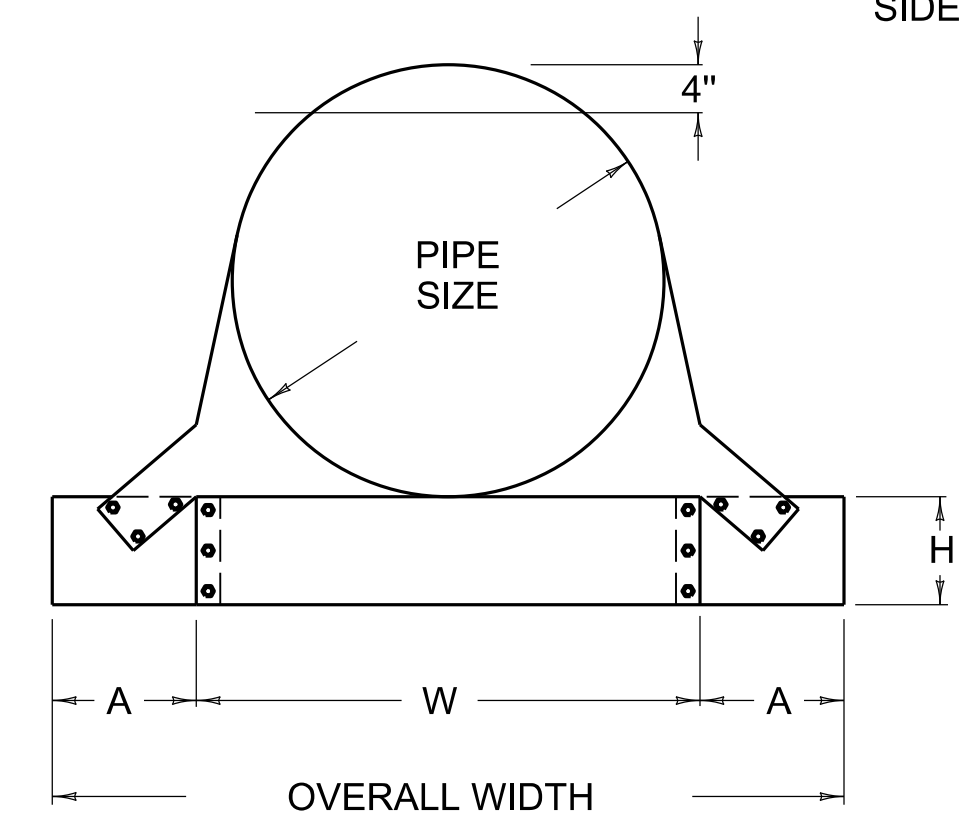
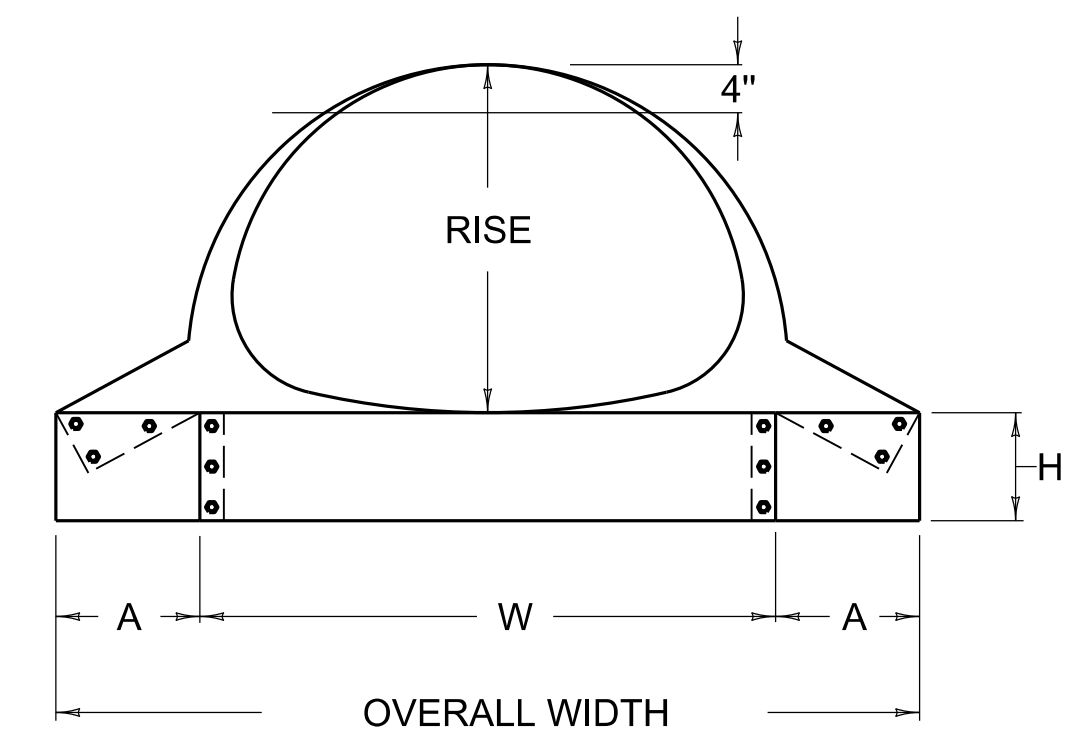


