

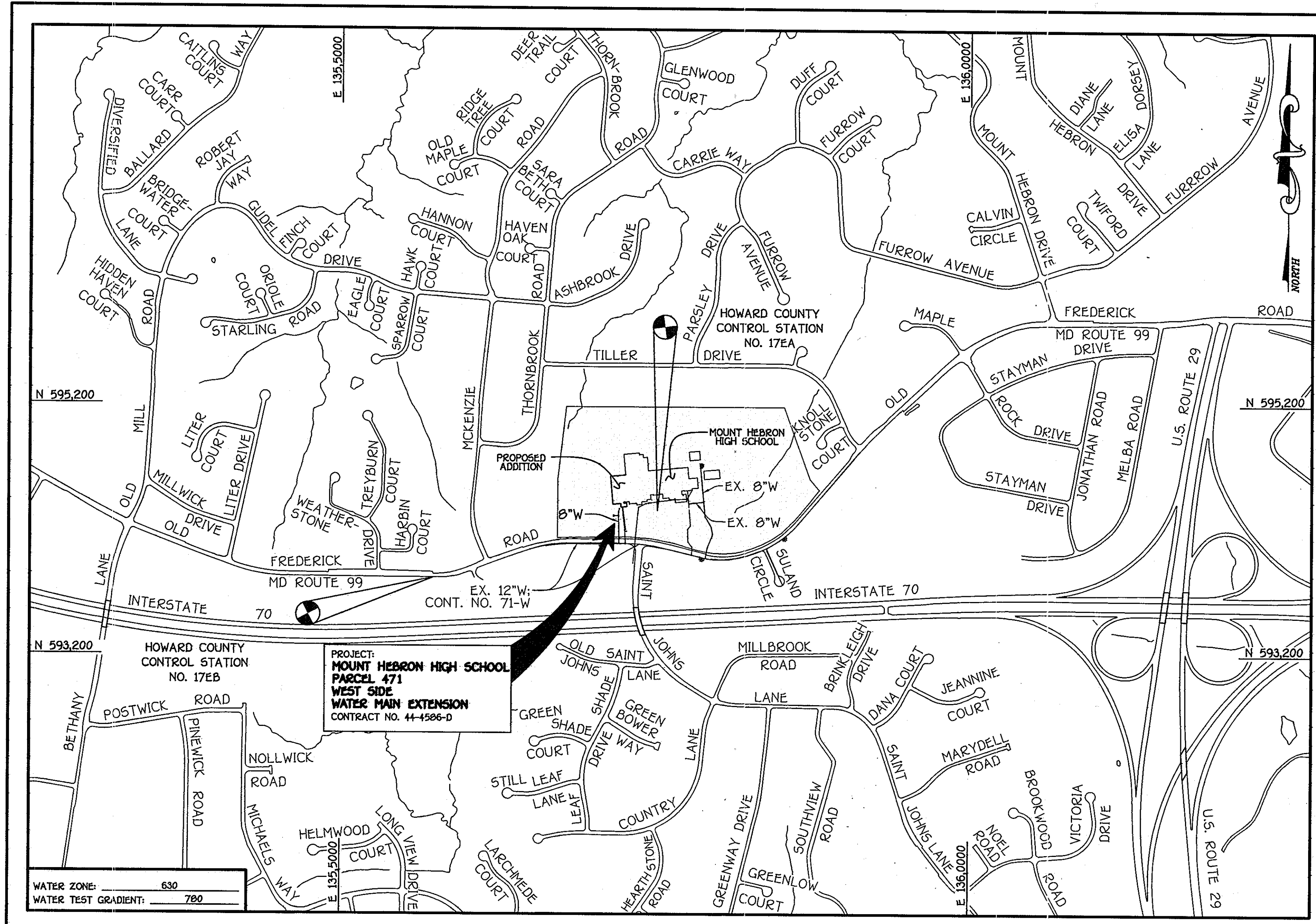
QUANTITIES				
ITEM	ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	SUPPLIER
8" WATER	295 LF.	295 LF	PVC	JM EAGLE
6" WATER	40 LF.	39 LF	PVC	JM EAGLE
8" VALVE	1 EACH		DUCTILE	MUELLER
6" VALVE	1 EACH		DUCTILE	MUELLER
1/32 HD.	1 EACH		DIP	SIGMA CORP
8" TAPPING VALVE	1 EACH		DIP	MUELLER
12"x8" TAPPING SLEEVE	1 EACH		STAINLESS STEEL	ROMAC IND
8"x6" TEE	1 EACH		DUCTILE IRON	SIGMA CORP
FIRE HYDRANT	1 EACH		DUCTILE IRON	MUELLER
8" PLUG & BUTTRESS	1 EACH		DUCTILE IRON	SIGMA CORP

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

BENCHMARK INFORMATION

B.M.#1 - HOWARD COUNTY CONTROL STATION 17EA (NAD 83)
(SET IN THE ROUND-A-BOUNT LOCATED IN MOUNT HEBRON HIGH SCHOOL PARKING LOT;
DIRECTLY IN FRONT OF THE MAIN ENTRANCE TO THE SCHOOL)
N 595,257.816
E 1,357,919.371
ELEVATION = 479.482

