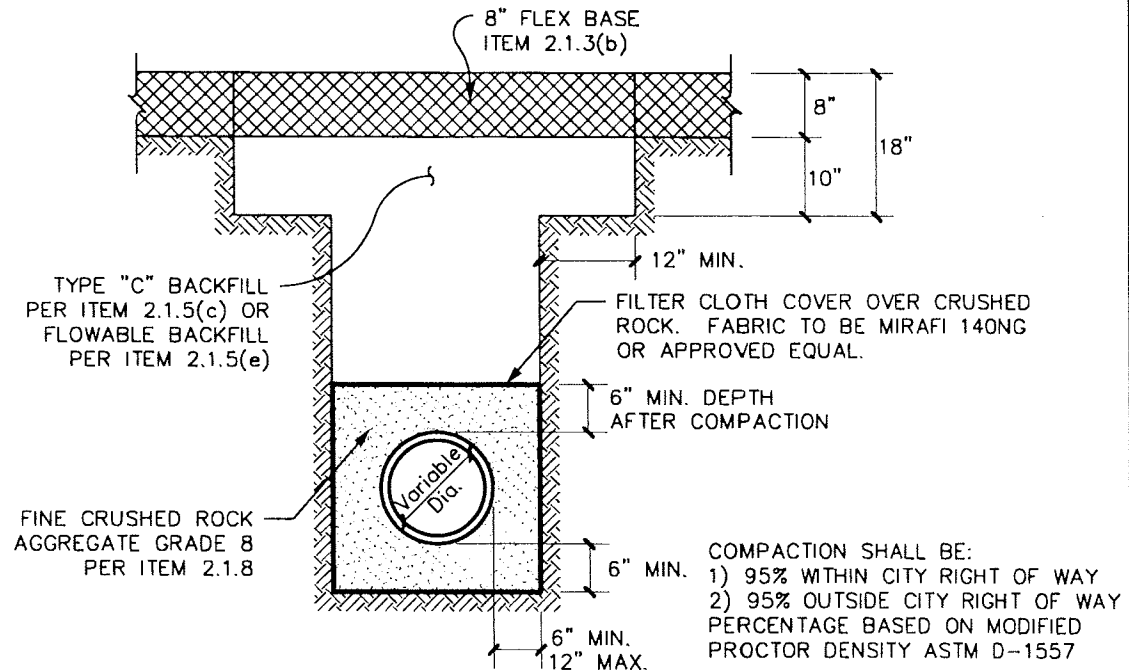


UNPAVED AND FUTURE PAVED AREAS



NOTES:

EXISTING FLEXBASE SURFACE

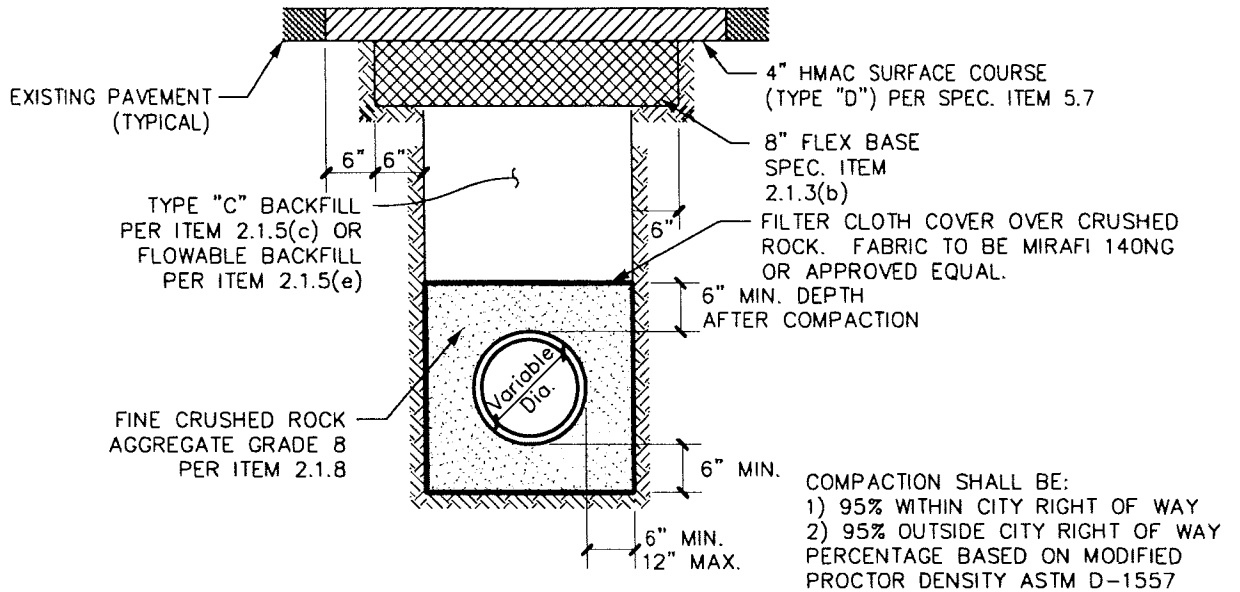
1. AT THE END OF EACH WORK DAY ALL SPOILS SHALL BE REMOVED FROM THE CITY AND TxDOT ROW UNLESS PRIOR WRITTEN PERMISSION IS OBTAINED FROM THE OWNER TO STORE SPOILS IN DESIGNATED SPOIL STORAGE AREAS THAT DO NOT OBSTRUCT AUTOMOBILE OR PEDESTRIAN TRAFFIC.
2. ALL BACKFILL SHALL BE PER SPEC ITEM 6.2 AND SHALL BE COMPACTED PER SPEC ITEM 6.2.9(b). ROCKS GREATER THAN 4" IN DIAMETER SHALL BE REMOVED FROM ANY NATIVE MATERIAL USED AS BACKFILL.
3. ALL PAVEMENT SHALL BE REMOVED ALONG NEAT SAW-CUT LINES PER SPEC ITEM 8.8.
4. COATED TRACER WIRE SHALL BE INSTALLED IN THE EMBEDMENT MATERIAL ABOVE ALL PVC PIPE.
5. A MAXIMUM OF 300 FT OF OPEN TRENCH WILL BE ALLOWED AT ANY TIME, UNLESS APPROVED BY THE CITY ENGINEER.
6. THE CONTRACTOR SHALL COMPLY WITH OSHA REGULATIONS AND STATE OF TEXAS LAWS CONCERNING EXCAVATION, TRENCHING AND SHORING.
7. IN SANDY SOILS THE CRUSHED ROCK EMBEDMENT SHALL BE WRAPPED IN A FILTER FABRIC.



