<table>
<thead>
<tr>
<th>STANDARD SHEET 100-S</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2093</td>
<td>&quot;C&quot; OR &quot;D&quot; BEAMS - STUB ABUTMENT DETAILS - (R.A.) 0°01-7°30 SKEWS</td>
</tr>
<tr>
<td>2094</td>
<td>&quot;C&quot; OR &quot;D&quot; BEAMS - STUB ABUTMENT DETAILS - (R.A.) 7°31-15 SKEWS</td>
</tr>
<tr>
<td>2095</td>
<td>&quot;C&quot; OR &quot;D&quot; BEAMS - STUB ABUTMENT DETAILS - (R.A.) 15°01-30 SKEWS</td>
</tr>
<tr>
<td>2096</td>
<td>&quot;C&quot; OR &quot;D&quot; BEAMS - STUB ABUTMENT DETAILS - (L.A.) 0°01-7°30 SKEWS</td>
</tr>
<tr>
<td>2097</td>
<td>&quot;C&quot; OR &quot;D&quot; BEAMS - STUB ABUTMENT DETAILS - (L.A.) 7°31-15 SKEWS</td>
</tr>
<tr>
<td>2098</td>
<td>&quot;C&quot; OR &quot;D&quot; BEAMS - STUB ABUTMENT DETAILS - (L.A.) 15°01-30 SKEWS</td>
</tr>
<tr>
<td>2099</td>
<td>&quot;C&quot; OR &quot;D&quot; BEAMS - STUB ABUTMENT DETAILS - 0 SKEW</td>
</tr>
<tr>
<td>2100</td>
<td>&quot;C&quot; OR &quot;D&quot; BEAMS - STUB ABUTMENT DETAILS - (R.A.) 0°01-7°30 SKEWS</td>
</tr>
<tr>
<td>2101</td>
<td>&quot;C&quot; OR &quot;D&quot; BEAMS - STUB ABUTMENT DETAILS - (R.A.) 7°31-15 SKEWS</td>
</tr>
<tr>
<td>2102</td>
<td>&quot;C&quot; OR &quot;D&quot; BEAMS - STUB ABUTMENT DETAILS - (R.A.) 15°01-30 SKEWS</td>
</tr>
<tr>
<td>2103</td>
<td>&quot;C&quot; OR &quot;D&quot; BEAMS - STUB ABUTMENT DETAILS - (L.A.) 0°01-7°30 SKEWS</td>
</tr>
<tr>
<td>2104</td>
<td>&quot;C&quot; OR &quot;D&quot; BEAMS - STUB ABUTMENT DETAILS - (L.A.) 7°31-15 SKEWS</td>
</tr>
<tr>
<td>2105</td>
<td>&quot;C&quot; OR &quot;D&quot; BEAMS - STUB ABUTMENT DETAILS - (L.A.) 15°01-30 SKEWS</td>
</tr>
<tr>
<td>2106</td>
<td>BEAM BAR LIST FOR 0 SKEW</td>
</tr>
<tr>
<td>2107</td>
<td>BEAM BAR LIST FOR 1 - 7 SKEW</td>
</tr>
<tr>
<td>2108</td>
<td>BEAM BAR LIST FOR 7 - 30 SKEW</td>
</tr>
<tr>
<td>2109</td>
<td>BEAM BAR LIST FOR 30 - 30 SKEW</td>
</tr>
<tr>
<td>4542</td>
<td>PART PLAN &amp; LONGIT. SECT. - &quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS, STUB ABUT., 0 SKEW</td>
</tr>
<tr>
<td>4543</td>
<td>PART PLAN &amp; LONGIT. SECT. - &quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS, STUB ABUT., 0°01 - 7°30 SKEW</td>
</tr>
<tr>
<td>4544</td>
<td>PART PLAN &amp; LONGIT. SECT. - &quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS, STUB ABUT., 7°31 - 15° SKEW</td>
</tr>
<tr>
<td>4545</td>
<td>PART PLAN &amp; LONGIT. SECT. - &quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS, STUB ABUT., 15°01 - 30° SKEW</td>
</tr>
<tr>
<td>4546</td>
<td>PART PLAN &amp; LONGIT. SECT. - &quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS, STUB ABUT., 0 SKEW</td>
</tr>
<tr>
<td>4547</td>
<td>PART PLAN &amp; LONGIT. SECT. - &quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS, STUB ABUT., 0°01 - 7°30 SKEW</td>
</tr>
<tr>
<td>4548</td>
<td>PART PLAN &amp; LONGIT. SECT. - &quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS, STUB ABUT., 7°31 - 15° SKEW</td>
</tr>
<tr>
<td>4549</td>
<td>PART PLAN &amp; LONGIT. SECT. - &quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS, STUB ABUT., 15°01 - 30° SKEW</td>
</tr>
<tr>
<td>4550</td>
<td>STUB ABUT. &quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS, BAR LIST &amp; SUPER. DETAILS - 0 SKEW</td>
</tr>
<tr>
<td>4551</td>
<td>STUB ABUT. &quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS, BAR LIST &amp; SUPER. DETAILS - 0°01 - 7°30 SKEW</td>
</tr>
<tr>
<td>4552</td>
<td>STUB ABUT. &quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS, BAR LIST &amp; SUPER. DETAILS - 7°31 - 15° SKEW</td>
</tr>
<tr>
<td>4553</td>
<td>STUB ABUT. &quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS, BAR LIST &amp; SUPER. DETAILS - 15°01 - 30° SKEW</td>
</tr>
<tr>
<td>4554</td>
<td>STUB ABUT. &quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS, BAR LIST &amp; SUPER. DETAILS - ALL SKEWS</td>
</tr>
<tr>
<td>4555</td>
<td>30'-0 WELDED CROSS SECTION LRFD DESIGN</td>
</tr>
<tr>
<td>4556</td>
<td>40'-0 WELDED CROSS SECTION LRFD DESIGN</td>
</tr>
<tr>
<td>4557</td>
<td>44'-0 WELDED CROSS SECTION LRFD DESIGN</td>
</tr>
<tr>
<td>4558</td>
<td>40'-0 WELDED CROSS SECTION (SYMM. CROWN) LRFD DESIGN</td>
</tr>
<tr>
<td>4559</td>
<td>40'-0 RDWY. PPCB (&quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS - STUB ABUT.) CROSS SECTION</td>
</tr>
<tr>
<td>4560</td>
<td>44'-0 RDWY. PPCB (&quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS - STUB ABUT.) CROSS SECTION</td>
</tr>
<tr>
<td>4561</td>
<td>40'-0 RDWY. PPCB (&quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS - STUB ABUT.) CROSS SECTION (SYMM. CROWN)</td>
</tr>
<tr>
<td>4562</td>
<td>30'-0 RDWY. PPCB (&quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS - STUB ABUT.) CROSS SECTION</td>
</tr>
<tr>
<td>4563</td>
<td>40'-0 RDWY. PPCB (&quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS - STUB ABUT.) CROSS SECTION (SYMM. CROWN)</td>
</tr>
<tr>
<td>4564</td>
<td>44'-0 RDWY. PPCB (&quot;B&quot;, &quot;C&quot;, &amp; &quot;D&quot; BEAMS - STUB ABUT.) CROSS SECTION (SYMM. CROWN)</td>
</tr>
</tbody>
</table>
DRAIN DETAILS