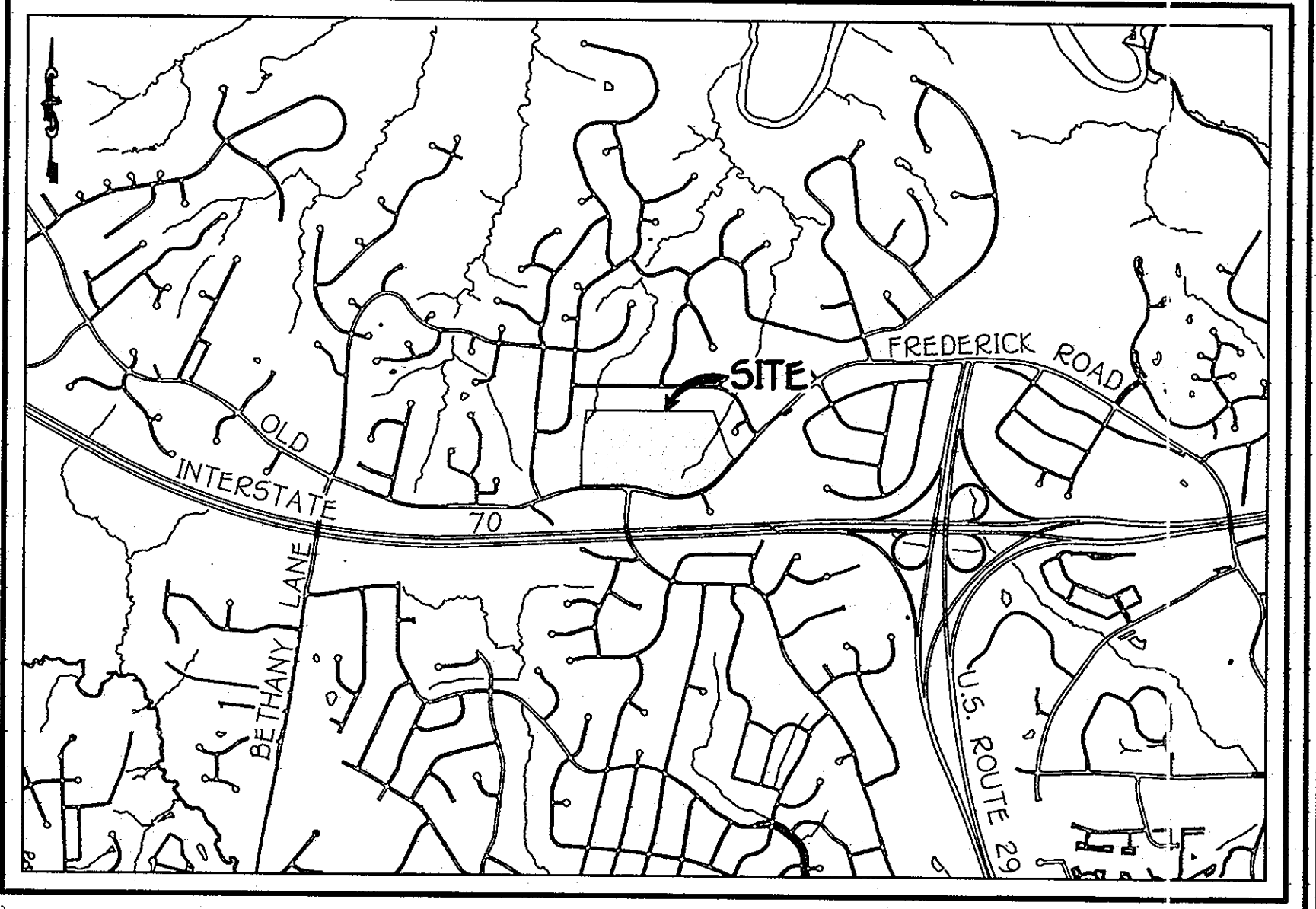
B.M.#2 - HOWARD COUNTY CONTROL STATION 17EB (NAD 83)
(LOCATED ALONG THE SOUTH SIDE OF OLD FREDERICK ROAD;
APPROX. 28' EAST OF PP474631 AND WEST OF SAINT JOHNS LANE)
N 593,038.961
E 1,355,731.855
ELEVATION = 453.488



TYPE OF BUILDING:	EXISTING HIGH SCHOOL
NUMBER OF PARCELS:	1
NO. OF WATER HOUSE CONNECTIONS:	0
NO. OF SEWER HOUSE CONNECTIONS:	0
DRAINAGE AREA:	LITTLE PATUXENT
TREATMENT PLANT:	LITTLE PATUXENT WATER RECLAMATION CENTER SAVAGE, MARYLAND

VICINITY MAP
SCALE: 1" = 600'

PLAN REFERENCE NUMBERS:
SDP-09-XXX



LOCATION MAP
SCALE: 1" = 2000'

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 MAY, 2005 BY FISHER, COLLINS & CARTER, INC.
 - 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. 17EA & NO. 17EB
 - ALL VERTICAL CONTROLS ARE BASED ON NAVD 83. 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 (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 1-800-252-1133
 - BGE (CONSTRUCTION SERVICES) 410-950-4620
 - BGE (EMERGENCY) 410-689-1400
 - 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
- PART B: WATER MAIN GENERAL NOTES**
- EXCEPT FOR THE 12"x 8" TAPPING SLEEVE & VALVE, ALL WATER MAINS SHALL BE ANWPA C900 PVC.
 - TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
 - VALVES ADJACENT TO TEES SHALL BE STAMPED 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 RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH THE 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.
 - ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
 - FOR SPRINKLER SYSTEM FOR ALL TOWN HOMES OR MULTI-FAMILY DWELLING UNITS SHOULD HAVE A MINIMUM OF 1" CONNECTION WITH A 3/4" METER.
- 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 G552. 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 CELLULAR 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.

Signature: *[Signature]* DATE: 9/1/08

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.

Signature: *[Signature]* DATE: 09/11/08

GP-09-008

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

APPROVED: *[Signature]* DATE: 10/2/08
HOWARD SOIL CONSERVATION DISTRICT

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 THESE PLANS.

Signature: *[Signature]* DATE: 9/1/08
SIGNATURE OF DEVELOPER

CONTRACT NO. 44-4586-D

MOUNT HEBRON HIGH SCHOOL

WEST SIDE WATER MAIN EXTENSION

PARCEL 471
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

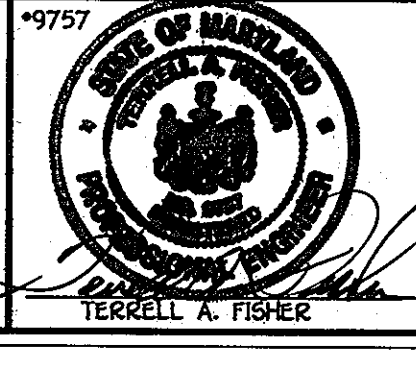
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Signature: *[Signature]* DATE: 10/1/08
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

Signature: *[Signature]* DATE: 10/1/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTONAL SQUARE OFFICE PARK - 10272 BALTHAZORE NATIONAL Pkz
ELLCOTT CITY, MARYLAND 21042
410-461-2295



