

**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, P.R. China **Report No:** NCR-000604  
**Prime Contractor:** American Bridge/Fluor Enterprises, a JV **Date:** 05-Jan-2010  
**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0577

**Type of problem:**

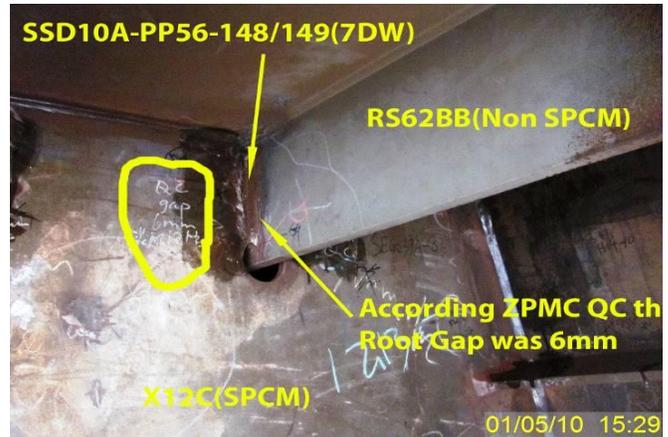
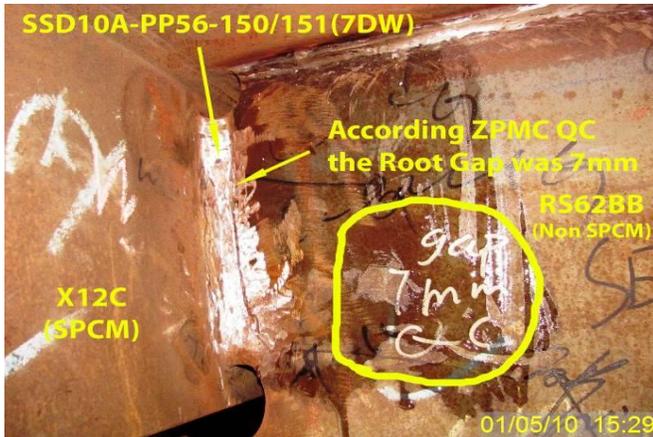
<b>Welding</b>	<b>Concrete</b>	<b>Other</b>	
<b>Welding</b>	<b>Curing</b>	<b>Procedural</b>	<b>Bridge No:</b> 34-0006
<b>Joint fit-up</b>	<b>Coating</b>	<b>Other</b>	<b>Component:</b> OBG Segment 7DW I-rib
<b>Procedural</b>	<b>Procedural</b>	<b>Description:</b>	

**Reference Description:** Excessive root gap at weld joint of FL3 to I- Rib Stiffener was welded with fillet weld in Segment 7DW

**Description of Non-Conformance:**

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 7DW, this Quality Assurance Inspector (QA) discovered the following issues:

- The original welds per the approved drawing (SEGSD10A) are designated as Fillet Welds. ZPMC performed fillet weld welding knowing that the root gap exceeded the specified tolerance.
- The welds are identified as: SSD10A-PP56-148/149 and SSD10A-PP56-150/151.
- The excessive root gaps confirmed by ZPMC QC were 6mm and 7mm.
- Located at Panel Point 56 at Cross Beam side.
- The weld is designated as Seismic Performance Critical Material (SPCM).
- The welds are joining the Plate X12C (SPCM) to Stiffener RS62BB (Non SPCM).
- This Green Tag inspection was identified as: Green Tag # 004993
- OBG Segment 7DW is located in the outside yard west of Bay 13.



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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

( Continued Page 2 of 2 )

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**Applicable reference:**

“Submittal 200, Rev. 2 - Update 1 - Methods to Repair Elements that Exceed Specified Tolerance.” Letter No. 05.03.01-004548.

Letter No. 05.03.01-004548, Dated 07/01/09.

