SHEET INDEX 2 DEMOLITION PLAN 3 SITE DEVELOPMENT PLAN 12 BUILDING ADDITIONS AND DEMOUTION PLAN ENLARGEMENTS
13 STORM DRAIN PROPILE, STRUCTURE SCHEDULE AND DETAILS
14 SEAMENT CONTROL NOTES AND BUILDING ELEVATIONS

SITE ANALYSIS DATA

B. Present use of site or structure: Institutional; Public School

B. Area of this plan submission: 1.83 Ac. + is the limit of submission and grading disturbance for the

A. The Number of parking spaces in accordance with the Public School System's requirements = 110

B. Total number of parking spaces existing and provided on site: (Including handicap Parking) = 110

C. Number of Handicaped parking spaces provided: (Including Handicap Van Spaces) = 5

LEGEND

---366---- EXISTING CONTOUR 2' INTERVAL

— 370— — EXISTING CONTOUR 10' INTERVAL

SPOT ELEVATION

- EXISTING WATER LINE

PROPOSED PAVING

- 366 PROPOSED CONTOUR 2' INTERVAL

-370-PROPOSED CONTOUR 10' INTERVAL

----- EXISTING SEWER LINE

NEW CONCRETE WALK

EXISTING TREE

L.O.D. LIMIT OF DISTURBANCE

TP-TP-TP-TREE PROTECTION FENCE

DESCRIPTION

C. Impervious Coverage Proposed Paved Areas (Access Road, Parking and Walkways) and Building Additions: 54,003 of

A. Present Zoning: NEWTOWN OPEN SPACE

C. Public water and sewer to be utilized.

construction of the parking lot addition.

3. Open Space Data: A. Open Space Required: N/A

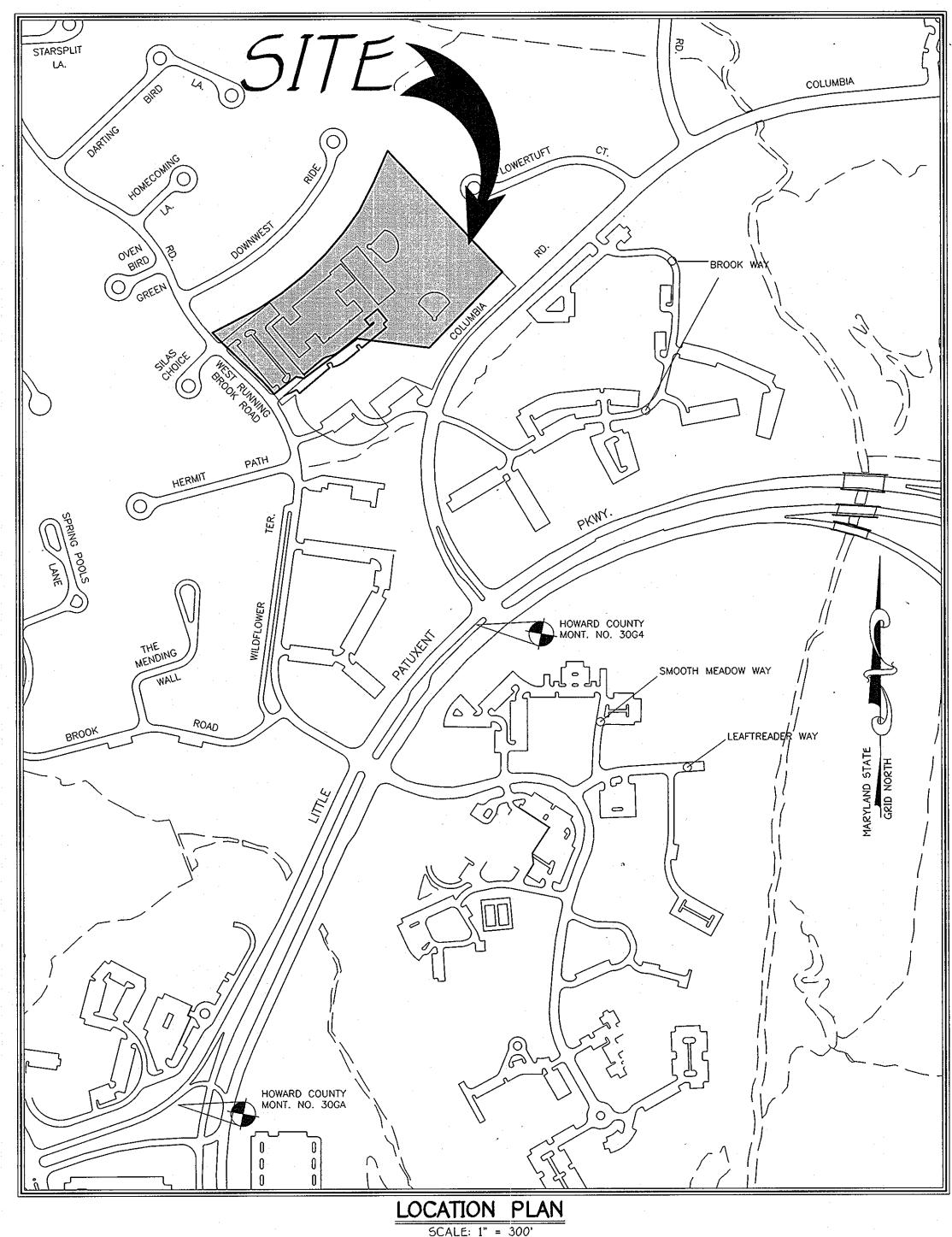
A. Total project area: 9.00 Ac±

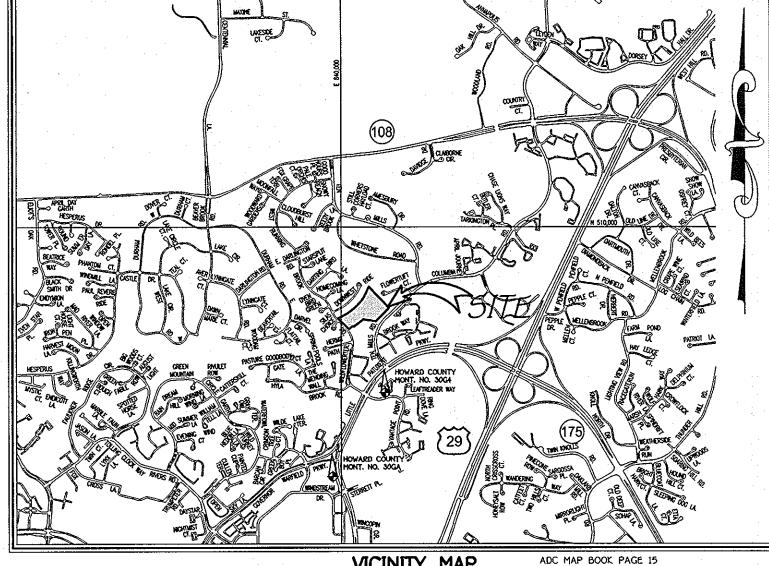
2. Area Tabulation:

4. Parking Space Data:

# SITE DEVELOPMENT PLAN RUNNING BROOK ELEMENTARY SCHOOL

COLUMBIA VILLAGE OF WILDE LAKE SECTION 9 AREA 5 LOT 78 AND OPEN SPACE LOT 79





VICINITY MAP

General Notes:

1. All construction shall be accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if

2. The contractor shall notify the Bureau of Engineering/Construction Inspection Division at 410-313-1880 at least five working days prior to

3. The contractor shall notify Miss Utility at 1-800-257-7777 at least 48 hours prior to any digging and excavation work.

Tax Map 30, Grid 14

Part of Parcel No. 258 Zoning: This project is zoned NEWTOWN OPEN SPACE per the 2/2/04 comprehensive zoning plan and to Comp-Lite Zoning Amendments dated

Section/Area: 9/5

Site Area: 9.00 Ac.+

Open Space to be recorded on Amended Final Development Plan Phase Twenty-Two. A. Open Space Lot 78: Credited = 8.00 acres

Non-Credited = 1.00 acres B. Open Space Lot 79: Credited = 3.165 acres

5. Traffic control devices, markings and signing shall be in accordance with the latest edition of the manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to placement of any asphalt.

6. All plan dimensions are to the face of curb or face of building unless otherwise noted. Dimensions are measured perpendicular or radial

7. Existing topography and features were derived from a field run survey by Fisher, Collins and Carter Inc. dated March 2006.

8. Coordinates are based on NAD 83 Maryland Coordinates System as projected by Howard County Geodetic Control Stations. 30GA N 566,053,579 E 1,352,177.58 ELEV. 339.937

30G4 N 567,015.220 E 1,353,271.280 ELEV. 360.306

9. Public water and sewer is to be utilized for this project. The existing water and sewer systems serving this project are Contract No. 206

10. All on-site storm drains under this site development plan are private.

11. The existing utilities shown hereon were derived from available public records. The Contractor must dig test pits by hand at all utility

crossings and connection points to verify the exact location. 12. All proposed ramps shall be in accordance with current A.D.A. Standards Accessibility Guidelines. Maximum sidewalk cross slope shall be two

percent. Provide a (5'x5') five foot by five foot level landing (max. slope 2%) at the top and bottom of all ramps and building entrances and exits. Handrails shall be provided on all ramps in accordance with section 4.8.5 of the A.D.A Standards Accessibility Guidelines.

13. All driveways and parking to be owned and maintained by the Howard County Public School System. 14. Any damage to County and or State owned right-of-way to be corrected at the Contractor's expense.

15. Trench bedding for storm drains structures shall be in accordance with Howard County Standard G2.01 Class C Bedding unless otherwise noted. 16. Gutter pan of curbs shall be pitched to conform to the adjacent drainage patterns of the adjoining paving for vehicular use. 17. There are no known grave sites or cemeteries on this site based on a visual site visit and based on an examination of the Howard County

18. This Project is recorded among the land records in Howard County, Maryland in Plat Book 13, Folio 82 & Final Development Plan Phase 22

recorded in Plat Book 14 Folio 47 And Final Development Plan Phase 22-A Recorded As Plat # 19839 - 1984-2.

19. Soils Analysis prepared by: Penniman and Browne, Inc. dated August 2007. 20. All outside lighting shall comply with Zoning Regulations Section 134 which requires lights to be installed to direct/reflect light downwards and inwards on the site and away from all public streets and residential areas.

21. Previous DPZ file numbers: 5DP 84-98c, WP 99-128, 5DP 70-03 and FDP-022. 22. This 5DP is subject to the First Amendment to the Fifth Edition of the Subdivision and Land Development Regulations dated October 2, 2003

and the Amended Zoning Regulations, per Council Bill 75-2003. 23. No clearing, grading or construction is permitted within the limit of wetlands, streams or their required buffers, except as approved on this

plan for necessary utility line disturbances in accordance with Section 16.116(c) of the Subdivision and Land Development Regulations. 24. No landscape surety is required for this plan since it is a Howard County project. 25. This SDP is subject to the Amended Fifth Edition of the Subdivision and Land Development Regulations per Council Bill No. 45-2003 and the

Amended Zoning Regulations per Council Bill No. 75-2003. Development or construction on this property must comply with setback and buffer regulations in effect at the time of submission of the site development plan, waiver petition application or building/grading permit applications. The structure and use setbacks from lot lines internal to a development when two or more contiguous parcels are treated as a single parcel for development purposes shall not apply in accordance with section 120A.10 of the Zoning Regulations.

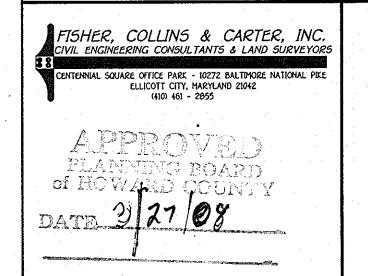
26. All sign posts used for traffic control signs installed in the County right-of-way shall be mounted on a 2" galvanized steel, perforated, square tube post (14 gauge) inserted into a 2-1/2" galvanized steel, perforated, square tube sleeve (12 gauge) - 3' long. A galvanized steel pole cap shall be mounted on top of each post.

27. Landscaping is in accordance with Section 16.124 of the Howard County Code and the Landscape Manual. 28. Forest Conservation for this project is exempt due to the limits of disturbance being within the original limits of disturbance based on Site Development Plans 5DP 70-03 and 5DP 84-98c. Grading permits were approved prior to 12-31-92 in accordance with Section 16.1202(b)(1)(iii) of the

Howard County Code, which exempts this project from forest conservation. 29. The site is considered as "Redevelopment" and that the stormwater management has been addressed by the reduction of the impervious area



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 13204, Expiration Date: November 3, 2008."



9/6/13	REVISED SITE ANALYSIS NOTE IC	
2/19/13	KEVISED SHEET INDEX AND SHEET NUMBER	
DATE	DESCRIPTION	
	REVISION BLOCK	
	D: DEPARTMENT OF PLANNING AND ZONING  White the department of Planning and Zoning  Date	08
Ci	vision & Land Development Date	108
1	/ // // // /	_

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

	<b>}</b>									
rcel Numb	cel Number Street Address									
ART OF	RT OF 5215 WEST RUNNING BROOK ROAD									
ARCEL 258	RCEL 258 COLUMBIA, MD. 21044									
		,								
•										
		-								
ROJECT	ROJECT SECTION/AREA P/O PARCEL									
NNING BRO	NNING BROOK ELEMENTARY SCHOOL 9/5 258									
T REF.	BLOCK NO.	ZONE	•	AX MAP	ELEC.	DIST.	CENSUS TR.			
3/82	14	NEWTOW OPEN SPA		30	FIFT	H	6054.01			
TER CODE	E-01		SEW	VER CODE		560	50000			

for the limit of disturbance by at least 20%.

