

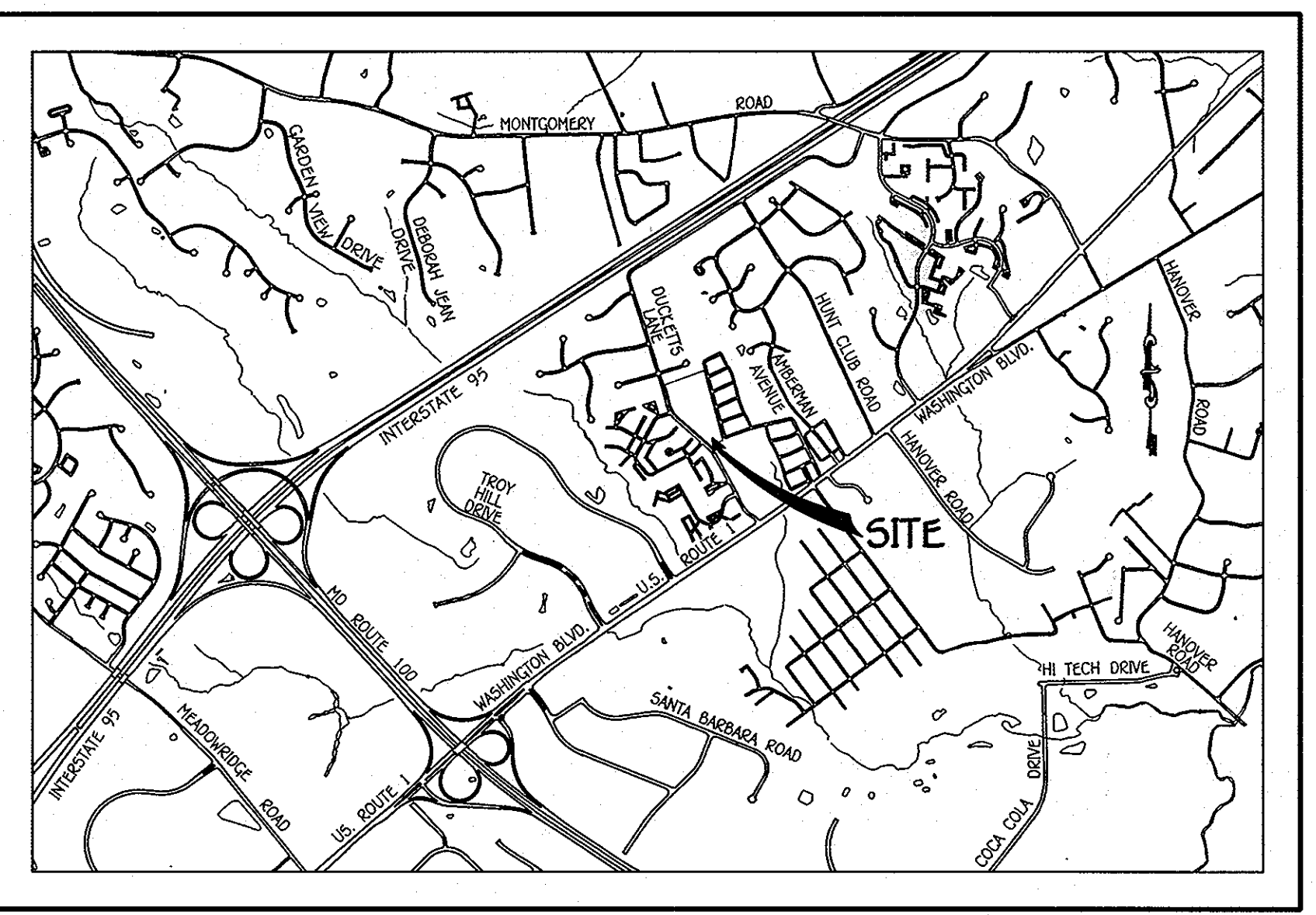
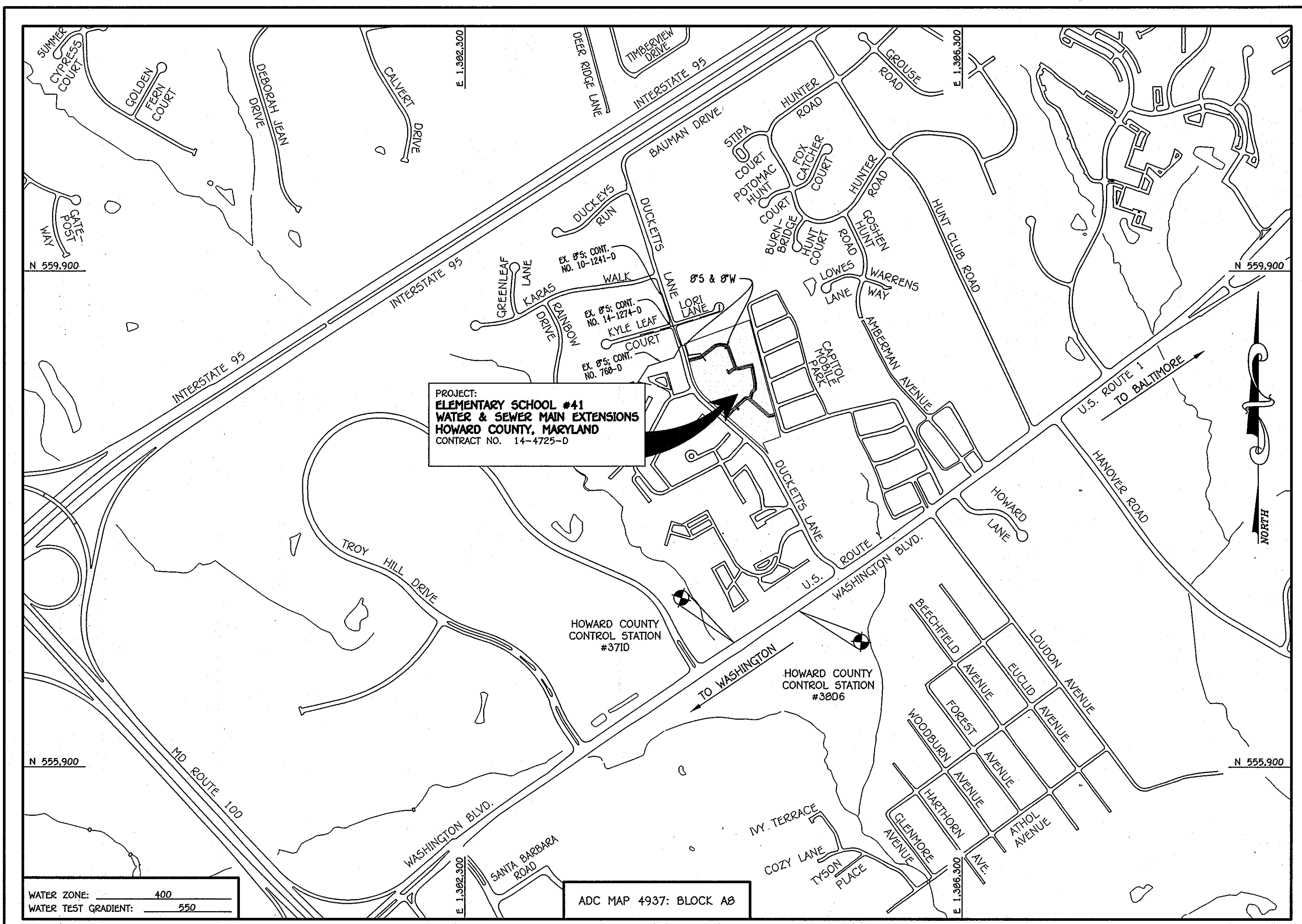
QUANTITIES				
ITEM	ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	SUPPLIER
8" S	33 L.F.			
8" PLUG	1 EACH			
8" W	1,530 L.F.			
6" W	31 L.F.			
8" X 8" TEE	4 EACH			
8" X 6" TEE	2 EACH			
1/8" H.B.	5 EACH			
1/16" H.B.	8 EACH			
1/32" H.B.	6 EACH			
4" H.B.	3 EACH			
8" VALVE	8 EACH			
6" VALVE	2 EACH			
FIRE HYDRANT	2 EACH			
CONTINUITY TEST STATION	2 EACH			

