CALIFORNIA HIGH-SPEED RAIL PROGRAM UPDATE October 9, 2018

SPUR, San Jose, CA



MEETING

Introductions & Agenda Review

Statewide Update

San Francisco to San Jose Project Overview San Jose to Merced Project Overview Recent & Upcoming Outreach Activities



CONNECTING CALIFORNIA





AIR QUALITY **JOB GROWTH**

BETTER







STATEWIDE CONNECTIVITY

- Ties economies together
 - San Jose to Fresno = 60 min
 - Bakersfield to Los Angeles = 60 min
 - San Francisco to Los Angeles = under 3 hrs
- Connects with and reinforces local mobility
- Foundation for sustainable growth
- Opportunities for revitalization in downtown cores



CONSTRUCTION UPDATE

- 119 miles under construction
 - Madera to north of Bakersfield
- Over \$10 billion total investment
- 21 active construction sites
- Over 2,200 craft laborers
- 100% of steel/concrete is recycled



WHAT HAPPENED 1990 - TODAY

1996

Authority established



2008

Prop 1A



2016

Restart of HSR **Environmental Clearance &** Range of Alternatives



2017

2018

Refinement of **New Leadership** HSR Alternatives 2018 Business Plan

1990

Introduction

2000s

2010s

2011-12

Blended System (SB1029

& 2012 Business Plan

2012-15

Caltrain Electrification **Environmental & Blended** Planning

Caltrain

2017

Caltrain Electrification Construction

Statewide Update

San Francisco to San Jose

San Jose to Merced

Outreach

NEW LEADERSHIP

Executive Leadership Appointments

Northern California Team Leadership



Boris Lipkin
Northern California
Regional Director



Brian P. Kelly
Chief Executive
Officer



Joseph Hedges
Chief Operating
Officer



James Tung
San Francisco to
San Jose Project
Section Project

Manager

2018 BUSINESS PLAN

Principles of the Business Planaped by public comment

- Program's status at this point in time
- Our approach to implementing the system

Key Authority Goals

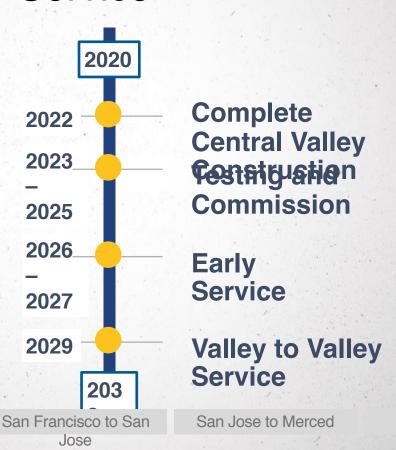
- Initiate service as soon as possible
- Strategic and concurrent investments linked over time and provide mobility, economic and environmental benefits
- Positioned to construct segments as





2018 BUSINESS PLAN

Plan for Delivery of Service



Outreach

BAY AREA PROGRESS

Caltrain Electrification



Introduction of High-Speed Rail



Diridon Integrated Station Concept



Caltrain Business Plan



BART Extension to San Jose



Transbay Terminal



BAY AREA PROGRESS

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SAN FRANCISCO TO SAN JOSE PROJECT SECTION **Range of Alternatives Under Consideration**

Alternative A Features

East Option Light Maintenance Facility No Additional Passing Tracks At-Grade throughout Project Section

Alternative B Features

West Option Light Maintenance Facility Additional Passing Tracks Short Viaduct or Long Viaduct

