

File No. 141114

Committee Item No. 2  
Board Item No. \_\_\_\_\_

## COMMITTEE/BOARD OF SUPERVISORS

### AGENDA PACKET CONTENTS LIST

Committee: Land Use & Development

Date Dec. 8, 2014

Board of Supervisors Meeting

Date \_\_\_\_\_

#### Cmte Board

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|-------------------------------------|--------------------------|--|
| <input type="checkbox"/>            | <input type="checkbox"/> | Motion                                       |
| <input type="checkbox"/>            | <input type="checkbox"/> | Resolution                                   |
| <input type="checkbox"/>            | <input type="checkbox"/> | Ordinance                                    |
| <input type="checkbox"/>            | <input type="checkbox"/> | Legislative Digest                           |
| <input type="checkbox"/>            | <input type="checkbox"/> | Budget and Legislative Analyst Report        |
| <input type="checkbox"/>            | <input type="checkbox"/> | Youth Commission Report                      |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Introduction Form                            |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Department/Agency Cover Letter and/or Report |
| <input type="checkbox"/>            | <input type="checkbox"/> | MOU  |
| <input type="checkbox"/>            | <input type="checkbox"/> | Grant Information Form                       |
| <input type="checkbox"/>            | <input type="checkbox"/> | Grant Budget                                 |
| <input type="checkbox"/>            | <input type="checkbox"/> | Subcontract Budget                           |
| <input type="checkbox"/>            | <input type="checkbox"/> | Contract/Agreement                           |
| <input type="checkbox"/>            | <input type="checkbox"/> | Form 126 – Ethics Commission                 |
| <input type="checkbox"/>            | <input type="checkbox"/> | Award Letter                                 |
| <input type="checkbox"/>            | <input type="checkbox"/> | Application                                  |
| <input type="checkbox"/>            | <input type="checkbox"/> | Public Correspondence                        |

OTHER (Use back side if additional space is needed)

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Completed by: Andrea Ausberry Date Dec. 4, 2014

Completed by: \_\_\_\_\_ Date \_\_\_\_\_

Request for presentations from Peninsula Corridor Joint Powers Board (JPB), California High Speed Rail Authority (CHSRA) and Transbay Joint Powers Authority on the issue of platform compatibility, vehicle width, and its impact on the CHSRA program, Caltrain passenger and freight corridor, and the Transbay Transit Center and Downtown Extension. Presentations from JPB and CHSRA should include status on the RFPs for vehicle procurement.

## Caltrain/CHSRA/TJPA Update Shared Platform Analysis Update

December 2014  
Prepared for SF Land Use Committee

## Caltrain



### About Caltrain

- Diesel commuter rail system
- SF to SJ area
- 77 mile corridor
- 32 stations
- 92 trains / weekday
- Today Ridership: ~ 60,000+ weekday
- 2040 Ridership: ~100,000+ weekday



### Bikes on Board


- 48 - 80 per train (2 of 5 cars)
- Today: ~6,000 weekday
- Bike "bumps"



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## Caltrain Modernization

- Early Investment Program
  - Advanced Signal System: CBOSS PTC (2015)
  - Peninsula Corridor Electrification Project (2020-2021)
- Caltrain/HSR Blended System



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## CBOSS PTC

- Communications Based Overlay Signal System Positive Train Control
- Project Requirements
  - Includes federal mandate (PTC)
  - Improves Caltrain performance
- Key Milestones
  - Preparing for FRA witness testing in the southern segment
  - Pilot train on board installation complete
  - Back up control facility built out
  - Continued work for rest of corridor and remainder of trains

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## Electrification Project\*

Area	Project	Service
51+ miles San Francisco to San Jose (Tamien Station)	Electrification: <ul style="list-style-type: none"> <li>• Overhead Contact System (OCS)</li> <li>• Traction Power Facilities</li> </ul> Electric Multiple Units (EMUs)	Up to 79 mph Service Increase <ul style="list-style-type: none"> <li>• 6 trains / hour / direction</li> <li>• More station stops / reduced travel time</li> <li>• Restore Atherton &amp; Broadway service</li> </ul> Mixed-fleet service (interim period) Cont. tenant service (including freight)

\*Proposed project not yet approved, pending environmental clearance

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## Electrification Milestones

