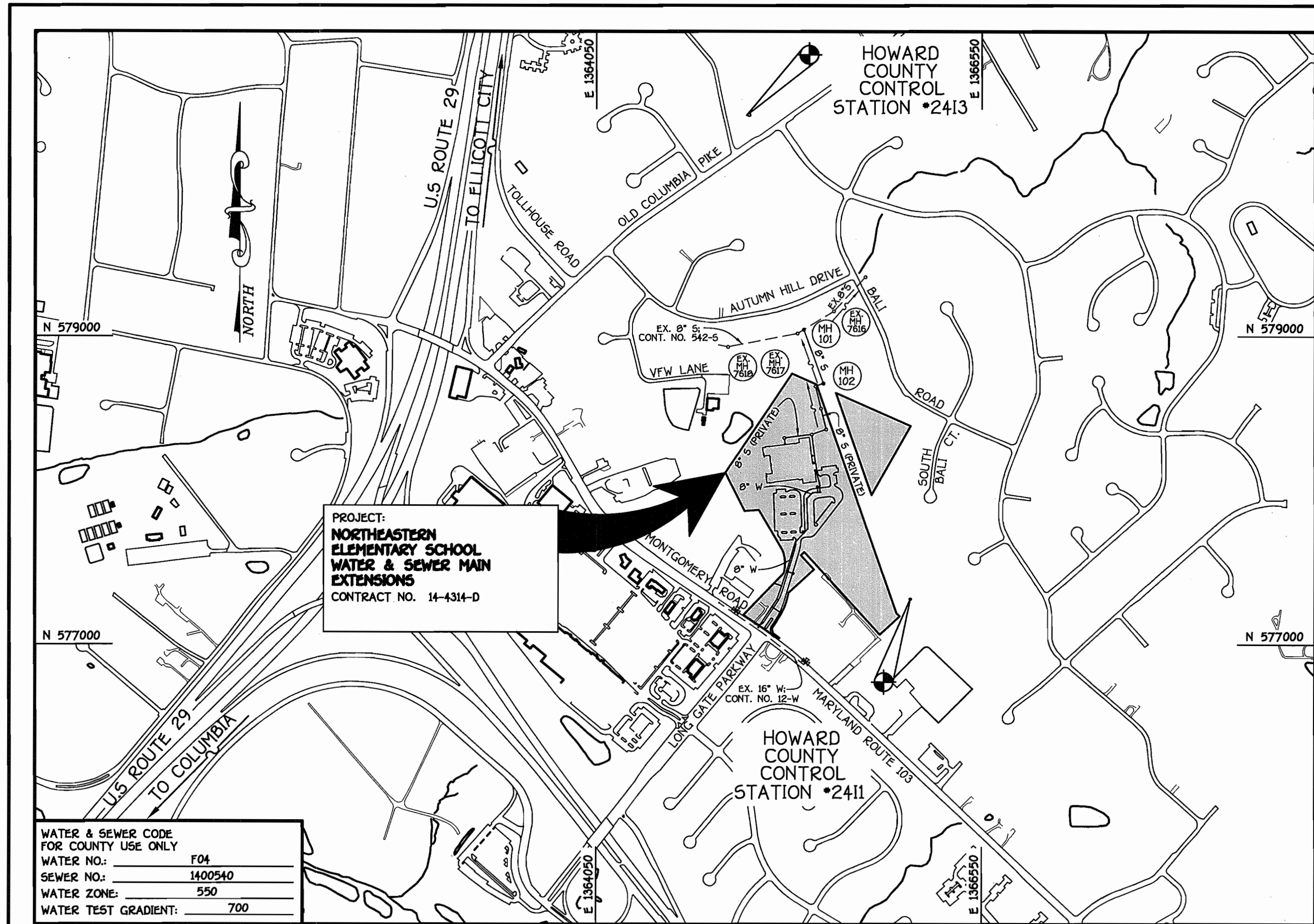


QUANTITIES				
ITEM	ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	SUPPLIER
8" SEWER	375 L.F.			
MANHOLES	3 EACH			
8" WATER	1,092 L.F.			
6" WATER	157 L.F.			
8"x8" TEE	2 EACH			
8"x6" TEE	4 EACH			
8" VALVE	3 EACH			
6" VALVE	4 EACH			
1/8" BEND	3 EACH			
1/16" BEND	1 EACH			
8" PLUG & BUTTRESS	3 EACH			
16"x8" TAPPING SLEEVE	1 EACH			
8" TAPPING VALVE	1 EACH			
FIRE HYDRANTS	4 EACH			
NAME OF UTILITY CONTRACTOR:				
SURVEY & DRAFTING DIVISION AS-BUILT DATE:				



WATER & SEWER CODE  
FOR COUNTY USE ONLY  
WATER NO.: F04  
SEWER NO.: 1400540  
WATER ZONE: 550  
WATER TEST GRADIENT: 700

TYPE OF BUILDING:	NEW PUBLIC ELEMENTARY SCHOOL
NUMBER OF PARCELS:	-1-
NO. OF WATER HOUSE CONNECTIONS:	-1-
NO. OF SEWER HOUSE CONNECTIONS:	-1-
DRAINAGE AREA:	PATAPSCO
TREATMENT PLANT:	PATAPSCO WASTEWATER TREATMENT PLANT CITY OF BALTIMORE

VICINITY MAP  
SCALE: 1"=600'

PLAN REFERENCE NUMBERS:  
SDP06-040

### GENERAL NOTES

- PART 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 EXPENSE.
  - TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON OR ABOUT NOVEMBER, 2004 (WATER MAIN) & JULY, 2005 (SEWER MAIN) BY FISHER, COLLINS & CARTER, INC.
  - HORIZONTAL AND VERTICAL 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. 2411 & NO. 2413. SEE THIS SHEET FOR BENCHMARK INFORMATION.  
ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS ARE BASED ON TRAVERSE POINT NO. 7450, A REBAR & CAP SET ON THE NORTH SIDE OF MONTGOMERY ROAD; ELEV. 4216.7.
  - 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 (P) 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 . . . . . 1-800-295-1133  
 BGE (CONSTRUCTION SERVICES) . . . . . 410-850-4620  
 BGE (EMERGENCY) . . . . . 410-685-1400  
 BUREAU OF UTILITIES . . . . . 410-313-4900  
 COLONIAL PIPELINE CO. . . . . 410-795-1590  
 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 II: WATER
- ALL WATER MAINS SHALL BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
  - TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
  - VALVES ADJACENT TO TREES 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.
  - 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.

- PART III: SEWER
- 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 16" WALLS ARE FOR BRICK MANHOLES ONLY.
  - 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.
  - HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.

#### DEVELOPER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION 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 ARE DEEMED NECESSARY.

*Wm B*  
SIGNATURE OF DEVELOPER  
*2/28/06*  
DATE

#### 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 CONSERVATION DISTRICT.

*Paul W. Kiebel*  
SIGNATURE OF ENGINEER  
*02/28/06*  
DATE

MDE LETTER OF AUTHORIZATION NUMBER: 200660372/05-NT-3247

GP-06-12

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*Jim Mayne*  
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE  
*3/23/06*  
DATE

THIS DEVELOPMENT APPROVES EROSION AND SEDIMENT CONTROL BY HOWARD SOIL CONSERVATION DISTRICT.

APPROVED:  
*John R. Robertson*  
HOWARD SOIL CONSERVATION DISTRICT  
*3/23/06*  
DATE

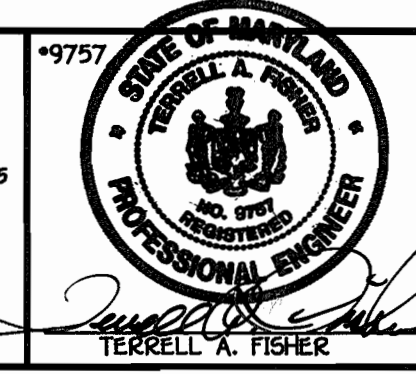
SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND AS SHOWN ON SDP-06-040 AND THESE PLANS.

*Wm B*  
SIGNATURE OF DEVELOPER  
*2/28/06*  
DATE

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE  
ELLICOTT CITY, MARYLAND 21114  
(410) 461-2955



DESIGNED BY:	B.C.R.
DRAWN BY:	B.C.R.
CHECKED BY:	P.W.K.
DATE:	FEBRUARY, 2006
BY:	NO.
REVISION:	
DATE:	

WATER & SEWER MAINS TITLE SHEET	
600' SCALE MAP NO. 24	BLOCK NO. 24
F.C.C. WORK ORDER NO. 40385	
FILE NAME: WATER AND SEWER PLAN SH1	

#### OWNER & DEVELOPER

HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
BOARD OF EDUCATION  
10910 MARYLAND ROUTE 108  
ELLICOTT CITY, MARYLAND 21042

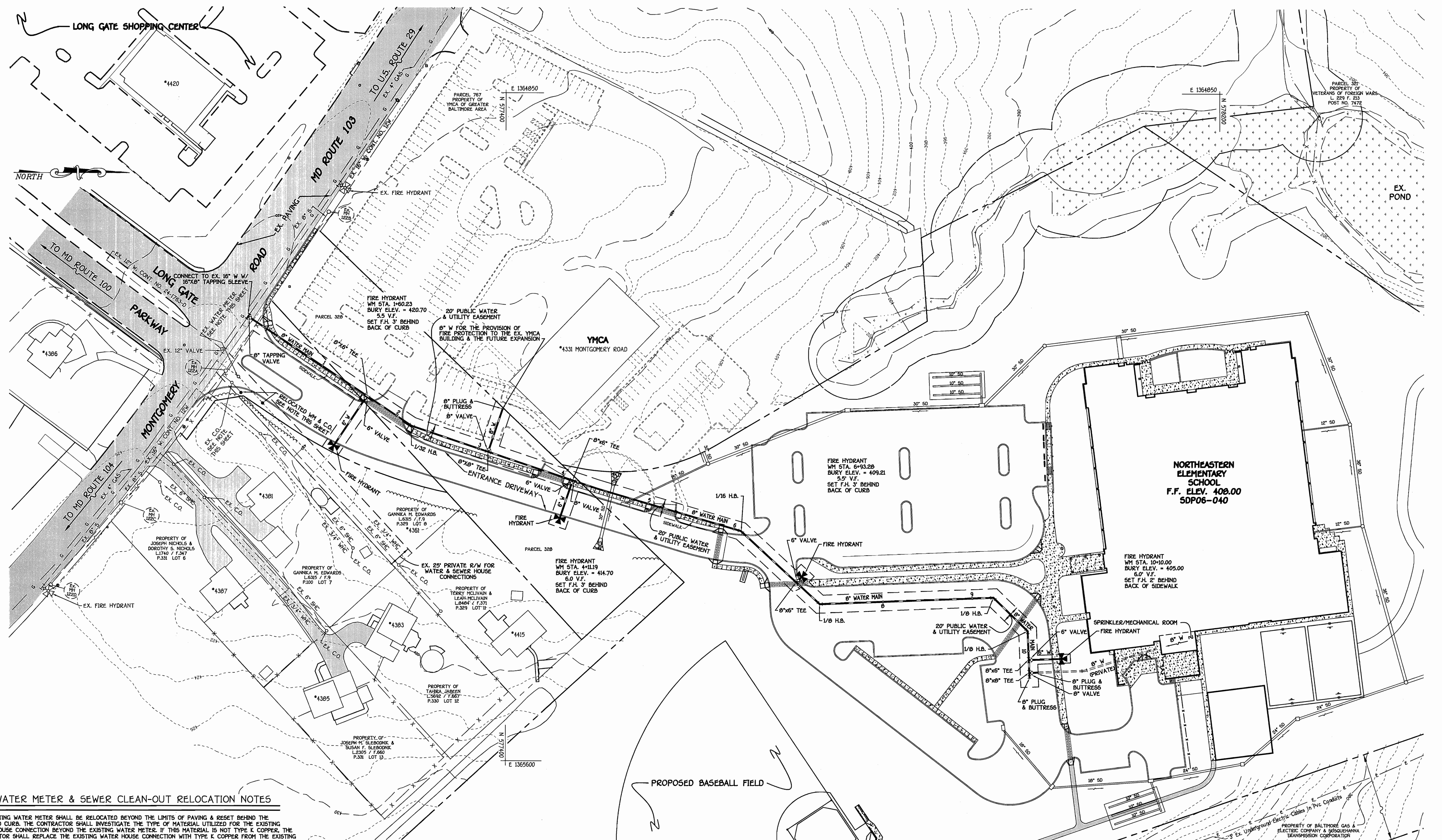
CONTRACT NO. 14-4314-D  
NORTHEASTERN  
ELEMENTARY SCHOOL  
WATER & SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

