### GENERAL NOTES

# RELOCATED MONTEVIDEO ROAD WATER AND SEWER PLANS

#### I. APPROXIMATE LOCATIONS OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S

- 2. TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED MAY AND AUGUST 2011 BY JMT.
- 3. HORIZONTAL AND VERTICAL SURVEY CONTROLS: THE COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON MARYLAND STATE REFERENCE SYSTEM NAD 83/91 AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO 43BC AND 43BM2. ALL VERTICAL CONTROLS ARE BASED ON NAVD 1988 DATUM.
- 4. ALL PIPE ELEVATIONS SHOWN ARE INVERT OF ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- 5. CLEAR ALL UTILITIES BY A MINIMUM OF 12-INCHES. CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONIES OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- 6. FOR DETAILS NOT SHOWN ON THE DRAWINGS, 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.
- 7. WHERE TEST PITS HAVE BEEN MADE ON THE EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR 2 WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- 8. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST 5 WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
  - BGE (CONTRACTOR SERVICES BGE (EMERGENCY). BUREAU OF UTILITIES COLONIAL PIPELINE CO MISS UTILITY .... STATE HIGHWAY ADMINISTRATION......410-531-5533
- 9. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- 10. THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OR EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- II. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT 410-313-7450 AT LEAST 5 WORKING DAYS BEFORE ANY 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.
- 12. FOR ROAD WIDENING AND RELOCATION, SEDIMENT CONTROLS, AND TRAFFIC CONTROLS, REFER TO CAPITAL PROJECT NO. J-4206-IB BREAKOUT DRAWINGS.

### WATER NOTES

- I. ALL WATER MAINS SHALL BE D.I.P. CLASS 54 UNLESS OTHERWISE NOTED.
- 2. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM 3'-6" OF COVER UNLESS OTHERWISE NOTED.
- 3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- 4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS
- 5. FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTIONS 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
- 6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- 7. TRACER WIRES AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL DIP AND PVC WATER MAINS IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL.
- 8. 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 PIPE SHALL BE SUBMITTED WITH THE PIPE MATERIAL CERTIFICATION OR SHOP DRAWING 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.
- 9. 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 HARNESSES. 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.
- 10. 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 PVC PIPE.
- II. 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 DEFECTION 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.

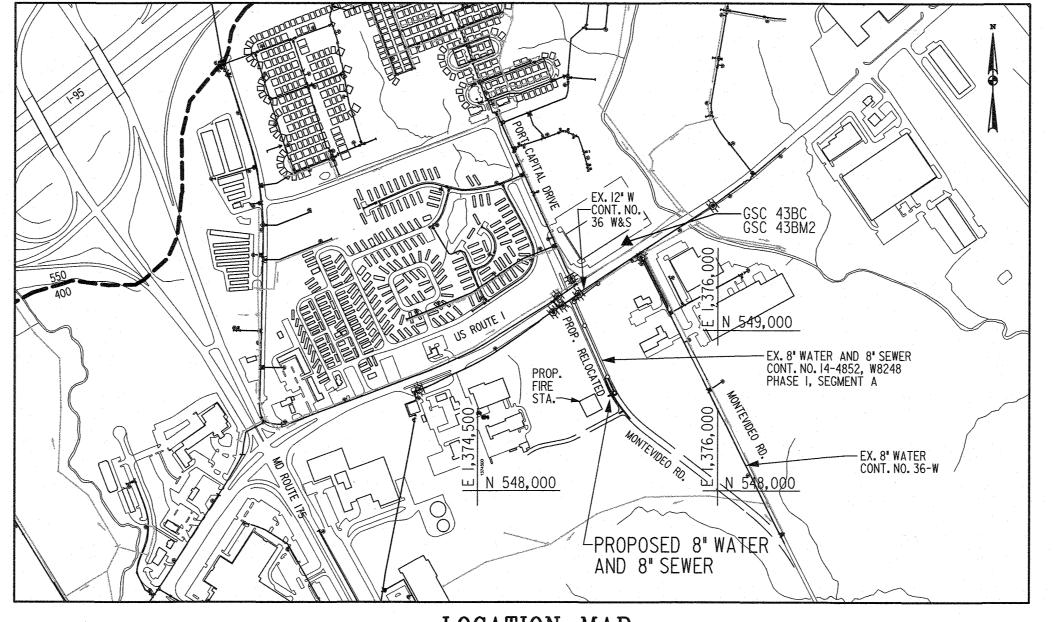
PVC HIGH DEFLECTION COUPLINGS SHALL BE LIMITED TO A TOTAL DEFLECTION OF 3-DEGREES (11/2-DEGREE ON EITHER END OF THE COUPLING). SHALL BE RATED FOR A MINIMUM 200 PSIMEETING THE REQUIREMENTS OF AWWA C900. SHALL HAVE A MINIMUM LAY LENGTH OF 9-INCHES AND SHALL HAVE CENTER STOPS. PVC HIGH DEFLECTION COUPLINGS SHALL BE CERTAINTEED PVC HIGH DEFLECTION (HD) STOP COUPLINGS OR EQUAL.

