<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFP-BT6372-0</td>
<td>Diaphragm Fixed Pier; Bulb T-Beam 63-72 inch beam depth; No skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-BT6372-L</td>
<td>Diaphragm Fixed Pier; Bulb T-Beam 63-72 inch beam depth; Left skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-BT6372-R</td>
<td>Diaphragm Fixed Pier; Bulb T-Beam 63-72 inch beam depth; Right skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-I3642-0</td>
<td>Diaphragm fixed pier; I-Beam 36-42 inch beam depth; No skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-I3642-L</td>
<td>Diaphragm fixed pier; I-Beam 36-42 inch beam depth; Left skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-I3642-R</td>
<td>Diaphragm fixed pier; I-Beam 36-42 inch beam depth; Right skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-I4854-0</td>
<td>Diaphragm fixed pier; I-Beam 48-54 inch beam depth; No skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-I4854-L</td>
<td>Diaphragm fixed pier; I-Beam 48-54 inch beam depth; Left skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-I4854-R</td>
<td>Diaphragm fixed pier; I-Beam 48-54 inch beam depth; Right skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL27-0</td>
<td>Diaphragm fixed pier; IL 27 inch beam depth; No skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL27-L</td>
<td>Diaphragm fixed pier; IL 27 inch beam depth; Left skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL27-R</td>
<td>Diaphragm fixed pier; IL 27 inch beam depth; Right skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL36-0</td>
<td>Diaphragm fixed pier; IL 36 inch beam depth; No skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL36-L</td>
<td>Diaphragm fixed pier; IL 36 inch beam depth; Left skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL36N-0</td>
<td>Diaphragm fixed pier; IL 36 inch beam depth narrow top; No skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL36N-L</td>
<td>Diaphragm fixed pier; IL 36 inch beam depth narrow top; Left skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL36N-R</td>
<td>Diaphragm fixed pier; IL 36 inch beam depth narrow top; Right skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL36-R</td>
<td>Diaphragm fixed pier; IL 36 inch beam depth; Right skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL4554-0</td>
<td>Diaphragm fixed pier; IL 45-54 inch beam depth; No skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL4554-L</td>
<td>Diaphragm fixed pier; IL 45-54 inch beam depth; Left skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL4554N-0</td>
<td>Diaphragm fixed pier; IL 45-54 inch beam depth narrow top; No skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL4554N-L</td>
<td>Diaphragm fixed pier; IL 45-54 inch beam depth narrow top; Left skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL4554N-R</td>
<td>Diaphragm fixed pier; IL 45-54 inch beam depth narrow top; Right skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL6372-0</td>
<td>Diaphragm fixed pier; IL 63-72 inch beam depth; No skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL6372-L</td>
<td>Diaphragm fixed pier; IL 63-72 inch beam depth; Left skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL6372N-0</td>
<td>Diaphragm fixed pier; IL 63-72 inch beam depth narrow top; No skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL6372N-L</td>
<td>Diaphragm fixed pier; IL 63-72 inch beam depth narrow top; Left skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL6372N-R</td>
<td>Diaphragm fixed pier; IL 63-72 inch beam depth narrow top; Right skew</td>
<td>7/15/16</td>
</tr>
<tr>
<td>DFP-IL6372-R</td>
<td>Diaphragm fixed pier; IL 63-72 inch beam depth; Right skew</td>
<td>7/15/16</td>
</tr>
</tbody>
</table>
Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet of
Concrete in diaphragm is billed with Concrete Superstructure on sheet of
Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
Cost of side retainer and anchor bolts shall be included with Concrete Structures.
For details of bar sizes (E) see sheet of
Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
Beans shall be brazed for stability during erection and remain brazed until deck is poured and cured.
Another bolts and side retainers shall be installed on each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

Additional Notes:

- All bolts and anchor bolts shall be hot-dip galvanized.
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- Size and side retainers and anchor bolts shall be included with Concrete Structures.
- For details of bar sizes (E) see sheet of.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beans shall be brazed for stability during erection and remain brazed until deck is poured and cured.
- Another bolts and side retainers shall be installed on each exterior beam if erected unless an equivalent temporary means of lateral restraint is used.
Reinforcement bars in diaphragms are billed with superstructure on sheet of.
Concrete in diaphragms is included with Concrete Superstructure on sheet of.
Cost of 30 lb. roofing felt is included with Concrete Superstructure.
Cost of side retainers and anchor bolts shall be included with Concrete Structures.
For details of bar sizes see sheet of.
The #6 reinforcing bars shall be spaced parallel to the beams.
Spacing for these bars shall be at right angles to the beams.
Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot-dip galvanized.
Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DIAPHRAGM AT PIER

*Shaded to show beam embedded into diaphragm.

