



SAS Superstructure

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 21-Nov-14

Time 11:25 PM

Daily Diary Report by Bid Item

Contract No.: 04-0120F4

Diary #: 539 Const Calendar Day: 932 Date: 28-Mar-2012 Wednesday

Inspector Name: Bruce, Matt Title: Transportation Engineer

Inspection Type: Intermittent

Shift Hours: 03:30 am 04:00 pm Break: 00:30 Over Time: 04:00

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 0.80" Condition Overcast to rain

Working Day [] If no, explain:

Diary:

Dispute

Work description.

- John Lyons, Sami Dauok, Alex Schmitt, Damon Brown, and myself checked the out to out distance for the cable strands today as Damon's and my measurements are tabulated below. Damon and I were responsible for both the north/south sidespans and west-loop today. Similarly Sami and John were responsible for checking the north/south mainspans. Damon assisted me with the measurements and tabulating the data as I took all of the measurements unless otherwise noted. I used the Victor Tree Gauge (#2) to take the out to out measurements of the cable strands.

All measurements by both crews were reported to Alex who was stationed in the Caltrans conex recording and analyzing the data. When all of the measurements were completed, Alex was responsible for reviewing the measurements with ABF engineer Zach Lauria. See Alex's diary for more details related to the acceptance or rejection of cable strand sag adjustment.

The digital thermometer was used to measure both the ambient and steel temperatures. The green dual thermometer and anemometer was used to check the ambient temperature and wind speed. The steel temperature measurements were taken with the digital thermometer placed on the outer cable strand wires. Wind speeds were also obtained from weather.com at the time of the measurements.

The official sunrise time per weather.com for San Francisco today was at 7:00am. The following measurements were taken of the relative sag from cable strand number 1 at the given times below:

// North Sidespan //

Time = 4:20m

Ambient Temperature = 53.3F

Condition = Cloudy

Wind = S @ 9mph

ABF Surveyor(s) = None at this time

Caltrans Engineer(s) = Matt Bruce and Damon Brown

Table with 5 columns: Cable Strand (mm), Steel Temperature (F), O-O (#2) CT / ABF (mm), Theor (mm), CT Delta. Rows include strand 1, 115, and 116 with their respective measurements.

Comments: All cable strands were considered to be free-hanging at the time of measurement on the north sidespan. I took all of the measurements while Damon assisted me with setting up the targets, being level,

Daily Diary Report by Bid Item

Job Name: 04-0120F4

Inspector Name Bruce, Matt

Diary #: 539

Date: 28-Mar-2012 Wednesday

normal to cable, etc. A timber block was used on cable strand number 1 to obtain measurements where the dimension is in () millimeters. Cable strand number 117 was floated and 118 was in the rollers at the time of the measurements.

The length of adjustment in the tower saddles was to be 3-East for CS#115 and 3-East for CS#116. This information was conveyed to Daryoush Bahar who was at the tower saddle during "Live-Adjustments".

// South Sidespan //

Time = 4:45am

Ambient Temperature = 53.4F

Condition = Cloudy

Wind = SSE @ 7mph

ABF Surveyor(s) = James Allen and Ken Woon

Caltrans Engineer(s) = Matt Bruce and Damon Brown

Cable Strand (mm)	Steel Temperature (F)	O-O (#2) CT / ABF (mm)	Theor (mm)	CT Delta
1	53.9	Baseline or Zero	78	0
114	53.0	732 (-61) = 671 / 668	691	- 20
116	53.0	851 (-61) = 790 / 791	825	- 35
117	52.8	943 (-61) = 882 / 884	892	- 10

Comments: All cable strands were considered to be free-hanging at the time of measurement on the south sidespan. I took all of the measurements while Damon assisted me with setting up the targets, being level, normal to cable, etc. A timber block was used on cable strand number 1 to obtain all of the measurements where the dimension is in () millimeters. Cable strand number 118 was in the rollers at the time of measurements.

The length of adjustment in the tower saddles was to be 2-East for CS#114, 3-East and for CS#116. This information was conveyed to Daryoush Bahar who was at the tower saddle during "Live-Adjustments".

// South Sidespan //

Time = Immediately after preliminary measurements were taken

Ambient Temperature = Not taken

Condition = Cloudy

Wind = Not taken

ABF Surveyor(s) = James Allen and Ken Woon

Caltrans Engineer(s) = Matt Bruce and Damon Brown

Cable Strand (mm)	Steel Temperature (F)	O-O (#2) CT / ABF (mm)	Theor (mm)	CT Delta
1	N/A	Baseline or Zero	78	0
114	N/A	744 (-61) = 683 / 683	691	- 8
116	N/A	883 (-61) = 822 / 828	825	- 3

Comments: All cable strands remained free-hanging at the time of measurement on the south sidespan. I took all of the measurements while Damon assisted me with setting up the targets, being level, normal to cable, etc. A timber block was used on cable strand number 1 to obtain all of the measurements where the dimension is in () millimeters.

Measurements on the cable strands at this time were done immediately after ABF ironworkers performed a real time or "Live" adjustment on the cable strand. Once the cable strand was adjusted ABF surveyors would take a measurement followed by Caltrans engineers. Numbers amongst the two groups were compared to expedite final buy-off.

