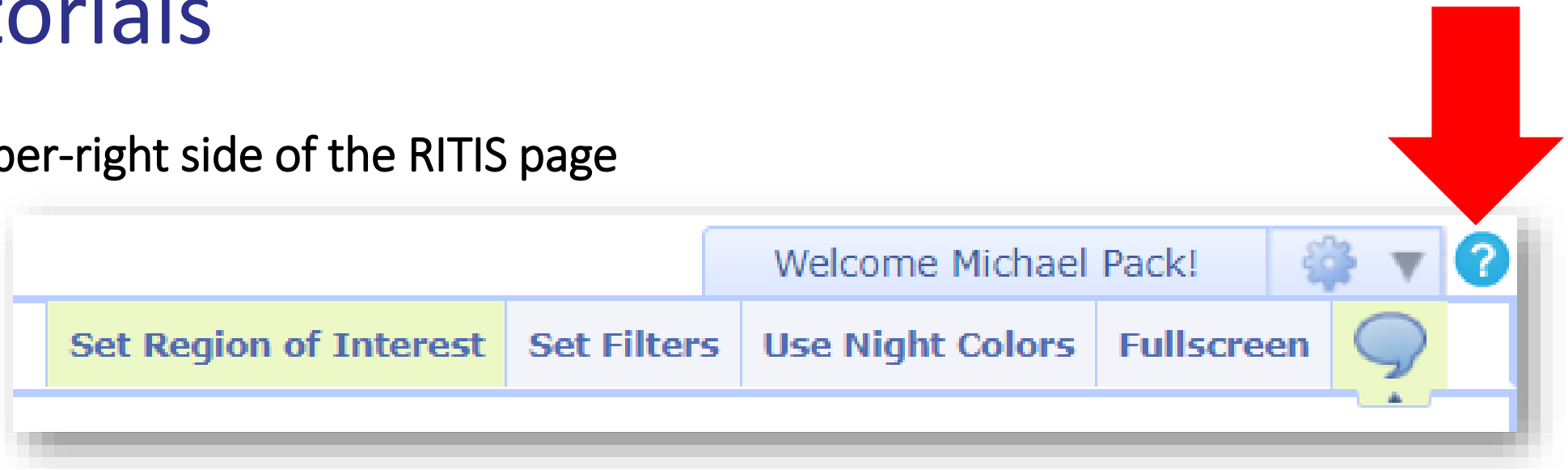
RITIS

PROBE DATA ANALYTICS SUITE

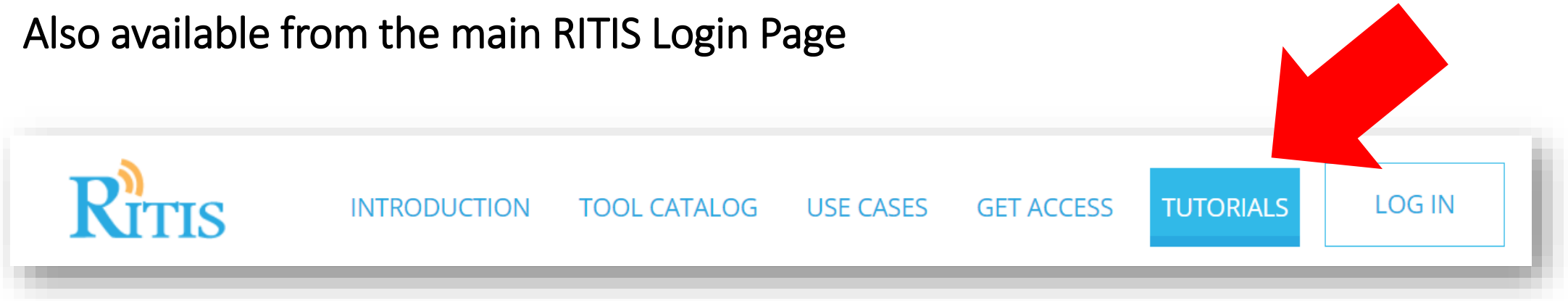
u s e r g r o u p

# Tutorials

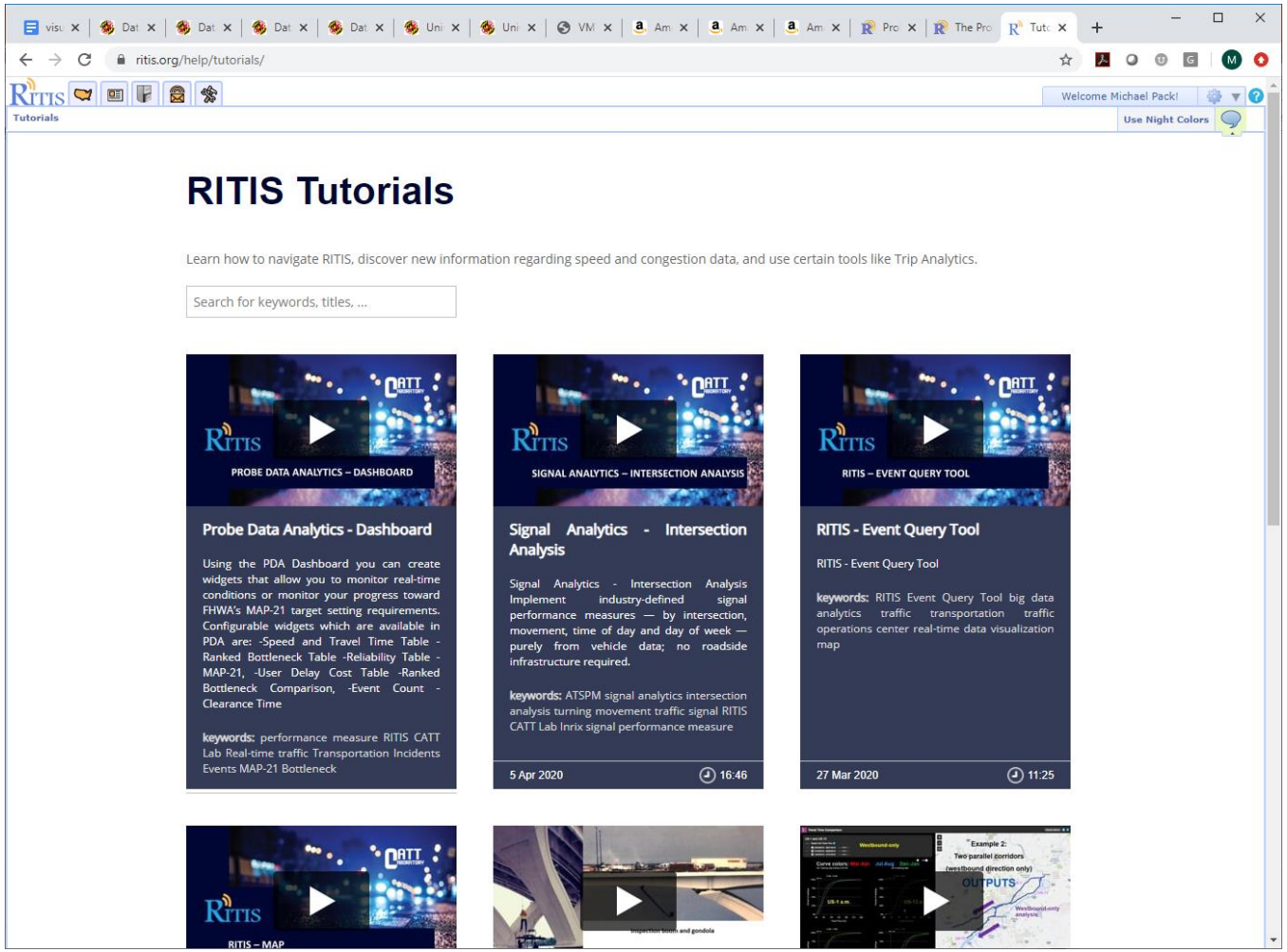
- Upper-right side of the RITIS page



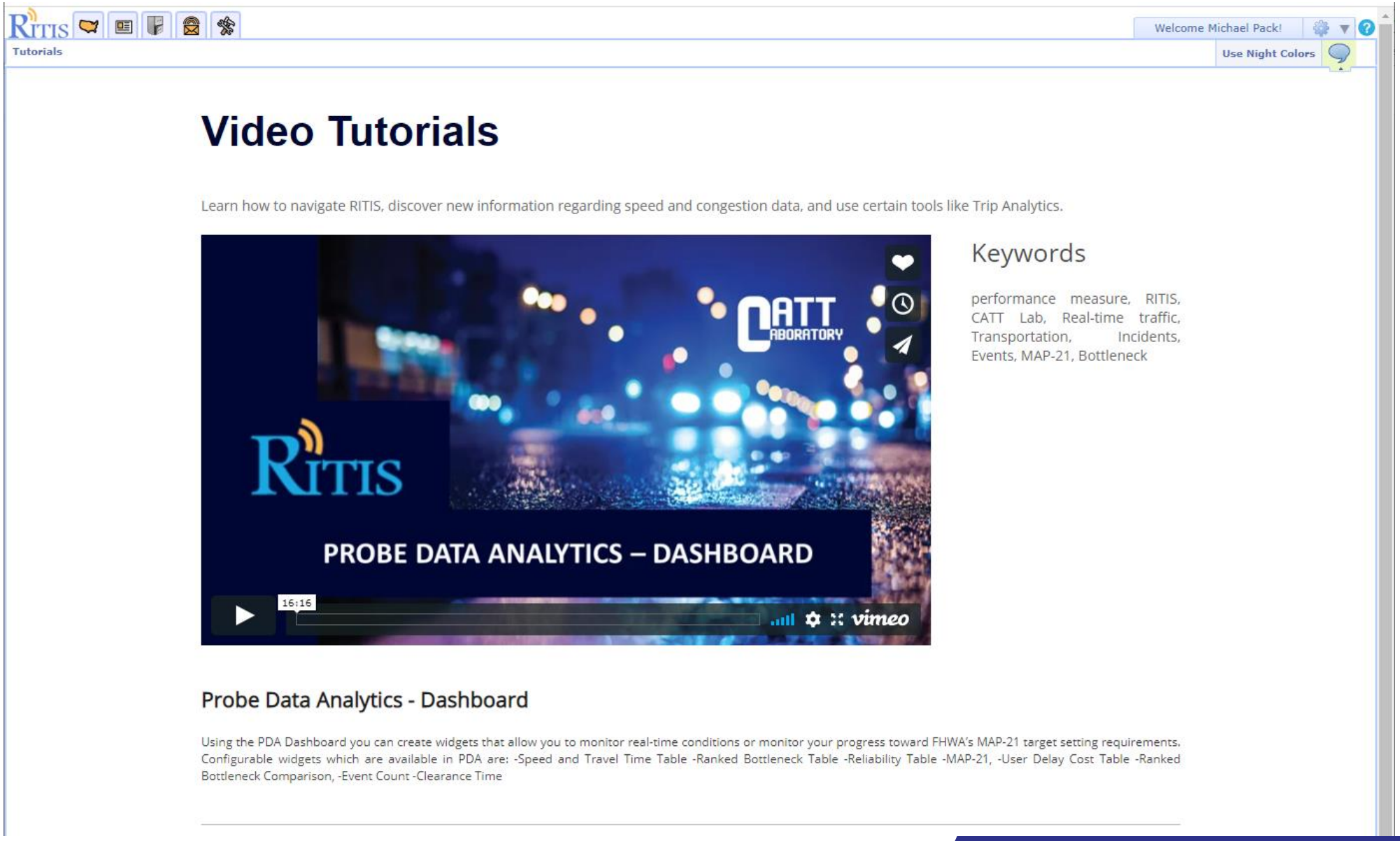

- Also available from the main RITIS Login Page



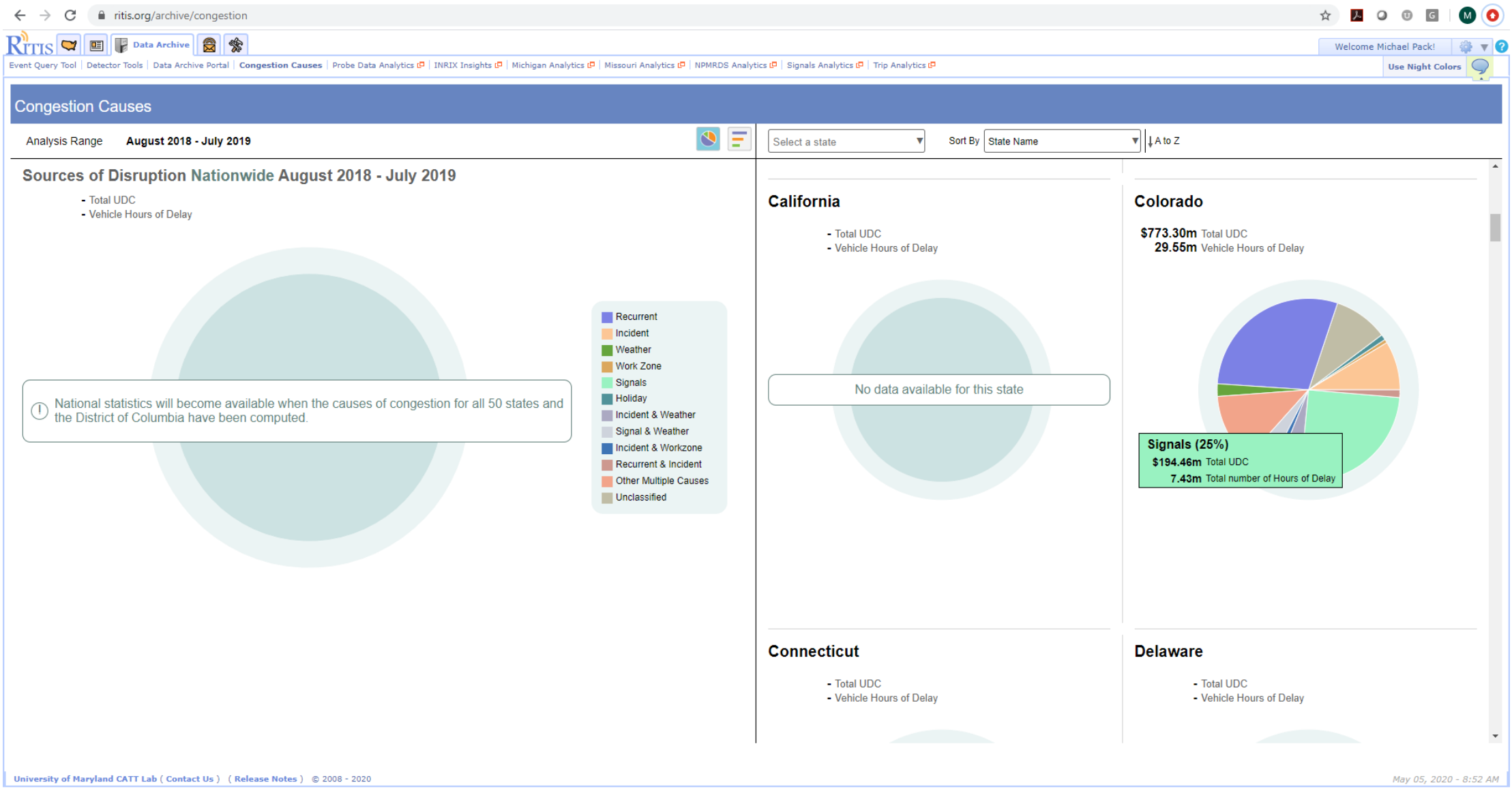
# Tutorials


ritis.org/help/tutorials/
Welcome Michael Pack!
Tutorials
Use Night Colors
RITIS Tutorials
Learn how to navigate RITIS, discover new information regarding speed and congestion data, and use certain tools like Trip Analytics.
Search for keywords, titles, ...
PROBE DATA ANALYTICS – DASHBOARD
Probe Data Analytics - Dashboard
Using the PDA Dashboard you can create widgets that allow you to monitor real-time conditions or monitor your progress toward FHWA's MAP-21 target setting requirements. Configurable widgets which are available in PDA are: -Speed and Travel Time Table - Ranked Bottleneck Table -Reliability Table - MAP-21, -User Delay Cost Table -Ranked Bottleneck Comparison, -Event Count - Clearance Time
keywords: performance measure RITIS CATT Lab Real-time traffic Transportation Incidents Events MAP-21 Bottleneck
SIGNAL ANALYTICS – INTERSECTION ANALYSIS
Signal Analytics - Intersection Analysis
Signal Analytics - Intersection Analysis Implement industry-defined signal performance measures — by intersection, movement, time of day and day of week — purely from vehicle data; no roadside infrastructure required.
keywords: ATSPM signal analytics intersection analysis turning movement traffic signal RITIS CATT Lab Inrix signal performance measure
5 Apr 2020
16:46
RITIS – EVENT QUERY TOOL
