AMER A. ALOMER, P.E.

30. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK: 1-800-257-7777 MISS UTILITY (410) 725-9976 VERIZON TELEPHONE COMPANY (410) 313-4900 HOWARD COUNTY BUREAU OF UTILITIES (410) 393-3533 AT&T CABLE LOCATION DIVISION (410) 685-0123 BALTIMORE GAS & ELECTRIC (410) 531-5533 STATE HIGHWAY ADMINISTRATION HOWARD COUNTY DEPT. OF PUBLIC WORKS/ (410) 313-1880 CONSTRUCTION INSPECTION DIVISION 31. ENVIRONMENTAL CONCEPT PLAN (ECP 12-023) FOR THIS PROJECT WAS APPROVED ON 1/23/2012 32. THIS PROJECT WILL REQUIRE APPROVAL FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT 33. THIS PROJECT IS SUBJECT TO ALTERNATIVE COMPLIANCE WP-24-041 TO SECTIONS 16.156(0)(1)(1) AND (0)(2). A REQUEST TO ALLOW THE REACTIVATION OF THE EXPIRED THE APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS; SUBMISSION OF A REDLINE REVISION FOR SDP-12-020 TO THE DEVELOPMENT ENGINEERING DIVISION WITHIN 30 DAY OF THE DATE OF THIS LETTER (ON OR BEFORE THE HOUSE FOOTPRINT FOR LOT 36 SHALL NOT NEGATIVELY IMPACT THE FLOODPLAIN OR ABILITY TO PERFORM ESD.

THE APPLICANT SHALL OBTAIN ALL REQUIRED AUTHORIZATIONS AND PERMITS FROM MARYLAND DEPARTMENT OF THE ENVIRONMENT AND U.S. ARMY CORPS OF ENGINEERS FOR DISTURBANCES WITHIN THE FLOODPLAIN, WETLAND, WETLAND BUFFER OR STREAM. REFERENCE THE APPLICABLE MDE OR USACOE PERMITS OR TRACKING NUMBERS ON THE

SOIL CLASSIFICATION:

GnB (C) GLENVILLE-BAILE SILT LOAMS - 0 TO 8% SLOPES.

LEGEND: EX. TREE/BRUSH LINE DENOTES PUBLIC 100-YEAR FLOODPLAIN, DRAINAGE & UTILITY EASEMENT STABILIZED CONSTRUCTION ENTRANCE LIMITS OF DISTURBANCE MB-XSILT FENCE OR SUPER SILT FENCE

AREA TREATED BY N-1 ROOFTOP DISCONNECTION AND N-3 SHEET FLOW TO CONSERVATION DRAINAGE AREA DIRECTLY TO MICRO-BIORETENTION

100' @ 1.0% (N-1)

100' @ 1.0%

M-6, MICRO-BIORETENTION FACILITY N-1, ROOFTOP DISCONNECTION FLOW PATH

(W/DISTANCE AND SLOPE)

AMERICAN

SYCAMORE

INK BERRY

GREAT BLUE

LOBELIA

SENSITIVE

N-3, SHEET FLOW TO CONSERVATION FLOW PATH (W/DISTANCE AND SLOPE)

SIZE

- 3' HT.

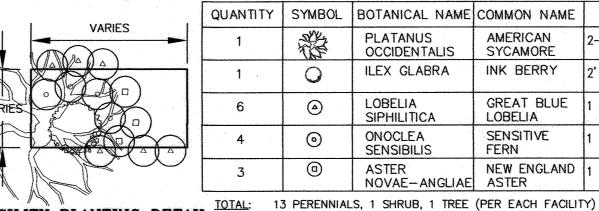
-1/2" - 3" CAL.

GAL. CONTAINER

GAL. CONTAINER

NEW ENGLAND | 1 GAL. CONTAINER

PLANT LIST



SWM PRACTICES SCHEDULE

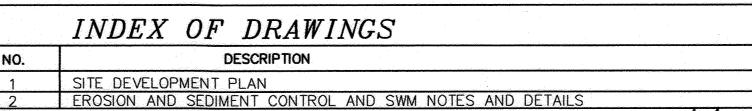
AREA	PROPOSED PRACTICES	REQUIRED ESDV	PROVIDED ESDV	REQUIRED Pe	PROVIDED Pe
LOT 36	N-1, ROOFTOP DISCONNECTION	515 CF	158 CF		<u></u>
	N-3, SHEET FLOW TO CONSERVATION		95 CF	.[
	M-6, MICRO-BIORETENTION (MB-1,2)		281 CF		
TOTAL		515 CF	534 CF	1.00"	1.04"