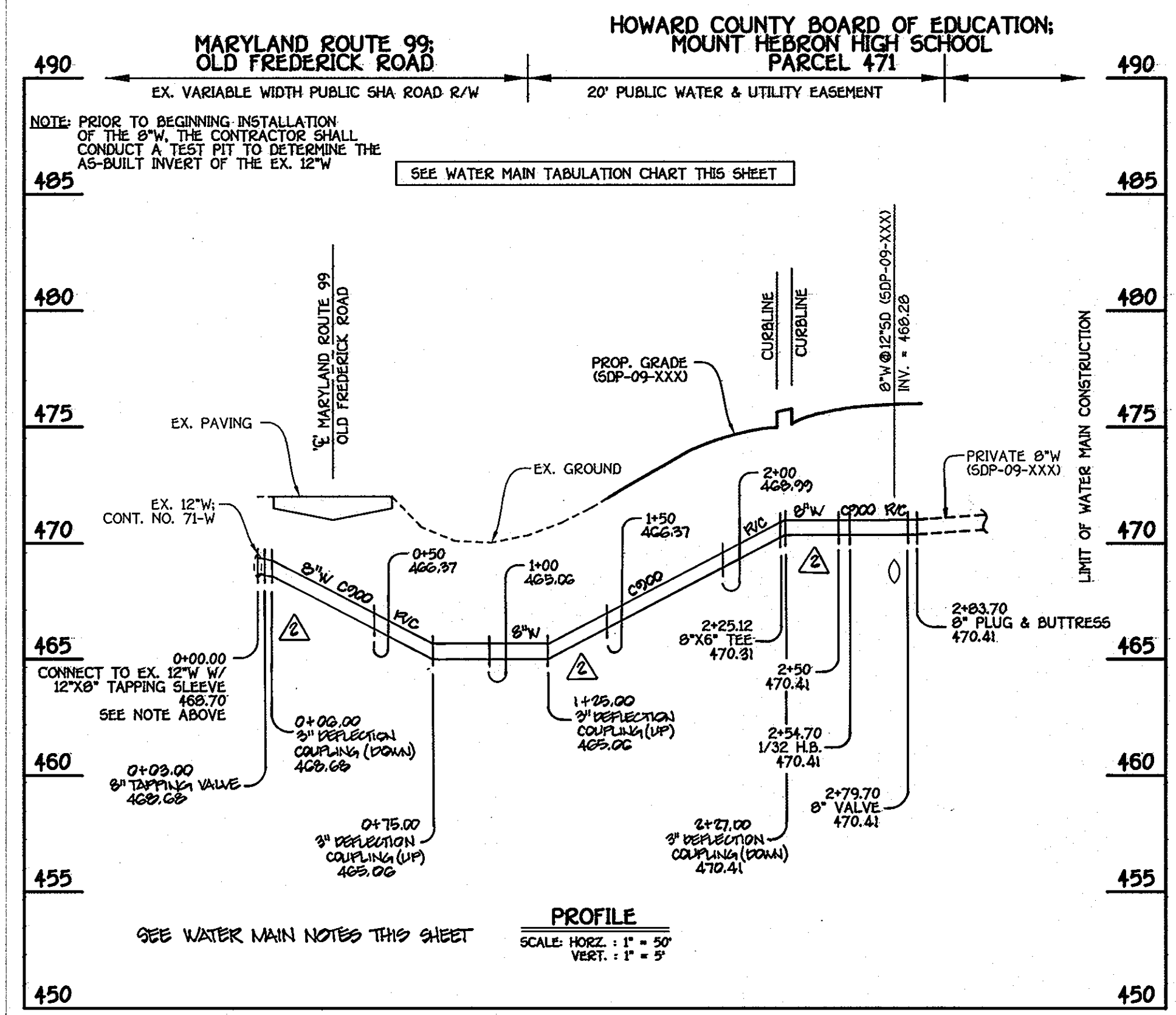
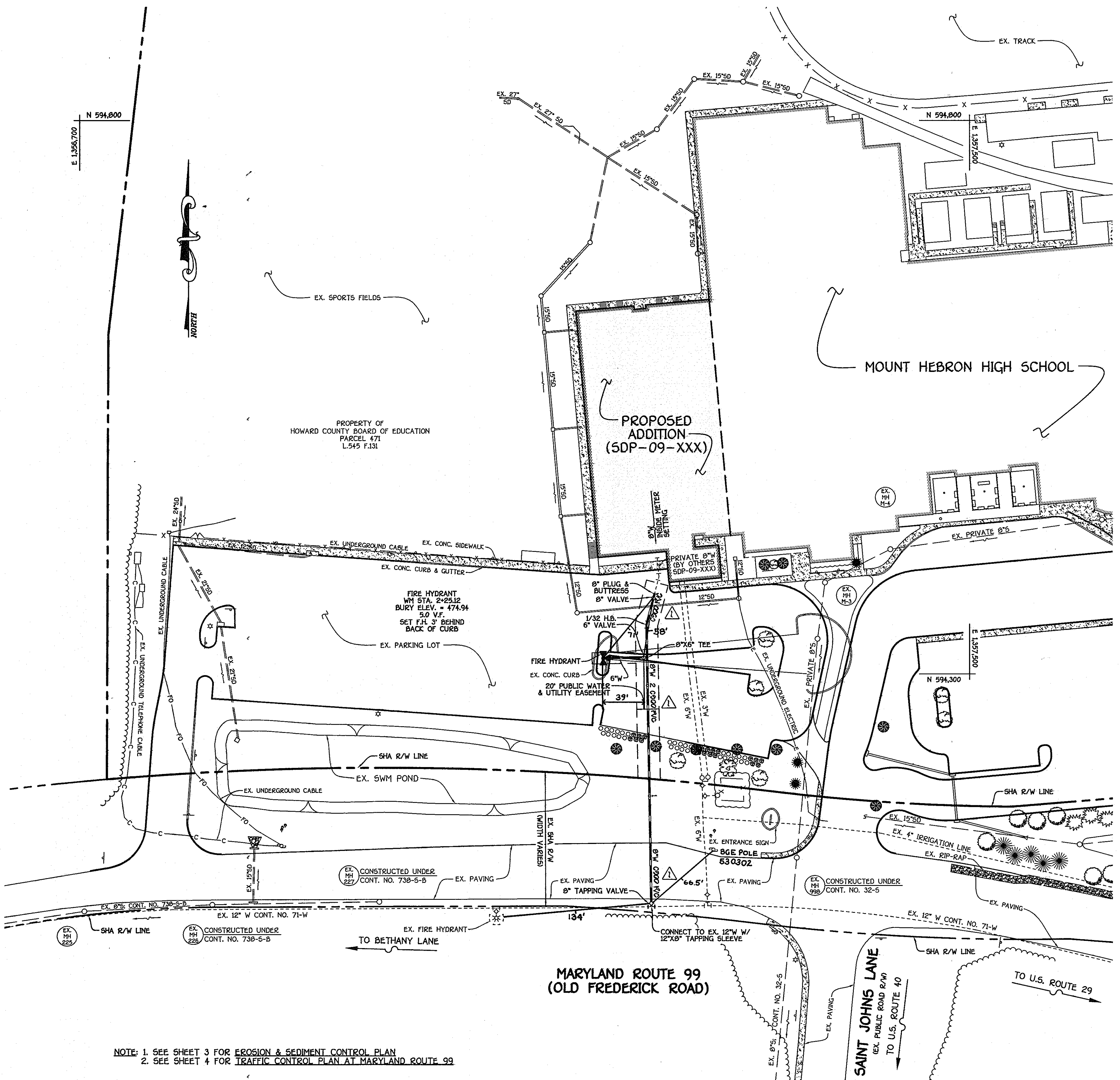
DESIGNED BY:	B.C.R.
DRAWN BY:	B.C.R.
CHECKED BY:	P.M.K.
DATE:	SEPTEMBER, 2008
BY:	KCI
NO.:	AS-BUILT REVISIONS
REVISION:	REMOVE GENERAL NOTES TO ACCOMMODATE USE OF C900 PVC 12" DIA PIPE

