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SUPPLEMENTAL PLAN, LANDSCAPE, TOPOGRAPHY, AND STORMWATER MANAGEMENT PLAN

WINTER CREST

Approved: Department Of Planning And Zoning
U. J. ... 10/09/12
 Chief, Division Of Land Development
... 9/27/12
 Chief, Development Engineering Division

BUILDABLE LOTS 1 THRU 8 & OPEN SPACE LOT 9

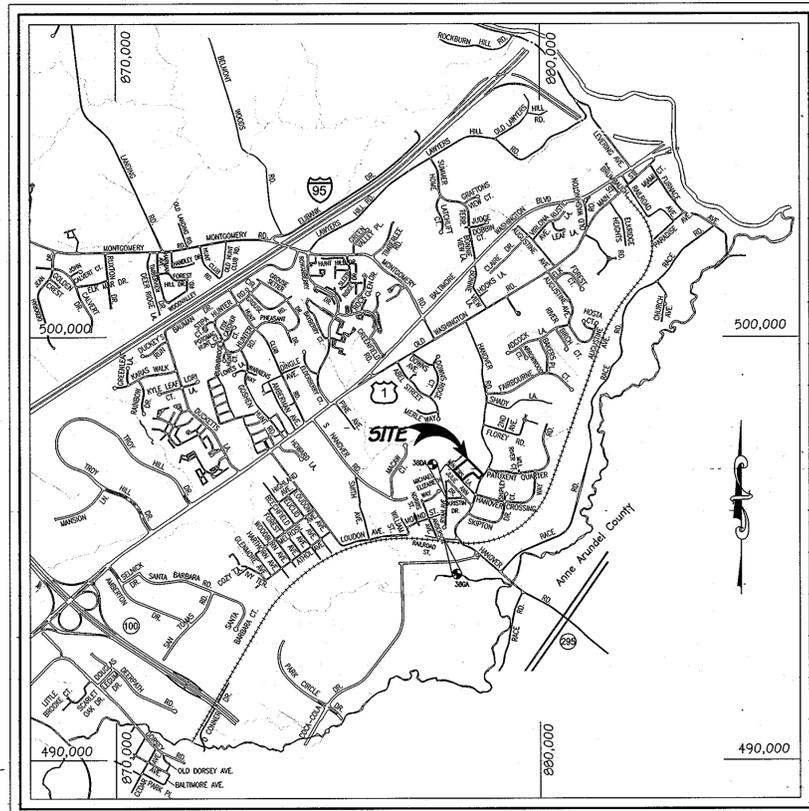
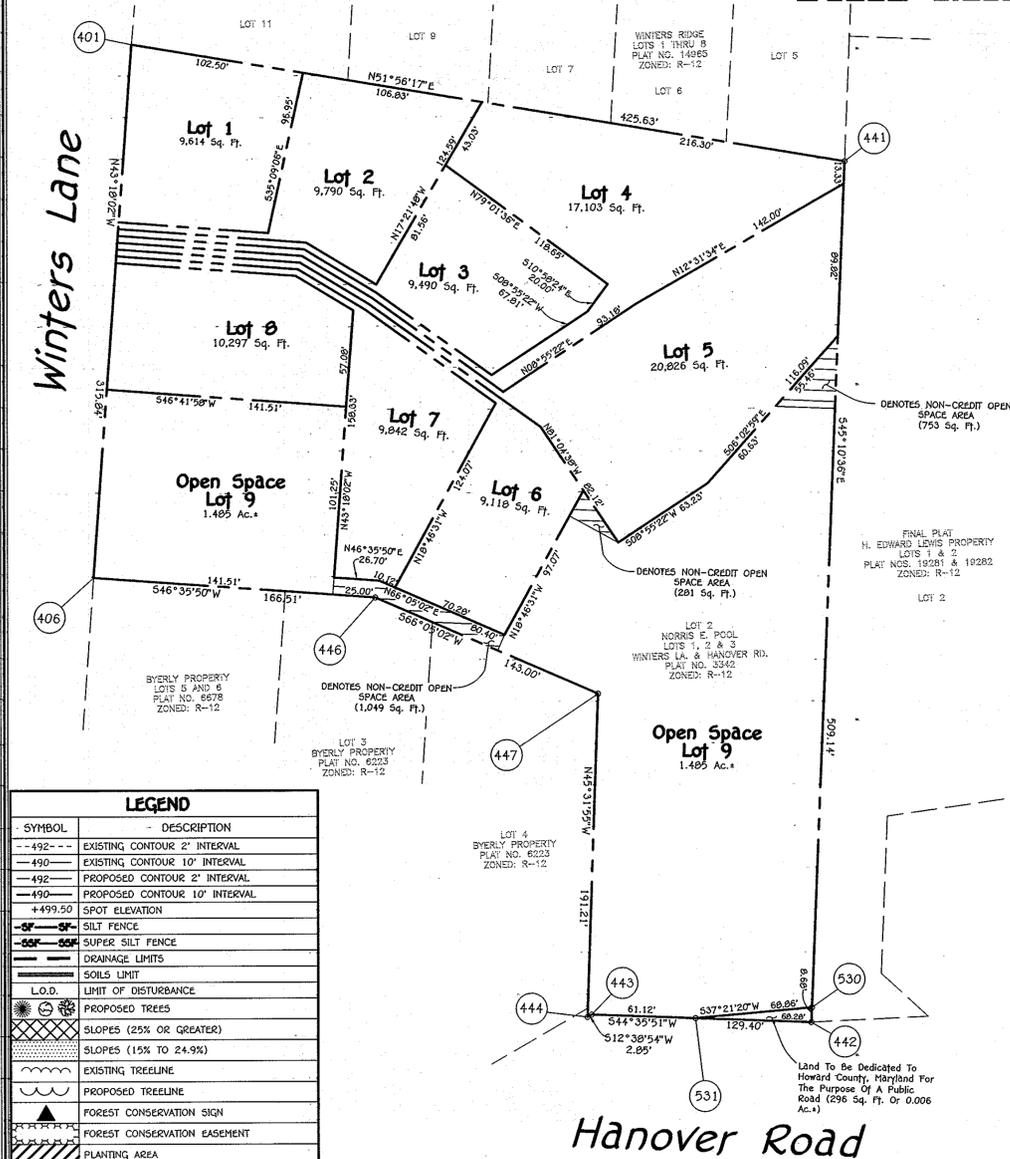
(Being A Resubdivision Of Lot 2, As Shown On A Plat
 Entitled "Norris E. Pool, Lots 1, 2 & 3, Winters La. &
 Hanover Rd." Recorded Among The Land Records Of
 Howard County, Maryland As Plat No. 3342)

ZONING: R-12

TAX MAP No. 38 GRID No. 15 PARCEL No. 868

| ROADWAY INFORMATION CHART | | | |
|---------------------------|------------------------|--------------|----------------|
| ROAD NAME | CLASSIFICATION | DESIGN SPEED | EASEMENT WIDTH |
| N/A | USE-IN-COMMON DRIVEWAY | 15 M.P.H. | 24' |

| STORMWATER MANAGEMENT PRACTICES | | |
|---------------------------------|------------------------------|---|
| LOT No. | DRY WELLS M-5 (NUMBER) | MICRO BIO-RETENTION M-6 (NUMBER) |
| 1 | 2 | - |
| 2 | 1 | - |
| 3 | 1 | - |
| 4 | 1 | - |



VICINITY MAP
 ADC MAP No. 17, H9
 SCALE: 1" = 2000'

FIRST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

| SYMBOL | DESCRIPTION |
|-----------|-------------------------------|
| ---492--- | EXISTING CONTOUR 2' INTERVAL |
| ---490--- | EXISTING CONTOUR 10' INTERVAL |
| ---492--- | PROPOSED CONTOUR 2' INTERVAL |
| ---490--- | PROPOSED CONTOUR 10' INTERVAL |
| 499.50 | SPOT ELEVATION |
| --- | SILT FENCE |
| --- | SUPER SILT FENCE |
| --- | DRAINAGE LIMITS |
| --- | SOILS LIMIT |
| --- | L.O.D. |
| --- | LIMIT OF DISTURBANCE |
| --- | PROPOSED TREES |
| --- | SLOPES (25% OR GREATER) |
| --- | SLOPES (15% TO 24.9%) |
| --- | EXISTING TREELINE |
| --- | PROPOSED TREELINE |
| --- | FOREST CONSERVATION SIGN |
| --- | FOREST CONSERVATION EASEMENT |
| --- | PLANTING AREA |

| PRIVATE WELL & PRIVATE SEPTIC SYSTEM CHART | | | | |
|--|-------------------|--|--------------|----------------|
| PARCEL NO. | ADDRESS | OWNER | ABANDON WELL | ABANDON SEPTIC |
| 868 | 6301 WINTERS LANE | WINTERS LANE INVESTMENTS, LLC C/O B. JAMES GREENFIELD | N/A | YES |

NOTE: WATER METERS WILL NOT BE RELEASED BY HOWARD COUNTY TO ANY NEW BUILDING UNTIL THE EXISTING WELLS AND SEPTIC SYSTEMS HAVE BEEN ABANDONED IN ACCORDANCE WITH HOWARD COUNTY HEALTH DEPARTMENT REGULATIONS AND THE EXISTING BUILDINGS ARE CONNECTED TO THE PUBLIC WATER AND SEWER MAINS.

