

CITY OF KENORA
KEEWATIN CHANNEL BRIDGE
RECOATING AND STEEL REPAIR PROJECT
ADDENDUM #4
MAY 30, 2025

Attached is Addendum #4 dated May 30, 2025 to the Tender Documents for the City of Kenora Keewatin Channel Bridge Recoating and Steel Repair Project.

Please incorporate this Addendum to your tender and return the acknowledgement form below **with your bid submission**.

Yours truly,

STANTEC CONSULTING LTD.

Eric Tranquada, B.Env.D., P.Eng.

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Phone: 204-228-2574
Email: eric.tranquada@stantec.com

We have received Addendum #4 to the Tender Documents for the City of Kenora Keewatin Channel Bridge Recoating and Steel Repair Project.

Date: _____

Time: _____

Company: _____



CITY OF KENORA
KEEWATIN CHANNEL BRIDGE
RECOATING AND STEEL REPAIR PROJECT
ADDENDUM #4
MAY 30, 2025

This Addendum is being issued to revise portions of the tender documents, or provide additional information for the City of Kenora Keewatin Channel Recoating and Steel Repair Project. In the event of conflicts, this Addendum shall govern over all earlier documents.

1.0 INTENT

This Addendum is issued prior to Tender Closing and shall become an integral part of the Tender, Specifications and Contract Documents for the project.

2.0 DRAWING UPDATES

Refer to the attached revised drawings to reflect the following modifications:

S-102 (Sheet 4 of 8)

Removal of Repair Detail 5 at select locations

S-104 (Sheet 6 of 8)

Update to batten plates to accurately reflect total number of existing rivets

S-105 (Sheet 7 of 8)

Update to bolt dimensions for Repair Detail 5, as well as modification to Repair Detail 5 at Pier 8 south side.

S-106 (Sheet 8 of 8)

Batten plate dimensions have been updated

Lattice bar dimensions have been updated

3.0 RESPONSES TO BIDDER QUESTIONS

- .1 Will there be liquidated damages or a bridge occupancy cost included with this contract?*
 - a. No.
- .2 Please confirm existing rivet diameters connecting the batten plates and lattice plates.*
 - a. Rivet heads were measured on-site and varied between 38 mm and 40 mm diameter. Rivet shank was not measured.



4.0 SPECIFICATION MODIFICATIONS

Section 1 General

.1 From 1.15 Quality Control, the following clause 1.15.6:

The Contractor shall retain the services of an independent testing agency under supervision of a registered Professional Engineer, and pay the cost of testing services for quality control including, but not limited to, the following:

- a. Sieve analysis of sands and aggregates to be supplied to the work.
- b. Any product testing that is required and is specified under various sections of the Specifications.
- c. Base coat and topcoat thickness testing.
- d. Adhesion testing of new coatings.

Shall now state:

The Contractor shall retain the services of an approved third-party AMPP Level 2 or 3 inspector and pay the cost of testing services for quality control including, but not limited to, the following:

- a. Primer, intermediate and topcoat thickness testing.
- b. Adhesion testing of new coatings.

.2 Delete the following clause 3.2.5:

No lane restrictions nor closures on Highway 17 shall be permitted between June 28 to September 2, 2019, inclusive.

Section 4 Steel Repair and Protective Coating

.1 From 4.5 Submittals, the following clause 4.5.2:

The Contractor shall prepare and submit a list of Shop drawings and include all elements required to perform the safe removal and application of the structural repairs and painting system. The list shall include critical path items and proposed delivery dates for each item. The list shall be updated regularly and shall be submitted to the Consultant on a timely basis. Shop Drawings should be submitted a minimum of 14 days ahead of the Work.

Shall now state:

The Contractor shall prepare and submit a list of Shop drawings and include all elements required to perform the safe removal and application of the structural repairs and painting system. The list shall include critical path items and proposed delivery dates for each item. The list shall be updated regularly and shall be submitted to the Consultant on a timely basis. **Shop** Drawings should be submitted a minimum of 14 days ahead of the Work.

.2 From 4.5 Submittals, the following clause 4.5.3:



Work affected by the submittal or technical data sheet shall not proceed prior to the review by the Consultant. The contractor shall review by accompanied by the a signed review stamp for all submittal prior to sending them to the Consultant. The Contractors review represents the necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with the requirements of the Work and the Contract Documents.

Shall now state:

Work affected by the submittal or technical data sheet shall not proceed prior to the review by the Consultant. The Contractor's review shall be accompanied by a signed review stamp for all submittals prior to sending them to the Consultant. The Contractor's review represents that the necessary requirements have been determined and verified, and that each submittal has been checked and coordinated with the requirements of the Work and the Contract Documents.

.3 From 4.5.2 Material Samples, the following clause 4.5.2.2:

Colour and application samples for all primer and topcoats and stripe coats shall be provided prior to beginning of coating removals on-site. Samples for all coating stages shall be applied to a single 6 mm thick steel plate as in the field, with consecutive coating stages exposed; refer to Table 1 below. Each exposed sample zone shall be minimum 75 mm x 100 mm. The following demonstrates the various layers (zones) of a typical 2-coat coating system, applied to a plate 100 mm x 530 mm x 6 mm.

Table 1 - Coating sample zone description

Sample Zone					
	1	2	3	4	5
Steel	Top	Y	Y	Y	Y
Primer Stripe		Top	Y	Y	Y
Primer Spray			Top	Y	Y
Topcoat Stripe				Top	Y
Topcoat Spray					Top

Shall now state:

Colour and application samples for all primer and topcoats and stripe coats shall be provided prior to beginning of coating removals on-site. Samples for all coating stages shall be applied to a single 6 mm thick steel plate as in the field, with consecutive coating stages exposed; refer to Table 1 below. Each exposed sample zone shall be minimum 75 mm x 100 mm. The following demonstrates the various layers (zones) of a typical **3-coat** coating system, applied to a plate 100 mm x 530 mm x 6 mm.



Table 1 - Coating sample zone description

Sample Zone							
	1	2	3	4	5	6	7
Steel	Top	Y	Y	Y	Y	Y	Y
Primer Stripe		Top	Y	Y	Y	Y	Y
Primer Spray			Top	Y	Y	Y	Y
Intermediate Stripe				Top	Y	Y	Y
Intermediate Spray					Top	Y	Y
Topcoat Stripe						Top	Y
Topcoat Spray							Top

.4 From 4.5.2 Material Samples, the following clause 4.5.2.3:

Materials samples for all types of coating products applied during the course of the project (primer, topcoats and stripe coats, galvanizing touch-ups, etc.) shall be supplied to the Consultant after demobilization from site. Material samples shall be supplied in 1-gallon (minimum) kits, unopened and unmixed, as delivered from the coating manufacturer. Each container shall be physically marked with product name, batch number, and expiry date, as well as project name (T2024-G –). Samples shall be accompanied by copies of product data sheets (PDS), safety data sheets (SDS) and manufacturer's quality certification for the specific batches provided. Expiry date of samples shall be minimum 12 months from date of delivery to the Consultant.

Shall now state:

Materials samples for all types of coating products applied during the course of the project (primer, topcoats and stripe coats, galvanizing touch-ups, etc.) shall be supplied to the Consultant after demobilization from site. Material samples shall be supplied in 1-gallon (minimum) kits, unopened and unmixed, as delivered from the coating manufacturer. Each container shall be physically marked with product name, batch number, and expiry date, as well as project name (**Keewatin**). Samples shall be accompanied by copies of product data sheets (PDS), safety data sheets (SDS) and manufacturer's quality certification for the specific batches provided. Expiry date of samples shall be minimum 12 months from date of delivery to the Consultant.

.5 From 4.5.4 Quality Control Plan, add new bullet to 4.5.4.4. as shown below with subsequent bullets sequentially re-numbered:

The following minimum coating Quality Control inspections are required each day as applicable and will be included in the Inspection and Testing Plan (ITP):

- a) Pressure washing;

.6 From 4.5.4 Quality Control Plan, the following clause 4.5.4.4.r.:

Final drying prior to exposure to the elements;



Shall now be 4.5.4.4.s. and state:

Final drying **and curing** prior to exposure to the elements;

.7 From 4.5.8 Lead (Toxic Metal) Health and Safety Compliance Program, add the following clause 4.5.8.4:

The Contractor shall have a SSPC C3 trained representative on-site at all times during abrasive blasting.

.8 Delete all clauses within 4.8.5 Coatings (Paint) and replace with the following:

- .1 All coating materials, thinners, and reducers shall be from the same manufacturer. See Table 3 for acceptable coating systems.
- .2 Acceptable coating systems are approved by NEPCOAT (List 'B') – organic zinc-rich primer three-coat system; these approved coatings change from time to time, so alternative products may be found to be acceptable at time of application. Acceptable coating systems employ organic zinc primers.
- .3 The Contractor shall supply all coating related materials necessary to meet the specification and complete the work.
- .4 All materials used in the work shall comply with VOC emission requirements- EPA Clean Air Act 1977.
- .5 The finish coat shall meet the gloss and colour requirements of Table 3.