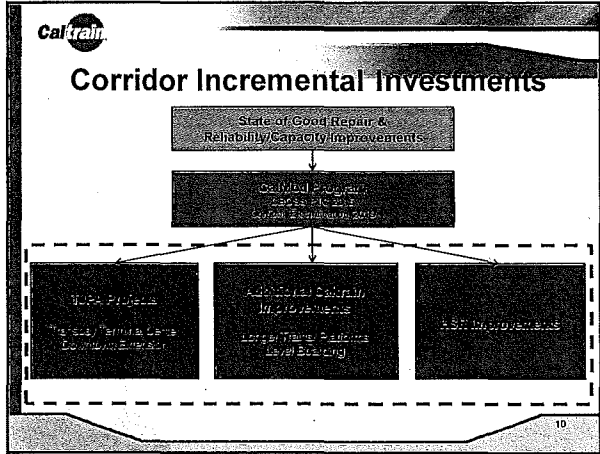
- 2008 35% Design
- 2009 FONSI
- 2012 Regional Funding Plan
- 2013 Contracting Method Selected
- 2014
  - Owners team procured
  - RFQ and RFI complete
- 2015
  - EIR Certification
  - Update Funding Plan
  - Issue RFPs

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### Electrification Procurement Status

- Electrifications (DB)
  - RFQ complete
  - 6 teams shortlisted
- Vehicles (Best Value)
  - RFI complete
  - EMUs best performance (stations stops, travel time)
  - BI-Level maximizes capacity
  - Most common ~25" floor threshold

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## California High Speed Rail Authority

**CALIFORNIA**  
High-Speed Rail Authority

**Peninsula Corridor: Blended (Integrated) System**

- Primarily two track system
- System Improvements TBD
  - HSR Stations
  - Passing Tracks
  - Grade Separations
  - Maintenance Facility
  - Support speeds up to 110mph
- Peak Hour Capacity (12 Caltrain + 8 HSR)



### Request for Expressions of Interest

- The REOI is being used to identify and receive feedback from firms interested in competing to design, build, and maintain the high-speed rail trainsets for use on the California High-Speed Rail System.
- The Authority's order will include a base order and options up to 95 trainsets.



### Technical Requirements - Trainsets

- **Single level EMU:**
  - Capable of operating in revenue service at speeds up to 354 km/h (220 mph), and
  - Based on a service-proven trainset in use in commercial high speed passenger service at least 300 km/h (186 mph) for a minimum of five years.



### Technical Requirements - Trainsets

- Width between 3.2 m (10.5 feet) to 3.4 m (11.17 feet)
- Maximum Length of 205 m (672.6 feet)
- Static axle loads that do not exceed 17 tonnes as shown in 2008 HS RST TSI
- Nominal Vehicle floor height above top-of-rail (TOR) of 1295mm (51 inches) under all loading conditions



### Technical Requirements - Trainsets

- **Minimum of 450 passenger seats:**
  - First class space: Equivalent of 1067 mm (42 inches) of Pitch
  - Business class space: 991 mm (39 inches) of Pitch
- **Compliant with all applicable U.S. laws and regulations, including ETF\_001-03 – Proposed Rule text for NPRM (Notice of Proposed Rule Making).**



### Technical Requirements - Maintenance

- Long term technical support, provision of spares and maintenance (30 years) for the trainsets
- The design, construction, operation and maintenance of a Heavy Maintenance Facility (HMF) for trainsets overhaul and 3 running repair/inspection shop, stabling facilities
- The Authority shall make three properties available to the Contractor for the facilities. The HMF facility should be co-located with one of the stabling facilities



### Submittal Information

- Expressions of Interest (EOI) received
- 10 Manufacturers have responded
- EOIs will be accepted after that date
- Submitting an EOI is not a requirement. Firms that do not submit an EOI may still submit a Proposal in response to the RFP

