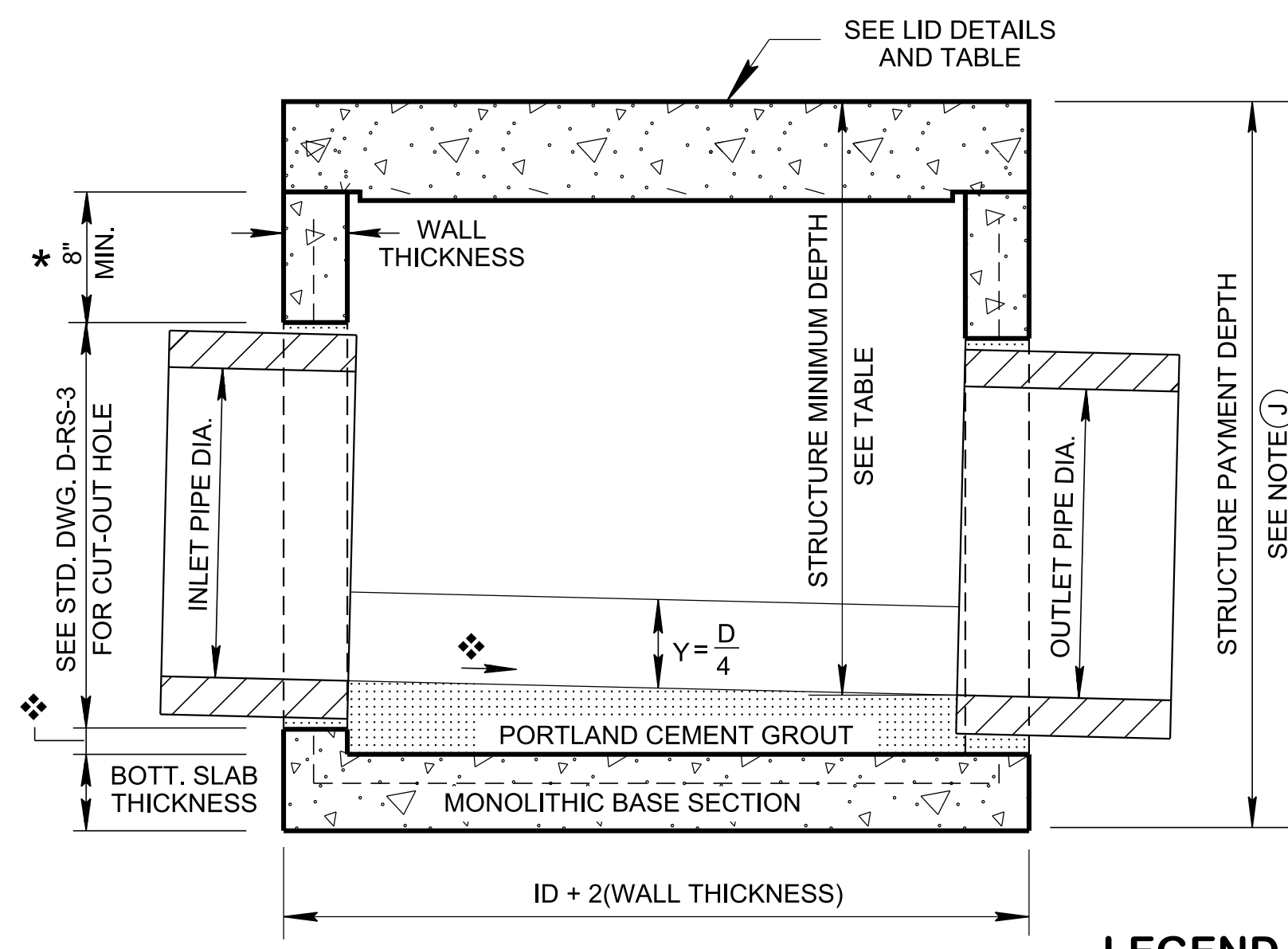
