



Santa Cruz County Regional Transportation Commission's
Interagency Technical Advisory Committee (ITAC)

NOTE-This month's meeting date is one week later than typical meeting date.

AGENDA
Thursday, January 22, 2026
1:30 p.m.

SCCRTC Conference Room
1101 Pacific Ave, Suite 250A
Santa Cruz, CA

The conference room is located in the middle of the 2nd floor.

Alternative In-Person Location

Caltrans District 5 Office: 50 Higuera St, San Luis Obispo, CA

Attendees arriving at this location need to check in at the main building's Front Desk and ask to meet with Paul Guirguis in Planning.

Remote Participation

Remote participation for a) members of the public, b) nonvoting committee members/alternates, or c) voting Committee members unable to attend in person due to a disability that prevents them from attending in person; or due to an emergency or for cause per AB2449 (see end of agenda for more information and inform RTC ITAC staff of justification prior to the meeting).

Zoom:

<https://us02web.zoom.us/j/87482198801?pwd=TDNjZDF3aloyenFRRU5OQmZpKzBKdz09>

Meeting ID: 874 8219 8801; Passcode: 250250

Alternately participants may dial-in to: 1-669-900-9128

NOTICE/NOTICIA:

- **Servicios De Traducción/ Translation Services:** *Si gusta estar presente o participar y necesita información o servicios de traducción al español, por favor llame por lo menos con tres días laborables de anticipo al (831) 460-3218 o email info@sccrtc.org y diríjase a página 3.*
- *See the end of this agenda for details about access for people with disabilities, translation services and other information.*
- **Agendas Online:** *To receive email notification when the meeting agenda packet is posted on our website, please call (831) 460-3200 or visit <https://sccrtc.org/about/esubscriptions/>*

1. Call to Order
2. Roll Call/Introductions
3. Additions, deletions, or other changes to consent and regular agendas

CONSENT AGENDA

Items appearing on the consent agenda are considered to be minor or non-controversial and will be acted upon in one motion if no member of the Committee or public wishes an item be removed and discussed on the regular agenda. Members of the Committee may raise questions, seek clarification or add directions to Consent Agenda items without removing the item from the Consent Agenda as long as no other committee member objects to the change.

4. Approve Minutes of the December 18, 2025 ITAC meeting
5. Receive January 2026 Regional Transportation Commission Meeting Highlights
6. State Budget and Legislative Updates
 - a. Staff Report, Max Friedman

REGULAR AGENDA

7. Status of transportation projects, programs, studies and planning documents
 - a. Verbal updates from ITAC members and RTC staff
8. Work Zone Data Exchange (WZDx) and Connected Work Zones (CWZ) and Construction Coordination
 - a. Staff report, Marshall Ballard
9. Zero Emission Passenger Rail and Trail Project (ZEPRT) Updates
 - a. Staff report, Riley Gerbrandt
10. Monterey Bay Sanctuary Scenic Trail (MBSST) Coastal Rail Trail Southern Segments Project Update
 - a. Staff report, Riley Gerbrandt and Janine Ramirez
11. Oral Communications on Matters Not on the Agenda

Members of the public may address the Committee on any item within the jurisdiction of the Committee that is not already on the agenda. At the discretion of the chair, the amount of time for oral communications may be limited. Committee members will not take action or respond immediately to any Oral Communications presented but may choose to follow up at a later time, either individually, or on a subsequent Committee agenda.

12. Next Meeting and Future Items – The next ITAC meeting is scheduled for 1:30pm **February 19, 2026**. ITAC meetings will be canceled if there are no action items to be brought before the committee.

13. Adjourn

SERVICIOS DE TRADUCCIÓN/ TRANSLATION SERVICES: Si gusta estar presente o participar en juntas de la Comisión Regional de Transporte del condado de Santa Cruz y necesita información o servicios de traducción al español por favor llame por lo menos con tres días laborables de anticipo al (831) 460-3200 para hacer los arreglos necesarios. (Spanish language translation is available on an as needed basis. Please make advance arrangements at least three days in advance by calling (831) 460-3200.)

HOW TO REACH US: Santa Cruz County Regional Transportation Commission
1101 Pacific Avenue, Ste 250; Santa Cruz, CA 95060; phone: (831) 460-3200
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AGENDAS ONLINE: Agendas are posted online (<https://sccrtc.org/meetings/inter-agency/agendas/>) at least 72 hours prior to the meeting. Full agenda packets, including handouts and other documents relating to items on the agenda, are also posted online. To receive email notification when the Committee meeting agenda packets are posted on the RTC website, please fill out the e-subscription form on the website: <https://sccrtc.org/about/esubscriptions/> or call (831) 460-3200.

REMOTE PARTICIPATION –Committee Members

This meeting is being held in accordance with the California Ralph M. Brown Act as amended by AB2449 (2022) and AB2302 (2024) and as interpreted by Attorney General Opinion 23-1002. Under any circumstance that a member is participating remotely: The members must be 1) connected in real time through both audio and visual means, and 2) they must publicly disclose before any action is taken whether any other individuals 18 years of age or older are present in the room at the remote location with the member and the general nature of the member's relationship with that individual.

1. Members of the committee may attend by teleconference if the location from which they are attending is open to the public to participate and the remote meeting location is listed on the agenda under regular Brown Act rules. OR
2. Members of the committee may attend via zoom up to two times per year due to an "emergency" or "for cause" according to requirements set forth in Government Code Section 54953, as long as a quorum of the committee is present in person at one meeting location within the county. The remote location from which the member is participating does not need to be listed on the agenda and does not need to be available to the public.
 - Government Code Section 54953(j) defines "just cause" as:
 - Care of a child, parent, grandparent, grandchild, sibling, spouse, or domestic partner that requires them to participate remotely;
 - a contagious illness that prevents a member from attending in person;
 - a need related to a physical or mental disability as defined by statute; or
 - travel while on official business of the RTC or another state or local agency.
 - Government Code Section 54953(j) defines "emergency circumstances" as a physical or family medical emergency that prevents a member from attending in person. The committee member must provide a general description of the circumstances relating to your need to appear remotely at the given meeting (not exceeding 20 words). Medical condition does not need to be disclosed. The ITAC must take action to approve the request to participate due to an emergency circumstance at the start of their regularly scheduled meeting.

3. *Per Attorney General Opinion 23-1002, members with an Americans with Disabilities Act (ADA) qualifying disability that precludes their in-person attendance may participate remotely as a reasonable accommodation due to their disability.*

REMOTE PARTICIPATION - Public

The public may participate in the meetings of the Regional Transportation Commission (RTC) and its committees in person or remotely via the provided Zoom link. If technical difficulties result in the loss of communication for remote participants, the RTC will work to restore the communication; however, the meeting will continue while efforts are being made to restore communication to the remote participants. Members of the public participating by Zoom are instructed to be on mute during the proceedings and to speak only when public comment is allowed, after requesting and receiving recognition from the Chair.

PARTICIPACIÓN REMOTA – El público

El público puede participar en las juntas de la Commission Regional de Transporte (RTC) en persona o remotamente a través del enlace Zoom proporcionado. Si problemas técnicos resultan en la pérdida de comunicación con quienes participan remotamente, la RTC hará lo posible por restaurar la comunicación. Pero, la junta continuara mientras se hace lo posible por restaurar la comunicación con quienes participan remotamente. A los miembros del público que participan por Zoom se les indica que permanezcan en silencio durante los procedimientos y que hablen solo cuando se permitan comentarios públicos, después de solicitar y recibir el reconocimiento del presidente.

Zoom Meeting Tips: Meeting attendees are strongly encouraged to use the Zoom app for best reception. Prior to the meeting, participants can download the Zoom app at: <https://zoom.us/download>. A link to simplified instruction for the use of the Zoom app is: <https://blog.zoom.us/video-communications-best-practice-guide/>

ACCESSIBILITY/ACCOMMODATIONS FOR PEOPLE WITH DISABILITIES: The Santa Cruz County Regional Transportation Commission does not discriminate on the basis of disability and no person shall, by reason of a disability, be denied the benefits of its services, programs, or activities. This meeting location is an accessible facility. If you wish to attend this meeting and require special assistance in order to participate, please contact RTC staff at 460-3200 (CRS 800/735-2929) at least three working days in advance of this meeting to make arrangements. People with disabilities may request a copy of the agenda in an alternative format. As a courtesy to those persons affected, please attend the meeting smoke and scent-free.

TITLE VI NOTICE: The RTC operates its programs and services without regard to race, color and national origin in accordance with Title VI of the Civil Rights Act. Any person believing to have been aggrieved by the RTC under Title VI may file a complaint with RTC by contacting the RTC at (831) 460-3212 or 1101 Pacific Avenue, Ste 250, Santa Cruz, CA 95060 or online at <https://sccrtc.org/about/title-vi-civil-rights-program/>. A complaint may also be filed directly with the Federal Transit Administration to the Office of Civil Rights, Attention: Title VI Program Coordinator, East Building, 5th Floor-TCR, 1200 New Jersey Ave., SE, Washington, DC 20590.

<https://rtcsc.sharepoint.com/sites/Planning/Shared Documents/ITAC/2026/Jan/ITAC-agenda-Jan2026.docx>



Santa Cruz County Regional Transportation Commission Interagency Technical Advisory Committee (ITAC)

MINUTES

Thursday, December 18, 2025, 1:30 p.m.

In Person: RTC Conference Room, 1101 Pacific Ave, Ste 250A, Santa Cruz

Alternate Location: Caltrans District 5, Planning, San Luis Obispo

Online: Zoom

ITAC Members Present:

Association of Monterey Bay Area Governments	Heather Adamson
California Department of Transportation	Paul Guirguis (online)
County Public Works	Casey Carlson (AB2449)
County Planning	Fernanda Dias-Pini
Ecology Action – Transportation Programs	Matt Miller
Santa Cruz Metropolitan Transit District (METRO)	John Urgo
Santa Cruz Public Works	Matt Starkey
Santa Cruz Planning Proxy	Claire Gallogly
Scotts Valley Public Works	Andrew Lee
Scotts Valley Planning Proxy	Cody Wentworth
Watsonville Public Works	Murray Fontes
Watsonville Community Development	Justin Meek
University of California Santa Cruz (UCSC)	Georgina Arias

RTC Staff Present: Marshall Ballard, Tommy Travers, Rachel Moriconi, Brianna Goodman, Jason Thompson (online)

Others Present: Benjamin Finke (SCMTD SMART 0023), Oxo Slayer (UCSC), Stevan Servin (Bcycle Santa Cruz), Tai Bell (Bcycle Santa Cruz)

Others Online:

Caltrans District 5 - Malinda Gallaher
County of Santa Cruz Planning- Mark Connolly and Jacob Lutz
METRO - Derek Toups

- 1. Call to Order:** Chair Starkey called the meeting to order at 1:31 p.m.
- 2. Introductions** were made.
- 3. AB 2302/AB 2449 Remote Participation Requests:** Casey Carlson attended remotely due to "just cause". Paul Guirguis attended remotely via regular Brown Act noticing.
- 4. Additions, deletions, or other changes to consent and regular agendas:** Item #14 regarding Work Zone Data Exchange and Connected Work Zones was tabled to the next ITAC meeting. Slides for Items 10, 11,

and 12 were posted online.

CONSENT AGENDA

ITAC members unanimously approved a motion (Gallogly/Meek) approving the consent agenda with members Arias, Carlson, Dias-Pini, Fontes, Gallogly, Guirguis, Miller, Starkey, Adamson, Meek voting "aye". Members from Scotts Valley and METRO were not yet present at the time of the vote.

- 5. Approved amended Minutes of the October 16, 2025 ITAC meeting**
- 6. Received Notices about State and Federal Programs**
- 7. Received November and December 2025 Regional Transportation Commission Meeting Highlights, including list of projects approved for Consolidated Grants**

REGULAR AGENDA

8. Status of transportation projects, programs, studies and planning documents

ITAC members provided brief updates on transportation projects in development, including grant applications and upcoming public outreach efforts.

- SCMTD: John Urgo noted that in 2022 METRO set ambitious goals to double ridership in 5 years, build affordable housing, and transition to zero-emission fleet. METRO has seen 43% ridership increase; built housing at Pacific Station, submitted grants for housing development at the Watsonville Transit Center; and purchased new hydrogen fuel cell buses. He reported the board is evaluating option to address noise from the temporary hydrogen fueling station and a tax measure in 2026. They are hiring a design consultant for Rapid Corridors project, as well as hiring a new planner and intern.
- UCSC: Georgina Arias reported several new buses are being purchased. Oxo Slayer reported that several housing projects are underway, including on Delaware, Family Student Housing, and student housing off Heller.
- County of Santa Cruz: Casey Carlson reported that Jeff de los Santos is now leading the traffic section for public works. He also reported that the Soquel Multimodal phase one is nearing completion, with phase 2 starting design soon; Green Valley Path

finishing up; major resurfacing projects at Murrays Crossing and Rogge Lane, Seacliff and Swaton Road; upcoming multimodal projects on Soquel San Jose Road and resurfacing on Intercounty Routes including Lee Road, Beach, Trout Gulch and others planned for 2026. County staff is also focused on storm damage and bridge program projects.

- City of Santa Cruz: Claire Gallogly and Matt Starkey reported on Murray Street Bridge construction, with traffic management changes in February; Pacific Ave/Wharf/Beach St Roundabout bike lane realignment; Swanton-Delaware multi-use path (ATP-funded); Bay Corridor complete streets design at 60%; Active Transportation Plan open house on January 28.
- Ecology Action: Matt Miller reported that Ecology Action continues to implement education, encouragement, and planning projects. Through their Santa Cruz Bikeway pilot, an 11-mile low-stress route, bicycle trips shown in Strava on the routes increased by 43%, with some segments seeing 100% increase.
- Scotts Valley: Andrew Lee and Cody Wentworth reported that design work continues for the Scotts Valley Drive multimodal project; storm damage repairs on Glenwood Drive and street resurfacing projects are wrapping up.
- Watsonville: Murray Fontes reported on the Bridge Street rehabilitation and citywide roadway rehabilitation and slurry seal projects and the Harkins Slough/Highway 1 bike/pedestrian bridge. Construction on Lee Rd, West Beach, Clifford Drive, and Pennsylvania Ave path is scheduled for Summer 2026. Freedom Boulevard improvements, Lee Road Trail Phase 1 from Pajaro Valley High is being implemented in partnership with Land Trust. City staff appreciated Brianna Goodman's work on a planning grant application to address truck impacts on the community. John Urgo and Watsonville staff will meet to discuss Freedom Boulevard design and project coordination. Justin Meek reported that planning had a collaborative meeting with Ecology Action on road diets and is working to leverage SHOPP funds. Vision Zero Corridor planning, Freedom Boulevard traffic calming, closing one of the airport runways, and new metrics for the General Plan are other planning efforts underway.
- RTC: Rachel Moriconi noted highlights from recent RTC meetings included on the consent agenda, meetings on the North Coast TDM

plan, and the Capitola Avenue bridge over Highway 1 planned reopening in January.

- Caltrans: Paul Guirguis reported that Caltrans received 168 applications for planning grants, with five applications from agencies in Santa Cruz County. He also reported that the draft 2026 State Highway Operation and Protection Program (SHOPP) delays several projects due to updated revenue projections, though the Mission Street/Highway 1 and Highway 129 capital maintenance projects remains in FY26/27.

9. Rural Highways Safety Plan: Milestone 3 - Draft Safety Enhancement Concepts

Brianna Goodman presented draft safety enhancement concepts for the Rural Highways Safety Plan. The project team analyzed crash data to develop a series of common crash profiles, compiled a range of conflict management countermeasure options, and developed a list of priority project locations that demonstrate typical existing conditions for identified crash provides. She requested input from the ITAC on the draft safety enhancement concepts before they are finalized. She noted that she has been working closely with Caltrans, METRO and staff from each agency with rural sections of highway in their jurisdictions. The draft report will be released for public review and comment in early 2026, and integrate feedback received from the public, at stakeholder and other meetings.

City of Santa Cruz Staff suggested modifications for the Dimio Lane/ Santa Cruz Landfill intersection on State Route 1, especially to address large trucks. **ITAC members should send any comments to Brianna by early January and review the draft plan when it is released for public comment in early 2026.**

10. Preparing for Storm Damage Season

Malinda Gallaher, Caltrans District 5 Local Assistance provided an overview of Federal Highway Administration Emergency Relief (FHWA-ER) program, eligibility, and application process. Key points included filing paperwork as soon as possible; taking photos of damaged areas; that minimum disaster thresholds apply to each storm event - not each facility; eligible facilities include all roadway elements, bike paths, pedestrian facilities, and stream channel work; tracking costs closely and invoicing every 6 months. Repair options include Emergency Opening (temporary) and Permanent Restoration.

Casey Carlson shared lessons learned from the CZU fire and storm events, including taking videos of damage sites.

11. Draft 2050 Regional Transportation Plan (RTP) for Santa Cruz County

RTC Planner Tommy Travers provided an overview of the Draft 2050 Regional Transportation Plan (RTP). The plan identifies \$6.2 billion in potential funding for transportation operations, maintenance, and new projects through 2050, but nearly \$18 billion in projects.

By January 30, 2026, ITAC members should review the project lists for accuracy, including project cost estimates; as well as funding estimates. Committee members discussed some of the financial assumptions, including the assumption that the gas tax would be replaced by some of funding mechanism in the future.

12. AMBAG Draft 2050 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) and Draft Environmental Impact Report

Heather Adamson, AMBAG, provided an overview of the Draft 2050 Metropolitan Transportation Plan (MTP) and Draft Environmental Impact Report (DEIR). The MTP includes information from the RTPs for Santa Cruz, Monterey and San Benito Counties. The MTP includes transportation and land use recommendations which would reduce greenhouse gas emissions in the region 8% by 2035. Several public workshops are scheduled to provide an opportunity to comment on the plan and DEIR. ITAC members should review the land use/place type maps (Appendix I) and major transit stop definition (Appendix G).

13. Draft Legislative Program

Rachel Moriconi solicited input on the RTC's draft 2026 Legislative Program. She reviewed focus areas, updates from 2025 and requested that ITAC members send any comments or suggested edits to Max Friedman by December 23.

ITAC members discussed e-bike regulation efforts, advocacy for reinstating statewide e-bike incentive program, increasing Active Transportation Program funding by at least \$200 million, support for automated speed enforcement expansion, and the transformative active transportation Mineta Transportation Institute recommendations.

14. Work Zone Data Exchange and Connected Work Zones - Tabled

15. Oral Communications on Matters Not on the Agenda: None.

16. Next Meeting and Future Items:

The next ITAC meeting is scheduled for 1:30 p.m. on **January 22, 2026**. **This is one week later than the regular ITAC schedule.** ITAC meetings will be canceled if there are no action items to be brought before the committee. Future agenda items:

- Zero Emission Passenger Rail and Trail Project (ZEPRT) Updates
- Planning for Climate Resilience of the Rail Corridor
- Construction Coordination
- Work Zone Data Exchange and Connected Work Zones (tabled from December meeting)

The meeting adjourned at 3:56 p.m.

Minutes respectfully submitted by Rachel Moriconi, Senior Transportation Planner

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Santa Cruz County Regional Transportation Commission
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CONTACT: Shannon Munz, Communications Specialist (smunz@sccrtc.org)

Santa Cruz County Regional Transportation Commission (RTC)

January 15, 2026 Meeting Highlights

Contract Amendment with HDR Engineering for Climate Resilience Planning on the Santa Cruz Branch Rail Line Right-of-Way

The Commission approved a contract amendment with HDR Engineering to add tasks to a previously approved contract that will analyze impacts of climate hazards on the Santa Cruz Branch Rail Line (SCBRL) at four locations – Capitola Bluffs, La Selva/Manresa Bluffs, Harkins Slough Rail Crossing, and the Pajaro River Rail Bridge. These locations were identified as highly vulnerable through a Climate Analysis Vulnerability Assessment planning effort that was completed. The approved amendment expanded the scope to include climate adaptation concepts for an Interim Trail Configuration in addition to the previously approved work to develop climate adaptation concepts for a Zero Emission Passenger Rail and Trail Project.

Presentation on the Corridor ID Program

The Commission received a presentation from Rob Cunningham, Regional Rail Coordinator for Caltrans Division of Rail on the Corridor Identification and Development (CID) Program. The Federal Railroad Administration (FRA) initiated the CID Program to provide a comprehensive intercity passenger rail planning and development process that will help guide intercity passenger rail development throughout the country and create a pipeline of intercity passenger rail projects ready for implementation. Caltrans is the sponsor of five corridors in the program, including the Central Coast Corridor which includes the SCBRL. All projects in the program go through a uniform planning process that will make them eligible for federal and state construction grants. Participation in the program does not mean project funding is guaranteed, but it would make it more competitive for funding.

There are three steps in the CID Program process. Step 1: Scoping the Service Development Plan includes the development of the scope, schedule and budget. This step has been completed for the SCBRL. Step 2: Preparing the Service Development Plan includes a Capital Project Inventory as part of the Phased implementation Plan. This step is expected to start in early/mid 2026 and finish in 2029-2030 and is being funded by the FRA and Caltrans. Step 3: NEPA/Preliminary Engineering will be done after Step 2 subject to funding availability and readiness criteria. Funding for this step will be 80% covered by the FRA, and Caltrans can assist the RTC in identifying state and local funding opportunities for the other 20%.

Cunningham stated that temporary track removal on the SCBRL would not result in Caltrans taking action to remove the SCBRL from the CID Program as long as the RTC is committed to building and operating intercity rail in the corridor.

Public Hearing: Draft 2050 Santa Cruz County Regional Transportation Plan

The Commission held a public hearing and received public input on the Draft 2050 Regional Transportation Plan (RTP). The RTP identifies transportation needs and priorities in Santa Cruz County over the next 25 years. It sets goals and policies for the transportation system that includes an emphasis on safety, climate resiliency, equity, system efficiency and preservation, and a reduction in vehicle miles traveled. The RTP includes the list of transportation needs in Santa Cruz County based on input from local jurisdictions, partner agencies and members of the public, and estimates the amount of funding that will be available for transportation projects in Santa Cruz County over the next 25 years. The transportation needs identified in the RTP far exceed the available projected funding and additional funding sources will be needed to implement some projects. The plan is an essential first step in securing funding from federal, state, and local sources. The Draft 2050 RTP is available for review at www.sccrtc.org/2050rtp. Comments can be submitted through Jan. 30, 2026, by email to info@sccrtc.org.

RTC to Become Common Carrier for Portion of the Santa Cruz Branch Rail Line to Advance Coastal Rail Trail Projects and Protect Community Interests

The Commission voted in Closed session to issue a notice of termination of the Administration, Coordination, and License Agreement with Progressive Rail Incorporated, which currently serves as the common carrier on the Santa Cruz Branch Rail Line. This decision marks a necessary step in the development of transportation solutions along the RTC-owned branch line, including the Coastal Rail Trail in the near-term and passenger rail in the long-term. This action also preserves the existing freight and recreational rail uses along the branch line, while allowing Coastal Rail Trail projects to be implemented along non-operational sections of the line. The RTC remains fully committed to continuing freight service for the three existing freight customers in Watsonville. Read more [here](#).

Upcoming RTC and Committee Meetings

[Regional Transportation Commission Meeting](#)

Thursday, February 5, 2026, 9:00 a.m.

[Interagency Technical Advisory Committee](#)

Thursday, January 22, 2026, 1:30 p.m.

[Bicycle Advisory Committee](#)

Monday, February 9, 2026, 5:30 p.m.

[Elderly & Disabled Transportation Advisory Committee](#)

Tuesday, February 10, 2026, 1:30 p.m.

[Budget, Administration & Personnel Committee](#)

Thursday, February 12, 2026, 1:30 p.m.

RTC and committee meetings are held in person. Non-voting members of the Commission and its committees, as well as members of the public and staff, will have the option to participate in person or remotely, provided equipment is available at the meeting location to allow remote participation. If there are technical difficulties during a meeting that prevent remote participation, the

meeting will continue. Please check the RTC website [<https://sccrtc.org/meetings/calendar/>] or call 460-3200 to confirm meeting and video conference information for future meetings. Agendas are posted to the website at least 3 days before the meeting and will also include attendance information. Meetings may be canceled if there are no action items to be considered by the committee.

The RTC is committed to its compliance with the Americans with Disabilities Act (ADA). Please contact the RTC at least 3 days in advance of a meeting if special accommodations are needed. If any document, webpage, meeting, or recording is inaccessible to you, kindly notify us at info@sccrtc.org or by calling 831-460-3200.

Public input on transportation issues is welcomed and encouraged. For more information, visit the SCCRTC website at www.sccrtc.org or call 460-3200. Some Regional Transportation Commission meetings are televised countywide by Community TV of Santa Cruz. Consult www.communitytv.org or call 831-425-8848 for schedule and station Information.

TO: Interagency Technical Advisory Committee (ITAC)

FROM: Max Friedman, Transportation Planner

RE: Governor's 2026-27 Proposed State Budget and Legislative Updates

RECOMMENDATIONS

Staff recommends that the Interagency Technical Advisory Committee (ITAC) receive updates on the Governor's 2026-27 Proposed Budget and other legislative activities that RTC staff are monitoring.

BACKGROUND

The RTC monitors state and federal legislative and administrative actions that could impact transportation funding or project implementation in Santa Cruz County. Legislative priorities are identified in the RTC's annual [Legislative Platform](#).

DISCUSSION

Staff has been monitoring the evolving legislative and budgetary landscape and potential impacts on transportation operations and projects in Santa Cruz County. On Friday, January 9th, Governor Newsom released his Administration's 2026-27 Proposed Budget.

State Budget Outlook

Due to an unexpected increase in state revenues, the Governor's budget is currently presented as roughly balanced with an expected \$3 billion dollar deficit. In November, it was anticipated that the State faced an \$18 billion dollar deficit according to Legislative Analyst Office projections. However, the recent Governor's budget estimates a much higher revenue estimate which improves the budget condition to the point of it being roughly balanced. Additionally, the Department of Finance reported a modest surplus of \$363 million. While the Governor's 2026-27 Proposed Budget does reflect continued growth, it also predicts several risk factors that could have negative impacts on California's economy and revenues, including stock market volatility and reemerging inflation.

At \$349 billion, the Governor's 2026-27 Proposed Budget includes a proposed

\$248 billion General Fund, funded by \$142 billion in personal income tax, \$35 billion in sales and use tax, and \$43.5 billion in corporation tax revenues. The proposal also assumes a budget reserve balance of roughly \$60 billion at the end of 2026-27. The Administration is not proposing either significant increases or decreases in spending given its “modest” projected shortfall of \$2.9 billion, but cautions that additional decisions may need to be made when the revenue picture is clearer around the time of the May Revision. The Administration projects a deficit of roughly \$22 billion in 2027-28. In May, the Governor will release a “May Revise” budget proposal for the upcoming fiscal year, then Legislature has until June 15 to approve and the Governor until July to approve the budget.

