

# RITIS Workshop

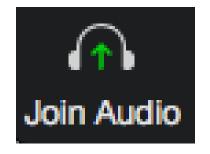
Building a Corridor Performance Summary Report

March 29, 2022



#### Welcome!

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





## Asking Questions in the Q&A Box



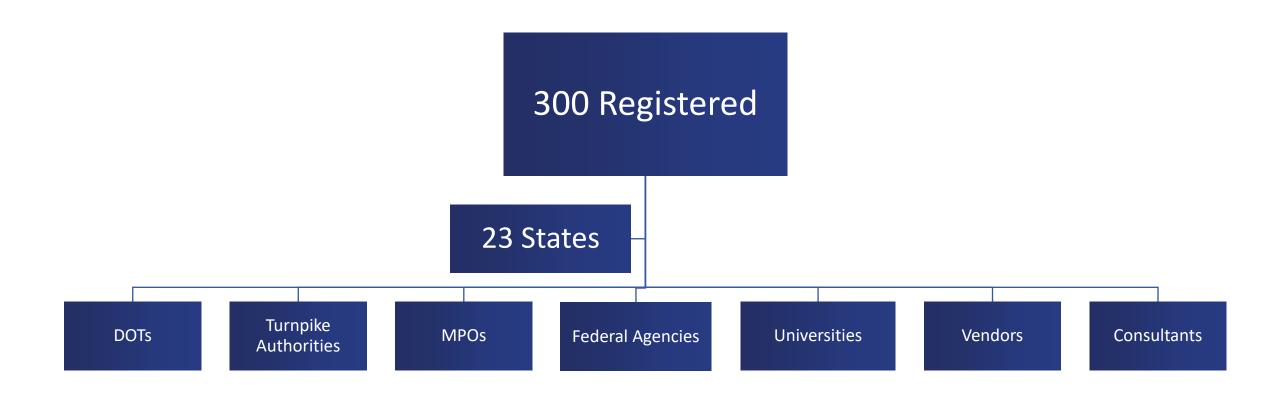
- Questions will be asked in the Q&A box
- Click on the Q&A icon at the bottom of your screen



- The questions in the Q&A box will be monitored and answered either during or at the end of the workshop
- You can keep track of your questions in the "My Questions" tab in the Q&A box



### The Eastern Transportation Coalition Sponsored Event



# Today's Speakers

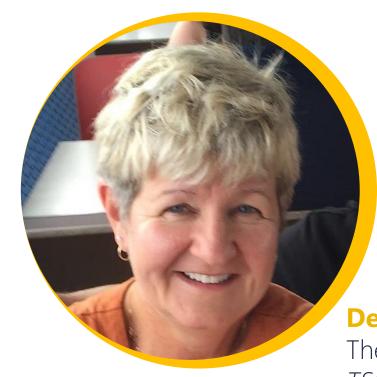


John Allen
UMD CATT Lab
Faculty Assistant, Outreach &
Education



Rick Ayers
UMD CATT Lab
Public Sector Advocate

#### Welcome from the Coalition





**Denise Markow**The Eastern Transportation Coalition
TSMO Director

#### Who We Are

 The Eastern Transportation Coalition (TETC) is a partnership of 17 states and D.C. focused on connecting public agencies across modes of travel to increase safety and efficiency.

- In the past 25 years TETC has evolved from a small, highway-focused group to more than **200 public agencies** working together to address the pressing challenges facing the eastern corridor focusing on:
  - Transportation Systems Management & Operations
  - Freight
  - Innovation









### Coalition Update

#### **RECENT**

- ✓ Transportation Data Marketplace State & Vendor Meetings (33) August 2021 January 2022
- ✓ New England HOGs Fresh Start: Freight Roundtable February 17, 2022
- ✓ **RITIS User Group Meeting -** February 24, 2022
- ✓ TIS Web Summit: Improving Safety Implementing New Travel Info Services for Commercial Vehicles March 17, 2022

#### **UPCOMING**

- RITIS Product Enhancement Working Group Web Meeting April 6, 2022
- New England HOGs Using RWIS in Winter Operations April 7, 2022
- Understanding Origin-Destination Data: RITIS Workshop #2 April 8, 2022
- Electric Vehicle Workshop April 12-13, 2022 (invite only)
- > FY2023 Strategic Planning April 21, 2022 (Committee members only)
- Freight Committee Meeting April 27, 2022
- > RITIS User Group Meeting May 5, 2022
- > Potomac HOGs Getting Better Information out to Travelers in Winter Operations- May 11, 2022



# Setting the Stage





John Allen
UMD CATT Lab
Faculty Assistant, Outreach & Education





Templates from the CATT Lab

▶ A Workshop for The Eastern Transportation Coalition User Community



703.989.3221

rayers@umd.edu

TRANSPORTATION
COALITION

CONNECTING FOR SOLUTIONS

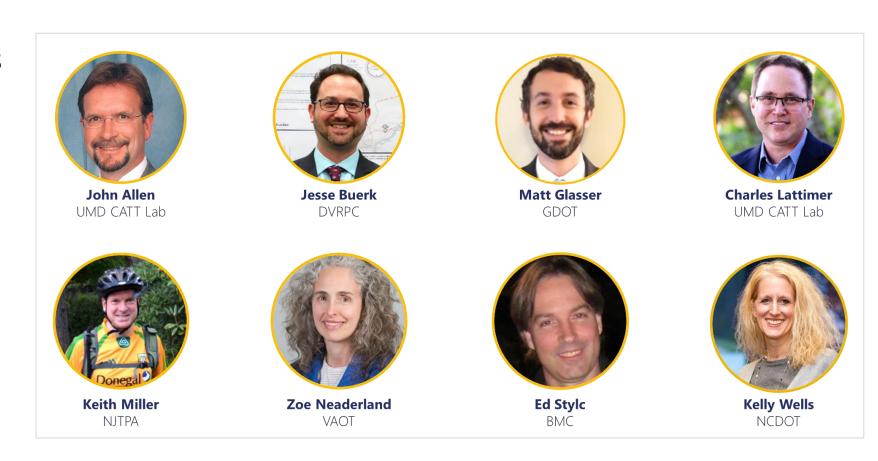
cattlab.umd.edu



# The Performance Reporting Working Group

# Our Working Group has helped the CATT Lab in:

- Guiding template development
- Test driving product
- Shaping the RITIS templates page
- Promoting performance reporting use



**Representing** Planning • Operations / DOTs • MPOs / RITIS User Group co-chairs

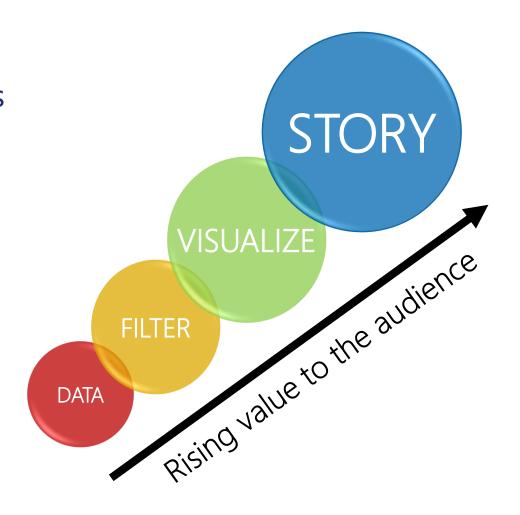
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#### Our Mission

**To help** agencies *easily* develop consistent, professional performance reporting documents for telling a "transportation story" in a simple, concise and visually persuasive way...

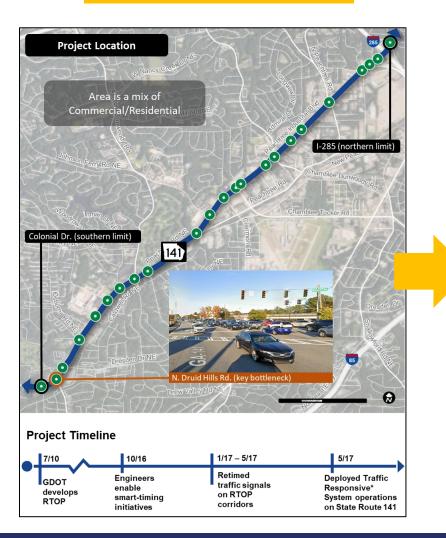
...that supports decision-making, meets a requirement or promotes an action...

...and is shareable with a wide range of audiences.

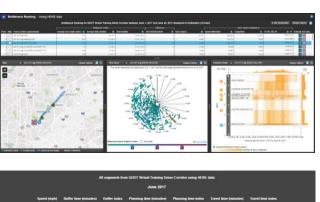


#### A basic three-step process to create performance reports

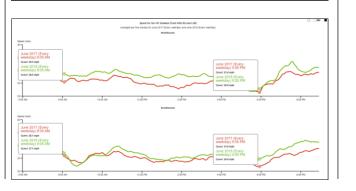
Choose a use case



Run RITIS tools



				June 2017					
	Speed (mph)	Buffer time (minutes)	Buffer index	Planning time (minutes)	Planning time index	Travel time (minutes)	Travel time index		
	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM		
	12:00 AM	12:00 AM	12:00 AM	12:00 AM	12.00 AM	12:00 AM	12:00 AM		
Mon	29.61			29.84		21.00		Mon	
	28.55	10.86		32.44		21.78			
Wed	28.83	3 9.15 0.42		30.81		21.56		Wed	
	28.21	10.99				22.03			
	28.91	8.94	6.41	30,79					
leekdays								Weekdays	
	29.92	9.90	0.49	30.26		20.77			
	32.02			27.26		19.41			
Reekends	30.93			29.12		20.10		Weekends	
ul Days	29.33	9.76	0.46	30.92	1.00	21.19	1.29	All Days	



Summarize results in a template



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March 29, 2022

# Agenda

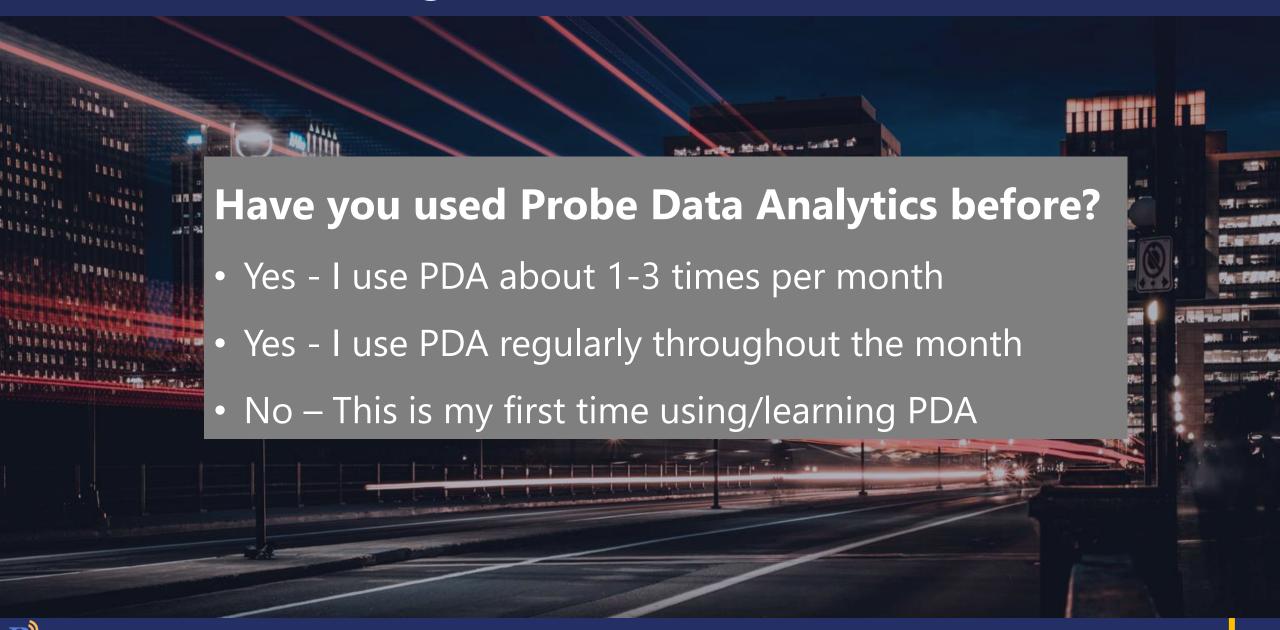
- Welcome and Intros
- Overview of RITIS resource site
- Review of PDA tools used to generate corridor and congestion perf. reports
- Report development
  - Monthly congestion performance report
  - Quarterly corridor performance report
- Q&A

**HD Signal Data** Movement, travel times, origin to 100 **Future Autonomous** First Responder/CAD ATMS & 511 **Transit** Schedules, AVL, CCTV and Video Data ridership, and **RITIS** Fusion & DSS Monitor Detour ahead Systems Prioritize Investment Decisions Measure **Evaluate** Operational Safety/Mobility Performance **Improvements** 

