CalMod Local Policy Maker Group (LPMG)

Thursday, September 26, 2013
6:00 PM – 7:30 PM
SamTrans Offices - Bacciocco Auditorium 2nd Floor
1250 San Carlos Ave., San Carlos

Agenda

1. JPB Staff Report

2. Information/Discussion
    a. Level Boarding Presentation – (Attachment A)
    b. Communications Based Overlay Signal System (CBOSS) Positive Train Control (PTC) Project Update – (Attachment B)

3. Public Comments

4. LMPG Member Comments/Requests

5. Next Meeting: November 28 @ 6:00PM, SamTrans Office Auditorium

Memorandum

Date: September 23, 2013

To: CalMod Local Policy Maker Group (LPMG)

From: Marian Lee, CalMod Executive Officer

Re: Caltrain Level Boarding

Level boarding allows passengers to get on and off the train from the platform without stepping up or down. Examples of level boarding in the San Francisco Bay Area include BART and MUNI.

Currently, Caltrain does not have level boarding but it is a desired system improvement that requires funding. Level boarding benefits include safety enhancements, operating efficiencies and passenger convenience.

It is now timely to begin discussing strategies for achieving level boarding in the long term. Those strategies will influence the development of vehicle specs for the procurement of Electric Multiple Units (EMUs) included in the Caltrain Modernization program.

Staff will present the attached power point presentation to the LPMG on the topic of Caltrain level boarding.

Attachment A

Caltrain Level Boarding

Discussion

LPMG
September 26, 2013

What is level boarding?

- Examples: BART and Muni
- Definition
  - Horizontal gap less 3”
  - Vertical gap less 5/8”

Level Boarding Important to Caltrain

- Safety enhancements
- Operating efficiencies
- Passenger convenience
- ADA compliant

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Caltrain Corridor

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Stations / Platforms

- 33 stations (SF to Gilroy)
- Shared stations / platforms
- Caltrain and tenants
  - Altamont Corridor Express (ACE)
  - Capitol Corridor (CC)
  - Amtrak
  - Freight

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Platform Height and Vehicle Threshold

Thresholds **Existing Platform Height 8" at top of rail (ATOR)**	
Caltrain	• Bi-level – 18" 1st step (25" @ floor) • Gallery – 18" 1st step (45" @ floor)
Tenants	• ACE – 18" 1st step (25" @ floor) • CC – 18" @ floor • Amtrak – 18" @ floor

Bi-Level

Gallery

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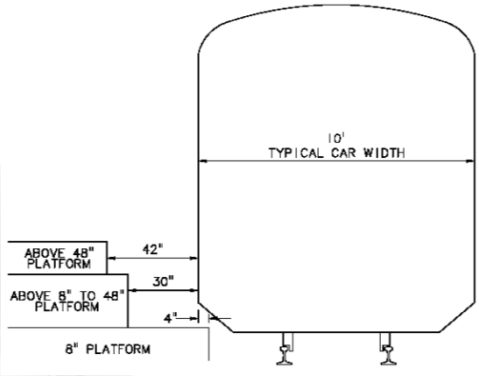
Conflicting Regulations

California Public Utilities Commission Regulation (General Order 26D)

- Tends to push platform and vehicle apart
- Protect freight and passenger operations
- Creates clearance envelope
- Govern train/platform interface

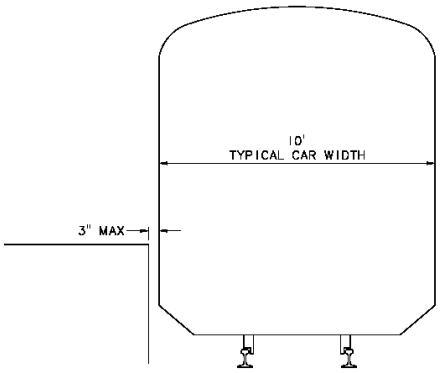
California Public Utilities Commission (CPUC) Regulation (General Order 26D)



Federal Americans with Disabilities Act (ADA)

- Tends to bring platform and vehicle together
- Provide level boarding where practicable
- Waivers when shared with freight
- Station improvements can trigger level boarding requirement

ADA Regulation



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Regulation Compliant

- Mini highs
- Wayside and on-board lifts
- Hand-crank lifts (backup)

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Caltrain Electrified Service (2019)

Electrified Service Context

- Maximize capacity and support growing ridership
- Utilize existing stations and tracks
- Continue ADA and CPUC compliance
- Service
  - Electric service from SF to SJ
  - Continued diesel for Gilroy service
- Vehicles
  - Convert from diesel to EMU fleet
  - Utilize remaining life of diesel fleet

Electrified Service Context, cont.

