



PENINSULA CORRIDOR ELECTRIFICATION PROJECT (PCEP)

2020Q1 Quarterly Update #20
July 1 – September 30, 2019

November 7, 2019



PCEP Work Segment Map



CalMod ELECTRIFICATION CONTRACT UPDATE

Signal Status

Signal Locations	Total Number of Locations	Design Percent Complete	Anticipated Design Completion	Installation Percent Complete	Anticipated Installation Complete	Testing Percent Complete	Anticipated Testing Completion
Segment 1	25	15%	12/31/2020	0%	6/30/2021	0%	12/31/2021
Segment 2	105	50%	3/31/2020	10%	9/20/2020	0%	3/31/2021
Segment 3	65	35%	12/31/2020	0%	6/30/2021	0%	12/31/2021
Segment 4	21	75%	3/31/2020	18%	9/20/2020	0%	3/31/2021
Total	216						

- Continued installation of signal ductbank, conduits, signal house and WPC foundations in Segments 2 and 4
- Installed signal house at CP Shark
- Continued fabrication and testing of signal houses
- Submitted for review application logic for Control Points Shark, Delmas, Mack, Michael, Stockton, Alameda, and Auzerais St and Virginia Ave crossings
- Submitted preliminary cutover plans for 4 (out of 9) proposed cutover phases in Segment 4
- Technical meetings weekly to discuss progress of grade crossing design submittals
- Met with FRA (Region 7 and HQ) and CPUC on 8/8/19 and 9/19/19



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CalMod ELECTRIFICATION CONTRACT UPDATE

Design Progress OCS and Traction Power

Required number of OCS submittals has increased due to breaking up of segments and updated contractual requirements

Design Discipline	OCS			Traction Power		
	Required	Completed Previously	Completed this Period	Required	Completed Previously	Completed this Period
Segment 1	12	2	0	3	1	0
Segment 2	15	12	0	3	2	0
Segment 3	6	3	2	2	1	0
Segment 4	10	11	0	4	4	0
Systemwide	12	10	0	7	7	0
Totals	55	37	2	19	15	0

Note: Data as of September 30, 2019



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CalMod ELECTRIFICATION CONTRACT UPDATE

OCS Progress

Segment	Work Area	Foundations				Poles			
		Required ^a	Completed as of 6/30	Completed this Period (7/1-9/30)	Total Completed	Required	Completed as of 6/30	Completed this Period (7/1-9/30)	Total Completed
1	Tunnels	32 ^d	32 ^d	0	32 ^d	32	0	0	0
	A	309	0	May 2020 ^b	0	259	0	0	0
	B	237	0	May 2020 ^b	0	177	0	0	0
2	5	243 ^c	184	0	184	208	160	0	160
	4	314	243	0	243	253	186	0	186
	3	174 ^c	60	0	60	140	30	6	36
	2	248	74	0	78 ^e	205	10	44	54
	1	206	78	0	79 ^e	154	0	26	26
3	2	514	0	Oct 2019 ^b	0	442	0	0	0
	1	390	171	182	353	311	0	0	0
4	A	244	72	79	151	180	0	46	46
	B	131	70	0	70	124	0	47	47
	CEMOF	112	0	Jan 2020 ^b	0	102	0	0	0
Total:		3,154	984	261	1,250	2,587	386	169	555

Note: ^a Foundations Required do not match Poles Required as guy foundations are needed in some locations for extra support.

^b Planned Start Date

^c 55 foundations in S2WA5 will be installed by SSF and 64 foundations in S2WA3 will be installed by 25th Avenue.

^d The number of foundations for the Tunnels Project reduced from 34 to 32 after it was determined the two "micropiles" are not to be considered foundations.

^e 5 foundations (1 from S2WA1 and 4 from S2WA2) from Non-Conformance Report #17 were tested and approved.



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CalMod ELECTRIFICATION CONTRACT UPDATE

Traction Power Facilities Progress

Facility	Sitework			Substation Building			Low / High Voltage Equipment			Transformer			Gantry		
	Last Period	This Period	To Date	Last Period	This Period	To Date	Last Period	This Period	To Date	Last Period	This Period	To Date	Last Period	This Period	To Date
TPSS-1	28%	0%	28%	0%	0%	0%	16%	14%	30%	100%	0%	100%	8%	10%	18%
TPSS-2	75%	0%	75%	20%	0%	20%	47%	14%	61%	100%	0%	100%	51%	20%	71%
SWS-1	10%	0%	10%	0%	0%	0%	7%	5%	12%	100%	0%	100%	6%	7%	13%
PS-1	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PS-2	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PS-3	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PS-4	11%	5%	16%	0%	0%	0%	5%	0%	5%	100%	0%	100%	0%	0%	0%
PS-5	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
PS-6	15%	0%	15%	0%	14%	14%	9%	19%	28%	100%	0%	100%	0%	10%	10%
PS-7	15%	36%	51%	0%	20%	20%	25%	8%	33%	100%	0%	100%	18%	0%	18%
Wayside Power Cubicles		Required						Installed							
		28						7							