Address Chart

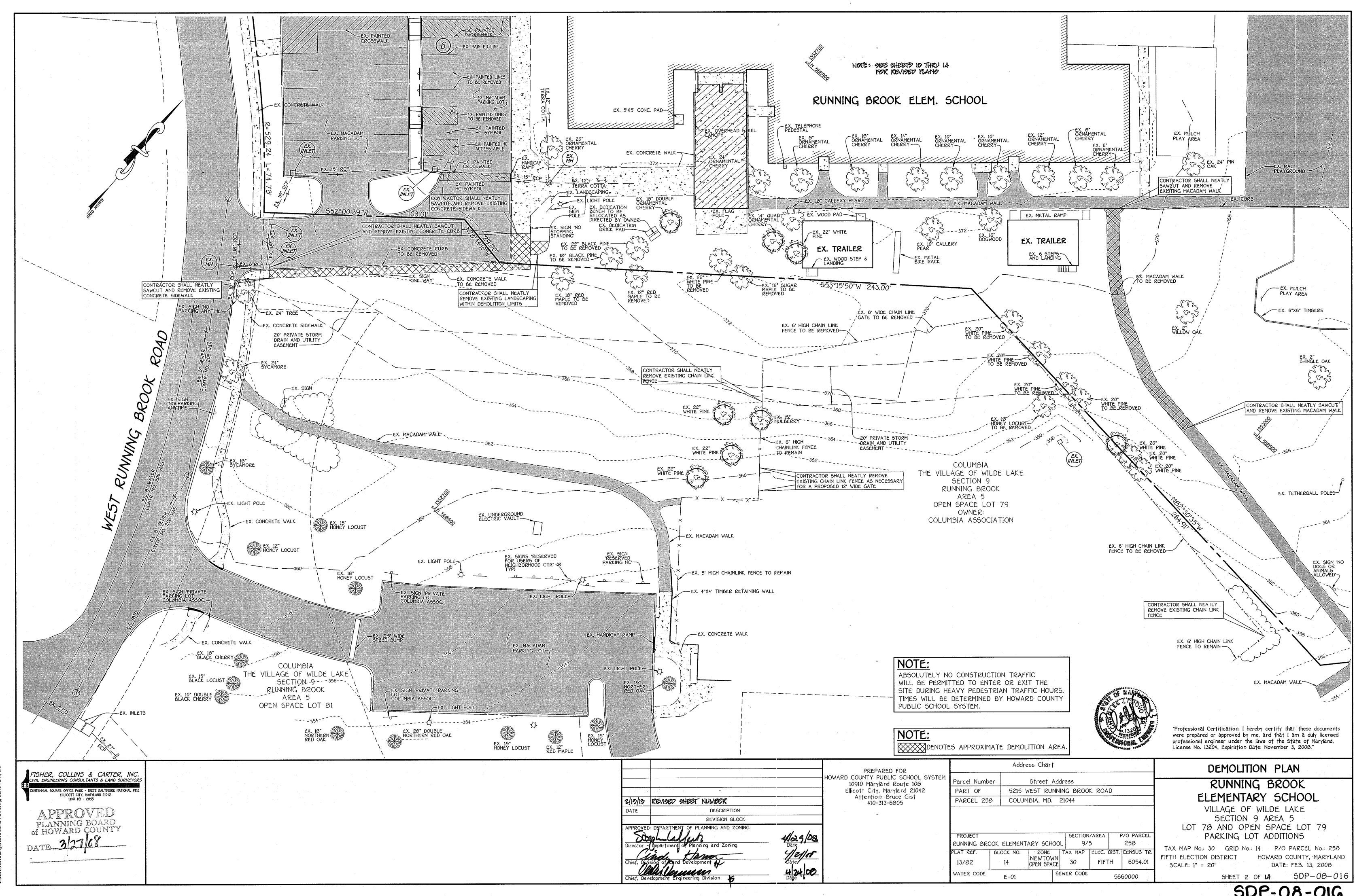
# TITLE SHEET RUNNING BROOK ELEMENTARY SCHOOL VILLAGE OF WILDE LAKE

SECTION 9 AREA 5 LOT 78 AND OPEN SPACE LOT 79 PARKING LOT ADDITIONS

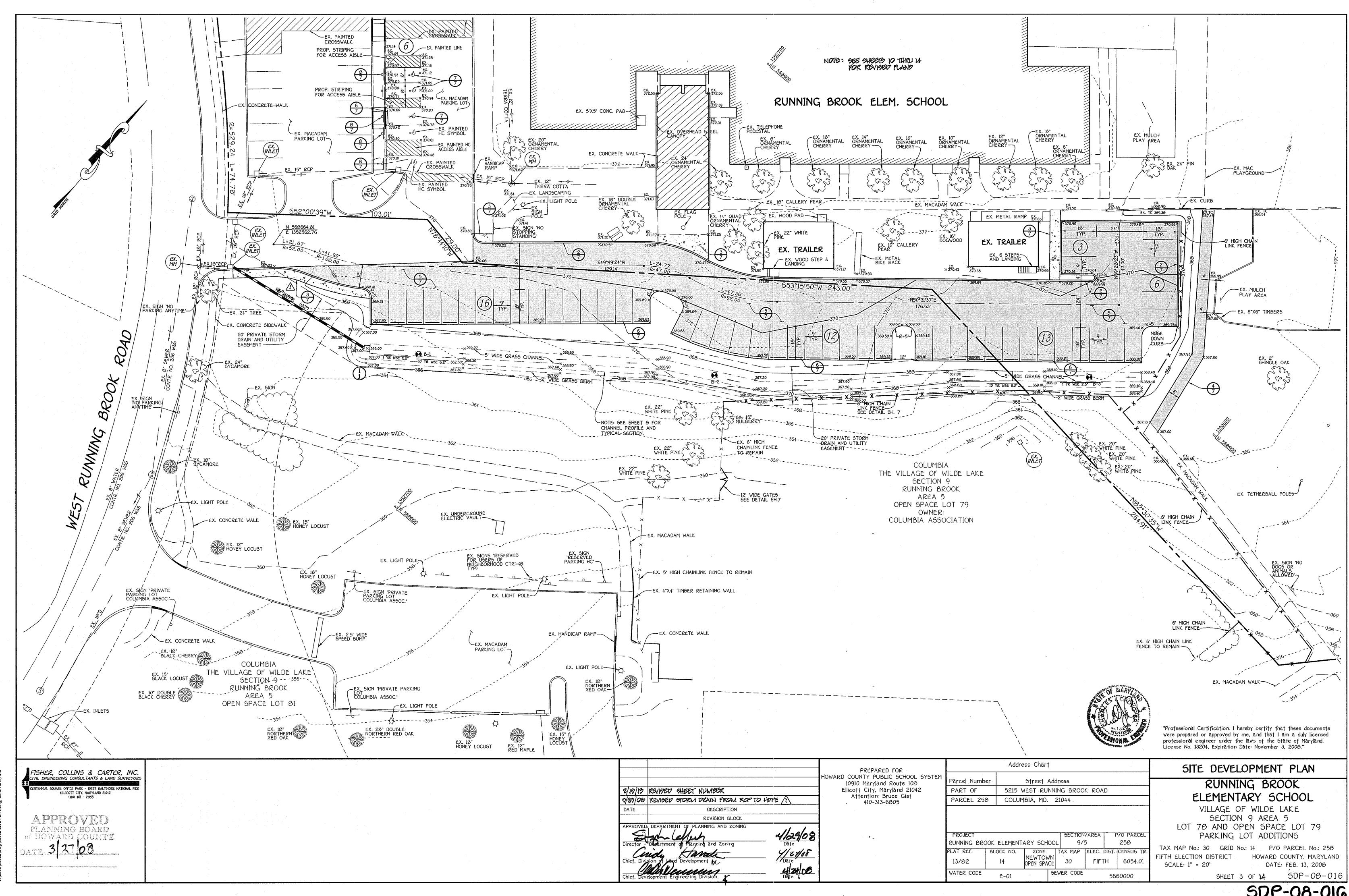
TAX MAP No.: 30 GRID No.: 14 P/O PARCEL No.: 258 HOWARD COUNTY, MARYLAND FIFTH ELECTION DISTRICT DATE: FEB. 13, 2008 SCALE: A5 SHOWN

