KIN PROJECT INFORMATION

DESTINATION PROJECT DESCRIPTION
---
1298275 Overlay and Superstructure Rehabilitation of the US 41 Southbound Bridge over the Ohio River.

NOTE: SEE ROAD PLANS FOR REMOVAL OF EXISTING GUARDRAIL, PAVEMENT MARKINGS, EROSION CONTROL MEASURES AND MAINTENANCE OF TRAFFIC DETAILS.

INDIANA DEPARTMENT OF TRANSPORTATION

BRIDGE PLANS
FOR SPANS OVER 20 FEET

ROUTE US 41 SOUTHBOUND OVER OHIO RIVER

PROJECT NO. 1298275
P.E. R/W CONST.

Overlay and Superstructure Rehabilitation of the US 41 Southbound Bridge over the Ohio River. Located north of the town of Henderson, Henderson County Kentucky and approximately 1,560 feet south of the intersection of KY 3522 (Nugent Drive).

ROUTE US 41 SOUTHBOUND OVER OHIO RIVER

IN HENDERSON COUNTY, KENTUCKY

IN NOAA

VINSON MAP
HENDERSON COUNTY, KENTUCKY
EXPANSION JOINT REPLACEMENT

BEARINGS SHALL BE LOW TEMPERATURE GRADE 3 WITH DUROMETER HARDNESS OF 50 AND SHALL BE
BRIDGES, DIVISION II, SECTION 18.

ELASTOMERIC BEARING PADS
UNLESS OTHERWISE PROVIDED ON THE PLANS, ALL NEW BOLTS SHALL BE °" DIAMETER HIGH STRENGTH BOLTS.

ANSI/AASHTO/AWS D1.5 BRIDGE WELDING CODE. MODIFICATION AND ADDITIONS AS STATED ON THE PLANS AND
INCLUDED IN THE PRICE BID FOR APPROPRIATE ITEMS.

POSSIBLE, AND SHALL BE APPROVED BY THE ENGINEER BEFORE ANY APPLICATION. CLEANING AND PAINTING SHALL BE
OTHERWISE ON THE PLANS, ALL NEW AND EXISTING STEEL WITHIN 12" OF THE WORK LIMITS OF EACH RETROFIT
PAINTED WITH ONE COAT OF INORGANIC ZINC RICH PRIMER. EXISTING STEEL AREAS OF THE BRIDGE TO BE IN
ALL NEW STRUCTURAL STEEL SHALL BE BLAST CLEANED IN THE SHOP TO A NEAR WHITE CONDITION AND SHOP
CLEANING AND PAINTING

CLASS "C" MODIFIED CONCRETE IS TO BE USED IN PARTIAL AND FULL DEPTH PATCHING OF DECK, EXPANSION
CONCRETE

UTILIZING (H) FREQUENCY TESTING. WHEN PLATE THICKNESS EXCEEDS 1"", FREQUENCY OF TESTING SHALL BE (P).

SAMPLING AND TESTING PROCEDURES SHALL BE IN ACCORDANCE WITH AASHTO T243 CURRENT EDITION,
ALL STRUCTURAL STEEL SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH TOUGHNESS TEST APPLICABLE

HARDENED STEEL WASHERS
HIGH STRENGTH BOLTS FOR STRUCTURAL STEEL JOINT

MATERIALS DESIGN SPECIFICATIONS
CONCRETE AND STRUCTURAL STEEL MODIFICATIONS ARE DESIGNED BY THE LOAD FACTOR METHOD AS SPECIFIED
REFERENCES TO THE SPECIFICATIONS ARE TO THE CURRENT EDITION OF THE INDIANA DEPARTMENT OF TRANSPORTATION
SPECIFICATIONS
Fy = 50000 PSI FOR GRADE 50
Fy = 60000 PSI
F'c = 4000 PSI

