Environment Site Design Overview:

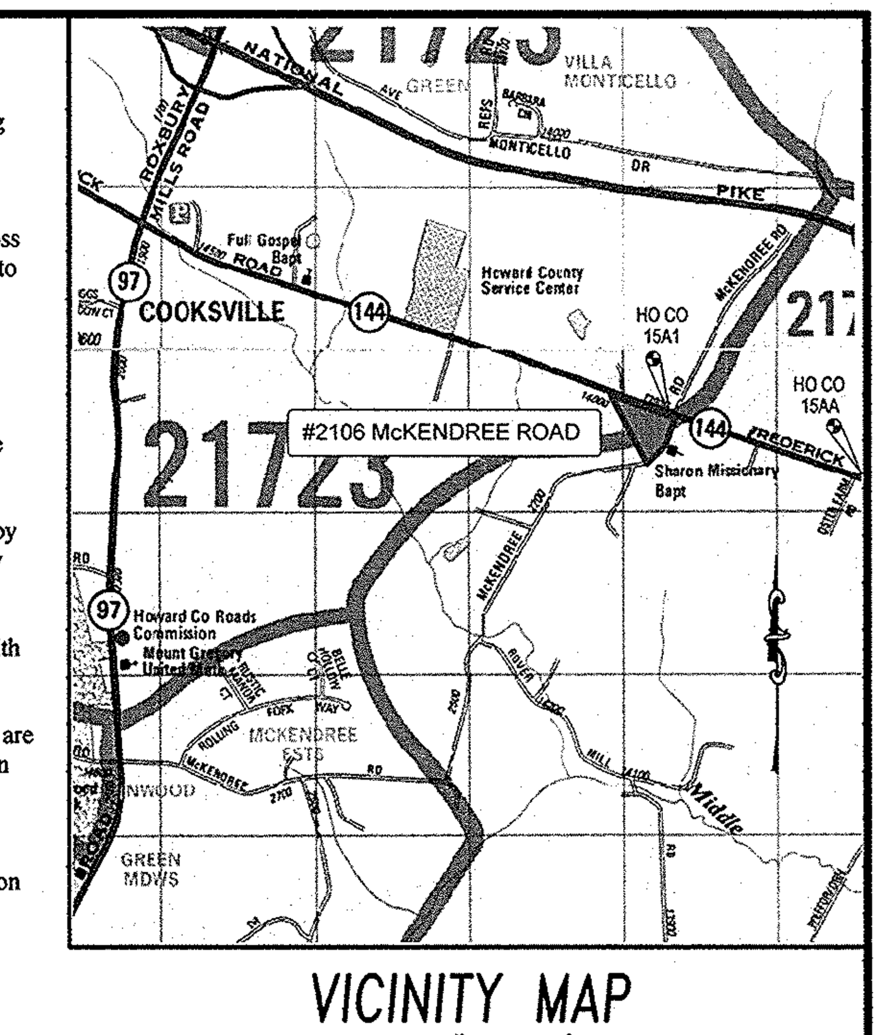
Qualitative and quantitative stormwater management shall be provided by utilizing the following non-structural best management practices [BMP} :

1.) The proposed driveway shall be disconnected and restored to a wooded condition, by utilizing sheetflow across a vegetated buffer. The proposed driveway will be superelevated at a 3 percent cross slope and a 12 foot wide, grass shoulder shall be graded on the south side of the proposed driveway to provide qualitative stormwater management. Pollutant laden runoff from the driveway will be infiltrated into the pervious soils of the wide shoulder and will be filtered by the grass cover and biologically absorbed by the vegetative matter. Thermal pollutants shall also be neutralized by infiltration. This technique shall also address quantitative stormwater management by returning the impervious surface of the driveway to a wooded condition. To enhance the function of this BMP, a ditch will be graded immediately north of the proposed driveway to reduce the contributing drainage area to the grass buffer strip.

2.) The proposed runoff from the house shall be disconnected and restored to a wooded conditions by directing runoff to vegetative areas, where it too can be absorbed by pervious soils and be filtered by the vegetative cover. This technique shall also provide quantitative management by returning the impervious surface of the house to a wooded condition. Special drainage measures have also been implemented to divert excessive runoff around the house to prevent innundation of pervious soils with unnecessary runoff.

The natural drainage patterns for the site, especially at the outfall, near the western property line, are being maintained and shall remain in their existing condition. A ditch is proposed along the northern property line to capture and divert runoff from the state highway around the proposed stormwater buffer areas. The ditch should help to attenuate this runoff and convey the runoff upstream of the discharge point at non erosive velocities. The proposed ditch can be also be utilized to reduce the transport of sediment during the construction phase by diverting offsite runoff around the construction site.

