ROAD CONSTRUCTION PLANS JASMYN WOODS LOTS 1 THRU 7 & OPEN SPACE LOT 8 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

MARYBETH SITE SITE OF THE DESCRIPTION OF THE DESCRI

VICINITY MAP
SCALE 1"=500"

OWNER/DEVELOPER

JASMYN WOODS, LLC C/O MILDENBERG, BOENDER AND ASSOC. INC. 5072 DORSEY HALL DRIVE, SUITE 202 ELLICOTT CITY, MARYLAND 21042 (410) 997-0296

DEVELOPERS CERTIFICATE

I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE
ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON—SITE INSPECTION
BY THE NATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF DEVELOPER

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS
A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWEDGE OF
THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE
REQUIREMENTS OF THE ATURAL RESOURCE CONSERVATION SERVICE.

SIGNATURE OF ERGINERY

JOHN B. MILDENBERG
PRINTED NAME OF ENGINEER

JOHN B. MILDENBERG
PRINTED NAME OF ENGINEER

APPROVED: DEPARTMENT OF PUBLIC WORKS

CHIEF-BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PUBLIC WORKS

APPROVED: DEPARTMENT OF PUBLIC WORKS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

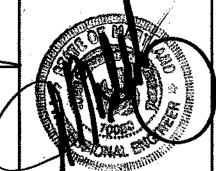
APPROVED: DEPARTMENT OF PLANNING AND ZONING

APPROVED: DEPARTMENT OF PLANNING AND ZONING

THIS DEVELOPMENT PLAN IS APPROVED
FOR SOIL EROSION AND SEDIMENT
CONTROL BY THE HOWARD SCIL
CONSERVATION DISTRICT.

Approved
Howard S.C.D.

Dete



GENERAL NOTES

- 1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- 3. THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS PRIOR TO ANY EXCAVATION WORK:

MISS UTILITY

C&P TELEPHONE COMPANY

HOWARD COUNTY BUREAU OF UTILITIES

AT&T CABLE LOCATION DIVISION

BALTIMORE GAS & ELECTRIC

STATE HIGHWAY ADMINISTRATION

HOWARD COUNTY DEPT. OF PUBLIC WORKS/

CONSTRUCTION INSPECTION DIVISION

1-800-257-7777

(410) 725-9976

(410) 313-4900

(410) 393-3533

(410) 685-0123

(410) 531-5533

4. PROJECT BACKGROUND:

LOCATION: TAX MAP 31, PARCEL 358, GRID 13.

ZONING: R-20

ELECTION DISTRICT: 2ND

TOTAL AREA: 3.64 AC ±

DPZ FILES: SP-03-08 APPROVED 7/11/03

STA. 31D4 N571700.681, E1369606.396 EL.495.181

TOPOGRAPHIC AND BOUNDARY INFORMATION IS BASED ON MONUMENTED FIELD RUN SURVEY BY MILDENBERG, BOENDER AND ASSOC, INC. PERFORMED IN OR ABOUT SEPTEMBER, 2002. VERTICAL DATUM IS NAD 83.

 COORDINATES BASED ON NAD'83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 30IA AND 31D4.
 STA. 30IA N567750.955, E1364842.701 EL.499.821

WP-03-100 APPROVED 04/22/03

7. STORMWATER MANAGEMENT CONTROL WILL BE PROVIDED IN ACCORDANCE WITH THE 2000 MARYLAND SWM DESIGN MANUAL.

8. STORMWATER MANAGEMENT FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED BY H.O.A.

NO WETLANDS EXISTS ON SITE PER STUDY BY MILDENBERG, BOENDER AND ASSOC., INC. DATED NOVEMBER, 2002.

10. GEOŢECHNICAL REPORT PREPARED BY HILLIS-CARNES ENGINEERING ASSOC. INC. IN NOVEMBER 2002.

11. DEED REFERENCE: L 7338, F 041.

NO CEMETERIES OR HISTORIC STRUCTURES EXIST ON SITE.
 ALL EXISTING STRUCTURES AND DRIVEWAYS ARE TO BE REMOVED UNLESS OTHERWISE NOTED.

14. TRAFFIC STUDY BY MARS TRAFFIC GROUP, DATED SEPTEMBER 2002.

15. PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER ARE PUBLIC

WATER CONTRACT NO. 64-W. SEWER CONTRACT NO. 302-S.

16. PROPOSED WATER AND SEWER ARE PUBLIC, CONTRACT # 24-4185-D

17. ALL LOTS WILL HAVE A MINIMUM OF 2 ON-SITE PARKING SPACES. NO STREET PARKING SPACES

ARE REQUIRED.

18. COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.

18. COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO 1-180.

19. CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES ON SITE PRIOR TO COMMENCING

CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES ON SITE PRIOR TO COMMENCING CONSTRUCTION.

20. ALL STORM DRAIN PIPES TO BE HDPE PIPES UNLESS OTHERWISE NOTED.

21. ALL DRIVEWAYS ENTRANCES TO BE H.C.STD. R-6.03 UNLESS OTHERWISE NOTED.

22. STREET LIGHTS WILL BE REQUIRED IN THE DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III(1993) AND AS MODIFIED BY GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 2993)

THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE. PROVIDE A 100-WATT HPS VAPOR "COLONIAL" POST FIXTURE MOUNTED ON 14' BLACK

PROVIDE A 100-WATT HPS VAPOR "COLONIAL" POST FIXTURE MOUNTED ON 14' BLAC FIBERGLASS POLE AT STA. 0-28, OFFSET 12' LEFT.

23. AREA TABULATION:

TOTAL TRACT AREA:

MINIMUM LOT AREA:

AREA OF PROPOSED BUILDABLE LOTS:

AREA OF PROPOSED ROADS (R/W):

REQUIRED OPEN SPACE (30%)

PROVIDED OPEN SPACE

NUMBER OF PROPOSED BUILDABLE LOTS:

NUMBER OF PROPOSED BUILDABLE LOTS:

TOTAL NUMBER OF PROPOSED LOTS:

8

24. THIS PROJECT IS SUBJECT TO W.P.-03-100 APPROVED ON APRIL 22, 2003. SUBJECT TO FOLLOWING:

 PROVIDE AN EASEMENT ACROSS THE 24' WIDE PRIVATE ACCESS PLACE FOR PEDESTRIAN AND VEHICULAR ACCESS TO OPEN SPACE LOT 8.
 PROVIDE A 40' WIDE PIPESTEM ADJACENT TO LOT 7.

27. FOREST CONSERVATION OBLIGATIONS IN ACCORDANCE WITH SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT FOR THIS SUBDIVISION WILL BE FULFILLED BY RETENTION OF 0.58 ACRES (25,264.8 SQ. FT.) AND PAYMENT OF A FEE-IN-LIEU OF REFORESTATION OF 0.65 ACRES (28,314 SQ. FT.) IN THE AMOUNT OF \$14,157.00. FINANCIAL SURETY FOR THE RETENTION OF 0.58 AC (25264.8 SQ.FT.) OF FOREST HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$5,052.96.

26. THIS PROJECT IS SUBJECT TO THE FIFTH EDITION SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. AND TO THE AMENDED ZONING REGULATIONS (COUNTY BILL 50-2001).

27. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (17 SHADE TREES, 8 EVERGREENS, 11 PRIVATE STREET TREES) HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$9,600.00.

28. DRIVEWAY CULVERTS WILL BE DESIGNED UNDER SDP STAGE.

no. description

SPACE LOT 8
CEL 356
HOWARD COUNTY, MARYLAND

MYN WO AND OPEN SP X MAP 31, PARCEL

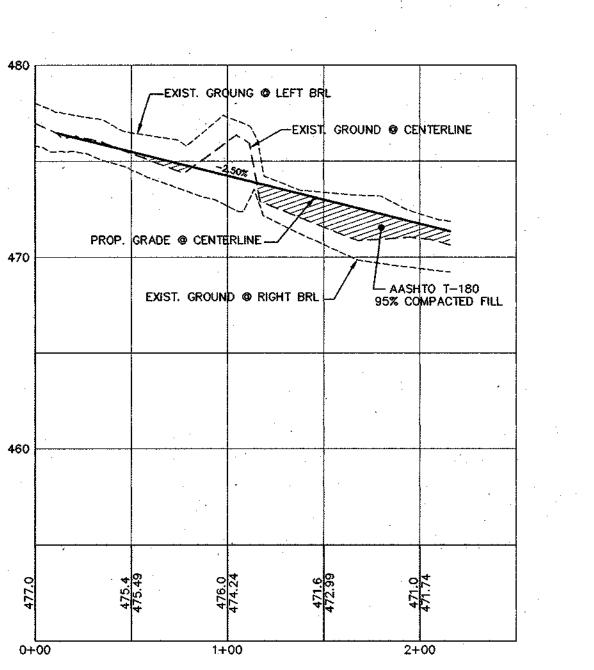
> LOIS: 1-TA SECOND ELECTION DISTRICT

> > Surveyors Slicott City, Maryland 21042 Wash (410) 997-0298 Fax

MILDENBERG,
BOENDER & A
Engineers Planners
Dorsey Hall Drive, Swite 202, Ellico

1 of 10

"KELLAN DR." ROAD PLAN
SCALE: 1"=50"



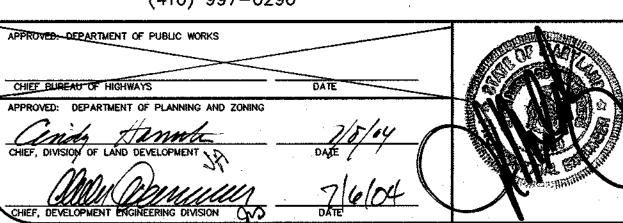
"KELLAN DR." PROFILE CLASSIFICATION: PRIVATE ACCESS PLACE

DESIGN SPEED: 25 MPH

SCALE: HOR. 1"=50'
VER. 1"-5'

OWNER/DEVELOPER

JASMYN WOODS, LLC C/O MILDENBERG, BOENDER AND ASSOC. INC. 5072 DORSEY HALL DRIVE, SUITE 202 ELLICOTT CITY, MARYLAND 21042 (410) 997-0296