State Budget Outlook

Staff has been monitoring the evolving legislative and budgetary landscape and potential impacts on transportation operations and projects in Santa Cruz County. The Governor released his proposed state budget for 2026-27 on January 9, 2026.

Due to stronger-than-expected state revenues, driven in part by continued growth in the AI sector, the Governor’s 2026-27 budget proposal is largely balanced, with a projected deficit of about \$3 billion. This is a significant improvement over earlier estimates that projected an \$18 billion shortfall. While the budget reflects ongoing economic growth, it also notes potential risks ahead, including stock market volatility and rising inflation. The proposed \$349 billion budget includes \$248 billion from the General Fund and assumes roughly \$60 billion in reserves by the end of the fiscal year. While the shortfall is relatively small, the Governor's budget does not propose significant spending changes and warns that downward adjustments may be needed as revenue estimates become clearer in the spring.

Transportation: The Governor’s 2026-27 Proposed Budget maintains the transportation funding established in the previous budget at approximately \$18.6 billion total. The Governor's budget also includes a four-year spending plan for the newly re-branded Cap-and-Invest program, including the three-tiered spending plan outlined in 2025’s Assembly Bill 1207 and Senate Bill 840, prioritizing funds for the State Responsibility Area Backfill, the High-Speed Rail Authority and the CAL FIRE General Fund shift over other programs such as Healthy and Resilient Forests and Safe Drinking Water. The Governor's proposals for transportation include:

- \$7.6 billion for high-priority transit and rail infrastructure projects. A portion of these funds can also be used to support transit operations.
- \$4.2 billion in Prop 1A funding for High-Speed Rail, with long-term funding strategy for the High-Speed Rail project including \$5 billion from the Greenhouse Gas Reduction Fund (GGRF)/Cap-and-Invest over the next five

years; the High-Speed Rail Authority was provided \$1 billion per year through 2045 from the GGRF with the passage of SB 840.

- \$1.2 billion for projects that improve goods movement on rail and roadways at port terminals
- \$1.1 billion for Active Transportation Program projects
- \$410 million for the Zero Emission Transit Capital Program
- \$150 million for grade separation projects
- \$125 million for Transit Passes via the GGRF/Cap-and-Invest program
- \$200 million one-time to launch a new zero-emission vehicle (ZEV) incentive program meant to backfill lost federal clean vehicle rebates (previously up to \$7,500 per vehicle).

While the budget includes EV incentives and preserves major transit spending, it does not expand funding for the Active Transportation Program, does not fully maintain funds for the zero-emission transit capital program, and does not include funding for e-bike incentives.

Legislation

The state's 2026 legislative session will end on August 31, 2026. The Governor has until September 30, 2026 to sign or veto bills. The State Assembly and State Senate have until May 29, 2026, to pass bills out of their "house of origin" and pass them onto their counterparts, respectively. A few of the bills that staff has been tracking this year that could impact local transportation projects or programs or special districts, like the RTC, are in Attachment 1.

SUMMARY

The RTC monitors and engages in discussions surrounding legislative and state budget proposals which may impact or benefit regional transportation projects and planning.

This report provides a summary of the Governor's Proposed Budget and select 2026 legislative activities. Staff will continue to gather information on bills that are signed by the Governor, and if any RTC action is necessary, staff will return with recommendations.

Attachment 1. RTC Legislation Matrix *(to be distributed as a handout)*

Includes excerpts from Rural County Representatives of California (RCRC).

SP:Planning/Shared Documents/ITAC/2026/Jan/StateBudgetLegUpdate-Jan2026-SR.docx

TO: Interagency Technical Advisory Committee (ITAC)

FROM: Marshall Ballard, Transportation Planner

REGARDING: Work Zone Data Exchange (WZDx) and Connected Work Zones (CWZ)

RECOMMENDATIONS

Staff recommends that the Interagency Technical Advisory Committee (ITAC) review the Work Zone Data Exchange (WZDx) and the Connected Work Zones (CWZ). It would be applicable for sharing construction zone information to improve work zone safety and enhance both jurisdictional and commuter awareness of construction zones. Request MTC to present lessons learned and success stories from their implementation of their WZDx system.

BACKGROUND

In response to the large amount of recent local and regional construction in the, we have received feedback about improving the coordination of traffic control. In regards to construction FHWA has developed the Work Zone Data Exchange (WZDx) <https://www.transportation.gov/av/data/wzdx> specification in response to the recognition that roadway work-zone events (the “when, where and how” of deployment) were not being shared in a harmonized way across jurisdictions, making it difficult for commuters, third-party users — including navigation systems, original equipment manufacturers (OEMs) and connected vehicle systems to integrate work-zone data.

The WZDx Specification enables infrastructure owners and operators (IOOs) to publish work-zone data feeds with a common schema so that downstream users can more easily ingest and use the data. The specification has evolved through multiple versions (v1.1, v2.0, v3.0, v4.0, v4.2) and is transitioning into a formal standard under the Institute of Transportation Engineers (ITE) in collaboration with American Association of State Highway and Transportation Officials (AASHTO) and National Electrical Manufacturers Association (NEMA). This new standard is named Connected Work Zones (CWZ) <https://www.ite.org/technical-resources/standards/cwz/>.

The Metropolitan Transportation Commission (MTC) has implemented the WZDx with a user interface for Bay Area jurisdictions to use for loading their construction projects. MTC has shared the 511 SF Bay WXDx Stakeholder Guide for your review.

DISCUSSION

- Santa Cruz County jurisdictions and mobility providers would benefit from a standard approach for sharing all roadway construction with all jurisdictions and mobility partners.
- With improved data about construction zones, signal coordination for detours can be optimized, especially when detours combine with multiple system operators.
- Connected work zones can assist in creating a safer work zone for our construction crews.
- Improved information sharing with the public will reduce commute stress.
- Santa Cruz County jurisdictions and mobility providers would benefit from learning from MTC and their implementation of the WZDx.

For technical advisory purposes, the key issues to consider include:

- Data quality and timeliness: how frequently updates are published, how accurate the location/time attributes are, how well the data reflects real-world dynamic conditions.
- Coverage and completeness: which agencies/jurisdictions have published feeds, and where gaps remain (especially local roads vs. state highways).
- Versioning and backward compatibility: since v4.0 broke backward compatibility to allow for device and non-work-zone restrictions feeds.
- Use-case readiness: How directly can ADS vendors or mapping/navigation providers leverage the feeds? Are there adoption hurdles (governance, feed maintenance, liability, formats, costs)?
- Institutional coordination: The early adopter guidance and “institutional buy-in” documentation indicate that beyond the technical schema, agencies need organizational commitment, resource allocation, data governance and stakeholder agreements.
- Coordinating with MTC to join their WZDx program and user interface for data creation and maintenance. Review **Appendix A**, MTC WZDx Stakeholder Tool Guide and **Appendix B** CalITS Session5 WZDX.

SUMMARY

The WZDx initiative provides a well-defined pathway towards harmonizing work-zone data across agencies and jurisdictions. It supports improved safety and operational awareness for construction crews, and both human drivers and connected vehicle driving systems by enabling consistent, third-party-usable feeds of work-zone activity. The ITAC should consider learning about the WZDx and its benefits of implementation throughout Santa Cruz County. Adoption of the WZDx standard positions Santa Cruz County to support improving traveler information, enhance safety and mobility through better visibility of work-zone operations, and prepare for emerging vehicle technologies.

Appendix A



WZDX STAKEHOLDER GUIDE

Prepared by TransSIGHT

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Introduction

1.1 Welcome

This guide will walk you through testing of the Work Zone Data Exchange (WZDx) data collection tool, website administration, and day-to-day operational functions.

The Work Zone Data Exchange (WZDx) Specification¹ enables local jurisdictions and agencies to make standardized work zone data available for third-party use. The intent is to make travel on public roads safer and more efficient through ubiquitous access to work zone data. This data can be leveraged by automated driving systems (ADS) and help human drivers navigate safely.

Please use the table of contents above to skip to any specific section of the website.

1.2 Enhancements Under Consideration

Stakeholders have proposed a variety of data collection tool functions based on their needs. Due to budget constraints, the first deployment of the data collection tool does not include all proposed functions. Future deployments will include additional functions based on stakeholder needs. Data collection tool enhancements under consideration, based on feedback received to date, are listed below:

- Create geographic boundaries representing council district, board of supervisor districts, maintenance yard limits, etc.
- Turn on/off traffic congestions maps.
- Relate detours to corresponding events so that both can be closed at the same time.
- Upload data in bulk through prescribed spreadsheet file.
- Edit data in private mode until it is approved for publishing.
- Allow contractors to create events.
- Add information relating to expected police presence at event.
- Include public utilities as users.
- Add error if a new event request overlaps or is duplicative with an existing closure.
- Add more comprehensive notification options.

General Information

2.1 Browser Requirements

The WZDx website can be accessed at <https://stg.wzdx.511.org/> on the following web browsers:

- Chrome
- Safari
- Firefox
- Microsoft Edge

¹ <https://github.com/usdot-jpo-ode/wzdx>

2.2 User Roles

The WZDx website is a role-based access tool. The website supports five different role types. These five roles are: System Admin, Jurisdiction Admin, Jurisdiction Staff, Contractor, and Temp User. Each role has unique abilities, to create, edit and view data. An overview of each role's ability is listed below.

	Create Jurisdiction	Manage Jurisdiction	Configure Divisions	Create New Users	Create Temp User	Create Event	Manage Event	Run Reports
System Admin	X	X		X	X			
Jurisdiction Admin		X	X	X	X	X	X	X
Jurisdiction Staff					X	X	X	X
Contractor					X		X	
Temp User							X	

ROLE ASSIGNMENT DIAGRAM

2.2.1 System Admin Role

This role can onboard new Jurisdictions and create new users. MTC or users authorized by MTC will be assigned this role.

2.2.2 Jurisdiction Admin Role

The Jurisdiction admin role is to configure divisions in their jurisdiction, add new users to their jurisdiction and divisions, create and manage events, and run reports.

2.2.3 Jurisdiction Staff Role

The Jurisdiction staff role can create and manage events and run reports inside their jurisdiction and assigned division.

2.2.4 Contractor Role

Contractors have restricted access to the events. They will only be able to view and edit events that are assigned to them. Contractors can be assigned events from multiple jurisdictions. Contractors are not currently able to create new events.

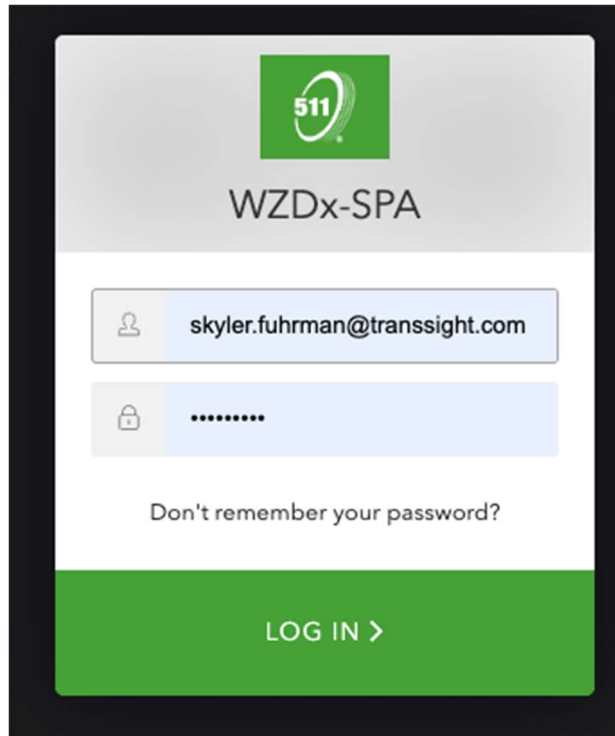
2.2.5 Temp User Role

This role does not require a username and password to login. The temp user is granted temporary access to events that have been assigned to them.

Site Navigation

3.1 Login

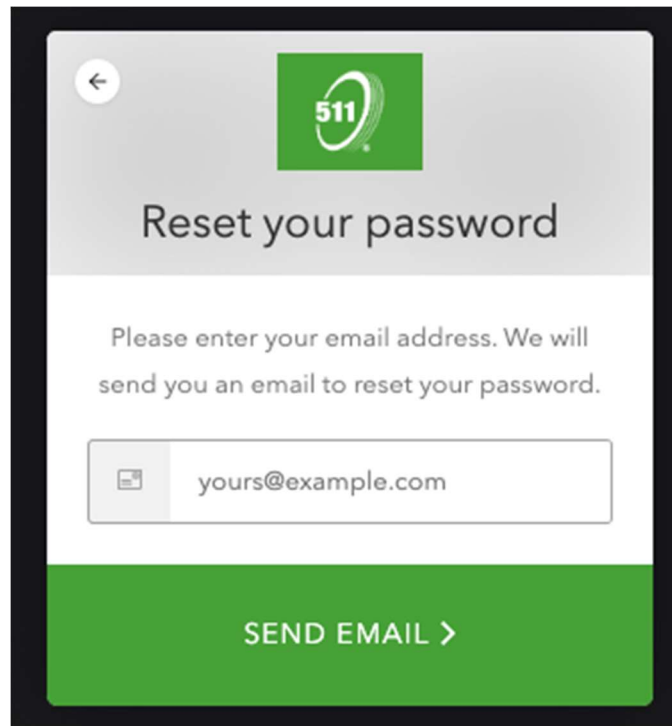
From the WZDx login page, please enter a username/email address and password. Click the LOG IN button to access the website.



The WZDx Login window

3.1.1 Password Reset

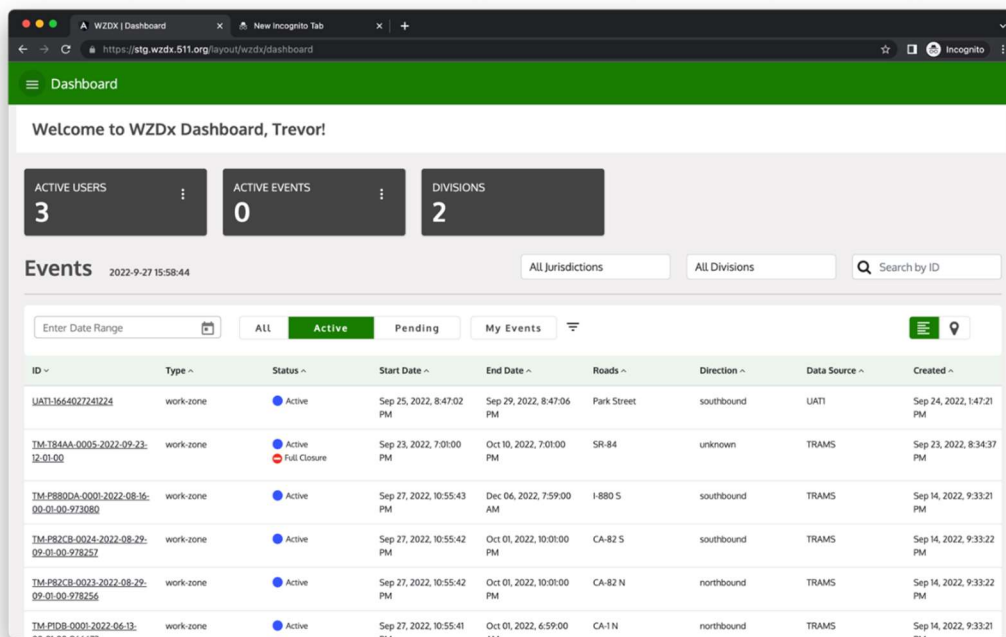
Users can reset their password by clicking the “Don't remember your password?” from the login page. From there, users provide their email address. After clicking Send Email, a password reset is initiated. Users will check their emails to complete the remaining steps.



Reset Password Prompt

3.2 Homepage

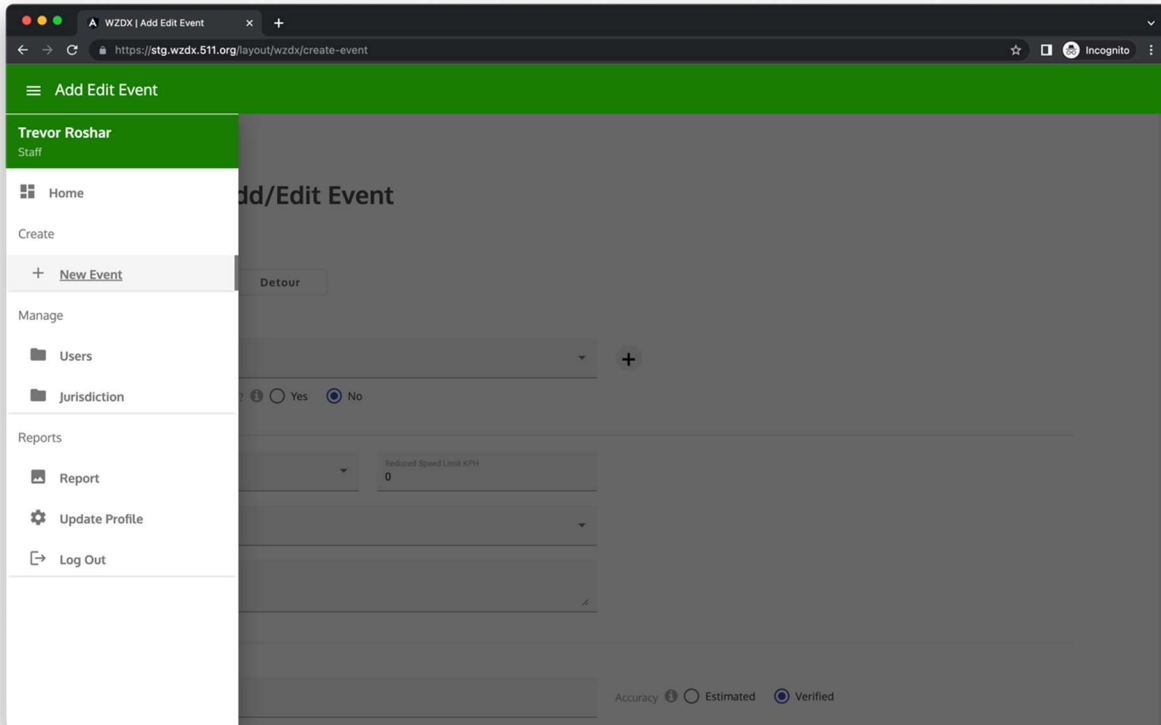
After a successful login, users are taken to the WZDx Dashboard. The homepage has quick access dashboard information along with the events table.



WZDx Dashboard Homepage

3.3 Dashboard Menu

The dashboard menu allows users to navigate to other pages, if available. This menu can be found in the top left corner of the website by clicking the three parallel lines.



Dashboard Menu

3.4 Filtering

Tables on the website can be filtered to easily locate data. Events can be filtered by date range, event type, or originating jurisdiction and division.

3.5 Update Profile

From the dashboard menu, the Profile section allows each user to update their personal information or manually initiate a password change.

Update Profile

3.6 Logout

Selecting logout from the dashboard menu allows users to log out of their account.

Dashboard Menu

Roles and Functions

Each role has unique functions, many of them shared with other roles. This guide will start with the temp user role, which has the lowest level functions, and work up to the system admin, which has the highest level functions. As the number of functions increase in role hierarchy, this bottom-up approach showcases shared functions between roles.

4.1 Temp User

ROLE FUNCTIONS

- **MANAGE EVENTS**

The temp user role can only edit events that have been assigned to them. There is no saved username and login for this role. Instead, all other roles can create this user and provide a login via text message.

4.1.1 Manage Events

Under Manage Events, users can view and edit events based on their role and access. Events can also be completed, canceled and assigned to contractor and temporary users.

Events are found on the homepage for each user. From here, users can view information about the events in the table or click the three dots in the last column of the table to access functions that can be performed on an event.

Dashboard MANAGE + CREATE EVENT

Welcome to WZDx Dashboard, TSTest!

ACTIVE USERS: 6

ACTIVE EVENTS: 1

DIVISIONS: 0

Events 2022-10-5 11:2:10

All Jurisdictions All Divisions

Enter Date Range [Calendar Icon]

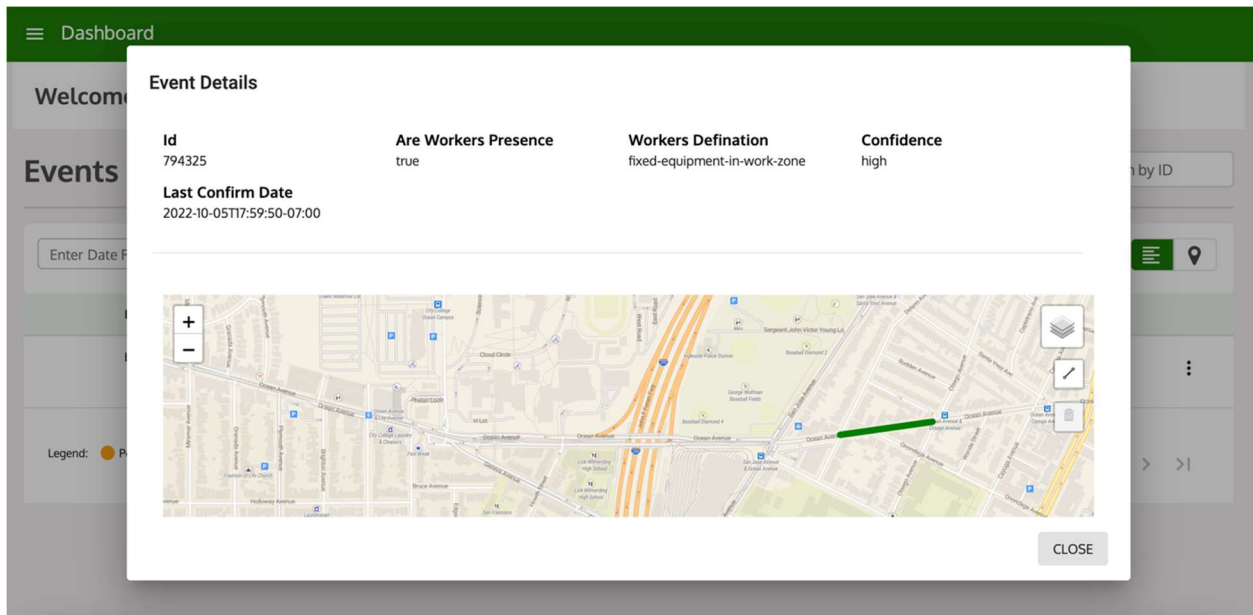
ALL Active Pending My Events

Direction ^	Data Source ^	Created ^	Updated ^	User ^	Jurisdiction ^	Divis
both	TSTestDS	Oct 05, 2022, 5:59:50 PM	Oct 05, 2022, 5:59:50 PM	TSTest Admin	TSTest	N/A

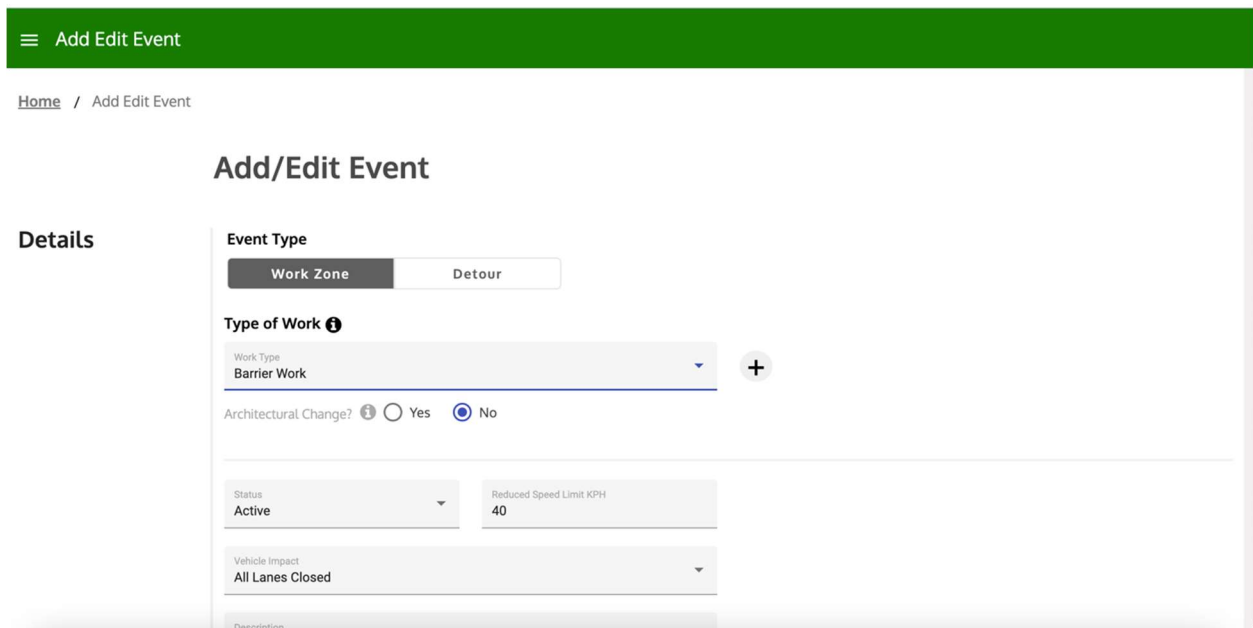
Manage Events Table

Event Actions:

- Edit Event
- Complete Event
- Cancel Event
- View Event
- Assign Event

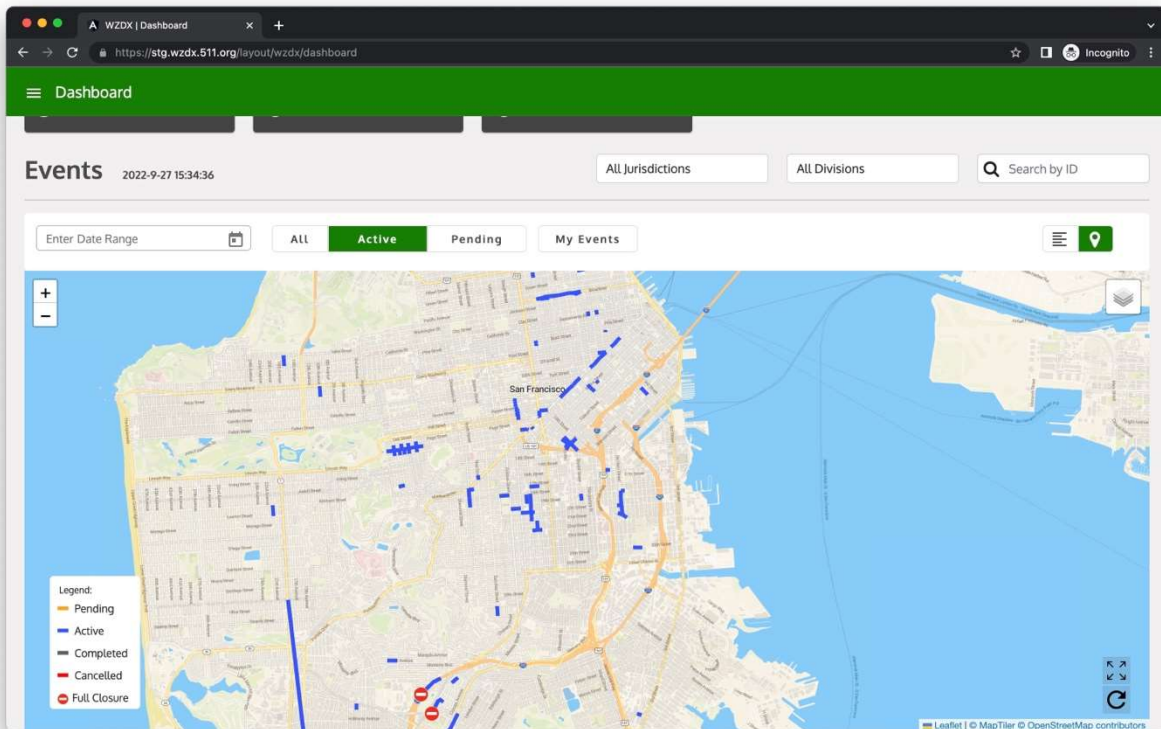


View Event



Edit Event

Events can also be viewed in either table view or map view. The map view allows a geographical representation of events.



