

CalMod

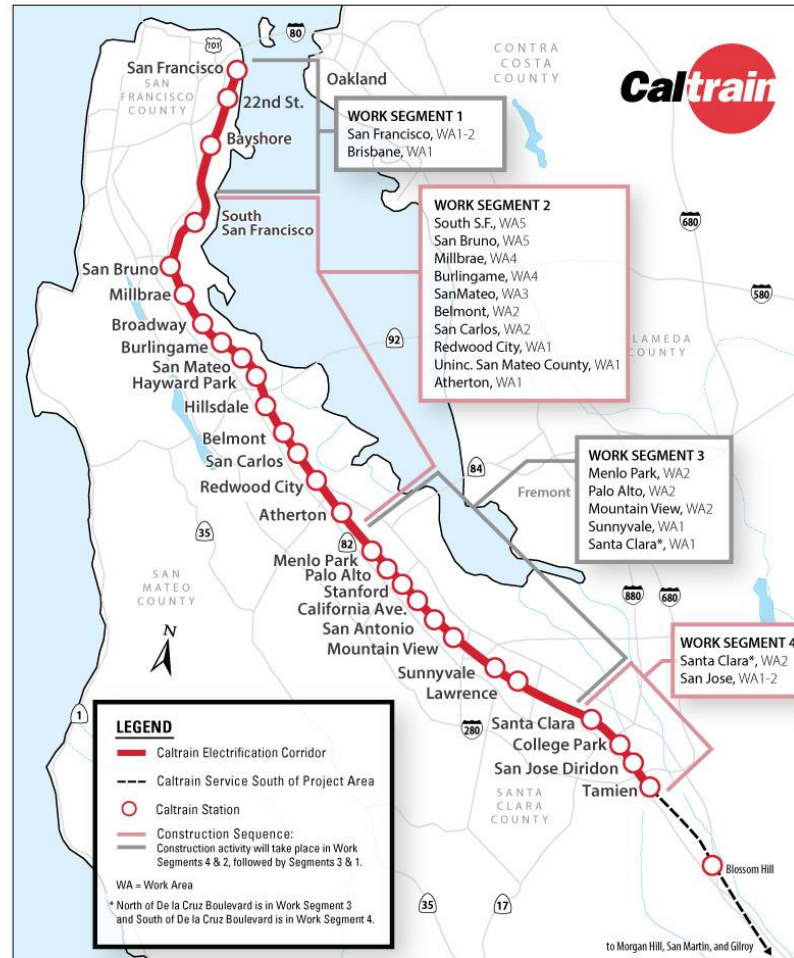


Peninsula Corridor Electrification Project Update

Bicycle Advisory Committee
November 16, 2017



Electrification - Infrastructure



Work Segment Map

Electrification - Infrastructure

- Construction activities in Segment 2:
 - Began tree trimming and removals
- Progression of field activities:
 - Continued utility potholing and completed signal potholing
 - Prepared sidings and staging areas for start of foundation installation
 - Installed test piles
 - Performed stray current surveys
 - Relocated existing signal cables



Electrification - Infrastructure

- Progression of design:
 - Overhead Catenary System (OCS):
 - Complete design for Segment 2 Work Area 5
 - Continued design for other Segments 2 and 4
 - Signal System:
 - Continued submission and review of 65% signal design for Segments 2 and 4
 - Continued technical coordination with Union Pacific Railroad for system wide signal system design
 - Traction Power System:
 - Continued submission and review of 95% Traction Power Facilities design for Segment 4
 - Continued with Pacific Gas and Electric (PG&E) interconnection feasibility study for Segments 2 and 4
 - Communication System:
 - Continued work on 65% system wide communication system design