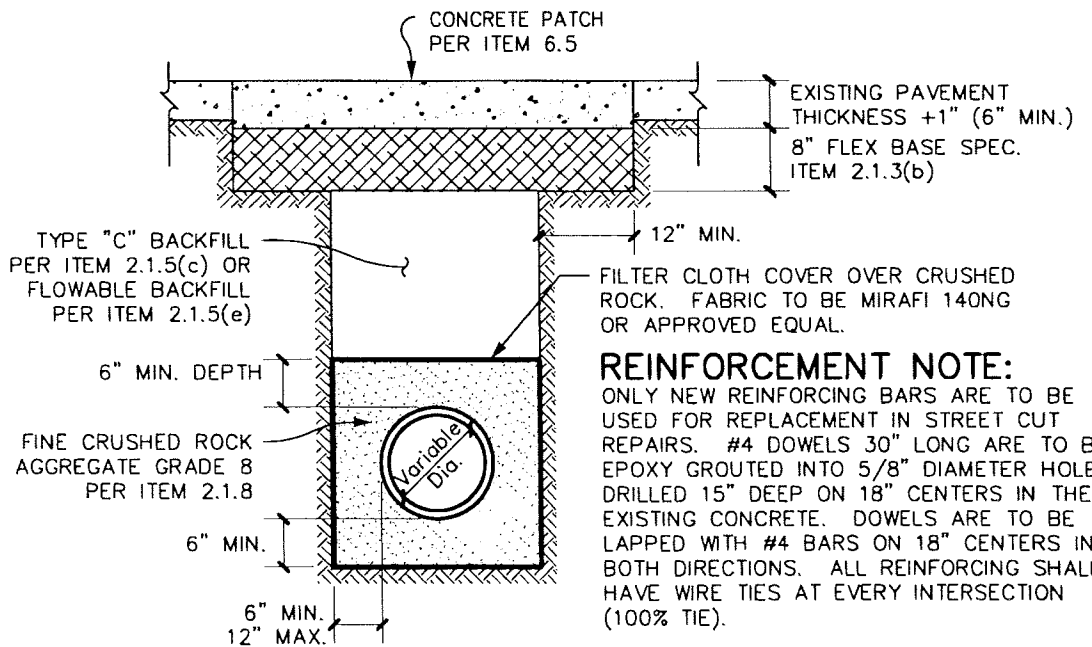
SEWER SYSTEM CONSTRUCTION DETAILS STANDARD SANITARY SEWER EMBEDMENT AND BACKFILL

REVISION DATE:
APRIL 14, 2000

SHEET: S-1A



EXISTING ASPHALT PAVEMENT



NOTES:

EXISTING CONCRETE PAVEMENT

1. AT THE END OF EACH WORK DAY ALL SPOILS SHALL BE REMOVED FROM THE CITY AND TxDOT ROW UNLESS PRIOR WRITTEN PERMISSION IS OBTAINED FROM THE OWNER TO STORE SPOILS IN DESIGNATED SPOIL STORAGE AREAS THAT DO NOT OBSTRUCT AUTOMOBILE OR PEDESTRIAN TRAFFIC.
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7. IN SANDY SOILS THE CRUSHED ROCK EMBEDMENT SHALL BE WRAPPED IN A FILTER FABRIC.

