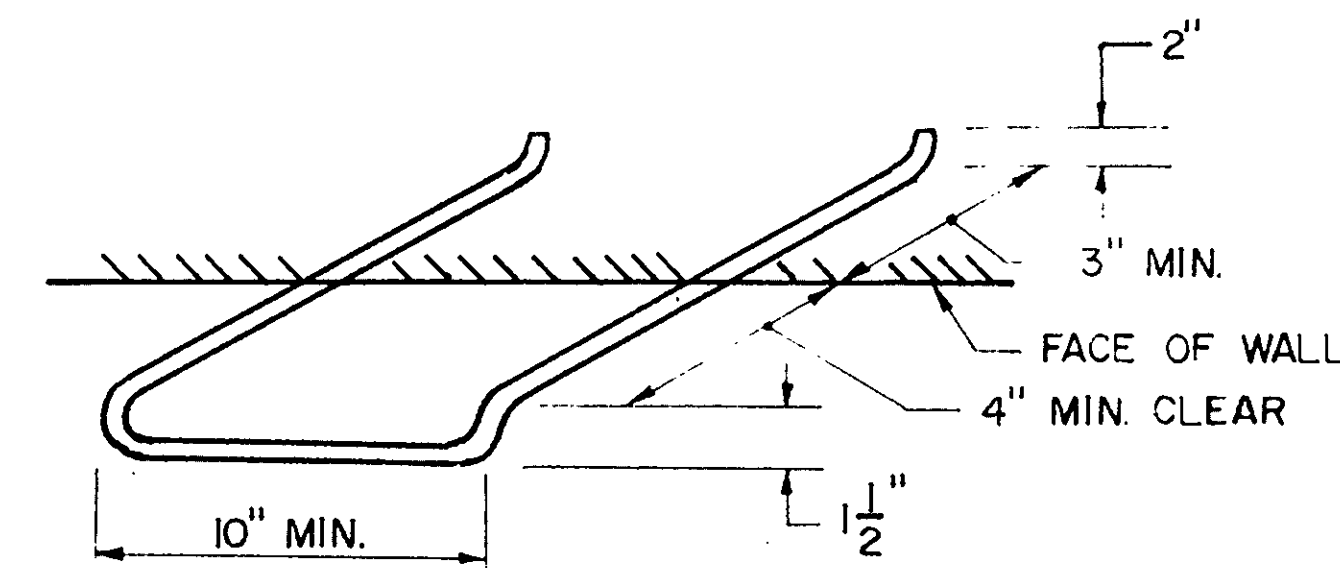


FORM CONCRETE TROUGH IN
BOTTOM OF MANHOLE

