



PROBE DATA ANALYTICS SUITE

u s e r g r o u p

Web Meeting – October 25, 2018



Webinar & Audio Information

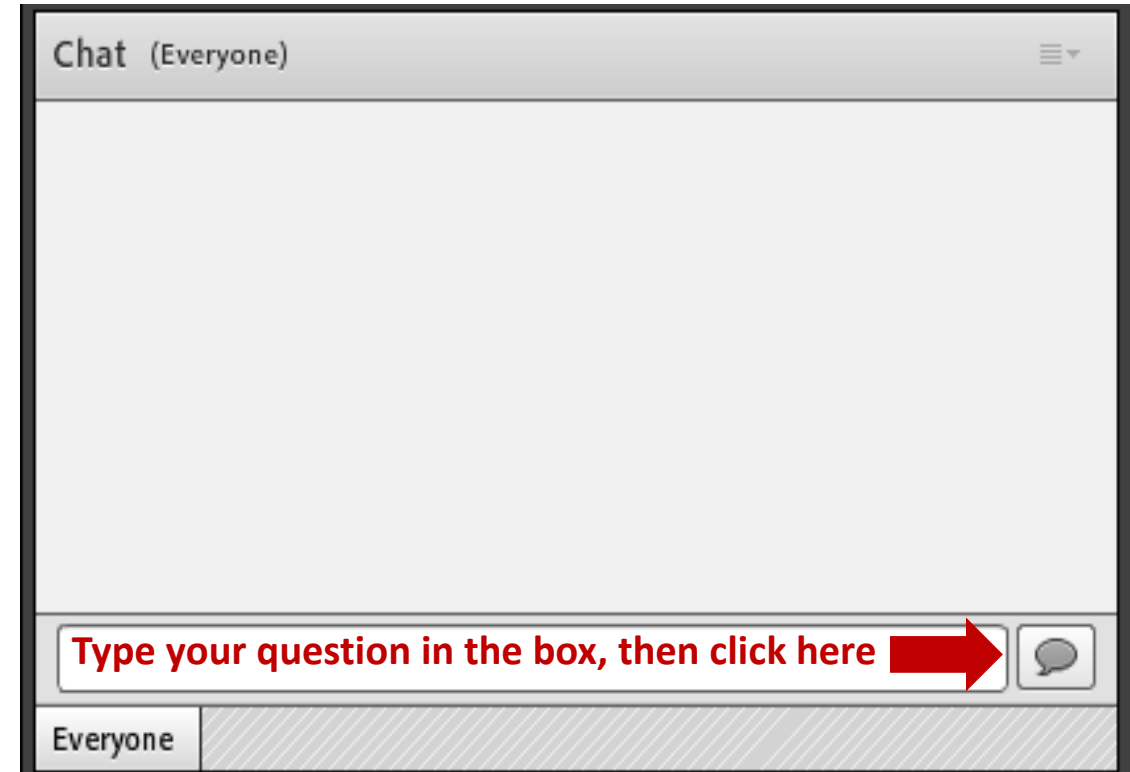
- The call-in phone number is: **x-xxx-xxxx & enter xxxxxxxx# at the prompt**
- **Participants will be in “Listen Only” mode throughout the webinar**
- Please press *0 to speak to an operator for questions regarding audio
- Please call Wayne Gibson at xxx-xxx-xxxx for difficulties with the web or audio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



Asking Questions



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



Welcome



Kelly Wells, PE, North Carolina DOT
User Group Co-chair

Participating Agencies

Agency			
Alexandria Office of Emergency Management	Fairfax County	Massachusetts DOT	Pennsylvania DOT
Anne Arundel County	FEMA	MATOC	Pennsylvania Turnpike Commission
Atlanta Regional Commission	FHWA	MetroPlan Orlando	Public Works
Baltimore Metropolitan Council	Florida International University	Miami-Dade TPO	Queen Anne's County Public Works
CATT Lab	Florida DOT	Montgomery County OEMHS	Rhode Island DOT
Chittenden County RPC	FMCSA	Montgomery County Planning Commission	Richmond Regional Planning District Commission
City of Charlotte (NC)	Georgia DOT	MWCOG	Rockingham Planning Commission
City of College Park, Maryland. DPW	Greater Hickory (NC) MPO	Naugatuck Valley Council of Governments	SJTPO
City of Frederick	Howard County Police Department	New Hampshire DOT	South Carolina DOT
City of Philadelphia	I-95 Corridor Coalition	New Jersey DOT	Southwestern Pennsylvania Commission
Cobb County – Georgia DOT	Iteris	New York State DOT	Tennessee DOT
CORE MPO	Maine DOT	New York City DOT	Transportation Department DCHCMPO
Connecticut Metropolitan Council of Governments	Manatee Department of Public Works	NJTPA	University of Maryland / CATT Lab
DC Homeland Security and Emergency Management Agency	Maricopa Association of Governments	North Carolina DOT	University of Virginia
District DOT	Maryland DOT – SHA	Northern Middlesex Council of Governments	Virginia DOT
DVRPC	Maryland Transportation Authority	Ohio DOT	

Welcome

Welcome / Introductions

Kelly Wells, NCDOT & User Group Co-chair



'Terrible Traffic Tuesday' an evaluation of changes in congestion after Labor Day

Taran Hutchinson, MATOC



Delving into Winter Weather Performance Measures

John MacAdam, Ohio DOT



Multi-agency, Multi-state response to the June 20 Woodrow Wilson Bridge Collision: An After Action Analysis of operations response

Taran Hutchinson, MATOC

RITIS and PDA Suite Features

- New Features
- Development Roadmap

Michael Pack, UMD CATT Laboratory

Your Input is Needed!

- New Tool Working Groups forming
- Agency Input Session – questions, comments.....

All

Wrap Up

Denise Markow, PE, I-95 Corridor Coalition

Introductions



Denise Markow, PE
I-95 Corridor Coalition
Director



Michael Pack
UMD CATT Lab
Director

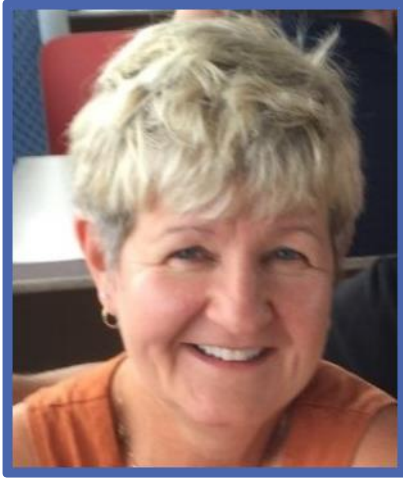


Taran Hutchinson
MATOC
Facilitator



John MacAdam, PE
Ohio DOT
Administrator, Office of
Traffic Management

Coalition Update



Denise Markow, PE, I-95 Corridor Coalition
TSMO Director

Coalition Update – Recent & Upcoming Events

RECENT

- ✓ RITIS & PDA Suite User Group Web Meeting - July 19, 2018
- ✓ VTM Steering Committee Web Meeting – Aug 16, 2018
- ✓ Building TSMO Performance Measures National Webinar – Aug 30, 2018
- ✓ Potomac Highway Operations Peer Exchange – Oct 3, 2018



UPCOMING

- ✓ Connected Vehicle Webinar: Member State Roadmaps & CMM – Nov 14, 2018
- ✓ Freight Fluidity National Workshop (Federal agencies by invitation) USDOT – Nov 15, 2018
- ✓ Delaware Valley Regional Highway Operations Peer Exchange – Nov 29, 2018
- ✓ Private-sector Origin-Destination Data TSMO Applications Webinar – Dec 2018



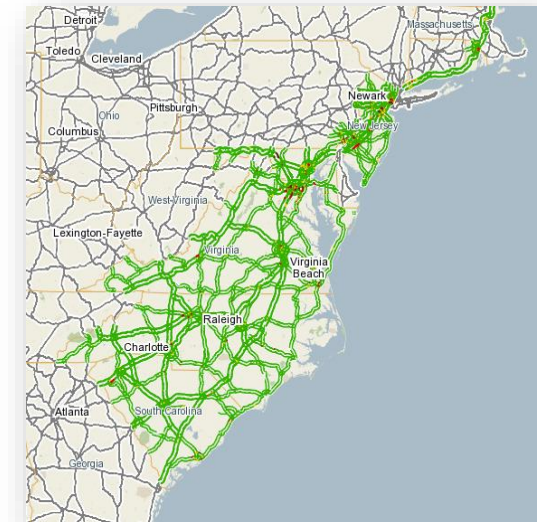
Marketplace - Product Updates being released in November



What is coming!

- ❖ *Pricing Structure Updates*
- ❖ *Ancillary Probe Data Product Offerings*
- ❖ *New Products*

- *The VPP works with a “traffic probe data marketplace” first created in 2008.*
- *Three highly qualified vendors (were selected by a team of agency members) to provide data to agencies at a cost that was negotiated by the Corridor.*
- *All data, regardless of vendor, is available to each of the participating agencies providing a truly shared effort.*



The Marketplace is overseen by the I-95 Corridor Coalition in collaboration with the University of Maryland

In the spotlight...

'Terrible Traffic Tuesday' an evaluation of changes in congestion after Labor Day


Taran Hutchinson
Metropolitan Area Transportation Operations Coordination
Facilitator




Major Travel Holidays

- New Years Day
- Martin Luther King, Jr. Birthday
- Washington's Birthday
- **Memorial Day**
 - Last Monday in May
 - Beginning of summer travel season
- **Independence Day**
 - July 4 (day varies)
 - "The holiday getaway will be bad"




- **Labor Day** 
 - First Monday in September
 - End of summer travel season
 - AAA Mid Atlantic request
- Columbus Day
- Veterans Day
- **Thanksgiving Day**
 - Last Thursday in November
- Christmas Day

User Delay Cost Analysis: Independence Day Holiday Travel (2012)

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Daily Totals					
6/03/12	2,361h	1,125h	384h	123h	94h	221h	493h	1,051h	923h	1,209h	1,825h	2,401h	3,856h	5,996h	5,742h	6,262h	5,520h	4,347h	2,807h	2,201h	1,506h	1,823h	1,710h	1,117h	55,300h					
6/04/12	 <p>June 2012</p>						7,421h	17,330h	15,791h	6,897h	3,740h	3,153h	3,146h	3,628h	5,485h	10,858h	17,160h	24,234h	13,268h	2,707h	1,091h	1,911h	2,962h	2,157h		144,408h				
6/05/12							6,839h	15,119h	15,351h	10,764h	6,535h	4,164h	3,727h	3,905h	5,052h	9,129h	17,839h	22,345h	12,034h	3,130h	1,650h	2,432h	749h	1,358h					143,940h	
6/06/12							8,694h	20,247h	22,312h	11,970h	5,238h	4,516h	4,568h	5,091h	6,988h	13,296h	22,466h	29,287h	12,731h	2,641h	1,091h	2,041h	709h	1,358h					191,558h	
6/07/12							7,839h	21,143h	21,570h	11,054h	5,858h	7,051h	7,779h	6,899h	8,682h	16,269h	28,467h	35,084h	22,221h	2,709h	1,091h	1,911h	2,962h	2,157h					214,921h	
6/08/12							5,487h	11,345h	10,791h	6,801h	4,768h	6,225h	5,837h	8,849h	14,752h	25,422h	34,562h	33,715h	17,611h	4,732h	1,561h	1,717h	2,038h	1,374h					199,735h	
6/09/12							496h	1,108h	1,862h	3,568h	5,223h	6,022h	7,804h	10,014h	8,939h	7,979h	7,317h	6,203h	3,971h	1,522h	1,162h	1,290h	615h	450h					76,746h	
6/10/12							320h	490h	728h	980h	1,804h	3,237h	3,543h	4,090h	4,808h	7,006h	8,183h	4,549h	3,804h	1,852h	1,107h	1,457h	675h	473h					50,020h	
6/11/12							8,266h	17,569h	18,451h	8,796h	5,733h	4,317h	4,332h	4,401h	5,863h	9,323h	16,904h	20,005h	10,116h	2,009h	1,412h	1,806h	983h	535h					142,621h	
6/12/12							9,295h	23,407h	22,210h	10,701h	4,444h	4,707h	4,822h	6,292h	10,833h	18,915h	26,950h	29,274h	14,554h	2,577h	1,117h	1,246h	1,200h	982h					195,085h	
6/13/12							6,269h	16,827h	16,099h	7,345h	4,533h	3,930h	4,744h	4,856h	5,826h	11,815h	21,727h	29,553h	17,451h	3,451h	1,117h	1,246h	1,200h	982h					165,919h	
6/14/12	6,173h	14,077h	13,467h	7,388h	5,797h	6,258h	6,826h	7,404h	12,107h	19,732h	29,022h	35,830h	21,421h	2,577h	1,117h	1,246h	1,200h	982h					201,890h							
6/15/12	6,567h	12,653h	11,949h	7,722h	5,628h	6,552h	9,081h	13,567h	19,852h	30,962h	39,483h	37,383h	19,668h	8,016h	2,839h	1,750h	1,832h	1,638h					239,302h							
6/16/12	719h	685h	1,040h	1,846h	4,004h	8,637h	9,935h	8,991h	10,720h	10,748h	8,237h	6,985h	4,846h	2,603h	1,260h	1,281h	706h	429h					85,859h							
6/17/12	350h	508h	691h	907h	1,448h	2,676h	5,248h	6,989h	8,710h	10,906h	9,004h	5,962h	3,206h	1,577h	1,402h	1,970h	1,692h	848h					65,123h							
6/18/12	8,704h	16,878h	20,322h	11,404h	6,412h	4,236h	3,542h	3,199h	3,745h	7,079h	11,223h	14,543h	6,800h	1,880h	1,007h	1,199h	767h	368h					125,166h							
6/19/12	236h	134h	106h	79h	107h	588h	6,594h	13,463h	12,622h	6,570h	4,105h	3,595h	4,102h	4,122h	5,433h	11,600h	23,064h	26,824h	14,517h	3,121h	1,194h	1,305h	693h	424h	144,412h					
6/20/12	202h	119h	106h	81h	129h	666h	6,128h	13,486h	13,712h	9,220h	6,784h	6,526h	7,371h	7,131h	9,892h	17,383h	26,392h	29,904h	17,234h	3,803h	1,096h	1,764h	1,357h	619h	181,134h					
6/21/12	232h	108h	75h	77h	108h	659h	5,438h	13,554h	14,444h	8,151h	5,963h	7,376h	7,805h	8,101h	10,768h	19,648h	27,688h	31,402h	16,567h	3,803h	1,096h	1,764h	1,357h	619h	187,316h					
6/22/12	354h	143h	88h	98h	123h	774h	3,839h	5,967h	5,150h	3,489h	5,291h	8,612h	8,087h	9,545h	16,324h	28,645h	33,230h	31,520h	16,404h	4,676h	3,591h	1,981h	1,134h	931h	190,217h					
6/23/12	735h	362h	207h	138h	121h	400h	874h	1,083h	1,338h	2,519h	4,532h	7,124h	9,361h	10,252h	10,446h	10,285h	8,620h	7,718h	4,910h	2,046h	1,131h	1,367h	961h	547h	87,990h					
6/24/12	277h	163h	100h	83h	88h	217h	320h	440h	681h	955h	1,395h	2,383h	3,604h	4,394h	6,015h	5,189h	5,057h	6,455h	3,676h	2,323h	1,045h	1,043h	876h	796h	47,593h					
6/25/12	200h	107h	73h	122h	123h	547h	4,803h	10,340h	10,211h	3,352h	3,644h	5,179h	4,784h	6,840h	9,852h	16,367h	19,787h	11,411h	2,557h	1,060h	1,248h	1,571h	999h		120,182h					
6/26/12	295h	126h	98h	85h	127h	605h	8,028h	18,854h	21,315h	10,709h	7,757h	6,518h	6,176h	12,174h	15,991h	23,784h	30,023h	17,645h	5,123h	1,265h	1,204h	1,273h	1,068h		198,190h					
6/27/12	271h	129h	78h	83h	96h	553h	7,032h	16,261h	16,850h	9,636h	5,381h	5,710h	7,264h	9,407h	10,131h	15,547h	24,040h	29,729h	15,557h	3,509h	1,265h	1,204h	1,273h	1,068h	182,756h					
6/28/12	323h	115h	101h	109h	139h	549h	6,244h	14,821h	20,507h	12,208h	7,449h	7,036h	8,804h	9,997h	13,390h	21,216h	30,934h	32,839h	18,604h	3,077h	1,632h	1,496h	1,581h	899h	216,598h					
6/29/12	475h	123h	89h	90h	195h	468h	3,340h	7,899h	9,076h	6,707h	6,660h	8,177h	9,656h	14,612h	21,448h	30,695h	33,533h	27,917h	12,056h	3,077h	1,632h	1,496h	1,581h	899h	201,712h					
6/30/12	68h	38h	23h 37m	16h 10m	16h 38m	47h	109h	213h	1,117h	2,019h	3,945h	9,075h	12,874h	13,485h	13,559h	13,236h	11,563h	7,883h	4,810h	2,996h	1,940h	1,712h	914h	533h	102,004h					
7/01/12	242h	147h	101h	76h	75h	208h	354h	490h	742h	1,405h	1,484h	2,480h	3,045h	4,630h	4,660h	4,488h	3,347h	3,040h	2,869h	2,213h	1,816h	1,444h	613h	438h	39,426h					
7/02/12	188h	88h	75h	88h	96h	529h	3,285h	7,227h	7,080h	4,838h	3,448h	3,622h	4,004h	4,496h	5,426h	9,740h	15,540h	15,850h	12,263h	2,539h	1,212h	1,052h	657h	270h	98,550h					
7/03/12	126h	87h	91h	62h	52h	428h	6,477h	6,477h	6,069h	5,990h	3,799h	2,867h	3,049h	3,667h	7,883h	15,883h	21,762h	21,865h	5,462h	1,349h	1,231h	1,064h	774h	263h	115,777h					
7/04/12	<div>The last time July 4th fell on a Wednesday was 2012</div>						1,009h	1,517h	1,334h	1,206h	1,933h	1,937h	1,862h	1,830h	2,216h	2,576h	2,656h	1,760h	1,398h	1,068h	1,056h	1,116h	1,504h	559h		29,609h				
7/05/12							147h	87h	78h	96h	321h	1,619h	3,733h	4,209h	3,483h	2,935h	4,251h	4,134h	3,867h	5,062h	8,976h	13,728h	15,880h	8,107h	2,152h	1,189h	1,384h	1,509h	1,309h	88,113h
7/06/12							520h	129h	73h	114h	961h	1,921h	2,875h	3,981h	4,901h	5,406h	4,406h	5,373h	7,837h	10,802h	14,408h	17,357h	14,262h	6,107h	2,444h	1,333h	1,088h	1,496h	542h	109,075h
7/07/12							935h	353h	243h	177h	185h	356h	423h	568h	1,082h	2,193h	2,217h	3,033h	4,134h	5,158h	6,767h	6,458h	3,710h	2,763h	1,722h	1,291h	1,044h	1,138h	617h	591h

Total Vehicle-hours of Delay User Delay Cost Analysis: Independence Day Holiday Travel (2018)

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Daily Totals
6/03/18	257h	144h	78h	50h	54h	82h	119h	238h	629h	737h	1,901h	4,324h	9,446h	12,042h	14,820h	13,926h	11,193h	7,254h	6,046h	3,231h	1,888h	1,440h	665h	286h	90,664h
6/04/18							7,006h	16,491h	16,910h	8,475h	4,316h	4,389h	3,847h	3,951h	6,549h	15,503h	25,756h	30,601h	20,568h	3,836h	1,239h	1,117h	1,094h	627h	173,442h
6/05/18							10,167h	23,889h	27,152h	17,168h	9,067h	5,194h	4,198h	5,434h	8,781h	17,739h	29,649h	36,823h	23,714h	1,751h	751h	1,117h	1,094h	627h	230,153h
6/06/18							9,402h	22,818h	26,458h	15,082h	7,344h	6,079h	5,424h	4,839h	7,610h	19,586h	32,159h	40,712h	24,773h	1,223M	1,223M	1,117h	1,094h	627h	235,222h
6/07/18							6,066h	15,998h	15,567h	8,092h	5,534h	5,336h	5,333h	6,814h	11,441h	23,885h	35,445h	37,918h	21,208h	5,202h	1,117h	1,094h	627h	1,082h	209,379h
6/08/18							3,940h	10,357h	9,906h	4,920h	4,014h	4,535h	5,952h	8,793h	15,759h	29,243h	35,287h	29,667h	15,575h	4,358h	1,350h	1,133h	1,257h	584h	188,675h
6/09/18							128h	311h	648h	1,768h	3,721h	5,772h	7,517h	11,185h	13,560h	13,712h	12,963h	9,806h	6,019h	2,688h	1,816h	1,355h	1,096h	581h	95,005h
6/10/18							160h	259h	424h	731h	1,190h	2,098h	3,506h	6,627h	7,640h	7,539h	5,890h	6,465h	3,287h	1,274h	1,277h	718h	312h	188h	50,290h
6/11/18							10,636h	20,246h	20,285h	12,373h	6,183h	3,852h	2,846h	3,025h	5,966h	13,529h	20,583h	22,997h	10,847h	2,053h	967h	766h	411h	235h	159,438h
6/12/18							8,221h	20,555h	21,247h	10,814h	6,466h	4,032h	3,970h	5,293h	8,695h	21,545h	29,413h	34,845h	18,224h	3,054h	971h	1,024h	890h	297h	201,075h
6/13/18							7,603h	16,188h	18,959h	10,973h	6,828h	6,287h	6,002h	8,438h	16,111h	27,034h	34,082h	38,682h	21,724h	1,223M	1,223M	1,117h	1,094h	627h	229,556h
6/14/18							7,652h	18,225h	20,179h	9,798h	6,443h	7,166h	6,996h	8,166h	13,213h	26,315h	36,101h	38,191h	23,634h	7,306h	1,350h	1,133h	1,257h	1,185h	238,901h
6/15/18							5,885h	11,422h	9,754h	4,755h	5,543h	6,790h	10,007h	14,490h	24,681h	36,626h	42,757h	36,219h	18,096h	6,538h	2,001h	1,081h	1,116h	934h	240,098h
6/16/18							600h	1,473h	2,552h	4,085h	7,063h	9,451h	12,393h	11,793h	11,159h	11,325h	10,499h	8,614h	6,828h	3,770h	1,520h	993h	1,162h	809h	106,770h
6/17/18							115h	171h	334h	516h	1,815h	2,974h	4,813h	7,635h	9,053h	6,556h	5,776h	4,821h	3,457h	2,204h	1,398h	1,280h	682h	1,068h	55,323h
6/18/18							7,394h	15,298h	16,489h	9,187h	5,313h	5,877h	6,588h	7,069h	10,421h	17,726h	26,301h	30,148h	15,764h	2,861h	692h	1,092h	1,092h	1,069h	183,106h
6/19/18	412h	64h	30h	54h	52h	957h	7,288h	15,627h	18,487h	10,670h	5,268h	4,661h	5,368h	11,278h	19,862h	38,560h	45,611h	41,188h	25,442h	6,271h	1,110h	899h	1,069h	261,140h	
6/20/18	355h	82h	52h	June 20, 2018 (Woodrow Wilson Bridge Incident) →								7,138h	11,185h	12,805h	20,731h	29,691h	40,496h	51,345h	36,402h	1,329M	1,329M	1,117h	1,094h	627h	310,343h
6/21/18	82h	42h	35h	45h	15h	779h	5,929h	12,950h	14,306h	7,334h	5,785h	6,514h	6,715h	7,296h	14,031h	21,757h	29,507h	31,865h	18,383h	4,838h	1,469h	1,117h	1,094h	323h	187,165h
6/22/18	123h	60h	30h	29h	13h	4,079h	11,004h	11,775h	7,604h	7,065h	10,319h	12,532h	18,026h	28,143h	39,053h	42,167h	38,161h	19,896h	7,187h	2,145h	903h	801h	445h	64,342h	
6/23/18	238h	140h	96h	62h	5h	150h	310h	563h	1,197h	2,462h	3,932h	4,617h	6,258h	7,664h	8,678h	8,457h	6,159h	5,304h	3,990h	1,619h	1,113h	717h	436h	64,342h	
6/24/18	368h	163h	65h	54h	54h	87h	103h	143h	294h	851h	1,592h	3,102h	4,970h	8,032h	8,927h	8,037h	7,580h	5,617h	3,646h	2,296h	1,369h	1,775h	1,426h	1,371h	61,934h
6/25/18	526h	92h	43h	43h	39h	646h	6,656h	16,236h	17,004h	7,347h	3,647h	4,009h	4,443h	5,709h	10,691h	15,917h	21,217h	24,840h	11,790h	2,638h	750h	721h	1,148h	839h	158,599h
6/26/18	160h	46h	36h	40h	58h	719h	7,452h	19,443h	21,904h	10,409h	5,745h	4,667h	5,130h	8,326h	9,594h	17,002h	25,532h	27,345h	14,766h	3,167h	1,859h	1,342h	1,523h	930h	187,165h
6/27/18	480h	84h	45h	33h	58h	709h	5,897h	11,717h	11,250h	6,478h	3,702h	5,067h	6,399h	6,700h	8,297h	16,946h	26,360h	28,434h	14,664h	1,864h	1,070h	689h	722h	839h	158,826h
6/28/18	381h	54h	35h	37h	36h	805h	7,249h	15,453h	15,756h	9,531h	7,095h	7,888h	8,657h	8,210h	9,928h	13,949h	21,473h	34,028h	34,720h	6,006h	2,193h	1,436h	1,260h	998h	222,172h
6/29/18	511h	193h	67h	35h	54h	432h	5,007h	10,376h	10,847h	6,678h	6,561h	8,364h	9,588h	13,949h	21,473h	34,028h	38,160h	32,301h	16,129h	5,613h	2,193h	1,436h	1,260h	998h	228,351h
6/30/18	656h	256h	88h	38h	32h	57h	114h	517h	1,238h	3,202h	8,567h	10,197h	10,362h	11,078h	11,644h	11,328h	8,418h	7,487h	6,232h	3,696h	1,355h	1,230h	972h	540h	99,315h
7/01/18	217h	141h	73h	55h	50h	61h	82h	202h	305h	518h	1,688h	3,087h	4,218h	6,106h	7,123h	6,105h	4,328h	2,961h	2,653h	2,245h	1,366h	863h	551h	344h	45,354h
7/02/18	101h	60h	30h	38h	46h	573h	5,280h	11,024h	9,436h	4,304h	3,302h	4,485h	3,966h	5,341h	9,727h	19,625h	24,528h	22,646h	1,656h	2,918h	679h	750h	432h	201h	143,361h
7/03/18	59h	45h	39h	27h	43h	460h	4,430h	9,127h	8,209h	2,828h	2,013h	2,305h	4,284h	6,956h	14,091h	26,182h	28,586h	25,093h	9,273h	2,607h	993h	1,350h	1,070h	380h	147,231h
7/04/18	96h	57h	34h	25h	77h	1,223h	2,713h	6,220h	5,090h	1,840h	2,242h	2,709h	1,354h	1,467h	1,799h	3,134h	1,731h	1,258h	962h	1,055h	1,000h	1,000h	1,079h	518h	24,718h
7/05/18	81h	55h	29h	31h	78h	1,223h	2,713h	6,220h	5,090h	1,840h	2,242h	2,709h	3,002h	6,024h	9,094h	13,945h	14,248h	12,596h	6,759h	1,600h	762h	554h	1,022h	307h	92,538h
7/06/18	166h	91h	65h	41h	49h	192h	1,076h	3,041h	2,813h	1,630h	2,616h	2,437h	3,687h	7,809h	10,759h	15,126h	12,681h	N/A	4,930h	1,317h	934h	1,122h	1,236h	439h	74,698h
7/07/18	491h	193h	101h	63h	46h	67h	111h	243h	729h	2,624h	3,966h	5,187h	5,635h	7,136h	7,292h	8,169h	6,954h	5,650h	4,954h	2,327h	1,393h	1,649h	1,798h	1,310h	68,099h

4 weeks before July 4th Holiday

1.223M Veh-Hrs of Delay

(1.027M in 2012)

3 weeks before July 4th Holiday

1.226M Veh-Hrs of Delay

(1.081M in 2012)

2 weeks before July 4th Holiday

1.329M Veh-Hrs of Delay

(0.980M in 2012)

1 week before July 4th Holiday

1.112M Veh-Hrs of Delay

(1.069M in 2012)

Similar pattern to 2012

July 4th Holiday Week

(2018)

0.596M Veh-Hrs of Delay

Holiday Week is relatively light

Best Practice: Save your TMC segments sets

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 and MP4s.

1. Select roads

TMC segments from **INRIX**

Road Region Segment codes Map Saved

Showing 52 of 52 available segment sets

Segment set	Segments	Owner
Hurricane Florence - Virginia ...	1991	taran.hutchinson@mat...
Hurricane Florence - MD, VA,...	21951	taran.hutchinson@mat...
Hurricane Evac: VA Shoreline	863	operations@matco.org
Crash. I-86 EB past VA-123. ...	418	taran.hutchinson@mat...
CATT Test	418	taran.hutchinson@mat...
6-20-2018 WWB Incident V3	2071	taran.hutchinson@mat...
IMPORTANT: Save your TMC...	800	taran.hutchinson@mat...

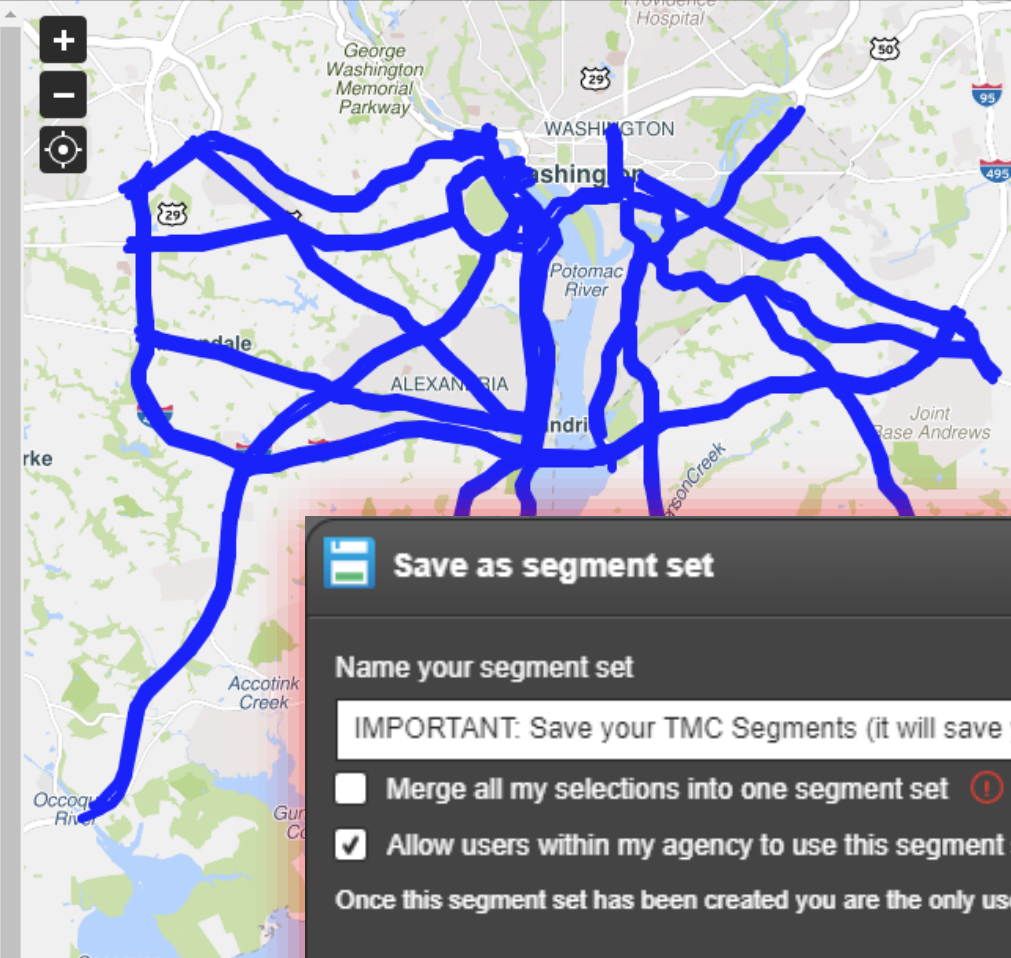
+ Add selected segment sets

Your selected roads

Remove all

IMPORTANT: Save your TMC Segments (it will save you time)

Save as segment set



Save as segment set

Name your segment set

IMPORTANT: Save your TMC Segments (it will save you time)

☐ Merge all my selections into one segment set

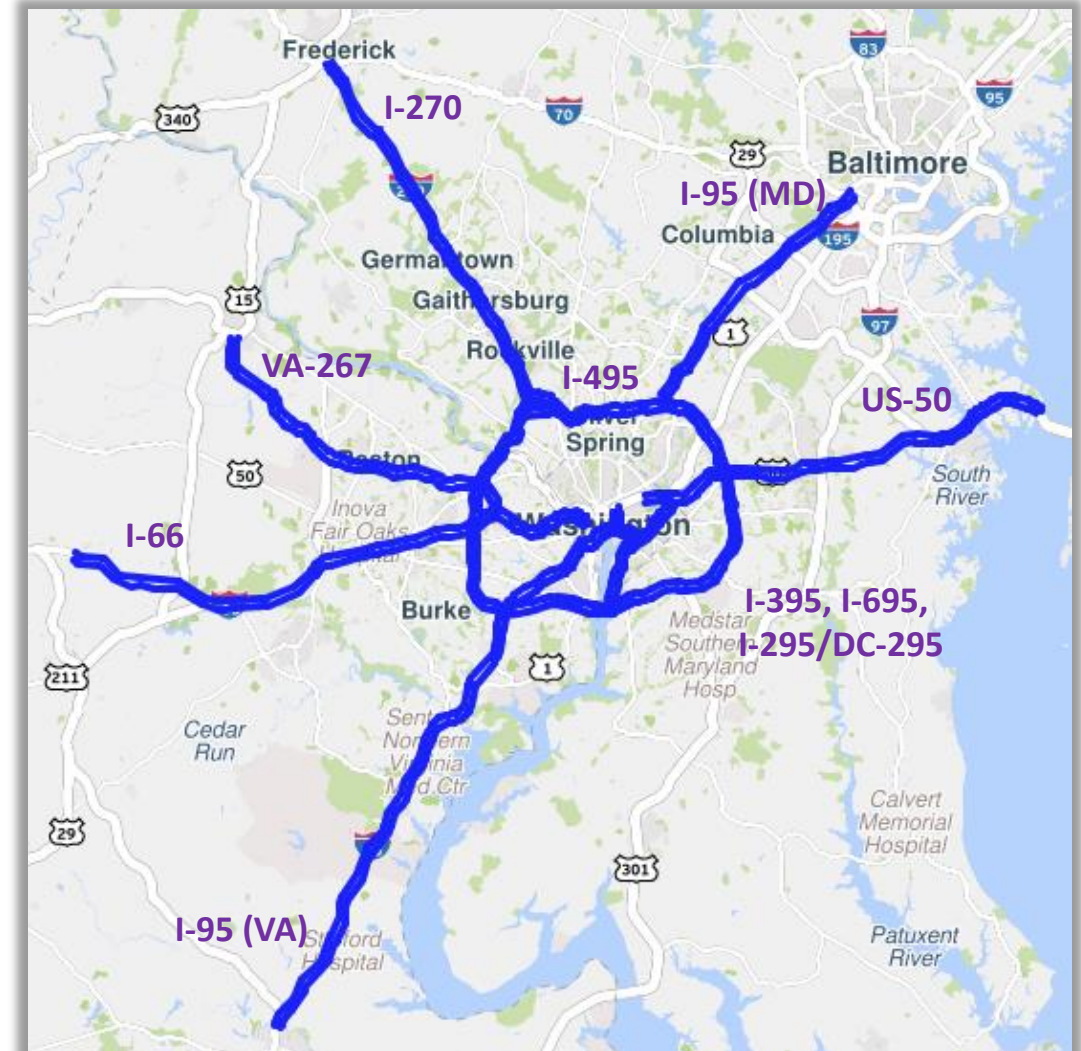
☒ Allow users within my agency to use this segment set

Once this segment set has been created you are the only user with permissions to rename or delete it.

