For skew greater than 15 degrees, break bar top and bottom flanges at skew. Provide a smooth transition between top and bottom flange breakbacks. Adjust reinforcement as necessary to maintain minimum clear cover.

Required for beams that will support cantilevered slab overhang formwork and exterior beams only.

Cut Bars Y and Bars R as necessary to provide 2" clear between adjacent bars.

When fabricating beams using the optional skewed end, replace Bars Y that are shown to be cut with Bars D (Fig. 9) in shape and location. Shop drawings must show details used.

Where Bars P and L overlap, omit one Bar L and place Bar P instead.

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**GENERAL NOTES:**

Deigned according to AASHTO LRFD Bridge Design Specifications.

Details are provided for skew angles up to 45 degrees. Shop drawings can be prepared with horizontal skew angles rounded to nearest 5 degrees, and beam end vertical batter rounded to the nearest 1'. These shop drawing tolerances are in addition to the fabrication tolerances cited in item 424, "Precast Concrete Structural Members: Fabrication".

Cover dimensions are clear dimensions, unless noted otherwise. Nonanchoring bar dimensions shown are cast-to-cast of bar.

**FABRICATION NOTES:**

Provide Class H concrete. Provide Grade 60 reinforcing steel as equal area of deformed wire reinforcement. EWR (AASHTO A1064) may be substituted for bars R, P, L, and T. All bars for skew over 20 degrees. Provide 1/4" chamfer or 1 1/2" radius at all corners noted to require a chamfer.

Horizontal form joints on exterior forms are not permitted.

Refer to standard UBD for unanchored plates cast in beam end when bearing pad taper exceeds 5 percent, roadway cross-slope exceeds 5 percent, or otherwise required in plans.

**DIMENSIONS:**

- Min Permiss Lap
- Min Lap
- Bar Dimension
- Bar R Dimension
- Bar D Dimension
- Bar DS Dimension
- Bar DE Dimension
- Bar DS Dimension

**Table 424**

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<thead>
<tr>
<th>Beam Type</th>
<th>UBD(a)</th>
<th>UBD(b)</th>
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<tbody>
<tr>
<td>DSU &amp; DSU</td>
<td>7'-0&quot;</td>
<td>7'-0&quot;</td>
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**TxDOT Bridge Division Bridge Standard**

- U-BEAM DETAILS
- PRESTRESSED CONCRETE U-BEAM DETAILS