



SAS Superstructure

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 22-Nov-14

Time 6:57 AM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 1143 Const Calendar Day: 716 Date: 21-May-2014 Wednesday

Inspector Name: Brignano, Bob Title: Transportation Engineer

Inspection Type:

Shift Hours: Break: Over Time:

Federal ID:

Location:

Reviewer: Schmitt, Alex Approved Date: Status: Submit

04-0120F4
04-SF-80-13.2/13.9
Self-Anchored
Suspension Bridge

Weather

Temperature 7 AM 12 PM 4PM
Precipitation Condition overcast early am, then clear

Working Day [checked] If no, explain:

Diary:

Dispute

General Comments

CCO 314, SAMPLING AND TESTING A354 GRADE BD MATERIAL:



ABF Engineer Kelvin Chen is working part time in the field and office on CCO 314.

There is work in the field on setup of TR's 14-17. Crews at the Pier 7 warehouse area are working an 8-hour shift 0600 through 1430. Laborer Carlos (Pedro) Garcia works all day on CCO 314. Ironworker Jared Garrett works all day on CCO 314. Operator John Sabatino works at the CCO 314 site briefly (less than a half hour).

At the start of the day, the laborer continues work to remove the blue lubricant from the 4 nuts (3" diameter) for use with the galvanized test rods in TR's 14 & 15. These 4 nuts came from Dyson with lubricant as is typical for galvanized material. However, the DJV has determined that this would be a contaminant in the wet chambers, so it needs to be removed prior to use in the test rigs. The Laborer uses MEK and rags to remove the wax lubricant. He started this work yesterday but it was not completed by the end of the shift. It is completed this morning by about 0800.

The ironworker continues work today installing the plug bolts in the bottom of the wet chambers at TR's 14-17. These are the holes that were for the reference electrodes in TR's 1-4, but those reference electrode hot dip galvanized A325 bolts were removed after the completion of work at TR's 1-4 for lab testing as part of the post fracture analysis for those TR's. For TR's 14-17, a calomel master reference electrode will be used instead of using hot dip galvanized A325 bolts. The plans call for installing the plug bolts the same as the reference electrode bolts, except with no electrical wire connection. The plug bolts were installed yesterday with the bolt head in the wet chamber, a standard washer and rubber washer under the bolt head, and another standard washer and rubber washer under the nut underneath the TR. By the end of the shift yesterday, the plug bolts were all installed but not tightened. Note the difficult access for tightening at the nut end of these bolts because of the limited room between the test rig end plate and the test rig feet to the grouted connections to the concrete slab. The ironworker wrench tightens all of these bolts this morning. At a later date the bolt heads and washers will be painted with epoxy paint to match the remainder of the wet chamber.

After completing work on the plug bolts, the ironworker moves the hydraulic pump and the 40kW generator to run the hydraulic pump from north of TR's 14-17 to the south of TR's 14-17 so that they will be at the tensioning end.

After completing work removing the blue lubricant from the test rod nuts, the laborer does miscellaneous cleanup in the area south of TR's 14-17. In recent days, the ironworker has moved CCO 314 materials in

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this area and as a result there is debris in the area that needs to be cleaned, particularly sand from broken sandbags.

Starting about 0845, the ironworker begins assembly of the fourth of eight tent frames. Yesterday, additional 1/4" diameter bolts and nuts were ordered and received to make the connections of the tent frame parts. The ironworker does not complete the assembly of this tent frame, and the laborer also does some work on this tent frame but does not finish it. Note that after the assembly of this fourth tent, ABF will be waiting for the arrival of parts for 4 more tents (4 of the tents from TR's 1-4 are not useable because of storm damage).

For the TR 7 test rod for which testing was completed in February, lab testing is now scheduled to begin soon to pull it to failure (couldn't pull to failure in February due to failure of the jacks). The DJV and CT-METS have requested the removal of the cylindrical sleeve that was located at the diaphragm between the wet chamber and the dry chamber, but the removal a few weeks ago was unsuccessful. Today, the laborer does additional cleaning of the test rod threads to facilitate removal of the cylindrical sleeve. He uses a wire wheel brush to clean thread sealant and zinc oxide (white rust) from the threads for all but the end of the rod in the area of the nut engagement – the plan is to remove the cylindrical sleeve in the opposite direction from where the nut was previously engaged. The area of the nut engagement had zinc oxide / white rust previously sampled by CT-METS, but review of the test results is not complete so the area still has to be preserved in case additional material sampling is requested by CT-METS and/or the DJV. This work is started about 1030 and is completed about 1300. After completion of this work, the laborer continues work on the tent frame assembly and does miscellaneous cleanup around the test rigs.