Save Cancel

AAA Mid Atlantic Inquiry: Labor Day

- How bad is Terrible Traffic Tuesday (the day after Labor Day)?
- What can PDA Suite show us?
 - Is Terrible Traffic Tuesday that terrible?
 - What about the rest of September? October?
- Things to consider
 - Area school systems typically start two weeks mid/late August
 - Travel patterns along each corridor are unique
- Roadways selected: Major freeways



Vehicle Type

All

Display

Vehicle-hours of delay

Legend

Weekdays

Lowest

Highest

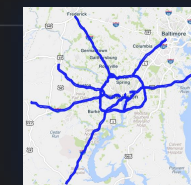
Weekends

Lowest

Highest

No data

User Delay Cost Analysis

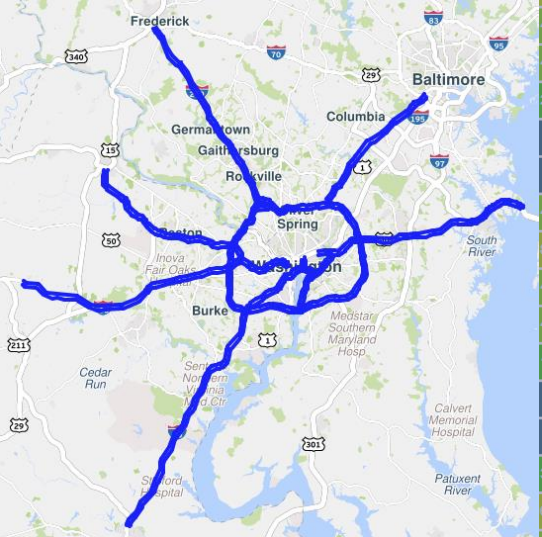


	Total Vehicle-hours of Delay																								
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Daily Totals
8/01/17	77h	56h	34h	16h 32m	19h 55m	605h	6,552h	12,66h	11,856h	6,547h	2,690h	1,200h	968h	1,245h	3,987h	11,040h	17,922h	22,402h	16,371h	4,260h	626h	1,261h	748h	174h	123,362h
8/02/17	61h								11,483h	8,160h	2,789h	997h	949h	1,080h	2,827h	9,985h	16,681h	19,780h	10,695h	2,729h	132h	871h	643h	214h	107,159h
8/03/17	80h								11,446h	5,819h	2,111h	1,380h	1,868h	2,993h	7,447h	16,725h	22,805h	25,060h	16,809h	6,594h	1,021h	1,576h	771h	221h	141,537h
8/04/17	72h	52h	31h	22h 41m	40h	229h	2,857h	4,93h	5,519h	3,164h	3,265h	4,893h	7,185h	8,053h	13,736h	21,901h	24,561h	21,410h	8,542h	2,539h	720h	325h	106h	70h	134,238h
8/05/17	14h	96h	55h	54h	38h	51h	34h	83h	142h	1,041h	2,379h	4,935h	7,400h	9,037h	11,823h	11,448h	8,959h	6,914h	4,499h	2,157h	835h	484h	373h	421h	73,402h
8/06/17	10h	48h	36h	30h	24h	37h	52h	61h	28h	78h	703h	2,805h	4,580h	4,948h	4,988h	5,200h	5,325h	4,396h	3,306h	1,814h	1,208h	1,037h	534h	131h	41,288h
8/07/17	46h	32h	28h	40h	40h	961h	4,129h	1,811h	9,133h	4,200h	2,756h	3,661h	5,769h	5,392h	10,749h	17,352h	17,116h	16,706h	6,931h	474h	111h	132h	125h	87h	115,209h
8/08/17	61h	27h	18h 54m	16h 28m	35h	1,483h	8,350h	14,612h	9,912h	5,080h	1,565h	1,019h	1,068h	1,259h	2,850h	7,411h	13,551h	18,035h	10,936h	2,157h	1,037h	534h	131h	87h	101,379h
8/09/17	96h	45h	47h	9h 21m	80h	486h	4,611h	11,281h	12,038h	5,621h	2,455h	3,007h	1,494h	2,516h	5,263h	13,451h	19,991h	23,268h	12,907h	2,157h	1,037h	534h	131h	87h	121,790h
8/10/17	95h	28h	26h	13h 30m	31h	526h	1,913h	9,758h	11,954h	1,169h	2,288h	3,009h	3,215h	3,283h	5,841h	17,109h	20,024h	23,070h	11,119h	2,581h	677h	686h	627h	331h	125,789h
8/11/17	12h	50h	21h 8m	20h 2m	15h 11m	175h	1,701h	2,601h	2,772h	1,211h	1,365h	1,652h	6,632h	9,838h	12,525h	19,288h	19,517h	16,120h	9,011h	4,492h	4,497h	2,029h	1,126h	321h	116,982h
8/12/17	13h	106h	73h	29h	19h 38m	19h 49m	42h	32h	130h	700h	1,465h	3,123h	4,858h	4,690h	6,977h	6,058h	4,722h	3,613h	2,953h	2,355h	4,037h	1,342h	487h	121h	48,102h
8/13/17	12h	96h	47h	32h	35h	40h	43h	24h	N/A	54h	755h	2,329h	3,821h	4,490h	8,232h	8,800h	7,093h	4,657h	2,768h	1,747h	926h	1,167h	595h	111h	47,973h
8/14/17	45h	29h	16h 45m	9h 18m	14h 29m	490h	3,094h	6,012h	4,952h	2,238h	630h	901h	861h	658h	3,441h	9,919h	14,022h	15,195h	6,475h	954h	291h	275h	332h	391h	71,258h
8/15/17	56h	41h	20h 46m	26h	31h	844h	6,933h	12,281h	15,311h	10,094h	6,770h	5,695h	4,675h	4,163h	2,710h	5,119h	9,158h	10,079h	4,783h	511h	151h	230h	273h	181h	100,157h
8/16/17	78h	32h	21h 42m	18h 48m	13h 20m	537h	4,780h	10,100h	9,222h	4,534h	1,838h	1,589h	2,051h	3,141h	5,237h	12,556h	20,975h	23,137h	13,873h	2,667h	290h	187h	322h	141h	117,349h
8/17/17	45h	52h	27h	25h	32h	481h	5,264h	10,100h	8,200h	3,961h	2,993h	2,255h	2,386h	3,938h	6,558h	15,634h	20,975h	23,137h	13,873h	2,667h	313h	362h	450h	361h	131,996h
8/18/17	23h	98h	22h 40m	16h 48m	14h 43m	263h	3,445h	2,144h	2,144h	2,144h	3,398h	4,522h	5,004h	5,708h	11,512h	19,460h	20,727h	21,135h	13,765h	4,161h	1,133h	270h	277h	128h	123,833h
8/19/17	14h	38h	36h	28h	17h 20m	211h	59h	58h	374h	1,054h	3,088h	5,756h	6,594h	8,150h	8,653h	10,803h	10,620h	9,180h	6,988h	4,266h	1,718h	735h	693h	274h	79,361h
8/20/17	1h	17h	58h	51h	26h	46h	25h	35h	35h	354h	1,456h	2,444h	3,300h	3,588h	3,714h	3,672h	3,710h	2,612h	2,038h	1,363h	1,166h	1,179h	621h	107h	32,131h
8/21/17	113h	24h	18h 32m	32h	9h 16m	561h	4,252h	10,100h	10,100h	2,435h	1,495h	1,305h	910h	847h	597h	4,524h	10,100h	10,100h	4,503h	735h	145h	179h	183h	118h	56,668h
8/22/17	46h	44h	16h 24m	20h 36m	27h	1,471h	10,342h	18,132h	19,878h	13,192h	3,077h	1,186h	1,426h	2,484h	6,152h	14,724h	22,131h	26,209h	15,536h	3,944h	949h	510h	412h	184h	162,111h
8/23/17	53h	28h	24h	16h 14m	23h 30m	799h	5,094h	10,753h	10,547h	3,582h	3,460h	1,956h	2,373h	5,034h	6,588h	13,546h	22,503h	24,371h	14,471h	3,778h	520h	429h	380h	234h	130,571h
8/24/17	37h	20h	19h 18m	18h 5m	43h	499h	4,304h	10,971h	10,019h	3,887h	1,687h	1,450h	1,126h	3,240h	6,709h	15,055h	23,864h	25,007h	14,238h	4,734h	1,011h	354h	164h	105h	128,371h
8/25/17	32h	30h	44h	36h	20h 25m	285h	2,730h	7,346h	7,330h	2,757h	1,937h	2,645h	3,452h	6,565h	11,344h	18,928h	22,980h	21,396h	10,866h	3,225h	871h	713h	328h	171h	126,042h
8/26/17	97h	52h	47h	50h	34h	27h	144h	319h	622h	1,208h	2,580h	3,607h	5,495h	7,820h	7,837h	8,432h	7,455h	6,487h	4,454h	2,518h	2,870h	1,527h	358h	125h	63,976h
8/27/17	68h	70h	38h	41h	80h	94h	88h	39h	55h	121h	381h	2,198h	3,030h	4,401h	4,678h	4,792h	4,392h	3,386h	3,037h	2,801h	2,735h	1,014h	478h	945h	38,777h
8/28/17	378h	80h	27h	41h	276h	575h	4,722h	8,630h	8,629h	3,848h	951h	609h	821h	657h	3,392h	6,609h	12,824h	14,986h	7,937h	1,223h	916h	151h	145h	190h	79,627h
8/29/17	109h	57h	27h	13h 1m	34h	1,375h	10,518h	20,198h	20,168h	2,166h	4,566h	2,339h	1,469h	1,868h	5,288h	15,182h	24,186h	29,038h	8,443h	4,757h	360h	172h	87h	48h	172,483h
8/30/17	50h	144h	184h	95h	1,227h	3,696h	5,720h	11,889h	14,107h	7,777h	2,104h	733h	1,486h	1,113h	3,656h	12,667h	22,298h	23,305h	12,719h	2,834h	513h	237h	390h	214h	129,168h
8/31/17	142h	38h	25h	36h	252h	443h	4,494h	10,740h	11,211h	5,394h	1,240h	947h	1,195h	2,170h	7,114h	13,734h	21,476h	22,101h	10,321h	1,896h	616h	322h	589h	541h	117,306h
9/01/17	53h	30h	27h	16h 42m	23h 25m	831h	1,008h	3,137h	2,474h	1,332h	1,248h	1,266h	2,006h	5,176h	11,524h	18,637h	18,485h	10,761h	3,337h	847h	511h	107h	83h	75h	82,228h

User Delay Cost Analysis: Aug - Sep 2017

Total Vehicle-hours of Delay

Aug 15 vs Sep 5: ~15% Increase

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Daily Totals	
8/01/17	77h	56h	34h	16h 32m	16h 55m	605h	6,552h	12,695h	11,856h	6,547h	2,690h	1,200h	968h	1,245h	3,987h	11,040h	17,922h	22,402h	16,371h	4,260h	626h	1,261h	748h	174h	123,362h	
8/02/17		4,579h	10,412h	12,483h	8,166h	2,789h	997h	949h	1,080h	2,927h	9,985h	16,681h	19,780h	10,695h	2,729h	132h	871h	643h	214h						107,156h	
8/03/17		4,880h	11,107h	11,446h	5,819h	2,111h	1,380h	1,868h	2,993h	7,447h	10,725h	22,805h	25,000h	16,809h						141,537h						
8/04/17		2,857h	4,933h	5,519h	3,164h	3,265h	4,893h	7,185h	8,053h	13,736h	21,901h	24,561h	21,410h	8,542h						134,238h						
8/05/17		34h	83h	142h	1,041h	2,379h	4,935h	7,406h	9,037h	11,823h	11,448h	8,959h	6,914h	4,499h						73,402h						
8/06/17		52h	61h	28h	78h	703h	2,805h	4,580h	4,948h	4,988h	5,200h	5,325h	4,396h	3,306h						41,286h						
8/07/17		4,129h	8,811h	9,133h	4,200h	2,756h	3,661h	5,769h	5,392h	10,746h	17,352h	17,516h	16,708h	6,931h						115,209h						
8/08/17		8,350h	14,612h	9,912h	5,080h	1,565h	1,019h	1,068h	1,256h	2,650h	7,411h	13,551h	18,035h	10,936h						101,379h						
8/09/17		4,551h	11,281h	12,036h	5,821h	2,455h	3,007h	1,494h	2,516h	5,263h	13,481h	19,991h	23,266h	12,907h						121,790h						
8/10/17		4,913h	9,758h	11,954h	6,369h	2,288h	3,009h	3,215h	3,283h	5,841h	13,609h	20,024h	23,070h	12,819h						125,789h						
8/11/17		1,701h	2,601h	2,772h	1,277h	1,365h	1,652h	6,632h	9,638h	12,525h	19,288h	19,517h	16,120h	9,008h						116,982h						
8/12/17	42h	32h		130h	700h	1,465h	3,123h	4,858h	4,690h	6,977h	6,058h	4,722h	3,613h	2,953h						48,102h						
8/13/17	43h	24h		N/A	54h	755h	2,329h	3,821h	4,490h	8,232h	8,800h	7,093h	4,657h	2,768h	1,747h	926h	1,111h	595h	119h						47,973h	
8/14/17	3,094h	6,012h	4,952h	2,236h	630h	901h	861h	658h	3,441h	9,919h	14,022h	15,195h	6,475h	954h	291h	231h	332h	392h						71,258h		
8/15/17	6,933h	12,281h	15,311h	10,094h	6,770h	5,695h	4,675h	4,163h	2,710h	5,119h	9,158h	10,079h	4,783h	511h	151h	231h						100,157h				
8/16/17	78h	32h	21h 42m	16h 48m	13h 20m	537h	4,780h	10,100h	9,222h	4,534h	1,838h	1,589h	2,051h	3,141h	5,237h	12,556h	20,975h	23,137h	13,873h	2,667h	290h	187h	322h	140h	117,349h	
8/17/17	45h	52h	27h	25h	32h	486h	5,264h	9,060h	8,438h	3,961h	2,993h	2,255h	2,386h	3,938h	6,558h	15,634h	25,883h	27,088h	13,901h	2,466h	313h	362h	450h	368h	131,996h	
8/18/17	231h	98h	22h 40m	16h 48m	14h 43m	263h	3,445h	2,627h	2,811h	2,144h	3,398h	4,522h	5,004h	5,708h	11,512h	19,460h	21,727h	21,085h	13,765h	4,161h	1,133h	270h	277h	128h	123,833h	
8/19/17	140h	38h	36h	28h	17h 20m	28h	59h	58h	374h	1,054h	3,088h	5,756h	6,594h	8,150h	8,653h	10,803h	10,620h	9,180h	6,988h	4,266h	1,718h	735h	693h	271h	79,361h	
8/20/17	103h	37h	58h	51h	26h	46h	25h	35h	53h	354h	1,459h	2,444h	3,300h	3,588h	3,714h	3,672h	3,710h	2,972h	2,038h	1,363h	1,166h	1,179h	621h	107h	32,131h	
8/21/17	Schools begins	21h 42m	32h	9h 16m	563h	4,252h	6,314h	5,803h	2,435h	1,495h	1,305h	910h	847h	597h	4,524h	8,924h	12,630h	4,503h	735h	145h	179h	183h	118h			56,668h
8/22/17	46h	44h	16h 24m	20h 36m	27h	1,479h	10,342h	18,132h	19,878h	13,192h	3,077h	1,188h	1,426h	2,484h	6,152h	14,724h	22,131h	26,209h	15,538h	3,944h	949h	510h	412h	184h	162,111h	
8/23/17	53h	28h	24h	16h 14m	23h 30m	799h	5,094h	10,753h	10,547h	3,582h	3,460h	1,956h	2,373h	5,034h	6,588h	13,546h	22,503h	24,371h	14,471h	3,778h	520h	429h	380h	234h	130,571h	
8/24/17	37h	20h	19h 18m	18h 5m	43h	499h	4,304h	10,971h	10,019h	3,887h	1,687h	1,450h	1,126h	3,240h	6,709h	15,055h	23,664h	25,007h	14,238h						128,371h	
8/25/17	32h	30h	44h	36h	20h 25m	285h	2,730h	7,348h	7,330h	2,757h	1,937h	2,845h	3,452h	6,565h	11,344h	18,628h	22,980h	21,398h	10,866h						126,042h	
8/26/17	97h	52h	47h	50h	34h	27h	144h	319h	622h	1,208h	2,580h	3,607h	5,495h	7,620h	7,837h	8,432h	7,455h	6,487h	4,454h						63,976h	
8/27/17	68h	70h	38h	41h	80h	94h	88h	39h	55h	126h	381h	2,198h	3,030h	4,401h	4,678h	4,792h	4,392h	3,386h	3,036h						38,777h	
8/28/17	378h	80h	27h	41h	276h	575h	4,722h	8,630h	8,629h	3,848h	951h	609h	821h	657h	3,392h	7,609h	12,824h	14,988h	7,937h						79,627h	
8/29/17	109h	57h	27h	13h 1m	34h	1,375h	10,518h	20,198h	20,168h	12,166h	4,569h	2,339h	1,469h	1,868h	5,288h	15,182h	24,188h	29,038h	18,443h						172,483h	
8/30/17	50h	144h	184h	95h	1,227h	3,699h	5,720h	11,889h	14,107h	7,777h	2,104h	733h	1,486h	1,113h	3,656h	12,667h	22,296h	23,305h	12,719h						129,168h	
8/31/17	142h	38h	25h	36h	252h	443h	4,494h	10,740h	11,371h	5,394h	1,240h	947h	1,195h	2,170h	7,114h	13,734h	21,478h	22,197h	10,321h						117,306h	
9/01/17	35h	36h	27h	16h 42m	23h 25m	83h	1,008h	3,137h	2,474h	1,332h	1,248h	1,266h	2,006h	5,176h	11,524h	18,637h	18,465h	10,761h	3,337h						82,226h	
9/02/17	42h	51h	29h	25h	32h	100h	166h	109h	309h	1,068h	1,951h	3,548h	4,644h	4,180h	5,515h	5,562h	3,047h	1,783h	718h						33,928h	
9/03/17	89h	73h	33h	32h	64h	97h	45h	90h	20h 44m	29h	37h	822h	847h	1,573h	2,337h	4,112h	2,969h	2,062h	873h	1,349h	153h	91h	75h	54h	17,937h	
9/04/17	Labor Day	16h 18m	25h	44h	137h	114h	147h	140h	44h	218h	903h	2,127h	2,530h	2,589h	3,144h	2,694h	2,286h	1,408h	758h	707h	41h	137h	32h			20,695h
9/05/17	21h 12m	16h 18m	12h 8m	10h 5m	8h 48m	529h	5,510h	15,808h	14,216h	6,378h	788h	291h	167h	245h	1,306h	9,045h	15,930h	20,132h	15,778h	7,408h	632h	115h			114,453h	

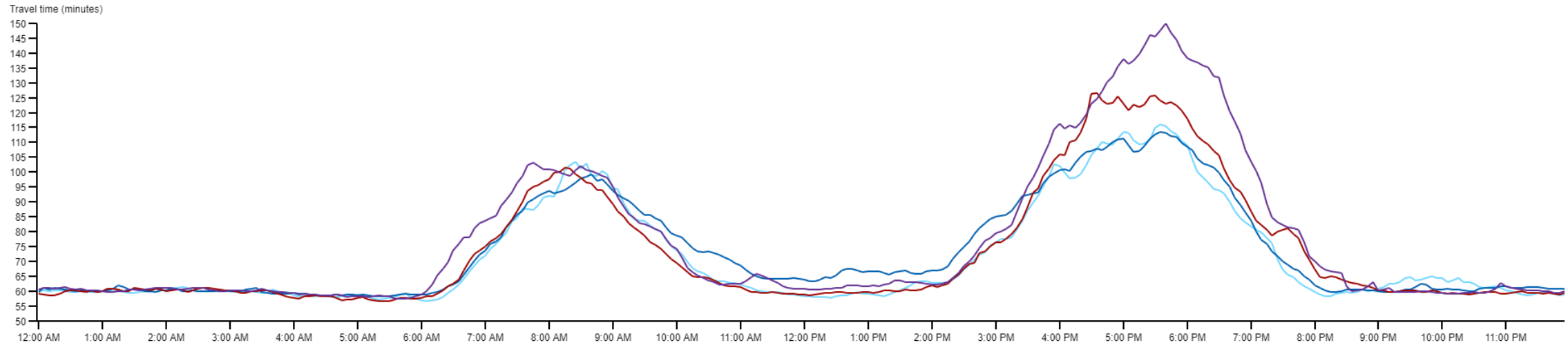
Performance Chart: I-495 (Capital Beltway), Average Tuesday



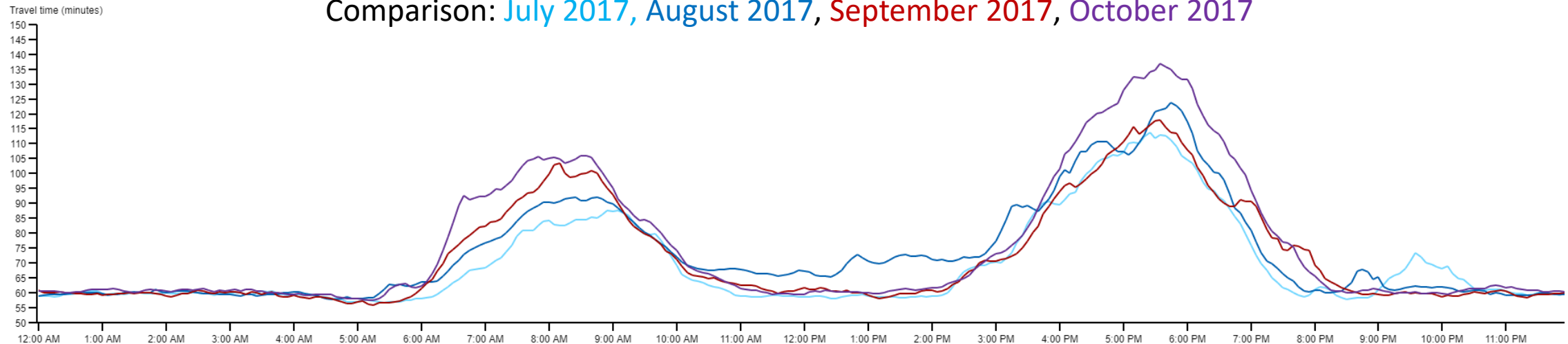
Travel Time for I-495 (Capital Beltway) Inner Loop vs Outer Loop

Averaged per five minutes for July 2017 (Every Tuesday), August 2017 (Every Tuesday), September 2017 (Every Tuesday), and October 2017 (Every Tuesday)

Clockwise (Inner Loop)



Counterclockwise (Outer Loop)



Comparison: July 2017, August 2017, September 2017, October 2017

Travel time: Time it will take to drive along the roadway segment (Distance Traveled / Speed).

August 2017 (Every Tuesday) - INRIX July 2017 (Every Tuesday) - INRIX October 2017 (Every Tuesday) - INRIX September 2017 (Every Tuesday) - INRIX

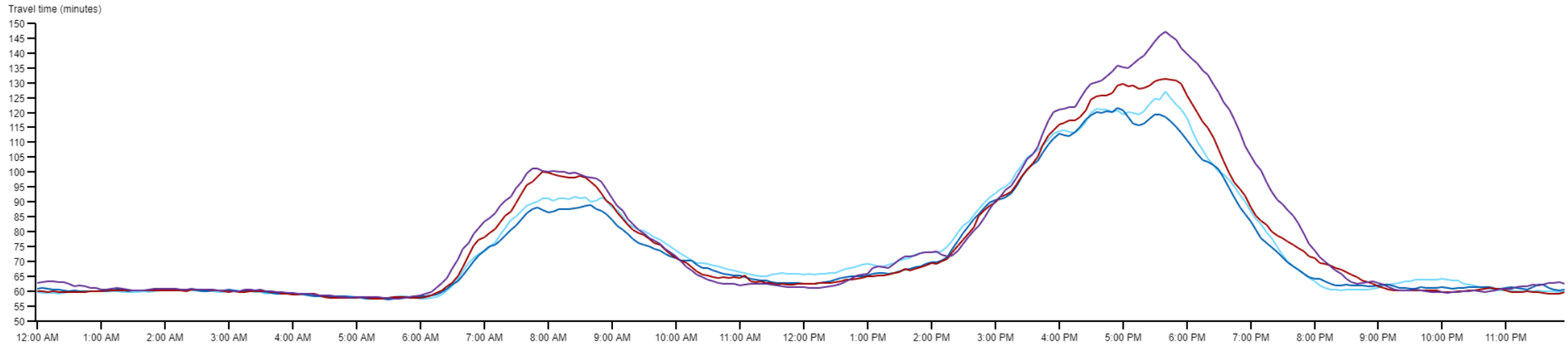
Performance Chart: I-495 (Capital Beltway), Average Tuesday-Friday



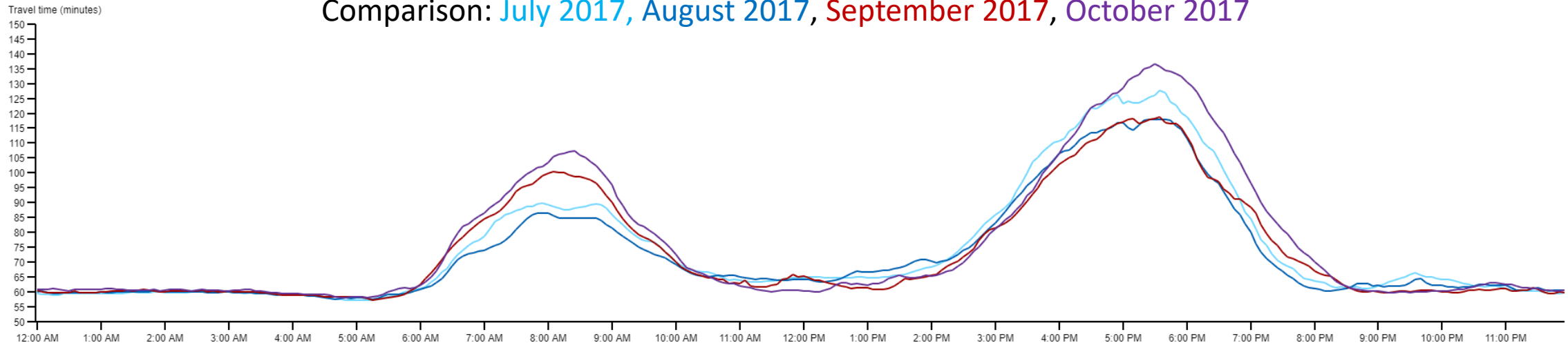
Travel Time for I-495 (Capital Beltway) Inner Loop vs Outer Loop

Averaged per five minutes for Every Tuesday-Friday (July 2017 vs August 2017 vs September 2017 vs October 2017)

Clockwise (Inner Loop)



Counterclockwise (Outer Loop)



Comparison: July 2017, August 2017, September 2017, October 2017

Travel time: Time it will take to drive along the roadway segment (Distance Traveled / Speed).

■ August 2017 (Every Tuesday, Wednesday, Thursday, and Friday) - INRIX

■ July 2017 (Every Tuesday, Wednesday, Thursday, and Friday) - INRIX

■ October 2017 (Every Tuesday, Wednesday, Thursday, and Friday) - INRIX

■ September 2017 (Every Tuesday, Wednesday, Thursday, and Friday) - INRIX

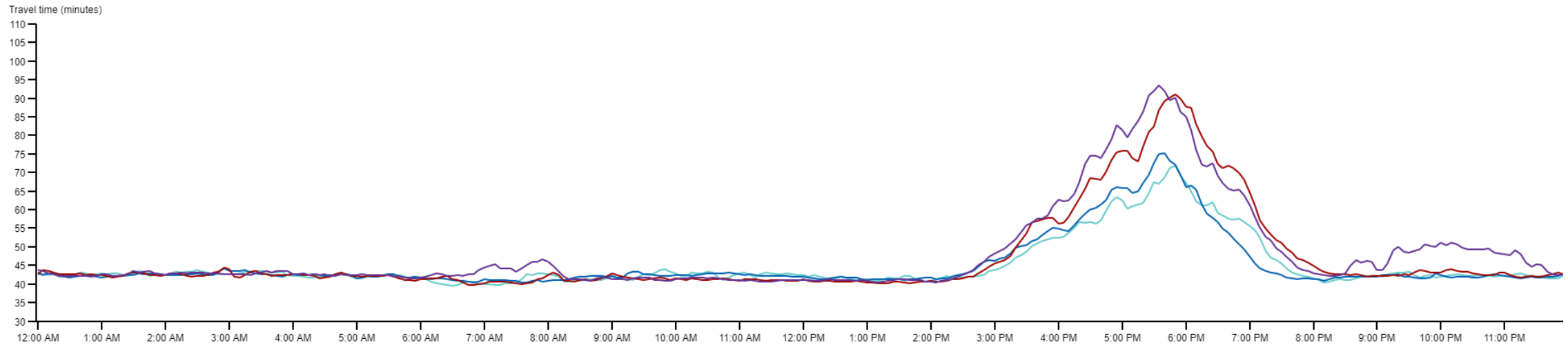
Performance Chart: I-270 (MD), Average Tuesday



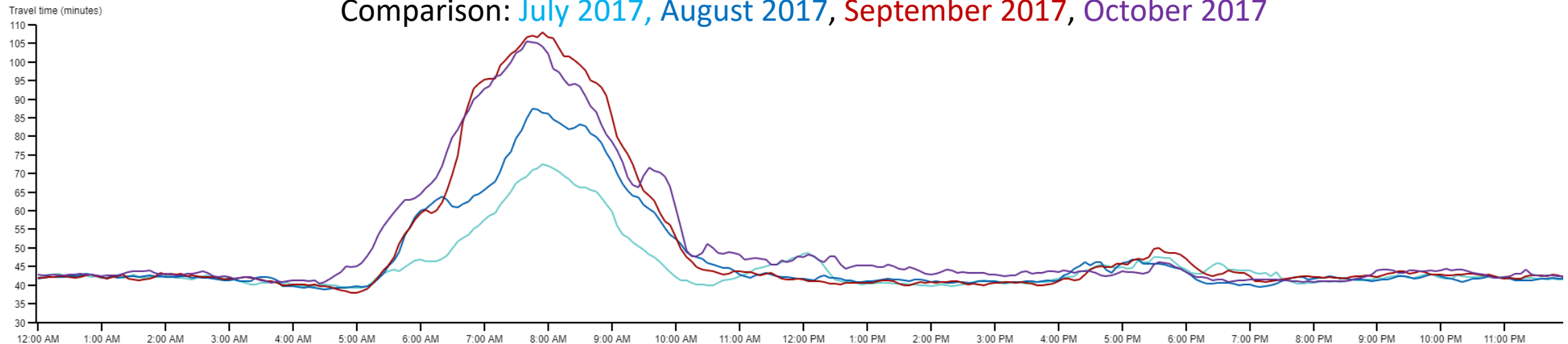
Travel Time for I-270 Between I-495 and I-70

Averaged per five minutes for July 2017 (Every Tuesday), August 2017 (Every Tuesday), September 2017 (Every Tuesday), and October 2017 (Every Tuesday)

Northbound (PM Rush)



Southbound (AM Rush)



Comparison: July 2017, August 2017, September 2017, October 2017

Travel time: Time it will take to drive along the roadway segment (Distance Traveled / Speed).

■ August 2017 (Every Tuesday) - INRIX ■ July 2017 (Every Tuesday) - INRIX ■ October 2017 (Every Tuesday) - INRIX ■ September 2017 (Every Tuesday) - INRIX

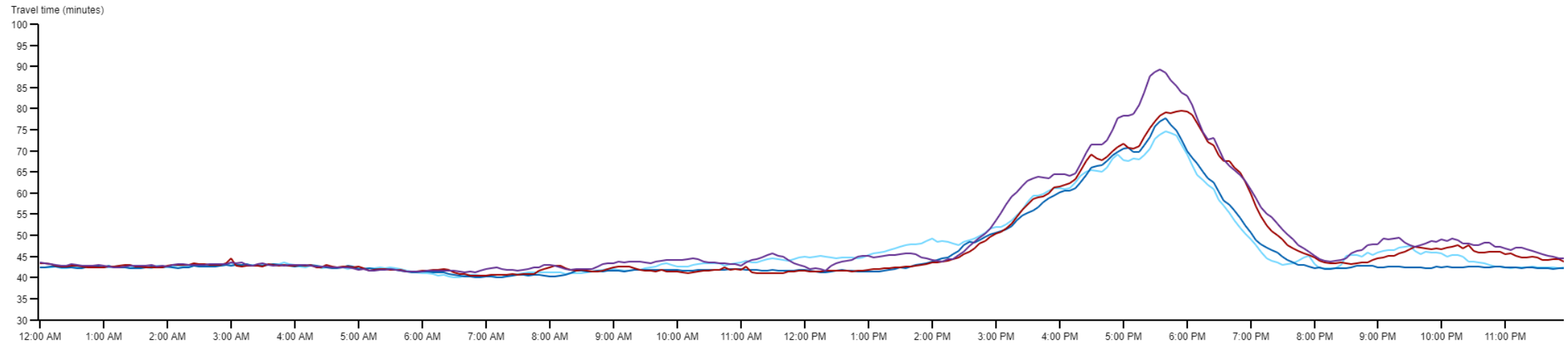
Performance Chart: I-270 (MD), Average Tuesday-Friday



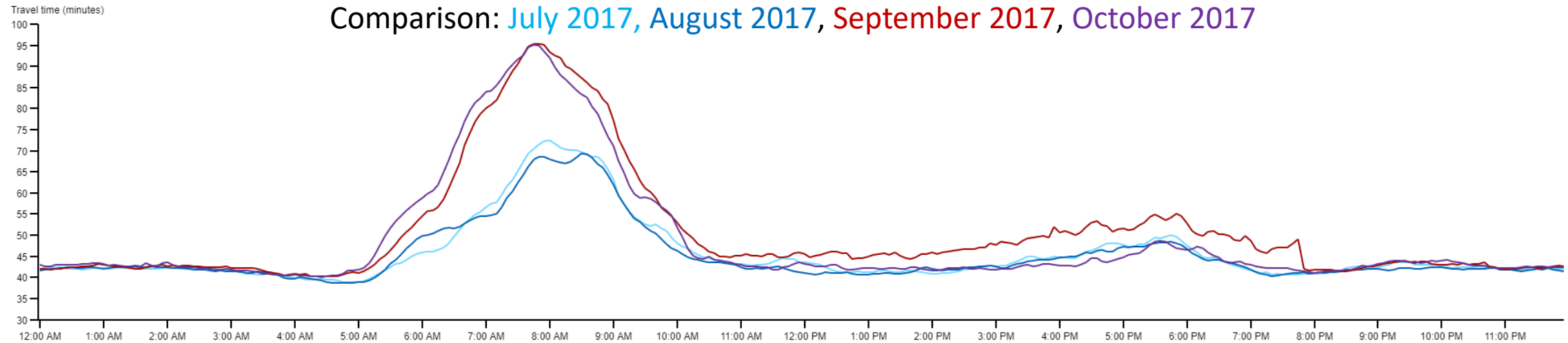
Travel Time for I-270 Between I-495 and I-70

Averaged per five minutes for Every Tuesday-Friday (July 2017 vs August 2017 vs September 2017 vs October 2017)

Northbound (PM Rush)



Southbound (AM Rush)



Comparison: July 2017, August 2017, September 2017, October 2017

Travel time: Time it will take to drive along the roadway segment (Distance Traveled / Speed).

■ August 2017 (Every Tuesday, Wednesday, Thursday, and Friday) - INRIX

■ July 2017 (Every Tuesday, Wednesday, Thursday, and Friday) - INRIX

■ October 2017 (Every Tuesday, Wednesday, Thursday, and Friday) - INRIX

■ September 2017 (Every Tuesday, Wednesday, Thursday, and Friday) - INRIX

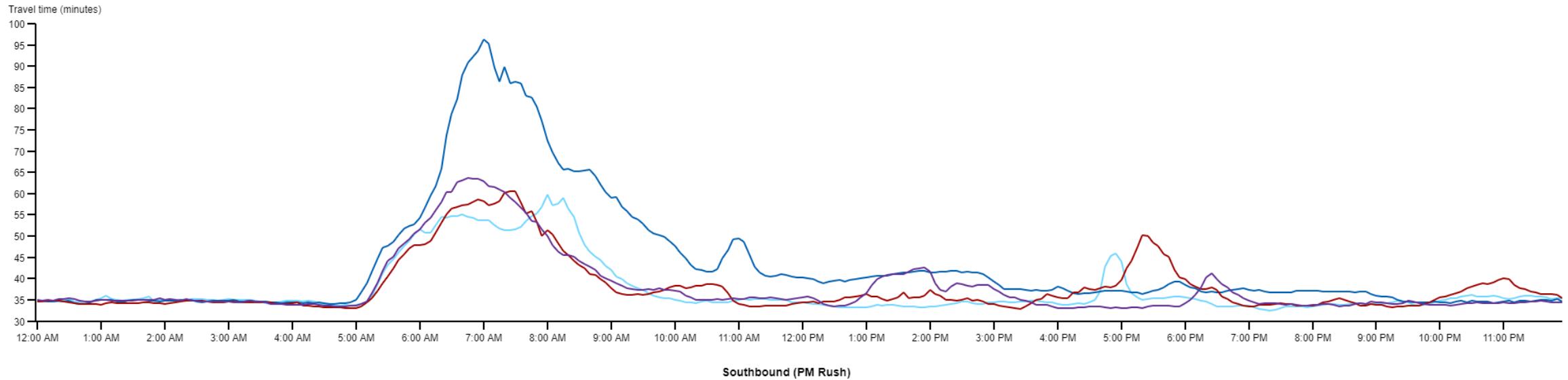
Performance Chart: I-95 (VA), Average Tuesday



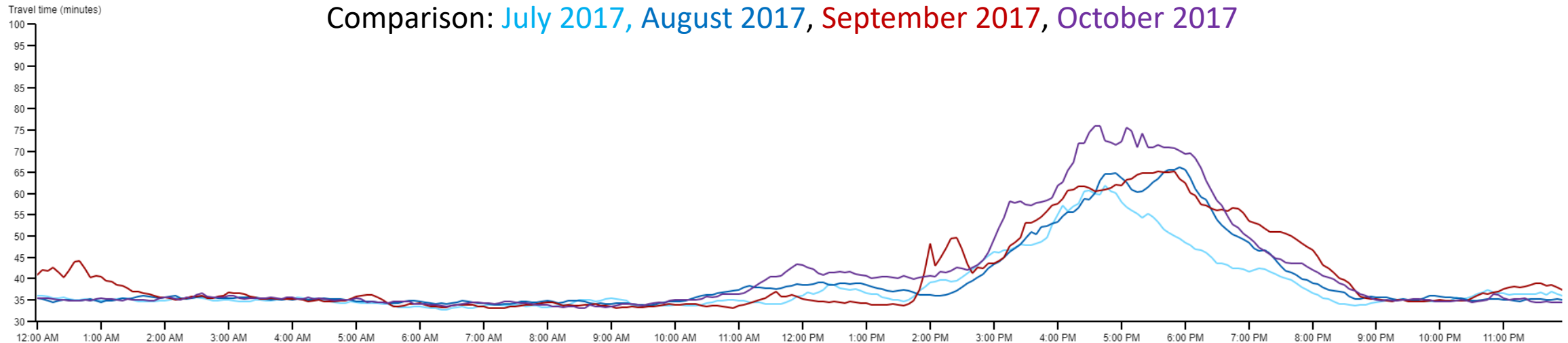
Travel Time for I-95 (VA) General Purpose Lanes Between I-495 and Rappahannock River

Averaged per five minutes for July 2017 (Every Tuesday), August 2017 (Every Tuesday), September 2017 (Every Tuesday), and October 2017 (Every Tuesday)

Northbound (AM Rush)



Comparison: July 2017, August 2017, September 2017, October 2017



Travel time: Time it will take to drive along the roadway segment (Distance Traveled / Speed).

■ August 2017 (Every Tuesday) - INRIX ■ July 2017 (Every Tuesday) - INRIX ■ October 2017 (Every Tuesday) - INRIX ■ September 2017 (Every Tuesday) - INRIX

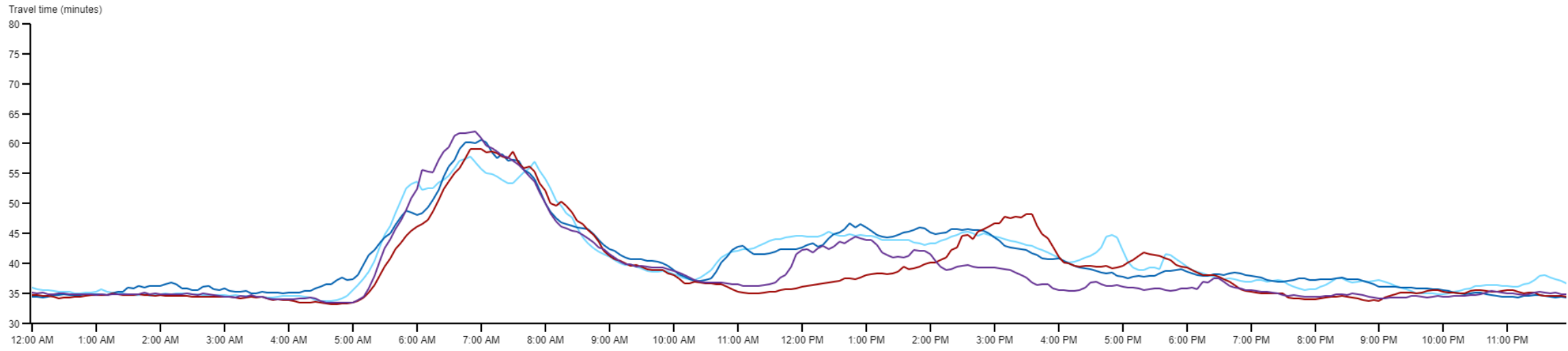
Performance Chart: I-95 (VA), Average Tuesday-Friday



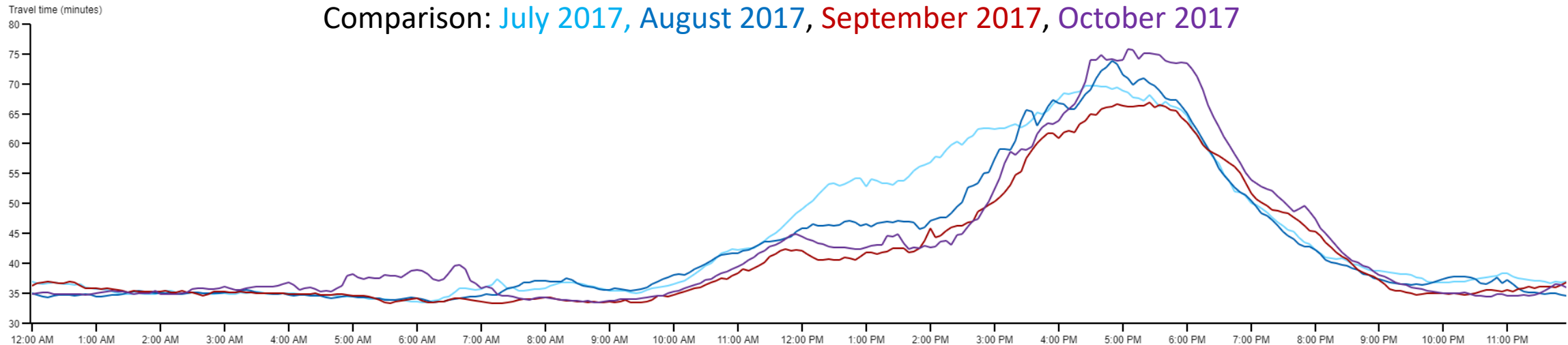
Travel Time for I-95 (VA) General Purpose Lanes Between I-495 and Rappahannock River

Averaged per five minutes for Every Tuesday-Friday (July 2017 vs August 2017 vs September 2017 vs October 2017)

Northbound (AM Rush)



Southbound (PM Rush)



Comparison: July 2017, August 2017, September 2017, October 2017

Travel time: Time it will take to drive along the roadway segment (Distance Traveled / Speed).