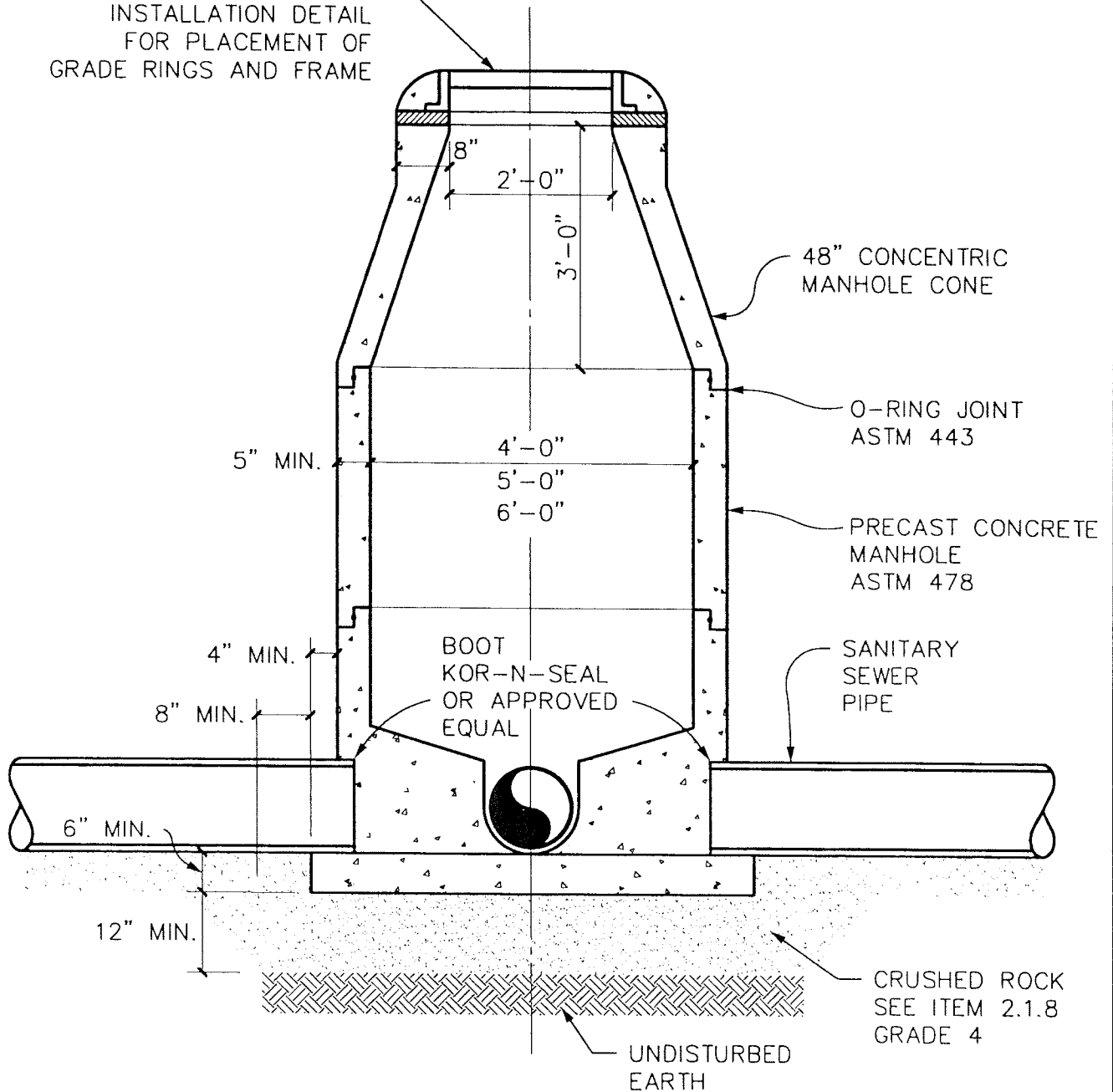


SEWER SYSTEM CONSTRUCTION DETAILS STANDARD SANITARY SEWER EMBEDMENT AND BACKFILL

REVISION DATE:
 APRIL 14, 2000

SHEET: S-1B

SEE EXTENSION RING
INSTALLATION DETAIL
FOR PLACEMENT OF
GRADE RINGS AND FRAME



NOTES:

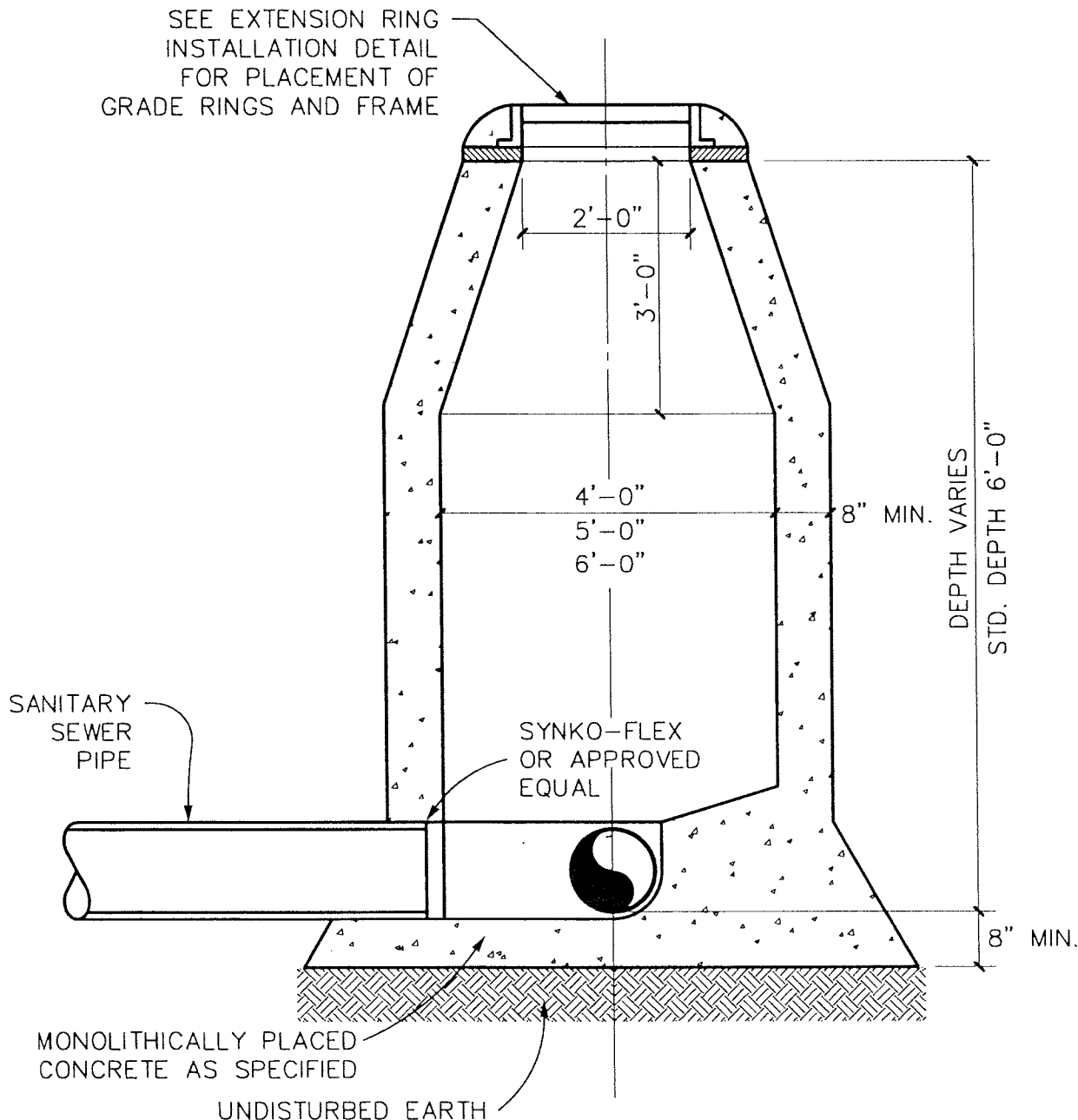
1. MAXIMUM CHIMNEY HEIGHT SHALL BE 12".
2. MANHOLES SHALL BE CONCENTRIC UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
3. TRANSITIONS TO 5' AND 6' BARREL DIAMETERS SHALL OCCUR JUST BELOW THE CONE SECTION.
4. INVERTS SHALL BE EQUAL TO OR GREATER THAN THE PIPE DIAMETER.
5. WATERSTOP GASKETS SHALL BE PALCED ON ALL PENETRATIONS OF CONCRETE.