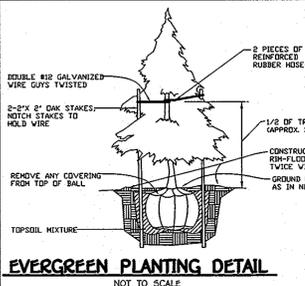
- GENERAL NOTES**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSMA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
 - THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST (5) WORKING DAYS PRIOR TO THE START OF WORK.
 - THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
 - TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
 - THE COORDINATES SHOWN ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT Nos. 380A AND 38 QA WERE USED FOR THIS PROJECT.
- HOWARD COUNTY MONUMENT No. 380A N 556,796.2929 ELEV. = 126.133
E 1,390,221.4861
- HOWARD COUNTY MONUMENT No. 38CA N 555,897.3157 ELEV. = 80.848
E 1,390,132.1323
- SUBJECT PROPERTY ZONED R-12 PER 02-02-04 COMPREHENSIVE ZONING PLAN AND "COMPLITE" AMENDMENTS EFFECTIVE ON 07-28-06.
 - BACKGROUND INFORMATION:
a. SUBDIVISION NAME: WINTER CREST
b. TAX MAP NO. 38
c. PARCELS NO. 868
d. ZONING: R-12
 - ELECTION DISTRICT: FIRST
 - GROSS AREA OF TRACT = 3.697 AC.
 - NUMBER OF BUILDABLE LOTS: 8
 - NUMBER OF OPEN SPACE LOTS: 1
 - NUMBER OF NON-BUILDABLE BULK PARCELS: 0
 - NUMBER OF BUILDABLE BULK PARCELS: 0
 - AREA OF BUILDABLE BULK PARCELS: 0.00 AC.
 - AREA OF OPEN SPACE LOTS: 1.405 AC.
 - AREA OF NON-BUILDABLE BULK PARCELS: 0.00 AC.
 - AREA OF BUILDABLE BULK PARCEL: 0.00 AC.
 - AREA OF NON-BUILDABLE PARCEL: 0.00 AC.
 - AREA OF ROADWAY TO BE DEDICATED: 0.006 AC.
 - PREVIOUS FILE NUMBERS: F-75-D18, NORRIS F-08-003 (APPROVED ON 4/10/08), WP-12-009 & F-12-003
 - AREA OF FLOODPLAIN = 0.00 AC.
 - AREA OF 25% OR GREATER SLOPES = 0.418 AC.
 - NET AREA OF TRACT = 3.279 AC.
 - OPEN SPACE TABULATION:
a. OPEN SPACE REQUIRED = (8,400 SQ.FT. OPTION) = 30% x 3.697 = 1,109 AC.
b. TOTAL OPEN SPACE PROVIDED = 1,405 AC.
c. CREDITED OPEN SPACE PROVIDED = 1,437 AC.
d. NON-CREDITED OPEN SPACE PROVIDED = 0.048 AC.
e. RECREATIONAL OPEN SPACE REQUIRED = N/A (LESS THAN 10 UNITS)
 - ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF ASPHALT T-100.
 - NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
 - PUBLIC WATER AND SEWER SHALL BE UTILIZED WITHIN THIS DEVELOPMENT. EXISTING UTILITIES ARE BASED ON CONT. Nos. 44-1937 & 10-3041.
 - SOILS INFORMATION TAKEN FROM SOIL MAP No. 34, SOIL SURVEY, HOWARD COUNTY, MARYLAND, JULY, 1968 ISSUE.
 - THE EXISTING DWELLING (CIRCA 1969) LOCATED ON PROPOSED LOT 5 IS TO REMAIN.
 - BOUNDARY OUTLINE BASED ON FIELD RUN SURVEY PREPARED BY FISHER, COLLINS & CARTER, INC. DATED MARCH, 2006.
 - TOPOGRAPHIC CONTOURS BASED ON FIELD RUN TOPOGRAPHY PREPARED BY FISHER, COLLINS & CARTER, INC. DATED MARCH, 2006.
 - THERE ARE AREAS OF STEEP SLOPES LOCATED ON THIS PROPERTY AS DEFINED BY THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.116.b.
 - STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH HOWARD COUNTY AND MSMA 378 SPECIFICATIONS. RETENTION VOLUME WILL BE PROVIDED THROUGH THE USE OF A SURFACE SAND FILTER. WATER QUALITY WILL BE PROVIDED VIA A SURFACE SAND FILTER. ONE (1) 60" AND FOUR (4) DRYWELLS, CHANNEL PROTECTION IS NOT REQUIRED SINCE THE ONE YEAR PEAK DISCHARGE IS LESS THAN 2 c.f.s. THESE FACILITIES ARE PRIVATELY OWNED AND MAINTAINED BY THE H.O.A.
 - THE 24' PRIVATE USE-IN-COMMON ACCESS EASEMENT AND MAINTENANCE AGREEMENT FOR THE BENEFIT OF LOTS 2 THRU 7 AND OPEN SPACE LOT 9 WILL BE RECORDED SIMULTANEOUSLY WITH THE RECORDATION OF THIS PLAT.
 - THERE ARE NO FLOODPLAIN AND NO WETLANDS LOCATED ON-SITE FOR THIS PROJECT.
 - THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE MARS GROUP DATED APRIL, 2007 AND APPROVED UNDER SP-08-003.
 - THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY PROVIDING 0.78 AC. OF ON-SITE RETENTION AND 0.32 AC. OF ON-SITE REFORESTATION @ \$250/SQ.FT. FOR 19,939 SQ.FT. = \$4,989.00 IS REQUIRED. THE BALANCE OF 0.02 ACRES OF FOREST CONSERVATION WILL BE PROVIDED VIA A FEE-IN-LIEU PAYMENT IN THE AMOUNT OF \$684.00 (871 SQ.FT. X \$0.75 = \$ 653.40).
 - THE LANDSCAPE SURETY IN THE AMOUNT OF \$7,350.00 FOR PERIMETER LANDSCAPE REQUIREMENTS (18 SHADE TREES AND 15 EVERGREEN TREES) OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL IS POSTED WITH THE DEVELOPER'S AGREEMENT FOR THIS SUBDIVISION.
 - THE FOREST STAND DELINEATION AND WETLAND DELINEATION FOR THIS PROJECT WAS PREPARED BY ESA, INC., DATED JULY, 2007 AND APPROVED UNDER SP-08-003.
 - THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
 - FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND THE ROAD R/W LINE AND NOT THE PIPESTEM LOT DRIVEWAY.
 - NO CEMETERIES EXIST WITHIN THIS SUBDIVISION.
 - THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
 - SIGN POSTS: ALL SIGN POST USED FOR TRAFFIC CONTROL, SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (1 1/2" DIA) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (1 1/2" DIA) - 3" LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
 - DRIVEWAY (S) SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING (MINIMUM) REQUIREMENTS:
a) WIDTH - 12 FEET (16 FEET IF SERVING MORE THAN ONE RESIDENCE)
b) SURFACE - SIX (6) INCHES OF COMPACTED CRUSHER RUN BASE WITH TAR AND CHIP COATING
c) GEOMETRY - MAXIMUM 15% GRADE, MAXIMUM 10% GRADE CHANGE AND MINIMUM OF 45 FOOT TURNING RADIUS
d) STRUCTURES (CULVERTS/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING)
e) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
f) STRUCTURE CLEARANCES - MINIMUM 12 FEET
g) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE
 - DRIVEWAYS SHALL BE PROVIDED IN ACCORDANCE WITH HOWARD COUNTY STANDARD DETAIL 8-6.06 IN THE VOL. IV DESIGN MANUAL.
 - THE OVERHEAD ELECTRIC LINES LOCATED ON OPEN SPACE LOT 9 WILL BE RELOCATED TO AN AREA OUTSIDE THE PROPOSED FOREST CONSERVATION EASEMENT.
 - DOCUMENTATION OF THE PROPER ABANDONMENT OF SEPTIC SYSTEMS WILL BE SUBMITTED TO THE HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO SUBMISSION OF FINAL PLAN ORIGINALS FOR SIGNATURE APPROVAL.
 - NO GRADING, CLEARING, CULPING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
 - AN ADDRESS RANGE SIGN SHALL BE PROVIDED FOR LOTS 2-7 AT THE INTERSECTION OF WINTERS LANE AND THE USE-IN-COMMON DRIVEWAY. EACH NUMBER SHALL BE A MINIMUM OF 3" PLAIN BLOCK LETTERING. IN ADDITION, THERE SHALL BE AN ADDRESS SIGN AT THE POINT WHERE EACH INDIVIDUAL DRIVEWAY INTERSECTS WITH THE USE-IN-COMMON DRIVEWAY.
 - THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY GEO-TECHNOLOGY ASSOC., INC. DATED MARCH, 2007 AND APPROVED UNDER SP-08-003.
 - OPEN SPACE LOT 9 TO BE OWNED AND MAINTAINED BY THE WINTER CREST HOMEOWNERS ASSOCIATION, INC.
 - THE PRIVATE SEPTIC TO BE PROPERLY ABANDONED PRIOR TO SIGNATURE OF THE FINAL PLAT. THE SEPTIC WILL BE PUMPED, COLLAPSED AND FILLED IN. AN AGREEMENT WILL BE RECORDED TO HOLD THE DEVELOPER RESPONSIBLE FOR MAINTENANCE AND REMOVAL OF ALL SEPTIC TREATMENTS THAT EXCEED THE PROPOSED LOT LINE BOUNDARIES ONCE PUBLIC SEWER IS GRANTED.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 10722 BALTIMORE NATIONAL PLACE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2899

Owner/Developer
 Winters Lane Investments, LLC
 c/o B. James Greenfield
 8460 Autumn Sky Way
 Columbia, Maryland 21044
 Phone: (443) 324-4732

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
...
 I hereby certify that these documents were prepared by me and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-13.

Winter Crest
 Buildable Lots 1 Thru 8 And
 Open Space Lot 9
 (Being A Resubdivision Of Lot 2, As Shown On A Plat Entitled
 "Norris E. Pool, Lots 1, 2 & 3, Winters La. & Hanover Rd."
 Recorded Among The Land Records Of Howard County, Maryland As
 Plat No. 3342)
 Zoned: R-12
 Tax Map: 38, Grid: 15, Parcel: 868
 First Election District - Howard County, Maryland
 Date: August 28, 2012 Scale: As Shown
 Sheet 1 of 10



EVERGREEN PLANTING DETAIL
NOT TO SCALE

Approved: Department Of Planning And Zoning
 Chief, Division Of Land Development
 Chief, Development Engineering Division
 Date: 10/08/12
 Date: 9/12/12

"At the time of plant installation, all trees listed and approved on the landscape Plan, shall comply with the proper height requirement in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocations of the required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviations from the approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to the road drawing plans."

"The Owner, tenants and/or their agents shall be responsible for maintenance of the required perimeter landscaping. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced."

| SCHEDULE A PERIMETER LANDSCAPE EDGE | | | | | | | | |
|-------------------------------------|--------------------------------|----------------|---|--|---|---------------------------|-----------------|--------|
| PERIMETER | CATEGORY (PROPERTIES/ROADWAYS) | LANDSCAPE TYPE | LINEAR FEET OF ROADWAY FRONTAGE PERIMETER | CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED) | CREDIT FOR WALL, FENCE OR BERRY (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED) | NUMBER OF PLANTS REQUIRED | | |
| | | | | | | SHADE TREES | EVERGREEN TREES | SHRUBS |
| P-1 | FRONT TO ROADWAY | N/A | 204' | NO | NO | - | - | - |
| P-2 | ADJACENT TO PERIMETER | A | 426' | YES (60') | NO | 6 | - | - |
| P-3 | ADJACENT TO PERIMETER | A | 509' | YES (245') & 11 TREES | NO | 0 | - | - |
| P-4 | ADJACENT TO ROADWAY | B | 129' | YES (100%) | NO | 0 | - | - |
| P-5 | ADJACENT TO PERIMETER | A | 191' | YES (100%) | NO | 0 | - | - |
| P-6 | ADJACENT TO PERIMETER | A | 168' | YES (72') | NO | 2 | - | - |
| TOTAL | | | | | | 8 | 0 | 0 |

| SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING | | |
|---|--|----------|
| LINEAR FEET OF TYPE "B" PERIMETER | | D1: 500' |
| CREDIT FOR EXISTING VEGETATION (NO, YES AND X) | | NO |
| CREDIT FOR OTHER LANDSCAPING (NO, YES AND X) | | NO |
| REMAINING PERIMETER | | 500' |
| NUMBER OF TREES REQUIRED: | | |
| SHADE TREES | | 10 |
| EVERGREEN TREES | | 13 |

| SYMBOL | DESCRIPTION |
|--------|-------------------------------|
| --- | EXISTING CONTOUR 2' INTERVAL |
| --- | EXISTING CONTOUR 10' INTERVAL |
| --- | PROPOSED CONTOUR 2' INTERVAL |
| --- | PROPOSED CONTOUR 10' INTERVAL |
| + | SPOT ELEVATION |
| --- | EROSION CONTROL MATTING (ECM) |
| ○ | PROPOSED TREES |
| --- | SLOPES (25% OR GREATER) |
| --- | SLOPES (15% TO 24.9%) |
| --- | EXISTING TREELINE |
| --- | PROPOSED TREELINE |
| ▲ | FOREST CONSERVATION SIGN |
| --- | FOREST CONSERVATION EASEMENT |
| --- | PLANTING AREA |

| SYMBOL | QTY. | BOTANICAL AND COMMON NAME | SIZE |
|--------|------|---------------------------------------|------------------|
| ○ | 10 | ACER RUBRUM 'OCTOBER GLORY' RED MAPLE | 2 1/2" - 3" CAL. |
| ○ | 7 | ILEX OPACA AMERICAN HOLLY | 5' - 6' HT. |
| ○ | 6 | PINUS STROBUS EASTERN WHITE PINE | 6' - 8' HT. |

This plan has been prepared in accordance with the provision of Section 16.124 of the Howard County Code and Landscape Manual. Financial surety for the required 10 shade and 13 evergreen trees will be posted as part of the Developer's Agreement in the amount of \$7,350.00.

LANDSCAPE DEVELOPER'S CERTIFICATE

I/we certify that the landscaping shown on this plan will be done according to the plan, section 16.124 of the Howard County Code and the Howard County Landscape Manual. I/we further certify that upon completion a certification of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

Name: *R. James O'Neil* Date: 9/16/12

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SERVICE OFFICE: P.O. BOX 10722 NATIONAS NATIONAL PARK
 ELKTON CITY, MARYLAND 21142
 (410) 461-2955

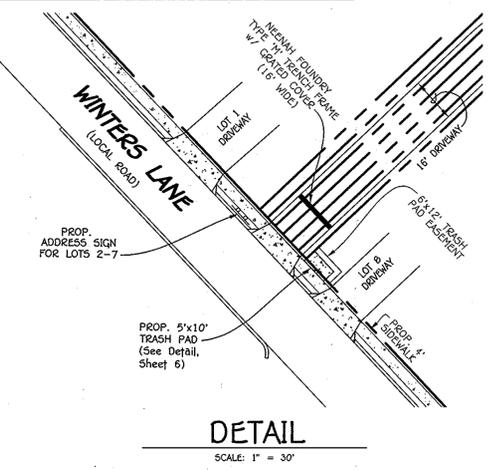
Owner/Developer
 Winters Lane Investments, LLC
 c/o B. James Greenfield
 6420 Autumn Sky Way
 Columbia, Maryland 21044
 Phone: (443) 324-4732

PLAN
 SCALE: 1" = 40'

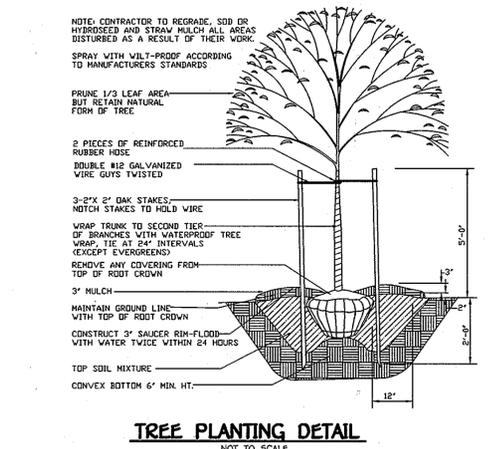


Date: 9/12/12

Supplemental, Topography & Landscape Plan
Winter Crest
 Buildable Lots 1 Thru 8 And
 Open Space Lot 9
 (Being A Resubdivision Of Lot 2, As Shown On A Plat Entitled "Morris E. Pool, Lots 1, 2 & 3, Winters Ln. & Hanover Rd.", Recorded Among The Land Records Of Howard County, Maryland As Plat No. 3342) Zoned: R-12
 Tax Map: 38, Grid: 15, Parcel: 869
 First Election District - Howard County, Maryland
 Date: August 28, 2012 Scale: As Shown
 Sheet 2 of 10

