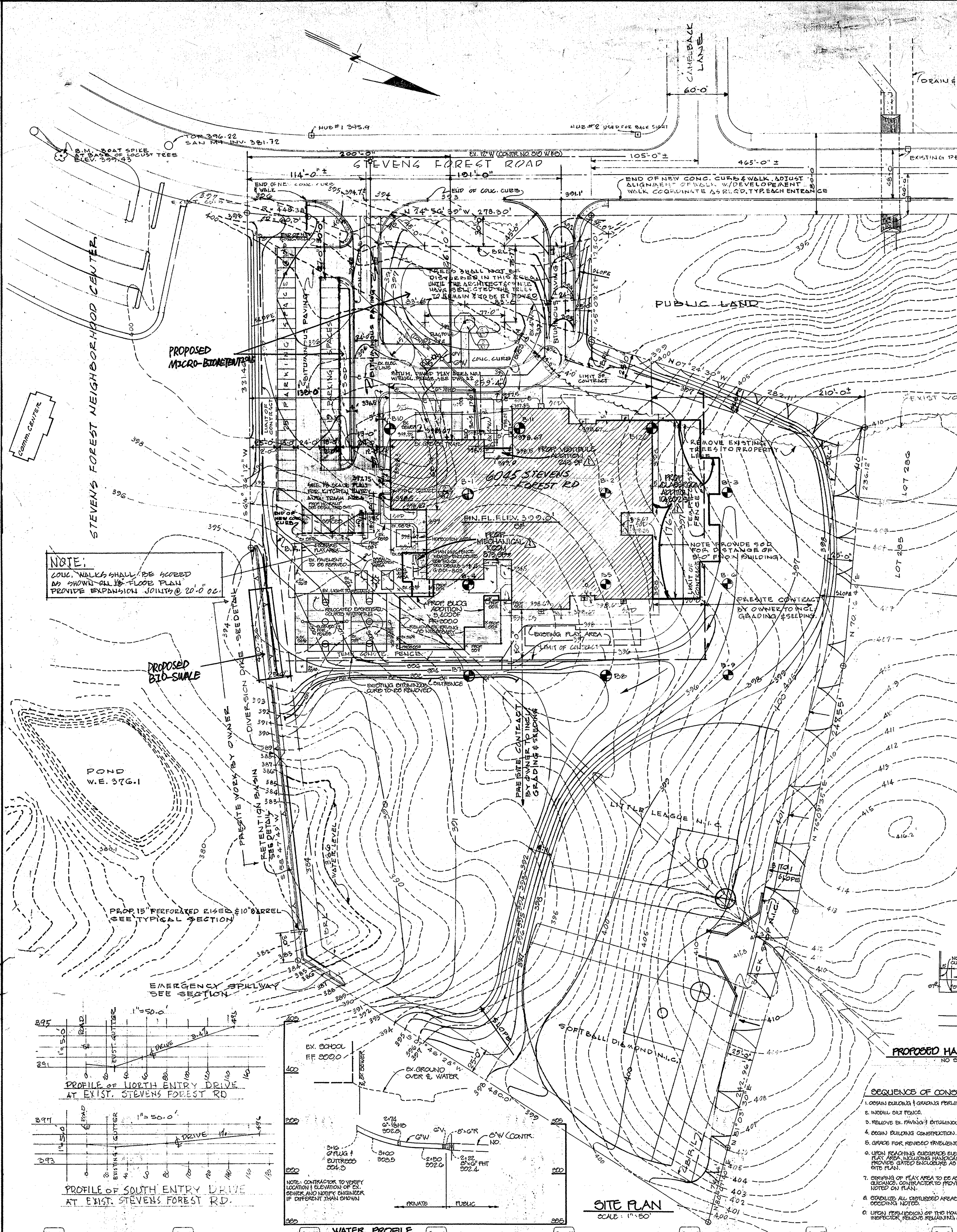
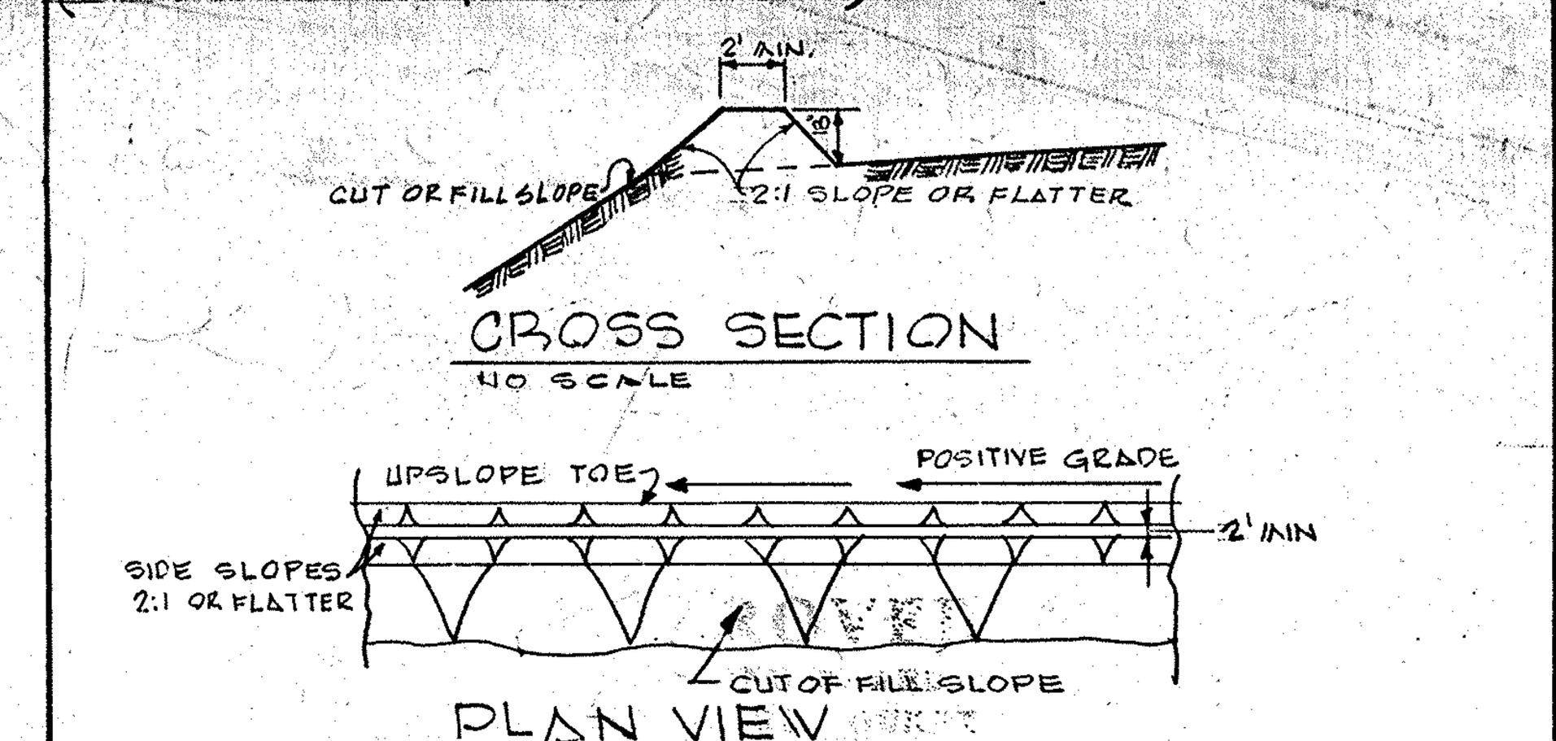


NOTE: CONC. WALKS SHALL BE SCORED AS SHOWN ON FLOOR PLAN PROVIDE EXPANSION JOINTS @ 20'-0" O.C.

PRE-SITE CONTRACT WORK BY OWNER (NOT IN BLDG. CONTRACT)



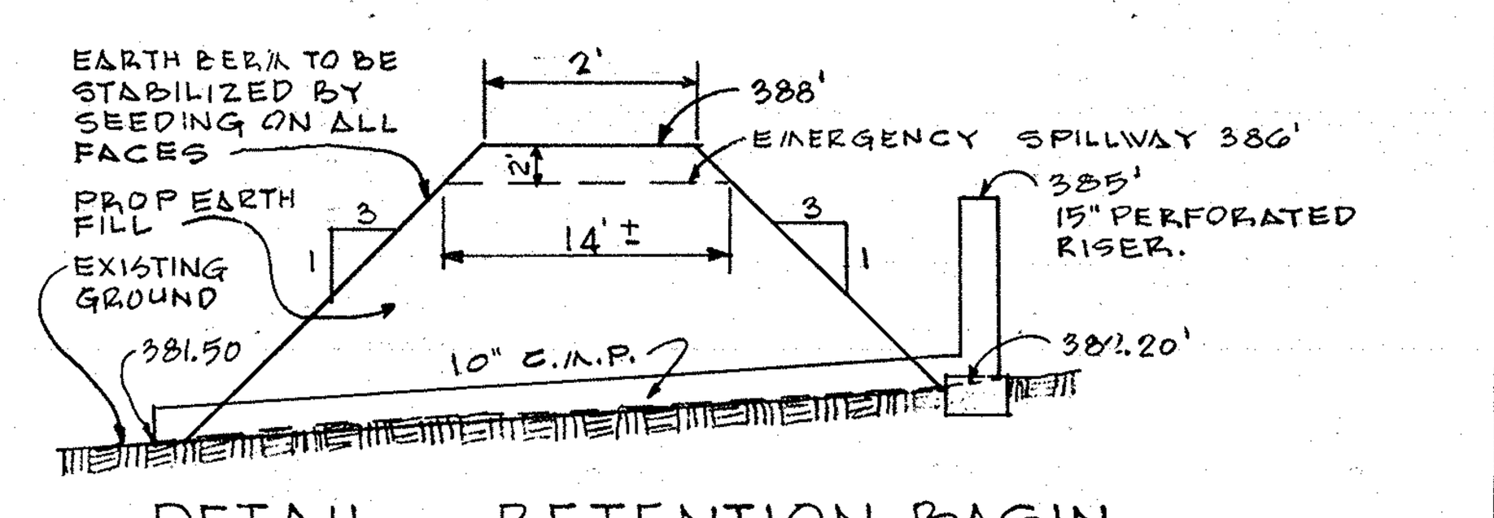
CROSS SECTION
NO SCALE

PLAN VIEW

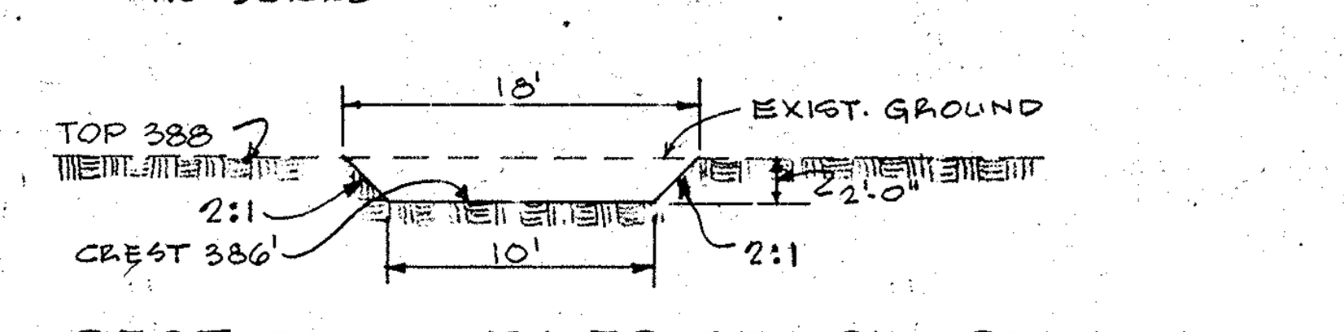
DETAIL OF DIVERSION DIKE

GENERAL NOTES:

1. ALL DIKES MUST BE MACHINE COMPACTED.
2. ALL DIVERSION DIKES MUST HAVE POSITIVE GRADE DRAINING TO A STABILIZED OUTLET.
3. DIVERTED RUNOFF WILL OUTLET ONTO A STABILIZED UNDISTURBED AREA, A PREPARED LEVEL SPREADER, OR INTO A GRADE STABILIZATION STRUCTURE.
4. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED.

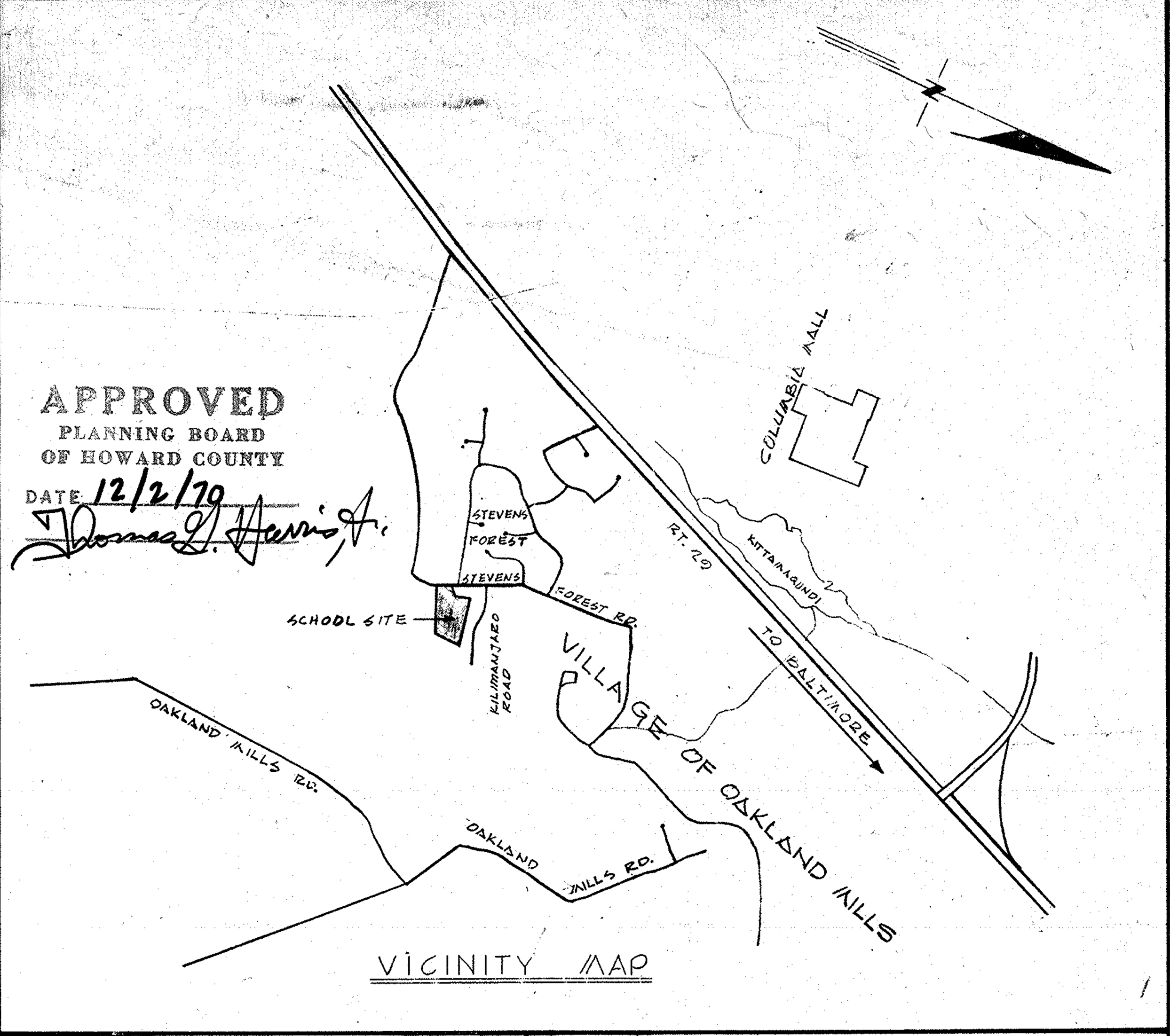


DETAIL OF RETENTION BASIN
NO SCALE



SECTION THRU EMERGENCY SPILLWAY
NO SCALE

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 12/2/70
Thomas G. Harris Jr.



