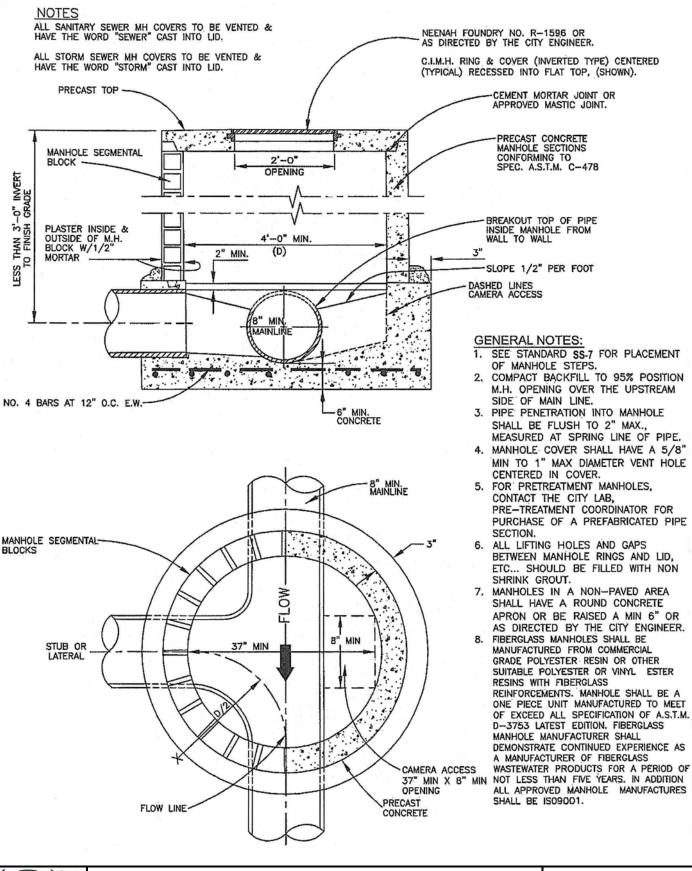
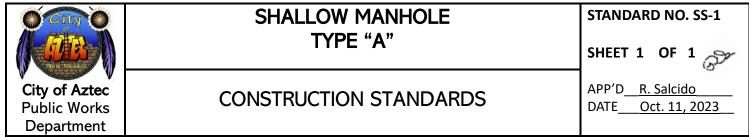


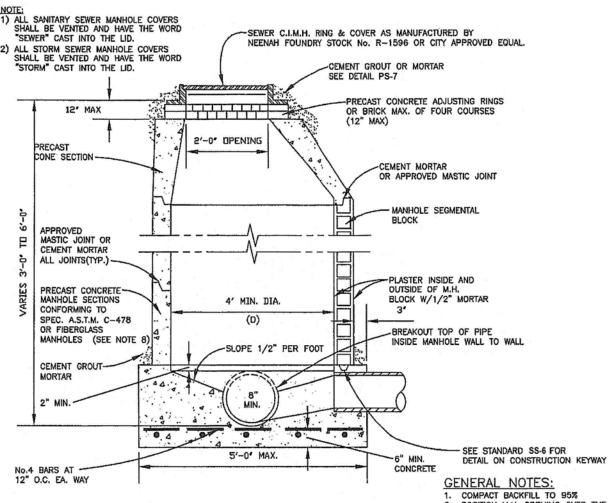
SANITARY SEWER Construction Standards

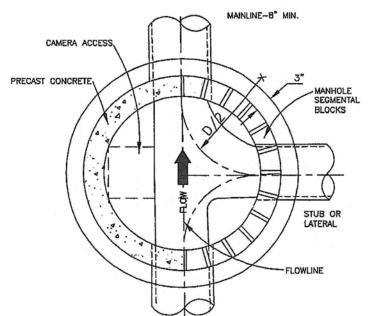
SHEET INDEX

Sheet #	Title
SS-1	Shallow Manhole Type "A"
SS-2	Shallow Manhole Type "B"
SS-3	Drop Manhole Type "D"
SS-4	Standard Manhole Type "E"
SS-5	Sewer Service at Dead Ends and Cul-De-Sac
SS-6	Manhole Bases
SS-7	Standard Manhole Steps
SS-8	Typical Manhole Cover Raising
SS-9	Tap Saddle Connection
SS-10	Slip Liner Tap Connection
SS-11	Trench Cuts & Widths
SS-12.1	Trench Details 72" O.D. Pipe or Less
SS-12.2	Trench Details Pipe Over 72" O.D.
SS-12.3	Trench Pay Width
SS-12.4	Trench Details
SS-13	Approximate Angle of Repose for Sloping Sides of Excavations
SS-14	Sewer Service Location
SS-15	Sanitary Sewer Mains
SS-16	Typical Sanitary Sewer Air Relief Detail
SS-17	Pressure Sanitary Sewer Cleanout Detail
SS-18.1	1-1/2" Pressure Sanitary Sewer Lateral Detail
SS-18.2	2" Pressure Sanitary Sewer Lateral Detail









- 2. POSITION M.H. OPENING OVER THE UPSTREAM SIDE OF MAIN LINE.
- PIPE PENETRATION INTO MANHOLE SHALL BE FLUSH TO 2" MAX., MEASURED AT SPRING LINE OF PIPE.
- MANHOLE COVER SHALL HAVE A 5/8" MIN TO 1" MAX DIAMETER VENT HOLE CENTERED IN COVER.
- 5. FOR PRETREATMENT MANHOLES, CONTACT THE CITY LAB, PRE— TREATMENT COORDINATOR FOR PURCHASED OF A PREFABRICATED PIPE SECTION.
- 6. ALL LIFTING HOLES AND GAPS BETWEEN
 MANHOLE RINGS AND LID, ETC... SHOULD BE
 FILLED WITH NON SHRINK GROUT.
- MANHOLES' IN A NON-PAVED AREA SHALL HAVE A ROUND CONCRETE. APRON OR BE RAISED A MIN. 6" OR AS DIRECTED BY THE CITY ENGINEER.
- 8. FIBERGLASS MANHOLES SHALL BE
 MANUFACTURED FROM COMMERCIAL GRADE
 POLYESTER RESIN OR OTHER SUITABLE
 POLYESTER OR VINYL ESTER RESINS WITH
 FIBERGLASS REINFORCEMENTS. MANHOLE SHALL
 BE A ONE PIECE UNIT MANUFACTURED TO
 MEET OF EXCEED ALL SPECIFICATION OF
 A.S.T.M. D-3753 LATEST EDITION. FIBERGLASS
 MANHOLE MANUFACTURER SHALL DEMONSTRATE
 CONTINUED EXPERIENCE AS A MANUFACTURER
 OF FIBERGLASS WASTEWATER PRODUCTS FOR A
 PERIOD OF NOT LESS THAN FIVE YEARS. IN
 ADDITION ALL APPROVED MANHOLE
 MANUFACTURES SHALL BE ISO9001.