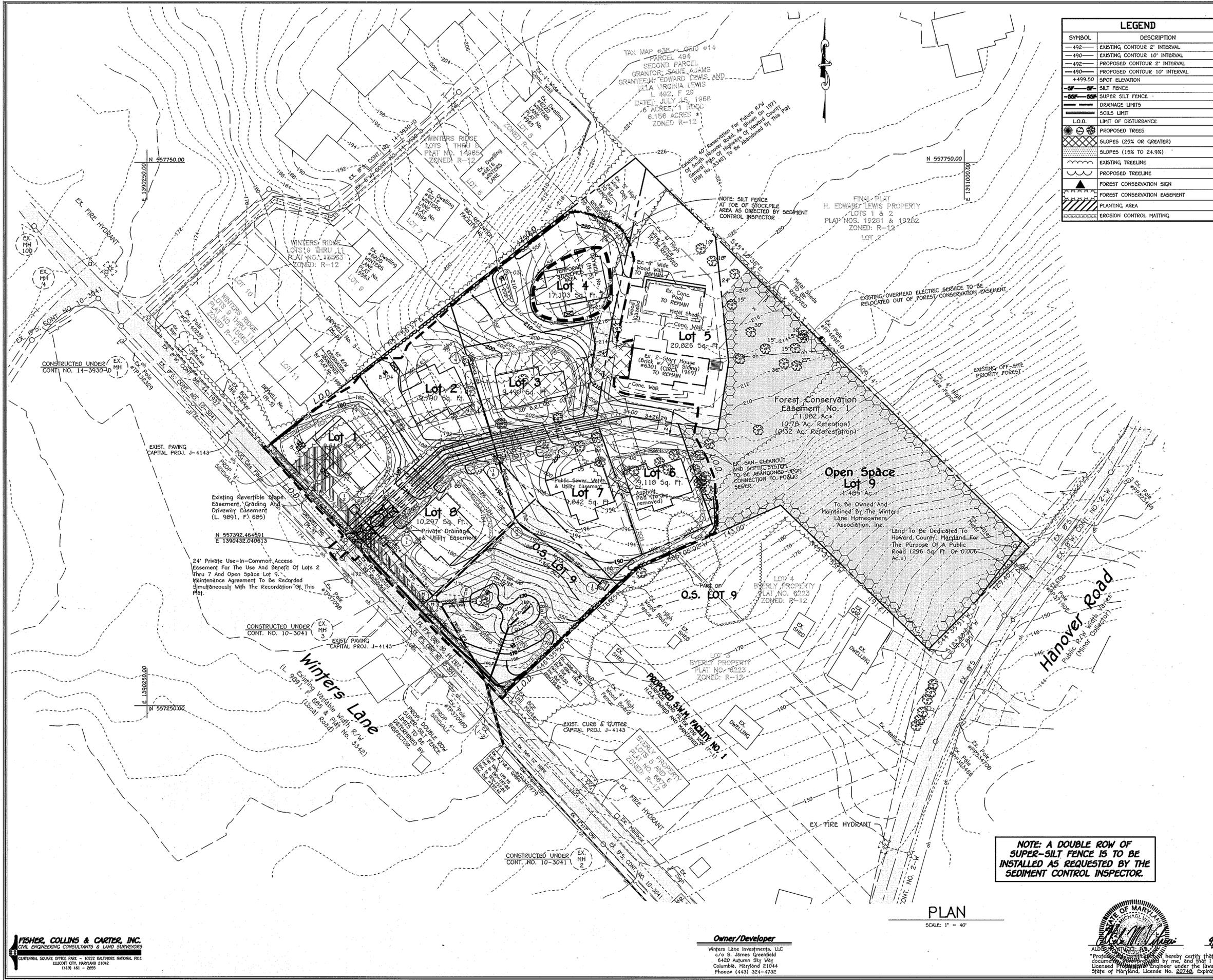


DETAIL
SCALE: 1" = 30'



TREE PLANTING DETAIL
NOT TO SCALE





LEGEND

| SYMBOL | DESCRIPTION |
|--------|-------------------------------|
| --- | EXISTING CONTOUR 2' INTERVAL |
| --- | EXISTING CONTOUR 10' INTERVAL |
| --- | PROPOSED CONTOUR 2' INTERVAL |
| --- | PROPOSED CONTOUR 10' INTERVAL |
| + | SPOT ELEVATION |
| --- | SILT FENCE |
| --- | SUPER SILT FENCE |
| --- | DRAINAGE LIMITS |
| --- | SOILS LIMIT |
| --- | L.O.D. LIMIT OF DISTURBANCE |
| ⊙ | PROPOSED TREES |
| ⊙ | SLOPES (25% OR GREATER) |
| ⊙ | SLOPES (15% TO 24.9%) |
| --- | EXISTING TREELINE |
| --- | PROPOSED TREELINE |
| ▲ | FOREST CONSERVATION SIGN |
| --- | FOREST CONSERVATION EASEMENT |
| --- | PLANTING AREA |
| --- | EROSION CONTROL MATTING |

By The Developer:

"I/We Certify That All Development And/Or Construction Will Be Done According To These Plans, And That Any 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 Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide Erosion Control Plans To The Howard Soil Conservation District. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District."

Signature Of Developer: *Jim Granitz* Date: 9/12/12

Printed Name Of Developer: **JIM GRANITZ**

By The Engineer:

"I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Feasible Design Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Noted That The Engineer Nor Does An Engineer's Certification Provide A Guarantee That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction And Provide Erosion Control Plans To The Howard Soil Conservation District."

Signature Of Engineer: *John R. Rehter* Date: 9/12/12

Printed Name Of Engineer: **John R. Rehter**

These Plans For Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Approved: Department Of Planning And Zoning

Signature: *Vect...* Date: 10/09/12

Chief, Division Of Land Development

Signature: *...* Date: 9/27/12

Chief, Development Engineering Division

AS-BUILT CERTIFICATION

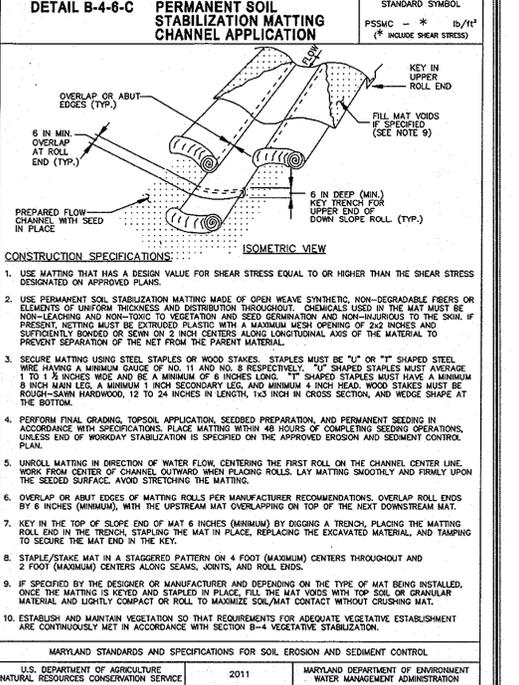
I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.

Signature: _____ P.E. No. _____

Date: _____

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

| NO. | REVISIONS | DESCRIPTION | DATE |
|-----|-----------|-------------|------|
| | | | |



NOTE: A DOUBLE ROW OF SUPER-SILT FENCE IS TO BE INSTALLED AS REQUESTED BY THE SEDIMENT CONTROL INSPECTOR.

PLAN
SCALE: 1" = 40'

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS (B-4-2)

- Soil Preparation**
 - Temporary Stabilization
 - Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches 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 must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
 - Apply fertilizer and lime as prescribed on the plans.
 - Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
 - Permanent Stabilization
 - A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
 - Soil pH between 6.0 and 7.0.
 - Soluble salts less than 500 parts per million (ppm).
 - Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
 - Soil contains 1.5 percent minimum organic matter by weight.
 - Soil contains sufficient pore space to permit adequate root penetration.
 - Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
 - Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
 - Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
 - Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

- Topsoiling
 - Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is 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.
 - Topsoil salvaged from an existing site may be used provided 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-NRCS.
 - Topsoiling is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - 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.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
 - Areas having slopes steeper than 2:1 require special consideration and design.

- Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
 - Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textures and soils must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2 inches in diameter.
 - Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnsongrass, nut sedge, poison ivy, thistle, or others as specified.
 - 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.

- Topsoil Application
 - erosion and sediment control practices must be maintained when applying topsoil.
 - Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to 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 topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
 - Topsoil must not be placed if 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 sodded preparation.

- 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 of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
 - Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
 - Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydrossedging) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 90 to 100 percent will pass through a #200 mesh sieve.
 - Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
 - Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

- PERMANENT SEEDING NOTES (B-4-5)
 - Seed Mixtures
 - General Use
 - Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardness Zone (from Figure B.3) and based on the site condition or purpose shown on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
 - Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.
 - For sites having disturbed area over 5 acres, use and show the rates recommended by the soil testing agency. For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.

Permanent Seeding Summary

| Hardness Zone (from Figure B.3): | Seed Mixture (from Table B.3): | Fertilizer Rate (10-20-20) | | | Lime Rate |
|----------------------------------|--------------------------------|--|-------------------------------|------------------------------|---------------------------------|
| | | N | P ₂ O ₅ | K ₂ O | |
| 6b | 8 | 45 lb./ac per acre (1.0 lb./1000 sf) | 90 lb./ac (2 lb./1000 sf) | 90 lb./ac (2 lb./1000 sf) | 2 tons/acre (50 lb./1000 sf) |
| | TALL FESCUE | Mar. 1-May 15 Aug. 15-Oct. 15 | 1/4-1/2 in. | | |

- SEQUENCE OF CONSTRUCTION
 - OBTAIN A GRADING PERMIT.
 - NOTIFY MISS UTILITY AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 AT LEAST 24 HOURS BEFORE STARTING WORK.
 - INSTALL THE STABILIZED CONSTRUCTION ENTRANCE AND PERIMETER SILT FENCE AS SHOWN. (1 DAY)
 - UPON COMPLETION OF THE ABOVE WORK RECEIVE PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEEDING.
 - CLEAR AND GRUB FOR THE REMAINDER OF THE WORK AREA. (1 DAY)
 - GRADE SITE TO PROPOSED SUBGRADE AND INSTALL THE STORM DRAIN SYSTEM ALONG WITH WATER AND SEWER MAINS. INSTALL SUPER-SILT FENCE AROUND 1-1, 1-3 & 1-5 AND INSTALL INLET PROTECTION AT 1-2. STABILIZE ALL SLOPES IMMEDIATELY UPON COMPLETION OF GRADING. (1 WEEK)
 - CONSTRUCT THE SURFACE SAND FILTER (S.W.M. FACILITY NO. 1). (1 WEEK) BLOCK 12" FROM M-1 TO S-1 UNTIL CONTRIBUTING DRAINAGE AREA IS STABILIZED.
 - CONSTRUCT THE HOUSES ON LOTS 1-4, 6-8 (6 MONTHS). INSTALL THE PROPOSED BIO-RETENTION FACILITY ON LOT 4 & THE PROPOSED DRYWELLS ON LOTS 1, 2 & 4 AS SHOWN ON THE PLAN. (1 WEEK)
 - WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE SEDIMENT CONTROL DEVICES MAY BE REMOVED AND/OR BACK-FILLED AND THE REMAINING AREAS BROUGHT TO FINAL GRADE. UNBLOCK M-1 AND STABILIZE ALL AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
 - NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR FINAL INSPECTION OF THE COMPLETED PROJECT.

Owner/Developer
Winters Lane Investments, LLC
c/o B. James Greenfield
6420 Autumn Sky Way
Columbia, Maryland 21044
Phone: (443) 324-4732

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

- This practice is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - 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.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
- For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design. Areas having slopes steeper than 2:1 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-NRCS in cooperation 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 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 textures and soils must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, Johnsongrass, nut sedge, poison ivy, thistle, or others as specified.
 - 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. Limestone 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 200 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.
- For sites having disturbed areas over 5 acres:
 - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime requirements required to bring the soil into compliance with the following:
 - 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.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - 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 phytotoxic 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.

Place topsoil (if required) and apply soil amendments as specified in 200 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

- Topsoil Application
 - When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
 - Grades on the areas to be topsoiled that have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
 - 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 topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
 - 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 sodded preparation.

- Alternative for Permanent Seeding - Instead of applying the full amounts of the lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
 - 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:
 - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (as the best of occupation) by the Maryland Department of the Environment under CDMAR 26.04.06.
 - Composted sludge shall contain at least 1 percent nitrogen, 15 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.
 - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
 - 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.

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSING AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1895).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 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 GRADE AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 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.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

| | |
|--|---------------|
| TOTAL AREA OF SITE | 3,697 ACRES |
| AREA DISTURBED | 2.27 ACRES |
| AREA TO BE ROOFED OR PAVED | 0.58 ACRES |
| AREA TO BE VEGETATIVELY STABILIZED | 1.69 ACRES |
| TOTAL CUT | 5,246 CU.YDS. |
| TOTAL FILL | 1,570 CU.YDS. |
| OFFSITE WASTE/BORROW AREA LOCATION TBD | 3,676 CU.YDS. |
- 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.
- 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.

DUST CONTROL
DEFINITION
CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

PURPOSE
TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS AND IMPROVE TRAFFIC SAFETY.