TYPICAL ROADWAY SECTION

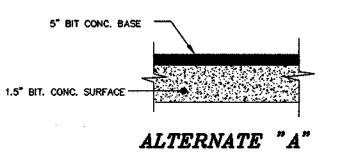
24' EASEMENT

CLASSIFICATION: PRIVATE ACCESS PLACE

DESIGN SPEED: 25 MPH

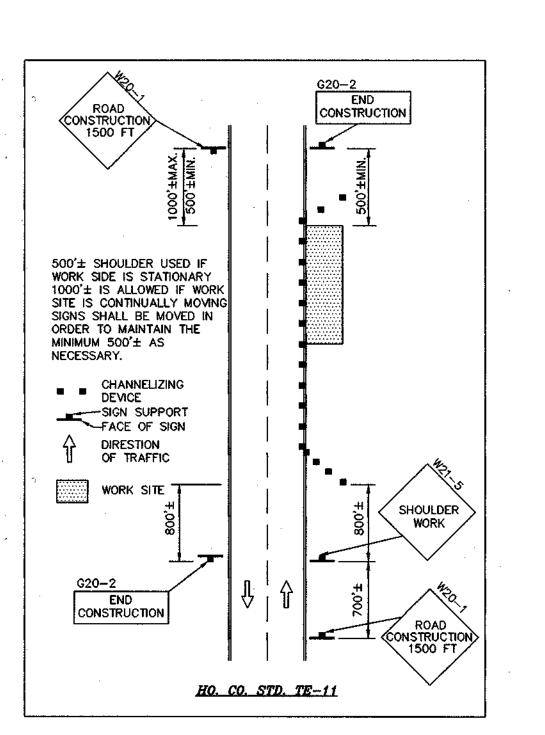
STA.0+00 TO STA. 2+15.68

SECTION NOT TO SCALE



ALTERNATE "B"

PAVING SECTION P-2

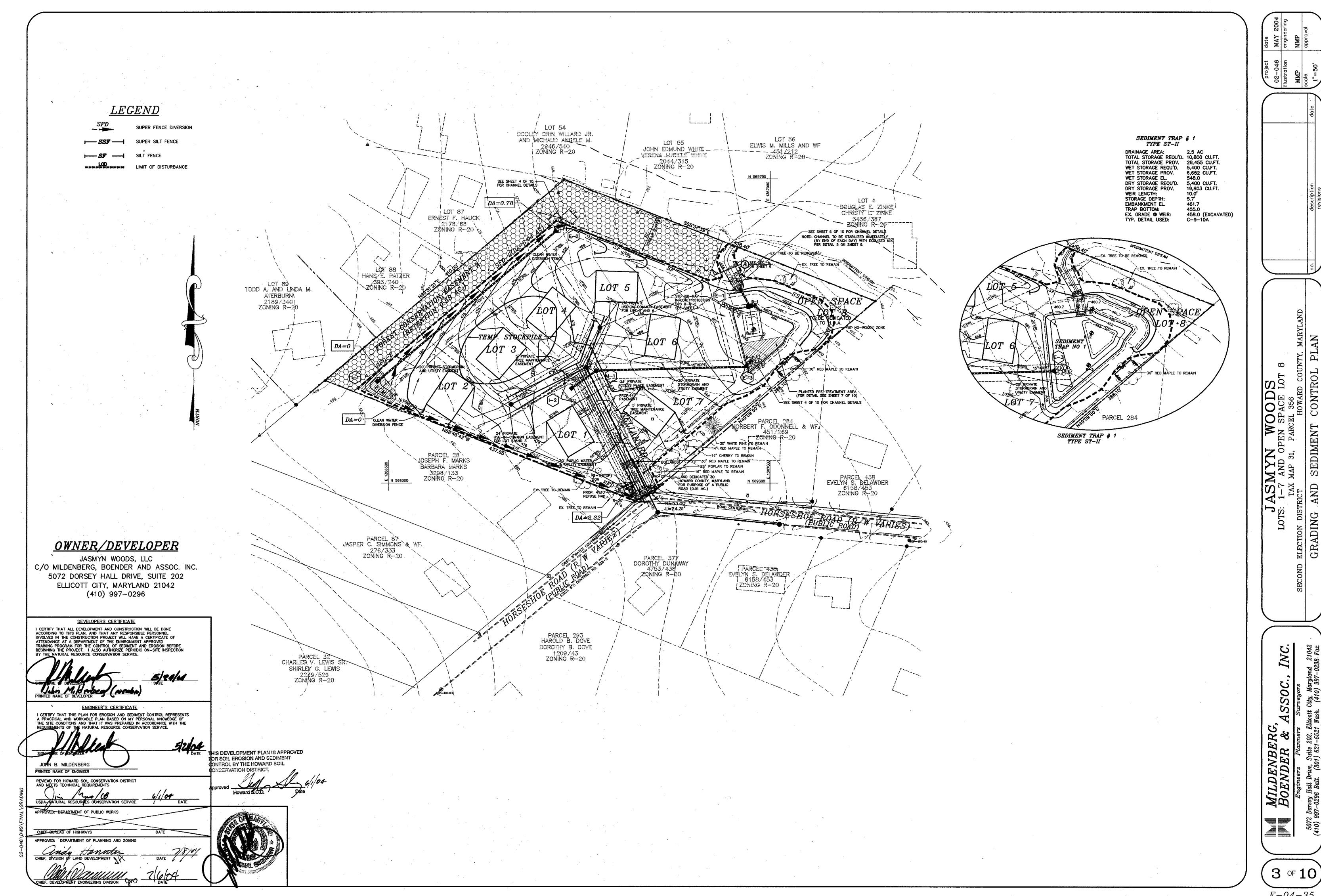


WORK ZONE TRAFFIC CONTROL PLAN

2 of 10

SECOND E

F-04-35



F-04-35

ELECTION DIS'
GRADING

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 ACRES DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ.FT.) BÉFORE 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 KENJUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LOBS. 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 TONE/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 ACRÉ OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED WEED FREE SMALL GRAIN TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING. REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.

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 NAY 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 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
- 4) ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE
- 5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 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 OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS: TOTAL AREA OF SITE: _____ AREA DISTURBED: AREA TO BE ROOFED OR PAVED:. AREA TO BE VEGITATIVELY STABILIZED: ACRES
- THESE QUANTITIES ARE FOR PERMIT PURPOSES ONLY. CONTRACTOR IS REQUIRED TO PROVIDE HIS OWN QUANTITIES MEASUREMENTS.

OWNER/DEVELOPER

TOTAL WASTE/BORROW AREA LOCATION: _

JASMYN WOODS, LLC C/O MILDENBERG, BOENDER AND ASSOC. INC. 5072 DORSEY HALL DRIVE, SUITE 202 ELLICOTT CITY, MARYLAND 21042 (410) 997-0296

	DEVELOPERS CERTIFICATE	
	I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, 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 ALSO AUTHORIZE PERIODIC ON—SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.	
	SIGNATURE OF DEVELOPER DOTE John M. Idenberg (membra) PRINTED NAME OF DEVELOPER	
(ENGINEER'S CERTIFICATE 1 CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE. SIGNATURE OF ENGINEER JOHN B. MILDENBERG PRINTED NAME OF ENGINEER	THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
SEDNO	REVIEWD FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS USDA NATURAL RESOURCES CONSERVATION SERVICE DATE	Approved Howard S.C.D. Dete
046\DWG\FINAL\SEDNO	APPROVED: DEPARTMENT OF PUBLIC WORKS CHIEF BUREAU OF HIGHWAYS DATE	
12046\L	APPROVED: DEPARTMENT OF PLANNING AND ZONING (Indu Humillar 7/8/04	

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

- 9) ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY
- 10) ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- 11) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

STANDARD AND SPECIFICATIONS FOR TOPSOIL

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

<u>PURPOSE</u>

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

CONDITIONS WHERE PRACTICE APPLIES

- THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
- a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE
- b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS
- 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

OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.

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 SPECIFICATION. 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-SON GRASS, NUTSEDGE, 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. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING
- 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:
 - a.. 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 PERSCRIBED 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 OF CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL

- PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0. VEGETATIVE STABILIZATION - SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- 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, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" - 8" HIGHER IN ELEVATION.
- 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 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
- VI. ALTERNATIVE FOR PERMANENT SEEDING INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:
 - 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
 - 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. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.
 - iv. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILLIZER APPLIED AT THE RATE OF 4 LB/1,000 SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE.

REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING. MD-VA, PUB. #1, COOPERATIVE

EROSION AND SEDIMENT CONTROL NOTES

EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES. REVISED 1973.

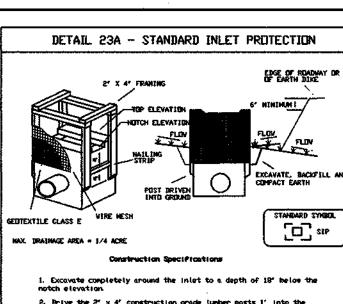
- 1. ALL SEDIMENT CONTROL OPERATIONS ARE TO BE DONE IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY VOLUME IV DESIGN MANUAL AND THE STANDARDS AND SPECIFICATIONS FOR SEDIMENT CONTROL IN DEVELOPING AREAS.
- 2. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF BUSINESS.
- 3. ALL EXCAVATED MATERIALS SHALL BE STOCKPILED ON THE UPGRADE SIDE OF THE MAIN TRENCH.
- 4. EXCAVATION AND BACKFILL SHALL BE LIMITED TO THAT WHICH CAN BE STABILIZED WITHIN ONE WORKING DAY. 5. IMMEDIATELY FOLLOWING BACKFILL OF THE SEWER TRENCH, ALL DISTURBED AREAS ARE TO BE STABILIZED

AND PROVIDE ALL NECESSARY MAINTENANCE TO INSURE THAT ALL DEVICES ARE IN OPERATIVE CONDITION.