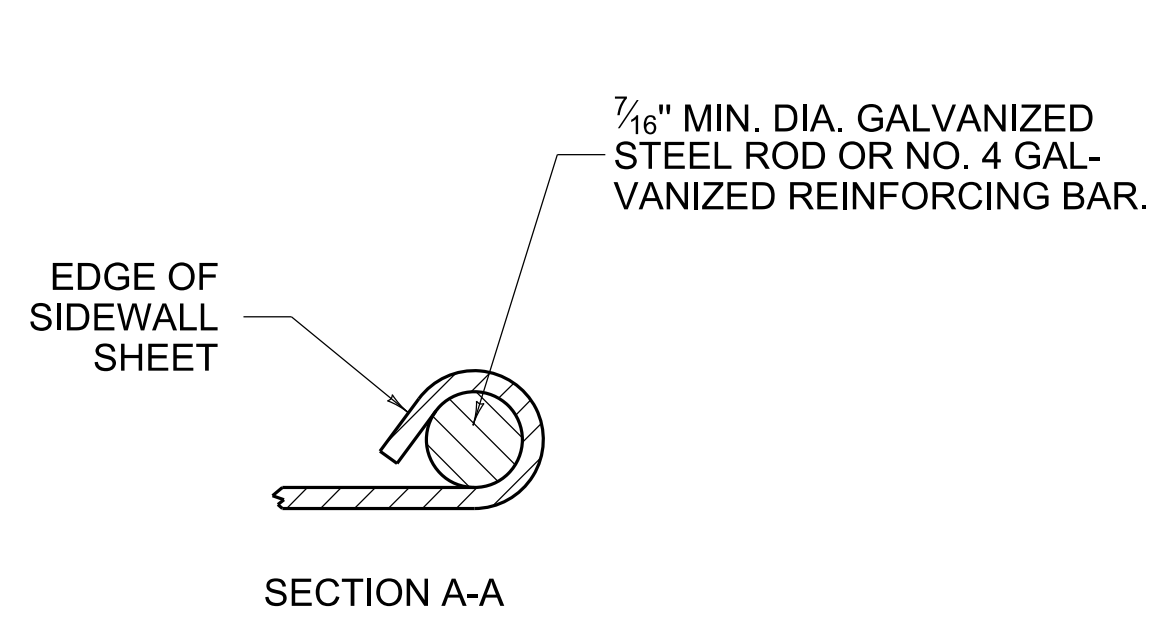
SIDE ELEVATION



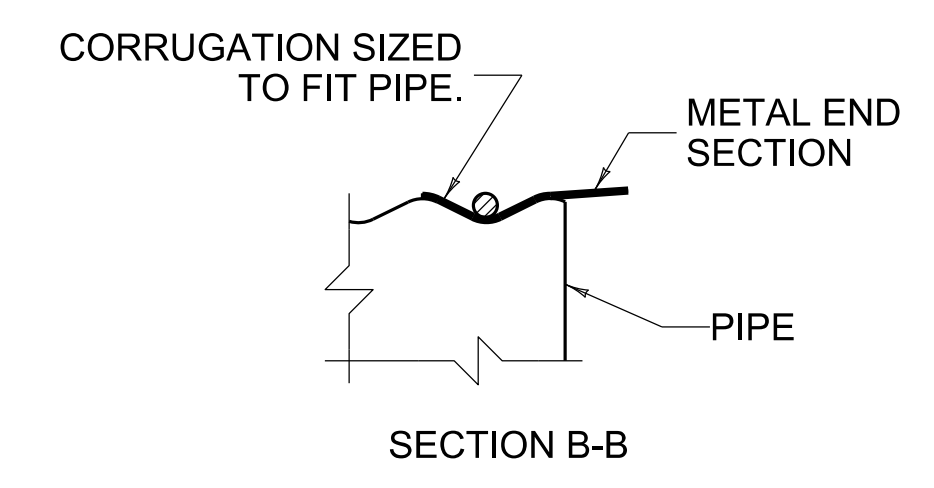
END SECT. FRONT VIEW  
CIRCULAR PIPE