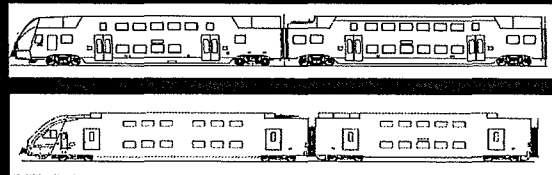


### The Procurement Process

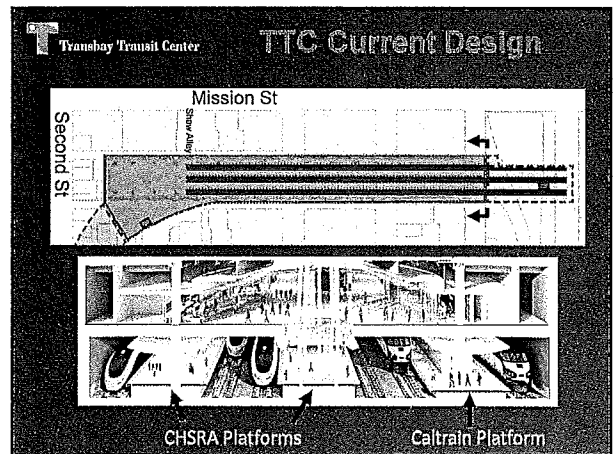
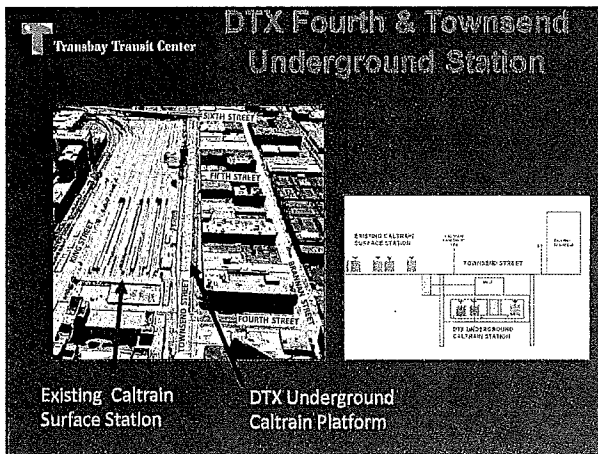
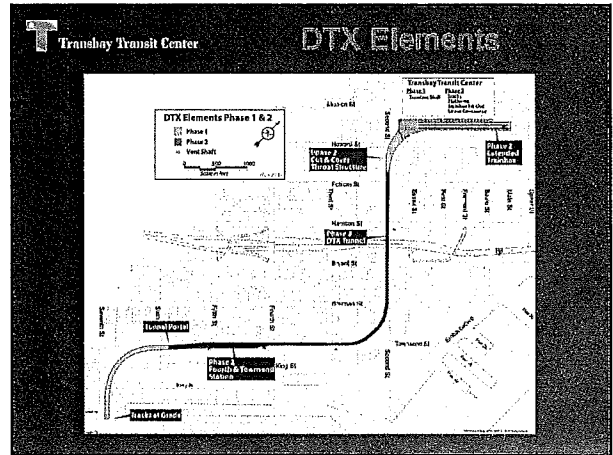
- The REOI does not begin the procurement process
- The Authority will issue an RFP to begin the procurement process (2015)
- Firms that submit EOIs will be given credentials to ask questions and participate in one-on-ones during the RFP process

### HIGH LEVEL DEDICATED – LONG TERM

Mid-Level versus High Level Platform (Stadler KISS)



# Transbay Joint Powers Authority





**T** Transbay Transit Center **TTC Current Dedicated Platform Design**

- Single Caltrain platform
  - 25" above top-of-rail
  - 30' wide
  - 5'-7" side clearance to track C/L
- Two HSR platforms
  - 50" above top-of-rail
  - 29'-8" wide
  - 5'-9" side clearance to track C/L

**T** Transbay Transit Center **TTC with Shared Platforms**

Common platform height and vehicle width provides:

- ✓ Start-up staging storage
- ✓ Improved delay recovery
- ✓ Greater Caltrain capacity
- ✓ HSR phase-in flexibility
- ✓ No curved crossovers

**Shared Level Platforms  
Technical Analysis**

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**Current Vehicles / Platforms**

- Diesel Push/Pull
  - Bi-Level Cars
  - Gallery Cars
- Platforms 8" ATOR

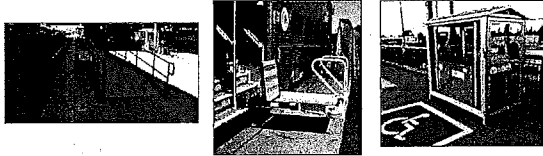
Bi-Level

Gallery

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## Regulation Compliant

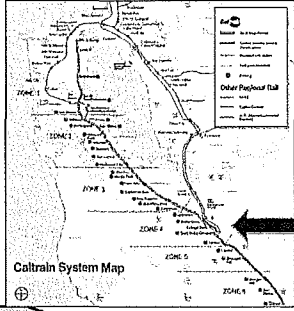
- Mini highs
- Wayside and on-board lifts
- Hand-crank lifts (backup)



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## Passenger Tenants



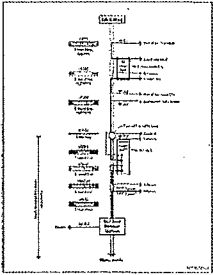
- ACE (2 stations)
- CC (2 stations)
- Amtrak (1 station)

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## Freight (Union Pacific Rail Road)

- TRA (JPB & UPRR)
  - 12am to 5am
  - 10am to 3pm (At least one 30 min headway window in each direction)
- In Practice
  - 8pm to 5am
  - Occasional day service
- MT-1 between Santa Clara to South of Tamien, no limit to hours



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## Shared Platform Analysis

- Baseline
  - HSR at ~50" / Caltrain at ~25" boarding height
  - Dedicated platforms at 3 stations
- Consider alternative vehicles to achieve same boarding height
- Key Considerations
  - Vehicle performance / capacity
  - Caltrain diesel fleet compatibility
  - Passenger tenant compatibility
  - CPUC and ADA requirements
  - Station modifications (~50" vs. ~25" platforms)

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### Vehicle Performance / Capacity

