

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-025351**Date Inspected:** 25-Jul-2011**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:** Job Site**CWI Name:** Tony Sherwood**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:** OBG Sections**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

This QA Inspector was informed by ABF welding personnel Rory Hogan (#3186) and Danny Ieraci (#3232) that Electro Slag Welding (ESW) would not be performed this date. This QA Inspector informed QA Inspectors Jojo Lizardo of this conversation.

Orthotropic Bridge Girder (OBG) Sections:

11W/12W – A1 and A2: This QA Inspector was informed by QC Inspector John Pagliero that he was going to perform Ultrasonic Testing (UT) on the repair welding previously performed at these location. This QA Inspector accompanied QC Inspector John Pagliero to monitor the UT inspection. This QA Inspector and QC Inspector John Pagliero observed upon arrival that none of the repairs (1-repair at A1 and 2-repairs at A2) had been ground flush. QC Inspector John Pagliero informed this QA Inspector the welds were required to be ground flush and that he would inform Lead QC Inspector Bonifacio Daquinag Jr. of the issue.

10W/11W-C2: This QA Inspector randomly observed ABF welding personnel James Zhen (#6001) and Jin Pei Wang (#7299) using the Flux Cored Arc Welding (FCAW) process in the overhead (4G) position on the outside (back gouged side) of this OBG section. This QA Inspector randomly observed QC Inspector Tony Sherwood

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monitoring the work being performed. QC Inspector Tony Sherwood informed this QA Inspector of the following welding parameters; 240 amperes and 23 volts at a travel speed of 170 mm per minute to produce a heat input value of 1.94 KJ per mm. The welding observed appeared to comply with ABF-WPS-D15-3042B-1. This QA Inspector periodically observed QC Inspector Tony Sherwood monitoring the work at this location.

10W/11W-D1: While observing the work at the location above this QA Inspector observed gouges in the back gouged area of the weld which lead into the base material. The gouges were each approximately 25 mm in length and several mm's deep. They appeared to have been caused by the plasma arc torch used in the back gouging process. This QA Inspector asked QC Inspector Tony Sherwood if the visual and Magnetic Particle Testing (MT) had been performed on the back gouged weld joint. QC Inspector Tony Sherwood stated he not aware of the statues of the work and this QA Inspector did not observe any paint markings indicating the MT had been performed. This QA Inspector circled each of the areas with a soapstone marker. See photo of gouged areas below.

11W/12W – C2: This QA Inspector randomly observed ABF welding personnel Jorge Lopez (#6149) using the Shielded Metal Arc Welding (SMAW) process in the vertical (3G) position on the inside of this OBG section. The welding was adjacent to the “D” and “F” welds where access using the FCAW process on the Bug-O track was not available. This QA Inspector randomly observed QC Inspector Tony Sherwood monitoring the work being performed. This QA Inspector verified the following welding parameters; 140 amperes using a 3.2 mm diameter E7018H4R electrode. This QA Inspector verified the preheat being greater than 150°F using an electronic temperature gauge. The welding observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-1110A Rev-1. This QA Inspector periodically observed QC Inspector Tony Sherwood monitoring the work at this location. Welding at this location was not completed this date.

7W-PP 60-E2.5: This QA Inspector randomly observed ABF welding personnel Eric Sparks (#3040) using the SMAW process to weld Storm Tie-downs for the Catwalk. This QA Inspector observed QC Inspector Fred Von Hoff was monitoring the welding and informed this QA Inspector the welding parameters were 195 amperes using a 4.0 diameter E7018H4R electrode. The welding observed appeared to comply with ABF-WPS-D15-F1200A-2.

11W/12W-B and F: This QA Inspector was informed by QC Inspector Bonifacio Daquinag Jr. that all QC inspections (visual, MT and UT) had been completed and accepted at these locations. This QA Inspector performed a visual verification and MT inspection on these welds, including the welded transition at the A-deck. The welding observe d appeared to comply with the contract requirements. See the Magnetic Particle Inspection report (TL-6028) this date for more details.

Summary of Conversations:

This QA Inspector had general conversations with American Bridge/Fluor (ABF) and Caltrans personnel during this shift. Except as described above and noted below there were no notable conversations.

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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 Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By: Hager,Craig

Quality Assurance Inspector

Reviewed By: Levell,Bill

QA Reviewer