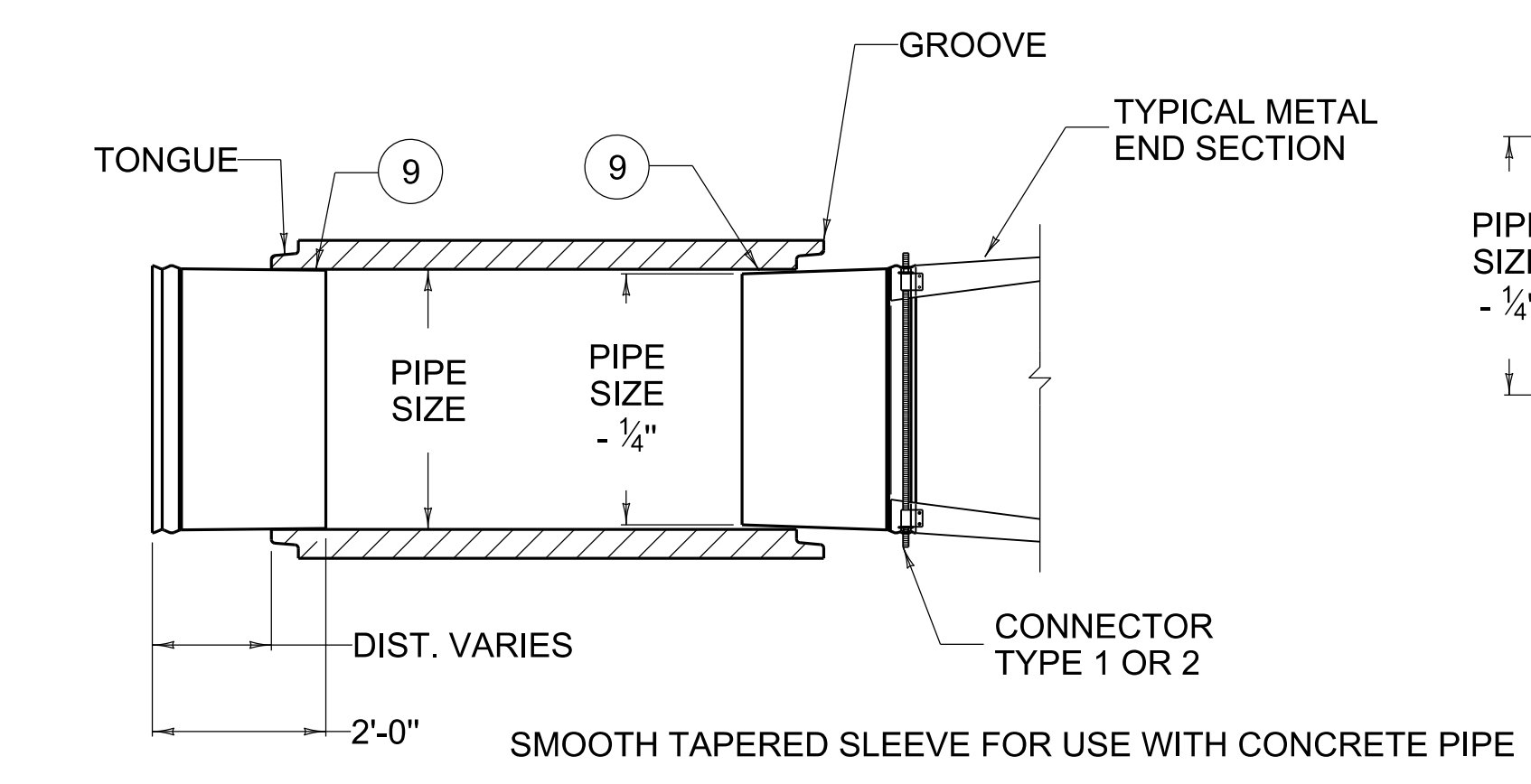
END SECT. FRONT VIEW  
ARCHED PIPE



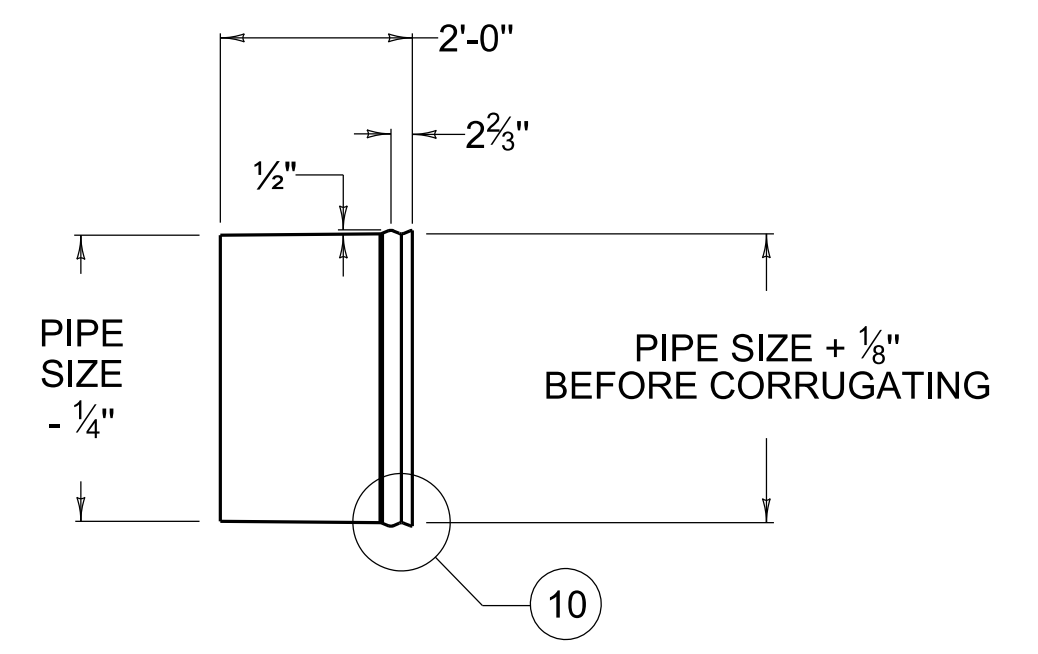
SECTION A-A