- 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
- 7. ALL SEDIMENT CONTROL FACILITIES SHALL REMAIN IN PLACE UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

SEQUENCE OF CONSTRUCTION

- 1. OBTAIN GRADING PERMIT (1 DAY)
- 2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE (1 DAY)
- 3. CONSTRUCT STORM DRAIN DIVERSION, I-1 TO E2, PLACE EROSION CONTROL MATTING OVER DISTURBED AREA IN VICINITY OF I-1 (3 DAYS)
- 4. INSTALL SUPER FENCE DIVERSION (2 DAY)
- 5. INSTALL SILT FENCES AND SUPER SILT FENCES (3 DAY)
- 6. CONSTRUCT SEDIMENT TRAP TO GRADE INDICATED (4 DAYS)
- 7. CONSTRUCT INLET PROTECTION FOR I-2 IF REQUIRED BY SEDIMENT CONTROL INSPECTOR.
- 7. WITH PERMISSION OF SEDIMENT CONTROL INSPECTOR, COMPLETE CONSTRUCTION OF SITE TO GRADE INDICATED AND STABILIZE (20 DAYS)
- 8. WHEN SITE IS STABILIZED, CONVERT SEDIMENT TRAP TO STORMWATER MANAGEMENT FACILITY (5 DAYS).
- 6. 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.



2. Brive the 2" x 4" construction grade lumber posts 1" into the 2. Brive the 2" x 4" construction grade tumber posts 1" into the ground at each corner of the intex. Place nail strips between the posts on the ends of the intex. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Betali 234. The top of the frame (werr) must be 6" below adjacent roadways where flooding and safety issues may arise. 3. Stretch the 1/2' x 1/2' wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a

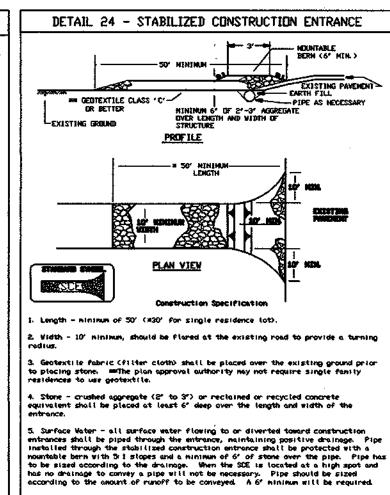
4. Stretch the Geotextile Class E tightly over the wire mesh with the gestixtile extending from the top of the frame to 18° below the inlet notch elevation. Fasten the gestextile firmly to the frame. The ends of the gestextile must neet at a post, be overlapped and folded, then fastened down. 5. Backfill around the inlet in compacted 6' layers until the layer of earth is level with the notch elevation on the ends and

6. If the inlet is not in a sump, construct a compacted earth dike scross the ditch line directly below it. The top of the earth dike should be at least 6' higher than the top of the frame.

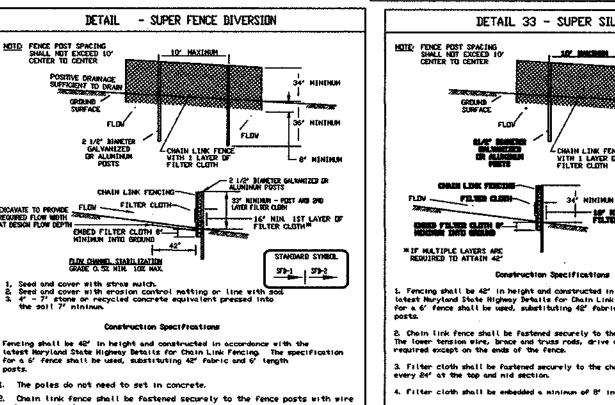
7. The structure wast be inspected periodically and after each rain and the geotestile replaced when it becomes clogged.

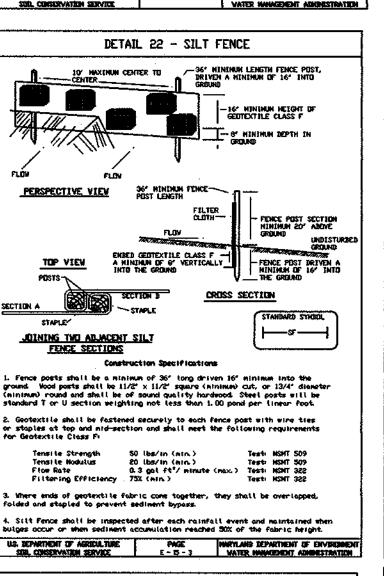
where construction traffic enters or leaves a construction site. Yehicles leaving the site must travel over the entire length of the stabilized construction entrance SEPARTHENT OF AGROUATURE PAGE MARYLAND REPARTMENT OF DEVIADRESS.

SUB. CONSERVATION SURVICE C - 16 - 5 WATER MANAGEMENT ADMINISTRATION U.S. BEPARTHENT OF AGRICULTURE PAGE MARYLAND DEPARTMENT OF ENVIRONMENTS
SIZEL CONSERVATION SERVICE F - 17 - 3 VATER MANAGEMENT ADMINISTRATION DETAIL - SUPER FENCE DIVERSION



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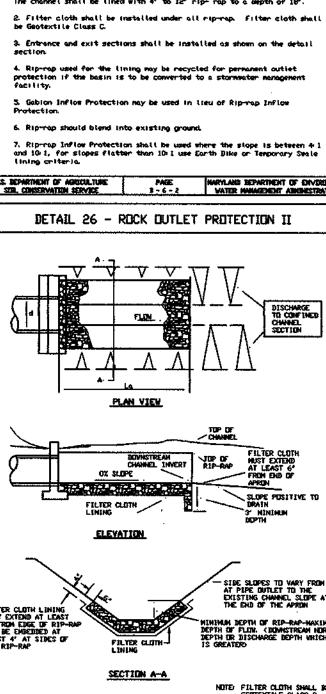


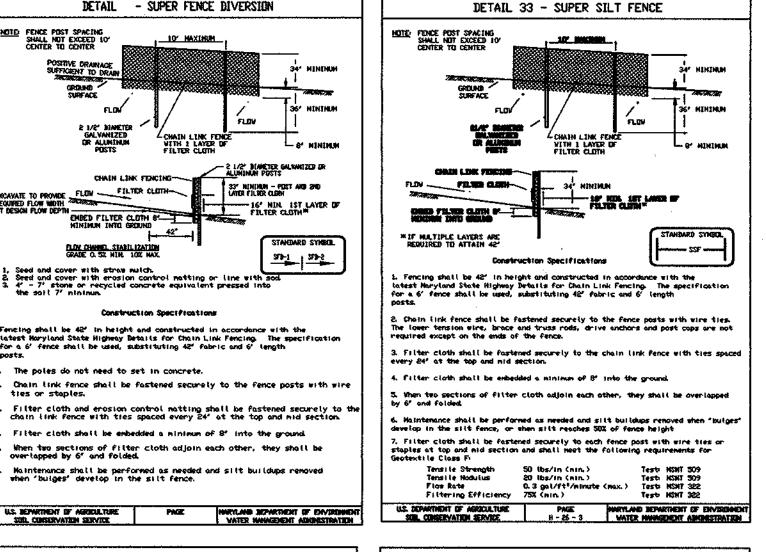
DETAIL 27 - ROCK OUTLET PROTECTION III

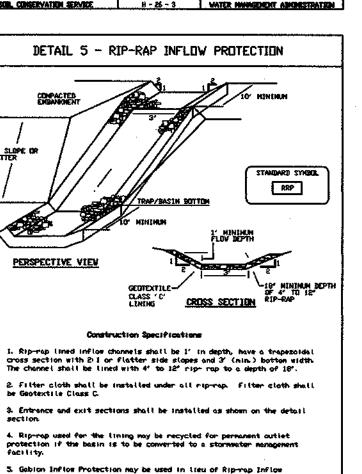
DETAIL 30 - EROSION CONTROL MATTING

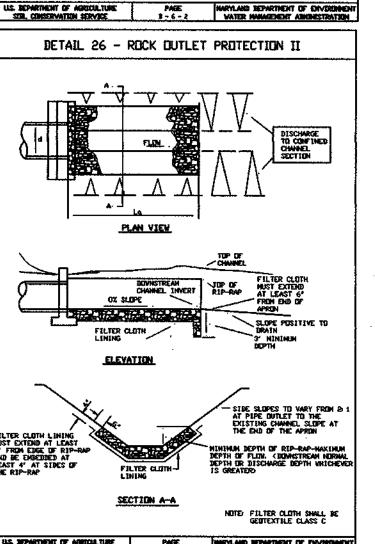
TYPICAL STAPLES NO. 11 GAUGE VIRE

When two sections of filter cloth adjoin each other, they shall be overlapped by 5° and folded.