PIPE

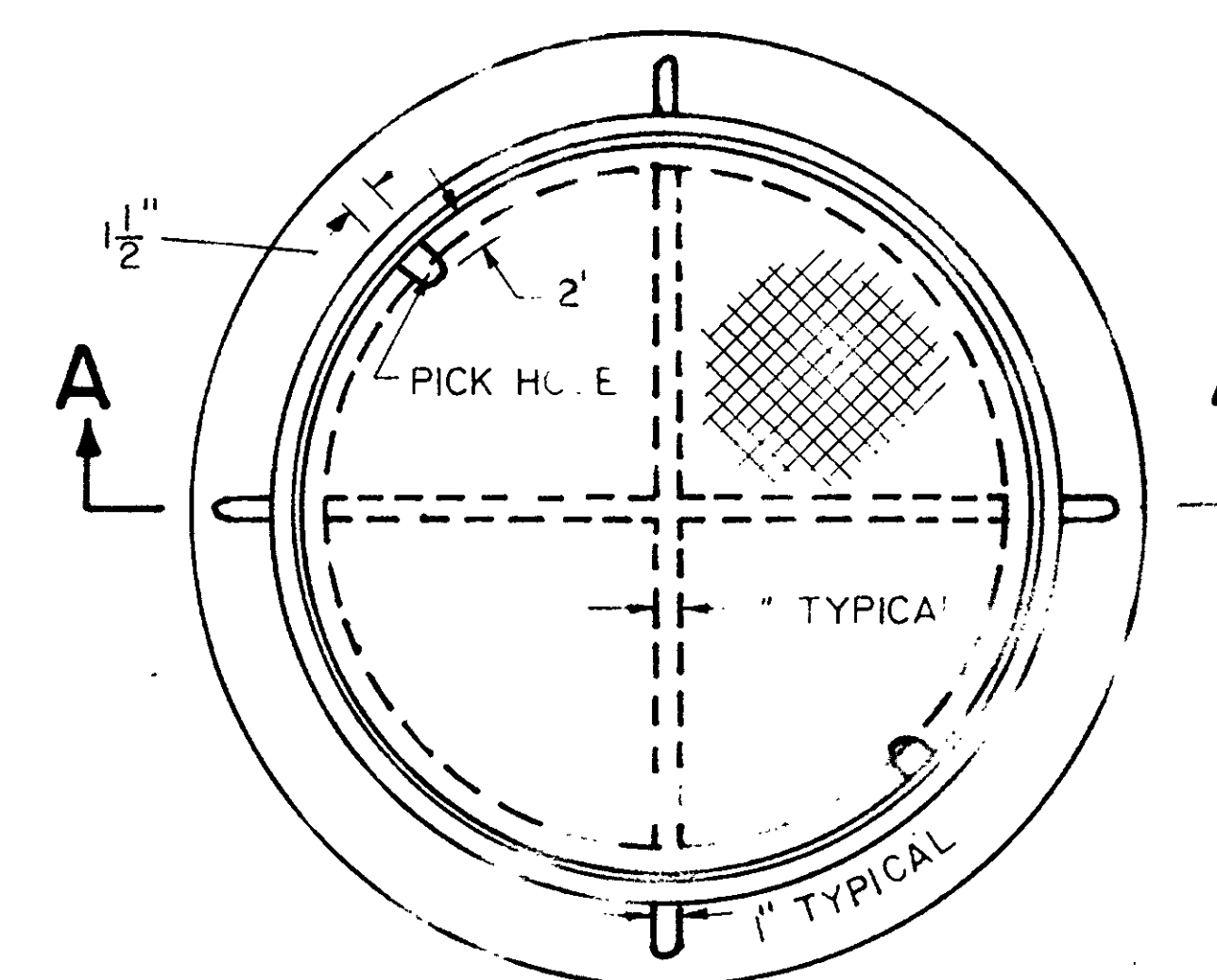
E

PLAN

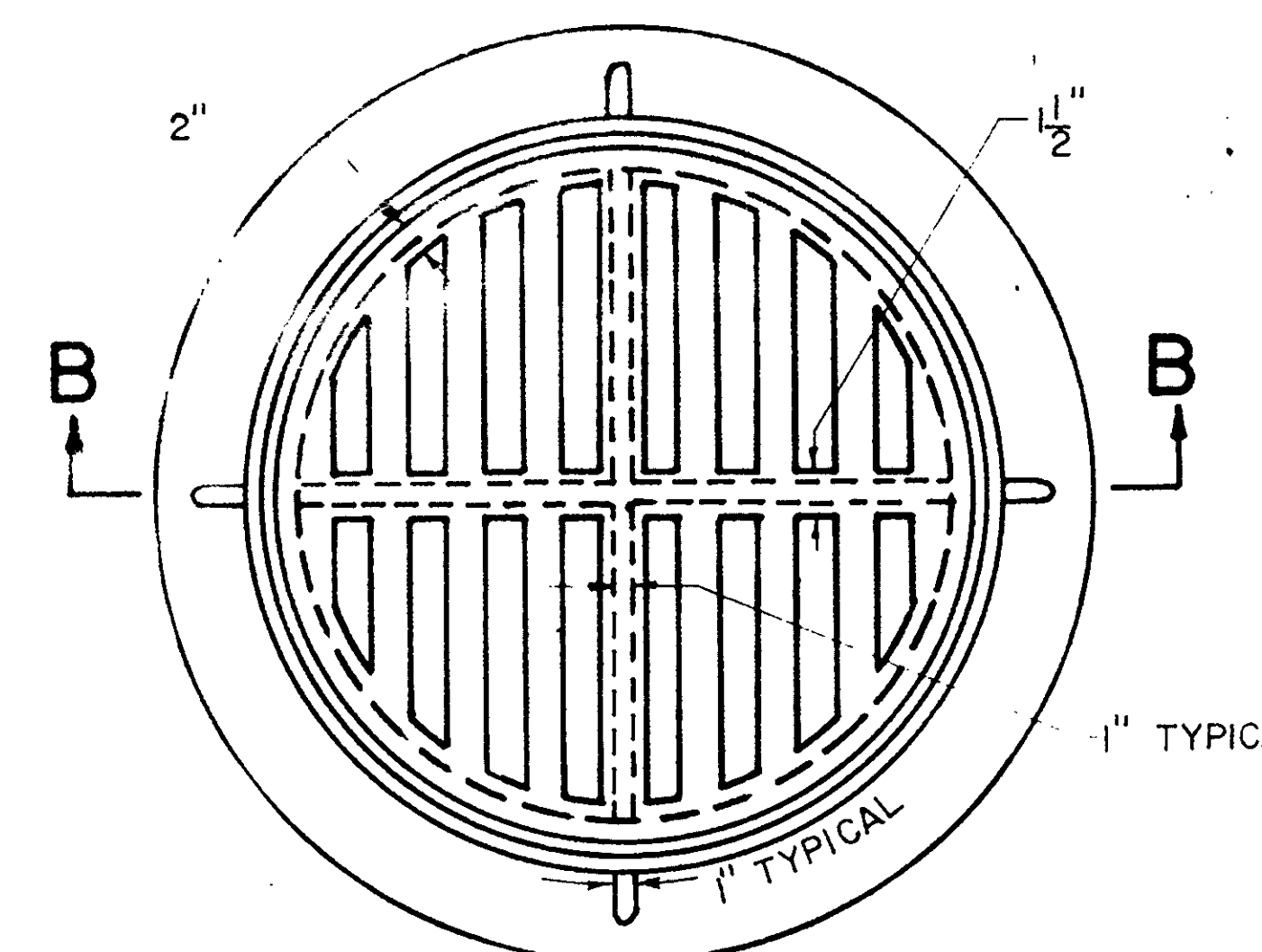