NORTHEASTERN ELEMENTARY SCHOOL WATER AND SEWER MAIN EXTENSIONS SECOND ELECTION DISTRICT CONTRACT NO. 14-4314-D HOWARD COUNTY, MARYLAND		SCALE AS SHOWN
		SHEET 1 of 6

*Rita B. Berman*  
CHIEF, BUREAU OF UTILITIES  
*3-8-06*  
DATE

*John R. Robertson*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*3/28/06*  
DATE





**EX. WATER METER & SEWER CLEAN-OUT RELOCATION NOTES**

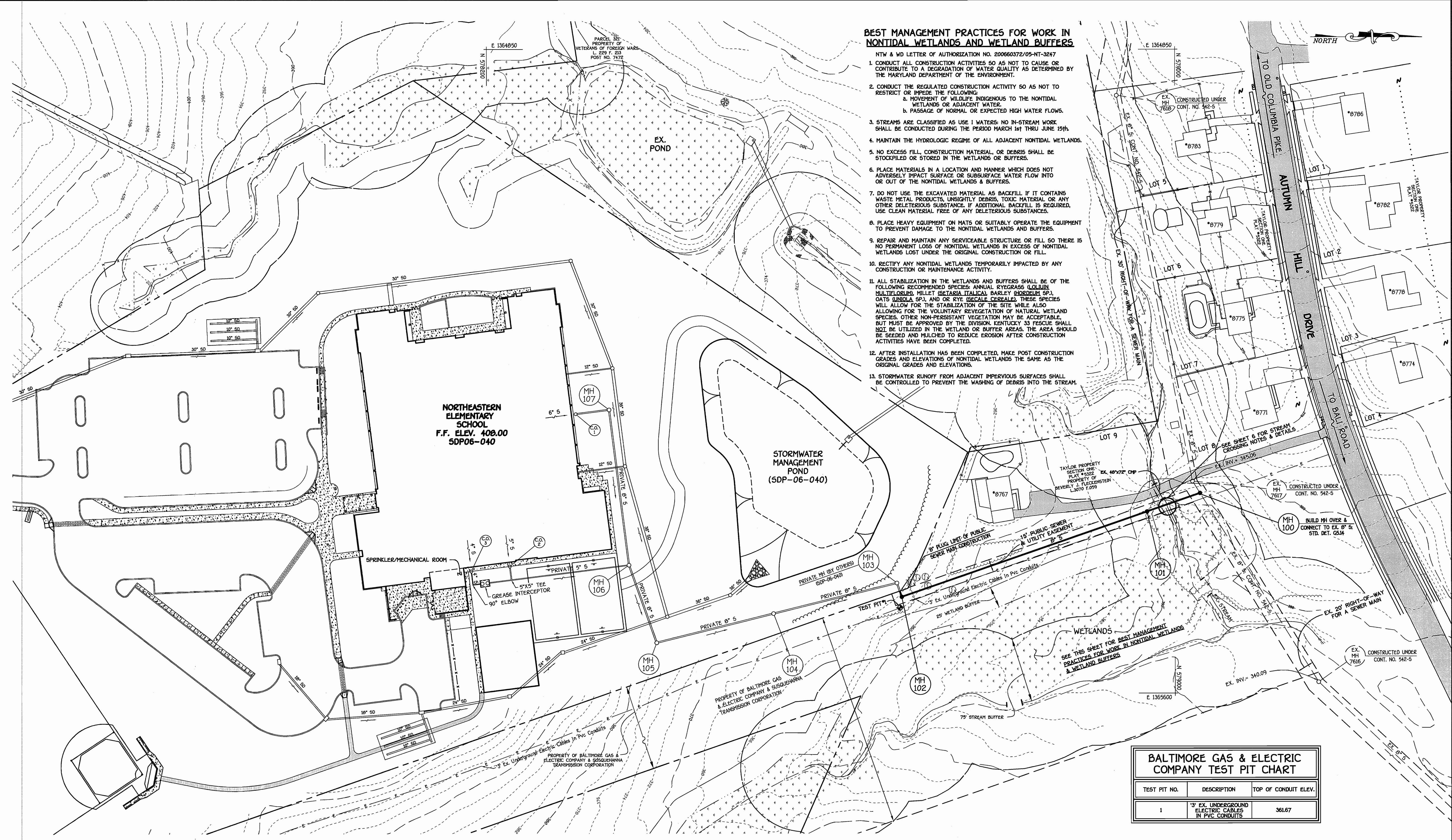
1. THE EXISTING WATER METER SHALL BE RELOCATED BEYOND THE LIMITS OF PAVING & RESET BEHIND THE PROPOSED CURB. THE CONTRACTOR SHALL INVESTIGATE THE TYPE OF MATERIAL UTILIZED FOR THE EXISTING WATER HOUSE CONNECTION BEYOND THE EXISTING WATER METER. IF THIS MATERIAL IS NOT TYPE K COPPER, THE CONTRACTOR SHALL REPLACE THE EXISTING WATER HOUSE CONNECTION WITH TYPE K COPPER FROM THE EXISTING WATER METER TO THE RELOCATED WATER METER SETTING.
2. THE EXISTING SANITARY SEWER CLEAN-OUT SHALL BE RELOCATED BEYOND THE LIMITS OF PAVING & RESET BEHIND THE PROPOSED CURB. THE CONTRACTOR SHALL INVESTIGATE THE TYPE OF MATERIAL UTILIZED FOR THE EXISTING SEWER HOUSE CONNECTION UP TO THE EXISTING CLEAN-OUT. IF DIFFERENT MATERIAL IS UTILIZED BEYOND THE EXISTING CLEAN-OUT, THE CONTRACTOR SHALL REMOVE THE EXISTING SEWER HOUSE CONNECTION & REPLACE WITH SIMILAR MATERIAL FROM THE EXISTING CLEAN-OUT TO THE RELOCATED CLEAN-OUT SETTING.

PLAN  
SCALE: 1" = 50'

NOTE: SEE SHEET 3 OF 5 FOR PLAN OF 8" PUBLIC & PRIVATE SEWER MAINS.

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND R. J. B... CHIEF, BUREAU OF UTILITIES DATE: 3-8-06	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND M... CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 3/8/06	FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE ELLICOTT CITY, MARYLAND 21114 (410) 461-2895	*9757 STATE OF MARYLAND PROFESSIONAL ENGINEER TERRY A. FISHER	DESIGNED BY: B.C.R.	CHECKED BY: P.W.K.	DATE: FEBRUARY, 2006	BY NO.	REVISION	DATE	FILE NAME: WATER PLAN SH1	CONTRACT NO. 14-4314-D NORTHEASTERN ELEMENTARY SCHOOL WATER & SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND	SCALE AS SHOWN  SHEET 2 OF 6
				DRAWN BY: B.C.R.								





**BEST MANAGEMENT PRACTICES FOR WORK IN NONTIDAL WETLANDS AND WETLAND BUFFERS**

- NTW & WD LETTER OF AUTHORIZATION NO. 20060372/05-NT-3247
- CONDUCT ALL CONSTRUCTION ACTIVITIES SO AS NOT TO CAUSE OR CONTRIBUTE TO A DEGRADATION OF WATER QUALITY AS DETERMINED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
  - MOVEMENT OF WILDLIFE INDIGENOUS TO THE NONTIDAL WETLANDS OR ADJACENT WATER.
  - PASSAGE OF NORMAL OR EXPECTED HIGH WATER FLOWS.
- STREAMS ARE CLASSIFIED AS USE 1 WATERS: NO IN-STREAM WORK SHALL BE CONDUCTED DURING THE PERIOD MARCH 1st THRU JUNE 15th.
- MAINTAIN THE HYDROLOGIC REGIME OF ALL ADJACENT NONTIDAL WETLANDS.
- NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN THE WETLANDS OR BUFFERS.
- PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF THE NONTIDAL WETLANDS & BUFFERS.
- DO NOT USE THE EXCAVATED MATERIAL AS BACKFILL IF IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL OR ANY OTHER DELETERIOUS SUBSTANCE. IF ADDITIONAL BACKFILL IS REQUIRED, USE CLEAN MATERIAL FREE OF ANY DELETERIOUS SUBSTANCES.
- PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO THE NONTIDAL WETLANDS AND BUFFERS.
- REPAIR AND MAINTAIN ANY SERVICEABLE STRUCTURE OR FILL SO THERE IS NO PERMANENT LOSS OF NONTIDAL WETLANDS IN EXCESS OF NONTIDAL WETLANDS LOST UNDER THE ORIGINAL CONSTRUCTION OR FILL.
- RECTIFY ANY NONTIDAL WETLANDS TEMPORARILY IMPACTED BY ANY CONSTRUCTION OR MAINTENANCE ACTIVITY.
- ALL STABILIZATION IN THE WETLANDS AND BUFFERS SHALL BE OF THE FOLLOWING RECOMMENDED SPECIES: ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILLET (SETARIA ITALICA), BARLEY (HORDEUM SP.), OATS (Avena sp.), AND OR RYE (SECALE CEREALE). THESE SPECIES WILL ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF NATURAL WETLAND SPECIES. OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE DIVISION. KENTUCKY 33 FESCUE SHALL NOT BE UTILIZED IN THE WETLAND OR BUFFER AREAS. THE AREA SHOULD BE SEEDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
- AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST CONSTRUCTION GRADES AND ELEVATIONS OF NONTIDAL WETLANDS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS.
- STORMWATER RUNOFF FROM ADJACENT IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE STREAM.

**NORTHEASTERN  
ELEMENTARY  
SCHOOL  
F.F. ELEV. 408.00  
SDP06-040**

**STORMWATER  
MANAGEMENT  
POND  
(SDP-06-040)**

BALTIMORE GAS & ELECTRIC COMPANY TEST PIT CHART		
TEST PIT NO.	DESCRIPTION	TOP OF CONDUIT ELEV.
1	3' EX. UNDERGROUND ELECTRIC CABLES IN PVC CONDUITS	361.67

NOTES: 1. SEE THIS SHEET FOR BEST MANAGEMENT PRACTICES FOR WORK IN NONTIDAL WETLANDS AND WETLAND BUFFERS.  
2. SEE SHEET 5 FOR EROSION & SEDIMENT CONTROL PLAN FOR OFF-SITE SEWER MAIN.

NOTE: SEE SHEET 2 FOR PLAN OF 8" PUBLIC WATER MAIN.

