Daily Diary Report by Bid Item

Contract No.: **04-0120F4**
Diary #: **505** **Const Calendar Day:** 890 **Date:** **15-Feb-2012** **Wednesday**
Inspector Name: **Bruce, Matt** **Title:** **Transportation Engineer**
Inspection Type: Intermittent
Shift Hours: 05:00 am 03:30 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

Working Day ☐ If no, explain:

Diary: Dispute ☐

Work description.

- John Lyons, Phil Latasa, Sami Dauok and myself checked the out to out distance for the cable strands today as Phil's and my measurements are tabulated below. Phil and I were responsible for the mainspans and the west-loop. Similarly John and Sami were responsible for checking the sidespans. Phil assisted me with the measurements and tabulating the data while I took most of the measurements. We used the Maletic gauge (Yellow #1) to take the out to out measurements of the cable strands.

When all of the measurements were completed, I proceeded to meet with ABF engineer Zach Lauria at the top of the tower to discuss the measurements taken today. The discussion between us began 6:30am in the tower elevator. At the time of the discussion, all of the measurements were completed on the mainspan, south sidespan and the west-loop. Also at this time measurements were being taken by John and Sami on the north sidespan.

The ABF cable sag adjustment acceptance form was signed by both myself and ABF engineer Zach Lauria at 7:03am. The reason the form wasn't signed at 7:00am was due ABF still taking measurements and or compiling the data for acceptance or rejection. The was a dispute over the measurement for cable strand numbers 38 on the north sidespan and 35 on the north mainspan. John and Sami went to remeasure cable strand 38 while ABF surveyors Terry Denis and Mike Bonidici went to recheck number 35. It was decided that given the differences after the remeasure of these strands and with the sun rising to abandon acceptance of the adjustment for these cable strands. It also should be noted that the ABF surveyors reported the measurements to Zach. It appears at times that he is choosing numbers that are close (look better on paper) to the theoretical.

Ambient temperatures were taken with the red temperature gauge. Wind speeds were obtained from weather.com at the time of the measurements. The steel temperature measurements were taken with the digital thermometer placed on the outer cable strand wires.

The official sunrise time per weather.com for San Francisco today was at 7:00am. It should be noted that the catwalk lights were off during the time of measurements and the only source of light provided by ABF was the light plants at the east end OBG. The following measurements were taken of the relative sag from cable strand number 1 at the given times below:

// North Mainspan //
Time = 5:02am
Ambient Temperature = 45F
Condition = Fair
Wind = NNW @ 16mph

ABF Surveyor(s) = None at this time
Caltrans Engineer(s) = Matt Bruce and Phil Latasa

Cable Strand	Steel Temperature (F)	O-O (#1Y) CT / ABF (mm)	Theor (mm)	CT Delta (mm)
1	45	Baseline or Zero	75	0
29	44	105, 105 - Ave = 105 / 110	111	- 6
30	44	160, 162 - Ave = 161 / 168	168	- 7
34	44	396, 398 - Ave = 397 / 395	395	+ 2
35	44	441, 440 - Ave = 441 / 434	452	- 11
36	45	509, 507 - Ave = 508 / 501	509	- 1
37	46	594, 597, 596 - Ave = 596 (+/-10mm) / 590	566	+ 30
38	44	314, 321, 315 - Ave = 317 (+/-10mm) / 325	177	+ 140
39	44	359, 363 - Ave = 361(+/-10mm)	234	+ 127
40	44	426, 431 - Ave = 429 (+/-10mm)	290	+ 139

Comments: All cable strands were considered to be free-hanging at the time of measurement on the north mainspan. I took all of the measurements while Phil assisted me with setting up the targets, being level, normal to cable, etc. Phil also recorded the data while the measurements were being taken. The numbers in ( ) denote the estimated vertical oscillations of the cable strands.