NOTE:

- DRAINS ARE TO BE GALVANIZED AND PAINTED ACCORDING TO SECTION 2509 OF THE STANDARD SPECIFICATIONS. DRAINS ARE REQUIRED.

- DRAIN WEIGHTS ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.

- WEIGHT OF DRAIN INCLUDES ANGLES AND PLATES.

- WEIGHT OF DRAIN INCLUDES ANGLES AND PLATES.

NOTE:

- DRAIN WEIGHTS ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.

- DRAIN WEIGHTS ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.
ABUTMENT STEP DIAGRAM

REAR ELEVATION

TABLE OF ABUTMENT ELEVATIONS

<table>
<thead>
<tr>
<th>POINT</th>
<th>ABUTMENT</th>
<th>ABUTMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELEV.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE OF ABUTMENT STEPS

<table>
<thead>
<tr>
<th>STEP</th>
<th>ABUTMENT</th>
<th>ABUTMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SECTION THROUGH ABUTMENT

ABUTMENT FOOTING DETAILS

DESIGN TEAM
STANDARD SHEET 2099
“C” OR “D” BEAM STUB ABUT. DETAILS - 0° SKEW

NOTE: BARRIER RAIL NOT SHOWN.

NOTE: SEE DESIGN SHEET _____ IN THESE PLANS FOR DETAILS OF BARRIER RAIL WING EXTENSIONS, REINFORCING BARS 5c3 AND 5c14 ARE INCLUDED IN THE BARRIER RAIL QUANTITIES.

NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY" A LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

TABLE OF WINGWALL ELEVATIONS

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>ELEV. G</th>
<th>ELEV. H</th>
<th>ELEV. I</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY" A LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.
STANDARD SHEET 2100
"C" OR "D" BEAM STUB ABUT. DETAILS - ( R.A. ) 0°01' - 7°30' SKEW

TO ACCOMMODATE SKEW CLEAR FROM FACE OF CONCRETE

NOTE:"STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL
SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

NOTE: BARRIER RAIL NOT SHOWN.

NOTE: SEE DESIGN SHEET ____ IN THESE PLANS FOR DETAILS OF BARRIER RAIL WING EXTENSIONS. REINFORCING BARS 5c3 AND 5c14 ARE INCLUDED IN THE BARRIER RAIL QUANTITIES.
STANDARD SHEET 2101

"C" OR "D" BEAM STUB ABUT. DETAILS - ( R.A. ) 7°31' - 15° SKEW

Note: See design sheet ... for location of views A-A & B-B

Note: See design sheet ... for location of views C-C & D-D

Note: See design sheet ... for location of views F-F & D-D

Note: See plan & longit. section sheet for PVC pipe location.

Note: See design sheet ____ for location of views A-A & B-B

Note: For location of views A-A & B-B

Note: Stainless steel" level or "rebar epoxy" A" level should be on or off depending on barrier rail steel embedded in the bridge deck.

Table of Wingwall Elevations

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Design Team: [Name]  Project Number: [Number]  Sheet Number: [Number]

Iowa Department of Transportation - Highway Division

[Date]  [Signature]
STANDARD SHEET 2102

"C" OR "D" BEAM STUB ABUT. DETAILS - (R.A.) 15°01' - 30° SKEW

TO ACCOMMODATE SKEW CLEAR FROM FACE OF CONCRETE
POSITION THIS 5e2 BAR 2" PART SECTION F-F

ABUTMENT WING.
AVOID PILE IN AS NECESSARY TO FIELD BEND 5h4 BAR IN THE BRIDGE DECK.
RAIL STEEL EMBEDDED DEPENDING ON BARRIER SHOULD BE ON OR OFF "REBAR EPOXY A" LEVEL
NOTE: "STAINLESS STEEL" LEVEL OR

REvised 05-14 - CHANGED THE MINIMUM EMBEDMENT OF THE 5e1 & 5e2 BARS TO 1'-6" INTO THE ABUTMENT FOOTING.

TABLE OF WINGWALL ELEVATIONS

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>ELEV. G</th>
<th>ELEV. H</th>
<th>ELEV. I</th>
</tr>
</thead>
</table>

NOTE: STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN | GRADE ||| BELOW THE PARALLEL TO AND THIS SURFACE IS PARALLEL TO AND BELOW THE DESIGN | GRADE.

DESIGN TEAM

COUNT | PROJECT NUMBER

SHEET NUMBER | SHEET NAME

STANDARD SHEET 2102

COUNT | PROJECT NUMBER

4'-1 ~5c3 ~5c14

F.F. | SPA.

PART SECTION D-D

NOTE: BARRIER RAIL NOT SHOWN.

SECTION C-C
NOTE: BARRIER RAIL NOT SHOWN.

NOTE: SEE DESIGN SHEET ____ IN THESE PLANS FOR DETAILS OF BARRIER RAIL WING EXTENSIONS, REINFORCING BARS 5c3 AND 5c14 ARE INCLUDED IN THE BARRIER RAIL QUANTITIES.

