

**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:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017756**Date Inspected:** 02-Nov-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 1000**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1830**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Jobsite**CWI Name:** See 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:**

On this date CALTRANS OSM Quality Assurance Inspector (QAI) Bert Madison was present at Yerba Buena Island in California between the times noted above for observations relative to the work being performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below.

- 1). OBG Field Welding of East Line Lifting Rod Access Penetration Insert (SMAW)
- 2). OBG Field Splice of Ventilation Access Insert Weld at 5E-PP29.5-E2-S – (SMAW)
- 3). OBG Field Splice 6E/7E Weld ID C1 & C2, Face A (QAI Verification)
- 4). OBG Field Splice 6E/7E Weld ID E1 & E2, Face A (QAI Verification)
- 5). OBG Field Splice 5W/6WE Weld ID D1 & D2, Face A (QAI Verification)
- 6). OBG Field Splice of Ventilation Access Insert Weld at 3E-PP23.5-E5-NE – (Fit-up)

- 1). OBG Field Welding of East Line Lifting Rod Access Penetration Insert (SMAW)

Interior: OBG 2E-PP15-E3-welds 2 &amp; 4

The QAI periodically observed the welding per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position to restore the Lifting Rod Access Penetrations in the A deck at PP15. The QAI observed that AB/F approved welder Darcell Jackson (ID 9967) performed air carbon arc gouging, back grinding and subsequent back welding at PP15 weld E3-2 & E3-4. QC Inspector John Pagliero was periodically present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1110B rev 1. The QAI periodically observed QC Inspector John Pagliero performing Magnetic Particle Testing (MT) of the back grind/gouge areas prior to back welding at these locations. See photo below. The QAI observed that the performance and evaluation of the MT appeared to comply with the MT procedure identified as SE-MT-CT-D1.5-101 Rev. 4. Welding was

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# WELDING INSPECTION REPORT

( Continued Page 2 of 4 )

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completed from the interior at these locations, flush grinding was in process for the duration of the QA Inspectors shift and the QAI observed that the work appeared to be in general compliance with contract documents except for weld E3-2 which will need re-work from the exterior because Mr. Jackson burned through while air carbon arc gouging.

Interior: OBG 2E-PP17- E4-weld 2, 3 & 4

The QAI periodically observed the welding per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position to restore the Lifting Rod Access Penetrations in the A deck at PP17. The QAI observed that AB/F approved welder Eric Sparks (ID 3040) performed back grinding and subsequent back welding at PP17 welds E4-2, 3 & 4. QC Inspector John Pagliero was periodically present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1110B rev 1. The QAI periodically observed QC Inspector John Pagliero performing Magnetic Particle Testing (MT) of the back grind areas prior to back welding at these locations. The QAI observed that the performance and evaluation of the MT appeared to comply with the MT procedure identified as SE-MT-CT-D1.5-101 Rev. 4. Welding was completed at these locations and flush grinding was in process for the duration of the QA Inspectors shift. The QAI observed that the work appeared to be in general compliance with contract documents.

Exterior: OBG 4E-PP27- E4-weld 4

The QAI periodically observed welding per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position to restore the Lifting Rod Access Penetration in the A deck at PP27. The QAI observed that AB/F approved welder Melvin Ivy (ID 8309) performed fit-up, tack welding, root and fill passes at 4E PP27 weld E4-4. See photo below. QC Inspector Bonafacio Daquinag was present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1070.

2). OBG Field Splice of Ventilation Access Insert Weld at 5E-PP29.5-E2-S – (SMAW)

The QAI periodically observed the welding per the Shielded Metal Arc Welding (SMAW) process in the 4G (overhead) position to restore the Ventilation Access Insert at 5E-PP29.5-E2-S. The QAI observed that AB/F approved welder Jin Pei Wang (ID 7299) performed back welding from the interior of the OBG (to serve as backing for the welding from the exterior of the OBG) at this location. QC Inspector John Pagliero was periodically present to monitor the progress and verify that the welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1010 rev 1. After the lunch break, the QAI observed that welder 7299 had moved to the exterior and was grinding in the groove to prepare for welding. The QAI asked of the QC Inspector Mr. Pagliero if the welder was finished on the Interior. See summary of conversations below. The QAI noted that work was halted at this location and the QAI spoke with welding foreman Dan Ieraci. See summary of conversations below.

3). OBG Field Splice 6E/7E Weld ID: C1 & C2, Face A (QAI Verification)

The QAI performed verification Ultrasonic Testing (UT) of 20% of the lengths of OBG Field Splice 6E/7E Weld ID: C1 & C2. The 6E/7E Weld ID: C1 & C2 verified by the QAI appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

4). OBG Field Splice 6E/7E Weld ID: E1 & E2, Face A (QAI Verification)

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## WELDING INSPECTION REPORT

( Continued Page 3 of 4 )

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The QAI performed verification Ultrasonic Testing (UT) of 10% of the lengths of OBG Field Splice 6E/7E Weld ID: E1 & E2. The 6E/7E Weld ID: E1 & E2 verified by the QAI appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

5). OBG Field Splice 5W/6WE Weld ID D1 & D2, Face A (QAI Verification)

The QAI performed verification Ultrasonic Testing (UT) of 20% of the lengths of OBG Field 5W/6WE Weld ID: D1 & D2. The 5W/6W Weld ID: D1 & D2 verified by the QAI appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

6). OBG Field Splice of Ventilation Access Insert Weld at 3E-PP23.5-E5-NE – (Fit-up)

The QAI periodically observed AB/F personnel performing fit-up of the Ventilation Access Insert at 3E-PP23.5-E5-NE. The QAI performed a fit-up inspection and observed that the fit-up appeared to be in general compliance with contract documents.



### Summary of Conversations:

At the beginning of the shift, the QAI was told by QC Inspector Jesse Cayabyab that the QC inspection was completed and accepted at the following welds and they were released to the QAI for verification testing: 6E/7E welds E1, E2, C1 & C2 and 5W/6W welds D1 & D2.

From Item 2 above: Mr. Pagliero stated to the QAI that welder 7299 was having difficulty welding the backing weld from the interior of the OBG. He also stated that AB/F approved welder James Zhen (ID 6001) had attempted to continue back welding at this location and that Mr. Zhen had communicated to Mr. Pagliero that the existing back weld was littered with defects and that the welders had decided to weld out the groove from the exterior and return to the interior to back gouge afterwards. In a conversation with Dan Ieraci, the QAI asked Mr. Ieraci what the status was at the 5E-PP29.5-E2-S location. Mr. Ieraci stated that there was some confusion among the welders and that welding would resume tomorrow.

Other conversations on this date with Quality Control Inspectors were general in nature and pertained to locations of welding and QC activities.

### 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 Mohammed Fatemi (916) 813 3677, who represents the Office of Structural Materials for your project.

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# WELDING INSPECTION REPORT

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**Inspected By:**      Madison,Bert

Quality Assurance Inspector

**Reviewed By:**      Levell,Bill

QA Reviewer