STEP DETAIL

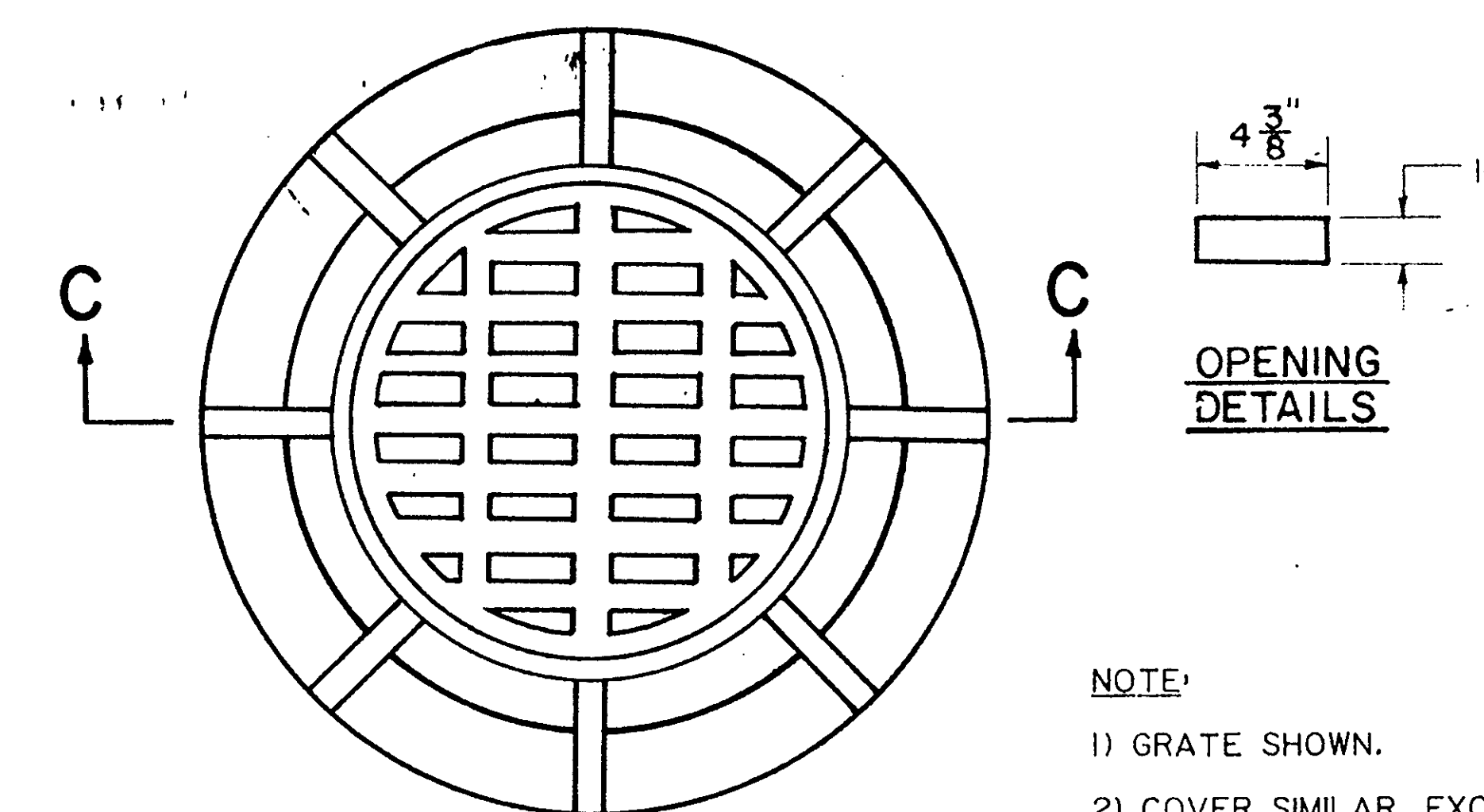
(SEE NOTE 6)