Table 2 - Acceptable Coating Systems and Requirements

Table 5.6-1 Acceptable Coating Systems and Requirements				
Product: (OZ/EP/PU)	DFT mils (um)	VOC g/l (lb./g) EPA Method 24	Primer Slip Rating	Primer Restrictions when Applied to Joints
Manufacturer: Carboline (NEPCOAT System)				
Primer Carbozinc 859	3-10 (75-250)	322	B	6 mil max. DFT 4-day min. cure 10% max. thin
Intermediate: Carboline 893	3-6 (75-150)	207		
Topcoat: Carboline 133 VOC	3-5 (76-127)	185 es (with exempt solvent)		
Manufacturer: Carboline (NEPCOAT System)				
Primer Carbozinc 859	3-10 (75-250)	342	B	6 mil max. DFT 4-day min. cure 10% max. thin
Intermediate: Carboline 893	3-6 (75-150)	218		



Topcoat: Carboline 133 VOC	3-5 (76-127)	254		
Manufacturer: Sherwin Williams (NEPCOAT System)				
Primer Zinc Clad 4100	3-5 (75-120)	319	B	5 mil max. DFT 72 hr. cure 5% max. thin
Intermediate: Macropoxy 646 FC	3-10 (75-250)	265		
Topcoat: Hi-Solids Polyurethane 250	3-4 (75-100)	234 es (with exempt solvent)		
Manufacturer: Sherwin Williams (NEPCOAT System)				
Primer: Zinc Clad 4100	3-5 (75-125)	336	B	5 mil max. DFT 72 hr. cure 5% max. thin
Intermediate: Macropoxy 646 FC	3-10 (75-250)	229		
Topcoat: Acrolon 218 HS	3-6 (75-150)	276		
Manufacturer: Sherwin William (NEPCOAT System)				
Primer: Zinc Clad 4100	3-5 (75-125)	333	B	5 mil max. DFT 72 hr. cure 5% max. thin
Intermediate: Macropoxy 646 FC	3-8 (75-200)	290		
Topcoat: Acrolon 218 HS	3-6 (75-150)	254		
Manufacturer: PPG Industries (NEPCOAT System)				
Primer: Sigmazinc 70 DOT	2-7 (50-177)	257	B	5 mil max. DFT 72 hr. cure 5% max. thin
Intermediate: PPG DTM	4-8 (100-200)	234		



Epoxy 202 DOTC				
Topcoat: Pitthane Ultra DOT 95-812	2-3 (50-75)	250		

Table 3 - Acceptable Bridge Coating Colours and Gloss

Where Used	Gloss	RAL Number	RGB Coordinates
General Bridge Topcoat	Gloss	7040	154, 162, 164

.9 From 4.9 Coating Requirements, the following clause 4.9.8:

The coating system shall consist of an Organic Zinc/Polysiloxane (OZPS) system. A stripe coat of primer shall be applied after the full coat of primer.

Shall now state:

The coating system shall consist of a Zinc/Epoxy/Polyurethane (OZ/EP/PU) system. A stripe coat of primer shall be applied after the full coat of primer.

.10 From 4.9.4 New Steel, the following clause 4.9.4.11:

The coating system shall consist of an Organic Zinc/Polysiloxane (OZ/PS) system. A stripe coat of primer shall be applied after the full coat of primer.

Shall now state:

The final coating system shall consist of a Zinc/Epoxy/Polyurethane (OZ/EP/PU) system. A stripe coat of primer shall be applied after the full coat of primer.

.11 Delete the following clause 4.9.4.15:

New galvanizing that is painted, after cleaning (SSPC-SP16), one of the above coats is applied, Polysiloxane (PS).

.12 From 4.10 Existing Steel, the following clause 4.10.1:

The repair areas to be prepared to be coated are shown in the drawings provided and receive same the OZPS system used for shop painting new steel.

Shall now state:

The repair areas to be prepared to be coated are shown in the drawings provided and receive same the OZ/EP/PU system used for shop painting new steel.

.13 From 4.10.5 In-Fill Areas in the field, the following clause 4.10.5.1:

Sharp areas of weld shall be ground to a 2 mm radius. All weld spatter and other detritus shall be removed. Infill surfaces may be cleaned to either SSPC SP10 or SSPC SP11. Surface profile shall be a minimum 50 to 100 µm (2-4 mils) and sharp. Primer thickness shall be measured from the top of profile. This area will be filled



in by lapping the successive layers of in-fill coating over the feathered edges of the existing coating. The in-fill coating shall be the OZPS coating system.

Shall now state:

Sharp areas of weld shall be ground to a 2 mm radius. All weld spatter and other detritus shall be removed. Infill surfaces may be cleaned to either SSPC SP10 or SSPC SP11. Surface profile shall be a minimum 50 to 100 µm (2-4 mils) and sharp. Primer thickness shall be measured from the top of profile. This area will be filled in by lapping the successive layers of in-fill coating over the feathered edges of the existing coating. The in-fill coating shall be the OZ/EP/PU coating system.

.14 Delete Section 4.10.6 Organic Zinc Polysiloxane and replace with the following new 4.10.6 Organic Zinc/Epoxy/Polyurethane System (OZ/EP/PU):

- .1 This is the standard coating system for the Work. It assumes that washing and surface preparation has been done and the surface meets these Specifications immediately prior to coating application.
- .2 The system consists of a stripe coat of zinc primer, full coat of zinc primer, stripe coat of epoxy intermediate, full coat of epoxy intermediate, stripe coat of urethane finish, and a full coat of urethane finish.
- .3 Each coat shall be mixed, thinned, and applied according to the coating manufacturers' instructions and this specification. Required thicknesses are shown in Table 2, in Section 4.8.5 Coatings (Paint). All coats shall be free of skips, misses, dry spray, overspray, runs, sags, or other defects. Coating thickness shall be measured using wet film thickness gages according to ASTM D4414 during application. Dry film thickness shall be measured according to SSPC-PA2. Verification of gage accuracy shall be according to ASTM D7091. In the event of a dispute, destructive testing according to ASTM D4138 can be used. The Contractor shall touch up all test areas.
- .4 Stripe coats of the primer shall be applied to all edges, outside corners, seams, bolt heads and nuts, all rivet heads, edges of flanges and plates, welds, sharp edges, in general all edges, shall receive one stripe coat, by brush only, of the same primer as the Full Prime Coat. Striping shall extend a minimum of 25 mm from the edge. The prime coat shall at a minimum, be set-to-touch before the stripe coat is applied. No dry film thickness is specified for this coat. This coat shall be tinted as allowed by the manufacturer to be in contrast to the full prime coat. The tinting agent shall be the paint manufacturer's approved tinting agent.
- .5 Once the full coat of primer is dry-to-recoat per the manufacturer's written instructions, a stripe coat of intermediate shall be applied, followed by full application of intermediate coat. The full coat of intermediate shall be applied by spray.
- .6 Once the epoxy intermediate coat is dry-to-recoat per the manufacturer's instructions, a stripe coat of urethane topcoat shall be applied, followed by the full topcoat. The full topcoat shall be spray-applied according to the Manufacturer's Product Data Sheet.
- .7 All full coats shall be a colour that contrasts with the coating layer(s) above and/or below. Coating colours shall be provided in the sample described in 4.5.2.
- .8 Topcoat colour shall be per Table 3, in Section 4.8.5 Coatings (Paint).



.15 From 4.10.8 Field touch-up of coating, the following clause 4.10.8.1:

Damaged areas of the new OZ/PS system will be assessed by the Owner's representative. Minor damage shall be repaired by taking the damaged area back to a clean, profiled metal surface, by abrasive blast cleaning to SSPC-SP10 or SSPC-SP11 then feathering out the damaged area into surrounding sound coating. Then successive layers of coating are added, each overlapping the previous by a minimum 25 mm until the coating system is fully reinstated. Note that the surrounding topcoat shall be lightly abraded to enhance the adhesion of the repair topcoat. The Consultant may at their sole discretion allow alternative repair procedures, if the damage is very minor. Major damage will be assessed on a case by case basis.

Shall now state:

Damaged areas of the new OZ/EP/PU system will be assessed by the Owner's representative. Minor damage shall be repaired by taking the damaged area back to a clean, profiled metal surface, by abrasive blast cleaning to SSPC-SP10 or SSPC-SP11 then feathering out the damaged area into surrounding sound coating. Then successive layers of coating are added, each overlapping the previous by a minimum 25 mm until the coating system is fully reinstated. Note that the surrounding topcoat shall be lightly abraded to enhance the adhesion of the repair topcoat. The Consultant may at their sole discretion allow alternative repair procedures, if the damage is very minor. Major damage will be assessed on a case by case basis.

.16 Delete all clauses from Section 4.10.9 Field installed steel and bolts, and replace with the following clauses:

- .1 Except for connections and areas to be field welded, the new steel is to be coated with the full OZ/EP/PU system. Welded areas are bare steel and connections and splice plates are primed only. New bird screens and hatch covers are to be hot dipped galvanized prior to coating.
- .2 Welded areas shall be blast cleaned to SSPC-SP10 according to Section 6.7.1.5 and the surrounding coating feathered. Upon approval of, SSPC-SP11 may be used in lieu of blast cleaning. SSPC VIS 3 can be used as an aid in determining the appearance of SSPC-SP11. All three coats of the OZ/EP/PU system shall be applied, overlapping onto the surrounding feathered coating.
- .3 Bolted connections and splice plates shall be pressured washed to remove dirt, dust, grease, oil, and surface interference material. The step-down area of the intermediate and overlap areas of the finish shall be sanded to remove gloss.
- .4 Damage to the primer shall be prepared according to SSPC-SP11 and the area spot-primed with organic zinc.
- .5 The epoxy stripe and full intermediate coats shall be applied to all exposed zinc primer, galvanized bolts, and nuts, and overlapped onto the exposed intermediate in the step-down area.
- .6 The polyurethane finish shall be applied to all visible intermediate coat and overlapped onto the polyurethane.

.17 From 4.10.10 High strength bolts (galvanized) – after installation, the following clause 4.10.10.6:



Coating damage from tensioning bolts shall be repaired at the same time as the touch up. If the area is excessive in the opinion of the Consultant's, it shall be repaired by cleaning to SSPC SP 11, then primed, striped and finally topcoated.