MICRO-BIORETENTION SCHEDULE

ALL STRUCTURAL BMP'S WILL BE PRIVATELY OWNED AND MAINTAINED

FACILITY TOP EL. TOP OF INV. IN INV. OUT AREA AT 10' MIN. SETBACK - FROM HOUSE -DIMENSIONS OF THE PROPOSED MICRO-BIORETENTION FACILITIES MAY BE REVISED IN THE FIELD SO LONG AS THE TOP OF FACILITY AREAS ARE MAINTAINED AND ALL REQUIRED SETBACKS ARE OBSERVED. - SPLASHBLOCK - TOP OF BERM (B) 4" NON-PERFORATED CLEANOUT WITH CAP ON EACH UNDERDRA 4" NON-PERFORATED HDPE __/ OUTLET PIPE (IF APPLICABLE) PLANTING, SOIL -NON-WOVE GEOTEXTILE - INV. OUT EL. (D) 6" GRAVEL 4" NON-PERFORATED HDPE CAP END OF--1/4" GALVANIZED ─INV.IN EL. (C) WRE MESH - 4" PERFORATED HDPE

TYPICAL MICRO-BIORETENTION PROFILE



34. At the time of Rediive approval number 1, the site was mass graded and the Culverts were constructed.

STORMWATER MANAGEMENT PRACTICES RAINWATER SUBMERGED LANDSCAPE INFILTRATION DRY **ENHANCED** GRAVEL WELLS | BIORETENTION | GARDENS HARVESTING INFILTRATION BERMS FILTERS WETLANDS M-2M-5M-6M-7(NUMBER) (NUMBER) (NUMBER) (NUMBER) (NUMBER) (NUMBER) (NUMBER) (NUMBER) (NUMBER) 0

SCALE :1"=2,000' ADC MAP: 5052 J-2

GENERAL NOTES:

1. THE SUBJECT PROPERTY IS ZONED R-20 PER THE 02/02/04 COMPREHENSIVE ZONING PLAN AND COMP LITE ZONING AMENDMENTS EFFECTIVE 7/28/06.

VICINITY MAP

- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS.
- 3. SITE ANALYSIS DATA: LOCATION: TAX MAP: 41 PARCEL: 220 LOT: 36
- BLOCK: 6 ELECTION DISTRICT: FIFTH
- TOTAL AREA: 0.99 AC.± LIMIT OF DISTURBED AREA: 0.40 AC.± PROPOSED USE FOR SITE: RESIDENTIAL. TOTAL NUMBER OF UNITS: 1 TYPE OF PROPOSED UNIT: SFD

DEED REFERENCE: 07266/00037

- CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM HOWARD COUNTY MONUMENT NOS. 0057 AND 41CA WERE USED FOR THIS PROJECT. N 550835.2057 E 1347017.6516 EL. 398.864 N 550124.8331 E 1342960.8189 EL. 295.328 STA. No. 41CA
- 5. EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY MILDENBERG, BOENDER AND ASSOCIATES IN DECEMBER, 2007 NO CEMETERIES EXIST ON SITE.

4. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC

7. NO HISTORIC STRUCTURES EXIST ON SITE. 8. THE SITE CONTAINS AN INTERMITTENT STREAM AND A PORTION OF THE SITE LIES WITHIN

THAN 20,000 SF.

