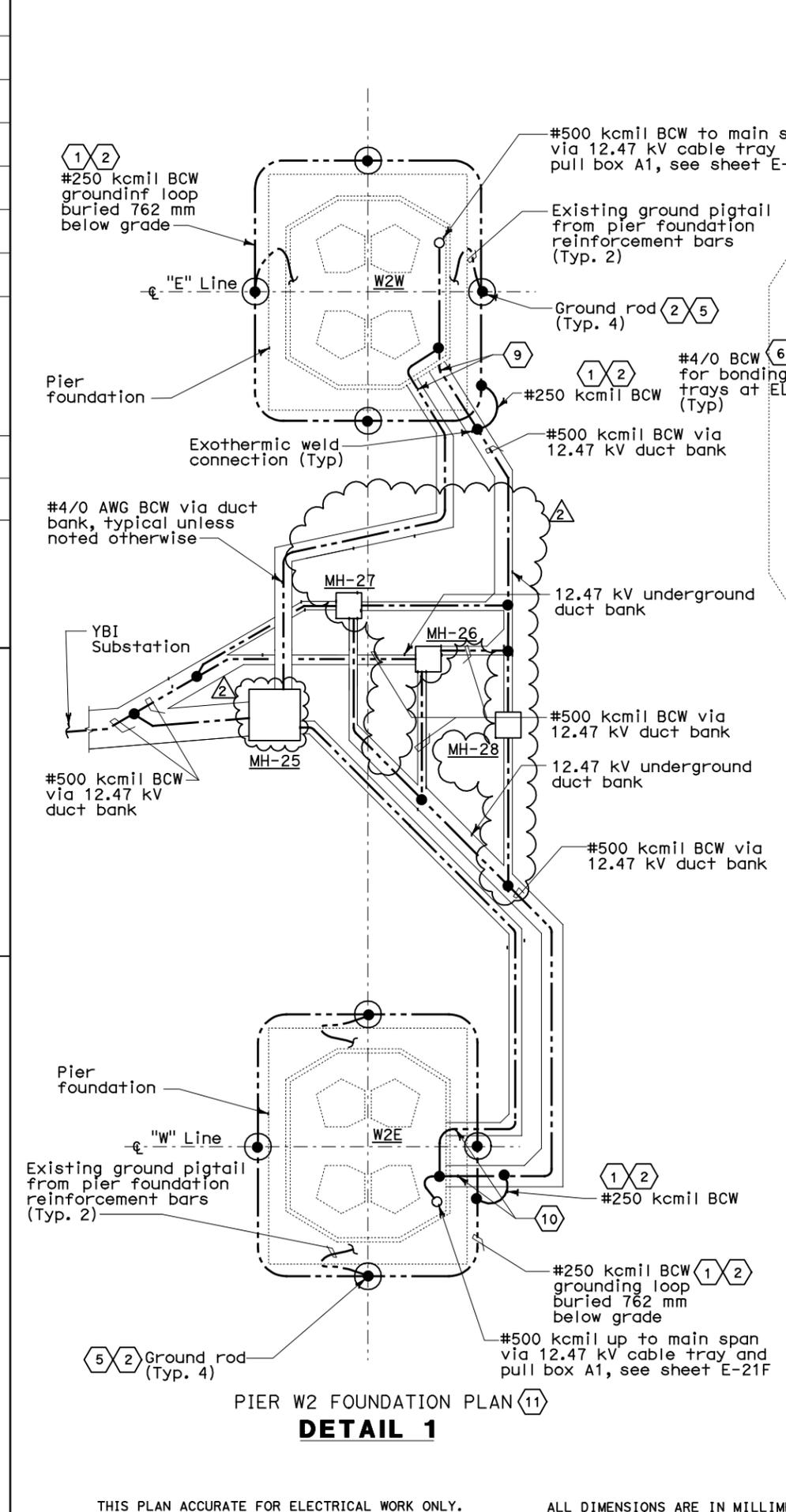
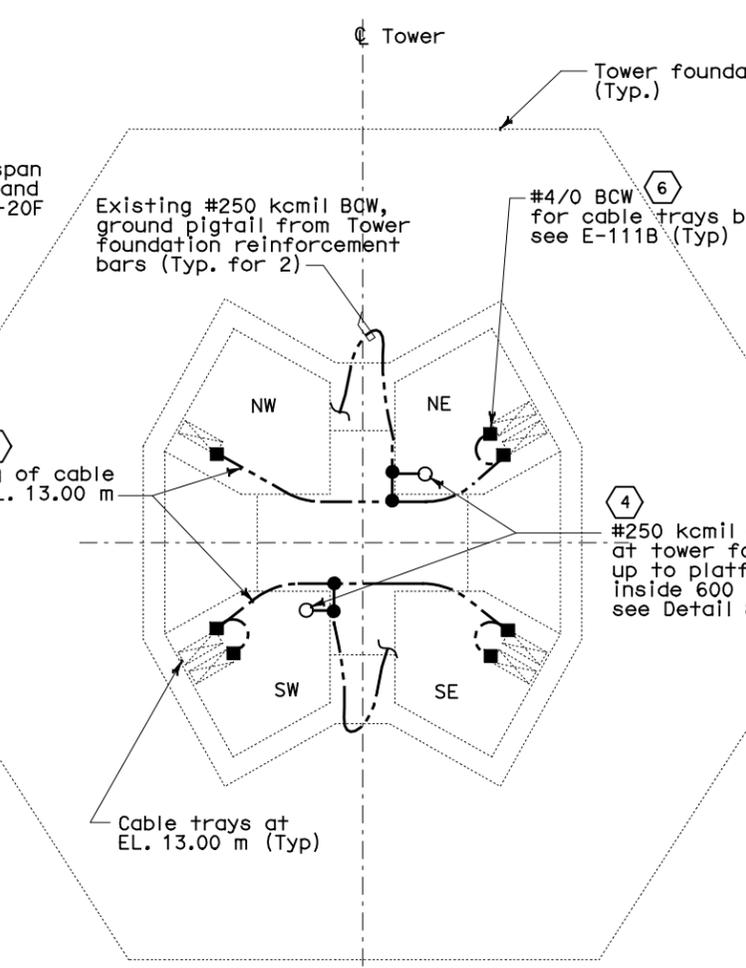