CONDITIONS WHERE PRACTICE APPLIES
THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

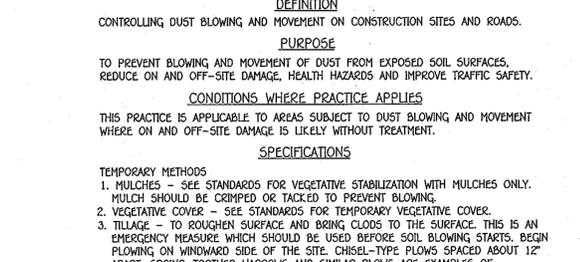
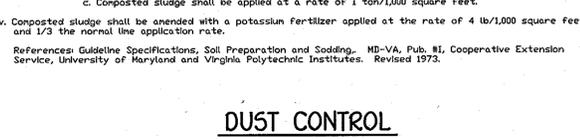
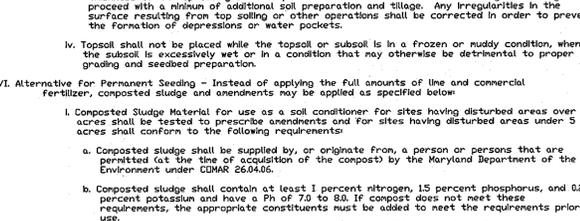
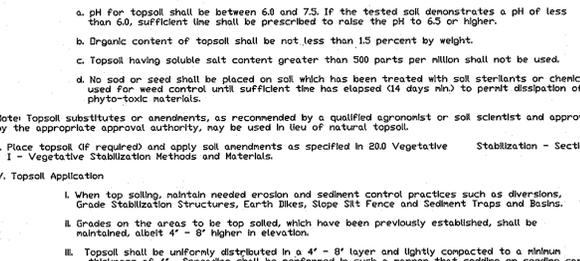
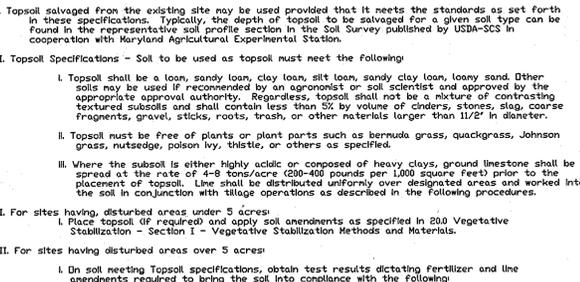
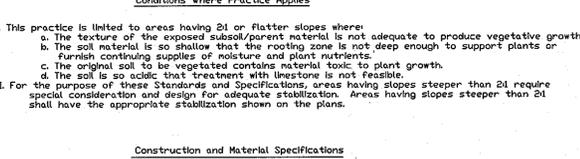
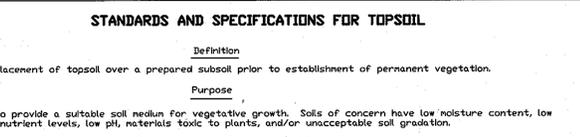
SPECIFICATIONS

- TEMPORARY METHODS
 - MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
 - VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
 - TILLAGE - TO ROUGHEN SURFACE AND BIND CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF THE SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, SPRING-TOOTHED HARROWS AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
 - IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOST REPEAT AS NEEDED, AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
 - BARRIERS - SOLID BOARD FENCES SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALE DIKES AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
 - CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.
- PERMANENT METHODS
 - PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
 - TOPSOILING - COVERING WITH LESS ERODIBLE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
 - STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

DESIGN CRITERIA

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

NOT TO SCALE



Owner/Developer
Winters Lane Investments, LLC
c/o B. James Greenfield
6420 Autumn Sky Way
Columbia, Maryland 21044
Phone: (443) 324-4732

ENGINEER'S CERTIFICATE
I Herewith Certify That All Development And Construction Will Be Done In Accordance With The Plan Based On My Personal Knowledge And That It Was Prepared In Accordance With The Standards And Specifications of the Howard Soil Conservation District.

Signature Of: *[Signature]* Date: 9/12/12

DEVELOPER'S CERTIFICATE
I/We Certify That All Development And Construction Will Be Done In Accordance With The Plan Based On My Personal Knowledge And That It Was Prepared In Accordance With The Standards And Specifications of the Howard Soil Conservation District.

Signature Of Developer: *[Signature]* Date: 9/12/12

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

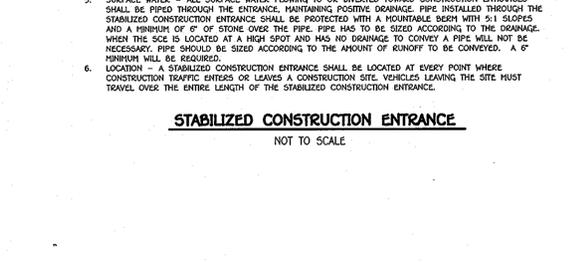
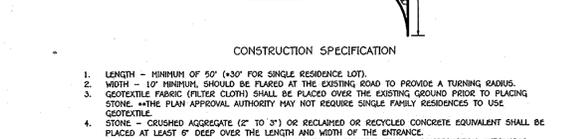
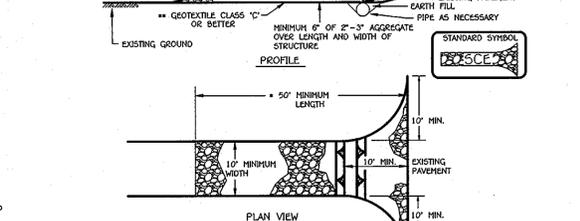
[Signature] Date: 9/12/12

Approved: Department Of Planning And Zoning

[Signature] Date: 9/12/12

CONSTRUCTION SPECIFICATIONS

- INSTALL 2 1/2" DIAMETER GALVANIZED STEEL OR ALUMINUM POSTS SIX FEET IN LENGTH, PLACED NO FURTHER THAN 10 FEET APART. SOME POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
- FASTEN MINIMUM 5 GAUGE CHAIN LINK FENCE (2 1/2" MAX. DIAMETER) AS INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
- FASTEN WOOD NONCORROSION GEOTEXTILE AS SPECIFIED IN SECTION 1.0 MATERIALS, SECURELY TO THE CHAIN LINK WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EXCEED GEOTEXTILE AND CHAIN LINK FENCE MINIMUM OF 6 INCHES INTO THE GROUND.
- WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEAMING BYWIND.
- REMOVE ACCUMULATED SEDIMENT WHICH "BUILDS" DEVELOP IN THE SILT FENCE, OR WHEN SEDIMENTS REACH 25% OF THE FENCE HEIGHT.
- EXTEND BOTH ENDS OF THE SUPER-SILT FENCE MINIMUM OF 1 FEET UPWARD, AT 45 DEGREES TO THE MAIN FENCE DESIGNATION TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER-SILT FENCE.
- PROVIDE MAINTENANCE CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS SET FORTH IN THE NATIONAL SPECIFICATION.
- INSPECT AND PROVIDE NECESSARY MAINTENANCE PERIODICALLY AND AFTER EACH DOWN POUR.



STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

ENGINEER'S CERTIFICATE
I Herewith Certify That All Development And Construction Will Be Done In Accordance With The Plan Based On My Personal Knowledge And That It Was Prepared In Accordance With The Standards And Specifications of the Howard Soil Conservation District.

Signature Of: *[Signature]* Date: 9/12/12

DEVELOPER'S CERTIFICATE
I/We Certify That All Development And Construction Will Be Done In Accordance With The Plan Based On My Personal Knowledge And That It Was Prepared In Accordance With The Standards And Specifications of the Howard Soil Conservation District.

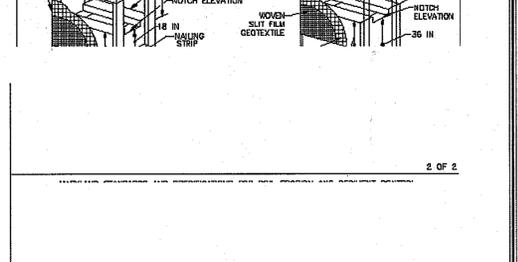
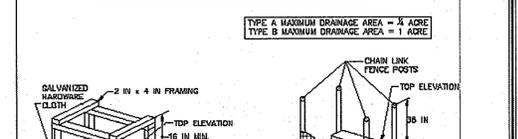
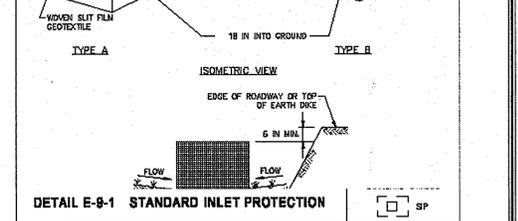
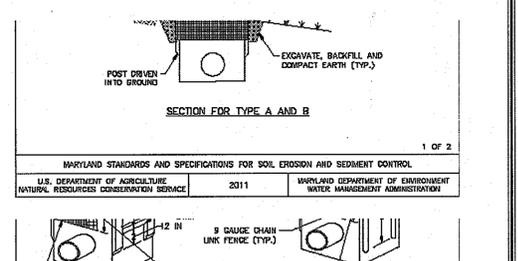
Signature Of Developer: *[Signature]* Date: 9/12/12

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

[Signature] Date: 9/12/12

Approved: Department Of Planning And Zoning

[Signature] Date: 9/12/12



Sediment And Erosion Control Notes & Details
Winter Crest
Buildable Lots 1 Thru 8 And
Open Space Lot 9
(Being A Resubdivision Of Lot 2, As Shown On A Plat Entitled "Norris E. Pool, Lots 1, 2 & 3, Winters Ln. & Hanover Rd." Recorded Among The Land Records Of Howard County, Maryland As Plat No. 3342)
Zoned: R-12
Tax Map: 35, Grid: 15, Parcel: 968
First Election District - Howard County, Maryland
Date: August 28, 2012 Scale: As Shown
Sheet 4 of 10

LOG OF BORING NO. B-01 Sheet 1 of 1

PROJECT: Winters Lane
 PROJECT NO: 07070
 PROJECT LOCATION: Howard County, Maryland

DATE STARTED: March 2, 2007
 DATE COMPLETED: March 2, 2007
 DRILLING CONTRACTOR: Geo-Technology Associates
 DRILLER: P. Stephens
 CHECKED BY: K. Nguit

WATER LEVEL: 2.0' Dry
 DATE: 3/2/07
 GROUND SURFACE ELEVATION: 178.8
 DATE: Survey
 EQUIPMENT: CMR-500
 LOGGED BY: P. Stephens
 CHECKED BY: K. Nguit

| DEPTH (FEET) | DESCRIPTION | REMARKS |
|--------------|---|---------------------------------------|
| 0.0 | Soil and sand, wet to moist, very loose, silty sand, trace organic (Small Roots). | Typical 2 in. |
| 1.0 | ASHTO: A-4 | |
| 2.0 | Drain, moist, medium dense, silty sand, trace gravel. | Water Not Encountered During Drilling |
| 3.0 | ASHTO: A-4 | |
| 4.0 | Drain, moist, medium dense, silty sand with gravel and quartz rock fragments. | |
| 5.0 | ASHTO: A-4 to A-3 | |
| 6.0 | Bottom of Hole at 10.0 Feet. | |

NOTES: Sample at 2.0 feet Not Recovered; Soil Description Based on Auger Cuttings.

LOG OF BORING NO. B-02 Sheet 1 of 1

PROJECT: Winters Lane
 PROJECT NO: 07070
 PROJECT LOCATION: Howard County, Maryland

DATE STARTED: March 2, 2007
 DATE COMPLETED: March 2, 2007
 DRILLING CONTRACTOR: Geo-Technology Associates
 DRILLER: P. Stephens
 CHECKED BY: K. Nguit

WATER LEVEL: 2.0' Dry
 DATE: 3/2/07
 GROUND SURFACE ELEVATION: 188.8
 DATE: Survey
 EQUIPMENT: CMR-500
 LOGGED BY: P. Stephens
 CHECKED BY: K. Nguit

| DEPTH (FEET) | DESCRIPTION | REMARKS |
|--------------|--|---------------------------------------|
| 0.0 | Drain, wet, very loose, silty sand, trace organic (Small Roots). | Typical 2 in. |
| 1.0 | ASHTO: A-4 | |
| 2.0 | Drain, moist, medium dense, silty sand, trace gravel. | Water Not Encountered During Drilling |
| 3.0 | ASHTO: A-4 | |
| 4.0 | Drain to white spot soil, moist, medium dense, silty sand. | |
| 5.0 | ASHTO: A-4 | |
| 6.0 | Bottom of Hole at 10.0 Feet. | |

NOTES:

LOG OF BORING NO. B-03 Sheet 1 of 1

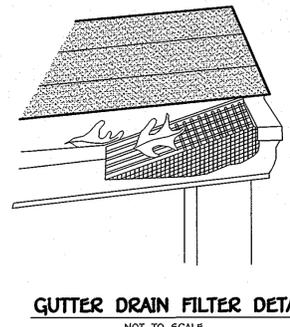
PROJECT: Winters Lane
 PROJECT NO: 07070
 PROJECT LOCATION: Howard County, Maryland

DATE STARTED: March 2, 2007
 DATE COMPLETED: March 2, 2007
 DRILLING CONTRACTOR: Geo-Technology Associates
 DRILLER: P. Stephens
 CHECKED BY: K. Nguit

WATER LEVEL: 2.0' Dry
 DATE: 3/2/07
 GROUND SURFACE ELEVATION: 200.3
 DATE: Survey
 EQUIPMENT: CMR-500
 LOGGED BY: P. Stephens
 CHECKED BY: K. Nguit

| DEPTH (FEET) | DESCRIPTION | REMARKS |
|--------------|---|---------------|
| 0.0 | Drain, wet to moist, very loose to loose, silty sand with gravel. | Typical 2 in. |
| 1.0 | ASHTO: A-2-4 | |
| 2.0 | Drain, moist, medium dense, silty sand, trace gravel. | |
| 3.0 | ASHTO: A-4 | |
| 4.0 | Drain to white spot soil, moist, medium dense, silty sand. | |
| 5.0 | ASHTO: A-4 | |
| 6.0 | Bottom of Hole at 10.0 Feet. | |

NOTES:



GUTTER DRAIN FILTER DETAIL
 NOT TO SCALE

Operation and Maintenance Schedule for Drywells (M-5)

- The owner shall inspect the monitoring wells and structures on a quarterly basis and after every heavy storm event.
- The owner shall record the water levels and sediment build up in the monitoring wells over a period of several days to insure trench drainage.
- The owner shall maintain a log book to determine the rate at which the facility drains.
- When the facility becomes clogged so that it does not drain down within a seventy two (72) hour time period, corrective action shall be taken.
- The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- Once the performance characteristics of the infiltration facility have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.

LOG OF BORING NO. B-04 Sheet 1 of 1

PROJECT: Winters Lane
 PROJECT NO: 07070
 PROJECT LOCATION: Howard County, Maryland

DATE STARTED: March 2, 2007
 DATE COMPLETED: March 2, 2007
 DRILLING CONTRACTOR: Geo-Technology Associates
 DRILLER: P. Stephens
 CHECKED BY: K. Nguit

WATER LEVEL: 2.0' Dry
 DATE: 3/2/07
 GROUND SURFACE ELEVATION: 188.8
 DATE: Survey
 EQUIPMENT: CMR-500
 LOGGED BY: P. Stephens
 CHECKED BY: K. Nguit

| DEPTH (FEET) | DESCRIPTION | REMARKS |
|--------------|--|---------------------------------------|
| 0.0 | Drain, moist, very loose, silty sand with gravel, trace organic (Small Roots, Vegetation). | Typical 2 in. |
| 1.0 | ASHTO: A-4 | |
| 2.0 | Drain, moist, medium dense, silty sand, trace gravel. | Water Not Encountered During Drilling |
| 3.0 | ASHTO: A-4 | |
| 4.0 | Drain, moist, medium dense, poorly-sorted sand. | |
| 5.0 | ASHTO: A-3 | |
| 6.0 | Bottom of Hole at 10.0 Feet. | |

NOTES: Sample at 2.0 feet Not Recovered; Soil Description Based on Auger Cuttings.

