Contents:
General Information (1 Sheet)
Cells included in cell file Bridge_Details.cel (29 sheets)
Cells included in cell file Bridge_Notes.cel (3 sheets)

See EPG 751.5.2.2 for more information.
Theoretical Bottom of Slab Elevations Diagram - Beam

### ANCHOR BOLT WELLS

<table>
<thead>
<tr>
<th>Number</th>
<th>Beam</th>
<th>Theory Bottom of Slab Elevations at Centerline of Beam (Prior to forming for slab) (Estimated at 90 days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab (including precast panel) and barrier.

### TYPICAL SLAB ELEVATIONS DIAGRAM

- TYPICAL SLAB ELEVATIONS DIAGRAM
- **BORING**
- **FILLED TRANSVERSE JOINT**

Filled transverse joint detail for box culverts

*Footnotes:*
- Standard Specifications for Highway Construction.
- Fiber expansion joint material shall be preformed fiber expansion joint material as specified by the Engineer. Preformed fiber expansion joint material shall be securely stitched to one face of the concrete with 10 Gage copper wire or 12 Gage soft drawn galvanized steel wire.
- Filter cloth 3 feet in width and double thickness shall be centered on transverse joints in top slab and shall be centered on transverse joints in sides with edges sealed with mastic or two-sided tape. Filter cloth shall be a separation and sidewalls with edges sealed with mastic or two-sided tape. Filter cloth shall be a separation and sidewalls with edges sealed with mastic or two-sided tape. Filter cloth shall be a separation and sidewalls with edges sealed with mastic or two-sided tape.
- Joint Material
- Filter Material
- Cloth
- Filter Cloth
KEYED CONSTRUCTION JOINTS

- Approximately one third of wall thickness
- Exterior wall shown, interior wall similar

SLAB POURING SEQUENCE

Guidance (do not show on plans):
When using Case 1 for prestressed structures, remove the "No Retarder" column. See EPG 701.50 (H6) for appropriate notes.
### SLAB POURING SEQUENCE

**Guidance (do not show on plans):**
When using Case 1 for prestressed structures, remove the "No Retarder" column. See EPG 751.50 (H6) for appropriate notes.

**Pours Alternate A:**
- Pours
- Alternate

---

### SLAB POURING SEQUENCE

**Guidance (do not show on plans):**
When using Case 1 for prestressed structures, remove the "No Retarder" column. See EPG 751.50 (H6) for appropriate notes.
SLAB POURING SEQUENCE

SLAB POURING SEQUENCE - Case 2 - 2 Span

SLAB POURING SEQUENCE - Case 2 - 3 Span

SLAB POURING SEQUENCE - Case 2 - 4 Span
SLAB POURING SEQUENCE

With Retarder

End to End

3 to 4

4 to 5

5

Alternate pours to the basic sequence are subject to the approval of the engineer.

SLAB POURING SEQUENCE

<table>
<thead>
<tr>
<th>Sequence of Pours</th>
<th>Pours</th>
<th>Pours</th>
<th>Pours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>1 to 2</td>
<td>2 to 3</td>
<td>3 to 4</td>
<td>4 to 5</td>
</tr>
<tr>
<td>5</td>
<td>1 to 2</td>
<td>2 to 3</td>
<td>3 to 4</td>
</tr>
</tbody>
</table>

The concrete diaphragm at the intermediate bents and integral end bents shall be poured to 2.5 hours, and shall pour and satisfactorily finish the slab pours at the rate given.

The contractor shall furnish an approved retarder to retard the set of the concrete.

The following retarders are suggested:

- Type F
- Type C
- Type K
- Type A

The retarder shall be placed at a minimum of 30 minutes and a maximum of 2 hours before the slab is poured.

The concrete diaphragm at the intermediate bents and integral end bents shall be poured to 2.5 hours, and shall pour and satisfactorily finish the slab pours at the rate given.