M31
M291
M164
A325
ASTM

STRINGER REPAIR AS NOTED IN THE PLANS.
TO COMPLETE THE REPLACEMENT OF THE DIAPHRAGMS, DIAPHRAGM GUSSET PLATE REPAIRS AND
NOT DAMAGE ADJACENT STRUCTURAL STEEL. THIS MAY INCLUDE MECHANICAL REMOVAL OR OTHER
WORK DESCRIBED HEREIN SHOULD BE INVESTIGATED. SUBMISSION OF A BID WILL BE CONSIDERED EVIDENCE OF THIS
WORK CAN BE EXPEDITIOUSLY PERFORMED AFTER A CONTRACT IS AWARDED. A SUITABLE METHOD OF PERFORMING THE
WORK SITE PRIOR TO SUBMITTING A BID AND SHALL BE THOROUGHLY FAMILIAR WITH EXISTING CONDITIONS SO THAT

CONTRACT: 5839, BRIDGE FILE 41-A-5000; SUPERSTRUCTURE SUBSTRUCTURE TRUSS BRIDGE - BRIDGE CONTRACT: 5195,
ACCURACY. THE ORIGINAL EXISTING BRIDGE CONTRACT AND BRIDGE FILE NUMBERS FOR THESE STRUCTURES INCLUDE:

AS AN AID TO THE CONTRACTOR, A PORTION OF THE PLANS AND SHOP DRAWINGS OF THE EXISTING STRUCTURES ARE

INDEX OF SHEETS

SUMMARY OF BRIDGE QUANTITIES

INDIANA DEPARTMENT OF TRANSPORTATION
US 41 SB BRIDGE REPAIR OVER THE OHIO RIVER SIBLEY, CENTRAL NUTS & BRIDGE SUMMARY
STATE OF INDIANA
REGULATIONS

HENDerson COUNTY, KENTUCKY

US 41 SB Bridge Over The Ohio River
Elevation & TYP Section (South Approach)

PART ELEVATION SB SOUTH APPROACH

PART ELEVATION SB SOUTH APPROACH

TYPICAL DECK SECTION

NOTES:

1. REMOVE EXISTING FINGER EXPANSION JOINT (SEE SHEET S19 FOR DETAILS)
2. REMOVE AND REPLACE DIAPHRAGM (BAY 1 - BETWEEN PIER S-1 & S-2)
3. INSTALL THREE BEAM GUARDRAIL (SEE SHEETS S13 - S18 FOR DETAILS)
4. CLEAN BRIDGE DECK AND SCUPPERS, SOUTHBOUND DECK SHOWN, SOUTHBOUND ORTHODOX SPAN
5. REMOVE AND REPLACE EXISTING EXPANSION JOINT (SEE SHEETS S13- S18 FOR DETAILS)
6. REMOVE AND REPLACE FINGER EXPANSION JOINT (SEE SHEETS S11 OR S12 FOR DETAILS)
7. REMOVE AND REPLACE DIAPHRAGM GUSSET PLATE (BAYS 3 & 4)
8. REMOVE AND REPLACE DIAPHRAGM (BAY 1 - BETWEEN PIER S-1 & S-2) (SEE SHEET S19 FOR DETAILS)

MATERIALS:

- HANDRAIL (TYP)
- ALUMINUM
- ASPHALT WATERPROOFING MIX OVERLAY
- REMOVELATEX OVERLAY AND SCARIFY DECK

SCALE:

DESIGNATION:

OF DRAWING:

SHEET OF CONTRACT:

NOTATIONS:

M. LAWLER
R. YOUNG

FOR APPROVAL:

DRAWN:

RECOMMENDED:

DATE:

BRIDGE FILE

DEPARTMENT OF TRANSPORTATION

INDIANA

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Save:

Foy, Sheila Plot:

V:\1785\active\17856601\structural\Henderson SB Bridge\drawing\IN_S3_South_Approach_BR.drg

DRAFT

Not for Construction

DRAFT

Not for Construction
NOTATIONS:

1. REMOVE & REPLACE EXIST FINGER EXPANSION JOINT (SEE SHEETS S13 - S18 FOR DETAILS).
2. SELF EXPANDING EXPANSION JOINT (SEE SHEET S12 FOR DETAIL).
3. CLEAN BRIDGE DECK AND SCUPPERS, CONFORM DECK PROFILE (SOUTH, NORTHBOUND) BRIDGE DECK.

