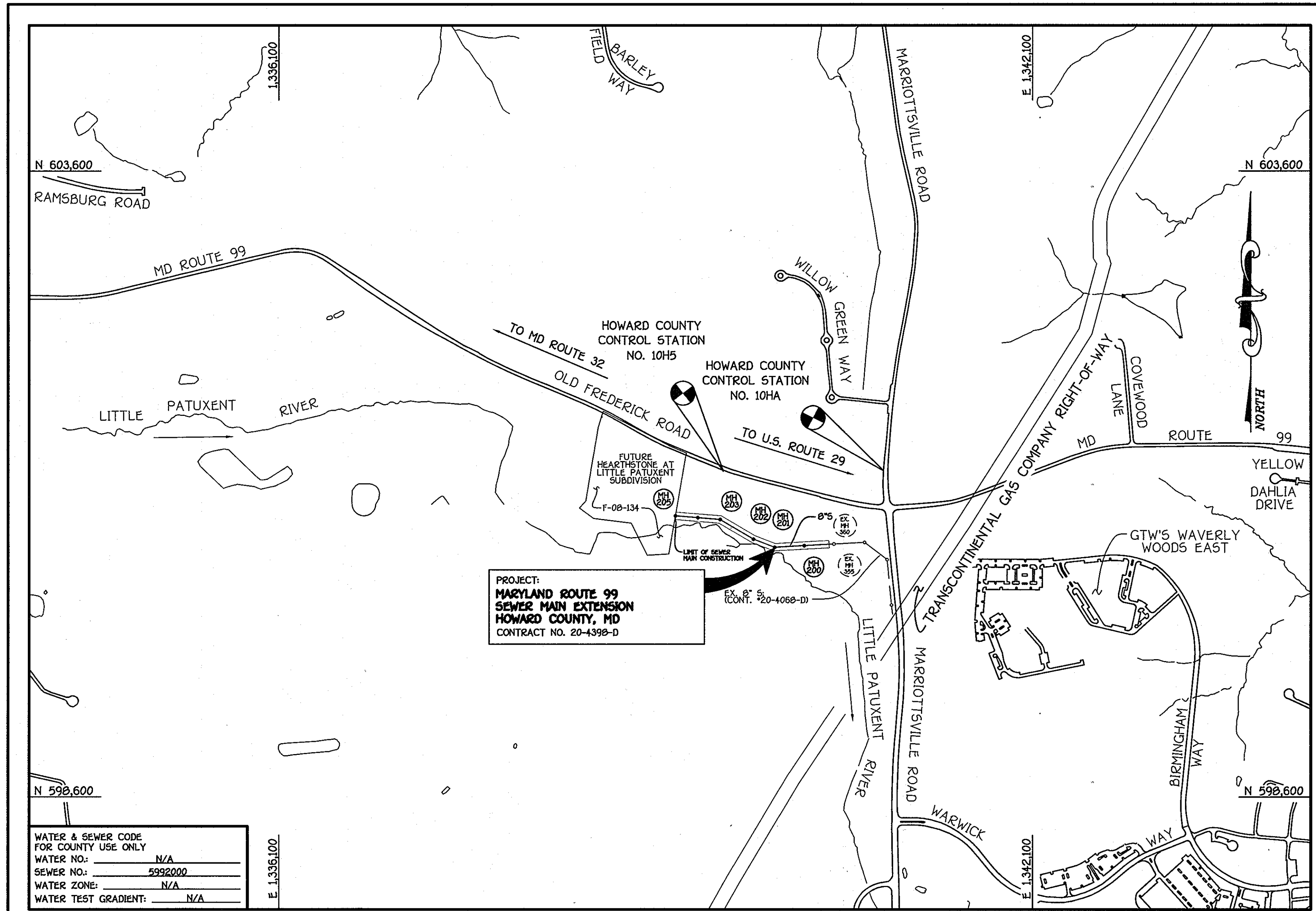


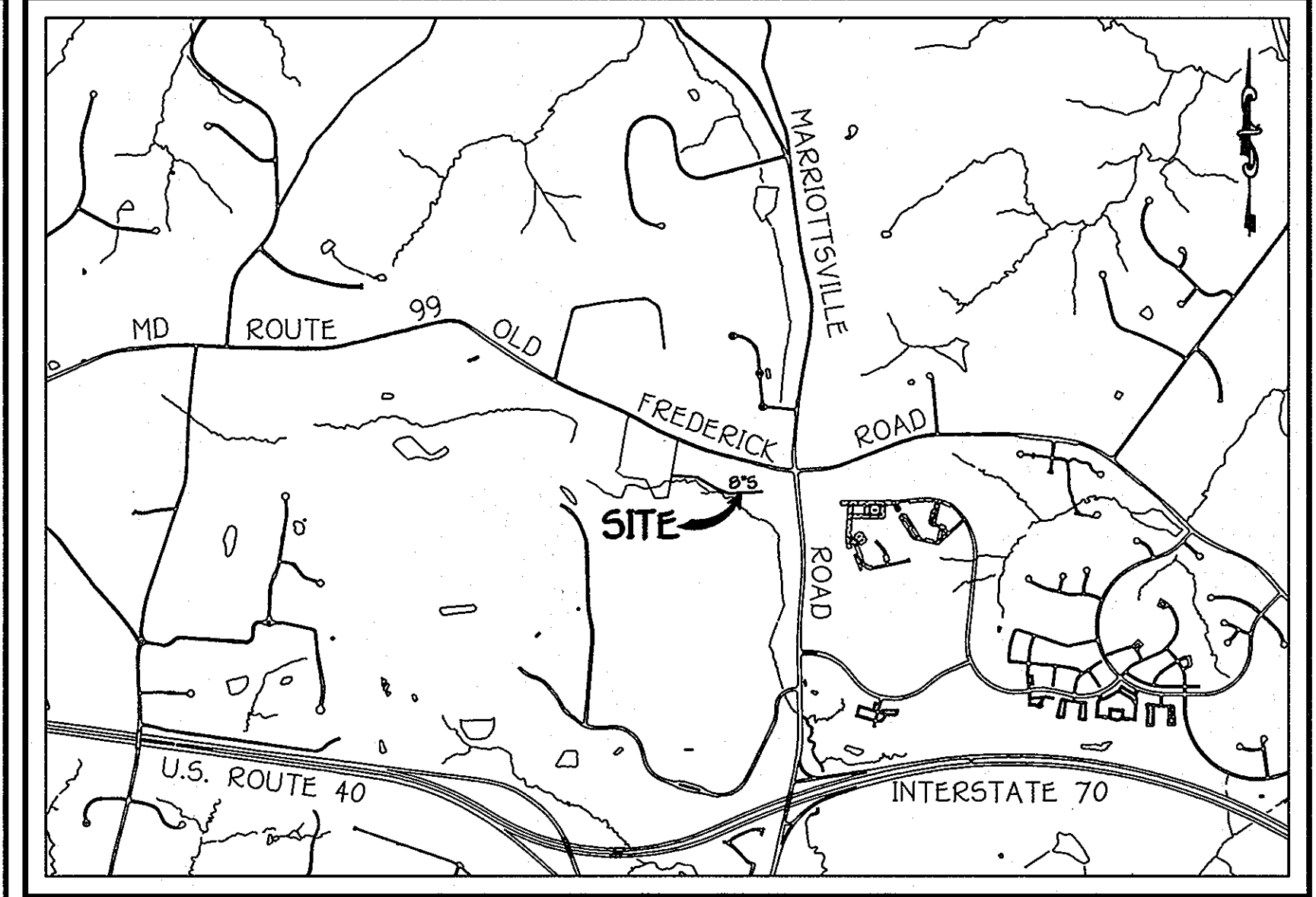
QUANTITIES				
ITEM	ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	SUPPLIER
8" SEWER	1,320 LF.	1,308.0 LF	PVC SDR-35	JM EAGLE
4" SEWER	120 LF.	160.5 LF	PVC SDR-35	JM EAGLE
MANHOLES	6 EACH	6 EA.	ATLANTIC CONC.	ASTM C478

NAME OF UTILITY CONTRACTOR: CCS, INC.
SURVEY & DRAFTING DIVISION AS-BUILT DATE:



WATER & SEWER CODE FOR COUNTY USE ONLY	
WATER NO:	N/A
SEWER NO:	5992000
WATER ZONE:	N/A
WATER TEST GRADIENT:	N/A

VICINITY MAP
SCALE: 1" = 600'



LOCATION MAP
SCALE: 1" = 2000'

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 FEBRUARY, 2006 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. 10HA & NO. 10H5. SEE THIS SHEET FOR BENCHMARK INFORMATION. ALL VERTICAL CONTROLS ARE BASED ON NAVD '88. VERTICAL CONTROLS ARE BASED ON TRAVERSE POINT NO. 7033 AN IRON PIPE SET ON THE SOUTH SIDE OF OLD FREDERICK ROAD, ELEV. 922.81.
 - 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 (S) 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) 410-850-4620
BGE (EMERGENCY) 410-695-1000
BUREAU OF UTILITIES 410-313-4900
COLONIAL PIPELINE CO. 410-795-1390
MISSISSIPPI 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: 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 18" WALLS ARE FOR BRICK MANHOLES ONLY.
 - MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVER, STANDARD DETAIL C5.52. 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 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.

Paul W. Kuehl, FOR: MORSBERGER, LLC
SIGNATURE OF DEVELOPER
DATE: 04/21/08

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.

Paul W. Kuehl
SIGNATURE OF ENGINEER
DATE: 04-21-08

GP-07-089

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

APPROVED:
John K. Robertson, 5/1/08
HOWARD SOIL CONSERVATION DISTRICT
DATE

SEDDIMENT 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.