**Who discovered the problem:** Subhasis Bera

**Name of individual from Contractor notified:** Peter Shaw

**Time and method of notification:** 1/5/2010, 15:30; Verbal

**Name of Caltrans Engineer notified:** Bill Howe

**Time and method of notification:** 1/6/2010, 09:30, Verbal

**QC Inspector's Name:** Zhong Wei

**Was QC Inspector aware of the problem:** Yes No

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

N/A

**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, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Sinevod,Serge	ASMR
<b>Reviewed By:</b>	Wahbeh,Mazen	SMR

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## NCR PROPOSED RESOLUTION

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

**Attention:** Pursell, Gary  
Resident Engineer

**Ref:** 05.03.06-000567

**Subject:** NCR No. ZPMC-0577

**Dated:** 08-Feb-2010

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

**Job Name:** SAS Superstructure

**Document No.:** ABF-NPR-000555 Rev: 00

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### Contractor's Proposed Resolution:

**Reference Resolution:** ZPMC requests that this NCR be closed. Approval for this change was received by the Department and approved. Based on this ZPMC requests that this NCR be closed.

ZPMC requests that this NCR be closed. Approval for this change was received by the Department and approved. Based on this ZPMC requests that this NCR be closed.

**Submitted by:** Ishibashi, Joshua

**Attachment(s):** ABF-NPR-000555R00;

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### Caltrans' comments:

**Status:** CLO

**Date:** 08-Feb-2010

The documentation recieved will close this NCR.

**Submitted by:** Howe, Bill

**Date:** 08-Feb-2010

**Attachment(s):**



No. B-600

## LETTER OF RESPONSE

**TO: American Bridge/Flour**

**DATE: 2010-2-5**

**REGARDING: NCR-00604 (ZPMC-0577)**

With this letter of response, ZPMC requests withdraw/closure of CT NCR-00604 (ZPMC-0577), what mentioned that CT Inspector observed unapproved Excessive root gap at weld joint of FL3 to I-Rib Stiffener was welded with fillet weld in Segment 7DW.

- This weld joint ZPMC has changed into CJP weld, and got the approval report from the Caltrans's Engineer.

Based on the responses above, ZPMC requests withdraw/closure of this NCR.

**ATTACHMENT:**

NCR-00604 (ZPMC-0577)

*Zhang Wei*

*2010.02.05*



DEPARTMENT OF TRANSPORTATION - District 4 Toll Bridge  
333 Burma Road  
Oakland CA 94607  
Tel: Fax:

## NON-CONFORMANCE REPORT TRANSMITTAL

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

**Date:** 06-Jan-2010

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

**Dear:** Mr. Charles Kanapicki

**Job Name:** SAS Superstructure

**Attention:** Mr. Thomas Nilsson Project/Fabrication Manager

**Document No:** 05.03.06-000567

**Subject:** NCR No. ZPMC-0577

**Reference Description:** Excessive root gap at weld joint of FL3 to I- Rib Stiffener was welded with fillet weld in Segment 7DW

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

- Material or Workmanship not in conformance with contract documents.
- Quality Control (QC) not performed in conformance with contract documents.
- Recurring QC issue that constitutes a systematic problem in quality control.
- Non-Conformance Resolved.

**Material Location:** OBG

**Lift:** 07

### Remarks:

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 7DW, this Quality Assurance Inspector (QA) discovered the following issues:

- The original welds per the approved drawing (SEGSD10A) are designated as Fillet Welds. ZPMC performed fillet weld welding knowing that the root gap exceeded the specified tolerance.
- The welds are identified as: SSD10A-PP56-148/149 and SSD10A-PP56-150/151.
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- Located at Panel Point 56 at Cross Beam side.
- The weld is designated as Seismic Performance Critical Material (SPCM).
- The welds are joining the Plate X12C (SPCM) to Stiffener RS62BB (Non SPCM).
- This Green Tag inspection was identified as: Green Tag # 004993
- OBG Segment 7DW is located in the outside yard west of Bay 13.

### Action Required and/or Action Taken:

Propose a resolution for the identified non-conformance with revised procedures to prevent future occurrences. A response for the resolution of this issue is expected within 7 days.

