

**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 #: 69.25B**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT****Location:** Changxing Island, Shanghai, PRC**Report No:** NCR-000076**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 16-Feb-2008**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island**NCR #:** ZPMC-0074**Type of problem:**

<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b> Tower-114m Mockup
<b>Procedural</b>	<b>Procedural</b>	<b>Descriptor:</b>	Internal Bolt Connection Plate Skin D

**Description of Non-Conformance:**

ABF/ZPMC used a 10 ton hydraulic jack to aid in the fit-up of internal bolt connection plates on skin D. The plates were 6mm out of alignment between the internal bolted connection plate and interior longitudinal stiffener prior to utilizing a 10 ton jack. The misalignment is not in conformance with the Special Provisions which states "The misalignment of longitudinal stiffeners at bolted splices shall not exceed 4mm"

The use of jacks is not a step in the ABF/ZPMC approved fabrication plan. Fabrication plans for the mockup must be approved per Special Provisions, Section 10-1.59 "Steel Structures", "Fabrication/Erection Procedure Mock-Ups".

**Applicable reference:**

Special Provisions, Section 10-1.59 "Steel Structures", "Design Details (4f)", pg. 327. "The misalignment of longitudinal stiffeners at bolted splices shall not exceed 4mm"

Special Provisions, Section 10-1.59 "Steel Structures", "Fabrication/Erection Procedure Mock-Ups", pg. 313. "For each mock-up, the Contractor shall prepare a written fabrication and welding sequence. The fabrication and welding sequence shall be submitted for review by the Engineer, and approval shall be given before the mock-up is fabricated."

**Who discovered the problem:** Greg Bertlesman, Quality Assurance Inspector**Name of individual from Contractor notified:****Time and method of notification:****Name of Caltrans Engineer notified:** Ching Chao, Structure Representative**Time and method of notification:** 2/20/08, 1030; Verbal**QC Inspector's Name:** Chan Shi Gang, ZPMC Quality Control Inspector**Was QC Inspector aware of the problem:**

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# QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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Yes No

**Contractor's proposal to correct the problem:**

**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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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**Inspected By:** Wahbeh,Mazen

Quality Assurance Inspector

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**Reviewed By:** Wahbeh,Mazen

QA Reviewer



**DEPARTMENT OF TRANSPORTATION**  
666 Feng Bin Road Room 708, Changxing Island  
Shanghai 201913 PR China  
Tel: 021-56856666 ext 207061 Fax:

## NON-CONFORMANCE REPORT TRANSMITTAL

**To:** AMERICAN BRIDGE/FLUOR, A JV  
375 BURMA ROAD  
OAKLAND CA 95607

**Date:** 21-Feb-2008

**Contract No:** 04-0120F4  
04-SF-80-13.2 / 13.9

**Attention:** Dave Williams          Consultant

**Job Name:** SAS Superstructure

**Document No:** 05.03.06-000044

**Subject:** NCR No. ZPMC-0074

The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

Non-Conformance with quality control procedures. Please take appropriate corrective action. Recurrence may require further administrative action.

Non-Conformance with quality control. Records indicate that this is a recurring issue and constitutes a systematic problem in quality control. Within fourteen (14) days, please submit a plan to correct the deficiency.

Material or workmanship is not in compliance with contract requirements.

**Enclosed please find the following items:**

**NCR No:** ZPMC-0074

**Remarks:**

Please see the attachment for details.

**Transmitted by:** Ching Chao

**cc:** Rick Morrow, Gary Pursell, Peter Siegenthaler, Mark Woods, Doug Coe, Jason Tom, Dave Williams, Contract Files, Kannu Balan, Chin

**File:** 05.03.06

## NCR PROPOSED RESOLUTION

**To:** CALTRANS - SAS Superstructure  
333 Burma Road  
Oakland CA 94607

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000044

**Subject:** NCR No. ZPMC-0074

**Dated:** 03-Jul-2008

**Contract No.:** 04-0120F4  
04-SF-80-13.2 / 13.9

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000035 Rev: 00

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**Contractor's Proposed Resolution:**

**Reference Resolution:** ZPMC did not think that it was necessary to include the use of hydraulic jacks on an as-needed basis in their fabrication and respectfully requests the withdrawal of the NCR.