The measured length of adjustment in the tower saddle reported by Daryoush was 3-East for CS#114, 3-

Daily Diary Report by Bid Item

Job Name: 04-0120F4

Inspector Name Bruce, Matt

Diary #: 539

Date: 28-Mar-2012 Wednesday

East for CS#116.

// North Sidespan //

Time = 5:55am

Ambient Temperature = 53.1F

Condition = Cloudy

Wind = S @ 1mph

ABF Surveyor(s) = James Allen and Ken Woon

Caltrans Engineer(s) = Matt Bruce and Damon Brown

Cable Strand (mm)	Steel Temperature (F)	O-O (#2) CT / ABF (mm)	Theor (mm)	CT Delta
1	53.7	Baseline or Zero	78	0
115	53.4	815 (-61) = 754 / 753	762	- 8
116	53.2	877 (-61) = 816 / 823	827	- 11
116	53.2	879 (-61) = 818 / 823	827	- 9

Comments: All cable strands were considered to be free-hanging at the time of measurement on the north sidespan. I took all of the measurements while Damon assisted me with setting up the targets, being level, normal to cable, etc. A timber block was used on cable strand number 1 to obtain measurements where the dimension is in () millimeters.

Measurements on the cable strands at this time were done immediately after ABF ironworkers performed a real time or "Live" adjustment on the cable strand. Once the cable strand was adjusted ABF surveyors would take a measurement followed by Caltrans engineers. Numbers amongst the two groups were compared to expedite final buy-off.

The measured length of adjustment in the tower saddle reported by Daryoush was 5-East and then 2-West for CS#115, and 5-East and then 2-West for CS#116.

// North West-Loop //

Time = 6:25am

Ambient Temperature = 53.2F

Condition = Cloudy

Wind = W @ 2mph

ABF Engineer(s) or Surveyor(s) = None at this time

Caltrans Engineer(s) = Matt Bruce and Damon Brown

Cable Strand (mm)	Steel Temperature (F)	O-O (#2) CT (mm)	Theor (mm)	CT Delta
1	53.9	Baseline or Zero	80	0
116	53.6	932 (-126) = 805	811	- 6
117	53.4	805 (+ 92) = 897	906	- 9

Comments: All cable strands were considered to be free-hanging at the time of measurement on the north west-loop. I took all of the measurements while Damon assisted me with setting up the targets, being level, normal to cable, etc. The () denotes the fixed timber block (by ABF) to cable strand number 1 dimension in millimeters.

It should be noted that cable strand number 116 was not on the prescribed list for buy-off today. However it was measured due to the Victor Tree gauge #2 not being able to reach to the target referencing strand 1. Therefore cable strand 116 was measured then the distance was taped up to the top of cable strand number 117 for the overall measurement.

// South West-Loop //

Time = 6:28am



Daily Diary Report by Bid Item

Job Name: 04-0120F4

Inspector Name Bruce, Matt

Diary #: 539

Date: 28-Mar-2012 Wednesday

Ambient Temperature = 53.2F

Condition = Cloudy

Wind = W @ 2mph

ABF Engineer(s) or Surveyor(s) = None at this time

Caltrans Engineer(s) = Matt Bruce and Daryoush Bahar

Cable Strand	Steel Temperature (F)	O-O (#2) CT (mm)	Theor (mm)	CT Delta (mm)
1	53.9	Baseline or Zero	80	0
116	53.6	929 (-121) = 808	811	- 3
117	53.4	808 (+ 92) = 900	906	- 6

Comments: All cable strands were considered to be free-hanging at the time of measurement on the south west-loop. I took all of the measurements while Damon assisted me with setting up the targets, being level, normal to cable, etc. The () denotes the fixed timber block (by ABF) to cable strand number 1 dimension in millimeters.

It should be noted that cable strand number 116 was not on the prescribed list for buy-off today. However it was measured due to the Victor Tree gauge #2 not being able to reach to the target referencing strand 1. Therefore cable strand 116 was measured then the distance was taped up to the top of cable strand number 117 for the overall measurement.

- All of the prescribed measurements were completed at 6:37am and conveyed to Alex. As mentioned in the comments section of the measurement tabulations, live adjustments were performed by ABF ironworkers. An adjustment would be made and then ABF surveyors and Caltrans engineers would measure the cable strand to verify the correct sag adjustment was done before moving on to adjusting another strand. The ironworkers began their shift at 5:00am today at both the tower saddle and east anchorages. See Daryoush Bahar's diary for comments, measurements, labor, and equipment at the tower saddle. See Saman Soheilifard's diary for comments, measurements, labor, and equipment at the east anchorage.

- Surveyed the three brass caps placed by ABF on the YBITS W-Line cantilever while yet another pulldown jacking operation was in progress. The survey was done in conjunction with the ABF surveyors as the agreed value of the pulldown deflection or elevation change was 28mm at 4,100kips. See Jason Wilcox's diary for more details on the operation, labor, and equipment.

- Attended the weekly Team Cable meeting in the Caltrans conex box at 12:00pm located on the E-Line OBG near the south mainspan catwalk anchorage.

- Completed calculating the coordinates for the cable band position at 48F to upload into the data collector. I would like someone to check the calculations such as Francis O'Malley or Mohammed Awal. The QA check and steel tape practice on the strand wires for the cable band "Rough" layout had to be postponed due to issues with strand adjustments on the mainspan this morning forcing an earlier start in the morning tomorrow.

- Continued to review the plans for the suspender geometry related to the cable bands.