

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 82.28**WELDING INSPECTION REPORT****Resident Engineer:** Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017533**Date Inspected:** 14-Oct-2010**Project Name:** SAS Superstructure**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Contractor:** Westmont Industries**OSM Arrival Time:** 700**OSM Departure Time:** 1530**Location:** Santa Fe Springs, CA.**CWI Name:** R. Rodriguez, R. Dominguez**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:** Travelers**Summary of Items Observed:**

The Quality Assurance Inspector Sean Vance arrived on site at Westmont Industries (WMI) in Santa Fe Springs, CA, to randomly observe the in process welding of the Travelers. The QA Inspector arrived on site to randomly observe the WMI Quality Control (QC) Inspectors in process and completed visual and nondestructive testing. Upon the arrival of the QA Inspector the following observations were made:

**Traveler Test Rack**

On this date, the QA Inspector observed Westmont Industries (WMI), production welder Daniel Grayum (WID # 3049) performing Flux Core Arc Welding (FCAW) activities, for the Traveler Test Rack. The QA Inspector observed that the FCAW was being performed on the vertical post assembly Base plates to Tube Steel (TS) material. The QA Inspector observed Mr. Grayum performing the FCAW in multiple positions and observed the activities continue throughout the shift.

**Trolley Test Stand**

On this date, the QA Inspector observed WMI Production fitter, Mr. Larry Swanson, WID # 3031, Mr. Jose Rodriguez and a helper, performing fitting and Flux Core Arc Welding (FCAW) activities for the piece mark identified as Rail Y Assembly 2-A4. The QA Inspector observed that the top and bottom flanges were being fit to the web plates, for this assembly. The QA Inspector initially observed Mr. Swanson utilizing the overhead Bay crane, chain and hook to lift sections of the web plate and place on the bottom flange. The QA Inspector observed that prior to placing the web plate sections, a full length center line had been marked on the bottom flange and small pieces of carbon steel material had been previously tack welded, to be utilized as guides for the fitting of the web plate sections.

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The QA Inspector observed that during the fitting activities of the web plate section, come along were being utilized to pull the web plate sections together, to achieve a tight fit up. Once the web plate sections were fit, the QA Inspector observed that the top flange was then lifted in the same manner above and placed on the top of the web plate sections. The QA Inspector observed that a full length center line had also been previously marked on this top flange, for fitting purposes. Once the top flange was placed, the QA Inspector observed that pieces of carbon steel material, were then utilized to secure the top flange to web plate sections.

## SAS-EB Traveler

### Elevated Truss Section

The QA Inspector observed that this Elevated Truss Section assembly had been previously transferred to WMI Bay 5 and is currently idle.

### Fixed Stairs Section

On this date, the QA Inspector observed Westmont Industries (WMI), production welder Raymundo Anaya and production fitter, Cesar Canales continuing to perform fitting and Flux Core Arc Welding (FCAW) tacking activities for the fabrication of the Fixed Stairs Section Assembly. The QA Inspector observed Mr. Anaya and Mr. Canales had previously secured the Frame assemblies identified as A237 and B237, in an upright fashion. The QA Inspector observed that the overhead Bay crane, chain and hook was then utilized to lift the Frame Assembly, identified as A217 and place in a perpendicular fashion between the A237 and B237 frame assemblies. Once placed, the QA Inspector observed that Mr. Anaya and Canales then reference the shop drawings and then start fit up activities for this frame assembly. The QA Inspector observed that during the fit-up process, that various c-clamps were utilized to secure the frame assemblies in place. Once secured, the QA Inspector then observed the Frame Assemblies identified as A218 and A223 being placed in the same manner as mentioned above. Once these assemblies were placed, the QA Inspector then observed Mr. Anaya perform FCAW tacking, to further secure.

### Frame Assemblies

On this date, the QA Inspector observed Westmont Industries (WMI), production welder Eutimo Lopez (WID # 3035), continuing to perform Flux Core Arc Welding (FCAW) activities for the SAS-EB Traveler frames. The QA Inspector observed Mr. Lopez performing the FCAW on previously fit and tack welded Tube Steel (TS) and plate material, for the Frame Assembly identified as B240, per the shop drawings. The QA Inspector observed Mr. Lopez perform the FCAW in various positions and observed that Mr. Lopez was performing the FCAW, fillet and flare groove welds, plate to TS material throughout the shift. The QA Inspector observed that Smith-Emery QC Inspector Ruben Dominguez was present, during the above mentioned welding and tacking activities and QC Inspector Dominguez explained that approved Welding Procedure Specifications (WPS's) were being utilized. The QA Inspector randomly observed that the applicable WPS's and copies of the shop drawings, were located near each work station, where the above mentioned FCAW and fitting activities were being performed. The QA Inspector randomly verified that the consumable material, utilized during the welding was in compliance to the applicable WPS and that the above mentioned welders were currently qualified for the applicable process and position of welding. The QA Inspector randomly observed QC Inspector Dominguez verifying the in-process welding parameters, including voltage, amperage, pre-heat and travel speed and the parameters appeared to be in compliance to the applicable WPS.

On this date, the QA Inspector observed Westmont Industries (WMI) production personnel Mr. Tim Hartnett, continuing to cut material which will be utilized, for the Traveler Frame Assemblies. The QA Inspector observed

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that Mr. Hartnett was continuing to utilize a Marvel® 15 A series horizontal band saw, to perform the cutting operations and observed that the material being cut, is identified as rectangular and square Tube Steel (TS). The QA Inspector spoke with Mr. Hartnett and he explained that WMI shop supervisor, Mr. George Grayum, had provided a list of TS material, with specific dimensions, per the shop drawing bill of materials. Mr. Harnett further explained that he was cutting the material to these specific lengths and marking the material with a white paint stick marker, to identify the individual cut pieces of material. After the material was cut and marked, the QA Inspector observed Mr. Hartnett utilize the overhead bay crane, chain and hook to lift and place the material into neatly stacked piles, nearby the cutting area. The QA Inspector noted that the Mill Test Reports (MTR's) had been previously provided and the QA Inspector had previously written "OK to Cut" on the material.



## Summary of Conversations:

As noted above.

## 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.

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<b>Inspected By:</b>	Vance, Sean	Quality Assurance Inspector
<b>Reviewed By:</b>	Edmondson, Fred	QA Reviewer

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