

SANITARY FORCE MAIN  
START STA: 0+00

### SANITARY SEWER DATA TABLE

THE FOLLOWING UTILITIES ARE IDENTIFIED BY MISS UTILITY (TICKET NO.S 233500265, 233500266, 233500274, 2335000275, 233500276, 233500277, 233500278, 233500279) AS HAVING UNDERGROUND FACILITIES IN THE AREA OF THIS PROJECT:

DISTRICT	COMPANY NAME
CDE01	COMCAST/CABLE PROTECTION
CUR02	CHESAPEAKE UTILITIES
DPML11	DELMARVA POWER/UTILITY
ESDNK06	EASTERN SHORE NATURAL GAS
KSCDE01	KENT COUNTY PUBLIC WORKS
POOR01	POORE'S PROPANE
TIDE01	TIDEMATER UTILITIES
VKOR01	VERIZON



- |  |   |   |
|--|---|---|
| 1. OWNER:  | REESE ASSOCIATES, LLC<br>14 ROCKFORD CROSSING<br>DOVER, DE 19901  |   |
| 2. TAX PARCEL NO.:   | 07-00-12-000-01-10-01   | 07-00-12-000-01-11-00                     |
| 3. SOURCE OF TITLE:  | DEED BOOK 12501, PAGE 186   | DEED BOOK 12501, PAGE 186                 |
| 4. AREA:   | 1.30± ACRES   | 3.27± ACRES                               |
| 5. ADDRESS:  | SOUTH DUPONT HWY<br>FELTON, DE 19943  | 8093 SOUTH DUPONT HWY<br>FELTON, DE 19943 |
| 6. PROPOSED USE:   | 48 RESIDENTIAL APARTMENTS   |   |
| 7. DATUM:  | HORIZONTAL - DELAWARE STATE PLANE, NAD 83<br>VERTICAL - NORTH AMERICA VERTICAL DATUM NAVD 1988 DERIVED FROM<br>GPS OBSERVATIONS.  |   |
| 8. SITE BENCHMARK:   | SQUARE BOX CUT ON TOP OF CONCRETE CURB AT CRESTWOOD DRIVE<br>ELEVATION = 54.16  |   |
| 9. WATER:  | TIDEWATER UTILITIES, INC. WATER SUPPLY IS SUBJECT TO THE APPROVAL OF THE<br>DELAWARE STATE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL AND THE<br>DELAWARE DEPARTMENT OF PUBLIC HEALTH. |   |
| 10. SEWER:   | KENT COUNTY PUBLIC WORKS  |   |
| 11. PROPERTY LINES SHOWN HEREON WERE DERIVED FROM TAX MAPS, SITE FEATURES, AND FIELD OBSERVATIONS. |   |   |

SCALE: 1" = 1,200'

CONSTRUCT 265 L.F. OF PRIVATE 2" SANITARY SEWER FORCE MAIN, 276 L.F. OF PRIVATE 8" GRAVITY SANITARY SEWER, 1,352 L.F. OF PUBLIC 2" SANITARY SEWER FORCE MAIN, 1,333 L.F. OF PUBLIC 3" SANITARY AND A PRIVATE PUMP STATION TO SERVICE PROPOSED APARTMENTS.

SHEET NO.      SHEET TITLE

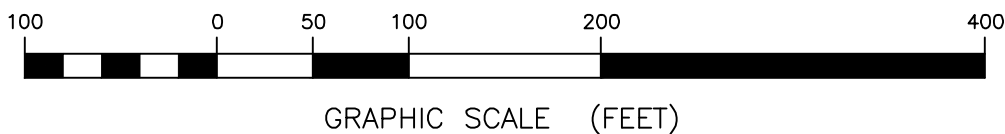
ITEM NO.	NAME / ENTITY	APPROVED/ PROPOSED EDU'S	EXISTING EDU'S	DIFFERENCE EDU'S	AVERAGE FLOW GPM (Q AVG)	COMMENTS
1	REESE APARTMENTS	48	0	48	8.3	BASED ON 250 GPD/EDU
2	CLUBHOUSE & RENTAL OFFICE	5	0	5	0.9	BASED ON 250 GPD/EDU
	TOTAL	53	0	53	9.2	

$$PF = \frac{20 + 2(EDU/10)^{0.5}}{5 + 2(EDU/10)^{0.5}} = \frac{24.60}{9.60} = 2.60$$

$$Q_p = (PF)(Q_{avg}) \quad Q_p = (2.6)(9.2) = 23.9 \text{ gpm (0.03 MGD)}$$

NORTH MURDERKILL HUNDRED  
DELAWARE

MARCH 21, 2023



12/18/2023



4305 MILLER ROAD  
WILMINGTON, DE 19802  
302.764.7635



**DELAWARE**  
1309 VEALE ROAD  
SUITE 22  
WILMINGTON, DE 19810  
302.478.3777

**PENNSYLVANIA**  
256 EAGLEVIEW BLVD  
SUITE 194  
EXTON, PA 19341  
610.640.9000

## THE REESE APARTMENTS

8093 S. Dupont Hwy,  
Felton, DE 19943  
Kent County

1	8.31.23	PER KENT COUNTY PUBLIC WORKS
2	10.2.23	PER KENT COUNTY PUBLIC WORKS

## REVISIONS

DRAWN BY: DJS

DATE: 3/21/23

INDEX PLAN  
SANITARY SEWER PLAN

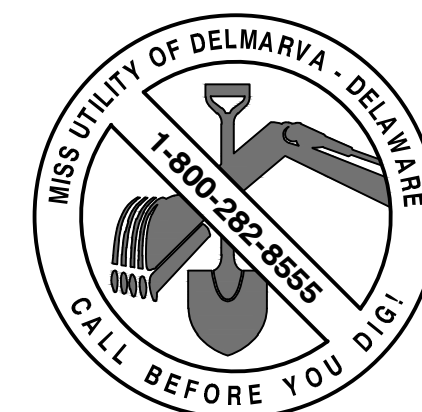
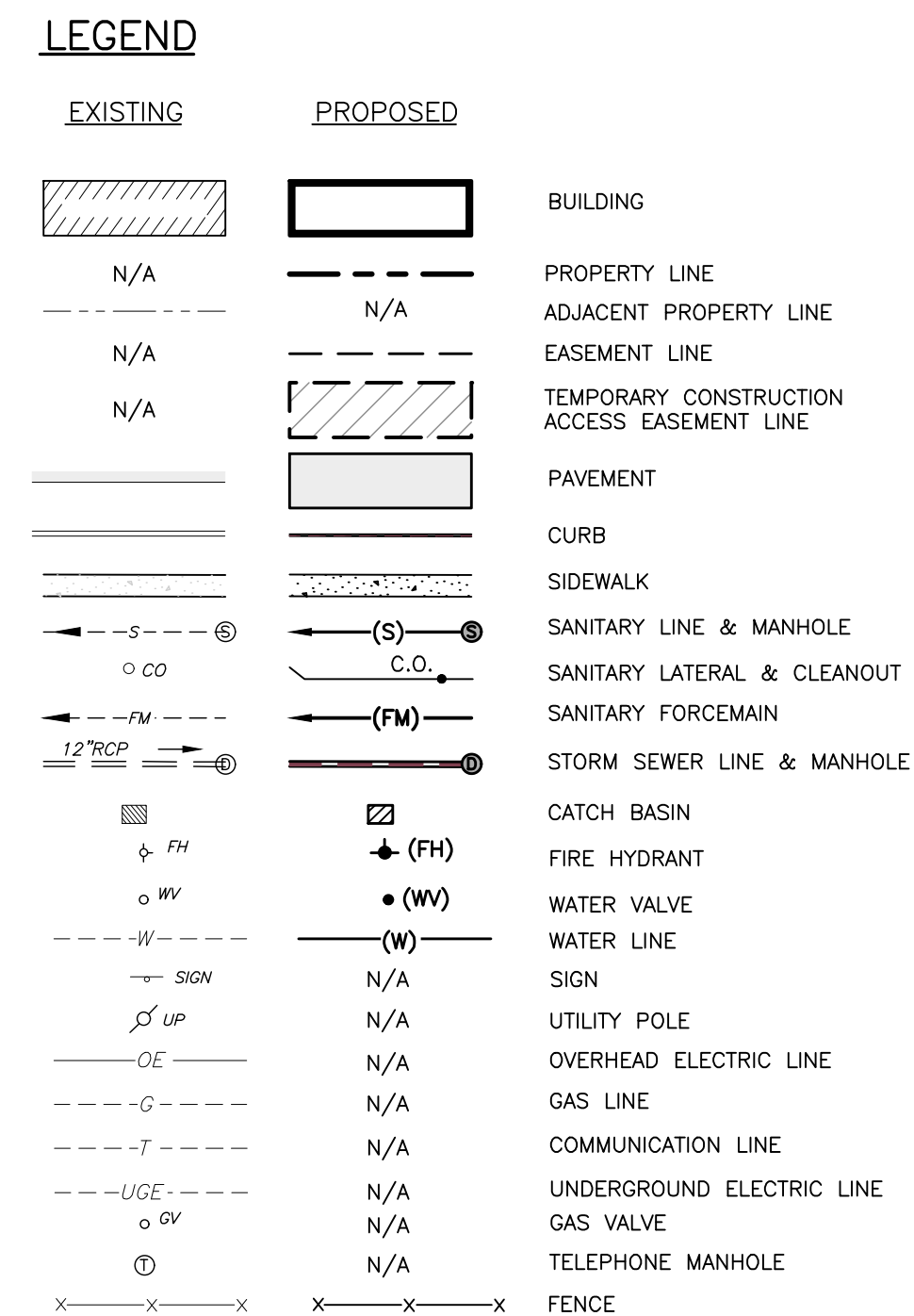
DRAWING NUMBER

CP1.01

SCALE: 1" = 150'

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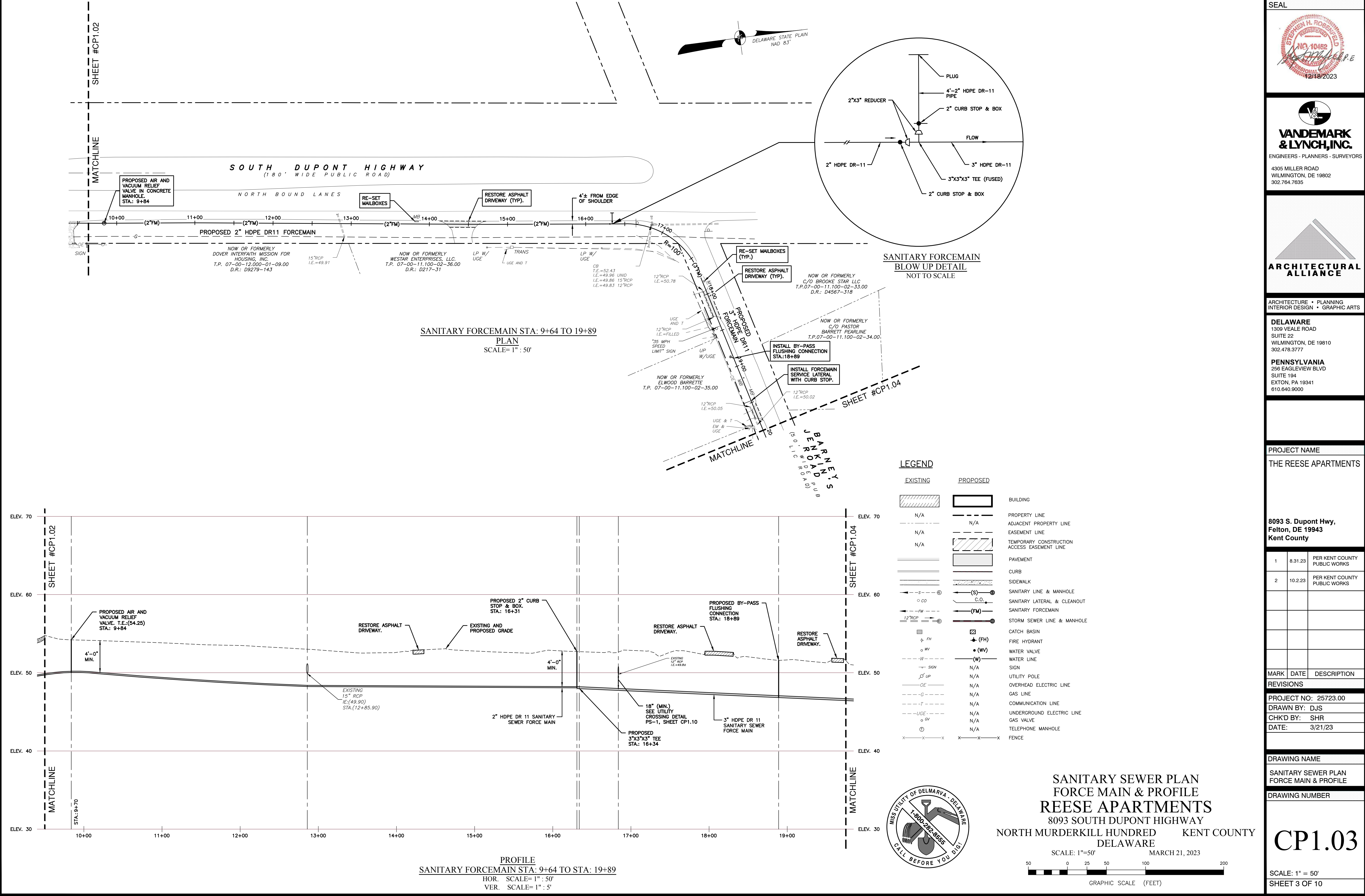
SHEET 1 OF 10



50 0 25 50 100 200

GRAPHIC SCALE (FEET)

SHEET 2 OF 10



SEAL

STEPHEN H. ROSENFIELD  
REGISTERED  
NO. 10482  
12/18/2023

**VANDEMARK & LYNCH, INC.**  
ENGINEERS - PLANNERS - SURVEYORS  
4305 MILLER ROAD  
WILMINGTON, DE 19802  
302.764.7635

**ARCHITECTURAL ALLIANCE**  
ARCHITECTURE • PLANNING  
INTERIOR DESIGN • GRAPHIC ARTS

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PROJECT NAME

THE REESE APARTMENTS

8093 S. Dupont Hwy,  
Felton, DE 19943  
Kent County

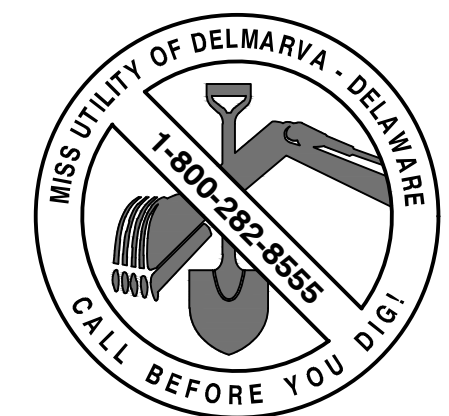
1	8.31.23	PER KENT COUNTY PUBLIC WORKS
2	10.2.23	PER KENT COUNTY PUBLIC WORKS

MARK	DATE	DESCRIPTION
REVISIONS		

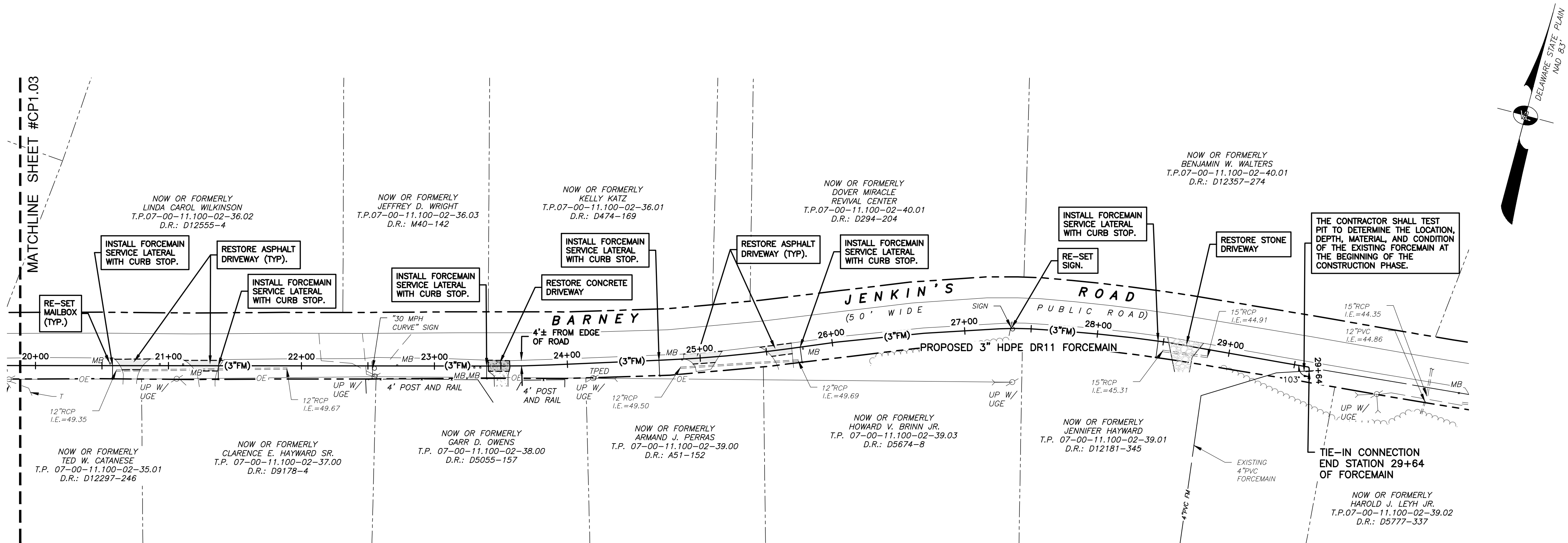
PROJECT NO: 25723.00  
DRAWN BY: DJS  
CHK'D BY: SHR  
DATE: 3/21/23