Shall now state:

Coating damage from tensioning bolts shall be repaired at the same time as the touch up. If the area is excessive in the opinion of the Consultant's, it shall be repaired by cleaning to SSPC SP 11, then primed, striped, mid-coated, and finally topcoated.

.18 From 4.11.4 Caulking, the following clause 4.11.4.2:

Caulking in a 2-coat system (exterior) shall be applied after the prime coat has cured. Caulking on a 2-coat system (interior) shall be applied after prime coat has cured. The topcoat shall not be applied until the caulking has fully cured in accordance with the manufacturer's recommendations.

Shall now state:

Caulking in a 3-coat system shall be applied after the intermediate coat has cured in accordance with the manufacturer's recommendations.

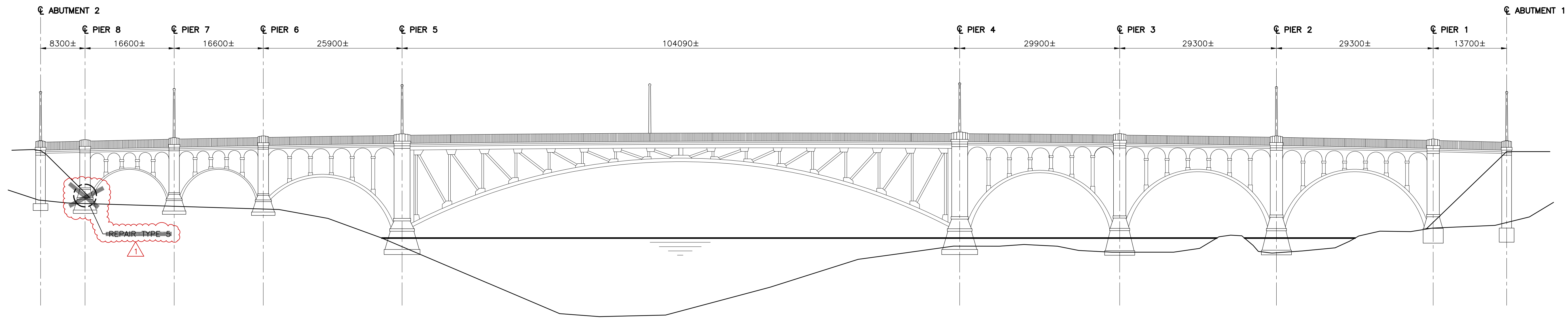
.19 From 5.8 Bridge Cleaning and Painting, the following clause 5.8.3:

Price includes full compensation for all labour, materials and equipment for all cleaning and painting activities, including, but not limited to: pressure washing; preparation of primed surfaces; soluble salt/chloride remediation; application of the three-coat paint system (intermediate coat) including stripe coats to all surfaces and fasteners; quality control inspections and documentation; and compliance with all requirements of regulatory agencies. For interior location items, two-coat paint system is required.

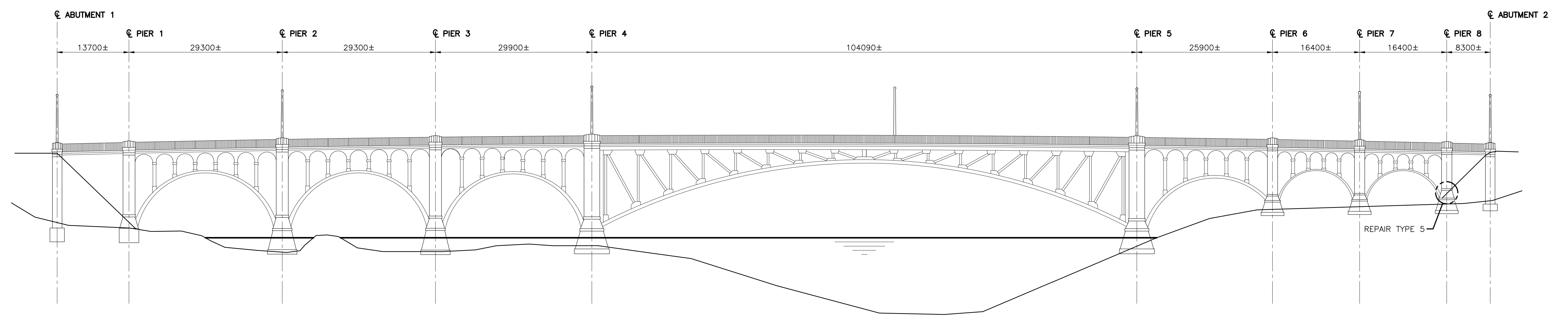
Shall now state:

Price includes full compensation for all labour, materials and equipment for all cleaning and painting activities, including, but not limited to: pressure washing; preparation of primed surfaces; soluble salt/chloride remediation; application of the three-coat paint system (intermediate coat) including stripe coats to all surfaces and fasteners; quality control inspections and documentation; and compliance with all requirements of regulatory agencies.





NORTH ELEVATION



SOUTH ELEVATION

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

US:113733903_0300_drawing_0300_dwg.dwg (Rev. 03) Structural 33903-101-cok.dwg 4
2025/05/09 4:14 PM By: Baerndt, James

5			
4			
3			
2			
1	REMOVE REPAIR LOCATION	J.M.B.	E.R.T. 2025.05.30
Revision		By	Appd. YY.MM.DD
E			
D			
C			
B	ISSUED FOR ADDENDUM No.4	J.M.B.	E.R.T. 2025.05.30
A	ISSUED FOR TENDER	J.M.B.	E.R.T. 2025.05.05
Issued		By	Appd. YY.MM.DD

Client/Project Logo

Lake of the Woods
KENORA

Permit-Seal

 **Stantec**

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www.stantec.com

The Contractor shall verify and be responsible for all dimensions.
DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
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Client/Project
CITY OF KENORA

KEEWATIN CHANNEL BRIDGE RECOATING
& STRUCTURAL STEEL REPAIR
KENORA, ONTARIO

File Name: 33903-101-cok.dwg J.W. E.R.T. K.R. 2025.05.30
Dwn. Chkd. Dsgn. YY.MM.DD

Title
GENERAL ARRANGEMENTS &
LOCATIONS OF REPAIR DETAILS

Project No. 113733903 Scale 1:400

Drawing No. S-102 Sheet 4 of 8 Revision 1

REPAIR TYPE 1 PROCEDURE

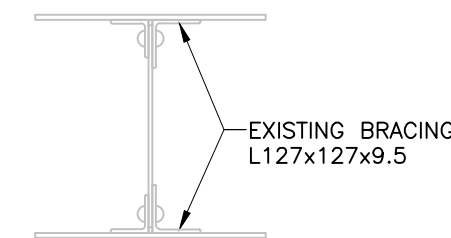
1. NOTIFY THE ENGINEER TO ALLOW FOR FOLLOW-UP INSPECTION OF PIN AND CONNECTION
2. FOLLOWING INSPECTION, ENGINEER TO INFORM CONTRACTOR OF NECESSARY REPAIR DETAIL(S), OR TO AUTHORIZE APPLICATION OF PROTECTIVE COATING
3. CONTRACTOR TO COMPLETE REPAIR DETAILS AS PER DIRECTION BY THE ENGINEER.

REPAIR TYPE 2 PROCEDURE

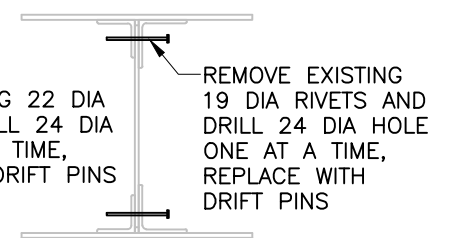
- NOTIFY THE ENGINEER TO ALLOW FOR FOLLOW-UP INSPECTION OF PIN AND CONNECTION
- ADDITIONAL REPAIR DETAILS ARE ANTICIPATED AT THIS LOCATION ON THE NORTH AND SOUTH TRUSSES.
- FOLLOWING INSPECTION, ENGINEER TO INFORM CONTRACTOR OF NECESSARY REPAIR DETAIL(S)
- CONTRACTOR TO COMPLETE REPAIR DETAILS AS PER DIRECTION BY THE ENGINEER

REPAIR TYPE 3 PROCEDURE

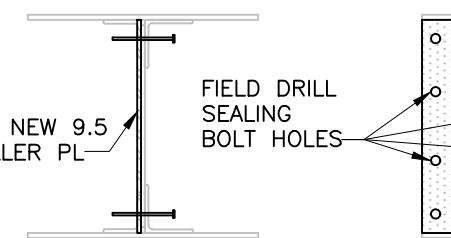
1. REMOVE EXISTING RIVETS AND REPLACE WITH DRIFT PINS ONE AT A TIME. INCREASE RIVET HOLE DIAMETER TO 24mm BY DRILLING PRIOR TO INSTALLING DRIFT PINS.
2. INSTALL NEW FILLER BY FITTING OVER DRIFT PINS.
3. INSTALL NEW STAY PLATE BY FITTING OVER DRIFT PINS. FIELD DRILL SEALING BOLT HOLES.
4. REMOVE DRIFT PINS AND REPLACE WITH BOLTED ASSEMBLY ONE AT A TIME. INSTALL SEALING BOLTS.