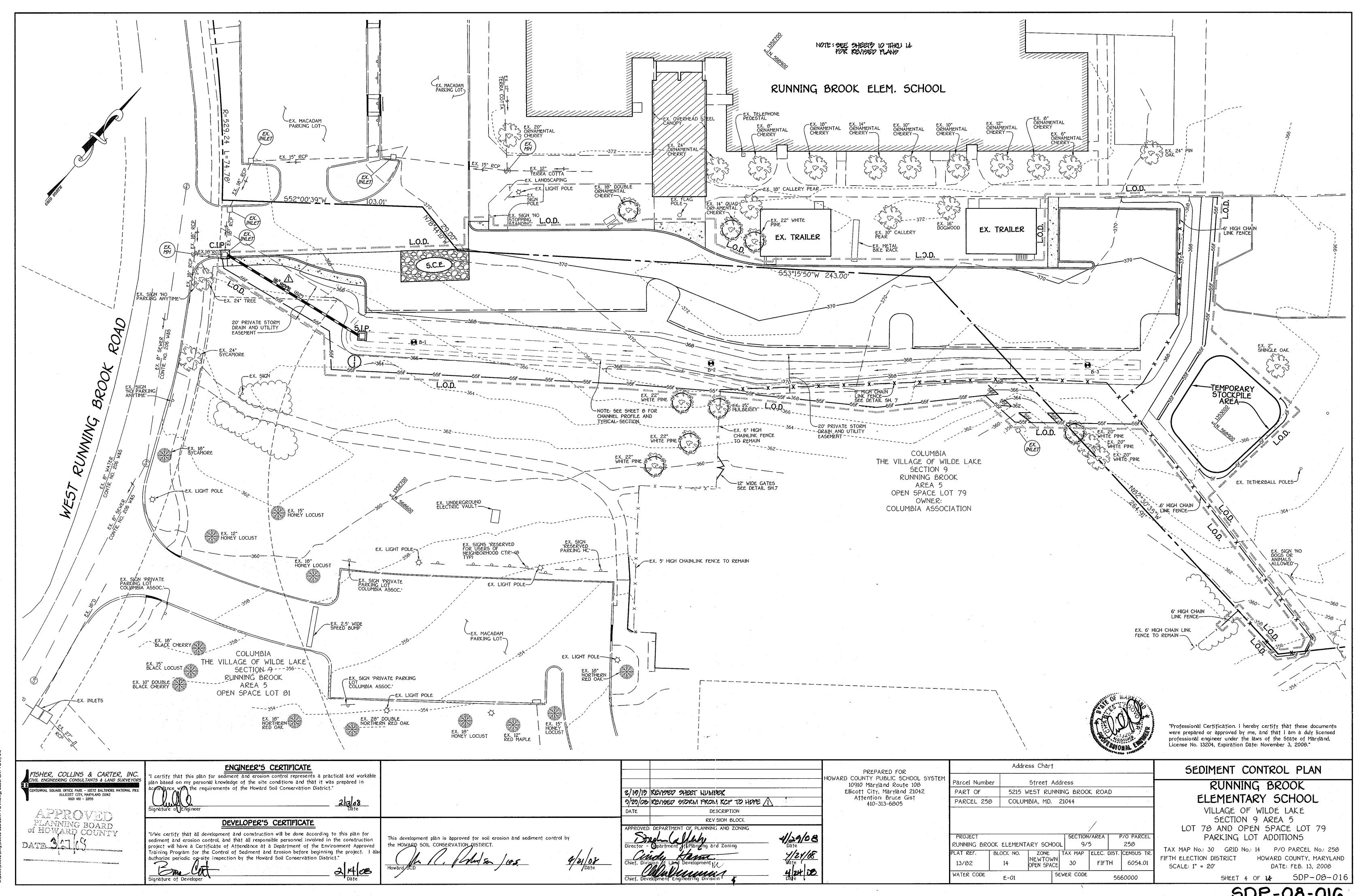
SHEET 1 OF 14 SDP-08-016

SDP-08-016

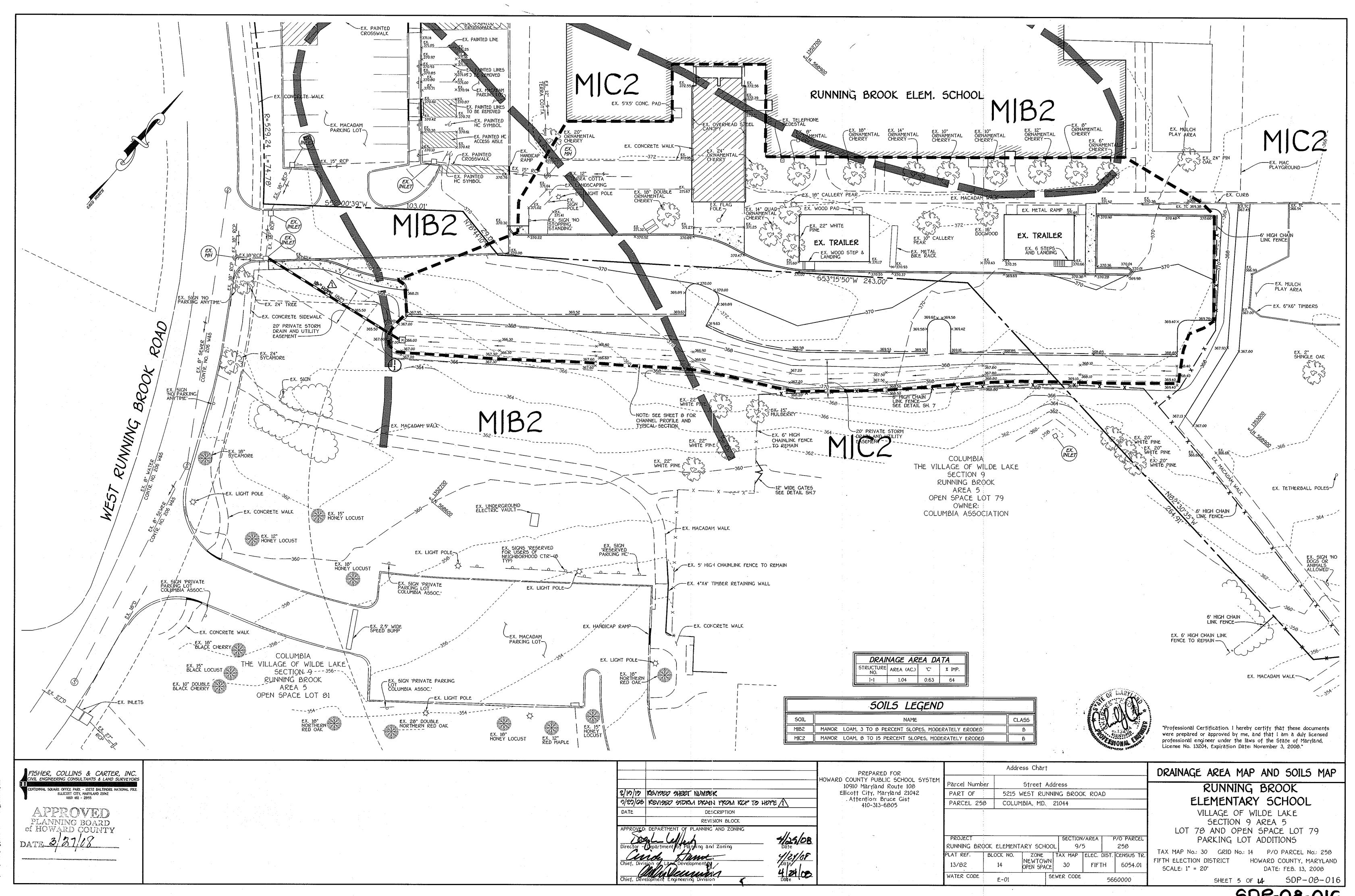


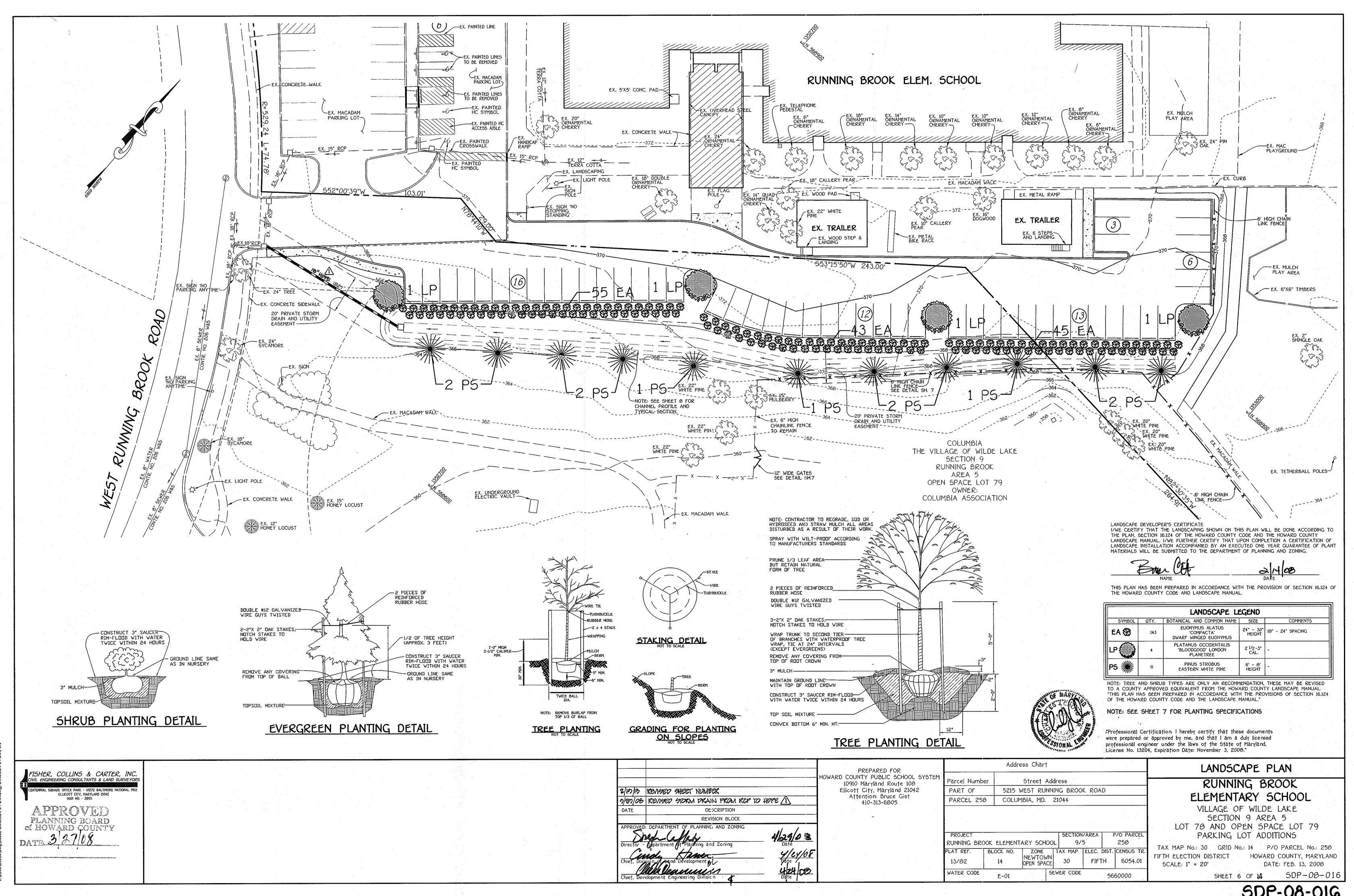
SDP-08-01G



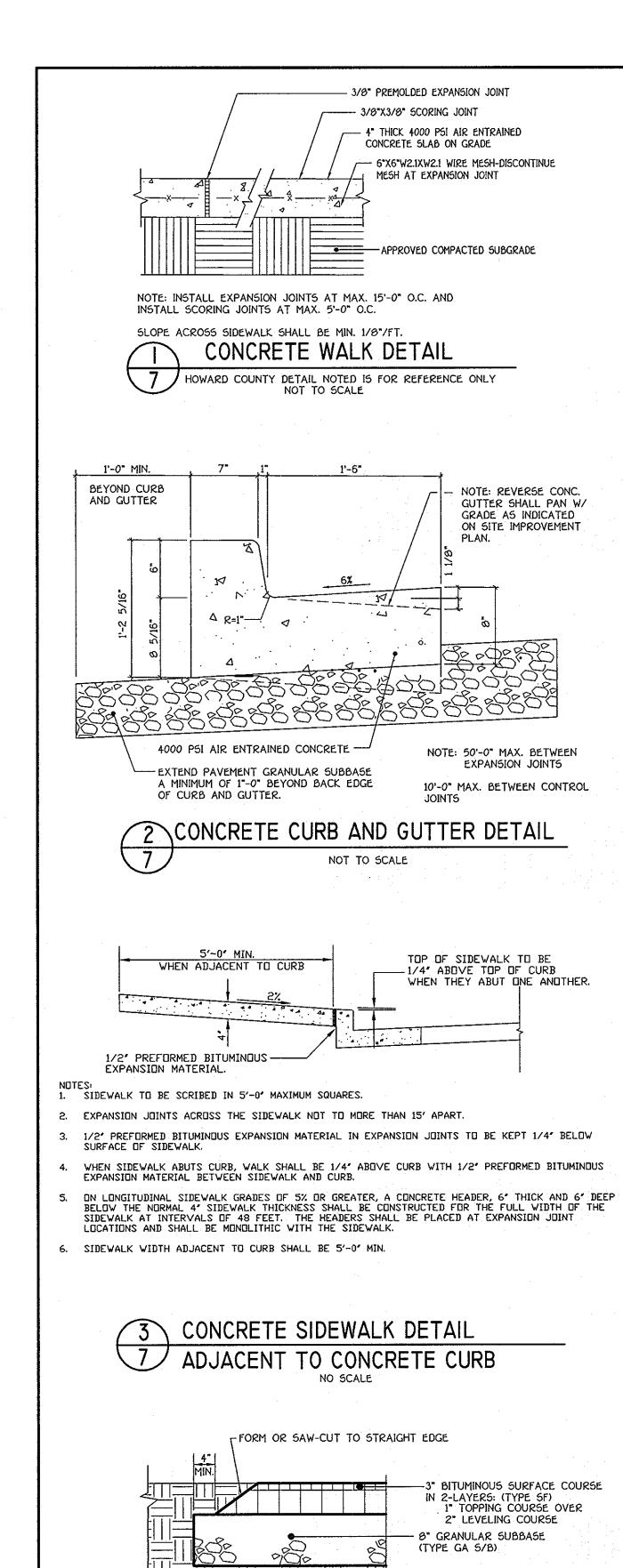


SDP-08-016





SDP-08-016



- APPROVED COMPACTED

SUB-GRADE

ASPHALTIC SIDEWALK PAVING DETAIL

NO SCALE

FISHER, COLLINS & CARTER, INC.

(410) 461 - 2855

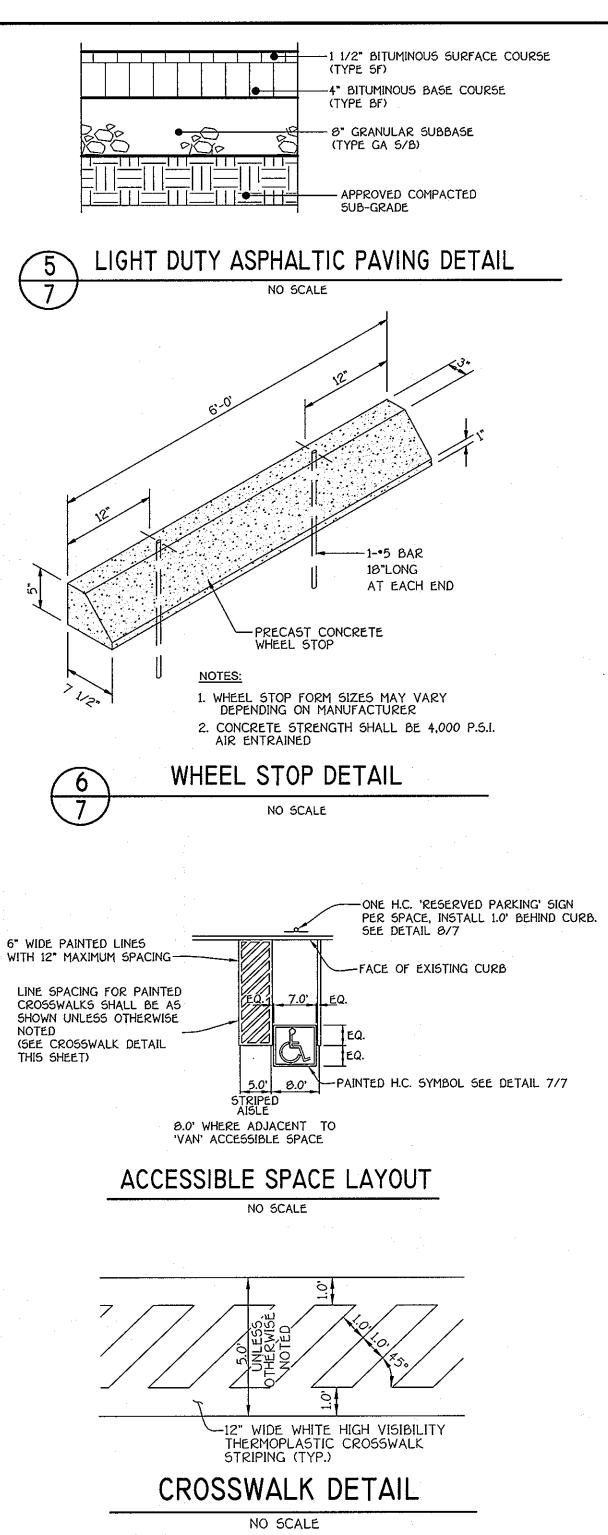
APPROVEL

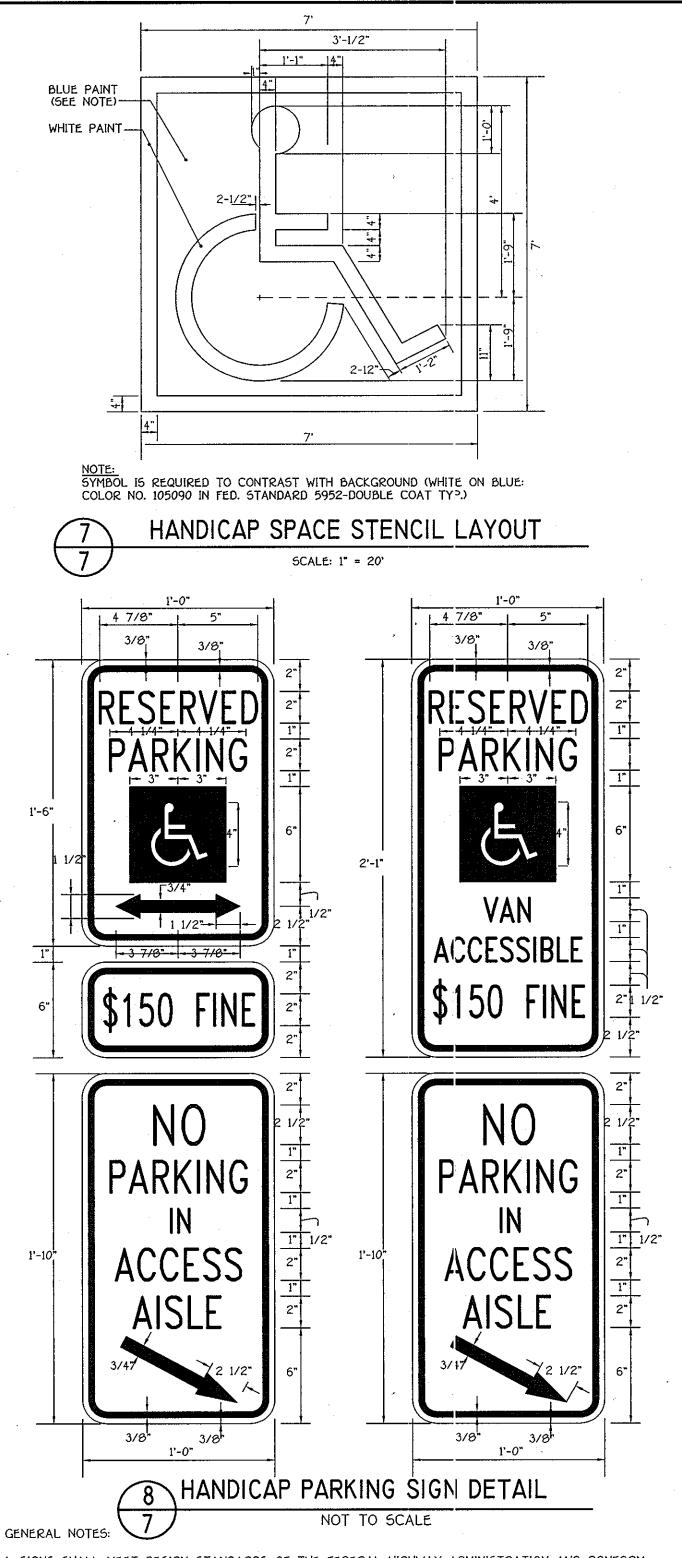
PLANNING BOARD

HOWARD COUNTY

CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS

HAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIK





1. SIGNS SHALL MEET DESIGN STANDARDS OF THE FEDERAL HIGHWAY ADMINISTRATION AND CONFORM TO THE STATE OF MARYLAND STANDARD HIGHWAY SIGN BOOKLET DETAIL R7-8.