FIVE DEGREE SWEEPS SHALL BE BELL BY SPIGOT, RATED FOR A MINIMUM 225 PSI, DRI8 MEETING THE REQUIREMENTS OF AWWA C900 AND SHALL BE MULTIFITTINGS (IPEX) BLUE BRUTE DRI8 OR EQUAL.

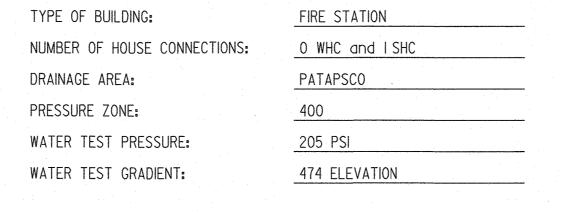
12. WHEN PVC HIGH DEFECTION COUPLINGS OR PVC 5-DEGREE SWEEPS ARE USED TO FACILITATE CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENTS OF AWWA C-900 PVC PIPELINES, THE CONTRACTOR SHALL INSTALL DEVICES FOR THE PREVENTION OF OVER-INSERTION OF THE PVC PIPE SPIGOTS OR PLAIN ENDS INTO THE PUSH ON BELL JOINT ON BOTH SIDES OF THE HIGH DEFECTION 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 INCORPORATE 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.

## PHASE 1, SEGMENT B BREAKOUT HOWARD COUNTY, MARYLAND

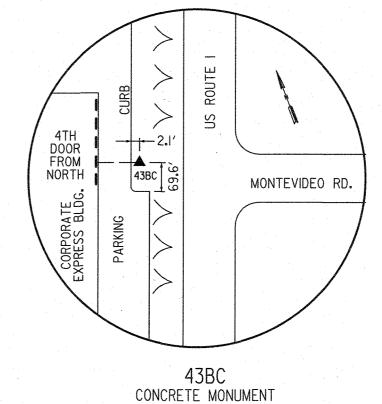
DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT NO. W8602 CONTRACT NO. 14-5110

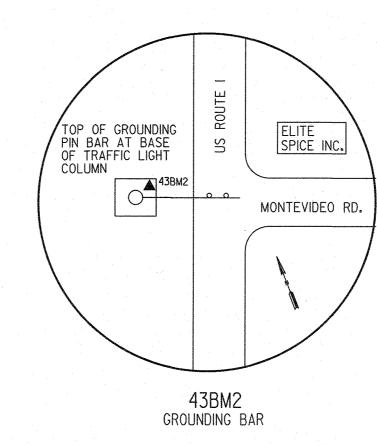






HORIZONTAL AND VERTICAL CONTROL BASED ON MARYLAND NAD 1983/1991 AND NAVD 1988 DATUM. HOWARD COUNTY GEODETIC SURVEY CONTROL NUMBERS: HOWARD COUNTY MONUMENTS GSC 43BC GSC 43BM2 (Horiz. & Vert.) (Horiz. & Vert.) N 549,592.108 N 549,600,000 E 1,375,466.624 E 1,375,500.00 ELEV. 214.063 ELEV. 193.599