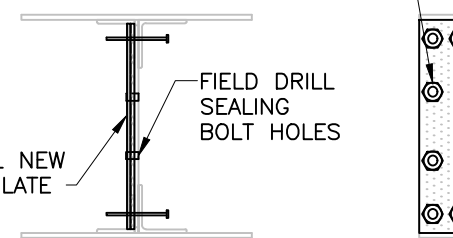
STAGE-3a (EXISTING CONDITION)



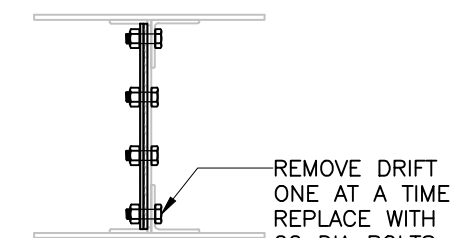
STAGE-3b



STAGE-3c



STAGE-3d

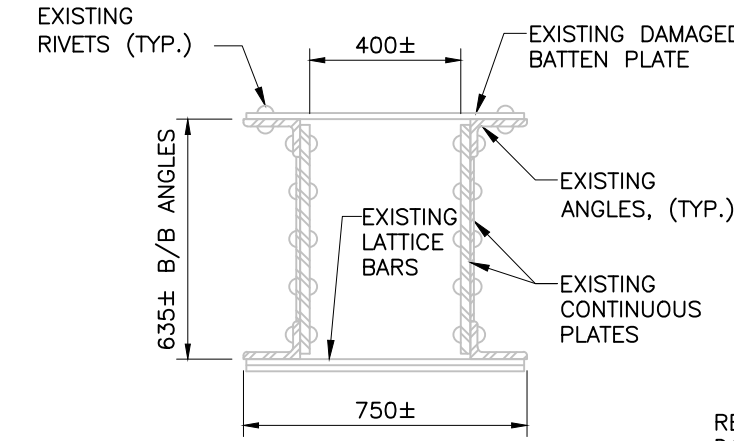


STAGE-3e

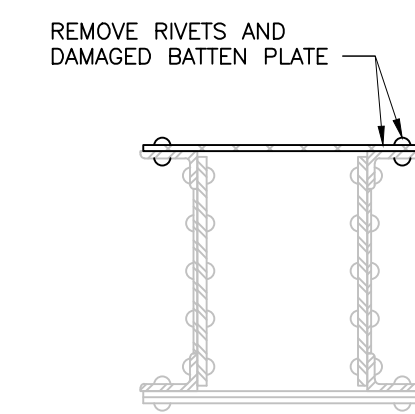
A close-up photograph of a heavily rusted metal structure, likely a bridge component. Handwritten in red paint on the rusted surface are the following markings: "NT" at the top, "V4-Y5" below it, "7mm SL" below that, and "JD" on the left side. A circular red mark is also visible on the right side. The structure is surrounded by snow, indicating a winter environment.

REPAIR TYPE 4 PROCEDURE

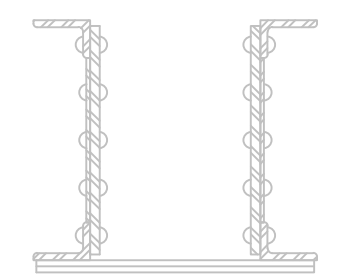
1. REMOVE RIVETS FROM LOWER CHORD BATTEN PLATE-ANGLE CONNECTION
2. REMOVE EXISTING DAMAGED BATTEN PLATE.
3. INCREASE RIVET HOLE SIZE TO 28 DIA IN PREPARATION FOR BOLT INSTALLATION.
4. INSTALL NEW BATTEN PLATE WITH BOLTED ASSEMBLY



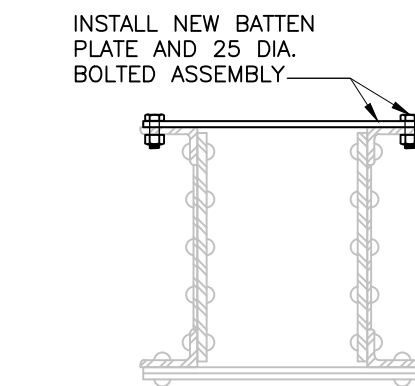
STAGE-4a (EXISTING CONDITION)



STAGE-4b



STAGE-4c



STAGE-4d

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

5			
4			
3			
2			
1	REVISED BATTEN PLATES	J.M.B.	E.T.T. 2025.05.30
Revision		By	Appd. YY.MM.DD
E			
D			
C			
B	ISSUED FOR ADDENDUM No.4	J.M.B.	E.T.T. 2025.05.30
A	ISSUED FOR TENDER	J.M.B.	E.T.T. 2025.05.05
Issued		By	Appd. YY.MM.DD

Client/Project Logo



Permit-Seal



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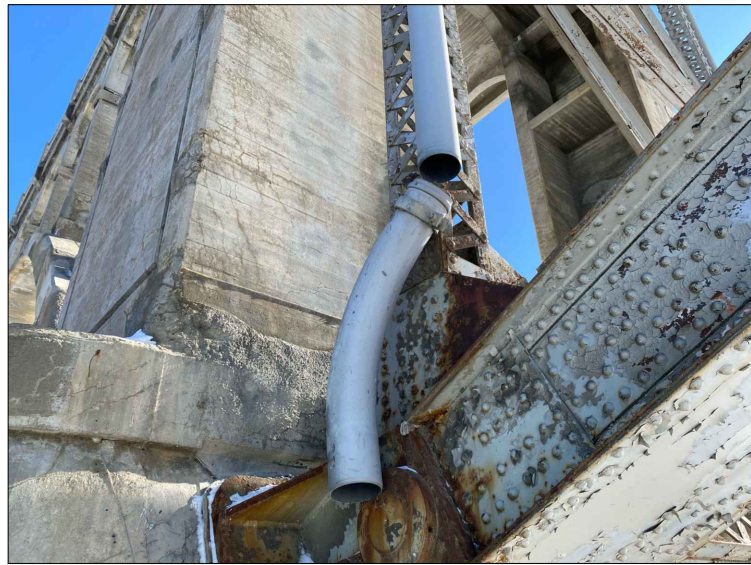
KEEWATIN CHANNEL BRIDGE RECOATING
& STRUCTURAL STEEL REPAIR
KENORA, ONTARIO

File Name: 33903s-101-cok.dwg	J.W.	E.R.T.	K.R.	2025.05.30
	Dwn.	Chkd.	Dsn.	YY.MM.DD