Events in Map View

4.2 Contractor

ROLE FUNCTIONS

- MANGE EVENTS (SEE 4.1.1)
- CREATE USER
 - TEMP USERS
- MANAGE USERS
 - GRANT ACCESS TO TEMP USER
- ASSIGN EVENT TO TEMP USER

A contractor inside the WZDx program has the same role functions as a temp user. A contractor can also be assigned events from multiple jurisdictions. This allows a contractor to manage events from multiple jurisdictions.

4.2.1 Create Users

From the Dashboard Menu, click the Users link under the Manage header. From the Manage Users page, Select Create User. Select a User Role, fill out the requested information and select Create. Different Roles are limited to in what type of users they can create.

WZDx STAKEHOLDER GUIDE

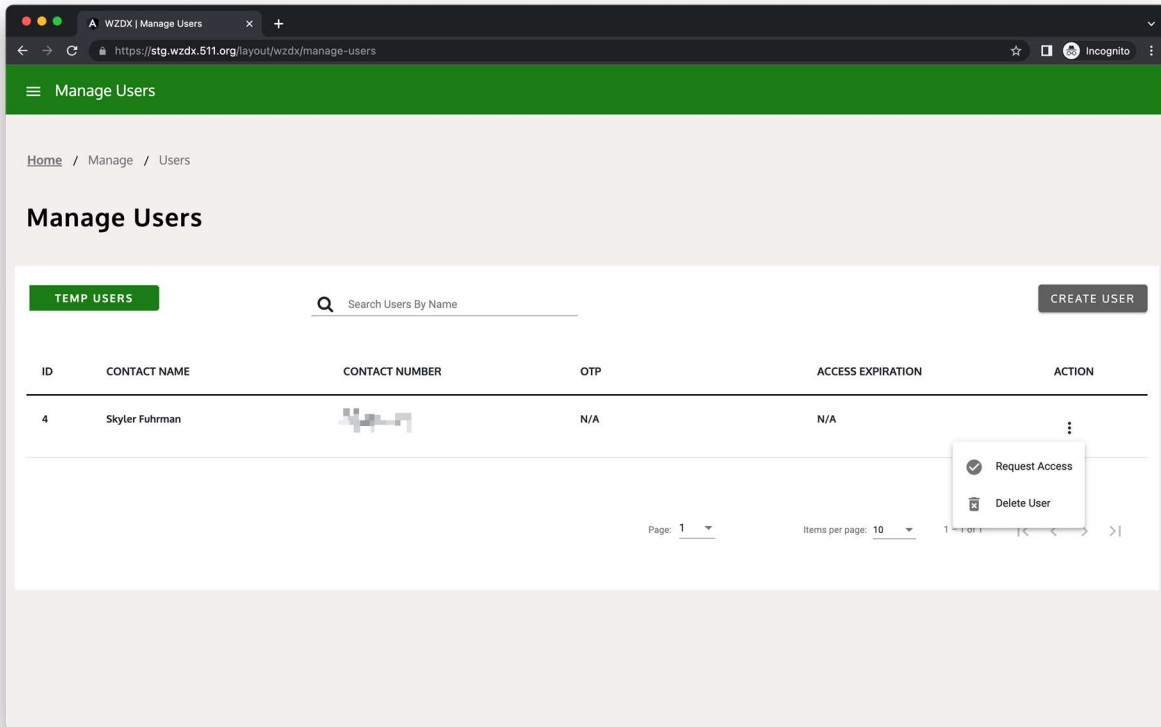
The screenshot displays a web browser window with the address bar showing `https://atg.wzdx.511.org/layout/wzdx/manage-users`. The page title is "Manage Users". A green header bar contains a menu icon and the text "Manage Users". Below the header, a breadcrumb trail reads "Home / Manage / Users". The main heading is "Manage Users". On the left, a green button labeled "TEMP USERS" is visible. A table with columns "ID" and "CONTACT NAME" is partially visible, showing a row with ID "4" and name "Skyler Fuhrman". A "CREATE USER" button is located on the right. A "Create User" modal form is centered on the screen. The modal has a title "Create User" and contains the following fields: a "User Role" dropdown menu with "Tempuser" selected, "First Name" and "Last Name" text input fields, and a "Phone Number" text input field. At the bottom right of the modal are "CANCEL" and "CREATE" buttons. The background of the modal is semi-transparent.

ID	CONTACT NAME
4	Skyler Fuhrman

Create User Prompt

4.2.2 Mange Users

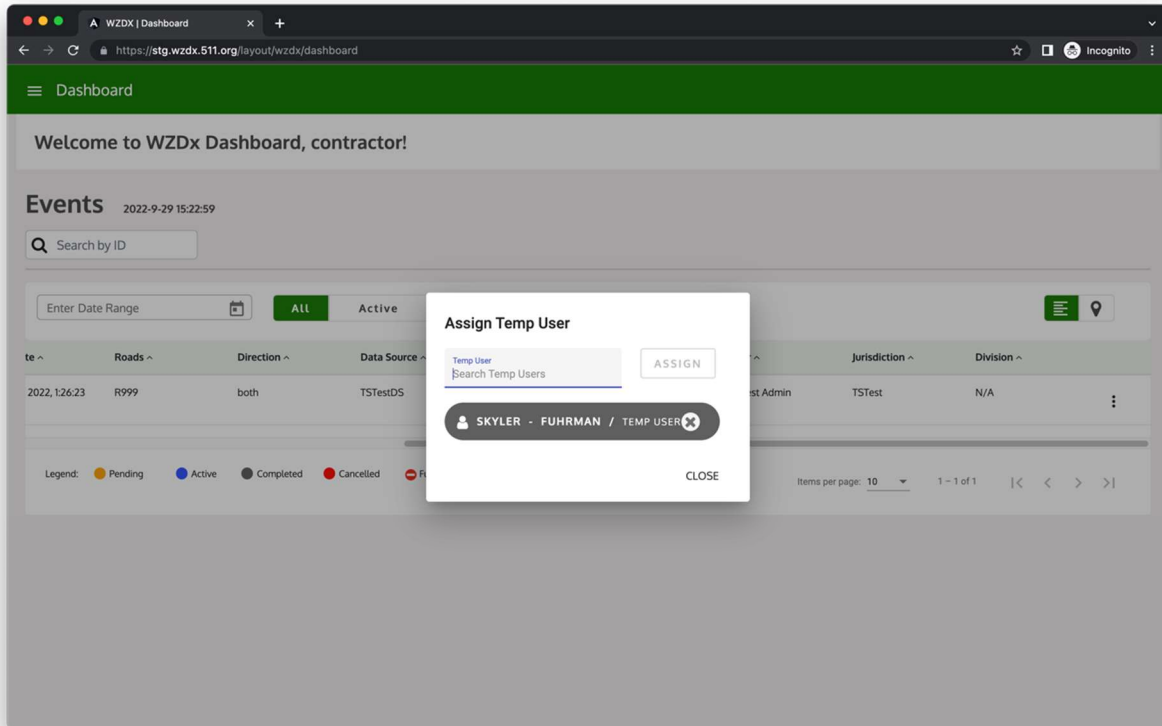
From the Dashboard Menu, click the Users link under the Manage header. Under the Action column, click the three dots for the user in question. Select the desired action item to manage users.



Request Access Prompt

4.2.3 Assign Event to Temp User

Contractors can assign events to temp users by clicking the three dots in the last column of the events page table. Selecting Assign Event brings up the Assign Temp User prompt. From here, contractors can add any temp users already created to this event.



Assign Temp User Prompt

4.3 Jurisdiction Staff

ROLE FUNCTIONS

- MANAGE EVENTS (SEE 4.1.1)
- CREATE EVENT
- MANAGE REPORTS
- CREATE USERS (SEE 4.2.1)
 - TEMP USER
 - CONTRACTOR
- MANAGE USERS (SEE 4.2.2)
 - TEMP USERS
 - CONTRACTORS
- ASSIGN EVENT TO CONTRACTOR AND TEMP USER (SEE 4.2.3)

The jurisdiction staff role has all the abilities of the contractor role but is only assigned to a single jurisdiction. The jurisdiction staff can also create events and manage reports.

4.3.1 Creating Events

New events are created by going to the dashboard menu and selecting New Event under the Create header. From here, a user fills out all required information to create a new event.

The screenshot shows the 'Add/Edit Event' form in a web browser. The browser's address bar shows the URL 'https://stg.wzdx.511.org/layout/wzdx/create-event'. The form has a green header bar with the text 'Add Edit Event'. Below the header, there is a breadcrumb trail 'Home / Add Edit Event'. The main title of the form is 'Add/Edit Event'. The form is divided into two main sections: 'Details' and 'Location'. The 'Details' section includes a 'Event Type' dropdown with options 'Work Zone' and 'Detour'. Below this is a 'Type of Work' dropdown with the option 'Heavy Traffic'. There is also a radio button for 'Architectural Change?' with options 'Yes' and 'No'. The 'Status' dropdown is set to 'Active'. The 'Reduced Speed Limit KPH' is set to '20'. The 'Vehicle Impact' dropdown is set to 'All Lanes Open'. There is a 'Description' text area. The 'Location' section includes a 'Start Point' text field with the value '1436 Garrett Court'. At the bottom right of the form, there is an 'Accuracy' section with radio buttons for 'Estimated' and 'Verified'.

Create Event Page

4.3.2 Manage Reports

Reports provide information to users on events in the WZDx system. Here, users can filter, search, and download information as a CSV or PDF file. Users can view the history of each event by clicking the three dots in the action column.

ID	Roads	Direction	Data Source	Created	Updated	User	Jurisdiction	Action
2022, 2:01:00	I-580	eastbound	TRAMS	Sep 27, 2022, 10:31:10 PM	Sep 27, 2022, 10:39:12 PM	N/A	MTC	...
2022, 6:59:59	CA-17 N	northbound	TRAMS	Sep 27, 2022, 12:43:11 PM	Sep 27, 2022, 10:39:12 PM	N/A	MTC	...
2022, 10:01:00	SR-61	southbound	TRAMS	Sep 26, 2022, 4:56:12 PM	Sep 27, 2022, 10:39:12 PM	N/A	MTC	...
2022, 9:01:00	I-680	southbound	TRAMS	Sep 26, 2022, 5:20:12 PM	Sep 27, 2022, 10:39:12 PM	N/A	MTC	...
2022, 11:59:00	US-101	northbound	TRAMS	Sep 27, 2022, 10:34:11 PM	Sep 27, 2022, 10:39:12 PM	N/A	MTC	...
2022, 6:59:59	US-101 S	southbound	TRAMS	Sep 27, 2022, 11:19:12 AM	Sep 27, 2022, 10:39:12 PM	N/A	MTC	...
2022, 1:01:00	SR-4	eastbound	TRAMS	Sep 26, 2022, 4:20:12 PM	Sep 27, 2022, 10:39:12 PM	N/A	MTC	...

Manage Reports Page

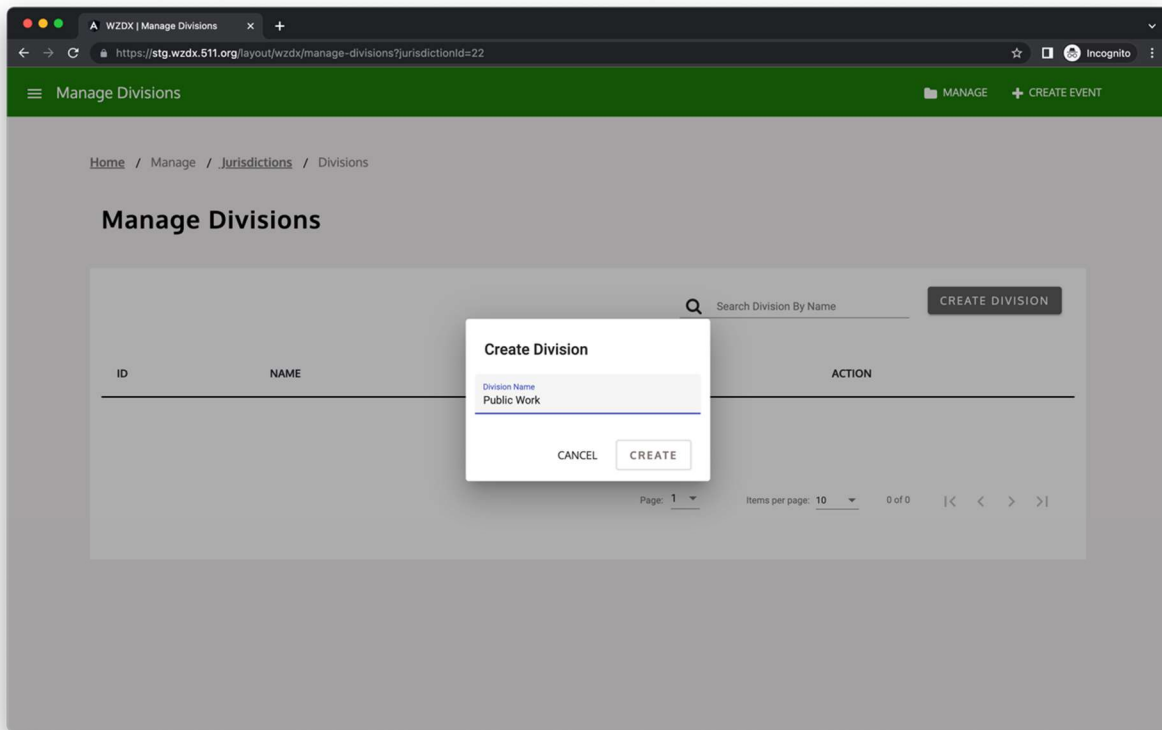
4.4 Jurisdiction Admin

ROLE FUNCTIONS

- MANAGE EVENTS (SEE 4.1.1)
- MANAGE EVENTS (SEE 4.1.1)
- CREATE EVENT (SEE 4.3.1)
- MANAGE REPORTS (SEE 4.3.2)
- CREATE USERS (SEE 4.2.1)
 - TEMP USER
 - CONTRACTOR
 - JURISDICTION STAFF
 - JURISDICTION ADMIN
- MANAGE USERS (SEE 4.2.2)
 - TEMP USERS
 - CONTRACTORS
 - JURISDICTION STAFF
 - JURISDICTION ADMIN
- ASSIGN EVENT TO CONTRACTOR AND TEMP USER (SEE 4.2.3)
- CREATE DIVISIONS
- MANAGE DIVISIONS
- MANAGE JURISDICTION

4.4.1 Create Divisions

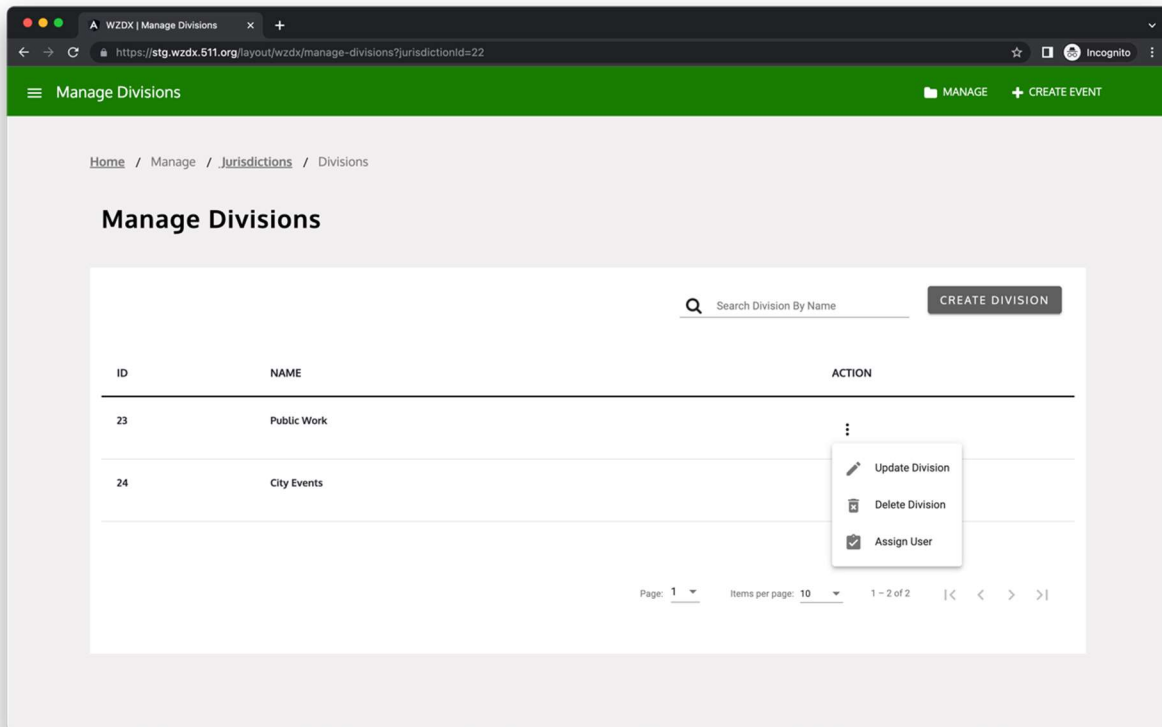
Divisions allow jurisdiction admins to create virtual sub-jurisdictions. This allows staff, contractors, or temp users to work from a shared collection of events occupying the same geographical area. Users can be assigned to a single division or the entire jurisdiction.



Create Division Prompt

4.4.2 Manage Divisions

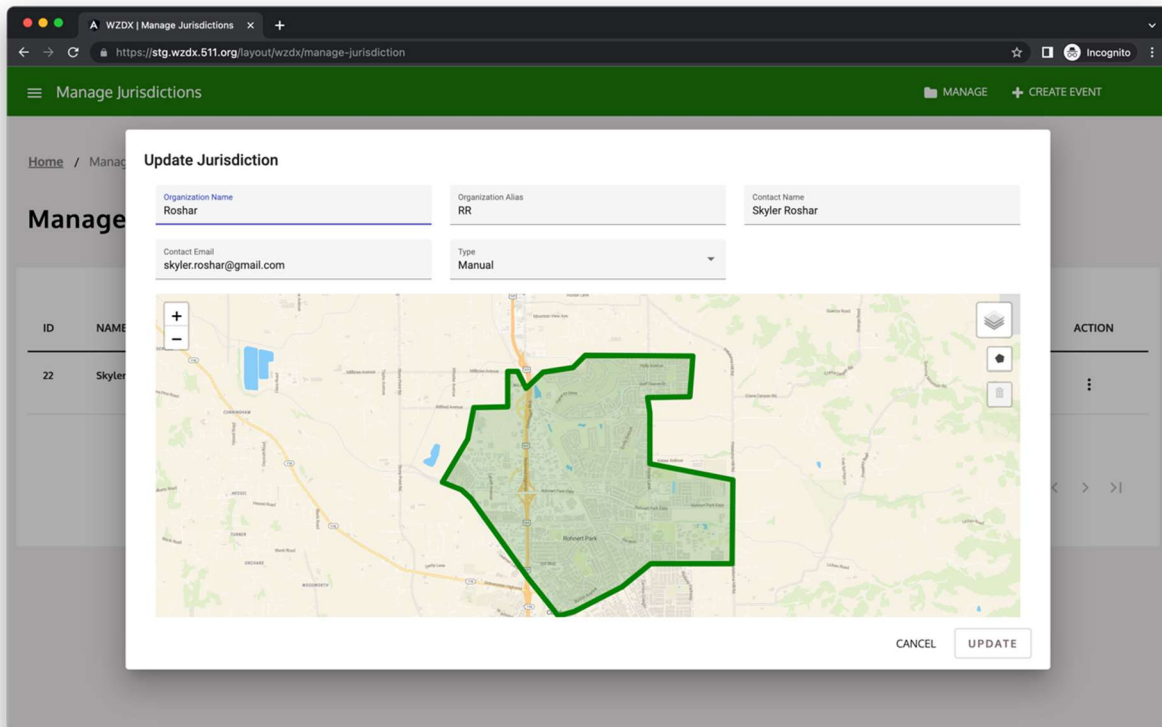
After divisions are created in a jurisdiction, users for the jurisdiction can be assigned to specific division. This is done by clicking the three dots in the action column on the Manage Divisions page.



Manage Divisions Action Menu

4.4.3 Manage Jurisdictions

The manage jurisdiction page provides jurisdiction admins the ability to update or correct their jurisdiction information. This includes both the written fields and the geographical area for their jurisdiction.



Update Jurisdiction Prompt

4.5 System Admin

ROLE FUNCTIONS

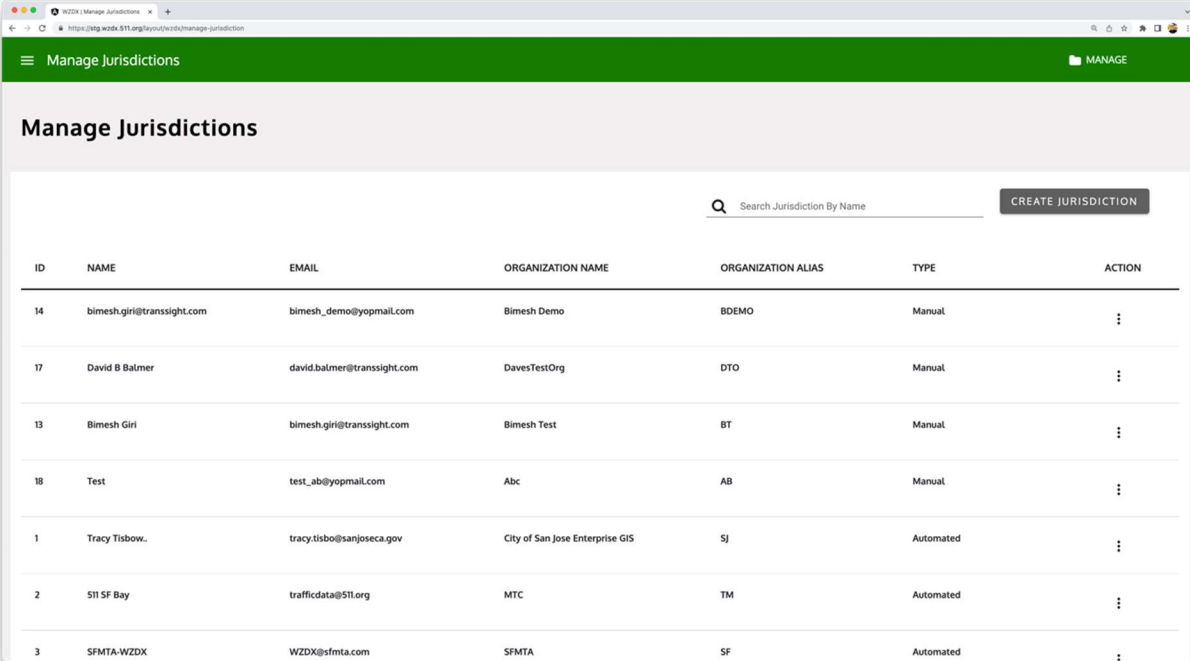
- MANAGE EVENTS (SEE 4.1.1)
- MANAGE REPORTS (SEE 4.3.2)
- CREATE USERS (SEE 4.2.1)
 - TEMP USER
 - CONTRACTOR
 - JURISDICTION STAFF
 - JURISDICTION ADMIN
 - SYSTEM ADMIN
- MANAGE USERS (SEE 4.2.2)
 - TEMP USERS
 - CONTRACTORS
 - JURISDICTION STAFF
 - JURISDICTION ADMIN
 - SYSTEM ADMIN
- ASSIGN EVENT TO CONTRACTOR AND TEMP USER (SEE 4.2.3)
- CREATE DIVISIONS (SEE 4.4.1)
- MANAGE DIVISIONS (SEE 4.4.2)
- MANAGE JURISDICTION (SEE 4.4.3)

● CREATE JURISDICTIONS

The system administrator functions are limited to the creation of users and jurisdictions. System administrations assist with the creation of jurisdiction administrations so that these jurisdiction admins can create their own organizations inside the WZDx. Those who are logged in as administrations cannot create events.

4.5.1 Create Jurisdictions

The manage jurisdiction page provides jurisdiction admins the ability to create new jurisdictions. This includes both the written fields and the geographical area for the jurisdiction.



ID	NAME	EMAIL	ORGANIZATION NAME	ORGANIZATION ALIAS	TYPE	ACTION
14	bimesh.giri@transsight.com	bimesh_demo@yopmail.com	Bimesh Demo	BDEMO	Manual	⋮
17	David B Balmer	david.balmer@transsight.com	DavesTestOrg	DTO	Manual	⋮
13	Bimesh Giri	bimesh.giri@transsight.com	Bimesh Test	BT	Manual	⋮
18	Test	test_ab@yopmail.com	Abc	AB	Manual	⋮
1	Tracy Tisbow.	tracy.tisbo@sanjoseca.gov	City of San Jose Enterprise GIS	SJ	Automated	⋮
2	511 SF Bay	trafficdata@511.org	MTC	TM	Automated	⋮
3	SFMTA-WZDX	WZDX@sfmta.com	SFMTA	SF	Automated	⋮

Manage Jurisdictions Page



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WZDx Data Feed to Enhance Traffic and Worker Safety in the San Francisco Bay Area

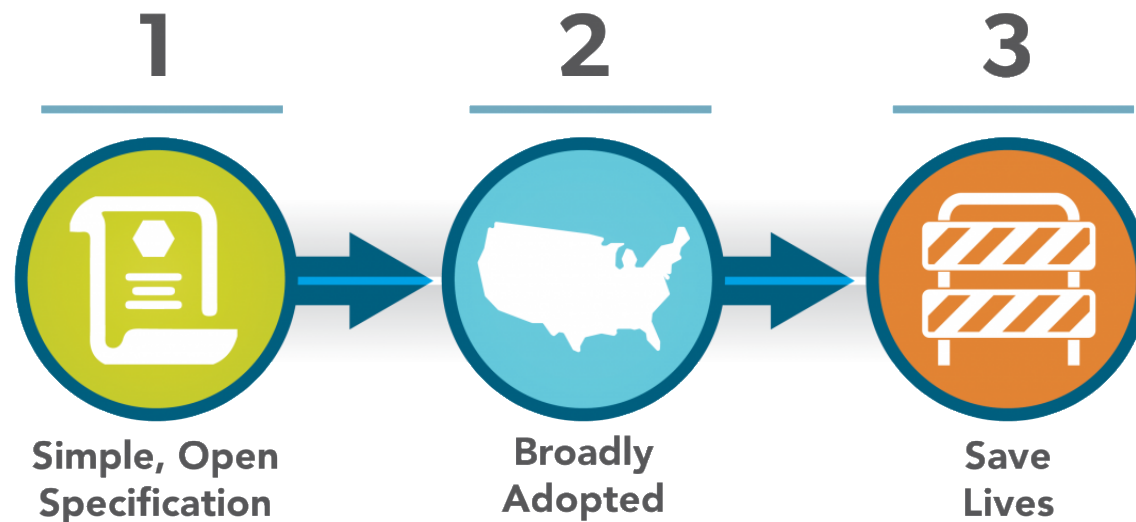
Nisar Ahmed
Darya Shtykalo



What is WZDx – Data Specification?



- Work zones can be dangerous to all roadway users
- The Work Zone Data Exchange advances the deployment of standardized, open data feeds that make real-time, accurate, and actionable work zone data available for third-party use
- Open-source and standardized to better inform IOOs, navigation systems, and roadway users



Work zone fatalities
increased 42%
between 2013 to 2019,
in the US



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Project Benefits



MTC Proposed Safety/Vision Zero Policy

Working together with our partner agencies, encourage and support equitable and data-driven actions towards eliminating traffic fatalities and serious injuries for the Bay Area region by 2030

- Increased work zone safety
- Decreased congestion
- Data standardization
- Technology accessibility for local agencies



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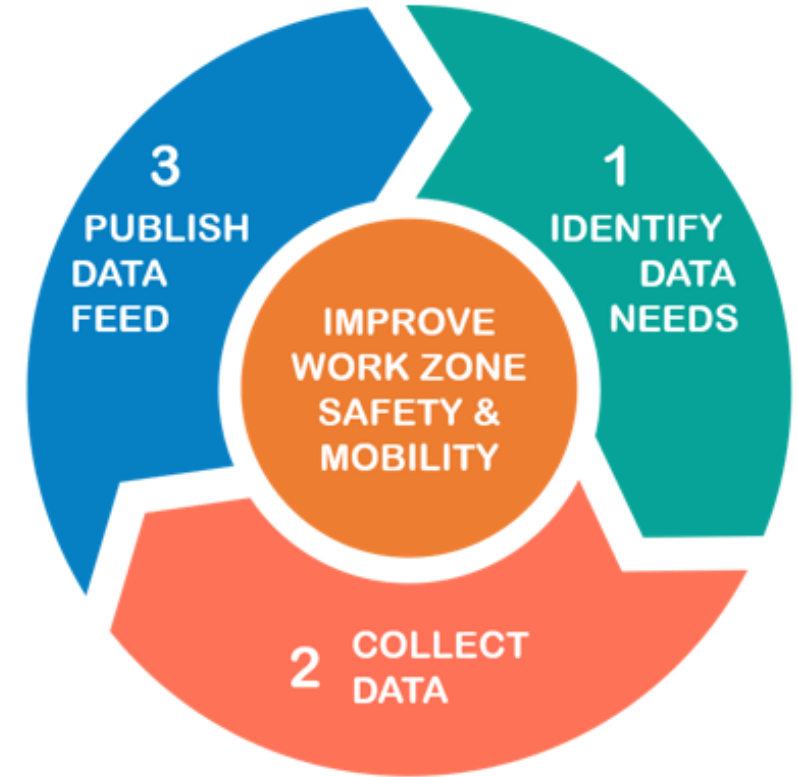
511 SF Bay WZDx Goals



1&2: Identify and Collect Data

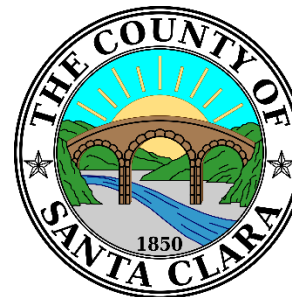
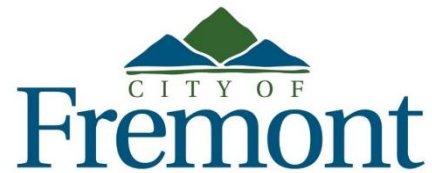
- To support data providers, develop mobile friendly tools and processes to capture work zone data from local jurisdictions
- To comply with the latest WZDx specification, update existing 511 SF Bay traffic event backend

3: Publish Data Feed - To timely deliver work zone data, develop a new WZDx complaint API and test with key partner data consumers



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Data Producers



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Data Consumers



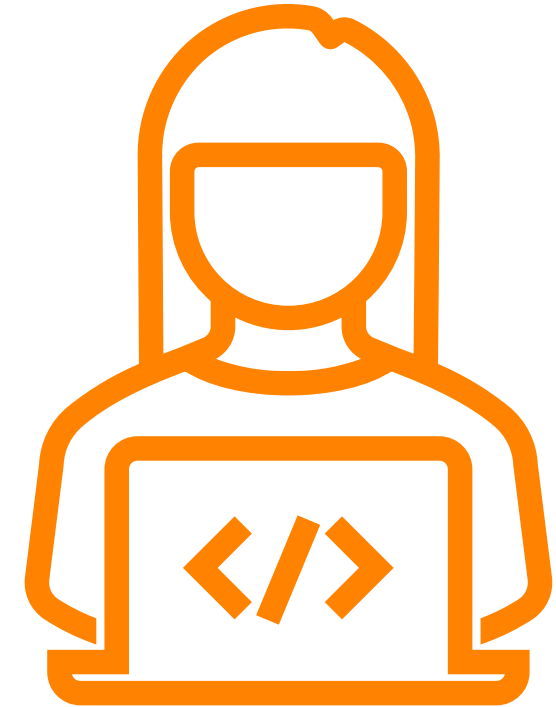
...and data producers!



Lessons Learned



- Jurisdictions with limited technology resources will adopt the new mobile enabled **online data entry tool**
- **Contractors need access** to data entry tool
- **Data mapping** between existing data and WZDx feed is useful for public agencies
- **Lack of staff capacity/resources** to standardize data
- Larger public agencies have **independent Divisions** collecting work zone data



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Data Collection Methods



Online Data Entry Tool

*Agencies without a traffic event database and/or staff capacity, can use the **online WZDx data entry tool***

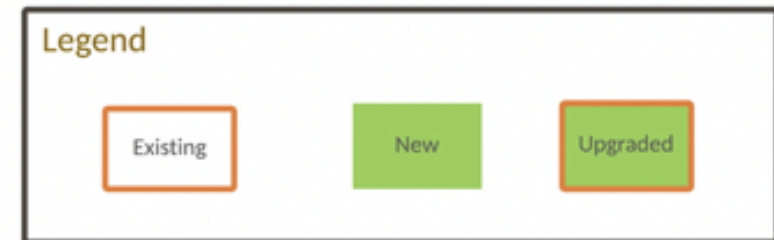
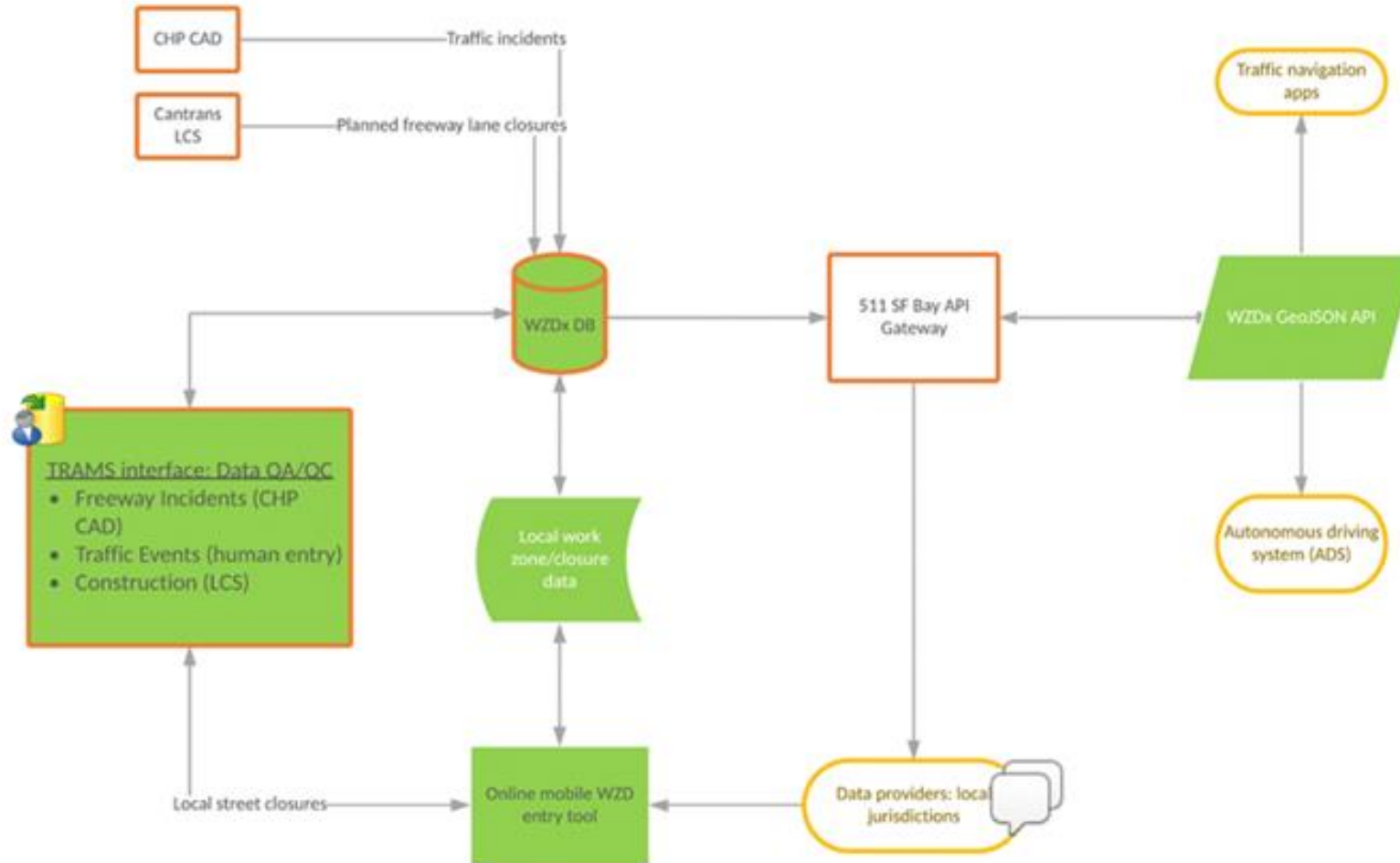
WZDx Compliant Feed

*Agencies that have traffic event database and staff capacity, can produce a **WZDx compliant feed***

Existing Data

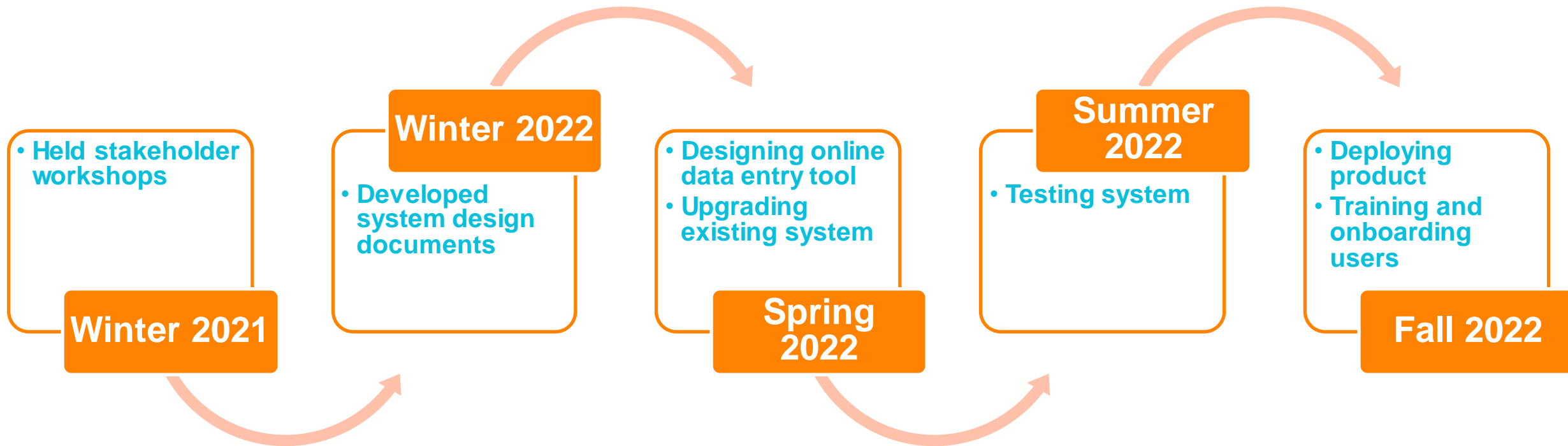
Existing data, that is already being shared with MTC, will be enhanced into WZDx compliant data

System Architecture



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Project Timeline



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Thank you!



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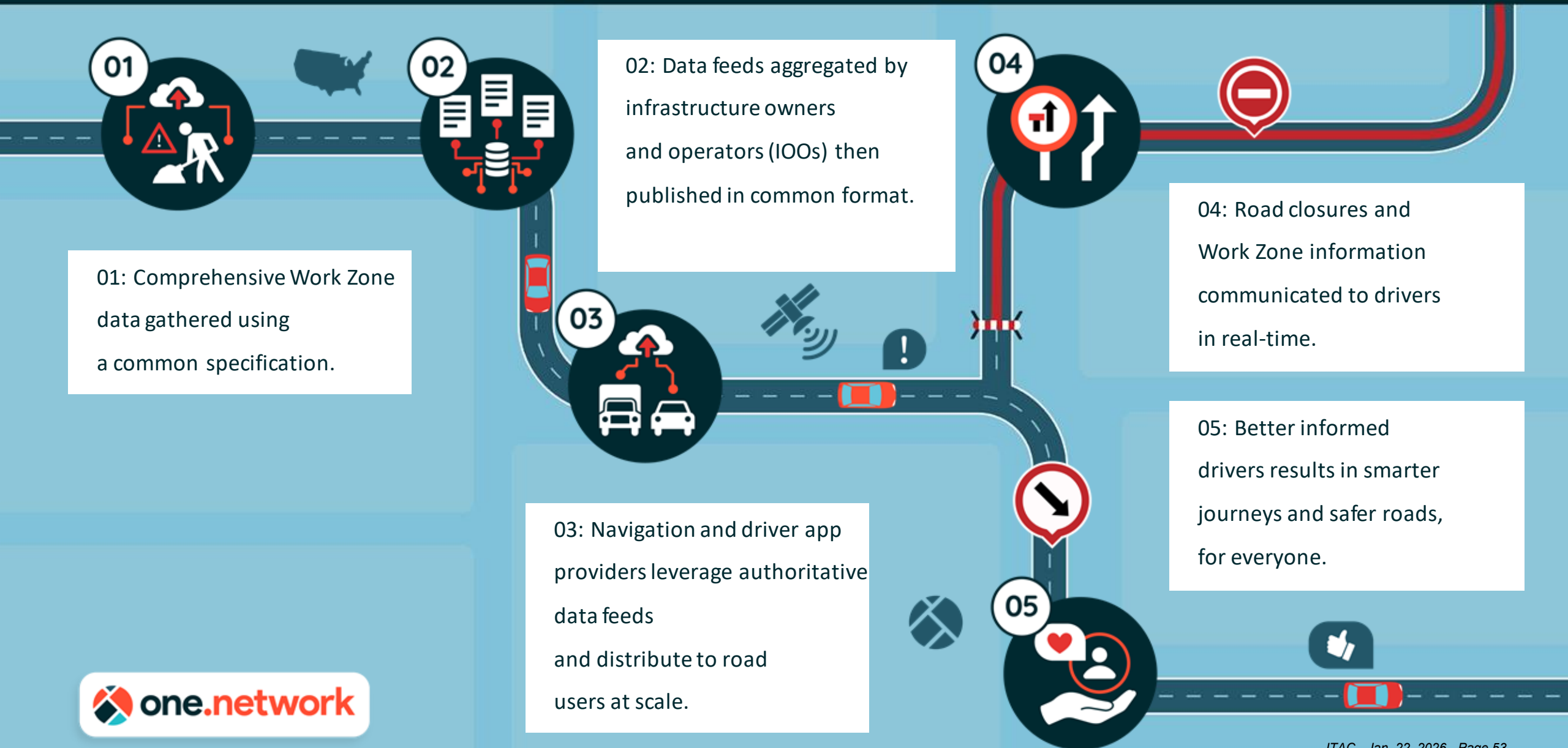


Why WZDx matters for California

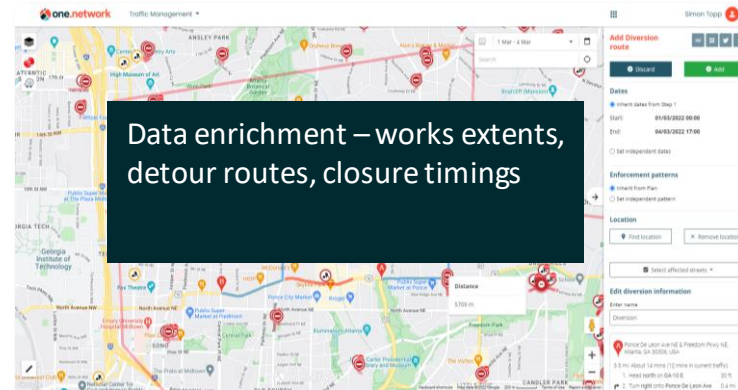
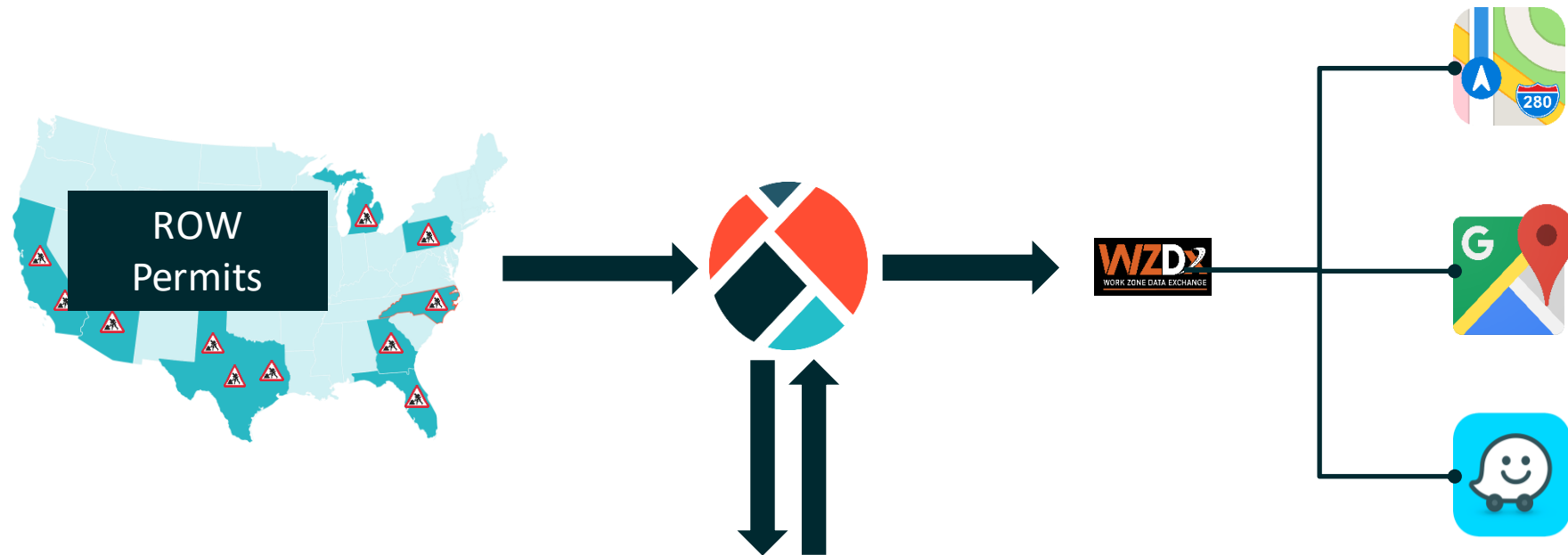


- **Operational Benefits now**
- **Construction & inter-jurisdictional collaboration**
- **Safety**
- **CAV readiness**

Understanding the WZDx (Work Zone Data Exchange)



Standardizing & Enriching work zone data

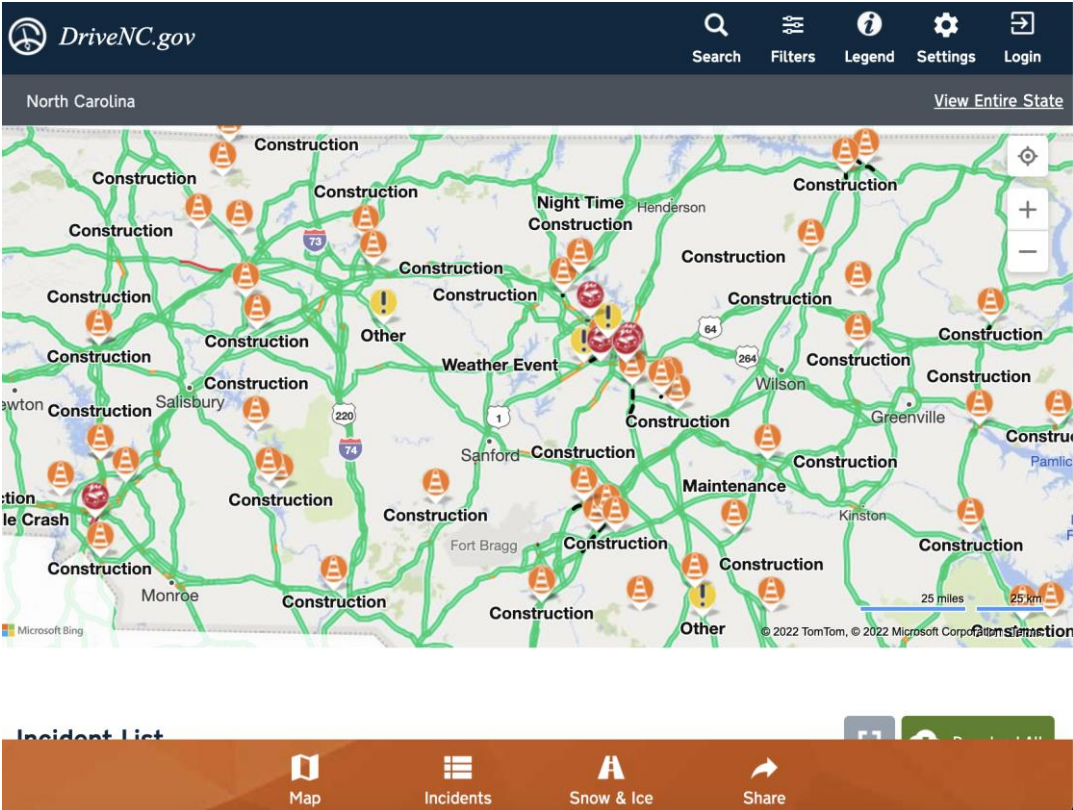


one.network



STEP 1: Adoption of basic WZ data + building a WZDx Translator





WZDx field	NC DOT field
road_event_id	Id
subidentifier	n/a
road_name	Road
direction	Direction
start_date	Start
end_date	End
start_date_accuracy	“Verified”
end_date_accuracy	“Verified”
event_status	Based on the start and end dates:
total_num_lanes	n/a
vehicle_impact	Severity
reduced_speed_limit	n/a
description	Condition/IncidentType/ Reason/ConstructionDateTime + TIMS ID
creation_date	Date stamp of when we first received the entity
update_date	LastUpdate
types_of_work	incidentType
Lanes	LanesClosed/LanesTotal
geometry	Latitude,Longitude or Polyline