LOG OF BORING NO. B-05 Sheet 1 of 1

PROJECT: Winters Lane
 PROJECT NO: 07070
 PROJECT LOCATION: Howard County, Maryland

DATE STARTED: March 2, 2007
 DATE COMPLETED: March 2, 2007
 DRILLING CONTRACTOR: Geo-Technology Associates
 DRILLER: P. Stephens
 CHECKED BY: K. Nguit

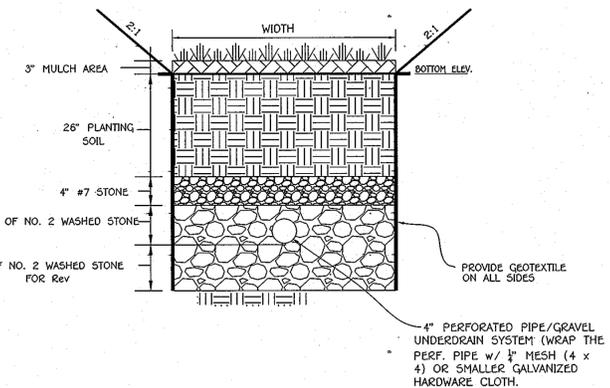
WATER LEVEL: 2.0' Dry
 DATE: 3/2/07
 GROUND SURFACE ELEVATION: 177.3
 DATE: Survey
 EQUIPMENT: CMR-500
 LOGGED BY: P. Stephens
 CHECKED BY: K. Nguit

| DEPTH (FEET) | DESCRIPTION | REMARKS |
|--------------|--|---------------------------------------|
| 0.0 | Dark brown and grey, moist, loose, silty sand with organic (Tree Bark and Wood). | Typical 2 in. |
| 1.0 | ASHTO: A-4 | |
| 2.0 | Drain, moist, very loose, silty sand. | Water Not Encountered During Drilling |
| 3.0 | ASHTO: A-2-4 | |
| 4.0 | Drain, moist to dry, loose, poorly-sorted sand. | |
| 5.0 | ASHTO: A-3 | |
| 6.0 | Bottom of Hole at 10.0 Feet. | |

NOTES:

Operation and Maintenance Schedule for Micro Bio-Retention Areas (M-6)

- The owner shall maintain the plant material, mulch layer and soil layer annually, maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following: 2000 Maryland stormwater design manual volume II, table A.4.1 and 2.
- The owner shall perform a plant in the spring and in the fall each year. During the inspection, the owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material with acceptable replacement plant material. Treat diseased trees and shrubs and replace all deficient stakes and wires.
- The owner shall inspect the mulch each spring. The mulch shall be replaced every two to three years. The previous mulch layer shall be removed before the new layer is applied.
- The owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.



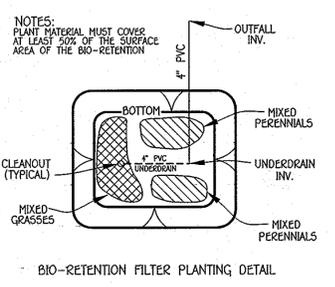
LOT 4 MICRO BIO-RETENTION (M-6) DETAIL
 NO SCALE

MICRO BIO-RETENTION DATA

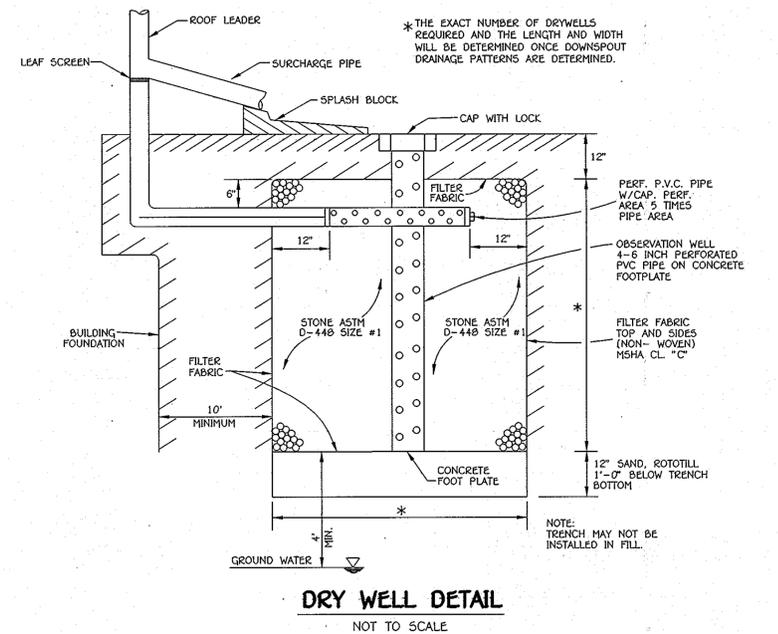
| LOT NO. | NO. | LENGTH | WIDTH | BOTTOM | UNDERDRAIN INV. | OUTFALL INV. |
|---------|-----|--------|-------|--------|-----------------|--------------|
| 4 | 1 | 25' | 6' | 208.0 | 205.0 | 204.0 |

PLANT MATERIAL-BIO-RETENTION FILTER No. 1

| QUANTITY | NAME | MAXIMUM SPACING (FT.) |
|----------|------------------|-----------------------|
| 30 | MIXED PERENNIALS | 1 FT. |
| 30 | MIXED GRASSES | 1 FT. |



BIO-RETENTION FILTER PLANTING DETAIL



DRY WELL DETAIL
 NOT TO SCALE

DRY WELL CHART

| LOT NO. | NO. OF DOWNSPOUTS | AREA OF ROOF PER DOWN SPOUT | VOLUME REQUIRED | AREA OF STORAGE | AREA OF TREATMENT | NO. OF DRYWELLS | *D L W |
|---------|-------------------|--------------------------------|-----------------|-----------------|-------------------|-----------------|----------------|
| LOT 1 | 4 | 424 SF, 423 SF, 491 SF, 222 SF | 125 CF | 100% | 100% | 2 | 6.5' x 8' x 4' |
| LOT 2 | 2 | 418 SF, 420 SF | 67 CF | 100% | 100% | 1 | 6.5' x 8' x 4' |
| LOT 4 | 2 | 498 SF, 498 SF | 80 CF | 100% | 100% | 1 | 6.5' x 8' x 4' |

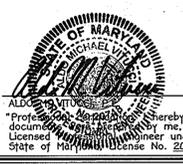
STORMWATER MANAGEMENT NOTES

- STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH THE 2000 MARYLAND STORMWATER DESIGN MANUAL.
- CREDITS ARE GIVEN FOR DISCONNECTION OF IMPERVIOUS COVERS.
- MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE LESS THAN 500 SQ. FT.
- DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5% THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE FIGURE 5.2 OF THE MANUAL AND THE DETAIL SHOWN ON THIS SHEET.
- FINAL GRADING IS SHOWN ON THIS SITE DEVELOPMENT PLAN.

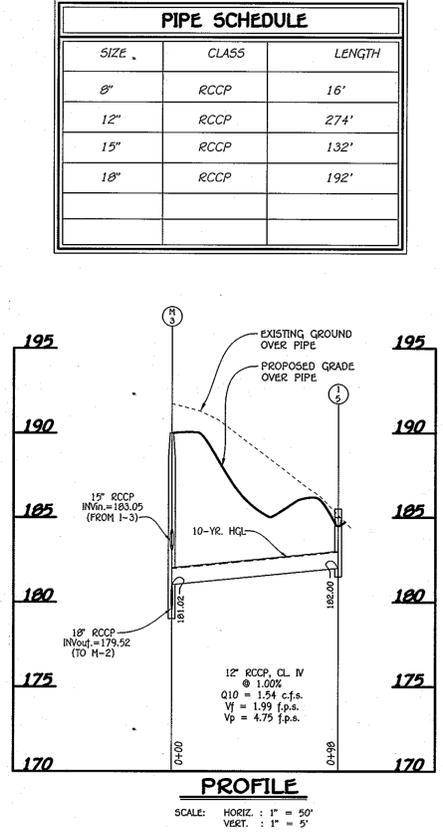
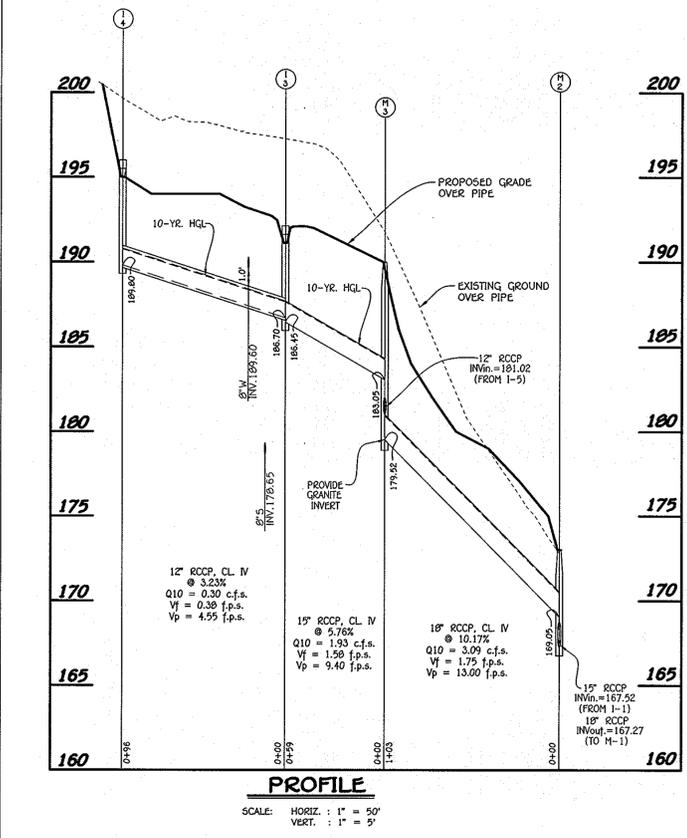
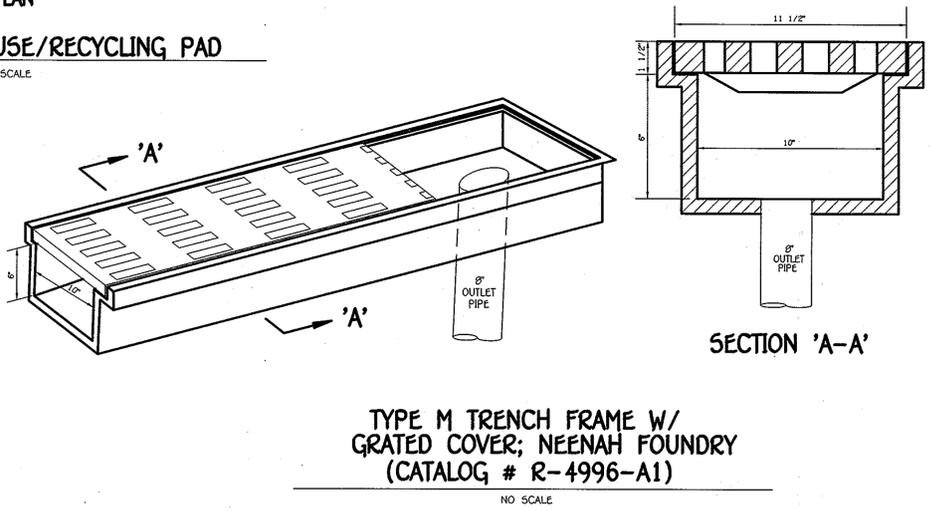
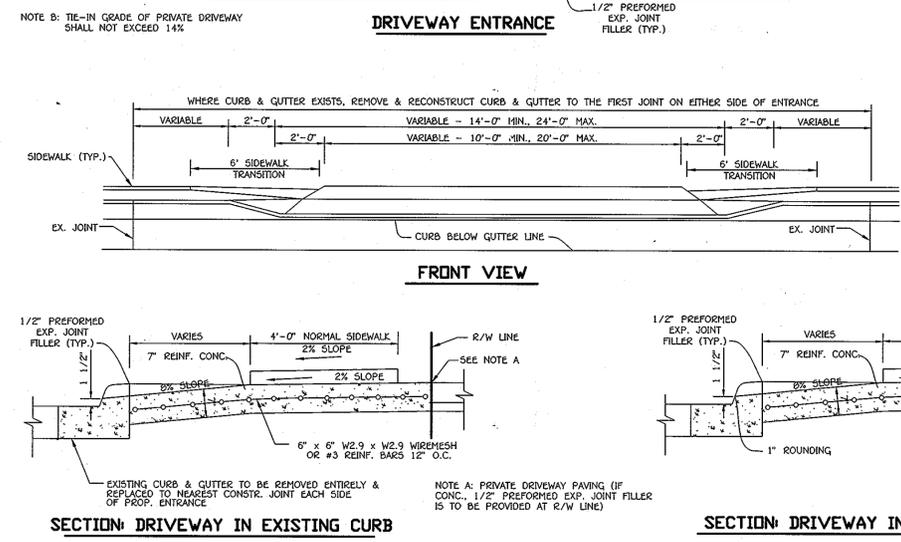
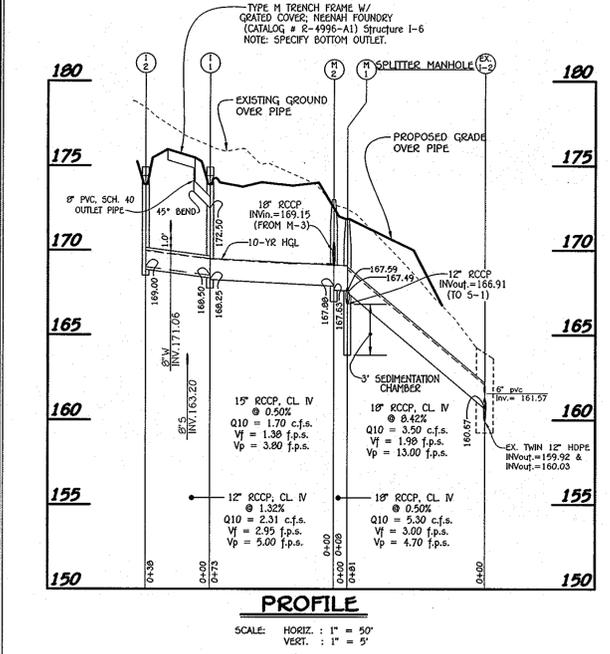
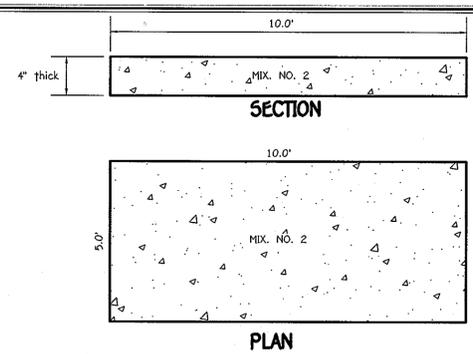
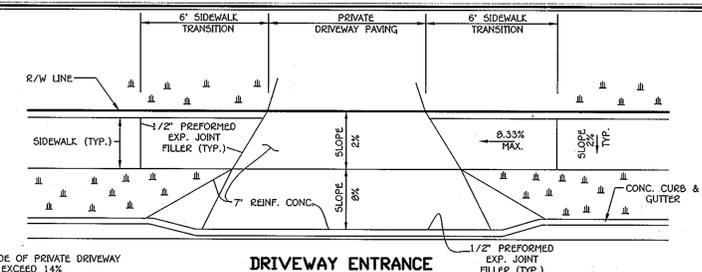
Stormwater Management Details & Soil Borings