There are no proposed wavier petitions associated with this project.

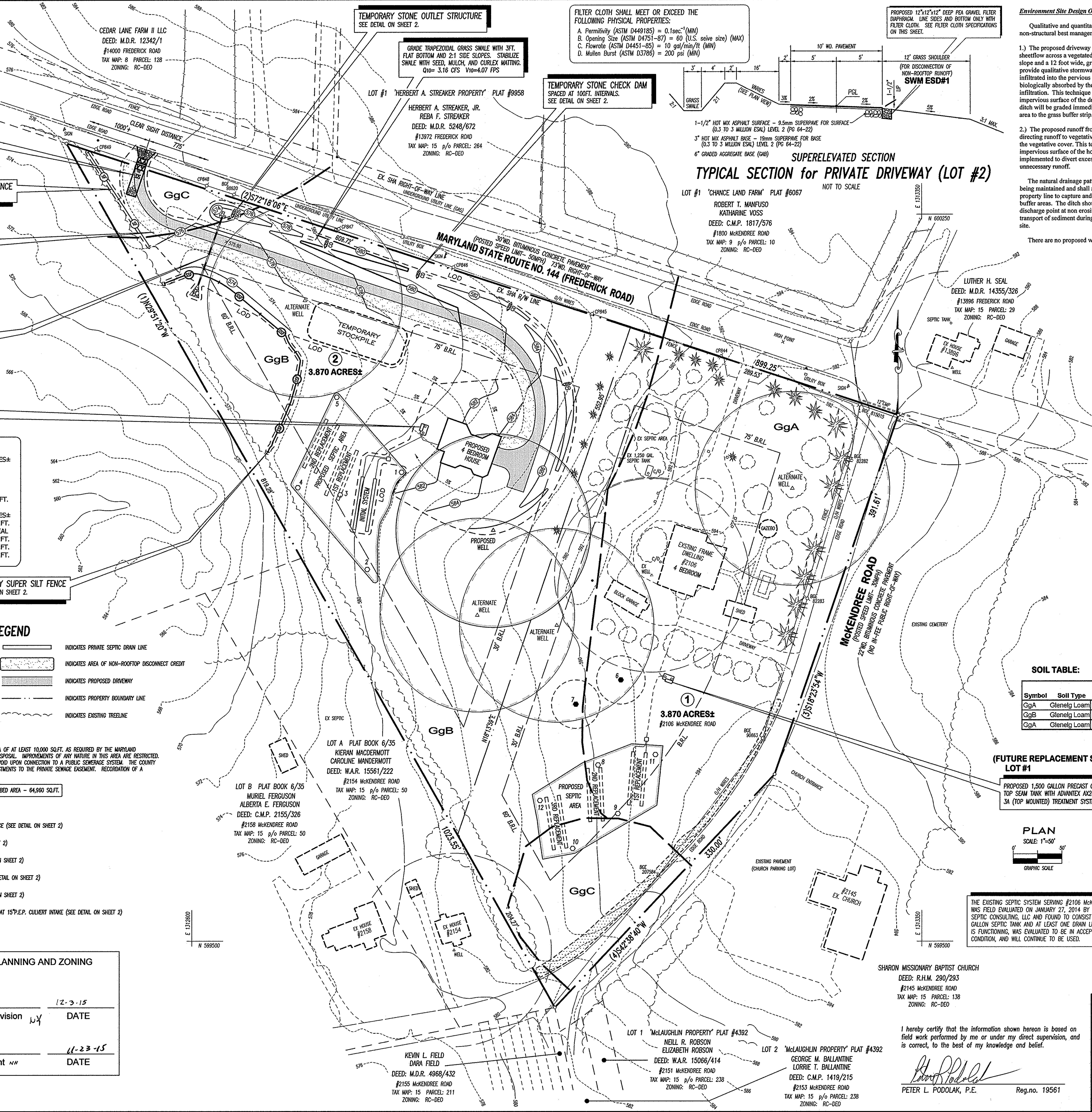


VICINITY MAP

Scale 1" = 2000'

HOWARD COUNTY ADC MAP: 9 GRID: G-1

COPYRIGHT ADC THE MAP PEOPLE PERMITTED USE NUMBER 21096444



SITE ANALYSIS CHART

1. SITE AREA - 7.739 ACRES±
2. ENVIRONMENTAL AREAS
   - WETLANDS (AND BUFFERS) - 0
   - FORESTS - 0
   - FLOODPLAINS (AND BUFFERS) - 0
   - STEEP SLOPES (15% AND GREATER) - 3,030 SQ.FT.
   - ERODIBLE SOILS - 0
3. TOTAL PROJECT AREA - 7.739 ACRES±
4. LOD AREA - 64,960 SQ.FT.
5. PROPOSED SITE USES - RESIDENTIAL
6. IMPERVIOUS AREAS - 37,855 SQ.FT.
7. GREEN OPEN AREA - LOT #1 - 135,740 SQ.FT.; LOT #2 - 157,290 SQ.FT.

