



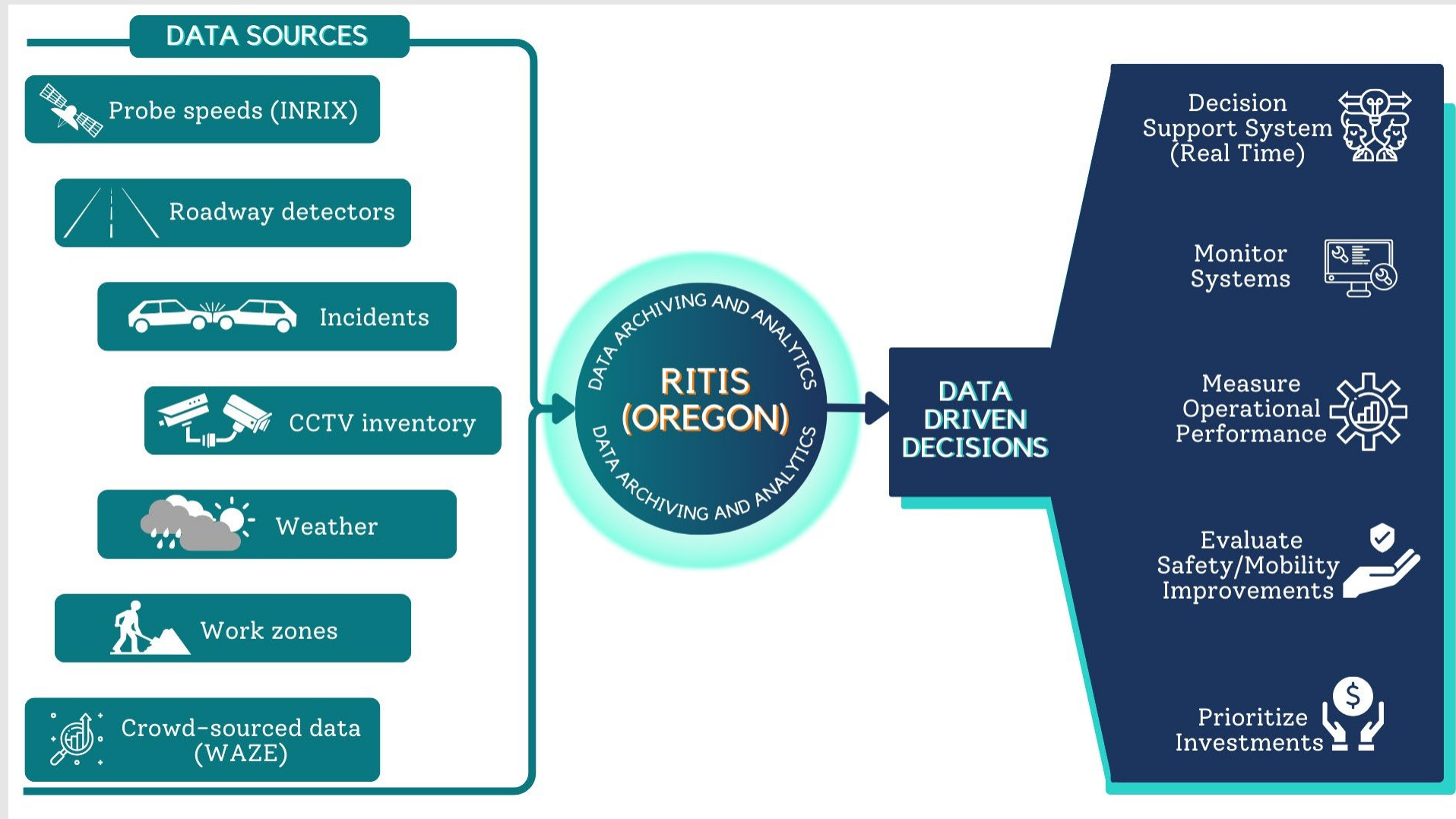
RITIS

EMTCT TAC

Chi Mai, P.E.

November 29, 2023

Regional Integrated Transportation Information System (RITIS)



RITIS Access

Who can have access?

