

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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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-017481**Date Inspected:** 20-Oct-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**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 6W/7W Weld ID: C2, Face A - (FCAW-G)
- 2). OBG Field Splice 7W/8W Weld ID: B1/A1, Face B - (SMAW)
- 3). OBG Field Splice 7W/8W Weld ID: F1/A5, Face B - (SMAW)
- 4). OBG Field Splice 7W/8W Weld ID: A1 & A5, Face A - (QC UT)

- 1). OBG Field Splice 6W/7W Weld ID: C1, Face A - (SMAW)

The QAI periodically observed AB/F approved welder Song Tao Huang (ID 3794) assisted by AB/F approved welder Jin Quan Huang, performing welding per the Flux Cored Arc Welding (FCAW-G) process in the 3G (vertical) position of root and fill passes on weld ID: C2. The QAI observed QC Inspector Tony Sherwood 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-D1.5-3042B-1. The QAI observed as Mr. Sherwood measured the welding parameters and noted the following measurements were obtained: amps = 250, volts = 23.8 and travel speed=328. The QAI calculated the heat input as 1.09 kJ/mm. The QAI observed that the work at this location was in process and appeared to be in general compliance with contract documents. See photo below.

- 2). OBG Field Splice 7W/8W Weld ID: B1/A1, Face B - (SMAW)

The QAI periodically observed AB/F approved welder Jin Pei Wang (ID 7299) performing welding per the

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Shielded Metal Arc Welding (SMAW) process in the 2F (horizontal) and 4F (overhead) positions. The welding at this location was of the radius/transition area at the termination of the Weld A1 backing bar. QC Inspector Tony Sherwood 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-F1200A. The QAI observed that the welder spent the duration of the QA Inspectors shift grinding the radius/transition area and the weld B1. The work at this location appeared to be in general compliance with the contract documents.

### 3). OBG Field Splice 7W/8W Weld ID: F1/A5, Face B – (SMAW)

The QAI periodically observed AB/F approved welder James Zhen (ID 6001) performing welding per the SMAW process in the 2F (horizontal) and 4F (overhead) positions. The welding at this location was of the radius/transition area at the termination of the Weld A1 backing bar. QC Inspector Tony Sherwood 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-F1200A. The QAI observed that an apprentice welder spent the duration of the QA Inspectors shift grinding the radius/transition area and the weld F1. The work at this location appeared to be in general compliance with the contract documents.

### 4). OBG Field Splice 7W/8W Weld ID: A1 & A5, Face A – (QC UT)

The QAI periodically observed SE QC Inspector Steve McConnell performing UT of OBG Field Splice 7W/8W Weld ID: A1 from the A face. Mr. McConnell utilized the UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 during the examination of the splice weld. The QC technician performed the required shear wave testing during the testing for weld soundness utilizing a .63 x .75 rectangular transducer. The UT examination was in process during this shift and the QAI observed that the QC inspector had marked several rejectable indications on the steel. See photo below. The QAI also periodically observed SE QC Inspector Tom Pasqualone performing UT of OBG Field Splice 7W/8W Weld ID: A5 from the A face. Mr. Pasqualone utilized the UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 during the examination of the splice weld. The QC technician performed the required shear wave testing during the testing for weld soundness utilizing a .63 x .75 rectangular transducer. The UT examination was in process during this shift and the QAI observed that the QC inspector had marked several rejectable indications on the steel.



### Summary of Conversations:

Conversations on this date with Quality Control Inspectors were general in nature and pertained to locations of welding and QC activities.

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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 Mohammed Fatemi (916) 813 3677, who represents the Office of Structural Materials for your project.

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

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