

TYPE OF BUILDING: COMMERCIAL
 NUMBER OF PARCELS: 5
 WATER HOUSE CONNECTIONS: 2
 SEWER HOUSE CONNECTIONS: 5
 DRAINAGE AREA: PATAPSCO

VICINITY MAP

SCALE: 1"=600'

TIBER ALLEY WATER & SEWER CONTRACT NO. 10-4998 HOWARD COUNTY, MARYLAND



BILL OF MATERIALS - SEWER			
ITEM	QUANTITY	AS-BUILT QUANTITY	MANUFACTURER/SUPPLIER
SEWER			
4" PANELLA CLEAN OUT		4	FOX FOUNDRY
4"x4" CONCRETE CLEAN OUT BLOCK		4	PRISM PRECAST
4" GASKET PVC SEWER FITTING - SDR35		14	GPK
4" SEWER PIPE - SDR26		98 LF	LM EAGLE/NORTH AMERICAN PIPE CORP.
6" GASKET PVC SEWER FITTING - SDR35		9	GPK
8" GASKET PVD SEWER FITTING - SDR35		15	GPK
8" FLEXIBLE COUPLING - CLAY TO PVC		2	FERNCO
8" FLEXIBLE COUPLING - CONCRETE TO PVC		2	FERNCO
8" SEWER PIPE - SDR35	222 LF	252 LF	LM EAGLE/NORTH AMERICAN PIPE CORP.
48" MANHOLE	3		ATLANTIC PRECAST
48" DOGHOUSE MANHOLE	1		ATLANTIC PRECAST
WATER			
3/4" C44 BRASS COUPLING NL - QJxQJ		2	FORD METER BOX
1" C44 BRASS COUPLING NL - QJxQJ		2	FORD METER BOX
1" C84 BRASS COUPLING NL - MIPxGJ		2	FORD METER BOX
1" C84 BRASS COUPLING NL MIPxQJ		2	FORD METER BOX
1"x3/4" C84 BRASS COUPLING NL MIPxQJ		2	FORD METER BOX
1" FB1600 CORPORATION STOP BALL STYLE W/FIP		2	FORD METER BOX
4" SERIES 2500 RW GATE VALVES - OPEN RIGHT		2	AMERICAN FLOW CONTROL
4" SERIES 2000 PVC MEGA LUGS		8	EBAA IRON
4" FUSION BONDED EPOXY COATED MJ - SLEEVE		2	TYLER UNION
6" SERIES 2500 RW GATE VALVES - OPEN RIGHT		2	AMERICAN FLOW CONTROL
6" SERIES 2000 PVC MEGA LUGS		11	EBAA IRON
6" BELL JOINT RESTRAINER - UFR 1390		4	FORD METER BOX
6" FS1 SINGLE BAND S.S. REPAIR CLAMP		2	FORD METER BOX
6" C900 PVC PIPE - DR-14		100 LF	LM EAGLE/NORTH AMERICAN PIPE CORP.
6" HYMAX SERIES 2000 REPAIR COUPLING		2	KRAUSZ USA
6" FUSION BONDED EPOXY COATED MJ - SLEEVE		1	TYLER UNION
6" TAR COATED, CEMENT LINED MJ - SLEEVE		1	TYLER UNION
6"x1" 202NS NYLON COATED SADDLE W/STAINLESS STRAP		2	ROMAC
6"x4" FUSION BONDED EPOXY COATED MJ - TEE		2	TYLER UNION
40"-51" SLIP TYPE VALVE BOX		4	CAPITOL FOUNDRY
NAME OF UTILITY CONTRACTOR: WF WILSON & SONS, INC.			
AS-BUILT DATE: MAY 2017			

DRAWING/SHEET INDEX		
DWG.	SHEET	DESCRIPTION
G-1	1	VICINITY MAP, TITLE, AND SHEET INDEX
G-2	2	GENERAL NOTES, SEQUENCE OF CONSTRUCTION, ABBREVIATIONS, AND LEGEND
C-1	3	WATER AND SEWER PLAN
C-2	4	BORING AND TEST PIT LOCATION PLAN
C-3	5	WATER AND SEWER PROFILES

THE DRAWING IN THIS SET ARE RECORD DRAWINGS. THEY ARE CONSTRUCTION CONTRACT DRAWINGS WHICH HAVE BEEN REVISED ON THE BASIS OF AVAILABLE FIELD INFORMATION RECORDED BY OTHERS AND/OR BY WRA (SEWER MAIN) AND HOWARD COUNTY (WATER MAIN) DURING CONSTRUCTION OF THE CONTRACT.

AS-BUILT

PURPOSE STATEMENT:


THIS PROJECT WILL INSTALL 8" SANITARY SEWER AND A 4" WATER MAIN IN TIBER ALLEY AND PROVIDE NEW WATER AND SEWER CONNECTIONS TO THE BUSINESSES WITHIN TIBER ALLEY.

DWG. G-1

AS-BUILT REPLACEMENT SHEET 5/18

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND. 		PREPARED BY: Whitman, Reardon & Associates, LLP 801 South Caroline Street, Baltimore, Maryland 21231		DES: LES DRN: LES CHK: MB DATE: 1/13/17		VICINITY MAP, TITLE, BILL OF MATERIALS AND SHEET INDEX		TIBER ALLEY WATER AND SEWER CONTRACT NO. 10-4998		SCALE AS SHOWN SHEET 1 OF 05	
DIRECTOR, PUBLIC WORKS CHIEF, BUREAU OF UTILITIES		CHIEF, BUREAU OF ENGINEERING CHIEF, UTILITY DESIGN DIVISION		STATE OF MARYLAND PROFESSIONAL ENGINEER		HOCO AS-BUILTS - WATER WRA AS-BUILTS - SEWER		ELECTION DISTRICT 4		HOWARD COUNTY, MARYLAND	

GENERAL NOTES:

- APPROXIMATE LOCATIONS OF EXISTING SEWERS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING SEWERS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED IN OCTOBER, 2016 BY WRA. UTILITY LOCATE WAS PERFORMED IN NOVEMBER, 2016 BY SOFTDIG.
- HORIZONTAL AND VERTICAL SURVEY CONTROLS:
ALL HORIZONTAL CONTROLS ARE BASED ON NAD83.
ALL VERTICAL CONTROLS ARE BASED ON NAVD88.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- FOR DETAILS NOT SHOWN ON THE DRAWING, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- WHERE TEST HOLES HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL  AT THE LOCATIONS OF THE TEST HOLES.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

AT&T.....	1-800-252-1133
BGE (CONSTRUCTION SERVICES).....	410-637-8713
BGE (EMERGENCY).....	410-685-0123
BUREAU OF UTILITIES.....	410-313-4900
COLONIAL PIPELINE CO.....	410-795-1390
MISS UTILITY.....	1-800-257-7777
STATE HIGHWAY ADMINISTRATION.....	410-531-5533
VERIZON.....	1-800-743-0033
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410)-313-7450 AT LEAST FIVE WORKING DAYS BEFORE OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(A) OF THE HOWARD COUNTY CODE.
- REFER TO UTILITY PLAN SHEETS FOR SOIL BORING AND AUGER LOCATIONS AND DRAWING C-3 FOR SOIL BORING LOGS AND AUGER DATA.
- ANY COMPONENTS DESIGNATED AS FUTURE, ARE NOT IN CONTRACT.