Paul W. Kuehl, FOR: MORSBERGER, LLC
SIGNATURE OF DEVELOPER
DATE: 04/21/08

CONTRACT NO. 20-4398-D
**MARYLAND ROUTE 99
SEWER MAIN EXTENSION**
HOWARD COUNTY, MARYLAND

BENCHMARK INFORMATION

B.M.#1 - HOWARD COUNTY CONTROL STATION #10HA (NAD '83)
(APPROX. 250 FT. FROM THE INTERSECTION OF OLD FREDERICK ROAD AND HARRIOTTVILLE ROAD; ALONG THE WEST SIDE OF HARRIOTTVILLE ROAD)
N 60126.59
E 1340.912325
ELEVATION = 484.717

B.M.#2 - HOWARD COUNTY CONTROL STATION #10H5 (NAD '83)
(LOCATED ALONG OLD FREDERICK ROAD APPROX. 1300 FT. WEST OF HARRIOTTVILLE ROAD; ACROSS FROM HOUSE #1226)
N 60120.819
E 1339.637571
ELEVATION = 423.439

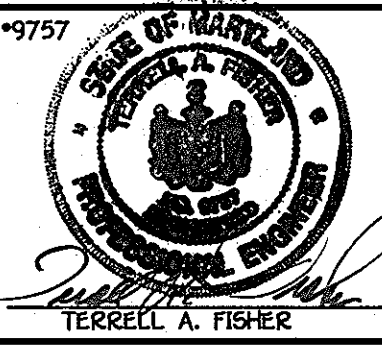
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

John C. Coan, 4/25/08
CHIEF, BUREAU OF UTILITIES
DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

William J. ... 5/6/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE, OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
410-661-9955



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

SEWER MAIN EXTENSION TITLE SHEET	
600' SCALE MAP NO. 10 & 16	BLOCK NO. 3 & 4; 21 & 22
F.C.C. WORK ORDER NO. 04135	
FILE NAME:	SEWER MAIN EXTENSION TITLE SHEET

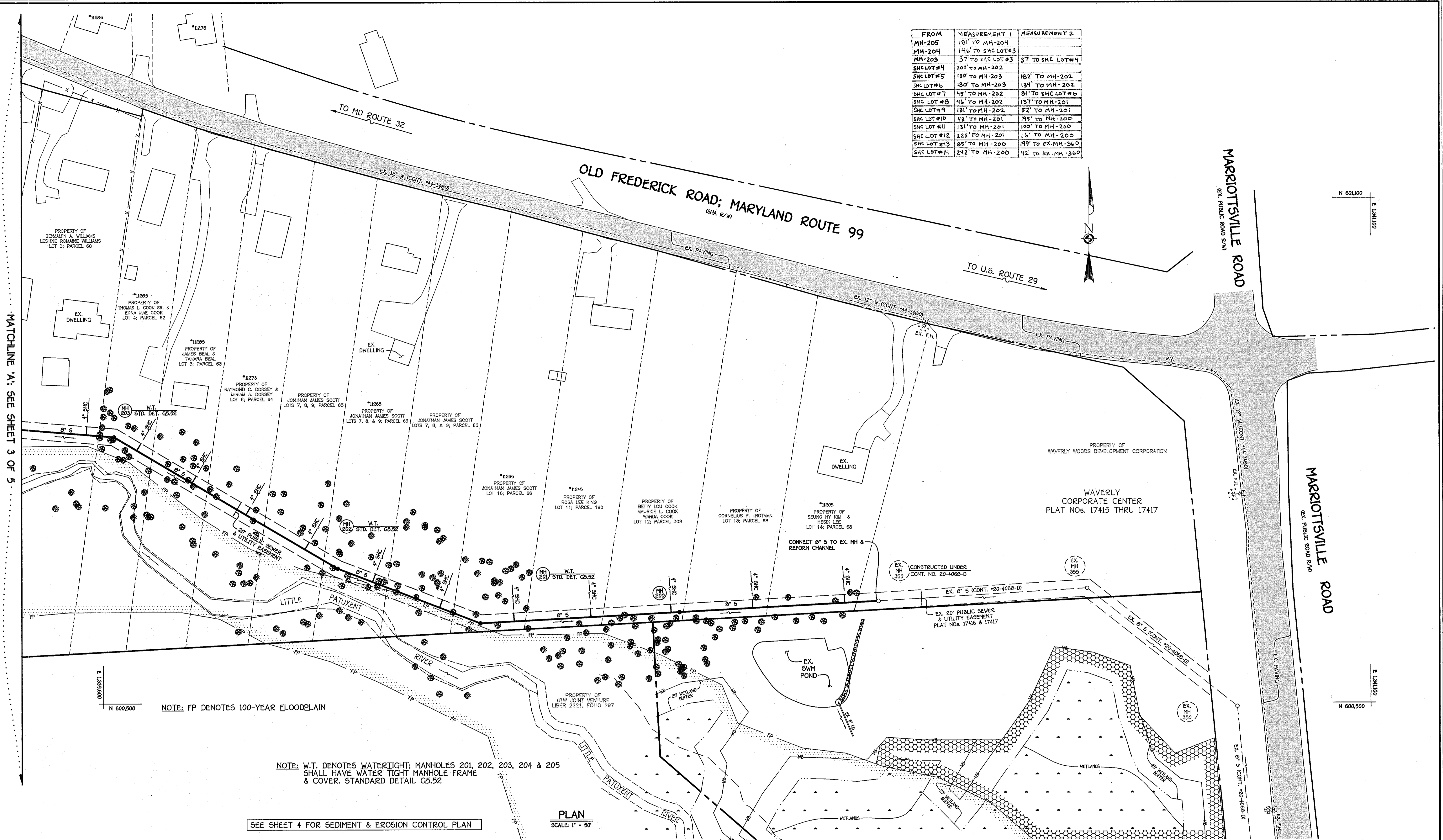
DEVELOPER
MORSBERGER, LLC
C/O LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DRIVE
SUITE 102
ELLCOTT CITY, MARYLAND 21042

