Change Order No. 4

Date of Issuance: June 16, 2022		Effective Date:	June 16, 2022	
Project: Phase 3, Sub Basins 2 & 10 Public Sanitary Sewer Repairs	Owner Park	: Village of Tuxedo	Owner's Contract No.: DPW-2019-01	
Contract: SSES Phase 3, Sub Basins 2 & Sewer Repairs	10 Pul	blic Sanitary	Date of Contract (NTP): September 1, 2020	
Contractor: Arold Construction Compan	y Inc.		Engineer's Project No.: N2190019	
The Contract Documents are modified				
			d 3 and Wee Wah trunk sewer areas within the al unit prices and provides a time extension to	
Attachments (list documents supporting Change Order No.4 Project Cost Summar	- '	<i>-</i>	-1, and D-2	
CHANGE IN CONTRACT PRICE:		СНА	NGE IN CONTRACT TIMES:	
Original Contract Price: \$451,552.00		Original Contract Times: Working days Calendar days Substantial completion date: December 30, 2020 Final completion date: January 29, 2021		
Contract Price Prior To This Change Orde \$294,925.00	er:	Contract Times prior to this Change Order: Substantial completion date: February 28, 2021 Final completion date: February 28, 2022		
Increase of this Change Order: \$155,519.00			nange Order: 579 days	
Contract Price incorporating this Change Order:		Contract Times wi	ith all approved Change Orders:	
<u>\$450,444.00</u>		Substantial comp Final completion	September 30, 2022 September 30, 2023	
By: God Engineer (Authorized Signature)	Ow	PTED: Pavid McFa rner (Authorized Signat 7/11/2022		
ACCEPTED:				
By: EFC (Authorized Signature)				
Date:				

Village of Tuxedo Park

SSES Phase 3, Sub-basins 2 & 10, Public Sewer Rehabilitation, Year 2 Construction - Change Order Summary No. 4

DATE: June 16, 2022

Arold Construction, Kingston, NY



			Original Bid Values					CO No. 1 V	/alues		CO No. 3	Values		00	lo. 4 Value	38
ITEM NO.	BID QUAN.	UNITS	DESCRIPTION	UN	NIT PRICE	TOTAL AM	MOUNT	Installed/Adj Quan.	TC	TAL AMOUNT	Installed/Adj Quan.	TO	TAL AMOUNT	Installed/Adj Quan.	TC	OTAL AMOUNT
			Base Bid													
1	2,775	LF	6-Inch CIPP Liner	\$	65.00	\$ 18	30,375.00	2,775	\$	180,375.00	1,194	\$	77,610.00	1,306	\$	84,890.00
2	900	LF	8-Inch CIPP Liner	\$	50.00	\$ 4	15,000.00	900	\$	45,000.00	1,427	\$	71,350.00	2,366	\$	118,300.00
3	30	EA	Cementitious Manhole Lining	\$	2,500.00	\$ 7	5,000.00	31	\$	77,500.00	30	\$	75,000.00	42	\$	105,000.00
4	2	EA	Precast Manholes, Frames and Covers	\$	12,500.00	\$ 2	25,000.00	0	\$	-	0	\$	-	1	\$	12,500.00
5	10	CY	Additional Crushed Stone	\$	100.00	\$	1,000.00	10	\$	1,000.00	0	\$	=	0	\$	=
6	225	LF	8" PVC Sewer Pipe	\$	133.00	\$ 2	9,925.00	0	\$	=	0	\$	=	0	\$	=
7	15	CY	Cut, Grout, & Cap Existing Sewer Main	\$	1,500.00	\$ 2	22,500.00	15	\$	22,500.00	13	\$	19,500.00	13	\$	19,500.00
8	10	EA	Grout Lateral Connection	\$	2,725.00	\$ 2	27,250.00	10	\$	27,250.00	7	\$	19,075.00	10	\$	27,250.00
9	3	EA	Demolition of Existing Sanitary Sewer Manholes	\$	3,000.00	\$	9,000.00	0	\$	-	0	\$	-	0	\$	-
10	300	LF	Demolition of Existing Sanitary Sewer Pipe	\$	50.00	\$ 1	5,000.00	0	\$	=	0	\$	=	0	\$	=
11	1	LS	Mobilization	\$	21,502.00	\$ 2	21,502.00	1	\$	21,502.00	1	\$	21,502.00	1.32	\$	28,386.00
12	0	EA	Replace Manhole Frame & Grate	\$	3,000.00	\$	-	1	\$	3,000.00	1	\$	3,000.00	3	\$	9,000.00
13	0	LS	Change Order No. 3 - Additional Labor	\$	7,888.00	\$	-	0	\$	=	1	\$	7,888.00	1	\$	7,888.00
14	0	LS	Change Order No. 4 - Bypass Pumping	\$	3,500.00	\$	-	0	\$	=	0	\$	=	1	\$	3,500.00
15	0	LF	Change Order No. 4 - 12" CIPP	\$	105.00	\$	-	0	\$	=	0	\$	=	326	\$	34,230.00
			Project Total			\$451	1,552.00		\$	378,127.00		\$	294,925.00		\$	450,444.00