Public agencies
within Oregon
and Clark
County, WA

Consultants
working on a
public agency
contract

Universities

RITIS Use Cases

- Covid traffic data reporting
- Region 1 Traffic Performance Report
- Before-After analysis
- Work zone traffic monitoring
- Safety corridor traffic evaluation (excessive speeds)
- Traffic model calibrations



Portland Region

2020

Traffic Performance Report





















Oregon Department of Transportation: Region 1
December 2021

RITIS Resources

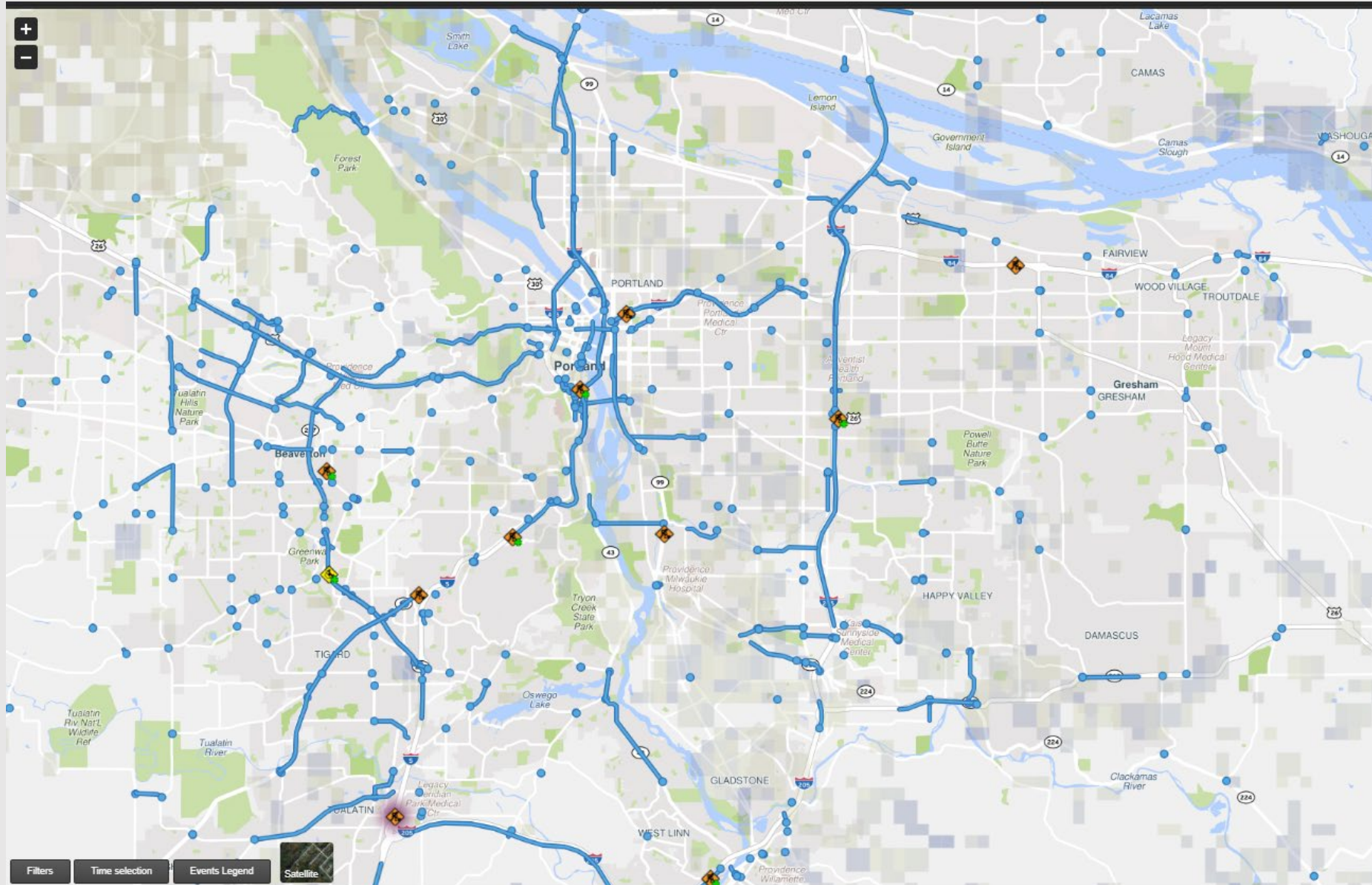
- RITIS weblink: <https://ritis.org>
- ODOT RITIS webpage: <https://www.oregon.gov/odot/Data/Pages/RITIS.aspx>
- RITIS Best Practices Handbook
- ODOT Quarterly User Group Meetings (10am-noon on the 3rd Tues in March, June, Sept & Dec)
- Annual RITIS Training in the Fall
- Contact:
 - Chi Mai, PE
 - Transportation System Analysis Engineer
 - ODOT, Transportation Planning Analysis Unit
 - (Chi.Mai@odot.oregon.gov)