RITIS - Event Query Tool
RITIS - Event Query Tool
keywords: RITIS Event Query Tool big data analytics traffic transportation traffic operations center real-time data visualization map
27 Mar 2020
11:25
RITIS – MAP
Example 2:
Two parallel corridors
(westbound direction only)
OUTPUTS

# Tutorials


RITIS
Welcome Michael Pack!
Tutorials
Use Night Colors
Video Tutorials
Learn how to navigate RITIS, discover new information regarding speed and congestion data, and use certain tools like Trip Analytics.
CATT LABORATORY
RITIS
PROBE DATA ANALYTICS – DASHBOARD
16:16
vimeo
Keywords
performance measure, RITIS, CATT Lab, Real-time traffic, Transportation, Incidents, Events, MAP-21, Bottleneck
Probe Data Analytics - Dashboard
Using the PDA Dashboard you can create widgets that allow you to monitor real-time conditions or monitor your progress toward FHWA's MAP-21 target setting requirements. Configurable widgets which are available in PDA are: -Speed and Travel Time Table -Ranked Bottleneck Table -Reliability Table -MAP-21, -User Delay Cost Table -Ranked Bottleneck Comparison, -Event Count -Clearance Time

# Causes of Congestion – Live, but limited data



# COVID-19 Impact Analytics

Provides insights into various impacts of COVID-19 on Mobility, Health, and the Economy

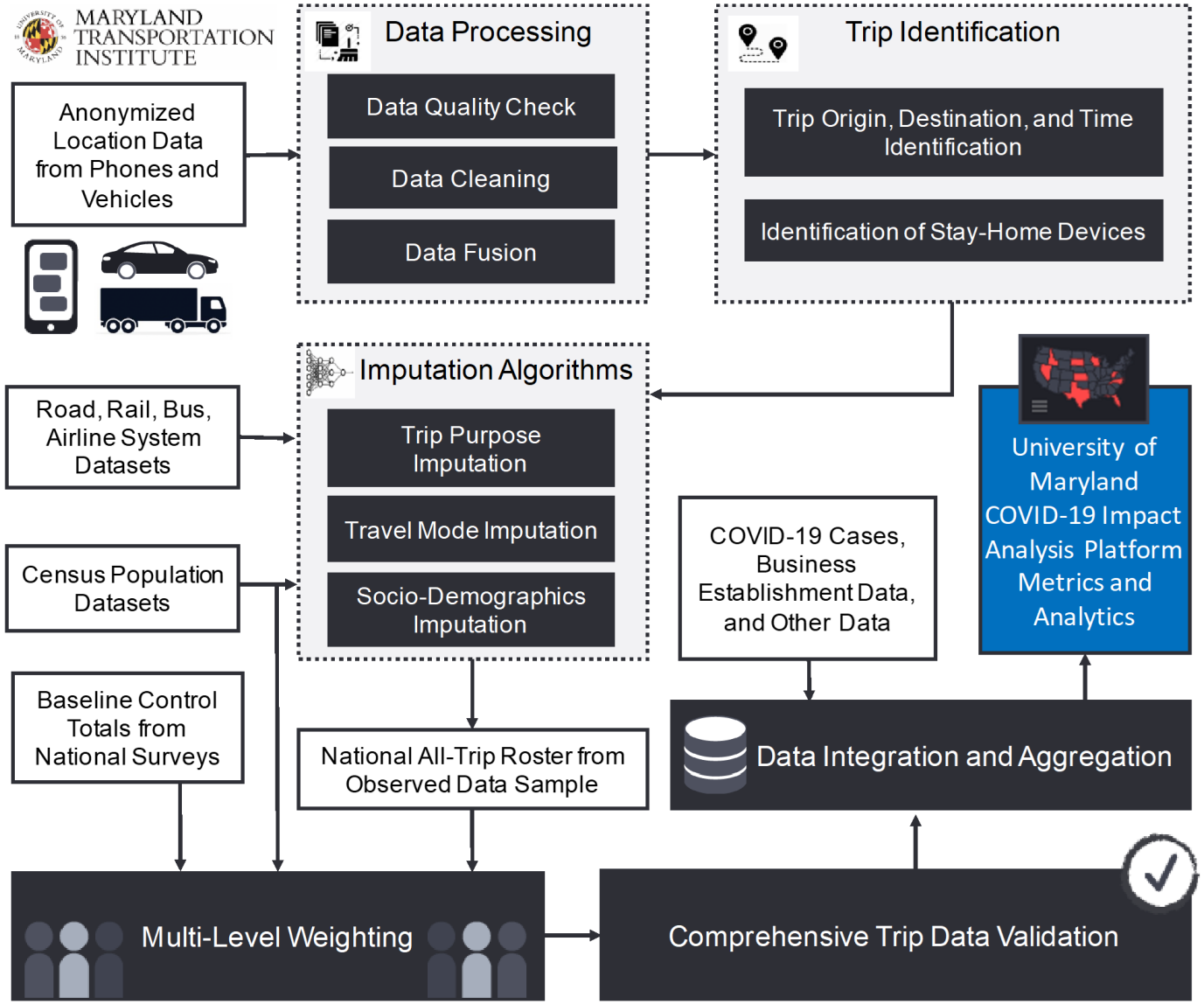
Creates new data related to:

- Travel (# of trips, trip purpose, trip distance, mode, in/out of state/county, hot spots, social distancing etc)
- Includes state and county-level comparisons

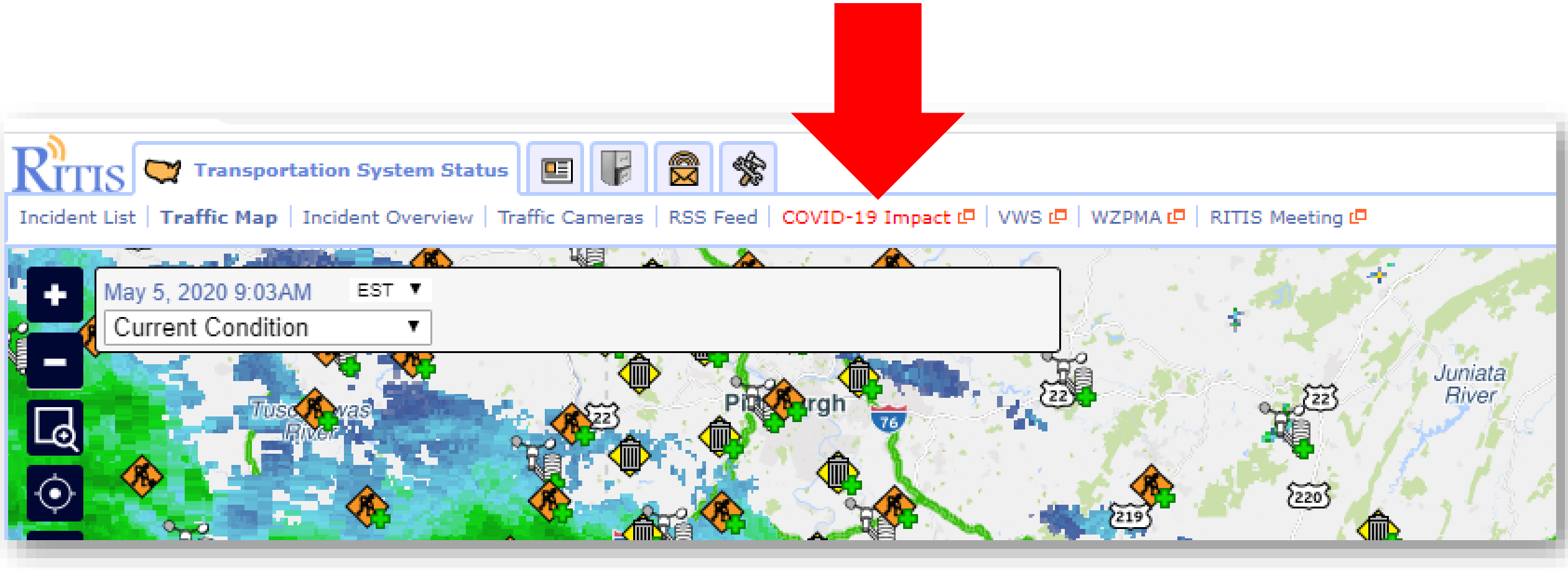
Provides easier access to data related to:

- Economic Impact
- Health
- Vulnerable Populations (socio-economic data and related demographics)