STEP 2: Improve Data Quality



People & CAVs need more granular information



④ Lane closure

④ Contra-flow

④ Sidewalk closure

④ Advisory and preferred access route

④ Road closure crossing point

④ Temporary speed limit

④ Weight restriction

④ Suspension of weight restriction

● Clearway / no stopping

Ⓜ No U-turn

Ⓜ Emergency Access Route

Ⓜ Access only

Ⓜ Bike lane

Ⓜ Pedestrian zone

Ⓜ Widened sidewalk

Ⓜ Suspension of one-way

Ⓜ Reversal of one-way

Ⓜ Tow away zone

Ⓜ Temporary parking restriction

Ⓜ Suspension of parking restriction

Ⓜ Suspension of busway

Ⓜ Snow and ice control in progress

Ⓜ Road ahead closed

Ⓜ No vehicle access

Ⓜ No right turn

Ⓜ No left turn

Ⓜ Mobile VMS

Ⓜ Two-way traffic lights

Ⓜ Multi-way traffic lights

Ⓜ Stop/slow paddles

Ⓜ Alternate one-way

Ⓜ Priority signs

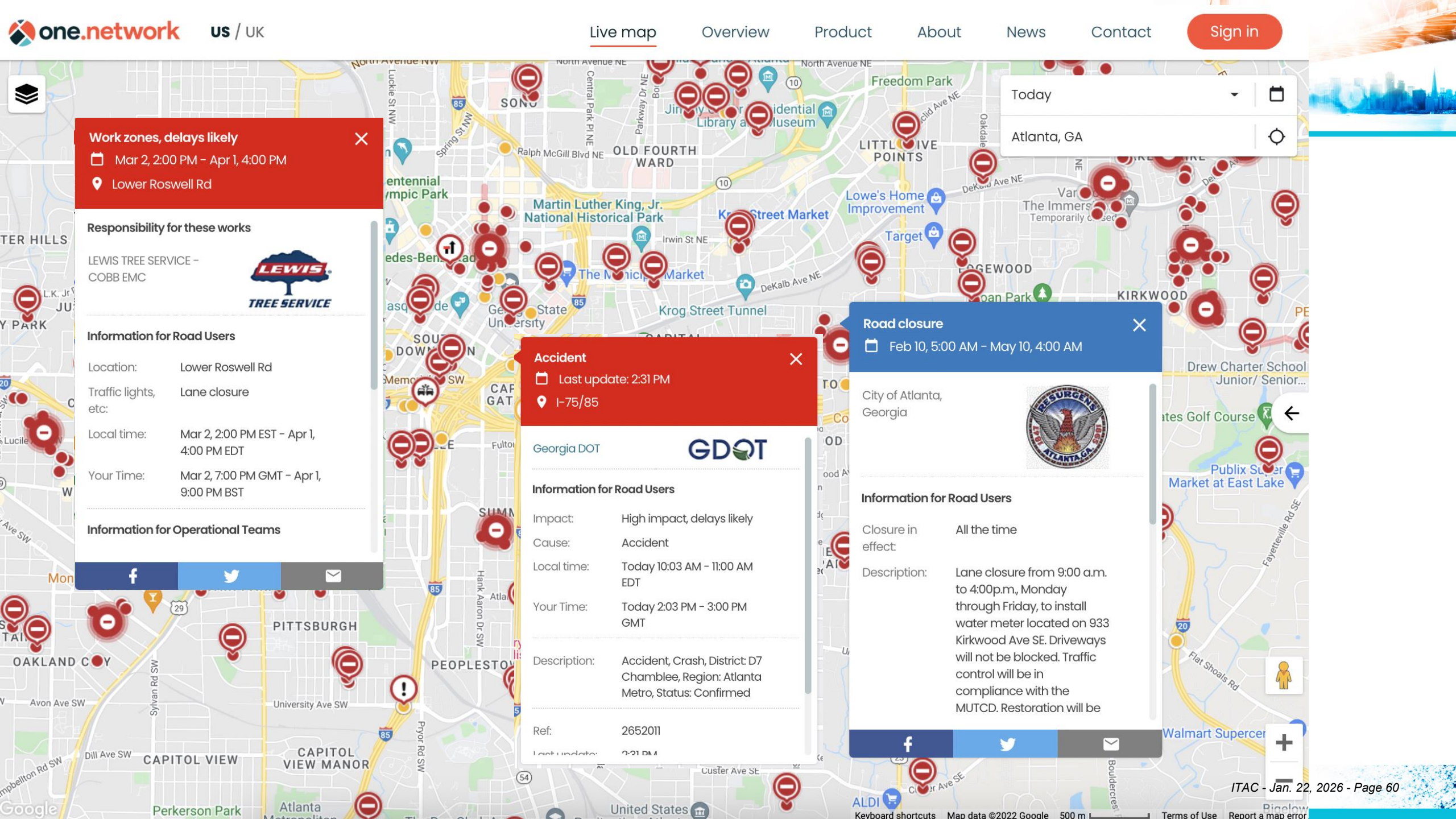
Ⓜ Convoy working

Ⓜ Work stop




Step 3: build an inter-jurisdictional view






Work zones, delays likely


✕

 Mar 2, 2:00 PM – Apr 1, 4:00 PM

 Lower Roswell Rd

Responsibility for these works

LEWIS TREE SERVICE – COBB EMC



Information for Road Users


Location: Lower Roswell Rd


Traffic lights, etc: Lane closure


Local time: Mar 2, 2:00 PM EST – Apr 1, 4:00 PM EDT

Your Time: Mar 2, 7:00 PM GMT – Apr 1, 9:00 PM BST

Information for Operational Teams










Accident

✕

 Last update: 2:31 PM

 I-75/85

Georgia DOT



Information for Road Users

Impact: High impact, delays likely

Cause: Accident

Local time: Today 10:03 AM – 11:00 AM EDT

Your Time: Today 2:03 PM – 3:00 PM GMT


Description: Accident, Crash, District: D7 Chamblee, Region: Atlanta Metro, Status: Confirmed

Ref: 2652011


Last update: 2:31 PM

Road closure

✕

 Feb 10, 5:00 AM – May 10, 4:00 AM


City of Atlanta, Georgia





Information for Road Users

Closure in effect: All the time

Description: Lane closure from 9:00 a.m. to 4:00p.m, Monday through Friday, to install water meter located on 933 Kirkwood Ave SE. Driveways will not be blocked. Traffic control will be in compliance with the MUTCD. Restoration will be







STEP 4: Real-time data

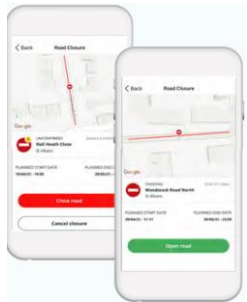


Real-time data

Getting live information from the field to Drivers



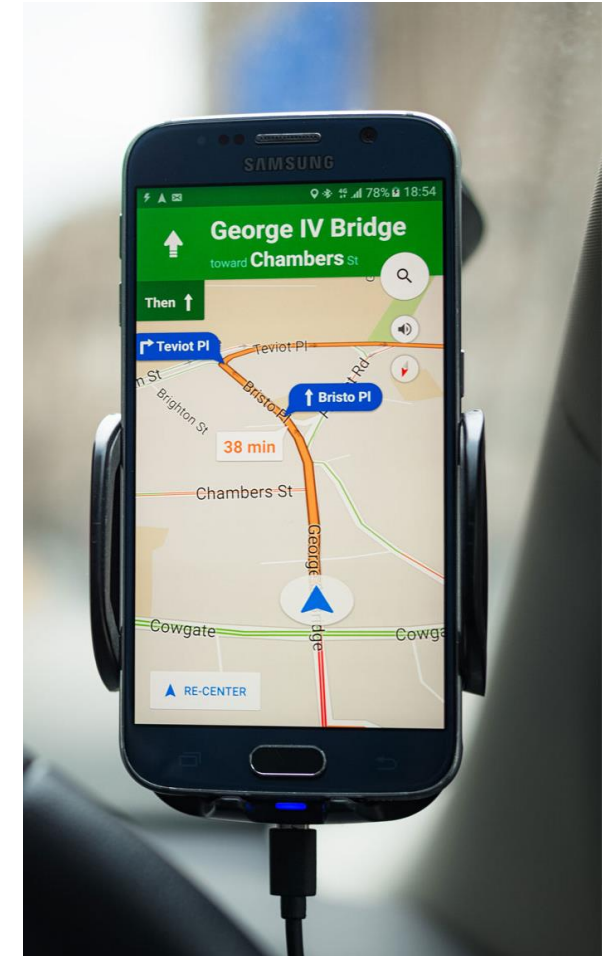
Roadside mobile app



Smart work zone device



Real-time data feed



How to Measure success



- **Data Completeness of all WZDx event data fields and geometries**
- **Operational efficiencies: \$ saved in joint trenching and # of planning clashes averted**
- **Accuracy of approved vs actual start and end times**
- **Safety: Number of crashes occurring in and/or related to work zones**

Why WZDx matters for California



- **Operational Benefits now**
- **Construction & inter-jurisdictional collaboration**
- **Safety**
- **CAV readiness**



Eliza Shaw

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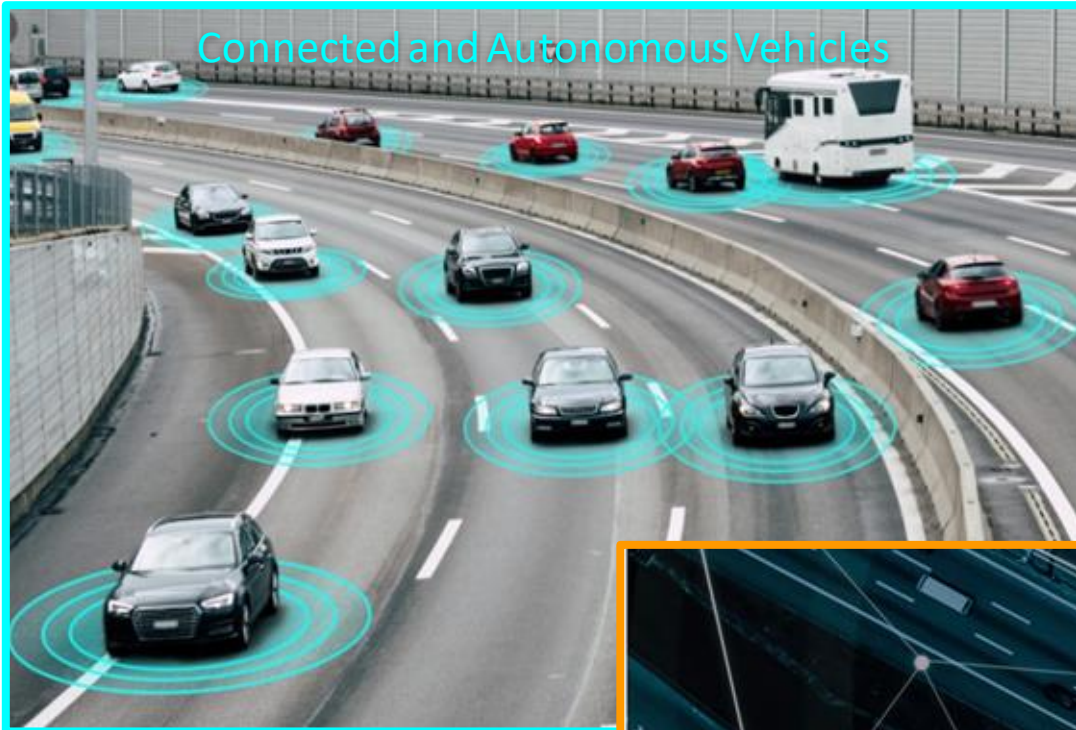


Smart Work Zones in Arizona and WZDx

Adam Carreon, PE, PTOE
Arizona Department of Transportation



Smart Work Zones in Arizona and WZDx



&



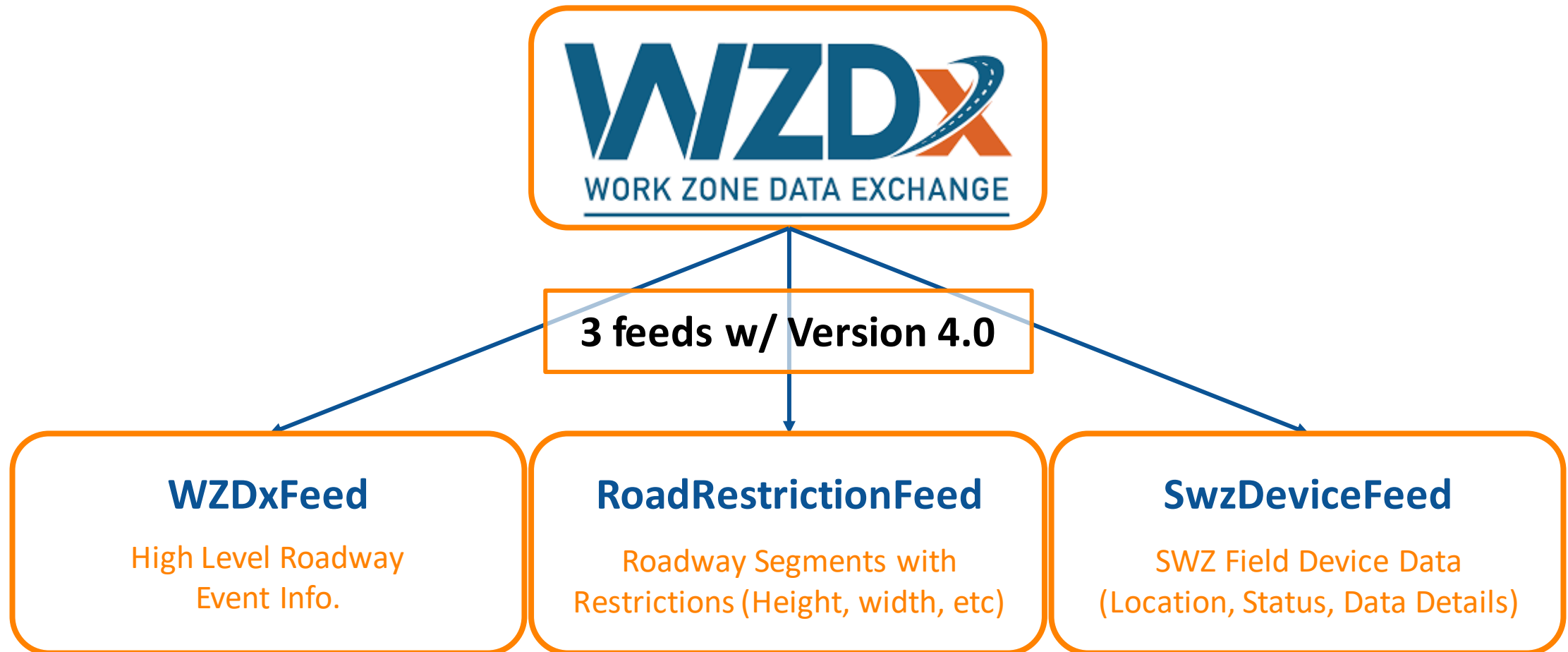


Purpose

Effective coordination of work zone activities for enhanced mobility and safety

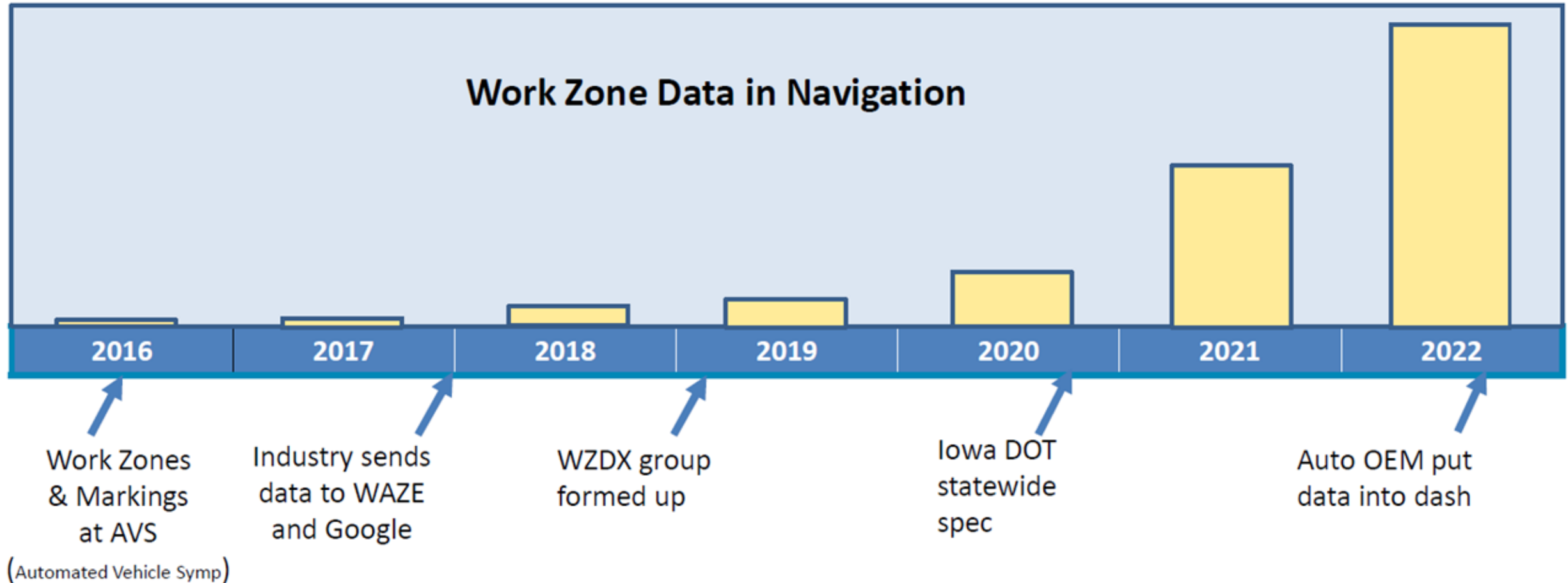
Development of a standardized approach for collecting, organizing, and sharing Work Zone Event Data (WZED)

Smart Work Zones in Arizona and WZDx

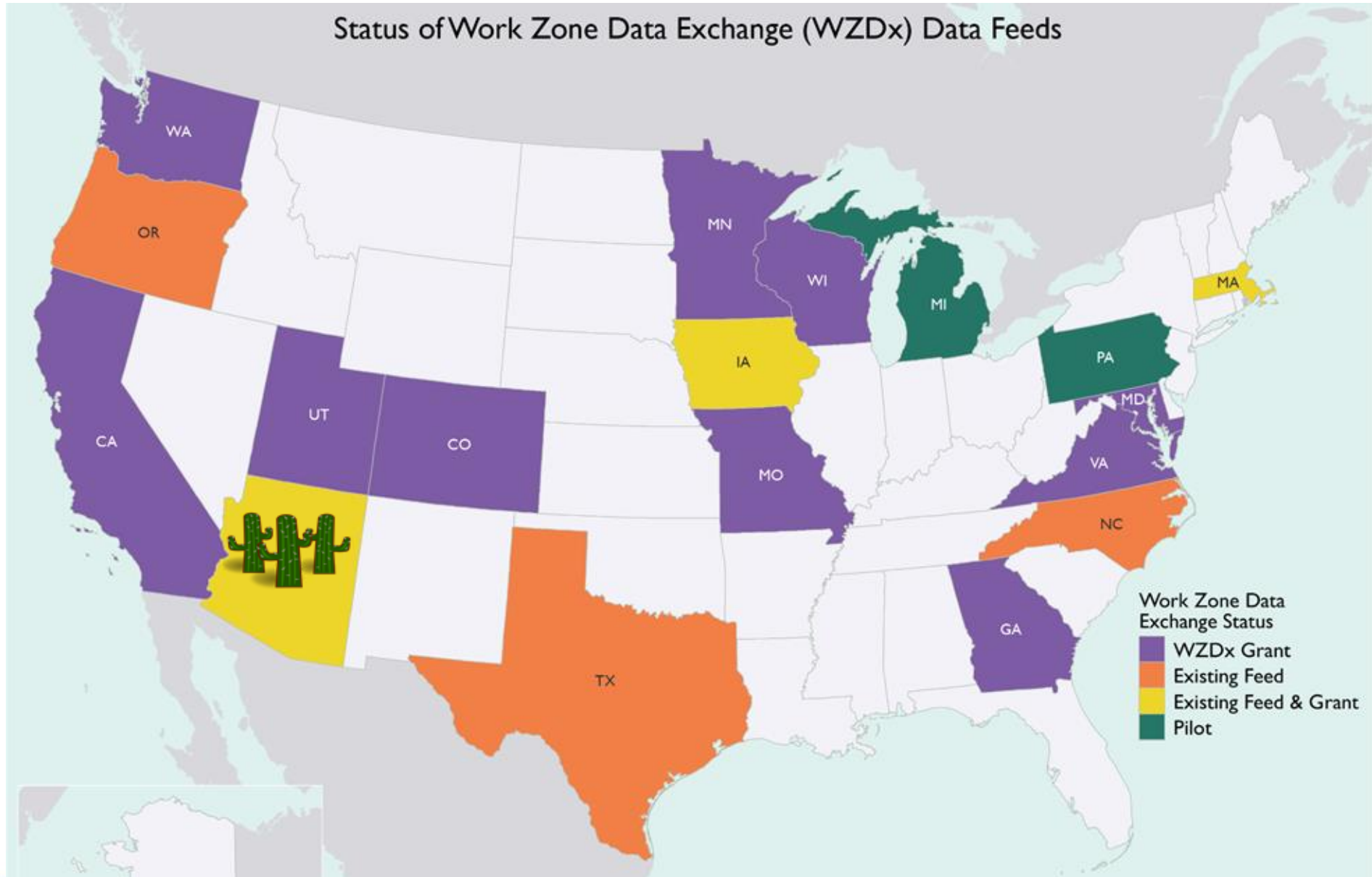




Now we have a WZD Industry...what just happened!



Smart Work Zones in Arizona and WZDx



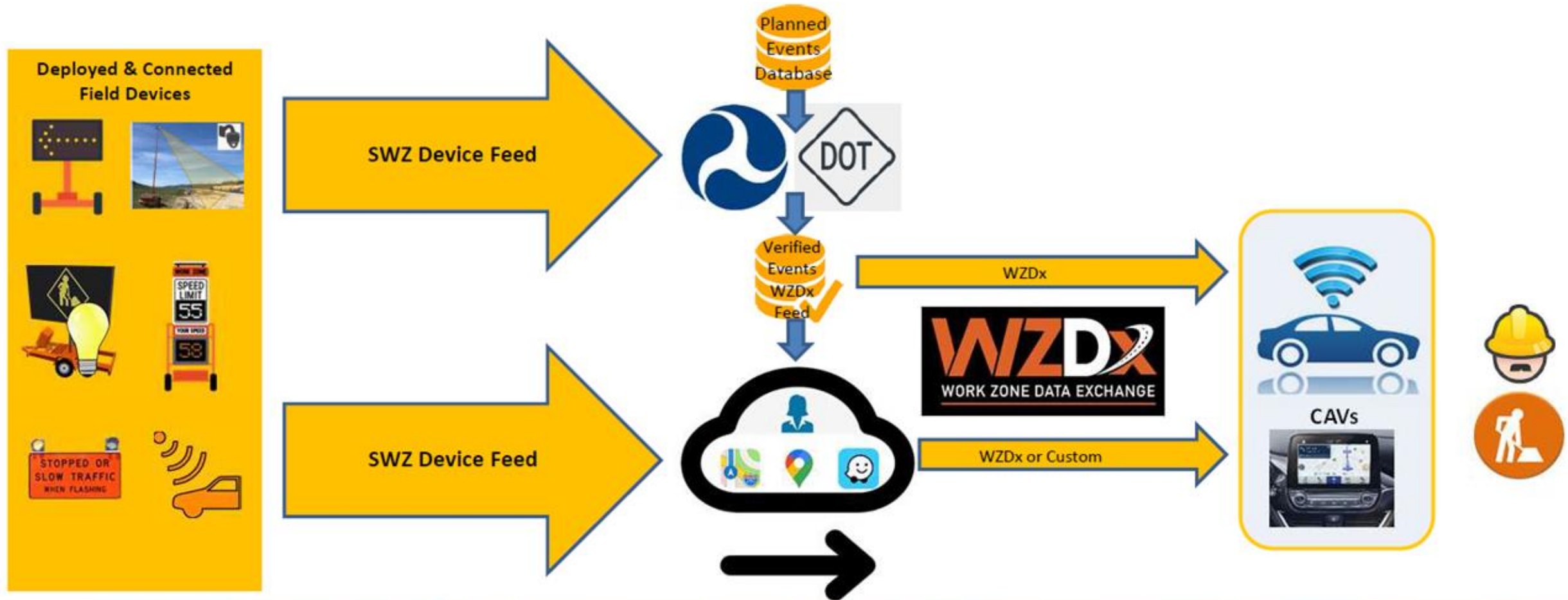


○ Sending live work zone data to navigation apps is available now!

- Purdue study suggests significant safety gains by sharing with Waze/Google
- Work Zone Data will go directly into dashboards
 - Potential for audible, visual, vibratory means to disrupt the distractions
 - Potential to override automation including cruise control
 - Potential for positive actions to avoid work zones



