

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1x.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027550**Date Inspected:** 03-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:** On 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:** 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 E2.8 Deck Plate Drop-in Section Longitudinal Field Weld Splice - (11970 mm)

This QA Inspector observed ABF welders Mike Jimenez (Welder ID 4671) and Salvador Sandoval (Welder ID 2202) performing the 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 E2.8 - (Welder ID 4671 from PP122.2 working toward east direction) and (Welder ID 2202 from 13E / 14E working toward west direction).

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 afterwards 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 Mike Jimenez and Salvador Sandoval completed the fill pass weld operation on the Deck Plate Drop-in section Longitudinal Field Weld Splice along Grid E2.5 at these locations. The cover pass weld operation will be performed using the Submerged Arc Welding process at a later date.

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### Segment 13E PP122.2 Deck Plate Drop-in Section Transverse Field Weld Splice - (8600 mm)

This QA Inspector observed ABF welder 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 Transverse Field Weld Splice on Segment 13E along PP122.2 - approximate "Y" Location (5500 ~ 6500) mm.

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 afterwards 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 Steve Davis completed the root and fill pass weld operation on the Deck Plate Drop-in section Transverse Field Weld Splice on Segment 13E along PP122.2 at this location. The cover pass weld operation will be performed using the Submerged Arc Welding process at a later date.

### 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 - (0 ~ 1000) mm.

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 afterwards 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 completed the fill pass weld operation on the Deck Plate Drop-in section Transverse Field Weld Splice along PP120.6 at this location.

### Segment 13E PP123.6 - Deck Plate Drop-in Section Transverse Field Weld Splice - (1000 mm)

This QA Inspector observed ABF welder Eddie Brown (Welder ID 9331) 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 123.6 - (0 ~ 1000) mm.

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 afterwards 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 Eddie Brown completed the fill pass weld operation on the Deck Plate Drop-in section Transverse Field Weld Splice along PP123.6 at this location.

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

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This QA Inspector observed ABF welder Kit Lounechany (Welder ID 4985) performing the 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 from approximate "Y" Location 4000 ~ 5000) mm.

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 afterwards 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 Kit Lounechany completed the fill pass weld operation on the Deck Plate Drop-in section Longitudinal Field Weld Splice along Grid E2.1 at this location.

Segment 13E Grid Line E2.8; E2.2; PP123.6; and PP122.2 Longitudinal and Transverse Field Weld Splices

This QA Inspector observed ABF Welder Rick Clayborn (Welder ID 2773) removing the root and fill passes previously deposited by the air-carbon-arc method to adjust the out of tolerance planar mis-alignment between the deck plate and the deck plate drop-in section at (5) five locations. The "Y" locations and length of excavations performed were on Segment 13 East are as follows:

[Grid Line E2.8] ("Y" location - 11085 ~ 11715 for a total length of 635 mm).

[Grid Line E2.2] ("Y" location - 3625 ~ 4660 for a total length of 1035 mm).

[PP123.6] ("Y" location - 50 ~ 900 for a total length of 850 mm).

[PP122.2] ("Y" location -2330 ~ 3035 for a total length of 705 mm).

[PP122.2] ("Y" location - 6495 ~ 7080 for a total length of 585 mm).

At all (5) five of the locations mentioned above the Engineer was not notified before the excavation of the root and fill passes at the above locations commenced. This QA Inspector notified Lead Inspector Danny Reyes of the work being performed to correct the planar misalignment at these locations and provided the "Y" locations and the total length of the excavations to be incorporated into a weld map and submitted to QA Task Leader Bill Levell and SMR Bajat Dagher for review and disposition.

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## 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.

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**Inspected By:** Peterson, Art

Quality Assurance Inspector

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**Reviewed By:** Levell, Bill

QA Reviewer