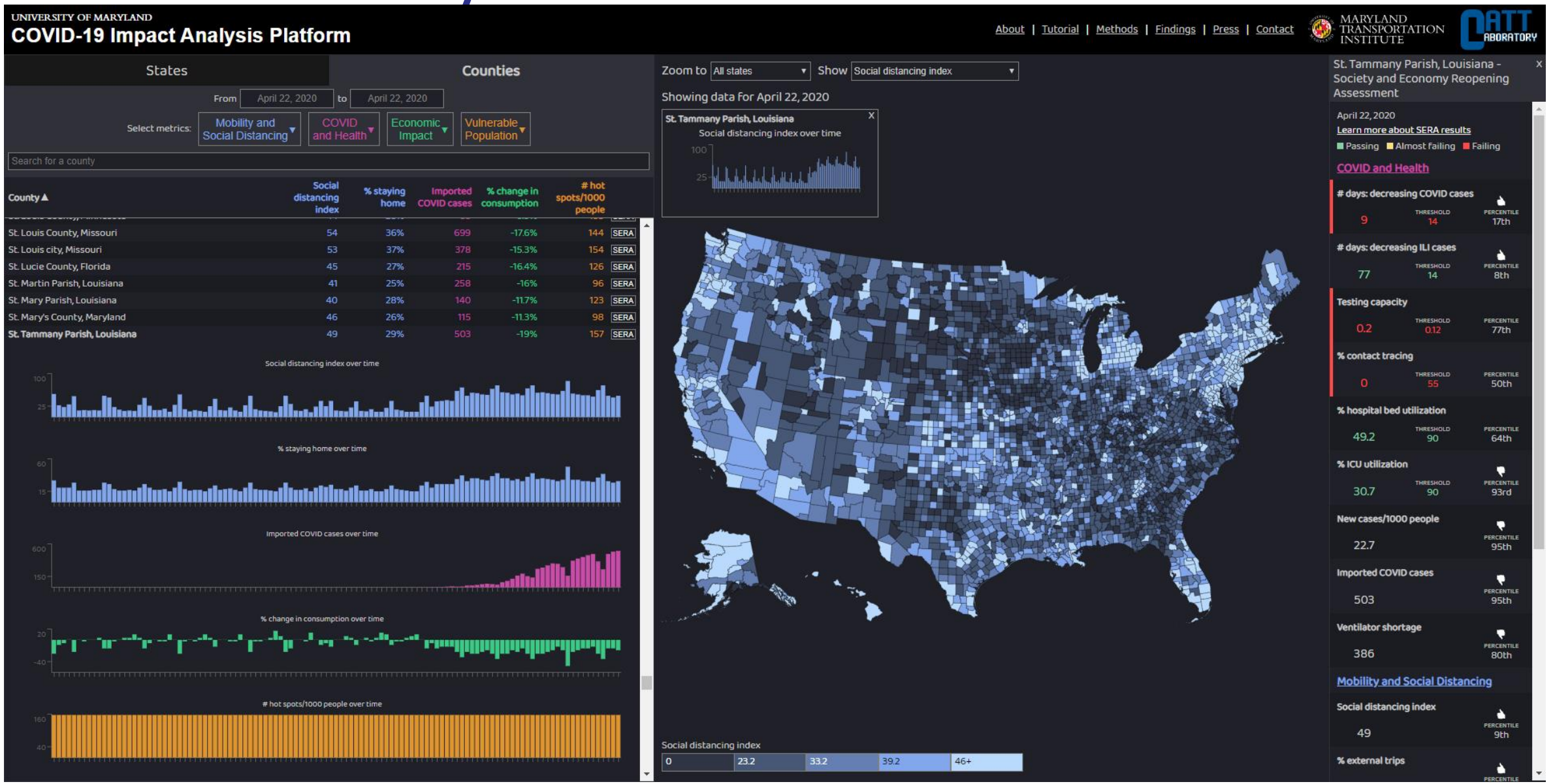
- Funded by: UMD, USDOT, Amazon, et al



# COVID-19 Analytics

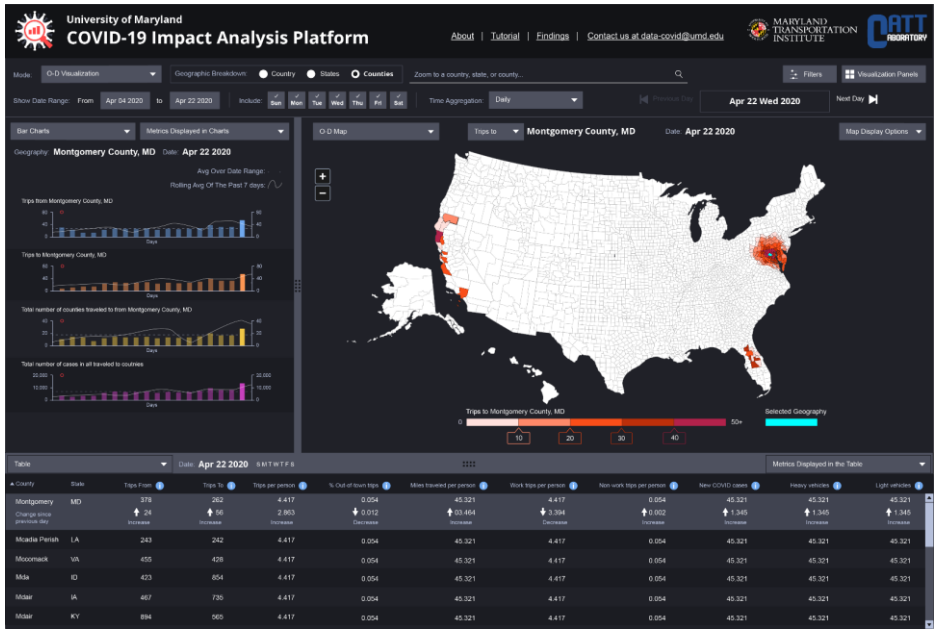


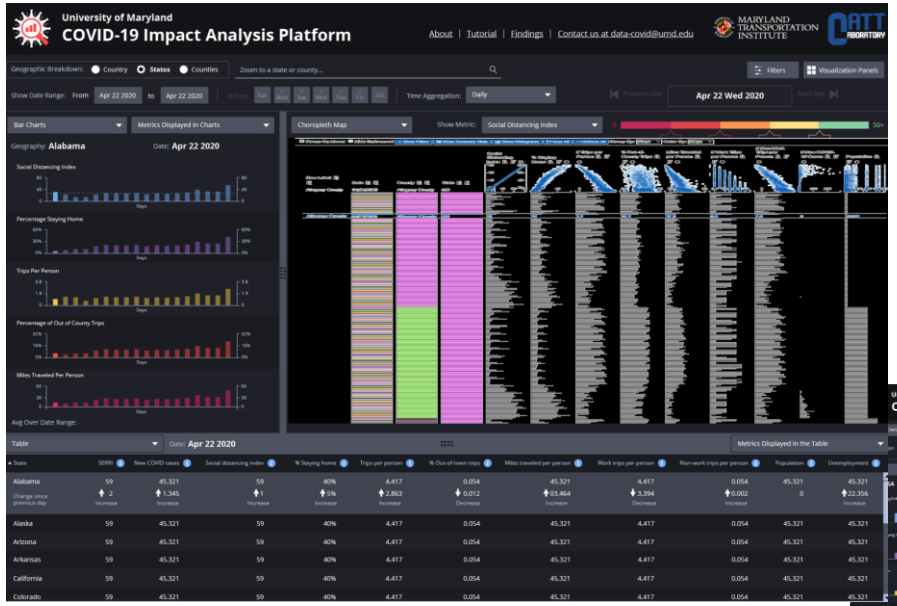
# COVID-19 Analytics: Demo

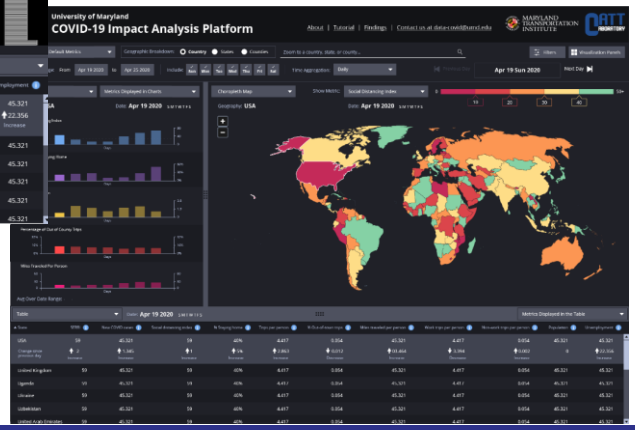


# Next Steps

- Sharing data with over 100 academic & private-sector researchers
- Providing daily briefings to federal and state governments
- Building out additional functionality

University of Maryland

# COVID-19 Impact Analysis Platform

About | Tutorial | Findings | Contact us at data-covid@umd.edu

MARYLAND TRANSPORTATION INSTITUTE

CATT LABORATORY

Geographic Breakdown: Country **States** Counties

Zoom to a state or county...

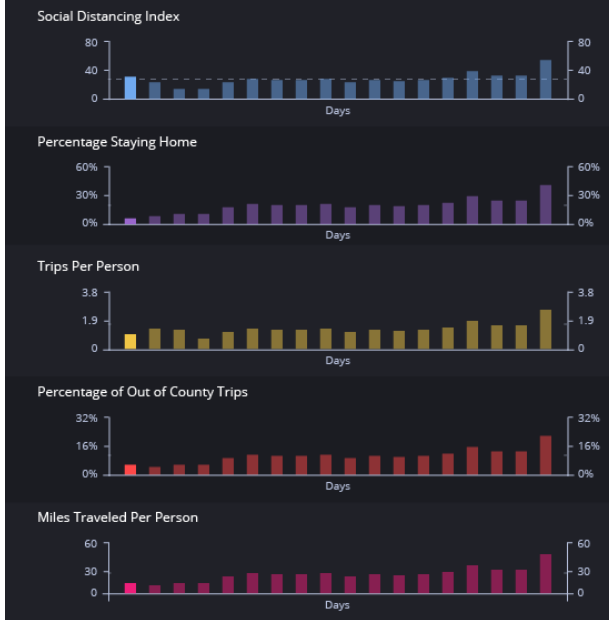
Filters | Visualization Panels

Show Date Range: From Apr 22 2020 to Apr 22 2020 | Include Sun ✓Mon ✓Tue ✓Wed ✓Thu ✓Fri Sat | Time Aggregation: Daily