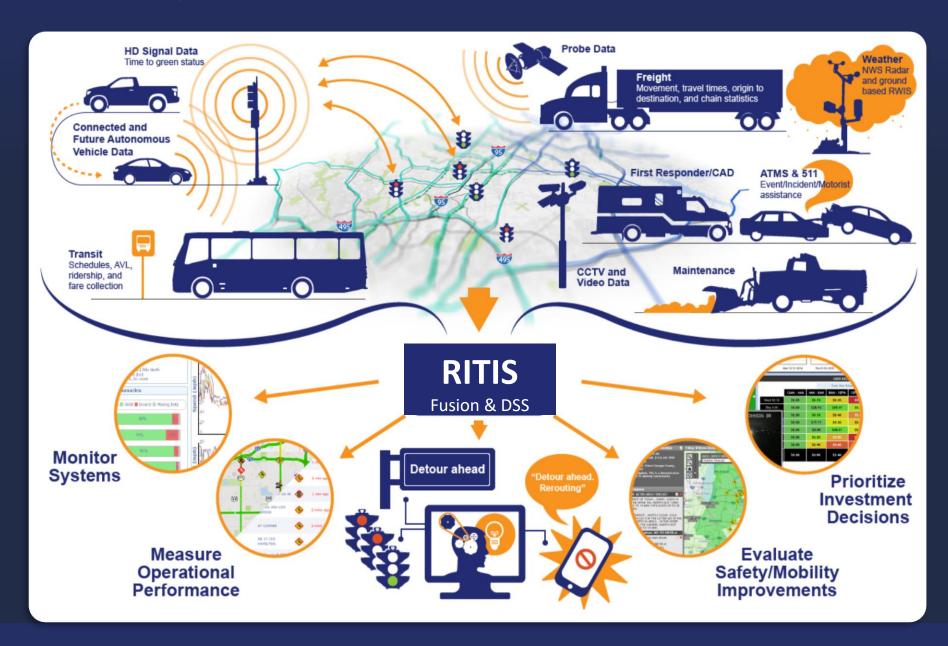
https://ritis.org



# Attendee Polling – Q1

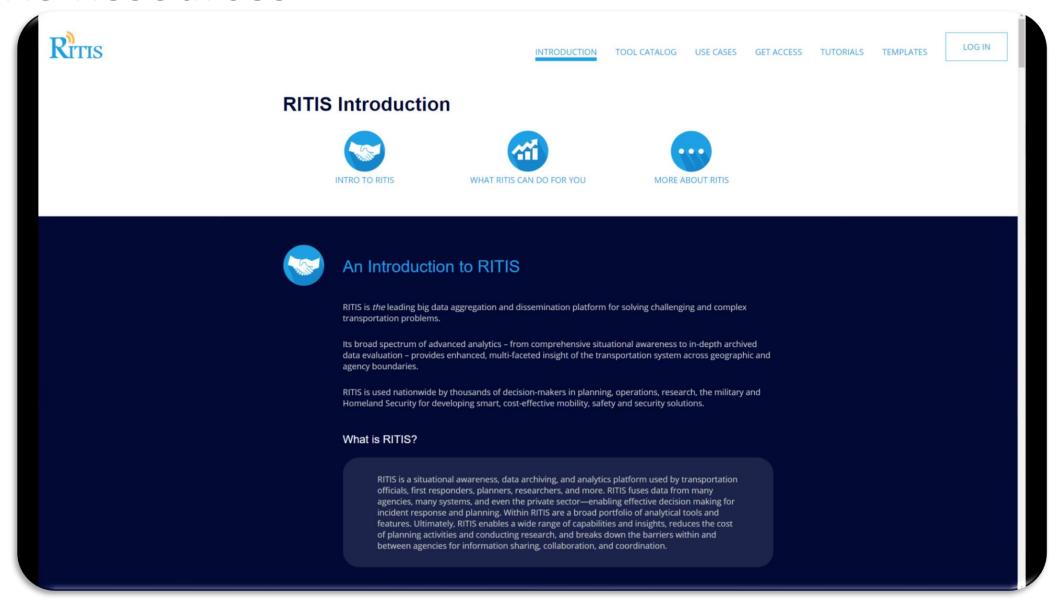


### Regional Integrated Transportation Information System



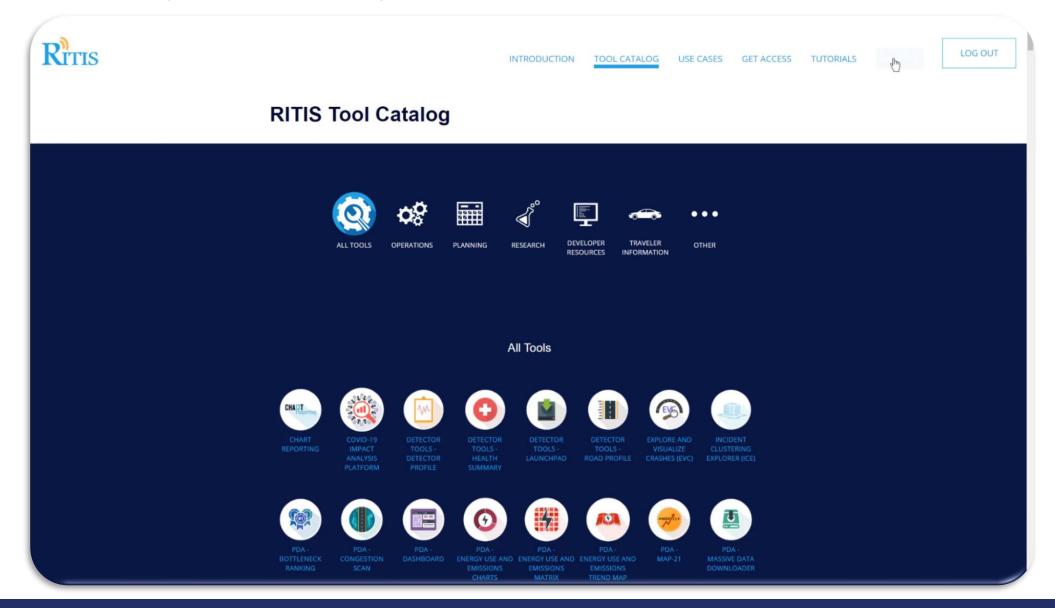


#### **RITIS Resources**



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### RITIS Report Templates



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19

#### Probe Data Analytics – Why Report Templates?

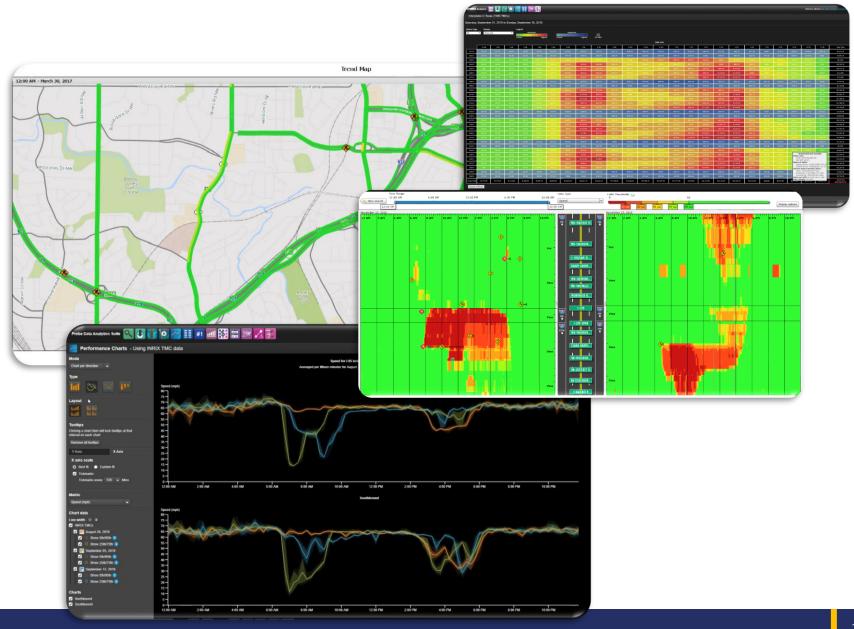
#### DATA DRIVEN INSIGHTS

#### OPERATIONS

- Signalized corridor before
   & after studies
- After-action incident review
- Work zone impacts
- Safety and operations
- Significant event analysis

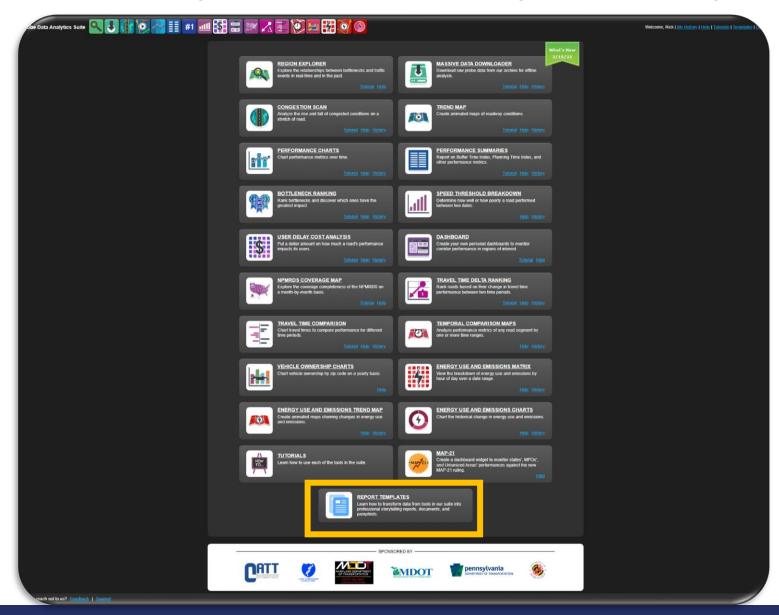
#### PLANNING

- Program reviews for project prioritization
- Business case justification
- Public information campaigns
- Federal reporting



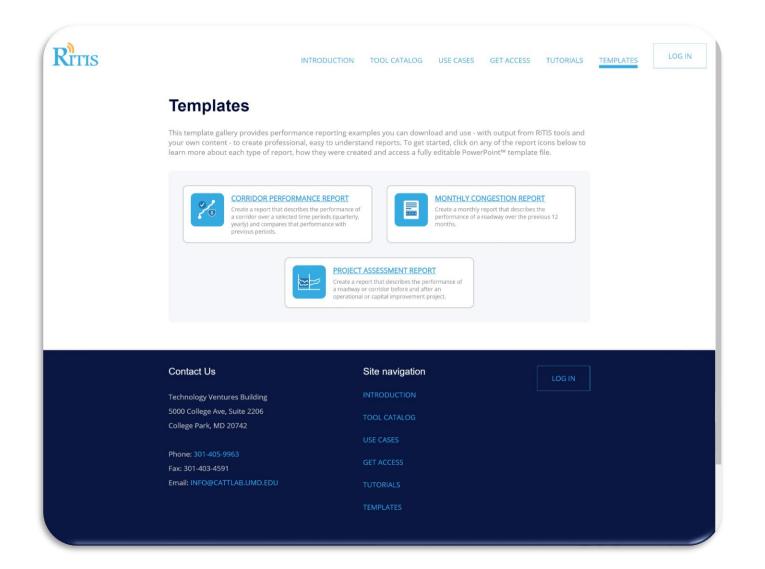


#### Probe Data Analytics Suite – Report Templates



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### Report Templates – Tell Your Story





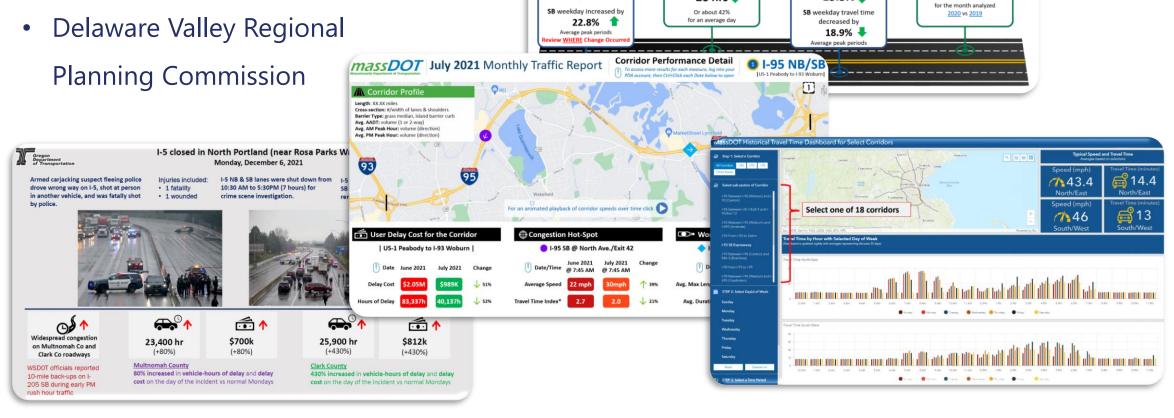




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#### Report Templates – Use Cases

- Massachusetts DOT
- New Jersey DOT
- Oregon DOT



Department of

**Transportation** 

**Vehicle Speeds** 

NB weekday increased by

18.2%

**Corridor Performance Report** 

US-1 from Brunswick Pike to US-9 Middlesex and Mercer Counties

**Traffic Signal Timing Operational Improvement** 

Reliability

NB weekday travel time

decreased by

15.3% 🞩

This report represents before and after congestion analysis, comparing **October** of **2020** to the same month in **2019**.

Explore this Trend Map to visualize how travel time reliability changed throughout the district.

**Key Bottleneck** 

(US-1 @ Old Post Rd /

Total congested

time decreased

almost

26 hrs 🎩

10.1M veh./day

Delay Costs

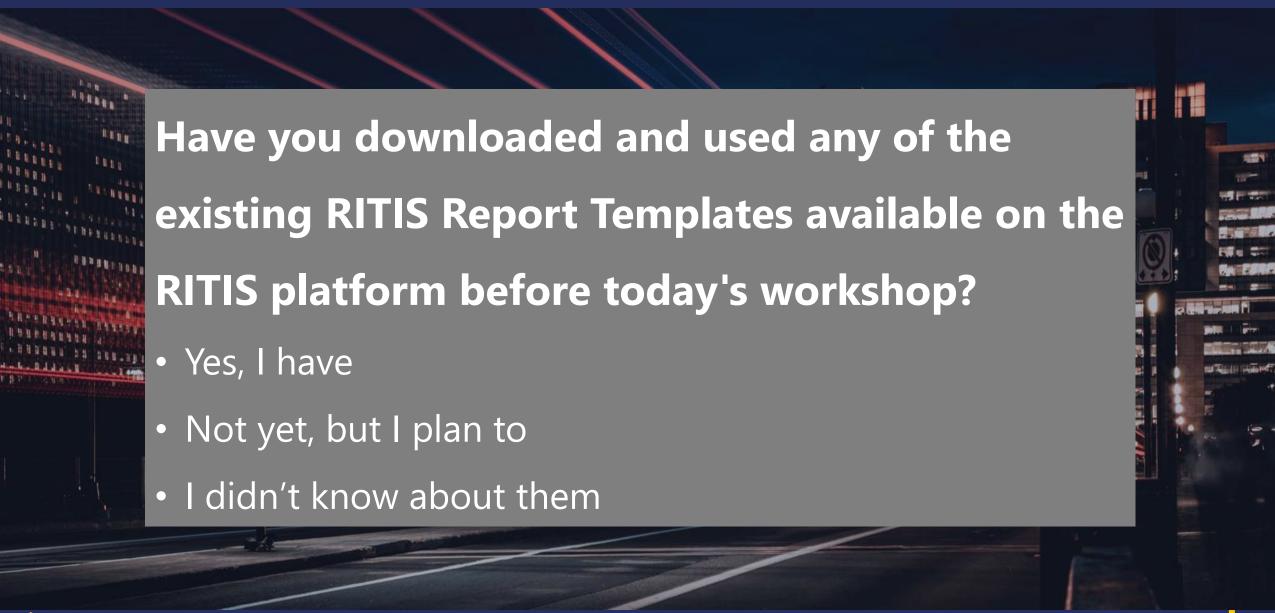
Delay costs

decreased by

\$1.6M 🔻



# Attendee Polling – Q2

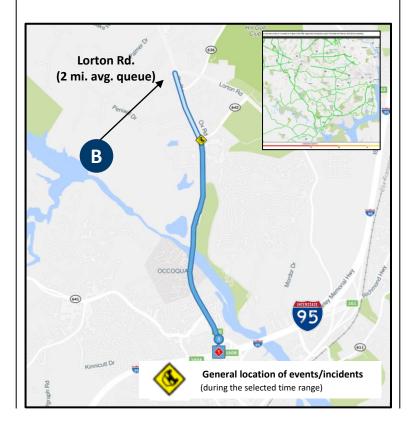


#### **VA-123 S @ I-95**

**Southbound PM congestion** from Lorton Rd. extends to I-95 during the afternoon peak.

Volume-related delays are caused by factors such as:

- High volume
- <u>Click inset map to open an animation of congestion</u> for the reported month



Feb. vs. Jan

The variation in Travel Time

between these periods.

Reliability improved modestly

#### Monthly Congestion Performance Report Feb. 2022

\$177,596 Click on an icon for more detail The Total Delay Cost for Feb. of 2022 **46.7** mph The Average AM Peak Hour Speed, @ 9:15 AM - 11% lower than free flow speed **5,881** hr **User Cost** The Vehicle-hrs. of Delay for Feb. of 2022 **21.3** mph The Average PM Peak Hour **Average** Vehicle-hrs. Speed, @ 5:40 PM - 46% Speed of Delay lower than free flow speed THERE WAS 1 **EVENT / INCIDENTS 3.5** min **DURING REPORTING PERIOD** The Average AM Peak Hour No significant AM congestion Travel Time. Drivers should plan Travel Congestion locations for up to 5 min to be on time Time Locations **7.4** min 3:00-6:30 PM **Bottlenecks** Lorton Rd. to VA-123 @ I-95 The Average PM Peak Hour Travel Time. Drivers should plan **Travel Time Reliability** for up to 13 min to be on time

3 pm - 6:30 pm

Most of the Bottlenecks along this

roadway occurred between these times





#### **Quarterly Corridor Performance Report**

Q1 2022 vs Q1 2021

Analyzed for the <u>Northern Virginia District</u> Interstates Only

Key District Metrics

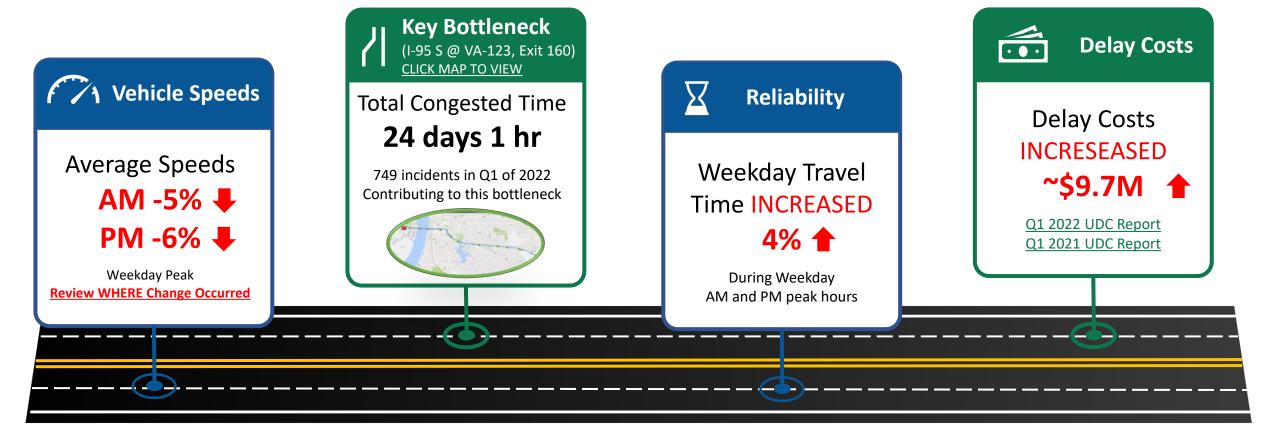
Interstates

**~170** mi. of road

**~34.1M** veh./day

Northern VA

This quarterly report evaluates key performance indicators across the Norther Virginia District and is focused on interstates throughout the district. **Explore this Trend Map** to visualize how travel time reliability changed throughout the district.



