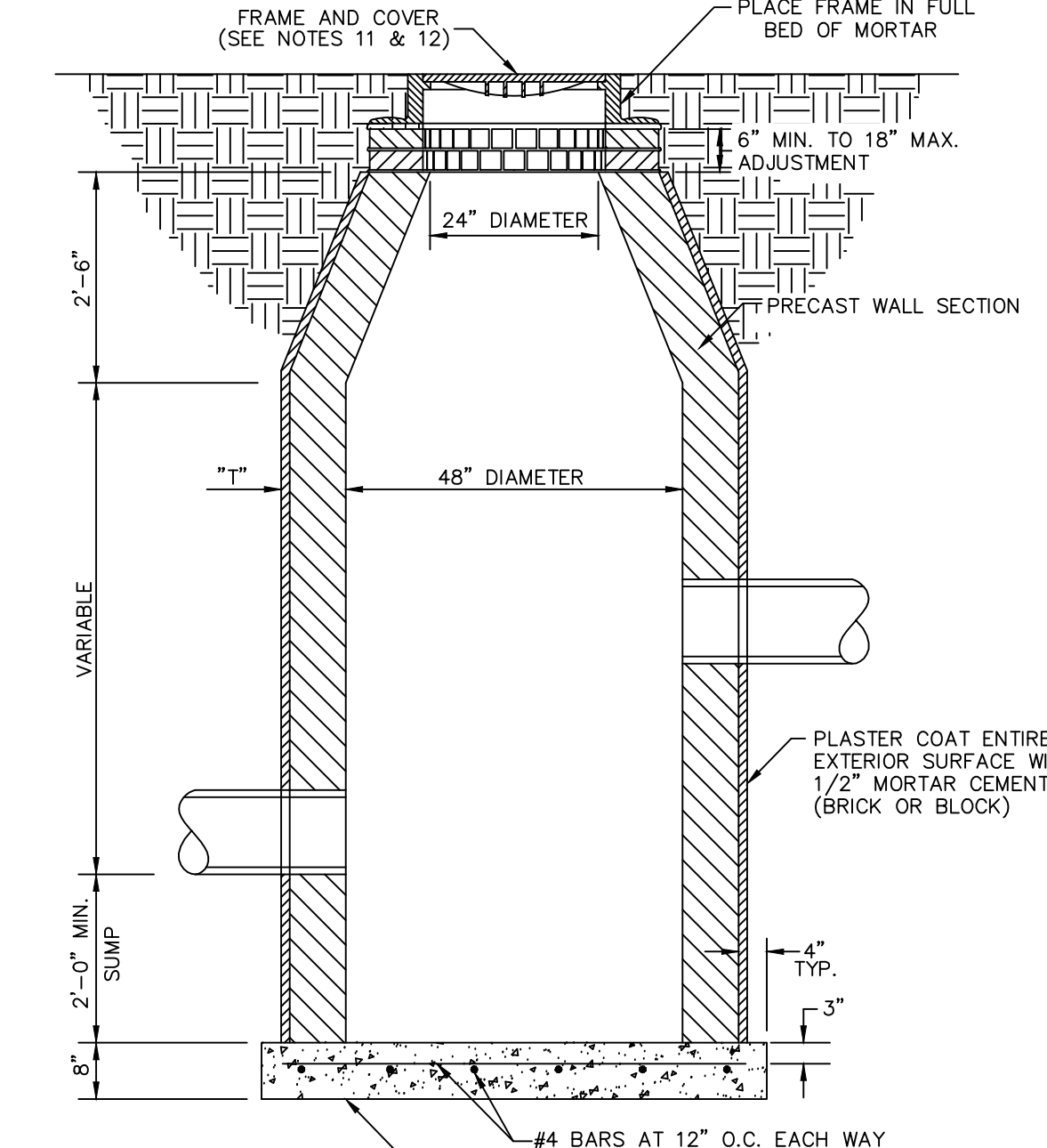
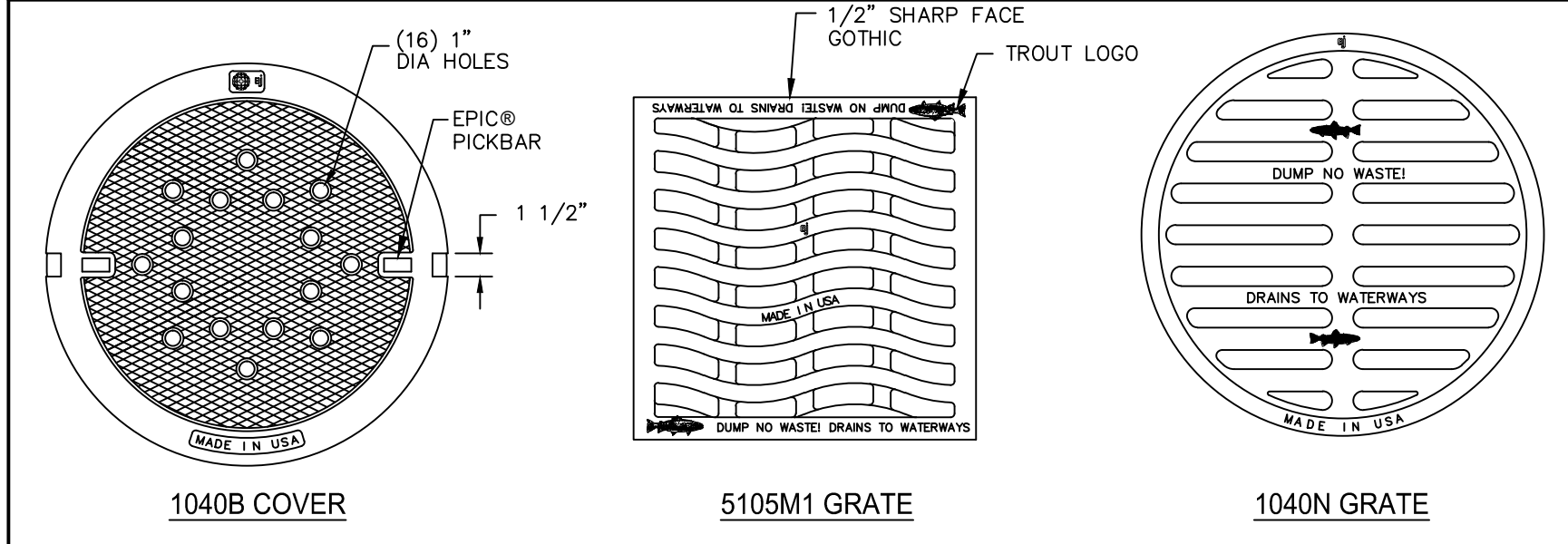