Previous Day | Apr 22 Wed 2020 | Next Day

Bar Charts | Metrics Displayed in Charts

Geography: **Alabama** Date: **Apr 22 2020**




Choropleth Map | Show Metric: Social Distancing Index | 0 — 50+

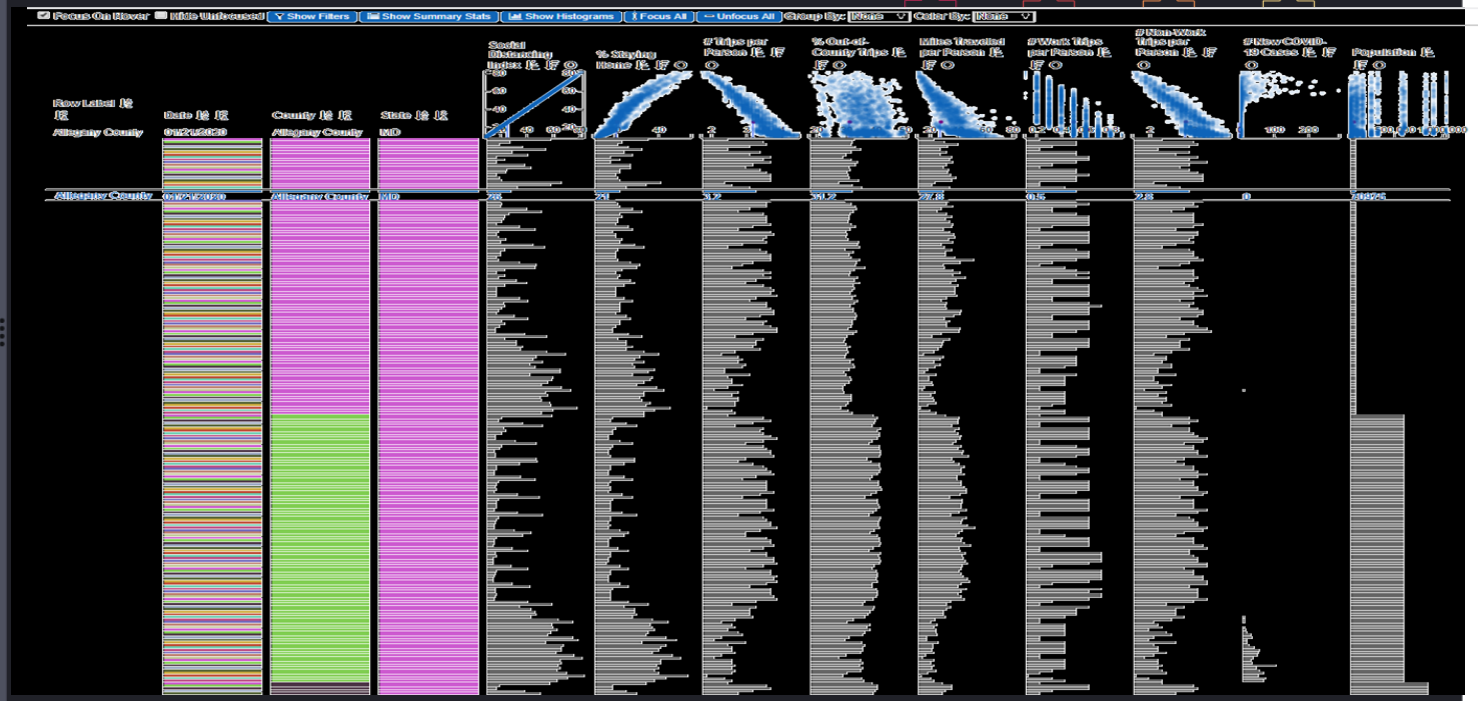


Table | Date: **Apr 22 2020** | Metrics Displayed in the Table

| State | SERRI | New COVID cases | Social distancing index | % Staying home | Trips per person | % Out-of-town trips | Miles traveled per person | Work trips per person | Non-work trips per person | Population | Unemployment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alabama | 59 | 45.321 | 59 | 40% | 4.417 | 0.054 | 45.321 | 4.417 | 0.054 | 45.321 | 45.321 |
| Change since previous day | ↑ 2 Increase | ↑ 1.345 Increase | ↑ 1 Increase | ↑ 5% Increase | ↑ 2.863 Increase | ↓ 0.012 Decrease | ↑ 03.464 Increase | ↓ 3.394 Decrease | ↑ 0.002 Increase | 0 | ↑ 22.356 Increase |
| Alaska | 59 | 45.321 | 59 | 40% | 4.417 | 0.054 | 45.321 | 4.417 | 0.054 | 45.321 | 45.321 |
| Arizona | 59 | 45.321 | 59 | 40% | 4.417 | 0.054 | 45.321 | 4.417 | 0.054 | 45.321 | 45.321 |
| Arkansas | 59 | 45.321 | 59 | 40% | 4.417 | 0.054 | 45.321 | 4.417 | 0.054 | 45.321 | 45.321 |
| California | 59 | 45.321 | 59 | 40% | 4.417 | 0.054 | 45.321 | 4.417 | 0.054 | 45.321 | 45.321 |
| Colorado | 59 | 45.321 | 59 | 40% | 4.417 | 0.054 | 45.321 | 4.417 | 0.054 | 45.321 | 45.321 |

# Route Analytics (Speed and Functionality)

- Faster Performance
- Data Compression
- UI improvements
- Several New Features

## Route Analysis

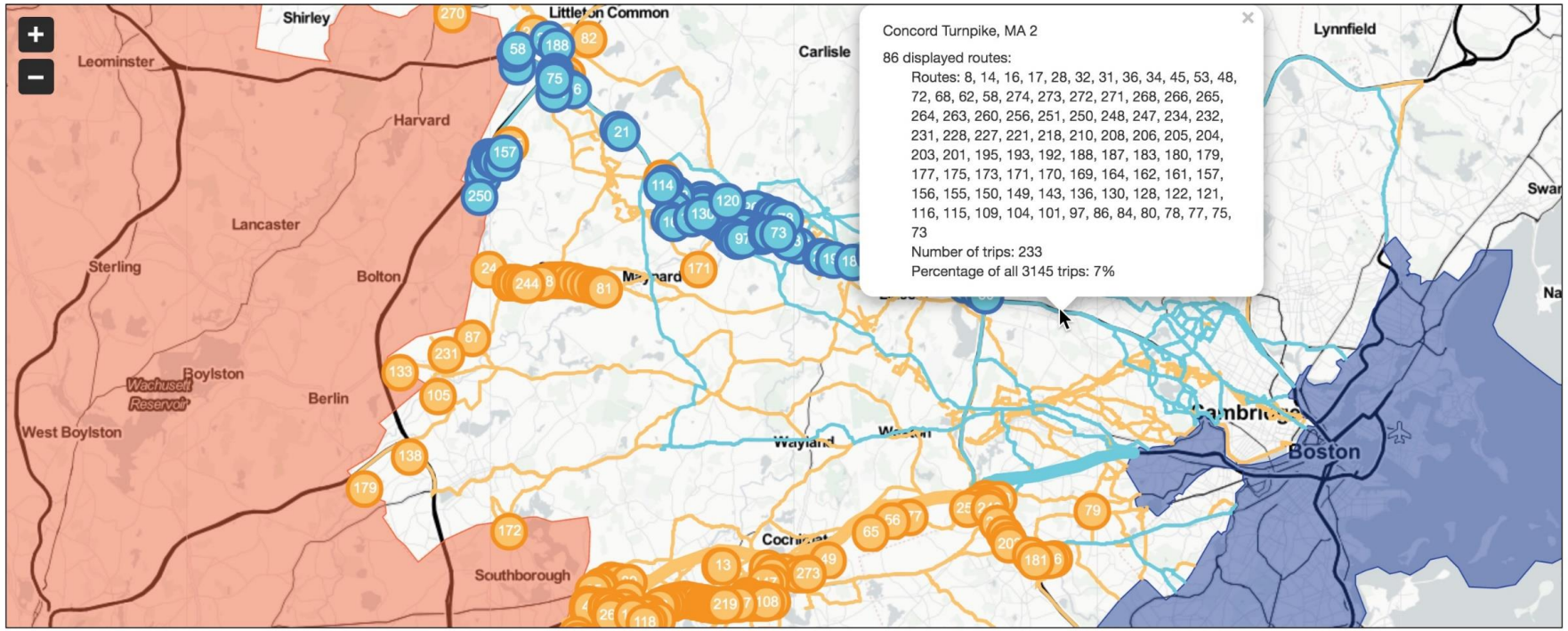
Switch Origins and Destinations

Using the MA data set
Started and ended: March, April, May and June 2019, Monday, Tuesday, Wednesday, Thursday and Friday, 5 AM - 9 AM; Light vehicles

**Trips from Worcester (Massachusetts) to Suffolk (Massachusetts)**

Show on map...

| Map | Rank | Route | Number of Tri... ▼ | Travel Time | Avg Travel Time | Min Travel Time | Max Travel Time | Reliability |
|---|---|---|---|---|---|---|---|---|
| ☑ | 4 | ► Massachusetts Turnpike, I 90; Centre Street; Washington Stre... | 120 | 00:47:55 | 00:45:41 | 00:11:36 | 01:14:20 | 1.28 |
| ☑ | 5 | ► Worcester Road, MA 9; Massachusetts Turnpike, I 90; Centre S... | 71 | 00:36:29 | 00:39:52 | 00:11:24 | 01:13:36 | 1.54 |
| ☑ | 6 | ► Worcester Road, MA 9; Worcester Road, MA 9, MA 30; Worcester... | 60 | 00:35:42 | 00:40:54 | 00:20:34 | 01:23:51 | 1.43 |
| ☑ | 7 | Worcester Road, MA 9; Massachusetts Turnpike, I 90 | 58 | 00:30:47 | 00:33:19 | 00:15:29 | 01:02:56 | 1.44 |
| ☑ | 8 | ► George W Stanton Highway, MA 2; Captain Isaac Davis Highway,... | 57 | 00:48:50 | 00:47:23 | 00:25:54 | 01:24:13 | 1.24 |
| ☑ | 9 | ► George W Stanton Highway, MA 2; Captain Isaac Davis Highway,... | 50 | 00:41:52 | 00:45:14 | 00:27:51 | 01:23:14 | 1.41 |
| ☑ | 10 | ► Worcester Road, MA 9; Worcester Road, MA 9, MA 30; Concord S... | 42 | 00:32:50 | 00:34:40 | 00:20:25 | 00:57:11 | 1.22 |
| | Total | | 3145 | | | | | |

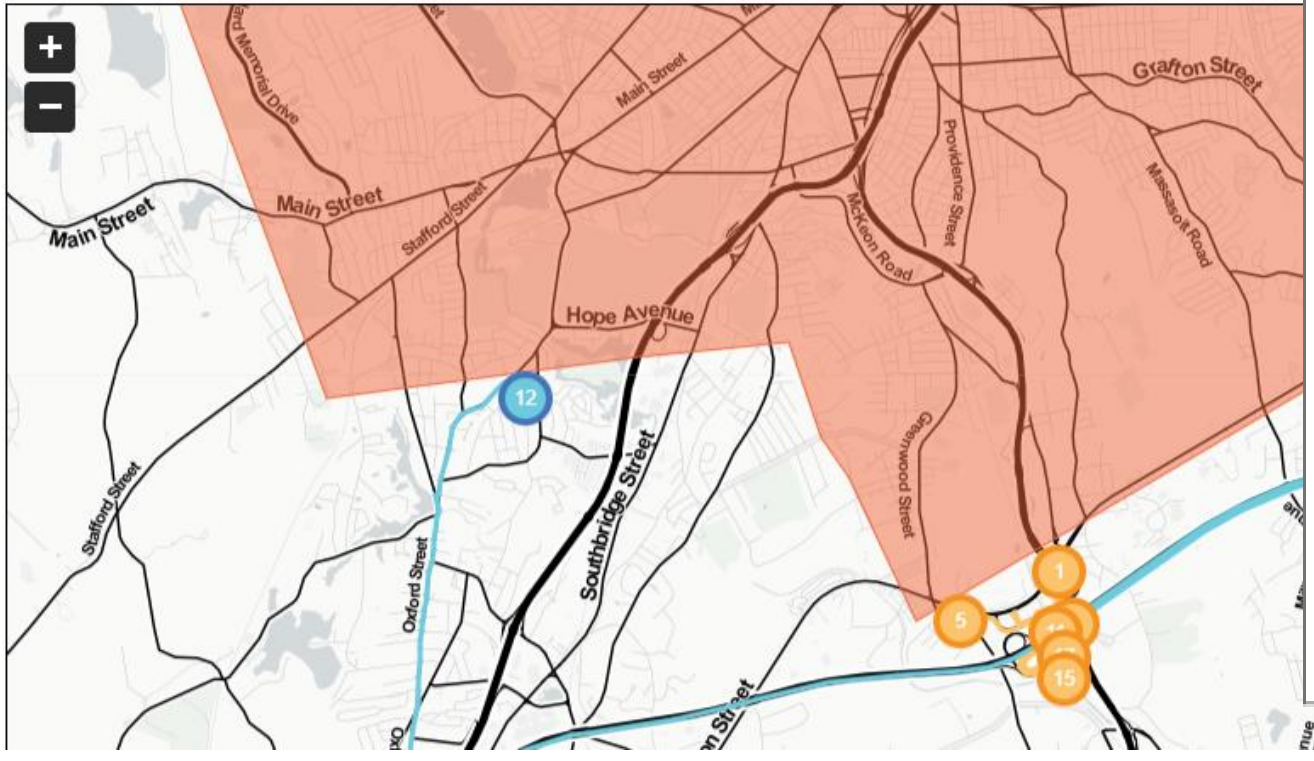


# Route Analytics

**Trips from** Worcester - 0278200000619493 (Worcester) (Massachusetts) **to** Boston - 025070000061946

Show on map...

| Map | Rank | Route | Number of Trips▼ | Travel Time | Avg |
|---|---|---|---|---|---|
| ☑ | 12 | ▼ Oxford Street; Pinehurst Avenue; Southbridge Street, MA 12; Massachusetts Turnpike, I 90 | 51 | 39 m | |
| ☑ | 13 | ► I 290; I 495; Blue Star Memorial Highway, I 495; Turnpike Ro... | 51 | 1 h 08 m | |
| ☑ | 14 | ► Grafton Road, MA 122; Worcester Street, MA 122; Brigham Hill... | 48 | 34 m | |
| ☑ | 15 | ► Worcester-Providence Turnpike, MA 122A, MA 146; Massachusett... | 44 | 1 h 01 m | |
| ☑ | 16 | ► Grafton Road, MA 122; Massachusetts Turnpike, I 90; Yankee D... | 42 | 50 m | |
| ☑ | 17 | ► Worcester-Providence Turnpike, MA 122A, MA 146; Massachusett... | 35 | 54 m | |
| ☑ | 18 | ► Grafton Road, MA 122; Massachusetts Turnpike, I 90; Centre S... | 34 | 55 m | |
| | Total | | 7439 | | |




Show on map...