NAME OF UTILITY CONTRACTOR:
SURVEY & DRAFTING DIVISION AS-BUILT DATE:

BENCHMARK INFORMATION

B.M.#1 - HOWARD COUNTY CONTROL STATION #3710 - 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)
N 556,907.4177
E 1,384,460.5975
ELEVATION = 157.314 - VERTICAL - (NAVD '88)

B.M.#2 - HOWARD COUNTY CONTROL STATION #3806 - HORIZONTAL - (NAD '83)
(LOCATED ALONG U.S. ROUTE 1, DIRECTLY ACROSS FROM ATLANTIC SUPPLY CO., APPROX. 6.6' FROM
QUADRANT)
N 557,154.4454
E 1,384,992.2276
ELEVATION = 174.506 - VERTICAL - (NAVD '88)



VICINITY MAP
SCALE: 1" = 200'

GENERAL NOTES

- PART A**
- 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.
 - 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. 3710 & NO. 3806. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS PROVIDED ON THE DRAWINGS.
 - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
 - 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 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 THE POLES.
 - 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.
 - 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 (CONTRACTOR 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 / 410-224-9210
 - 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.
 - 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.
 - 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.

- PART B: WATER MAIN GENERAL NOTES**
- ALL WATER MAINS SHALL BE AWWA C900 PVC 12" DIA.
 - 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 TEES.
 - ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
 - 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.
 - 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 D.I.P. AND PVC WATER MAINS IN ACCORDANCE WITH 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 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.
 - 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 HARNESSSES. 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**
- ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
 - ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
 - FORCE MAINS SHALL BE D.I.P. ONLY.
 - MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
 - MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL Q5.52. WHERE WATERTIGHT MANHOLE FRAMES AND COVERS ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
 - HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

LOCATION MAP
SCALE: 1" = 600'

TYPE OF BUILDING: ELEMENTARY SCHOOL
 NUMBER OF PARCELS: 1
 NO. OF WATER HOUSE CONNECTIONS: 1
 NO. OF SEWER HOUSE CONNECTIONS: 1
 SEWER SHED: PATAPSCO
 TREATMENT PLANT: PATAPSCO WASTEWATER TREATMENT PLANT
 CITY OF BALTIMORE

PLAN REFERENCE NUMBERS:
SOP-12-042 F-12-XXX (RECORD PLAT)

CONTRACT NO. 14-4725-D

ELEMENTARY SCHOOL #41

WATER & SEWER MAIN EXTENSIONS

HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

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 5/7/16/12

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2999

DESIGNED BY: B.C.R.
DRAWN BY: B.C.R.
CHECKED BY: P.M.K.
DATE: FEBRUARY, 2012

PAUL W. KRUEBEL
PROFESSIONAL ENGINEER

APPROVED: 3/1/12
DATE

APPROVED: 3/1/12
DATE

WATER & SEWER MAIN EXTENSIONS
TITLE SHEET

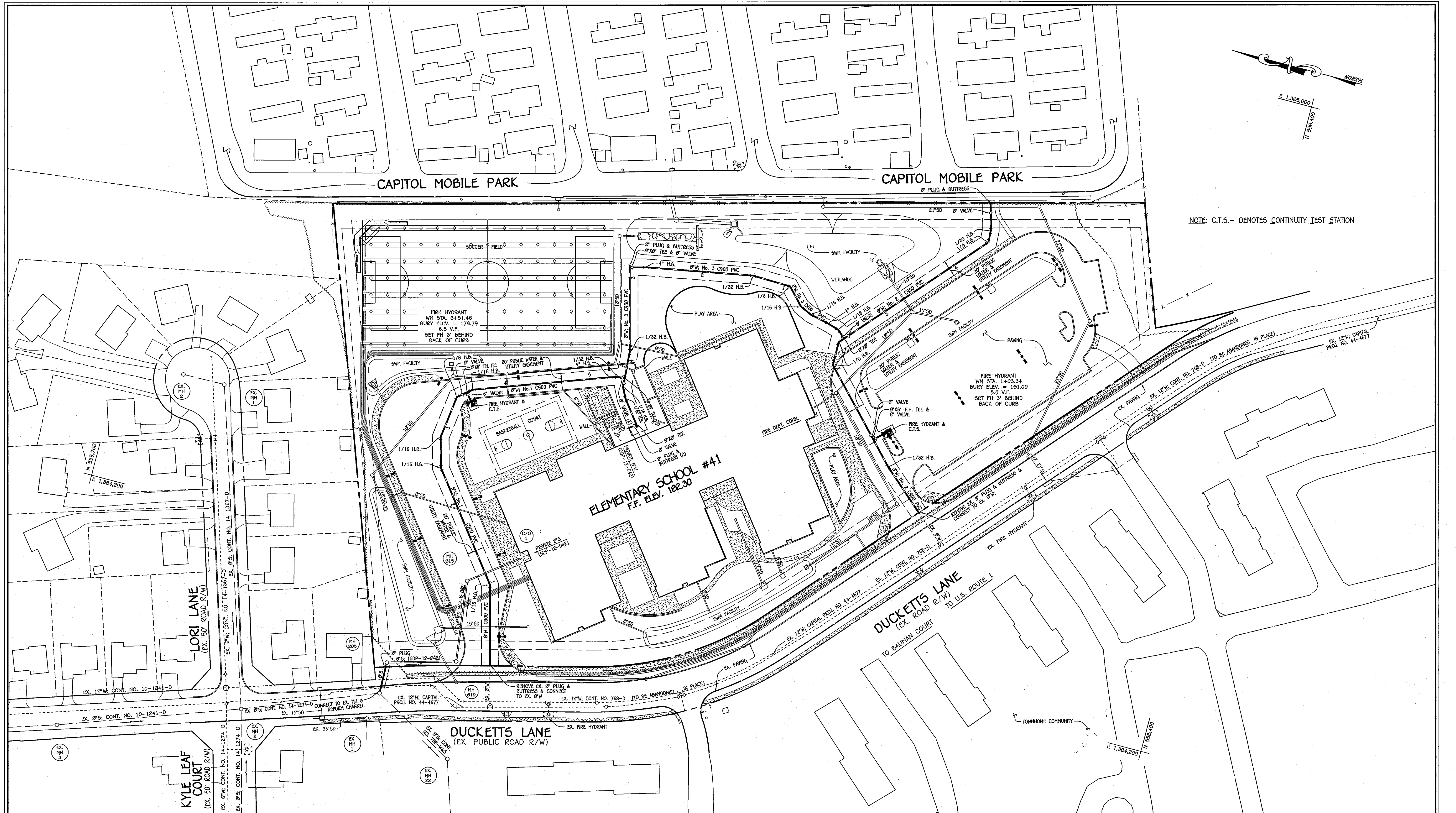
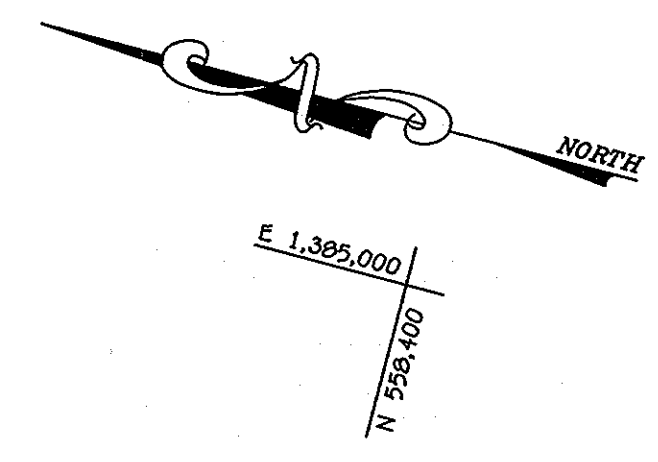
600' SCALE MAP NO. 37 BLOCK NO. 12
F.C.C. WORK ORDER NO. 11022
FILE NAME: WATER & SEWER MAIN EXTENSION TITLE SHEET