	INDEX OF SHEETS	
SHEET NO.	DESCRIPTION	
	TITLE SHEET	
2	PLAN AND PROFILES	THE COLUMN ASSESSMENT

		QUAN	NTITIES 🙆	
ITEM	UNIT	ESTIMATE	AS-BUILT	MATERIAL SUPPLIER
8" W PVC	L.F.	440	440	NATIONAL PIPE
6" W PVC (FH)	L.F.	42	41	
8"X8" TEE	EA.	l	l	TYLER FOUNDRY
8* 5-5/8 DEG. BEND	EA.	3		
8" HD COUPLING	EA.	2		
FIRE HYDRANT	EA.		l .	MUELLER
8"X6" TEE (FH)	EA.	2	2	TYLER FOUNDRY
6" VALVE (FH)	EA.	2	2	MUELLER
8" VALVE	EA.	2	3	MUELLEL
8" CAP	EA.	2	2	TYLER FOUNDRY
6" CAP	EA.	1	l	
8* S PVC	L.F.	134	133	NATIONAL PIPE
6" S PVC	L.F.	36	35	
24" FRAME & COVER	EA.		Оставляний	N/A
4 FT. PRECAST MH	V.F.	10	10	N/A
CLEANOUT	EA.	l	l	HORNE CONCRETE
II" FRAME & COVER	EA.		COMMUNICATION	N/A
-	,			
NAME OF UTILITY CON	ITRACTOR:	HTI		
			AS-BUILT D	ATE: 8-17-2021

### SEWER NOTES

- I. ALL SEWER MAINS SHALL BE D.I.P OR P.V.C. UNLESS OTHERWISE NOTED.
- 2. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- 3. FORCE MAINS SHALL BE D.I.P ONLY.
- 4. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- 5. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILES SHALL HAVE WATERTIGHT FRAME AND COVER. STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME I'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS,
- 6. HOUSE(S) WITH THE SYMBOL "C.N.S. INDICATED THAT THE CELLAR CANNOT BE SERVED.

### **LEGEND**

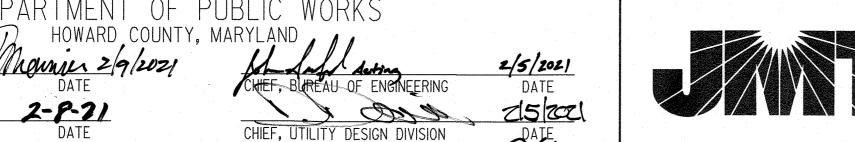
FENCE LINE	XX	PROPOSED SEWER MAIN	
RIGHT OF WAY LINE	entrophic production and the same constant	PROPOSED SEWER CLEANOUT	
PROPERTY LINE	with the second control of the second contro	PROPOSED WATER MAIN	
LIMIT OF DISTURBANCE	— LOD —	PROPOSED WATER VALVE	ф
WATER	· · · · · · · · · · · · · · · · · · ·	PROPOSED FIRE HYDRANT	
GAS	— - G — -	PROPOSED WATER CAP	
SAN. SEWER		EX. WATER VALVE	ф
UG ELECTRIC	— — E — –	EX. FIRE HYDRANT	
UG TELEPHONE	— T — –	EX. WATER METER	<b>MA</b>
UTILITY POLE			
TRAVERSE POINT	$\wedge$		

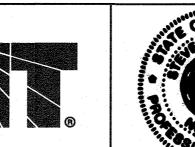
### PURPOSE STATEMENT:

THE PURPOSE OF THIS PROJECT IS TO EXTEND THE WATER AND SEWER IN COORDINATION WITH THE RELOCATION OF MONTEVIDEO ROAD (CAPITAL PROJECTS J4206-IB BREAKOUT).

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT IAM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 50329, EXPIRATION DATE: 12/18/2022

AS-BUILT DRAWINGS HAVE BEEN COMPILED FROM MARK-UPS OBTAINED FROM CONTRACTOR. THE ENGINEER MAKES HO WARRANTY OR GUARANTEE AS TO THE ACCURACY OR THE ACTUAL AS-BUILT FIRED CONDITIONS.





AAV.	DES:
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and the second s								TITLE	SHEET	
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DATE:01/12/2021	raf		AS-BUILT				8-1-2022			
	BY	NO.		REVISION			DATE	600' SCALE MAP NO	43 BLOCK NO.	9

RELOCATED MONTEVIDEO ROAD WATER AND SEWER PLAN PHASE I, SEGMENT B BREAKOUT TITLE SHEET

TELECTION DISTRICT 2

CAPITAL PROJECT No. W8602 CONTRACT No. 14-5110

UT-I OF 2 SCALE AS SHOWN

SHEET

HOWARD COUNTY, MARYLAND