NOTE: SEE DESIGN SHEET ____ FOR PVC PIPE LOCATION.

*SEE PART PLAN & LONGIT. SECTION SHEET FOR PVC PIPE LOCATION.

SEE ABUTMENT WING FOR DETAILS.

FOR BOTTOM FOOTING ELEVATION SEE DESIGN SHEET ??

VIEW A-A
NOTE: FOR LOCATION OF VIEWS A-A & B-B SEE DESIGN SHEET ____.

VIEW B-B
SEE PART PLAN & LONGIT. SECTION SHEET FOR PVC PIPE LOCATION.

VIEW A-A
NOTE: FOR LOCATION OF VIEWS A-A & B-B SEE DESIGN SHEET ____.

VIEW B-B
SEE PART PLAN & LONGIT. SECTION SHEET FOR PVC PIPE LOCATION.

NOTE: SEE DESIGN SHEET ____ IN THESE PLANS FOR DETAILS OF BARRIER RAIL WING EXTENSIONS, REINFORCING BARS 5c3 AND 5c14 ARE INCLUDED IN THE BARRIER RAIL QUANTITIES.

NOTE: STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

7'-0 ABUTMENT WING

NOTE: BARRIER RAIL NOT SHOWN.

NOTE: SEE DESIGN SHEET ____ IN THESE PLANS FOR DETAILS OF BARRIER RAIL WING EXTENSIONS, REINFORCING BARS 5c3 AND 5c14 ARE INCLUDED IN THE BARRIER RAIL QUANTITIES.

NOTE: STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.
**ABUTMENT NOTES:**

Minimum clear distance from face of concrete to near reinforcing bar is to be 2 inches otherwise noted on drawing. Expansion joint is to be poured before the bridge deck is poured.

Concrete joint keys are to be formed with developable keys.

The portion of the backwall containing the abutment anchors of the expansion device is to be placed after the bridge deck is placed.

Concrete anchor is to be applied to the abutment bridge face in accordance with the current Iowa codes standard specifications.

The cost of reinforcing expansion joint filler, and cost of furnishing and placing concrete sealer is to be included in the price bid for structural concrete bridge.

Painting access doors shall be stainless steel deformed bar access doors. Meeting the requirements of materials, sizes, if necessary to prevent damage to the end of the bridge deck and backwall from construction equipment. An approximate method of protection approved by the engineer shall be provided by the bridge contractor at no extra cost to the state.

**REINFORCING BAR LIST - ONE ABUTMENT**

<table>
<thead>
<tr>
<th>BAR</th>
<th>LOCATION</th>
<th>SHAPE</th>
<th>NO.</th>
<th>LENGTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>6d1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5d2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5d3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5g1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5g2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5g3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5m1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5n1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**CONCRETE PLACEMENT QUANTITIES**

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>CFT</th>
<th>MVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Footing and stem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backwall fill of constr. joint</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backwall above constr. joint</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pave extension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pave extension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pave maskwall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pave maskwall</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL (C.Y.)**

**NOTE:**

Concrete and reinforcing steel quantities are included on the summary quantities sheet.

68x576

**ABUTMENT QUANTITIES**

IOWA DEPARTMENT OF TRANSPORTATION • HIGHWAY DIVISION

DESIGN SHEET NO. 1003 • SHEET NO. 100060

COUNTY OF IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1003 • SHEET NO. 100060

CFT | MVA |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**ABUTMENT NOTES:**

Minimum clear distance from face of concrete to near
reinforcing bar is to be 2" unless otherwise noted in drawing.

The backwall is to be poured before the bridge deck is
poured.

Construction joint keys are to be formed with develo

The portion of the backwall containing the abutment
anchor bars of the expansion device is to be placed after
the bridge deck is placed.

Concrete anchor bars are to be applied to the abutment bridge
deck in accordance with the current IOWA DOT, Standard
Specifications.

The cost of preformed expansion joint filler, and cost of
furnishing and placing concrete sealer is to be included in
the price bid for structural concrete bridge.

PAVING NOTCH DOWELS SHALL BE STAINLESS STEEL DEFORMED BAR

Necessary steps shall be taken to prevent damage to the end of the
bridge deck and backwall from construction equipment. An appropriate
method of protection approved by the engineer shall be provided by
the bridge contractor at no extra cost to the state.

NOTE: ALL DIMENSIONS ARE OUT TO OUT. D = PIN DIAMETER

ABUTMENT QUANTITIES

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION


REINFORCING BAR LIST - ONE ABUTMENT

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>POSTING AND STEPS</td>
<td></td>
</tr>
<tr>
<td>BACKWALL ABOVE CONSTRUCTION JOINT</td>
<td></td>
</tr>
<tr>
<td>PAVING NOTCH</td>
<td></td>
</tr>
<tr>
<td>PAVING NOTCH</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL (LBS)

NOTE: CONCRETE AND REINFORCING STEEL QUANTITIES ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.
ABUTMENT NOTES:

MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR PAVING ROW IS TO BE 2 UNLESS OTHERWISE SHOWN ON PLAN.
THE MASKWALL IS TO BE POISED BEFORE THE BRIDGE DECK IS
POISED.

CONSTRUCTION JOINT KEYWAYS ARE TO BE FORMED WITH DEVELED
2", 3", 4".

THE PORTION OF THE BRIDGE CONTAINING THE ABUTMENT
ANCHORAGE OF THE EXPANSION DEVICE IS TO BE PLACED
AFTER THE BRIDGE DECK IS PLACED.

CONCRETE SEALER IS TO BE APPLIED TO THE ABUTMENT BRIDGE
SEEN IN ACCORDANCE WITH THE CURRENT IOWA HIGHWAY
SPECIFICATIONS.

THE COST OF PREPARED EXPANSION JOINT FILLER AND COST
OF FURNISHING AND PLACING CONCRETE SEALER IS TO BE INCLUDED
IN THE PRICE BID FOR STRUCTURAL CONCRETE BRIDGE.
MOVING AUTOMATIC DOORS SHALL BE STAINLESS STEEL DEFORMED BAR
GRADE 60, MEETING THE REQUIREMENTS OF MATERIALS I.M. 452.
IF NECESSARY TO PREVENT DAMAGE TO THE END OF THE BRIDGE
DECK AND BACKWALL FROM CONSTRUCTION EQUIPMENT, AN APPROPRIATE
METHOD OF PROTECTION APPROVED BY THE ENGINEER SHALL BE PROVIDED
BY THE BRIDGE CONTRACTOR AT NO EXTRA COST TO THE STATE.