///// Short Viaduct

Long Viaduct

HSR Stations

Maintenance Facilities

San Jose to Merced Alignments

Downtown Extension

High-Speed Rail Operations

INITIAL OPERATIONS

Speed: 79 mph

Trains per hour

FULL OPERATIONS

Trains per hour

Speed: 110 mph

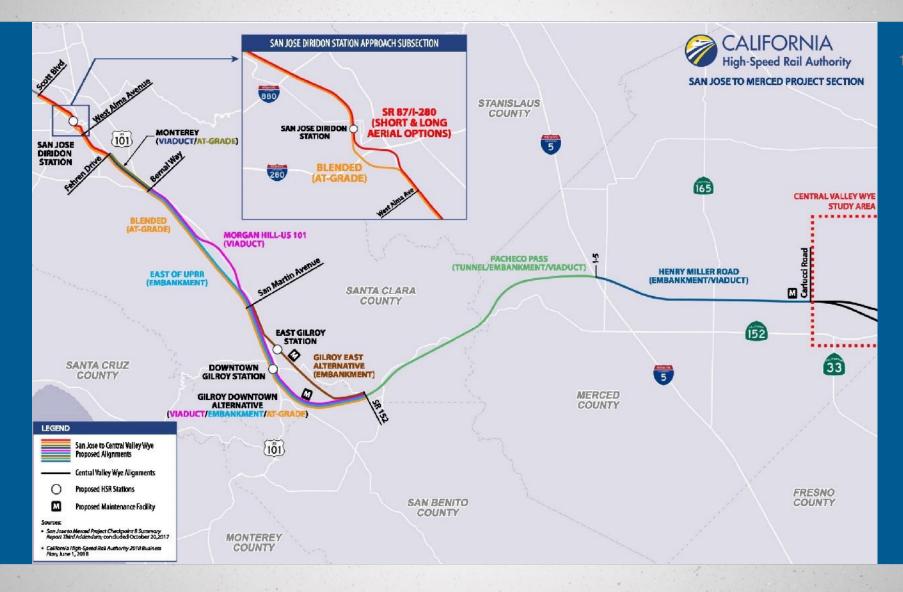




SAN FRANCISCO TO SAN JOSE ENVIRONMENTAL MILESTONES







Outreach

SAN JOSE TO MERCED ENVIRONMENTAL MILESTONES



San Francisco to San

Jose

San Jose to Merced

Statewide Update

Introduction

CONCURRENT PLANNING PROCESSES

HSR Environmental Process

Diridon Integrated
Station Concept Plan

Caltrain Business Plan

Lead Agency

CALFORNIA
Hgh-Spind Roll Authority

CALFORNIA
Hgh-Spind Roll Authorit



UPCOMING COMMUNITY WORKING GROUPS



OCTOBER



NOVEMBER

South Peninsula

October 15 at 6:00 to 8:00 p.m. Santa Clara Central Park Library City of Santa Clara, CA

San Mateo County

October 22 at 6:00 to 8:00 p.m. Millbrae Community Center Millbrae, CA

San Francisco

October 24 at 6:30 to 8:30 p.m. SPUR Urban Center San Francisco, CA

Morgan Hill-Gilroy

November 7 at 6:00 to 8:00 p.m. Portuguese Hall Gilroy, CA

San Jose

November 28 at 6:00 to 8:00 p.m. Venue TBD

Introduction

Statewide Update

San Francisco to San Jose San Jose to Merced

Outreach

HOW TO STAY INVOLVED

WEBSITE www.hsr.ca.gov

HELPLINE 1-800-435-8670

EMAIL

san.francisco_san.jose@hsr.ca.gov



instagram.com/cahsra



facebook.com/CaliforniaHighSpeedRail



twitter.com/cahsra



youtube.com/user/CAHighSpeedRail



HSR SUSTAINABILITY PROGRAM

Meg Cederoth, Director of Sustainability California High-Speed Rail Authority SPUR, San Jose 9 October 2018

HIGH-SPEED RAIL: Key to the State's Future

High-Speed Rail's Role in Climate Change Mitigation & Adaptation

"Build high-speed rail to provide reliable access to urban centers across the state with increased public transit and active transportation opportunities around stations"

-Safeguarding California Plan 2017 Update

Delivery Sets a New, Green Standard for Infrastructure

"The Authority will deliver a sustainable high-speed rail system for California that serves as a model for sustainable rail infrastructure. The Authority has developed, and will continue to implement, sustainability practices that inform and affect the planning, siting, designing, construction, mitigation, operation, and maintenance of the high-speed rail system."

-Authority Sustainability Policy

Prop 1A Expressed Californian's Goal for Sustainable Development:

» Fostering Mobility and Economic Development without Sacrificing the Environment, or Bequeathing Future Generations With Debt

POLICY & FRAMEWORK



Energy



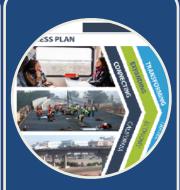
Communities & Ridership



Sustainable Infrastructure



Natural Resources



Business & Management

KEY COMMITMENTS REFLECT STAKEHOLDER PRIORITIES

- Net-zero Greenhouse Gas and Criteria
 Pollutant Emissions in Construction
- Planning For Climate Change Adaptation
- Operating the System Entirely on Renewable Energy
- Prioritizing Life-Cycle Considerations

