

**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-020901**Date Inspected:** 15-Feb-2011**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:** Job Site**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:**

The Quality Assurance (QA) Inspector, Rick Bettencourt was on site at the job site between the times noted above. The QA Inspector was on site to randomly observe the in process welding and inspection of the weld joints identified as 4W-pp35-W3-3, 4W-pp35-W4-3, 8W/9W-D1, 9E/10E-E1, 6E-pp40-E4-1 & 3 the following items were observed:

**4W-pp35-W3-3**

The QA Inspector randomly observed the ABF welder identified as Darcel Jackson continue welding the in process lift lug hole restoration. The QA Inspector noted the weld joint was approximately 50% complete at the time of the QA Inspectors arrival. The QA Inspector randomly observed the ABF welder continue the SMAW fill/cover pass. The QA Inspector randomly observed the SMAW parameters were 3/16" E7018 low hydrogen electrodes with 275 Amps. The QA Inspector noted the parameters appeared to be in general compliance with ABF-WPS-1070A. The QA Inspector randomly observed the ABF welder did complete the above identified lifting lug hole on this date. The QA Inspector randomly observed the welder did complete the welding but the weld reinforcement was not ground flush on this date.

**4W-pp35-W4-3**

The QA Inspector randomly observed the ABF welder identified as Mike Jiminez continue welding the in process lift lug hole restoration. The QA Inspector noted the weld joint was approximately 30% complete at the time of the QA Inspectors arrival. The QA Inspector randomly observed the ABF welder continue the SMAW fill/cover pass. The QA Inspector randomly observed the SMAW parameters were 3/16" E7018 low hydrogen electrodes with 260 Amps. The QA Inspector noted the parameters appeared to be in general compliance with ABF-WPS-1070A. The

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QA Inspector randomly observed the ABF welder did complete the above identified lifting lug hole on this date. The QA Inspector randomly observed the welder did compete the welding but the weld reinforcement was not ground flush on this date.

### 8W/9W-D1

The QA Inspector randomly observed the ABF welder Rory Hogan had completed the carbon arc gouging and grinding to the above identified weld joint. The QA Inspector randomly observed the SE QC Inspector Fred Vonhoff perform visual testing and magnetic particle testing of the back gouged weld joint. The QC Inspector Informed the QA Inspector the weld joint was acceptable and ready for production welding. The QA Inspector performed a random visual inspection of the back gouge and noted the weld joint did appear to meet the general requirements of the contract documents. The QA Inspector noted the ABF welder spent the remainder of the QA Inspectors shift setting up the FCAW machine. The QA Inspector noted no welding was performed on the QA Inspectors shift.

### 9E/10E-E1

The QA Inspector randomly observed the ABF welder Song Tao Huang had previously started the induction heating blankets on the inside of OBG to ensure the minimum required preheat of 150°F was achieved prior to welding. The QA Inspector randomly verified utilizing a 150°F temperature indicating marker and noted the minimum required preheat had been achieved. The QA Inspector observed the ABF welder to be utilizing the semi automated flux cored arc welding (FCAW) for the above identified weld joint. The QA Inspector randomly observed the Smith Emery (SE) QC Inspector identified as Steve Jensen set the FCAW machine to the parameters of the approved WPS identified as ABF-WPS-D1.5-3042-B-1 The QA Inspector randomly observed the FCAW parameters were 265 Amps, 23.5 Volts and a travel speed of 295mm/min. The QA Inspector noted the ABF welder continued welding the FCAW fill/cover passes for the remainder of the shift. The QA Inspector noted the fit up in the areas being welded were in compliance with the contract requirements. The QA Inspector noted the welding continued through out the duration of the QA Inspectors shift.

### 6E-pp40-E4-1 & 3

The QA Inspector randomly observed the ABF welder Salvador Sandoval performing carbon arc gouging and back grinding of the above identified weld joints. The QA inspector randomly observed the ABF welder grind the back gouged weld joints to bright metal. The QA Inspector randomly observed the back gouged weld joints and noted they appeared to be in general compliance with the contract requirements. The QA Inspector randomly observed the SE QC Inspector Tony Sherwood perform magnetic particle testing of the back gouged weld joint and noted no relevant indications were present at the time of the testing. The QA Inspector randomly observed the ABF welder continue welding the in process lift lug hole restoration. The QA Inspector noted the weld joint was approximately 70% complete at the time of the SMAW 4G back weld. The QA Inspector randomly observed the ABF welder continue the SMAW fill pass. The QA Inspector randomly observed the SMAW parameters were 1/8" E7018 low hydrogen electrodes with 122 Amps. The QA Inspector noted the parameters appeared to be in general compliance with ABF-WPS-1070A R1. The QA Inspector randomly observed the ABF welder did complete the above identified lifting lug hole on this date. The QA Inspector noted the weld reinforcement was ground flush on the QA Inspectors shift. The QA Inspector observed the grinding did appear to comply with the contract requirements.

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**Summary of Conversations:**

No pertinent conversation on this date.

**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>	Bettencourt,Rick	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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