



**SAS Superstructure**

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 21-Nov-14

Time 11:31 PM

**Daily Diary Report by Bid Item**

Contract No.: 04-0120F4

Diary #: 494 Const Calendar Day: 877 Date: 02-Feb-2012 Thursday

Inspector Name: Bruce, Matt Title: Transportation Engineer

Inspection Type: Intermittent

Shift Hours: 05:30 am 05:00 pm Break: 00:30 Over Time: 03:00

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 60 - 70

Precipitation 0.00" Condition Partly overcast

Working Day  If no, explain:

**Diary:**

Dispute

**Work description.**

- The tasks completed today by the Alta Vista surveyors included the following:
  - 1.) Dave continued to process the surveying data for all of the Hinge K tie down related surveys done to date.
  - 2.) Chris continued to process the raw data from the Trimble S8 total station of the 24 deflection monitoring points on the W-Line YBITS bridge.
  - 3.) Erol continued to compile all of the Alta Vista reports done for the OBG and Tower fabrication at ZPMC in China. He also assisted Dave and Chris.
- The following is the hours worked by the Alta Vista consultants today:
  - Dave Garrett (survey party chief) = 8hrs
  - Chris Ferrucci (instrumentman) = 8hrs
  - Erol Schaller (rodman) = 8hrs
- Continued to obtain quotes on the Trimble S8 total station and TSC3 data collector.
- Myself, John Lyons, and Sami Daouk checked the out to out distance for the cable strands today as my measurements are tabulated below. The information below was conveyed to Alex to inform ABF engineer Zach Lauria which cable strands were either adjusted properly (accepted) or if the cable strand required more adjusting (rejected). I used the Maletic modified calipers (gauge - Yellow #1) to take the out to out measurements of the cable strands. Ambient temperatures were taken with the red temperature gauge. Wind speeds were obtained from weather.com at the time of the measurements. For steel temperature measurements, the infrared temperature gun probe was wedged in between the cable strand wires to obtain the steel temperature. See Alex Schmitt's diary on the discussions with ABF engineer Zach Lauria and the decision for acceptance or rejection. The official sunrise time per weather.com for San Francisco today was at 7:13am. The following measurements were of the adjusted cable strand taken today at the given times below:

// North Sidespan //

Time = 5:33am

Ambient Temperature = 49F

Condition = Partly cloudy

Wind = N @ 2mph

ABF Engineer(s)/Surveyors = Not present during my measurements. However engineer Eric Blue showed surveyors James Allen and Steve Smith where and how to measure the cable strands.

Caltrans Engineer (s) = Matt Bruce



## Daily Diary Report by Bid Item

Job Name: 04-0120F4    Inspector Name Bruce, Matt    Diary #: 494    Date: 02-Feb-2012    Thursday

| Cable Strand | O-O (#1Y) CT / ABF (mm)         | Theor(mm) / CT Delta (mm) | Steel Temperature (F) |
|--------------|---------------------------------|---------------------------|-----------------------|
| 1            | Baseline or Zero                | 78 / 0                    | 52                    |
| 13*          | 417, 416 - Ave = 417 / 406      | 405 / +12                 | 47                    |
| 14           | 88, 92, 90 - Ave = 90 / 102     | 83 / +7                   | 50                    |
| 15           | 146, 144, 145 - Ave = 145 / 148 | 148 / -3                  | 50                    |
| 16           | 210, 208 - Ave = 209 / 213      | 213 / -4                  | 50                    |
| 17           | 360, 360 - Ave = 360 / 362      | 278 / +82                 | 48                    |
| 18           | 360 / N/A                       | 342 / +18                 | 48                    |

Comments: The \* denotes that the measurement taken for cable strand number 13 required the Maletic gauge to be inverted. The target was placed on cable strand number 1 and the gauge flat plate was placed onto cable strand number 13. The maximum observed oscillations while measuring this set of cable strands was +/- 3mm. I finished my measurements at 6:00am, however I had to wait for the ABF surveyors to finish their measurements since waking on the catwalk causes vibrations while measuring. James took the measurements for ABF and at first struggled with the proper techniques but caught on quickly how to accurately obtain measurements. Cable strand number 18 was buried in the bundle of cable strands but a preliminary measurement was taken anyways. Cable strand number 19 was floated and number 20 was in the rollers.

- Reported the numbers to Alex at 6:40am and arrived at the north mainspan to take preliminary measurements. Upon arrival I had to wait for ABF surveyors (Terry Denis, Mike Bonidici, and Dave Adams) to complete their measurements.

// North Mainspan //

Time = 7:01am

Ambient Temperature = 52F

Condition = Partly cloudy with the sun rising

Wind = Calm

ABF Engineer(s) = Terry Denis, Mike Bonidici, and Dave Adams

Caltrans Engineer (s) = Matt Bruce

| Cable Strand | O-O (#1Y) CT / ABF (mm)    | Theor(mm) / CT Delta (mm) | Steel Temperature (F) |
|--------------|----------------------------|---------------------------|-----------------------|
| 1            | Baseline or Zero           | 65 / 0                    | 48                    |
| 12           | 400, 401 - Ave = 401 / N/A | 311 / +90                 | 48                    |
| 13           | 479 / N/A                  | 368 / +111                | 49                    |
| 14           | 394 / N/A                  | 93 / +301                 | 49                    |
| 15           | 323 / N/A                  | 150 / +173                | 48                    |
| 16           | 376 / N/A                  | 207 / +169                | 49                    |
| 18           | 382 / N/A                  | 320 / +62                 | 51                    |

Comments: Cable strand number 17 was unaccessible since it was buried in the bundle of strands placed to date. Completed taking my measurements at 7:32am which was done after ABF surveyors took their measurements. It also should be noted that the ABF engineers Zach Lauria and Eric Blue along with the three surveyors mentioned had to uncross a few cable strands in order to take measurements. The crossed cable strands were bearing on the previous cable strands placed. I was unsure which ones were crossed when I arrived upon the location.