 Net-Zero Energy, LEED-Platinum Facilities

- Landscape Scale Habitat Mitigation
- Station Area Planning to Catalyze Infill Development
- Permanent Conservation Easements

ENERGY

- Operate on clean, renewable energy
- Design zero-net energy facilities
- Explore how storage and other emerging technology benefit the system
- Explore how the station fits into district scale energy management



COMMUNITIES & RIDERSHIP

- Maximize active transportation
- Convenient station access and intuitive interfaces
- Maximize benefits to disadvantaged communities
- Partnerships to achieve infill development
- Maximize local and regional transit connectivity with the system



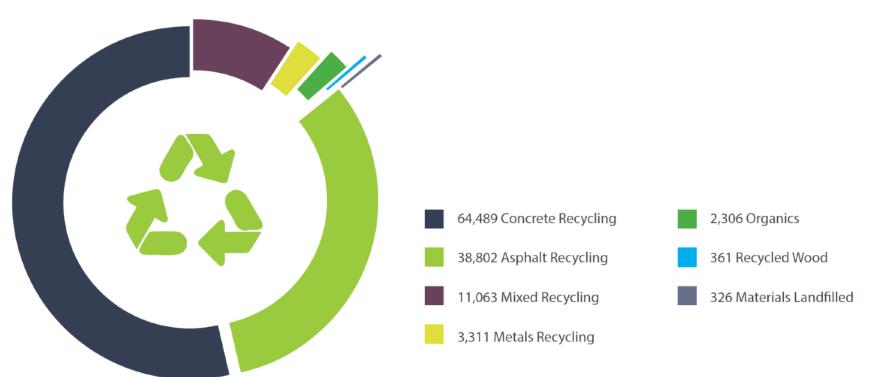
SUSTAINABLE INFRASTRUCTURE

- Set a new standard for delivery
- Implement State and Local energy and sustainability policies
- Resilient, Adaptive infrastructure
- Protect employee and customer health



SET ABSOLUTE TARGETS: RECYCLING

Exhibit 21: 2017 Materials Management (in Tons)



UNIQUE COMMITMENT: OFFSETTING GHG EMISSIONS

- 452 trees planted to date will:
 - » Offer shade
 - » Improve air quality
 - » Provide recreation benefits in West Fresno
 - » Offset 1,300 tons of GHG over their lifetime
- Partnering with Tree Fresno and California Urban Forestry Coalition on additional planting



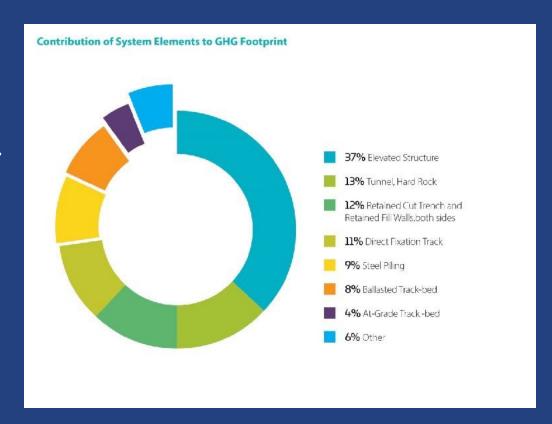
UNDERSTANDING THE SUPPLY CHAIN

Consultation with Industry

- » Explaining Authority Policy and Intent
 - "The Contractor shall provide Environmental Product Declarations (EPDs)
 from its suppliers and manufacturers for concrete mix designs used in
 elements of the project, including pre-cast and cast-in-place concrete, and all
 steel."

Analyzing Materials Installed

» Direction from Board in 2016 to Consider Attributes of Materials for the Infrastructure Across their Entire Life-Cycle



THE WHOLE PICTURE

INDIRECT - Upstream

DIRECT - System

INDIRECT - Downstream and Avoided Emissions

CONSTRUCTION

OPERATIONS



SUPPLY CHAIN

Sustainable procurement requirements and baseline setting



CONTRACTOR FLEET

Mobile equipment emissions during rail construction: .52 MMTCO₂e* *to be revised in 2018



AUTHORITY RAIL DEVELOPMENT

Zero direct emissions from rail construction



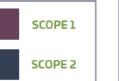
DISPOSAL/ RECYCLING

~ 71,000 MTCO₂e avoided emissions through recycling and reuse to date



TREE PLANTING

Tree planting program,
offsetting fuel-based
emissions from construction:
.52 MMTCO₂e (Cumulative)*
*to be revised in 2018



