Daily Diary Report by Bid Item

Contract No.: **04-0120F4**
Diary #: **798** **Const Calendar Day:** 280 **Date:** **11-Mar-2013** **Monday**
Inspector Name: **Bruce, Matt** **Title:** **Transportation Engineer**
Inspection Type: Continuous
Shift Hours: 07:00 am 05:30 pm **Break:** 00:30 **Over Time:** 02:00
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** 40 - 50 **12 PM** 50 - 60 **4PM** 50 - 60
Precipitation 0.00" **Condition** Partly cloudy to mostly sunny

Working Day ☐ If no, explain:

Diary: Dispute ☐

Work description.

- Prepared for todays surveys of the T1 tower highest elevations.

- Performed a reciprocal trig level from control point TWL270 up to working point T1SX located on the south tower head shaft top plate. The slope/vertical distance and the zenith angle were measured while occupying both points. Three rounds were executed using both faces of the total station scope to ensure consistency and that the zenith angle checked out. The ambient temperature while performing the reciprocal trig-level was 50F yielding a barometric pressure of 30.26"Hg under partly cloudy skies. The survey was conducted from 9:20am to 10:30am. Steel temperature was not measured since only the elevation was being measured. The elevation obtained for T1SX was found to be 159.989m located on the south tower head top plate.

- Conducted a level run with the assistance of Sami Daouk using the elevation from T1SX reciprocal tri-level to find the elevation of the following points:

1.) 5 corners of the tower head parapet on each shaft (N, S, E, & W - 20 points total)

2.) 4 points (K, L, M, & N) on the tower saddle where there is a history of coordinates from tower erection to tower pullback

3.) Tower grillage which was level prior to saddle and main cable erection.

- Used a steel tape with a weight scale to measure the vertical height down the North and West tower shaft faces with the assistance of Sami Daouk and Larraine Woo. The following items in regard to this survey should be noted:

1.) The steel tape was pulled with 11lb of force on each end of the tape neglecting the effects of gravity

2.) All measurements were conducted in the shade mitigating differential thermal expansion effects of the steel tape, also prior to measuring the steel tape sat in this environment for 10 minutes the along the tower shaft until it reached a uniform temperature of 54F

3.) Larraine took notes, I read the steel tape on the high end and Sami set the tape at the zero mark with 11lbs of force

4.) An adjustment needs to be made for the break in the measured location along the North

and West shaft faces to find the true vertical distance

The measurements done with the steel tape are a cursory check given the inherent errors, therefore the reciprocal trig-level will be used to establish the elevation at the top of the tower head parapets.

- Spent a considerable amount of time mobilizing, setting up and demobilizing survey equipment to obtain elevation values at the top of the tower.

- Began to process the surveying data obtained today.

Attachment

View from the west tower head looking towards YBITS and San Francisco.

View from the northeast corner of the T1 erection tower of the removed portions of the W-Line truss.

Caltrans and ABF personnel inspecting suspender ropes on the South Sidespan for broken wires.

Steel tape temperature of 54F in the shade along the North tower shaft near lift 4 and grillage splice.