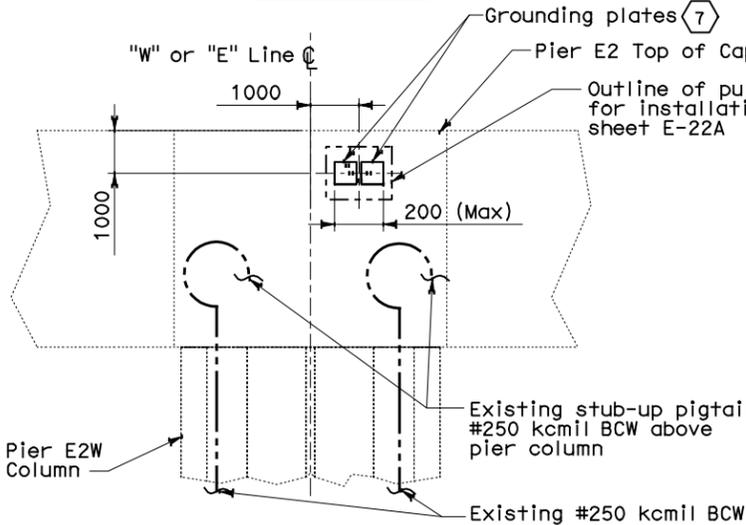
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION  
**Caltrans**  
 BEHZAD GOLEMOHAMMADI  
 DESIGN OVERSIGHT  
 REVISIONS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11



