

Transportation Performance Management Webinar Series

Case Studies - Identifying Data Gaps and Developing New Data Collection Processes to Inform Decision-Making

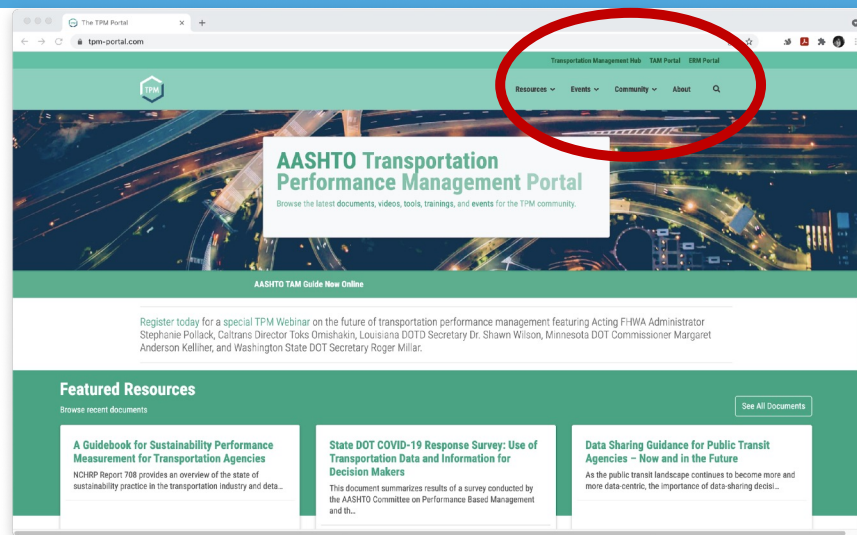
Sponsored by AASHTO and FHWA



Wednesday, March 19, 2025
TPM Webinar 25

Transportation Performance Management Webinar Series

- Our TPM webinar series is held every two months, on topics such as communications, system performance management, data sources, and many more to come!
- Today is the 25th webinar in our bi-monthly series
- We welcome ideas for future webinar topics and presentations
- Use the webinar chat panel during the webinar
 - Submit questions for today's presenters
 - Submit ideas for future webinar topics



Find us on the AASHTO TPM Portal
<https://www.tpm-portal.com>

Webinar Agenda

2:00 Introduction, Agenda, & Other Updates

- Christos Xenophontos, Rhode Island DOT, Chair, AASHTO CPBM.

2:05 AASHTO Perspective

- Anna McLaughlin, AASHTO.

2:15 Planning for Destination Accessibility: Resources to Inform Decision-Making

- Liz Williams, Massachusetts DOT.

2:35 Leveraging Centralized Citizen Issue Data to Help Drive Decision-Making

- Stephen Kut, Rhode Island DOT.

2:55 Enhancing Data Management and Utilization for Decision-Making

- John Hoang, Contra Costa Transportation Authority.

Webinar Agenda

3:15. Panel Q&A

- Christos Xenophontos, Rhode Island DOT, Chair, AASHTO CPBM.

3:30 Wrap-Up.

- Christos Xenophontos, Rhode Island DOT, Chair, AASHTO CPBM.

NCHRP Project 23-35 Survey

- NCHRP is partnering with Cambridge Systematics on NCHRP Project 23-35 "A Guide for Program Level Risk Management Performance Metrics."
- A questionnaire for DOTs will establish practices, gaps, and potential areas for improvement in the measurement and management of program risk.
- Please complete 15-minute survey (one per state DOT) by March 28, 2025:
<https://www.surveymonkey.com/r/programriskmetrics>
- Any questions or issues with survey, please contact Joe Zissman at
jzissman@camsys.com



AASHTO Perspective

Anna McLaughlin

AASHTO



Upcoming Meetings

AASHTO Spring Meeting

May 12 – 15, 2025

Hartford, Connecticut

<https://web.cvent.com/event/f7fb6a23-d66d-4e8c-819f-d38550e38bef/summary>

15th National Conference on Transportation Asset Management

August 25 – 28, 2025

Chicago, Illinois

<https://ctre.iastate.edu/events/tam-conference-15/>

CPBM Annual Meeting and Peer Exchange

Save The Date: September 23-25, 2025

Baltimore, Maryland

Planning for Destination Accessibility

Liz Williams

Massachusetts DOT





Planning for destination accessibility

Resources to inform decision-making

March 19, 2025 | AASHTO TPM Webinar 25



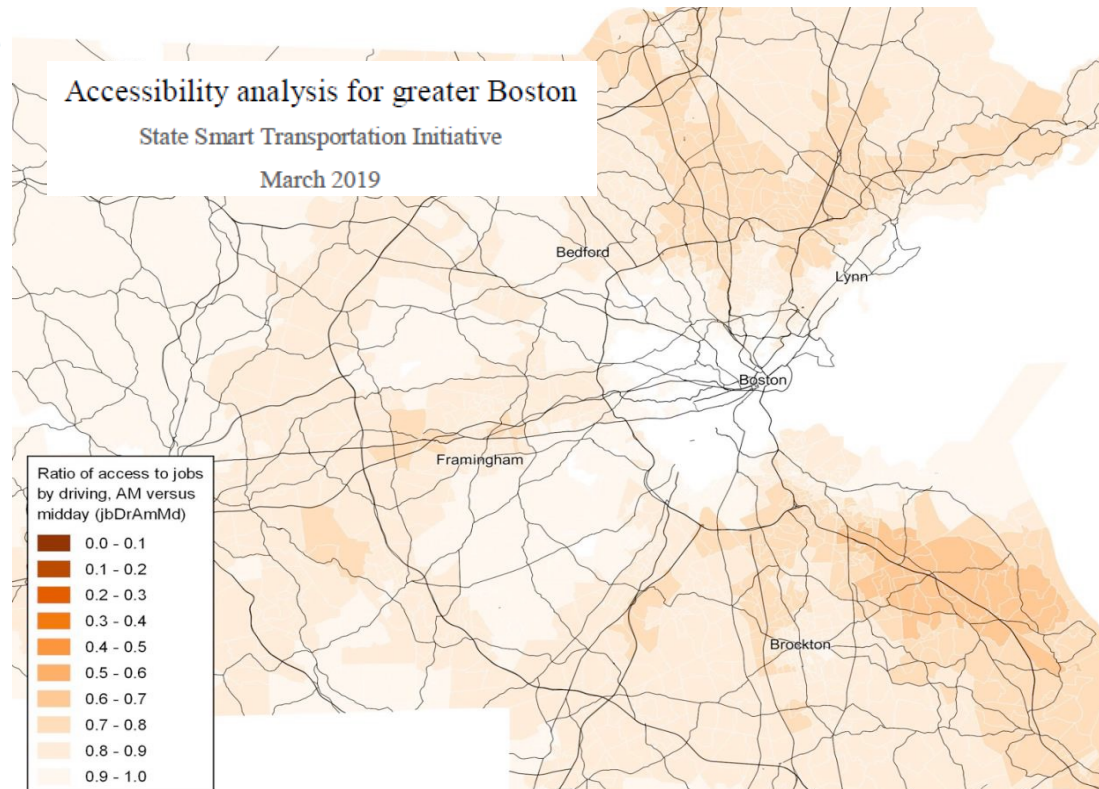
Agenda

- 01 MassDOT's experience
- 02 Upgrading efforts
- 03 Guidance documents
- 04 Recent applications



MassDOT's Experience

- 2018: Began working with Sugar Access (later CUBE, now ?)
 - Research projects with SSTI
- 2019: Began participating in FHWA National Accessibility Evaluation Pooled Fund Study
 - Provided with GIS files reflecting multimodal, temporally-specific job access
 - Created public-facing dashboard
- 2020: Procured Conveyal software



Upgrading efforts

- 2022: Began developing statewide long range transportation plan, Beyond Mobility
- Initial identification of six priority areas included destination connectivity



Upgrading efforts

- 2022: Began developing statewide long range transportation plan, Beyond Mobility
- Initial identification of six priority areas included destination connectivity
- (ongoing) MassDOT participation in several peer exchanges with other state DOTs and MPOs
- 2023: initiated development of Conveyal user guide for Office of Transportation Planning

Destination Connectivity



VISION

By 2050, due to targeted investments that have expanded access to everyday destinations for transit-critical and traditionally underserved communities statewide, there will be significantly more modal options, more equitable travel times, increased transportation choices, and far fewer first- and last-mile gaps for these communities.



VALUES

MassDOT believes that the primary purpose of the transportation system is to **connect people to the places that they need and want to go**.

MassDOT believes in the importance of measuring how **people, rather than just vehicles**, pass through the transportation system.

MassDOT is committed to the principle that a "**regional rail**" system with expanded service throughout the day is critical to building a stronger and more inclusive state economy.

MassDOT is committed to supporting **robust on-demand transit services** using dedicated drivers and vehicles across the Commonwealth, especially in communities served by Regional Transit Authorities (RTAs) that may not have and/or lack the density to support fixed-route service.

Guidance Documents

- 2023: retained Nelson/Nygaard for an on-call study to help identify opportunities to use Conveyal in the traditional planning study process
- Deliverables included an introductory guide to Conveyal including when and how to use it, as well as an accompanying technical guide to help interpret analysis parameters and results

Conveyal in MassDOT OTP: Technical User Manual
MassDOT

CONVEYAL IN MASSDOT OTP: TECHNICAL USER MANUAL

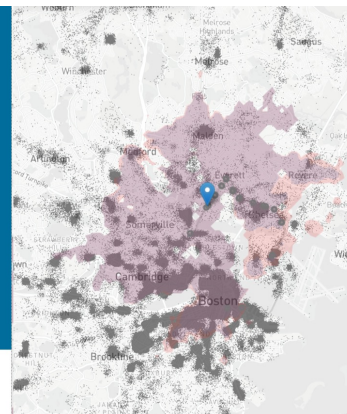
December 2023

Conveyal in OTP

MassDOT Conveyal Guide

N NELSON
NYGAARD

massDOT
Office of Transportation Planning



Overview: What Is This Document?

This document provides **technical guidance on how to use Conveyal to conduct accessibility analyses for MassDOT OTP planning projects**. It will cover the following topics:

1. Scoping
2. Starting A Project
3. Setting up Modifications and Scenarios
4. Conducting Analyses
5. Interpreting, Exporting, and Visualizing Results

This guide is intended to **supplement and contextualize Conveyal's existing documentation, not replace it**. The step-by-step guidance for using Conveyal is well-documented in their official [User Manual](#) and will be referred to throughout this document. The official Conveyal User Manual provides relevant screenshots and images to easily follow the step-by-step guidance.

