

**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-029807  
**Date Inspected:** 06-Jul-2013

**Project Name:** SAS Superstructure  
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV  
**Contractor:** American Bridge/Fluor Enterprises, a JV

**OSM Arrival Time:** 700  
**OSM Departure Time:** 1530  
**Location:** Job Site

<b>CWI Name:</b>	See Below	<b>CWI Present:</b>	Yes	No
<b>Inspected CWI report:</b>	Yes No N/A	<b>Rod Oven in Use:</b>	Yes No N/A	
<b>Electrode to specification:</b>	Yes No N/A	<b>Weld Procedures Followed:</b>	Yes No N/A	
<b>Qualified Welders:</b>	Yes No N/A	<b>Verified Joint Fit-up:</b>	Yes No N/A	
<b>Approved Drawings:</b>	Yes No N/A	<b>Approved WPS:</b>	Yes No N/A	
		<b>Delayed / Cancelled:</b>	Yes No N/A	
<b>Bridge No:</b>	34-0006	<b>Component:</b>	E2 Anchorage	

**Summary of Items Observed:**

At the start of the shift this Quality Assurance Lead Inspector (QAI) traveled to the SAS project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) Quality Control (QC) personnel. The observations and inspections were performed as noted below:

**E2 Anchorage**

This QAI observed the fillet welding of four (4) temporary angles to the vertical embed plate and plate washer located on the north and south side of the shear key identified S1. The welding was performed by Wai Kit Lai ID-2953 utilizing the Shielded Metal Arc Welding (SMAW) process as per the Welding Procedure Specification (WPS) identified as ABF-WPS-D15-F1200A, Rev. 2 which was also utilized by the Quality Control Inspector, William Sherwood, during the in process visual inspection and QC verification of the welding parameters during the welding of the temporary attachments. The QC inspection was performed by Mr. Sherwood which appeared to comply with the contract specifications.

Later in the shift this QAI performed a Visual Weld Inspection (VT) of the fillet welding of the temporary attachments as requested by Mr. Sherwood. The QA inspection of the welds was performed to verify the weld and inspection performed by QC complied with the requirements of the contract documents. At the conclusion of the inspection QA concurs with QC assessment. At this time this QA observed Mr. Sherwood perform a Magnetic Particle Test (MPT) and at the conclusion of the testing no rejectable indications were noted.

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# WELDING INSPECTION REPORT

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## QA Summary

The welding was performed in two (2) vertical and horizontal position utilizing the E7018-H4R low hydrogen. The 3.2 mm electrodes were stored in electrically heated, thermostatically controlled oven after removal from the sealed containers. The exposure limits of the electrodes appeared to comply with the minimum storage oven temperature of 120 degrees Celsius as per the contract documents. The WPS's were also utilized by the QC inspector as a reference to monitor the welding operation, verify the welding parameters and verify the minimum preheat and the interpass temperatures. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter for the electrical welding parameters and Tempil Heat Indicators for verifying the preheat and interpass temperatures. At the time of the observation no issues were noted by this QAI.

### Summary of Conversations:

There were general conversations with Quality Control Inspector, William Sherwood, at the start of the shift regarding the location of welding, inspection personnel scheduled for this shift. There were also, other pertinent conversations with QA personnel throughout the course of this shift in regards to the contractor's scheduling, work progress, related structural steel, welding and coatings issues. There were no issues noted during this shift.

Note: In regards to the welding of temporary attachments the QC inspector, William Sherwood, informed this QAI that drawings would be provided as per conversation with ABF personnel, Levi Gastos.

### 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 SMR Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Reyes,Danny	Quality Assurance Inspector
<b>Reviewed By:</b>	Mertz,Robert	QA Reviewer

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