WATER MAIN EXTENSION TITLE SHEET	
600' SCALE MAP NO. 17	BLOCK NO. 9
F.C.C. WORK ORDER NO. 40261	
FILE NAME: WATER MAIN EXTENSION TITLE SHEET	

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

CONTRACT NO. 44-4586-D
MOUNT HEBRON HIGH SCHOOL
WEST SIDE WATER MAIN EXTENSION
PARCEL 471
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 of 4



8" WATER MAIN: WEST SIDE EXTENSION

WATER MAIN TABULATION CHART			
W.M. STA.	APPURTENANCE	NORTHING	EASTING
8" WATER MAIN: WEST SIDE EXTENSION			
0+00.00	12" X 8" TAPPING SLEEVE	594089.83	1357213.74
0+03.00	8" TAPPING VALVE	594092.83	1357213.69
2+25.12	8" X 6" TEE	594314.92	1357209.93
2+54.70	1/32 H.B.	594344.50	1357209.43
2+79.70	8" VALVE	594368.70	1357215.70
2+83.70	8" PLUG & BUTTRESS	594372.57	1357216.70

- WATER MAIN NOTES:**
- EXCEPT FOR THE 12" X 8" TAPPING SLEEVE & VALVE (WM STA. 0+00.00 TO WM STA. 0+03.00), ALL WATER MAINS SHALL BE ANNA COCO PVC PIPE.
 - ALL PIPE BEDDING, TRACER WIRE, LOCATING TAPE AND OTHER APPURTENANCES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME II - WATER & SEWER STANDARDS FOR ANNA COCO PVC WATER PIPE INSTALLATION.
 - ALL WATER HOUSE CONNECTIONS AND TAPS SHALL BE PERFORMED USING A SHARPLE.
 - ANODES PLACED ON ALL METAL FITTINGS

NOTE: 1. SEE SHEET 3 FOR EROSION & SEDIMENT CONTROL PLAN
2. SEE SHEET 4 FOR TRAFFIC CONTROL PLAN AT MARYLAND ROUTE 99

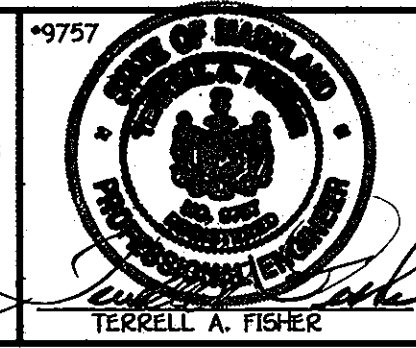
PLAN
SCALE: 1" = 50'

CONTRACT NO. 44-4586-D
MOUNT HEBRON HIGH SCHOOL
WEST SIDE WATER MAIN EXTENSION
PARCEL 471
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
S. C. COOPER
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
10/6/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
1000 46 - 2025



DESIGNED BY: B.C.R.
DRAWN BY: KCI
CHECKED BY: P.W.K.
DATE: SEPTEMBER, 2008
AS-BUILT REVISIONS
ADD WATER MAIN NOTES REGARDING USE OF COCO PVC PIPE 10/16/08
REVISE WM PROFILE TO ACCOMMODATE USE OF COCO PVC PIPE 1/14/09
DENOTE USE OF COCO PVC PIPE FOR WATER MAIN 1/14/09

WATER MAIN EXTENSION
PLAN, PROFILE & CHART
600' SCALE MAP NO. 17 BLOCK NO. 9
F.C.C. WORK ORDER NO. 40261
FILE NAME: WATER MAIN EXTENSION PLAN

**MOUNT HEBRON HIGH SCHOOL
WEST SIDE WATER MAIN EXTENSION
PARCEL 471**
CONTRACT NO. 44-4586-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 2 OF 4

SECTION 20 : STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION
USING VEGETATION AS COVER FOR BARREN SOIL TO PROTECT IT FROM FORCES THAT CAUSE EROSION.
PURPOSE
VEGETATIVE STABILIZATION SPECIFICATIONS ARE USED TO PROMOTE THE ESTABLISHMENT OF VEGETATION ON EXPOSED SOIL. WHEN SOIL IS STABILIZED WITH VEGETATION, THERE IS LESS LIKELIHOOD AND MORE LIKELIHOOD OF ILLUWATION OF RAINFALL, THEREBY REDUCING SEDIMENT LOADS AND RUN-OFF TO DOWNSTREAM AREAS, AND IMPROVING WILDLIFE HABITAT AND VISUAL RESOURCES.

CONDITIONS WHERE PRACTICE APPLIES
THIS PRACTICE SHALL BE USED ON DENuded AREAS AS SPECIFIED ON THE PLANS AND MAY BE USED ON HIGHLY ERODIBLE OR CRITICALLY ERODING AREAS. THIS SPECIFICATION IS DIVIDED INTO TEMPORARY SEEDING, TO QUICKLY ESTABLISH VEGETATIVE COVER FOR SHORT DURATION, AND PERMANENT SEEDING, TO ESTABLISH LONG TERM VEGETATIVE COVER. VEGETATIVE COVER APPLICABLE AREAS FOR TEMPORARY SEEDING ARE TEMPORARY SOIL STOCKPILES, CLEARED AREAS BEING LEFT IDLE BETWEEN CONSTRUCTION PHASES, EARTH DICES, ETC. AND FOR PERMANENT SEEDING ARE LAWNS, DAMS, CUT AND FILL SLOPES AND OTHER AREAS AT FINAL GRADE, FORMER STOCKPILE AND STAGING AREAS, ETC.