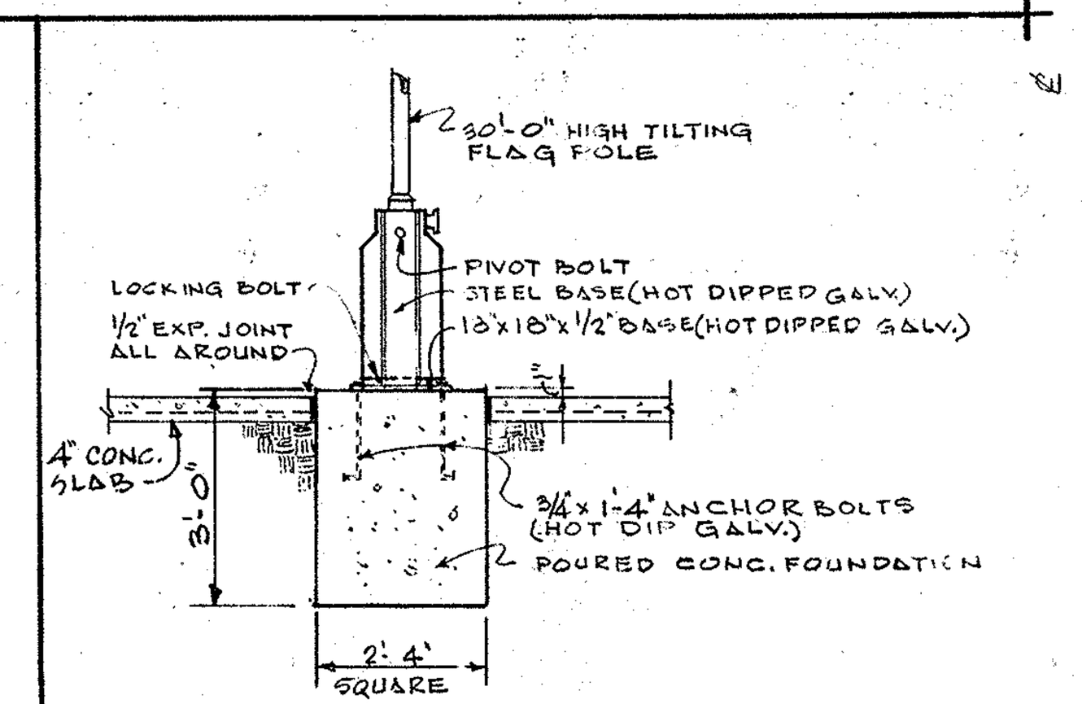
VICINITY MAP

GENERAL NOTES

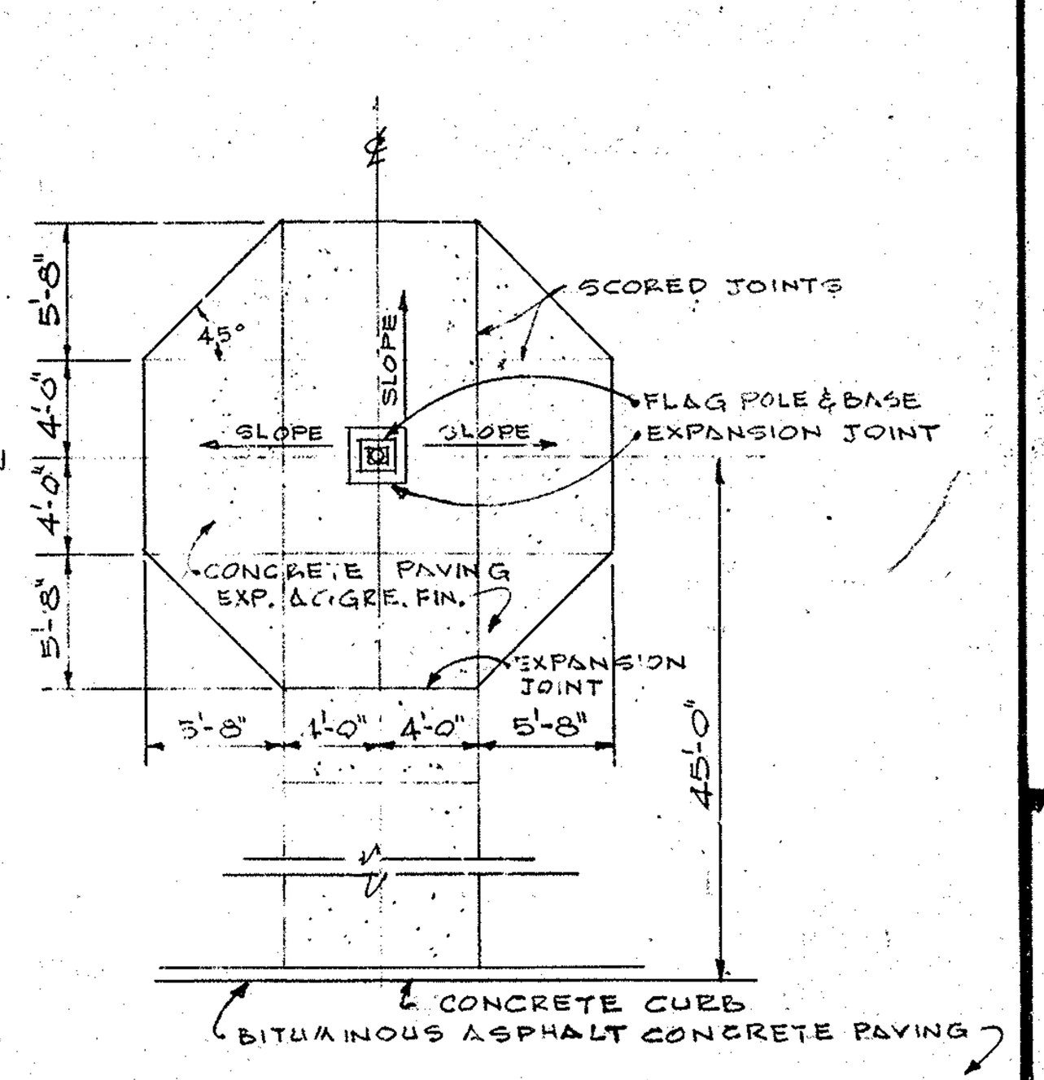
1. CONTRACTOR SHALL VERIFY ALL INFORMATION INDICATED ON THE CONTRACT DWGS. AND SPECIFICATIONS TO HIS COMPLETE SATISFACTION.
2. TEMPORARY TOILET FACILITIES TO BE LOCATED AT AREA APPROVED BY OWNER.
3. NEW GRADES SHALL BE ADJUSTED TO MEET EXISTING GRADES. CONTRACTOR SHALL VERIFY ALL EXISTING GRADES IN FIELD AND NOTIFY ARCHITECT IF HIS GRADES DISAGREE WITH GRADES SHOWN ON DWGS. SO ADJUSTMENTS, IF NECESSARY, CAN BE MADE.
4. ASSUMED FLOOR ELEVATION IS 399.0'
5. CONTRACTOR SHALL REMOVE ALL RUBBLE AND RUBBISH FROM PREMISES UNLESS OTHERWISE DIRECTED.
6. CONTRACTOR SHALL NOT REMOVE TOP SOIL OR CLEAN FILL DIRT FROM PREMISES BUT SHALL DEPOSIT SAME AS DIRECTED.
7. NO OTHER PROPERTY CORNERS FOUND EXCEPT FOR TWO HUBS AS SHOWN.
8. BOUNDARY BASED ON RECORD PLAT RECORDED IN PLAT BOOK 18, FOLIO 72 ON MAY 27, 1970 AMONG THE LAND RECORDS OF HOWARD COUNTY.
9. CONTOURS USED ARE BASED ON TOPOGRAPHIC SURVEY DATED, 6-17-70 PREPARED BY ASSOCIATED ENGINEERS INC. 1605 CONNECTICUT AVE. N.W. WASHINGTON, D.C.

LIMIT OF CONTRACT NOTES

1. BUILDING WORK SHALL BE CONFINED WITHIN LIMIT OF CONTRACT AREA.
2. ENTIRE SITE WILL BE GRADED BY OWNER UNDER A PRE-SITE CONTRACT, WITHIN LIMIT OF CONTRACT, GRASS AREAS, PRE-SITE GRADES WILL BE -4", BUILDING AREA -12" AND PAVED AREAS AT SUB GRADE.
3. BUILDING CONTRACTOR SHALL REMOVE ALL EXCESS EARTH & DEBRIS & REPAIR DAMAGE TO PRE-SITE WORK.
4. FURNISH, INSTALL & REMOVE A TEMPORARY CHAIN LINK CONSTRUCTION FENCE WHERE SHOWN ON LIMIT OF CONTRACT LINE TO LIMIT ENCROACHMENT ON PRESITE SEEDED AREA.
5. LIMIT OF CONTRACT AS NOTED ON SITE PLAN IS TO INDICATE RESTRICTION OF SITE AREA USAGE BY GENERAL CONTRACTOR
6. ALL SEEDING IS TO BE DONE BY OWNER.
7. SOD TO BE FURNISHED & INSTALLED BY GEN. CONTR.



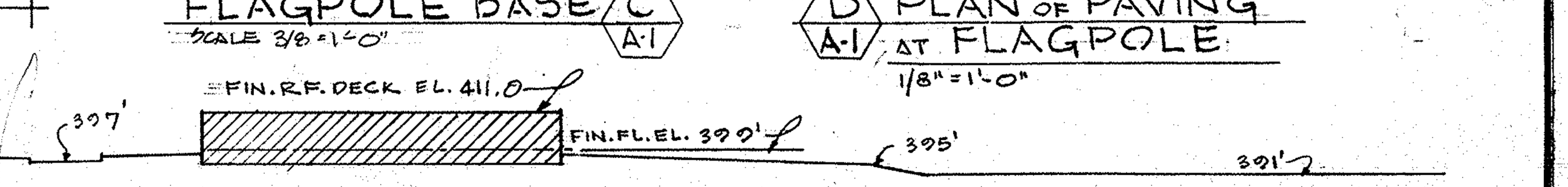
DETAIL OF FLAGPOLE BASE (C / A-1)
SCALE 3/8"=1'-0"



(D / A-1) PLAN OF PAVING AT FLAGPOLE
1/8"=1'-0"

NOTES:

1. All sediment controls must be constructed prior to any grading.
2. No temporary sediment control structure may be removed or destroyed without approval of the Howard Soil Conservation District.
3. Area to be seeded within road R/W's shall use a seed mixture as follow: annual rye grass (20%), kentucky blue grass (20%) and kentucky "31" fescue (60%) at the rate of 200#/A. Sow with mechanical spreader rake, minimum of two (2) passes with "York Rake", cover and compact with cultipacker. Surface preparation to include ground limestone over topsoil surface area at the rate of 1¼ T/A (60#/1000□) commercial fertilizer (5-10-10) at the rate of 3/4 T/A (35#/1000□) and super-phosphate at the rate of 600#/A (15#/1000□).



PROFILE THRU BUILDING AND LOWEST GRADE
SCALE: 1"=50'

APPROVAL SIGNATURE BLOCK FOR SITE DEVELOPMENT PLANS

APPROVED: FOR PUBLIC/ WATER AND PUBLIC/ SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
[signature] — COUNTY HEALTH OFFICER — DATE Sept 1 1971

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
Thomas G. Harris Jr. — PLANNING DIRECTOR — DATE 9-15-71
J.H. Clawson Jr. — CHIEF ENGINEER DIVISION OF LAND DEVELOPMENT — DATE 9/14/71

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE & STORM DRAINAGE SYSTEMS & ROADS HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
G.Y. Clark for Wm. A. ALTMAN — DIRECTOR — DATE 8-31-71
Granville W. Wehland — CHIEF BUREAU OF HIGHWAYS — DATE 8/30/71

CERTIFICATION BY THE PROFESSIONAL ENGINEER:
"I certify that the plan of development and the plan for control of silt and erosion meets the requirements, standards, and specifications of the Howard Soil Conservation District."
(Seal) Charles E. Fick — Signature — Date 8/19/71

CERTIFICATION BY THE DEVELOPER:
"I certify that all development and/or construction will be done according to this plan of development and plan of silt and sediment control."
(Seal) [illegible signature] — Signature — Date [illegible]

"This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District."
Reviewed [signature] — Dist. Conservation — Date 9-13-71
Approved Robert B. Campbell — Howard Soil Conservation District — Date 9-13-71

Note: Prior to any construction, sediment control measure must be installed.

SITE ANALYSIS

1. TOTAL AREA OF SITE 10.001 AC.
2. TOTAL PARKING PROVIDED AT 200 SF MIN. = 50 (10'x18' WITH 2' OVERHANG)
3. TOTAL COVERAGE ALLOWED = 10%
4. TOTAL COVERAGE PROVIDED 56,400 SF
5. EXISTING ZONING N.T. FDP 96
   OPEN SPACE
   CR. 9.001
   NON C.R. 1.000
6. TITLE REF: P.B. 18, F. 72 (5-27-70) TAX MAP Nº 36 6th ELECT. DIST.