GENERAL STORM SEWER NOTES

- AT LEAST THREE WORKING DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL GIVE NOTIFICATION OF HIS INTENTION TO BEGIN CONSTRUCTION TO THE TOWNSHIP, THE OFFICE OF THE PUBLIC WORKS COMMISSIONER AND THE COUNTY ROAD COMMISSION, WHEN NEEDED.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING, AT A TIME AND PLACE AS ARRANGED BY THE OWNER OR THE MUNICIPAL ENGINEER, AT WHICH VARIOUS UTILITY COMPANIES AND GOVERNMENTAL AGENCY REPRESENTATIVES WILL BE PRESENT.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR MUST HAVE IN HIS POSSESSION A COPY OF A VALID PERMIT TO CONSTRUCT A CONNECTION TO, OR AN EXTENSION OF, THE STORM WATER DRAINAGE SYSTEM.
- THE CONTRACTOR SHALL SECURE PERMITS FROM THE OFFICE OF THE PUBLIC WORKS COMMISSIONER FOR TAPS AND CROSSINGS OF COUNTY DRAINS AND SHALL PAY THE COSTS OF SAID PERMITS AND THE COST OF ANY INSPECTION CHARGES BY THAT AGENCY FOR WORK DONE UNDER THE PERMITS.
- PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL TELEPHONE MISS DIG(800-482-7171) OR DIAL 811 FOR THE LOCATION OF UNDERGROUND FACILITIES, AND SHALL ALSO NOTIFY REPRESENTATIVES OF ANY OTHER FACILITIES, LOCATED IN THE VICINITY OF THE WORK, WHICH MAY NOT BE HANDLED BY MISS DIG.
- ALL STORM WATER DRAINAGE SYSTEM CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE TOWNSHIP, COUNTY ROAD COMMISSION AND/OR THE OFFICE OF THE PUBLIC WORKS COMMISSIONER, MDEQ OR AGENCY WITH JURISDICTION AS REQUIRED.
- ALL REINFORCED CONCRETE SEWER PIPE SHALL CONFORM TO ASTM SPECIFICATION C-76 WITH CLASS DESIGNATION ON PLANS. CLASS II OR LOWER SHOULD NOT BE ALLOWED.
- UNLESS OTHERWISE INDICATED ON THE PLANS, ALL STORM SEWER BEDDING SHALL BE STANDARD BEDDING.
- ALL WYES AND BUILDING SERVICE CONNECTIONS SHALL BE 3" POLYVINYL CHLORIDE (PVC) SEWER PIPE D3033 OR D3034-3.
- ALL WYES MUST GO TO STORM STRUCTURE.
- UNLESS OTHERWISE NOTED ON THE PLANS, STRUCTURE FRAME AND COVERS SHALL BE AS FOLLOWS:
 - A. MANHOLE (N ROAD R.O.W.) E.J. 1040B WITH PERFORATED COVER
 - B. MANHOLE (OTHER THAN IN ROAD R.O.W.) E.J. 1040B WITH PERFORATED COVER
 - C. CATCH BASIN OR INLET (PAVEMENT TYPE) E.J. 5105M1 WITH SINUSOIDAL GRATE
 - D. CATCH BASIN (YARD TYPE) OR SIDE INLET E.J. 1040N WITH OVAL GRATE HAVING A RISE ABOVE THE FRAME OF 2 1/2".
- ALL CATCH BASIN AND INLET COVERS SHALL HAVE "DUMP NO WASTE!" LETTERING AND TROUT IMAGE.
- ALL STORM SEWER JOINTS SHALL BE MODIFIED GROOVED TONGUE WITH RUBBER GASKET.
- AS PART OF THE FINAL INSPECTION, THE CONTRACTOR SHALL PROVIDE FOR TELEVISION INSPECTION OF THE STORM SEWER LINES IN ACCORDANCE WITH THE CURRENT DETAILED SPECIFICATIONS OF THE TOWNSHIP.
- ALL MANHOLES NEED TO BE CHANNLED.
- NORMAL INSPECTION WILL BE DONE BY THE MUNICIPAL SEWER DEPARTMENT AT THE OWNER'S EXPENSE. HOWEVER, OVERTIME (OVER 8 HOURS A DAY) OR SATURDAY INSPECTION COST (COMPUTED AT 2.25 TIMES THE INSPECTOR'S PAYROLL), OR HOLIDAY & SUNDAY INSPECTION COST (COMPUTED AT 3 TIMES THE INSPECTOR'S PAYROLL) INCURRED BY REASON OF OVERTIME WORK SHALL BE PAID BY THE CONTRACTOR.
- STORM SEWER PIPES, LEADS AND STRUCTURES MUST BE "MADE IN USA."