Please see the attached response from ZPMC. ABFJV has reviewed and concurs with this response.

**Submitted by:** Kanapicki, Charles

**Attachment(s):** ABF-NPR-000035R00; ;

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**Caltrans' comments:**

**Status:** REJ

**Date:** 07-Sep-2008

The response is not acceptable. The mock-up procedure must include all processes that will be applied in production. This Non-Conformance can only be closed when the Contractor has fabricated the 114m mock-up with a procedure that includes all processes that will be used in production and that meets Caltrans acceptance criteria.

**Submitted by:** Wright, Doug

**Attachment(s):**

**Date:** 07-Sep-2008



## DEPARTMENT OF TRANSPORTATION

CHINA FABRICATION TEAM

506 Shangcheng Rd., Pudong New District  
Shanghai 200120, PRC

## REVIEW OF CONTRACTOR'S TRANSMITTAL

To: Dave Williams, American Bridge – Fluor, a Joint Venture  
Gary Pursell, Resident Engineer

Review Date: 05-19-2008From: Bob McReynolds, Structural Materials RepresentativeContract No.: 04-0120F4Date/Time Submittal Received: 04-23-2008/ 0900
 China Standard Time  
(GMT+08:00)
Contractor's Transmittal #: TL-08-1052 Rev. # 0

<input type="checkbox"/> substantially complies with contract requirements and is approved			
<input type="checkbox"/> substantially complies with contract requirements and is approved as noted.			
<input checked="" type="checkbox"/> Lacks sufficient information and/or contains unacceptable items that must be corrected or prior to resubmittal			
Verbal Notification		<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes
Date:		Time:	
Name of individual from Contractor Notified:			
This submittal is a:	<input type="checkbox"/> Welding Report	<input type="checkbox"/> Critical Weld Repair	
	<input type="checkbox"/> Request for Information	<input type="checkbox"/> Heat Straightening Request	
	<input type="checkbox"/> Fabrication Procedures	<input checked="" type="checkbox"/> Other: <u>Response to NCRs</u>	
Submitting Contractor: <u>ABF</u>			
ITEMS REVIEWED	COMPLIES		COMMENTS
1. ZPMC-0051 LOR (Letter of Response)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<p>ABF allowed ZPMC to weld skin plate 'D' to 'E' identified as weld MUB-MA21 D/J-5 with excessive root gap measurement of 4.2mm. ZPMC claims that TC-U4b-GF and the WPS-B-T-2232-TC-U4b-F allow a 0-3mm root opening and a tolerance of +2/-0, so they can have a 0-5mm root opening. ZPMC's understanding of the Code requirements is incorrect.</p> <p>AWS D1.5-2002, C2.12.1 'Dimensional Tolerances' states "When the standard joints of Figure 2.4 are being detailed, they may be adjusted using the 'As Detailed Tolerances' provided in Figure 2.4. When being assembled for welding, the joint may vary from the details shown on the approved shop drawings within the limits of the 'As Fit-Up Tolerances' provided in Figure 2.4 for standard joints, or 3.3.4 and Figure 3.2 for other groove welded joints. The fit-up provisions of Figure 2.4 are derived from 3.3.4."</p> <p>For this non-standard joint with backgouging and without steel backing, 3.3.4 and Figure 3.2 require a +2/-3mm root opening tolerance from the detailed dimension. Mockup weld detail MU-WDT-07 specifies a 0mm root gap, thus the fit-up root gap dimension could only be a maximum of 2mm. If the detailed root gap dimension were specified as 3mm, then the fitup dimension could be up to 5mm.</p>
2. ZPMC-0074 LOR	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<p>ZPMC used a 10-ton hydraulic jack to fitup the bolt connection plates on skin 'D' of 114m mockup. The plates were 6mm out of alignment between the internal bolted connection plate and the interior longitudinal stiffener. ZPMC's explanation that the mockup was in the pre-assembly stage when the misalignment was noted and the hydraulic jack were applied is not acceptable. The mockup procedure must include all processes that will be applied in production. This NCR can only be closed when the Contractor has fabricated a mockup with a procedure that includes all processes that will be used in production and that meets Caltrans acceptance criteria.</p>