**Transmitted by:** Bill Howe Sr. Transportation Engineer

**Attachments:** ZPMC-0577

**cc:** Rick Morrow, Gary Pursell, Peter Siegenthaler, Stanley Ku, Brian Boal, Jason Tom, Contract Files, Ching Chao  
**File:** 05.03.06

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**QUALITY ASSURANCE -- NON-CONFORMANCE REPORT**

**Location:** Changxing Island, Shanghai, P.R. China

**Report No:** NCR-000604

**Prime Contractor:** American Bridge/Fluor Enterprises, a JV

**Date:** 05-Jan-2010

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

**NCR #:** ZPMC-0577

**Type of problem:**

- Welding  Concrete  Other   
 Welding  Curing  Procedural   
 Joint fit-up  Coating  Other   
 Procedural  Procedural  Description:

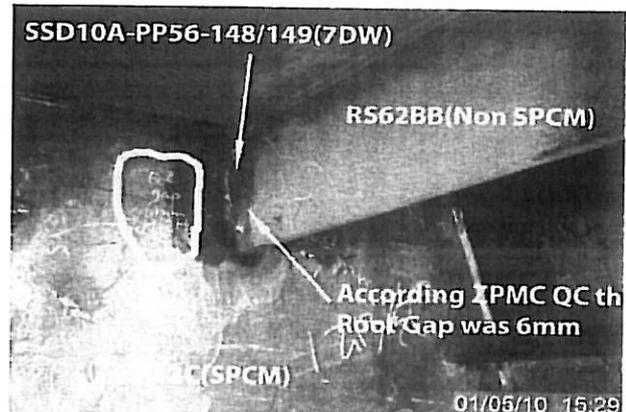
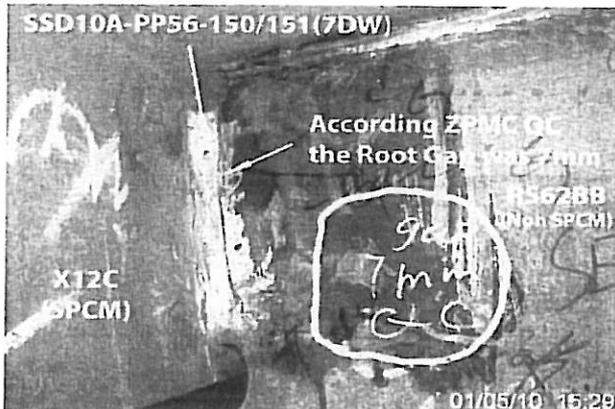
**Bridge No:** 34-0006

**Component:** OBG Segment 7DW I-rib

**Reference Description:** Excessive root gap at weld joint of FL3 to I- Rib Stiffener was welded with fillet weld in Segment 7DW

**Description of Non-Conformance:**

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## QUALITY ASSURANCE -- NON-CONFORMANCE REPORT

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( Continued Page 2 of 2 )

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**Applicable reference:**

"Submittal 200, Rev. 2 - Update 1 - Methods to Repair Elements that Exceed Specified Tolerance." Letter No. 05.03.01-004548.

Letter No. 05.03.01-004548, Dated 07/01/09.

**Who discovered the problem:** Subhasis Bera

**Name of individual from Contractor notified:** Peter Shaw

**Time and method of notification:** 1/5/2010, 15:30; Verbal

**Name of Caltrans Engineer notified:** Bill Howe

**Time and method of notification:** 1/6/2010, 09:30, Verbal

**QC Inspector's Name:** Zhong Wei

**Was QC Inspector aware of the problem:**  Yes  No

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

N/A

**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, +(86) 134.7247.7571, who represents the Office of Structural Materials for your project.

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**Inspected By:** Sinevod,Serge

ASMR

**Reviewed By:** Wahbeh,Mazen

SMR

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B-303420

Submitted by: <u>Ye Abala</u>	Date Submitted: <u>10.01.10</u>	Time Submitted: <u>9:00</u>
Received by: <u>Tauie</u>	Date Received: <u>11-01-10</u>	Time Received: <u>11-30-10</u>

### Notification for Engineer's Review & Approval

Out-of-tolerance Repair: Excessive Root Gap Turning Fillet Weld to CJP per Submittal 200R2

INFORMATION:

