BENCHMARK INFORMATION

3.M.#1 - HOWARD COUNTY CONTROL STATION #37ID - HORIZONTAL - NAD '83) (LOCATED ALONG U.S. ROUTE 1, APPROX. 375' NORTH OF TROY HILL INDUSTRIAL PARK. BRASS DISC LOCATED APPROX. 2.5' OFF EDGE OF PAVING)

F. 1.384.460.9875 ELEVATION = 157.314 - VERTICAL - (NAVD '88)

- HOWARD COUNTY CONTROL STATION #3006 - HORIZONTAL - (NAD '03) (LOCATED ALONG U.S. ROUTE 1, DIRECTLY ACROSS FROM ATLANTIC SUPPLY CO., APPROX. 6.6' FROM GUARDRAILL N 557,155,4454

ELEVATION = 174.506 - VERTICAL - (NAVD '88)

N 559,900 **ELEMENTARY SCHOOL #41** WATER & SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND CONTRACT NO. 14-4725-0 HOWARD COUNTY CONTROL STATION HOWARD COUNTY CONTROL STATION N 555,900 WATER ZONE: ADC MAP 4937: BLOCK AB WATER TEST GRADIENT: ______550_ TYPE OF BUILDING: ELEMENTARY SCHOOL PLAN REFERENCE NUMBERS: 50P-12-042 F-12-XXX NUMBER OF PARCELS: (RECORD PLAT) NO. OF WATER HOUSE CONNECTIONS NO. OF SEWER HOUSE CONNECTIONS: SEWER SHED: PATAPSCO TREATMENT PLANT: PATAPSCO WASTEWATER TREATMENT PLANT CITY OF BALTIMORE

DEVELOPER'S CERTIFICATION

WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT THE DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS

Paul W. Kruba; FOR:

HOWARD COUNTY PUBLIC SCHOOL SYSTEM OZ-09-12 SIGNATURE OF DEVELOPER

ENGINEER'S CERTIFICATION

" I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 308 OF THE HOWARD COUNTY DESIGN MANUAL - VOLUME IV: STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND AS SHOWN ON THE SITE DEVELOPMENT PLAN,

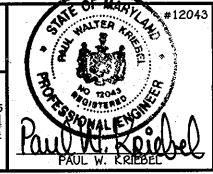
HOWARD COUNTY PUBLIC SCHOOL SYSTEM OZ-09-12

GP-12-4

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY HOWARD SOIL CONSERVATION DISTRICT.

PREPARED OR APPROVED BY ME. AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE

LAWS OF THE STATE OF MARYLAND. LICENSE NO. 12043 EXPIRATION DATE IS 7/16/12. FISHER. COLLINS & CARTER, INC. L ENGINEERING CONSULTANTS & LAND SURVEYOR NNAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PB



B.C.R. DRAWN BY B.C.R. CHECKED BY P.W.K. KCT 1 AS-BUTLET EBRUARY, 2012 REVISION WATER & SEWER MAIN EXTENSIONS TITLE SHEET

