## Minimum Required Bearing Area - Total Square Feet

<table>
<thead>
<tr>
<th>Type of Fitting</th>
<th>90° Bend</th>
<th>45° Bend</th>
<th>11 1/4° or 22 1/2° Bend</th>
<th>Tee or Dead End</th>
<th>End of Line</th>
<th>Cross</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Installation</td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
<td><img src="image" alt="Diagram" /></td>
</tr>
<tr>
<td>Size of Pipe</td>
<td>4&quot;</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>6&quot;</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>8&quot;</td>
<td>4</td>
<td>2</td>
<td>5</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>10&quot;</td>
<td>6</td>
<td>3</td>
<td>8</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>12&quot;</td>
<td>10</td>
<td>5</td>
<td>12</td>
<td>11</td>
<td>16</td>
</tr>
</tbody>
</table>

**Notes:**

1. Concrete thrust blocks shall be constructed of Type II Six-Sack Portland cement.
2. Areas given are for CL235 DR 18 AWWA C900-07 PVC, CL305 DR 14 AWWA C900-07 PVC, and PC350 DIP at test pressure of 150 p.s.i. in soil with minimum 2,000 p.s.f. bearing capacity. Installations using different pipe, test pressures, and/or soil types require adjustment of bearing areas accordingly.
3. Concrete thrust blocks to be poured against undisturbed soil.
4. Pipe, joints, and bolts shall be kept clear of cementitious materials.
5. Transporting or use of concrete for thrust blocks in non-mixing trucks or trailers (buggies) is not permitted.
6. Thrust blocks are required at every bend, tee, end, and cross on pipelines and as deemed necessary by the District Inspector.
7. Key-in from the vertical wall of trench shall be a minimum of 8' into undisturbed soil and shall be inspected by CHWD prior to pouring concrete.
8. Concrete thrust blocks shall be allowed to cure for a minimum of 24-hours prior to any pressure loading or trench backfilling.

---

**Concrete Thrust Block Details**

**Citrus Heights Water District**

[Logo]

Approved by: [Signature]

Date: 5/8/13

Citrus Heights Water District

[Logos]

- Drawn: 8 May 2013
- Revised:
- Scale: N.T.S.
- Design: P.A.D.
- Cad File: TB_001.DWG
- Page: TB_001