PLAN AT PIER

(Showing footing pads and PJF details)

SIDE RETAINER

* Required each side of pier.
Equivalent rolled edges with stiffeners will be allowed in lieu of welded plates.
Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. The s  (E) bars shall be placed parallel to the beams. For details of bar s  (E) see sheet  of  . The s  (E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used. Concrete in diaphragm is included with Concrete Superstructure on sheet   of   . Reinforcement bars in diaphragm are billed with superstructure on sheet of . Concrete in diaphragm is included with Concrete Superstructure on sheet of  . Coat of 30 Lb. roofing felt is included with Concrete Superstructure. Coat of side retainer and anchor bolts shall be included with Concrete Structures. For details of bar s  (E) see sheet  of  . The s  (E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of . Concrete in diaphragm is included with Concrete Superstructure on sheet of  . Coat of 30 Lb. roofing felt is included with Concrete Superstructure. Coat of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s  (E) see sheet  of  . The s  (E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of . Concrete in diaphragm is included with Concrete Superstructure on sheet of  . Coat of 30 Lb. roofing felt is included with Concrete Superstructure. Coat of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s  (E) see sheet  of  . The s  (E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of . Concrete in diaphragm is included with Concrete Superstructure on sheet of  . Coat of 30 Lb. roofing felt is included with Concrete Superstructure. Coat of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s  (E) see sheet  of  . The s  (E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of . Concrete in diaphragm is included with Concrete Superstructure on sheet of  . Coat of 30 Lb. roofing felt is included with Concrete Superstructure. Coat of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s  (E) see sheet  of  . The s  (E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of . Concrete in diaphragm is included with Concrete Superstructure on sheet of  . Coat of 30 Lb. roofing felt is included with Concrete Superstructure. Coat of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s  (E) see sheet  of  . The s  (E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of . Concrete in diaphragm is included with Concrete Superstructure on sheet of  . Coat of 30 Lb. roofing felt is included with Concrete Superstructure. Coat of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s  (E) see sheet  of  . The s  (E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of . Concrete in diaphragm is included with Concrete Superstructure on sheet of  . Coat of 30 Lb. roofing felt is included with Concrete Superstructure. Coat of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s  (E) see sheet  of  . The s  (E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of . Concrete in diaphragm is included with Concrete Superstructure on sheet of  . Coat of 30 Lb. roofing felt is included with Concrete Superstructure. Coat of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s  (E) see sheet  of  . The s  (E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of . Concrete in diaphragm is included with Concrete Superstructure on sheet of  . Coat of 30 Lb. roofing felt is included with Concrete Superstructure. Coat of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s  (E) see sheet  of  . The s  (E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of . Concrete in diaphragm is included with Concrete Superstructure on sheet of  . Coat of 30 Lb. roofing felt is included with Concrete Superstructure. Coat of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s  (E) see sheet  of  . The s  (E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
**DIAPHRAGM OVERVIEW**

Diaphragm at Pier: 3" x 3" x 1/2" rolled angle with stiffeners (2 required each side of pier). See Section A-A. See also Notes.

---

**Notes:**
- Reinforcement bars in diaphragm are billed with superstructure on sheet of Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- Cost of 30 lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be billed with Concrete Structures. For details of bar sizes see sheet of.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed on each exterior beam as erected unless an equivalent temporary means of lateral restraint is used.

---

**SIDE RETAINER**

If required on each side of pier, equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
Diaphragm Details

Plan at Pier

Side Retainer

Equivalent rolled angle with stiffeners (2 required each side of pier).

Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is billed with Concrete Superstructure on sheet of.
- Coir of 30 Lb. roofing felt is included with Concrete Superstructure.
- Coir of side retainer and anchor bolts shall be included with Concrete Superstructure.
- For details of bar ayly(e) see sheet of.
- The ayly(e) bars shall be placed parallel to the beams.
- Spacing for these bars shall be at right angles to the beams. Anchor bolts and side retainers shall be as per Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as soon as exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Notes:

Fabric bridge pad is erected unless an equivalent temporary means of lateral restraint is used.