■ August 2017 (Every Tuesday, Wednesday, Thursday, and Friday) - INRIX

■ July 2017 (Every Tuesday, Wednesday, Thursday, and Friday) - INRIX

■ October 2017 (Every Tuesday, Wednesday, Thursday, and Friday) - INRIX

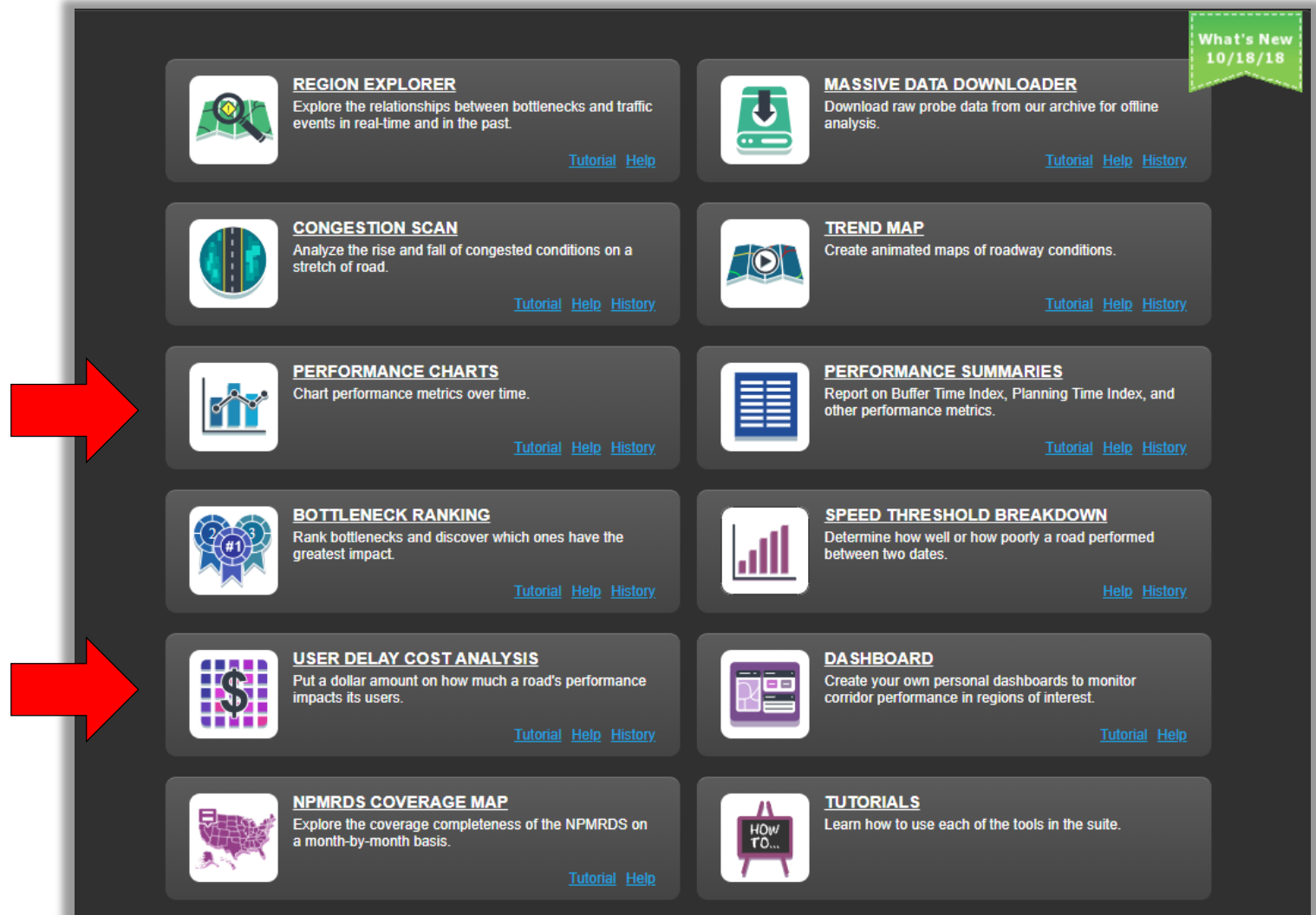
■ September 2017 (Every Tuesday, Wednesday, Thursday, and Friday) - INRIX

Takeaways













- Compared to early August, there was an increase in User Delay Cost on the Tuesday after Labor Day (Terrible Traffic Tuesday); approximately 15%
 - Previous years indicate a 20-25% increase for the same period
- Increases continue through September and plateau in mid-late October
- User Delay Cost varies for different corridors
- PDA Suite tools helped quantify anecdotal information

Probe Data Analytics Suite

- Tools Utilized
 - Performance Charts
 - User Delay Cost Analysis



What's New 10/18/18

 REGION EXPLORER Explore the relationships between bottlenecks and traffic events in real-time and in the past. Tutorial Help	 MASSIVE DATA DOWNLOADER Download raw probe data from our archive for offline analysis. Tutorial Help History
 CONGESTION SCAN Analyze the rise and fall of congested conditions on a stretch of road. Tutorial Help History	 TREND MAP Create animated maps of roadway conditions. Tutorial Help History
 PERFORMANCE CHARTS Chart performance metrics over time. Tutorial Help History	 PERFORMANCE SUMMARIES Report on Buffer Time Index, Planning Time Index, and other performance metrics. Tutorial Help History
 BOTTLENECK RANKING Rank bottlenecks and discover which ones have the greatest impact. Tutorial Help History	 SPEED THRESHOLD BREAKDOWN Determine how well or how poorly a road performed between two dates. Help History
 USER DELAY COST ANALYSIS Put a dollar amount on how much a road's performance impacts its users. Tutorial Help History	 DASHBOARD Create your own personal dashboards to monitor corridor performance in regions of interest. Tutorial Help
 NPMRDS COVERAGE MAP Explore the coverage completeness of the NPMRDS on a month-by-month basis. Tutorial Help	 TUTORIALS Learn how to use each of the tools in the suite.

Questions

Mr. Taran Hutchinson

Facilitator

Metropolitan Area Transportation Operations Coordination

taran.hutchinson@matoc.org



In the spotlight...

Delving into Winter Weather Performance Measures

John MacAdam
Ohio Department of Transportation
Administrator, Office of Traffic Management



DELVING INTO WINTER WEATHER PERFORMANCE MEASURES

John MacAdam, PE

PRESENTATION OUTLINE

1. What is it?
2. How is it calculated?
3. How is it reported?

WHAT IS IT?

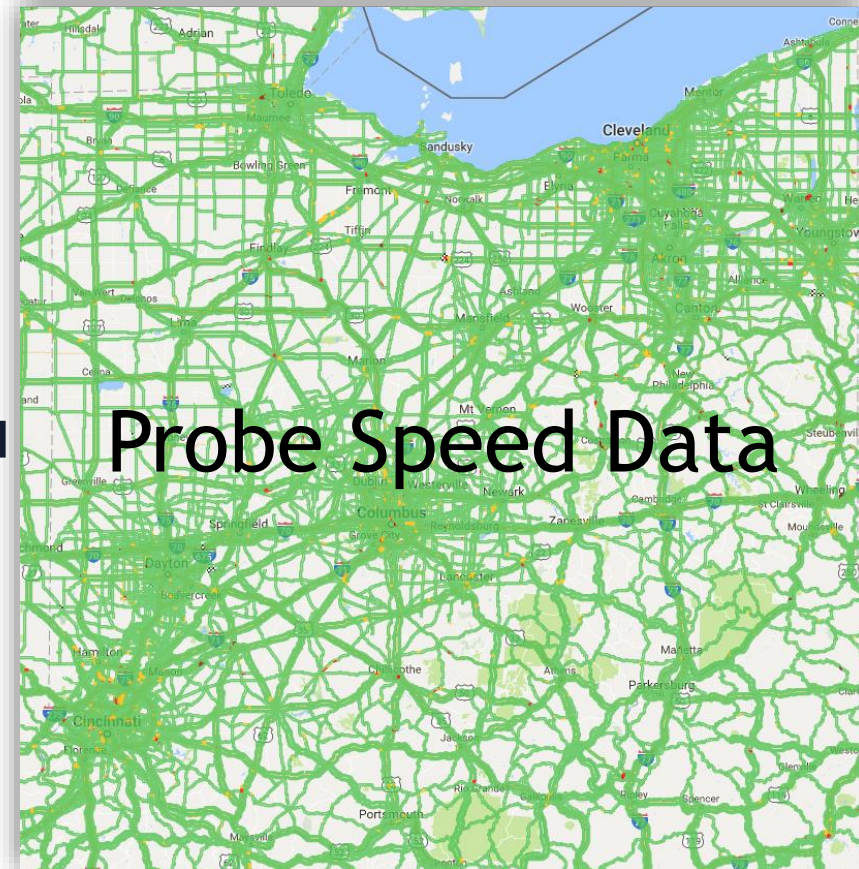
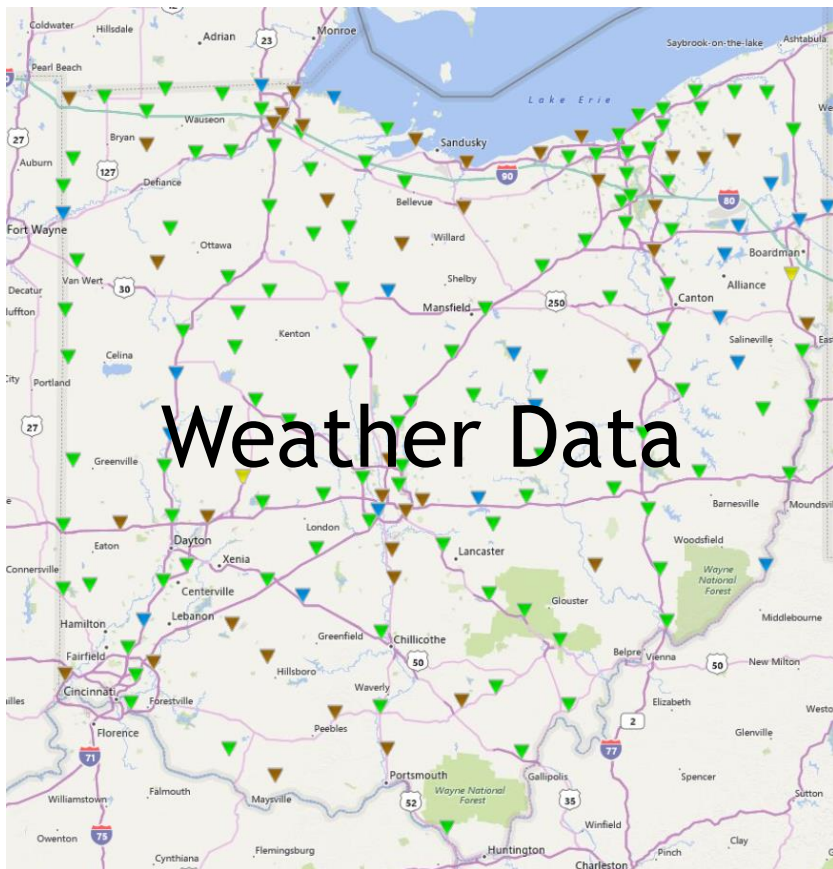
SNOW AND ICE SPOTTERS PROGRAM



During the 1997-98 snow season, ODOT began the use of the Snow and Ice Spotters program. Residents living in each of the counties throughout Ohio have been recruited as observers, with the task of noting how well ODOT snow crews clear the roads after a snow event. After a snowfall and removal, the county managers or other county

1997-98

WHAT IS IT?



2013-14

WHAT IS IT?

The % of routes
recovering speeds
within 2 hours
of a snow event ending.

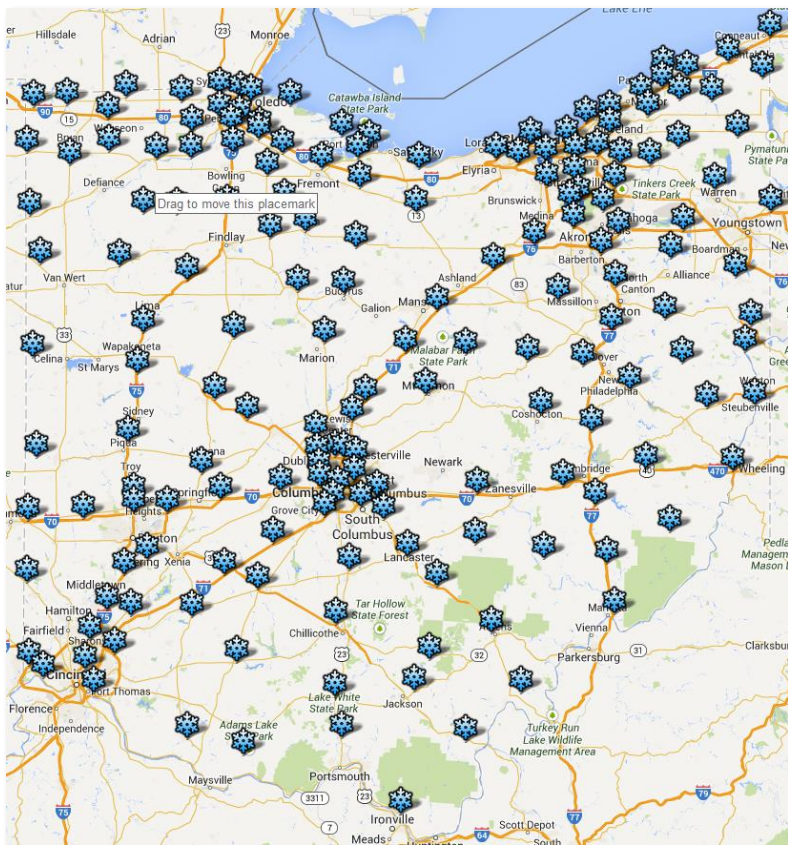
WHAT IS IT?

- Reported Monthly
- Analyzed for each County
- Averaged for the District

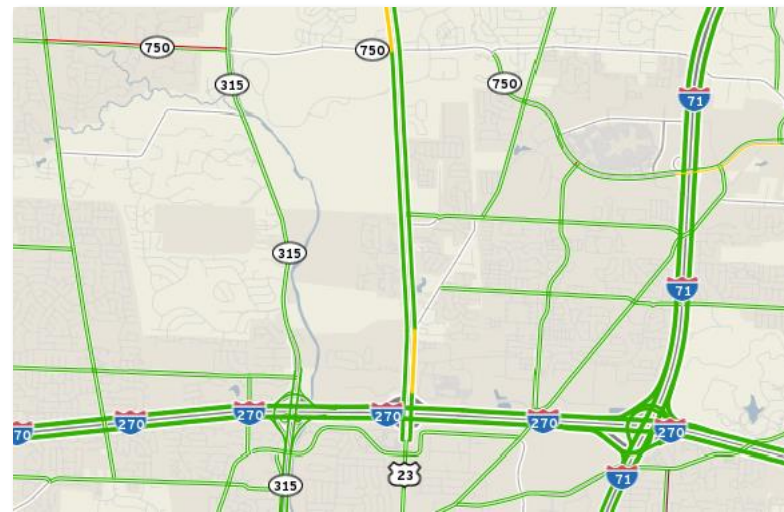
HOW IS IT CALCULATED?

1. What is it?
2. How is it calculated?
3. How is it reported?

2 DATA SOURCES

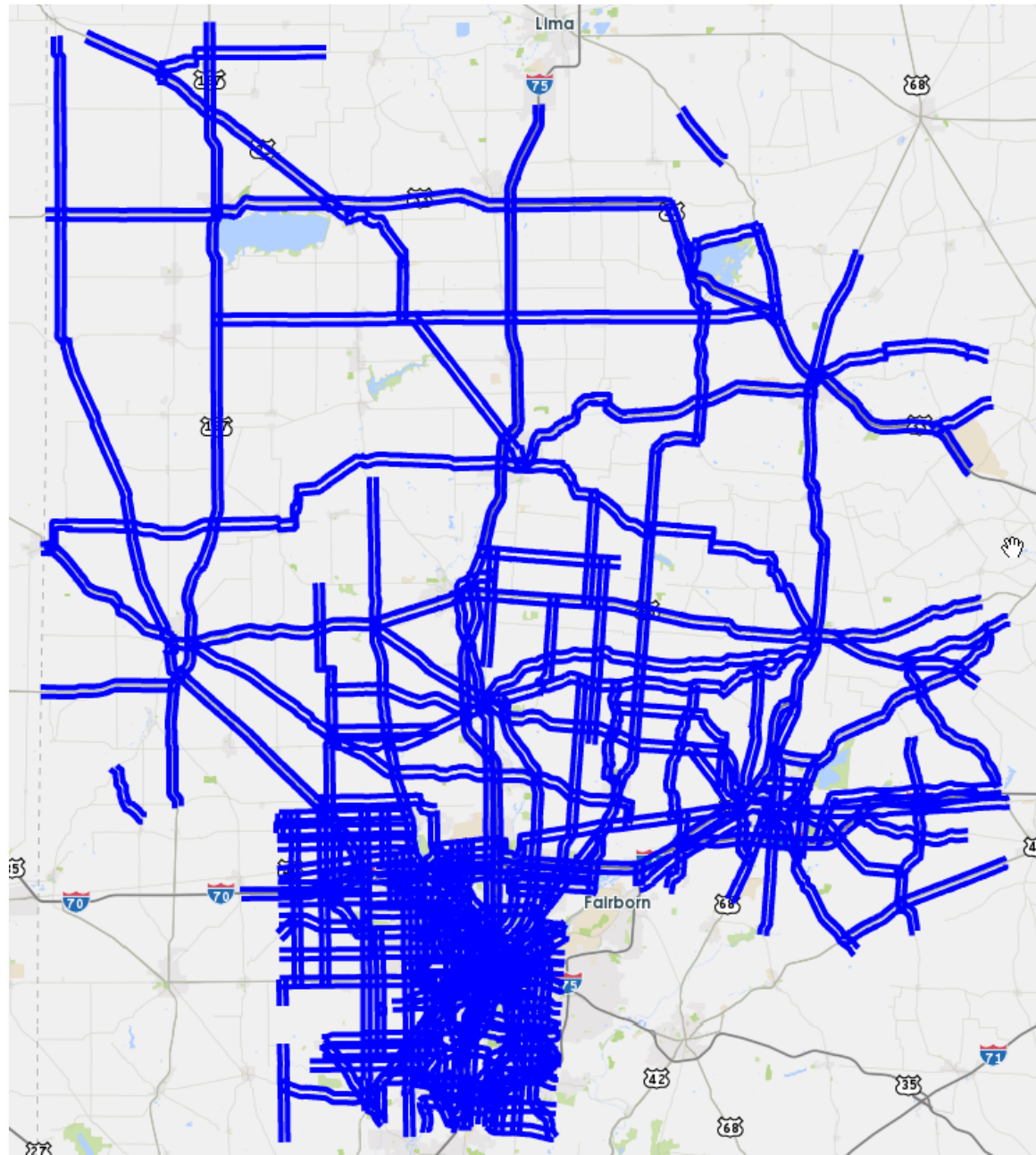


RWIS



Speed

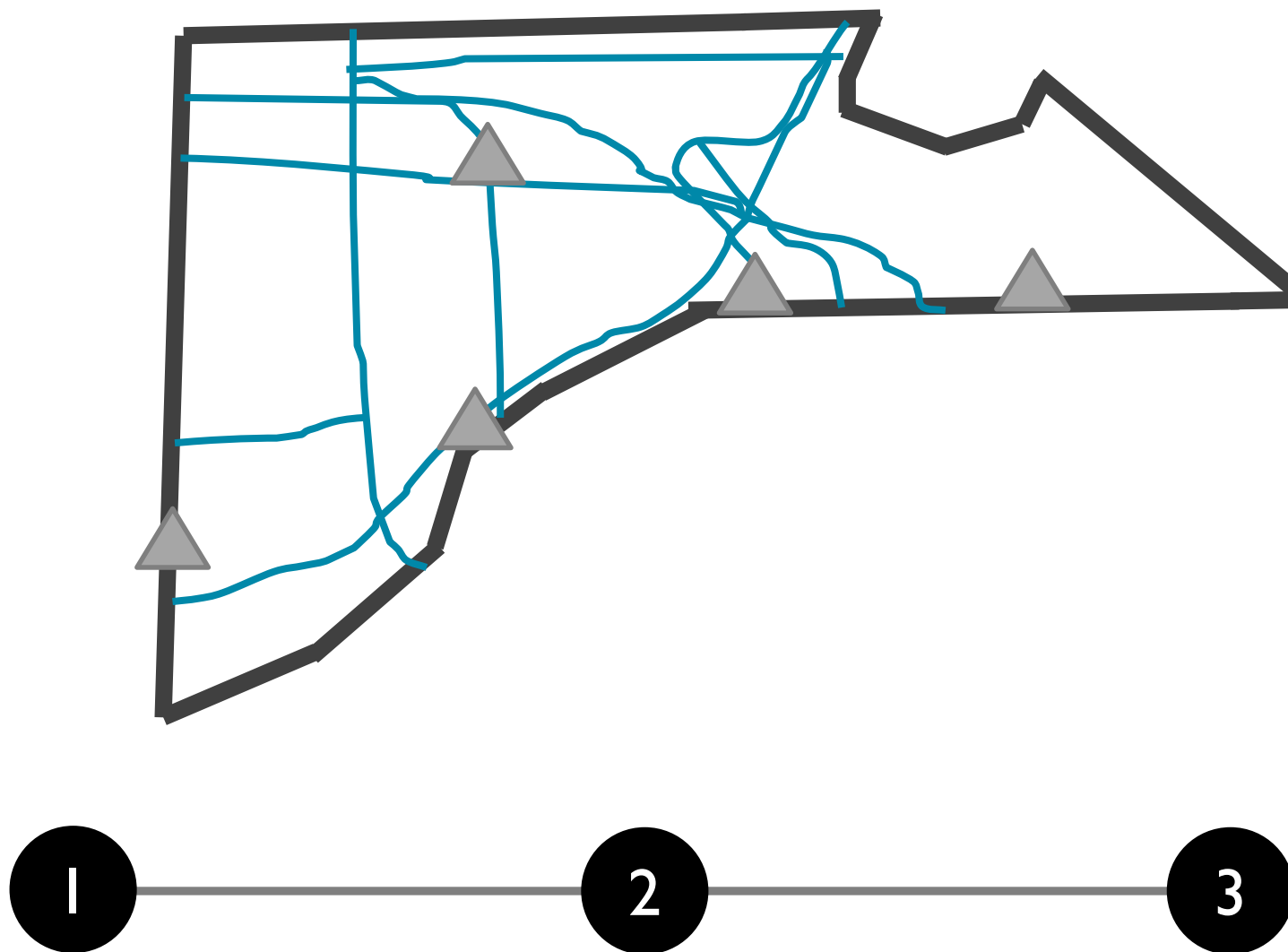




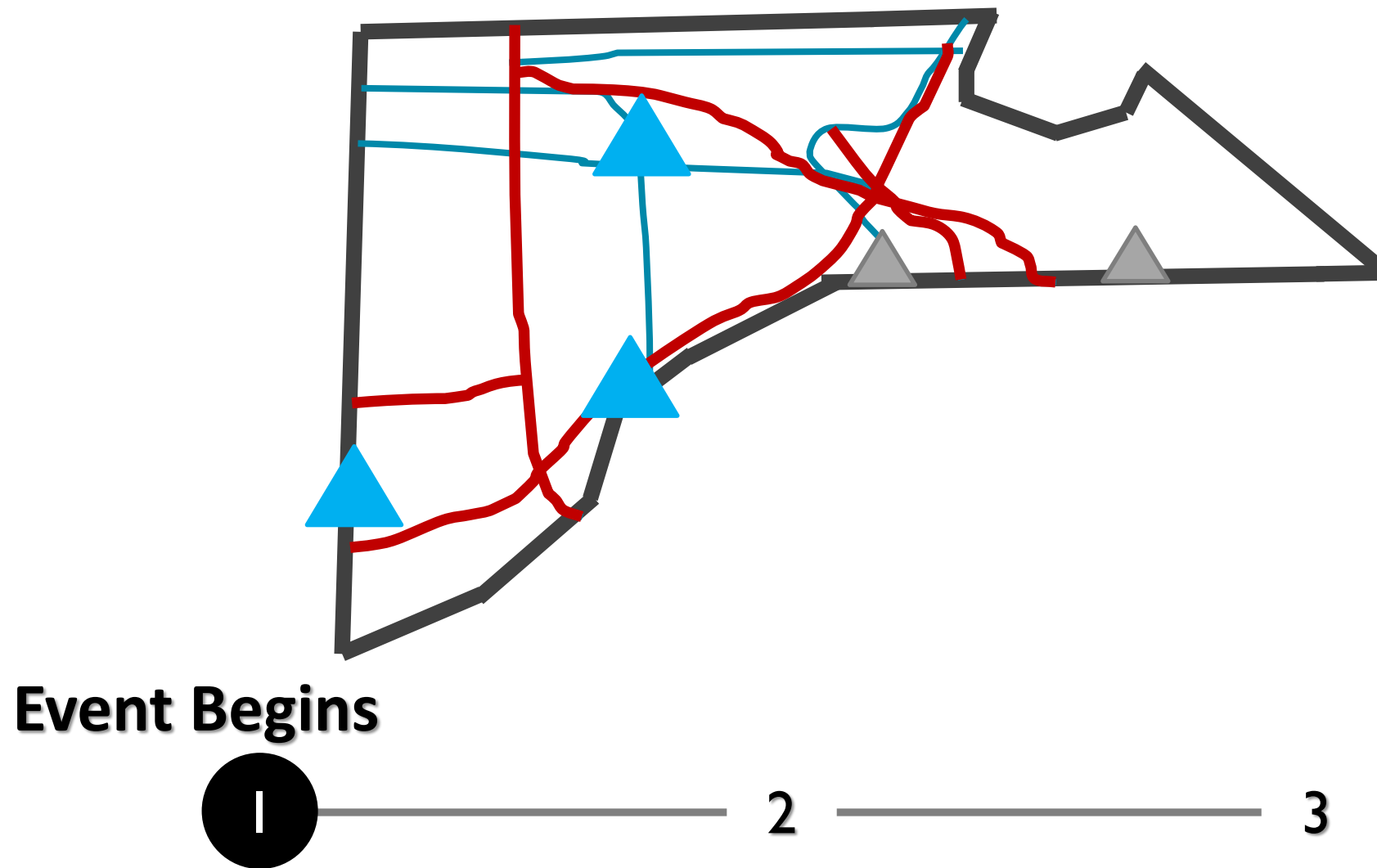
The % of routes
recovering speeds
within 2 hours
of a snow event.

of a snow event.

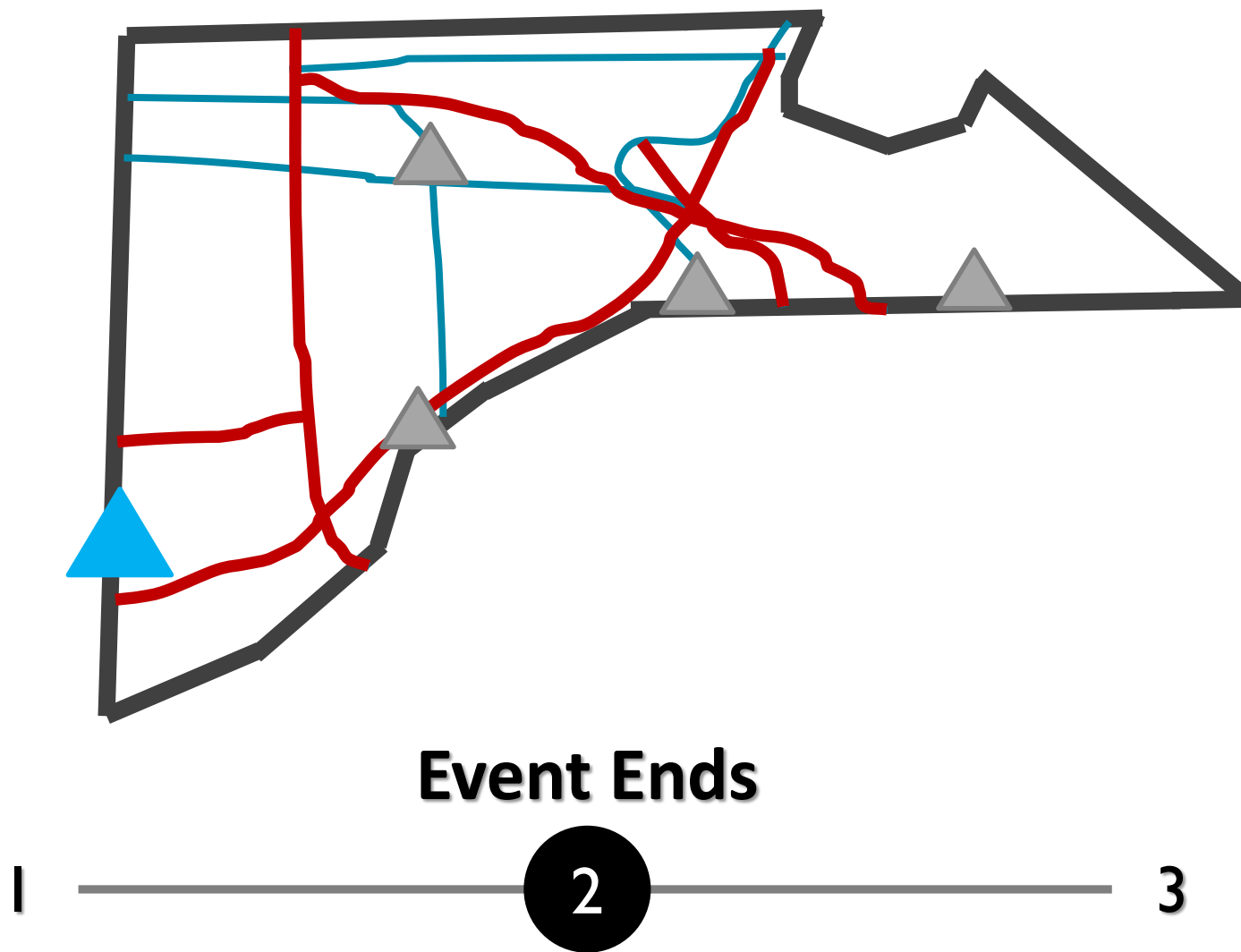
SNOW EVENTS



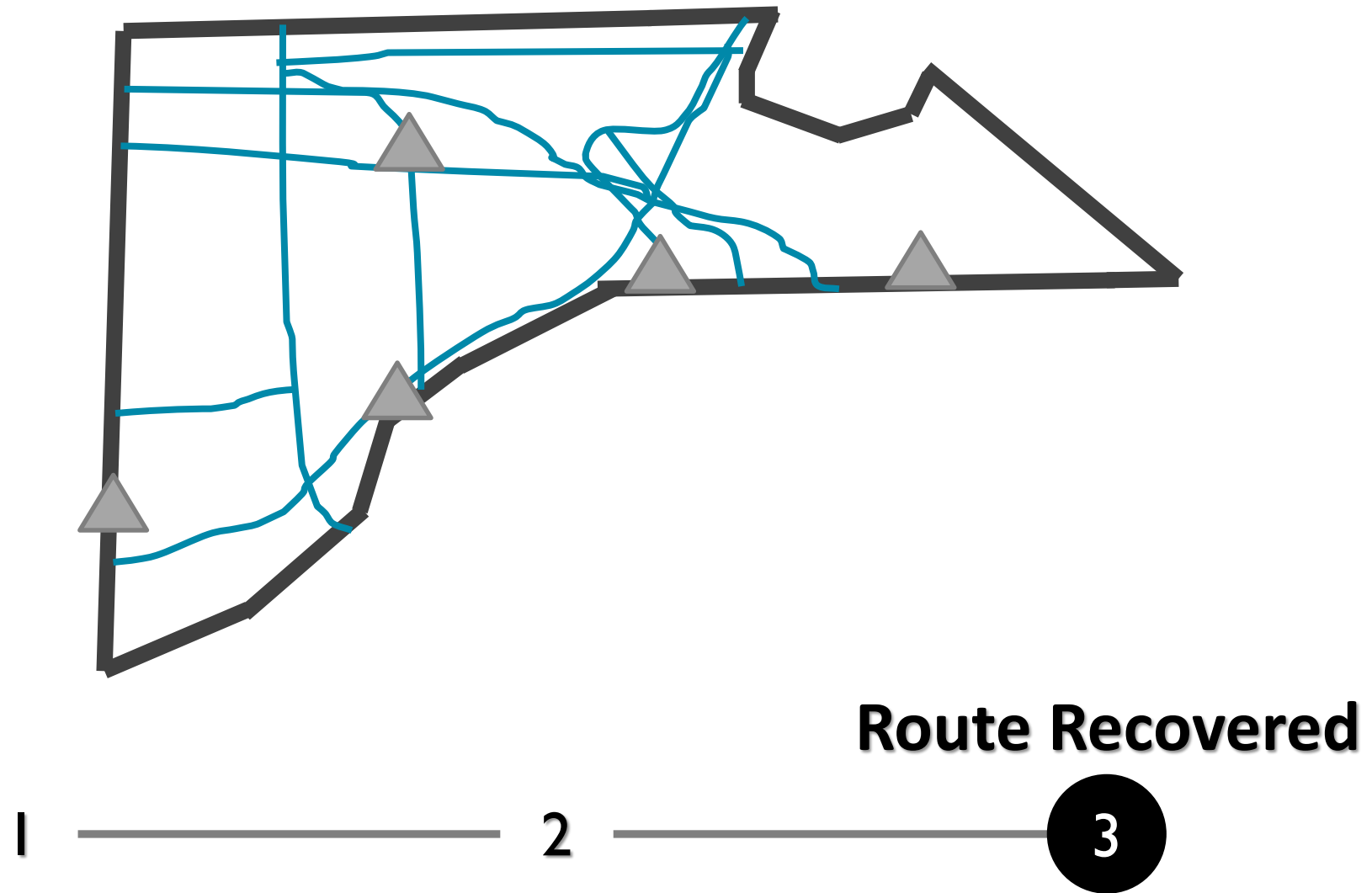
SNOW EVENTS



SNOW EVENTS



SNOW EVENTS



25% routes

15mph wind

40% RWIS

2 hour look
ahead

10mph speed
drop

25% routes

15mph wind

40% RWIS

2 hour look
ahead

10mph speed
drop

25% routes

15mph wind

40% RWIS

2 hour look
ahead

10mph speed
drop

25% routes

15mph wind

40% RWIS

2 hour look
ahead

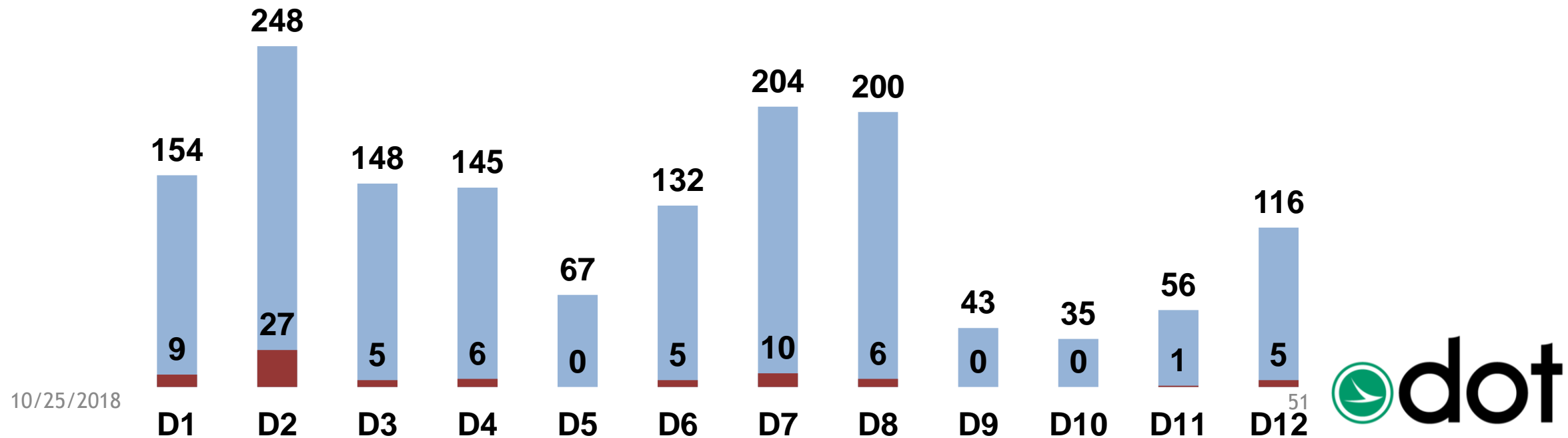
**10mph speed
drop**

The % of routes
recovering speeds
within 2 hours
of a snow event.

The % of routes

HOW IS IT REPORTED?

147495% 548
Routes Recovered Routes Impacted



HOW IS IT REPORTED?

District 7 - March 2015

March 1 [0/16] → Auglaize Clark Darke Logan Mercer Miami Montgomery Shelby

March 3 [0/0] → Mercer

March 23 [0/6] → Auglaize Logan Mercer Shelby

Total Routes Dropped: 22 Total Routes Recovered: 22

Results

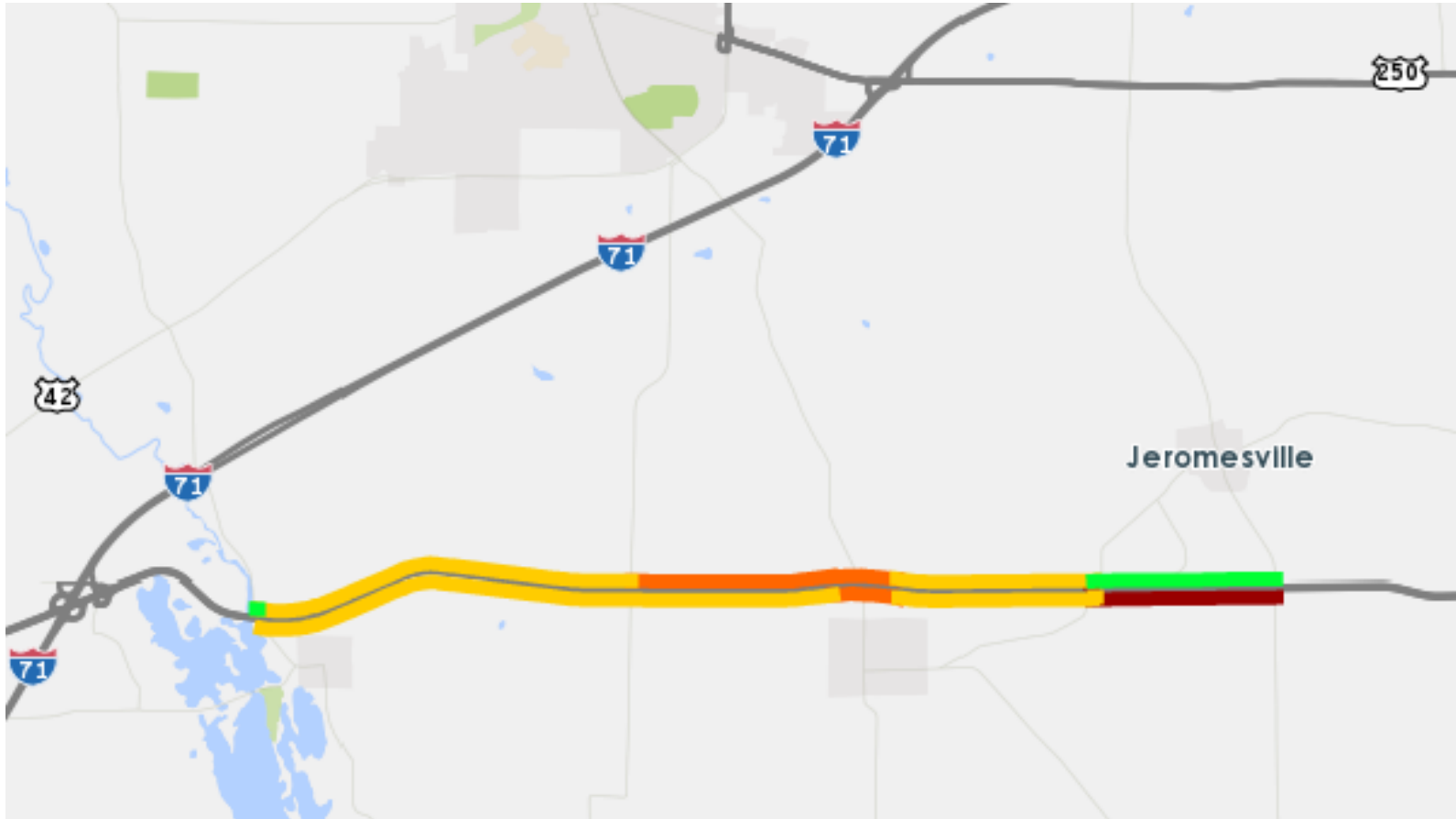
Feedback

Resources

	District	AUG	CHP	CLA	DAR	LOG	MER	MIA	MOT	SHE
Total Routes Down	22	5	0	5	1	2	2	2	3	2
Total Failed Routes	0	0	0	0	0	0	0	0	0	0
% Recovered	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Equipment Miles Pre-Treatment	912	512	0	0	45	0	155	0	0	0
Labor Hours Pre-Treatment	48	32	0	0	8	0	8	0	0	0
Equipment Miles Driven	124907	15843	10936	17406	10320	14427	10509	16560	21187	7719
Labor Hours Regular	7595	993.1	637.8	638.4	855.6	1115.2	673.5	999.5	939.2	742.7

Resources

HOW IS IT REPORTED?