SCOPE 3

OFFSET/ AVOIDED EMISSIONS



SUPPLY CHAIN

Sustainable procurement of rolling stock and operations supply



RENEWABLE POWER

100% renewable power for train operations



AUTHORITY RAIL OPERATIONS

Zero emissions generated from electric powered operations



VMT + AIRTRIPS SAVED

64-76 MMTCO₂e avoided from vehicle and shorthaul airtrips



ADDITIONAL SAVINGS

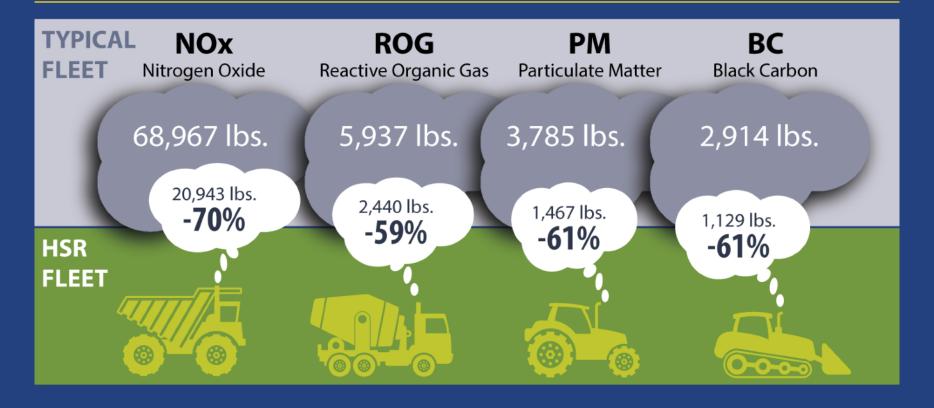
Savings from Compact Land Use

NATURAL RESOURCES

- Achieve zero-net criteria pollutants in construction
- Improve air quality through operations
- Conserve agricultural land
- Deliver habitat conservation at a landscape level
- Restore and maintain ecosystem health
- Reduce the demand for virgin materials



MINIMIZE EMISSIONS: AIR QUALITY



The use of Tier 4 vehicles (or retrofitted vehicles) results in demonstrably cleaner sites

LEVERAGE PROJECT SCALE: HABITAT

- 2,500 acres of habitat preserved and restored
- 1,200 acres of agricultural land approved for conservation
- 273 deeded acres of agricultural land have been secured



BUSINESS & MANAGEMENT

Objectives

- Improve the economic value to Californians from the system
- Achieve a self-sustaining financial structure
- Achieve continual improvement of delivery and management
- Operate and maintain transparently and accountably
- Maximize opportunity for private investment
- Incorporate adaptation considerations into investment decisions



RESULTS: JOBS AND ECONOMIC ACTIVITY

Providing Benefits Now:

- 45% of workers to date live in disadvantaged communities, more than 1,100
- 115 of 463 small businesses are located in disadvantaged communities



TRANSPARENCY & BENCHMARKING

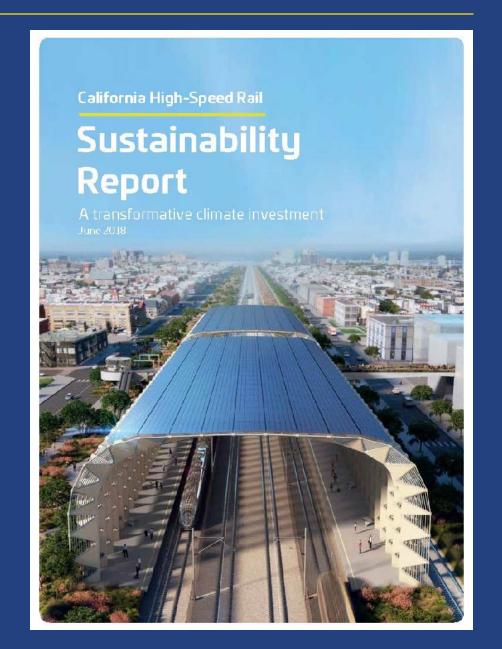
- Reviewed data with Air Resources Board
- Completed third response to GRESB Infrastructure
 Assessment benchmark and request of information from private investors
- Completed third public Global Reporting Initiative report
- Participated in California Cohort and ranked a leader among state agencies delivering sustainable procurement strategies