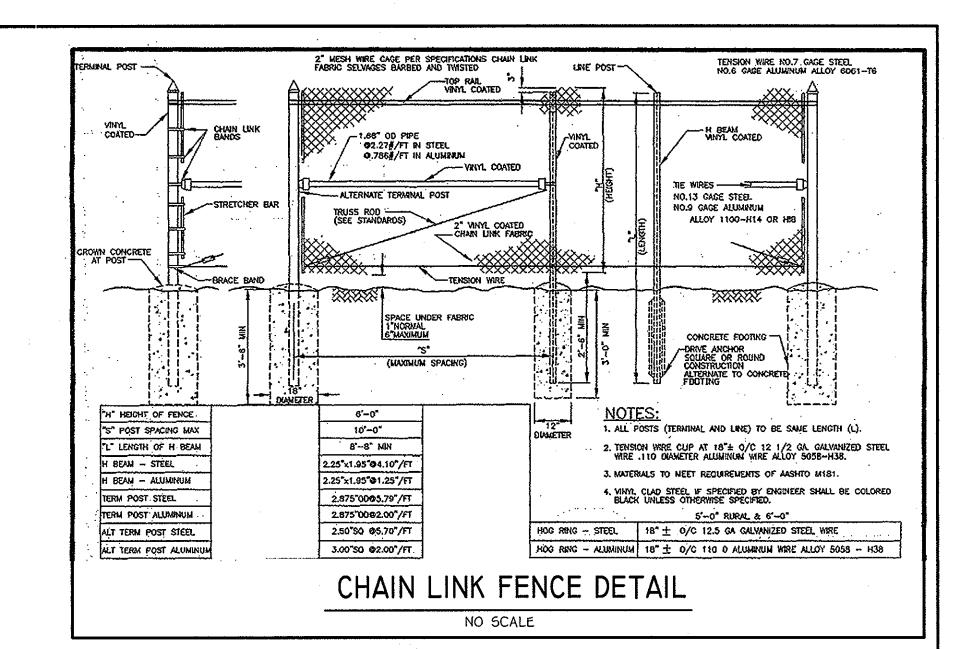
2. ONE SIGN IS REQUIRED PER SPACE PLACED AS SHOWN ON SITE IMPROVEMENT PLAN. 3. SIGNS SHALL BE POLE MOUNTED WITH HOT DIPPED GALVANIZED COUNTY APPROVED PERFORATED CHANNEL POSTS W/TOP OF SIGNS 9'-1" ABOVE FINISHED GRADE OR AS INDICATED ON SITE

4. SIGN SHALL BE ATTACHED TO FLANGED SIDE OF POST. POST SHALL EXTEND INTO GROUND 2'-6"

5. COLORS: LEGEND AND BORDER-GREEN SYMBOL-WHITE ON BLUE BACKGROUND BACKGROUND-WHITE

ACCORDINGLY.

6. CONTRACTOR SHALL COORDINATE ARROW DIRECTION WITH LOCATION OF ADJACENT AISLE. 7. SPACES INDICATED ON SITE DEVELOPMENT PLANS AS "VAN ACCESSIBLE" SHALL BE SIGNED



# PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein.

All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size, root and shape shown on the plant list and the American Association of Nurserymen (AAN) Standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug; no healed-in plants from cold storage will be accepted.

Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas', (hereinafter 'Landscape Guidelines') approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.

Contractor shall be required to guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

Contractor shall be responsible for notifying utility companies, utility contractors and 'Miss Utility' a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the

Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at the drip line.

Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site

Bid shall be based on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on drawings and specifications

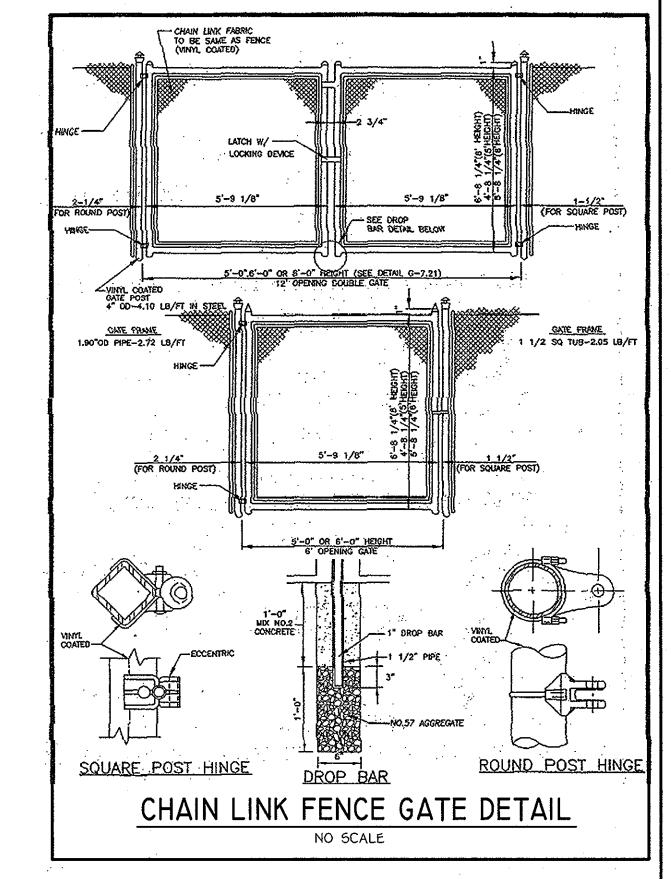
Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence

All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where noted on plans. Positive drainage shall be maintained in planting beds 2 percent slope).

Planting mix shall be as follows: Beciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

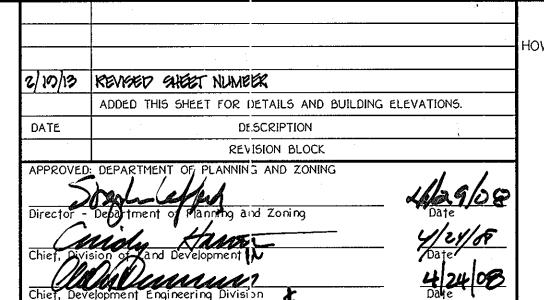
Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated.

All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded.





Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 13204, Expiration Date: November 3, 2008."



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

Address Chart Parcel Number Street Address PART OF 5215 WEST RUNNING BROOK ROAD PARCEL 258 COLUMBIA, MD. 21044 ECTION/AREA P/O PARCEL RUNNING BROOK ELEMENTARY SCHOOL 9/5 258° TAX MAP ELEC. DIST. CENSUS TI NEWTOWN 30 FIFTH 6054.01 13/82 OPEN SPACE WATER CODE SEWER CODE E-01 5660000

DETAIL SHEET & PLANTING SPECIFICATIONS RUNNING BROOK

ELEMENTARY SCHOOL VILLAGE OF WILDE LAKE SECTION 9 AREA 5

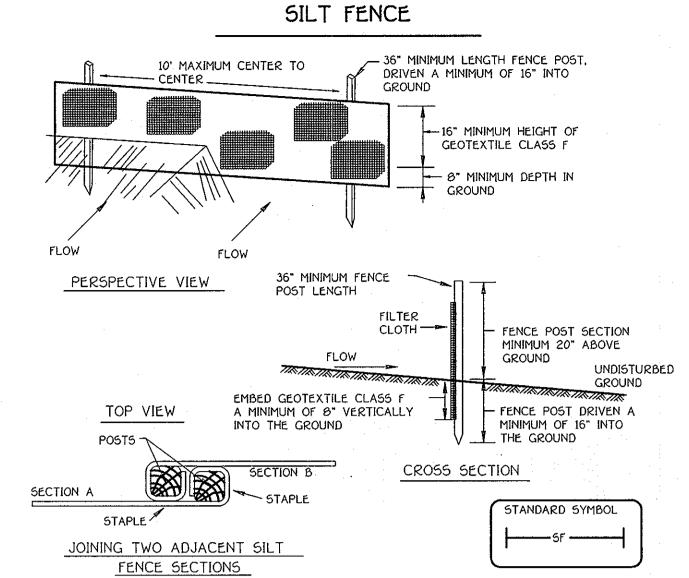
LOT 78 AND OPEN SPACE LOT 79 PARKING LOT ADDITIONS TAX MAP No.: 30 GRID No.: 14 P/O PARCEL No.: 258

FIFTH ELECTION DISTRICT

DATE: FEB. 13, 2008 SCALE: AS SHOWN 5DP-*08*-016 SHEET 7 OF 14

SDP-08-016

HOWARD COUNTY, MARYLAND



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. Geotextile 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:

Test: MSMT 509 Tensile Strenath 50 lbs/in (min.) Test: MSMT 509 Tensile Modulus 20 lbs/in (min.) Test: MSMT 322 0.3 gal ft / minute (max.)2 Flow Rate Test: MSMT 322 75% (min.) Filtering Efficiency

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric

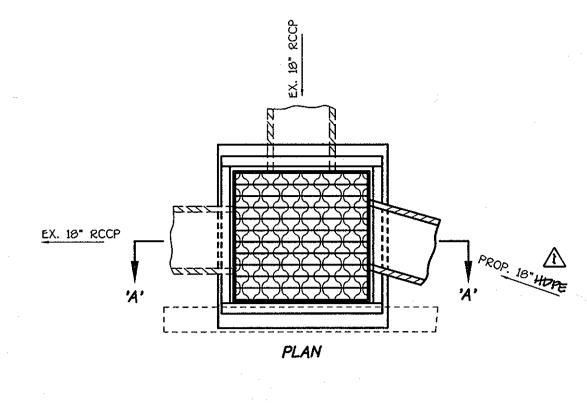
#### Silt Fence Design Criteria

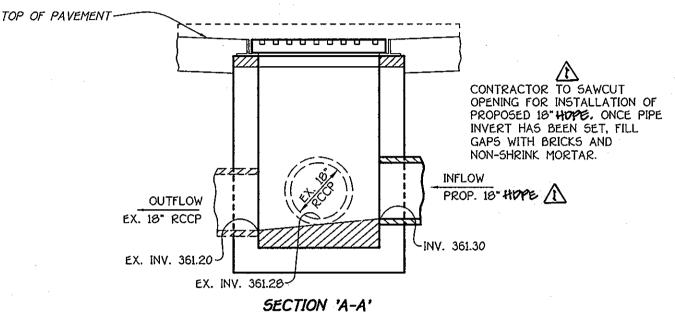
Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

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

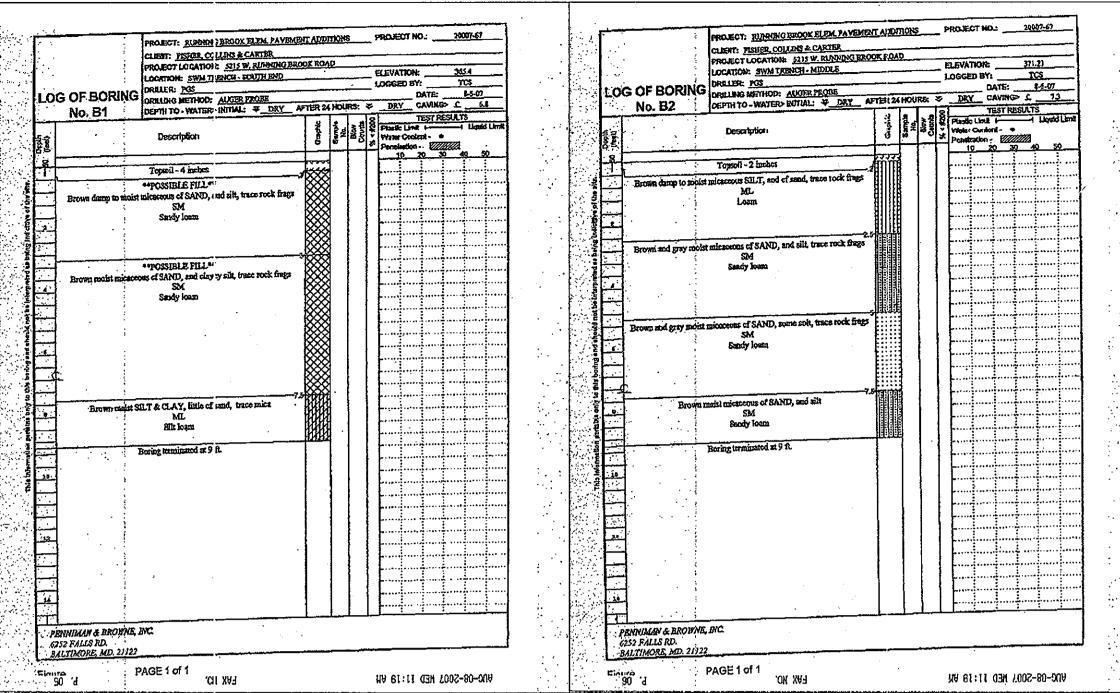
#### OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED OPEN CHANNEL SYSTEMS (0-1 AND 0-2)

