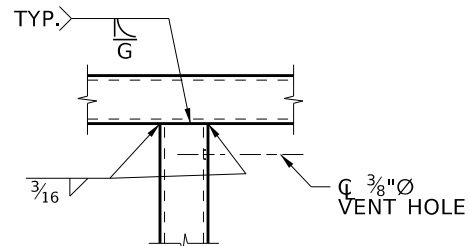
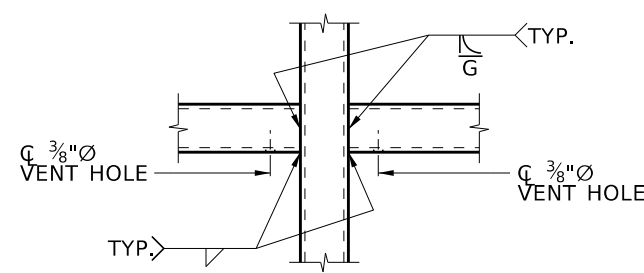


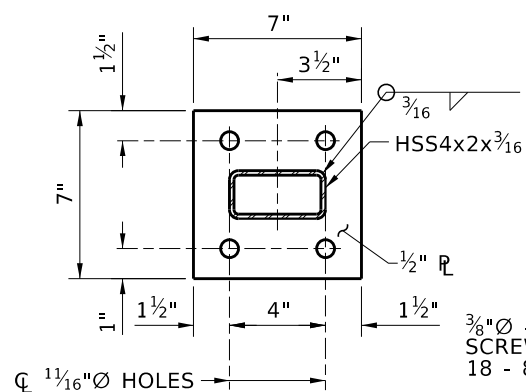
DETAIL A
1 1/2" = 1'-0"



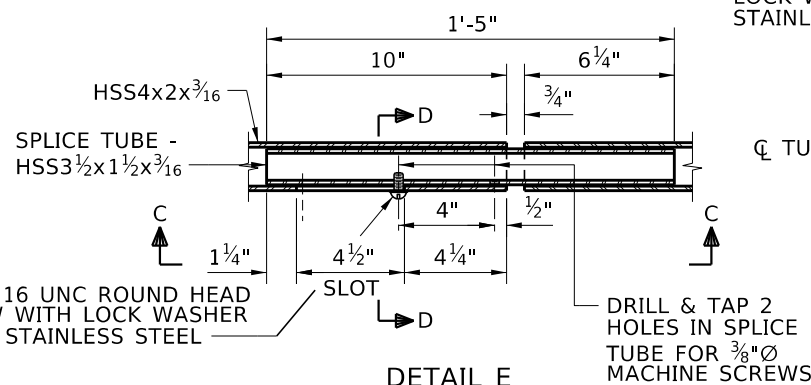
DETAIL B
1 1/2" = 1'-0"



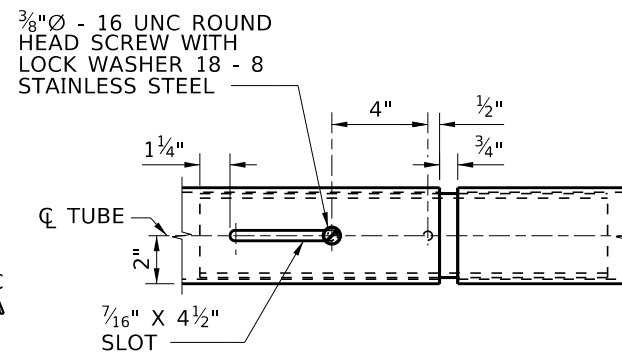
DETAIL C
1 1/2" = 1'-0"



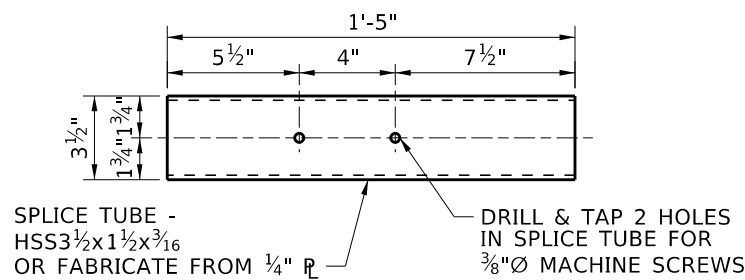
DETAIL D
1 1/2" = 1'-0"