Anchor bolts and side retainers shall be installed as each exterior beam until deck is poured and cured.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as soon as exterior beam is erected unless an equivalent temporary means of lateral restraint is used.
**DIAPHRAGM AT PIER**

*Bonded to sides of beams embedded in diaphragm.*

**PLAN AT PIER**

(Showing bearing pads and P.J.F. details)

**SIDE RETAINER**

If required at each side of pier.

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

**SECTION A-A**

(Dimensions along E of beam braced as shown)

Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet of  of .
- Concrete in diaphragm is included with Concrete Superstructure on sheet of  of .
- Coat of 30 Lb. roofing felt is included with Concrete Superstructure.
- Coat of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar #20 see sheet of  of .
- Anchor bolts of 1/2" bars shall be placed parallel to the beams.
- Spacing for these bars shall be at right angles to the beams.
- Anchor bolts and side retainers shall be installed as per Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as per exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

**Concrete Structures.**

Cost of side retainer and anchor bolts shall be included with Concrete Superstructure on sheet of  of .

Concrete in diaphragm is included with Concrete Superstructure on sheet  of  of .

Reinforcement bars in diaphragm are billed with superstructure on sheet of  of .

Concrete in diaphragm is included with Concrete Superstructure on sheet of  of .

Coat of 30 Lb. roofing felt is included with Concrete Superstructure.
Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

Concrete Superstructure.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure.

Reinforcement bars in diaphragm are billed with superstructure on sheet 10. Concrete in diaphragm is included with Concrete Superstructure on sheet 10.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Side retainers shall be hot dip galvanized. Concrete Superstructure.

For details of bar see sheet 10 of the Standard Specifications. Side retainers shall be hot dip galvanized. Concrete Superstructure.

Notes:

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
Anchor bolts and side retainers shall be installed as each exterior beam until deck is poured and cured. Beams shall be braced for stability during erection and remain braced of the Standard Specifications. Side retainers shall be hot dip galvanized.

Reinforcement bars in diaphragm are billed with superstructure on sheet of Concrete in diaphragm is included with Concrete Superstructure on sheet of Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Coat of side retainers and anchor bolts shall be included with Concrete Superstructure. For details of bar size see sheet of The #6 bars shall be spaced parallel to the beams. Spacing for these bars shall be at right angles to the beams. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured. Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

Concrete Structures.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Coat of side retainers and anchor bolts shall be included with Concrete Superstructure.

For details of bar size see sheet of

The #6 bars shall be spaced parallel to the beams.

Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

Concrete in diaphragm is included with Concrete Superstructure on sheet of

Reinforcement bars in diaphragm are billed with superstructure on sheet of Concrete in diaphragm is included with Concrete Superstructure on sheet of Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Coat of side retainers and anchor bolts shall be included with Concrete Superstructure. For details of bar size see sheet of The #6 bars shall be spaced parallel to the beams. Spacing for these bars shall be at right angles to the beams. Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured. Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.
DIAPHRAGM AT PIER

*Required to sides of beams embedded into diaphragm.

PLAN AT PIER

(Diagram showing bearing pads and PJF details)

DETAIL 'A'

FABRIC BRG. PAD

Concrete Deck

DIAPHRAGM DETAILS

SIDE RETAINER

Note:
Reinforcement bars in diaphragm are billed with superstructure on sheet of.
Concrete in diaphragm is included with Concrete Superstructure on sheet of.
Coefficient of 30 lb. roofing felt is included with Concrete Superstructure.

For details of bar (E) see Sheet A-A.

The s (E) bars shall be placed parallel to the beams.
Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot-dip galvanized.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on Sheet A-A.

Fabric brg. pad

Concrete Pad

DIAPHRAGM AT PIER

See Detail 'A'

Fabric Pad

Concrete Deck
DIAPHRAGM DETAILS

PLAN AT PIER

DIAPHRAGM AT PIER

*Bonded to sides of beams embedded in diaphragm.