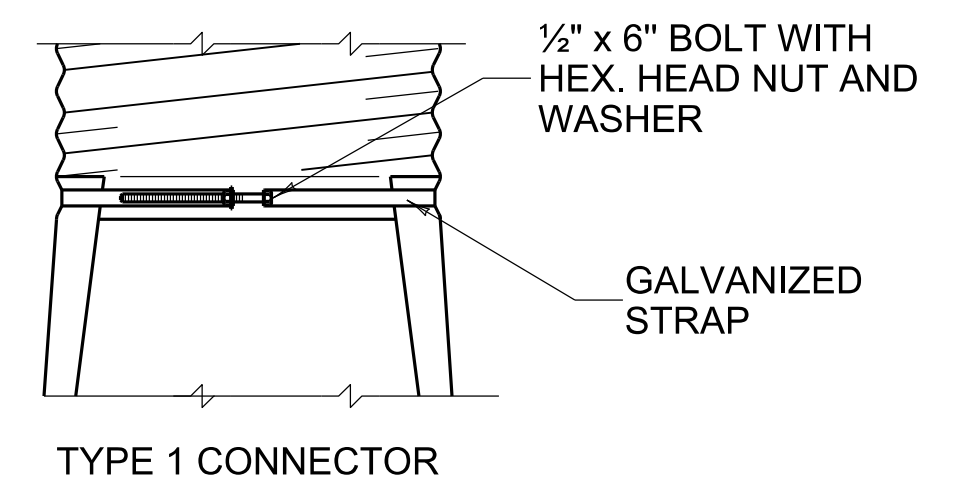
SECTION B-B



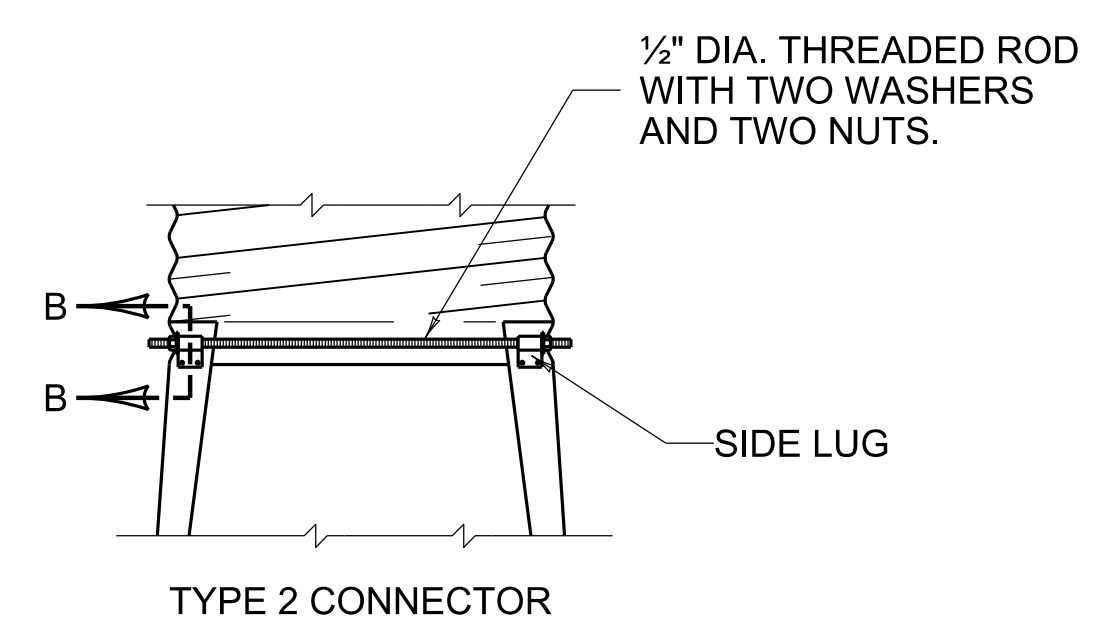
SMOOTH TAPERED SLEEVE FOR USE WITH CONCRETE PIPE