FOR BRIDGE TYPICAL SECTION, SEE SHEET S5.
SEE SHEET S7 FOR PHASE CONSTRUCTION.
SEE SHEET S6 FOR NB NORTH APPROACH.

FOR APPROVAL:

M. LAWLER
R. YOUNG
M. LAWLER

FOR CONSTRUCTION:

R. YOUNG
M. LAWLER

HENDERSON COUNTY, KENTUCKY
US 41 SB BRIDGE OVER THE OHIO RIVER
ELEVATION & TYPICAL SECTION (TRUSS)
NOTATIONS:

1. EXTRACT INTERPRETATION IS TO DISPLAY, REMOVE EXISTING, LATERAL, DECK AND REMOVE DECK SHOWN TO REQUIRE NEW DECK.

2. RETAIN EXIST EXPANSION JOINT AND REPLACE WITH RUBBER JOINT SEE SHEET S13 - S18 FOR DETAILS.

3. REMOVE A PRESERVE RUBBER JOINT SEE SHEETS S20 & S21 FOR DETAILS.

4. INSTALL TIME RELEASE ENCASE. SEE SHEETS S20 & S21 FOR DETAILS.

5. CLEAN DECK AND SCARRIFY, OVERLAY DECK prior to placing NEW ASPHALT WATERPROOFING MIX OVERLAY. REMOVE EXISTING.

PART ELEVATION TRUSS BRIDGE

TYPICAL DECK SECTION

LOOKING AHEAD STATION
PART ELEVATION - SB NORTH APPROACH

TYPICAL DECK SECTION

LOOKING AHEAD

NOTATIONS:
1. REMOVE & REPLACE EXISTING EXP JOINT SEE SHEETS S3 & S4 FOR DETAILS
2. REPLACE EXISTING RUBBER CHIP PASTE EXP JOINT SEE SHEETS S3 & S4 FOR DETAILS
3. REMOVE & REPLACE EXISTING RUBBER CHIP PASTE EXP JOINT SEE SHEETS S3 & S4 FOR DETAILS
4. REMOVE & REPLACE EXISTING RUBBER CHIP PASTE EXP JOINT SEE SHEETS S3 & S4 FOR DETAILS
5. REMOVE & REPLACE EXISTING RUBBER CHIP PASTE EXP JOINT SEE SHEETS S3 & S4 FOR DETAILS
6. INSTALL THREE (3) CONCRETE CONCRETE SHEETS S2 & S3 FOR DETAILS
7. CLEAN DECK, DECK AND RAMP, SOUTHBOUND DECK SHOWN, NORTHBOUND DECK SHOWN.

NOTES:
1. SEE SHEET S2 FOR SB SOUTH APPROACH.
2. SEE SHEET S8 FOR SB TRUSS.
3. SEE SHEET S7 FOR PHASE CONSTRUCTION.

INSTRUCTIONS:
1. REPLACE EXISTING CONCRETE DECK.
2. CLEAN DECK, DECK AND RAMP.
3. INSTALL THREE (3) CONCRETE SHEETS S2 & S3 FOR DETAILS

REFERENCES:
1. SHEET S3 & S4 FOR SB SOUTH APPROACH.
2. SHEET S8 FOR SB TRUSS.
3. SHEET S7 FOR PHASE CONSTRUCTION.

INSTRUCTIONS:
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2. CLEAN DECK, DECK AND RAMP.
3. INSTALL THREE (3) CONCRETE SHEETS S2 & S3 FOR DETAILS

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REFERENCES:
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2. SHEET S8 FOR SB TRUSS.
3. SHEET S7 FOR PHASE CONSTRUCTION.

INSTRUCTIONS:
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2. CLEAN DECK, DECK AND RAMP.
3. INSTALL THREE (3) CONCRETE SHEETS S2 & S3 FOR DETAILS

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2. SEE SHEET S8 FOR SB TRUSS.
3. SEE SHEET S7 FOR PHASE CONSTRUCTION.