- Continued tenant access
  - ACE, CC, Amtrak
  - Freight
- Support future HSR service
- Consider other planned services
  - Coast Daylight
  - Dumbarton

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EMU Design Considerations

- Service proven
- Existing design / safety standard approved
- Compatible with existing fleet
- Maximize capacity
- Maintain/Improve current customer experience
- Future station platform implications
  - Caltrain level boarding
  - Shared platforms with tenants

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Service Proven EMU Options

- Single Level EMU
  - Floor threshold 46” to 51” ATOR
  - Capacity 80 – 100 passengers per car (less than today)
- Multi-Level EMU
  - Floor threshold ~25” ATOR
  - Capacity 110 – 130 passengers per car (similar to today’s)

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Platform Height and Vehicle Threshold

Thresholds **Existing Platform Height 8” at top of rail (ATOR)**	
Caltrain • Bi-level – 18” 1st step (25” @ floor) • Gallery – 18” 1st step (45” @ floor) • Multi-level EMU – Removable 18” 1st step (25” @ floor)	Tenants • ACE – 18” 1st step (25” @ floor) • CC – 18” @ floor • Amtrak – 18” @ floor

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Future Caltrain Level Boarding

Caltrain Level Boarding Approach

- Identify cost / funding
- 25” platforms at 27 Caltrain stations (SF to SJ)
- SJ to Gilroy TBD
- Dedicated tenant platforms
- Phasing consideration
- CPUC waiver for regulation compliance

Platform Height and Vehicle Threshold

Caltrain Level Boarding	*Tenants Dedicated Platform*	*HSR Dedicated Platform*
SF to SJ *Platform height at top of rail (ATOR) 25”*	*Diridon, Santa Clara* *Platform height at top of rail (ATOR) 18”*	*Millbrae, TTC* *Platform height at top of rail (ATOR) ~50”*
• Bi-level – (Remove 1st step) – 25” @ floor • Multi-level EMU – (Remove 1st step) – 25” @ floor	• ACE – 18” 1st step (25” @ floor) • CC – 18” @ floor • Amtrak – 18” @ floor	• HSR – ~50” @ floor

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Systems with Dedicated Platforms

Essen Central Station, Germany

L.A. Union Station, USA

Denver Union Station, USA (under construction)

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Next Steps

- Public Dialogue
- Agency Stakeholder Dialogue
- Inform Industry Discussions
- Inform Vehicle Procurement

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Discussion

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Memorandum

Date: September 23, 2013

To: CalMod Local Policy Maker Group (LPMG)

From: Marian Lee, CalMod Executive Officer

Re: Communications Based Overlay Signal System (CBOSS) Positive Train Control (PTC) Project Update

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The Communications Based Overlay Signal System (CBOSS) Positive Train Control (PTC) project is one of the projects identified in the ~$1.5 billion Caltrain Modernization Program.

It is an advanced signal system project that will improve the safety of the Caltrain corridor as well as provide performance enhancements needed for improved Caltrain service and the future Caltrain/high-speed rail blended system.

The LPMG received an update on the CBOSS PTC Project in March and August 2013. At the August LPMG meeting, members requested more information on the light and noise associated with the equipment that would be used during installation of the fiber and the data communications subsystem.

Caltrain staff will present the attached power point presentation at the September LPMG meeting.

The City/County Staff Coordination Group (CSCG) is receiving briefings on project progress. In July and August, Caltrain staff met with each of the 17 cities along the Caltrain corridor to coordinate local agency permits and tailor outreach for each jurisdiction.