If this is your first time using Conveyal, please review these three important resources before going through this manual:

- [Conveyal at MassDOT User Guide](#): This guide gives a non-technical overview of Conveyal, including what it is and how it can be used in MassDOT projects. It is maintained internally by MassDOT.
- [Conveyal Glossary](#): This is part of Conveyal's official documentation and defines key terminology used throughout the Conveyal platform. We will reference these terms throughout this manual, so it is important to become familiar with them.
- [Conveyal Demo](#): An introductory video to Conveyal's capabilities.

Key terms and tips will be indicated throughout this document as follows:

- Key Conveyal-related terms will be **bolded and highlighted in blue**.
- Tips will be indicated with a blue star: ★
- Sections that supplement official Conveyal guidance have instructions *italicized* at the beginning. Notes and considerations will also be *italicized* throughout the document.

~ break for **Conveyal in OTP** slides
~

Technical Assistance Guide

Conveyal in MassDOT OTP: Technical User Manual
MassDOT

CONVEYAL IN MASSDOT OTP: TECHNICAL USER MANUAL

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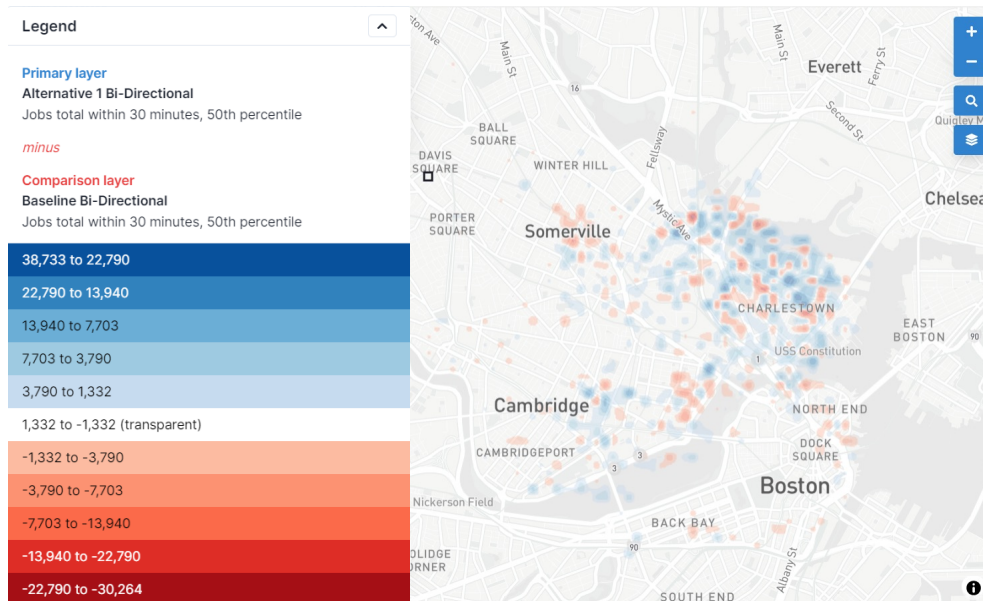
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Recent Applications

- Gilmore Bridge transit planning study
 - considers the impact of different bus route types on job access, primarily in the areas of Cambridge, Somerville, and Charlestown
 - Alt. 1: dedicated lane
 - Alt 2: BRT
 - Bi-directional vs east/west-bound only

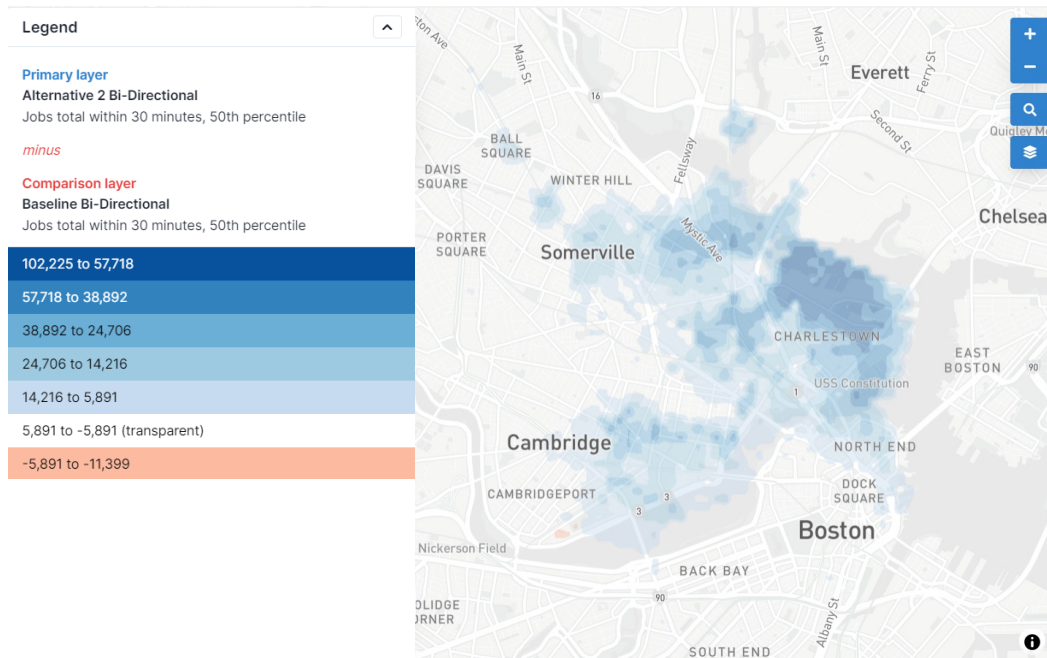
Map 1.1: REGIONAL ANALYSIS – Alternative 1 (Dedicated Gilmore Bus Lane) Bi-Directional vs Baseline Bi-Directional.



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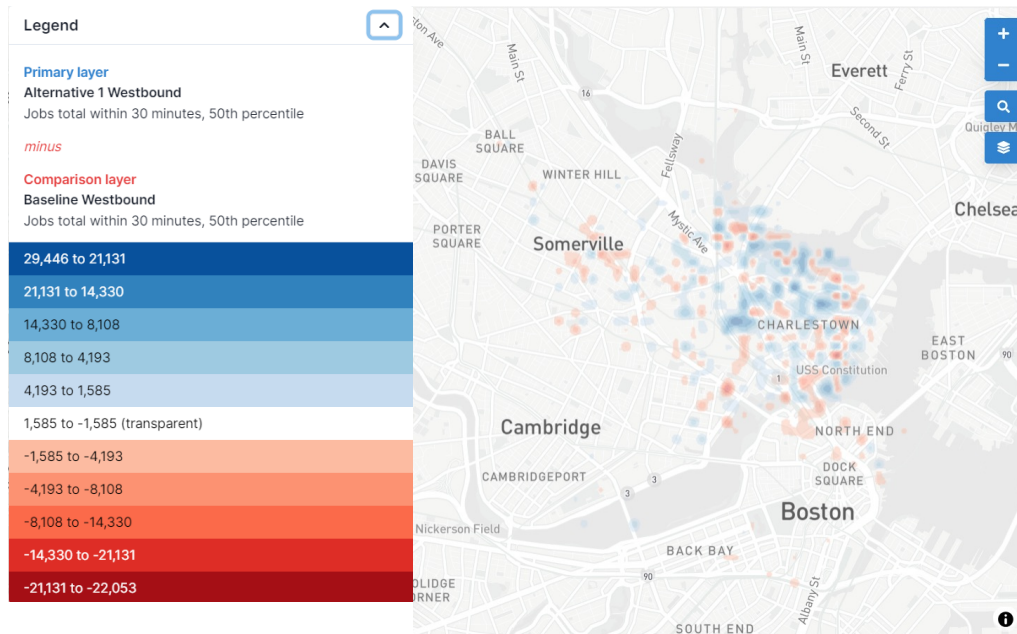
Map 1.2: REGIONAL ANALYSIS – Alternative 2 (Dedicated Bus Lane for Whole Route) Bi-Directional vs Baseline Bi-Directional.



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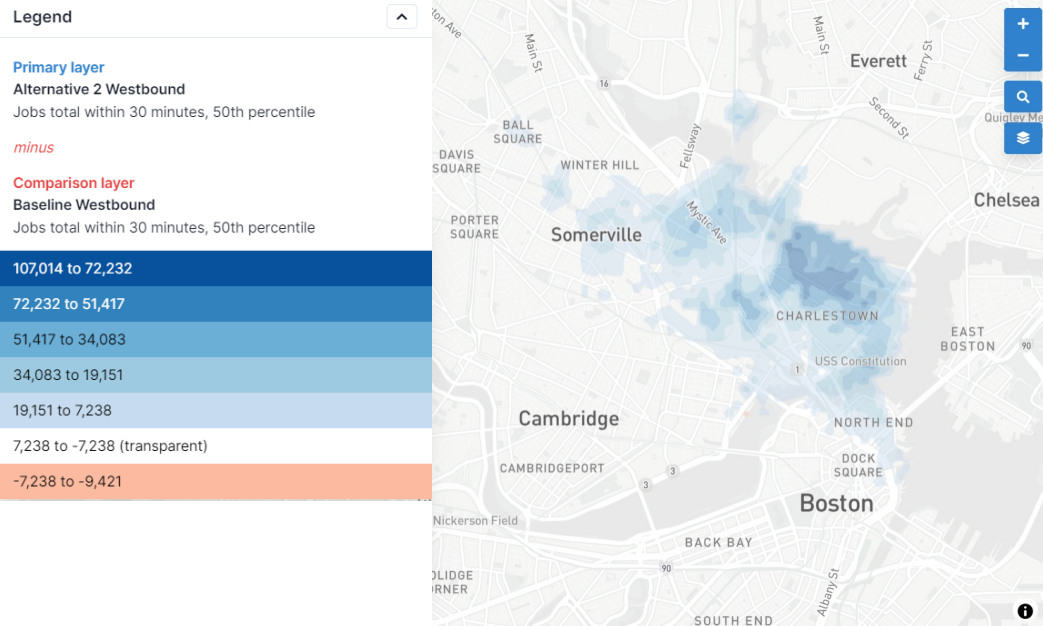
Map 2.1: REGIONAL ANALYSIS – Alternative 1 (Dedicated Gilmore Bus Lane) Westbound Only vs Baseline Westbound Only.