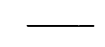






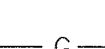







SEWER NOTES:

- ALL PROPOSED SANITARY SEWER SHALL BE C900 POLYVINYL CHLORIDE PIPE, DR 18.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- MANHOLES SHALL HAVE WATERTIGHT FRAMES AND COVERS PER HOWARD COUNTY DETAIL G-5.52. SET TOP OF FROM 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- REFER TO HOWARD COUNTY STANDARD DETAIL G-2.12 FOR PIPE TRENCH REQUIREMENTS. UTILITY TRENCH REPAIR TO BE PER DETAIL G-4.01. ANY CURB AND GUTTER DISTURBED, TO BE REPLACED IN-KIND.
- TRACER WIRES AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL PROPOSED SANITARY SEWER IN ACCORDANCE WITH SECTION 905 OF THE HOWARD COUNTY DESIGN MANUAL VOLUME IV.
- INSTALL SEWER HOUSE CONNECTION PER HOWARD COUNTY STANDARD DETAILS S-2.11, S-2.12 AND CLEANOUT PER S-2.22.
- PROVIDE AND INSTALL MANHOLES PER SECTION 962 OF THE HOWARD COUNTY DESIGN MANUAL VOLUME IV.

SEWER SEQUENCE OF CONSTRUCTION

- SET UP SIGNAGE, CONES AND BARRICADES AS NECESSARY FOR THE WORK IN THE TIBER ALLEY AND ALONG MARYLAND AVENUE.
- EXCAVATE EXISTING MH-7503 TO ESTABLISH THE CONNECTION POINT TO THE NEW SEWER.
- SET UP BYPASS PUMPING.
- INSTALL THE NEW SEWER.
- SET UP NEW SEWER HOUSE CONNECTIONS AND CLEANOUTS.
- RESTORE ALL SURFACES, INCLUDING PAVEMENT MILL AND OVERLAY.

LEGEND

-  BUILDING
-  EDGE OF ROAD
-  SIDEWALK
-  EXISTING SEWER
-  EXISTING MANHOLE
-  EXISTING SEWER LATERAL
-  EXISTING ROOF LEADER
-  EXISTING GAS LINE
-  EXISTING GAS METER
-  EXISTING GAS VALVE
-  EXISTING WATER LINE
-  EXISTING WATER VALVE
-  PROPOSED SEWER
-  PROPOSED MANHOLE
-  PROPOSED SEWER LATERAL

ABBREVIATIONS

AP	AUGER PIT	MGD	MILLION GALLONS PER DAY
B	BORING	N.I.C.	NOT IN CONTRACT
E	ELECTRIC	S	SEWER
EX.	EXISTING	SHC	SEWER HOUSE CONNECTION
FF	FINISHED FLOOR	TH	TEST HOLE
FUT	FUTURE	TYP	TYPICAL
G	GAS	W	WATER
INV	INVERT		

WATER NOTES:

- ALL WATER MAINS SHALL BE C900 PVC DR-14 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TREES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- TRACER WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
- FOR PVC WATER MAINS, ALL RECORDS FOR THE QUALITY CONTROL AND QUALIFICATION TEST REQUIREMENTS NOTED IN SECTION 5.1 OF THE AWWA STANDARD C900 FOR PVC PRESSURE PIPES SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATIONS OR SHOP DRAWINGS PRIOR TO APPROVAL OF THE MATERIAL FOR USE.
- THE TEST RECORDS SHALL BE FOR THE PIPE TO BE INSTALLED UNDER THIS CONTRACT. ALL PVC PIPE SHALL CONTAIN MARKINGS TO ALLOW CROSS REFERENCING OF THE PIPE SUPPLIED TO THE TEST RECORDS RECEIVED.
- UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS, SACRIFICIAL ANODES SHALL BE INSTALLED ON ALL VALVES AND METALLIC FITTINGS USED WITH PVC WATER MAINS IN ACCORDANCE WITH VOLUME IV STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION. 17 POUND MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSSES. 12 POUND ZINC ANODES SHALL BE INSTALLED ON ALL STAINLESS STEEL FITTINGS AND SADDLES USED WITH PVC MAINS. ALL "TEES" USED WITH PVC MAINS SHALL BE DUCTILE IRON.
- PROPER ASSEMBLY OF GASKETED PVC PIPE JOINTS: THE MANUFACTURER'S INSERTION LINE OF GASKETED PVC PIPE JOINTS INDICATES THE MAXIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. AFTER ASSEMBLY OF THE JOINT, THE INSERTION LINE SHALL REMAIN VISIBLE. DUAL INSERTION LINES ON GASKETED PVC PIPE INDICATE THE MAXIMUM AND MINIMUM DEPTH OF INSERTION OF THE SPIGOT INTO THE BELL. THE CONTRACTOR SHALL NOT OVER INSERT OR OVER HOME THE SPIGOT INTO THE BELL OF THE PVC PIPE.
- ALL CHANGES IN HORIZONTAL OR VERTICAL DIRECTION OF PVC WATER PIPE SHALL BE MADE WITH STANDARD BENDS, 5-DEGREE SWEEPS OR HIGH DEFLECTION (HD) COUPLINGS. NO BENDING OF THE PIPE OR DEFLECTING OF PVC PIPE JOINTS IS PERMITTED. WHERE HIGH DEFLECTION COUPLINGS OR 5-DEGREE SWEEPS ARE PERMITTED, THE CONTRACTOR SHALL PROVIDE ONE FULL PIPE LENGTH (20-FOOT LONG) ON EITHER SIDE OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP. THE CONTRACTOR SHALL USE A VIBRATORY PLATE COMPACTOR OR OTHER APPROVED MEANS TO THOROUGHLY COMPACT THE #57 STONE ON BOTH SIDES OF THE HIGH DEFLECTION COUPLING OR 5-DEGREE SWEEP, TAKING CARE NOT TO USE COMPACTION EQUIPMENT DIRECTLY OVER THE FITTING. PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (1 1/2- DEGREE ON EITHER END OF THE COUPLING), SHALL BE RATED FOR A MINIMUM 200 PSI MEETING THE REQUIREMENTS OF AWWA C900, SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL. FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DR 18 MEETING THE REQUIREMENTS OF AWWA C900 AND SHALL BE MULTI FITTINGS (IPEX) BLUE BRUTE DR18 OR EQUAL.
- WHEN PVC HIGH DEFLECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWWA C-900 PVC PIPELINES, THE CONTRACTOR SHALL INSTALL DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPIGOTS OR PLAIN ENDS INTO THE PUSH ON BELL JOINT ON BOTH SIDES OF THE HIGH DEFLECTION COUPLINGS AND 5-DEGREE SWEEPS. BELL STOPS SHALL BE PLACED AT THE PROPER INSERTION LINE FOR THE FITTING. THE BELL STOP SHALL BE MANUFACTURED OF DUCTILE IRON AND INCORPORATES AN EXPANSION RETENTION SPRING TO ALLOW FOR PIPE EXPANSION AND CONTRACTION. THE BELL STOPS SHALL BE SERIES 5000 MEGA-STOP, AS MANUFACTURED BY EBAA IRON, INC. OR APPROVED EQUAL.