SECTION A-A

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet(s).
- Concrete in diaphragm is included with Concrete Superstructure on sheet(s).
- Cost of 30 lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar sizes see sheet(s).
- Concrete in diaphragm is included with Concrete Superstructure on sheet(s).
- Side retainers shall be hot dip galvanized.
- Steel shall be broad for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

SIDE RETAINER

If required on each side of pier.
Equivalent rolled angles with stiffeners will be allowed in lieu of welded plates.
DIAPHRAGM AT PIER

*Defined to sides of beams embedded in diaphragm.

PLAN AT PIER

(Drawing showing details and P/R details)

SIDE RETAINER

If required on each side of pier, equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

DIAPHRAGM DETAILS

(Showing bearing pads and PJF details)

SECTION A-A

(Dimensions along E of beam except as shown)

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- Coat of side retainer and anchor bolts shall be included with Concrete Superstructure.
- For details of bar sizes see sheet of.
- The 5/8" bars shall be placed parallel to the beams.
- Spacing for these bars shall be at right angles to the beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed at each exterior beam as erected unless an equivalent temporary means of lateral restraint is used.

For details of bar sizes see sheet of.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Concrete Structures.

Notes:
- Cost of side retainer and anchor bolts shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.
Anchor bolts and side retainers shall be installed as each exterior beam until deck is poured and cured. Beams shall be braced for stability during erection and remain braced of the Standard Specifications. Side retainers shall be hot dip galvanized.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar å'E' see sheet of.
- The å'E' bars shall be spaced parallel to the beams.
- Spacing for these bars shall be at right angles to the beams.
- Anchor bolts and side retainers shall be bonded to the sides of beams embedded into diaphragm.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.
DIAPHRAGM AT PIER

*Sound to sides of beams extended into diaphragm.

PLAN AT PIER

(SEction showing bearing pads and PJF details)

DIAPHRAGM DETAILS

SIDe RETAINER

*Equivalent rolled angles with stiffeners (2 required each side of pier).

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar see sheet of.
- Anchor bolts and side retainers shall be bonded to sides of beams embedded into diaphragm.
- Equivalent rolled angles with stiffeners will be allowed in lieu of welded plates.

SIDE RETAINER

If required on either side of pier.

Notes:
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar see sheet of.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be bonded for stability during erection and remain bonded until deck is poured and cured.
- Anchor bolts and side retainers shall be handled as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

Details:
- Fabric brg. pad 1" x 1'-3" x 3'-0" ~ 1'-9"
- Extended prestressing strands ~ Pier, typ.
- 30 Lb. roofing felt, typ.
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.
DIAPHRAGM AT PIER

* Bonded to sides of beams embedded into diaphragm.

SIDE RETAINER

If required at sides of pier.
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

PLAN AT PIER

(Showing bearing pads and PJF details)

DIAPHRAGM DETAILS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DFP-IL36-L

07-15-16

DEPARTMENT OF TRANSPORTATION
STATE OF ILLINOIS
F.A. RTE. SECTION ILLINOIS FED. AID PROJECT COUNTY CONTRACT NO.

FILE NAME = USER NAME =

PLOT SCALE =

PLOT DATE =

CHECKED = DRAWN =

CHECKED = DESIGNED =

REVISED = REVISED = REVISED =

DEPARTMENT OF TRANSPORTATION STATE OF ILLINOIS
DIAPHRAGM AT PIER

*Bound to slopes of beams embedded into diaphragm.

Side retainer

Concrete beam

PLAN AT PIER

ToShowing bearing pads and PJF details

DIAGRAMS DETAILS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAGRAM DETAILS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIDE RETAINER

If required on each side of pier. Equivalent rolled angles with stiffeners will be allowed in lieu of weighted plates.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar see sheet of.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be broached for stability during erection and reamed drilled until shear is poured and cured.
- Anchor bolts and side retainers shall be installed at each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.
**DIAPHRAGM AT PIER**

Bonded to sides of beams connected into diaphragm.

**PLAN AT PIER**

(Showing bearing pads and PJF details)

**SECTION A-A**

(Dimensions using E of beam except as shown)

**SIDE RETAINER**

(If required each side of pier; Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.)

Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet 12.
- Concrete in diaphragm is included with Concrete Superstructure on sheet 1.
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s (E) see sheet 1.
- The s (E) bars shall be placed parallel to the beams.
- Spacing for these bars shall be at right angles to the beams.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.
Anchor bolts and side retainers shall be installed as each exterior beam until deck is poured and cured. Beams shall be braced for stability during erection and remain braced until deck is poured and cured. Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

Concrete in diaphragm is included with Concrete Superstructure on sheet... Reinforcement bars in diaphragm are billed with superstructure on sheet of... Concrete in diaphragm is included with Concrete Superstructure on sheet of... Equal to 30 lb. roofing felt is included with Concrete Superstructure.

For details of bars see sheet of... The #5 reinforcing bars shall be placed parallel to the beams.

Spacing for these bars shall be at right angles to the beams. Anchor bars and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

Anchor bolts and side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

Concrete Structures.

Fabric brg. pad

1" x 1' - 3" x 3' - 0"

Fabric brg. pad

30 Lb. Roofing felt

Next to sheets of beams embedded into diaphragm.
Diaphragm Details

Plan at Pier

Showing bearing pads and PJF details

Diaphragm at Pier

Screwed to sides of beams embedded into diaphragm.

Fabric brg. pad

DIAPHRAGM AT PIER

See Detail 'A'

Concrete Structures.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of side retainer and anchor bolts shall be included with Concrete Superstructure.

Reinforcement bars in diaphragm are billed with superstructure on sheet of.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Fabric Pad

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS
STRUCTURE NO.

DEPARTMENT OF TRANSPORTATION
STATE OF ILLINOIS
F.A. RTE. SECTION ILLINOIS FED. AID PROJECT
COUNTY CONTRACT NO.
TOTAL SHEETS SHEET NO.

SIDE RETAINER

Of required length

4-#6 nos. 1 bars centered between beams.

Concrete pad

Plan at Pier

Detail 'A'

Concrete Structures.

Notes:

Anchor bolts and side retainers shall be installed as each exterior beam until deck is poured and cured.

Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
DIAPHRAGM AT PIER

*Placed as sides of beams embedded into diaphragm.

PLAN AT PIER

See Section A-A

DETAIL 'A'

Fabric Pad

SIDE RETAINER

*Bonded to sides of beams embedded into diaphragm.

Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet(s) of the Plan.
- Concrete in diaphragm is included with Concrete Superstructure on sheet(s) of the Plan.
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure on sheet(s) of the Plan.
- Concrete Structures.

For details of bar sizes, see sheet(s) of the Plan.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

Locations on Superstructure.

Notes:

- Cost of 30 Lb. roofing felt is included with Concrete Superstructure on sheet(s) of the Plan.

Concrete in diaphragm is included with Concrete Superstructure on sheet(s) of the Plan.

Reinforcement bars in diaphragm are billed with superstructure on sheet(s) of the Plan.

Concrete in diaphragm is included with Concrete Superstructure on sheet(s) of the Plan.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure on sheet(s) of the Plan.

Concrete Structures.

For details of bar sizes, see sheet(s) of the Plan.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

Locations on Superstructure.

Notes:

- Cost of 30 Lb. roofing felt is included with Concrete Superstructure on sheet(s) of the Plan.

Concrete in diaphragm is included with Concrete Superstructure on sheet(s) of the Plan.

Reinforcement bars in diaphragm are billed with superstructure on sheet(s) of the Plan.

Concrete in diaphragm is included with Concrete Superstructure on sheet(s) of the Plan.

Cost of 30 Lb. roofing felt is included with Concrete Superstructure on sheet(s) of the Plan.

Concrete Structures.

For details of bar sizes, see sheet(s) of the Plan.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.

Locations on Superstructure.
Anchor bolts and side retainers shall be installed as each exterior beam until deck is poured and cured. Beams shall be braced for stability during erection and remain braced of the Standard Specifications. Side retainers shall be hot dip galvanized. The sperrl bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams. Anchors and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured. Anchors bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

Notes:
- Reinforcement bars in diaphragms are billed with superstructure on sheet of.
- Concrete in diaphragms is included with Concrete Superstructure on sheet of.
- Coat of 30 Lb. roofing felt is included with Concrete Superstructures. Coat of side retrimber and anchor bolts shall be included with Concrete Superstructures.
- For details of bar alignment see sheet of.
- Bonded to sides of beams embedded into diaphragms.
- Extended prestressing strands.
- Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.