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Map 2.2: REGIONAL ANALYSIS – Alternative 2 (Dedicated Bus Lane for Whole Route) Westbound Only vs Baseline Westbound Only



Recent Applications

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 - **Slow zones added by hand to approximate impact to drivers**

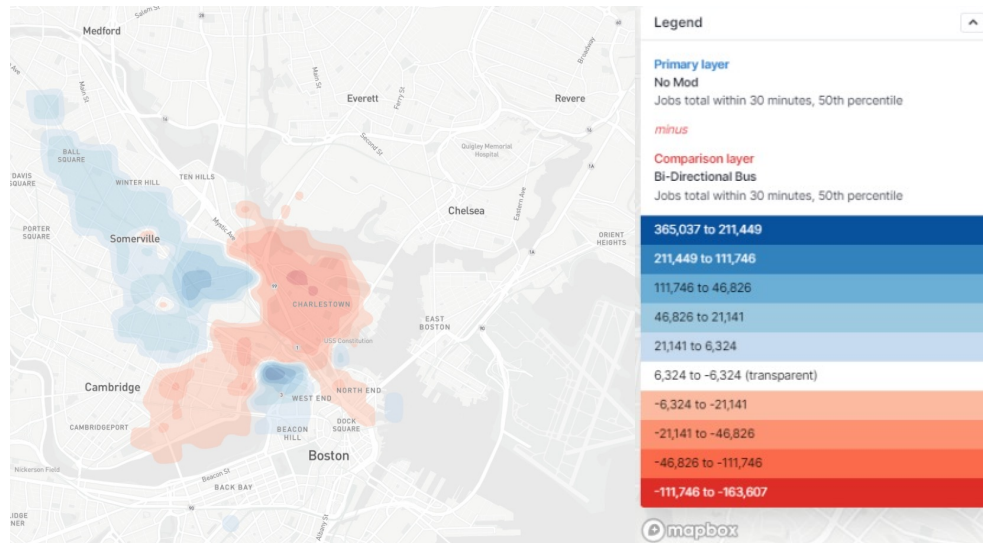
Map 2.2: Slow Zones



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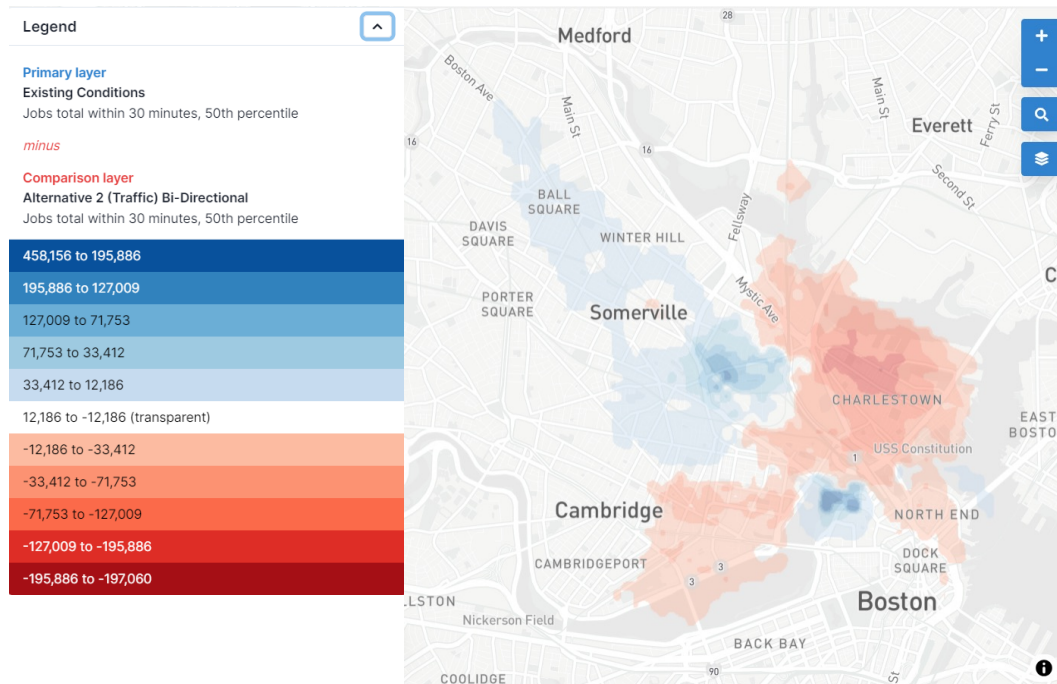
Map 3.2: REGIONAL ANALYSIS - Existing Conditions vs Alternative 1 (Dedicated Gilmore Bus Lane) Bi-Directional



Recent Applications

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Map 3.3: REGIONAL ANALYSIS – Existing Conditions vs Alternative 2 (Dedicated Bus Lane for Whole Route) Bi-Directional



Recent Applications



Transportation is Supportive (TIS) and Regional Environmental Justice Plus (REJ+)
Application for exploring transportation infrastructure and demographics in Massachusetts

Average Statewide TIS Score
2.499

TIS REJ+

REJ+ Demographics

Selected MPO

Filter by Geometry - Select By

Town
0 Selected

MPOs
0 Selected

Filter by Attribute

Select If

Access Score
at least range: 0-1

Affordability Score
Greater Than range: 0-1

Environment Score
Between range: 0-1

Infrastructure Score
Between range: 0-1

Safety Score
at least range: 0-1

TIS Score
Between range: 0-5

Apply Cancel

Turn On/Off Each Layer By Clicking Below

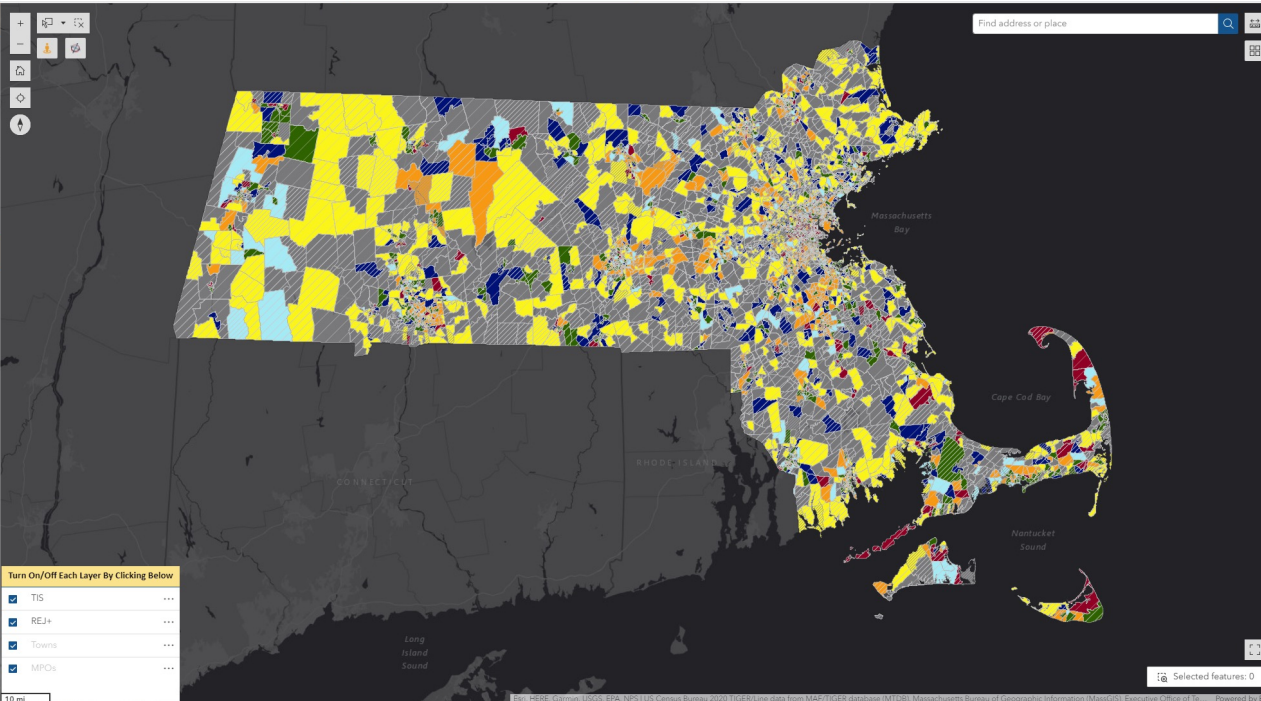
☒ TIS ...

☒ REJ+ ...

☒ Towns ...

☒ MPOs ...

