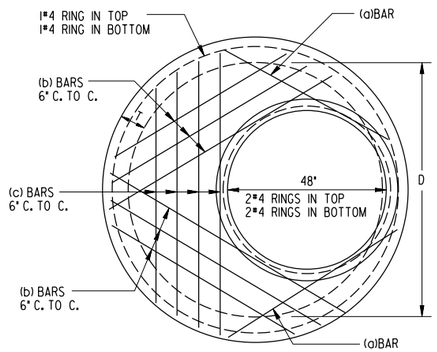
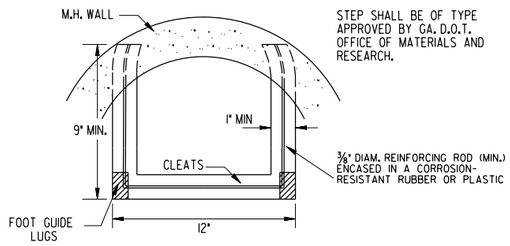
GDOT Georgia Department of Transportation | P. I. No. XXXXXXX



PLAN OF STEEL REINFORCEMENT



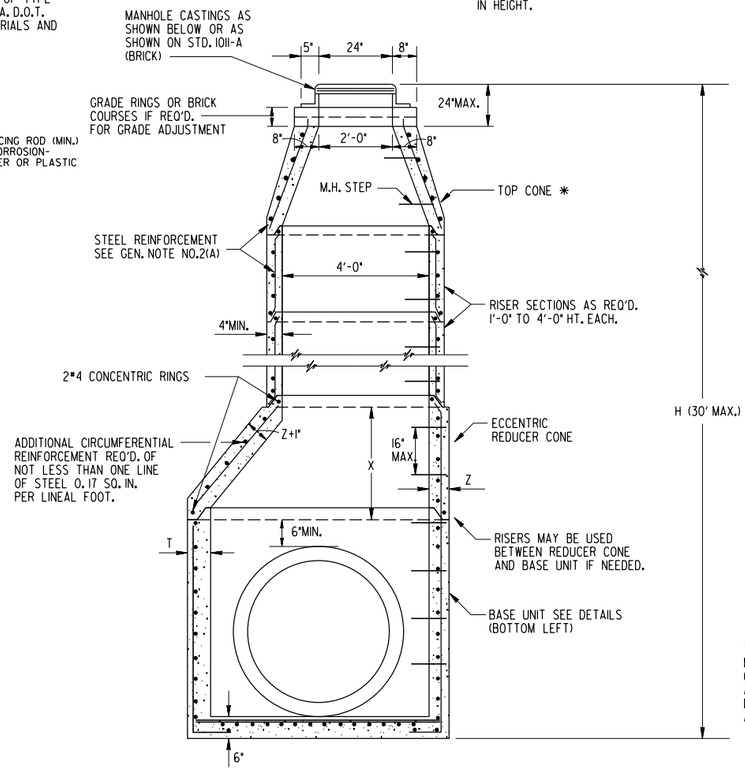
STEP SHALL BE OF TYPE APPROVED BY GA. D.O.T. OFFICE OF MATERIALS AND RESEARCH.

⅜" DIAM. REINFORCING ROD (MIN.) ENCASED IN A CORROSION-RESISTANT RUBBER OR PLASTIC

MIN. VERTICAL LOAD RESISTANCE = 400 LBS.
MIN. PULLOUT RESISTANCE = 700 LBS.

STEP DETAIL

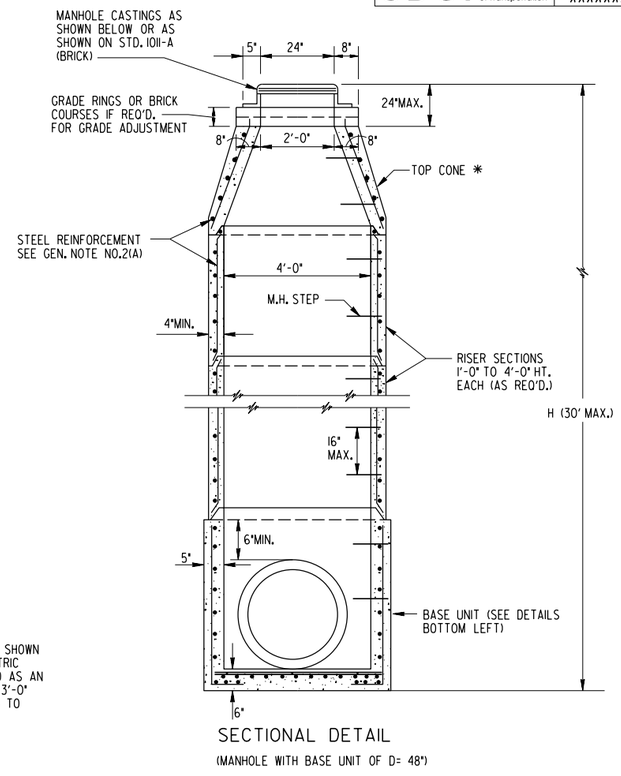
STEPS ARE REQUIRED IN ALL MANHOLES OVER 4 FT. IN HEIGHT.



