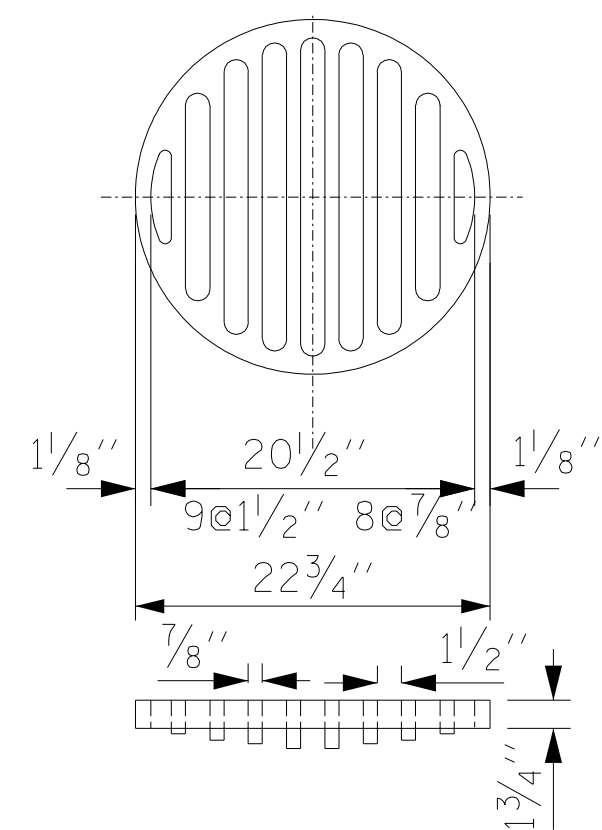
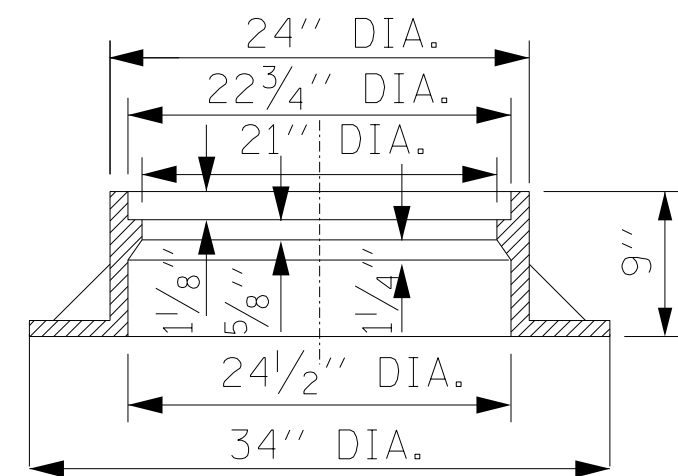


