



January 22, 2014

TO: Dave Jones
HQ Construction, MS: 47354

THRU: Amy Revis *AR*
OR Construction, MS: 47440

FROM: *BC* Brenden Clarke, 47440
(360) 357-2606

SUBJECT: C-8513 SR 167 Puyallup River Bridge – Bridge Replacement
Change Order No. 002 – Truss Repair

Requested Action:

Review Review and Region Execution Review and HQ Execution

Approvals Obtained:

Change Approval

Approval to Proceed

Project Engineer:	11/22/2013	11/22/2013
OR Construction:	11/22/2013	N/A
HQ Construction:	1/13/2014	N/A

Description of the Change

This change order compensates the Design-Builder for the repair of the existing steel truss panel points, gusset plates and floor stringers for the SR 167 Puyallup River Bridge to maintain the current load (traffic) carrying capacity.

Evolution of the Change

The existing SR 167 steel truss bridge is deteriorated and is being replaced under this contract. Specifically, it is load rated, restricting truck traffic to the right lane only, due to deterioration of the floor beams. The annual WSDOT bridge inspection completed in October 2013 identified severe corrosion in both the east and west trusses and missing rivets in the floor stringers. WSDOT Bridge Preservation staff determined repairs were necessary to restore structural section loss due to corrosion in order to maintain the current load carrying capacity of the bridge, and to replace lost rivets to maintain structural continuity.

Since this determination occurred after execution of the subject contract, WSDOT requested that the Design-Build contractor develop engineered design, shop drawings,

Dave Jones – HQ Construction
CO#002 – Truss Repair
Page 2

and traffic control plans necessary to complete the repairs to the bridge under Change Order #1.

Once the design effort was substantially complete and the scope of the repair was fully understood, the price for the repair work was negotiated and appropriate approvals to proceed were secured.

On January 13, 2014, Headquarters Construction granted change approval and approval to proceed for this change order. **See Attachment A.**

On November 22, 2013, Olympic Region Construction granted change approval for this change order. **See Attachment B.**

Entitlement

This change order adds work that was not anticipated in the original scope of work, but necessary to maintain the safe, load carrying capacity of the bridge. Accordingly, the Design-Build contractor is entitled to additional compensation to perform the added work in accordance with Section 1-04.4 of the contract.

Price

The total net change to the contract is \$896,649.00.

Contract Time

No extension of contract time will be granted as a result of this change order.

BC

Attachments to Memorandum

Change Order No. 001 – Truss Repair Design
Attachment A: HQ Change Approval.
Attachment B: OR Change Approval.
Attachment C: Independent Engineer's Estimate.
Change Order Checklist

**WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
CHANGE ORDER**

DATE: 01/15/14
Page 1 of 10

CONTRACT NO: 008513 FEDERAL AID NO: BR-0167(047)
CONTRACT TITLE: SR 167, PUYALLUP RIVER BRIDGE - BRIDGE REPLACEMENT
CHANGE ORDER NO: 2 TRUSS REPAIR

PRIME CONTRACTOR: XXXXXXXXXX GUY F. ATKINSON CONSTRUCTION, LLC.
707 SOUTH GRADY WAY SUITE 500
RENTON WA 98057-3224

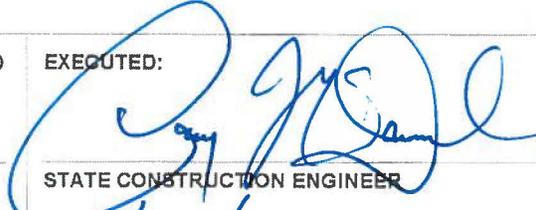
Ordered by Engineer under the terms of Section 1-04.4 of the Standard Specifications

Change proposed by Contractor

ENDORSED BY:  CONTRACTOR 01.15.14 DATE	SURETY CONSENT: ATTORNEY IN FACT DATE
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ORIGINAL CONTRACT AMOUNT: 23,220,888.00
CURRENT CONTRACT AMOUNT: 23,293,888.00
ESTIMATED NET CHANGE THIS ORDER: 896,649.00
ESTIMATED CONTRACT TOTAL AFTER CHANGE: 24,190,537.00

Approval Required: Region Olympia Service Center Local Agency

<input checked="" type="checkbox"/> APPROVAL RECOMMENDED  PROJECT ENGINEER 1/17/14 DATE	<input type="checkbox"/> EXECUTED EXECUTED:  STATE CONSTRUCTION ENGINEER 1/24/14 DATE
<input checked="" type="checkbox"/> APPROVAL RECOMMENDED REGIONAL ADMIN: K. DAYTON BY:  DATE 1/17/14	<input type="checkbox"/> EXECUTED OTHER APPROVAL WHEN REQUIRED SIGNATURE DATE REPRESENTING

**WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
CHANGE ORDER**

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CONTRACT NO: 008513

CHANGE ORDER NO: 2

All work, materials, and measurements to be in accordance with the provisions of the Standard Specifications and Special Provisions for the type of construction involved.

This contract is revised as follows:

Description:

This change order adds the Work to repair the existing SR 167 steel truss bridge to replace structural section loss due to corrosion.

Construction Requirements:

The Design-Builder shall complete the repairs to the SR 167 Puyallup River steel truss bridge as identified below. This includes the implementation of Work Zone Traffic Control, providing access to perform the Work and any containment necessary to complete the Work. Lane closures required to complete this Work will not be counted against the number of lane closures included in the original Contract. The repairs shall be completed in accordance with the details shown on pages 5 through 10 of this change order.