Note: Change Order No. 2 was a no-cost time extension

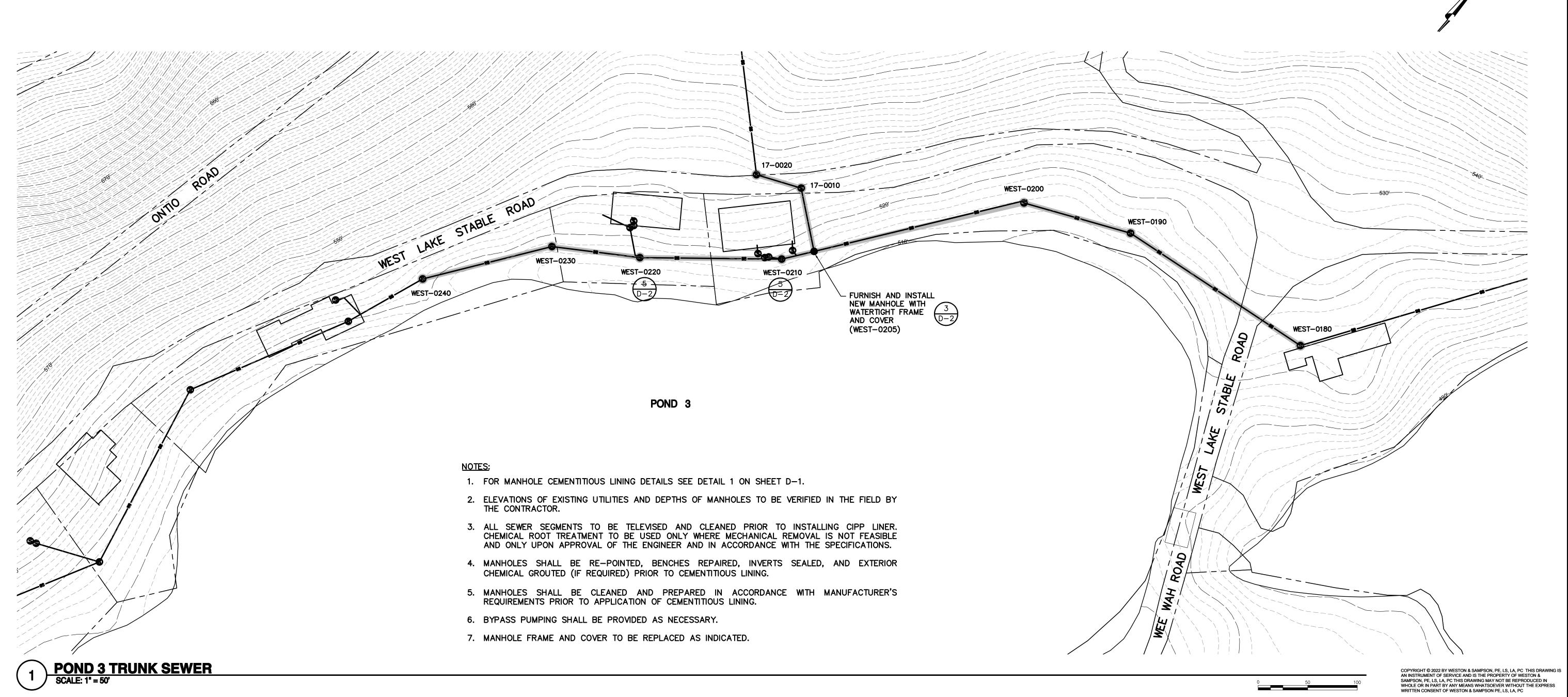
CURED-IN-PLACE PIPE LINER									
UPSTREAM MH	DOWNSTREAM MH	STREET/LOCATION	PIPE DIA (IN)	MATERIAL	LENGTH (FT)	SERVICE LATERAL			
WEST-0240	WEST-0230	WEST LAKE STABLE ROAD (EASEMENT)	8"	VCP	134	0			
WEST-0230	WEST-0220	WEST LAKE STABLE ROAD (EASEMENT)	8"	VCP	89	1			
WEST-0220	WEST-0210	WEST LAKE STABLE ROAD (EASEMENT)	8"	VCP	143	1			
WEST-0210	WEST-0205	WEST LAKE STABLE ROAD (EASEMENT)	8"	VCP	34	1			
WEST-0205	WEST-0200	WEST LAKE STABLE ROAD (EASEMENT)	8"	VCP	221	0			
WEST-0200	WEST-0190	WEST LAKE STABLE ROAD (EASEMENT)	8"	VCP	112	0			
WEST-0190	WEST-0180	WEST LAKE STABLE ROAD (EASEMENT)	8"	VCP	206	0			
17-0020	17-0010	WEST LAKE STABLE ROAD (EASEMENT)	6"	VCP	47	0			
17-0010	WEST-0205	WEST LAKE STABLE ROAD (EASEMENT)	6"	VCP	65	0			