ELEMENTARY SCHOOL #41 WATER & SEWER MAIN EXTENSIONS CONTRACT NO. 14-4725-D

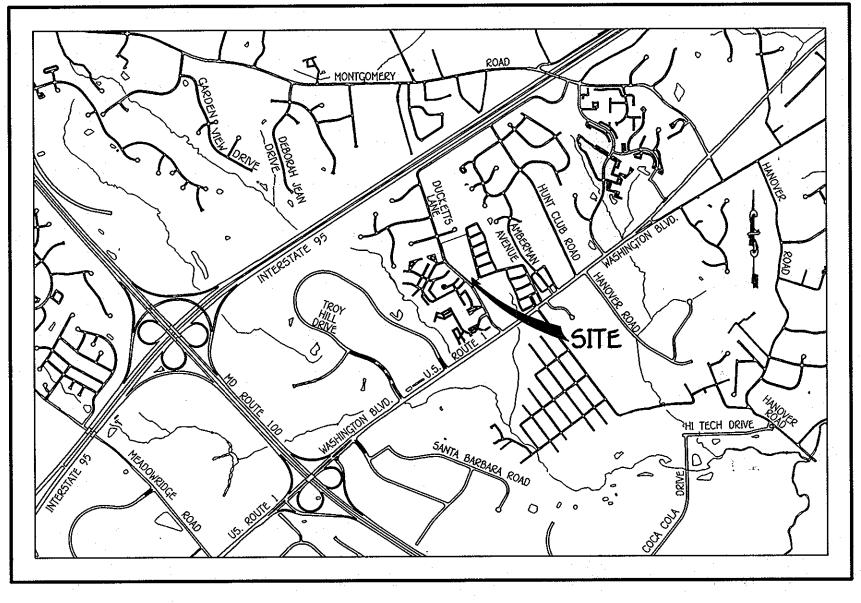
SHOWN

FIRST ELECTION DISTRICT or 3 HOWARD COUNTY, MARYLAND

CONTRACT NO. 14-4725-D

ELEMENTARY SCHOOL #41

WATER & SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND



GENERAL NOTES

. 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 EXPENSE.

2. TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON OR ABOUT JULY, 2011 BY FISHER, COLLINS & CARTER, INC. . 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. 37ID & NO. 38D6. ALL VERTICAL CONTROLS ARE BASED ON NAVO '86. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS. . ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.

5. CLEAR ALL UTILITIES BY A MINIMUM OF 12 INCHES. CLEAR ALL POLES BY 5'-O' 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 BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF THE 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

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 SITE. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL • AT THE LOCATIONS OF THE TEST PITS. 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 TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.

8. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

9 TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE

BEFORE OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROAD FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE

CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR. 10. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG THE LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE CONSTRUCTION OF THE MAIN. 11. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410)-313-7450 AT LEAST FIVE WORKING DAYS

APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD

1. ALL WATER MAINS SHALL BE AWAYA COOO R/C 1 DR 14. 2. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 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 UNLESS OTHERWISE

PROVIDED FOR ON THE DRAWINGS. 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 SECTION 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS. 6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM 7. TRACER WIRE AND CONTINUITY TEST STATIONS SHALL BE INSTALLED ON ALL D.I.P. AND PVC WATER MAINS IN ACCORDANCE

B. 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

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. 9. UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS, SEVENTEEN (17) POUND 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. MAGNESIUM ANODES SHALL BE INSTALLED ON ALL VALVES AND DUCTILE IRON FITTINGS INCLUDING RESTRAINTS AND HARNESSES. 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.

PART C: SEWER MAIN GENERAL NOTES

PART B: WATER MAIN GENERAL NOTES

1. 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 PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS

OTHERWISE NOTED ON THE DRAWINGS. 6. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