RITIS Demo

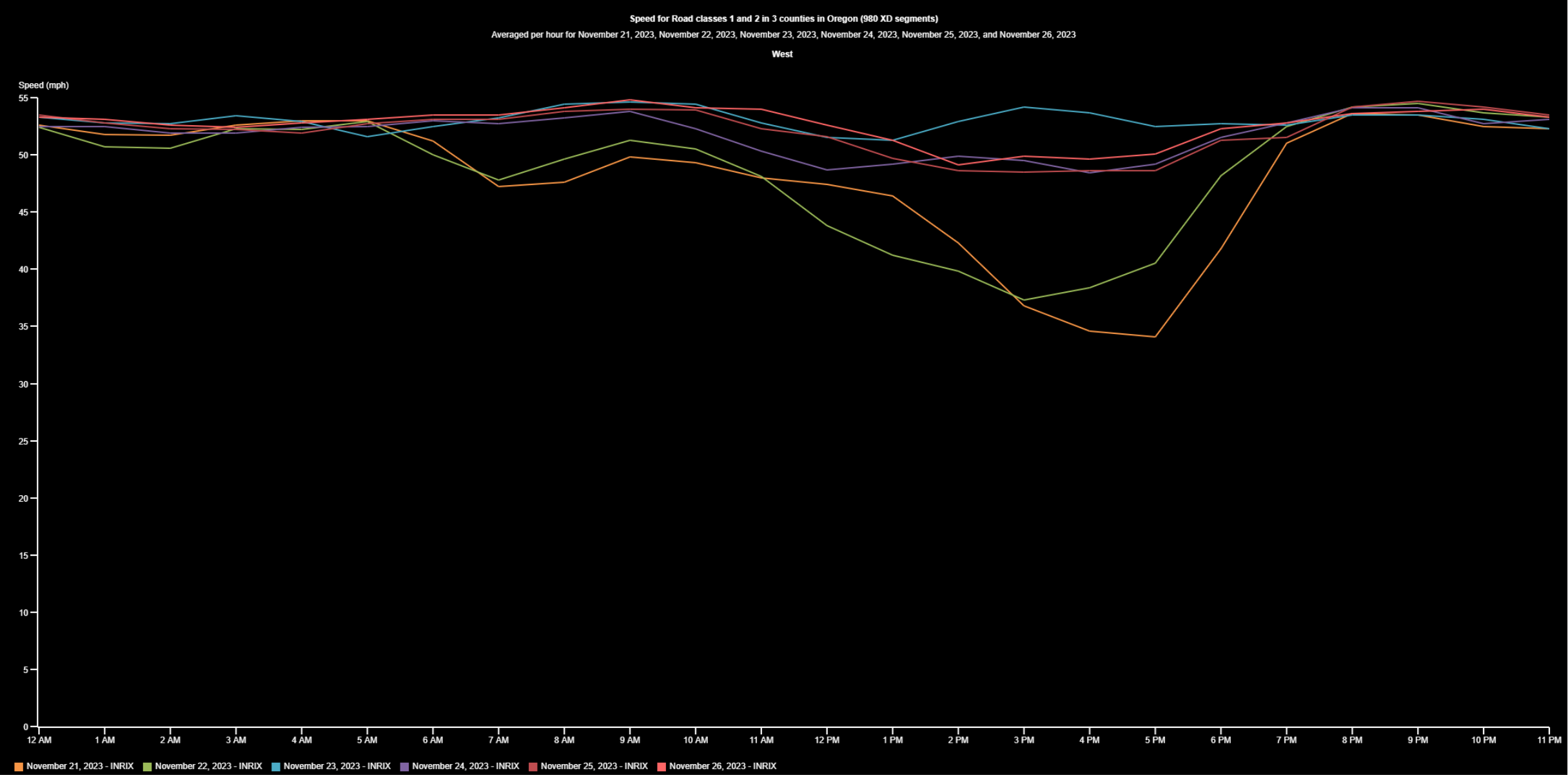
What's New
11/1/22

 <p>REGION EXPLORER Explore the relationships between bottlenecks and traffic events in real-time and in the past.</p> <p>Tutorial Help</p>	 <p>MASSIVE DATA DOWNLOADER Download raw probe data from our archive for offline analysis.</p> <p>Tutorial Help History</p>
 <p>CONGESTION SCAN Analyze the rise and fall of congested conditions on a stretch of road.</p> <p>Tutorial Help History</p>	 <p>CORRIDOR TIME COMPARISON View congestion metrics as a function of location on a road.</p> <p>Help History</p>
 <p>TREND MAP Create animated maps of roadway conditions.</p> <p>Tutorial Help History</p>	 <p>PERFORMANCE CHARTS Chart performance metrics over time.</p> <p>Tutorial Help History</p>
 <p>PERFORMANCE SUMMARIES Report on Buffer Time Index, Planning Time Index, and other performance metrics.</p> <p>Tutorial Help History</p>	 <p>BOTTLENECK RANKING Rank bottlenecks and discover which ones have the greatest impact.</p> <p>Tutorial Help History</p>
 <p>USER DELAY COST ANALYSIS Put a dollar amount on how much a road's performance impacts its users.</p> <p>Tutorial Help History</p>	 <p>DASHBOARD Create your own personal dashboards to monitor corridor performance in regions of interest.</p> <p>Tutorial Help</p>
 <p>NPMRDS COVERAGE MAP Explore the coverage completeness of the NPMRDS on a month-by-month basis.</p> <p>Tutorial Help</p>	 <p>TRAVEL TIME DELTA RANKING Rank roads based on their change in travel time performance between two time periods.</p> <p>Tutorial Help History</p>
 <p>TRAVEL TIME COMPARISON Chart travel times to compare performance for different time periods.</p> <p>Tutorial Help History</p>	 <p>TEMPORAL COMPARISON MAPS Analyze performance metrics of any road segment by one or more time ranges.</p> <p>Help History</p>
 <p>CAUSES OF CONGESTION GRAPHS Discover the magnitude and causes of congestion on customizable geographies and time periods.</p> <p>Help History</p>	 <p>TUTORIALS Learn how to use each of the tools in the suite.</p>
 <p>MAP-21 Create a dashboard widget to monitor states', MPOs', and Urbanized Areas' performances against the new MAP-21 ruling.</p> <p>Help</p>	 <p>REPORT TEMPLATES Learn how to transform data from tools in our suite into professional storytelling reports, documents, and pamphlets.</p>

Probe Data Analytics – Region Explorer (Real-Time Bottleneck Data)