SNOW & ICE DASHBOARD DEMO

OHIO DEPARTMENT OF TRANSPORTATION					2013-2014 Archived Data				
March 2018					February 2018				
District	Total Routes Down	Routes Recovered within 2 Hrs	Routes Recovered after 2 Hrs	% Recovered	District	Total Routes Down	Routes Recovered within 2 Hrs	Routes Recovered after 2 Hrs	% Recovered
District 1	32	31	1	97%	District 1	68	67	1	99%
District 2	11	11	0	100%	District 2	111	111	0	100%
District 3	75	75	0	100%	District 3	101	101	0	100%
District 4	56	56	0	100%	District 4	75	75	0	100%
District 5	23	23	0	100%	District 5	37	36	1	97%
District 6	25	24	1	96%	District 6	44	44	0	100%
District 7	33	31	2	94%	District 7	57	57	0	100%
District 8	31	27	4	87%	District 8	51	49	2	96%
District 9	11	11	0	100%	District 9	19	19	0	100%
District 10	7	7	0	100%	District 10	40	40	0	100%
District 11	20	20	0	100%	District 11	44	44	0	100%
District 12	63	62	1	98%	District 12	71	71	0	100%
Statewide	387	378	9	98%	Statewide	718	714	4	99%
January 2018					December 2017				
District	Total Routes Down	Routes Recovered within 2 Hrs	Routes Recovered after 2 Hrs	% Recovered	District	Total Routes Down	Routes Recovered within 2 Hrs	Routes Recovered after 2 Hrs	% Recovered
District 1	73	73	0	100%	District 1	80	80	0	100%
District 2	82	81	1	99%	District 2	95	94	1	99%
District 3	133	133	0	100%	District 3	125	121	4	97%

DELVING INTO WINTER WEATHER PERFORMANCE MEASURES

John MacAdam, PE
614.752.9695

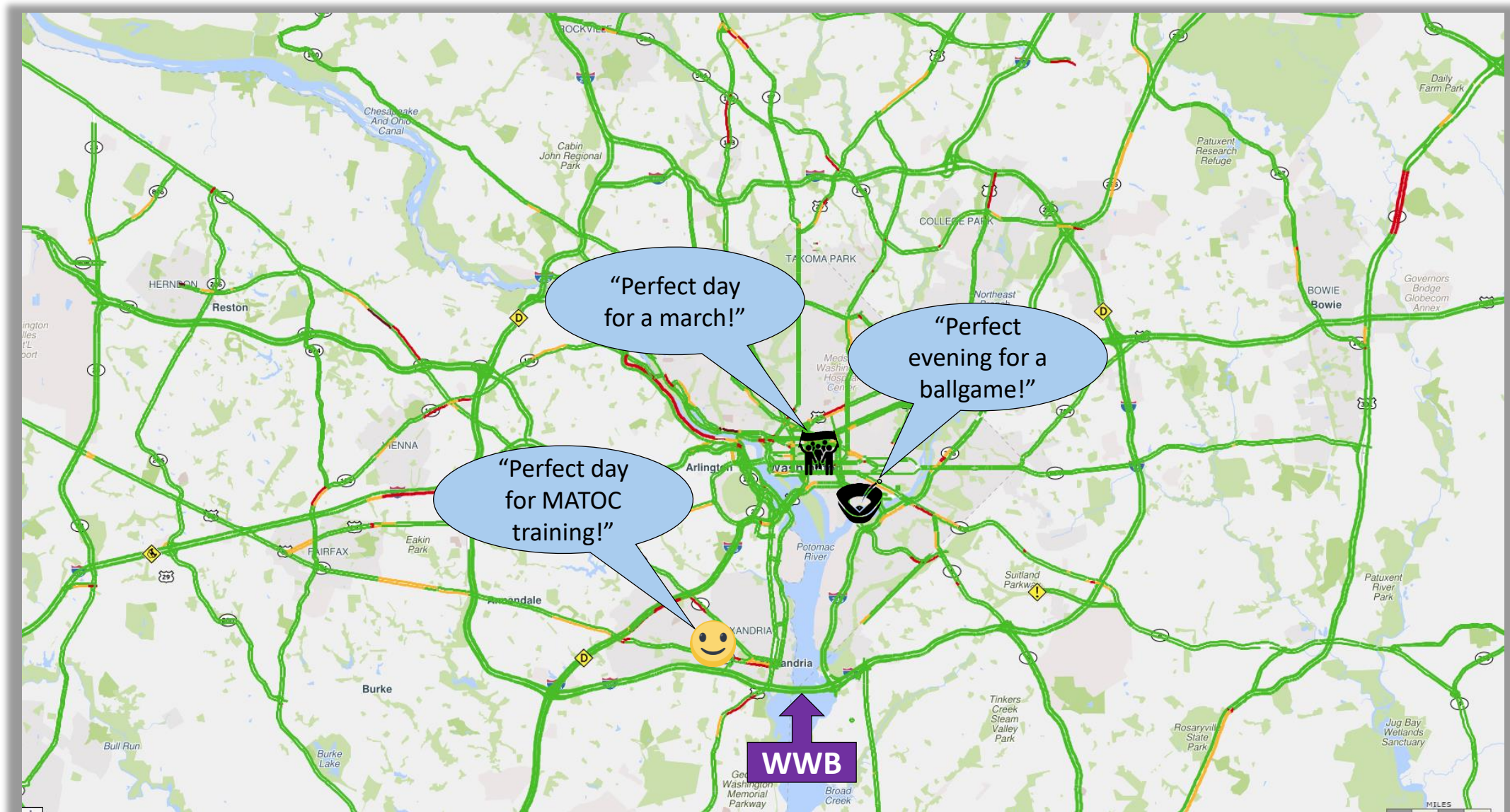
In the spotlight...

Multi-agency, Multi-state response to the June 20 Woodrow Wilson Bridge Collision: An After Action Analysis of operations response

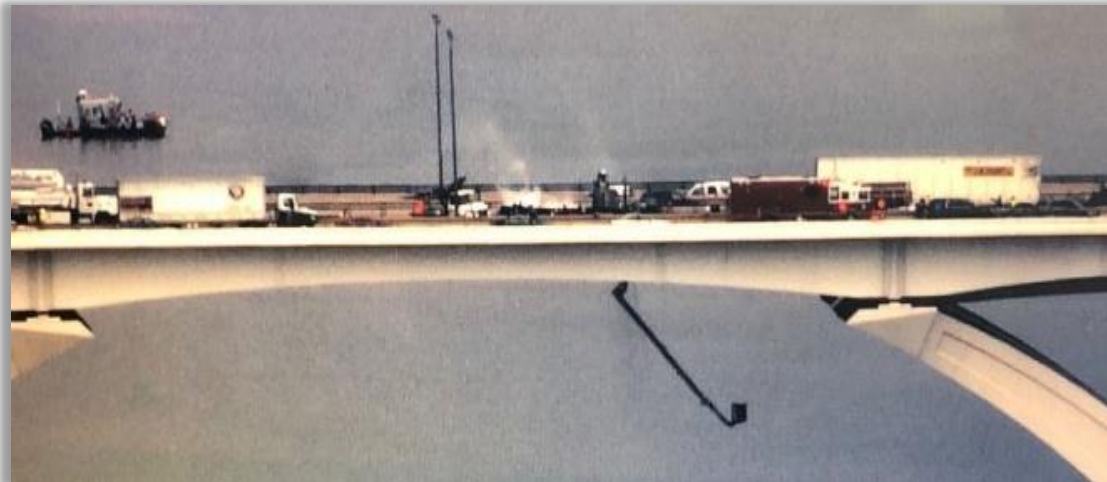
Taran Hutchinson
Metropolitan Area Transportation Operations Coordination
Facilitator



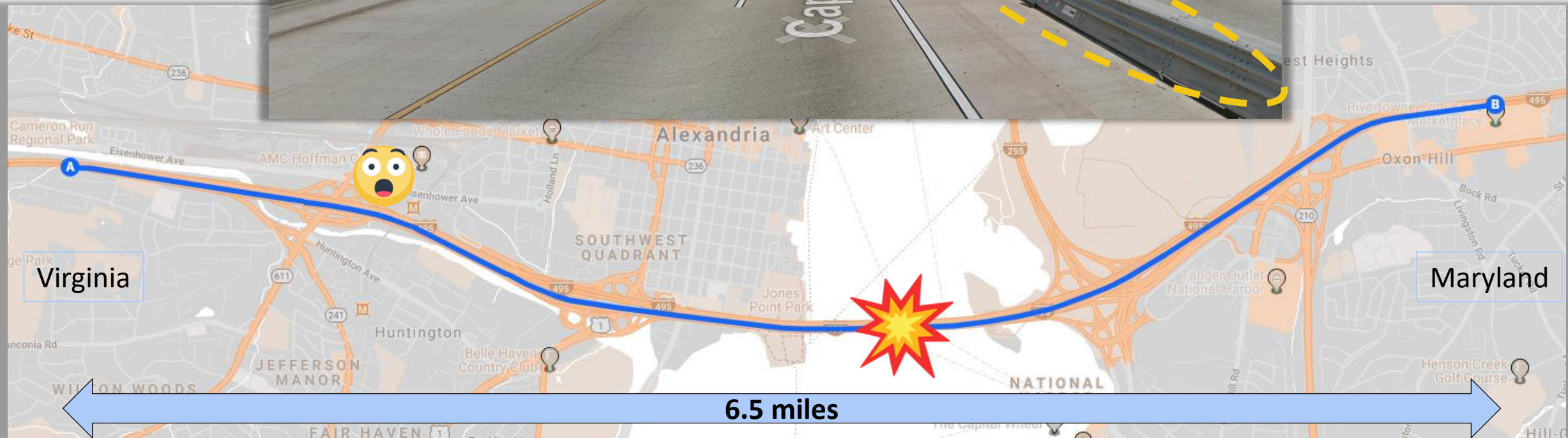
June 20, 2018: A perfect day



A perfect day for...



There's a what on the bridge?!?!



June 20, 2018: WWB Incident

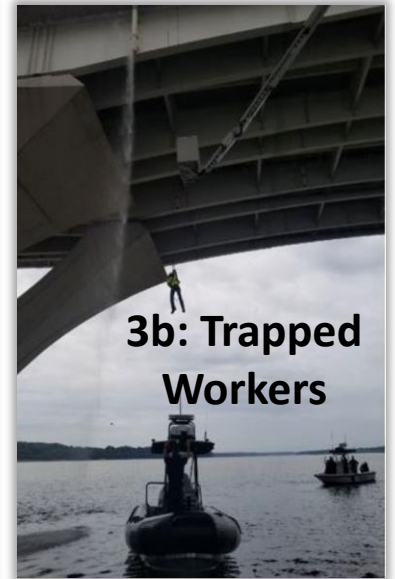
- At approximately 10:45am
- Tractor Trailer Crash & Fire. I-95/495 NB (Outer Loop) Thru Lanes on Woodrow Wilson Bridge, Prince George's County, MD
 - Bridge inspection attenuator truck, snooper truck, and pickup truck struck
 - Involves a fatality (tractor trailer driver)
 - Rescue of trapped work crew below the bridge
 - Temporary closure of the bridge (all lanes)
 - Extensive recovery and cleanup operations required
 - Northbound Outer Loop Thru Lanes closed for most of the day (~12 hours)
 - Late afternoon/early evening precipitation
- Planned Events
 - Midday Rally/March near the National Mall and Pennsylvania Ave (5,000+)
 - Evening MLB Event: Baltimore Orioles at Washington Nationals (41,000+)

Incident Scene

1: Tractor Trailer



3b: Trapped Workers



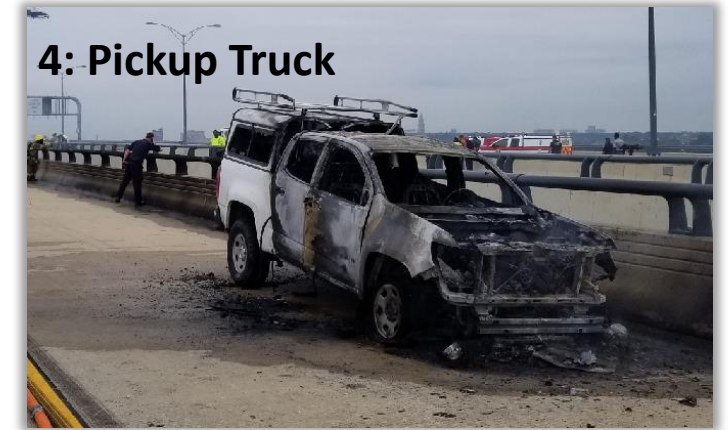
2: Attenuator Truck



3: Snooper Truck



4: Pickup Truck



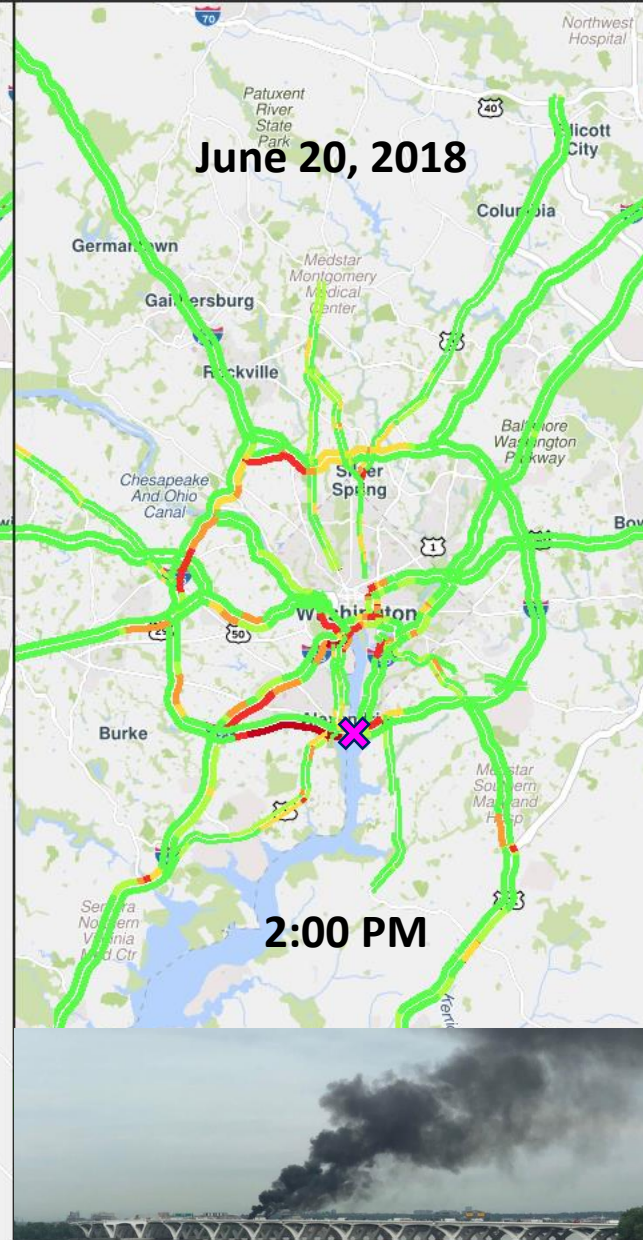
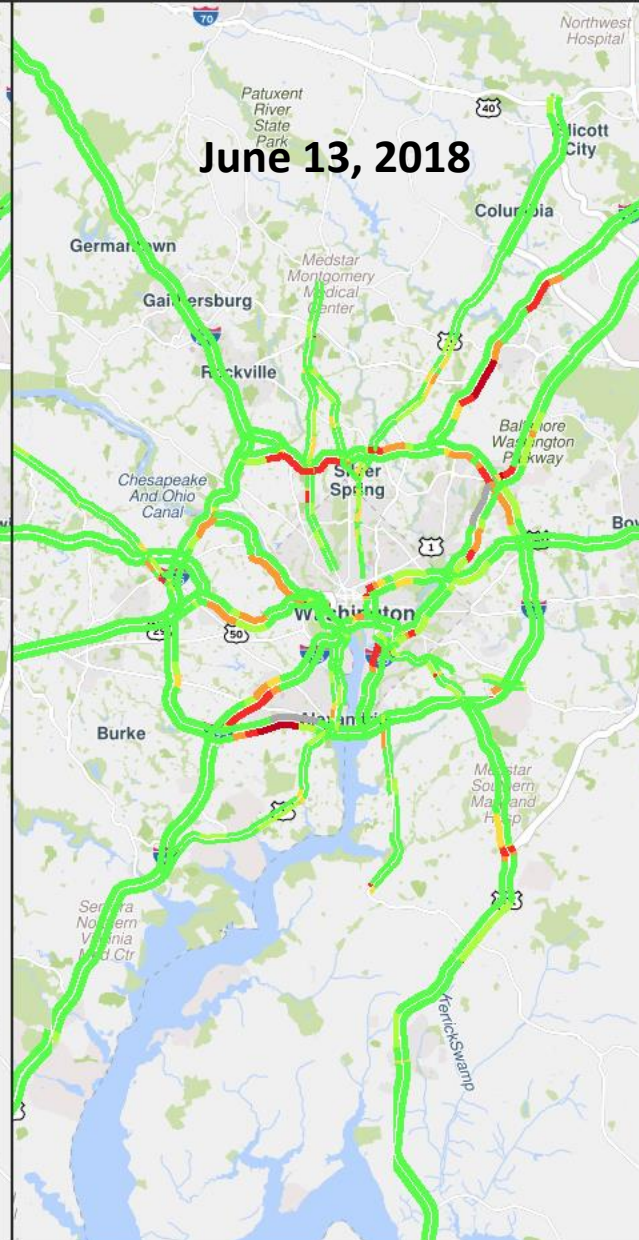
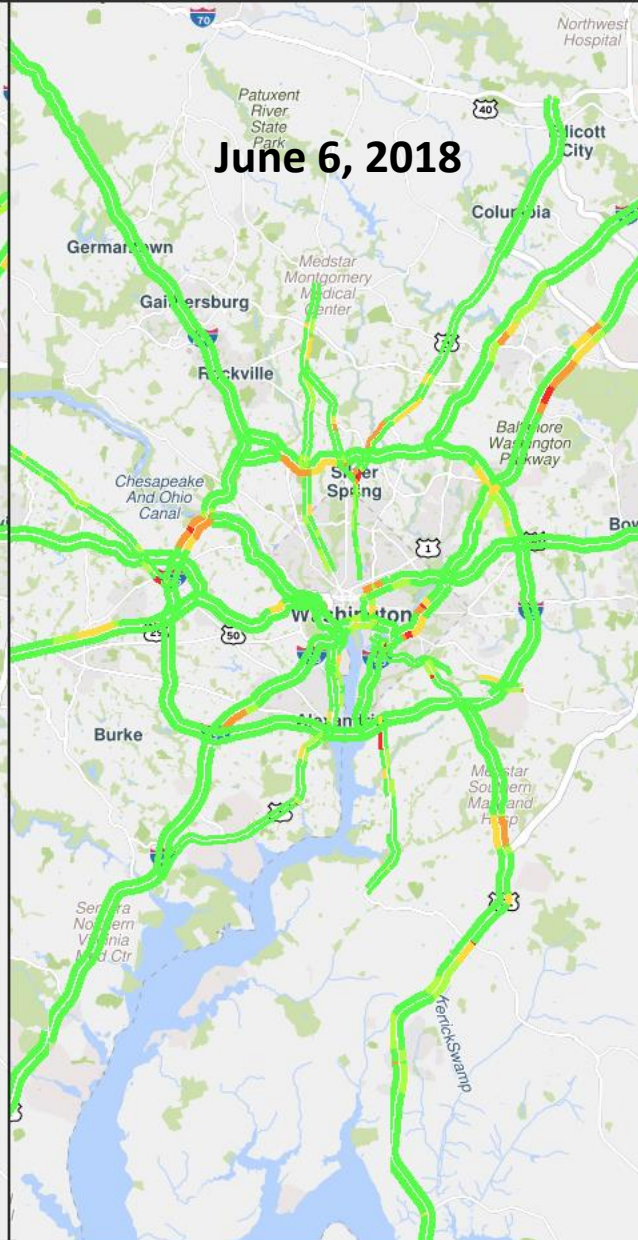
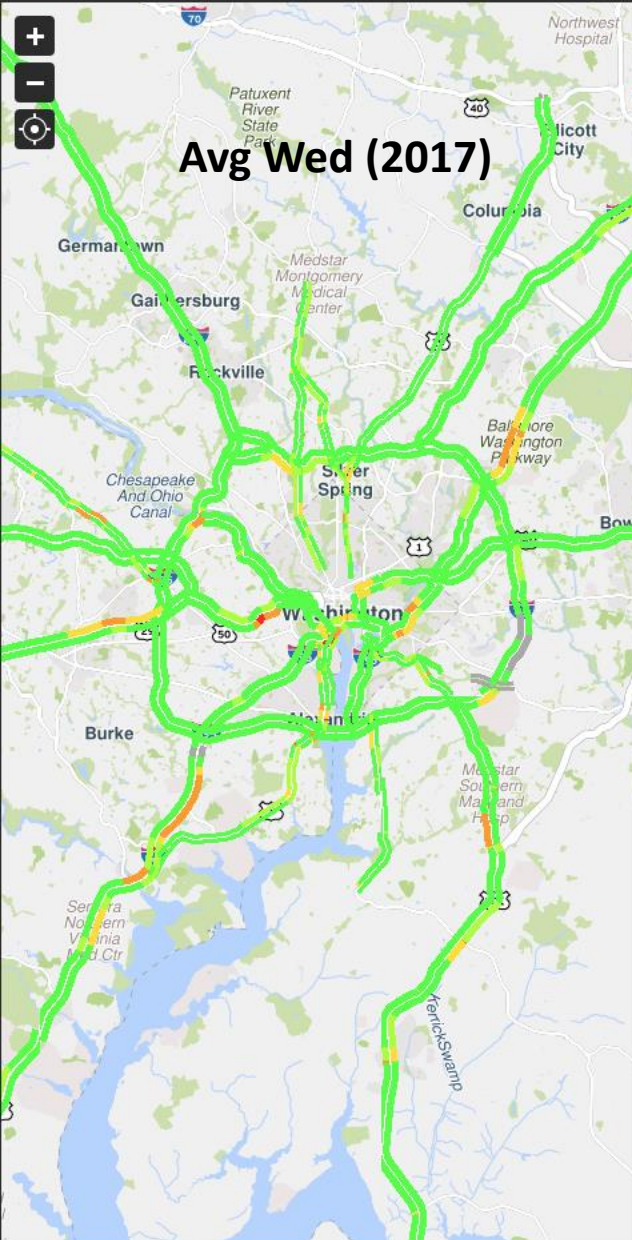


02:00 PM - June 2017 (Every Wednesday)

02:00 PM - June 06, 2018 (Wednesday)

02:00 PM - June 13, 2018 (Wednesday)

02:00 PM - June 20, 2018 (Wednesday)



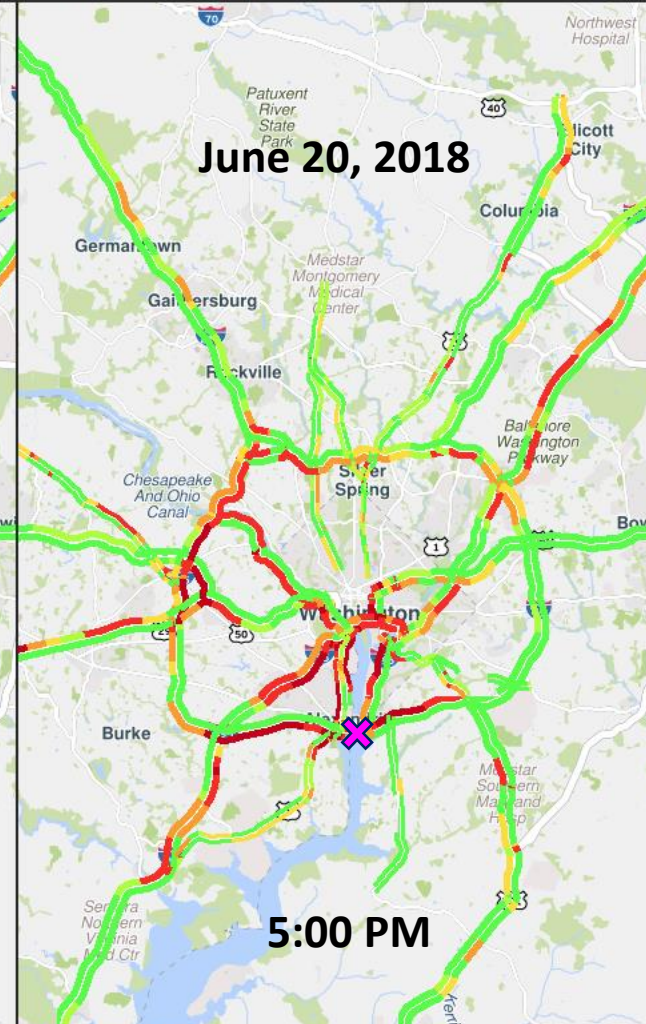
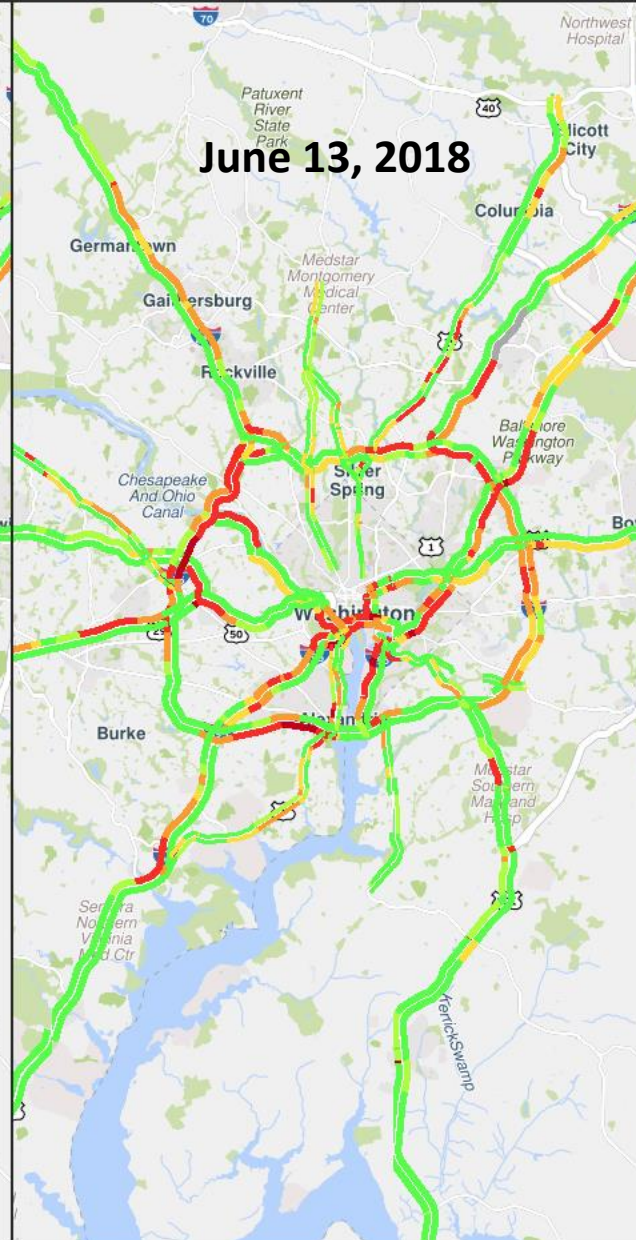
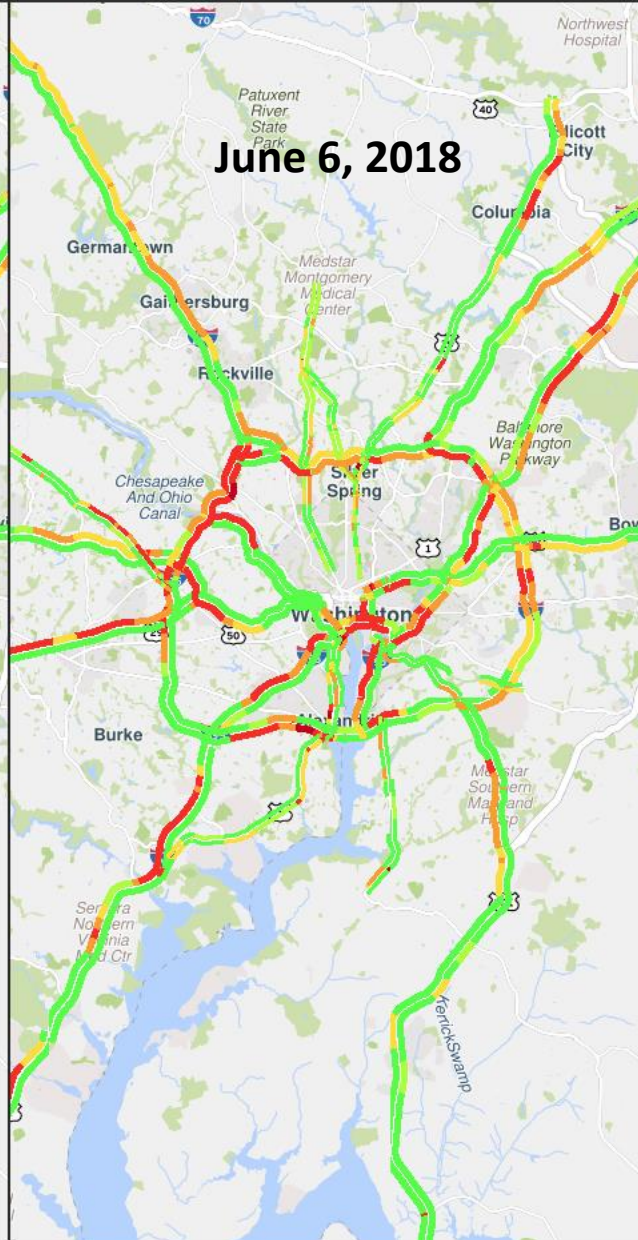
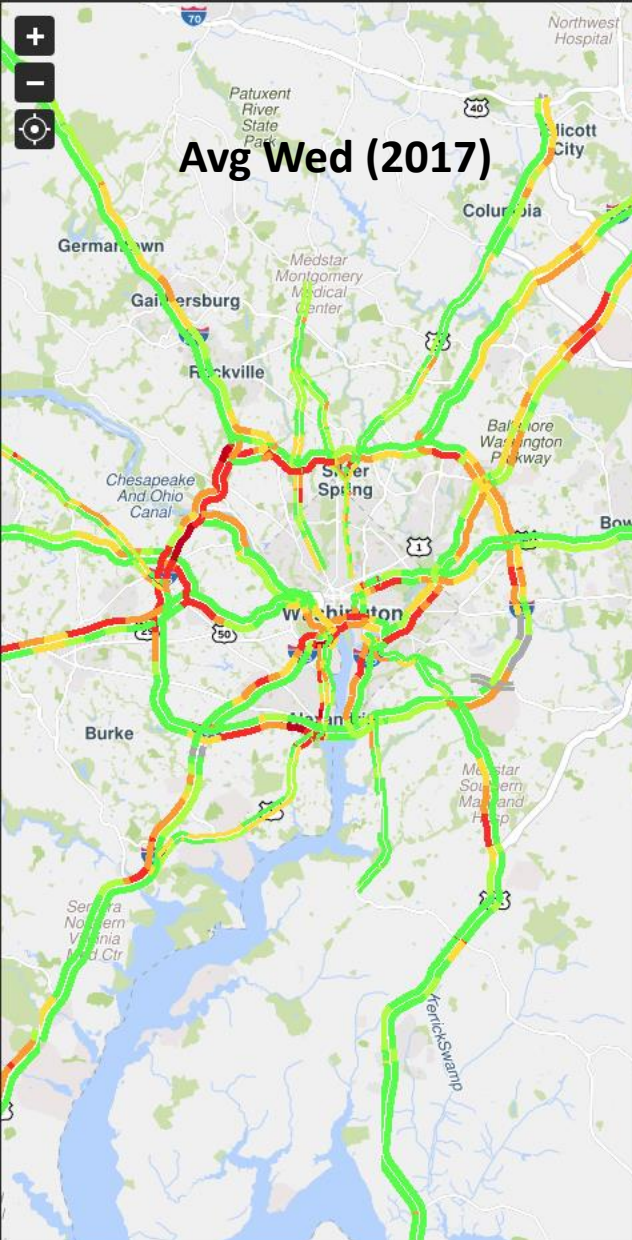


05:00 PM - June 2017 (Every Wednesday)

05:00 PM - June 06, 2018 (Wednesday)

05:00 PM - June 13, 2018 (Wednesday)

05:00 PM - June 20, 2018 (Wednesday)



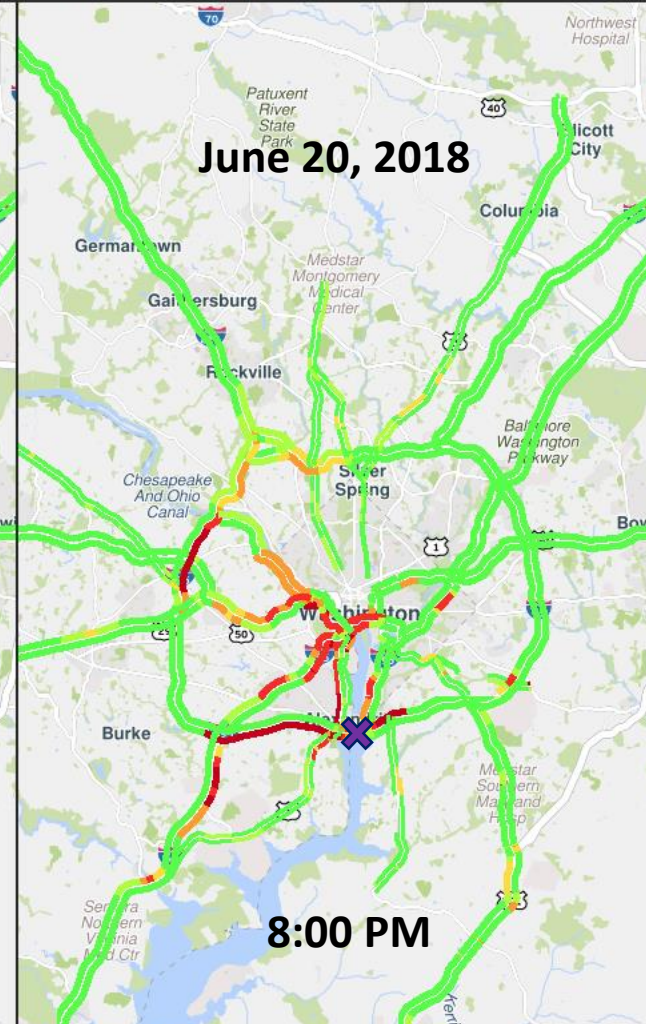
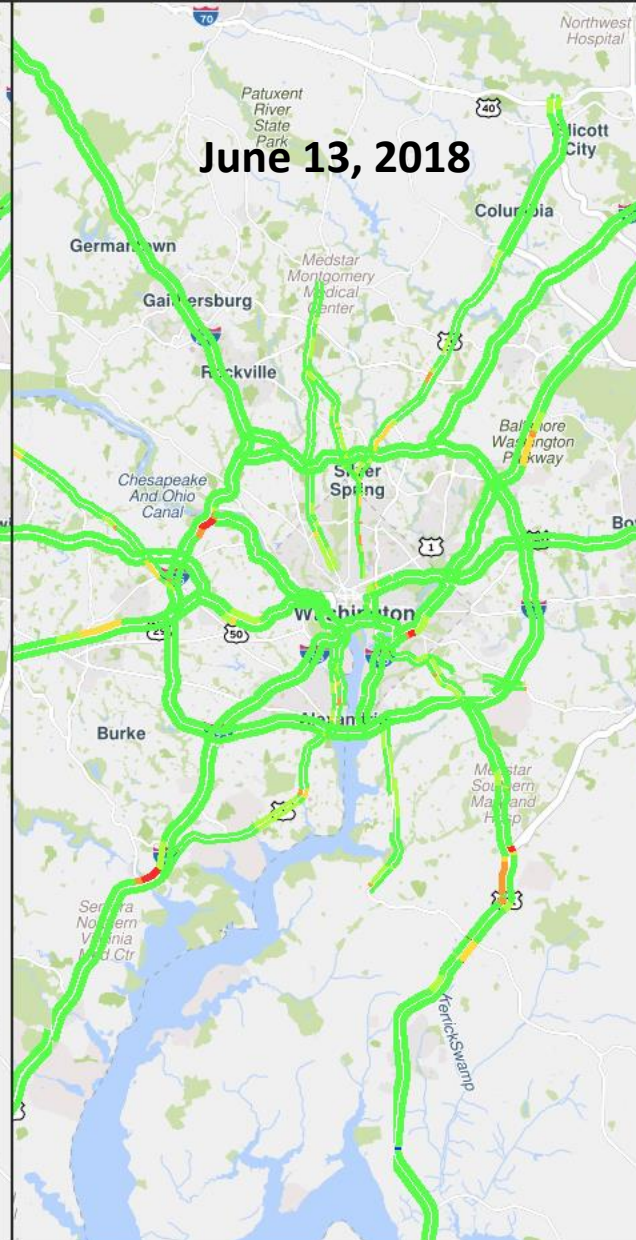
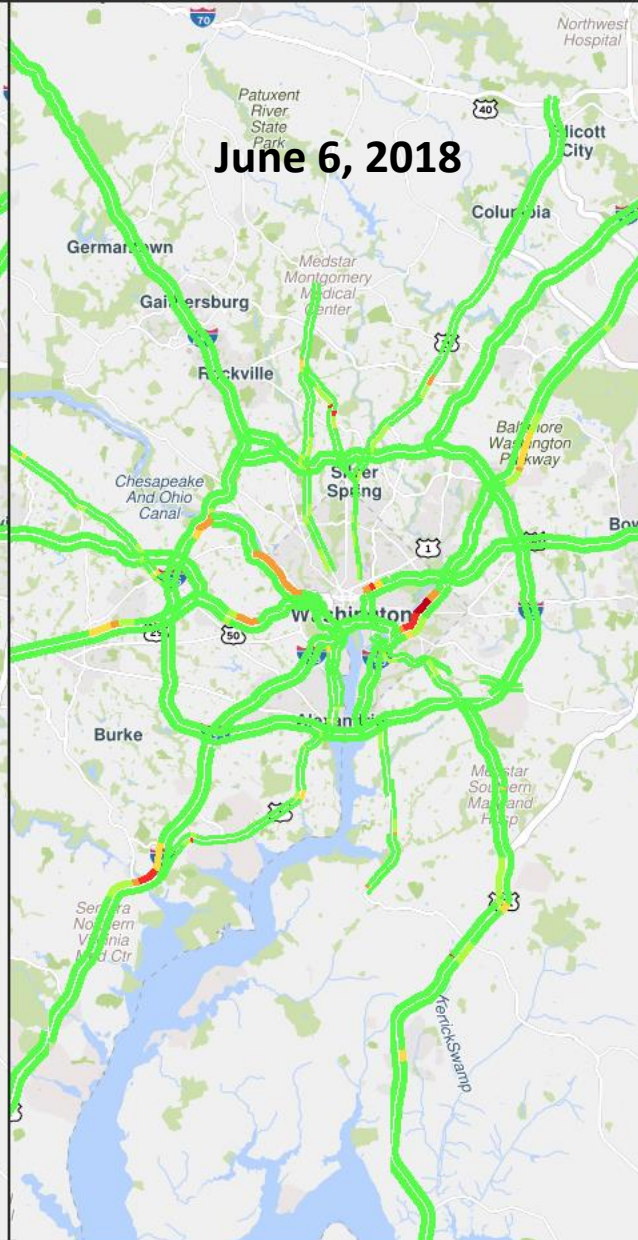
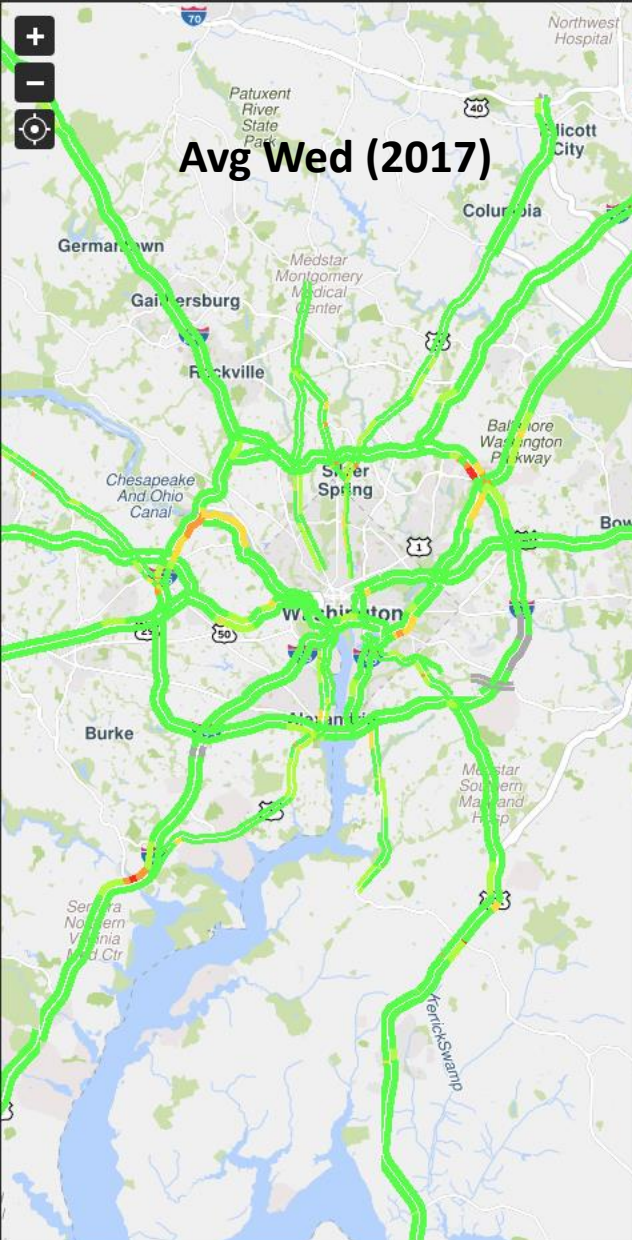


08:00 PM - June 2017 (Every Wednesday)

08:00 PM - June 06, 2018 (Wednesday)