COVER



GRATE

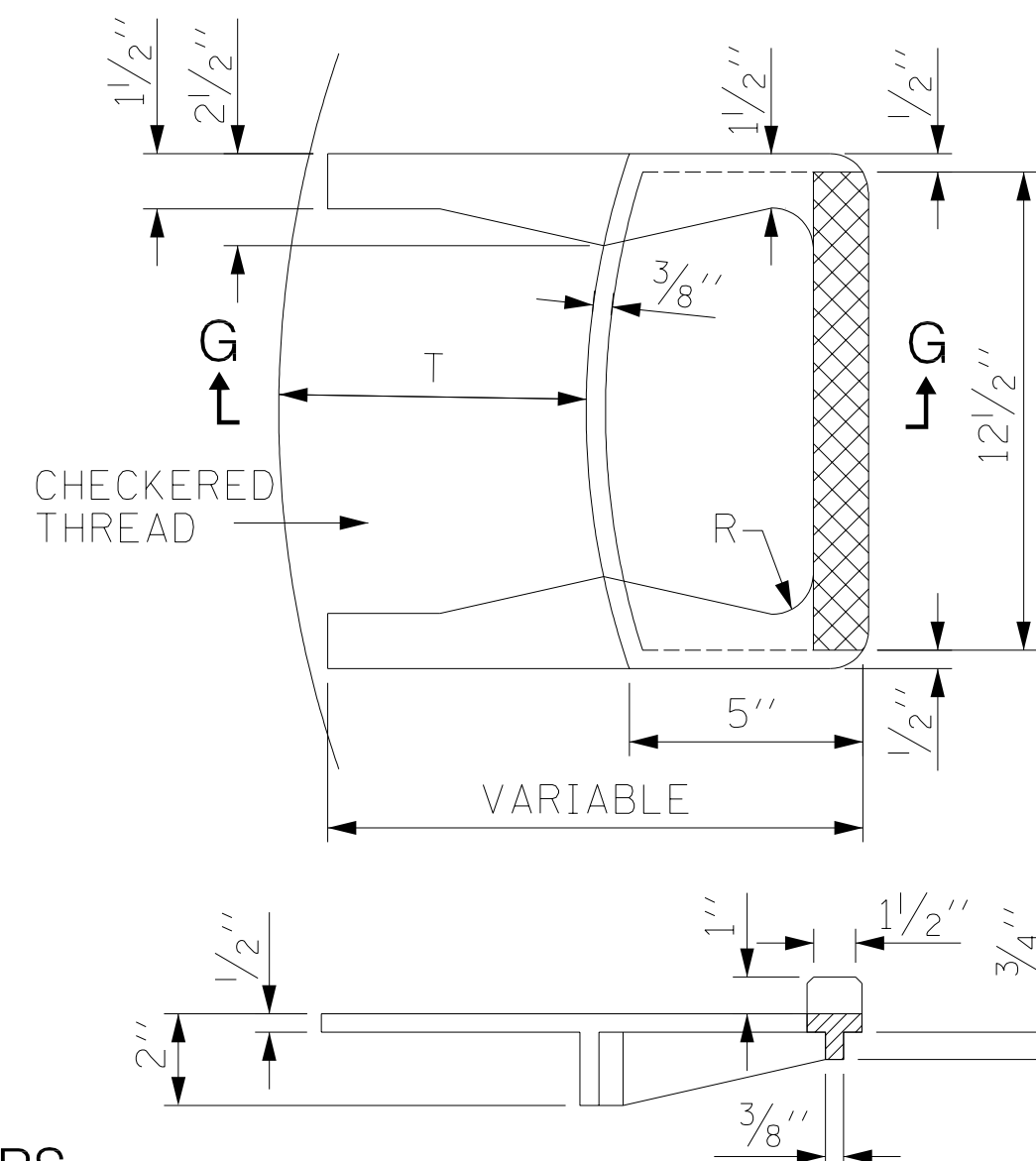


FRAME

**NOTES FOR TYPE 1
FRAMES, GRATES & COVERS**

1. TYPE 1 FRAME & COVER TO BE NEENAH FOUNDRY COMPANY NO. R-1713, TYPE "B" VENTED COVER OR APPROVED EQUAL
2. TYPE 1 FRAME & GRATE TO BE NEENAH FOUNDRY COMPANY NO. R-2504, TYPE "E" GRATE OR APPROVED EQUAL