AREA & VOLUME OF CONSTRUCTION

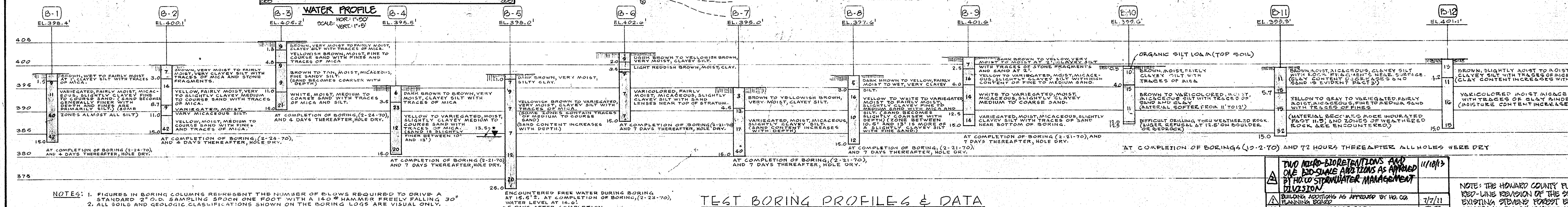
TOTAL AREA OF CONSTRUCTION 38,490 SQ.FT.
TOTAL VOLUME OF CONSTRUCTION 666,300 CU.FT.

SITE PLAN SYMBOLS

- NEW BUILDING
- BITUMINOUS ASPHALT CONC. PAVING
- CONCRETE WALKS & PAVING
- NEW FINISH GRADES
- EXISTING GRADES

MATERIAL SYMBOLS

- BRICK
- EARTH
- CONCRETE BLOCK
- GRAVEL
- POURED CONCRETE
- PERIMETER INSUL.
- PLASTER
- WOOD BLOCKING
- ACOUSTICAL TILE
- FINISH WOOD
- STEEL



TEST BORING PROFILES & DATA
VERT. SCALE: 1/2" = 5'-0"

AT COMPLETION OF BORINGS (10-2-70) AND 72 HOURS THEREAFTER ALL HOLES WERE DRY

NOTES: 1. FIGURES IN BORING COLUMNS REPRESENT THE NUMBER OF BLOWS REQUIRED TO DRIVE A STANDARD 2" O.D. SAMPLING SPOON ONE FOOT WITH A 140# HAMMER FREELY FALLING 30".
2. ALL SOILS AND GEOLOGIC CLASSIFICATIONS SHOWN ON THE BORING LOGS ARE VISUAL ONLY.

NO.	DESCRIPTION	DATE
2	TWO MICRO-BIORETENTIONS AND ONE BIO-SWALE ADDITIONS AS APPROVED BY HO. CO STORMWATER MANAGEMENT DIVISION	11/18/13
1	BUILDING ADDITIONS AS APPROVED BY HO. CO. PLANNING BOARD	7/7/11

REVISIONS

NOTE: THE HOWARD COUNTY PLANNING BOARD ON JUNE 16, 2011 APPROVED THE REQUEST FOR A RED-LINE REVISION OF THE SITE DEVELOPMENT PLAN TO CONSTRUCT THREE ADDITIONS TO THE EXISTING STEVENS FOREST ELEMENTARY SCHOOL. THE THREE ADDITIONS RESULTED IN LOT COVERAGE OF 13% EXCEEDING THE MAXIMUM COVERAGE OF 10% ALLOWED BY THE APPLICABLE FINAL DEVELOPMENT PLAN.

8-26-71
REVISED 7-28-71

STEVENS FOREST ELEMENTARY SCHOOL

COLUMBIA MARYLAND

FOR THE BOARD OF EDUCATION OF HOWARD COUNTY — CLARKSVILLE, MARYLAND

Revision 1 7/7/11

FISHER-COLLINS & CARTER INC.

Eugene R. Smeallie — ARCHITECT

SITE PLAN

DATE: 6-3-71

JOB Nº 6915

SMEALLIE, ORRICK AND JANKA, LTD.
ARCHITECTS PLANNERS
5820 YORK ROAD BALTIMORE, MD. 21212

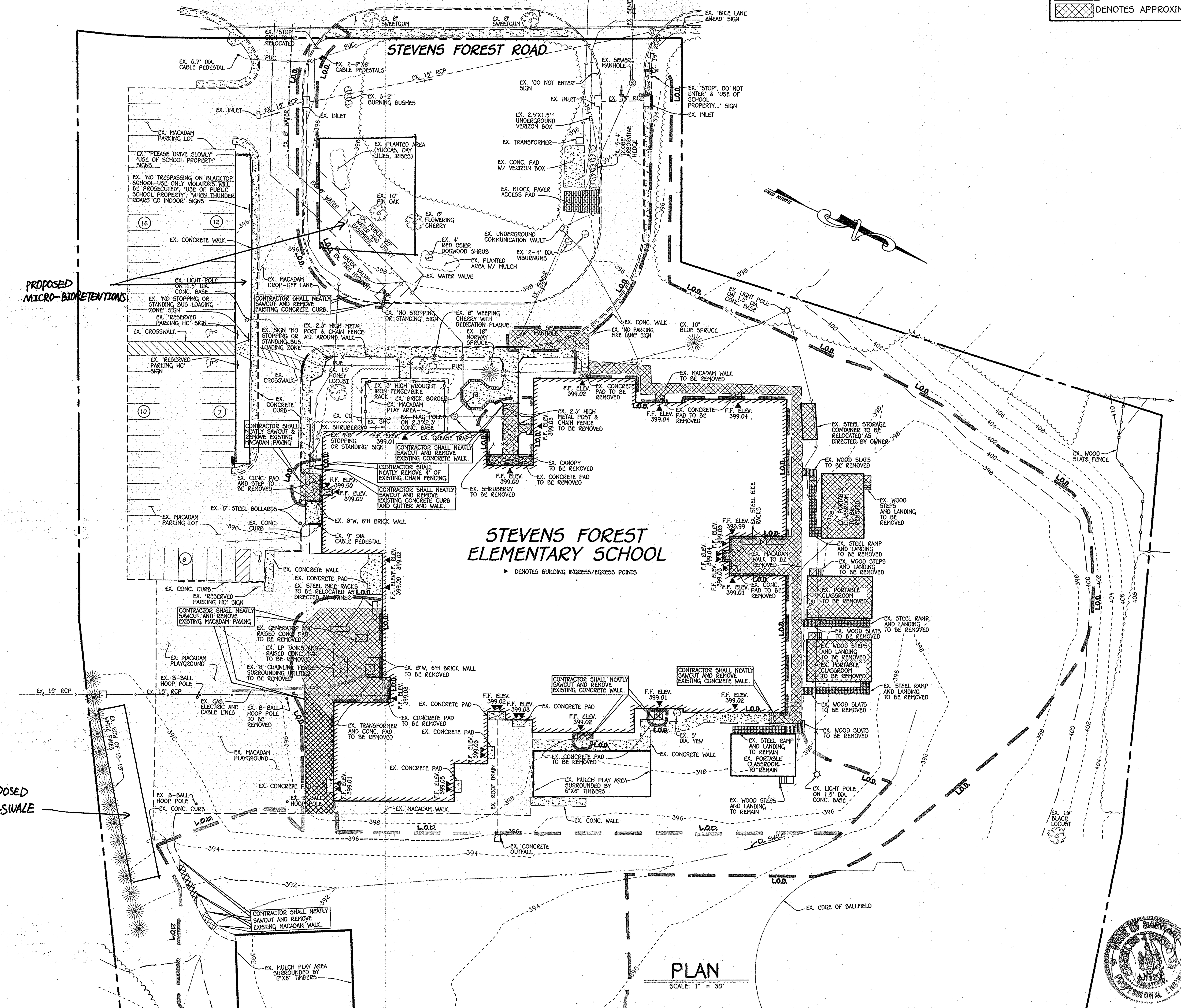
DRAWING Nº A1A of 14

S.D.P. 71-28C

NOTE:

[hatched box] DENOTES APPROXIMATE DEMOLITION AREA.

LEGEND	
SYMBOL	DESCRIPTION
— 402 —	EXISTING CONTOUR 2' INTERVAL
— 400 —	EXISTING CONTOUR 10' INTERVAL
— s —	EXISTING SAN. SEWER LINE
— D —	EXISTING STORM DRAIN LINE
— W —	EXISTING WATER LINE
— G —	EXISTING GAS LINE
— C —	EXISTING CABLE LINE
— T —	EXISTING TELEPHONE LINE
— E —	EXISTING ELECTRIC LINE
— X —	EXISTING FENCE
	EXISTING CONCRETE WALK
	EXISTING PAVING
	EXISTING TREES
L.O.D.	LIMIT OF DISTURBANCE
— SSF —	SUPER SILT FENCE
— SFD —	SUPER FENCE DIVERSION
	TREE PROTECTION FENCE



PLAN

SCALE: 1" = 30'

NOTE: THE HOWARD COUNTY PLANNING BOARD ON JUNE 16, 2011 APPROVED THE REQUEST FOR A RED-LINE REVISION OF THE SITE DEVELOPMENT PLAN TO CONSTRUCT THREE ADDITIONS TO THE EXISTING STEVENS FOREST ELEMENTARY SCHOOL. THE THREE ADDITIONS RESULTED IN LOT COVERAGE OF 13% EXCEEDING THE MAXIMUM COVERAGE OF 10% ALLOWED BY THE APPLICABLE FINAL DEVELOPMENT PLAN.

NOTE: THE PURPOSE OF THIS PLAN IS TO BE USED FOR DEMOLITION FOR THE PROPOSED BUILDING ADDITIONS.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DATE	DESCRIPTION
06/26/14	TWO MICRO-BIORETENTIONS AND ONE BIO-SWALE ADDITIONS AS APPROVED BY HO. CO. STORMWATER MANAGEMENT DIVISION
9/13/11	REVISED LOD AND DEMOLITION AREA
3-15-11	BLDG. ADDITIONS AS APP'D. BY PB and ADD NEW SHEETS 2 TO 6.
	REVISION BLOCK

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning	8/2/11 Date
Chief, Division of Land Development	8/02/11 Date
Chief, Development Engineering Division	7/25/11 Date

PREPARED FOR
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 Maryland Route 108
Ellicott City, Maryland 21042
Attention Bruce Gist
410-313-6805

PENZA+BAILEY
ARCHITECTS
401 WOODBOURNE AVENUE
BALTIMORE, MARYLAND 21212
TEL 410.435.6677/FAX 410.435.6868
www.PenzaBailey.com

Address Chart	
Parcel Number	Street Address
P. 324	6045 STEVENS FOREST ROAD
	COLUMBIA, MD. 21045

PROJECT				SECTION/AREA	LOT/PARCEL
VOM/STEVENS FOREST ELEM. SCHOOL				5 / 5	LOT 1
PLAT REF.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
P.B.18, F.72	9	NT	36	SIXTH	6066.03
WATER CODE	E09		SEWER CODE	5631200	

DEMOLITION PLAN

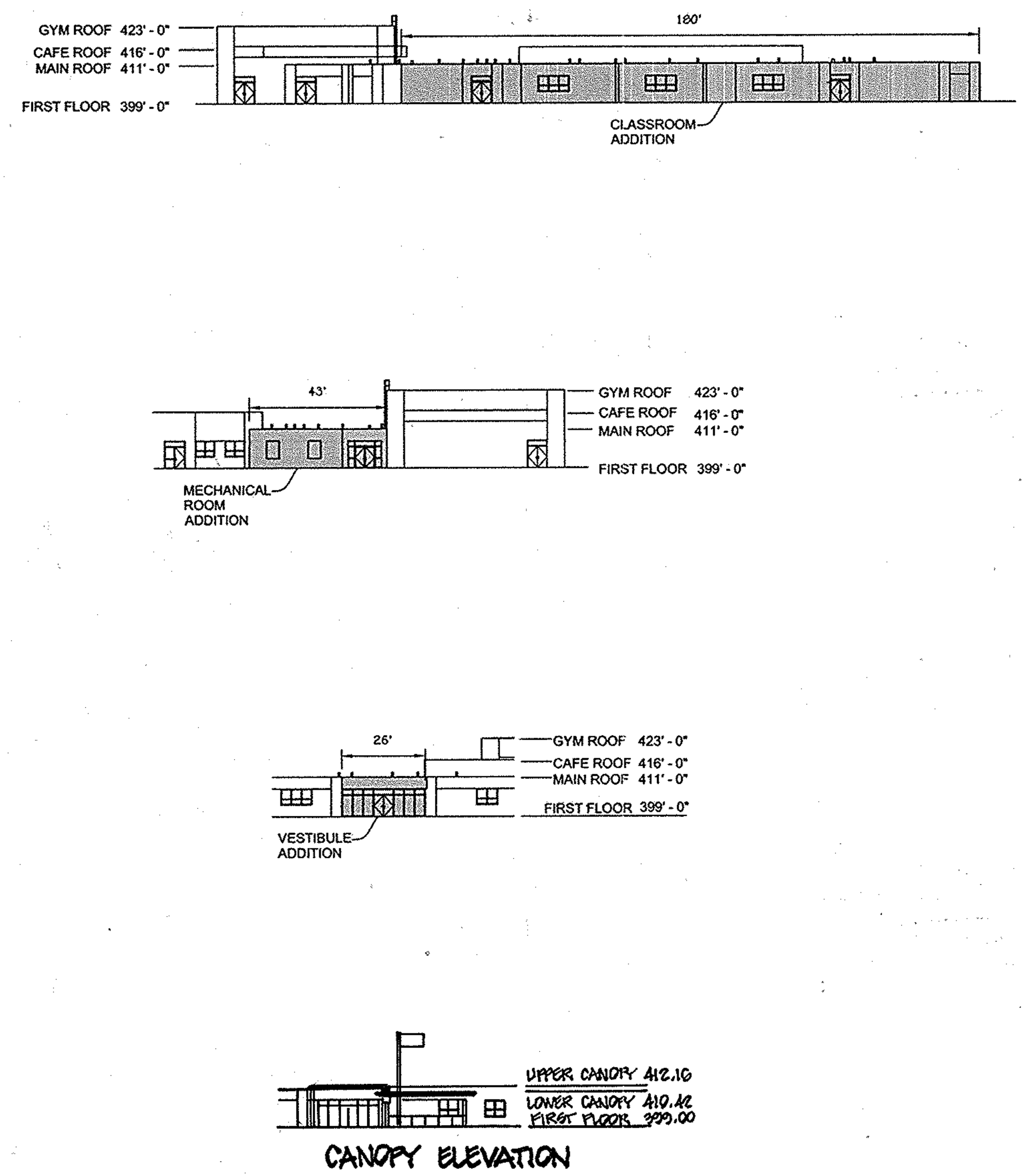
"REVISED SITE DEVELOPMENT PLAN"
STEVENS FOREST ELEMENTARY SCHOOL
CLASSROOM ADDITIONS AND IMPROVEMENTS