Lift/Segment: 70W Measured Gap Size (mm): Gap max = 7mm

Component(s)/Member(s): Corner Assembly SPCM Member:  Yes  No

Piece Mark(s) Related: FB19B, RS02BA

Weld ID#: SS010A - PP56 - 148/149, 150/151

All Specific Y-locations, Reference Point, Length of Repair (For Intermittent Welds):

See attached drawings for detail

- Attached Location Layout Sketch?  Yes  No
- Is the weld a repair or new joint fit up?  Repair  New Joint
- If the repair requires a CWR, has a CWR submitted for Engineer's Approval?  Yes  No
- The cause of this repair: (Select all applicable)
  - misaligned member exceeding the fit-up tolerance
  - error in cutting/ uneven cut member
  - flatness or straightness issue
  - other, please specify \_\_\_\_\_

RECEIVED 12 JAN 2010 10:45

Engineer's Approval: <u>Yes</u> /No	Reviewed by: <u>ET</u>	Date: <u>12 JAN 10</u>	Time: <u>09:00</u>
Comments: <u>The work has already performed. This Notification does</u>			

AGREEMENT: not serve its purpose in allowing CT to perform inspection prior to welding

The Contractor agrees to perform the following work in the above referenced locations.

- To incorporate the detail changes to the weld map.
- To reflect the changes in the shop drawings/as-built drawings.
- To reflect the changes on the QA Database. (i.e., CJP weld, intermittent weld length, UT inspection)
- To follow the repair method described in Sec. 6.2 of Submittal 200R2; RFCO 63.
- To provide inspection notification to CT for witnessing and inspecting the work indicated in the checklist below prior to starting.

CANNOT BE INSPECTED

CT INSPECTOR CHECKLIST:

	Yes	No	Insp. ID#	Date
Copy of the applicable WPS in English.	<input type="checkbox"/>	<input type="checkbox"/>		
Acceptable Joint Prep; Proper Steel Backing.	<input type="checkbox"/>	<input type="checkbox"/>		
The CJP weld extends at least 50mm beyond either side of the out of tolerance root gap repair.	<input type="checkbox"/>	<input type="checkbox"/>		
The CJP weld does have reinforcing fillets equal to the replaced fillet welds.	<input type="checkbox"/>	<input type="checkbox"/>		
Acceptable 100% MT result to the backgouged area.	<input type="checkbox"/>	<input type="checkbox"/>		
Acceptable 100% UT result to the CJP weld.	<input type="checkbox"/>	<input type="checkbox"/>		
The CJP weld preparation does have a 1:1 slope or smoother transition at the ends.	<input type="checkbox"/>	<input type="checkbox"/>		

提交人: 李平 提交日期: 2010.01.08 提交地点: \_\_\_\_\_  
 设计: \_\_\_\_\_ 设计日期: \_\_\_\_\_ 设计编号: \_\_\_\_\_

提交工程师审批通知单

返修原因: 角焊缝根部间隙超标返修

相关信息:

箱梁号: 7DW 实际间隙 (mm): Gap max = 6-7mm

构件名称: 散装的单元隔板 是否SPCM件:  是  否

相关的件号: FB19B R362BA

焊缝编号: SSD10A-PP56-148/149 SSD10A-PP56-150/151

所有的Y向位置; 参考点; 返修长度 (如是间断的焊缝返修)

具体的间隙超标位置及长度如附图所示。

- 是否附有详细位置草图:  是  否
- 该处进行返修或是新焊缝?  返修  新焊缝接头
- 若是返修是否有相关CWR, CWR是否已经过工程师批准:  是  否
- 造成返修原因:
  - 构件装配错位超出允许公差范围
  - 切割错误/构件切割不平
  - 平整度问题
  - 其他原因, 请说明 \_\_\_\_\_

Engineer's Approval: Yes/No Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Comments: \_\_\_\_\_

