

TRANSPORTATION RESEARCH BOARD

Rail in the Time of Coronavirus - Planning, Operating, & Constructing Rail

December 2, 2020

@NASEMTRB
#TRBwebinar

PDH Certification Information:

- 1.5 Professional Development Hour (PDH) – see follow-up email for instructions
- You must attend the entire webinar to be eligible to receive PDH credits
- Questions? Contact Reggie Gillum at RGillum@nas.edu

The Transportation Research Board has met the standards and requirements of the Registered Continuing Education Providers Program. Credit earned on completion of this program will be reported to RCEP. A certificate of completion will be issued to participants that have registered and attended the entire session. As such, it does not include content that may be deemed or construed to be an approval or endorsement by RCEP.



REGISTERED CONTINUING EDUCATION PROGRAM

#TRBwebinar

Learning Objectives

1. Discuss the Valley Rail Program and Texas Central High-Speed Rail Project and the progress of these programs during COVID-19
2. Discuss the impacts of COVID-19 on passenger rail operations and planning

#TRBwebinar





Valley Rail Update

TRB Webinar: December 2, 2020

San Joaquins Overview

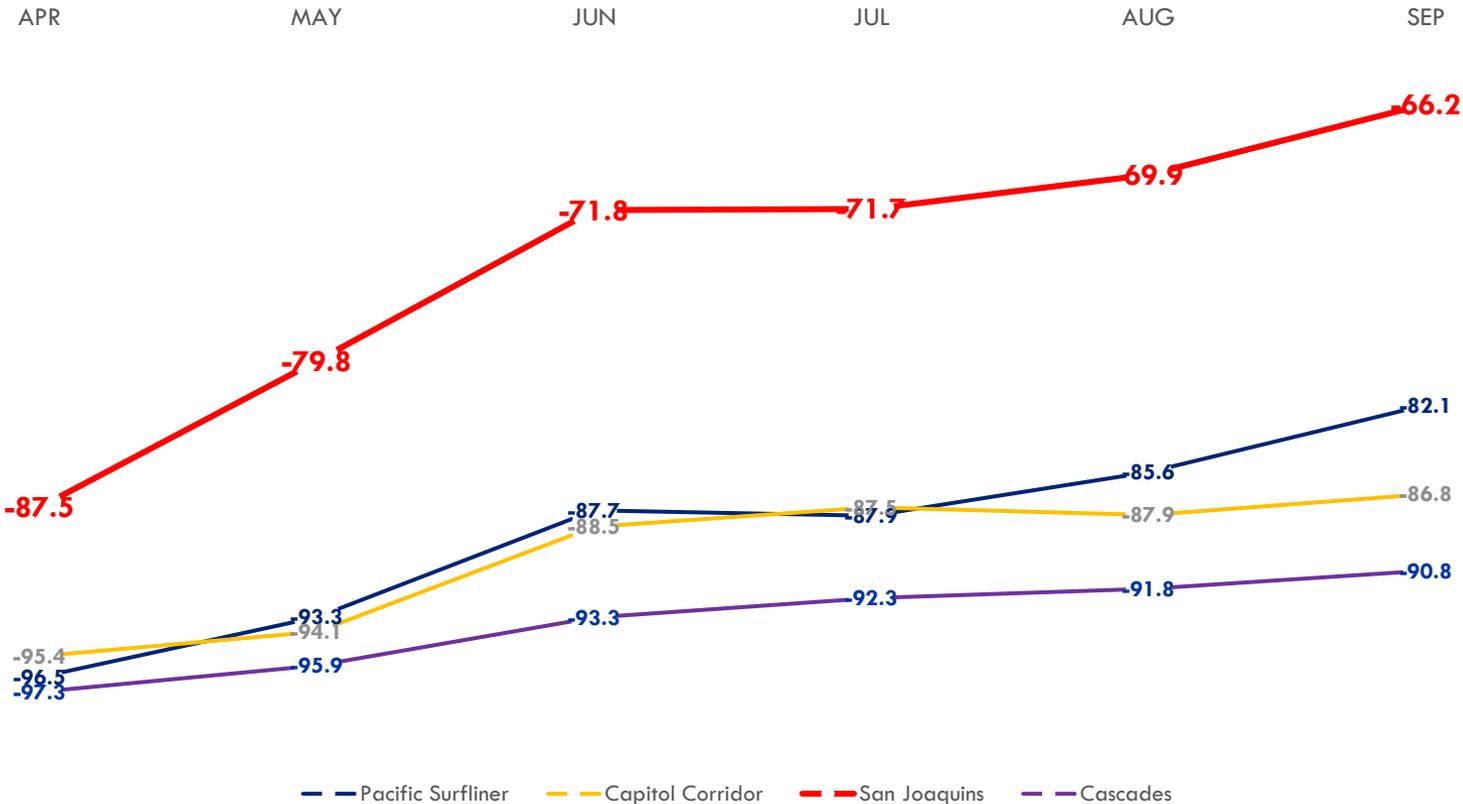
- **364 miles**
- **11 Counties**
- **Serves 18 Stations**
- **7 Daily Round-Trips**
 - 2 Between San Joaquin Valley and Sacramento
 - 5 Between Bakersfield and Oakland
- **1.1 million passengers a year**



San Joaquins Operations and Ridership/Revenue Update

San Joaquins Ridership Comparison

WESTERN ROUTES RIDERSHIP BY % YEAR OF YEAR (FY19 VS FY20)

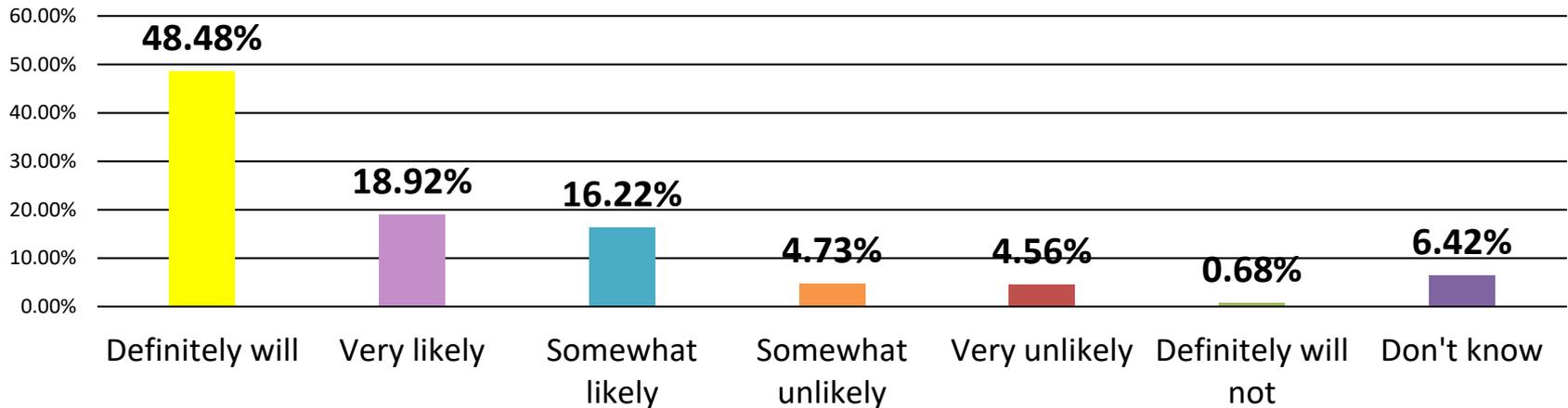


Altamont Corridor Express



2nd Round Passenger Health and Safety Survey
WHEN WILL RIDERSHIP RETURN?

Once the stay-at-home order is lifted, how likely are you to ride ACE again?