PLAN

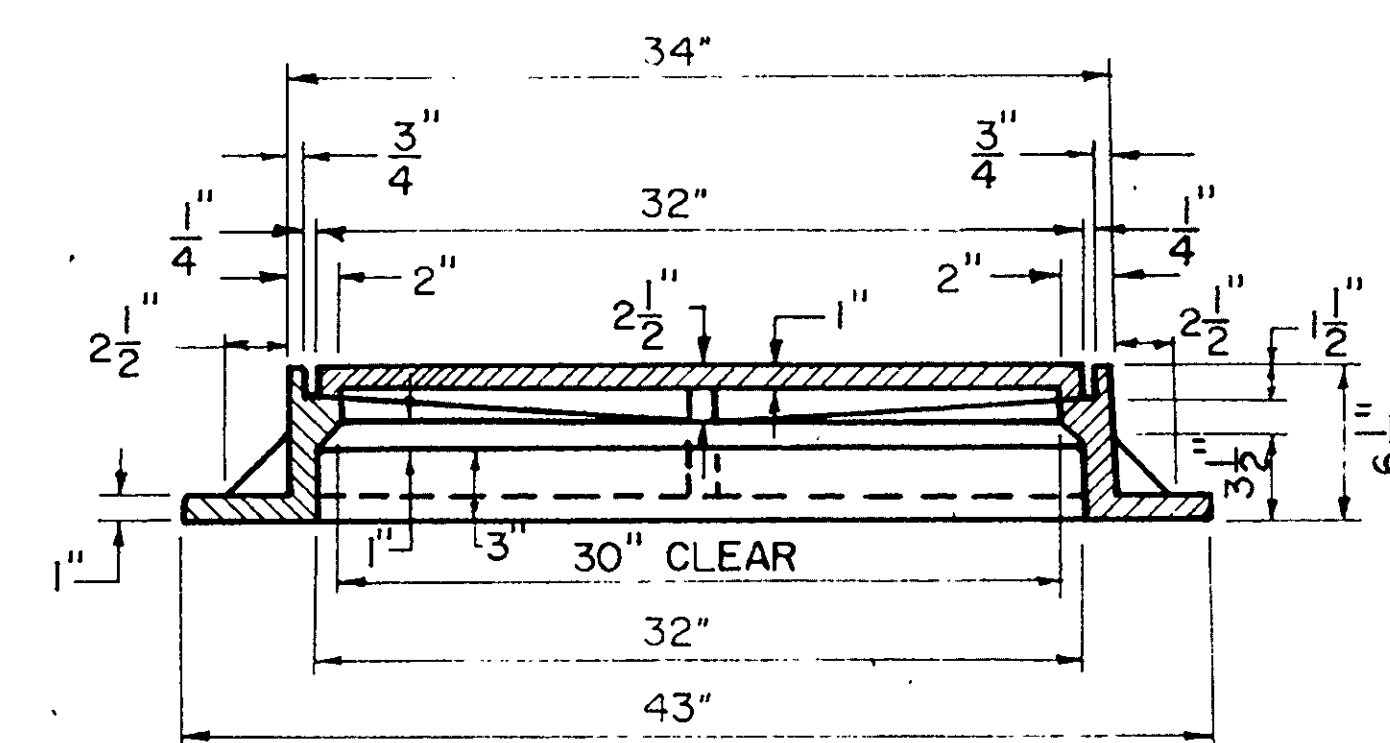


PLAN



PLAN

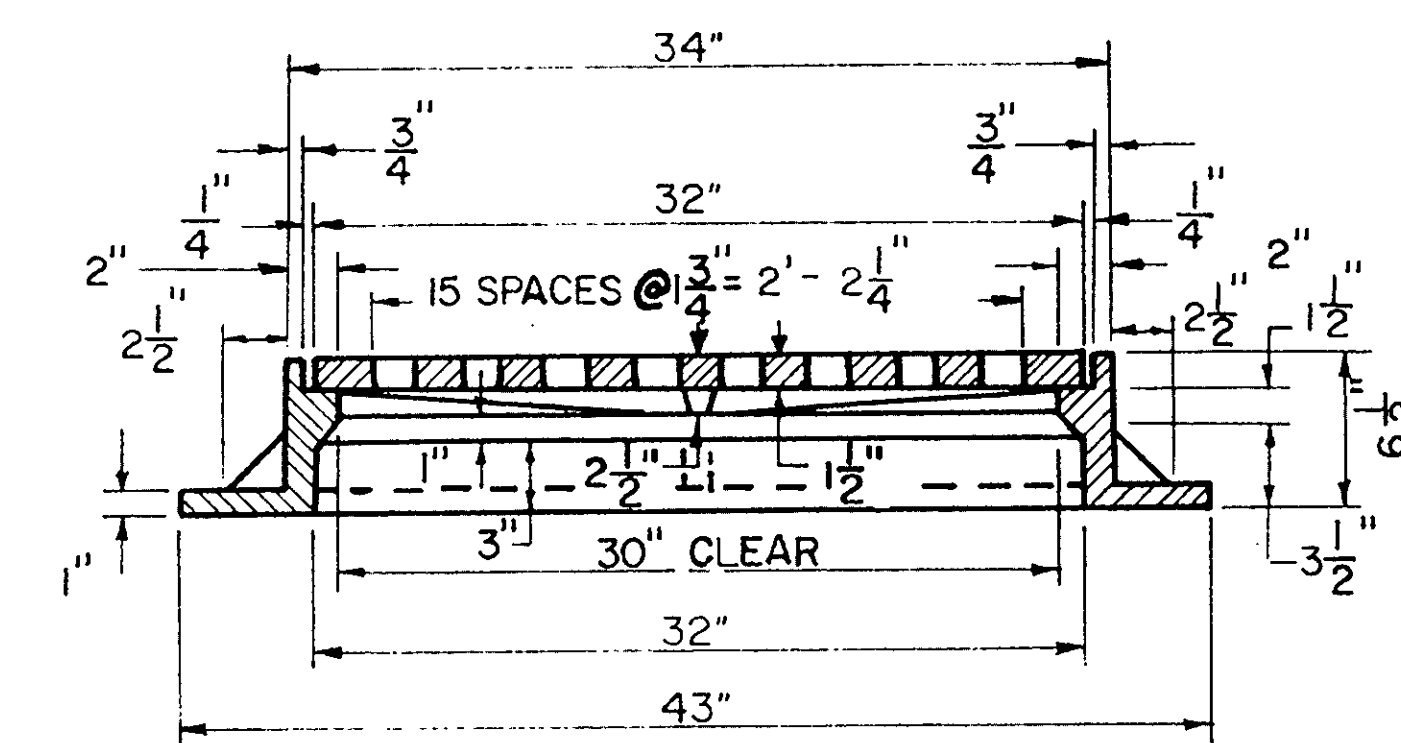
NOTE:
1) GRATE SHOWN.
2) COVER SIMILAR, EXCEPT
WITHOUT OPENINGS.