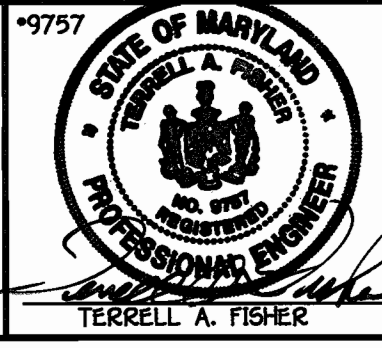
PLAN  
SCALE: 1" = 50'

CONTRACT NO. 14-4314-D  
NORTHEASTERN  
ELEMENTARY SCHOOL  
WATER & SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21042  
(410) 461-2895



DESIGNED BY:	B.C.R.				
DRAWN BY:	B.C.R.				
CHECKED BY:	P.W.K.				
DATE:	FEBRUARY, 2006	BY	NO.	REVISION	DATE

<b>SEWER MAINS PLAN</b>	
600' SCALE MAP NO.	24 BLOCK NO. 24
F.C.C. WORK ORDER NO.	40385
FILE NAME:	SEWER PLAN SH1

**NORTHEASTERN ELEMENTARY SCHOOL**  
WATER AND SEWER MAIN EXTENSIONS  
SECOND ELECTION DISTRICT  
CONTRACT NO. 14-4314-D  
HOWARD COUNTY, MARYLAND

SCALE  
AS  
SHOWN  
  
SHEET  
3 of 6

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PROPERTY OF YMCA OF GREATER BALTIMORE

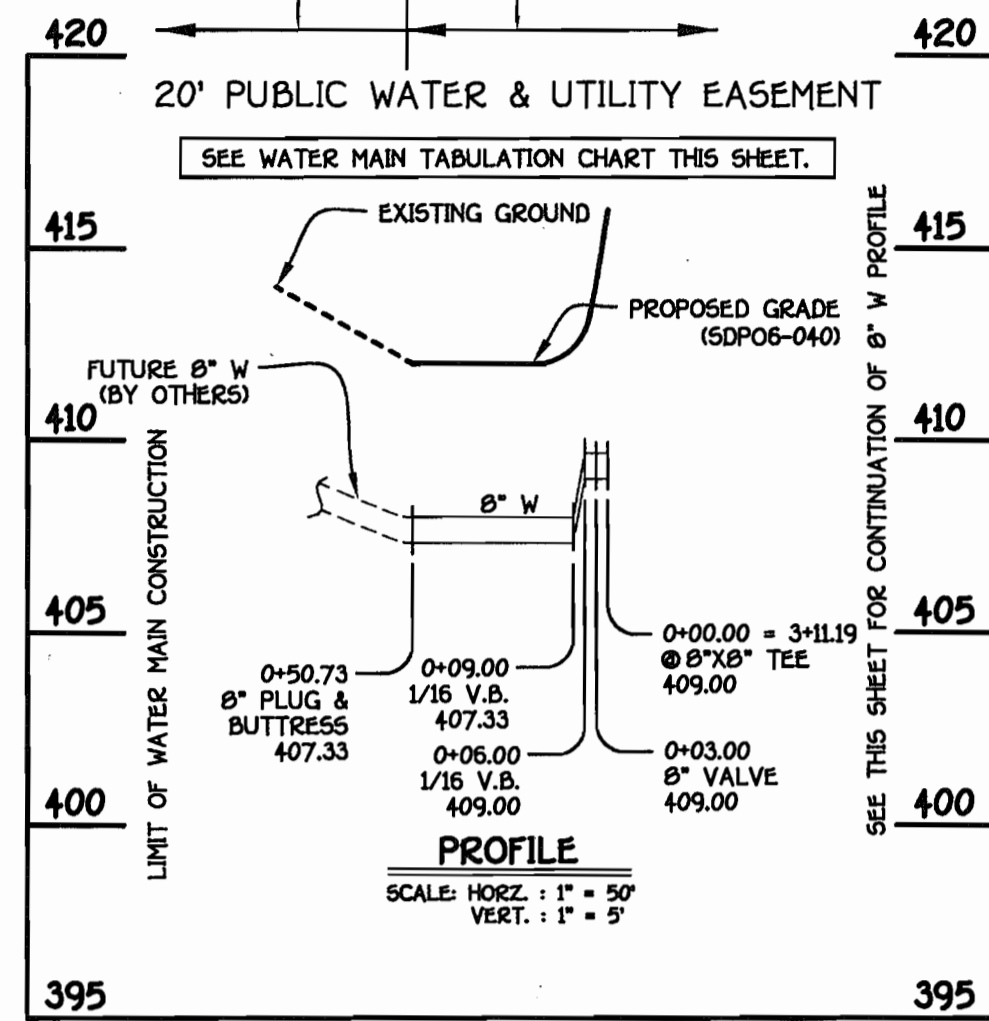
PROPERTY OF HOWARD COUNTY BOARD OF EDUCATION

MONTGOMERY ROAD

EX. PUBLIC R/W

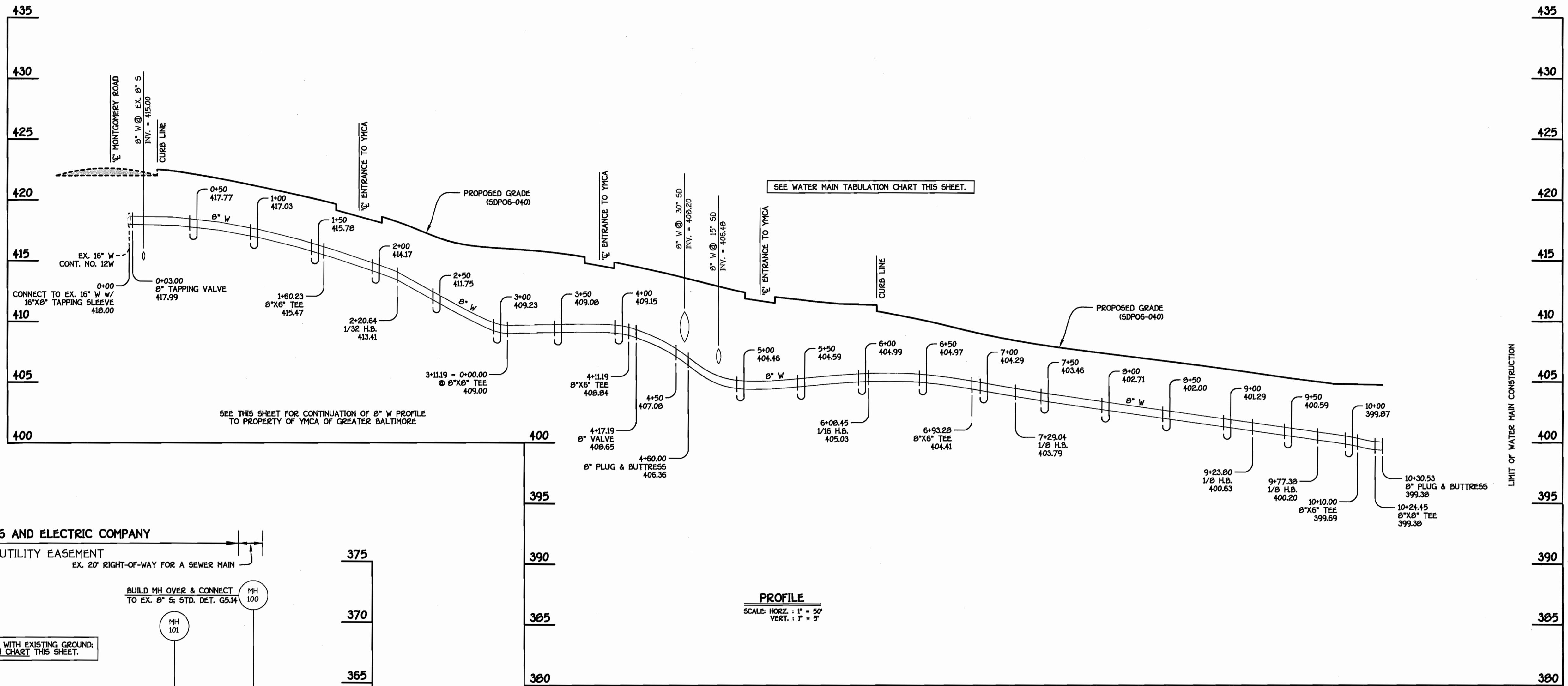
PROPERTY OF HOWARD COUNTY BOARD OF EDUCATION

20' PUBLIC WATER & UTILITY EASEMENT



**8" WATER MAIN**

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN			
0+00.00	8"X8" TEE	577380.40	1365253.20
0+03.00	8" VALVE	577381.35	1365250.35
0+50.73	8" PLUG & BUTTRESS	577396.53	1365205.10



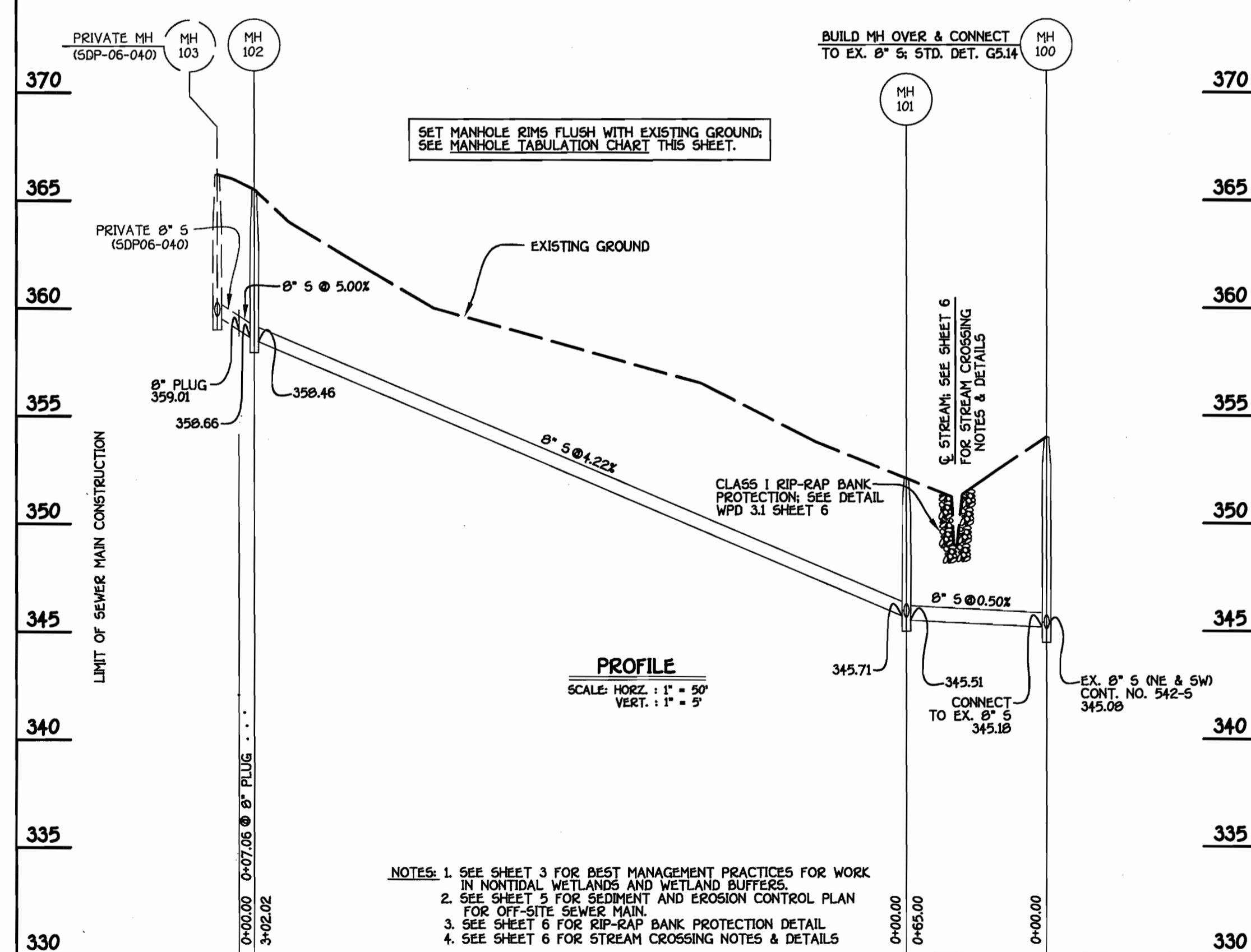
**PROFILE**  
SCALE: HORIZ. : 1" = 50'  
VERT. : 1" = 5'

PROPERTY OF HOWARD COUNTY BOARD OF EDUCATION

PROPERTY OF BALTIMORE GAS AND ELECTRIC COMPANY

15' PUBLIC SEWER & UTILITY EASEMENT

EX. 20' RIGHT-OF-WAY FOR A SEWER MAIN



**PROFILE**  
SCALE: HORIZ. : 1" = 50'  
VERT. : 1" = 5'

- NOTES: 1. SEE SHEET 3 FOR BEST MANAGEMENT PRACTICES FOR WORK IN NONTIDAL WETLANDS AND WETLAND BUFFERS.  
2. SEE SHEET 5 FOR SEDIMENT AND EROSION CONTROL PLAN FOR OFF-SITE SEWER MAIN.  
3. SEE SHEET 6 FOR RIP-RAP BANK PROTECTION DETAIL.  
4. SEE SHEET 6 FOR STREAM CROSSING NOTES & DETAILS.

