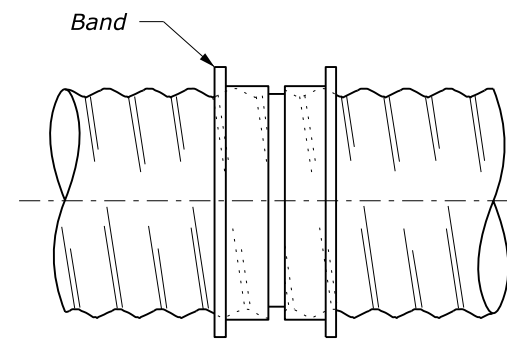


COUPLING BANDS FOR METAL PIPE CULVERT ^[1]

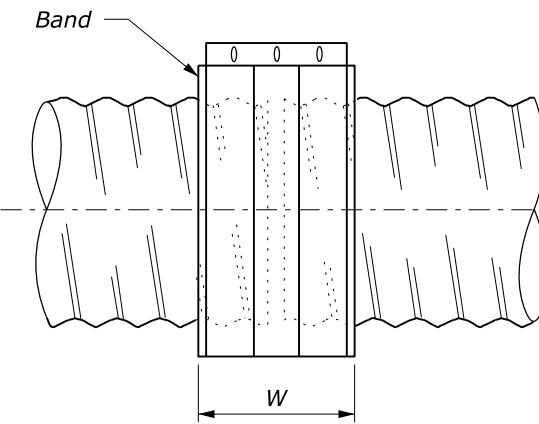
CORRUGATION SIZE ^[2] INCHES	ROUND PIPE DIAMETER INCHES	PIPE ARCH SPAN × RISE INCHES	MINIMUM BAND WIDTH (INCHES)		
			ANNULAR CORRUGATED BANDS ^[3]	HELICALLY CORRUGATED BANDS ^[4]	SEMI-CORRUGATED BANDS ^[5]
1½ × ¼	underline ^[6]	-	10.5	7	10.5
2⅔ × ½	12 to 36	17 × 13 to 42 × 29	7	12	
	42 to 72	49 × 33 to 83 × 57	10.5	12	
	78 to 84	-	10.5	12	10.5
3 × 1	36 to 72	60 × 46 to 81 × 59	12	14	10.5
	78 to 144	87 × 64 to 142 × 91	12	14	10.5
5 × 1	36 to 72	60 × 46 to 81 × 59	20	22	
	78 to 144	87 × 64 to 142 × 91	20	22	



SLEEVE JOINT

Smoother sleeve with center stop.
Stab type joint

SMOOTH SLEEVE BAND



FLAT BAND

NOTE:

1. Other types of coupling bands or fastening devices that comply with the joint performance criteria of AASHTO Standard specifications for Highway Bridges, Division II Section 26 may be used.

^[1] Fabricate annular, helical and semi-corrugated type coupling bands from the same metal as the connecting pipe. Provide coupling bands not more than 3 nominal sheet thicknesses thinner than the thickness of the pipe to be connected, and no thinner than 0.052 inch for steel or 0.048 inch for aluminum. Fasten coupling bands with the following diameter of bolt: ⅜" for 18" round culvert (21" × 15" pipe arch) or less; ½" for 21" round culvert (24" × 18" pipe arch) or more.

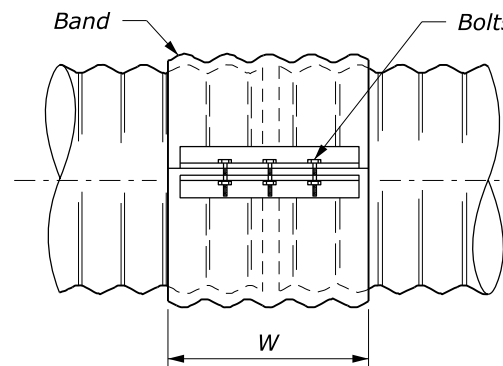
^[2] For helically corrugated pipe with rerolled ends, the nominal corrugations size refers to the dimension of the end corrugation in the pipe.