CONTRACT NO. 20-4398-D
**MARYLAND ROUTE 99
SEWER MAIN EXTENSION**
HOWARD COUNTY, MARYLAND

SCALE
AS
SHOWN

SHEET
1 of 5

FROM	MEASUREMENT 1	MEASUREMENT 2
MH-205	181' TO MH-204	
MH-204	146' TO SHC LOT#3	
MH-203	37' TO SHC LOT#3	37' TO SHC LOT#4
SHC LOT#4	202' TO MH-202	
SHC LOT#5	130' TO MH-203	162' TO MH-202
SHC LOT#6	180' TO MH-203	134' TO MH-202
SHC LOT#7	45' TO MH-202	81' TO SHC LOT#6
SHC LOT#8	46' TO MH-202	137' TO MH-201
SHC LOT#9	131' TO MH-202	52' TO MH-201
SHC LOT#10	43' TO MH-201	115' TO MH-200
SHC LOT#11	131' TO MH-201	100' TO MH-200
SHC LOT#12	225' TO MH-201	16' TO MH-200
SHC LOT#13	85' TO MH-200	199' TO EX-MH-360
SHC LOT#14	242' TO MH-200	42' TO EX-MH-360



MATCHLINE A; SEE SHEET 3 OF 5

NOTE: FP DENOTES 100-YEAR FLOODPLAIN

NOTE: W.T. DENOTES WATERTIGHT; MANHOLES 201, 202, 203, 204 & 205 SHALL HAVE WATER TIGHT MANHOLE FRAME & COVER. STANDARD DETAIL G5.52

SEE SHEET 4 FOR SEDIMENT & EROSION CONTROL PLAN

PLAN
SCALE: 1" = 50'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

John C. Combs
CHIEF, BUREAU OF UTILITIES

4/25/09 DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

John P. ...
CHIEF, DEVELOPMENT ENGINEERING DIVISION

5/6/08 DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
BALTIMORE CITY, MARYLAND 21286
(410) 481-2995

STATE OF MARYLAND
TERRELL A. FISHER
REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY:	B.C.R.
DRAWN BY:	B.C.R.
CHECKED BY:	P.W.K.
DATE:	APRIL, 2008

REVISION	DATE
AS-BUILT REVISIONS	6/15/11

SEWER MAIN EXTENSION PLAN

600' SCALE MAP NO. 10 & 15 BLOCK NO. 3 & 4: 21 & 22
F.C.C. WORK ORDER NO. 04135
FILE NAME: SEWER MAIN EXTENSION PLAN SHEET

**MARYLAND ROUTE 99
SEWER MAIN EXTENSION**

CONTRACT NO. 20-4398-D
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE
AS
SHOWN

SHEET
2 of 5

CONTRACT NO. 20-4398-D
MARYLAND ROUTE 99
SEWER MAIN EXTENSION
HOWARD COUNTY, MARYLAND

MATCHLINE 'A'; SEE SHEET 2 OF 5

NOTE: W.T. DENOTES WATERTIGHT; MANHOLES 201, 202, 203, 204 & 205 SHALL HAVE WATER TIGHT MANHOLE FRAME & COVER. STANDARD DETAIL G5.52

SEE SHEET 4 FOR SEDIMENT & EROSION CONTROL PLAN

NOTE: FP DENOTES 100-YEAR FLOODPLAIN

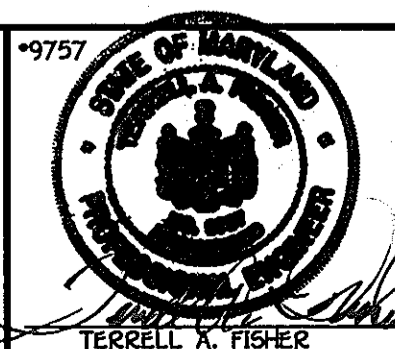


PLAN
SCALE: 1" = 50'

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 - 10772 BALTIMORE NATIONAL PARK
ELLSWORTH CITY, MARYLAND 21042
(410) 431-2000



DESIGNED BY:
B.C.R.
DRAWN BY:
B.C.R.
CHECKED BY:
P.W.K.
DATE:
APRIL, 2008

DESIGNED BY:	B.C.R.
DRAWN BY:	B.C.R.
CHECKED BY:	P.W.K.
DATE:	APRIL, 2008
BY NO.	
REVISION	
DATE	6/15/11

SEWER MAIN EXTENSION PLAN
60' SCALE MAP NO. 10 & 15 BLOCK NO. 3 & 4; 21 & 22
F.C.C. WORK ORDER NO. 04135
FILE NAME: SEWER MAIN EXTENSION PLAN SHEET