	CURED-IN-PLACE PIPE LINER SCHEDULE SCALE: N.T.S.
~]	SCALE: N.T.S.

CEMENTITIOUS MANHOLE LINING							
MANHOLE	STREET/LOCATION	MATERIAL	# OF INVERTS	MANHOLE DEPTH	REPLACE FRAME / COVER		
WEST-0240	WEST LAKE STABLE ROAD (EASEMENT)	BRICK	2	7.87*	NO - USE EXISTING		
WEST-0230	WEST LAKE STABLE ROAD (EASEMENT)	BRICK	2	4.21*	NO - USE EXISTING		
WEST-0220	WEST LAKE STABLE ROAD (EASEMENT)	BRICK	2	4.60	YES - WATERTIGHT		
WEST-0210	WEST LAKE STABLE ROAD (EASEMENT)	BRICK	2	5.40	YES - WATERTIGHT		
WEST-0200	WEST LAKE STABLE ROAD (EASEMENT)	BRICK	2	4.70	NO - USE EXISTING		
WEST-0190	WEST LAKE STABLE ROAD (EASEMENT)	BRICK	2	4.35	NO - USE EXISTING		
WEST-0180	WEST LAKE STABLE ROAD (EASEMENT)	BRICK	2	8.00	NO - USE EXISTING		
17-0020	WEST LAKE STABLE ROAD	BRICK	2	5.50	NO - USE EXISTING		
17-0010	WEST LAKE STABLE ROAD	BRICK	2	15.35*	NO - USE EXISTING		

st MANHOLE DEPTH IS APPROXIMATE BASED ON CALCULATED PIPE INVERTS AND ESTIMATED RIM ELEVATIONS.





ATION SHEET —

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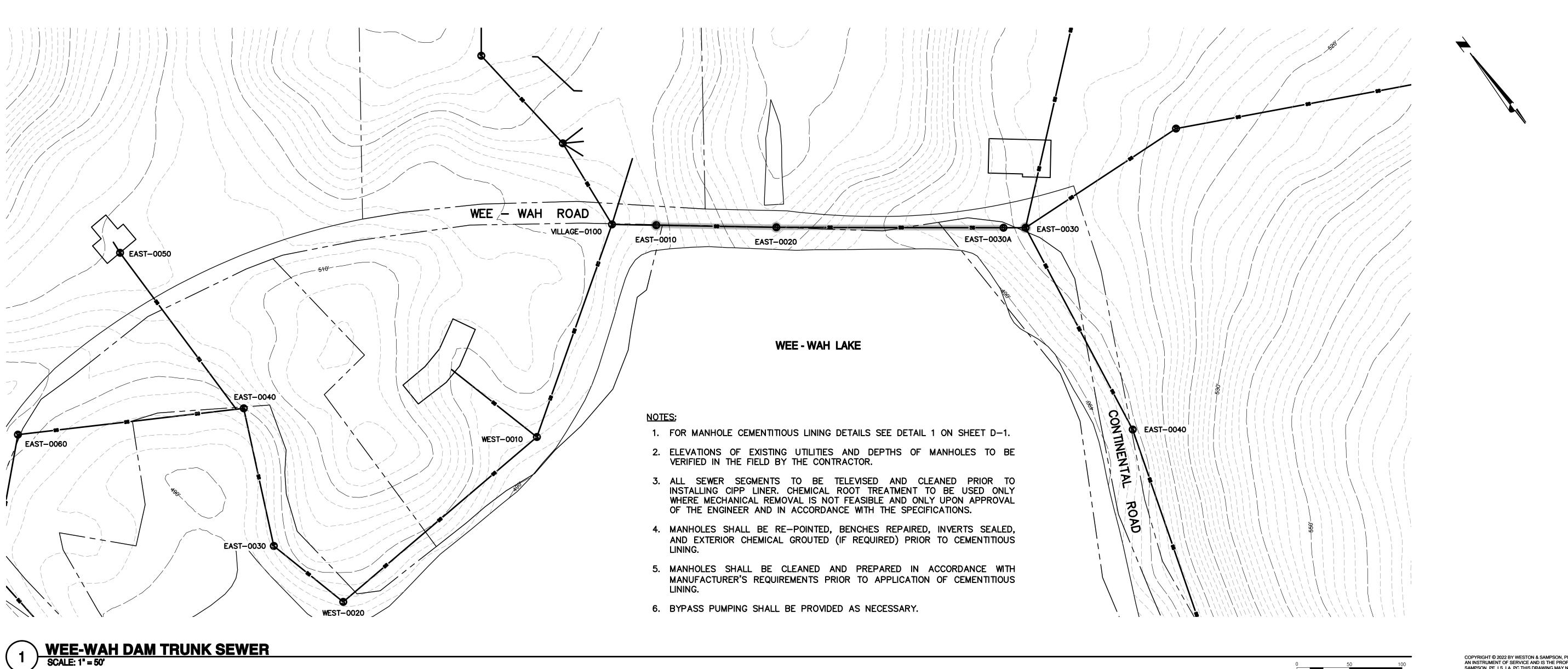
CURED-IN-PLACE PIPE LINER									
UPSTREAM MH	DOWNSTREAM MH	STREET/LOCATION	PIPE DIA (IN)	MATERIAL	LENGTH (FT)	SERVICE LATERAL			
EAST-0030	EAST-0020	WEE-WAH ROAD	12"	PVC	212	0			
EAST-0020	EAST-0010	WEE-WAH ROAD	12"	PVC	114	0			