SLAB POURING SEQUENCE

COIL

Cell Insert

(Shown at 0.5 scale)

CONC

Concrete pattern cluster

CONPAT

Concrete pattern (for area fill)

(Shown at 0.25 scale)

DiaEdge_E

Diaphragm Edge Detail for expansion bents

DiaEdge_F

Diaphragm Edge Detail for fixed bents
DiaEnd_BoxBeam
Diaphragm End Detail for prestressed box beams

DiaEnd_Bulb-T_NU
Diaphragm End Detail for prestressed bulb-tee & NU-Girders

DiaEnd_I-Girders
Diaphragm End Detail for prestressed I-Girders

DIMRD
Dimensions at Centerline Roadway note with bracket

DKJT1
Const. joint detail full depth CIP deck

DKJT2
Const. joint detail precast prestressed panel deck

Sheet 6 of 29

Bevel 

Diaphragm End of Girder under girder 

Jt. Filler 

END DETAIL 

or revise dimension to “Varies”. 
will need to add “(Min.)” 
For curved structures, SDG (don’t show on plans):

Bevel 

Diaphragm End of Girder under girder 

Jt. Filler 

END DETAIL 

or revise dimension to “Varies”. 
will need to add “(Min.)” 
For curved structures, it 

SLAB CONSTRUCTION JOINT

Const. Joint detail full depth CIP deck

Const. Joint detail precast prestressed panel deck

Key to SLAB ON PANELS
**Deadload Deflection - tenths points**

**Table:**

<table>
<thead>
<tr>
<th>Girder No.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
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<tbody>
<tr>
<td>Girder No. 7</td>
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<td></td>
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<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

**Chord Between Bents:**

<table>
<thead>
<tr>
<th>Section at Top Flange</th>
<th>10 Equal Spaces</th>
<th>10 Equal Spaces</th>
<th>10 Equal Spaces</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Section thru downstream headwall for box culverts**

**Chamfer Detail**

<table>
<thead>
<tr>
<th>END BENT CHAMFER</th>
<th>Chamfer detail for integral end bents</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FINISH**

<table>
<thead>
<tr>
<th>FINISH</th>
<th>Finished ground line symbol</th>
</tr>
</thead>
</table>

**FOR INFORMATION ONLY**

**NOT FOR CONSTRUCTION**
Theoretical Bottom of Slab Elevations at Centerline of Girder

<table>
<thead>
<tr>
<th>Span</th>
<th>Number</th>
<th>Girder</th>
<th>Weight of Slab (Including Precast Panel) and Barrier</th>
<th>Theoretical Dead Load Deflections</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>1</td>
<td>Girder</td>
<td>Weight of Slab (Including Precast Panel) and Barrier</td>
<td>Dead Load Deflections</td>
</tr>
<tr>
<td>2-3</td>
<td>2</td>
<td>Girder</td>
<td>Weight of Slab (Including Precast Panel) and Barrier</td>
<td>Dead Load Deflections</td>
</tr>
<tr>
<td>3-4</td>
<td>3</td>
<td>Girder</td>
<td>Weight of Slab (Including Precast Panel) and Barrier</td>
<td>Dead Load Deflections</td>
</tr>
</tbody>
</table>

Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab (including Precast panels) and barrier.

TYPICAL SLAB ELEVATIONS DIAGRAM
Optional shifting top bars at Type B barrier (safety barrier curb)

Contractor spacing (4" min. bar in barrier to tie R3 bars as needed) may shift or swap

Optional shifting top bars at Type D or H barrier

Contractor spacing (4" min. bar in barrier to tie R3 bars as needed) may shift or swap
PART ELEVATION SHOWING LIMITS OF PAINT OVERLAP
(Vertical or horizontal paint limit: horizontal limit shown)

Limits of Paint Overlap: System G shall overlap the existing coating between 6 inches and 12 inches in order to achieve maximum coverage at limits of paint overlap. System G shall not overlap more than 12 inches, and the final field coating shall be masked to provide crisp, straight lines and to prevent overspray beyond the overlap limits.