The repairs to be completed are as follows:

- 1) Replace section loss to the bottom chords interior Bottom Chord Angles for panels L0, L1, L2, L12, L13 and L14 of both the east and west truss.
- 2) Replace section loss to the interior and exterior Gusset Plates at L2 and L12 of both the east and west truss.
- 3) Replace missing bolts and sheared rivets on floor Stringers as identified in pages 5 and 10 of this change order.

Measurement:

No specific unit of measure will apply to the new lump sum item, "CO# 002 - Truss Repair".

Payment:

"CO# 002 - TRUSS REPAIR", lump sum, shall be full payment for all labor, tools, equipment and material costs incurred by the Design-Builder in performing the Work associated with this change order.

Release:

The Design-Builder, Atkinson-Jacobs, agrees that the Work performed under this change order, and change order No. 1, restores the bridge to the capacity at the time of bid, and that the repairs address the recommended repairs identified in the November 14, 2013 WSDOT Bridge Inspection Report, and that any future repairs associated with ATC #6 are the sole responsibility of the design-builder. By signing this change order, the Design-Builder, agrees and certifies that any and all issues, claims or disputes of whatsoever kind or nature, through execution of this change order for which WSDOT is responsible under the Contract are satisfied in full and the State of Washington is hereby released and discharged in full from said issues, claims or disputes.

WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
CHANGE ORDER

DATE: 01/15/14
Page 3 of 10

CONTRACT NO: 008513

CHANGE ORDER NO: 2

Contract Time:

No extension of contract time will be granted as a result of this change order.

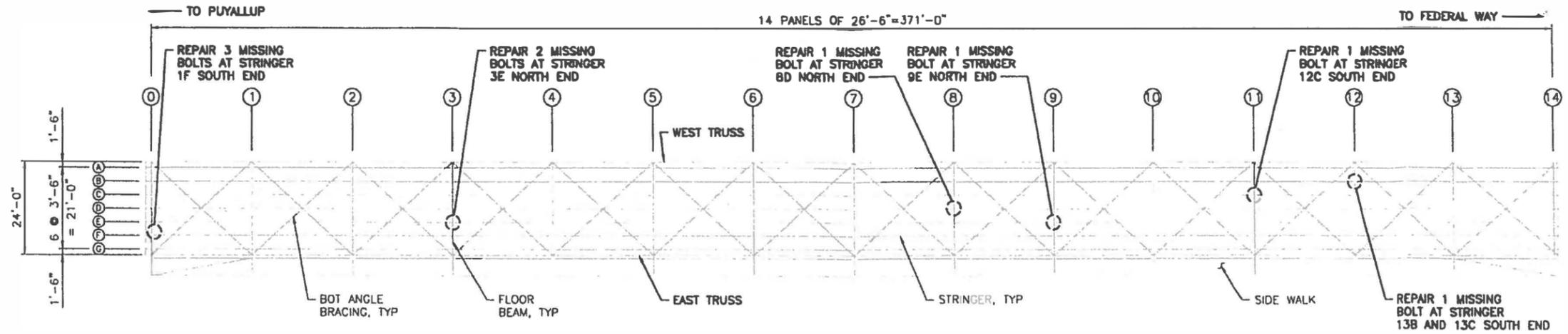
**WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION
CHANGE ORDER**

DATE: 01/15/14
Page 4 of 10

CONTRACT NO: 008513				CHANGE ORDER NO: 2			
ITEM NO	GROUP NO	STD ITEM	ITEM DESCRIPTION	UNIT MEASURE	UNIT PRICE	EST QTY CHANGE	EST AMT CHANGE

1002	01		CO# 002 - TRUSS REPAIR	L.S.	0.00	0.00	896,649.00
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896,649.00
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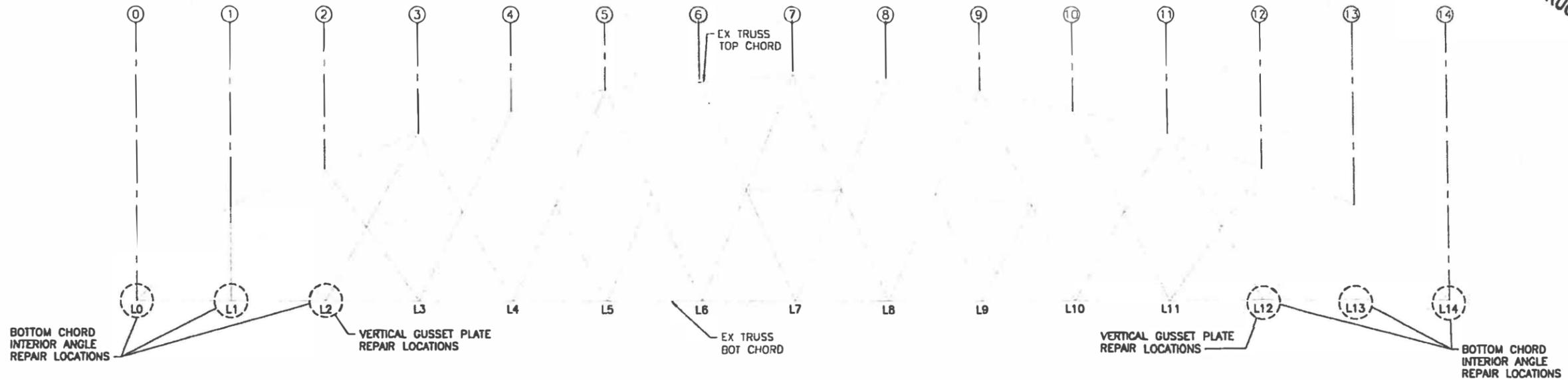


NOTE:
NOTIFY THE ENGINEER IF THE
FIELD CONDITION DOES NOT
MATCH THE DRAWING.