MARYLAND ROUTE 99
SEWER MAIN EXTENSION
CONTRACT NO. 20-4398-D
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

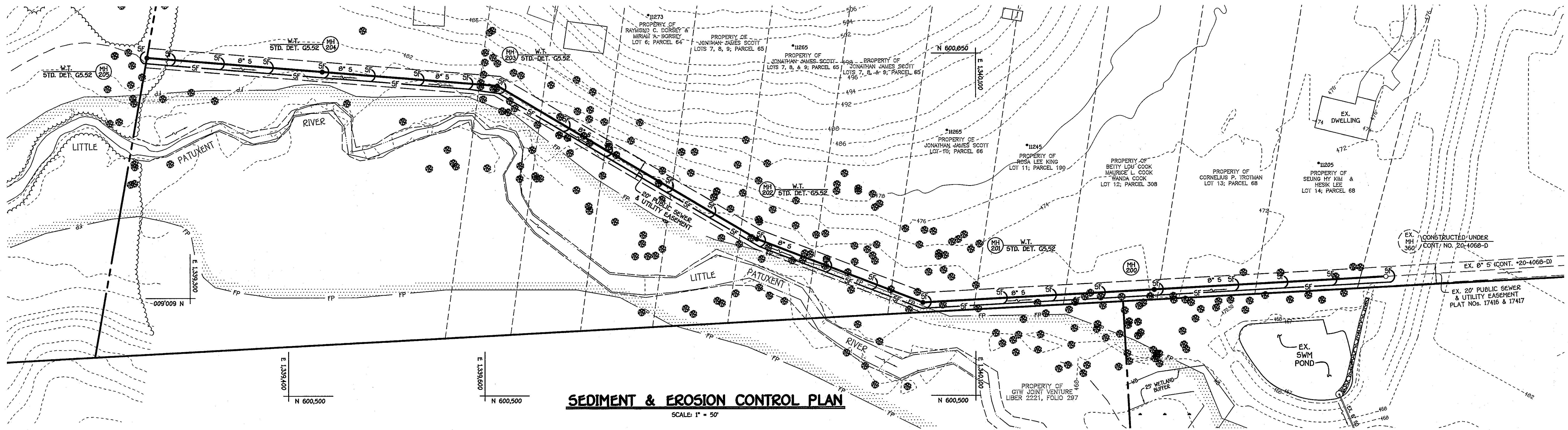
SCALE
AS
SHOWN
SHEET
3 of 5

John C. Coen
CHIEF, BUREAU OF UTILITIES
DATE: 4/25/09

Terrell K. Fisher
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 5/6/08

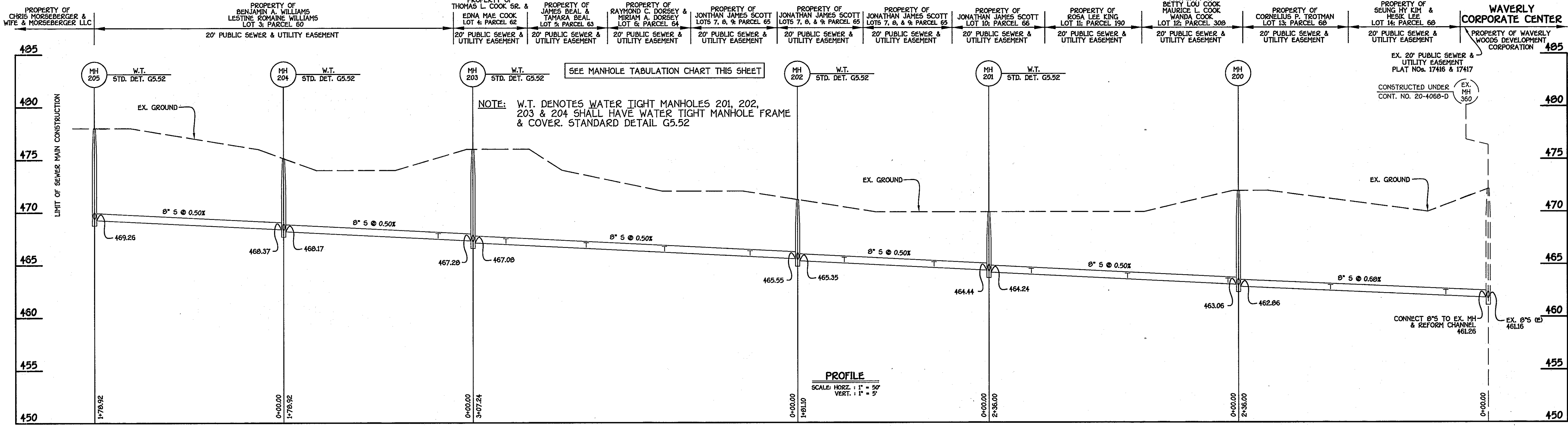
TERRELL K. FISHER

DATE: 6/15/11



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

NO.	NORTHING	EASTING	RIM ELEVATION
200	600608.04	1340281.76	472.00
201	600595.10	1340046.13	470.00
202	600660.19	1339877.13	471.18
203	600816.86	1339612.83	476.00
204	600831.37	1339434.50	475.00
205	600845.89	1339256.17	478.00



8" SEWER MAIN EXTENSION

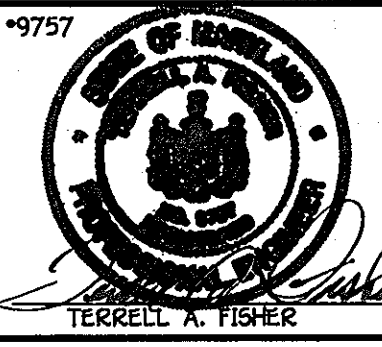
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Sheila C. Green
4/25/08
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