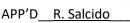


SHALLOW MANHOLE TYPE "B"

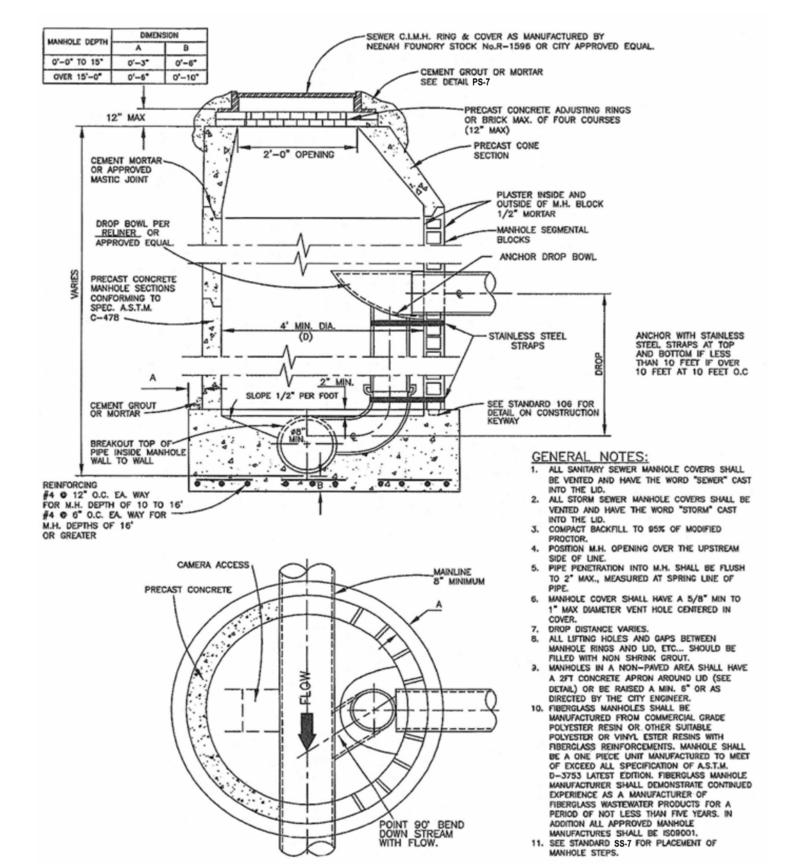
CONSTRUCTION STANDARDS

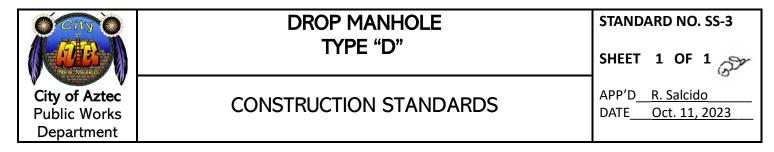
STANDARD NO. SS-2

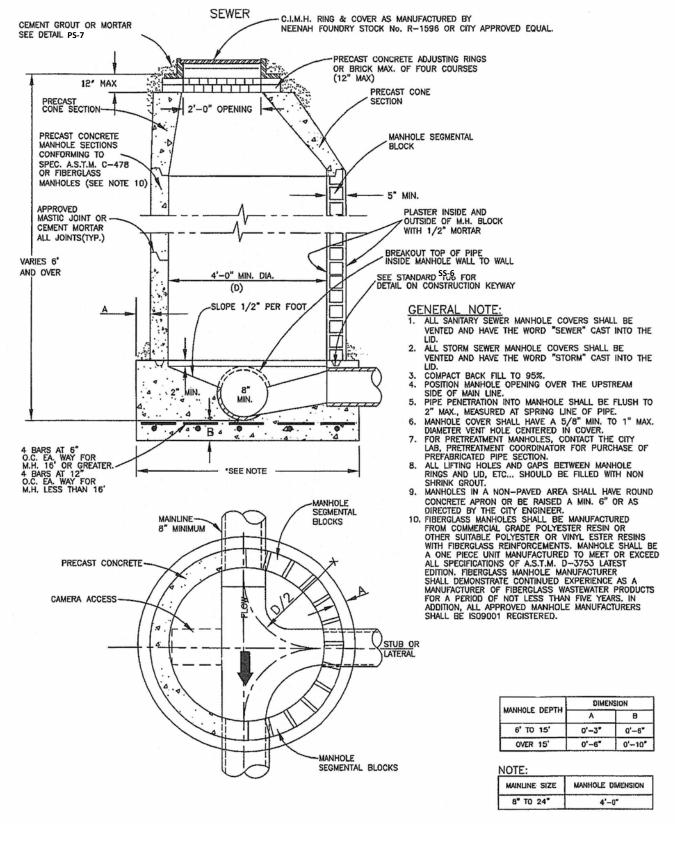
SHEET 1 OF 1

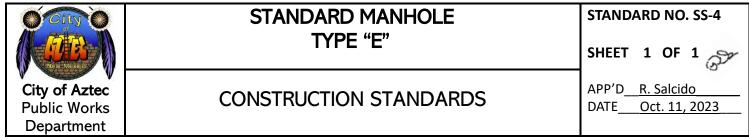


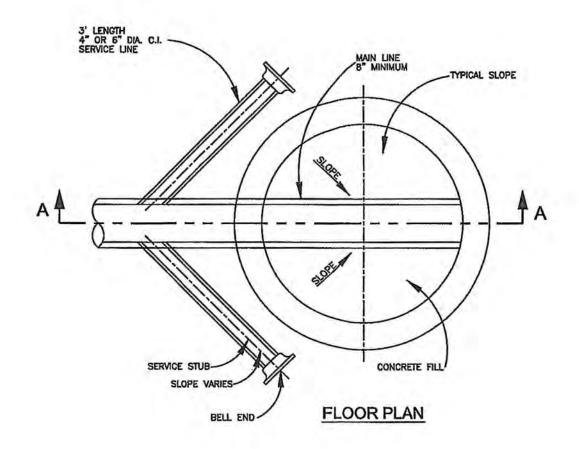
DATE Oct. 11, 2023

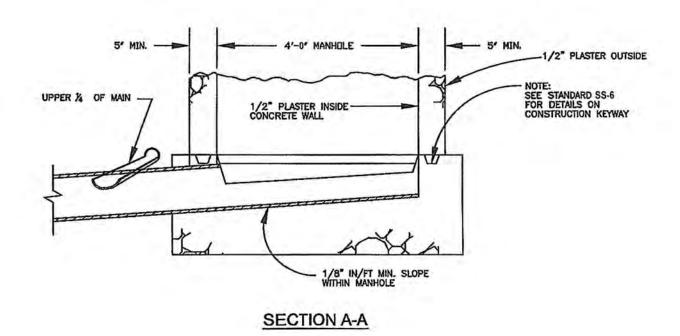


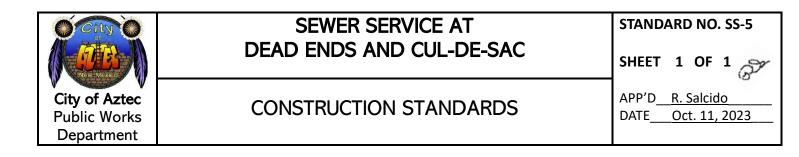