10 mi



Find address or place

Filter by Attribute

Select By

Nonwhite Persons
- All -

Limited English Proficiency Households
- All -

Low Income Households
- All -

Zero Vehicle Households
- All -

Disability Status Households
- All -

Age
- All -

Most Dominant REJ+ Factor
- All -

Apply Cancel

TIS

> 3.18 - 4.6

> 2.54 - 3.18

> 1.89 - 2.54

0.57 - 1.89

REJ+

Disability

Income

Limited English Proficiency

Nonwhite

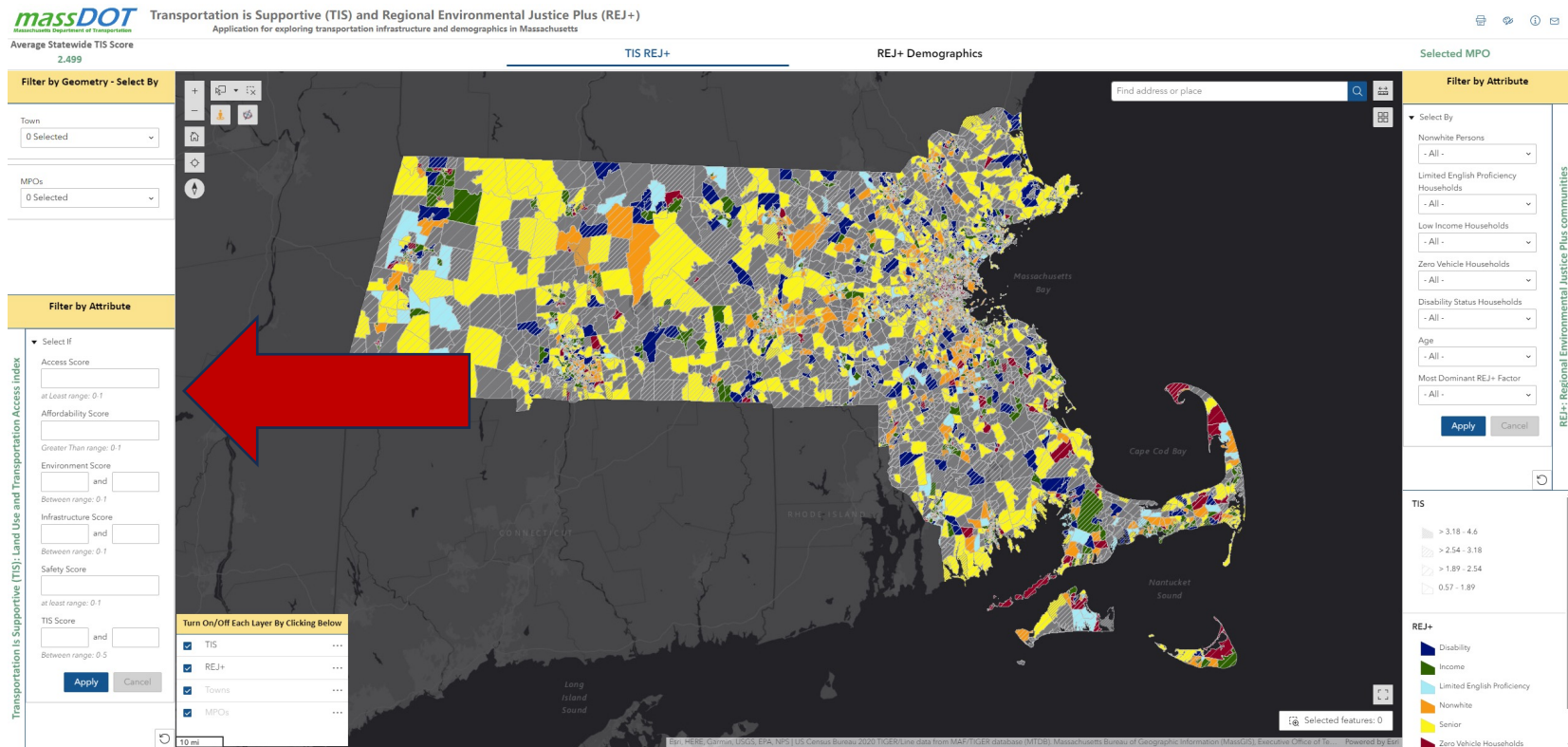
Senior

Zero Vehicle Households

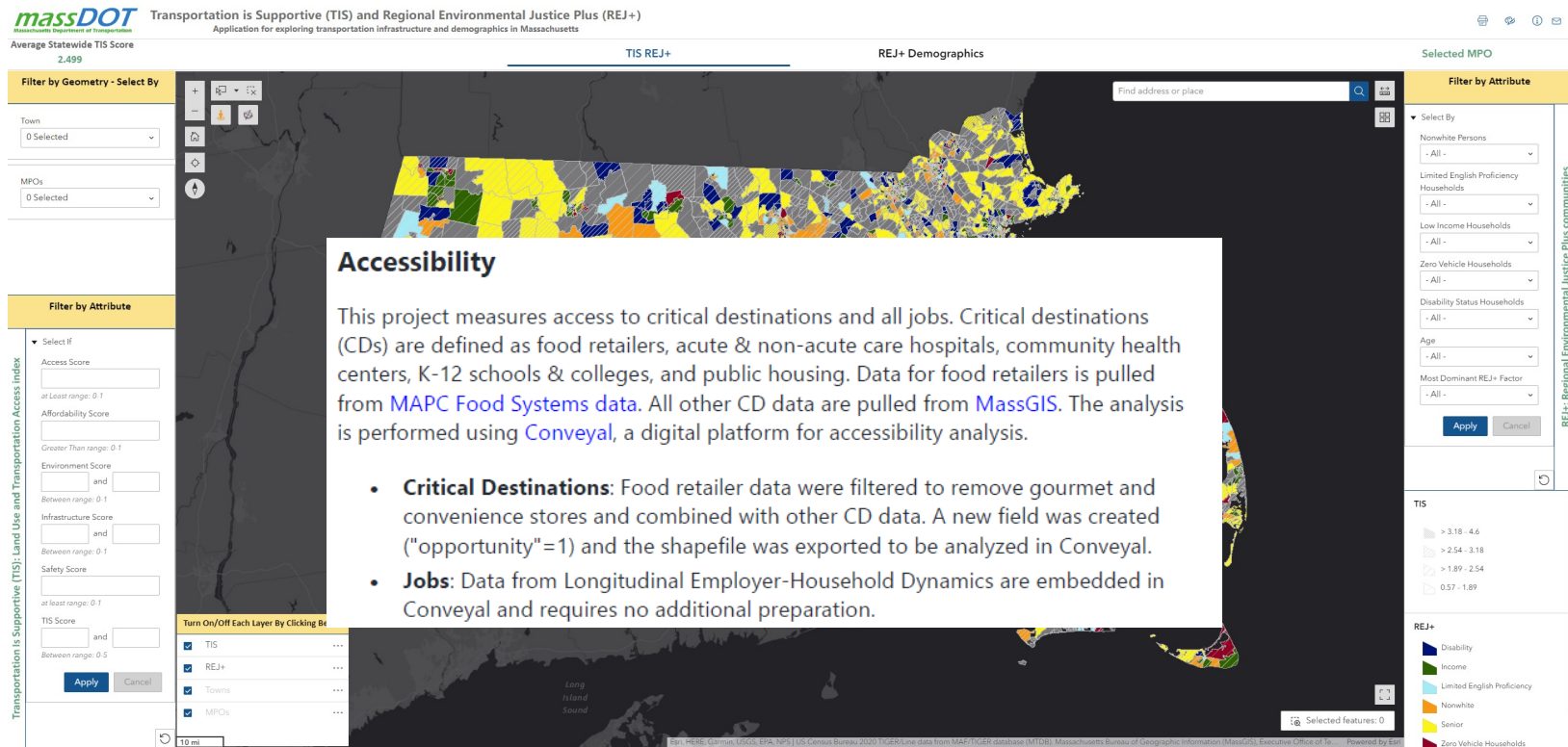
REJ+ Regional Environmental Justice Plus communities

Selected features: 0

Recent Applications



Recent Applications





Thank You

liz.williams@dot.state.ma.us



Leveraging Centralized Citizen Data to Help Drive Decision-Making

Stephen Kut

Rhode Island DOT





Establish a Centralized System for Capture Issues and Complaints

- Replace the 6 or more systems for tracking issues.
 - Redundant
 - No way to report or analyze
 - Non spatial
- Immediately track responses to complaints logged by our Communications and Customer Service Unit Citizens
 - Governor's Office
 - Legislature
 - Cities/Towns
- Expanded to include
 - Traffic Management Center (TMC)
 - 24/7 Quick Response Calls (Dispatch)



Standardized Input

- Training on input of issues into proper category
- Accurate location key to analyzing the data
 - Link to asset data where possible - Signs, Lighting, Guardrail, Striping, Walls, Catch Basins, Manholes, Signals, Bridges
 - Link to address or milepost if asset not identified
 - Location description derived from GIS asset link

ID: 821726-61 Logged By: [User] 03/17/2025 08:58 AM
 Type: Quick Response
 Division: Highway and Bridge Maintenance
 Group: Operations.Midstate
 Issue: Flooding
 Location: 1670 FLAT RIVER RD, COVENTRY
 Lat/Long: 41.791055, -71.592559
 Assigned To: [User]
 Role: Midstate Facility 03/17/2025 8:58 AM
 Form: VUEWorks RIBDOT Default

Details | Linked Calls | Documents | Work Orders | Assets | Comments

Caller Information Copy From
 Name of Caller: Midstate Driver
 Address of Caller: [Field]
 Relation to Owner: TMC
 Phone: Primary [Field]
 Email: [Field] Auto Send

MAINTENANCE FACILITY
 MIDSTATE [Field]
 CITY/TOWN: [Field]
 COVENTRY [Field]
 Source of Call: RIBDOT
 Communication Method: [Field]
 Accident Report Number: [Field]

Description: Flooding and #2568
 Response: [Field]

Issue Occurred	Location	Issue
03/17/2025 09:32 AM	Intersection of TOWER HILL RD and COL. RODMAN HWY in NORTH KINGS	Called into TMC
03/17/2025 09:25 AM	38 1/2 DEAN AVE, JOHNSTON	Drainage
03/17/2025 09:20 AM	Intersection of TAUNTON AVE and GOLDSMITH AVE in EAST PROVIDENCE	Work Zone Issue
03/17/2025 09:10 AM	Intersection of RI 1 A (NEWPORT AV) and WHITTIER RD in Pawtucket	Called into TMC
03/17/2025 09:05 AM	Intersection of RI 177 (BULGARMARSH RD) and RESTFUL VALLEY AV in Tiv	Flooding
03/17/2025 09:03 AM	Intersection of RI 1 A (NEWPORT AV) and WHITTIER RD in Pawtucket	Pothole
03/17/2025 08:58 AM	1670 FLAT RIVER RD, COVENTRY	Flooding
03/17/2025 08:54 AM	295 North @ Route 114 North & South (Diamond Hill Road) - Cumberland	Exit Pothole
03/17/2025 08:51 AM	Intersection of RI 114 (DIAMOND HILL RD) and HILLSIDE RD in Cumberland	Flooding
03/17/2025 08:45 AM	Intersection of BRONCO HWY and DOUGLAS PIKE in BURRILLVILLE	Sign: Traffic Signal On Flash
03/17/2025 08:41 AM	692 WARREN AVE, EAST PROVIDENCE	Accident
03/17/2025 08:31 AM	Intersection of WEST MAIN RD and HOME DEPOT in MIDDLETOWN	Sign: Traffic Signal On Flash
03/17/2025 08:28 AM	295 North @ I 295 South to Route Greenville Ave Johnston Exit Number 10	Light Pole Down
03/17/2025 08:14 AM	206 E MAIN RD, PORTSMOUTH	Traffic Control
03/17/2025 08:11 AM	Intersection of NEWPORT AVE and ARMISTICE BLVD in PAWTUCKET	Sign: Traffic Signal On Flash
03/17/2025 08:08 AM	206 E MAIN RD, PORTSMOUTH	Tree Issue
03/17/2025 08:02 AM	170 MENDON RD, CUMBERLAND	Flooding
03/17/2025 07:51 AM	445 PUTNAM PIKE, SMITHFIELD	Sign Down
03/17/2025 07:43 AM	28 GRISWOLD AVE, BRISTOL	Tree Issue
03/17/2025 07:28 AM	195-5 I-195 W @ Washington Bridge	Camera No Video/Poor Video
03/17/2025 07:04 AM	Intersection of ROUTE 10 and PARK AVE in CRANSTON	Signal No. 207 Flooding
03/17/2025 06:23 AM	Intersection of WATERMAN AVE and JAMES ST in EAST PROVIDENCE	Sign: Traffic Signal On Flash
03/17/2025 06:19 AM	95_38_0_S_CAM - Orms St	Camera No Video/Poor Video
03/17/2025 05:52 AM	95 North @ Providence Place Mall Exit Number 37D	Debris
03/17/2025 05:16 AM	Intersection of US 6 (HARTFORD PK) and RI 116 (W GREENVILLE RD) in Scitree	Issue
03/17/2025 05:14 AM	Intersection of 333 DIAMOND HILL RD and NATE WHIPPLE RD in Cumberland	Tree Issue
03/17/2025 05:10 AM	95 South @ Atwells Avenue Exit Number 37A	Guardrail Repair
03/17/2025 04:59 AM	95 South @ RI-2 N & S (Quaker Lane) - West Warwick/East Greenwich Exit N	Flooding
03/17/2025 12:02 AM	Intersection of GEORGE WASH. HWY and OLD RIVER RD in LINCOLN	Sign: Traffic Signal Timing Issue
03/16/2025 10:42 PM	515 KINGSTOWN RD, RICHMOND	Tree Issue