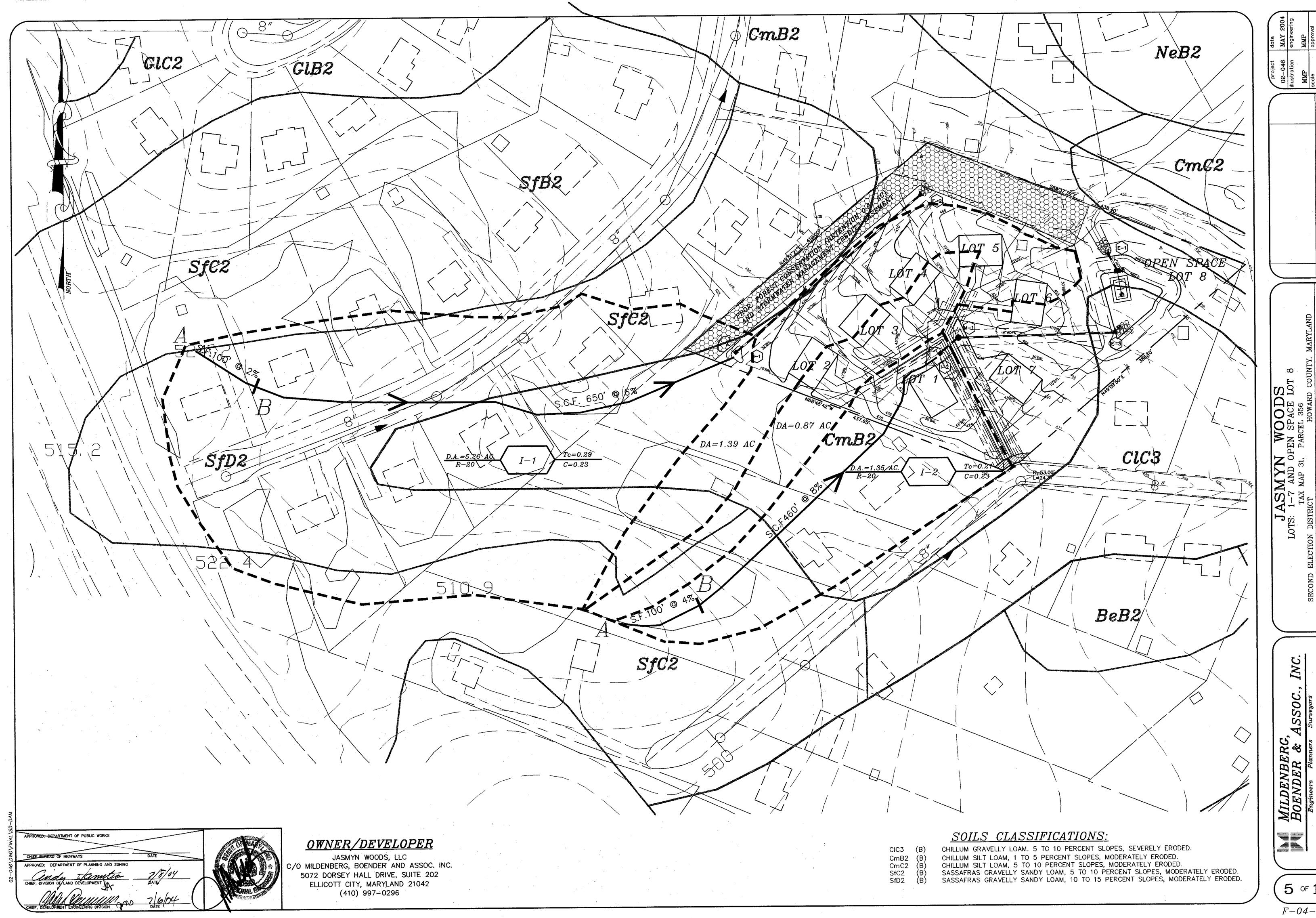








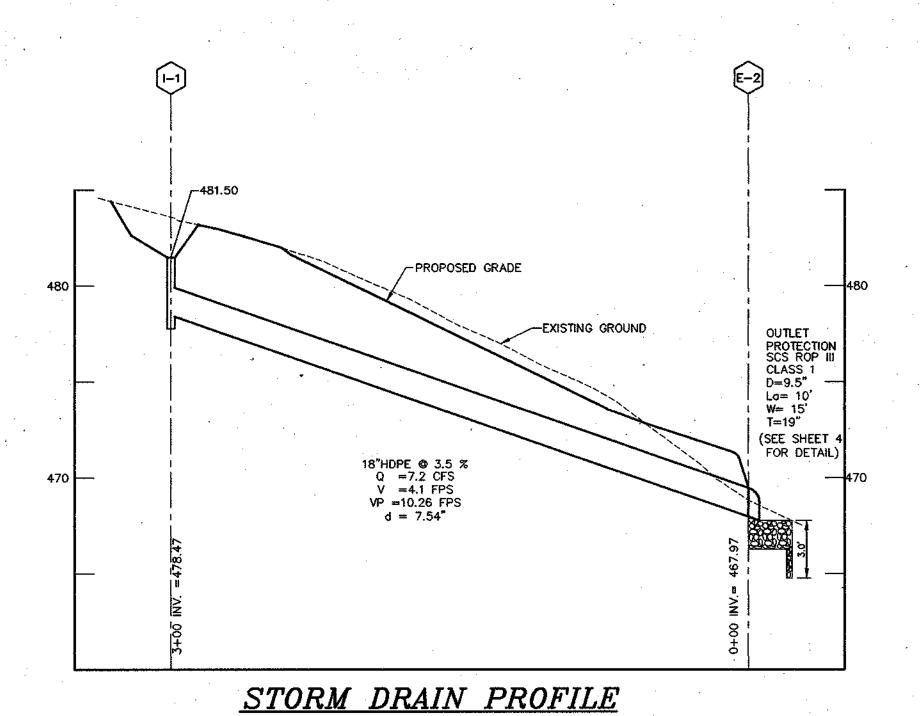
AILS

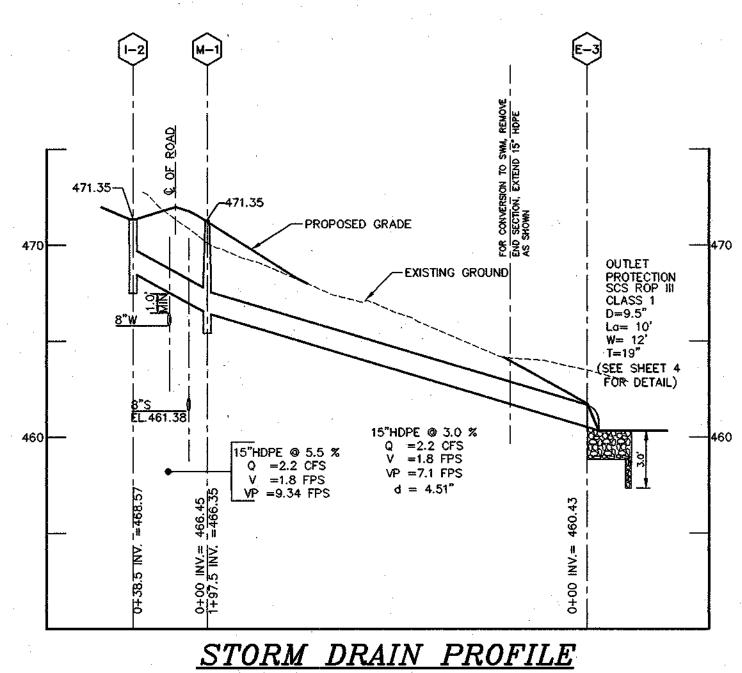


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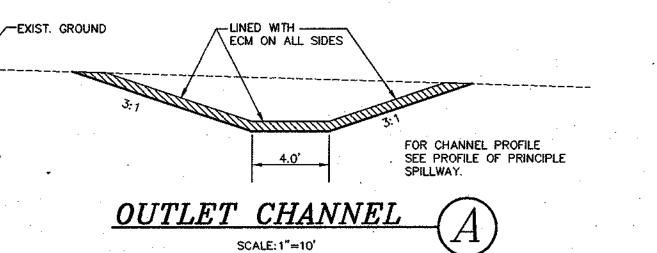
ELECTION DIST STORM

*NOTE: HGL= TOP OF THE PIPE UNLESS OTHERWISE NOTED.





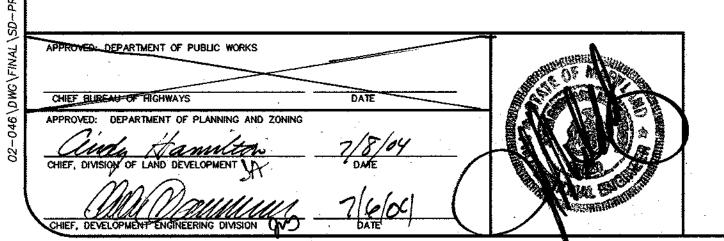
SCALE: HOR. 1"=50' VER. 1"=5'



NOTE: CHANNEL TO BE STABILIZED IMMEDIATELY (BY END OF EACH DAY) WITH ECM/SED MIX

OWNER/DEVELOPER

JASMYN WOODS, LLC C/O MILDENBERG, BOENDER AND ASSOC. INC. 5072 DORSEY HALL DRIVE, SUITE 202 ELLICOTT CITY, MARYLAND 21042 (410) 997-0296



STRUCTURE SCHEDULE

4 E 1,366,485 1+850, 0/S 21.5' RT. A. 1+90.5, 0/S 16.5'	481.50 471.35	-	478.47 468.47	TYPE K, H.C.STD. SD-4.12 TYPE K, H.C.STD. SD-4.12
	 	<u>.</u>	468.47	TYPE K, H.C.STD. SD-4.12
A 1±00.5 0/S 16.5'	474 75			
н. 1 тэо.о, о/о 10.о	471.35	466.45	466.35	H.C.STD. G-5.12
D E 1,366,718		467.97	_	H.C.STD. SD-5.61*
3 E 1,366,968	_	460.43	_	H.C.STD. SD-5.61*
			, 5 1,000,710	, - 1,000,710

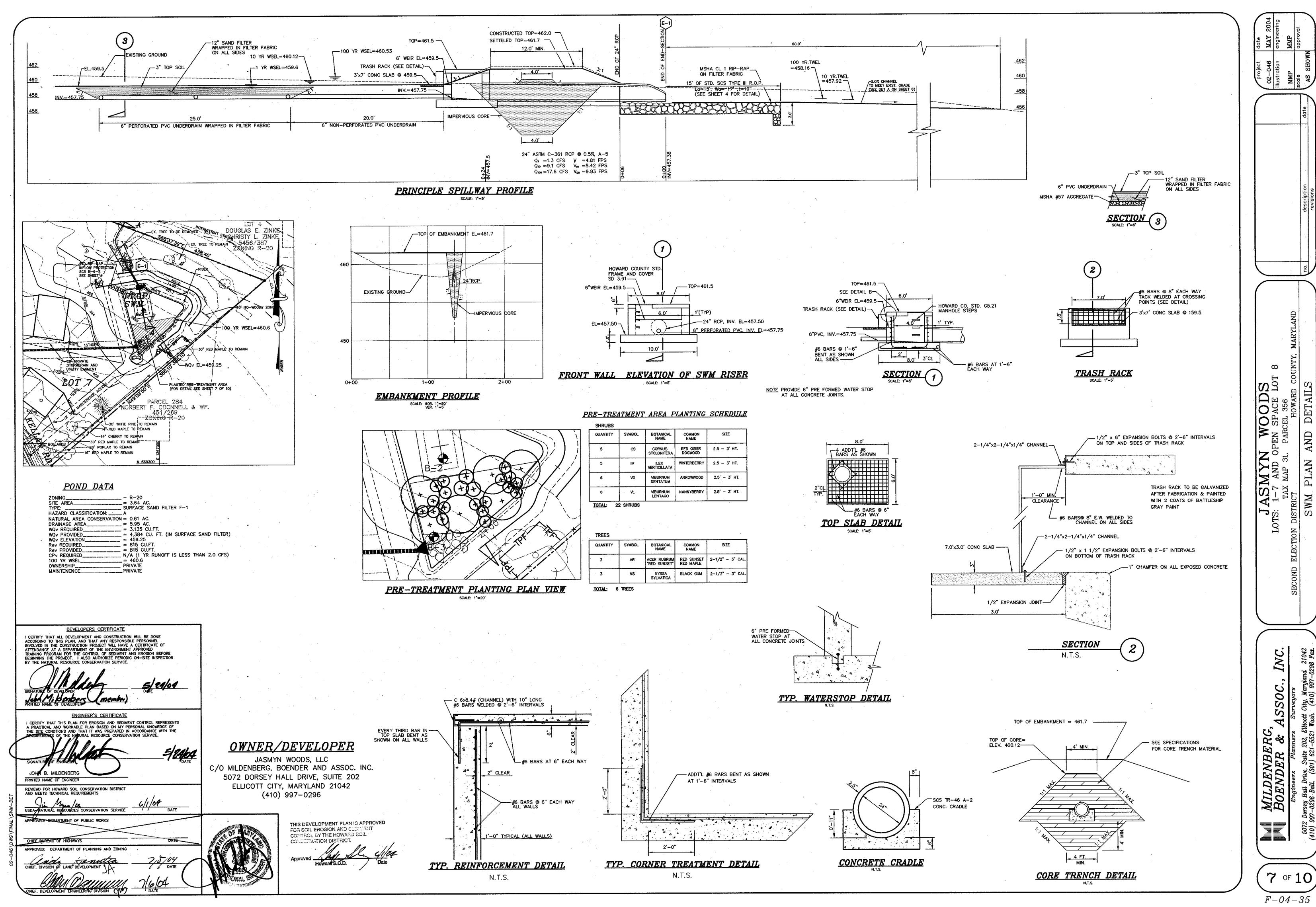
*NOTE: USE H.C.STANDARD CONNECTION SD-5.62

