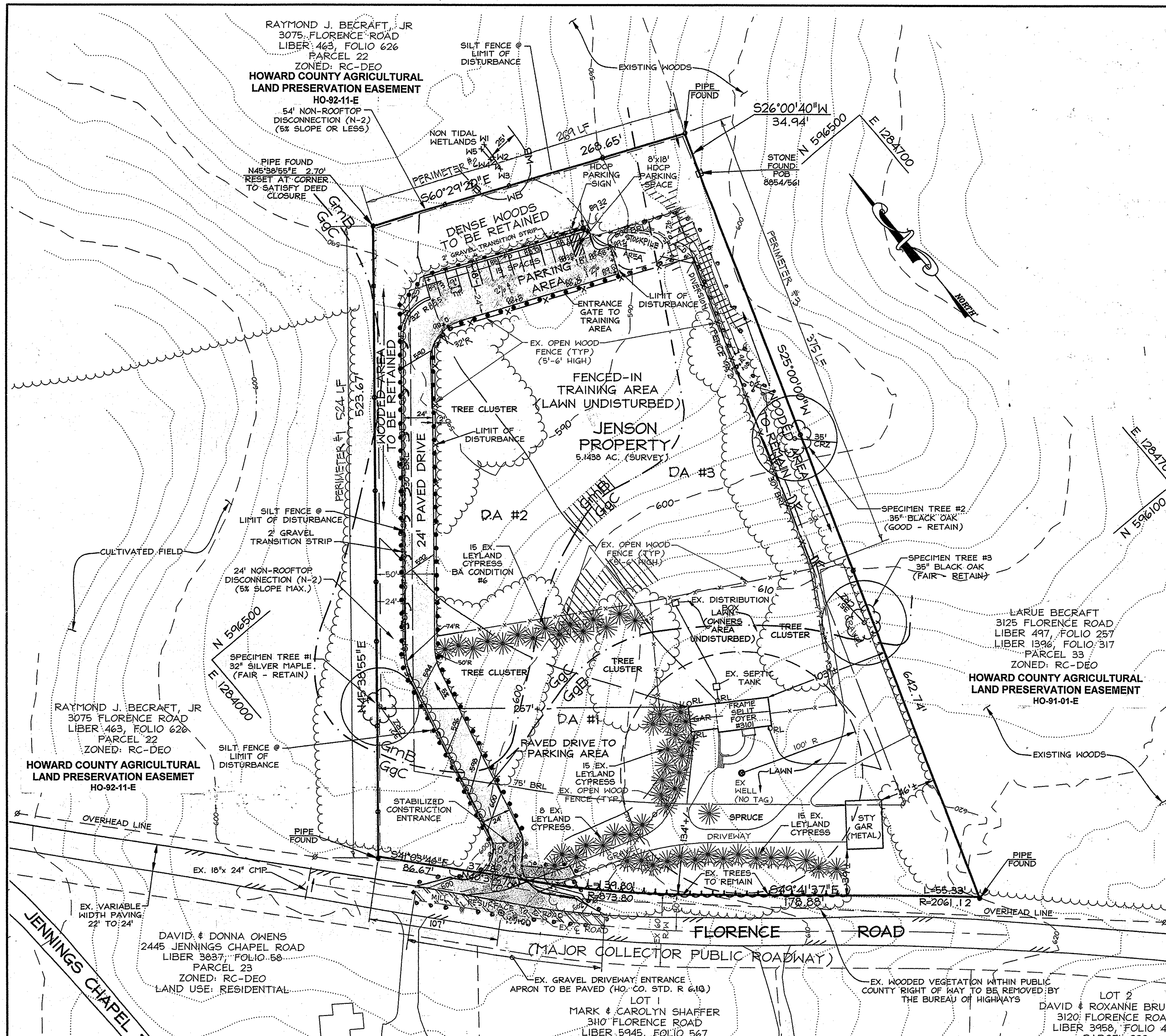


IN THE MATTER OF * BEFORE THE

WESLEY AND REBECCA JENSON, t/a ARROWWOOD SHEPHERDS, INC. * BOARD OF APPEALS

CASE NO. BA 09-030C * OF HOWARD COUNTY

ORDER

The Board of Appeals met on February 28, 2012 to consider the Order of the Circuit Court in Circuit Court Case #13-C-10-84855, dated November 18, 2011, wherein the Court affirmed the Board of Appeals Decision in BA 09-030C dated October 20, 2010, and further ordered that the same be remanded to the Howard County Board of Appeals for the limited purpose of amending any terms and conditions such as, but not limited to, time lines that have been affected by the Order and not to be inconsistent with this Order; and

In accordance with the Court's directive, the Board of Appeals, on this 28th day of February, 2012, ORDERS:

That the effective date of the Board's approval of the amended petition in this case be February 28, 2012; and

That the Board hereby amends Condition number 6 of the Board's Decision and Order dated October 20, 2010, to state: "Within 15 months of February 28, 2012, the approval date of this altered conditional use, the Petitioners shall install a buffer of Leyland cypress trees along the fence line facing Florence Road, west of the personal residence."

ATTEST:

Alison Mathieson
Board Secretary

HOWARD COUNTY BOARD OF APPEALS

James Walsh, Chairperson

John Lederer, Vice Chairperson

Maurice Simpkins

Henry Eigles

Did Not Participate
James Howard

APPROVED AS TO FORM:
HOWARD COUNTY OFFICE OF LAW
MARGARET ANN NOLAN
COUNTY SOLICITOR

Barry M. Sanders, Esq.
Asst. County Solicitor

ORDER

Based upon the foregoing, it is this 20th day of October, 2010, by the Howard County Board of Appeals, ORDERED:

That the amended petition of Wesley and Rebecca Jenson, t/a Arrowwood Shepherds, Inc., Petitioners, to alter a previously approved Conditional Use for a dog kennel and pet grooming establishment in an RC-DEO (Rural Conservation – Density Exchange Option) Zoning District is hereby GRANTED, subject to the following conditions:

1. The conditional use shall be limited to (i) dog training activities previously approved under the Conditional Use; (ii) parking related to the dog training activities; and (iii) the housing of the Petitioners' personal pets (9 dogs), as described in the amended petition and conditional use plan submitted to the Board On June 29, 2010 as *Applicants' Exhibit #1*, and not to any other activities, uses, or structures on the Property.

2. No more than 10 dogs (exclusive of the Petitioners' personal pets) shall be kept on the Property for dog training purposes at any given time Monday Through Friday.

3. No more than 15 dogs (exclusive of the Petitioners' personal pets) shall be kept on the Property for dog training purposes at any given time Saturday through Sunday.

4. No dog training activities shall occur on the Property between the hours of sunset and 9:00 a.m.

5. No outdoor lighting shall be installed and no sound amplification devices shall be used in connection with dog training activities on the Property.

6. Within 15 months of the approval date of this altered conditional use, the Petitioners shall install a buffer of Leyland cypress trees along the fence line facing Florence Road, west of the personal residence.

7. The Conditional Use, as amended, shall be personal to Wesley and Rebecca Jenson and shall expire immediately in the event either Wesley Jenson and/or Rebecca Jenson does not occupy the Property as their/his/her own personal residence.