SYMBOLS LEGEND

- INDICATES PERCOLATION TEST LOCATION
- INDICATES EXISTING WELL LOCATION
- INDICATES PROPOSED or ALTERNATE WELL LOCATION
- B.R.L. INDICATES BUILDING RESTRICTION LINE
- INDICATES PROPOSED GRADING CONTOUR LINE
- INDICATES EXISTING GROUND CONTOUR LINE
- INDICATES AREAS OF GREATER THAN 15 PERCENT SLOPES
- THIS AREA DESIGNATES A PRIVATE SEWAGE DISPOSAL AREA OF AT LEAST 10,000 SQ.FT. AS REQUIRED BY THE MARYLAND DEPARTMENT OF ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED. THIS SEWAGE DISPOSAL AREA SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE AUTHORITY TO GRANT ADJUSTMENTS TO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A REVISED SEWAGE EASEMENT SHALL NOT BE NECESSARY.
- LOD INDICATES LIMITS OF DISTURBANCE (LOD) — TOTAL DISTURBED AREA - 64,960 SQ.FT.
- GgB INDICATES SOILS LINE AND SOILS DESIGNATION
- INDICATES TEMPORARY STABILIZED CONSTRUCTION ENTRANCE (SEE DETAIL ON SHEET 2)
- SF INDICATES TEMPORARY SILT FENCE (SEE DETAIL ON SHEET 2)
- SSF INDICATES TEMPORARY SUPER SILT FENCE (SEE DETAIL ON SHEET 2)
- TSOS INDICATES TEMPORARY STONE OUTLET STRUCTURE (SEE DETAIL ON SHEET 2)
- CD INDICATES TEMPORARY STONE CHECK DAM (SEE DETAIL ON SHEET 2)
- FL INDICATES TEMPORARY 18" FILTER LOG TO BE INSTALLED AT 15"P.E.P. CULVERT INTAKE (SEE DETAIL ON SHEET 2)
- INDICATES PRIVATE SEPTIC DRAIN LINE
- INDICATES AREA OF NON-ROOFTOP DISCONNECT CREDIT
- INDICATES PROPOSED DRIVEWAY
- INDICATES PROPERTY BOUNDARY LINE
- INDICATES EXISTING TREELINE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[signature] 12-3-15
Chief, Development Engineering Division NY — DATE

[signature] 11-23-15
Chief, Division of Land Development NH — DATE

\\Freenas\lap\Job Fies\Allnutt\#2106 McKendree Rd ENVIRONMENTAL CONCEPT PLAN r3.dwg 11-18-2015

GENERAL NOTES

1. The project is in conformance with the latest Howard County Standards unless waivers have been approved.
2. The existing topography is taken from Howard County GIS with two foot contour intervals and has been updated by field survey by Leon A. Podolak and Associates, LLC, dated April 13, 2014.
3. The coordinates shown hereon are based upon the Howard County Geodetic Control, which is based upon the Maryland State Plane Coordinate System. Howard County Monument Nos. 15A1 and 15AA were used for this project.
4. Water is private.
5. Sewer is private.
6. Existing utilities are based on locations from field survey as of April 13, 2014.
7. The stormwater management system shown on these plans is an approximation of the size, shape and location. It is understood that this system has not been designed and the actual design may change, altering the number of units allocated for this development.
8. Project background information:
   - Subdivision Name- FRIENDSHIP PINES
   - Tax Map- 15
   - Section/Area- 1
   - Lot/Parcel- 51
   - Zoning- RC-DEO (RURAL CONSERVATION - DENSITY EXCHANGE OPTION)
   - ZB/BA Reference-
   - Election District- 4
   - Total Tract Area- 7.739 acres±
   - Section Area-
   - Number of Proposed Lots- 2
9. **Note**: Trench drains across entrances, and at intersections may need to be installed if constructed drainage areas are not sufficiently captured to satisfy stormwater management requirements. Such determination shall be made by the engineer in the field during the construction phase of this project.
10. Field assessment of site was performed by Eco-Science Professional, Inc. on November 25, 2014.
11. Base map information provided by Leon A. Podolak & Associates, LLC.
12. Site area is approximately 7.739 acres.
13. Approval of this ECP does not constitute an approval of any subsequent and associated subdivision Plan/Plat and/or Site Development Plan and/or Red-line Revision Plan. Review of this project for compliance with the Howard County Subdivision and Land Development Regulations and the Howard County Zoning Regulations shall occur at the Subdivision Plan/Plat and/or Site Development Plan stages and/or Red-line Revision process. The applicant and consultant should expect additional and more detailed review comments (including comments that may alter the overall site design) as this project progresses through the plan review process.
14. Any damage to the county's right of way shall be corrected at the developers expense.