SEWER SYSTEM CONSTRUCTION DETAILS
**PRECAST SANITARY SEWER
 MANHOLE**

REVISION DATE:
 APRIL 14, 2000

SHEET: **S-2**

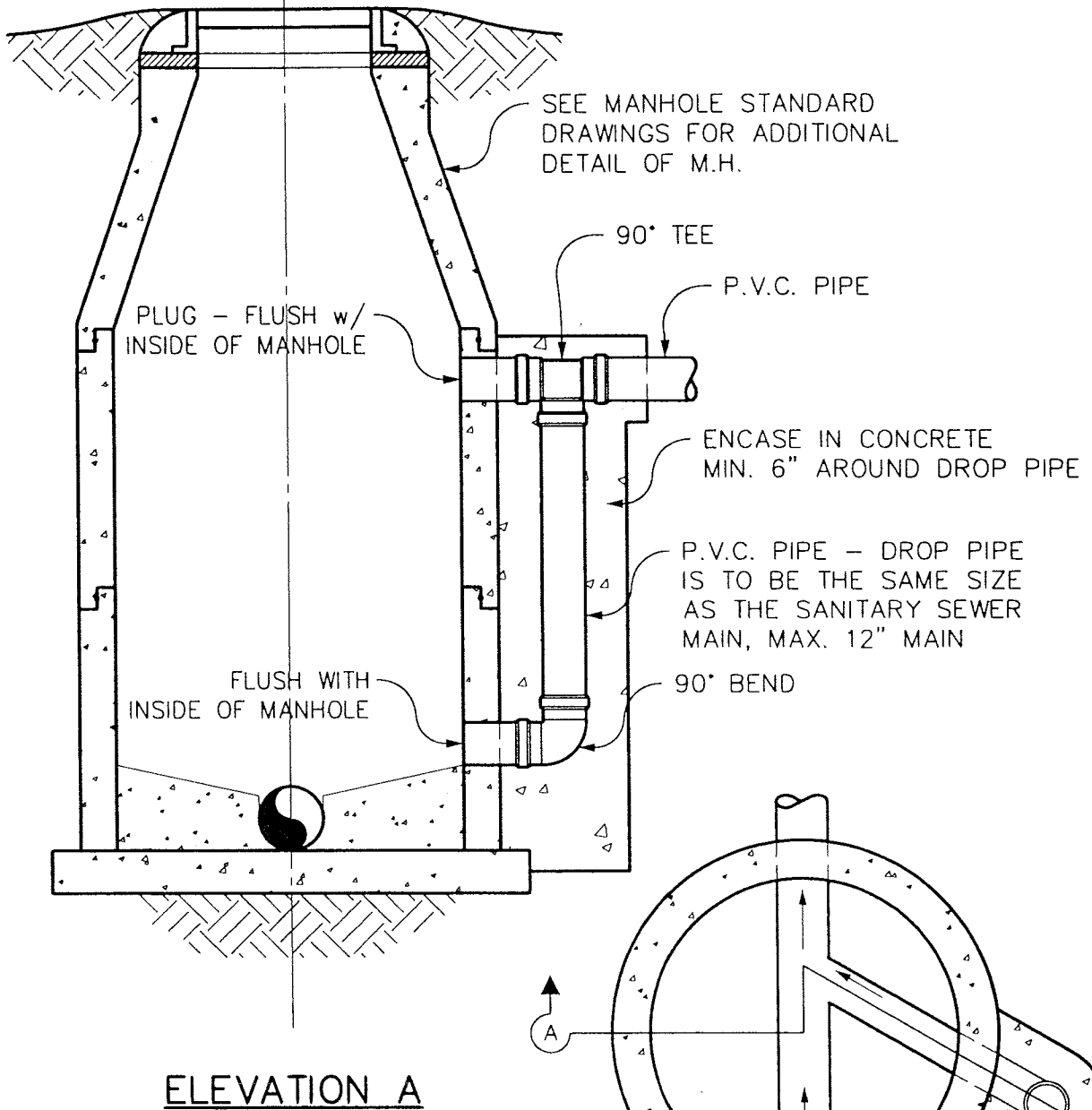


- NOTES:**
1. MAXIMUM CHIMNEY HEIGHT SHALL BE 12".
 2. MANHOLES SHALL BE CONCENTRIC UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
 3. INVERTS SHALL BE EQUAL TO OR GREATER THAN THE PIPE DIAMETER.
 4. FOR MANHOLE DEPTHS GREATER THAN 12 FEET ADD AN ADDITIONAL 4" INCHES OF CONCRETE TO THE WALL THICKNESS FOR EACH ADDITIONAL 6 FEET OF DEPTH.
 5. WATERSTOP GASKETS SHALL BE PLACED ON ALL PENETRATIONS OF CONCRETE.



SEWER SYSTEM CONSTRUCTION DETAILS
**CAST-IN-PLACE
 SANITARY SEWER MANHOLE**

REVISION DATE:
 APRIL 14, 2000
 SHEET: **S-3**



NOTES:

1. P.V.C. PIPE WITHIN MANHOLE SHALL BE SDR-35.
2. MANHOLE MAY BE EITHER PRECAST OR MONOLITHIC TYPE.
3. \bar{E} OF SURCHARGE LINE NORMALLY PLACED AT TOP OF EXISTING WASTEWATER LINE UNLESS NOTED OTHERWISE ON PLANS.