REFERENCES:
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2. SHEET S8 FOR SB TRUSS.
3. SHEET S7 FOR PHASE CONSTRUCTION.

INSTRUCTIONS:
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2. CLEAN DECK, DECK AND RAMP.
3. INSTALL THREE (3) CONCRETE SHEETS S2 & S3 FOR DETAILS

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3. SEE SHEET S7 FOR PHASE CONSTRUCTION.

REFERENCES:
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3. SHEET S7 FOR PHASE CONSTRUCTION.

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REFERENCES:
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2. SHEET S8 FOR SB TRUSS.
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REFERENCES:
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2. SHEET S8 FOR SB TRUSS.
3. SHEET S7 FOR PHASE CONSTRUCTION.

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2. CLEAN DECK, DECK AND RAMP.
3. INSTALL THREE (3) CONCRETE SHEETS S2 & S3 FOR DETAILS

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1. REPLACE EXISTING CONCRETE DECK.
2. CLEAN DECK, DECK AND RAMP.
3. INSTALL THREE (3) CONCRETE SHEETS S2 & S3 FOR DETAILS

NOTES:
1. SEE SHEET S2 FOR SB SOUTH APPROACH.
2. SEE SHEET S8 FOR SB TRUSS.
3. SEE SHEET S7 FOR PHASE CONSTRUCTION.

REFERENCES:
1. SHEET S3 & S4 FOR SB SOUTH APPROACH.
2. SHEET S8 FOR SB TRUSS.
3. SHEET S7 FOR PHASE CONSTRUCTION.
STIFFENER LONGITUDINAL

CUT ANGLES FOR TIGHT FIT.
STIFFENER (EACH SIDE OF GIRDER)
6x6xƒ TEMPORARY JACKING

TYP ‡` BOLTS

AFTER STIFFENER REMOVAL
RE-INSTALL BOLTS IN HOLES

GIRDER JACKING AND BEARING REMOVAL AT PIER N-8

INDICATES TO BE REMOVED

LEGEND

J A C K  &  S H I M S

SIDE RETAINER DETAIL

ELEVATION

ELASTOMERIC BEARING REPLACEMENT

NOTES:

1. REMOVE EXPANSION SHOE ASSEMBLY, INCLUDING SHIMS AND PLATES.
2. ALIGN / LEVEL STIFFENER BEARING (PADDLES), HORIZONTAL AND VERTICAL.
3. PROVIDE PLATE OR ALIGN PADDLE WITH PLATE.
4. PROVIDE PLATE OR ALIGN PADDLE WITH PLATE.
5. PROVIDE PLATE OR ALIGN PADDLE WITH PLATE.

SIDE RETAINER DETAIL

NOTE:

ALL JACKING AND BEARING REMOVAL / REPLACEMENT, IF MADE, SHALL BE COMPLETED PRIOR TO THE COMPLETION OF THE JOINT REPLACEMENT AND OVERLAY REPLACEMENT WORK, INCLUDING BRIDGE REPAIR WORK.

ALL DIMENSIONS SHOWN ARE BASED ON EXISTING PLANS, CONSTRUCTION MAY BE DIFFERENT.

CONTRACTOR SHALL FIELD VERIFY.

SEE UNIQUE SPECIAL PROVISION FOR ADDITIONAL DETAILS AND REQUIREMENTS.
EXISTING FINGER JOINT REMOVAL & EXPANSION JOINT REPLACEMENT AT ABUTMENT S-20, PIER N-8

NOTATIONS:
1) In Snap
2) Vertical A.C. Section shall conform to existing sheet 3D
3) 1" Deeper concrete: See existing sheet Drawings for 1/2" depth
4) Formwork materials, labor for expansion joint system: Per existing protected surface
5) Bonded Construction Joint
6) Formwork, materials, labor: See existing sheet Drawings for 1/2" depth
7) Protection of materials, labor: See existing sheet Drawings for 1/2" depth
8) Expanded Joint reinforcement shall be transverse and electrically bonded, new construction