Last Period: Data as of June 30, 2019
 This Period: July 1, 2019 – September 30, 2019



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CalMod ELECTRIFICATION CONTRACT UPDATE



Paralleling Station 4
Hillsdale Station



San Bruno Station OCS

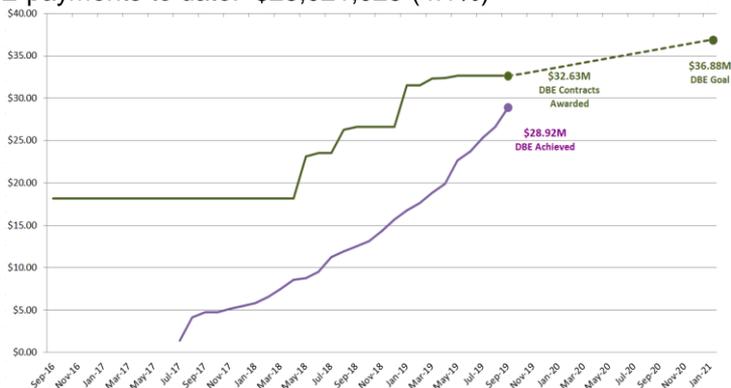


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CalMod DBE UPDATE

Disadvantaged Business Enterprises

- 5.2% (\$36,884,154) of the total DB contract value (\$709,310,651) subcontracted to DBEs
- DBE payments to date: \$28,921,028 (4.1%)



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CalMod SCADA & CEMOF CONTRACTS UPDATE

Other Electrification Contracts

- Supervisory Control and Data Acquisition (SCADA)
 - Numerous functional test procedures completed, in preparation for Pre-Factory Acceptance Testing
 - Continued working with JPB Operations to develop screen layouts and desired operational features

- Centralized Equipment Maintenance and Operations Facility (CEMOF)
 - RFIs and submittals continue to be processed
 - Roadway Worker Protection training is continuing to be provided as workers come onboard the project
 - Full Notice to Proceed was issued on September 10
 - Field work commenced on September 16
 - Underground utilities have been located and marked
 - Safety critical activities were reviewed and approved by JPB Safety
 - CEMOF Access Protocol has been approved by all parties



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CalMod TUNNEL CONTRACT UPDATE

ProVen Management, Inc.

- OCS termination structure fabrication, procurement, and installation at all portals are in progress
- ProVen finished casting the Tunnel 4 Historic South Portal Archstones on August 29, 2019, and installation of the blocks will be scheduled on a weekend shutdown
- Installation of drop tubes and conductor rail to start by December; procurement and fabrication are in progress

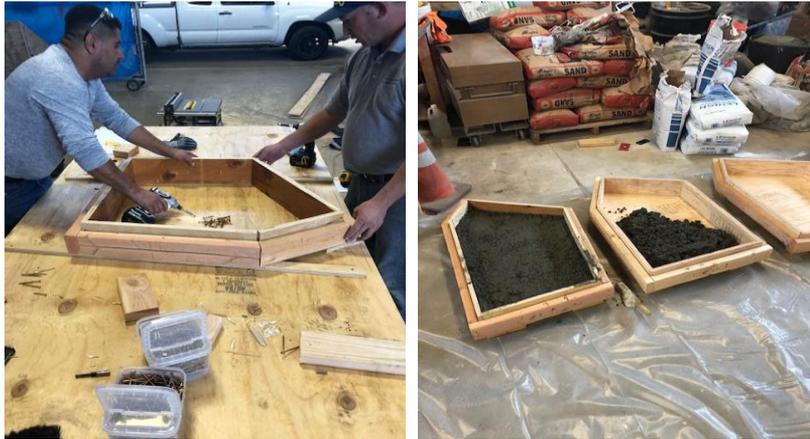
Update through September 30, 2019



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CalMod TUNNEL CONTRACT UPDATE

Casting Archstones for Portal Reconstruction



Wood forms for archstones, and concreting in various staging



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CalMod TUNNEL CONTRACT UPDATE