NOTE: ALL DIMENSIONS ARE OUT TO OUT. D = PIN DIAMETER

REINFORCING BAR LIST - ONE ABUTMENT

<table>
<thead>
<tr>
<th>BAR</th>
<th>LOCATION</th>
<th>LENGTH</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>6d1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5d2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5d3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5g1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5g2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5m1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5n1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5h2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5h4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5b1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5b2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5e1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5e2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5f3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5d4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4d6</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

REINFORCING STEEL - EPOXY COATED - TOTAL (LBS.)

<table>
<thead>
<tr>
<th>S.S. BARS</th>
<th>TOTAL (LBS.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.S. BARS</td>
<td></td>
</tr>
</tbody>
</table>

EPOXY COATED BARS

<table>
<thead>
<tr>
<th>S.S. BARS</th>
<th>TOTAL (LBS.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.S. BARS</td>
<td></td>
</tr>
</tbody>
</table>

ABUTMENT QUANTITIES

<table>
<thead>
<tr>
<th>ABUT. QUANTITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

NOTE: CONCRETE AND REINFORCING STEEL QUANTITIES ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.
SUPERSTRUCTURE NOTES:

BY THE GIRDERS THE CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR SHALL BE 2 INCHES UNLESS OTHERWISE NOTED BY SADIR.

1) TRANSVERSE REINFORCING STEEL IS TO BE PARALLEL TO AND CLEAR ABOVE BOTTOM OF DECK.

2) ALL FIELD CONNECTIONS ARE TO BE BOLTED USING “HIGH TENSILE STRENGTH BOLTS”.

3) ALL OPEN HOLES ARE TO BE APPLIED FOR BAR CHAIRS, HIGH BAR CHAIRS, AND DECK BOLSTERS.

4) DECK BOLSTERS SPACED 4'-0 APART.

5) STRAIGHT LINE DETAIL B

6) PART SECTION NEAR PIER

7) TYPICAL DECK & HAUNCH DETAIL

8) ALTERNATE SPLICE OUTSIDE OF BORDER

9) SECTION A-A

NOTE: THE BRIDGE DECK AS SHOWN INCLUDES “INTERNAL HAUNCH” SURFACE.

NOTE: FOR ADDITIONAL DETAILS AND WELDING DETAILS SEE SUMMARY QUANTITIES INCLUDED ON THE SUMMARY SHEET.

NOTE: MISCELLANEOUS DATA TABLE SHOWN ELSEWHERE ON THESE PLANS.

NOTE: TRANSVERSE DECK REINFORCING STEEL IS TO BE PARALLEL TO AND CLEAR ABOVE BOTTOM OF DECK.

NOTE: “STAINLESS STEEL” LEVEL OR “REBAR EPOXY A” LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.

NOTE: “STAINLESS STEEL” LEVEL OR “REBAR EPOXY A” LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.
**ALTERNATE INTERMEDIATE DIAPHRAGM NOTES:**

- All field connections are to be seated using high-tensile strength bolts. Unless otherwise noted, all open holes are to be 2" and all bolts to be 3/4".
- The design drawings indicate AWS prequalified welded joints. Alternate joint details may be submitted for approval. Magnetic particle inspection of welds shall be in accordance with Article 2408.03, B, of the Standard Specifications.
- Structural steel quantities are based on the intermediate diaphragm shown on typical cross section elsewhere in these plans. No adjustment to quantities will be made if the contractor uses this alternate intermediate diaphragm detail.

**OVERHANG BRACKET NOTES:**

- A maximum finishing machine load and the angle of the diagonal member of the overhang bracket shown are assumed to be the maximum. In addition to other construction loadings, they are used to check the strength of the exterior girders during critical stages of construction. If the finishing machine load or angle of the diagonal member of the overhang bracket deviate significantly from values shown, the contractor shall submit to the engineer this information on proposed construction equipment to be used.

**ALTERNATE INTERMEDIATE DIAPHRAGM PART SECTION THRU DECK**

*Note:* This cannot be welded from one side, cross frame must be turned over to add second angle.
SUPERSTRUCTURE NOTES:

- The bridge deck is shown including all necessary shop drawings, shop notes, and construction details.
- Bar chairs, bar high chairs, and deck bolster details are included in the plans.
- Shop welds are to be shown at the splice points on the plans.
- All welds are to be shown in the plans.
- Bar chairs are to be spaced at not more than 3'-0 centers longitudinally.
- Bottom bars - lap over beams (`Min. lap = 3'-3`).
- Top bar - lap midway between beams (`Min. lap = 3'-3`).
- Payment for reinforcing bars shall be based on no splices.
- All field connections are to be bolted using "High Strength Bolts".
- Unless otherwise noted, all open holes are filled with "MISCELLANEOUS DATA TABLE" shown elsewhere on these plans.
- "Stainless Steel" level or "Rebar Epoxy" A level should be on or off depending on barrier rail steel embedded in the bridge deck.
- "High Strength Bolts" are to be used at the splice points.
- Bar chairs, bar high chairs, and deck bolsters are to be shown in the plans.
- Bottom flanges are to be perpendicular to webs at the splice points.
- All field connections are to be bolted using "High Strength Bolts".
- "Stainless Steel" level or "Rebar Epoxy" A level should be on or off depending on barrier rail steel embedded in the bridge deck.
- "High Strength Bolts" are to be used at the splice points.
- Bar chairs, bar high chairs, and deck bolsters are to be shown in the plans.
- Bottom flanges are to be perpendicular to webs at the splice points.
- All field connections are to be bolted using "High Strength Bolts".
SUPERSTRUCTURE NOTES:

- The bridge deck as shown includes integral paving.
- The bridge deck and barrier rail are to be supported by the superstructure. The clear distance from face of concrete to top reinforcing bar shall be 2 inches unless otherwise noted by design.
- The superstructure reinforcing steel is to be parallel to and 3½ inches below the top of the deck. The superstructure reinforcing steel shall be supported by individual bar chairs spaced at not more than 3½ inches longitudinally and transversely, or by continuous rows of bar high chairs or deck bolts. The spacing of the reinforcing shall be such that the bar chairs or deck bolts, when included, shall not interfere with the shear studs.

