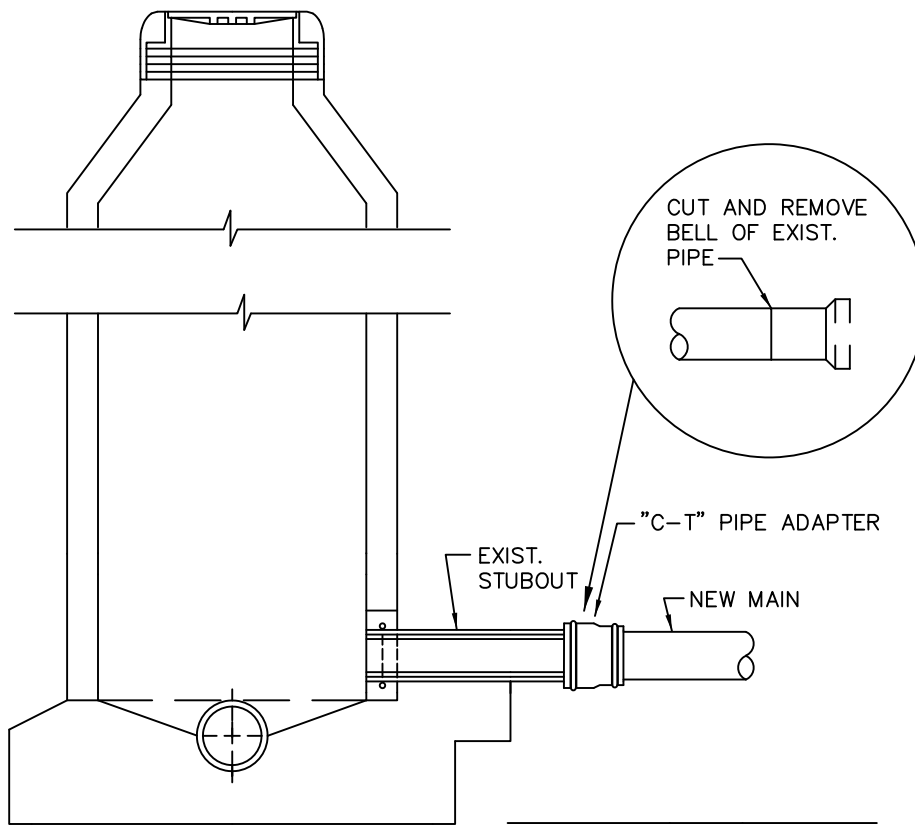
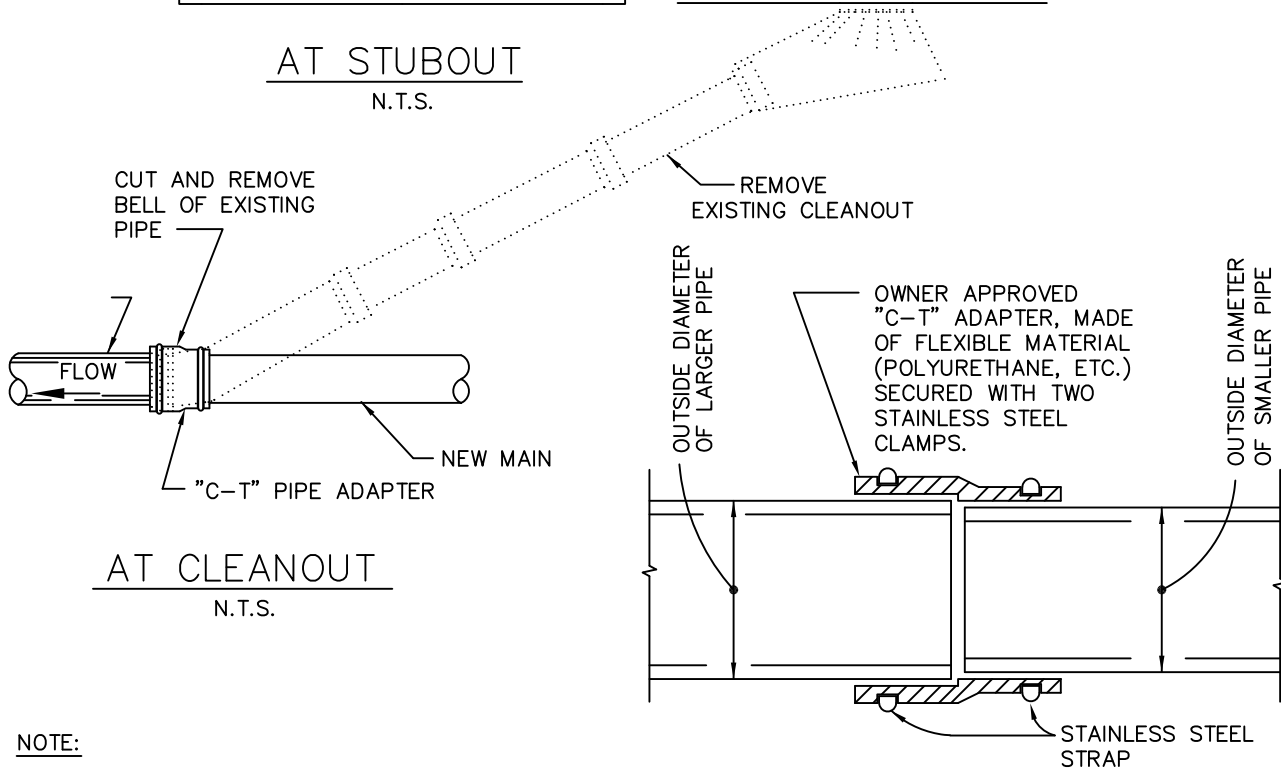


DIVISION 5000 WASTEWATER COLLECTION**TABLE OF CONTENTS**

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5170	Abandonment of Manhole In or Out of Pavement	504. pages 504-1 to 504-11



AT STUBOUT
N.T.S.



AT CLEANOUT
N.T.S.

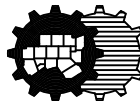
"C-T" PIPE ADAPTER
N.T.S.

NOTE:

THIS DETAIL FOR USE ONLY WHEN NEW MAIN WILL NOT MATE WITH EXISTING MAIN JOINT DUE TO DIFFERENT DIMENSIONS OR MATERIALS AND A MANHOLE IS NOT REQUIRED.

WASTEWATER MAIN TIE-IN
AT CLEANOUT OR M.H. STUBOUT

North Central Texas Council of Governments



STANDARD SPECIFICATION REFERENCE

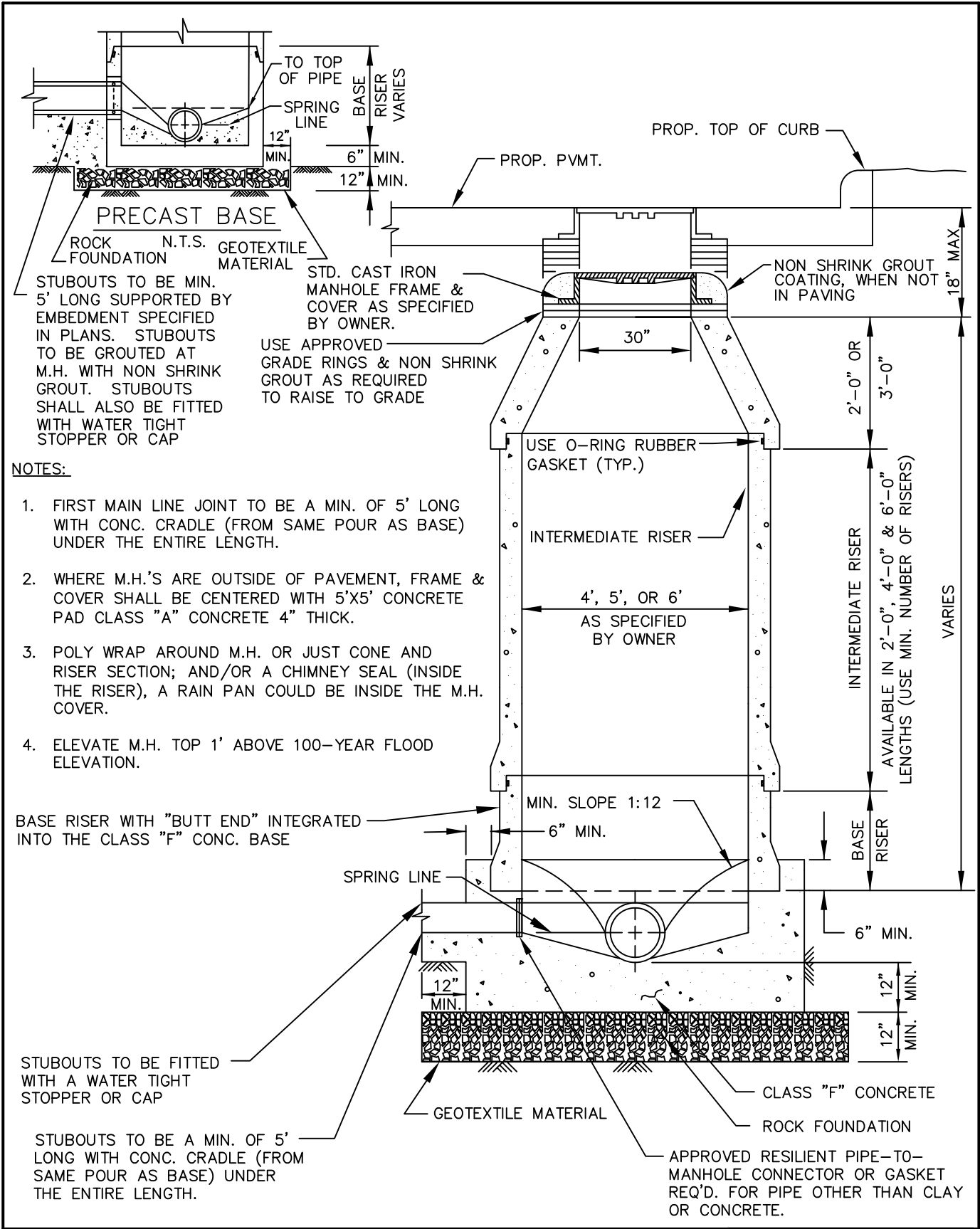
502.10

DATE

TBD

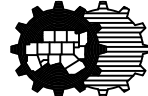
STANDARD DRAWING NO.