PIPE SCHEDULE

QUANTITY	PIPE SIZE
236'	15" HDPE
300'	18" HDPE

AP 31, PARCEL 356
HOWARD CC
DRAIN PROFILES

6 of 10)



F-04-35

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MD-378 POND SPECIFICATIONS (JANUARY 2000)

CONSTRUCTION SPECIFICATIONS

THESE SPECIFICATIONS ARE APPROPRIATE TO ALL PONDS WITHIN THE SCOPE OF THE STANDARD FOR PRACTICE MD-378. ALL REFERENCES TO ASTM AND AASHTO SPECIFICATIONS APPLY TO THE MOST RECENT

AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED. GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 1:1. ALL TREES SHALL BE CLEARED AND GRUBBED WITHIN 15 FEET OF THE TOE OF THE

AREAS TO BE COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS. TREES, BRUSH, AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE. FOR DRY STORM WATER MANAGEMENT PONDS, A MINIMUM OF A 25-FOOT RADIUS AROUND THE INLET STRUCTURE SHALL BE

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DRAIN AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED, A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

MATERIAL - THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT AND CUT OFF TRENCH SHALL CONFORM TO UNIFIED SOIL CLASSIFICATION CC, SC, CH, OR CL AND MUST HAVE AT LEAST 30%, PASSING THE #200 SIEVE. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGNED BY A GEOTECHNICAL ENGINEER. SUCH SPECIAL DESIGNS MUST HAVE CONSTRUCTION SUPERVISED BY A GEOTECHNICAL ENGINEER. MATERIALS USED IN THE OUTER SHELL OF THE EMBANKMENT MUST HAVE THE CAPABILITY TO SUPPORT VEGETATION OF THE QUALITY REQUIRED TO PREVENT

PLACEMENT - AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIALS SHALL BE PLACED IN MAXIMUM 8 INCH THICK (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE PRINCIPAL SPILLWAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

COMPACTION - THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TREAD TRACK OF HEAVY EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR COMPLETE PASSES OF A SHEEPSFOOT, RUBBER TIRED OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED. THE FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SO THAT IF FORMED INTO A BALL IT WILL NOT CRUMBLE, YET NOT BE SO WET THAT WATER CAN BE SQUEEZED OUT. WHEN REQUIRED BY THE REVIEWING AGENCY THE MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN 2% OF THE OPTIMUM. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T-99 (STANDARD

CUT OFF TRENCH - THE CUTOFF TRENCH SHALL BE EXCAVATED INTO IMPERVIOUS MATERIAL ALONG OR PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE BOTTOM WIDTH OF THE TRENCH SHALL BE GOVERNED BY THE EQUIPMENT USED FOR EXCAVATION, WITH THE MINIMUM WIDTH BEING FOUR FEET. THE DEPTH SHALL BE AT LEAST FOUR FEET BELOW EXISTING GRADE OR AS SHOWN ON THE PLANS. THE SIDE SLOPES OF THE TRENCH SHALL BE 1 TO 1 OR FLATTER. THE BACKFILL SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY

EMBANKMENT CORE - THE CORE SHALL BE PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE TOP WIDTH OF THE CORE SHALL BE A MINIMUM OF FOUR FEET. THE HEIGHT SHALL EXTEND UP TO AT LEAST THE 10 YEAR WATER ELEVATION OR AS SHOWN ON THE PLANS. THE SIDE SLOPES SHALL BE 1 TO 1 OR FLATTER. THE CORE SHALL BE COMPACTED WITH CONSTRUCTION EQUIPMENT, ROLLERS, OR HAND TAMPERS TO ASSURE MAXIMUM DENSITY AND MINIMUM PERMEABILITY. IN ADDITION, THE CORE SHALL BE PLACED CONCURRENTLY WITH THE OUTER SHELL OF THE EMBANKMENT.

BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT BACKFILL ADJACENT TO PIPES OR STRUCTURES SHALL BE OF THE TIPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE ADJOINING FILL MATERIAL THE FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO COMPACTED BY HAND TAMPERS OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPE. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A CONCRETE STRUCTURE OR PIPE, UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE STRUCTURE BACKFILL MAY BE FLOWABLE FILL MEETING THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 313 AS MODIFIED. THE MIXTURE SHALL HAVE A 100–200 PSI; 28 DAY UNCONFINED COMPRESSIVE STRENGTH. THE FLOWABLE FILL SHALL HAVE A MINIMUM PH OF 4.0 AND A MINIMUM RESISTIVITY OF 2,000 OHM-CM. MATERIAL SHALL BE PLACED SUCH THAT A MINIMUM OF 6" (MEASURED PERPENDICULAR TO THE OUTSIDE OF THE PIPE) OF FLOWABLE FILL SHALL BE UNDER (BEDDING). OVER AND, ON THE SIDES OF THE PIPE. IT ONLY NEEDS TO EXTEND UP TO THE SPRING LINE FOR RIGID CONDUITS. AVERAGE SLUMP OF THE FILL SHALL BE 7". TO ASSURE FLOWABILITY OF THE MATERIAL, ADEQUATE MEASURES SHALL BE TAKEN (SAND BAGS, ETC.). TO PREVENT FLOATING THE PIPE. WHEN USING FLOWABLE FILL, ALL METAL PIPE SHALL BE BITUMINOUS COATED. ANY ADJOINING SOLTED FOR PLACED IN HORIZONTAL LAYERS NOT TO EXCEED FOUR INCHES IN THICKNESS AND COMPACTED BY HAND TAMPER OR OTHER MANUALLY DIRECTED COMPACTION EQUIPMENT. THE ATERIAL SHALL COMPLETELY FILL ALL VOIDS ADJACENT TO THE FLOWABLE FILL ZONE. AT NO TIME DURING HE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN FOUR FEET MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE. UNDER NO CIRCUMSTANCES SHALL EQUIPMENT BE DRIVEN OVER ANY PART OF A STRUCTURE OR PIPE UNLESS THERE IS A COMPACTED FILL OF 24" OR GREATER OVER THE STRUCTURE OR PIPE. BACKFILL MATERIAL OUTSIDE THE STRUCTURAL BACKFILL (FLOWABLE FILL) ZONE SHALL BE OF THE TYPE AND QUALITY CONFORMING TO THAT SPECIFIED FOR THE CORE OF THE EMBANKMENT OR OTHER EMBANKMENT MATERIALS.

OWNER/DEVELOPER

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	DEVELOPERS CERTIFICATE	
	I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AN BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC BY THE NATURAL RESOURCE CONSERVATION SERVICE. SIGNATURE OF DEVELOPER	PERSONNEL CERTIFICATE OF APPROVED D EROSION BEFORE
	John Milosubry (member) PRINTED NAME OF DEVELOPER	UNIC
	ENGINEER'S CERTIFICATE	
	I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMEN A PRACTICAL AND WORKABLE PLAN BASED ON MY PER THE SITE CONDITIONS AND THAT IT WAS PREPARED IN A REQUIREMENTS OF THE NATURAL RESOURCE CONSERVAT	SONAL KNOWEDGE OF
	Stalled	Sl 21/04
	SIGNATURE OF EAGINEER	DATE
2002	JOHN B. MILDENBERG PRINTED NAME OF ENGINEER	
DWG\FINAL\SWM—SPEC-2000	REVIEWD FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS	
¥ .	(in /run /con	•
Š.	USDA-VATURAL RESOURCES CONSERVATION SERVICE	DATE
TINAL	APRICOVED: DEPARTMENT OF PUBLIC WORKS	
\$		
Š	CHIEF BUREAU OF HIGHWAYS	DATE

CHIEF, DIVISION/OF LAND DEVELOPMENT

ALL PIPES SHALL BE CIRCULAR IN CROSS SECTION. CORRUGATED METAL PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR CORRUGATED METAL PIPE: I. MATERIALS — (POLYMER COATED STEEL PIPE) — STEEL PIPES WITH POLYMERIC COATINGS SHALL HAVE A MINIMUM COATING THICKNESS OF 0.01 INCH (10 MIL) ON BOTH SIDES OF THE PIPE. THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATIONS M-245 & M-246 WITH WATERTIGHT COUPLING BANDS OR FLANGES.

MATERIALS - (ALUMINUM COATED STEEL PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-274 WITH WATERTIGHT COUPLING BANDS OR FLANGES. ALUMINUM COATED STEEL PIPE, WHEN USED WITH FLOWABLE FILL OR WHEN SOIL AND/OR WATER CONDITIONS WARRANT THE NEED FOR INCREASED DURABILITY, SHALL BE FULLY BITUMINOUS COATED PER REQUIREMENTS OF AASHTO SPECIFICATION M-190 TYPE A. ANY ALUMINUM COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER OR TWO COATS OF ASPHALT.