Winter Crest
 Buildable Lots 1 Thru 3 And Open Space Lot 9

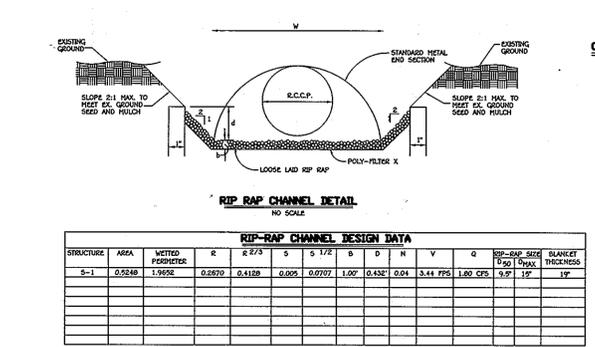
(Being A Resubdivision Of Lot 2, As Shown On A Plat Entitled "Winter Crest, Lots 1, 2 & 3, Winters Lane & Hanover Rd." Recorded Among The Land Records Of Howard County, Maryland As Plat No. 3342)
 Zoned: R-12
 Tax Map: 38, Grid: 15, Parcel: 868
 First Election District - Howard County, Maryland
 Date: August 28, 2012 Scale: As Shown
 Sheet 5 of 10



| SECTION NUMBER | ROAD AND STREET CLASSIFICATION | CALIFORNIA BEARING RATIO (CBR) | 3 TO <5 | | | 5 TO <7 | | | ≥7 | | | |
|----------------|--|--|------------------|-----------------------|-----|---------|-----|-----|-----|-----|-----|-----|
| | | | MIN HMA WITH GAB | HMA WITH CONSTANT GAB | N/A | N/A | N/A | N/A | N/A | N/A | N/A | |
| P-1 | PARKING BAYS, RESIDENTIAL AND NON-RESIDENTIAL PARKING DRIVE ASILES, RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY | PAVEMENT MATERIAL (INCHES) | | | | | | | | | | |
| | | HMA SUPERPAVE FINAL SURFACE 9.5 MM, PG 64-22, LEVEL 1 (ESAL) | | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | |
| | | HMA SUPERPAVE INTERMEDIATE SURFACE N/A | | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| | | HMA SUPERPAVE BASE 19.0 MM, PG 64-22, LEVEL 1 (ESAL) | | 2.0 | 2.0 | 2.0 | 3.5 | 3.0 | 2.5 | | | |
| | | GRADED AGGREGATE BASE (GAB) | | 8.5 | 7.0 | 5.0 | 4.0 | 4.0 | 4.0 | | | |



| SIZE | CLASS | LENGTH |
|------|-------|--------|
| 8" | RCCP | 16' |
| 12" | RCCP | 274' |
| 15" | RCCP | 132' |
| 18" | RCCP | 192' |

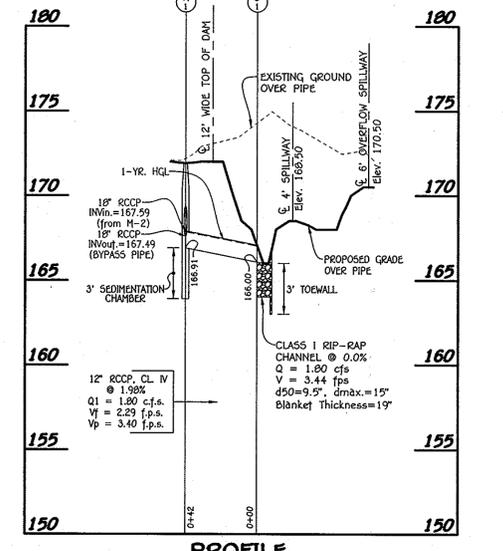


| STRUCTURE | AREA | WETTED PERIMETER | E | E+2/3 | S | S+1/2 | B | D | N | V | Q | RIP-RAP SIZE | BLANKET THICKNESS |
|-----------|--------|------------------|--------|--------|-------|--------|-------|--------|------|------|-----|--------------|-------------------|
| S-1 | 0.5248 | 1.9152 | 0.2670 | 0.4128 | 0.009 | 0.0707 | 1.00' | 0.43E' | 0.04 | 3.44 | 775 | 1.80 | 9" |

| STRUCTURE NO. | TOP ELEVATION | INV.IN | INV.OUT | LOCATION | ROAD STA./COORDINATE | OFFSET | TYPE AND WIDTH | REMARKS |
|---------------|---------------|----------------|--------------------------|------------------|---------------------------|--------|-----------------|----------|
| I-1 | * 173.90 | 168.50 | 172.50 | PRIVATE DRIVEWAY | STA. 0+31.80 | 16.9'E | 10" INLET | D - 4.39 |
| I-2 | * 173.90 | --- | 169.00 | PRIVATE DRIVEWAY | STA. 0+31.80 | 21.7'L | 10" INLET | D - 4.39 |
| I-3 | * 191.00 | 186.70 | 186.45 | PRIVATE DRIVEWAY | STA. 1+72.49 | 16.1'R | 10" INLET | D - 4.39 |
| I-4 | * 195.00 | --- | 189.80 | --- | N 557.567.9 E 1.390.541.6 | --- | YARD INLET | D - 4.14 |
| I-5 | * 184.45 | --- | 182.00 | --- | N 557.360.7 E 1.390.668.4 | --- | YARD INLET | D - 4.14 |
| I-6 | ** 175.75 | --- | 175.13 | PRIVATE DRIVEWAY | STA. 0+31.80 | --- | TRENCH FRAME | ** |
| M-1 | 171.85 | 167.59 | 167.49(18"), 166.91(12") | --- | N 557.343.1 E 1.390.519.2 | --- | 4" DIA. MANHOLE | G - 5.12 |
| M-2 | 173.00 | 167.80, 169.15 | 167.63 | --- | N 557.349.2 E 1.390.513.0 | --- | 4" DIA. MANHOLE | G - 5.12 |
| M-3 | 190.00 | 183.05, 181.02 | 179.52 | --- | N 557.419.6 E 1.390.568.5 | --- | 4" DIA. MANHOLE | G - 5.12 |
| S-1 | 167.00 | 166.00 | --- | --- | N 557.346.1 E 1.390.546.6 | --- | 12" END SECTION | D - 5.51 |

* - DENOTES THROAT ELEVATION
** - DENOTES CENTERLINE ELEVATION

- CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS**
- The substrate for the filter, riprap or gabion shall be prepared to the required line and grade. Any fill required in the substrate shall be compacted to a density of approximately that of the surrounding undisturbed materials.
 - The rock or gravel shall conform to the specified grading limits when installed respectively in the riprap or filter.
 - Riprap depth shall be protected from sanding, cutting or beating. Any damage other than an occasional hole shall be repaired by placing another piece of cloth over the damaged area or by completely replacing the riprap. All openings for repairs or for filling two pieces of cloth shall be a minimum of one foot.
 - Stone for the filter or gabion outlets may be placed by equipment, both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for filter or gabion outlets shall be uniform and placed in a manner that it is reasonably homogeneous with the smaller stones and shall fill the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the riprap work.



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CORPORATE OFFICE: 10222 BALDWIN NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-2855

Owner/Developer
Winters Lane Investments, LLC
c/o B. James Greenfield
6420 Autumn Sky Way
Columbia, Maryland 21044
Phone: (410) 324-4732

*** NEENAH FOUNDRY
2121 BROOKS AVE.
NEENAH, WI 54956
PH: 1-800-556-5075
FAX: 1-920-729-3661



Detail Sheet
Winter Crest
Buildable Lots 1 Thru 8 And
Open Space Lot 9
(Being A Resubdivision Of Lot 2, As Shown On A Plat Entitled
"Norris E. Pool, Lots 1, 2 & 3, Winters La. & Hanover Rd.",
Recorded Among The Land Records Of Howard County, Maryland As
Plat No. 3342)
Zoned: R-12
Tax Map: 3B, Grid: 15, Parcel: 86B
First Election District - Howard County, Maryland
Date: August 28, 2012 Scale: As Shown
Sheet 6 of 10

Approved: Department Of Planning And Zoning
 V. Stalder
 Chief, Division Of Land Development
 Date: 10/08/12

Chief, Development Engineering Division
 Date: 9/27/12

| SOILS LEGEND | | |
|--------------|---|-------|
| SOIL | NAME | CLASS |
| CIC3 | Chillum gravelly loam, 5 to 10 percent slopes, severely eroded | C |
| CID2 | Chillum gravelly loam, 10 to 15 percent slopes, moderately eroded | C |
| CmC2 | Chillum silt loam, 5 to 10 percent slopes, moderately eroded | 7 |
| ScB | Sandy and clayey sand, gently sloping | 7 |
| SIC2 | Sassafras loam, 5 to 10 percent slopes, moderately eroded | B |
| SsE | Sassafras soils, 15 to 40 percent slopes | B |
| ** F8 | Fallingston loam | D |

NOTES:
 * Hydric soils and/or contains hydric inclusions
 ** May contain hydric inclusions
 † Generally only within 100-year floodplain areas

| DRAINAGE AREA DATA | | | | | |
|--------------------|---------------|----------|------|-------|---------|
| STRUCTURE NO. | DRAINAGE AREA | AREA | "C" | ZONED | TC |
| I-1 | A | 0.59 AC. | 0.36 | R-12 | 10 MIN. |
| I-2 | B | 0.19 AC. | 0.45 | R-12 | 10 MIN. |
| I-3 | C | 0.26 AC. | 0.65 | R-12 | 10 MIN. |
| I-4 | D | 0.11 AC. | | R-12 | 10 MIN. |
| I-5 | E | 0.39 AC. | | R-12 | 10 MIN. |
| * I-6 | F | 0.16 AC. | | R-12 | 10 MIN. |

* TRENCH DRAIN



Drainage Area & Soils Map
Winter Crest
 Buildable Lots 1 Thru 8 And
 Open Space Lot 9
 (Being A Resubdivision Of Lot 2, As Shown On A Plat Entitled
 "Norris E. Pool, Lots 1, 2 & 3, Winters Ln. & Hanover Rd."
 Recorded Among The Land Records Of Howard County, Maryland As
 Plat No. 3342)
 Zone: R-12
 Tax Map: 38, Grid: 15, Parcel: 068
 First Election District - Howard County, Maryland
 Date: August 28, 2012. Scale: As Shown
 Sheet 7 of 10

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CORPORATE OFFICE: 10722 MATHIAS NATIONAL PIKE
 ELLSWORTH CITY, MARYLAND 21042
 (410) 461-2295

Owner/Developer
 Winters Lane Investments, LLC
 c/o B. James Greenfield
 5420 Autumn Sky Way
 Columbia, Maryland 21044
 Phone: (443) 324-4732



ALDO
 DATE: 9/26/12
 I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-13.

PLAN
 SCALE: 1" = 40'

By The Developer:
 "I/We Certify That All Development And/Or Construction Will Be Done According To These Plans, And That Any 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 Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District."

Signature of Developer: *Jim Greenfield* Date: 9/28/12
 Printed Name of Developer: JIM GREENFIELD

By The Engineer:
 "I Certify That This Plan For Pond Construction, Erosion And Sediment Control Represents A Practical And Workable Solution Based On My Personal Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Noted That He/She Must Engage A Registered Professional Engineer To Supervise Pond Construction. I Provide The Howard Soil Conservation District With An "As-Built" Plan Within 30 Days Of Completion."

Signature of Engineer: *Robert J. ...* Date: 9/28/12
 Printed Name of Engineer: ROBERT J. ...

These Plans For Small Pond Construction, Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.

