DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 99.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-016991
Date Inspected: 28-Sep-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC)

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name: Zhu Zhong Hai

Inspected CWI report:	☐ Yes	☐ No	☑ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: 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 10BW to Segment 10CW (Longitudinal Diaphragm to Longitudinal Diaphragm)

This QA Inspector performed Dimension Control Inspection along with ABF QA Inspector on the Longitudinal Diaphragm to Longitudinal Diaphragm at Work Point W3 (Counter Weight side) and at Work Point W4 (Cross Beam side) for the Segment 10BW to Segment 10CW between Panel Point (PP) 91 to PP 92 at the following locations:

The offset was measured at 5 (five) different locations in which 2 (Two) locations were at Flange area and 3 (Three) locations were at Web area. The QA Inspector measured the Offset using 1(One) Meter Straight Edge.

The Sweep was measured at 100 mm from both sides of the Floor Beam and 800mm from both sides of floor Beam and at Center (Total 5 Locations) using string line.

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.

Anchorage Bearing Stiffeners at Machine Shop # 1(for Lift 14- East and West)

This QA Inspector performed Dimension Control Inspection to check and measure the Anchorage Bearing Stiffeners at machine shop # 1. The following dimensional inspection was performed.

The scribe line distances of anchor rod were measured.

The offset were measured from scribe line.

The vertical spacing between the bearing stiffeners at four locations were measured.

The vertical offset between bearing stiffeners at two locations were measured.

The QA Inspector verified the surface condition met the mill to bear condition at MTB1, MTB2 and MTB3 locations.

The Anchorage Bearing Stiffeners piece marks are identified below.

-Anchorage Bearing Stiffeners identified as SA3355J and top plate piece mark identified as X4727J.

-Anchorage Bearing Stiffeners identified as SA3347C and top plate piece mark identified as X4733C.

-Anchorage Bearing Stiffeners identified as SA3354E and top plate piece mark identified as X4742E.

-Anchorage Bearing Stiffeners identified as SA3424C and top plate piece mark identified as X5030Y.

-Anchorage Bearing Stiffeners identified as SA3428D and top plate piece mark identified as X5037M.

-Anchorage Bearing Stiffeners identified as SA3354D and top plate piece mark identified as X4742D.

-Anchorage Bearing Stiffeners identified as SA3356B and top plate piece mark identified as X4744B.

-Anchorage Bearing Stiffeners identified as SA3353C and top plate piece mark identified as X4740C.

-Anchorage Bearing Stiffeners identified as SA3425E and top plate piece mark identified as X5025E.

-Anchorage Bearing Stiffeners identified as SA3354F and top plate piece mark identified as X4742F.

-Anchorage Bearing Stiffeners identified as SA3422G and top plate piece mark identified as X5030G.

-Anchorage Bearing Stiffeners identified as SA3423C and top plate piece mark identified as X5030M.

-Anchorage Bearing Stiffeners identified as SA3351G and top plate piece mark identified as X4737AE.

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 10AE (Lower Chevron)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Lower Chevron and Upper Chevron at Panel Point (PP) 86, PP 87 and PP 88 for Segment 10AE at Cross Beam side and Bike Path side. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00499 Dated September 28, 2010.

Bolt sizes used were M22 x 70 RC Set# DHGM220038 and final torque required was 480 N-m.

Bolt sizes used were M22 x 70 RC Set# DHGM220009 and final torque required was 447 N-m.

Bolt sizes used were M22 x 75 RC Set# DHGM220034 and final torque required was 453 N-m.

Bolt sizes used were M22 x 80 RC Set# DHGM220091 and final torque required was 460 N-m.

The Manual Torque wrench used was Serial No. XO2-779. Please reference the pictures attached for more comprehensive details.

Segment 10BE (Lower Chevron)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Lower Chevron and Upper Chevron at Panel Point (PP) 89, PP 90 and PP 91 for Segment 10BE at Cross Beam side and Bike Path side. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00499 Dated September 28, 2010.

Bolt sizes used were M22 x 70 RC Set# DHGM220038 and final torque required was 480 N-m.

Bolt sizes used were M22 x 70 RC Set# DHGM220009 and final torque required was 447 N-m.

Bolt sizes used were M22 x 75 RC Set# DHGM220034 and final torque required was 453 N-m.

Bolt sizes used were M22 x 80 RC Set# DHGM220091 and final torque required was 460 N-m.

The Manual Torque wrench used was Serial No. XO2-779.

Segment 10CE (Lower Chevron)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Lower Chevron and Upper Chevron at Panel Point (PP) 92, PP 93 and PP 94 for Segment 10CE at Cross Beam side and Bike Path side.

Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00499 Dated September 28, 2010.

Bolt sizes used were M22 x 70 RC Set# DHGM220038 and final torque required was 480 N-m.

Bolt sizes used were M22 x 70 RC Set# DHGM220009 and final torque required was 447 N-m.

Bolt sizes used were M22 x 75 RC Set# DHGM220034 and final torque required was 453 N-m.

Bolt sizes used were M22 x 80 RC Set# DHGM220091 and final torque required was 460 N-m.

The Manual Torque wrench used was Serial No. XO2-779.

Segment 11AW to Segment 11BW

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 OBW11B-003. The welder identification was 040609 and was observed welding in the 1G (Flat) position using approved Welding Procedure Specification WPS-B-T-2231T. The piece mark was identified as the Bottom Panel, transverse splice weld.

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

WELDING INSPECTION REPORT

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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.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Peterson,Art	QA Reviewer