8. Neither the garage nor the rear yard of the house may be used for activities under this conditional use.

9. The Petitioner shall comply with all applicable Federal, State, and County laws and regulations.

ATTEST:

Ann Nicholson, Secretary

HOWARD COUNTY BOARD OF APPEALS

Albert Hayes, Chairperson

James Walsh, Vice Chairperson

Maurice Simpkins

Henry Eigles

John Lederer

PREPARED BY:
HOWARD COUNTY OFFICE OF LAW
BARBARA M. COOK
COUNTY SOLICITOR

Barry M. Sanders
Assistant County Solicitor

BA 12-027C
Section 131.H.4 Petition to Modify Condition of Approval on BA 09-030C
Wesley and Rebecca Jenson, t/a Arrowwood Shepherds

ORDER

Based upon the foregoing, it is this 20th day of May 2013, by the Howard County Board of Appeals Hearing Examiner, ORDERED:

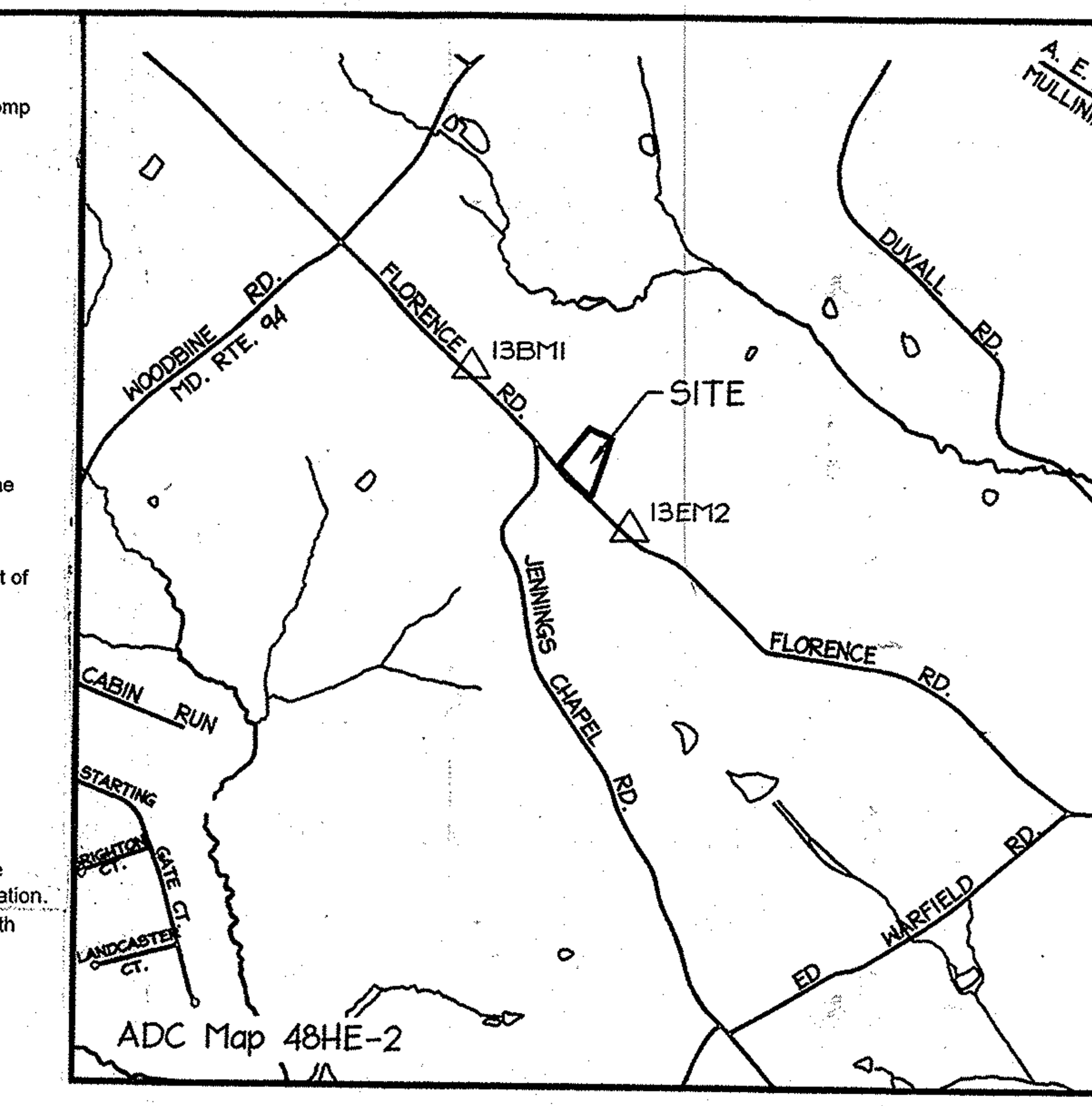
That condition no. 7 of the Board of Appeals decision and order in BA 09-030C is MODIFIED to read as follows.

7. The Conditional Use, as amended hereunder, shall be personal to Wesley Jenson and shall expire immediately in the event Wesley Jenson does not occupy the Property as his personal residence.

HOWARD COUNTY BOARD OF APPEALS
HEARING EXAMINER

GENERAL NOTES

1. The subject property is zoned RC-DEO per the 10/6/13 Comprehensive Zoning Plan and the Comp Lite Zoning Regulations effective 7/28/06.
2. All construction shall be in accordance with the latest Standards and Specifications of Howard County Design Manual Vol. IV and current MSHA Standards & Specifications.
3. Project Background:
   Subdivision: Jenson Property
   Location: 3101 Florence Road
   Woodbine, MD 21797
   Tax Map: Map 13 Grid 9 Parcel 137
   Election District: 4th
   Current Deed Reference: L. 8854 F. 561
   Tax ID Nos: 04-329724
4. The Boundary shown hereon is based on a field run monumented boundary survey by LDE, Inc. dated 2/2009.
5. Horizontal and Vertical Datums are related to the Maryland State Plane Coordinate System (NAD 83) as projected from Howard County Control Stations Nos. 13BM1 & 13EM2.
6. The lot shown hereon complies with the minimum lot area and ownership width as required by the Maryland Department of the Environment.
7. Existing wells have been shown within 100 feet which may affect this proposal.
8. The existing residential use on this property utilizes existing private water and private sewerage systems. Existing bathrooms within the existing residence shall not be used by the public as part of the Canine Training Conditional Use.
9. Proposed on-site uses;
   A. Existing dwelling, owners residence.
   B. Fenced lawn area, canine training (see Decision & Order for times of operation).
   C. Number of employees: 1
10. Parking tabulation per Section 133 of the Howard County Zoning Regulations
    A. Existing dwelling (2 sp/du), 2 spaces provided in attached garage
    B. Canine training; (15 spaces/per condition 3), 14 (9'x18') regular spaces, 1 (8'x18') handicap space
11. Landscaping for this project is not required since no new lots are being created and the project maintains a 20' min. existing wooded buffer between the projects proposed on-site uses and adjacent properties.
12. The project complies with the requirements of Section 16.1200 of the Howard County Code for Forest Conservation by payment of a Fee-in-lieu of $2,896.74 for 0.07 acres of Afforestation.
13. This project will utilize the Howard Soil Conservation District Standard Erosion Plan for minor earth disturbances between 5,000 square feet and 30,000 square feet since the proposed Limit of Disturbance is 19,000 square feet.
14. Stormwater Management for this project is provided by utilization of privately maintained non-rooftop disconnection (N-2).
15. All dog training equipment is movable. There are no kennels located on the property.
16. This plan is subject to approved Board of Appeals BA 09-030C and as modified by BA 12-027C.
17. This plan is subject to WP12-167 August 10,2012, and WP 14-126 May 27, 2014, the Planning Director denied the request to waive Section 16.155.a.3 which requires a Site Development Plan for construction for conditional uses in residential zoning districts, Denial was based on three (3) reasons.
    A. Development Engineering Division comments of 7/31/12 and 5/2/14
    B. The waiver request is a self created hardship
    C. The waiver request nullifies the intent and purpose of the Subdivision and Land Development Regulations.
18. Any damage caused by the contractor to existing public right-of-way, existing curb and gutter, existing utilities, etc. shall be corrected at the contractors expense.
19. The existing utilities shown hereon are located from field surveys and construction drawings of record. The contractor shall locate existing utilities to his own satisfaction and well in advance of existing features due to contractor's operation shall be repaired immediately at the contractors expense.
20. There may be additional utilities not shown on these plans. The engineer assumes no responsibility for utility locations not shown and it shall be the responsibility of the contractor to verify the locations of all existing utilities within the limits of construction and notify the engineer of any discrepancies, prior to the start of construction.
21. Site Analysis Data:
    a. Total project Area: 5.14 Acres ±
    b. Area of Plan Submission: 0.44 Acres ±
    c. Limit of Disturbed Area 0.44 Acres ±
    d. Present Zoning Designation: RC-DEO
    e. Proposed Site and Structure Uses: Residential / Canine Training
22. This property was investigated for wetlands by Klebasko Environmental LLC on 9/19/12 as part of ECP 13-032.
23. No construction, grading or removal of existing vegetation shall occur within the private forest conservation easements, wetlands or stream bank buffers. However, forest management practices, as defined in the deed of forest conservation are allowed.
24. The contractor shall notify the Department of Public Works/Construction Inspection Division at (410)313-1880 at least 24 hours prior to the start of work.
25. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least forty-eight hours prior to any excavation work. Driveways shall be provided prior to issuance of a use and occupancy permit for any new dwellings to ensure safe access for fire and emergency vehicles per the following minimum requirements:
    a. Width – 12' (16' serving more than one residence):
    b. Surface – 6" of compacted crusher run base with tar and chip coating (1-1/2" min.):
    c. Geometry – Max. 15% grade, max. 10% grade change, minimum 45 ft. turning radius:
    d. Structures (culverts / bridges)- capable of supporting 25 gross tons (H25 loading):
    e. Maintenance – sufficient to ensure all weather use.
26. All fill shall be rolled to a minimum degree of compaction of 95% of the dry unit weight as determined by AASHTO T-180.
27. Earthwork quantities shown on this plan are estimated and should not be used for bid purposes. Contractors should perform independent earthwork analysis for bid purposes.
28. Deviations from these plans and specifications without prior written consent of the civil engineer may cause the work to be unacceptable.
29. The dimensioned distances shall govern if scaled and dimensioned distances on this plan are found to be in disagreement.
30. This plan is subject to the amended Fifth Edition of the Subdivision and Land Development Regulations per Council Bill NO. 45-2003 and the Zoning Regulations as amended in August, 2008. Development or construction must comply with setback and buffer regulations in effect at the time of submission of this site development plan.
31. The owner certifies to the best of their knowledge, there are no historic structures or cemeteries located on the property.
32. No grading, removal of vegative cover or trees, paving and new structures shall be permitted within the required wetlands, stream or there buffers, forest conservation easement areas and 100 year floodplain.
33. This plan is subject to WP-15-065. On December 2, 2014, the Planning Director approved the request to waive Section 16.156(g)(2) to extend the 45 day resubmission deadline date, subject to the following conditions:
    1. The active status of SDP-14-088 is hereby extended for 45 days from the date of the Waiver Petition Approval Letter to submit the revised plans (on or before January 16, 2015).
    2. Compliance is required for all comments from the letter dated September 26, 2014 from the Department of Planning and Zoning.
34. Existing bathrooms located within the existing residence shall not be used by the public as part of Canine Training Conditional Use.
35. All plan dimensions are to edge of pavement unless otherwise noted.
36. The existing topography shown on this plan is taken from aerial survey with two (2) foot contour intervals and supplemental field run topography within the Limit of Disturbance by LDE, Inc. dated 2/2009.
37 There is no floodplain on this site.
38. There are no wetlands located on this site (see note 22).
39. No traffic study is required for this project.