Probe Data Analytics – Performance Charts



2023 Thanksgiving Travel

Portland Metro Freeways • Nov. 21st to 26th



TUE 21



CONGESTION
Noon – 7 PM

WED 22



CONGESTION
11 AM – 6 PM

THU 23



Light
Traffic

FRI 24



Light
Traffic

SAT 25

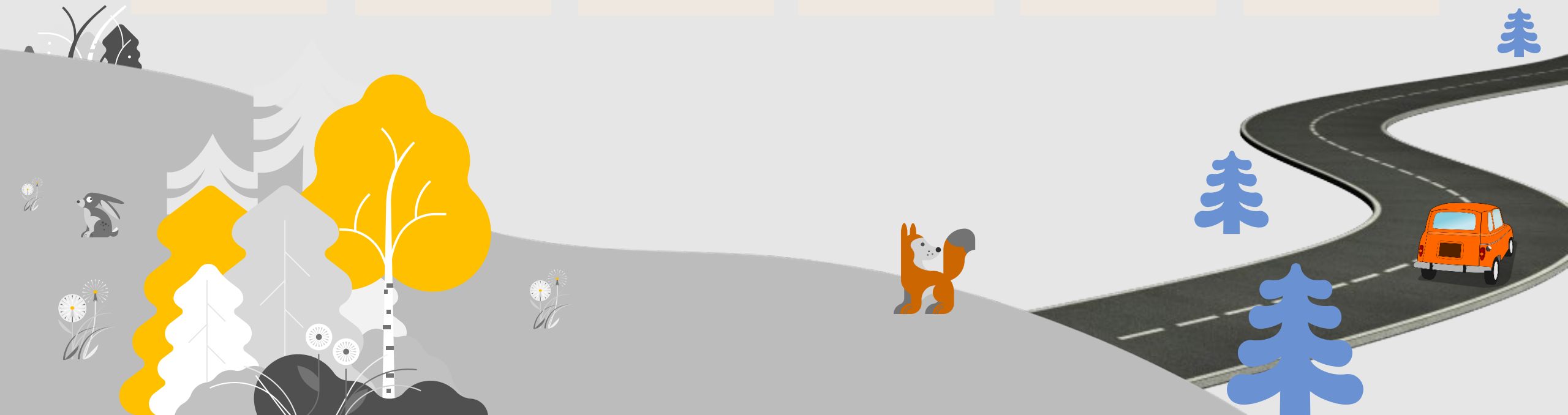


Light
Traffic

SUN 26



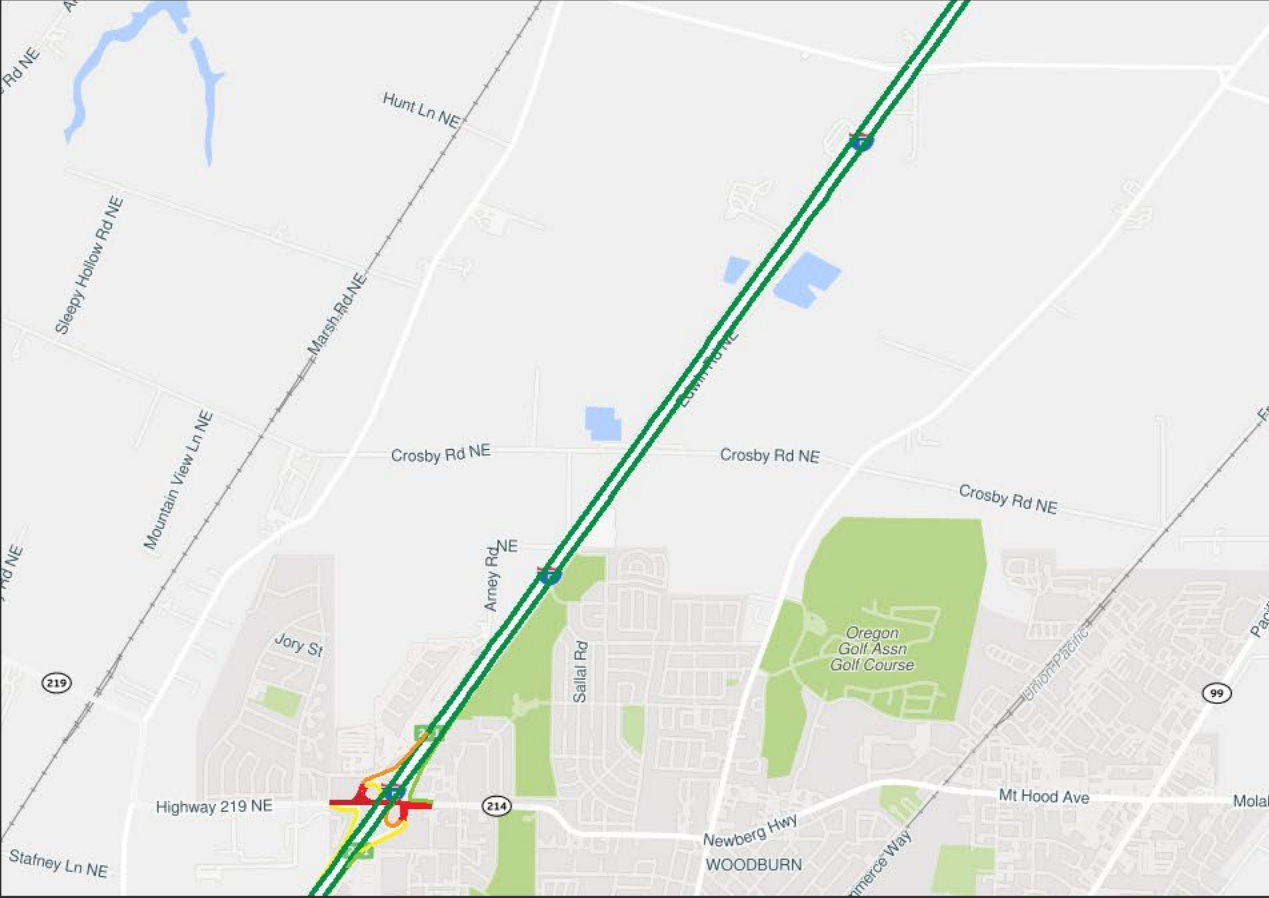
Light
Traffic



