



**SAS Superstructure**

Location: 04-SF-80-13.2 / 13.9

Client Name: CalTrans

Run date 21-Nov-14

Time 10:04 AM

**Daily Diary Report by Bid Item**

Contract No.: 04-0120F4

Diary #: 063 Const Calendar Day: 247 Date: 13-May-2010 Thursday

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

Working Day  If no, explain:

**Diary:**

Dispute

**General Comments**

ITEM 52 FURNISH STRUCTURAL STEEL (BRIDGE)(TOWER);  
TOWER HEAD BOLT TESTING - HUCK BLIND BOLTS:



For today's testing, ABF made 6 plates 1/2" thick with 1" diameter holes to accommodate the Huck Blind Bolts. The Skidmore MS is used for this testing. Four bolts are brought by the Huck Representative are tested and this type of blind bolt is discussed between 1100 and 1200. For tightening the bolts, the Huck Representative brings a Tension-Control electric gun. ABF supplies a 2000 ft-lb dial torque wrench for checking the torque on the completed bolts and a clicker torque wrench with a ratchet for bolt removal after completing the tests.

Present for this testing is Huck Representative Beth VanZandt; ABF engineer Scott Yeager; DJV engineers Carol Choi and Nhan Vo; CT engineers Bob Brignano, Saman Soheilifard, and Rick Morrow.

The material tested is the Metric unit size 24 Huck blind bolt for a 70 to 75 mm grip range. The test results are as follows:

TEST 1: 43.5 kips clamping force, 300 ft-lb nut turns

TEST 2: 49 kips clamping force, 300 ft-lb nut turns

TEST 3: 42 kips clamping force, 340 ft-lb nut turns; note that the force drops to 41 kips after a few minutes. Also note that there were some gun start stop problems at the beginning of the test that may have affected the results.

TEST 4: This test is with the removal of a washer thick ply so that the length in the grip is below the specified range to test what happens if the bolt is not the correct size for the thickness in the grip. 36 kips clamping force, 340 ft-lb nut turns. The clamping force is lower than specified and required for this size bolt. Note that the force also drops to 34.5 kips and then 33.5 kips after a few minutes.