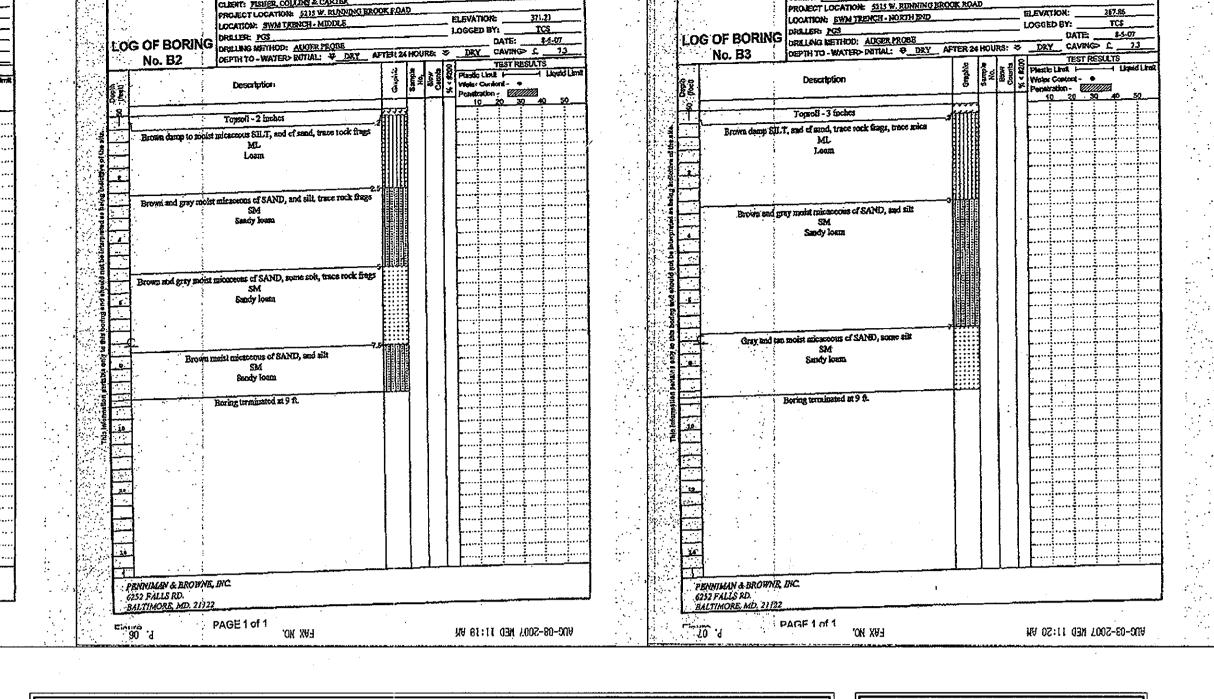
- 1. The open channel system shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facility is functioning properly.
- 2. The open channel shall be mowed a minimum of as needed during the growing season to maintain a maximum grass height of less than 6 inches.
- 3. Debris and litter shall be removed during regular mowing operations and as needed.
- 4. Visible signs of erosion in the open channel system shall be repaired as soon as it is noticed.
- 5. Remove silt in the open channel system when it exceeds 25% of the original WQv.

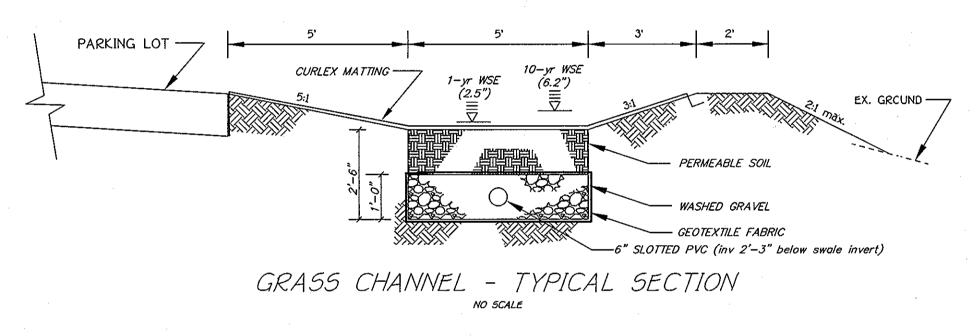




MODIFIED EXISTING INLET DETAIL NOT TO SCALE

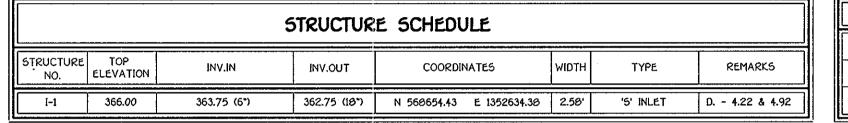






#### GRASSED SWALE SPECIFICATIONS

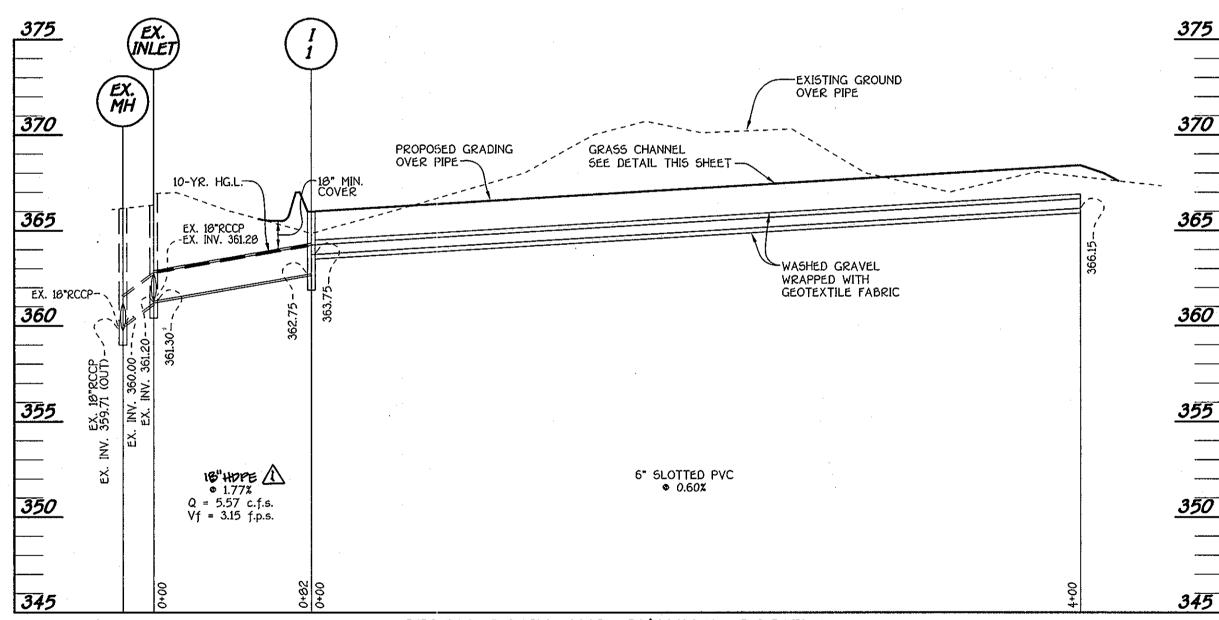
- 1. All construction shall meet dryswale and bioretention soil standards as set for in the Maryland Department of the Environment's 2000 SWM Design Manual and as outlined below.
- 2. The permeable soil and stone trench below the grassed swale invert shall be installed after ALL upstream areas have been stabilized (i.e., paved or have established vegetation).
- 3. Mulch shall be double-shredded hardwood aged 6 to 12 months. No woods chips or pine mulch.
- 4. The "washed gravel" shall be washed pea gravel (ASTM D448) or uniformly sized stone meeting AASHTO M-43 (0.375" to 0.75") surrounded by geotextile Mirafi 180N or approved equal (alternative geotextiles are outlined in MDE's 2000 SWM Manual in Appendix B, Class "C" criteria). Stone shall be carefully placed to prevent damage to geotextile. The geotextile shall be installed per the manufacturer's specifications with a 6" overlap. Stone aggregate must be free of fines and clean.
- 5. The permeable soil shall consist of well mixed 35% sand, and 65% topsoil. The soil shall be free of stones, stumps, roots, or other similar material greater than 2". No other material shall be mixed or dumped within the permeable soil that may hinder plant growth. The planting soil shall be free of Bermuda grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05. The permeable soil shall loosely compacted in 8" lifts and be flooded after placement. Any settlement shall be refilled to the design elevation.
- 6. The 6" perforated PVC pipe shall be placed at the same grade as the grassed swale (0.6%). Perforated pipe shall be slotted. The PVC shall be Schedule 40 or stronger. Cap end except at connection to storm drain inlet (i.e., cap upstream end). NOTE: Use 1 LF of non-perforated PVC pipe to connect to the storm drain inlet.
- 7. Sand shall meet AASHTO M-6 or ASTM C-33, Size: 0.02" to 0.04". Sand must be clean; free of fines, roots,
- 8. The curlex matting shall be stapled and installed per the manufacturer's specifications.



ſ	PIPE SCHEDUL	£
SIZE	CLA55	LENGTH
10"	HOPE	82 L.F.
6 <b>"</b>	SLOTTED PVC	400 L.F.

PROJECT: RUNNING BROOK BLEM, PAVEMENT ADDITIONS PROJECT NO.: 20007-67

CLIENT: FISHER COLLINS & CARTER



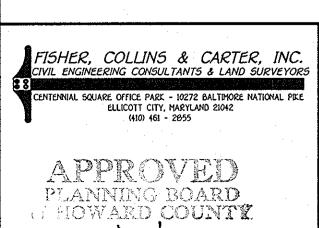
STORM DRAIN AND CHANNEL PROFILE

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



5660000

rofessional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 13204, Expiration Date: November 3, 2008."



ENGINEER'S CERTIFICATE 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 ccordance with the requirements of the Howard Soil Conservation District."

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."

the HOWARD SOIL CONSERVATION DISTRICT.

This development plan is approved for soil erosion and sediment control by

2/19/13 REVISED SHEET NUMBER 9/29/08 REVISED STORM DRAIN FROM KOP TO HOPE A DESCRIPTION REVISION BLOCK

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

Street Address Parcel Number PART OF 5215 WEST RUNNING BROOK ROAD PARCEL 258 COLUMBIA, MD. 21044 SECTION/AREA RUNNING BROOK ELEMENTARY SCHOOL 258 ZONE TAX MAP ELEC. DIST. CENSUS TR BLOCK NO. NEWTOWN OPEN SPACE 30 FIFTH 6054.01 13/82

SEWER CODE

Address Chart

WATER CODE

# 50IL BORING PROFILES, 5WM, STORM DRAIN PROFILE AND STRUCTURE SCHEDULE. RUNNING BROOK

# ELEMENTARY SCHOOL

VILLAGE OF WILDE LAKE SECTION 9 AREA 5 LOT 78 AND OPEN SPACE LOT 79 PARKING LOT ADDITIONS

TAX MAP No.: 30 GRID No.: 14 P/O PARCEL No.: 258 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND DATE: FEB. 13, 2008 SCALE: AS SHOWN SHEET 8 OF 4 SDP-08-016

20.0 STANDARDS AND SPECIFICATIONS

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 Olup 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, infiliration 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 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.
  Soil Amendments (Fertilizer and Lime Specifications) 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.
- 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 sections.
- 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 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. iv. Incorporate lime and fertilizer into the top 3-5" of soil by disking or other suitable means.

  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 pt shall be between 6.0 and 7.0.

  2. Soluble salts shall be less than 500 parts per million (cpm).

  3. The soil shall contain less than 40x clay but enough fine grained material (30X sit) plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or

- moderate amount of moisture. An exception is if lovegrass o serecia lespedezas is to be planted, then a sandy soil (30% sil serecta respectations in the planties. There a sural solution 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.
- the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.

  Apply soil amendments as per soil test 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

b. Areas previously graded in conformance with the drawings shall be maintained in a true an even grade, then scarified or otherwise loosened to a depth of 3-5" to permit bonding of

- and ready the area for seed and application. Where site constitutions will not permit following the 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 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. 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 hydrosedien. 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.
- the date indicated on the conjunction.

  The date when hydroseeding. Note: It is very important to keep inoculant as cool as positive until used. Temperatures above 75°-80° r. can weaken bacteria and make the inoculant less effect.

  Methods of Seeding. Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a cultipacter 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.
- without interruption.

  i. 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.
- Apply half the seeding rate in each direction.

  Much 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 Much (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 of growth inhibiting factors.

  d. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber much will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous sturry. and will blend with seed, fertilizer and other additives to form a homogeneous sturry. 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 phytol-toxic. 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 16% maximum and water holding capacity of 90% minimum.

  Note: Only sterile straw much should be used in areas where one species of grass is desired. Mukhing 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.
- 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. pe, 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.

  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:
- A much 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. It used on sloping land, this practice should be used on the continuit it 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
- xture 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. Incremental Stabilization - Cut Slopes
- 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°. . 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.
- 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. Incremental Stabilization of Embankments - Fill Slopes

operation out of the seeding season will necessitate the application of temporary stabilization

J. Incremental Stabilization of Embarkments - Fill Slopes

i. Embarkments 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 embarkment to intercept surface runoff and convey it down the slope in a non-crosive 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 embarkment, dress and stabilize.

c. Place Phase 2 embarkment, dress and stabilize.

d. Place final phase embarkment, dress and stabilize.