PLAN AT PIER
(Showing bearing pads and P/F details)
Side retainers will be allowed in lieu of welded plates.

Equivalent rolled angle with stiffeners (2 required each side of pier).

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar see sheet of.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Bolts shall be broad for stability during erection and remain braced until deck is poured and curved.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

Fabric brg. pad

Concrete

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar see sheet of.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Bolts shall be broad for stability during erection and remain braced until deck is poured and curved.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.
Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Note: Reinforcement bars in diaphragms are billed with superstructure on sheet of 0. Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainers and anchor bolts shall be included with Concrete Structures. For details of bar s(E) see sheet . See Section A-A of bar s(E) bars centered between beams.

Extended prestressing strands

Notes:

Concrete in diaphragm is included with Concrete Superstructure on sheet of 0. Notes: Reinforcement bars in diaphragms are billed with superstructure on sheet of 0. Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Cost of side retainers and anchor bolts shall be included with Concrete Structures. For details of bar s(E) see sheet . See Section A-A of bar s(E) bars centered between beams.

Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Bolts shall be brazed for stability during erection and remain brazed until deck is poured and cured.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.
Anchor bolts and side retainers shall be installed as each exterior beam until deck is poured and cured. Beams shall be braced for stability during erection and remain braced of the Standard Specifications. Side retainers shall be hot-dip galvanized. The s (E) bars shall be placed parallel to the beams. For details of bar s (E) see sheet of Concrete Structures. The anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot-dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured. Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.
Anchor bolts and side retainers shall be installed as each exterior beam until deck is poured and cured. Beams shall be braced for stability during erection and remain braced of the Standard Specifications. Side retainers shall be hot dip galvanized. Anchor bolts and side retainers shall be according to Article 521.06.

Concrete Structures.

Cost of side retainers and anchor bolts shall be included with Concrete Superstructure.

Notes:

- Anchors shall be bonded to the sides of the beams.
- Anchors shall be placed parallel to the beams.
- The spacing of anchor bolts shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

Plan at Pier (Showing bearing pads and PJF details)

Fabric brg. pad

Concrete beam

Plan at Pier

Fabric brg. pad

Concrete beam

SIDE RETAINER

If required each side of pier, Equivalent rolled angles with stiffeners will be allowed in lieu of welded plates.

PLAN AT PIER

(Detail A)

DIAPHRAGM AT PIER

*Bedded in sides of beams embedded into diaphragm.

DIAPHRAGM DETAILS

SIDE RETAINER

† Connected in lieu of welded plates.

Equivalent rolled angle with stiffeners (2 required each side of pier).
Anchor bolts and side retainers shall be installed as each exterior beam until deck is poured and cured. Beams shall be braced for stability during erection and remain braced until deck is poured and cured. Extended prestressing strands shall be provided as required.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of . Concrete in diaphragm is included with Concrete Superstructure on sheet of .
- Cost of 30 lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Superstructure.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be bored for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be located at each exterior beam.
- Diaphragm details shall be located on sheet of .

Concrete in diaphragm is included with Concrete Superstructure on sheet of . Reinforcement bars in superstructure are billed with superstructure on sheet of .

Notes:
- Reinforcement bars in superstructure are billed with superstructure on sheet of . Concrete in superstructure is included with Concrete Superstructure on sheet of .
- Cost of 30 lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainer and anchor bolts shall be included with Concrete Superstructure.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized.
- Beams shall be bored for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be located at each exterior beam.
- Diaphragm details shall be located on sheet of .

Concrete in superstructure is included with Concrete Superstructure on sheet of . Reinforcement bars in superstructure are billed with superstructure on sheet of .
DIAPHRAGM AT PIER

*Placed to trim of beams embedded into diaphragm.

PLAN AT PIER

(Detail showing hot dip galvanized side retainers)

NOTES:

- All square or rectangular steel members shall be hot dip galvanized.
- The HP-1000 base gaskets shall be placed per plan.
- Expanded prestressing strands shall be installed to the exterior beams.
- Anchor bolts and side retainers shall be according to Article 5.2.06 of the Standard Specifications.
- Fabric brg. pad 1'-6'' x 1'-9'' x 3'-0''
- Concrete in diaphragm is included with Concrete Superstructure.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Diaphragm is erected unless an equivalent temporary means of lateral restraint is used.