VICINITY MAP

1" = 2000'

LEGEND: (FOR ALL SHEETS)

MINOR CONTOUR- (2' INTERVAL)	
MAJOR CONTOUR- (10' INTERVAL)	350
PROP. CONTOURS	858 / 860
EXISTING TREELINE / EXISTING TREELINE (TO REMAIN)	
PROP. SPOT ELEVATION	+ 85²
LIMIT OF DISTURBANCE	
EXISTING ROAD PAVEMENT	
PRIVATE FOREST CONSERVATION EASEMENT	
SILT FENCE	—SF—SF—SF—
USDA SOILS LINE	MaC / GmB
NON TIDAL WETLAND LIMIT	—W—W—
25' WETLAND BUFFER	—WB—WB—WB—
STEEP SLOPES >15%	
PROPOSED PAVING	
PRIVATE FOREST CONSERVATION EASEMENT	—FCE—FCE—

SCHEDULE A
PERIMETER LANDSCAPE EDGE

Category	Adjacent to Roadways	Adjacent to Perimeter Properties
Landscape Type		A
Linear Feet of Roadway Frontage/Perimeter		1168 LF
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)		YES 1168 LF
Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)		—
Number of Plants Required Shade Trees Evergreen Trees Shrubs		0
Number of Plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution) (Describe plant substitution credits below if needed)		0

Comments CREDIT FOR RETENTION OF EXISTING VEGETATION ON ALL PERIMETERS OF CONDITIONAL USE

GRAPHIC SCALE

50 0 25 50 100 300

(IN FEET)
1 inch = 50 ft.

STORMWATER MANAGEMENT SUMMARY TABLE

RECEIVING AREA	PRACTICE	LOCATION	AREA TREATED	VOLUME (ESDv)
1	NON-ROOFTOP DISCONNECTION (N-2)	SW DRIVEWAY	7000 SF	554 CF
2	NON-ROOFTOP DISCONNECTION (N-2)	NW DRIVEWAY	5400 SF	427 CF
3	NON-ROOFTOP DISCONNECTION (N-2)	PARKING AREA	6600 SF	523 CF
		TOTAL	19,000 SF	1504 CF
			ESDv REQ'D =	1504 CF

SOILS LEGEND:

GgA - Glenelg Loam, 0 to 3 percent slopes B
GgB - Glenelg Loam, 3 to 8 percent slopes B
GgC - Glenelg Loam, 8 to 15 percent slopes B
GmB - Glenville Silt Loam, 3 to 8 percent slopes C

MAINTENANCE CRITERIA FOR DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)

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.

STORMWATER MANAGEMENT PRACTICE	
3101 FLORENCE ROAD	DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2)

SHEET INDEX	
NO.	TITLE
1	Site Development Plan
2	FOREST STAND DELINEATION
3	Construction, Sediment Control Notes & Details

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO: 19184, EXPIRATION DATE: 6/30/15."

SIGNED BRUCE D. BURTON DATE 6/5/15

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7.27.15

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8.12-15

PLANNING DIRECTOR — DATE 8-12-15

Approved for Private Water and Private Sewerage
Howard County Health Department

Howard County Health Officer — Date 8/6/2015

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 6/25/15

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF ENGINEER — DATE 6/5/15

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

SIGNATURE OF DEVELOPER — DATE 6-5-15

STATE OF MARYLAND — BRUCE DAVID BURTON — PROFESSIONAL ENGINEER

REVISIONS		
No.	Date	Description

ADDRESS CHART	
Lot No.	Street Address
PARCEL 137	3101 FLORENCE ROAD

Subdivision Name:	Section	Lot No.
JENSON PROPERTY	--	PARCEL 137

Plat Ref.	Grid No.	Zoning	Tax Map No.	Election District	Census Tract
L.8854 F.561	9	RC-DEO	13	4th	604002

LDE Inc.
Engineers • Surveyors • Planners
Historic Carriage House • 7520 Main Street • Suite 203 • Sykesville, Maryland • 21784
(410)795-6391 • (410)795-6392 • FAX(410)795-9540 • www.Landsurveyormd.com