☑ Routes with the following number of trips:

1084 to 2484

1 — 1084 — 2484 — 2484

☑ Routes with travel time **greater than:**

Hours 00 Minutes 00

☑ Routes with travel time **less than:**

Hours 03 Minutes 24

**The selection above represents:**

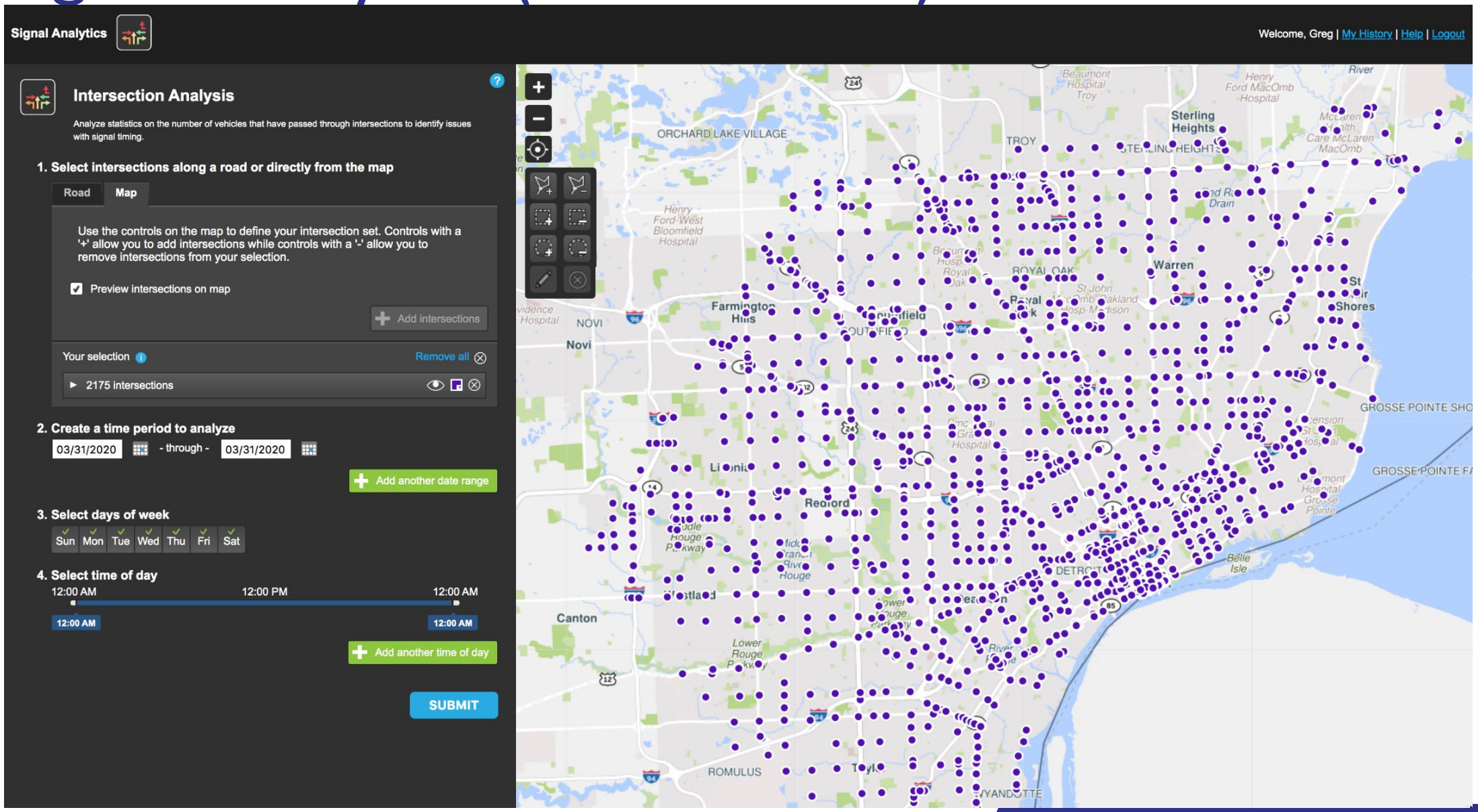
**52%** of all **7439** trips

**0%** of all **972** routes

Cancel

Show On Map

# Signal Analytics (Brand New!)

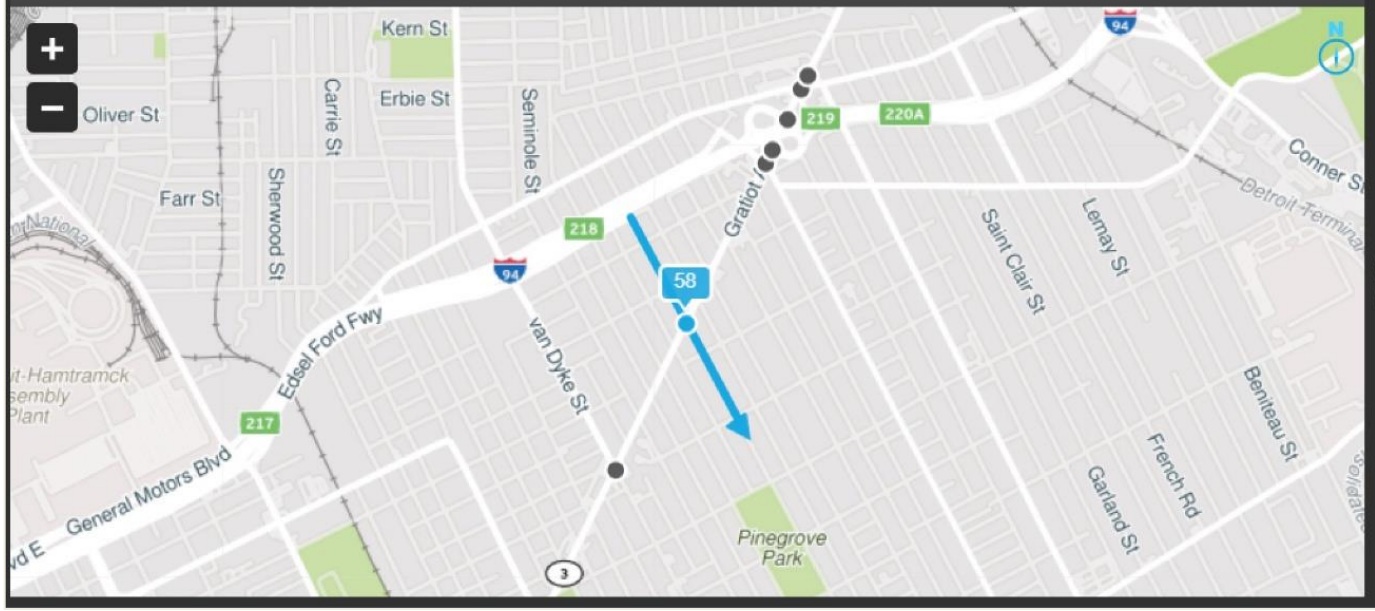


## Intersection Analysis

**Ranked intersection movements for the selected geography for the date range of January 13, 2020 through January 31, 2020 (Every Tuesday, Wednesday, and Thursday) at 4 PM - 6 PM (10 intersections)** Display Options

| Rank | Intersection | Approach | Movement | POG | Vehicle count | Stopped vehicle count | Avg travel time | Max travel time | Avg approach speed | Avg control delay | Max control delay |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 56 | Gratiot Ave & M-53 & Van... | Northbound | Straight | 24% | 259 vehicles | 198 vehicles | 58s | 309s | 28.5 mph | 43s | 294s |
| 57 | Burns St & Gratiot Ave | Northbound | Straight | 20% | 5 vehicles | 4 vehicles | 60s | 98s | 30.0 mph | 36s | 74s |
| 58 | Burns St & Gratiot Ave | Southbound | Straight | 20% | 5 vehicles | 4 vehicles | 82s | 111s | 27.0 mph | 65s | 94s |
| 59 | Gratiot Ave & Mcclellan St | Southbound | Straight | 18% | 28 vehicles | 23 vehicles | 69s | 108s | 27.9 mph | 52s | 91s |
| 60 | French Rd & Gratiot Ave | Northbound | Left | 17% | 6 vehicles | 5 vehicles | 58s | 88s | 34.9 mph | 36s | 66s |
| 61 | Burns St & Gratiot Ave | Southbound | Left | 17% | 6 vehicles | 5 vehicles | 65s | 101s | 25.4 mph | 42s | 78s |

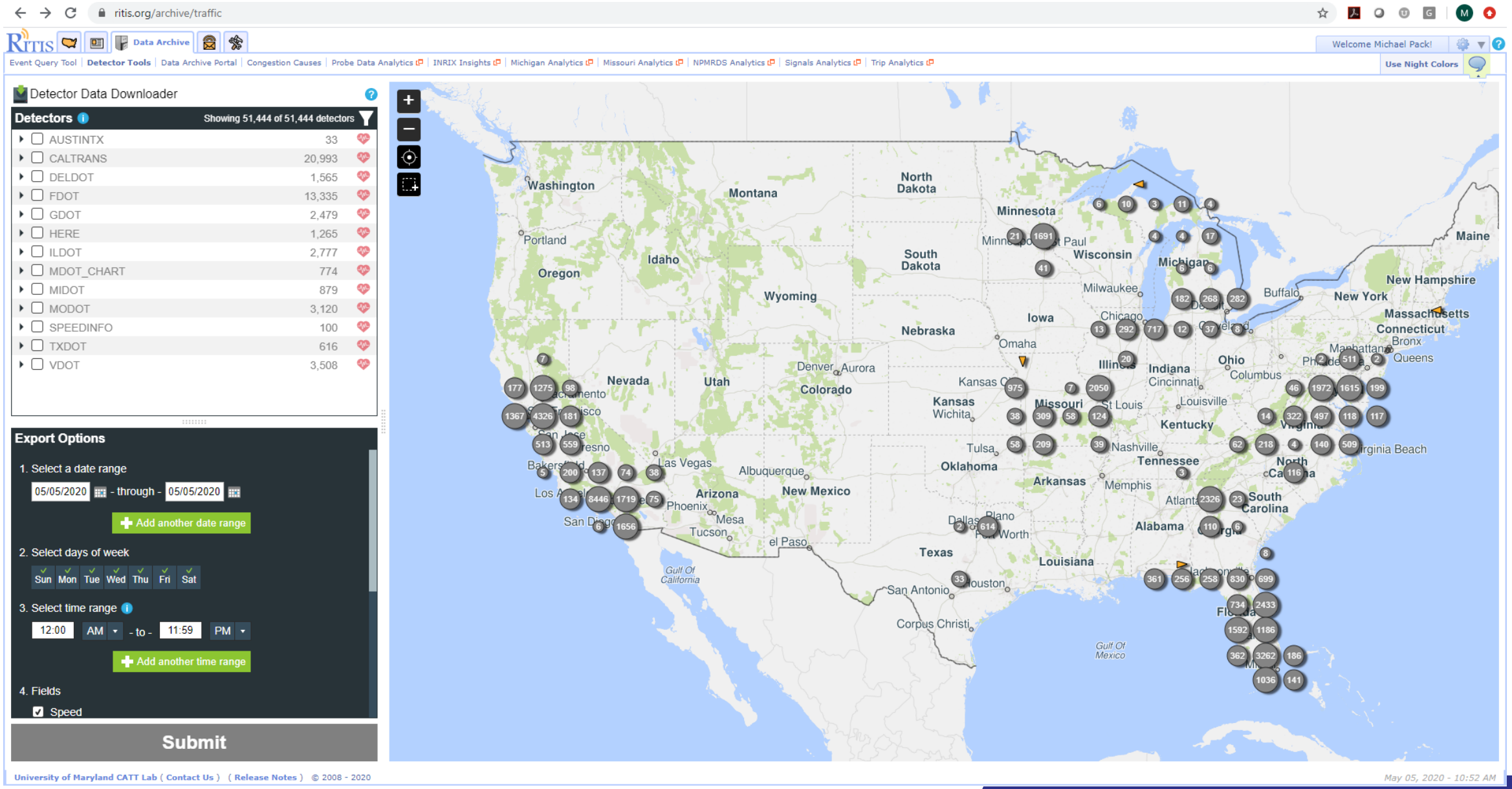
**Map** Burns St & Gratiot Ave Display Options



