

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-019169**Date Inspected:** 05-Jan-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**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 Splice 9E/10E Weld ID: D1 & D2, Face A (FCAW-G)
- 2). OBG Field Welding of East Line Lifting Lug Hole Inserts (SMAW)
- 3). OBG Field Splice 7E/8E Weld ID: B1, Face A – (SMAW R-1 Repairs)
- 4). OBG Field Splice 9E/10E Weld ID: A1-A5, Face A (SAW)
- 5). OBG Field Splice 7W/8W Weld ID: C1 & C2, Face B – (FCAW-G)
- 6). East Line Lifting Lug Hole Insert Welds (QA verification)
- 7). West Line Lifting Lug Hole Insert Welds (QA verification)
- 8). OBG Field Splice of Access Hole Insert Longitudinal Stiffener (QA verification)

- 1). OBG Field Splice 9E/10E Weld ID: D1 & D2, Face A (FCAW-G)

The QAI periodically observed AB/F approved welder Xiao Jian Wan (ID 9677) performing welding of the cover passes on the last 1200mm of weld ID: D2. Welding at this location was per the Flux Cored Arc Welding (FCAW-G) process in the 1G (flat) position. The QAI observed QC Inspector Fred Von Hoff 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-D1.5-3040A-1. Later in this shift, the QAI observed QC Inspector John Pagliero performing visual inspection at this location to verify that the welding was complete. Mr. Pagliero observed several areas on the SAW weld that did not appear to have sufficient reinforcement. The QC inspector marked several areas to perform additional welding. The QAI randomly

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observed AB/F approved welder Xiao Jian Wan (ID 9677) performing welding of the areas marked by Mr. Pagliero per the Flux Cored Arc Welding (FCAW-G) process in the 1G (flat) position. The QAI observed QC Inspector John Pagliero 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-D1.5-3040A-1. The work at this location was completed and appeared to be in general compliance with contract documents.

2). OBG Field Welding of East Line Lifting Lug Hole Inserts (SMAW)

Exterior: OBG 5E- PP31-E4-weld 1- (SMAW)

The QAI periodically observed AB/F approved welder Salvador Sandoval (ID 2202) performing cover pass welding at E4 weld 1 per the Shielded Metal Arc Welding (SMAW) process in the 1G (flat) position. QC Inspector Steve McConnell 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-D1.5-1070. Cover pass welding was completed and the QAI observed that the work at this location appeared to be in general compliance with contract documents.

3). OBG Field Splice 7E/8E Weld ID: B1, Face A – (SMAW R-1 Repairs)

The QAI periodically observed AB/F approved welder Fred Kaddu (ID 2188) performing air carbon arc gouging and grinding on the exterior surface of OBG Field Splice 7E/8E Weld ID: B1 to prepare three R-1 Ultrasonic Testing (UT) reject areas for repair welding. The QAI randomly observed QC Inspector Jesse Cayabyab performing Magnetic Particle Testing (MT) of the excavated areas prior to repair welding. Mr. Kaddu performed additional grinding several times prior to Mr. Cayabyab accepting the excavations. The QAI randomly 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. Later in this shift, the QAI randomly observed Mr. Kaddu performing repair welding of the three excavated areas per the Shielded Metal Arc Welding (SMAW) process in the 3G (vertical) position on the exterior of OBG Field Splice 8E/9E Weld B1. See photo below. QC Inspector Jesse Cayabyab was present periodically to monitor the progress and verify that the repair welding parameters were within the limits established by the approved welding Procedure Specification (WPS) identified as ABF-WPS-D1.5-1001 Repair. The QAI observed that fill and cover pass welding was in process during the QA Inspectors shift on this date and work at this location appeared to be in general compliance with contract documents. The QAI observed that the repair areas excavated on this date in on the exterior of weld B1 had the following dimensions and the following Y locations:

Y = 545mm, Length = 120mm, Depth = 24mm, Width = 30mm.

Y = 870mm, Length = 120mm, Depth = 20mm, Width = 50mm.

Y = 1305mm, Length = 75mm, Depth = 25mm, Width = 30mm.

4). OBG Field Splice 9E/10E Weld ID: A1-A5, Face A (SAW)

The QAI periodically observed AB/F approved welders Dan Ieraci (ID 3232) and James Zhen (ID 6001) performing welding of the fill and cover passes on weld ID: A1 through A5 per the Submerged Arc Welding (SAW) process in the 1G (flat) position. The QAI noted that Mr. Zhen was welding A1-A2 and Mr. Ieraci was welding A3-A5. The QAI observed QC Inspector Tony Sherwood 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-D1.5-4042B-1. The work at this location was completed and appeared to be in general compliance with contract documents.

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5). OBG Field Splice 7W/8W Weld ID: C1 & C2, Face B – (FCAW-G)

The QAI periodically observed AB/F approved welder Rory Hogan (ID 3186) assisted by AB/F approved welder Jeremy Dolman (ID 5042) performing fill and cover pass welding per the Flux Cored Arc Welding (FCAW-G) process in the 4G (overhead) position. See photo below. The QAI periodically observed QC inspector Gary Ehram 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-D1.5-3110-4. The welding of cover passes was completed at this location and the work appeared to be in general compliance with contract documents.

6). East Line Lifting Lug Hole Insert Welds (QA verification)

The QAI performed verification Ultrasonic Testing (UT) of 25% of the lengths of OBG Field Welds of Lifting Lug Hole Inserts at the following locations:

OBG 4E PP27-E3-Welds 1 through 4 & OBG 4E PP27-E4-Welds 1 through 4.

The OBG Field Welds verified by the QAI at these locations appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

7). West Line Lifting Lug Hole Insert Welds (QA verification)

The QAI performed verification Ultrasonic Testing (UT) of 25% of the lengths of OBG Field Welds of Lifting Lug Hole Inserts at the following locations:

OBG 1W PP9.5-W4-Welds 1 through 4.

The OBG Field Welds verified by the QAI at these locations appeared to be in general compliance with contract documents. See Ultrasonic Testing Report Form TL-6027 generated by the QAI on this date.

8). OBG Field Splice of Access Hole Insert Longitudinal Stiffener (QA verification)

The QAI performed verification Ultrasonic Testing (UT) of 100% of the length of the OBG Field Splice at the following location:

OBG 8E PP61.5 E2: LS West, LS East and the Transverse Stiffener.

The OBG Field Splices 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.

Conversations on this date with Quality Control Inspectors were general in nature and pertained to locations of welding and QC activities and locations of welds released to the QAI for verification testing.

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Summary of Conversations:

Conversations on this date with Quality Control Inspectors were general in nature and pertained to locations of welding and QC activities and locations of welds released to the QAI for verification testing.

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: Madison, Bert

Quality Assurance Inspector

Reviewed By: Levell, Bill

QA Reviewer