ENVIRONMENTAL FEATURES NOTES

1. WATERCOURSES - No streams are present on or proximal to the project site.
2. NONTIDAL WETLANDS - No nontidal wetlands are present on or proximal to the project site.
3. PUBLIC WATER SUPPLY - The study area eventually drains to the Middle Patuxent River, which is part of a public water supply.
4. BUFFERS - No wetland or Howard County stream buffers are present on the project site.
5. RTE ELEMENTS - No RTE species were observed within the study area. A request has been made to the MD Department of Natural Resorces Wildlife and Heritage Service for information on RTE elements wthin and adjacent to the study area.
6. FOREST - No forest or specimen trees are present on the project site. The limits of offsite forest are shown on the plan.
7. 100 YEAR FLOODPLAINS - No known 100 year floodplains occur on the project site.
8. STREAM USE CLASS - The Middle Patuxent River and its tributaries in this paert of Howard County are classified as Use IV-P - Put and Take Trout Fisheries and Public Water Supply - by the Maryland Department of the Environment (MDE).

SOIL TABLE:

Symbol	Soil Type	Slope	Slowest Permeability	Hydrologic Group	Erodibility Kw	Shrink/Swell Potential	Depth to Restriction	Available Water Capacity	Non-Irrigative Land Capacity	Drainage
GgA	Glenelg Loam	0 - 3 %	moderate	B non hyrdric	0.2	Low	> 60 inches	Very High	Class 1	well drained
GgB	Glenelg Loam	3 - 8 %	moderate	B non hyrdric	0.2	Low	> 60 inches	Very High	Class 2c	well drained
GgA	Glenelg Loam	> 8%	moderate	B non hyrdric	0.2	Low	> 60 inches	Very High	Class 3	well drained

(FUTURE REPLACEMENT SYSTEMS)
LOT #1

PROPOSED 1,500 GALLON PRECAST CONCRETE, TOP SEAM TANK WITH ADVANTEX AX20 MODE 3A (TOP MOUNTED) TREATMENT SYSTEM.

PLAN
SCALE: 1"=50'
0' 50'
GRAPHIC SCALE

THE EXISTING SEPTIC SYSTEM SERVING #2106 McKENDREE ROAD WAS FIELD EVALUATED ON JANUARY 27, 2014 BY HOME LAND SEPTIC CONSULTING, LLC AND FOUND TO CONSIST OF A 1,250 GALLON SEPTIC TANK AND AT LEAST ONE DRAIN LINE. THE SYSTEM IS FUNCTIONING, WAS EVALUATED TO BE IN ACCEPTABLE CONDITION, AND WILL CONTINUE TO BE USED.

ENVIRONMENTAL CONCEPT PLAN for SUBDIVISION of the LANALL RENOVATIONS LLC PROPERTY 'FRIENDSHIP PINES'

(RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND IN DEED: W.A.R. 15471/440)

#2106 McKENDREE RD. at the intersection of MD RTE 144
4-TH ELECTION DISTRICT

NEAR WEST FRIENDSHIP
HOWARD COUNTY, MARYLAND

PROPERTY OWNER	DEVELOPER
LANALL RENOVATIONS LLC	PATUXENT HOLDINGS II, LLC
c/o STEVE ALLNUTT	c/o STEVE ALLNUTT
#8171 MAPLE LAWN BLVD.	#8171 MAPLE LAWN BLVD.
SUITE 150	SUITE 150
FULTON, MARYLAND 20759	FULTON, MARYLAND 20759
PHONE: 410-336-7787	PHONE: 410-336-7787

I hereby certify that the information shown hereon is based on field work performed by me or under my direct supervision, and is correct, to the best of my knowledge and belief.

[signature]
PETER L. PODOLAK, P.E. Reg.no. 19561

ECP-15-070

ENVIRONMENTAL CONCEPT PLAN
#2106 McKENDREE ROAD

HOWARD CO. TAX MAP: 15 GRID: 1 PARCEL: 51 TAX ACCT. NO.: 04-322878

SHEET 1 OF 2

LEON A. PODOLAK and ASSOCIATES, L.L.C.