TYPICAL CURB & PLINTH

EXHISTING PLAN
SHOWING REMOVAL

PROPOSED PLAN
SHOWING NEW CONSTRUCTION

SECTION A-A

MIX (TYP)
WATERPROOFING

SHOWING REMOVAL
EXISTING PLAN

SHOWING NEW CONSTRUCTION
PROPOSED PLAN

MOVEMENT (IN)
"A" (°F)

MOVEMENT (IN)
"B" (°F)

1/3/2016 1:42 PM
SAV E:
1/3/2016 1:43 PM
FOY, SHEILA PLO T:
V:\1785\active\178566011\structural\HENDERSON SB BRIDGE\drawing\IN_S10-S11-S12_EXP & Finger Jt Rpl.dgn

MOVEMENT TABLE

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<td>1.875</td>
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<tr>
<td>3.125</td>
<td>2.25</td>
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<tr>
<td>4.375</td>
<td>3.25</td>
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MOVEMENT TABLE

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<th>MOVEMENT</th>
<th>&quot;B&quot; (°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>60</td>
</tr>
<tr>
<td>1.25</td>
<td>3.25</td>
</tr>
<tr>
<td>2.25</td>
<td>4.375</td>
</tr>
<tr>
<td>3.25</td>
<td>60</td>
</tr>
</tbody>
</table>

EXISTING FINGER JOINT REMOVAL & EXPANSION JOINT REPLACEMENT AT ABUTMENT S-20, PIER N-8

NOTES:
1) CONTRACTOR SHALL PROVIDE SPECIFIED WET CONCRETE FOR PROD. EXP. J.O. 120° F & CONFORM TO SPECIFICATIONS IN DRAWINGS.

FOR DRAWINGS SHOWN HEREIN ONLY.

FOR LIMITS OF PHASED CONSTRUCTION SEE SHEET S7.

WATERPROOFING MIX OVERLAY BID ITEM.

IS EXCLUDED FROM THE MEASURED QUANTITY FOR 2" ASPHALT THE AREA WITHIN THE LIMITS OF EXPANSION JOINT REPLACEMENT.

ROUGHEN EXISTING CONCRETE WHEN IN CONTACT WITH NEW CONCRETE.

SEE GENERAL NOTES FOR BONDING NEW CONCRETE TO EXIST CONCRETE.

TOP & BOTTOM TRANSVERSE REINFORCEMENT IN OVERHANG.

EXIST CONCRETE FOR PROP EXP JOINT, AS NOT TO CUT EXIST CONCRETE.

CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHEN REMOVING EXISTING CONCRETE.

FOR EXISTING FINGER JOINT REMOVAL & EXPANSION JOINT REPLACEMENT AT ABUTMENT S-20, PIER N-8
JOINT AND DRAINAGE SYSTEM REMOVAL
AT PIERS S-3 AND N-5

JOINT AND DRAINAGE SYSTEM REMOVAL AT PIER S-11
AT PIERS S-7 & S-15

JOINT AND DRAINAGE SYSTEM REMOVAL
AT PANEL POINTS LS0 AND LS0'

JOINT AND DRAINAGE SYSTEM REMOVAL
AT PIER E

NOTATIONS:

- ™ Existing Diaphragm/Cross Frame to Remain

NOTE:
CLEAN AND STRAIGHTEN EXISTING
REINFORCEMENT. REPLACE ANY
DAMAGED REINFORCEMENT.

PLINTH AND CURB REMOVAL
AT LS0, LS0' AND PIER E

DATE: 11/04/2016
M. LAWLER
S. PARSONS

HENDERSON COUNTY, KENTUCKY
US 41 SB BRIDGE REHAB OVER THE OHIO RIVER
FINGER JOINT REMOVAL
TRANSVERSE

OVERHANG BAR

OVERHANG BAR

KYTC DRAWING NO. 27600

3"

1"

3"

1"

4"

5"

3"