EXISTING TRUSS PANEL PLAN
SCALE: 1/32" = 1'-0"



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EXISTING TRUSS PANEL ELEVATION
SCALE: 1/32" = 1'-0"

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CHANGE ORDER No.: 2
CONTRACT No.: 8513

RFC SUBMITTAL

NO.	BY	DATE	REVISIONS
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DESIGNED BY
R.Q. BIN/A. BI
DRAWN BY
J. ROBERTS
DATE
01/08/14



400 - 112th Ave. NE, Suite 120
Bellevue, WA 98004
Phone: 425.453.6488
Fax: 425.453.5848

TRUSS PLAN AND ELEVATION
SR 167 PUYALLUP RIVER BRIDGE
STEEL TRUSS REPAIR

JOB NO.
13034J
SHEET NO.
S1

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GENERAL NOTES

- ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION -- DATED 2012 AND AMENDMENTS.
- EXISTING FEATURES AND DIMENSIONS ARE BASED ON INSPECTION REPORTS AND AS-BUILT DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS SHOWN IN THE PLANS AND AS-BUILT DRAWINGS FOR FIT-UP.
- ALL MISSING BOLT REPAIR AND BOTTOM CHORD INTERIOR ANGLE REPAIR SHALL BE PERFORMED WITH ONE TRAFFIC LANE CLOSURE. ALL GUSSET PLATE REPAIR WORK SHALL BE PERFORMED WITH FULL BRIDGE CLOSURE.
- EXISTING MEMBERS OR PLATES TO BE COVERED BY OR CONNECTED TO NEW STEEL MEMBERS OR PLATES SHALL BE CLEANED AND REMOVED OF FOREIGN MATERIAL, LOOSE PAINT AND RUST TO SOUND STEEL PRIOR TO INSTALLING NEW MEMBERS OR PLATES.
- USE OF PLASMA TORCH IS PERMITTED FOR RIVET REMOVAL, PROVIDED THE FOLLOWINGS ARE OBSERVED:
 - USE FOR LOCATIONS WHERE RIVET BUSTER CANNOT BE UTILIZED.
 - CARE SHOULD BE APPLIED TO LIMIT THE PLASMA FLAME TO ONLY THE RIVET.
 - CONNECTING MEMBERS' TEMPERATURE SHALL NOT BE RAISED ABOVE 600 DEGREES FAHRENHEIT.
 - PLASMA TORCH SHALL NOT BE USED TO ENLARGE RIVET HOLES.
- RE-USING BOLTS FOR PERMANENT CONITION SHALL NOT BE PERMITTED. RE-USING BOLTS FOR TEMPORARY CONDITION (E.G. BETWEEN TRAFFIC CLOSURES) IS PERMITTED.
- IF CONTRACTOR FAILS TO COMPLETE INDIVIDUAL GUSSET PLATE INSTALLATIONS OR INDIVIDUAL ANGLE REPAIRS AT PANEL POINTS L0 AND L14 PRIOR TO RE-OPENING THE BRIDGE TO TRAFFIC, CONTRACTOR SHALL INSTALL TEMPORARY BOLTS TO SNUG TIGHT CONDITION FOR ALL REMOVED RIVETS PRIOR TO RE-OPENING THE BRIDGE TO TRAFFIC.

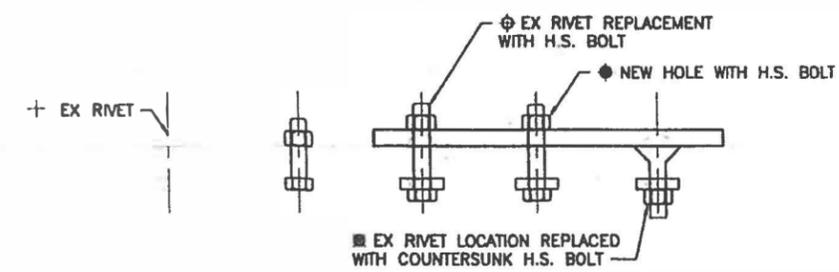
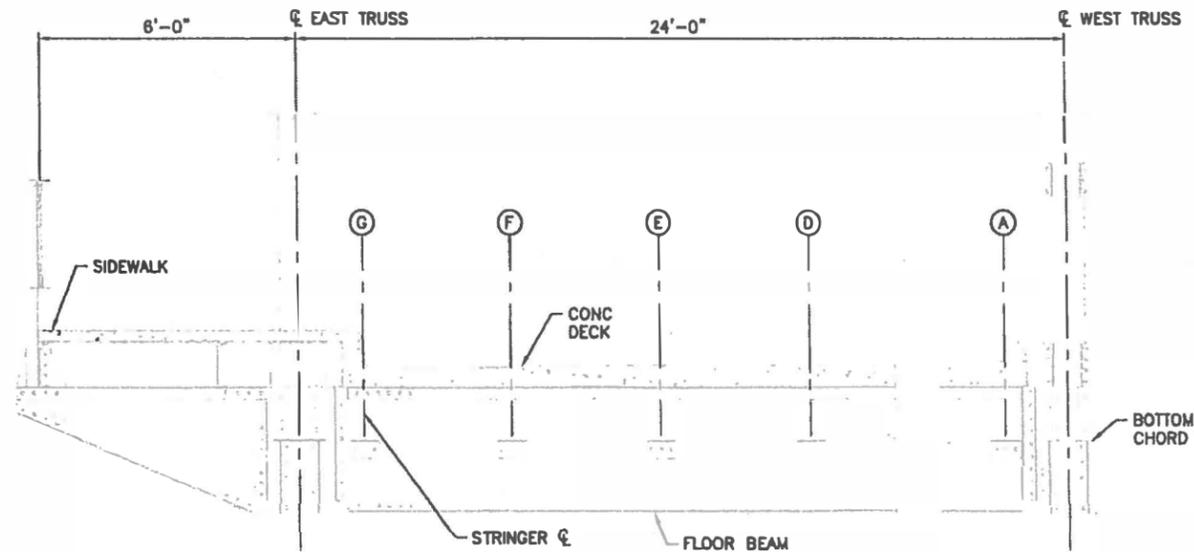
STRUCTURAL NOTES

