

**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:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016242**Date Inspected:** 16-Aug-2010**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**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 1W/2W Weld ID: F1, Face B
- 2). OBG Field Splice 4W/5W Weld ID: B1, Face A
- 3). OBG Field Splice 5W/6W Weld ID: F1, Face B
- 4). OBG Field Splice 5W/6W Weld ID: C1 & C2, Face A

- 1). OBG Field Splice 1W/2W Weld ID: F1, Face B

The QAI observed that there were two separate excavations in the B face of the splice weld and the QAI gauged the depths at 3mm and 5mm deep. See Summary of Conversations below. The QAI periodically observed AB/F approved welder Fred Kaddu (ID 2188) performing grinding to prepare the excavated Ultrasonic Testing (UT) repairs

(R-3) for welding. The QAI observed QC Inspector Tom Pasqualone performing Magnetic Particle Testing (MT) of the excavations prior to repair welding. See photo below. The QAI 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 per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position. The QAI also periodically observed the QC Inspector Tom Pasqualone 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-D1.5-1000-Repair. Work at this location was completed and appeared to be in general compliance with

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contract documents.

## 2). OBG Field Splice 4W/5W Weld ID: B1, Face A

The QAI periodically observed AB/F approved welder Rick Clayborn (ID 2773) performing welding per the SMAW process in the 3G (vertical) position. The welding was being performed to complete the bottom 50mm from the A Face of the Edge Plate Splice Weld B1. The QAI observed that Welder Clayborn performed air carbon arc gouging to excavate prior to the commencement of welding. The QAI observed QC Inspector Tony Sherwood performing Magnetic Particle Testing (MT) of the excavation prior to welding. The QAI 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 also periodically observed the 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-D1.5-1040A-Repair. Work at this location was completed and appeared to be in general compliance with contract documents.

## 3). OBG Field Splice 5W/6W Weld ID: F1, Face B

The QAI performed verification visual & magnetic particle testing of 10% of the lengths of OBG Field Splice 5W/6W weld ID: F1, Face B. The QAI inspected 150mm of Weld F1 from Y = 1242mm to Y = 1392mm. The welds verified by the QAI were found to be in general compliance with contract documents. See Report of Magnetic Particle Testing Form TL-6028 generated by the QAI on this date.

## 4). OBG Field Splice 5W/6W Weld ID: C1 & C2, Face A

The QAI periodically observed AB/F approved welder Song Tao Huang (ID 3794) performing welding per the Flux Cored Arc Welding (FCAW-G) process in the 3G (vertical) position of fill and cover passes on weld ID: C1 & 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 that the QC Inspector periodically measured the welding parameters and at the commencement of welding obtained the following: the welding amperes were 250 amps, the welding volts were 24.2 volts and the travel speed was measured to be 340mm/min. See photo below. The work at this location was in process for the duration of the QA Inspectors shift and appeared to be in general compliance with contract documents.



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**Summary of Conversations:**

From Item 1).

The QAI in a conversation with the QC Inspector Tom Pasqualone was informed by QC that the QC UT report showed the two indication's depths as 15mm and 18mm deep from the A face. The QC Inspector allowed the QAI to observe the QC UT Report and the QAI observed that the 15mm deep flaw was plotted in the second leg of soundpath.

**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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