- THE 100 YEAR FLOODPLAIN. FLOODPLAIN DELINEATION IS BASED UPON A FLOODPLAIN STUDY PREPARED BY MILDENBERG, BOENDER AND ASSOCIATES IN APRIL, 2011 AND APPROVED UNDER F-11-081. 9. NO WETLAND EXISTS ON SITE AS CERTIFIED BY ECO SCIENCE IN LETTER OF FINDINGS
- DATED OCTOBER, 2011. FOREST STAND DELINEATION PREPARED BY ECO-SCIENCE, INC.
- 10. NO STEEP SLOPES MORE THAN 20,000 SQ. FT. EXIST ON SITE. 11. PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. PUBLIC WATER AND SEWER WILL BE UTILIZED UNDER CONTRACT # 34-1810-D (WATER) AND 30-3123 (SEWER)
- 12. ACCESS FOR LOT 36 WILL BE VIA A DRIVEWAY CONNECTION TO VISTA ROAD DRIVEWAY ENTRANCE IS PER HOWARD COUNTY STANDARD DETAIL R-6.06.
- 13. DRIVEWAYS SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS
- A) WDTH 12 FEET (16 FEET SERVING MORE THAN ONE RESIDENCE).
- B) SURFACE 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. STRUCTURES (CULVERT/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.
- STRUCTURE CLEARANCES MINIMUM 12 FEET MAINTENANCE - SUFFICIENT TO ENSURE ALL WEATHER USE
- 14. THIS PLAN IS CONDITIONALLY EXEMPT FROM FOREST CONSERVATION REQUIREMENTS WITH A DECLARATION OF INTENT PER SECTION 16.1202(b)(2)(i)(a) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. GRADING AND CLEARING OF EXISTING FOREST IS LESS
- 15. PERIMETER LANDSCAPING FOR LOT 36 IS NOT REQUIRED, BECAUSE THIS LOT IS AN INTERNAL LOT WITHIN THE SAME DEVELOPMENT, PER THE LANDSCAPE, MANUAL
- 16. NO CLEARING OF EXISTING VEGETATION IS PERMITTED WITHIN THE LANDSCAPED EDGE FOR WHICH CREDIT BEING TAKEN; HOWEVER, LANDSCAPE MAINTENANCE IS AUTHORIZED.
- 17. FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE ARE PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM LOT AND
- ROAD RIGHT OF WAY LINE AND NOT TO THE PIPESTEM LOT DRIVEWAY. 18. STORMWATER MANAGEMENT IS PROVIDED VIA ROOFTOP, NON-ROOFTOP DISCONNECTION AND USE OF MICROSCALE PRACTICES (MICRO-BIORETENTION) IN ACCORDANCE WITH THE 2007 MDE STORMWATER DESIGN MANUAL UNDER ECP-12-023. STORMWATER MANAGEMENT FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED. A DECLARATION OF COVENANT
- SHALL BE RECORDED FOR THE MAINTENANCE AND INSPECTION OF THE MICRO-BIORETENTION FACILITIES. 19. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION EASEMENT AREAS AND 100 YEAR FLOODPLAIN, UNLESS APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING OR OTHER APPLICABLE REGULATORY AGENCY. A DECLARATION OF COVENANT SHALL BE RECORDED FOR THE MAINTENANCE
- 20. NO OPEN SPACE IS REQUIRED FOR THIS PROJECT SINCE NO SUBDIVISION IS PROPOSED.

AND INSPECTION OF THE BIORETENTION FACILITIES.

- 21. THE SITE IS CURRENTLY VACANT. 22. PER SECTION 16.1107(b)(2) OF THE HOWARD COUNTY APPLIED PUBLIC FACILITIES
- ORDINANCE (APFO), THIS PROJECT IS EXEMPT FROM APFO REQUIREMENTS
- 23. SIDEWALKS, STREET LIGHTS, AND STREET TREES ARE NOT PROPOSED ALONG THE SITE'S FRONTAGE ON VISTA ROAD.
- 24. DISTURBANCE TO THE STREAM BUFFER IS ESSENTIAL FOR CONSTRUCTION OF THE PROPOSEI DRIVEWAY THAT PROVIDES ACCESS FROM THE DEVELOPABLE PORTION OF THE LOT TO VISTA ROAD. THIS PROJECT FALLS UNDER THE GUIDELINES SET FORTH FOR NECESSARY DISTURBANCE PER SECTION 16.116(c)(1)(I THRU IV). PERMISSION TO DISTURB THE STREAM BUFFER HAS BEEN GRANTED BY MDE UNDER PERMIT 201260666
- 25. IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS, OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD
- 26. WATER AND SEWER SERVICE TO THESE LOTS WILL BE PROVIDED IN ACCORDANCE WITH SECTION 18.122B OF THE HOWARD COUNTY CODE. PUBLIC WATER AND SEWAGE ALLOCATION WILL BE GRANTED AT THE TIME OF ISSUANCE OF THE BUILDING PERMIT IF CAPACITY IS
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START
- 28. ANY DAMAGE TO THE COUNTY RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S 29. SEWER HOUSE CONNECTIONS SHOWN ARE LOCATED AT THE PROPERTY LINE.

PERMIT IN	IF(ORMATIC	ON CHART	
SUBDIVISION NAME 2nd ADDITION TO HOLIDAY H			LOT/PARCEL #	

ELEC. DIST.