- The maximum embedment of the edge of the top flange in the deck shall be 2 inches. The maximum embedment of a shear connection key shall be a minimum of 6 inches from a step in the key. The key shall be 3½ inches long and 2 inches wide.

- The superstructure reinforcing steel shall be supported by individual bar chairs spaced at not more than 3½ inches longitudinally and transversely, or by continuous rows of bar high chairs or deck bolts. The spacing of the reinforcing shall be such that the bar chairs or deck bolts, when included, shall not interfere with the shear studs.

- A concrete haunch reinforcement shall be made between section of deck and top of flange plate. Refer to haunch details shown elsewhere in these plans.

PART SECTION NEAR PIER

- The bridge deck as shown includes integral paving.
- The bridge deck and barrier rail are to be supported by the superstructure. The clear distance from face of concrete to top reinforcing bar shall be 2 inches unless otherwise noted by design.
- The superstructure reinforcing steel is to be parallel to and 3½ inches below the top of the deck. The superstructure reinforcing steel shall be supported by individual bar chairs spaced at not more than 3½ inches longitudinally and transversely, or by continuous rows of bar high chairs or deck bolts. The spacing of the reinforcing shall be such that the bar chairs or deck bolts, when included, shall not interfere with the shear studs.

- The maximum embedment of the edge of the top flange in the deck shall be 2 inches. The maximum embedment of a shear connection key shall be a minimum of 6 inches from a step in the key. The key shall be 3½ inches long and 2 inches wide.

- The superstructure reinforcing steel shall be supported by individual bar chairs spaced at not more than 3½ inches longitudinally and transversely, or by continuous rows of bar high chairs or deck bolts. The spacing of the reinforcing shall be such that the bar chairs or deck bolts, when included, shall not interfere with the shear studs.

- A concrete haunch reinforcement shall be made between section of deck and top of flange plate. Refer to haunch details shown elsewhere in these plans.
PART PLAN VIEW

PART SECTION

FACE OF BACKWALL

END OF DECK

½"x1'-3 COIL ROD

5d5

5d6

AT 50° F.

1'-6

STANDARD SHEET 4543

1'-7

5e2

5e7

COIL ROD

½"x1'-3

5e3

5d3

5d4

PIER

2'-2

1'-3

1'-3

1'-3

1'-3

ROADWAY

PART PLAN & LONGIT. SECTION - "B", "C", OR "D" BEAMS, STUB ABUT., 0°01' - 7°30' SKEW L. A.

EXPAN. PIER

FIXED PIER

| BEAMS

1'-3

ABUTMENT BEARING (VERTICAL)

PART LONGITUDINAL SECTION NEAR GUTTER

FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ??.

NOTE

PLUG 3½ PVC PIPE WITH EXPANDING FOAM PRIOR TO BACKFILLING BEHIND ABUTMENTS.

FOR BARRIER Recess and Plate Details SEE DESIGN SHEET ??

CONCRETE SEALER LIMITS FOR PRESTRESSED BEAM

CONCRETE SEALER SHall BE APPLIED TO THE ABUTMENT SEAL, WASH SURFACES AND PRESTRESSED BEAM ENDS IN ACCORDANCE WITH ARTICLE 2403.01 OF THE STANDARD SPECIFICATIONS. THE SEALING SHALL INCLUDE PORTIONS OF THE PRESTRESSED BEAM ENDS THAT ARE NOT EMBEDDED IN THE ABUTMENT DIAPHRAGMS AS DETAILED ON THIS SHEET.

TOP OF FIXED PIER DETAILS

NOTE:

** END OF BEAM TO BEARINGS

** END OF BEAM TO BEARINGS

TOP OF FIXED PIER DETAILS

SEE DESIGN SHEET ____ FOR BARRIER RAIL LAYOUT AND DETAILS

DETAIL "A"

NOTE:

STEPS, SIDES AND ENDS OF KEYWAYS.

JOINT FILLER AROUND BEARINGS, FACE OF BACKWALL

STEPS, SIDES AND ENDS OF KEYWAYS.

JOINT FILLER AROUND BEARINGS, FACE OF BACKWALL

CONCRETE SEALER SHALL BE APPLIED TO THE ABUTMENT SEAL, WASH SURFACES AND PRESTRESSED BEAM ENDS IN ACCORDANCE WITH ARTICLE 2403.01 OF THE STANDARD SPECIFICATIONS. THE SEALING SHALL INCLUDE PORTIONS OF THE PRESTRESSED BEAM ENDS THAT ARE NOT EMBEDDED IN THE ABUTMENT DIAPHRAGMS AS DETAILED ON THIS SHEET.

CONCRETE SEALER LIMITS FOR PRESTRESSED BEAM

JOINT FILLER.

EXPANSION "PREFORMED

TOP OF FIXED PIER DETAILS

PRESTRESSED BEAM

CONCRETE SEALER LIMITS FOR

PRESTRESSED BEAM ENDS THAT ARE NOT EMBEDDED IN THE ABUTMENT

THE SEALING SHALL INCLUDE PORTIONS OF THE PRESTRESSED

CONCRETE SEALER SHALL BE APPLIED TO THE ABUTMENT SEAT,

ABUTMENTS.

TO BACKFILLING BEHIND

EXPANDING FOAM PRIOR

PLUG 3½ PVC PIPE WITH

NOTE:

** END OF BEAM TO BEARINGS

** END OF BEAM TO BEARINGS

TOP OF FIXED PIER DETAILS

SEE DESIGN SHEET ____ FOR BARRIER RAIL LAYOUT AND DETAILS

DETAIL "A"

NOTE:

STEPS, SIDES AND ENDS OF KEYWAYS.

JOINT FILLER AROUND BEARINGS, FACE OF BACKWALL

STEPS, SIDES AND ENDS OF KEYWAYS.