// South Mainspan //
Time = 5:33am
Ambient Temperature = 44F
Condition = Fair
Wind = NNW @ 16mph
ABF Surveyor(s) = None at this time
Caltrans Engineer(s) = Matt Bruce and Phil Latasa

Cable Strand	Steel Temperature (F)	O-O (#1Y) CT / ABF (mm)	Theor (mm)	CT Delta (mm)
1	44	Baseline or Zero	76	0
35	44	539, 538 - Ave = 539 / 538	458	+ 81
36	45	515, 514 - Ave = 515 / 512	517	- 2
37	44	609, 612 - Ave = 611/ 621 (+/- 10mm)	576	+ 35
38	44	212, 214 - Ave = 213	173	+ 40
39	45	325, 325 - Ave = 325	231	+ 94
40	44	355, 355 - Ave = 355	290	+ 65

Comments: All cable strands were considered to be free-hanging at the time of measurement on the south mainspan. I took all of the measurements while Phil assisted me with setting up the targets, being level, normal to cable, etc. Phil recorded the data while the measurements were being taken. The numbers in ( ) denote the estimated vertical oscillations of the cable strands.

// North West-Loop //
Time = 6:03am
Ambient Temperature = 45F

Condition = Fair
Wind = N @ 18mph
ABF Surveyor(s)/Engineer(s) = None at this time
Caltrans Engineer(s) = Matt Bruce and Phil Latasa

Cable Strand	Steel Temperature (F)	O-O (#1Y) CT / ABF (mm)	Theor (mm)	CT Delta (mm)
1	43	Baseline or Zero	80	0
39	45	259 (-114) = 145	151	- 6
40	45	358 (-114) = 244 / 251	245	- 1
41	44	456 (-114) = 342 / 346	339	+ 3

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 Phil assisted me with setting up the targets, being level, normal to cable, etc. I recorded the data while the measurements were being taken. The ( ) denotes that a block was used with the block width or height dimension in millimeters.

// South West-Loop //
Time = 6:16am
Ambient Temperature = 45F
Condition = Fair
Wind = NNW @ 17mph
ABF Surveyor(s)/Engineer(s) = None at this time
Caltrans Engineer(s) = Matt Bruce and Phil Latasa

Cable Strand	Steel Temperature (F)	O-O (#1Y) CT / ABF (mm)	Theor (mm)	CT Delta (mm)
1	45	Baseline or Zero	80	0
39	45	259 (-114) = 145	151	- 6
40	45	358 (-114) = 244 / 252	245	- 1
41	44	463 (-114) = 349 / 356	339	+ 10

Comments: All cable strands were considered to be free-hanging at the time of measurement on the south west-loop. Phil took all of the measurements while I assisted him with setting up the targets, being level, normal to cable, etc. I recorded the data while the measurements were being taken The ( ) denotes that a block was used with the block width or height dimension in millimeters.

- Even though I didn't measure the sidespans (John and Sami) the numbers below are ABF values presented today by ABF engineer Zach Lauria:

// North Sidespan //

Cable Strand	O-O ABF (mm)
37	609
38	150
39	381
40	352
41	380

// South Sidespan //

Cable Strand	O-O ABF (mm)

35	478
36	610
38	196
39	307
40	269
41	332

- Attended the weekly Team Cable meeting at 12:00pm to review safety issues and cable works operations in progress at the Caltrans Connex box on the E-Line OBG.

- Continued to develop a plan for surveying the suspender brackets on the OBG with Warren Collins and Roman Granados. We looked at a suspender bracket in the field to find the most accessible location where a point could be placed. The consensus was to put a point on the top plate, which would be offset 50mm from the web closest to the barrier. It was also reiterated that this survey was to be done at night.

- Called ESC salesman/surveyor Chuck Madrid to order a metric steel tape for the layout of the cable bands along the top of the cable.

- Continued to research a plan of the preliminary and final layouts for cable band placement. We discussed techniques and the schedule in which these tasks had to be done.

- Met with Alex Schmitt, Michelle Chui, and John Lyons regarding the cable strand sag adjustment spreadsheet and documentation.

- Worked on compiling my measurements and gave the daily cable strand sag adjustment sheets to Alex.

Attachment

The W-Line Hinge K area where the stage is set for ABF to begin to prepare for construction.

Hillside Drilling installing micropile for the W-Line YBITS tie down to build Hinge K.

Lighting at the time of cable strand measurements on the south mainspan.

The completed W-Line YBITS bridge where MCM has cranes placed on top of the bridge to build formwork.