SEWER SYSTEM CONSTRUCTION DETAILS
**DROP SANITARY SEWER
 MANHOLE**

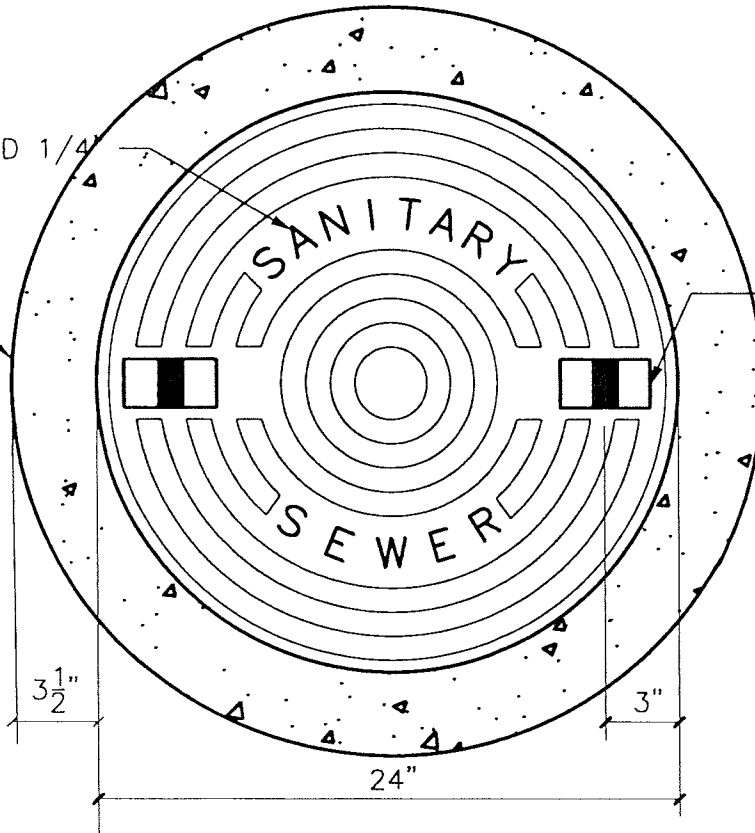
REVISION DATE:
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SHEET: **S-4**

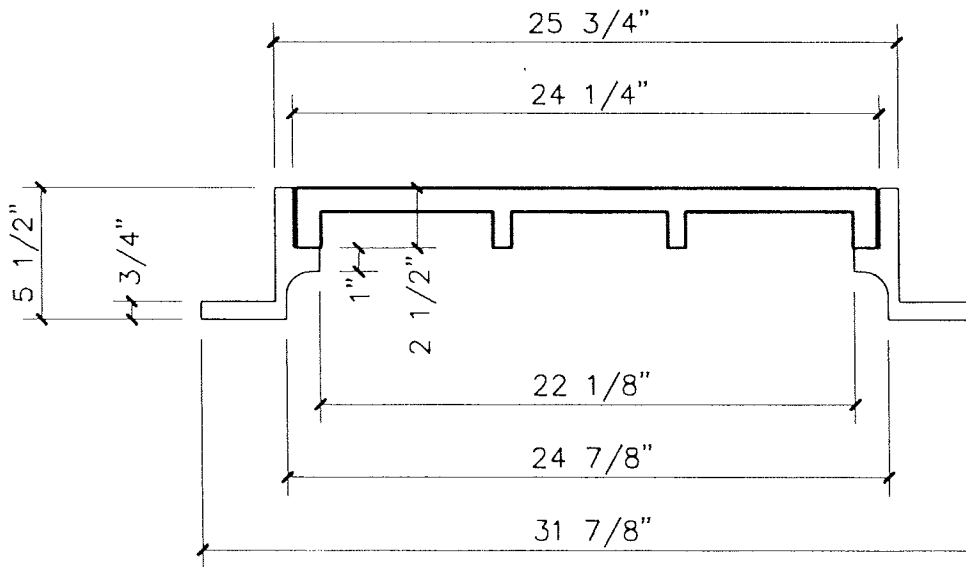
1" LETTERS RAISED 1/4"

CONCRETE RING

3 3/4" x 2" SLOTS
W/ 1" DIA. ROD
(TYP.)