5/16/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2995



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

SEWER MAIN EXTENSION
PROFILE
SEDIMENT CONTROL PLAN

600' SCALE MAP NO. 10 & 15 BLOCK NO. 3 & 4; 21 & 22
F.C.C. WORK ORDER NO. 04135
DATE: 6/15/11
FILE NAME: SEWER MAIN EXTENSION SEDIMENT & PROFILE SHEET

MARYLAND ROUTE 99
SEWER MAIN EXTENSION
CONTRACT NO. 20-4398-D
THIRD ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE
AS
SHOWN

SHEET
4 OF 5

CONTRACT NO. 20-4398-D
MARYLAND ROUTE 99
SEWER MAIN EXTENSION
HOWARD COUNTY, MARYLAND

**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, THE SOIL IS LESS LIKELY TO ERODE AND MORE LIKELY TO ALLOW INFILTRATION 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 UP TO ONE YEAR, AND PERMANENT SEEDING, TO ESTABLISH PERMANENT VEGETATIVE COVER. EXAMPLES OF APPLICABLE AREAS FOR TEMPORARY SEEDING ARE TEMPORARY SOIL STOCKPILES, CLEARED AREAS BEING LEFT IDLE BETWEEN CONSTRUCTION PHASES, EARTH DIKES, 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 QUANTITY
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

- 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 PERFORMED DURING THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZERS 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 SHOULD BE IN SOLUTION 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 OF THE PRODUCT.
 - LIME MATERIALS SHALL BE GROUND LIME STONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED) WHICH CONTAINS AT LEAST 50% TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIME STONE SHALL BE GROUND TO SUCH FINENESS THAT AT LEAST 50% WILL PASS THROUGH A #100 MESH SIEVE AND 90-100% WILL PASS THROUGH A #20 MESH SIEVE.
 - INCORPORATE LIME AND FERTILIZER INTO THE TOP 3"-5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS.

- TEMPORARY SEEDING
 - 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 A REGULAR 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 1% CLAY, BUT ENOUGH FINE GRAINED MATERIAL (20X SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION IS LOVEGRASS OR SERICIA LESPEDEZAS IS TO BE PLANTED, THEN A SANDY SOIL (<30% SILT PLUS CLAY) WOULD BE ACCEPTABLE.
 - SOIL SHALL CONTAIN 1.5% 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 IN CONFORMANCE WITH THE DRAWINGS SHALL BE MAINTAINED IN A TRUE AND EVEN GRADE, THEN SCRAPPED OR OTHERWISE LOOSENED TO A DEPTH OF 3"-5" TO PERMIT BONDING OF THE TOPSOIL TO THE SURFACE AREA AND TO CREATE HORIZONTAL EROSION CHECK SLOTS TO PREVENT TOPSOIL FROM SLIDING DOWN A SLOPE.
 - 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 SUBSOIL 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 SUCH MATERIAL ON THIS JOB.
 - SEED TAGS SHALL BE MADE AVAILABLE TO THE INSPECTOR. 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 FRESH INOCULANT 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 SEED, OR A CULTPACKER SEEDER.
 - 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 25B OR 26B. 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 CULTPACKER SEEDING - MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
 - CULTPACKER 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.
- MULCH SPECIFICATIONS (IN ORDER OF PREFERENCE)
 - STRAW SHALL CONSIST OF THOROUGHLY THRESHED WHEAT, RYE OR OAT STRAW, REASONABLE BRIGHT IN COLOR, AND SHALL NOT BE MUSTY, MOLLY, CAKED, DECAYED, OR EXCESSIVELY DUSTY AND SHALL BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW.
 - WOOD CELLULOSE FIBER MULCH (WCFM)
 - WCFM SHALL CONSIST OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.
 - 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.
 - WCFM, INCLUDING DYE, SHALL CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
 - 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 BLOTTER-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.
 - WCFM MATERIAL SHALL CONTAIN NO ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
 - WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH TO APPROXIMATELY 10 MM, DIAMETER APPROXIMATELY 1 MM, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 16% MAXIMUM AND WATER HOLDING CAPACITY OF 90% MINIMUM.

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.

ii. 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 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.

iii. 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.

iv. SECURING STRAW MULCH ANCHORING: 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.

- A MULCH ANCHORING TOOL IS AS TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF TWO (2) 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.
- 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.
- APPLICATION OF LIQUID BINDERS SHOULD BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND CREST OF BANKS. THE REMAINDER OF AREA SHOULD BE APPEAR UNIFORM AFTER BINDER APPLICATION. SYNTHETIC BINDERS-SUCH AS ACRYLIC DLR (AGG-TACK), DCA-70 PETROLET, TERRA TACK II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH.
- LIGHTWEIGHT PLASTIC FILMING MAY BE STARTLED 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.

v. INCREMENTAL STABILIZATION - CUT SLOPES

- ALL CUT SLOPES SHALL BE DRESSED, PREPARED, SEEDED 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 SEEDED AREAS NECESSARY.