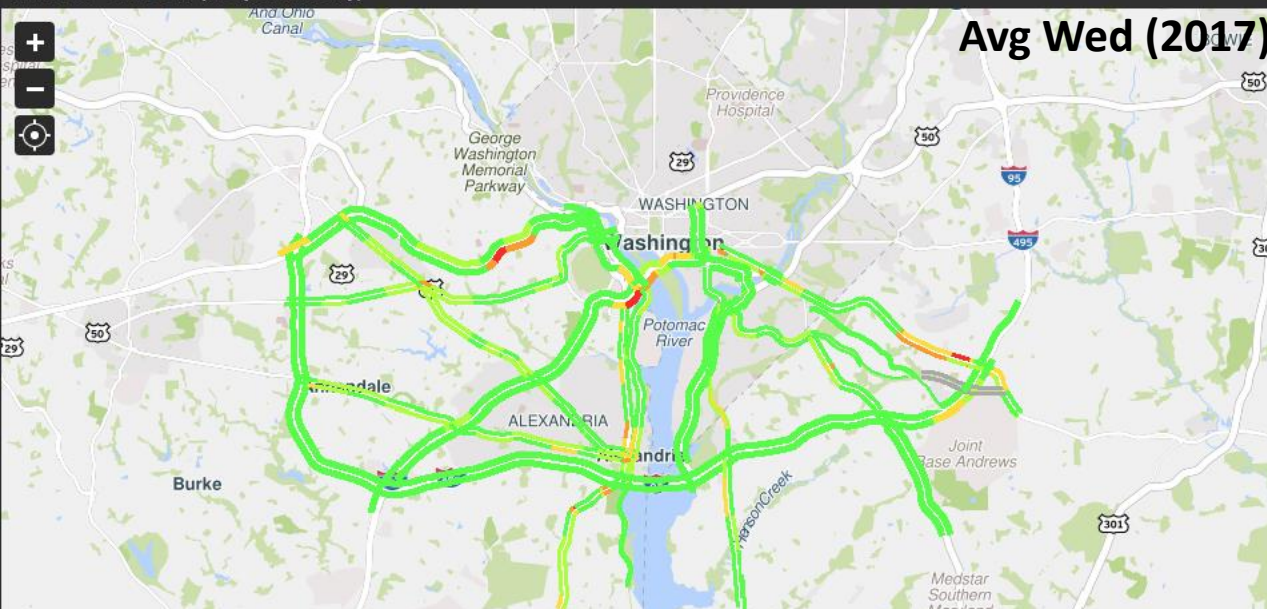
08:00 PM - June 13, 2018 (Wednesday)

08:00 PM - June 20, 2018 (Wednesday)

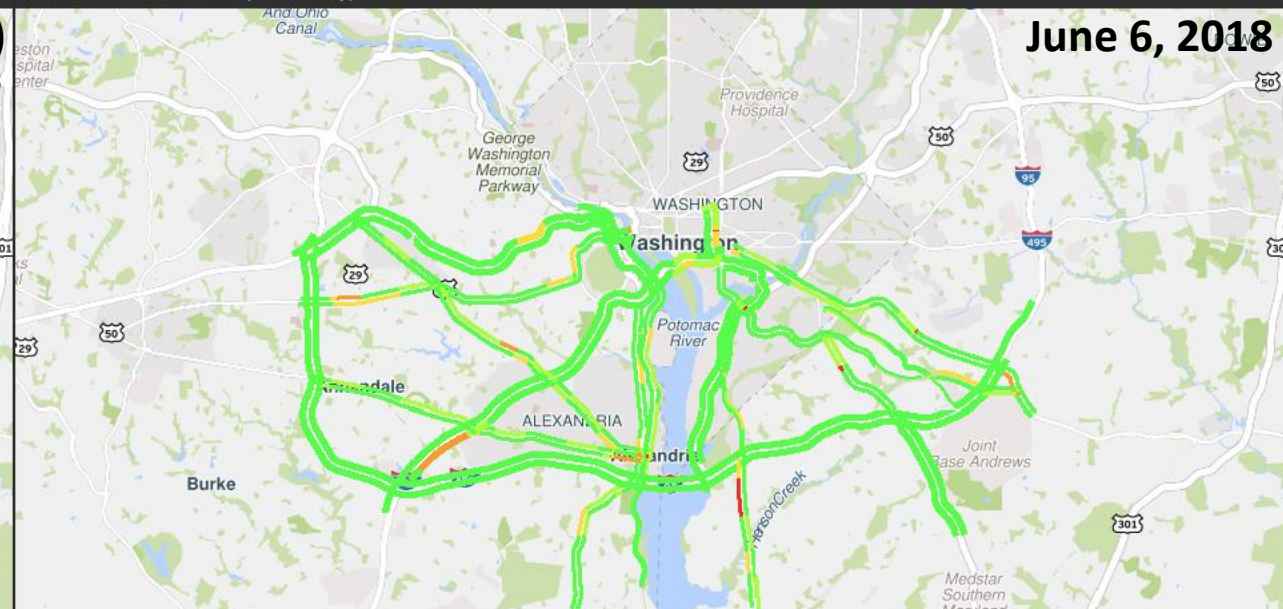




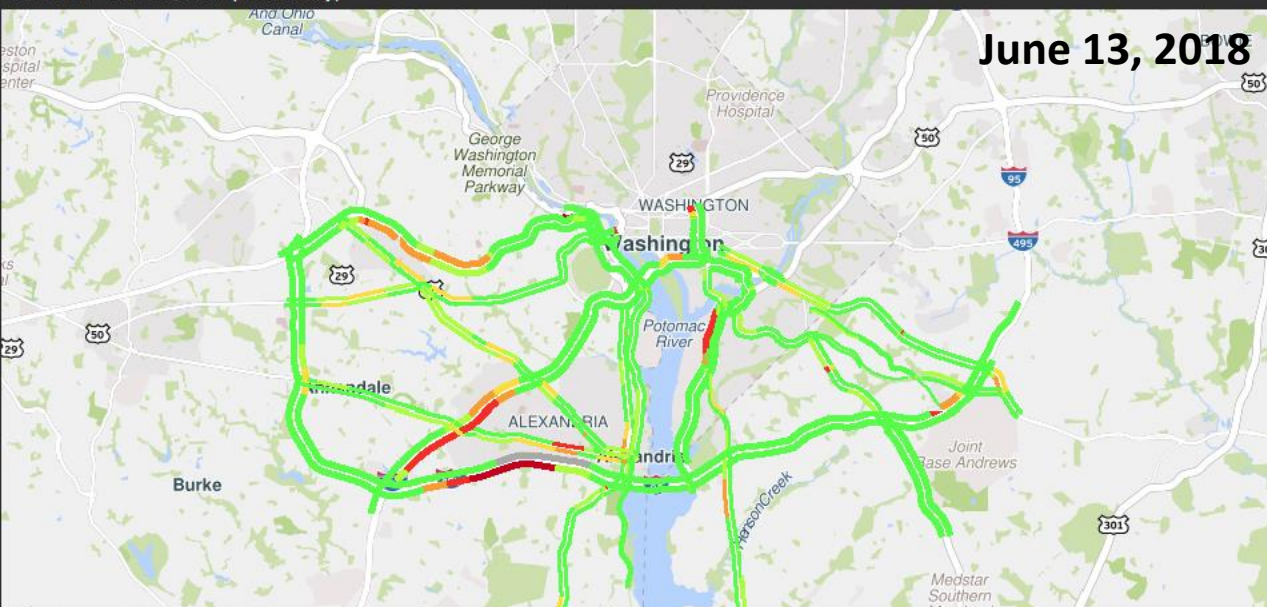
02:00 PM - June 2017 (Every Wednesday)



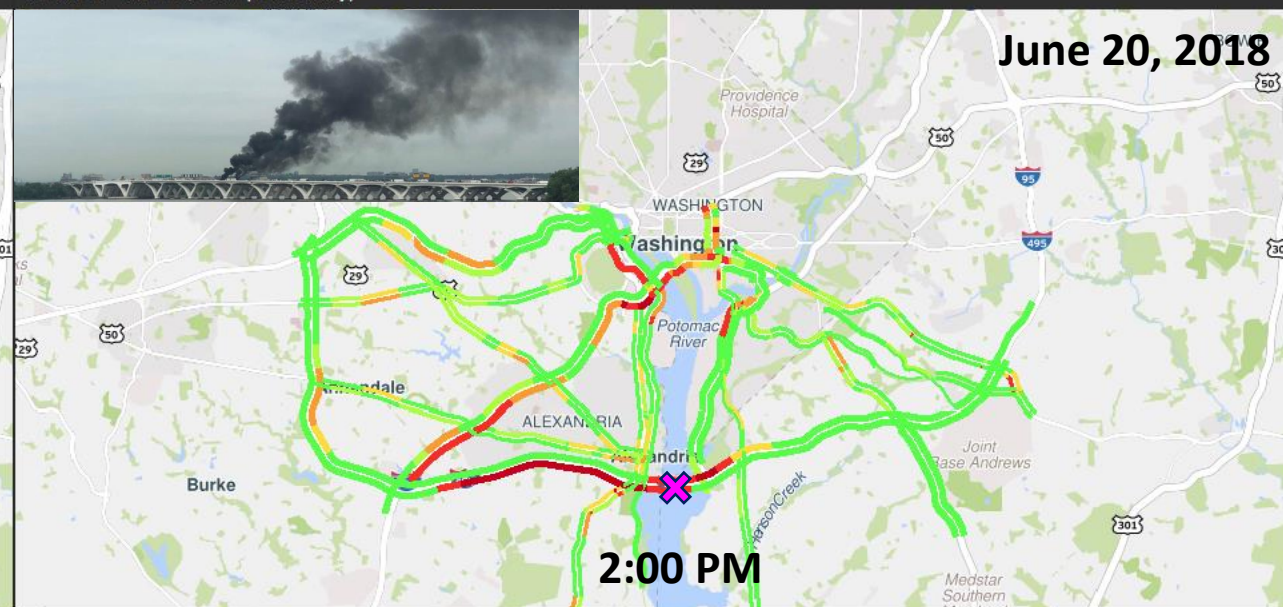
02:00 PM - June 06, 2018 (Wednesday)



02:00 PM - June 13, 2018 (Wednesday)

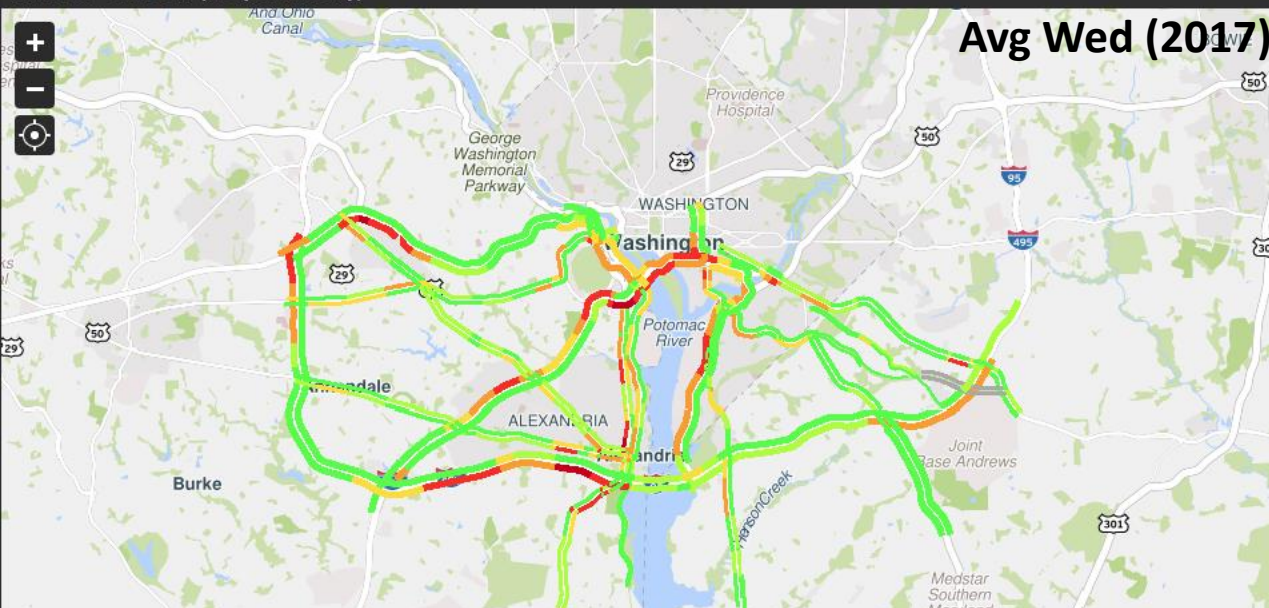


02:00 PM - June 20, 2018 (Wednesday)

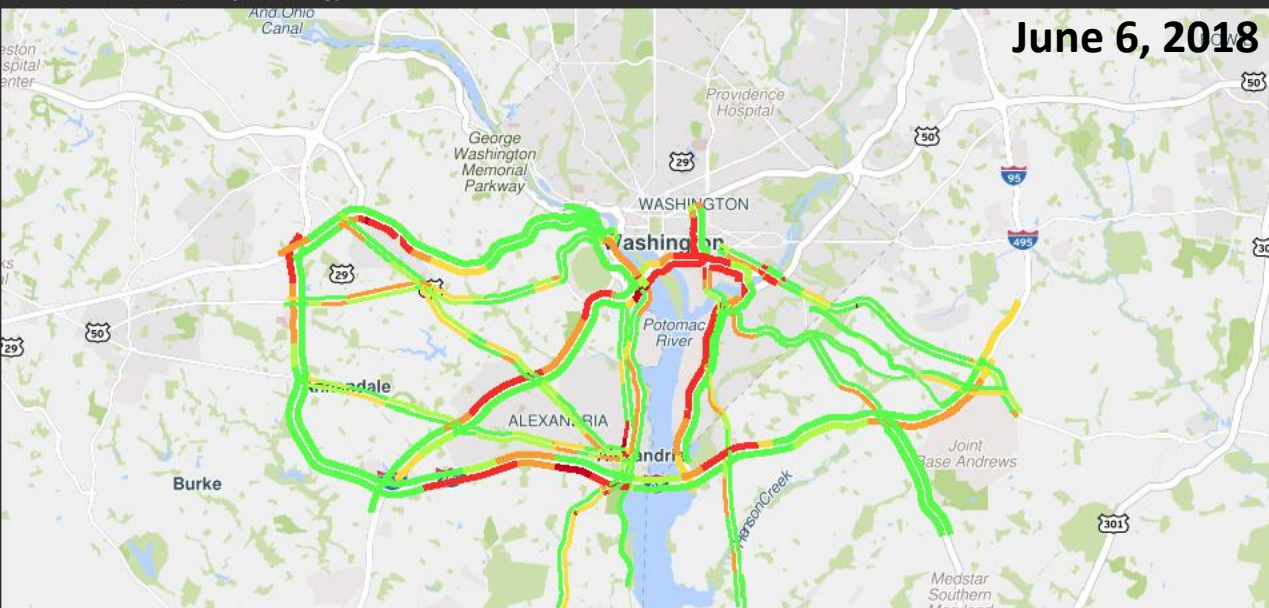




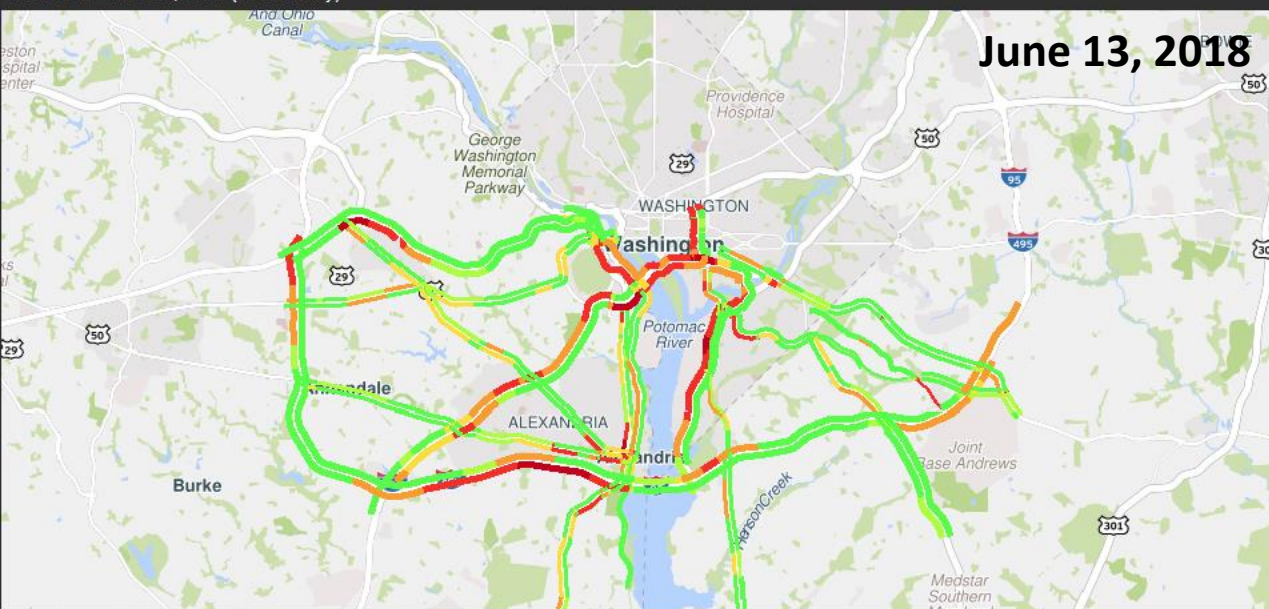
05:00 PM - June 2017 (Every Wednesday)



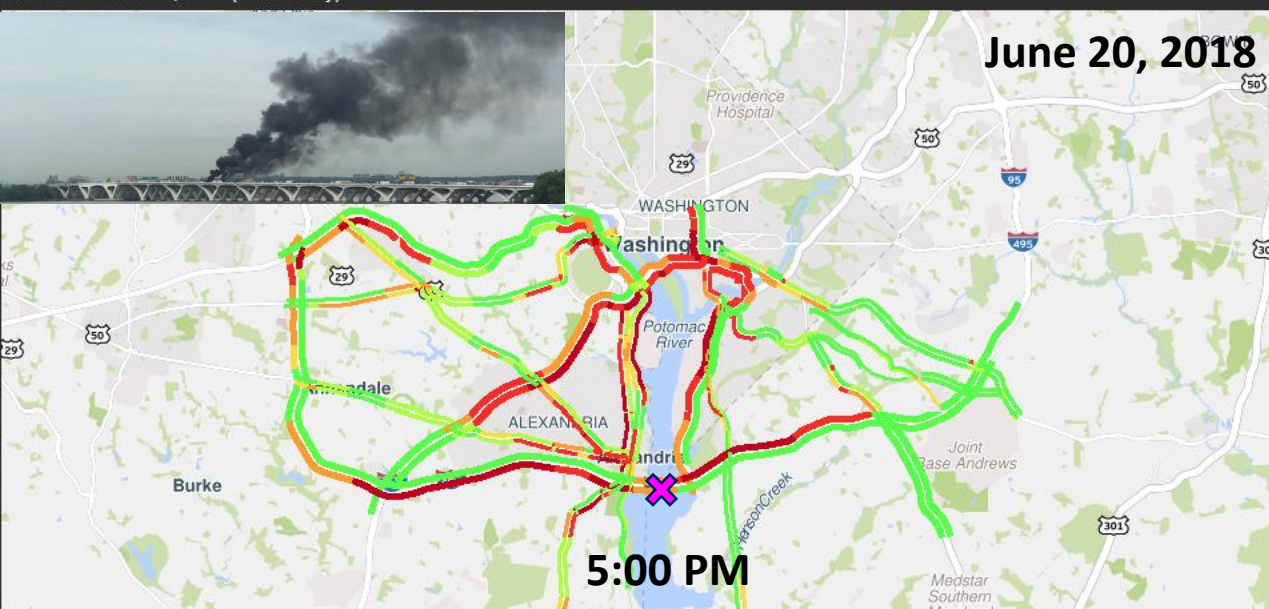
05:00 PM - June 06, 2018 (Wednesday)



05:00 PM - June 13, 2018 (Wednesday)

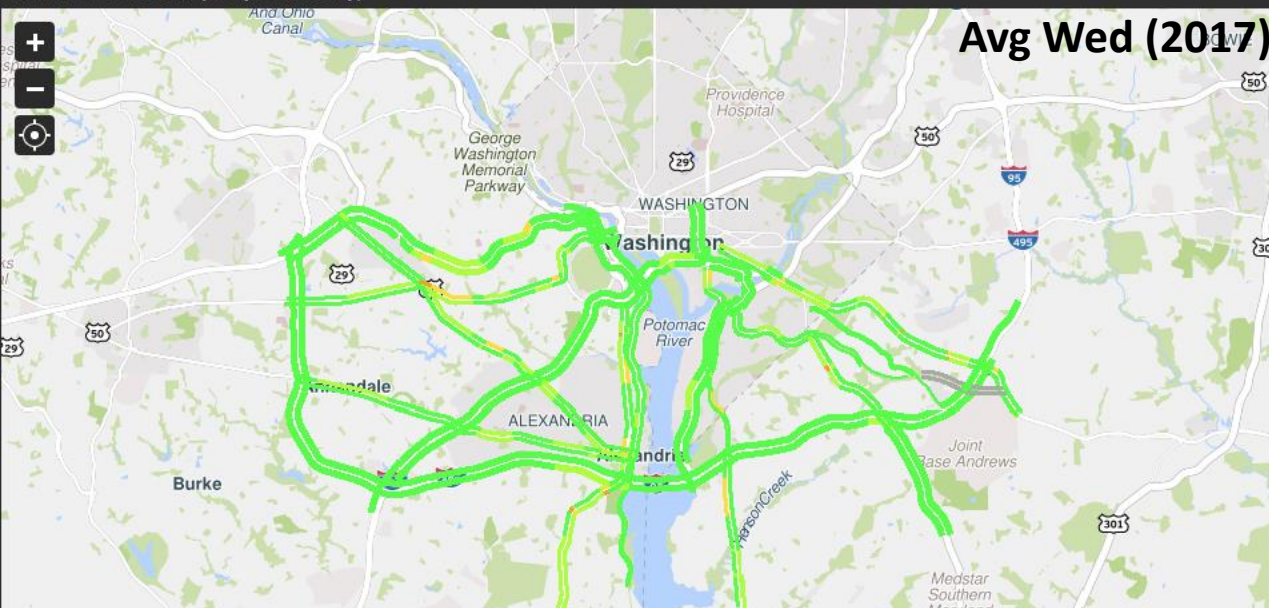


05:00 PM - June 20, 2018 (Wednesday)

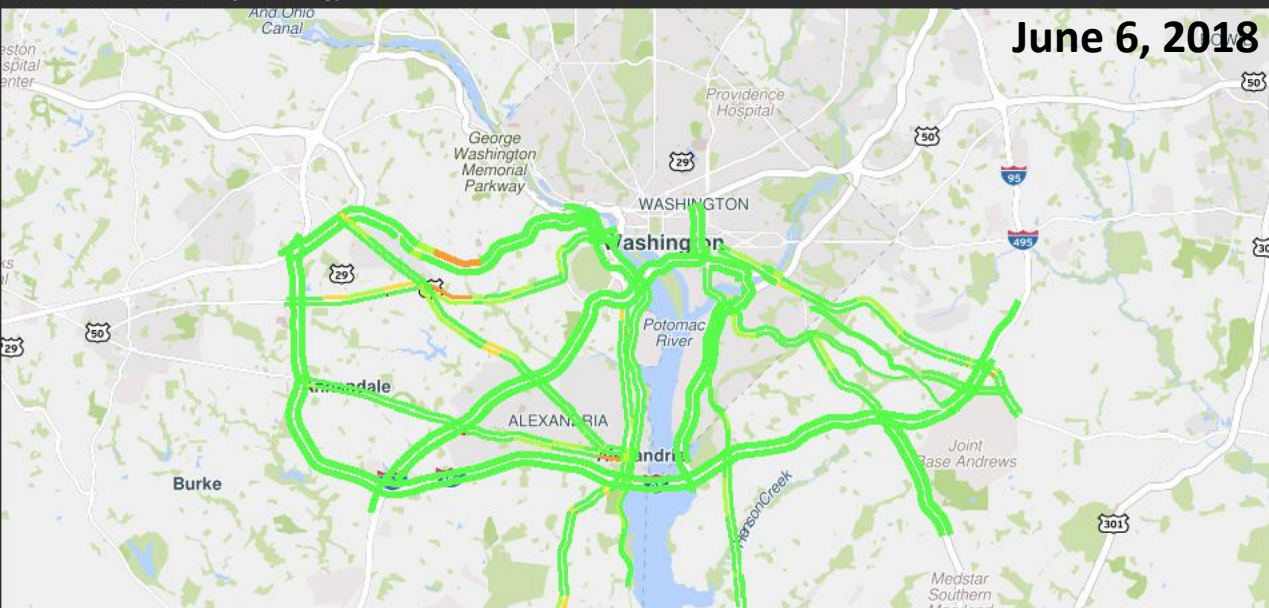




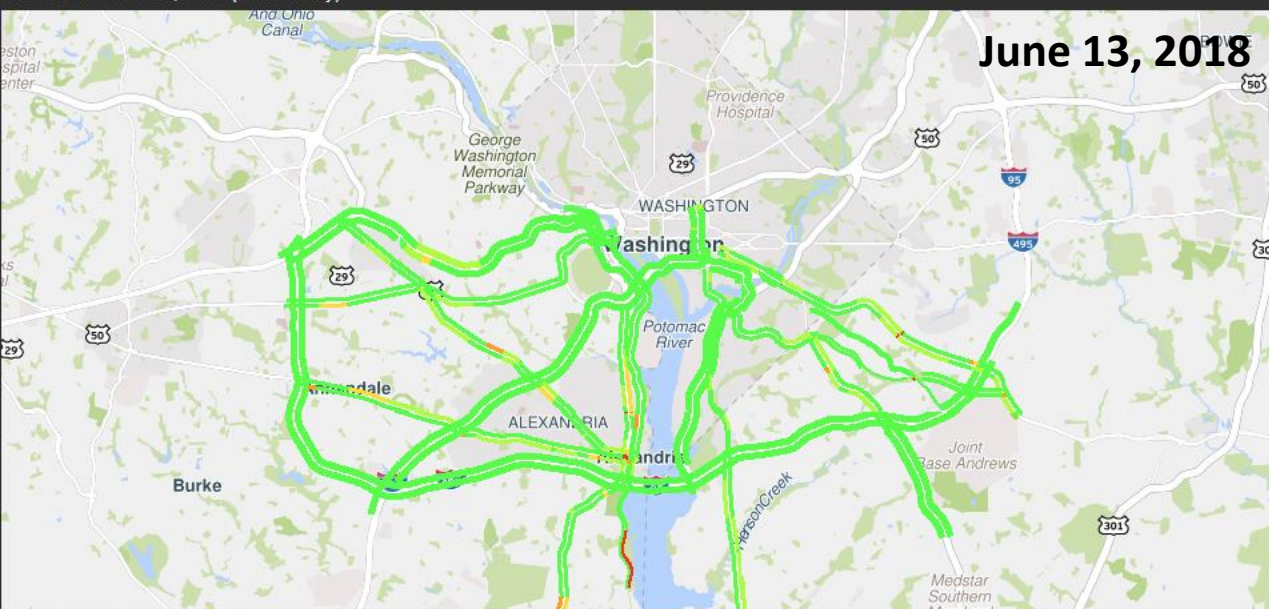
08:00 PM - June 17, 2017 (Every Wednesday)



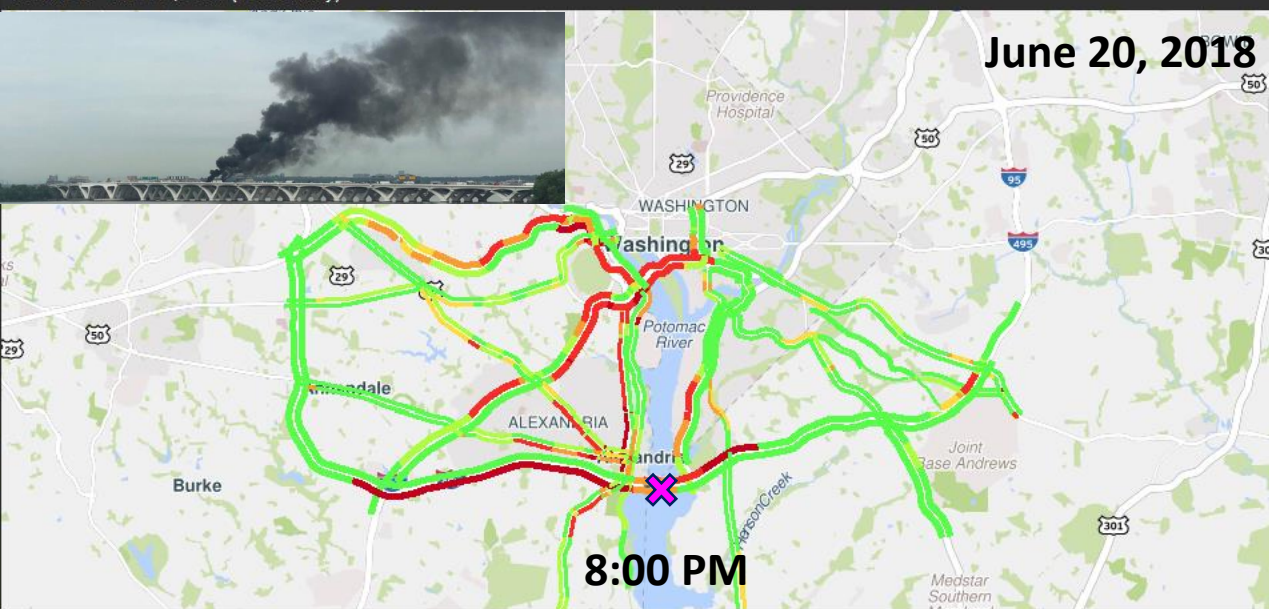
08:00 PM - June 06, 2018 (Wednesday)



08:00 PM - June 13, 2018 (Wednesday)



08:00 PM - June 20, 2018 (Wednesday)

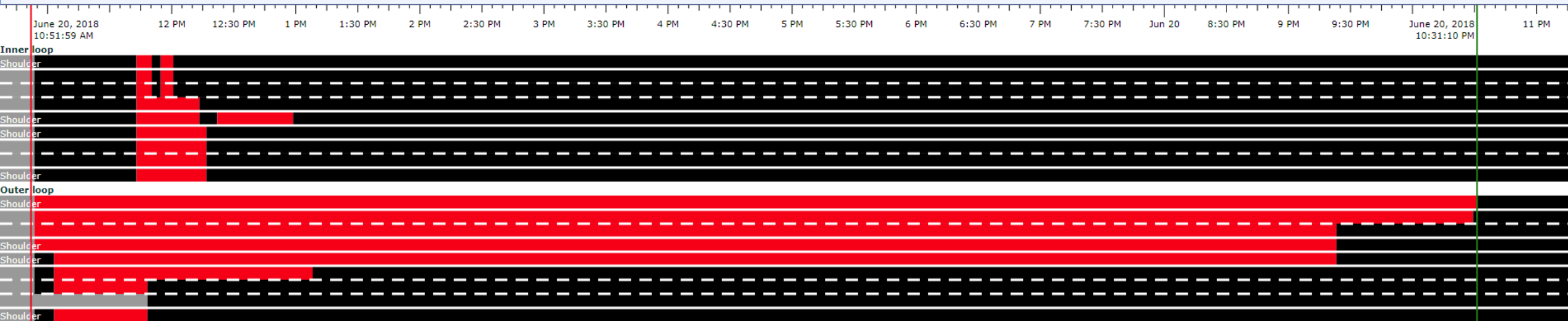


► Traffic management center communications

► Notifications and responders

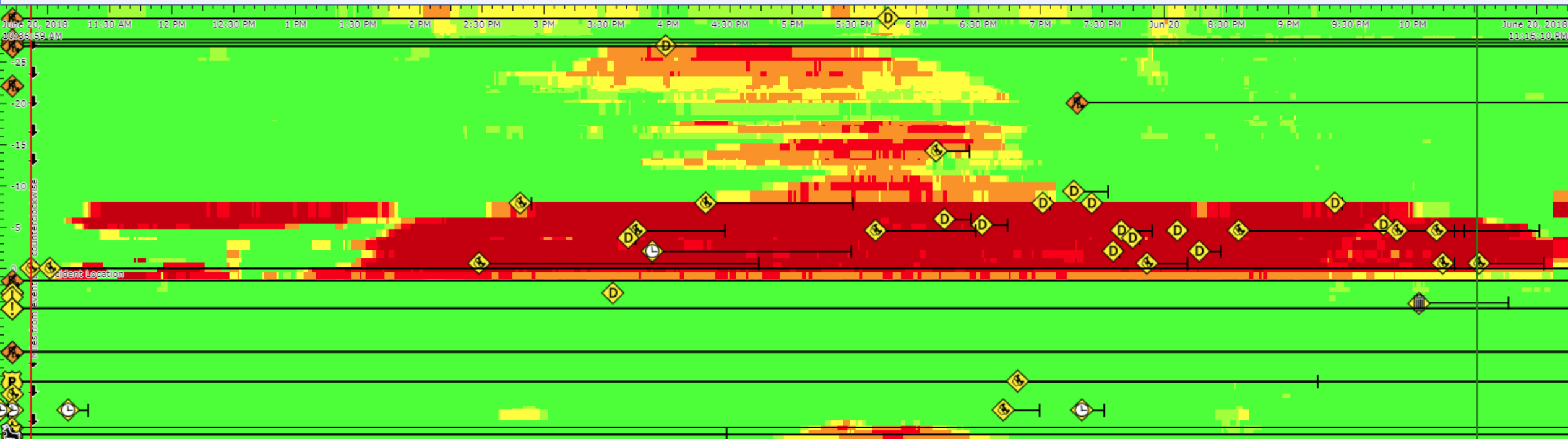
RITIS Incident Timeline – WWB Incident – June 20, 2018

▼ Lane Status

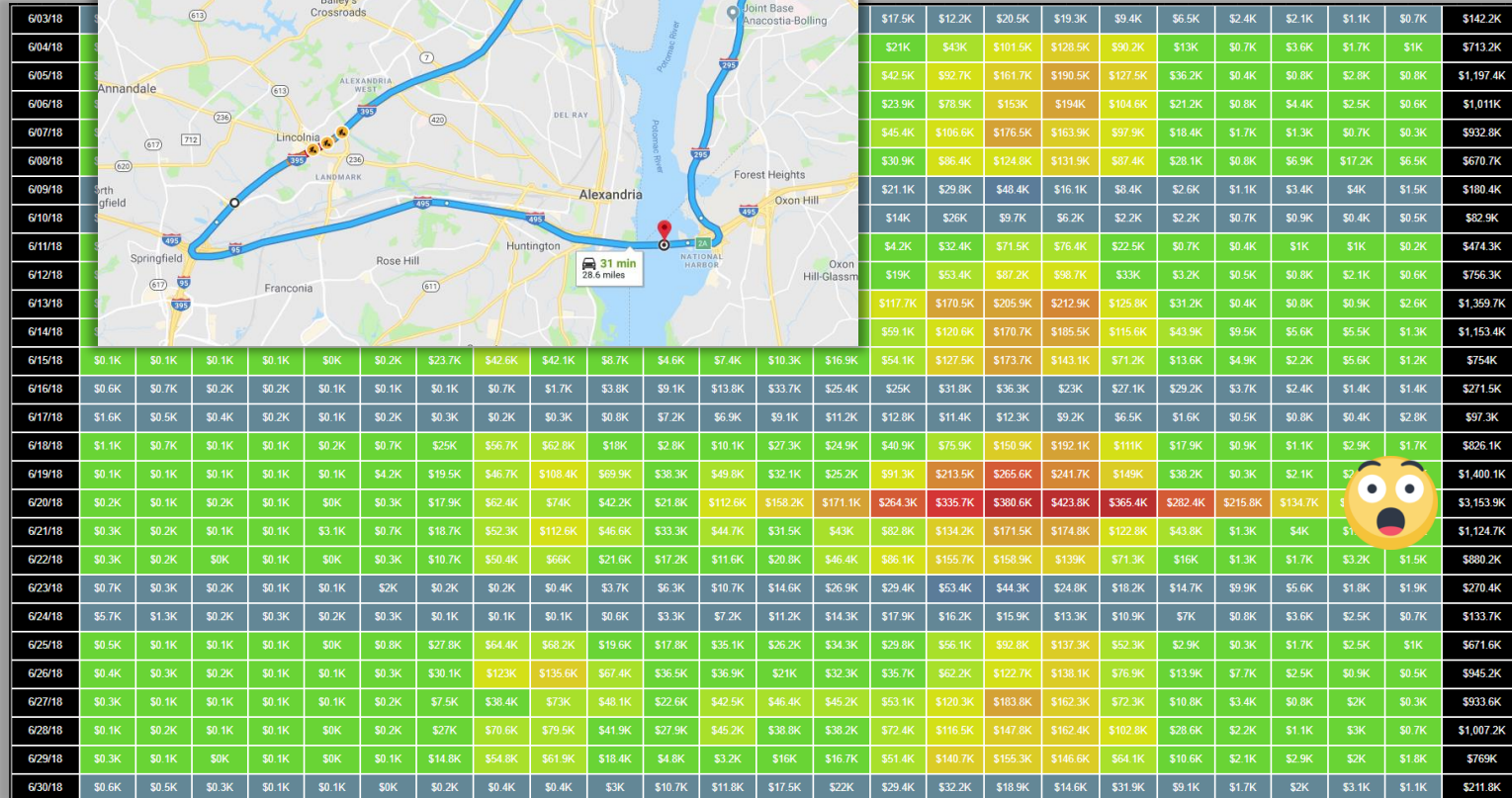


► Overhead sign messages

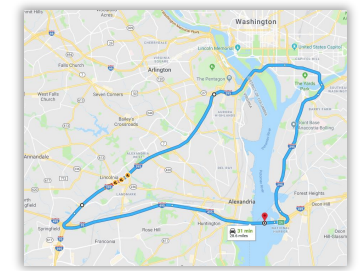
▼ Speed readings on I-95 counterclockwise (event's side of road)







Wednesdays: May vs June



May

Wednesday, May 9, 2018
Delay cost:
 Total: \$960,564.27
 Per VMT: \$0.22
Hours of delay:
 Person-hours: 38,966h 11m 19s
 Vehicle-hours: 31,809h 8m 1s
Vehicle miles traveled (VMT):
 Total: 3,708,530 miles
 Passenger: 3,337,677 miles
 Commercial: 370,853 miles
Delay per VMT: 0.5146 mins / mile
Data validity: 99.51%

Wednesday, May 16, 2018
Delay cost:
 Total: \$1,363,134.47
 Per VMT: \$0.32
Hours of delay:
 Person-hours: 55,296h 49m 33s
 Vehicle-hours: 45,140h 15m 57s
Vehicle miles traveled (VMT):
 Total: 3,691,122 miles
 Passenger: 3,322,009 miles
 Commercial: 369,112 miles
Delay per VMT: 0.7338 mins / mile
Data validity: 96.11%

Wednesday, May 23, 2018
Delay cost:
 Total: \$1,193,129.79
 Per VMT: \$0.28
Hours of delay:
 Person-hours: 48,400h 25m 36s
 Vehicle-hours: 39,510h 33m 9s
Vehicle miles traveled (VMT):
 Total: 3,700,012 miles
 Passenger: 3,330,011 miles
 Commercial: 370,001 miles
Delay per VMT: 0.6407 mins / mile
Data validity: 99.38%

Wednesday, May 30, 2018
Delay cost:
 Total: \$631,793.56
 Per VMT: \$0.15
Hours of delay:
 Person-hours: 25,629h 17m 49s
 Vehicle-hours: 20,921h 52m 30s
Vehicle miles traveled (VMT):
 Total: 3,723,006 miles
 Passenger: 3,350,705 miles
 Commercial: 372,301 miles
Delay per VMT: 0.3372 mins / mile
Data validity: 99.31%

June

Wednesday, June 6, 2018
Delay cost:
 Total: \$1,010,999.49
 Per VMT: \$0.24
Hours of delay:
 Person-hours: 41,012h 8m 26s
 Vehicle-hours: 33,479h 17m 54s
Vehicle miles traveled (VMT):
 Total: 3,712,016 miles
 Passenger: 3,340,814 miles
 Commercial: 371,202 miles
Delay per VMT: 0.5412 mins / mile
Data validity: 99.51%


Wednesday, June 13, 2018
Delay cost:
 Total: \$1,359,734.77
 Per VMT: \$0.32
Hours of delay:
 Person-hours: 55,158h 54m 50s
 Vehicle-hours: 45,027h 41m 5s
Vehicle miles traveled (VMT):
 Total: 3,684,289 miles
 Passenger: 3,315,860 miles
 Commercial: 368,429 miles
Delay per VMT: 0.7333 mins / mile
Data validity: 99.32%

Wednesday, June 20, 2018
Delay cost:
 Total: \$3,153,861.31
 Per VMT: \$0.77
Hours of delay:
 Person-hours: 127,939h 20m 12s
 Vehicle-hours: 104,440h 16m 29s
Vehicle miles traveled (VMT):
 Total: 3,570,901 miles
 Passenger: 3,213,811 miles
 Commercial: 357,090 miles
Delay per VMT: 1.7549 mins / mile
Data validity: 99.06%

Wednesday, June 27, 2018
Delay cost:
 Total: \$933,589.27
 Per VMT: \$0.22
Hours of delay:
 Person-hours: 37,871h 55m 21s
 Vehicle-hours: 30,915h 51m 19s
Vehicle miles traveled (VMT):
 Total: 3,712,526 miles
 Passenger: 3,341,273 miles
 Commercial: 371,253 miles
Delay per VMT: 0.4996 mins / mile
Data validity: 97.85%