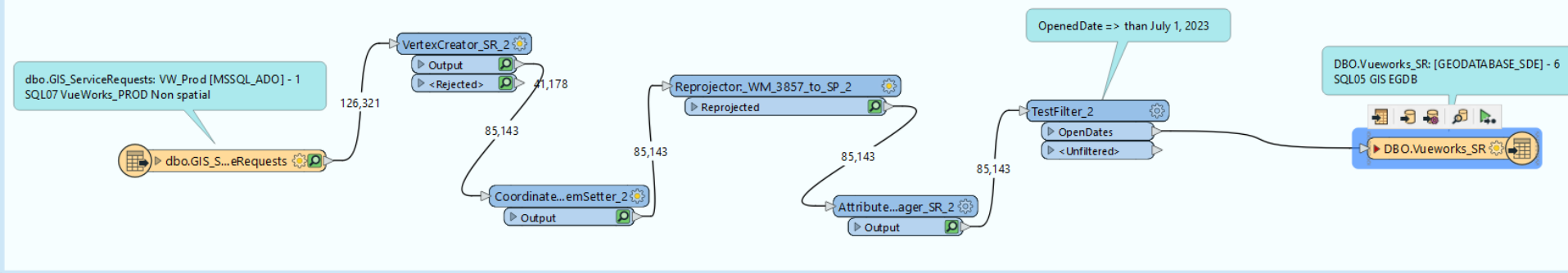
Operational Units responding to Issues

- Robust data set of over 120,000 Service Requests
 - Seven Maintenance Districts responding to service requests
 - Over 1000 issues logged from Customer Service Unit and TMC Monthly
 - Approximately 95% turns into work performed by Maintenance
 - Pavement, flooding, washouts, sweeping, debris, spills
 - Traffic Maintenance Unit
 - Highway lighting, traffic signals, & traffic signs
 - Bridge Maintenance Unit
 - Bridge joints, potholes on decks, railing issues, debris
 - Roadside
 - Trees, Mowing, Graffiti, Trash Issues
 - Safety Maintenance Contracts
 - Guardrail, Fence, Attenuators
 - Project Management
 - Project Issues
 - Drainage Maintenance
 - Flooding Issues

Prepare Data for Analysis

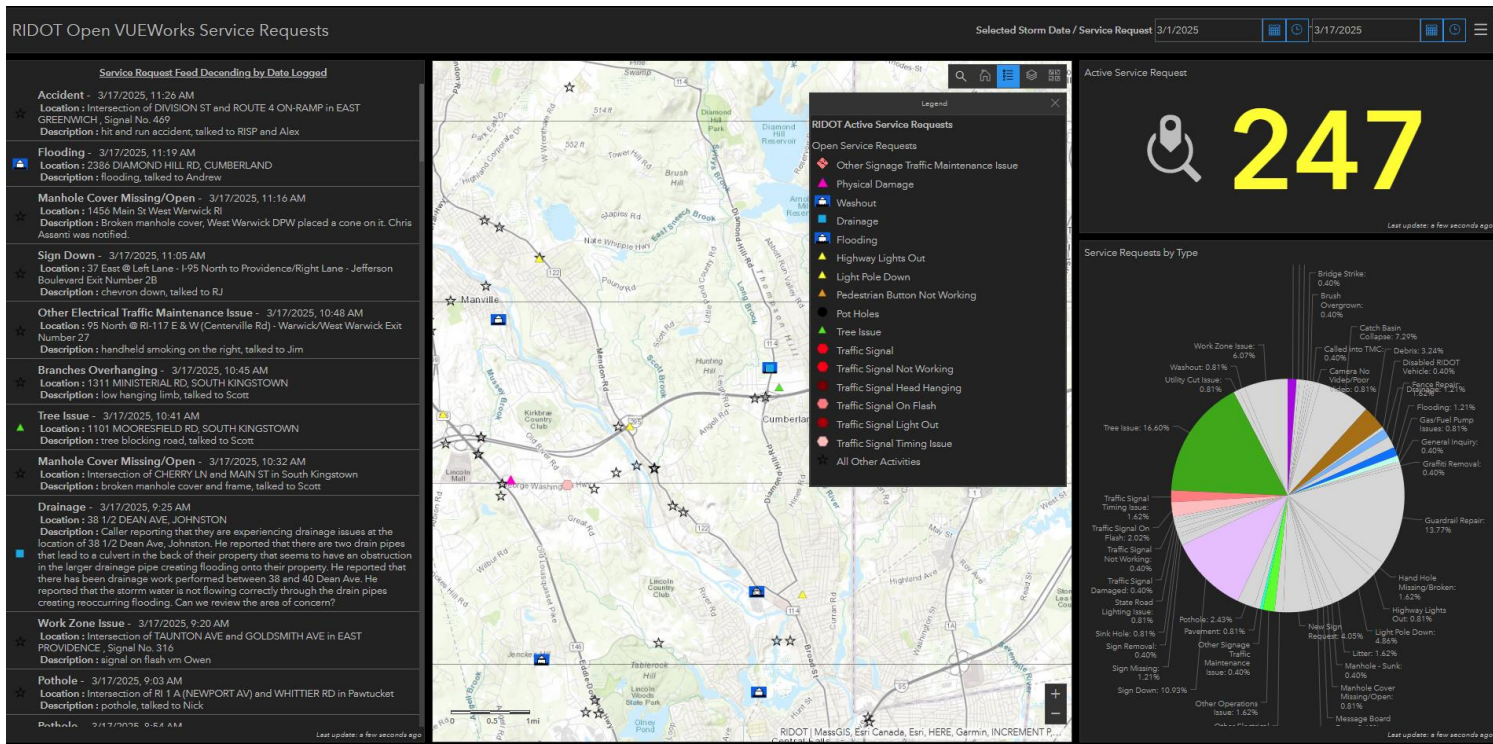
- ETL data from SR System to Enterprise GIS for sharing and analysis
 - Data uses for operational dashboards and for project development

▼ VueWorks Service Requests rolling logged into DB SQL05 for Operations



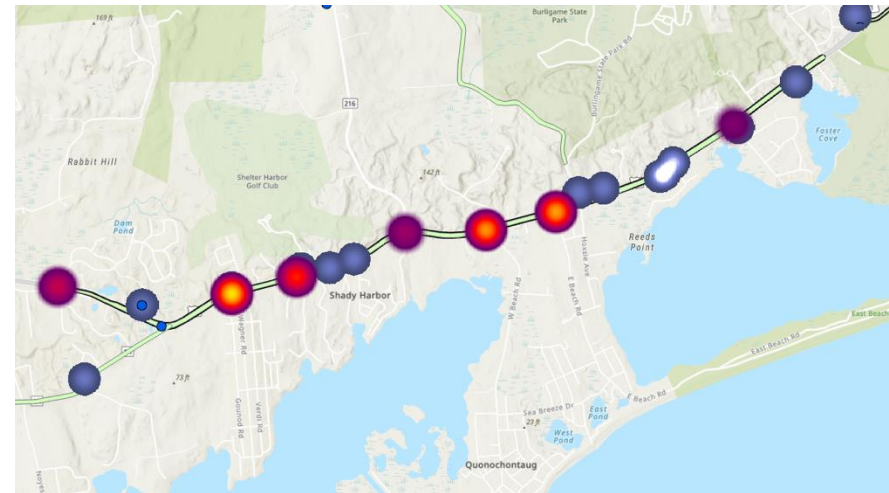
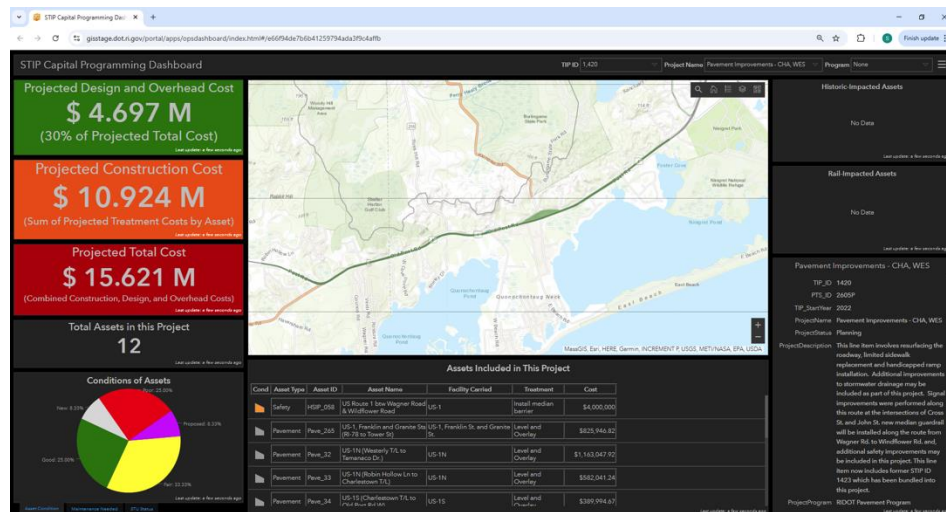
Maintenance Operations

- Operations Dashboards During Major Events
 - Prioritize Resources
 - Flooding, Traffic Signal, Tree Damage



Project Development

- Summary of issues within and near Project ZOD
 - Helps to validate asset condition data
 - Used to identify additional scoping items to projects



Next Steps – Include Issue Data in Project Geoprocessing Engine

- Automate the summarization of data by project
 - Statistics of issue type by project area
 - Flexibility to rerun as projects limits change

Statewide Intake Framework for Transportation (SWIFT)

4/8 Geoprocessing

Click here to run Geoprocessing

Find address or place

Providence

Asset ID: 098101...

