

**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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-020227**Date Inspected:** 01-Feb-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Jobsite**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance Inspector (QAI) Bert Madison was present at Yerba Buena Island in California between the times noted above for observations relative to the work being performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below.

- 1). OBG Field Splice 9W/10W Weld ID: A5, Face A (SMAW)
- 2). OBG Field Welding of East Line Lifting Lug Hole Inserts (SMAW)
- 3). OBG Field Splice 9E/10E Weld ID: C2, Face A (FCAW-G)
- 4). OBG Field Splice 8W/9W Weld ID: F1, Face A – (SMAW R-1 Repairs)
- 5). OBG Field Splice 8E/9E Weld ID: C2, Face B – (FCAW-G)

- 1). OBG Field Splice 9W/10W Weld ID: A5, Face A (SMAW)

The QAI periodically observed AB/F approved welder Jorge Lopez (ID 6149) performing welding of root, fill and cover passes on the last 160mm of weld ID: A5 per the Shielded Metal Arc Welding (SMAW) process in the 1G (vertical) position. See photo below. The QAI observed QC Inspector Jesse Cayabyab was present to monitor the progress and verify that the welding parameters were within the limits established by the approved Welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1040A rev. 1. The QAI observed that the work at this location was complete and appeared to be in general compliance with contract documents.

- 2). OBG Field Welding of Lifting Lug Hole Inserts (SMAW)

Exterior: OBG 6E PP44 E4 weld 2 and weld 4

The QAI periodically observed AB/F approved welder Salvador Sandoval (ID 2202) performing welding of cover passes at OBG 6E PP44 E4 weld 2 per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position.

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QC Inspector Steve McConnell was periodically present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1070. Welding was completed at weld 2 and fit-up, root, fill and cover pass welding was completed at weld 4. Flush grinding was in process and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

### 3). OBG Field Splice 9E/10E Weld ID: C2, Face A (FCAW-G)

The QAI periodically observed AB/F approved welder Song Tao Huang (ID 3794) assisted by AB/F approved welder Jin Quan Huang (ID 9340) performing semi-automated welding of the root pass at the OBG Field Splice 9E/10E Weld ID: C2 per the Flux Cored Welding (FCAW-G) process in the 3G (vertical) position. The QAI observed QC Inspector Fred Von Hoff was present periodically to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-3042B-1. The QAI observed that Mr. Von Hoff obtained the following welding parameters: welding amps = 235, welding volts = 24.1, travel speed = 300mm/minute. The QAI calculated the Heat Input at 1.33 kJ/mm. The welding of the root pass was complete and fill pass welding was not started. The QAI observed that the work at this location appeared to be in general compliance with contract documents.

### 4). OBG Field Splice 8W/9W Weld ID: F1, Face A – (SMAW R-1 Repairs)

The QAI periodically observed AB/F approved welder Fred Kaddu (ID 2188) performing air carbon arc gouging, grinding and subsequent R-1 repair welding per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position on the exterior of OBG Field Splice 8W/9W Weld F1. The QAI randomly observed QC Inspector Jesse Cayabyab performing Magnetic Particle Testing (MT) of two excavated areas prior to repair welding. The QAI randomly observed that the performance and evaluation of the MT appeared to comply with the MT procedure identified as SE-MT-CT-D1.5-101 Rev. 4. The QAI periodically observed AB/F approved welder Fred Kaddu (ID 2188) performing repair welding (see photo below) of one excavated area. QC Inspector Jesse Cayabyab was present periodically to monitor the progress and verify that the repair welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1001 Repair. The QAI observed that fill and cover pass welding of one excavation was completed and welding of the second excavation was not started during the QA Inspectors shift on this date. The QAI observed that the work at this location appeared to be in general compliance with contract documents. The QAI observed that the repair areas excavated had the following dimensions and the following Y locations:

#1 Y = 540mm, Length = 190mm, Depth = 14mm, Width = 23mm.

#2 Y = 100mm, Length = 220mm, Depth = 13mm, Width = 25mm.

### 5). OBG Field Splice 8E/9E Weld ID: C2, Face B – (FCAW-G)

The QAI periodically observed AB/F approved welder Rory Hogan (ID 3186) assisted by AB/F approved welder Jeremy Dolman (ID 5042) performing fill and cover pass welding per the Flux Cored Arc Welding (FCAW-G) process in the 4G (overhead) position. The QAI periodically observed QC inspector Steve Jensen was present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-3110-4. The welding of cover passes was completed at this location and the work appeared to be in general compliance with contract documents.

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## Summary of Conversations:

Conversations on this date with Quality Control Inspectors were general in nature and pertained to locations of welding and QC activities and locations of welds released to the QAI for verification testing.

## 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 Sang Le (916) 764 5650, who represents the Office of Structural Materials for your project.

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**Inspected By:** Madison, Bert

Quality Assurance Inspector

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**Reviewed By:** Levell, Bill

QA Reviewer