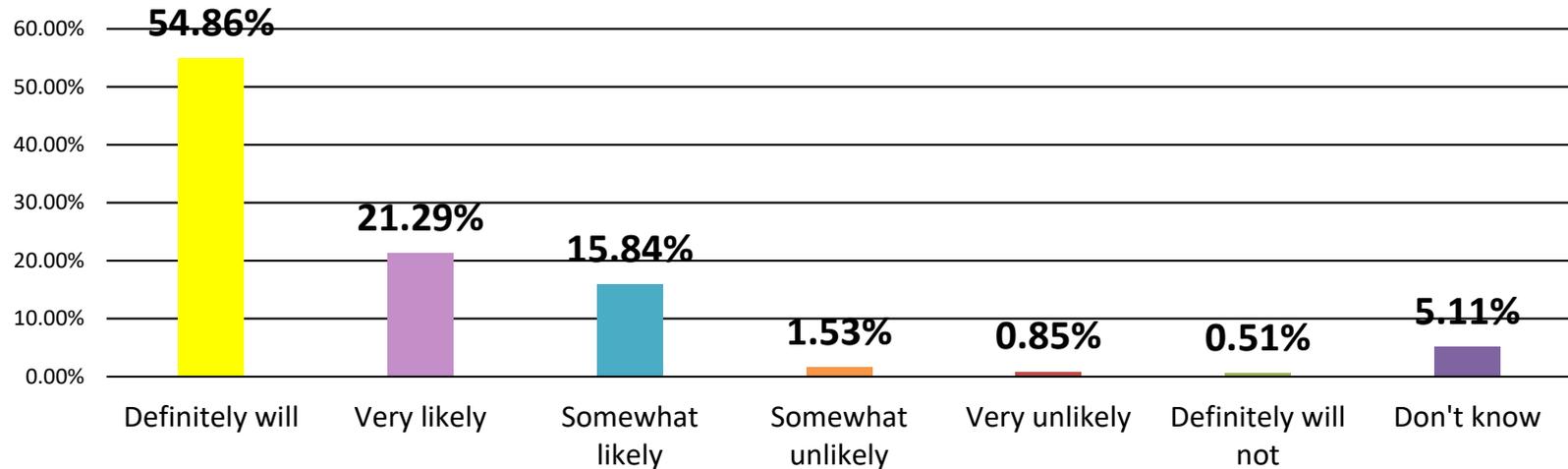


- Respondents indicate positive intentions to return to riding the service when the 'stay-at-home' order is lifted.
- 83% indicated at least a 'Somewhat likely' response.

2nd Round Passenger Health and Safety Survey

WHEN WILL RIDERSHIP RETURN?

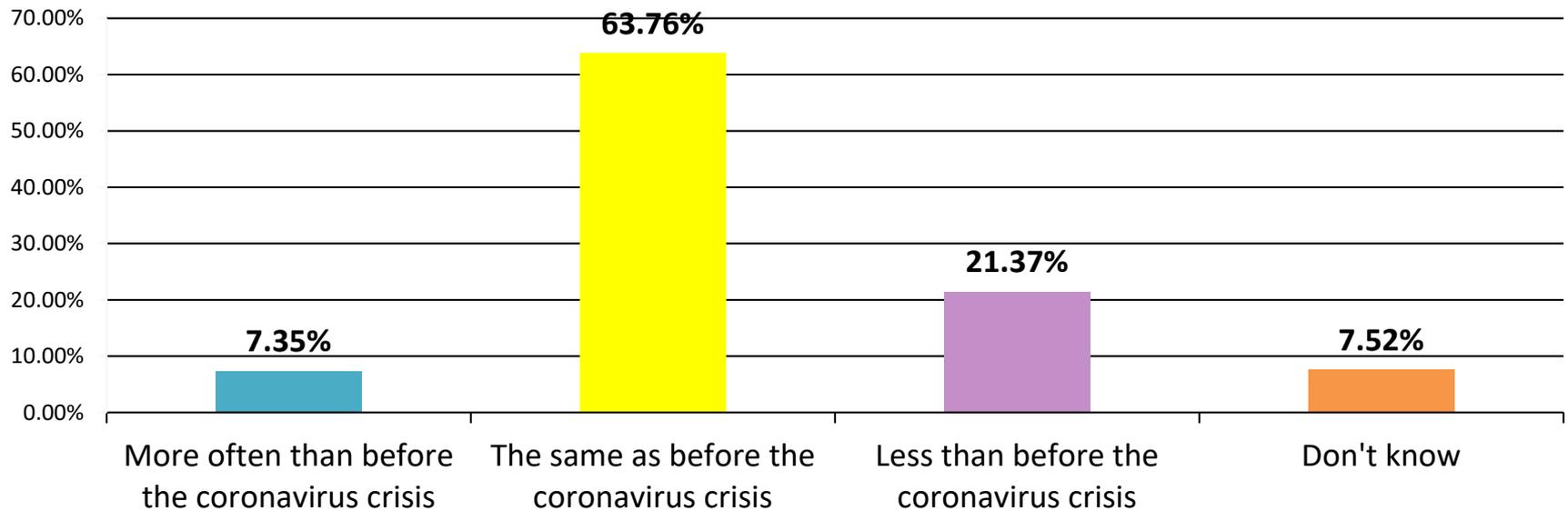
Once a vaccine is readily available, how likely are you to ride ACE again?



- Respondents indicate positive intentions to return to riding the service when a 'vaccine is readily available'.
- 92% indicated at least a 'Somewhat likely' response up from 82% for when the 'stay-at-home' order is lifted.

2nd Round Passenger Health and Safety Survey
HOW WILL THE CORONA VIRUS EFFECT RIDERSHIP?

How will the corona virus affect ridership frequency?

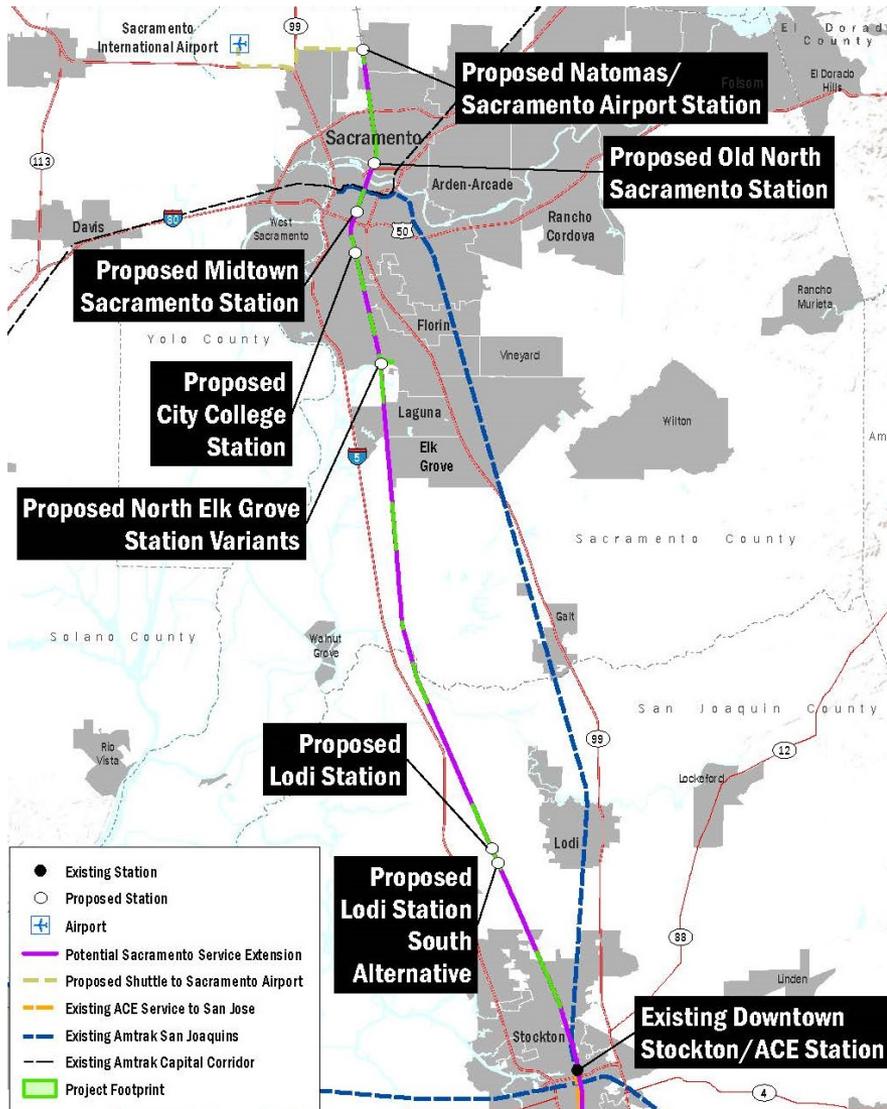


- Majority of respondents indicated return to similar pre-Covid ridership
- +21% indicated riding the service less.