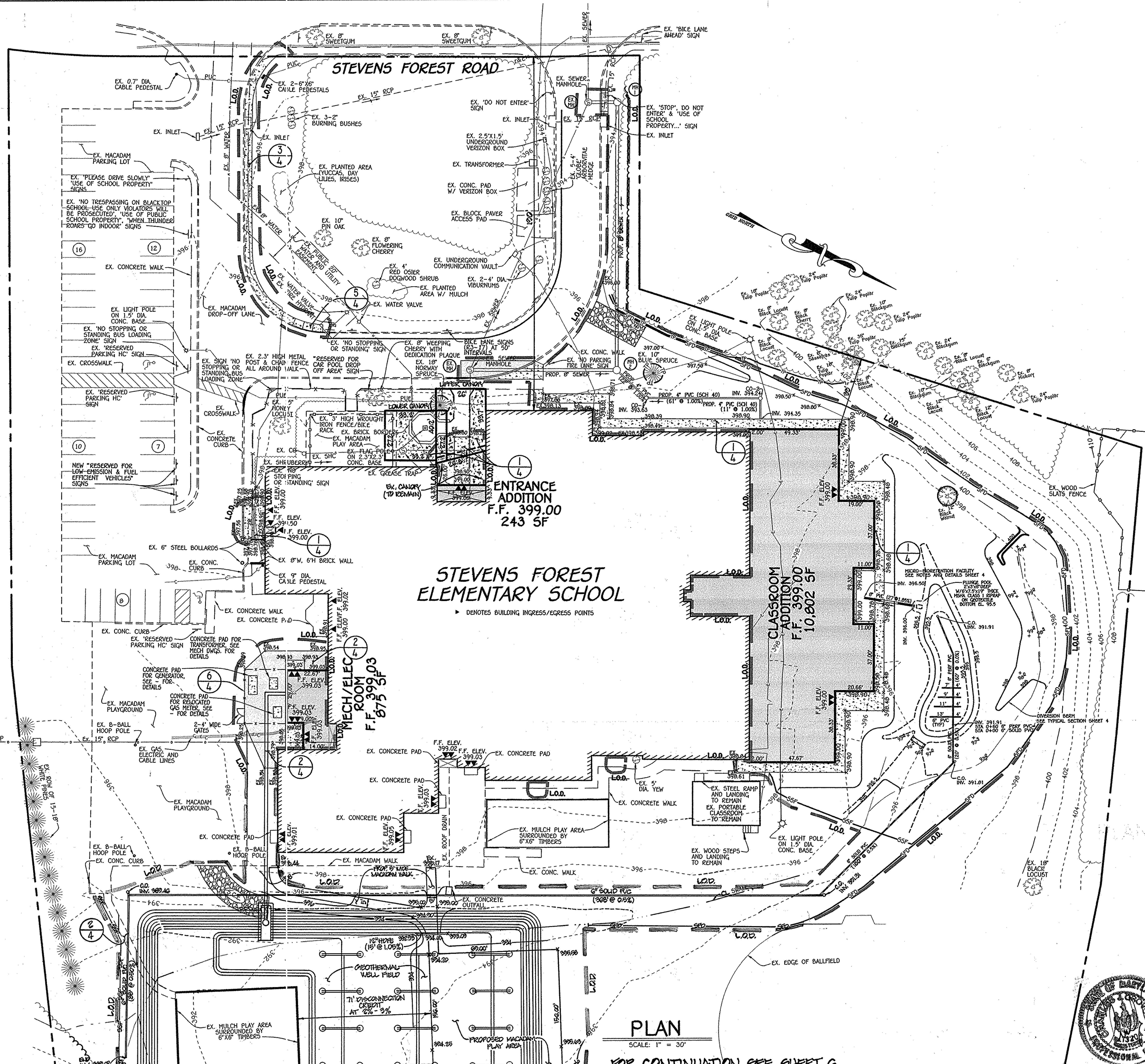
VILLAGE OF OAKLAND MILLS, SECTION 5, AREA 5, LOT 1
PARCEL No.: 324
TAX MAP No.: 36 GRID No.: 9
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1"=30' DATE: APRIL 26, 2011

SHEET 2 OF 14

SDP 71-028C

I:\2003\03005\dwg\RED LINE\03005 REDLINE SUPPLEMENTAL.dwg, 7/11/2011 9:00:07 AM





SYMBOL	DESCRIPTION
402	EXISTING CONTOUR 2' INTERVAL
400	EXISTING CONTOUR 10' INTERVAL
S	EXISTING SAN. SEWER LINE
D	EXISTING STORM DRAIN LINE
W	EXISTING WATER LINE
G	EXISTING GAS LINE
C	EXISTING CABLE LINE
T	EXISTING TELEPHONE LINE
E	EXISTING ELECTRIC LINE
X	EXISTING FENCE
6" PVC	PROPOSED STORM DRAIN LINE
	PROPOSED CONCRETE WALK
	PROPOSED PAVING
+398.90	SPOT ELEVATION
	EXISTING TREES
L.O.D.	LIMIT OF DISTURBANCE
SSF	SUPER SILT FENCE
SFD	SUPER FENCE DIVERSION
	TREE PROTECTION FENCE

PLAN

SCALE: 1" = 30'

FOR CONTINUATION SEE SHEET 6

NOTE: THE IMPERVIOUS AREA FOR THE NEW CANOPY IS 1700 SF AND IS EXEMPT FROM STORM WATER MANAGEMENT.

NOTE: THE HOWARD COUNTY PLANNING BOARD ON JUNE 16, 2011 APPROVED THE REQUEST FOR A RED-LINE REVISION OF THE SITE DEVELOPMENT PLAN TO CONSTRUCT THREE ADDITIONS TO THE EXISTING STEVENS FOREST ELEMENTARY SCHOOL. THE THREE ADDITIONS RESULTED IN LOT COVERAGE OF 13% EXCEEDING THE MAXIMUM COVERAGE OF 10% ALLOWED BY THE APPLICABLE FINAL DEVELOPMENT PLAN.

NOTE: THE PURPOSE OF THIS PLAN IS TO SHOW THE BUILDING ADDITIONS AND STORMWATER MANAGEMENT GRADING.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

ENGINEER'S CERTIFICATE

"I certify that this plan for sediment and erosion 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 of Engineer — 7/11/11 Date

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan for sediment and erosion 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 Soil Conservation District."

Signature of Developer — 7/11/11 Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — 7/21/11 Date

DATE	DESCRIPTION
6/2/15	ADDED CANOPY AND ELEVATION
06/26/14	RENUMBER PER REVISION
9/13/11	REVISED LOD, STORM DRAIN LINE AND PAVED AREA, ADDED GEOTHERMAL WELL FIELD, MACADAM WALK AND PLAY AREA
3-15-11	BLDG. ADDITIONS AS APP'D. BY PB and ADD NEW SHEETS 2 TO 6.

REVISION BLOCK

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — 8/2/11 Date

Chief, Division of Land Development — 8/02/11 Date

Chief, Development Engineering Division — 7/25/11 Date

PREPARED FOR
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Address Chart

Parcel Number	Street Address
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	COLUMBIA, MD. 21045

PROJECT			SECTION/AREA		LOT/PARCEL
VOM/STEVENS FOREST ELEM. SCHOOL			5 / 5		LOT 1
PLAT REF.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
P.B.18, F.72	9	NT	36	SIXTH	6066.03
WATER CODE	E09		SEWER CODE		5631200

SITE IMPROVEMENT PLAN
SEDIMENT AND EROSION CONTROL PLAN

"REVISED SITE DEVELOPMENT PLAN"
STEVENS FOREST ELEMENTARY SCHOOL

CLASSROOM ADDITIONS AND IMPROVEMENTS

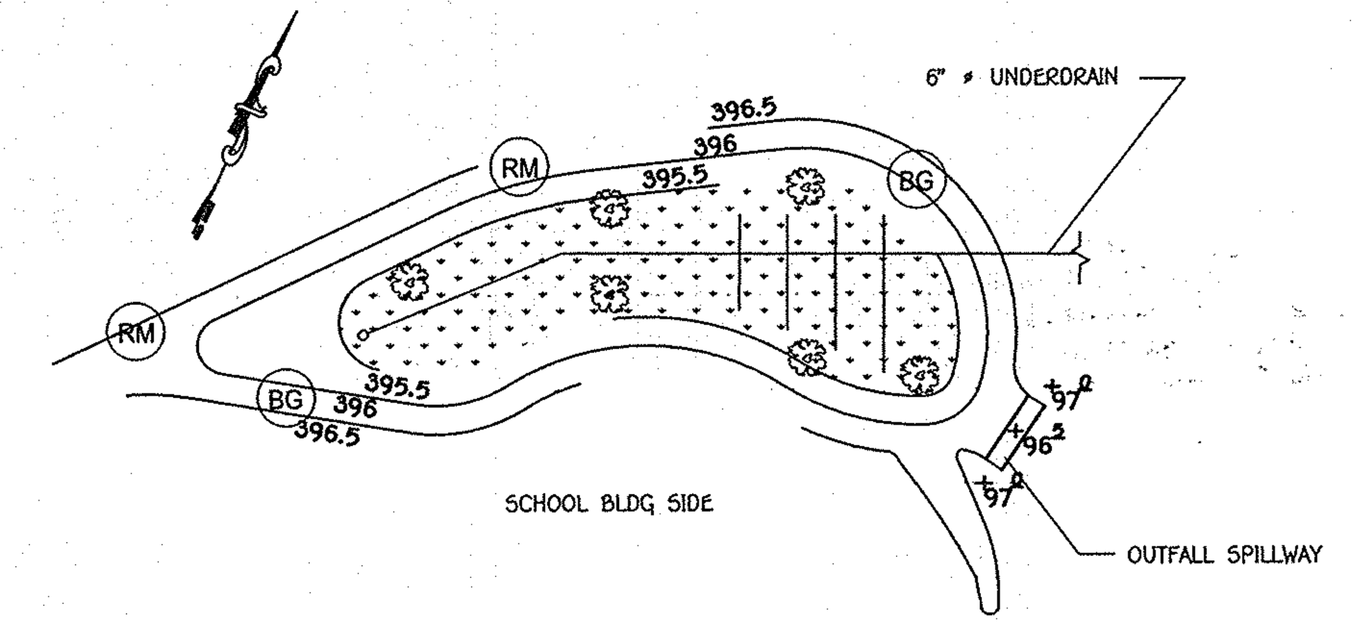
VILLAGE OF OAKLAND MILLS, SECTION 5, AREA 5, LOT 1
PARCEL No.: 324
TAX MAP No.: 36 GRID No.: 9
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1"=30' DATE: APRIL 26, 2011

SDP 71-028C

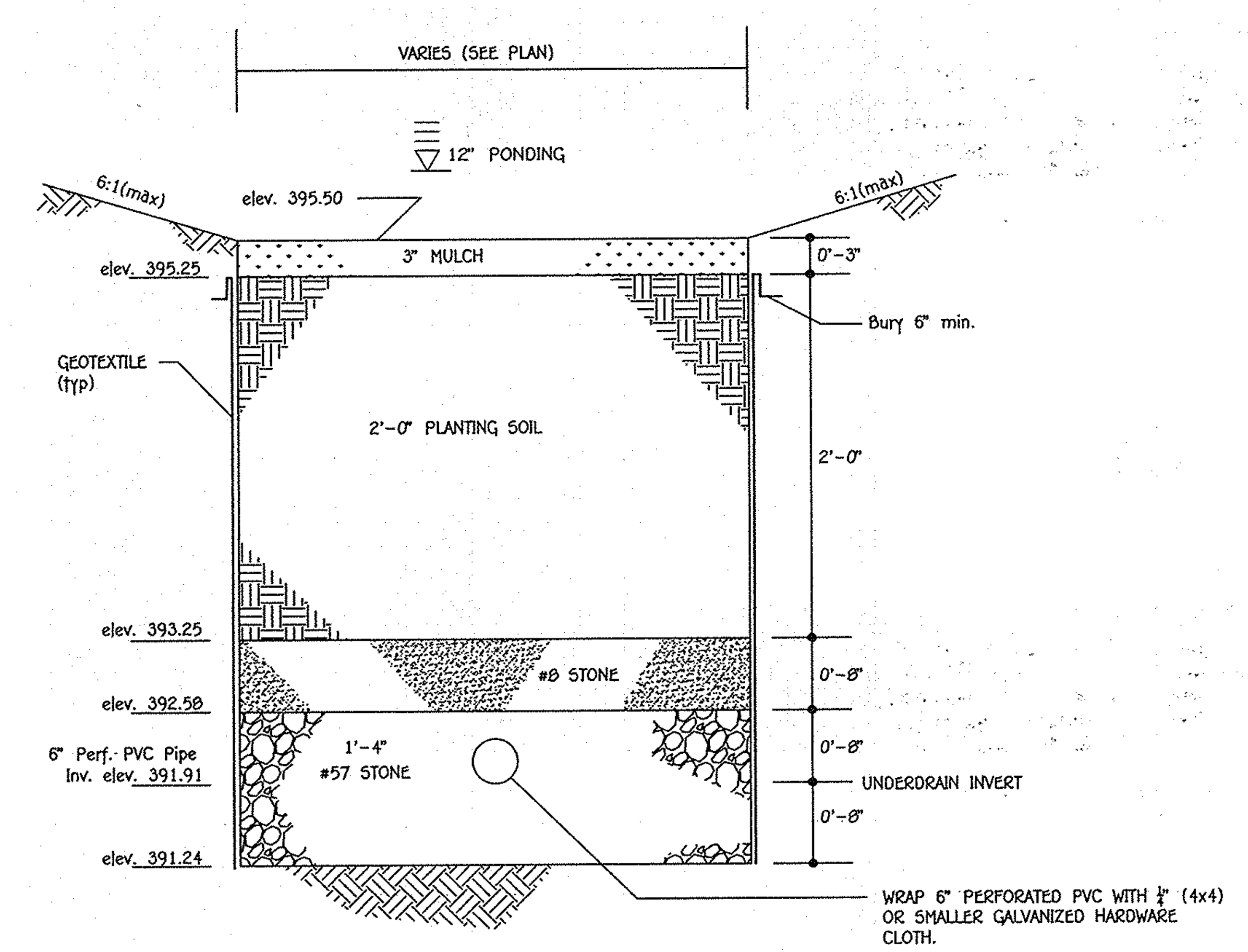
BMP MICRO-BIORETENTION PLANTING SCHEDULE