User Delay Cost Analysis

Total Vehicle-hours of Delay

	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Daily Totals					
6/03/18	257h	144h	78h	50h	54h	82h	119h	238h	629h	737h	1,901h	4,324h	9,446h	12,042h	14,820h	13,926h	11,193h	7,254h	6,046h	3,231h	1,688h	1,440h	665h	286h	90,664h					
6/04/18	 <div>June 2018</div>							7,008h	16,491h	16,910h	8,475h	4,316h	4,389h	3,847h	3,951h	6,549h	15,503h	25,756h	30,601h	4 weeks before July 4 th Holiday										
6/05/18								10,167h	23,889h	27,152h	17,166h	9,967h	5,194h	4,198h	5,434h	8,781h	17,736h	29,649h	36,823h	1.223M Veh-Hrs of Delay										
6/06/18								9,402h	22,818h	26,458h	15,082h	7,344h	6,079h	5,424h	4,839h	7,610h	19,586h	32,159h	40,712h	24,773h	(1.027M in 2012)									
6/07/18								6,066h	15,998h	15,567h	8,092h	5,534h	5,336h	5,333h	6,814h	11,441h	23,885h	35,445h	37,918h	21,208h	5,202h	1,223h	1,113h	1,094h	627h	173,442h				
6/08/18								3,940h	10,357h	9,906h	4,920h	4,014h	4,535h	5,952h	8,793h	15,759h	29,243h	35,287h	29,667h	15,575h	4,358h	1,350h	1,133h	1,257h	584h	188,675h				
6/09/18								128h	311h	649h	1,768h	3,721h	5,772h	7,517h	11,185h	13,560h	13,712h	12,963h	9,806h	6,019h	2,688h	1,816h	1,355h	1,096h	581h	95,005h				
6/10/18								160h	259h	424h	731h	1,190h	2,098h	3,506h	6,627h	7,640h	7,539h	5,890h	6,465h	3,287h	1,274h	1,277h	718h	312h	188h	50,290h				
6/11/18								10,639h	20,249h	20,285h	12,373h	6,183h	3,852h	2,846h	3,025h	5,966h	13,529h	20,583h	22,997h	10,847h	2,053h	967h	768h	411h	235h	159,438h				
6/12/18								8,221h	20,555h	21,247h	10,814h	6,466h	4,032h	3,970h	5,293h	8,695h	21,545h	29,413h	34,845h	18,224h	3,664h	971h	1,024h	690h	297h	201,075h				
6/13/18								7,803h	16,188h	18,959h	10,973h	6,828h	6,287h	6,002h	8,438h	16,111h	27,034h	34,062h	38,682h	21,724h	5,272h	1,299h	1,041h	1,154h	641h	229,556h				
6/14/18	7,852h	18,225h	20,179h	9,798h	6,443h	7,166h	6,996h	8,166h	13,213h	26,315h	36,191h	38,191h	23,634h	7,306h	1,244h	1,114h	1,114h	1,185h	238,901h											
6/15/18	5,886h	11,422h	9,754h	4,755h	5,543h	6,790h	10,007h	14,490h	24,681h	36,626h	42,757h	36,219h	18,096h	6,538h	2,001h	1,081h	1,116h	934h	240,098h											
6/16/18	600h	1,473h	2,552h	4,085h	7,063h	9,451h	12,393h	11,783h	11,159h	11,325h	10,499h	8,614h	6,828h	3,770h	1,520h	993h	1,162h	809h	106,770h											
6/17/18	115h	171h	334h	516h	1,815h	2,974h	4,813h	7,635h	9,053h	6,556h	5,776h	4,821h	3,457h	2,204h	1,398h	1,280h	682h	1,068h	55,323h											
6/18/18	7,394h	15,298h	16,489h	9,187h	5,313h	5,877h	6,588h	7,066h	10,421h	17,726h	26,301h	30,148h	15,764h	2,861h	692h	1,092h	1,092h	1,069h	183,106h											
6/19/18	412h	64h	30h	54h	52h	957h	7,288h	15,627h	18,487h	10,670h	5,268h	4,661h	5,368h	11,278h	19,862h	38,560h	45,611h	41,188h	25,442h	2 weeks before July 4 th Holiday					261,140h					
6/20/18	355h	82h	52h	June 20, 2018 (Woodrow Wilson Bridge Incident) ➡							7,138h	11,185h	12,806h	20,731h	29,691h	40,496h	51,345h	36,402h	1.329M Veh-Hrs of Delay					310,343h						
6/21/18	82h	42h	35h	45h	151h	779h	5,929h	12,950h	14,306h	7,334h	5,785h	6,514h	6,715h	7,296h	14,031h	21,757h	29,507h	31,865h	18,383h	4,838h	(0.980M in 2012)					191,426h				
6/22/18	123h	60h	30h	29h	90h	443h	4,079h	11,004h	11,775h	7,604h	7,965h	10,319h	12,532h	18,026h	28,143h	39,053h	42,167h	38,161h	19,896h	7,187h	2,145h	903h	801h	445h	262,991h					
6/23/18	238h	140h	96h	62h	59h	140h	150h	310h	563h	1,197h	2,462h	3,932h	4,617h	6,258h	7,664h	8,678h	8,457h	6,159h	5,304h	3,990h	1,619h	1,113h	717h	436h	64,342h					
6/24/18	368h	163h	65h	54h	54h	87h	103h	143h	294h	851h	1,592h	3,102h	4,970h	8,032h	8,827h	8,037h	7,580h	5,617h	3,646h	2,296h	1,369h	1,775h	1,426h	1,371h	61,934h					
6/25/18	526h	92h	43h	43h	39h	646h	6,656h	16,239h	17,004h	7,347h	3,647h	4,009h	4,443h	5,709h	10,691h	15,917h	21,217h	24,640h	11,703h	2,638h	759h	721h	1,148h	639h	156,599h					
6/26/18	160h	46h	36h	40h	58h	719h	7,452h	19,443h	21,904h	10,405h	5,745h	4,667h	5,130h	8,326h	9,524h	17,002h	25,532h	27,345h	14,705h	3,197h	1,859h	1,342h	1,523h	930h	187,165h					
6/27/18	480h	84h	45h	33h	58h	709h	5,897h	11,717h	11,250h	6,478h	3,702h	5,067h	6,399h	5,700h	8,297h	16,946h	26,360h	28,434h	14,664h	1,171h	1,070h	1,342h	1,342h	1,342h	158,826h					
6/28/18	381h	54h	35h	37h	36h	805h	7,249h	15,453h	15,756h	9,531h	7,095h	7,888h	8,657h	8,219h	16,145h	23,991h	31,688h	34,553h	19,928h	6,006h	1,849h	1,342h	1,283h	1,283h	222,172h					
6/29/18	511h	193h	67h	35h	54h	432h	5,007h	10,376h	10,847h	6,678h	6,561h	8,364h	9,588h	13,946h	21,473h	34,028h	38,160h	32,301h	16,129h	5,613h	2,193h	1,438h	1,290h	998h	226,351h					
6/30/18	656h	256h	88h	38h	32h	57h	114h	517h	1,238h	3,202h	8,567h	10,197h	10,362h	11,078h	11,644h	11,328h	8,418h	7,487h	6,232h	3,696h	1,355h	1,230h	972h	540h	99,315h					
7/01/18	217h	141h	73h	55h	50h	61h	82h	202h	305h	518h	1,688h	3,087h	4,218h	6,106h	7,123h	6,105h	4,328h	2,961h	2,653h	2,245h	1,366h	863h	551h	344h	45,354h					
7/02/18	101h	90h	30h	38h	46h	573h	5,280h	11,024h	9,436h	4,304h	3,302h	4,485h	3,866h	5,341h	9,727h	19,625h	24,528h	22,646h	13,956h	2,918h	679h	759h	432h	201h	143,361h					
7/03/18	59h	45h	39h	27h	43h	460h	4,430h	9,127h	8,209h	2,828h	2,013h	2,305h	4,284h	6,956h	14,826h	26,182h	28,586h	20,931h	9,273h	July 4 th Holiday Week (2018)					147,231h					
7/04/18	96h	57h	34h	25h	77h	179h	363h	732h	831h	929h	1,710h	1,550h	1,354h	1,467h	1,795h	3,134h	1,731h	1,258h	962h	1,055h	1,041h	1,342h	1,342h	518h	24,718h					
7/05/18	81h	55h	29h	31h	78h	1,223h	2,713h	6,220h	5,090h	1,840h	2,242h	2,709h	3,002h	6,024h	9,094h	13,945h	14,248h	12,596h	8,759h	1,600h	762h	554h	1,022h	307h	92,538h					
7/06/18	166h	91h	65h	41h	49h	192h	1,076h	3,041h	2,813h	1,630h	2,616h	2,437h	3,687h	7,809h	10,759h	15,126h	12,681h	N/A	4,930h	1,317h	934h	1,122h	1,230h	499h	74,698h					
7/07/18	491h	193h	101h	63h	46h	67h	111h	243h	729h	2,624h	3,966h	5,187h	5,635h	7,136h	7,282h	8,169h	6,954h	5,650h	4,954h	2,327h	1,393h	1,649h	1,798h	1,310h	68,099h					

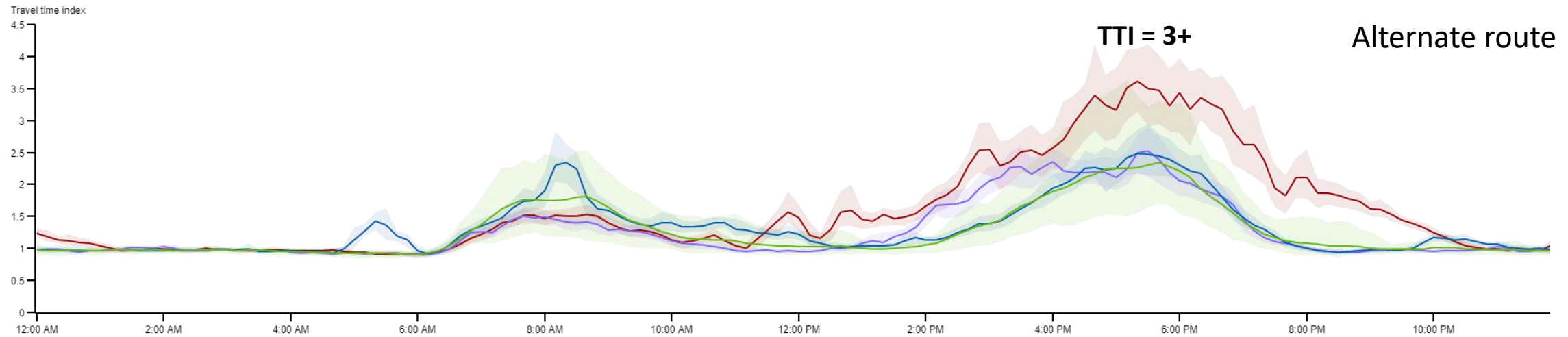
PDA Performance Chart: I-495 (Capital Beltway)



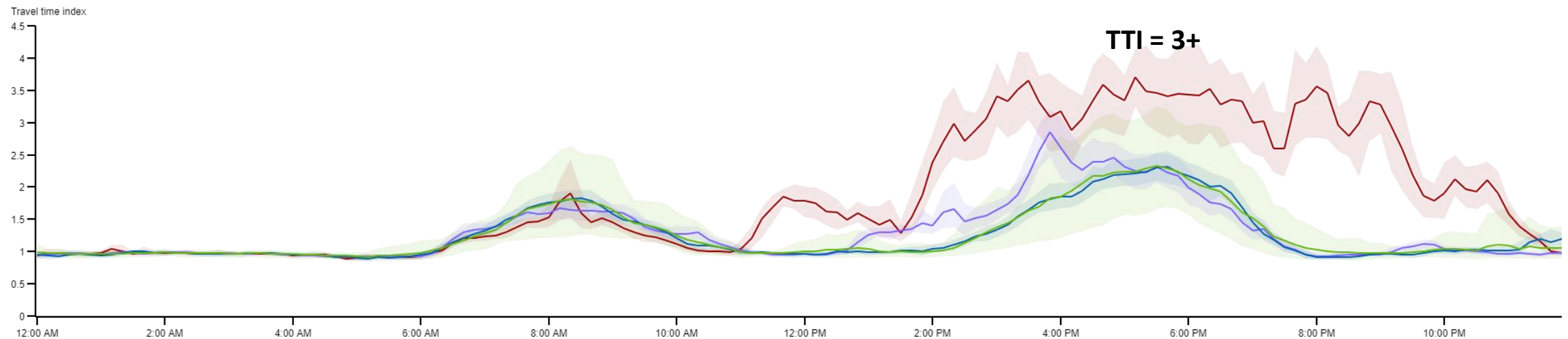
Travel Time Index for I-495 (Capital Beltway)

Averaged per ten minutes for Wednesday, June 20, 2018 vs Two Previous Wednesdays vs Average Wednesday (2017)

Inner Loop (Clockwise)



Outer Loop (Counterclockwise)



Travel time index: Travel time represented as a percentage of the ideal travel time (Travel Time / Free-flow Travel Time).

■ June 06, 2018 - INRIX
■ June 20, 2018 5th and 95th percentile - INRIX

■ June 06, 2018 5th and 95th percentile - INRIX
■ June 2017 (Every Wednesday) - INRIX

■ June 13, 2018 - INRIX
■ June 2017 (Every Wednesday) 5th and 95th percentile - INRIX

■ June 13, 2018 5th and 95th percentile - INRIX

■ June 20, 2018 - INRIX

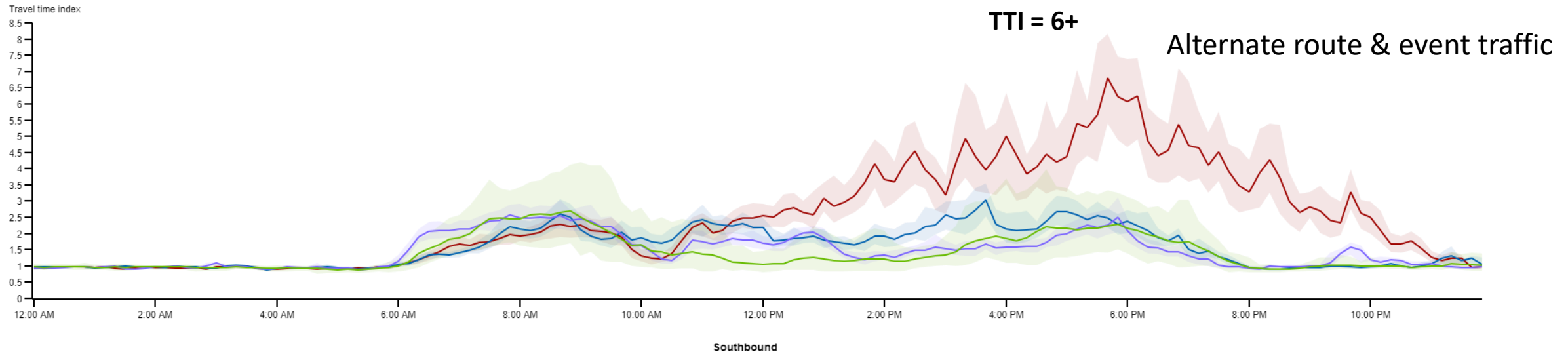
PDA Performance Chart: I-395 from 3rd Street Tunnel to I-495



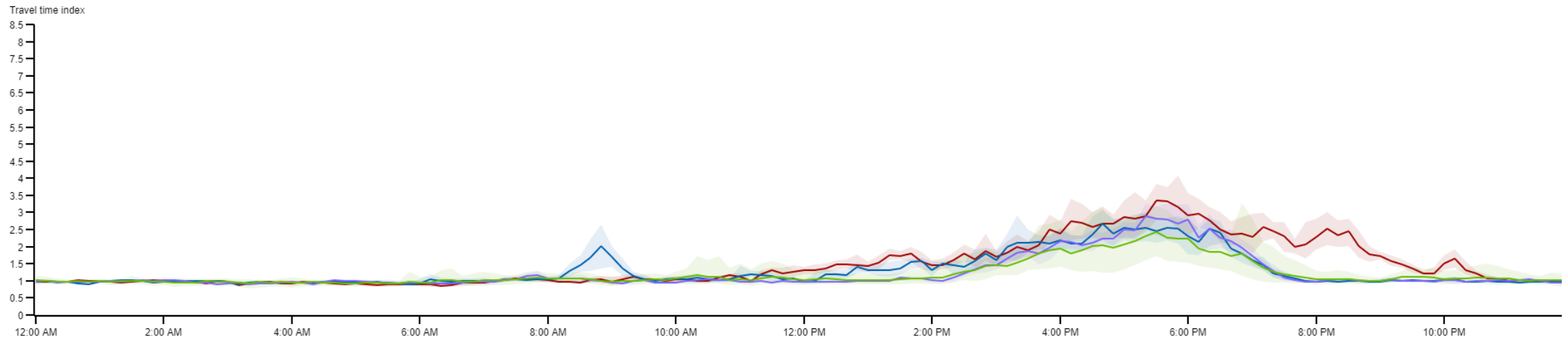
Travel Time Index for I-395 from I-495 to New York Ave NE

Averaged per ten minutes for Wednesday, June 20, 2018 vs Two Previous Wednesdays vs Average Wednesday (2017)

Northbound



Southbound



Travel time index: Travel time represented as a percentage of the ideal travel time (Travel Time / Free-flow Travel Time).

June 06, 2018 - INRIX June 06, 2018 5th and 95th percentile - INRIX June 13, 2018 - INRIX June 13, 2018 5th and 95th percentile - INRIX June 20, 2018 - INRIX June 2017 (Every Wednesday) - INRIX June 2017 (Every Wednesday) 5th and 95th percentile - INRIX

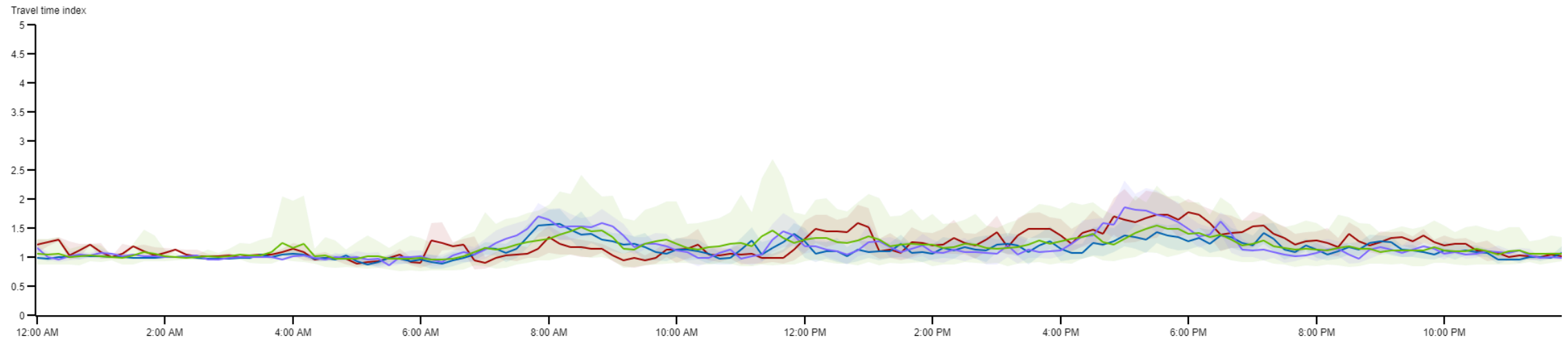
PDA Performance Chart: US-1 from I-395 to I-495



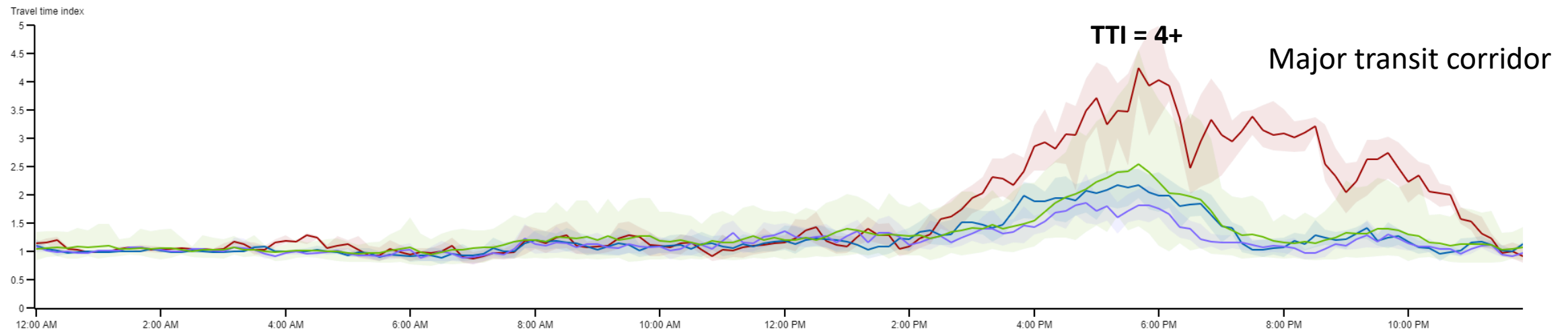
Travel Time Index for US-1 (VA) from I-495 to I-395

Averaged per ten minutes for Wednesday, June 20, 2018 vs Two Previous Wednesdays vs Average Wednesday (2017)

Northbound



Southbound



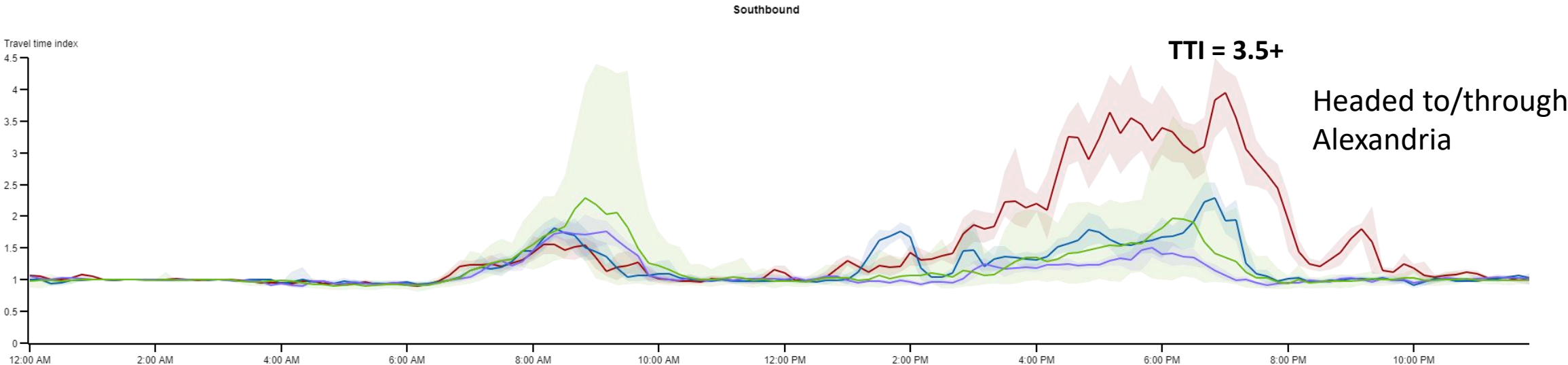
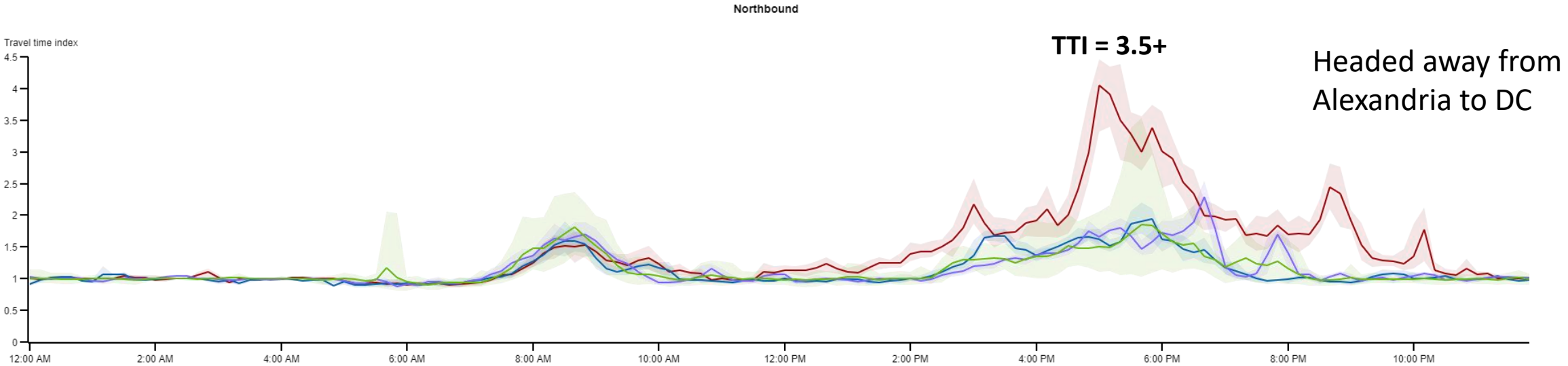
Travel time index: Travel time represented as a percentage of the ideal travel time (Travel Time / Free-flow Travel Time).

June 06, 2018 - INRIX
June 20, 2018 5th and 95th percentile - INRIX
June 06, 2018 5th and 95th percentile - INRIX
June 13, 2018 - INRIX
June 13, 2018 5th and 95th percentile - INRIX
June 20, 2018 - INRIX
June 2017 (Every Wednesday) - INRIX
June 2017 (Every Wednesday) 5th and 95th percentile - INRIX

PDA Performance Chart: GWMP (in Alexandria)



Travel Time Index for George Washington Memorial Parkway from Slater Lane to I-495
Averaged per ten minutes for Wednesday, June 20, 2018 vs Two Previous Wednesdays vs Average Wednesday (2017)



Travel time index: Travel time represented as a percentage of the ideal travel time (Travel Time / Free-flow Travel Time).

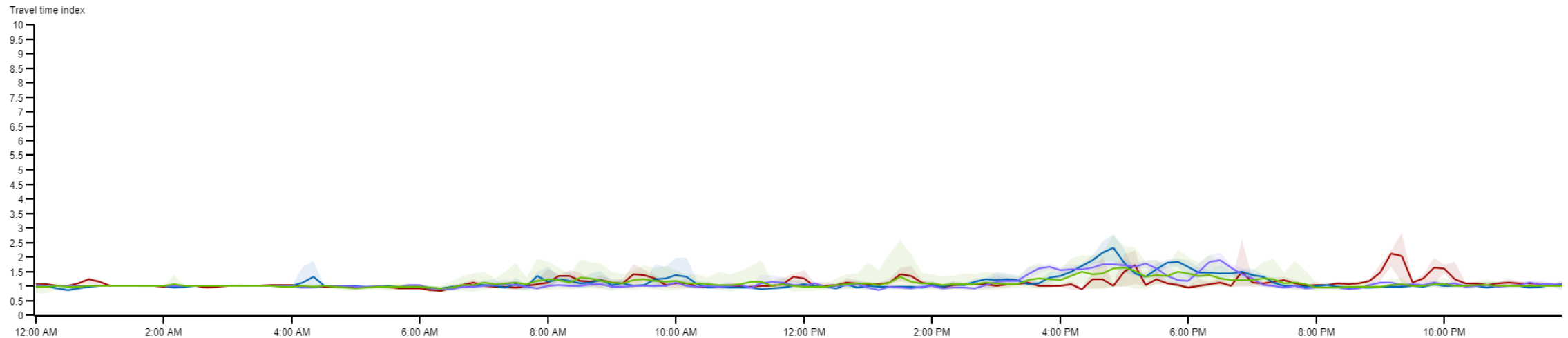
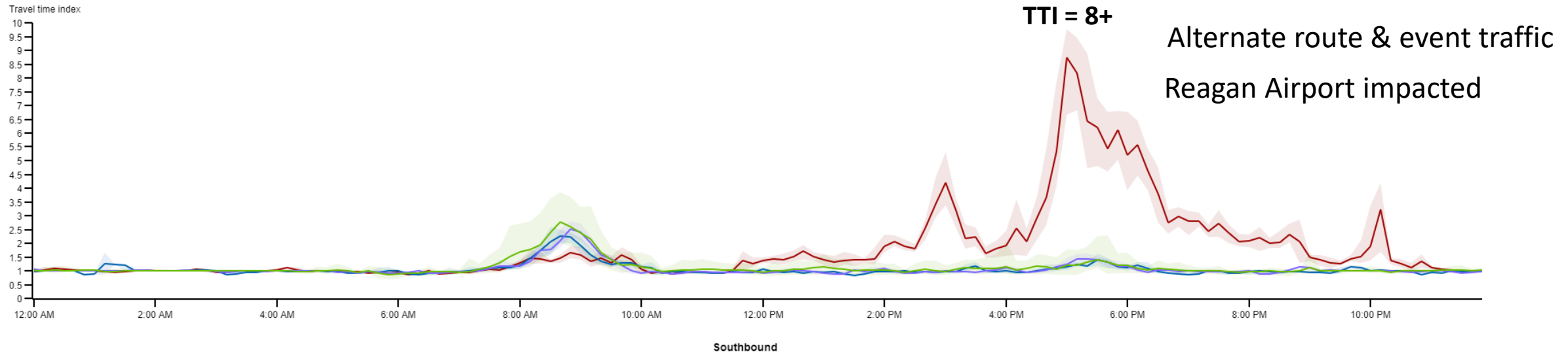
June 06, 2018 - INRIX June 06, 2018 5th and 95th percentile - INRIX June 13, 2018 - INRIX June 13, 2018 5th and 95th percentile - INRIX June 20, 2018 - INRIX
June 20, 2018 5th and 95th percentile - INRIX June 2017 (Every Wednesday) - INRIX June 2017 (Every Wednesday) 5th and 95th percentile - INRIX

PDA Performance Chart: GWMP from I-395 to Alexandria



Travel Time Index for George Washington Memorial Parkway from Slaters Lane to I-395
Averaged per ten minutes for Wednesday, June 20, 2018 vs Two Previous Wednesdays vs Average Wednesday (2017)

Northbound



Travel time index: Travel time represented as a percentage of the ideal travel time (Travel Time / Free-flow Travel Time).

June 06, 2018 - INRIX June 06, 2018 5th and 95th percentile - INRIX June 13, 2018 - INRIX June 13, 2018 5th and 95th percentile - INRIX June 20, 2018 - INRIX June 20, 2018 5th and 95th percentile - INRIX June 2017 (Every Wednesday) - INRIX June 2017 (Every Wednesday) 5th and 95th percentile - INRIX

After Action Review: Takeaways

- Overall the response was a success given the complicated nature of the incident, there were no single points of failure.
- 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.
- Incident demonstrated the need for ongoing training between transportation agencies (including contractors), law enforcement agencies, and fire departments; specifically with regards to high profile facilities like the WWB
- Queued motorists upstream from the incident sometimes self-diverted, often reversing down onramps which created additional hazards; other factors to consider are knowledge of alternate routes and the influence of personal navigation devices

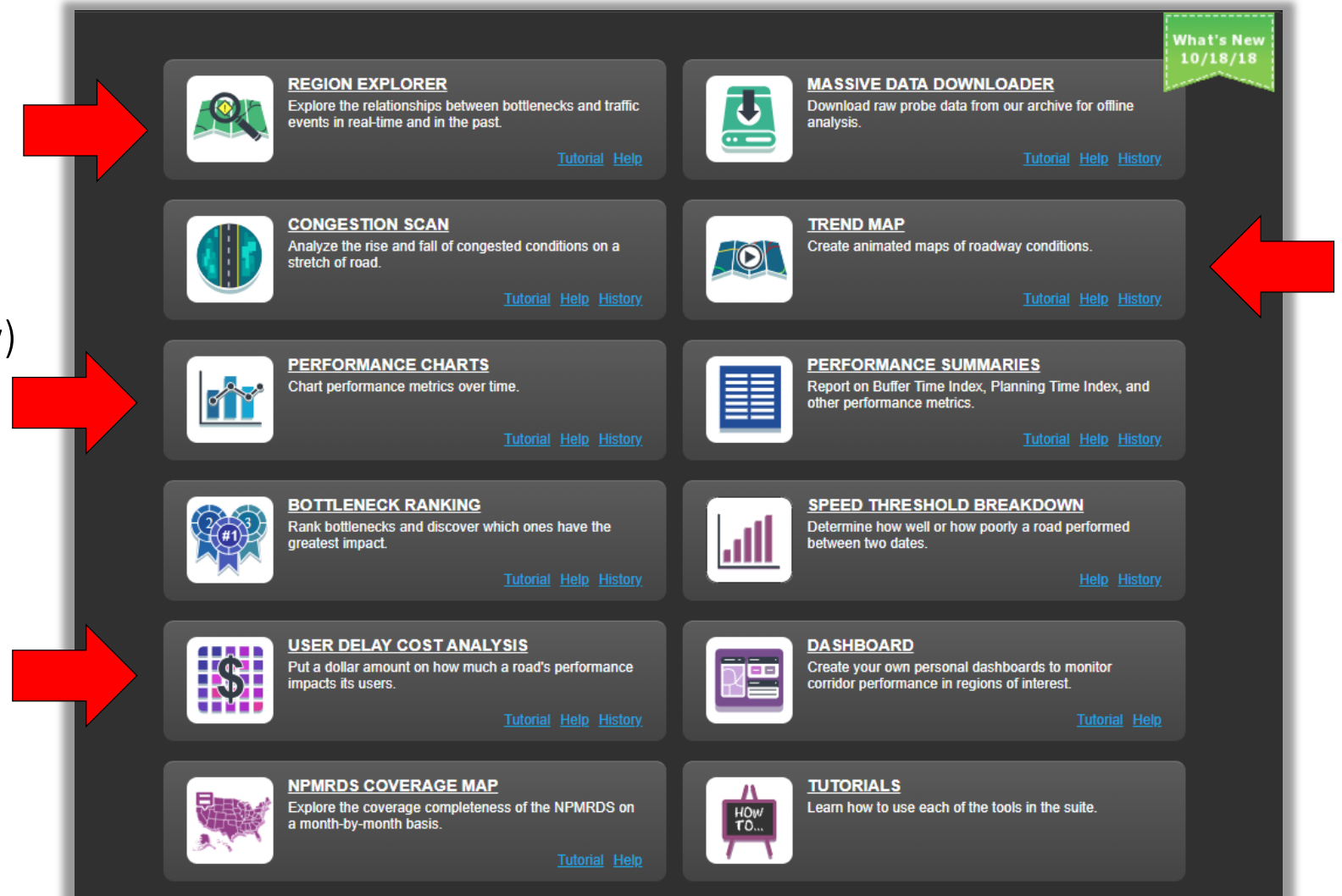
After Action Review: Takeaways

- 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. Rail services served as a good alternate. Transit agencies would benefit from regular traffic incident management training with their DOT and public safety counterparts.

RITIS/Probe Date Analytics Suite

Tools Utilized

- Trend Maps
- Performance Charts
- User Delay Cost Analysis
- Region Explorer (historic view)
- Event Query Tool
- Incident Timeline



The screenshot displays a grid of 12 analytics tools. Red arrows point to the following tools:

- REGION EXPLORER**: Explore the relationships between bottlenecks and traffic events in real-time and in the past. (Tutorial | Help)
- PERFORMANCE CHARTS**: Chart performance metrics over time. (Tutorial | Help | History)
- USER DELAY COST ANALYSIS**: Put a dollar amount on how much a road's performance impacts its users. (Tutorial | Help | History)

Other tools visible include:

- MASSIVE DATA DOWNLOADER**: Download raw probe data from our archive for offline analysis. (Tutorial | Help | History)
- CONGESTION SCAN**: Analyze the rise and fall of congested conditions on a stretch of road. (Tutorial | Help | History)
- TREND MAP**: Create animated maps of roadway conditions. (Tutorial | Help | History)
- PERFORMANCE SUMMARIES**: Report on Buffer Time Index, Planning Time Index, and other performance metrics. (Tutorial | Help | History)
- BOTTLENECK RANKING**: Rank bottlenecks and discover which ones have the greatest impact. (Tutorial | Help | History)
- SPEED THRESHOLD BREAKDOWN**: Determine how well or how poorly a road performed between two dates. (Help | History)
- DASHBOARD**: Create your own personal dashboards to monitor corridor performance in regions of interest. (Tutorial | Help)
- NPMRDS COVERAGE MAP**: Explore the coverage completeness of the NPMRDS on a month-by-month basis. (Tutorial | Help)
- TUTORIALS**: Learn how to use each of the tools in the suite.

A green banner in the top right corner indicates "What's New 10/18/18".

Questions

Mr. Taran Hutchinson

Facilitator

Metropolitan Area Transportation Operations Coordination

taran.hutchinson@matoc.org





&

PROBE DATA ANALYTICS SUITE



What's new & what's coming

Michael Pack
UMD CATT Laboratory
Director



RITIS Recent Deployments



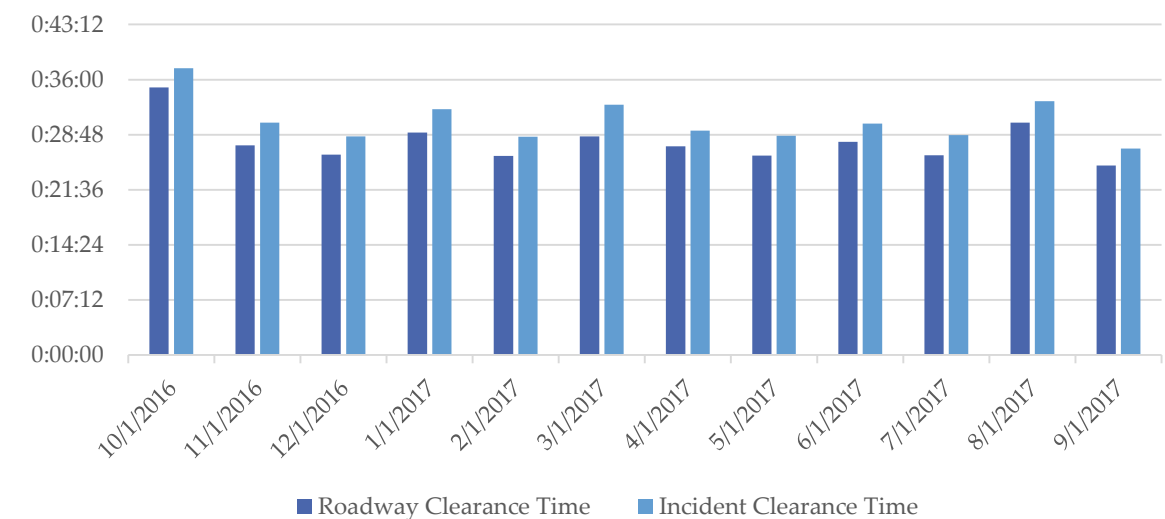
- Additional Agency Partner Integration
 - Austin, TX DMS, CCTV, Signals, and Sensors
 - MoDOT Incidents
- Expanded RITIS Alerts to support Bottlenecks identified from HERE data
- Expanded RITIS Alerts Email details
- Updated WZPMA with new Bottleneck Calcs
- Enhanced CCTV Stability
- Responded to dozens of bug support requests
- Began working on EDC Clearance Time Analytics

Every Day Counts Clearance Time Initiative

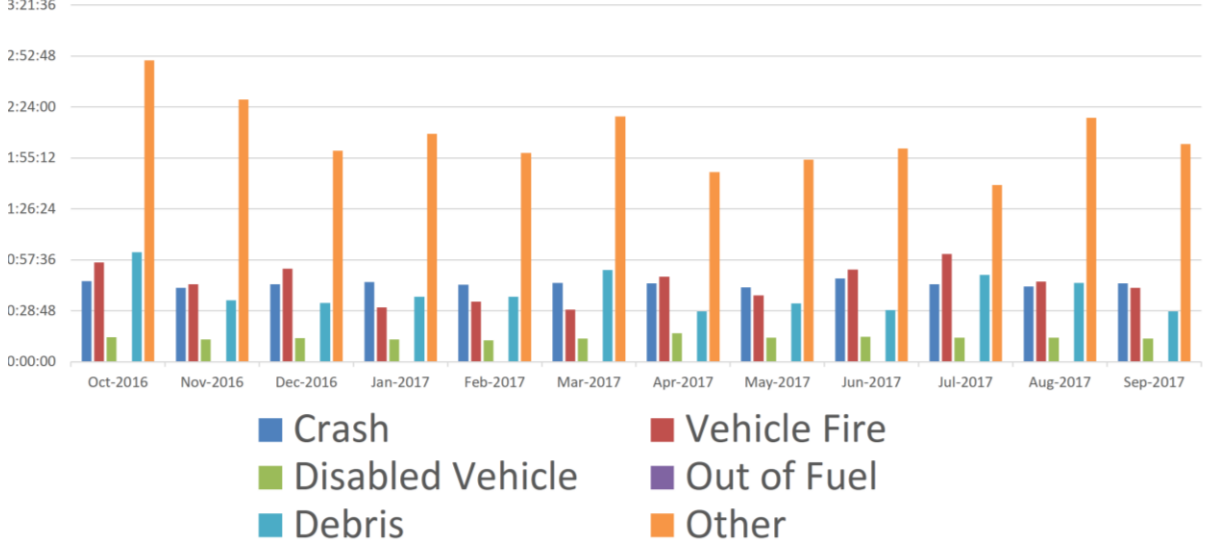
Goal

- To provide insights into *clearance times* for events in the EDC database.
- Provide as much flexibility as possible for additional analysis and comparison

RCT & ICT for Maryland



Maryland Incident Clearance Times by Type



EDC Query Form

← → ↻ 🔒 Secure | https://ritis.org/traffic/incident_list

RTTS

Data Archive

Event Query Tool | Detector Tools | Data Archive Portal

Welcome Jenny Lees!

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Quisque in nisi dolor. Nam vel sollicitudin dui. Aliquam egestas suscipit egestas. Proin ullamcorper enim nec neque sodales placerat. Nunc vehicula leo eget aliquam tempus. Vivamus in viverra nulla. Quisque at ullamcorper tellus, ut auctor libero.