	15901 6	R-20 41	FIFTH	6051
Г		DDDDGG	OTT I DM	
L	A	DDRESS	CHART	
L	LOT/PARCEL NO.		STREET ADDRESS	
1	LOT 36	10	ACA WISTA BOAD	

PLAT # OR L/F BLOCK # ZONE TAX MAP

OF 2

CENSUS TRACT

民名

VBE. ER

MILDEN BOENDE

1AY 590

H NO 4,

HOWARD SOIL CONSERVATION DISTRICT PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES: PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS./1000 SQ.FT.).

ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE 1.4 LBS/1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FÉSCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS./1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) - 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) - USE SOD. OPTION (3) -SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED. SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, FOR NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.)

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (.07 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU NOVEMBER 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE AND THE SEPRING OR LISE SOON.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED WEED FREE SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION, (313-1855).
- 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 REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC.51), SOD (SEC 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC.52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- 6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN COUNTY SEDIMENT CONTROL INSPECTOR.

7) SITE ANALYSIS: TOTAL AREA OF SIT AREA DISTURBED: ACRES AREA TO BE ROOFED OR PAVED ACRES AREA TO BE VEGETATIVELY STABILIZED __ ACRES TOTAL CUT: _ CU. YDS. TOTAL FILL: TOTAL WASTE/BORROW AREA LOCATION:

THESE QUANTITIES ARE FOR PERMIT PURPOSES ONLY. CONTRACTOR IS REQUIRED TO PROVIDE HIS OWN QUANTY MEASUREMENTS.

OWNER / DEVELOPER DIANA GUPTA 10610 VISTA ROAD

COLUMBIA, MD 21044 (410) 531-0370 **DEVELOPERS CERTIFICATE**

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ÁCCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WIL 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 DIANA L. GUPTA PRINTED NAME OF DEVELOPER ENGINEER'S CERTIFICATE CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. JEFFREY SLOMAN PRINTED NAME OF ENGINEER THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD

8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

10) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL

11) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN

BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

DEFINITION

STANDARD AND SPECIFICATIONS FOR TOPSOIL

PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW pH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

CONDITIONS WHERE PRACTICE APPLIES

- I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE
 - b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS
 - OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS
- c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH. d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION. 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 CON-TRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN
- TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
- WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL 4. EXCAVATION AND BACKFILL SHALL BE LIMITED TO THAT WHICH CAN BE STABILIZED WITHIN ONE WORKING DAY. BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.
- III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
 - ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 - PH FOR TOPSOILS SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE pH TO 6.5 OR HIGHER.
 - b. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
 - c. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED. d. NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR

CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT 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

ii. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 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.
- ii. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" - 8" HIGHER IN ELEVATION.
- iii. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" TO 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
- IV. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER
- ALTERNATIVE FOR PERMANENT SEEDING INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:
 - 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 AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - a. COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS WHO ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
 - b. COMPOSTED SLUDGE SHALL CONTAIN AT LEASE 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHOURUS, 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.
 - e. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET. ii. 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.

TEMPORARY DUST CONTROL MEASURES

1. MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT

2. VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE

3. TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS APCED ABOUT 12" APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED FFFECT.

4. IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.

5. BARRIERS - SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, 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.

6. CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT (1 DAY).
- 2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE AT LOCATION SHOWN (1 DAY).
- 3. CONSTRUCT SILT FENCES AND SUPER SILT FENCES (2 DAYS). 4. CONSTRUCT TRIPLE CULVERT (1 DAY)
- 5. CONSTRUCT SITE TO GRADES INDICATED WITH PERMISSION
- FROM INSPECTOR BEFORE PROCEEDING (10 DAYS). CONSTRUCT HOUSES (60 – 120 DAYS).
- 7. WHEN CONTRIBUTING AREAS TO MICRO-BIORETENTION FACILITIES HAVE BEEN STABILIZED, CONSTRUCT MICRO-BIORETENTION FACILITIES (4 DAYS)
- 8. COMPLETE FINE GRADING OF SITE TO GRADES INDICATED (2 DAYS).
- 9. SEED AND MULCH ALL REMAINING DISTURBED AREAS (1 DAY). 10. WHEN ALL CONTRIBUTING DRAINAGE AREAS TO SEDIMENT CONTROL DEVICES HAVE BEEN STABILIZED, AND WITH PERMISSION OF SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL

DEVICES AND STABILIZE REMAINING DISTURBED AREAS (1 DAY).