PLANT NAME	FORM	QUANTITY	SYMBOL
SWITCH GRASS *(panicum virgatum)*	Grass	100 Qts [a]	
FOX SEDGE *(carex vulpinoidea)*	Grass	100 Qts [a]	
RED MAPLE *(acer rubrum)*	Tree (4-6', 1" cal.)	2	(RM)
BLACKGUM *(nyssa sylvatica)*	Tree (5-8', 1" cal.)	2	(BG)
RED OSIER DOGWOOD *(cornus sericea)*	Shrub	6	

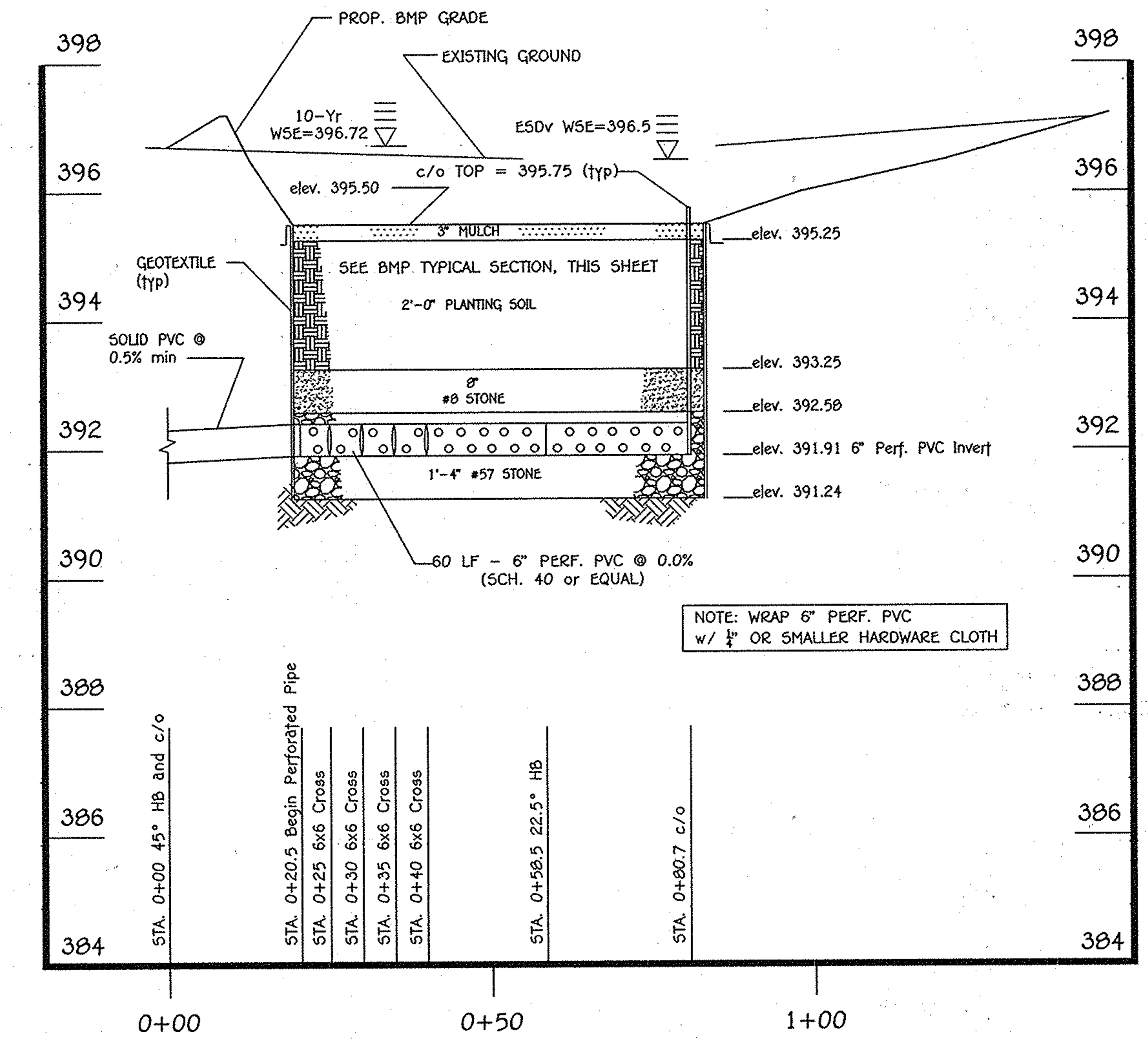
[a] Plant BMP level surface only (i.e., at elev. 395.5). Distribute evenly. Stabilize side slopes w/ permanent grass seed per NRCS specs.



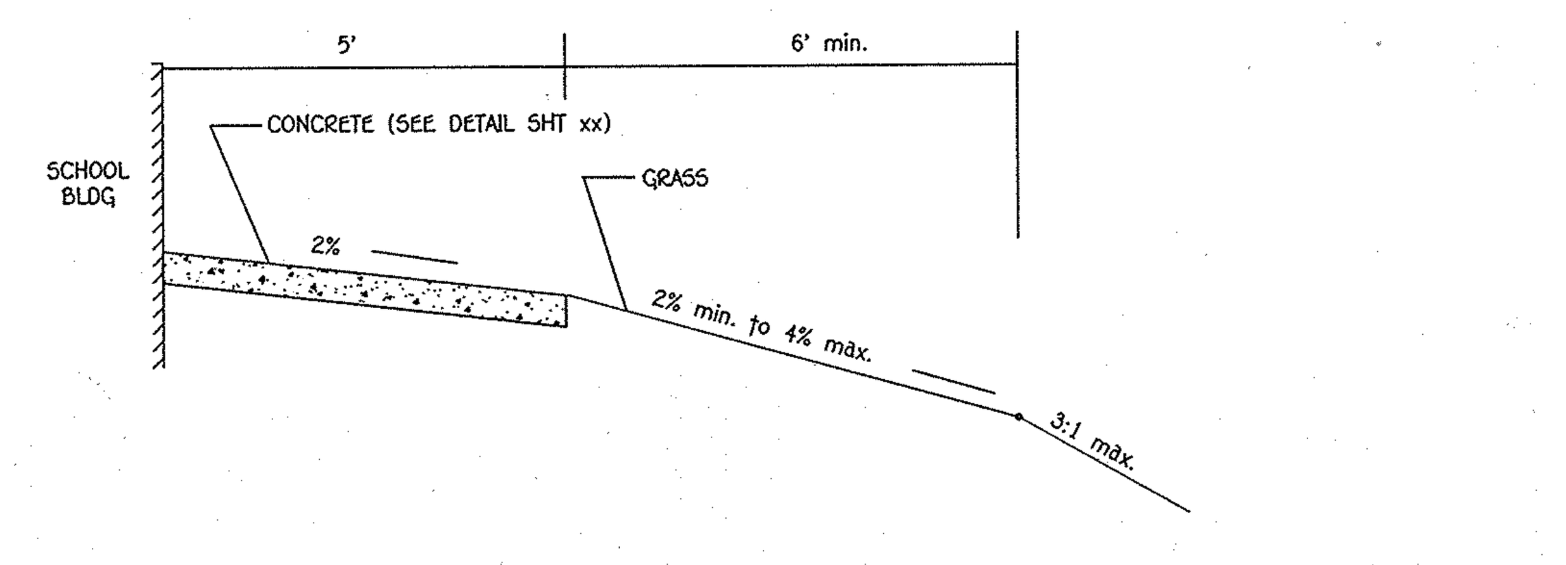
BMP PLANTING PLAN
SCALE:
HORZ: 1" = 20'



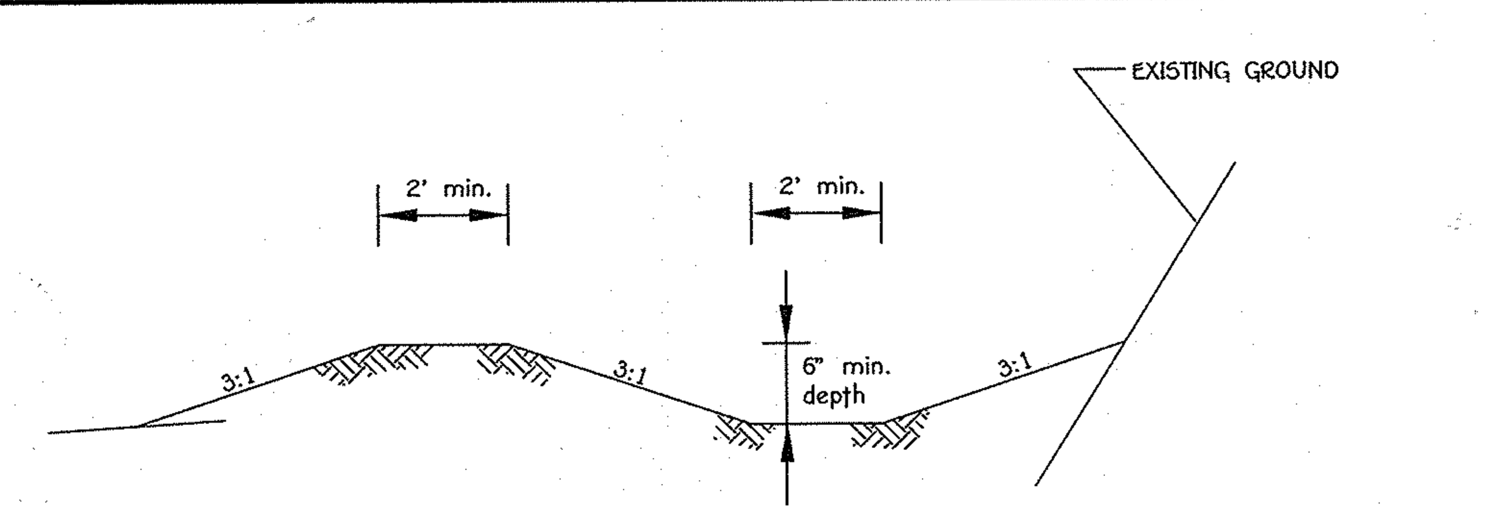
MICRO-BIORETENTION FACILITY (M-6) TYPICAL SECTION
NTS



BMP UNDERDRAIN PROFILE
SCALE:
HORZ: 1" = 20'
VERT: 1" = 2'



TYPICAL SECTION ALONG PROPOSED SIDEWALKS
NTS



TYPICAL SECTION FOR DIVERSION SWALE
NTS

OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION BMP (M-6)

THE MICRO-BIORETENTION FACILITY SHALL BE INSPECTED AT LEAST TWICE PER YEAR (ONCE EACH IN THE SPRING AND FALL) AND AFTER HEAVY STORMS. THE OWNER IS RESPONSIBLE FOR MAINTAINING A DETAILED LOG OF THE MAINTENANCE INSPECTION FINDINGS AND A HISTORY OF THE COMPLETED WORK. THE LOG SHALL BE MADE AVAILABLE TO HOWARD COUNTY DPZ AND/OR THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UPON REQUEST.

MICRO-BIORETENTION FACILITY COMPONENTS TO BE INSPECTED AND MAINTAINED INCLUDE THE ITEMS AS FOLLOWS:

1. PLANT MATERIAL: PLANTS SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION. REMOVE AND REPLACE DEAD OR DYING VEGETATION CONSIDERED BEYOND TREATMENT (SEE NOTE #1 BELOW). MAINTENANCE INCLUDES PRUNING, AND REPLACEMENT OF DEFICIENT STAKES AND WIRE.
2. MULCH LAYER: SHALL BE REPLACED ONCE EVERY SPRING DUE TO THE HEAVY METALS GENERATED FROM THE PARKING LOT. THE OWNER SHALL PROPERLY DISPOSE OF THE OLD MULCH SO AS NOT TO CAUSE STORMWATER CONTAMINATION ELSEWHERE. WASHED OUT AREAS SHALL BE REPAIRED AS NECESSARY.
3. SOIL LAYER: SHOULD STORMWATER POND FOR MORE THE 48 HOURS, THE TOP 6 INCHES (MINIMUM) OF THE SOIL LAYER SHALL BE REPLACED. THE OLD SOILS SHALL BE PROPERLY DISPOSED.
4. SPILLWAY OUTFALL, INTERIOR SLOPES: ERODED AREAS SHALL BE REPAIRED (FILLED IN AND SEEDED) AS NEEDED. BARE AREAS SHALL BE TREATED AND RE-SEEDED.
5. INLET: REPAIR CRACKS, DAMAGED CONCRETE, ETC. AS NECESSARY.
6. REMOVE AND PROPERLY DISPOSE ACCUMULATED SEDIMENT GREATER THAN ONE (1) INCH.

NOTES:
1. IF SPECIFIC PLANTS ARE NOT SURVIVING; THE PLANT TYPE SHALL BE CHANGED TO BETTER SUITED SPECIES.
2. PLANT WATERING MAY BE NEEDED DURING PROLONGED DRY PERIODS.

GENERAL STORMWATER MANAGEMENT NOTES

1. STORMWATER MANAGEMENT HAS BEEN PROVIDED WITH A MICRO-BIORENTION (M-6) FACILITY. PLEASE REFER TO THE SWM REPORT PREPARED BY FISHER, COLLINS, & CARTER, INC. DATED MARCH 4, 2011.

2. ALL CONSTRUCTION SHALL MEET THE LATEST EDITION OF THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS, SMALL EARTHEN DAM SPECIFICATION MD-378, AND THE MARYLAND DEPARTMENT OF THE ENVIRONMENT'S CURRENT STORMWATER DESIGN MANUAL, OR AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL CONSULT THE ENGINEER SHOULD THERE BE ANY DISCREPANCIES.

3. THE UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL TEST PIT ALL KNOWN EXISTING UTILITIES TO VERIFY, SIZE, SHAPE, LOCATION, AND TYPE PRIOR TO PERFORMING CONSTRUCTION. UTILITY RELOCATIONS, WHETHER SHOWN OR NOT, ARE THE RESPONSIBILITY OF THE OWNER. ANY UTILITY DAMAGED DUE TO CONSTRUCTION MUST BE REPAIRED IMMEDIATELY.

4. SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. IF THE CONTRACTOR MAKES FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.

5. CONTRACTOR SHALL NOTIFY MISS UTILITY 1-800-257-7777 AND THE HOWARD COUNTY DEPARTMENT OF INSPECTION LICENSES & PERMITS THREE (3) WORKING DAYS BEFORE BEGINNING CONSTRUCTION.