MATERIALS - (ALUMINUM PIPE) - THIS PIPE AND ITS APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATION M-196 OR M-21 L WITH WATERTIGHT COUPLING BANDS OR FLANGES. ALUMINUM PIPE, WHEN USED WITH FLOWABLE FILL OR WHEN SOIL AND/OR WATER CONDITIONS WARRANT FOR INCREASED DURABILITY, SHALL BE FULLY BITUMINOUS COATED PER REQUIREMENTS OF AASHTO SPECIFICATION M-190 TYPE A. ALUMINUM SURFACES THAT ARE TO BE IN CONTACT WITH CONCRETE SHALL BE PAINTED WITH ONE COAT OF ZINC CHROMATE PRIMER OR TWO COATS OF ASPHALT. HOT DIP GALVANIZED BOLTS MAY BE USED FOR CONNECTIONS. THE PH OF THE

2. COUPLING BANDS, ANTI-SEEP COLLARS, END SECTIONS, ETC., MUST BE COMPOSED OF THE SAME MATERIAL AND COATINGS AS THE PIPE. METALS MUST BE INSULATED FROM DISSIMILAR MATERIALS WITH USE OF RUBBER OR PLASTIC INSULATING MATERIALS AT LEAST 24 MILS IN THICKNESS.

3. CONNECTIONS — ALL CONNECTIONS WITH PIPES MUST BE COMPLETELY WATERTIGHT. THE DRAIN PIPE OR BARREL CONNECTION TO THE RISER SHALL BE WELDED ALL AROUND WHEN THE PIPE AND RISER ARE METAL. ANTI-SEEP COLLARS SHALL BE CONNECTED TO BE WATERTIGHT. DIMPLE

ALL CONNECTIONS SHALL USE A RUBBER OR NEOPRENE GASKET WHEN JOINING PIPE SECTIONS. THE END OF EACH PIPE SHALL BE RE-ROLLED AN ADEQUATE NUMBER OF CORRUGATIONS TO ACCOMMODATE THE BANDWIDTH. THE FOLLOWING TYPE CONNECTIONS ARE ACCEPTABLE FOR PIPES LESS THAN 24 INCHES IN DIAMETER: FLANGES ON BOTH ENDS OF THE PIPE WITH A CIRCULAR 3/8 INCH CLOSED CELL NEOPRENE GASKET, PRE-PUNCHED TO THE FLANGE BOLT CIRCLE, SANDWICHED BETWEEN ADJACENT FLANGES: A 12-INCH WIDE STANDARD LAP TYPE BAND WITH 12-INCH WIDE BY 3/8-INCH THICK CLOSED CELL CIRCULAR NEOPRENE GASKET; AND A 12-INCH WIDE HUGGER TYPE BAND WITH O-RING GASKETS HAVING A MINIMUM DIAMETER OF ½ INCH GREATER THAN THE CORRUGATION DEPTH. PIPES 24 INCHES IN DIAMETER AND LARGER SHALL BE CONNECTED BY A 24 INCH LONG ANNULAR CORRUGATED BAND USING A MINIMUM OF 4 (FOUR) RODS AND LUGS, 2 ON EACH CONNECTING PIPE END. A 24-INCH WIDE BY 3/8-INCH THICK CLOSED CELL CIRCULAR NEOPRENE GASKET WILL BE INSTALLED WITH 12 INCHES ON THE END OF EACH PIPE, FLANGED JOINTS WITH 3/8 INCH CLOSED CELL GASKETS THE FULL WIDTH OF THE

HELICALLY CORRUGATED PIPE SHALL HAVE EITHER CONTINUOUSLY WELDED SEAMS OR HAVE LOCK SEARNS WITH INTERNAL CAULKING OR A NEOPRENE BEAD.

4. BEDDING — THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

5. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL."

6. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

REINFORCED CONCRETE PIPE - ALL OF THE FOLLOWING CRITERIA SHALL APPLY FOR REINFORCED CONCRETE PIPE: 1. MATERIALS - REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM C-361.

2. BEDDING - REINFORCED CONCRETE PIPE CONDUITS SHALL BE LAID IN A CONCRETE BEDDING/CRADLE FOR THEIR ENTIRE LENGTH. THIS BEDDING/CRADLE SHALL CONSIST OF HIGH SLUMP CONCRETE PLACED UNDER THE PIPE AND UP THE SIDES OF THE PIPE AT LEAST 50% OF ITS OUTSIDE DIAMETER WITH A MINIMUM THICKNESS OF 6 INCHES. WHERE A CONCRETE CRADLE IS NOT NEEDED FOR STRUCTURAL REASONS, FLOWABLE FILL MAY BE USED AS DESCRIBED IN THE "STRUCTURE BACKFILL" SECTION OF THIS STANDARD. GRAVEL BEDDING IS NOT PERMITTED.

3. LAYING PIPE - BELL AND SPIGOT PIPE SHALL BE PLACED WITH THE BELL END UPSTREAM. JOINTS SHALL BE MADE IN ACCORDANCE WITH RECOMMENDATIONS OF THE MANUFACTURER OF THE MATERIAL. AFTER THE JOINTS ARE SEALED FOR THE ENTIRE LINE, THE BEDDING SHALL BE PLACED SO THAT ALL SPACES UNDER THE PIPE ARE FILLED. CARE SHALL BE EXERCISED TO PREVENT ANY DEVIATION FROM THE ORIGINAL LINE AND GRADE OF THE PIPE. THE FIRST JOINT MUST BE LOCATED WITHIN 4 FEET FROM THE RISER.

4. BACKFILLING SHALL CONFORM TO "STRUCTURE BACKFILL."

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS.

PLASTIC PIPE - THE FOLLOWING CRITERIA SHALL APPLY FOR PLASTIC PIPE:

1. MATERIALS - PVC PIPE SHALL BE PVC-1120 OR PVC-1220 CONFORMING TO ASTM D1785 OR ASTM D-2241 CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) PIPE, COUPLINGS AND FITTINGS SHALL CONFORM TO THE FOLLOWING: 4" - 10" INCH PIPE SHALL MEET THE REQUIREMENTS OF AASHTO M252 TYPE S, AND 12" THROUGH 24" INCH SHALL MEET THE REQUIREMENTS OF AASHTO M294 TYPE S.

2. JOINTS AND CONNECTIONS TO ANTI-SEEP COLLARS SHALL BE COMPLETELY WATERTIGHT.

3. BEDDING -THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK SOFT, SPONGY OR OTHER UNSTABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH COMPACTED TO PROVIDE ADEQUATE SUPPORT.

4. BACKFILL SHALL CONFORM TO "STRUCTURE BACKFILL."

5. OTHER DETAILS (ANTI-SEEP COLLARS, VALVES, ETC.) SHALL BE AS SHOWN ON THE DRAWINGS. DRAINAGE DIAPHRAGMS -- WHEN A DRAINAGE DIAPHRAGM IS USED, A REGISTERED PROFESSIONAL ENGINEER WILL SUPERVISE THE DESIGN AND CONSTRUCTION INSPECTION.

CONCRETE SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 414. MIX NO. 3.

ROCK RIPRAP SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS,

GEOTEXTILE SHALL BE PLACED UNDER ALL RIPRAP AND SHALL MEET THE REQUIREMENTS OF MARYLAND DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 921.09, CLASS C. CARE OF WATER DURING CONSTRUCTION

ALL WORK ON PERMANENT STRUCTURES SHALL BE CARRIED OUT IN AREAS FREE FROM WATER. THE CONTRACTOR SHALL CONSTRUCT AND MAINTAIN ALL TEMPORARY DIKES, LEVEES, COFFERDAMS, DRAINAGE CHANNELS, AND STREAM DIVERSIONS NECESSARY TO PROTECT THE AREAS TO BE OCCUPIED BY THE PERMANENT WORKS. THE CONTRACTOR SHALL ALSO FURNISH, INSTALL, OPERATE, AND MAINTAIN ALL NECESSARY PUMPING AND OTHER EQUIPMENT REQUIRED FOR REMOVAL OF WATER FROM VARIOUS PARTS OF THE WORK AND FOR MAINTAINING THE EXCAVATIONS, FOUNDATION, AND OTHER PARTS OF THE WORK FREE FROM WATER AS REQUIRED OR DIRECTED BY THE ENGINEER FOR CONSTRUCTING EACH PART OF THE WORK. AFTER HAVING SERVED THEIR PURPOSE, ALL TEMPORARY PROTECTIVE WORKS SHALL BE REMOVED OR LEVELED AND GRADED TO THE EXTENT REQUIRED TO PREVENT OBSTRUCTION IN ANY DEGREE WHATSOEVER OF THE FLOW OF WATER TO THE SPILLWAY OR OUTLET WORKS AND SO AS NOT TO INTERFERE IN ANY WAY WITH THE OPERATION OR MAINTENANCE OF THE STRUCTURE. STREAM DIVERSIONS SHALL BE MAINTAINED UNTIL THE FULL FLOW CAN BE PASSED THROUGH THE PERMANENT WORKS. THE REMOVAL OF WATER FROM THE REQUIRED EXCAVATION AND THE FOUNDATION SHALL BE ACCOMPLISHED IN A MANNER AND TO THE EXTENT THAT WILL MAINTAIN STABILITY OF THE EXCAVATED SLOPES AND BOTTOM REQUIRED EXCAVATIONS AND WILL ALLOW SATISFACTORY PERFORMANCE OF ALL CONSTRUCTION OPERATIONS. DURING THE PLACING AND COMPACTING OF MATERIAL IN REQUIRED EXCAVATIONS, THE WATER LEVEL AT THE LOCATIONS BEING REFILLED SHALL BE MAINTAINED BELOW THE BOTTOM OF THE EXCAVATION AT SUCH LOCATIONS WHICH MAY REQUIRE DRAINING THE WATER SUMPS FROM WHICH THE WATER SHALL BE

HIS DEVELOPMENT PLAN IS APPROVED

OR SOIL EROSION AND CLI TROL BY THE HOWARD SOIL EXWITION DISTRICT.

loward S.C.O.

ALL BORROW AREAS SHALL BE GRADED TO PROVIDE PROPER DRAINAGE AND LEFT IN A SIGHTLY CONDITION ALL EXPOSED SURFACES OF THE EMBANKMENT, SPILLWAY, SPOIL AND BORROW AREAS, AND BERMS SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING AND MULCHING IN ACCORDANCE WITH THE NATURAL RESOURCES CONSERVATION SERVICE STANDARDS AND SPECIFICATIONS FOR CRITICAL AREA PLANTING (MD-342) OR AS SHOWN ON THE ACCOMPANYING DRAWINGS.