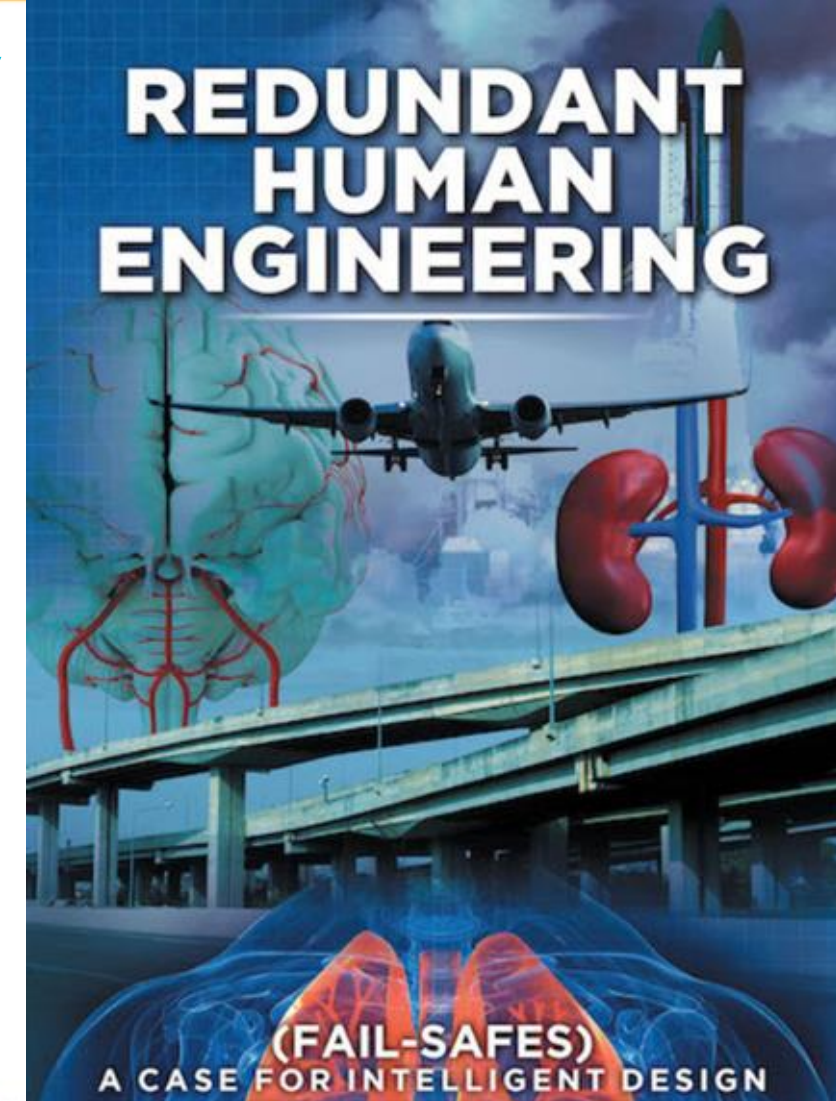
Smart Work Zones in Arizona and WZDx



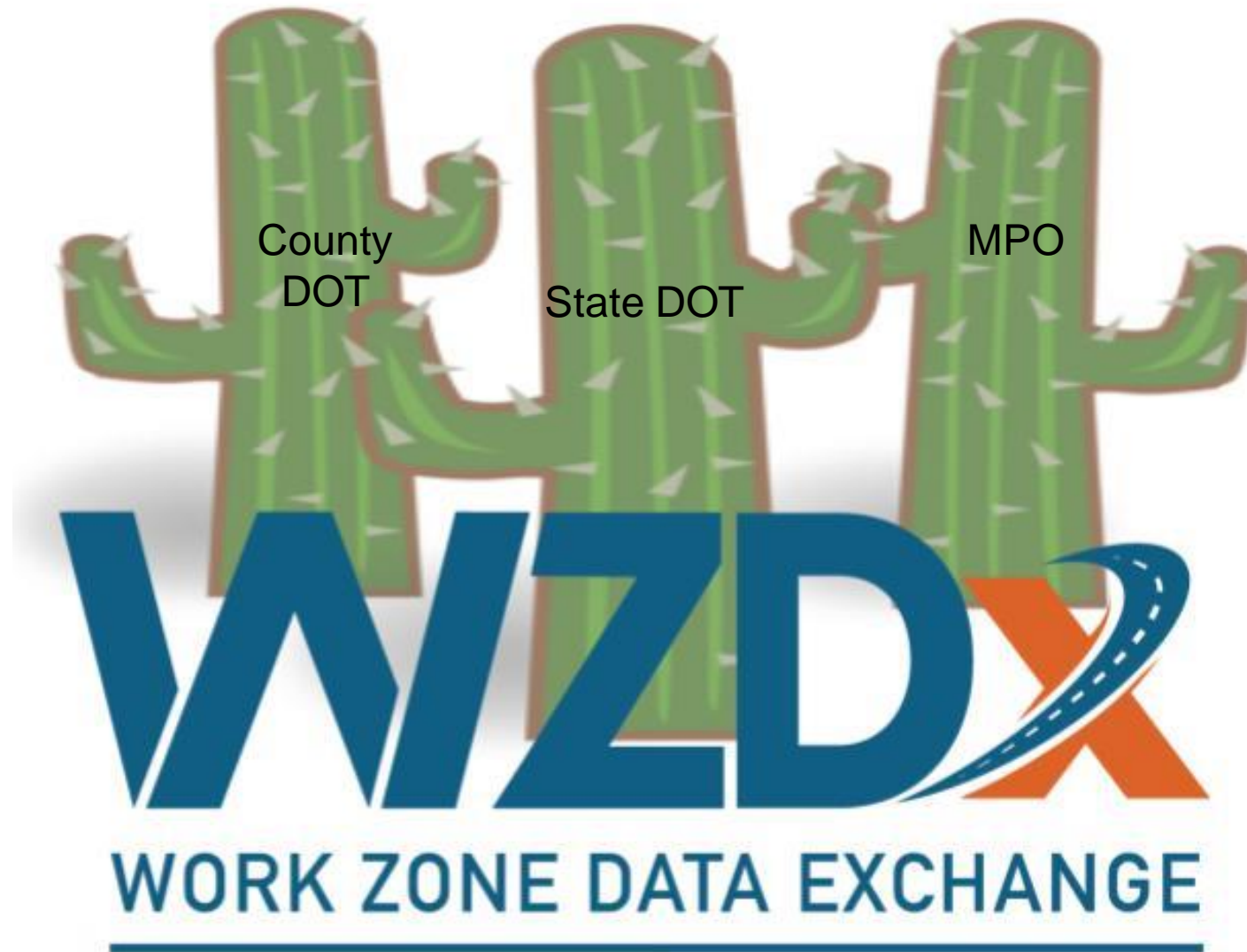
Smart Work Zones in Arizona and WZDx



- Help bridge the gap in levels of autonomy

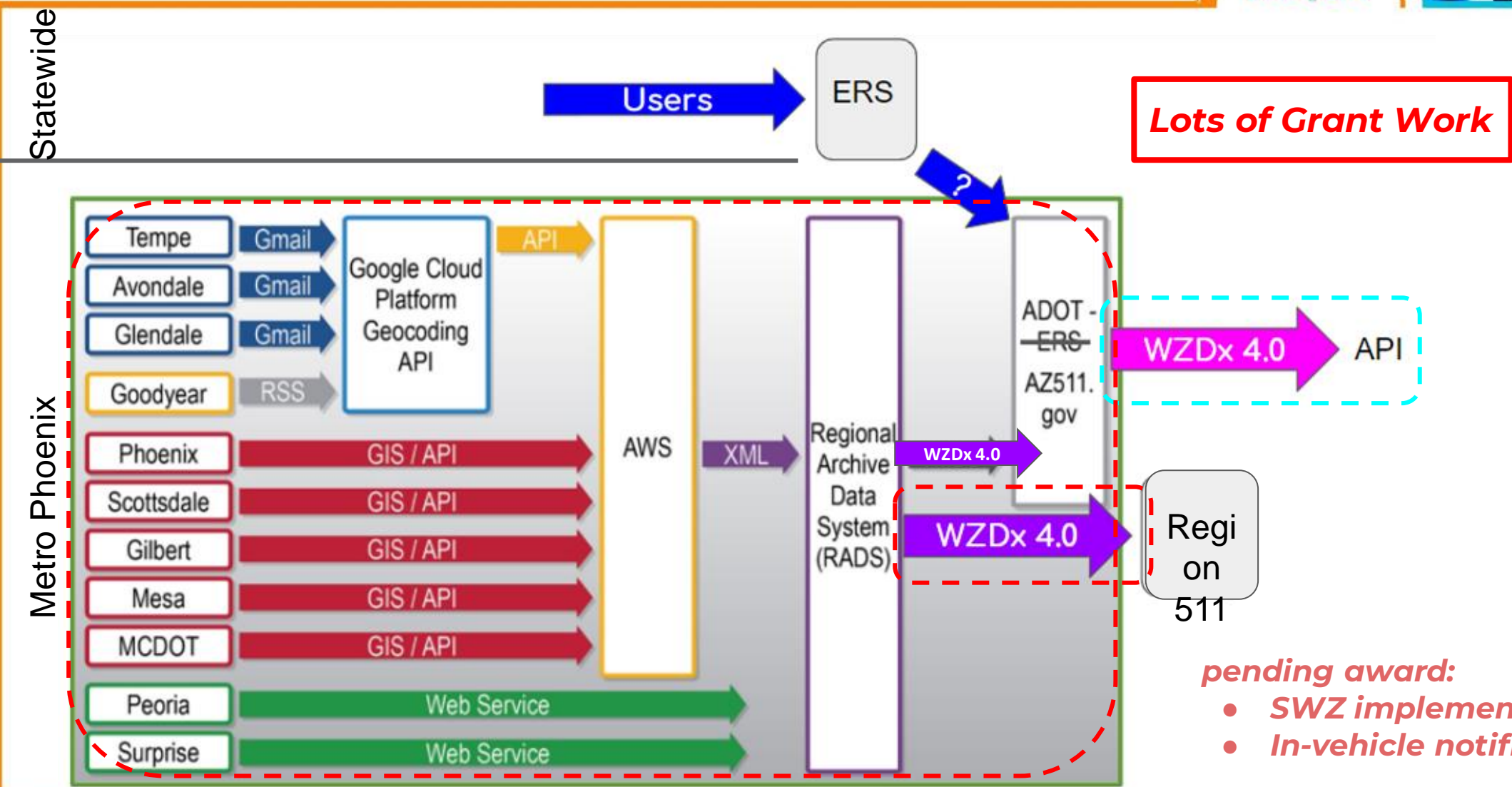


Smart Work Zones in Arizona and WZDx





Current Arizona efforts



- pending award:*
- *SWZ implementation grant*
 - *In-vehicle notification grant*

Next Steps

- Expanding Device Data





○ Resources

- To learn more and access available resources, visit:
 - WZDx Version 4.0 Specification
 - WZDx GitHub Wiki (Day-to-Day Subgroup Activities)
 - WZDx Technical Assistance Discussions
 - WZDx Technical Assistance Help Desk
 - WZDx Data Feed Registry
 - FHWA WZDI Data Dictionary and Framework
 - V2X Mapping Tool
 - CARMA

For more information on the WZDx project or anything related to the Work Zone Data Working Group (WZDWG), contact AVDX@dot.gov

Many slide images were created by others for the 2022 ATSSA Convention, and credit for the work associated with it is due with those individuals including but not limited to Ross Sheckler & Todd Foster.

Thank you.



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Work Zone Data Exchange





○ **Hill and Smith – Who are we? Visit us at <https://hillandsmith.com>**

- Hill & Smith Inc. is an industry leading manufacturer of a wide range of transportation safety products. Through the manufacturing of our premier MASH-compliant impact attenuator, the Smart Cushion®, our extensively tested & MASH-compliant portable steel barrier, Zoneguard®, and our Work Area Protection product lines of Smart Work Zone Systems, message and arrow boards and traffic controls, Hill & Smith Inc. is dedicated to advancing Work Zone Safety, ITS, & Roadside Safety nationwide.
- The Work Area Protection line of ITS & Smart Work Zone solutions enhances transportation and improves safety and mobility in and around work zones. Our communications-based information software and innovative electronic technologies offer contractors and transportation agencies a comprehensive smart work zone package.



○ The Work Zone Data Exchange

- What is the Work Zone Data Exchange
 - The Work Zone Data Working Group (WZDWG), established in 2019 under the Federal Geographic Data Committee (FGDC) Transportation Subcommittee (TSC), maintains the WZDx Specification with the goal of publishing incremental updates to refine the features, attributes, and vocabulary needed to model work zone activity data.
 - The goal of the WZDx is to enable widespread access to up-to-date information about dynamic conditions occurring on roads such as construction events. WZDx defines a common language for describing work zone information. This simplifies the design process for producers and the processing logic for consumers and makes work zone data more accessible.
 - The WZDx specification enables infrastructure owners and operator to make common work zone data available for third party use. It is intended to make travel on public roads safer and more efficient through access to all data that is captured at all points during a work zone activity.
 - The idea is to get data from work zones into vehicles to help automated and connected vehicles. We want to **alert** vehicles and or motorists and **not educate** them while they are driving.
 - Similar to NTCIP issues with message boards in early 2000's



- Why is the WZDx necessary
 - Improving access to work zone data is one of the top needs identified through the U.S. DOT's Data for Automated Vehicle Integration (DAVI) initiative
 - Up-to-date information about dynamic conditions occurring on roads – such as construction events – can help ADS and humans navigate safely and efficiently. Many infrastructure owners and operators (IOOs) maintain data on work zone activity. However, a lack of common data standards and convening mechanisms makes it difficult and costly for third parties – including original equipment manufacturers (OEMs) and navigation applications – to access and use these data across various jurisdictions.
 - U.S. DOT launched the WZDx Specification to jumpstart the voluntary adoption of a basic work zone data specification through collaboration with data producers and data users. Longer term, the goal is to enable collaborative maintenance and expansion of the specification to meet the emerging needs of ADS.
- Who is involved in developing the WZDx
 - The FHWA and ITS Joint Program Office began the early stages of the WZDx project and have remained actively involved.
 - In 2019 the Work Zone Data Working Group was established with the primary goal of developing version 2 of the WZDx Specification based on lessons learned from version 1.1 and **new insights from the user community**. Version 2 of the Work Zone Data Exchange (WZDx) Specification was released in early 2020.



- Who is involved in developing the WZDx (Continued)

The Work Zone Data Working Group released [version 4.0 of the WZDx Specification](#) in December 2021. This update reorganizes the feed to make room for smart work zone device data and non-work zone road restrictions as well as allowing road owners to share more nuanced information about worker presence in work zones.

- Who is currently using the WZDx

- Active WZDx data feeds can be found on the [WZDx Feed Registry](#). The registry currently lists feeds from the following jurisdictions:
 - Texas Department of Transportation
 - Iowa Department of Transportation – Specifically Arrow boards to identify work zones through out the state
 - Maricopa County (Arizona) Department of Transportation – Hill and Smith and ADOT on I-15 in Maricopa County
 - Massachusetts Department of Transportation – Specifications require the use of the WZDx to transfer data to the state
 - North Carolina DOT



○ What is Hill and Smith's role in WZDx

- Hill and Smith currently has over twenty active Smart Work Zone systems running across ten states
 - Arizona is the only state which is receiving the Work Zone data via the WZDx feed.
 - The remaining States are downloading the data manually and mining it in non real time.
 - This is creating a situation in which data is stale by the time other relevant third parties are receiving the data making it useless to many other vendors.
 - Hill and Smith has multiple personnel on the WZDx subgroup committees. These committees are comprised of data producers and data consumers. Hill and Smith communicates with the State DOT entities on the committees who also have a Hill and Smith Smart Work Zone system to help them get up to speed with ingesting the WZDx data feeds.
 - Hill and Smith makes work zones smart and connected, but in order to really utilize the data from the roadside equipment, the data must be able to get into vehicles, navigation systems, Engineering firms and other vendors. WZDx must be specified for all Smart Work Zone systems to get and use the data in the best possible fashion.
 - While speed is the only required lane level information, Hill and Smith is providing volume counts and density as well.
 - Hill and Smith not only wants to make and keep drivers safe, but highway workers must also be kept safe. We have the ability to know when workers are present in a work zone. A future release of the WZDx will contain a node that warns if workers are present. This information can be forwarded to auto manufacturers and navigation systems to alert drivers of workers present.

- Questions





WORK ZONE SAFETY IS JOB ONE AT CALTRANS

Chuck Suszko
Office of Contract Administration
Caltrans



The image features the ITS/CA logo on the left, which includes a stylized orange and blue graphic of a city skyline and a bridge. To the right of the logo is a photograph of a large suspension bridge, likely the San Francisco Bay Bridge, spanning a body of water with a city skyline in the background. The image is split vertically, with the left half being a solid blue color and the right half showing the bridge and city skyline.



WORK ZONE SAFETY IS JOB ONE AT CALTRANS



○ Smart Work Zone Systems

- Real time
- Portable
- Automated
- Reliable

○ Smart Work Zone Benefits

- Real time information to motorists
- Encourage motorists to take alternative routes
- Manage congestion to maintain free flowing traffic
- Improve work zones safety for highway workers and motorists

WORK ZONE SAFETY IS JOB ONE AT CALTRANS



○ Work Zone Speed Limit Reduction

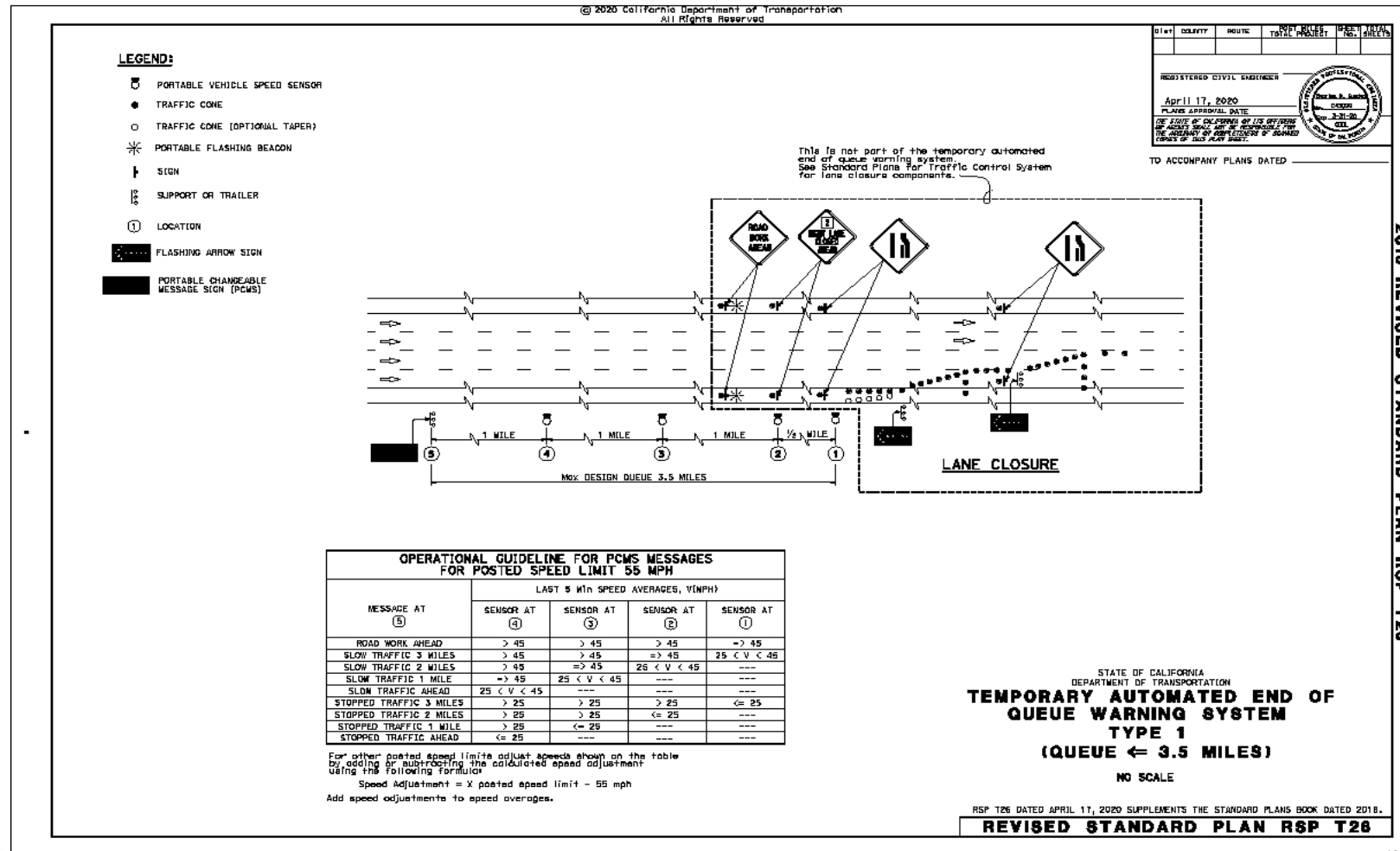
- Portable Radar Speed Feedback Signs placed 400 feet in advance of work areas.
- Real time
- Speed information is collected



WORK ZONE SAFETY IS JOB ONE AT CALTRANS



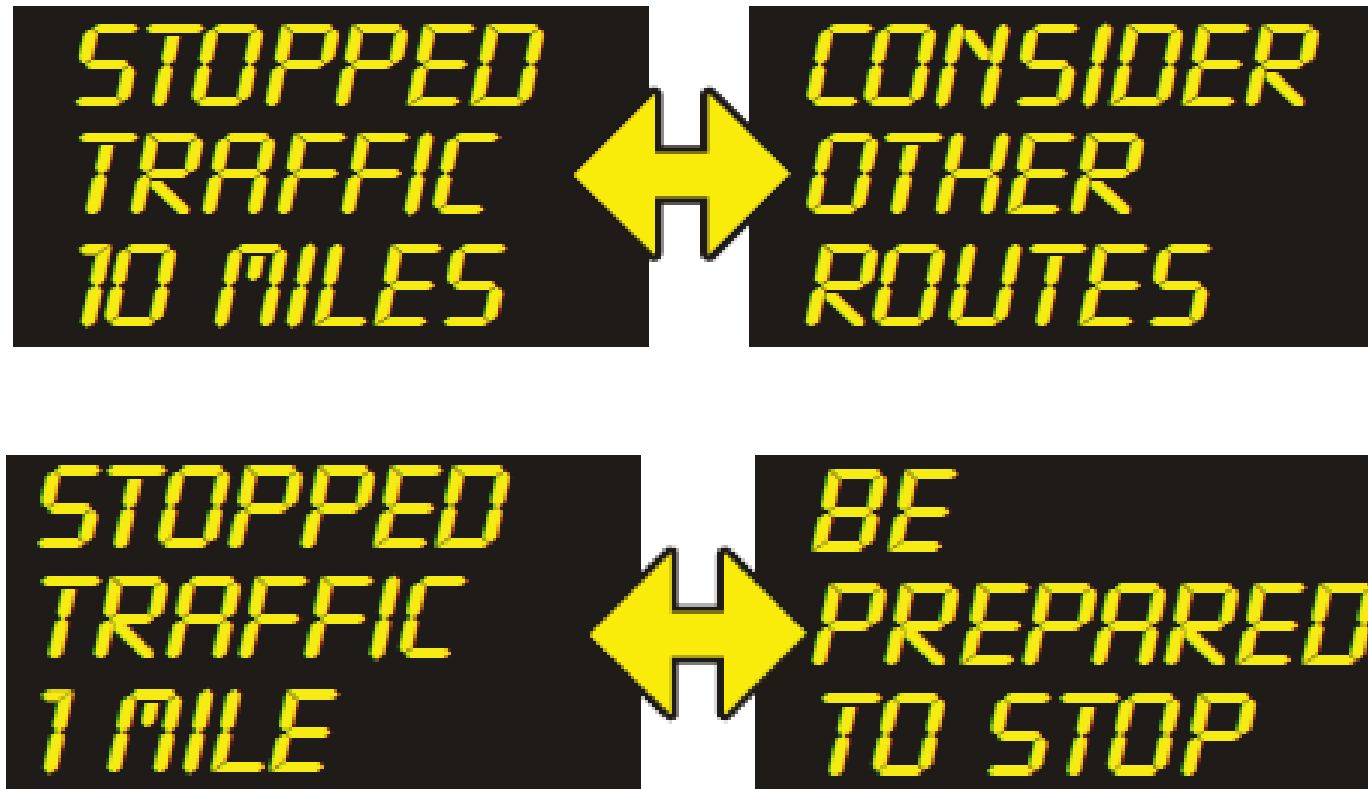
○ End of Queue Monitoring and Warning



WORK ZONE SAFETY IS JOB ONE AT CALTRANS



Automated Work Zone Information Systems



WORK ZONE SAFETY IS JOB ONE AT CALTRANS



○ Future Devices



Variable Speed Limit Signs

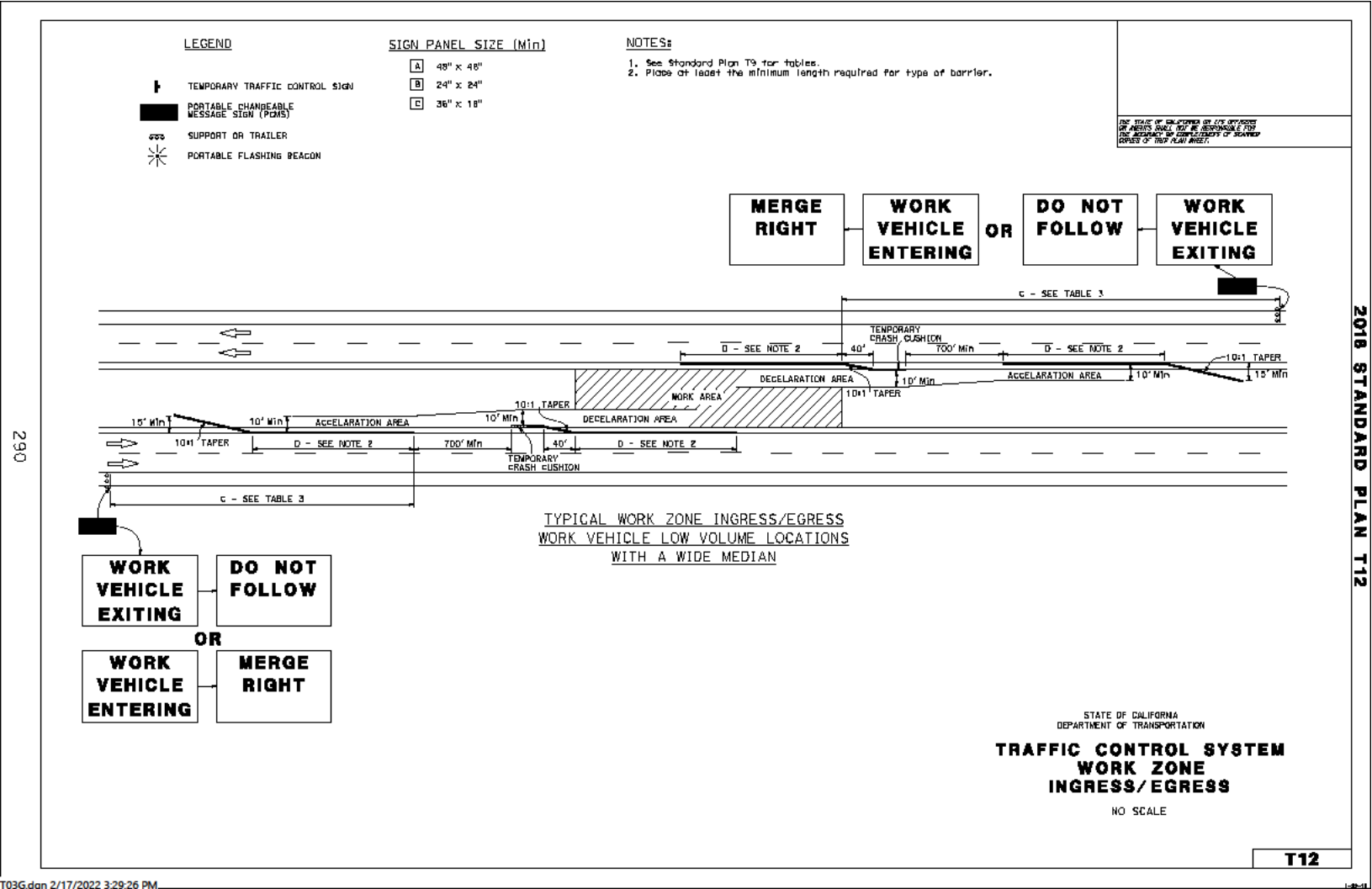
WORK ZONE SAFETY IS JOB ONE AT CALTRANS



○ Future Devices



Construction Entrance and Exits



WORK ZONE SAFETY IS JOB ONE AT CALTRANS



○ Updated Devices



Portable Signal Systems



Automated Flagger Assistance Devices



○ What's Next

- **How do we work together so that the ITS elements used in work zones are seamlessly connected to Traffic Management centers?**

AGENDA: January 22, 2026

TO: Interagency Technical Advisory Committee (ITAC)
FROM: Riley Gerbrandt, P.E., Associate Transportation Engineer
RE: Zero Emission Passenger Rail and Trail Project Update

RECOMMENDATIONS

Staff recommends that the Committee receive an informational update and provide input on the Zero Emission Passenger Rail and Trail Project's Final Concept Report.

BACKGROUND

The Regional Transportation Commission (RTC) is preparing a project concept report for passenger rail transit between Pajaro and Santa Cruz and the multi-use bicycle and pedestrian trail (Coastal Rail Trail) along the Santa Cruz Branch Line, including between Rio del Mar and Pajaro (Segments 13 through 20) and the Capitola Trestle (Segment 11, Phase 2). Work over the past year has included development of the purpose and need statement; loading guidelines for railroad bridge repairs and replacements; typical design cross sections; horizontal setback guidelines; initial and revised conceptual alignments; analysis of rail transit vehicle types and station locations; consideration of funding opportunities and integration with state and interregional rail plans; and regulatory requirements. Information on the project is online at: <http://www.sccrtc.org/zeprt>.

Public engagement conducted from October 2024 through May 2025 focused on the Project's updated conceptual alignment, potential station locations and features, quiet zones, infrastructure evaluations, funding and service.

From June through December 2025, the Commission received updates and provided comments on the development of the Project's draft and final Project Concept Report.

DISCUSSION

At its August 7, 2025, meeting, the Commission received an update and held a public hearing on the Draft Project Concept Report and financial analysis prepared in response to the Commission's June 2025 request. During that

meeting, the Commission directed staff to return in December 2025, and to respond to the following requests:

1. The Final Concept Report is released no later than two and a half weeks prior to the Commission meeting;
2. The final report include specific feedback from the Coastal Commission about any input they have that would add costs;
3. Specific discussion of constraints on Beach Street and Walker Street;
4. Specific financial analysis of cost per passenger mile that compares the costs of the ZEPRT system to others; and
5. Peer review of the Final Concept Report.