SECTION A-A

32" ϕ MANHOLE FRAME & COVER

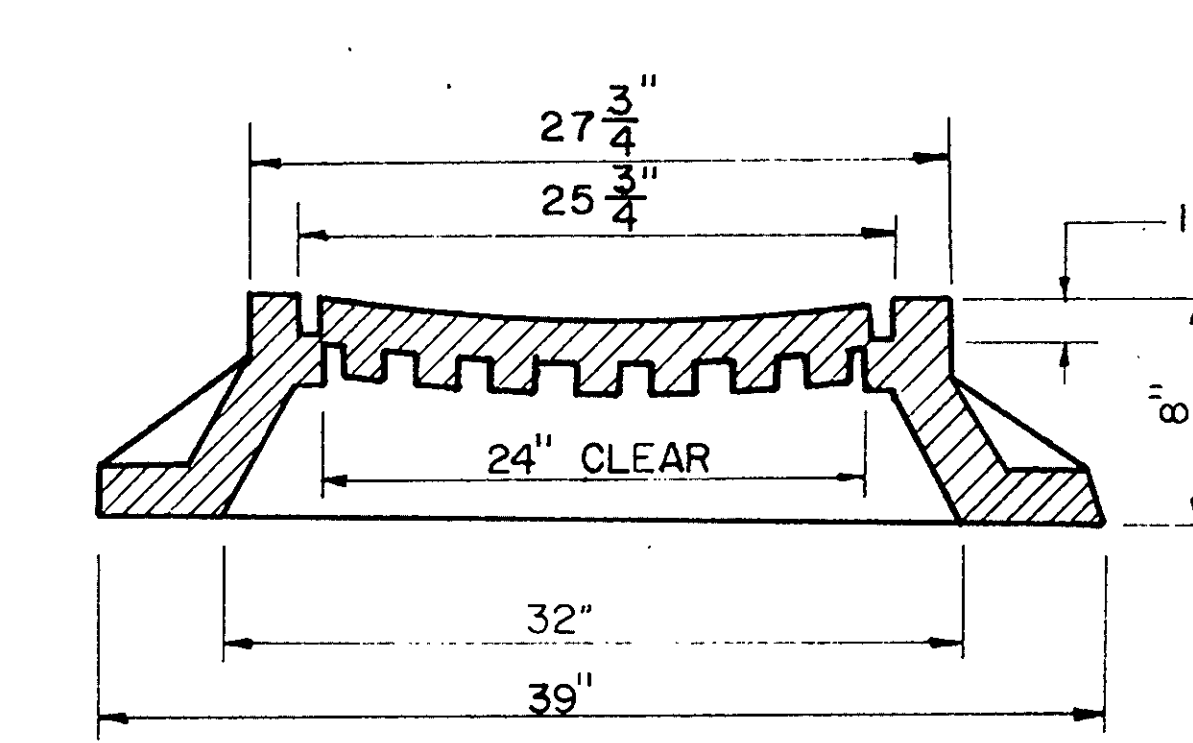
(ITEM # AC655.0101)
(N.Y.S.D.O.T. STANDARD ITEM)
PAYMENT AREA= 5.8 SF
APPROX. WEIGHT
COVER= 240#
FRAME= 350#