- ALL STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:
 - PLATES AND GUSSET PLATES - AASHTO M270 OR ASTM A36.
 - ANGLES - AASHTO M270 OR ASTM A36.
 - H.S. BOLTS - AASHTO M164 TYPE 1 PLAIN FINISH WITH THREAD EXCLUDED FROM THE SHEAR PLANE OR APPROVED EQUAL.
- PRIOR TO STARTING ANY RIVET REMOVAL, CONTRACTOR SHALL SUBMIT REMOVAL METHODS FOR APPROVAL BY THE PROJECT ENGINEER. APPROVAL WILL REQUIRE DEMONSTRATION BY CONTRACTOR TO ENSURE NO DAMAGE WILL OCCUR TO EXISTING MEMBERS THAT REMAIN. IF IT IS NECESSARY TO CUT OPENINGS IN THE FIRST STRINGER WEB PLATE FOR HOLE DRILLING ACCESS, CONTRACTOR SHALL SUBMIT OPENING SIZE AND LOCATION, STRINGER SHORING PLANS, AND WEB PLATE REPAIR PLAN FOR APPROVAL BY THE PROJECT ENGINEER.
- HIGH STRENGTH BOLTS SHALL CONFORM TO SECTION 9-08.5(3) AND SHALL BE 7/8" OR LARGER. NUTS AND WASHERS SHALL CONFORM TO SECTION 9-08.5(3). ALL HOLES FOR 7/8" BOLTS SHALL BE 15/16".
- DO NOT DAMAGE EXISTING STEEL DURING RIVET REMOVAL. ALL MISSING OR SECTION LOSS RIVETS SHALL BE REPLACED WITH HIGH STRENGTH BOLTS AS NOTED IN THE PLANS.
- ALL NEW STRUCTURAL STEEL SHALL BE COATED WITH SHOP PRIMER. ALL STEEL EXPOSED AFTER INSTALLATION IS COMPLETED SHALL BE COATED WITH COLD GALVANIZING COMPOUND MANUFACTURED BY RUST-OLEUM OR APPROVED EQUAL.
- HOLES REMAINING IN STEEL MEMBER OR PLATES UPON REMOVAL OF EXISTING RIVETS SHALL BE FILLED WITH FULLY TENSION AASHTO M164 BOLTS IN ACCORDANCE WITH SECTION 6-D3.3(33) UNLESS OTHERWISE NOTED.

- ALL NEW BOLT HOLES IN EXISTING MEMBERS OR PLATES SHALL BE MATCH-DRILLED IN THE FIELD. HOLES IN THE NEW STEEL MEMBER OR PLATE CORRESPONDING WITH EXISTING RIVETS SHALL BE FIELD DRILLED TO MATCH EXISTING LOCATIONS. FIELD DRILLED HOLES FOR 7/8" BOLTS IN NEW STEEL MEMBERS SHALL MATCH EXISTING RIVET LOCATIONS. CONTRACTOR MAY INCREASE HOLE SIZE FROM 15/16" TO 1" IF 15/16" HOLE CANNOT BE ACHIEVED.
- CONTRACTOR SHALL ANTICIPATE MISALIGNMENT OF HOLES IN EXISTING CONNECTIONS WITH MULTIPLE PLIES OF STEEL. HOLES SHALL BE REAMED TO BOLT DIAMETER PLUS 1/16" (E.G. HOLES FOR 7/8" RIVETS SHALL BE 15/16" MAXIMUM) AND CONTRACTOR SHALL UPSIZE BOLTS AS NEEDED. THE PROJECT ENGINEER SHALL BE NOTIFIED OF ANY LOCATIONS WHERE THE HOLES EXCEED THE SPECIFIED HOLE SIZE LIMITS.
- BOLTS CONNECTING CHANNEL LEGS REQUIRE A BEVELED WASHER ABUTTING THE LEG OF THE CHANNEL.
- SEE SHEET S5 FOR GUSSET PLATE INSTALLATION SEQUENCE.