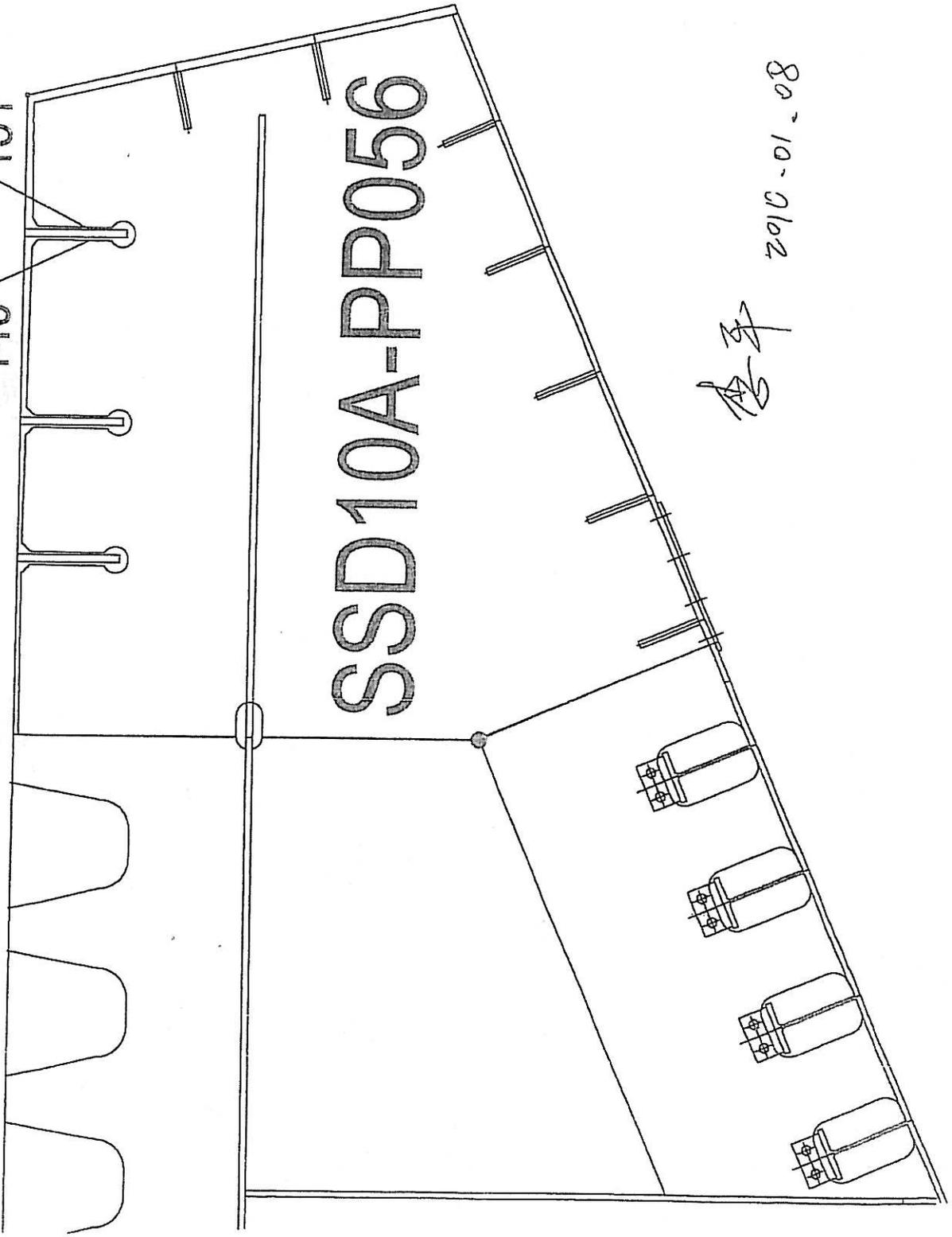
AGREEMENT:

- The Contractor agrees to perform the following work in the above referenced locations.
- To incorporate the detail changes to the weld map.
  - To reflect the changes in the shop drawings/as-built drawings.
  - To reflect the changes on the QA Database. (i.e., CIP weld, intermittent weld length, UT inspection)
  - To follow the repair method described in Sec. 6.2 of Submittal 200R2; RFCO 63.
  - To provide inspection notification to CT for witnessing and inspecting the work indicated in the checklist below prior to starting.