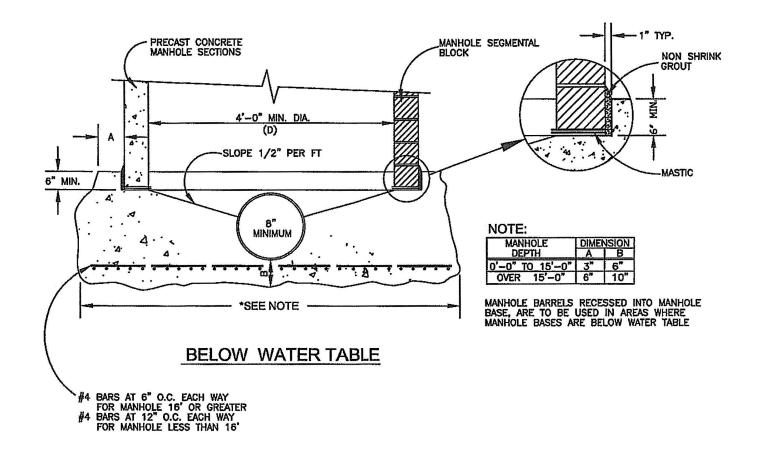


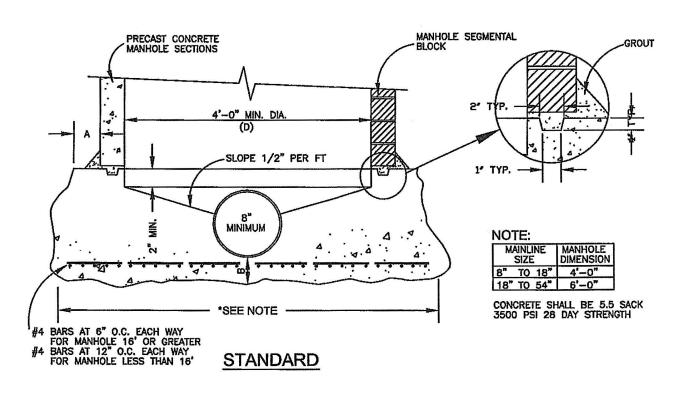


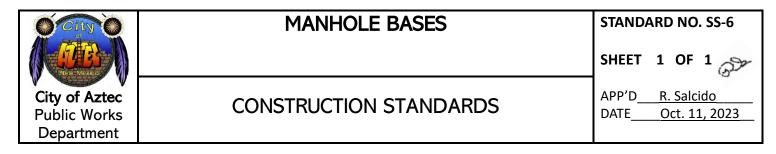




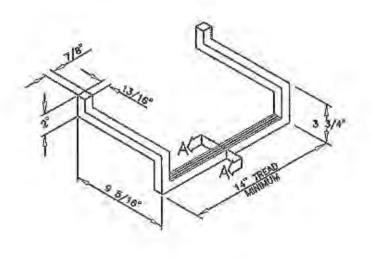


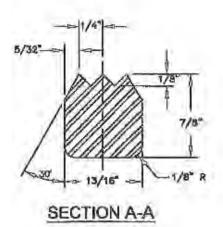


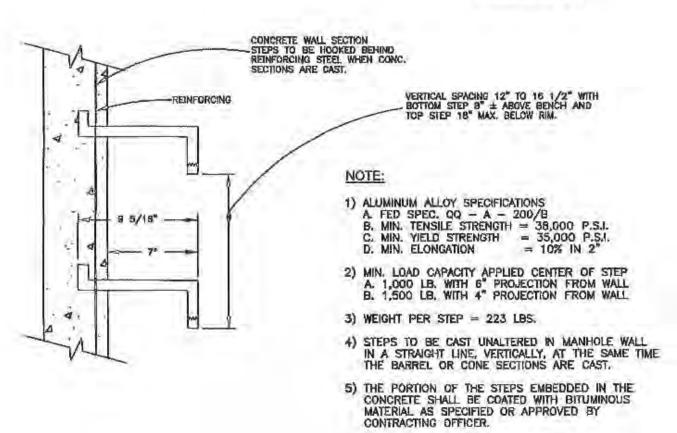


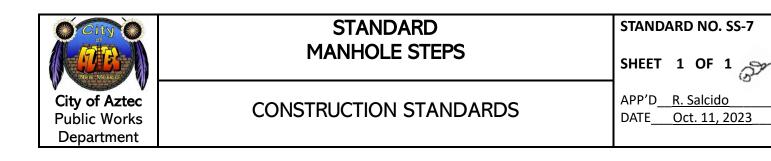


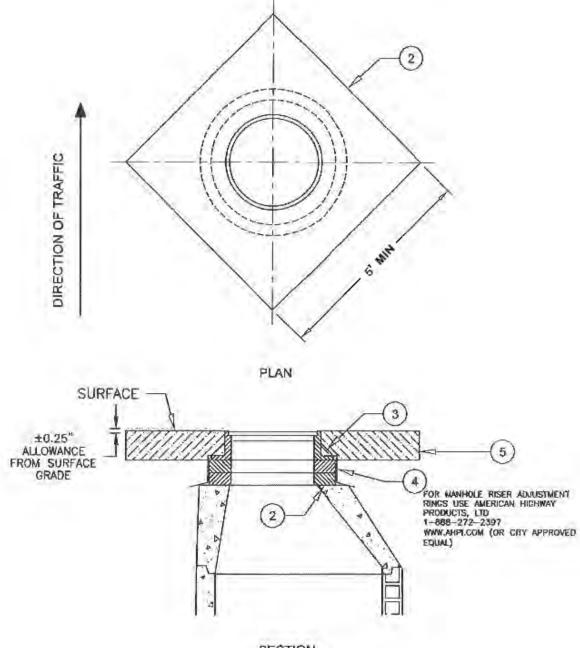
STEPS SHALL BE SIMILIAR AND EQUAL TO COPOLYMER POLYPROPYLENE PLASTIC EQUAL TO M.A. INDUSTRIES MODEL PS2 — PF.