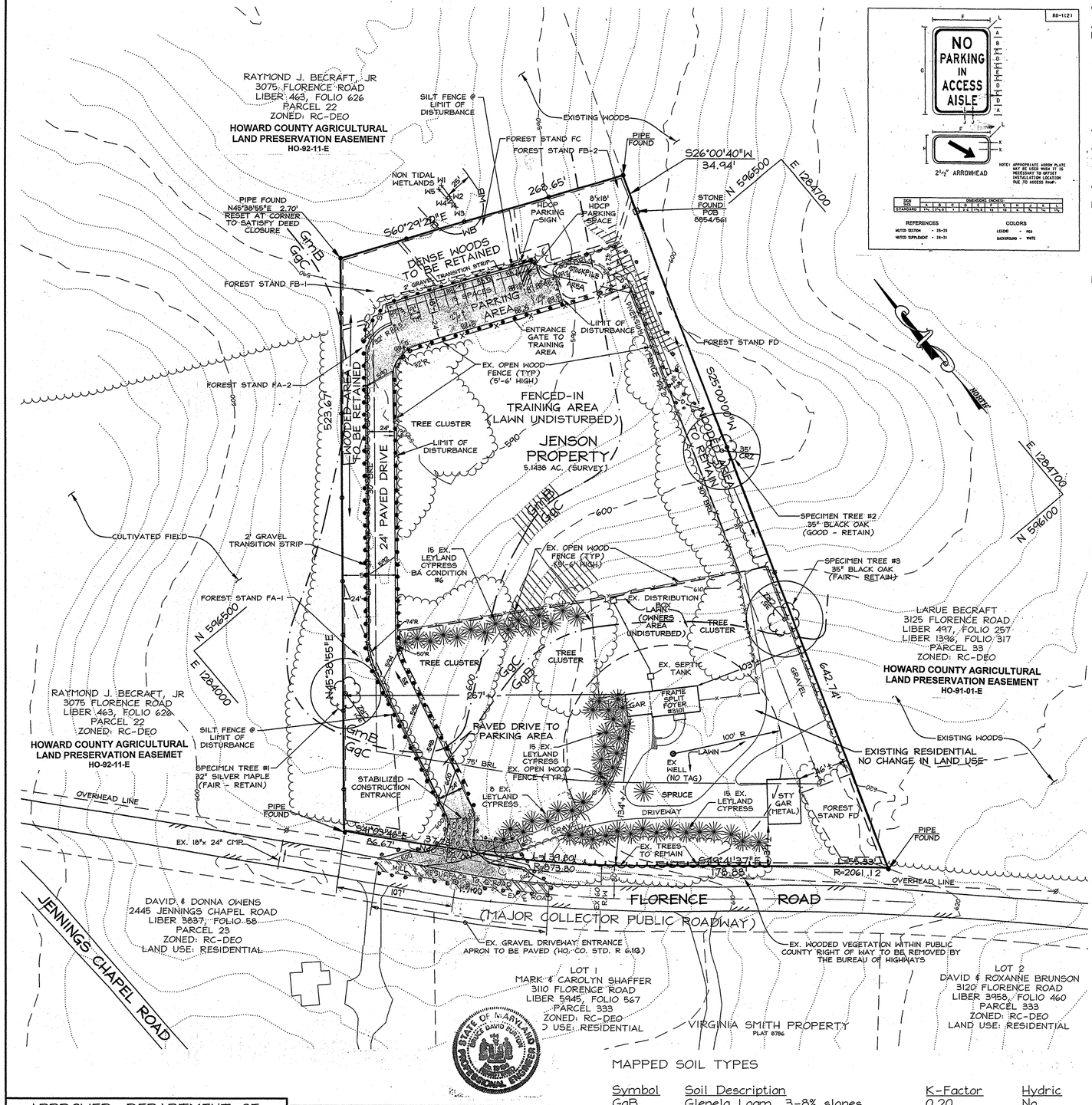
DESIGNED: BDB
DRAWN: LDE
CHECKED: BDB
DATE: 6/2015

Site Development Plan
ARROWWOOD SHEPHERDS, INC.
#3101 FLORENCE ROAD
JENSON PROPERTY
L.8854 / F.561
TAX MAP 13 GRID 9 PARCEL 137
4TH ELECTION DISTRICT HOWARD COUNTY MD
Previous Submittals: BA 09-030C, WP 12-167, BA 12-027C

OWNER: Wesley L. & Rebecca M. Jenson
3101 Florence Road
Woodbine, MD 21797-7832
410-804-2714

SCALE: 1"=50'
DRAWING: 1 of 3
JOB NO. 09-200.07
FILE NO.

SDP 14-088

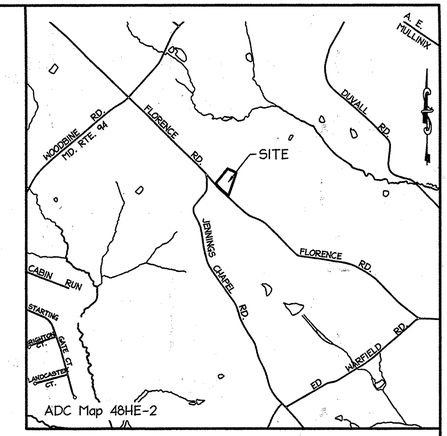


GENERAL NOTES

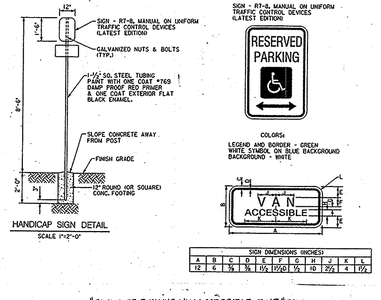
a. Total Site Area: 5.14 Acre
b. Total Forest Area: 0.90 Acre
Stand FA 0.30 Acre
Sub-Stand FA-1 0.23 Acre
Sub-Stand FA-2 0.07 Acre
Stand FB 0.25 Acre
Sub-Stand FB-1 0.11 Acre
Sub-Stand FB-2 0.14 Acre
Stand FC 0.12 Acre
Stand FD 0.23 Acre
c. Total Floodplain Area: 0.00 Acre
Forested Floodplain Area: 0.00 Acre
d. No rare, threatened, or endangered species are known to exist on the property.
e. No known historic structures are located on the property.
f. Forest stand delineation field work conducted by Kenneth R. Wallis of Klebasko Environmental, LLC on September 17, 2012.
g. Three (3) specimen trees exist on the property and their approximate locations are denoted on the plan.
h. A formal wetland delineation in accordance with the 1987 Corps of Engineers' Wetland Delineation Manual and the Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Peidmont Region was performed by Kenneth R. Wallis of Klebasko Environmental, LLC on September 19, 2012. Although no jurisdictional waters of the U.S., including non-tidal wetlands, exist on the property. Non-tidal wetlands were identified just to the northwest of the property. The field located limits of the non-tidal wetlands are shown on the Forest Stand Delineation Plan.
i. Watershed designation: Upper Patuxent 02131104

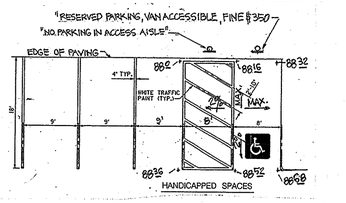
SPECIMEN TREE LIST

ID	Common Name	Species Name	DBH (inches)	Condition
1	silver maple	Acer saccharinum	32	Fair - dieback
2	black oak	Quercus velutina	35	Good
3	black oak	Quercus velutina	35	Fair - broken limbs



VICINITY MAP
1" = 2000'





LEGEND

MINOR CONTOUR- (2' INTERVAL)
MAJOR CONTOUR- (10' INTERVAL)
PROP. CONTOURS
EXISTING TREELINE
EXISTING TREELINE (TO REMAIN)
PROP. SPOT ELEVATION + 852
LIMIT OF DISTURBANCE
EXISTING ROAD PAVEMENT
SILT FENCE SF SF SF
USDA SOILS LINE MaC
NON TIDAL WETLAND LIMIT GmB
25' WETLAND BUFFER WB WB WB
STEEP SLOPES >15%
PROPOSED PAVING

GRAPHIC SCALE
50 0 25 50 100 300
(IN FEET)
1 inch = 50 ft.

FOREST CONSERVATION WORKSHEET
VERSION 1.0
(Enter in Yellow Cells)

NET TRACT AREA:

A. Total tract area	=	0.44
B. Area within 100 year floodplain	=	0.00
C. Area to remain in agricultural production	=	0.00
D. Net tract area	=	0.44

LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)

Input the number "1" under the appropriate land use zoning, and limit to only one entry.