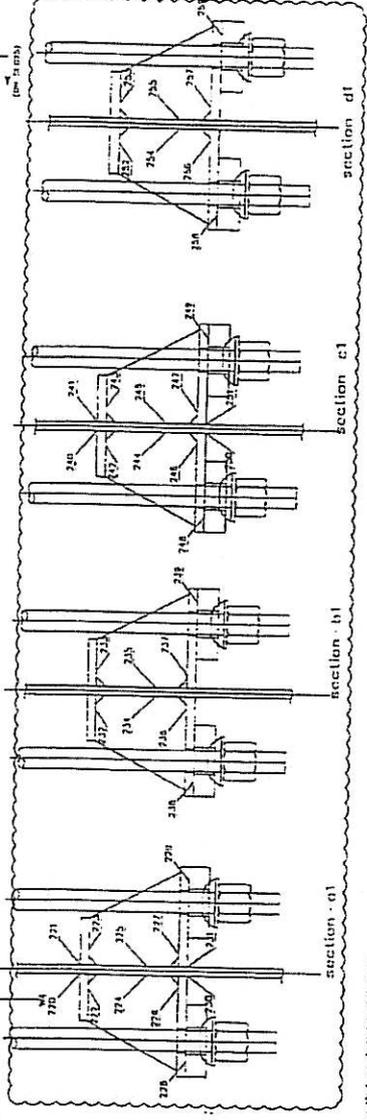
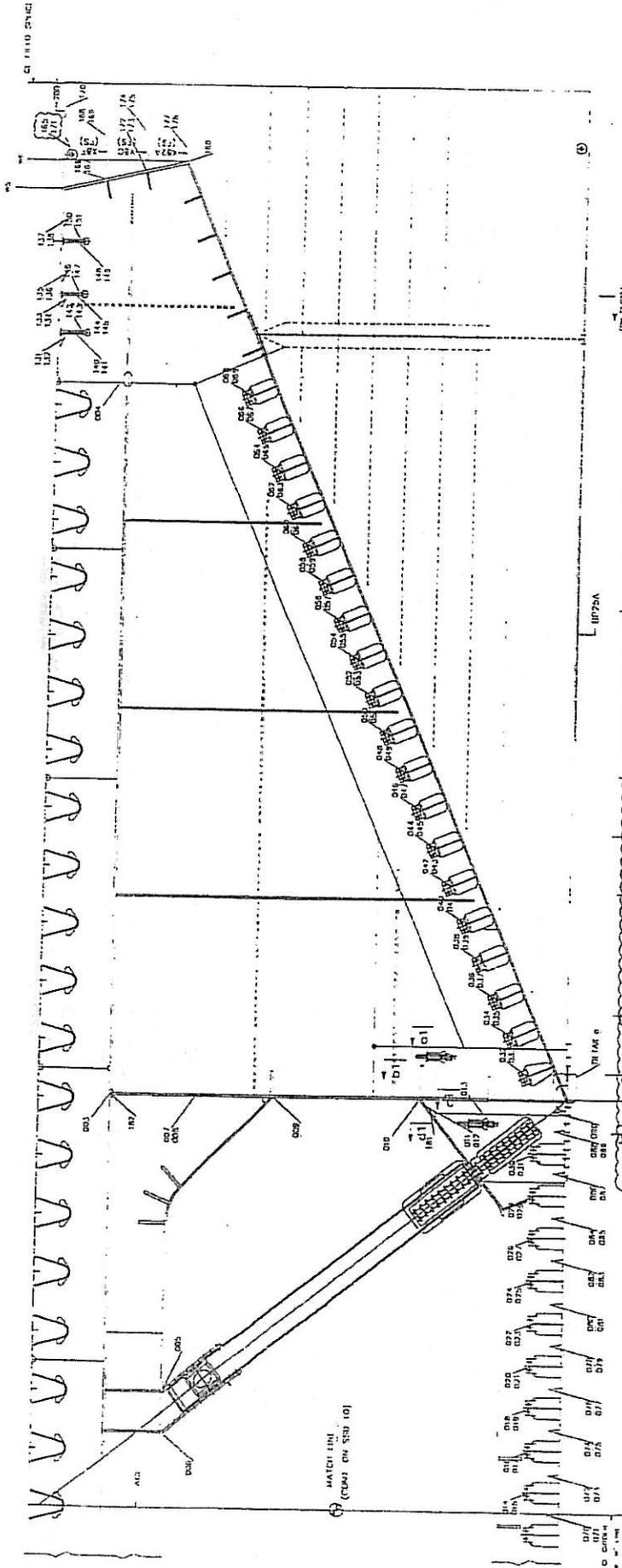
CT INSPECTOR CHECKLIST:

