**PLAN VIEW OF TYPICAL DOUBLE BEARING**

- Equal Spacing
- 2 Equal sp.

**PLAN VIEW OF TYPICAL SINGLE BEARING**

- Equal Spacing
- 2 Equal sp.

**NOTES:**

1. Work this sheet with the **BEVELED BEARING PLATE DATA TABLE** in the plans.
2. Beveled Bearing Plates B with Embedded Bearing Plates A are required for beams only as scheduled in the **TABLE OF BEAM VARIABLES** on Beam Sheets.
3. Bearing plate material shall conform to ASTM A36 or ASTM A572 (Grade 36 or 50). Headed Concrete Anchor Studs shall conform to Specification Section 502. Hot-dip galvanized Bearing Plates A & B after fabrication except Galvanized Caps may be welded in place after hot-dip galvanizing. Drill Bearing Plates A and B as an assembled unit, Thread Bearing Plate A only. Drill and thread holes perpendicular to bottom of Plate B and prior to plates being galvanized (ASTM A 123).
4. Provide Electroplated, Flat Countersunk Head Cap Screws in accordance with ASTM F 835. Electroplating shall be ASTM B 633, SC 2, Type 1. Provide screws long enough to maintain a 2 in. minimum embedment into Embedded Bearing Plate A and Galvanized Cap. Provide steel Galvanized Caps with 1/8 in. to 1/3 in. min. height and nominal 1 in. inside diameter.
5. Include the cost of Beveled Bearing Plates in the pay item for Prestressed Beams (Florida U-Beams).
6. For Dimensions C and D, see **BEVELED BEARING PLATE DATA TABLE** in the Structures Plans. For Dimensions J, K1 and K2, see 'BEVELED BEARING PLATE DATA TABLE' on Beam Sheets.
7. All details and dimensions shown are along Beam for single bearings or Plate parallel to Beam for double bearings, except for dimensions to 2 Dia. Screws and 2 Dia. x 2 in. Anchor Studs, which are along Screws or Anchor Studs. Positive Slope shown. Negative Slope similar.
8. When Skew = 0°, dimensions for Embedded Bearing Plate A are D x C x 1/2 in. and for Beveled Plate B are D x C x 1/2 in.

**DESIGN STANDARDS**

- Prestressed Beams (Florida U-Beams).
- Provide Electroplated, Flat Countersunk Head Cap Screws in accordance with ASTM F 835. Electroplating shall be ASTM B 633, SC 2, Type 1. Provide screws long enough to maintain a 2 in. minimum embedment into Embedded Bearing Plate A and Galvanized Cap. Provide steel Galvanized Caps with 1/8 in. to 1/3 in. min. height and nominal 1 in. inside diameter.
- Include the cost of Beveled Bearing Plates in the pay item for Prestressed Beams (Florida U-Beams).
- For Dimensions C and D, see **BEVELED BEARING PLATE DATA TABLE** in the Structures Plans. For Dimensions J, K1 and K2, see 'BEVELED BEARING PLATE DATA TABLE' on Beam Sheets.
- All details and dimensions shown are along Beam for single bearings or Plate parallel to Beam for double bearings, except for dimensions to 2 Dia. Screws and 2 Dia. x 2 in. Anchor Studs, which are along Screws or Anchor Studs. Positive Slope shown. Negative Slope similar.
- When Skew = 0°, dimensions for Embedded Bearing Plate A are D x C x 1/2 in. and for Beveled Plate B are D x C x 1/2 in.
### Typical Section Type D, E & AA Pad