TO ANCHOR PLATE

#5 STIRRUP WELDED

BULKHEAD PLATE

REBAR ANCHOR PLATE

STUD ANCHOR PLATE

APPROACH BRIDGE ANCHOR PLATE DETAILS

TRUSS BRIDGE ANCHOR PLATE DETAILS

AIR CUT LINE

MIN 6"

OVERLAY

EXISTING INSTALLATION BEAM

SHIPPING BRACKETS

SHIPPING RODS

BLOCKING

NEW REINFORCEMENT REQUIRED

SHIM AS BLOCKING & JOINT INSTALLATION DETAIL

DETAIL SIMILAR AT ALL OTHERS SHOWN AT PIER S-3 JOINT

CONNECTION BOLTS.

TRANSPORT FINGER JOINT ASSEMBLIES WITH A MINIMUM OF TWO INSTALLATION BEAMS.

INSTALLATION NOTES:

1. TRANSVERSE REINFORCEMENT AS SHOWN IN PLAN, SHEET S14.

2. STRINGERS, EACH SIDE BETWEEN STRINGERS, 1" x 6" SHEAR STUDS (ONE SIDE ONLY AT COLLECTOR PLATE)

3. VENT HOLE

4. SPLASH PLATE

5. COLLECTOR PLATE

NOTATIONS

COMMON CONCRETE HAS BEEN USED FOR COMPLETE STRENGTH. SHOWN THE INSTALLATION PLATE IS ANCHORED DIRECTLY TO BULKHEAD PLATE USING BOLTS AND CONNECTION PLATE.

#6 TRANSVERSE

#5 SLAB REINFORCEMENT

#4 OVERHANG BAR

#4 OVERHANG BAR

#5 DIAPHRAGM STIRRUP

#6 MECHANICAL

M. LAWLER

R. CATRON

S. PARSONS

HENDERSON COUNTY, KENTUCKY

US 41 SB BRIDGE REHAB OVER THE OHIO RIVER

FINGER EXPANSION JOINT

PE 11012108

CHECKED:

DESIGN ENGINEER

FOR APPROVAL:

DRAWN:

RECOMMENDED DATE

DEPARTMENT OF TRANSPORTATION INDIANA

11/04/2016

SAVED:

11/3/2016 1:59 PM

FOY, SHEILA PLOT:

V:\1785\active\178566011\structural\Henderson SB Bridge\drawing\IN_S16_Finger_Jt_Dtdgn

DRAFT

Not for Construction
ELEVATION - PLATING FOR CURB

SECTION A-A

ELEVATION - PLATING FOR CURB & PLINTH

SECTION B-B
INDIANA DEPARTMENT OF TRANSPORTATION
HENDERSON COUNTY KENTUCKY
US 41 SB BRIDGE REHAB OVER THE OHIO RIVER
STEEL DIAPHRAGM REPAIR

REMOVAL AND REPLACEMENT OF DIAPHRAGM AT PIER N-8

GUSSET PLATE BOLT CONNECTION
AT PIER S-7 (SPAN 7S, BAYS 3 & 4)

SECTION A-A

LEGEND

INDICATES LIMITS OF SEVERE CORROSION
INDICATES STRUCTURAL STEEL TO BE REMOVED AND REPLACED

NOTE:
CONTRACTOR SHALL ENSURE THE PROPER FIT BETWEEN THE NEW STEEL COMPONENTS AND THE EXISTING DIAPHRAGM SHEAR PLATES.

GUSSET PLATE BOLT CONNECTION
AT PIER S-7 (SPAN 7S, BAYS 3 & 4)

SECTION A-A

INDICATES STRUCTURAL STEEL TO BE REMOVED AND REPLACED

Note:
CONTRACTOR SHALL ENSURE THE PROPER FIT BETWEEN THE NEW STEEL COMPONENTS AND THE EXISTING DIAPHRAGM SHEAR PLATES.