EROSION AND SEDIMENT CONTROL

CONSTRUCTION OPERATIONS WILL BE CARRIED OUT IN SUCH A MANNER THAT EROSION WILL BE CONTROLLED AND WATER AND AIR POLLUTION MINIMIZED. STATE AND LOCAL LAWS CONCERNING POLLUTION ABATEMENT WILL BE FOLLOWED. CONSTRUCTION PLANS SHALL DETAIL EROSION AND SEDIMENT CONTROL MEASURES.

OPERATION. MAINTENANCE AND INSPECTION

INSPECTION OF THE POND(S) SHOWN HEREON SHALL BY PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA. SCS "STAND-ARDS AND SPECIFICATIONS FOR PONDS" (MD-378), THE POND OWNER(S) AND THE HEIRS SUCCESSORS OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

OPERATION AND MAINTENENCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED SURFACE SAND FILTER

- 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 OPERATION AND AS
- 5. VISIBLE SIGNS OF EROSION IN THE FACILITY SHALL BE REPAIRED AS SOON AS IT IS
- 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. PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIAL AND LIQUID MUST BE FOLLOWED BY THE OWNER.
- 8. A LOG BOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY
- THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITCH 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.

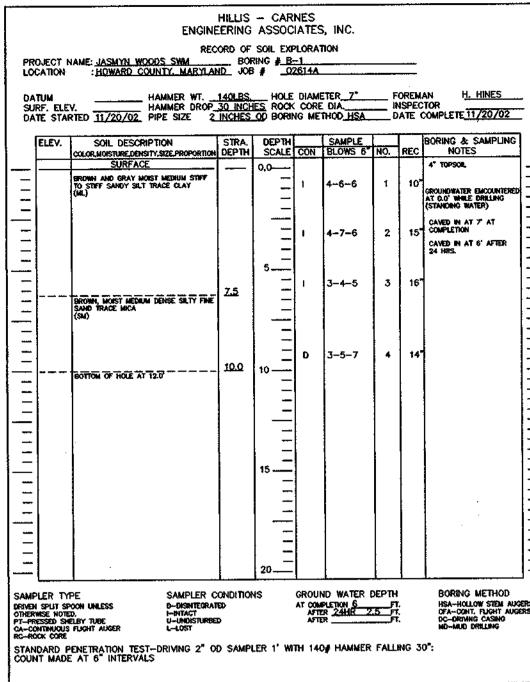
GEOTECHNICAL RECOMENDATIONS:

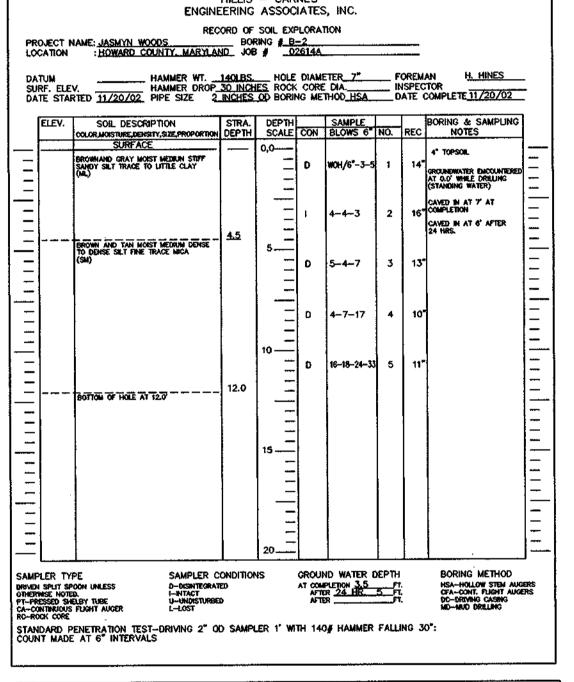
THE AREA OF THE PROPOSED SWM FACILITY SHOULD BE STRIPPED OF TOPSOIL AND ANY OTHER UNSUITABLE MATERIALS FROM THE EMBANKMENT OR STRUCTURE AREA IN ACCORDANCE WITH SOIL CONSERVATION GUIDELINES. AFTER STRIPPING OPERATIONS HAVE BEEN COMPLETED, THE EXPOSED SUBGRADE MATERIALS SHOULD BE PROOFROLLED WITH A LOADED DUMP TRUCK OR SIMILAR EQUIPMENT IN THE PRESENCE OF A GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE.

FOR AREAS THAT ARE NOT ACCESSIBLE TO A DUMP TRUCK, THE EXPOSED MATERIALS SHOULD BE OBSERVED AND TESTED BY 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-OF TRENCH. IN ACCORDANCE WITH MARYLAND SOIL CONSERVATION SPECIFICATIONS 378 SOILS CONSIDERED SUITABLE FOR 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. ALL FILL MATERIALS MUST BE PLACED AND COMPACTED IN ACCORDANCE WITH MD SCS 178 SPECIFICATIONS.





		FNGIN		- CAR		. INC.				
				SOIL EXT		-				
PRO	DUECT N	IAME: JASMYN WOODS	BOF	RING # B	-3	TION				
FOC	CATION	: HOWARD_COUNTY, MARYLA	ND NOE	# _0:	2614A					
DA.	TUM	HAMMER WT	140LBS.	HOLE	DIAM	TER 7"	F	OREM	AN H. HINES	_
SUI	RF. ELEY	V. HAMMER DROP	30 INCH	ES ROCK	CORE	DIA THOO_HSA		ISPEC	TOR COMPLETE 11/20/02	-
0.	IC SIM	THE SIZE C	11150.150	<u></u>	10					
	ELEV.	SOIL DESCRIPTION	STRA. DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO	REC	BORING & SAMPLING NOTES	
		COLOR, MOISTURE, DENSITY, SIZE, PROPORTION SURFACE	UEF III	0.0—	001	BEOWS 0	110.	1,420	4" TOPSOIL	<u></u>
_		BROWN MOIST SOFT TO STIFF SANDY SILT			D	1-1-2	1	14"		—
_				_	-				Groundwater encountered at 0.0' while drilling (Standing Water)	_
			2.5						CAVED IN AT 7' AT	
_		BROWN MOIST MEDIUM DENSE SILTY FINE SAND TRACE ROCK FRAGMENTS	-		D	479	2	6"	COMPLETION	-
_		(54)			Ĭ	-,-,	_		CAVED IN AT 6' AFTER 24 HRS.	
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_'				=			Ĭ			
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DRIVEN OTHERN PT-PRI CA-CO RC-RO	essed 5H4 NTINUOUS CIX CORE	OON UNLESS D-DISINTEGRA? D. I-INTACT SLBY TUBE U-UNDISTURBE FLIGHT AUGER I,-LOST	D D		AT COM AFTE AFTE		, гт В_ F1 Г		BORING METHOD HSA-HOLLOW STEE AUG CFA-CONT. FLIGHT AUG DC-DRIVING CASING MO-MUO DRILLING	ERS FRS
STANI COUN	DARO P	ENETRATION TEST-DRIVING 2" O AT 6" INTERVALS	D SAMPL	.ER 1' Wi	TH 140	# HAMMER	FALU	NG 3	0⁻:	

HILLIS - CARNES

MILDENBERG, BOENDER &

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WEST FILLET PROFILE

SCALE: HOR. 1"=20'
VER. 1"=2'

PROPOSED GRADE FLOW LINE

EAST FILLET PROFILE

SCALE: HOR. 1"=20"
VER. 1"=2"

APPROVED: GEPARTMENT OF PUBLIC WORKS

OWNER/DEVELOPER

JASMYN WOODS, LLC C/O MILDENBERG, BOENDER AND ASSOC. INC. 5072 DORSEY HALL DRIVE, SUITE 202 ELLICOTT CITY, MARYLAND 21042 (410) 997-0296

(9 of 10)

F-04-35

THIS DRAWING IS TO BE USED FOR LANDSCAPE & FOREST CONSERVATION PLAN PURPOSES ONLY.

NOTES:

1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.

- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (16 SHADE TREES, 8 EVERGREENS, 11 PRIVATE STREET TREES) HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$9,300.00.
- FOREST CONSERVATION EASEMENT(S) HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. NO CLEARING, GRADING. OF CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, EXCEPT AS SHOWN ON AN APPROVED ROAD CONSTRUCTION DRAWING OR SITE DEVELOPMENT PLAN. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- 4. FOREST CONSERVATION OBLIGATIONS IN ACCORDANCE WITH SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT FOR THIS SUBDIVISION WILL BE FULFILLED BY RETENTION OF 0.58 ACRES (25,264.8 SQ. FT.) AND PAYMENT OF A FEE—IN—LIEU OF REFORESTATION OF 0.65 ACRES (28,314 SQ. FT.) IN THE AMOUNT OF \$14,157.00. FINANCIAL SURETY FOR THE RETENTION OF 0.58 AC (25264.8 SQ.FT.) OF FOREST HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$5,052.96.

GENERAL NOTES FOREST PROTECTION

ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING AND SIGHAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO

INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.

THE FOREST PROTECTION DEVICES SHALL BE INSTALLED SUCH THAT THE CRITICAL ROOT ZONES OF ALL TREES WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED WILL BE WITHIN FOREST PROTECTION DEVICES.

ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SILT FENCE BEING USED AS PROTECTIVE FENCING, ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.

ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS. INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DE-WATERING OPERATIONS, OFF—SITE RUN OFF, SPILLAGE AND DRAINING OF MATERIALS THAT MAY BE HARMFUL TO TREES.

THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILLING OF EARTH WITHIN FOREST CONSERVATION EASEMENTS. REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.

THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS. ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL PRESERVATION AREAS, AS NECESSARY.

PRE-CONSTRUCTION MEETING

AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED, BUT BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE, A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE ON SITE. THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, AND HOWARD COUNTY INSPECTORS SHALL ATTEND. THE PURPOSE OF THIS MEETING WILL BE:

A. TO IDENTIFY THE LOCATIONS OF THE FOREST RETENTION AREAS, SPECIMEN TREES WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, LIMITS OF CONSTRUCTION, EMPLOYEE PARKING AREAS AND EQUIPMENT STAGING AREAS;

B. INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES;
C. MAKE ALL NECESSARY ADJUSTMENTS;
D. ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS PENALTIES.