^[3] Use annular corrugated bands with pipes having annular corrugations or with helical pipe having rerolled end to form annular corrugations. A 10.5 inch band is acceptable on pipe ends rerolled with 2⅔" × ½" corrugations. A 12 inch band is acceptable on pipe ends rerolled with 3" × 1" pipe corrugations.

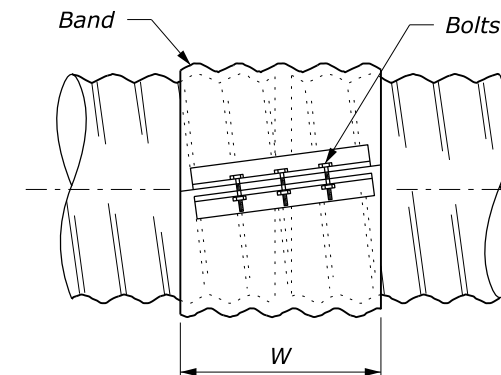
^[4] Use helical corrugated bands with pipes having helically corrugated ends.

^[5] The minimum band widths shown for 3" × 1" and 5" × 1" corrugated sizes apply to 2⅔" × ½" corrugations on rerolled pipe ends.

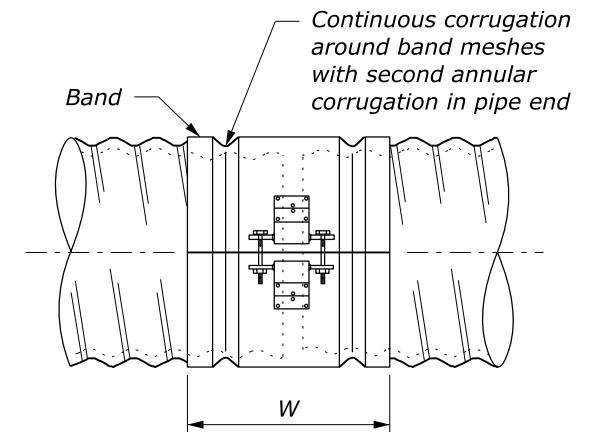
^[6] Smooth sleeve-type couplers and flat bands may be used for pipe diameters of 12" or less. Use a matching metal having a nominal thickness of not less than 0.040 inch for steel, or 0.036 inch for aluminum, or a plastic with an equivalent strength to metal.



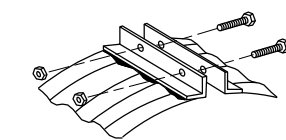
SIDE VIEW



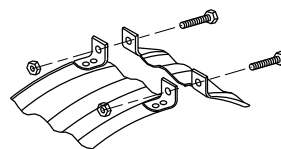
SIDE VIEW



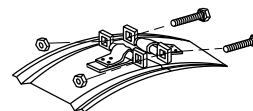
SIDE VIEW



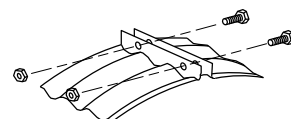
Band Angle



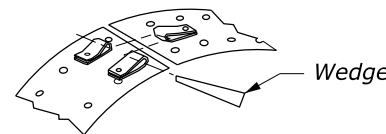
Oval Lug



Bar & Strap



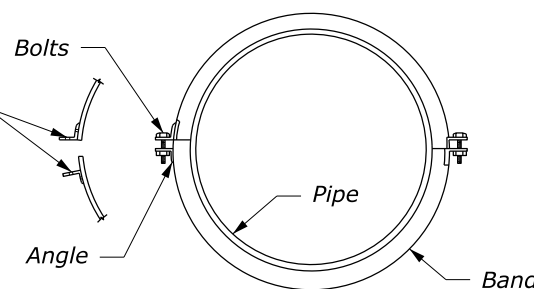
Integral Flange



Wedge and Strap

STANDARD BAND CONNECTIONS

Rivet, spot weld, or fillet weld at crest of corrugation at heel and toe of angle