SURVEYING and CIVIL ENGINEERING
147 East Main St. (P.O. Box 266) Westminster, Maryland 21157
(410) 848-2229 - (410) 876-1226

STATE OF MARYLAND — PETER LEON PODOLAK — No. 19561 — PROFESSIONAL ENGINEER

[signature] 11-19-15
Peter L. Podolak, P.E. Date

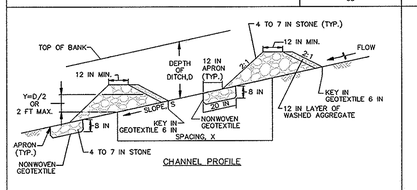
I hereby certify that these documents were prepared or approved by me, and I am a duly licensed professional engineer under the laws of the State of Maryland, license no. 19561, expiration date: 3-3-2016.

Date	Revision
7-17-2015	DED-DLD COMMENTS
9-30-2015	SCS COMMENTS
11-18-2015	DLD COMMENTS

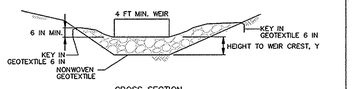
Date: April 27, 2015
Scale: 1"=50'
Drawing No. ______

DETAIL D-2 STONE CHECK DAM

STANDARD SYMBOL: CD



CHANNEL PROFILE



CROSS SECTION

CONSTRUCTION SPECIFICATIONS

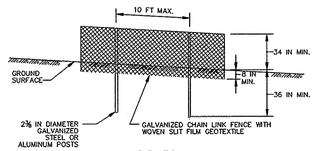
1. PREPARE SWALES IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS DESCRIBED IN SECTION C-2, STANDARDS AND SPECIFICATIONS FOR TEMPORARY SWALE, OR AS SPECIFIED ON PLAN.
2. PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND SIDES OF THE DAM PRIOR TO PLACEMENT OF STONE. CONSTRUCT THE CHECK DAM WITH WASHED 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) WITH SIDE SLOPES OF 2:1 OR FLATTER AND A MINIMUM TOP WIDTH OF 12 INCHES. PLACE THE STONE SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL AND CHANNEL BANKS. FORM THE WEIR SO THAT TOP OF THE OUTLET CREST IS APPROXIMATELY 6 INCHES LOWER THAN THE OUTER EDGES. LINE THE UPSTREAM FACE OF THE DAM WITH A 1 FOOT THICK LAYER OF WASHED AGGREGATE (¾ TO 1½ INCH).
3. SET THE HEIGHT FOR THE WEIR CREST EQUAL TO ONE-HALF THE DEPTH OF THE CHANNEL OR DITCH. TO AVOID SCOUR THE MAXIMUM HEIGHT OF THE WEIR CREST MUST NOT EXCEED 2.0 FEET.
4. REMOVE ACCUMULATED SEDIMENT WHEN IT REACHES ONE-HALF OF THE HEIGHT OF THE WEIR CREST. MAINTAIN LINE, GRADE, AND CROSS SECTION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

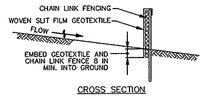
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



ELEVATION



CROSS SECTION

CONSTRUCTION SPECIFICATIONS

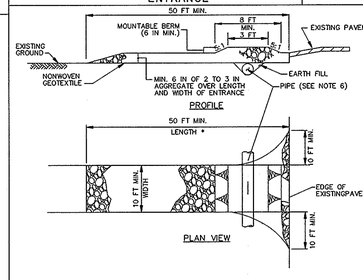
1. INSTALL 2¾ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2¾ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HOG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

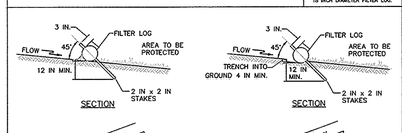
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-6 FILTER LOG

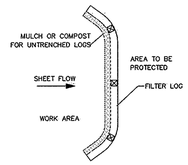
STANDARD SYMBOL: FL-18 (DESIGNATION FL-18 REFERS TO 18 INCH DIAMETER FILTER LOG)



UNTRENCHED INSTALLATION OR ENTRENCHED INSTALLATION*

*THIS APPLICATION MAY NOT BE USED WITH LOGS SMALLER THAN 12 IN.