EROSION AND SEDIMENT CONTROL NOTES

. ALL SEDIMENT CONTROL OPERATIONS ARE TO BE DONE IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY VOLUME IV DESIGN MANUAL AND THE STANDARDS AND SPECIFICATIONS FOR SEDIMENT CONTROL IN DEVELOPING AREAS.

5. IMMEDIATELY FOLLOWING BACKFILL OF THE SEWER TRENCH, ALL DISTURBED AREAS ARE TO BE STABILIZED

2. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF BUSINESS. 3. ALL EXCAVATED MATERIALS SHALL BE STOCKPILED ON THE UPGRADE SIDE OF THE MAIN TRENCH.

IN ACCORDANCE WITH THE PERMANENT STABILIZATION AND SEEDING NOTES SHOWN ON THIS SHEET. 6. THROUGHOUT THE PROJECT, THE CONTRACTOR SHALL REGULARLY INSPECT ALL SEDIMENT CONTROL DEVICES

AND PROVIDE ALL NECESSARY MAINTENANCE TO ENSURE THAT ALL DEVICES ARE IN OPERATIVE CONDITION. 7. ALL SEDIMENT CONTROL FACILITIES SHALL REMAIN IN PLACE UNTIL PERMISSION FOR THEIR REMOVAL HAS

OPERATION AND MAINTENANCE SCHEDULE FOR MICRO-BIORETENTION (M-6)

BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

ANNUAL MAINTENANCE OF PLANT MATERIAL. MULCH LAYER AND SOIL LAYER IS REQUIRED. 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.

WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT. TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.

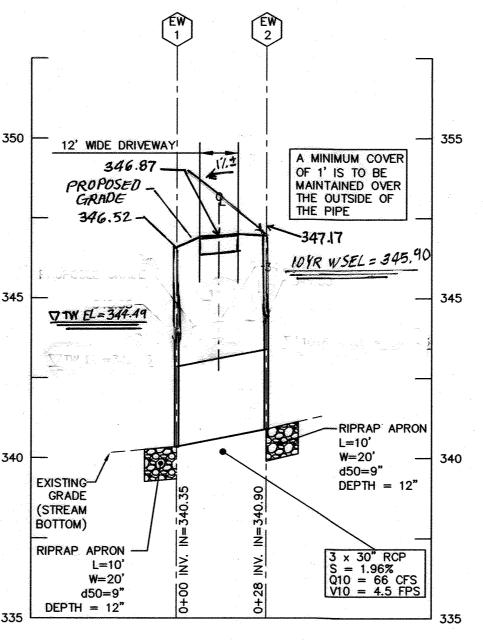
MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER

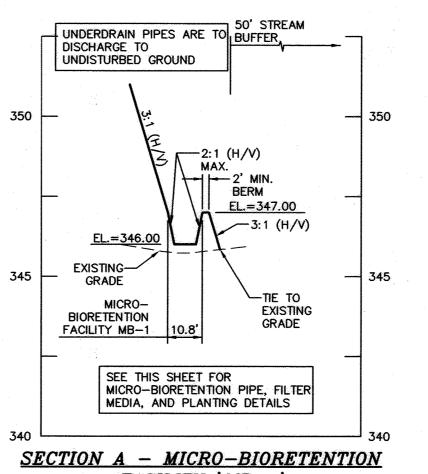
OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED

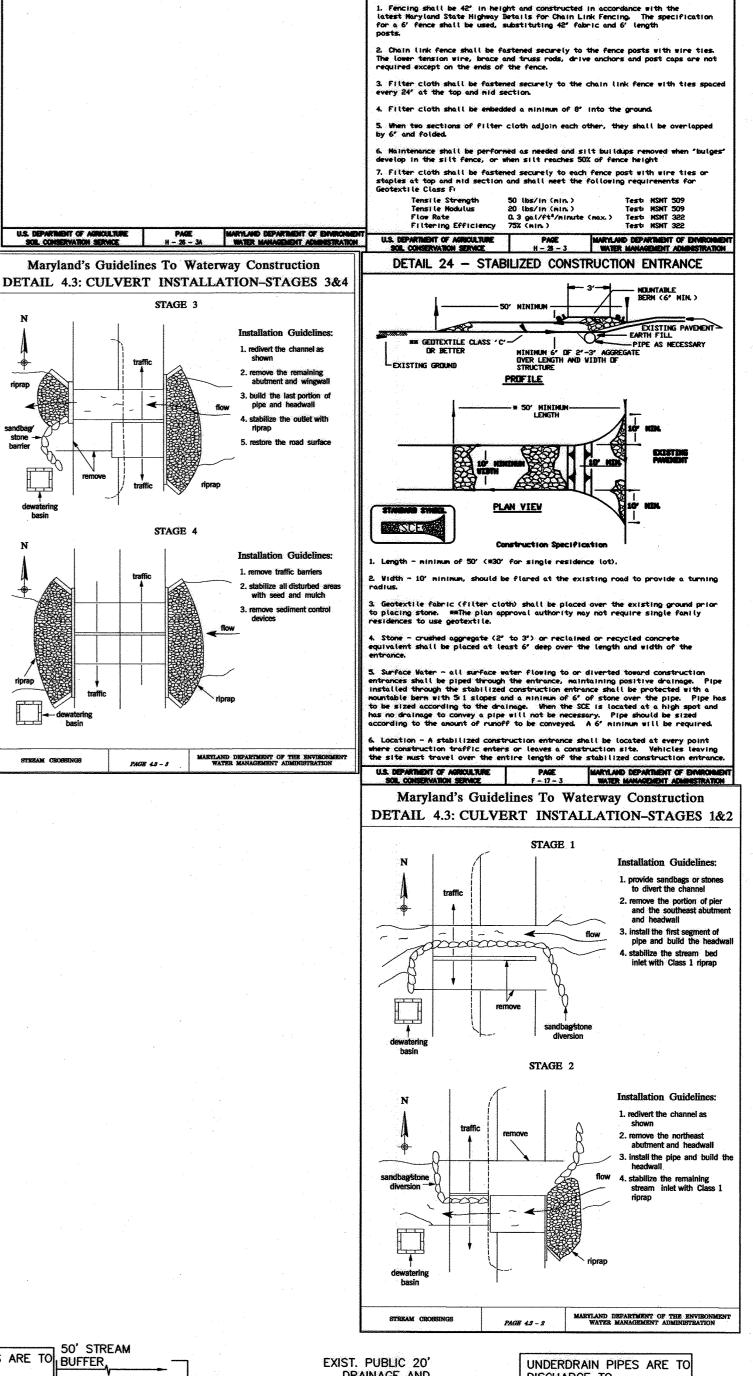
MONTH AND AFTER HEAVY STORM EVENTS.

AREAS, FOOT TRAFFIC SHOULD BE DISCOURAGED AS WELL.

DISCONNECTION OF ROOFTOP RUNOFF (N-1) MAINTENANCE OF AREAS RECEIVING DISCONNECTED RUNOFF IS GENERALLY NO DIFFERENT THAN THAT REQUIRED FOR OTHER LAWN OR LANDSCAPED AREAS. THE AREAS RECEIVING RUNOFF SHOULD BE PROTECTED FROM FUTURE COMPACTION OR DEVELOPMENT OF IMPERVIOUS AREA. IN COMMERCIAL







DETAIL 33 - SUPER SILT FENCE

SADI LDK PECDIS

LOV FILITE CLOTH

MA. eng

UBDIVISION

SO H

1,

NO X

59 500

SUPER SILT FENCE

Unit in I ted

200 feet

100 feet

50 feet

STAGE 3

STAGE

(noxinum)

Unlinited

1,500 feet

500 feet

250 feet

Besign Criteri

0 - 10-1

10:1 - 5:1

31-21

0 - 10%

DRAINAGE AND DISCHARGE TO UTILITY EASEMENT UNDISTURBED GROUND BERM EXISTING GRADE GRADE MICRO-BIORETENTION FACILITY MB-2 SEE THIS SHEET FOR MICRO-BIORETENTION PIPE, FILTER MEDIA, AND PLANTING DETAILS <u> SECTION B — MICRO-BIORETENTION</u> <u>FACILITY 'MB-2</u>

TOP EL. INV. IN INV. OUT COMMENTS EW-1 N 551088.0292 E 1345525.2077 343.85 N/A 340.90 TYPE 'C' END WALL - HO. CO. STD. D-5.21 N 551080.8923 E 1345552.5187 344.40 340.35 N/A TYPE 'C' END WALL - HO. CO. STD. D-5.21

2 OF

SDP 12-020

0

S

, DIVISION OF LAND DEVELOPMEN

HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 40091, EXP. DATE 2/13/13.

REW SLOMAN, P.E.

REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING. MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES. REVISED 1973.

PROFILE - CULVERT EW-2 TO EW-1