# Probe Data – Share Your Story





### Probe Data Analytics Suite – Share Your Story





#### **VA-123 S @ I-95**

**Southbound PM congestion** from Lorton Rd. extends to I-95 during the afternoon peak.

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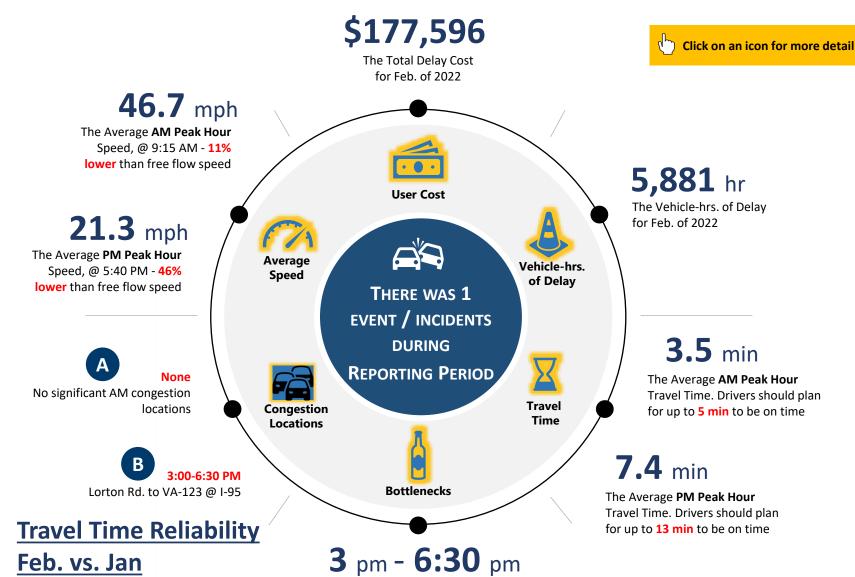


#### Monthly Congestion Performance Report Feb. 2022

The variation in Travel Time

between these periods.

Reliability improved modestly

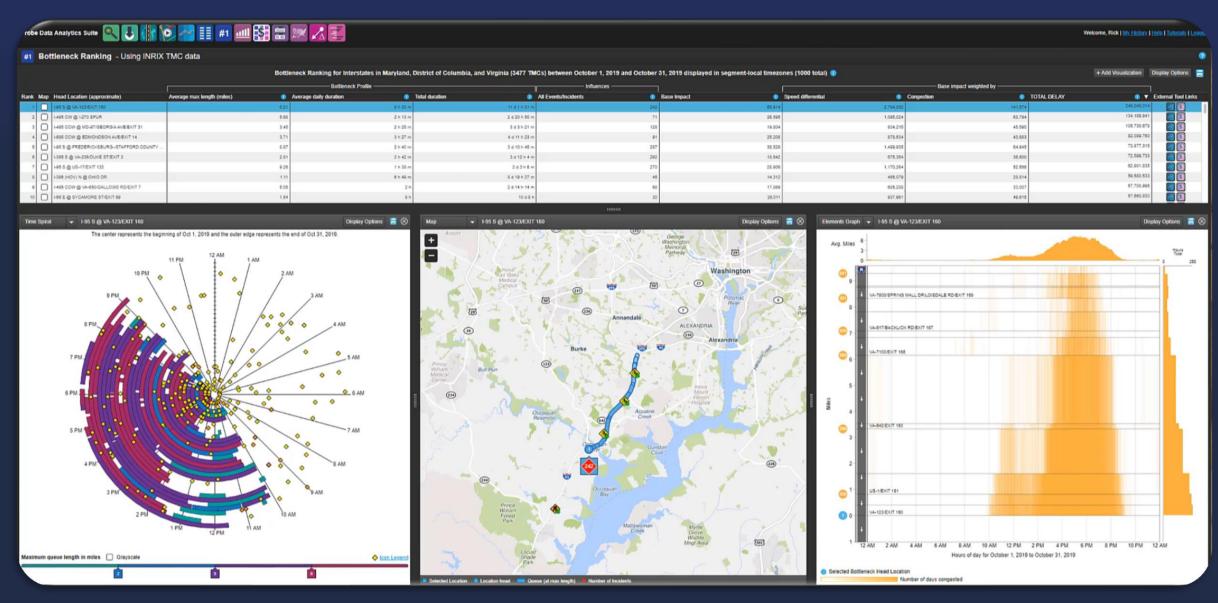


Most of the Bottlenecks along this

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### Bottleneck Ranking (project prioritization)







# Demo



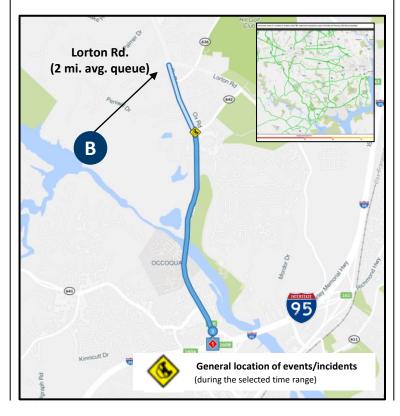


#### **VA-123 S @ I-95**

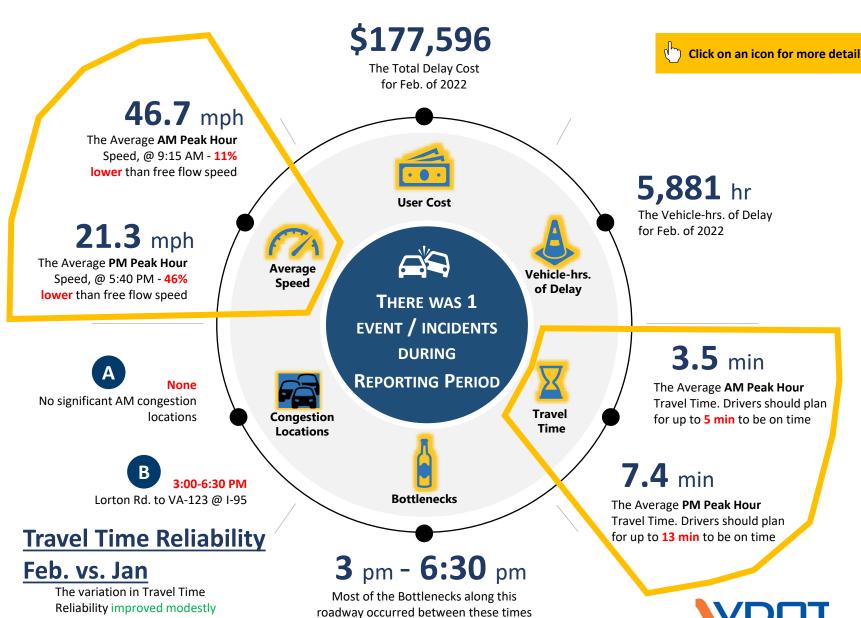
**Southbound PM congestion** from Lorton Rd. extends to I-95 during the afternoon peak.

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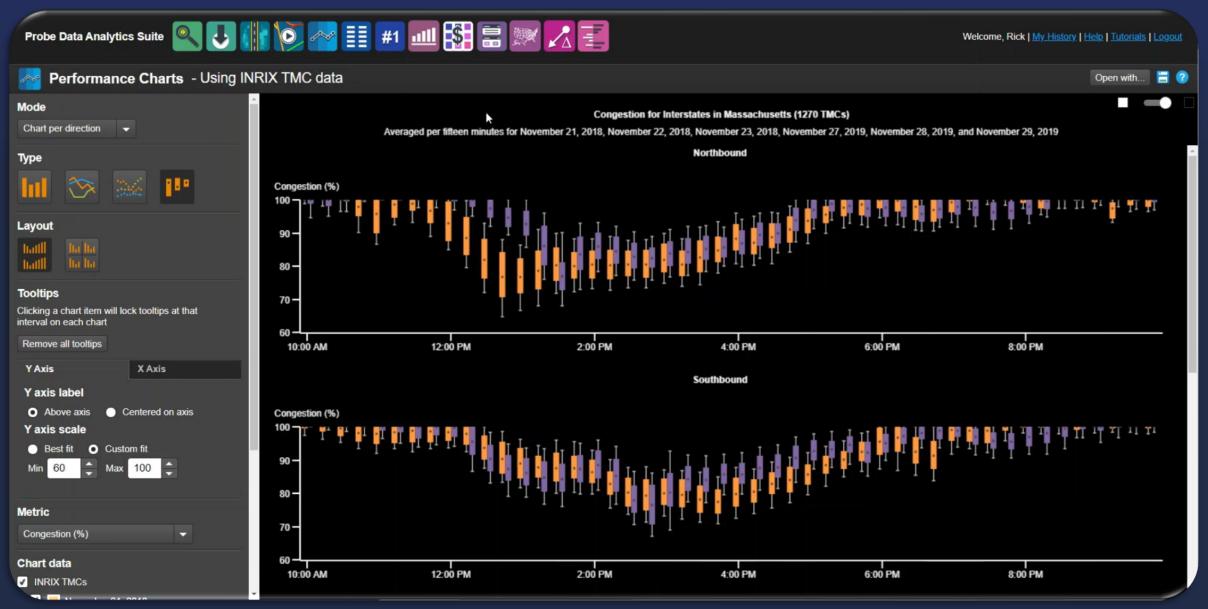
#### Monthly Congestion Performance Report Feb. 2022



between these periods.

#### Performance Charts & Summaries







# Demo



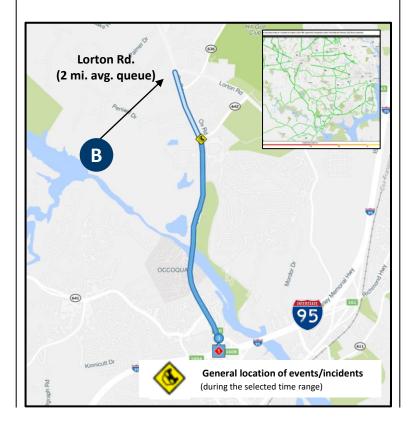


#### VA-123 S @ I-95

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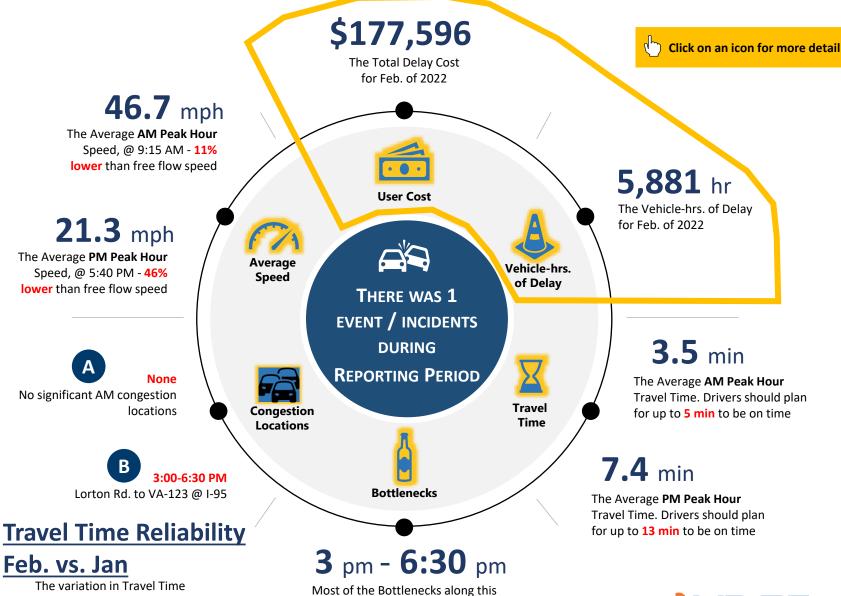
- · High volume
- <u>Click inset map to open an animation of congestion</u> for the reported month



#### Monthly Congestion Performance Report Feb. 2022

Reliability improved modestly

between these periods.