DEVELOPER / OWNER
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 MARYLAND ROUTE 108
ELLCOTT CITY, MD 21042
ATTN: BRUCE GIST
410-313-6798

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

SCALE AS SHOWN
SHEET 1 OF 3

1020111022dwg11022 Water and Sewer Main Plan (mg, 2/8/2012 2:59:33 PM)



NOTE: C.T.S. - DENOTES CONTINUITY TEST STATION

PLAN
SCALE: 1" = 50'

DEVELOPER / OWNER
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM
 10910 MARYLAND ROUTE 108
 ELLICOTT CITY, MD 21104
 ATTN: BRUCE GIST
 410-313-6798

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

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Shea C. Cram
 CHIEF, BUREAU OF UTILITIES

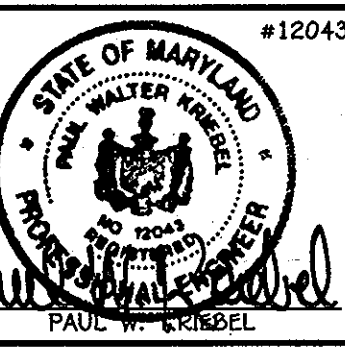
DEPARTMENT OF PLANNING AND ZONING
 HOWARD COUNTY, MARYLAND

Paul W. Corbett
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

3/14/12
 DATE

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.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21104
 (410) 461-2225