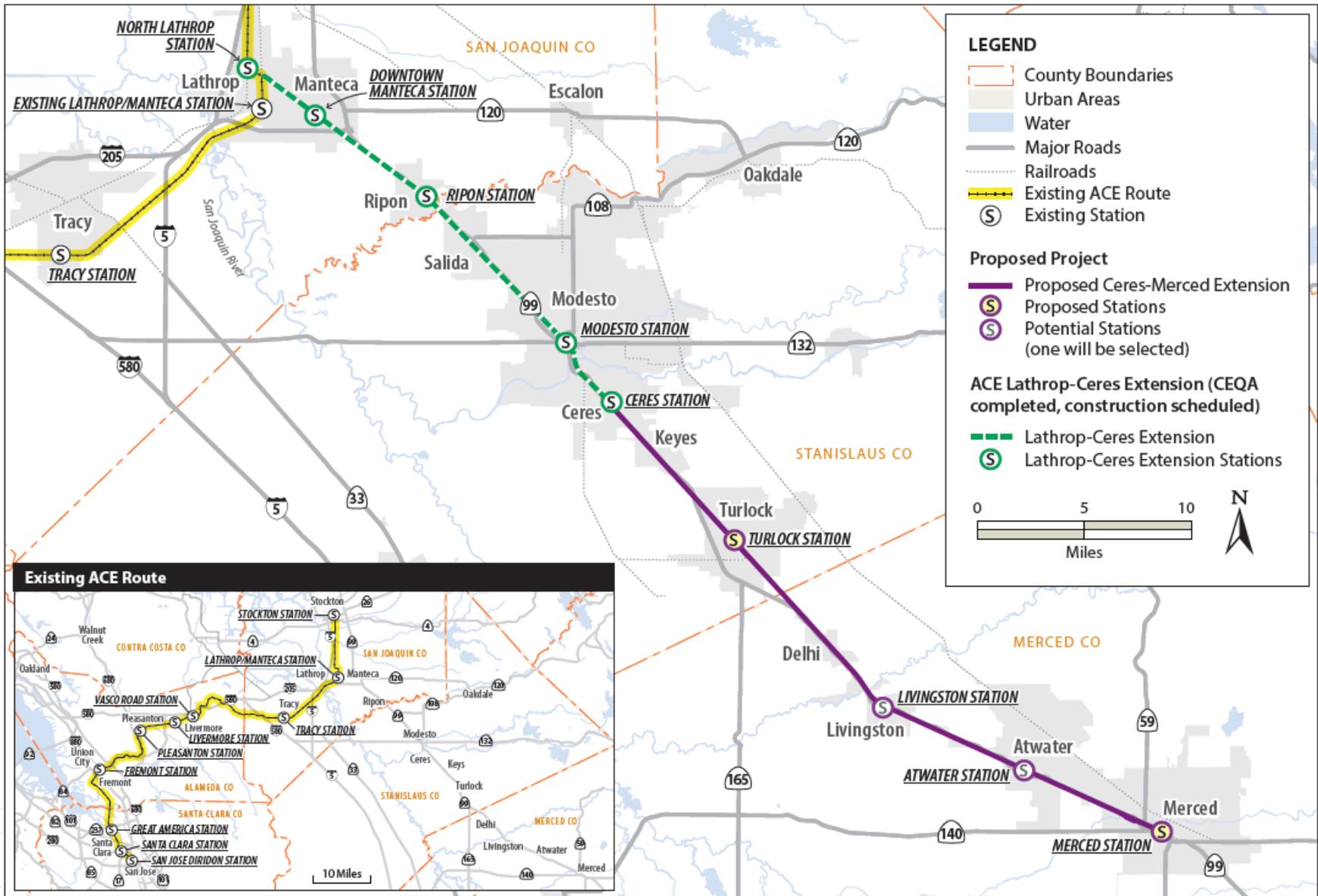
- Valley Rail Program includes expansion of both ACE and the San Joaquins Services
- Valley Rail is funded by the Transit and Intercity Rail Capital Program (TIRCP) and other state funding sources.