JOINT FILLER AROUND BEARINGS, FACE OF BACKWALL

CONCRETE SEALER SHALL BE APPLIED TO THE ABUTMENT SEAL, WASH SURFACES AND PRESTRESSED BEAM ENDS IN ACCORDANCE WITH ARTICLE 2403.01 OF THE STANDARD SPECIFICATIONS. THE SEALING SHALL INCLUDE PORTIONS OF THE PRESTRESSED BEAM ENDS THAT ARE NOT EMBEDDED IN THE ABUTMENT DIAPHRAGMS AS DETAILED ON THIS SHEET.

CONCRETE SEALER LIMITS FOR PRESTRESSED BEAM

JOINT FILLER.

EXPANSION "PREFORMED

TOP OF FIXED PIER DETAILS

PRESTRESSED BEAM

CONCRETE SEALER LIMITS FOR
PART PLAN VIEW  

PART SECTION  

PART LONGITUDINAL SECTION NEAR GUTTER  

FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET **  

NOTE: 2-3/4 PVC PIPE WITH EXPANDING FOAM PRIOR TO BACKFILLING BEHIND ABUTMENTS.  

CONCRETE SEALER LIMITS FOR PRESTRESSED BEAM  

CONCRETE SEALER SHALL BE APPLIED TO THE ABUTMENT SEAT, WASH SURFACES AND PRESTRESSED BEAM ENDS IN ACCORDANCE WITH ARTICLE 2403.03, P, 3, OF THE STANDARD SPECIFICATIONS. THE SEALING SHALL INCLUDE PORTIONS OF THE PRESTRESSED BEAM ENDS THAT ARE NOT EMBEDDED IN THE ABUTMENT DIAPHRAGMS AS DETAILED ON THIS SHEET.  

FOR BARRIER Recess and plate details see design sheet **  

SEE DETAIL "A"  

NOTE: *** END OF BEAM TO S. BEAM BEARING DIMENSION  

EXPANDING FOAM PRIOR TO BACKFILLING BEHIND ABUTMENTS.  

TOP OF FIXED PIER DETAILS  

TOP OF FIXED PIER DETAILS  

FOR DETAILS OF INTERMEDIATE DIAPHRAGMS SEE DESIGN SHEET **  

NOTE: *** END OF BEAM TO S. BEAM BEARING DIMENSION  

EXPANDING FOAM PRIOR TO BACKFILLING BEHIND ABUTMENTS.
PART PLAN VIEW

PART LONGITUDINAL SECTION NEAR GUTTER
FOR DETAILS OF INTERMEDIATE DIAPHRAGM SEE DESIGN SHEET ??

PART SECTION

NOTE:
PLUG 3½ PVC PIPE WITH EXPANDING FOAM PRIOR TO BACKFILLING BEHIND ABUTMENTS.

TOP OF FIXED PIER DETAILS

CONCRETE SEALER LIMITS FOR PRESTRESSED BEAM

NOTE:
CONCRETE SEALER SHALL BE APPLIED TO THE ABUTMENT SEAT, WASH SURFACES AND PRESTRESSED BEAM ENDS IN ACCORDANCE WITH ARTICLE 2403.03, P, 3 OF THE STANDARD SPECIFICATIONS. THE SEALING SHALL INCLUDE PORTIONS OF THE PRESTRESSED BEAM ENDS THAT ARE NOT EMBEDDED IN THE ABUTMENT DIAPHRAGMS AS DETAILED ON THIS SHEET.

CORRECTION
10-10 - CHANGED CONCRETE SEALER ARTICL 2403.21, D TO ARTICL 2403.03, P, 3.

REvised 07-2018: ADDED "WASH SURFACES" AND LEADER LINE TO "CONCRETE SEALER LIMITS" DETAIL.

BY BEVELED 2x8.

KEYWAY FORMED.

4-
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
4 -
5 &
PART PLAN & LONGIT. SECTION - "B", "C", OR "D" BEAMS, STUB ABUT., 15°01' - 30° SKEW R.A.

ABUTMENTS:
- Face of Backwall
- End of Deck
- 3½x1'-3 Coil Rod
- 1'-6 5d5
- 5d6
- 2'-0 5e5
- 5e6
- 5e7
- PIER
- 2'-8
- 5e2
- 5e3
- 5d3
- 5d4
- 5e1
- 2'-0

BEARINGS:
- EXPANS. PIER
- FIXED PIER

BEAMS:
- PRESTRESSED BEAMS

CONCRETE SEALER LIMITS FOR PRESTRESSED BEAM
- CONCRETE SEALER SHALL BE APPLIED TO THE ABUTMENT SEAT, WASH SURFACES AND PRESTRESSED BEAM ENDS IN ACCORDANCE WITH ARTICLE 2403.03, P, 3, OF THE STANDARD SPECIFICATIONS. THE SEALING SHALL INCLUDE PORTIONS OF THE PRESTRESSED BEAM ENDS THAT ARE NOT EMBEDDED IN THE ABUTMENT DIAPHRAGMS AS DETAILED ON THIS SHEET.

DETAIL "A"
- CONCRETE SEALER LIMITS FOR PRESTRESSED BEAM
- EXPANSION JOINTS
- JOINTS BETWEEN BEAMS AND ENDS OF KEYWAYS.
- JOINT FILLER AROUND BEARINGS, FACE OF BACKWALL
- EXPANSION "PREFORMED CONCRETE SEALER LIMITS"

NOTES:
- PVC PIPE WITH EXPANDING FOAM PRIOR TO BACKFILLING BEHIND ABUTMENTS.
- NOTE:
- PVC PIPE - 3½ PVC PIPE
- EXPANDING FOAM PRIOR TO BACKFILLING
- EXPANSION JOINTS
- JOINT FILLER AROUND BEARINGS, FACE OF BACKWALL
- EXPANSION "PREFORMED CONCRETE SEALER LIMITS"

PRESTRESSED BEAM END OF BEARINGS:
- 4" MIN. CL. - 6" MAX. CL.
- SEE DETAIL "A"

DESIGN TEAM
- PROJECT NUMBER
- SHEET NUMBER
- SHEET NUMBER
- SHEET NUMBER

STATE OF IOWA
DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO.
COUNTY OF
OF FILE NO.
DESIGN NO.
CONCRETE PLACEMENT QUANTITIES