DRAWING NAME  
SANITARY SEWER PLAN  
FORCE MAIN & PROFILE  
DRAWING NUMBER

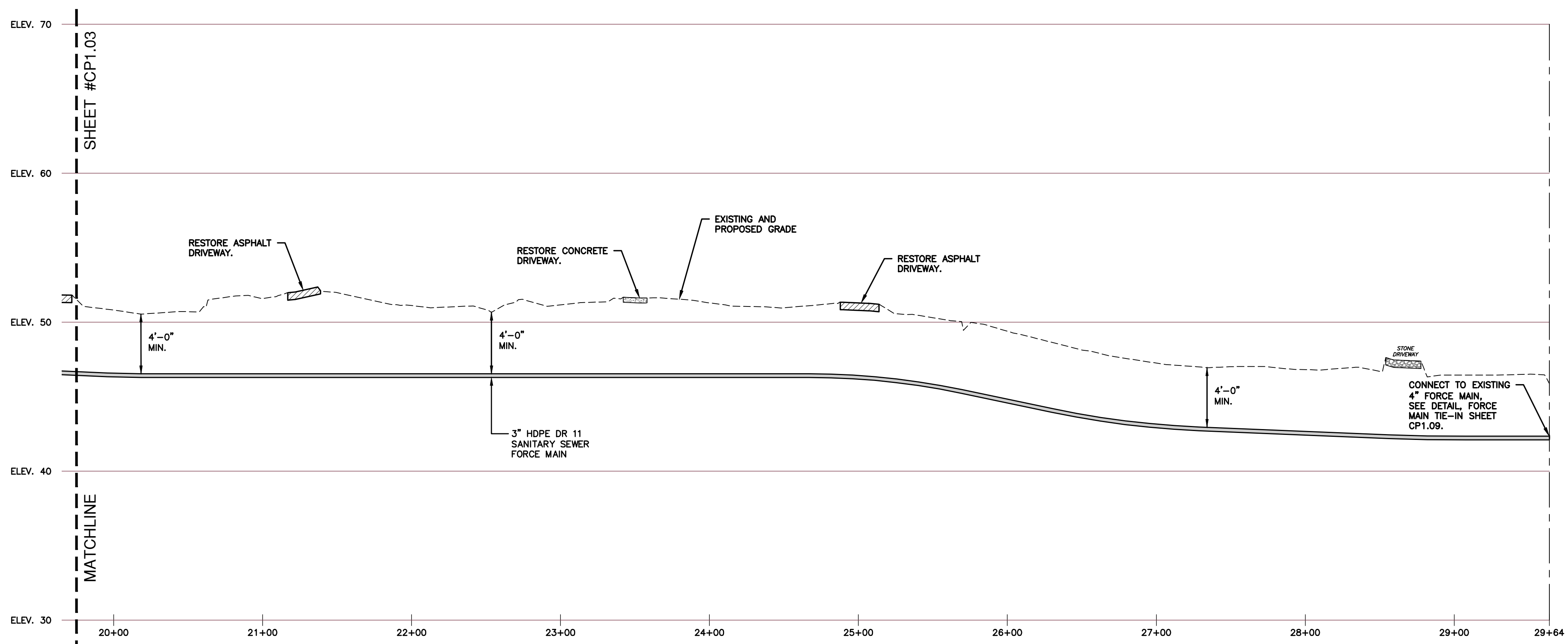
**CP1.03**  
SCALE: 1" = 50'  
SHEET 3 OF 10



**SANITARY SEWER PLAN  
FORCE MAIN & PROFILE  
REESE APARTMENTS**  
8093 SOUTH DUPONT HIGHWAY  
NORTH MURDERKILL HUNDRED DELAWARE KENT COUNTY  
SCALE: 1"=50' MARCH 21, 2023  
GRAPHIC SCALE (FEET)

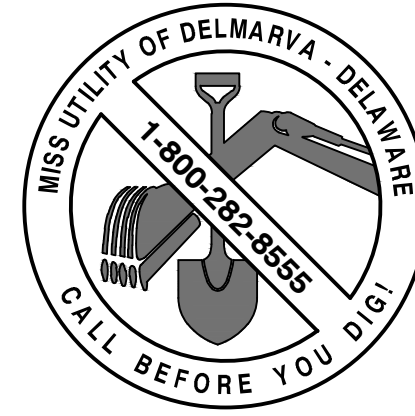


SANITARY FORCEMAIN TIE-IN STA: 19+89 TO STA: 29+64  
PLAN  
SCALE= 1" : 50'



PROFILE  
SANITARY FORCEMAIN STA: 19+89 TO 29+64  
HOR. SCALE= 1" : 50'  
VER. SCALE= 1" : 5'

LEGEND		
EXISTING	PROPOSED	
		BUILDING
N/A	N/A	PROPERTY LINE
N/A	N/A	ADJACENT PROPERTY LINE
N/A	N/A	EASEMENT LINE
N/A		TEMPORARY CONSTRUCTION ACCESS EASEMENT LINE
		PAVEMENT
		CURB
		SIDEWALK
		SANITARY LINE & MANHOLE
		SANITARY LATERAL & CLEANOUT
		SANITARY FORCEMAIN
		STORM SEWER LINE & MANHOLE
		CATCH BASIN
		FIRE HYDRANT
		WATER VALVE
		WATER LINE
		SIGN
		UTILITY POLE
		OVERHEAD ELECTRIC LINE
		GAS LINE
		COMMUNICATION LINE
		UNDERGROUND ELECTRIC LINE
		GAS VALVE
		TELEPHONE MANHOLE
		FENCE



SANITARY SEWER PLAN  
FORCE MAIN & PROFILE  
REESE APARTMENTS  
8093 SOUTH DUPONT HIGHWAY  
NORTH MURDERKILL HUNDRED KENT COUNTY  
DELAWARE

SCALE: 1"=50' MARCH 21, 2023

50 0 25 50 100 200  
GRAPHIC SCALE (FEET)

SEAL

STEPHEN H. ROSENFIELD  
REGISTERED PROFESSIONAL ENGINEER  
NO. 10482  
12/18/2023

**VANDEMARK & LYNCH, INC.**  
ENGINEERS - PLANNERS - SURVEYORS  
4305 MILLER ROAD  
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ARCHITECTURE • PLANNING  
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PROJECT NAME  
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1	8.31.23	PER KENT COUNTY PUBLIC WORKS
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MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: 25723.00		
DRAWN BY: DJS		
CHK'D BY: SHR		
DATE: 3/21/23		

DRAWING NAME  
SANITARY SEWER PLAN  
FORCE MAIN & PROFILE

DRAWING NUMBER  
CP1.04

SCALE: 1" = 50'  
SHEET 4 OF 10



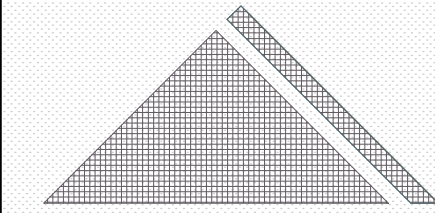
SEAL



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& LYNCH, INC.**

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Kent County

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MARK	DATE	DESCRIPTION
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REVISIONS

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CHKD BY: SHR

DATE: 3/21/23

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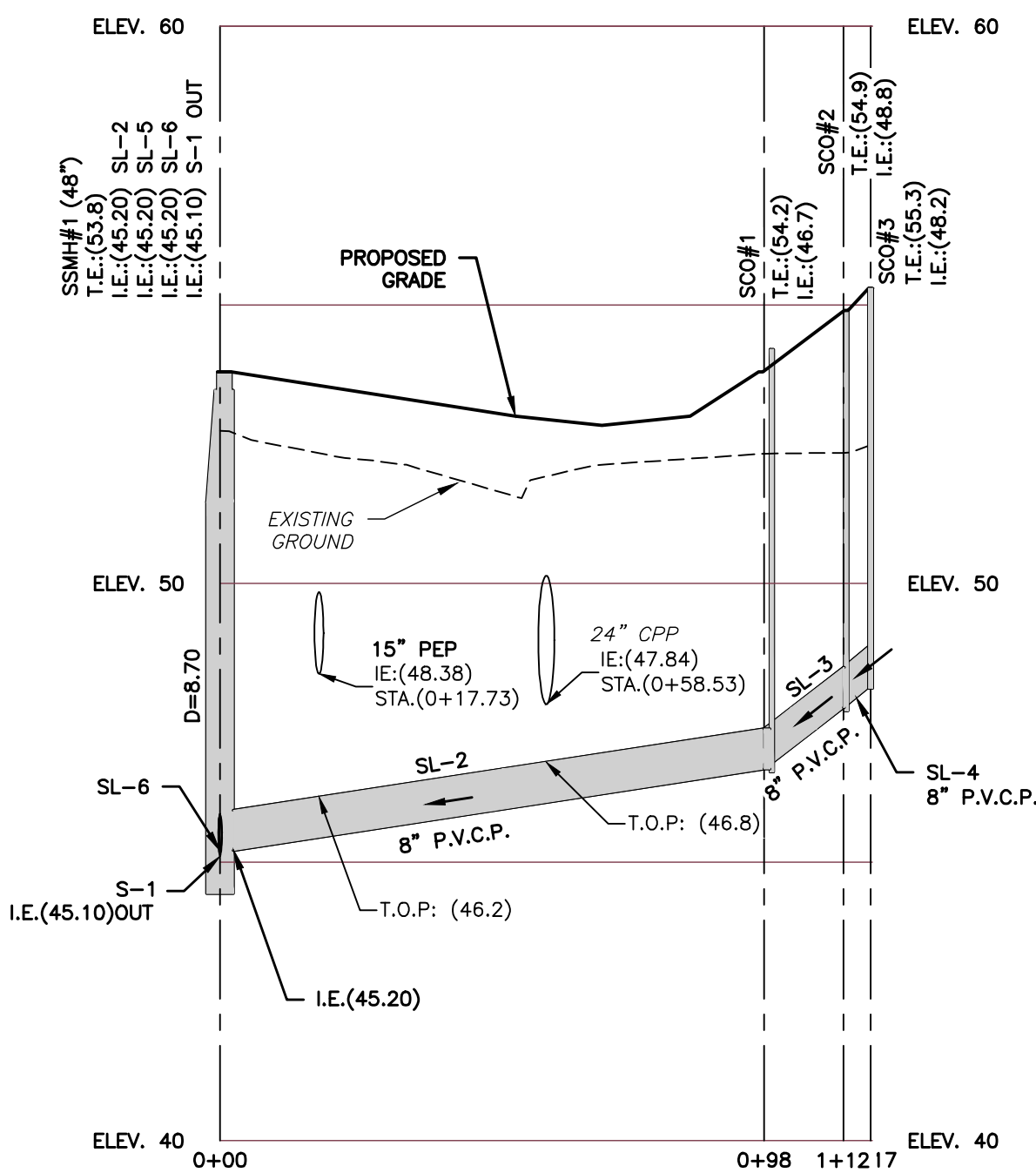
SANITARY SEWER PROFILE

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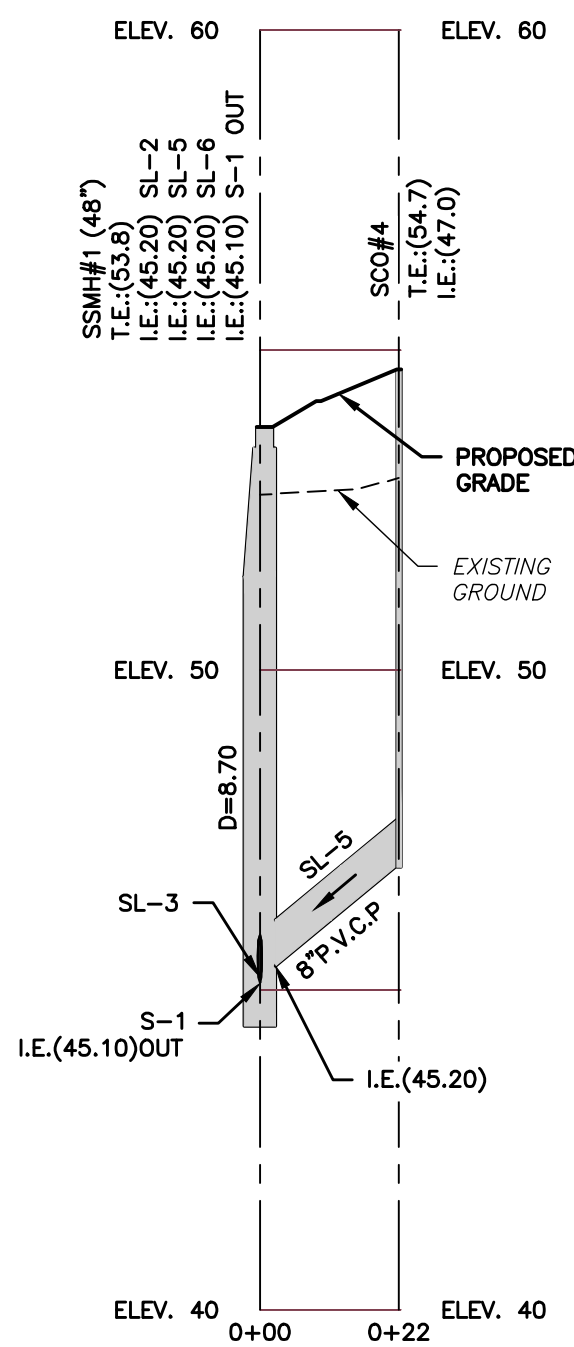
**CP1.06**

SCALE: 1" = 30'

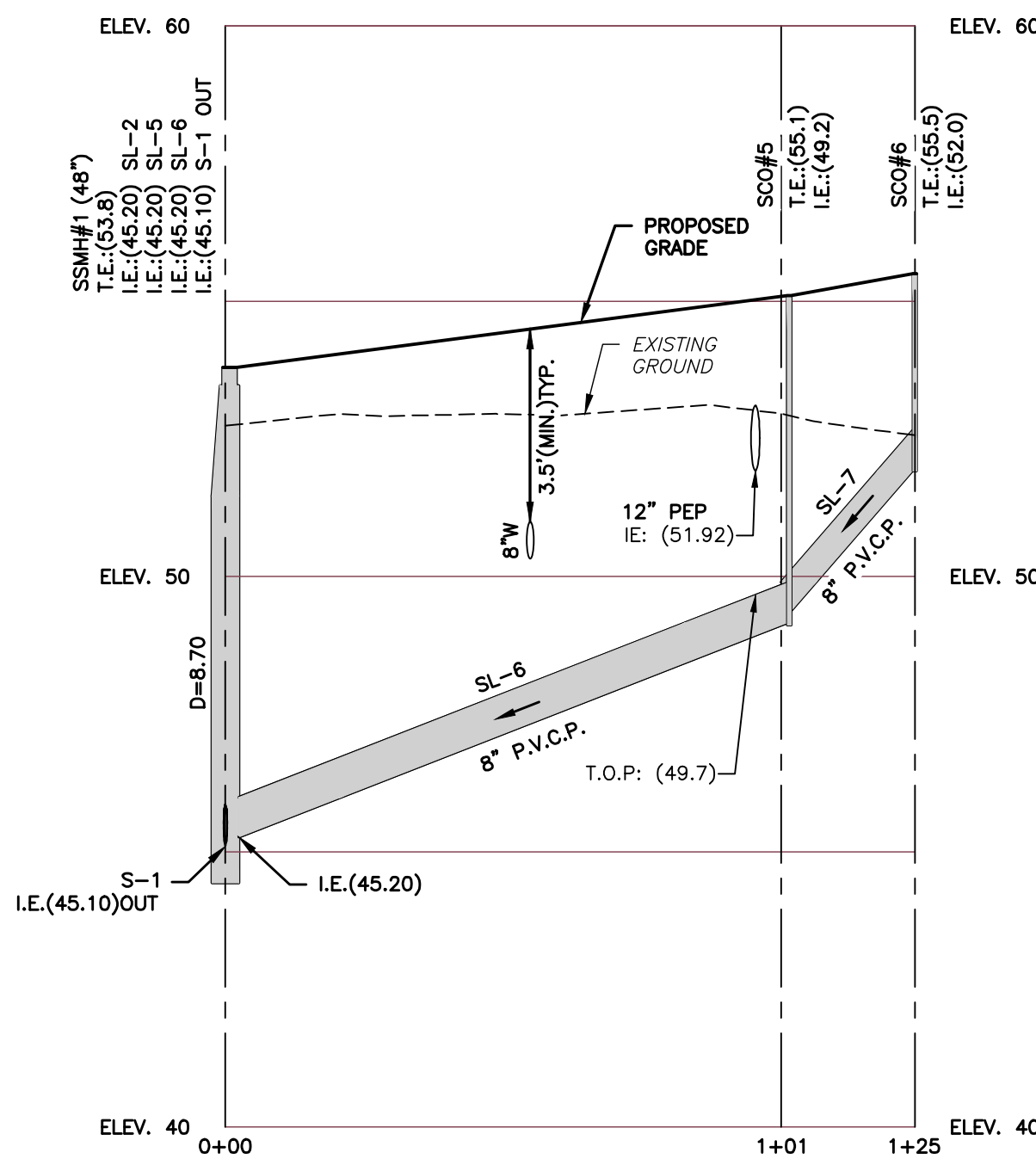
SHEET 6 OF 10



**PROFILE**  
**SANITARY SSMH-1 TO SSCO-3**  
HOR. SCALE= 1" : 30'  
VER. SCALE= 1" : 3'



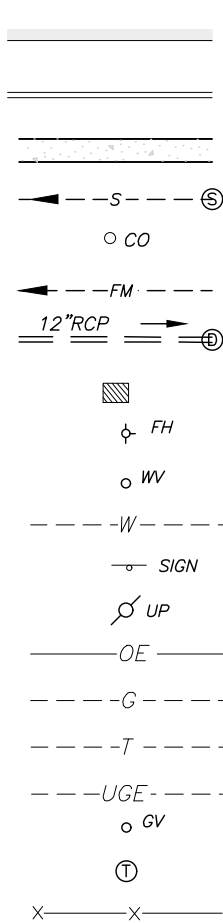
**PROFILE**  
**SANITARY SSMH-1 TO SSCO-4**  
HOR. SCALE= 1" : 30'  
VER. SCALE= 1" : 3'



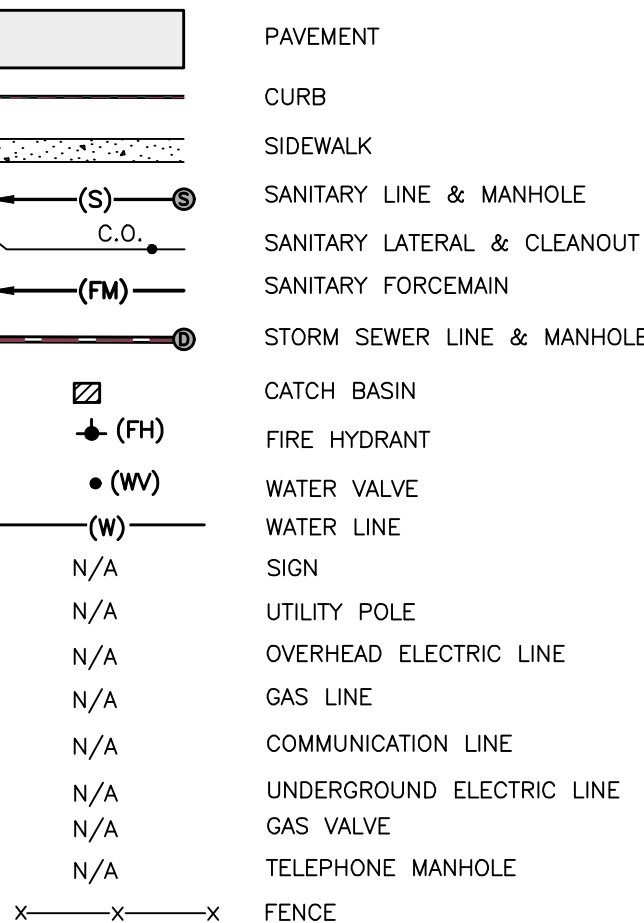
**PROFILE**  
**SANITARY SSMH-1 TO SSCO-6**  
HOR. SCALE= 1" : 30'  
VER. SCALE= 1" : 3'

**LEGEND**

**EXISTING**



**PROPOSED**



SANITARY MANHOLE SCHEDULE				
NO.	SIZE	TOP ELEV.	INV. ELEV. (IN)	INV. ELEV. (OUT)
1-1	48"	53.8	45.20 (SL-2) 45.20 (SL-5) 45.20 (SL-6)	45.10 (S-1)

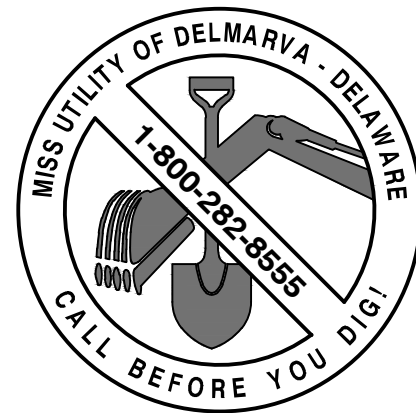
SANITARY PIPE SCHEDULE			
NO.	SIZE/TYPER	LENGTH	SLOPE
S-1	8" P.V.C.P.	5 L.F.	0.0200 FT/FT

PVC PIPE SHALL BE ASTM D3034,  
SDR-26.