WATER SEQUENCE OF CONSTRUCTION

- NOTIFY THE COUNTY TEN (10) BUSINESS DAYS PRIOR TO THE DESIRED START OF WORK. THE COUNTY WILL COORDINATE CONSTRUCTION WITH 8061 TIBER ALLEY (WAGON WHEEL), OTHER OWNERS ON TIBER ALLEY, 3720 MARYLAND AVE (ANTIQUA DEPOT), THE B&O MUSEUM, AND OTHERS THAT ARE ANTICIPATED TO BE AFFECTED BY CONSTRUCTION AND WATER OUTAGES.
- NOTIFY OWNERS AFFECTED BY CONSTRUCTION AND WATER SHUTOFFS IN WRITING (DOORKNOB HANGERS PRINTED ON CARD STOCK) PRIOR TO START OF WORK, A MINIMUM 48 HOURS IN ADVANCE.
- SETUP MAINTENANCE AND PROTECTION OF TRAFFIC DEVICES AS REQUIRED.
- SHUTOFF EXISTING 2"W TO 8061 TIBER ALLEY. INSTALL THE NEW 4"W FROM 8069 TIBER ALLEY TO MARYLAND AVENUE, DEMOLISHING THE 2"W TO THE LIMITS SHOWN. INSTALL AND CLOSE THE NEW 4"W AND 2"W SHUTOFF VALVES.
- CLOSE THE TWO (2) 6" VALVES AND 4" VALVE IN MARYLAND AVE TO ISOLATE THE EXISTING 6"W IN MARYLAND AVE. INSTALL THE NEW 6"W, 6"x4" TEE, AND 4" SHUTOFF VALVE IN MARYLAND AVE (OR TAPPING SLEEVE AND VALVE), AND CONNECT TO THE NEW 4"W.
- PRESSURE TEST THE 4"W AND 6"W AT 150PSI. UPON SUCCESSFUL COMPLETION OF TESTING, DISINFECT THE WATER MAIN.
- MAKE CONNECTIONS TO THE EXISTING CAPPED 4"W AT 8069 TIBER ALLEY (BY OTHERS) AND THE EXISTING 2" WHC TO 8061 TIBER ALLEY. TURN ON SERVICE TO 8061 TIBER ALLEY.
- ABANDON THE EXISTING WHC TO 8069 TIBER ALLEY ON ST. PAUL'S STREET.
- RESTORE SITE AS SPECIFIED.

SHEET KEY NOTES

- RESTORE PAVEMENT PER HOWARD COUNTY STANDARD DETAIL G-4.01.
- MILL AND REPAVE 2" MINIMUM TO THE APPROXIMATE EXTENTS SHOWN AND, AT A MINIMUM, TO THE OUTER EDGE OF THE PAVEMENT PATCH COMPLETED FOR THE 8" TIBER ALLEY SEWER MAIN.
- DEMOLISH EXISTING CONCRETE SIDEWALK, TRANSITION AND FLUSH CURB, AND 6" TRENCH DRAIN GUTTER TO NEAREST EXPANSION JOINTS AS NECESSARY TO COMPLETE THE 4"W AND 6"W. RESTORE CONCRETE SIDEWALK AND TRENCH DRAIN GUTTER TO NEAREST EXPANSION JOINTS PER HOWARD COUNTY STANDARD DETAIL R-3.05 AND TO MATCH EXISTING, RESPECTIVELY. REFER TO HOWARD COUNTY DESIGN MANUAL VOL. IV, SECTIONS 602 AND 603 FOR CONCRETE CURB/GUTTER AND SIDEWALK SPECIFICATIONS.
- THE ABANDONMENT OF THE EXISTING WATER SERVICE CONNECTION SHALL BE AS SPECIFIED UNDER SECTION 1015.03 OF THE STANDARD SPECIFICATIONS. REMOVAL OF THE EXISTING CORPORATION STOP OR TAPPING SADDLE REQUIRES SCHEDULING A SHUTDOWN OF THE WATERMAIN WITH THE BUREAU OF UTILITIES. THE EXISTING CORPORATION STOP SHALL BE REMOVED FROM THE WATER MAIN AND THE PIPE REPAIRED WITH A FULL-CIRCLE SST REPAIR CLAMP BY FORD METER (FS2 SERIES), MUELLER (MODEL 550 SERIES), OR ROMAC (MODEL SS2).
- REMOVE EXISTING SHC FOR 8059 TIBER ALLEY (BEAN HOLLOW). PERMANENTLY SEAL WITH MECHANICAL PLUG INSERTED A MINIMUM 12" INTO THE END OF THE PIPELINE AND FILL REMAINING SPACE WITH NON-SHRINK GROUT.

AS-BUILT

MANHOLE AND SEWER HOUSE CONNECTION COORDINATES		
DESCRIPTION	NORTHING	EASTING
MH 7503-A	583,075.29	1,370,298.89
MH 7503-C	583,034.24	1,370,295.04
MH 7503-D	582,999.44	1,370,207.12
MH 7503-E	582,992.32	1,370,150.21
MH FUT. 1	582,964.94	1,370,217.17
MH FUT. 2	582,952.32	1,370,175.88
8055 (DISCOVERIES) CONNECTION	583,022.07	1,370,263.37
8059 (BEAN HOLLOW) CONNECTION	583,008.53	1,370,229.18
8069 (GREAT PANES) CONNECTION	582,994.98	1,370,168.83
8061 (WAGON WHEEL) CONNECTION	582,992.34	1,370,153.17
8069 (RUMOR MILL) CONNECTION	582,991.29	1,370,147.95

"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. 24478, EXPIRATION DATE: 10/28/17."

PREPARED BY :



DES:	LES				
DRN:	LES				
CHK:	MB	HOCO	AS-BUILTS - WATER	5/18	
DATE:	1/13/17	WRA	AS-BUILTS - SEWER	5/17	
BY:	NO.		REVISION	DATE	