Title
REPAIR TYPES & METHODS - SHEET 1 OF 3

Project No. 113733903	Scale 1:20	
Drawing No. S-104	Sheet 6 of 8	Revision 1

STEEL REPAIR TYPE 5

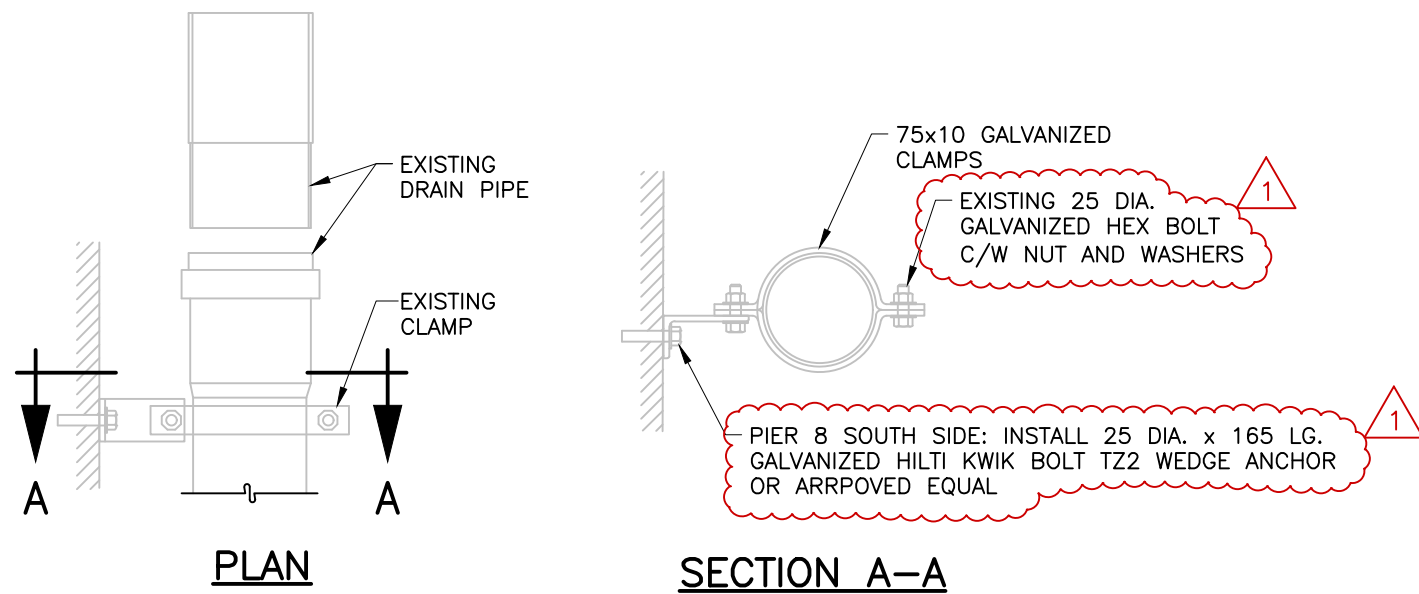


TYPICAL PHOTO OF DISCONNECTED DRAIN ELBOW



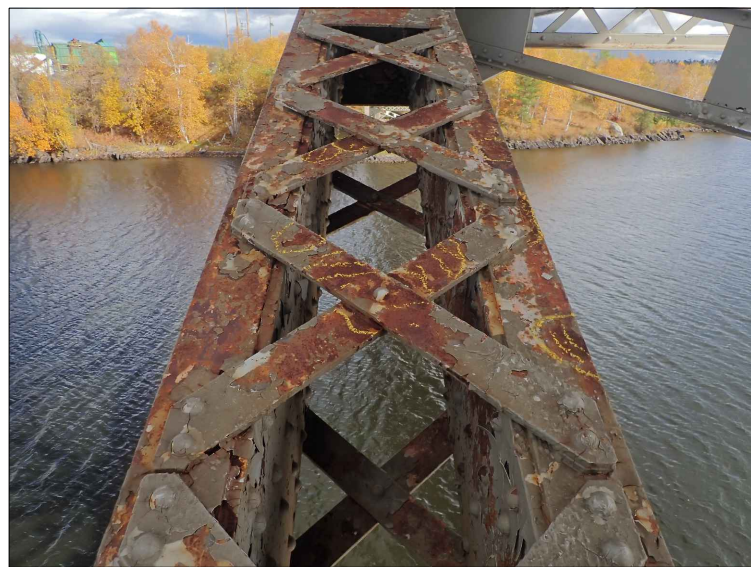
REPAIR TYPE 5 PROCEDURE

1. RE-CONNECT DISCONNECTED DRAIN ELBOWS WITH EXISTING CLAMPS AND BOLTED ASSEMBLY
2. DRAIN ELBOWS TO BE DIRECTED AWAY FROM STRUCTURE AT APPROXIMATELY 45 DEGREES



STAGE-5a

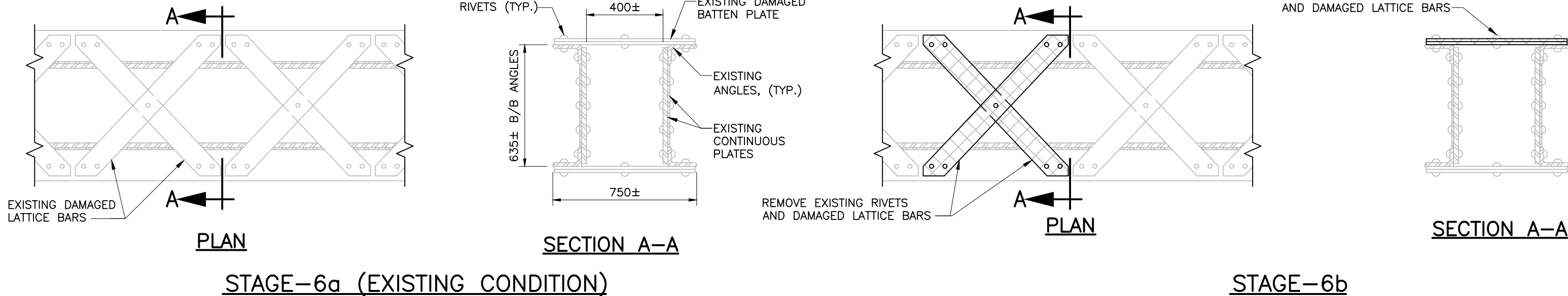
STEEL REPAIR TYPE 6



TYPICAL PHOTO OF LATTICE BARS

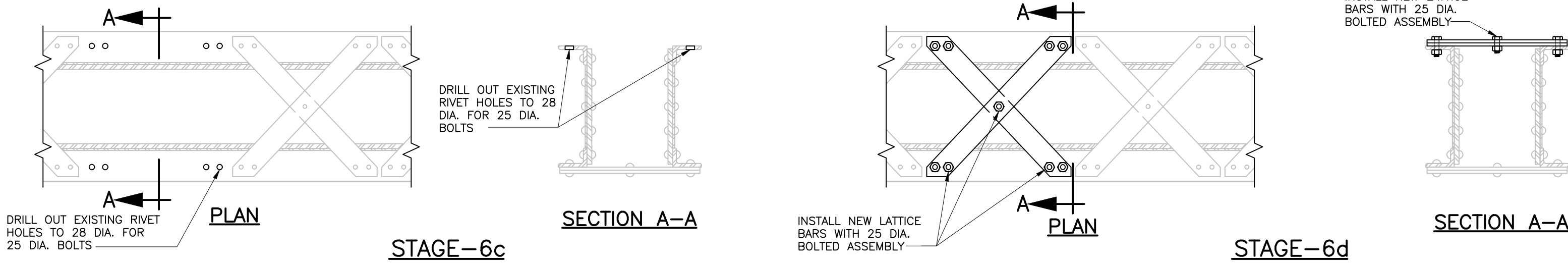
REPAIR TYPE 6 PROCEDURE

1. REMOVE RIVETS AND DAMAGED LATTICE MEMBERS/FILL PLATES. NOTE: MAXIMUM OF TWO ADJACENT LATTICE PAIRS MAY BE REMOVED AT ANY TIME.
2. DRILL HOLE RIVET HOLES TO 28 DIA. FOR 25 DIA. BOLTS.
3. INSTALL NEW LATTICE BARS, PLATE WASHERS AND BOLTS. REFER TO SHT. S-106 FOR LATTICE BAR DIMENSIONS.



STAGE-6a (EXISTING CONDITION)

STAGE-6b



STAGE-6c

STAGE-6d

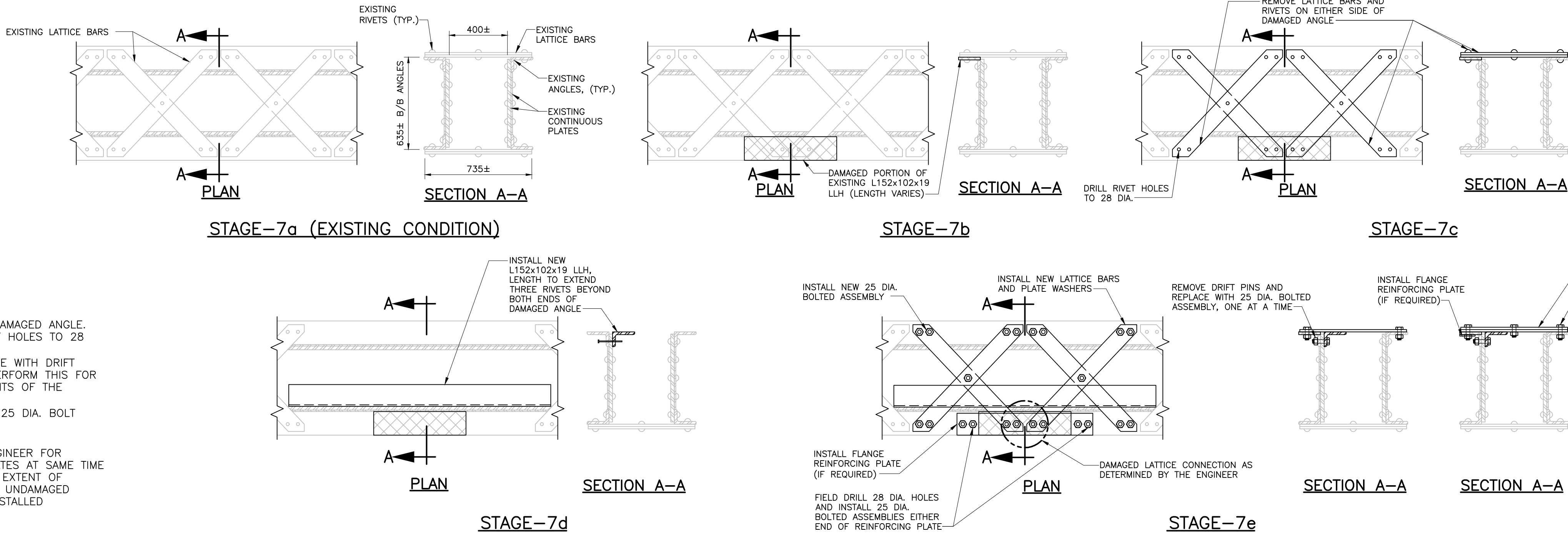
STEEL REPAIR TYPE 7



TYPICAL PHOTO OF SEVERE SECTION LOSS IN TOP FLANGE OF LOWER CHORD.

REPAIR TYPE 7 PROCEDURE

1. REMOVE LATTICE BARS AND LATTICE BAR RIVETS ADJACENT TO LENGTH OF DAMAGED ANGLE. ONLY TWO LATTICE BARS PAIRS MAY BE REMOVED AT ANY TIME. DRILL RIVET HOLES TO 28 DIA.
2. REMOVE RIVETS CONNECTING DAMAGED ANGLE SECTION TO WEB AND REPLACE WITH DRIFT PINS ONE AT A TIME, DRILLING TO INCREASE HOLE DIAMETER TO 28 DIA. PERFORM THIS FOR THREE ADDITIONAL RIVETS BEYOND EITHER END OF THE LONGITUDINAL EXTENTS OF THE DAMAGED SECTION.
3. INSTALL NEW ANGLE ASSEMBLY ON THE INTERIOR FACE OF THE WEB USING 25 DIA. BOLT ASSEMBLIES
4. INSTALL NEW LATTICE BARS USING 25 DIA. BOLT ASSEMBLIES
5. IF RIVETED LATTICE CONNECTION HAS ALSO BEEN DAMAGED, NOTIFY THE ENGINEER FOR VERIFICATION. IF DETERMINED NECESSARY, INSTALL FLANGE REINFORCING PLATES AT SAME TIME AS LATTICE BARS. REINFORCING PLATE LENGTH SHALL EXTEND 150 BEYOND EXTENT OF DAMAGED ANGLE. TWO 28 DIA. HOLES SHALL BE FIELD DRILLED IN THE 150 UNDAMAGED LENGTH AT BOTH ENDS OF THE REINFORCING PLATE, AND 25 DIA. BOLTS INSTALLED



STAGE-7a (EXISTING CONDITION)

STAGE-7b

STAGE-7c

STAGE-7d

STAGE-7e

METRIC
WHOLE NUMBERS INDICATE MILLIMETRES
DECIMALIZED NUMBERS INDICATE METRES

US:113733903_0300_Rev001.dwg 03/20/2025 4:13 PM By: beamonts_james

5				
4				
3				
2				
1	REPAIR TYPE 5 NOTES	J.M.B.	E.R.T.	2025.05.30
Revision		By	Appd.	YY.MM.DD
E				
D				
C				
B	ISSUED FOR ADDENDUM No.4	J.M.B.	E.R.T.	2025.05.30
A	ISSUED FOR TENDER	J.M.B.	E.R.T.	2025.05.05
Issued		By	Appd.	YY.MM.DD

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KEEWATIN CHANNEL BRIDGE RECOATING
& STRUCTURAL STEEL REPAIR
KENORA, ONTARIO

File Name: 33903-101-cok.dwg J.W. E.R.T. K.R. 2025.05.30
Dwn. Chkd. Dsgn. YY.MM.DD

Title

REPAIR TYPES & METHODS - SHEET 2 OF 3

Project No.
113733903

Scale
1:20

Drawing No.

