

**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 #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016565**Date Inspected:** 01-Sep-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC)**Location:** Shanghai, China

<b>CWI Name:</b>	N/A	<b>CWI Present:</b>	Yes	No
<b>Inspected CWI report:</b>	Yes No N/A	<b>Rod Oven in Use:</b>	Yes No N/A	
<b>Electrode to specification:</b>	Yes No N/A	<b>Weld Procedures Followed:</b>	Yes No N/A	
<b>Qualified Welders:</b>	Yes No N/A	<b>Verified Joint Fit-up:</b>	Yes No N/A	
<b>Approved Drawings:</b>	Yes No N/A	<b>Approved WPS:</b>	Yes No N/A	
		<b>Delayed / Cancelled:</b>	Yes No N/A	
<b>Bridge No:</b>	34-0006	<b>Component:</b>	OBG Trial Assembly	

**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Segment 9AW (Cable Tray Structure)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Cable Tray Structures installed at Bottom Panel T-Ribs at North and South Side between Panel Points (PP) 71.25 to PP 73 for Segment 9AW. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00471 dated Sep 01, 2010.

The bolt sizes used were M19 x 50 RC Lot # DHG60631 and the final torque value established was 346 N-m.

The Manual Torque wrench used was Serial No. XO2-114. Please reference the pictures attached for more comprehensive details.

Segment 9BW (Cable Tray Structure)

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This QA Inspector witnessed the final bolt tension verification on bolts connecting the Cable Tray Structures installed at Bottom Panel T-Ribs at North and South Side between Panel Points (PP) 73 to PP 76 for Segment 9BW. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00471 dated September 01, 2010.

The bolt sizes used were M19 x 50 RC Lot # DHG60631 and the final torque value established was 346 N-m.

The Manual Torque wrench used was Serial No. XO2-114.

### Segment 9CW (Cable Tray Structure)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Cable Tray Structures installed at Bottom Panel T-Ribs at North and South Side between Panel Points (PP) 76 to PP 79 for Segment 9CW. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00471 dated September 01, 2010.

The bolt sizes used were M19 x 50 RC Lot # DHG60631 and the final torque value established was 346 N-m.

The Manual Torque wrench used was Serial No. XO2-114.

### Segment 9DW (Cable Tray Structure)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Cable Tray Structures installed at Bottom Panel T-Ribs at North and South Side between Panel Points (PP) 79 to PP 82 for Segment 9DW. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00471 dated September 01, 2010.

The bolt sizes used were M19 x 50 RC Lot # DHG60631 and the final torque value established was 346 N-m.

The Manual Torque wrench used was Serial No. XO2-114.

### Segment 9EW (Cable Tray Structure)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Cable Tray Structures installed at Bottom Panel T-Ribs at North and South Side between Panel Points (PP) 82 to PP 85 for Segment 9EW. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00471 dated September 01, 2010.

The bolt sizes used were M19 x 50 RC Lot # DHG60631 and the final torque value established was 346 N-m.

The Manual Torque wrench used was Serial No. XO2-114.

### Segment 9AW to Segment 9BW (Skin Flatness)

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This QA Inspector performed Joint Inspection along with the ABF QA Inspector to check the Skin Flatness between Segment 9AW to Segment 9BW between Panel Points (PP) 73 and PP 74 at the following locations after Heat Straightening:

The skin flatness was measured on South side (Bike Path side at B3 location) at Bottom Panel to Side Panel using Straight Edges 630 mm of length was also used to measure the localized flatness.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Suspender Bracket at Bay # 19

This QA Inspector performed Dimension Control Inspection along with ABF QA Inspector to check and measure the Suspender Bracket (SB) lifting rod hole spacing by placing the socket template at the following suspender brackets.

SB 80E which will be installed at Segment 9DE, Bike Path side.

SB 76W which will be installed at Segment 9BW, Counter Weight side.

SB 78W which will be installed at Segment 9CW, Counter Weight side.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Segment 10BW to Segment 10CW

This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW10C-003. The welder identification was 053486 and was observed welding in the 1G (Flat) position using approved Welding Procedure Specification WPS-B-T-2231. The piece mark was identified as the Bottom Panel, transverse splice weld.

Segment 10BW to Segment 10CW

This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW10C-004. The welder identification was 053316 and was observed welding in the 3G (Vertical) position using approved Welding Procedure Specification WPS-B-T-2233T. The piece mark was identified as the Side Panel, transverse splice weld.

Segment 10BW to Segment 10CW

This QA Inspector observed the in-process welding by Flux Cored Arc Welding (FCAW) process on a Complete Joint Penetration (CJP) groove weld. The Weld joint was designated as OBW10C-005. The welder identification was 040609 and was observed welding in the 3G (Vertical) position using approved Welding Procedure

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Specification WPS-B-T-2233T. The piece mark was identified as the Side Panel Corner Assembly, transverse splice weld.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



## Summary of Conversations:

No relevant conversations were reported 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 Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Math,Manjunath

Quality Assurance Inspector

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**Reviewed By:** Peterson,Art

QA Reviewer