- **Elastomer Layer (Typ.)**
- **Steel Plate**
- **Elastomer Cover (Typ.)**

### Typical Section Type F, G & AB Pad

- **Elastomer Layer (Typ.)**
- **Steel Plate**
- **Elastomer Cover (Typ.)**

### Typical Section Type H Pad

- **Elastomer Layer (Typ.)**
- **Steel Plate**

### Typical Section Type I & K Pad

- **Elastomer Layer (Typ.)**

### Table of Beams and Bearing Plate Data

<table>
<thead>
<tr>
<th>BEAM TYPE</th>
<th>BEARING PLATE DIMENSIONS</th>
<th>*BEVELED BEARING PLATE DIMENSIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>(G=110psi)</td>
<td>8&quot; x 7-3/4&quot; x 1-3/4&quot; x 1-3/4&quot;</td>
</tr>
<tr>
<td>E</td>
<td>(G=110psi)</td>
<td>10&quot; x 7-3/4&quot; x 1-3/4&quot; x 1-3/4&quot;</td>
</tr>
<tr>
<td>F</td>
<td>(G=110psi)</td>
<td>10&quot; x 7-3/4&quot; x 1-3/4&quot; x 1-3/4&quot;</td>
</tr>
<tr>
<td>G</td>
<td>(G=150psi)</td>
<td>10&quot; x 7-3/4&quot; x 1-3/4&quot; x 1-3/4&quot;</td>
</tr>
<tr>
<td>H</td>
<td>(G=150psi)</td>
<td>10&quot; x 7-3/4&quot; x 1-3/4&quot; x 1-3/4&quot;</td>
</tr>
<tr>
<td>J</td>
<td>(G=150psi)</td>
<td>10&quot; x 7-3/4&quot; x 1-3/4&quot; x 1-3/4&quot;</td>
</tr>
<tr>
<td>K</td>
<td>(G=150psi)</td>
<td>10&quot; x 7-3/4&quot; x 1-3/4&quot; x 1-3/4&quot;</td>
</tr>
<tr>
<td>L</td>
<td>(G=150psi)</td>
<td>10&quot; x 7-3/4&quot; x 1-3/4&quot; x 1-3/4&quot;</td>
</tr>
</tbody>
</table>

### Notes:

1. Neoprene in Type D, E, F & AA bearing pads shall have a shear modulus (G) of 110 psi. Neoprene in Type G, H, J, K & AB bearing pads shall have a shear modulus (G) of 150 psi.
2. Steel Plates in bearing pads shall conform to ASTM A1011 Grade 36, Type 1.
3. See Table of Beam Variables and Bearing Plate Data Table in the Structures Plans for locations where beveled bearing plates are required.

### Detailed "C"

- Neoprene in Type D, E, F & AA bearing pads shall have a shear modulus (G) of 110 psi. Neoprene in Type G, H, J, K & AB bearing pads shall have a shear modulus (G) of 150 psi.
- Steel Plates in bearing pads shall conform to ASTM A1011 Grade 36, Type 1.
BEVELED BEARING PLATE B FOR ELASTOMERIC BEARING PAD TYPES AA, AB, D, E, F, G, H, & J (Along G Beam)

(Positive Slope shown; Negative Slope similar)

BEVELED BEARING PLATE B FOR ELASTOMERIC BEARING PAD TYPE K (Along G Beam)

Composite Elastomeric Bearing Pad

Face of Pier or Bent Cap

Edge of Beam

Bottom Flange (Typ.)

2 sp. @ 3 ƀ" Dia. Screws

3 sp. @ 3 ƀ" Dia. Holes for 2 ƀ" Dia. Screws

Ø 1 ƀ" Dia. Holes for 2 ƀ" Dia. Screws

Bearing Plates A & B (See Note 8)

Holes for 3 ƀ" Dia. Screws, (See Note No. 3)

(Embedded Plate A) (Beveled Plate B)

 embedd Plate A

End 1

Screw Spacing

Anchor Stud Spacing

End 1

Embedd Plate A

Face of Pier or Bent Cap

Edge of Beam

Bottom Flange (Typ.)

7 ƀ" Dia. Electro-plated, Countersunk Flat Head Machine Screws with Galvanized Caps (16 Ga. Min.), Seal weld Cap to top of Plate A (Typ.) (See Note 4)

End 2

Level Bearing Seat (Top of Substructure)

Direction of Stationing

Composite Elastomeric Bearing Pad

Front Face of Backwall or G Pier or Bent

Bearing Plates A & B (See Note 8)

1 ƀ" Dia. x 2½" Anchor Studs, (See Detail 'A')

2 ƀ" Dia. Screws or 2 ƀ" Dia. Anchor Studs, Positive Slope shown, Negative Slope similar

Holes for ½ ƀ" Dia. Screws or ½ ƀ" Anchor Studs. Positive Slope shown, Negative Slope similar

2 ƀ" Dia. x 2½" Anchor Studs (See Note 3)

1 ƀ" x G x F

1'-4" (FIB's)

1'-6" (FIB's)

Type II

2 ƀ" Dia. Screws or 2 ƀ" Dia. Anchor Studs

2 ƀ" Dia. Screws or 2 ƀ" Dia. Anchor Studs

2 ƀ" Dia. Screws or 2 ƀ" Dia. Anchor Studs

2 ƀ" Dia. Screws or 2 ƀ" Dia. Anchor Studs

2 ƀ" Dia. Screws or 2 ƀ" Dia. Anchor Studs

2 ƀ" Dia. Screws or 2 ƀ" Dia. Anchor Studs

2 ƀ" Dia. Screws or 2 ƀ" Dia. Anchor Studs

2 ƀ" Dia. Screws or 2 ƀ" Dia. Anchor Studs

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2 ʅ" Dia. Screws or 2 ʅ" Dia. Anchor Studs