Overview of the Sacramento Extension

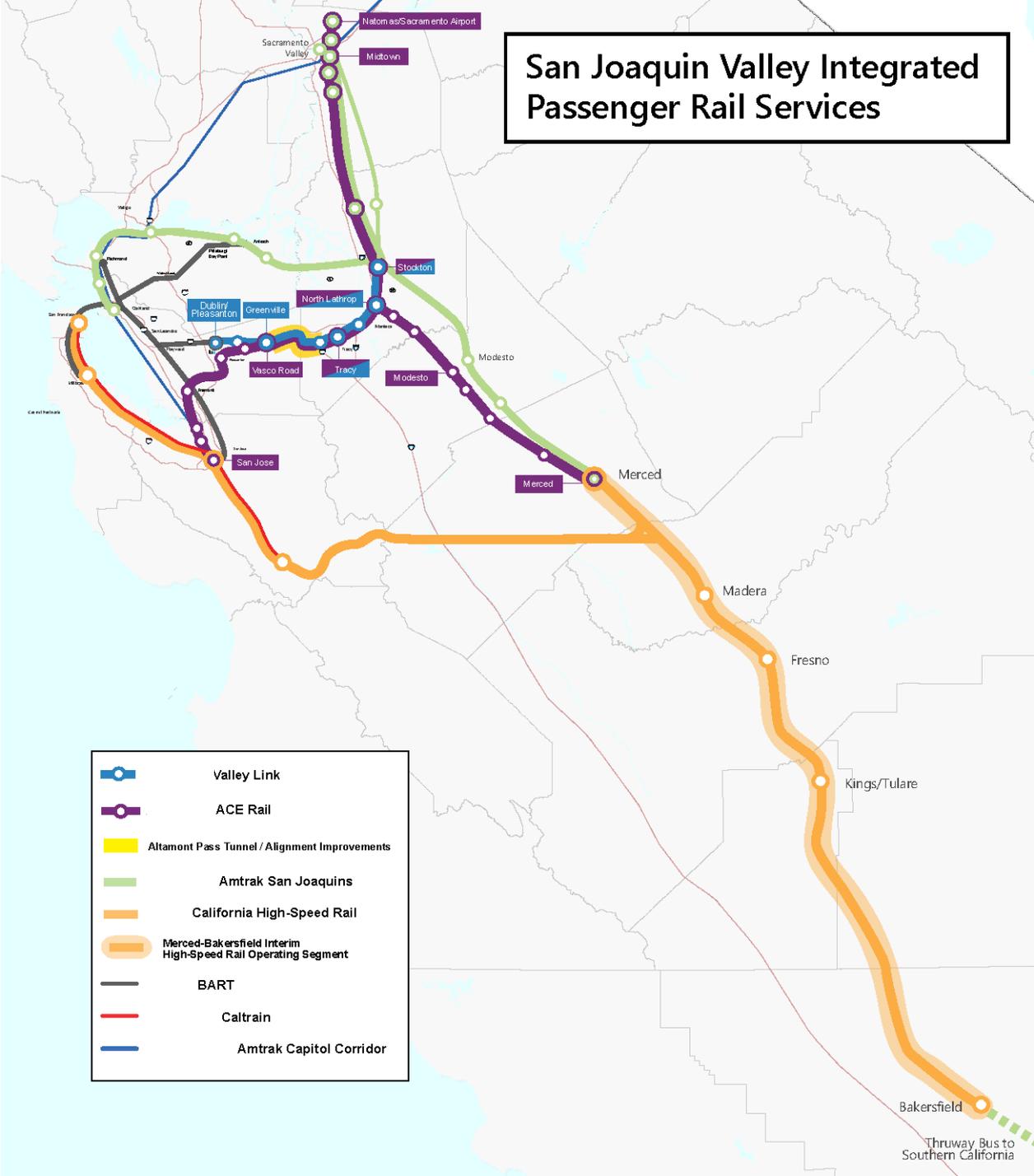


- Service to Sacramento Valley Station via current route is capped by UPRR
- Available service on the Sacramento subdivision by UPRR
- Service will support additional San Joaquins service and new ACE service

Project Overview: ACE Extension to Merced

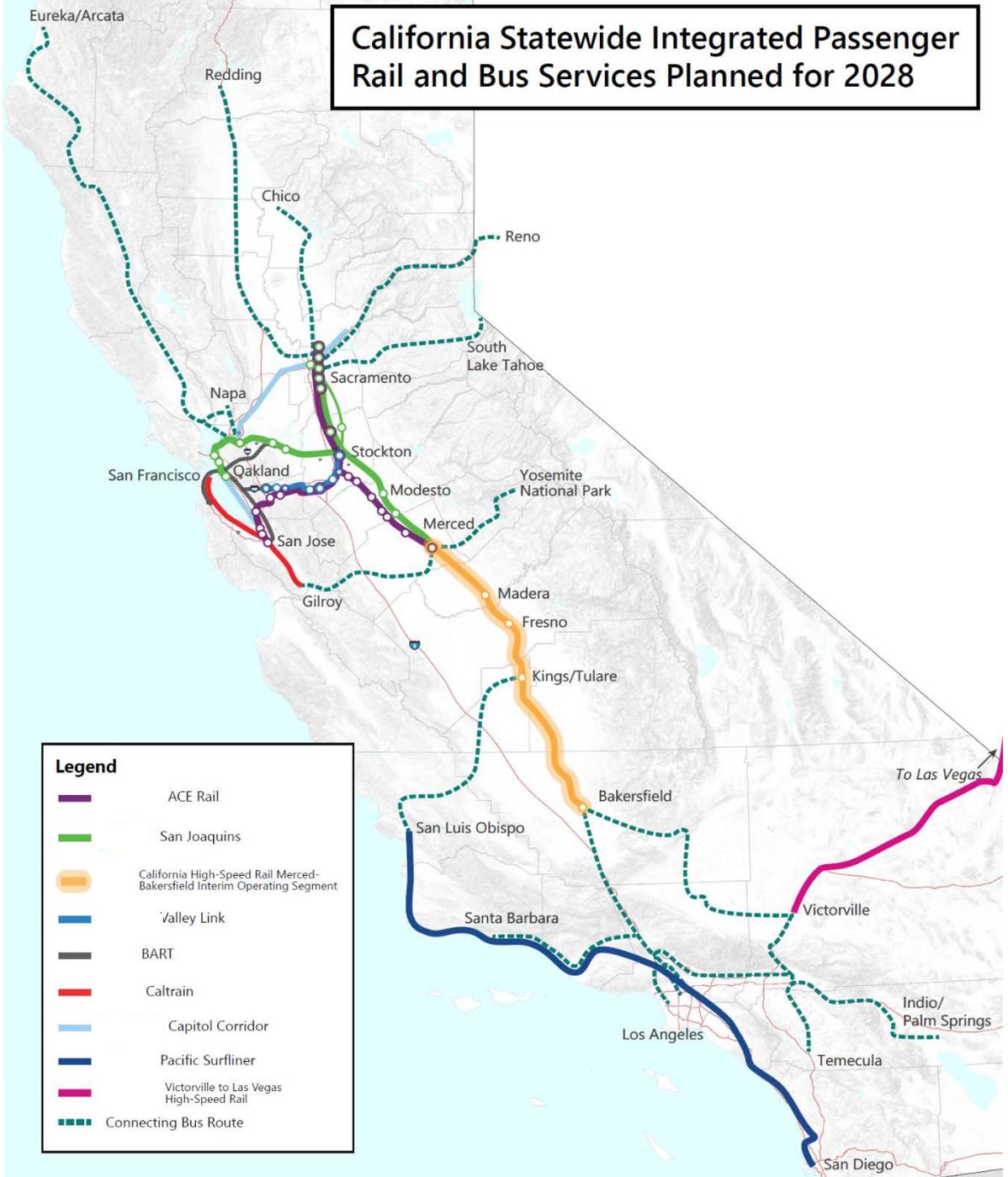


San Joaquin Valley Integrated Passenger Rail Services



-  Valley Link
-  ACE Rail
-  Altamont Pass Tunnel / Alignment Improvements
-  Amtrak San Joaquins
-  California High-Speed Rail
-  Merced-Bakersfield Interim High-Speed Rail Operating Segment
-  BART
-  Caltrain
-  Amtrak Capitol Corridor

California Statewide Integrated Passenger Rail and Bus Services Planned for 2028



Benefits of Integrated Passenger Rail:

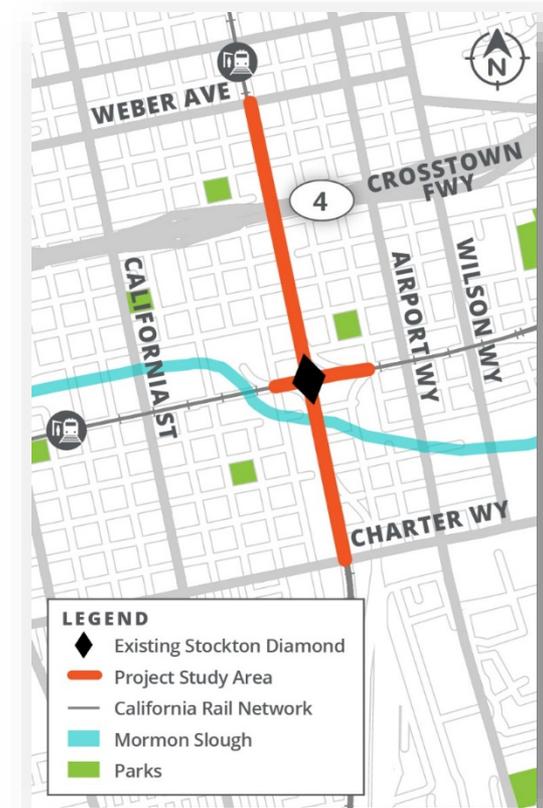
- Corridor-wide ridership increasing from 2.6 million passengers in 2019 to 8.8 million passengers in 2029. Results in reduced state subsidies for passenger rail services.
- Improves air quality in the Central Valley and reduces GHG emissions by shifting from diesel to clean, electrically powered trains.
- Projected to generate about \$38 billion in total economic activity and over 200,000 job-years of employment.
- Early testing of high-speed operations.