**8" SEWER MAIN**

MANHOLE TABULATION CHART			
NO.	NORTHING	EASTING	RIM ELEVATION
100	579029.04	1365367.04	354.00
101	578967.65	1365380.41	352.00
102	578682.43	1365487.74	365.50
8" PLUG	578680.10	1365481.00	

NOTE: SET ALL MH RIMS FLUSH W/EXISTING GROUND.

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN			
0+00.00	16"X8" TAPPING SLEEVE	577111.10	1365101.63
0+03.00	8" TAPPING VALVE	577113.66	1365103.32
1+60.23	8"X6" TEE	577244.37	1365190.69
2+20.64	1/32 H.B.	577294.60	1365224.26
3+11.19	8"X8" TEE	577380.40	1365253.20
4+11.19	8"X6" TEE	577475.15	1365285.16
4+17.19	8" VALVE	577480.84	1365287.00
4+60.00	8" PLUG & BUTTRESS	577521.64	1365300.00
6+08.45	1/16 H.B.	577664.06	1365341.97
6+93.28	8"X6" TEE	577726.31	1365399.59
7+29.04	1/8 H.B.	577792.56	1365423.88
9+23.80	1/8 H.B.	577947.17	1365416.37
9+77.38	1/8 H.B.	577985.57	1365453.74
10+10.00	8"X6" TEE	577986.83	1365486.33
10+24.50	8"X8" TEE	577987.39	1365500.82
10+30.53	8" PLUG & BUTTRESS	577987.63	1365506.84

**8" WATER MAIN**

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
3-8-04

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND  
3/28/06

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
1601 461 - 2995



DESIGNED BY: B.C.R.  
DRAWN BY: B.C.R.  
CHECKED BY: P.W.K.  
DATE: FEBRUARY, 2006

WATER & SEWER MAINS PROFILES  
600' SCALE MAP NO. 24 BLOCK NO. 24  
F.C.C. WORK ORDER NO. 40389  
FILE NAME: WATER AND SEWER PROFILE SHT

NORTHEASTERN ELEMENTARY SCHOOL  
WATER AND SEWER MAIN EXTENSIONS  
SECOND ELECTION DISTRICT  
CONTRACT NO. 14-4314-D  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 4 OF 6

CONTRACT NO. 14-4314-D  
NORTHEASTERN ELEMENTARY SCHOOL  
WATER & SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND



### SECTION 20 : STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

#### DEFINITION PURPOSE CONDITIONS WHERE PRACTICE APPLIES

VEGETATIVE STABILIZATION SPECIFICATIONS ARE USED TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL... THIS PRACTICE SHALL BE USED ON DENUDED AREAS AS SPECIFIED ON THE PLANS AND MAY BE USED ON HIGHLY ERODIBLE OR CRITICALLY ERODING AREAS... EFFECTS ON WATER QUALITY AND QUANTITY... PLANTING VEGETATION IN DISTURBED AREAS WILL HAVE AN EFFECT ON THE WATER BUDGET, ESPECIALLY ON VOLUMES AND RATES OF RUNOFF...

#### SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

- INSTALL EROSION AND SEDIMENT CONTROL STRUCTURES (EITHER TEMPORARY OR PERMANENT SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, WATERWAYS, OR SEDIMENT CONTROL BASINS).
- PERFORM ALL GRADING OPERATIONS AT RIGHT ANGLES TO THE SLOPE. FINAL GRADING AND SHAPING IS NOT USUALLY NECESSARY FOR TEMPORARY SEEDING.
- SCHEDULE REQUIRED SOIL TESTS TO DETERMINE SOIL AMENDMENT COMPOSITION AND APPLICATION RATES FOR SITES HAVING DISTURBED AREA OVER 5 ACRES.
- SOIL AMENDMENTS FERTILIZER AND LIME SPECIFICATIONS
  - SOIL TESTS MUST BE CONDUCTED AT THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OVER 5 ACRES. SOIL ANALYSIS MAY BE PERFORMED BY THE UNIVERSITY OF MARYLAND OR A RECOGNIZED COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSES.
  - FERTILIZERS SHALL BE OF HIGH PURITY, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROVED EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS SHALL ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE STATE FERTILIZER LAWS AND SHALL BEAR THE NAME, TRADEMARK AND WARRANTY.
  - LIME MATERIALS SHALL BE CALCIUM LEMONATE (HYDRATED) OR BURNT LIME. LIME MAY BE SUBSTITUTED WHICH CONTAINS AT LEAST 90% TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE SHALL BE GRIND TO SUCH FINENESS THAT AT LEAST 50% WILL PASS THROUGH A #20 MESH AND 10% THROUGH A #40 MESH SIEVE.
  - INCORPORATE LIME AND FERTILIZER INTO THE TOP 3-5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

- SEED SPECIFICATIONS
  - SEED PREPARATION SHALL CONSIST OF LOOSENING SOIL TO A DEPTH OF 3" TO 5" BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHELSE, PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED IT SHOULD NOT BE ROLLED OR DRAGGED SMOOTH, BUT LEFT IN THE ROUGHENED CONDITION. SLOPED AREAS (GREATER THAN 3%) SHOULD BE TRACKED LEAVING THE SURFACE IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
  - APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
  - INCORPORATE LIME AND FERTILIZER INTO THE TOP 3-5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
- PERMANENT SEEDING
  - MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT:
    - SOIL PH SHALL BE BETWEEN 6.0 AND 7.0.
    - SOLUBLE SALTS SHALL BE LESS THAN 500 PARTS PER MILLION (PPM).
    - THE SOIL SHALL CONTAIN LESS THAN 40% CLAY. THE SOIL SHALL BE LIGHT ENOUGH TO GRAIN MATERIAL #30 SILT PLUS CLAY TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION IS IF LOVEGRASS OR SERICIA LESPEDEZIAS IS TO BE PLANTED, THEN A SANDY SOIL (#30 SILT PLUS CLAY) WOULD BE ACCEPTABLE.
    - SOIL SHALL CONTAIN 15% MINIMUM ORGANIC MATTER BY WEIGHT.
    - SOIL MUST CONTAIN SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
    - IF THESE CONDITIONS CANNOT BE MET BY SOILS ON SITE, ADDING TOPSOIL IS REQUIRED IN ACCORDANCE WITH SECTION 21 STANDARD AND SPECIFICATION FOR TOPSOIL.
  - AREAS PREVIOUSLY GRADED AND STABILIZED WITH RIDGES OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE, STEEP SLOPES (STEEPER THAN 3%) SHOULD BE TRACKED BY A DOZER LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. THE TOP 1-3" OF SOIL SHOULD BE LOOSE AND FRIABLE. SEEDING LOOSENING MAY NOT BE NECESSARY ON NEWLY DISTURBED AREAS.
  - APPLY SOIL AMENDMENTS AS PER SOIL TESTS OR AS INCLUDED ON THE PLANS.
  - MIX SOIL AMENDMENTS INTO THE TOP 3-5" OF TOPSOIL BY DISKING OR OTHER SUITABLE MEANS. LAWN AREAS SHOULD BE RAKED TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED AND APPLICATION. WHERE SITE CONDITIONS WILL NOT PERMIT NORMAL SEEDING, PREPARATION, LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE. STEEP SLOPES (STEEPER THAN 3%) SHOULD BE TRACKED BY A DOZER LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. THE TOP 1-3" OF SOIL SHOULD BE LOOSE AND FRIABLE. SEEDING LOOSENING MAY NOT BE NECESSARY ON NEWLY DISTURBED AREAS.

- SEED SPECIFICATIONS
  - ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW. ALL SEED SHALL BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED SHALL HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING. SEED TAGS SHALL BE MADE AVAILABLE TO THE INSPECTOR TO VERIFY TYPE AND RATE OF SEED USED.
  - INOCULATION - THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES SHALL BE A PURE CULTURE OF NITROGEN-FIXING BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES. INOCULANTS SHALL NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER AND AS DIRECTED ON PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75°-80° F. CAN WEAKEN BACTERIA AND MAKE THE INOCULANT LESS EFFECTIVE.
- METHODS OF SEEDING
  - HYDROSEEDING - APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER). BROADCAST OR DROP SEEDING, OR A CULTIPACKER SOWER.
    - IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES AMOUNTS WILL NOT EXCEED THE FOLLOWING: NITROGEN: MAXIMUM OF 100 LBS. PER ACRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS): 200 LBS./AC. K2O (POTASSIUM): 200 LBS./AC.
    - LIME - USE ONLY GROUND AGRICULTURAL LIMESTONE, UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING. NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
    - SEED AND FERTILIZER SHALL BE MIXED ON SITE AND SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.
  - DRY SEEDING - THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
    - SEED SPREAD DRY SHALL BE INCORPORATED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON THE TEMPORARY OR PERMANENT SEEDING SUMMARIES OR TABLES 265 OR 266. THE SEEDED AREA SHALL THEN BE ROLLED WITH A WEIGHTED ROLLER TO PROVIDE GOOD SEED TO SOIL CONTACT.
    - WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
    - DRILL OR CULTIPACKER SEEDING - MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
      - CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4" INCH OF SOIL COVERING. SEEDING MUST BE FIRM AFTER PLANTING.
      - WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

NOTE: ONLY STERILE STRAW MULCH SHOULD BE USED IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED. MULCHING SEEDED AREAS - MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.

- IF GRADING IS COMPLETED OUTSIDE OF THE SEEDING SEASON, MULCH ALONE SHALL BE APPLIED AS PRESCRIBED IN THIS SECTION AND MAINTAINED UNTIL THE SEEDING SEASON RETURNS AND SEEDING CAN BE PERFORMED IN ACCORDANCE WITH THESE SPECIFICATIONS.
- WHEN STRAW MULCH IS USED, IT SHALL BE SPREAD OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS/ACRE. MULCH SHALL BE APPLIED TO A UNIFORM LOOSE DEPTH OF BETWEEN 1" AND 2". MULCH APPLIED SHALL ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED. IF A MULCH ANCHORING TOOL IS TO BE USED, THE RATE SHOULD BE INCREASED TO 2.5 TONS/ACRE.
- WOOD CELLULOSE FIBER USED AS A MULCH SHALL BE APPLIED AT A NET DRY WEIGHT OF 1,500 LBS. PER ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER, AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LBS. OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

- INCREMENTAL STABILIZATION - CUT SLOPES
  - ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDING AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 15'.
  - CONSTRUCTION SEQUENCE REFER TO FIGURE 3 BELOW:
    - EXCAVATE AND STABILIZE ALL TEMPORARY SWALES, SIDE DITCHES, OR BERMS THAT WILL BE USED TO CONVEY RUNOFF FROM THE EXCAVATION.
    - PERFORM PHASE 1 EXCAVATION, DRESS, AND STABILIZE.
    - PERFORM PHASE 2 EXCAVATION, DRESS, AND STABILIZE. OVERSEED PHASE 1 AREAS AS NECESSARY.
    - PERFORM FINAL PHASE EXCAVATION, DRESS, AND STABILIZE. OVERSEED PREVIOUSLY SEED AREAS NECESSARY.
- ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL OF REQUIRED GRADE AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OF COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.
- INCREMENTAL STABILIZATION OF EMBANKMENTS - FILL SLOPES
  - EMBANKMENTS SHALL BE CONSTRUCTED IN LIFTS AS PRESCRIBED ON THE PLANS.
  - SLOPES SHALL BE STABILIZED IMMEDIATELY WHEN THE VERTICAL HEIGHT OF THE MULTIPLE LIFTS REACHES 15', OR WHEN THE GRADING OPERATION CEASES AS PRESCRIBED IN THE PLANS.
  - AT THE END OF EACH DAY, TEMPORARY BERMS AND PIPE SLOPE DRAINS SHOULD BE CONSTRUCTED ALONG THE TOP EDGE OF THE EMBANKMENT TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER TO A SEDIMENT TRAPPING DEVICE.
  - CONSTRUCTION SEQUENCE REFER TO FIGURE 4 (BELOW):
    - EXCAVATE AND STABILIZE ALL TEMPORARY SWALES, SIDE DITCHES, OR BERMS THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL. CONSTRUCT SLOPE SILT FENCE ON LOW SIDE OF FILL AS SHOWN IN FIGURE 5, UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA.
    - PLACE PHASE 1 EMBANKMENT, DRESS, AND STABILIZE.
    - PLACE PHASE 2 EMBANKMENT, DRESS, AND STABILIZE.
    - PLACE FINAL PHASE EMBANKMENT, DRESS, AND STABILIZE. OVERSEED PREVIOUSLY SEED AREAS AS NECESSARY.
  - ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION AND PLACEMENT OF TOPSOIL OF REQUIRED GRADE AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OF COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

#### SECTION 2 - TEMPORARY SEEDING

VEGETATION - ANNUAL GRASS OR GRAIN USED TO PROVIDE COVER ON THE DISTURBED AREAS FOR UP TO 12 MONTHS. FOR LONGER DURATION OF VEGETATIVE COVER, PERMANENT SEEDING IS REQUIRED.