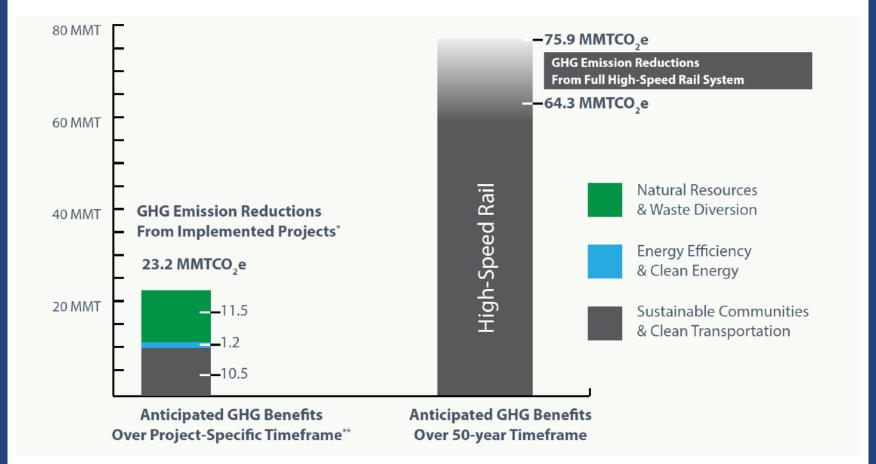
JUNE 2018 SUSTAINABILITY REPORT HIGHLIGHTS

- More than 50,000 pounds of criteria air pollutants avoided.
- More than 2,000 acres of natural habitat preserved
- 2,400 trees being planted in Fresno parks and schools to offset emissions
- 463 small business, 115 in disadvantaged communities
- Top sustainable infrastructure project in North America for the second year in a row per the GRESB Infrastructure Assessment



PART OF CALIFORNIA'S CLIMATE STRATEGY

Exhibit 2: California Climate Investments and Greenhouse Gas Emissions Reductions (MMTCO₂e=million metric tons of carbon dioxide equivalent)

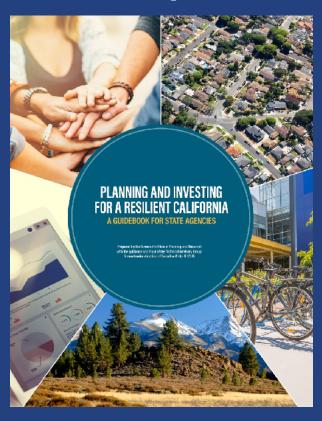


^{*}Estimates for California Climate Investments implemented through 2016 & 2017; does not include benefits from High-Speed Rail Project.

^{**}https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/2018_cci_annual_report.pdf

DESIGNING FOR THE FUTURE

Climate Analysis



Resilient Infrastructure



NEXT STEPS

Gathering Insight from Stakeholders

Many of you contributed to the 2014 initial "materiality assessment" We are refreshing our approach now

- » Evolution of the agency
- » New guidance from the Global Reporting Initiative

Your insight is key to the Authority understanding the right and most effective implementation steps!



A **materiality assessment** is a process of stakeholder engagement and analysis undertaken to quantify the relative significance of different environmental, social, and governance issues to the organization or project in question.

MOVING FORWARD

Implementation

- Incorporate insights from stakeholders on implementation plan
- Refresh existing policies to reflect
 - » Agency evolution
 - » Board priorities
 - » Stakeholder input
 - » New regulations
- Evaluate carbon targets for upcoming procurements

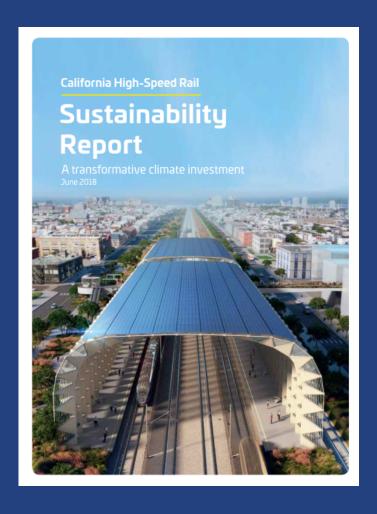
Reporting

- Progress reports to Board on key commitments
- Update annual Global Reporting Initiative to new standard
- ARB reporting, including new cobenefits calculations

Construction

- Continued focus on construction performance
- Evaluate additional third party verification

QUESTIONS & COMMENTS



THANK YOU & NEXT STEPS

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