EFFECTS ON WATER QUALITY AND NUTRIENT
PLANTING VEGETATION IN DISTURBED AREAS WILL HAVE AN EFFECT ON THE WATER BUDGET, ESPECIALLY ON VOLUMES AND RATES OF RUNOFF, INFILTRATION, EVAPORATION, TRANSPARATION, PERCOLATION AND GROUNDWATER RECHARGE. VEGETATION, OVER TIME, WILL INCREASE ORGANIC MATTER CONTENT AND IMPROVE THE WATER HOLDING CAPACITY OF THE SOIL. AND SUBSEQUENT PLANT GROWTH VEGETATION WILL HELP REDUCE THE MOVEMENT OF SEDIMENT, NUTRIENTS, AND OTHER CHEMICALS CARRIED BY RUNOFF TO RECEIVING WATERS. PLANTS WILL ALSO HELP PROTECT GROUNDWATER SUPPLIES BY ASSIMILATING THOSE SUBSTANCES PRESENT WITH THE ROOT ZONE.
SEDIMENT CONTROL DEVICES MUST REMAIN IN PLACE DURING GRADING, SEEDING, MULCHING AND VEGETATIVE ESTABLISHMENT TO PREVENT LARGE QUANTITIES OF SEDIMENT AND ASSOCIATED CHEMICALS AND NUTRIENTS FROM WASHING INTO SURFACE WATERS

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

1. SITE PREPARATION AND SEDIMENT CONTROL STRUCTURES (EITHER TEMPORARY OR PERMANENT) SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, WATERWAYS, OR SEDIMENT CONTROL BASINS.
2. PERFORM ALL GRADING OPERATIONS AT RIGHT ANGLES TO THE SLOPE. FINAL GRADING AND SHAPING IS NOT USUALLY NECESSARY FOR TEMPORARY SEEDING.
3. SCHEDULE SOIL SOIL TESTS TO DETERMINE SOIL AMENDMENT COMPOSITION AND APPLICATION RATES FOR SITES HAVING DISTURBED AREA OVER 5 ACRES.
4. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)
5. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON A PER ACRE BASIS. 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.
6. FERTILIZERS SHALL 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 WARRANTEE OF THE PRODUCER.
7. LIME MATERIALS SHALL BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED WHICH CONTAINS AT LEAST 50% TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE SHALL BE GROUND TO SUCH FINENESS THAT AT LEAST 50% WILL PASS THROUGH A #100 MESH SIEVE AND 98-100% WILL PASS THROUGH A #20 MESH SIEVE. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3"-5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

1. TEMPORARY SEEDING
 2. SEEDING 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 CHISEL 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.
 3. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
 4. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3"-5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

2. PERMANENT SEEDING
 1. MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT:
 1. SOIL PH SHALL BE BETWEEN 6.0 AND 7.0.
 2. SOLUBLE SALTS SHALL BE LESS THAN 500 PARTS PER MILLION (PPM).
 3. THE SOIL SHALL CONTAIN LESS THAN 10% CLAY, BUT ENOUGH FINE GRAINED MATERIAL (30% SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MOISTURE ANKUNT OF MOISTURE. AN EXCEPTION IS LOW-GRASS OR SERICIA LESPEDEZAS IS TO BE PLANTED, THEN A SANDY SOIL (30% SILT PLUS CLAY) WOULD BE ACCEPTABLE.
 4. SOIL SHALL CONTAIN 1.5% MINIMUM ORGANIC MATTER BY WEIGHT.
 5. SOIL MUST CONTAIN SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
 6. IF THESE CONDITIONS CANNOT BE MET BY SOILS ON SITE, ADDING TOPSOIL IS REQUIRED IN ACCORDANCE WITH SECTION 21 STANDARD AND SPECIFICATION FOR TOPSOIL.
 2. AREAS PREVIOUSLY GRADED IN CONFORMANCE WITH THE DRAWINGS SHALL BE MAINTAINED IN A TRUE AND EVEN GRADE. THEN GRADE TO HOLD A MOISTURE ANKUNT OF MOISTURE. AN EXCEPTION IS LOW-GRASS OR SERICIA LESPEDEZAS IS TO BE PLANTED, THEN A SANDY SOIL (30% SILT PLUS CLAY) WOULD BE ACCEPTABLE.
 3. APPLY SOIL AMENDMENTS AS PER SOIL TESTS OR AS INCLUDED ON THE PLANS.
 4. 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 SHOULD BE MADE AVAILABLE TO THE INSPECTOR TO USE 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.

3. SEED SPECIFICATIONS
 1. 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 SUCH MATERIAL ON THIS JOB.
 2. SEED TAGS SHALL BE MADE AVAILABLE TO THE INSPECTOR TO VERIFY TYPE AND RATE OF SEED USED.
 3. 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. ADD FRESH INOCULANT AS DIRECTED ON PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDRATING. 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.

4. METHODS OF SEEDING
 1. HYDROSEEDING - APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER). BROADCAST OR DROP SEEDING OR A CULTIPACKER SEEDER.
 2. 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.
 3. 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.
 4. SEED AND FERTILIZER SHALL BE MIXED ON SITE AND SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION.
 2. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS
 3. 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.
 4. WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
 5. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
 6. CULTIPACKER 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.
 7. WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

5. MULCH SPECIFICATIONS (ON ORDER OF PREFERENCE)
 1. STRAW SHALL CONSIST OF THOROUGHLY THRESHED WHEAT, RYE OR OAT STRAW, REASONABLE BRIGHT IN COLOR, AND SHALL NOT BE MUSTY, MOLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY AND SHALL BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW.
 2. WOOD CELLULOSE FIBER MULCH (WCFM)
 3. WCFM SHALL CONSIST OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
 4. WCFM SHALL BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
 5. WCFM, INCLUDING DYE, SHALL CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
 6. WCFM MATERIALS SHALL BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL SHALL FORM A SLURRY-LIKE GROUND COVER, ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND SHALL COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
 7. WCFM MATERIAL SHALL CONTAIN NO ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
 8. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH TO APPROXIMATELY 10 MM, DIAMETER APPROXIMATELY 1 MM, PH RANGE OF 4.0 TO 6.5, ASH CONTENT OF 16% MAXIMUM AND WATER HOLDING CAPACITY OF 90% MINIMUM.