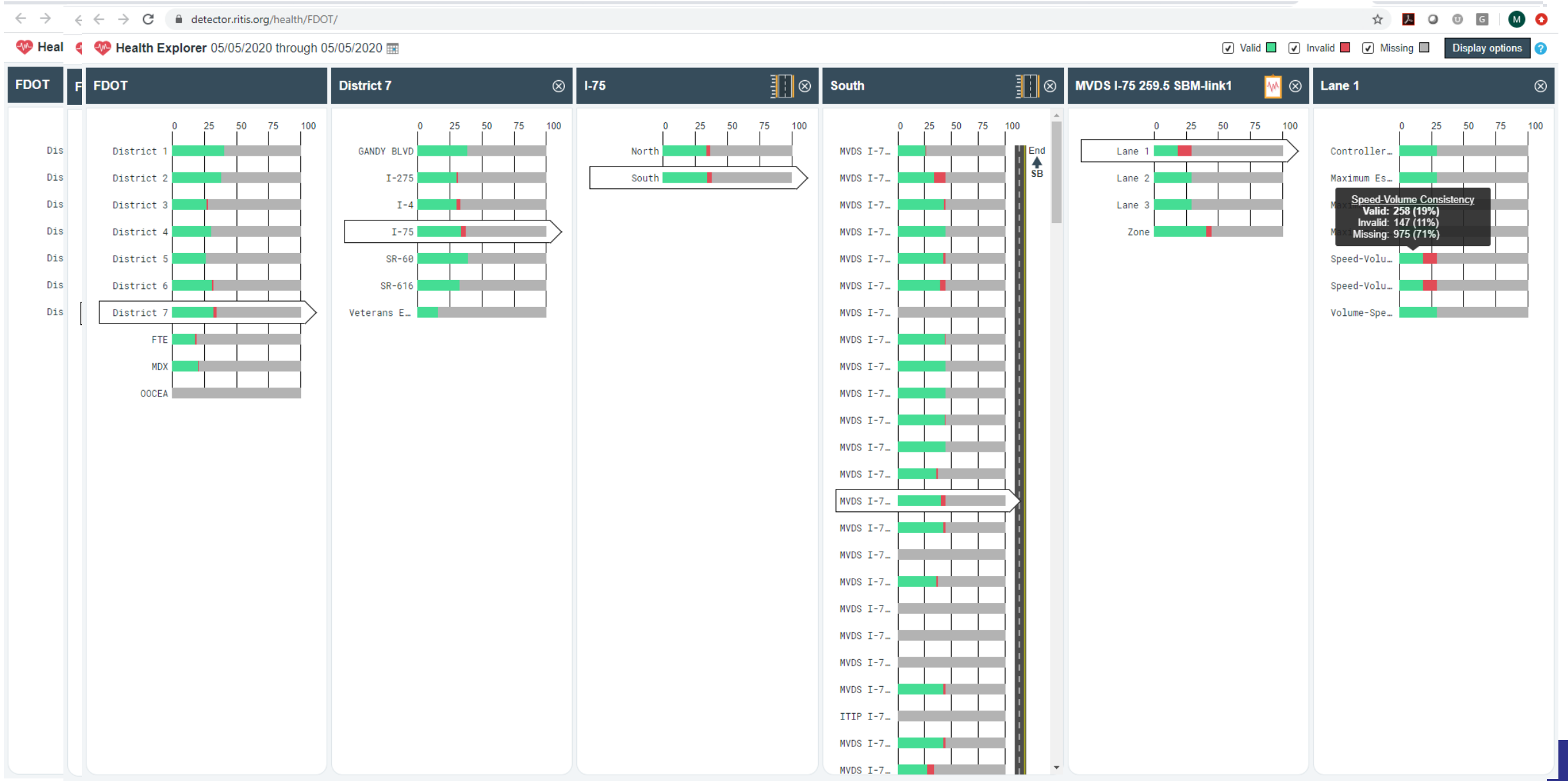

**Intersection Breakdown** Burns St & Gratiot Ave Display Options


Approach speeds, travel times, delays, arrival-on-green, and directional splits can be calculated individually for all approaches. This system operates without installation of field hardware or communications.

# Detector Tools Modernization



# Detector Tools Modernization



# What's in Development

- UDC Updates/Improvements/Standardization
- New COVID-19 Mobility Impact Metrics, Analytics and Visualizations
- Advanced Road Selection
- Detector Tools (Graphing and Road Profiles)
- AARs in Event Query Tool (EQT)
- Screen and Cordon Lines in Route Analysis
- Reporting Tutorials

RITIS

PROBE DATA ANALYTICS SUITE

u s e r g r o u p

# Work in Progress | Performance Summary Reports

- **We want to help agencies** *easily* develop consistent, professional reports for telling a "transportation performance story" in a simple, concise and visually persuasive way, so that they can:
  - **gain** actionable insight;
  - **share** with a wide range of audiences to:
    -- inform
    -- help make a decision
    -- meet a requirement
    -- promote an action

# Example Reporting Types we're addressing

- After-action reviews
- Before & After (project evaluation)
  - Congestion/travel trends
  - Corridor performance
- Holiday travel guides
- MAP-21 reporting*
  - Monthly / Quarterly Summary Reports
  - "Top 10" (bottlenecks, accident locations, etc.)
- Work zone impacts

In the works

* - the CATT Lab's MAP-21 tools already include PM3 reporting features

# Some available product

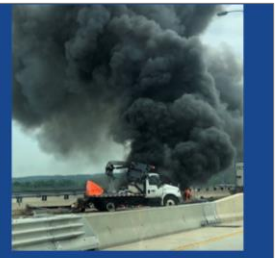
# After-action Review

MATOC
Metropolitan Area Transportation Operations Coordination

## After-Action Review
## Woodrow Wilson Bridge Collision

I-95/495 NB (Outer Loop) • Thru lanes on Woodrow Wilson Bridge
Prince Georges County, MD

**Performance Summary Report**



### Event Summary

On Wednesday, June 20, 2018 at about 10:45am, a tractor trailer hit several construction vehicles on the Woodrow Wilson Bridge, leading to a closure of the Capital Beltway (primarily NB). The tractor-trailer and three other vehicles caught fire. There was 1 fatality, 7 treated & released, 1 hospitalized. A work crew trapped below the bridge had to be rescued.

### Some Key Aspects

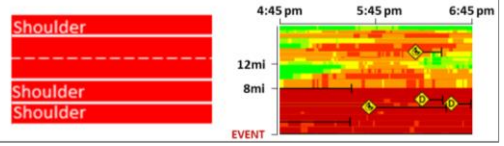
Participating agencies/personnel
**17/100+**
Worst backups from event
NB 12 miles (into VA)
SB 4 miles (into MD)

### Event Location


### Event Timeline (record began 10:51:58 am | ended 10:31:10 pm)


### Lane Status / Backups

Due to the extensive recovery & cleanup operations required (hampered by late afternoon/ early evening rain), **the NB Outer Loop thru lanes and shoulders were closed for most of the day, from 11:03 am to 9:23 pm (10h 20m).** Backups of 8 miles were common, increasing at times to 12 miles. There were numerous minor secondary incidents in the queued traffic.




## Event Regional Impacts

Closure of the Outer Loop on the Woodrow Wilson bridge *severely impacted* area Interstates within this triangle, an example of which can be seen by this aerial photo of I-495 approaching the bridge. Understanding the various costs to travelers (time, money) provides the necessary technical evaluation critical to informing decision-makers and better addressing similar events in the future.


### User Delay Cost Comparisons

| Wed., June 13th 2018 | Wed., June 20th 2018 | Wed., June 27th 2018 |
|---|---|---|
| Delay Cost $1,359,734 | **Delay Cost $3,153,861** | Delay Cost $933,589 |
| Hours of Delay 55,159 person-hrs. 45,028 vehicle-hrs. | **Hours of Delay 127,939 person-hrs. 104,440 vehicle-hrs.** | Hours of Delay 37,872 person-hrs. 30,916 vehicle-hrs. |
| Delay per VMT 0.73 min/mi | **Delay per VMT 1.75 min/mi** | Delay per VMT 0.50 min/mi |

A **User Delay Cost** analysis was conducted to ascertain the monetary, and other effects the closure had on these roadways, compared a Wednesday in June before and after the event.

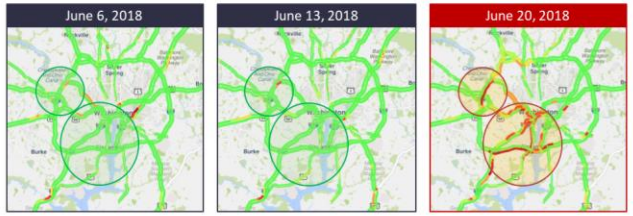
Results show ***substantial increases*** in delay cost, hours of delay and delay per Vehicle Miles Traveled during the event compared to other normal days.

**Delay cost** increased between **$1.79M and $2.2M (232% - 338%), hours of delay** between **82,911 and 90,067 h (232% - 338%)** and **delay per VMT** between **1.02 and 1.25 mi (240% - 350%)** due to the severity and lengthy clearance time of the event.

### National Capital Region | WWB Event Extended Impacts (8:00 PM EST)

Two previous Wednesdays show minimal traffic in the NCR region at 8:00 PM, but on 6/20, traffic backups remained substantial, even after almost 10h after the accident.

The most congested corridors were I-95 NB to the WWB, I-495 and I-395 in the Washington, DC area.




## After Action Review Key Takeaways

### What worked well?

Overall the response was a success given the complicated nature of the incident; there were no single points of failure.

### What needs improvement?

Some DOT response trucks could have been delayed in responding to the incident given they are not classified as emergency response vehicles.

Delays in opening retractable barriers to bleed off queued traffic lead to additional delays in opening lanes.

Queued motorists upstream from the incident sometimes self-diverted, often reversing down on-ramps which created additional hazards; other factors to consider are knowledge of alternate routes and the influence of personal navigation devices.

There were numerous minor secondary incidents in queued traffic, including an increase in incidents on roadways that served as alternate routes.

Local transit bus operations in the area were severely impacted (but rail services served as a good alternate).

### Recommendations

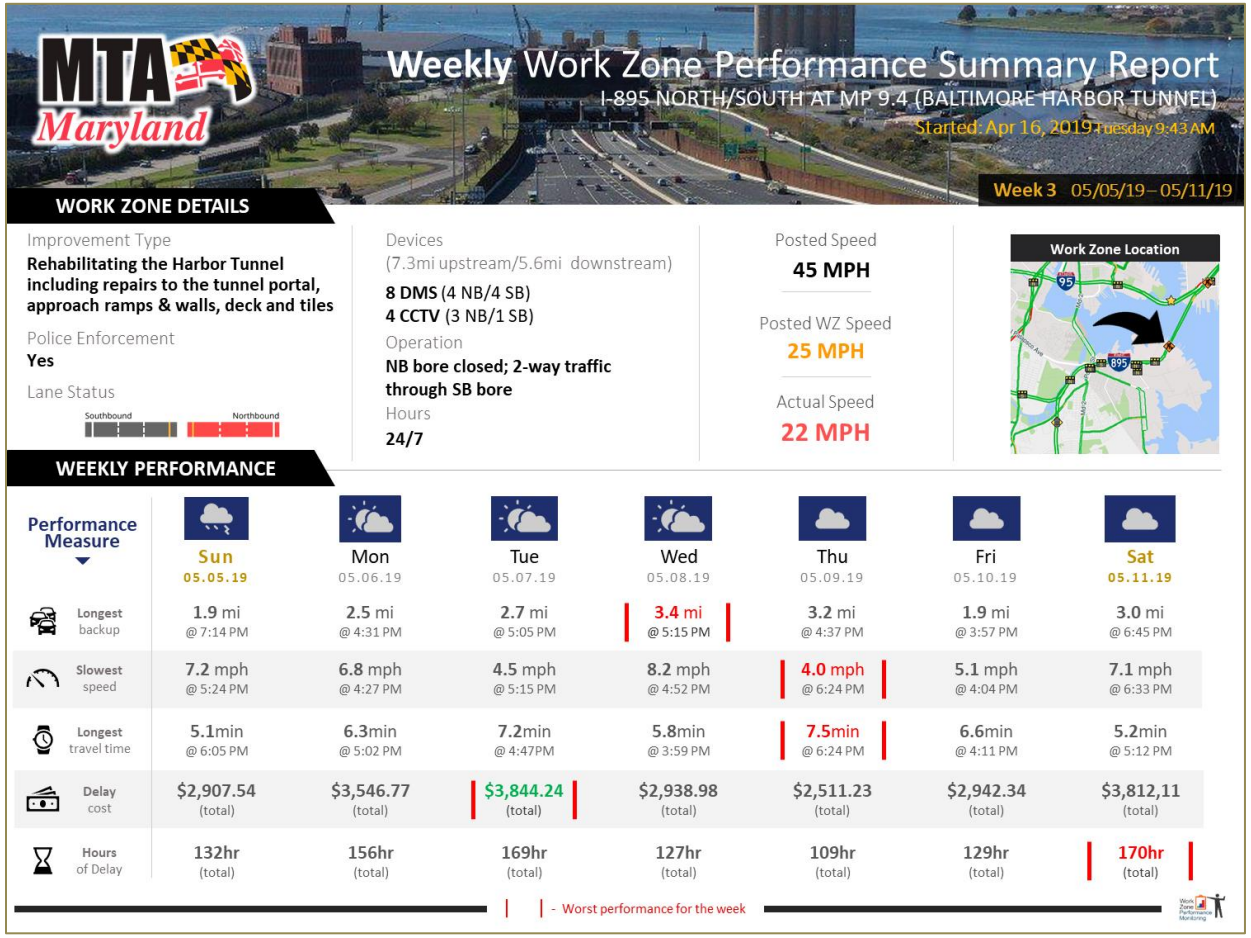
- Examine Unified Command & Command Post locations as they related to the WWB
- Regularly train responders on how to operate and open the retractable barriers to address staff turnover (and get the barrier(s) back into a state of good repair)
- Explore opportunities to conduct bridge related training for DOTs and responders
- Expand TMARS access to select field users like Incident Management Coordinators
- Consider periodic reporting via conference calls for major incidents
- Update and share Maryland and Virginia FITM plans; including updates in RITIS
- Explore conducting a broader multi-jurisdiction/multi-discipline AAR for this incident