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SECTION 1, DECK &amp; ABUT.</td>
<td></td>
</tr>
<tr>
<td>SECTION 2, DECK &amp; ABUT.</td>
<td></td>
</tr>
<tr>
<td>SECTION 3, DECK &amp; ABUT.</td>
<td></td>
</tr>
<tr>
<td>SECTION 4, DECK &amp; PIER DIAPH.</td>
<td></td>
</tr>
<tr>
<td>SECTION 5, DECK &amp; PIER DIAPH.</td>
<td></td>
</tr>
</tbody>
</table>

REINFORCING STEEL EPOXY COATED - BRIDGE DECK

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>DECK TRANS. TOP &amp; Bottom</td>
<td></td>
</tr>
<tr>
<td>DECK LIGHT. TOP &amp; Bottom</td>
<td></td>
</tr>
<tr>
<td>DECK LIGHT. TOP AT Piers</td>
<td></td>
</tr>
<tr>
<td>EXP. PIER DIAPH. HOOPS ENDS</td>
<td></td>
</tr>
<tr>
<td>EXP. PIER DIAPH. TIES ENDS</td>
<td></td>
</tr>
<tr>
<td>DECK TRANS. TOP AT RAIL</td>
<td></td>
</tr>
</tbody>
</table>

NOTES:
- CONCRETE AND REINFORCING STEEL QUANTITIES ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.
- CONCRETE DECK SHALL BE PLACED IN SECTIONS AND SEQUENCES INDICATED.

CONCRETE PLACEMENT DIAGRAM

NOTES:
- CONCRETE DECK SHALL BE PLACED IN SECTIONS AND SEQUENCES INDICATED.
- ALTERNATE PROCEDURES FOR PLACING DECK CONCRETE MAY BE SUBMITTED FOR APPROVAL TOGETHER WITH A STATEMENT OF THE PROPOSED METHOD AND EVIDENCE THAT THE CONTRACTOR POSSESSES THE NECESSARY EQUIPMENT AND FACILITIES TO ACCOMPLISH THE REQUIRED RESULTS. FOR APPROVED ALTERNATE PROCEDURES THE CONTRACTOR IS REQUIRED TO MAINTAIN PLASTICITY OF THE CONCRETE DECK DURING PLACEMENT.
- ALTERNATE PROCEDURES FOR PLACING DECK CONCRETE MAY BE SUBMITTED FOR APPROVAL TOGETHER WITH A STATEMENT OF THE PROPOSED METHOD AND EVIDENCE THAT THE CONTRACTOR POSSESSES THE NECESSARY EQUIPMENT AND FACILITIES TO ACCOMPLISH THE REQUIRED RESULTS. FOR APPROVED ALTERNATE PROCEDURES THE CONTRACTOR IS REQUIRED TO MAINTAIN PLASTICITY OF THE CONCRETE DECK DURING PLACEMENT.

CONCRETE PLACEMENT QUANTITIES

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>SECTION 1, DECK &amp; ABUT.</td>
<td></td>
</tr>
<tr>
<td>SECTION 2, DECK &amp; ABUT.</td>
<td></td>
</tr>
<tr>
<td>SECTION 3, DECK &amp; ABUT.</td>
<td></td>
</tr>
<tr>
<td>SECTION 4, DECK &amp; PIER DIAPH.</td>
<td></td>
</tr>
<tr>
<td>SECTION 5, DECK &amp; PIER DIAPH.</td>
<td></td>
</tr>
</tbody>
</table>

REINFORCING STEEL EPOXY COATED - BRIDGE DECK

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>DECK TRANS. TOP &amp; Bottom</td>
<td></td>
</tr>
<tr>
<td>DECK LIGHT. TOP &amp; Bottom</td>
<td></td>
</tr>
<tr>
<td>DECK LIGHT. TOP AT Piers</td>
<td></td>
</tr>
<tr>
<td>EXP. PIER DIAPH. HOOPS ENDS</td>
<td></td>
</tr>
<tr>
<td>EXP. PIER DIAPH. TIES ENDS</td>
<td></td>
</tr>
<tr>
<td>DECK TRANS. TOP AT RAIL</td>
<td></td>
</tr>
</tbody>
</table>

NOTES:
- CONCRETE AND REINFORCING STEEL QUANTITIES ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.
- CONCRETE DECK SHALL BE PLACED IN SECTIONS AND SEQUENCES INDICATED.
CONCRETE PLACEMENT QUANTITIES

LOCATION

SECTION 1, DECK & ABUT. DIAPH.
SECTION 2, DECK & ABUT. DIAPH.
SECTION 3, DECK & PIER DIAPH.
SECTION 4, DECK & PIER DIAPH.
SECTION 5, DECK & PIER DIAPH.

QUANTITY

TOTAL (CU. YDS.)

SECTION 1, DECK & ABUT. DIAPH.
SECTION 2, DECK
SECTION 3, DECK & ABUT. DIAPH.
SECTION 4, DECK & PIER DIAPH.
SECTION 5, DECK & PIER DIAPH.

REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)

NOTE: CONCRETE AND REINFORCING STEEL QUANTITIES ARE INCLUDED ON THE SUMMARY QUANTITIES SHEET.

