

ANNULAR AND HELICAL PROFILE

To accompany plans dated _____



DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
June 6, 2008 PLANS APPROVAL DATE					
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COUPLING TYPE	PIPE CORRUGATION (mm)	PIPE SIZE (mm)	W OR A (mm)	PIPE WALL THICKNESS				BAR AND STRAP (CSP ONLY)				ANGLE							
				CSP (mm)		CAP (mm)		STRAP THICKNESS (mm)	BOLTS (mm ø)	BAR Dia (mm)	BAR YIELD STRENGTH (MPa)	DIMENSIONS		BOLTS (No. - mm ø)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND	
				CSP	CAP	CSP	CAP					CSP	CAP	CSP	CAP	CSP	CAP	CSP	
TWO PIECE INTEGRAL FLANGE	38 x 6.5	150-250	178	1.63-2.01	1.52	1.63	1.52							2-10	2-10				
	68 x 13	300-600	305		1.52-2.67		1.52								3-13				
UNIVERSAL	68 x 13	THROUGH 900	305	1.63-3.51	1.52-3.43	1.63	1.52	2.01	13	22	220	51 x 51 x 4.8	51 x 51 x 4.8	3-13	3-13	3-9.5 mm	3-9.5 mm	5-15 mm	
		1050-1500	413	1.63-4.27	1.52-4.17	1.63	1.52	DOUBLE 2.01	13	22	220	51 x 51 x 6.4	51 x 51 x 6.4	4-13	4-13	5-9.5 mm	5-9.5 mm		
ANNULAR	68 x 13	THROUGH 900	305	1.63-3.51	1.52-3.43	1.63	1.52					51 x 51 x 4.8	51 x 51 x 4.8	3-13	3-13	3-9.5 mm	3-9.5 mm	5-15 mm	
		1050-1500	305	1.63-2.01		1.63							51 x 51 x 4.8		3-13		3-9.5 mm	5-15 mm	
		1050-1500	305	2.77-4.27	3.43-4.17	1.63	1.91						51 x 51 x 6.4	51 x 51 x 6.4	3-13	3-13	5-9.5 mm	5-9.5 mm	
		1650-1800	610		4.17		2.67						51 x 51 x 6.4			5-13		5-13 mm	
		1050-1350	305	1.52-2.67		1.63	1.52						51 x 51 x 4.8	51 x 51 x 4.8	5-13	3-13	7-9.5 mm		3-9.5 mm
	75 x 25	1200-1500	355	1.63-2.01			1.63						51 x 51 x 4.8		3-13		3-9.5 mm		5-15 mm
		1200-1500	355	2.77			1.63						51 x 51 x 4.8		3-13		5-9.5 mm		
		1650-3000	635	1.63-2.77			1.63						51 x 51 x 4.8		5-13		9-9.5 mm		
		1050-1500	355		1.52-2.67		1.52						51 x 51 x 4.8		3-13		5-9.5 mm		
		1050-1500	355		3.43		1.91						51 x 51 x 6.4		3-13		5-9.5 mm		
1650-2400		635		1.52-3.43		1.52						51 x 51 x 6.4		5-13		7-9.5 mm			
2400-2700		635		3.43		1.91						51 x 51 x 6.4		5-13		7-9.5 mm			
HELICAL	68 x 13	THROUGH 900	305	1.63-3.51	1.52-3.43	1.63	1.52					51 x 51 x 4.8	51 x 51 x 4.8	3-13	3-13	3-9.5 mm	3-9.5 mm	5-15 mm	
		1050-1350	305		1.52-2.67		1.52						51 x 51 x 4.8		3-13		3-9.5 mm	5-15 mm	
		1050-1500	305	1.63-2.01		1.63							51 x 51 x 4.8		3-13		3-9.5 mm	5-15 mm	
		1050-1500	305	2.77-4.27	3.43-4.17	1.63	1.91						51 x 51 x 6.4	51 x 51 x 6.4	3-13	3-13	5-9.5 mm	5-9.5 mm	
		1650-2100	610	2.77-4.27		1.63							51 x 51 x 6.4		5-13		7-9.5 mm		
	75 x 25	1200-1500	355	1.63-2.01			1.63						51 x 51 x 4.8		3-13		3-9.5 mm		5-15 mm
		1200-1500	355	2.77			1.63						51 x 51 x 4.8		3-13		5-9.5 mm		
		1650-3000	635	1.63-2.77			1.63						51 x 51 x 4.8		5-13		9-9.5 mm		
		1050-1500	355		1.52-2.67		1.52						51 x 51 x 4.8		3-13		5-9.5 mm		
		1050-1500	355		3.43		1.91						51 x 51 x 6.4		3-13		5-9.5 mm		
HUGGER	68 x 13 REROLLED END	1200 - 1350	267	2.77		1.63		2.01	13	22	220								
		1350 - 1650	267	2.77		1.63		DOUBLE 2.01	13	22	220								
		THROUGH 1350	267	1.63 - 2.01		1.63		2.01	13	22	220								
		THROUGH 1500	267	3.51		2.01		DOUBLE 2.01	13	22	220								
		1650 - 1800	267	3.51		2.77		DOUBLE 2.01	13	22	220								
	75 x 25 REROLLED END	THROUGH 1800	267	4.27		2.77		DOUBLE 2.77	13	22	310								
		1200 - 2100	267	2.77		2.01		DOUBLE 2.01	13	22	220								
		1200 - 2250	267	1.63 - 2.01		1.63		DOUBLE 2.01	13	22	220								
		2400 - 2550	267	2.01		2.01		DOUBLE 2.01	13	22	220								
		2250 - 3000	267	2.77		2.77		DOUBLE 2.77	13	22	310								