Stockton Diamond Grade Separation

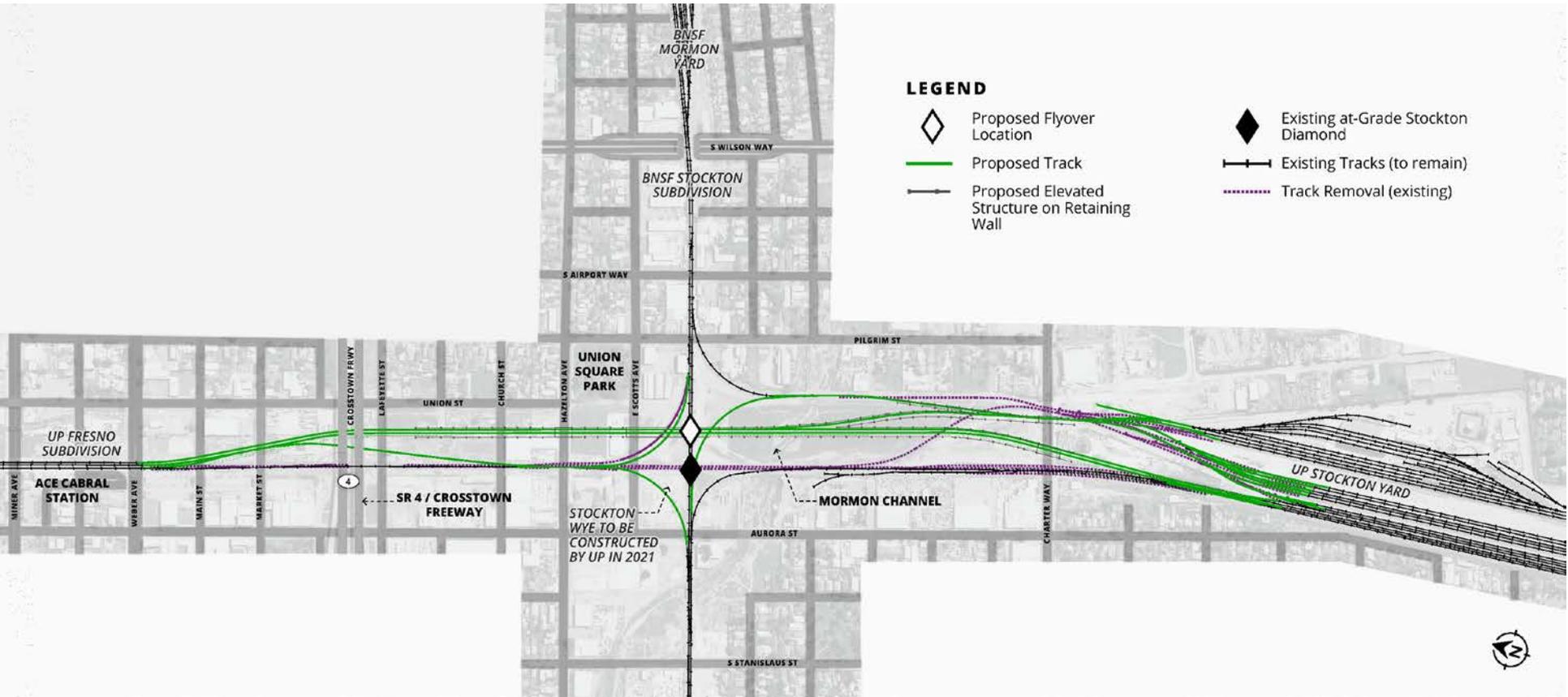


Busiest, most congested at-grade rail crossing in CA

- Causes significant **congestion** and **delays** to service
- Impacts **frequency**, **reliability** and potential **expansion**
- Causes local **crossing delays**