DIAPHRAGM DETAILS

SIDE RETAINER

(Dimensions along & of beam except as shown)

Notes:

- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- Coir of 30 Lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainers and anchor bolts shall be included with Concrete Superstructure.
- Steel gusset plates at center of diaphragm are billed with superstructure on sheet of.
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Diaphragm is erected unless an equivalent temporary means of lateral restraint is used.
SIDE RETAINER

If required at sides of pier, equivalent rolled angles with stiffeners will be allowed in lieu of welded plates.

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet of .
- Concrete in diaphragm is included with Concrete Superstructure on sheet of .
- Cost of 30 Lb. roofing felt is included with Concrete Superstructure.
- Cost of side retainers and anchor bolts shall be included with Concrete Structures.
- For details of bars (E) see sheet of .
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Bolts shall be broad for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed at each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

DIAPHRAGM AT PIER
*Bonded to sides of beams embedded into diaphragm.

PLAN AT PIER
(Showing bearing pads and PJF details)
**DIAPHRAGM AT PIER**

*Allowed to sides of beams embedded into diaphragm.*

**PLAN AT PIER**
*(Showing bearing pads and PJF details)*

**SIDE RETAINER**
*(If required on each side of pier. Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.)*

**SECTION A-A**
*(Dimensions along E of beam except as shown)*

---

**Notes:**
- Reinforcement bars in diaphragm are billed with superstructure on sheet of.
- Concrete in diaphragm is included with Concrete Superstructure on sheet of.
- Cost of 30 lb. roofing felt is included with Concrete Structures.
- Anchors and side retainers shall be installed as each exterior beam until deck is poured and cured.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications.
- Side retainers shall be hot dip galvanized.
**NOTES:**

- Reinforcement bars in diaphragm are billed with superstructure on sheet of Concrete in diaphragm is included with Concrete Superstructure.
- Coat of 30 Lb. roofing felt is included with Concrete Superstructure.
- Coat of side retainer and anchor bolts shall be included with Concrete Structures.
- For details of bar s(E) see sheet or.
- The s(E) bars shall be placed parallel to the beams.
- Spacing for these bars shall be at right angles to the beams.
- Anchor bolts shall be hot dip galvanized.
- Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed as each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

---

**DIAPHRAGM AT PIER**

- Bonded to sides of beams embedded into diaphragm.

---

**PLAN AT PIER**

- Showing bearing pads and PJF details

---

**SIDE RETAINER**

- If required with each side of pier.
- Equivalent rolled angles with stiffeners will be allowed in lieu of welded plates.

---

**DIAPHRAGM DETAILS**

- SEE DETAIL 'A'
- Fabric Pad
- See Section A-A
Anchor bolts and side retainers shall be installed as each exterior beam until deck is poured and cured. Beams shall be braced for stability during erection and remain braced of the Standard Specifications. Side retainers shall be hot dip galvanized. The s  (E) bars shall be placed parallel to the beams. For details of bar s  (E) see sheet    of   . Concrete Structures. Cost of side retainer and anchor bolts shall be included with Concrete Superstructure. Cost of 30 Lb. roofing felt is included with Concrete Superstructure. Concrete in diaphragm is included with Concrete Superstructure on sheet   of   . Reinforcement bars in diaphragm are billed with superstructure on sheet of . Diaphragm at Pier *Bonded to sides of beams embedded into diaphragm.

Notes:
- Spacing for these bars shall be at right angles to the beams.
- Anchor bolts and side retainers shall be according to Article 521.06 of the Standard Specifications. Side retainers shall be hot dip galvanized. Beams shall be braced for stability during erection and remain braced until deck is poured and cured.
- Anchor bolts and side retainers shall be installed on each exterior beam is erected unless an equivalent temporary means of lateral restraint is used.

Fabric brg. pad 1'' x 1'-3'' x 3'-0''. Equivalent rolled angle with stiffeners (2 required each side of pier). See Section A-A.}

DIAPHRAGM AT PIER

SECTION A-A

(Dimensions along $Q$ of beam except as shown)

PLAN AT PIER

Showing bearing pads and PJF details

DETAIL 'A'

Fabric brg. pad

Concrete beam

DIAPHRAGM DETAILS

SIDE RETAINER

@ Rt. L's

If required each side of pier.

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.