TYPE 1 FRAME GRATE AND COVER

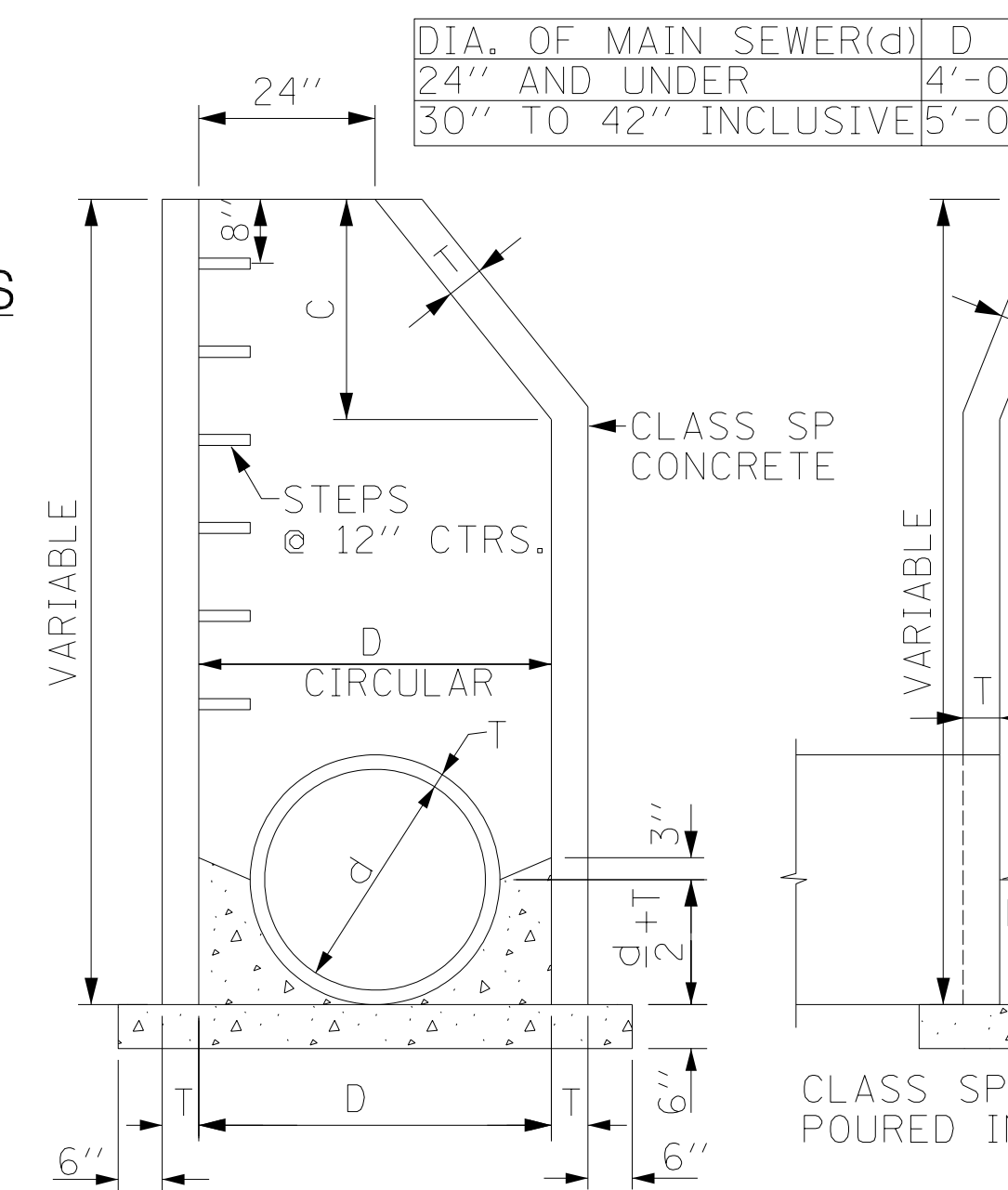


SECTION G-G

CAST IRON STEPS

NOTES: FOR CAST IRON STEPS

1. CAST IRON STEPS SHALL BE GRAY IRON CONFORMING TO THE STANDARD SPECIFICATIONS.
2. STEPS SHALL BE EMBEDDED INTO THE WALL A MINIMUM OF 3 INCHES AND SHALL NOT EXTEND BEYOND THE OUTSIDE OF THE WALL.
3. NEENAH TYPE 1980-I OR 1981-Y.