- SEED MIXTURES - TEMPORARY SEEDING
  - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE 26 FOR THE APPROPRIATE PLANT HARDNESS ZONE FROM FIGURE 5) AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW, ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLANS AND COMPLETED, THEN TABLE 26 MUST BE PUT ON THE PLANS.
  - FOR SITES WHERE SOIL TESTS PERFORMED, THE RATES SHOWN ON THE TABLE SHALL BE DELETED AND THE RATES RECOMMENDED BY THE TESTING AGENCY SHALL BE WRITTEN IN. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.

SEED MIXTURE HARDNESS ZONE (From Table 26)				SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (0-10-10)	LIME RATE (00-10-10)
NO.	SPECIES	APPLICATION RATE (b/ac)	SEEDING DATES				
1	BARLEY	122	3/1 - 5/15	1" - 2"	600 lb/ac	2 tons/ac	
	OATS	96	8/15 - 10/15	1" - 2"	(15 lb/1000sf)	(100 lb/1000sf)	
	RYE	140		1" - 2"			

#### SECTION 3 - PERMANENT SEEDING

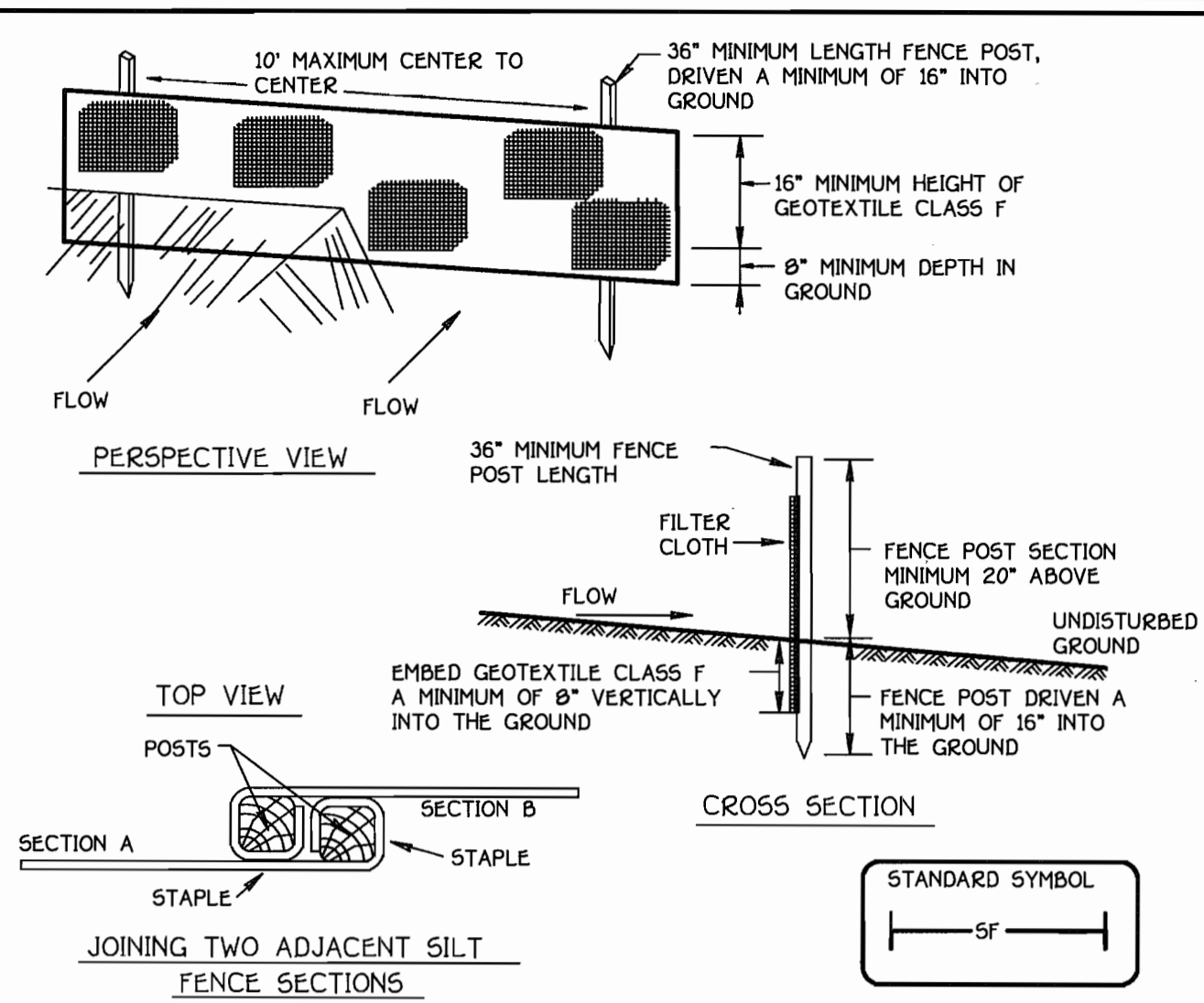
SEEDING GRASS AND LEGUMES TO ESTABLISH GROUND COVER FOR A MINIMUM OF ONE YEAR ON DISTURBED AREAS GENERALLY RECEIVING LOW MAINTENANCE.

- SEED MIXTURES - PERMANENT SEEDING
  - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE 25 FOR THE APPROPRIATE PLANT HARDNESS ZONE FROM FIGURE 5) AND ENTER THEM IN THE PERMANENT SEEDING SUMMARY BELOW, ALONG WITH APPLICATION RATES AND SEEDING DATES. SEEDING DEPTHS CAN BE ESTIMATED USING TABLE 26. IF THIS SUMMARY IS NOT PUT ON THE CONSTRUCTION PLANS AND COMPLETED, THEN TABLE 25 MUST BE PUT ON THE PLANS. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAMBANKS, OR DUNES OR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-SCS TECHNICAL FIELD OFFICE GUIDE, SECTION 362 - CRITICAL AREA PLANTING, FOR SPECIAL LAWN MAINTENANCE AREAS, SEE SECTIONS IV SOIL V TURFGRASS.
  - FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, THE RATES SHOWN ON THIS TABLE SHALL BE DELETED AND THE RATES RECOMMENDED BY THE TESTING AGENCY SHALL BE WRITTEN IN.
  - FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREAFORM FERTILIZER (46-0-0) AT 3 1/2 LBS/1000 SQ. FT. (LBS/AC). IN ADDITION TO THE ABOVE SOIL AMENDMENTS SHOWN IN THE TABLE BELOW, TO BE PERFORMED AT THE TIME OF SEEDING.

SEED MIXTURE HARDNESS ZONE (From Table 25)				SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)		LIME RATE
NO.	SPECIES	APPLICATION RATE (b/ac)	SEEDING DATES			N	P205	
3	TALL FESCUE (852)	125	3/1 - 5/15	1" - 2"	90 lb/ac	175 lb/ac	175 lb/ac	2 tons/ac
	PERENNIAL RYE GRASS (50)	15	8/15 - 10/15	1" - 2"	(2.0 lb/1000sf)	(4.0 lb/1000sf)	(4.0 lb/1000sf)	
10	TALL FESCUE (800)	120	3/1 - 5/15	1" - 2"	1000sf	1000sf	1000sf	2 tons/ac
	HARD FESCUE (202)	30	8/15 - 10/15	1" - 2"				

#### SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1055).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERE TO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 37 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1. 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12 OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE PERIODS SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 50), SOIL (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:
  - TOTAL AREA OF SITE: 21.9 ACRES (FROM SITE PLAN)
  - AREA TO BE ROOFED OR PAVED: 0.88 ACRES
  - AREA TO BE STABILIZED: 0.21 ACRES
  - TOTAL CUT - N/A; WATER & SEWER MAIN INSTALLATION ONLY
  - TOTAL FILL - N/A; WATER & SEWER MAIN INSTALLATION ONLY
  - OFFSITE WASTE/BORROW AREA LOCATION: N/A; C.I. YES



#### CONSTRUCTIONS SPECIFICATIONS

- FENCE POSTS SHALL BE A MINIMUM OF 36" LONG DRIVEN 16" MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 1 1/2" X 1 1/2" SQUARE (MINIMUM CUT), OR 1 3/4" DIAMETER MINIMUM ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE STANDARD "T" OR "U" SECTION WEIGHING NOT LESS THAN 100 POUND PER LINEAR FOOT.
- GEOTEXTILE SHALL FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP OR MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS "F":
 

TENSILE STRENGTH	50 LBS/IN (MIN)	TEST: MSMT 509
TENSILE MODULUS	2.0 LBS/IN (MIN)	TEST: MSMT 509
FLOW RATE	0.3 GAL. FT. / MINUTE (MAX)	TEST: MSMT 322
FILTERING EFFICIENCY	75% (MIN)	TEST: MSMT 322
- WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS.
- SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHED 50% OF THE FABRIC HEIGHT.

#### SECTION 21 : STANDARD AND SPECIFICATIONS FOR TOPSOIL

- DEFINITION: PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.
- PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
- SPECIFICATIONS:
  - TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND.
  - TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING SUBSOILS.
  - TOPSOIL SHALL CONTAIN LESS THAN 5% BY VOLUME OF CHISELS, GRAVEL, STICKS, ROOTS, THIRDS, OR OTHER MATERIALS LARGER THAN 1/8" DIAMETER.
  - TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" - 6" LAYER AND LIGHTLY COMPACTED TO A MINIMUM DEPTH OF 4"; AVOID SURFACE IRREGULARITIES.
  - REPLACE TOPSOIL AND APPLY SOIL AMENDMENTS AS SPECIFIED IN STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION.
  - TOPSOIL SHALL NOT BE PLACED DURING FROZEN, MUDDY, OR EXCESSIVELY WET CONDITIONS.
- APPLICATION:
  - FOR SITES RECEIVING HIGH MAINTENANCE, TOPSOIL SHALL BE PLACED IN ACCORDANCE WITH SECTION 20.04.
  - FOR SITES RECEIVING LOW MAINTENANCE, TOPSOIL SHALL BE PLACED IN ACCORDANCE WITH SECTION 20.05.

