

**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 #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-029417**Date Inspected:** 12-Apr-2013**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** American Bridge Manufacture**Location:** Reesport, Oregon**CWI Name:** Mike Inman**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:** Supplemental Cable Band Collar**Summary of Items Observed:**

On this date CALTRANS OSM Quality Assurance (QA) representative was present at American Bridge Manufacture for observations related to welding, fabrication and inspection performed for the Supplemental Cable Band Collar assemblies scheduled for this project. While onsite the QA Inspector observed the following.

At the time of arrival, the QA Inspector met with American Bridge Manufacture (ABM) Quality Control Manager (QCM) David Speakman and Project Manager Todd Pannell and together had multiple discussions regarding of scheduled fabrication the Non-Destructive Testing (NDT) and the up-coming material releases. Project Manager provided a tour to the QA Inspector around the facility and provided a detailed explanation of the in-progress material fabrication.

During the Shift, the QA Inspector met with Caltrans OSM QA Inspector Jamie Doe which was on site for the past few weeks and discussed the turn-over. The QA Inspector Jamie Doe provided a detailed explanation of the fabrication, verification and material releasing scheduled for this project as of this date.

**Supplemental Cable Band Collar Welding - CCO # 274**

The QA Inspector periodically observed American Bridge Manufacture (ABM) welding personnel Cody Greer performing base material preheating, preparation and welding operations. The welding operation was being performed by using the Flux Cored Arc Welding Gas Shielded (FCAW-G) process in the horizontal position and it was being performed to make Complete Joint Penetration (CJP) and Partial Joint Penetration (PJP) welds. The welding operation was being performed between assembly members on the Supplemental Cable Band identified as number 8. (A total of 6 plates were attached on bottom and 6 plates attached on top sides of assembly). (Please

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note that the welding operation on this assembly started during previous shifts).

The QA Inspector verified the electrical welding parameters and they appeared to be in general compliance with the referenced Welding Procedure Specification (WPS) number ABM-SAS-25 and ABM-SAS-08. The QA Inspector observed QC Inspector monitoring the welding operation at this location. The welding operation was not completed between assembly members at this location during the QA Inspector's shift.

### Supplemental Cable Band Collar Welding – CCO # 274

The QA Inspector periodically observed ABM welding personnel Brian Moore performing base material preparation and welding operations. The welding operation was being performed by using the FCAW-G process in the horizontal position and it was being performed to make CJP and PJP welds. The welding operation was being performed between assembly members on the Supplemental Cable Band identified as number 5. (A total of 6 plates were attached on bottom and 6 plates attached on top sides of assembly). (Please note that there are a total of 16 cable band assemblies to fabricate and the welding operation on this assembly started during previous shifts)

The QA Inspector verified the electrical welding parameters and they appeared to be in general compliance with the referenced WPS number ABM-SAS-25 and ABM-SAS-08. The QA Inspector observed QC Inspector monitoring the welding operation at this location. The welding operation was not completed between assembly members at this location during the QA Inspector's shift.

### Supplemental Cable Band Collar Welding – CCO # 274

The QA Inspector periodically observed ABM welding personnel Bryan Whiteman performing base material preheating, preparation and welding operations. The welding operation was being performed by using the FCAW-G process in the horizontal position and it was being performed to make CJP and PJP welds. The welding operation was being performed between assembly members on the Supplemental Cable Band identified as number 15. (A total of 6 plates were attached on bottom and 6 plates attached on top sides of assembly). (Please note that the welding operation on this assembly started during previous shifts)

The QA Inspector verified the electrical welding parameters and they appeared to be in general compliance with the referenced WPS number ABM-SAS-25 and ABM-SAS-08. The QA Inspector observed QC Inspector monitoring the welding operation at this location. The welding operation was not completed between assembly members at this location during the QA Inspector's shift.

### Supplemental Cable Band Collar Welding – CCO # 274

The QA Inspector periodically observed ABM welding personnel Joe Reitmeir performing base material preheating, preparation and welding operations. The welding operation was being performed by using the FCAW-G process in the horizontal position and it was being performed to make CJP and PJP welds. The welding operation was being performed between assembly members on the Supplemental Cable Band identified as number 13. (A total of 6 plates were attached on bottom and 6 plates attached on top sides of assembly). (Please note that the welding operation on this assembly started during previous shifts)

The QA Inspector verified the electrical welding parameters and they appeared to be in general compliance with the referenced WPS number ABM-SAS-25 and ABM-SAS-08. The QA Inspector observed QC Inspector

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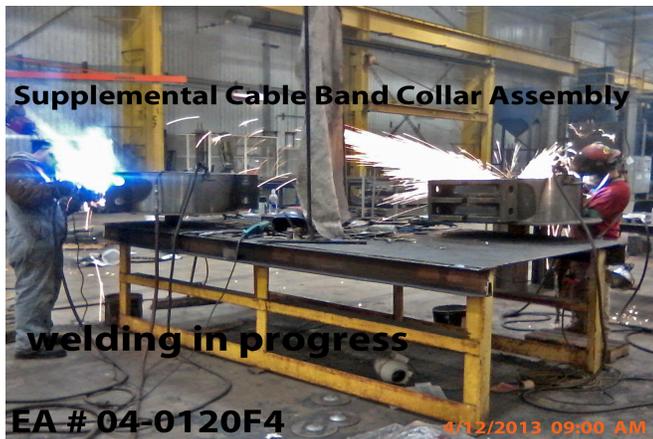
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monitoring the welding operation at this location. The welding operation was not completed between assembly members at this location during the QA Inspector's shift.

During the shift, the QA Inspector was notified by ABM Quality Control Manager David Speakman the following. Non-Destructive Testing (NDT) has been completed on Supplementary Cable Band Collars and Caltrans verification will be needed, so ABM could continue the fabrication. QCM provided with a copy of the QC Inspection reports for review and verification. The QA Inspector observed that the acceptance / rejection criteria table was not listed on the reports and the QA Inspector discussed the non-listed table with QCM. QCM relayed he will provide with the correct acceptance criteria table at a later date after he research for it. The QA Inspector notified QCM the UT verification will be performed by following the acceptance rejection criteria table number 6.3 from the American Welding Society (AWS) D1.5 code. Please note that the QCM did not provide with the acceptance rejection criteria table during this shift.

### Supplemental Cable Band Collar - Ultrasonic Testing Verification CCO # 274

Later during the shift, the QA Inspector performed random Ultrasonic Testing (UT) verification on the Complete Joint Penetration (CJP) "T" joint welds made between assembly members on the Supplemental Cable Band Collar identified as number 11 and 9. The QA Inspector did not observe any rejectable welding discontinuities during the verification. Please note that the QA Inspector followed the rejection and acceptance criteria table number 6.3 from the AWS D1.5 code. Please see the QA Inspector Ultrasonic Testing Report (TL- 6027) generated on this date for additional information. The QA Inspector notified QA Task Leader Michael Foerder and Structural Materials Representative (SMR) Yiannis Kourakis (in behalf of Gary Thomas) of the UT verification and the rejection criteria table used during the verification.



### Summary of Conversations:

As noted on the body of the report above. Other Basic communication was performed between the QA Inspector and the Quality Control Inspector during observations.

### 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 Gary Thomas (916) 764-6027, who represents the Office of Structural Materials for your project.

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**Inspected By:** Medina,Ricardo

Quality Assurance Inspector

**Reviewed By:** Foerder,Mike

QA Reviewer