Proposed Flyover Concept



Flyover Concept Examples

**Stockton Diamond Grade Separation
Preliminary Simulation**



Existing Colton Grade Separation



Design & materials to be determined through planning process

Unlocking Freight & Passenger Rail Mobility



STIMULATE MOBILITY



ENHANCE SAFETY



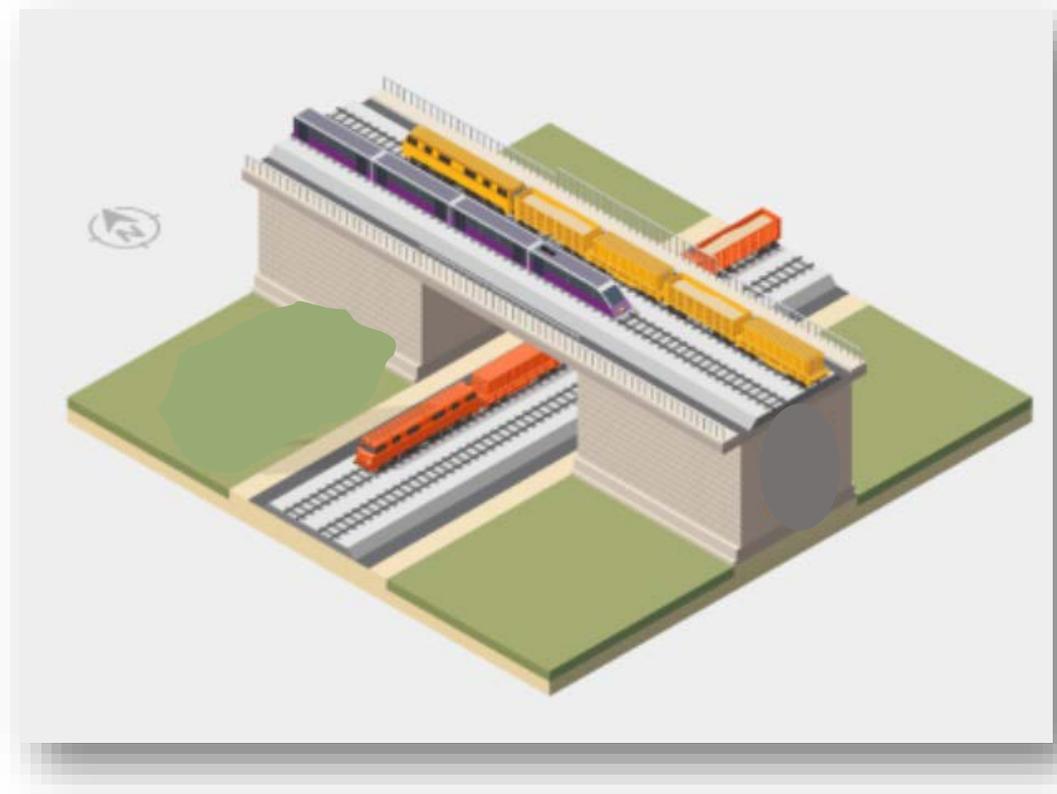
ECONOMIC VITALITY



INSPIRE CONNECTIONS

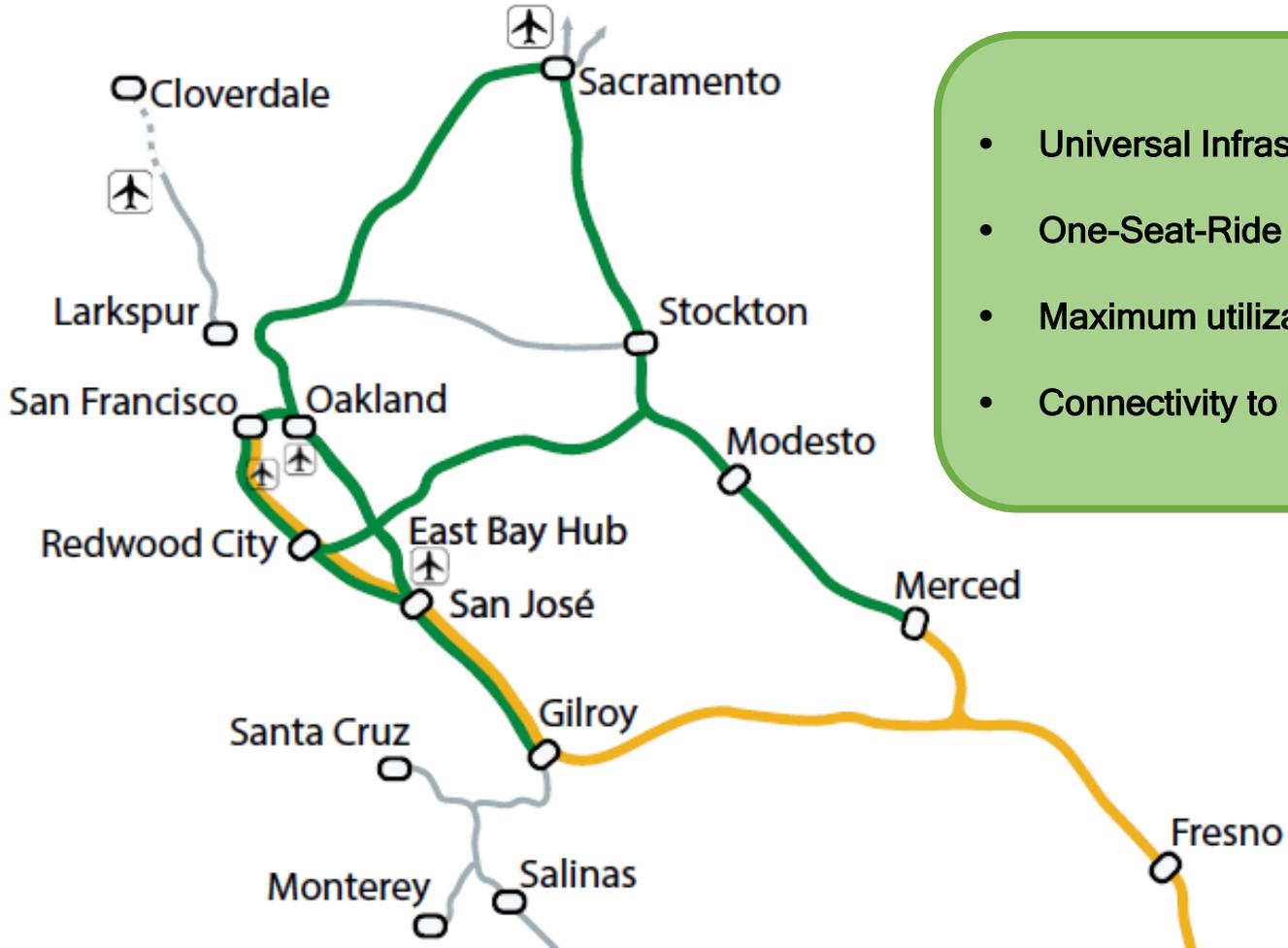


SUSTAINABILITY



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Megaregional Network Integration



- Universal Infrastructure
- One-Seat-Ride throughout the Megaregion
- Maximum utilization of new Bay Crossings
- Connectivity to High Speed Rail

Altamont Corridor Vision



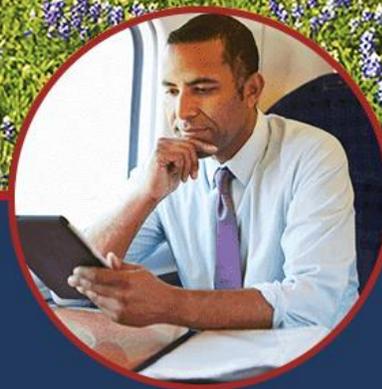
www.acerail.com

www.sjjpa.com

dan@acerail.com

THE TEXAS HIGH SPEED TRAIN

**CONNECTING PEOPLE, CREATING
JOBS & A NEW AMERICAN INDUSTRY**



A New Way to Connect

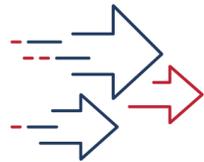
Reimagining Travel between North Texas and Houston



SAFE

Zero Accidents / Zero Fatalities

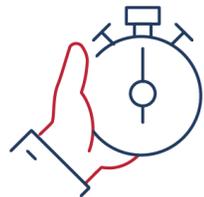
More than 56 years in operations in Japan