COVER FACE



300 LB. X 24"
FRAME AND COVER

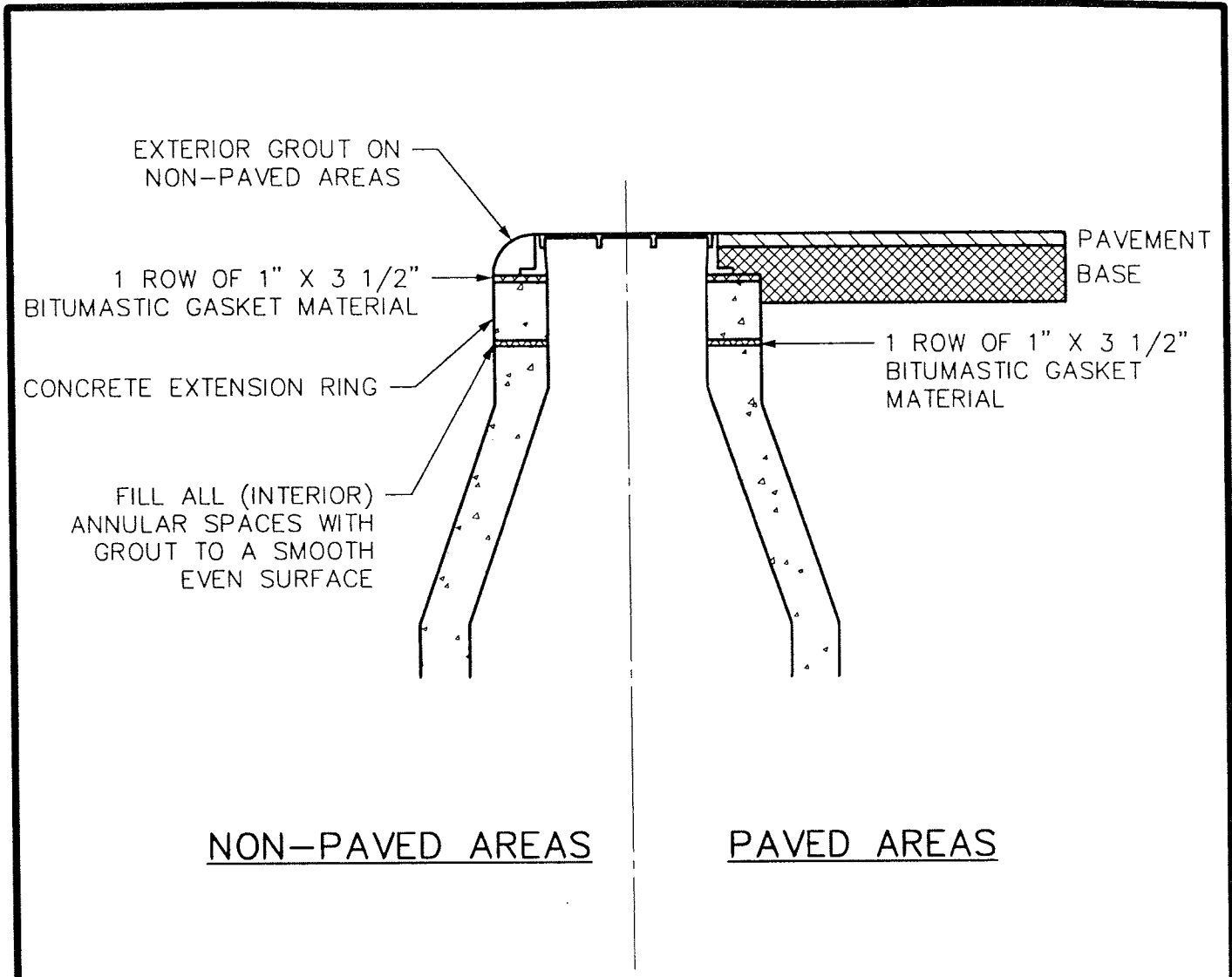


SEWER SYSTEM CONSTRUCTION DETAILS

MANHOLE FRAME AND COVER

REVISION DATE:
APRIL 14, 2000

SHEET: S-5

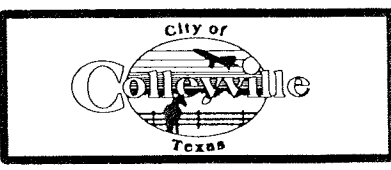


NON-PAVED AREAS

PAVED AREAS

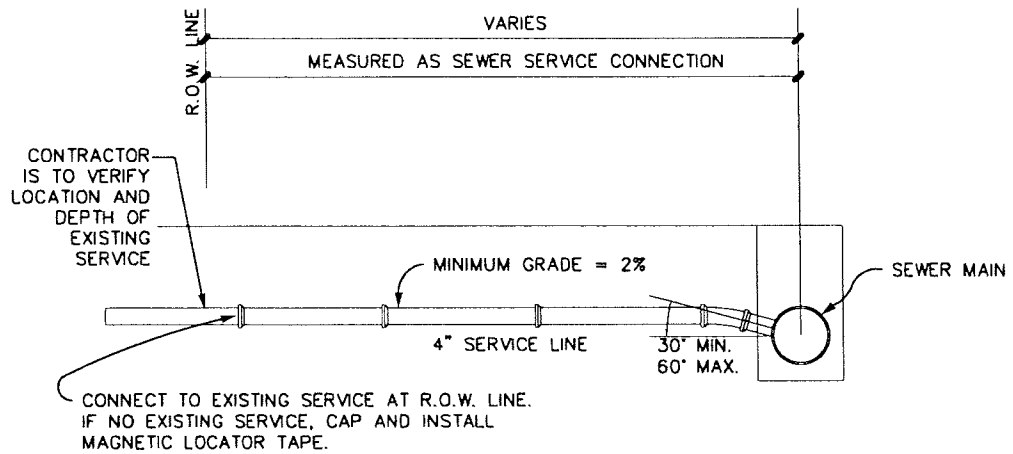
NOTES:

1. NO GAPS WILL BE ALLOWED IN BITUMASTIC GASKET.
2. THERE SHALL BE SMOOTH TRANSITION BETWEEN THE FRAME AND CONE OR GRADE RING, OR THE GRADE RING AND THE CONE.
3. CONCRETE EXTENSION RINGS MAY BE PRECAST OR CAST-IN-PLACE. BRICK EXTENSION RINGS WILL NOT BE ALLOWED.
4. STANDARD EXTENSIONS SHALL BE 2", 3", 4", 6", AND 12". EXTENSIONS SHALL BE SIZED TO MINIMIZE THE NUMBER REQUIRED TO RAISE THE MANHOLE. NO MORE THAN 1-2" EXTENSION WILL BE ALLOWED ON ANY MANHOLE.