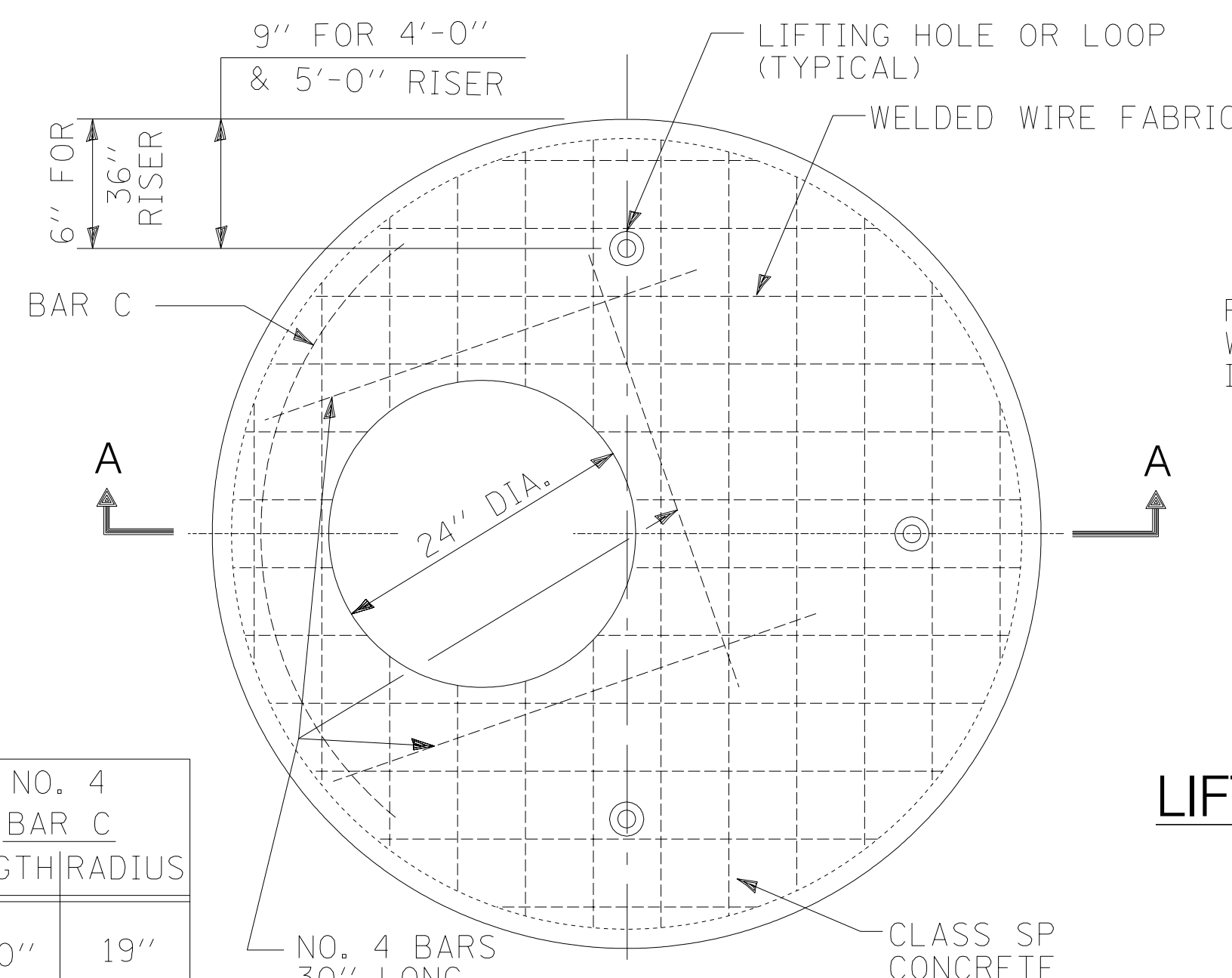


**MANHOLE, TYPE 1
INLET, TYPE D-1**

ALTERNATE MATERIALS FOR WALLS	D	C	(MIN.) T
CONCRETE MASONRY UNITS	4'-0"	2'-6"	5"
PRECAST REINFORCED CONCRETE RISERS	4'-0"	2'-6"	4"
MONOLITHIC CONCRETE	4'-0"	2'-6"	6"

**NOTES FOR MANHOLE TYPE 1
AND INLET TYPE D-1**

1. COST OF MANHOLE, TYPE 1 TO INCLUDE TYPE 1 FRAME & COVER & STEPS.
2. COST OF INLET, TYPE D-1 TO INCLUDE TYPE 1 FRAME & GRATE & STEPS.
3. CONCRETE MASONRY UNIT SHALL BE A CYLINDER OF THE REQUIRED RADIUS.
4. 6' MANHOLE, TYPE 1 SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD DRAWING SD XX-05A (SHEET 2 OF 2).