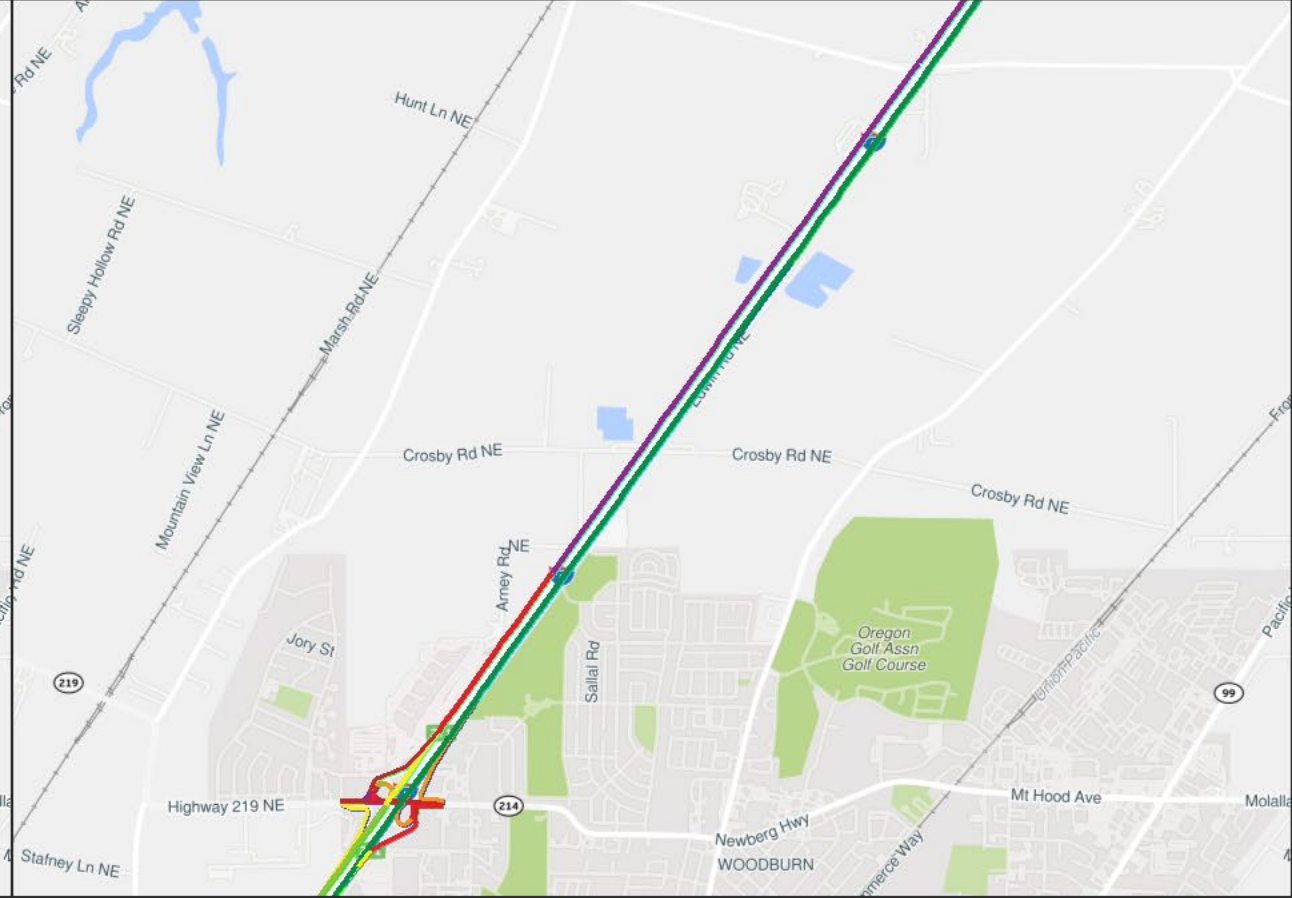
Probe Data Analytics – Trend Map (Animated Map Over Time)

141 XD segments and 3 XD segments Speed Trend Map for November 17, 2023 and November 24, 2023

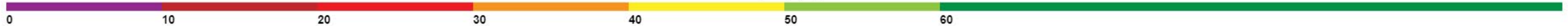
02:00 PM - November 17, 2023 (Friday)



02:00 PM - November 24, 2023 (Friday)



Speed (mph)



Probe Data Analytics – User Delay Cost Analysis (snow/ice event)