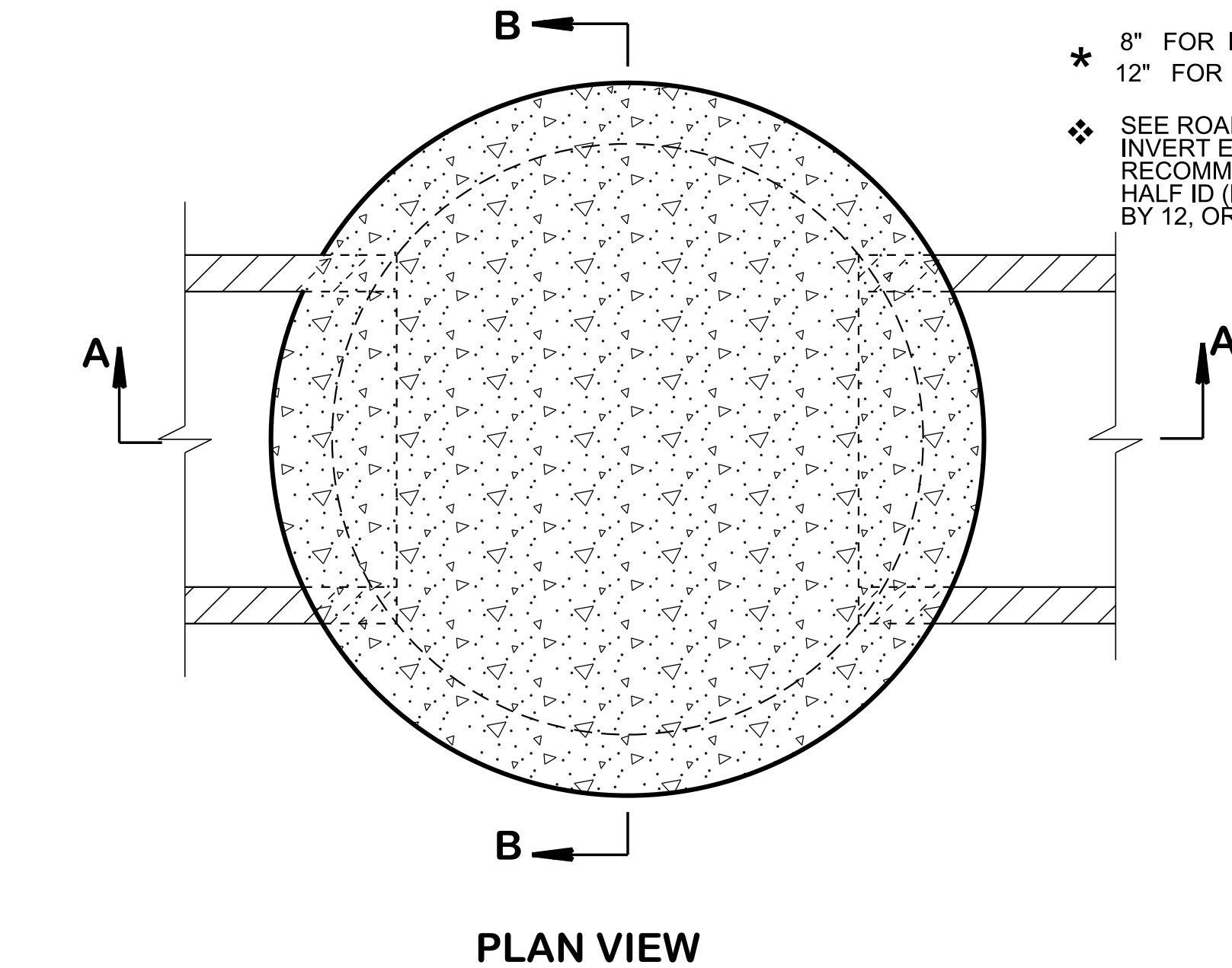