Coordination will continue throughout the CBOSS PTC project.

Attachment B

Advanced Signal System (CBOSS PTC)

Noise / Light Update

LPMG
September 26, 2013

CBOSS PTC - What is it?

- Communications Based Overlay Signal System Positive Train Control
- Project Requirements
  - Includes federal mandate (PTC)
  - Improves Caltrain performance
- Project Partners
  - Federal Railroad Administration (FRA)
  - Union Pacific (UP)
  - California High Speed Rail Authority (CHSRA)
- Needed for Blended System

CBOSS PTC Requirements

- PTC
  - Prevent train-to-train collisions
  - Prevent over speed derailments
  - Prevent incursions into established work zones
  - Prevent movement through a misaligned switch
  - Interoperability
- Caltrain
  - Enhanced crossing safety / performance
  - Improved headways and operational flexibility
  - Enforcement of scheduled station stops
  - Schedule management
  - Employee In Charge

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Project Cost & Milestones

Description	Cost (in millions)	Milestones
Project Planning and Procurement	$5	2010 - 2011
Phase 1 - Critical Design	$25	2012 – 2013
Phase 2 - Final Design, Data Communications Subsystem & Fiber Backbone Installation	$51	2013 – 2014
Phase 3/4 - Installation, Testing, Commissioning	$150	2014 – 2016 (Revenue service Oct. 2015)
Total	**$231**	

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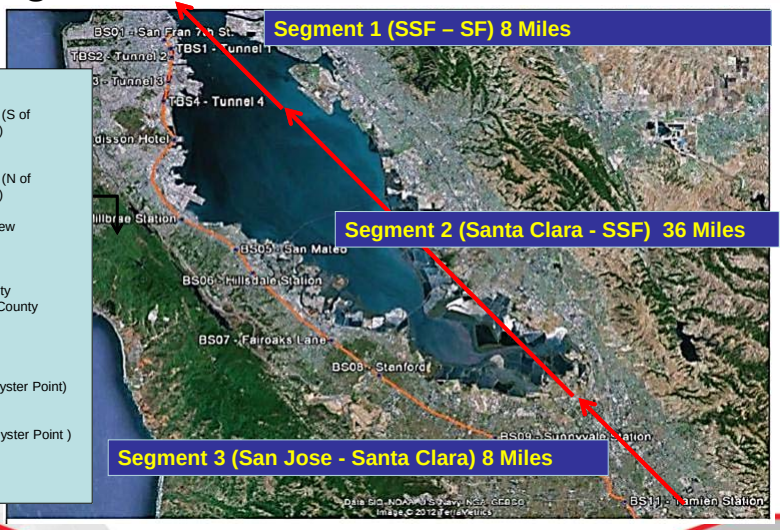
Segments – South to North



Segment 3
SJ
Santa Clara (S of Lafayette St)

Segment 2
Santa Clara (N of Lafayette St)
Sunnyvale
Mountain View
Palo Alto
Menlo Park
Atherton
Redwood City
San Mateo County
San Carlos
Belmont
San Mateo
San Bruno
SSF (S of Oyster Point)

Segment 1
SSF (N of Oyster Point)
Brisbane
SF

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Noise

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Noise Examples

- Whisper (30 dB)
- Conversational speech (60 dB)
- **Noisy restaurant (75 dB)**
- **Freeway traffic (90 dB)**
- Chain saw (120 dB)
- Jet plane (148 dB)

Note: The human ear does not judge sound in absolute terms, but instead senses the intensity of how many times greater one sound is to another. A decibel is the basic unit of sound level.

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Installation Equipment (76- 88 dB)

Trench w/ mini excavator

Potholing - vacuum-excavation/compressor

Boring Power Unit

Concrete Pump

Note: Back up alarms required by law.