6. 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.
 1. 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.
 2. 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.
 3. WOOD CELLULOSE FIBER USED AS A MULCH SHALL BE APPLIED AT A NET DRY WEIGHT OF 1500 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.
 4. SECURING STRAW MULCH (MULCH ANCHORING) SHALL BE PERFORMED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMIZE LOSS BY WIND OR WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS LISTED BY PREFERENCE, DEPENDING UPON SIZE OF AREA AND EROSION HAZARD.
 1. A MULCH ANCHORING TOOL IS AS TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF TWO INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD BE USED ON THE CONTOUR IF POSSIBLE.
 2. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. THE FIBER BINDER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 POUNDS/ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
 3. APPLICATION OF LIQUID BINDERS SHOULD BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND CRESTS OF BANKS. THE REMAINDER OF AREA SHOULD BE APPLIED UNIFORM AFTER BINDER APPLICATION. SYNTHETIC BINDERS-SUCH AS ACRYLIC DYE (AGRO-TACK), DCA-70 PETROSET, TERESA TACK II, TERESA TACK AR OR OTHER APPROVED EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH.
 4. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4' TO 15' FEET WIDE AND 300 TO 3,000 FEET LONG.
7. INCREMENTAL STABILIZATION - CUT SLOPES
 1. ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED AND MULCHED AS THE WORK PROGRESSES. SLOPES SHALL BE CONSTRUCTED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 15'.
 2. CONSTRUCTION SEQUENCE (REFER TO FIGURE 3 BELOW):
 - a. EXCAVATE AND STABILIZE ALL TEMPORARY SWALES, SIDE DITCHES, OR BERMS THAT WILL BE USED TO CONVEY RUNOFF FROM THE EXCAVATION.
 - b. PERFORM PHASE 1 EXCAVATION, DRESS, AND STABILIZE.
 - c. PERFORM PHASE 2 EXCAVATION, DRESS, AND STABILIZE. OVERSEED PHASE 1 AREAS AS NECESSARY.
 - d. PERFORM FINAL PHASE EXCAVATION, DRESS, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS NECESSARY.
 2. ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL OF REQUIRED 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.
 3. INCREMENTAL STABILIZATION OF EMBANKMENTS - FILL SLOPES
 1. EMBANKMENTS SHALL BE CONSTRUCTED IN LIFTS AS PRESCRIBED ON THE PLANS.
 2. 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.
 3. 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.
 4. CONSTRUCTION SEQUENCE: REFER TO FIGURE 4 (BELOW):
 - a. 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.
 - b. PLACE PHASE 1 EMBANKMENT, DRESS, AND STABILIZE.
 - c. PLACE PHASE 2 EMBANKMENT, DRESS, AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.
 - d. PLACE FINAL PHASE EMBANKMENT, DRESS, AND STABILIZE.
 4. ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF AND PLACEMENT OF TOPSOIL OF REQUIRED GRADING AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

SECTION 2 - TEMPORARY SEEDING

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

1. SEED MIXTURES - TEMPORARY SEEDING
 1. 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.
 2. FOR SITES HAVING 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 (6b)					FERTILIZER RATE (00-10-10)	LIME RATE
NO.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS		
1	BARLEY	122	3/1 - 5/15	1" - 2"	600 lb/ac (15 lb/1000sf)	2 tons/ac (100 lb/1000sf)
	OATS	96	8/15 - 10/15	1" - 2"		
	RYE	140		1" - 2"		

2. SEEDING METHODS
 1. SEEDING SHALL BE PERFORMED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
 2. WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

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.

1. SEED MIXTURES - PERMANENT SEEDING
 1. 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 SUCH AS SHOBBLENS, STREAMBANKS, OR DUNES OR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-SCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL MAINTENANCE AREAS. SEE SECTIONS IV 500 V TURFGRASS.
 2. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, THE RATES SHOWN ON THIS TABLE SHALL BE DELETED AND THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY SHALL BE WRITTEN IN.
 3. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY USABLE FERTILIZER (66-0-0) 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 (6b)					FERTILIZER RATE (00-20-20)			LIME RATE
NO.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS	N	P205	K20	
3	TALL FESCUE (95%) PERENNIAL RYE GRASS (00) KENTUCKY BLUEGRASS (5%)	125 15 10	3/1 - 5/15 8/15 - 10/15	1" - 2"	90 lb/ac (2.0 lb/1000sf)	175 lb/ac (4 lb/1000sf)	175 lb/ac (4 lb/1000sf)	2 tons/ac (100 lb/1000sf)
10	TALL FESCUE (60%) TALL FESCUE (20%)	120 30	3/1 - 5/15 8/15 - 10/15	1" - 2"				

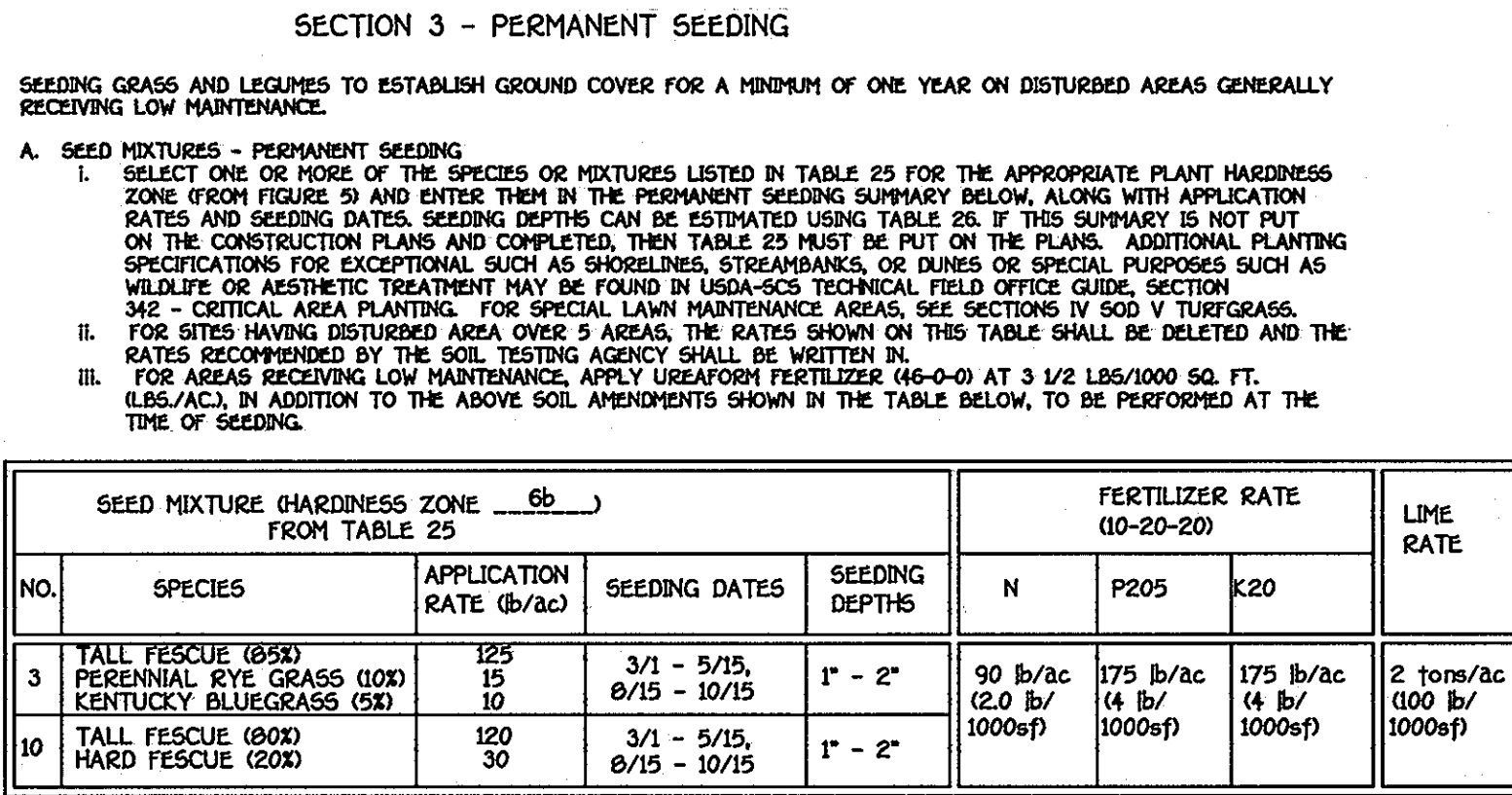
2. SEEDING METHODS
 1. SEEDING SHALL BE PERFORMED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.
 2. WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