S-105

Sheet

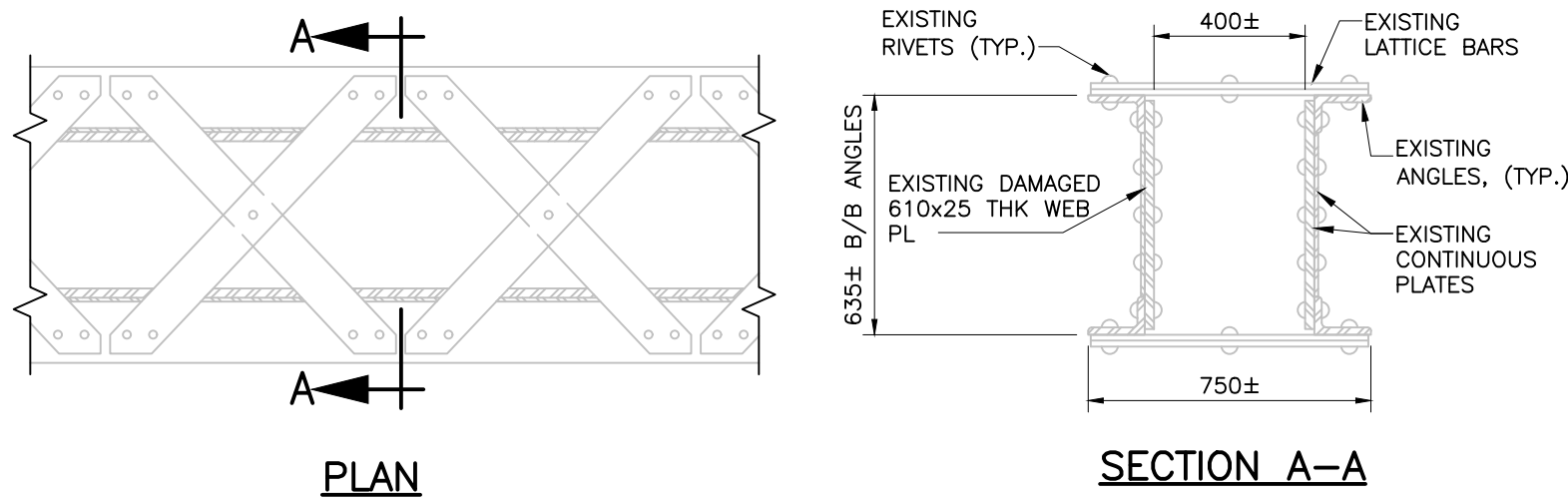
7 of 8

Revision

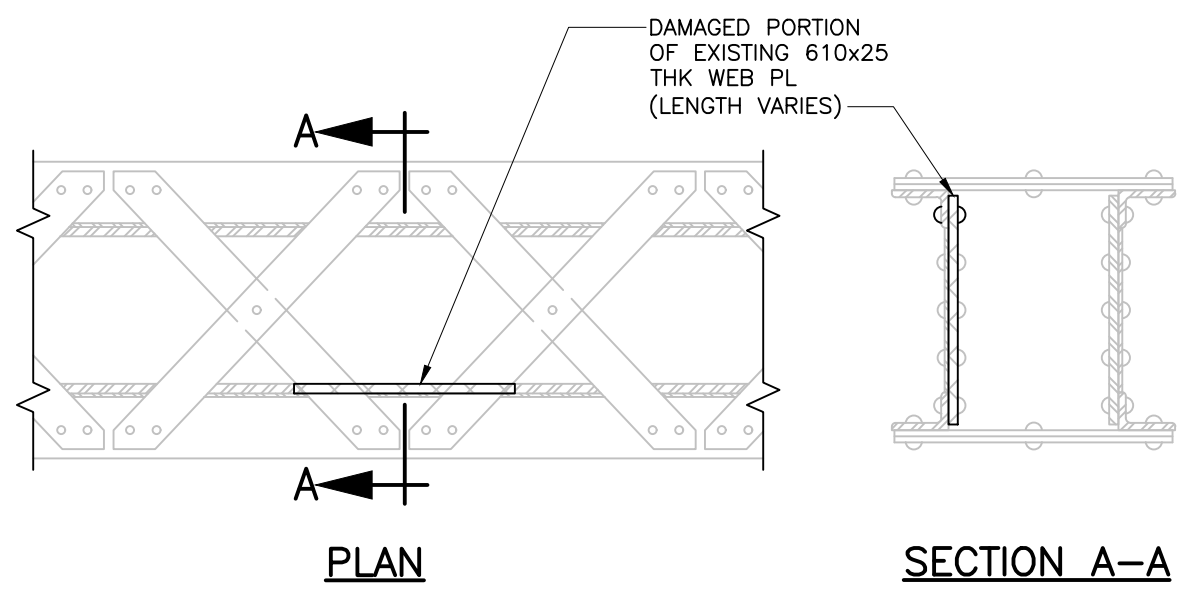
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REPAIR TYPE 8 PROCEDURE

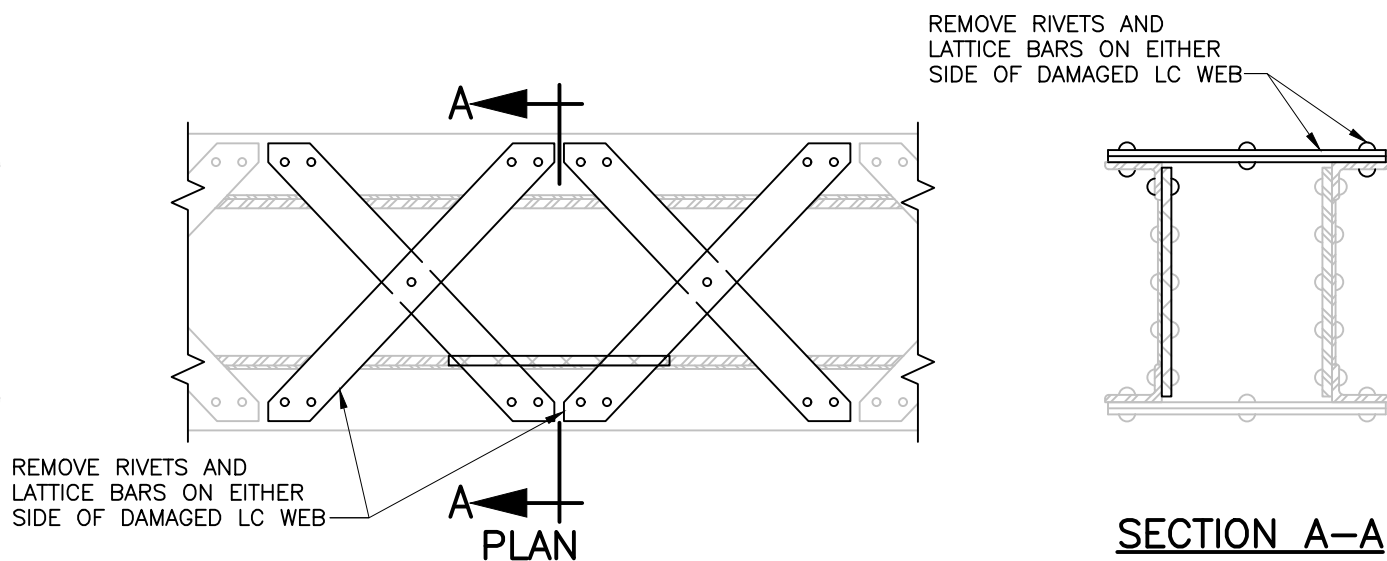
1. REMOVE LATTICE BARS AND LATTICE BAR RIVETS ADJACENT TO LENGTH OF DAMAGED WEB. ONLY TWO LATTICE BAR PAIRS MAY BE REMOVED AT ANY TIME. DRILL RIVET HOLES TO 28 DIA.
2. REMOVE RIVETS IN DAMAGED WEB PLATE AND REPLACE WITH DRIFT PINS ONE AT A TIME, DRILLING TO INCREASE HOLE DIAMETER TO 28 DIA. PERFORM THIS FOR FOUR ADDITIONAL VERTICAL LINES OF RIVETS BEYOND EITHER END OF THE LONGITUDINAL EXTENTS OF THE DAMAGED SECTION. THIS SHOULD ENCOMPASS APPROXIMATELY 18 RIVETS TOTAL BEYOND THE EITHER END OF THE DAMAGED SECTION.
3. INSTALL NEW PLATE ASSEMBLY ON THE INTERIOR FACE OF THE WEB USING 25 DIA. BOLTED ASSEMBLIES.
4. INSTALL NEW LATTICE BARS USING 25 DIA. BOLTED ASSEMBLIES.