REMOVAL AND REPLACEMENT OF DIAPHRAGM AT PIER N-8

GUSSET PLATE BOLT CONNECTION
AT PIER S-7 (SPAN 7S, BAYS 3 & 4)

SECTION A-A

INDICATES LIMITS OF SEVERE CORROSION
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GUSSET PLATE BOLT CONNECTION
AT PIER S-7 (SPAN 7S, BAYS 3 & 4)

SECTION A-A

INDICATES LIMITS OF SEVERE CORROSION
INDICATES STRUCTURAL STEEL TO BE REMOVED AND REPLACED

NOTE:
CONTRACTOR SHALL ENSURE THE PROPER FIT BETWEEN THE NEW STEEL COMPONENTS AND THE EXISTING DIAPHRAGM SHEAR PLATES.

GUSSET PLATE BOLT CONNECTION
AT PIER S-7 (SPAN 7S, BAYS 3 & 4)

SECTION A-A

INDICATES LIMITS OF SEVERE CORROSION
INDICATES STRUCTURAL STEEL TO BE REMOVED AND REPLACED

NOTE:
CONTRACTOR SHALL ENSURE THE PROPER FIT BETWEEN THE NEW STEEL COMPONENTS AND THE EXISTING DIAPHRAGM SHEAR PLATES.
HANDRAIL
ALUMINUM
5
ANY COMPONENTS.
DIMENSIONS SHALL BE MEASURED IN THE FIELD BY THE CONTRACTOR PRIOR TO FABRICATION OF
THE DIMENSIONS SHOWN IN THE PLANS ARE BASED ON ORIGINAL CONSTRUCTION RECORDS. THESE
PROVIDE A ‘” MIN OF THREAD EXPOSED BEYOND NUT.
USE TEMPLATE TO LOCATE HOLES IN CONCRETE. BOLT LENGTHS NOT SHOWN SHALL BE SIZED TO
ALL BOLT HOLES SHALL BE ‘” LARGER THAN THE BOLT DIAMETER UNLESS OTHERWISE SPECIFIED.
FABRICATION. BOLTS AND HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 232.
ALL STEEL POSTS AND PLATES SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 111 AFTER
RESIN BONDED ANCHORS (ALL THREAD)
BOLTS, NUTS & WASHERS,
STEEL SHAPES & PLATES
NOTE:
REINF (SEE
TRANSVERSE
EXISTING
NOTE)
POST CONNECTION
EXP SPLICE
REG SPLICE
BEAM MEMBER SPLICE
BOLTS WITH HEX NUTS AT ALL SLOTS.
CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHEN DRILLING
FIELD DRILL FOR 2 - ‘” RESIN BONDED ANCHORS WITH HARDENED
RECOMMENDATION, 1'-0" MIN)
FIELD DRILL FOR 2 - 1" RESIN BONDED ANCHORS WITH HARDENED
RECOMMENDATION, 6" MIN)
NOTE)
THREE BEAM
TWELVE
BEAM ELEMENT
SECTION THRU RAIL ELEMENT
INSERT “A”
NOTE:
CONCRETE POSTS, THE POST CONFORMS WITH THE CONGRETE CURB
CONSTRUCTION SHALL REMOVE CONCRETE FROM CURB, AT LEAST 1'-6" LATERAL TO CURB, AS NOT TO CUT
EXISTING CONCRETE FOR CURB REPAIR, AS NOT TO CUT EXIST
EXISTING CONCRETE WHEN IN CONTACT WITH NEW
ROUGHEN EXISTING CONCRETE WHEN IN CONTACT WITH NEW
TWO-COMPONENT EPOXY RESIN SYSTEM.
CONTRACTOR SHALL REMOVE EXISTING CONCRETE 1'-6" LATERALLY
TOP & BOTTOM TRANSVERSE REINFORCEMENT IN OVERHANG.
THE CONTRACTOR SHALL REMOVE EXISTING CONCRETE AND SAND-BLAST CLEAN, SIDE OF REPAIR AREA, WITH APPROVAL OF RESIDENT ENGINEER.
BEYOND DAMAGED OR CRACKED CURB INTO SOUND CONCRETE ON EACH
CONCRETE.
WHERE REPAIR TO CONCRETE IS REQUIRED, NEW CONCRETE
BONDING NEW CONCRETE TO EXISTING CONCRETE-
TO MATCH EXISTING CONCRETE.
CONTRACTOR SHALL REMOVE EXISTING CONCRETE WALLS, WHERE REPAIR TO CONCRETE IS REQUIRED, NEW CONCRETE
TWO-COMPONENT EPOXY RESIN SYSTEM.
CONTRACTOR SHALL REMOVE CONCRETE FROM CURB, AT LEAST 1'-6" LATERAL TO CURB, AS NOT TO CUT EXIST
EXISTING CONCRETE FOR CURB REPAIR, AS NOT TO CUT EXIST
EXISTING CONCRETE WHEN IN CONTACT WITH NEW
ROUGHEN EXISTING CONCRETE WHEN IN CONTACT WITH NEW
TWO-COMPONENT EPOXY RESIN SYSTEM.
CONTRACTOR SHALL REMOVE EXISTING CONCRETE 1'-6" LATERALLY
TOP & BOTTOM TRANSVERSE REINFORCEMENT IN OVERHANG.
THE CONTRACTOR SHALL REMOVE EXISTING CONCRETE AND SAND-BLAST CLEAN, SIDE OF REPAIR AREA, WITH APPROVAL OF RESIDENT ENGINEER.
BEYOND DAMAGED OR CRACKED CURB INTO SOUND CONCRETE ON EACH
CONCRETE.
WHERE REPAIR TO CONCRETE IS REQUIRED, NEW CONCRETE
BONDING NEW CONCRETE TO EXISTING CONCRETE-
TO MATCH EXISTING CONCRETE.
CONTRACTOR SHALL REMOVE CONCRETE FROM CURB, AT LEAST 1'-6" LATERAL TO CURB, AS NOT TO CUT EXIST
EXISTING CONCRETE FOR CURB REPAIR, AS NOT TO CUT EXIST
EXISTING CONCRETE WHEN IN CONTACT WITH NEW
ROUGHEN EXISTING CONCRETE WHEN IN CONTACT WITH NEW
TWO-COMPONENT EPOXY RESIN SYSTEM.
CONTRACTOR SHALL REMOVE EXISTING CONCRETE 1'-6" LATERALLY
TOP & BOTTOM TRANSVERSE REINFORCEMENT IN OVERHANG.
THE CONTRACTOR SHALL REMOVE EXISTING CONCRETE AND SAND-BLAST CLEAN, SIDE OF REPAIR AREA, WITH APPROVAL OF RESIDENT ENGINEER.
BEYOND DAMAGED OR CRACKED CURB INTO SOUND CONCRETE ON EACH
CONCRETE.
THRIE BEAM EXPANSION AT JOINTS LESS THAN 2"