	Yes	No	Insp. ID#	Date
Copy of the applicable WPS in English.	<input type="checkbox"/>	<input type="checkbox"/>		
Acceptable Joint Prep; Proper Steel Backing.	<input type="checkbox"/>	<input type="checkbox"/>		
The CIP weld extends at least 50mm beyond either side of the out of tolerance root gap repair.	<input type="checkbox"/>	<input type="checkbox"/>		
The CIP weld does have reinforcing fillets equal to the replaced fillet welds.	<input type="checkbox"/>	<input type="checkbox"/>		
Acceptable 100% MT result to the backgouged area.	<input type="checkbox"/>	<input type="checkbox"/>		
Acceptable 100% UT result to the CIP weld.	<input type="checkbox"/>	<input type="checkbox"/>		
The CIP weld preparation does have a 1:1 slope or smoother transition at the ends.	<input type="checkbox"/>	<input type="checkbox"/>		

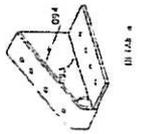
gap=6mm  $\frac{148}{149}$   $\frac{150}{151}$  gap=7mm



李平 2010-01-08



SECTION 10A-10A
SECTION 10B-10B
SECTION 10C-10C
SECTION 10D-10D
SECTION 10E-10E
SECTION 10G-10G
SECTION 10H-10H



注A  
如可能將此項設計之詳細  
請CC人員通知工務進行詳述之  
A.

1. 此圖係根據 1991 年 10 月 14 日 A-SSD10A 預備性之申請單號 188-150 核稿。而在 SSD10A 允許之位置內作修改。  
2. 此圖係根據 1991 年 10 月 14 日 A-SSD10A 預備性之申請單號 188-150 核稿。而在 SSD10A 允許之位置內作修改。

外建橋式號碼: SSD10A  
IPD000 XXX  
牌號註号  
牌號小号  
牌號車間圖號



WI I DING MAI  
SSD 10A  
1/1

He Xiao Lin 10.21.10

**DEPARTMENT OF TRANSPORTATION**

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: xx.25A**QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION****Location:** Changxing Island, Shanghai, P.R. China**Report No:** NCS-000509**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**Date:** 10-Feb-2010**Submitting Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **NCR #:** ZPMC-0577**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:** 05-Jan-2010**Description of Non-Conformance:**

During the Quality Assurance Ultrasonic Testing (UT) review of welds located on Orthotropic Box Girder (OBG) segment 7DW, this Quality Assurance Inspector (QA) discovered the following issues:

- The original welds per the approved drawing (SEGSD10A) are designated as Fillet Welds. ZPMC performed fillet weld welding knowing that the root gap exceeded the specified tolerance.
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- This Green Tag inspection was identified as: Green Tag # 004993
- OBG Segment 7DW is located in the outside yard west of Bay 13.

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

Change weld type from fillet to CJP and perform required NDT.

**Corrective action taken:**

Contractor submitted Notification for Engineer's Review and Approval form to change the weld type and CJP welds were administered at the locations noted in the NCR. After welding, Quality Control (QC) personnel performed Ultrasonic Testing (UT) at the weld locations to verify the welds are in compliance with Contract specifications. QA verified these results after receiving notification that the welds were found to be acceptable.

**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:**

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## QUALITY ASSURANCE -- NON-CONFORMANCE RESOLUTION

( Continued Page 2 of 2 )

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of Structural Materials for your project.

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**Inspected By:** Simonis,Jim

Quality Assurance Inspector

**Reviewed By:** Wahbeh,Mazen

QA Reviewer

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