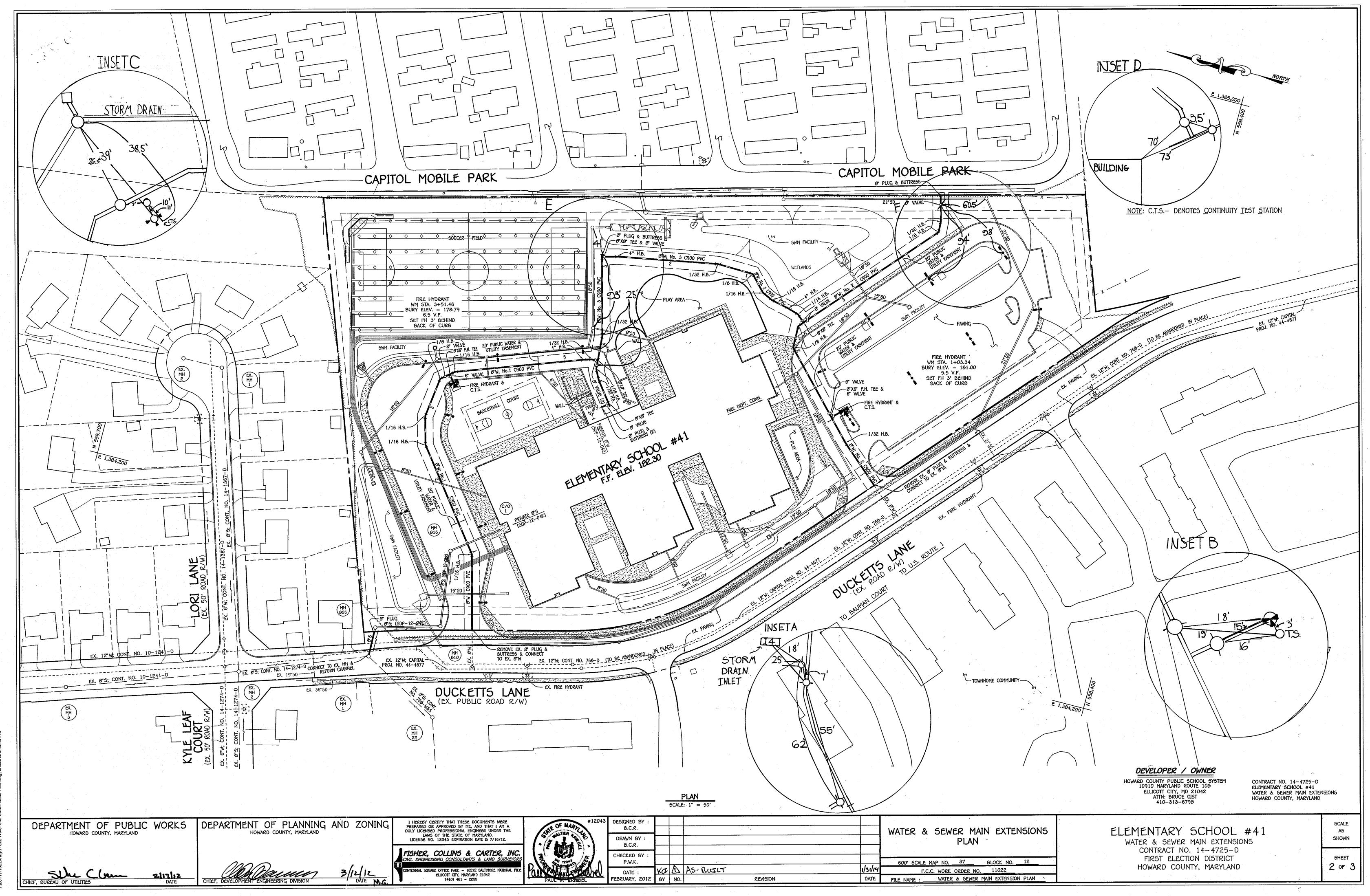
DEVELOPER / OWNER

HOWARD COUNTY PUBLIC SCHOOL SYSTEM 10910 MARYLAND ROUTE 108 ELLICOTT CITY, MD 21042 ATTN: BRUCE GIST