SECTIONAL DETAIL

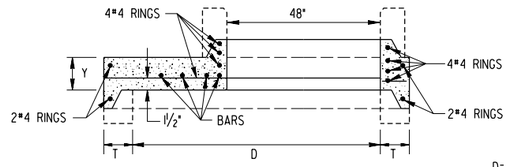
(MANHOLE WITH BASE UNIT OF D=OVER 48")

* CONCENTRIC CONE SHOWN MIN. HT.=2'-0" ECCENTRIC CONES MAY BE USED AS AN ALTERNATE, MIN. HT.=3'-0" DESIGNED ACCORDING TO A.S.T.M. C-478



SECTIONAL DETAIL

(MANHOLE WITH BASE UNIT OF D= 48")



SECTIONAL DETAIL
REDUCER SLAB

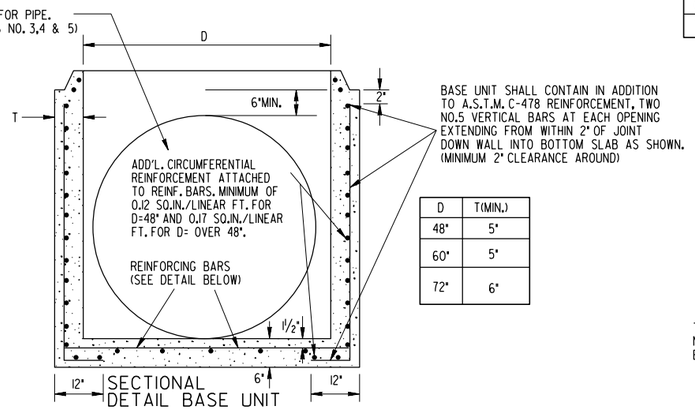
REDUCER SLAB - REINF. AND DIMENSIONS							
D	Y MIN.	(a) BARS		(b) BARS		(c) BARS	
		NO.	SIZE	NO.	SIZE	NO.	SIZE
60"	8"	2	#6	4	#6	2	#6
72"	9"	2	#6	6	#6	4	#6

NOTE:
10 FT. MAXIMUM ALLOWANCE COVER ABOVE TOP OF REDUCER SLABS. REDUCER CONES TO BE USED WHERE REDUCER SLABS NOT PERMITTED.

D= INSIDE DIAMETER OF BASE UNIT

NOTE:
25 FT. MAXIMUM ALLOWABLE COVER ABOVE REDUCER CONE.

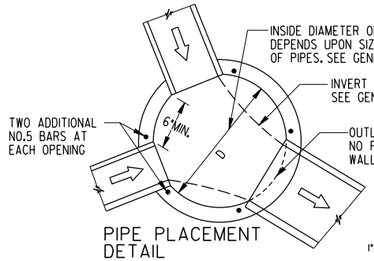
D	X(MIN)	Z(MIN)
60"	1'-6"	5"
72"	3'-0"	6"



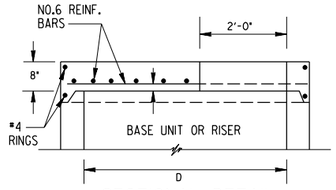
SECTIONAL DETAIL BASE UNIT

BASE UNIT SHALL CONTAIN IN ADDITION TO A.S.T.M. C-478 REINFORCEMENT, TWO NO.5 VERTICAL BARS AT EACH OPENING EXTENDING FROM WITHIN 2" OF JOINT DOWN WALL INTO BOTTOM SLAB AS SHOWN. (MINIMUM 2" CLEARANCE AROUND)

D	T(MIN.)
48"	5"
60"	5"
72"	6"



PIPE PLACEMENT DETAIL



SECTIONAL DETAIL

GENERAL NOTES:

1. MATERIALS: ALL CONCRETE, STEEL BARS AND STEEL WIRE REINFORCEMENT SHALL COMPLY WITH SECTION 866.02 OF GEORGIA STANDARD SPECIFICATIONS AND SPECIAL PROVISION WHICH MODIFY SECTION 866.02.

2. REINFORCEMENT:
   (A) PLACEMENT AND DESIGN OF STEEL REINFORCEMENT IN RISER UNITS, CONE SECTIONS, GRADE RINGS AND JOINTS SHALL BE IN COMPLIANCE WITH A.S.T.M. C-478 UNLESS OTHERWISE NOTED.
   (B) BASE UNITS, REDUCER SLABS AND FLAT TOP SLABS SHALL HAVE STEEL REINFORCEMENT AS SHOWN IN DETAILS AT LEFT.