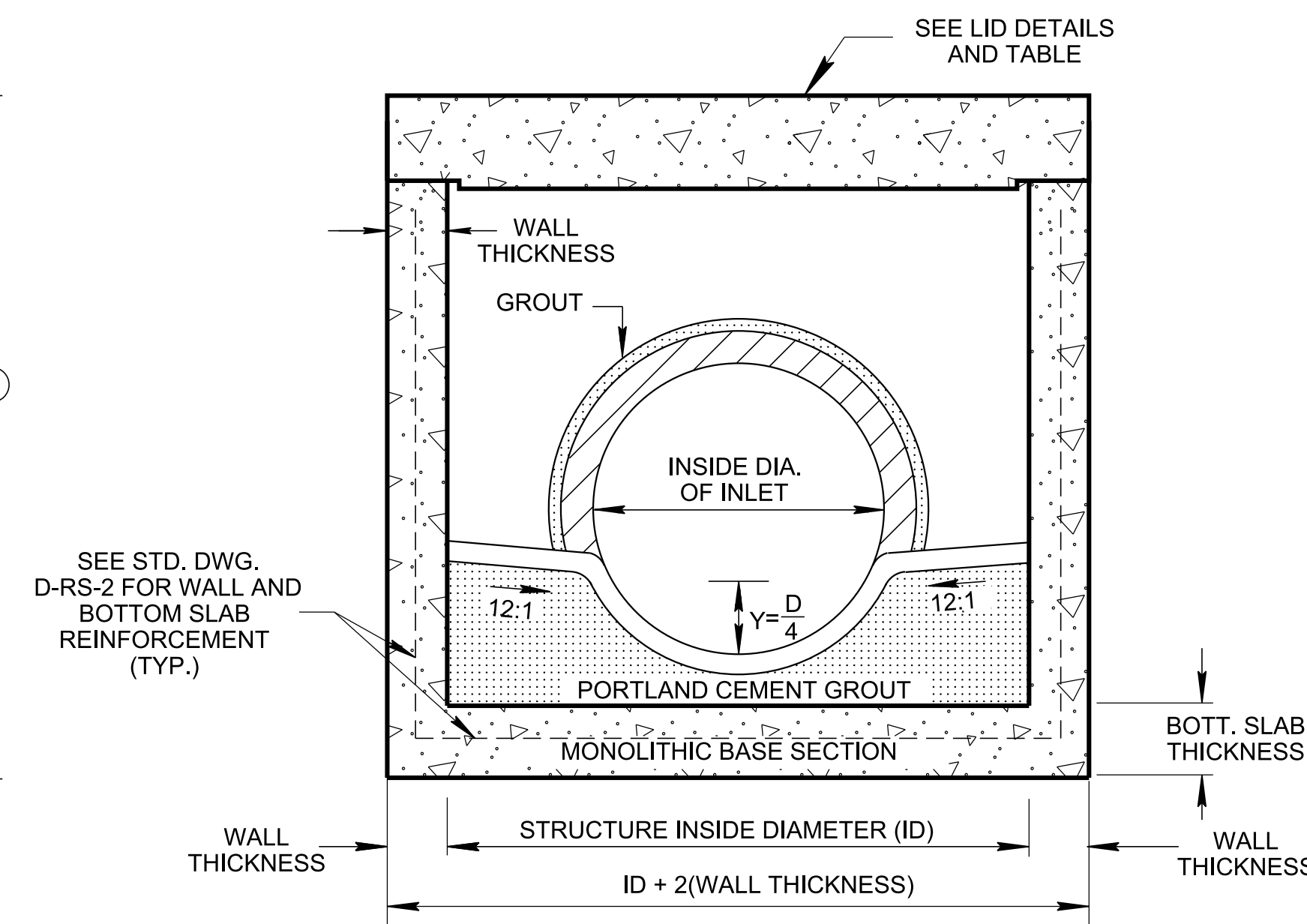
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SECTION A-A