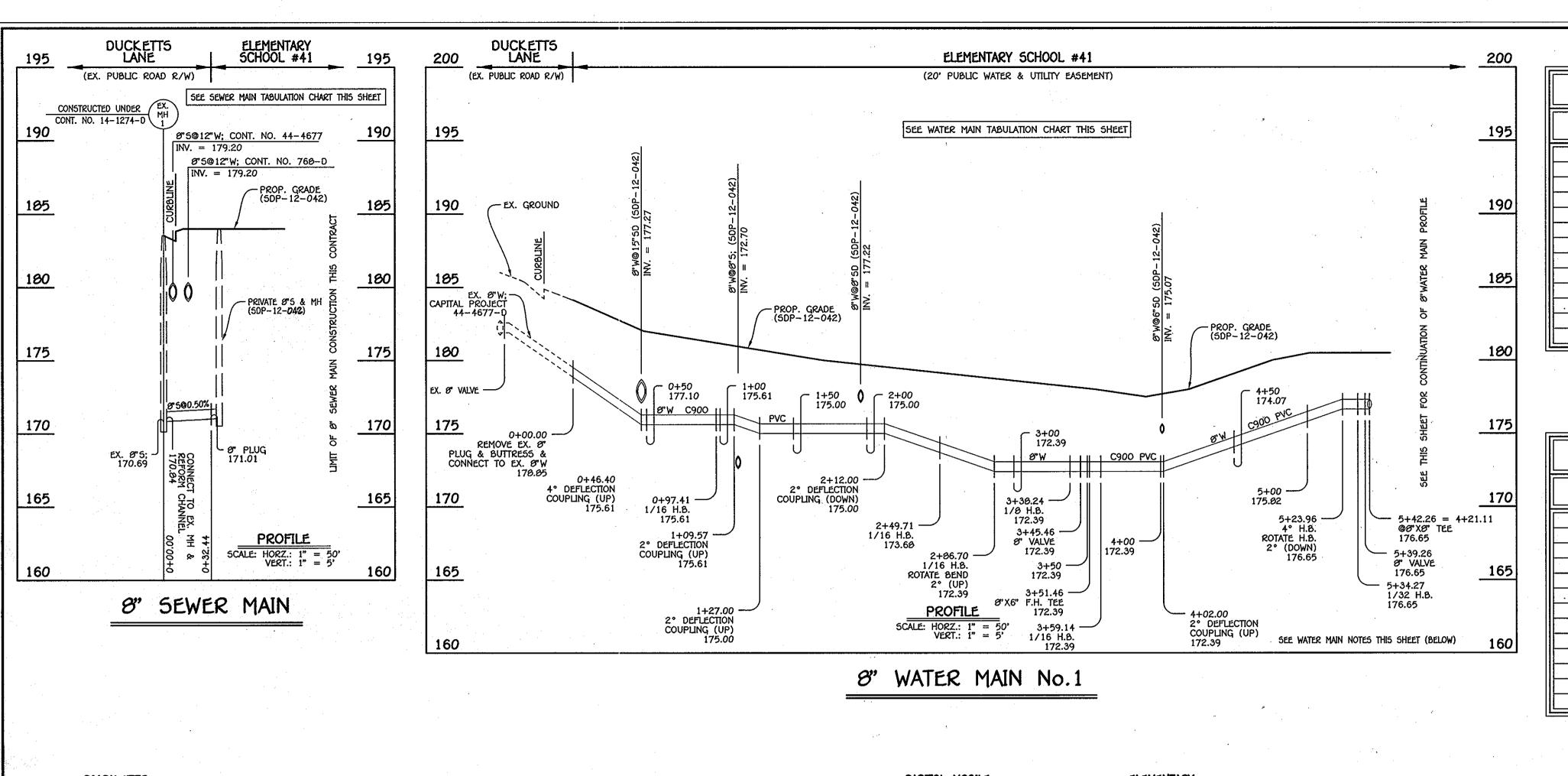
CONTRACT NO. 14-4725-D ELEMENTARY SCHOOL #41 WATER & SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING DEPARTMENT OF PUBLIC WORKS