ISOMETRIC VIEW



PLAN

CONSTRUCTION SPECIFICATIONS

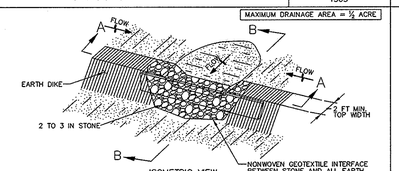
1. PRIOR TO INSTALLATION, CLEAR ALL OBSTRUCTIONS INCLUDING ROCKS, CLODS, AND DEBRIS GREATER THAN ONE INCH THAT MAY INTERFERE WITH PROPER FUNCTION OF FILTER LOG.
2. FILL LOG NETTING UNIFORMLY WITH COMPOST (IN ACCORDANCE WITH SECTION H-1 MATERIALS), OR OTHER APPROVED BIODEGRADABLE MATERIAL TO DESIRED LENGTH SUCH THAT LOGS DO NOT DEFORM.
3. INSTALL FILTER LOGS PERPENDICULAR TO THE FLOW DIRECTION AND PARALLEL TO THE SLOPE WITH THE BEGINNING AND END OF THE INSTALLATION POINTING SLIGHTLY UP THE SLOPE CREATING A "J" SHAPE AT EACH END TO PREVENT BYPASS.
4. FOR UNTRENCHED INSTALLATION BLOW OR HAND PLACE MULCH OR COMPOST ON UPHILL SIDE OF THE SLOPE ALONG LOG.
5. STAKE FILTER LOG EVERY 4 FEET OR CLOSER ALONG ENTIRE LENGTH OF LOG OR TRENCH LOG INTO GROUND A MINIMUM OF 4 INCHES AND STAKE LOG EVERY 8 FEET OR CLOSER.
6. USE STAKES WITH A MINIMUM NOMINAL CROSS SECTION OF 2X2 INCH AND OF SUFFICIENT LENGTH TO ATTAIN A MINIMUM OF 12 INCHES INTO THE GROUND AND 3 INCHES PROTRUDING ABOVE LOG.
7. WHEN MORE THAN ONE LOG IS NEEDED, OVERLAP ENDS 12 INCHES MINIMUM AND STAKE.
8. REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO A DEPTH OF ½ THE EXPOSED HEIGHT OF LOG AND REPLACE MULCH. REPLACE FILTER LOG IF TORN. REINSTALL FILTER LOG IF UNDERMINING OR DISLODGING OCCURS. REPLACE CLOGGED FILTER LOGS. FOR PERMANENT APPLICATIONS, ESTABLISH AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

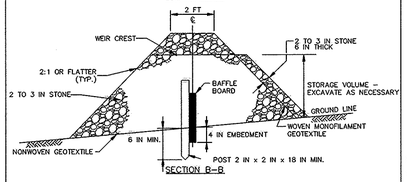
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-7 TEMPORARY STONE OUTLET STRUCTURE

STANDARD SYMBOL: TSOS



SECTION A-A



SECTION B-B

CONSTRUCTION SPECIFICATIONS

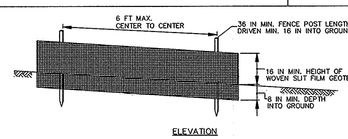
1. PROVIDE STORAGE VOLUME AS SPECIFIED ON APPROVED PLANS.
2. USE NONWOVEN GEOTEXTILE ON INTERFACE BETWEEN GROUND AND STONE.
3. PERFORATE BAFFLE BOARD WITH 3 ROWS OF 1 INCH DIAMETER HOLES 6 INCHES ON CENTER, EMBED A MINIMUM OF 4 INCHES INTO GROUND, AND EXTEND BAFFEL BOARD MINIMUM OF 12 INCHES INTO EARTH DIKE.
4. USE CLEAN 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE. PLACE WOVEN MONOFILAMENT GEOTEXTILE ON UPSTREAM FACE AND COVER WITH A MINIMUM OF 6 INCHES OF ADDITIONAL STONE.
5. USE NONWOVEN AND WOVEN MONOFILAMENT GEOTEXTILES AS SPECIFIED IN SECTION H-1 MATERIALS.
6. SET WEIR CREST OF STONE 6 INCHES LOWER THAN THE TOP OF EARTH DIKE. USE MINIMUM LENGTH OF 6 FEET FOR WEIR CREST.
7. REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO WITHIN 6 INCHES OF WEIR CREST. REPLACE GEOTEXTILE AND STONE FACING WHEN STRUCTURE CEASES TO DRAIN. MAINTAIN LINE, GRADE, AND CROSS SECTION.
8. UPON REMOVAL OF STONE OUTLET STRUCTURE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

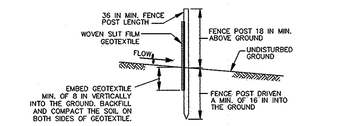
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

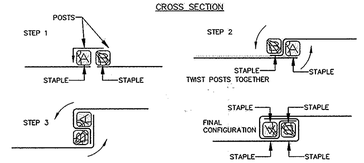
STANDARD SYMBOL: SF



ELEVATION



CROSS SECTION



JOINING TWO ADJACENT SILT FENCE SECTIONS (TOP VIEW)

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1½ X 1½ X ¾ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD, AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division — DATE 12.3.15

Chief, Division of Land Development — DATE 11-23-15

PERMANENT SEEDING NOTES

Scope: Planting permanent, long lived vegetative cover on graded and/or cleared areas and areas that have been in temporary vegetation for more than 6 months.

