CONCRETE PIPE TO CONCRETE PIPE

**TYPE "C-1"**

Remove existing concrete where necessary.

Flow

Concrete pipe

Pipe connector See Standard Road Plan DR-121

Standard prefab corrugated pipe elbow (if necessary)

Connecting band (if necessary)

Corrugated pipe

12' min.

CONCRETE PIPE TO CORRUGATED PIPE

**TYPE "C-3"**

Pipe connector See Standard Road Plan DR-121

Concrete pipe

2.5 for 18" O.D. pipe

3" for 24" O.D. pipe

12' min.

Flow

Standard prefab corrugated pipe elbow (if necessary)

Connecting band (if necessary)

Corrugated pipe

CONCRETE PIPE TO CONCRETE BOX CULVERT

**TYPE "C-2"**

Remove existing concrete where necessary.

Tie in old steel reinforcing to new adapter if possible.

Flow

Existing Concrete Box Culvert

INLET

Fillet

OUTLET

Fillet

CONCRETE PIPE TO CONCRETE BOX CULVERT

**TYPE "C-2"**

Remove existing concrete where necessary.

Tie in old steel reinforcing to new adapter if possible.

Flow

Existing Concrete Box Culvert

INLET

Fillet

OUTLET

Fillet

Flow

Concrete pipe elbow (if necessary)

Concrete pipe

Pipe connector See Standard Road Plan DR-121

Standard prefab corrugated pipe elbow (if necessary)

Connecting band (if necessary)

Corrugated pipe

COPPERED PIPE TO CORRUGATED PIPE

**TYPE "C-4"**

Pipe connector See Standard Road Plan DR-121

Concrete pipe

12' min.

Corrugated pipe

CONCRETE ADAPTERS FOR CONSTRUCTION OF TYPE 'C'

**ESTIMATED ENCASEMENT QUANTITIES PER LINEAR FOOT FOR "C-2" ADAPTORS**

<table>
<thead>
<tr>
<th>Diameter, D inches</th>
<th>Concrete cu. yds.</th>
<th>Wire Mesh lbs.</th>
<th>Concrete for Fillet &quot;C-2&quot; cu. yds.</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>0.1</td>
<td>2.0</td>
<td>N.A.</td>
</tr>
<tr>
<td>18</td>
<td>0.1</td>
<td>2.3</td>
<td>N.A.</td>
</tr>
<tr>
<td>21</td>
<td>0.1</td>
<td>2.6</td>
<td>N.A.</td>
</tr>
<tr>
<td>24</td>
<td>0.1</td>
<td>2.9</td>
<td>N.A.</td>
</tr>
<tr>
<td>30</td>
<td>0.2</td>
<td>3.4</td>
<td>0.1</td>
</tr>
<tr>
<td>36</td>
<td>0.2</td>
<td>4.0</td>
<td>0.1</td>
</tr>
<tr>
<td>42</td>
<td>0.2</td>
<td>4.5</td>
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<tr>
<td>48</td>
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<td>60</td>
<td>0.4</td>
<td>6.2</td>
<td>0.1</td>
</tr>
<tr>
<td>66</td>
<td>0.5</td>
<td>6.9</td>
<td>0.1</td>
</tr>
<tr>
<td>72</td>
<td>0.6</td>
<td>7.5</td>
<td>0.1</td>
</tr>
<tr>
<td>78</td>
<td>0.8</td>
<td>8.1</td>
<td>0.1</td>
</tr>
<tr>
<td>84</td>
<td>0.7</td>
<td>8.7</td>
<td>0.1</td>
</tr>
</tbody>
</table>

No payment will be made for individual adaptors.

The cost of furnishing all materials and constructing adaptor as indicated is incidental to the pipe culvert.

Removal and disposal of headwall, wingwall, or other concrete, as directed, will be paid for as "Removal of Existing Structures".

Form and construct Type "C-1" and "C-2" adaptors on the job site using methods approved by the Engineer.

Type "C-3" and "C-4" adaptors may be shop fabricated using a method approved by the Engineer for attaching a concrete collar (either tongue or groove end) to a standard section of corrugated pipe. Holes may be field drilled in corrugated pipe to match alignment with concrete pipe.

Thickness same as pipe thickness (T) but not less than 4 inches.

2000 D (Class III) and 3000 D (Class IV) Pipe

Positive type joint coupling required.

5/8 inch (min.) bolts in 7/8 inch (min.) holes. Four bolts around each connection at equal intervals. Existing pipe connector holes may be used if available. Place remaining two bolts at approximate equal intervals.

5/8 inch (min.) bolts in 7/8 inch (min.) holes. Four bolts around each connection at equal intervals. Existing pipe connector holes may be used if available. Place remaining two bolts at approximate equal intervals.

Thickness of wall of concrete pipe. See AASHTO M 170.