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 SEFOING 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.

Se	ed Mixture (Hard From	Fertilizer .	Lime Rate			
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	(10-10-10)	
1	BARLEY OATS RYE	122 96 140	3/1 - 5/15, 8/15 - 10/15	1" - 2" 1" - 2" 1" - 2"	600  b/ac (15  b/1000sf)	2 tons/ac (100 lb/1000sf)

SECTION 3 - PERMANENT SEEDING

Seeding grass and legumes to establish groung 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

Seed Mixture (Hardiness Zone <u>6b</u> _) From Table 25						Fertilizer ( (10-20-20)	2ate	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/	175  b/ac	175 lb/ac (4 lb/	2 tons/ac
10	TALL FESCUE (80%) HARD FESCUE (20%)	120 30	3/1 - 5/15, 8/15 - 10/15	1" - 2"	1000sf)	1000sf)	1000sf)	1000sf)

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

#### SEDIMENT CONTROL NOTES

- 1) A MINIMUM OF 40 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LISCENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY 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
- 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

9.00 ACRES

0.66 ACRES

611 CU.YD5.

611 CU.YD5.

- 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
- 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
- 7) SITE ANALYSIS: TOTAL AREA OF SITE
  - AREA DISTURBED AREA TO BE ROOFED OR PAVED AREA TO BE VEGETATIVELY STABILIZED
  - TOTAL CUT TOTAL FILL

0.93 ACRES 0.27 ACRES OFFSITE WASTE/BORROW AREA LOCATION

B) 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 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.

### SEQUENCE OF CONSTRUCTION FOR PARKING LOT ADDITIONS

1. OBTAIN GRADING PERMIT. (1 DAY)

- 2. NOTIFY "MISS UTILITY" AT LEAST 40 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777 NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION DIVISION AT 410-313-1070 AT LEAST 24 HOURS BEFORE STARTING ANY WORK.
- 3. CLEAR FOR AND INSTALL/CONSTRUCT ALL PERIMETER TEMPORARY SEDIMENT CONTROLS. (I WEEK) 4. UPON PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR BEGIN ROUGH GRADING THE SITE AND IMMEDIATELY STABILIZE ALL SLOPES UPON COMPLETION OF GRADING WITH TEMPORARY SEEDING. (6
- 5. INSTALL STORM DRAIN SYSTEM AND EARTH SWALE. (1 WEEK)
- 6. INSTALL CURB AND PAVING. (2 WEEKS)
- 7. FINE GRADE SITE. (1 WEEK)
- 8. INSTALL SIDEWALKS AND MACADAM WALKWAY. (I WEEK)
- FOLLOWING SUCCESSFUL STABILIZATION (i.e. FULLY-ESTABLISHED VEGETATION OR PAVING) OF ALL DISTURBED AREAS, OBTAIN PERMISSION FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR TO REMOVE ALL REMAINING SEDIMENT & EROSION CONTROL DEVICES AND THEN STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS WITH PERMENANT SEEDING. (2 WEEKS)

10. NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR A FINAL INSPECTION OF THE COMPLETED SITE.

#### STANDARDS AND SPECIFICATIONS FOR TOPSOIL

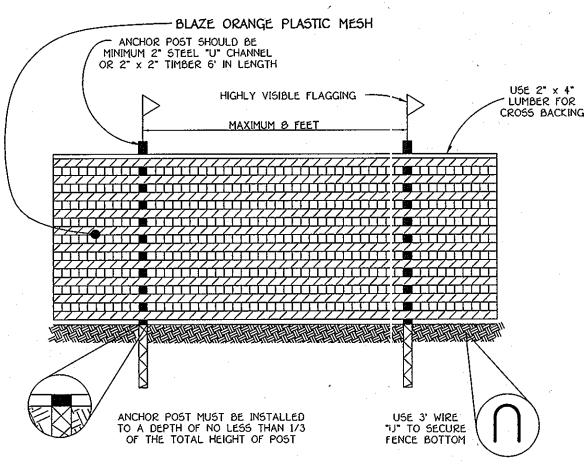
Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation

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 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.
- furnish continuing supplies of moisture and plant nutrients.
- b. The soil material is so shallow that the rooting zone is not deep enough to support plants or 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.
- For the purpose of these Standards and Specifications, areas having slope: steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than a shall have the appropriate stabilization shown on the plans. Construction and Material Specifications

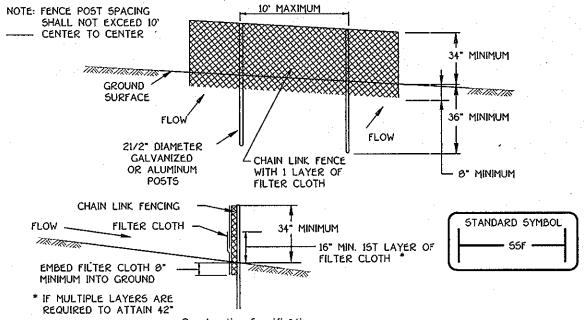
Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in

- poperation with Maryland Agricultural Experimental Station. Topsoil Specifications - Soil to be used as topsoil must meet the following
- Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay kram, 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 diamet
- 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 4-0 tons/acre (200-400 pounds per 1,000 squire 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.
- For sites having, disturbed areas under 5 acres: Place topsoil (if required) and apply soil amendments as specified in 2010 Vegetative
- tabilization Section I Vegetative Stabilization Methods and Materials. 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: Tonsoil 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 2:10 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials. 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 Seciment 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. 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, appropriate constituents must be added to meet the requirements prior to use.
- c. Composted sludge shall be applied at a rate of 1 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. •1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.



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

# SUPER SILT FENCE



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

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 nost with wire ties or

staples at top and mid section and shall meet the following requirements for Geotextile Class F: Tensile Strenath 50 lbs/in (min.) Test: MSMT 509 Tensile Modulus 20 lbs/in (min.)

0.3 gal/ft /minuté (max.) Test: MSMT 322

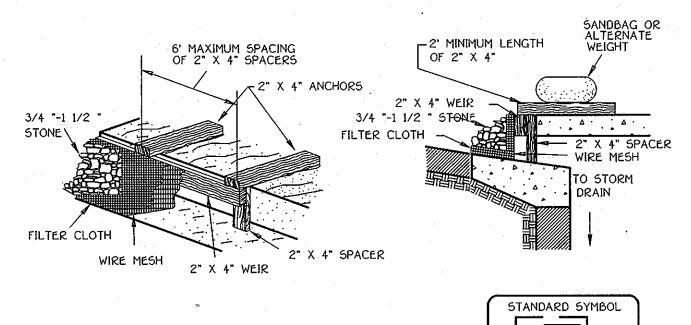
Test: MSMT 322

# Design Criteria

Flow Rate

Filtering Efficiency

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10x	0 - 10:1	Unlimited	Unlimited
10 - 20X	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
50x +	2:1 +	50 feet	250 feet



MAX. DRAINAGE AREA = 1/4 ACRE

# Construction Specifications. Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4")

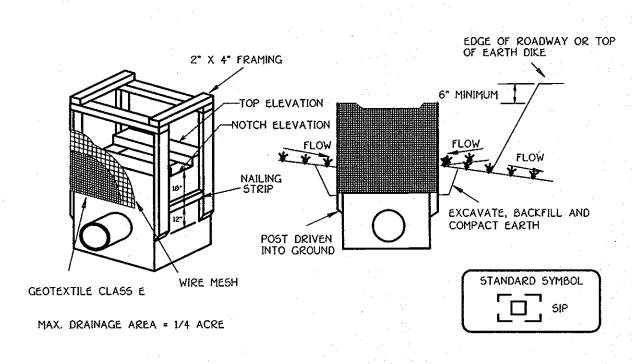
- to the 2" x 4" weir (measuring throat length plus 2') as shown on the standard 2. Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.
- Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4' apart). 4. Place the assembly against the inlet throat and nail (minimum 2' lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across
- the inlet top and be held in place by sandbags or alternate weight. 5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
- 6. Form the 1/2 " x 1/2 " wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4 "  $\times$  1 1/2 " stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.
- replaced when clogged with sediment. 8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

7. This type of protection must be inspected frequently and the filter cloth and stone

# CURB INLET PROTECTION (COG OR COS INLETS)

#### STABILIZED CONSTRUCTION ENTRANCE MOUNTABLE BERM (6" MIN.) - 50' MINIMUM EXISTING PAVEMENT \*\* GEOTEXTILE CLASS 'C' PIPE AS NECESSARY OR BETTER MINIMUM 6" OF 2"-3" AGGREGATE OVER LENGTH AND WIDTH OF - EXISTING GROUND STRUCTURE STANDARD SYMBOL PROFILE ##SCE \* 50' MINIMUM LENGTH **PAVEMENT** 10' MINIMUM WIDTH PLAN VIEW Construction Specification Length - minimum of 50' (\*30' for single residence lot).

- 2. Width 10' minimum, should be flared at the existing road to provide a turning radius.
- 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.
- Stone crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall 4. be placed at least 6" deep over the length and width of the entrance.
- 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.
- 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.



#### Construction Specifications

1. Excavate completely around the inlet to a depth of 18" below the

- notch elevation. 2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where
- flooding and safety issues may arise. 3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post. 4. Stretch the Geotextile Class E tightly over the wire mesh with

the geotixtile extending from the top of the frame to 18" below the

inlet notch elevation. Fasten the geotextile firmly to the frame.

- The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down 5. Backfill around the inlet in compacted 6" layers until the
- layer of earth is level with the notch elevation on the ends and top elevation on the sides. 6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike
- should be at least 6" higher than the top of the frame. 7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

STANDARD INLET PROTECTION



"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 13204, Expiration Date: November 3, 2008."

# TREE PROTECTION DETAIL

2/19/13 KEVISED SHEET NUMBER ADDED THIS SHEET FOR CETAILS AND BUILDING ELEVATIONS. DATE DESCRIPTION REVISION BLOCK

IOWARD COUNTY PUBLIC SCHOOL SYSTEM 10910 Maryland Route 108 Ellicott City, Maryland 21042 Attention: Bruce Gist 410-313-6805

PREPARED FOR

Parcel Number Street Address PART OF 5215 WEST RUNNING BROOK ROAD PARCEL 258 COLUMBIA, MD. 21044 P/O PARCEL ECTION/AREA 9/5 258 TAX MAP | ELEC. DIST. CENSUS T BLOCK NO. ZONE NEWTOWN FIFTH 6054.01 IOPEN SPACE

# SEDIMENT CONTROL NOTES AND DETAILS RUNNING BROOK ELEMENTARY 5CHOOL

VILLAGE OF WILDE LAKE SECTION 9 AREA 5 LOT 78 AND OPEN SPACE LOT 79 PARKING LOT ADDITIONS

TAX MAP No.: 30 GRID No.: 14 P/O PARCEL No.: 258 HOWARD COUNTY, MARYLAND FIFTH ELECTION DISTRICT DATE: FEB. 13, 2008 SCALE: AS SHOWN



CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS ELLICOTT CITY, MARYLAND 21042

HOWARD COUNTY

PLANNING BOARD

FISHER, COLLINS & CARTER. INC.

Signature of Develope

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."

ENGINEER'S CERTIFICATE

certify that this plan for sediment and erosion control represents a practical and workable

olan based on my personal knowledge of the site conditions and that it was prepared in

optance with the requirements of the Howard Soil Conservation District."

the HOWARD SOIL CONSERVATION DISTRICT.

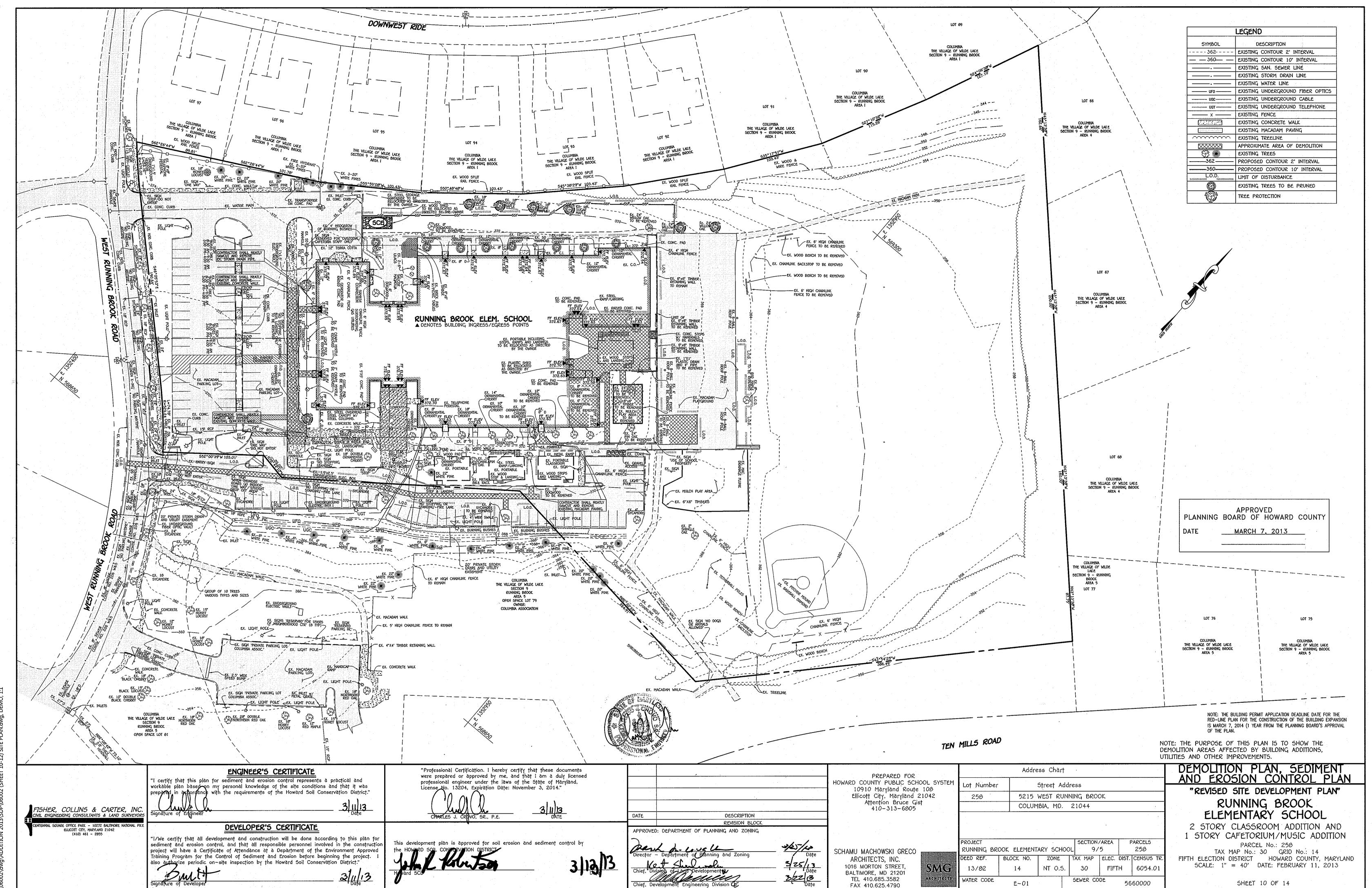
This development plan is approved for soil erosion and sediment control by