#### SEQUENCE OF CONSTRUCTION

- OBTAIN THE REQUIRED GRADING PERMIT & THE MID LETTER OF AUTHORIZATION.
- NOTIFY MESS UTILITY 48 HOURS BEFORE ANY WORK (8-800-297-7777). NOTIFY HOWARD COUNTY CONSTRUCTION/INSPECTION DIVISION 24 HOURS BEFORE STARTING ANY WORK (410-318-1870).
- INSTALL THE REQUIRED SEDIMENT AND EROSION CONTROL DEVICES AS INDICATED ON THIS SHEET.
- CLEAR AND GRUB AS NECESSARY, ONLY AS REQUIRED FOR EXCAVATION AND INSTALLATION OF THE WATER & SEWER MAINS, ONLY WITHIN THE DESIGNATED WATER AND UTILITY EASEMENTS.
- NOTE: THE LENGTH OF OPEN WATER & SEWER MAIN TRENCHES SHALL BE LIMITED TO THREE (3) PIPE LENGTHS OR THAT WHICH WILL BE BACKFILLED AND STABILIZED WITHIN ONE (1) WORKING DAY, WHICHEVER IS SHORTER.
- CONSTRUCT THE WATER AND SEWER MAINS AND APPURTENANCES.
- REFERENCE ADDITIONAL SEQUENCE OF CONSTRUCTION FROM CROSSING ON SHEET 6 OF 6, REQUIRED DURING INSTALLATION OF THE 8" SEWER MAIN.
- STABILIZE SEED AND MULCH ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES SHOWN ON THIS SHEET.
- FOLLOWING SUCCESSFUL STABILIZATION OF ALL DISTURBED AREAS, AND AFTER PERMISSION HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES.

#### DEVELOPER'S CERTIFICATION

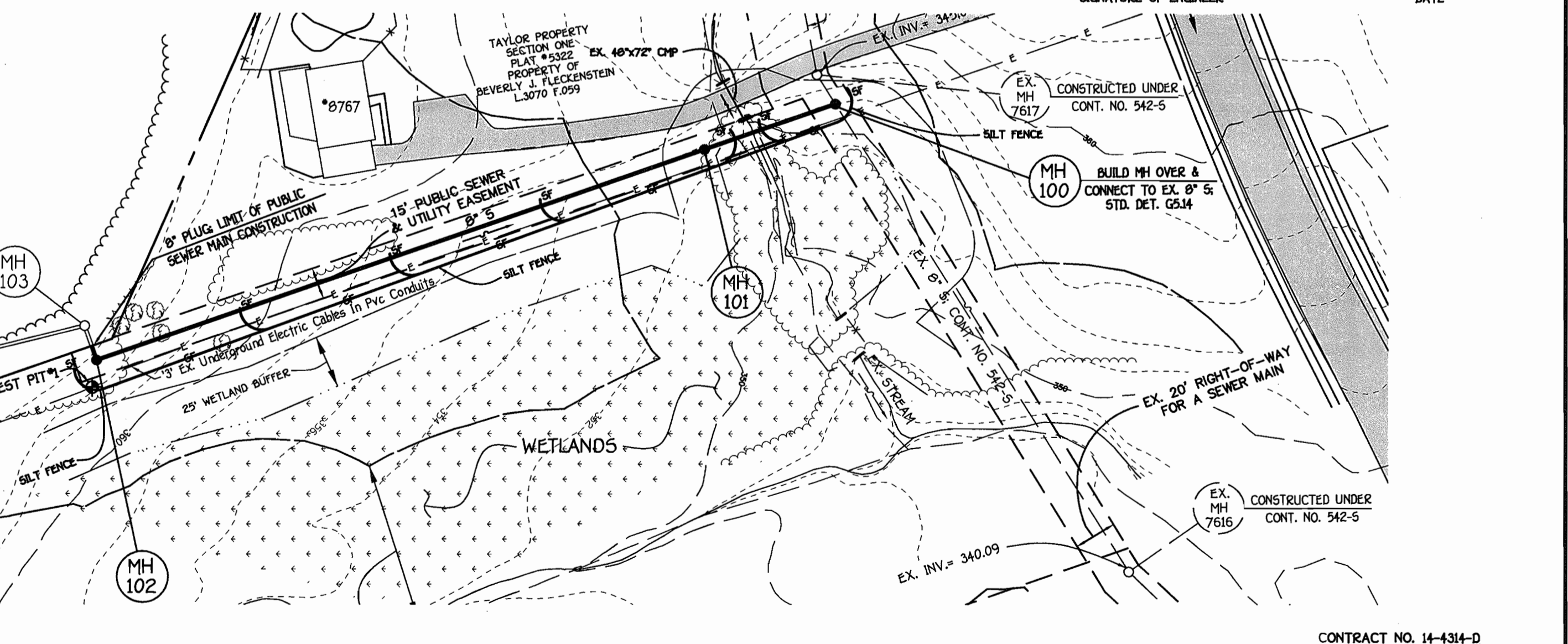
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED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

Signature: [Signature] Date: 3/28/06

#### 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 COUNTY CONSERVATION DISTRICT.

Signature: Paul W. Kiebel Date: 02/28/06



#### EROSION & SEDIMENT CONTROL PLAN

SCALE: 1" = 50'

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND
<i>R. B. Bauman</i> CHIEF, BUREAU OF UTILITIES	<i>[Signature]</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 3-8-06	DATE: 3/28/06

FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTRAL SQUARE OFFICE PARK - 30272 BALTIMORE NATIONAL PRZ. ELLSWORTH CITY, MARYLAND 21034 (410) 481-1855		DESIGNED BY: B.C.R.		
		DRAWN BY: B.C.R.		
		CHECKED BY: P.W.K.		
		DATE: FEBRUARY, 2006	BY NO.	REVISION

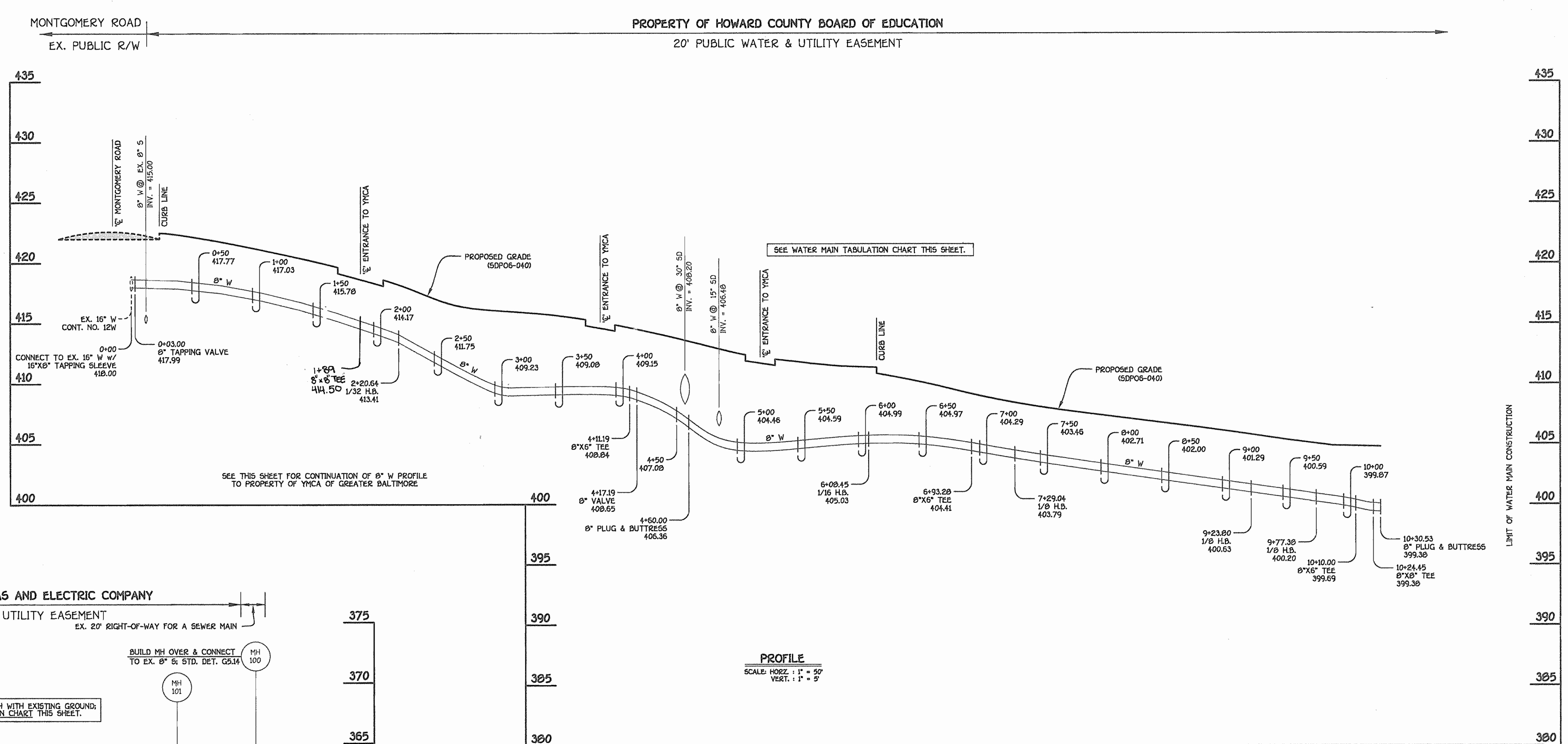
SEDIMENT & EROSION CONTROL SHEET	
600' SCALE MAP NO. 24	BLOCK NO. 24
F.C.C. WORK ORDER NO. 40382	
DATE:	FILE NAME: WATER AND SEWER PROFILE SH

NORTHEASTERN ELEMENTARY SCHOOL		SCALE AS SHOWN
WATER AND SEWER MAIN EXTENSIONS SECOND ELECTION DISTRICT CONTRACT NO. 14-4314-D HOWARD COUNTY, MARYLAND		
CONTRACT NO. 14-4314-D NORTHEASTERN ELEMENTARY SCHOOL WATER & SEWER MAIN EXTENSIONS HOWARD COUNTY, MARYLAND		SHEET 5 OF 6