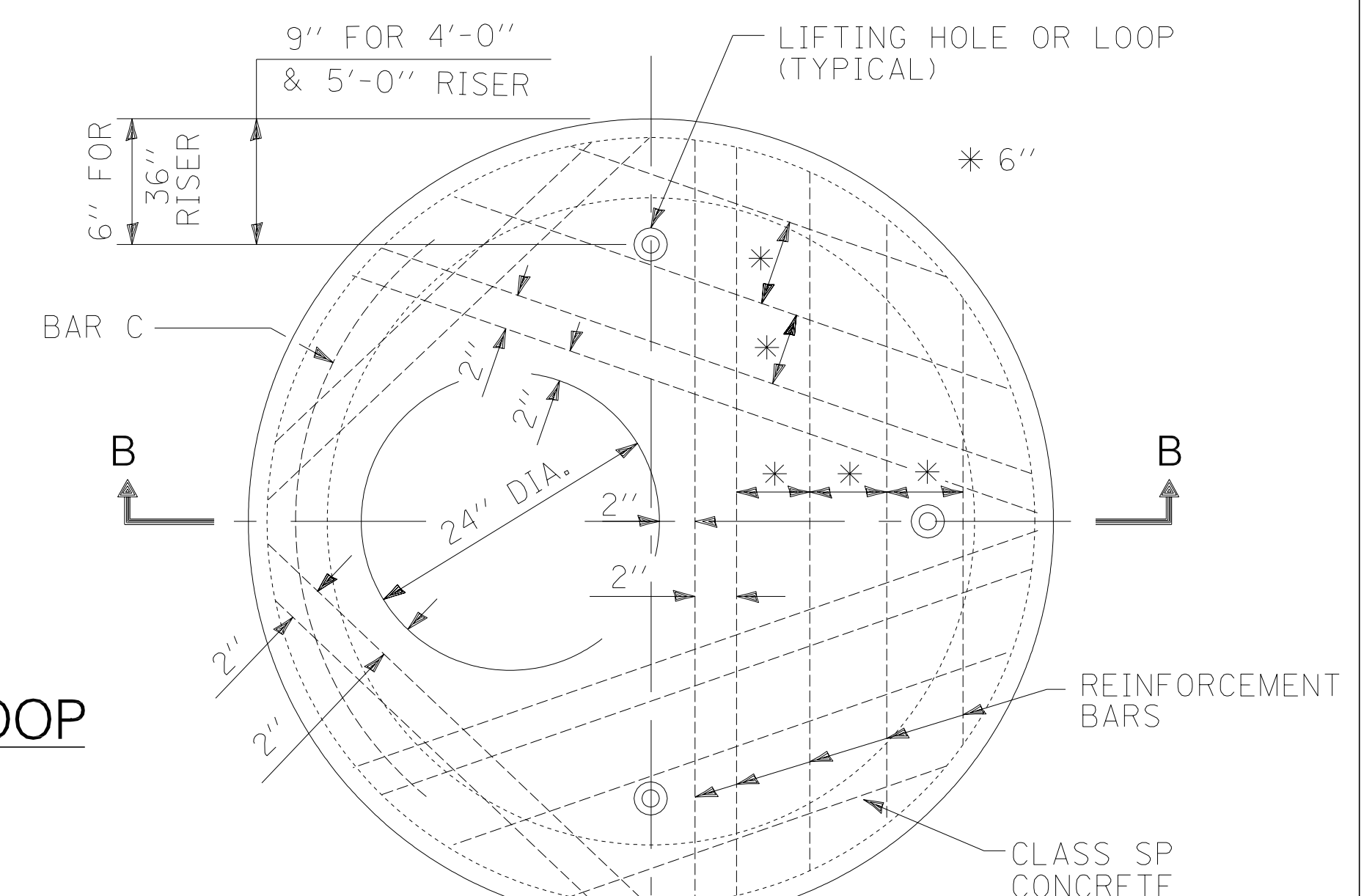


PLAN

(WELDED WIRE FABRIC)

**LIFTING HOLE OR LIFTING LOOP
TYPICAL**

(3 REQUIRED PER SLAB)