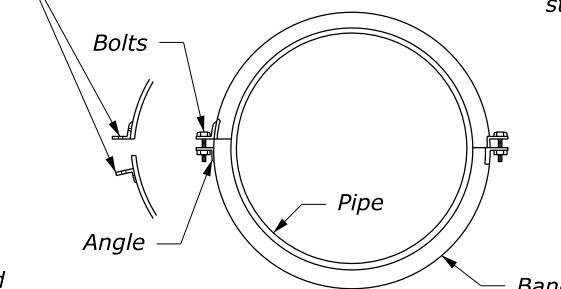


END VIEW

Second angle connection optional to 42" diameter, required above 42" diameter

ANNULAR BAND

Rivet, spot weld, or fillet weld at crest of corrugation at heel and toe of angle

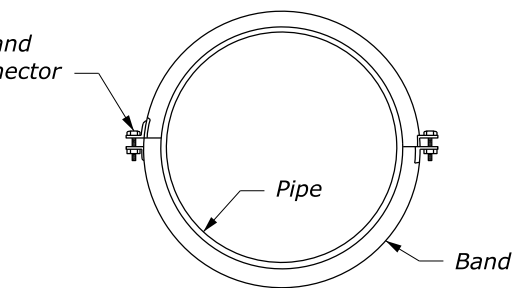


END VIEW

Second angle connection optional to 42" diameter, required above 42" diameter

HELICAL BAND

Bolt, bar and strap connector



END VIEW

SEMI-CORRUGATED BAND

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION, FHWA
OFFICE OF FEDERAL LANDS HIGHWAY

**METAL PIPE CULVERT
COUPLING BAND**

FLH STANDARD
602-2

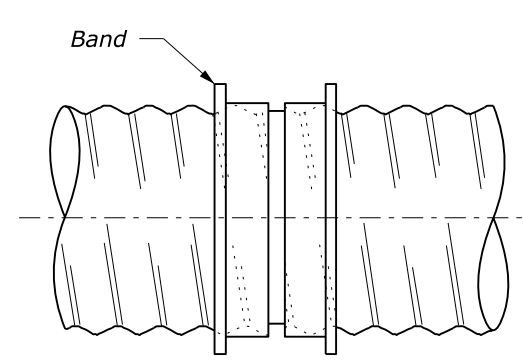
SPECIFICATION
FP-24, FP-14

APPROVED FOR USE
1/2024

COUPLING BANDS FOR METAL PIPE CULVERT ^[1]

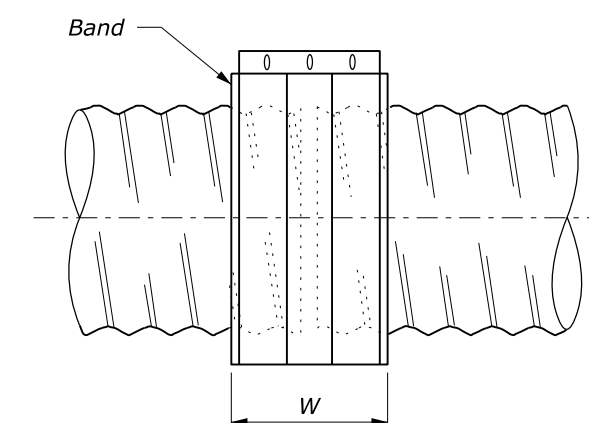
CORRUGATION SIZE ^[2]	ROUND PIPE DIAMETER	PIPE ARCH SPAN × RISE	ANNULAR CORRUGATED BANDS ^[3]	HELICALLY CORRUGATED BANDS ^[4]	SEMI-CORRUGATED BANDS ^[5]
38 × 6.5	underline ^[6]	-	265	180	265
	300 to 900	430 × 330 to 1060 × 740	180	300	
68 × 13	1050 to 1800	1240 × 840 to 2100 × 1450	265	300	
	1950 to 2100	-	265	300	265
75 × 25	900 to 1800	1520 × 1170 to 2050 × 1500	300	350	265
	1950 to 3600	2200 × 1620 to 3600 × 2320	300	350	265
125 × 25	900 to 1800	1520 × 1170 to 2050 × 1500	500	560	
	1950 to 3600	2200 × 1620 to 3600 × 2320	500	560	

NOTE:
 1. Other types of coupling bands or fastening devices that comply with the joint performance criteria of AASHTO Standard specifications for Highway Bridges, Division II Section 26 may be used.