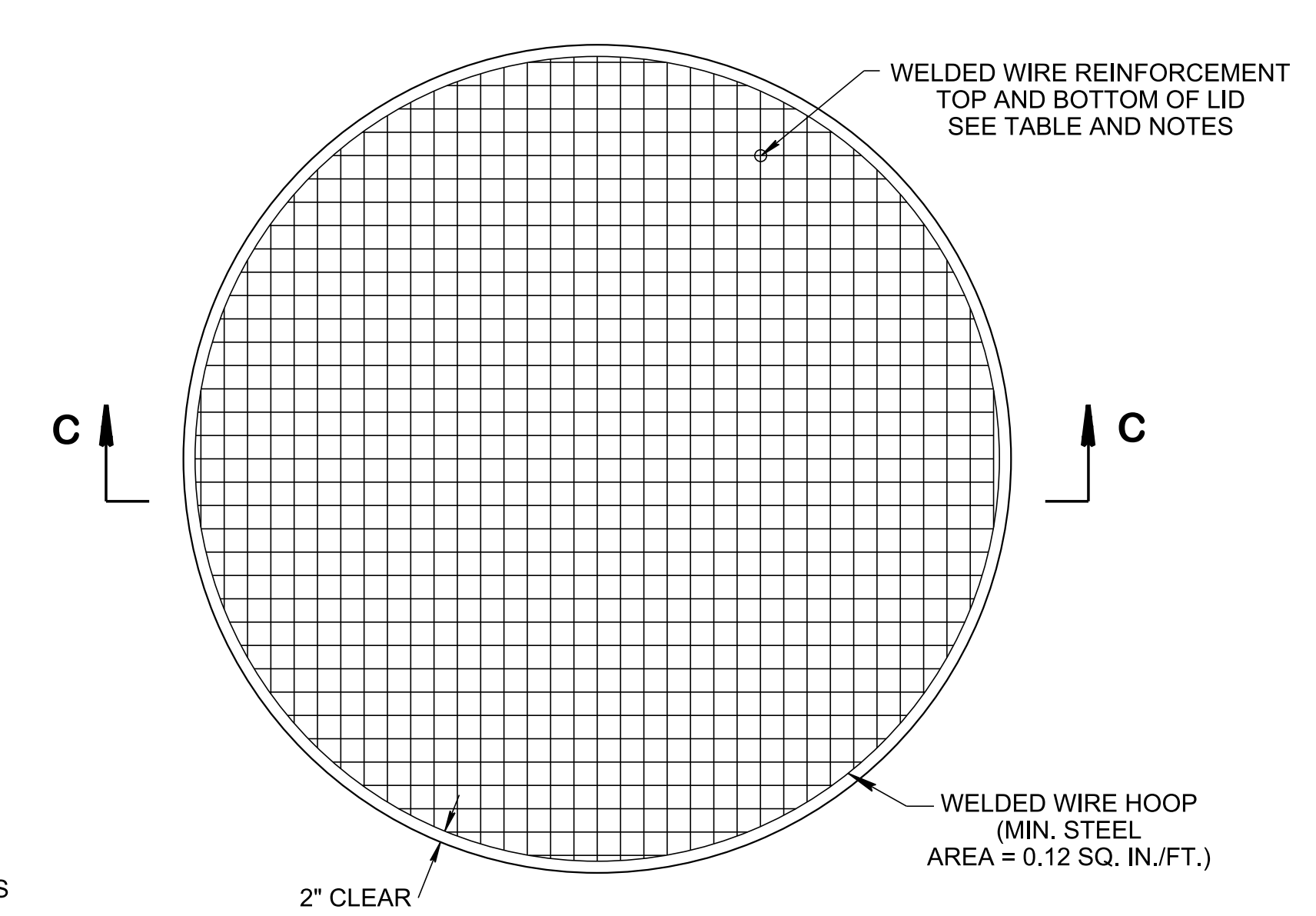
PLAN VIEW



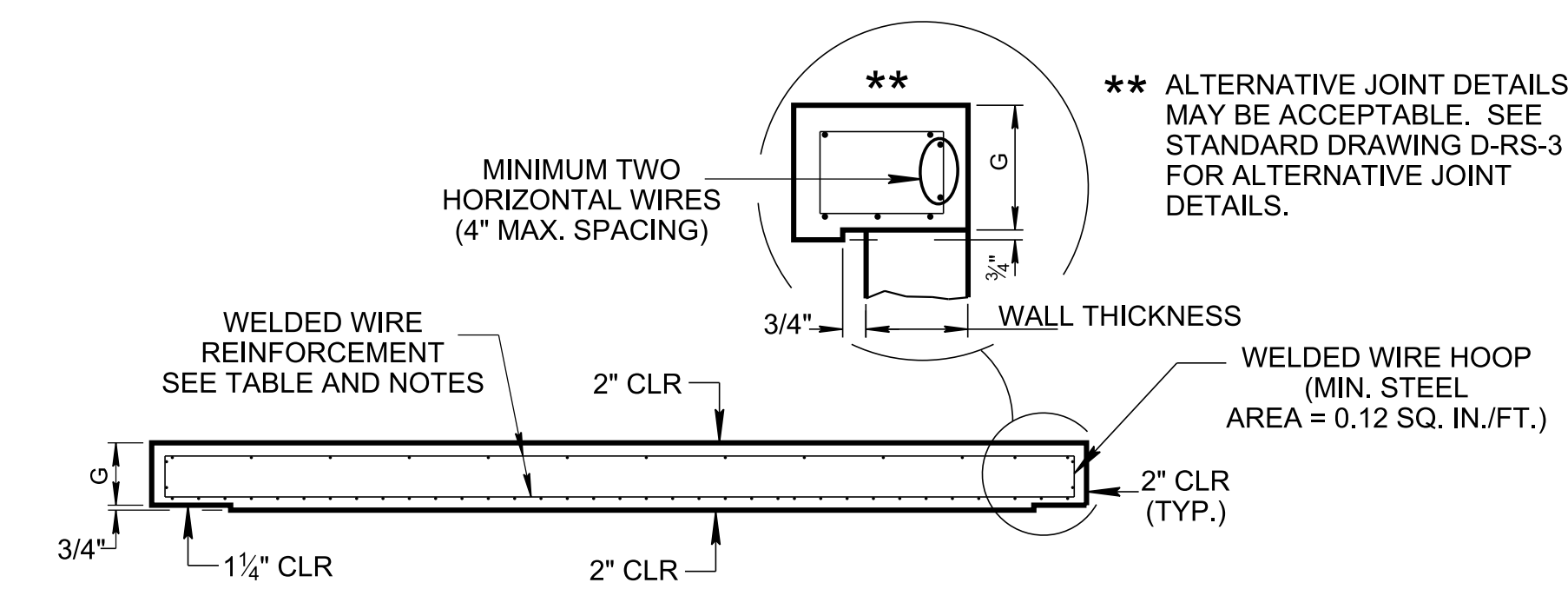
SECTION B-B

LEGEND

- NON-SHRINK GROUT PER STANDARD SPECIFICATIONS SECTION 921 REQUIRED AROUND PIPE OPENINGS ONLY
- * 8" FOR ID 48", 60", AND 72"
12" FOR ID 84", 96", 108" AND 120"
- SEE ROADWAY PLANS FOR INVERT ELEVATIONS. RECOMMENDED SLOPE IS HALF ID (IN INCHES) DIVIDED BY 12, OR 24:1 MIN.



LID REINFORCING



**SECTION C-C
LID DETAILS FOR ROUND JUNCTION BOX**

ROUND JUNCTION BOX LIDS DIMENSION & REINFORCEMENT							
ROUND JUNCTION BOX STRUC. INSIDE DIA. (ID)	LID DIA.	G	MIN. STEEL AREA FOR LID				
			BOTTOM MAT WWR		TOP MAT WWR		
			STEEL AREA (SQ. INCH/ FT)	SPACING (4" MAX.) & SIZE	STEEL AREA (SQ. INCH/ FT)	SPACING (4" MAX.) & SIZE	
48"	4'-10"	8"	0.42	4x4-D14xD14	0.12	4X4-D4xD4	
60"	6'-0"	8"	0.49	4x4-D17xD17	0.12	4X4-D4xD4	
72"	7'-2"	9"	0.45	4x4-D15xD15	0.12	4X4-D4xD4	
84"	8'-4"	10"	0.49	4x4-D17xD17	0.12	4X4-D4xD4	
96"	9'-6"	11"	0.45	4x4-D15xD15	0.12	4X4-D4xD4	
108"	10'-8"	13"	0.47	4x4-D16xD16	0.12	4X4-D4xD4	
120"	11'-10"	15"	0.50	4x4-D17xD17	0.12	4X4-D4xD4	