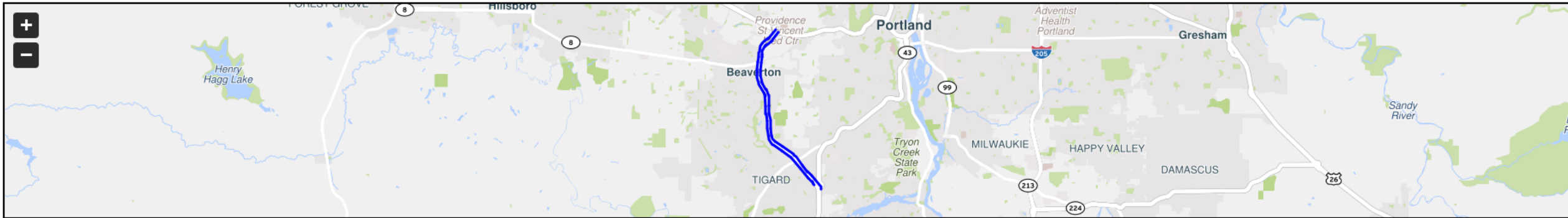
	12 AM	1 AM	2 AM	3 AM	4 AM	5 AM	6 AM	7 AM	8 AM	9 AM	10 AM	11 AM	12 PM	1 PM	2 PM	3 PM	4 PM	5 PM	6 PM	7 PM	8 PM	9 PM	10 PM	11 PM	Daily Totals
2/13/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.2M	\$0.1M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$1M
2/14/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.2M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.9M
2/15/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.2M	\$0.2M	\$0.2M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$1.4M
2/16/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.2M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$1M
2/17/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0M	\$0.1M	\$0.1M	\$0.2M	\$0.2M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$1M
2/18/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.7M
2/19/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.4M
2/20/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.2M	\$0.2M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$1M
2/21/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.2M	\$0.3M	\$0.2M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$1.5M
2/22/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.2M	\$0.5M	\$0.7M	\$1.1M	\$1.2M	\$0.9M	\$0.7M	\$0.5M	\$0.5M	\$0.4M	\$0.3M	\$7.4M
2/23/23	\$0.2M	\$0.1M	\$0.1M	\$0.1M	\$0.2M	\$0.3M	\$0.4M	\$0.5M	\$0.5M	\$0.5M	\$0.5M	\$0.5M	\$0.5M	\$0.4M	\$0.4M	\$0.3M	\$0.3M	\$0.3M	\$0.3M	\$0.2M	\$0.2M	\$0.1M	\$0.1M	\$0.1M	\$7.2M
2/24/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.2M	\$0.3M	\$0.3M	\$0.3M	\$0.3M	\$0.3M	\$0.3M	\$0.3M	\$0.3M	\$0.2M	\$0.2M	\$0.3M	\$0.3M	\$0.2M	\$0.1M	\$0.1M	\$0.1M	\$0M	\$4.2M
2/25/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0M	\$0M	\$0M	\$1.7M
2/26/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.6M
2/27/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.2M	\$0.2M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$1.2M
2/28/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.2M	\$0.3M	\$0.3M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$1.6M
3/01/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.2M	\$0.2M	\$0.3M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$1.4M
3/02/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.2M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.2M	\$0.3M	\$0.3M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$1.9M
3/03/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.3M	\$0.4M	\$0.3M	\$0.2M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$1.9M
3/04/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.7M
3/05/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.5M
3/06/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.2M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$1M
3/07/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0M	\$0M	\$0.1M	\$0M	\$0.1M	\$0.1M	\$0.2M	\$0.2M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$1.2M
3/08/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.2M	\$0.2M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$0M	\$1.2M
3/09/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.1M	\$0.2M	\$0.3M	\$0.4M	\$0.2M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$1.8M
3/10/23	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0M	\$0M	\$0M	\$0.1M	\$0.1M	\$0.1M	\$0.2M	\$0.2M	\$0.1M	\$0.1M	\$0.1M	\$0M	\$0M	\$0M	\$0M	\$1.2M

Probe Data Analytics – Dashboard (System Monitoring – Delay \$)

OR217 Construction



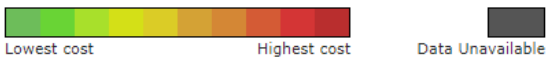
User Delay Cost for OR-217



[Hide Map](#)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total
2023	\$2.4M	\$2.1M	\$2.2M	\$2.2M	\$2.6M	\$2.4M	\$1.9M	\$1.7M	\$2M	\$2M			-
2022	\$0.9M	\$1.4M	\$1.5M	\$2.7M	\$2.2M	\$2.5M	\$2M	\$3.1M	\$2.8M	\$2.6M	\$2.4M	\$2.8M	\$26.9M
2021	\$0.3M	\$1M	\$0.8M	\$1M	\$0.9M	\$1.3M	\$1.3M	\$1M	\$1.1M	\$1.3M	\$1.6M	\$2.2M	\$13.8M
2020	\$1.5M	\$1.2M	\$0.4M	\$0M	\$0M	\$0.1M	\$0.2M	\$0.3M	\$0.4M	\$0.6M	\$0.6M	\$0.9M	\$6.1M

Legend



Based on lowest values of all years to highest values of all years.