SECTION 4 - SEDIMENT CONTROL NOTES

1. 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 (315-1695).
2. ALL VEGETATIVE AREA PLANTING PERMITS 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 THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS FOR ALL PERMETER SEDIMENT CONTROL STRUCTURES, DICES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3% 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. 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.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING. SEE SEC. 501 AND SEC. 502, TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. 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.
7. SITE ANALYSIS:
 1. TOTAL AREA OF SITE: 40,055 ACRES (FROM RECORD PLAT)
 2. AREA DISTURBED: 0.1494 ACRES
 3. AREA TO BE REVEGETATED: 0.1494 ACRES
 4. AREA TO BE VEGETATIVELY STABILIZED: 0.0451 ACRES
 5. TOTAL CUT: N/A; WATER MAIN INSTALLATION ONLY
 6. OFFSITE WASTE/BORROW AREA LOCATION: N/A CU. YDS.
8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUIRED UPON COMPLETION OF INSTALLATION OF PERMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THE THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

SECTION 21 : STANDARD AND SPECIFICATIONS FOR TOPSOIL

1. DEFINITION: PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.
2. PURPOSE: TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH.
3. SPECIFICATIONS:
 1. TOPSOIL SHALL BE A LOAM, SANDY LOAM, OR LOAMY SAND.
 2. TOPSOIL SHALL NOT BE A LOAM MIXTURE OF CONTRASTING SUBSOILS.
 3. TOPSOIL SHALL CONTAIN LESS THAN 3% BY VOLUME OF COARSE GRAVEL, STICKS, ROOTS, TRASH OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
 4. APPLICATION: TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" - 6" DEEP AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS 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.



SEQUENCE OF CONSTRUCTION

1. OBTAIN THE REQUIRED GRADING PERMIT.
2. NOTIFY MISS UTILITY 48 HOURS BEFORE ANY WORK (1-800-257-7777). NOTIFY HOWARD COUNTY CONSTRUCTION/INSPECTION DIVISION 24 HOURS BEFORE STARTING ANY WORK (410)313-1870.
3. INSTALL THE REQUIRED SEDIMENT AND EROSION CONTROL DEVICES AS INDICATED ON THIS SHEET.
4. CLEAR AND GRUB AS NECESSARY, ONLY AS REQUIRED FOR EXCAVATION AND INSTALLATION OF THE WATER MAIN, ONLY WITHIN THE DESIGNATED WATER AND UTILITY EASEMENT.
5. NOTE: THE LENGTH OF OPEN WATER MAIN TRENCH SHALL BE LIMITED TO THREE (3) PIPE LENGTHS OR THAT WHICH WILL BE BACKFILLED AND STABILIZED WITHIN ONE (1) WORKING DAY, WHICHEVER IS SHORTER.
6. CONSTRUCT THE WATER MAIN EXTENSION.
7. STABILIZE SEED AND MULCH ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES SHOWN ON THIS SHEET.
8. 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

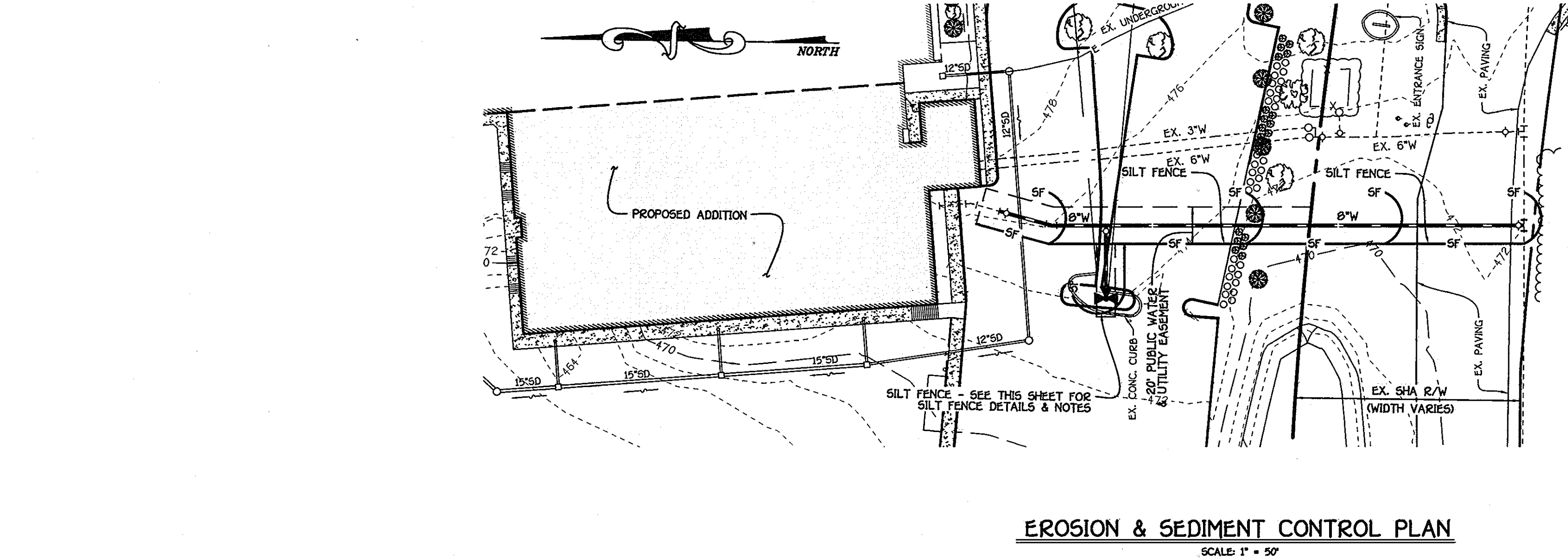
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROCESS WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED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

[Signature] 9/11/08
SIGNATURE OF DEVELOPER 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.