AGENCIES

Search agencies

☐ Include all agencies

T A B C D E F G H I J K L M N O P Q R S T U V W X Y Z #

Show

☒ Alphabetically

(Washington DC DOT)

☐ By State

are DOT)

☐ All

th 511

TIME PERIOD

1. Within the range of...

☒ 08/16/2016 - through - 08/16/2016

☐ Last 0 full Days

☐ Year to date

2. Using data for...

☒ All days

☐ Except for...

☐ Only the following selected days...

3. That occurs on and in...

Days of week

Sun Mon Tue Wed Thu Fri Sat

Months of year

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

4. During the hours of...

☒ 12:00 AM - to - 12:00 PM

☐ AM Peak

☐ PM Peak

Additional filters

▼ GEOGRAPHY

▼ EVENT TYPES

▼ DURATION

SUBMIT QUERY

85

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Quisque in nisi dolor. Nam vel sollicitudin dui. Aliquam egestas suscipit egestas. Proin ullamcorper enim nec neque sodales placerat. Nunc vehicula leo eget aliquam tempus. Vivamus in viverra nulla. Quisque at ullamcorper tellus, ut auctor libero.

AGENCIES

Search agencies

🔍

☐ Include all agencies

 All agencies

- ☐ 511NY (New York and Connect Traveller Information)

☐ Austin, TX

☐ Caltrans (California DOT)

☐ DDOT CapTOP (Washington DC DOT)

☐ DelDOT (Delaware DOT)

☐ Dallas/Fort Worth 511

☐ FDOT (Florida State DOT)

☐ GDOT (Georgia State DOT)

☐ Howard Count CAD

☐ Iowa DOT

☐ MDOT CHART (Maryland DOT)

☐ MassDOT (Massachusetts DOT)

☐ Michigan DOT

☐ MS TRAFFIC (Mississippi DOT)

☐ NCDOT (North Carolina DOT)

☐ NJDOT (New Jersey DOT)

☐ ODOT (Ohio DOT)
- ☐ PennDOT (Pennsylvania DOT)

☐ Pennsylvania Turnpike

☐ Prince George's County, Maryland (CAD Center)

☐ Prince George's County, Maryland (Trip Center)

☐ RIDOT (Rhode Island DOT)



☐ SCDOT (South Carolina DOT)





☐ TXDOT (Texas State DOT)


☐ VDOT (Virginia DOT)

TIME PERIOD

1. Within the range of...

☒  - through - 

☐ Last   full  

☐  to date

2. Using data for...

☒ All days

☐ Except for...

☐ Only the following selected days...

3. That occurs on and in...


Days of week

Sun	Mon	Tue	Wed	Thu	Fri	Sat
-----	-----	-----	-----	-----	-----	-----

Months of year

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

4. During the hours of...

☒  - to - 

☐ AM Peak

☐ PM Peak

▼ GEOGRAPHY

Available roads are based on the agencies you have selected.

☐ Include all available corridors

Roads

Region

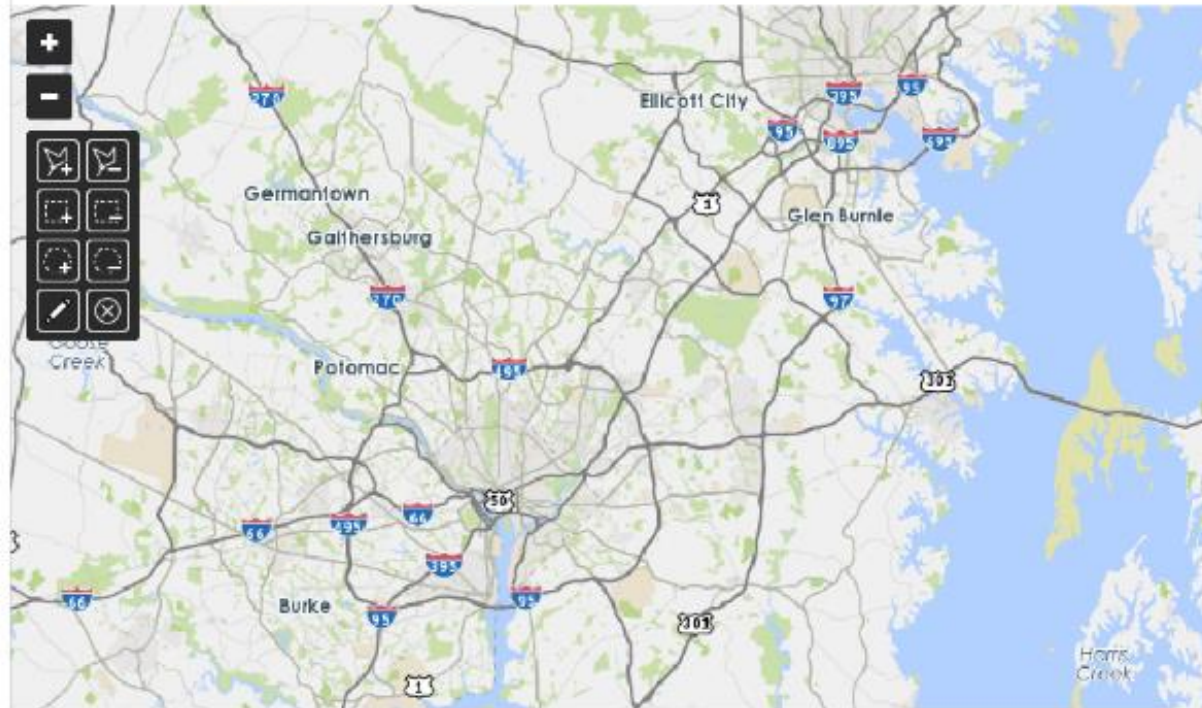
Segment Codes

Map

Use the controls on the map to define your TMC set. Controls with a '+' allow you to add TMCs while controls with a '-' allow you to remove TMCs from your selection. Use the dropdowns below to fine tune your selection before drawing on the map.

States **All** ▼

Road Classes **All** ▼

**► EVENT TYPES**

► GEOGRAPHY

▼ EVENT TYPES

Available event types are based on the agencies you have selected.

☐ Include all available event types

▼ DDOT CapTOP (Washington DC DOT)

Standardized Types

Agency Types

☐ Include all standardized types

- ☐ Collision
- ☐ Congestion Due to Closure
- ☐ Disabled Vehicle
- ☐ Fire
- ☐ Flood
- ☐ Hazard Material Spill
- ☐ Incident
- ☐ Obstructions
- ☐ Road Maintenance Operations
- ☐ Traffic Signal Not Working
- ☐ Vehicle On Fire

▼ MDOT CHART (Maryland DOT)

Standardized Types

Agency Types

☐ Include all standardized types

- | | | |
|--|--|--|
| <input type="checkbox"/> Alert | <input type="checkbox"/> Fallen Tree | <input type="checkbox"/> Road Maintenance Operations |
| <input type="checkbox"/> Animal Struck | <input type="checkbox"/> Fire | <input type="checkbox"/> Road Marking Operations |
| <input type="checkbox"/> Bridge Maintenance Operations | <input type="checkbox"/> Flood | <input type="checkbox"/> Roadwork |
| <input type="checkbox"/> Collision | <input type="checkbox"/> Foggy Conditions | <input type="checkbox"/> Special Event |
| <input type="checkbox"/> Congestion | <input type="checkbox"/> Incidents | <input type="checkbox"/> Sporting Event |
| <input type="checkbox"/> Congestion Due To Closure | <input type="checkbox"/> Injuries Involved | <input type="checkbox"/> Strong Winds |
| <input type="checkbox"/> Construction Work | <input type="checkbox"/> Medical Emergency | <input type="checkbox"/> Traffic Congestion |
| <input type="checkbox"/> Delays | <input type="checkbox"/> Obstructions | <input type="checkbox"/> Traffic Signal Not Working |
| <input type="checkbox"/> Disabled Vehicle | <input type="checkbox"/> Obstructions Due To Animal In Roadway | <input type="checkbox"/> Unknown |
| <input type="checkbox"/> Disabled Vehicle In Roadway | <input type="checkbox"/> Overgrown Plants | <input type="checkbox"/> Utility Work |
| <input type="checkbox"/> Driving Wrong Way | <input type="checkbox"/> Paving Operations | <input type="checkbox"/> Vehicle Fire |
| <input type="checkbox"/> Emergency Roadwork | <input type="checkbox"/> Police At Scene | <input type="checkbox"/> Water Main Work |
| <input type="checkbox"/> Fair | <input type="checkbox"/> Road Construction | <input type="checkbox"/> Weather Condition |

► DURATION

SUBMIT QUERY

4. During the hours of...

- ☒ - to -
- ☐ AM Peak
- ☐ PM Peak

Additional filters

► GEOGRAPHY

► EVENT TYPES

▼ DURATION

Filter events that were open for a specific amount of time.

☐ Include events of any duration

Greater than

Less than

Equal to

Not equal to

Between

Only show events that lasted longer than

SUBMIT QUERY

NEW SEARCH



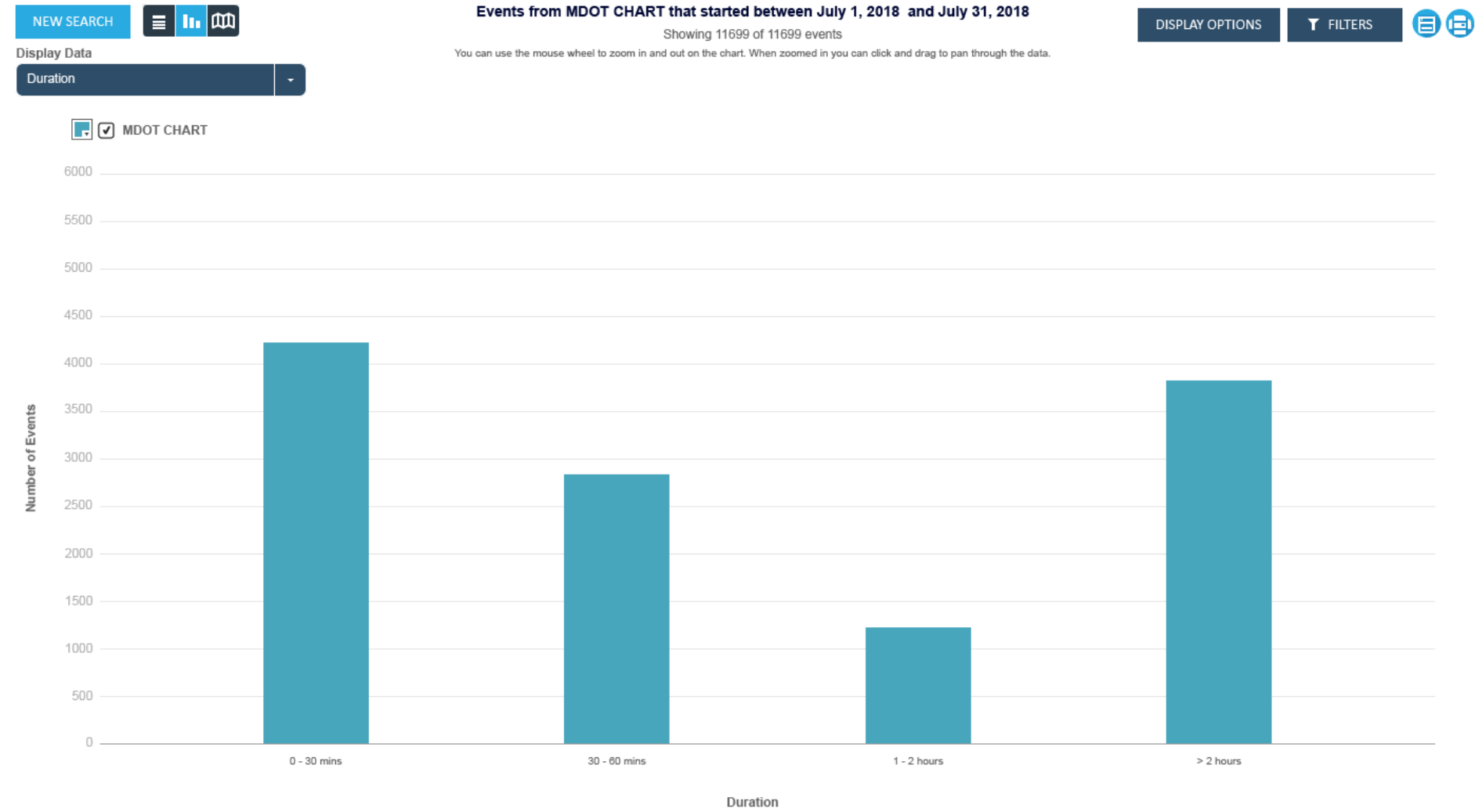
Events from MDOT CHART that started on July 2, 2018

Showing 469 of 469 events

FILTERS



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



NEW SEARCH

Events from MDOT CHART and DDOT CapTOP that started between July 1, 2018 and July 31, 2018

Showing 12312 of 12312 events

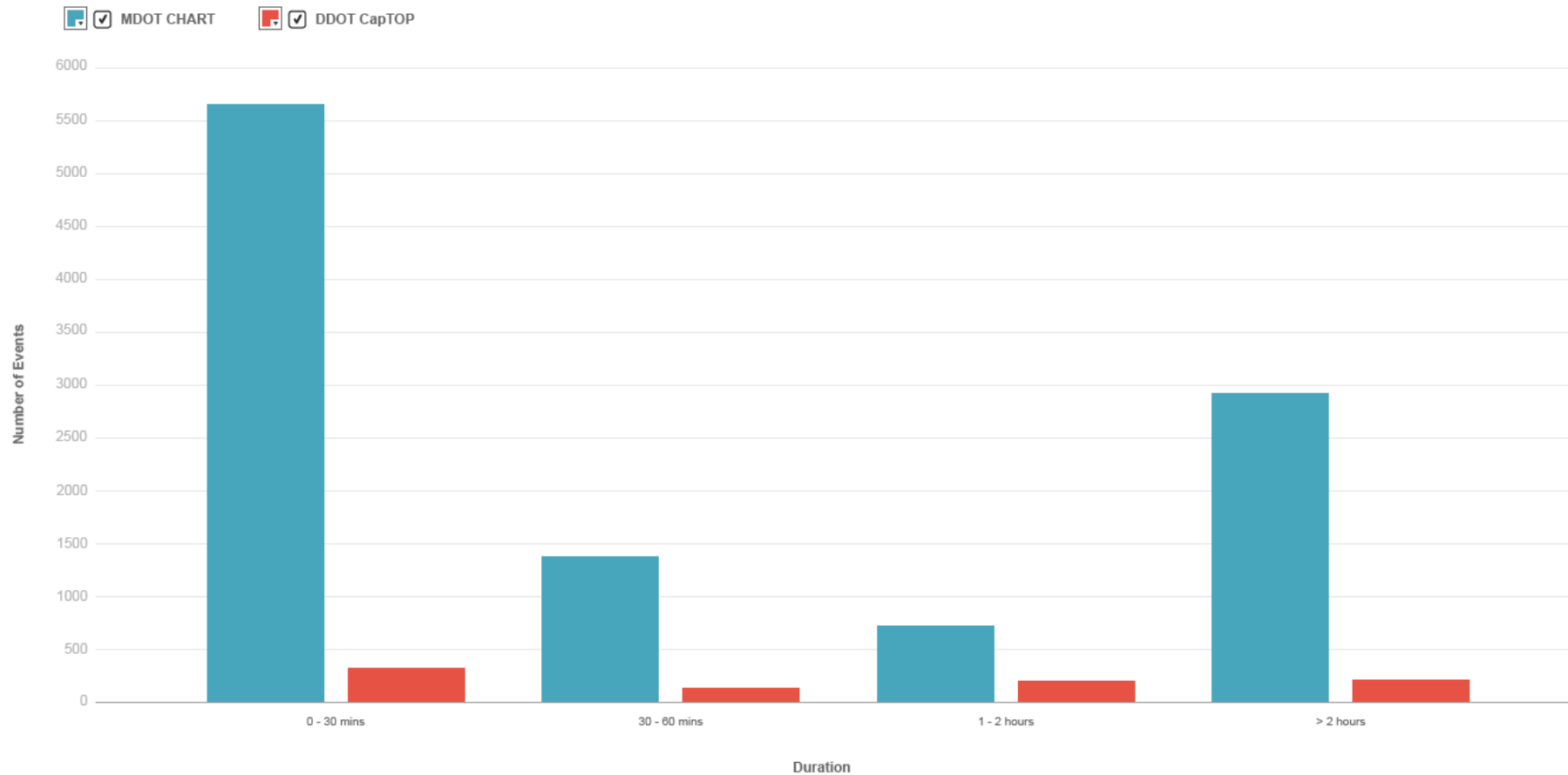
DISPLAY OPTIONS

FILTERS

Display Data

Duration

You can use the mouse wheel to zoom in and out on the chart. When zoomed in you can click and drag to pan through the data.



NEW SEARCH

☰ ▮ 📖

Events from MDOT CHART and DDOT CapTOP that started between July 1, 2018 and July 31, 2018

Showing 12312 of 12312 events

DISPLAY OPTIONS

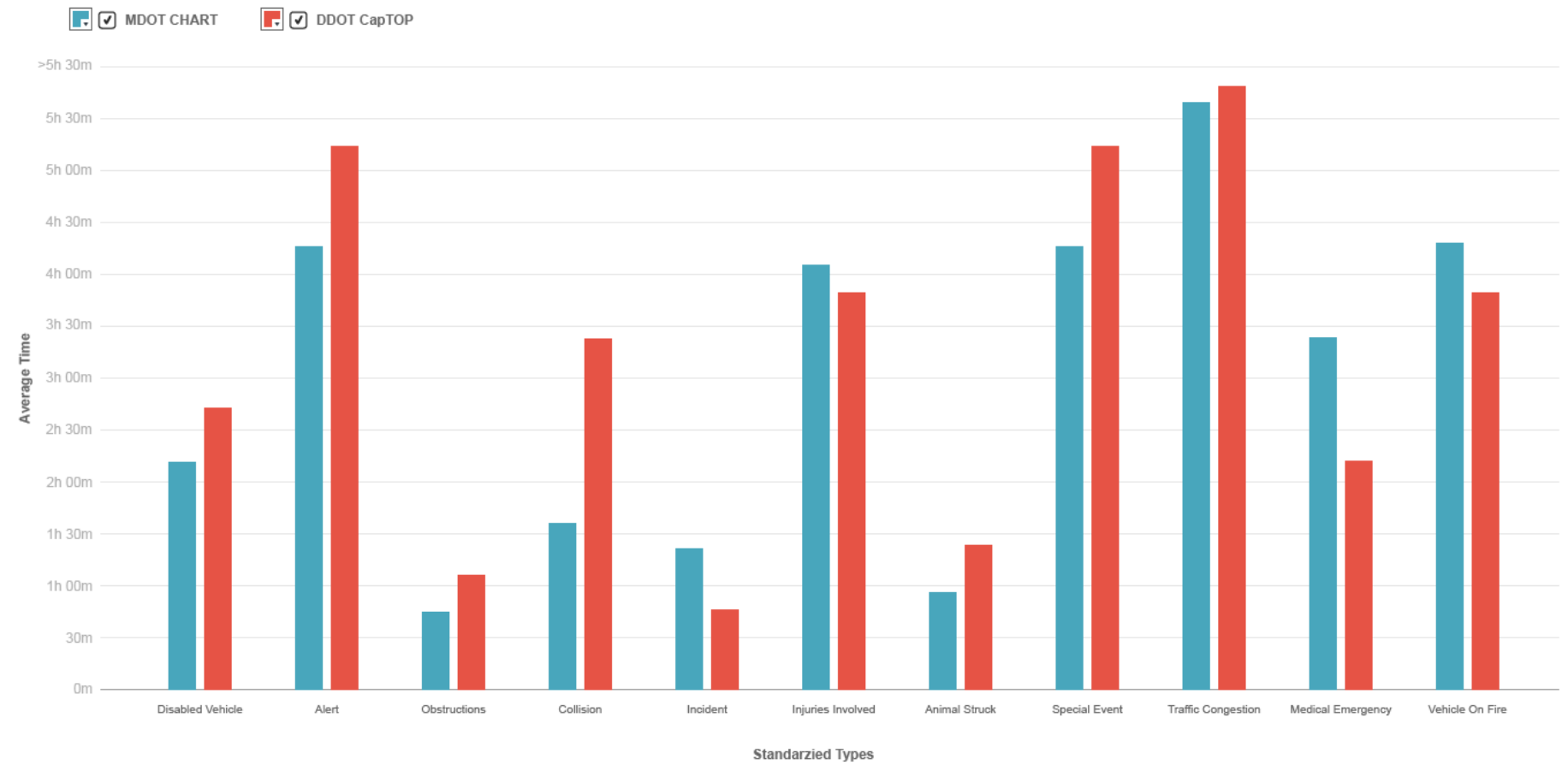
FILTERS

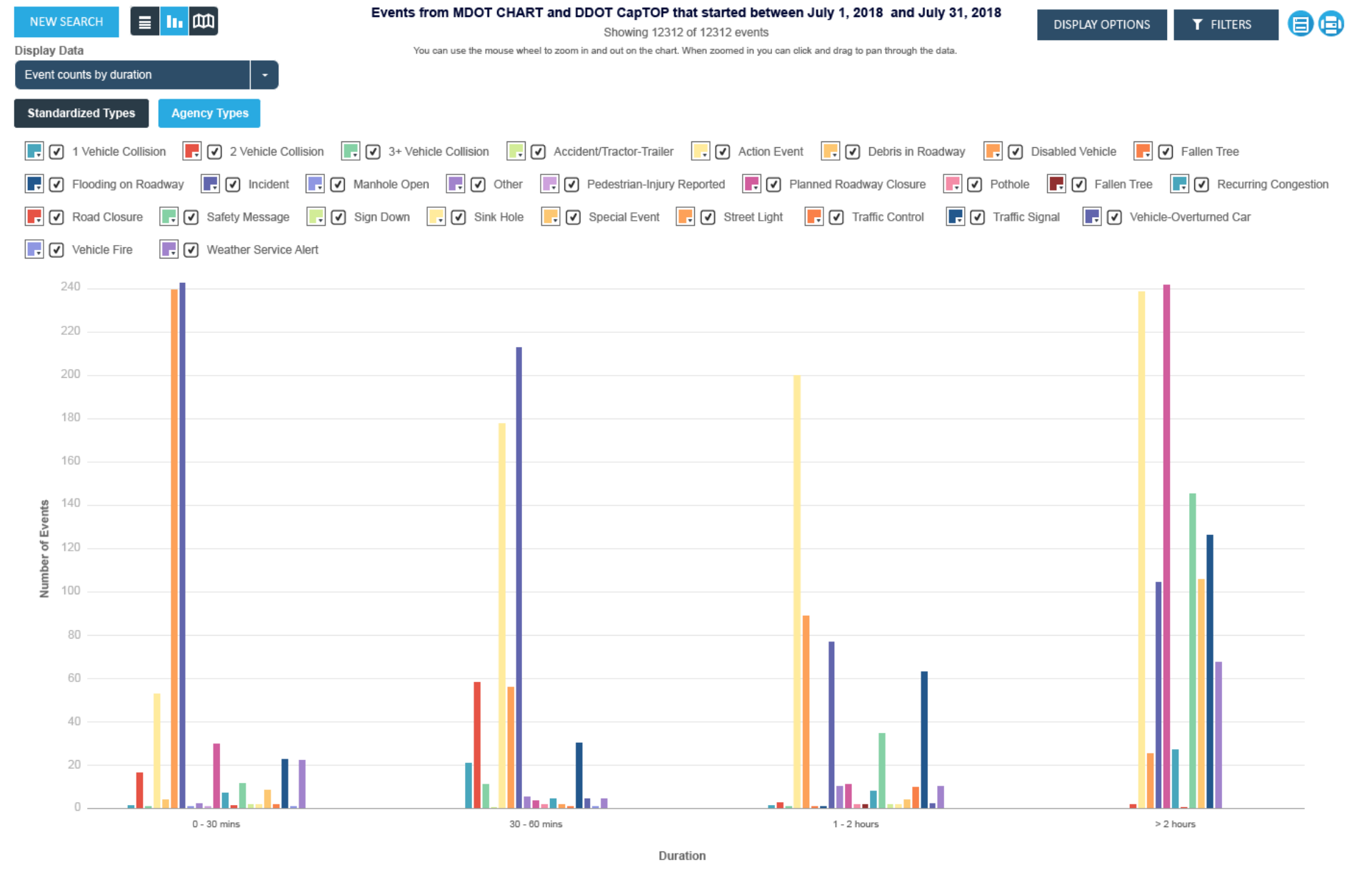
📄 📋

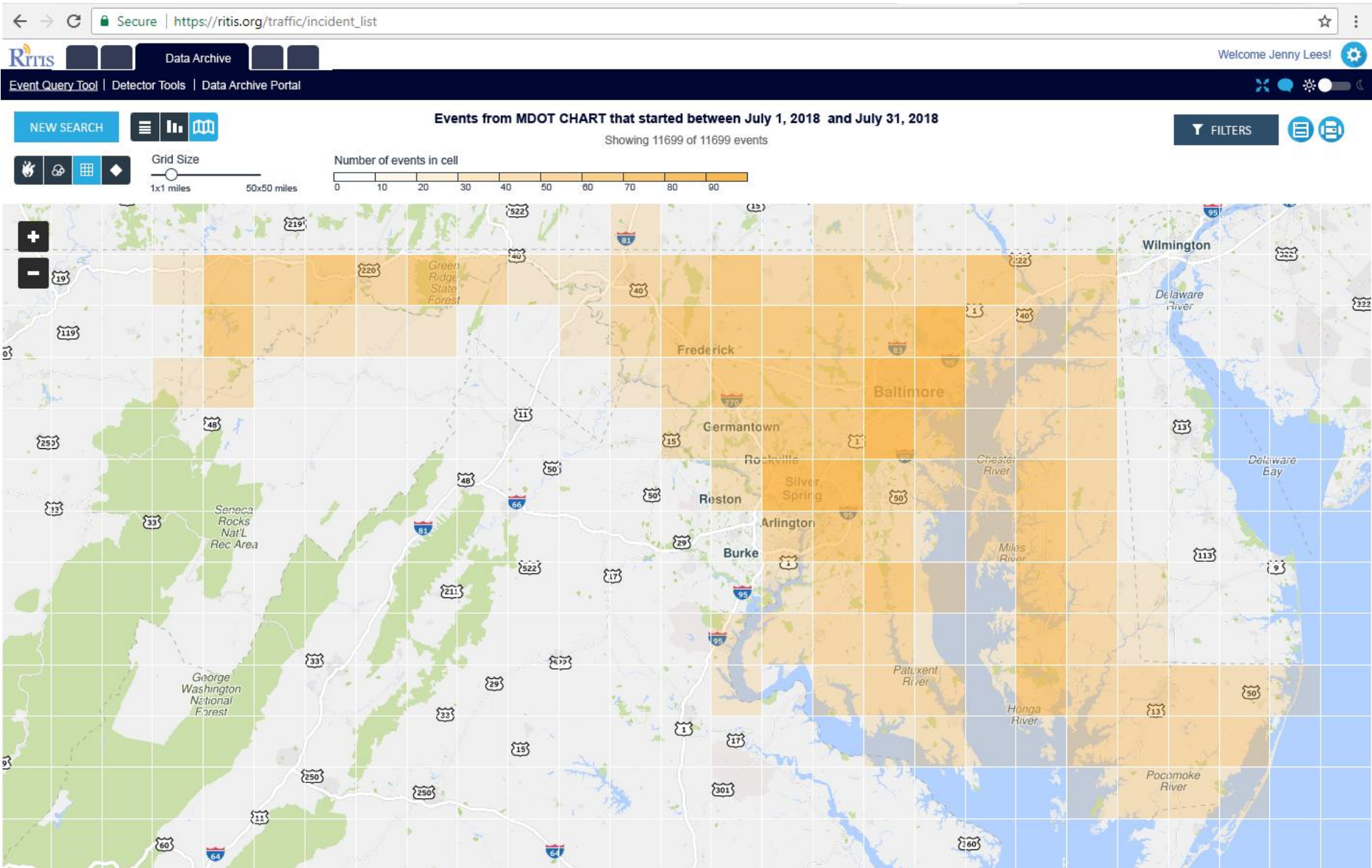
Display Data

Duration ▾

You can use the mouse wheel to zoom in and out on the chart. When zoomed in you can click and drag to pan through the data.








Probe Data Analytics Recent Deployments

- XD in MDD
- UDC Dashboard Widget
- 2018 NPMRDS Conflation
- Congestion Scan Flash Migration
- More...

PROBE DATA ANALYTICS SUITE

u s e r g r o u p

XD Functionality Now Available





Massive Data Downloader

Use the Massive Data Downloader to download raw probe data from our archive for offline analysis.

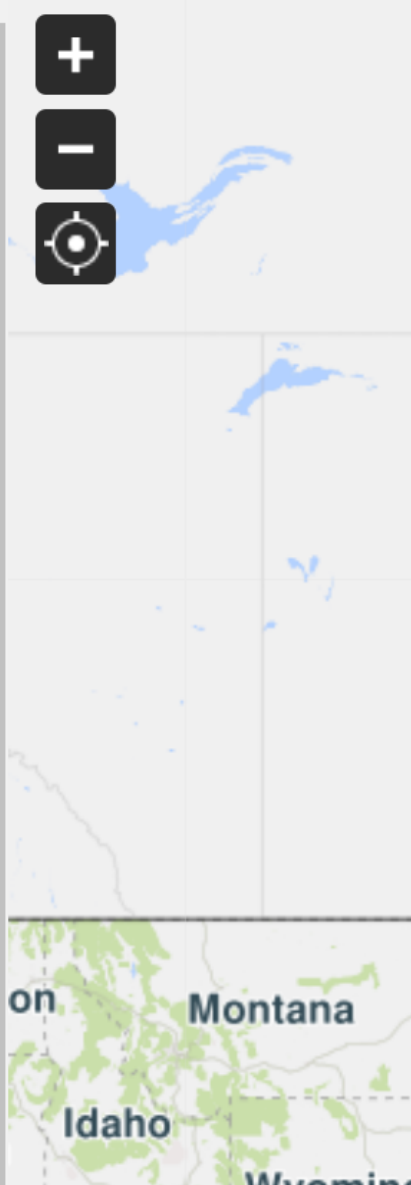
1. Select roads

XD

▼ segments from INRIX

Road	Region	Segment codes	Map	Saved
States and counties	Pennsylvania			
Zip codes	Example: 20742,20904			
Road Classes	2 and 1			
<div>+ Add region</div>				
Your selected roads ⓘ Remove all ⊗				
Road classes 2 and 1 in Pennsylvania (32277 XDs) ⌵  ⊗				
<div> Save as segment set</div>				

+
-
📍



Perf. Charts & Massive Data Downloader



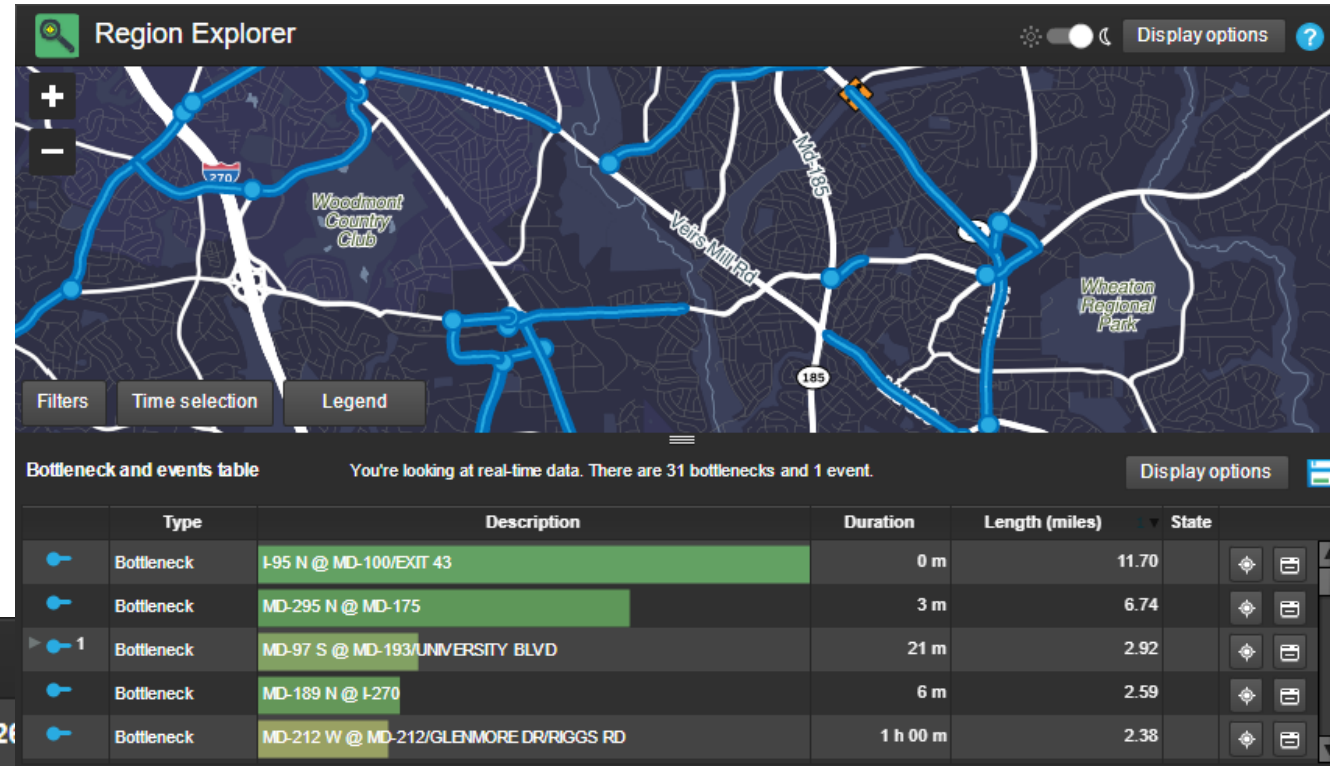
Flash Migration/Modernization Continues

- Congestion Scan now complete



Flash Migration in-progress

- Region Explorer
- Bottleneck Ranking

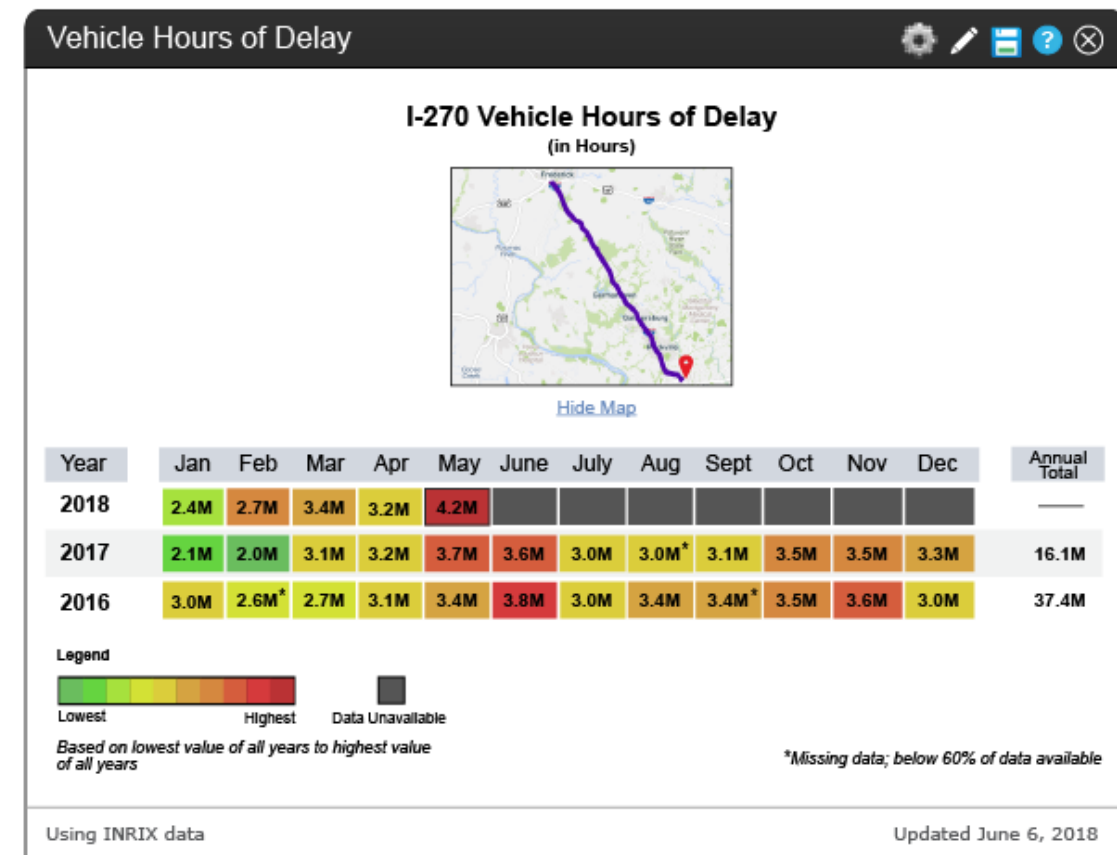
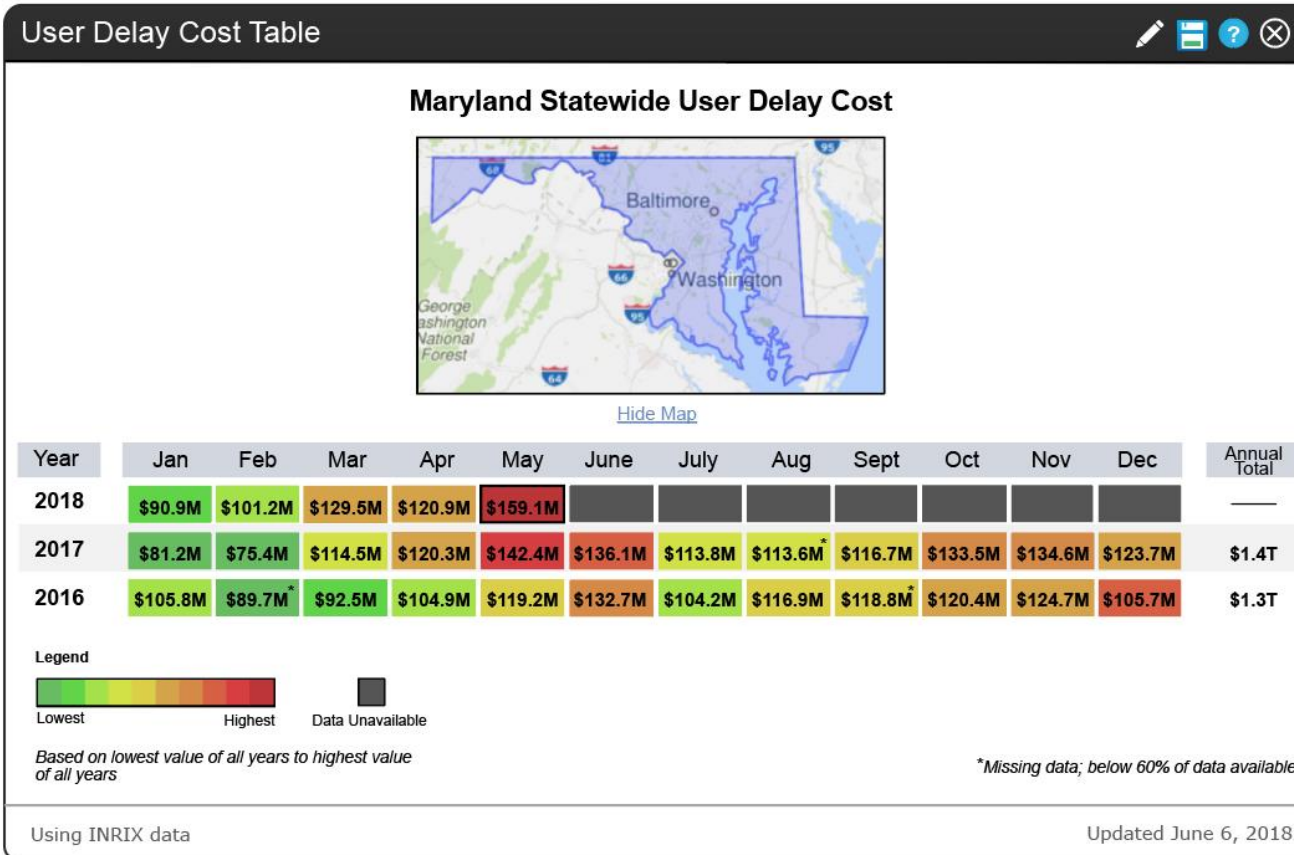


#1 Bottleneck Ranking - Using HERE data

Bottleneck Ranking Table for Interstates in Michigan (22)

Rank	Map	Head Location ...	Bottleneck Profile			Influences		Base impact weighted by				External Tool...
			Ave...	Averag...	Total duration	All Events/Incidents	▼ Bas...	Speed di...	Conge...	TOTAL DELAY		
1		I-696 E @ COUZENS AVE/ EXIT 19	3.73	4 h 03 m	1 d 12 h 39 m	35	7,611.87	349,763.18	16,555.04	28,248,273,557.80		
2		I-696 W @ I-96/ MI-5/EXIT 1	7.20	1 h 50 m	16 h 37 m	7	7,068.48	303,732.14	13,850.23	19,121,456,679.61		
3		I-96 E @ BECK RD/EXIT 160	4.58	1 h 57 m	17 h 40 m	1	5,571.00	217,761.52	8,086.02	10,876,316,801.50		
4		I-75 N @ MACKINAC	3.46	2 h 36 m	23 h 32 m	0	4,599.86	96,243.72	5,347.55	387,765,943.68		

New Dashboards (available today)



Using the Dashboard

User Delay Cost Table

1. Select geography
Roads County Region State [Advanced](#)
TMCs from... Search in Maryland...

2. Select a metric
☐ Cost of delay
☒ Vehicle hours in delay

3. Compare last 3 Years

4. Select volume data source
INRIX
[Change provider](#)

5. Select speed data source
☒ HERE
☐ INRIX
☐ NPMRDS from HERE (Passenger vehicles)
☐ NPMRDS from HERE (Trucks and passenger vehicles)
☐ NPMRDS from HERE (Trucks)
☐ TomTom
Data from NPMRDS from HERE (Trucks) is only available between October 1, 2011 and January 31, 2017.