roadway occurred between these times

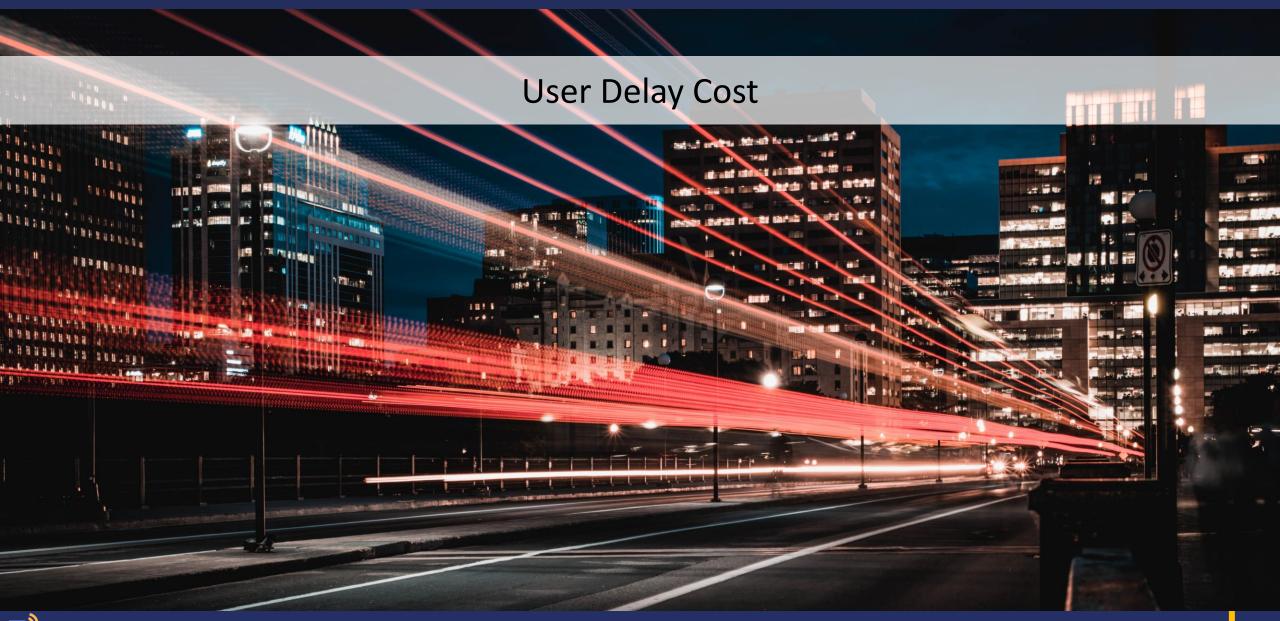


### User Delay Costs (make the case for funding)



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													Total Cost												
[	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
01/18	\$0.8K	\$0.4K	\$0.3K	\$0.2K	\$0.1K	\$0.2K	\$0.3K	\$1.2%	\$1.8K	\$5.2K	\$24.8K	\$50K	\$53.1K	\$72.7K	\$81.3K	\$88.3K	\$56.7K	\$38.2K	\$22.7K	\$11.7K	S8.1K	\$2.6K	SETK	\$1.5K	\$503.2K
2/18	\$0.5K	\$0.2K	\$0.1K	\$0.5K	\$0.3K	\$9.4K	\$49.6K	\$76.BK		\$15.6K	\$10K	\$14.8K		\$42.3K		\$127.8K	\$159.3K	\$101.1K	\$05.8K	\$35.2K	\$6.3K	\$4.7K	\$1.5K	\$0.8K	\$960.9K
3/18	\$0.2K	\$0.2K	\$0.2K	\$0.16	\$0.2%	\$5.3K	\$32.6K	\$65K	\$31K	\$7.7K	\$13.7K	\$21.9K	\$30.7K	\$30.4K	\$66.7K	\$133.9K	\$153.7K	\$109.7K	\$67.5K	\$43.6K	\$6.3K	SERK	\$35.5K	54K	\$905.7K
04/18	\$0.4K	\$0.2K \$0.4K	\$0.1K	\$0.1K	\$0.1K	\$0.8K	\$1.8K \$16.5K	\$4.5K	\$4.7K \$18.9K	\$6.5K \$7K	\$6.6K \$20.5K	\$7.2K \$35.9K	\$0.5X	\$8.7K	\$9K \$72.6K	\$8.5K	\$11.8K	\$6.8K \$78.3K	\$3.9K \$44K	\$4.2K \$18.4K	\$3.7K \$4.0K	\$4K \$4.2K	\$2.4K \$7.7K	\$0.6K	\$106.1K
6/18	90.9K	\$0.4K	\$0.1K	\$0K \$0.1K	\$0.3K	\$1.3K	\$10.5K	\$11.1K	\$18.9K	\$7K \$6.8K	\$20.5K	\$35.9K \$20.5K		\$45.0K	\$72.6K	583.5K		N/A	\$36.1K	\$10.4K \$13.1K	\$4.0K	\$1.0K	\$17.7K	\$0.9K \$2K	\$607.6K
7/18	SORK	\$0.3K	\$0.2K	50.1K	\$0.1K	50.4K	\$1K	\$2.5K	\$3.6K	512.9K	S4T.SK	159.3K	\$42.0K	904.5K	563.110	\$78.6K	\$62.0K	540.1K	\$46.6K	\$27.9K	SØ.BK	35.2K	53.9K	\$1.5K	\$603.3K
V18	\$0.8K	\$1.3K	\$0.1K	\$0.1K	\$0.1K	\$0.2K	\$1K.	\$1.1K	15K	\$2.0K	\$14.8K	\$25.8K			\$00.01	984.2K		\$53.6K	\$45K	\$27K	\$15.8K	\$15.7K	\$3.5K	\$1.2K	\$527K
18	\$0.4K	\$0.1K	\$0.2K	\$0.4K	\$0.1K	\$9.3K	\$48.1K	\$70.0K	570 9K	\$37.7K	\$11.4K	\$22.5K	\$29.7K	\$44.4%	\$86.5K	\$118.2K	\$146.4K	\$154.6K	\$68.2K	\$33K	SBK	\$4K	\$1.6K	\$1.1K	\$1M
18	\$2.6K	\$0.5K	\$0.4K	\$0.2K	\$2.6K	\$10.1K	184.7K	\$80.6K	\$100.4K	\$50.6K	\$31.7K	\$23.1K		\$32.5K	\$77.3K	\$114.2K	\$155.4K	\$172.3K	\$117.6K	\$55.5K	\$10.2K	\$5.5K	\$2.5K	\$1.2K	\$1.1M
18	\$1K	\$0.5K	\$0.5K	\$0.3K	-\$1K	\$7.8K	\$36.6K	\$81.6K	\$78.8K	SALEK	\$25.0K	\$16.4K	\$12.0K	\$26.8K	\$75.5K	\$130.9K	\$169.4K	\$180.4K	3114K	\$60.16	\$15.5K	\$5.3K	\$3.2K	\$1.7K	\$1.1M
18	\$1.7K	\$0.8K	\$0.5K	\$0.6K	\$1.2K	\$13.3K	\$45K	\$75K		\$47.00	\$36K	\$33.2K			\$82.4K	\$127.4K	\$157.3K	\$165.8K	\$66.5K	\$34.4K	\$10.5K	\$4K	\$3.8K	\$3.5K	\$1.1M
18	\$0.7K	\$0.7K	\$0.2K	\$0.5K	\$1.1K	\$14K	\$34.7%	\$52.4K	SHOK	\$18.6K	\$54.4K	555.4K	\$80.0K	\$50K	\$102.2K	\$133.5K	\$129.2K	\$111.4K	\$71.7K	\$34.8K	\$15.8K	\$7.46	\$6.5K	\$2K	\$1M
18	\$0.6K	\$0.2K \$0.7K	\$0.1K \$0.3K	\$0.2K \$0.1K	\$0.1K \$0.2K	\$0.3K	\$1.7K	\$3.4K	\$6.7K \$2.9K	\$20.8K \$2.4K	\$37.3K \$13K	\$80.5K	980 IIK 534.5K	\$82.1K \$35.7K	\$07.8K	\$00.1K	\$87.6K	\$05.2K	\$50.1K \$36.0K	\$27.0K \$20.4K	\$7.8K \$6.6K	\$4K \$2.3K	\$3.1K \$1.8K	\$1.4K \$1.5K	\$724.11 \$336.20
18	\$0.0K	\$0.7K	\$1.3K	50.1K	\$0.4K	\$7.6K	\$42.9K	59E.1K		\$2.4K	\$11.9K	\$18.2K	\$26.8K	\$43.5K	\$59.5K	\$115.5K	\$150.7K	\$171.4K	\$30.5K	\$29.7K	\$0.0K	\$4.5K	\$2.1K	\$1.1K	\$330.2 \$1M
18	\$1.5K	\$0.7K	\$0.5K	50.4K	\$0.5K	\$19.0K	\$65.4K	595.9K	\$108K	\$32.3K	\$18.6K	\$11.4K	\$12.2K	\$12.8K	\$37.3K	\$177.4K	\$180.2K	\$175K	\$100.4K		\$6K	\$4K	\$2.3K	\$1.2K	51.1M
8	\$1.8K	\$0.9K	\$0.4K	\$0.6K	\$0.3K	\$7.8K	\$38.9K	\$79.5K		\$32.9K	\$11.5K	\$23.3K	\$16.4K	\$10.5K	\$36.9K	\$102.2K	\$139.4K	\$124.9K	385.4K	\$54.3K	\$12.6K	\$4.3K	\$1.8K	\$1.2K	\$881.
8	\$0.3K	\$0.6%	\$0.2K	\$0.2K	\$1.1K	\$7.5K	\$37.1K	\$80.7K		\$22.8K	\$10.1K	\$20.7K	\$14.5K	\$19.4K	\$74.46	\$130.9K	\$140.3K	\$155.8K		\$31K	\$22.8K	\$5.2K	\$2.0K	\$1.8K	\$962.4
18	50.4K	\$0.6%	\$0.3K	\$0.3K	\$0.46	\$5.2K	\$29.5K	\$40,2K	\$48.40	\$25.7K	\$55.BK	500.4K	\$00.116	965.1K	\$84.2K	\$115.2K	\$112.6K	\$94.2K	\$78K	\$44.18	\$20K	\$11.4K	\$2.90	\$1.9K	\$956.5
t8	\$1.3K	\$0.6K	\$0.3K	\$0.3K	\$1.3K	\$0.2K	SIK	\$3.1K	\$7.3K	533.1K	\$47.3K	\$73K	\$96.5K	\$87.7K	\$107.3K	585 fK	\$80.8K	\$95K	\$73.6K	\$88.5K	\$30K	\$53.2K	\$73.9K	\$31.1K	\$1M
18	\$31.16	\$5.1K	\$0.2K	50.1K	\$0.2K	\$0.8K	\$0.9K	\$1.2K	55.2K	\$5.4K	\$11.5K	\$33.7K	\$40.5K	\$74.5%	\$98.1K	576.1K	\$76.8K	562.0K	\$43.7K	\$18.8K	\$5.5K	\$12K	\$3.1K	\$1.3K	\$817.6
8	\$0.6K	\$0.3K	\$0.2K	30.1K	\$0.1K	\$6.2K	\$26.6K	\$90.7K	550.8K	\$31.3K	\$7.8K	\$21.5K	\$19.8K	\$24.4K	SSOK	\$108.4K	\$149.3K	\$134.6K		\$69.2K	\$12.9K	\$2.7K	\$2.3K	\$0.6K	\$900+
8	\$0.5K	\$0.2K	\$0.2K	50.1K	\$1.2K	\$37.3K	\$118.6K	\$134.5K	\$109.1K	\$57.8K	\$19.4K	\$12.3K	\$17.1K	\$13.5K	\$20.7K	\$35.0K	\$89.7K	\$110.7K \$135.8K	\$54.4K	\$17K	\$5.4K	\$2.5K	\$1.5K	\$1.9K	\$882.5
8	\$0.9K	\$0.3K \$0.1K	\$0.1K \$0.4K	\$0.1K	\$0.2K	\$6K \$8K	\$26.5K	\$43.0K	\$37.5K	\$15.2K \$43.0K	\$6.3K \$32.3K	\$11.4K	\$14.7K	\$14.5K \$20.1K	\$32.9K	\$171K	\$118.4K	\$135.8K \$218.4K	\$143.2K \$124.2K		\$29.2K \$14.7K	\$10.1K	\$2.9K \$2.2K	\$2.1K	\$822.8 \$1.2M
18	\$0.2K	\$0.3K	\$0.2K	\$0.1K	\$0.3K	\$5.3K	\$19.4K	\$45.7K		\$16.7K	\$30.7K	\$49.2K		\$67.3K	\$102.3K	\$142.9K	\$189.6K	\$151.6K	\$62.9K	\$45.1%	\$13.7K	\$10.3K	50.1H	\$1.6K	\$1.1M
18	\$2K	\$1.1K	\$2.7K	\$2.3K	\$1.00	\$3.6K	96.8K	\$7.1K	SERK	\$22.3K	\$40.1K	\$62.7K	870K	\$66.5K	\$74.5K	\$88.EK	\$82.7K	\$72.4K	\$71.8K	\$40.7K	\$15.2K	95.2K	\$2.7K	\$2.8K	\$776.8
18	\$0.8K	\$0.3K	\$0.2K	\$0.1K	\$0.2K	\$0.2K	30.4K	31.4K	\$3.5K	\$7.8K	\$21.7K			\$85.5K	\$89.7K	509.1K			\$32.5%	\$16.6K	\$5.4K	\$2.5K	\$4.2K	\$6.4K	\$581.1
18	\$0.6K	\$0.1K	\$0.3K	\$0.2K	\$0.8K	\$11.2K	\$44.400	\$54.0K	546K	\$16.8K	\$10.5K	\$15.6K	\$24.0K	\$39.6K	351.5K	\$87.6K	\$142.9K	\$205.6K	\$160K	\$60.2K	\$23.3K	\$3.1K	\$2.2K	\$0.8K	\$1M
18	\$0.2K	\$0.1K	\$0.1K	\$0.1K	\$0.4K	\$7.1K	540K	\$72.2K		524.6K	35.0K	\$9.7K	30.4K	\$9.5K	\$25.3K	968.7K	\$121.8K	\$135.4K	\$95.8K	\$34.2%	\$7K	35.1K	\$1.6K	\$1.16	\$735.4
8	50.4K	50.2K	\$0.4K	30.1K	\$0.2K	\$6.7K	\$38.8K	\$70.0K		\$27.9K	\$15.4K	\$31.3K		\$22.4K	\$37.8K	584.2K	\$137.6K	\$150.6K	\$66.8K		\$10.0%	\$4.2K	\$3.6K	\$1.2K	\$876.2
/18	\$0.3K	50.2K	\$0.5K	50.1K	\$0.4K	55.4K	\$31.6K	\$85.3K	550.3K	\$42.8K	\$35.3K	\$57.8K			\$141.1K	\$208.3K	\$212.4K	\$168.2K	\$105K	\$44.6%	\$5.3K	\$2.7K	\$2.2K	50.8K	\$1.3M
/18		\$0.4%	\$0.1K	\$0.3K	\$0.2K	\$3.2K	\$7K	\$30.2K	\$39.4K	\$18.6K	\$40.400	\$121.4K			\$97.9K	\$122.3K		\$110K	\$86.2K	\$37K	\$24.5K	\$22.7K	\$8.1K	\$1.2K	\$1.1M



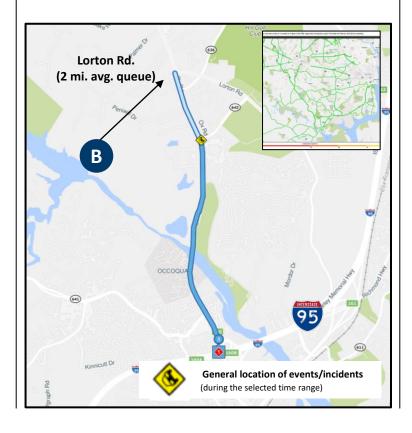


#### VA-123 S @ I-95

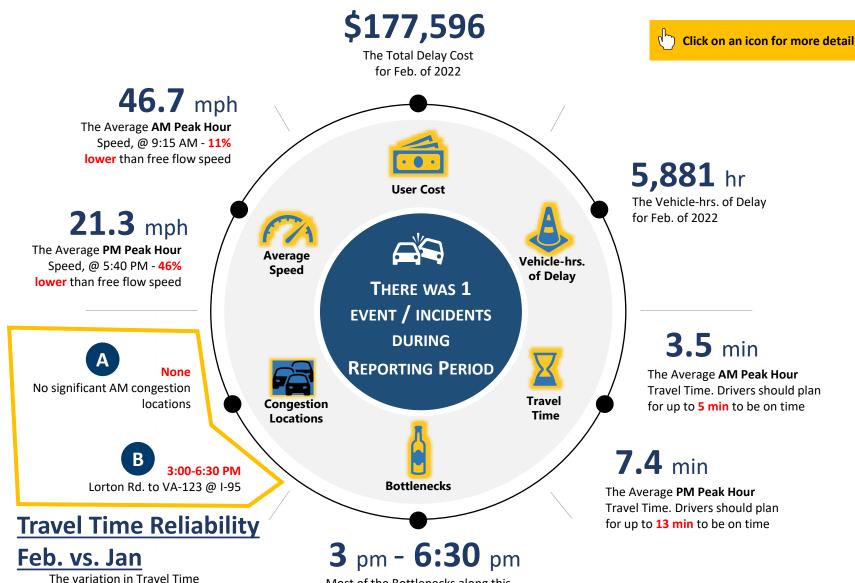
**Southbound PM congestion** from Lorton Rd. extends to I-95 during the afternoon peak.

Volume-related delays are caused by factors such as:

- High volume
- Click inset map to open an animation of congestion for the reported month



#### Feb. 2022 Monthly Congestion Performance Report



Most of the Bottlenecks along this

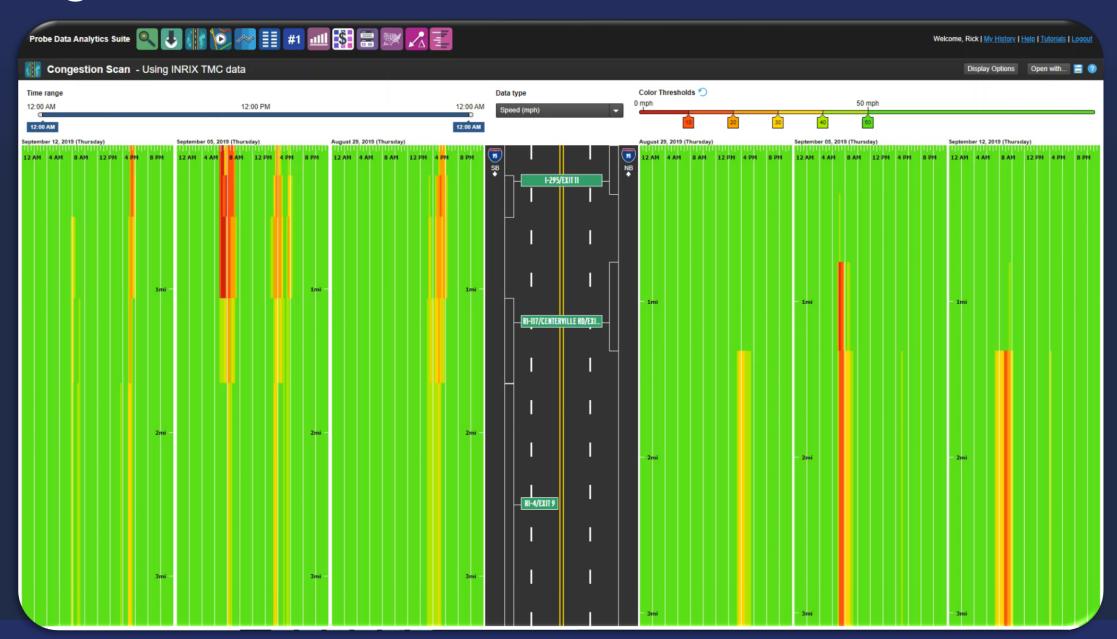
roadway occurred between these times

Reliability improved modestly

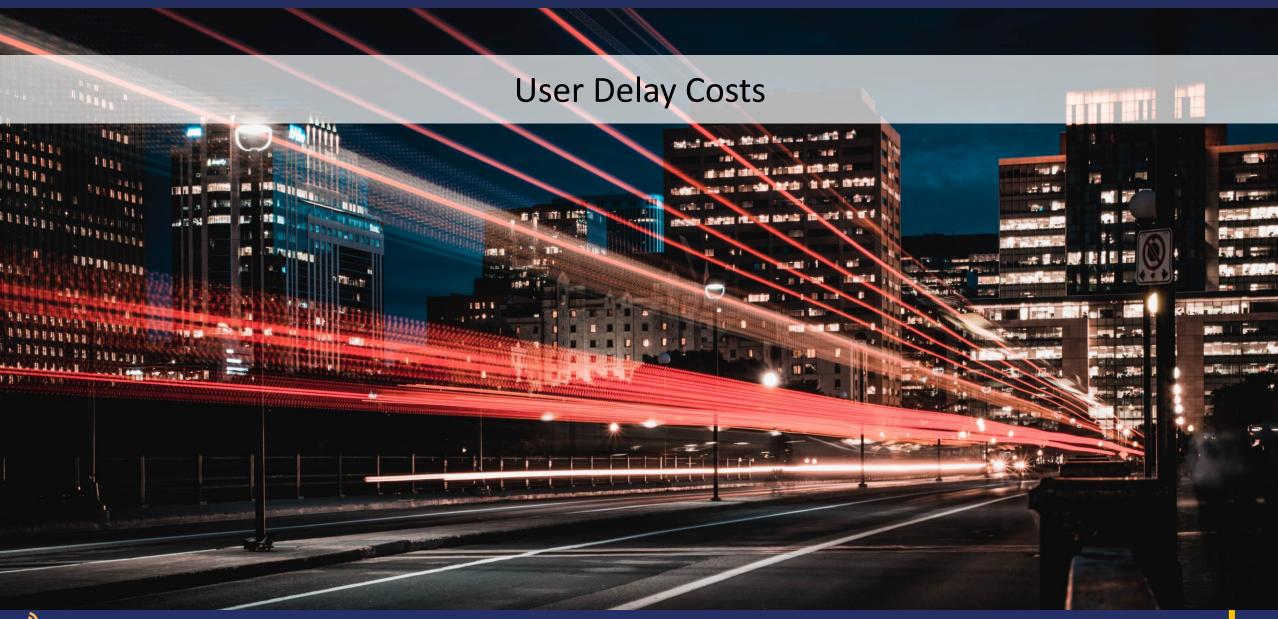
between these periods.