Data source: INRIX

Updated Nov 29, 2023 5:58 PM (47s ago)

Probe Data Analytics – Dashboard (System Monitoring - Congestion)

OR217 Construction Work Zone



Corridor	Average Speed			Travel Time		
	Differential	Current	Historical	Differential	Current	Historical
OR-217 NB	↓ 9	22 mph	31 mph	↑ 5	20 m	15 m
OR-217 SB	↓ 15	18 mph	33 mph	↑ 11	24 m	13 m

Data source: INRIX

Updated Nov 29, 2023 6:00 PM (10s ago)

Reliability during the PM Peak (5-6pm) for OR-217 Northbound and OR-217 Southbound



	Location	Planning Time Index: Free Flow Speed			Planning Time Index: Posted Speed Limit i		
		Differential	Current Week to ...	11/27/2022-12/0...	Differential	Current Week to ...	11/27/2022-12/0...
1	OR-217 North...	↓ 0.12	3.14	3.26	↓ 0.08	3.01	3.09
2	OR-217 South...	↓ 0.07	4.30	4.37	↑ 0.05	4.19	4.14

Data source: INRIX

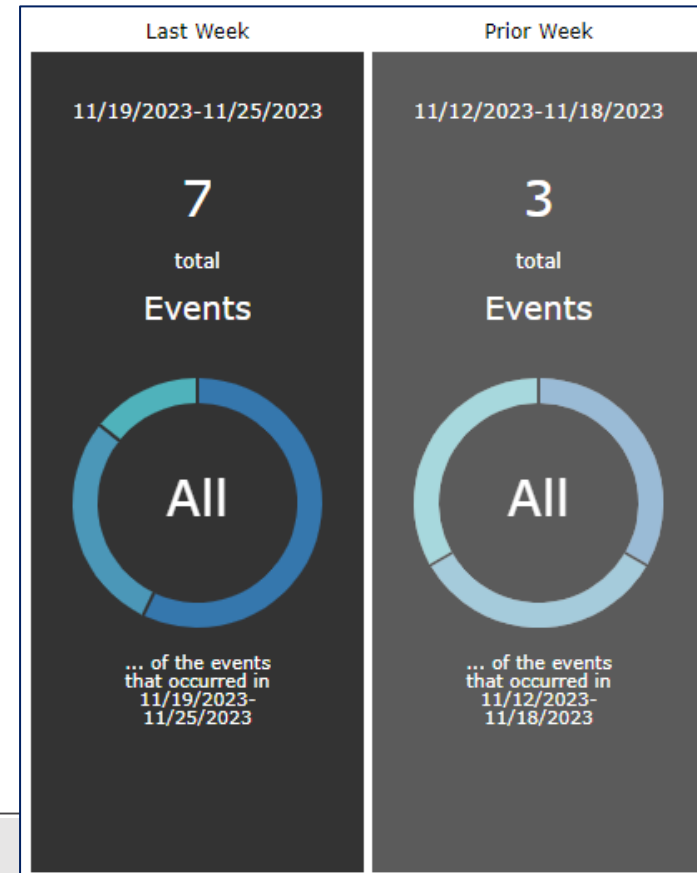
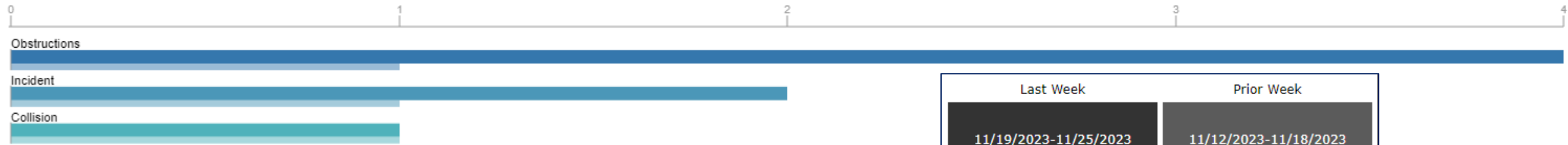
Updated Nov 29, 2023 5:58 PM (2m 20s ago)

Probe Data Analytics – Dashboard (System Monitoring – Incidents)

Event Count for OR-217 Southbound

ODOT

Events from ODOT for OR-217 Southbound using standardized event types



Probe Data Analytics – Causes of Congestion Graphs (Mult. County)