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CHANGE ORDER No.: 2
CONTRACT No.: 8513

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TYPICAL SECTION THRU ROADWAY
SCALE: 1/4" = 1'-0"

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R.Q. BIN
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J. ROBERTS
DATE
01/08/14



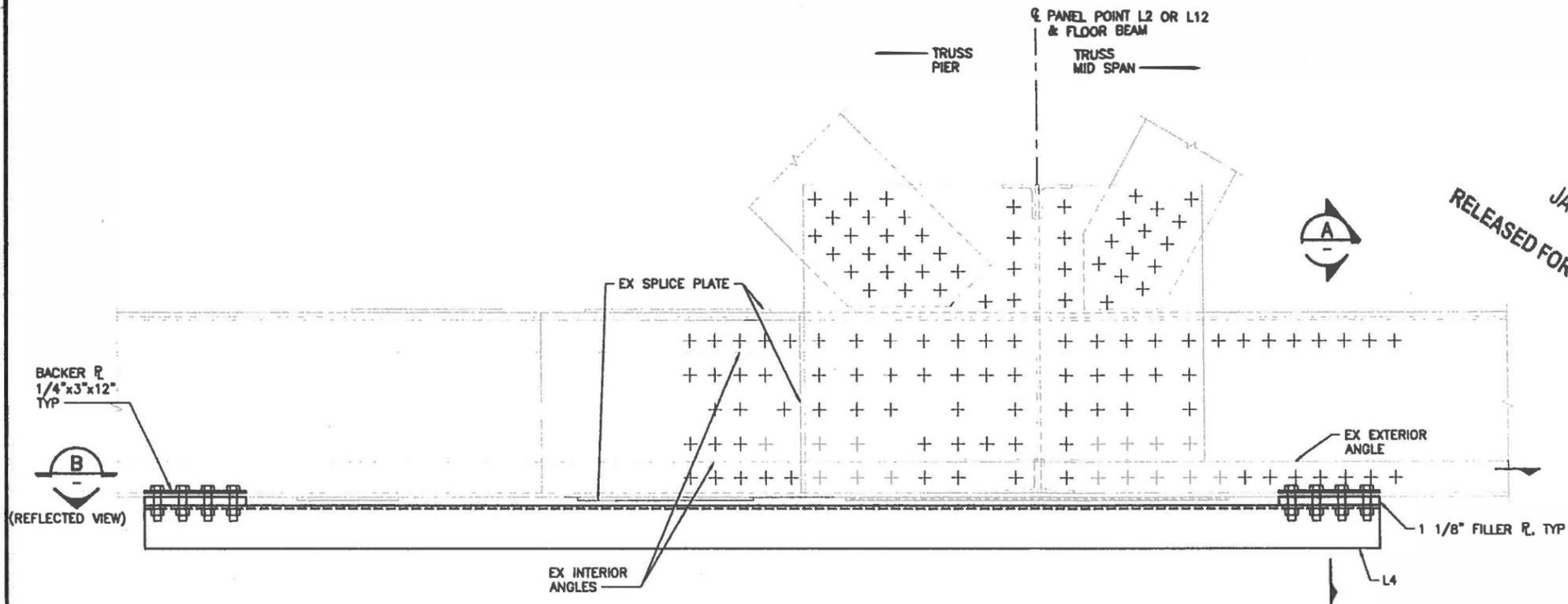
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STRUCTURAL NOTES AND
TYPICAL SECTION
SR 167 PUYALLUP RIVER BRIDGE
STEEL TRUSS REPAIR

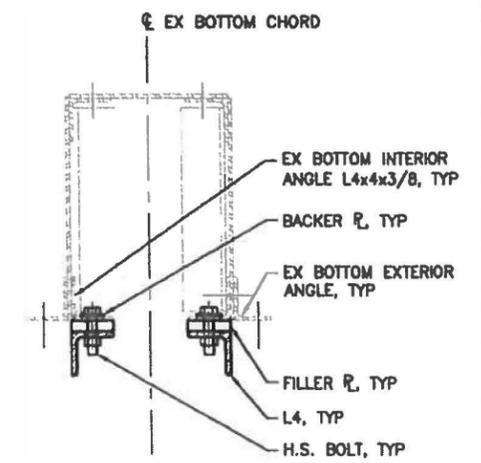
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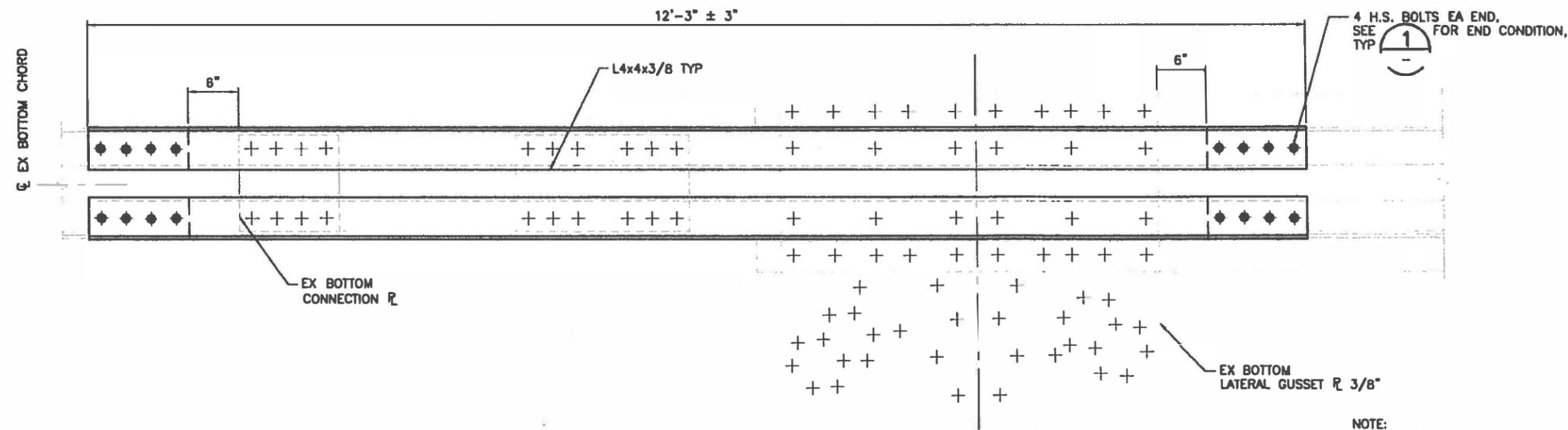
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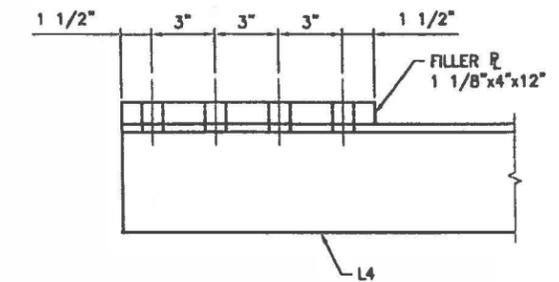
PANEL POINT L2 ELEVATION VIEW (L12 SIM)
 SCALE: 3/4" = 1'-0" (GUSSET PLATE REPAIR NOT SHOWN, SEE S5 FOR DETAILS)