### Congestion Scan (Spatial/Temporal Heat Maps)







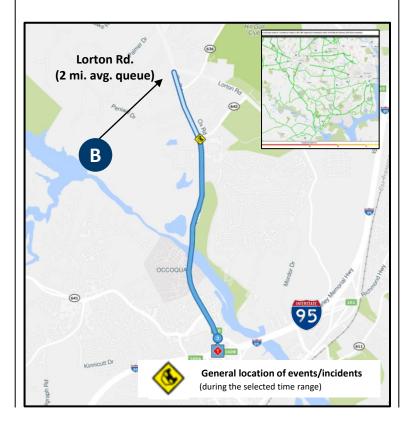


#### **VA-123 S @ I-95**

**Southbound PM congestion** from Lorton Rd. extends to I-95 during the afternoon peak.

Volume-related delays are caused by factors such as:

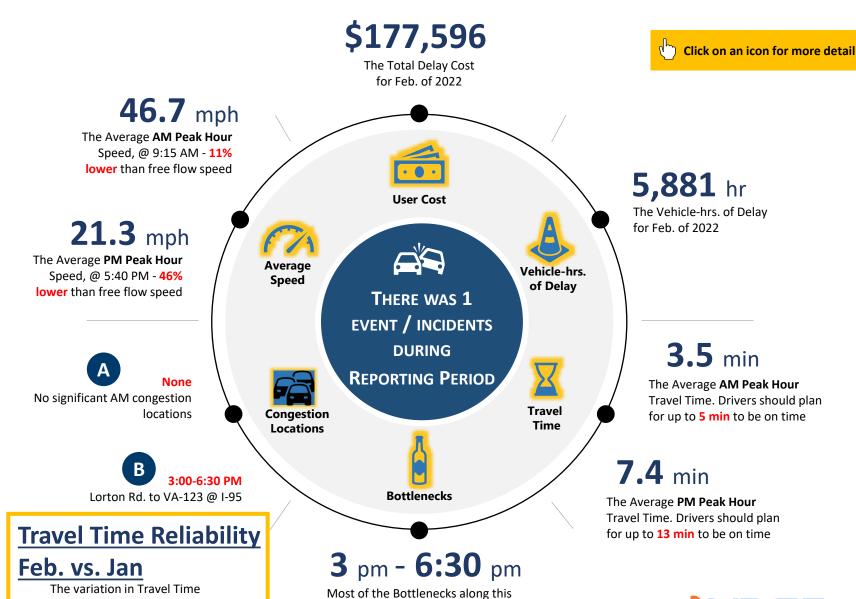
- High volume
- <u>Click inset map to open an animation of congestion</u> for the reported month



### Monthly Congestion Performance Report Feb. 2022

Reliability improved modestly

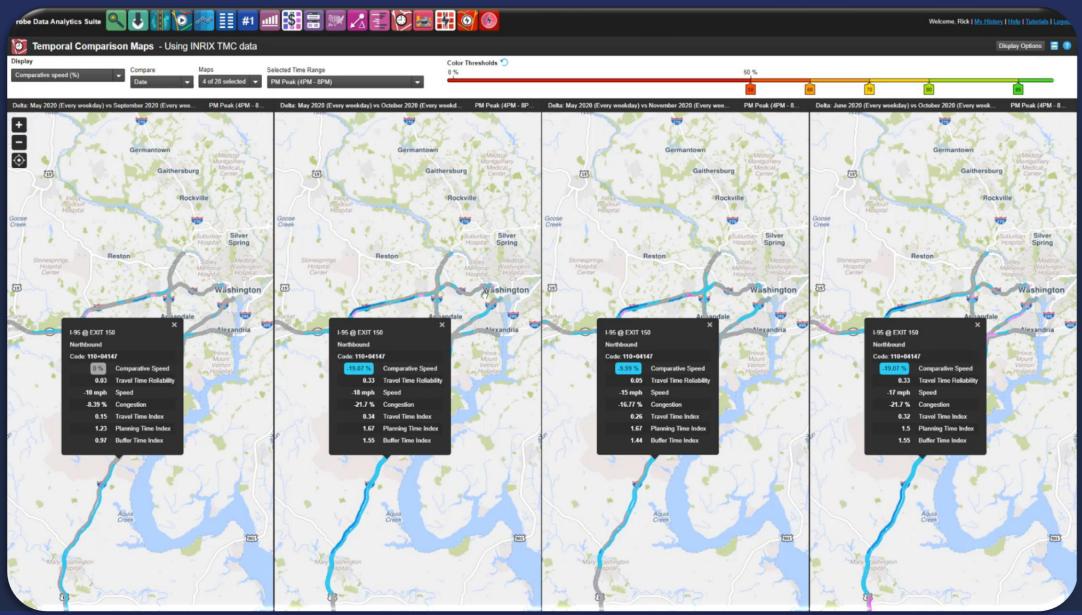
between these periods.



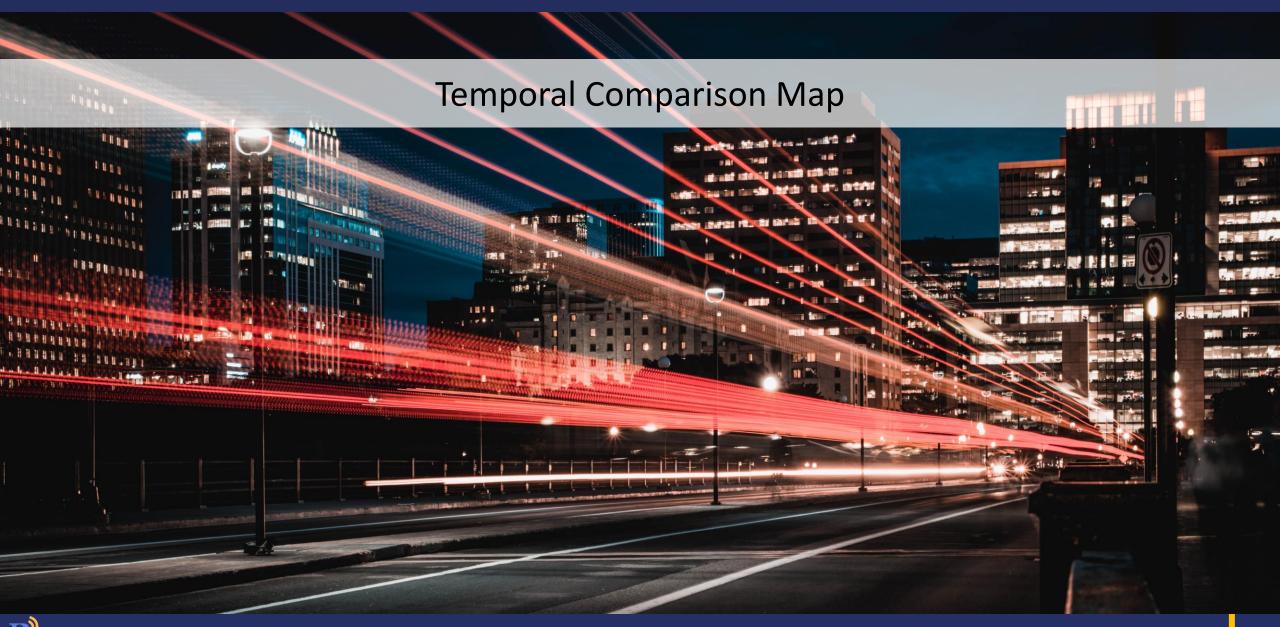
roadway occurred between these times

## Temporal Comparison Maps (Delta Maps of KPIs)







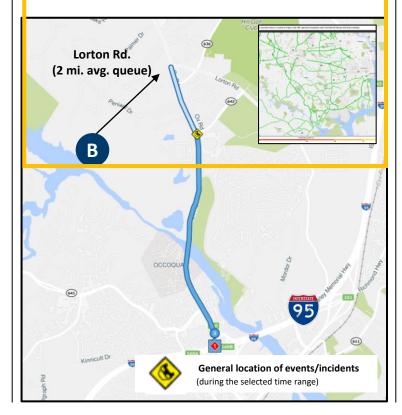


#### VA-123 S @ I-95

**Southbound PM congestion** from Lorton Rd. extends to I-95 during the afternoon peak.

Volume-related delays are caused by factors such as:

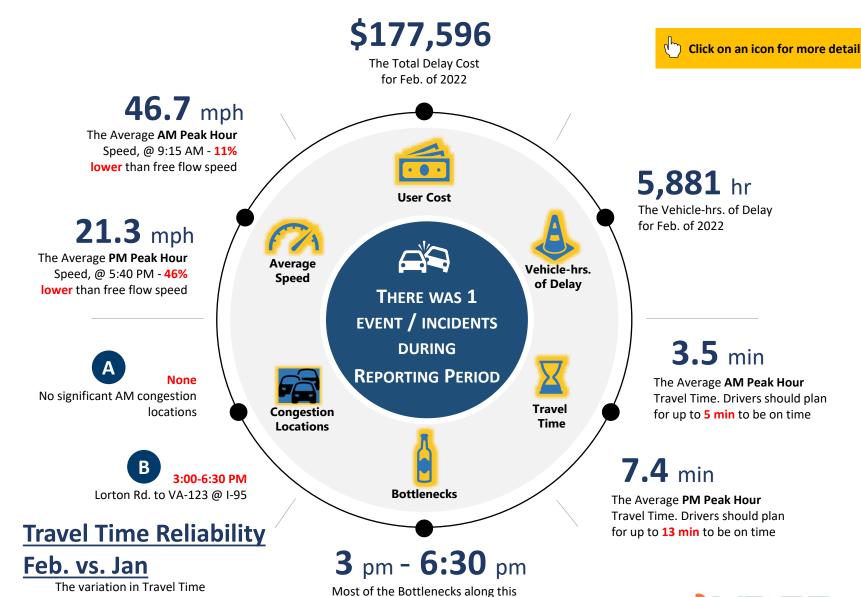
- · High volume
- Click inset map to open an animation of congestion for the reported month



### Monthly Congestion Performance Report Feb. 2022

Reliability improved modestly

between these periods.

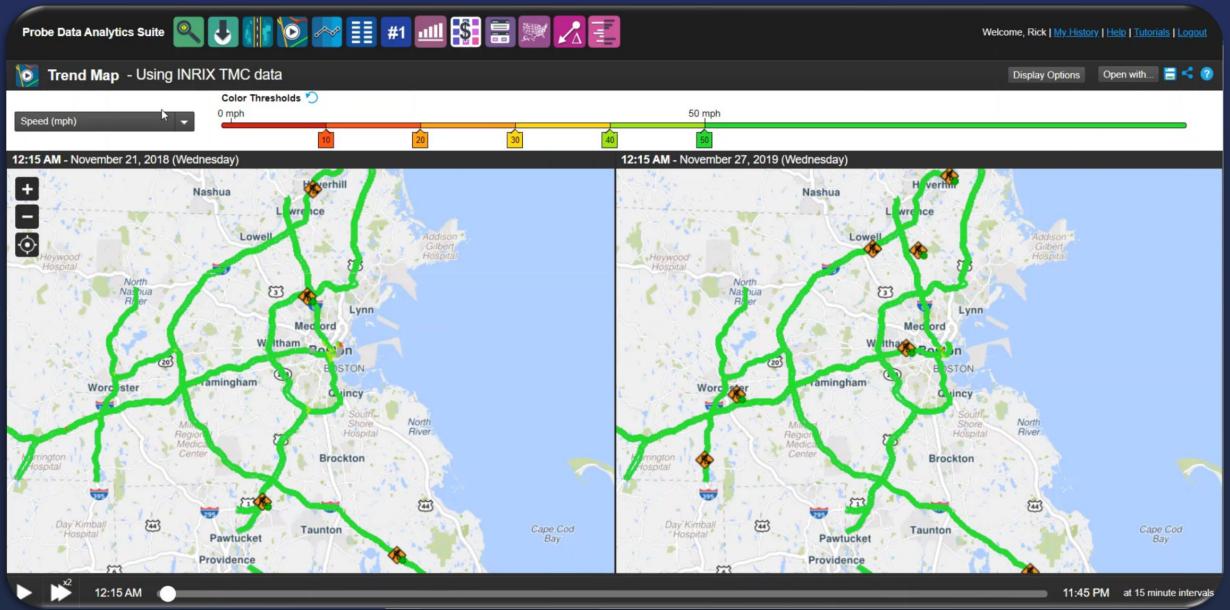


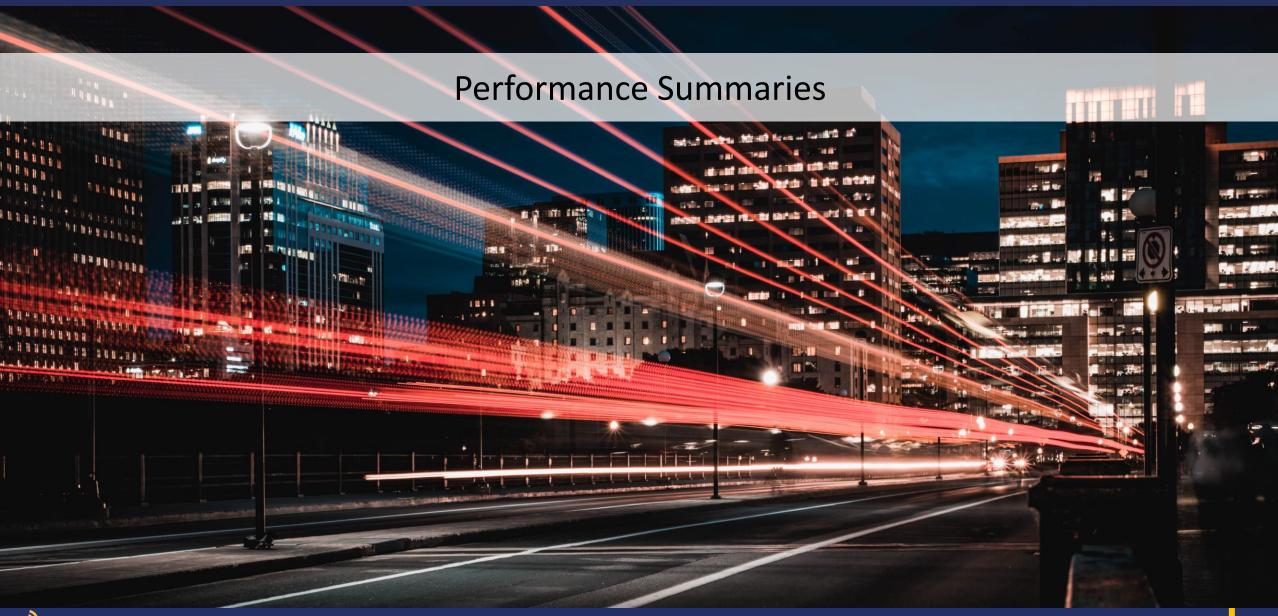
roadway occurred between these times



### Trend Maps (animated maps to compare change)







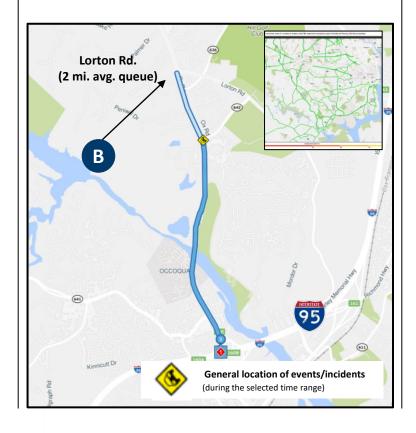


#### **VA-123 S @ I-95**

**Southbound PM congestion** from Lorton Rd. extends to I-95 during the afternoon peak.

Volume-related delays are caused by factors such as:

- High volume
- <u>Click inset map to open an animation of congestion</u> for the reported month

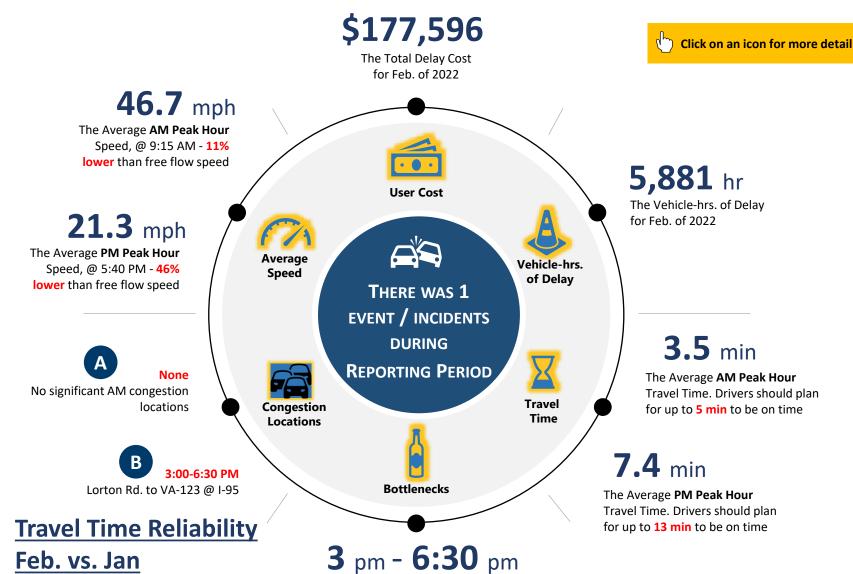


### Monthly Congestion Performance Report Feb. 2022

The variation in Travel Time

between these periods.