The final field coating shall be masked to provide crisp, straight lines and to prevent overspray beyond the overlap limits.

Limits of Paint Overlap (Vertical or horizontal paint limit: horizontal limit shown)
THEORETICAL SLAB HAUNCH

- Theoretical slab haunch for plate girders with CIP slab
- Theoretical slab haunch for plate girders with precast panel slab

Detail for variation in haunching. Additional concrete required for any adjustment due to weight of structural steel. No payment will be made for any adjustment due to weight of structural steel. No more than the specified % of Dead Load Deflection.
Camber includes allowance for vertical curve, and dead load deflection due to concrete slab, barrier, and structural steel.

Angles shall be coated with a minimum of two coats of non-aluminum epoxy mastic primer to provide a dry film thickness of 4 mils minimum, followed by two coats of zinc chromate primer per ASTM A525, Type 1. All structural steel shall be primed with three coats of non-aluminum epoxy mastic primer per ASTM A525, Type 1. Two coats of primer shall be applied to the structural steel in accordance with AASHTO M 232 Sec 1081. Bolts, washers and nuts shall be galvanized in accordance with ASTM A153, Class C.

DETAILS OF PILE ANCHORS

DETAILS OF HP PILE ANCHORS

Pile elevation - flange
STEEL PILE SPLICE
(If required)
45°
8
1
to be cut square
Butt Splice (Top
accordance with Sec 702.
clear of weld locations in
omitted or removed one inch
Galvanizing material shall be

TYPICAL LOCATION DETAILS
(Skews thru 25°)
(Skews over 25° thru 45°)
(Skews over 45°)

Choose the appropriate detail for your skew.
### TYPICAL LOCATION DETAILS (Skews over 25° thru 45°)

*Choose the appropriate detail for your skew.*

<table>
<thead>
<tr>
<th>Flange Width</th>
<th>Flange Width</th>
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</thead>
<tbody>
<tr>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

#### Beam Camber Diagram for A Less Than C

Conversion Factors for Beam Camber (Estimated at 90 days):

- 0.4 pt. = 0.952 x 0.5 pt.
- 0.3 pt. = 0.813 x 0.5 pt.
- 0.2 pt. = 0.593 x 0.5 pt.
- 0.1 pt. = 0.314 x 0.5 pt.
- 0.25 pt. = 0.7125 x 0.5 pt.

#### Beam Camber Diagram for C Less Than A

Conversion Factors for Beam Camber (Estimated at 90 days):

- 0.4 pt. = 0.952 x 0.5 pt.
- 0.3 pt. = 0.813 x 0.5 pt.
- 0.2 pt. = 0.593 x 0.5 pt.
- 0.1 pt. = 0.314 x 0.5 pt.
- 0.25 pt. = 0.7125 x 0.5 pt.
Theoretical Slab Haunching Diagram (Estimated at 90 Days)

1. Beam camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the estimated quantities for slab on beams.

Concrete Adjacent Beam.

The slab is to be built parallel to grade and to a minimum thickness of A (except varies from A to B within parabolic crown).

Bearing

SPAN (1-2) 1 Bearing

SPAN (2-3) 1 Bearing

SPAN (3-4) 1 Bearing

THEORETICAL SLAB HAUNCHING DIAGRAM (ESTIMATED AT 90 DAYS)

If beam camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the estimated quantities for slab on beams.

Concrete Adjacent Beam.

The slab is to be built parallel to grade and to a minimum thickness of A (except varies from A to B within parabolic crown).

Bearing

SPAN (1-2) 1 Bearing

SPAN (2-3) 1 Bearing

SPAN (3-4) 1 Bearing

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If beam camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

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SPAN (1-2) 1 Bearing

SPAN (2-3) 1 Bearing

SPAN (3-4) 1 Bearing

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Concrete Adjacent Beam.

The slab is to be built parallel to grade and to a minimum thickness of A (except varies from A to B within parabolic crown).