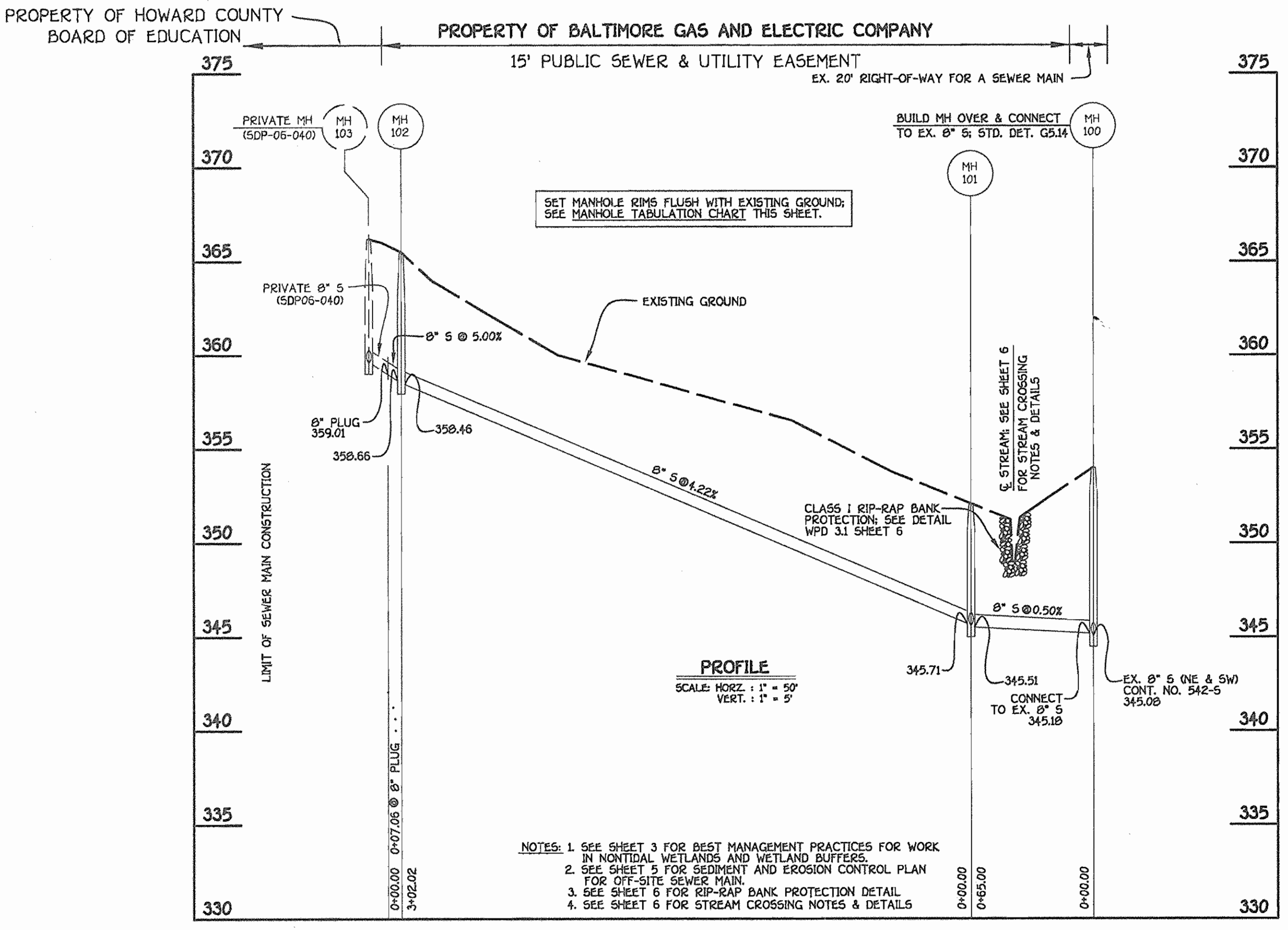








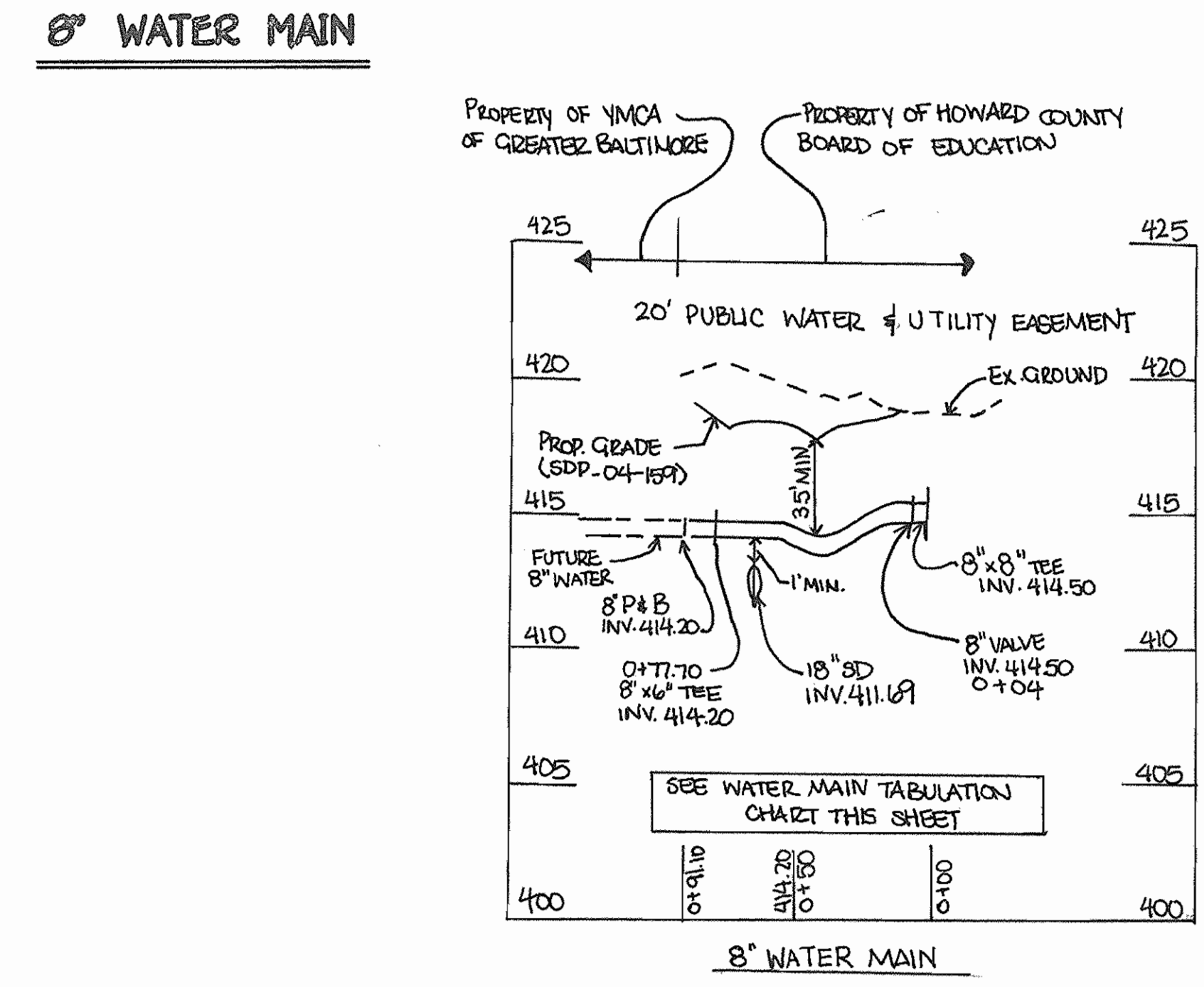
WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN			
0+00.00	8"x8" TEE	577268.02	1365206.49
0+4.00	8" VALVE	577210.20	1365203.17
0+91.10	8" PLUG & BUTTRESS	57788.83	13652130.89
0+77.7	8"x6" TEE	57731.36	136542.01



MANHOLE TABULATION CHART			
NO.	NORTHING	EASTING	RIM ELEVATION
100	579029.04	1365367.04	354.00
101	578967.65	1365388.41	352.08
102	578682.43	1365487.74	365.50
8" PLUG	578680.10	1365481.08	-----

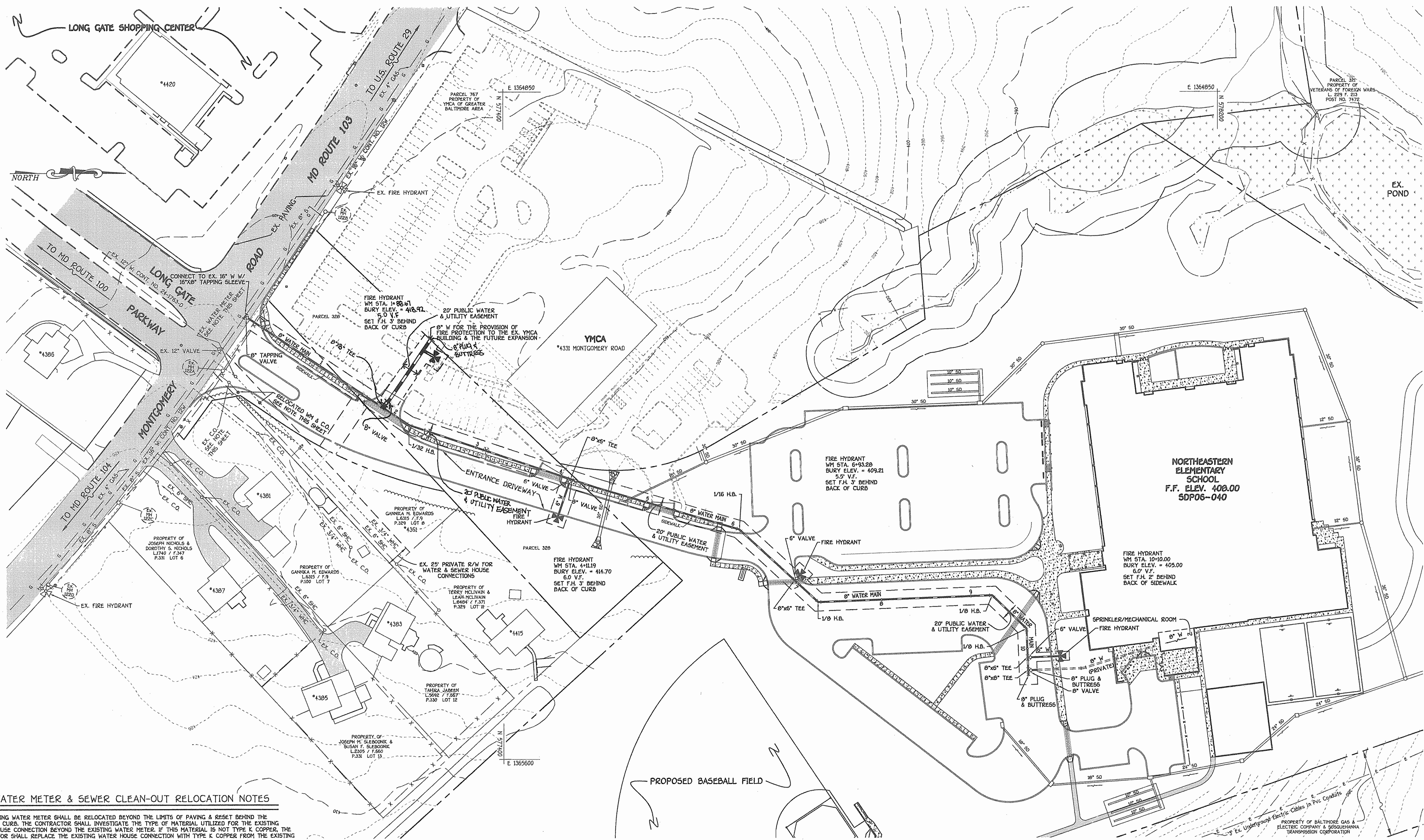
NOTE: SET ALL MH RIMS FLUSH W/EXISTING GROUND.

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN			
0+00.00	16"x8" TAPPING SLEEVE	577111.18	1365101.63
0+03.00	8" TAPPING VALVE	577113.66	1365103.32
1+60.23	8"x6" TEE	577244.37	1365190.69
2+20.64	1/32 H.B.	577294.60	1365224.26
3+11.19	8"x8" TEE	577380.40	1365253.20
4+11.19	8"x6" TEE	577475.15	1365285.16
4+17.19	8" VALVE	577480.84	1365287.08
4+60.00	8" PLUG & BUTTRESS	577521.64	1365300.00
6+08.45	1/16 H.B.	577664.06	1365341.97
6+93.28	8"x6" TEE	577726.31	1365399.59
7+29.04	1/8 H.B.	577752.56	1365423.88
9+23.80	1/8 H.B.	577947.17	1365416.37
9+77.38	1/8 H.B.	577985.57	1365453.74
10+10.00	8"x6" TEE	577986.83	1365466.33
10+24.50	8"x8" TEE	577987.39	1365500.82
10+30.53	8" PLUG & BUTTRESS	577987.63	1365506.84



DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DATE: 3-8-06 CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND DATE: 3/28/06 CHIEF, DEVELOPMENT ENGINEERING DIVISION	FISHER, COLLINS & CARTER, INC. CIVIL, ENGINEERING CONSULTANTS & LAND SURVEYORS CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE ELICOTT CITY, MARYLAND 21042 (410) 461-2292	DESIGNER: B.C.R. DRAWN BY: B.C.R. CHECKED BY: P.W.K. DATE: FEBRUARY, 2006 BY: NO.	WATER & SEWER MAINS PROFILES 60' SCALE MAP NO. 24 BLOCK NO. 24 F.C.C. WORK ORDER NO. 40385 FILE NAME: WATER AND SEWER PROFILE SH1	NORTHEASTERN ELEMENTARY SCHOOL WATER AND SEWER MAIN EXTENSIONS SECOND ELECTION DISTRICT CONTRACT NO. 14-4314-D HOWARD COUNTY, MARYLAND SCALE AS SHOWN SHEET 4 OF 6
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**EX. WATER METER & SEWER CLEAN-OUT RELOCATION NOTES**

1. THE EXISTING WATER METER SHALL BE RELOCATED BEYOND THE LIMITS OF PAVING & RESET BEHIND THE PROPOSED CURB. THE CONTRACTOR SHALL INVESTIGATE THE TYPE OF MATERIAL UTILIZED FOR THE EXISTING WATER HOUSE CONNECTION BEYOND THE EXISTING WATER METER. IF THIS MATERIAL IS NOT TYPE K COPPER, THE CONTRACTOR SHALL REPLACE THE EXISTING WATER HOUSE CONNECTION WITH TYPE K COPPER FROM THE EXISTING WATER METER TO THE RELOCATED WATER METER SETTING.
2. THE EXISTING SANITARY SEWER CLEAN-OUT SHALL BE RELOCATED BEYOND THE LIMITS OF PAVING & RESET BEHIND THE PROPOSED CURB. THE CONTRACTOR SHALL INVESTIGATE THE TYPE OF MATERIAL UTILIZED FOR THE EXISTING SEWER HOUSE CONNECTION UP TO THE EXISTING CLEAN-OUT. IF DIFFERENT MATERIAL IS UTILIZED BEYOND THE EXISTING CLEAN-OUT, THE CONTRACTOR SHALL REMOVE THE EXISTING SEWER HOUSE CONNECTION & REPLACE WITH SIMILAR MATERIAL FROM THE EXISTING CLEAN-OUT TO THE RELOCATED CLEAN-OUT SETTING.