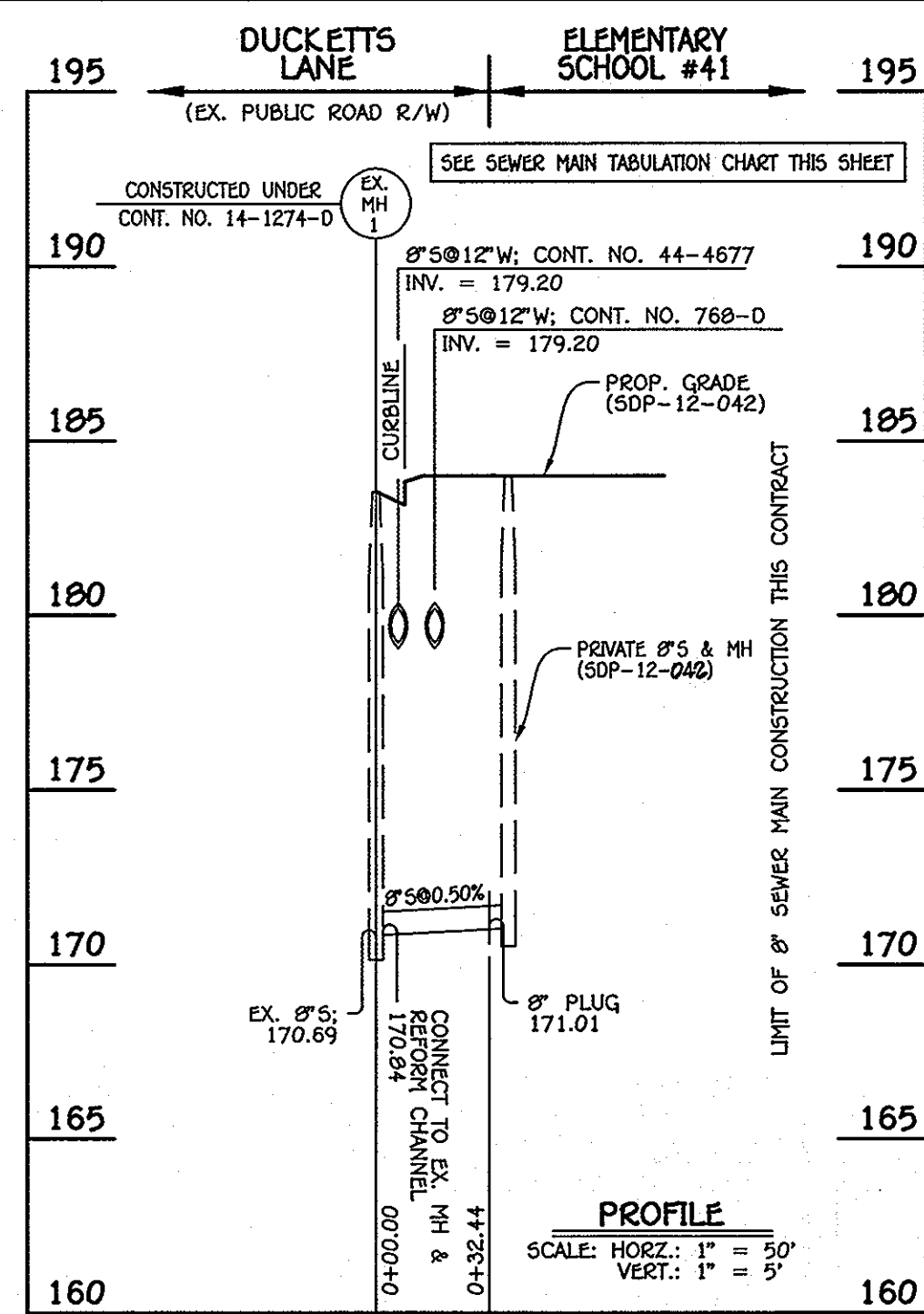
DESIGNED BY :	B.C.R.
DRAWN BY :	B.C.R.
CHECKED BY :	P.W.K.
DATE :	FEBRUARY, 2012
BY NO.	
REVISION	

WATER & SEWER MAIN EXTENSIONS PLAN	
600' SCALE MAP NO. 37	BLOCK NO. 12
F.C.C. WORK ORDER NO. 11022	
FILE NAME : WATER & SEWER MAIN EXTENSION PLAN	