Reliability improved modestly



Most of the Bottlenecks along this

roadway occurred between these times

# Attendee Polling – Q3



- Peers
- Management
- Executive leadership
- General public
- Elected officials





### **Quarterly Corridor Performance Report**

Q1 2022 vs Q1 2021

Analyzed for the <u>Northern Virginia District</u> Interstates Only

Key District Metrics

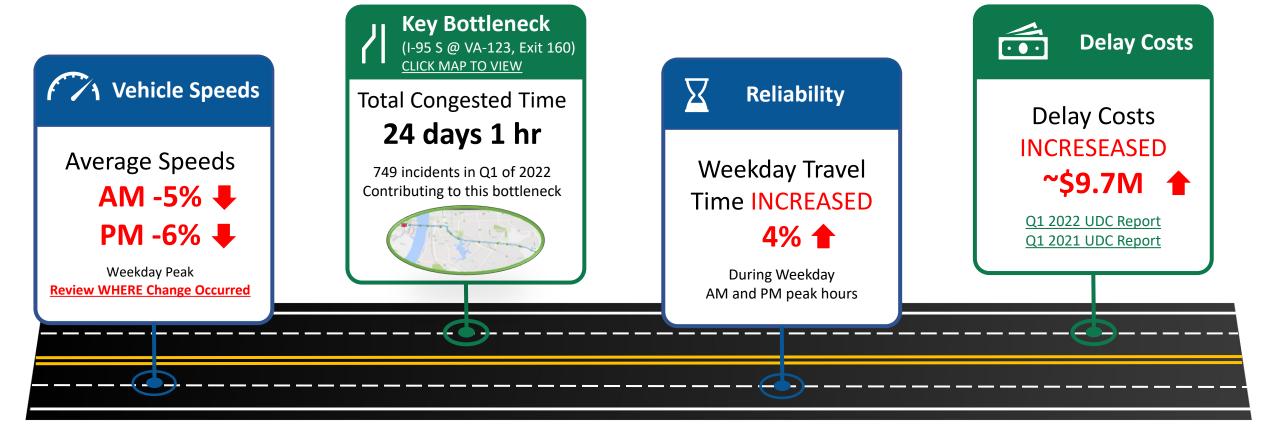
Interstates

**~170** mi. of road

~34.1M veh./day

Northern VA

This quarterly report evaluates key performance indicators across the Norther Virginia District and is focused on interstates throughout the district. **Explore this Trend Map** to visualize how travel time reliability changed throughout the district.



## Probe Data Analytics Suite – Share Your Story







### **Quarterly Corridor Performance Report**

Q1 2022 vs Q1 2021

Analyzed for the <u>Northern Virginia District</u> Interstates Only

Key District Metrics

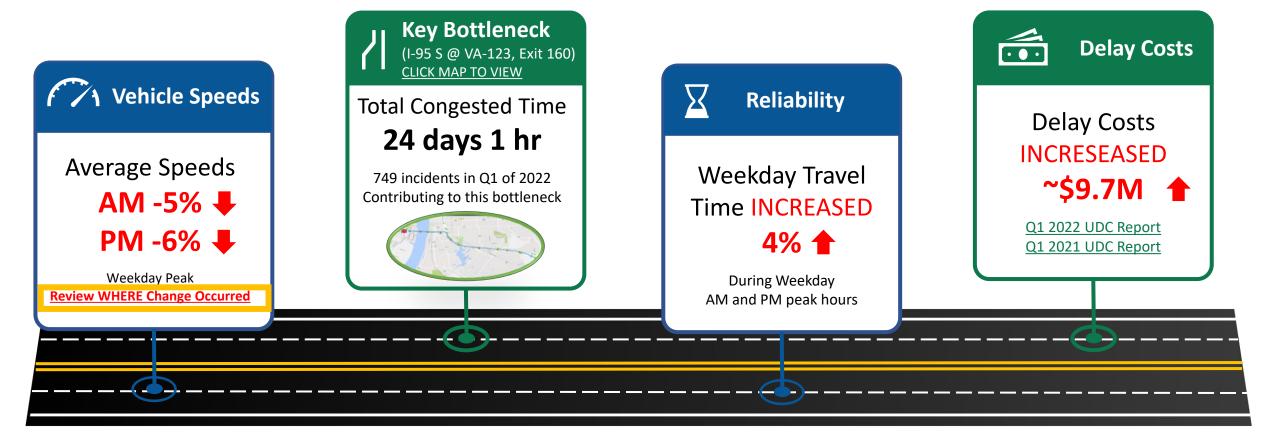
Interstates

**~170** mi. of road

**~34.1M** veh./day

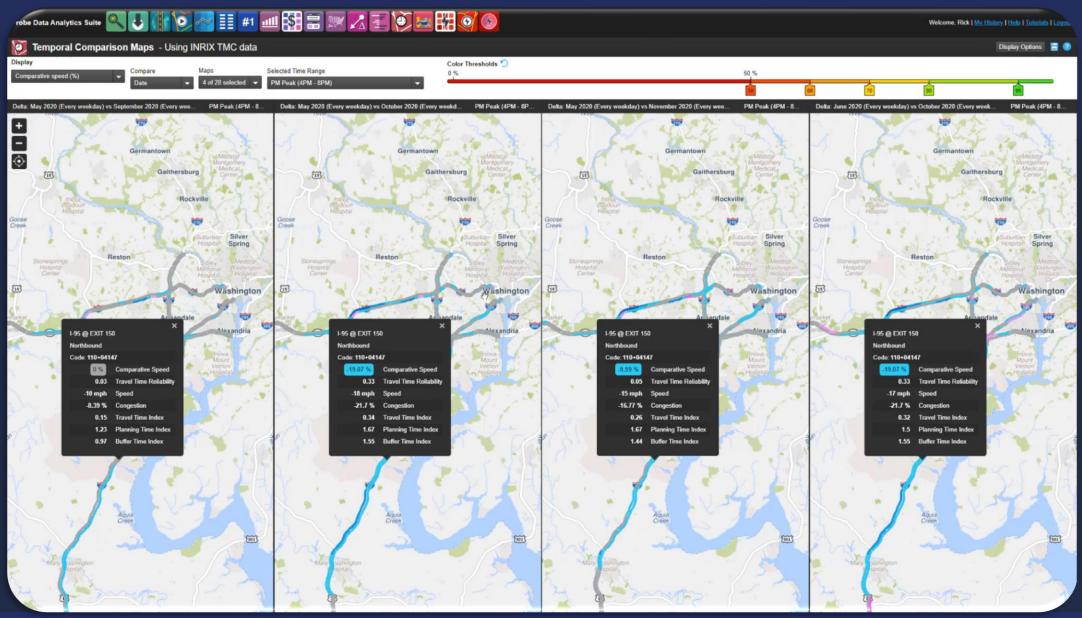
Northern VA

This quarterly report evaluates key performance indicators across the Norther Virginia District and is focused on interstates throughout the district. **Explore this Trend Map** to visualize how travel time reliability changed throughout the district.

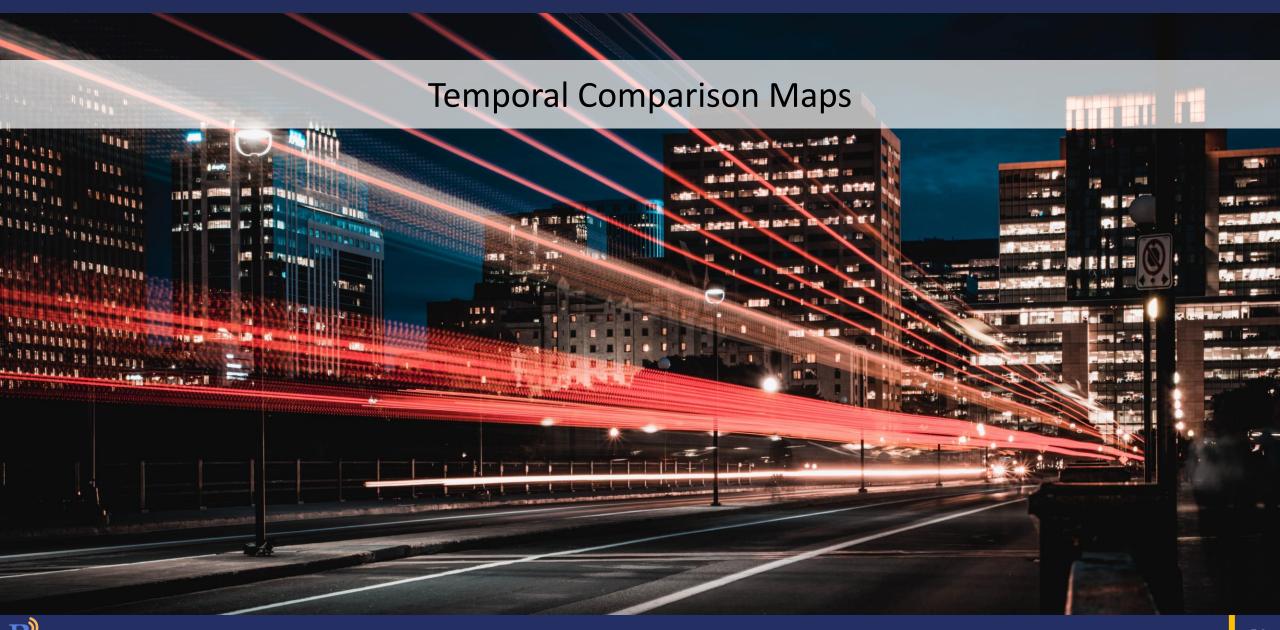


## Temporal Comparison Maps (Delta Maps of KPIs)











### **Quarterly Corridor Performance Report**

Q1 2022 vs Q1 2021

Analyzed for the <u>Northern Virginia District</u> Interstates Only

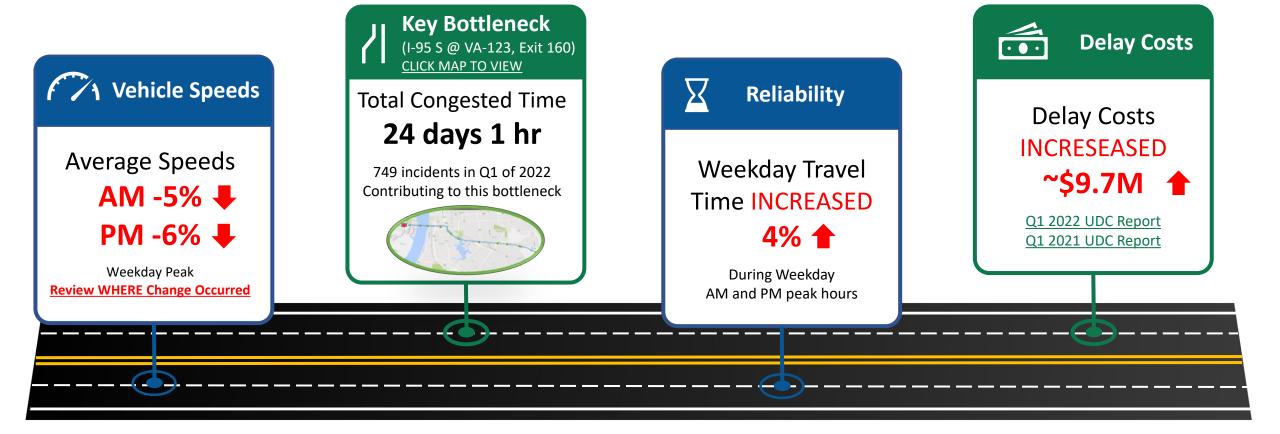
Key District Metrics

Interstates

**~34.1M** veh./day

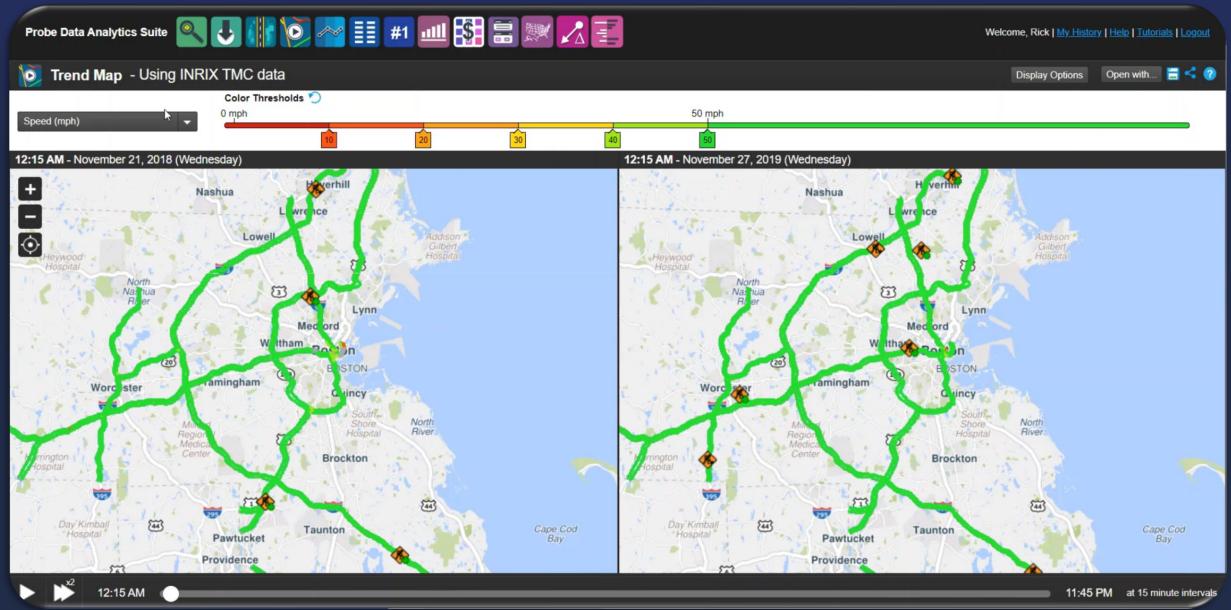
**~170** mi. of road **Northern VA** 

This quarterly report evaluates key performance indicators across the Norther Virginia District and is focused on interstates throughout the district. **Explore this Trend Map** to visualize how travel time reliability changed throughout the district.