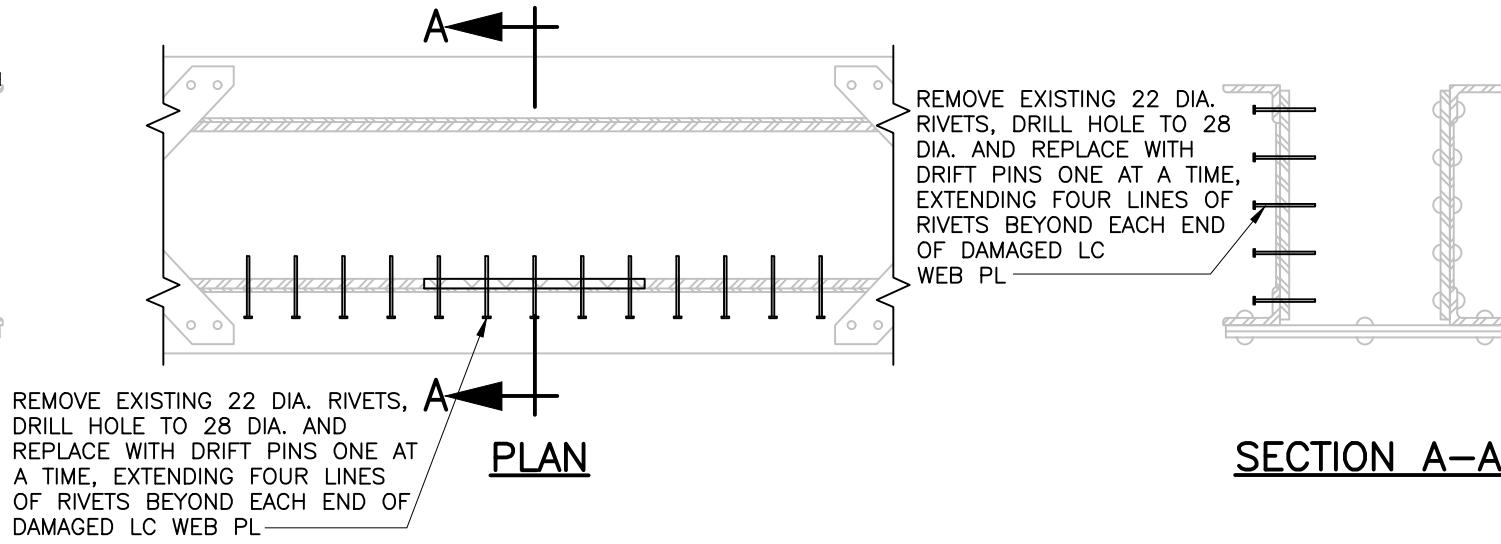
STAGE-8a (EXISTING CONDITION)