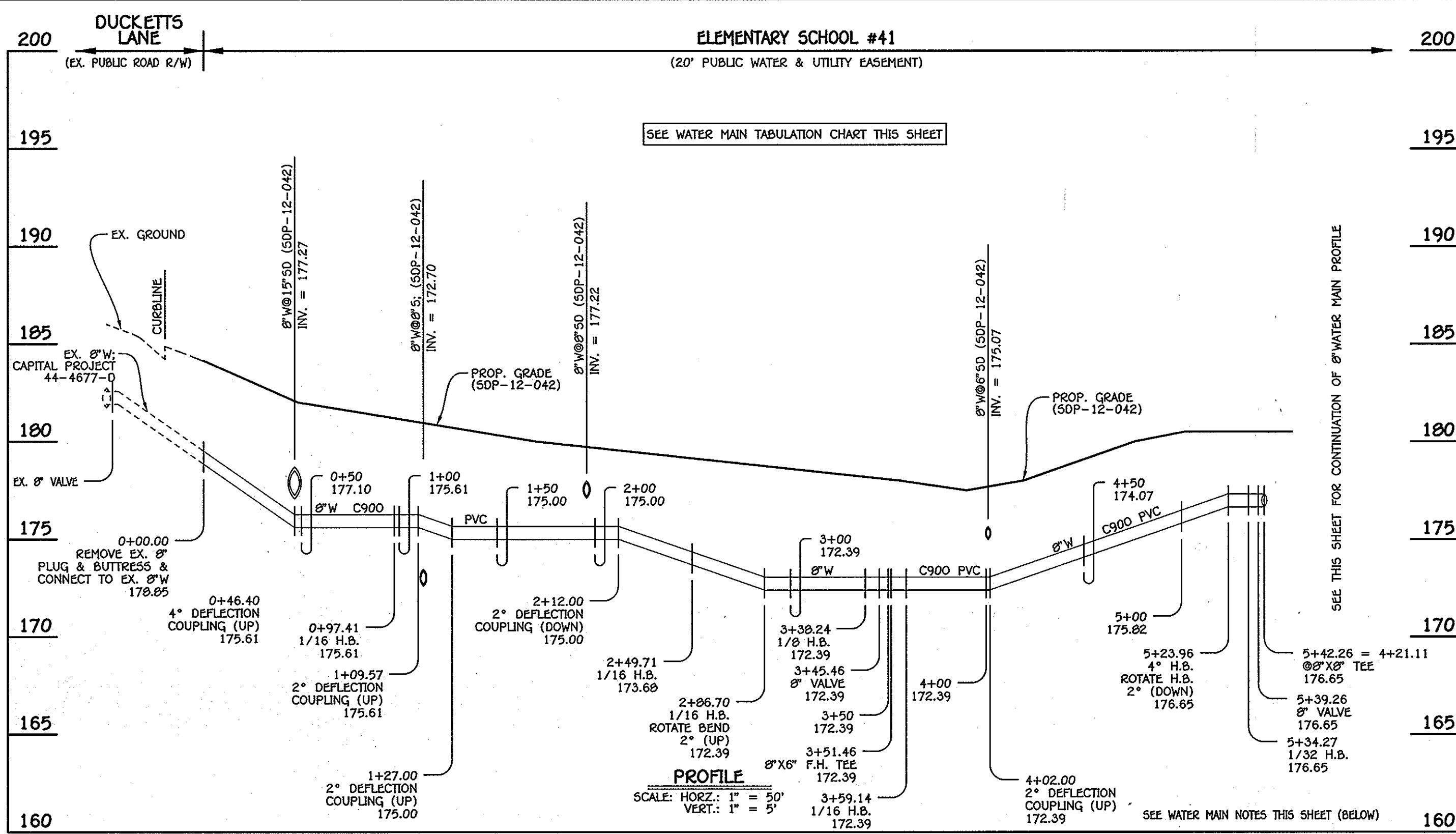
ELEMENTARY SCHOOL #41
 WATER & SEWER MAIN EXTENSIONS
 CONTRACT NO. 14-4725-D
 FIRST ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 2 OF 3