600' SCALE MAP NO. 37 F.C.C. WORK ORDER NO. ____11022 FILE NAME : WATER & SEWER MAIN EXTENSION TITLE SHEET



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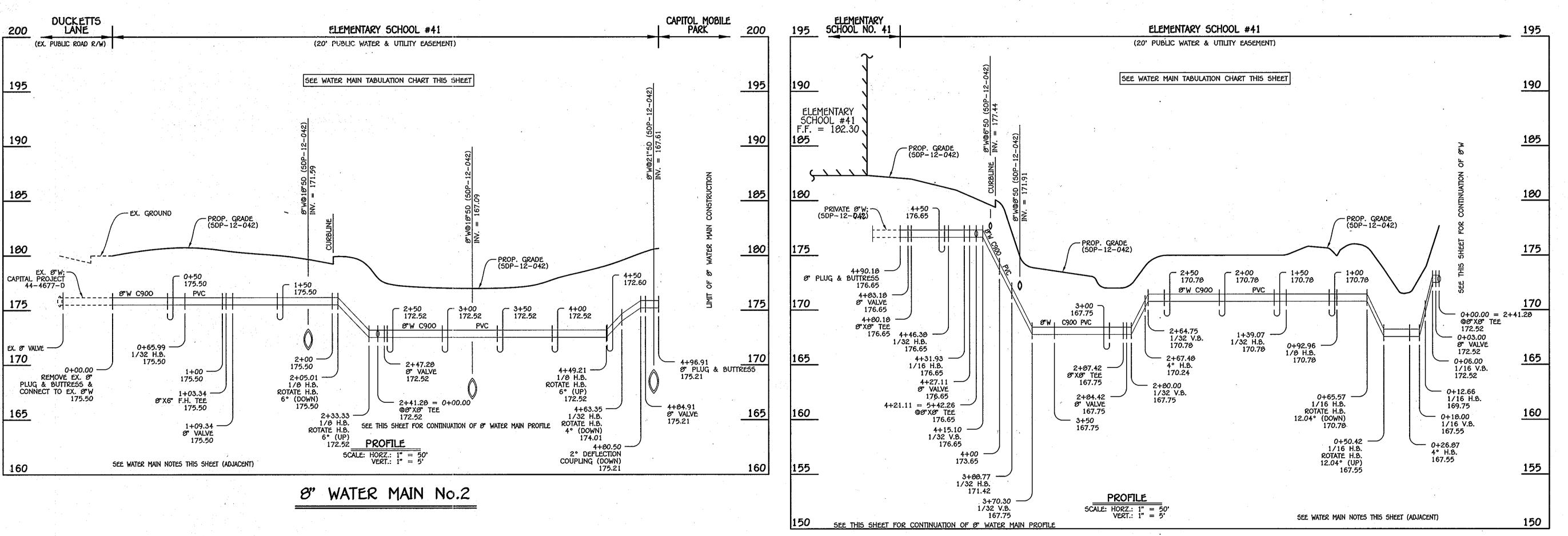


W A	ATER MAIN TABUI	LATION CH	IAR I
W.M. STA.	APPURTENANCE	NORTHING	EASTING
	8" WATER MAIN No. 1: ELEME	NTARY 5CHOOL #41	
0+00.00	EX. 8" PLUG & BUTTRESS	559180.15	1304100.26
0+97.41	1/16 H.B.	559205.05	1304194.44
2+49.71	1/16 H.B.	559297.71	1304315.30
2+86.70	1/16 H.B.	559307.37	1304351.01
3+38.24	1/8 H.B.	559300.90	1384402.14
3+45.46	Ø" VALVE	559295.35	1304406.77
3+51.46	Ø"X6" F.H. TEE	559290.75	1304410.62
3+59.14	1/16 H.B.	559204.06	1304415.55
5+23.96	4° H.B.	559129.98	1384471.93
5+34.27	1/32 H.B.	559120.10	1384474.84
5+39.26	8" VALVE	559115.11	1384475.21
5+42.26	8" X8" TEE	559112.12	1384475.43