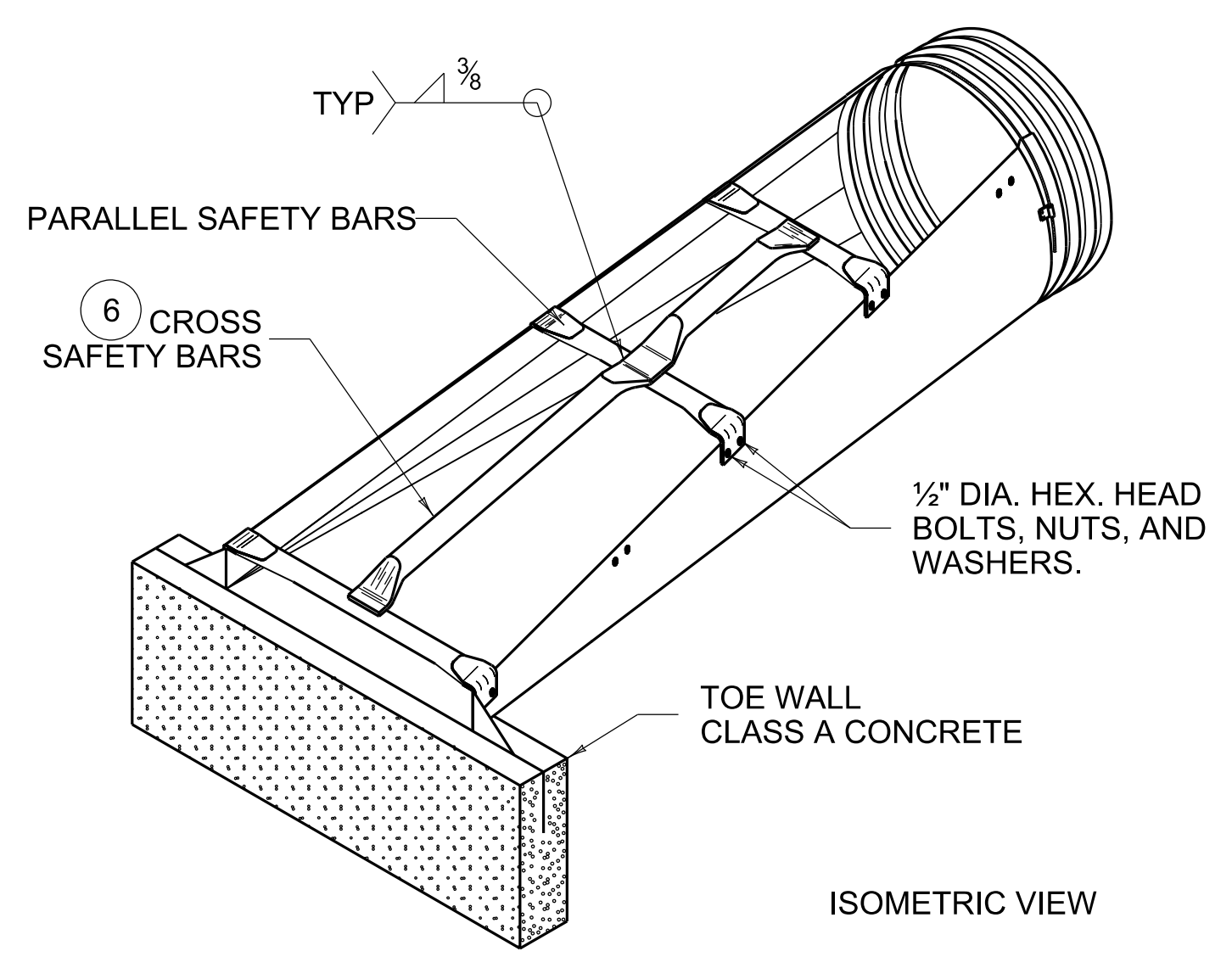
10



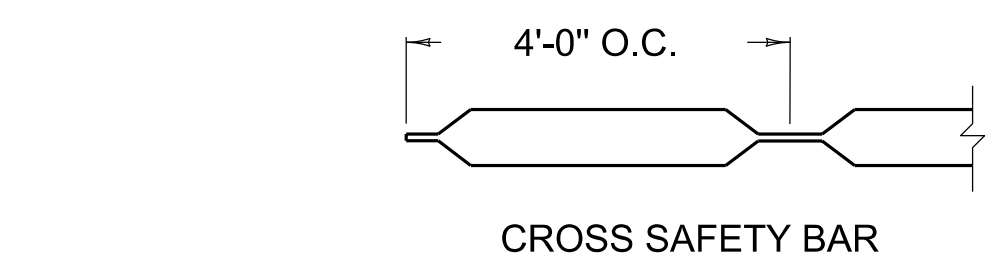
TYPE 1 CONNECTOR



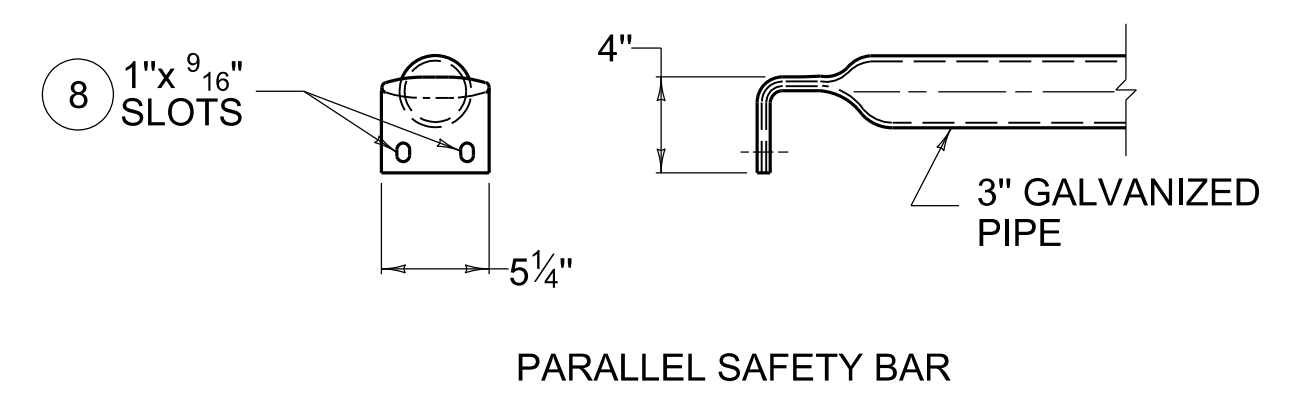
TYPE 2 CONNECTOR



ISOMETRIC VIEW



CROSS SAFETY BAR



PARALLEL SAFETY BAR

~ NOTES ~

BID ITEM AND UNIT TO BID  
METAL END SECTION TY 3-15 IN EACH  
3 = CROSSDRAIN STRUCTURE ON 4:1 SLOPE, 4 = CROSSDRAIN STRUCTURE ON 6:1 SLOPE  
SIZE IN INCHES  
BID ITEM EXAMPLE: METAL END SECTION TY 3-15 IN  
THE CONTRACT UNIT PRICE EACH FOR METAL END SECTION SHALL INCLUDE CLASS A CONCRETE, EXCAVATION, AND ALL INCIDENTALS NECESSARY TO COMPLETE ONE INSTALLATION AS DETAILED.

1. FABRICATE METAL END SECTIONS FROM GALVANIZED SHEETS CONFORMING TO AASHTO M218.
2. METAL END SECTIONS & TAPERED SLEEVES SHALL BE ASPHALT COATED IN ACCORDANCE WITH SECT. 806 OF THE CURRENT KENTUCKY STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION. ASPHALT COATING IS NOT REQUIRED ON SAFETY BARS.