PIER W2 FOUNDATION PLAN  
**DETAIL 1**



TOWER FOUNDATION PLAN  
**DETAIL 2**

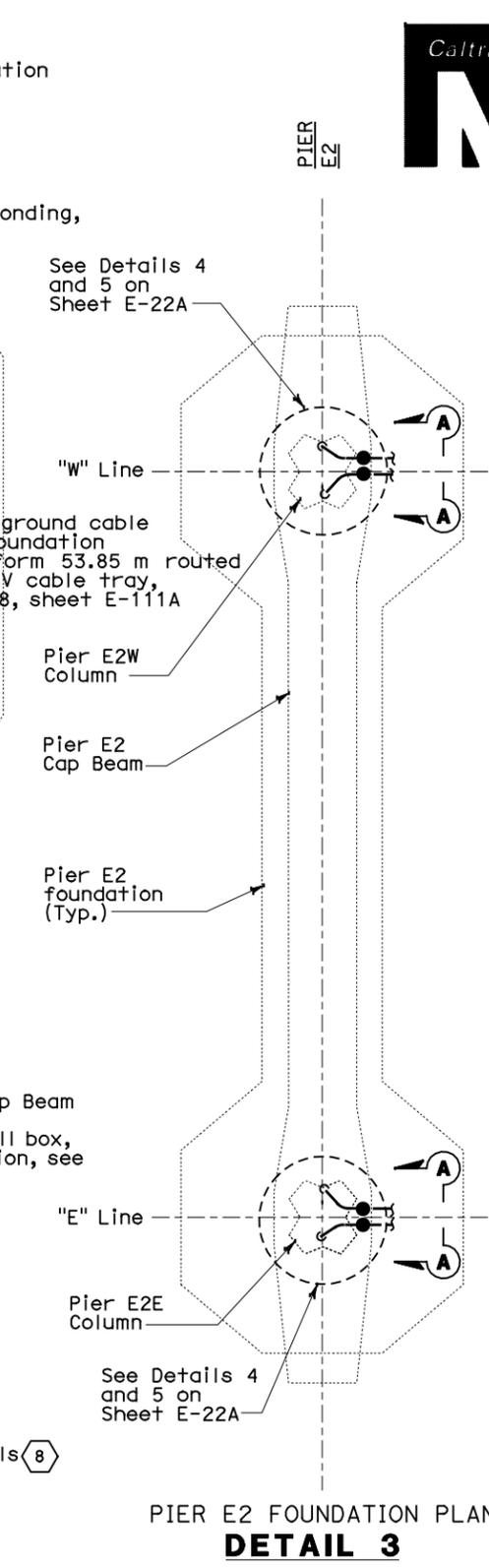


GROUNDING PLATE INSTALLATION  
**SECTION A-A**

REQUEST FOR INFORMATION NOT ADDRESSED IN THIS CCO REMAIN IN FORCE

MARK	DATE	DESCRIPTIONS	BY	CH'D CCO#
2	08/08/11	W2 DUCT BANKS REINFORCEMENT	TW	RG 205
1	11/20/09	ELECTRICAL GROUNDING	RR	RG FE 75

CONTRACT CHANGE ORDER NO. \_\_\_\_\_  
 SHEET \_\_\_\_\_ OF \_\_\_\_\_



PIER E2 FOUNDATION PLAN  
**DETAIL 3**



DIST	COUNTY	ROUTE	KILOMETER TOTAL PROJECT	POST TOTAL PROJECT	SHEET No	TOTAL SHEETS
04	SF	80	13.2/13.9		105 R2	1204

REGISTERED ELECTRICAL ENGINEER DATE 12/19/02  
 JENS ERLINGSSON No. 8249 Exp. 9/30/06  
 PB AMERICAS, Inc. A Parsons Brinckerhoff Company 303 Second St., Suite 700N San Francisco, CA 94107-1317

PLANS APPROVAL DATE 12-6-04

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.  
 Caltrans now has a web site to get to the web site, go to <http://www.dot.ca.gov>

**SHEET NOTES:**

- 1 Tie the underground duct bank #500 kcmil Bare Copper Wire (BCW) system grounding conductor to the W2E and W2W pier foundations. See W2 contract 04-0120C4 for limited scope of work.
- 2 Route the #250 kcmil grounding conductors around the W2W and connect to the new grounding rods. This grounding loop shall be exothermically connected to the #500 kcmil main ground conductor at the pier. This is typical for pier W2E.
- 3 Not used.
- 4 Main tower foundation ground conductors shall be routed vertically up to platform 53.85 m via 600V cable trays inside SW and NE tower quadrants and tied exothermically to the #500 kcmil main ground conductor.
- 5 Ground rod shall be copper clad, 19 mm diameter and 3048 mm long.
- 6 Bond all the cable trays to the ground loop at Tower elevation 13 m.
- 7 Install two grounding plates, Thermoweld Type CR-27 Cat. #38-4533-6B or equal (sized for #250 kcmil BCW with 305mm pigtail). Grounding plates shall be embedded at east face side of the pier E2 cap beam.
- 8 For connection of stub-up #250 kcmil BCW to grounding plates, see sheet E-22A.
- 9 See Detail 1, sheet E-22B for grounding installation through pier pit wall.
- 10 See Detail 2, sheet E-22B for grounding installation through pier pit wall.
- 11 Pier grounding system must be verified and tested for ground resistance prior to tie-in to #500 kcmil main ground conductor. Perform tests, by the fall-of-potential method according to IEEE-81. Contractor shall submit a test plan and procedure for Engineer's approval. Test results shall be submitted to the Engineer for evaluation and approval.

ORIGINAL SHEET SUPERCEDED

**DETAILS UNDERGROUND FOUNDATION GROUNDING**  
 NO SCALE

REGISTERED PROFESSIONAL ENGINEER  
 FADI WALIEDDINE No. 11465 Exp. 12/31/2009  
 REGISTERED PROFESSIONAL ENGINEER  
 DAVID H. OTO No. 10699 Exp. 06/30/2013

FOR REVISION ONLY FOR REVISION ONLY

THIS PLAN ACCURATE FOR ELECTRICAL WORK ONLY.

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

FOR REDUCED PLANS ORIGINAL SCALE IS IN MILLIMETERS

DGN FILE => 04-0120f1\_0105R02.dgn  
 USERNAME => ilorico

CU 04251

EA 0120F1

DATE PLOTTED => 09-AUG-2011  
 TIME PLOTTED => 13:46  
 LAST REVISION 00-00-00