OFFICE OF STRUCTURAL MATERIALS - REVIEW OF CONTRACTOR'S SUBMITTAL

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Remarks:

*OTI FOR*

Reviewer: Bob McReynolds

Date: 05-19-08

Construction Concurrence: KL Initial 5/27/08 Date

Received by (ABVJV): PZ Date: 5/27/08 Time: 1400



Page 1 of 1

Date: 22 April 2008

To: Gary Pursell

From: Steve Lawton

Contract No. 04-0120F4

Dear Gary Pursell

<input type="checkbox"/>	APPROVED
<input type="checkbox"/>	APPROVED AS NOTED
<input checked="" type="checkbox"/>	NOT APPROVED
Pursuant to Section 5-1.02 of the Standard Specifications State of California DEPARTMENT OF TRANSPORTATION	
Signed	
	Structure Representative
Date	5/27/08

This letter is issued to provide formal response addressing the proposed resolution to each of the mentioned NCR's for Engineer's review and approval.

NCR's

ZPMC-0033  
ZPMC-0051 \*  
ZPMC-0071  
ZPMC-0074 \*

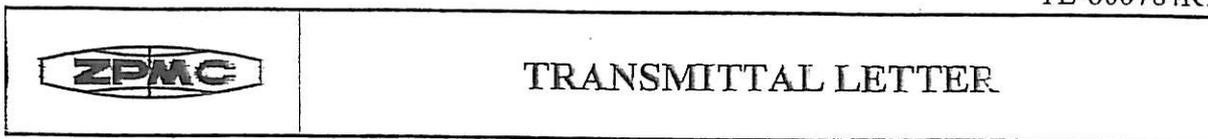
ZPMC has summarized the above listed NCR's and has generated an internal NCR for each occurrence.

ABFJV considers the NCR's mentioned as closed.

If further clarifications are needed, please contact me.



Steve Lawton  
Foreign Quality Assurance Manager  
American Bridge Fluor Joint Venture



PROJECT: SAN FRANCISCO OAKLAND BAY BRIDGE

DATE: 03/17/2008

TO: RUBY/ ABFJV QA DEPARTMENT

FROM: ZPMC QA DEPARTMENT

SUBJECT: LETTER OF RESPONSE

REQUEST FOR REVIEW & SUBMITTAL TO CALTRANS FOR APPROVAL.

ENCLOSED WITH THIS TRANSMITTAL IS ONE

- (1) COPY OF LETTER OF RESPONSE WITH NO.CT-096, CT-086, CT-087, CT-093, CT-088
- (2) COPY OF NCR-000019, NCR-000059, NCR-000064, NCR-000065, NCR-000068.

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT:

*Ruby*

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PLAN HOLDER

*3/19/08 1050*

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DATE

*ABFJV*

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COMPANY

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PHONE NO.

PLAN NUMBER: N/A  
 #R787-QCP-102



No. CT-112

## LETTER OF RESPONSE

TO: American Bridge/Flour JV

DATE: 2007-3-19

REGARDING: NCR-000076 (ZPMC-0074)

ZPMC received CT NCR-000076 on 27-Feb-2008, it mentioned ZPMC used a 10 ton hydraulic jack to aid in the fit-up of internal bolt connection plates on skin D; the plates were 6mm out of alignment between the internal bolted connection plate and interior longitudinal stiffener prior to utilizing a 10 ton jack. CT considered these were not in conformance with the Special Provision and the Fabrication Plan.

So ZPMC wants to give an explanation here. The 114m Mock Up' condition that time was just under the preassembly, and some internal connection plates had been bolted. So the misalignment CT measured couldn't be regarded as final result and also can't be compared with the Special Provision's requirement. As to the using of 10 ton hydraulic jack, ZPMC thought it wouldn't be necessary to put everything or method out of the requirements in the fabrication procedure unless it had been discussed and confirmed between CT, AB/F and ZPMC.

So ZPMC requests Caltrans can withdraw NCR-000076 (ZPMC-0074).