### Trend Maps (animated maps to compare change)









### **Quarterly Corridor Performance Report**

Q1 2022 vs Q1 2021

Analyzed for the <u>Northern Virginia District</u> Interstates Only

Key District Metrics

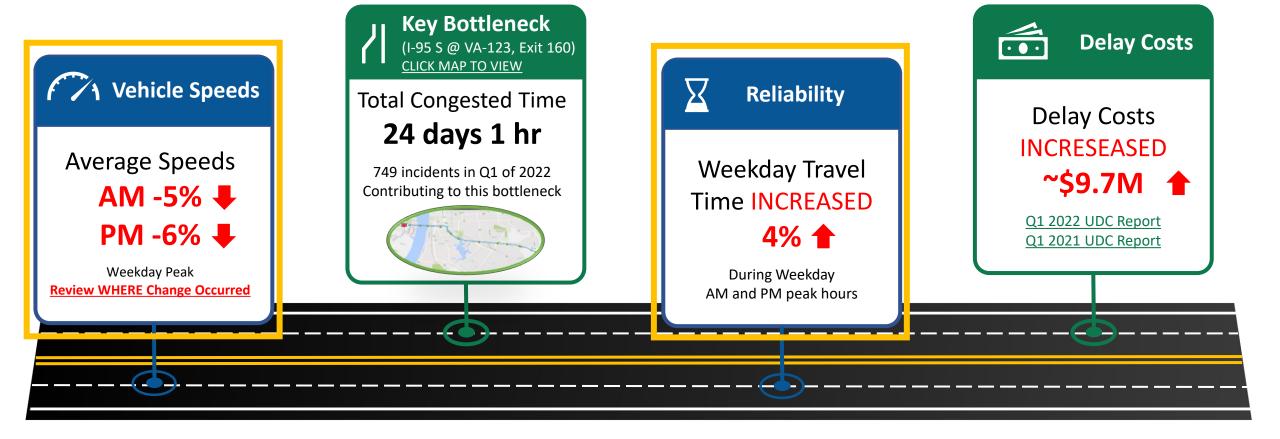
Interstates

**~170** mi. of road

**~34.1M** veh./day

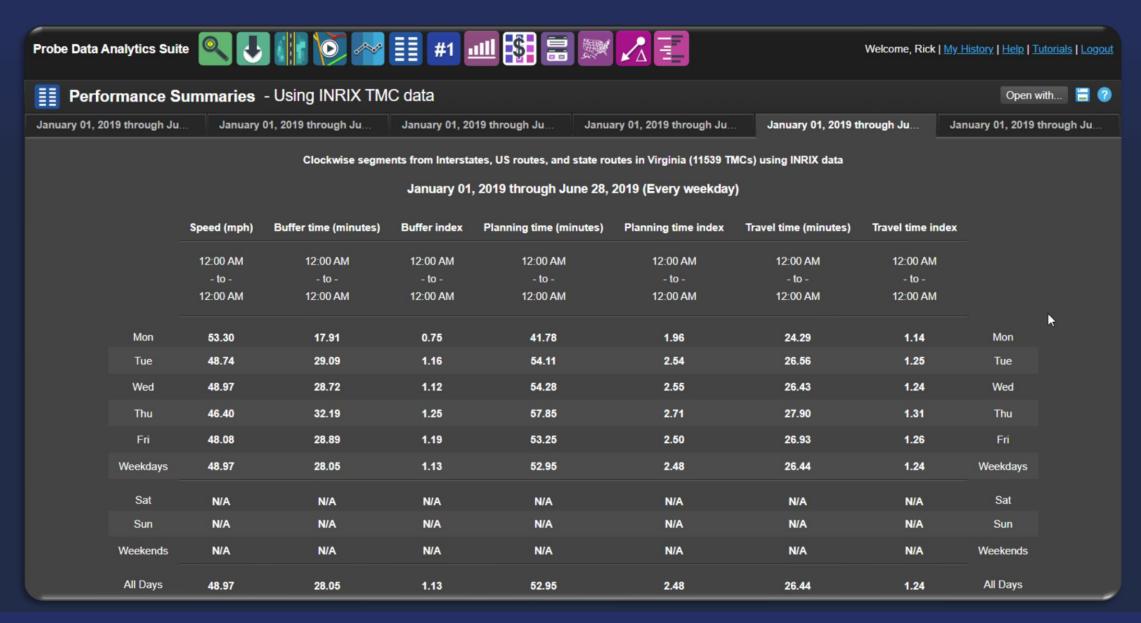
Northern VA

This quarterly report evaluates key performance indicators across the Norther Virginia District and is focused on interstates throughout the district. **Explore this Trend Map** to visualize how travel time reliability changed throughout the district.

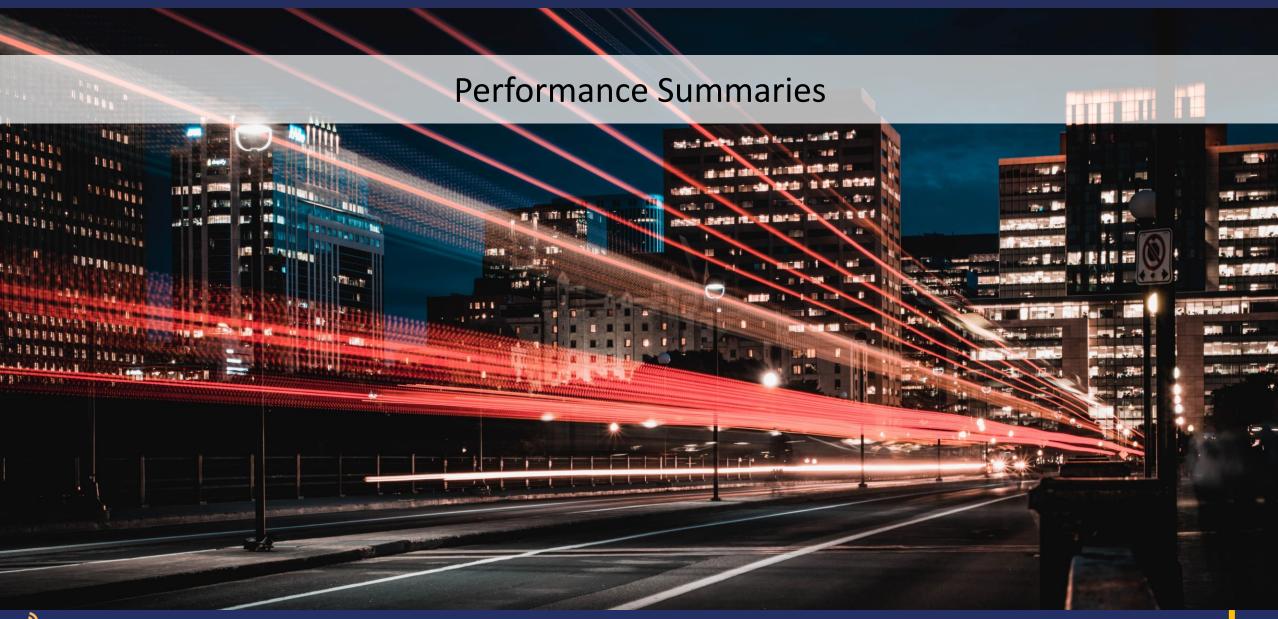


### Performance Summaries













#### **Quarterly Corridor Performance Report**

Q1 2022 vs Q1 2021

Analyzed for the <u>Northern Virginia District</u> Interstates Only

Key District Metrics

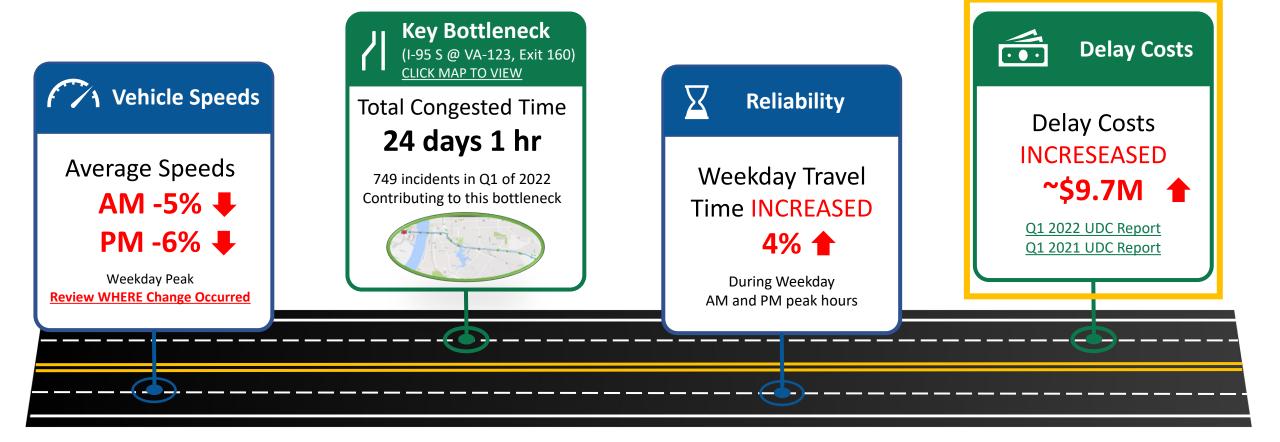
Interstates

**~170** mi. of road

**~34.1M** veh./day

Northern VA

This quarterly report evaluates key performance indicators across the Norther Virginia District and is focused on interstates throughout the district. **Explore this Trend Map** to visualize how travel time reliability changed throughout the district.