[Signature] 09/11/08
SIGNATURE OF ENGINEER DATE



EROSION & SEDIMENT CONTROL PLAN
SCALE: 1" = 50'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES
[Signature]
DATE: 10/6/08

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature]
DATE: 10/6/08

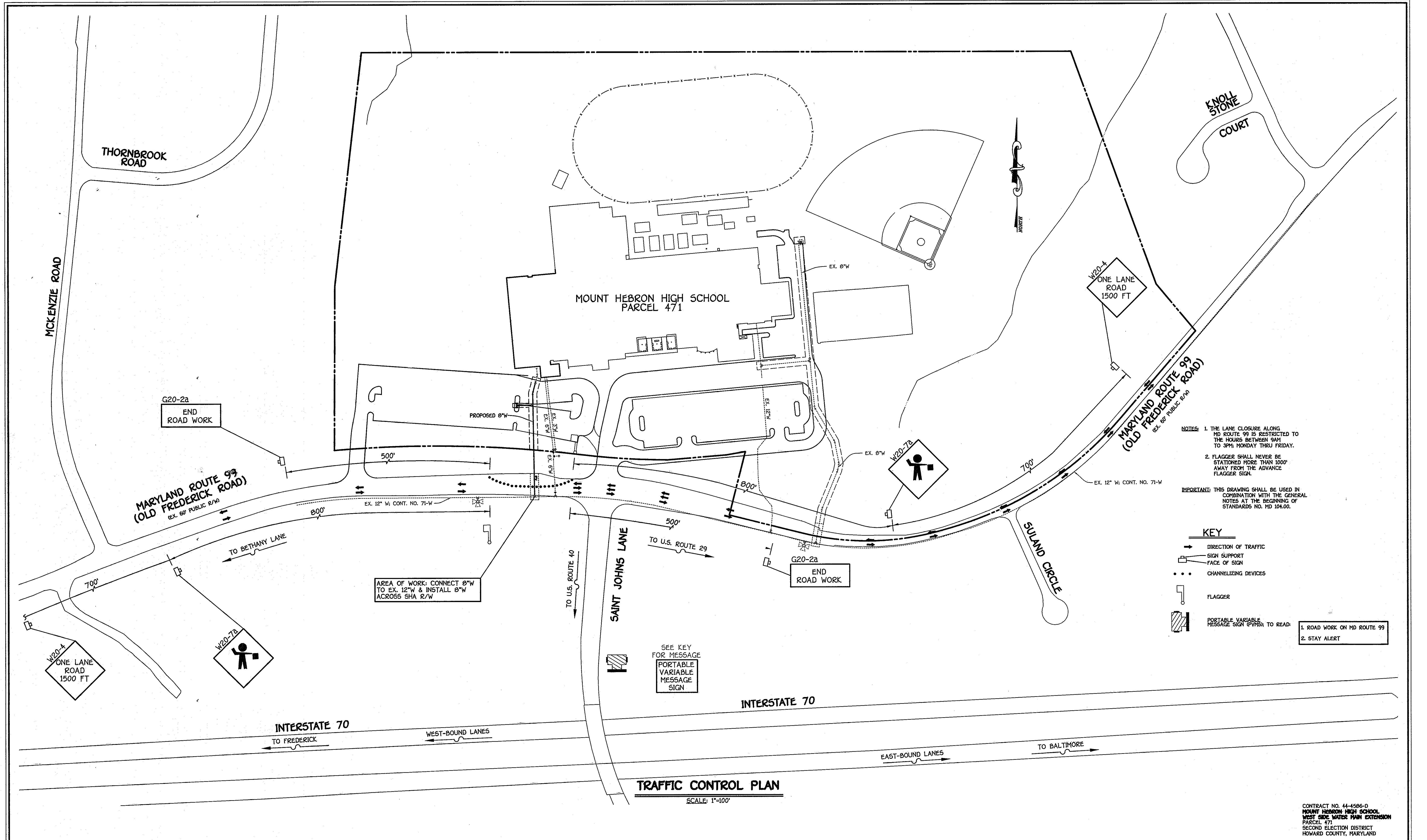
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PkE
ELLSWORTH CITY, MARYLAND 21117
(410) 461-2955

STATE OF MARYLAND
TERRELL J. HEMER

DESIGNED BY: B.C.R.
DRAWN BY: B.C.R.
CHECKED BY: P.W.K.
DATE: SEPTEMBER, 2008 BY NO. REVISION DATE

EROSION & SEDIMENT CONTROL PLAN, NOTES & DETAILS
600' SCALE MAP NO. 17 BLOCK NO. 9
F.C.C. WORK ORDER NO. 40261
FILE NAME: WATER MAIN EXTENSION PLAN

MOUNT HEBRON HIGH SCHOOL
WEST SIDE WATER MAIN EXTENSION
PARCEL 471
CONTRACT NO. 44-4506-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE AS SHOWN
SHEET 3 OF 4



NOTES: 1. THE LANE CLOSURE ALONG MD ROUTE 99 IS RESTRICTED TO THE HOURS BETWEEN 9AM TO 3PM MONDAY THRU FRIDAY.
 2. FLAGGER SHALL NEVER BE STATIONED MORE THAN 1000' AWAY FROM THE ADVANCE FLAGGER SIGN.

IMPORTANT: THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES AT THE BEGINNING OF STANDARDS NO. MD 104.00.

KEY

- DIRECTION OF TRAFFIC
- SIGN SUPPORT
- FACE OF SIGN
- ... CHANNELIZING DEVICES
- ⌚ FLAGGER
- ▨ PORTABLE VARIABLE MESSAGE SIGN (PVMS) TO READ:

1. ROAD WORK ON MD ROUTE 99
 2. STAY ALERT

TRAFFIC CONTROL PLAN
 SCALE: 1"=100'

CONTRACT NO. 44-4586-D
 MOUNT HEBRON HIGH SCHOOL
 WEST SIDE WATER MAIN EXTENSION
 PARCEL 471
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Steve C. Gorman</i> CHIEF, BUREAU OF UTILITIES	DEPARTMENT OF PLANNING AND ZONING HOWARD COUNTY, MARYLAND <i>[Signature]</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	FISHER, COLLINS & CARTER, INC. <small>CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS</small> CENTRAL SQUARE OFFICE: P.O. BOX 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 : SEPTEMBER, 2008 BY NO. _____ REVISION _____ DATE _____	TRAFFIC CONTROL PLAN 600' SCALE MAP NO. 17 BLOCK NO. 9 F.C.C. WORK ORDER NO. 40261 FILE NAME : WATER MAIN EXTENSION PLAN	MOUNT HEBRON HIGH SCHOOL WEST SIDE WATER MAIN EXTENSION PARCEL 471 CONTRACT NO. 44-4586-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 4 of 4
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