The ZEPRT Final Project Concept Report was published on October 24, 2025 on the RTC's project website at www.sccrtc.org/zeprt. The Final Project Concept Report considered feedback received from extensive public engagement and stakeholder coordination. A summary of the engagement activities and feedback received is available in the Milestone 4 Engagement Summary, available on the project website at www.sccrtc.org/zeprt under the "Engagement Opportunities" header.

At its December 4, 2025 meeting, the Commission received a staff response to its August 2025 requests. Below include staff response:

Final ZEPRT Project Concept Report Updates

Key updates in the Final Project Concept Report include a preface, next steps, and funding. A preface includes information on the purpose and intent to respond to the questions raised by our community, partner agencies, and the Commission about the feasibility and potential of implementing passenger rail service along the Branch Line rail corridor. The report also identifies potential next steps to help inform and progress future project activities by providing clarity on how the project can serve Santa Cruz County. In addition, the report outlined potential federal, state, and local funding sources and other options for phased advancements, which can be found in Chapter 20 of the Final Concept Report.

Coastal Commission Feedback

Early engagement has been conducted with the California Coastal Commission (CCC) throughout the project development. Key discussion have included reiteration of the CCC's permitting requirements, costal access, seasonal stations, whether the project is considered a new or existing facility and its can be considered a costal-dependent use, and approaches to address anticipated bluff retreat. While limited information or direction has been provided by the CCC, the team anticipates the CCC require additional mitigation measures, such as enhanced costal access and/or seasonal

stations that could change the projects footprint, travel times, and capital & operational cost.

Constraints on Walker Street in Watsonville and Beach Street in Santa Cruz

In the central Watsonville, constraints along Walker Street include limited street right-of-way, and challenges to support a new station platform at the historic Downtown Watsonville Depot location. The current conceptual rail alignment includes a slight shift of the Branch Line to the east of the Walker Street footprint, which helps resolve some of the constraints. A final rail alignment through Watsonville will be defined through future analysis and stakeholder coordination.

In the Beach Flats area of Santa Cruz, the current alignment carries significant complexities due to conflicting priorities, such as visitor access and safety, parking, maintenance and operations, vehicular traffic and pedestrian circulations, and costal constraints. Alignment alternatives have been considered including shifting the rail alignment farther north and placing it on an elevated guideway. The conceptual cost estimates an at-grade alignment for the ZEPRT baseline concept. Additional study will be required in future ZEPRT Project phases to confirm the final rail and trail alignment.

Project Cost Analysis

A memorandum ([Attachment 1](#)) was prepared which provides an overview of the factors affecting the conceptual capital costs and constructability of the ZEPRT project. This memorandum also includes comparison with capital costs and construction experience from a selection of other comparable rail transit projects in California.

The analysis relies on construction cost trends and discusses project cost estimate elements, the key drivers of those costs, and comparisons of those cost categories with similar elements on other transit projects.

Peer Review

A peer review of the ZEPRT project concept was held in Santa Cruz on November 17-19, 2025. The purpose of the peer review was to review the project analysis completed to-date and as presented in the Final Project Concept Report. Five panelists of statewide and local rail experts participated in the peer review process. Panelists participated in a tour of the Branch Line to observe the existing rail corridor and current conditions. The panelists provided feedback and recommendations regarding the Final Project Concept Report and how the RTC can best move forward to advance passenger rail service and a multimodal Coastal Rail Trail in Santa Cruz County.

A memorandum summarizing the peer review and recommendations is included as Attachment 2.

The Commission accepted the Final Project Concept Report and directed staff to continue pursuing state and federal funding to complete preliminary engineering and environmental review.

NEXT STEPS

Following the Commission's acceptance of the Final Project Concept Report, the next phase of the ZEPRT Project would be to complete the preliminary engineering and environmental analysis of the Project. Staff continues to seek full funding to complete this phase, however, there are very few available funding sources at the state and federal level for pre-construction components of capital projects.

SUMMARY

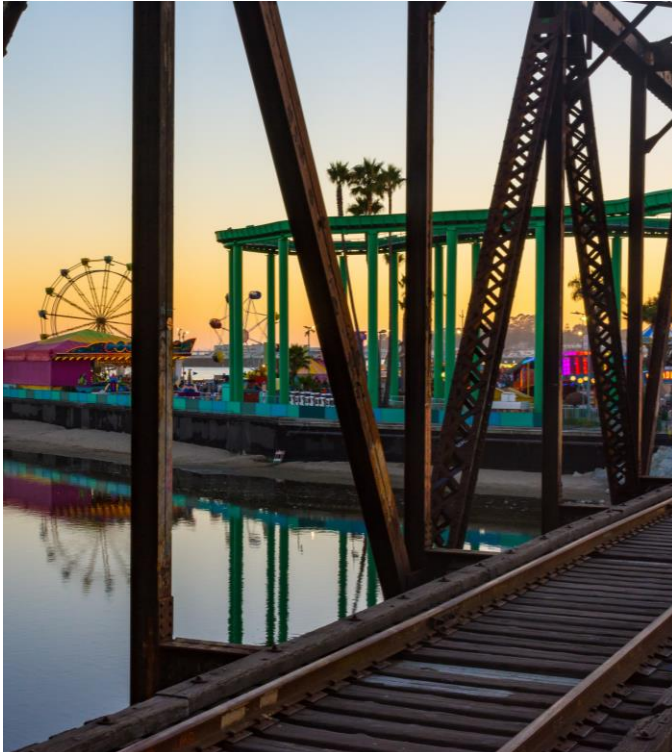
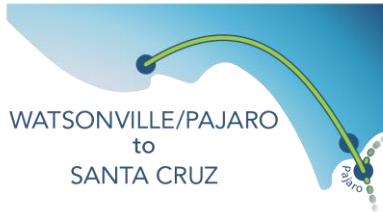
Staff will provide an update on the Zero Emission Passenger Rail and Trail Project's Final Concept Report. Input can be provided at the virtual open house at www.zeprt.com or via email to zeprt@scrtc.org.

ATTACHMENTS

- 1) Memorandum – Capital Cost Description and Comparison
- 2) Memorandum – Peer Review Summary and Recommendations

ZERO EMISSION

PASSENGER RAIL AND TRAIL



Capital Cost Description and Comparison Memorandum

November 20, 2025

SCCRTC Zero Emission
Passenger Rail and Trail Project



1.0 Introduction

This memorandum provides an overview of the factors affecting the conceptual capital costs and constructability of the Santa Cruz County Regional Transportation Commission's (SCCRTC's) Zero-Emission Passenger Rail and Trail (ZEPRT) project, in addition to a comparison with capital costs and construction conditions encountered by a selection of other rail transit projects in California. The ZEPRT Project proposes implementation of new passenger rail service approximately 22 miles of the Santa Cruz Branch Rail Line (SCBRL) extending from Pajaro in the east to Santa Cruz in the west.

This memo begins with an overview of recent construction cost trends, followed by a description of the various cost elements in the conceptual estimate, the key drivers of those costs, and comparisons of those cost categories with similar elements on other projects.

2.0 Construction Cost Trends

When undertaking a comparison of capital costs between projects, it is important to distinguish between estimates of future costs for a conceptual project where the scope is not fully-defined (such as the current stage of the ZEPRT project) and actual construction costs from past projects (occurring at an earlier time and a different place). This brief summary of cost trends will focus on cost trends for common construction elements over time.

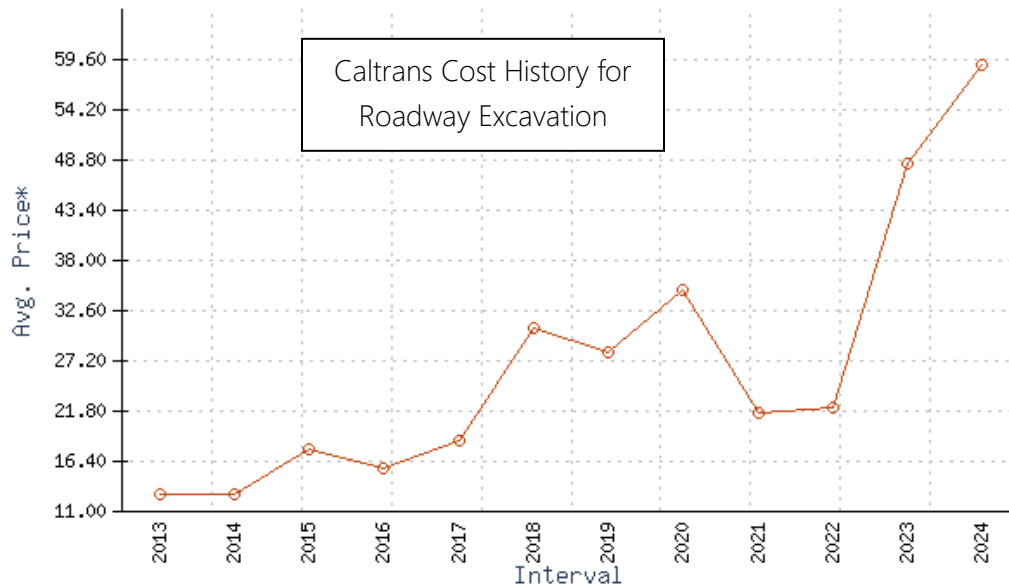
The timing and schedule of a project has an effect on the cost. While accelerating the delivery typically increases construction costs, the year in which expenditures were, or would be, made also affects the total cost. This is particularly important to consider when comparing actual construction costs from past projects with projections of construction costs for a future project, such as the ZEPRT project. The time value of money and inflation have significant effects on costs, making direct comparisons challenging.

It is worth noting that the overall competitive environment at the time of construction also has a significant effect on costs. If, for example, specialty contractors for important items such as railroad track construction or railroad signal construction are forecasted to be particularly busy on other projects (as they are in the current environment in late 2025), pricing for those items will be relatively high and cost estimates may reflect that situation. Similarly, competition for materials, such as Buy America-compliant steel (used for reinforcing in concrete and, most significantly for the ZEPRT project, railroad rail), increases the cost of those items.

Many heavy civil construction projects involve similar types of work as the ZEPRT project. For example, Caltrans provides historical cost data for roadway projects, which due to the similarities in construction activities, can be used as a reference for cost trends. The following graphs illustrate these trends.

2.1 Cost for Roadway Excavation

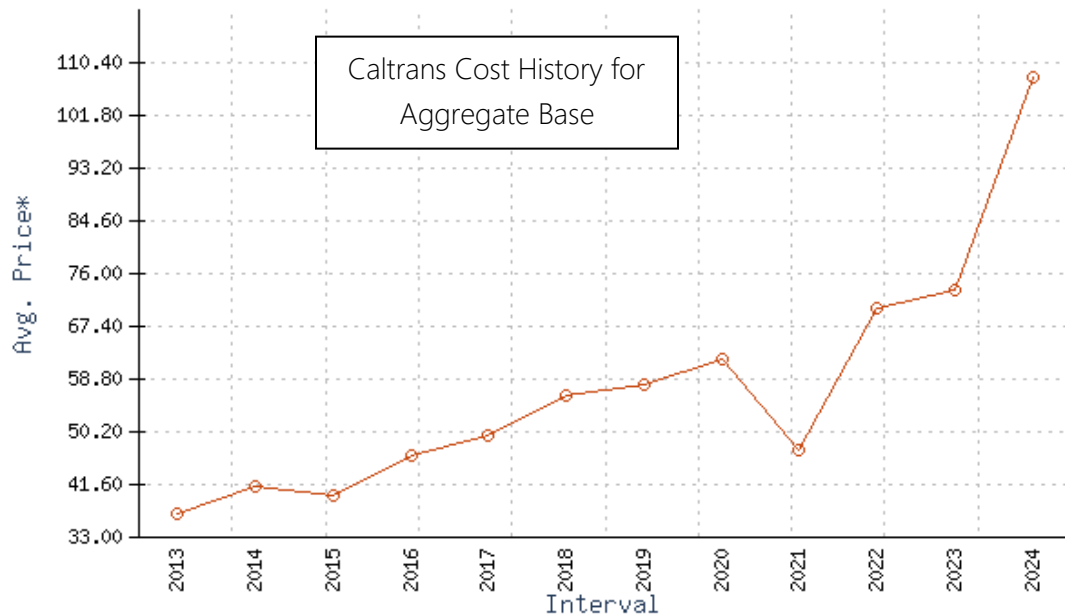
The graph below illustrates the cost for Roadway Excavation, the description Caltrans uses for excavating soil within the prism of a roadway. This would be a comparable activity to the excavation needed to prepare the SCBRL corridor for the new railbed and trail. Other than a brief dip during the Covid-19 pandemic, the average bid cost of Roadway Excavation has increased dramatically from 2013 to 2024, with the statewide average increasing by a factor of approximately 4.6 from year 2013 to year 2024.



* Average price is weighted by the quantity of the item used.
Note: All districts' and all years' data used to generate graph.

2.2 Cost for Aggregate Base

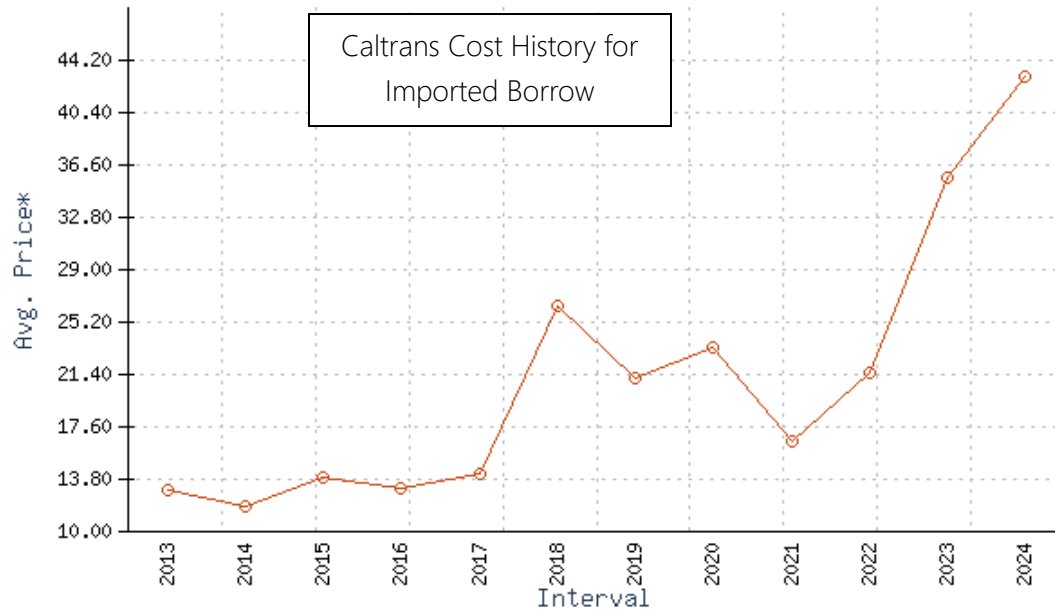
Another item common in construction projects is Aggregate Base, which is used as the granular material underlying the asphalt or concrete on paved roadways and is comparable to railroad subballast. Similar to Roadway Excavation, the statewide average bid cost of Aggregate Base has increased dramatically in recent years, by a factor of approximately 3 from the year 2013 to the year 2024.



* Average price is weighted by the quantity of the item used.
Note: All districts' and all years' data used to generate graph.

2.3 Cost for Imported Borrow

The cost for imported borrow (soil imported from off-site locations, used to build embankments) has also increased, from \$12.98 per cubic yard to \$43.04 per cubic yard, a factor of 3.3 from 2013 to 2024.

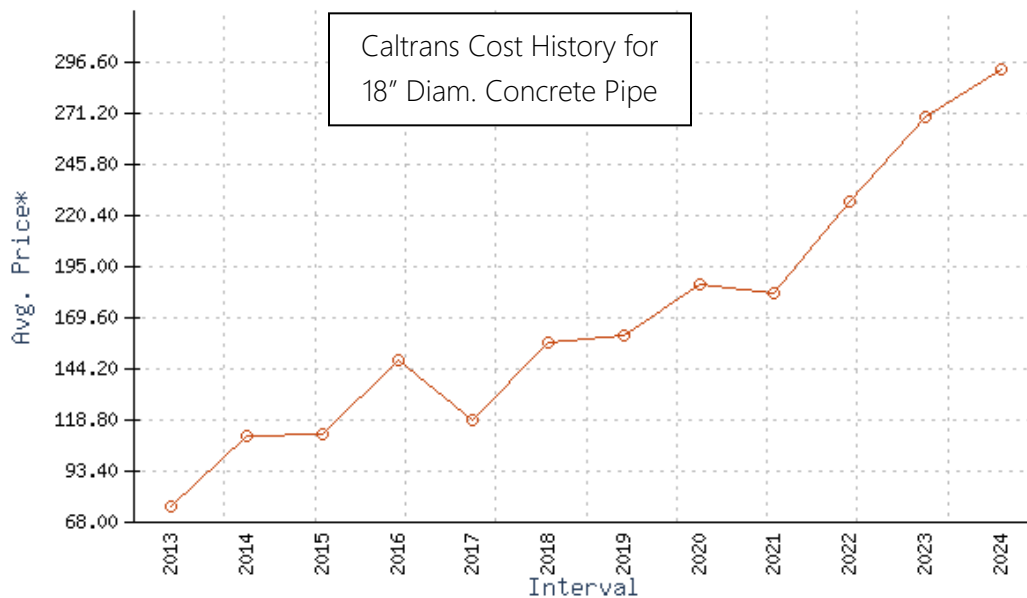


Interval	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Avg. Price*	\$12.98	\$11.88	\$13.91	\$13.16	\$14.19	\$26.40	\$21.08	\$23.34	\$16.56	\$21.58	\$35.72	\$43.04
Project Count	49	51	53	61	48	60	54	73	63	84	58	61

* Average price is weighted by the quantity of the item used.
 Note: All districts' and all years' data used to generate graph.

2.4 Cost for Other Construction Items

The cost for other construction items, outside of earthwork, has similarly increased. For example, the cost of 18" diameter concrete pipe, which would be typical of storm drain pipe, is illustrated below. The cost of concrete pipe increased from \$76.13 per linear foot in 2013 to a cost of \$292.66 per linear foot 2024, a factor of approximately 3.8.

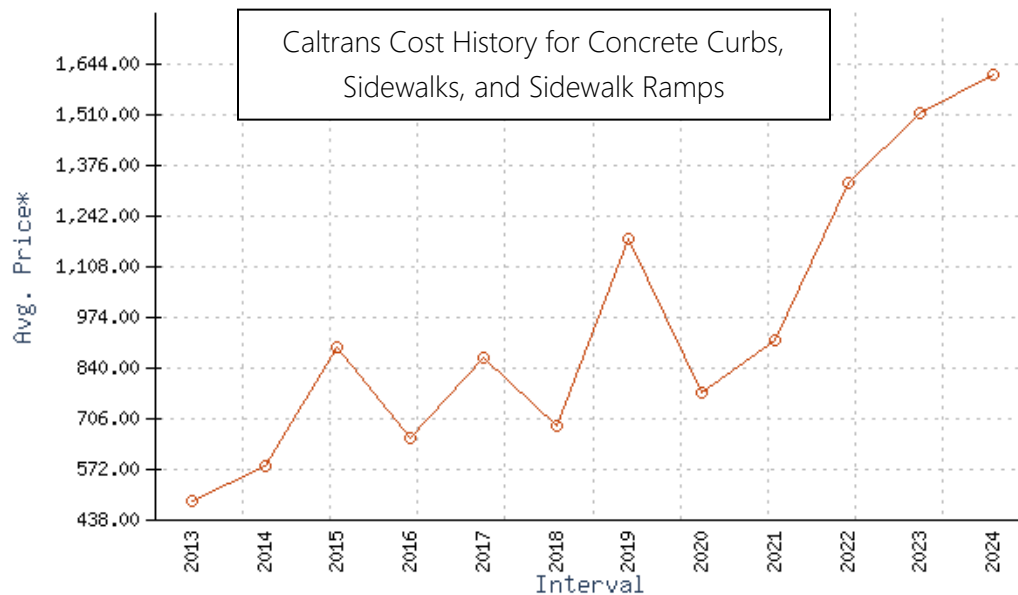


* Average price is weighted by the quantity of the item used.

Note: All districts' and all years' data used to generate graph.

2.5 Cost for Concrete Curbs, Sidewalks, and Sidewalk Ramps

The price for unreinforced concrete placed for curbs, sidewalks, and sidewalk ramps has also increased; while these prices have been more variable, the upward trend is still clear. From a low of \$487.20 per cubic yard in 2013 to a high of \$1,615.92 in 2024, the cost has increased by a factor of 3.3.



* Average price is weighted by the quantity of the item used.
Note: All districts' and all years' data used to generate graph.

2.6 Cost Trend Summary

Note that the above graphs illustrate statewide averages for construction costs across all projects, both large projects with large quantities of these items and smaller projects with lower quantities. The project count (shown in the bar at the bottom of each graph) is helpful in understanding how many projects included these particular items of work. For instance, an item occurring on relatively few projects might have more variation in the actual pricing, since one project with a very high or very low cost could disproportionately affect the average that is shown in the graphed line.

Nonetheless, there is a clear trend of significant price increases for these foundational items of civil construction. (A similar trend of increasing prices can also be seen in data from other state

departments of transportation.) It is important to remember this overall trend when making comparisons with projects bid and constructed 10 or more years ago.

The causes of these price increases are varied, ranging from scarcity of skilled construction labor, to raw materials input price increases (and potential uncertainty due to tariffs), to fuel and energy cost increases (which ultimately affect every activity and input), to interest rates (which affect construction contractors' carrying costs). Some portion of these price increases also reflect the recent construction environment: with many large civil construction projects being undertaken in the last few years, each project competes for the same pool of resources.

3.0 Elements of the ZEPRT Construction Cost

The ZEPRT project cost estimate has been organized generally in accordance with the Federal Transit Administration Standard Cost Categories (SCCs). Similar SCCs are also used by the Federal Railroad Administration.

1. Guideway and Track Elements
2. Station Stops, Terminals
3. Support Facilities: Yards, Shops, Admin Buildings
4. Sitework and Special Conditions
5. Systems
6. Right of Way, Land
7. Vehicles
8. Professional Services
9. Contingency


The nature of each SCC will be discussed with respect to the ZEPRT project, and in comparison with other transit projects.

3.1 Guideway and Track Elements

Note that the Guideway and Track Elements SCC is defined on a route mile basis, including the cost of sidings and second tracks within the route mile unit cost.

Guideway: The SCC "Guideway" includes the subballast (the engineered material that underlays the track and ballast), finishing the subgrade and subballast, ditching, track-related drainage, underdrains, and asphalt (HMA) for the trail. After preparation of the new subgrade, new subballast would be placed on the final alignment.

Aerial Structure: the SCC "Aerial Structure" refers to bridges. The quantity of bridges on the ZEPRT project and construction challenges associated with most of the ZEPRT bridges distinguish the ZEPRT project from other, recent, transit projects. By comparison, the bridges on most other recent transit



projects, such as the SMART project, are mostly shorter in height, length and had better access than those on the ZEPRT project (though there were exceptions on each transit project).

The ZEPRT project includes over 20 bridge locations, many of which require complete replacement, are tall, require long clear spans, feature difficult construction access, and/or are located in environmentally sensitive areas. Any one of these characteristics increases the complexity and therefore the cost of a structure. However, in the case of structures such as the Capitola trestle, San Lorenzo River bridge, or the bridges over Valencia Creek and Aptos Creek, all four characteristics are present.

There are several other bridges and timber trestles with similar characteristics, such as the timber bridges located along the largely inaccessible section between Buena Vista Drive and Harkins Slough, each of which would need replacement.

The availability of space adjacent to and at the ends of each bridge for staging heavy equipment (such as cranes and earthmoving equipment) and construction materials is a critical driver of productivity for a construction contractor.

While the necessary amount of staging area and access is dependent upon the length, type of bridge and substructure, in general, the staging areas that promote the most efficiency are larger and wider than the structure being constructed. These larger and wider staging areas would also allow access adjacent to at least one side of the proposed structure. In the case of the ZEPRT project, this means that in order to maximize efficiency, the ideal staging areas would extend outside the SCBRL right-of-way. In almost no bridge locations along the corridor does such space exist.

There are several cost implications due to the narrow corridor on the various bridges. For example, if only one piece of equipment at a time can reach a bridge site due to a narrow approach corridor, or if equipment can only reach the bridge site from one end, construction may need to proceed sequentially, without the possibility of multiple activities being performed simultaneously. The sequential constraint reduces construction efficiency. In practice, sequential construction also increases schedule risk, since the contractor's ability to embark on any one step of construction becomes dependent upon completion of all preceding steps and any delay impacting an early activity may affect subsequent activities.

A comparison of construction conditions is shown in the following photographs.



Photo illustrating construction work for replacement of an existing railroad timber trestle at San Elijo Lagoon in San Diego County. Note that at San Elijo, the new bridge was wide enough for two tracks (rather than the single track used for most bridge on the SCBRL) and was constructed adjacent to the existing track in order to maintain that track in operation. Conversely, the ZEPRT bridges would typically be only one track wide and would be constructed on the existing track alignment. However, the width of the freshly-graded area the contractor is using for a laydown pad, materials storage area, and crane work area is indicative of the space needed for bridge construction. Photo from SANDAG website.



Photo illustrating construction work for replacement of the Santa Ana River bridge for the SBCTA Arrow project and laydown area for equipment and materials on both sides of the bridge. Photo from SBCTA website.



Photo illustrating constrained construction location at the timber trestle approaches to the Capitola bridge. All construction activities, including pile driving or shaft drilling, as well as staging of materials would need to occur in an area approximately 40 feet wide. It is likely that the existing timber structure would need to be disassembled piece-by-piece, since conventional wrecking equipment could risk damage to adjacent homes.



Photo of the Capitola truss bridge, viewed from Stockton Avenue. Access to the main truss span across Soquel Creek from either end is extremely limited. It may be necessary to construct temporary falsework in the water – essentially a temporary bridge under the existing bridge – in order to provide a stable work platform for disassembly of the existing structure and construction of the new bridge. Photo from Google Earth.

Adding to complexity of several bridges is the need to retain their iconic design forms. For example, the main spans of the bridges at Capitola and San Lorenzo River are truss bridges, with a lattice-like structure. Both bridges would need to be replaced with new structures. At this early stage, to maintain visual consistency with the existing conditions, it has been assumed that the replacements would also need to be some kind of truss span to echo the design form of the existing bridges. However, these truss bridge designs will be substantially more expensive than other modern bridge designs (such as plate girders).

The need for replacement of many bridges distinguishes this project from several other transit projects which have been able to leverage existing bridges for their operations. For example, the North County Transit District's (NCTD) Coaster commuter rail service continued to operate on numerous timber trestles for many years. But, when NCTD assumed maintenance responsibility for that line, the bridges were all in serviceable condition. And, in most locations along the NCTD Coaster corridor, there was ample right of way adjacent to each existing structure to allow for construction activities. That additional right-of-way allowed NCTD to construct new bridges on entirely new alignments adjacent to the existing timber structures, leaving the existing timber structures in service.