- Share HSR and Caltrain platforms provide station and system operational benefits
- Different electric technologies considered
  - Electric Loco (inferior performance)
  - EMU single level (reduced capacity)
  - EMU bi level with 2 sets of doors (customization)
- Further analysis of EMU bi level of 2 sets of doors

### Caltrain Diesel Fleet Compatibility

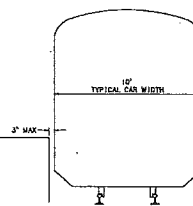
- ~25" boarding cars retain utilization of existing diesel fleet during transition to higher platforms
- ~50" boarding cars eliminate use of existing Caltrain diesel fleet once first station is upgraded
- Consideration of purchasing 100% of electric fleet

### CPUC / ADA Requirements

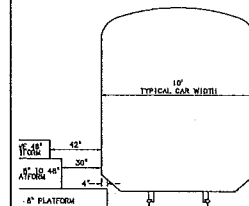
- CPUC waiver needed above current platform height
  - Platform clearance will be an issue
  - Greater set back the higher the platform
- Compliance with ADA requirements of 3" horizontal and +/- 5/8" will be difficult to achieve and only possible with CPUC waiver at either 25" or 50"
- Accommodate freight service

### Conflicting Regulations

ADA: Platform and vehicle together



CPUC: Platform and vehicle apart



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### Station Modifications (50" vs. 25" platforms)

- Original plan for HSR no additional changes to new stations
- Additional challenges to existing stations TBD
- Relevant to either height
  - Environmental process
  - Construction on operating railroad
  - CPUC Waiver
  - Freight Issues

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### Next Steps

<b>Nov. 2014</b>	• Issue and Options
<b>Dec. 2014</b>	• Key Criteria for Analysis
<b>Jan. - Feb. 2015</b>	• Trade-Off Assessment
<b>Mar. - May 2015</b>	• Policy Decisions • Update Funding Commitment

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Q/A

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BOARD of SUPERVISORS



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Dr. Carlton B. Goodlett Place, Room 244  
San Francisco 94102-4689  
Tel. No. 554-5184  
Fax No. 554-5163  
TDD/TTY No. 554-5227

## MEMORANDUM

TO: Ed Reiskin, Executive Director, Municipal Transportation Agency

FROM: Andrea Ausberry, Assistant Clerk, Land Use and Economic Development Committee, Board of Supervisors

DATE: November 13, 2014

SUBJECT: LEGISLATION INTRODUCED

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The Board of Supervisors' Land Use and Economic Development Committee has received the following proposed legislation, introduced by Supervisor Kim on October 21, 2014:

**File No. 141114**

**Hearing requesting presentations from Peninsula Corridor Joint Powers Board (JBP), California High Speed Rail Authority (CHSRA), and Transbay Joint Powers Authority on the issue of platform compatibility, vehicle width, and its impact on the CHSRA program, Caltrain passenger and freight corridor, and the Transbay Transit Center and Downtown Extension including presentations from JPB and CHSRA status on the Request for Proposals for vehicle procurement.**

If you have any additional comments or reports to be included with the file, please forward them to me at the Board of Supervisors, City Hall, Room 244, 1 Dr. Carlton B. Goodlett Place, San Francisco, CA 94102.

c: Janet Martinsen, Municipal Transportation Agency  
Kate Breen, Municipal Transportation Agency  
Dillon Auyoung, Municipal Transportation Agency

Print Form

# Introduction Form

By a Member of the Board of Supervisors or the Mayor

RECEIVED  
BOARD OF SUPERVISORS  
SAN FRANCISCO

2011 OCT 21 PM 1:48  
Time stamp  
or meeting date

I hereby submit the following item for introduction (select only one):

- 1. For reference to Committee. (An Ordinance, Resolution, Motion, or Charter Amendment)
- 2. Request for next printed agenda Without Reference to Committee.
- 3. Request for hearing on a subject matter at Committee.
- 4. Request for letter beginning "Supervisor [ ] inquires"
- 5. City Attorney request.
- 6. Call File No. [ ] from Committee.
- 7. Budget Analyst request (attach written motion).
- 8. Substitute Legislation File No. [ ]
- 9. Reactivate File No. [ ]
- 10. Question(s) submitted for Mayoral Appearance before the BOS on [ ]

Please check the appropriate boxes. The proposed legislation should be forwarded to the following:

- Small Business Commission       Youth Commission       Ethics Commission
- Planning Commission       Building Inspection Commission

**Note: For the Imperative Agenda (a resolution not on the printed agenda), use a Imperative Form.**

**Sponsor(s):**

Kim

**Subject:**

Request for presentations from Caltrain, California High Speed Rail and Transbay Joint Powers Authority on the issue of platform compatibility

**The text is listed below or attached:**

See attached

Signature of Sponsoring Supervisor: 

**For Clerk's Use Only:**

14114