3. SAFETY BARS SHALL BE REQUIRED ON ALL 30" ROUND PIPE AND LARGER.
4. SAFETY BARS SHALL BE REQUIRED ON ALL 24" ELLIPTICAL EQUIVALENT PIPE AND LARGER.
5. SAFETY BARS SHALL BE CONSTRUCTED OF SCHEDULE 40 GALVANIZED STEEL PIPE (COML. GRADE).
6. CROSS SAFETY BARS SHALL BE SPACED A MAXIMUM OF 30" O.C. AND WELDED TO PARALLEL SAFETY BARS. GALVANIZING REQUIRED AFTER FABRICATION.
7. THE TAPERED SLEEVE SHALL BE GALVANIZED SMOOTH METAL CONFORMING TO AASHTO M218, WITH A WALL THICKNESS AS FOLLOWS: 18" DIA. OR LESS = .079", 21" DIA. OR LARGER = .109".
8. SLOTTED HOLES FOR SAFETY BAR ATTACHMENT SHALL BE PUNCHED PRIOR TO GALVANIZING. FIELD DRILLING OF HOLES SHALL NOT BE PERMITTED.
9. WATERPROOF MASTIC CONFORMING TO 807.02.03 OF THE CURRENT KENTUCKY STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION SHALL BE PLACED IN THE VOID BETWEEN THE TAPERED SLEEVE AND CONCRETE PIPE.