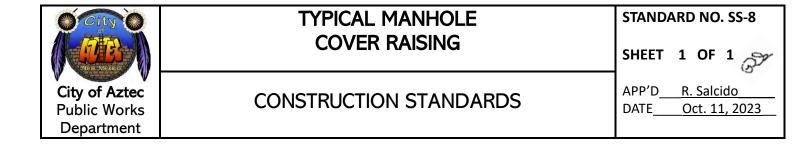


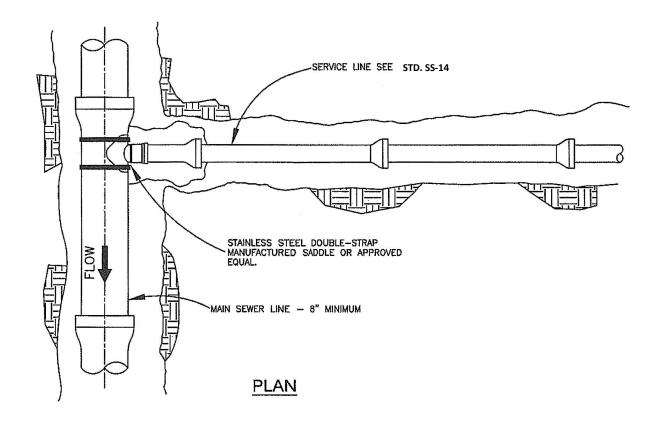


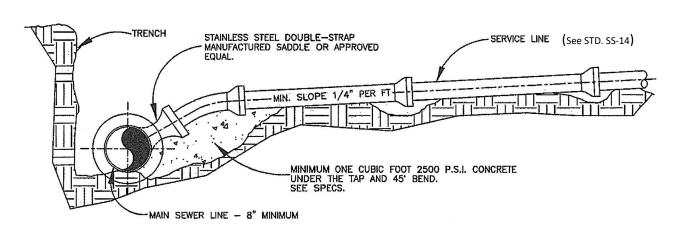


SECTION

- MANHOLE UD SMALL BE ADJUSTED WHEN GREATER THAN OR EQUAL TO 0.75 INCH FROM FINAL SURFACE CRADE. CUT AND REMOVE EXISTING PAVEMENT TO NEAT LINES AS SHOWN OR AS DIRECTED, REMOVE BITUMINOUS CONCRETE FROM THE MANHOLE FRAME AND COVERS. CIRCULAR PAVEMENT CUT AROUND MANHOLE COVER ALSO ACCEPTABLE. REMOVE EXISTING MORTAR AND MASONRY WHICH IS LOOSE, DETERIORATED OR UNSOUND AS DIRECTED BY THE
- ENGINEER, REPLACE PAVEMENT WITH 3" BITUMINOUS CONCRETE ON TAMPED SUBBASE, SEAL PAVEMENT JOINT WITH
- ASTRALL,
 SET MANHOLE FRAME TO REQUIRED GRADE WITH MANHOLE GRADE RINGS OR AS DIRECTED BY THE ENGINEER.
 MANHOLE FRAMES ARE TO BE SET IN FULL MORTAR BEDS.
 CONTRACTOR TO FURNISH NEW MANHOLE FRAME AND COVER AS MECESSARY.
 FINAL LID ADJUSTMENT SHALL BE FLUSH WITH EXISTING SURFACE ±0,25 INCH.
 HOT ASPHALT MIX SHALL BE USED FOR MANHOLE LID ADJUSTMENT UNLESS DIRECTED OTHERWISE BY THE
- ENGINEER.



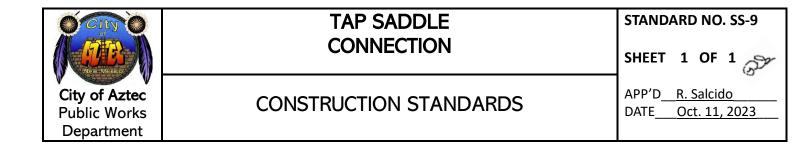


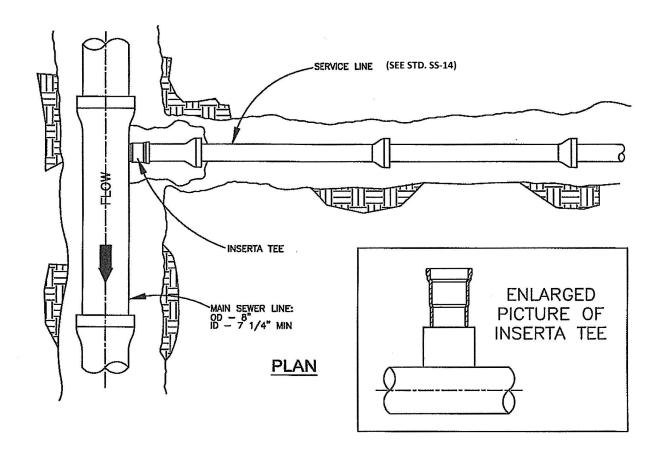


ELEVATION

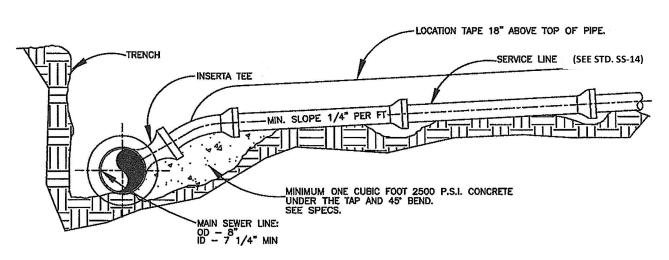
- 1. ALL SERVICE LINES SHALL CONFORM TO LOCAL
- PLUMBING CODE.

 2. SERVICE LINE SHALL NOT PROTRUDE INTO SEWER MAIN.

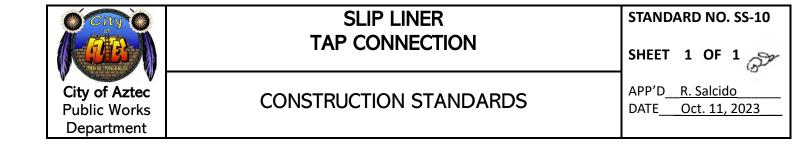


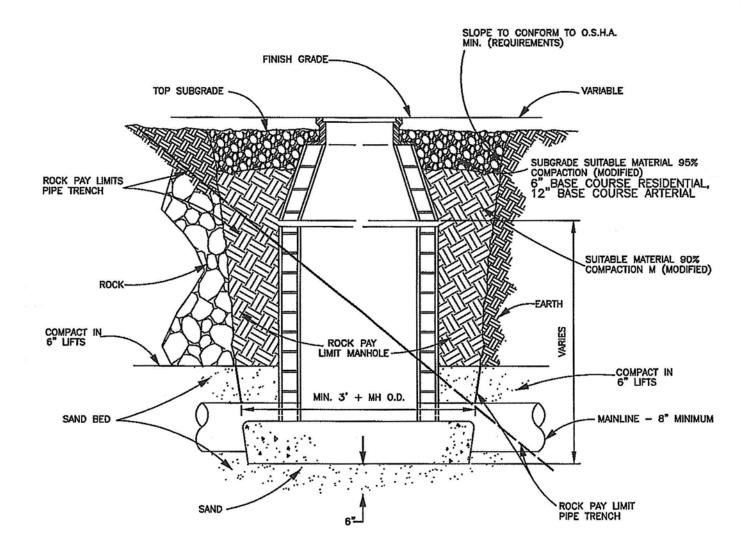


- 1) ALL SERVICE LINES SHALL CONFORM TO LOCAL PLUMBING CODE.
- 2) SERVICE LINE SHALL NOT PROTRUDE INTO MAIN.



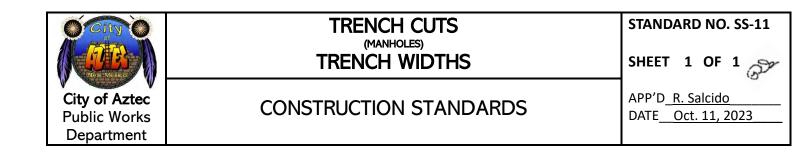
ELEVATION

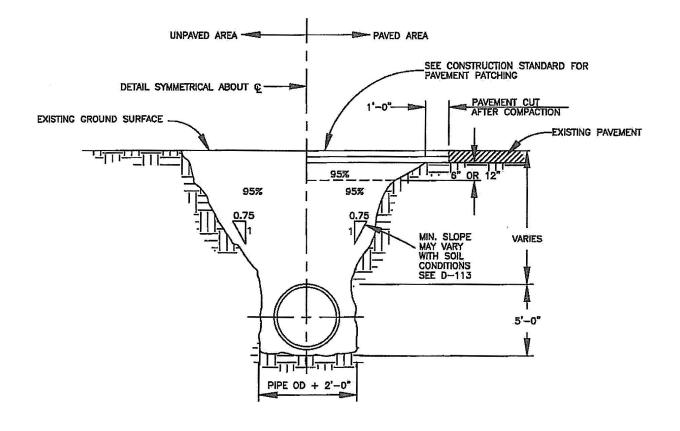




AS DETERMINED BY A.S.T.M. D-1557
A.A.S.H.T.O. DEG T-147-FIELD TEST
MOISTURE CONTENT OF ALL COMPACTION
SUBGRADE MATERIAL IN PLACE SHALL
BE NO GREATER THAN OPTIMUM NOR
ANY LESS THAN OPTIMUM MINUS 5%

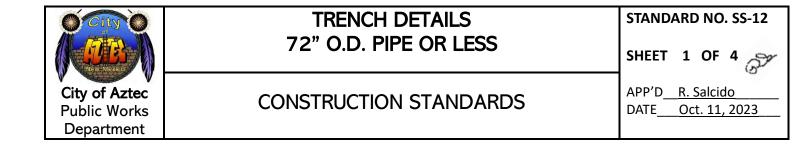
CUT AND BACKFILL IN ROCK FOR MANHOLES

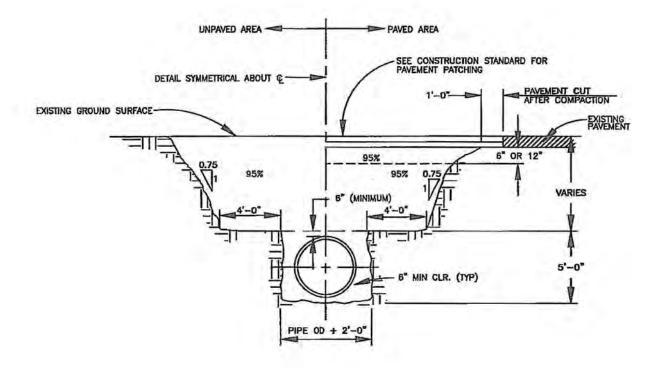




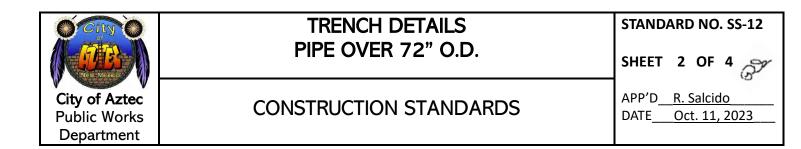
- TOP 6" OF BASE COURSE ON PAVED RESIDENTIAL STREETS &
 TOP 12" OF PAVED ARTERIAL STREETS TO BE COMPACTED TO
 95% MODIFIED PROCTOR.
- UNPAVED STREETS & OTHER AREAS TO BE 95% MODIFIED PROCTOR.
- WITHIN CITY ROW PIPE BEDDING & TRENCH BACK FILL SHALL BE BASE COURSE.
- 4. TRENCH DETAILS FOLLOW OSHA 1926 SUBPART P APP B EXCAVATION: SLOPING AND BENCHING.

PIPE DIA.	TRENCH WIDTH	PIPE DIA.	TRENCH WIDTH
8"	2'-5"	30"	6'-6"
10"	2'-8"	36"	7'-0"
12"	3'-0"	42"	8'-0"
15"	3'-0"	48"	8'-6"
18"	4'-6"	54"	10'-6"
21"	4'-6"	66"	13'-0"
24*	5'-6"	72"	14'-0"



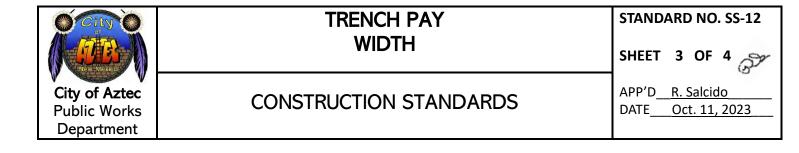


- TOP 6" OF BASE COURSE ON PAVED RESIDENTIAL STREETS & TOP 12" OF PAVED ARTERIAL STREETS TO BE COMPACTED TO 95% MODIFIED PROCTOR.
- UNPAVED STREETS & OTHER AREAS TO BE 95% MODIFIED PROCTOR.
- WITHIN CITY ROW PIPE BEDDING & TRENCH BACK FILL SHALL BE BASE COURSE.
- TRENCH DETAILS FOLLOW OSHA 1926 SUBPART P APP B -EXCAVATION: SLOPING AND BENCHING.



PIPE	TRENCH PAY WIDTH									
SIZE	3'	4'	6'	8'	10'	12'	14'	16'	18'	20'
4	5.00	5.00	7.00	9.00	11.00	13.00	15.00	17.00	19.00	21.00
6	5.00	5.00	7.00	9.00	11.00	13.00	15.00	17.00	19.00	21,00
8	5.00	5.00	7.00	9.00	11.00	13.00	15.00	17.00	19.00	21.00
10	5.50	5.50	7.50	9,50	11.50	13.50	15.50	17.50	19.50	21.50
12	5.50	5.50	7.50	9.50	11.50	13.50	15.50	17.50	19.50	21.50
14	5.75	5.75	7.75	9.75	11.75	13.75	15.75	17.75	19.75	21.75
15	5.75	5.75	7.75	9.75	11.75	13.75	15.75	17.75	19.75	21.75
16	5.75	5.75	7.75	9.75	11.75	13.75	15.75	17.75	19.75	21.75
18	6.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
20	6.25	6.25	8.25	10.25	12.25	14.25	16.25	18.25	20,25	22.25
21	6.25	6.25	8.25	10.25	12.25	14.25	16.25	18.25	20.25	22.25
24	6.50	6.50	8.50	10.50	12.50	14.50	16.50	18.50	20.50	22.50
27		6.75	8.75	10.75	12.75	14.75	16.75	18.75	20.75	22.75
30		7.00	9.00	11.00	13.00	15.00	17.00	19.00	21.00	23.00
36		7.50	9.50	11.50	13.50	15.50	17.50	19.50	21.50	23.50
42			10.00	12.00	14.00	16.00	18.00	20.00	22.00	24.00
48	3, 1		11.50	13.50	15.50	17.50	19,50	21.50	23.50	25.50
54			12.00	14.00	16.00	18.00	20.00	22.00	24.00	26.00
60			12.50	14.50	16.50	18.50	20.50	22.50	24.50	26.50
66				15.00	17.00	19.00	21.00	23.00	25.00	27.00
72				23.50	25.50	27.50	29.50	31.50	33.50	35.50
78				24.00	26.00	28.00	30.00	32.00	34.00	36,00
84				24.50	26.50	28.50	30.50	32.50	34.50	36.50
90				25.00	27.00	29.00	31.00	33.00	35.00	37.00
96				25.50	27.50	29.50	31,50	33.50	35.50	37,50
102		-		26.00	28.00	30.00	32.00	34.00	36.00	38.00
108				26,50	28.50	30.50	32,50	34.50	36.50	38.50

- PAYMENT FOR PAVEMENT REMOVAL AND REPLACEMENT SHALL BE BASED ON ACTUAL TRENCH WIDTHS UP TO THE WIDTH NOTED ABOVE & WILL BE PAID FOR ACTUAL TRENCH MEASUREMENT.
- EXCESSIVE TRENCH WIDTH ABOVE THAT LISTED IN THE TABLE ABOVE WILL BE AT THE CONTRACTORS EXPENSE AND NO ADDITIONAL COMPENSATION WILL BE PAID. IF CONDITIONS EXIST THAT REQUIRES ADDITIONAL REMOVAL CONTRACTOR SHALL REQUEST CITY ENGINEER APPROVAL.
- 3. IN THE EVENT A LINE IS LOCATED SUCH THAT REMOVAL OF CURB, GUTTER AND SIDEWALK IS REQUIRED PAVEMENT WIDTH SHALL BE LIMITED TO 1/2 THE PAY WIDTH PLUS THE DISTANCE FROM THE CENTERLINE OF THE PIPE TO GUTTER. PAYMENT FOR REMOVAL AND REPLACEMENT OF CURB AND SIDEWALK SHALL BE AS MEASURED IN THE FIELD.
- 4. THE ADDITIONAL 1' PAVEMENT CUT BACK SHALL BE MADE AFTER BACKFILLING AND TESTING IS COMPLETE. THIS CUT SHALL BE REMOVED TO A NEAT LINE. IF THE CONTRACTORS OPERATION PRODUCES A JAGGED EDGE HE SHALL BE REQUIRED TO REMOVE ADDITIONAL PAVING UNTIL A NEAT STRAIGHT LINE IS OBTAINED.



TRENCH SHORING-MINIMUM REQUIREMENTS

I		Γ	TAL	t:l											
		SPACING	HORIZONTAL	FEET	9	9	9	Ф	9	9	9	9	φ.	ø	
		MAXIMUM SPACING	VERTICAL	FEET	4	4	4	4	4		4	4	4	4	
	NOTE	2	12'TO 15' IVERTICAL	INCHES	8X9	6X8	8X8	8X8	8x8	вхв	8X10	BXIO	10X10	IOXIZ	
S	CES-SE	동	970 1z'	INCHES	9X9	9x9	8X8	900	9X9	8X8	888	8X8	8X10	10X10	
AEMBER	CROSS BRACES-SEE NOTE	WIDTH OF TRENCH	6,10 9,	INCHES	4X6	4X6	929	9X9	9X9	9X9	8X9	8X8	8008	8X10	
IG OF A	CRC		3,10 6	NCHES	4X4	4X4	4X8	4X6	4X6	4X6	929	9X9	ex8	8X8	
SIZE & SPACING OF MEMBERS			up TO 3	INCHES	2X6	2X6	4X4	4X4	4X4	4X4	4X6	4XB	4X12	4X12	
SIZE &	RS	AXIMUM	-	PEET		4	4	4	4	4	4	4	4	4	
	STRINGERS	MINIMUM MAXIMUM DIMENSION SPACING		INCHES		4X6	4X6	8X8	4X6	4X6	4X6	8X10	4X12	6X8	
	100	XIMUM		FEET	9	ю	CLOSE	CLOSE	4	7	CLOSE	CLOSE	CLOSE SHEETING	CLOSE	
	UPRIGHTS	MINIMUM		INCHES	. 3X4 OR 2X6	3X4 OR 2X6	OR 2X6	OR 2X8	.3X4 OR 2X6	3X4 OR 2X6	3X4 OR 2X6	336	3X6	3X6	
CONDITION OR KIND OF EARTH			HARD, COMPACT 3X4	LIKELY TO CRACK 3X4	SOFT, SANDY, OR FILLED3X4	PRESSURE	10' TO 15' HARD 3X4	LIKELY TO CRACK 3X4	SOFT, SANDY, OR FILLED3X4	HYDROSTATIC PRESSURE	15' TO 20' ALL KINDS OR CONDITIONS.	ALL KINDS OR CONDITIONS.			
	DEPTH OF TRENCH			FEET	5, 70 10'	_	•		10' TO 15'	-	•		15' TO 20'	OVER 20'	

1) TRENCH JACKS MAY BE USED IN LIEU OF, OR IN COMBINATION WITH, CROSS BRACES. SHORING IS NOT REQUIRED IN SOLID ROCK, HARD SHALE, OR HARD SLAG. WHERE DESIRABLE, SHEET STEEL PILING AND BRACING OF EQUAL STRENGTH MAY BE SUBSTITUTED FOR WOOD. NOTES



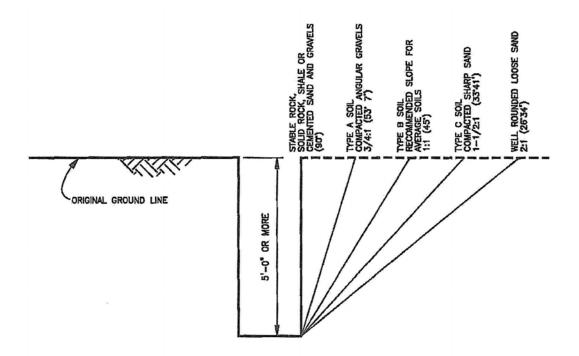
TRENCH DETAILS

STANDARD NO. SS-12

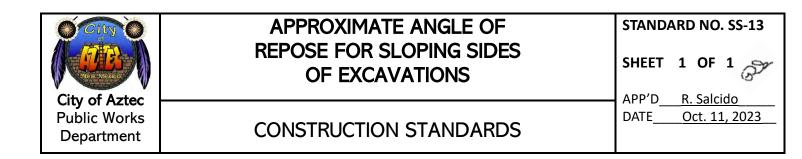
SHEET

APP'D R. Salcido Oct. 11, 2023 DATE

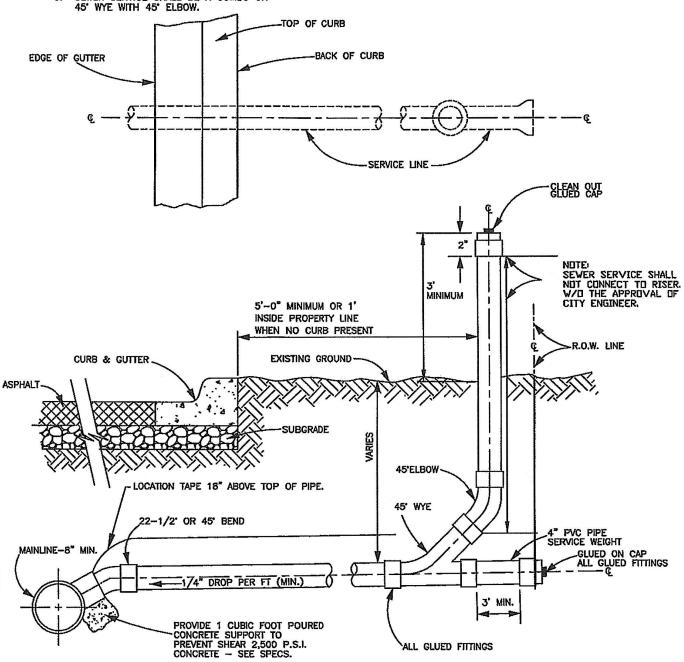
CONSTRUCTION STANDARDS



- SIDES OF TRENCHES IN HARD OR COMPACTED SOIL, INCLUDING EMBANKMENTS SHALL BE SHORED, OR OTHERWISE SUPPORTED OR SLOPED WHEN THE TRENCH IS MORE THAN 5 FEET IN DEPTH AND 8 FEET OR MORE IN LENGTH.
- CLAYS, SILLS, LOAMS OR NON HOMOGENOUS SOILS REQUIRE SHORING AND BRACING. THE PRESENCE OF GROUND WATER REQUIRES SPECIAL TREATMENT.
- 3. STANDARD DETAIL 112 SHALL BE APPLICABLE WHEN EXCAVATING IN PAVED STREETS.
- ALL PAYMENT WILL BE BASED ON TRENCH PAY WIDTHS AS OUTLINED IN CITY STANDARD 112.
 NO EXTRA PAYMENT OUTSIDE THOSE LIMITS LISTED IN COF 112 WILL BE PAID.
- 5. DETALS FOLLOW OSHA 1926 SUBPART P APP B EXCAVATIONS: SLOPING AND BENCHING.



- ALL SERVICE LINES SHALL CONFORM TO LOCAL PLUMBING CODE.
- SERVICE LINES SHALL NOT PROTRUDE INTO SEWER MAIN.
- SEWER SERVICE SHALL BE A COMBO OR 45' WYE WITH 45' ELBOW.

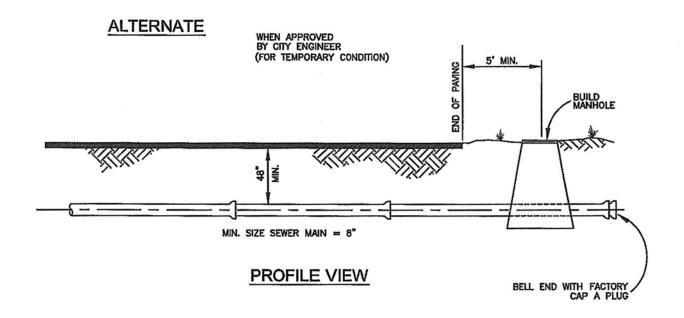


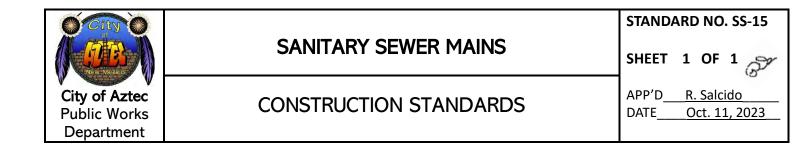


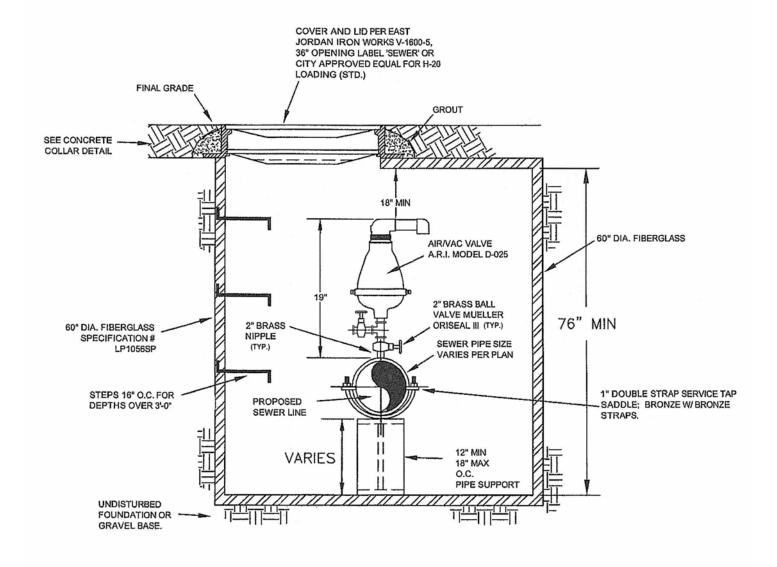
SANITARY SEWER MAINS MINIMUM SLOPES

SIZE	SLOPE, FT./FT.
8"	0.004
10"	0.003
12"	0.0022
15"	0.0015
18"	0.0012
21" 24"	0.0010
24"	0.0009
27" & LARGER	0.0008

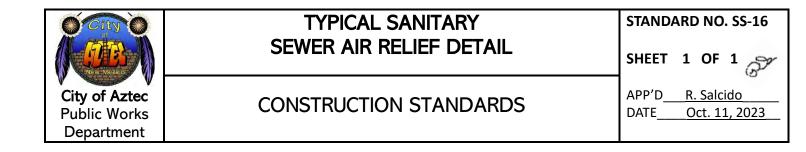
- PRIOR TO BACKFILLING, RECORD INVERT ELEVATIONS AND LOCATION ON CONSTRUCTION PLANS FOR AN AS-BUILT RECORD.
- SEE LATEST EDITION OF THE N.M. STANDARD SPECIFICATIONS FOR PUBLIC WORKS FOR A LIST OF ACCEPTABLE SEWER MAIN MATERIALS & PIPE.
- 3. MINIMUM 4'-0" COVER UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
- 4. MAXIMUM MANHOLE SPACING 400 FEET.
- 5. THIS TYPE OF INSTALLATION WILL ONLY BE USED IF THE DOWN STREAM MANHOLE IS LESS THAN 100 FEET FROM END OF LINE.
- MANHOLE WILL BE BUILT AT END OF MAINLINE UNLESS ALTERNATE IS APPROVED BY CITY ENGINEER OR BY DESIGNEE.
- STUB OUT FOR FUTURE MAINLINE EXTENSION SHALL BE CONST. A MAX. OF 5' WITH BELL END AND FACTORY PLUG BEYOND LAST MANHOLE.

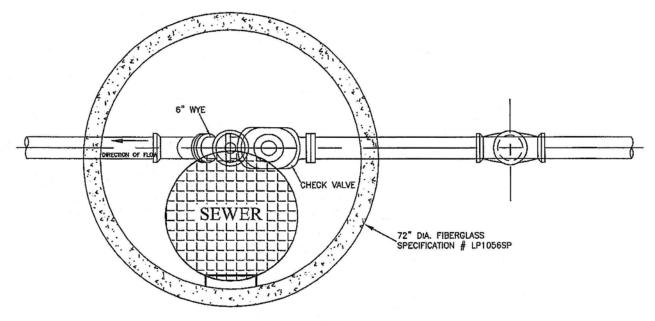




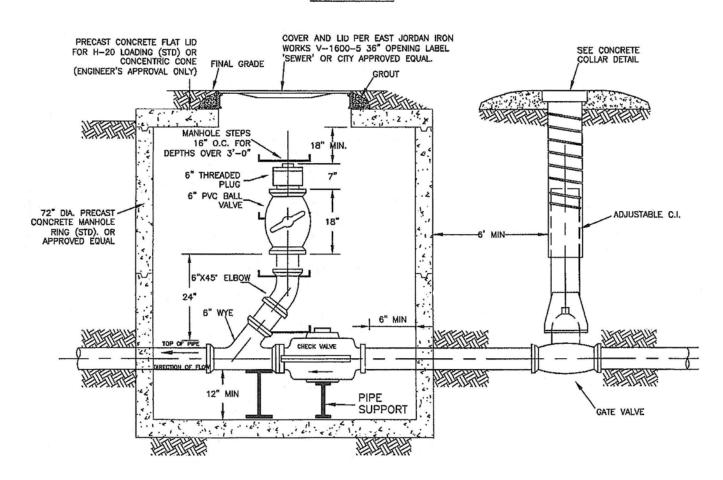


FIBERGLASS SHALL BE A ONE PIECE UNIT MANUFACTURED BY L.F. MANUFACTURING INC., GIDDING TEXAS, 1-800-237-5791, OR APPROVED EQUAL.
SEE SPECIFICATION FOR APPROVAL

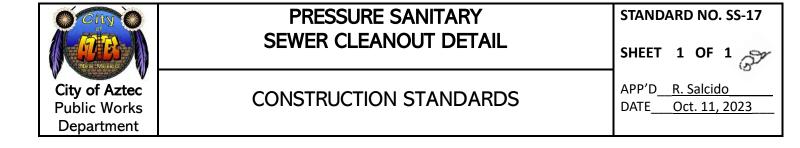


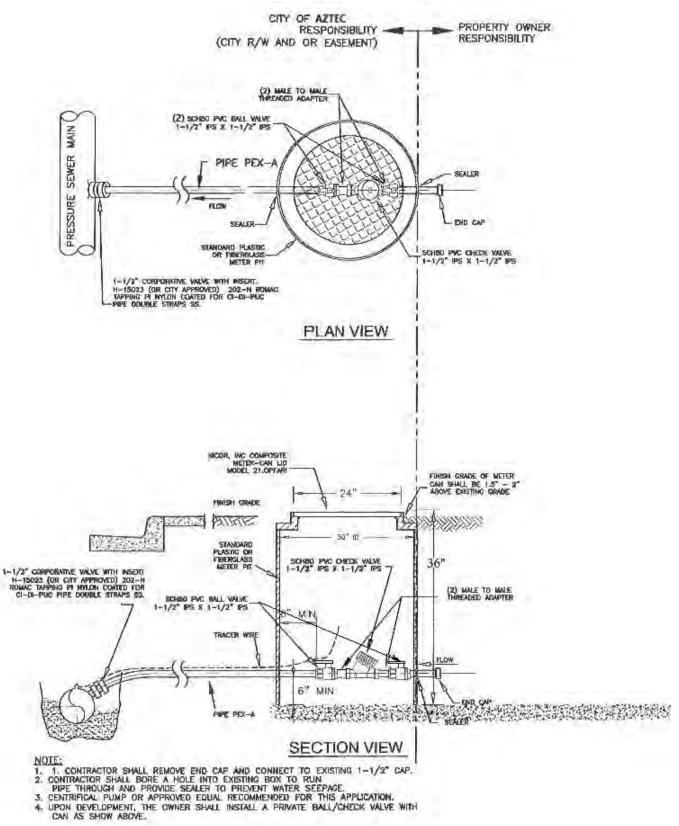


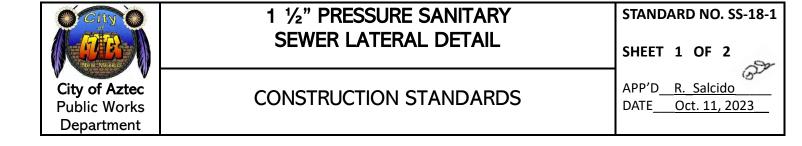
PLAN VIEW

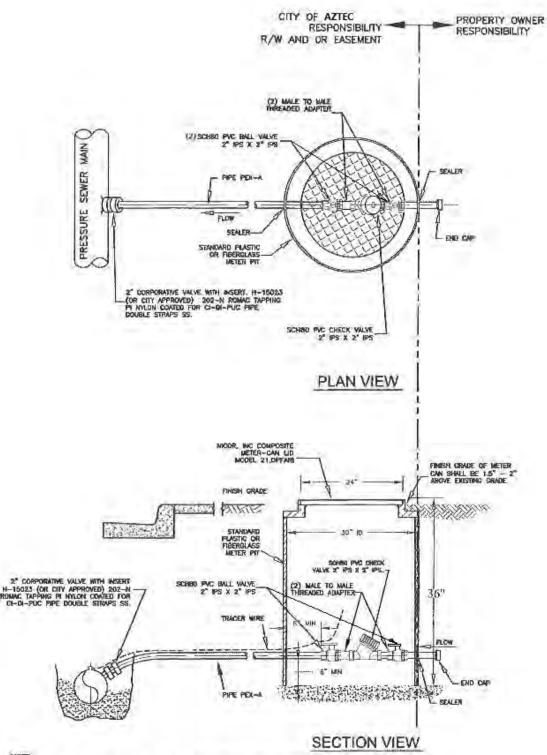


SECTION VIEW









NOTE

- LECT CONTRACTOR SHALL REMOVE END CAP AND CONNECT TO EXISTING 2" CAP.
 CONTRACTOR SHALL BORE A HOLE INTO EXISTING BOX TO RUN PIPE THROUGH AND
 PROVIDE SEALER TO PREVENT WATER SEEPAGE.
 CENTRIFICIAL PUMP OR APPROVED EQUAL RECOMMENDED FOR THIS APPLICATION.
 THE IS REQUIRED TO SEPARATE SERVICES SHALL BE CAPED ON OTHER IF NO
 OTHER SERVICE.
- 5. UPON DEVELOPMENT, THE OWNER SHALL INSTALL A PRIVATE BALL/CHECK VALVE



2" PRESSURE SANITARY **SEWER LATERAL DETAIL**

CONSTRUCTION STANDARDS

STANDARD NO. SS-18-2

2 SHEET OF 2

R. Salcido

DATE Oct. 11, 2023