If manhole depth exceeds 20 feet, install steps.
Install infiltration barrier.

1. For new pipe connections, provide cored opening with flexible pipe connector.
2. For existing pipe connections, provide an arched opening with a diameter up to 6 inches larger than outside diameter of pipe. Install waterstop around existing pipe. Fill void between pipe and opening with non-shrink grout.
3. For additional configurations, maintain a minimum of 12 inches of concrete between vertical edges of pipe openings.
4. 12 inch minimum riser height above all pipe openings.
5. When specified, provide an eccentric flat to in Lieu of eccentric cone section.

**Table: Maximum Pipe Diameter (inches) for 2 Pipes**

<table>
<thead>
<tr>
<th>Manhole Diameter (inches)</th>
<th>At 180° Separation</th>
<th>At 90° Separation</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>24</td>
<td>18</td>
</tr>
<tr>
<td>60</td>
<td>36</td>
<td>24</td>
</tr>
<tr>
<td>72</td>
<td>42</td>
<td>30</td>
</tr>
<tr>
<td>84</td>
<td>48</td>
<td>36</td>
</tr>
<tr>
<td>96</td>
<td>60</td>
<td>42</td>
</tr>
</tbody>
</table>

**Legend**

- **Existing Sewer**
- **Precast Top**
- **Adjustment Rings**
- **Precast Riser Sections**
- **Joint Sealant (typ.)**
- **Location Station**
- **Concrete Fillet**
- **Class I Bedding Material**
- **Non-shrink Grout**
- **Possible New Pipe**
- **Existing Sewer**
- **Flow**
- **#4 Bars @ 12" o.c. Each Way**
- **6" min. Class I Bedding Material**
- **Sw-601 Casting**
- **SW-303**
- **Base Cast-in-place**
- **Flowline Lowest Flowline**
- **Precast Riser Section with Square Bottom Edge**
- **Depth**

**Notes**

- For existing pipe connections, provide an arched opening with a diameter up to 6 inches larger than outside diameter of pipe. Install waterstop around existing pipe. Fill void between pipe and opening with non-shrink grout.
- For new pipe connections, provide cored opening with flexible pipe connector.
- For additional configurations, maintain a minimum of 12 inches of concrete between vertical edges of pipe openings.
- 12 inch minimum riser height above all pipe openings.
- When specified, provide an eccentric flat to in Lieu of eccentric cone section.

**SANITARY SEWER MANHOLE OVER EXISTING SEWER**

**FIGURE 6010.303**

**STANDARD ROAD PLAN**

**SUDAS DIRECTOR DESIGN METHODS ENGINEER**

**REVISIONS:**

- Added circle note 5.