5010



WASTEWATER MANHOLE
PRECAST

North Central Texas Council of Governments



STANDARD SPECIFICATION REFERENCE

502.1

DATE

STANDARD DRAWING NO.

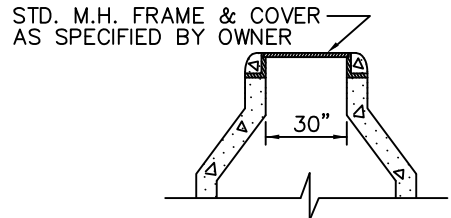
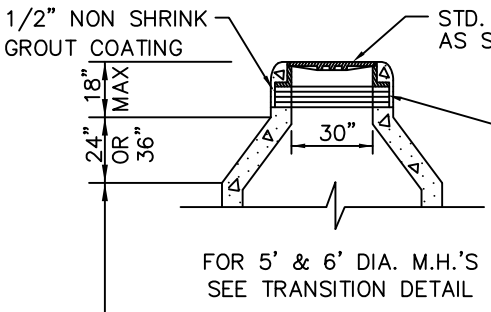
TBD

5020

← ROOF OPTIONS →
N.T.S.

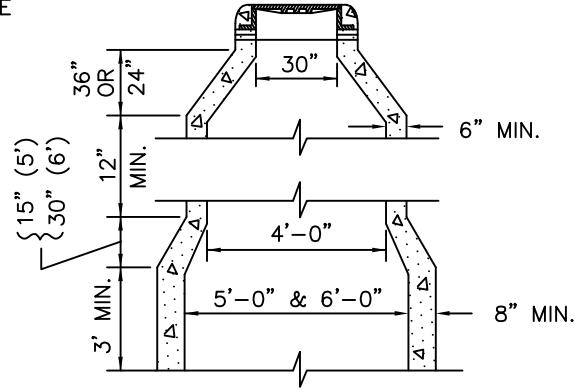
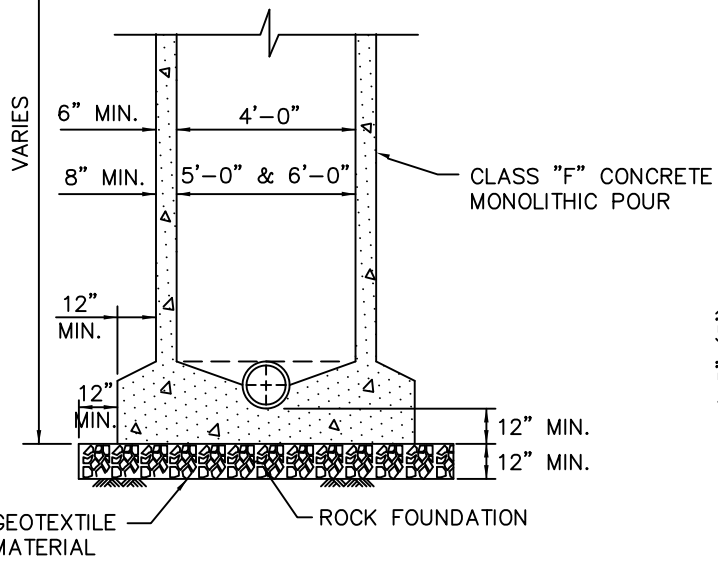
ADJUSTABLE FRAME

FRAME CAST IN CONC.



USE APPROVED GRADE RINGS & NON SHRINK GROUT AS REQUIRED TO RAISE TO GRADE. (MIN. 4 COURSES)

FOR 5' & 6' DIA. M.H.'S SEE TRANSITION DETAIL

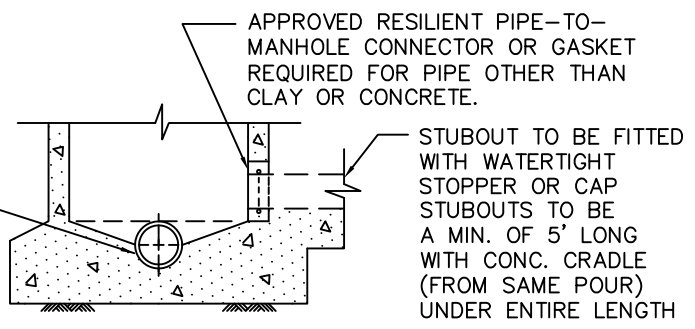


TRANSITION DETAIL FOR 5' & 6' DIA. M.H.'S
N.T.S.

NOTES:

1. WHERE M.H.'S ARE IN "PROPOSED" PAVING, FRAME & COVER SHALL BE SET 18" MAX BELOW TOP OF PAVEMENT OR AS REQUIRED TO CONSTRUCT PAVEMENT SECTION, INCLUDING SUBGRADE.
2. WHERE M.H.'S ARE OUTSIDE OF PAVEMENT, FRAME & COVER SHALL BE CENTERED IN 5'X5' CONCRETE PAD CLASS "A" CONCRETE, 4" THICK
3. POLY WRAP AROUND MANHOLE OR JUST CONE AND RISER SECTION; AND/OR A CHIMNEY SEAL INSIDE THE RISER. A RAIN PAN COULD BE INSIDE THE MANHOLE COVER.

FIRST MAIN LINE JOINT TO BE A MIN. OF 5' LONG WITH CONC. CRADLE (FROM SAME POUR AS BASE) UNDER ENTIRE LENGTH.

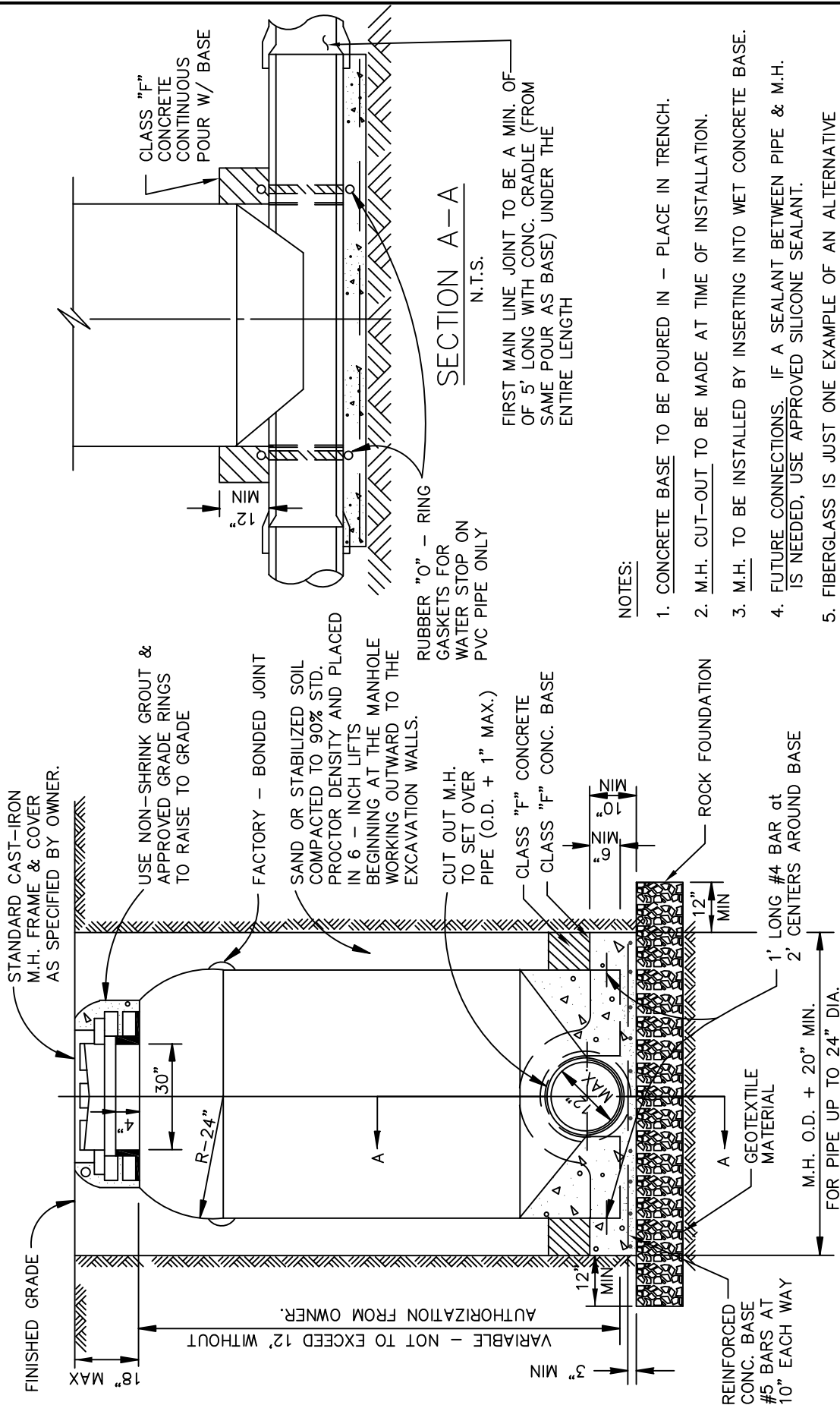


STUBOUT CONNECTION
N.T.S.

WASTEWATER MANHOLE
CAST-IN-PLACE



STANDARD SPECIFICATION REFERENCE	
502.1	
DATE	STANDARD DRAWING NO.
TBD	5030



SECTION A-A
N.T.S.

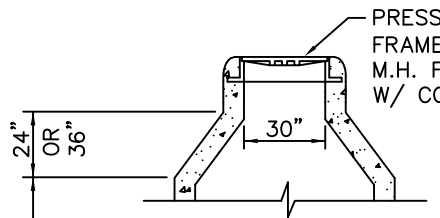
RUBBER "O" - RING GASKETS FOR WATER STOP ON PVC PIPE ONLY

NOTES:

1. CONCRETE BASE TO BE POURED IN - PLACE IN TRENCH.
2. M.H. CUT-OUT TO BE MADE AT TIME OF INSTALLATION.
3. M.H. TO BE INSTALLED BY INSERTING INTO WET CONCRETE BASE.
4. FUTURE CONNECTIONS, IF A SEALANT BETWEEN PIPE & M.H. IS NEEDED, USE APPROVED SILICONE SEALANT.
5. FIBERGLASS IS JUST ONE EXAMPLE OF AN ALTERNATIVE MATERIAL. OTHER MATERIALS COULD BE USED, PER APPROVAL BY CITY ENGINEER.

 <p>North Central Texas Council of Governments</p>	<p>STANDARD SPECIFICATION REFERENCE 502.1</p>
<p style="font-size: 2em; font-weight: bold;">WASTEWATER MANHOLE</p> <p style="font-size: 2em; font-weight: bold;">FIBERGLASS</p>	<p>DATE TBD</p> <p>STANDARD DRAWING NO. 5040</p>
<p>STANDARD DRAWING NO. 5040</p>	

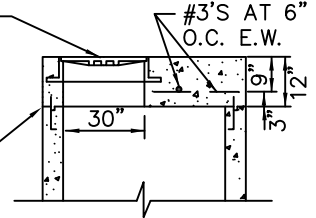
CONCRETE CONE ← ROOF OPTIONS → REINFORCED CONCRETE SLAB
 N.T.S.



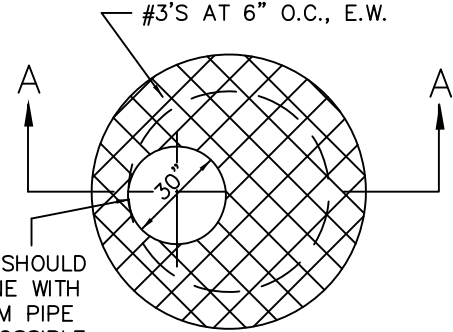
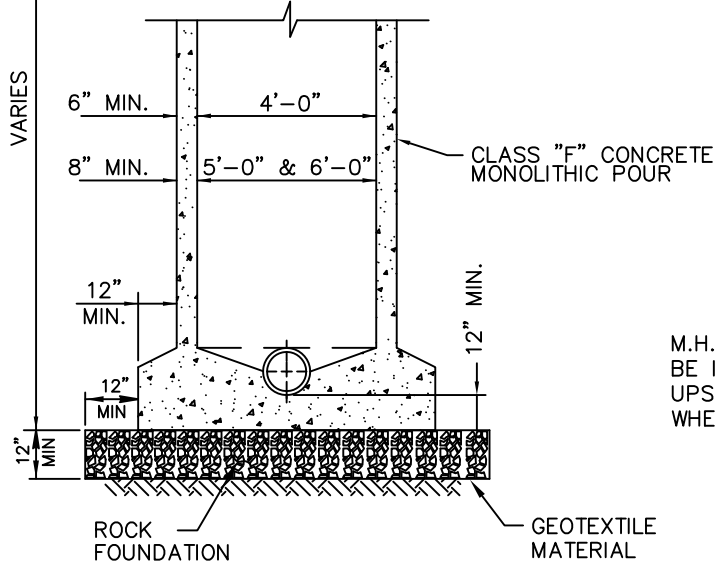
FOR 5' & 6' DIA. M.H.'S
 SEE TRANSITION DETAIL

PRESSURE-TYPE M.H.
 FRAME & COVER AS SPECIFIED BY OWNER.
 M.H. FRAME CAST IN ROOF
 W/ CONTINUOUS POUR FROM BASE.

CONSTRUCTION JOINT WITH
 KEY WAY WATERSTOP, AND
 #3'S AT 12" O.C. EXTENDING
 9" INTO WALL (NOT REQ'D
 FOR CONTINUOUS POUR)

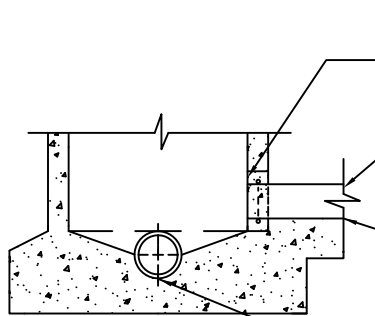


SECTION A - A
 N.T.S.



M.H. LID SHOULD
 BE IN LINE WITH
 UPSTREAM PIPE
 WHERE POSSIBLE

ROOF STEEL LAYOUT
 N.T.S.



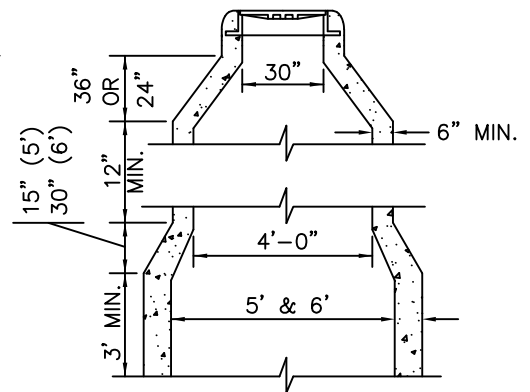
STUBOUT CONNECTION
 N.T.S.

APPROVED RESILIENT PIPE-TO-
 MANHOLE CONNECTOR OR GASKET
 REQUIRED FOR PIPE OTHER THAN
 CLAY OR CONCRETE.

STUBOUT TO BE FITTED
 WITH WATER TIGHT
 STOPPER OR CAP

STUBOUTS TO BE A MIN.
 OF 5' LONG WITH CONC.
 CRADLE (FROM SAME
 POUR AS BASE) UNDER
 ENTIRE LENGTH.

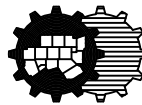
FIRST MAIN LINE JOINT
 TO BE A MIN. OF 6' LONG
 WITH CONC. CRADLE (FROM
 SAME POUR AS BASE) UNDER
 UNDER THE ENTIRE LENGTH.



TRANSITION DETAIL FOR
 5' & 6' DIA. M.H.'S
 N.T.S.

WASTEWATER MANHOLE
 PRESSURE-TYPE

North Central Texas Council of Governments



STANDARD SPECIFICATION REFERENCE

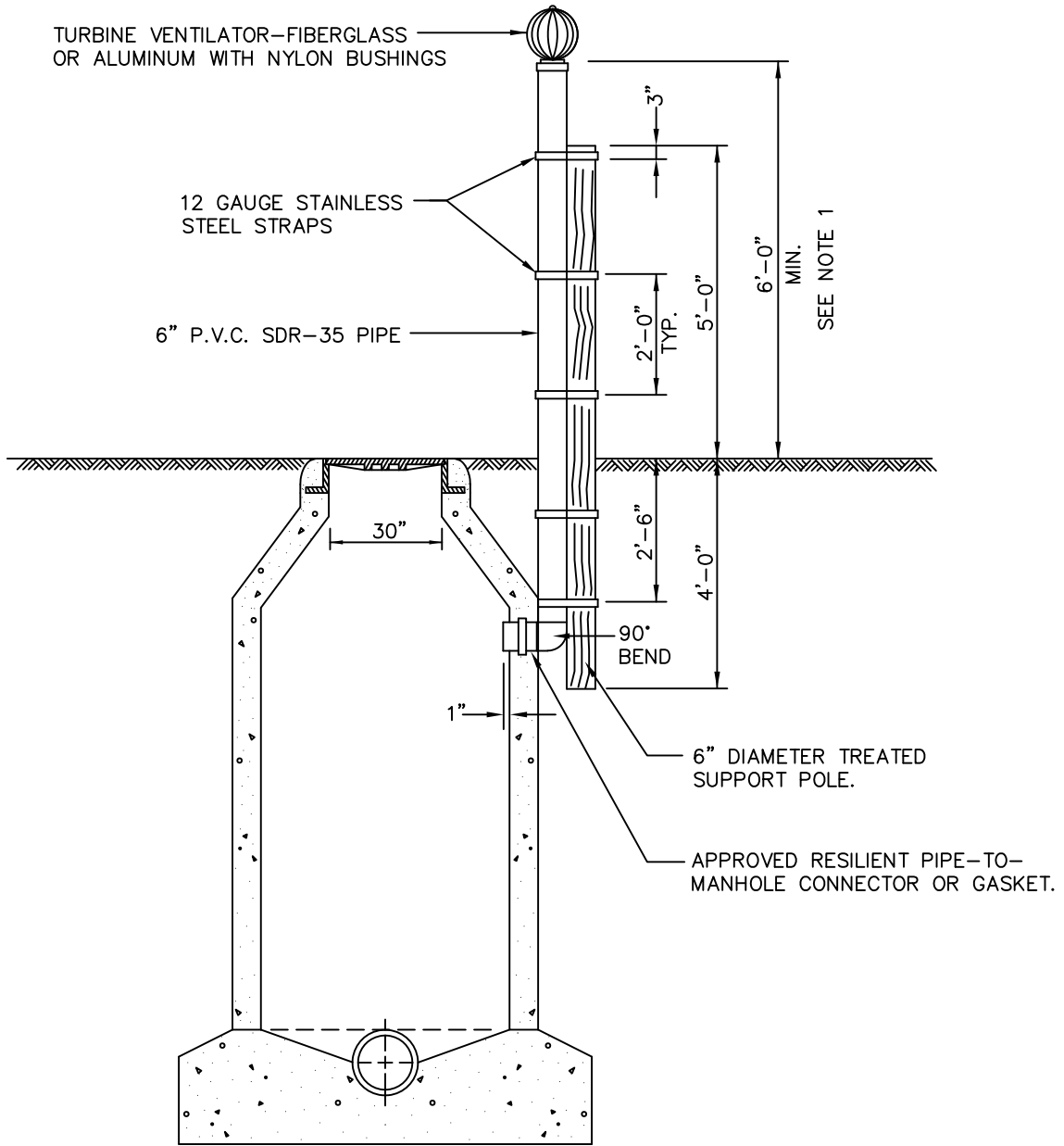
502.1

DATE

TBD

STANDARD DRAWING NO.

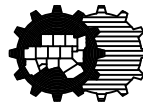
5050



- NOTES:
1. ELEVATE TOP OF VENT MIN. 1' ABOVE 100-YEAR FLOOD ELEVATION.
 2. FRAME AND COVER SHALL BE BOLTED.

WASTEWATER MANHOLE
VENTED

North Central Texas Council of Governments



STANDARD SPECIFICATION REFERENCE

502.1

DATE

TBD

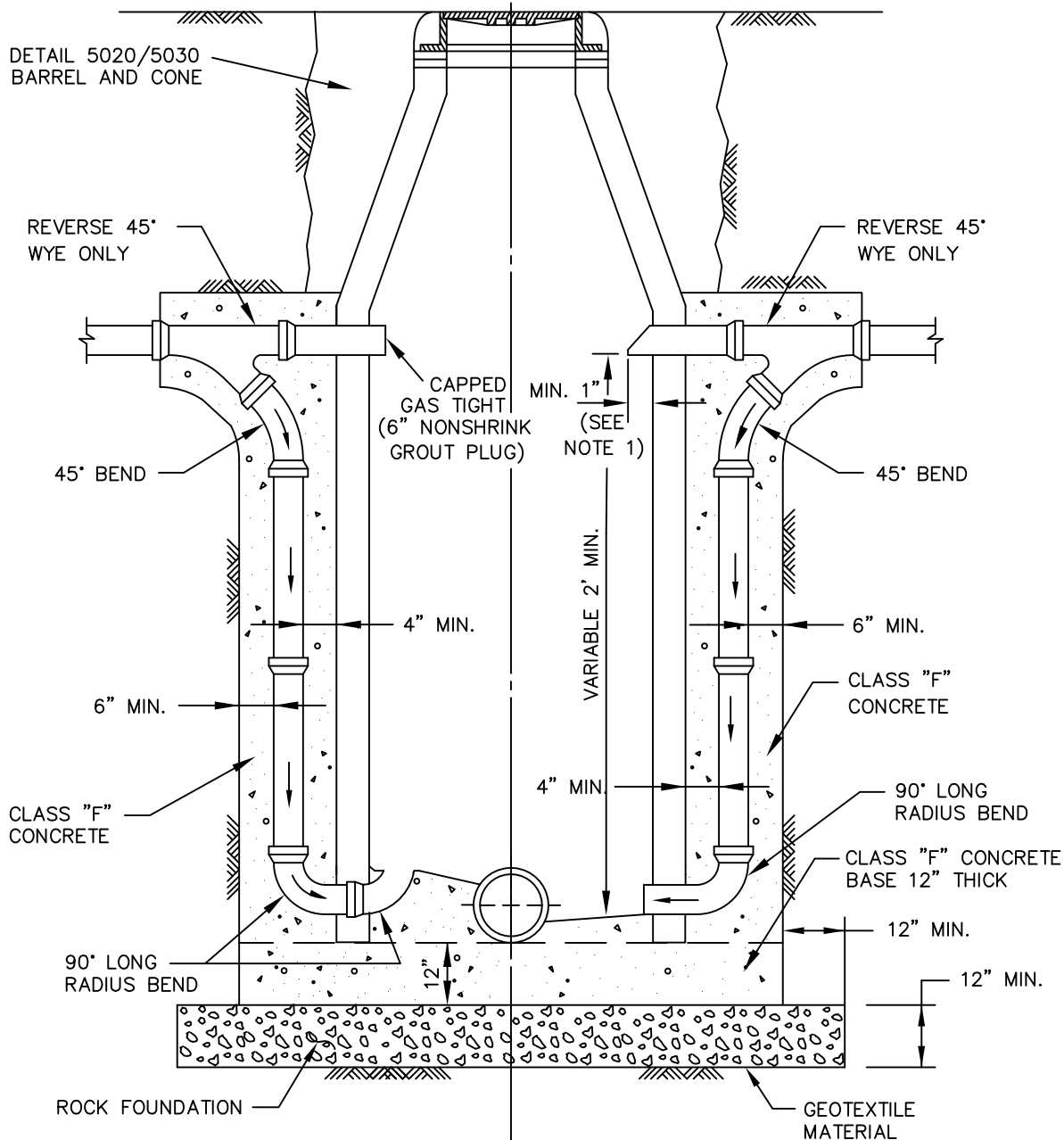
STANDARD DRAWING NO.

5060

GAS SEALED
DROP CONNECTION
N.T.S.

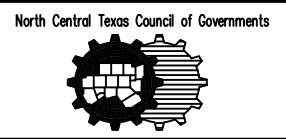
STANDARD
DROP CONNECTION
N.T.S.

SEE DETAIL 5020/5030
FOR BARREL AND CONE

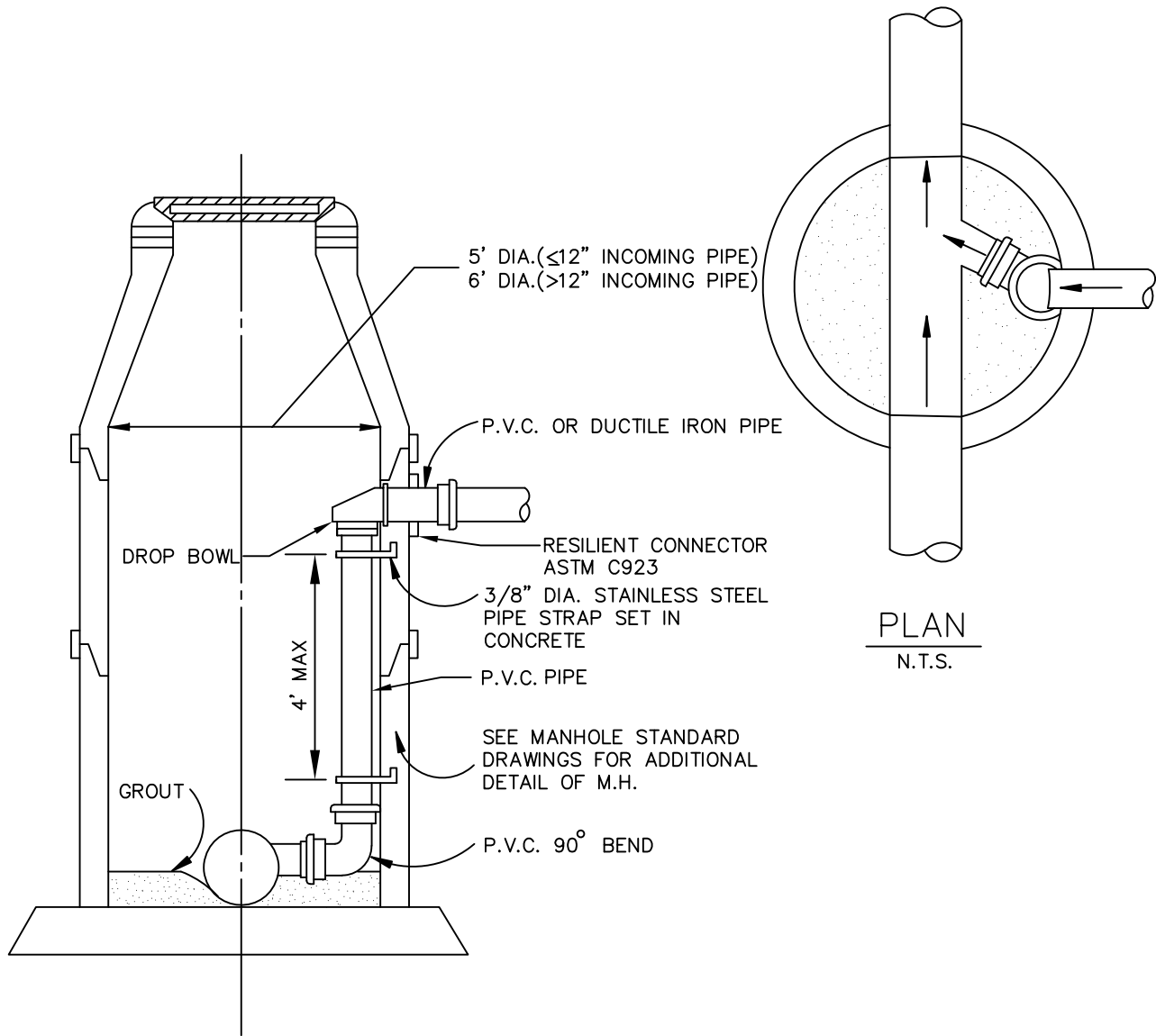


NOTE:
1. EXTEND INWARD & CUT-OFF TOP FOR EASE OF
CAMERA ACCESS AS REQUESTED BY OWNER

WASTEWATER MANHOLE
OUTSIDE DROP CONNECTIONS

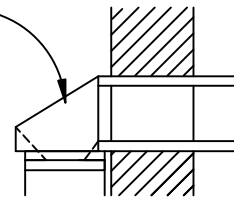


STANDARD SPECIFICATION REFERENCE 502.1	
DATE TBD	STANDARD DRAWING NO. 5070



ELEVATION
N.T.S.

REMOVE PORTION OF DROP
PIPE TO CONNECT AS SHOWN



WEIR DETAIL
N.T.S.

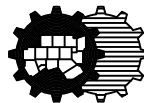
NOTE:

1. FLOW LINE OF SURCHARGE LINE NORMALLY PLACED AT TOP OF EXISTING WASTEWATER LINE UNLESS NOTED OTHERWISE ON PLANS.
2. MAXIMUM SPACING OF 4' ON PIPE STRAPS. 2 STRAPS MINIMUM. ALL STRAP PARTS SHALL BE STAINLESS STEEL.

WASTEWATER MANHOLE

INSIDE DROP CONNECTION

North Central Texas Council of Governments



STANDARD SPECIFICATION REFERENCE

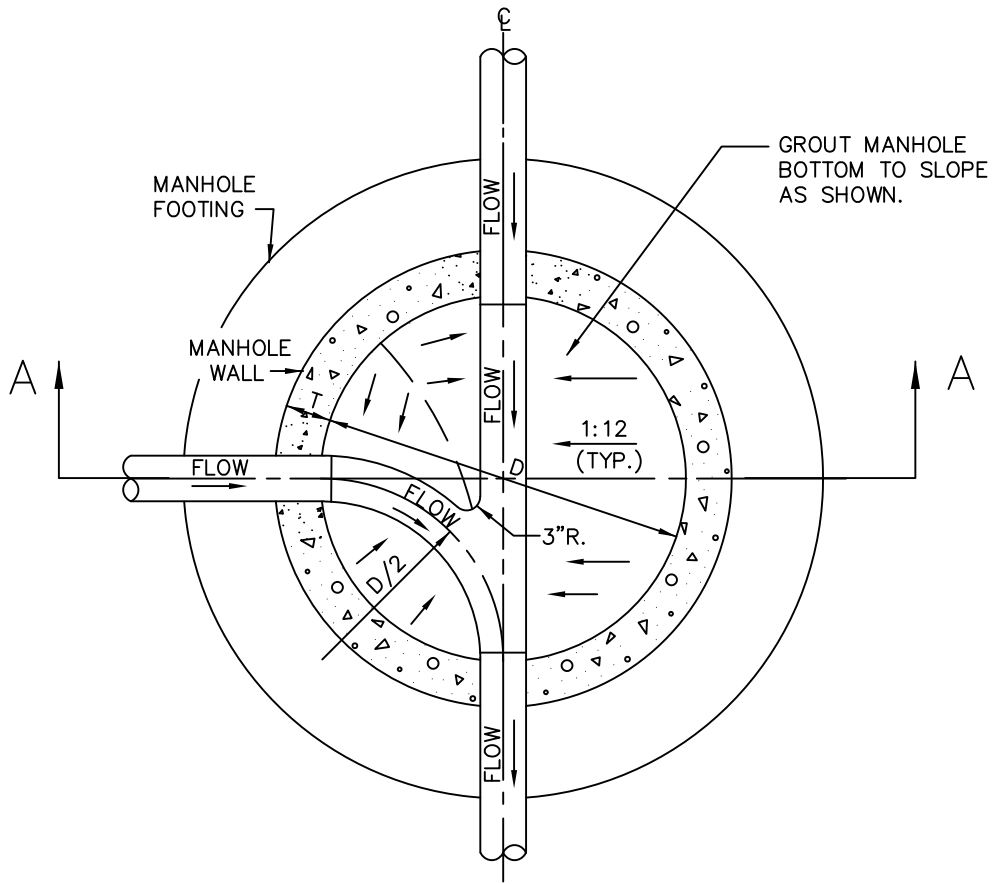
502.1

DATE

TBD

STANDARD DRAWING NO.

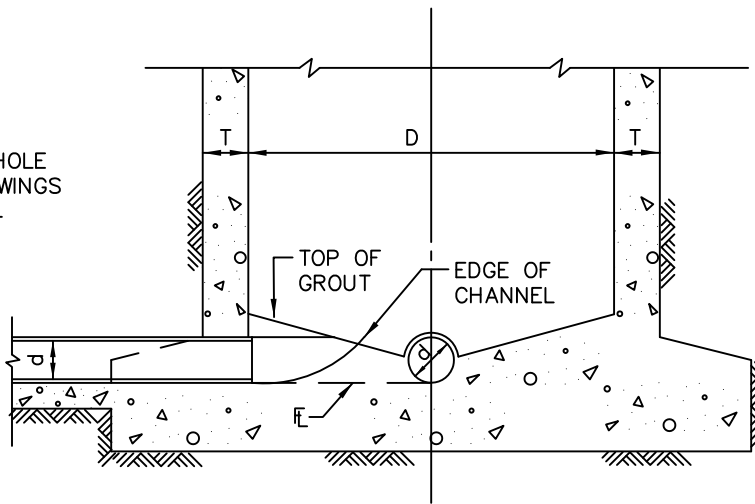
5080



PLAN
N.T.S.

T = WALL THICKNESS
D = MANHOLE DIAMETER
d = PIPE DIAMETER

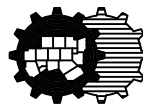
NOTE:
REFER TO MANHOLE
STANDARD DRAWINGS
FOR ADDITIONAL
DETAIL OF M.H.



SECTION A-A
N.T.S.

WASTEWATER MANHOLE
INVERT DETAIL

North Central Texas Council of Governments



STANDARD SPECIFICATION REFERENCE

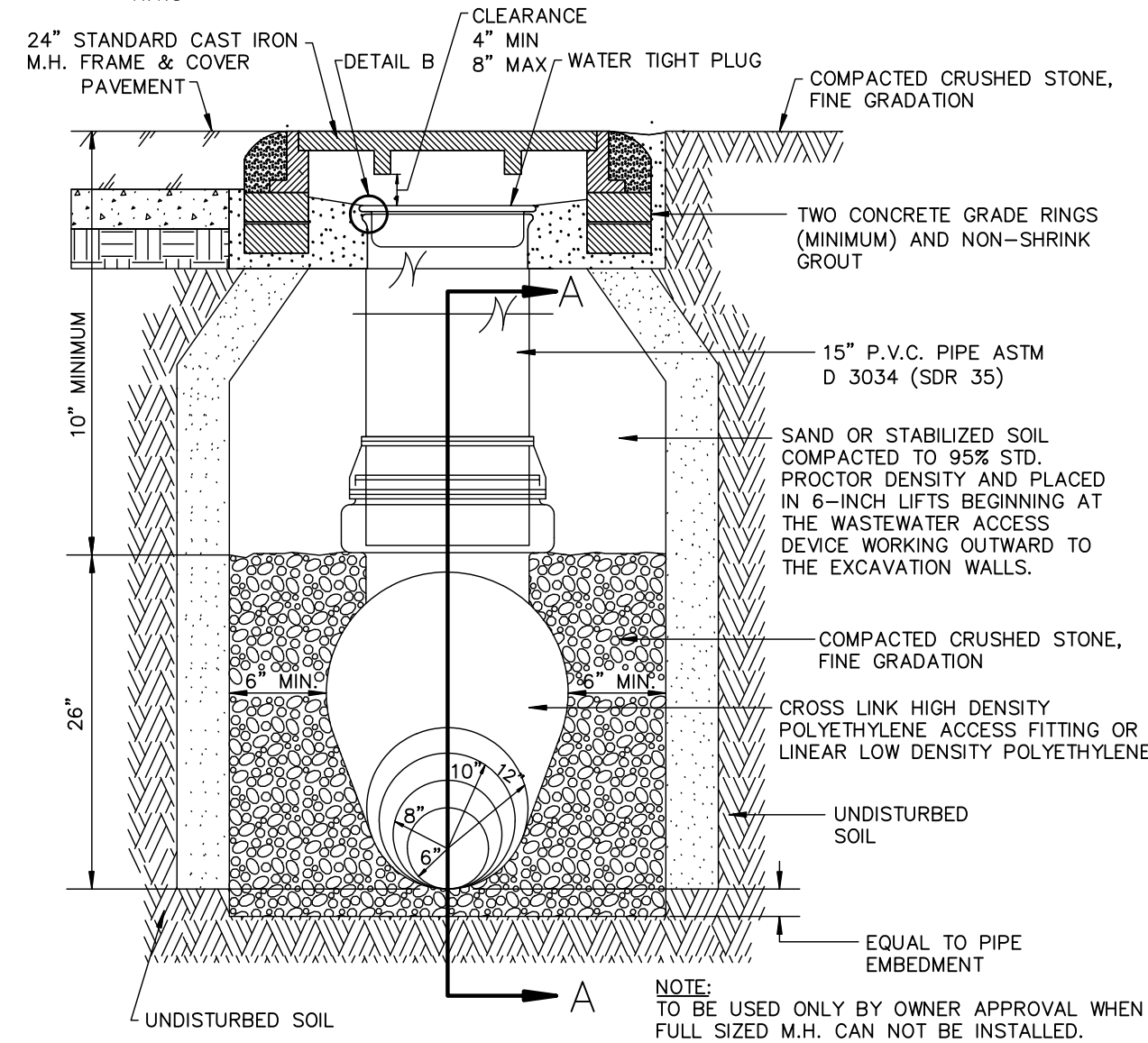
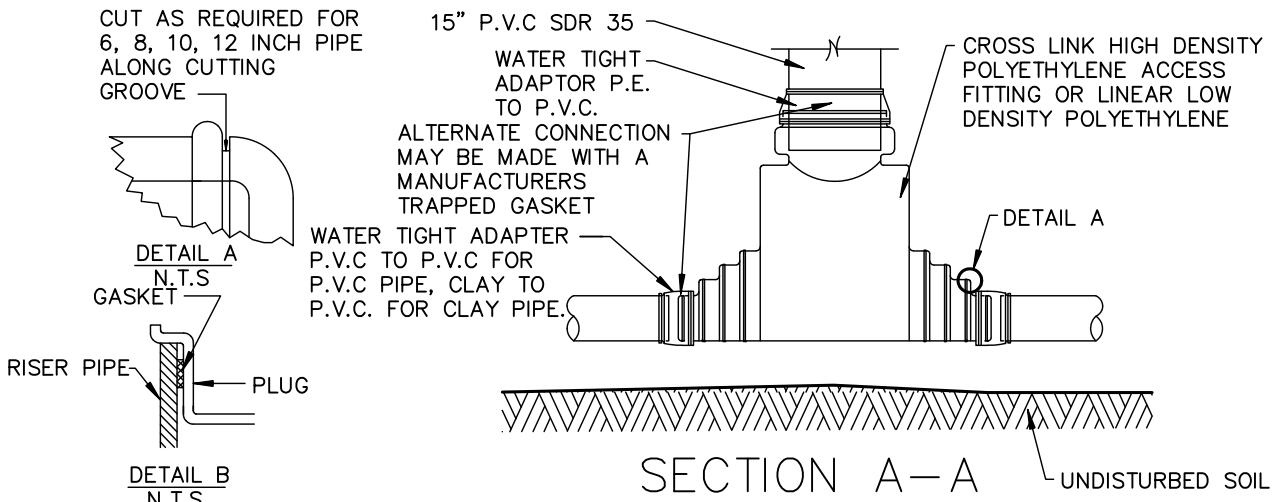
502.1

DATE

TBD

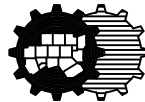
STANDARD DRAWING NO.

5090



WASTEWATER ACCESS
DEVICE

North Central Texas Council of Governments



STANDARD SPECIFICATION REFERENCE

502.1

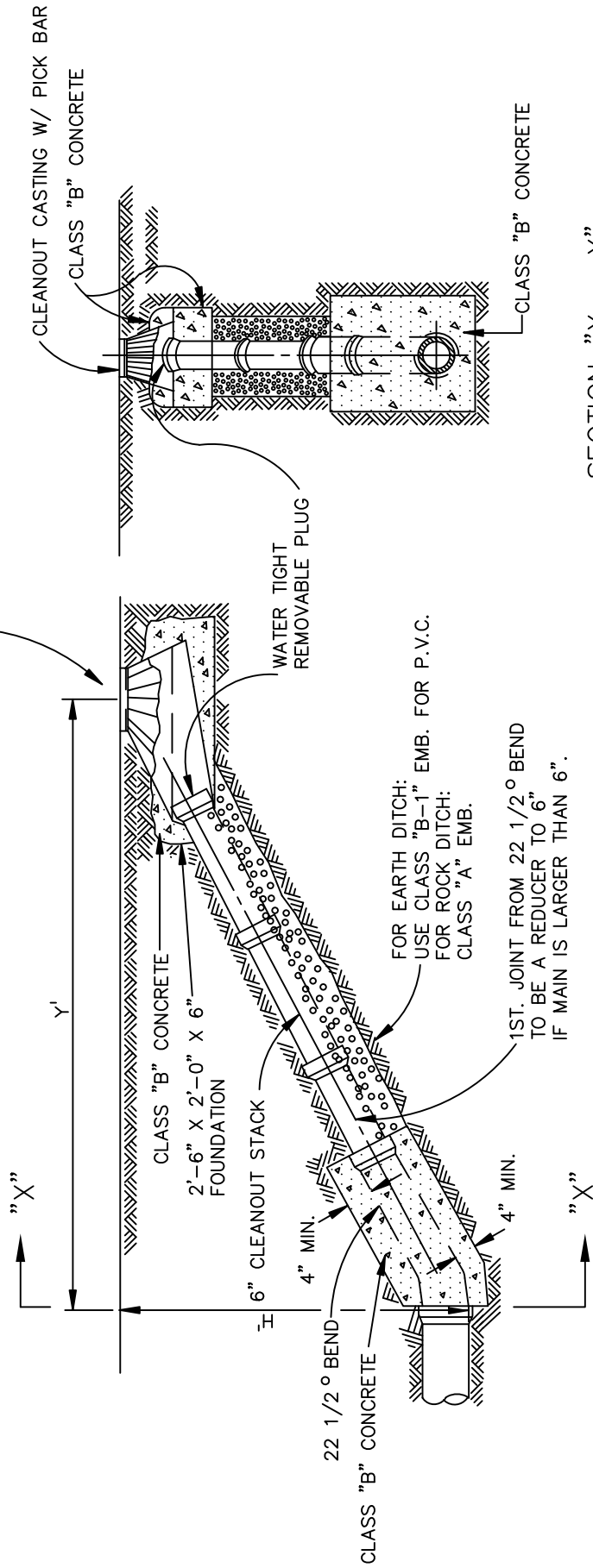
DATE

TBD

STANDARD DRAWING NO.

5100

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'



NOTES:

1. IF CLEANOUT IS PLACED IN ADVANCE OF PAVEMENT PLACE SAND AROUND CLEANOUT CASTING IN LIEU OF CLASS "B" CONCRETE.
2. IF CLEANOUT IS OUTSIDE OF PAVEMENT, CENTER CASTING IN 15"x15" CLASS "A" CONCRETE PAD "4" THICK.
3. ONLY TO BE USED WITH EXPRESS CONSENT OF THE OWNER.

PROFILE VIEW
N.T.S.

SECTION "X - X"
N.T.S.

STANDARD DRAWING NO. 5110

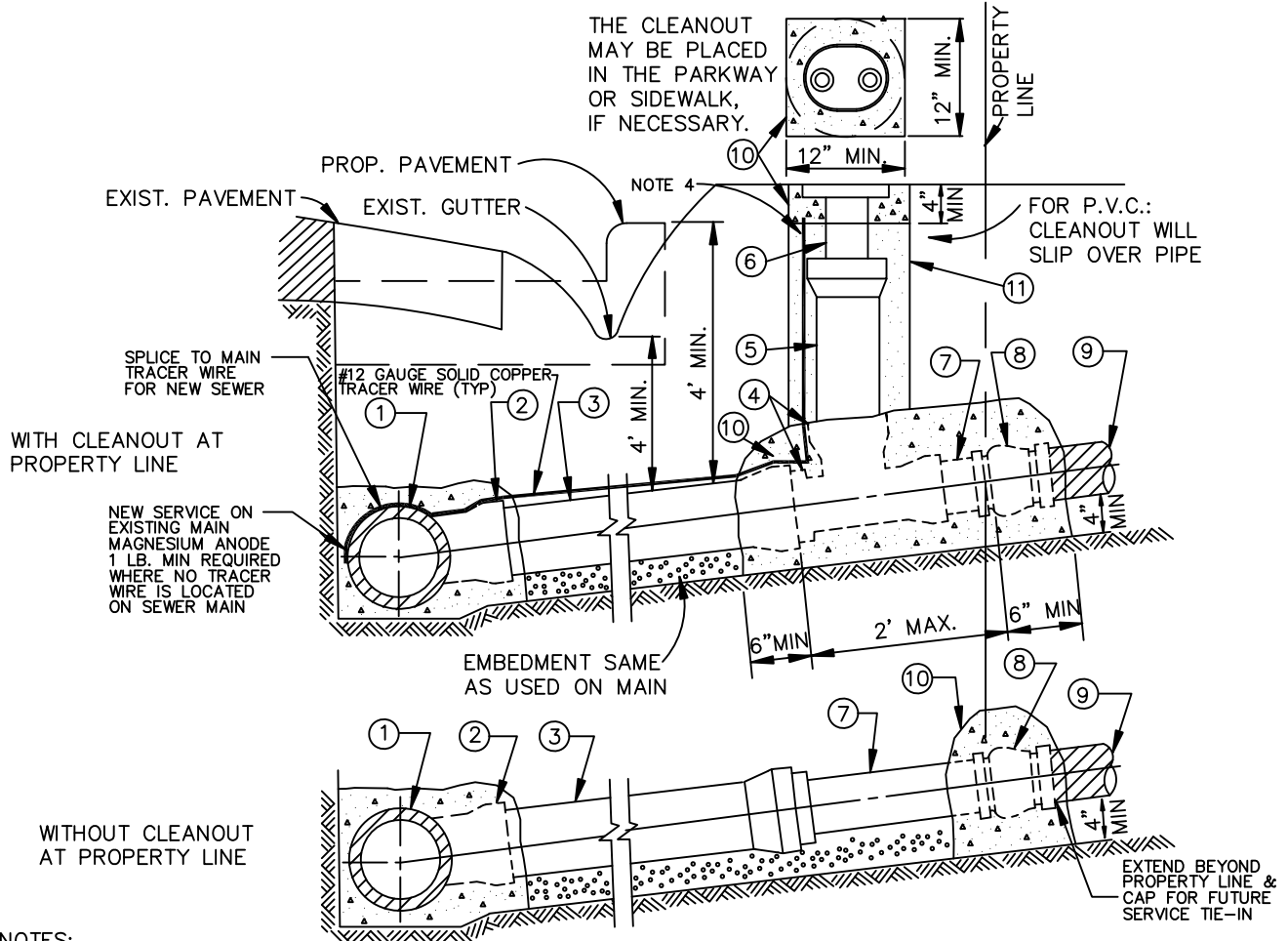
WASTEWATER MAIN
CLEANOUT



STANDARD SPECIFICATION REFERENCE 502.2
DATE TBD
STANDARD DRAWING NO. 5110

KEY:

- | | |
|--|---|
| ① WASTEWATER MAIN | ⑦ 4" WASTEWATER PIPE (LENGTH VARIES) |
| ② 4" WYE OR TAP | ⑧ ADAPTOR |
| ③ 4" WASTEWATER LAT. (LENGTH VARIES) | ⑨ BUILDING SEWER LAT. |
| ④ 4" X 4" TEE OR WYE AS REQ'D. BY OWNER. | ⑩ CLASS "B" CONCRETE |
| ⑤ 4" STACK (LENGTH VARIES) | ⑪ COMPACTED AS SPECIFIED, OR INUNDATED SAND |
| ⑥ 4" WASTEWATER LAT. CLEANOUT CASTING | |



NOTES:

- CLEANOUT CASTING TO BE FURNISHED AND PLACED PER SPECIAL CONDITIONS, IN VEHICLE TRAFFIC AREAS AND FOR COMMERCIAL MAINLINE LATERALS, WASTEWATER CLEANOUT SHALL BE OF CAST IRON.
- SLOPE OF LATERAL TO BE 2% MIN., UNLESS INSTRUCTED OTHERWISE BY OWNER.
- THE WASTEWATER LATERAL SHALL BE CONNECTED TO BUILDING LATERAL AND CONSTRUCTED IN SUCH MANNER AS TO CLEAR EXISTING UTILITIES AND PROPOSED FACILITIES SUCH AS STORM SEWER MAINS, PAVING, SIDEWALKS, RETAINING WALLS, ETC. VERTICAL BENDS (22.5° MAX.) MAY BE USED IF APPROVED BY OWNER.
- EXTEND TRACER WIRE TO JUST ABOVE CLEANOUT PLUG, PROVIDE 24' NEATLY COILED WIRE IN BOX
- THE MAINLINE LATERAL CONNECTION TO THE PRIVATE BUILDING LATERAL SHALL BE AS CLOSE TO THE PROPERTY LINE AS POSSIBLE.
- INSTALL 4" STOPPER OR CAP AT PROPERTY LINE IF BUILDING LATERAL DOES NOT EXIST.
- SUBSTITUTE 4" FOR 6" FITTINGS IF PLANS OR SPEC. COND. CALL FOR 4" LATERAL DOES NOT EXIST.
- THE CLEANOUT STACK & CASTING MAY BE PLACED IN THE PARKWAY, VEHICLE TRAFFIC AREAS, OR SIDEWALK, IF NECESSARY.
- FOR 6" SERVICES OR LARGER, INSTALL A MANHOLE.
- MINIMUM 9' SEPARATION FROM WATER SERVICE.

WASTEWATER LATERALS

WITH & WITHOUT CLEANOUT

North Central Texas Council of Governments



STANDARD SPECIFICATION REFERENCE

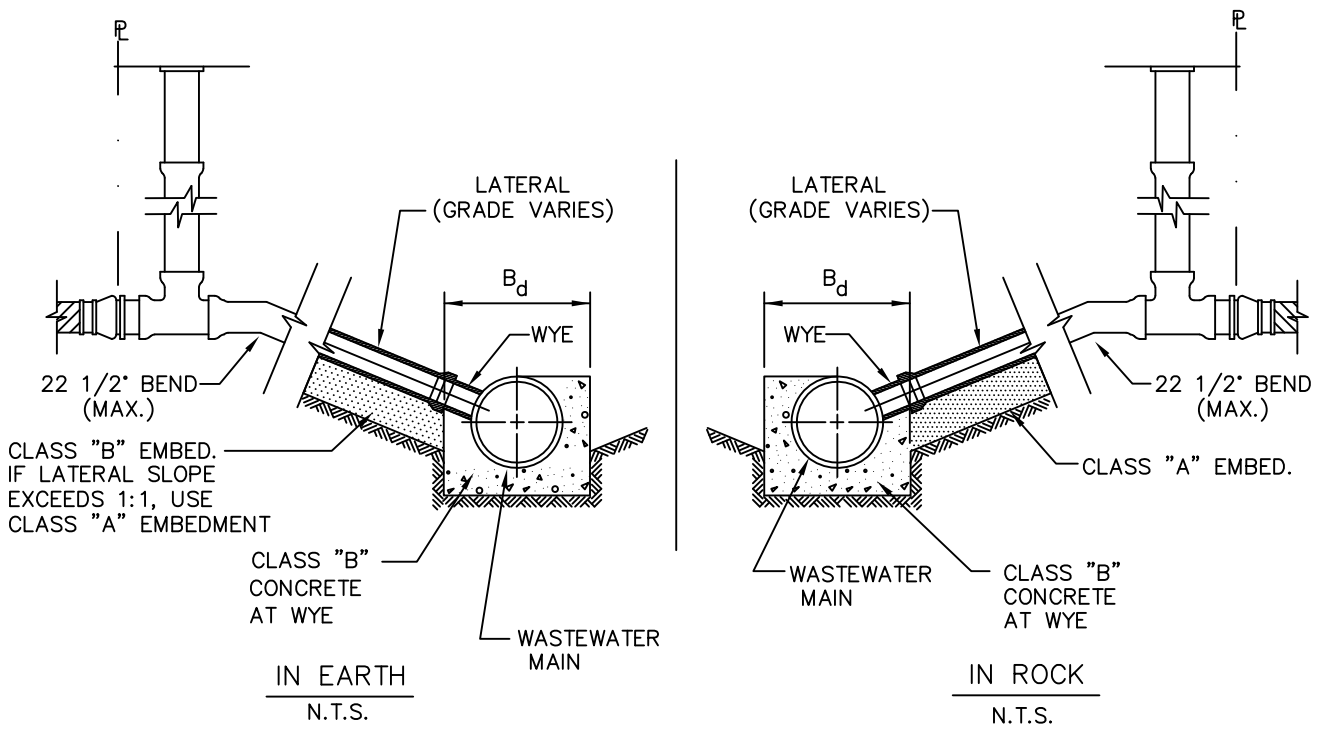
502.10

DATE

TBD

STANDARD DRAWING NO.

5120

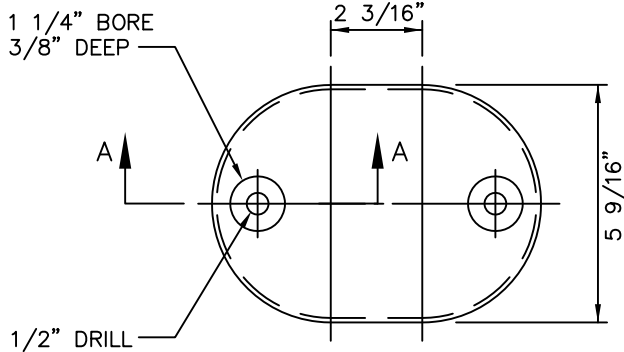


TRENCH WITH SLOPING SIDES
N.T.S.

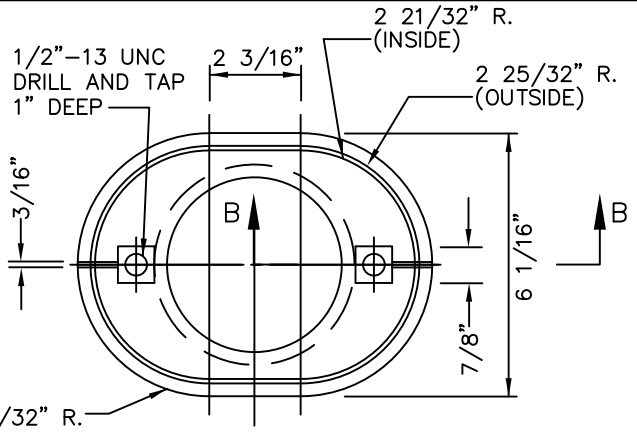
NOTES:

1. WYE SHALL BE SUPPORTED AS SHOWN FOR WYE CONNECTION SUPPORT.
2. LATERALS ARE TO CLEAR ALL EXISTING UTILITIES. 11 1/4" OR 22 1/2° BEND, ONLY, MAY BE REQUIRED.

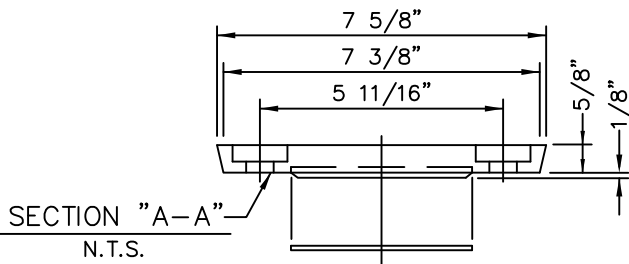
<p style="font-size: 1.2em; margin: 0;">WASTEWATER LATERAL CONNECTIONS</p> <p style="font-size: 1.2em; margin: 0;">IN EARTH & IN ROCK</p>	<p style="font-size: 0.8em; margin: 0;">North Central Texas Council of Governments</p>	<p style="font-size: 0.8em; margin: 0;">STANDARD SPECIFICATION REFERENCE</p> <p style="font-size: 1.2em; margin: 0;">502.10</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <tr> <td style="width: 50%; font-size: 0.8em; padding: 2px;">DATE</td> <td style="width: 50%; font-size: 0.8em; padding: 2px;">STANDARD DRAWING NO.</td> </tr> <tr> <td style="font-size: 1.2em; padding: 2px;">TBD</td> <td style="font-size: 1.2em; padding: 2px;">5130</td> </tr> </table>	DATE	STANDARD DRAWING NO.	TBD	5130
DATE	STANDARD DRAWING NO.					
TBD	5130					



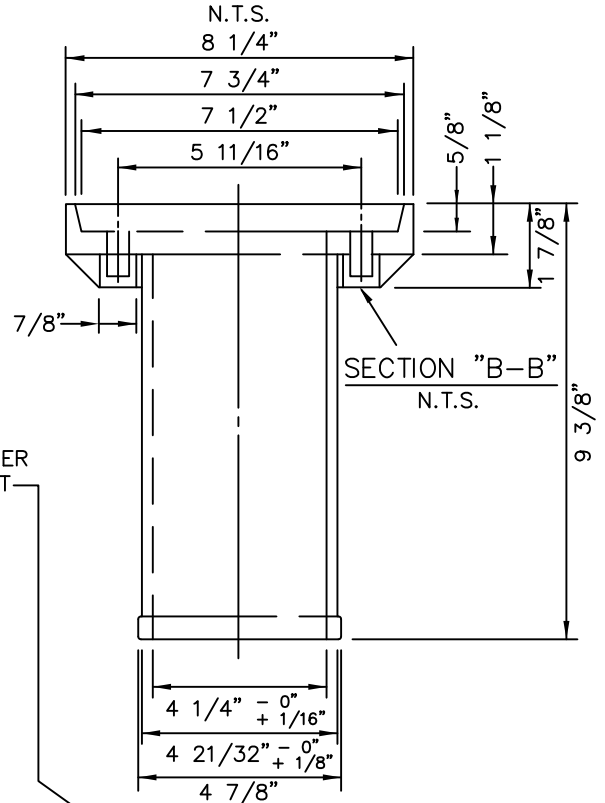
COVER
N.T.S.



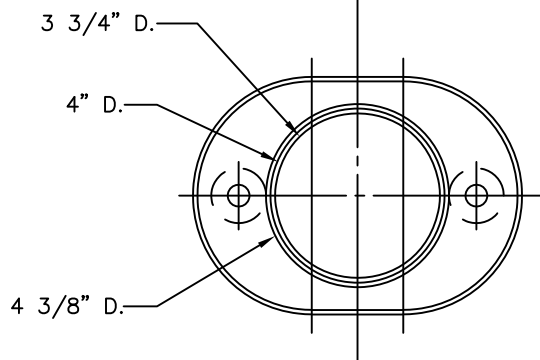
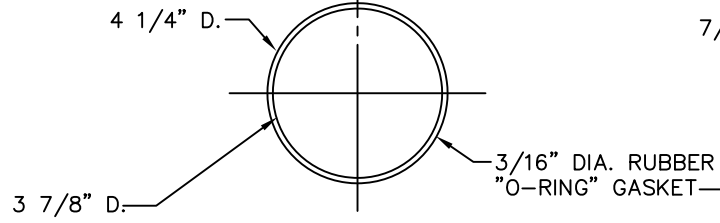
CLEANOUT FRAME TOP
N.T.S.



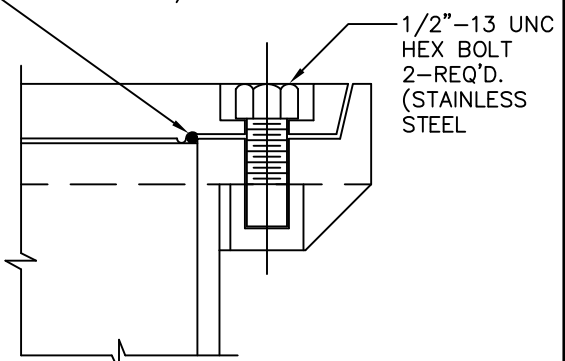
SECTION "A-A"
N.T.S.



SECTION "B-B"
N.T.S.



CLEANOUT FRAME BOTTOM
N.T.S.



ASSEMBLY VIEW
N.T.S.

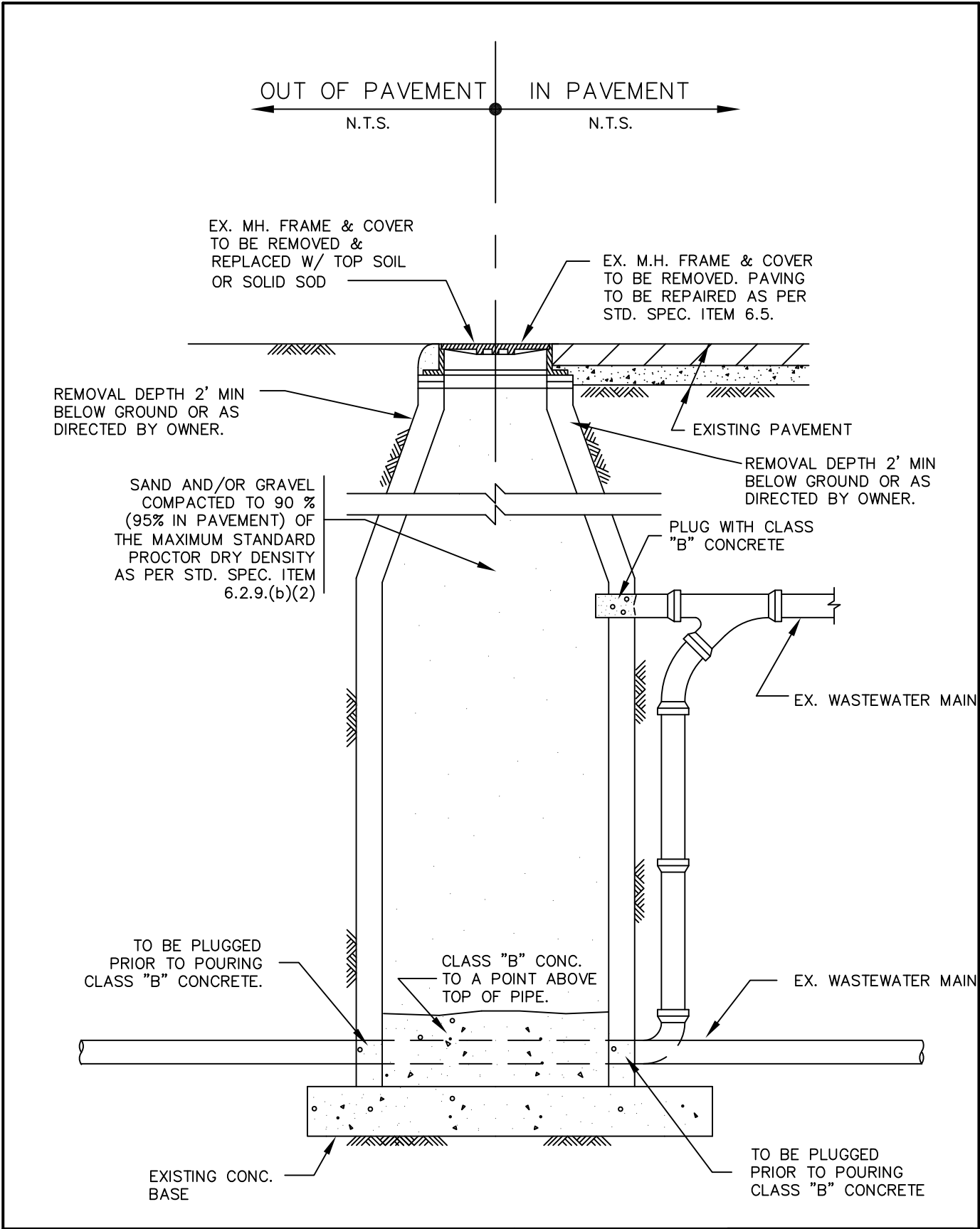
NOTES:

1. THE WORDS "WASTEWATER LATERAL CLEANOUT" SHALL BE CAST INTO TOP OF COVER.
2. MATERIALS TO BE CAST IRON, P.V.C. OR ABS PLASTIC.

**WASTEWATER LATERAL
CLEANOUT FRAME & COVER**

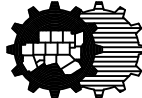


STANDARD SPECIFICATION REFERENCE	
502.10	
DATE	STANDARD DRAWING NO.
TBD	5140



ABANDONMENT OF MANHOLE
IN OR OUT OF PAVEMENT

North Central Texas Council of Governments



STANDARD SPECIFICATION REFERENCE

504

DATE
TBD

STANDARD DRAWING NO.
5170