FAST

Travels at Nearly 200-Miles Per Hour

Houston to North Texas in 90-minutes



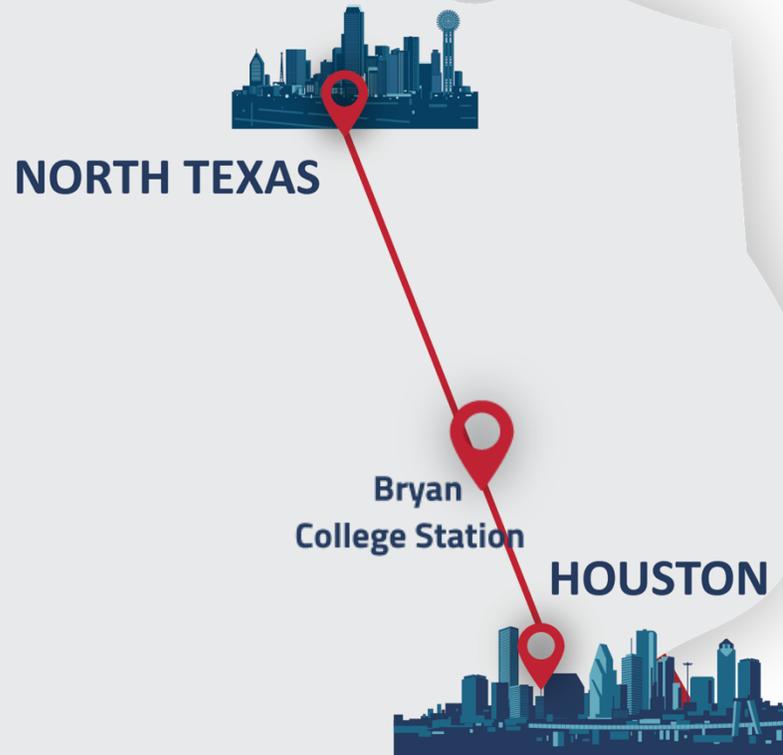
RELIABLE

Leaves On Time, Every Time

Less than a one-minute delay annually

Investor-Owned Approach

Data-Driven Decisions



\$10s of millions spent on studies



16-million trips per year already being made



80% of Texans surveyed said they would consider riding the train

COVID-19 Impact on Project Planning



Prioritize project resources



Focus on completing major regulatory actions

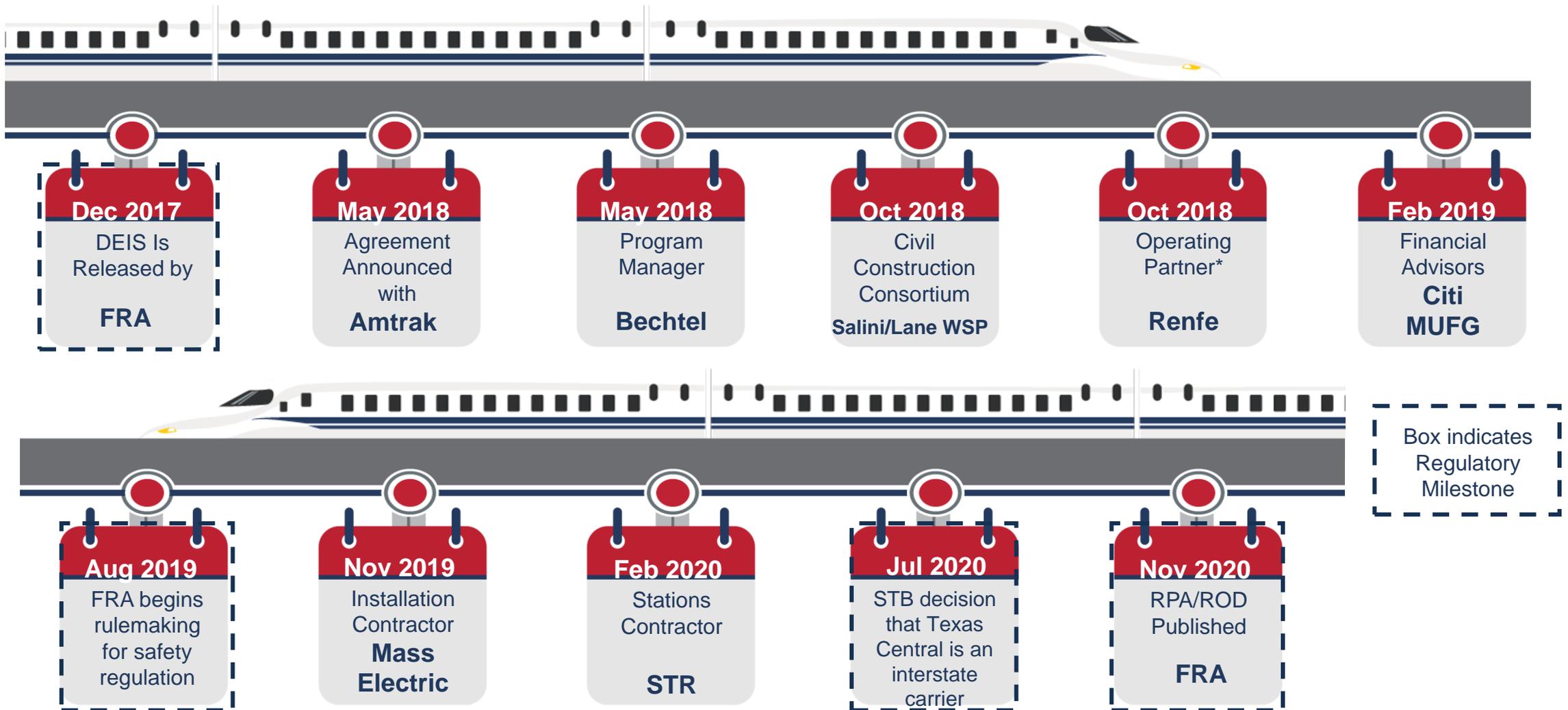


Maintain coordination with stakeholders



Learn from industry best practices

Tracking Major Milestones



Box indicates Regulatory Milestone

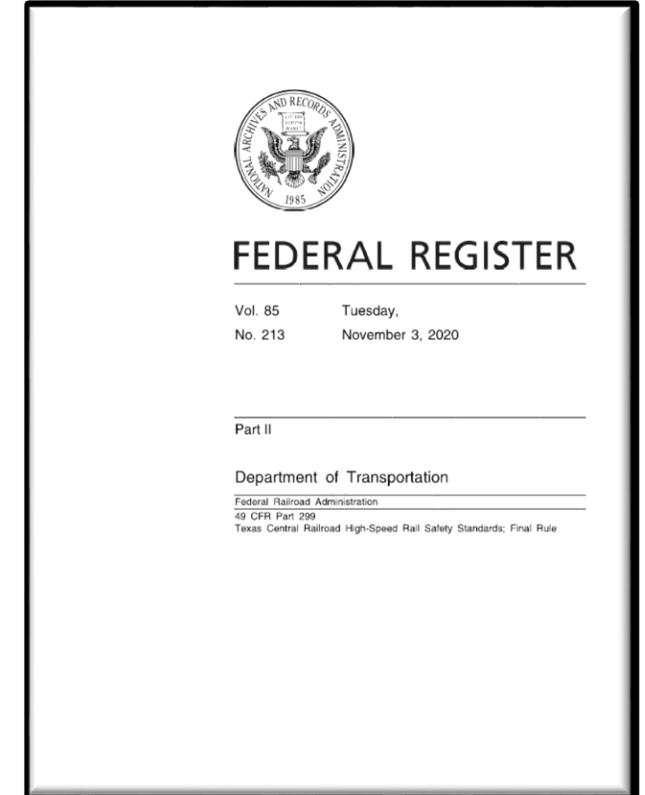
Rule of Particular Applicability and NEPA Decision

FRA's first final Rule of Particular Applicability (RPA):

- Is specific to the Texas Central HSR system and technology
- Establishes regulatory requirements codifying the service-proven technological, operational, and maintenance aspects of the Tokaido Shinkansen HSR system
- Adopts a systems approach—regulation covers rolling stock, track, signaling and trainset control, operating practices, training, and inspection, testing, and maintenance

RPA publication also encompasses the Record of Decision

- Completes FRA's 6-year environmental review process



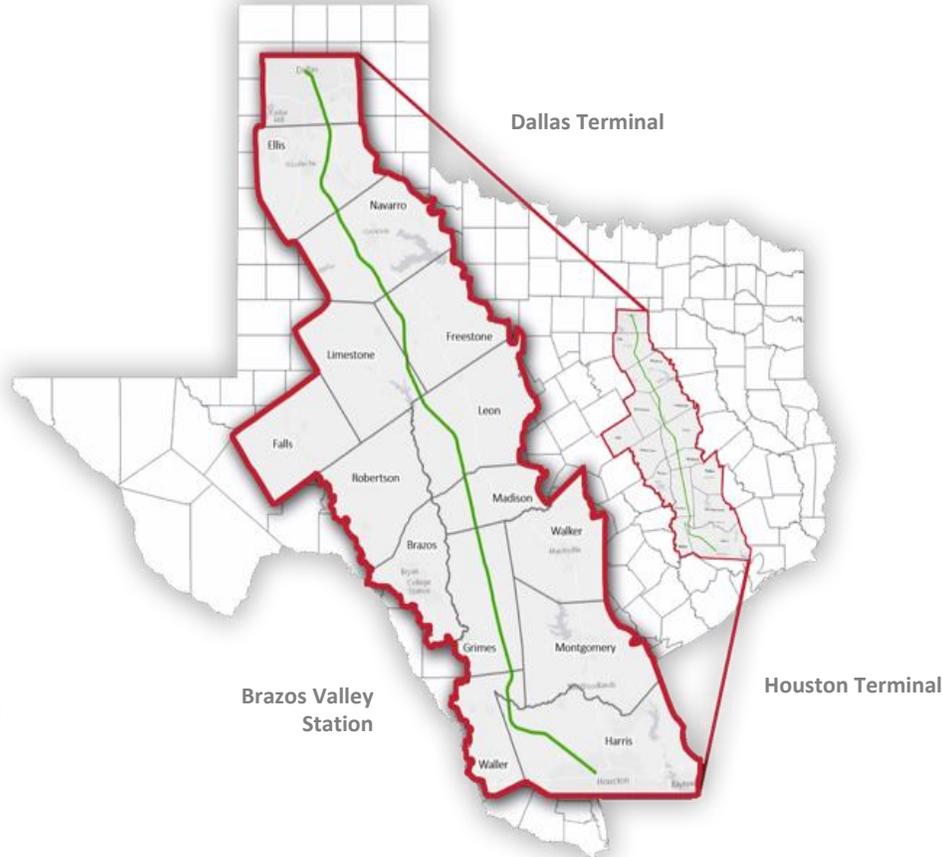
Project Alignment by the Numbers

3

Stations

15

Trainsets



TRAVERSES

- 10** counties
- 4** TxDOT districts
- 2** USACE districts

CROSSINGS

all fully grade separated

- 240** Public roads
- 21** Railroads

FACILITIES

- 2** Trainset Maintenance Facilities
- 7** Maintenance of Way Facilities
- 3** Siding Facilities



Construction on a Texas-Sized Scale

>\$20 Billion Investment in Civil Infrastructure



CONCRETE

10 million cubic yards of concrete, nearly 3X used in the Hoover Dam



RAIL

Nearly 1,100 miles of rail



STATIONS & FACILITIES

3 passenger stations
2 trainset maintenance facilities
multiple maintenance of way and power substations