SPECIAL CATCH BASIN NOTES:

- DIAMETER OF "YARD" CATCH BASIN MAY BE REDUCED TO 36" PROVIDED THERE IS ONLY ONE (1) PIPE IN THE STRUCTURE AND THE DISTANCE TO THE OUTLET MANHOLE IS LESS THAN 150 FEET.
- CATCH BASIN MUST DISCHARGE INTO MANHOLES AND NOT INTO OTHER CATCH BASINS, EXCEPT:
 - A. WHERE CATCH BASIN IS A "YARD" TYPE WITH NOT MORE THAN THREE (3) CATCH BASINS DISCHARGING INTO IT.
 - B. WHERE CATCH BASIN IS A "PAVEMENT TYPE" DISCHARGING INTO ANOTHER CATCH BASIN LOCATED WITHIN 75 FEET.
- STEPS SHALL BE PLACED IN ALL 48" DIAMETER STRUCTURES MORE THAN 4' DEEP.
- ALL BACKFILL AROUND THE STRUCTURE SHALL BE 1/4" TO 3/4" ANGULAR STONE UP TO THE SPRINGLINE OF THE HIGHEST PIPE. THE REMAINING BACKFILL (TO GRADE) SHALL BE SAND COMPACTED IN 12" LIFTS.

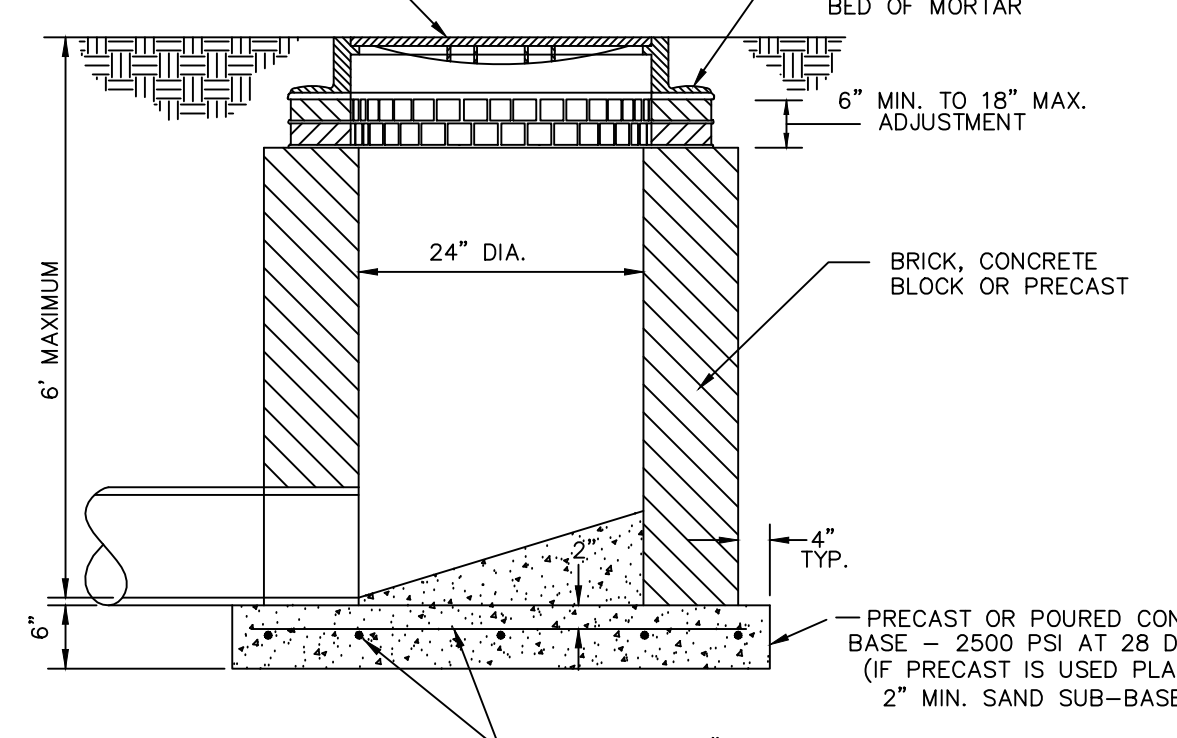


WALL THICKNESS "T"	DEPTH	BRICK	PRECAST OR BLOCK
0'-10"	8"	6"	6"
10'-16"	12"	8"	8"

