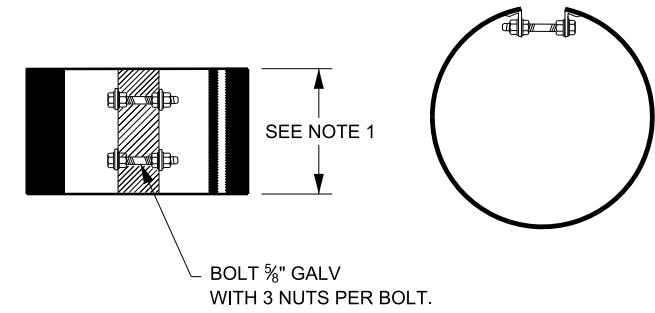
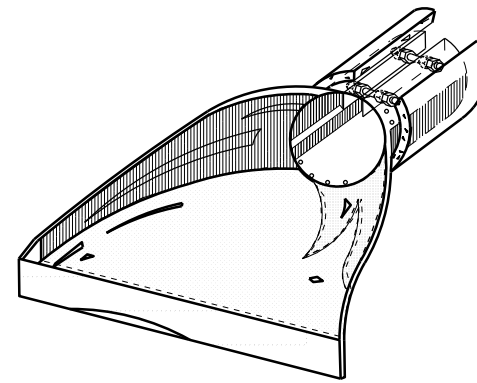


EMBANKMENT SIDE SUPPORT OF SKEW CULVERTS

PROVIDE PROPER SUPPORT FOR METAL AND PLASTIC PIPE TYPES BY WARPING THE EMBANKMENT FILL A MINIMUM d' DISTANCE TO PROVIDE THE NECESSARY BALANCED SIDE SUPPORT AS SHOWN WHERE SINGLE OR MULTIPLE PIPE STRUCTURES ARE INSTALLED AT A SKEW TO THE EMBANKMENT (OTHER THAN 90 DEGREES).



METAL INSERT

USE TO CONNECT CONCRETE PIPE OR CORRUGATED POLYETHYLENE PIPE TO METAL END SECTION

PIPE ARCHES

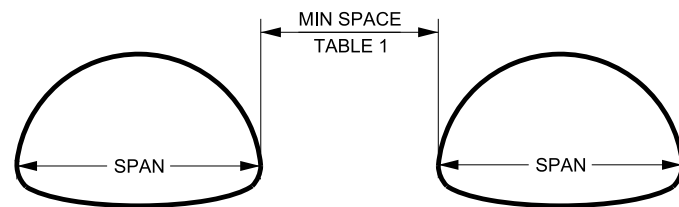


TABLE 1: MINIMUM SPACING

SPAN (INCH)	MINIMUM SPACE (INCH)
UP TO 72	24
72 TO 86	1/3 SPAN

PIPE CULVERTS

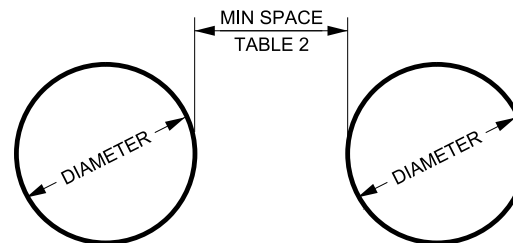


TABLE 2: MINIMUM SPACING

DIAMETER (INCH)	MINIMUM SPACE (INCH)
UP TO 48	24
48 TO 96	1/2 DIAMETER
96 TO 120	48

MULTIPLE INSTALLATIONS

NOTES: METAL INSERTS

1. CONNECT METAL END SECTIONS TO CONCRETE PIPES OR PLASTIC PIPES USING METAL INSERTS.
2. USE A MINIMUM OF 2 BOLTS WITH A LENGTH OF 12 INCHES MINIMUM FOR PIPE DIAMETERS UP TO AND INCLUDING 60 INCHES.
3. USE A MINIMUM OF 3 BOLTS WITH A LENGTH OF 18 INCHES MINIMUM FOR PIPE DIAMETERS GREATER THAN 60 INCHES.
4. GALVANIZE METAL INSERT AND ALL BOLTS, WASHERS AND RIVETS OR WELDS.
5. USE THE SAME WALL THICKNESS FOR METAL INSERT AND METAL END SECTION.
6. CLEAN AND COAT ALL WELDS WITH APPROVED ZINC RICH COMPOUND AS RECOMMENDED BY THE SHEET MANUFACTURER.

SUPPLEMENTAL DRAWING

REVISIONS

NO.	DATE	APPR.	REMARKS
1	02/27/14	JLC	NEW DRAWING, RENUMBERED FROM DG 3.

UTAH DEPARTMENT OF TRANSPORTATION
STANDARD DRAWINGS FOR ROAD AND BRIDGE CONSTRUCTION
SALT LAKE CITY, UTAH

RECOMMENDED FOR APPROVAL
Randy J. Cook
CHAIRMAN STANDARDS COMMITTEE
DATE: FEB. 27, 2014
APPROVED
[Signature]
DEPUTY DIRECTOR
DATE: FEB. 27, 2014

MISCELLANEOUS
PIPE DETAILS

STANDARD DRAWING TITLE

STD. DWG. NO.
DG 10