4629/08 424 05

RUNNING BROOK ELEMENTARY SCHOOL WATER CODE SEWER CODE E-01

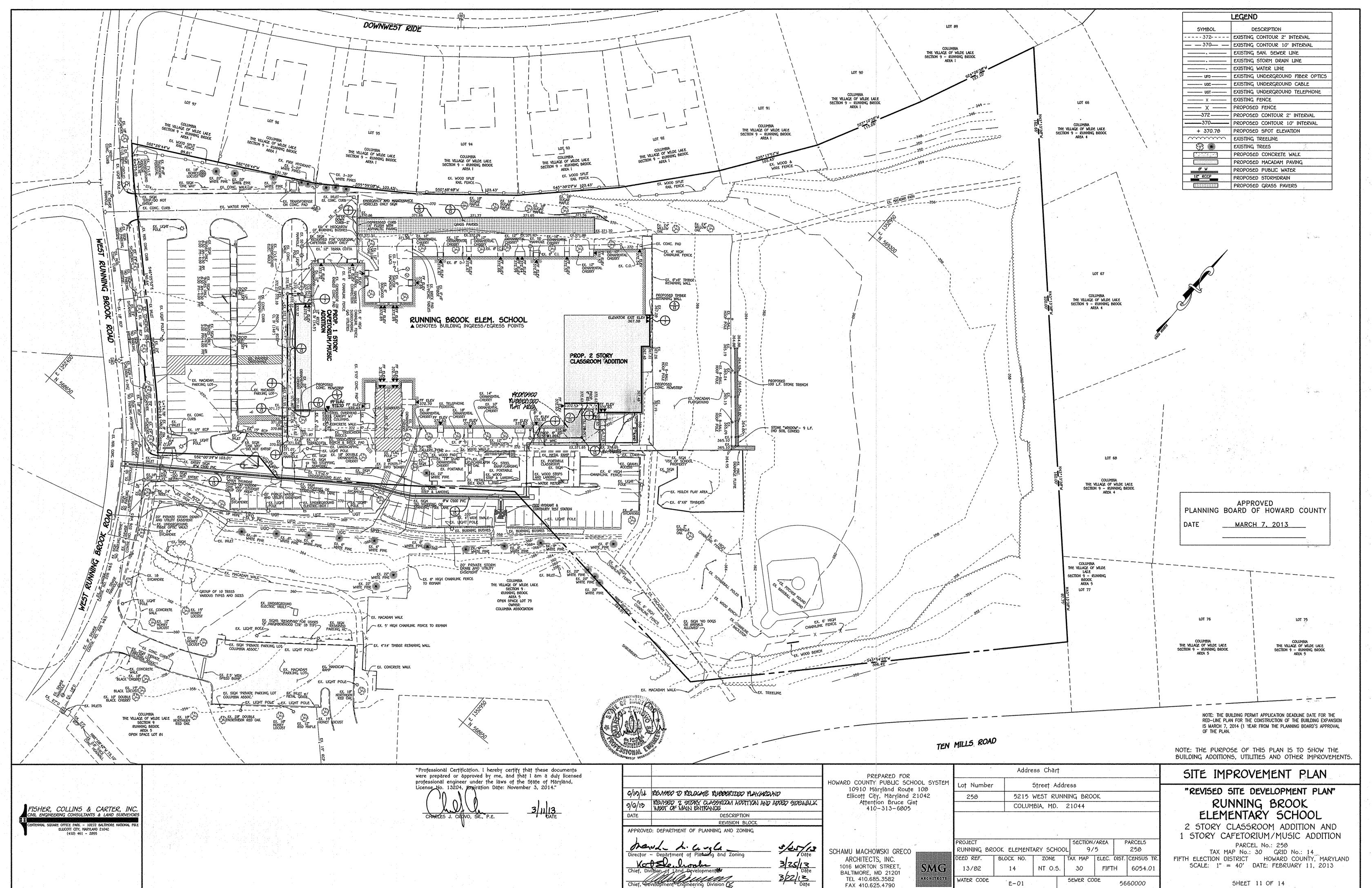
Address Chart

SHEET 9 OF 14 SDP-08-016 5660000



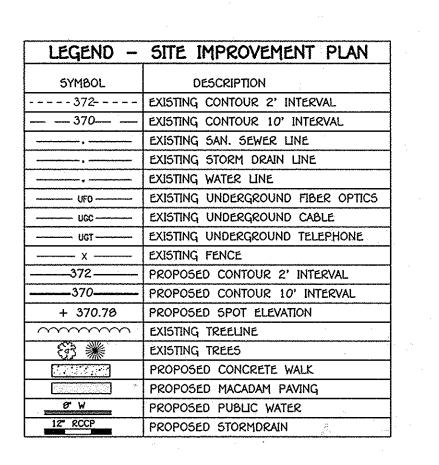
IN 2006 O6002) dural A Drittion 2013 (CHEET 10.12) CTE DI AN dura DEI

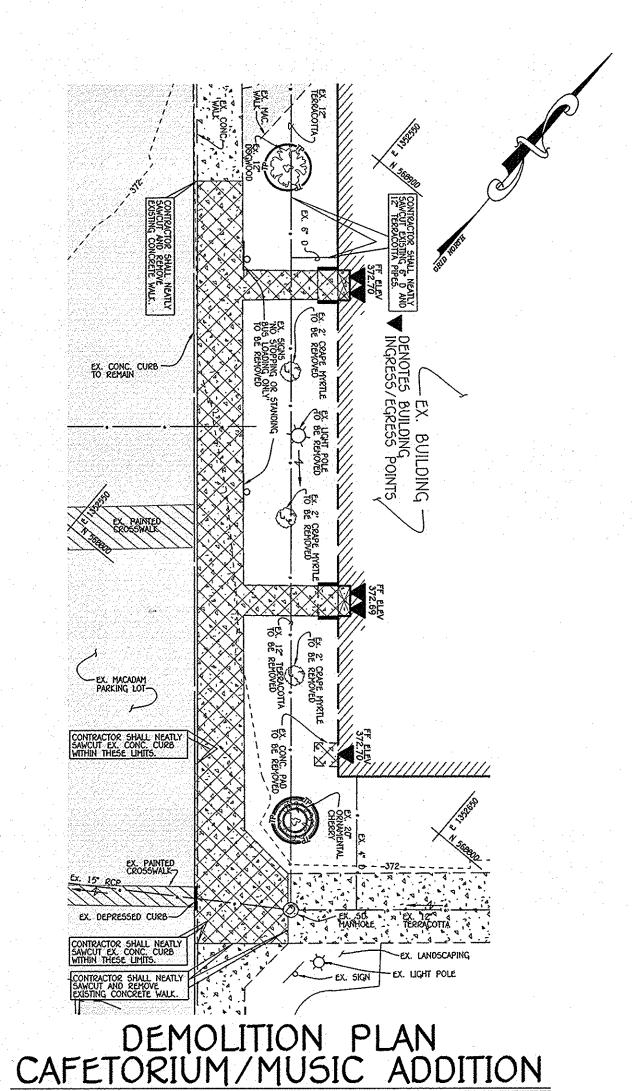
50P-00-016

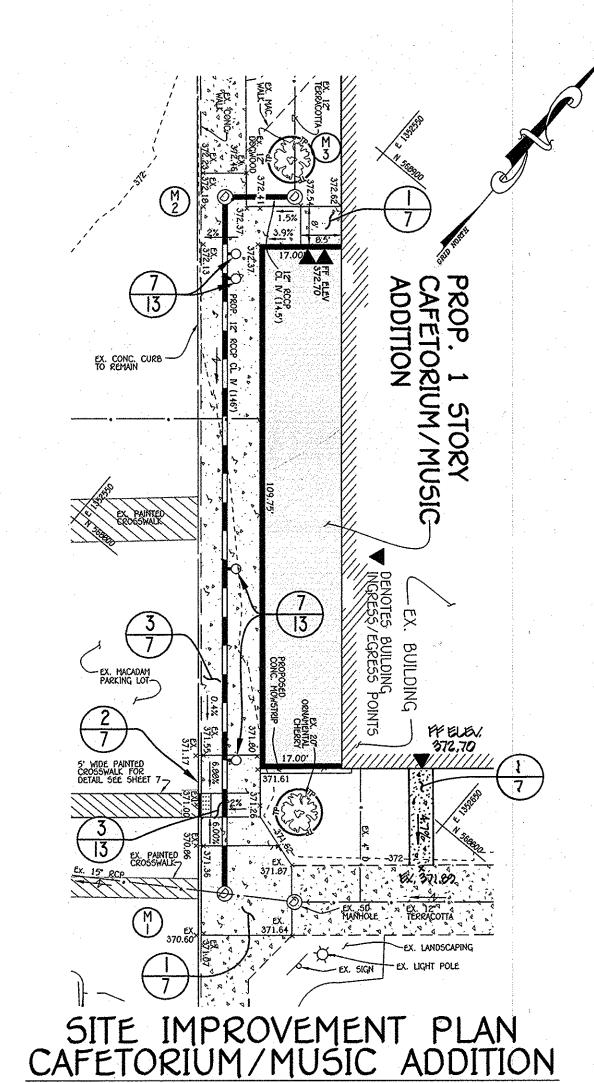


50P-08-016

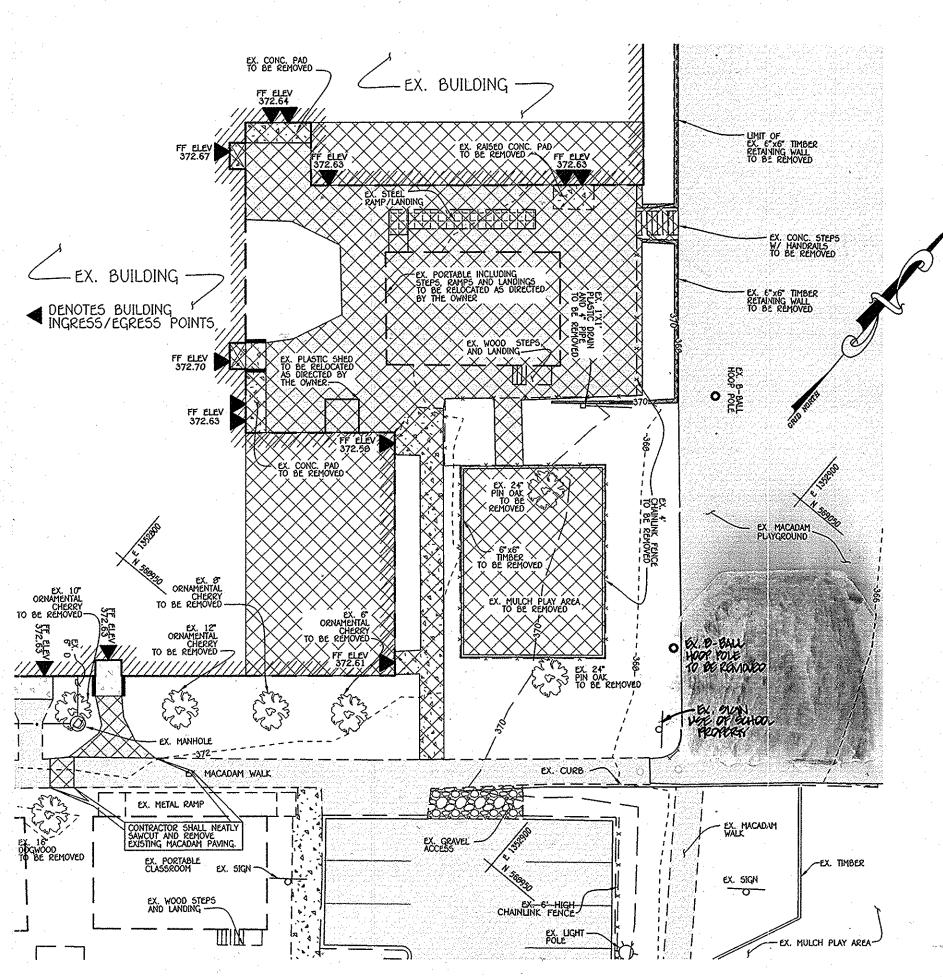
LEGENI	D - DEMOLITION PLAN
SYMBOL	DESCRIPTION
362	EXISTING CONTOUR 2' INTERVAL
	EXISTING CONTOUR 10' INTERVAL
	EXISTING SAN. SEWER LINE
	EXISTING STORM DRAIN LINE
	EXISTING WATER LINE
UFO	EXISTING UNDERGROUND FIBER OPTICS
UGC	EXISTING UNDERGROUND CABLE
UGT	EXISTING UNDERGROUND TELEPHONE
X	EXISTING FENCE
	EXISTING CONCRETE WALK
in the first News	EXISTING MACADAM PAVING
· ~~~~~	EXISTING TREELINE
	APPROXIMATE AREA OF DEMOLITION
₩ E3	EXISTING TREES
0	EXISTING TREES TO BE PRUNED
	TREE PROTECTION