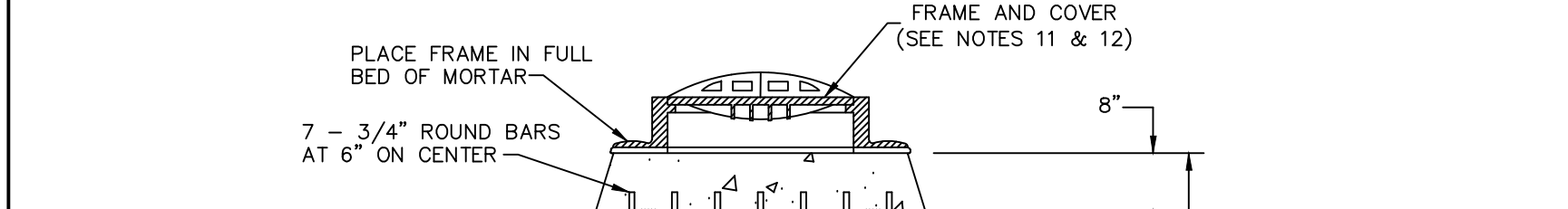
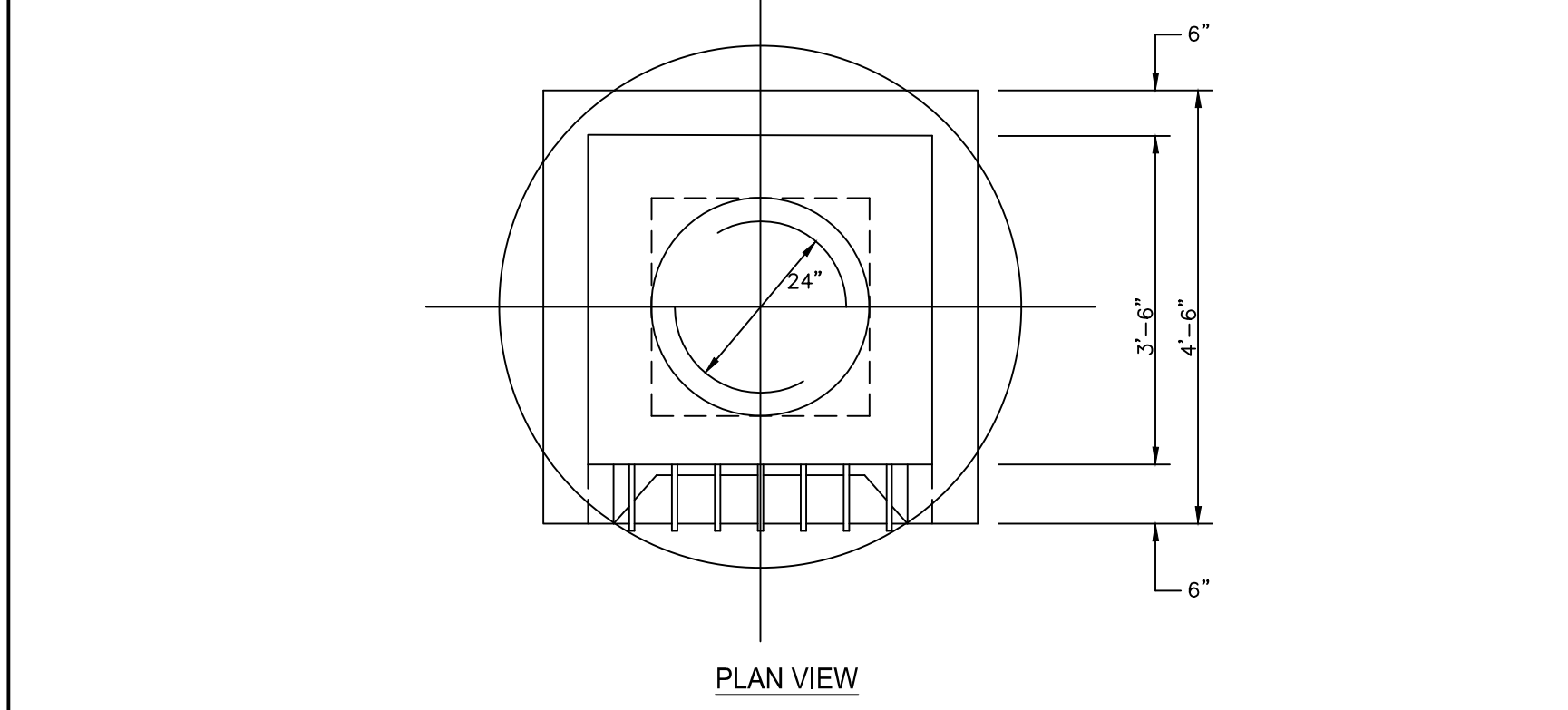
STORM SEWER CATCH BASIN
NOT TO SCALE

SPECIAL INLET NOTES:

- INLET SHALL NOT BE USED FOR YARD DRAINAGE.
- INLET SHALL NOT BE USED IN COUNTY ROAD RIGHT-OF-WAY.
- OTHER THAN ABOVE, INLET MAY BE USED, PROVIDED:
 - A. THE INLET DISCHARGES INTO CATCH BASIN LOCATED WITHIN 75 FEET.
 - B. NOT MORE THAN ONE INLET DISCHARGES INTO A CATCH BASIN.