Electrification - Infrastructure



Test pile installation in preparation for foundation installations



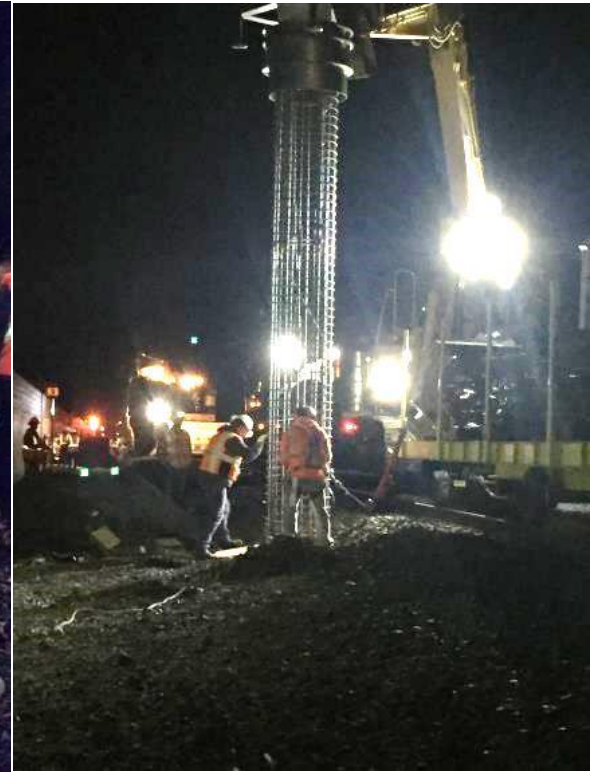
OCS Foundations



Potholing



Drilling



Installing



Electrification - Infrastructure

- Supervisory Control and Data Acquisition (SCADA) Contract (ARINC Inc.)
 - Completed contract negotiations
 - Awarded contract at August Board meeting
 - Executed in September
 - Notice to Proceed and kickoff meeting in October



Electrification - Infrastructure

- **Tunnel Modifications**
 - 100% Plans and Specifications reviewed
 - Completion of bid package targeted for December
- **Centralized Equipment Maintenance and Operations Facility (CEMOF)**
 - Developed design concepts
 - Reviewed with stakeholders



Electrification - Infrastructure

- PG&E
 - Supplemental Agreement #3 approved for final design and long lead procurement
 - Progress on power quality studies with PG&E
 - Start interconnection option study and coordination
 - Temporary power available from PG&E by summer 2018



Electrification - Infrastructure

- **Utility Relocation and Coordination**
 - Relocation required at locations of overhead power and communication lines
 - Relocation notices sent to owners of utilities
 - Conducted utility partnering session
 - Received relocation schedules from PG&E and Silicon Valley Power
 - Received first PG&E relocation designs



Electrification - Infrastructure

- Disadvantaged Business Enterprise (DBE) Participation and Labor
 - Design-Build contract has a DBE goal of 5.2%
 - \$1,795,031 (0.258%) paid to date
 - Upcoming solicitations for DBE/ Small Business Enterprise to be determined:
 - Tunnel modifications
 - CEMOF facility upgrades for Electric Multiple Units (EMUs)
 - On-call safety & security support for PCEP



EMUs

- Stadler
 - Input for on board bike storage received with stacked option selected
 - Completed preliminary design review meetings for car shell, ventilations and mechanical systems
 - Receiving extrusions for car body manufacturing

