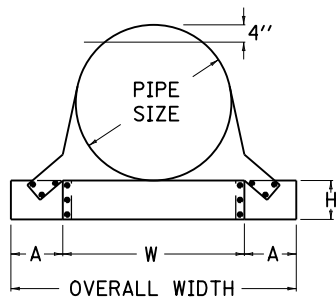
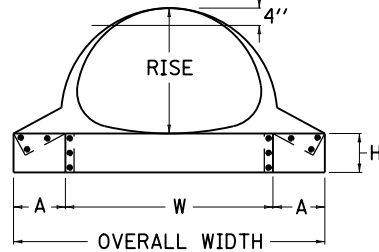


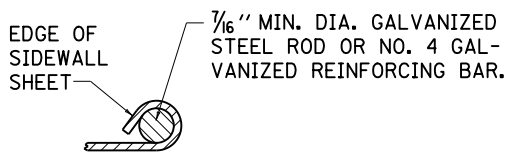
SIDE ELEVATION



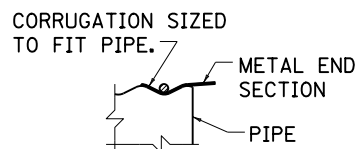
END SECT. FRONT VIEW CIRCULAR PIPE



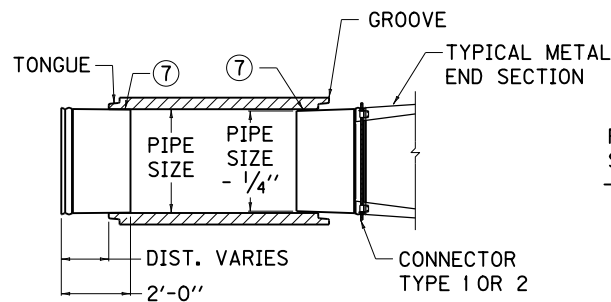
END SECT. FRONT VIEW ARCHED PIPE



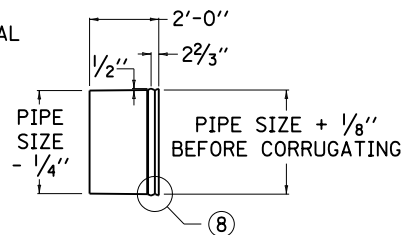
SECTION A-A



SECTION B-B



SMOOTH TAPERED SLEEVE FOR USE WITH CONCRETE PIPE



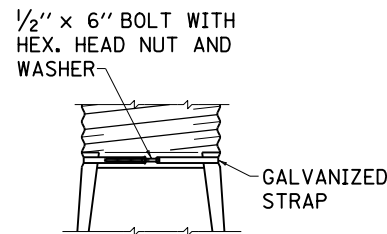
~ NOTES ~

BID ITEM AND UNIT TO BID  
 METAL END SECTION TY  $\otimes$   $\triangle$  IN EACH  
 $\otimes$  1 = PARALLEL STRUCTURE ON 6:1 SLOPE, 2 = PARALLEL STRUCTURE ON 10:1 SLOPE  
 $\triangle$  SIZE IN INCHES

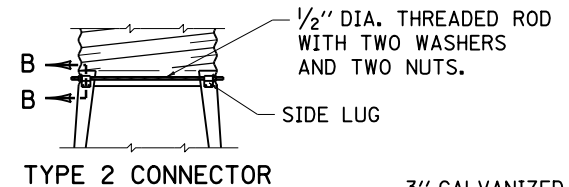
BID ITEM EXAMPLE: METAL END SECTION TY 1-15 IN.

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.

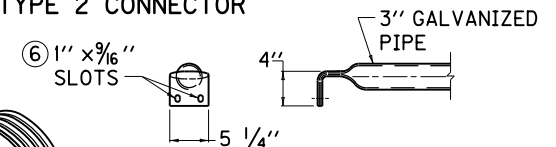
1. METAL END SECTIONS SHALL BE FABRICATED FROM GALVANIZED SHEETS, CONFORMING TO AASHTO M218.
2. METAL END SECTIONS & TAPERED SLEEVES SHALL BE ASPHALT COATED IN ACCORDANCE WITH SECTION 806 OF THE CURRENT KENTUCKY STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ASPHALT COATING IS NOT REQUIRED ON SAFETY BARS.
3. SAFETY BARS SHALL BE REQUIRED ON ALL METAL END SECTIONS CONSTRUCTED PARALLEL TO THE ROADWAY.
4. SAFETY BARS SHALL BE CONSTRUCTED OF SCHEDULE 40 GALVANIZED STEEL PIPE (COMMERCIAL GRADE).
5. 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".
6. SLOTTED HOLES FOR SAFETY GRATE ATTACHMENT SHALL BE PUNCHED PRIOR TO GALVANIZING. FIELD DRILLING OF HOLES SHALL NOT BE PERMITTED.
7. 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.
8. FORM 1/2" x 2 2/3" CORRUGATIONS. MAINTAIN INSIDE DIAMETER OF SLEEVE. FINISHED END IS TO BE THE SAME DIAMETER AS CORRUGATED STEEL PIPE DIAMETER.
9. ALL MISCELLANEOUS HARDWARE SHALL COMPLY WITH AASHTO M36.
10. THE WELDS USED IN THE MANUFACTURE OF THE TAPERED SLEEVE FOR ELLIPTICAL CONC. 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.
11. TYPE 1 = 6", TYPE 2 = 4"



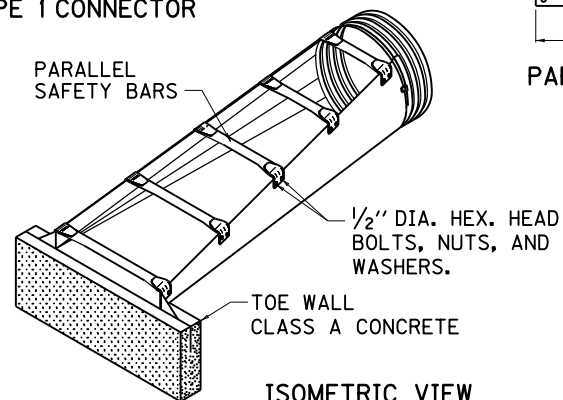
TYPE 1 CONNECTOR



TYPE 2 CONNECTOR



PARALLEL SAFETY BAR



ISOMETRIC VIEW

USE WITH CUR. STD. DWG.  
 RDB-160

KENTUCKY  
 DEPARTMENT OF HIGHWAYS  
 METAL END SECTION  
 TYPE 1 AND 2  
 (PARALLEL STRUCTURES)

STANDARD DRAWING NO. RDB-150-02

SUBMITTED *William P. Gabel* 12-01-15  
 DIRECTOR, DIVISION OF DESIGN DATE  
 APPROVED *[Signature]* 12-01-15  
 STATE HIGHWAY ENGINEER DATE