Running script PitGPTask...

Previous Save & Next

- Did we meet our goals of the project?
 - Reduce the number complaints within the area identified
 - Flooding
 - Pavement
 - Traffic Signals
 - Reduced impacts during major weather events

Enhancing Data Management and Utilization for Decision-Making

John Hoang

Contra Costa Transportation Authority





CONTRA COSTA
transportation
authority

Enhancing Data Management and Utilization for Decision-Making

AASHTO/FHWA TMP WEBINAR 25

March 19, 2025

John Hoang

Director, Planning

Contra Costa Transportation Authority





Who We Are

- CCTA is a public agency formed by voters in 1988 to manage the county's transportation sales tax program and to lead transportation planning efforts.
 - CCTA is responsible for maintaining and improving the county's transportation system by delivering critical transportation infrastructure projects to safely and efficiently, get people where they need to go.
- 

What We Do



PEDESTRIAN

Improvements to sidewalks, crosswalks, trails, and paths



LOCAL STREETS

Smooth traffic flow on major roads and make surface improvements such as pothole repairs



BUSES

Invest in a reliable, comfortable and convenient bus network



SAFE ROUTES TO SCHOOLS

Focus on programs and projects aimed at bicycle and pedestrian safety for K-12 students



FERRIES

Expand ferry system by looking to ferries as an alternate commute method between West County and San Francisco



BICYCLE

Invest in safe routes and infrastructure improvements for bicyclists



BART

Improve BART service and stations, extend routes and increase parking



HIGHWAYS

Complete Contra Costa's highway system, and improve air quality and noise protection along corridors



INNOVATIVE SOLUTIONS

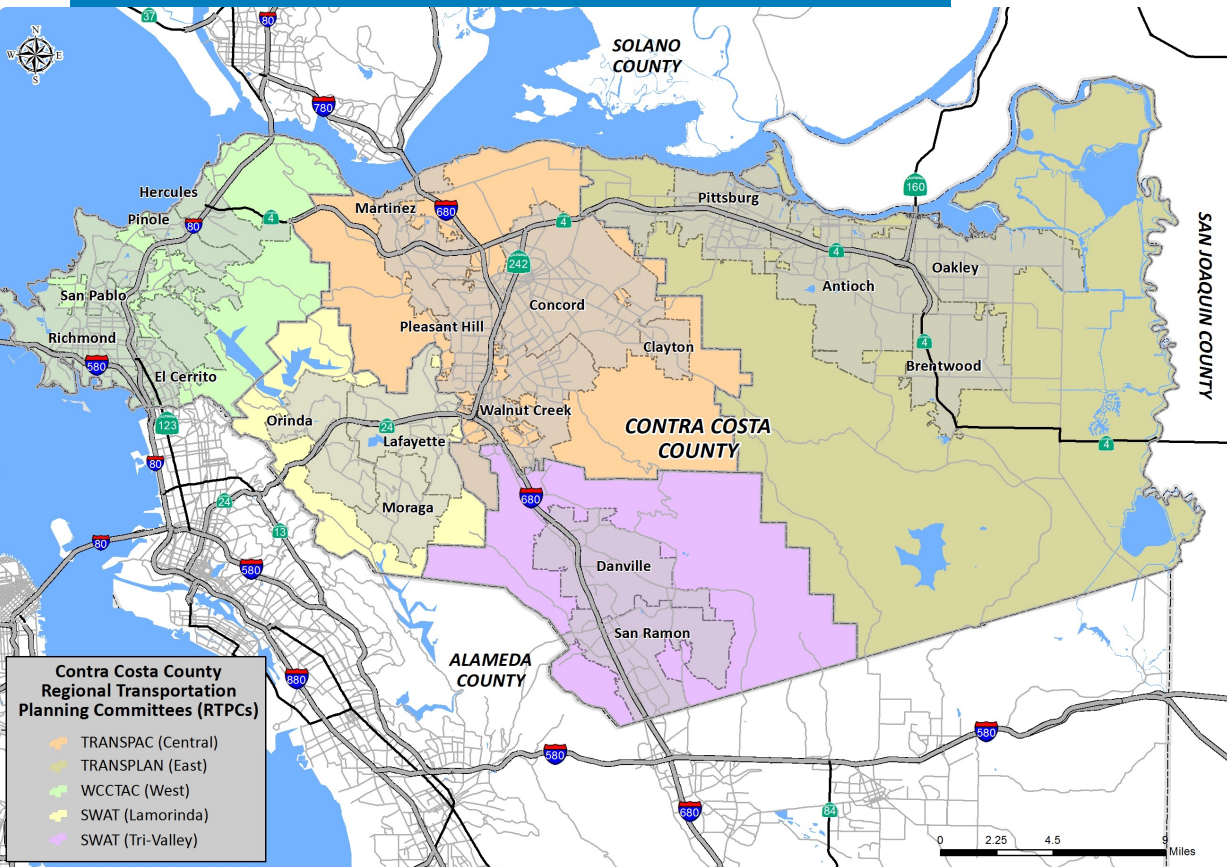
Implement smart transportation infrastructure to reduce congestion and encourage greener travel



PROGRAMS FOR SENIORS AND DISABLED

Enhance transit options to improve mobility for seniors and people with disabilities

Contra Costa County

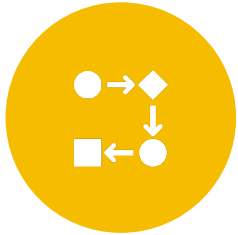


SF BAY AREA

Where is Contra Costa?

- 1.155 million residents (2023)
- 19 incorporated Cities/Towns
- 3,200 miles of roadway
- 5 transit providers + Amtrak

CCTA Data Initiative



**VISUALIZE
DATA**



**PROVIDE
INSIGHTS**



**TELL A
STORY**



**TARGETED
AUDIENCE**



Disconnected Data, Disconnected Decisions: Overcoming the Silo Effect

Data is just data—until you connect, analyze, and act on it. Only then does it become actionable information.

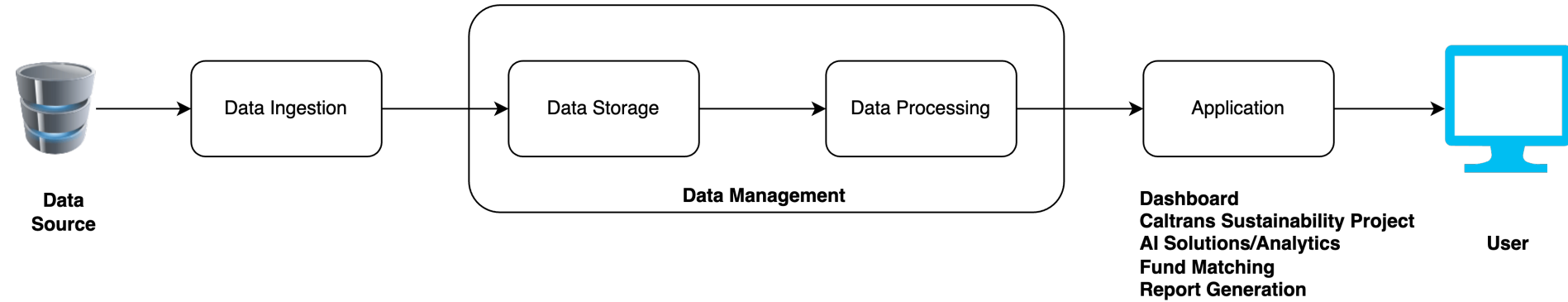


Data Fabric: The Foundation for Data-Driven Solutions

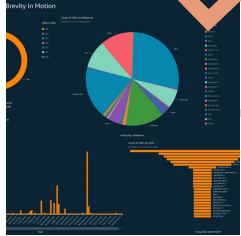


Data Fabric is an architectural approach that connects and integrates all data sources, empowering organizations to efficiently utilize their data across various environments.

Data to Action

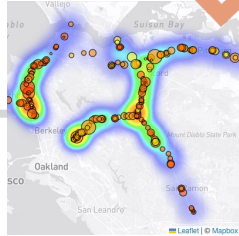


CCTA Multi-Year Data Plan



2022- Phase I

Demonstrated cloud capabilities as a Proof Of Concept.



2023 – Phase II

Analytics dashboard utilizing data available: Inrix planning speed and incident data, PeMS, and Streetlight.



2024 –Phase III

- CCTA Data Repository
- Gen-AI
- Predictive analytics
- Project Central Platform



2025 & after – Phase IV

- Large-scale knowledge-base
- Enhanced AI Features
- Scaled real-time data ingestion and export

CCTA Data Portal: Transportation Insight Reimagined



data.ccta.net

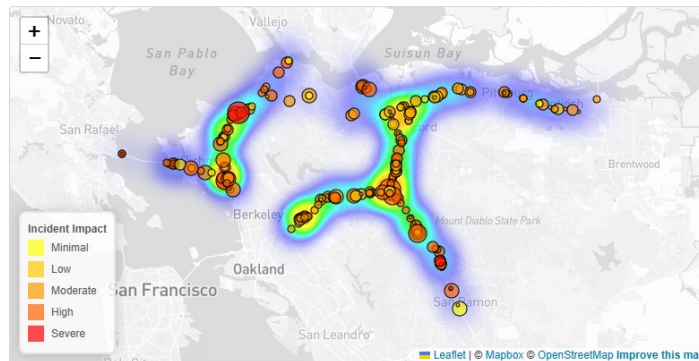
Data and Maps: Traffic Safety and Congestion Management Countywide

CCTA and its regional partner agencies are using real-time traffic data to help manage congestion on county roadways. This website shares some of the key data that informs CCTA's decision-making around transportation challenges. It also provides tools for you to make informed decisions about how and when you travel.

Traffic Safety at CCTA: Countywide Vision Zero

Safe travel for all is the top priority at CCTA. Alongside our local partners, we have developed the framework for [Vision Zero](#), which views transportation-related fatalities as preventable, not inevitable. The data shown here is the basis for our work to ensure the well-being of travelers of all ages and abilities, including people walking and bicycling.