Conversely, the ZEPRT corridor is very narrow, and, even if some of the bridges (particularly timber bridges) were deemed to be serviceable for use in the near-term, they would eventually need replacement. In many areas the surrounding land uses would not allow for the new track alignments that would be needed to build a new, replacement structure adjacent to the existing structure. Thus, once passenger service commences, removing a bridge from service for replacement would interrupt operations for some time, possibly several months, depending upon the construction conditions at a particular location.

Guideway: Retained Cut or Fill: This SCC refers to retaining walls along the corridor. Much of the existing SCBRL corridor is constructed on hillsides, ranging from relatively shallow slopes (as in the area near Mar Vista Drive) to relatively steep slopes (as in the area near Manresa and the area between Harkins Slough and Buena Vista Drive). This means that the existing ground on one side of the corridor is higher than the track, while the other side is lower than the track. In the relatively narrow corridor, areas of side-hill topography require that retaining walls would be required to accommodate track shifts, such as those necessary to accommodate a trail or realignments to accommodate curve realignments or passing sidings.

As with the bridges, retaining wall construction requires space for staging and positioning materials, driving trucks carrying cement or steel, etc. And, as with the other construction activities, the constrained corridor means that construction productivity would be low and unit costs would be relatively high. An initial estimate includes nearly 25,000 linear feet (approximately 4.7 miles) of

retaining wall. At this early level of development, it is not yet known whether the retaining walls would be cut (excavating into a hillside) or fill (adding material to the top of a slope). The latter is often less expensive than the former, but topographic features would dictate which approach is feasible in any given location.

Track: Ballasted and Track: Embedded: This item is relatively self-explanatory, and includes costs for construction of the rail, ties, and ballast for both the main line track and sidings, as well as track through grade crossings with crossing panels, and ballasted track that is embedded in asphalt or concrete within the streets (such as Beach Street in Santa Cruz and Walker Street in Watsonville), and ancillary hardware like insulated joints. In many areas along the corridor, the track is assumed to be shifted to a new alignment to allow sufficient space for the trail.

Note that, by comparison to other projects, the ZEPRT project includes many grade crossings, as well as track in streets, which have significantly higher track construction costs than regular ballasted track. To minimize disruption to roadway traffic, track reconstruction at grade crossings typically occurs at night, or during compressed time frames like weekend closures. The construction contractor must also provide a new roadway surface across the track, as well as roadway detours and flagging during construction. These constraints increase construction costs substantially; historically, track construction at grade crossings is an order of magnitude more expensive than “regular” track outside of at-grade crossings.

As with other construction items, the narrow right of way and limited access will impact track construction logistics and costs. For example, on many other projects, the new rail has been delivered by train in 1600' lengths, and the tens of thousands of new ties delivered by railcar, all distributed alongside the locations where they would be placed. Those projects had serviceable rail lines to facilitate those deliveries. Since the SCBRL is out of service west of Watsonville, there is no viable rail access to much of the corridor. Thus, Watsonville would be the nearest location for delivery of these materials (if a suitable staging area could be found). The materials would then need to be trucked to their final location for installation. While trucking of ties short distances is typical, the need to truck rail to every location implies that the rail would likely be delivered in 80' lengths to be welded together on-site, as opposed to being delivered in the 1600' lengths produced by rail mills (delivered on special trains directly to the point of installation), which offer cost efficiencies. Moreover, the materials would need to be moved-in from a limited number of access points, with limited or no space to store materials on the grade, meaning many trips with equipment to move materials to their final locations as track construction advances (and thus precludes access where track has already been constructed).

Track: Special: This SCC includes turnouts on the main line for passing sidings and spurs, as well as switches for the gauntlet tracks, but excludes the turnouts within the maintenance facility. While there are a range of turnout sizes and configurations to match the constrained geometry at several locations, all costs are included in this single line item.

3.2 Stations

This SCC accounts for the nine at-grade stations, each of which includes a 350-foot long, raised concrete boarding platform that is long enough for two ZEMU trains coupled together. The platform would be configured to comply with Americans with Disabilities Act (ADA) and National Fire Protection Association's (NFPA) Standard for Transit and Passenger Rail Systems. Platforms would be equipped with passenger shelters, lighting, and passenger display information systems.

This station configuration is comparable to stations on similar corridors, such as the ARROW or Sprinter services in southern California, or the SMART service in northern California. The two southern California services provide low-floor, level-boarding, similar to that proposed for the ZEPRT project, with generally similar platform configurations (note that SMART provides high-level boarding, with platform surfaces typically 42" or more above top of rail).

ADA requirements for level boarding between the platform and the vehicle effectively dictate the need for high-level platform at each station, close to or at the same elevation as the floor of the vehicle. For the ZEMUs currently under consideration, this would require a platform elevation on the order of 15" to 24" above the top of rail. However, to comply with CPUC's General Orders for clearance requirements for mixed freight and passenger operations, which requires 8'-6" clear distance from centerline of track) the ZEPRT project would use gauntlet tracks at the stations to shift freight trains away from the platforms. Where stations have two platform tracks, the gauntlet would only be installed on one side. This is same approach SMART has taken.

It has been assumed that Transportation Agency for Monterey County would construct the main elements of the Pajaro station, such as the main line passenger platforms along the Union Pacific tracks, the upgrades to the station building, and the parking lot; only the platforms and platform tracks specific to the ZEPRT project (i.e., used solely by ZEPRT trains) would be constructed by the ZEPRT project.

3.3 Support Facilities

The support facilities include the vehicle maintenance and storage facility and operations control center. The maintenance facility would be designed to accommodate the fleet of ZEMU vehicles, including track storage space, enclosed maintenance space for daily inspections and preventative maintenance as well as heavy overhauls, hydrogen refueling facilities, train wash facilities, wastewater filtration facilities, crew locker rooms, restrooms, and office space from which daily operations (including dispatching) would be managed. This particular SCC also includes the track within the yard facility.

The capabilities of the proposed facility would be similar to those of the Sprinter DMU maintenance and operations facility in Escondido or the SMART DMU maintenance and operations facility near Santa Rosa.

The facility has been preliminarily located at the east end of the line, in Watsonville, for operational reasons: early morning trains would likely originate at nearby Pajaro station to start each day to allow trains to operate in the direction of heaviest commute. To find sufficient space, the entire facility site would need to be on property acquired from private landowners. This area is in a flood plain and portions of the facility, particularly the buildings, would need to be raised above the 100-year flood elevation. This would necessitate a significant amount of imported fill material. Some of this material could be sourced from other excavations along the corridor.

The ZEPRT maintenance facility presents an opportunity for value engineering. Additional operational analysis may indicate that the facility could be located at the far west end of the corridor, in West Santa Cruz, where the facility may be able to occupy existing SCCRTC right of way and avoid the major land acquisition and flood plain issues. If the main maintenance facility were located in West Santa Cruz, a small train storage area at the Pajaro station would also be needed to provide overnight layover capacity for several trainsets in order to have trains in position for the morning commute. Relocating the maintenance facility to West Santa Cruz may also require additional passing sidings mid-route to facilitate equipment positioning trips at the beginning and end of each operating day, with the attendant crew, fuel, and vehicle maintenance expenses. The trade-offs would need to be analyzed to assess whether a West Santa Cruz location would make sense from financial and operational perspectives.

3.4 Sitework and Special Conditions

The major cost drivers in this SCC are demolition and earthwork, utility relocation, hazardous materials, temporary facilities, and indirect costs during construction.

Demolition, Clearing and Earthwork: This SCC includes clearing trees and debris, demolition of existing infrastructure and track, and new earthwork (grading) for the new track and trail. Earthwork was estimated based on the conceptual track profile. Where that profile resulted in the new track section being above the existing ground (after removal of the existing track), it was assumed that fill would be needed. Where that profile was at or below existing ground, it was assumed that excavation (cut) would be needed. Other allowances were made in areas of sidehill territory. However, it is important to remember that at this early conceptual stage, there was not enough existing information to prepare an earthwork model which could be used to estimate quantities. Thus, the grading plan is not yet known. The current quantities were estimated from photographs and plan views and, while they are believed to be conservative, that assumption would need to be validated.

In the case of the ZEPRT project, the earthwork and grading effort is anticipated to be extensive. In many areas, the track must be shifted to a new alignment to provide space for the trail in the comparatively narrow right of way. Even where the existing track is not being shifted, the existing track and ballast are not suitable for use in a passenger rail operation, are heavily fouled with fine dirt,

and require replacement. To address these conditions, the existing track and ballast would be excavated and replaced with new material.

Complicating the earthwork is that, in the narrow right-of-way, construction access will be challenging. In many areas the earthwork will occur on side-hill terrain, exacerbating the space constraints. This means that the productivity of construction crews will be limited.

For example, in many areas there may be insufficient width for a truck to turn around, much less space for earthmoving equipment to load trucks from the side, necessitating long backing moves and forcing excavation spoil to be loaded onto dump trucks from the end of the truck by excavators (typically limited to one to three cubic yards of material per bucket), rather than from the side by end loaders (which could handle six or eight cubic yards of material per bucket, but which require substantially more maneuvering room adjacent to each truck). As a result of the change in earthmoving equipment type and associated reduction in equipment bucket size means that crew and machinery productivity would be reduced by half or, alternately, require twice as long compared to the same activities performed in a non-confined corridor. This is one example of the practical cost implications of construction in a narrow right-of-way.

These images illustrate the constrained ZEPRT corridor, compared with other recent transit project corridors follow.



Example of ZEPRT side hill alignment east of Buena Vista Road. Track is located on a narrow shelf with steep embankments on both sides of the track.

This is one of the steeper areas of the corridor, though other steep areas, like the bluffs at Manresa, have similar construction constraints.



Example of ZEPRT corridor near 47th Ave in Santa Cruz. While flat, construction activities would be constrained by the narrow right of way (approximately 35' wide) and the need to protect mature trees and their root systems on the north side of the right-of-way.

By comparison with other west coast transit projects, access for grading activities on the ZEPRT project is much more restrictive. The same constraints also affect the ability to stage and place materials such as rail, ties, ballast, subballast, structural fill, retaining wall components, and other items.

Although a mile-by-mile inventory of construction constraints has not been developed, there are obvious constraints along several sections of the corridor. For example, the section of the corridor from Seabright to Capitola, while relatively flat, is constrained by narrow right-of-way with development on both sides and access only from grade crossings. The section from Capitola to Rio Del Mar is, in many areas, on an embankment, on a sidehill, or in a cut. The same is true for the section from La Selva Beach to Harkins Slough, through this area has the further constraint of environmentally sensitive areas. Together, these constrained areas comprise more than half the distance from Santa Cruz to Watsonville.

Conversely, on many other transit projects the corridors were mostly flat, allowing contractors to easily maneuver equipment and stage material without restriction. The flat corridors on other projects also meant that sloping embankments, cuts, and retaining walls were minimized, thus saving substantial space and cost, even in constrained locations.



Example of relatively flat right of way along SMART corridor at East Railroad Avenue crossing. Corridor is relatively flat and approximately 60 feet wide. Photo from Google Earth



Example of wide and flat right of way along SPRINTER corridor at North Drive crossing. Corridor is 100 feet wide, with ample space for construction activities and infrastructure. Photo from Google Earth.

Another key driver of guideway costs for the ZEPRT project is the additional grading needed to elevate the track at specific locations in order to account for sea level rise. This grading has a significant impact on the material quantities and construction costs at the narrow embankment in the vicinity of Harkins Slough (surrounded on both sides by wetlands), on the approach to the Pajaro River Bridge, and at the approaches to the San Lorenzo River bridge. At each location, the available working area is narrow and, like the situation with earthwork, creates inefficiencies for construction equipment operation and material staging. (Note that the additional grading for the track at the maintenance facility, which would need to be elevated above its current location for sea level rise resiliency, is included in the SCC for the maintenance facility itself.)

The project is expected to be a “net excavation” project, meaning that, despite the areas where there is additional fill needed to elevate the track for sea level rise, over the entire project there will be substantially more soil released from excavation than soil needed for embankment construction. This excess soil will need to be hauled away (possibly a long distance) and disposed of, which adds to the cost of the excavation.

The graphs illustrating cost inflation at the beginning of this memorandum are indicative of the change in price for excavation and fills. Specifically, the graph for “Roadway Excavation” illustrates the change that has occurred in excavation cost between the time other transit projects (e.g., those constructed in the 2010s) were constructed and this cost estimate for the ZEPRT project. When making comparisons to other projects, it is important to account for the effects of cost escalation.

Site Utilities, Utility Relocation: The ZEPRT project’s impact on existing utilities is not known; however, utility relocation and protection has historically been a major cost driver for many projects. Although the corridor is an existing rail corridor, the addition of the pathway will change the railroad alignment and thus shift the location where the track crosses some utilities, so protection for buried utilities (e.g., casings) may need to be extended. There may also be utilities parallel to the track within the right-of-way;; these parallel facilities would likely require relocation to make space for the trail and track.

The costs for utility relocations have been assumed to be significant, based on prior experience. As noted, additional design work would be needed to assess the extent of utility relocation and could result in significant changes in this cost. While some agreements between SCCRTC and the various utilities may theoretically place the cost burden of utility relocation on the respective utility owners, it has been assumed that the ZEPRT project will bear the costs for utility relocation.

Hazardous Materials: Similar to utilities past experience guided development of hazardous material costs. Where there were historically industrial uses (such as in Watsonville) or rail servicing facilities (as in Santa Cruz and Pajaro), there may be a possibility of contaminated soils. Where the rail line is adjacent to streets or freeways, there is a possibility of aially deposited lead that may increase the cost of soil disposal. This cost could be refined with further site investigation.

Environmental Mitigation: This SCC was specific to the salamander crossing which, based on the concept, would also need to be lighted. Other specific mitigations were not identified at the time the estimate was developed. (Note that an allowance for non-location-specific mitigations for water issues was included in the temporary facilities category, discussed below).

Pedestrian and Bike Access/Landscaping: This item includes landscaping, fencing, striping, and signage for the trail, as well as station pedestrian crossings and other bike trail elements that were not accounted for in the earthwork item.

Automobile Accessways, Including Roads and Parking Lots: This item includes the concrete flatwork and pavement upgrades in the immediate vicinity of grade crossings (this excludes both the roadway and railroad signalization at crossings, which are covered in other SCCs).

Temporary Facilities and Indirect Costs: “Temporary Facilities and Other Indirect Costs” includes contractor’s mobilization cost, bonding, insurance, traffic control, survey, flagging, and a significant amount (nearly half this item’s budget) for erosion control and mitigations assumed to be required for the coastal areas. As discussions with regulatory agencies such as the California Coastal Commission and the Central Coast Regional Water Quality Control Board progress, the cost impact of erosion control and mitigations could be further refined.

3.5 Systems

The Systems SCC includes the signal system that controls train movements, the positive train control system, the warning devices at highway-rail at-grade crossings and pedestrian crossings, the dispatching system that controls the railroad signals, the passenger information systems at station platforms, and new or upgraded traffic signal control systems, and voice radio network. Many of these systems (such as the railroad signal system, dispatching system, and positive train control system) need a secure data link; fiber optic cable laid along the track would provide this functionality.

This is a similar architecture, with similar infrastructure requirements to other transit and commuter rail systems, such as Sprinter, SMART, ARROW, and even to heavy rail systems like Caltrain and Metrolink in southern California.

3.6 Right-of-Way

This SCC includes right-of-way for the vehicle maintenance facility and associated yard tracks and access roads, which would be located on property currently in-use as farmland. While the vehicle maintenance facility is the largest single right-of-way acquisition, the concept design identified potential need for acquisition of parcels (in many cases, only partial acquisitions) along the main line alignment. These acquisitions account for infrastructure such as retaining walls as well as additional right-of-way near at-grade crossings, where additional space would be required for active warning devices and enclosures for electronic equipment. At this stage it is not possible to identify whether the partial acquisitions would in fact need to be full acquisitions due to impacts on the remainder parcels.

At this conceptual level, the uncertainty in the right-of-way impacts makes comparisons to right-of-way costs at other transit systems challenging. In addition, the nature of the acquired right-of-way (e.g., agricultural, residential, commercial, etc.), would be distinctly different from that at other transit systems, further complicating comparisons.

Note that refinements in design along the corridor could similarly result in refinements in the right-of-way impacts and costs. And if the scope of the maintenance facility, which represents the largest

single right-of-way acquisition, were reduced (as described above), the right-of-way cost would similarly be reduced.

3.7 Vehicles

The Vehicles SCC includes the zero-emission multiple unit (ZEMU) vehicles. The technology has not been determined, but the hydrogen fuel cell ZEMU vehicles recently delivered to San Bernardino County Transportation Authority's Arrow system are representative of the vehicles assumed for the ZERPT project. A supply of basic spare parts would also be included in the initial capital cost.

3.8 Professional Services

Professional services include planning, public outreach, coordination with other agencies, preliminary engineering, environmental documentation, final design, permitting, construction management, inspection and testing, program management, legal services, non-construction insurance costs, agency costs, and commissioning, testing, and start-up costs for developing and delivering the project. The Federal Transit Administration typically expects agencies to allow one quarter of project costs for professional services, a guideline followed for this conceptual estimate.

3.9 Contingency

At this stage, an approximate 40% contingency has been included to reflect the comparatively low level of design and uncertainties about scope or proposed work, constructability, existing conditions (such as utilities and environmental considerations), and cost escalation. The contingency percentage was selected prior to the current uncertainty in the international tariff schedule, which could affect costs for commodities which trade in international markets, such as steel (for rail and structures), concrete (for structures), and wood ties. The cost of fuel is also affected by international trade, and it also affects nearly every construction activity. This contingency percentage would be comparable to other projects at this early concept stage.

4.0 Summary

Cost estimates will continue to be refined as the ZEPRT Project advances through future design and environmental phases. The initial capital cost estimate includes a contingency typical of a project at this early phase of design. The contingency is intended to account for the risks associated with the environmental process and final design, as well as changes that may occur to the Project as development advances.

Additionally, considerations for cost savings could be evaluated in the following areas.

- Reduce the scope and reassess the location of the vehicle maintenance facility.
- Plan stations and assess amenities and right of way requirements at stations.
- Refine designs and for bridges and assess structure type at “signature” bridges.
- Incrementally advance design of earthwork to better understand the topographic constraints on the typical sections used for estimating. Such an effort would identify grading and drainage considerations and the interaction with the trail (which are currently based on assumptions). This process would also allow better identification of the extent of retaining walls (which have, to date, been estimated based on aerial imagery). This would also assist in refining right-of-way costs.
- Conduct additional constructability assessments for the entire corridor that could refine unit costs on a location-specific basis (e.g., adjust the unit cost of grading to reflect lower costs in flatter areas with better access and higher costs in steeper areas with poor access).
- Work with third parties (such as regulatory agencies and utilities) to refine assumptions and understanding of the scope of third-party impacts.



ZERO EMISSION PASSENGER RAIL AND TRAIL PROJECT

Peer Review Recommendations

November 2025



Overview

- **Held November 17-19, 2025**
- **Peer Review Panelists:**
 - **Carrie Schindler**, CEO
San Bernardino County Transportation Authority (SBCTA)
 - **Sam Sargent**, Directory, Strategy and Transformation
Valley Transportation Authority (VTA)
 - **Bill Gamlen**, Chief Engineer
Sonoma-Marín Area Rail Transit (SMART)
 - **Chris Shiels**, Principal/PMP
SSC Inc.
 - **Darrell Maxey**, Project Manager
RSE Corp (Retired Metrolink, Caltrain, UPRR)

Peer review panelists were selected for their relevant statewide and local rail and infrastructure knowledge and expertise, including active and retired representatives of regional public agencies and the private sector.



Agenda

- **November 17**
 - Project Overview
 - Corridor Tour
- **November 18**
 - Project Concept Deep Dive and Discussion
 - Development of Peer Review Observations and Recommendations
- **November 19**
 - Peer Review presentation to RTC staff and project team



Peer Review Purpose

Develop Observations and Recommendations to present to SCCRTC for consideration and implementation in future phases. Asked Peer Review to consider:

- Do you see the long-term benefit of maintaining freight and developing passenger rail service on the Santa Cruz Branch Rail Line?
- Is the estimated capital cost in line with industry practice for similar projects?
- Do you see any best practices to reduce costs?
- What else do you see as next steps the RTC could be doing to advance the project?





Big Picture

- The estimated cost of the project is high for the projected ridership. Securing enough grant funding coupled with setting a feasible tax measure target is challenging to fund both Capital and O&M.
 - There are opportunities to reduce costs, but not to fully fund capital and operations and maintenance without significant down-scoping.
 - Recognizes there is a value in connectivity the corridor provides in connecting communities from Santa Cruz, Watsonville, and points between.
- Important to preserve the corridor for future rail/transportation opportunities, given the surrounding transportation network is constrained.
- Explore railbanking approach to allow preservation of future rail/transportation use while constructing a trail in the near term.
- Project Concept Report was comprehensive and enabled a successful Peer Review.

Concept Report - Costs

- Better define the baseline rail project scope to ensure the project is not addressing non-rail needs (e.g., local street road widening with rail bridge replacement)
- Consider doing a cost comparison with recent projects/estimates from similar projects like SMART and SBCTA (using recent bid tab information).
 - Cost per mile seems high comparative to relatable projects.
- Messaging related to year of expenditure cost is important.
 - Value Engineer Maintenance Facility (e.g., reduce size and consider outsourcing heavy maintenance)
 - Look at reducing initial station footprints to two car consist.
 - Investigate ending rail service east of the Boardwalk and utilizing local circulator to service downtown and UC Santa Cruz, and consider future extension at later phase.
 - Consider options near 3rd Street and west of San Lorenzo River with bike/ped connectivity maintained over the river
 - Allows for Beach Train to continue operations and minimizes impacts to the Beach Flats neighborhood
 - Consider limiting freight service to the Watsonville area.

Concept Report - Operations

- Separate freight service (i.e., temporal separation) from passenger service to minimize impact to passenger rail service.
- Review SPRINTER operating model to determine if it is viable for an initial phase to simplify operating model, regulatory oversight and reduce initial costs.
 - Develop as a closed system with opportunity to connect later.
 - Investigate deferring initial cost of train control systems (i.e. interoperable train control) to a future date.
 - Ensure a simpler and reduced-scope initial project doesn't preclude future funding eligibility (e.g., Corridor Identification and Development).



Next Steps

- Investigate updating operating agreement to reflect current freight and Beach Train limits and allow for trail outside of active use areas.
 - Retain legal/railroad business and operations subject matter experts to assist the Commission
- Develop Corridor Maintenance of Way Plan.
- Consult with Caltrans to better understand preservation of corridor for rail if proceeding with trail first.
- Develop viable funding plan for capital and O&M that includes upfront activities such as completing environmental analysis.

Thank you!



AGENDA: January 22, 2026

TO: Interagency Technical Advisory Committee (ITAC)

FROM: Riley Gerbrandt, P.E., Associate Transportation Engineer and
Janine Ramirez, Engineering Intern

RE: Monterey Bay Sanctuary Scenic Trail (MBSST) Coastal Rail Trail
Southern Segments Project Update

RECOMMENDATIONS

Staff recommends that the Committee:

1. Receive an informational update on RFP 2603 for professional engineering services for the Project Approval/Environmental Document (PA/ED) phase of the Monterey Bay Sanctuary Scenic Trail (MBSST) Coastal Rail Trail Southern Segments Project that is currently out for solicitation, and
 2. Provide input on key interagency coordination needs for the PA/ED phase and identify staff participants for a Project Development Team (PDT) to assist and advise delivery of the project.
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BACKGROUND

The Santa Cruz County Regional Transportation Commission (RTC) issued Request for Proposals (RFP) 2603 on December 3, 2025, seeking proposals for the Project Approval/Environmental Document (PA/ED) phase of the Monterey Bay Sanctuary Scenic Trail (MBSST) Coastal Rail Trail Southern Segments Project; proposals are due January 27, 2026 at 12:00 p.m. (PDT). Information on the RFP is available at the RTC's Consulting Opportunities webpage available at <https://www.sccrtc.org/about/working-with-the-rtc/#consulting>, with the following a direct link to the RFP document: https://www.sccrtc.org/wp-content/uploads/2025/12/RFP-South-County-CRT-PAED_Combined.pdf.

As described in the RFP, the Project would implement Class I and Class IV multi-use bicycle and pedestrian facilities in and around the City of Watsonville, with connections to Coastal Rail Trail segments to the north. The RFP notes that right-of-way acquisition, utility relocations, and

temporary construction easements may be required depending on the final alignment.

The RFP further indicates the RTC is seeking standalone, project-level CEQA review for Segments 13–20 and notes the project is within the Coastal Zone, where the project-level EIR will require California Coastal Commission approval in some locations.

DISCUSSION

Solicitation status.

RFP 2603 is active and includes the following key procurement milestones: pre-proposal meeting (December 18, 2025), questions due (January 12, 2026), proposals due (January 27, 2026), optional interviews (February 10, 2026), anticipated Contract Award by the RTC Commission (March 5, 2026), and anticipated notice to proceed (March 26, 2026).

The RTC has solicited the City of Watsonville and the County of Santa Cruz for recommendations for representatives to participate in the RFP selection committee.

Partner agency coordination and PDT formation.

The PA/ED phase will require sustained coordination with partner agencies to support efficient project development, including alignment refinement, jurisdictional interface issues, local access/connection considerations, utility coordination, and environmental/permitting coordination (including Coastal Zone considerations). Staff intends to form a Project Development Team (PDT) comprised of selected members from partner agencies to meet periodically, review technical deliverables, raise interagency issues early, and advise RTC staff and the selected consultant team throughout delivery of the PA/ED effort.

NEXT STEPS

1. RTC staff will proceed with the consultant selection process consistent with the RFP schedule.
2. RTC staff will request that partner agencies identify a primary and backup PDT representative to participate in coordination meetings during PA/ED delivery.
3. Following notice to proceed, RTC staff will convene the PDT and provide periodic updates to ITAC as key milestones are reached.

SUMMARY

RFP 2603 for the MBSST Coastal Rail Trail Southern Segments PA/ED effort is currently out for solicitation, with proposals due January 27, 2026. RTC staff requests ITAC input on interagency coordination needs and participation in a Project Development Team that will assist and advise project delivery.

[https://rtcsc.sharepoint.com/sites/Planning/Shared Documents/ITAC/2026/Jan/Monterey Bay Sanctuary Scenic Trail \(MBSST\) Coastal Rail Trail Southern Segments Project Update/Monterey Bay Sanctuary Scenic Trail Coastal Rail Trail Southern Segments Project ITAC Update-Jan2026.docx](https://rtcsc.sharepoint.com/sites/Planning/Shared Documents/ITAC/2026/Jan/Monterey Bay Sanctuary Scenic Trail (MBSST) Coastal Rail Trail Southern Segments Project Update/Monterey Bay Sanctuary Scenic Trail Coastal Rail Trail Southern Segments Project ITAC Update-Jan2026.docx)