GENERAL NOTES, SEQUENCE OF CONSTRUCTION, ABBREVIATIONS, LEGEND AND COORDINATES TABLE

AS-BUILT REPLACEMENT SHEET 5/18

TIBER ALLEY WATER AND SEWER

CONTRACT NO. 10-4998

600' SCALE MAP NO. 25A BLOCK NO. B1

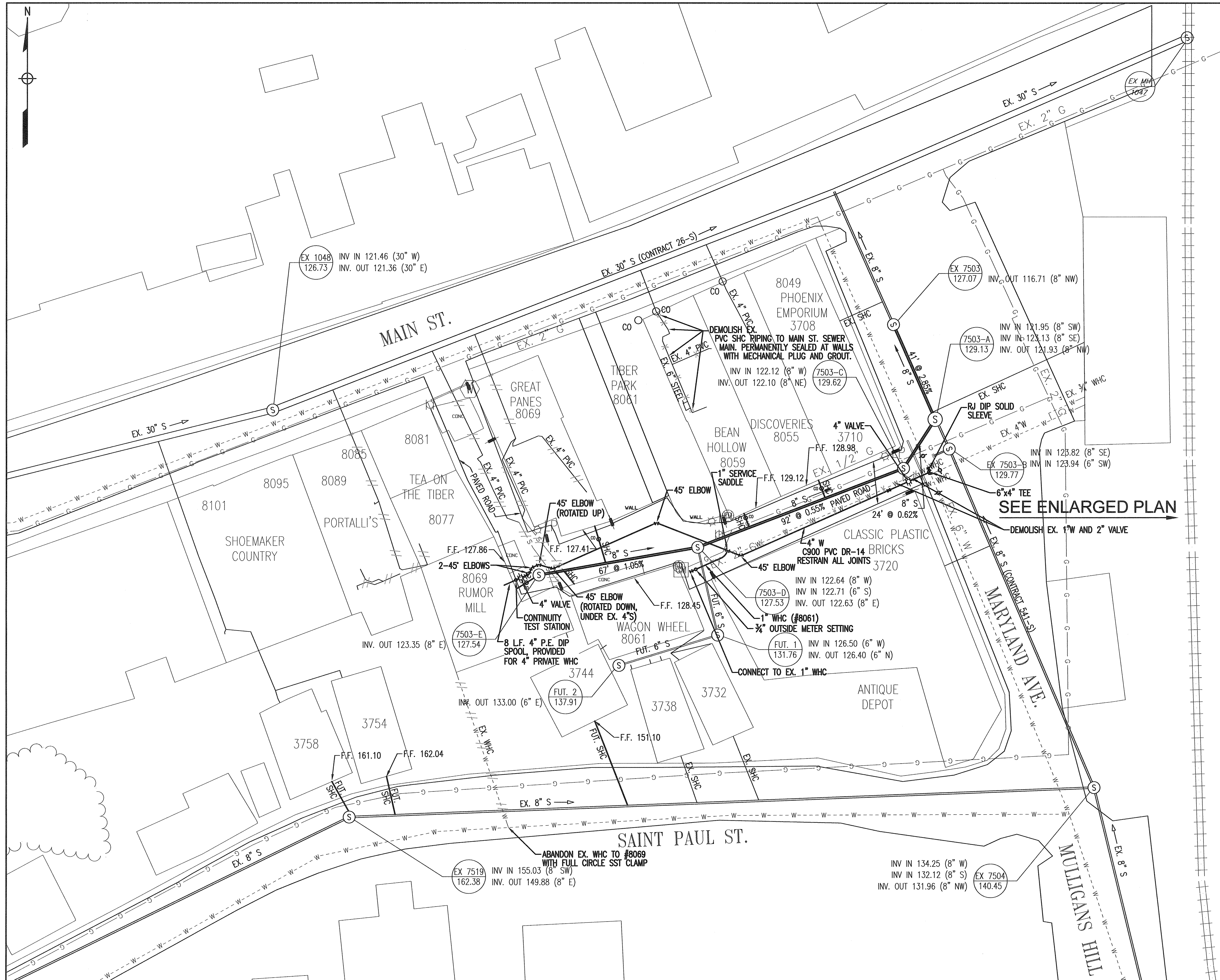
ELECTION DISTRICT 4

HOWARD COUNTY, MARYLAND

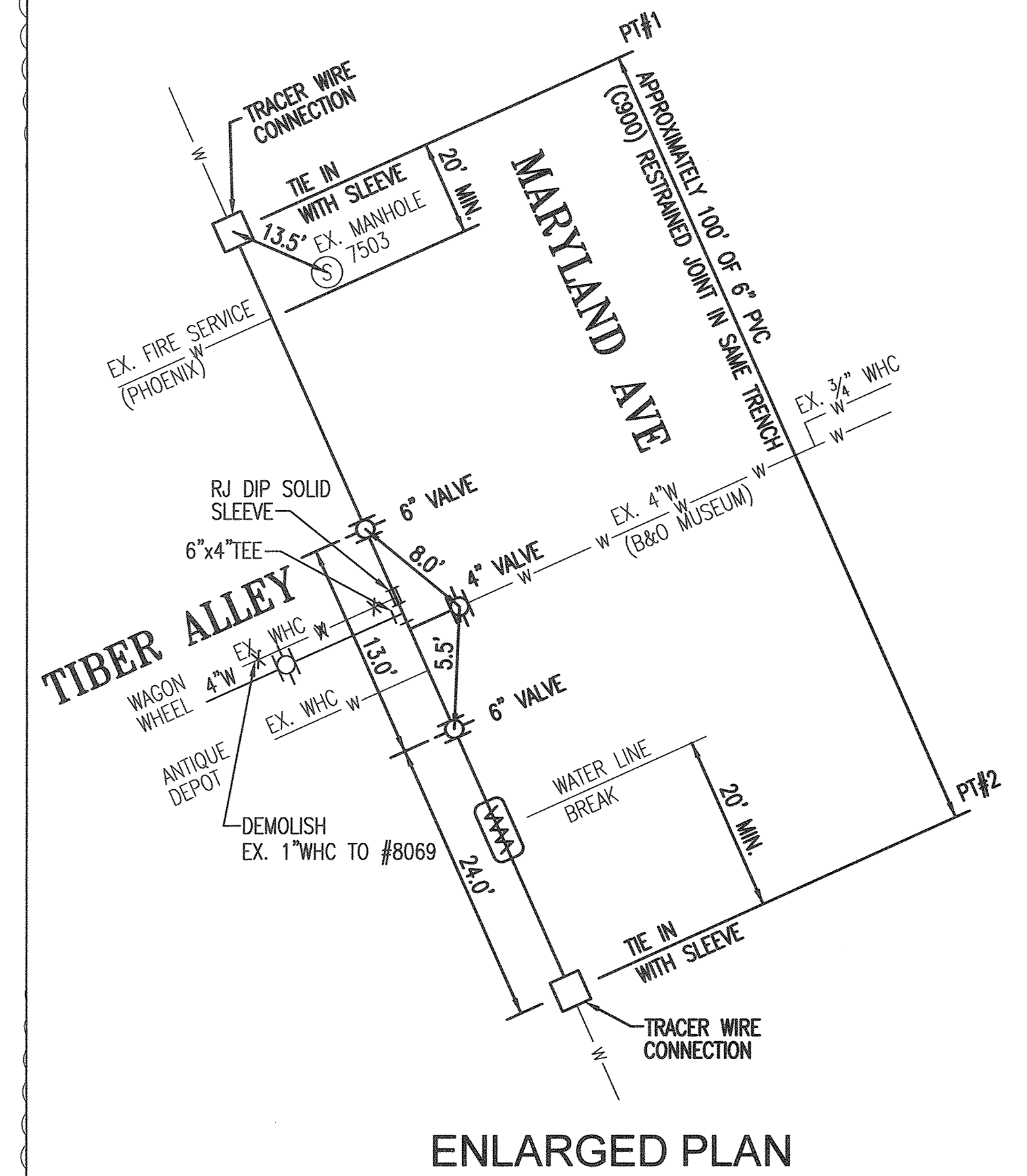
DWG. G-2

SCALE NTS

SHEET 2 OF 05



CONSTRUCTION NOTES:
 1. BYPASS PUMP FROM MANHOLE 7503-B TO 7503. COORDINATE REGARDING BYPASS OF SHC. BYPASS RATE OF 1.75 MGD TO BE ASSUMED.