NOTE: ONCE EXCAVATION HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF TOPSOIL 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.

vi. 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 EXCAVATION OPERATION CEASES AS PRESCRIBED IN THE LISTS.
- 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 SEEDED AREAS AS NECESSARY.

NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF TOPSOIL 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 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 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 ...SB...) FROM TABLE 26				FERTILIZER RATE (10-10-10)	LIME RATE
NO.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS	
1	BARLEY OATS RYE	122 96 140	3/1 - 5/15, 6/15 - 10/15	1" - 2" 1" - 2" 1" - 2"	2 tons/ac (100 lb/1000sf)

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.

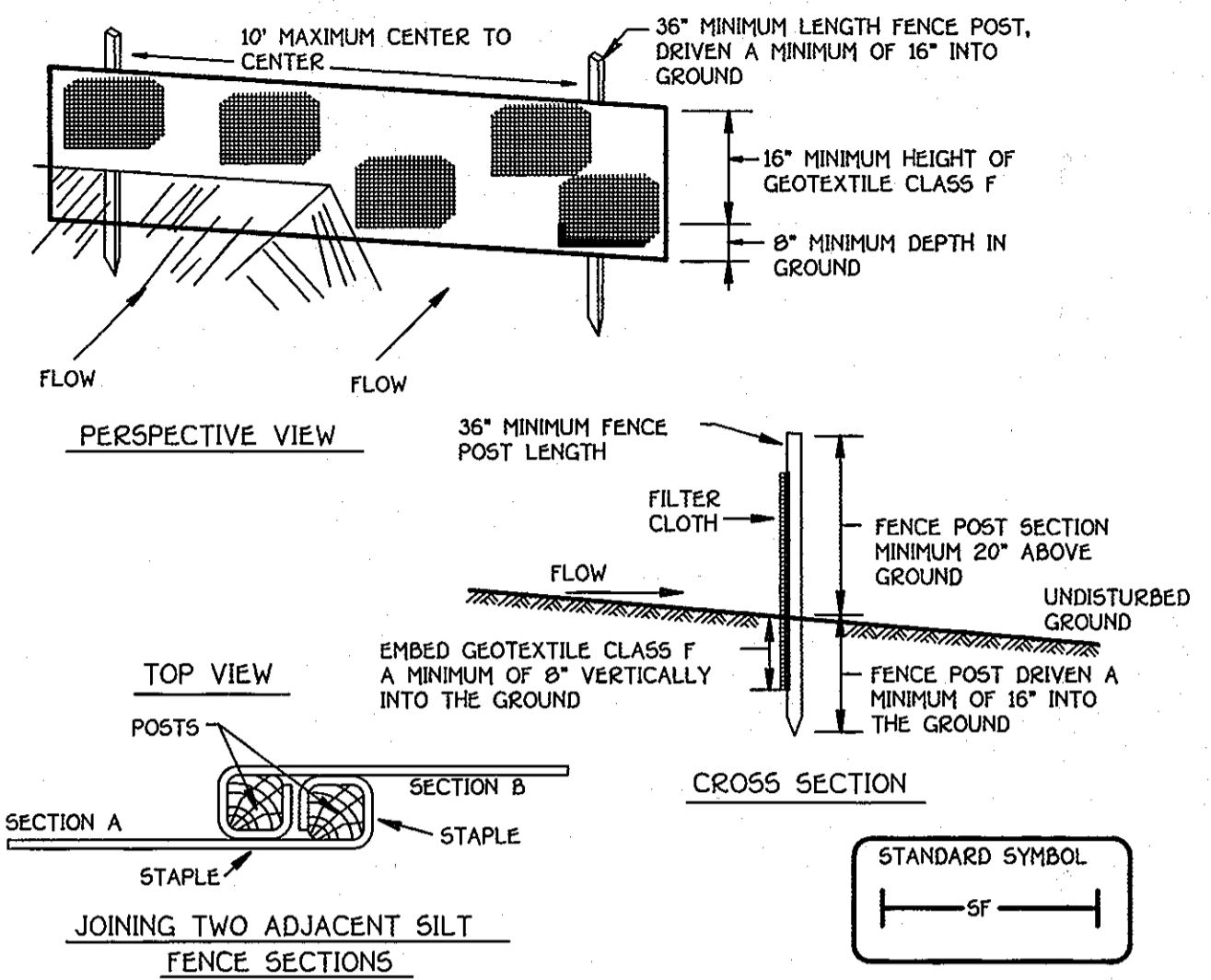
- SEED MIXTURES - PERMANENT SEEDING
 - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE 25 FOR THE APPROPRIATE PLANT HARDNESS ZONE (FROM FIGURE 5) AND ENTER THEM IN THE PERMANENT SEEDING SUMMARY BELOW, ALONG WITH APPLICATION RATES AND SEEDING DATES. SEEDING DEPTHS CAN BE ESTIMATED USING 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 SUCH AS SHOULDER, STREAMBANKS, OR DUNES OR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USGA-SGS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING. FOR SPECIAL LAWN MAINTENANCE AREAS, SEE SECTIONS 4 AND 5 OF TURFGRASS.
 - 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.
 - 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 ...SB...) FROM TABLE 25				FERTILIZER RATE (10-20-20)			LIME RATE
NO.	SPECIES	APPLICATION RATE (lb/ac)	SEEDING DATES	SEEDING DEPTHS	N	P205	K2O
3	TALL FESCUE (85) PERENNIAL RYE GRASS (10) KENTUCKY BLUEGRASS (95)	125 15 10	3/1 - 5/15, 6/15 - 10/15	1" - 2"	90 lb/ac (2.0 lb/1000sf)	175 lb/ac (4 lb/1000sf)	175 lb/ac (4 lb/1000sf)
10	TALL FESCUE (80) HARD FESCUE (20)	120 30	3/1 - 5/15, 6/15 - 10/15	1" - 2"			2 tons/ac (100 lb/1000sf)