Estimated Procurement from U.S. Supply Chain

~\$7.3b of materials from U.S. companies in 37 states will be required for the construction

Item	Total \$ to be Purchased from US Suppliers
Rebar	\$542,875,000
Concrete	\$1,053,200,000
Structural Steel	\$154,000,000
Fencing	\$76,200,000
Ballast	\$225,000,000
Rails	\$175,000,000
Ties	\$125,000,000
Electrical Cables	\$72,686,062
Waterproofing	\$4,500,000
Drywall	\$7,650,000
Concrete Masonry	\$9,400,000
Glazing & Metal Panel	\$137,500,000
Roofing	\$9,225,000
Paving (Asphalt)	\$150,000,000
Paving (Concrete)	\$6,957,500
Electrical Materials (Gear, Terms, Conduit, Other)	\$115,960,954
Waterproofing	\$125,000,000
Aggregate Base/ Backfill	\$500,000,000
Lime	\$250,000,000
Post Tensioning	\$100,000,000
OCS Power Poles	\$125,000,000
Manufactured Elements (i.e. RCP, Bearings)	\$425,000,000
Forms, Slip Form, PCY Forms,	\$70,000,000
Batch Plants, Gantry Cranes, PCY & ULF Equipment	\$85,000,000
AREMA Turnouts & Accessories	\$25,000,000
Pickup trucks	\$127,056,119
Construction Equipment	\$1,026,020,681
Small tools	\$94,706,297
Other Custom Fabrication	\$1,507,017,462
USA Supply Chain Total	\$7,325,000,000

Jobs, Jobs, Jobs

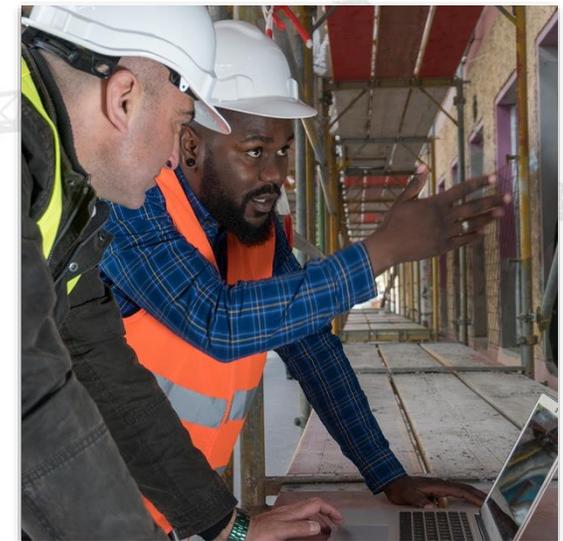
17,000+ jobs created during construction



Electrician
\$42,000/year



Welder
\$50,000/year



Construction Manager
\$80,000/year

Creating a New Industry in Texas

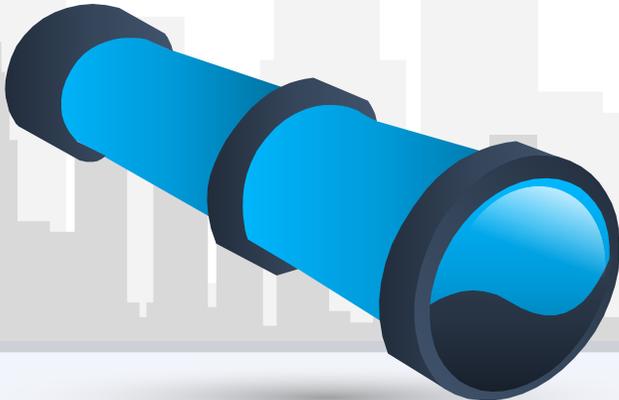
The Train is Moving Forward

More than 1,400 Direct Jobs



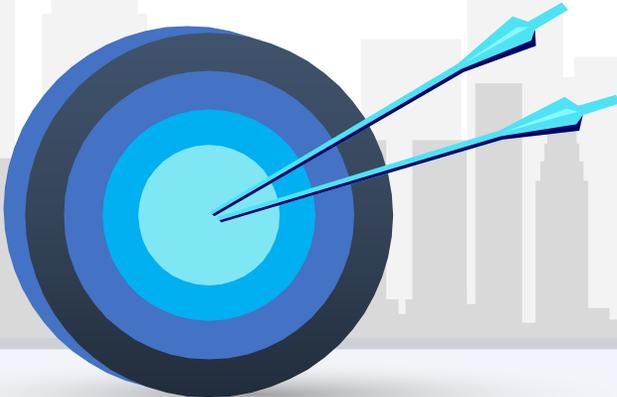
Business and Workforce Opportunity Program

A Commitment to Diversity and Inclusion



Vision

To provide sustainable economic development through transportation to Texas communities



Mission

To promote growth of Texas-based small, rural, minority, women, veteran and disabled individual-owned businesses

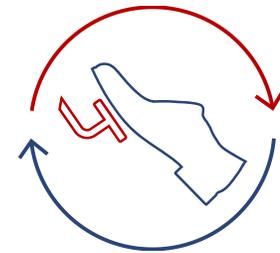
High Speed, Low Impact



Fewer cars,
less emissions



Fully electric



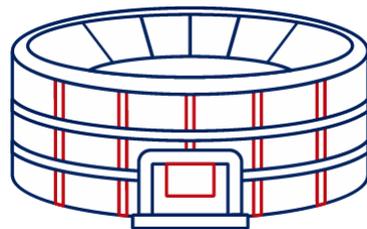
Regenerative
braking

Benefits Spread Across the State

Jobs, Revenue and Opportunity for Texas

\$36B

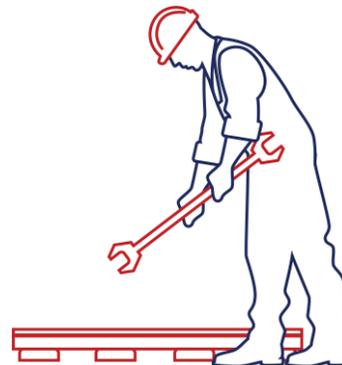
In Economic Impact



Equivalent to
84 Super Bowls

25%

Of Permanent Jobs
In Rural Communities



10

Counties



First Responders
Training & Equipment

Today's Panelists

#TRBWebinar



Moderator:
Diana Gomez, Caltrans



**Dan Leavitt, San
Joaquin Regional Rail
Commission**



**Jennifer Hu, Texas
Central High-Speed
Rail Project**

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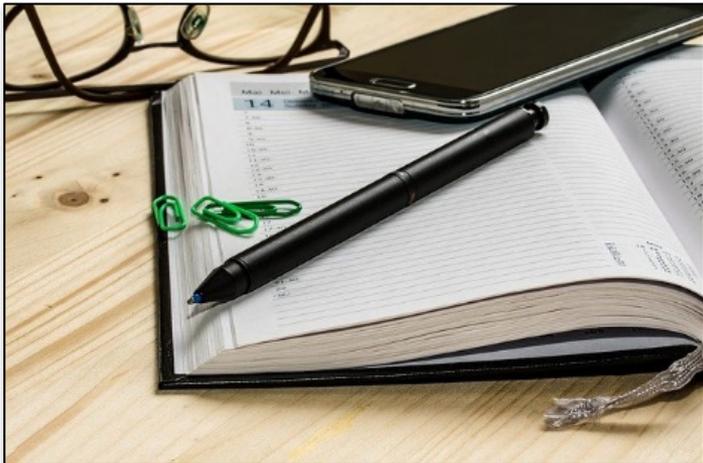
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- Networking opportunities
- May provide a path to Standing Committee membership

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TRB's Annual Meeting Registration is Open!

- 100th TRB Annual Meeting is fully virtual in January 2021
- Continue to promote with hashtag #TRBAM
- [Registration](#) is open!
- Check our [website](#) for more information