Bearing

SPAN (1-2) 1 Bearing

SPAN (2-3) 1 Bearing

SPAN (3-4) 1 Bearing

THEORETICAL SLAB HAUNCHING DIAGRAM (ESTIMATED AT 90 DAYS)

If beam camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the estimated quantities for slab on beams.

Concrete Adjacent Beam.
Concrete in the slab is included in the Estimated Quantities for Slab on Concrete Adjacent Beam. (Do not show on plans)

**Detailing Guidance**

Conversion Factors for Girder Camber (Estimated at 90 days):

<table>
<thead>
<tr>
<th>Interior</th>
<th>Exterior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Girder</td>
<td>Girder</td>
</tr>
<tr>
<td>Beam No. 1</td>
<td>Beam No. 1</td>
</tr>
<tr>
<td>Beam No. 2</td>
<td>Beam No. 2</td>
</tr>
<tr>
<td>Beam No. 3</td>
<td>Beam No. 3</td>
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<tr>
<td>Beam No. 4</td>
<td>Beam No. 4</td>
</tr>
<tr>
<td>Beam No. 5</td>
<td>Beam No. 5</td>
</tr>
</tbody>
</table>

- 0.25 pt. = 0.7125 x 0.5 pt.
- 0.4 pt. = 0.952 x 0.5 pt.
- 0.3 pt. = 0.813 x 0.5 pt.
- 0.2 pt. = 0.593 x 0.5 pt.
- 0.1 pt. = 0.314 x 0.5 pt.

**THEORETICAL SLAB THICKNESS DIAGRAM (ESTIMATED AT 90 DAYS)**

The slab is to be built parallel to grade and to a minimum thickness of A (except varies from A to B within parabolic crown). Theoretical Camber after erection is poured (Estimated at 90 days).

**GIRDER CAMBER DIAGRAM**

Conversion Factors for Girder Camber (Estimated at 90 days):

<table>
<thead>
<tr>
<th>Interior</th>
<th>Exterior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Girder</td>
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<tr>
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- 0.3 pt. = 0.813 x 0.5 pt.
- 0.2 pt. = 0.593 x 0.5 pt.
- 0.1 pt. = 0.314 x 0.5 pt.

If beam camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an increase in labor or materials required for variation in slab thickness or grade adjustment. No payment will be made for additional slab thickness or a raise in grade uniformly throughout the structure shall be necessary.
THEORETICAL SLAB HAUNCHING DIAGRAM (ESTIMATED AT 90 DAYS)

Concrete in the slab haunches is included in the Estimated Quantities for Slab on Concrete, in order to maintain uniformity of thickness or grade adjustment. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

THEORETICAL SLAB THICKNESS DIAGRAM (ESTIMATED AT 90 DAYS)

Concrete in the slab is included in the Estimated Quantities for Slab on Concrete, in order to maintain uniform thickness or grade adjustment. No payment will be made for additional labor or materials required for variation in slab thickness or grade adjustment.
Theoretical Slab Thickness Diagram (Estimated at 90 Days)

Concrete in the slab is included in the Estimated Quantities for Slab On Concrete Adjacent Beam.

If girder camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an increase in slab thickness or grade adjustment uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in slab thickness or grade adjustment.

Detailing Guidance

The slab is to be built parallel to grade and to a minimum thickness of A (except varies from A to B within parabolic crown). Use underline part when slab thickness is less than the minimum slab thickness. Replace A with the minimum slab thickness. The slab thickness at the crown is less than the minimum slab thickness within parabolic crown. If slab thickness at any point is less than the minimum slab thickness within parabolic crown, a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in slab thickness or grade adjustment.

The slab is to be built parallel to grade and to a minimum thickness of A (except varies from A to B within parabolic crown). Use underline part when slab thickness is less than the minimum slab thickness. Replace A with the minimum slab thickness. The slab thickness at the crown is less than the minimum slab thickness within parabolic crown. If slab thickness at any point is less than the minimum slab thickness within parabolic crown, a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in slab thickness or grade adjustment.