1301111022.dwg 11022 Water and Sewer Main Extensions 2/28/2012 3:40:46 PM



8" SEWER MAIN



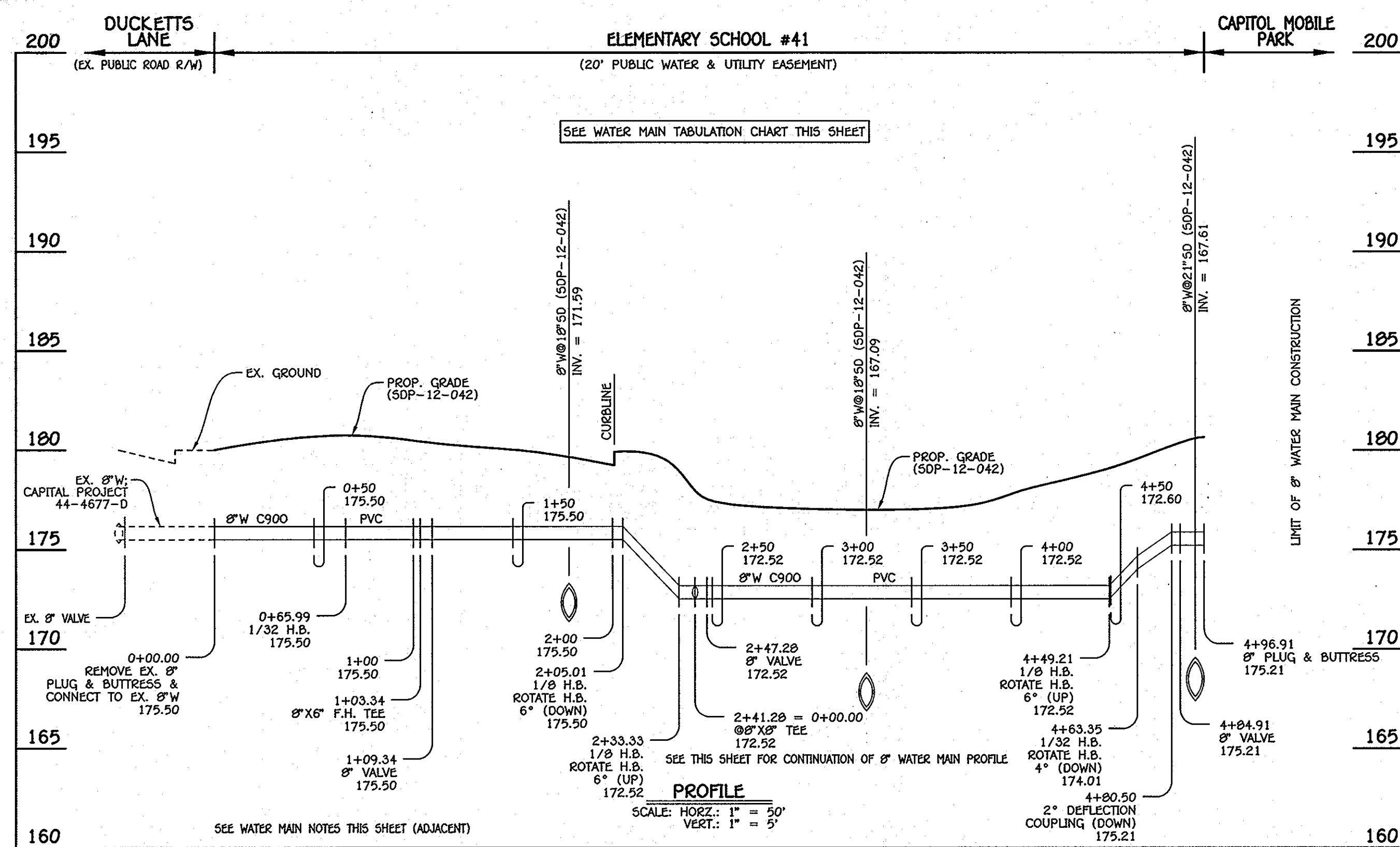
8" WATER MAIN No.1

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN No. 1: ELEMENTARY SCHOOL #41			
0+00.00	EX. 8" PLUG & BUTTRESS	559180.15	1384100.26
0+07.41	1/16 H.B.	559205.05	1384194.44
2+49.71	1/16 H.B.	559297.71	1384315.30
2+06.70	1/16 H.B.	559307.37	1384351.01
3+38.24	1/8 H.B.	559300.90	1384402.14
3+45.46	8" VALVE	559295.35	1384406.77
3+51.46	8" X 6" F.H. TEE	559290.75	1384410.62
3+59.14	1/16 H.B.	559284.86	1384415.55
5+23.96	4" H.B.	559129.90	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" X 8" TEE	559112.12	1384475.43