6. Confirm the average cost and percent of volume for passenger and commercial vehicle types
Cost
Default hourly costs are provided by Texas Transportation Institute
Passenger vehicles in 2018: \$ 17.91
Commercial vehicles in 2018: \$ 100.49
Percent
Percent of passenger and commercial volume is based on data provided by the DOT on an annual basis. If no value is provided, the default will be:
Passenger vehicles: 90%
Commercial vehicles: 10%
☐ Use these values for all road segments

7. Define where delay should be calculated
☒ Where speed falls below historic average speed
☐ Where speed falls below free-flow speed minus 20 mph
☐ Where speed falls below absolute speed
☐ For all segments

8. Calculate user delay cost against
☐ Free-flow speed
☒ Historic average speed

9. Name your User Delay Cost Table
☐ User Delay Cost Table
-or-
☒ User Delay Cost Table

[+ Add widget](#)

User Delay Cost Table

1. Select geography
Roads County Region State [Advanced](#)
TMCs from... Search in Maryland...

2. Select a metric
☐ Cost of delay
☒ Vehicle hours in delay

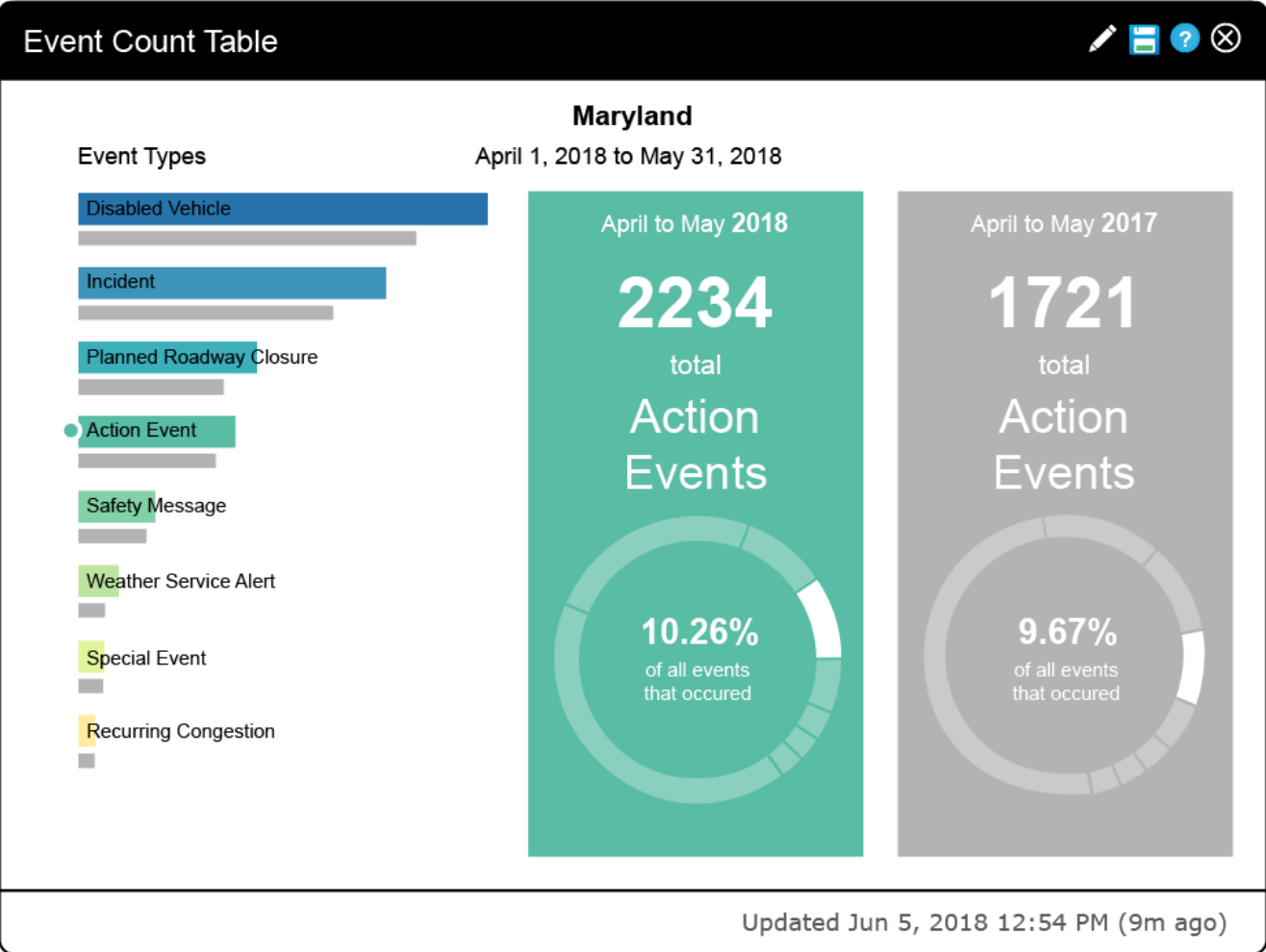
3. Compare last 3 Years

More New Dashboards (coming soon)

Reliability

Bottlenecks

Events



Ranked Bottlenecks Comparison

2018					Current Month	Location
Jan	Feb	Mar	Apr	May	June	
1	1	2	2	2	1	I-495 CW @ I-270 SPUR
2	2	3	3	3	2	I-495 CCW @ MD-97/GEORGIA AVE/EXIT 31
4	-	7	1	1	3	I-495 CW @ CLARA BARTON PKWY/EXIT 41
-	6	5	8	4	4	I-695 CW @ I-83/MD-25/EXIT 23
-	4	4	4	8	5	I-695 CCW @ US-40/EXIT 15
5	-	6	-	7	6	I-695 CCW @ EDMONDSON AVE/EXIT 14
7	-	-	-	10	7	I-270 S @ MD-109/EXIT 22
-	5	8	7	5	8	I-495 CW @ MD-214/CENTRAL AVE/EXIT 15
-	-	-	-	-	9	I-95 N @ MD-100/EXIT 43
-	7	9	6	-	10	I-895 N @ HARBOR TUNNEL THWY (NORTH)
Ranking					1 2 3	

Using INRIX data

Updated Jun 13, 2017

Reliability Ranking Table

AM Peak

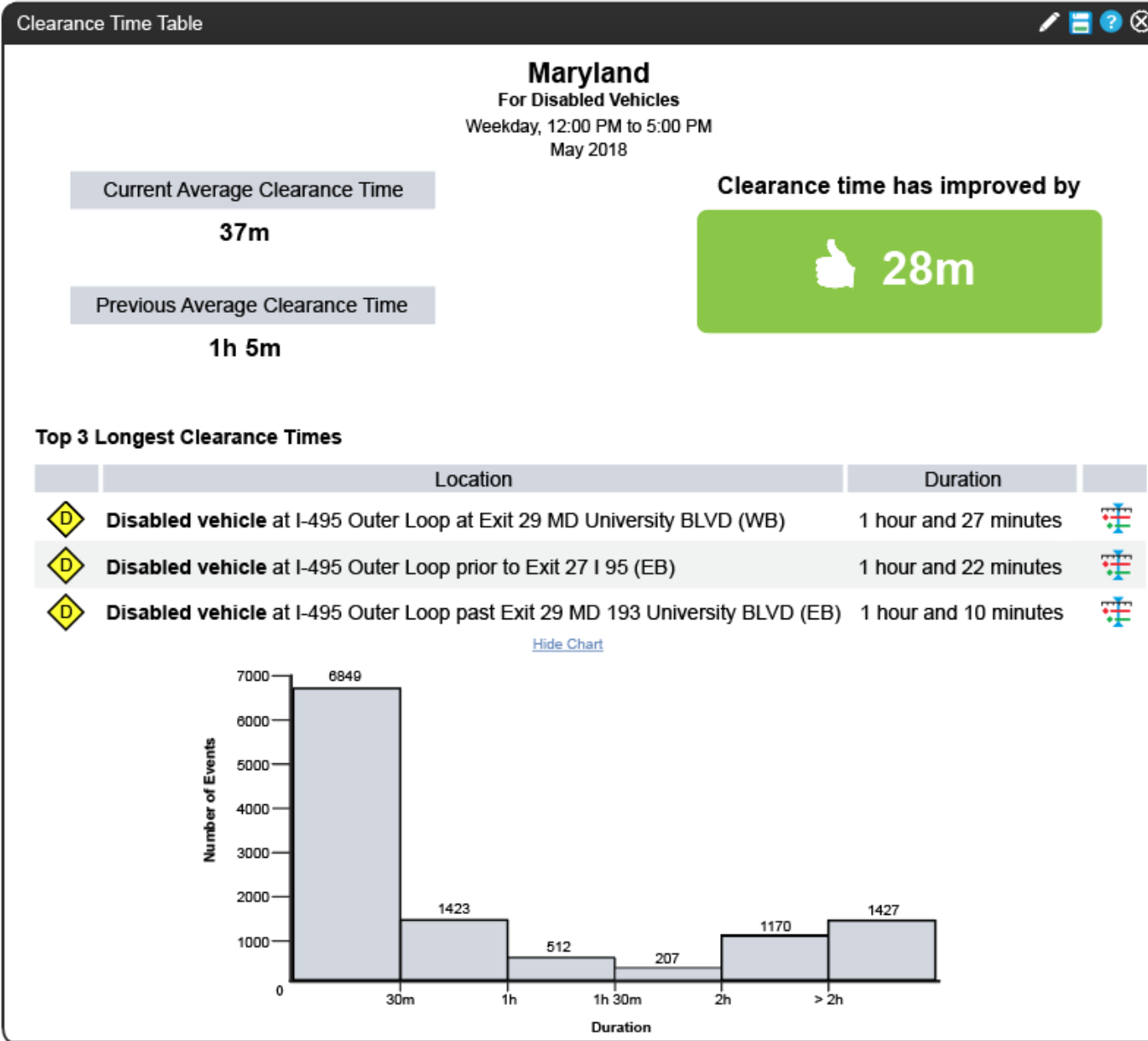
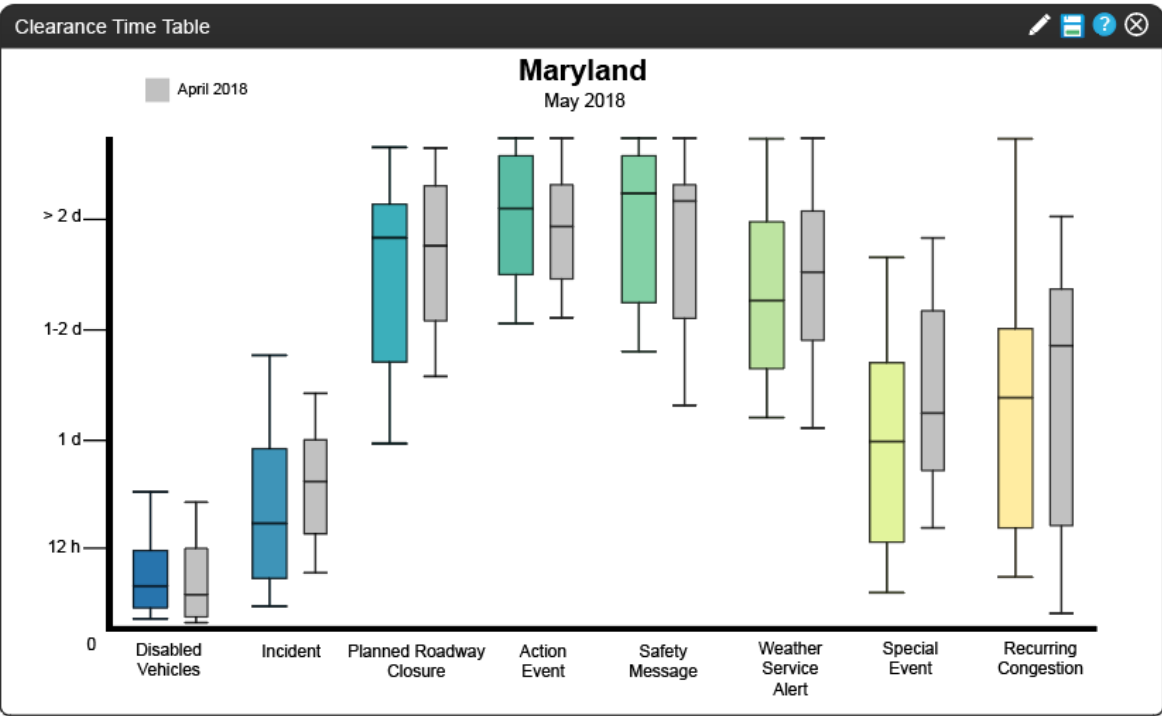
May 2018

Least Reliable Locations

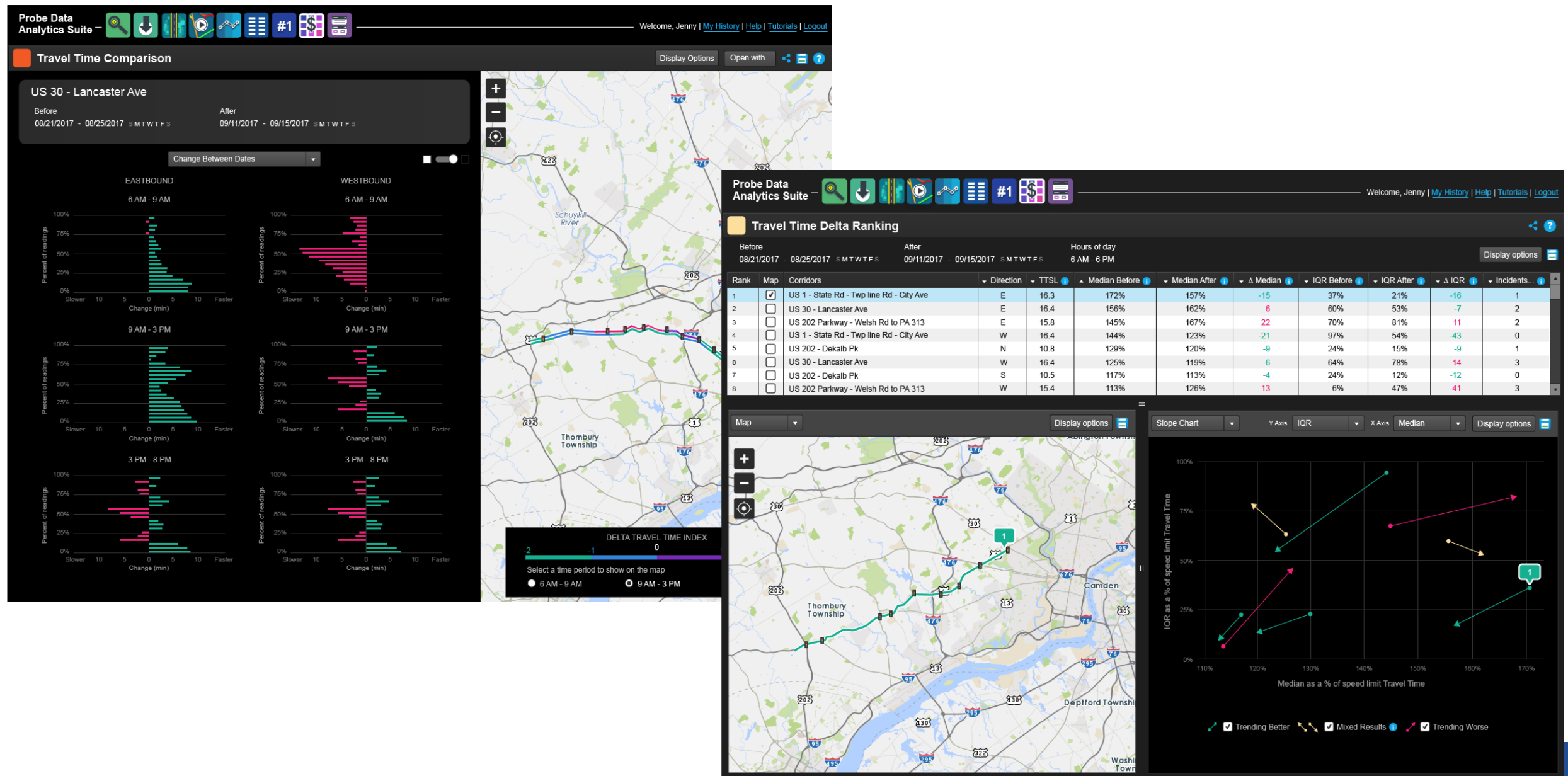
	Location	Reliability ▲	Differential	April's Reliability
1	I-95	20%	▲ 8%	12%
2	I-295	29%	▲ 2%	27%
3	I-270 SPUR	30%	▲ 4%	26%
4	I-495	35%	▼ - 2%	37%
5	Greenspring AVE	37%	▲ 3%	34%
6	Huntington PWKY	47%	▲ 7%	40%
7	Edmondson AVE	49%	▲ 4%	45%
8	Frederick RD	53%	▼ - 4%	57%
9	Baltimore AVE	56%	▼ - 5%	61%
10	Guilford RD	64%	▼ - 2%	66%

New Dashboards (coming soon)

Clearance Times
And more



Status of PennDOT's Signalized Arterial Perf. Measures



Your Input is Needed!



Working Groups



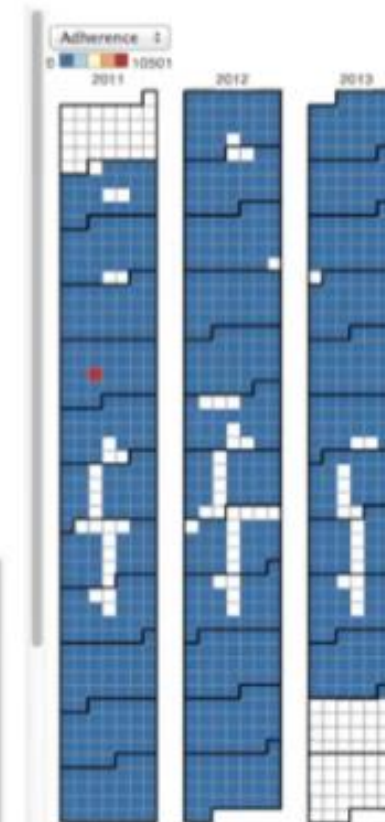
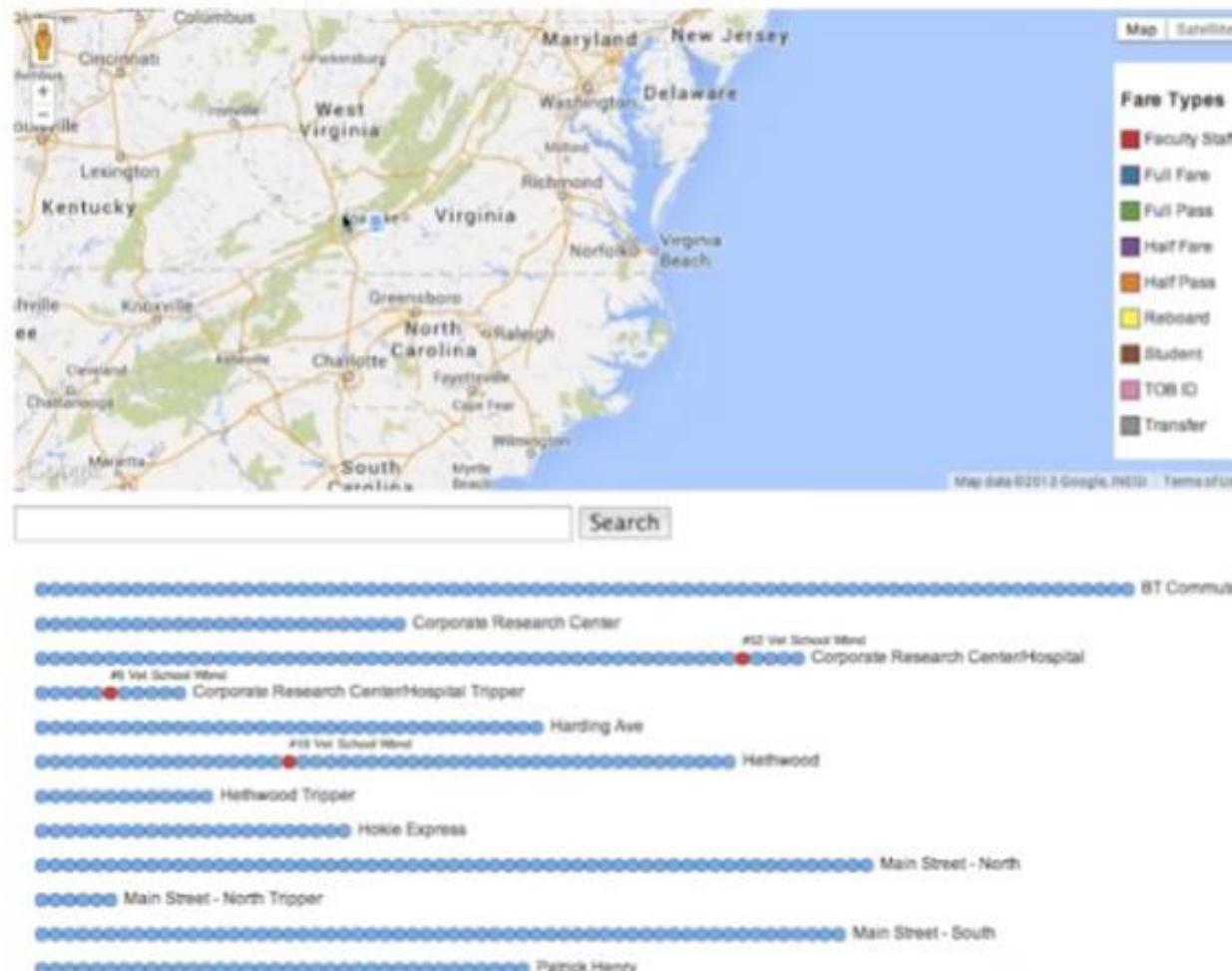
Agency Input Session

New Tool Working Groups Forming

- Transit Analytics
- Signal Performance Measures
- Trip/O-D Analytics
- Enhanced Work Zone Analytics



Transit Analytics (for ops and planners)

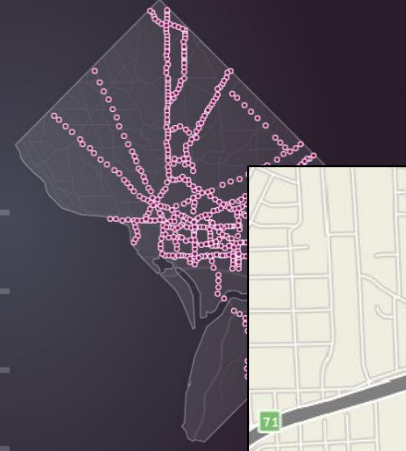


Transit Analytics

Which stops serve the most riders

There are 11500 public transit bus stops in DC. You can see on the map where they all are and, by hovering over the ranges below, you can highlight them based on the number of riders they serve daily in 2015.

Number of riders served daily:



Bus Stop
NEW YORK AVE NW & 9TH ST NW
Serves: 306

D4



DCWE



Wilson Blvd @ N Veitch Street

Next Arrival: Rte. 41 to Court House, 10 min

Routes Served: 41 Columbia Pike-Ballston-Court House
42 Columbia Pike-DHS/Sequoia-Rosslyn

Accessible: Yes
 Nearby Parking: Street
 Nearby Incidents: [Fort Myer Dr.](#)
[Key Blvd.](#)

Bus: 53A
 Routes served: 53A
 Nearby incidents: 2

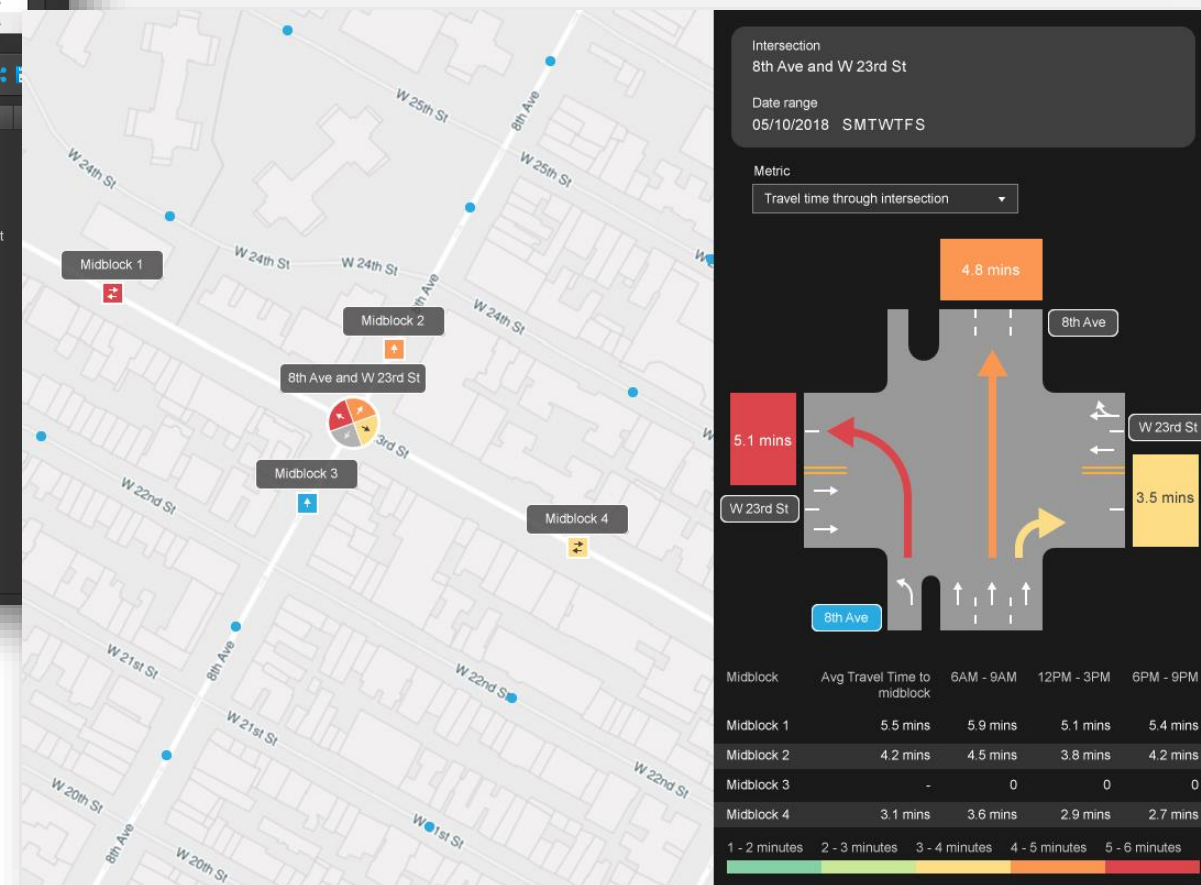
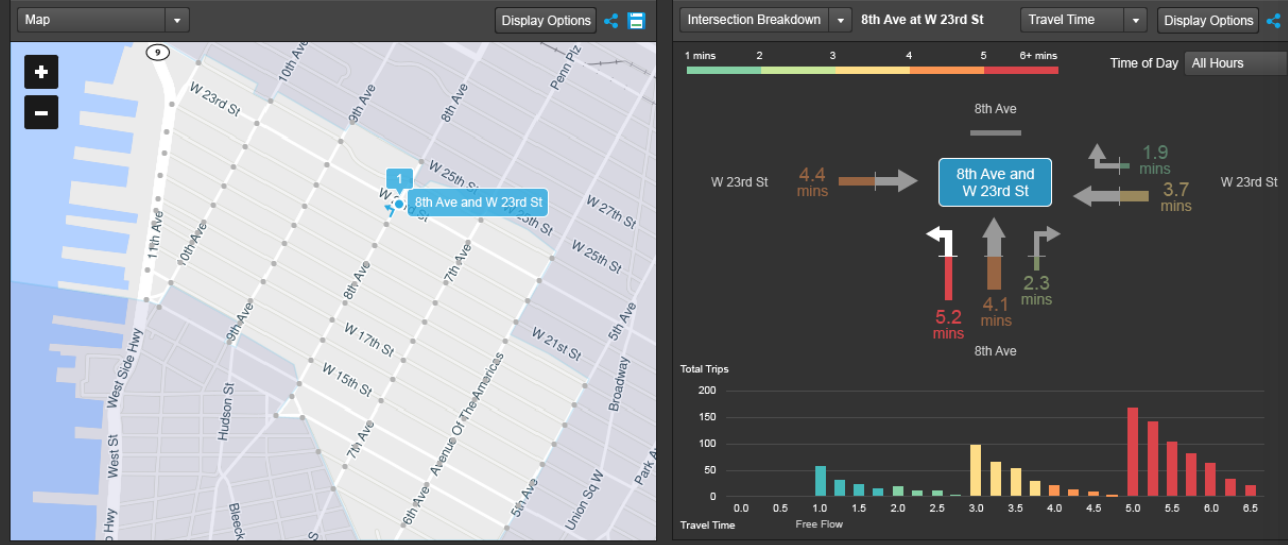
Wilson BLVD, EB @ N Kenmore Street, NS (41024)
 Routes served: 41 42
 Nearby incidents: 2

Route 41 to Court House
 Nearby incidents: 2

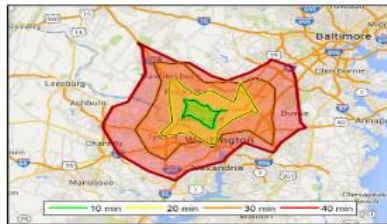
Signal Performance Measures (Trips + Probe + HD)

Ranked intersection movements in the 10011 zip code for the date range of 05/06/18 through 05/12/18

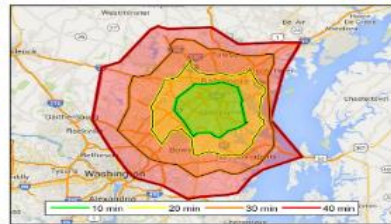
Rank	Map	Intersection	Approach	Movement	Volume	User Delay Cost	Average Travel Time	25th Percentile	75th Percentile	5th Percentile	95th Percentile
1	<input checked="" type="checkbox"/>	8th Ave at W 23rd St	Northbound	Left	489	\$4,235.00	5.5 mins	2.5 mins	7.2 mins	1.5 mins	7.5 mins
2	<input type="checkbox"/>	W 20th St at 8th Ave	Eastbound	Through	761	\$4,194.00	5.2 mins	2.1 mins	6.9 mins	1.4 mins	7.1 mins
3	<input type="checkbox"/>	W 19th St at 8th Ave	Westbound	Left	504	\$4,895.00	5.0 mins	2.1 mins	6.8 mins	1.4 mins	6.9 mins
4	<input type="checkbox"/>	W 23rd St at 8th Ave	Eastbound	Through	210	\$2,305.00	4.9 mins	1.7 mins	7.1 mins	1.2 mins	7.2 mins
5	<input type="checkbox"/>	W 20th St at 8th Ave	Westbound	Left	354	\$3,204.00	4.7 mins	1.8 mins	6.6 mins	1.3 mins	6.8 mins
6	<input type="checkbox"/>	7th Ave at W 17th St	Southbound	Through	159	\$2,987.00	4.7 mins	1.5 mins	6.3 mins	1.2 mins	6.6 mins
7	<input type="checkbox"/>	W 15th St at 11th Ave	Westbound	Left	263	\$2,516.00	4.5 mins	1.4 mins	6.0 mins	1.1 mins	6.5 mins
8	<input type="checkbox"/>	W 19th St at 8th Ave	Westbound	Right	186	\$1,425.00	4.4 mins	0.8 mins	5.8 mins	0.6 mins	6.2 mins
9	<input type="checkbox"/>	W 14th St at 7th Ave	Eastbound	Through	218	\$1,546.00	4.3 mins	1.5 mins	5.6 mins	1.0 mins	6.0 mins
10	<input type="checkbox"/>	W 21st St at 10th Ave	Eastbound	Left	135	\$1,204.00	4.0 mins	0.7 mins	5.5 mins	0.5 mins	6.0 mins



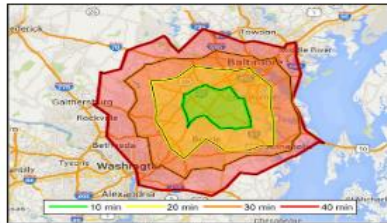
Trip/O-D Analytics



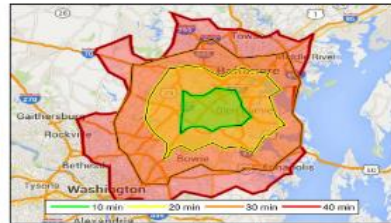
Walter Reed Medical Center



BWI



Fort Meade



Arundel Mills

Welcome to the OD Data Suite

Please choose one of the available data sets to explore:

DATA SETS	DATA PROVIDER	DATE RANGE	DETAILS
Maryland Data Set	INRIX	February, June, July, October 2015	Temporal Data Granularity: 1 Second Spatial Data Granularity: Latitude/Longitude Vehicle Types Included: Cars and Trucks (separated or aggregated) Waypoints Included: Yes
Washington DC Data Set	INRIX	January, February, March, April, May, June, July, August, September, October, November, December 2015	Temporal Data Granularity: 1 Second Spatial Data Granularity: Latitude/Longitude Vehicle Types Included: Cars and Trucks (separated or aggregated) Waypoints Included: Yes



Top N OD Locations Dashboard

- 1) Select Destination or Origin Display
- 2) Select MSA Destination or Origin
- 3) Specify Top N Locations to View

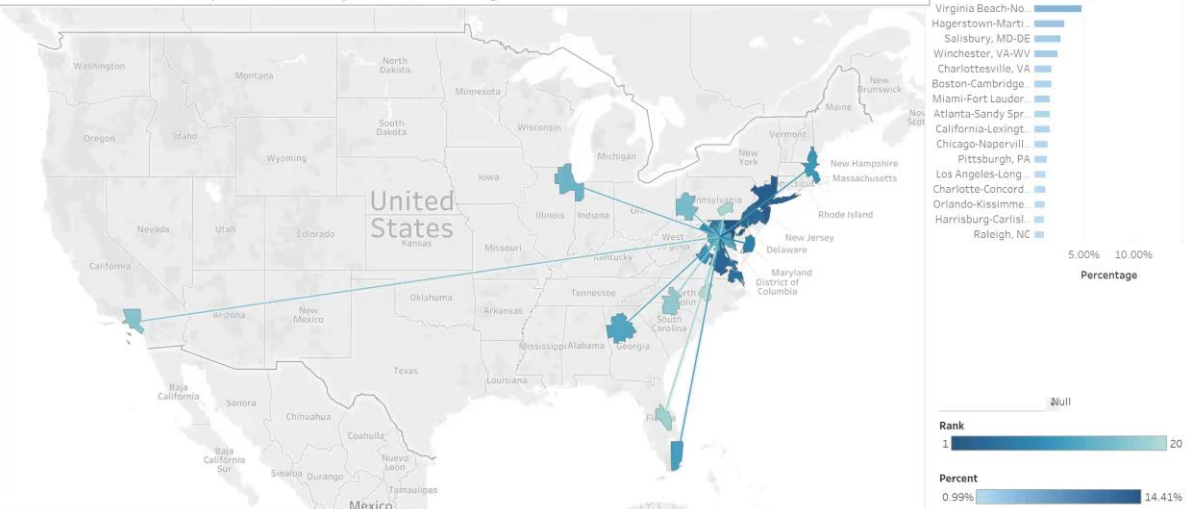
Display
Origin Selection

MSA Origin
Washington-Arlington-Alexandria, DC-VA-MD...

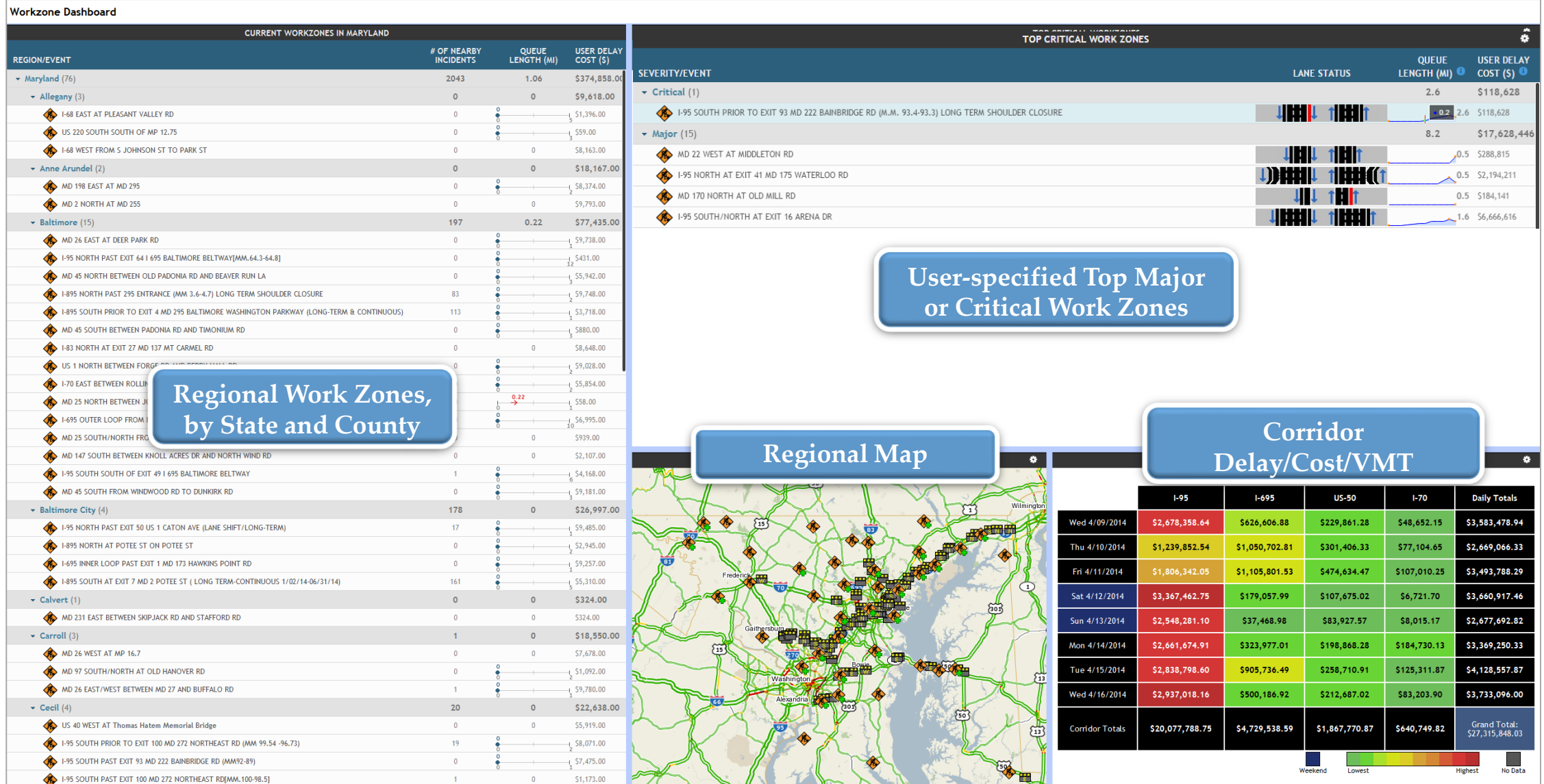
MSA Destination
(All)

Top N Locations
20

Map View Scaled by Relative Ranking



Enhanced Work Zone Analytics



Transportation Disruption Statistics

- Coalition led activity
- Leverages RITIS tools & data to
 - Evaluate the causes of congestion
 - Provide agencies with tools to
 - Evaluate state-wide, regional, and corridor causes of congestion
- A Steering Committee will be established



The ancient
Causes of Congestion
Pie Chart

Poll Question #1

1

Are you interested in being part of one of the Working groups or the Steering Committee?
If so, note which one?

- ☐ **Transit Analytics Working Group**
- ☐ **Signal Performance Measures Working Group**
- ☐ **OD Analytics Working Group**
- ☐ **Enhanced Work Zone Analytics Working Group**
- ☐ **Transportation Disruption Statistics Steering Committee**
- ☐ *Wherever you need the most help*
- ☐ *Not interested in participating at this time*

Agency Input Session



“What’s on your mind?”

Wrap Up



Denise Markow, PE, I-95 Corridor Coalition
TSMO Director

Questions?

Please contact:

I-95 Corridor 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!