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 (03-18-99).
- 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 THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3%, BY 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 TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 50), SOD (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	N/A ACRES
AREA DISTURBED	0.606 ACRES
AREA TO BE ROOTED OR PAVED	0.000 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.606 ACRES
TOTAL CUT	N/A; UTILITY INSTALLATION ONLY
OFFSITE WASTE/BORROW AREA LOCATION	N/A CU. YDS.



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 "I" OR "U" SECTION WEIGHING NOT LESS THAN 1.00 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	20 LBS/IN (MIN)	TEST: MSMT 509
FLOW RATE	0.3 GAL. FT. / MINUTE (MAX.) ²	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.

SILT FENCE

SILT FENCE DESIGN CRITERIA

SLOPE STEEPNESS	(MAXIMUM) SLOPE LENGTH	(MAXIMUM) SILT FENCE LENGTH
FLATTER THAN 50:1	UNLIMITED	UNLIMITED
50:1 TO 10:1	125 FEET	1,000 FEET
10:1 TO 5:1	100 FEET	750 FEET
5:1 TO 3:1	60 FEET	500 FEET
3:1 TO 2:1	40 FEET	250 FEET
2:1 AND STEEPER	20 FEET	125 FEET

NOTE: IN AREAS OF LESS THAN 2% SLOPE AND SANDY SOILS (USDA GENERAL CLASSIFICATION SYSTEM, SOIL CLASS "A") MAXIMUM SLOPE LENGTH AND SILT FENCE LENGTH WILL BE UNLIMITED. IN THESE AREAS A SILT FENCE MAY BE THE ONLY PERIMETER CONTROL REQUIRED.

**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: A. 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 CONCRETE, GRAVEL, STICKS, ROOTS, TRASH OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
 - TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4"-8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4"; AVOID SURFACE IRREGULARITIES.
 - PLACE 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: A. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4"-8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4"; AVOID SURFACE IRREGULARITIES. B. PLACE TOPSOIL AND APPLY SOIL AMENDMENTS AS SPECIFIED IN "STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION". C. TOPSOIL SHALL NOT BE PLACED DURING FROZEN, MUDDY, OR EXCESSIVELY WET CONDITIONS.

SEQUENCE OF CONSTRUCTION

- OBTAIN THE REQUIRED GRADING PERMIT.
- 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)313-1670.
- INSTALL THE REQUIRED SEDIMENT AND EROSION CONTROL DEVICES AS INDICATED ON SHEET 4 OF THIS CONTRACT.
- CLEAR AND GRUB AS NECESSARY, ONLY AS REQUIRED FOR EXCAVATION AND INSTALLATION OF THE SEWER MAIN AND ONLY WITHIN THE DESIGNATED SEWER AND UTILITY EASEMENTS.
- NOTE: THE LENGTH OF OPEN SEWER 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.
- CONSTRUCT THE SEWER MAIN AND APPURTENANCES.
- 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 PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

Paul W. Kaelbel FOR:
MORSEBOROUGH, LLC
SIGNATURE OF DEVELOPER

ENGINEER'S CERTIFICATION

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

Paul W. Kaelbel
SIGNATURE OF ENGINEER

04-21-08
DATE

SEE SHEET 4 OF 5 FOR SEDIMENT & EROSION CONTROL PLAN

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

4/25/08 DATE

5/6/08 DATE

FISHER, COLLINS & CARTER, INC.
CIVIL, ENGINEERING, CONSULTANTS & LAND SURVEYORS

CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PARK
ELLICOTT CITY, MARYLAND 21114
(410) 461-2895

TERRELL A. FISHER

DESIGNED BY: B.C.R.

DRAWN BY: B.C.R.

CHECKED BY: P.W.K.

DATE: APRIL, 2008

KCI | AS-BUILT REVISIONS

BY NO. REVISION

SEDIMENT CONTROL NOTES & DETAILS

600' SCALE MAP NO. 10 & 16 BLOCK NO. 3 & 4: 21 & 22

F.C.C. WORK ORDER NO. 04135

FILE NAME: SEWER MAIN EXTENSION SEDIMENT SHEET

MARYLAND ROUTE 99
SEWER MAIN EXTENSION
HOWARD COUNTY, MARYLAND

CONTRACT NO. 20-4398-D
THIRD ELECTION DISTRICT

SCALE AS SHOWN

SHEET 5 OF 5

CONTRACT NO. 20-4398-D
MARYLAND ROUTE 99
SEWER MAIN EXTENSION
HOWARD COUNTY, MARYLAND