

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026904**Date Inspected:** 17-Dec-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Jobsite

<b>CWI Name:</b>	As noted below		
<b>Inspected CWI report:</b>	Yes	No	N/A
<b>Electrode to specification:</b>	Yes	No	N/A
<b>Qualified Welders:</b>	Yes	No	N/A
<b>Approved Drawings:</b>	Yes	No	N/A

<b>CWI Present:</b>	Yes	No	
<b>Rod Oven in Use:</b>	Yes	No	N/A
<b>Weld Procedures Followed:</b>	Yes	No	N/A
<b>Verified Joint Fit-up:</b>	Yes	No	N/A
<b>Approved WPS:</b>	Yes	No	N/A
<b>Delayed / Cancelled:</b>	Yes	No	N/A

**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

- 14W/PP125.7/W3.7 R2 (Exterior)
- 13W/PP122W3 Lifting Lug Hole W1 (Exterior)

- 14W/PP125.7/W3.7 R2 (Exterior)

This QA Inspector randomly observed QC Inspector John Pagliero perform Ultrasonic Testing (UT) on vent hole 14W/PP125.7/W3.7. This QA Inspector verified the instrument through calibration and utilization. This QA Inspector observed the QC Inspector utilize a 70° wedge/transducer and noted scanning from both sides of the weld. This QA Inspector observed that Mr. Pagliero found a rejectable indication located at y + 625mm with length – 40mm and depth – 7mm with a db rating of +6. This QA Inspector noted that a CWR has been submitted by the QC Manager and is pending approval by the Engineer.

This joint is a Seismic Performance Critical Member (SPCM).

This QA Inspector randomly observed ABF welder Salvador Sandoval performing the excavation operation of an ultrasonic rejectable indication on "A" deck Vent Hole 14W/PP125.7/W3.7 located at "Y" 625 mm: (25 mm wide; 100 mm length; and 11 mm in depth). This QA Inspector observed QC Inspector Sal Merino perform a Magnetic Particle Inspection (MT) of the excavation to determine the soundness of the metal. Upon completion of

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the testing this QA Inspector verified that no rejectable indications were present.

This QA Inspector randomly observed ABF welder Salvador Sandoval (Welder ID 2202) performing the repair welding operation of an ultrasonic indication as per the Shielded Metal Arc Welding (SMAW) process in the (1G) flat position on "A" deck Vent Hole 14W/PP125.7/W3.7. This QA Inspector observed the use of E7018-H4R electrodes and QC Inspector William Sherwood verify that the preheat temperature was at the minimum of 325 degrees F and that the welding parameters (Amps=135) were in accordance with WPS D1. 5-1004- Repair. The welding parameters observed at this location appeared to be in general compliance with approved WPS and the contract specifications. Upon completion of the repair, a thermal induction blanket was placed over the area for Post Weld Heat Treatment (PWHT) at 450 degrees F for 1 hour. This joint is a Seismic Performance Critical Member (SPCM).

### Ultrasonic Testing (QA)

This QA Inspector performed Ultrasonic Testing (UT) on approximately 25% of the welds at the locations listed below. These welds were previously accepted by QC Ultrasonic technicians in accordance with AWS D1. 5-2002, section 6, table 6.3. This QA observed no rejectable indications at the time of testing. This QA generated a TL-6027 UT report on this date. These joints are Seismic Performance Critical Members (SPCM).

14W/PP125.7/W3.2 (Exterior)

14W/PP126.2/W3.7 (Exterior)

14W/PP125.2/W3.2 (Exterior)

14W/PP125.2/W3.7 (Exterior)

13W/14W/D1 (Exterior) R3 CWR pending approval by the Engineer.

### 2. 13W/PP122W3 Lifting Lug Hole W1 (Exterior)

This QA Inspector observed QC Inspector Sal Merino utilize a Bridge Cam Gage to measure the fit-up of the 20 mm plate in the BU-4a joint on lifting lug hole 13W/PP122/W3/W1. This QA Inspector verified the fit-up as acceptable and employed a 65°C Tempilstik to ensure the minimum pre-heat temperature had been achieved. This QA Inspector randomly observed ABF welder Salvador Sandoval (welder ID 2202) performing the Shielded Metal Arc Welding (SMAW) process in the (1G) flat position and observed QC Inspector Sal Merino verify the welding parameters were in accordance with ABF-WPS-D15-1050A-CU. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work was completed on this date and appeared to be in general compliance with the approved WPS and the contract specifications.

Note: The QAI reviewed the observations and inspection with QA Lead Inspector, Daniel Reyes, written in this report. The issues were noted by the QAI and the QA Lead Inspector concurs with the QA report.

### Summary of Conversations:

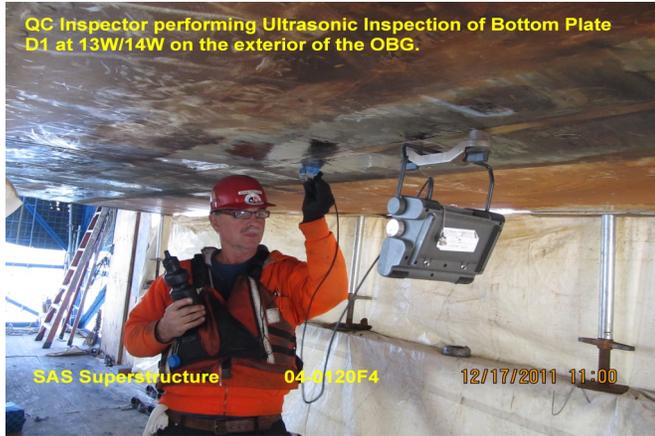
The were no pertinent conversations to report.

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## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Frey,Doug	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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