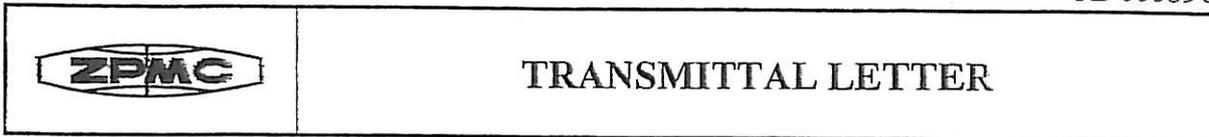
ATTACHMENT:

NCR-000076 (ZPMC-0074)

*Fu Yuhong*

*2008.03.19*

*REVIEWED  
J. Smith  
ABF CCM  
10 APR 08*



PROJECT: SAN FRANCISCO OAKLAND BAY BRIDGE

DATE: 03/19/2008

TO: RUBY/ ABFJV QA DEPARTMENT

FROM: ZPMC QA DEPARTMENT

SUBJECT: NCR(NCR-000076) FOR CLOSURE

SUBMITTED FOR YOUR APPROVAL AND SUBMITTAL TO CALTRANS.

ENCLOSED WITH THIS TRANSMITTAL IS ONE

- (1) COPY OF LETTER OF RESPONSE WITH NO.CT-113 FOR CLOSURE.
- (2) COPY OF NCR WITH NUMBER NCR-000076 .

PLEASE SIGN THIS TRANSMITTAL AND RETURN TO ME.

ACKNOWLEDGEMENT:

*Ruby Li*

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PLAN HOLDER

*3/19/08 1315*

---

DATE

*ABFJV*

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COMPANY

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PHONE NO.

PLAN NUMBER: N/A  
 #R787-QCP-102



DEPARTMENT OF TRANSPORTATION  
666 Feng Bin Road Room 708, Changxing Island  
Shanghai 201913 PR China  
Tel: 021-56856666 ext 207061 Fax:

## NON-CONFORMANCE REPORT TRANSMITTAL

To: AMERICAN BRIDGE/FLUOR, A JV  
375 BURMA ROAD  
OAKLAND CA 95607

Date: 21-Feb-2008

Contract No: 04-0120F4  
04-SF-80-13.2 / 13.9

Attention: Dave Williams Consultant

Job Name: SAS Superstructure

Document No: 05.03.06-000044

Subject: NCR No. ZPMC-0074

The attached Non-Conformance Report describes an occurrence where the contractor did not comply with a requirement of the contract document as indicated below:

- Non-Conformance with quality control procedures. Please take appropriate corrective action. Recurrence may require further administrative action.
- Non-Conformance with quality control. Records indicate that this is a recurring issue and constitutes a systematic problem in quality control. Within fourteen (14) days, please submit a plan to correct the deficiency.
- Material or workmanship is not in compliance with contract requirements.

Enclosed please find the following items:

NCR No: ZPMC-0074

Remarks:

Please see the attachment for details.

Transmitted by: Ching Chao

cc: Rick Morrow, Gary Pursell, Peter Siegenthaler, Mark Woods, Doug Coe, Jason Tom, Dave Williams, Contract Files, Kannu Balan, C  
File: 05.03.06

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 #: 04-0120F4  
 Cty: SF/ALA Rte: 80 PM: 13.2/13.9  
 File #: 69.25B

## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

Location: Changxing Island, Shanghai, PRC

Report No: NCR-000076

Prime Contractor: American Bridge/Fluor Enterprises, a JV

Date: 16-Feb-2008

Submitting Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

NCR #: ZPMC-0074

### Type of problem:

Welding  Concrete  Other   
 Welding  Curing  Procedural  Bridge No: 34-0006  
 Joint fit-up  Coating  Other  Component: Tower-114m Mockup  
 Procedural  Procedural  Description: Internal Bolt Connection Plate Skin D

### Description of Non-Conformance:

ABF/ZPMC used a 10 ton hydraulic jack to aid in the fit-up of internal bolt connection plates on skin D. The plates were 6mm out of alignment between the internal bolted connection plate and interior longitudinal stiffener prior to utilizing a 10 ton jack. The misalignment is not in conformance with the Special Provisions which states "The misalignment of longitudinal stiffeners at bolted splices shall not exceed 4mm"

The use of jacks is not a step in the ABF/ZPMC approved fabrication plan. Fabrication plans for the mockup must be approved per Special Provisions, Section 10-1.59 "Steel Structures", "Fabrication/Erection Procedure Mock-Ups".