SECTION A
 SCALE: 3/4" = 1'-0"



SECTION B (REFLECTED VIEW)
 SCALE: 3/4" = 1'-0"



DETAIL 1
 SCALE: 1 1/2" = 1'-0"

NOTE:
 EXISTING CONDITION SHOWN ON THESE DRAWINGS SHALL BE VERIFIED IN THE FIELD. THE LENGTH OF THE ANGLE SHALL BE ADJUSTED TO FIT.

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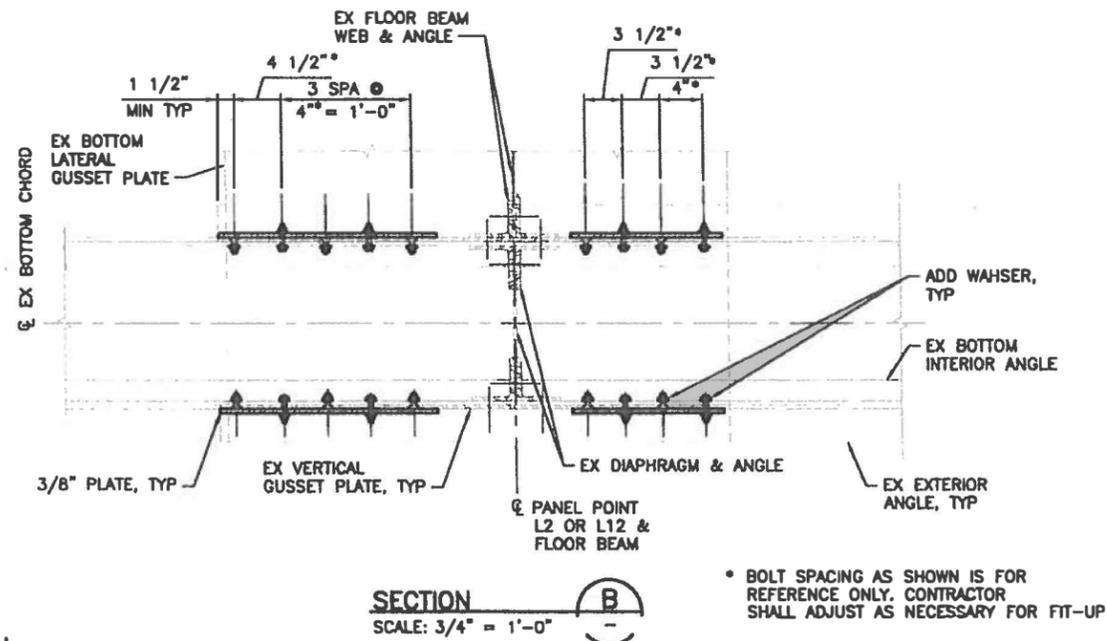
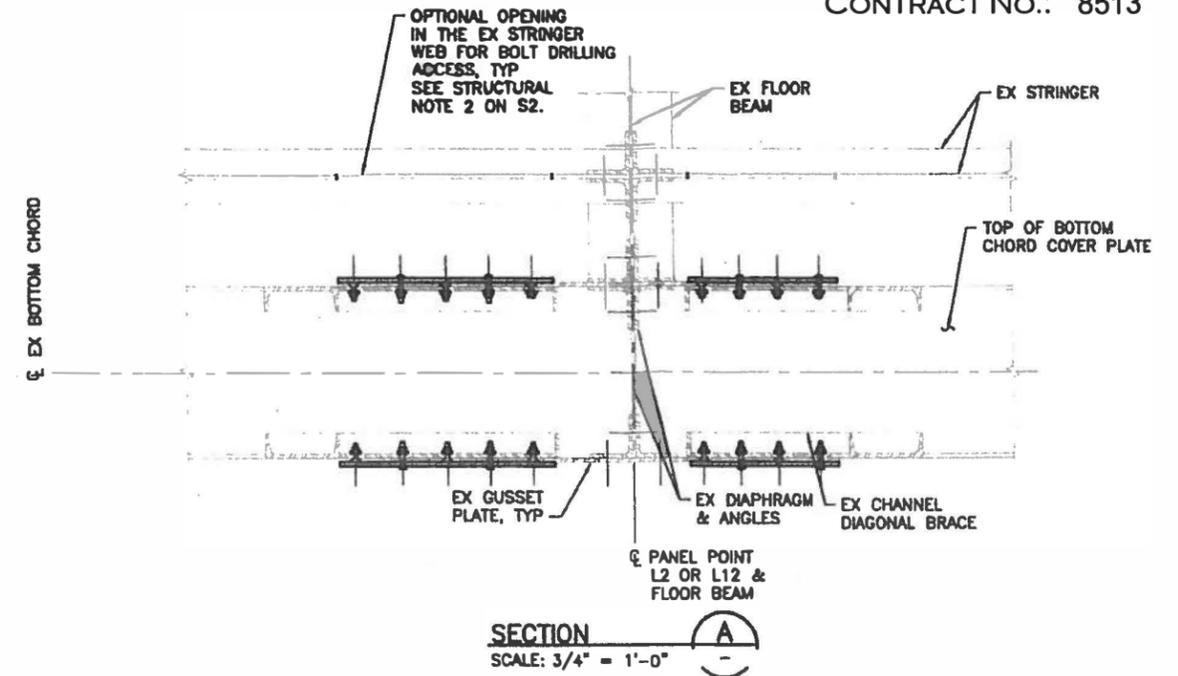
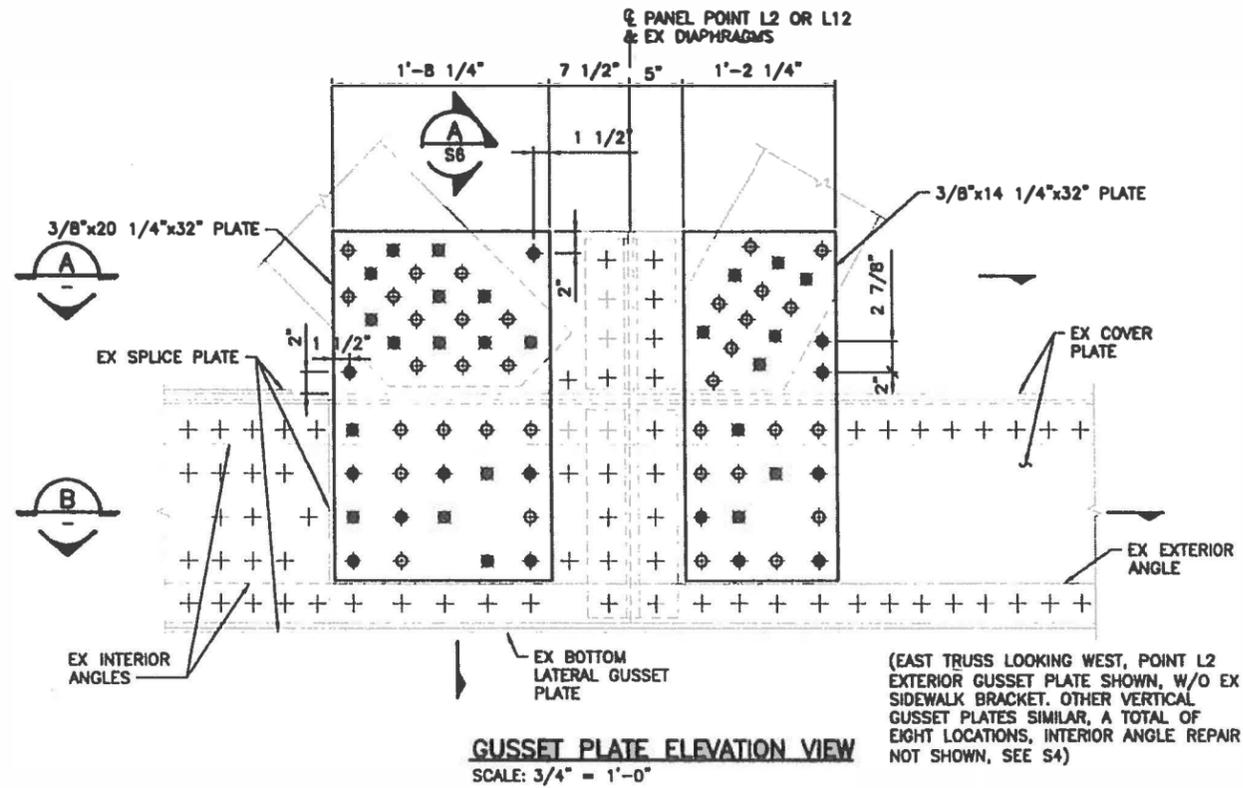
DESIGNED BY
 A. BI
 DRAWN BY
 J. ROBERTS
 DATE
 01/08/14



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INTERIOR ANGLE REPAIR PANEL POINTS L2 & L12	JOB NO. 13034J
SR 167 PUYALLUP RIVER BRIDGE STEEL TRUSS REPAIR	SHEET NO. S4

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GUSSET PLATE INSTALLATION SEQUENCE*

CONTRACTOR SHALL WORK ON ONE GUSSET PLATE PER TRUSS AT A TIME. AT CONTRACTOR'S OPTION, CONTRACTOR MAY WORK ON ANOTHER GUSSET PLATE ON THE OPPOSITE TRUSS PROVIDED THAT IT LOCATES ON THE OPPOSITE END OF THE BRIDGE. FOR EXAMPLE, CONTRACTOR MAY WORK ON PANEL POINTS L2 (WEST) AND L12 (EAST) CONCURRENTLY.