Detailing Guidance

The slab is to be built parallel to grade and to a minimum thickness of A (except varies from A to B within parabolic crown). Use underline part when slab thickness is less than the minimum slab thickness. Replace A with the minimum slab thickness. The slab thickness at the crown is less than the minimum slab thickness within parabolic crown. If slab thickness at any point is less than the minimum slab thickness within parabolic crown, a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in slab thickness or grade adjustment.

Detailing Guidance

The slab is to be built parallel to grade and to a minimum thickness of A (except varies from A to B within parabolic crown). Use underline part when slab thickness is less than the minimum slab thickness. Replace A with the minimum slab thickness. The slab thickness at the crown is less than the minimum slab thickness within parabolic crown. If slab thickness at any point is less than the minimum slab thickness within parabolic crown, a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in slab thickness or grade adjustment.
Prestressed Box Beams

PSBB39

(Shown at 0.1 scale)

Prestressed Bulb-Tee Girders

PSBTEE

(Shown at 0.1 scale)

Prestressed Bulb-Tee Girders

PSBTEE8

(Shown at 0.1 scale)
ROCK LN
Rock or shale

RRCONSTCLR
Railroad construction clearances

SDETA
Detail A for steel girder overhang

DETAIL A
Second sheet text for title block

SECT
Section arrow

MINIMUM CONSTRUCTION CLEARANCES

Note to Detailer, No construction may be placed within these limits.

Memorandum if different from values reported on Bridge Special provisions (See special provisions for Bridge Track over obstructions may be placed within these limits. No construction

This drawing is not to scale. Follow dimensions. Sheet No. 23 of 29
Stay-In-Place Forming Details:

**Bridge Details**

**Stay-In-Place Forming for NU Girder**

- Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.

- Drilling holes in the beam flanges will not be permitted. All steel fabrication and construction shall be in accordance with Sec 1080.

- Form sheets shall not rest directly on the top of beam. Sheets shall be securely fastened to form supports with minimum bearing length of one inch on each end.

- Form supports shall be placed in direct contact with the top of beam.

**Stay-In-Place Forming for Box Beam**

- Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.

- Drilling holes in the beam flanges will not be permitted. All steel fabrication and construction shall be in accordance with Sec 1080.

- Form sheets shall not rest directly on the top of beam. Sheets shall be securely fastened to form supports with minimum bearing length of one inch on each end.

- Form supports shall be placed in direct contact with the top of beam.

**Optional Stay-In-Place Form Details**

- Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.

- Drilling holes in the beam flanges will not be permitted. All steel fabrication and construction shall be in accordance with Sec 1080.

- Form sheets shall not rest directly on the top of beam. Sheets shall be securely fastened to form supports with minimum bearing length of one inch on each end.

- Form supports shall be placed in direct contact with the top of beam.

**Steel Corrugated Form Details**

- Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.

- Drilling holes in the beam flanges will not be permitted. All steel fabrication and construction shall be in accordance with Sec 1080.

- Form sheets shall not rest directly on the top of beam. Sheets shall be securely fastened to form supports with minimum bearing length of one inch on each end.

- Form supports shall be placed in direct contact with the top of beam.
SIP Forming PSI  Stay in Place forming details for PSI girder

SIP Forming Steel  Stay in Place forming details for steel girder
SLABEDGE

Drip groove and chamfer at edge of slab

NOTE:

Soil areapattern (natural ground)

SPIRA

Splice of spiral reinforcement

INTERMEDIATE SPLICE OF SPIRALS

Standard 135-degree tie hooks shall be provided at each end of splice. Engage vertical column reinforcing bars. Standard 135-degree tie hooks that are coated shall be sized as follows:

- Minimum (Min.) (All other) threads: 48D
- Minimum (Min.) (Coated bar) threads: 72D

WEB STIFFENER

INTERMEDIATE (One side only)

CONNECTION PLATE

INTERMEDIATE DIAPHRAGM

(3)

(3)

(1)

Typical for all intermediate web stiffeners, intermediate diaphragm connection plates and bearing stiffeners.