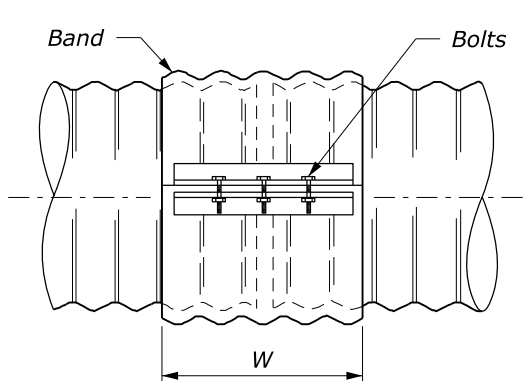
SLEEVE JOINT
 Smoother sleeve with center stop.
 Stab type joint

SMOOTH SLEEVE BAND

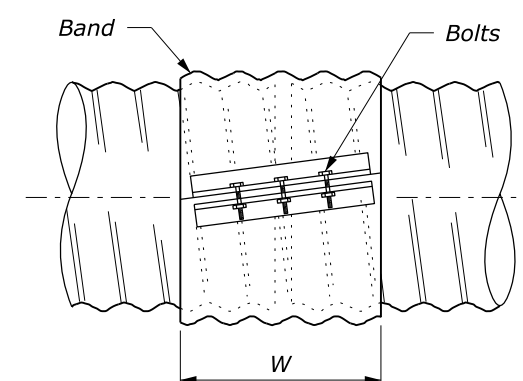


FLAT BAND

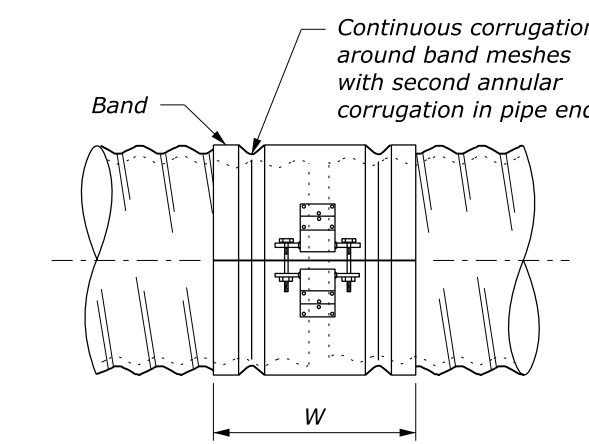
- [1] Fabricate annular, helical and semi-corrugated type coupling bands from the same metal as the connecting pipe. Provide coupling bands not more than 3 nominal sheet thicknesses thinner than the thickness of the pipe to be connected, and no thinner than 1.32 mm for steel or 1.2 mm for aluminum. Fasten coupling bands with the following diameter of bolt: M10 for 450 round culvert (530 × 380 pipe arch) or less; M12 for 525 round culvert (610 × 460 pipe arch) or more
- [2] For helically corrugated pipe with rerolled ends, the nominal corrugations size refers to the dimension of the end corrugation in the pipe.
- [3] Use annular corrugated bands with pipes having annular corrugations or with helical pipe having rerolled end to form annular corrugations. A 265 mm band is acceptable on pipe ends rerolled with 68 × 13 corrugations. A 300 mm band is acceptable on pipe ends rerolled with 75 × 25 pipe corrugations.
- [4] Use helical corrugated bands with pipes having helically corrugated ends.
- [5] The minimum band widths shown for 75 × 25 and 125 × 25 corrugated sizes apply to 68 × 13 corrugations on rerolled pipe ends.
- [6] Smooth sleeve-type couplers and flat bands may be used for pipe diameters of 300 or less. Use a matching metal having a nominal thickness of not less than 1.02 mm for steel, or 0.91 mm for aluminum, or a plastic with an equivalent strength to metal.