2 ʅ" Dia. Screws or 2  listItem: 2. Work this sheet with Index No. 20510 - Composite Elastomeric Bearing Plates, and the BEARING PLATE DATA TABLE in the Structures Plans.
3. Include the cost of Bearing Plates in the pay item for Prestressed Beams.
4. For Pad Type and Dimensions C, D, E, F and G, see the BEARING PLATE DATA TABLE in the Structures Plans.
5. Bearing plate material shall conform to ASTM A36 or ASTM A709 Grade 36 or 50. Headed Concrete Anchor Studs shall conform to Specification Section 503. Hot-dip galvanize Bearing Plates A & B after fabrication except that Galvanized Caps may be welded in place after hot-dip galvanizing. Drill Bearing Plates A and B as an assembled unit, thread Bearing Plate A only. Holes are not required in Plate A when Plate B is not required. Drill and thread holes perpendicular to Embedded Plate A and prior to plates being galvanized (ASTM A 123).
6. Provide Electroplated, Flat Head Cap Screws in accordance with ASTM F 835. Electroplating shall be ASTM B633, SC 2, Type 1. Provide screws long enough to maintain a 2 ƀ" minimum embedment into Embedded Bearing Plate A and Galvanized Cap. Provide Steel Galvanized Cuts with 2 ƀ" Min. to 5½ Max. height and nominal 1" inside diameter.
7. All details and dimensions shown are along G beam, except for dimensions to 2 ƀ" Dia. Screws and 2 ƀ" Dia. Anchor Studs, which are along G Screws or G Anchor Studs. Positive Slope shown, Negative Slope similar.
8. When Skew = 0°, F1 = D = 2'-0" (Florida-I beams) 1'-4" (AASHTO Type II beams) E = C, and G = 3'-1½".
9. Slope is determined along G Beam at Bearing. See BEARING PLATE DATA TABLE in the Structures Plans for Slope and Angle B.

NOTES:
1. Work this sheet with Index No. 20510 - Composite Elastomeric Bearing Plates, and the BEARING PLATE DATA TABLE in the Structures Plans.
2. Embedded Bearing Plates A are required for all Florida-I beams. Beveled Bearing Plates B with Embedded Bearing Plates A are required for beams as scheduled in the BEARING PLATE DATA TABLE in the Structures Plans.
3. Bearing plate material shall conform to ASTM A36 or ASTM A709 Grade 36 or 50. Headed Concrete Anchor Studs shall conform to Specification Section 503. Hot-dip galvanize Bearing Plates A & B after fabrication except that Galvanized Caps may be welded in place after hot-dip galvanizing. Drill Bearing Plates A and B as an assembled unit, thread Bearing Plate A only. Holes are not required in Plate A when Plate B is not required. Drill and thread holes perpendicular to Embedded Plate A and prior to plates being galvanized (ASTM A 123).
4. Provide Electroplated, Flat Head Cap Screws in accordance with ASTM F 835. Electroplating shall be ASTM B633, SC 2, Type 1. Provide screws long enough to maintain a 2 ƀ" minimum embedment into Embedded Bearing Plate A and Galvanized Cap. Provide Steel Galvanized Cuts with 2 ƀ" Min. to 5½ Max. height and nominal 1" inside diameter.
5. Include the cost of Bearing Plates in the pay item for Prestressed Beams.
6. For Pad Type and Dimensions C, D, E, F and G, see the BEARING PLATE DATA TABLE in the Structures Plans.
7. All details and dimensions shown are along G beam, except for dimensions to 2 ƀ" Dia. Screws and 2 ƀ" Dia. Anchor Studs, which are along G Screws or G Anchor Studs. Positive Slope shown, Negative Slope similar.
8. When Skew = 0°, F1 = D = 2'-0" (Florida-I beams) 1'-4" (AASHTO Type II beams) E = C, and G = 3'-1½".
9. Slope is determined along G Beam at Bearing. See BEARING PLATE DATA TABLE in the Structures Plans for Slope and Angle B.

CROSS REFERENCE:
See Sheet 2 for Detail 'A'.
CROSS REFERENCE:
See Sheet 1 for dimension H and Notes.
REVISION NO.

DESCRIPTION:

LAST REVISION
07/01/14

BEARING PLATES (TYPE 2) - PRESTRESSED FLORIDA-I AND AASHTO TYPE II BEAMS

FY 2016-17 DESIGN STANDARDS

INDEX NO.
20512

SHEET NO.
2 of 2