WELDING DETAILS

(1) Tight fit
(2) Grind or mill to bear
(3) Weld to compression flange as located on Elevation of Girder

* Typical for all intermediate web stiffeners, intermediate diaphragm connection plates and bearing stiffeners.
### Welding Details

**Web Stiffener**

- **Intermediate**
  - (One side only)
  - Typical for all intermediate web stiffeners, intermediate diaphragm connection plates and bearing stiffeners.
  - (3) Weld to compression flange as located on Elevation of Girder.
  - (2) Grind or mill to bear.
  - (1) Tight fit

**Connection Plate**

- **Intermediate Diaphragm**
  - (3)
  - (1)
  - (2)

**Flange**

- **Tension**
  - Typical for all intermediate web stiffeners, intermediate diaphragm connection plates and bearing stiffeners.
  - (3) Weld to compression flange as located on Elevation of Girder.
  - (2) Grind or mill to bear.
  - (1) Tight fit

**End Diaphragm or Bearing Stiffener**

- **CROSSFRAME ATTACHED**
  - (1)

**Bridge Details**

**Web Stiffener Details - Welded - Curved Girders**

**Web Stiffener Details - Welded - Straight Girders**

**Web Stiffener Details with Angles - Straight Girders**
UPSTREAM HEADWALL
SECTION THRU
UPSTREAM HEADWALL

WATER
Water line (stream)

WELSP
Welded shop web splice

WINGS1
Typical section thru end bent wing

2'-0" RADIUS TRANSITION

WELDED SHOP WEB AND FLANGE SPLICE
Welded shop web and flange splice may be permitted when detailed on the shop drawings and approved by the engineer. No additional payment will be made for optional welded shop web and flange splices.
A2.0 Diaphragm End Detail for prestressed box beams

B3.1 Indicate type of joint filler

- Constant Joint Filler
- Variable Joint Filler

B3.11 Estimated Quantities table

<table>
<thead>
<tr>
<th>Item</th>
<th>Substr.</th>
<th>Superstr.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1 Excavation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reinforcing Steel (Bridges)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class B Concrete</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>linear foot</td>
<td>linear foot</td>
<td>pound</td>
<td></td>
</tr>
<tr>
<td>Class 4 Excavation</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Reinforcing Steel (Epoxy Coated)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class B-1 Concrete (Culverts-Bridge)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reinforcing Steel (Culverts-Bridge)</td>
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<td></td>
</tr>
</tbody>
</table>

B3.21 Estimated Quantities for Slab on _____ (Superstructure)

<table>
<thead>
<tr>
<th>Item</th>
<th>Mix Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP125BSM Mix with PG 76-22</td>
<td></td>
</tr>
<tr>
<td>SP125BLP Mix with PG 76-22</td>
<td></td>
</tr>
<tr>
<td>SP125BSM Mix with PG 70-22</td>
<td></td>
</tr>
<tr>
<td>SP125CLP Mix with PG 70-22</td>
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</tr>
</tbody>
</table>

B3.50 Optional Asphaltic Concrete Wearing Surface

<table>
<thead>
<tr>
<th>Item</th>
<th>Substr.</th>
<th>Mix Used ( )</th>
<th>Type of Wearing Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optional Asphaltic Concrete Wearing Surface</td>
<td></td>
<td>SP125BSM Mix with PG 76-22</td>
<td>Optional Asphaltic Concrete Wearing Surface</td>
</tr>
</tbody>
</table>

MoDOT Construction personnel will indicate the type of box culvert constructed: Precast Concrete Box used Cast-in-Place Concrete Box used

Estimated Quantities for Slab on _____ (Superstructure): Note to detailer: If distance from stream face to stream face of exterior walls is ≥ 20', then use (Culverts-Bridge); If < 20', use (Culverts). The contractor shall select one of the optional asphaltic concrete wearing surfaces listed in the table. The contractor shall select one of the optional asphaltic concrete wearing surfaces listed in the table. The contractor shall select one of the optional asphaltic concrete wearing surfaces listed in the table.
### Section 3.2