NOTES

- All ferrous metal coupling band connection hardware shall be galvanized or electroplated in accordance with the Standard Specifications.
- 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.
- Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
- Use 32 mm gage line dimension on attached angle leg for rivets and spot welds.
- Band thickness shall not be less than:
 - 3 standard thicknesses lighter than the thickness of the pipe for corrugated steel pipe.
 - 2 standard thicknesses lighter than the thickness of the pipe and in no case lighter than 1.5 mm for corrugated aluminum pipe.
- Dimensions, thicknesses and strengths shown are minimum.
- For pipe arches use same width band as for round pipe of equal periphery.
- Fillet welds of equivalent strength may be substituted for spot welds or rivets.
- Spot welds shall develop minimum required strength of strap.
- Pipe with rerolled ends having at least two 68 mm x 13 mm annular 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 68 mm x 13 mm corrugations.
- In the case of H-305 huggerbands, two piece bands are required for diameters through 2400 mm and three piece bands are required for diameters 2550 mm through 3000 mm.
- Two piece bands are required for pipes greater than 1050 mm diameter.

SPIRAL RIB PROFILE

COUPLING TYPE	PIPE CORRUGATION (mm)	PIPE SIZE (mm)	W (mm)	PIPE WALL THICKNESS				BAR AND STRAP (SSRP ONLY)				ANGLE						
				SSRP (mm)		ASRP (mm)		STRAP THICKNESS (mm)	BOLTS (mm ø)	BAR Dia (mm)	BAR YIELD STRENGTH (MPa)	DIMENSIONS		BOLTS (No. - mm ø)		RIVETS ANGLE TO BAND		SPOT WELDS ANGLE TO BAND
				SSRP	ASRP	SSRP	ASRP					SSRP	ASRP	SSRP	ASRP	SSRP	ASRP	SSRP
ANNULAR	68 x 13 * REROLLED END	600 - 900	305	1.63 - 2.77	1.52 - 2.67	1.63	1.52	2.01	13	22	220	51 x 51 x 4.8	51 x 51 x 4.8	3-13	3-13	3-9.5 mm	3-9.5 mm	5-15 mm
		1050 - 1500	305	1.63 - 2.01	1.90 - 2.67	1.63	1.90	2.01	13	22	220	51 x 51 x 4.8	51 x 51 x 4.8	3-13	3-13	3-9.5 mm	3-9.5 mm	5-15 mm
		1050 - 1500	305	2.77		1.63		2.01	13	22	220	51 x 51 x 6.4		3-13		5-9.5 mm		
		1650 - 2100	610	2.77		1.63		2.01	13	22	220	51 x 51 x 6.4		5-13		7-9.5 mm		
HUGGER	68 x 13 * REROLLED END	600 - 1350	267	1.63 - 2.01		1.63		2.01	13	22	220							
		600 - 1200	267	2.77		1.63		2.01	13	22	220							
		1350 - 1650	267	2.77		1.63		Double 2.01	13	22	220							

* See Note 13.

- All profiles of Spiral Rib Pipe (19 mm x 19 mm ribs at 191 mm pitch and 19 mm x 25 mm ribs at 292 mm pitch in both steel and aluminum and 19 mm x 25 mm ribs at 216 mm pitch in steel only) shall be manufactured with rerolled ends. Corrugation profile of the rerolled ends shall be 68 mm x 13 mm annular corrugations with a minimum of two full corrugations at each end.

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

RSP D97F DATED JUNE 6, 2008 SUPERSEDES STANDARD PLAN D97F DATED July 1, 2004 - PAGE 188 OF THE STANDARD PLANS BOOK DATED July 2004.

REVISED STANDARD PLAN RSP D97F

2004 REVISED Std PLAN RSP D97F

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION
**CORRUGATED METAL PIPE
COUPLING DETAILS No. 6
POSITIVE JOINT**
NO SCALE