Standards: The following notes shall conform to Section B-4 of the "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" published jointly by the Maryland Department of Environment - Water Management Administration, the National Resource Conservation Service and the Maryland Association of Soil Conservation Districts.

The seed bed shall be prepared by loosening the soil to a depth of 3 to 5 inches and incorporating the lime and fertilizer into this loosened layer of soil. See section B-4-2.

For sites over 5 ac. soil tests will be performed. Soil tests will be conducted by the University of Maryland or a recognized commercial laboratory. Minimum soil conditions shall meet the requirements of section B-4-2-A-2-a, otherwise soil amendments or topsoil will need to be applied. Topsoiling may occur when soil conditions meet the minimum requirements as stated in section B-4-2-B. Soil amendments must meet the requirements as set forth in section B-4-2-C and must be applied as indicated by the soils tests.

For sites of 5 ac. or less of disturbance, the following fertilizer and lime rates shall apply.
Fertilizer shall consist of a mixture of 10-20-20 and be applied at the following rates:
N = 45 lb. per acre (1 lb. per 1000 sq.ft.) P2O5 = 90 lb. per acre (2 lb. per 1000 sq.ft.)
K2O = 90 lb. per acre (2 lb. per 1000 sq.ft.)
Lime shall be applied at a rate of 2 tons per acre (90 lb. per 1000 sq.ft.)
Seed type, turfgrass or sod application shall meet the requirements in section B-4-5. Seed tags shall be made available to the inspector to verify the type and application rate of seed used.
Mulch type and its application will meet the requirements in section B-4-3 a, b and c, and will be applied along with seed or immediately after seeding.

Seeding mixtures shall be selected from or will be equal to those on Table B-3. The seeding chart below will need to be placed on and filled in on the sediment control plan.

Hardiness Zone (from Figure B.3): 6b
Seed Mixture (from Table B.3): 8

No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20) N	P2O5	K2O	Lime Rate
8	Tall Fescue	100	3-1 to 5-15	1/4-1/2 in	45 pounds per acre (1 lb/1000 sf)	90 lb/ac (2 lb/1000 sf)	90 lb/ac (90 lb/1000 sf)	2 tons/ac (90 lb /1000 sf)
			8-1 to 10-15	1/4-1/2 in				
				1/4-1/2 in				

HOWARD SOIL CONSRVATION DISTRICT
STANDARD SEDIMENT CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 3 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 7 days as to all other disturbed or graded areas on the project site.
4. All disturbed areas must be stabilized within the time period specified above in accordance with the 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec. B-4-5), temporary seeding (Sec. B-4-4) and mulching (Sec.B-4-3). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
5. 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.
6. Site Analysis:

Total Area of Site	7.739 Acres
Area Disturbed	64,960 sq.ft. (1.4913 Acres)
Area to be roofed or paved	9,255 sq.ft. (0.2125 Acres)
Area to be vegetatively stabilized	50,460 sq.ft. (1.1584 Acres)
Total Cut	1,187 Cu. Yds.
Total Fill	475 Cu. Yds.
Offsite waste/borrow are location	N/A

7. Any sediment control practice that is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
8. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
9. 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.
10. Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized by the end of each workday, whichever is shorter.
11. Any changes or revisions to the sequence of construction must be reviewed and approved by the plan approval authority prior to proceeding with construction.
12. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceding grading unit has be stabilized and approved by the enforcement authority. Unless otherwise specified and approved by the approval authority, no more than 30 acres cumulatively may be disturbed at a given time.

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

Howard SCD — Date

ENGINEER'S CERTIFICATE

"I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Peter L. Podolak — Peter L. Podolak, P.E. — 11-19-15 — Nov 19, 2015

Signature of Engineer (print name below signature) — Date

DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan for sediment and erosion control, and that all responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

STEVE ASLINOT — 11/19/15

Signature of Developer (print name below signature) — Date

TEMPORARY SEEDING NOTES

Scope: Planting short term (no more than 6 Months) vegetation to temporarily stabilize any areas where soil disturbance has occurred, until the area can be permanently stabilized with vegetative or non-vegetative practices.

Standards: The following notes shall conform to Section B-4 of the "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" published jointly by the Maryland Department of Environment - Water Management Administration, the National Resource Conservation Service and the Maryland Association of Soil Conservation Districts.