February 2025's incidents vs last quarter's incidents



of Incidents
272 incidents (No change)
compared to January 2025

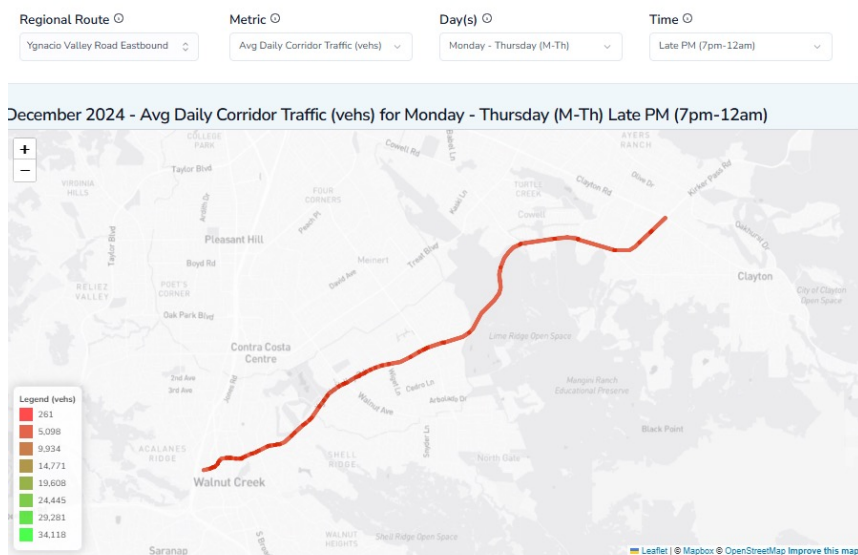
of High/Severe Impact Incidents
119 incidents (No change)
compared to January 2025

of Incidents with Road Closure
6 incidents (No change)
compared to January 2025

[How to read this chart](#)

Delve into the realm of traffic analysis by comparing the incident data from the current month with the previous quarter. The heatmap background represents the previous quarter's incidents. The circles represent last month's incidents with the color being the incident severity and size representing incident duration. Click on any incident (circle) for details.

This comparative exploration allows us to discern patterns, trends, and noteworthy shifts in traffic conditions. This proactive approach ensures that our congestion management strategies evolve and adapt to the dynamic nature of transportation, ultimately resulting in enhanced commuting experiences for all.



Ygnacio Valley Road Eastbound

December 2024

Late PM (7pm-12am) Monday - Thursday (M-Th)

Avg VMT

24,304

Estimated Vehicles Miles Traveled (vmt)

Avg # of Congested hours

71

Estimated Vehicle Hours of Delay (vhd)

Avg Travel Time

11m 18s

Avg Travel Time (mins)

Avg Daily Traffic (volume)

3,454

Estimated Avg daily traffic (vehs)

Avg % of Time Congested

86

% of Time Congested (%)

Avg Speed

35

Avg speed (mph)

Avg Daily Corridor Traffic (vehs)

Monday - Thursday (M-Th) Late PM (7pm-12am)



Data Collection

- Speed
- Volume
- Traffic Congestion
- Road Safety/Collision
- Pedestrian and Bicycle Crash
- Realtime & Historical Data
- Transit

Data Sources

- Inrix: Highway congestion and incidents
- Performance Measurement System (PeMS): highway VMT
- StreetLight: Routes of Regional Significance VMT, speed, delay
- BART: BART ridership
- Caltrans: CCTV
- CCTA Internal Data: Projects, documents, and reports

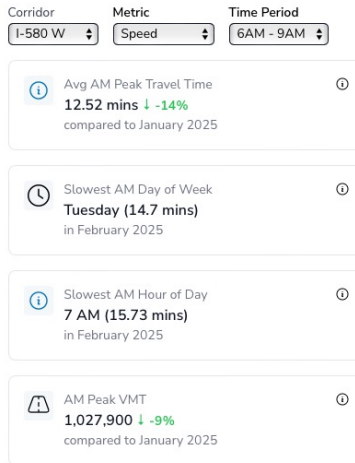
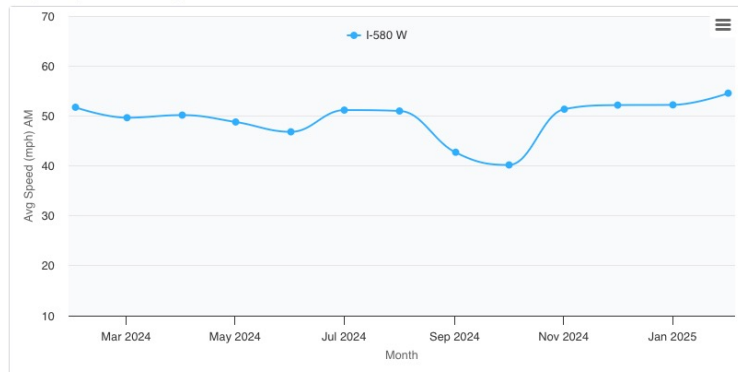
Quick Insight Into February 2025

February 2025 Speed AM



[How to read this map](#)

A yearly look at Speed



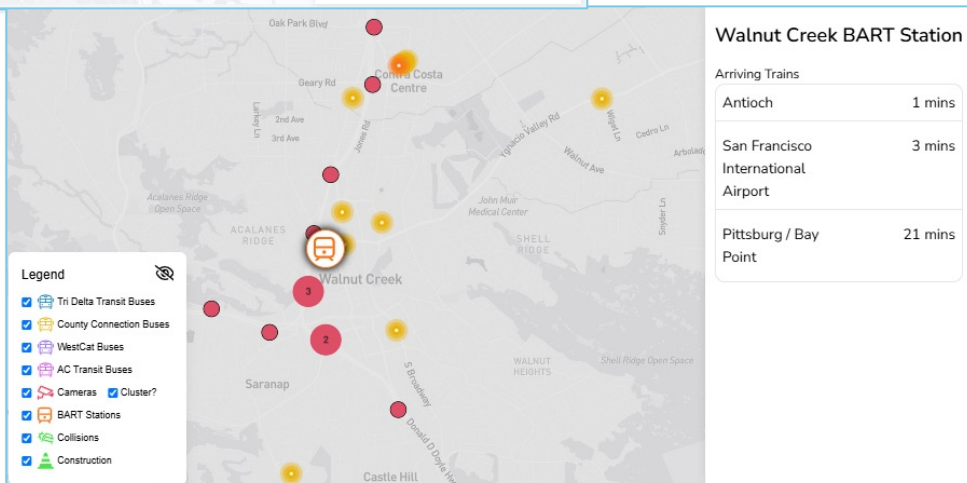
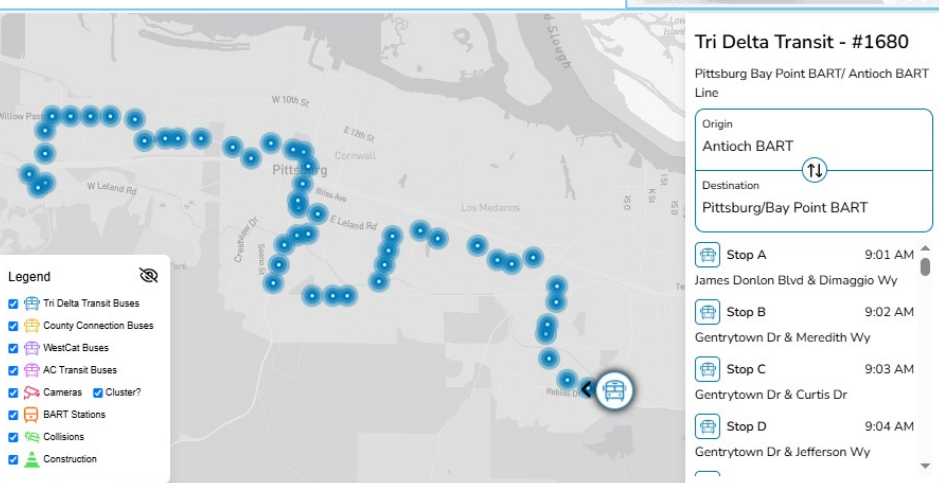
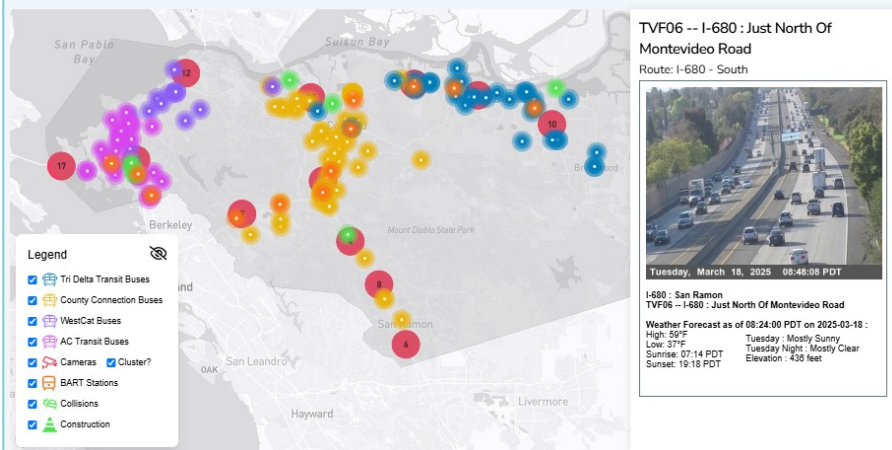
Realtime Data

- 511.org: Real-time bus, BART, highway accidents and construction
- Caltrans

Current Conditions

Our county-wide, real-time map provides up-to-the-minute bus locations, BART arrival times, and updates on construction events and incidents. By clicking a camera icon, you can view live footage from key freeway locations. We hope this resource enhances your travel experience and offers valuable insight into our transportation network.

This data is provided by 511.org and updated every minute.



Ai

- Database
- Knowledge Based



Menu

Ai Assistants

All assistants are limited to [CCTA employees](#) only.

We are excited to offer beta previews of our Ai assistants. Our AI assistants will only look through selected CCTA's database tables and selected documents for relevant information to answer your question.

The system may occasionally encounter errors or inconsistencies as we continue to refine its capabilities. Users should verify critical information and report any issues to help improve accuracy.

Ask knowledge base questions

Ask questions in a chat-like manner against a knowledge base of general documents like:

- "How is CCTA addressing safety across the county?"
- "What benefits would Contra Costa residents expect given our proposed mass transportation improvements?"

Try our knowledge base assistant

Ask questions over our database and knowledge base together

Ask questions related to projects & incidents as well as the CCTA's knowledge base, like:

- "Which projects' address safety?"
- "Which freeway corridor had the most severe incidents last month? What was the average duration of those incidents?"
- "List all the incidents (with a date and description) that required a SigAlert in 2024"
- "How is CCTA addressing safety across the county?"
- "What benefits would Contra Costa residents expect given our proposed mass transportation improvements?"