### Applicable reference:

Special Provisions, Section 10-1.59 "Steel Structures", "Design Details (4f)", pg. 327. "The misalignment of longitudinal stiffeners at bolted splices shall not exceed 4mm"

Special Provisions, Section 10-1.59 "Steel Structures", "Fabrication/Erection Procedure Mock-Ups", pg. 313. "For each mock-up, the Contractor shall prepare a written fabrication and welding sequence. The fabrication and welding sequence shall be submitted for review by the Engineer, and approval shall be given before the mock-up is fabricated."

Who discovered the problem: Greg Bertlesman, Quality Assurance Inspector

Name of individual from Contractor notified:

Time and method of notification:

Name of Caltrans Engineer notified: Ching Chao, Structure Representative

Time and method of notification: 2/20/08, 1030; Verbal

QC Inspector's Name: Chan Shi Gang, ZPMC Quality Control Inspector

Was QC Inspector aware of the problem:

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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(Continued Page 2 of 2)

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Yes  No

Contractor's proposal to correct the problem:

**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 Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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Inspected By: Wahbeh, Mazen

Quality Assurance Inspector

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Reviewed By: Wahbeh, Mazen

QA Reviewer

## NCR PROPOSED RESOLUTION

**To:** CALTRANS - SAS Superstructure  
333 Burma Road  
Oakland CA 94607

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000044

**Subject:** NCR No. ZPMC-0074

**Dated:** 10-Jan-2009

**Contract No.:** 04-0120F4  
04-SF-80-13.2 / 13.9

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000035 Rev: 01

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### Contractor's Proposed Resolution:

**Reference Resolution:** ABFJV requests that this NCR now be closed based on the approval of all mock-ups.

Please see attached State Letter 05.03.01-002737 and 05.03.01-003242 approving the 77m, 89m, and 114m mock-ups. The rejection of ABF-NPR-000035R00 states, "The response is not acceptable. The mock-up procedure must include all processes that will be applied in production. This Non-Conformance can only be closed when the Contractor has fabricated the 114m mock-up with a procedure that includes all processes that will be used in production and that meets Caltrans acceptance criteria." ABFJV has now satisfied that requirement.

**Submitted by:** Kanapicki, Charles

**Attachment(s):** ; ; ABF-NPR-000035R01

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### Caltrans' comments:

**Status:** CLO

**Date:** 08-Jan-2009

Per State Letter 05.03.01-003242 dated January 7, 2009, the 114m Tower Section Mock-up was successfully completed. The Department concurs that Non-Conformance ZPMC-0074 is closed. As noted in ABF-CAL-LTR-000766, the Department understands that the appropriate fabrication plans will be modified in accordance with Special Provision Section 10-1.59, "Steel Structures," subsection "Working Drawings" through the FCN process.

The use of jacks to aid in the fit-up of connection plates shall not be used in production unless it is shown in the fabrication procedure, and the Engineer has given prior approval in writing.

**Submitted by:** Wright, Doug

**Date:** 08-Jan-2009

**Attachment(s):**

**DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge Program**

333 Burma Rd.

Oakland, CA 94607

(510) 622-5660, (510) 286-0550 fax

*Flex your power  
Be energy efficient!*

September 25, 2008

Contract No. 04-0120F4

04-SF-80-13.2 / 13.9

Self-Anchored Suspension Bridge

Letter No. 05.03.01-002737

Michael Flowers  
Project Executive  
American Bridge/Fluor, A JV  
375 Burma Road  
Oakland, CA 94607

Dear Michael Flowers,

**Conditional Acceptance of the 77m & 89m Tower Mock-Ups**

In accordance with Special Provision Section 10-1.59, "Steel Structures," Subsection "Fabrication," the Department has concluded that the Tower Diaphragm Type 3B (77m) and the Tower Section (89m) Mock-ups are satisfactory with the condition that ABF will continue to perform partial mock-ups to develop acceptable repeatable procedures for the outstanding issues associated with the mock-ups.