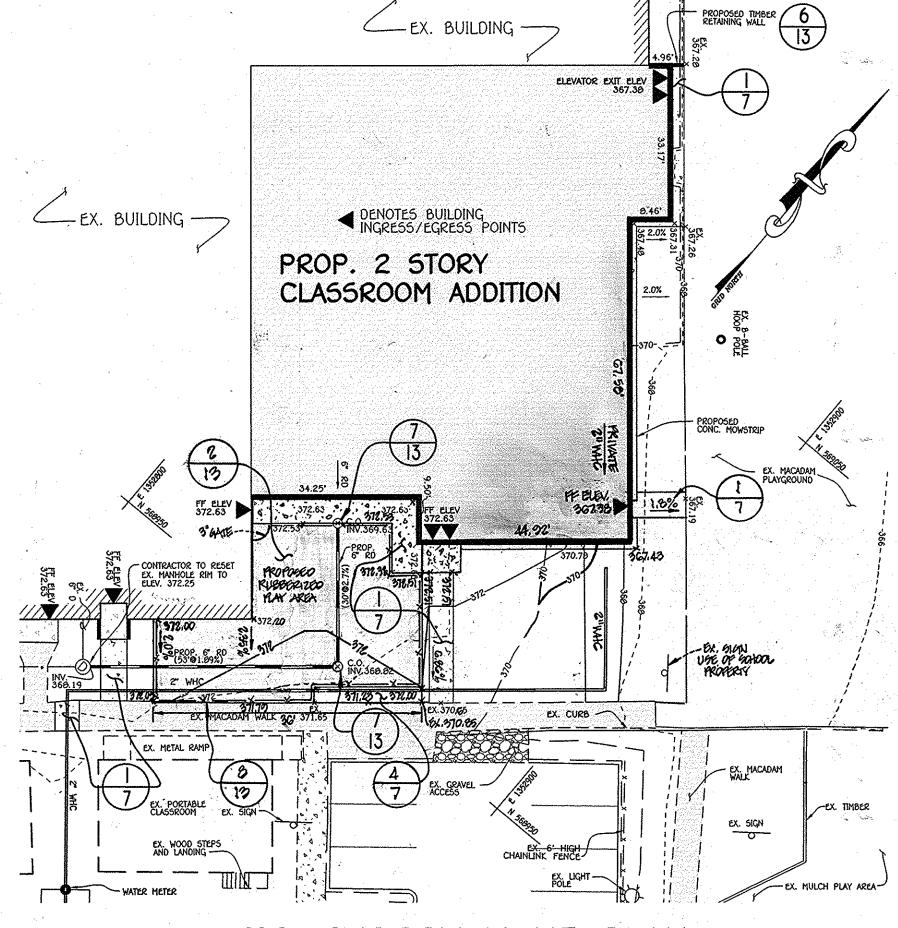






SCALE: 1" = 20'





DEMOLITION PLAN CLASSROOM ADDITION 5CALE: 1" = 20'

SITE IMPROVEMENT PLAN CLASSROOM ADDITION 5CALE: 1" = 20'



APPROVED PLANNING BOARD OF HOWARD COUNTY MARCH 7, 2013

NOTE: THE BUILDING PERMIT APPLICATION DEADLINE DATE FOR THE RED-LINE PLAN FOR THE CONSTRUCTION OF THE BUILDING EXPANSION IS MARCH 7, 2014 (1 YEAR FROM THE PLANNING BOARD'S APPROVAL OF THE PLAN.

NOTE: THE PURPOSE OF THIS PLAN IS TO SHOW HANDICAP ACCESS AND TO CLEARLY DISPLAY IMPROVEMENTS.

FISHER, COLLINS & CARTER, INC. CML ENGINEERING CONSULTANTS & LAND SURVEYORS E OFFICE PARK - 10272 BALTIMORE NATIONAL PIK ELLICOTT CITY, MARYLAND 21042 (410) 461 - 2055

SCALE: 1" = 20'

"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 13204, Expiration Date: November 3, 2014."

6/19/14	revised to belowife pubberized playlikoland
0/0/13	REVISED 2 STORY CLASSROOM ADDITION AND ADDED SIDEWALK WEST OF MAIN ENTRANCE
DATE .	DESCRIPTION
	REVISION BLOCK
APPROVE	She de la
Director -	- Department of Planning and Zoning Date

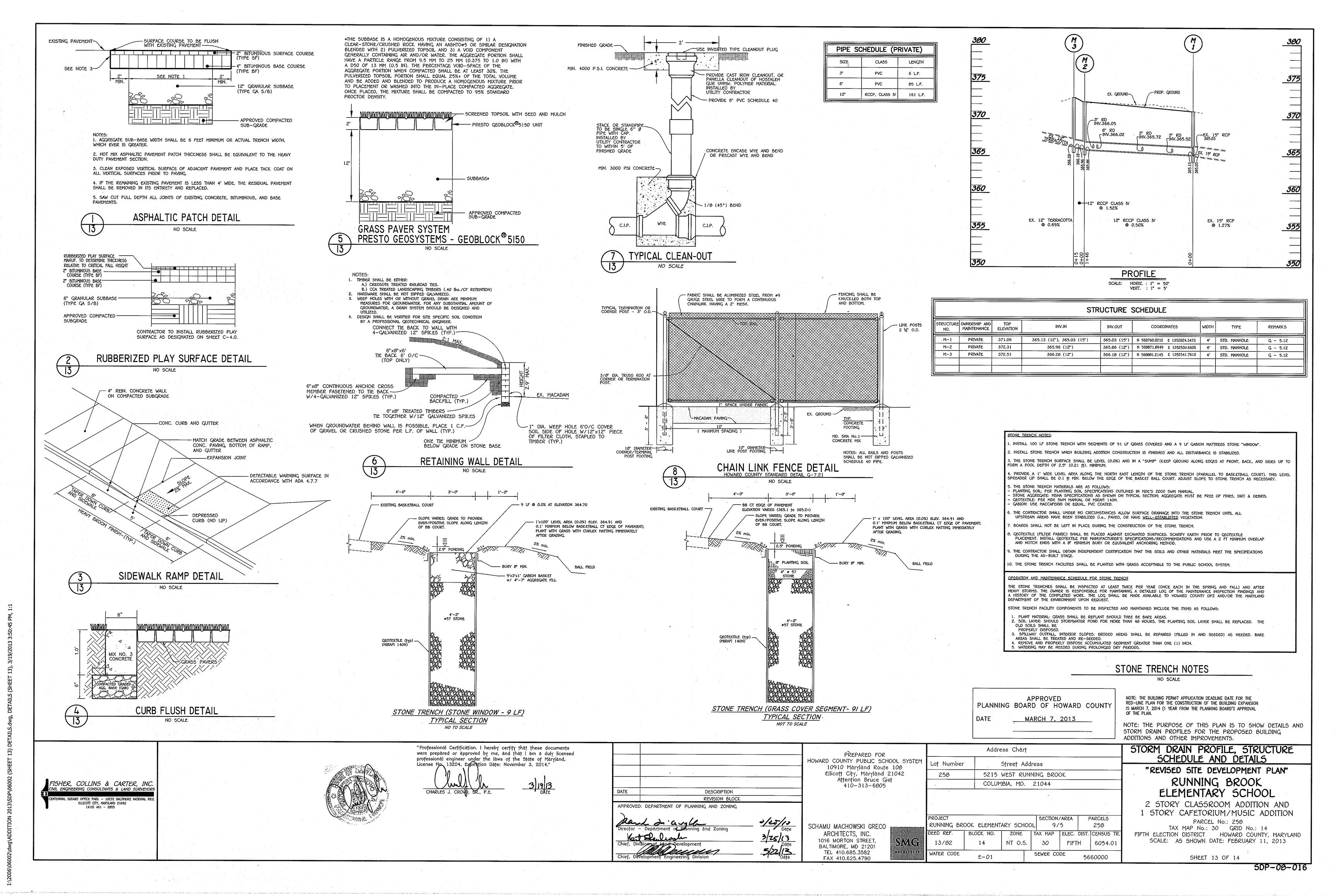
PREPARED FOR	· ^	Addre	ss Chart		:		*. *. ·
HOWARD COUNTY PUBLIC SCHOOL SYSTEM 10910 Maryland Route 108	1 Lot Number	-	Street Add	dress			
Ellicott City, Maryland 21042	258	5215	WEST RUN	INING BRO	OK		
Attention Bruce Gist 410-313-6805		COLUM	IBIA, MD.	21044			*
			e s d		:		
	PROJECT			SECTION.	1	PARCEL5	
SCHAMU MACHOWSKI GRECO		OOK ELEMENT	ARY 5CHO			258	
ARCHITECTS, INC.	DEED REF.	BLOCK NO.	ZONE	TAX MAP	ELEC: 0	IST. CENSUS	TR.
1016 MORTON STREET, BALTIMORE, MD 21201	13/82	14	NT 0.5.	30	FIFTH	6054.0	1
TEL 410.685.3582 ARCHITECTS FAX 410.625.4790	WATER CODE	E-01		SEWER CO	DE	5660000	

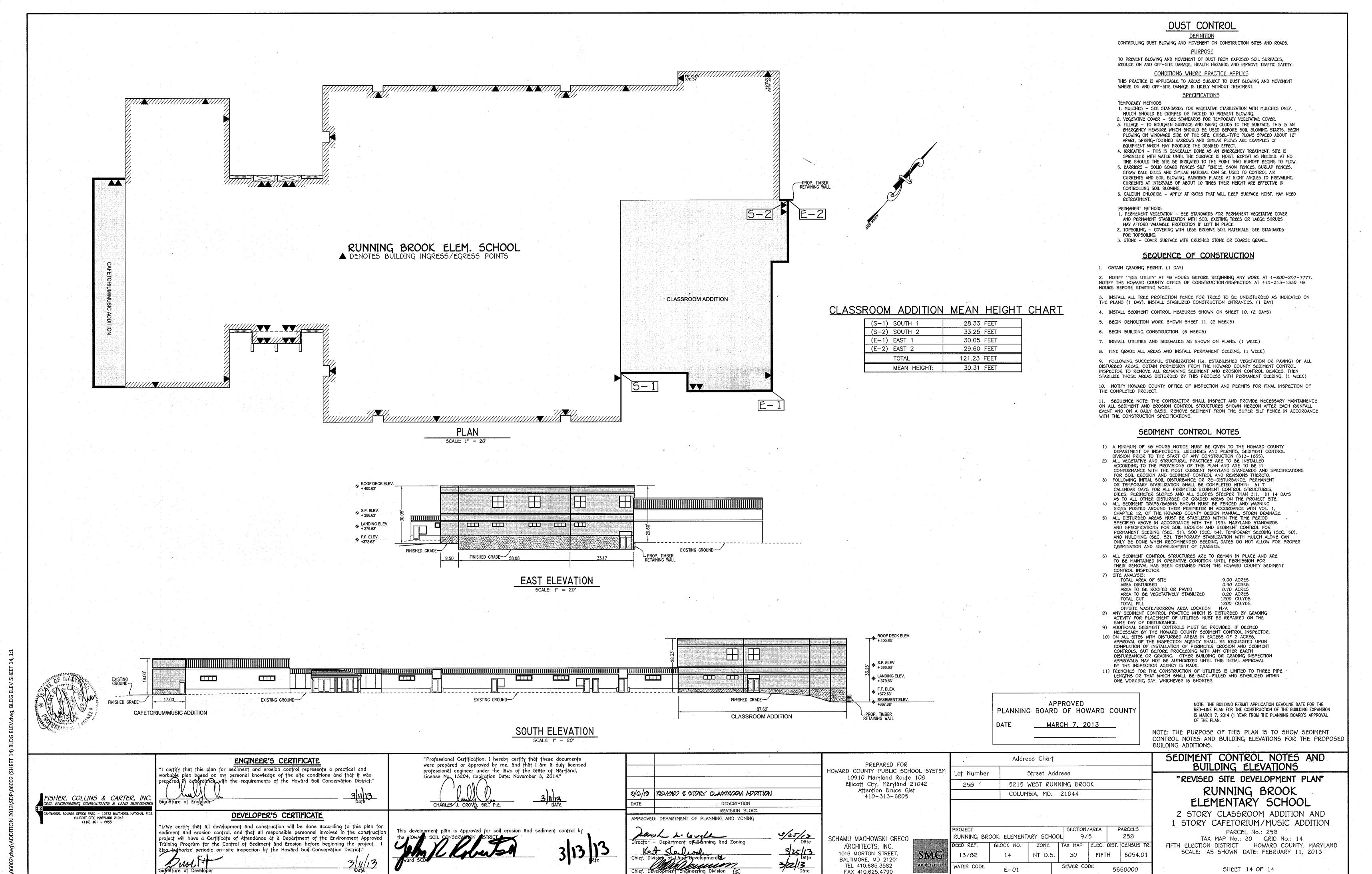
BUILDING ADDITIONS AND DEMOLITION PLAN ENLARGEMENTS "REVISED SITE DEVELOPMENT PLAN" RUNNING BROOK ELEMENTARY SCHOOL

2 STORY CLASSROOM ADDITION AND 1 STORY CAFETORIUM/MUSIC ADDITION PARCEL No.: 258 TAX MAP No.: 30 GRID No.: 14
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE: 1" = 20' DATE: FEBRUARY 11, 2013

SHEET 12 OF 14

50P-08-016





5DP-08-016