**TABLE A**

<table>
<thead>
<tr>
<th>MODE</th>
<th>MAX. LENGTH OF MEMBER</th>
<th>WELD SIZE</th>
<th>NO. OF</th>
<th>WEIGHT/FT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 x 5 x 5/8&quot;</td>
<td>15'-6&quot;</td>
<td>5/8&quot;</td>
<td>4</td>
<td>5.1#</td>
</tr>
<tr>
<td>1.5 x 5 x 5/8&quot;</td>
<td>20'-0&quot;</td>
<td>1&quot;</td>
<td>14&quot;</td>
<td>5.2#</td>
</tr>
</tbody>
</table>

**TABLE B**

<table>
<thead>
<tr>
<th>MODE</th>
<th>MAX. LENGTH OF MEMBER</th>
<th>WELD SIZE</th>
<th>NO. OF</th>
<th>WEIGHT/FT.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 x 5 x 5/8&quot;</td>
<td>15'-6&quot;</td>
<td>5/8&quot;</td>
<td>4</td>
<td>5.1#</td>
</tr>
<tr>
<td>1.5 x 5 x 5/8&quot;</td>
<td>20'-0&quot;</td>
<td>1&quot;</td>
<td>14&quot;</td>
<td>5.2#</td>
</tr>
</tbody>
</table>

**NOTES**

- All bolted connections shall be friction type using 3/4" x 1 1/4" high strength ASTM A325 bolts with double washers.
- Diaphragms on lower cross frame members are level when these members are sloped when their elevations exceed 6".
- Diaphragms on lower cross frame members that are level shall be placed above the top of the higher bottom flange or adjacent girder.
- Holes in cross frame connections may be oversized @ 5/16" diameter in plates.

**ADORER NOTES**

- For framing into lower lateral gusset, current practice is to avoid the use of lower laterals. Horizontal cross frames at the piers shall be designed to resist the lateral loads that are transferred from the piers to adjacent girders.
- Horizontal cross frames to have horizontal leg top bars shown when no lower laterals are used, when lower laterals are used, when horizontal leg shall be on the bottom and 5/16" away from bottom flange of girder to avoid the use of lower laterals.
END DIAPHRAGM CONNECTIONS - WEB DEPTHS < 48"

MEMBER "C" - SEE TABLE "D" FOR MEMBER SIZE & CONNECTION

FOR WEB DEPTHS GREATER THAN 60", THE NUMBER OF BOLTS REQUIRED IS THE NUMBER REQUIRED WITH "C".<br>

SEE STANDARD 24.02 FOR BEARING STIFFENER COPE & WELD DETAILS.

LEVEL (SEE NOTES)

HOLD 8" FROM TOP OF ADJACENT FLANGES TO BOTTOM OF DIAPHRAGMS FOR WEB DEPTHS > 48"

DIFFERENCE IN ADJACENT BOTTOM FLANGE ELEVATIONS EXCEEDS 6".

LOWER CROSS FRAME MEMBERS ARE SLOPED WHEN

HIGHER BOTTOM FLANGE ELEVATIONS EXCEED 6".

LEVEL (SEE NOTES)

HOLD 8" FROM TOP OF ADJACENT FLANGES TO BOTTOM OF DIAPHRAGMS FOR WEB DEPTHS > 48"

LOWER CROSS FRAME MEMBERS ARE SLOPED WHEN

HIGHER BOTTOM FLANGE ELEVATIONS EXCEED 6".

LEVEL (SEE NOTES)

HOLD 8" FROM TOP OF ADJACENT FLANGES TO BOTTOM OF DIAPHRAGMS FOR WEB DEPTHS > 48"

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HOLD 8" FROM TOP OF ADJACENT FLANGES TO BOTTOM OF DIAPHRAGMS FOR WEB DEPTHS > 48"

DIFFERENCE IN ADJACENT BOTTOM FLANGE ELEVATIONS EXCEEDS 6".
**Intermediate Diaphragm Sizes**

<table>
<thead>
<tr>
<th>Order Depth</th>
<th>Intermediate Diaphragm</th>
</tr>
</thead>
<tbody>
<tr>
<td>26'</td>
<td>MC15 x 33.9</td>
</tr>
<tr>
<td>23'</td>
<td>MC12 x 20.7</td>
</tr>
<tr>
<td>20'</td>
<td>C10 x 15.3</td>
</tr>
<tr>
<td>17'</td>
<td>C8 x 11.5</td>
</tr>
</tbody>
</table>

**Notes**

Diaphragms shall be horizontal except where the difference in adjacent girder elevations is such that it necessitates sloping the diaphragms. When diaphragms are sloped, place center of diaphragm at mid-depth of girder.