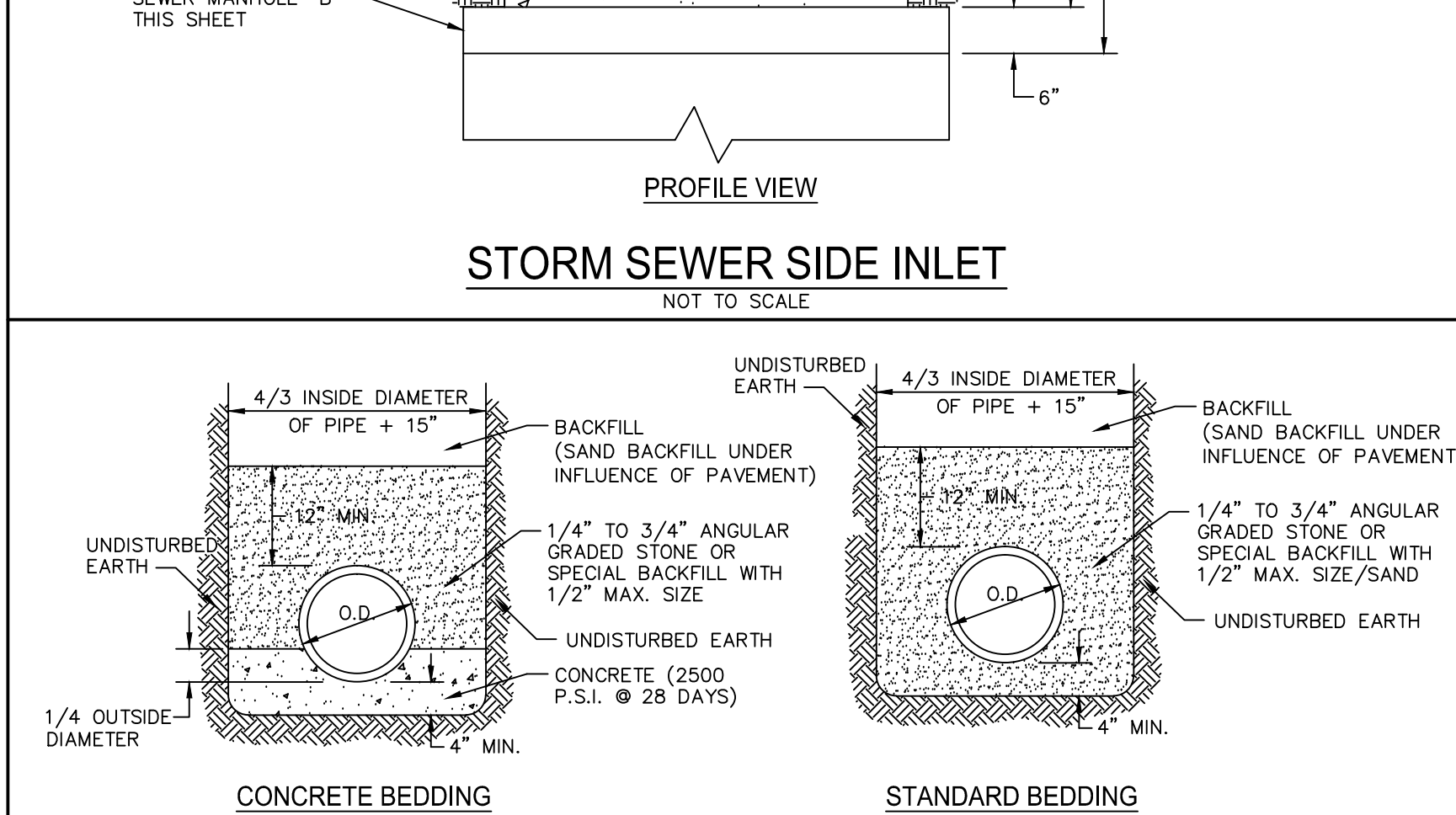


STORM SEWER INLET
NOT TO SCALE