CONCRETE PLACEMENT DIAGRAM

NOTE: CONCRETE DECK SHALL BE PLACED IN SECTIONS AND SEQUENCES INDICATED. ALTERNATE PROCEDURES FOR PLACING DECK CONCRETE MAY BE SUBMITTED FOR APPROVAL TOGETHER WITH A STATEMENT OF THE PROPOSED METHOD AND EVIDENCE THAT THE CONTRACTOR POSSESSES THE NECESSARY EQUIPMENT AND FACILITIES TO ACCOMPLISH THE REQUIRED RESULTS. AN APPROVED ALTERNATE PROCEDURE MUST BE SUBMITTED TOGETHER WITH A STATEMENT OF THE PROPOSED METHOD AND EVIDENCE THAT THE CONTRACTOR POSSESSES THE NECESSARY EQUIPMENT AND FACILITIES TO ACCOMPLISH THE REQUIRED RESULTS. FOR APPROVED ALTERNATE PROCEDURES THE CONTRACTOR SHALL DETERMINE THE NECESSARY EQUIPMENT AND FACILITIES TO ACCOMPLISH THE REQUIRED RESULTS. FOR APPROVED ALTERNATE PROCEDURES THE CONTRACTOR SHALL DETERMINE THE NECESSARY EQUIPMENT AND FACILITIES TO ACCOMPLISH THE REQUIRED RESULTS. FOR APPROVED ALTERNATE PROCEDURES THE CONTRACTOR SHALL DETERMINE THE NECESSARY EQUIPMENT AND FACILITIES TO ACCOMPLISH THE REQUIRED RESULTS.
### REINFORCING BAR LIST - BRIDGE DECK

<table>
<thead>
<tr>
<th>Section</th>
<th>Bar List Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

### CONCRETE PLACEMENT QUANTITIES

<table>
<thead>
<tr>
<th>Location</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1, Deck &amp; Pier Deck</td>
<td></td>
</tr>
<tr>
<td>Section 2, Deck &amp; Pier Deck</td>
<td></td>
</tr>
<tr>
<td>Section 3, Deck &amp; Pier Deck</td>
<td></td>
</tr>
<tr>
<td>Section 4, Deck &amp; Pier Deck</td>
<td></td>
</tr>
</tbody>
</table>

### CONCRETE PLACEMENT DIAGRAM

![Diagram showing concrete placement and reinforcing steel details.]

### NOTES

- Concrete and reinforcing steel quantities are included on the summary quantities sheet.
- Concrete deck shall be placed in sections and sequences indicated.
- Alternate procedures for placing deck concrete may be submitted for approval.
- Placing deck concrete may be submitted for approval.
- Epoxy-coated reinforcing steel details are shown.
- Plasticity of the concrete deck during placement.
- Permitting transverse deck construction joint.
- The engineer shall determine if a retarding admixture is required to maintain plasticity.
- For approved alternate procedures, the contractor must demonstrate equipment and facilities to accomplish the required results.
- Alternate procedures for placing deck concrete may be submitted for approval.
### Concrete Placement Quantities

<table>
<thead>
<tr>
<th>Location</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1, Deck &amp; Abut.</td>
<td></td>
</tr>
<tr>
<td>Section 2, Deck</td>
<td></td>
</tr>
<tr>
<td>Section 3, Deck</td>
<td></td>
</tr>
<tr>
<td>Section 4, Deck</td>
<td></td>
</tr>
<tr>
<td>Section 5, Deck</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- Concrete and reinforcing steel quantities are included on the summary quantities sheet.

### Reinforcing Bar List - Bridge Deck

- **5d1**
- **5d2**

### Bent Bar Details

- **5d1**
- **5d2**

### Permissible Transverse Deck Construction Joint

- **TOP OF DECK**
- **HEADER CUT TO FIT SHAPE OF CROWN AND DRILLED FOR LONGITUDINAL REINFORCING**

**Design Team:**

- **Iowa Department of Transportation - Highway Division**

**Sheet Number:**

- **Design Sheet No.**
- **File No.**
- **Project No.**
- **Sheet No.**
TABLE OF SIZE OF 'b2' BAR

<table>
<thead>
<tr>
<th>LONGEST ADJACENT BEAM</th>
<th>BAR SIZE</th>
</tr>
</thead>
<tbody>
<tr>
<td>50'-10</td>
<td>6</td>
</tr>
<tr>
<td>60'-10</td>
<td>5</td>
</tr>
<tr>
<td>75'-10</td>
<td>4</td>
</tr>
<tr>
<td>80'-0</td>
<td>3</td>
</tr>
<tr>
<td>90'-0</td>
<td>2</td>
</tr>
<tr>
<td>100'-0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

THE MIDPOINT OF THE 'b2' BAR IS TO BE PLACED AT THE E. OF PIER.

REASSIGNED TO ALIGN FOOTING & BACKWALL FACES. DIMENSION 3'-1 BECOMES 3'-1.

INTERIOR BEAMS

EXTERIOR BEAMS

TYPICAL DECK AND HAUNCH DETAIL

DATA FOR ONE DRAIN

SUPERSTRUCTURE NOTES:
The bridge deck as shown includes 3' internal bearing surface. The pier and abutment bearing concrete is to be placed horizontally with the bridge deck. The cost of all preformed expansion joint filler material is to be included in the price bid. The structure concrete contains 3/4" aggregate. All beams are to be set vertically.

NOTE: For details of intermediate diaphragms see design sheet ??.

PART SECTION NEAR EXPANSION PIER

NOTE: "STAINLESS STEEL" LEVEL OR "REBAR EPOXY A" LEVEL SHOULD BE ON OR OFF DEPENDING ON BARRIER RAIL STEEL EMBEDDED IN THE BRIDGE DECK.
**SUPERSTRUCTURE NOTES:**

The bridge deck as shown includes integral wearing surface. The pier and abutment framework concrete is to be placed monolithically with the bridge deck.

Cost of all preferred expansion joint filler material is to be included in the price bid for structural concrete only. All beams are to be set vertically.

Fittings for the deck and barrier rail are to be supported by the precasted concrete beams.

Clean distance from face of concrete to near reinforcing bar shall be 2 inches unless otherwise noted on drawing. All deck and superstructure fittings is to be rebed in place and adequately supported before concrete is placed.

Top transverse reinforcing steel is to be parallel to and 2½ inches clean below top of deck. Bottom transverse reinforcing steel is to be parallel to and 2½ inches clean above top of deck. Top and bottom reinforcing steel is to be supported by individual washer spacers that are not more than 2½ inches center-to-center. Filler bar spacers shall be spaced no more than 4 inches apart. Such requirements apply for bar chairs, beam bar chairs, and deck bolts.

Transverse deck reinforcing may be specified with one lap located at the top of beams, with one lap length equal to or more than 1½ times the lap length. Payment for reinforcing bars shall be based on no splices, and no allowance shall be made for the additional length of bars required for the use of splices.

**NOTE:** Stainless steel level or rebar epoxy A level should be on or off depending on barrier rail steel embedded in the bridge deck.