**Purpose: Ultrathin Bonded Asphalt Wearing Surface**

#### Notes:
- Mix Used ( ):
- Piles (CECIP and/or OECIP) are required if spread footings or rock sockets are not used; remove from table corresponding data with a dash.
- For LRFD, report equations for specific foundation type used. Remove unnecessary (1) Use either "DT", "DF", "WEAP" or "SLT"
equations.

#### Footing Data Table

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

#### Foundation Data Table - LRF and LFD

- **Elevation** is shown for CECIP piles or OECIP = Open Ended Cast-In-Place concrete pile
- CECIP = Closed Ended Cast-In-Place concrete pile
- **Load Bearing Piles**
- **Spread Footings**
- **SLT** = Static Load Test
- **WEAP** = Wave Equation Analysis of Piles
- **DF** = FHWA-modified Gates Dynamic Pile Formula
- **DT** = Dynamic Testing

#### Design Data

- **Resistance Factor** for pile driving should be given on the Design Layout.
- **Minimum Nominal Axial Compressive Resistance** =
- **Minimum Nominal Axial Compressive Resistance** =
- **Criteria for Min. Tip Penetration**
- **Minimum Tip Penetration (Elev.)** =
- **Approximate Length Per Each** =
- **Pile Jacket**
- **Pipe Pile Spacer**

#### Notice and Disclaimer Regarding Boring Log Data

- The data listed on this sheet was obtained from the boring logs referenced herein. The accuracy of the data cannot be guaranteed, and the user is responsible for verifying the accuracy of the data. All data is subject to correction and change based on additional boring data or construction activities. The District and the user agree that the data is for information purposes only and does not constitute a guarantee of quality or quantity. Any use of the data shall be at the user's risk. The District shall not be liable for any errors or omissions in the data. The user is responsible for all legal and regulatory compliance related to the use of the data. The data shall not be used for any purpose other than the purpose for which it was provided.

#### Substructure Quantity Table for Bent No.

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

**Certified**: The data contained in this document is certified by the appropriate quality assurance engineer.
## Optional Concrete Wearing Surface

<table>
<thead>
<tr>
<th>Type of Concrete Wearing Surface</th>
<th>Low Slump Concrete Wearing Surface</th>
<th>Silica Fume Concrete Wearing Surface</th>
<th>Latex Modified Concrete Wearing Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement and Basis of Payment</td>
<td>Low slump concrete wearing surface</td>
<td>Silica fume concrete wearing surface</td>
<td>Latex modified concrete wearing surface</td>
</tr>
</tbody>
</table>

(Do not show on plans)

## Optional Very Early Strength Concrete Wearing Surface

<table>
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<tr>
<th>Type of Concrete Wearing Surface</th>
<th>Very Early Strength Concrete Wearing Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement and Basis of Payment</td>
<td>Very early strength concrete wearing surface</td>
</tr>
</tbody>
</table>

(Do not show on plans)

## Optional Polymer Wearing Surface

<table>
<thead>
<tr>
<th>Type of Polymer Wearing Surface</th>
<th>Epoxy Polymer Wearing Surface</th>
<th>MMA Polymer Slurry Wearing Surface</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement and Basis of Payment</td>
<td>Epoxy polymer wearing surface</td>
<td>MMA polymer slurry wearing surface</td>
</tr>
</tbody>
</table>

(Do not show on plans)

### MSE Wall System Data Table

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Facing Unit</th>
<th>Facing Unit Manufacturer</th>
<th>Facing Unit Geogrid</th>
<th>Geogrid Manufacturer</th>
<th>Geogrid System</th>
</tr>
</thead>
<tbody>
<tr>
<td>MoDOT</td>
<td>Combination Wall Systems</td>
<td>Proprietary Wall Systems</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>