### ANNULAR AND HELICAL PROFILE

<table>
<thead>
<tr>
<th>COUPLING TYPE</th>
<th>PIPE CORRUGATION</th>
<th>PIPE SIZE</th>
<th># OR A</th>
<th>STRAP THICKNESS</th>
<th>BAND THICKNESS</th>
<th>BAR AND STRAP (CSP ONLY)</th>
<th>ANGLE</th>
<th>DIMENSIONS</th>
<th>BOLTS (No.- Dia)</th>
<th>RIVETS</th>
<th>BAR YIELD STRENGTH</th>
<th>SPOT WELDS</th>
<th>ANGLE TO BAND</th>
<th>BAR YIELD STRENGTH</th>
<th>ANGLE TO BAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>TWO PIECE INTEGRAL FLANGE</td>
<td>1 1/2&quot; x 2&quot;</td>
<td>6&quot;</td>
<td>1 1/2&quot;</td>
<td>0.064&quot;</td>
<td>0.168&quot;</td>
<td>0.052&quot;</td>
<td>BAR 1 1/2&quot;</td>
<td>3-1/2&quot;</td>
<td>3/8&quot;</td>
<td>3/32 ksi</td>
<td>3/8&quot;</td>
<td>3/32 ksi</td>
<td>3/8&quot;</td>
<td>3/32 ksi</td>
<td>3/8&quot;</td>
</tr>
<tr>
<td>ANNUAL</td>
<td>2 1/2&quot; x 2&quot;</td>
<td>12&quot;</td>
<td>0.064&quot;</td>
<td>0.168&quot;</td>
<td>0.060&quot;</td>
<td>0.060&quot;</td>
<td>BAR 2 1/2&quot;</td>
<td>3-1/2&quot;</td>
<td>1/4&quot;</td>
<td>3/32 ksi</td>
<td>1/4&quot;</td>
<td>3/32 ksi</td>
<td>1/4&quot;</td>
<td>3/32 ksi</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>HUGGER</td>
<td>2 1/2&quot; x 2&quot;</td>
<td>10 1/2&quot;</td>
<td>0.064&quot;</td>
<td>0.168&quot;</td>
<td>0.079&quot;</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
<td>32 ksi</td>
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<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

**NOTES:**
1. For helically corrugated coupling bands, the connection angles may be oriented parallel to the pipe axis, provided connecting holes are slotted lengthwise sufficiently to allow adjustment for the helix angle.
2. Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
3. Use 1/4" gage line dimension on ached angle leg for rivets and spot welds.
4. Band thickness shall not be less than:
   a. Standard thicknesses lighter than 0.060" for Corrugated Steel Pipe.
   b. Standard thicknesses lighter than the thickness of the pipe for Corrugated Aluminum Pipe.
5. Dimensions, thicknesses and strengths shown are nominal.
6. For pipe arches use same width band as for round pipe of equal periphery.
7. Fillet welds of equivalent strength may be substituted for spot welds or rivets.
8. Spot welds shall develop minimum required strength of strap.
9. Pipe with rerolled ends having at least two 2 1/2" x 2" circular corrugations at each end with or without an upturned flange may be connected with any of the annular coupling bands shown for pipe of the same diameter and wall thickness and having 2 1/2" x 2" corrugations.
10. For downdrain applications, two piece integral flange couplers shall have factory applied sleeve type rubber gaskets with a minimum length of 1" measured along the length of the pipe.

### SPIRAL RIB PROFILE

<table>
<thead>
<tr>
<th>COUPLING TYPE</th>
<th>PIPE CORRUGATION</th>
<th>PIPE SIZE</th>
<th>#</th>
<th>STRAP THICKNESS</th>
<th>BAND THICKNESS</th>
<th>BAR AND STRAP (SSRP ONLY)</th>
<th>ANGLE</th>
<th>DIMENSIONS</th>
<th>BOLTS (No.- Dia)</th>
<th>RIVETS</th>
<th>BAR YIELD STRENGTH</th>
<th>SPOT WELDS</th>
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<th>BAR YIELD STRENGTH</th>
<th>ANGLE TO BAND</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANNUAL</td>
<td>2 1/2&quot; x 2&quot;</td>
<td>2&quot;</td>
<td>1 1/2&quot;</td>
<td>0.064&quot;</td>
<td>0.168&quot;</td>
<td>0.060&quot;</td>
<td>BAR 2&quot;</td>
<td>3-1/2&quot;</td>
<td>1/4&quot;</td>
<td>3/32 ksi</td>
<td>1/4&quot;</td>
<td>3/32 ksi</td>
<td>1/4&quot;</td>
<td>3/32 ksi</td>
<td>1/4&quot;</td>
</tr>
<tr>
<td>HUGGER</td>
<td>2 1/2&quot; x 2&quot;</td>
<td>2&quot;</td>
<td>10 1/2&quot;</td>
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<td>0.168&quot;</td>
<td>0.079&quot;</td>
<td>1/4&quot;</td>
<td>1/4&quot;</td>
<td>32 ksi</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</table>

* See Note 11.

11. All profiles of Spiral Rib Pipe (2" x 2" ribs at 13/4" pitch and 2" x 2" ribs at 13/4" pitch in both steel and aluminum and 2" x 2" ribs at 7/8" pitch in steel only) shall be manufactured with rerolled ends. Corrugation profile of the rerolled ends shall be 2 1/2" x 2" circular corrugations with a minimum of two full corrugations at each end.

### OTHER NOTES

- For copies of this plan sheet, see the State of California Department of Transportation.
- The accuracy or completeness of scanned plans or agents shall not be responsible for the State of California or its officers.
- Register C152713.
- Dates:
  - 2015 Standard Plan D97G
  - 08-30-16
  - 09-30-15

### ADDITIONAL DETAILS

- All profiles of Spiral Rib Pipe (2" x 2" ribs at 13/4" pitch and 2" x 2" ribs at 13/4" pitch in both steel and aluminum and 2" x 2" ribs at 7/8" pitch in steel only) shall be manufactured with rerolled ends. Corrugation profile of the rerolled ends shall be 2 1/2" x 2" circular corrugations with a minimum of two full corrugations at each end.
- For downdrain applications, two piece integral flange couplers shall have factory applied sleeve type rubber gaskets with a minimum length of 1" measured along the length of the pipe.
- All profiles of Spiral Rib Pipe (2" x 2" ribs at 13/4" pitch and 2" x 2" ribs at 13/4" pitch in both steel and aluminum and 2" x 2" ribs at 7/8" pitch in steel only) shall be manufactured with rerolled ends. Corrugation profile of the rerolled ends shall be 2 1/2" x 2" circular corrugations with a minimum of two full corrugations at each end.

### PLAN SHEETS

- State of California Department of Transportation
- Corrugated Metal Pipe Coupling Details No. 7
- Downdrain
- No Scale
- D97G