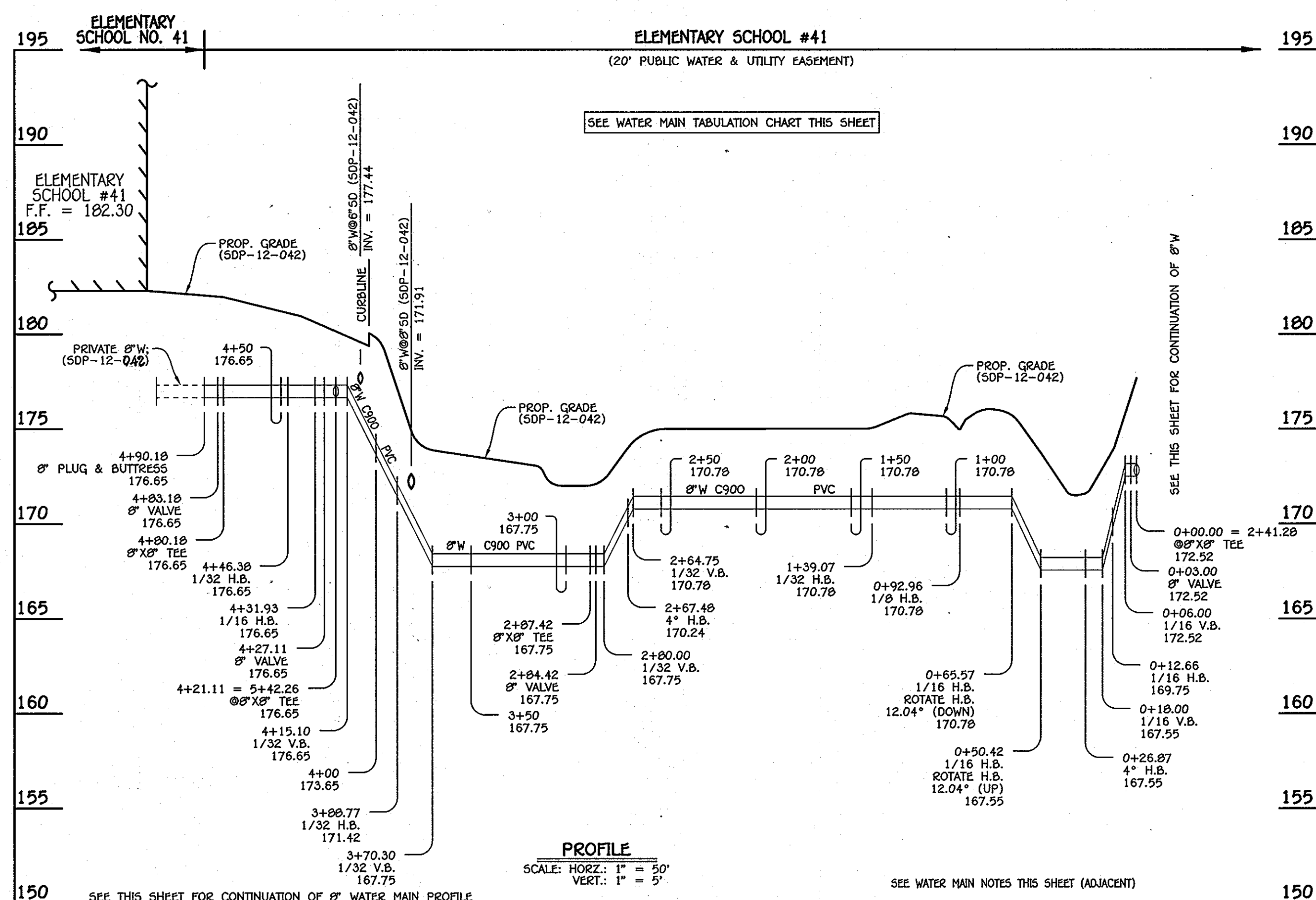
WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN No. 3: ELEMENTARY SCHOOL #41			
0+00.00	8" X 8" TEE	558070.20	1384580.53
0+03.00	8" VALVE	558072.45	1384590.52
0+12.66	1/16 H.B.	558079.69	1384596.92
0+26.87	4" H.B.	558093.24	1384601.18
0+50.42	1/16 H.B.	558116.23	1384606.33
0+65.57	1/16 H.B.	558092.97	1384612.70
0+92.96	1/8 H.B.	558048.73	1384632.64
1+39.07	1/32 H.B.	558094.83	1384633.77
2+67.48	4" H.B.	559121.16	1384610.76
2+84.42	8" VALVE	559137.54	1384606.43
2+87.42	8" X 8" TEE	559140.44	1384605.66
3+08.77	1/32 H.B.	559114.52	1384507.68
4+21.11	8" X 8" TEE	559112.12	1384475.43
4+27.11	8" VALVE	559111.68	1384469.45
4+31.93	1/16 H.B.	559111.32	1384464.64
4+46.38	1/32 H.B.	559104.87	1384451.71
4+80.18	8" X 8" TEE	559084.30	1384424.88
4+83.18	8" VALVE	559086.68	1384423.06
4+90.18	8" PLUG & BUTTRESS	559092.23	1384418.80

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN No. 2: ELEMENTARY SCHOOL #41			
0+00.00	EX. 8" PLUG & BUTTRESS	558730.37	1384409.24
0+65.99	1/32 H.B.	558779.77	1384452.98
1+03.34	8" X 6" F.H. TEE	558805.36	1384480.19
1+09.34	8" VALVE	558809.49	1384484.56
2+05.01	1/8 H.B.	558875.01	1384454.26
2+33.33	1/8 H.B.	558875.47	1384582.57
2+41.28	8" X 8" TEE	558870.20	1384580.53
2+47.28	8" VALVE	558866.23	1384593.03
4+49.21	1/8 H.B.	558732.55	1384744.37
4+63.35	1/32 H.B.	558733.42	1384758.49
4+84.91	8" VALVE	558738.94	1384779.33
4+96.91	8" PLUG & BUTTRESS	558742.01	1384790.93

MANHOLE TABULATION CHART			
NO.	NORTHING	EASTING	RIM ELEVATION
8" PLUG	559300.50	1384067.11	----



8" WATER MAIN No.2



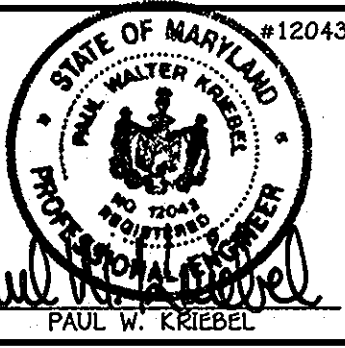
8" WATER MAIN No.3

- 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.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES
DATE: 5/1/12

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 5/1/12

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.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2295



DESIGNED BY: B.C.R.
DRAWN BY: B.C.R.
CHECKED BY: P.W.K.
DATE: FEBRUARY, 2012
BY NO. REVISION

WATER & SEWER MAIN EXTENSIONS PROFILES & CHARTS
600' SCALE MAP NO. 37 BLOCK NO. 12
F.C.C. WORK ORDER NO. 11022
FILE NAME: WATER & SEWER MAIN EXTENSION PROFILES

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

SCALE AS SHOWN
SHEET 3 OF 3