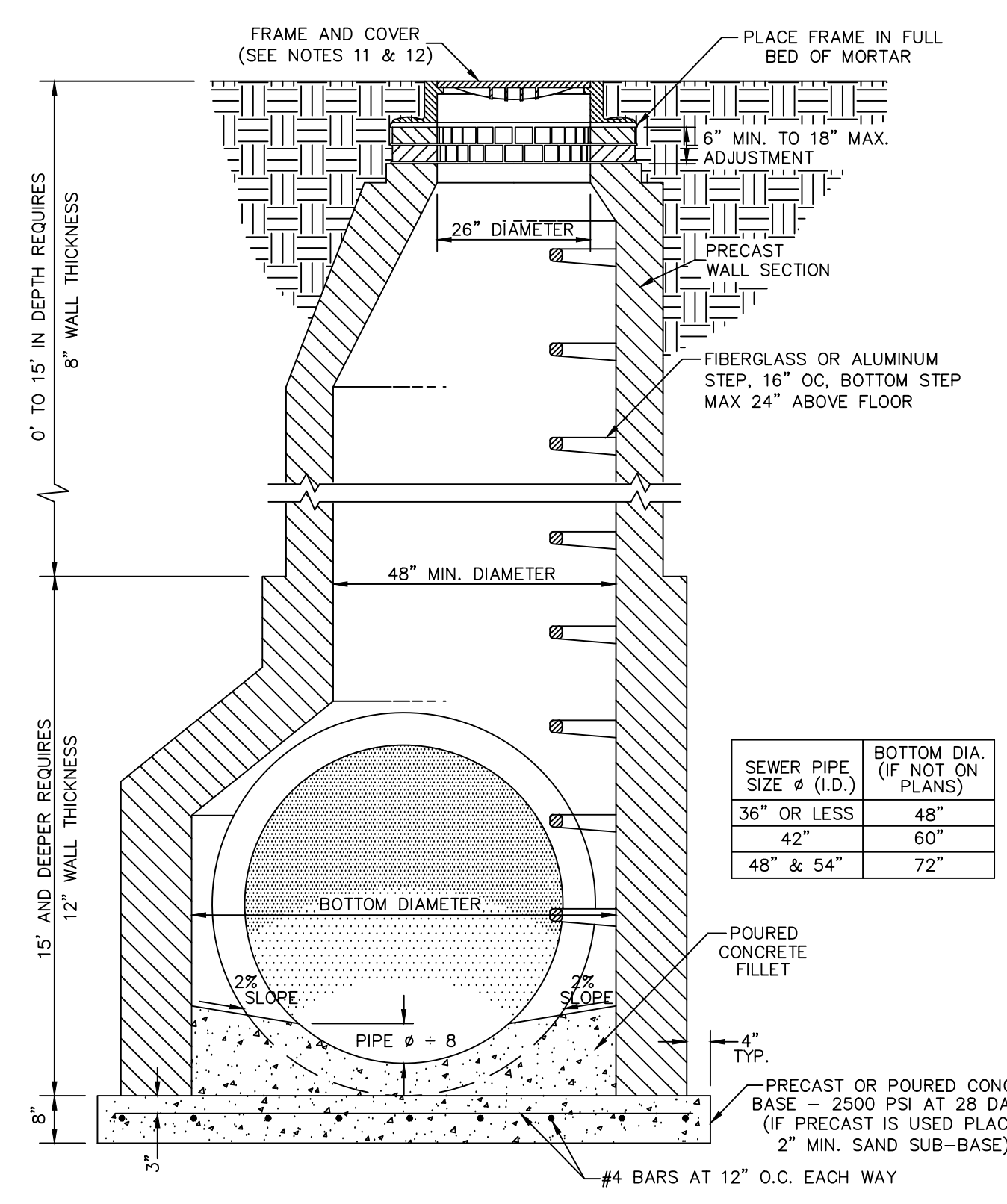


STORM SEWER SIDE INLET
NOT TO SCALE

BEDDING DETAILS