SEE ENLARGED PLAN

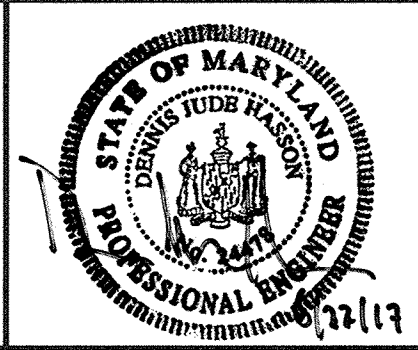
ENLARGED PLAN

AS-BUILT

"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. 24478, EXPIRATION DATE: 10/28/17."

PREPARED BY:

Whitman, Reardon & Associates, LLP
 801 South Carolina Street, Baltimore, Maryland 21231



DES:	LES		
DRN:	LES		
CHK:	MB	HOCO	AS-BUILTS - WATER
		WRA	AS-BUILTS - SEWER
DATE:	1/13/17	BY:	NO.
		REVISION	DATE

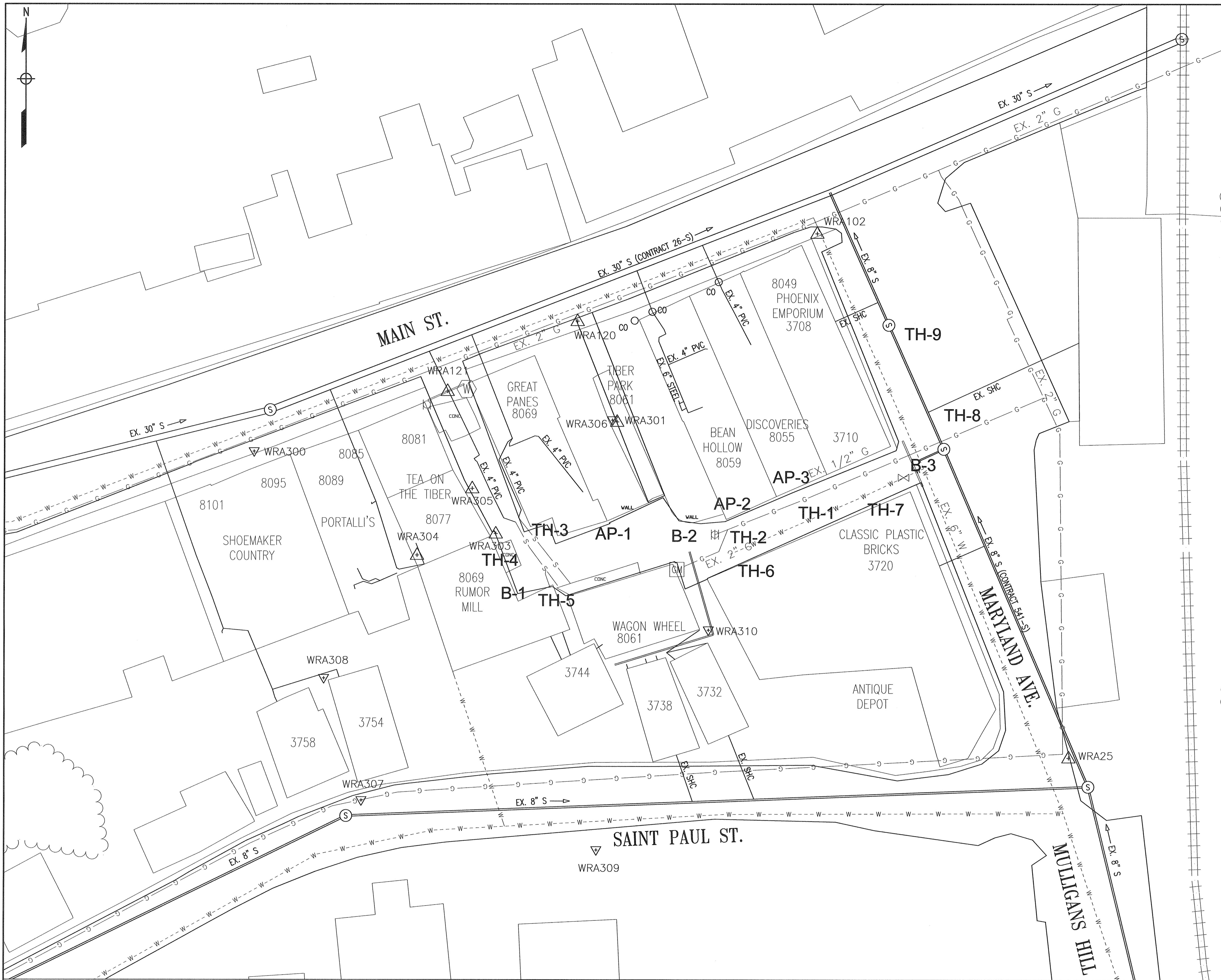
WATER AND SEWER PLAN

600' SCALE MAP NO. 25A BLOCK NO. B1

AS-BUILT REPLACEMENT SHEET 5/18

TIBER ALLEY WATER AND SEWER
 CONTRACT NO. 10-4998
 ELECTION DISTRICT 4 HOWARD COUNTY, MARYLAND

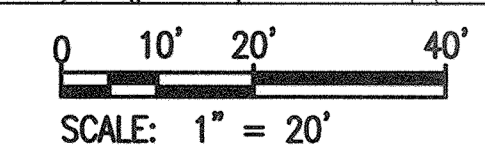
DWG. C-1
 SCALE 1"=20'
 SHEET 03 OF 05



SURVEY CONTROL POINTS			
POINT ID	NORTHING	EASTING	ELEVATION
WRA 25	582,913.52	1,370,366.32	139.64'
WRA 102	583,132.11	1,370,260.48	125.88'
WRA 120	583,095.59	1,370,159.94	125.96'
WRA 121	583,066.34	1,370,105.42	125.92'
WRA 300	583,041.28	1,370,024.24	127.18'
WRA 301	583,053.58	1,370,176.59	127.35'
WRA 303	583,006.95	1,370,125.77	127.55'
WRA 304	582,998.02	1,370,092.73	119.80'
WRA 305	583,025.81	1,370,115.85	127.74'
WRA 306	583,054.32	1,370,174.66	117.46'
WRA 307	582,895.77	1,370,069.39	161.96'
WRA 308	582,946.74	1,370,053.62	150.36'
WRA 309	582,875.05	1,370,168.09	165.82'
WRA 310	582,966.79	1,370,215.09	131.07'

TEST HOLE	UTILITY	MATERIAL	DIAMETER	COVER
TH-1	GAS	PLASTIC	1/2"	2.18
TH-2	GAS	PLASTIC	2"	1.38
TH-3	SEWER	STEEL	3"	2.16
TH-4	SEWER	STEEL	4"	2.55
TH-5	SEWER	STEEL	4"	2.19
TH-6	WATER	PLASTIC	1"	2.23
TH-7	WATER	PLASTIC	1"	3.11
TH-8	SEWER	T.C.	8"	5.54
TH-9	SEWER	T.C.	8"	5.48

BORING	NORTHING	EASTING	DEPTH
B-1	582,987.81	1,370,140.53	10.5 FT
B-2	582,999.44	1,370,207.07	10.5 FT
B-3	583,034.21	1,370,295.04	15.5 FT
AP-1	583,005.56	1,370,163.75	8.5 FT
AP-2	583,014.70	1,370,234.43	1.75 FT
AP-3	583,026.86	1,370,261.32	5.0 FT



AS-BUILT

"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. 24478, EXPIRATION DATE: 10/28/17."