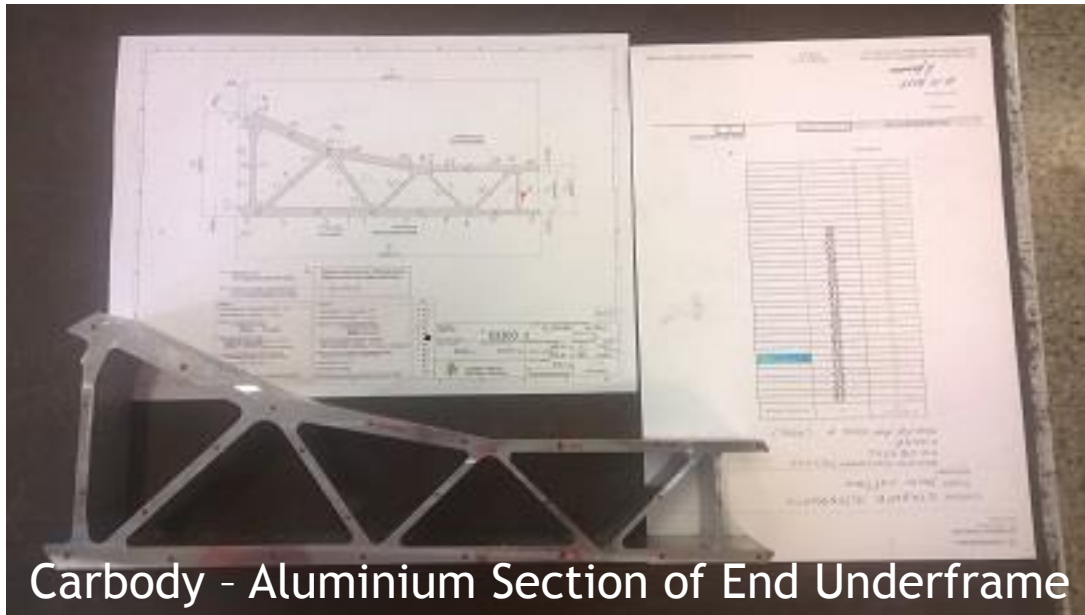


EMUs

Mockup of
engineer's
console and
seat within
the cab



EMUs



Carbody - Aluminium Section of End Underframe



Carbody - Aluminium Section of Roof End Structure



Safety

- Safety and Security Certification Review Committee - monthly basis with participation from FRA, FTA and Project Management Oversight Committee
- Fire Life Safety & Security Committee - monthly basis with representatives from local fire, police and County Office of Emergency Services personnel
- Certifiable Element and Items List developed
- Two incidents in the quarter
 - No injuries or schedule impacts
 - Mitigation efforts undertaken to prevent repeats



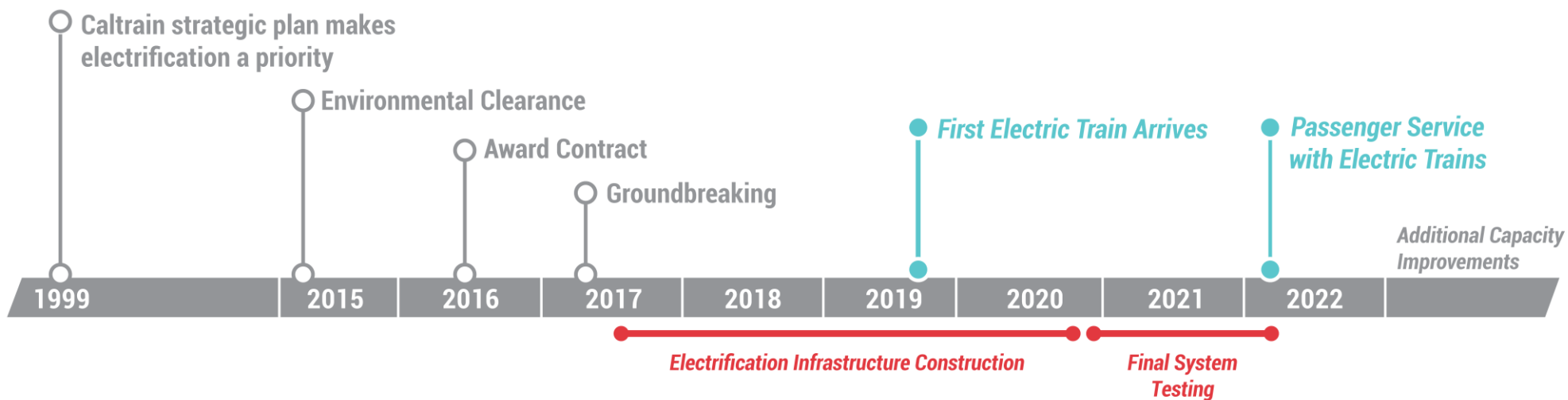
Quality Assurance

- Revised PCEP Quality Management Plan
- RFP preparation underway for QA lab
- 7 audits conducted this quarter (35 to date) including:
 - Wayside power cabinets
 - Switch machines
 - Bridge segments
 - Concrete batching
 - Traction power facilities/systems
 - Control point signaling
- No findings



Schedule

MILESTONES



*Please keep in mind that testing and construction will overlap as each Segment will be tested individually, prior to final system testing.

Note: **Schedule Subject to Change**



Budget & Expenditures (in millions)

	Budget	Current Budget*	Q1 Costs	Costs to Date	Estimate at Completion
Electrification	\$696.6	\$696.7	\$24.8	\$157.2	\$696.7
SCADA	\$0.0	\$3.4	\$0.0	\$0.0	\$3.4
EMU	\$550.9	\$550.9	\$29.7	\$43.6	\$550.9
Separate Contract & Support Costs	\$417.2	\$417.2	\$15.9	\$123.4	\$417.2
Contingency	\$315.5	\$312.0**	\$0.0	\$0.0	\$298.9
Forecasted Costs & Changes	\$0.0	\$0.0	\$0.0	\$0.0	\$13.1
PCEP Total	\$1,980.3	\$1,980.3	\$70.4	\$324.1	\$1,980.3

* Includes executed change orders and awarded contracts

** Refer to Contingency Drawdown Table on next slide for details

Note: Budget / Expenditures as of **September 30, 2017**



Contingency Drawdown Table

Contracts	Drawdown Amount	Contingency
		\$ 315,533,611
BBII Executed Change Orders	\$ 85,472	
SCADA Contract	\$ 3,446,917	
Total	\$ 3,532,389	
Remaining Contingency		\$ 312,001,222

