Peninsula Corridor Electrification Project

Draft Environmental Impact Report

LPMG

March 27, 2014

Context

Caltrain Modernization Program

- ~$1.5 Billion Early Investment Program
  - CBOSS PTC (2015)
  - Peninsula Corridor Electrification Project (2019)
- Caltrain/HSR Blended System

3

Project History

- JPB Strategic Plan (1999, 2004)
- Conceptual Design (2002)
- Draft EA/EIR (2004)
- 35% design complete (2008)
- Final EA/EIR & Finding of No Significant Impact (FONSI) (2009)
- State clearance postponed

4

Delivery Milestones*

Activity	2013	2014	2015	2016	2017	2018	2019
Stakeholder Outreach							
Establish Owner's Team							
Environmental Clearance							
Procure/Select Contractor Team							
Design/Manufacture/Build							

*Schedule subject to change

5

PCEP DEIR

6

CEQA Requirements

- Identify environmental baseline
- Analyze direct, indirect and cumulative impacts
- Compare impacts to significance criteria
- Identify feasible mitigation for significant impacts
- Consider alternatives
- "Reasonable worst-case" assumptions as conservative approach

7

Project Purpose and Need

- Improve Caltrain system performance
- Increase service & ridership
- Increase revenue & reduce cost
- Reduce environmental impacts
- HSR compatible electrical infrastructure

8

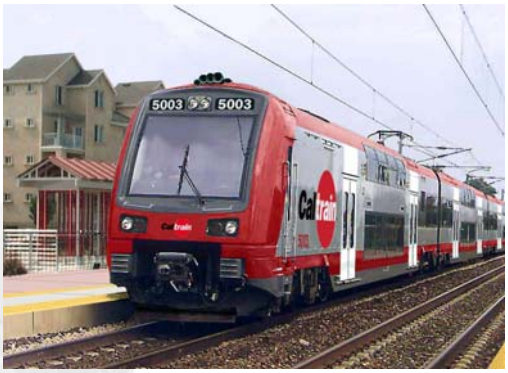
Project Description

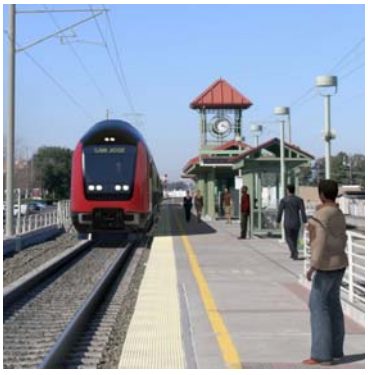
Area	Project	Service*
51+ miles San Francisco to San Jose (Tamien Station)	Electrification: • Overhead Contact System (OCS) • Traction Power Facilities Electric Multiple Units (EMUs)	Up to 79 mph More service: • 6 trains/per peak hour/per direction (12 trains per hour) • Restore Atherton & Broadway service Mixed diesel / EMU fleet Cont. Caltrain diesel service to Gilroy Cont. tenant service

* Based on prototypical schedule produced for DEIR

9

Visual Simulation





10

Right of Way Needs

- Most in Caltrain ROW
- Traction Power Facilities
  - 2 substations
  - Up to ~1.5 acres total
- OCS (Poles/Wires)
  - Based on 35% design
  - ~2 out of 102 miles of OCS alignment

Electric Safety Zone Need

- Easement for safety
  - No trees within10 ft. of OCS
  - No structures within 6 ft. of OCS
- Guidance
  - 25kV properties
  - Industry standards
- Up to ~18 acres along 51+ mile corridor
  - ~22 miles out of 102 miles along both sides of ROW

DEIR Structure

DEIR	Environmental Clearance
Project Analysis (2020)	Yes
Cumulative Analysis (2040)	No

Note: 2013 JPB/CHSRA New Agreement identifies JPB as lead agency for environmental clearance of the PCEP and CHSRA as lead agency for environmental clearance of the HSR Blended System.

13

Key Regional Benefits

Benefit	2020	2040 (all EMU + DTX)
Total Ridership (Daily)	69,000	111,000
Reduced Vehicle Miles Travelled (Daily)	235,000	619,000
Reduced Air Pollution (Daily)	56% to 84%	77% to 96%
Reduced Greenhouse Gases (Annual)	68,000 Metric Tons of CO_2 equivalent	177,000 Metric Tons of CO_2 equivalent

14

Stakeholder Key Concerns

- Tree / Vegetation
- Overhead Contact System
- Noise
- Electromagnetic Fields/Interference
- Local Traffic
- Station Access
- Freight

15

Trees / Vegetation

- Along Caltrain route (SF to Gilroy): ~19,000
- Worst-Case Impact
  - Removal of 2,200 trees/vegetation
  - Pruning of 3,600 trees/vegetation
- Mitigation Strategies
  - Avoidance and Minimization (OCS Pole Options)
  - Replacement Plan
  - Significant after mitigation (aesthetics)