10. FORM 1/2" x 2 2/3" CORRUGATIONS. MAINTAIN INSIDE DIAMETER OF SLEEVE. FINISHED END TO BE THE SAME DIAMETER AS CORRUGATED STEEL PIPE DIAMETER.
11. ALL MISCELLANEOUS HARDWARE SHALL COMPLY WITH AASHTO M36.
12. THE WELDS USED IN THE MANUFACTURE OF THE TAPERED SLEEVE FOR ELLIPTICAL CONCRETE PIPE SHALL BE REPAIRED IN ACCORDANCE WITH AASHTO M36 USING ZINC OXIDE-ZINC DUST PRIMER, FEDERAL SPECIFICATION TT-P-641, TYPE II, NO COLOR ADDED.

USE WITH CUR. STD. DWG.  
RDB-160

REVISION DATE: 12/01/2015  
REVISION NUMBER: 0

SUBMITTED 12-01-2015 DATE  
DIVISION DIRECTOR  
APPROVED 12-01-2015 DATE  
STATE HIGHWAY ENGINEER

DRAINAGE



COMMONWEALTH OF KENTUCKY  
DEPARTMENT OF HIGHWAYS  
TEAM KENTUCKY  
TRANSPORTATION COMPLEX

END SECTIONS

METAL END SECTION TYPE 3 AND 4 (CROSS STRUCTURES)

STANDARD DRAWING NUMBER  
RDB-155-02