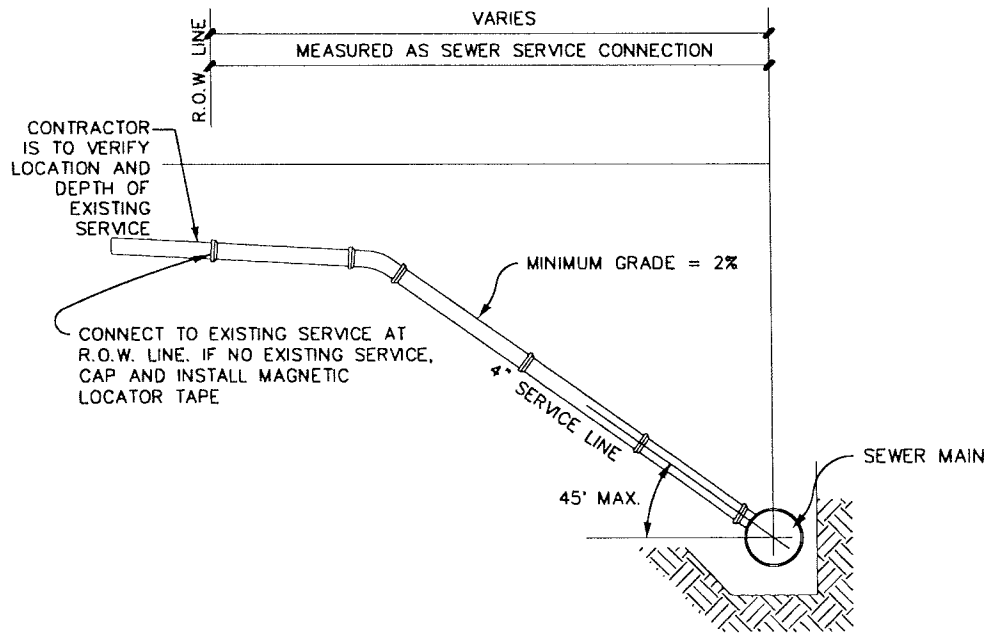
SEWER SYSTEM CONSTRUCTION DETAILS
EXTENSION RING INSTALLATION

REVISION DATE:
 APRIL 14, 2000
 SHEET: **S-6**



STANDARD SEWER CONNECTION DETAIL

NOTE: EITHER WYE FITTING OR WYE SADDLE MAY BE USED FOR CONNECTION. NO TEES WILL BE ALLOWED. ALL PIPE AND FITTINGS REQUIRED SHALL BE CONSIDERED SUBSIDIARY TO THE ITEM "SEWER SERVICE CONNECTIONS". NO DEDUCTION FROM THE LENGTH OF SEWER MAIN WILL BE MADE FOR THE LENGTH OF WYE, IF INSTALLED. CONNECTIONS TO SEWER MAINS FROM 0' TO 7' DEEP SHALL CONFORM TO THE STANDARD SEWER CONNECTION DETAIL. CONNECTIONS TO SEWER MAINS DEEPER THAN 7' SHALL CONFORM TO THE DEEP SEWER CONNECTION DETAIL. ALL CONNECTIONS SHALL BE COUNTED AS "SEWER SERVICE CONNECTIONS" REGARDLESS OF DEPTH.