SANITARY CLEANOUT SCHEDULE		
NO.	T.E.	I.E.
SCO-1	54.2	46.7
SCO-2	54.9	47.8
SCO-3	55.3	48.2
SCO-4	54.7	47.0
SCO-5	55.1	49.2
SCO-6	55.5	52.0

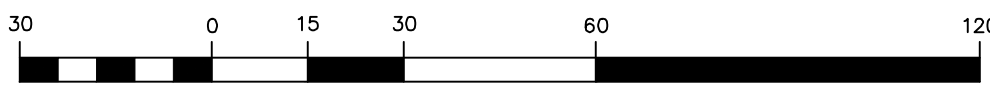
SANITARY LATERAL SCHEDULE				
NO.	SIZE/TYPER	LENGTH	SLOPE	
SL-2	8" P.V.C.P.	98 L.F.	0.0150 FT/FT	
SL-3	8" P.V.C.P.	141 L.F.	0.0800 FT/FT	
SL-4	8" P.V.C.P.	5 L.F.	0.0800 FT/FT	
SL-5	8" P.V.C.P.	22 L.F.	0.0800 FT/FT	
SL-6	8" P.V.C.P.	101 L.F.	0.0400 FT/FT	
SL-7	8" P.V.C.P.	24 L.F.	0.0200 FT/FT	

PVC PIPE SHALL BE ASTM D3034,  
SDR-26.



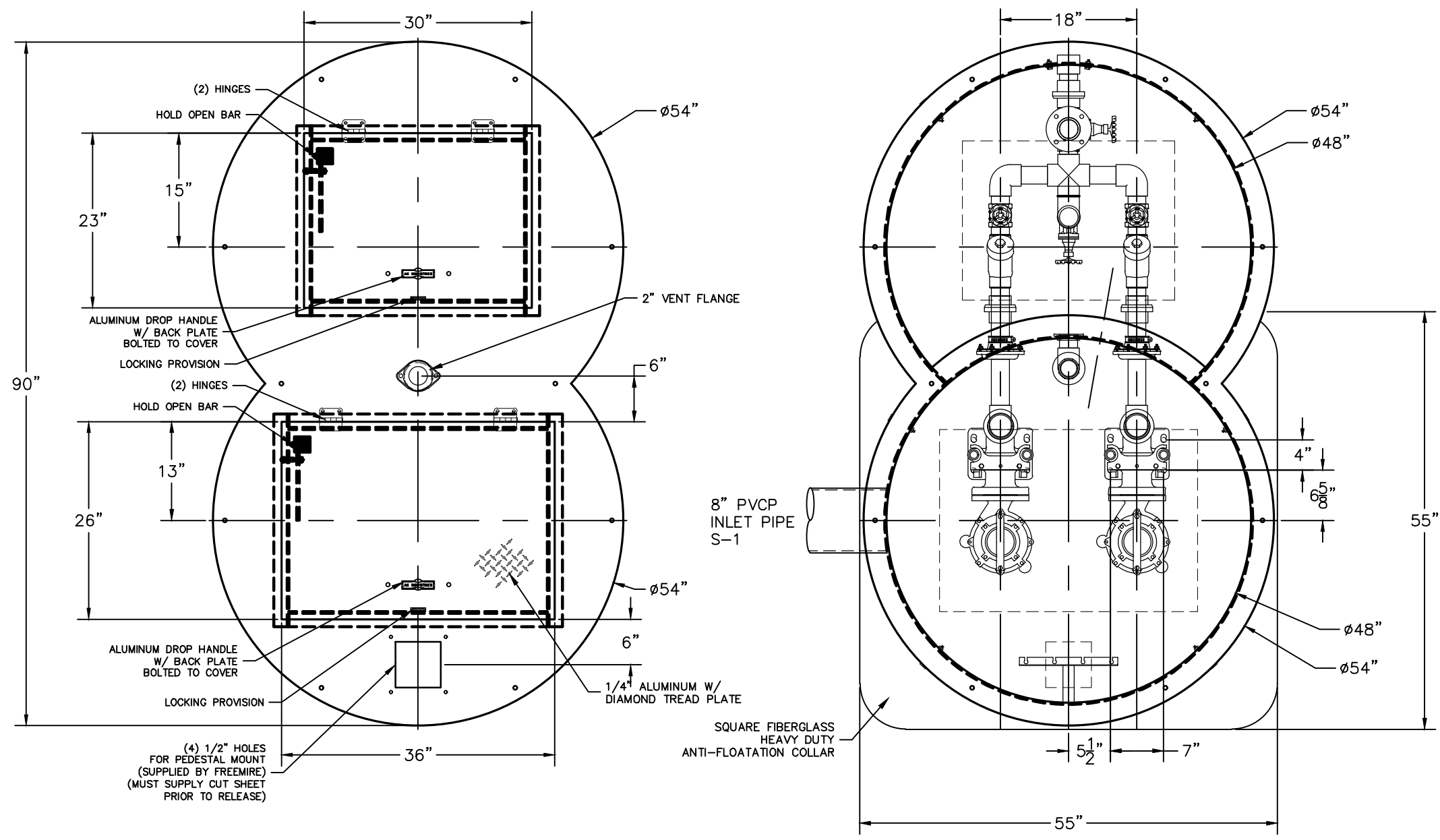
**SANITARY SEWER PROFILES**  
**REESE APARTMENTS**  
8093 SOUTH DUPONT HIGHWAY  
NORTH MURDERKILL HUNDRED KENT COUNTY  
DELAWARE

SCALE: 1"=30' MARCH 21, 2023



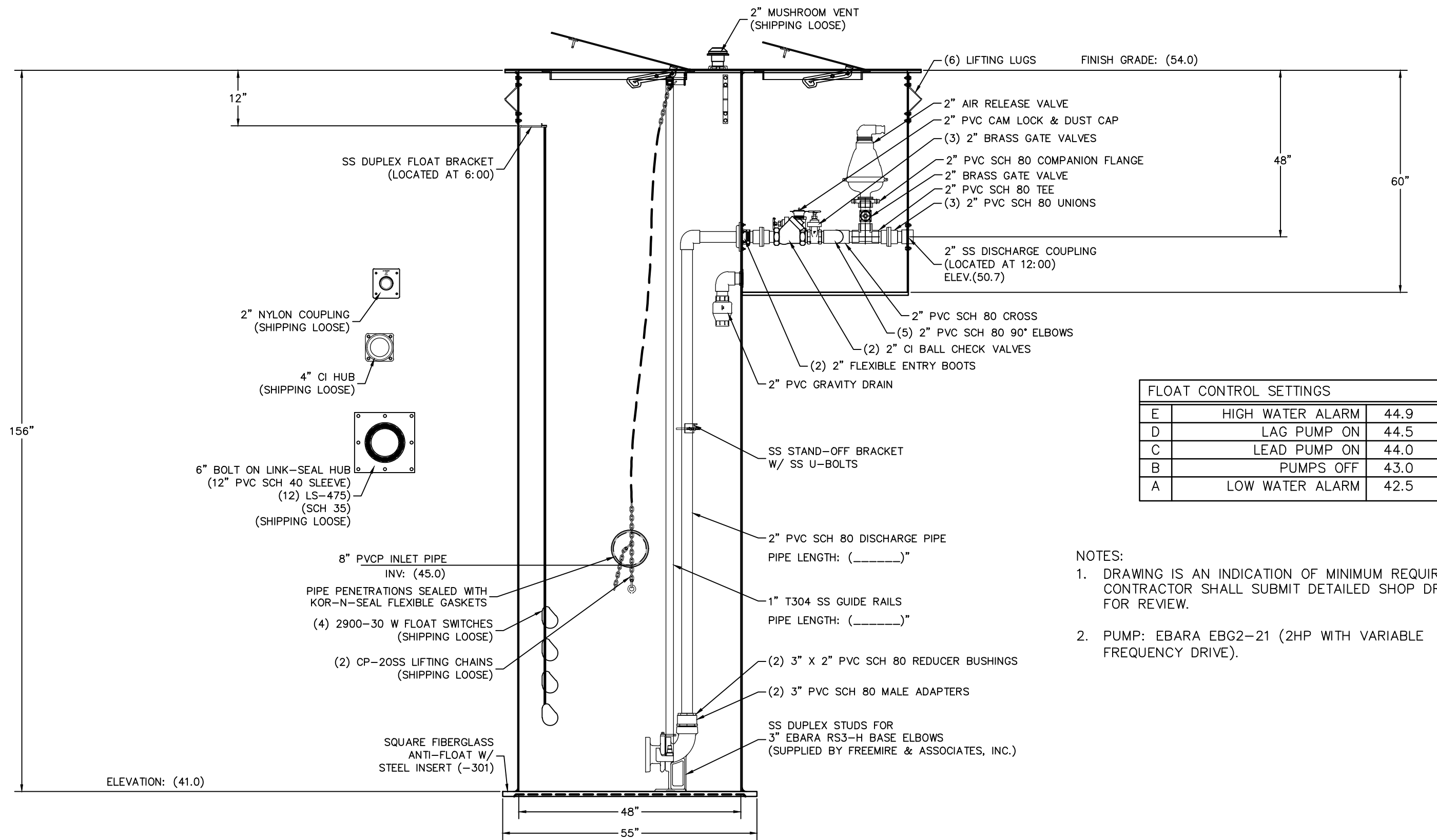
GRAPHIC SCALE (FEET)

NOTE: MEASUREMENTS OF BASINS ARE ALL I.D., IF NOT OTHERWISE SPECIFIED  
\*\*\*BACKFILL INSTRUCTIONS TO BE FOLLOWED FOR AK IND. TO WARRANTY BASIN\*\*\*



DRAWN FOR:	PO# ---	DISCONNECTS: EBARA RS3-H	SHEET 2 OF 2	Revision 2
FREEMIRE & ASSOCIATES, INC.	QUOTE # 85170	PUMPS: ---	"THE BEST AROUND UNDERGROUND"	
JOB REFERENCE / Notes:	BASIN DESCRIPTION: 48 X 168-301 W/ 48 X 48 VB	DRAWN BY: A.HARTUNG	DATE: 8/28/23	
REESE APART	COVER DESCRIPTION: 1/4" ALUMINUM VBC	CHECKED BY:	DATE CHECKED:	
PH: (574)-936-6022 FX: (574)-936-5811 WWW.AKINDUSTRIES.COM				

NOTE: MEASUREMENTS OF BASINS ARE ALL I.D., IF NOT OTHERWISE SPECIFIED  
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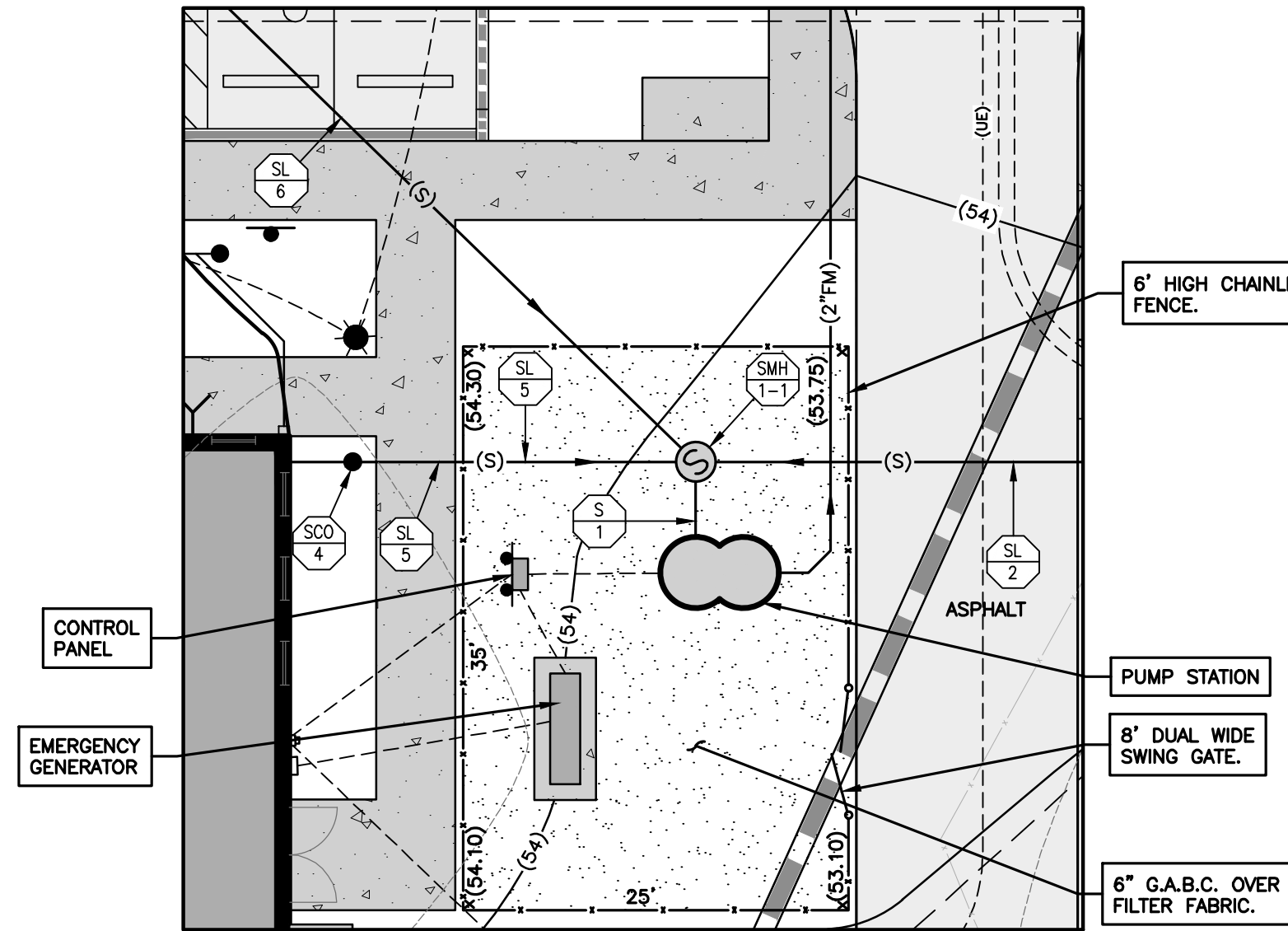
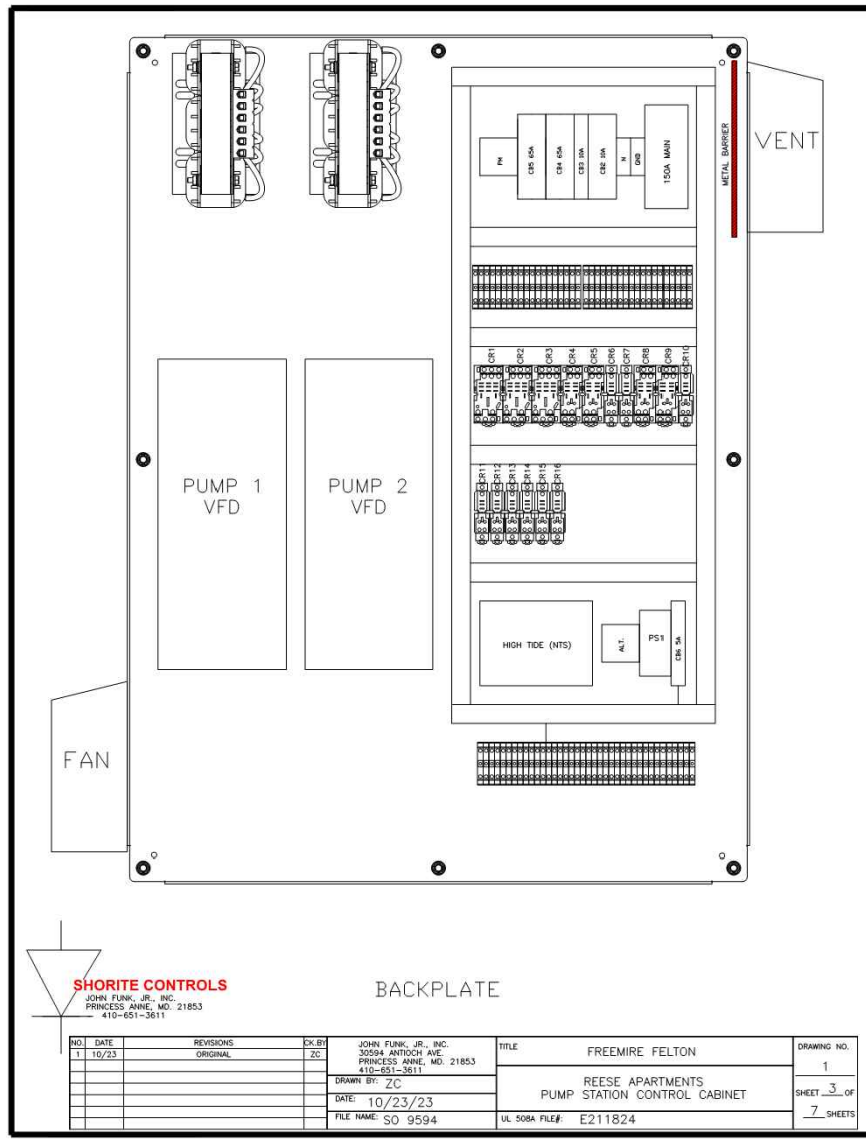
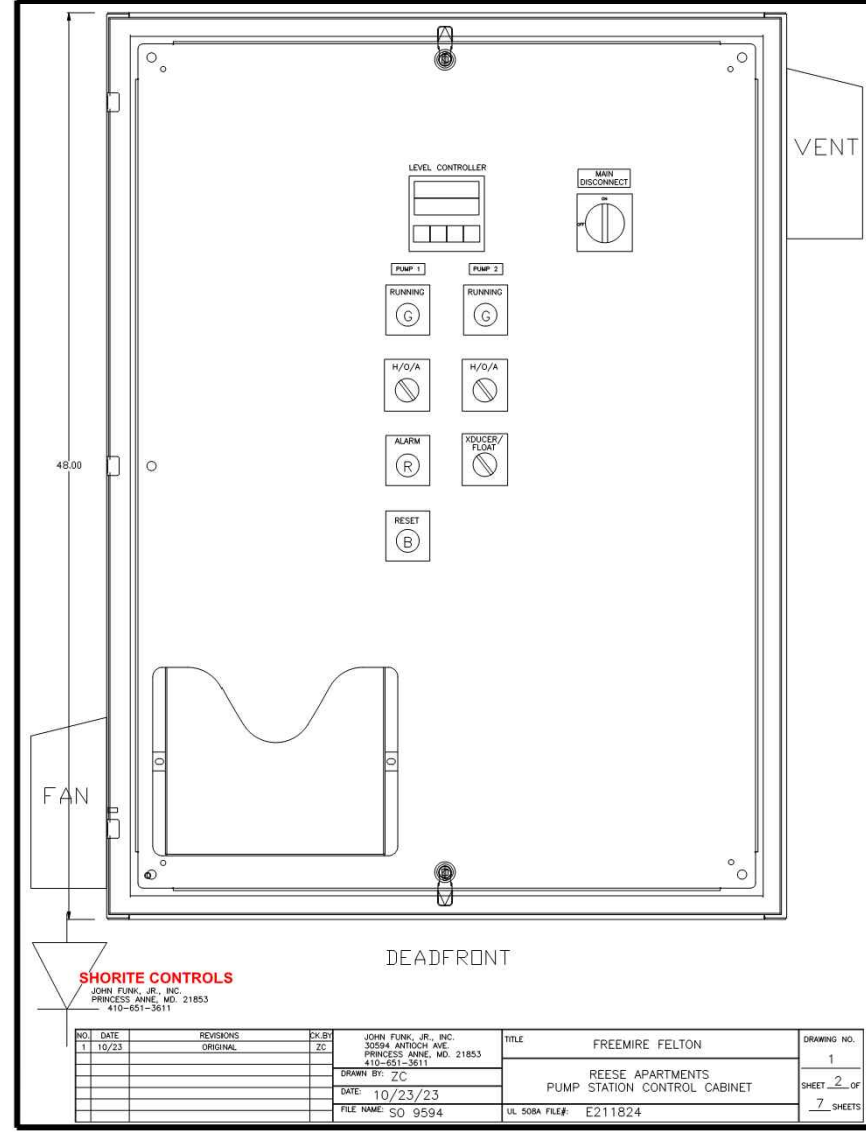
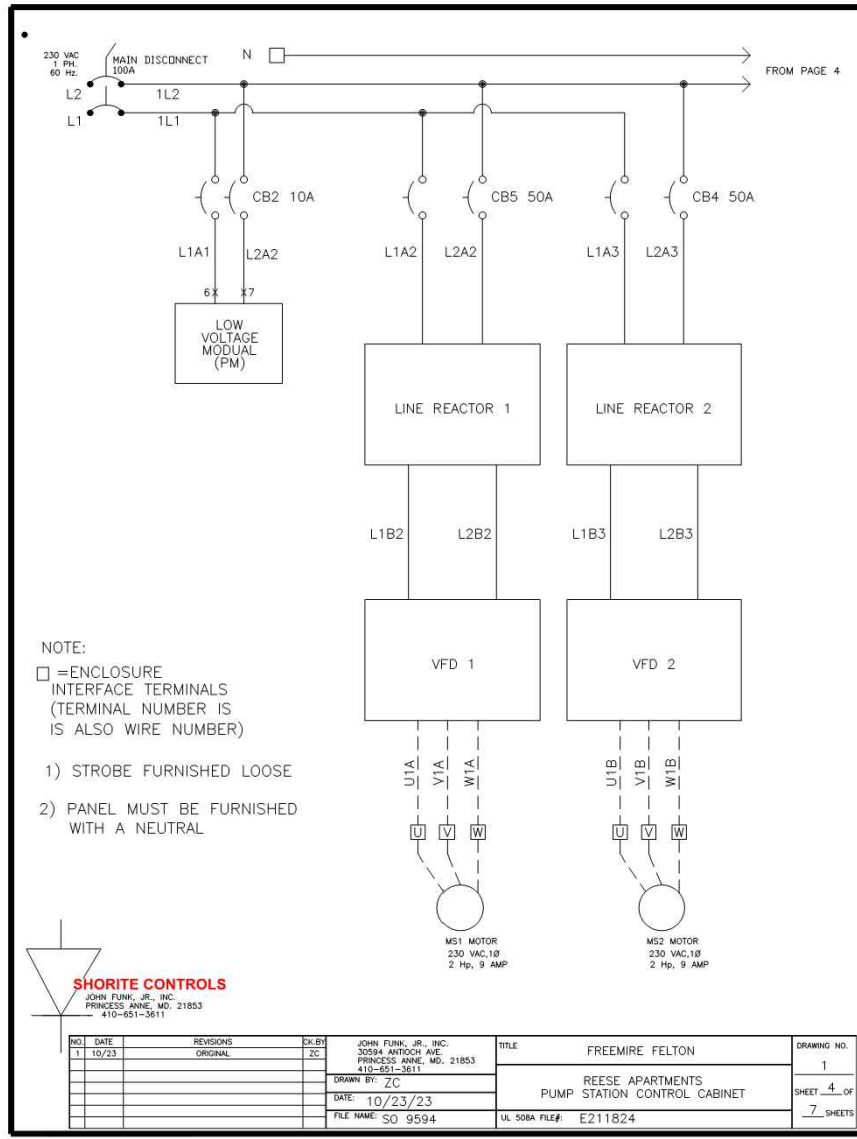


FLOAT CONTROL SETTINGS		
E	HIGH WATER ALARM	44.9
D	LAG PUMP ON	44.5
C	LEAD PUMP ON	44.0
B	PUMPS OFF	43.0
A	LOW WATER ALARM	42.5

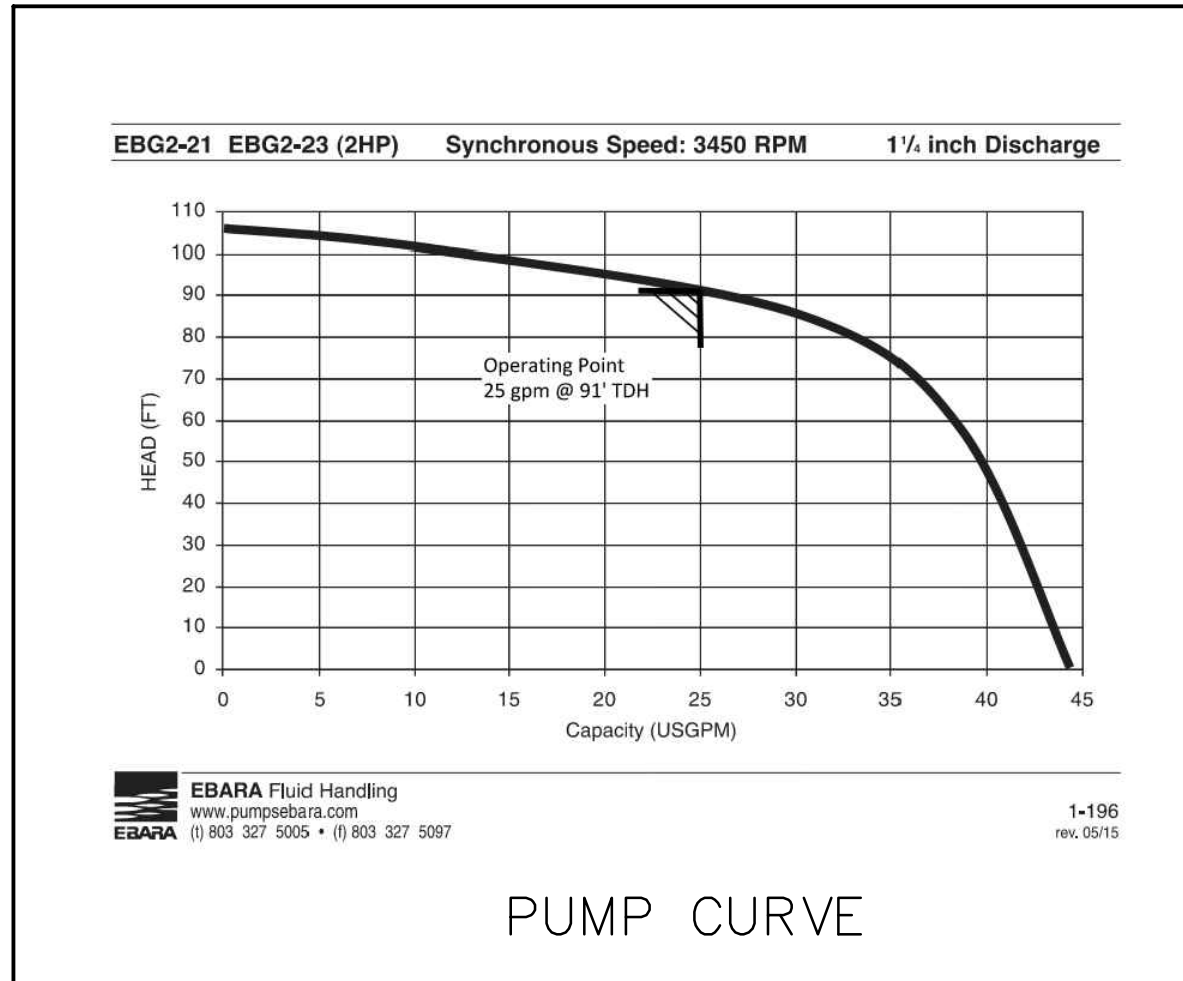
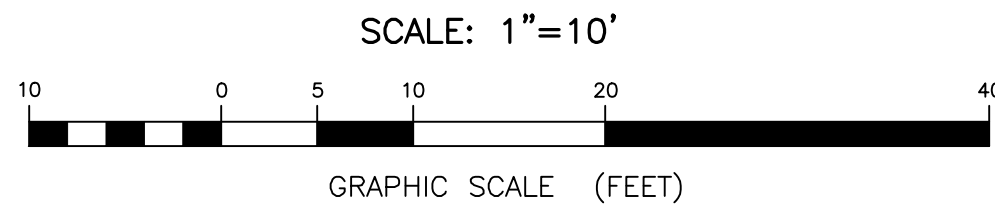
- NOTES:
- DRAWING IS AN INDICATION OF MINIMUM REQUIREMENTS. CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS FOR REVIEW.
  - PUMP: EBARA EBG2-21 (2HP WITH VARIABLE FREQUENCY DRIVE).



PH: (574)-936-6022 FX: (574)-936-5811  
WWW.AKINDUSTRIES.COM



PUMP STATION PLAN VIEW



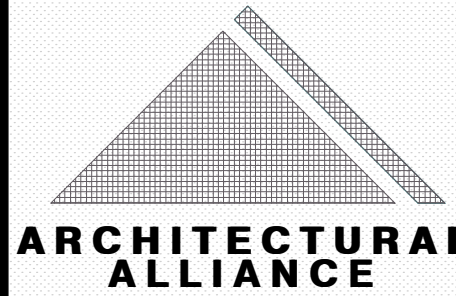
SANITARY SEWER PLAN  
PUMP STATION DETAILS  
FELTON APARTMENTS  
8093 SOUTH DUPONT HIGHWAY  
NORTH MURDERKILL HUNDRED KENT COUNTY  
DELAWARE  
SCALE: AS SHOWN MARCH 21, 2023

SEAL



ENGINEERS - PLANNERS - SURVEYORS

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REVISIONS		
PROJECT NO: 25723.00		
DRAWN BY: DJS		
CHKD BY: SHR		
DATE: 3/21/23		

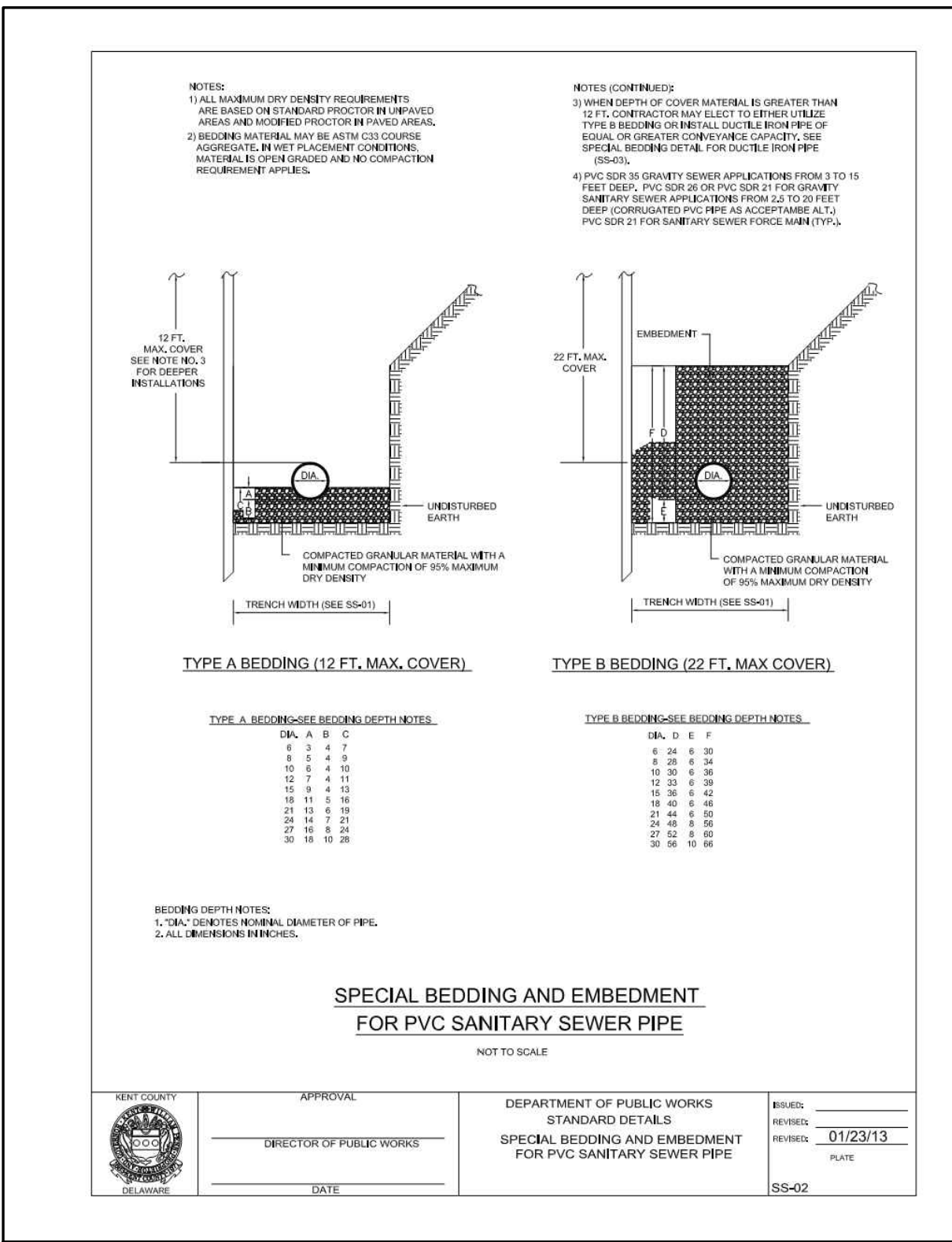
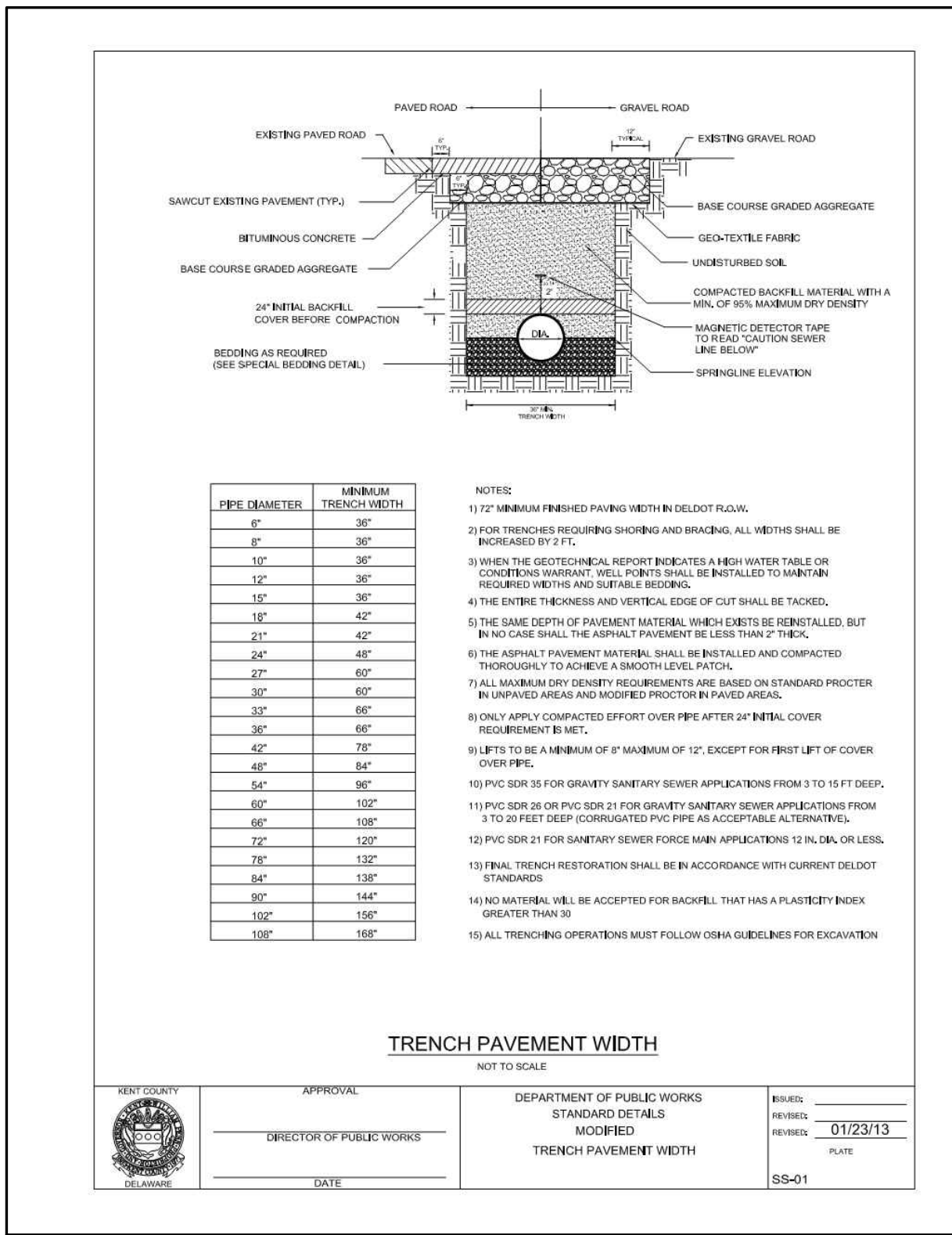
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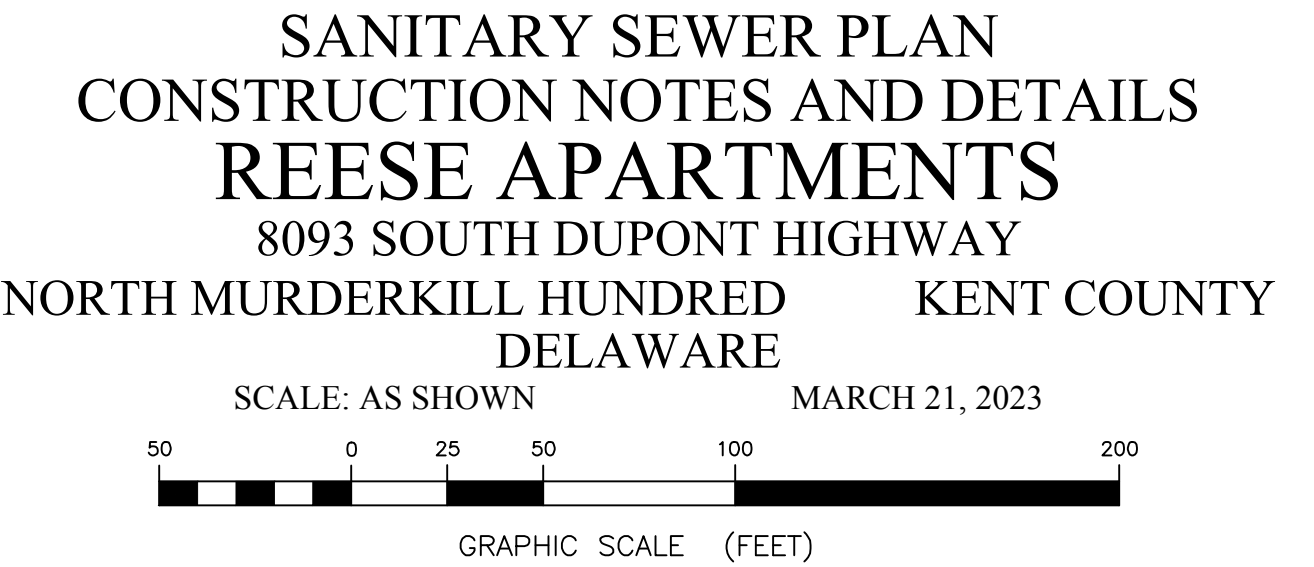
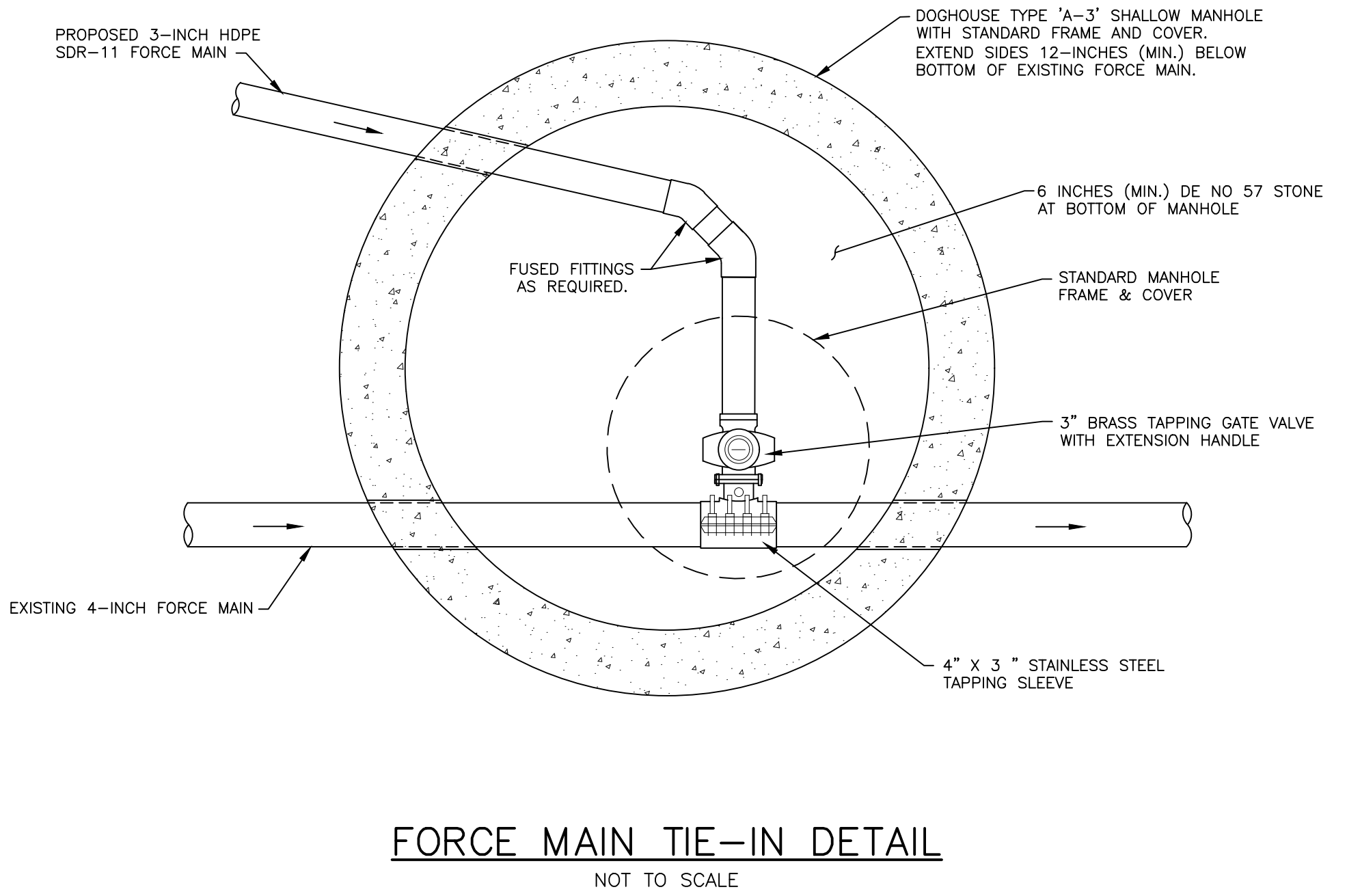
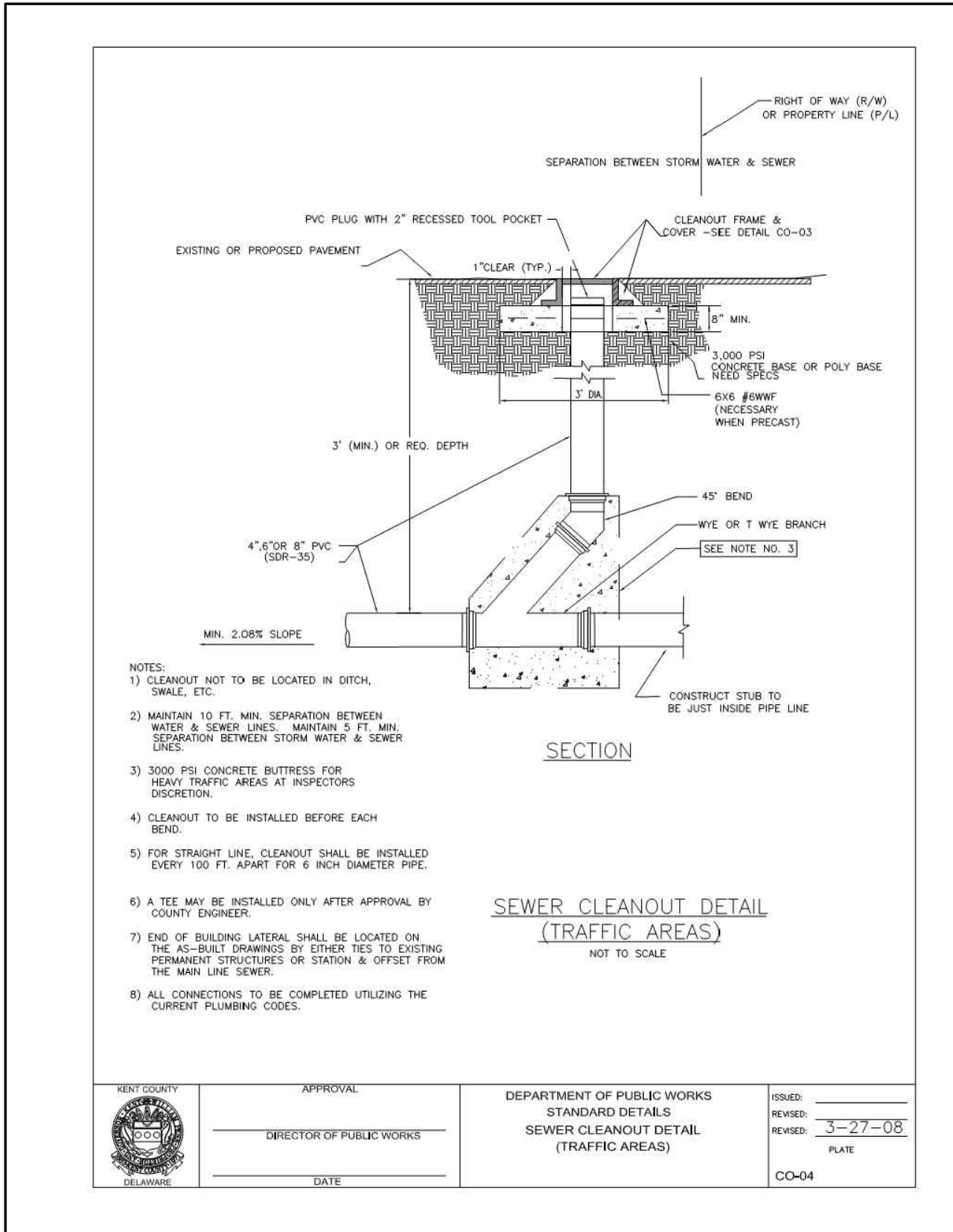
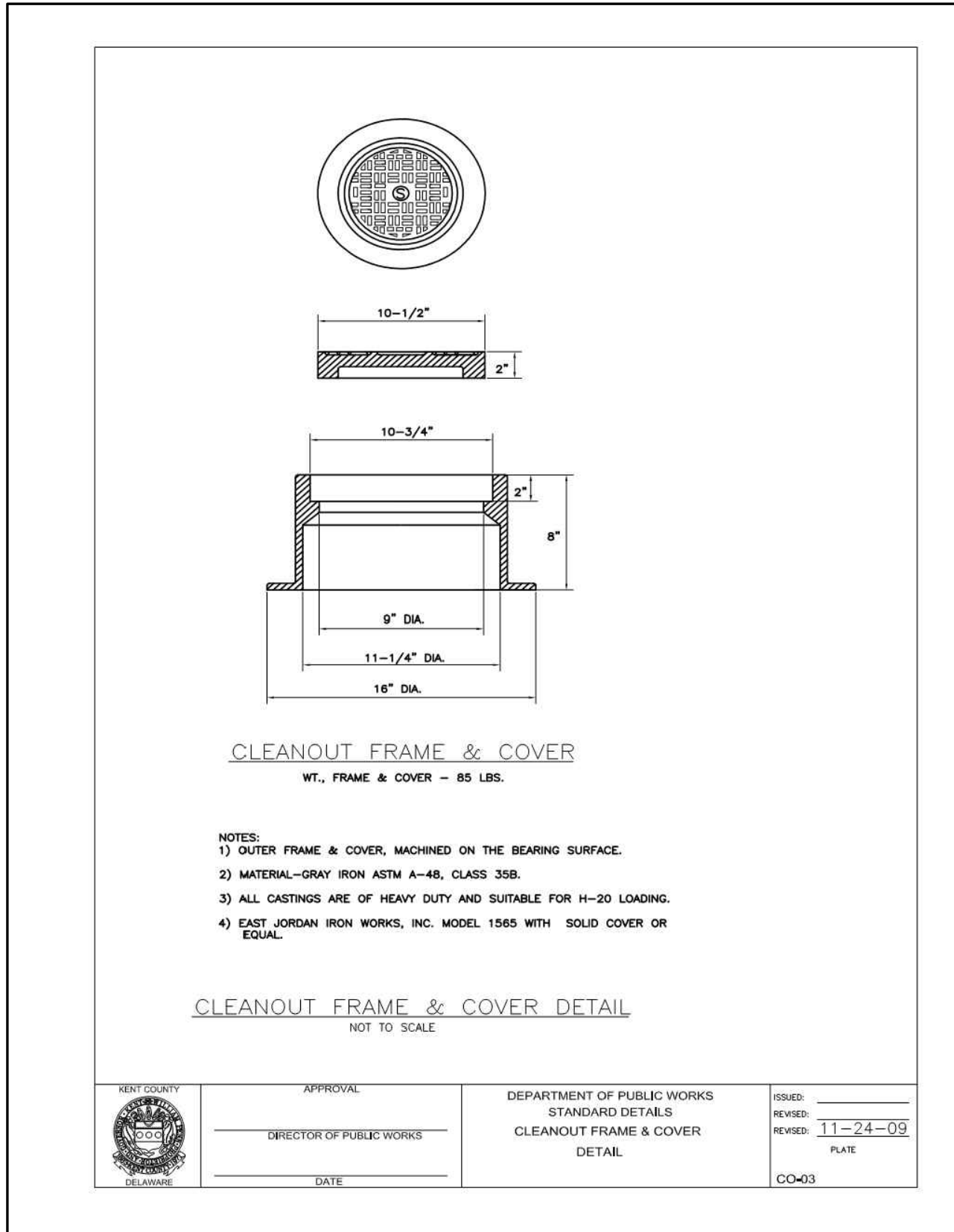
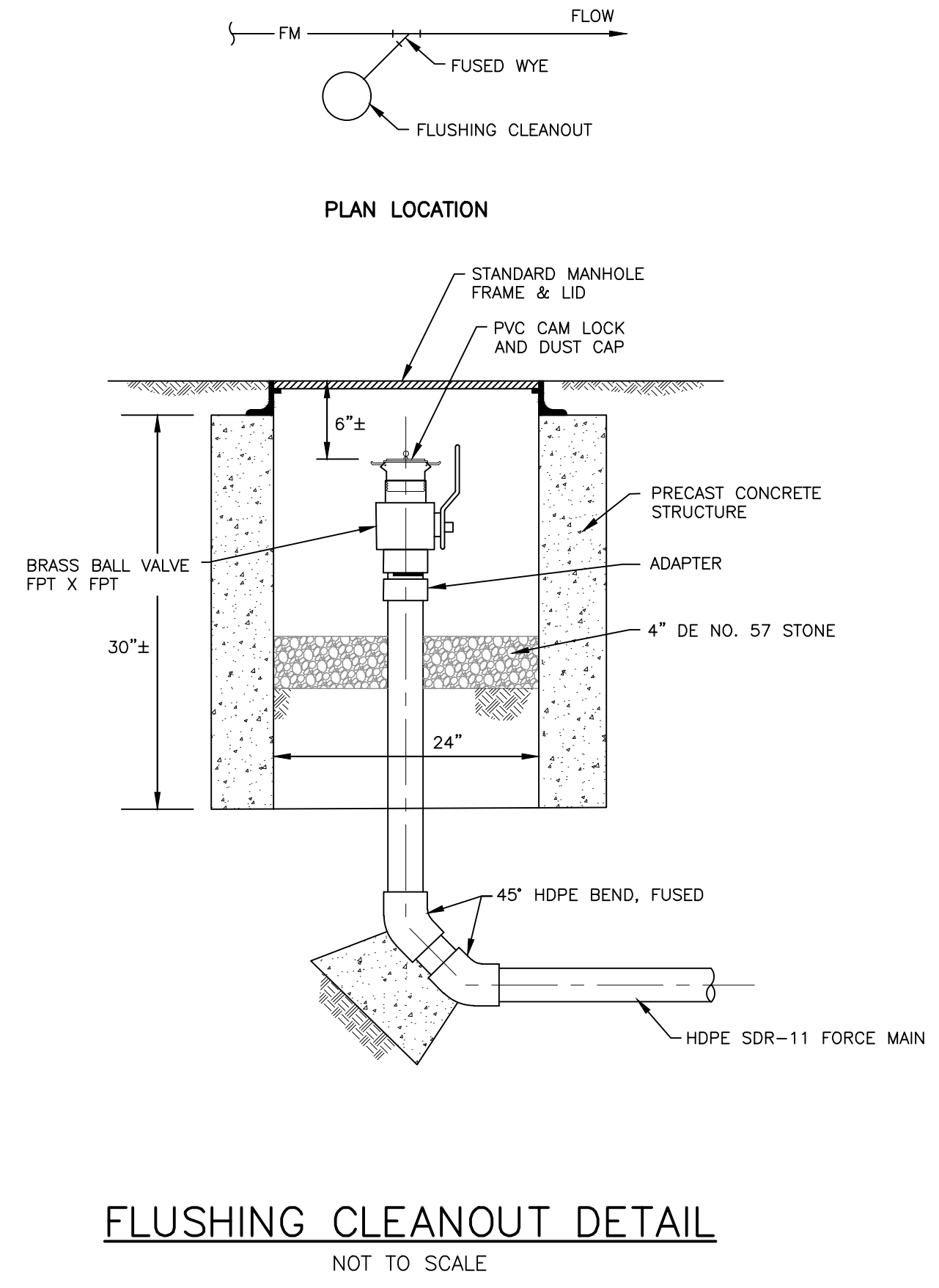
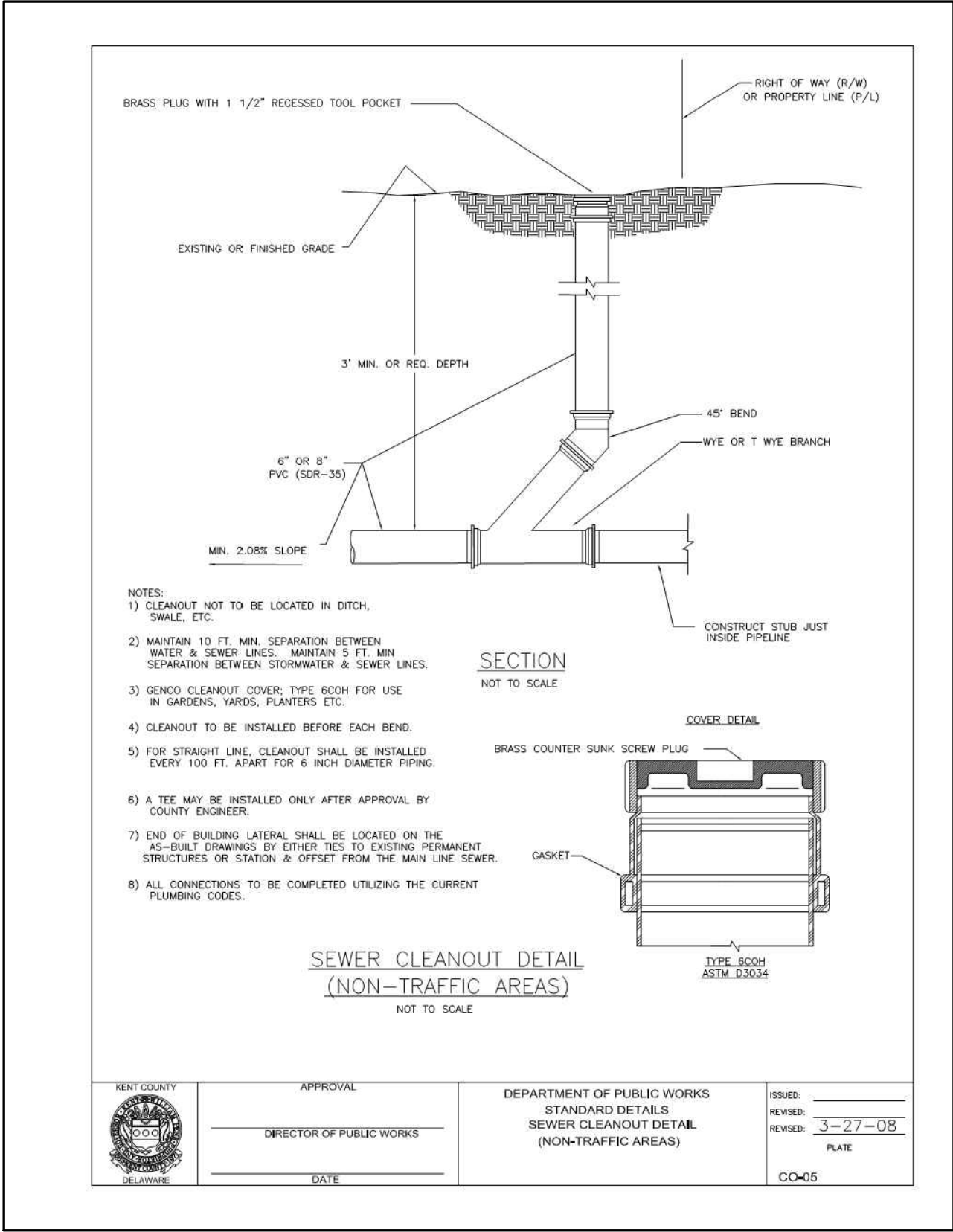
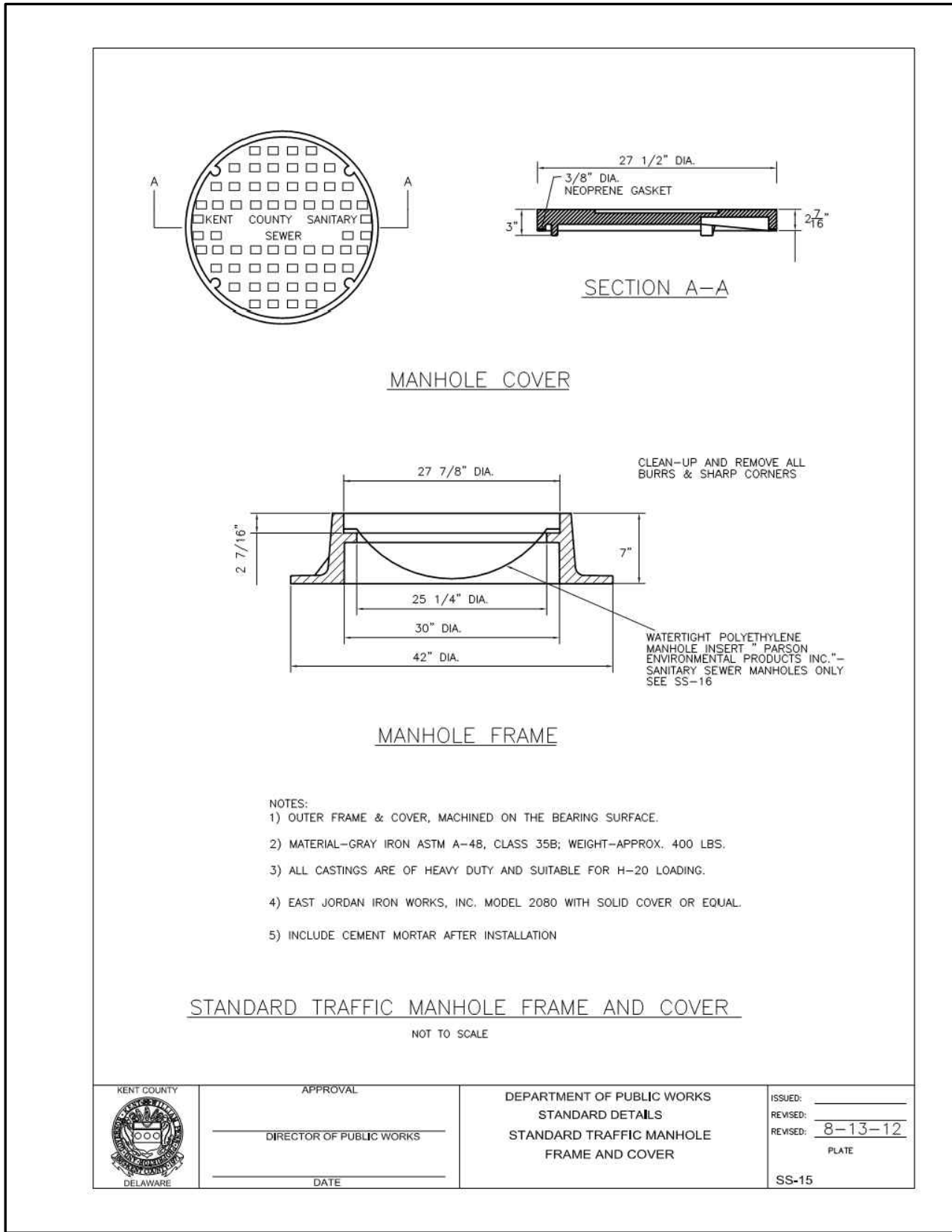
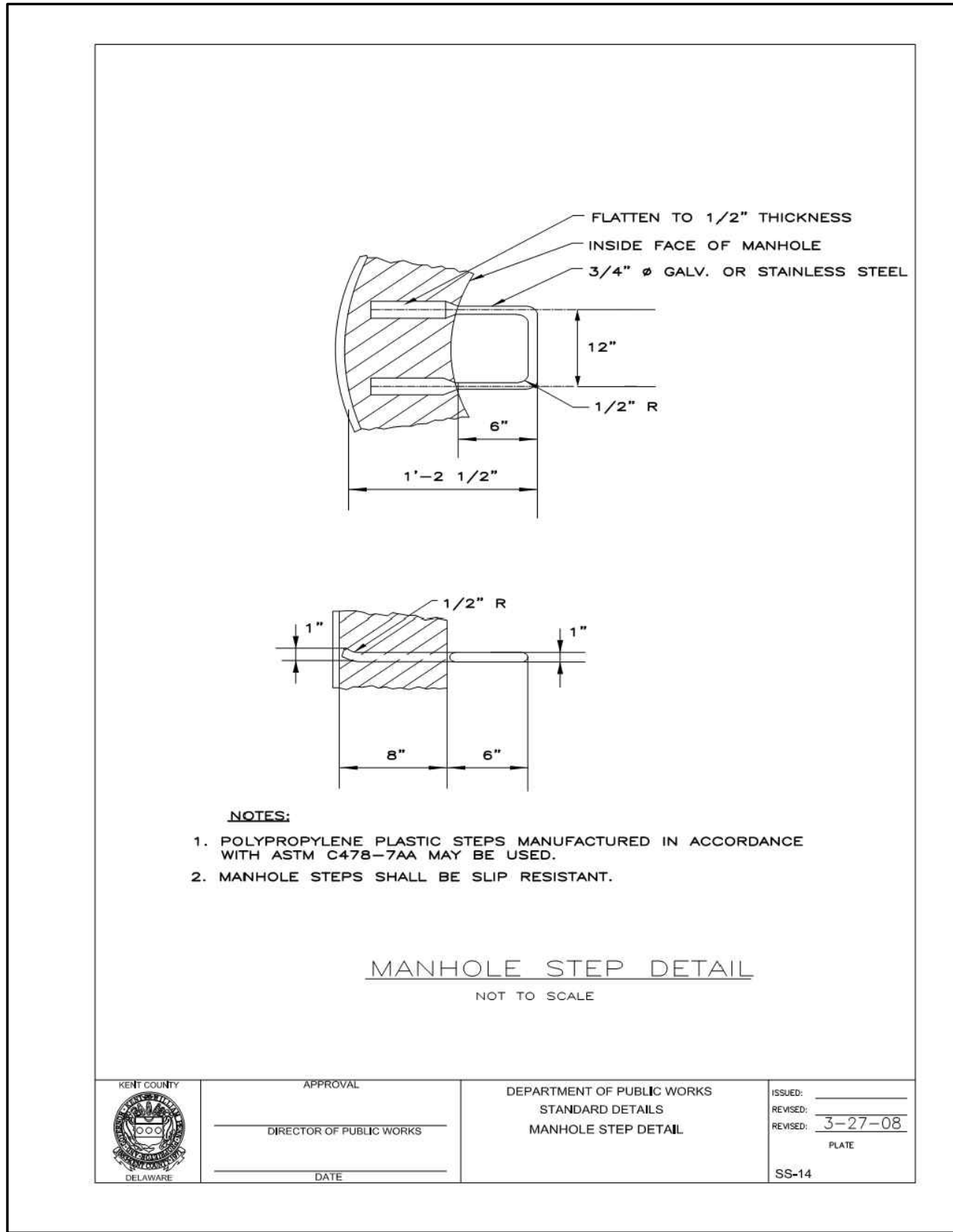
SANITARY SEWER PLAN  
PUMP STATION DETAILS

DRAWING NUMBER

CP1.07

SCALE: AS SHOWN  
SHEET 7 OF 10





SEAL

STEPHEN H. ROSENFIELD  
REGISTERED  
NO. 10452  
PROFESSIONAL  
ARCHITECT  
12/18/2023

VANDEMARK & LYNCH, INC.  
ENGINEERS - PLANNERS - SURVEYORS  
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ARCHITECTURAL ALLIANCE

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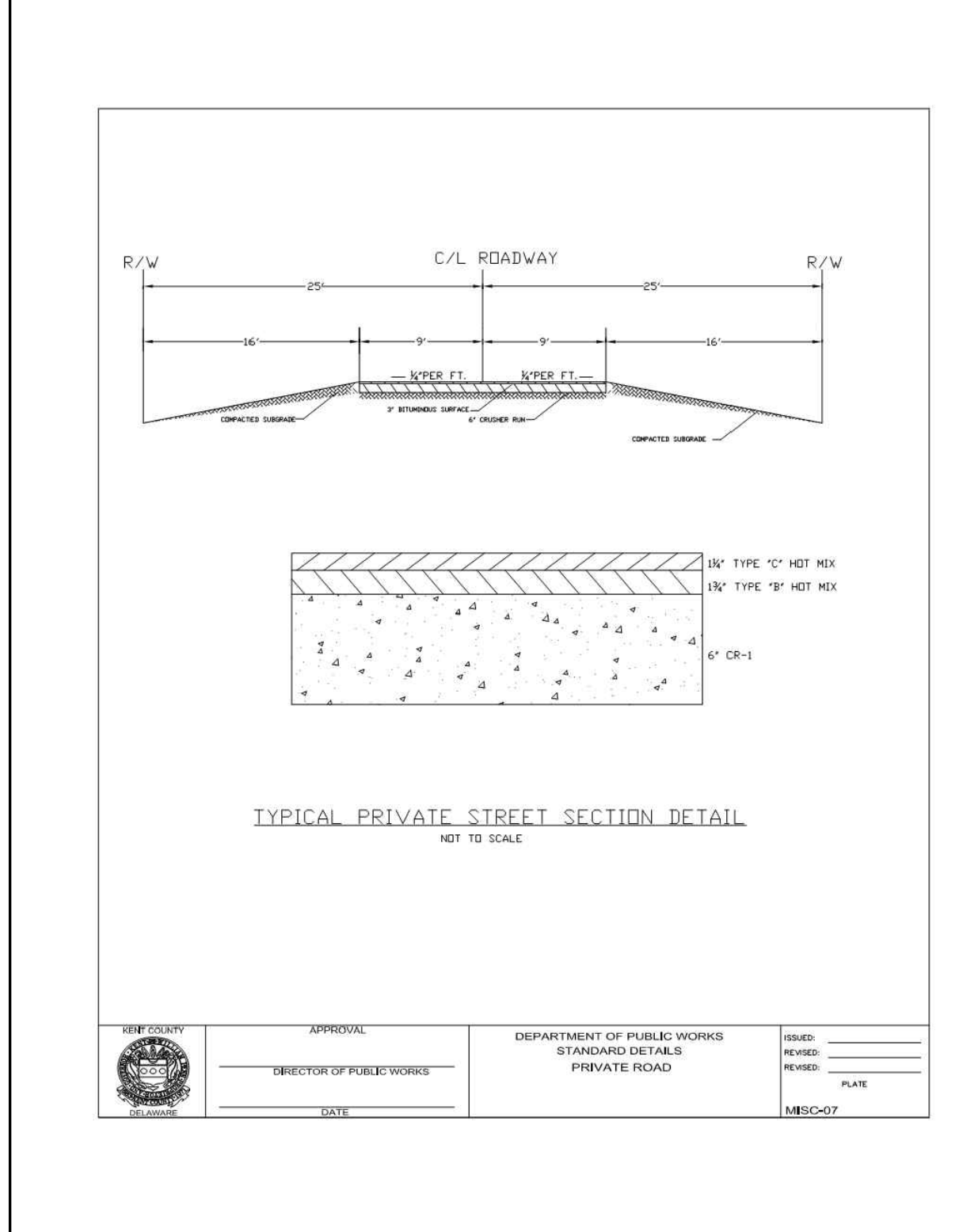
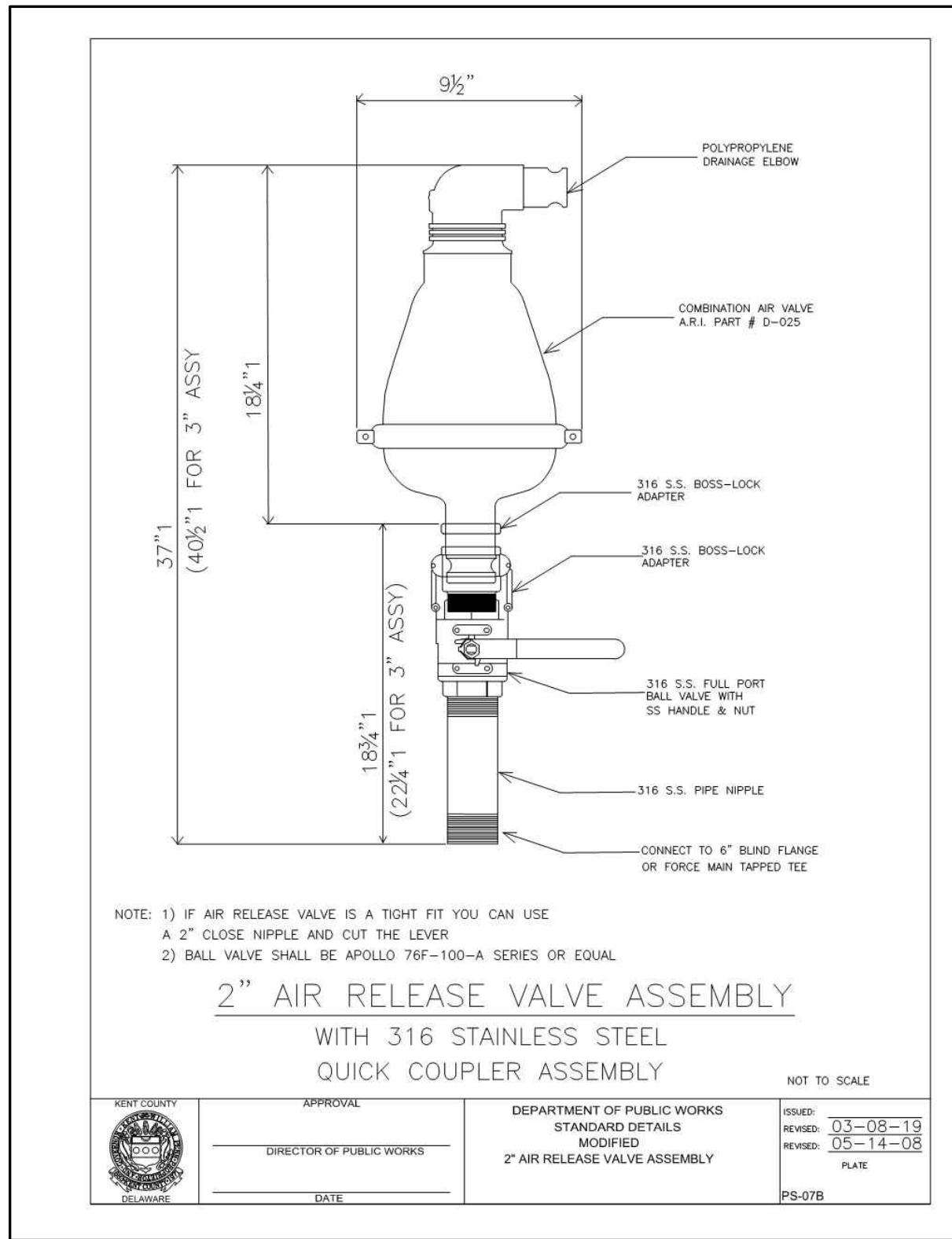
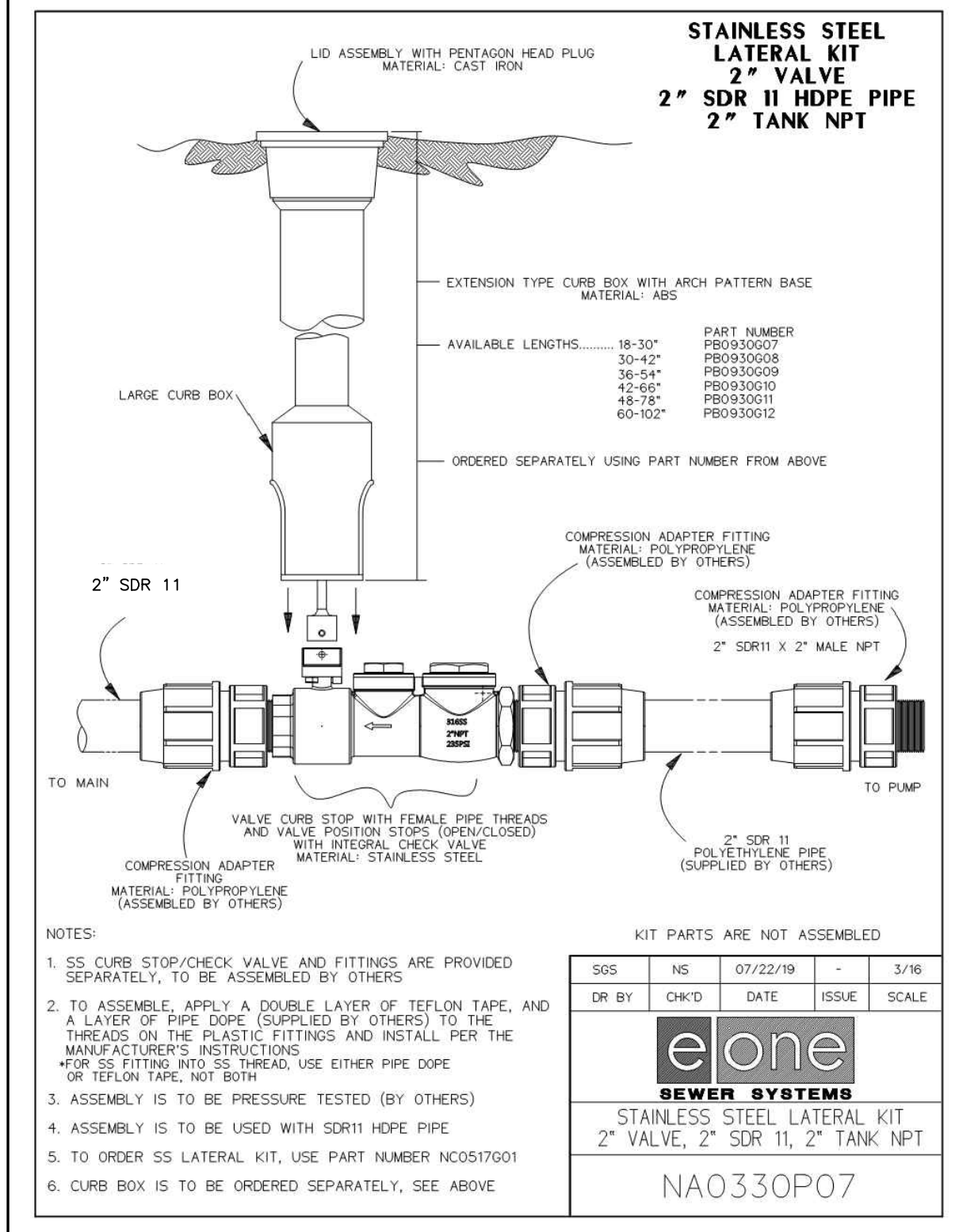
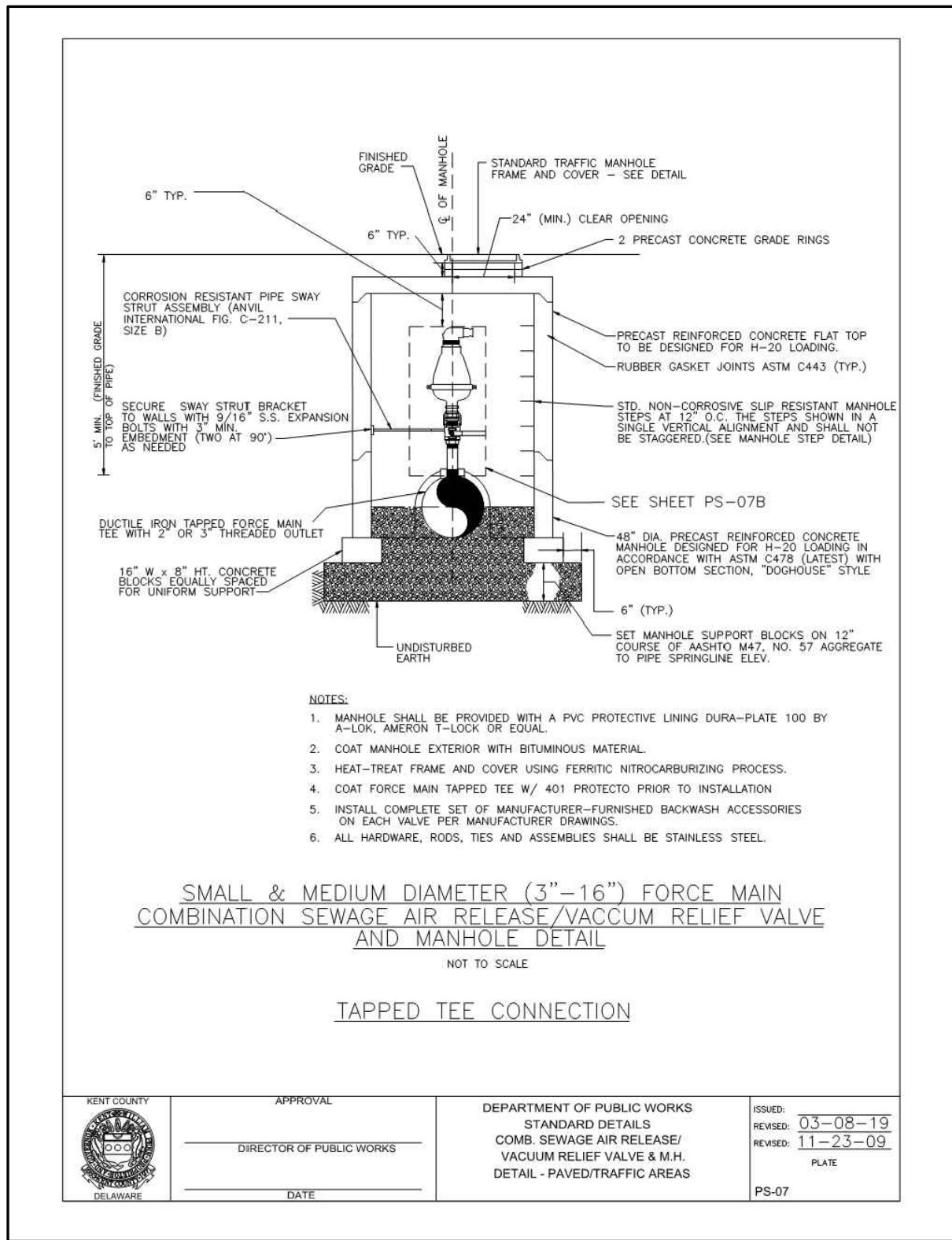
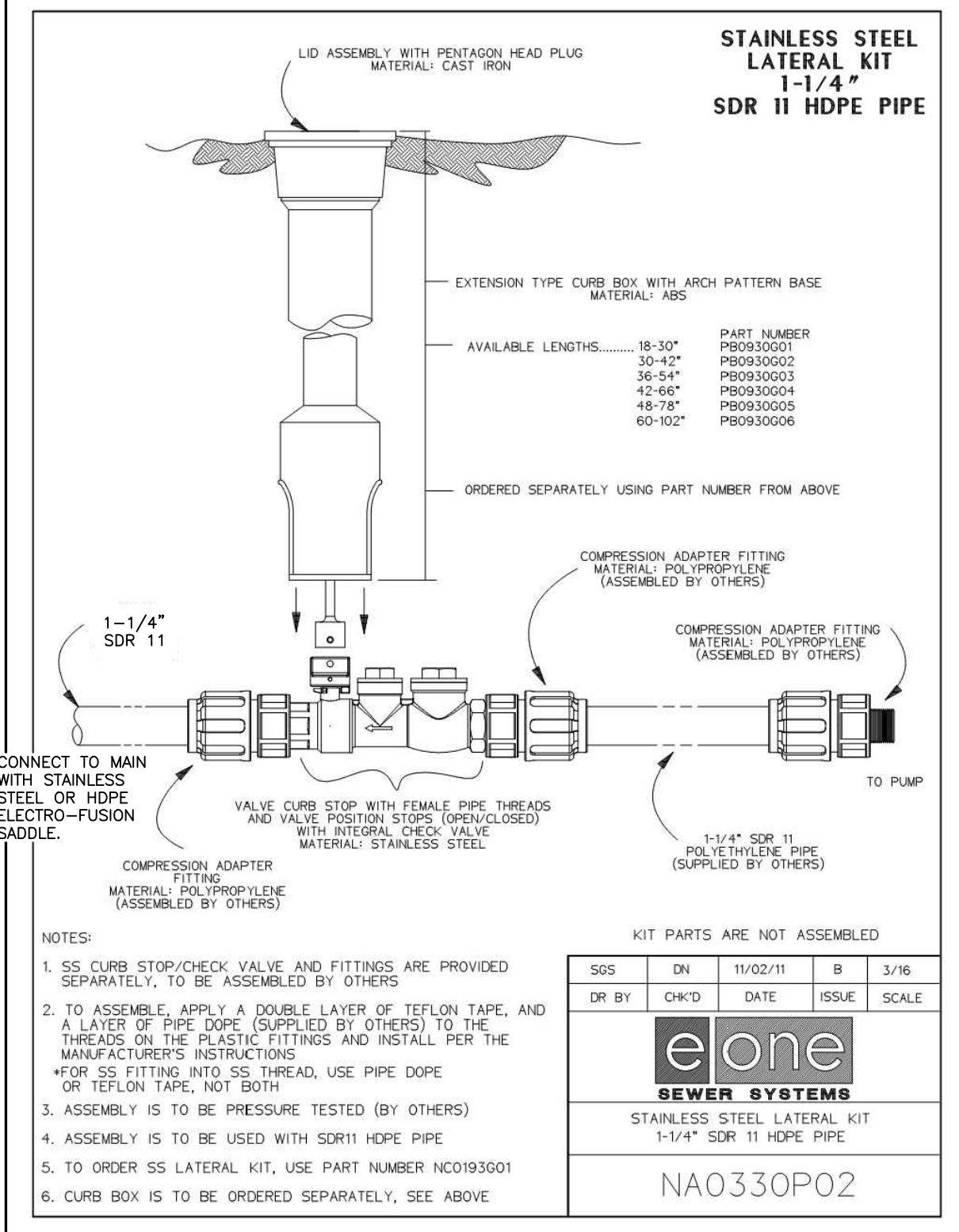
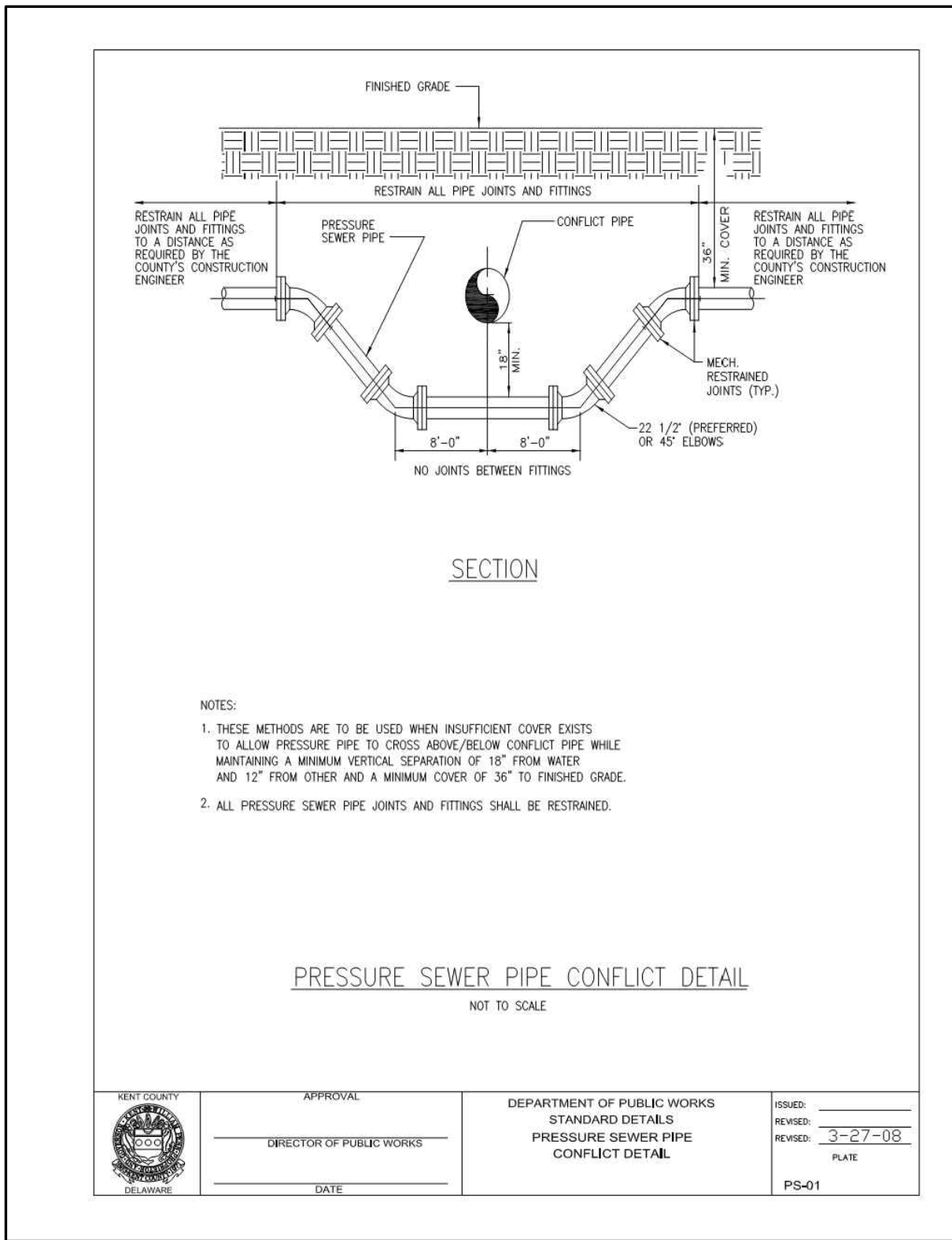
1	8.31.23	PER KENT COUNTY PUBLIC WORKS
2	10.2.23	PER KENT COUNTY PUBLIC WORKS

MARK	DATE	DESCRIPTION
REVISIONS		
PROJECT NO: 25723.00		
DRAWN BY: DJS		
CHKD BY: SHR		
DATE: 3/21/23		

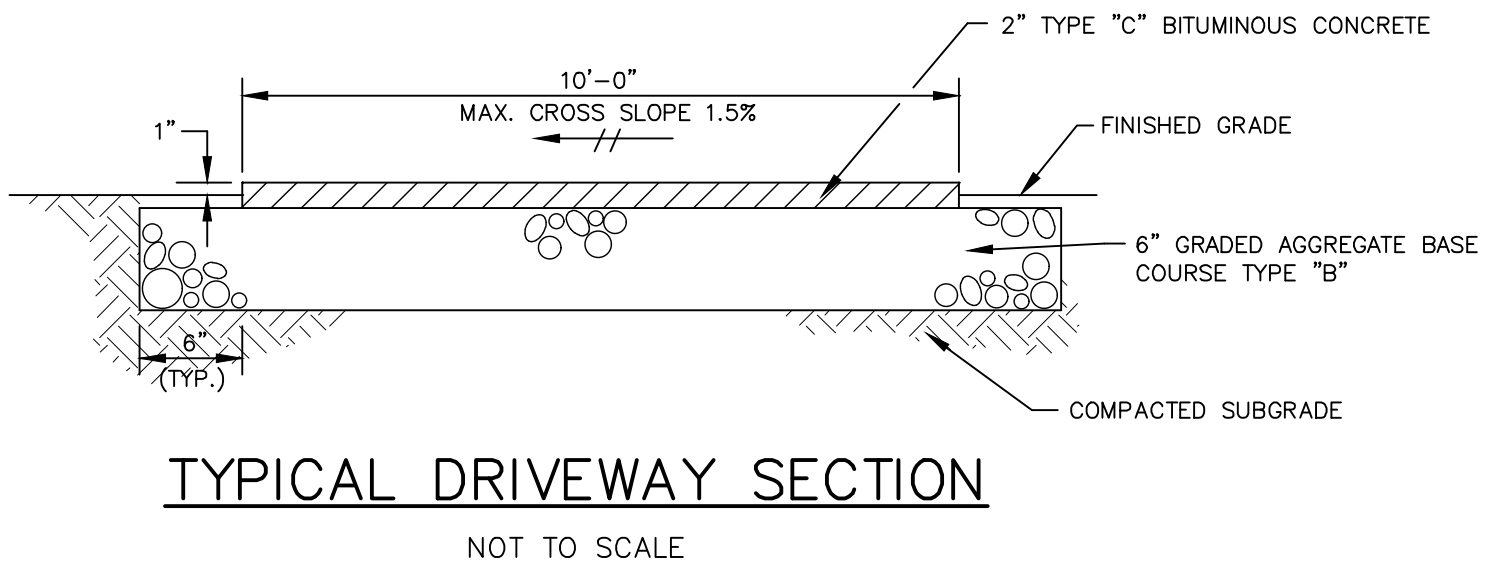
DRAWING NAME  
SANITARY SEWER PLAN  
CONST. NOTES AND DETAILS

DRAWING NUMBER  
CP1.09

SCALE: AS SHOWN  
SHEET 9 OF 10



- GENERAL NOTES**
1. THE CONTRACTOR SHALL PROVIDE SEDIMENT CONTROL MEASURES TO PROTECT STOCKPILE AREAS AND STORAGE AREAS. ALL AREAS USED BY THE CONTRACTOR FOR STAGING OPERATIONS SHALL BE FULLY RESTORED BY THE CONTRACTOR UPON COMPLETION OF THE PROJECT. IF THE STAGING AREA IS PAVED, IT SHALL BE RESTORED TO ITS ORIGINAL CONDITION. IF THE STAGING AREA IS UNPAVED, IT SHALL BE RE-GRADED, TOPSOILED, SEEDED AND MULCHED TO THE SATISFACTION OF THE ENGINEER. ALL COSTS ASSOCIATED WITH RESTORATION OF THE STAGING AREA SHALL BE AT THE CONTRACTOR'S EXPENSE. IF THE ENGINEER DETERMINES THAT A SATISFACTORY STAND OF GRASS DOES NOT EXIST AT THE TIME OF FINAL INSPECTION, ALL COSTS ASSOCIATED WITH RE-ESTABLISHING A SATISFACTORY STAND OF GRASS SHALL BE AT THE CONTRACTOR'S EXPENSE.
  2. EQUIPMENT AND/OR STOCKPILE MATERIAL SHALL NOT BE STORED IN THE DRIPLINE AREA OF ANY TREE.
  3. THE CONTRACTOR SHALL CONTACT KENT COUNTY DEPARTMENT OF PUBLIC WORKS AT 302-744-2430 AT LEAST 48 HOURS IN ADVANCE OF STARTING CONSTRUCTION.
  4. THE CONTRACTOR SHALL CONTACT MISS UTILITY OF DELMARVA AT 1-800-282-8555 FOR UTILITY LOCATIONS WITHIN AND SURROUNDING CONSTRUCTION AREA NOT LESS THAN 3 DAYS BEFORE PERFORMING ANY EXCAVATION.
  5. THE CONTRACTOR SHALL PROVIDE TEMPORARY SEED AND MULCH FOR ALL AREAS WHERE SOIL IS EXPOSED AND SILT FENCE IS NOT SPECIFIED, BY THE CLOSE OF EACH BUSINESS DAY.
  6. THE CONTRACTOR SHALL MAINTAIN PUBLIC ROADS AND STREETS IN A BROOM SWEEP CONDITION AT ALL TIMES.
  7. PIPE JOINTS TO BE RESTRAINED ARE SHOWN ON THE DRAWINGS.
  8. THE CONTRACTOR SHALL USE ONLY NEW MATERIALS, PARTS, AND PRODUCTS. ALL MATERIALS SHALL BE STORED SO AS TO ASSURE THE PRESERVATION OF THEIR QUALITY AND FITNESS FOR THE INTENDED WORK.
  9. MAINTENANCE OF TRAFFIC - ALL WORK SHALL BE PERFORMED IN A MANNER THAT WILL ENSURE THE LEAST PRACTICABLE OBSTRUCTION TO TRAFFIC CONSISTENT WITH SAFETY AND SHALL COMPLY WITH THE DEPARTMENT MANUAL ENTITLED "TRAFFIC CONTROLS FOR STREETS AND HIGHWAY CONSTRUCTION, MAINTENANCE, UTILITY AND EMERGENCY OPERATIONS". THE MOST CURRENT VERSION OF THIS MANUAL IN EFFECT AT THE TIME OF CONSTRUCTION SHALL BE USED. HEREINAFTER, THIS MANUAL SHALL BE REFERRED TO AS THE "TRAFFIC CONTROL MANUAL". THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR APPROVAL BY THE ENGINEER BEFORE THE START OF THE PROJECT.
  10. ALL UTILITIES PLOTTED ON THE DRAWINGS ARE FROM THE BEST AVAILABLE INFORMATION. THE CONTRACTOR, PRIOR TO LAYING A RUN OF PIPE OR OTHER INVOLVED CONSTRUCTION, SHALL EXCAVATE WITHIN THE ALIGNMENT AT POINTS OF POSSIBLE CONFLICT TO DETERMINE IF A CONFLICT EXISTS. ANY CONFLICTS SHALL BE COORDINATED BY THE CONTRACTOR WITH THE ENGINEER AND THE UTILITY INVOLVED. THE ENGINEER SHALL DETERMINE THE SOLUTION, EXCAVATING, BACKFILLING AND RESTORATION OF THE TEST HOLES AS REQUIRED FOR UTILITY INVESTIGATIONS SHALL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE UTILITIES AS SHOWN ON THE PLANS.
  11. ALL CONSTRUCTION SHALL BE PERFORMED TO THE SATISFACTION OF THE ENGINEER, KENT COUNTY DEPARTMENT OF PUBLIC WORKS (DPW), DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT) AND ALL RESPECTIVE UTILITY OWNER/S IN ACCORDANCE WITH ALL APPLICABLE CONTRACT DRAWINGS AND SPECIFICATIONS.
  12. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION. THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR SAFETY AND PROTECTION.
  13. THE CONTRACTOR SHALL INSTALL THE PROPOSED SANITARY SEWER AND FORCE MAINS WITH A MINIMUM OF 3 FT. OF CLEARANCE FROM ALL OTHER EXISTING AND PROPOSED UTILITIES. THE CONTRACTOR SHALL MAINTAIN A MINIMUM HORIZONTAL CLEARANCE OF 10 FT. BETWEEN WATER MAINS AND SANITARY SEWERS (BOTH EXISTING AND PROPOSED MAINS). IN CASES WHERE THIS MINIMUM HORIZONTAL CLEARANCE IS NOT SHOWN OR FEASIBLE, THE CONTRACTOR MAY INSTALL THE PROPOSED SANITARY SEWER LESS THAN 10 FT. FROM EXISTING WATER LINES, PROVIDED ALL EXISTING WATER MAINS REMAIN ON AN UNDISTURBED EARTH SHELVE IN A SEPARATE TRENCH FROM THE PROPOSED SANITARY SEWER MAINS AND THERE IS AT LEAST 18 INCHES OF VERTICAL CLEARANCE WITH THE WATER MAIN HIGHER THAN THE SEWER. IF VERTICAL CLEARANCE BETWEEN PROPOSED SANITARY SEWER AND EXISTING WATER MAINS IS LESS THAN 18 INCHES, THE CONTRACTOR SHALL CONCRETE ENCASE THE SANITARY SEWER PIPING A MINIMUM OF 10 FT. ON EACH SIDE OF THE WATER MAIN CROSSING OR 10 FT. BEYOND THE LIMITS WHERE VERTICAL CLEARANCE IS NOT MAINTAINED.
  14. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL MATERIALS FOR APPROVAL TO THE OWNER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL MATERIALS ORDERED AND INSTALLED PRIOR TO THE OWNER'S REVIEW AND ACCEPTANCE WILL BE AT THE CONTRACTOR'S RISK.
  15. THE CONTRACTOR SHALL OPEN ONLY THAT SECTION OF TRENCH OR ACCESS PITS WHICH CAN BE BACKFILLED AND STABILIZED AT THE END OF EACH WORKING DAY. STEEL PLATES SHALL BE USED ON ANY TRENCH OR ACCESS PITS WHICH MUST REMAIN OPEN OVERNIGHT. THIS REQUIREMENT DOES NOT APPLY TO AREAS COMPLETELY CLOSED AND SECURE FROM VEHICULAR OR PEDESTRIAN TRAFFIC.
  16. SANITARY SEWER PIPE AND FITTINGS SHALL BE TYPE PSM, POLYVINYL CHLORIDE (PVC) MATERIAL WITH A MINIMUM CELL CLASSIFICATION OF 12454B AND COMPLYING WITH ASTM D1784; INSIDE NOMINAL DIAMETER AS INDICATED ON THE DRAWINGS; BELL AND SPIGOT STYLE RUBBER RING SEALED ELASTOMERIC LOCKED-IN GASKET JOINT COMPLYING WITH ASTM F477.
  17. SANITARY SEWER PIPE AND FITTINGS - 4 INCHES THROUGH 15 INCHES: ASTM D3034 AND F1336 WITH A MINIMUM WALL THICKNESS OF SDR 35. IF THE PIPE COVER EXCEEDS 15 FEET MIN. OF PVC SDR 26 SHALL BE USED.
  18. SADDLES SHALL BE PVC CORRECTLY CONTOURED FOR OUTSIDE DIAMETER OF PIPE AND INCORPORATING RING GASKET BELL OUTLET.
  19. PIPE PLUGS SHALL BE DESIGNED FOR PERMANENT INSTALLATION AND SHALL BE REMOVABLE. OBTAIN PLUGS FOR VARIOUS TYPES OF PIPE USED FROM THE RESPECTIVE PIPE MANUFACTURER.
  20. ALL PVC SANITARY SEWER AND FORCE MAINS SHALL BE MARKED WITH LOCATOR TAPE, LABELED "SANITARY SEWER", INSTALLED 18" ABOVE THE PIPE.
  21. FINAL APPROVED SET OF PLANS AND SPECIFICATIONS SHALL BE MAINTAINED ON THE JOB SITE. FAILURE TO COMPLY WITH THIS PROVISION SHALL BE CONSIDERED CAUSE TO STOP THE WORK.
  22. THE CONTRACTOR SHALL MAINTAIN ONE COMPLETE SET OF CONTRACT DRAWINGS ON WHICH HE SHALL NOTE, IN RED, THE ALIGNMENTS AND INVERTS OF ALL UNDERGROUND UTILITIES ALL AS INSTALLED OR ENCOUNTERED DURING THE PROSECUTION OF THE WORK. ALL DISCREPANCIES BETWEEN THE PLAN LOCATIONS AND ELEVATIONS OF BOTH THE EXISTING AND PROPOSED UTILITIES SHALL BE SHOWN ON THE AS-BUILT DRAWINGS TO BE MAINTAINED BY THE CONTRACTOR IN THE FIELD.
  23. ROUTINE PERIODIC INSPECTIONS DURING CONSTRUCTION MAY BE PROVIDED BY KENT COUNTY. THESE INSPECTIONS DO NOT RELIEVE THE CONTRACTOR FROM HIS OBLIGATION AND RESPONSIBILITY FOR CONSTRUCTING A SANITARY SEWER SYSTEM IN STRICT ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE OWNER.
  24. AFTER TESTING IS COMPLETE AND ALL COMPONENTS OF THE SANITARY SEWER SYSTEM ARE DEEMED ACCEPTABLE, THE CONTRACTOR SHALL SUBMIT THE AS-BUILT DRAWINGS TO KENT COUNTY. ANY DISCREPANCIES NOTED DURING THE FINAL INSPECTION SHALL BE CORRECTED BY THE CONTRACTOR WITHIN 30 DAYS.
  25. THE PROPERTY AND RIGHT OF WAY LINES SHOWN ON THESE DRAWINGS ARE APPROXIMATE, AND ARE NOT BASED ON METES AND BOUNDS FIELD RUN SURVEYS OR PROPERTY RECORDS.
  26. PVC PRESSURE SEWER PIPE 12" AND SMALLER NOMINAL PIPE SIZE DIAMETER SHALL CONFORM TO ASTM D2241, PVC 1120 (12454-B); SDR 21.
  27. ALL PRESSURE SEWER PIPE JOINTS AND FITTING JOINTS SHALL BE RESTRAINED.
  28. CONTRACTOR SHALL AT ALL TIMES MAINTAIN A SAFE AND DRY EXCAVATION. AT A MINIMUM THAT INCLUDES SHEETING AND SHORING FOR TRENCHES IN ACCORDANCE WITH OSHA REGULATIONS AND SUFFICIENT DEWATERING FOR A DRY SUBGRADE.



- EXISTING UNDERGROUND UTILITIES COORDINATION NOTES:**
1. THE LOCATION OF UNDERGROUND UTILITIES AS INDICATED ON PLANS HAS BEEN OBTAINED FROM EXISTING RECORDS. NEITHER THE OWNER OR THE ARCHITECT/ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION SHOWN. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED THAT THE LOCATIONS, SIZE AND TYPE OF MATERIALS OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED DURING CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH UTILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE OWNER OF HIS OPERATIONAL PLANS. IN THE EVENT OF AN UNEXPECTED UTILITY INTERFERENCE DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER. ANY SUCH MAINS AND/OR SERVICES DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED IMMEDIATELY AT HIS EXPENSE.
  2. PRIOR TO PERFORMING ANY EXCAVATION GREATER THAN 6 INCHES, THE CONTRACTOR SHALL COORDINATE WITH KENT COUNTY DEPARTMENT OF PUBLIC WORKS AND ALL PRIVATE UTILITY COMPANIES TO DETERMINE THE LOCATION OF UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH ALL ORGANIZATIONS THAT CONTROL EXISTING UNDERGROUND UTILITIES IN THE CONSTRUCTION AREA OR WOULD BE AFFECTED BY CONSTRUCTION WORK AROUND THE EXISTING UTILITIES.
  3. THE CONTRACTOR SHALL NOT START EXCAVATION UNTIL ALL UTILITY LINE LOCATIONS HAVE BEEN STAKED OR OTHERWISE CLEARLY MARKED AND DOCUMENTATION FURNISHED TO THE OWNER. ALL MARKINGS SHALL BE CONSIDERED APPROXIMATE, AND UTILITIES OTHER THAN THOSE SHOWN SHALL BE CONSIDERED TO EXIST.
  4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEFINITE LOCATION OF EACH UTILITY WITHIN THE WORK AREA. CARE SHOULD BE EXERCISED DURING EXCAVATION WORK TO AVOID DAMAGING OR DISRUPTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING (AT CONTRACTOR'S EXPENSE) DAMAGE TO ANY UTILITY CAUSED BY THE CONTRACTOR'S WORK.
  5. WHERE EXISTING UNDERGROUND UTILITIES OR OTHER CONSTRUCTION ARE EXPECTED TO BE IN PROXIMITY TO PROPOSED CONSTRUCTION, OR WHEN APPROACHING EXISTING UTILITIES OR STRUCTURES FOR CONNECTIONS, THE CONTRACTOR SHALL DIG TEST PITS TO DETERMINE THE EXACT LOCATION AND INVERTS OF THE EXISTING UTILITY TO ALLOW FOR POSSIBLE CHANGES TO THE PROPOSED UTILITY IN LINE AND/OR GRADE. THE CONTRACTOR SHALL ALSO DIG TEST PITS IN THE LOCATION OF THE PROPOSED CONNECTIONS TO EXISTING UTILITIES AND SHALL MAKE ALL MEASUREMENTS NECESSARY TO ENSURE PROPER CONNECTION. ANY NECESSARY CHANGES IN LINE OR GRADE OF WORK CAUSED BY FAILURE TO TAKE SUCH PRECAUTIONS SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
  6. WHEN IT IS NECESSARY TO EXCAVATE NEAR OR INTERFERE WITH ANY SEWER LINE, WATER SERVICES, DRAIN PIPE, CATCH BASIN, CULVERT, OR OTHER STRUCTURES, THE CONTRACTOR SHALL MAINTAIN THE SAME IN WORKING ORDER AND SHALL REPAIR AND MAKE GOOD ANY DAMAGE DONE DURING THE PROGRESS OF THE WORK.
  7. WHERE EXISTING UTILITIES CROSS THE TRENCH EXCAVATION, THEY SHALL BE ADEQUATELY SUPPORTED AND PROTECTED FROM DAMAGE DUE TO CONSTRUCTION. ALL METHODS FOR SUPPORTING AND MAINTAINING THESE UTILITIES SHALL BE SUBJECT TO REVIEW BY OWNER. CARE SHALL BE TAKEN TO ENSURE THAT THE EXISTING UTILITY GRADES AND ALIGNMENT ARE MAINTAINED AND THE PIPE JOINTS ARE NOT DISTURBED. BACKFILL SHALL BE CAREFULLY PLACED AND TAMPED TO PREVENT DAMAGE OR FUTURE SETTLEMENT. ANY DAMAGE OR MISALIGNMENT OF THE UTILITIES DUE TO CONSTRUCTION OR SETTLEMENT SHALL BE REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
  8. ANY UNPROTECTED CABLE (DIRECT BURIED) ENCOUNTERED THAT IS VERIFIED AS NOT ABANDONED IN PLACE SHALL BE PROTECTED. THE UTILITY OWNER MAY DIRECT THE CABLE BE PLACED IN SPLIT DUCT OF APPROPRIATE SIZE AND CONCRETE ENCASED THROUGH THE AREA OF CONSTRUCTION. CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO AVOID HAVING TO CUT AND SPlice DIRECT BURIED CABLE. THE CONTRACTOR SHALL NOTE SPLIT DUCT PORTIONS ON AS-BUILTS.
  9. ALL EXCESS EXCAVATED MATERIALS SHALL BE DISPOSED OF OFF COUNTY/STATE PROPERTY, EXCEPT FOR CONTAMINATED SOILS OR LIQUIDS. ALL CONTAMINATED SOILS AND LIQUIDS SHALL BE TRANSPORTED TO AN APPROVED RECEIVING SITE AS DIRECTED BY THE ENGINEER, FOR FINAL DISPOSITION.
  10. INTERRUPTION OF EXISTING UTILITIES SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND/OR AT THE DIRECTION OF THE UTILITY OWNER'S.

**SANITARY SEWER PLAN**

**CONSTRUCTION NOTES AND DETAILS**

**REESE APARTMENTS**

8093 SOUTH DUPONT HIGHWAY

NORTH MURDERKILL HUNDRED KENT COUNTY

DELAWARE

SCALE: AS SHOWN MARCH 21, 2023

GRAPHIC SCALE (FEET)

50 0 25 50 100 150 200

**SEAL**

STEPHEN H. ROSENFIELD  
REGISTERED PROFESSIONAL ENGINEER  
NO. 10452  
12/18/2023

**VANDEMARK & LYNCH, INC.**

ENGINEERS - PLANNERS - SURVEYORS

4305 MILLER ROAD  
WILMINGTON, DE 19802  
302.764.7635

**ARCHITECTURAL ALLIANCE**

ARCHITECTURE • PLANNING  
INTERIOR DESIGN • GRAPHIC ARTS

**DELAWARE**  
1309 VEALE ROAD  
SUITE 22  
WILMINGTON, DE 19810  
302.478.3777

**PENNSYLVANIA**  
256 EAGLEVIEW BLVD  
SUITE 194  
EXTON, PA 19341  
610.640.9000

**PROJECT NAME**

**THE REESE APARTMENTS**

8093 S. Dupont Hwy,  
Feltton, DE 19943  
Kent County

1	8.31.23	PER KENT COUNTY PUBLIC WORKS
2	10.2.23	PER KENT COUNTY PUBLIC WORKS

**MARK DATE DESCRIPTION**

**REVISIONS**

PROJECT NO: 25723.00  
DRAWN BY: DJS  
CHKD BY: SHR  
DATE: 3/21/23

**DRAWING NAME**

**SANITARY SEWER PLAN**  
CONST. NOTES AND DETAILS

**DRAWING NUMBER**

**CP1.10**

SCALE: AS SHOWN  
SHEET 10 OF 10