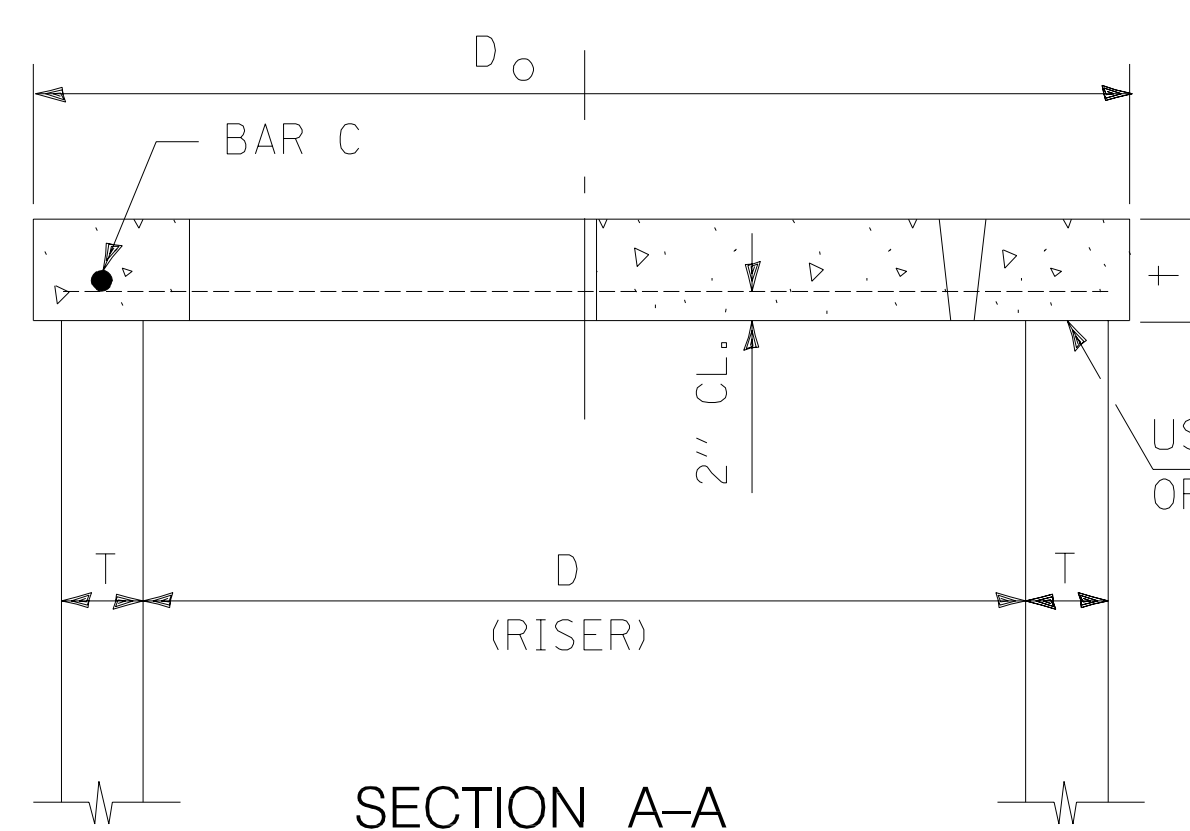
PLAN

(REINFORCEMENT BARS)