6. FISHER, COLLINS & CARTER, INC. IS NOT RESPONSIBLE FOR THE CONTRACTOR'S UTILIZATION OF MEN, MATERIALS, EQUIPMENT, OR SAFETY MEASURES IN THE PERFORMANCE OF ANY WORK FOR THIS PROJECT. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR PERFORMING THE WORK CORRECTLY AND IN CONFORMANCE WITH CODE/SPECIFICATION REQUIREMENTS.

7. THE BMP MAY BE GRADED, HOWEVER, THE PLANTING SOIL IN THE BMP SHALL NOT BE INSTALLED UNTIL ALL UPSTREAM AREAS HAVE BEEN STABILIZED (i.e., THICK GRASS COVER, OR PAVED).

8. THE STORMWATER MANAGEMENT MICRO-BIORETENTION BMP SHOWN ON THIS SHEET WILL BE PRIVATELY OWNED AND MAINTAINED.

BIORETENTION BMP NOTES AND SPECIFICATIONS

1. REFER TO THE *2000* MARYLAND SWM DESIGN MANUAL FOR BIORETENTION SPECIFICATIONS (PG. B.3.7) NOT LISTED HEREIN AND FOR ADDITIONAL INFORMATION.

2. THE BIORETENTION BMP MATERIALS ARE AS FOLLOWS:
- PLANTING SOIL: SHALL MEET PLANTING SOIL SPECIFICATIONS OUTLINED IN MDE'S *2000* SWM MANUAL. SEE PLANTING SCHEDULE THIS SHEET FOR VEGETATION STABILIZATION. - SAND: ASTM C33 "CONCRETE SAND" VERY CLEAN; FREE OF ALL DIRT AND DEBRIS.
- PVC PIPE: SCHEDULE *40*. PERFORATED PORTION TO BE HAVE NO SLOPE (*0.0%*).
- STONE AGGREGATE: MSHA SPECIFICATIONS AS SPECIFIED ON TYPICAL SECTION; AGGREGATE MUST BE FREE OF FINES, DIRT AND DEBRIS.
- GEOTEXTILE: PER MDE SWM MANUAL OR MIRAFI 140N.
- MULCH: SHREDDED, WELL-AGED (6-12 MONTHS) HARDWOOD MULCH; NO WOOD CHIPS OR PINE MULCH.

3. THE CONTRACTOR SHALL UNDER NO CIRCUMSTANCES ALLOW SURFACE DRAINAGE INTO THE MICRO-BIORETENTION BMPs UNTIL ALL UPSTREAM AREAS HAVE BEEN STABILIZED (i.e., PAVED OR HAVE WELL-ESTABLISTED VEGETATION.

4. BOARDS SHALL NOT BE LEFT IN PLACE DURING THE CONSTRUCTION OF THE BIORETENTION BMP.

5. GEOTEXTILE (FILTER FABRIC) SHALL BE PLACED AGAINST EXCAVATED SURFACES. SCARIFY EARTH PRIOR TO GEOTEXTILE PLACEMENT. INSTALL GEOTEXTILE PER MANUFACTURER'S SPECIFICATIONS/RECOMMENDATIONS AND USE A 2 FT MINIMUM OVERLAP AND NOTCH ENDS WITH A 6" MINIMUM BURY OR EQUIVALENT ANCHORING METHOD.

6. THE CONTRACTOR SHALL OBTAIN INDEPENDENT CERTIFICATION THAT THE SOILS AND OTHER MATERIALS MEET THE SPECIFICATIONS DURING THE AS-BUILT STAGE.

7. THE BIORETENTION FACILITIES SHALL BE VEGETATED (TOP LEVEL SURFACE ONLY) IN ACCORDANCE WITH THE PLANTING SCHEDULE.

8. USE PERFORATED PVC PIPE UNDER THE BMP AND USE SOLID PVC PIPE (SCHEDULE 40) OUTSIDE OF THE BMP (IN NATURAL SOIL) TO OUTLET/DAYLIGHT. BEGIN PERFORATED PVC PIPE 1' INSIDE BMP AGGREGATE. WRAP PVC PIPE WITH HARDWARE CLOTH TO PREVENT AGGREGATE FROM ENTERING THE PERFORATIONS.

9. INSTALL CLEANOUT (SOLID PVC PIPE) AS SHOWN. THE CLEANOUT TOP SHALL EXTEND 3" ABOVE TOP OF MULCH.

10. USE CURLEX MATTING/STAKES TO STABILIZE ALL DISTURBED AREAS BELOW THE MICRO-BIORETENTION (BMP) OUTFALL.

11. ROOF LEADER(S) SHALL DISCHARGE INTO THE BMP WITH A RIPRAP LEVEL SPREADER OR SMALL PLUNGE POOL. THIS IS NEEDED TO PRECLUDE MULCH DISTURBANCE DURING A STORM.

12. GRADE AREA SURROUNDING MICRO-BIORENTION FACILITY SUCH THAT POSITIVE FLOW IS MAINTAINED INTO THE FACILITY.

13. REMOVE TOPSOIL WHEN PLACING FILL AROUND THE MICRO-BIORETENTION FACILITY. ALL SOIL WITHIN 5 FT OF THE 396.5 CONTOUR (i.e., TOP OF BMP (M-6)) SHALL MEET MD-378 FILL REQUIREMENTS FOR SOIL TYPES (GC, SC. CH. CL) AND 95% COMPACTION.

NOTE: THE HOWARD COUNTY PLANNING BOARD ON JUNE 16, 2011 APPROVED THE REQUEST FOR A RED-LINE REVISION OF THE SITE DEVELOPMENT PLAN TO CONSTRUCT THREE ADDITIONS TO THE EXISTING STEVENS FOREST ELEMENTARY SCHOOL. THE THREE ADDITIONS RESULTED IN LOT COVERAGE OF 13% EXCEEDING THE MAXIMUM COVERAGE OF 10% ALLOWED BY THE APPLICABLE FINAL DEVELOPMENT PLAN.

NOTE: THE PURPOSE OF THIS PLAN IS TO SHOW DETAILS FOR SWM CONSTRUCTION.

PLANNING BOARD APPROVED BUILDING ADDITIONS (REVISION NO. 1)
ON ________(date) TO EXCEED 10% LOT COVERAGE.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DATE	DESCRIPTION
6/26/11	RENUMBER PER REVISION
3-15-11	BLDG. ADDITIONS AS APP'D. BY PB and ADD NEW SHEETS 2 TO 6.

REVISION BLOCK

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[signature] 8/2/11
Director - Department of Planning and Zoning — Date

[signature] 9/02/11
Chief, Division of Land Development — Date

[signature] 7/25/11
Chief, Development Engineering Division — Date

PREPARED FOR
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 Maryland Route 108
Ellicott City, Maryland 21042
Attention Bruce Gist
410-313-6805

PENZA+BAILEY
ARCHITECTS
401 WOODBOURNE AVENUE
BALTIMORE, MARYLAND 21212
TEL 410.435.6677/FAX 410.435.6868
www.PenzaBailey.com

Address Chart

Parcel Number	Street Address
P. 324	6045 STEVENS FOREST ROAD
	COLUMBIA, MD. 21045

PROJECT			SECTION/AREA		LOT/PARCEL
VOM/STEVENS FOREST ELEM. SCHOOL			5 / 5		LOT 1
PLAT REF.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
P.B.18, F.72	9	NT	36	SIXTH	6066.03
WATER CODE	E09		SEWER CODE	5631200	

MICRO-BIORETENTION (M-6) FACILITY
NOTES & DETAILS

"REVISED SITE DEVELOPMENT PLAN"
STEVENS FOREST ELEMENTARY SCHOOL
CLASSROOM ADDITIONS AND IMPROVEMENTS

VILLAGE OF OAKLAND MILLS, SECTION 5, AREA 5, LOT 1
PARCEL No.: 324
TAX MAP No.: 36 GRID No.: 9
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: APRIL 26, 2011

SHEET 5 OF 14

SDP 71-028C

I:\2003\03005\dwg\RED LINE\03005 REDLINE SUPPLEMENTAL.dwg, 7/11/2011 9:10:11 AM

20.0 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 O(up to one year), and Permanent Seeding, for long term 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, transpiration, 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 within the root zone.
Sediment control devices must remain in place during grading, seedbed preparation, 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

A. Site Preparation
   i. Install erosion and sediment control structures (either temporary of permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
   ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
   iii. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.
B. Soil Amendments (Fertilizer and Lime Specifications)
   i. Soil tests must be performed to determine 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.
   ii. Fertilizers shall be uniform in composition, 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, trade name or trademark and warrantee of the producer.
   iii. 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.
   iv. Incorporate lime and fertilizer into the top 3–5" of soil by disking or other suitable means.
C. Seedbed Preparation
   i. Temporary Seeding
      a. Seedbed 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 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
      b. Apply fertilizer and lime as prescribed on the plans.
      c. In corporate lime and fertilizer into the top 3–5" of soil by disking or other suitable means.
   ii. Permanent Seeding
      a. 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 40% clay, but enough fine grained material (>30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia 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.
      b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified 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 to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
      c. Apply soil amendments as per soil test or as included on the plans.
      d. 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 seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) 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. Seedbed loosening may not be necessary on newly disturbed areas.
D. Seed Specifications
   i. 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.
   Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.
   ii. Inoculant – 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 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.
E. Methods of Seeding
   i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a cultipacker seeder.
      a. 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; K20 (potassium): 200 lbs/ac.
      b. 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.
      c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
   ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
      a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 265 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.
      b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
   iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
      a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
      b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
F. Mulch Specifications (In order of preference)
   i. 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.
   ii. Wood Cellulose Fiber Mulch (WCFM)
      a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
      b. 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.
      c. WCFM, including dye, shall contain no germination or growth inhibiting factors.
      d. 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.
      e. WCFM material shall contain no elements or compounds at concentration levels that will be phytol-toxic.
      f. 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 1.6% 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.
G. Mulching Seeded Areas – Mulch shall be applied to all seeded areas immediately after seeding.
   i. If grading is completed outside of the seeding season, mulch along 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 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.
   iii. 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.
H. Securing Straw Mulch (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:
   i. A mulch anchoring tool is a 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.
   ii. 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.
   iii. 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 (Agro-Tack), DCA-70 Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
   iv. 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.
I Incremental Stabilization – Cut Slopes
   i. All cuts 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'.
   ii. 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 as necessary.
Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions int he operation of completing the operation out of the seeding season will necessitate the application of temporary stabilization.
J. Incremental Stabilization of Embankments – Fill Slopes
   i. Embankments shall be constructed in lifts as prescribed on the plans.
   ii. 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.
   iii. 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.
   iv. 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, unless other methods shown on the plans address this area.
      b. Place Phase 1 embankment, dress and stabilize.
      c. Place Phase 2 embankment, dress and stabilize.
      d. 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 grading and placement of topsoil (if required) 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 disturbed areas for up to 12 months. For longer duration of vegetative cover, Permanent Seeding is required.

A. Seed mixtures – Temporary Seeding
   i. Select one or more of the species or mixtures listed in Table 26 for the appropriate Plant Hardiness 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.
   ii. For sites having soil tests performed, the rates shown on this 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 (Hardiness Zone 6b) 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, 8/15 – 10/15	1" – 2" 1" – 2" 1" – 2"	600 lb/ac (15 lb/1000sf)	2 tons/ac (100 lb/1000sf)

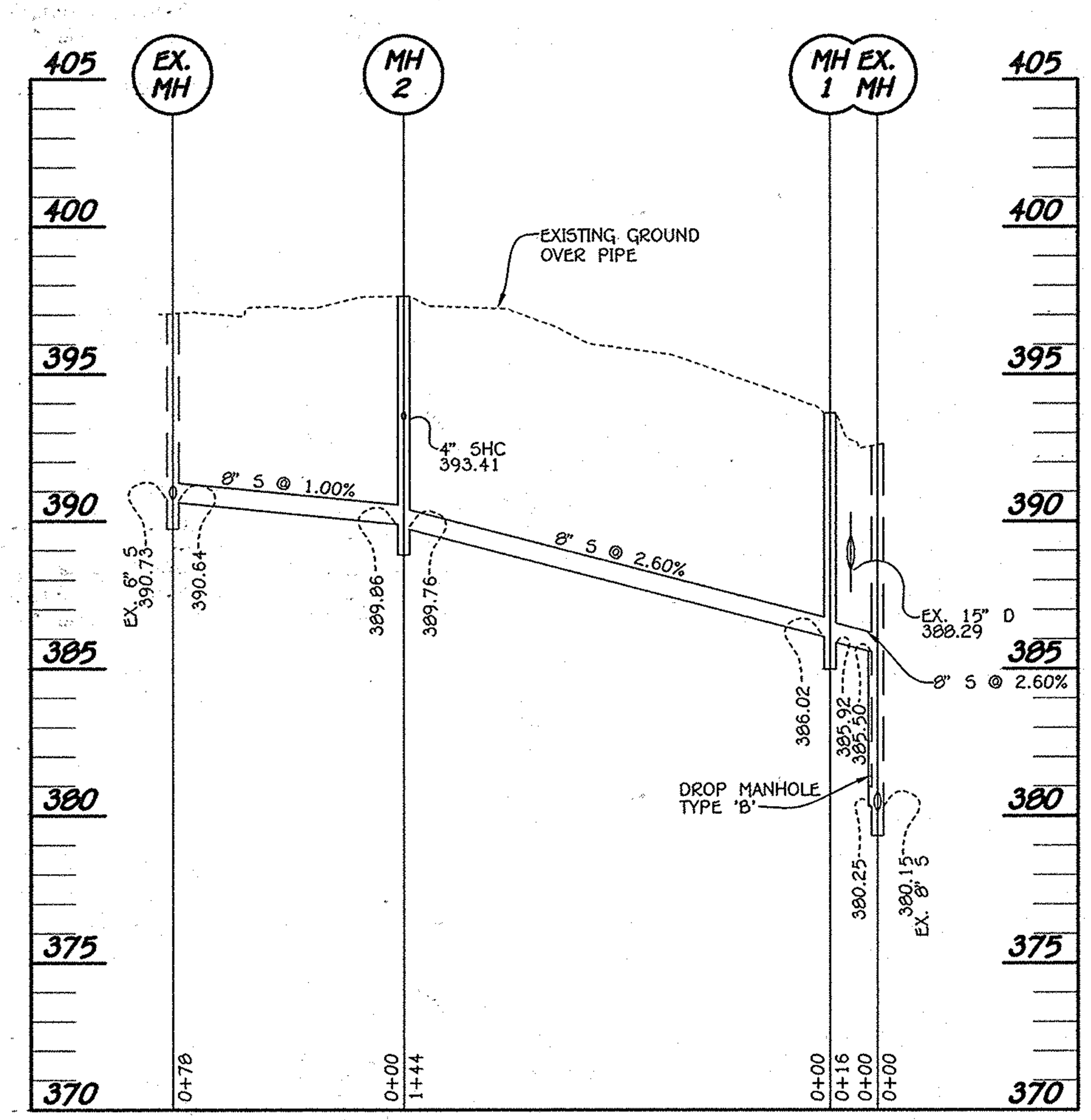
SECTION 3 – PERMANENT SEEDING

Seeding grass and legumes to establish ground cover for a minimum of one year on disturbed areas generally receiving low maintenance.

