DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

Caltrans Metric

REGISTERED CIVIL ENGINEER

July 1, 2004
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER Glenn DeCou No. C34547 Exp. 9-30-05 CIVIL STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

To get to the Caltrans web site, go to: http://www.dot.ca.gov

COUPLING TYPE	PIPE CORRUGATION (mm)	PIPE SIZE (mm)	W OR A (mm)	PIPE WALL THICKNESS CSP (mm)	PIPE WALL THICKNESS CAP (mm)	BAND THICKNESS CSP (mm)	BAND THICKNESS CAP (mm)	BAR AND STRAP (CSP ONLY) STRAP THICKNESS (mm)	BAR AND STRAP (CSP ONLY) BOLTS (mm ϕ)	BAR AND STRAP (CSP ONLY) BAR DIA (mm)	BAR AND STRAP (CSP ONLY) BAR YIELD STRENGTH (MPa)	ANGLE DIMENSIONS CSP (mm)	ANGLE DIMENSIONS CAP (mm)	ANGLE BOLTS (No. - mm ϕ) CSP	ANGLE BOLTS (No. - mm ϕ) CAP	ANGLE RIVETS ANGLE TO BAND CSP (mm)	ANGLE RIVETS ANGLE TO BAND CAP (mm)	ANGLE SPOT WELDS ANGLE TO BAND CSP (mm)
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	3-9.5	5-15
		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	5-9.5	
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	3-9.5	5-15
		1050-1500	305	1.63-2.01		1.63						51 x 51 x 4.8		3-13		3-9.5		5-15
		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	5-9.5	
		1650-1800	610		4.17		2.67						51 x 51 x 6.4		5-13		5-13	
		1650-2100	610	2.77-4.27		1.63						51 x 51 x 6.4		5-13		7-9.5		
		1050-1350	305		1.52-2.67		1.52						51 x 51 x 4.8		3-13		3-9.5	
	75 x 25	1200-1500	355	1.63-2.01		1.63						51 x 51 x 4.8		3-13		3-9.5		5-15
		1200-1500	355	2.77		1.63						51 x 51 x 4.8		3-13		5-9.5		
		1650-3000	635	1.63-2.77		1.63						51 x 51 x 4.8		5-13		9-9.5		
		1050-1500	355		1.52-2.67		1.52						51 x 51 x 4.8		3-13		5-9.5	
		1050-1500	355		3.43		1.91						51 x 51 x 6.4		3-13		5-9.5	
		1650-2400	635		1.52-3.43		1.52						51 x 51 x 6.4		5-13		7-9.5	
		2400-2700	635		3.43		1.91						51 x 51 x 6.4		5-13		7-9.5	
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	3-9.5	5-15
		1050-1350	305		1.52-2.67		1.52						51 x 51 x 4.8		3-13		3-9.5	
		1050-1500	305	1.63-2.01		1.63						51 x 51 x 4.8		3-13		3-9.5		5-15
		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	5-9.5	
		1650-2100	610	2.77-4.27		1.63						51 x 51 x 6.4		5-13		7-9.5		
		1650-1800	610		4.17		2.67						51 x 51 x 6.4		5-13		5-9.5	
	75 x 25	1200-1500	355	1.63-2.01		1.63						51 x 51 x 4.8		3-13		3-9.5		5-15
		1200-1500	355	2.77		1.63						51 x 51 x 4.8		3-13		5-9.5		
		1650-3000	635	1.63-2.77		1.63						51 x 51 x 4.8		5-13		9-9.5		
		1050-1500	355		1.52-2.67		1.52						51 x 51 x 4.8		3-13		5-9.5	
		1050-1500	355		3.43		1.91						51 x 51 x 6.4		3-13		5-9.5	
		1650-2400	635		1.52-3.43		1.52						51 x 51 x 6.4		5-13		7-9.5	
		2400-2700	635		3.43		1.91						51 x 51 x 6.4		5-13		7-9.5	

NOTES

1. All ferrous metal coupling band connection hardware shall be galvanized or electroplated in accordance with the Standard Specifications.
2. 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.
3. Tension strap may be connected to band with either spot welds or fillet welds that develop minimum required strength of strap.
4. Use 32 mm gage line dimension on attached angle leg for rivets and spot welds.
5. Band thickness shall not be less than:
   (I) 3 standard thicknesses lighter than the thickness of the pipe for corrugated steel pipe.
   (II) 2 standard thicknesses lighter than the thickness of the pipe and in no case lighter than 1.5 mm for corrugated aluminum pipe.
6. Dimensions, thicknesses and strengths shown are minimum.
7. For pipe arches use same width band as for round pipe of equal periphery.
8. Fillet welds of equivalent strength may be substituted for spot welds or rivets.
9. Spot welds shall develop minimum required strength of strap.
10. 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.
11. 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.
12. Two piece bands are required for pipes greater than 1050 mm diameter.

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CORRUGATED METAL PIPE COUPLING DETAILS No. 6 POSITIVE JOINT

NO SCALE

ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SHOWN

D97F

2004 Std PLAN D97F

03-26-04