The seed bed shall be prepared by loosening the soil to a depth of 3 to 5 inches and incorporating the lime and fertilizer into this loosened layer of soil. See section B-4-2.

For temporary stabilization, fertilizer shall consist of a mixture of 10-20-20 and be applied at a rate of 436 lb. per acre (10 lb. per 1000 sq. ft.) and will meet the requirements in section B-4-2. Lime shall be applied at a rate of 2 tons per acre (90 lb. per sq. ft.) and shall meet the requirements in section B-4-2 and B-4-4.

Seed type and application shall meet the requirements in section B-4-3 Seed tags shall be made available to the inspector to verify the type and rate of seed used.
Mulch type and its application will meet the requirements in section B-4-3 a, b and c and will be applied along with the seed or immediately after seeding.

Seeding mixtures shall be selected from or will be equal to those on Table B.1 (page B.20).

Temporary Seeding Summary

The seeding chart below will need to be placed on and filled in on the sediment control plan

Hardiness Zone (from Figure B.3): 6b
Seed Mixture (from Table B.1): _____

No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	Fertilizer Rate (10-20-20)	Lime Rate
	Annual Ryegrass	40	3-1 to 5-15 8-1 to 10-15	0.5"	436 lb/ac (10lb/1000 sf)	2 tons/ac (90lb/1000 sf)

REQUIRED SEQUENCE OF CONSTRUCTION:

1.) Contact the Howard County Department of Public Works, Construction Inspection Division at 410-313-1855 at least three working days prior to commencing any work, to schedule a pre-construction meeting. Also at this time contact the office of Leon A. Podolak and Associates 410-876-1226 [Engineer] to arrange for inspection of the construction of the storm water management facilities. Work with the Maryland State Highway Right-of-Way will require an access permit from the district office.
2.) Install stabilized construction entrance, silt fence and tree protection fence, if necessary, As depicted on the plan.
3.) Upon approval of the Sediment Control Inspector, strip topsoil, stockpile and stabilize in accordance with temporary seeding specifications. Install 15 inch HDPE culvert pipe at the location shown and provide cover and fill as depicted on the plan. Excess borrow material shall be hauled from the site and disposed of properly. All fill material shall be compacted in 8 inch layers and to a dry density of 95 percent, as measured by AASHTO Method T-99. The rip rap apron should be covered with filter cloth to prevent sediment from choking the interstices of the stone.
4.) Grade grass channel at the location shown on the plan and stabilize with 2 inches of topsoil and seed and mulch in accordance with permanent seeding specifications. Install temporary stone check dams at 100 foot intervals as depicted on the plan. Install temporary stone outlet structure near the intake of the culvert pipe.
6.) Grade driveway and provide wide shoulder disconnect as depicted on the plan. At this time, contact the office of Leon A. Podolak and Associates at 410-876-1226 [Engineer] to arrange for inspection of the construction and "As-Built" verification of grades. Provide stone base of driveway and superelevate at 3 percent cross slope as shown on plan.
7.) Grade and construct house, making sure to provide flat grades for the discharge of all rain spouts. Contact the office of Leon A. Podolak and Associates at 410-876-1226 [Engineer] to arrange for "As-Built" verification of grades.
8.) Fine grade all pervious areas and stabilize with 2 inches of topsoil, and seed in accordance with permanent seeding specifications. Pave driveway.
9.) Upon approval of the Howard County Sediment Control Inspector, remove all temporary sediment control devices.

SEDIMENT CONTROL DETAILS and SPECIFICATIONS

ENVIRONMENTAL CONCEPT PLAN
#2106 McKENDREE ROAD

ECP-15-070

HOWARD CO. TAX MAP: 15 GRID: 1 PARCEL: 51 TAX ACCT. NO.: 04-322878

SHEET 2 OF 2

LEON A. PODOLAK and ASSOCIATES, L.L.C.

STATE OF MARYLAND PETER LEON PODOLAK No. 19561 PROFESSIONAL ENGINEER

SURVEYING and CIVIL ENGINEERING
147 East Main St. (P.O. Box 266) Westminster, Maryland 21157
(410) 848-2229 – (410) 876-1226

Peter L. Podolak, P.E. — Date 11-19-15

I hereby certify that these documents were prepared or approved by me, and I am a duly licensed professional engineer under the laws of the State of Maryland, license no. 19561, expiration date: 3-3-2016.

Date	Revision
7-17-2015	DED-DLD COMMENTS
9-30-2015	SDS COMMENTS
11-18-2015	DLD COMMENTS

Date: April 27, 2015
Scale: 1"=50'
Drawing No. _____

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