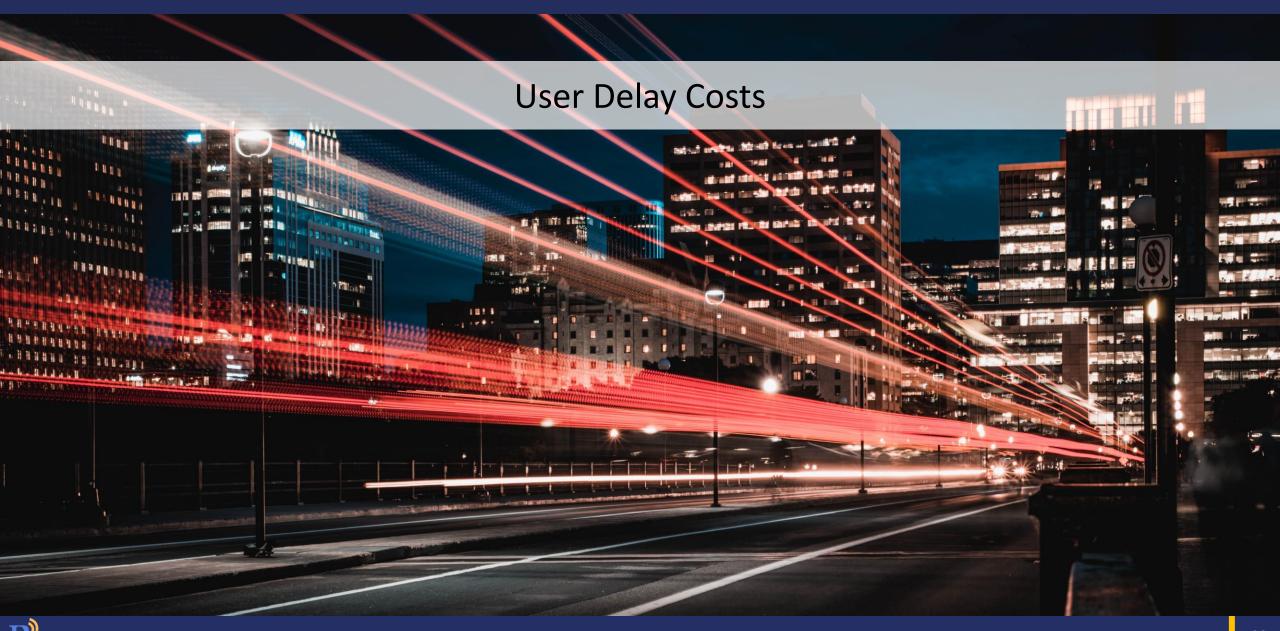


## User Delay Costs (make the case for funding)



Probe Data Analytics Suite 🔍 U 👔 🔯 🚾 🔡 #1 📶 👺 🖫 💹 🖫																									
Tanker Crash. I-95 SB past VA-294. Prince William County, VA																									
Sunday, July 01, 2018 to Friday, August 31, 2018																									
Vehicle Type Display Legend																									
All Total cost Lowest cost Highest cost No data																									
						data																			
								i					Total Cost												
7/01/18	12 AM \$0.8K	1 AM	2 AM \$0.3K	3 AM \$0.2K	4 AM \$0.1K	5 AM \$0.2K	6 AM \$0.3K	7 AM \$1.2K	8 AM \$1.8K	9 AM \$6.2K	10 AM 824 BK	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM 538 2K	6 PM \$22.7K	7 PM \$11.7K	8 PM SE:1K	9 PM \$2.6K	10 PM \$1.1K	11 PM 31.5K	Daily Totals \$603.2K
7/02/18	\$0.5K	\$0.2K	\$0.110	\$0.5K	\$0.5K	38.4K	349.6K	\$76.BK	\$40.1K	\$15.6K	\$10K	\$14.8K	\$31.1K	\$42.3K	\$70.2K	\$127.0K	\$159.3K	\$101.1K	505.8K	\$35.2k	56.3K	\$4.7K	\$1.5K	\$0.8K	\$960.9K
7/03/18	\$0.2K	\$0.2K	\$0.2K	90.1K	\$0.2K	\$5.3K	\$32.6K		\$31K	\$7.7K	\$13.7K	\$21.9K	\$30.7K	\$30.40		\$133.9K	\$153.7K	\$109.7K		\$43.6K	\$6.3K	\$8.6K	\$35.5K	544	\$985.7K
7/04/18	\$0.4K	\$0.2K	\$0.1K	\$0.1K	\$0.1K	\$0.8K	\$1.8K	\$4.5K	\$4.7K	\$6.5K	96.6K	\$7.2K	\$0.5K	\$8.7K	SOK	\$8.5K	\$11.8K	\$6.8K	\$3.9K	\$4.2K	\$3.7K	\$4K	\$2:4K	\$0.6K	\$106.1K
7/05/18	\$0.4K	\$0.4K	\$0.110	SOK	\$0.3K	\$1:3K	\$16.5K	\$33K	\$18.9K	\$7K	\$20.5K	\$35.9K	\$34.6K	\$45.3K	\$72.6K	\$83.5X		\$78.5K	\$4400	\$18.4K	\$4.010	\$4.2K	\$7.7K	\$0.9K	\$607.6K
7/06/18	\$0.3K	\$0.2K	\$0.1K	\$0.1K	\$0.1K	\$1.2K	\$2.9K	\$11.1K	\$7.4K	\$6.8K	\$21.0K	\$28.5K	\$30.6K	\$55.0K	\$72.1K	501.9K	STOK	N/A	\$38.1K	\$13.1K	\$6.7K	\$3.4%	\$3.2K	\$2K	\$480.4K
7/07/18 7/06/18	\$0.6K \$0.8K	\$0.5K	\$0.2K \$0.1K	\$0.1K	\$0.1K	\$0.4K \$0.2K	\$1K	\$2.5K \$1.1K	\$3.6K \$5K	\$12.9K	\$47.9K \$14.8K	\$59.5K	\$42.0K		503.110 508.8K	\$78.6K		\$48.1K	\$46.6K \$45K	\$27.9K \$27K	\$9.5K	\$5.2K \$15.7K	\$3.9K \$3.5K	\$1.3K \$1.2K	\$603.3K \$527K
7/09/18	\$0.4K	\$1.3K	\$0.1K	50.4K	\$0.16	\$0.2K	\$1K.	\$1.1K	\$70.0K	\$27.7K	\$11.4K	\$22.5K	\$29.7K	\$44.4K	\$00.0K	\$118.2K	\$146.4K	\$154.6K	\$68.2K	\$27K	\$15.6K	\$15.7K	\$3.5K	\$1.1K	\$52/K
7/10/18	\$2.6K	\$0.5K	\$0.4K	\$0.2K	\$2.6K	\$10.1K	354.7K		\$108.46	\$50.0K	\$31.7K	\$23.1K	\$25.9K	\$32.5K		\$114.2K	\$155.4K	\$172.3K		\$55.5K	\$10.2K	\$5.5K	\$2.5K	\$1.2K	\$1.1M
7/11/18	\$1K	\$0.5K	\$0.5K	\$0.3K	. \$1K.	\$7.8K	\$36.6K		\$78.8K	\$44.BK	\$25.0K	\$16.4K	\$12.0K	\$26.8K		\$130.9K	\$160.4K	\$180.4K			\$15.5K	\$5.3K	\$3.2K	\$1.7K	\$1.1M
7/12/18	\$1.7K	\$0.8K	\$0.5K	\$0,6K	\$1.2K	\$13.3K	\$45K	\$78K	SSLSK	\$47.9K	\$36K	\$33.2K	\$30.5K	\$51.9K	302.4K	\$127.4K	\$157.3K	\$155.8K	\$60.5K	\$34.9K	\$10.5K	\$4K	\$3.8K	\$3.5K	\$1.1M
7/13/18	\$0.7K	\$0.7K	\$0.2K	\$0.5K	\$1.18	\$14K	\$34.7%	552.4K	546K	\$18.6K	\$54.4K	558.4K	\$61.0K	550K	\$102.2K	\$133.5K	\$129.2K	\$111.4K	\$71.7K	\$34.8K	\$15.8K	\$7.46	\$6.5K	\$2K	\$1M
7/14/18	\$0.0K	\$0.2K	\$0.1K	\$0.2K	\$0.110	\$0.3K	\$1.7K	\$3.4K	\$6.7K	\$20.8K	\$37.3K	\$60.5K	980 BK	\$82.1K	\$07.8K	\$00 fK	\$87.6K	565.7K	\$55.1K	\$27.0K	\$7.8K	54K	\$3.110	\$1.4K	\$724.1K
7/15/18	\$0.5K	\$0.7K	\$0.3K	\$0.1K	\$0.2K	\$0.3K	\$0.6K	\$1K	\$2.9K	\$2.4K	\$13K	\$29.1K	\$34.5K	\$35.7%	\$39.5K	\$34.4K	\$35K	\$36.3K	\$36.6K	\$20.4K	56.6K	\$2.3K	\$1.8K	\$1.5K	\$336.2K
7/15/18 7/17/18	\$0.8K \$1.3K	\$0.3K	\$1.9K	\$0.8K \$0.4K	\$0.4K \$0.5K	\$7.6K		\$98.1K	\$109K \$74.4K	\$35K \$32.3K	\$11.9K \$18.6K	\$16.2K \$11.4K	\$26.8K \$12.2K	\$43.5K \$12.8K	\$55.7K	\$115.5K \$177.4K	\$150.7K \$180.2K	\$171.4K \$175K	\$82.5K \$100.4K		\$0.010	\$4.5K \$4K	\$2.1K \$2.3K	\$1.1K \$1.2K	\$1M \$1.1M
7/18/18	\$1.8K	\$0.9K	\$0.4K	50.6K	\$0.3K	\$7.8K	538.9K		\$87.6K	\$32.9K	\$11.5K	\$23.3K	\$18.4K	\$10.5K	\$37.3K	\$102.2K	\$139.4K	\$175K	3100.4K	\$54.3K	\$12.6K	\$4.3K	\$1.8K	\$1.2K	\$881.3K
7/19/18	\$0.5K	\$0.6K	\$0.2K	\$0.2K	\$1.1K	\$7.5K				\$22.8K	\$16.1K	\$20.7K	\$14.5K	\$10.4K	\$74.400	\$130.9K	\$146.3K	\$155.8K		\$31K	\$22.8K	\$5.2K	\$2.9K	\$1.8K	\$962.4K
7/20/18	50 ex	\$0.6K	\$0.3K	\$0.3K	\$0.4K	\$5.2K	\$29.5K	\$40,2K	540.6K	\$25.7K	\$55.DK	560.4K	960.1K	\$65.110		\$115.2K	\$112.6K	\$94.2K		\$44.1K	\$20K	\$11.46	\$2.9K	31.9K	\$956.5K
7/21/18	\$1.3K	\$0.6K	\$0.3K	\$0.3K	\$1.3K	\$0.2K	\$1K	\$3.1K	\$7.3K	533.1K	\$47.3K	\$73K	\$96.5K	\$87.7K	\$107.3K	\$85.1K	\$60.8K	\$05K	\$73.6K	\$58.5K	\$30K	\$53.2K	\$73.9K	\$31.1K	\$1M
7/22/18	\$31.1K	\$5.1K	\$0.2K	\$0.1K	\$0.2K	\$0.8K	\$0.9K	\$1.2K	\$5.2K	\$5.4K	\$11.5K	\$33.7K	\$49.5K	\$74.5%	598.1K	576.1K	\$76.8K	552.0K	\$43.7K	\$18.8K	\$5.5K	\$12K	\$3.1K	\$1.3K	\$617.6K
7/23/18	\$0.6K	\$0.3K	\$0.2K	\$0.1K	\$0:1K	\$6.2K	\$29.6K	\$90.7K	550.RK	\$31.3K	\$7.8K	\$23.5K	\$19.8K	\$24.4K	SSRK	\$100.4K	\$149.3K	\$134.6K		\$69.2K	\$12.9K	\$2.7K	123K	30.6K	\$900K
7/24/18	\$0.5K	\$0.2K	\$0.2K	\$0.1K	\$1.2K	\$37.3K	\$118.6K	\$134.5K	\$109.1K	\$87.0K	\$19.4K	\$12.3K	\$17.1K	\$13.5K	\$20.7K	\$36.0K	\$69.7K	\$110.7K	\$64.4K	\$17K:	\$5.4K	\$2.5K	\$1.5K	\$1.9K	\$882.5K \$822.8K
7/25/18	\$0.9K	\$0.3K \$0.1K	\$0.1K \$0.4K	\$0.1K	\$0.2K	\$6K		\$43.6K	\$37.5K \$65.9K	\$15.2K \$43.6K	\$6.3K \$32.3K	\$11.4K \$33.3K	\$14.7K \$31.3K	\$14.5K \$28.1K	\$32.9K	\$177K \$133.6K	\$118.4K \$186.2K	\$135.8K \$218.4K	\$143.2K \$124.2K		\$29.2K \$14.7K	\$10.1K	\$2.9K \$2.2K	\$2.1K \$1.4K	\$822.8K \$1.2M
7/27/18	\$0.2K	\$0.3K	\$0.2K	\$0.1K	\$0.3K	\$5.3K	519.4K	\$49.7K	\$37.36	\$16.7K	\$30.7K	\$40.2K	\$54.2K	\$67.3K	\$102.3K	\$142.9K	\$189.6K	\$151.6K	\$82.9K	\$45.1K	\$13.7K	\$10.3K	50.1K	\$1.6K	\$1.1M
7/28/18	SZK	\$1.1K	\$2.7K	\$2.3K	\$1.9K	\$3.6K	\$6.8K	\$7.1K	SERK	\$22.3K	\$40.1K	\$62.7K	570K	\$66.5K	\$74.5K	\$88.0K	\$62.7K	\$79.4K	\$71.8K	\$40.7K	\$15.2K	55.2K	\$2.7K	\$2.8K	\$776.8K
7/29/18	\$0.8K	\$0.3K	\$0.2K	\$0.1K	\$0.2K	\$0.2K	\$0.4%	31.4K	\$3.5K	\$7.6K	\$21.7K			\$85.5K	\$89.7K	509.1K			\$32.5K	\$16.6K	\$5.4K	\$2.5K	\$4.2K	\$8.4K	\$581.1K
7/30/18	\$0.6K	\$0.1K	\$0.3K	\$0.2K	\$0.8K	\$11.2K	\$44.4K	\$54.0K	\$45K	\$16.8K	\$10.5K	\$15.6K	\$24.8K	\$30.6K	\$51.5K	\$87.6K	\$142.9K	\$205.6K	\$160K	\$68.2K	\$23.3K	\$3.1K	\$2.2K	\$0.8K	\$1M
7/31/18	\$0.2K	\$0.1K	\$0.1K	\$0.1K	\$0.4K	57.1K	540K	\$77.2K		\$24.6K	35.9K	\$9.7K	\$9.4K	\$9.5K	\$25.3K	968.7K	\$121.8K	\$135.4K	\$06.EK	\$34.2%	\$7K	\$5.1K	\$1.6K	\$1.1K	\$735.4K
8/01/18	50.4K	\$0.2K	\$0.4K	90.1K	\$0.2K	\$6.7K				\$27.0K	\$15.4K	\$31.3K	\$26.7K	\$22.4K	\$37.8K	\$84.2K	\$137.6K	\$150.6K	\$60.EK		\$10.0%	\$4.2K	\$3.6K	\$1.2K	\$876.2K
8/02/18	\$0.3K	\$0.2K	\$0.5K	\$0.1K	\$0.4%	95.4K	\$31.6K	988.3K	550.3K	\$42.8K	\$35.3K	\$57.8K	\$60.6K		\$141.116	\$208.3K	\$212.4K	\$168.2K	\$105%		\$5.3K	\$2.7K	\$2.2K	\$0.8K	\$1.3M
8/03/18	\$0.3K	\$0.4K	\$0.1K	\$0.3K	\$0.2K	\$3.2K	\$7K	\$30.2K	\$30.4K	\$18.6K	\$40.400	\$121.4K	391.6K	980.7K	\$97.9K	\$122.3K	\$116K	\$110K	\$88.2K	\$37K	\$24.5K	\$22.7K	\$8.1K	\$1.2K	\$1.1M
						100																			







### **Quarterly Corridor Performance Report**

Q1 2022 vs Q1 2021

Analyzed for the <u>Northern Virginia District</u> Interstates Only

Key District Metrics

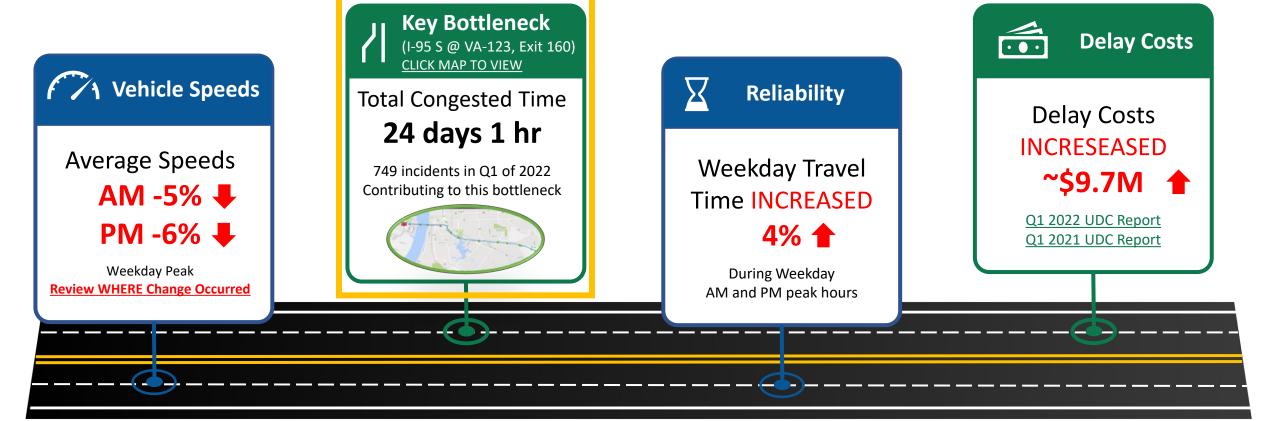
Interstates

**~170** mi. of road

**~34.1M** veh./day

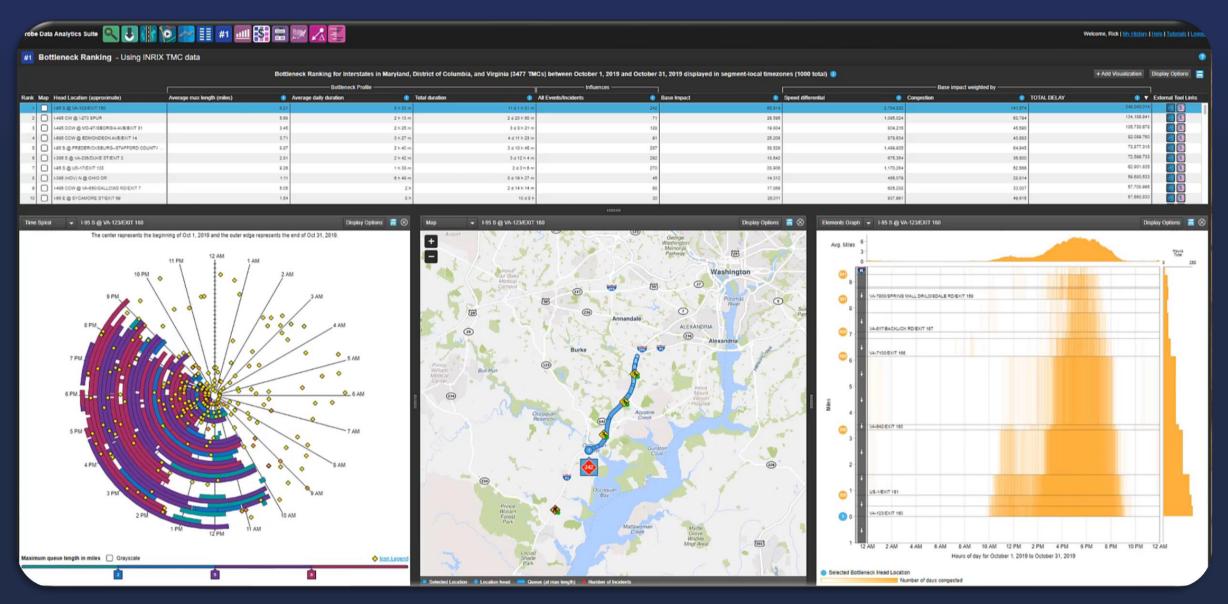
Northern VA

This quarterly report evaluates key performance indicators across the Norther Virginia District and is focused on interstates throughout the district. **Explore this Trend Map** to visualize how travel time reliability changed throughout the district.



## Bottleneck Ranking (project prioritization)











### **Quarterly Corridor Performance Report**

Q1 2022 vs Q1 2021

Analyzed for the <u>Northern Virginia District</u> Interstates Only

Key District Metrics

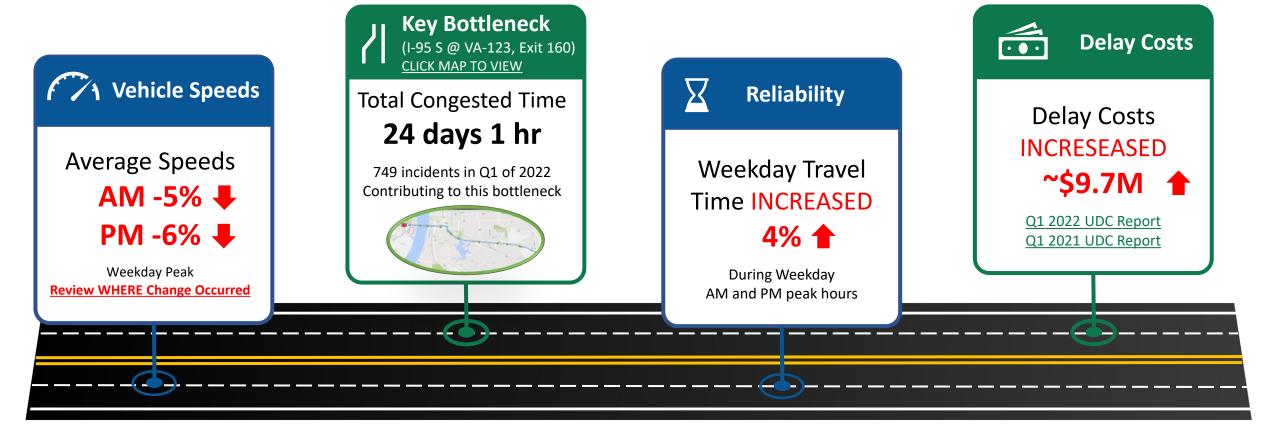
Interstates

**~170** mi. of road

~34.1M veh./day

Northern VA

This quarterly report evaluates key performance indicators across the Norther Virginia District and is focused on interstates throughout the district. **Explore this Trend Map** to visualize how travel time reliability changed throughout the district.



# Attendee Polling – Q4

Now that you've seen how to create a performance report, would you consider sharing your use case at a future RITIS User Group Web Meeting?

- Yes
- No
- Not sure Please reach out to me to discuss



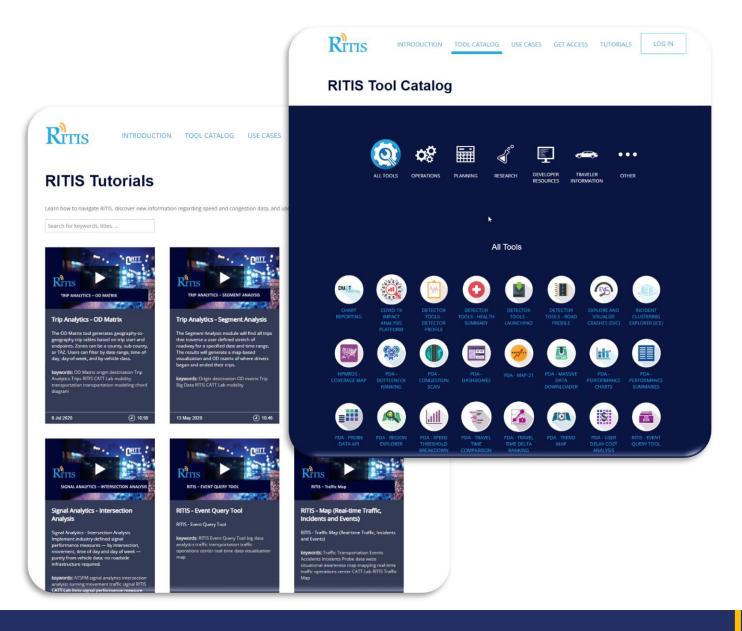
# Q & A





## RITIS/Probe Data Analytics Resources

- RITIS Tool Catalog
  - <a href="https://ritis.org/tools">https://ritis.org/tools</a>
- RITIS Report Templates
  - https://learn.ritis.org/reports
- RITIS Tutorials
  - https://ritis.org/tutorials
- Eastern Transportation Coalition
  - Previous User Group Meetings





# Attendee Polling – Q5

Please give the CATT Lab a score of 1 to 5 for the value of providing these report templates and this workshop as resources for your agency

- 1 Little value
- 2 Some value
- 3 Moderately valuable
- 4 Valuable
- 5 Extremely valuable



# Attendee Polling – Q6

We would like to develop future 1-hour training sessions for RITIS Tools/Templates (4x per year). Would you be interested in attending? Yes No I don't know

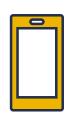


## Questions?



**PDA Suite Tech Support** 





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# Thank you!