// South West Loop //

Time = 7:55am

Ambient Temperature = 50F

Condition = Partly cloudy with the sun risen

Wind = N@1mph

ABF Engineer(s) = Not present

Caltrans Engineer (s) = Matt Bruce and John Lyons

| Cable Strand | O-O (#2B) CT / ABF (mm) | Theor(mm) / CT Delta (mm) | Steel Temperature (F) |
|--------------|-------------------------|---------------------------|-----------------------|
|--------------|-------------------------|---------------------------|-----------------------|

## Daily Diary Report by Bid Item

Job Name: 04-0120F4

Inspector Name Bruce, Matt

Diary #: 494

Date: 02-Feb-2012 Thursday

|     |                           |           |    |
|-----|---------------------------|-----------|----|
| 1   | Baseline or Zero          | 80 / 0    | 50 |
| 17* | 390, 390, 390 [329] / 329 | 316 / +13 | 49 |
| 18* | 474, 475 [414] / 415      | 410 / +4  | 51 |
| 19* | 575, 574 [514] / 514      | 505 / +9  | 51 |

Comments: Measurements were done in the shade by John Lyons while I assisted him with the proper technique and assistance gathering data. The \* denotes that a 61mm block was used between the flat plate of the calipers and cable strand number 1. The number in brackets is the subtracted value of 61mm for the block used to measure the out-to-out distance.

// North West Loop //

Time = 8:05am

Ambient Temperature = 49F

Condition = Partly cloudy with the sun risen

Wind = N@1mph

ABF Engineer(s) = Not present

Caltrans Engineer (s) = Matt Bruce and John Lyons

| Cable Strand | O-O (#2B) CT / ABF (mm) | Theor(mm) / CT Delta (mm) | Steel Temperature (F) |
|--------------|-------------------------|---------------------------|-----------------------|
| 1            | Baseline or Zero        | 80 / 0                    | 53                    |
| 17*          | 392, 392 [331] / 327    | 316 / +15                 | 50                    |
| 18*          | 476, 478 [416] / 413    | 410 / +6                  | 50                    |
| 19*          | 585 [524] / 523         | 505 / +19                 | 50                    |

Comments: Measurements were done in the shade by John Lyons while I assisted him with the proper technique and assistance gathering data. The \* denotes that a 61mm block was used between the flat plate of the calipers and cable strand number 1. The number in brackets is the subtracted value of 61mm for the block used to measure the out-to-out distance. I obtained the ABF measurements from Levi Gatsos after taking measurements at the west loop for the cable strands listed above.

- Measurements at the west loop were completed at 8:11am which is when I called Alex to inform him of the values obtained for the south main span preliminaries and west loop finals.

- Attended an informal meeting with John Lyons, Alex Schmitt, and Brian Boal from 11:00am to 1:00pm to review the numbers gathered today. The discussion was on the techniques used to measure the out-to-out distance between cable strands. Also the we explored the issues related to taking measurements and reporting to ABF and management.

- Attended an informal meeting with John Lyons, Alex Schmitt, Brian Boal, and ABF engineer Kevin Smith from 1:00pm to 2:00pm to review the procedures to measure the out-to-out distance between cable strands and how to report them to ABF and management via a buy-off sheet.

- Met with Victor Maletic about fabricating a frame used to measure the compaction of the cable. This frame would be similar to the Maletic gauge used to measure the out-to-out distance between cable strands. However the compaction frame would be a sliding frame (rectangular shape) used to measure the cable diameter along the x-axis and y-axis normal to the cable cross section simultaneously. The compaction measuring frame would also have a smart-level attached to the side of a frame vertical member. As the frame would be placed normal to the cable cross section the smart level would account for the angle the frame is placed from plumb. Also there will a point on top of the frame to place the rod/prism/GPS receiver to identify the location in the span where compaction will take place. The compaction frame will essentially measure the cross-section of the compacted cable at any given location.

- Began to review submittal 2505R01- Cable Band Installation for surveying.

- Began to review submittal 259R01- PWS Compaction Plan for surveying and fabricating the compaction frame used for inspection.

- Continued to write outstanding diaries.

### Attachment



ddrRptbyBidItem

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## Daily Diary Report by Bid Item

Job Name: 04-0120F4

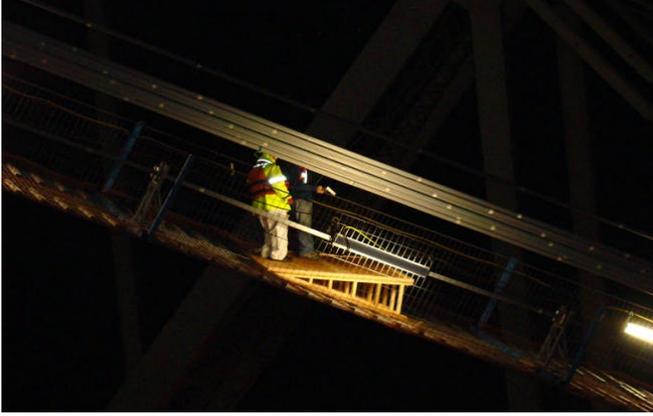
Inspector Name Bruce, Matt

Diary #: 494

Date: 02-Feb-2012

Thursday

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John and Sami taking measurements at the South Sidespan on the new catwalk platform.