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND.

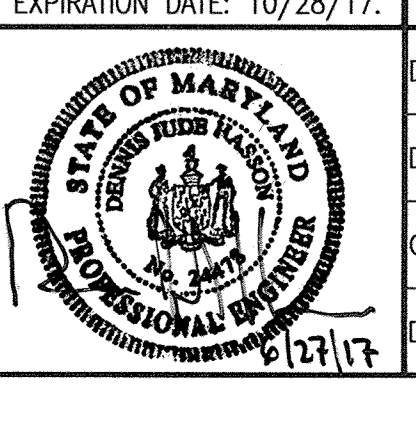
Jay Sch
DIRECTOR OF PUBLIC WORKS
DATE: 11-2-18

W. H. White
CHIEF, BUREAU OF ENGINEERING
DATE: 10/19/18

Thomas & Butler 10/23/18
CHIEF, UTILITY DESIGN DIVISION
DATE: 10/19/18

PREPARED BY:

WRA
Whitman, Reardon & Associates, LLP
801 South Caroline Street, Baltimore, Maryland 21231



DES:	LES			
DRN:	LES			
CHK:	MB			
DATE:	1/13/17			
BY:	NO.			
REVISION:				
DATE:				

BORING AND TEST PIT LOCATION PLAN

600' SCALE MAP NO. 25A BLOCK NO. B1

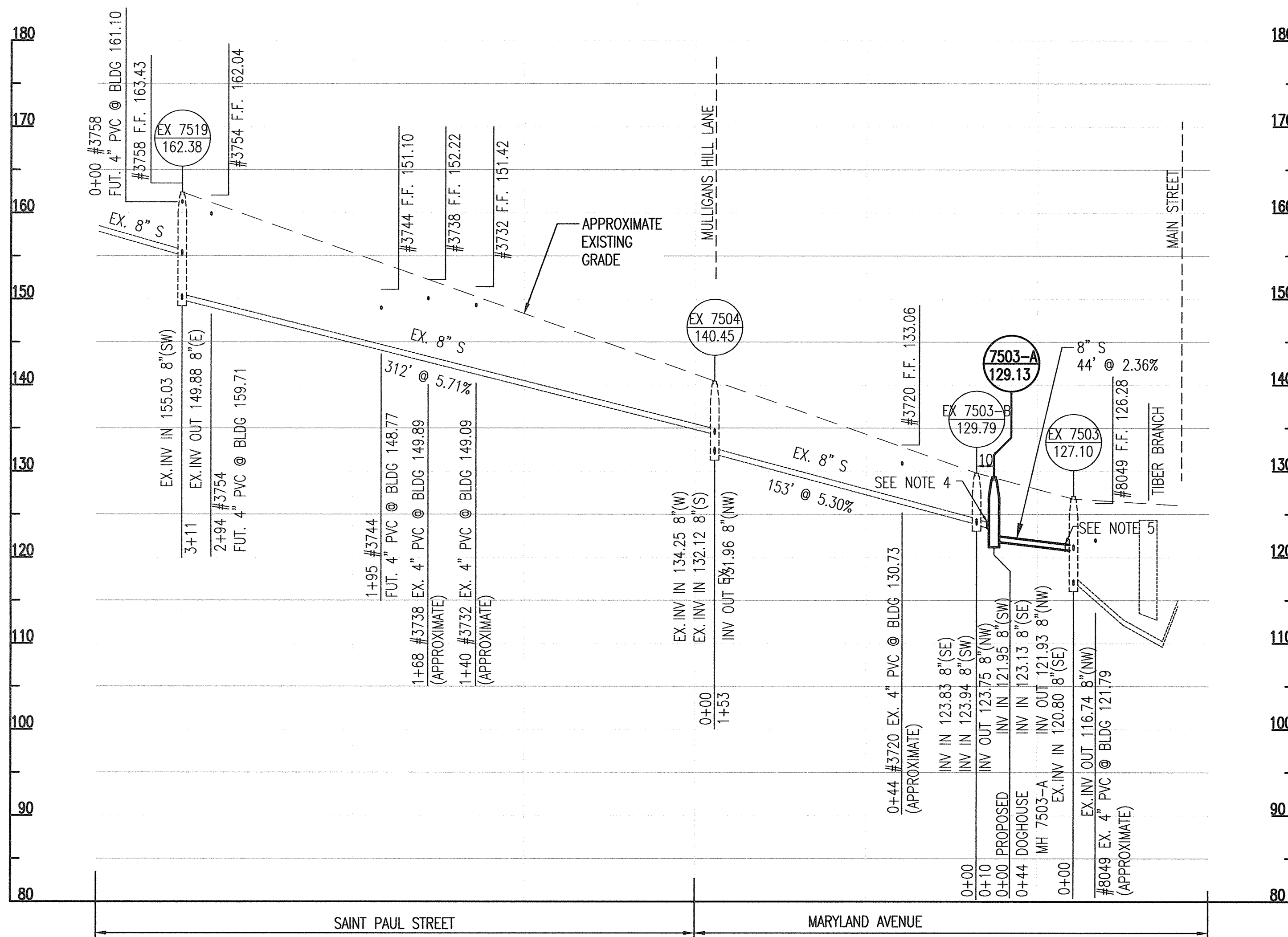
AS-BUILT REPLACEMENT SHEET 5/18

TIBER ALLEY WATER AND SEWER
CONTRACT NO. 10-4998
ELECTION DISTRICT 4
HOWARD COUNTY, MARYLAND

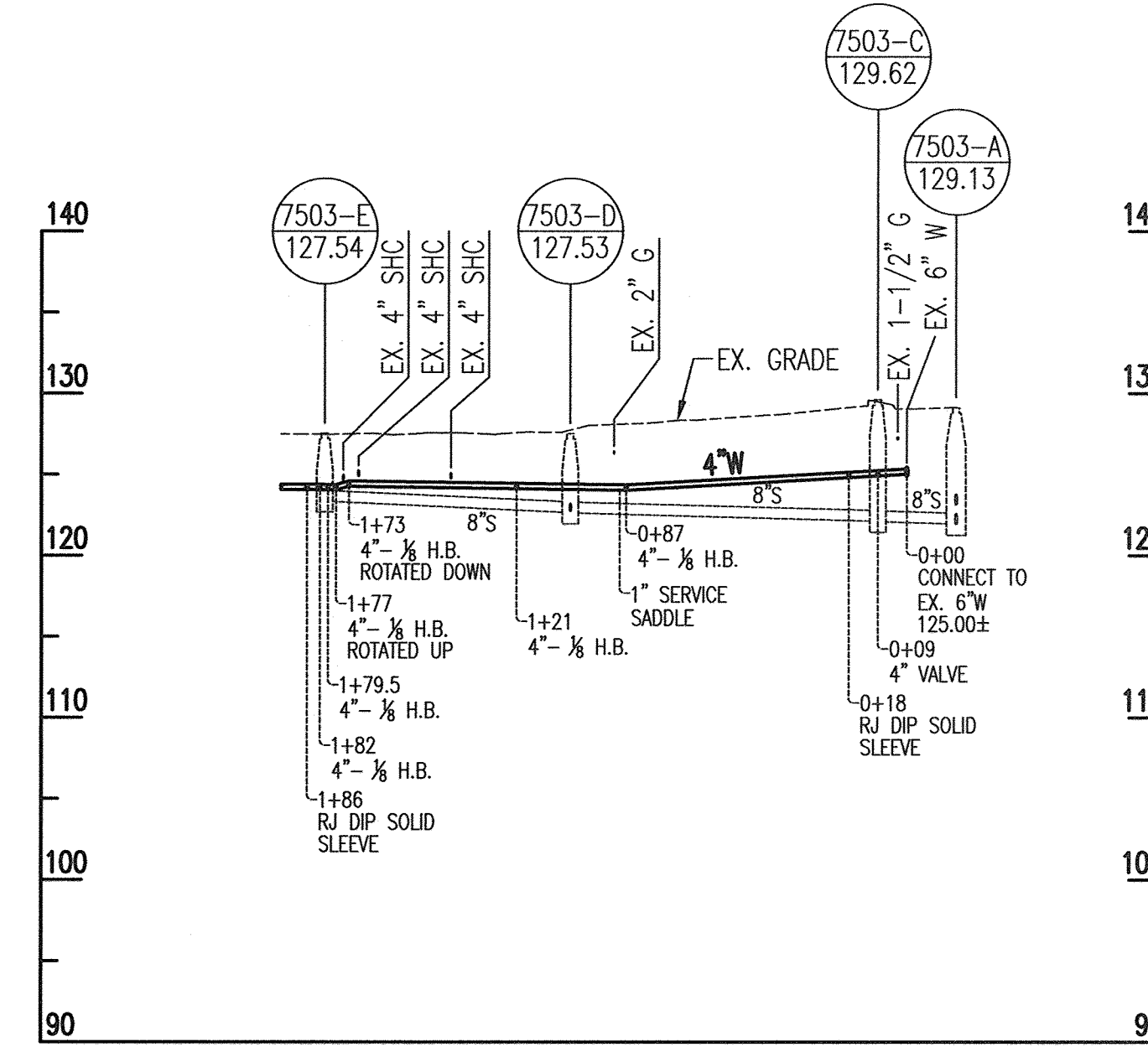
DWG. C-2
SCALE 1"=20'
SHEET 04 OF 05

CONSTRUCTION NOTES:

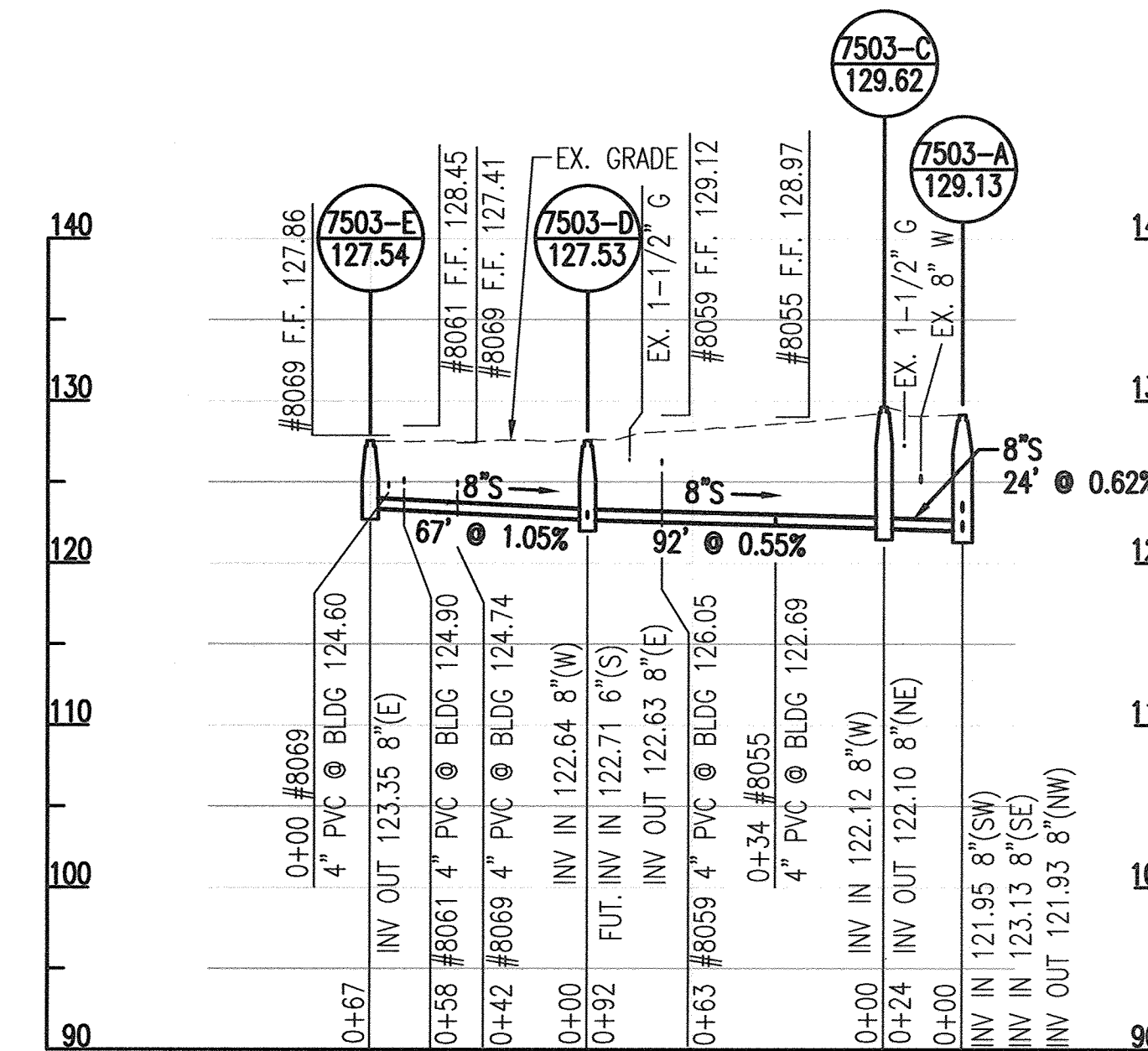