ROUND JUNCTION BOX STRUCTURES DIMENSION & ITEM NO.																		
ROUND JUNCTION BOX STRUC. INSIDE DIA. (ID)	WALL THK.	BOTT. SLAB THK.	MAX. DEPTH OF STRUC.	MAX. INLET OR OUTLET CONC. PIPE SIZE STRAIGHT	MAX. INLET OR OUTLET CONC. PIPE SIZE AT 90°	ROUND JUNCTION BOX STRUC. MINIMUM DESIGN DEPTH (FT)											PAY ITEM NO. (PER EACH)	
						INLET OR OUTLET PIPES INSIDE DIAMETER											> 4'-8' Depth	() Depth
						18"	24"	30"	36"	42"	48"	54"	60"	66"	72"	78"		
48"	5"	6"	20"	30"	18"	3.29	3.83										611-63.01	611-63.02
60"	6"	8"	40"	36"	24"	3.50	4.04	4.58	5.13								611-63.10	611-63.11
72"	7"	8"	40"	48"	30"	3.63	4.17	4.71	5.25	5.79	6.33						611-63.20	611-63.21
84"	8"	8"	40"	60"	36"	3.75	4.29	4.83	5.38	5.92	6.46	7.00	7.54				611-63.30	611-63.31
96"	9"	8"	40"	66"	42"	3.88	4.42	4.96	5.50	6.04	6.58	7.13	7.67	8.21			611-63.40	611-63.41
108"	10"	12"	40"	72"	48"	4.08	4.63	5.17	5.71	6.25	6.79	7.33	7.87	8.42	9.00	9.50	611-63.50	611-63.51
120"	11"	12"	40"	78"	54"	4.29	4.83	5.38	5.92	6.46	7.00	7.54	8.08	8.63	9.20	9.70	611-63.60	611-63.61

- GENERAL NOTES**
- (A) THIS JUNCTION BOX WILL CONFORM TO THE STANDARD DRAWING UNLESS OTHERWISE SHOWN OR DIRECTED BY THE ENGINEER TO MEET SPECIAL CONDITIONS. THERE WILL BE NO VARIATION FROM THE CONTRACT PRICE DUE TO SUCH CHANGES. IN ALL CASES IT MUST BE BUILT LARGE ENOUGH TO ACCOMMODATE INLET AND OUTLET PIPES.
 - (B) ALL PRECAST ELEMENTS TO MEET ASTM C478 (CURRENT EDITION) AND AASHTO M199 (CURRENT EDITION) AND AASHTO LRFD UNLESS SUPERSEDED BY THE STANDARD DRAWINGS.
 - (C) THE FOLLOWING MATERIAL PROPERTIES ARE REQUIRED FOR PRECAST STRUCTURES:
 CONCRETE: $f'_c = 4,000$ POUNDS PER SQUARE INCH AT 28 DAYS.
 WWR MEETING ASTM A1064, $F_y = 70,000$ POUNDS PER SQUARE INCH. PLAIN OR DEFORMED WIRE MAY BE USED FOR BASE SECTIONS. DEFORMED WIRE SHALL BE USED FOR ALL LIDS.
 AS AN ALTERNATIVE, REBAR MEETING ASTM A615 OR A706, $F_y = 60,000$ POUNDS PER SQUARE INCH MAY BE USED.
 REFER TO STANDARD DRAWINGS D-JBS-SERIES.
 - (D) REFER TO STANDARD DRAWING D-RS-1 FOR PRECAST ROUND STRUCTURES ADDITIONAL GENERAL NOTES.
 - (E) REFER TO STANDARD DRAWING D-RS-2 FOR PRECAST ROUND STRUCTURES REINFORCEMENT DETAIL.
 - (F) REFER TO STANDARD DRAWING D-RS-3 FOR PIPE CUT-OUT HOLE DETAILS, NON-MONOLITHIC BASE SECTION DETAILS AND ALTERNATIVE JOINT DETAILS.
 - (G) BOTTOM MAT OF WWR IN LIDS SHALL HAVE A MAXIMUM SPACING OF 4 INCHES IN EACH DIRECTION. IF REBAR IS USED, MAX. SPACING = 12" EACH DIRECTION.
 - (H) TOP MAT OF WWR IN LIDS SHALL HAVE A MINIMUM OF 0.12 SQ. INCH PER FT IN BOTH DIRECTIONS.
 - (I) THE COST OF FURNISHING AND PLACING CONCRETE, TO BE USED FOR THE FORMING OF INVERTS, TO BE INCLUDED IN THE PRICE BID FOR ROUND JUNCTION BOX STRUCTURES.
 - (J) ROUND JUNCTION BOX STRUCTURES PAYMENT DEPTH MEASUREMENT MADE FROM THE TOP SLAB TO THE BOTTOM SLAB, SEE SECTION A-A FOR DETAIL. SEE TABLE FOR ITEM NUMBERS.

STATE OF TENNESSEE
STANDARD DRAWING
DEPARTMENT OF TRANSPORTATION

PRECAST ROUND JUNCTION BOX STRUCTURES (48" THRU 120")

01-06-2024 D-RJB-1