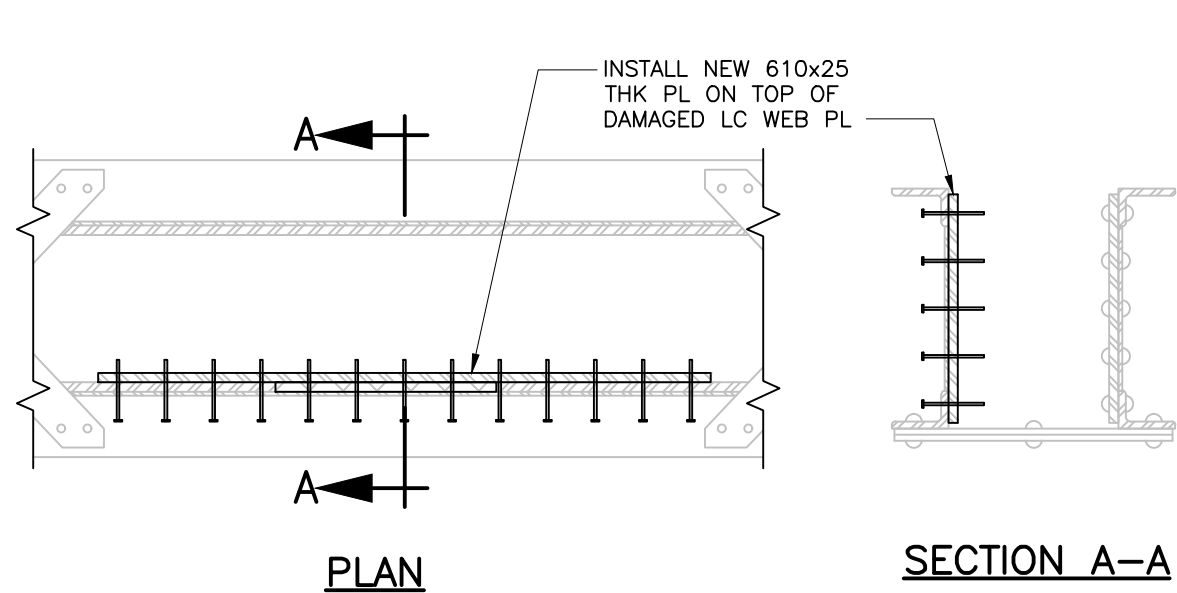
STAGE-8b



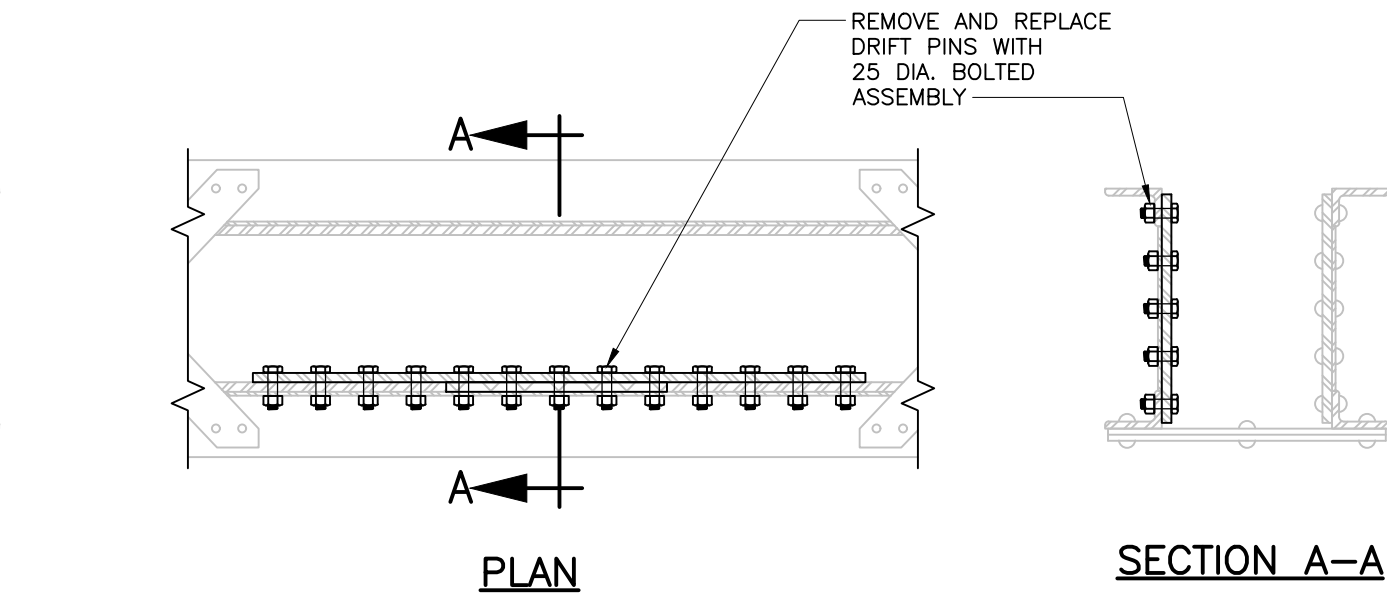
STAGE-8c



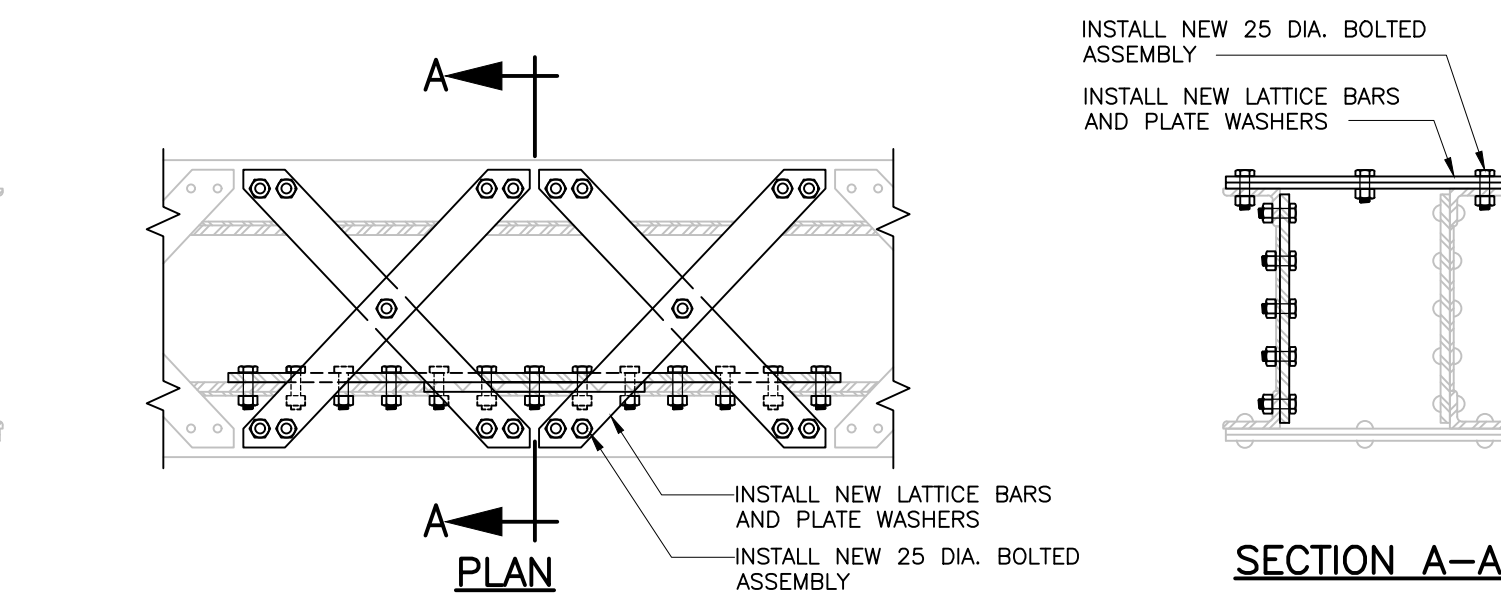
STAGE-8d



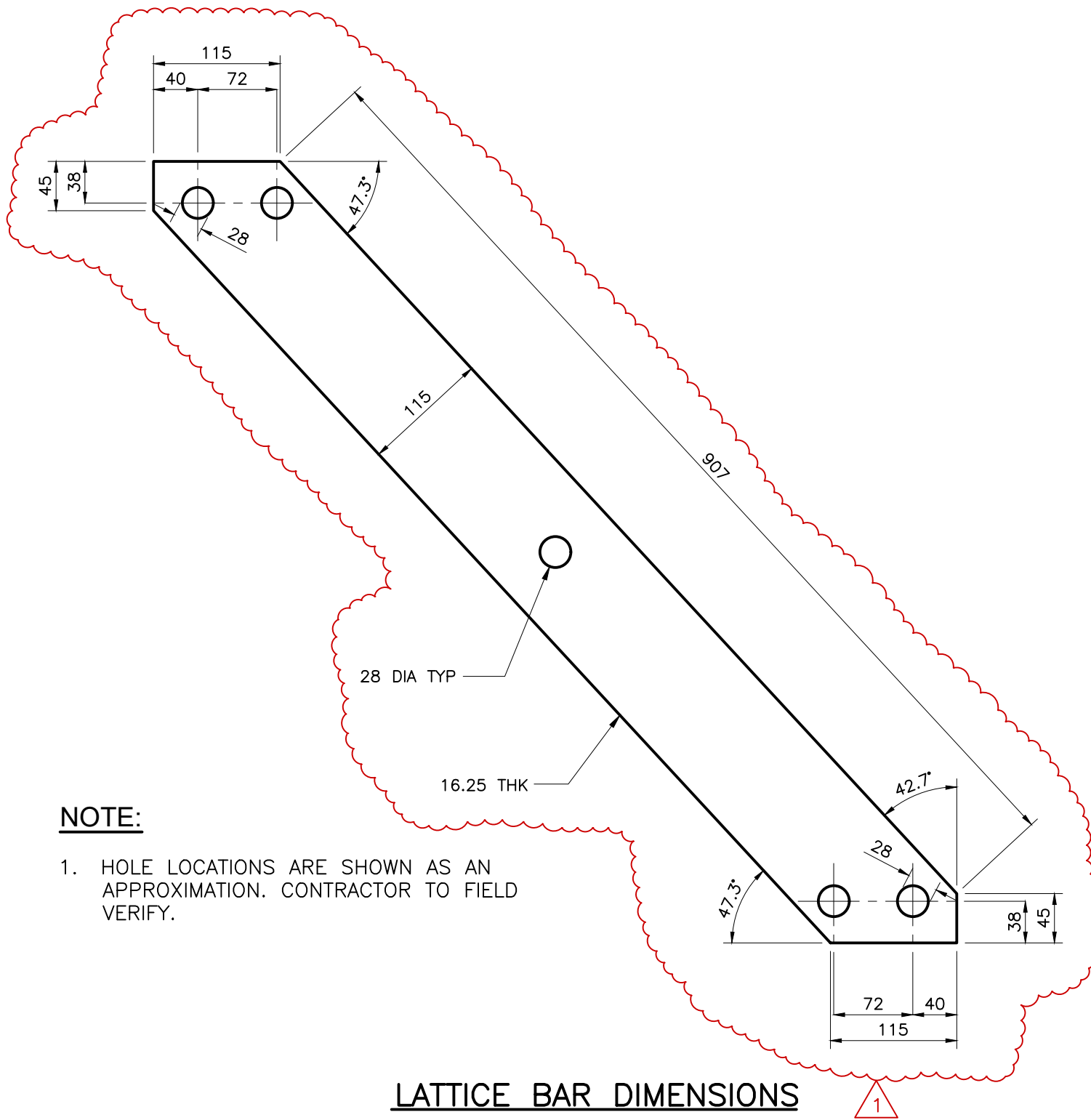
STAGE-8e



STAGE-8f



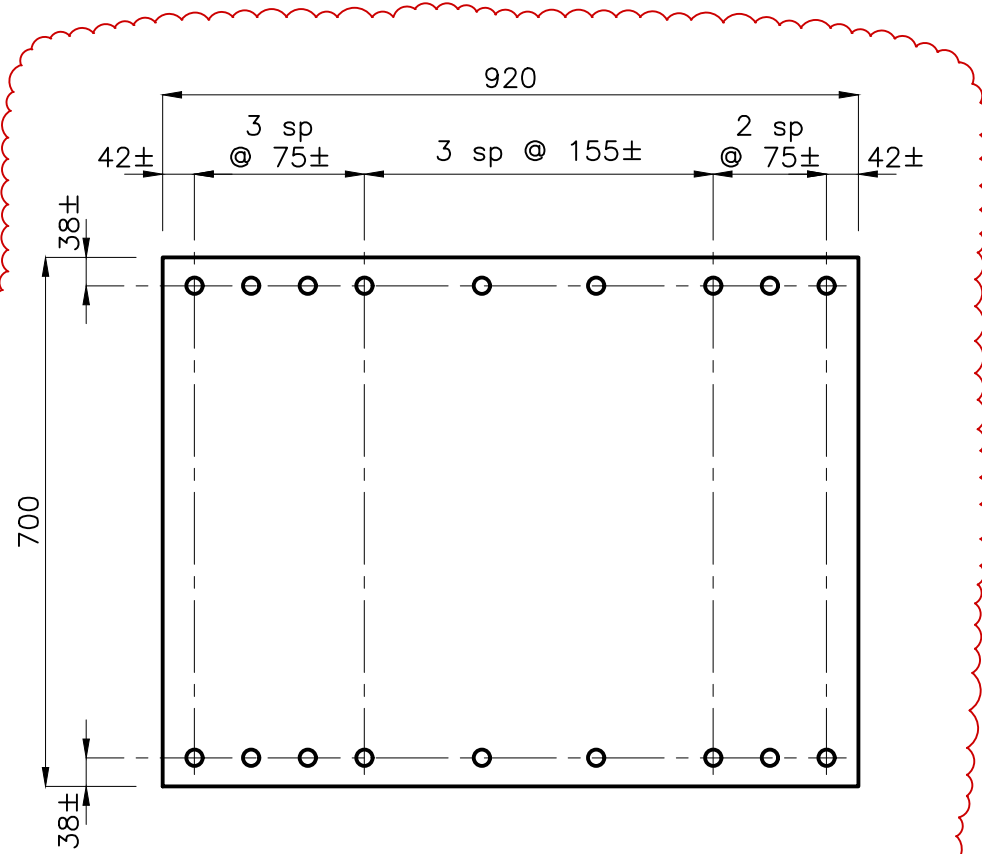
STAGE-8a



NOTE:

1. HOLE LOCATIONS ARE SHOWN AS AN APPROXIMATION. CONTRACTOR TO FIELD VERIFY.

LATTICE BAR DIMENSIONS



BATTEN PLATE DIMENSIONS

NOTE:

1. HOLE LOCATIONS ARE SHOWN AS AN APPROXIMATION. CONTRACTOR TO FIELD VERIFY.

METRIC
NUMBERS INDICATE MILLIMETRES
NUMBERS INDICATE METRES

5			
4			
3			
2			
1	REVISED LATTICE BAR & ADDED BATTEN PLATE	J.M.B.	E.R.T. 2025.05.30
Revision		By	Appd. YY.MM.DD
E			
D			
C			
B	ISSUED FOR ADDENDUM No.4	J.M.B.	E.R.T. 2025.05.30
A	ISSUED FOR TENDER	J.M.B.	E.R.T. 2025.05.05
Issued		By	Appd. YY.MM.DD

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	Dwn.	Chkd.	Dsgn.	YY.MM.DD

Title

REPAIR TYPES & METHODS - SHEET 3 OF 3

Project No.
113733903

Scale
1:20

Drawing No.

Sheet

Revision

S-106

8 of 8

1

END OF ADDENDUM #4