Casting Archstones For Portal Reconstruction



Completed Archstones



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CalMod EMU VEHICLES

EMUs – Design & Manufacturing

- 14 Final Design Reviews of the 18 major systems completed; remaining 4 are conditionally approved; scheduled for completion in late 2019, early 2020
- 64 First Article Inspections total, 48 conducted, 11 closed
- Alternate Vehicle Technology compliance (crashworthiness) validation analysis to be submitted to FRA mid-October
- FRA agreed to design of flip-up seats in Bike cars
- FRA 'Compliance Review' of EMU design conducted in Stadler's Salt Lake City (SLC) facility September 10th and 11th and an additional inspection is planned 1st Quarter 2020; FRA 'Sample Car Inspection' likely to be performed mid-2020
- Manufacturing, assembly and testing activities ramping up in Salt Lake City
- 19 of 133 car shells (first three 7-car trainsets) are in SLC in incremental stages of completion, 2 completely wired cars are undergoing electrical testing
- Overall production in SLC facility is behind schedule primarily due to shortage of sub-supplier parts and lack of shop personnel to assemble trains
 - Stadler adding personnel through local hiring and transfer of experienced employees from other Stadler facilities to SLC
 - Stadler staging full-time engineers/QA personnel at problematic sub-suppliers
 - Stadler looking into alternate sub-suppliers



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CalMod EMU VEHICLES



Engineer's cab and console



Lower level luggage racks, ceiling, seat frames installation

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CalMod RISK MANAGEMENT

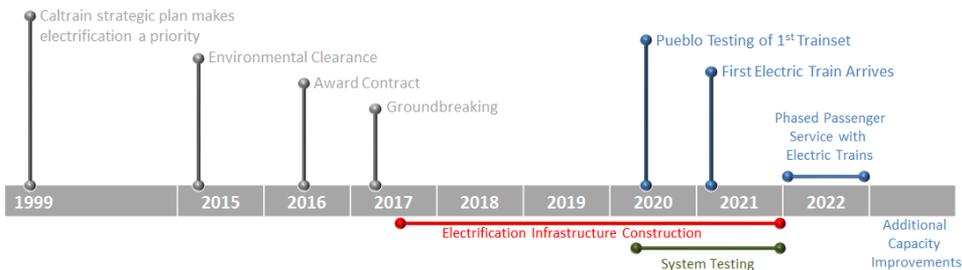
- Ongoing risk monitoring and reporting
- Top 2 Risks:
 - The contractor may not complete and install signal design including CWT modifications within budget and schedule
 - Streamline design reviews
 - Initiate construction prior to IFC
 - Consolidate locations for testing, where possible
 - Contractor sequencing of early utility location, preliminary design, and foundation construction may result in inefficiencies in construction, redesign, and reduced production rates
 - Positively identify known utilities in advance of foundation construction
 - Pothole foundation locations when all design elements have been taken into consideration including line of sight, adjustment of poles, etc.
 - BBII to empower field supervision to identify and respond to obstacles
 - Conducted workshop with BBII to identify improved productivity



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CalMod 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**



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CalMod BUDGET & EXPENDITURES (in millions)

	Budget	Current Budget	FY20 Q1 Costs	Costs to Date	Estimate at Completion
Electrification	\$696.61	\$723.03	\$24.95	\$343.68	\$723.03
SCADA	\$0.00	\$3.45	\$0.00	\$1.93	\$3.45
EMU	\$550.90	\$554.30	\$21.91	\$136.88	\$554.30
PG&E	\$57.22	\$88.49	\$11.93	\$64.12	\$88.49
Tunnel Modifications	\$11.03	\$42.24	\$1.61	\$24.33	\$42.24
CEMOF Modifications	\$1.34	\$6.55	\$0.00	\$0.00	\$6.55
Separate Contract & Support Costs	\$347.62	\$344.45	\$15.23	\$225.95	\$344.45
Contingency ¹	\$315.53	\$217.75	\$0.00	\$0.00	\$214.46
Anticipated Changes	\$0.00	\$0.00	\$0.00	\$0.00	\$3.29
PCEP Total	\$1,980.25	\$1,980.25	\$75.63	\$796.90	\$1,980.25