ARA	MDR	IDA	HDR	MPD	CIA
0	0	1	0	0	0

E. Afforestation Threshold	15% x D =		0.07
F. Conservation Threshold	20% x D =		0.09

EXISTING FOREST COVER:

G. Existing forest cover (excluding floodplain)	=	0.00
H. Area of forest above afforestaion threshold	=	0.00
I. Area of forest above conservation threshold	=	0.00

BREAK EVEN POINT:

J. Forest retention above threshold with no mitigation	=	0.00
K. Clearing permitted without mitigation	=	0.00

PROPOSED FOREST CLEARING:

L. Total area of forest to be cleared	=	0.00
M. Total area of forest to be retained	=	0.00

PLANTING REQUIREMENTS:

N. Reforestation for clearing above conservation threshold	=	0.00
P. Reforestation for clearing below conservation threshold	=	0.00
Q. Credit for retention above conservation threshold	=	0.00
R. Total reforestation required	=	0.00
S. Total afforestation required	=	0.07
T. Total reforestation and afforestation required	=	0.07

The project complies with the requirements of Section 16.1200 of the Howard County Code for Forest Conservation by payment of a Fee-in-lieu of $2,896.74 for 0.07 acres of Afforestation.

MAPPED SOIL TYPES

Symbol	Soil Description	K-Factor	Hydric
GgB	Glenelg Loam, 3-8% slopes	0.20	No
GgC	Glenelg Loam, 8-15% slopes	0.20	No
GmB	Glenville Silt Loam, 3-8% slopes	0.37	Partially

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7-27-15
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8-12-15
PLANNING DIRECTOR — DATE 8-12-15

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT 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.

SIGNATURE OF ENGINEER: BRUCE D. BURTON — DATE 6/5/15
BRUCE D. BURTON, P.E. 19184

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19184, EXPIRATION DATE: 6/30/15.

SIGNED: BRUCE D. BURTON — DATE 6/5/15
BRUCE D. BURTON

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

SIGNATURE OF DEVELOPER: WESLEY JENSON — DATE 6-5-15

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 6/25/15

Klebasko Environmental, LLC
8373 Piney Orchard Parkway, Suite 207
Odenton, Maryland 21113
Phone: (410) 672-5990
Fax: (410) 672-5593

Plan prepared by: 10-2-12
Kenneth R. Wallis
Qualified Professional
CoMar 08.19.06.01

LDE Inc.
Engineers • Surveyors • Planners
Historic Carriage House • 7520 Main Street • Suite 203 • Sykesville, Maryland • 21784
(410)795-6391 • (410)795-6392 • FAX(410)795-9540 • www.Landsurveyormd.com

DESIGNED: BDB	FOREST STAND DELINEATION PLAN ARROWWOOD SHEPHERDS, INC. #3101 FLORENCE ROAD JENSON PROPERTY L.8854 / F.561 TAX MAP 13 GRID 9 PARCEL 137 4TH ELECTION DISTRICT HOWARD COUNTY MD Previous Submittals: BA 09-030C, WP 12-167, BA 12-027C	SCALE: 1"=50'
DRAWN: LDE		DRAWING: 2 of 3
CHECKED: BDB		JOB NO.: 09-200.07
DATE: 6/2015	OWNER/PETITIONER: Wesley L. & Rebecca M. Jenson, 3101 Florence Road, Woodbine, MD 21797-7832, 410-804-2714	FILE NO.

SDP 14-088

F:\09-200-07\dwg\09-200-07 FOREST CON JJ.dwg, 4/10/2014 2:35:12 PM, tri

FOR

SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

A. Soil Preparation

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

B. Topsoiling

1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
   a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
   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.
4. Areas having slopes steeper than 2:1 require special consideration and design.
5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
   a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
   b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
   c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
6. Topsoil Application
   a. Erosion and sediment control practices must be maintained when applying topsoil.
   b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
   c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)

1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

PERMANENT SEEDING NOTES

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

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

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

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

For sites of 5 ac. or less of disturbance, the following fertilizer and lime rates shall apply.
Fertilizer shall consist of a mixture of 10-20-20 and be applied at the following rates:
N = 45 lb. per acre (1 lb. per 1000 sq.ft.) P2O5 = 90 lb. per acre (2 lb. per 1000 sq.ft.)
K2O = 90 lb. per acre (2 lb. per 1000 sq.ft.)
Lime shall be applied at a rate of 2 tons per acre (90 lb. per 1000 sq.ft.)

Seed type, turfgrass or sod application shall meet the requirements in section B-4-5. Seed tags shall be made available to the inspector to verify the type and application rate of seed used.
Mulch type and its application will meet the requirements in section B-4-3 a, b and c, and will be applied along with seed or immediately after seeding

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

Hardiness Zone (from Figure B.3): 6b Seed Mixture (from Table B.1): 7					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P2Os	K20	
7	Creeping Red Fescue (Fescue Rubar Var. Rubar)	60	3/1-5/15	1/4-1/2 in	45lbs/ac (1.0 lb/ 1000 sf)	90lbs/ac (2 lb/ 1000 sf)	90lbs/ac (90 lb/ 1000 sf)	2 tons/ac (90 lb/1000 sf)
	Kentucky Bluegrass (poa Pratensis)	15	8/1-10/15	1/4-1/2 in				

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[signature] 7.27.15
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

[signature] 8-12-15
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

[signature] 8-12-15
PLANNING DIRECTOR — DATE

F:\13-002\dwg\SDP\13 002 SEC NOTES (3).dwg, 6/25/2014 2:13:06 PM, 1:1

HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

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

Total Area of Site	5.14	Acres
Area Disturbed	0.44	Acres
Area to be roofed or paved	0.44	Acres
Area to be vegetatively stabilized	-	Acres
Total Cut	130	Cu. Yds.
Total Fill	130	Cu. Yds.

7. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
8. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
9. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
10. Trenches for the construction of utilities is limited to three pipe lengths or that which can be back-filled and stabilized by the end of each workday, whichever is shorter.
11. Any changes or revisions to the sequence of construction must be reviewed and approved by the plan approval authority prior to proceeding with construction.
12. A project is to be sequenced so that grading activities begin on one grading unit (maximum acreage of 20 ac. per grading unit) at a time. Work may proceed to a subsequent grading unit when at least 50 percent of the disturbed area in the preceeding grading unit has been stabilized and approved by the enforcement authority. Unless otherwise specified and approved by the approval authority, no more than 30 acres cumulatively may be disturbed at a given time.

TEMPORARY SEEDING NOTES

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

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

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

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

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

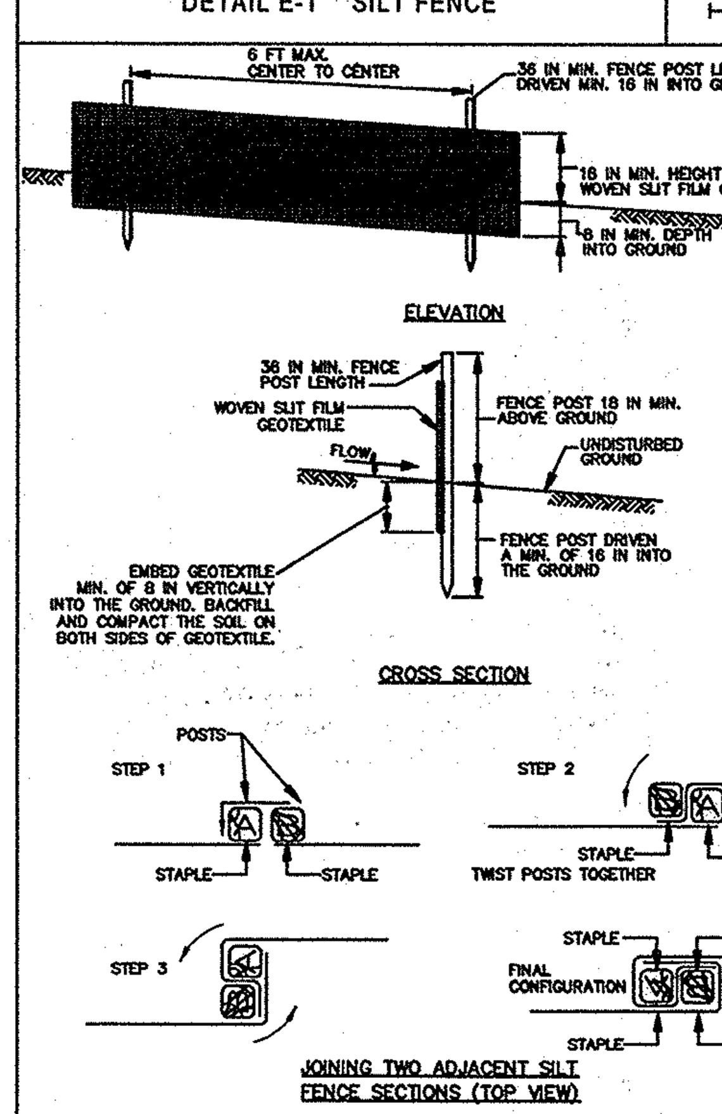
Seeding mixtures shall be selected from or will be equal to those on Table B.1 (page B.20).