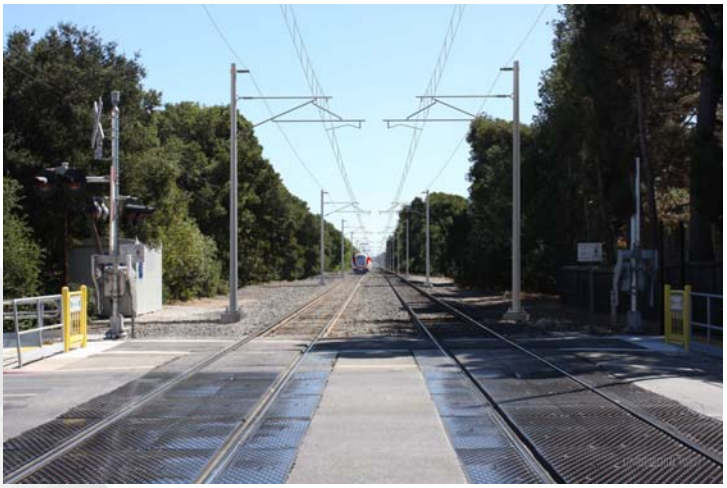
16

Overhead Contact System

- Poles and Wires
  - Poles ~200 feet apart along rail corridor
  - Poles 30 to 50 feet tall
  - Wires between poles
- Project Impact
  - Changes in visual aesthetics along tracks and at Caltrain stations
- Mitigation Strategies
  - OCS design & treatments
  - Less than significant after mitigation (aesthetics)

17

Visual Simulation



18

Noise

- Project Noise
  - EMUs quieter than diesel locomotives
  - More trains result in more horn soundings*
  - TPF (Traction Power Facilities)
- Noise Study Results
  - 49 locations analyzed
  - Significant impact at one TPF in SSF (FTA thresholds)
- Mitigation Strategies
  - Design treatment
  - Less than significant after mitigation

* Note: Train horns required by federal law

19

Electromagnetic Fields/ Electromagnetic Interference

- EMF: Electrical and magnetic fields
  - Generated from OCS, electric trains, and TPF
  - EMF levels less than health thresholds for General Public exposure along ROW
- EMI: Effect on equipment
  - Potential effects on sensitive electronic equipment
  - Design treatment mitigation
  - Less than significant after mitigation

20

Local Traffic

- Overall Traffic Congestion Reduction
- Project Impacts*
  - More trains increase gate down time
  - EMUs decrease gate down time
  - More riders increase local traffic at stations
  - 82 intersections studied (21 impacted)
- Mitigation Strategies
  - Signal improvements
  - Local roadway improvements
  - Significant impact at 9 intersections after mitigation

*Note: CBOSS, which minimizes gate down time, is assumed to be in place

Station Access / Egress

- Bicycle Access
  - Continuation of bikes on board program
  - Continuation of wayside facility improvements
- Pedestrian Access
  - All stations adequate except at the 4th and King Terminus
  - Access improvements in partnership with San Francisco
- Parking Demand
  - Demand exceeds supply at 7 stations
  - ~1,000 riders may not be realized due to parking deficit
- On-Going Improvements with Local Agencies
  - Caltrain Access Program Policy
  - Caltrain Bicycle Access and Parking Plan

Freight Rail

- Existing Tunnel and Bridge Constraints
- Project Evaluation
  - Vertical clearance impact from OCS
  - Constrained operating window from FRA waiver temporal separation requirement*
- No Project-Level Impact
  - Tunnel notching /track lowering mitigation
  - Existing freight can be accommodated

*Note: May not be needed if FRA rulemaking on Alternative Compliant Vehicle in place

23

Alternatives

- 51 Scoping Alternatives
- Screened Alternatives
  - Feasibility
  - Project purpose and need
  - Environmental effect
- Analyzed in DEIR
  - The No Project Alternative
  - Diesel Multiple Unit Alternative *(public interest)*
  - Dual-Mode Multiple Unit Alternative *(public interest)*
  - OCS Construction Alternative: Factory Train

24

Cumulative Analysis

Cumulative Analysis

- Project Contributions to Cumulative Impacts
- Cumulative Projects
  - Rail Projects in Caltrain Corridor
  - Other Transportation Projects
  - Local Development along Corridor
- Key Rail Projects
  - High Speed Rail (HSR) Blended Service
  - SF Downtown Extension and Transbay Transit Center
  - Tenant railroad service expansions

HSR Blended System

- Conceptual cumulative analysis only
- HSR service
  - 2 to 4 trains per peak hour/per direction
  - Up to 110 mph
- Improvements
  - Stations at SJ (Diridon), Millbrae, SF (Transbay Transit Center)
  - RWC Station TBD
  - System improvements, grade separations, passing tracks, maintenance yard

27

Key Cumulative Effects

- Beneficial Effects
  - Air Quality/Reduced GHG
  - Regional Traffic
- Potential Adverse Effects
  - Aesthetics/Land Use
  - Noise and Vibration
  - Local Traffic
  - Freight Rail
- Mitigation of Caltrain funding contribution on a fair-share basis / existing agreements

28

Next Steps

Key Milestones

- Notice of Preparation (1/31/13 – 3/18/13)
  - Circulated widely
  - 4 public meetings
- Develop DEIR (Mar 2013 – Feb 2014)
  - Reviewed comments
  - Surveys / technical analysis
  - Riders / community outreach
  - Agency coordination
  - Stakeholder/cities coordination

Key Milestones, Continued

- DEIR Comment Period (2/28/14 – 4/29/14)
  - Notice of Availability, circulated widely
  - DEIR available website, libraries, clearinghouse
  - 4 public meetings
  - 60-day comment period (longer than required)
  - www.caltrain.com/electrification
- Final EIR (Fall 2014)
- JPB Certification /Adoption (Winter 2014)

Public DEIR Meetings

Caltrain Office
1250 San Carlos Ave., San Carlos
Tuesday, March 18, 2014
Public Meeting: 6pm-8pm

Redwood City Library
1044 Middlefield Rd, Redwood City
Wednesday, April 2, 2014
Public Meeting: 6pm-8pm

San Jose Main Library
150 E San Fernando St, San Jose
Monday, April 7, 2014
Public Meeting: 6pm-8pm

UCSF Mission Bay
Genentech Hall Room N114
600 16th St, San Francisco
Wednesday, April 9, 2014
Public Meeting: 6pm-8pm