Try our database & knowledge base assistant

We are in the process of adding more data sets. Routes of Regional Significance (RRS) metrics is next.

Features of CCTA Data Portal

- Centralized CCTA Knowledge Base
- Custom Dashboards & Reports
- AI-Driven Insights
- Real-Time Traffic Monitoring
- Project Impact Analysis
- Grant & Policy Support

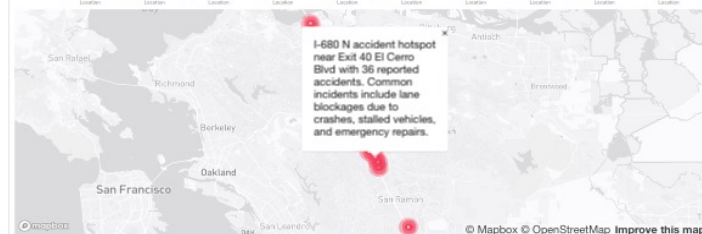
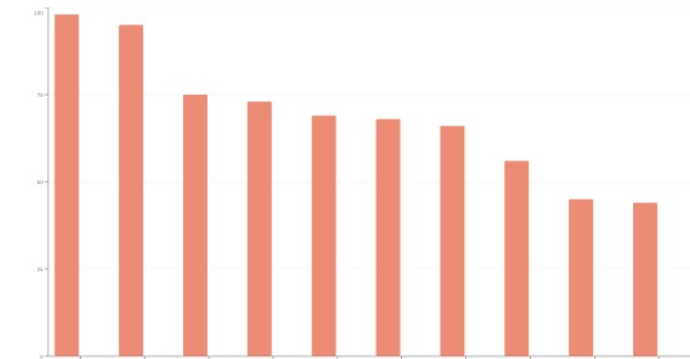
I-680 N Accident Hotspots

Based on the data analysis, the major accident hotspots on I-680 Northbound in Contra Costa County are:

- **Near Exit 48 Treat Blvd (98 accidents)** - This area has the highest concentration of accidents, with frequent lane blockages. Many incidents involve multiple lanes being blocked, particularly lanes #1 and #2.
- **Near Exit 56 Waterfront Rd/Marina Vista Ave (95 accidents)** - The second most dangerous area, with numerous accidents affecting multiple lanes and frequent stalled vehicles.
- **Around CA-242 interchange (75 accidents)** - This area before Exit 50/CA-242 experiences many multi-vehicle crashes and lane blockages.
- **Near CA-24/Ygnacio Valley Rd interchange (73 accidents)** - The area around Exit 46B experiences frequent accidents affecting multiple lanes.
- **Near Exit 38 Sycamore Valley Rd (69 accidents)** - This segment has numerous accidents with multiple lane blockages and stalled vehicles.
- **Around Exit 46B CA-24 (68 accidents)** - Another problematic area near the CA-24 interchange with frequent crashes.
- **Near Stone Valley Rd (66 accidents)** - The area around Exits 42A/42B experiences many accidents affecting multiple lanes.

Other notable hotspots include the area near Exit 53/CA-4 (56 accidents), Exit 39 Diablo Rd (45 accidents), and the Benicia-Martinez Bridge area.

The most common issues at these hotspots include multi-vehicle crashes, stalled vehicles, debris on the road, and lane blockages affecting traffic flow.



Raw SQL Data

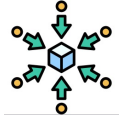
Utilization?

- Network Monitoring
 - Performance Measures
 - Vision Zero
 - Public awareness
 - Analytics and decision making
 - Board of directors
 - Fund allocation and grant applications
 - Project prioritization
 - Monthly and quarterly performance reports
 - Top management quick access to performance metrics
-

Benefits



Faster, Data-Driven Decision Making



Comprehensive & Centralized Insights



Enhanced Efficiency & Accuracy

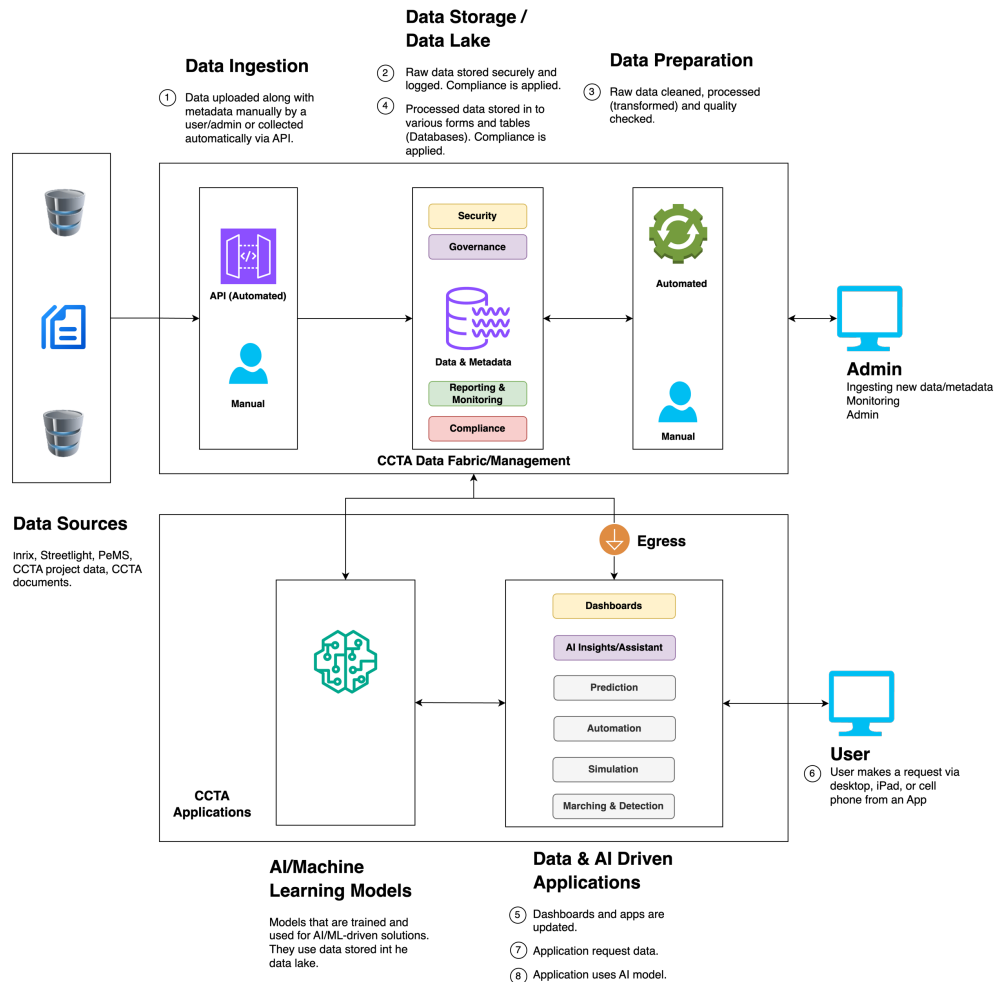


Improved Traffic & Safety Planning



Greater Public Transparency & Engagement





How are we doing it?

Continuous Delivery



**Iterative and
Gradual
Development**



Low Risk



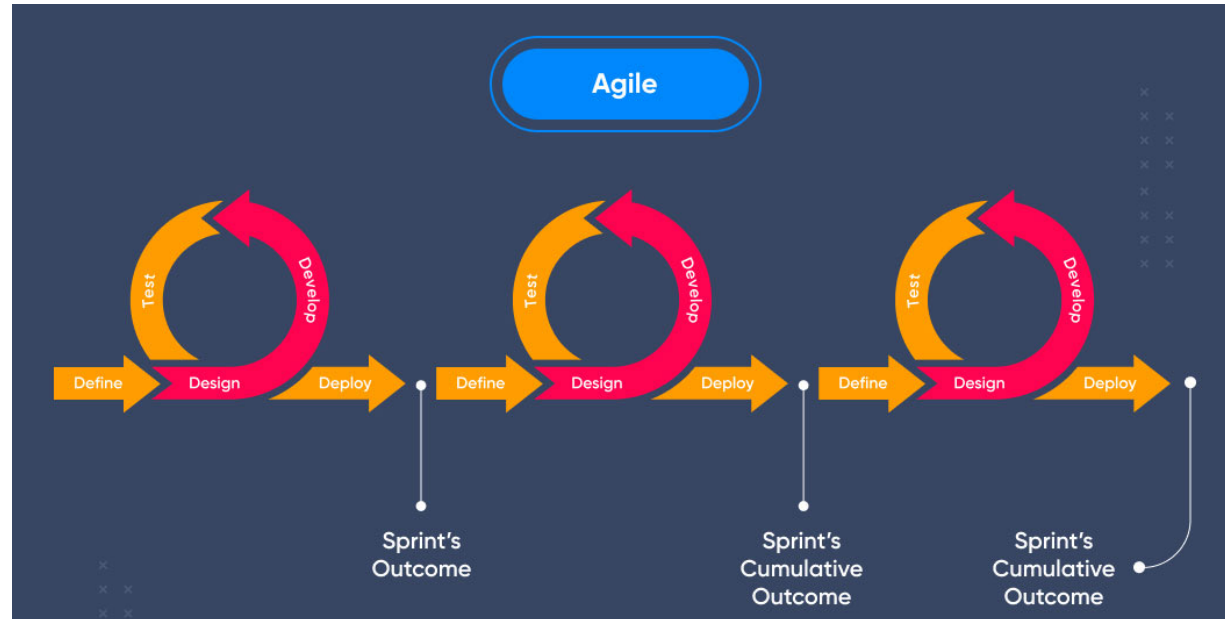
Flexible

**Adaptability to
Uncertainty**

**Fail Fast, Correct
Fast**



**Faster Time-to-
Market**





Enhancing Data Management and Utilization for Decision-Making



CONTRA COSTA
**transportation
authority**

Panel Q&A

Christos Xenophontos

Rhode Island DOT



- All TPM Webinars: <https://www.tpm-portal.com/event-directory/tpm-webinars/>

Save the Dates!



May 21, 2025 – TPM Webinar #26: Case Studies in Telling a Story – How to Leverage Collaboration and Communication in Performance Management

July 16, 2025 – TPM Webinar #27: Evaluating Post-Project Outcomes

October – Date TBD – TPM Webinar #28: Proceedings from the CPBM Annual Meeting and Peer Exchange

November 19, 2025 – TPM Webinar #29: Implication of AV and Shared Mobility to Transportation Performance Management

**Webinars Typically
Begin at 2:00 PM
Eastern Time**