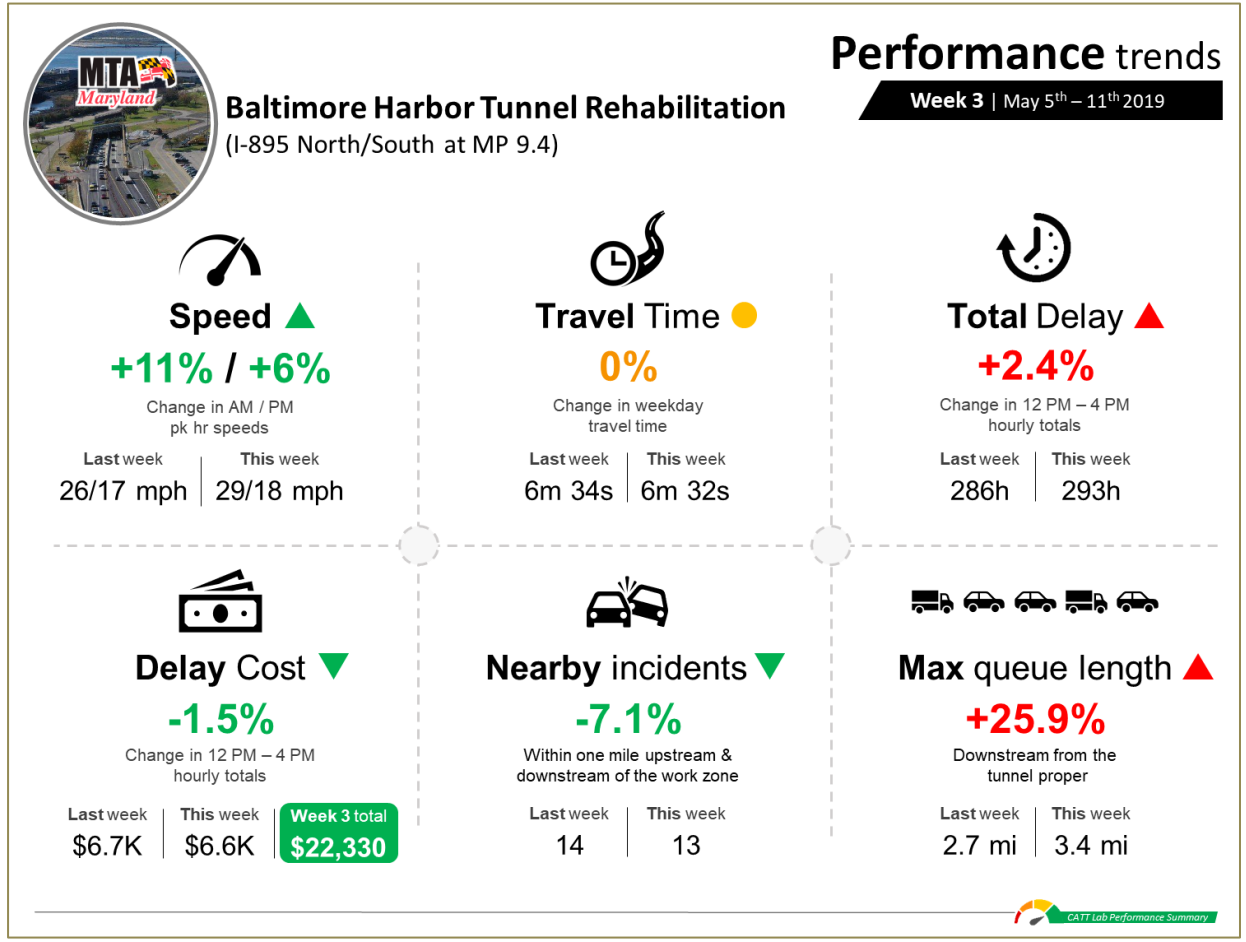
### Next Steps

Develop an on-going and comprehensive training program for transportation agencies – DOTs, transit, etc. – law enforcement, fire, safety, contractors and others that focuses on high-profile facilities and catastrophic events. Investigate **Virtual Incident Management Training** to supplement and enhance traditional training methods.

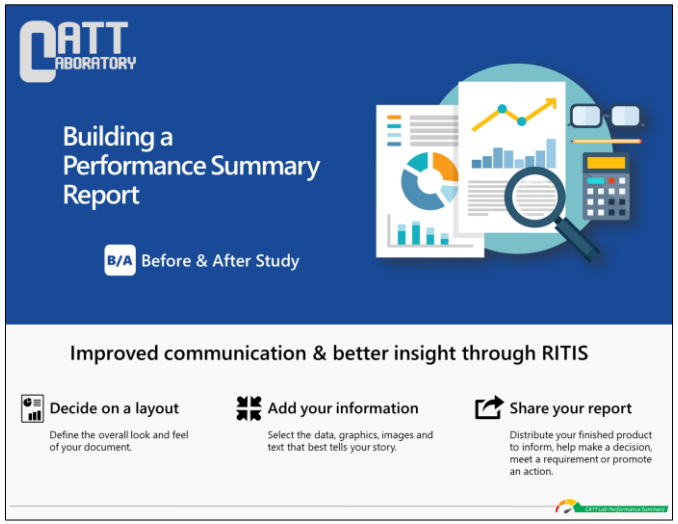
# Some available product

## Work Zones

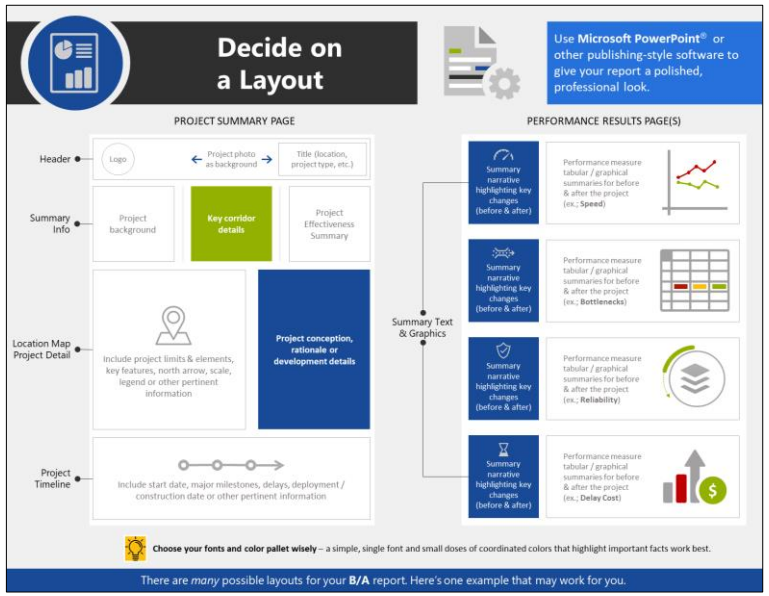


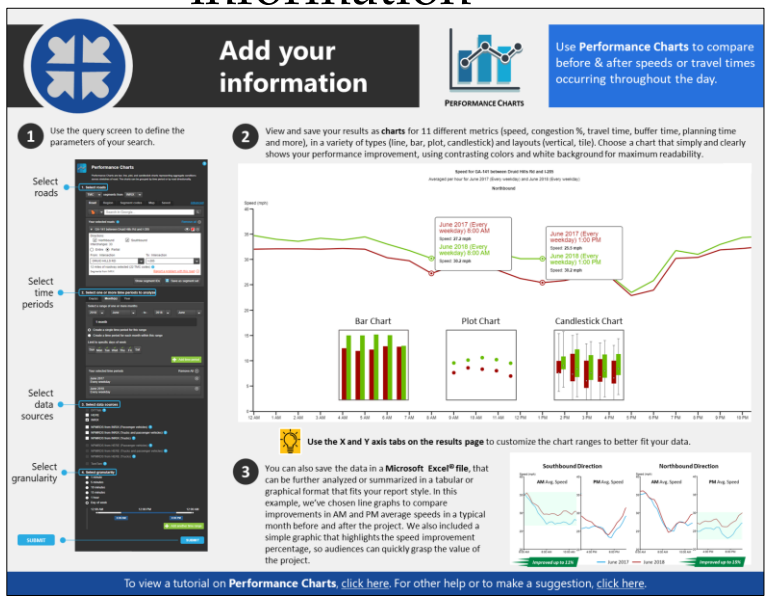
# How-to Guide




## 1 Decide on a Layout

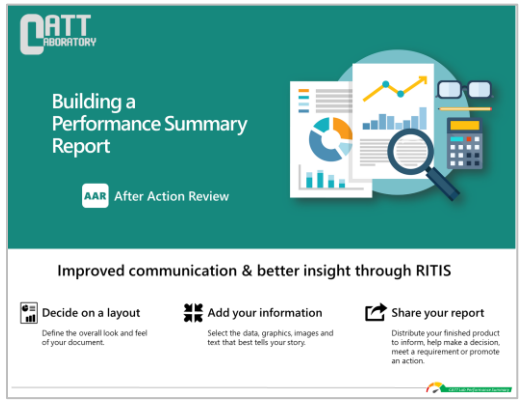



## 2 Add your information




## 3 Share your report

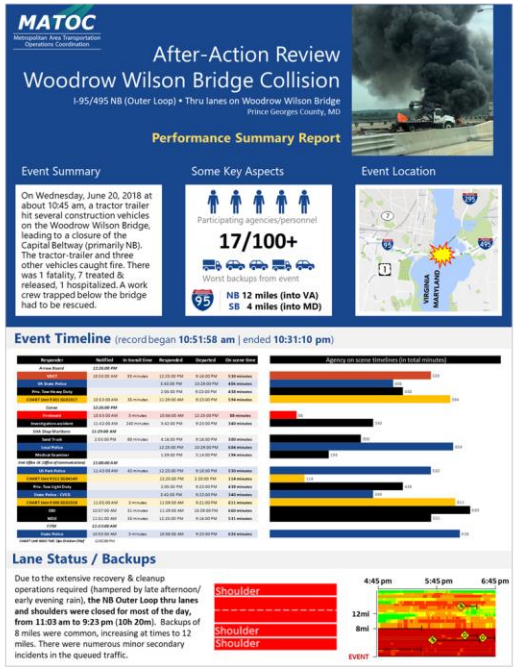
# How-to Guide (alternate version)




## event summary page layout

Use this layout as a guide for developing an overview of the event itself that provides important facts and context.

Use this area to include things like your agency's logo, event location, date & time, field images, a summary of event, some key aspects and a location map.




Use this area to include things like summary narrative, graphs, tables, enhanced screenshots and other visualizations from RITIS Analytics that help convey your information in a simple, concise and informative way.

There are *many* possible layouts for your **AAR** report. Here's one example that may work for you.

## event summary page info

EVENT QUERY TOOL | INCIDENT TIMELINE

Here's how we put together the info for the summary page using the Event Query Tool , Incident Timeline and related reports. Queries and results are shown for the WWB collision used in the report.

### 1 Accessing specific events

Log into your RITIS account, then on the home screen, click the Data Archive icon; the Event Query Tool query screen will open. Using the check boxes:

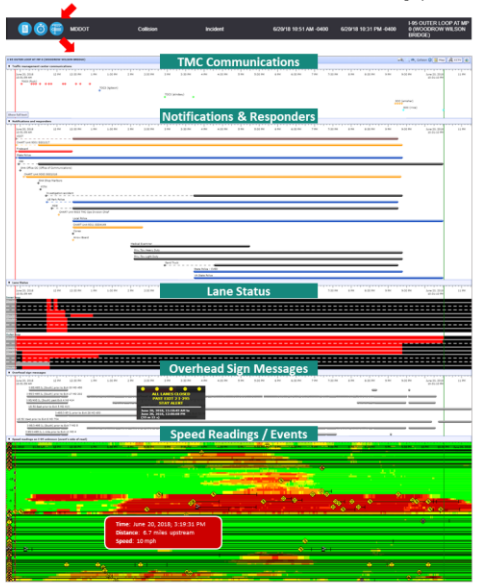
- First select your agency; **MDOT CHART (Maryland DOT)**
- Then event type (individual or by group, such as standardized types, EDC types, etc.); **MDOT CHART Types**
- Next, type in your road name(s) and select Location (State/County); **I-495, Prince Georges, Maryland**
- Then select your time period (date, time); **From: 06/20/2018 @ 00:00** **To: 06/20/2018 @ 23:59**
- When you're satisfied with the inputs, click on the Submit Query button:

SUBMIT QUERY

- You'll then be taken to the EQT results page, showing a table of events within your search criteria. You can also view results as a bar graph or on a map by clicking on the appropriate icons.