About 1230, the ironworker begins work at TR 14 now that VGO is complete with strain gauge installation – VGO is done rotating the rod for strain gauge installation. The first step is to shift and secure the test rod in the center of the hole in the diaphragm plates between the wet chambers and the dry chamber. Then, a small quantity of touchup epoxy paint (Carboline Carboguard 890) is mixed so that damaged paint in the holes in the diaphragm plates for the test rod can be replaced – this touchup paint is at both the TR14S and TR14N diaphragms. Then the flashing/bellows and plate washer at TR 14S are bolted using 1/4" hardware to the diaphragm plate. Note that caulking (Permatex Ultra Black Maximum Oil Resistance RTV Silicone Gasket Maker - product approved by the DJV for use in the wet chamber) is applied between the flashing flange and the diaphragm plate. The 1/4" hardware bolt heads are in the wet chamber and the nuts are tightened from the dry chamber side with access through the handhole in the top of the test rig. These 4 bolts are fully tightened by the 1330 afternoon break. Then after the break, the bolt heads inside the wet chamber are covered with caulk to isolate that mechanically galvanized material from the wet chamber and to assist with sealing. The nuts in the dry chamber are also caulked to assist with sealing the wet chamber. The caulking used on the bolt heads and nuts is the Permatex Ultra Black Maximum Oil Resistance RTV Silicone Gasket Maker - product approved by the DJV for use in the wet chamber. The flashing/bellows work today is only at TR 14S because there is not enough time in the shift to do the work at TR 14N.

Also after the afternoon break, the ironworker paints over the bolt heads of the sealing bolts installed and tightened previously in the bottom of the wet chambers (at all TR's – 14, 15, 16, and 17). This painting is also over the standard washer and rubber washer under the bolt head. These are at the former locations of the reference electrode bolts in the wet chambers. These hot dip galvanized bolt heads are painted to isolate them from the wet chambers.

Because the plug bolt work earlier today involved removing visqueen protecting the ends of the TR's 16 & 17 test rods, the laborer tapes visqueen over the test rig ends (test rod sticks out beyond the end of the TR's) at the end of today. These are the ungalvanized test rods and this protection method is used to minimize the forming of rust that will need to be cleaned later prior to the installation of the end plates and bolting of the flashing to seal the wet chambers.

Today CCC provides some touchup paint (Carboline Carboguard 890) for use by ABF where any of the wet chamber epoxy paint has been damaged by operations after CCC completed the painting last week.



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Dave Van Dyke from VGO arrives on site approximately 0700. Yesterday he completed 6 of 8 strain gauges at TR 14, and this morning by about 0930, he completes installation of the last 2 of 8 strain gauges at TR 14 (at the north location TR 14N), including adding all of the protection layers to the strain gauges installed today and yesterday. Concurrently, starting about 0845, he starts installation of strain gauges at TR 15S. He is complete with installation of 4 strain gauges at TR 15S by about 1330 and then starts work installing strain gauges at TR 15N. By the end of the shift at 1530, he is complete with installation of 2 of 4 strain gauges at TR 15N. Note that some of the strain gauge installations did not pass all of the QC checks and had to be replaced. VGO leaves site approximately 1530.

Between approximately 1100 and 1200, Carol Choi and Godwin Mok visit the TR site to examine and discuss the different displacement transducer options with VGO and me. The type of displacement transducers used previously (BEI-duncan style with 4" of travel per the cut sheet that is reduced to 3" of travel after VGO adds a spring to keep it in contact with the end plate) at the TR's may not have enough monitoring capacity to record the full inelastic elongation of a pull to failure operation (if the rods do not break prior to that point). VGO ordered the same displacement transducers used previously at the TR's and built frames to attach to the coupler and at our request they also ordered longer displacement transducers (Celesco 12" displacement transducers) that it turns out are too long to fit in the area between the TR end plate and the jacking beam. Included in the discussion of options, we request that VGO order a third set of displacement transducers for a monitoring range between the two ranges already available, with the understanding that there is a long lead time for these parts and they likely will not arrive in time for use at TR's 14-17.

A 7kW generator – Whisperwatt 7000 – ABF ID 002343 is used at the test rig work area for most of the day by the laborer. A 40kW generator – MQ Power 40 – ABF ID is on idle/standby at the test rig work area. A Hydraulic Pump for running the jacks is on idle/standby at the test rig work area. An oxyacetylene torch is on idle/standby at the test rig work area. A compressor – IR P185 ABF ID 000002 is on idle/standby at the test rig work area. A Kubota Cart is in use today by the laborer, and a second Kubota Cart is used by the ironworker. An extendable forklift is used briefly at the test rig work area and a small (CAT) forklift is used for part of the day at the TR's.

Note that there is k-rail at this work area. Some of the k-rail is rented and addressed by the rental agreement. Some of the k-rail is ABF's k-rail used on site and paid as rented from ABF on a daily basis. To elevate the k-rail, crane mats and timber blocking (12x12's) are in use. The k-rail quantities are as follows:

10' bought k-rail = 20 pieces
20' rented k-rail = 10 pieces
20' ABF k-rail = 6 pieces

The tabulation of the 20' ABF k-rail is as follows:
Two (2) 20' ABF k-rail at the north end of TR 17.
Two (2) 20' ABF k-rail at the north end of TR 16.
One (1) 20' ABF k-rail at TR 15 (longitudinal running).
One (1) 20' ABF k-rail at TR 14 (longitudinal running).

The agreed extra work with ABF is as follows:

Engineer Kelvin Chen - 1 hr
Laborer Carlos (Pedro) Garcia - 8 hrs
Ironworker Jared Garrett - 8 hrs
Radios (2 radios) - 16 hrs
Small Forklift - 4 hrs
Kubota Cart - 8 hrs
7kW Generator - 4 hrs
k-rail: 6 pcs @20'
Crane Mats (12x12 - 5'x16') - 2 pcs
Crane Mats (12x12 - 5'x7') - 8 pcs
See the attached Extra Work Order - Signed with ABF for CCO 314 work

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