1. The length of headers required shall not be extended by more than 3".

2. The length shall be provided for the chord of unit between starting points. The chord length may vary from 3" by plus one foot or minus two feet maximum.

3. Special drilling of the thrie beam may be required at the splices.

4. Thrie beam guardrail on the bridge shall be made of steel and shall be 12 gauge.

5. Use "` button-head, oval shoulder bolts with hex nuts at all slots. (Thickness of hex nuts = ..."

6. Minimum length of thrie beam sections is equal to one post space.

7. At the expansion slots in the thrie beam rails tighten bolts, back off one-half turn and burr threads.

8. Washers and plates shall be galvanized after fabrication.

9. All steel connecting bolts and fasteners for posts and railing, and all anchor bolts, nuts, bolts, washers, plates and structural tubing are considered as parts of the thrie beam rail for payment.

10. Notes:

   - "x1 " " L ONG
   - 8  S L O TTE D  HO LE S
   -  "x2  " L ONG
   - S L O TTE D  HO LE

   ELEMENT SEE DETAIL BELOW

   SYMMETRICAL TRANSITION

   SEE DETAIL ON SHEET S20

   BEAM MEMBER SPLICE

   THRIE BEAM EXPANSION AT JOINTS GREATER THAN 2"

   THRIE BEAM EXPANSION AT JOINTS LESS THAN 2"

   AT 60°

   "A"+"