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Monitor / Measure / Mitigate

- Measure noise during work windows
  - At site location
  - Edge of right-of-way
  - Next to neighborhoods
- 16 working days thus far
  - Several nights by residential buildings
  - No complaints (to date)
- Mitigate as needed / appropriate

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Light

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Light Examples

- Provides safe environment for workers
- Federal / State lighting requirements
- Lux examples
  - Direct sunlight ranges: ~32,000 to 100,000
  - TV studio lighting: ~ 1,000
  - **A bright office: ~ 320 to 500**
  - Building corridors: ~100
  - Full Moon night: ~1

Note: Lux is a standardized unit of measurement of the light intensity

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Installation Light Equipment

Light reading from field:
Lux: 350-450 at site; 196-228 25' away

Note: Lights required by state and federal law. Light generator noise 73dB.

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Monitor / Measure / Mitigate

- Ensure equipment functioning properly
- Measure lux with a light meter
- Position equipment
  - Towards work area
  - Away from roadways, residents, and businesses
- Mitigate as needed / appropriate

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Outreach

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Project Contact Info

- Dedicated Project Line: (650) 508-6499
- Email: caltrainptc@samtrans.com
- Website: www.caltrain.com/CBOSSPTC
  - Fact sheets, presentations, notices
  - Subscription for installation updates
- Social Media: @caltrain_news
  - Installation updates

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Information Sharing

- Caltrain website
- Project hotline line and project e-mail
- Social media
- CBOSS PTC subscription notification list
- Caltrain construction e-notice
- CalMod e-newsletter
- Direct mailers prior to installation
- Local jurisdiction website (if requested)

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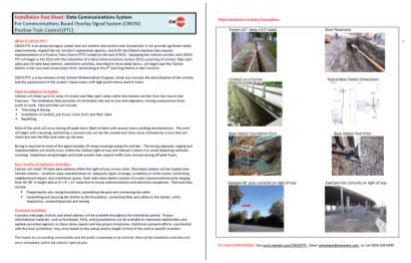
Stakeholder Outreach

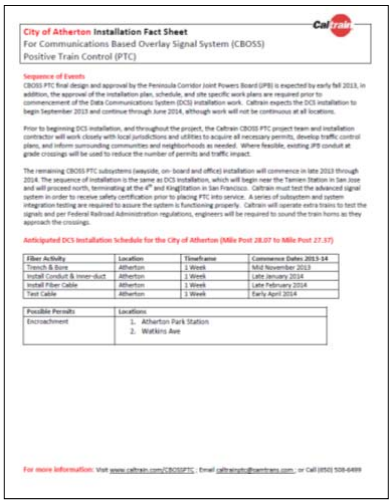
- City/County Staff Coordination Group (4 meetings)
- Local Policy Maker Group (3 meetings)
- One-on-One Meetings (17 cities / 3 counties)
  - Fact sheets
  - Tentative schedules
  - Tailored outreach
  - Communication material review
- Community Meetings (as requested)
  - San Bruno, Palo Alto, Atherton
  - RWC Chamber, Menlo Park Chamber
  - PFRUG
  - North Fair Oaks Community Council

Public Fact Sheets

- General Project Information
- FAQ
- Fiber and DCS Installation
- Noise and Light Equipment



Tentative Schedule



City of Atherton Installation Fact Sheet
For Communications Based Overlay Signal System (CBOSS)
Positive Train Control (PTC)

Sequence of Events

CBOSS PTC final design and approval by the Peninsula Corridor Joint Powers Board (JPB) is expected by early fall 2013, in addition, the approval of the installation plan, schedule, and site specific work plans are required prior to commencement of the Data Communications System (DCS) installation work. Caltrain expects the DCS installation to begin September 2013 and continue through June 2014, although work will not be continuous at all locations.

Prior to beginning DCS installation, and throughout the project, the Caltrain CBOSS PTC project team and installation contractor will work closely with local jurisdictions and utilities to acquire all necessary permits, develop traffic control plans, and inform surrounding communities and neighborhoods as needed. Where feasible, existing JPB conduit at grade crossings will be used to reduce the number of permits and traffic impact.

The remaining CBOSS PTC subsystems (wayside, on- board and office) installation will commence in late 2013 through 2014. The sequence of installation is the same as DCS installation, which will begin near the Tamien Station in San Jose and will proceed north, terminating at the 4th and King Station in San Francisco. Caltrain must test the advanced signal system in order to receive safety certification prior to placing PTC into service. A series of subsystem and system integration testing are required to assure the system is functioning properly. Caltrain will operate extra trains to test the signals and per Federal Railroad Administration regulations, engineers will be required to sound the train horns as they approach the crossings.