1. CLOSE TRUSS BRIDGE TO ALL PUBLIC TRAFFIC PER TRAFFIC CONTROL PLAN.
2. INSTALL DEBRIS CONTAINMENT MEASURES PER BLACK ROCK NW'S WORK PLAN.
3. WITH ONE RIVET BEING REMOVED AT A TIME, REPLACE SPECIFIED RIVETS WITH COUNTERSUNK HIGH STRENGTH BOLTS UNTIL ALL COUNTERSUNK HIGH STRENGTH BOLTS ARE INSTALLED.
4. REMOVE REMAINING RIVETS, INSTALL PLATE AND HIGH STRENGTH BOLTS - ALL BOLTS MUST BE INSTALLED & TENSIONED PRIOR TO REOPENING TO TRAFFIC. IF PLATE INSTALLATION CANNOT BE COMPLETED IN THE SAME SHIFT AS RIVET REMOVAL, TEMPORARY BOLTS WILL BE REQUIRED. SEE GENERAL NOTE 7 ON S2.
5. DRILL ADDITIONAL NEW HOLES IN GUSSET PLATE AND INSTALL HIGH STRENGTH BOLTS WHERE THEY ARE SHOWN IN THE PLAN.
6. REPEAT STEPS 3 THROUGH 5 UNTIL ALL SPECIFIED GUSSET PLATES ARE INSTALLED.

* THE SPECIFIED INSTALLATION SEQUENCE SHALL ALSO BE APPLIED TO ANGLE INSTALLATION AT PANEL POINTS L0 AND L14.

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 JAN 09 2014
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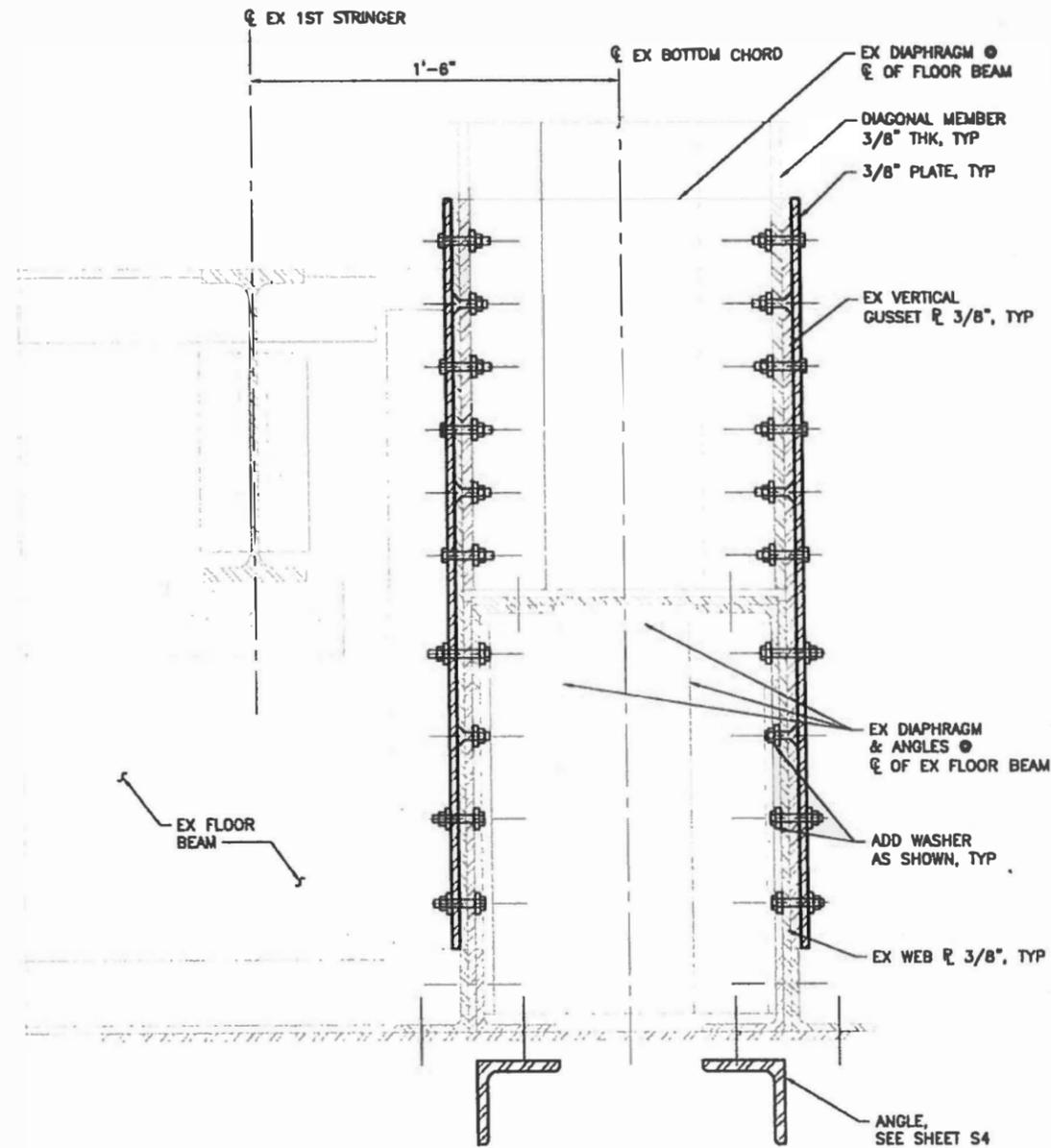


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SR 167 PUYALLUP RIVER BRIDGE
 STEEL TRUSS REPAIR

JOB NO.
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SECTION **A**
 SCALE: 1 1/2" = 1'-0" S5

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 DATE
 01/08/14



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GUSSET PLATE REPAIR
 DETAILS
 SR 167 PUYALLUP RIVER BRIDGE
 STEEL TRUSS REPAIR

JOB NO.
 13034J
 SHEET NO.
 S6