Note: As of **September 30, 2017**



Risk Management

- September Risk Refresh Meeting
 - Comprehensive review of full risk register
- Top Risk: Contractor may be unable to develop grade crossing modifications that meet operational requirements prior to scheduled sub-system testing of the grade crossings
- 276 risks; 106 active; 170 retired



Environmental Compliance

- Pre-construction efforts:
 - Nesting bird surveys
 - Biological surveys
 - Installation of wildlife exclusion fencing
- Archaeological exploratory trenching
- Construction noise and light mitigation



Real Estate

Segment	Appraisal Packages Needed	Appraisals Completed	Acquisition Offers Presented	Acquisition Offers Accepted
Segment 1	8	0	0	0
Segment 2	27	26	25	21
Segment 3	11	7	6	0
Segment 4	9	9	8	0
Total	55	42	39	21

The real estate acquisition program has prioritized delivering property first the first two construction segments, 2 and 4. With those acquisitions finalized, the focus is now turning to segments 1 and 3, which are scheduled to commence later in the project schedule.

Note: As of **September 30, 2017**



Salt Lake City Vehicle Plant Groundbreaking
October 13, 2017
Gov. Gary Herbert and Sen. Orrin Hatch helped
celebrate the groundbreaking of a new vehicle
plant that will help build Caltrain's EMUs



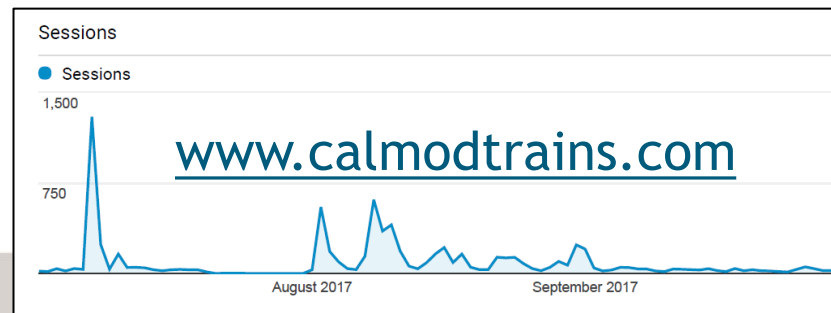
PCEP Groundbreaking
July 21, 2017

Gov. Jerry Brown, Dem. Leader
Nancy Pelosi, Rep. Anna Eshoo,
Rep. Jackie Speier, state and
local elected officials, business
leaders, environmentalists and
transportation advocates joined
together at the Millbrae Station
for the official Caltrain
Electrification Groundbreaking



EMU Outreach

- Input received
 - Seat colors (gray and red)
 - Onboard bike storage (stacking, storage, demarcation)
 - ADA restroom input from Caltrain Accessibility Advisory Committee (labeling, grab bars, emergency button)
 - Website



- Total Sessions: 7,817
 - Mobile (42.8%)
 - Desktop (52.4%)
 - Tablet (4%)
- Users
 - New (76.7%)
 - Returning (23.3%)



Onboard Bike Storage

- Stacking Option Selected
- Incorporated feedback specific to stacking design:
 - To reduce turning of front wheel, spacing for handle bars similar to Gallery cars
 - Bungee cord connection/spacing similar to Gallery cars
 - Bar covered in durable material to prevent scratching bike frames
- Incorporated feedback to bike cars:
boarding/deboarding, platform demarcation,
removed vertical hooks, storage under
cantilevered seats



Onboard Bike Storage

- Outreach Included
 - At Stations w/ Sample Options
 - Bicycle Advisory Committee
 - Bike Coalition Meetings
 - Public Poll (1,770 votes)
 - Traditional and Social Media
 - Emails, website comments
- Will continue to work with bike community on:
 - Security issues
 - 8-car EMU design
 - Station bike parking



ADA Restroom

- Outreach Included
 - Multiple meetings with Caltrain Accessibility Advisory Committee and tour of restroom mock-up
- Feedback Incorporated
 - Labeling (Braille and raised letters, placement requests)
 - Emergency Buttons (placement requests)
 - Grab Bars (Added and Locations Adjusted)
 - Toilet Paper Dispenser (no hard corners or edges)
 - Coat Hooks (Flush to wall, pull down feature)



Construction Outreach

- Pre-construction community mtgs
- Notices (38,000+)
- Weekly e-mail updates
www.caltrain.com/pcepconstruction
- Construction outreach office
- Dedicated 24-hour project hotline
650-508-7726
- Dedicated interactive website
(upcoming)



CalMod