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

Hardiness Zone (from Figure B.3): 6b Seed Mixture (from Table B.1):____					Fertilizer Rate (10-20-20)	Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
	Annual Ryegrass (lolium Pepenne ssp. multiflorum)	40	3/1 - 5/15 8/1 - 10/15	0.5"	436 lb/ac (10 lb/1000 sf)	2 tons/ac (90 lb/1000 sf)

DETAIL E-1 SILT FENCE

STANDARD SYMBOL —SF—



CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± ⅙ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

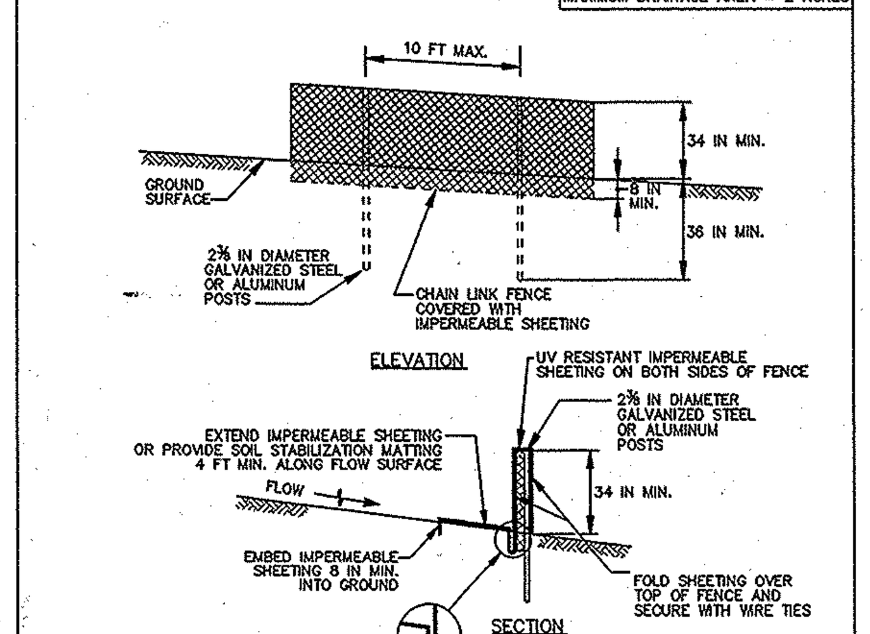
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[signature] 6/25/15
HOWARD SOIL CONSERVATION DISTRICT — DATE

DETAIL C-9 DIVERSION FENCE

STANDARD SYMBOL —DF—

MAXIMUM DRAINAGE AREA = 2 ACRES



CONSTRUCTION SPECIFICATIONS

1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

C-9 STANDARDS AND SPECIFICATIONS

FOR

DIVERSION FENCE

Definition

A temporary barrier of impermeable sheeting over chain link fence located in such a manner as to direct water to a desired location.

Purpose

To direct sediment-laden runoff to a sediment trapping practice, or to intercept and divert clear water away from disturbed areas.

Conditions Where Practice Applies

Constructed along the limit of disturbance (LOD) or across disturbed areas, a diversion fence is used when there is insufficient space to construct an earth dike, temporary swale, or perimeter dike swale.

Appropriate uses of diversion fences include the following:

1. To divert sediment-laden runoff from a disturbed area to a sediment trapping practice.
2. To segment drainage areas for reducing acreage to sediment control practices.
3. To divert clear water from an undisturbed area to a stable outlet at non-erosive velocities.

Design Criteria

1. The maximum slope along fence is 10 percent.
2. The maximum drainage area is 2 acres.
3. For drainage areas larger than 2 acres, an engineering design may be used based on the 2-year frequency storm with NRCS methodologies (i.e., TR-55, TR-20), assuming the worst soil cover conditions to prevail in the contributing drainage area over the life of the diversion fence.
4. Maintain positive drainage along the entire length of the diversion fence. Spot elevations must be provided for diversion fence having longitudinal slopes flatter than 1%.
5. Discharge velocities from diversion fence must be non-erosive.
6. Where diversion fence is used to convey runoff from disturbed areas, the discharge must be to a sediment control practice suitable for concentrated flow. Silt fence and super silt fence are unacceptable for receiving discharges from diversion fence.
7. Where diversion fence is used to convey clear water runoff, the discharge must be to an undisturbed, stable area at a non-erosive velocity (4 fps); otherwise, provide outlet protection.
8. When diversion fence is used in conjunction with a sediment trapping device, sequence construction so that the diversion fence installation follows completion of the sediment trapping device(s).

Maintenance

The flow surface along the diversion fence and at the point of discharge must be kept free of erosion. Accumulated sediment and debris must be removed and positive drainage maintained. Impermeable sheeting must be replaced if torn. If undermining occurs, reinstall fence.

B-4-8 STANDARDS AND SPECIFICATIONS

FOR

STOCKPILE AREA

Definition

A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria

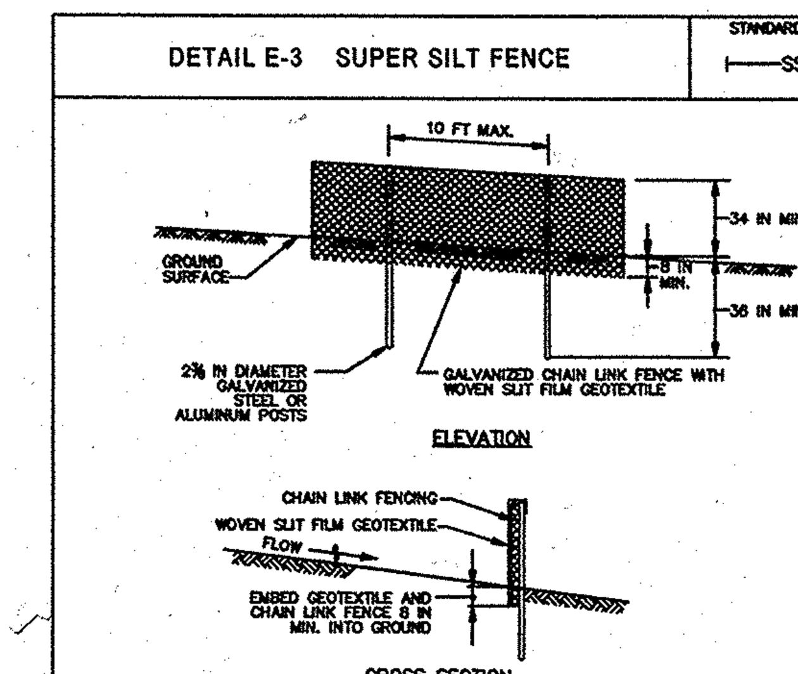
1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access the stockpile area from the upgrade side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL —SSF—