- HOUSE NUMBERS ARE DEPICTED ON THE PLAN AND COORDINATE WITH THE RESPECTIVE SEWER HOUSE CONNECTIONS SHOWN.
- CONNECT EXISTING 8-INCH SEWER TO THE PROPOSED MANHOLE 7503-A. UTILIZE SHORT PIECE BELL END PVC WITH GASKET TO CONNECT TO EXISTING PIPE. PROPOSED 8-INCH SEWER SHOWN FOR REFERENCE.
- INSTALL SEWER HOUSE CONNECTION PER HOWARD COUNTY STANDARD DETAILS S-2.11, S-2.12 AND CLEANOUT PER S-2.22.
- CONNECT TO THE EXISTING WYE FITTING DROP CONNECTION OUTSIDE OF THE MANHOLE AND CONCRETE ENCASEMENT.
- INSTALL 48-INCH MANHOLES (7503-A, 7503-C, 7503-D, 7503-E) PER HOWARD COUNTY STANDARD DETAIL G-5.11. FOR TERMINAL MANHOLE 7053-C UTILIZE DETAIL S-1.31.
- PROVIDE BELL JOINT CLAMPS FOR WATER CROSSING PER HOWARD COUNTY STANDARD DETAIL S-3.13. MAINTAIN 10' SEPARATION BETWEEN PROPOSED 8" SEWER AND EXISTING WATER BETWEEN MANHOLE 7503-D AND 7503-C.