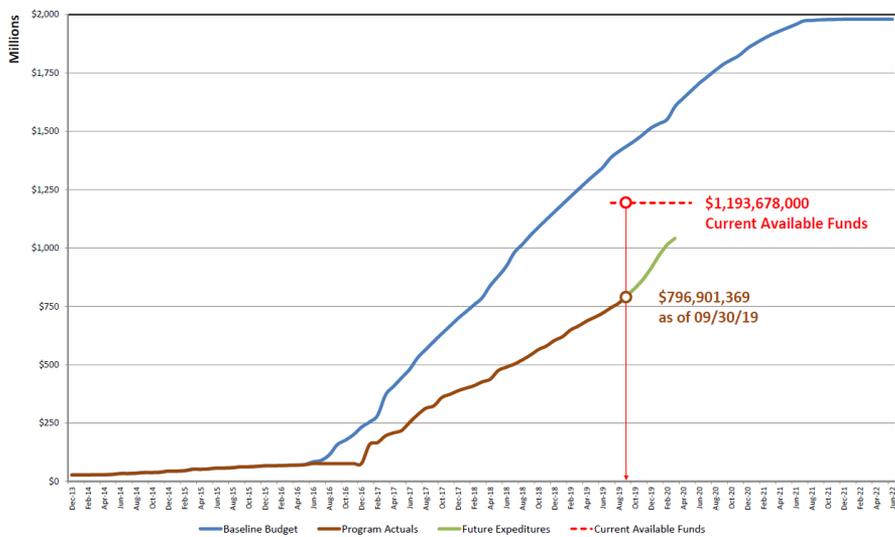
Note 1: Contingency is not for out of scope changes.

Budget / Expenditures as of September 30, 2019



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CalMod ACTUAL VS PLANNED



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CalMod CONTINGENCY¹ DRAWDOWN

Contracts	Amount	Contingency
Beginning Contingency		\$315,533,611
Drawdown		
Executed Change Orders	\$29,412,622	
SCADA Contract	\$3,446,917	
PG&E Supplemental #4	\$31,263,082	
Tunnel Modifications	\$31,749,083	
CEMOF Modifications	\$5,206,777	
Total	\$101,078,481	
Remaining Contingency		\$214,455,131

Note 1: Contingency is not for out of scope changes.

As of September 30, 2019



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CalMod ANTICIPATED CONTINGENCY¹ DRAWDOWN

Contracts	Amount	Contingency
Remaining Contingency		\$214,455,131
Pending Contingency Drawdown		
Switch Machine Isolation - Credit	(\$277,430)	
Change Design Sequence for OCS Foundations	\$37,500	
Foundation Inefficiencies S2WA5	\$401,501	
Plugging of High-Level Doorways	\$736,013	
Canopy Tube Drilling	\$89,787	
Total	\$987,371	
Anticipated Remaining Contingency		\$213,467,760

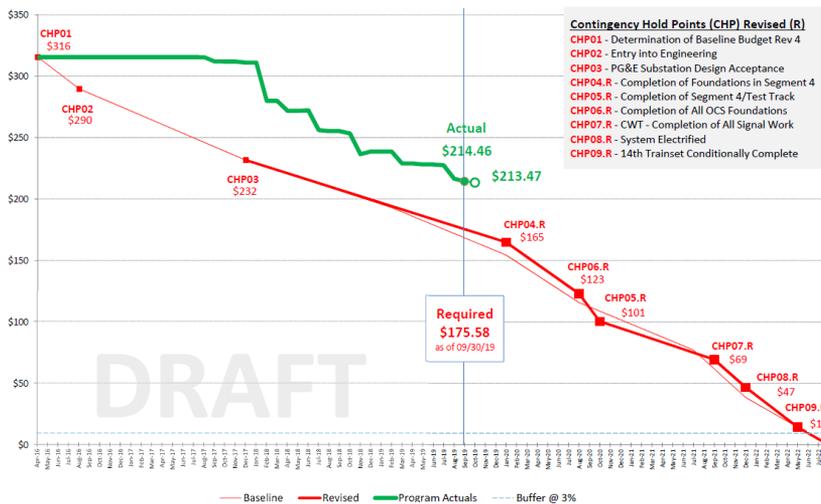
Note 1: Contingency is not for out of scope changes.

As of September 30, 2019



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CalMod CONTINGENCY DRAWDOWN CURVE



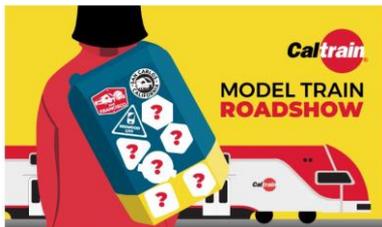
Note 1: Contingency is not for out of scope changes.



CalMod OUTREACH

July 1 – September 30, 2019

- 15 Community meetings
- 9,580 direct mailers / door hangers
- 3,270 Subscribers to the Monthly eNewsletter
 - Average Open Rate – 37% (vs. 18% National Average)
- 2,071 Subscribers to the weekly Construction Updates
- Summer 2019: Electric Train Roadshow
 - www.calmod.org/roadshow





CONTACT

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QUESTIONS