CONSTRUCTION SPECIFICATIONS

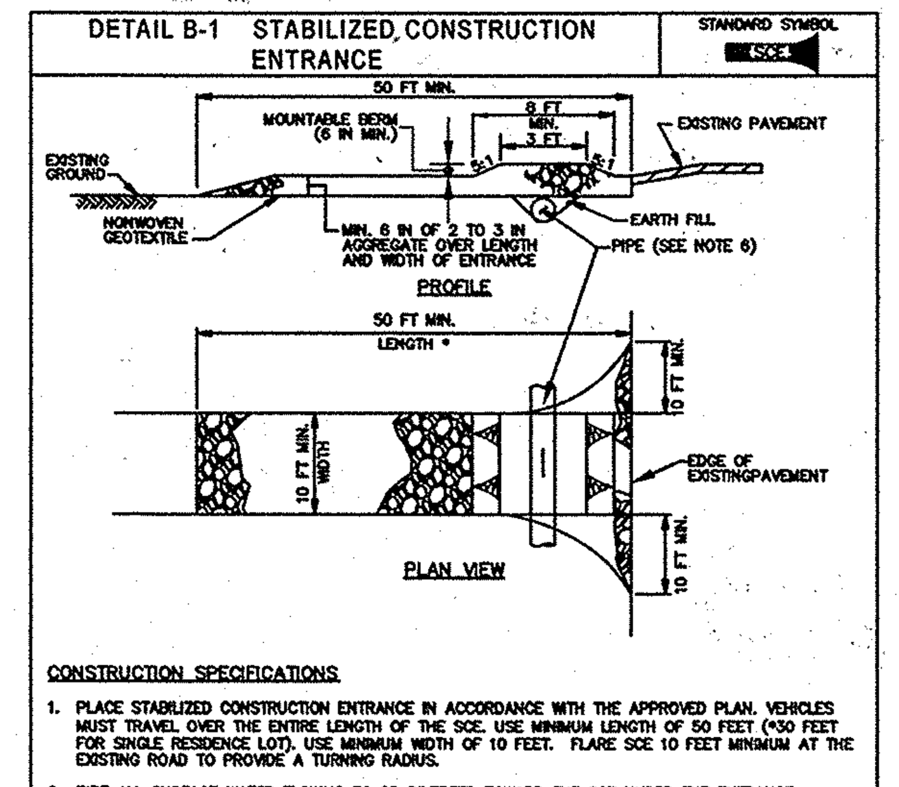
1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL SCE



CONSTRUCTION SPECIFICATIONS

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

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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

ENGINEER'S CERTIFICATE

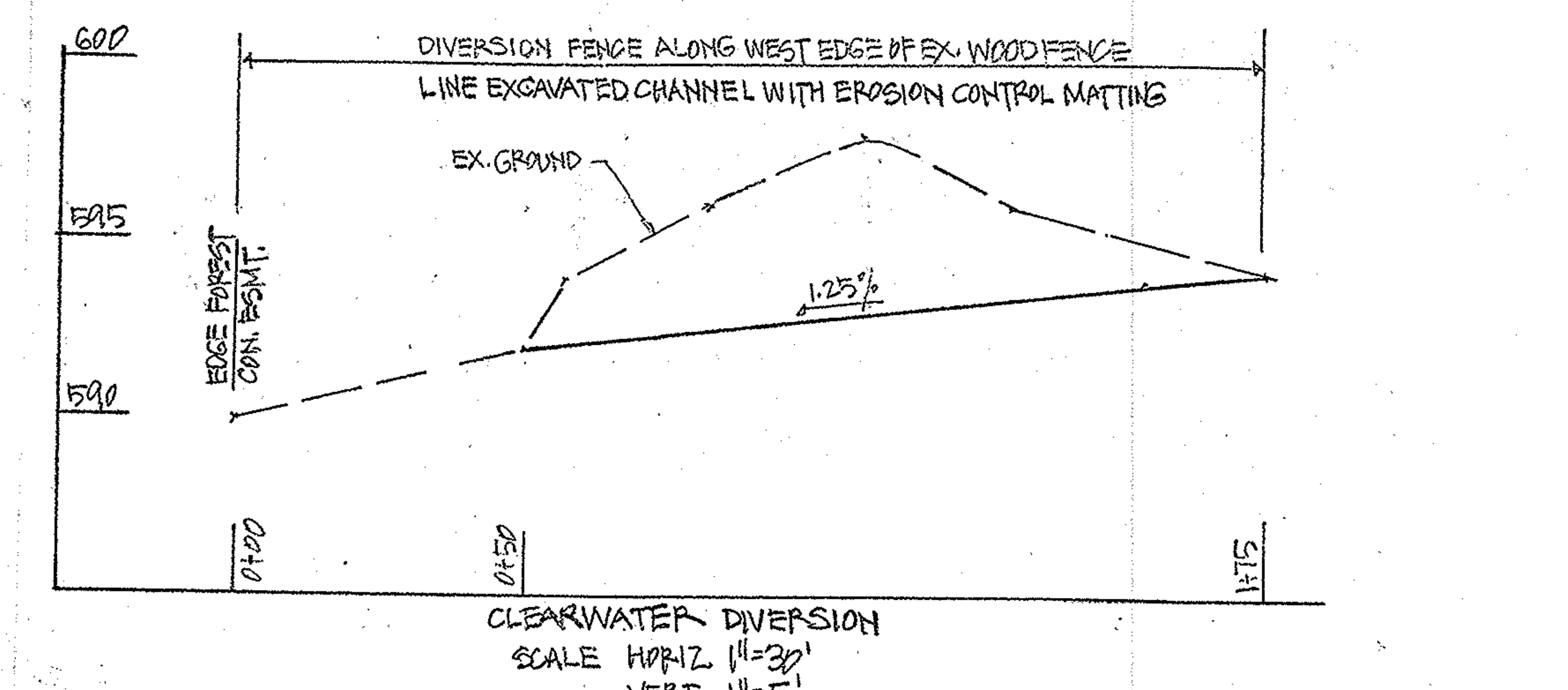
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[signature: Bruce D. Burton] 6/5/15
SIGNATURE OF ENGINEER — DATE

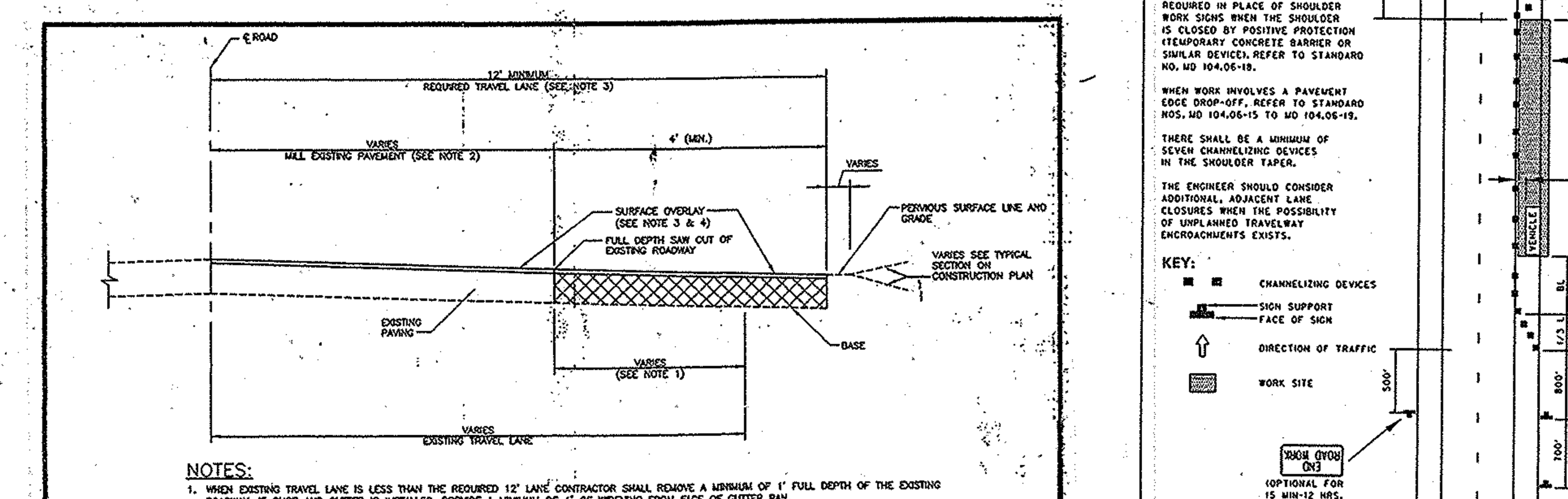
DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