Howard Soil Conservation District Date: _____

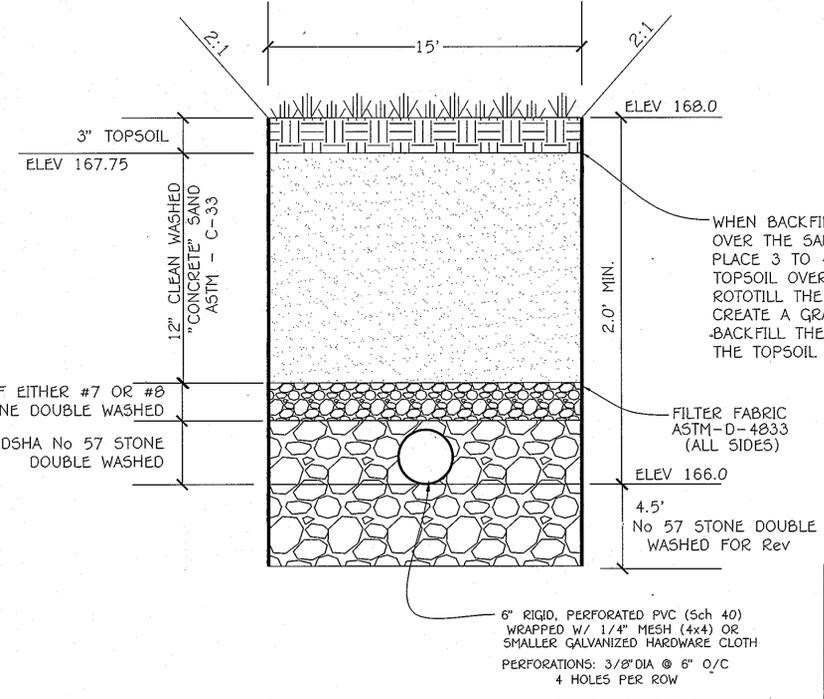
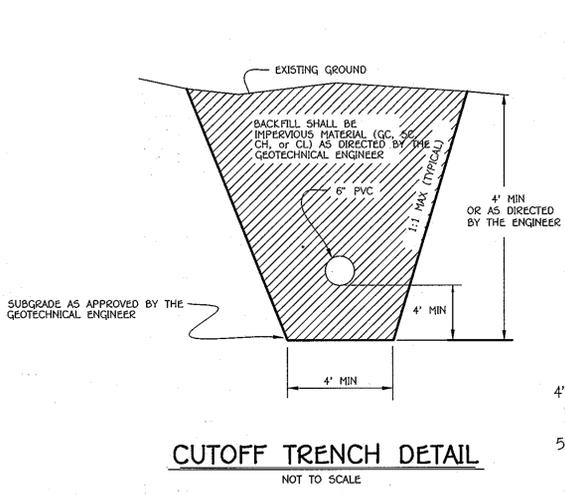
Approved: Department Of Planning And Zoning
 Chief, Division Of Land Development: *Neil ...* Date: 10/29/12
 Chief, Development Engineering Division: *...* Date: 9/27/12

AS-BUILT CERTIFICATION
 I hereby certify that the facility shown on this plan was constructed as shown on the "As-Built" Plans and meets the approved plans and specifications.

Signature: _____ P.E. No. _____ Date: _____

Certify Means To State Or Declare A Professional Opinion Based Upon Onsite Inspections And Material Tests Which Are Conducted During Construction. The Onsite Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Standards. Certify Does Not Mean Or Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Relieve Any Other Party From Meeting Requirements Imposed By Contract, Employment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

| NO. | REVISIONS DESCRIPTION | DATE |
|-----|-----------------------|------|
| | | |



Sand Filter Specifications

1. Material Specifications for Sand Filters
 The allowable materials for sand filter construction are detailed in Table B.3.1.

2. Sand Filter Testing Specifications
 Undergound sand filters, facilities within sensitive groundwater aquifers, and filters designed to serve urban hot spots are to be tested for water tightness prior to placement of filter media. Entrances and exits should be plugged and the system completely filled with water to demonstrate water tightness. Water tightness means no leakage for a period of 8 hours.

All overflow weirs, multiple orifices and flow distribution slots are to be field-tested to verify adequate distribution of flows.

3. Sand Filter Construction Specifications
 Provide sufficient maintenance access (i.e., 12-foot-wide road with legally recorded easement). Vegetated access slopes are to be a maximum of 10% ; gravel slopes to 15% ; paved slopes to 25%.

Absolutely no runoff is to enter the filter until all contributing drainage areas have been stabilized. Surface of filter bed is to be level.

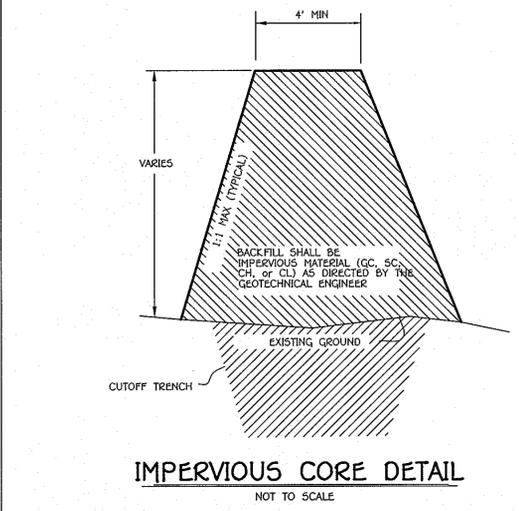
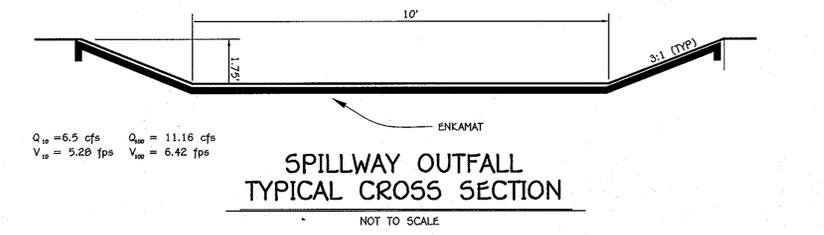
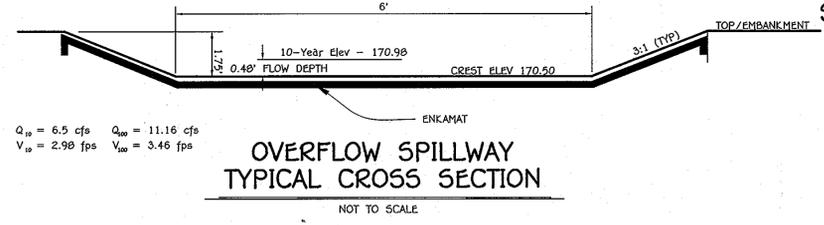
All underground sand filters should be clearly delineated with signs so that they may be located when maintenance is due.

Surface sand filters may be planted with appropriate grasses; see MAA Approved Species List.

"Pocket" sandfilters (and residential bio-retention facilities treating areas larger than an acre) shall be sized with a stone "window" that covers approximately 10% of the filter area. This "window" shall be filled pea gravel (3/4 inch stone).

Table B.3.1 Material Specifications for Sand filters

| Material | Specifications/Test Method | Size | Notes |
|---------------------------------|--|--|--|
| sand | clean AASHTO-M-6 of ASTM-Concrete sand | 0.02" to 0.04" | Sand substitutions such as Diabase and Grystone #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand. |
| peat | ash content: < 15% pH range: 5.2 to 4.9 loose bulk density 0.12 to 0.15 g/cc | N/A | The material must be reed-segged hemic peat, shredded, uncompacted, uniform, and clean. |
| leaf compost | | N/A | |
| underdrain gravel | AASHTO-M-43 | 0.375" to 0.75" | |
| geotextile fabric (if required) | ASTM-D-4833 (puncture strength lb.) ASTM-D-4632 (Tensile Strength lb.) | 0.08" thick equivalent opening size of #20 sieve | Must maintain 125 gpm per sq. ft. flow rate. Note: a 4" pea gravel layer may be substituted for geotextiles meant to "separate" sand filter layers. |
| impermeable liner (if required) | ASTM-D-4833 (thickness) ASTM-D-412 (tensile strength 1,100 lb., elongation 200%) ASTM-D-624 (Tear resistance - 150 lb./in) ASTM-D-471 (water adsorption: +8 to -2% mass) | 30 mil thickness | Liner to be ultraviolet resistant. A geotextile fabric should be used to protect the liner from puncture. |
| underdrain piping | F 758, Type PS 2B or AASHTO-M-27B | 4" - 6" rigid schedule 40 PVC or SDR35 | 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; not necessary underneath pipes |
| concrete (cast-in-place) | MSHA Standards and Specs. Section 902, Mix No. 3, f'c = 3500 psi, normal weight, air-entrained; reinforcing to meet ASTM-615-60 | N/A | on-site testing of poured-in-place concrete required; 28 day strength and slump test; all concrete design (cast-in-place or precast) not using previously approved State or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland |
| concrete (pre-cast) | per pre-cast manufacturer | N/A | SEE ABOVE NOTE |
| non-rebar steel | ASTM A-36 | N/A | structural steel to be hot-dipped galvanized ASTM-A-123 |

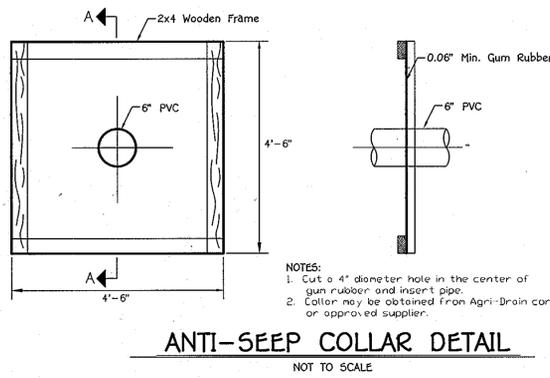


Embankment and Cut-off Trench Construction

THE AREA OF THE PROPOSED SWM POND SHOULD BE STRIPPED OF TOPSOIL AND ANY OTHER UNSUITABLE MATERIALS FROM THE EMBANKMENT OR STRUCTURE AREA IN ACCORDANCE WITH SOIL CONSERVATION GUIDELINES. AFTER STRIPPING OPERATIONS HAVE BEEN COMPLETED, THE EXPOSED SUBGRADE MATERIALS SHOULD BE PROOFROLLED WITH A LOADED DUMP TRUCK OR SIMILAR EQUIPMENT IN THE PRESENCE OF A GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE UTILIZING A DYNAMIC CONE PENETROMETER. ANY EXCESSIVELY SOFT OR LOOSE MATERIALS IDENTIFIED BY PROOFROLLING OR PENETROMETER TESTING SHOULD BE EXCAVATED TO SUITABLE FIRM SOIL, AND THEN GRADES RE-ESTABLISHED BY BACKFILLING WITH SUITABLE SOIL.

A REPRESENTATIVE OF THE GEOTECHNICAL ENGINEER SHOULD BE PRESENT TO MONITOR PLACEMENT AND COMPACTION OF FILL FOR THE EMBANKMENT AND CUT-OFF TRENCH. IN ACCORDANCE WITH MARYLAND SOIL CONSERVATION SPECIFICATION 37B SOILS CONSIDERED SUITABLE FOR THE CENTER OF EMBANKMENT AND CUT-OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL.

IT IS OUR PROFESSIONAL OPINION THAT IN ADDITION TO THE SOIL MATERIALS DESCRIBED ABOVE A FINE GRAINED SOIL, INCLUDING SILT (ML) WITH A PLASTICITY INDEX OF 10 OR MORE CAN BE UTILIZED FOR THE CENTER OF THE EMBANKMENT AND CORE TRENCH. BASED ON OUR VISUAL CLASSIFICATIONS IT APPEARS THAT SOME OF THE ON-SITE SOILS, ESPECIALLY THE NEAR SURFACE SOILS, WILL BE SUITABLE FOR USE AS CORE TRENCH MATERIAL. IT IS RECOMMENDED THAT ADDITIONAL EXPLORATION AND LABORATORY TESTING BE PERFORMED PRIOR TO POND CONSTRUCTION TO IDENTIFY AND QUANTIFY POTENTIAL BORROW AREAS FOR CORE TRENCH MATERIAL. ALL FILL MATERIALS MUST BE PLACED AND COMPACTED WITH MD SC5 37B SPECIFICATIONS.



Operation and Maintenance Schedule for Privately Owned and Maintained Surface Stormwater Filtration Systems

1. THE STORMWATER WETLAND FACILITY 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 TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF ONCE PER YEAR, WHEN VEGETATION REACHES 18" IN HEIGHT OR AS NEEDED.
3. FILTERS THAT HAVE A GRASS COVER SHALL BE MOWED A MINIMUM OF THREE (3) TIMES PER GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 12 INCHES.
4. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
5. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
6. REMOVE SILT WHEN IT EXCEEDS FOUR (4) INCHES DEEP IN THE FOREBAY.
7. WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. THE OWNER MUST FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID.
8. A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
9. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
10. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10712 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2895

Owner/Developer
 Winters Lane Investments, LLC
 c/o B. James Greenfield
 6420 Autumn Sky Way
 Columbia, Maryland 21044
 Phone# (443) 324-4732

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 ALDO J. ...
 License No. 20748, Expiration Date 2-22-13.