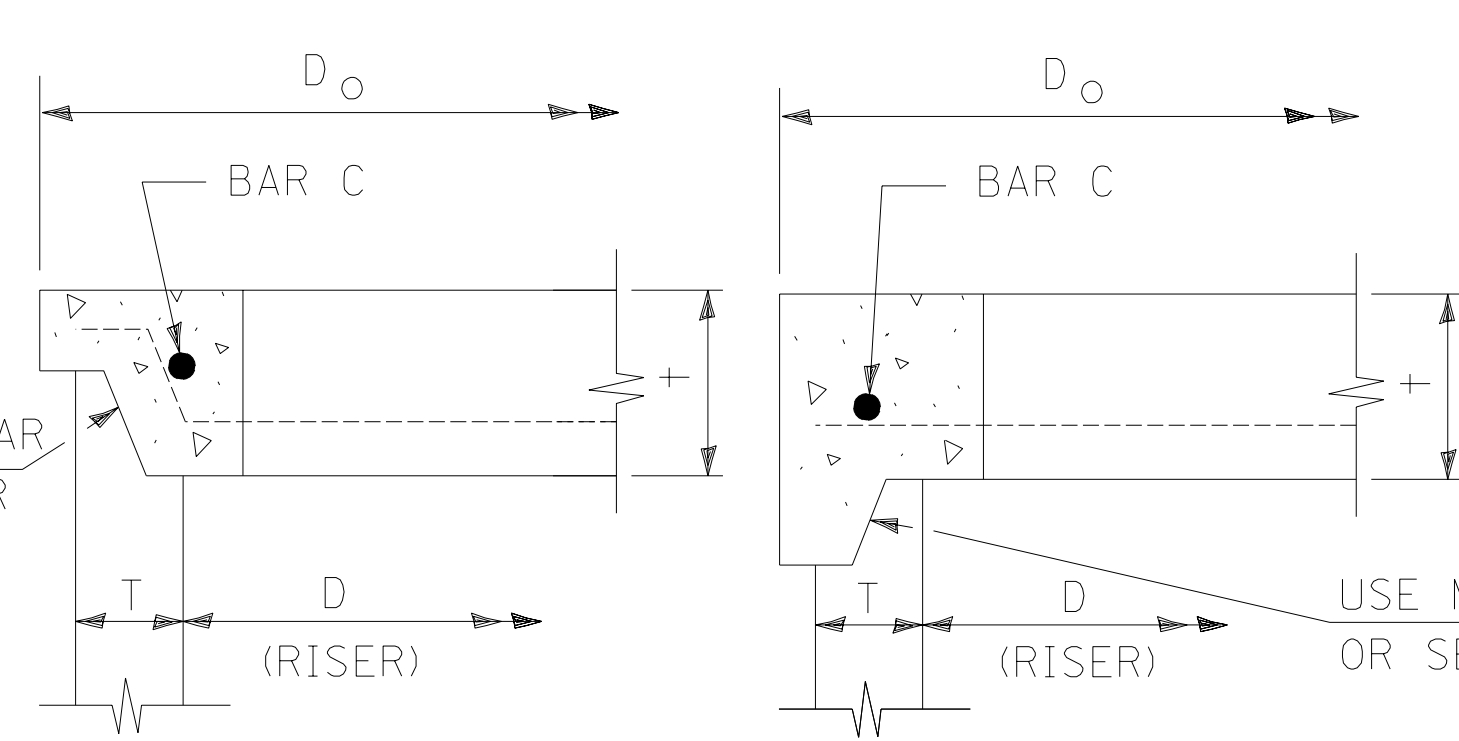
NOTES

1. ALL FRAMES, GRATES AND COVERS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATION FOR GRAY IRON CASTINGS, OR FOR DUCTILE IRON CASTINGS.
2. THE CONTRACT UNIT PRICE PER EACH FOR MANHOLE, TYPE 1 AND INLET OF THE TYPE SPECIFIED, SHALL INCLUDE ALL EXCAVATION, BACKFILL, CONCRETE, REINFORCEMENT, FRAMES, GRATES AND INCIDENTALS REQUIRED FOR CONSTRUCTION.
3. PRECAST CONCRETE UNITS FOR MANHOLE, TYPE 1 AND INLET OF THE TYPE SPECIFIED, WILL BE ACCEPTABLE PROVIDED THEY MEET ALL THE REQUIREMENTS SHOWN ON THIS DRAWING. BASE EXTENSION OF 6" NOT REQUIRED FOR PRECAST UNITS, FABRICATION DRAWING SHOWING PIPE OPENINGS, REINFORCEMENT AND OTHER PERTINENT DIMENSIONS WILL BE REQUIRED FOR EACH UNIT.
4. STEPS WILL NOT BE REQUIRED WHEN THE DEPTH, MEASURED FROM THE TOP OF THE FRAME TO THE INVERT, EXCEEDS 10'-0".
5. THE FLAT SLAB TOP MAY BE USED IN LIEU OF OFFSET CONES AT THE OPTION OF THE CONTRACTOR OR WHEN FIELD CONDITION PROHIBIT THE USE OF TAPERED TOPS.