**PLAN**  
SCALE: 1" = 50'

NOTE: SEE SHEET 3 OF 5 FOR PLAN OF 8" PUBLIC & PRIVATE SEWER MAINS.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

**FISHER, COLLINS & CARTER, INC.**  
CIVIL, ENGINEERING, CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLSWORTH CITY, MARYLAND 21042  
(410) 461-2355



DESIGNED BY :	B.C.R.
DRAWN BY :	B.C.R.
CHECKED BY :	P.W.K.
DATE :	FEBRUARY, 2005
BY :	NO.
REVISION :	
DATE :	
FILE NAME :	WATER PLAN SH1

**WATER MAIN PLAN**

60' SCALE MAP NO. 24 BLOCK NO. 24  
F.C.C. WORK ORDER NO. 40395

**NORTHEASTERN ELEMENTARY SCHOOL**  
WATER AND SEWER MAIN EXTENSIONS  
SECOND ELECTION DISTRICT  
CONTRACT NO. 14-4314-D  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 2 OF 6

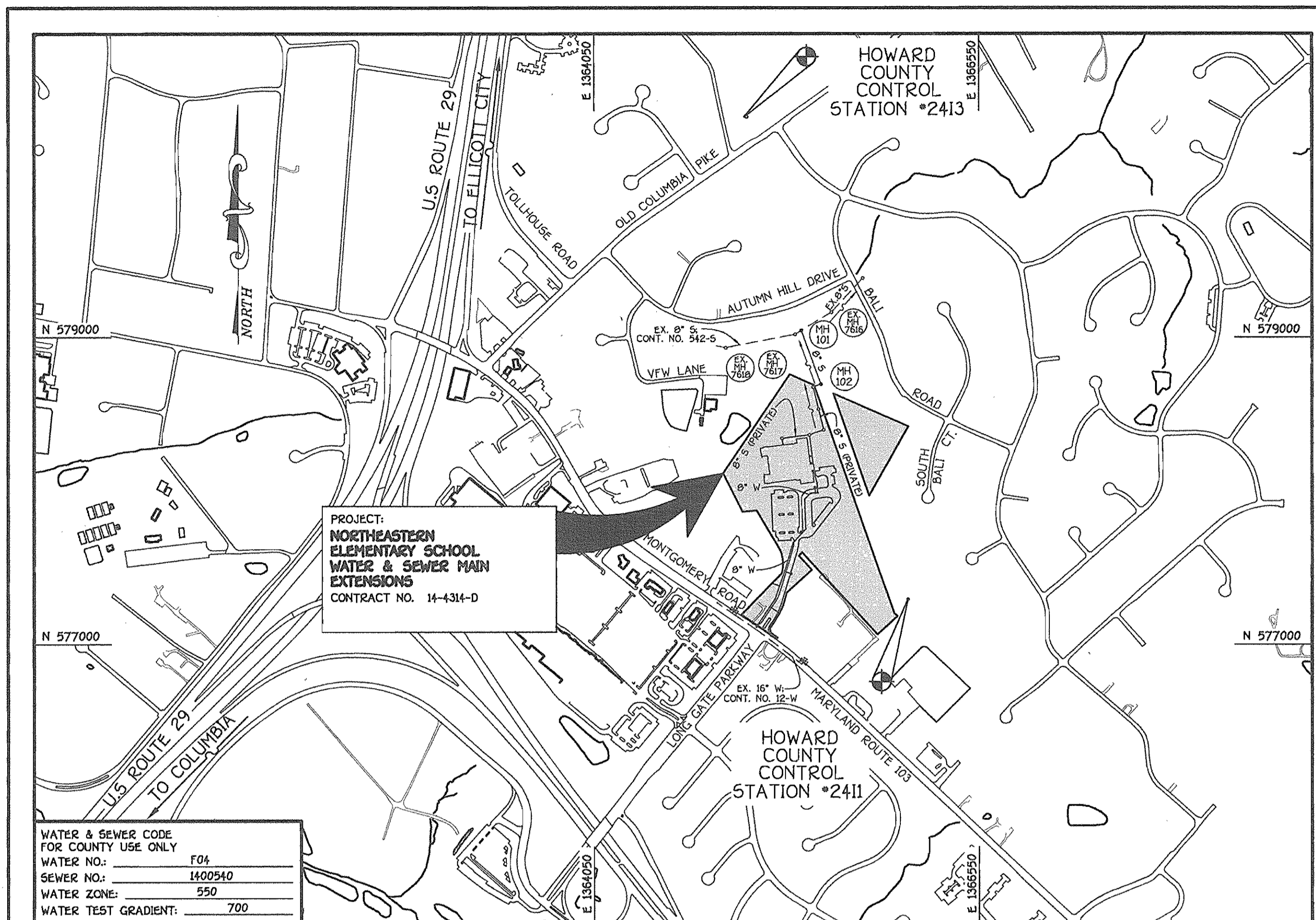
CONTRACT NO. 14-4314-D  
NORTHEASTERN ELEMENTARY SCHOOL  
WATER & SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

K:\SDS\PROJ\030305\LongGate\Water\ANS\WaterMainSewer\40395 W&S BASE Plan.dwg, 2/28/2005 9:32:57 AM, 1:1



QUANTITIES				
ITEM	ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	SUPPLIER
8" SEWER	375 L.F.			
MANHOLES	3 EACH			
8" WATER	1,092 L.F.			
6" WATER	157 L.F.			
8"x8" TEE	2 EACH			
8"x6" TEE	4 EACH			
8" VALVE	3 EACH			
6" VALVE	4 EACH			
1/8" BEND	3 EACH			
1/16" BEND	1 EACH			
8" PLUG & BUTTRESS	3 EACH			
16"x8" TAPPING SLEEVE	1 EACH			
8" TAPPING VALVE	1 EACH			
FIRE HYDRANTS	4 EACH			

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



WATER & SEWER CODE FOR COUNTY USE ONLY	
WATER NO.:	F04
SEWER NO.:	1400940
WATER ZONE:	550
WATER TEST GRADIENT:	700

TYPE OF BUILDING:	NEW PUBLIC ELEMENTARY SCHOOL
NUMBER OF PARCELS:	-1-
NO. OF WATER HOUSE CONNECTIONS:	-1-
NO. OF SEWER HOUSE CONNECTIONS:	-1-
DRAINAGE AREA:	PATAPSCO
TREATMENT PLANT:	PATAPSCO WASTEWATER TREATMENT PLANT CITY OF BALTIMORE

VICINITY MAP  
SCALE: 1"=600'

PLAN REFERENCE NUMBERS:  
SDP06-040

### GENERAL NOTES

- PART 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 EXPENSE.
  - TOPOGRAPHIC FIELD SURVEYS WERE PERFORMED ON OR ABOUT NOVEMBER, 2004 (WATER MAIN) & JULY, 2005 (SEWER MAIN) BY FISHER, COLLINS & CARTER INC.
  - HORIZONTAL AND VERTICAL 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. 2411 & NO. 2413. SEE THIS SHEET FOR BENCHMARK INFORMATION. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS ARE BASED ON TRAVERSE POINT NO. 7450, A REBAR & CAP SET ON THE NORTH SIDE OF MONTGOMERY ROAD; ELEV. 421.67.
  - 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
    - BCE (CONSTRUCTION SERVICES) . . . . . 410-850-4620
    - BCE (EMERGENCY) . . . . . 410-685-1400
    - BUREAU OF UTILITIES . . . . . 410-315-4900
    - 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(d) OF THE HOWARD COUNTY CODE.
- PART II: WATER**
- ALL WATER MAINS SHALL BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
  - TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-0" 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.
- PART III: SEWER**
- 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 16" WALLS ARE FOR BRICK MANHOLES ONLY.
  - MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVER, STANDARD DETAIL G5.52. WHERE WATER-TIGHT 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 THE CELLAR CANNOT BE SERVED.

#### DEVELOPER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS 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 ARE DEEMED NECESSARY.

*Wm. B.* SIGNATURE OF DEVELOPER  
*02/28/06* DATE

#### 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 CONSERVATION DISTRICT.

*Paul W. Kuebel* SIGNATURE OF ENGINEER  
*02/28/06* DATE

MDE LETTER OF AUTHORIZATION NUMBER: 200660372/05-NT-3247

GP-06-12

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*Jim Mayne* U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE  
*3/23/06* DATE

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

APPROVED: *John R. Robertson* HOWARD SOIL CONSERVATION DISTRICT  
*3/23/06* DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND AS SHOWN ON SDP-06-040 AND THESE PLANS.

*Wm. B.* SIGNATURE OF DEVELOPER  
*02/28/06* DATE

# CONTRACT NO. 14-4314-D

# NORTHEASTERN ELEMENTARY SCHOOL

## WATER AND SEWER MAIN EXTENSIONS

### HOWARD COUNTY, MARYLAND

BENCHMARK INFORMATION	
B.M. #1 - HOWARD COUNTY CONTROL STATION 2411	N 577,290.65 E 1,356,075.13 ELEV. = 473.80
B.M. #2 - HOWARD COUNTY CONTROL STATION 2413	N 500,640.91 E 1,364,974.45 ELEV. = 404.51

#### OWNER & DEVELOPER

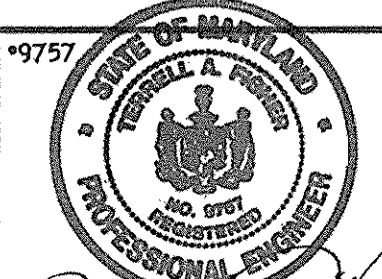
HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
BOARD OF EDUCATION  
10910 MARYLAND ROUTE 103  
ELLCOTT CITY, MARYLAND 21042

CONTRACT NO. 14-4314-D  
NORTHEASTERN ELEMENTARY SCHOOL  
WATER & SEWER MAIN EXTENSIONS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING  
HOWARD COUNTY, MARYLAND

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042  
(410) 461-2955



DESIGNED BY:	B.C.E.		
DRAWN BY:	B.C.E.		
CHECKED BY:	P.W.K.		
DATE:	FEBRUARY, 2006	BY NO.	
REVISION:		DATE:	

WATER & SEWER MAINS TITLE SHEET	
600' SCALE MAP NO. 24	BLOCK NO. 24
F.C.C. WORK ORDER NO. 40385	
FILE NAME: WATER AND SEWER PLAN SH1	

NORTHEASTERN ELEMENTARY SCHOOL WATER AND SEWER MAIN EXTENSIONS SECOND ELECTION DISTRICT CONTRACT NO. 14-4314-D HOWARD COUNTY, MARYLAND	
SCALE AS SHOWN	SHEET 1 OF 6

*Rick B. Berman* CHIEF, BUREAU OF UTILITIES  
*2-9-06* DATE

*Wm. B.* CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*2/28/06* DATE

TERRELL A. FISHER

DATE: FEBRUARY, 2006

SHEET 1 OF 6