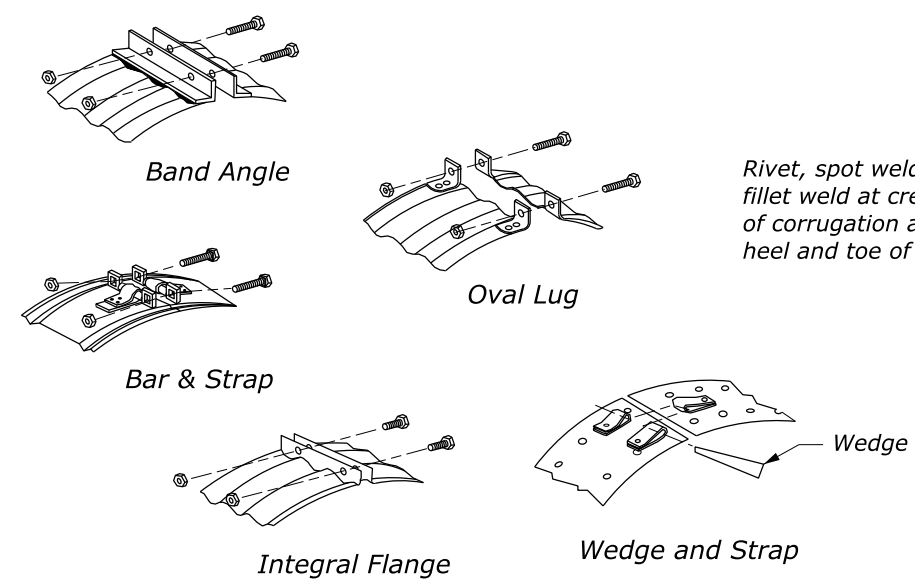
SIDE VIEW



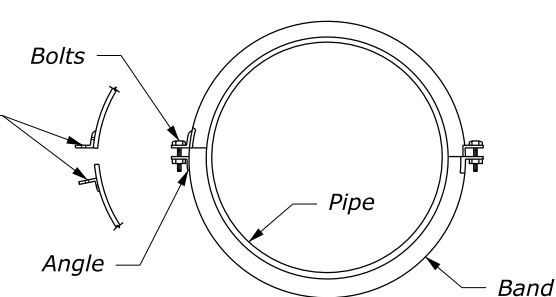
SIDE VIEW



SIDE VIEW



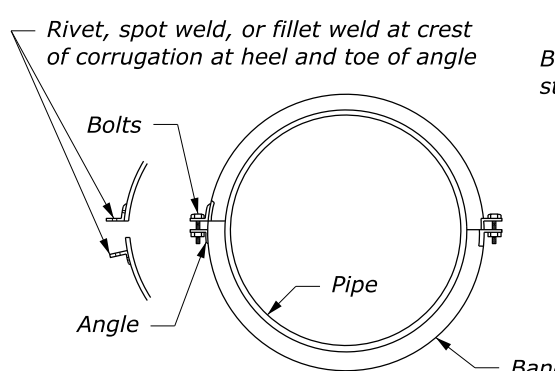
STANDARD BAND CONNECTIONS



END VIEW

Second angle connection optional to 1050 diameter, required above 1050 diameter

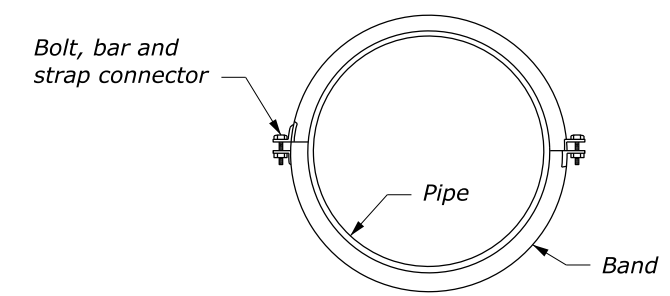
ANNULAR BAND



END VIEW

Second angle connection optional to 1050 diameter, required above 1050 diameter

HELICAL BAND



END VIEW

SEMI-CORRUGATED BAND

This drawing contains **Metric** units of measure. Dimensions without units are millimeters.

U.S. DEPARTMENT OF TRANSPORTATION, FHWA OFFICE OF FEDERAL LANDS HIGHWAY	FLH STANDARD M602-2
METAL PIPE CULVERT COUPLING BAND	SPECIFICATION FP-24, FP-14
	APPROVED FOR USE 1/2024

NO SCALE