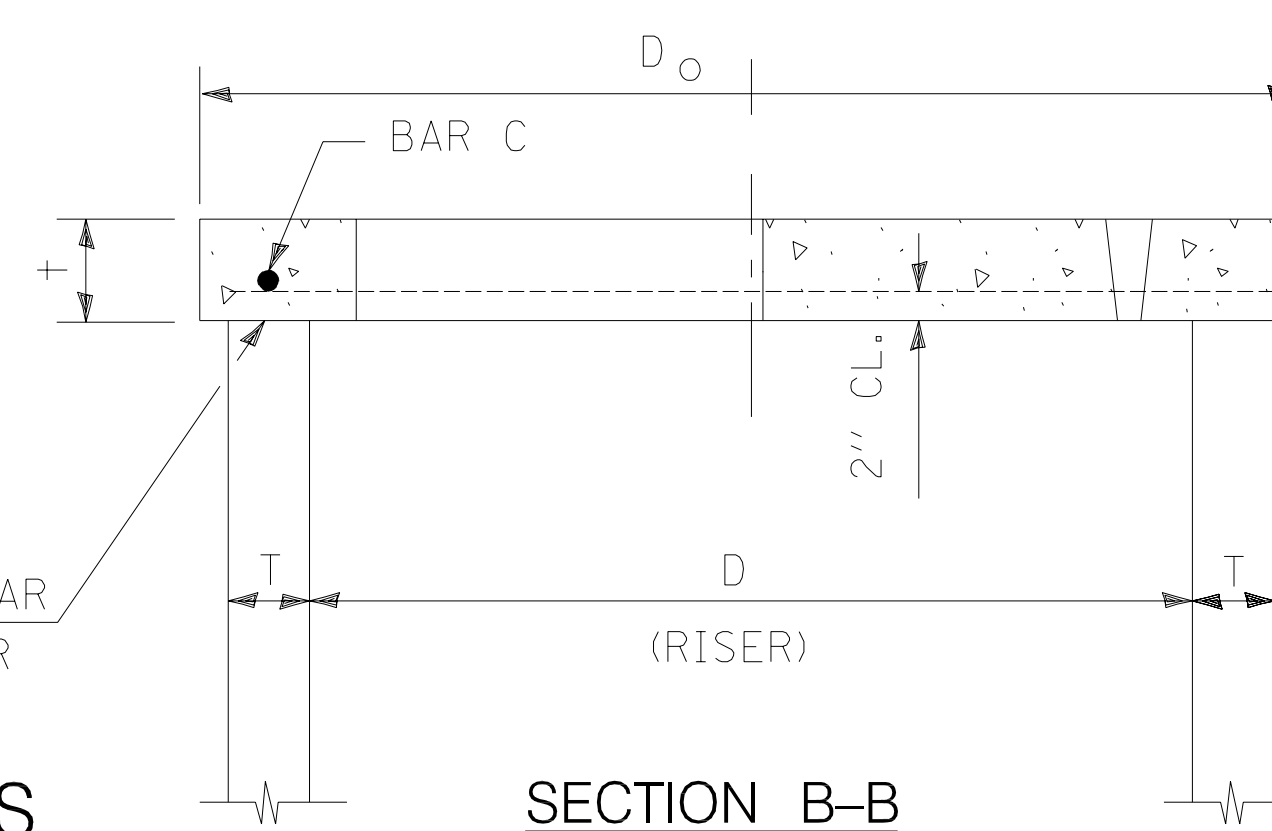
D	T	D _o (MIN.)	t	Reinforcement "A" S W.W.F. EACH DIRECTION	OR BAR SIZE	NO. 4 BAR C LENGTH	RADIUS
36"	SEE APPLICABLE STANDARDS	D + 2T	7"	.20 sq. inch/ft.	No. 4	4'-0"	19"
4'-0"	7"		.35 sq. inch/ft.	No. 5	4'-6"	26"	
5'-0"	9"		.35 sq. inch/ft.	No. 5	5'-0"	32"	



SECTION A-A



ALTERNATE JOINT CONFIGURATIONS



SECTION B-B

APPROVED *Jeff Daley* CHIEF ENGINEER DATE 6-22-2004

CTE ENGINEERS
CONSOER TOWNSEND ENVIRODYNE ENGINEERS, INC.

THE ILLINOIS STATE TOLL HIGHWAY AUTHORITY
2700 OGDEN AVENUE
DOWNERS GROVE, ILLINOIS 60515

REVISIONS	
NO.	DATE

STANDARD SD 04-5A
MANHOLE TYPE 1 AND
INLET TYPE D-1

DRAWING NO.
B4
OF