All intermediate connections shall be made with 9/16" high strength 3 1/4" bolts.

**Designer Notes**

See Standard 24.02 for connection bar corner cope & weld details.

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**Rolled Girder Diaphragms**

Approved: Bill Oliva

Date: 7-15

Bureau of Structures

Standard 24.06
NOTES

1. FOR WELDING DETAILS SEE "CONNECTION STIFFENER DETAILS" ON STANDARD 24.02
2. Dimensions and bearing plates are all perpendicular to flanges, angles are parallel to flanges.

DESIGNER NOTES

SECTION C

EXPANSION HINGE

JOINT DETAILS

BUREAU OF STRUCTURES

APPROVED: Bill Oliva

DATE:

STANDARD 24.08
**Designer Notes**

Haunch 3" will normally be made at the edge of the girder, at abutments, hingels, and field splices.  
Haunch depth variations need not be shown on the plans.  
If haunch variations exceed 3/8", the order shall be changed to reduce the variations in haunch thickness.

**Notes**

1. Haunch height at centerline of segment.  
2. Camber values may be given at 1/10 points for a given segment and need not be symmetrical about the vertex of the segment.

**Blocking Diagram**

**Treatment of Exterior Order**  
**At Sidewalk Overhang**

**Section Thru Slab**

**Elevations at Top of Deck (T.O.D.) & Top of Steel (T.O.S.)**

<table>
<thead>
<tr>
<th>Order 1</th>
<th>0.2 Span</th>
<th>0.5 Span</th>
<th>0.3 Span</th>
<th>T.O.D.</th>
<th>T.O.S.</th>
<th>T.O.D.</th>
<th>T.O.S.</th>
<th>T.O.D.</th>
<th>T.O.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>860.27</td>
<td>860.08</td>
<td>860.04</td>
<td>860.35</td>
<td>860.35</td>
<td>860.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>860.45</td>
<td>860.49</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>859.80</td>
<td>859.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Blocking & Slab Haunch Details**

Bill Oliva

Bureau of Structures

Approved: 1-12

Standard 24.09
KINKED GIRDER LAYOUT

CURVED GIRDER LAYOUT

GENERAL NOTES

Sketches and notes apply to any number of spans.

Number and size of girders and location of field splices to be determined by design.

For horizontal curves with a radius of less than 500 ft, the girders shall be fabricated along the curve.

For curved girder layout:

1. All substructure units and girders shall be held parallel to each other whenever possible.
2. Splices shall be held parallel to each other whenever possible.
3. Field splices may be used for more severe curvatures.

Substructure units on radial lines may be used when possible.

Approved: Scot Becker

Date: 7-10

BUREAU OF STRUCTURES

STANDARD 24.10
**Ideal Deck Pour Sequence**

**Continuous Steel Girder - 2 Spans Shown**

**Continuous Steel Girder - 3 Spans Shown**

**Continuous Steel Girder - Any Number of Spans Shown**

---

**Notes**

For ease of placing concrete, small volumes of concrete or short lengths of concrete shall be placed in one continuous operation, and if more than one pour is required, two or more sequential pours may be combined and placed in one continuous operation. The number of pour operations shall be limited to the number of pour operations required only for continuous steel girder superstructures.

If optional joints are provided, two or more sequential pours may be combined and placed in one continuous operation, and if more than one pour is required, two or more sequential pours may be placed in one continuous operation. The number of pour operations shall be limited to the number of pour operations required only for continuous steel girder superstructures.

For pour operations to be made no less than 72 hours after the previous pour, the pour plans for continuous steel girder superstructures shall be shown on the plans. The contractor may submit an alternate pouring sequence subject to the approval of the designer of the structure. The contractor shall pour the entire deck per the deck pour sequence.

Additional details on the designer's notes include:

- Optional transverse construction joints shall be detailed on the construction plans.
- Required transverse construction joints shall be detailed on the construction plans.
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**Designer Notes**

- Optional transverse construction joints shall be detailed on the construction plans.
- Required transverse construction joints shall be detailed on the construction plans.
- Required transverse construction joints shall be detailed on the construction plans.
**NOTES**

- **For Rehabilitation Projects:**
  - All expansion supports shall be made from steel 100,000 psi minimum yield strength unless otherwise specified by the designer.
  - All support angles shall be hot-dipped galvanized.
  - All expansion supports shall be made from steel 100,000 psi minimum yield strength unless otherwise specified by the designer.

**DESIGNER NOTE**

- 3" minimum expansion space required to accommodate large expansion devices.

**LEGEND**

- Bars placed parallel to girders, spacing perpendicular to girders.
- Dimension is taken normal to E, alignment.