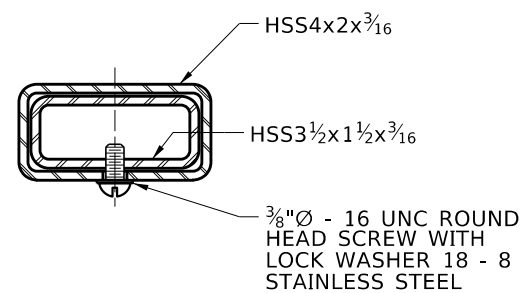
DETAIL E
1 1/2" = 1'-0"



VIEW C-C
1 1/2" = 1'-0"



SPLICE INSERT DETAILS
1 1/2" = 1'-0"



SECTION D-D
3" = 1'-0"

NOTES

MATERIALS

1. PROVIDE STRUCTURAL STEEL PLATES & SLEEVES IN ACCORDANCE WITH ASTM A709 GRADE 36.
 2. PROVIDE STRUCTURAL STEEL TUBING IN ACCORDANCE WITH ASTM A500 GRADE B OR ASTM A501.
 3. PROVIDE BOLT, ACORN NUTS, AND WASHER IN ACCORDANCE WITH ASTM A307.
 4. PROVIDE HEXAGONAL BOLTS AND NUTS IN ACCORDANCE WITH ANSI B18.2.1 AND B18.2.2.
 5. PROVIDE ROUND HEAD MACHINE SCREWS IN ACCORDANCE WITH ANSI B18.6.3.
 6. PROVIDE EPOXY COATED GRADE 60 TYPE S METAL REINFORCEMENT IN ACCORDANCE WITH 708.02.
 7. PROVIDE CONCRETE CLASS 40AF FOR CURB AND CLASS 40A FOR DRILLED POST HOLE.
- GALVANIZING/POWDER COATING**
8. GALVANIZE STEEL PARTS AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 AND ASTM A153.
 9. GALVANIZE ANCHOR BOLTS, NUTS, AND WASHERS IN ACCORDANCE WITH ASTM A153.
 10. THOROUGHLY CLEAN WELDED AREAS BEFORE GALVANIZING TO REMOVE SLAG OR OTHER MATERIAL THAT WOULD INTERFERE WITH THE ADHERENCE OF THE ZINC. REPAIR DAMAGED COATINGS IN ACCORDANCE WITH ASTM A780 AND ASTM A 123.
 11. PROVIDE GALVANIZED SURFACES FREE OF FINS, ABRASIONS, ROUGH OR SHARP EDGES, OR OTHER SURFACE DEFECTS.
 12. POWDER COAT THE RAILING SYSTEM AFTER GALVANIZING WITH A MINIMUM THICKNESS OF 3 MILS. THE COLOR WILL BE RAL 9005 (JET BLACK). SUBMIT A COLOR SAMPLE OF APPROVAL.
 13. PREPARE THE GALVANIZED SURFACES FOR POWDER COATING IN ACCORDANCE WITH ASTM D7803. SUBMIT POWDER COATING SHOP PROCEDURES FOR PREPARATION OF THE GALVANIZED SURFACES AND APPLICATION PROCESS OF THE POWDER COATING FOR APPROVAL.
 14. REPAIR SCRATCHES, PITS, AND OTHER DEFECTS IN ACCORDANCE WITH THE POWDER COATING MANUFACTURER'S WRITTEN INSTRUCTIONS.