CONSTRUCTION MONITORING

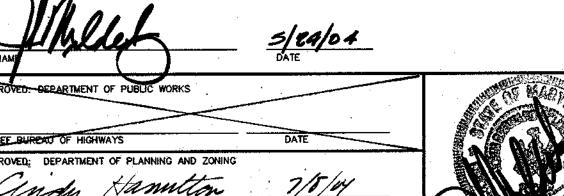
THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT. A QUALIFIED PROFESSIONAL SHALL BE RESPONSIBLE FOR IDENTIFYING DAMAGE TO PROTECTED FOREST AREAS OR INDIVIDUAL TREES WHICH MAY HAVE BEEN CAUSED BY CONSTRUCTION ACTIVITIES, SUCH AS SOIL COMPACTION, ROOT INJURY, TRUNK WOUNDS, LIMB INJURY, OR STRESS CAUSED BY FLOODING OR DROUGHT CONDITIONS. ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS MAY REQUIRE CONSULTATION WITH A PROFESSIONAL ARBORIST.

THE CONSTRUCTION PROCEDURE SHALL NOT DAMAGE AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE AS DESIGNATED ON THE PLANS. ANY DAMAGE SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

FOREST CONSERVATION WORKSHEET

NET TRACT AREA	ACRES
D. A.M.E.I. MILLION TOO TELES LEODOS ESTAS	3.64 0.00 0.00 3.64
LAND USE CATEGORY	
ARA MDR IDA HDR MPD CIA O O O 1 O O	
E. AFFORESTATION THRESHOLD (15%) F. CONSERVATION THRESHOLD (20%)	0.55 0.73
EXISTING FOREST COVER	•
G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD 1. AREA OF FOREST ABOVE CONSERVATION THRESHOLD	2.12 1.57 1.39
BREAK EVEN POINT	
J. FOREST RETENTION ABOVE THRESHOLD WITH NO MITIGATION K. CLEARING PERMITTED WITHOUT MITIGATION	1.01 1.11
PROPOSED FOREST CLEARING	
L. TOTAL AREA OF FOREST TO BE CLEARED M. TOTAL AREA OF FOREST TO BE RETAINED	1.54 0.58
PLANTING REQUIREMENTS	
N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD P. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD R. TOTAL REFORESTATION REQUIRED S. TOTAL AFFORESTATION REQUIRED T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED	

DEVELOPER'S/OWNER'S CERTIFICATE I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE IN 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.



OWNER/DEVELOPER

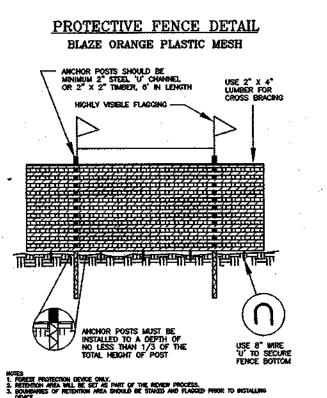
JASMYN WOODS, LLC MILDENBERG, BOENDER AND ASSOC. INC. 5072 DORSEY HALL DRIVE, SUITE 202 ELLICOTT CITY, MARYLAND 21042 (410) 997-0296

FOREST STAND FS1 - TULIP POPLAR ASSOCIATION

KEY SPECIES ST#1 30" RED MAPLE IN GOOD CONDITION
ST#1 30" RED MAPLE IN GOOD CONDITION
T#2 30" RED MAPLE IN GOOD CONDITION
T#3 32" RED MAPLE IN FAIR/POOR CONDITION

Mn II*		
FOREST RETENTION AREA		
machinery, dumping or storage of any materials is PROHIBITED	HBn 155*	
VIOLATORS ARE SUBJECT TO FINES AS IMPOSED BY THE MARYLAND FOREST CONSERVATION ACT OF 1991		

SIGNAGE DETAILS



TYPICAL EVERGREEN TREE PLANTING DETAIL NOT TO SCALE

TYPICAL DECIDUOUS TREE PLANTING DETAIL

TOTAL
24 TREES (16 SHADE TREES, 8 EVERGREENS)

DOOL	LOT 54 EY ORIN WILLARD JR. MICHAUD ANGELE M. 2946/540 IZONING R-20 LOT 55 LOT 56 ELWIS M. MILLS AND WF VERENA LIBRITE WHITE ZONING B 40	
	2044/315 ZONING R-20 N 569700	
LOT 87 ERNEST F. HAUCK 2178/68 ZUNING R-20	BOLIGIAS CHRISTY 5450 ZONIN	E. ZINKE E. ZINKE 1/387 G. R-20
LOT 88 HANS E. PATZER 395/240 ZONING R-20	EX. TREE TO REMAIN	
DE A AND LINDA M. ATERBURNI 2189/340 ZONING R-20	LOT 5 LOT 4 PROP TO BE DEDICATED H.O.A. ASSOCIATION OF THE DEDICATED H.O.A. ASSOC	DODY ZONE
PRIVATE 20' STORMDRAIN AND UTILLTY EASEMENT	LOT 6	
LOT 2	24' PRIVATE ACCESS PLACE EASEMENT STORMORAIN AND UTBLITY EASMENT PAYEMENT TREE MAINTENANCE EASEMENT DANCE STORMORAIN AND UTBLITY EASMENT PAYEMENT TREE MAINTENANCE EASEMENT DANCE STORMORAIN AND UTBLITY EASMENT PLANTED PRE-TREATMENT AREA PLANTED PRE-TREATMENT AREA	
PARCEL 28 ICSEPH F. MARKS BARBARA MARKS	PARCEL 284 NRBERT F. ODONNELL & WF. 451 269 30' WHITE PINE ITO REMAIN 14" CHERRY TO REMAIN 14" CHERRY TO REMAIN 28" POPLAR TO REMAIN 28" POPLAR TO REMAIN	
3298/133 3298/133 ZONING R-20	RI-NETORO- 16" RED MAPLE TO REMAIN PARCEL AND DEDICATED TO HOWARD COUNTY, MARYLAND FOR PURPOSE OF A RUBLIC ROAD (0.01 AC.) EX. TREE TO REMAIN EX. TREE TO REMAIN EX. TREE TO REMAIN EX. TREE TO REMAIN ROAD CENTERENSE ROAD CENTERENSE ROAD CENTERENSE ROAD CENTERENSE ROAD CENTERENSE	438 ELAWDER 53 20
PARCEL 87 JASPER C. SIMMONS & WF. 276/333 ZONING R-20	PADCEL NOW	W-VARIES) = 0 OP-480.40
	PARCEL 377 DOROTHY DUNAWAY 4753/438 ZONING R-20 FARCEL 438 EVELYN S. DELAWDER 6158/453 ZONING R-20 FOR PUBLIC & Contract to Sept. 158 EVELYN S. DELAWDER 200 EVELYN S	
HORSE.	PARCEL 293 HAROLD B. DOVE DOROTHY B. DOVE 1209/43 ZONING R-20	
PARCEL 32 CHARLES V. LEWIS SR. SHIRLEY G. LEWIS 2289/529 ZONING R-20	1209/43 ZONING R-20	LEGEND FOREST CONSERVATION EASEMENT (RETENTION)
30=496.63		FOREST CONSERVATION SIGNAGE TPF TREE PROTECTIVE FENCING

STREET TREE CALCULATIONS KELLAN ROAD - 430 LF/40 = 11 TREES TOTAL TREES REQUIRED = 11 STREET TREES TOTAL TREES PROVIDED = 11 STREET TREES

STREET TREE PLANTING SCHEDULE

QUANTITY SYMBOL BOTANICAL NAME 2 1/2" - 3" CAL. RED SUNSET RED MAPLE 11 STREET TREES

PERIMETER & SWM LANDSCAPE PLANTING SCHEDULE

2 1/2" - 3" CAL. GREEN MOUNTAIN SUGAR MAPLE

SCHEDULE	4	•	PERIMETER	LANDSCAPED	EDGE	

SCHEDULE D: STORMWATER MANAGEMENT AREA LANDSCAPING

3 SHADE TREES 3 EVERGREEN TREES

LINEAR FEET OF PERIMETER

(NO, YES AND %) NUMBER OF TREES REQUIRED

SHADE TREES EVERGREEN TREES

SHADE TREES EVERGREEN TREES

AS INDICATED ABOVE.

NUMBER OF TREES PROVIDED

CREDIT FOR EXISTING VEGETATION NO (NO, YES AND LINEAR FEET)

CREDIT FOR OTHER LANDSCAPING N/A

95 LF (PERIMETER A) 133 LF (PERIMETER B) 133 LF (PERIMETER C) 361 LF (TOTAL)

2 SHADE TREES 3 SHADE TREES 3 SHADE TREES 8 SHADE TREES 2 EVERGREEN TREES 3 EVERGREEN TREES 8 EVERGREEN TREES

3 SHADE TREES

3 EVERGREEN TREES 8 EVERGREEN TREES

CATEGORY		ADJACENT TO PE	RIMETER PROPERTIES		
LANDSCAPE TYPE	A (PERIMETER 1)	A (PERIMETER 2)	A (PERIMETER 3)	A (PERIMETER 4)	TOTAL
LINEAR FEET OF PERIMETER	426.17 LF	410.00 LF	438.40 LF	368.73 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	YES, 38 LF OF EXISTING TREES	YES, 410 LF OF EXISTING TREES	yes, 289 lf of Existing trees	NO	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO	YES, 133 LF OF SWM LANDSCAPING	YES, 95 LF OF SWM LANDSCAPING	
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	7 SHADE TREES O EVERGREEN TREES O SHRUBS	O SHADE TREES O EVERGREEN TREES O SHRUBS	1 SHADE TREE 0 EVERGREEN TREES 0 SHRUBS	5 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	13 SHADE TREES O EVERGREEN TREES O SHRUBS
CREDIT FOR EXISTING VEGETATION SHADE TREES EVERGREEN TREES	N/A	N/A	N/A	* 5 SHADE TREES	5 SHADE TREES
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION)	7 SHADE TREES 0 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	O SHADE TREES O EVERGREEN TREES O SUBSTITUTION TREES O SHRUBS	1 SHADE TREE 0 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS	O SHADE TREES O EVERGREEN TREES O SUBSTITUTION TREES O SHRUBS	8 SHADE TREES 0 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS

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