SECTION B-B

32" ϕ MANHOLE FRAME & GRATE

(ITEM # AC655.0102)
(N.Y.S.D.O.T. STANDARD ITEM)
PAYMENT AREA= 5.8 SF
APPROX. WEIGHT
GRATE= 155#
COVER= 230#
FRAME= 350#



SECTION C-C

24" ϕ MANHOLE FRAME & GRATE

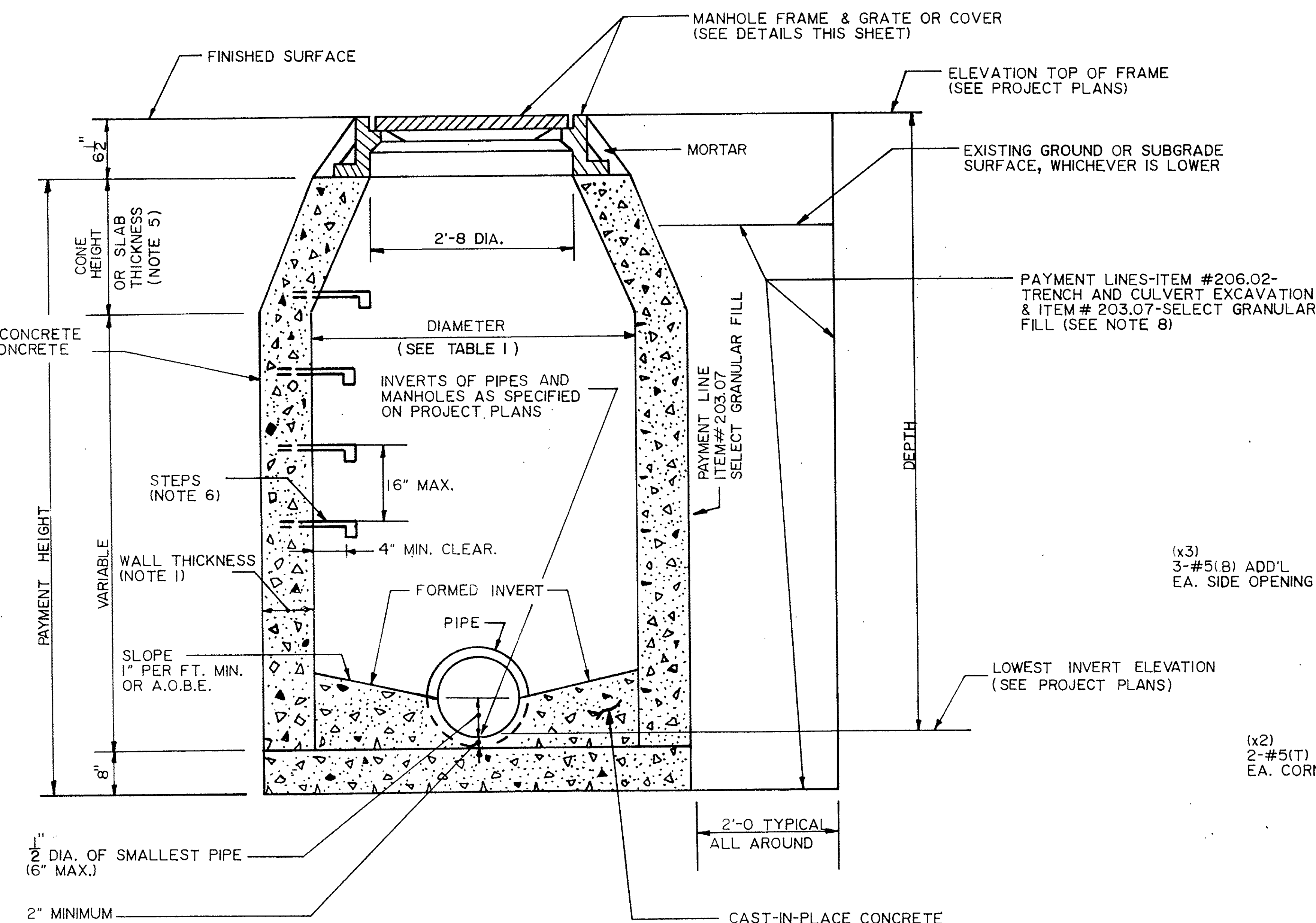
(ITEM # AC655.0103)

24" ϕ MANHOLE FRAME & COVER (AS NOTED)

(ITEM # AC655.0104)
PAYMENT AREA = 3.6 SF
APPROX. WEIGHT
GRATE= 155#
COVER= 155#
FRAME= 265#

GENERAL NOTES

- ALL DRAINAGE UNITS SHALL BE CAST-IN-PLACE CONCRETE OR PRECAST CONCRETE, DESIGNED TO RESIST AASHTO HS20 LOADING (MAX. WHEEL LOAD=16,000 LBS.) WITH 30% IMPACT LOADING. WALL THICKNESS SHALL BE:
8" FOR DRAINAGE UNITS $\leq$ 16'-0" DEEP
12" FOR DRAINAGE UNITS $>$ 16'-0" DEEP
SEE "PRECAST DRAINAGE UNIT NOTES" FOR PRECAST REQUIREMENTS.
- ALL CONCRETE CAST-IN-PLACE SHALL BE NYS DOT CLASS "A" OR CLASS "D".
- SHEETING IS REQUIRED FOR ALL EARTH EXCAVATION DEEPER THAN 5'-0", UNLESS SPECIFICALLY ORDERED BY THE ENGINEER. PAYMENT WILL BE PROVIDED UNDER ITEM #552.05-SAFE OPERATION SHEET PILING.
- ALL PIPES SHALL BE LAID EVEN WITH OR CUT FLUSH WITH INSIDE FACE OF WALL OF DRAINAGE UNIT.
- MANHOLE CONES MAY BE CONCENTRIC OR ECCENTRIC AS APPROVED BY ENGINEER. FLAT TOP SLAB MAY BE USED AS AN ALTERNATE.
- STEPS ARE REQUIRED FOR ALL DRAINAGE UNITS GREATER THAN 4'-0" IN DEPTH. ALL STEPS SHALL MEET REQUIREMENTS OF NYS DOT STANDARD SPECIFICATION SECTION 725-02.01.
- BOTTOM OF ALL DRAINAGE UNITS SHALL HAVE FORMED INVERTS TO FACILITATE SELF-CLEANING, UNLESS OTHERWISE A.O.B.E.
- PAYMENT FOR DRAINAGE UNITS SHALL INCLUDE THE COST OF EXCAVATION, BEDDING, BACKFILL, STEPS AND REINFORCING STEEL. ITEM NUMBERS SHOWN FOR ANY OF THESE ITEMS ARE FOR SPECIFICATION IDENTIFICATION PURPOSES.
- PAYMENT FOR MANHOLE FRAME AND GRATE OR COVER SHALL BE MADE UNDER SEPARATE ITEM.



