Peninsula Corridor Electrification Project

Draft Environmental Impact Report

Bicycle Advisory Committee
March 20, 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

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

4

Policies

- JPB Strategic Plans
- 2012 CHSRA Business Plan*
- 2012 Regional 9-party Funding MOU
- 2013 JPB/CHSRA New Agreement
  - JPB lead agency for PCEP EIR
  - CHSRA lead agency for Blended System environmental evaluation

* Note: 2014 CHSRA Draft Business Plan Released Feb. 7, 2014

5

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

6

PCEP DEIR

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

Project Purpose and Need

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

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

Visual Simulation

Right of Way Needs

- Most in Caltrain ROW
- Traction Power Facilities
  - 2 substations
  - Up to ~1.5 acres total
- OCS (Poles)
  - Based on 35% design
  - Just outside of the ROW
  - Up to ~1 acre

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

DEIR Structure

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

Key Regional Benefits

Benefit	2020	2040
Total Ridership (Daily)	69,000	111,000 (Downtown Extension)
Reduced Vehicle Miles Travelled (Daily)	235,000	619,000 (All-EMU Fleet)
Reduced Air Pollution	56% to 84%	77% to 96%
Reduced Greenhouse Gases	68,000 Metric Tons of CO^2 equivalent	177,000 Metric Tons of CO2 equivalent

15

Stakeholder Key Concerns

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

16

Trees / Vegetation

- Along Caltrain ROW: ~19,000 trees/vegetation
- Worst-Case Impact
  - Removal of 2,200 trees/vegetation
  - Pruning of 3,600 trees/vegetation
- Mitigation Strategies
  - Avoidance
  - Minimization
  - Replacement Plan
  - Significant after mitigation (aesthetics)

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)

Visual Simulation

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

ElectromagneticFields/ Electromagnetic Interference

- EMF: Physical field produced by electrically and magnetically charged objects
  - Generated from OCS, EMUs, and TPF
  - Less than Significant Impact
- EMI: Effect on equipment
  - Potential effects on sensitive electronic equipment
  - Design treatment mitigation
  - Less than significant after mitigation

Local Traffic

- 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 before electrification.

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 is put in place

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

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
- Improvements
  - Stations (SJ, Millbrae, RWC (TBD), SF Transbay Transit Center)
  - System improvements, grade separations, passing tracks, maintenance yard

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

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)
- 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

Comments on DEIR

- All substantive comments (oral/written) will be considered
- Substantive written comments will receive written responses in Final EIR
- Encourage stakeholders to attend public meetings
- Written comments can be submitted to:
  - Email: electrification@caltrain.com
  - Mail: Caltrain, Attn: Stacy Cocke, P.O. Box 3006 San Carlos, CA 94070