Date: 9/28/12

STORMWATER MANAGEMENT SPECIFICATIONS
Winter Crest
 Buildable Lots 1 Thru 8 And Open Space Lot 9
 (Being A Resubdivision Of Lot 2, As Shown On A Plat Entitled "Norris E. Pool, Lots 1, 2 & 3, Winters Ln. & Hanover Rd., Recorded Among The Land Records Of Howard County, Maryland As Plat No. 3342)
 Zoned: R-12
 Tax Map: 3B, Grid: 15, Parcel: 068
 First Election District - Howard County, Maryland
 Date: August 28, 2012 Scale: As Shown
 Sheet 9 of 10

Approved: Department of Planning And Zoning
 Chief, Division of Land Development
 Chief, Development Engineering Division

[Signatures]
 Date: 8/27/12

| LEGEND | |
|-----------|-------------------------------|
| SYMBOL | DESCRIPTION |
| ---492--- | EXISTING CONTOUR 2' INTERVAL |
| ---490--- | EXISTING CONTOUR 10' INTERVAL |
| ---492--- | PROPOSED CONTOUR 2' INTERVAL |
| ---490--- | PROPOSED CONTOUR 10' INTERVAL |
| +499.50 | SPOT ELEVATION |
| --- | SILT FENCE |
| --- | SUPER SILT FENCE |
| --- | DRAINAGE LIMITS |
| --- | SOILS LIMIT |
| --- | L.O.D. |
| --- | LIMIT OF DISTURBANCE |
| --- | PROPOSED TREES |
| --- | SLOPES (25% OR GREATER) |
| --- | SLOPES (15% TO 24.9%) |
| --- | EXISTING TREELINE |
| --- | PROPOSED TREELINE |
| --- | FOREST CONSERVATION SIGN |
| --- | FOREST CONSERVATION EASEMENT |
| --- | PLANTING AREA |

| SOILS LEGEND | | |
|--------------|---|-------|
| SOIL | NAME | CLASS |
| CIC3 | Chillum gravelly loam, 5 to 10 percent slopes, severely eroded | C |
| CID2 | Chillum gravelly loam, 10 to 15 percent slopes, moderately eroded | C |
| CmC2 | Chillum silt loam, 5 to 10 percent slopes, moderately eroded | C |
| ScB | Sandy and clayey sand, gently sloping | B |
| SIC2 | Sassafras loam, 5 to 10 percent slopes, moderately eroded | B |
| SsE | Sassafras soils, 15 to 40 percent slopes | B |
| ** Fa | Fallingston loam | D |

NOTES:
 * Hydric soils and/or contains hydric inclusions
 ** May contain hydric inclusions
 † Generally only within 100-year floodplain areas

FOREST CONSERVATION WORKSHEET
 VERSION 2.2

| | | |
|--|-----------|------|
| BASIC SITE DATA: | | |
| A. TOTAL TRACT AREA | | 3.69 |
| B. AREA WITHIN 100-YEAR FLOODPLAIN | | 0.00 |
| C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION | | 3.69 |
| D. NET TRACT AREA | | 3.69 |
| LAND USE CATEGORY: | | HR |
| INFORMATION FOR CALCULATIONS: | | |
| E. AFForestation THRESHOLD | 15% x D = | 0.55 |
| F. FOREST CONSERVATION THRESHOLD | 20% x D = | 0.74 |
| EXISTING FOREST COVER: | | |
| G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) | | 2.29 |
| H. AREA OF FOREST ABOVE CONSERVATION THRESHOLD | | 1.35 |
| I. BREAK EVEN POINT: | | 1.05 |
| J. FOREST CLEARING PERMITTED WITHOUT MITIGATION | | 1.24 |
| PROPOSED FOREST CLEARING: | | |
| K. FOREST TO BE CLEARED | | 1.51 |
| L. FOREST TO BE RETAINED | | 0.78 |
| PLANTING REQUIREMENTS: | | |
| M. REFORESTATION FOR CLEARING ABOVE THE CONSERVATION THRESHOLD | | 0.38 |
| N. REFORESTATION FOR CLEARING BELOW THE CONSERVATION THRESHOLD | | 0.00 |
| O. CREDIT FOR RETENTION ABOVE THE CONSERVATION THRESHOLD | | 0.04 |
| P. TOTAL REFORESTATION REQUIRED | | 0.34 |
| Q. TOTAL AFForestation REQUIRED | | 0.00 |
| R. TOTAL PLANTING REQUIREMENT | | 0.34 |

FCP NOTES
 THIS FOREST CONSERVATION PLAN DOCUMENTS THE PROPOSED FOREST TO BE CLEARED AND TO BE RETAINED. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER TO OBTAIN ALL NECESSARY PERMITS AND TO MAINTAIN THE FOREST CONSERVATION EASEMENT. THE DISTURBANCE OF FOREST RESOURCES SHALL BE LIMITED TO THE AREAS SHOWN ON THIS PLAN. ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE DISTURBANCE OF FOREST RESOURCES FOR ANY REASON. THE FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16-220 OF THE HOWARD COUNTY CODE. FOREST CONSERVATION ACT NO. CLEARING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS UNDER FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED. FORESTED AREAS OCCURRING OUTSIDE OF THE FCE SHALL NOT BE CONSIDERED PART OF THE FCE AND SHALL NOT BE SUBJECT TO PROTECTIVE LAND COVENANTS. LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE THE LIMIT OF TEMPORARY FENCING OR THE FCE BOUNDARY, WHICHEVER IS GREATER. THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS PROVIDED BY HOWARD COUNTY PERMITS. NO STOCKPILES, PARKING AREAS, EQUIPMENT, CLEANING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS. TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. THE FENCING SHALL BE MAINTAINED ALONG ALL FCE BOUNDARIES WHICH OCCUR WITHIN 15 FEET OF THE PROPOSED LIMITS OF DISTURBANCE. PERMANENT SIGNAGE SHALL BE PLACED 50' - 100' APART ALONG BOUNDARIES OF ALL AREAS INCLUDED IN FOREST CONSERVATION EASEMENTS.

AREA OF FOREST TO BE CLEARED:
 STAND 1: 0.58 ACRES
 STAND 2: 0.45 ACRES
 STAND 3: 0.00 ACRES
 TOTAL AREA OF FOREST TO BE CLEARED: 1.51 ACRES

NOTES:
 1. THE OVERHEAD ELECTRIC LINES LOCATED ON OPEN SPACE LOT 9 WILL BE RELOCATED TO AN AREA OUTSIDE THE PROPOSED FOREST CONSERVATION EASEMENT.
 2. THE FOREST CONSERVATION REQUIREMENTS PER SECTION 16.1200 OF THE HOWARD COUNTY CODE AND THE FOREST CONSERVATION MANUAL FOR THIS SUBDIVISION WILL BE FULFILLED BY PROVIDING 0.78 AC. OF ON-SITE RETENTION AND 0.32 AC. OF ON-SITE REFORESTATION SURETY FOR THE ON-SITE REFORESTATION @ \$0.50/SQ.FT. FOR 13,939 SQ.FT. = \$697.00 IS REQUIRED. THE BALANCE OF 0.08 ACRES OF FOREST CONSERVATION REQUIRED WILL BE PROVIDED VIA A FEE-IN-LIEU PAYMENT IN THE AMOUNT OF \$684.00 (871 SQ.FT. x \$0.75 = \$653.25).

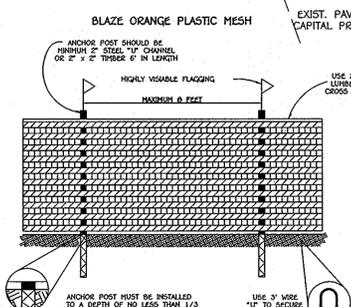
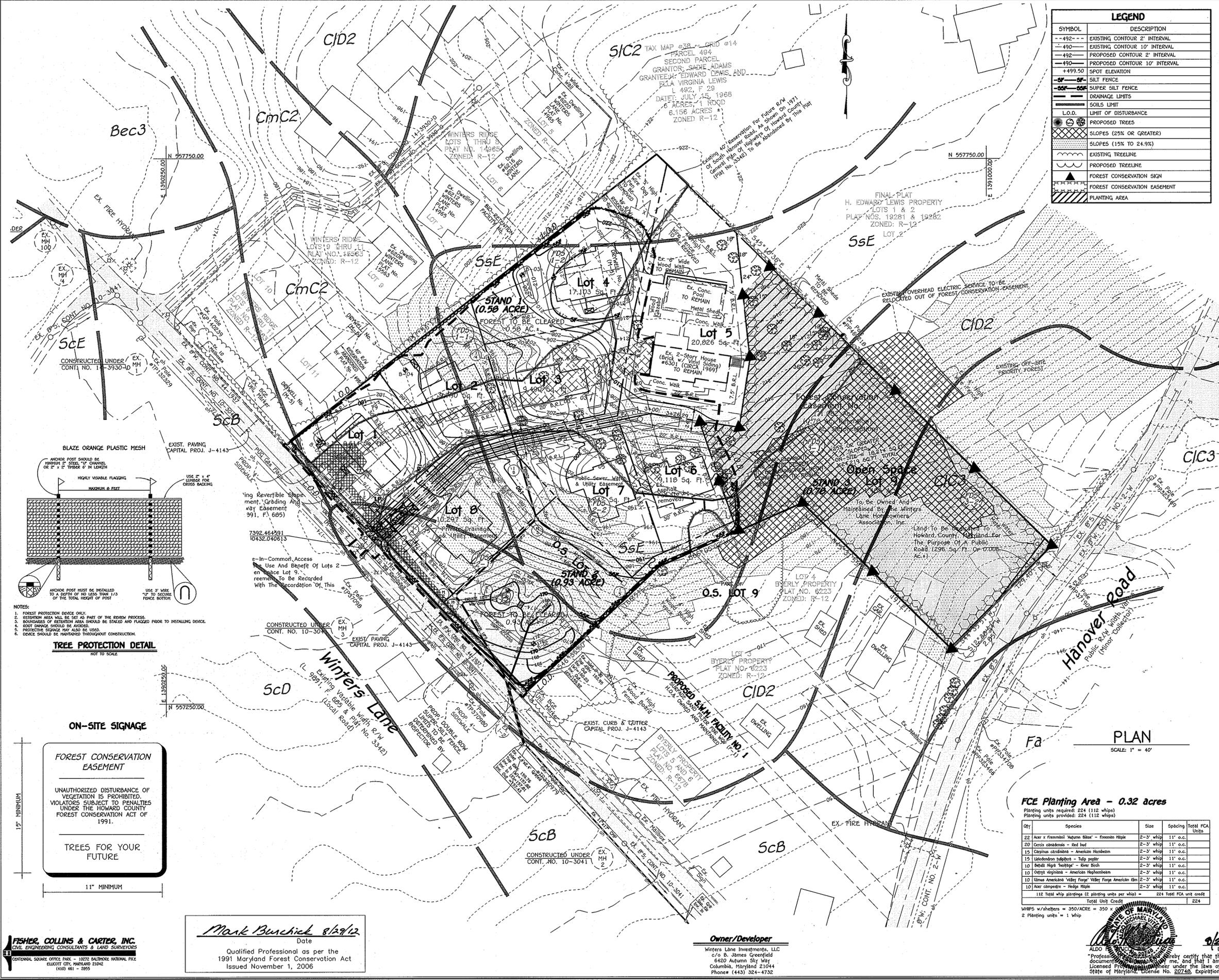
FOREST CONSERVATION PLAN
Winter Crest
 Buildable Lots 1 Thru 8 And
 Open Space Lot 9
 (Being A Resubdivision Of Lot 2, As Shown On A Plat Entitled
 "Norris E. Pool, Lots 1, 2, 3, Winters Lane, & Hanover Road",
 Recorded Among The Land Records Of Howard County, Maryland As
 Plat No. 3342)
 Zoned: R-12
 Tax Map: 3B, Grid: 15, Parcel: 868
 First Election District - Howard County, Maryland
 Date: August 29, 2012 Scale: As Shown
 Sheet 10 of 10

FCE Planting Area - 0.32 acres

Planting units required: 224 (112 whip)
 Planting units provided: 224 (112 whip)

| Qty | Species | Size | Spacing | Total FCA Units |
|--|--|------------|----------|----------------------------|
| 22 | Acer x Fraxinella 'Autumn Blaze' - Firebald Maple | 2'-3" whip | 11' o.c. | 11 |
| 20 | Cornus canadensis - Red Dog | 2'-3" whip | 11' o.c. | 10 |
| 12 | Crataegus canadensis - American Hawthorn | 2'-3" whip | 11' o.c. | 6 |
| 15 | Liquidambar styraciflua - Tulip poplar | 2'-3" whip | 11' o.c. | 7 |
| 10 | Metopium erythrorhizon - River Birch | 2'-3" whip | 11' o.c. | 5 |
| 10 | Opuntia virginiana - American Hopbush | 2'-3" whip | 11' o.c. | 5 |
| 10 | Ulmus americana 'Valley Forge' Valley Forge American Elm | 2'-3" whip | 11' o.c. | 5 |
| 10 | Acer composite - Hedge Maple | 2'-3" whip | 11' o.c. | 5 |
| 112 Total whip plantings (2 planting units per whip) = | | | | 224 Total FCA units credit |
| WHPS w/shelters = 350/ACRE = 350 x 0.92 = 322 | | | | 224 |
| 2 Planting units = 1 whip | | | | |

Professional Engineer's Seal
 ALDO
 I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20748, Expiration Date 2-22-13.



TREE PROTECTION DETAIL
 NOT TO SCALE

ON-SITE SIGNAGE

FOREST CONSERVATION EASEMENT

UNAUTHORIZED DISTURBANCE OF VEGETATION IS PROHIBITED. VIOLATORS SUBJECT TO PENALTIES UNDER THE HOWARD COUNTY FOREST CONSERVATION ACT OF 1991.

TREES FOR YOUR FUTURE

Mark Buschick 8/27/12
 Date
 Qualified Professional as per the
 1991 Maryland Forest Conservation Act
 Issued November 1, 2006

Owner/Developer
 Winters Lane Investments, LLC
 c/o B. James Greenfield
 6420 Autumn Sky Way
 Columbia, Maryland 21044
 Phone# (443) 324-4732

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