Anticipated DCS Installation Schedule for the City of Atherton (Mile Post 28.07 to Mile Post 27.37)

Fiber Activity	Location	Timeframe	Commence Dates 2013-14
Trench & Bore	Atherton	1 Week	Mid November 2013
Install Conduit & Inner-duct	Atherton	1 Week	Late January 2014
Install Fiber Cable	Atherton	1 Week	Late February 2014
Test Cable	Atherton	1 Week	Early April 2014

Possible Persists	Locations
Encroachment	1. Atherton Park Station 2. Watkins Ave

For more information: Visit www.caltrain.com/CBOSSPTC ; Email caltrainptc@gmtrans.com ; or Call (650) 508-6499

Next Steps

- Continue outreach
- Respond to inquiries
- Permits
- Installation coordination

Discussion

CalMod Local Policy Maker Group (LPMG)
Summary Meeting Notes for August 22, 2013

The following are summary meeting notes. The purpose of these notes is to capture key discussion items and actions identified for subsequent meetings.

JPB Staff Report

Staff provided an update on:

- The owner's rep procurement activities;
- Environmental technical studies; and
- An update on Jerry Hill's bill related to Prop 1A funding for the Caltrain Modernization Program.

Information/Discussion Items

1. Fourth and King Station/Yard Reduction/Removal Feasibility Assessment

   The LPMG received a power point presentation on the 4th and King Station/Yard Reduction/Removal Feasibility Study.

   At the request of the City/County of San Francisco to support local development efforts, Caltrain has been studying the feasibility of reducing and/or removing the existing 4th and King Station/Yard which currently functions as the San Francisco Caltrain terminus station.

   Two reduction options and a removal option were identified. This technical analysis focuses on the two reduction options. The removal option is a significant effort that needs a separate study.

   Preliminary findings show that Option A with street level development along Townsend and 4th streets and podium style development over an efficient reconfigured station/yard may support today's operations and electrified service in the future. Option B, which assumes Option A development plus additional street level development along King Street, can only partially support today's operations and electrified service in the future resulting in the need for an off-site facility located within the City/County of San Francisco. Final steps to conclude the study include cost estimation for improvements at the station and operation / maintenance changes.

   With completed technical work, there will be an assessment as to if these options should be included in the Peninsula Corridor Electrification Project (PECP) EIR as requested by the City/County of San Francisco.

This item will be brought back to the LPMG for further discussion.

2. Communications Based Overlay Signal System (CBOSS) Positive Train Control (PTC) Update

   The LPMG received a power point presentation on the installation work associated with the Communications Based Overlay Signal System (CBOSS) Positive Train Control (PTC) project. The presentation included detailed descriptions of the installation tasks and timeframes for those activities.

   Several LPMG members asked for more information about the noise and light that would be generated by the equipment used for the project. Staff committed to providing an update on those items at the September meeting.

   Public Comment: A public speaker expressed doubt about the performance attributes of the CBOSS PTC project. The project is moving to final design and installation with all of the performance attributes identified.

3. Peninsula Corridor Electrification Project Delivery Method

   The LPMG received a power point presentation on the Peninsula Corridor Electrification Project (PCEP) delivery options. The presentation included staff recommendation for using design build (DB) and best value for the electrification project including vehicle procurement. It also described the due diligence performed by staff to land on the recommendation.

   Questions and discussion were solicited to inform the September JPB meeting where the item would be presented for action.

   Public Comment: A public speaker expressed DB support for electrification and proposed Design Build Finance Maintenance (DBFM) for vehicles. DBFM was found by staff to not best meet the project objectives at this time.

Public Comments (after all information/discussion items were complete)

A speaker from Peninsula Freight Users Group (PFRUG) expressed support for the Caltrain Modernization Program and requested information about impacts on freight operations from CBOSS PTC installation. Following the meeting, staff confirmed that there would be no impacts to freight operations. The information was shared with PFRUG.