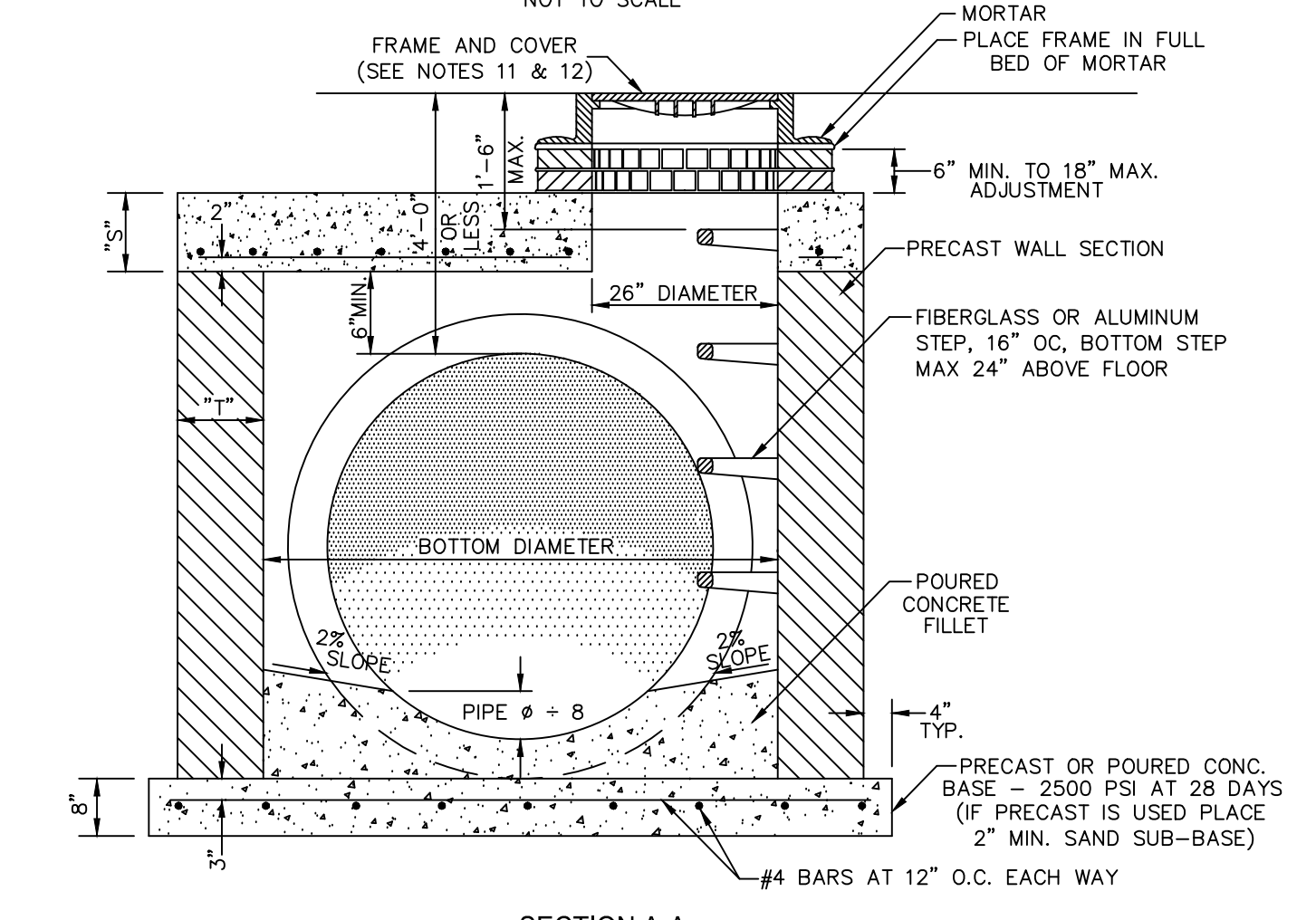
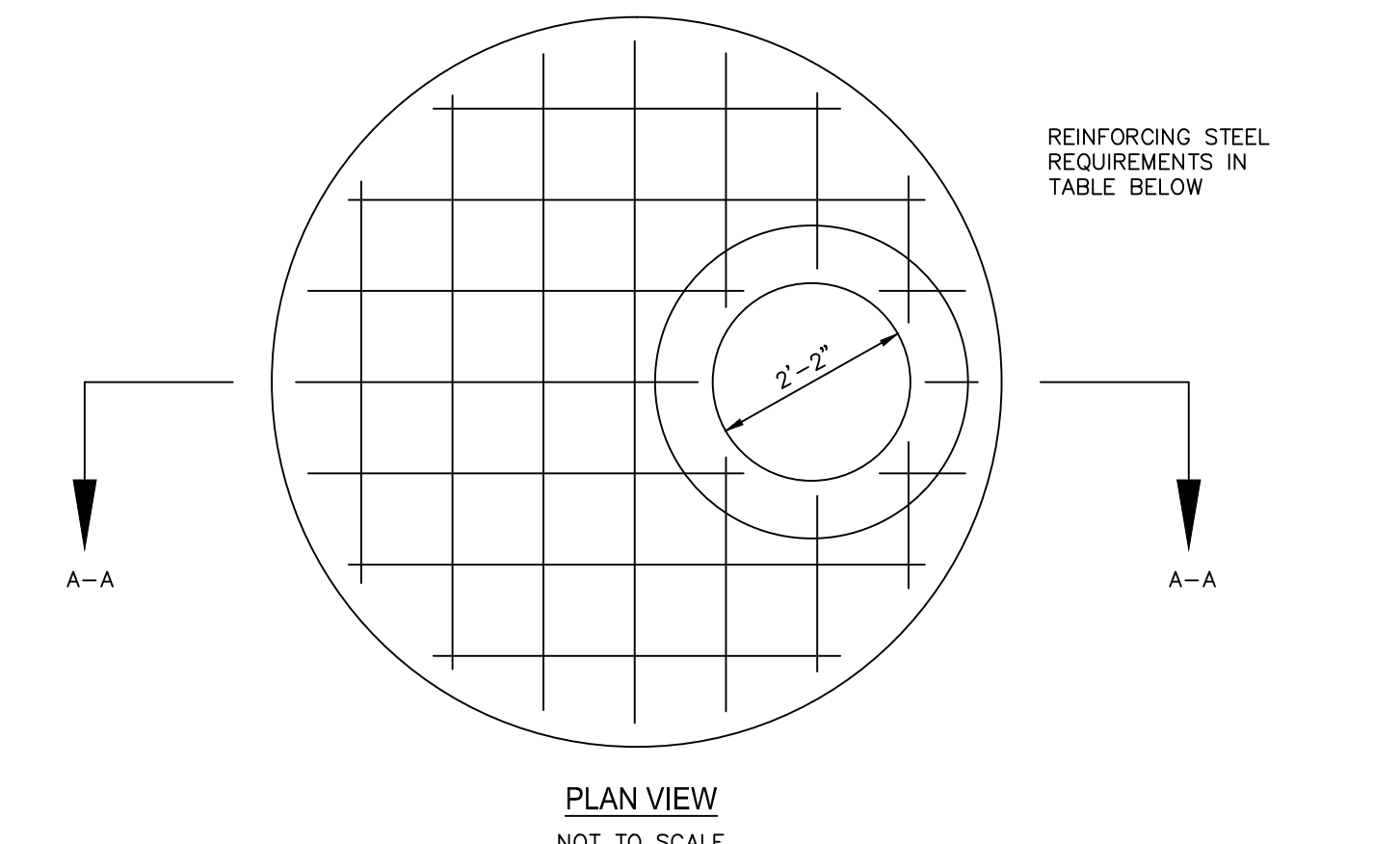