1	CURED-IN-PLACE	PIPE	LINER	SCHEDU	JLE
	SCALE: N.T.S.				

CEMENTITIOUS MANHOLE LINING								
MANHOLE	STREET/LOCATION	MATERIAL	# OF INVERTS	MANHOLE DEPTH				
EAST-0030	WEE-WAH ROAD	BRICK	2	7.9*				
EAST-0020	WEE-WAH ROAD	BRICK	2	9.2*				
EAST-0010	WEE-WAH ROAD	BRICK	2	7.5				

* MANHOLE DEPTH IS APPROXIMATE BASED ON CALCULATED PIPE INVERTS AND ESTIMATED RIM ELEVATIONS.

3 MANHOLE REHABILITATION SCHEDULE SCALE: N.T.S.

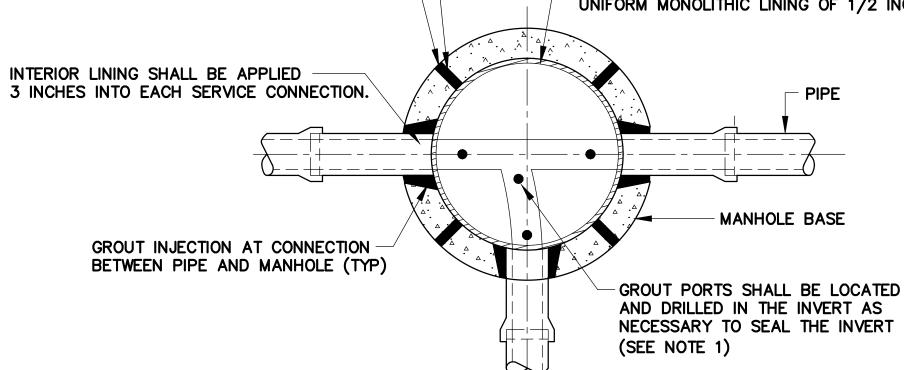


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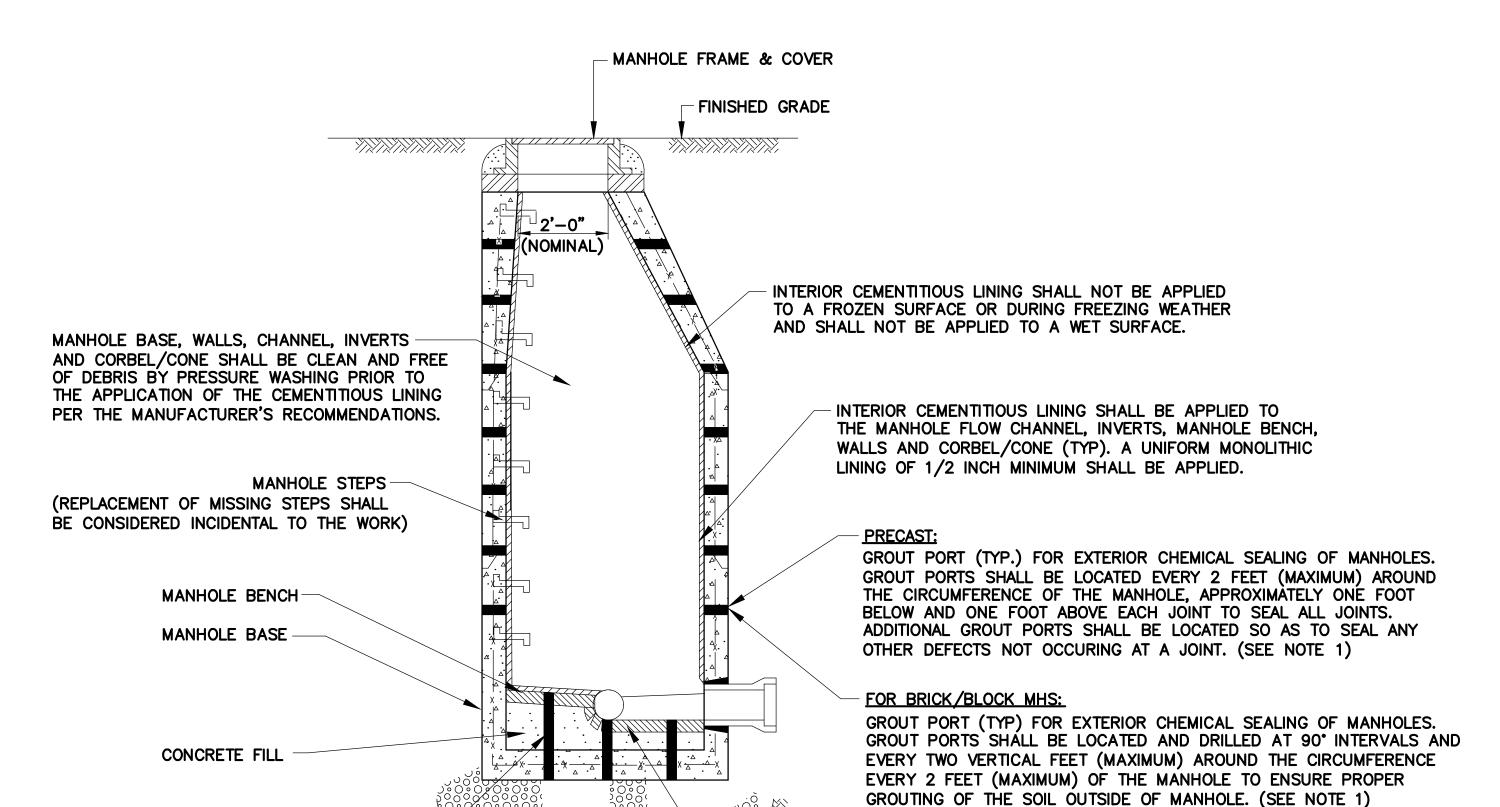
SHEET -

FOR BRICK / BLOCK MHS: GROUT PORT (TYP) FOR EXTERIOR CHEMICAL SEALING OF MANHOLES. GROUT PORTS SHALL BE LOCATED AND DRILLED AT 90° INTERVALS AND EVERY TWO VERTICAL FEET (MAXIMUM) AROUND THE CIRCUMFERENCE EVERY 2 FEET (MAXIMUM) OF THE MANHOLE TO ENSURE PROPER GROUTING OF THE SOIL OUTSIDE OF MANHOLE. (SEE NOTE 1)

> - INTERIOR CEMENTITIOUS LINING SHALL BE APPLIED TO THE MANHOLE BENCH, WALLS, CHANNEL, INVERTS AND CORBEL/CONE (TYP). A UNIFORM MONOLITHIC LINING OF 1/2 INCH MINIMUM SHALL BE APPLIED.



MANHOLE REHABILITATION PLAN N.T.S.



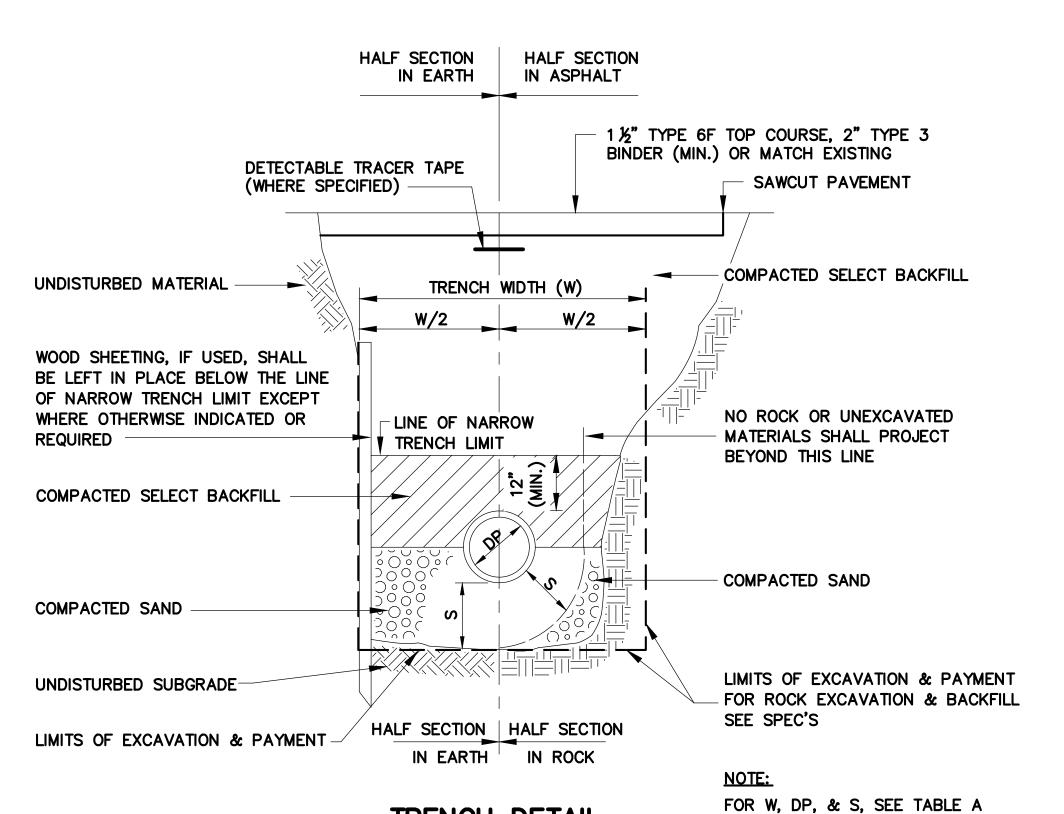
GROUT PORTS SHALL BE LOCATED AND DRILLED IN THE BENCH & INVERT AS NECESSARY TO SEAL THE MANHOLE BASE (SEE NOTE 1)

CONCRETE OR BRICK MASONRY INVERT

- 1. EXTERIOR CHEMICAL SEALING OF MANHOLES SHALL BE PREFORMED WHEN ACTIVE INFILTRATION IS PRESENT OR AS REQUIRED BY THE ENGINEER.
- 2. IF CONTRACTOR CANNOT APPLY CEMENTITIOUS LINING AT ½ INCH MINIMUM DEPTH WITH A SINGLE APPLICATION, THE CONTRACTOR HAS THE OPTION TO APPLY THE CEMENTITIOUS LINER AT DIFFERENT THICKNESS INTERVALS, AS LONG AS IT REACHES A MINIMUM DEPTH OF ½ INCH. CONTRACTOR TO CONFIRM WITH ENGINEER THE DEPTH OF MATERIAL APPLIED AND VERIFIED IN THE FIELD WITH A WET GAUGE.

MANHOLE REHABILITATION DETAIL





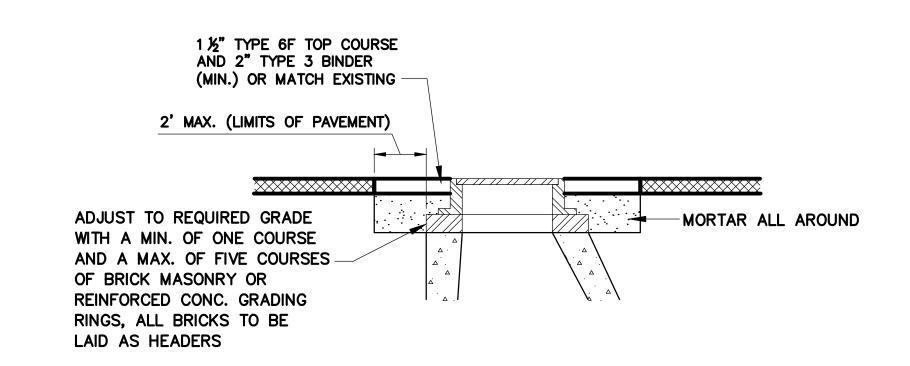
TRENCH DETAIL

(SEWER, FORCE MAIN, STORM DRAIN)

DEPTH TO INVERT	LINAMETER	MAXIMUM TRENCH WIDTH BELOW LINE OF NARROW TRENCH LIMIT (SHEETED OR UNSHEETED) (W)	MINIMUM CLEARANCE (S)
0-12'	TO 18"	5'	6"
0-12'	21"-24"	5'	7-1/2"
OVER 12'	TO 18"	7'	6"
OVER 12'	21"-24"	7'	7-1/2"

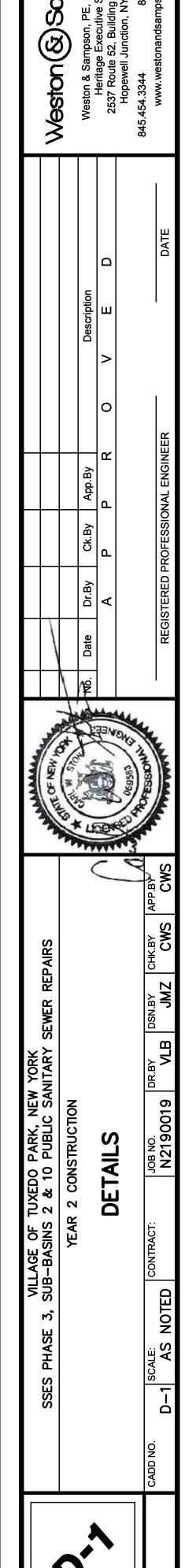
TABLE A







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SHEET 10 of 13

	MANHOLE WEST-0205									
INVERT	CONNECTING MH	ANGLE FROM OUT INV.	PIPE DIAMETER	INV. ELEVATION						
IN	WEST-0210	270°	8"	511.36						
IN	17-0010	180°	6"	511.36						
OUT	WEST-0200	N/A	8"	511.26						

- RIM ELEV. ±515.0 - USE WATERTIGHT FRAME AND COVER $\left(\frac{3}{D-2}\right)$

MANHOLE 10-0080A									
INVERT	CONNECTING MH	ANGLE FROM OUT INV.	PIPE DIAMETER						
IN	10-0240	136 °	6"						
IN	10-0090	200°	6"						
OUT	10-0150A	N/A	8"						

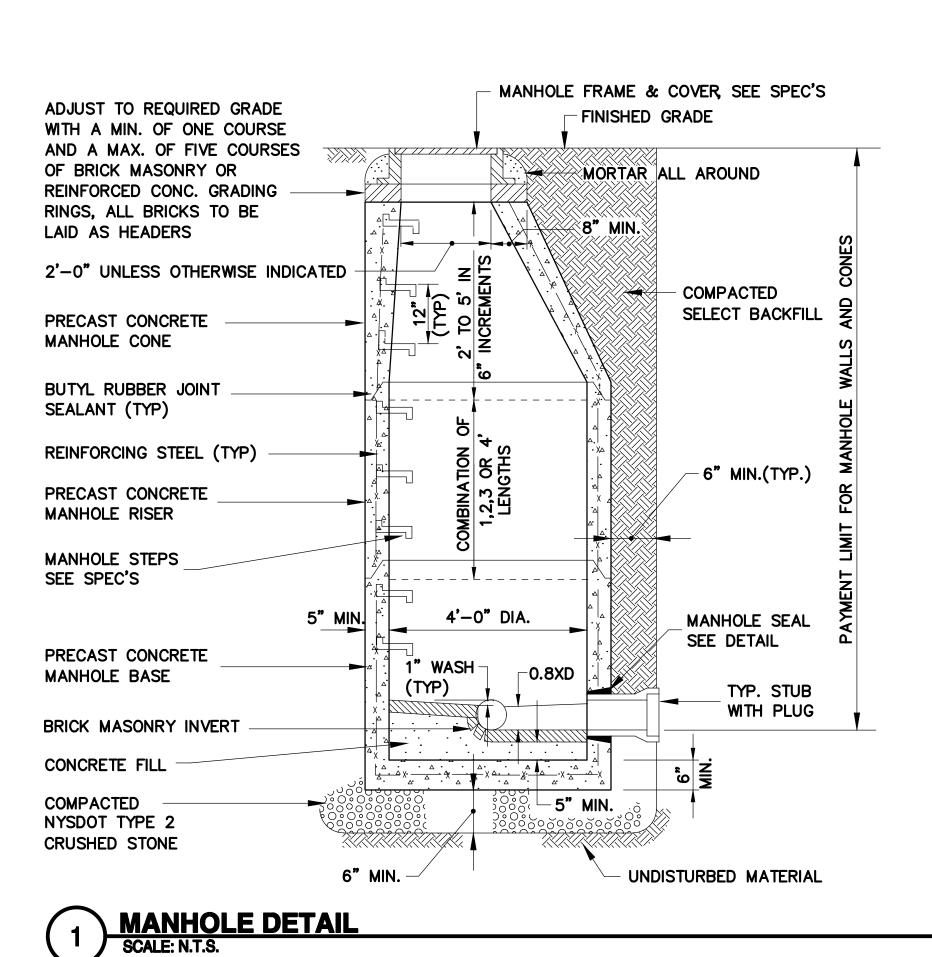
MANHOLE 10-0150A									
INVERT	CONNECTING MH	ANGLE FROM OUT INV.	PIPE DIAMETER						
IN	SERVICE	37°	4"						
IN	SERVICE	37°	4"						
IN	10-0080A	177*	8"						
IN	10-0160	243*	6"						

N/A

10-0150A

NOTES:

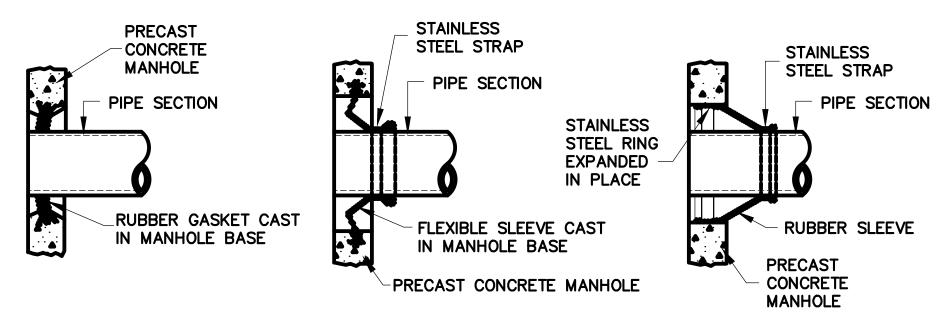
- 1. OUTLET INVERT SHOULD BE 0.1 LOWER THAN INLET INVERTS.
- 2. CONTRACTOR TO DETERMINE REQUIRED DEPTHS OF MANHOLES 10-0080A AND 10-0150A VIA TEST PITS AS NECESSARY.
- 3. ANGLE FROM OUT INVERT IS BASED ON CLOCKWISE ORIENTATION.
- 4. CONTRACTOR TO DETERMINE REQUIRED DEPTHS OF MANHOLE WEST-0205 VIA TEST PITS AS NECESSARY.



30" OPENING STANDARD WATERTIGHT MH FRAME WITH BOLT DOWN COVER NEENAH R-1915-J OR EQUAL 1/2" S.S ANCHOR BOLTS (TYPE 4) WITH FLAT WASHER INSTALL KENT SEAL BETWEEN MANHOLE FRAME **FINISHED** & CONCRETE RISER OR GRADE -BRICK WORK 5/8" DIA. HOLE IN MANHOLE FRAME (TYP OF 4) DRILL 5/8" DIA. HOLE STANDARD BOLT 4 1/2" DEEP (TYP OF 4) DOWN CASTING-IN TOP OF PRÈCAST SECTION

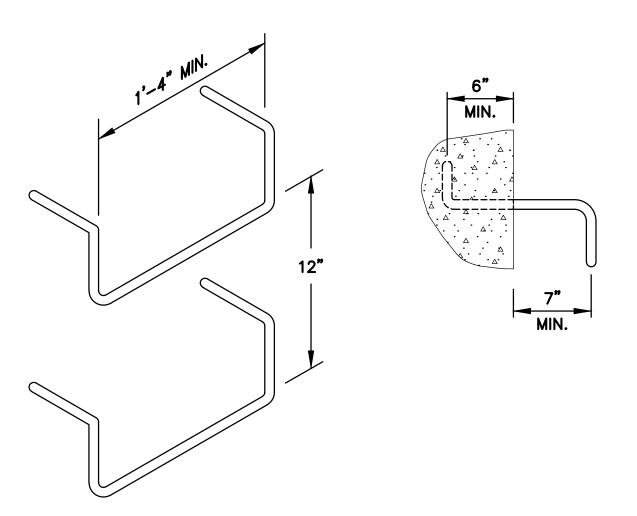
- 1. S.S. THREADED ROD MUST BE USED TO ANCHOR CASTING. THE RODS SHALL EXTEND THROUGH INTO THE TOP CONE SECTION.
- 2. THE ANCHORAGE MATERIAL SHALL BE A TWO COMPONENT POLYESTER RESIN WITH AN ORGANIC PEROXIDE CATALYST. IT SHALL BE SUPPLIED IN A SELF CONTAINED, CONVENTIONAL CELTITE ANCHORBOND CAULKING CARTRIDGE. THE CARTRIDGE SHALL CONTAIN AN INTERNAL MIXING ELEMENT, AND BE SUPPLIED WITH MIXING RODS.





1. GASKET SHALL BE CAST IN MANHOLE UNLESS OTHERWISE APPROVED BY ENGINEER.





NOTE: FOR MANHOLE STEPS SEE SPEC. SECTION 02631.

2 EMBEDDED LADDER RUNG DETAIL
SCALE: N.T.S.

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SHEET 11 OF 13