W.M. STA.	APPURTENANCE	northing	EASTING			
8" WATER MAIN No. 3: ELEMENTARY SCHOOL #41						
0+00.00	Ø"XØ" TEE	550070.20	1384588.53			
0+03.00	8" VALVE	550072.45	1384590.52			
0+12.66	1/16 H.B.	558879.69	1384596.92			
0+26.87	4° H.B.	550093.24	1384601.18			
0+50.42	1/16 H.B.	558916.23	1384606.33			
0+65.57	1/16 H.B.	550929.97	1384612.70			
0+92.96	1/0 H.B.	550940.73	1384632.64			
1+39.07	1/32 H.B.	558994.83	1384633.77			
2+67.48	4° H.8.	559121.16	1384610.76			
2+84.42	8" VALVE	559137.54	1384606.43			
2+87.42	Ø"XØ" TEE	559140.44	1304605.66			
3+80.77	1/32 H.B.	559114.52	1384507.68			
4+21.11	Ø"XØ" TEE	559112.12	1384475.43			
4+27.11	Ø* VALVE	559111.60	1384469.45			
4+31.93	1/16 H.B.	559111.32	1384464.64			
4+46.38	1/32 H.B.	559104.07	1384451.71			
4+80.18	Ø"XØ" TEE	559084.30	1384424.88			
4+83.18	8" VALVE	559086.68	1384423.06			
4+90.10	Ø' PLUG & BUTTRESS	559092.23	1384418.80			

	APPURTENANCE	NORTHING	EASTING		
	APP ORTEINAGE	HORITAIN.	- Doiling		
8" WATER MAIN No. 2: ELEMENTARY SCHOOL #41					
х. <i>в</i>	PLUG & BUTTRESS	550730.3	7 1384409.24		
	1/32 H.B.	558779.7	7 1304452.98		
	9" X6" F.H. TEE	558805.3	6 1304480.19		
	8" VALVE	558809.4	9 1304404.56		
	1/0 H.B.	558875.0	1 1384554.26		
	1/0 H.B.	558875.4	7 1384582.57		
	Ø'XØ' TEE	550070.2	0 1384588.53		
	Ø" VALVE	550066.2	3 1384593.03		
	1/8 H.B.	550732.5	5 1384744.37		
	1/32 H.B.	550733.4	2 1384758.49		
	Ø VALVE	550730.9	4 1384779.33		
8'	PLUG & BUTTRESS	558742.0	1 1304790.93		

MANHOLE TABULATION CHART					
NO.	NORTHING	easting	RIM ELEVATION		
Ø PLUG	559300.50	1384067.11			



WATER MAIN NOTES: 1. ALL WATER MAINS SHALL BE AWWA C900 PVC PIPE. 2. ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME II - WATER AND

SEWER STANDARDS FOR AWWA C900 PVC WATER PIPE INSTALLATION. 3. DEFLECTION COUPLINGS SHALL BE CERTAIN-TEED PVC HIGH DEFLECTION COUPLINGS.

4. ALL WATER HOUSE CONNECTIONS AND TAPS SHALL BE PERFORMED USING A SADDLE.

CONTRACT NO. 14-4725-D ELEMENTARY SCHOOL #41 WATER & SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS DEPARTMENT OF PLANNING AND ZONING

HOWARD COUNTY, MARYLAND

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. 12043 EXPIRATION DATE IS 7/16/12. FISHER, COLLINS & CARTER, INC Uare office park — 10272 Baltimore National Pi ellicott city, maryland 21042 (410) 461 — 2055

OF MARY #12043
3 10 200
Paul He a revel
PAUL W. KRIEBEL

DESIGNED BY : B.C.R.						WATER & SEWER MAIN EXTENSIONS
	N BY : C.R.					PROFILES & CHARTS
CHECKED BY : P.W.K.	ED BY :					
						600' SCALE MAP NO. 37 BLOCK NO. 12
DA ⁻	TE:					F.C.C. WORK ORDER NO. 11022
FEBRUARY, 2012	BY	, NO.	REVISION D	DATE	FILE NAME : WATER & SEWER MAIN EXTENSION PROFILES	

8" WATER MAIN No.3

ELEMENTARY 5CHOOL #41

WATER & SEWER MAIN EXTENSIONS CONTRACT NO. 14-4725-D FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE SHOWN SHEET 3 of 3

HOWARD COUNTY, MARYLAND