Currently, there remain three (3) outstanding issues which are as follows:

1. The fit lug connections addressed in ABF-SUB-0101R03
2. The fit lug connections addressed in ABF-SUB-0101R06
3. The strut addressed in ABF-SUB-0101R07

For your reference these outstanding items were previously identified in State Letter 05.03.01-002559, dated August 15, 2008.

This letter does not relieve ABF from the performance of the outstanding three partial mock-ups/trials, or the completion of the outstanding work for the Tower Splice (114m) Mock-up. Fabrication of the fit lugs and struts on the production work shall not proceed until the partial mock-ups have been successfully completed and accepted by the Department. Successful completion of the partial mock-ups shall include the revision and approval of the affected Fabrication/Erection Procedures to reflect the changes and lessons learned in the mock-ups and partial mock-ups.

If you have questions, please contact Jason Tom.

Sincerely,

A handwritten signature in blue ink that reads "Gary Pursell".

GARY PURSELL  
Resident Engineer

cc: Rick Morrow, Jason Tom, Peter Siegenthaler, Doug Coe, Mark Woods  
file: 05.03.01

**DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge Program**

333 Burma Rd.  
Oakland, CA 94607  
(510) 622-5660, (510) 286-0550 fax



*Flex your power  
Be energy efficient!*

January 07, 2009

Contract No. 04-0120F4  
04-SF-80-13.2 / 13.9  
Self-Anchored Suspension Bridge  
Letter No. 05.03.01-003242

Michael Flowers  
Project Executive  
American Bridge/Fluor, A JV  
375 Burma Road  
Oakland, CA 94607

Dear Michael Flowers,

**114m Mock-up Completion - Tower Lift Erection Splice**

This letter is issued in response to ABF-CAL-LTR-000766, dated December 4, 2008, advising the Department of the successful completion of the 114m Mock-up. The Department concurs with ABF that the 114m Mock-up has been successfully completed and understand that the appropriate fabrication and erection plans will be modified as described in ABF-CAL-LTR-000766 in accordance with Special Provision Section 10-1.59, "Steel Structures," subsection "Working Drawings," through the FCN or working drawing processes.

If you have any questions regarding this matter, please contact Mark Woods at (510) 622-5107.

Sincerely,

A handwritten signature in blue ink that reads "Gary Purcell".

GARY PURSELL  
Resident Engineer

cc: Rick Morrow  
Doug Coe  
Jason Tom  
Mark Woods  
file: 05.03.01

**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 #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, PRC**Report No:** NCS-000150**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 08-Jan-2009**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0074**Type of problem:**

<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b>
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Date the Non-Conformance Report was written:** 16-Feb-2008**Description of Non-Conformance:**

ABF/ZPMC used a 10 ton hydraulic jack to aid in the fit-up of internal bolt connection plates on skin D. The plates were 6mm out of alignment between the internal bolted connection plate and interior longitudinal stiffener prior to utilizing a 10 ton jack. The misalignment is not in conformance with the Special Provisions which states "The misalignment of longitudinal stiffeners at bolted splices shall not exceed 4mm." The use of jacks is not a step in the ABF/ZPMC approved fabrication plan. Fabrication plans for the mockup must be approved per Special Provisions, Section 10-1.59 "Steel Structures", "Fabrication/Erection Procedure Mock-Ups".

**Contractor's proposal to correct the problem:**

The mock-up was still in pre-assembly when it was inspected. The misalignment measured cannot be considered a final result and therefore cannot be compared to the requirements in the Special Provisions. Also, ZPMC did not think that it was necessary to include the use of hydraulic jacks on an as-needed basis in their fabrication procedures.

**Corrective action taken:**

Fabrication procedure has been modified and the 114m mock-up has been fabricated successfully. Letter No. 05.03.01-003242 concluded the successful completion of the 114m mock-up on January 7, 2009.

**Did corrective action require Engineer's approval?** Yes No**If so, name of Engineer providing approval:****Date:****Is Engineer's approval attached?** Yes No**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 Serge Sinevod, who represents the Office of Structural Materials for your project.

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## QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

( Continued Page 2 of 2 )

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**Inspected By:** Sinevod,Serge

Quality Assurance Inspector

**Reviewed By:** Wahbeh,Mazen

QA Reviewer