DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1x.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-027532
Date Inspected: 02-May-2012

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: 1730
Location: On Site

CWI Name: Tony Sherwood

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS OBG Components

Summary of Items Observed:

This Quality Assurance (QA) Inspector, Art Peterson arrived on 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 the welding operations performed by American Bridge Fluor (ABF) welding personnel. The following observations were:

Segment 13E Grid Line E2.5 Deck Plate Drop-in Section Longitudinal Field Weld Splice - (4720 mm)

This QA Inspector observed ABF welder Mike Jimenez (Welder ID 4671) performing the root and fill pass weld operation per the Shielded Metal Arc Welding (SMAW) process in the (1G) flat position on the (top side) of the Deck Plate Drop-in Section Longitudinal Field Weld Splice on Segment 13E along Grid Line E2.5.

This QA Inspector observed QC Inspector Sal Marino verify prior to the start of the root and fill pass weld operation, that the minimum preheat temperature as per the approved WPS was established; and afterwords verified that the welding parameters (Amps and Travel Speed) were in accordance with WPS D1.5-1040C-CU Revision 0 using E7018 (1/8") and (5/32") diameter electrode.

This QA Inspector observed that ABF welder Mike Jimenez was in-process on the root and fill pass weld operation on the Deck Plate Drop-in section Longitudinal Field Weld Splice along Grid E2.5 at the end of this QA Inspectors' shift.

Segment 13E PP121.2 Deck Plate Drop-in Section Transverse Field Weld Splice - (1900 mm)

This QA Inspector observed ABF welder Salvador Sandoval (Welder ID 2202) performing the root and fill pass weld operation per the Shielded Metal Arc Welding (SMAW) process in the (1G) flat position on the (top side) of the Deck Plate Drop-in Section Transverse Field Weld Splice on Segment 13E along PP121.2.

This QA Inspector observed QC Inspector Sal Marino verify prior to the start of the root and fill pass weld operation, that the minimum preheat temperature as per the approved WPS was established; and afterwords verified that the welding parameters (Amps and Travel Speed) were in accordance with WPS D1.5-1040C-CU Revision 0 using E7018 (1/8" and 5/32") diameter electrode.

This QA Inspector observed that ABF welder Salvador Sandoval was in-process on the root and fill pass weld operation on the Deck Plate Drop-in section Transverse Field Weld Splice on Segment 13E along PP121.2 at the end of this QA Inspectors' shift.

Segment 13E PP120.6 - Deck Plate Drop-in Section Transverse Field Weld Splice - (1000 mm)

This QA Inspector observed ABF welder Jacob Stafford (Welder ID 8020) performing the root and fill pass weld operation per the Shielded Metal Arc Welding (SMAW) process in the (1G) flat position on the (top side) of the Deck Plate Drop-in Section Transverse Field Weld Splice on Segment 13E along PP 120.6.

This QA Inspector observed QC Inspector Tony Sherwood verify prior to the start of the root and fill pass weld operation, that the minimum preheat temperature as per the approved WPS was established; and afterwords verified that the welding parameters (Amps and Travel Speed) were in accordance with WPS D1.5-1040C-CU Revision 0 using E7018 (1/8" and 5/32") diameter electrode.

This QA Inspector observed that ABF welder Jacob Stafford was in-process on the root and fill pass weld operation on the Deck Plate Drop-in section Transverse Field Weld Splice along PP120.6 at the end of this QA Inspectors' shift.

Segment 13E Grid Line E2.1 Deck Plate Drop-in Section Longitudinal Field Weld Splice - (9500 mm)

This QA Inspector observed ABF welders Kit Lounechany (Welder ID 4985), Eddie Brown (Welder ID 9331), and Steve Davis (Welder ID 7889) performing the root and fill pass weld operation per the Shielded Metal Arc Welding (SMAW) process in the (1G) flat position on the (top side) of the Deck Plate Drop-in Section Longitudinal Field Weld Splice on Segment 13E along Grid Line E2.1.

This QA Inspector observed QC Inspector Tony Sherwood verify prior to the start of the root and fill pass weld operation, that the minimum preheat temperature as per the approved WPS was established; and afterwords verified that the welding parameters (Amps and Travel Speed) were in accordance with WPS D1.5-1040C-CU Revision 0 using E7018 (1/8") and (5/32") diameter electrode.

This QA Inspector observed that ABF welders Kit Lounechany, Eddie Brown, and Steve Davis were in-process on the root and fill pass weld operation on the Deck Plate Drop-in section Longitudinal Field Weld Splice along Grid E2.5 at the end of this QA Inspectors' shift.

Segment 13E Grid Line E2.8 - Deck Plate Drop-in Section Longitudinal Field Weld Splice - (11970 mm)

This QA Inspector performed the root gap and root and fill pass thickness measurement verification inspection after ABF QC Inspectors Sal Marino and Tony Sherwood performed their inspections on the top side of the deck plate butt joint single V groove with 3/8" copper backing along Grid Line E2.5 on Segment 13E. The measurements were taken prior to the start of the Submerged Arc Welding (SAW) process for information only to determine the root gap was in accordance with the approved WPS and the root pass and fill pass thickness measurement to ensure the recommended minimum nominal thickness of weld metal was present to prevent melting through. The root gap measurements along the length of the groove were (12 ~ 18) mm and the root and fill pass thickness measurements were between (5 ~ 8) mm and backed by a 3/8" copper backing. The recommended minimum nominal thickness of backing per the SAW process is (10) mm.

Segment 13E Grid Line E2.8 Deck Plate Drop-in Section Longitudinal Field Weld Splice - (11970 mm)

This QA Inspector observed ABF welder Ken Chappell (Welder ID 3833) performing the fill pass weld operation per the Submerged Arc Welding (SAW) process in the (1G) flat position on the (top side) of the Deck Plate Drop-in Section Longitudinal Field Weld Splice on Segment 13E along Grid Line E2.8.

This QA Inspector observed QC Inspector Tony Sherwood verify prior to the start of the fill pass weld operation, that the minimum preheat temperature as per the approved WPS was established; and afterwords verified that the welding parameters (Amps, Volts and Travel Speed) were in accordance with WPS 4042B-1 Revision 0 using F7A6-EM12K-H8 (1/8") diameter electrode Flux 10.62.

After the initial start of the SAW process, ABF welder Ken Chappell stopped the SAW weld operation after traveling for (635) mm with the welding parameters at (590) amps and (32.5) volts and the travel speed yet to be determined by QC Inspector Tony Sherwood due to melt-through observed at "Y" Location 545 mm.

ABF Foreman Dan Ieraci removed all of the SAW equipment and informed ABF Superintendent Scott Smith of the melt-through. Afterwords, this QA Inspector observed ABF welders Salvador Sandoval and Mike Jimenez preparing to resume the SMAW process to build-up the groove of the 20 mm thick deck plate up to (12) mm of weld metal.

WELDING INSPECTION REPORT

(Continued Page 4 of 4)

Summary of Conversations:

Only general conversations between this QAI and the QC Inspector 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.

Inspected By:	Peterson,Art	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer