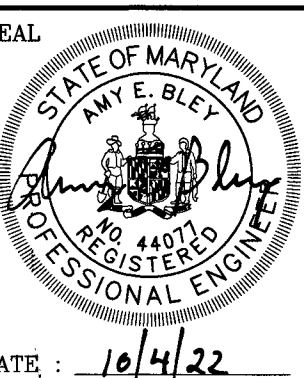


GENERAL NOTES:

- ANY DEVIATIONS TO THE DESIGN ALIGNMENT OR PROFILE OF THE LOW PRESSURE SEWER MAIN MUST BE APPROVED BY THE ENGINEER. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER OF ANY DEVIATION FROM THE PLANS PRIOR TO ANY CHANGES BEING MADE. ANY DEVIATION OF THE PLAN WITHOUT THE WRITTEN AUTHORIZATION FROM THE ENGINEER WILL BE DONE AT THE CONTRACTOR'S RISK AND RESPONSIBILITY.
- UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIAL PROVISIONS, ALL WORK PERFORMED UNDER THIS CONTRACT SHALL BE DONE IN ACCORDANCE WITH BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS AND DETAILS OF CONSTRUCTION, AND THE 2007 EDITION OF THE "BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS STANDARD DETAILS FOR CONSTRUCTION" INCLUDING ALL ADDENDA.
- ALL ELEVATIONS SHOWN ON THE PLANS ARE BASED ON THE BALTIMORE COUNTY DATUM, NAVD 88. ALL COORDINATES SHOWN ON THE PLANS ARE BASED ON THE BALTIMORE COUNTY GRID SYSTEM, NAD 83/11.
- THE EXISTING UTILITIES AND OTHER EXISTING FEATURES THAT ARE SHOWN ON THE PLANS ARE APPROXIMATE, FROM THE BEST AVAILABLE RECORDS AND THE ACCURACY AND THE COMPLETENESS OF THIS INFORMATION IS NOT GUARANTEED. THIS INFORMATION SHALL BE VERIFIED BY THE CONTRACTOR TO HIS/HER SATISFACTION PRIOR TO THE START OF WORK. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO AND DISTURBANCE OF EXISTING UTILITIES. THE CONTRACTOR SHALL CONTACT MISS UTILITY AT LEAST FOUR (4) DAYS IN ADVANCE OF ANY CONSTRUCTION (PH: 1-800-257-7777). ANY DAMAGE INCURRED SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL TEST PIT TO DETERMINE THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES TO BE CROSSED OR CONNECTED TO 60- FEET IN ADVANCE OF INSTALLING THE PIPE. THE COST FOR THIS TEST PITTING WILL BE CONSIDERED INCIDENTAL TO THE LOW PRESSURE SEWER MAIN BID ITEMS.
- THE CONTRACTOR SHALL MAINTAIN TRAFFIC MOVEMENT, TRAFFIC CONTROL, AND EMERGENCY VEHICLE ACCESS ALONG ALL ROADS DURING ALL PHASES OF CONSTRUCTION IN CONFORMANCE WITH THE REQUIREMENTS OF BALTIMORE COUNTY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MINIMIZING THE TRACKING OF DIRT AND MUD ONTO ROADS AND PUBLIC RIGHT-OF-WAY. THE CONTRACTOR SHALL CLEAN UP DIRT AND/OR MUD TRACKED ONTO ROADS IMMEDIATELY.
- THE CONTRACTOR SHALL OPEN ONLY THE SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED IN ONE DAY. THE END OF THE PIPE SHALL BE PLUGGED OR CAPPED AND PLATED OVER AT THE END OF EACH WORK DAY. COLD PATCH IS NOT ALLOWED AND UNLESS OTHERWISE APPROVED, STEEL PLATING SHALL NOT EXCEED 40 FEET.
- WHEN EXCAVATING FOR UTILITIES, ALL SPOIL MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
- THE COST OF A NEW CHANNEL OR MODIFICATION OF AN EXISTING CHANNEL IS CONSIDERED INCIDENTAL TO THE UNIT BID PRICE FOR THE PROPOSED LOW PRESSURE SEWER PIPE.
- WHEN CONNECTING TO A MANHOLE, THE MANHOLE MUST BE CORE DRILLED AND "A-LOCK" CONNECTOR, OR APPROVED EQUAL, MUST BE USED. ALL COSTS TO BE INCLUDED IN THE UNIT BID PRICE FOR LPS CONNECTION TO EXISTING MANHOLE.
- TREES, SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT POSSIBLE. CONTRACTOR TO REMOVE STUMPS AND ROOTS OF ANY TREE OR SHRUB THAT NEEDS REMOVAL. ANY EXISTING STUMPS WITHIN THE LIMIT OF DISTURBANCE WILL ALSO BE REMOVED. ALL COSTS FOR REMOVAL OF TREES, SHRUBS, STUMPS, ETC., WILL BE INCLUDED IN THE LUMP SUM PRICE FOR "CLEARING AND GRUBBING."
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS NOT TO DAMAGE THE EXISTING SEPTIC SYSTEMS FOR ANY HOME WHICH IS TO RECEIVE A GRINDER PUMP. THESE SEPTIC SYSTEMS MUST REMAIN OPERATIONAL UNTIL THE PROPOSED SEWER SYSTEM IS OPERATIONAL. ALL COSTS TO LOCATE, AND PROTECT SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIR COSTS TO THE EXISTING SEPTIC SYSTEM DAMAGED DUE TO CONTRACTOR'S NEGLIGENCE.
- IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS/HER RESPONSIBILITY TO COMPLETE SUCH WORK.
- ALL STORM DRAIN APPURTENANCES, DITCHES, ETC., SHALL REMAIN FUNCTIONAL DURING CONSTRUCTION AND SHALL BE PROTECTED BY THE CONTRACTOR FROM SEDIMENT RUNOFF. EXCAVATED MATERIAL SHALL NOT BE PLACED IN OR OBSTRUCT DRAINAGE DITCHES, DITCHES AND OTHER STORM DRAIN FACILITIES SHALL BE RETURNED TO ORIGINAL CONDITION FOLLOWING CONSTRUCTION. DURING TRENCH DEWATERING OPERATIONS NO WATER SHALL BE DISCHARGED DIRECTLY ACROSS THE GROUND OR INTO AN EXISTING BODY OF WATER OR STREAM WITHOUT FLOWING THROUGH AN APPROVED PORTABLE SEDIMENT TANK.
- THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS WHILE EXCAVATING NEAR OVERHEAD LINES, POWER AND TELEPHONE UTILITY POLES.
- THE COST FOR CONSTRUCTING UNDER AND/OR OVER ANY EXISTING UTILITIES AND UTILITY HOUSE SERVICE CONNECTIONS INCLUDING GAS, ELECTRIC, CABLE, STORM DRAINS, WATER, AND SEWER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE LOW PRESSURE SEWER MAIN. THE CONTRACTOR IS TO SUPPORT BRACE AND PROTECT SUCH UTILITIES.
- "FULL TRENCH COMPACTION" IS REQUIRED FOR ALL TRENCHES LOCATED WITHIN THE EXISTING ROAD AND/OR THE COUNTRY RIGHT-OF-WAY.
- SUBMITTALS ON MATERIALS FOR THIS PROJECT SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE BEGINNING OF CONSTRUCTION.
- CONTRACTOR SHALL HAVE ALL APPLICABLE PERMITS, A SET OF SPECIFICATIONS AND CONTRACT DOCUMENTS, AND A COMPLETE SET OF DRAWINGS ON SITE AT ALL TIMES.
- THE CONTRACTOR SHALL CONTACT BALTIMORE COUNTY BUREAU OF UTILITIES AT 410-887-7415 SEVENTY TWO (72) HOURS PRIOR TO STARTING THE PROJECT.
- THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT LEAST 72 HOURS PRIOR TO COMMENCING THE WORK.
- UNDERGROUND UTILITIES (ELECTRIC, WATER, ETC.) MAY OR MAY NOT EXIST ON THE HOMEOWNERS PROPERTY. THE LOCATION OF THESE SERVICES ARE UNKNOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGING THESE SERVICES. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES TO HIS/HER OWN SATISFACTION PRIOR TO STARTING ANY WORK. IT IS RECOMMENDED FOR THE CONTRACTOR TO "METROTECH" ALL EXISTING UTILITIES TO VERIFY MARKINGS PROVIDED BY THE UTILITY LOCATING COMPANY.
- THE CONTRACTOR SHALL DOCUMENT PRE-CONSTRUCTION CONDITION OF THE ENTIRE PROJECT THROUGH PHOTOGRAPHICAL/VIDEO MEANS. THE LEVEL OF DOCUMENTATION SHALL BE AT THE CONTRACTOR'S DISCRETION. THIS DOCUMENTATION IS TO SATISFY CLAIMS AGAINST THE CONTRACTOR THAT HOMEOWNERS MAY PRESENT DURING CONSTRUCTION. THERE SHALL BE NO SEPARATE PAYMENT FOR THIS WORK, THE COST SHALL BE CONSIDERED INCIDENTAL TO THE LOW PRESSURE SEWER MAIN BID ITEMS.
- SEWAGE FLOW IN EXISTING SEWER IS TO BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. AT NO TIME WILL IT BE PERMITTED FOR SEWAGE TO BE DISCHARGED ONTO THE GROUND OR INTO ANY STREAMS OR CONVEYING STORM DRAIN STRUCTURES. CONTRACTOR SHALL PROVIDE BY-PASS SEWER PUMPING AS NEEDED. NO SEPARATE PAYMENT WILL BE MADE FOR BYPASS SYSTEM, IT WILL BE CONSIDERED INCIDENTAL TO PRESSURE SEWER MAIN BID ITEM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR AVOIDING THE SPILLAGE OF RAW SEWAGE OR OTHER SUBSTANCES WHICH WOULD BE CONSIDERED DANGEROUS TO THE ENVIRONMENT DURING HIS/HER OPERATIONS. THE CONTRACTOR SHALL FURNISH ALL NECESSARY EQUIPMENT AND MATERIALS TO PREVENT SAID SPILLAGE.
- IN THE EVENT SEWAGE IS DISCHARGED ONTO THE GROUND OR INTO ANY STREAMS IN CONNECTION WITH THIS CONTRACT ANY PENALTIES INCURRED BY THE COUNTY, ALONG WITH ANY AND ALL OTHER DAMAGES, COSTS AND EXPENSES OF THE COUNTY, SHALL BE THE LIABILITY AND OBLIGATION OF THE CONTRACTOR UNDER THIS CONTRACT.
- ANY SEWER SPILLS SHALL BE REPORTED WITHIN 24 HOURS TO BALTIMORE COUNTY BUREAU OF UTILITIES AT 410-887-7415 AND TO MARYLAND DEPARTMENT OF THE ENVIRONMENT AT 410-537-3510.
- SEWER ALIGNMENT SHALL BE REGRADED TO ORIGINAL CONTOURS AND STABILIZED.
- SILT FENCE TO BE PLACED AS DIRECTED BY THE ENGINEER IN THE FIELD. THE INTENT OF THIS PLAN IS THAT SILT FENCE BE PLACED DOWNGRADE OF ALL DISTURBED AREA OUTSIDE OF PAVING.
- ALL WORK ON THIS PROJECT SHALL BE DONE IN ACCORDANCE WITH BALTIMORE COUNTY SOIL CONSERVATION DISTRICT PERMIT #200-COUNTY-21.
- CONTRACTOR SHALL MAINTAIN A 1'-6" MINIMUM VERTICAL CLEARANCE BETWEEN WATER AND SEWER LINES WITH THE WATER LINE LOCATED ABOVE THE SANITARY SEWER LINE. WHERE THIS IS NOT POSSIBLE, THE WATER LINE SHALL BE CONCRETE-ENCASED FOR A MINIMUM DISTANCE OF 5'-0" ON BOTH SIDES OF THE CROSSING.
- ALL PROPERTY MARKERS SHOWN ON THE DRAWINGS AND DISTURBED BY THE CONTRACTOR MUST BE RESET IN THE ORIGINAL LOCATION BY THE CONTRACTOR AFTER CONSTRUCTION IS COMPLETE. ALL COSTS ASSOCIATED WITH RESETTING PROPERTY MARKERS SHALL BE INCLUDED IN OTHER BID ITEM PRICES.
- THE PROPOSED ELECTRICAL CABLES/WIRES AS SHOWN ON THE PLANS REPRESENTS BEST GUESS LOCATION. THE EXACT LOCATION OF THE ELECTRIC LINES FROM THE EXISTING BGE METER TO THE GRINDER PUMP STATION WILL BE DETERMINED BY THE CONTRACTOR AND THE PROPERTY OWNER. THE EXACT LOCATION OF THESE ELECTRIC LINES MUST BE ACCURATELY LOCATED AND SHOWN ON THE "AS-BUILT" DRAWINGS BY THE CONTRACTOR. ALL COSTS TO FURNISH AND INSTALL ELECTRIC WIRES/CABLES AND LOCATE THE LINES ON THE "AS-BUILT" DRAWINGS TO BE INCLUDED IN THE UNIT BID PRICE FOR GRINDER PUMP, COMPLETE IN PLACE.

NATURAL GAS AND ELECTRICAL FACILITIES LOCATIONS NOTES:

- BALTIMORE GAS AND ELECTRIC COMPANY'S ("BGE") ELECTRIC AND/OR GAS UTILITIES LOCATED WITHIN THE PROJECT AREA (THE "BGE UTILITY INFORMATION") ARE DEPICTED ON THE PLANS. LOCATIONS, DIMENSIONS, DEPTHS, AND OTHER DETAILS OF ANY SUCH UTILITIES MAY NOT BE AS-BUILT, AND THE INFORMATION SHALL NOT BE RELIED UPON WITHOUT FIELD VERIFICATION. EXCAVATORS MUST EMPLOY SAFE DIGGING BEST PRACTICES WHEN APPROACHING BGE ELECTRIC AND GAS UTILITIES AND COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS, INCLUDING, BUT NOT LIMITED TO, THE "MISS UTILITY LAW."
- NO REPRESENTATIONS, GUARANTEES, OR WARRANTIES, EXPRESS OR IMPLIED, ARE MADE BY BGE AS TO THE QUALITY, COMPLETENESS, OR ACCURACY OF THE BGE UTILITY INFORMATION, AND IN ACCEPTING THIS DOCUMENT, THE RECIPIENT EXPRESSLY ACKNOWLEDGES AND AGREES THAT IT IS NOT RELYING ON THE ACCURACY OF THE SAME.



PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A duly LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NO. 44077, EXPIRATION DATE 06/09/2023.
ENGINEER: AMY E. BLEY
Bureau of Engineering and Construction
111 West Chesapeake Avenue, Rm. 200
Towson, Maryland 21204.
Design Section SEWER
Phone /Fax: (410) 887-3781 /4394

DGN BY: CAY
DWN BY: CAY
CHKD BY: CCB

BUREAU OF ENGINEERING AND CONSTRUCTION
TRAFFIC
HIGHWAYS
STRUCTURES
STORM DRAINS
SEWER

CONTRACT COMPLETION BOX
REVIEWED BY:
DATE REVIEWED:

POSITION SHT
ONE
16N636
17N636
18N636

KEY SHEET
ONE
AEB
10/4/22

DRAWING SCALE
PLAN SCALE: AS SHOWN
PROFILE SCALE: N/A

DPW AND TRANSPORTATION
APPROVED: [Signature]
DATE: 10/12/22

APPROVED BY: [Signature]
DATE: 10/12/2022

CHIEF
DATE: 10/12/2022

DATE: 10/12/2022

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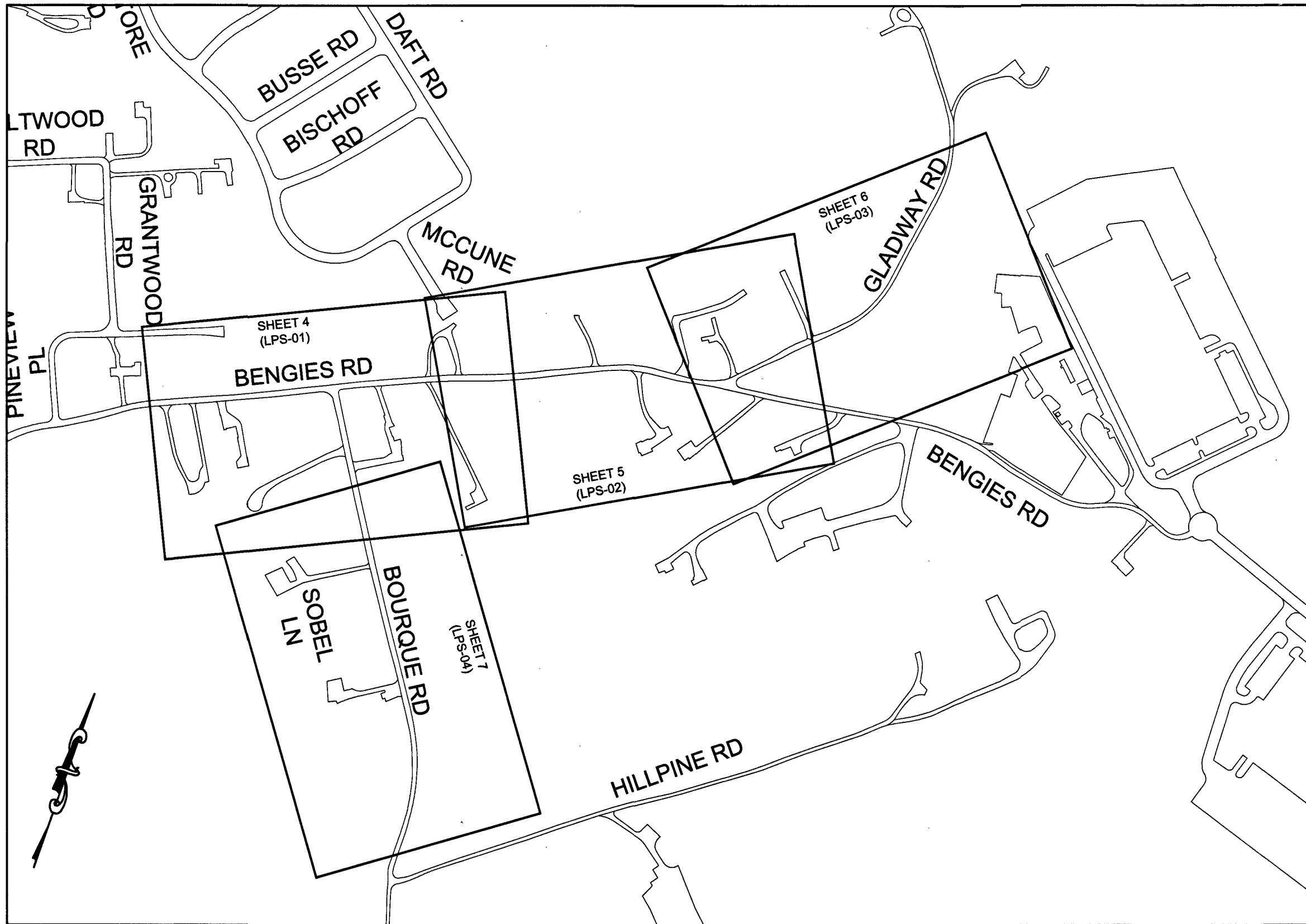
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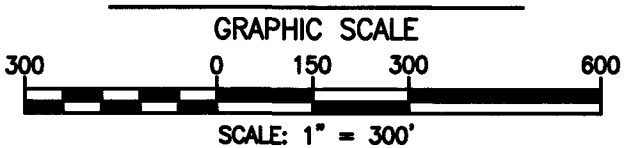
DATE: 10/12/2022

DATE: 10/12/2022

BALTIMORE COUNTY MARYLAND
DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION
BUREAU OF ENGINEERING AND CONSTRUCTION
SANITARY SEWER SYSTEM EXTENSION-HEALTH PROJECT
BENGIES ROAD, BOURQUE ROAD AND GLADWAY RD
LOW PRESSURE SEWER (LPS)
BALTIMORE COUNTY J.O. 231-201-0002-1243
CONTRACT No. 22003-SX0

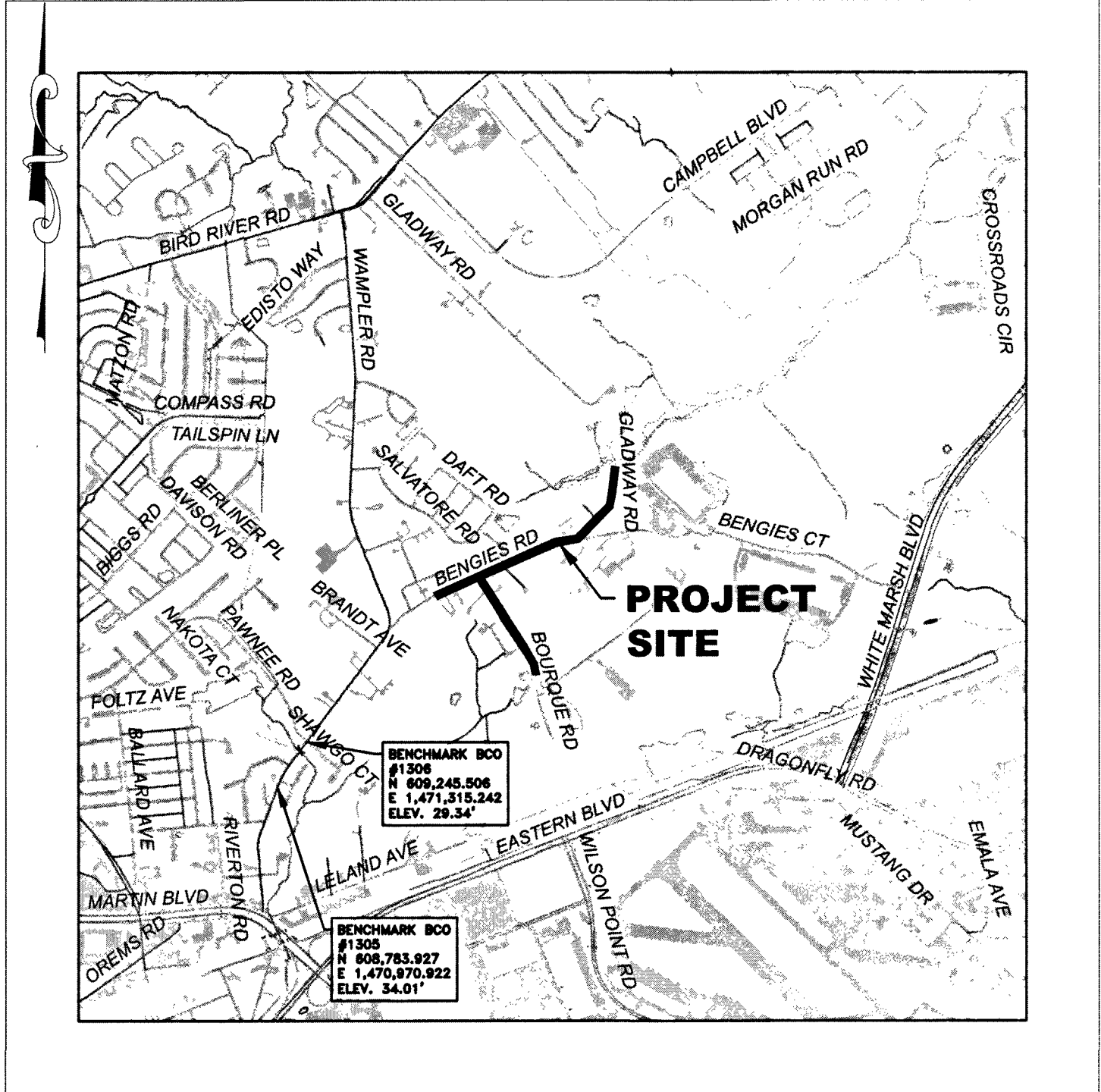


LOCATION MAP

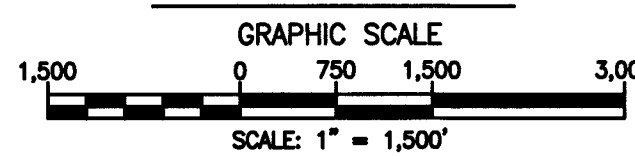


NUMBER OF HOUSE CONNECTIONS = 26
26 SIMPLEX GRINDER PUMPS

ALL 26 UNITS ARE COUNTY MAINTAINED GRINDER PUMPS



VICINITY MAP



LIST OF DRAWINGS

SHT. NO.	SHT. DES.	DWG. NO.	DESCRIPTION
01	G-01	2021-2726	TITLE SHEET
02	G-02	2021-2727	SURVEY CONTROL, STAKEOUT AND LEGEND
03	G-03	2021-2728	OVERVIEW PLAN OF PROPERTIES SERVED BY IMPROVEMENT
04	LPS-01	2021-2729	PLAN - BENGIES RD STA. 0+00 TO STA. 6+50 & BOURQUE RD STA. 100+00 TO STA 103+50
05	LPS-02	2021-2730	PLAN - BENGIES RD & GLADWAY RD STA. 6+50 TO STA. 14+50
06	LPS-03	2021-2731	PLAN - BENGIES RD & GLADWAY RD STA. 14+50 TO STA. 18+00
07	LPS-04	2021-2732	PLAN - BOURQUE RD STA. 103+50 TO STA. 109+40
08	LPS-05	2021-2733	PROFILE - BENGIES RD & GLADWAY RD STA. 0+00 TO STA. 16+00
09	LPS-06	2021-2734	PROFILE - BENGIES RD & GLADWAY RD STA. 16+00 TO STA. 18+00
10	LPS-07	2021-2735	PROFILE - BOURQUE RD STA. 103+50 TO STA. 109+40
11	LPS-08	2021-2736	DETAILS
12	LPS-09	2021-2737	DETAILS (CONT.)
13	LPS-10	2021-2738	DETAILS (CONT.)

GRADING NOTES:

- THE PROPOSED GRADING SHOWN ON THIS PLAN MEETS THE REQUIREMENTS SET FORTH BY BALTIMORE COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SUSTAINABILITY AND COMPLIES WITH ARTICLE 33, TITLE 5 OF THE BALTIMORE COUNTY CODE. HOWEVER, DUE TO BUILDING TYPES AND LAYOUT, SOME FIELD ADJUSTMENTS MAY BE REQUIRED. ALL CHANGES MUST COMPLY WITH THE ABOVE MENTIONED REQUIREMENTS.
- ALL SWALES HAVE BEEN DESIGNED BY THE ENGINEER TO CONVEY RUNOFF ACCORDING TO BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS DESIGN STANDARDS.
- THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST BUFFER EASEMENT OR OTHER FOREST RETENTION AREAS, EXCEPT AS PERMITTED BY THE BALTIMORE COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SUSTAINABILITY.

STORMWATER MANAGEMENT NOTE:

- STORMWATER MANAGEMENT HAS BEEN ADDRESSED BY STORMWATER MANAGEMENT VARIANCE DATED 10/14/2021 (EPS TRACKING # 06-21-3567).

OWNER'S/DEVELOPER'S CERTIFICATION - GRADING:

I/WE CERTIFY THAT ALL GRADING ON THIS SITE WILL BE DONE IN ACCORDANCE WITH THE CURRENT GRADING REQUIREMENTS AS SET FORTH BY THE BALTIMORE COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION AND SUSTAINABILITY AND WITH THE REQUIREMENTS SPECIFIED IN ARTICLE 33, TITLE 5 OF THE BALTIMORE COUNTY CODE.

SIGNATURE OF OWNER: [Signature]

DATE: 10/12/22

PRINT NAME: [Signature]

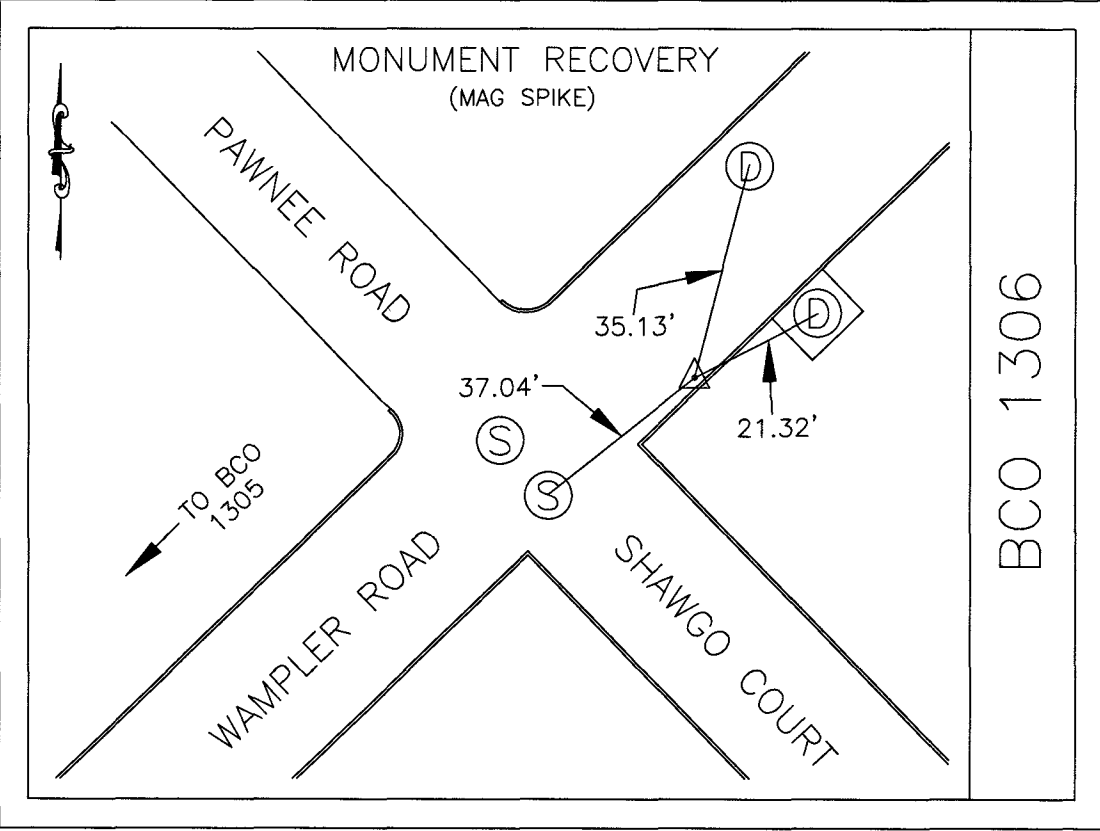
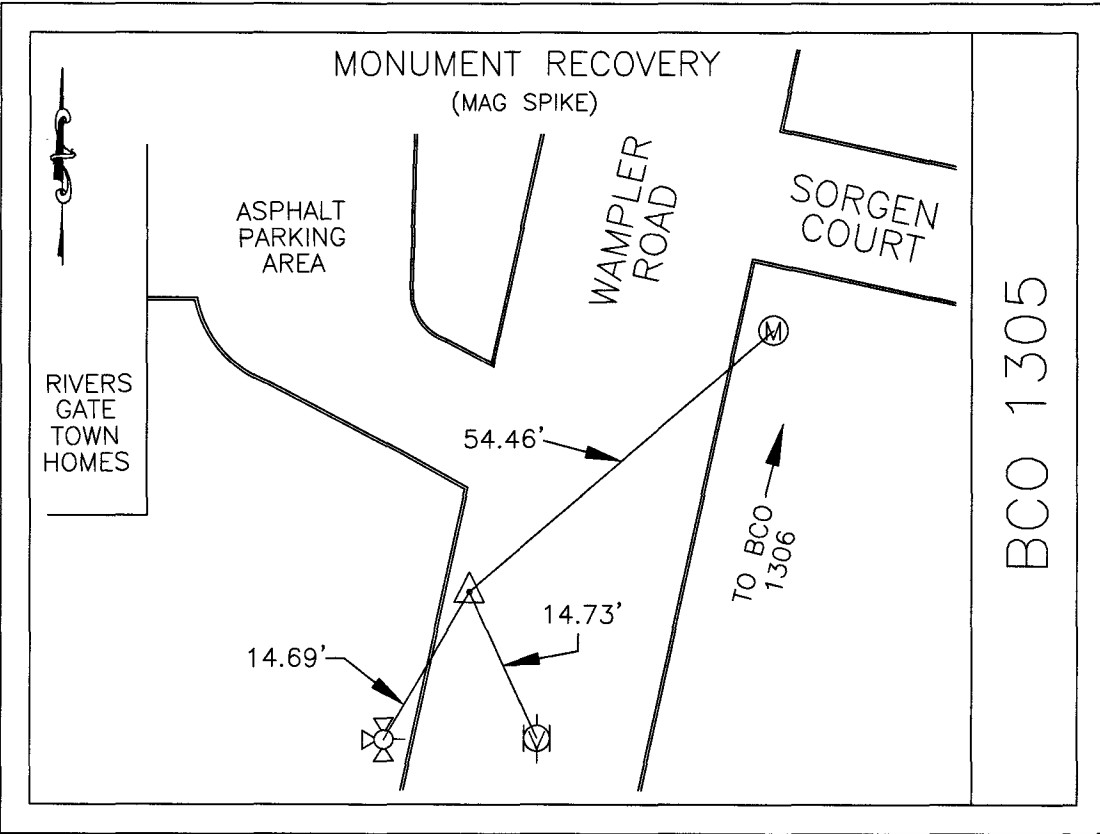
TITLE: Deputy Director DPWT

BALTIMORE COUNTY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
AND SUSTAINABILITY
APPROVED FOR GRADING
[Signature]
DATE: 10-26-22
STORMWATER MANAGEMENT PERMIT
NOT REQUIRED

DESIGN AND DRAWING BASED ON
MARYLAND COORDINATE SYSTEM:
HORIZONTAL - NAD 83/11
VERTICAL - NAVD 88

CONTRACT COMPLETION BOX
CONTRACTOR:
DATE COMPLETED:
INSPECTOR:
PIPE MATERIAL (Pressure Only):
SHEET DESIGNATION: G-01
CONTRACT NUMBER: 22003-SX0
JOB ORDER NUMBER: 231-201-0002-1243
SHEET 01 OF 13
DRAWING NUMBER: 2021-2726
FILE NO.: 1

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
SANITARY SEWER SYSTEM EXTENSION - HEALTH PROJECT
TITLE SHEET
BENGIES ROAD, BOURQUE ROAD AND GLADWAY ROAD - LOW PRESSURE SEWER (LPS)
SUBDIVISION: MIDDLE RIVER
ELECTION DIST. NO.: 15C6



COORDINATES AND ELEVATIONS SHOWN HEREON ARE REFERRED TO THE NORTH AMERICAN DATUM OF 1983 (2011) AND NORTH AMERICAN VERTICAL DATUM OF 1988 AND ARE BASED ON THE FOLLOWING CONTROL STATIONS:

CONTROL	NORTH	EAST	ELEVATION
BCO 1305	N 608,783.927	E 1,470,970.922	34.01'
BCO 1306	N 609,245.506	E 1,471,315.242	29.34'

FIELD SURVEYS WERE PERFORMED IN OCTOBER, 2018

GRINDER UNITS STAKEOUT INFORMATION						
UNIT	ADDRESS	PUMP TYPE	NORTHING	EASTING	GROUND ELEV.	INVERT ELEV.
GP # 01	709 GLADWAY ROAD	SIMPLEX	611,567.22'	1,474,347.04'	57.57±	47.57±
GP # 02	707 GLADWAY ROAD	SIMPLEX	611,523.71'	1,474,301.42'	57.82±	50.82±
GP # 03	714 GLADWAY ROAD	SIMPLEX	611,563.54'	1,474,258.15'	56.53±	46.53±
GP # 04	710 GLADWAY ROAD	SIMPLEX	611,496.57'	1,474,162.31'	54.23±	44.23±
GP # 05	701 GLADWAY ROAD	SIMPLEX	611,396.77'	1,474,176.24'	55.94±	48.94±
GP # 06	938 BENGIES ROAD	SIMPLEX	611,322.14'	1,474,001.34'	57.10±	47.10±
GP # 07	936 BENGIES ROAD	SIMPLEX	611,315.70'	1,473,919.18'	57.23±	50.23±
GP # 08	933 BENGIES ROAD	SIMPLEX	611,272.35'	1,473,963.65'	58.02±	53.02±
GP # 09	931 BENGIES ROAD	SIMPLEX	611,243.64'	1,473,810.35'	60.08±	55.08±
GP # 10	923 BENGIES ROAD	SIMPLEX	611,171.79'	1,473,669.40'	64.37±	54.37±
GP # 11	915 BENGIES ROAD	SIMPLEX	611,124.99'	1,473,560.37'	66.06±	56.06±
GP # 12	911 BENGIES ROAD	SIMPLEX	611,079.78'	1,473,451.74'	65.70±	55.70±
GP # 13	907-A BENGIES ROAD	SIMPLEX	610,844.46'	1,473,461.64'	54.10±	44.10±
GP # 14	905 BENGIES ROAD	SIMPLEX	611,021.12'	1,473,275.49'	65.02±	55.02±
GP # 15	903 BENGIES ROAD	SIMPLEX	610,982.70'	1,473,198.82'	62.47±	52.47±
GP # 16	818 BENGIES ROAD	SIMPLEX	610,925.98'	1,472,965.71'	61.78±	56.78±
GP # 17	901 BENGIES ROAD	SIMPLEX	610,891.33'	1,473,110.42'	58.41±	50.91±
GP # 18	328 BOURQUE ROAD	SIMPLEX	610,805.29'	1,473,081.38'	55.77±	45.77±
GP # 19	322 BOURQUE ROAD	SIMPLEX	610,721.70'	1,473,144.39'	52.87±	47.87±
GP # 20	318 BOURQUE ROAD	SIMPLEX	610,548.03'	1,473,250.43'	49.49±	39.49±
GP # 21	316 BOURQUE ROAD	SIMPLEX	610,533.80'	1,473,259.05'	49.14±	42.14±
GP # 22	310 BOURQUE ROAD	SIMPLEX	610,394.17'	1,473,360.39'	47.23±	40.23±
GP # 23	308 BOURQUE ROAD	SIMPLEX	610,272.53'	1,473,425.29'	45.13±	40.13±
GP # 24	304 BOURQUE ROAD	SIMPLEX	610,253.48'	1,473,456.03'	45.12±	38.12±
GP # 25	302 BOURQUE ROAD	SIMPLEX	610,168.19'	1,473,517.13'	43.40±	38.40±
GP # 26	300 BOURQUE ROAD	SIMPLEX	610,146.04'	1,473,528.03'	42.99±	35.99±

BENGIES ROAD, BOURQUE ROAD AND GLADWAY ROAD CURVE TABLE						
CURVE #	RADIUS	LENGTH	CHORD DIRECTION	START POINT	END POINT	PI COORDINATES
C1	2000.00'	205.30'	N66° 44' 30.6"E	PC STA 4+32.3 (E1,473,156.35, N610,986.26)	PT STA 4+37.6 (E1,473,344.08, N611,067.29)	(E1,473,248.53, N611,031.62)
C2	2400.00'	230.44'	N66° 55' 54.7"E	PC STA 6+74.8 (E1,473,379.79, N611,080.22)	PT STA 9+05.2 (E1,473,591.72, N611,170.48)	(E1,473,487.93, N611,120.26)
C3	300.00'	107.41'	N74° 26' 15.5"E	PC STA 10+86.6 (E1,473,754.96, N611,249.46)	PT STA 11+94.0 (E1,473,857.88, N611,278.12)	(E1,473,803.83, N611,273.10)
C4	600.00'	64.52'	N81° 36' 48.3"E	PC STA 12+76.6 (E1,473,940.12, N611,285.76)	PT STA 13+41.1 (E1,474,003.92, N611,295.16)	(E1,473,972.27, N611,288.74)

PRELIMINARY PRESSURE SEWER - PIPE SIZING AND BRANCH ANALYSIS
BENGIES RD, GLADWAY RD AND BOURQUE RD HEALTH PROJECT
JO 231-201-0002-1243

ZONE NUMBER	CONNECTS TO ZONE	NUMBER OF PUMPS IN ZONE	ACCUM PUMPS IN ZONE	GALSDAY PER PUMP	MAX FLOW PER PUMP (GPM)	MAX SIM OPS	MAX FLOW (GPM)	PIPE SIZE (INCHES)	MAX VELOCITY (FPS)	LENGTH OF MAIN THIS ZONE	FRIC LOSS FACTOR (FT/100 FT)	FRIC LOSS THIS ZONE	ACCUM FRIC LOSS (FEET)	MAX MAIN ELEVATION (FEET)	MINIMUM PUMP ELEVATION	STATIC HEAD (FEET)	TOTAL DYNAMIC HEAD (FT)
1	2	3	3	315	12.49	2	24.97	1.5	3.45	200.00	2.72	5.44	42.88	59.40	46.53	12.87	55.75
2	3	6	9	315	12.64	3	37.77	2	3.34	683.90	1.98	13.55	37.44	59.40	44.59	14.81	52.25
3	5	3	12	315	13.74	4	51.51	2	4.56	329.30	3.52	11.59	23.89	59.40	55.7	3.70	27.59
4	5	1	1	315	13.64	1	13.64	1.5	1.88	266.00	0.89	2.36	14.66	59.40	44.1	15.30	29.96
5	9	2	15	315	14.11	4	52.37	2	4.63	265.20	3.63	9.63	12.30	59.40	52.47	6.93	19.23
6	7	3	3	315	12.79	2	25.57	1.5	3.53	203.60	2.84	5.79	25.62	59.40	35.99	23.41	49.03
7	8	6	9	315	13.20	3	39.19	2	3.47	690.80	2.12	14.65	19.83	59.40	39.49	19.91	39.74
8	9	1	10	315	14.36	4	52.77	2	4.67	68.20	3.68	2.51	5.18	59.40	50.91	8.49	13.67
9	9	1	26	315	14.74	5	65.97	3	2.69	316.40	0.84	2.67	2.67	59.40	56.78	2.62	5.29

PRELIMINARY PRESSURE SEWER - ACCUMULATED RETENTION TIME (HR)

ZONE NUMBER	CONNECTS TO ZONE	ACCUM TOTAL OF PUMPS THIS ZONE	PIPE SIZE (INCHES)	GALLONS PER 100 LINEAL FEET	LENGTH OF ZONE	CAPACITY OF ZONE	AVERAGE DAILY FLOW	AVERAGE FLUID CHANGES PER DAY	AVERAGE RETENTION TIME (HR)	ACCUM RETENTION TIME (HR)
1	2	3	1.5	12.07	200.00	24.14	945	39.15	0.61	2.73
2	3	9	2	18.84	683.90	128.86	2,835	22.00	1.09	2.12
3	5	12	2	18.84	329.30	62.05	3,780	60.92	0.39	1.03
4	5	1	1.5	12.07	266.00	32.11	315	9.81	2.45	3.08
5	9	15	2	18.84	265.20	49.97	4,725	94.56	0.25	0.63
6	7	3	1.5	12.07	203.60	24.58	945	38.45	0.62	2.22
7	8	9	2	18.84	690.80	130.16	2,835	21.78	1.10	1.58
8	9	10	2	18.84	68.20	12.85	3,150	245.13	0.10	0.48
9	9	26	3	40.90	316.40	129.39	8,190	63.3	0.38	0.38

THIS SPREADSHEET WAS CALCULATED USING PIPE DIAMETERS FOR: SDR21PVC
FRICTION LOSS CALCULATIONS WERE BASED ON A CONSTANT FOR INSIDE ROUGHNESS "C" OF: 150
NOTE: THIS ANALYSIS IS VALID ONLY WITH THE USE OF PROGRESSIVE CAVITY TYPE GRINDER PUMPS AS MANUFACTURED BY ENVIRONMENT ONE.

PRESSURE ZONE INFORMATION			
ZONE	ROAD	START STATION	START STATION
# 1	GLADWAY ROAD	18+00.0	16+00.0
# 2	BENGIES ROAD AND GLADWAY ROAD	16+00.0	9+15.0
# 3	BENGIES ROAD	9+15.0	5+85.0
# 4	907 A DRIVEWAY	*GP#13	*2+66 (5+81.6)
# 5	BENGIES ROAD	5+85.0	3+10.0
# 6	BOURQUE ROAD	109+40.0	107+65.0
# 7	BOURQUE ROAD	107+65.0	100+70.0
# 8	BOURQUE ROAD	100+70.0	100+00.0
# 9	BENGIES ROAD	3+10.0	0+00.0

FITTING AND APPURTENANCE TABLE			
DESCRIPTION	STATION	NORTHING	EASTING
LPS CONNECTION TO EX MH #4200	BENGIES AND GLADWAY LPS - 0+00.0	610,801.84	1,472,765.43
SHC TEE (GRINDER 16)	BENGIES AND GLADWAY LPS - 2+33.9	610,900.38	1,472,977.61
2"x3" REDUCER	BENGIES AND GLADWAY LPS - 3+10.0	610,932.42	1,473,046.49
INTERSECTION COMBINATION FLUSHING AND AIR/VACUUM RELEASE VALVE AND VAULT (STD DETAIL PLATE S-27)	BOURQUE RD - 100+00.0	610,935.12	1,473,052.41
SHC TEE (GRINDER 15)	BENGIES AND GLADWAY LPS - 4+69.2	611,002.27	1,473,189.63
SHC TEE (GRINDER 14)	BENGIES AND GLADWAY LPS - 5+53.3	611,037.16	1,473,268.36
SHC TEE (GRINDER 13)	BENGIES AND GLADWAY LPS - 5+81.6	611,047.12	1,473,292.65
COMBINATION FLUSHING CONNECTION AND AIR/VACUUM RELEASE VALVE AND VAULT (STD DETAIL PLATE S-19)	BENGIES AND GLADWAY LPS - 6+70.0	611,078.56	1,473,375.30
SHC TEE (GRINDER 12)	BENGIES AND GLADWAY LPS - 7+41.4	611,104.21	1,473,441.91
SHC TEE (GRINDER 11)	BENGIES AND GLADWAY LPS - 8+43.9	611,144.49	1,473,536.22
SHC TEE (GRINDER 10)	BENGIES AND GLADWAY LPS - 9+75.7	611,201.18	1,473,655.18
SHC TEE (GRINDER 09)	BENGIES AND GLADWAY LPS - 11+38.2	611,267.85	1,473,803.17
SHC TEE (GRINDER 08)	BENGIES AND GLADWAY LPS - 12+96.5	611,288.18	1,473,961.89
SHC TEE (GRINDER 07)	BENGIES AND GLADWAY LPS - 12+66.4	611,284.83	1,473,930.01
SHC TEE (GRINDER 06)	BENGIES AND GLADWAY LPS - 13+50.3	611,297.00	1,474,012.95
HZ 11-1/4 DEG BEND	BENGIES AND GLADWAY LPS - 13+74.2	611,301.74	1,474,036.35
HZ 22-1/2 DEG BEND	BENGIES AND GLADWAY LPS - 13+88.2	611,307.15	1,474,049.27
SHC TEE (GRINDER 05)	BENGIES AND GLADWAY LPS - 15+42.0	611,416.29	1,474,157.59
SHC TEE (GRINDER 04)	BENGIES AND GLADWAY LPS - 15+94.8	611,453.81	1,474,194.82
1-1/2"x2" REDUCER	BENGIES AND GLADWAY LPS - 16+00.0	611,457.49	1,474,198.48
COMBINATION FLUSHING CONNECTION AND AIR/VACUUM RELEASE VALVE AND VAULT (STD DETAIL PLATE S-19)	BENGIES AND GLADWAY LPS - 16+25.0	611,475.23	1,474,216.12
SHC TEE (GRINDER 03)	BENGIES AND GLADWAY LPS - 17+17.3	611,540.76	1,474,281.11
SHC TEE (GRINDER 02)	BENGIES AND GLADWAY LPS - 17+19.4	611,542.21	1,474,282.55
SHC TEE (GRINDER 01)	BENGIES AND GLADWAY LPS - 17+82.6	611,587.09	1,474,327.09
TERMINAL FLUSHING CONNECTION VALVE AND VAULT (STD DETAIL PLATE S-20)	BENGIES AND GLADWAY LPS - 18+00.0	611,599.44	1,474,337.35
HZ 11-1/4 DEG BEND	BOURQUE RD LPS - 100+05.8	610,929.89	1,473,054.84
SHC TEE (GRINDER 17)	BOURQUE RD LPS - 100+68.2	610,877.28	1,473,088.36
SHC TEE (GRINDER 18)	BOURQUE RD LPS - 101+25.2	610,829.24	1,473,118.98
SHC TEE (GRINDER 19)	BOURQUE RD LPS - 102+29.5	610,741.24	1,473,175.05
SHC TEE (GRINDER 20)	BOURQUE RD LPS - 104+32.7	610,570.15	1,473,284.68
SHC TEE (GRINDER 21)	BOURQUE RD LPS - 104+49.3	610,556.19	1,473,293.70
SHC TEE (GRINDER 22)	BOURQUE RD LPS - 106+21.6	610,411.48	1,473,387.18
SHC TEE (GRINDER 23)	BOURQUE RD LPS - 107+59.0	610,296.08	1,473,461.73
1-1/2"x2" REDUCER	BOURQUE RD LPS - 107+65.0	610,291.03	1,473,464.99
SHC TEE (GRINDER 24)	BOURQUE RD LPS - 107+92.3	610,268.08	1,473,479.85
SHC TEE (GRINDER 25)	BOURQUE RD LPS - 108+96.5	610,180.68	1,473,536.42
SHC TEE (GRINDER 26)	BOURQUE RD LPS - 109+21.0	610,160.10	1,473,549.74
TERMINAL FLUSHING CONNECTION VALVE AND VAULT (STD DETAIL PLATE S-20)	BOURQUE RD LPS - 109+40.0	610,144.15	1,473,560.07

NUMBER OF HOUSE CONNECTIONS 26
ALL 26 UNITS ARE SIMPLEX GRINDER PUMPS

ALL 26 UNITS ARE COUNTY MAINTAINED GRINDER PUMPS

DESIGN AND DRAWING BASED ON
MARYLAND COORDINATE SYSTEM:
HORIZONTAL - NAD 83/11
VERTICAL - NAVD 88

CONTRACT COMPLETION BOX	
CONTRACTOR: _____	
DATE COMPLETED: _____	
INSPECTOR: _____	
PIPE MATERIAL (Pressure Only): _____	
SHEET DESIGNATION	CONTRACT NUMBER
G-02	22003-SX0
JOB ORDER NUMBER	
231-201-0002-1243	
SHEET 02 OF 13	
DRAWING NUMBER	
2021-2727	
FILE NO.: 1	

SEAL	PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH	DRAWING SCALE	DPW AND TRANSPORTATION	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.									
	LICENSE NO. 44077 EXPIRATION DATE 06/09/2023									
	ENGINEER: AMY E. BLEY Bureau of Engineering and Construction 111 West Chesapeake Avenue, Rm. 200 Towson, Maryland 21204.	DGN BY: CAY	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
	Design Section SEWER Phone /Fax: (410) 887-3781 / 4394	DWN BY: CAY	REVIEWED BY:							
DATE: 10/4/22	CHKD BY: PCB	DATE REVIEWED:								
SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES										

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION

SANITARY SEWER SYSTEM EXTENSION - HEALTH PROJECT


SURVEY CONTROL, STAKEOUT AND LEGEND


BENGIES ROAD, BOURQUE ROAD AND GLADWAY ROAD - LOW PRESSURE SEWER (LPS)

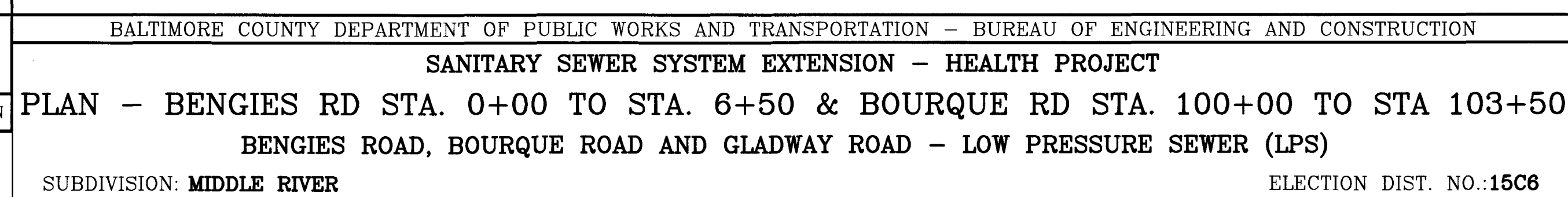
SUBDIVISION: MIDDLE RIVER

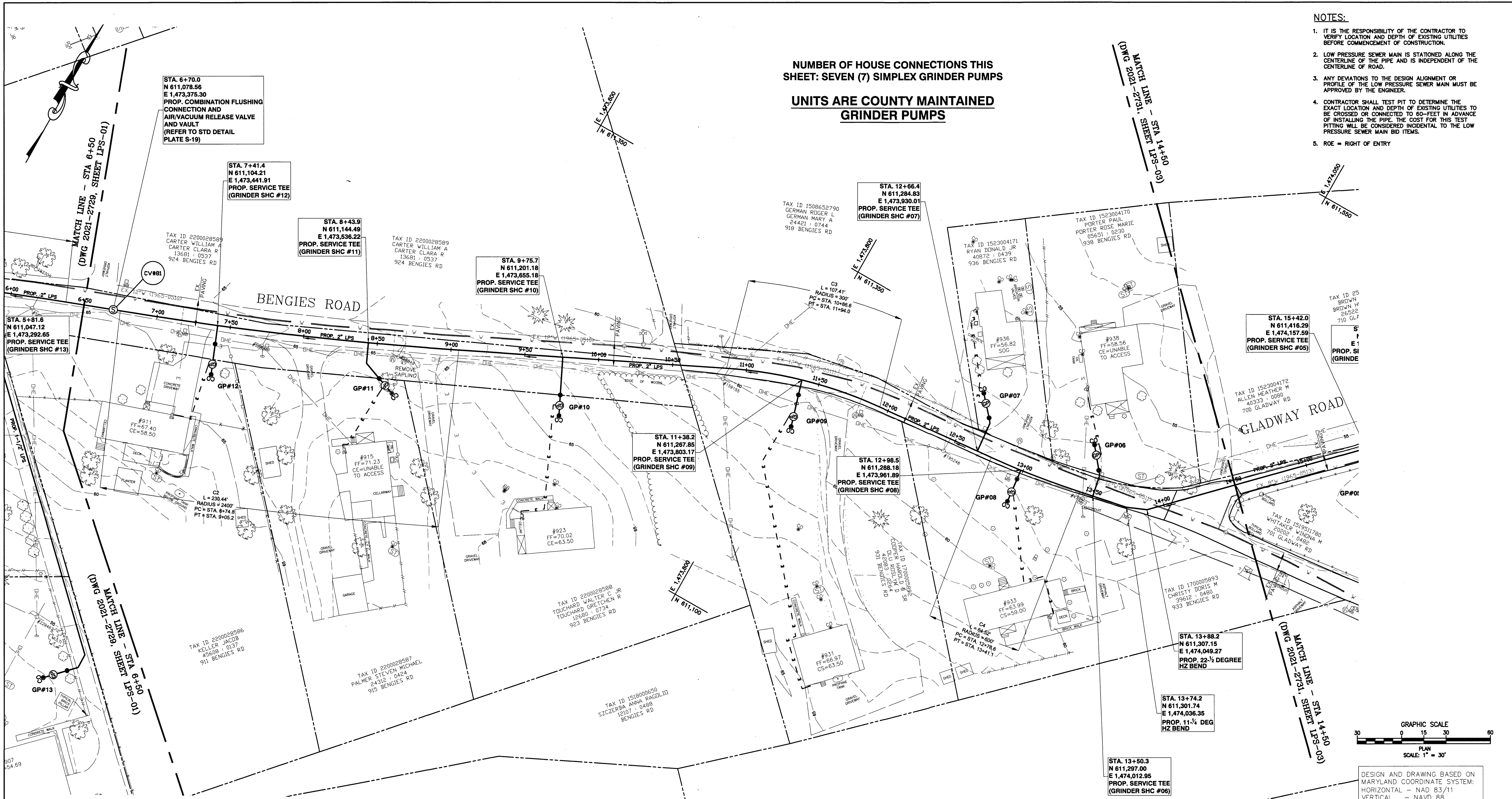
ELECTION DIST. NO.: 15C6



SHEET DESIGNATION	CONTRACT NUMBER
G-03	22003-SX0
	JOB ORDER NUMBER
	231-201-0002-124
	SHEET 03 OF 13
	DRAWING NUMBER
	2021-2728
	FILE NO.: 1 2

	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 44077 EXPIRATION DATE 06/09/2023		AS-BUILT / REVISION BY DATE P.W.A. NO. KEY SHEET POSITION SHT		DRAWING SCALE PLAN SCALE: 1"=75' PROFILE SCALE: N/A		DPW AND TRANSPORTATION SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES	
	ENGINEER: AMY E. BLEY Bureau of Engineering and Construction 111 West Chesapeake Boulevard, Rm. 200 Towson, Maryland 21204. Design Section SEWER Phone / Fax: (410) 887-3781 / 4394		CONTRACT COMPLETION BOX 16N636 17N636 18N636		R.O.W. NO. DE 16N636 17N636 18N636		SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES	
	DGN BY: CAV BUREAU OF ENGINEERING AND CONSTRUCTION DWN BY: CAV REVIEWED BY:		HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER		BUR. OF ENGINEERING & CONSTRUCTION		SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES	
	CHKD BY: PCB DATE REVIEWED:		SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES		SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES		SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES	
	DATE: 10/4/22		SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES		SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES		SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES	

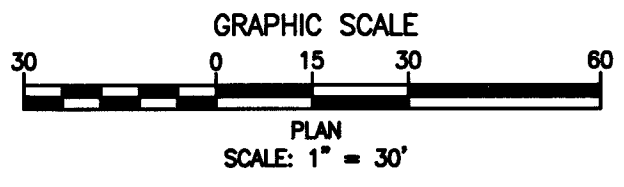




- NOTES:**
1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES BEFORE COMMENCEMENT OF CONSTRUCTION.
 2. LOW PRESSURE SEWER MAIN IS STATIONED ALONG THE CENTERLINE OF THE PIPE AND IS INDEPENDENT OF THE CENTERLINE OF ROAD.
 3. ANY DEVIATIONS TO THE DESIGN ALIGNMENT OR PROFILE OF THE LOW PRESSURE SEWER MAIN MUST BE APPROVED BY THE ENGINEER.
 4. CONTRACTOR SHALL TEST PIT TO DETERMINE THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES TO BE CROSSED OR CONNECTED TO 60-FEET IN ADVANCE OF INSTALLING THE PIPE. THE COST FOR THIS TEST PITTING WILL BE CONSIDERED INCIDENTAL TO THE LOW PRESSURE SEWER MAIN BID ITEMS.
 5. ROE = RIGHT OF ENTRY

NUMBER OF HOUSE CONNECTIONS THIS
SHEET: SEVEN (7) SIMPLEX GRINDER PUMPS
**UNITS ARE COUNTY MAINTAINED
GRINDER PUMPS**

PLAN: BENGIES RD & GLADWAY RD STA. 6+50 TO STA 14+50



DESIGN AND DRAWING BASED ON
MARYLAND COORDINATE SYSTEM:
HORIZONTAL - NAD 83/11
VERTICAL - NAVD 88

	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION		BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH	DRAWING SCALE	DPW AND TRANSPORTATION	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.						R.O.W. NO.	16N036	17N036	PLAN SCALE: 1"=30'	SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES	
	LICENSE NO. 44077 EXPIRATION DATE 06/09/2023		CONTRACT COMPLETION BOX					17N036	18N036	PROFILE SCALE: N/A		
	ENGINEER: AMY E. BLEY Bureau of Engineering and Construction 111 West Chesapeake Avenue, Rm. 200 Towson, Maryland 21204. Design Section SEWER Phone /Fax: (410) 887-3781 / 4394		BUREAU OF ENGINEERING AND CONSTRUCTION		TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	BUR. OF ENGINEERING & CONSTRUCTION
DGN BY: CAY		REVIEWED BY:		DATE REVIEWED:		SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES						
DWN BY: CAY												
CHKD BY: PCB												

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION – BUREAU OF ENGINEERING AND CONSTRUCTION
SANITARY SEWER SYSTEM EXTENSION – HEALTH PROJECT
PLAN – BENGIES RD & GLADWAY RD STA. 6+50 TO STA. 14+50
BENGIES ROAD, BOURQUE ROAD AND GLADWAY ROAD – LOW PRESSURE SEWER (LPS)
SUBDIVISION: MIDDLE RIVER
ELECTION DIST. NO.: 15C6

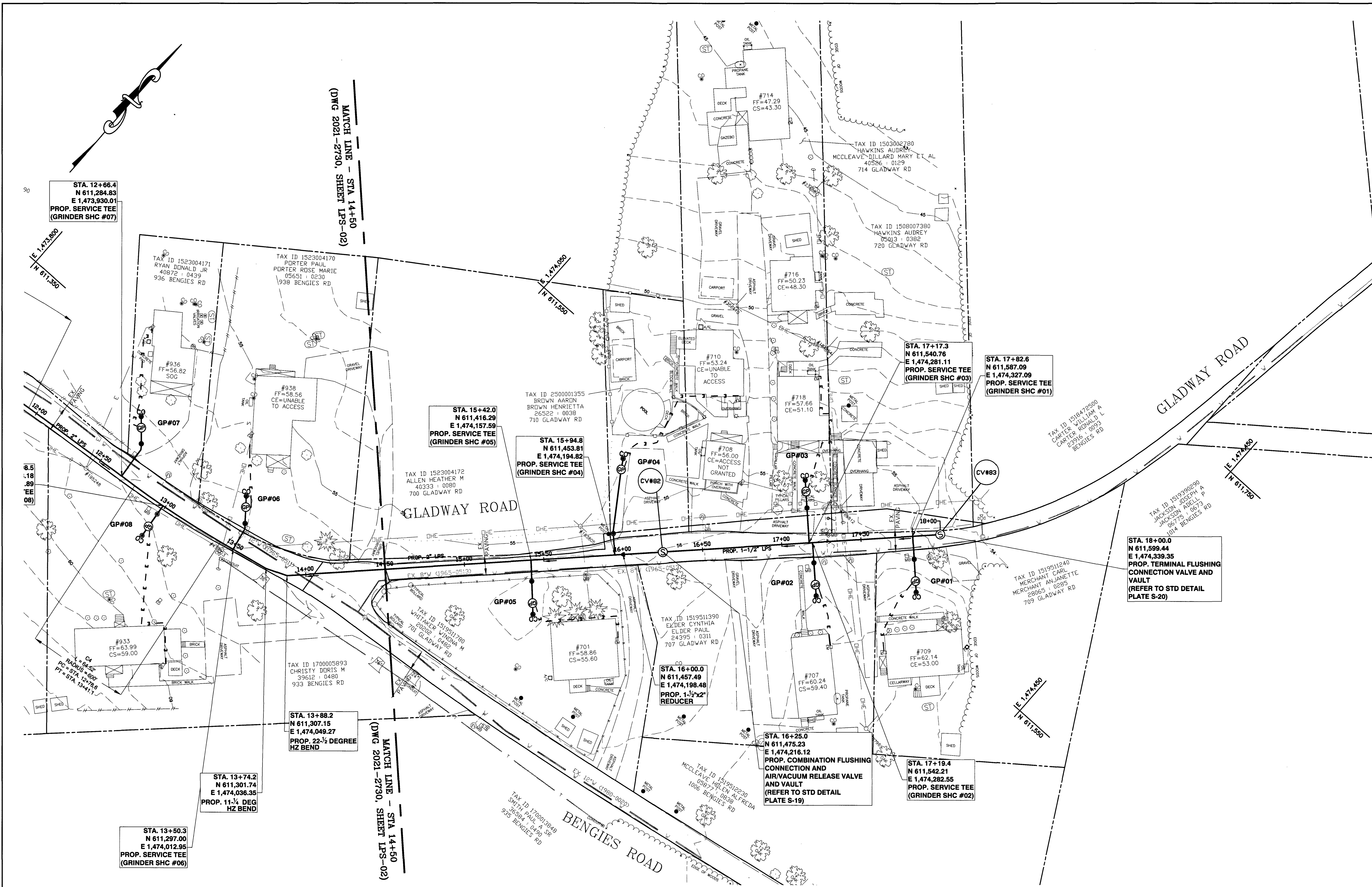
CONTRACT COMPLETION BOX	
CONTRACTOR:	
DATE COMPLETED:	
INSPECTOR:	
PIPE MATERIAL (Pressure Only)	
SHEET DESIGNATION	CONTRACT NUMBER
LPS-02	22003-SX0
JOB ORDER NUMBER	
231-201-0002-1243	
SHEET 05 OF 13	
DRAWING NUMBER	
2021-2730	
FILE NO.	1

NOTES:

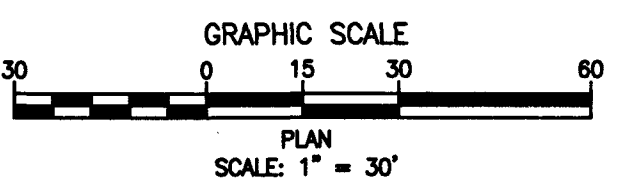
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES BEFORE COMMENCEMENT OF CONSTRUCTION.
- LOW PRESSURE SEWER MAIN IS STATIONED ALONG THE CENTERLINE OF THE PIPE AND IS INDEPENDENT OF THE CENTERLINE OF ROAD.
- ANY DEVIATIONS TO THE DESIGN ALIGNMENT OR PROFILE OF THE LOW PRESSURE SEWER MAIN MUST BE APPROVED BY THE ENGINEER.
- CONTRACTOR SHALL TEST PIT TO DETERMINE THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES TO BE CROSSED OR CONNECTED TO 60-FEET IN ADVANCE OF INSTALLING THE PIPE. THE COST FOR THIS TEST PITTING WILL BE CONSIDERED INCIDENTAL TO THE LOW PRESSURE SEWER MAIN BID ITEMS.
- ROE = RIGHT OF ENTRY

NUMBER OF HOUSE CONNECTIONS THIS SHEET: FIVE (5) SIMPLEX GRINDER PUMPS

UNITS ARE COUNTY MAINTAINED GRINDER PUMPS



PLAN: BENGIES RD AND GLADWAY RD
STA. 14+50 TO STA 18+00



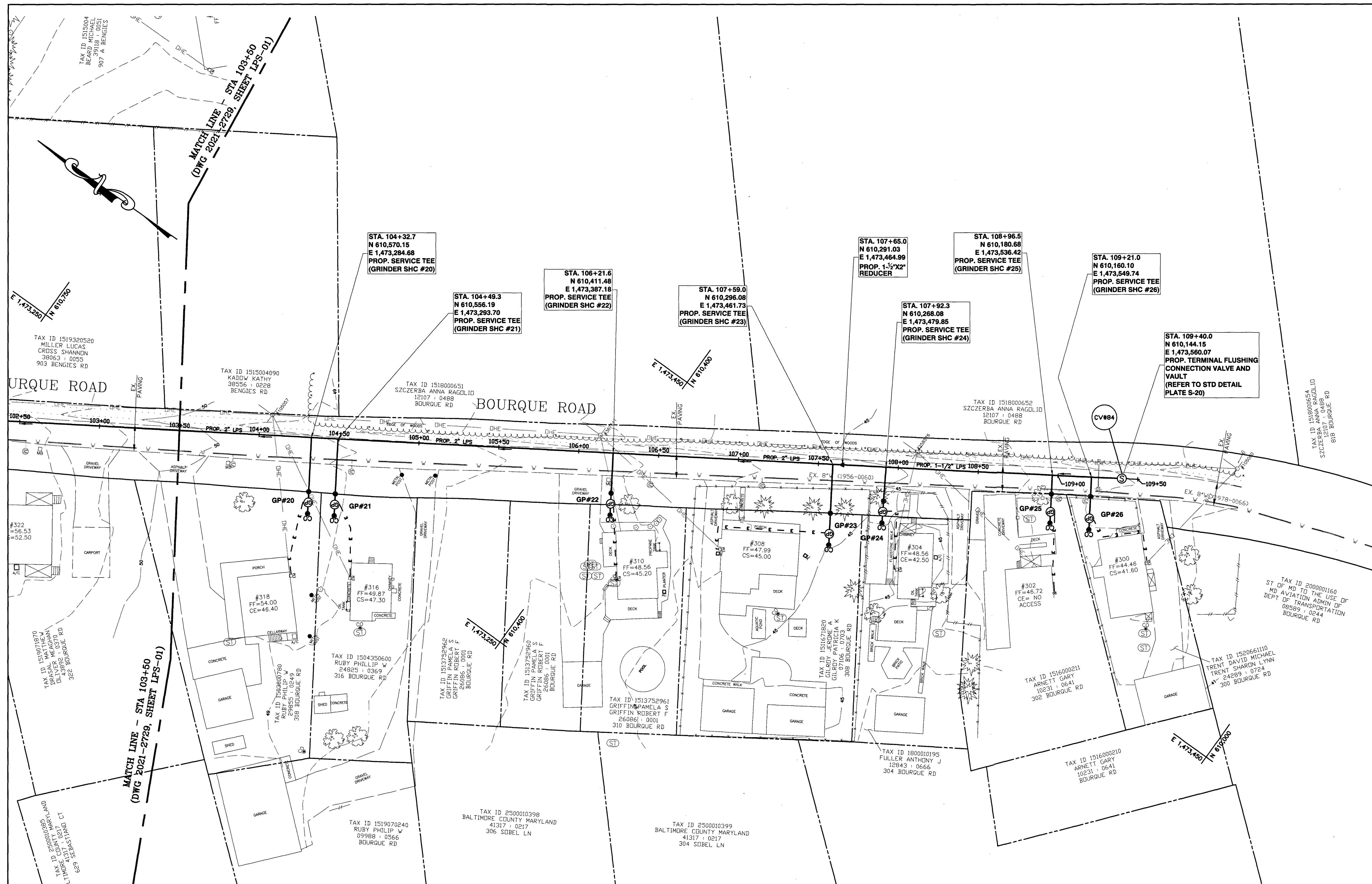
DESIGN AND DRAWING BASED ON MARYLAND COORDINATE SYSTEM:
HORIZONTAL - NAD 83/11
VERTICAL - NAVD 88

CONTRACT COMPLETION BOX	
CONTRACTOR:	
DATE COMPLETED:	
INSPECTOR:	
PIPE MATERIAL (Pressure Only):	

SHEET DESIGNATION	CONTRACT NUMBER
LPS-03	22003-SX0
JOB ORDER NUMBER	
231-201-0002-1243	
SHEET 06 OF 13	
DRAWING NUMBER	
2021-2731	
FILE NO.: 1	

PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	DPW AND TRANSPORTATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 44077 EXPIRATION DATE 06/09/2023 ENGINEER: AMY E. BLEY Bureau of Engineering and Construction 111 West Chesapeake Avenue, Rm. 200 Towson, Maryland 21204. Design Section SEWER Phone /Fax: (410) 887-3781 /4394								
CONTRACT COMPLETION BOX DGN BY: CAV DWN BY: CAV CHD BY: PCB REVIEWED BY: DATE REVIEWED:								
SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES								

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
 SANITARY SEWER SYSTEM EXTENSION - HEALTH PROJECT
 PLAN - BENGIES RD & GLADWAY RD STA. 14+50 TO STA. 18+00
 BENGIES ROAD, BOURQUE ROAD AND GLADWAY ROAD - LOW PRESSURE SEWER (LPS)
 SUBDIVISION: MIDDLE RIVER
 ELECTION DIST. NO.: 15C6

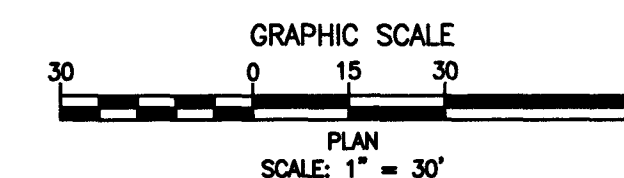


NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES BEFORE COMMENCEMENT OF CONSTRUCTION.
2. LOW PRESSURE SEWER MAIN IS STATIONED ALONG THE CENTERLINE OF THE PIPE AND IS INDEPENDENT OF THE CENTERLINE OF ROAD.
3. ANY DEVIATIONS TO THE DESIGN ALIGNMENT OR PROFILE OF THE LOW PRESSURE SEWER MAIN MUST BE APPROVED BY THE ENGINEER.
4. CONTRACTOR SHALL TEST PIT TO DETERMINE THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES TO BE CROSSED OR CONNECTED TO 80- FEET IN ADVANCE OF INSTALLING THE PIPE. THE COST FOR THIS TEST PITTING WILL BE CONSIDERED INCIDENTAL TO THE LOW PRESSURE SEWER MAIN BID ITEMS.
5. ROE = RIGHT OF ENTRY

NUMBER OF HOUSE CONNECTIONS THIS SHEET: SEVEN (7) SIMPLEX GRINDER PUMPS

UNITS ARE COUNTY MAINTAINED GRINDER PUMPS



DESIGN AND DRAWING BASED ON MARYLAND COORDINATE SYSTEM:
HORIZONTAL - NAD 83/11
VERTICAL - NAVD 88

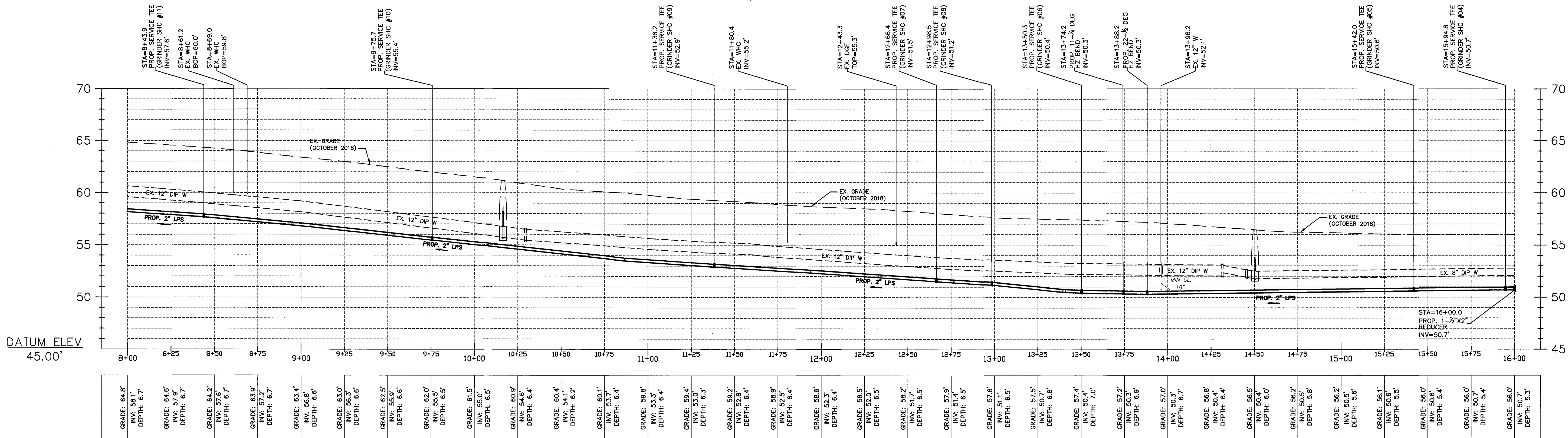
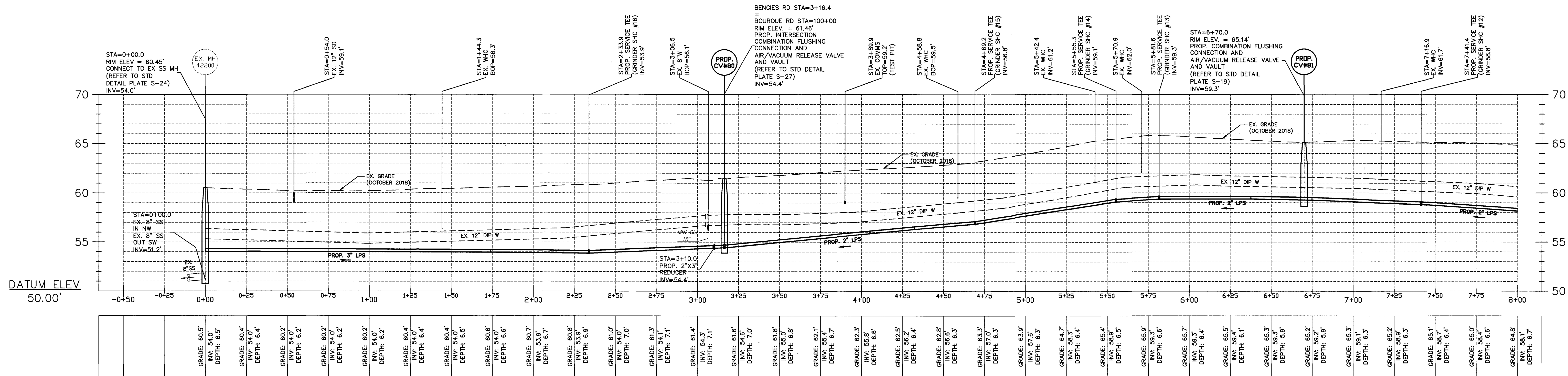
PLAN: BOURQUE RD STA. 103+50 TO STA. 109+40

CONTRACT COMPLETION BOX	
CONTRACTOR:	
DATE COMPLETED:	
INSPECTOR:	
PIPE MATERIAL (Pressure Only):	

SHEET DESIGNATION	CONTRACT NUMBER
LPS-04	22003-SX0
JOB ORDER NUMBER	231-201-0002-1243
SHEET 07 OF 13	DRAWING NUMBER
2021-2732	FILE NO.: 1

SEAL STATE OF MARYLAND AMY E. BLEY REGISTERED PROFESSIONAL ENGINEER DATE: 10/4/21	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	DPW AND TRANSPORTATION			
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 44077 EXPIRATION DATE 06/09/2023						R.O.W. NO.	DNE	PLAN SCALE: 1"=30'	SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES			
	ENGINEER: AMY E. BLEY Bureau of Engineering and Construction 111 West Chesapeake Avenue, Rm. 200 Towson, Maryland 21204		DGN BY: CAY	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	BUR. OF ENGINEERING & CONSTRUCTION	
	Design Section SEWER Phone /Fax: (410) 887-3781 / 4394		DWN BY: CAY	REVIEWED BY:									
DATE REVIEWED:												SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES	

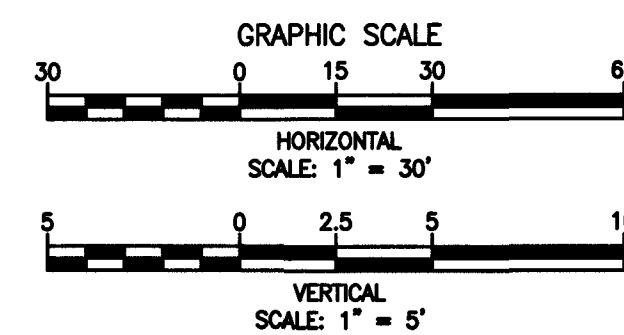
BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
SANITARY SEWER SYSTEM EXTENSION - HEALTH PROJECT
PLAN - BOURQUE RD STA. 103+50 TO STA. 109+40
BENGIES ROAD, BOURQUE ROAD AND GLADWAY ROAD - LOW PRESSURE SEWER (LPS)
SUBDIVISION: MIDDLE RIVER
ELECTION DIST. NO.: 15C6



PROFILE: BENGIES ROAD AND GLADWAY ROAD
STA. 0+00 TO 16+00

NOTES:

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES BEFORE COMMENCEMENT OF CONSTRUCTION.
- LOW PRESSURE SEWER MAIN IS STATIONED ALONG THE CENTERLINE OF THE PIPE AND IS INDEPENDENT OF THE CENTERLINE OF ROAD.
- ANY DEVIATIONS TO THE DESIGN ALIGNMENT OR PROFILE OF THE LOW PRESSURE SEWER MAIN MUST BE APPROVED BY THE ENGINEER.
- CONTRACTOR SHALL TEST PIT TO DETERMINE THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES TO BE CROSSED OR CONNECTED TO 60-FOET IN ADVANCE OF INSTALLING THE PIPE. THE COST FOR THIS TEST PITTING WILL BE CONSIDERED INCIDENTAL TO THE LOW PRESSURE SEWER MAIN BID ITEMS.
- ROE = RIGHT OF ENTRY

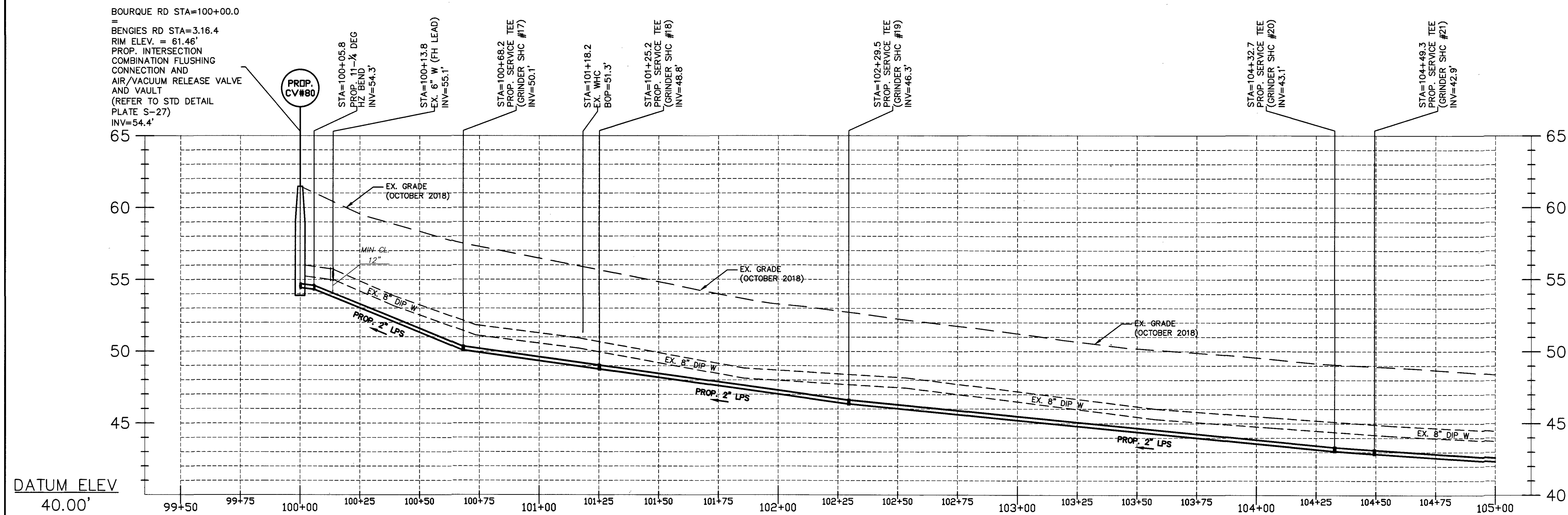


DESIGN AND DRAWING BASED ON
MARYLAND COORDINATE SYSTEM:
HORIZONTAL - NAD 83/11
VERTICAL - NAVD 88

SEAL STATE OF MARYLAND AMY E. BLEY PROFESSIONAL ENGINEER DATE: 10/4/22	PROFESSIONAL CERTIFICATION I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 44077, EXPIRATION DATE 06/09/2023 ENGINEER: AMY E. BLEY Bureau of Engineering and Construction 111 West Chesapeake Avenue, Rm. 200 Towson, Maryland 21204. Design Section SEWER Phone / Fax: (410) 887-3781 / 4394		AS-BUILT / REVISION BY DATE P.W.A. NO. KEY SHEET POSITION SHI DRAWING SCALE DPW AND TRANSPORTATION CONTRACT COMPLETION BOX BUREAU OF ENGINEERING AND CONSTRUCTION TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER BUR. OF ENGINEERING & CONSTRUCTION REVIEWED BY: DATE REVIEWED: SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES	
	DGN BY: CAY DWN BY: CAY CHKD BY: PCB		BUREAU OF ENGINEERING AND CONSTRUCTION TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER BUR. OF ENGINEERING & CONSTRUCTION REVIEWED BY: DATE REVIEWED: SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES	
	DGN BY: CAY DWN BY: CAY CHKD BY: PCB		BUREAU OF ENGINEERING AND CONSTRUCTION TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER BUR. OF ENGINEERING & CONSTRUCTION REVIEWED BY: DATE REVIEWED: SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES	
	DGN BY: CAY DWN BY: CAY CHKD BY: PCB		BUREAU OF ENGINEERING AND CONSTRUCTION TRAFFIC HIGHWAYS STRUCTURES STORM DRAINS SEWER WATER FIELD ENGINEER BUR. OF ENGINEERING & CONSTRUCTION REVIEWED BY: DATE REVIEWED: SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES	

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION
SANITARY SEWER SYSTEM EXTENSION - HEALTH PROJECT
PROFILE - BENGIES RD & GLADWAY RD STA. 0+00 TO STA. 16+00
BENGIES ROAD, BOURQUE ROAD AND GLADWAY ROAD - LOW PRESSURE SEWER (LPS)
SUBDIVISION: MIDDLE RIVER
ELECTION DIST. NO.: 15C8

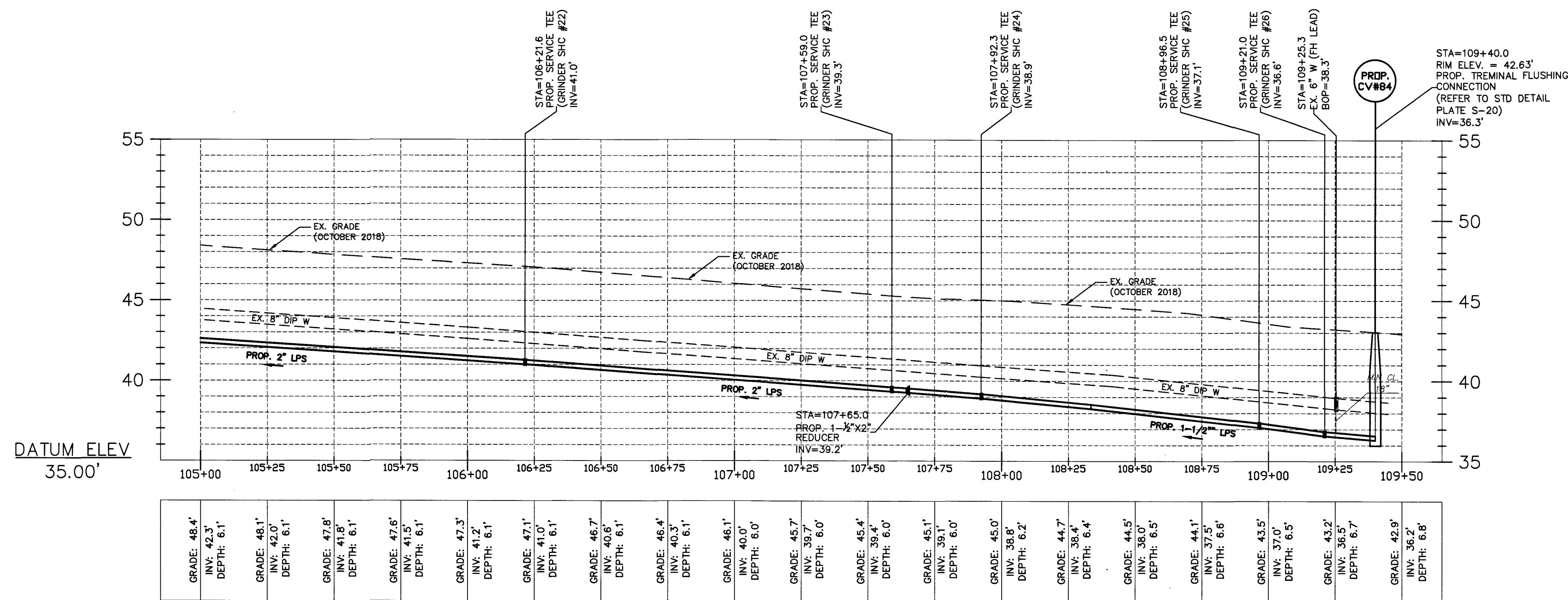
CONTRACT COMPLETION BOX CONTRACTOR: _____ DATE COMPLETED: _____ INSPECTOR: _____ PIPE MATERIAL (Pressure Only): _____	
SHEET DESIGNATION LPS-05	CONTRACT NUMBER 22003-SX0
JOB ORDER NUMBER 231-201-0002-1243	
SHEET 08 OF 13	
DRAWING NUMBER 2021-2733	
FILE NO.: 1	



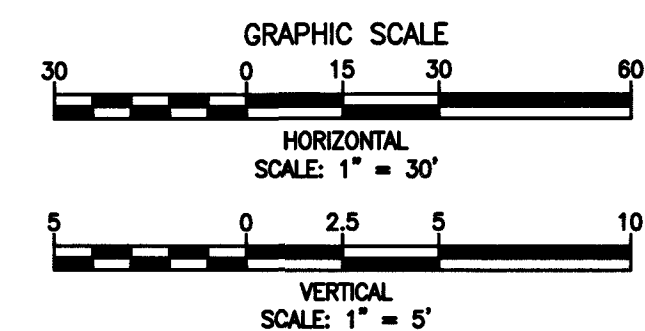
NOTES:

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES BEFORE COMMENCEMENT OF CONSTRUCTION.
- LOW PRESSURE SEWER MAIN IS STATIONED ALONG THE CENTERLINE OF THE PIPE AND IS INDEPENDENT OF THE CENTERLINE OF ROAD.
- ANY DEVIATIONS TO THE DESIGN ALIGNMENT OR PROFILE OF THE LOW PRESSURE SEWER MAIN MUST BE APPROVED BY THE ENGINEER.
- CONTRACTOR SHALL TEST PIT TO DETERMINE THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES TO BE GROSSED OR CONNECTED TO 60-Feet IN ADVANCE OF INSTALLING THE PIPE. THE COST FOR THIS TEST PITTING WILL BE CONSIDERED INCIDENTAL TO THE LOW PRESSURE SEWER MAIN BID ITEMS.
- ROE = RIGHT OF ENTRY

GRADE: 61.5'	INV: 54.4'	DEPTH: 7.1'
GRADE: 59.6'	INV: 53.0'	DEPTH: 6.6'
GRADE: 58.3'	INV: 51.7'	DEPTH: 6.6'
GRADE: 57.3'	INV: 50.7'	DEPTH: 6.6'
GRADE: 56.5'	INV: 49.9'	DEPTH: 6.6'
GRADE: 55.7'	INV: 49.1'	DEPTH: 6.6'
GRADE: 54.8'	INV: 48.2'	DEPTH: 6.6'
GRADE: 54.0'	INV: 47.4'	DEPTH: 6.6'
GRADE: 53.3'	INV: 46.7'	DEPTH: 6.6'
GRADE: 52.3'	INV: 45.7'	DEPTH: 6.6'
GRADE: 51.8'	INV: 45.2'	DEPTH: 6.6'
GRADE: 51.2'	INV: 44.6'	DEPTH: 6.6'
GRADE: 50.7'	INV: 44.1'	DEPTH: 6.6'
GRADE: 50.2'	INV: 43.6'	DEPTH: 6.6'
GRADE: 49.9'	INV: 43.3'	DEPTH: 6.6'
GRADE: 49.5'	INV: 42.9'	DEPTH: 6.6'
GRADE: 49.2'	INV: 42.6'	DEPTH: 6.6'
GRADE: 48.9'	INV: 42.3'	DEPTH: 6.6'
GRADE: 48.7'	INV: 42.1'	DEPTH: 6.6'
GRADE: 48.4'	INV: 41.8'	DEPTH: 6.6'



PROFILE: BOURQUE ROAD STA. 103+50 TO 109+40



DESIGN AND DRAWING BASED ON
MARYLAND COORDINATE SYSTEM:
HORIZONTAL - NAD 83/11
VERTICAL - NAVD 88

	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH	DRAWING SCALE	DPW AND TRANSPORTATION
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.									
	LICENSE NO. 44077 EXPIRATION DATE 06/09/2023									
	ENGINEER: AMY E. BLEY Bureau of Engineering and Construction 111 West Chesapeake Avenue, Rm. 200 Towson, Maryland 21204. Design Section SEWER Phone / Fax: (410) 887-3781 / 4394		DON BY: CAV DWN BY: CAV CHKD BY: PCB	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION

SANITARY SEWER SYSTEM EXTENSION - HEALTH PROJECT

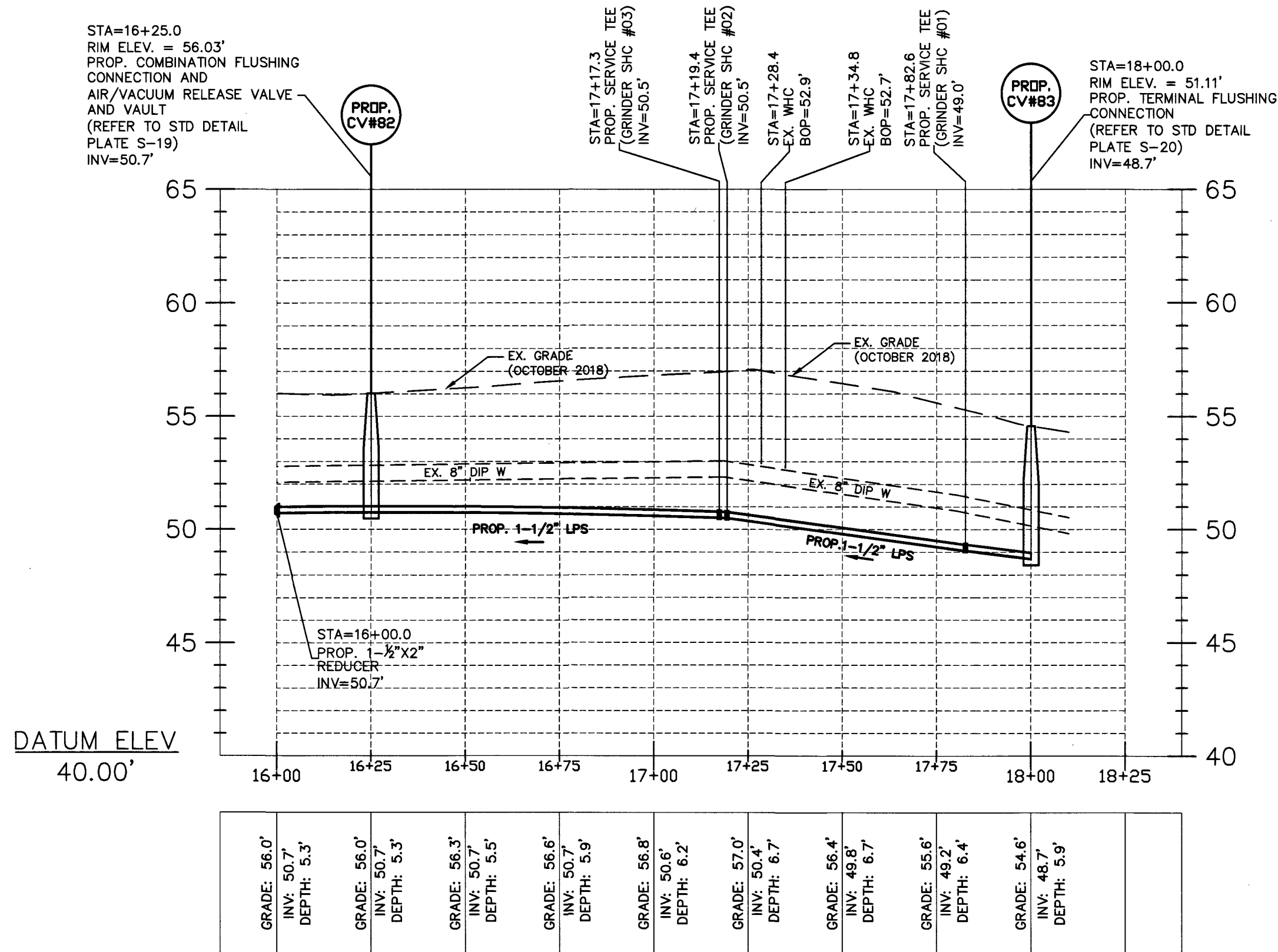
PROFILE - BOURQUE RD STA. 103+50 TO STA. 109+40

BENGIES ROAD, BOURQUE ROAD AND GLADWAY ROAD - LOW PRESSURE SEWER (LPS)

SUBDIVISION: MIDDLE RIVER

ELECTION DIST. NO.: 15C6

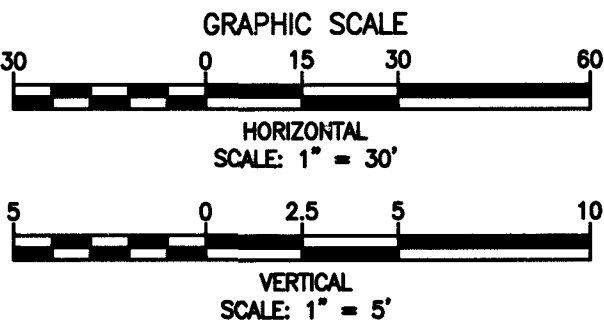
CONTRACT COMPLETION BOX	
CONTRACTOR: _____	
DATE COMPLETED: _____	
INSPECTOR: _____	
PIPE MATERIAL (Pressure Only): _____	
SHEET DESIGNATION	CONTRACT NUMBER
LPS-07	22003-SX0
JOB ORDER NUMBER	
231-201-0002-1243	
SHEET 10 OF 13	
DRAWING NUMBER	
2021-2735	
FILE NO.: 1	



PROFILE: BENIGIES ROAD AND GLADWAY ROAD
STA. 16+00 TO 18+00

NOTES:

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY LOCATION AND DEPTH OF EXISTING UTILITIES BEFORE COMMENCEMENT OF CONSTRUCTION.
- LOW PRESSURE SEWER MAIN IS STATIONED ALONG THE CENTERLINE OF THE PIPE AND IS INDEPENDENT OF THE CENTERLINE OF ROAD.
- ANY DEVIATIONS TO THE DESIGN ALIGNMENT OR PROFILE OF THE LOW PRESSURE SEWER MAIN MUST BE APPROVED BY THE ENGINEER.
- CONTRACTOR SHALL TEST PIT TO DETERMINE THE EXACT LOCATION AND DEPTH OF EXISTING UTILITIES TO BE CROSSED OR CONNECTED TO 60- FEET IN ADVANCE OF INSTALLING THE PIPE. THE COST FOR THIS TEST PITTING WILL BE CONSIDERED INCIDENTAL TO THE LOW PRESSURE SEWER MAIN BID ITEMS.
- ROE = RIGHT OF ENTRY



DESIGN AND DRAWING BASED ON
MARYLAND COORDINATE SYSTEM:
HORIZONTAL - NAD 83/11
VERTICAL - NAVD 88

CONTRACT COMPLETION BOX	
CONTRACTOR:	
DATE COMPLETED:	
INSPECTOR:	
PIPE MATERIAL (Pressure Only):	

SHEET DESIGNATION	CONTRACT NUMBER
LPS-06	22003-SX0

JOB ORDER NUMBER	DRAWING NUMBER
231-201-0002-1243	2021-2734

FILE NO.
1

SEAL	PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHT	DRAWING SCALE	DPW AND TRANSPORTATION				
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 44077, EXPIRATION DATE 06/09/2023 ENGINEER: AMY E. BLEY Bureau of Engineering and Construction 111 West Chesapeake Avenue, Rm. 200 Towson, Maryland 21204. Design Section SEWER Phone /Fax: (410) 887-3781 / 4394	CONTRACT COMPLETION BOX	DGN BY: CAV DWN BY: CAV CHKD BY: PCB	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	BUR. OF ENGINEERING & CONSTRUCTION	
					R.O.W. NO.	INT	16WB36 17WB36 17WB36 18WB36	PLAN SCALE: N/A PROFILE SCALE: VERT: 1"=5' HOR: 1"=30'	SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES				

SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION

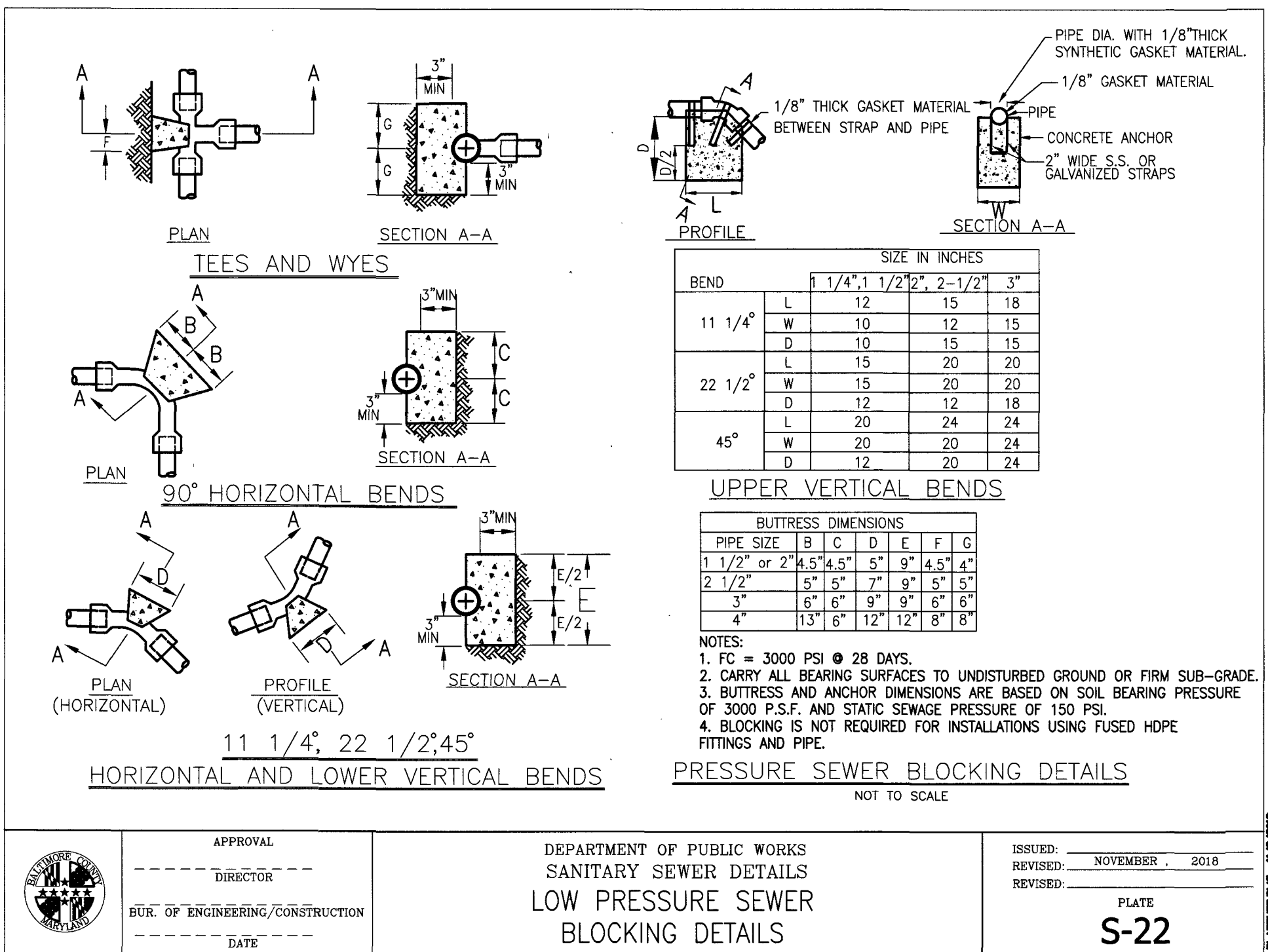
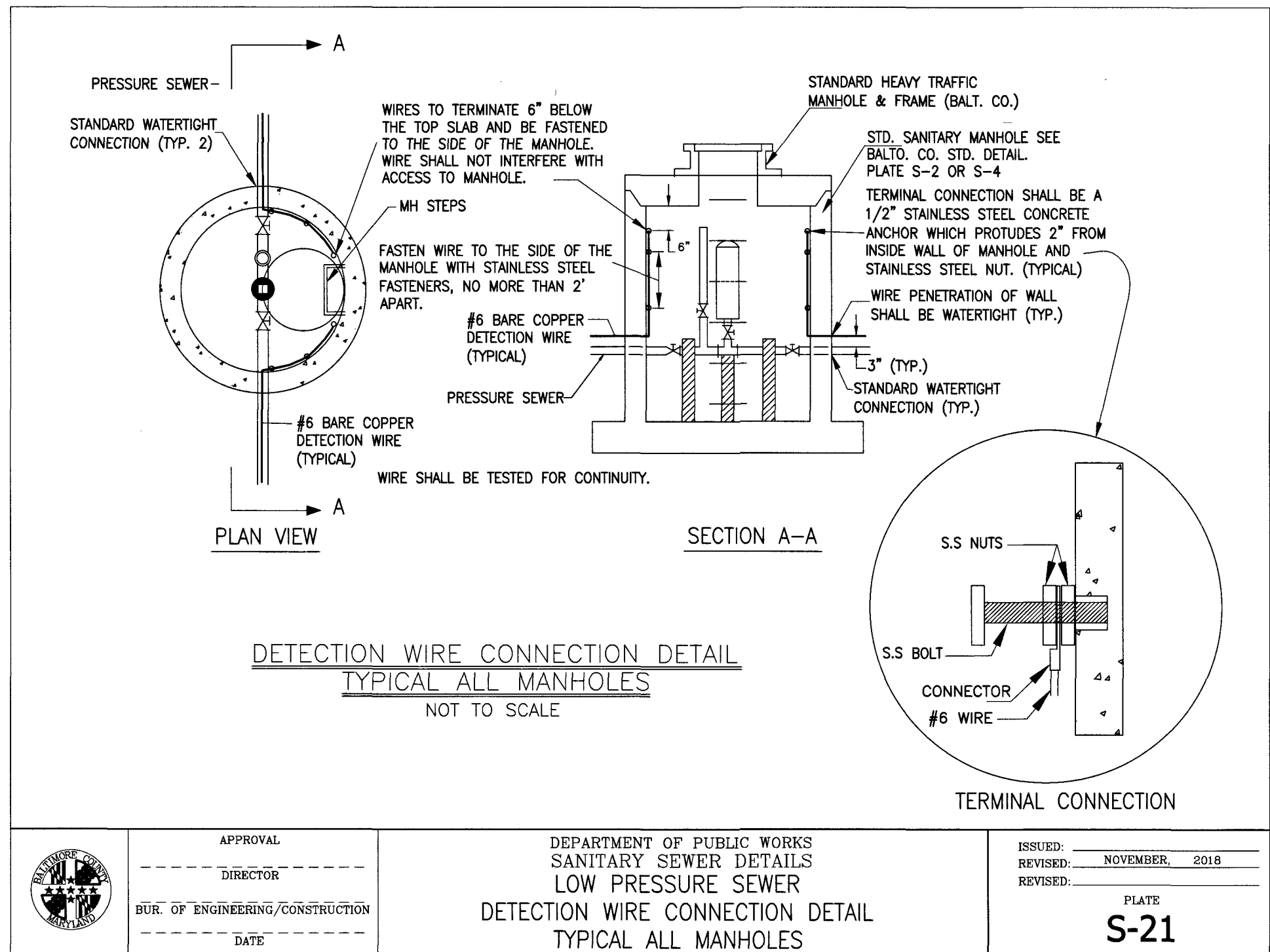
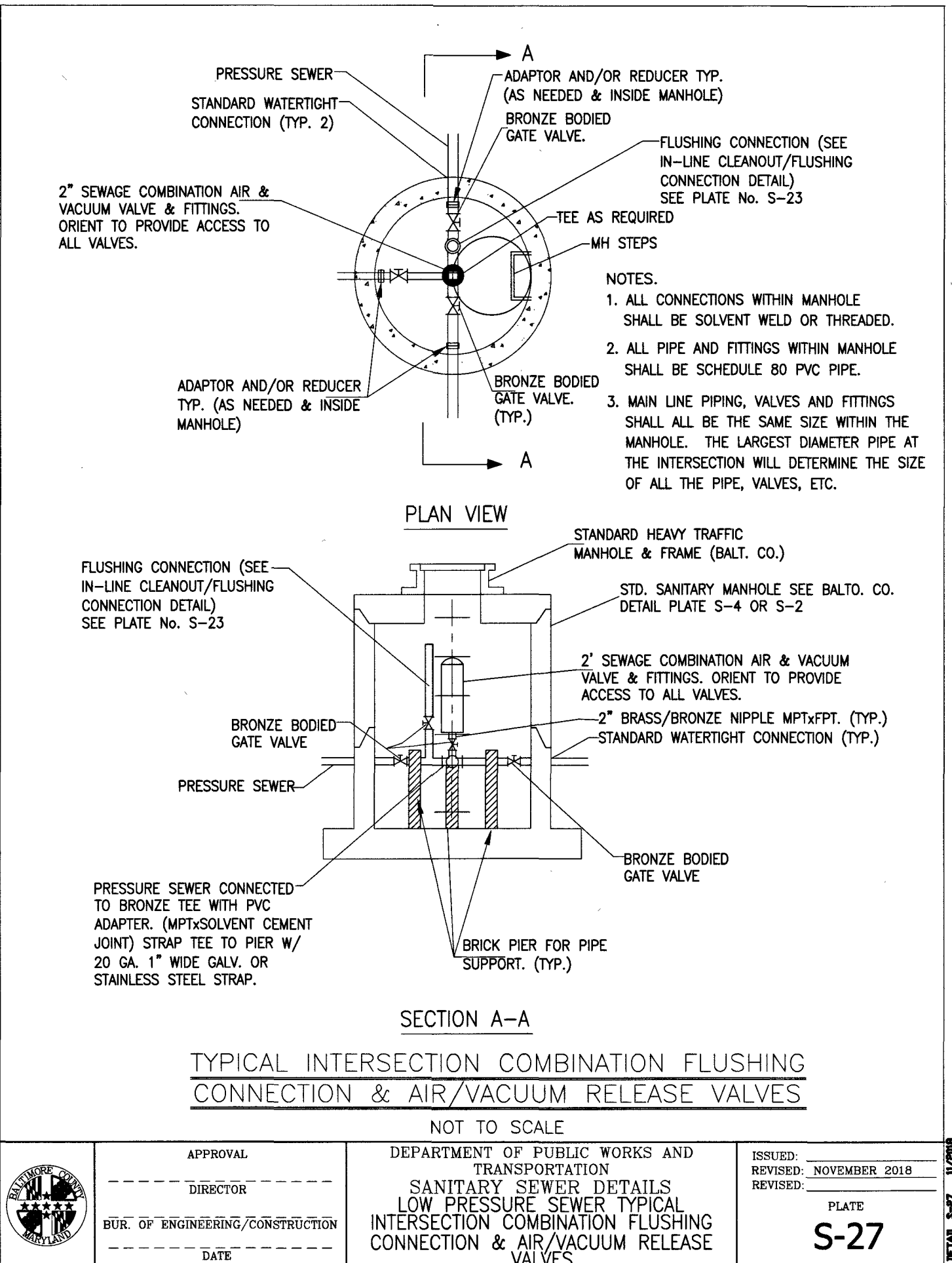
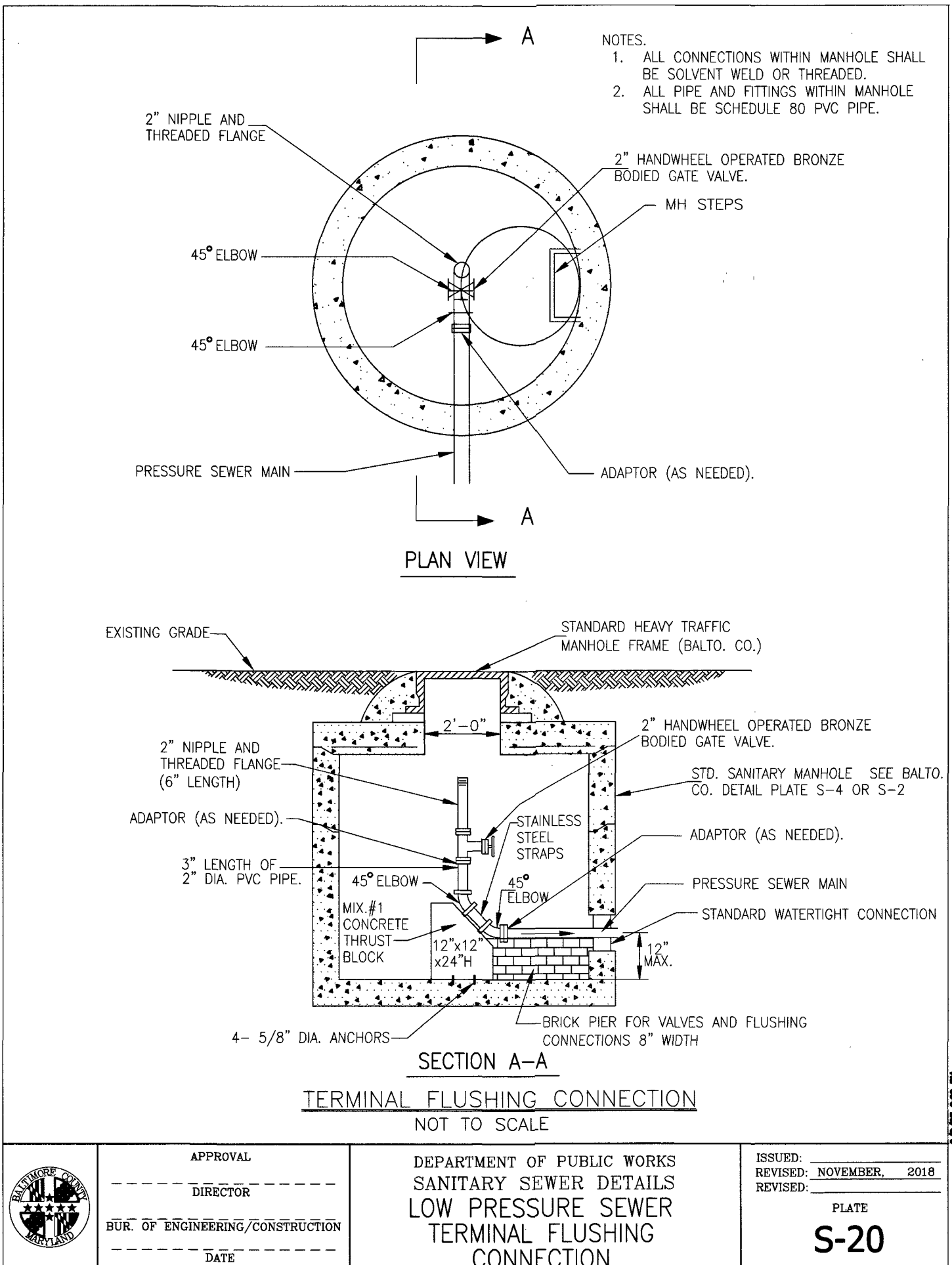
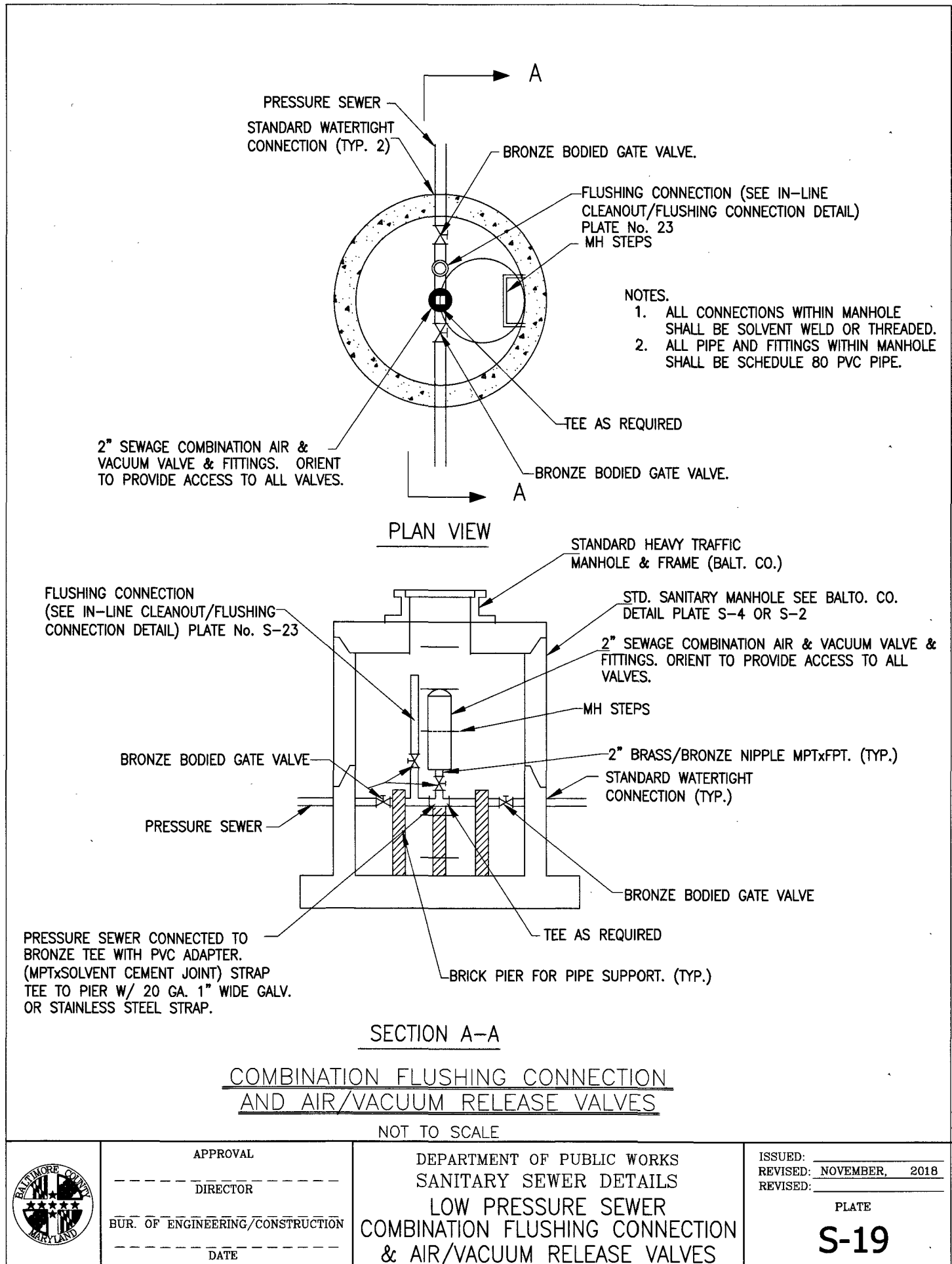
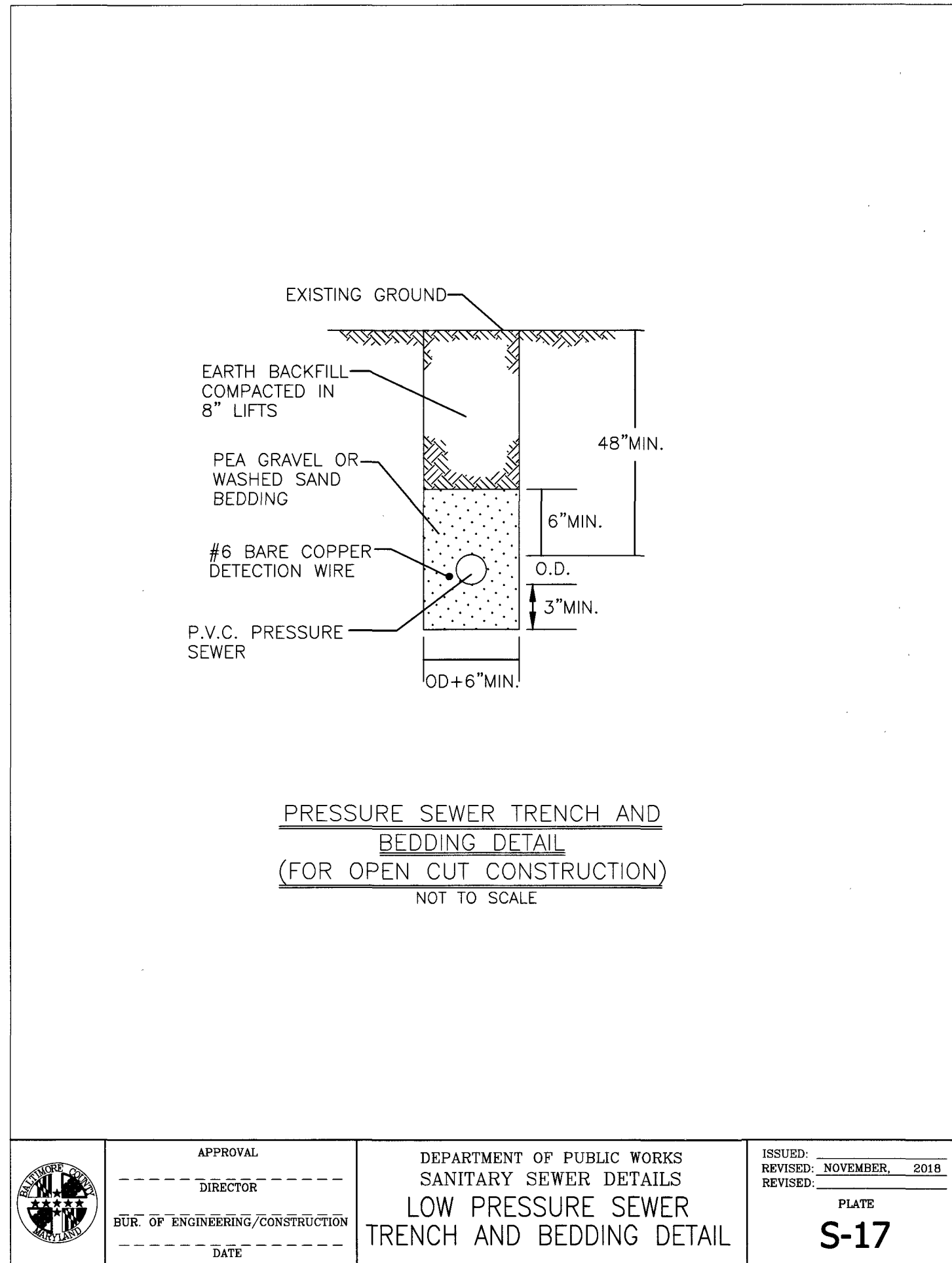
SANITARY SEWER SYSTEM EXTENSION - HEALTH PROJECT

PROFILE - BENIGIES RD & GLADWAY RD STA. 16+00 TO STA. 18+00

BENIGIES ROAD, BOURQUE ROAD AND GLADWAY ROAD - LOW PRESSURE SEWER (LPS)

SUBDIVISION: MIDDLE RIVER

ELECTION DIST. NO.:15C6



GENERAL NOTES

- UTILITY CONTRACTOR IS NOT PERMITTED TO TURN ANY VALVES OFF IN THE EXISTING LOW PRESSURE SEWER SYSTEM. CONTRACTOR MUST CONTACT BUREAU OF UTILITIES, PUMPING AND TREATMENT DIVISION AT 410-887-5210 MINIMUM 24 HOURS PRIOR TO STARTING ANY WORK TO REQUEST VALVE TURN OFF. PROPERTY OWNERS MUST ALSO BE NOTIFIED 24 HOURS BEFORE SHUT OFF. SHUT OFF MUST NOT LAST MORE THAN 4 HOURS. ANY DAMAGE TO THE EXISTING LOW PRESSURE SEWER SYSTEM WILL BE THE RESPONSIBILITY OF THE UTILITY CONTRACTOR TO REPLACE/REPAIR THE DAMAGE AT HIS COST AND UNDER THE DIRECTION OF BALTIMORE COUNTY BUREAU OF UTILITIES.
- PAD LOCKS KEYED TO THE COUNTY SYSTEM ARE TO BE FURNISHED FOR:
 - THE GRINDER PUMP LID
 - THE ALARM SUBPANEL
 - THE MAIN DISCONNECT
- NO MODIFICATIONS OR ALTERATIONS ARE TO BE MADE TO THE GRINDER PUMP OR CASING WITHOUT WRITTEN APPROVAL OF BALTIMORE COUNTY DEPARTMENT OF UTILITIES.
- GRINDER PUMP SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISIONS & NOTE 5 BELOW. SHOP DRAWINGS WILL BE REQUIRED FOR ANY GRINDER PUMP SUPPLIED, SHOWING THAT THE GRINDER PUMP MEETS THE SPECIFICATION & NOTE 5 COMPLETELY.
- ALL GRINDER PUMPS ADDED INTO AN EXISTING LOW PRESSURE SEWER SYSTEM SHALL BE SUPPLIED BY THE SAME MANUFACTURER AS THE EXISTING PUMPS IN THAT SYSTEM.
- CONTRACTOR TO PROVIDE A NON-CORROSIVE SUPPORT SYSTEM (BRACING) FOR ALL VERTICAL PIPING IN ALL PROPOSED MANHOLES. THE SUPPORT SYSTEM (BRACING) SHALL BE FASTENED TO THE INSIDE OF THE MANHOLE WALL WITH NON-CORROSIVE MATERIALS. THE SUPPORT SYSTEM SHALL NOT INTERFERE WITH ACCESS TO THE MANHOLE. THE TYPE OF SUPPORT SYSTEM TO BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. (AICKINSTRUT, FIBERGLASS STRUT SUPPORT SYSTEMS OR APPROVED EQUAL).

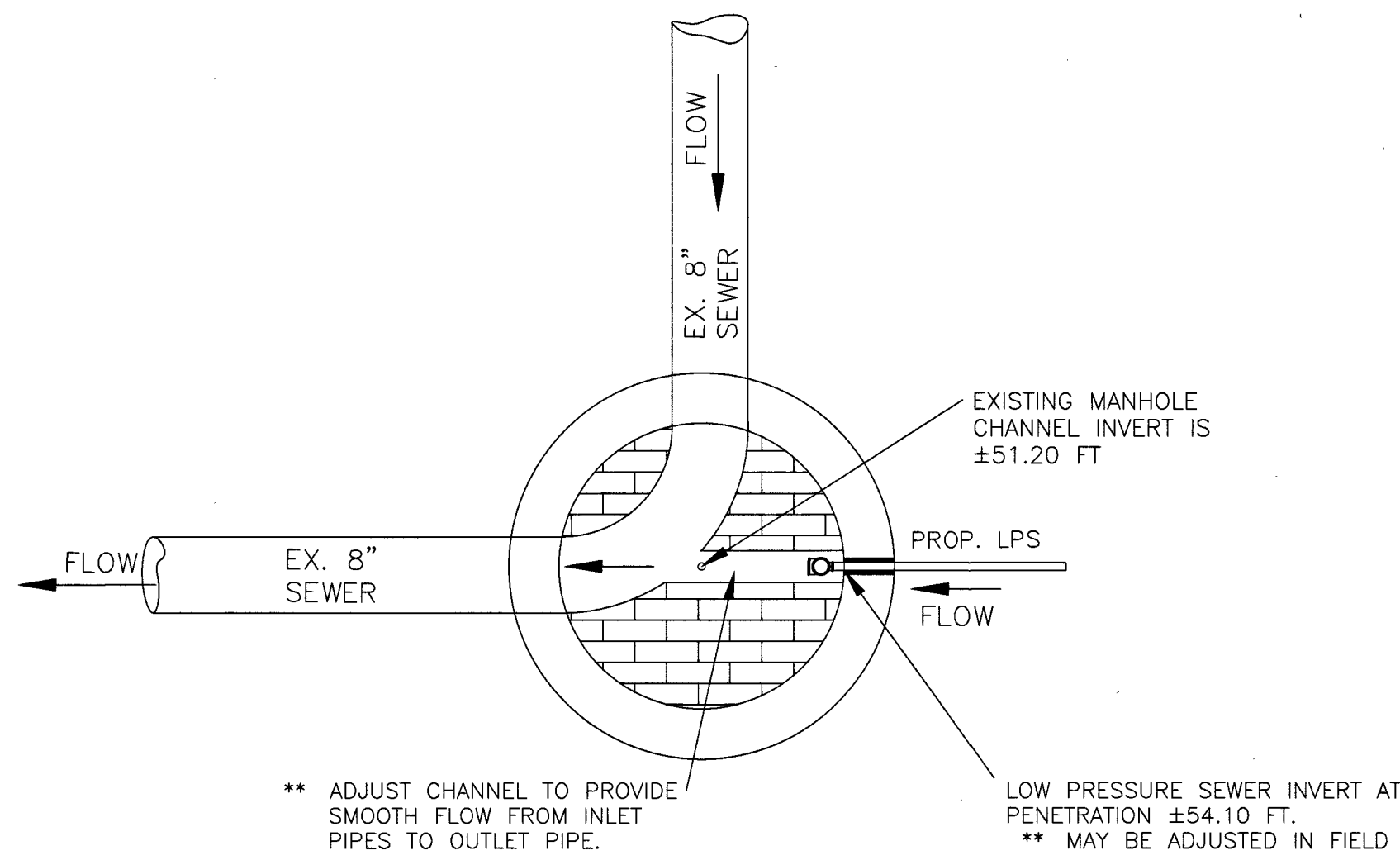
DESIGN AND DRAWING BASED ON MARYLAND COORDINATE SYSTEM:
HORIZONTAL - NAD 83/11
VERTICAL - NAVD 88

	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SH	DRAWING SCALE	DPW AND TRANSPORTATION
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.									
	LICENSE NO. 44077, EXPIRATION DATE 06/09/2023									
	ENGINEER: AMY E. BLEY Bureau of Engineering and Construction 111 West Chesapeake Avenue, Rm. 200 Towson, Maryland 21204. Design Section SEWER Phone /Fax: (410) 887-3781 /4394		DON BY: CAY	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER

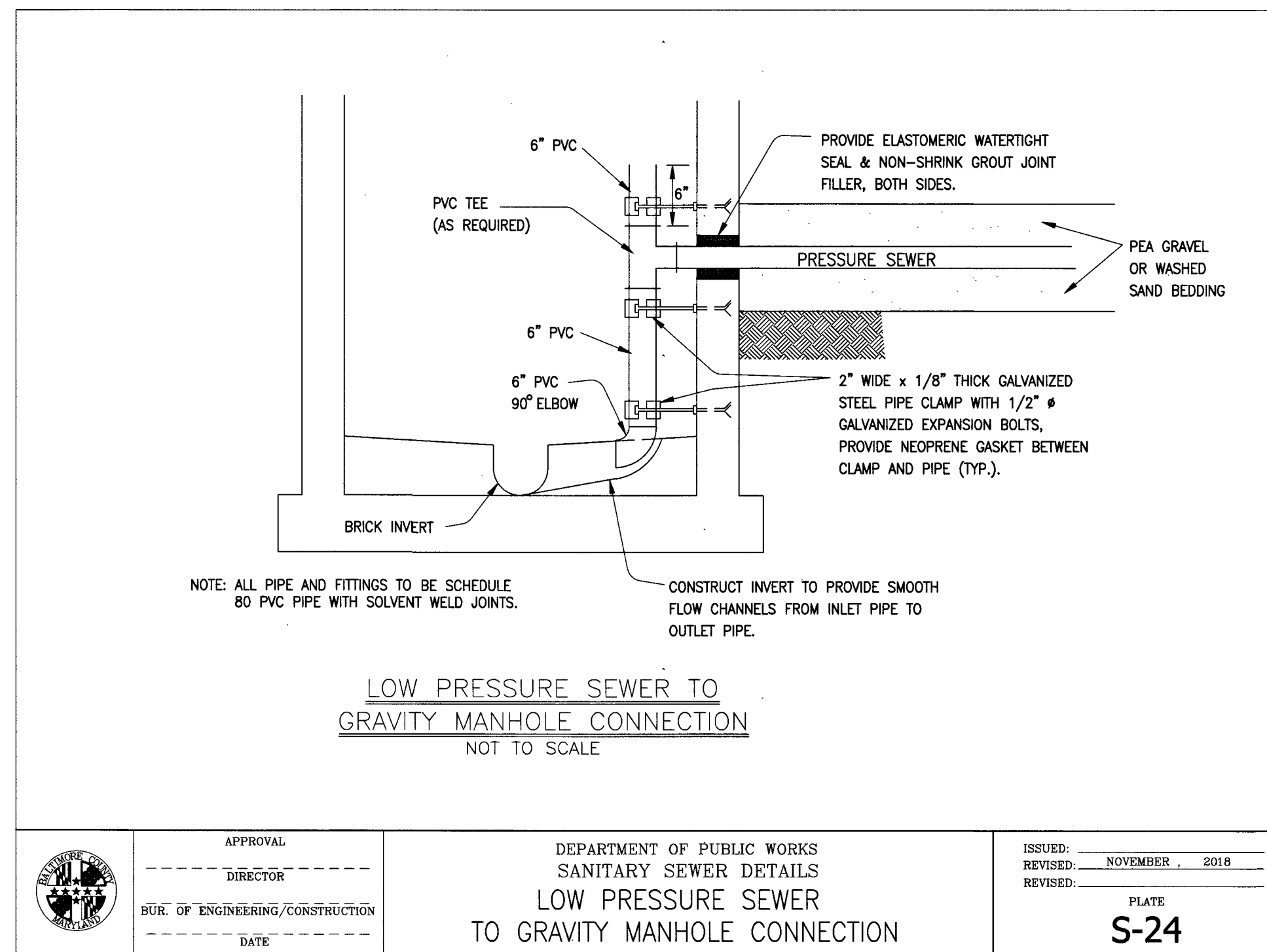
BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION	
SANITARY SEWER SYSTEM EXTENSION - HEALTH PROJECT	
DETAILS	
BENGIES ROAD, BOURQUE ROAD AND GLADWAY ROAD - LOW PRESSURE SEWER (LPS)	
SUBDIVISION: MIDDLE RIVER	
ELECTION DIST. NO.: 15C6	

CONTRACT COMPLETION BOX	
CONTRACTOR:	
DATE COMPLETED:	
INSPECTOR:	
PIPE MATERIAL (Pressure Only):	

SHEET DESIGNATION	CONTRACT NUMBER
LPS-08	22003-SX0
JOB ORDER NUMBER	
231-201-0002-1243	
SHEET 11 OF 13	
DRAWING NUMBER	
2021-2736	
FILE NO.:	1

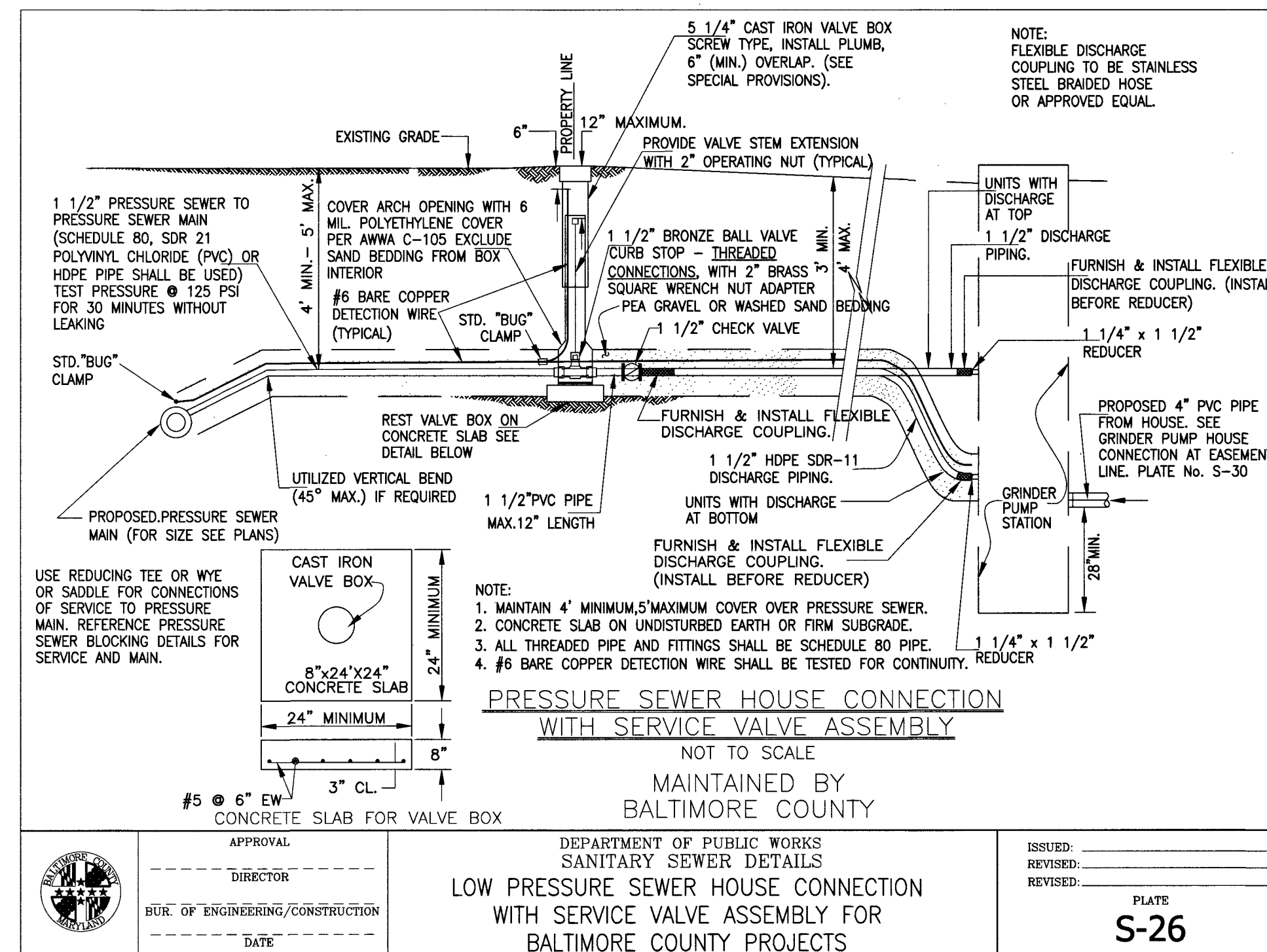


EXISTING MANHOLE #42200 AT STATION 0+00
NOT TO SCALE



LOW PRESSURE SEWER TO
GRAVITY MANHOLE CONNECTION
NOT TO SCALE

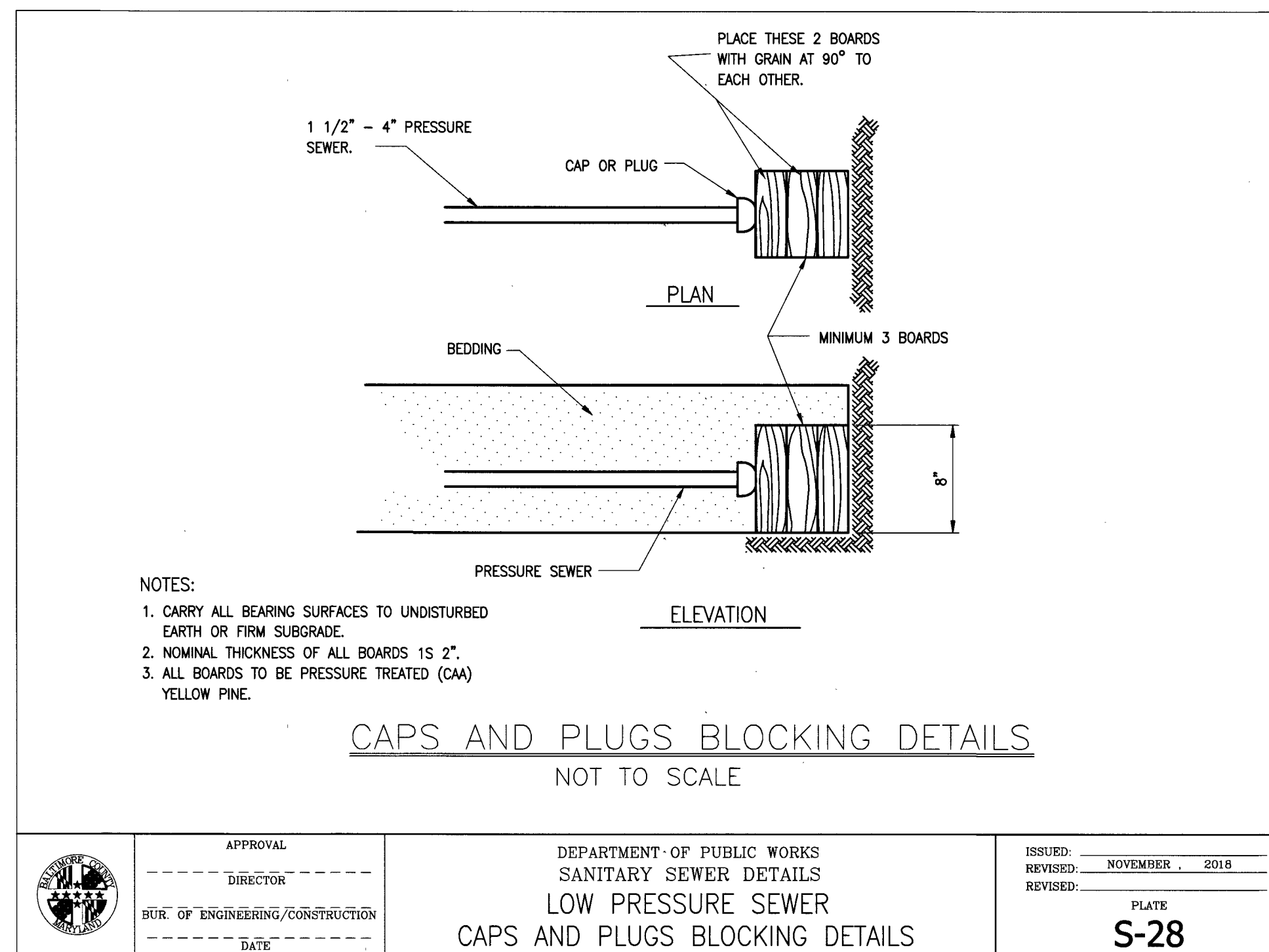
APPROVAL	DIRECTOR	DEPARTMENT OF PUBLIC WORKS SANITARY SEWER DETAILS	ISSUED: NOVEMBER, 2018
BUREAU OF ENGINEERING/CONSTRUCTION	DATE	LOW PRESSURE SEWER TO GRAVITY MANHOLE CONNECTION	PLATE S-24



PRESSURE SEWER HOUSE CONNECTION
WITH SERVICE VALVE ASSEMBLY
NOT TO SCALE
MAINTAINED BY
BALTIMORE COUNTY

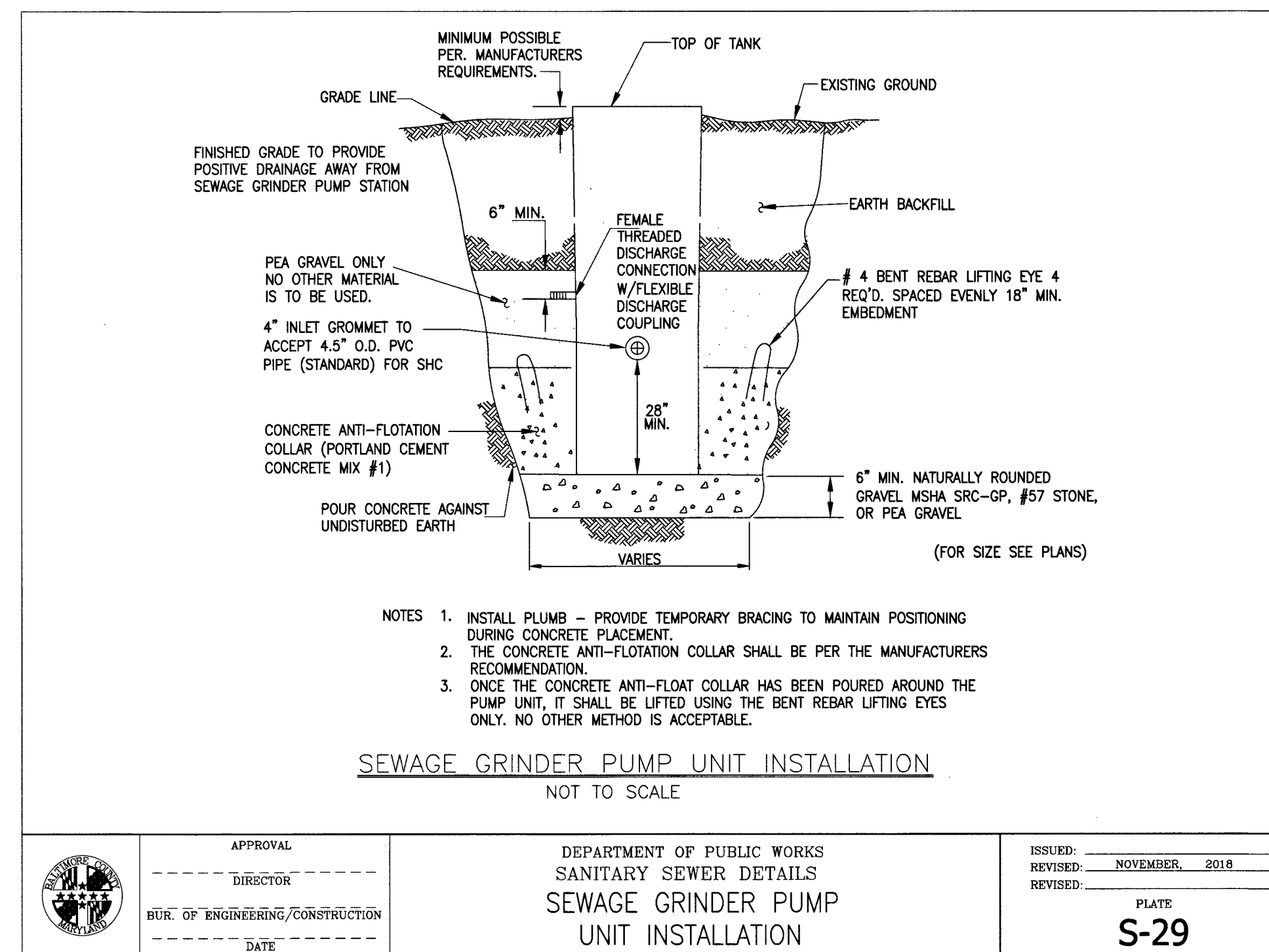
APPROVAL	DIRECTOR	DEPARTMENT OF PUBLIC WORKS SANITARY SEWER DETAILS	ISSUED: NOVEMBER, 2018
BUREAU OF ENGINEERING/CONSTRUCTION	DATE	LOW PRESSURE SEWER HOUSE CONNECTION WITH SERVICE VALVE ASSEMBLY FOR BALTIMORE COUNTY PROJECTS	PLATE S-26

- NOTES:
- UNLESS OTHERWISE APPROVED BY THE ENGINEER:
 - SERVICE LINE TUBING BETWEEN THE PRESSURE SEWER MAIN AND CURB STOP/VALVE BOX SHALL BE INSTALLED WITHOUT SHARP TURNS OR BENDS.
 - SERVICE LINE TUBING BETWEEN THE CURB STOP/VALVE BOX AND THE PROPOSED GRINDER PUMP STATION SHALL BE INSTALLED WITHOUT SHARP TURNS OR BENDS.



CAPS AND PLUGS BLOCKING DETAILS
NOT TO SCALE

APPROVAL	DIRECTOR	DEPARTMENT OF PUBLIC WORKS SANITARY SEWER DETAILS	ISSUED: NOVEMBER, 2018
BUREAU OF ENGINEERING/CONSTRUCTION	DATE	LOW PRESSURE SEWER CAPS AND PLUGS BLOCKING DETAILS	PLATE S-28



SEWAGE GRINDER PUMP UNIT INSTALLATION
NOT TO SCALE

APPROVAL	DIRECTOR	DEPARTMENT OF PUBLIC WORKS SANITARY SEWER DETAILS	ISSUED: NOVEMBER, 2018
BUREAU OF ENGINEERING/CONSTRUCTION	DATE	SEWAGE GRINDER PUMP UNIT INSTALLATION	PLATE S-29

SEAL	PROFESSIONAL CERTIFICATION	AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHIT	DRAWING SCALE	DPW AND TRANSPORTATION		
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.				R.O.W. NO.	ONE	16NBS6 17NBS6 18NBS6	PLAN SCALE: N/A PROFILE SCALE: N/A	SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES		
	ENGINEER: AMY E. BLEY Bureau of Engineering and Construction 111 West Chesapeake Avenue, Rm. 200 Towson, Maryland 21204.	DGN BY: CAY	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER	BUR. OF ENGINEERING & CONSTRUCTION
	Design Section SEWER Phone /Fax: (410) 887-3781 /4394	DWN BY: CAY	REVIEWED BY:								
	DATE: 10/4/22	CHD BY: PCB	DATE REVIEWED:								

SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION

SANITARY SEWER SYSTEM EXTENSION - HEALTH PROJECT

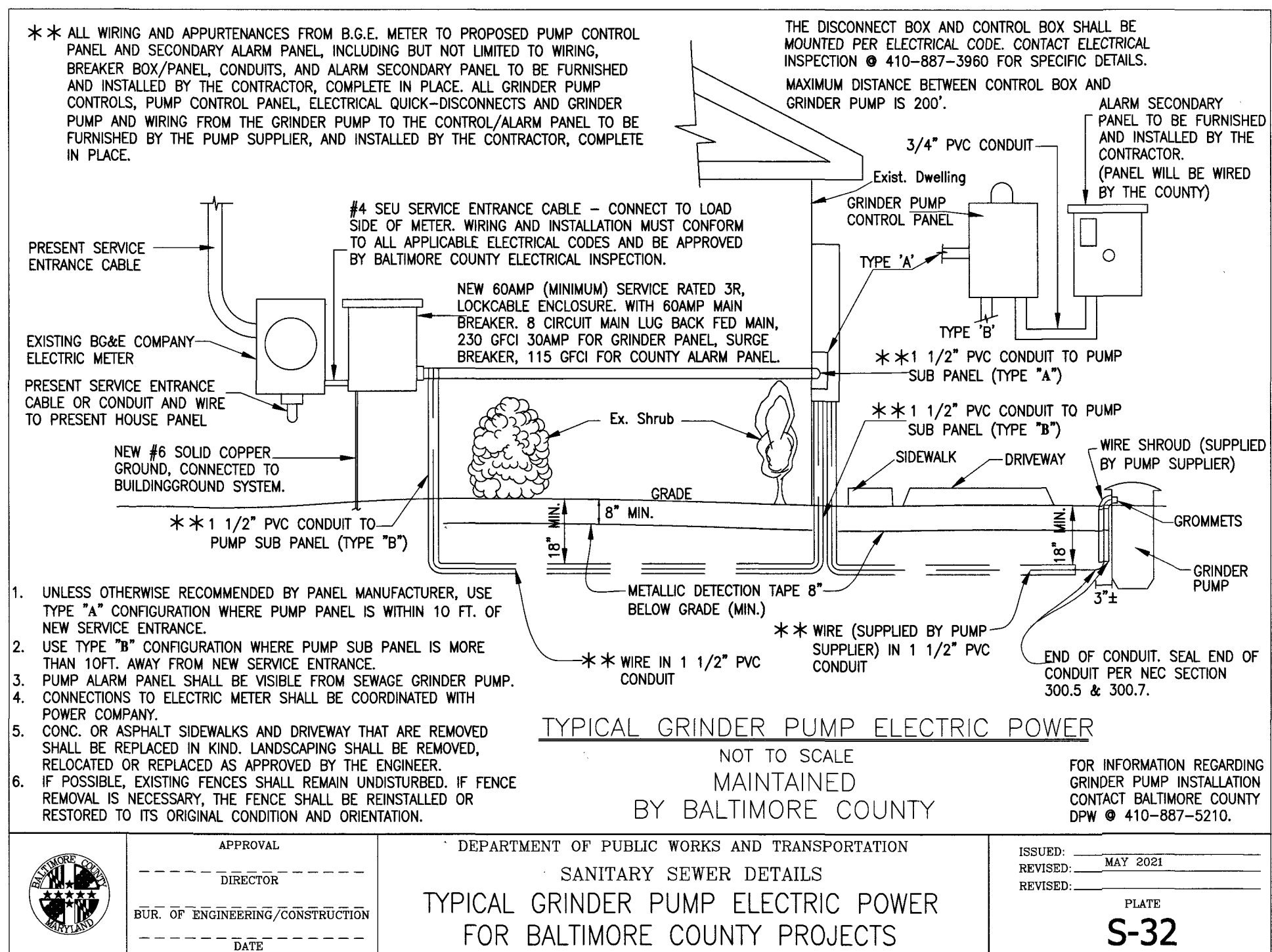
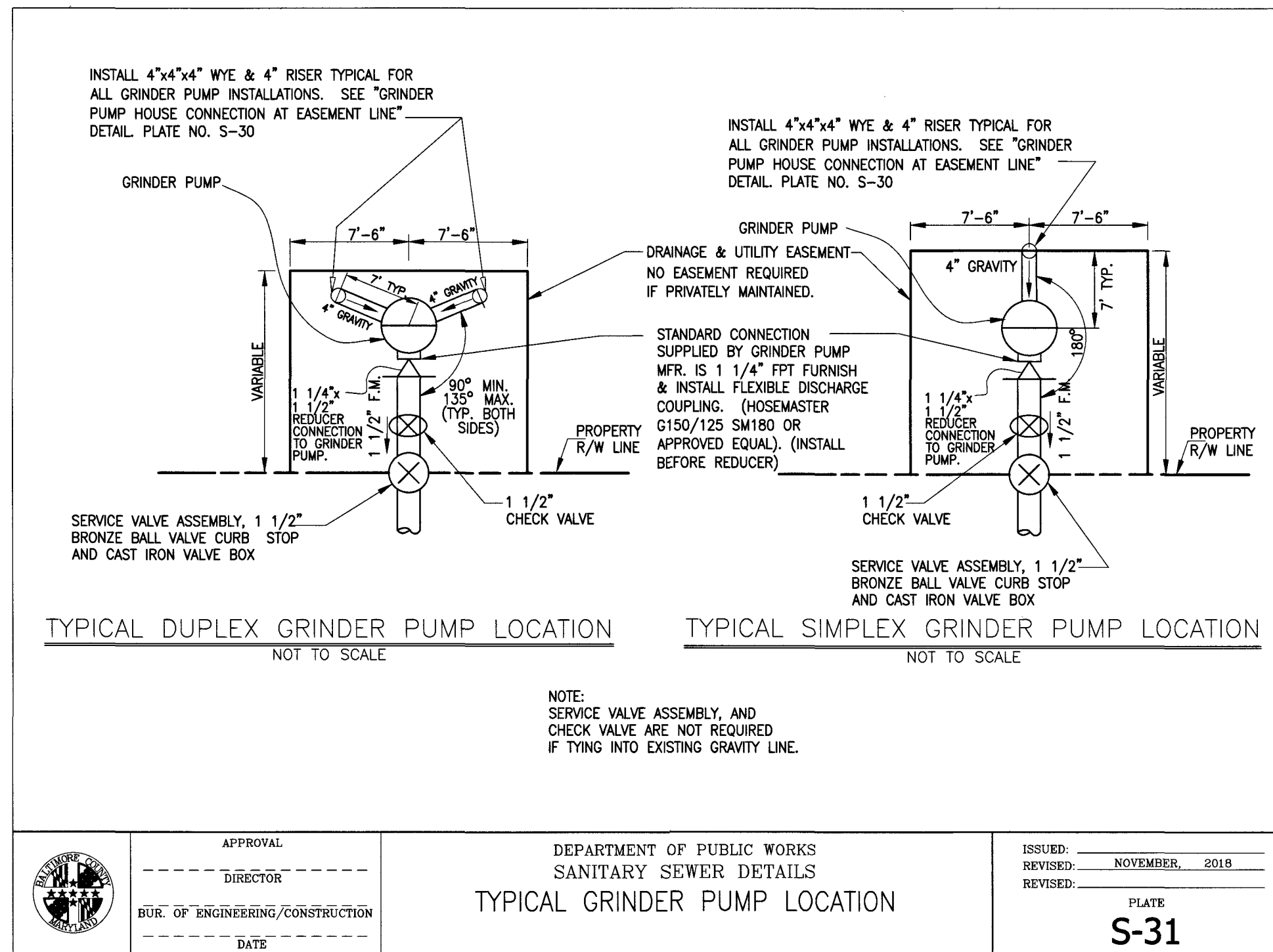
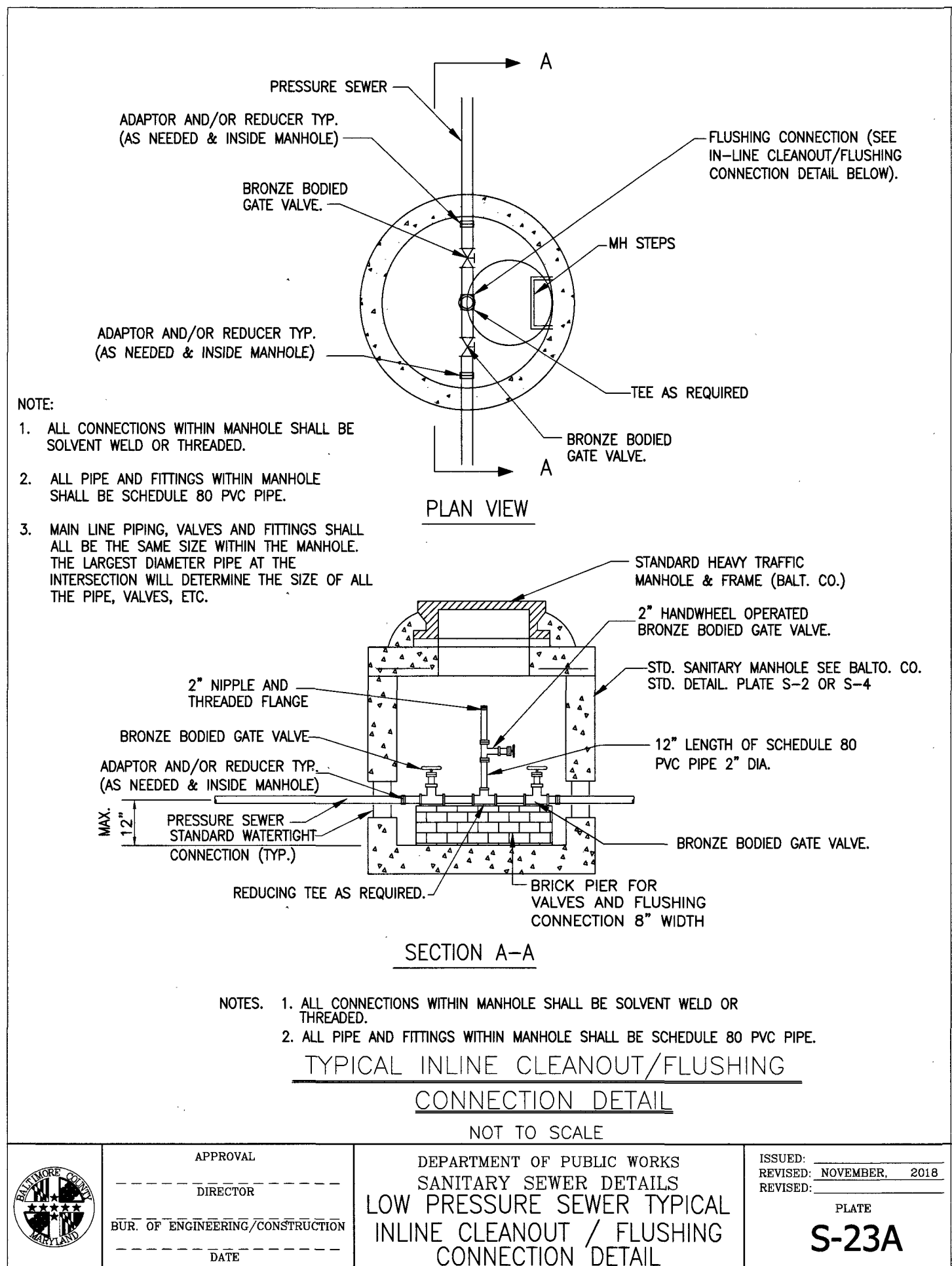
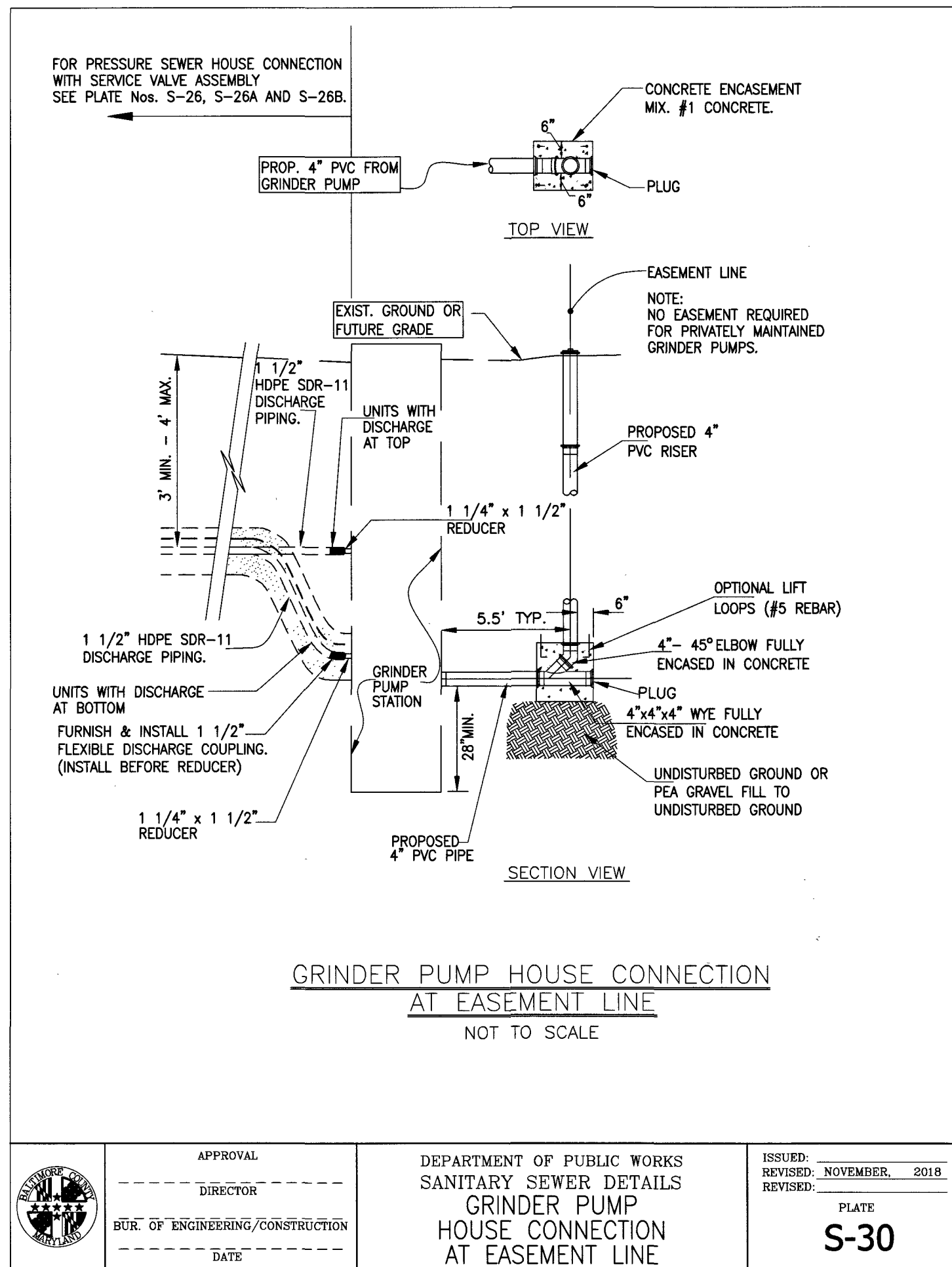
DETAILS (CONT.)

BENGIES ROAD, BOURQUE ROAD AND GLADWAY ROAD - LOW PRESSURE SEWER (LPS)

SUBDIVISION: MIDDLE RIVER

ELECTION DIST. NO.: 15C8

CONTRACT COMPLETION BOX	
CONTRACTOR: _____	
DATE COMPLETED: _____	
INSPECTOR: _____	
PIPE MATERIAL (Pressure Only): _____	
SHEET DESIGNATION	CONTRACT NUMBER
LPS-09	22003-SX0
JOB ORDER NUMBER	
231-201-0002-1243	
SHEET 12 OF 13	
DRAWING NUMBER	
2021-2737	
FILE NO.: 1	



	PROFESSIONAL CERTIFICATION		AS-BUILT / REVISION	BY	DATE	P.W.A. NO.	KEY SHEET	POSITION SHI	DRAWING SCALE	DPW AND TRANSPORTATION	
	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.								PLAN SCALE: 1"=30'	SEE DRAWING 2021-2726 FOR ORIGINAL SIGNATURES	
	ENGINEER: AMY E. BLEY Bureau of Engineering and Construction 111 West Chesapeake Avenue, Rm. 200 Towson, Maryland 21204. Design Section SEWER Phone /Fax: (410) 887-3781 / 4394		DGN BY: CAY	BUREAU OF ENGINEERING AND CONSTRUCTION	TRAFFIC	HIGHWAYS	STRUCTURES	STORM DRAINS	SEWER	WATER	FIELD ENGINEER
	DATE: 10/4/22		DWN BY: CAY	REVIEWED BY:							

CONTRACT COMPLETION BOX	
CONTRACTOR:	
DATE COMPLETED:	
INSPECTOR:	
PIPE MATERIAL (Pressure Only):	
SHEET DESIGNATION	CONTRACT NUMBER
LPS-10	22003-SX0
JOB ORDER NUMBER	
231-201-0002-1243	
SHEET 13 OF 13	
DRAWING NUMBER	
2021-2738	
FILE NO.: 1	

DESIGN AND DRAWING BASED ON MARYLAND COORDINATE SYSTEM:
HORIZONTAL - NAD 83/11
VERTICAL - NAVD 88

BALTIMORE COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION - BUREAU OF ENGINEERING AND CONSTRUCTION

SANITARY SEWER SYSTEM EXTENSION - HEALTH PROJECT

DETAILS (CONT.)

BENGIES ROAD, BOURQUE ROAD AND GLADWAY ROAD - LOW PRESSURE SEWER (LPS)

SUBDIVISION: MIDDLE RIVER

ELECTION DIST. NO.: 15C6