A. Seed mixtures – Permanent Seeding
   i. Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardiness 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 for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Techinical Field Office Guide, Section 342 – Critical Area Planting. For special lawn maintenance areas, see Sections IV Sod and V Turfgrass.
   ii. For sites having disturbed area over 5 areas, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in.
   iii. For areas receiving low maintenance, apply ureaform fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil amendments shown in the table below, to be performed at the time of seeding.

Seed Mixture (Hardiness Zone 6b) From Table 25					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P205	K20	
3	TALL FESCUE (85%) PERENNIAL RYE GRASS (10%) 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 (80%) HARD FESCUE (20%)	120 30	3/1 – 5/15, 8/15 – 10/15	1" – 2"				

NOTE: THESE SEEDING SPECIFICATIONS ARE THE MINIMUM REQUIRED FOR SEDIMENT CONTROL. REFER TO PROJECT SPECIFICATIONS FOR SEEDING REQUIREMENTS FOR OTHER AREAS OF THE SITE.



SEWER PROFILE

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

STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV.IN	INV.OUT	COORDINATES	WIDTH	TYPE	REMARKS
MH-1	393.65	386.02 (8")	385.92 (8")	N 50094.84 E 50264.16	4'	4' STD. MANHOLE	G - 5.12
MH-2	397.64	389.06 (8") 393.41 (4")	389.76 (8")	N 49955.16 E 50228.51	4'	4' STD. MANHOLE	G - 5.12

STANDARDS 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. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

I. This practice is limited to areas having 2:1 or flatter slopes where:
   a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
   b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
   c. The original soil to be vegetated contains material toxic to plant growth.
   d. The soil is so acidic that treatment with limestone is not feasible.

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

II. Topsoil Specifications – Soil to be used as topsoil must meet the following:
   i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 11/2" in diameter.
   ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnson grass, nutsedge, poison ivy, thistle, or others as specified.
   iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4–8 tons/acre (200–400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

III. For sites having, disturbed areas under 5 acres:
   i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization – Section I – Vegetative Stabilization Methods and Materials.

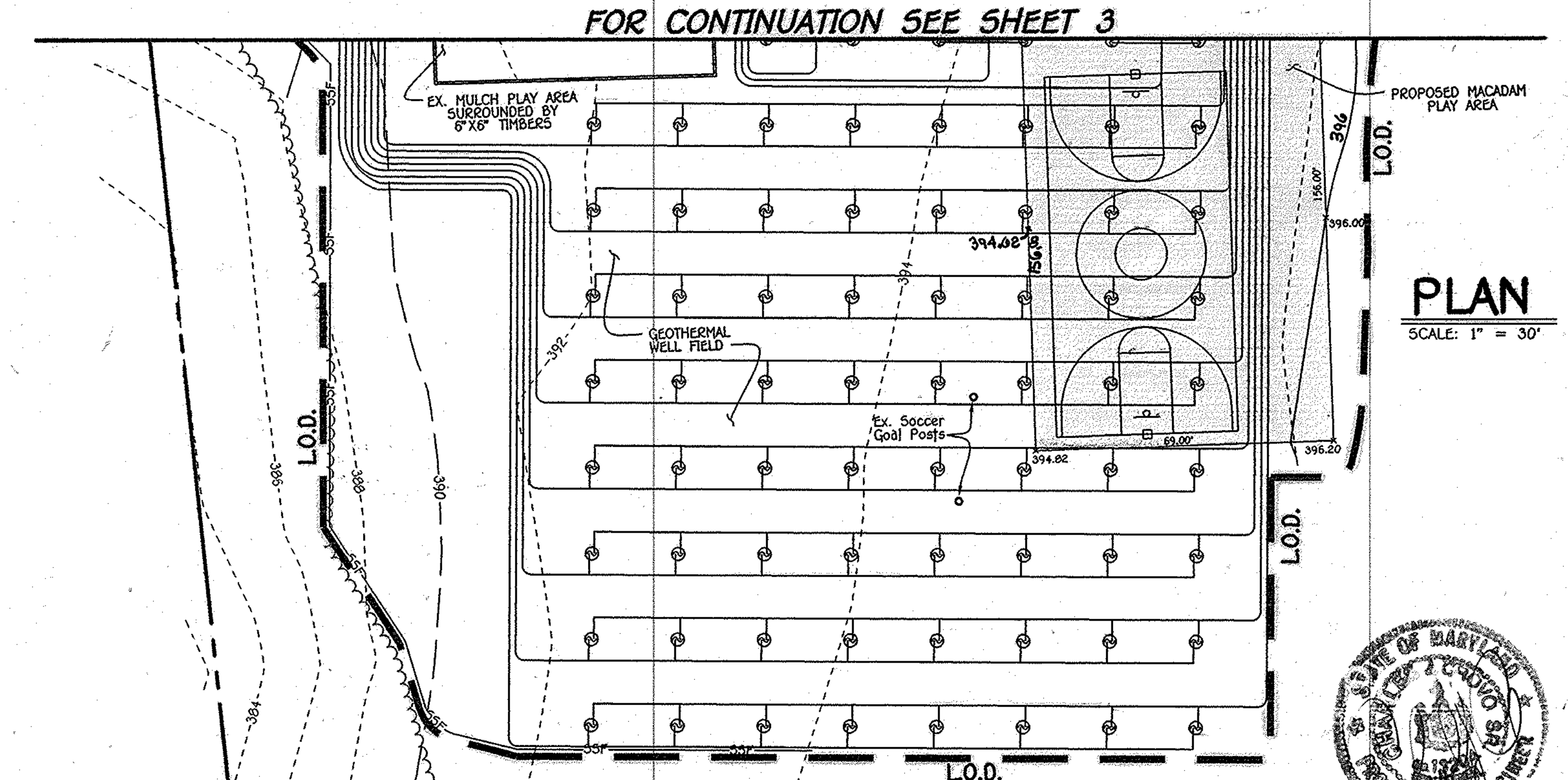
IV. For sites having disturbed areas over 5 acres:
   i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
      a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
      b. Organic content of topsoil shall be not less than 1.5 percent by weight.
      c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
      d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.
   Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
   ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization – Section I – Vegetative Stabilization Methods and Materials.

V. Topsoil Application
   i. When top soiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
   ii. Grades on the areas to be top soiled, which have been previously established, shall be maintained, albeit 4" – 8" higher in elevation.
   iii. Topsoil shall be uniformly distributed in a 4" – 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from top soiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
   iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

VI. Alternative for Permanent Seeding – Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
   i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
      a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
      b. Composted sludge shall contain at least I percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
      c. Composted sludge shall be applied at a rate of I ton/1,000 square feet.
   iv. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Sodding,. MD-VA, Pub. #I, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

FOR CONTINUATION SEE SHEET 3



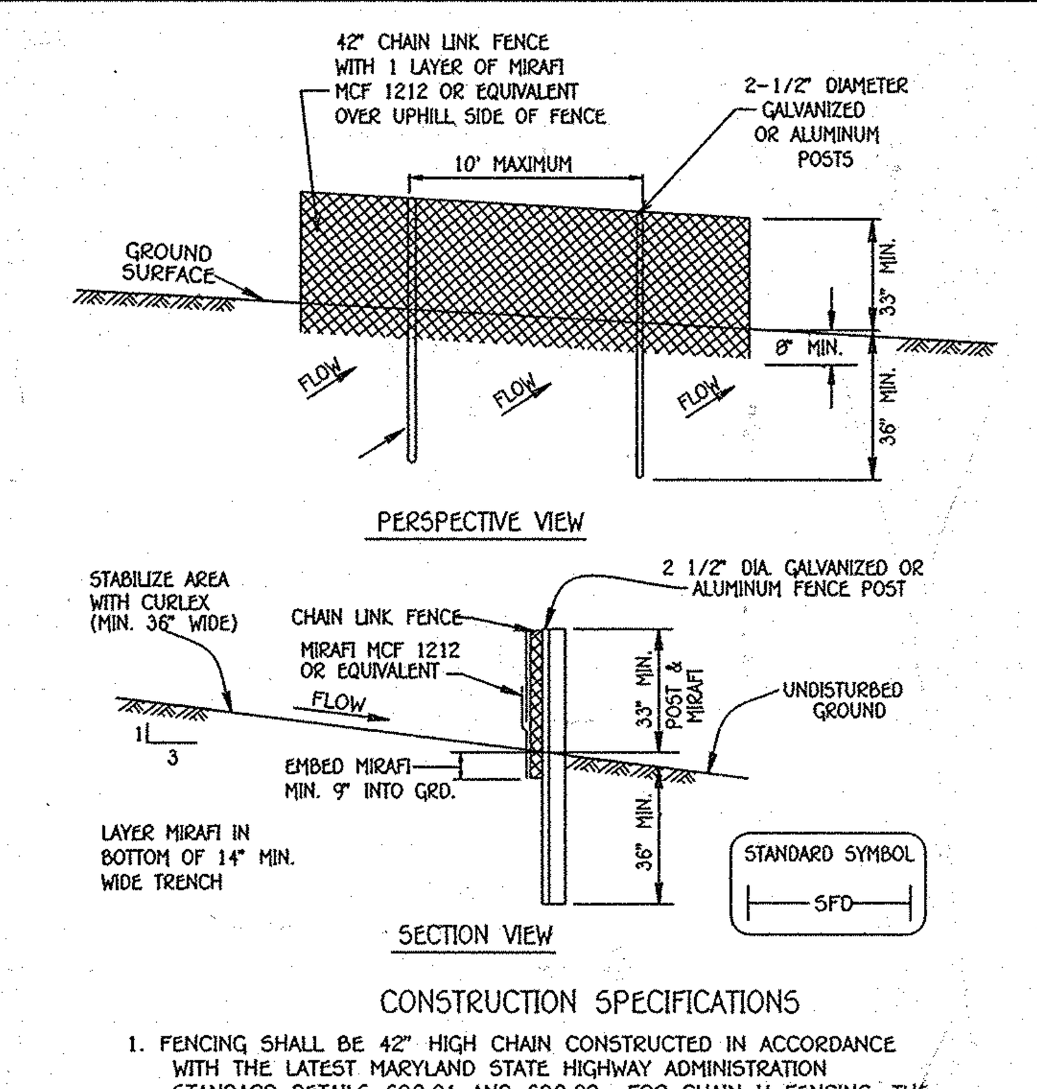
PLAN
SCALE: 1" = 30'

SEDIMENT CONTROL NOTES

1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LISCENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
2) 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.
3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, b) 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, STORM DRAINAGE.
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 (SEC. 51), 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.
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:

TOTAL AREA OF SITE	10.00	ACRES
AREA DISTURBED	2.62	ACRES
AREA TO BE ROOFED OR PAVED	0.50	ACRES
AREA TO BE VEGETATIVELY STABILIZED	2.12	ACRES
TOTAL CUT	450	CU.YDS.
TOTAL FILL	450	CU.YDS.
OFFSITE WASTE/BORROW AREA LOCATION	N/A	

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 REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER 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 THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.



CONSTRUCTION SPECIFICATIONS

1. FENCING SHALL BE 42" HIGH CHAIN CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD DETAILS 690.01 AND 690.02 FOR CHAIN U FENCING. THE SPECIFICATIONS FOR A 6'-0" FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND 8' POSTS. POSTS SHALL BE PLACED WITHOUT CONCRETE EMBEDMENT.
2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE.
3. FILTER CLOTH TO BE FASTENED SECURELY TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
4. FILTER CLOTH SHALL BE IMBEDDED A MINIMUM OF 9" INTO THE GROUND.
5. WHEN TWO SECTIONS OF DIVERSION CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED.

Fabric Properties	Value	Test Method
Grab Tensile Strength (lbs.)	90	ASTM D1682
Elongation at Failure (%)	50	ASTM D1682
Mullen Burst Strength (PSI)	190	ASTM D3786
Puncture Strength (lbs.)	40	ASTM D751
Slurry Flow Rate (gal/min/sf)	0.3	Virginia DOT VTM-51
Equivalent Opening Size	40-80	US Std Sieve CW-02215
Utraviolet Radiation Stability (%)	90	ASTM G-26

Design Criteria

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 – 10%	0 – 10:1	Unlimited	Unlimited
10 – 20%	10:1 – 5:1	400 feet	1,500 feet
20 – 33%	5:1 – 3:1	300 feet	1,000 feet
33 – 50%	3:1 – 2:1	200 feet	500 feet
50% +	2:1 +	100 feet	250 feet

SUPER FENCE DIVERSION

NOT TO SCALE

NOTE: THE HOWARD COUNTY PLANNING BOARD ON JUNE 16, 2011 APPROVED THE REQUEST FOR A RED-LINE REVISION OF THE SITE DEVELOPMENT PLAN TO CONSTRUCT THREE ADDITIONS TO THE EXISTING STEVENS FOREST ELEMENTARY SCHOOL. THE THREE ADDITIONS RESULTED IN LOT COVERAGE OF 13% EXCEEDING THE MAXIMUM COVERAGE OF 10% ALLOWED BY THE APPLICABLE FINAL DEVELOPMENT PLAN.

NOTE: THE PURPOSE OF THIS PLAN IS TO SHOW NOTES AND DETAILS FOR SEDIMENT CONTROL.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

ENGINEER'S CERTIFICATE

"I certify that this plan for sediment and erosion 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 of Engineer — Date 7/11/11

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan for sediment and erosion 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 Soil Conservation District."

Signature of Developer — Date 7/11/11

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — Date 7/21/11

DATE	DESCRIPTION
06/26/14	RENUMBER PER REVISION
8/26/11	Added Continuation To Plan (L.O.D., Geothermal Well Field & Mac. Area)
3-15-11	BLDG. ADDITIONS AS APP'D. BY PB and ADD NEW SHEETS 2 TO 6.