BEDDING DETAILS
NOT TO SCALE



SEWER PIPE SIZE Ø (I.D.)	BOTTOM DIA. (IF NOT ON PLANS)
36" OR LESS	48"
42"	60"
48" & 54"	72"

STORM SEWER MANHOLE "A"
NOT TO SCALE

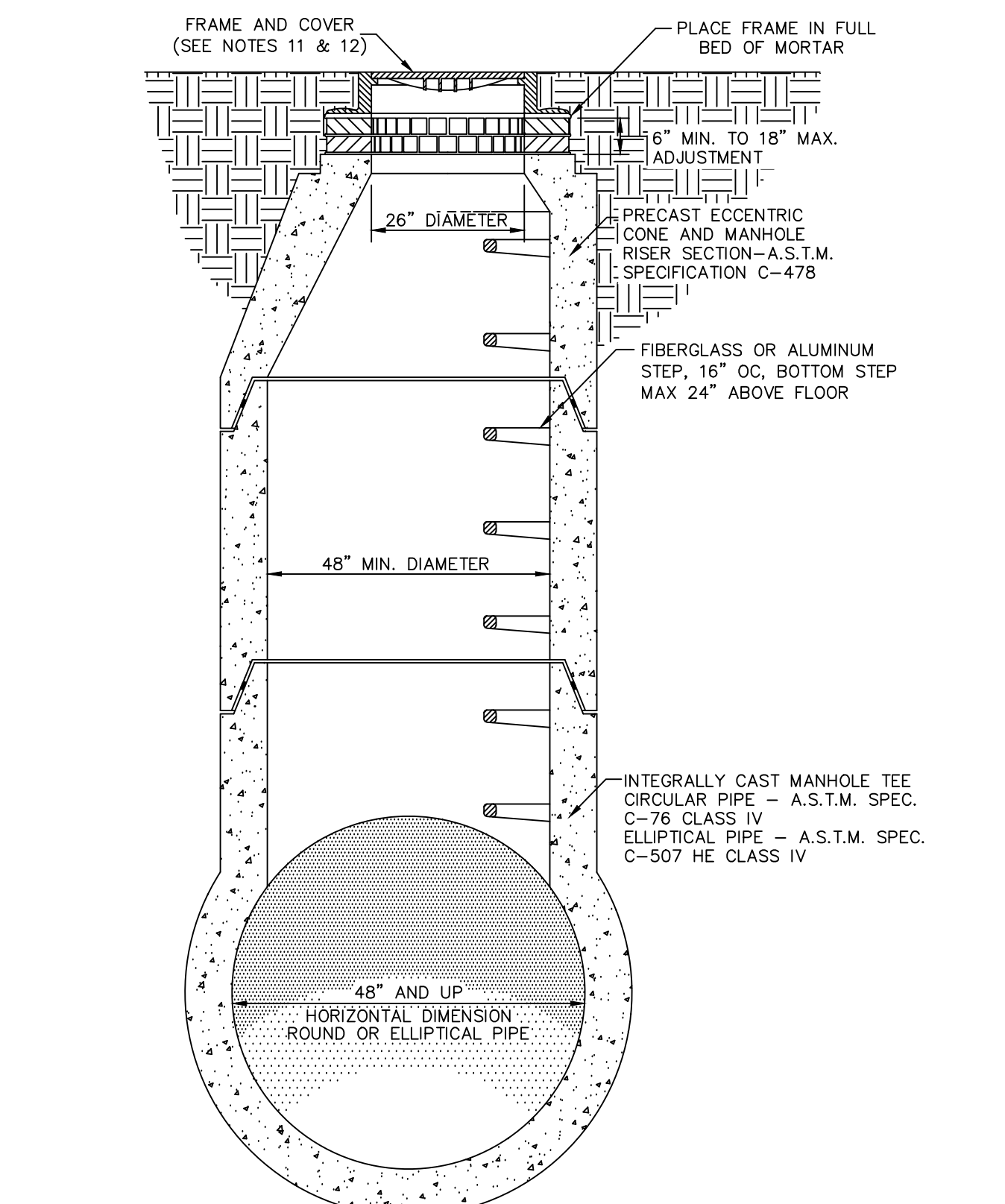


SECTION A-A
NOT TO SCALE

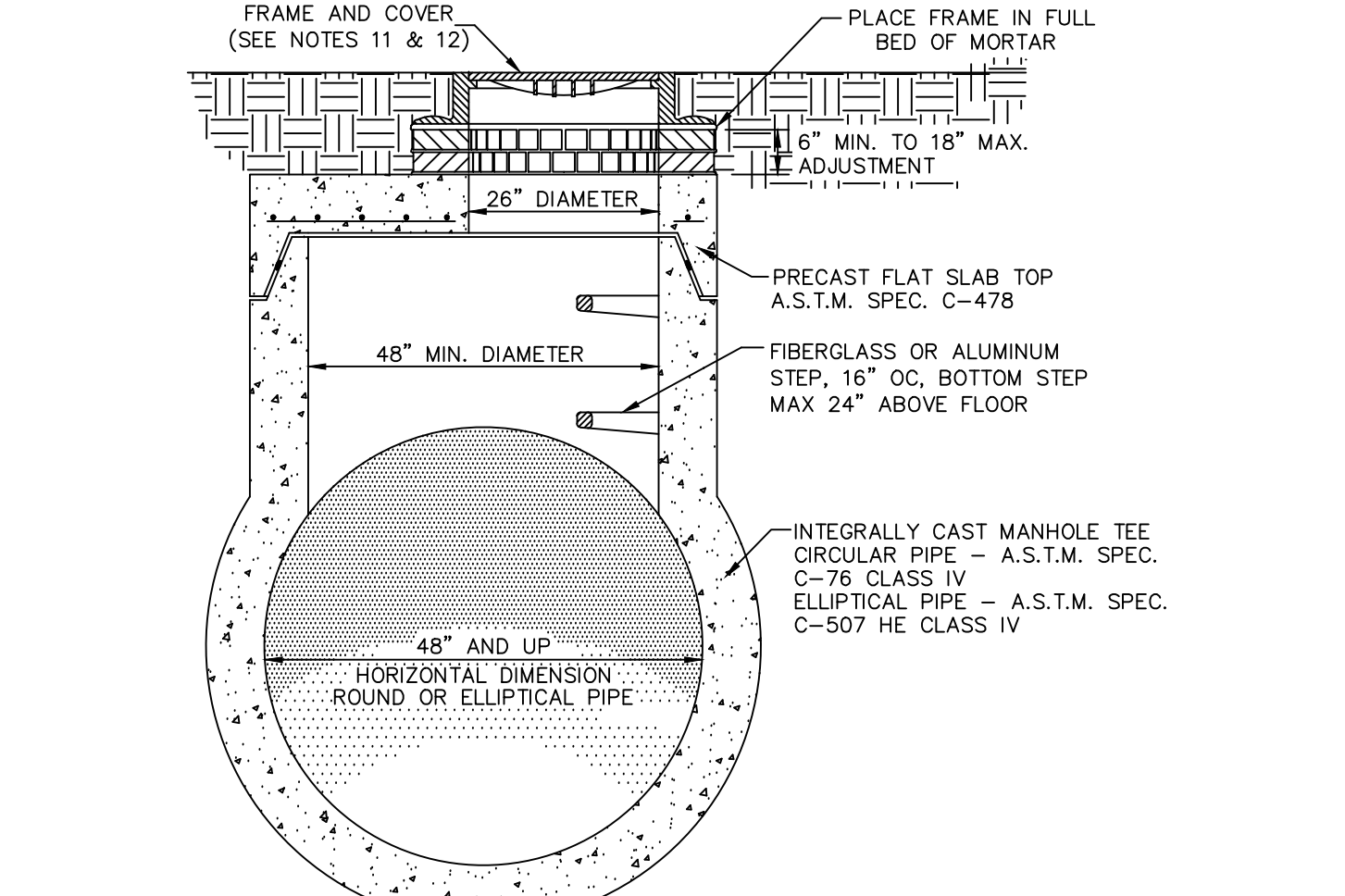
SEWER PIPE SIZE Ø (I.D.)	BOTTOM DIA. (IF NOT ON PLANS)*	TOP SLAB "S"	WALL "T"	REINFORCING STEEL
36" OR LESS	48"	9"	12"	3/4" @ 9" EA. WAY
42"	60"	10"	12"	3/4" @ 9" EA. WAY
48" & 54"	72"	11"	12"	7/8" @ 9" EA. WAY

* DIAMETER OF MANHOLE SHALL BE INCREASED AS SHOWN ON THE PLANS DEPENDING ON THE ANGLE OF THE SEWERS.

STORM SEWER MANHOLE "B"
NOT TO SCALE



STORM SEWER TEE MANHOLE "A"
NOT TO SCALE



STORM SEWER TEE MANHOLE "B"
NOT TO SCALE

DATE:	ISSUE:

Developed For:
CHARTER TOWNSHIP OF CLINTON
40700 ROMEO PLANK ROAD
CLINTON TOWNSHIP, MI 48038
(586) 286-8000

CHARTER TOWNSHIP OF CLINTON

STORM SEWER STANDARD DETAILS

CHARTER TOWNSHIP OF CLINTON
MACOMB COUNTY
MICHIGAN

Date: 07.24.2015
Scale: N.T.S.
Sheet: ST-1
Project: