

"A" PIPE SIZE DIAMETER	"B" TRENCH WIDTH	"C" TRENCH HEIGHT	TRENCH AREA	PIPE AREA	SANITARY SEWER BEDDING MAT. AREA	SANITARY SEWER BEDDING MAT. **TONS/LF
4"	28"	16"	3.11 Sq.Ft.	0.09 Sq.Ft.	3.02 Sq.Ft.	0.18
6"	30"	18"	3.75 Sq.Ft.	0.20 Sq.Ft.	3.55 Sq.Ft.	0.21
8"	32"	20"	4.44 Sq.Ft.	0.35 Sq.Ft.	4.10 Sq.Ft.	0.25
10"	34"	22"	5.19 Sq. Ft.	0.55 Sq.Ft.	4.65 Sq.Ft.	0.28
12"	36"	24"	6.00 Sq.Ft.	0.79 Sq.Ft.	5.22 Sq.Ft.	0.31
15"	39"	27"	7.31 Sq.Ft.	1.23 Sq.Ft.	6.09 Sq.Ft.	0.37
18"	42"	30"	8.75 Sq.Ft.	1.77 Sq.Ft.	6.98 Sq.Ft.	0.42
21"	45"	33"	10.31 Sq.Ft.	2.41 Sq.Ft.	7.91 Sq.Ft.	0.47
24"	48"	36"	12.00 Sq.Ft.	3.14 Sq.Ft.	8.86 Sq.Ft.	0.53
27"	51"	39"	13.81 Sq.Ft.	3.98 Sq.Ft.	9.84 Sq.Ft.	0.59
30"	54"	42"	15.75 Sq.Ft.	4.91 Sq.Ft.	10.84 Sq.Ft.	0.65
36"	60"	48"	20.00 Sq.Ft.	7.07 Sq.Ft.	12.93 Sq.Ft.	0.78

\* LENGTH BASED ON ONE (1) FOOT OF SANITARY SEWER PIPE.

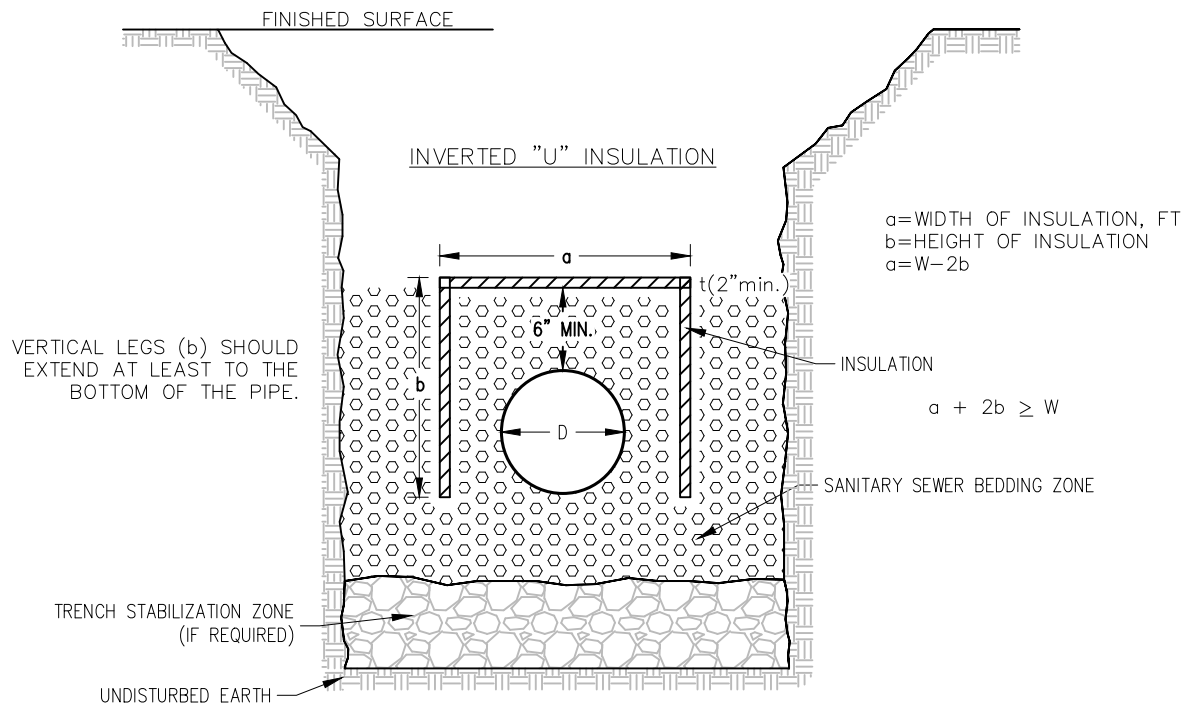
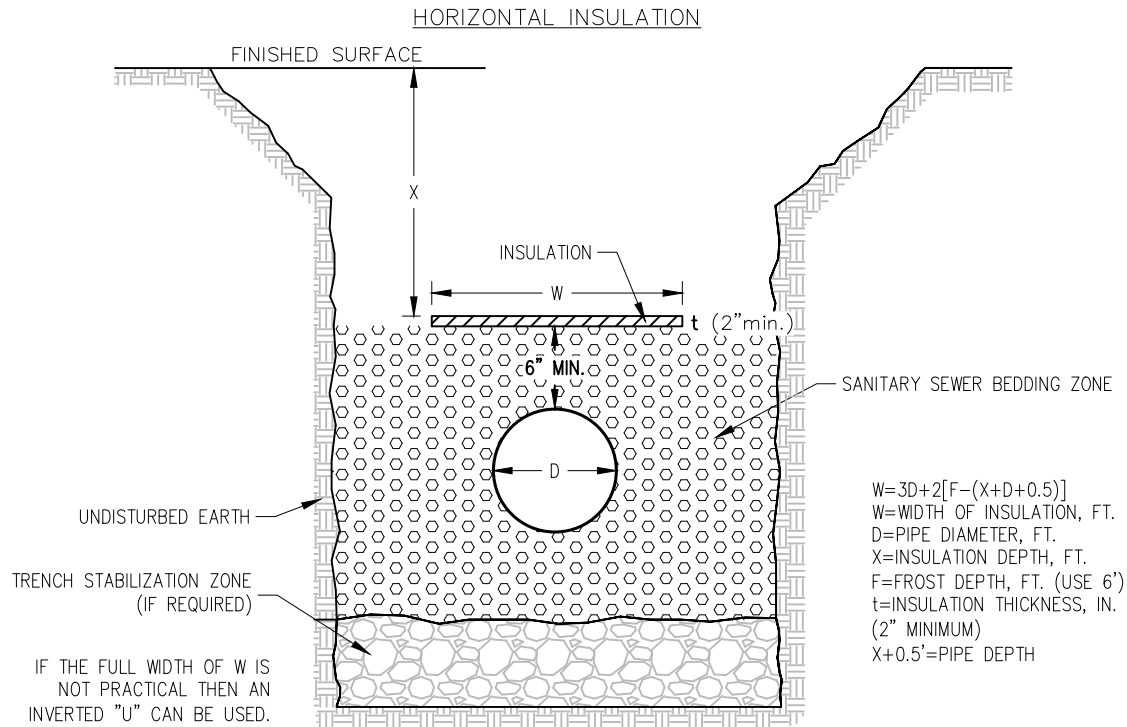
\*\* TONS PER LF IS BASED ON (120 LBS/FT<sup>3</sup>)

CITY OF BROOKINGS  
BROOKINGS MUNICIPAL UTILITIES  
**SANITARY SEWER MAIN BEDDING**



REVISION  
DATE  
**03/15/2025**

PLATE  
NUMBER  
**SM-01**

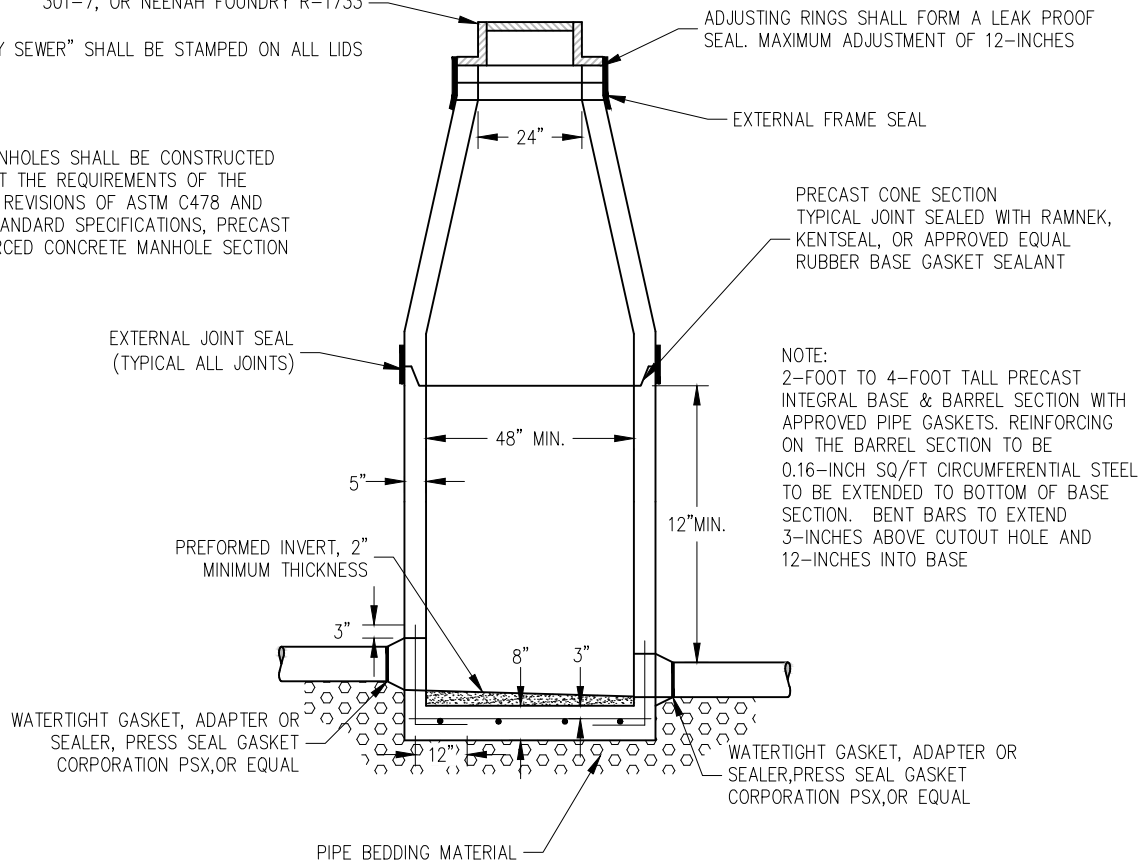


NOTE:  
THIS DETAIL IS A GENERAL GUIDELINE. INSULATION OF SANITARY SEWER WILL BE DETERMINED ON A CASE BY CASE SITUATION DEPENDING ON THE FOLLOWING FACTORS: DEPTH, PIPE DIAMETER, FLOW, AND LOCATION.

MANHOLE FRAME AND COVER TO BE DEETER 1260,  
EAST JORDAN IRONWORKS 1205, MUNICIPAL CASTINGS  
301-7, OR NEENAH FOUNDRY R-1733

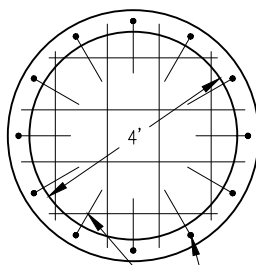
"SANITARY SEWER" SHALL BE STAMPED ON ALL LIDS

ALL MANHOLES SHALL BE CONSTRUCTED  
TO MEET THE REQUIREMENTS OF THE  
LATEST REVISIONS OF ASTM C478 AND  
BMU STANDARD SPECIFICATIONS, PRECAST  
REINFORCED CONCRETE MANHOLE SECTION



NOTE:  
2-FOOT TO 4-FOOT TALL PRECAST  
INTEGRAL BASE & BARREL SECTION WITH  
APPROVED PIPE GASKETS. REINFORCING  
ON THE BARREL SECTION TO BE  
0.16-INCH SQ/FT CIRCUMFERENTIAL STEEL  
TO BE EXTENDED TO BOTTOM OF BASE  
SECTION. BENT BARS TO EXTEND  
3-INCHES ABOVE CUTOUT HOLE AND  
12-INCHES INTO BASE

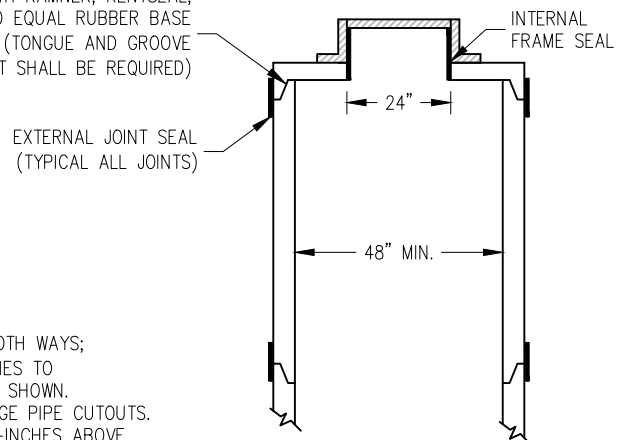
BASE BARREL SECTION



#4 BARS AT 12-INCH C-C BOTH WAYS;  
(12)-#3 BENT BARS, 30-INCHES TO  
36-INCHES LONG, PLACED AS SHOWN.  
TO BE DOUBLED AROUND LARGE PIPE CUTOUTS.  
BENT BARS SHALL EXTEND 3-INCHES ABOVE  
THE CUTOUT HOLE AND 12-INCHES HORIZONTAL INTO BASE

PRECAST FLAT TOP SECTION TYPICAL  
JOINT SEALED WITH RAMNEK, KENTSEAL,  
OR APPROVED EQUAL RUBBER BASE  
GASKET SEALANT (TONGUE AND GROOVE  
JOINT SHALL BE REQUIRED)

TYPICAL PRECAST & FLAT TOP  
SECTION (WHERE SPECIFIED)

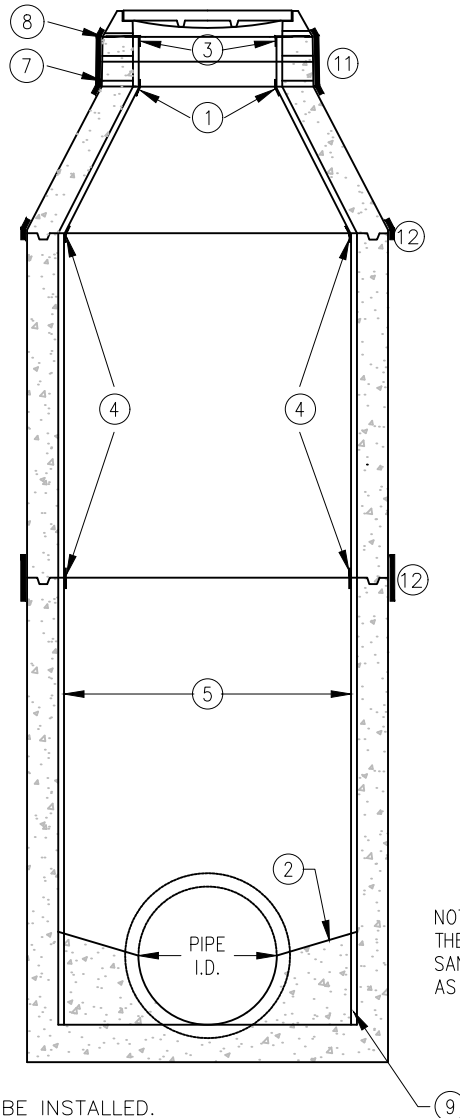


CITY OF BROOKINGS  
BROOKINGS MUNICIPAL UTILITIES  
**SANITARY SEWER MANHOLE**



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NUMBER  
**SM-03**



NOTE:  
THE ENGINEER SHALL DETERMINE WHICH  
SANITARY SEWER MANHOLES SHALL BE LINED,  
AS PER BID FORM

NOTE:

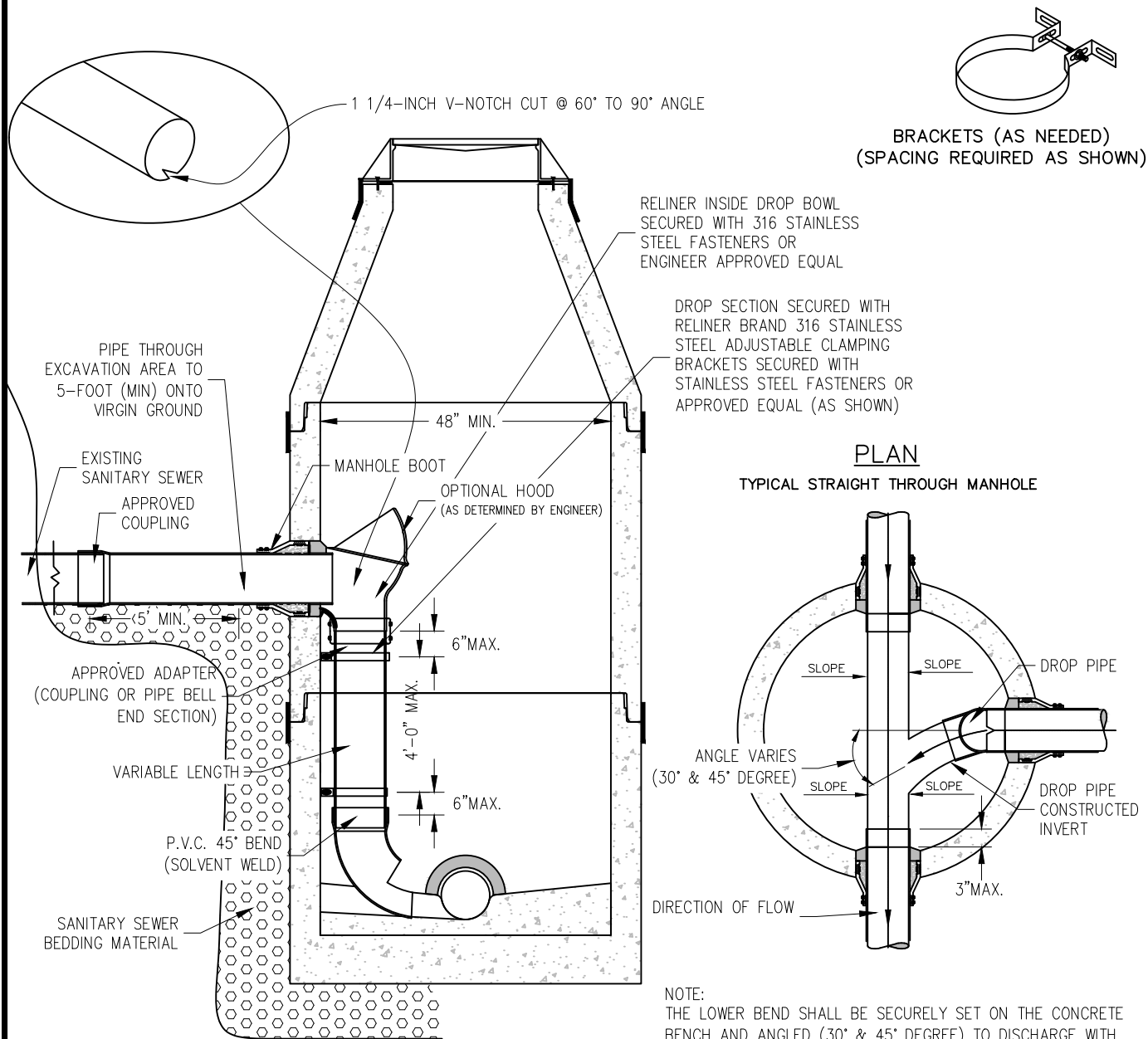
- ① PREFORMED CORNER WELD STRIP TO BE INSTALLED.
- ② PRE-FORMED BENCH AND INVERT.
- ③ INSTALL (2) PREFORMED CORNER TURNBACKS UNDER RING.
- ④ WELD STRIPS.
- ⑤ ALL CONCRETE SURFACES, EXCEPT THE INVERTS, WHICH WILL BE EXPOSED TO SEWER GASES SHALL BE LINED. THIS INCLUDES ALL CONCRETE PIPE SURFACES IF CONCRETE PIPE IS USED.
- ⑥ INSTALLATION OF THE MANHOLE LINER PLATE SHALL CONFORM TO THE REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATIONS.
- ⑦ THE LINER SHALL BE EXTENDED OVER THE TOP OF THE CORBEL SECTION TO FORM A CONTINUOUS SEAL WITH THE MANHOLE WALL LINING. THE LINER SHALL BE EXTENDED TO ONE-HALF THE THICKNESS OF THE CORBEL TOP SECTION.
- ⑧ WHERE ADJUSTING RINGS ARE ALLOWED AND/OR REQUIRED, HDPE ADJUSTING RINGS SHALL BE USED.
- ⑨ THE LINER SHALL BE EXTENDED DOWN TO THE BOTTOM OF THE BASE SECTION TO FORM A CONTINUOUS SEAL WITH THE MANHOLE WALL LINING.
- ⑩ ALL VERTICAL LINER JOINTS SHALL BE WELDED IN THE SHOP.
- ⑪ EXTERNAL FRAME SEAL.
- ⑫ EXTERNAL JOINT SEAL (TYPICAL ALL JOINTS).

CITY OF BROOKINGS  
BROOKINGS MUNICIPAL UTILITIES  
**SANITARY SEWER MANHOLE  
LINED TYPE**



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**SM-04**



NOTE:  
THE LOWER BEND SHALL BE SECURELY SET ON THE CONCRETE BENCH AND ANGLED (30° & 45° DEGREE) TO DISCHARGE WITH THE FLOW. THE MANHOLE BENCH SHALL BE CONSTRUCTED WITH AN INVERT FOR THE DROP PIPE TO DISCHARGE INTO.

NOTE:

THE P.V.C. DROP SECTION SHALL BE SECURED TO THE BARREL SECTION WITH APPROVED NON-CORROSIVE ADJUSTABLE CLAMPING BRACKET(S), AND THE LOWER BEND SHALL BE SECURED AND FORMED INTO THE BENCH OF THE FLOWLINE. THE DROP BOWL SHALL BE SECURED WITH STAINLESS STEEL FASTENERS OR ENGINEER APPROVED EQUAL AND CONNECTED TO THE DROP PIPE WITH APPROVED ADAPTERS. THE DROP BOWL SHALL ALLOW CLEARANCE FOR MAINTENANCE EQUIPMENT INTO THE EXISTING LINE.

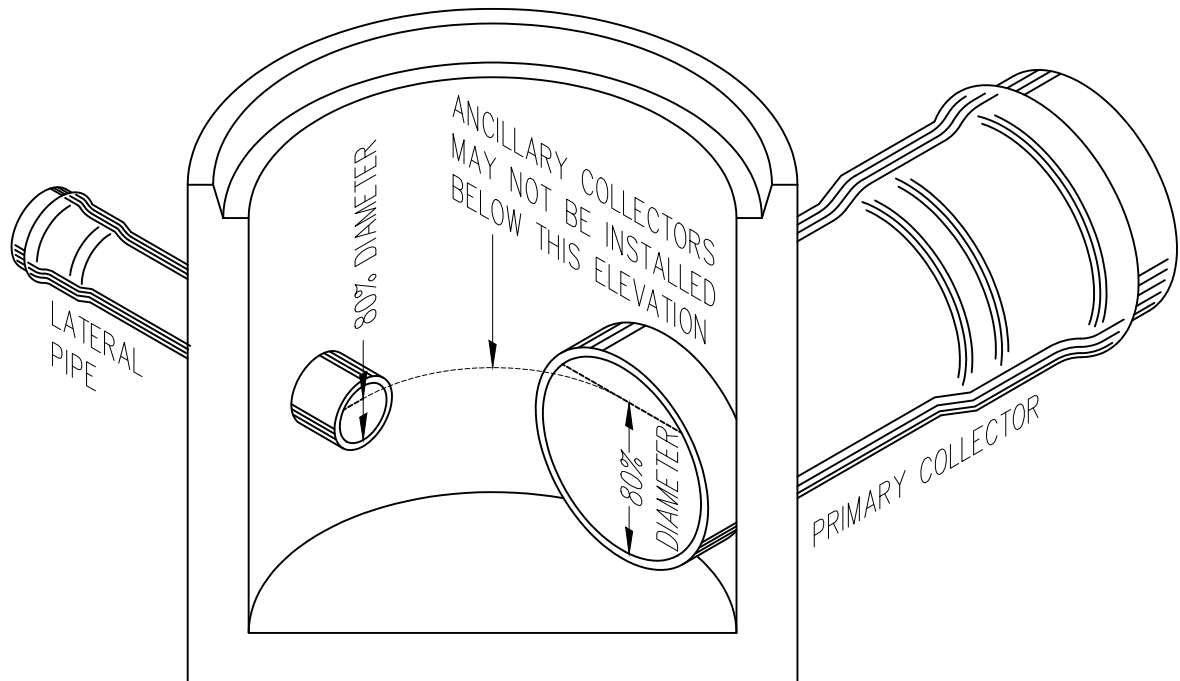
THE MANHOLE BOOT SHALL BE SIMILAR TO THE MANHOLE BASE SECTION SPECIFICATION MINIMUM OF 8-INCHES BETWEEN THE OPENING FOR THE DROP SECTION AND THE NEAREST JOINT.

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BROOKINGS MUNICIPAL UTILITIES  
**SANITARY SEWER MANHOLE  
BOWL TYPE DROP SECTION**



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**SM-05**



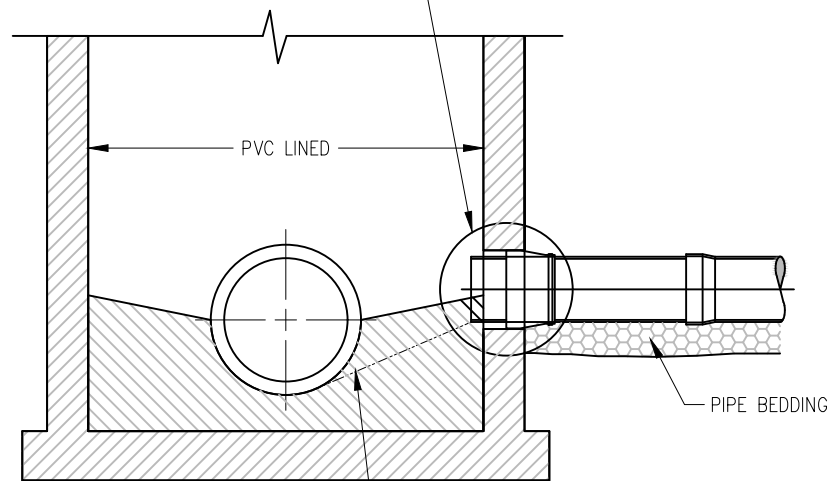
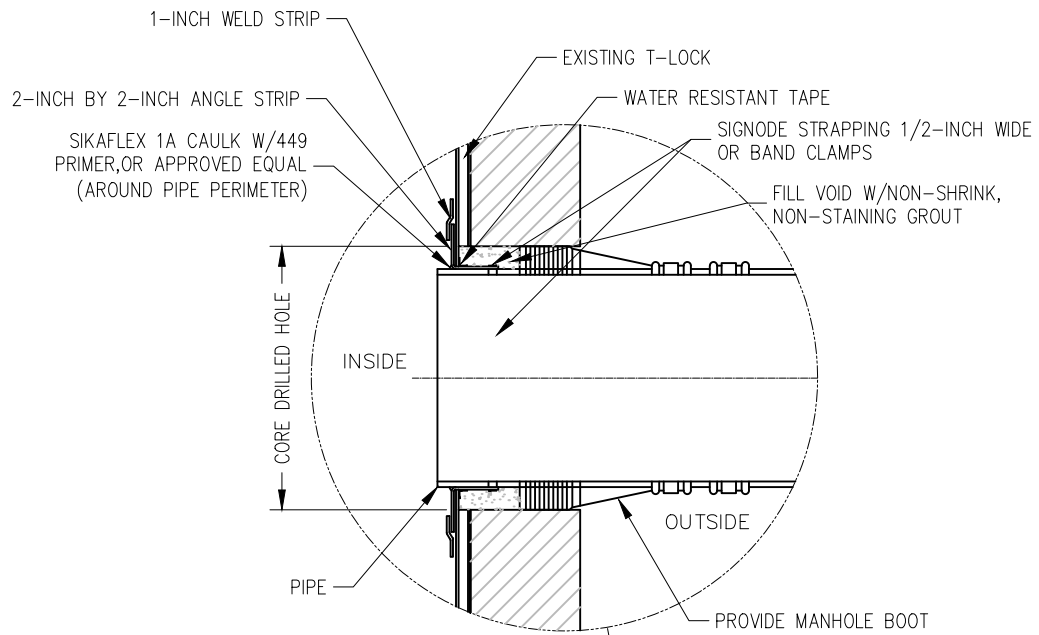
NOTE:  
LATERAL PIPES MAY NOT BE INSTALLED BELOW THE ELEVATION AT WHICH THE 80% OF DIAMETER HEIGHT OF EACH PIPE MEETS. THIS SHALL APPLY WHEN PRIMARY COLLECTORS ARE 10" AND LARGER.

CITY OF BROOKINGS  
BROOKINGS MUNICIPAL UTILITIES  
**LOWEST LATERAL ELEVATIONS  
ON COLLECTOR PIPES**



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**SM-06**



CONTRACTOR SHALL REMOVE PART OF EXISTING CONCRETE INVERT AND CONSTRUCT NEW INVERT TO FACILITATE SMOOTH TRANSITION INTO EXISTING INVERTS

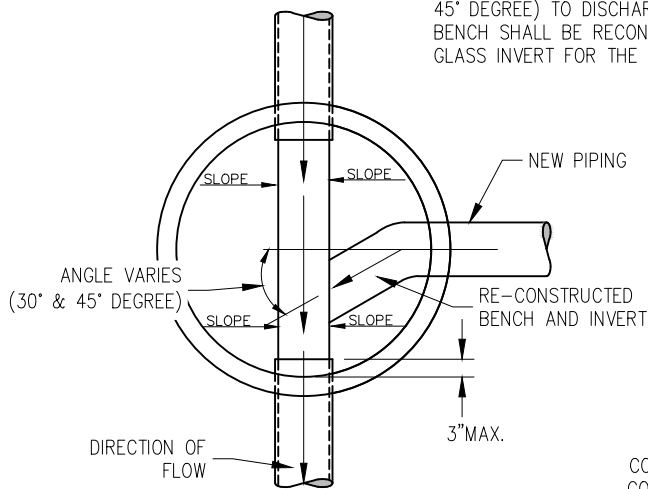
CITY OF BROOKINGS  
BROOKINGS MUNICIPAL UTILITIES  
**SANITARY SEWER LINED  
MANHOLE PIPE SECTION**



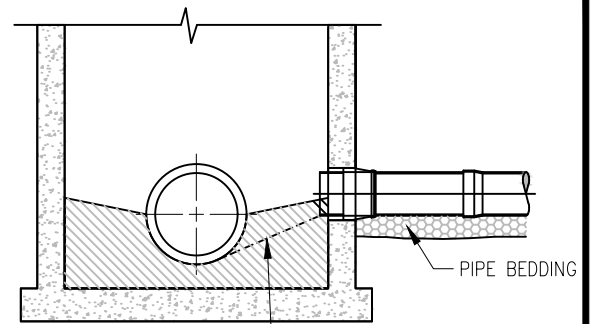
REVISION  
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**03/15/2025**

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NUMBER  
**SM-07**

NOTE:  
THE CONCRETE BENCH AND INVERT SHALL BE ANGLED (30° & 45° DEGREE) TO DISCHARGE WITH THE FLOW. THE MANHOLE BENCH SHALL BE RECONSTRUCTED WITH A SMOOTH AS GLASS INVERT FOR THE NEW PIPE TO DISCHARGE INTO.

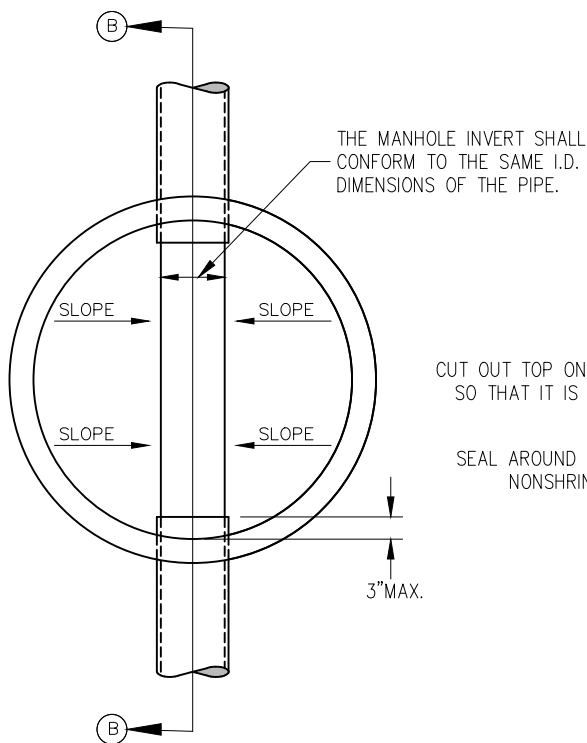


PLAN  
PROPOSED MANHOLE



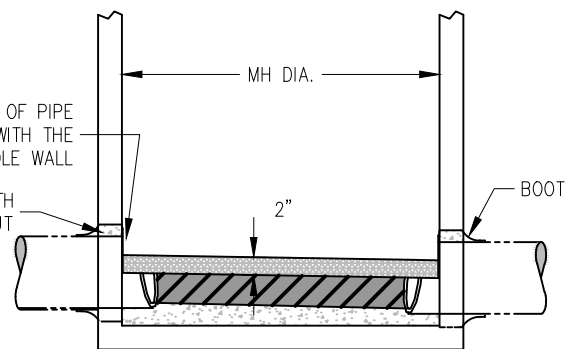
CONTRACTOR SHALL REMOVE PART OF EXISTING CONCRETE BENCH AND INVERT AND CONSTRUCT NEW BENCH AND INVERT TO FACILITATE SMOOTH TRANSITION INTO EXISTING INVERTS

SECTION



PLAN  
EXISTING STRAIGHT THROUGH MANHOLE

CUT OUT TOP ONE-HALF OF PIPE SO THAT IT IS FLUSH WITH THE MANHOLE WALL  
SEAL AROUND PIPE WITH NONSHRINK GROUT



SECTION B-B

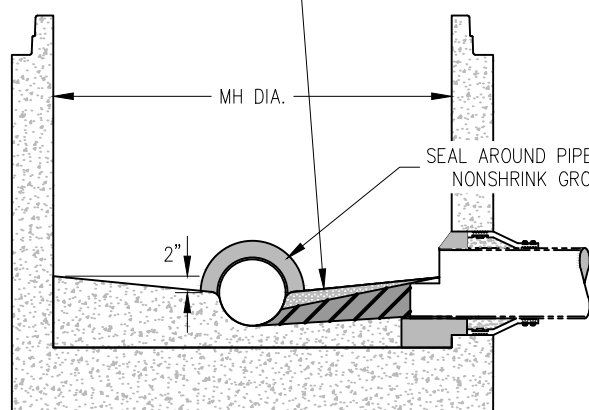
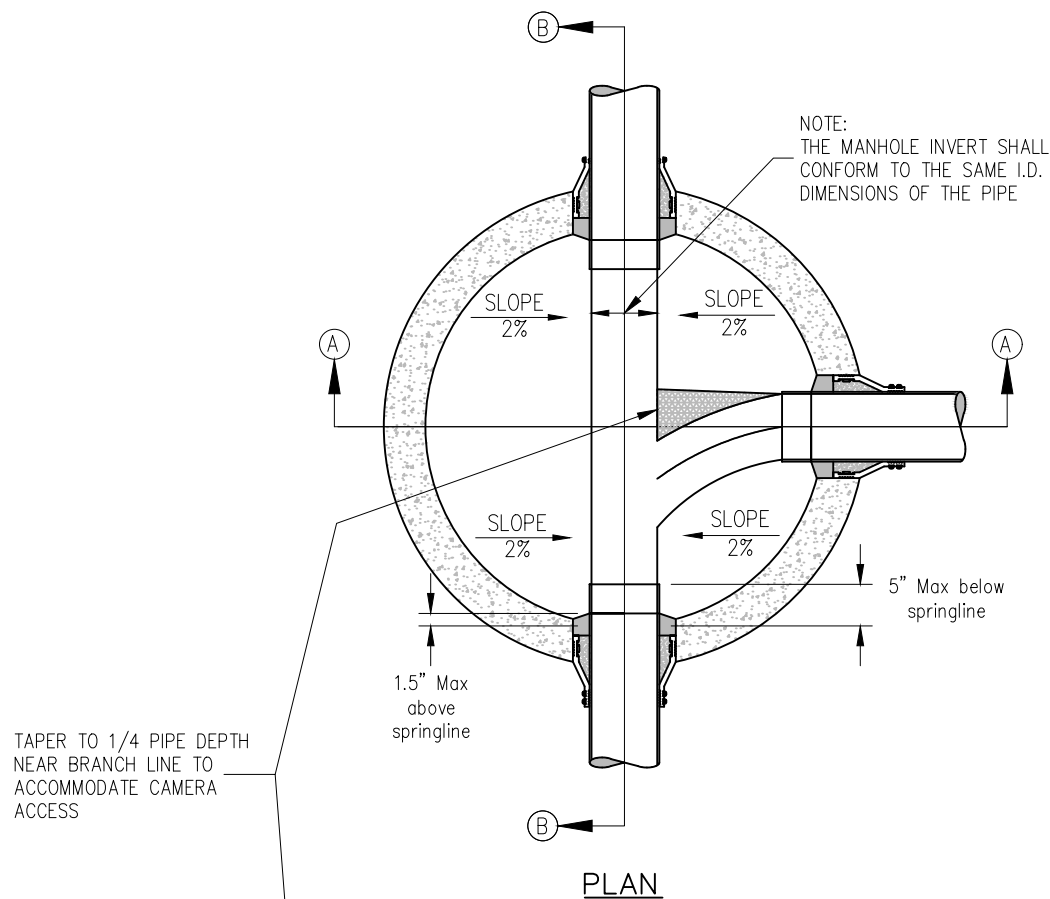
CITY OF BROOKINGS  
BROOKINGS MUNICIPAL UTILITIES  
**MANHOLE BENCH AND INVERT DETAIL  
CONNECT TO EXISTING MANHOLE**



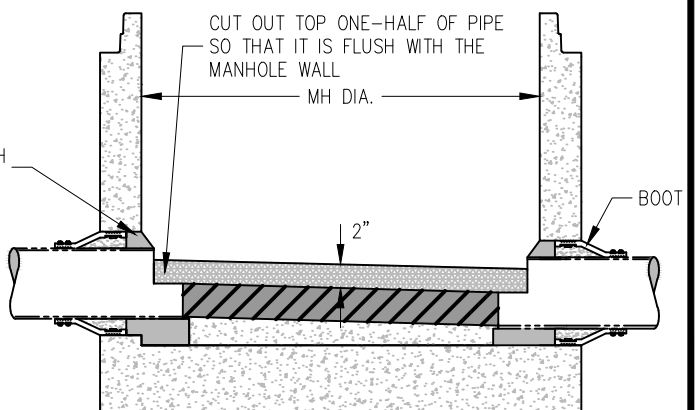
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**03/15/2025**

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NUMBER  
**SM-08**





SECTION A-A



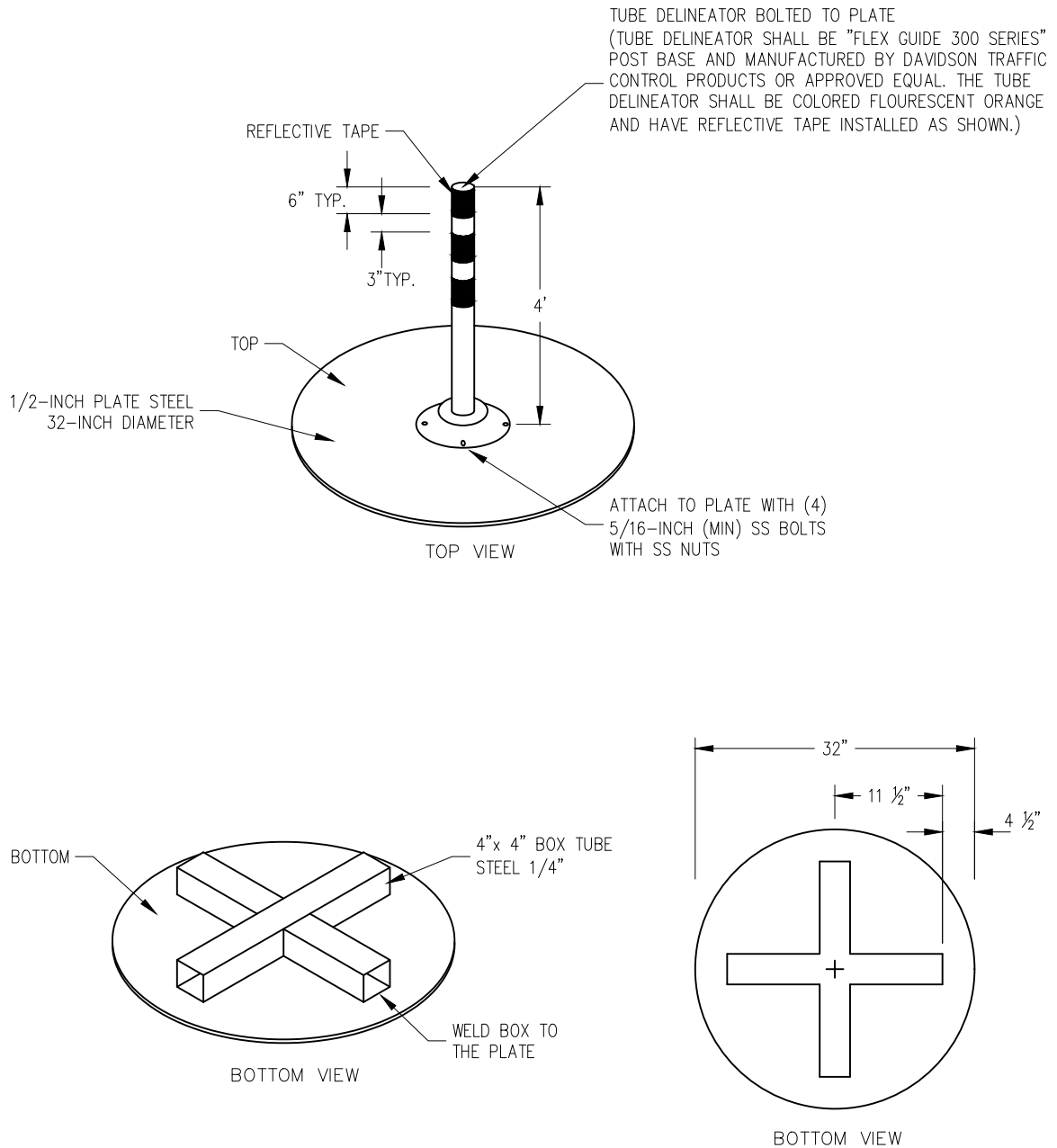
SECTION B-B

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BROOKINGS MUNICIPAL UTILITIES  
**MANHOLE BENCH AND INVERT DETAIL**  
**NEW MANHOLE**



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NUMBER  
**SM-09**



**NOTE:**

A SEALANT MATERIAL SHALL BE INSTALLED BETWEEN THE MANHOLE CONSTRUCTION PLATE MARKER AND THE MANHOLE TO FORM A WATERTIGHT SEAL.

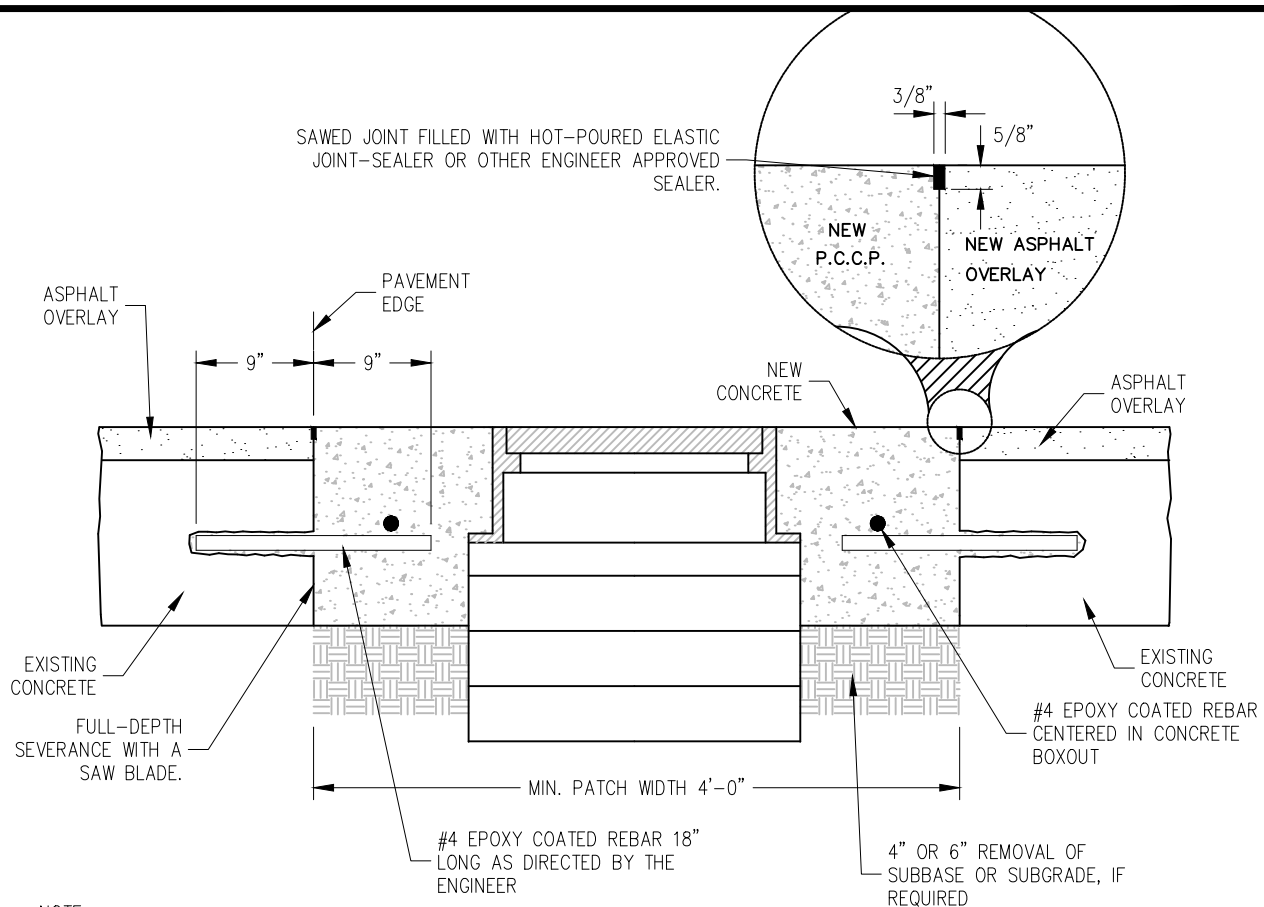
BREAKAWAY LIFT HOOKS WILL BE ALLOWED ON THE TOP OF THE PLATE FOR USE IN INSTALLING AND REMOVING THE PLATE. THE LIFT HOOKS SHALL BE LOCATED WITHIN A 10 INCH RADIUS OF THE PLATE CENTER.

CITY OF BROOKINGS  
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**MANHOLE CONSTRUCTION  
PLATE MARKER**



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**SM-10**



NOTE:

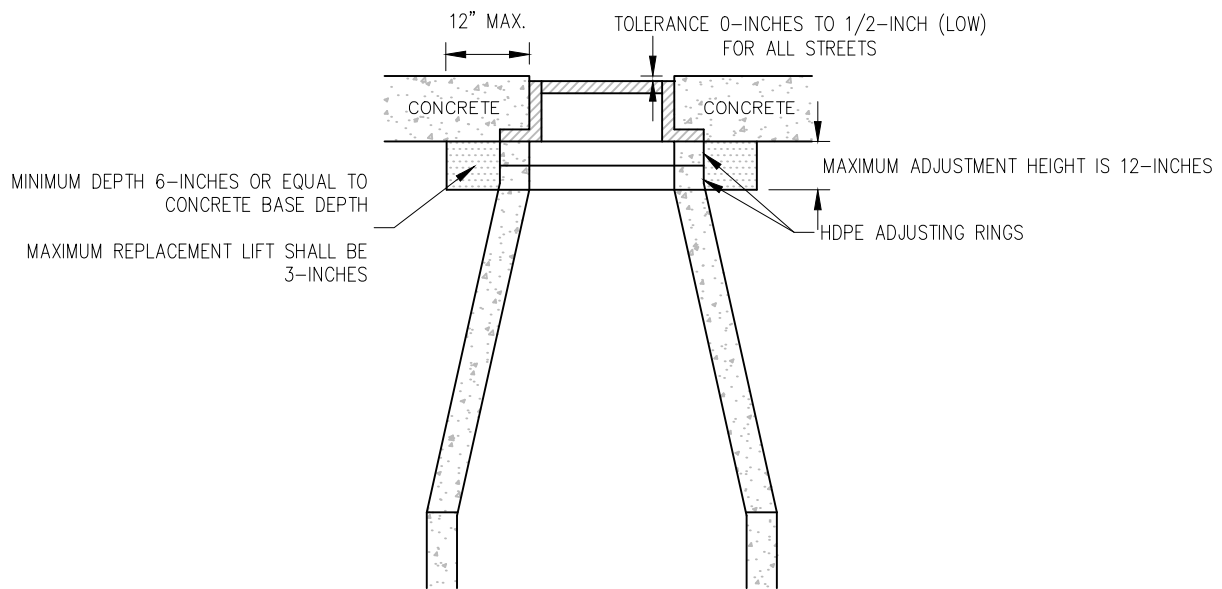
1. THE ADJUSTMENT OF MANHOLE CASTINGS INVOLVES ADDING OR REMOVING ADJUSTING RINGS UNDER THE FRAME. IF THE ELEVATION OF THE COVER IS TOO HIGH, IT MAY BE NECESSARY FOR THE CONTRACTOR TO REPLACE THE UPPER MANHOLE SECTION OR INTERMEDIATE SECTION SO THAT THE ELEVATIONS FOR THE COVERS ARE FLUSH WITH THE TOP OF THE FINISHED SURFACE. ADJUSTMENT OF FRAME AND COVERS SHALL BE IN ACCORDANCE WITH THIS STANDARD PLATE AND THE CITY OF BROOKINGS STANDARD SPECIFICATIONS FOR SANITARY SEWER MAIN CONSTRUCTION.
2. A CONCRETE BOXOUT IS REQUIRED FOR ASPHALT OVERLAY ON EXISTING CONCRETE STREETS. THE CONCRETE BOXOUT SHALL BE CENTERED ON THE MANHOLE OR JUNCTION BOX FRAME AND COVER OR VALVE BOX.
3. THE BOXOUT SHALL BE CUT OUT AFTER THE INSTALLATION OF THE ASPHALT OVERLAY. THE PAVEMENT SHALL BE SAWED FULL DEPTH WITH A VERTICAL FACE. THE CONTRACTOR SHALL ENSURE THAT THE ADJACENT ASPHALT SURFACE IS LEFT INTACT AND UNDAUNAGED WHEN REMOVING THE BOXOUT.
4. THE ALLOWABLE VERTICAL TOLERANCE BETWEEN THE ASPHALT PAVEMENT AND ANY PART OF THE FRAME AND COVER OR VALVE BOX SHALL BE 0-INCHES TO 1/2-INCH LOW FOR ALL ADJUSTMENTS. IN NO CASE SHALL THE MANHOLE COVER OR VALVE BOX BE ABOVE THE SURFACE OF THE FINISHED PAVEMENT.
5. THE CONCRETE BOXOUT SHALL BE SQUARE OR RECTANGULAR, AND HAVE MINIMUM DIMENSION OF 4-FOOT BY 4-FOOT FOR A MANHOLE FRAME AND LID
6. APPLY TACK COAT TO THE VERTICAL ASPHALT AND CONCRETE SURFACES PRIOR TO PLACEMENT OF CONCRETE FOR BOXOUT.
7. CLASS M6 CONCRETE SHALL BE USED FOR THE BOXOUT. FAST TRACK CONCRETE MAY BE USED AT THE DISCRETION OF THE ENGINEER.
8. STEEL REINFORCING SHALL BE EPOXY COATED GRADE 40.
9. STEEL REINFORCING SHALL CONSIST OF #4 REBAR SUPPORTED BY APPROVED CHAIRS.
10. THE CONCRETE BOXOUT WORK SHALL BE COMPLETED PRIOR TO OPENING THE STREET TO TRAFFIC.
11. CONCEALED PICK HOLES AND THE SEAL BETWEEN THE FRAME AND COVER SHALL BE PROTECTED FROM FOREIGN MATERIAL. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE A SYSTEM TO PREVENT FOREIGN MATERIAL FROM ENTERING THE CONCEALED PICK HOLE AND FRAME AND COVER SEAL DURING THE WORK.
12. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A SYSTEM TO PREVENT FOREIGN MATERIAL FROM ENTERING THE VALVE BOX DURING THE WORK.

CITY OF BROOKINGS  
BROOKINGS MUNICIPAL UTILITIES  
**MANHOLE CONCRETE BOXOUT  
IN CONCRETE STREETS**



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**SM-12**



NOTE:

1. THE ADJUSTMENT OF MANHOLE CASTINGS INVOLVES ADDING OR REMOVING ADJUSTING RINGS UNDER THE FRAME. IF THE ELEVATION OF THE COVER IS TOO HIGH, IT MAY BE NECESSARY FOR THE CONTRACTOR TO REPLACE THE UPPER MANHOLE SECTION OR INTERMEDIATE SECTION SO THAT THE ELEVATIONS FOR THE COVERS ARE FLUSH WITH THE TOP OF THE FINISHED SURFACE. ADJUSTMENT OF FRAME AND COVERS SHALL BE IN ACCORDANCE WITH THIS STANDARD PLATE AND THE BROOKINGS MUNICIPAL UTILITIES STANDARD SPECIFICATIONS FOR SANITARY SEWER MAIN CONSTRUCTION.

2. MANHOLE CASTINGS SHALL BE ADJUSTED TO FINAL GRADE PRIOR (INCLUDING SIDE SLOPE) TO PLACEMENT OF CONCRETE SURFACING.

3. ALL MANHOLES SHALL BE ADJUSTED TO BE FLUSH WITH THE CONCRETE SURFACE. THE ALLOWABLE VERTICAL TOLERANCE BETWEEN THE CONCRETE PAVEMENT AND ANY PART OF THE FRAME AND COVER SHALL BE 0-INCHES TO 1/2-INCH LOW. IN NO CASE SHALL THE MANHOLE OR JUNCTION BOX FRAME AND COVER BE ABOVE THE SURFACE OF THE CONCRETE PAVEMENT.

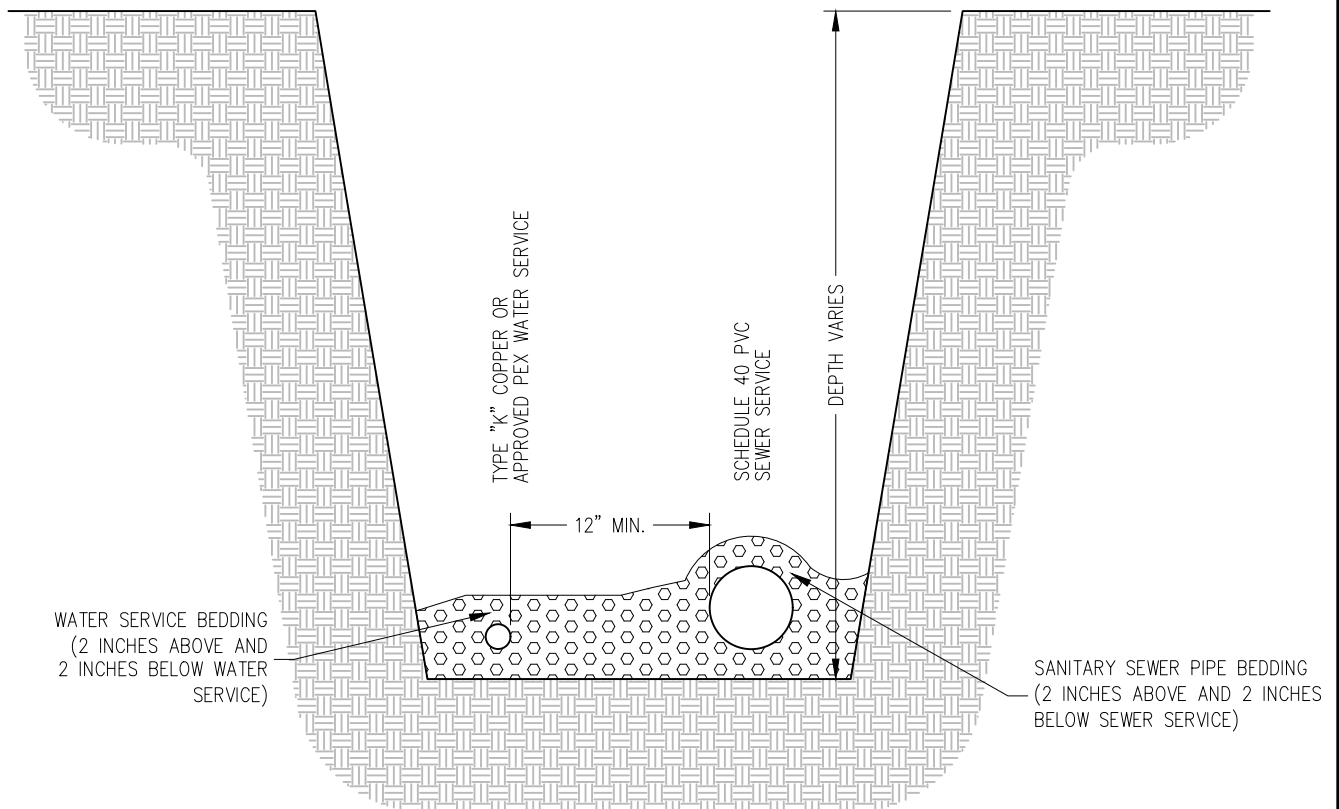
4. CONCEALED PICK HOLES AND THE SEAL BETWEEN THE FRAME AND COVER SHALL BE PROTECTED FROM FOREIGN MATERIAL. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO PROVIDE A SYSTEM TO PREVENT FOREIGN MATERIAL FROM ENTERING THE CONCEALED PICK HOLE AND FRAME AND COVER SEAL DURING THE WORK.

CITY OF BROOKINGS  
BROOKINGS MUNICIPAL UTILITIES  
**MANHOLE ADJUSTMENT  
IN CONCRETE STREETS**



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**SM-13**

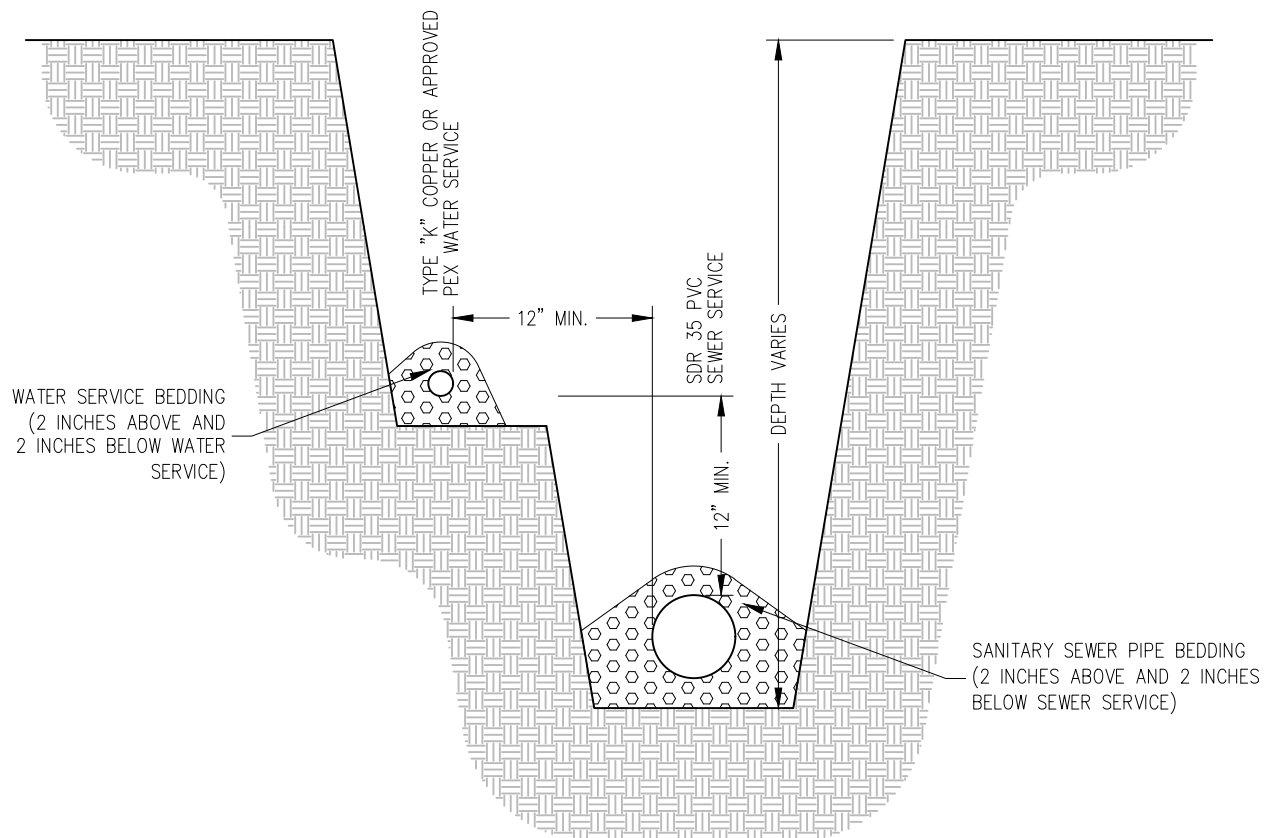


CITY OF BROOKINGS  
BROOKINGS MUNICIPAL UTILITIES  
**SANITARY SEWER SERVICE (SCH 40)  
WITH WATER SERVICE**



REVISION  
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**03/15/2025**

PLATE  
NUMBER  
**SM-14**

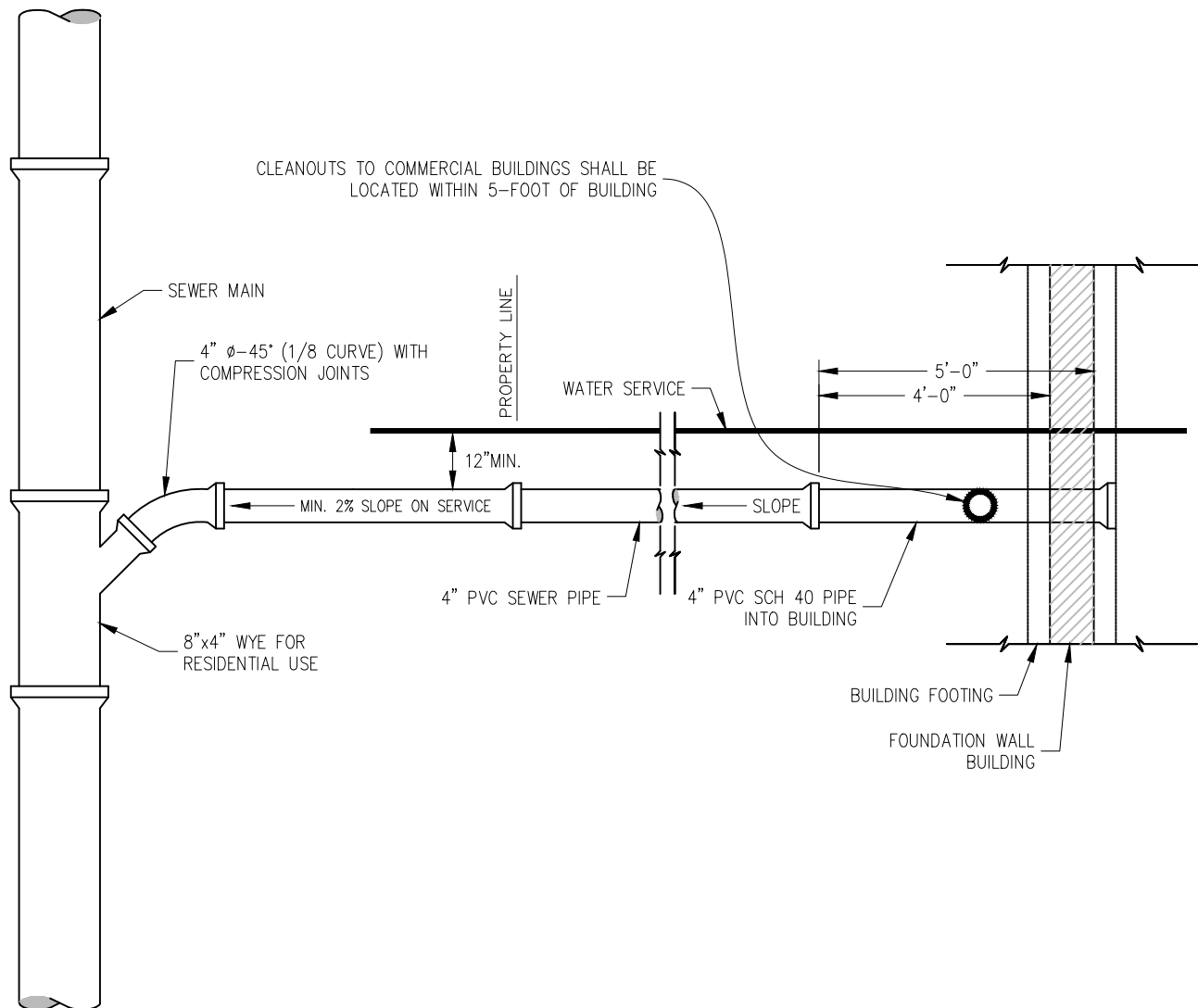


CITY OF BROOKINGS  
BROOKINGS MUNICIPAL UTILITIES  
**SANITARY SEWER SERVICE (SDR35)  
WITH WATER SERVICE**



REVISION  
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PLATE  
NUMBER  
**SM-15**



NOTE:

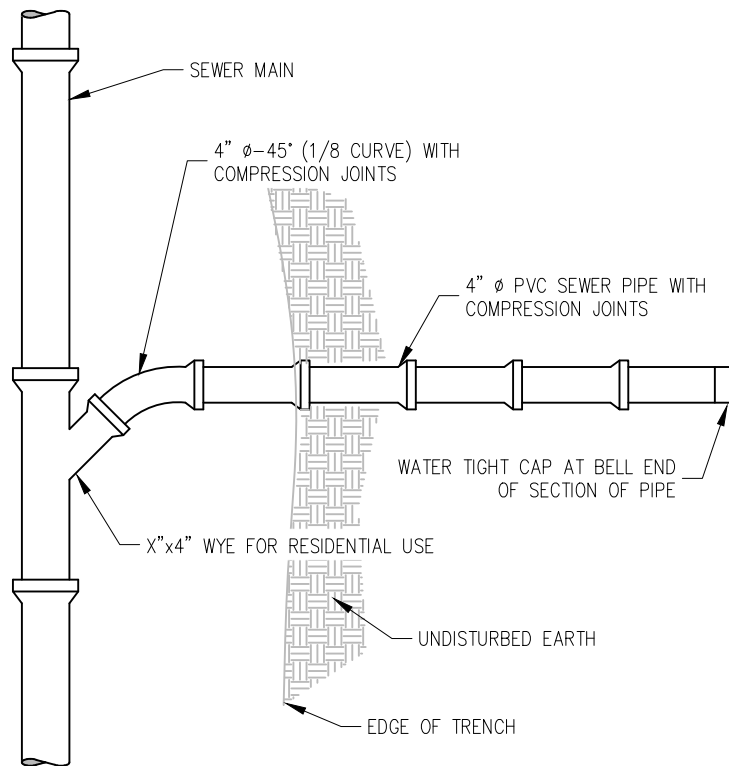
1. A 12-INCH MINIMUM SEPARATION IN ALL DIRECTIONS BETWEEN THE SEWER AND WATER SERVICES SHALL BE MAINTAINED FROM THE PROPERTY LINE TO THE BUILDING AT ALL TIMES.
2. MINIMUM SIZE FOR SERVICES FOR RESIDENTIAL BUILDINGS IS 4-INCH. DETAIL ABOVE IS FOR A RESIDENTIAL SERVICE. MINIMUM SIZE FOR SERVICES FOR COMMERCIAL BUILDINGS IS 6-INCH.
3. CLEAN OUTS ARE REQUIRED ON ALL RESIDENTIAL SERVICES THAT EXCEED 75 FEET IN LENGTH, AND COMMERCIAL SERVICES THAT EXCEED 100 FEET IN LENGTH.

CITY OF BROOKINGS  
BROOKINGS MUNICIPAL UTILITIES  
**TYPICAL SANITARY SEWER SERVICE**



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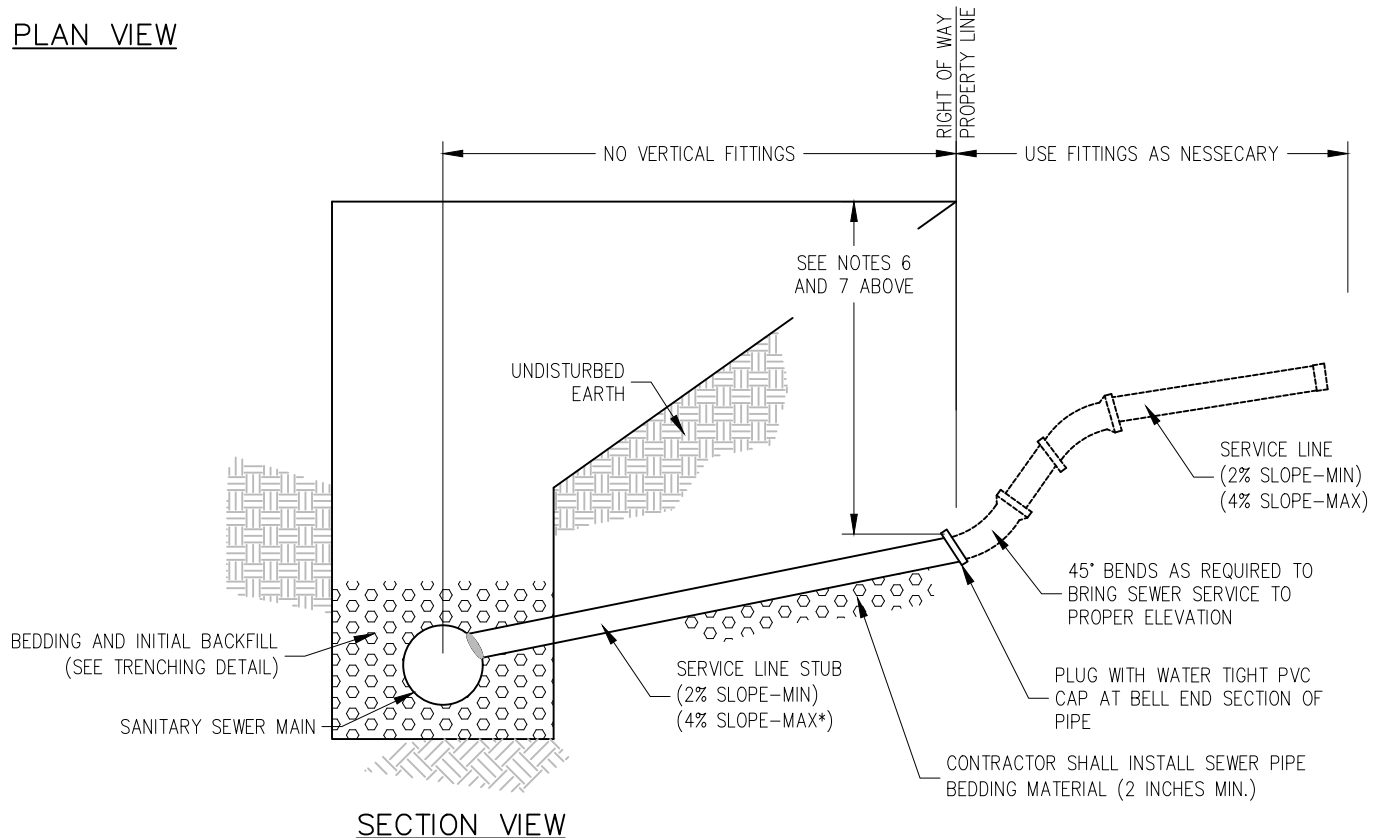
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**SM-16**



PLAN VIEW

NOTE:

1. MINIMUM SIZE FOR SERVICES FOR RESIDENTIAL BUILDINGS IS 4-INCH. DETAIL IS FOR A RESIDENTIAL SERVICE. MINIMUM SIZE FOR SERVICES FOR COMMERCIAL BUILDINGS IS 6-INCH.
2. JOINTS SHALL BE WIPED CLEAN AND DRY – AND COATED WITH LUBRICANT. SPIGOT SHALL BE INSERTED INTO BELL AS DEEP AS POSSIBLE. TRENCHES SHALL BE KEPT WATER FREE AND AS DRY AS POSSIBLE DURING BEDDING, LAYING AND JOINTING OF PIPE
3. CONTRACTOR SHALL NOT BE ALLOWED TO INSTALL VERTICAL FITTINGS INSIDE OF RIGHT A WAY.
4. SDR 26 PIPE AND FITTING (INCLUDING WYE OR TEE) SHALL BE REQUIRED FOR SERVICES OR SERVICE RISERS EXCEEDING 20- FEET IN DEPTH.
5. CONTRACTOR SHALL MARK THE LOCATION OF THE END OF THE SERVICE LINE (SEE STANDARD DETAIL).
6. DEPTH OF THE SERVICE AT THE PROPERTY LINE IS DICTATED BY THE DEPTH OF THE SEWER MAIN. SERVICE LINE STUB SHALL BE INSTALLED AT 4%, OR GREATER, SO THAT THE DEPTH TO STUB AT PROPERTY LINE IS NO GREATER THAN 12 FEET.
7. IF DEVELOPER WANTS A SERVICE STUB GREATER THAN 12 FEET DEEP AT THE PROPERTY LINE, THE DESIGNER SHALL INCLUDE THE SLOPE OF THE SERVICE AND AN ELEVATION OF THE STUB AT THE PROPERTY LINE ON THE PROJECT PLANS.



SECTION VIEW

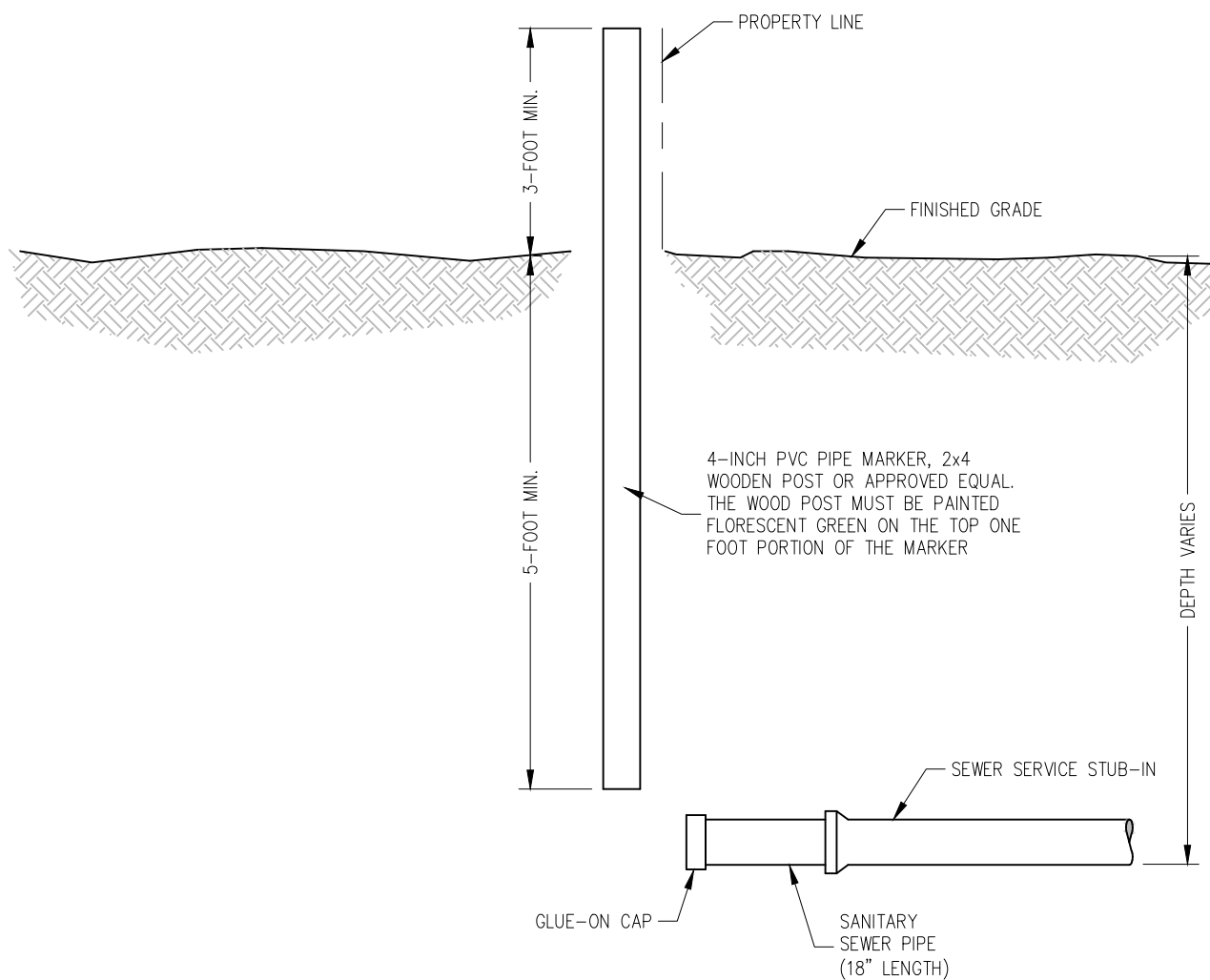
CITY OF BROOKINGS  
BROOKINGS MUNICIPAL UTILITIES  
**TYPICAL SANITARY SEWER SERVICE  
VERTICAL ADJUSTMENT**



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**SM-17**





NOTE:

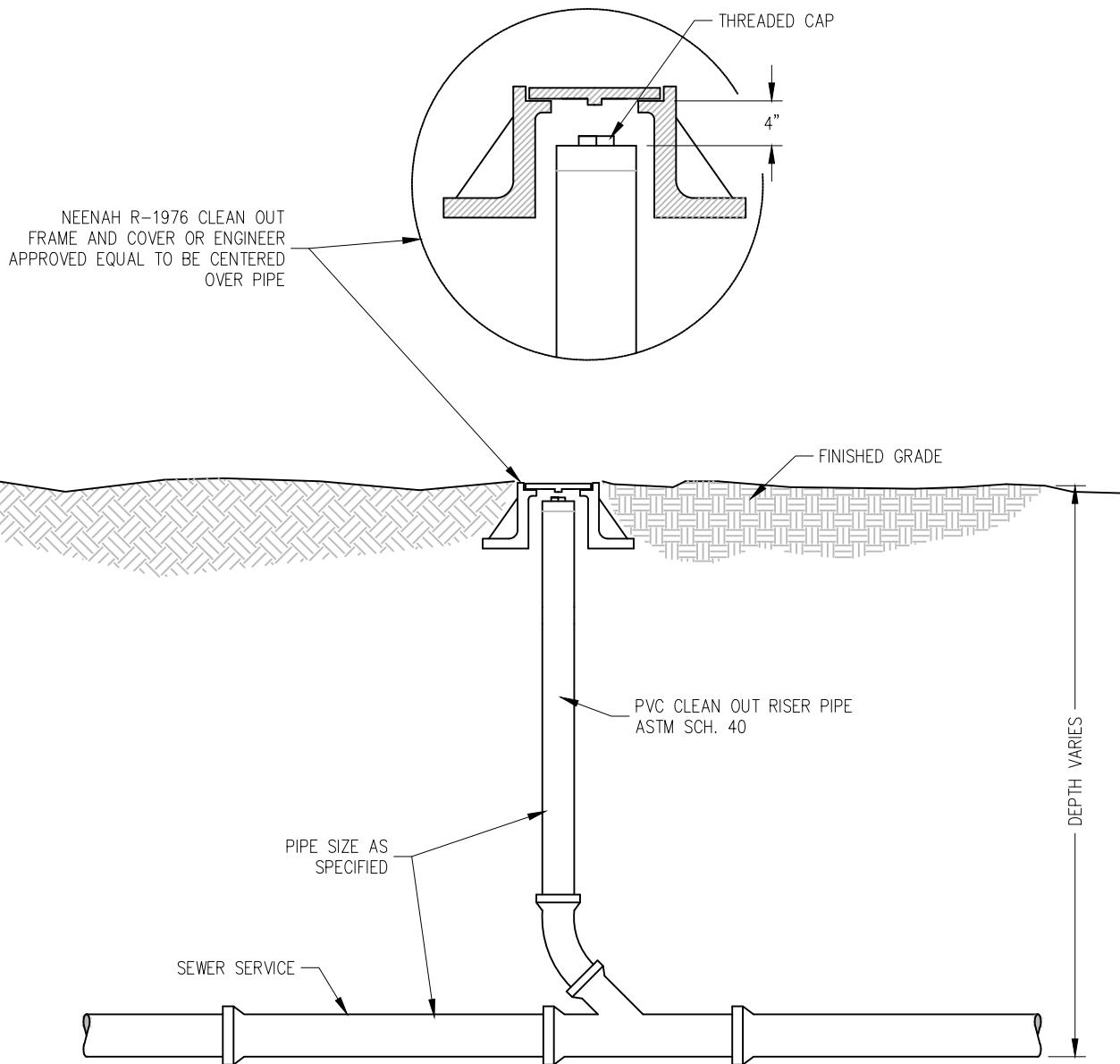
1. MARKERS SHALL BE MAINTAINED BY THE DEVELOPER OR PROPERTY OWNER UNTIL THE SERVICE IS EXTENDED TO THE HOUSE, BUILDING OR OTHER STRUCTURE.
2. DEVELOPER OR PROPERTY OWNER WILL BE RESPONSIBLE FOR REPLACING DAMAGED MARKERS.
3. MARKERS SHALL BE PLACED VERTICAL FROM THE END OF THE SEWER SERVICE AND NOT OFFSET.

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**SANITARY SEWER SERVICE  
STUB-IN MARKER DETAIL**



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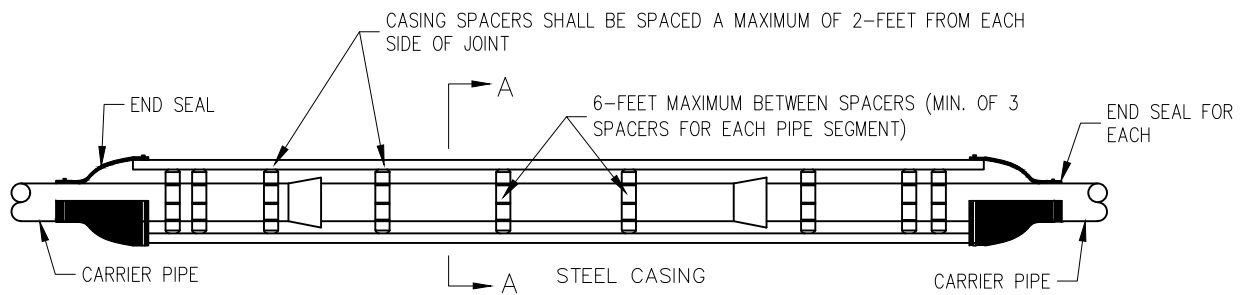


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**CLEANOUT FRAME AND COVER**

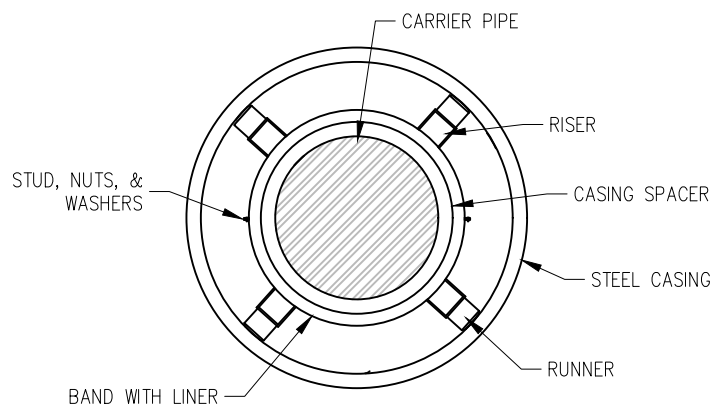


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**SM-19**



ELEVATION



SECTION A-A

PIPE SIZE	CASING SIZE
4"	10"
6"	12"
8"	16"
10"	18"
12"	20"
15"	24"
18"	26"
21"	30"
24"	36"
27"	40"
30"	42"
36"	48"

NOTE:  
CASING PIPE MUST CONFORM TO AWWA C-200 WITH ASTM GRADE A36 PLATE STEEL MINIMUM YIELD STRENGTH OF 35,000 POUNDS PER SQUARE INCH

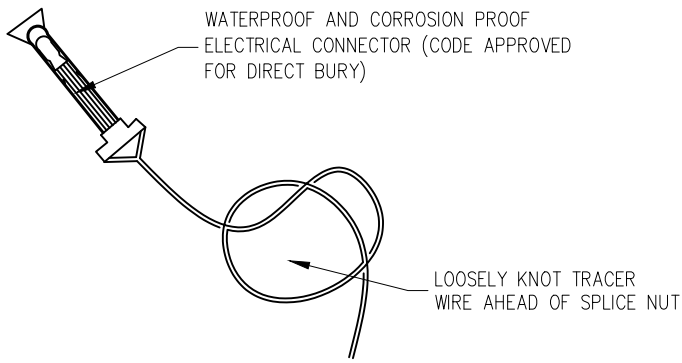
GROUTING OF THE ANNULAR SPACE WILL NOT BE REQUIRED UNLESS OTHERWISE NOTED

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BROOKINGS MUNICIPAL UTILITIES  
**STANDARD CASING / CARRIER  
FOR SANITARY SEWER PIPE**

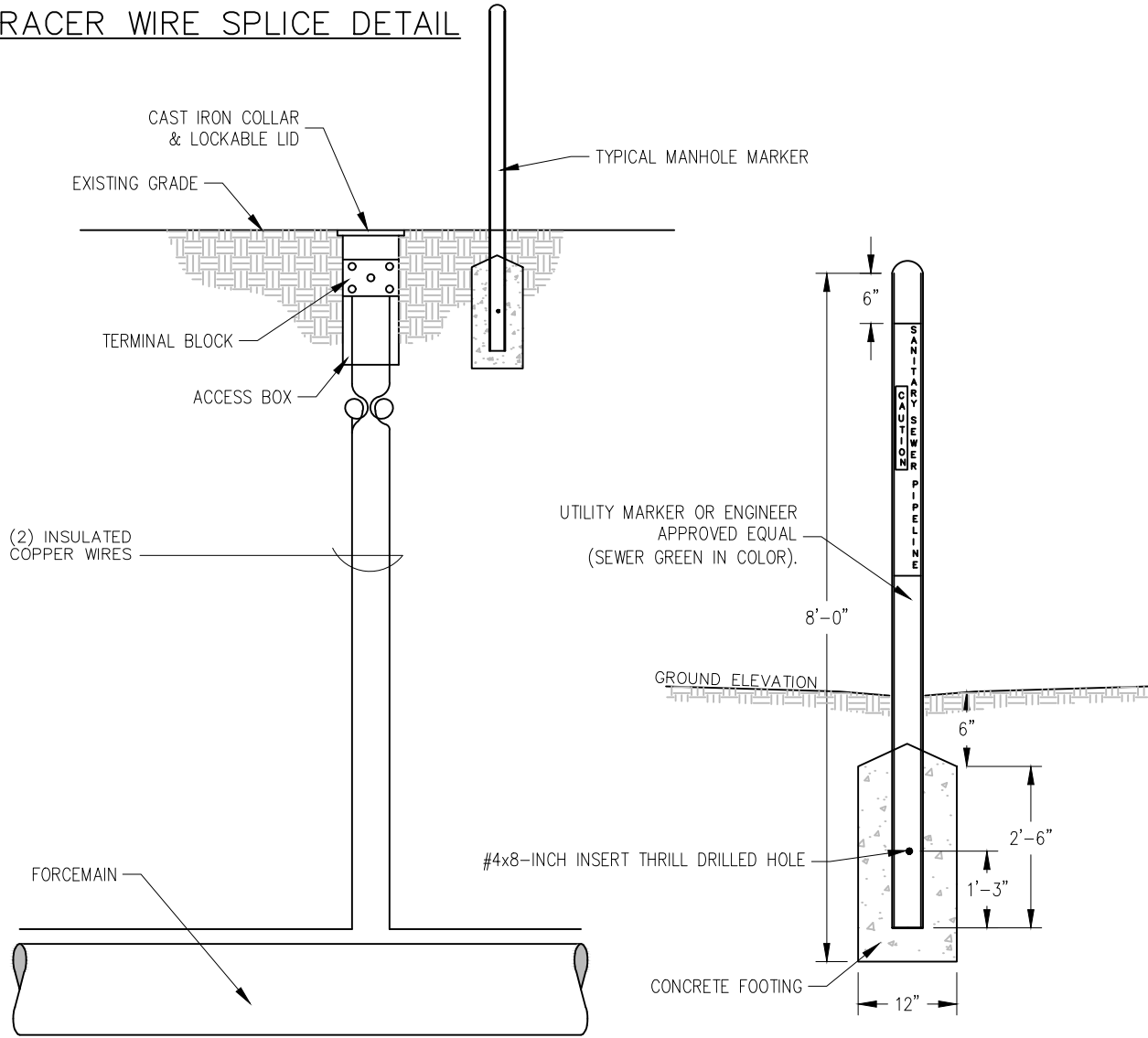


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## TRACER WIRE SPLICE DETAIL



NOTE:  
PROVIDE SUFFICIENT SLACK IN TRACER WIRE TO ALLOW  
TERMINAL BLOCK TO EXTEND 18-INCHES OUT OF FLUSH  
BOX. COIL WIRES IN ACCESS BOX

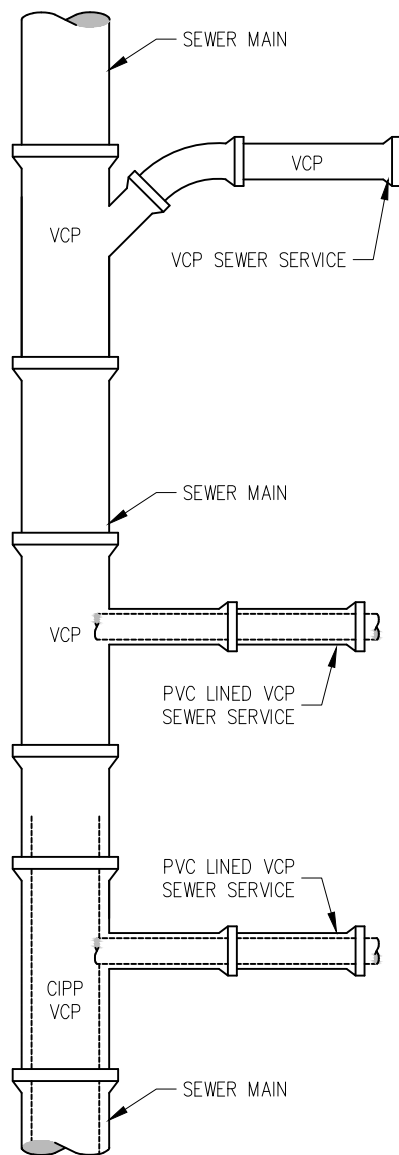
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**SANITARY SEWER FORCE MAIN  
TRACER WIRE SYSTEM**



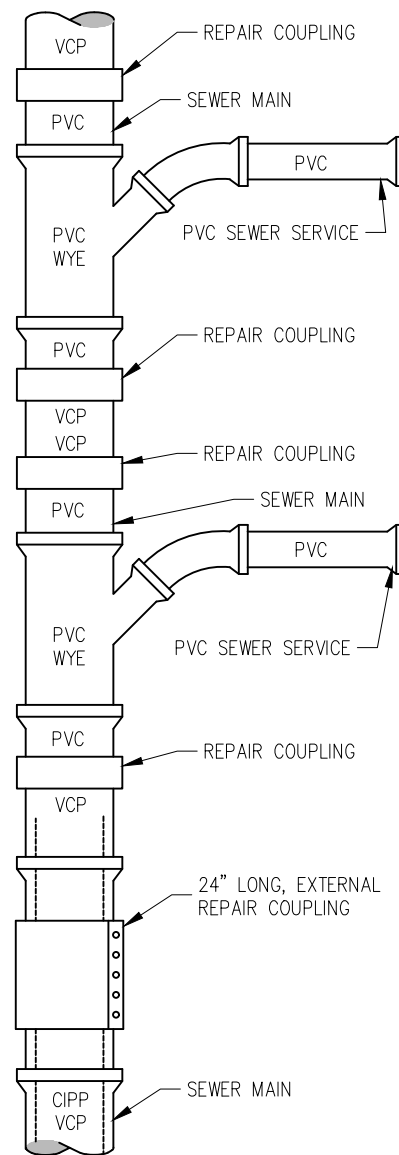
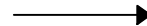
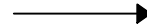
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## EXISTING SANITARY SEWER MAIN AND SERVICE CONNECTION



## SANITARY SEWER SERVICE REPAIR METHOD



### NOTE:

1. ALL TAPS AND REPAIRS TO THE EXISTING SANITARY SEWER MAIN SHALL BE MADE BY BMU.
2. WHEN THE SANITARY SEWER MAIN IS CLAY PIPE OR CURED IN PLACE PIPE (CIPP) MATERIAL, A SECTION OF THE MAIN LINE PIPE WILL BE REMOVED, AND A NEW PVC PIPE WILL BE COUPLED ONTO THE EXISTING MAIN. A NEW WYE OR INSERTA-TEE SHALL BE USED FOR THE PROPOSED SERVICE.
3. UNUSED SEWER SERVICES SHALL BE ABANDONED AT THE SEWER MAIN BY ONE OF THREE WAYS. METHOD OF ABANDONMENT SHALL BE DETERMINED BY THE SEWER MAIN AND SERVICE PIPE MATERIALS. REFERENCE STANDARD SPECIFICATIONS FOR REQUIREMENTS.
4. IN NO CASE WILL THE SEWER BE ABANDONED BY CAPPING THE EXISTING SERVICE WITH NON-SHRINK GROUT PLACED CONTINUOUSLY FOR A 1-FOOT DISTANCE INTO THE PIPE.

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**REPAIR OR ABANDON  
SANITARY SEWER SERVICE**



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