

**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:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027525**Date Inspected:** 01-May-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** As noted 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:**

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

## 13W PP120/PP124.7 Grid Line W2.0/W2.8 Deck Plate Drop-in Sections

This QA Inspector observed ABF Welder Rick Clayborn (ID 2773) performing the fillet weld operation per the Shielded Metal Arc Welding (SMAW) process in the (2F) horizontal position attaching the blank nuts to the deck plate on Segment 13W for installation of the key plates to adjust the longitudinal weld splice planar offset between the Deck Plate section and Deck Plate Drop-in section at transverse field weld splice 13W/14W on PP124.7, longitudinal field weld splice along Grid W2.3 and Grid W2.4. This QA Inspector observed QC Inspector William Sherwood verify prior to the start of the fillet weld operation, that the minimum preheat temperature as per the approved WPS was established; and afterward's verified that the welding parameters (Amps and Travel Speed) were in accordance with WPS F1200A using E7018 3.2mm diameter electrodes. This QA Inspector along with QC Inspector Tony Sherwood performed a joint inspection to measure the root gap of the complete-joint penetration (CJP) longitudinal and transverse single V butt-joint grooves between the Deck plate Section and the Deck plate Drop-in Sections. This QA Inspector observed ABF Welder Todd Jackson (Welder ID 4639) performing the fillet weld operation per the Shielded Metal Arc Welding (SMAW) process in the (4F) overhead position to attach the U-Bars to the underside of the deck plate on Segment 13W. The work being performed was to augment the installation of the non-fusible copper backing bar prior to welding the complete-joint penetration (CJP) single V groove butt-joint between the Deck Plate section and Deck Plate Drop-in section at longitudinal

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## WELDING INSPECTION REPORT

( *Continued Page 2 of 3* )

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field weld splice along Grid W2.8. This QA Inspector observed that ABF welder Todd Jackson completed the fillet welding of the U-Bars to the underside of the Deck Plate section and Deck Plate Drop-in section along Grid W2.1 at the end of this QA Inspectors' shift.

### 12W PP109.5 W2-LSW (Interior)

This QA Inspector performed MT testing on the West longitudinal Stiffener (LSW) located at 12W PP109.5 W2 on the interior of the OBG. This QA Inspector performed MT testing utilizing the yoke method in conformance with ASTM E 709 and the standard of acceptance with D1.5 section 6.26. This QA Inspector noted that no rejectable indications were found at the time of testing. This QA Inspector generated a TL-6028 MT report on this date. The completed work at this location appeared to be in general conformance with the contract specifications. This QA Inspector performed a UT inspection on approximately 10% of the welds on the LSW and these welds were previously accepted by QC Ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. This QA observed no rejectable indications at the time of testing. This QA generated a TL-6027 UT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications.

### 12E PP109.5 E2-LSW (Interior)

This QA Inspector performed MT testing on the West longitudinal Stiffener (LSW) located at 12E PP109.5 E2 on the interior of the OBG. This QA Inspector performed MT testing utilizing the yoke method in conformance with ASTM E 709 and the standard of acceptance with D1.5 section 6.26. This QA Inspector noted that no rejectable indications were found at the time of testing. This QA Inspector generated a TL-6028 MT report on this date. The completed work at this location appeared to be in general conformance with the contract specifications. This QA Inspector performed a UT inspection on approximately 10% of the welds on the LSW and these welds were previously accepted by QC Ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. This QA observed no rejectable indications at the time of testing. This QA generated a TL-6027 UT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications.

### 13E PP120/PP124.7 Drop in Panels

This QA Inspector observed QC Inspector Sal Merino verify prior to the start of the Shielded Metal Arc Welding (SMAW) operation, that the minimum preheat temperature as per the approved WPS was established; and afterward's verified that the welding parameters (Amps and Travel Speed) were in accordance with WPS F1200A utilizing E7018 (1/8") diameter electrodes. This QA Inspector randomly observed ABF welder Mike Jimenez (ID 4671) fill the root gap along E2.2 line utilizing the SMAW process in the (1G) flat position. The welder was observed cleaning the start/stop edges of the work by employing a small disc grinder and brushes. Mr. Merino was observed monitoring the inter-pass temperatures between passes. On a subsequent observation, this QA Inspector observed ABF welder Salvador Sandoval (ID 2202) grinding and blending the edges of the work between passes and performing SMAW on E2.5 line. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work was in progress and appeared to be in general conformance with the contract specifications.

### **Summary of Conversations:**

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# WELDING INSPECTION REPORT

( Continued Page 3 of 3 )

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There was a conversation with QAI Lead Daniel Reyes concerning the removal of the temporary attachments by cutting verses a sledge hammer as it may damage the parent metal and require an RWR.



## 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>	Frey,Doug	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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