FABRICATION AND ERECTION

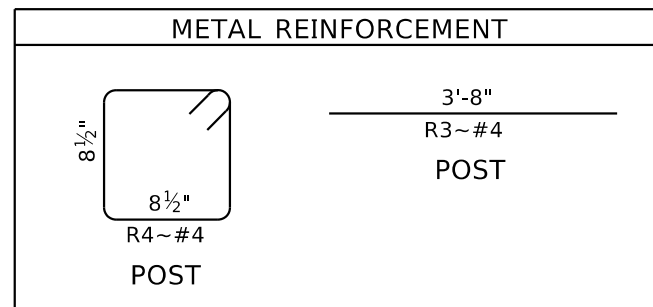
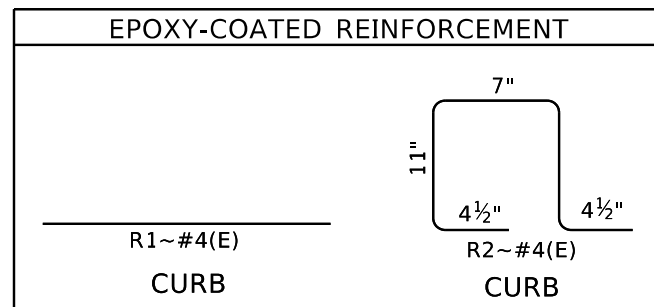
15. FABRICATE AND ERECT THE RAILING IN ACCORDANCE WITH THE CURRENT EDITION OF AASHTO SPECIFICATIONS FOR HIGHWAY BRIDGES AND ITD STANDARD SPECIFICATIONS.
16. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH 504.01 F AND 105.02.
17. CONSTRUCT RAILING CONFORMING TO THE HORIZONTAL AND VERTICAL ALIGNMENT OF THE STRUCTURE, INSTALL POSTS NORMAL TO GRADE IN LONGITUDINAL DIRECTION AND VERTICAL IN TRANSVERSE DIRECTION.
18. SAW OR MILL ENDS OF TUBE SECTIONS AT SPLICES. PROVIDE CUT ENDS THAT ARE TRUE, SMOOTH AND FREE FROM BURRS OR RAGGED EDGES.
19. PROVIDE VENT HOLES FOR GALVANIZING AS REQUIRED AND SHOWN ON THE SHOP DRAWINGS. DRILL VENT HOLES AWAY FROM TRAFFIC FACE AND NOT ON THE TOP SURFACE OF THE HORIZONTAL TUBE.
20. ATTACH EACH RAIL SECTION TO A MINIMUM OF TWO POSTS, BUT PREFERABLY THREE OR MORE. PROVIDE RAILING SYSTEM THAT IS CONTINUOUS. LOCATE EACH JOINT IN A RAIL LENGTH AT THE SAME POSITION IN THE SECTION AND SPLICE AS DETAILED.
21. SUBMIT ALTERNATE SPLICE DETAILS FOR APPROVAL ON THE SHOP DRAWINGS.

METHOD OF MEASUREMENT

22. PAYMENT FOR "PEDESTRIAN/BICYCLE RAILING" IS PAY ITEM 504-035A. CONCRETE, METAL REINFORCEMENT, AND EPOXY-COATED REINFORCEMENT IS INCIDENTAL TO PAY ITEM 504-035A.

ALTERNATE ALUMINUM RAILING

23. AN ALTERNATE ALUMINUM RAIL THAT GENERALLY CONFORM TO THE GEOMETRY AND DESIGN CRITERIA OF THE STEEL RAIL MAY BE SUBSTITUTED, AT NO ADDITIONAL COST TO THE STATE. PROVIDE ALUMINUM RAILING IN ACCORDANCE WITH ASTM B221, ALLOY 6005-T5. REFER TO THE ALTERNATE PEDESTRIAN/BICYCLE RAIL SPECIAL PROVISION.



APPROXIMATE QUANTITIES

RAILING (RAILS, POSTS, BALUSTERS, PLATE).....	240 LBS. PER 8' SECTION
CONCRETE CURB.....	0.37 C.F. PER LIN. FT.
METAL REINFORCEMENT CURB (EPOXY).....	3.40 LB. PER LIN. FT.
CONCRETE POST BASE.....	7.07 C.F. PER POST
METAL REINFORCEMENT POST BASE.....	19.37 LB. PER POST

REVISIONS			
NO.	DATE	BY	DESCRIPTION

DESIGNED
DESIGN CHECKED
DETAILED
DWG. CHECKED
CORRECTIONS

SCALES SHOWN ARE FOR 11" X 17" PRINTS ONLY
CADD FILE NAME
Standards/Bridge Standard Drawings
B13_4B.DGN.dgn
DRAWING DATE: OCT 2023

IDAHO TRANSPORTATION DEPARTMENT

YOUR Safety→YOUR Mobility→YOUR Economic Opportunity

APPROVED BY: BRIDGE ENGINEER MICHAEL T. JOHNSON DATE: _____

ENGLISH
PROJECT NO.

PEDESTRIAN/BICYCLE RAILING DETAILS
BRIDGE LRFD DESIGN MANUAL, B13.4B

BRIDGE PLANS	
BRIDGE KEY NO.	
COUNTY	KEY NO.
BRIDGE DWG. NO.	SHEET OF