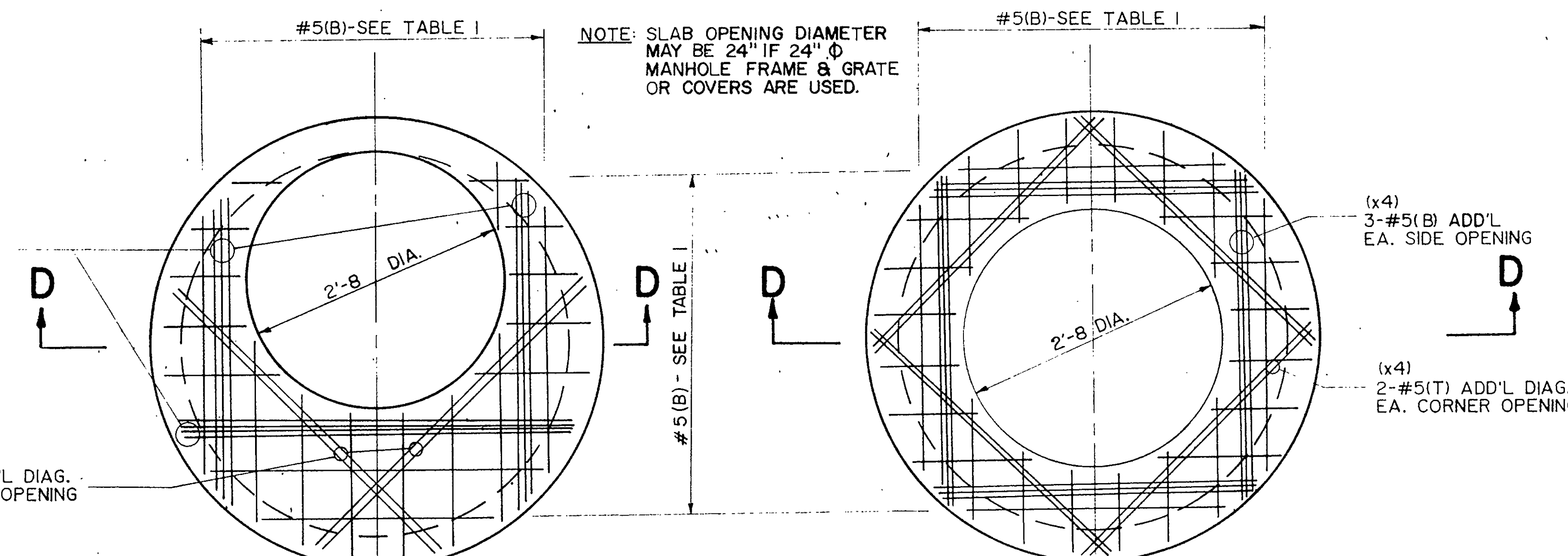
SECTION E-E

TABLE 1

ITEM NUMBER	TYPE	INSIDE DIAMETER (IN.)	CONE HEIGHT (IN.)	ALTERNATE FLAT TOP SLAB	
				THICKNESS	REINFORCING STEEL
AC604.0401	A	36	8	8"	#5 @ 6" (B) (E.W.)
AC604.0402	B	42	16	8"	#5 @ 6" (B) (E.W.)
AC604.0403	C	48	24	8"	#5 @ 6" (B) (E.W.)
AC604.0404	D	54	32	8"	#5 @ 5 1/2" (B) (E.W.)
AC604.0405	E	60	40	8"	#5 @ 5 1/2" (B) (E.W.)
AC604.0406	F	66	48	9"	#5 @ 5" (B) (E.W.)
AC604.0407	G	72	56	9"	#5 @ 5" (B) (E.W.)