3. OPENINGS FOR PIPES LARGER THAN 6 INCHES IN DIAMETER ARE TO BE PRECAST. A MINIMUM OF 6" ALONG THE INTERCIRCUMFERENCE IS TO REMAIN BETWEEN THE EXTREMITIES OF HOLE FOR ADJACENT PIPE IN ANY SINGLE UNIT. A MINIMUM OF TWO REINF. BARS SHALL REMAIN IN WALL BETWEEN ANY TWO OPENINGS.

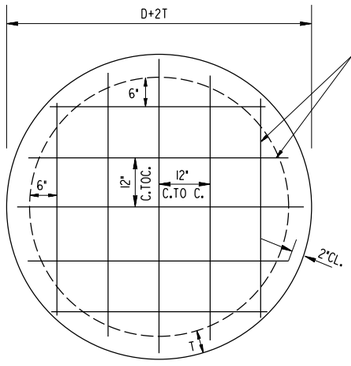
4. THE CONTRACTOR WILL FURNISH THE FABRICATOR WITH THE ANGLE OF ALIGNMENT AND SIZE OF ALL PIPES TO ENTER MANHOLE AND THE HEIGHT OF STRUCTURE.

5. BASE UNITS SHALL HAVE SUFFICIENT HEIGHT TO ALLOW FOR MINIMUM OF 6" OF WALL BETWEEN TOP OF HIGHEST OPENING FOR PIPES AND BOTTOM OF JOINT.

6. INVERT CHANNELS:
   (A) FOR SANITARY SEWER MANHOLES SEE GEORGIA STANDARD SPECIFICATIONS FOR CHANNEL REQUIREMENTS.
   (B) FOR STORM SEWER MANHOLES, CHANNELS BUILT TO SUIT PIPE SIZE AND LOCATION. HEIGHT OF CHANNEL EQUAL TO ½ DIAMETER OF OUTLET PIPE, CHANNEL BUILT FROM GROUT OR CLASS "A" CONCRETE.

7. PIPES ARE TO BE EXTENDED INTO STRUCTURE WALL A MINIMUM OF 4" BUT SHOULD NOT EXTEND BEYOND INTERIOR WALL OF STRUCTURE.

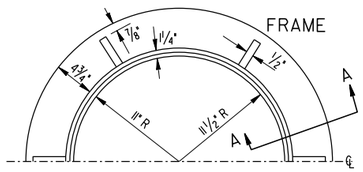
8. ALL JOINTS, EXCEPT FOR GRADE RINGS AND TOP OF TOP CONE, SHALL HAVE TONGUE AND GROOVE SECTION.



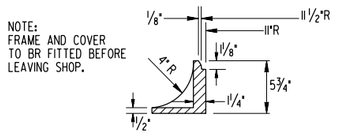
PLAN OF STEEL REINFORCEMENT IN BOTTOM SLAB

BASE UNIT

D	BAR SIZE
48"	#5
60"	#6
72"	#6

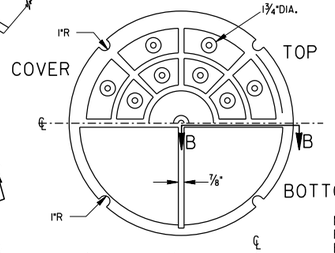


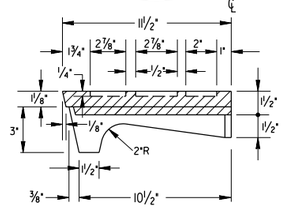
APPROX. WEIGHTS: FRAME - 200 LBS.
COVER - 135 LBS.



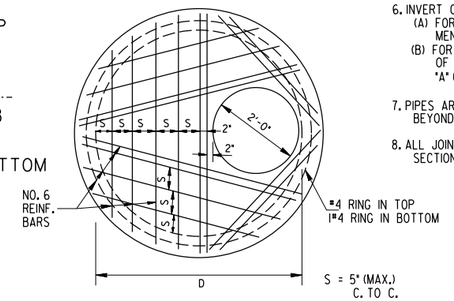
NOTE:
FRAME AND COVER TO BR FITTED BEFORE LEAVING SHOP.

SECTION A-A





SECTION B-B



PLAN OF REINFORCING STEEL

FLAT TOP SLAB IS FOR USE IN AREA OF MINIMUM COVER ONLY. MAXIMUM HEIGHT OF MANHOLE WITH FLAT TOP SLAB SHALL BE 4FT. ABOVE TOP OF HIGHEST ENTERING PIPE.

FLAT TOP SLAB

MANHOLE CASTINGS (C.I.)

BY	DATE	REVISION
R.M.U.	6-1-75	CASTINGS & BASE U.

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

STANDARD
PRECAST REINFORCED CONCRETE MANHOLES

NOT TO SCALE | REDRAWN JULY 2024 | AUGUST 1973

DESIGNED G.C.L. R.M.U.
DRAWN R.M.U.
CHECHED J.R.C.

(SUBMITTED) STATE ROAD DESIGN ENGINEER

(APPROVED) STATE HIGHWAY ENGINEER

NUMBER 1011A PRECAST