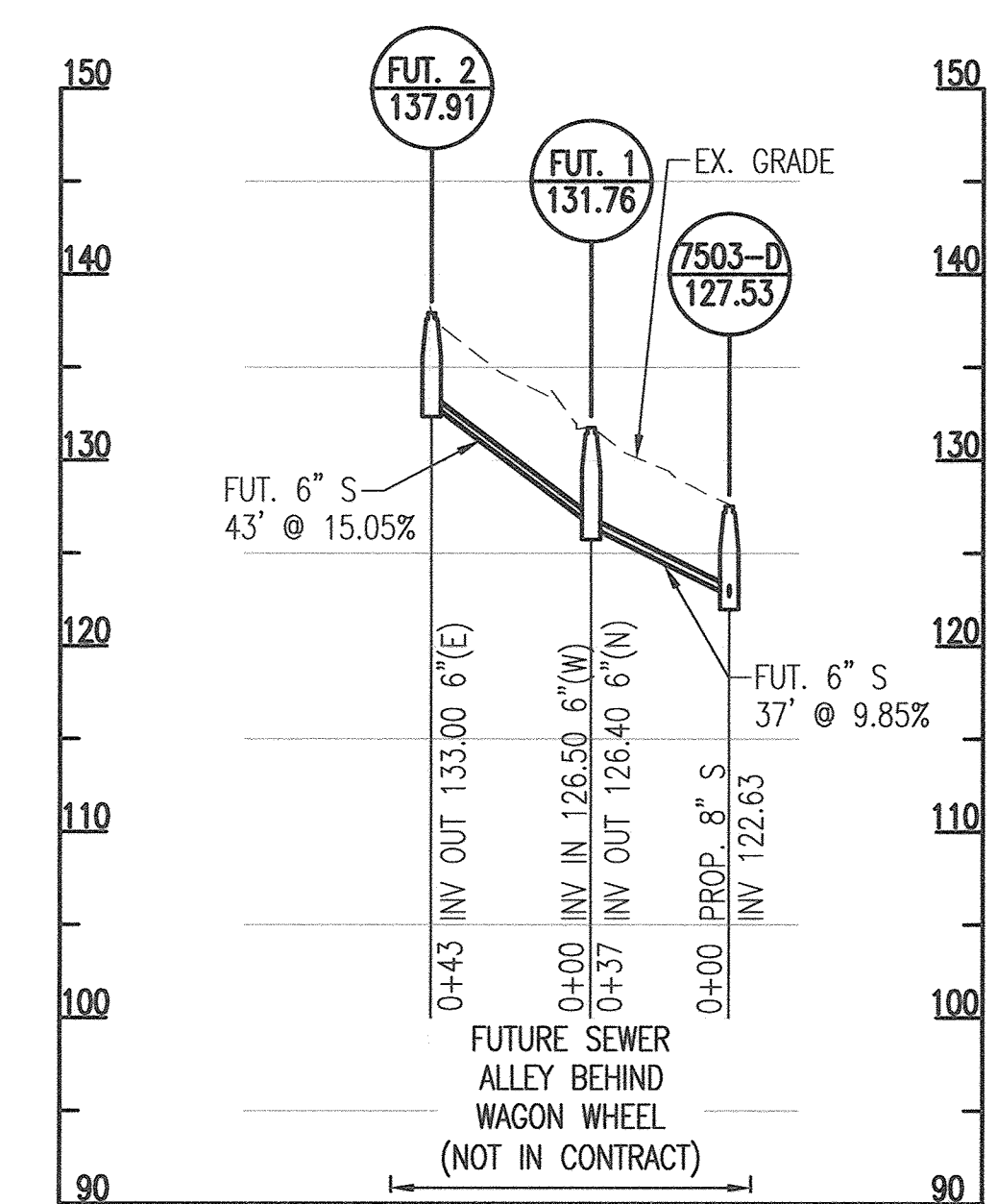
EXISTING INTERCEPTOR SEWER



PROPOSED TIBER ALLEY WATER

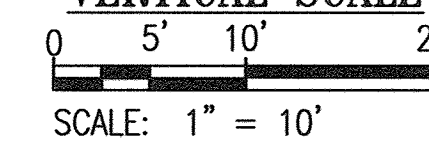


PROPOSED TIBER ALLEY SEWER



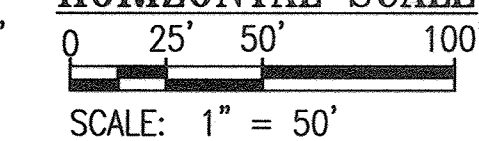
FUTURE SEWER (N.I.C.)

VERTICAL SCALE



SCALE: 1" = 10'

HORIZONTAL SCALE



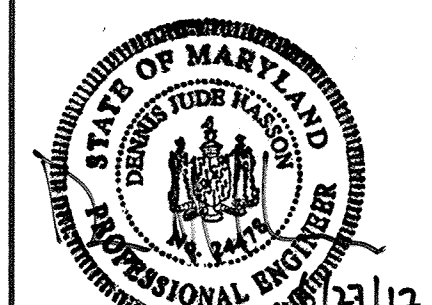
SCALE: 1" = 50'

AS-BUILT REPLACEMENT SHEET 5/18

AS-BUILT

"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. 24478, EXPIRATION DATE: 10/28/17."

PREPARED BY :



DES:	LES		
DRN:	LES		
CHK:	MB		
DATE:	1/13/17		
BY:	NO.		
REVISION:			
DATE:			

WATER AND SEWER PROFILES

600' SCALE MAP NO. 25A BLOCK NO. B1

TIBER ALLEY WATER AND SEWER

CONTRACT NO. 10-4998

ELECTION DISTRICT 4

HOWARD COUNTY, MARYLAND

DWG. C-3

SCALE

SHEET

05 OF 05