MANHOLE- ITEM#AC604.04XX

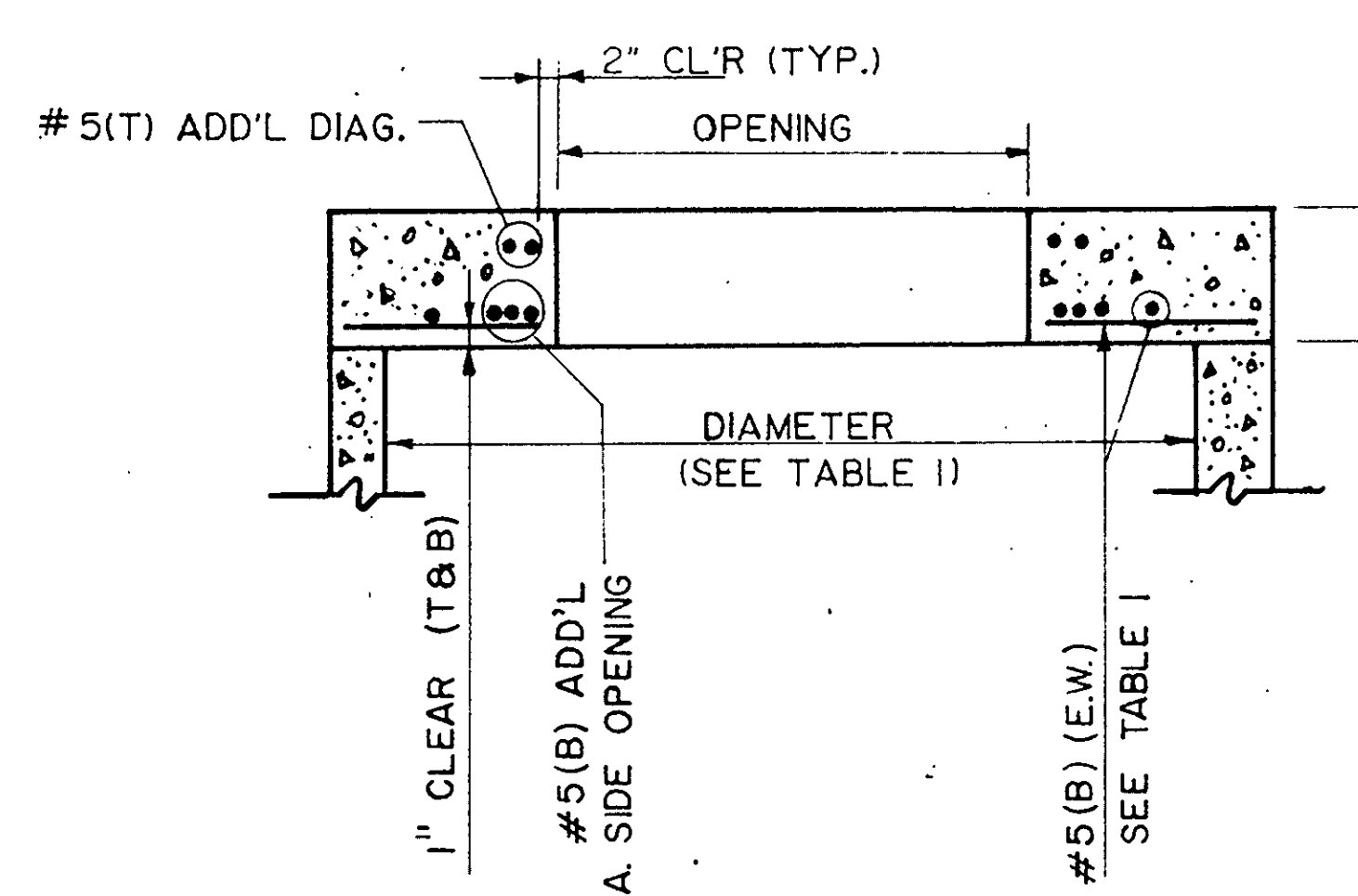
NOTE:
(B) = BOTTOM
(T) = TOP
(E.W.) = EACH WAY



PLAN-OPENING OFF CENTER

PLAN-OPENING ON CENTER

ALTERNATE FLAT TOP
SLAB DETAILS



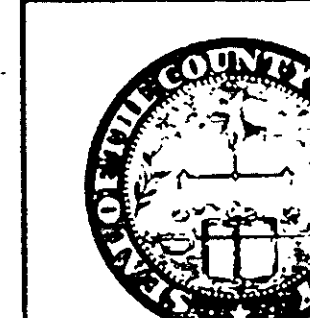
SECTION D-D

PRECAST DRAINAGE UNIT NOTES

- PRECAST DRAINAGE UNITS SHALL MEET THE REQUIREMENTS OF NYS DOT STANDARD SPECIFICATION SECTION 706-04.
 - SHOP DRAWINGS ARE REQUIRED FOR ALL PRECAST DRAINAGE UNITS. DRAWINGS SHALL SHOW THE DETAILS OF EACH INDIVIDUAL DRAINAGE UNIT. NO FABRICATION SHALL BEGIN UNTIL AFTER SHOP DRAWINGS ARE APPROVED.
 - MINIMUM HEIGHT FOR ALL PRECAST SECTIONS, OTHER THAN TOP SLABS, SHALL BE 1'-0".
 - A MINIMUM 4" IN WALL HEIGHT SHALL BE ALLOWED FOR CAST-IN-PLACE CONCRETE ADJUSTMENT TO FINAL ELEVATION IN THE FIELD.
- ATERIAL USED FOR FIELD ADJUSTMENTS SHALL BE:
CONCRETE MORTAR (SECTION 705-21) IF ADJUSTMENT $\leq$ 2"
CLASS "A" OR CLASS "D" CONCRETE IF ADJUSTMENT $>$ 2"
THE USE OF CONCRETE BLOCK OR BRICK WILL NOT BE ALLOWED.



WARNING: It is a violation of Section 7209 Subdivision 2 of the New York State Education Law for any person unless acting under the direction of a Licensed Professional Engineer to alter in any way any plans, specifications, plats or reports to which the seal of a Professional Engineer has been applied.



county of albanys
department of public works
rd #2, box 460
voorheesville, new york 12186
518-765-2055

STANDARD DETAILS

DRAINAGE UNITS- MANHOLES

drawn by: P.J.B., M.J.J., & D.S.Q. scale: NONE
checked by: F. Boeng 2/16/88 date: 2/10/88
approved by: F.M. Boeng proj. i.d. no.:

drawing number: ACS-51