### 2 Viewing your query results

Scroll down the events table to locate the incident you're looking for, then click on the Incident Timeline icon to view the Incident Timeline interactive graphic.




### 3 Using the query results

You can use the Incident Timeline graphic as is – the vertical integration of multiple event data for the duration of the incident makes for a compelling, informative visual. Simply click on the "Save Image" icon

Another option is to use select pieces of information to build your own summary:

- For the report's "Event Timeline", we first added some basic information from this Event Timeline (record begin and end times in the header).
- Next, we opened the **Responders** table in the EQT query results page,

saved it as an Excel file, then applied a coordinated color palette, shading and highlights. We then created simple horizontal bar chart, using data in the "On-scene Time" column, and added a header.

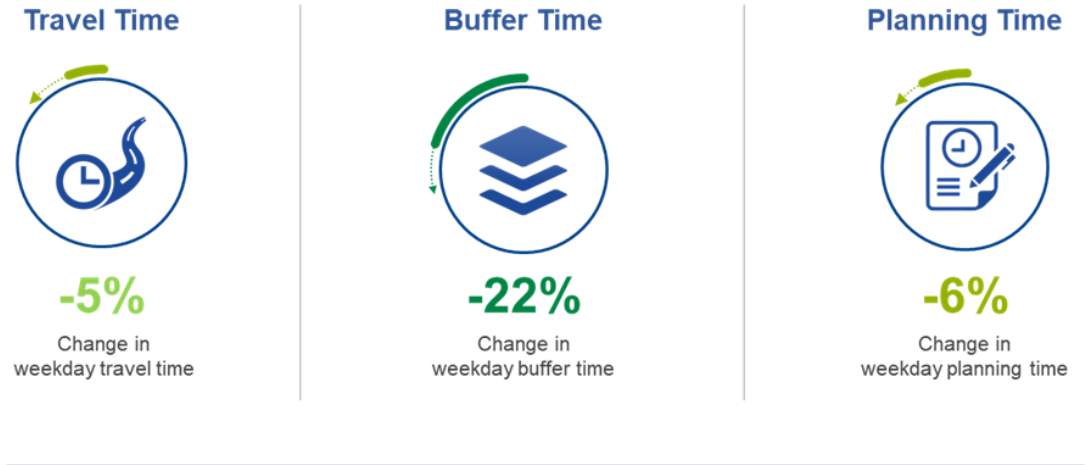
- For "Lane Status / Backups", we took the Timeline graphic and clipped relevant areas of the Lane Status and Speed Readings/Events results, then added some narrative and contextual elements (e.g.; mile and time indicators on the speed readings graphic to highlight the extent of backups) to help tell the story.

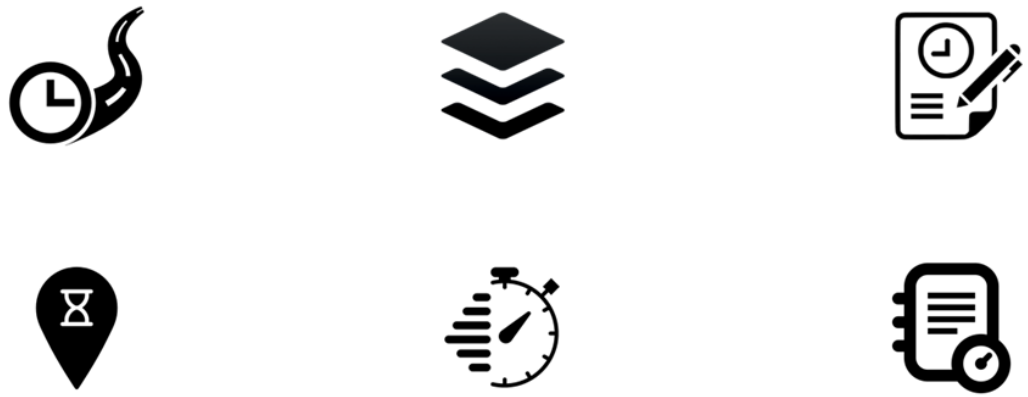
To access RITIS video tutorials for EQT/Event Timeline, click here | To contact RITIS support, click here

# DesignSheets

## Reliability Graphics

- Completely editable for your use
- To change the reliability indicator (amount or directional arrow), simply click on the shape, then drag one of the handles (orange dots)
- To show decreased reliability (increases in these measures), set the left handle to the top, and drag the other handle clockwise. Click on the shape or text to change color scheme to reflect reliability decrease (shades of orange or red)
- Select a related icon for the center of the indicator, and recolor to your report's color palette



CATT Lab Performance Summary

# Next Steps

## Short Term

- Engage the **Performance Measure Summary Report Focus Group** for feedback and further refinement of the reports and guides
- Make the final product available to you
- Start addressing other reporting types:
  - Which report types are most important to you?
  - What have we missed?

## Longer Term

- Develop and deploy a complete library or report guides and examples
- Build report auto-generating features into the RITIS tools, by report type
  - Will require additional funding

# Thanks!

Please contact me if you're interested in participating in the
**Performance Measure Summary Report Focus Group**

John Allen, Outreach & Education | jallen35@umd.edu | 215.666.3057

## Need Help now?

If you have a report that needs guidance, input or hands-on work, let us know and we'll be happy to help!

# Poll Question #1 – Reporting Types

1 Which of these reporting types are most important/ useful to you? *(check all that apply)*

___ **Congestion/travel trends**

___ **Corridor performance**

___ **Monthly / Quarterly Summary Reports**

___ **“Top 10” (bottlenecks, accident locations, etc.)**

___ **Other (please note in the chat box)**

# Poll Question #2 – Working Groups

2

Which topics would you be interested in hearing more about in a separate webinar (and a more detailed discussion)?

___ User Delay Cost Improvements & Standardization

___ Trips Analytics Functionality (Screen and Cordon Lines or other features/needs)

___ COVID-19 Impacts Analytics Platform

___ Performance Report Tutorials, Layout, and Automation

# Backlog Prioritization & Funding

- There have been many requests for features and functionality over the years for which annual O&M funding simply can't support.
- These requests are digitized, ticketed electronically, and placed on our scrum-room walls for future work should funding ever become available
- There are hundreds of requests!

# Backlog Prioritization & Funding

- Examples of some of these requests include things like:
  - Mobile CCTV Cameras on RITIS Map and Incident Timelines
  - Add media (docs, links, video, images, etc.) to timelines
  - Advanced Road Selection Tools for XD segments
  - Scheduled Reports
  - HERE Subsegment Integration
  - Automatic creation of Performance Report Fliers and Pamphlets
  - MAP-21 PM-related analysis of project alternatives and sensitivity analysis
  - Automated Creation of Printable Fliers/Reports
  - XD UDC
  - Etc.
- Some of these already have UI designs complete.  Many do not, and require additional discussion.

# Backlog Prioritization & Funding

- Agencies have prioritized and directly funded their own list of enhancements, including:
  - Florida---Detector/Sensor Analytics
  - Georgia—HERE Subsegment Analysis and Integration
  - Maryland ---Dashboards, Transit, VWS, Trips Analytics, Signal Analytics,
  - Michigan --- User Delay Cost, XD Integration, and more
  - Pennsylvania --- XD Arterial PMs
  - FHWA ---  NPMRDS Analytics, Coverage Maps, select PMs, Event Query Tool, Causes of Congestion
  - I-95 CC – Work Zone Seed Funding & WAZE Integration
  - Homeland Security --- RITIS Meeting

# Backlog Prioritization & Funding

- Some agencies have prioritized and directly funded their own list of enhancements, including:
  - Florida---Detector/Sensor Analytics
  - Maryland ---Dashboards, Transit, VWS, Trips Analytics, Signal Analytics
  - Michigan --- User Delay Cost and more
  - Pennsylvania --- XD Arterial PMs
  - FHWA --- NPMRDS Analytics, Coverage Maps, select PMs, Event Query Tool
  - I-95 CC – Work Zone Seed Funding
  - Homeland Security --- RITIS Meeting
- **At the next user-group meeting, we will dedicate a significant amount of time to:**
  - **Describing each item (What it is, how many people have requested it, why it's deemed important)**
  - **Estimated Costs to build out (if known)**
  - **Facilitating a voting/prioritization of features**
- We will then distribute that list to the User Group for internal discussions. Some agencies may wish to fund certain enhancements directly

# Poll Question #3 – New Features/Improvements

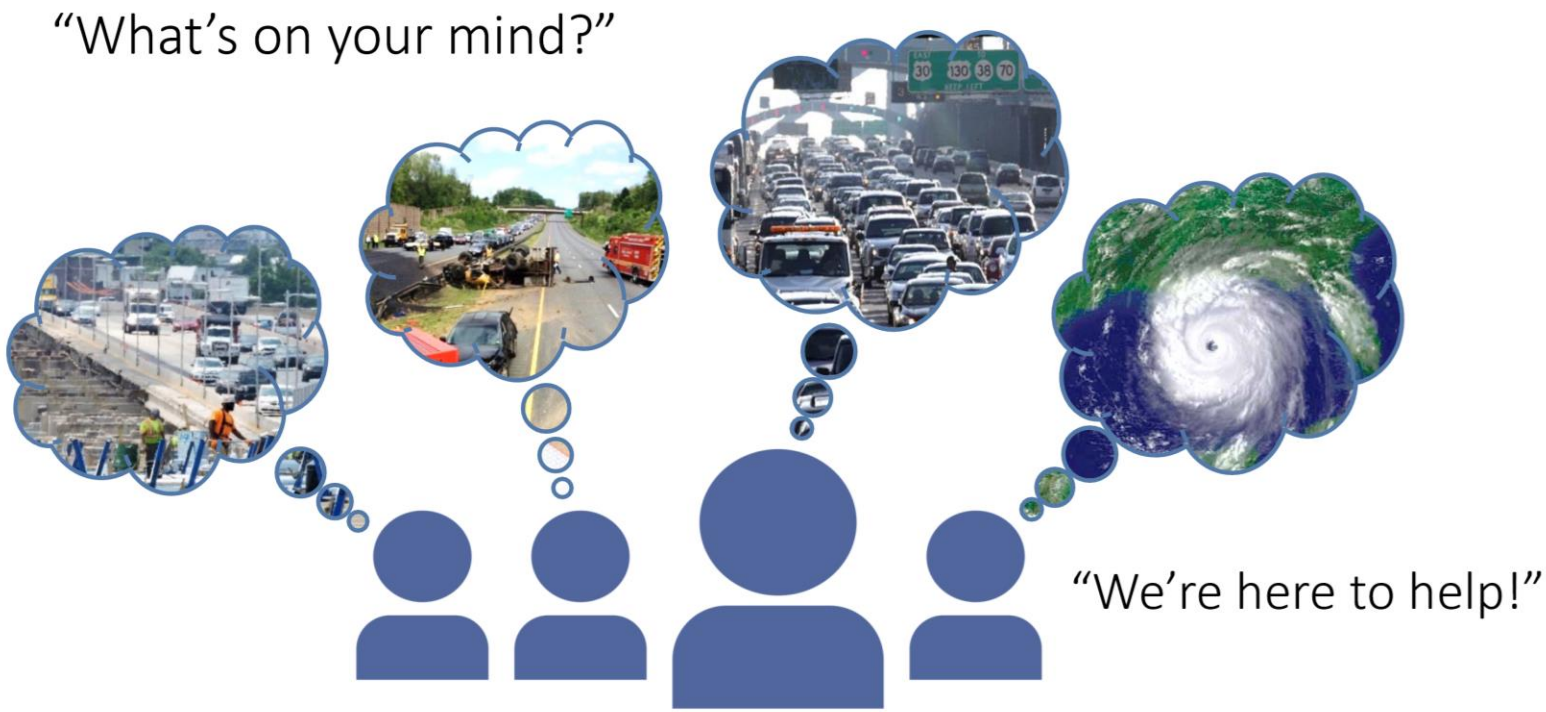
3

Please tell us about your feature requests. They can be large or small. We can reach out to you for additional points of clarification.

___ **(type in your request for the development team)**

# Your Input is Needed!

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



# Agency Input Session


"What's on your mind?"

# Wrap Up

Jesse Buerk, Delaware Valley Regional Planning Commission

User Group Co-chair

# Questions?

Please contact:

**I-95 Corridor Coalition (soon to be the East Transportation Coalition)** – Denise Markow 301.789.9088 or dmarkow@i95coalition.org

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

**RITIS Technical Support –** support@ritis.org

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

**Logistics** – Joanna Reagle 610.228.0760 or jreagle@kmjinc.com

# thank you!

CATT LABORATORY