REVISION BLOCK

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director – Department of Planning and Zoning — Date 8/2/11
Chief, Division of Land Development — Date 8/02/11
Chief, Development Engineering Division — Date 7/25/11

PREPARED FOR
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 Maryland Route 108
Ellicott City, Maryland 21042
Attention Bruce Gist
410-313-6805

PENZA+BAILEY
ARCHITECTS
401 WOODBOURNE AVENUE
BALTIMORE, MARYLAND 21212
TEL 410.435.6677/FAX 410.435.6868
www.PenzaBailey.com

Address Chart

Parcel Number	Street Address
P. 324	6045 STEVENS FOREST ROAD
	COLUMBIA, MD. 21045

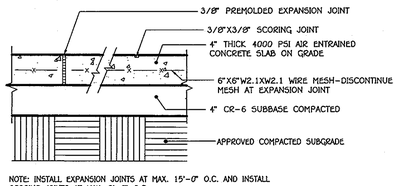
PROJECT			SECTION/AREA		LOT/PARCEL
VOM/STEVENS FOREST ELEM. SCHOOL			5 / 5		LOT 1
PLAT REF.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
P.B.18, F.72	9	NT	36	SIXTH	6066.03
WATER CODE	E09		SEWER CODE	5631200	

SEWER PROFILE, STRUCTURE SCHEDULE, NOTES AND DETAIL SHEET

"REVISED SITE DEVELOPMENT PLAN"
STEVENS FOREST ELEMENTARY SCHOOL
CLASSROOM ADDITIONS AND IMPROVEMENTS

VILLAGE OF OAKLAND MILLS, SECTION 5, AREA 5, LOT 1
PARCEL No.: 324
TAX MAP No.: 36 GRID No.: 9
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: APRIL 26, 2011

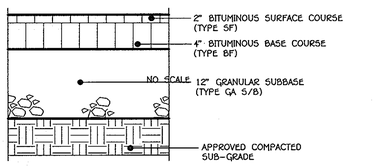
SDP 71-028C



NOTE: INSTALL EXPANSION JOINTS AT MAX. 15'-0" O.C. AND INSTALL SCORING JOINTS AT MAX. 5'-0" O.C.

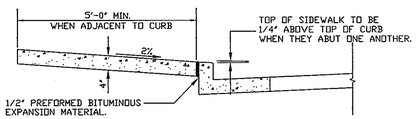
SLOPE ACROSS SIDEWALK SHALL BE MIN. 1/8"/FT.

1/4 CONCRETE WALK DETAIL



2/4 HEAVY DUTY ASPHALTIC PAVING DETAIL

NO SCALE

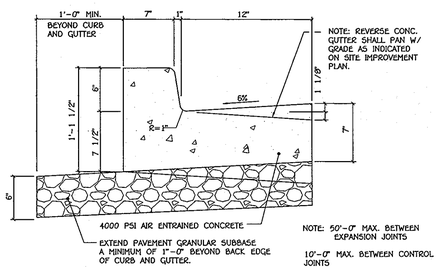


NOTES:

1. SIDEWALK TO BE SCRIBED IN 5'-0" MAXIMUM SQUARES.
2. EXPANSION JOINTS ACROSS THE SIDEWALK NOT TO MORE THAN 15' APART.
3. 1/2" PREFORMED BITUMINOUS EXPANSION MATERIAL IN EXPANSION JOINTS TO BE KEPT 1/4" BELOW SURFACE OF SIDEWALK.
4. 4000 PSI AIR ENTRAINED CONCRETE SHALL BE USED.
5. WHEN SIDEWALK ABUTS CURB, WALK SHALL BE 1/4" ABOVE CURB WITH 1/2" PREFORMED BITUMINOUS EXPANSION MATERIAL BETWEEN SIDEWALK AND CURB.
6. ON LONGITUDINAL SIDEWALK GRADES OF 5% OR GREATER, A CONCRETE HEADER, 6" THICK AND 6" DEEP BELOW THE NORMAL 4" SIDEWALK THICKNESS SHALL BE CONSTRUCTED FOR THE FULL WIDTH OF THE SIDEWALK AT INTERVALS OF 40 FEET. THE HEADERS SHALL BE PLACED AT EXPANSION JOINT LOCATIONS AND SHALL BE MONOLITHIC WITH THE SIDEWALK.
7. SIDEWALK WIDTH ADJACENT TO CURB SHALL BE 5'-0" MIN.
8. SIDEWALK LOCATED 2' OR MORE FROM CURB MAY BE 4'-0" IN WIDTH WITH A 5' X 5' PAVED SECTION PLACED 200' APART.

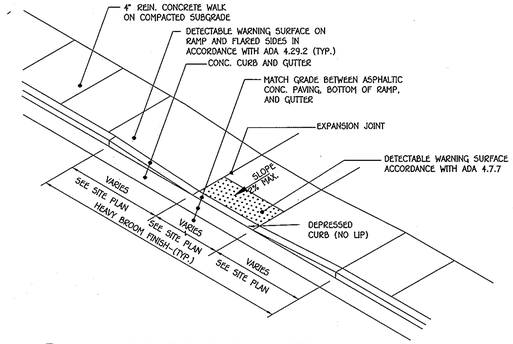
3/4 CONCRETE SIDEWALK DETAIL

NO SCALE



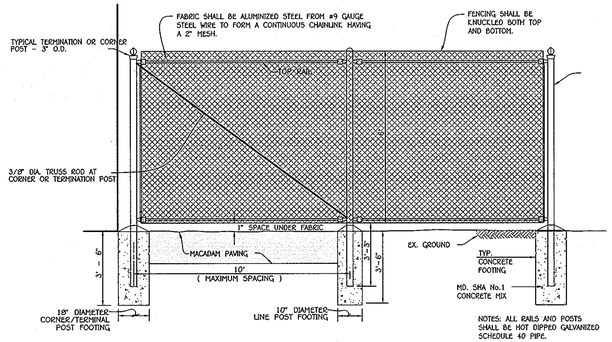
4/4 STANDARD 6" COMB. CONC. CURB AND GUTTER

NO SCALE



5/4 HANDICAP CURB RAMP DETAIL

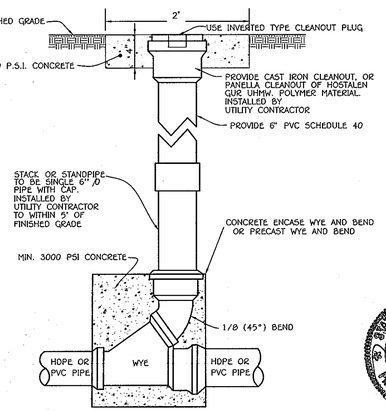
NO SCALE



NOTES: ALL RAILS AND POSTS SHALL BE HOT DIPPED GALVANIZED SCHEDULE 40 PIPE.

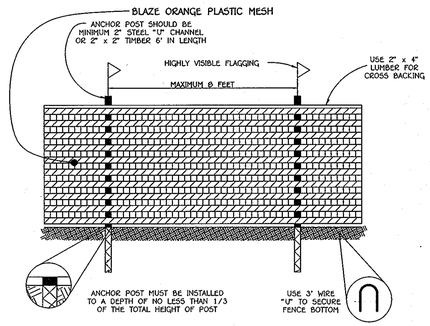
6/4 CHAIN LINK FENCE DETAIL

NO SCALE



TYPICAL ROOF LEADER CLEAN-OUT

NO SCALE



NOTES:

1. FOREST PROTECTION DEVICE ONLY.
2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
4. ROOT DAMAGE SHOULD BE AVOIDED.
5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

TREE PROTECTION DETAIL

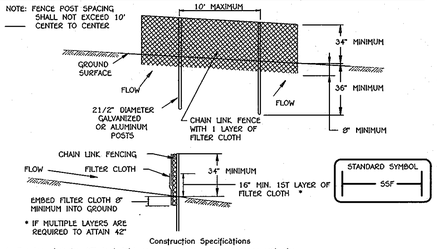
NOT TO SCALE

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT. (1 DAY)
2. NOTIFY "MISS UTILITY" AT 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 48 HOURS BEFORE STARTING WORK.
3. INSTALL ALL TREE PROTECTION FENCE FOR TREES TO BE UNDISTURBED AS INDICATED ON THE PLANS (1 DAY). INSTALL STABILIZED CONSTRUCTION ENTRANCES. (1 DAY)
4. INSTALL SEDIMENT CONTROL MEASURES SHOWN ON SHEET 3. (2 DAYS)
5. BEGIN DEMOLITION WORK SHOWN SHEET 2. (2 WEEKS)
6. BEGIN BUILDING CONSTRUCTION. (6 WEEKS)
7. INSTALL PAVING AND SIDEWALKS AS SHOWN ON PLANS. (1 WEEK)
8. FINE GRADE ALL AREAS AND INSTALL PERMANENT SEEDING. (1 WEEK)
9. FOLLOWING SUCCESSFUL STABILIZATION (i.e. ESTABLISHED VEGETATION OR PAVING) OF ALL DISTURBED AREAS, OBTAIN PERMISSION FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR TO REMOVE ALL REMAINING SEDIMENT AND EROSION CONTROL DEVICES. THEN STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS WITH PERMANENT SEEDING. (1 WEEK)
10. NOTIFY HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS FOR FINAL INSPECTION OF THE COMPLETED PROJECT.
11. SEQUENCE NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTAINENCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL EVENT AND ON A DAILY BASIS. REMOVE SEDIMENT FROM THE SUPER SILT FENCE IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS.

SUPER SILT FENCE

NOTE: FENCE POST SPACING SHALL NOT EXCEED 10' — CENTER TO CENTER



Construction Specifications

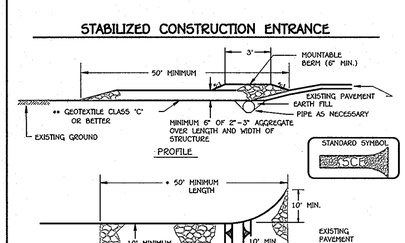
1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
4. Filter cloth shall be embedded a minimum of 8" into the ground.
5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height
7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and 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.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

Design Criteria

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet

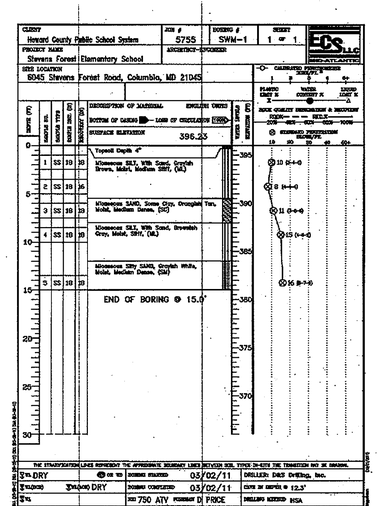
STABILIZED CONSTRUCTION ENTRANCE

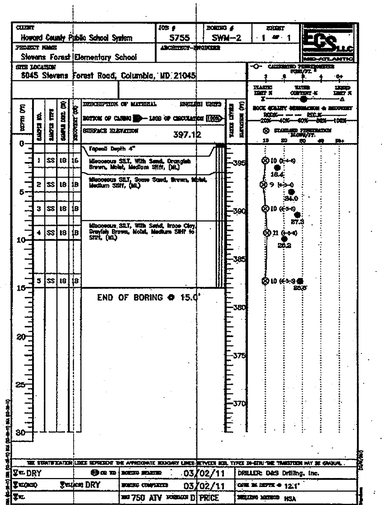


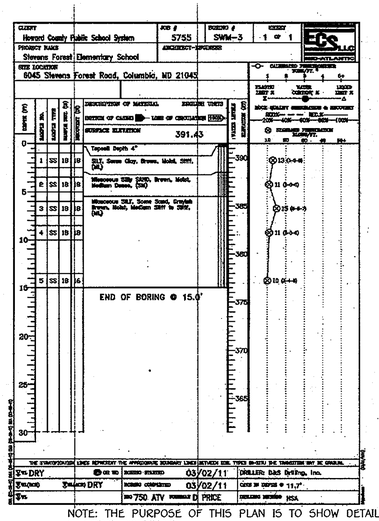
Construction Specification

1. Length - minimum of 50' (*20' for single residence lot).
2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.
4. Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

NOTE: THE HOWARD COUNTY PLANNING BOARD ON JUNE 16, 2011 APPROVED THE REQUEST FOR A RED-LINE REVISION OF THE SITE DEVELOPMENT PLAN TO CONSTRUCT THREE ADDITIONS TO THE EXISTING STEVENS FOREST ELEMENTARY SCHOOL. THE THREE ADDITIONS RESULTED IN LOT COVERAGE OF 13% EXCEEDING THE MAXIMUM COVERAGE OF 10% ALLOWED BY THE APPLICABLE FINAL DEVELOPMENT PLAN.







NOTE: THE PURPOSE OF THIS PLAN IS TO SHOW DETAILS FOR BUILDING ADDITIONS.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

ENGINEER'S CERTIFICATE

"I certify that this plan for sediment and erosion 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 of Engineer — Date 7/11/11

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan for sediment and erosion 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 Soil Conservation District."

Signature of Developer — Date 7/11/11

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — Date 7/22/11

DATE	DESCRIPTION
3-15-11	BLDG. ADDITIONS AS APP'D. BY PB and ADD NEW SHEETS 2 TO 6.

REVISION BLOCK

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — Date 8/2/11
Chief, Division of Land Development — Date 8/02/11
Chief, Development Engineering Division — Date 7/26/11

PREPARED FOR
HOWARD COUNTY PUBLIC SCHOOL SYSTEM
10910 Maryland Route 108
Ellicott City, Maryland 21042
Attention Bruce Gist
410-313-6805

PENZA+BAILEY
ARCHITECTS
401 WOODBOURNE AVENUE
BALTIMORE, MARYLAND 21212
TEL 410.435.6677/FAX 410.435.6868
www.PenzaBailey.com

Address Chart	
Parcel Number	Street Address
P. 324	6045 STEVENS FOREST ROAD
	COLUMBIA, MD. 21045

PROJECT			SECTION/AREA		LOT/PARCEL
VOM/STEVENS FOREST ELEM. SCHOOL			5 / 5		LOT 1
PLAT REF.	BLOCK NO.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
P.B.18, F.72	9	NT	36	SIXTH	6066.03
WATER CODE	E09		SEWER CODE	5631200	

DETAIL SHEET

"REVISED SITE DEVELOPMENT PLAN"

STEVENS FOREST ELEMENTARY SCHOOL

CLASSROOM ADDITIONS AND IMPROVEMENTS

VILLAGE OF OAKLAND MILLS, SECTION 5, AREA 5, LOT 1
PARCEL No.: 324
TAX MAP No.: 36 GRID No.: 9
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: APRIL 26, 2011

SHEET 4 OF 6

SDP 71-028C

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