DEEP SEWER CONNECTION DETAIL



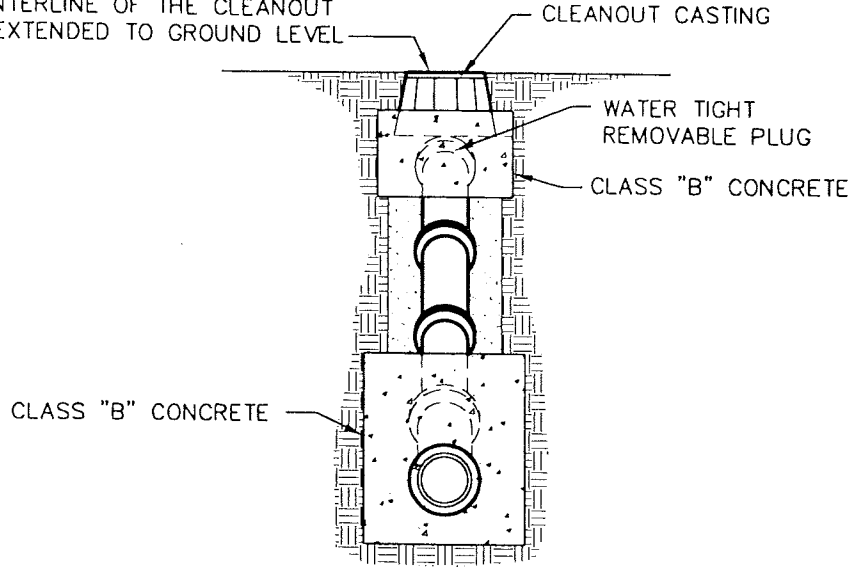
SEWER SYSTEM CONSTRUCTION DETAILS

REVISION DATE:
APRIL 14, 2000

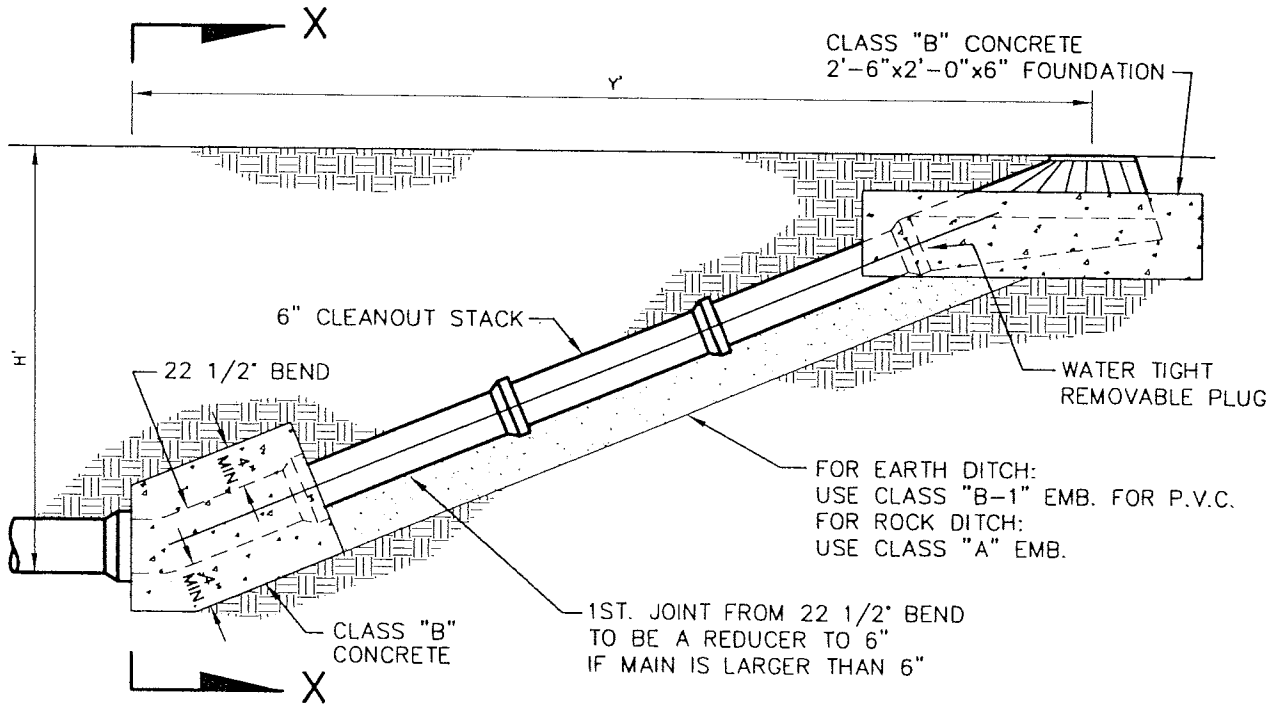
4" SANITARY SEWER SERVICE

SHEET: S-7

CLEANOUT CASTING OPENING TO BE INSTALLED CENTERED OVER THE CENTERLINE OF THE CLEANOUT STACK EXTENDED TO GROUND LEVEL



SECTION "X-X"



PROFILE VIEW

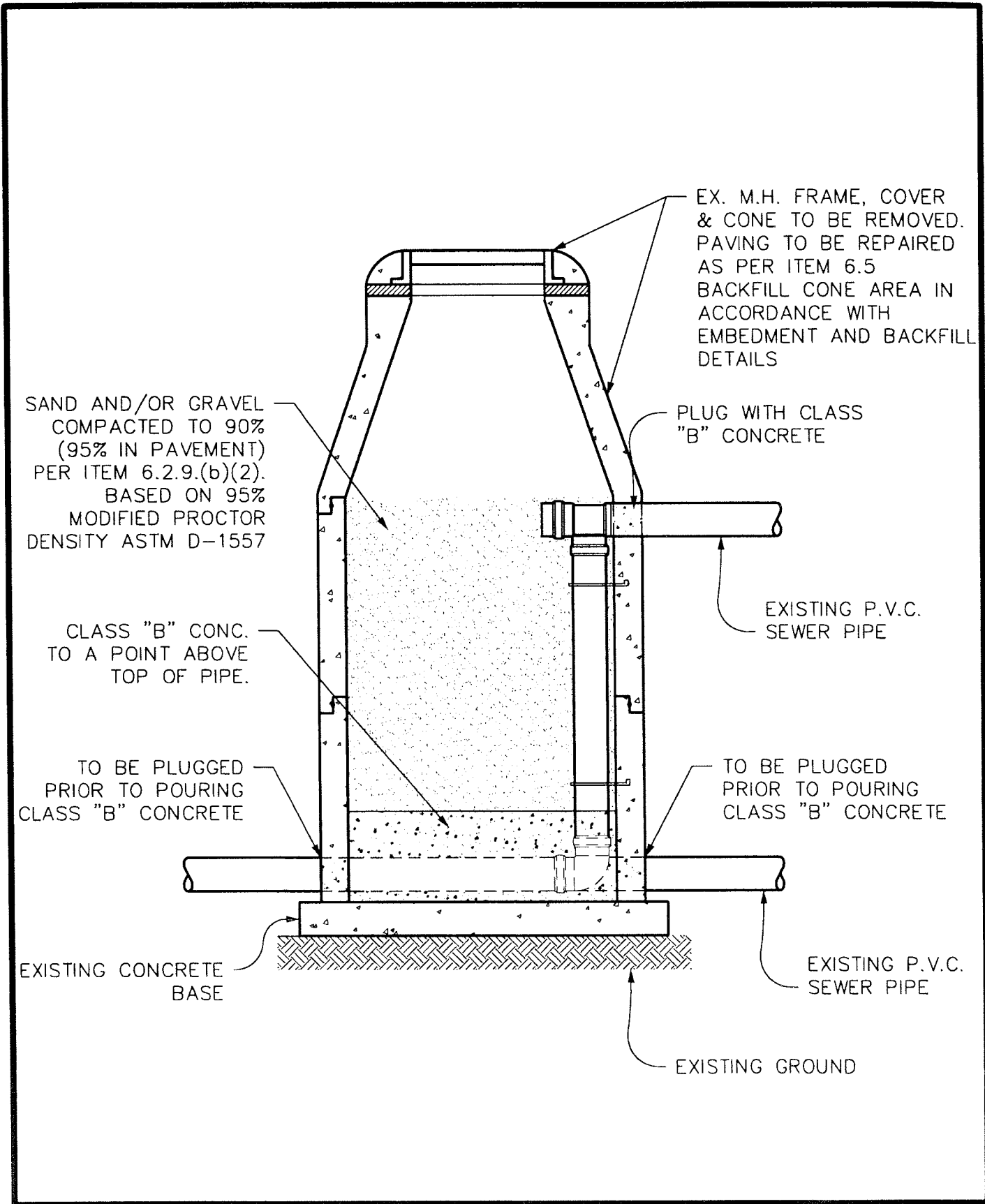
H'	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	H'
Y'	10	12	14	17	19	22	24	27	29	31	34	36	39	41	43	46	48	Y'



SEWER SYSTEM CONSTRUCTION DETAILS
**SANITARY SEWER MAIN LINE
 CLEANOUT**

REVISION DATE:
 APRIL 14, 2000

SHEET: **S-8**



SEWER SYSTEM CONSTRUCTION DETAILS
 ABANDONMENT OF EXISTING
 MANHOLE

REVISION DATE:
 APRIL 14, 2000

SHEET: **S-9**