[signature] 6-5-15
SIGNATURE OF DEVELOPER — DATE



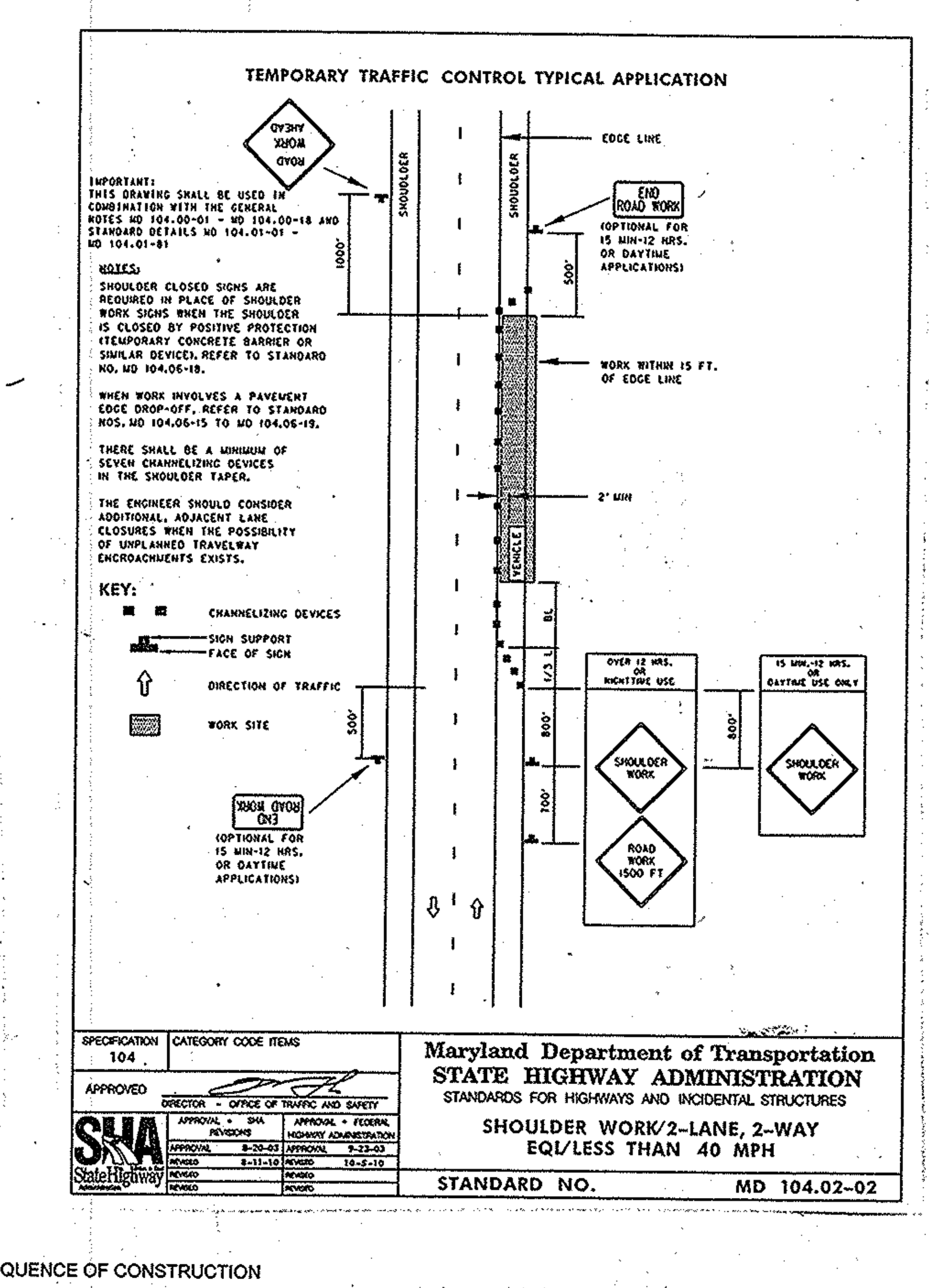
CLEARWATER DIVERSION
SCALE HORIZ. 1"=30'
VERT 1"=5'

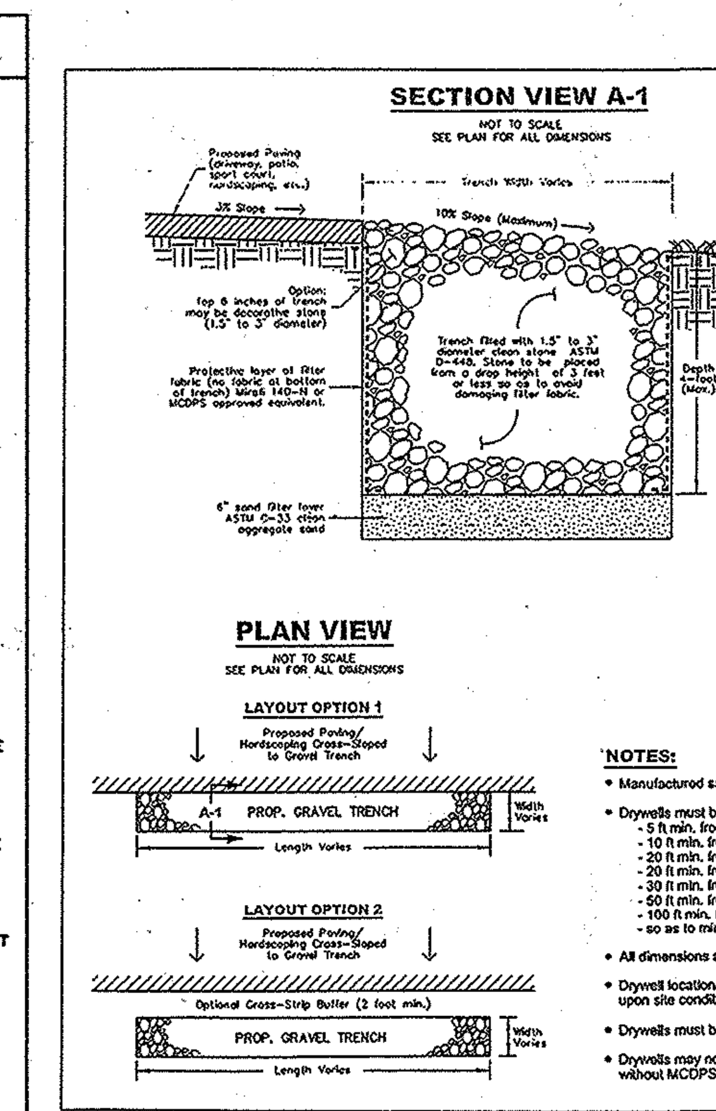


NOTES:

1. WHEN EXISTING TRAVEL LANE IS LESS THAN THE REQUIRED 12' LANE CONTRACTOR SHALL REMOVE A MINIMUM OF 1' FULL DEPTH OF THE EXISTING ROADWAY. IF CURB AND GUTTER IS INSTALLED, PROVIDE A MINIMUM OF 4' OF WIDENING FROM FACE OF GUTTER PAN.
2. THE EXISTING PAVEMENT TO BE RESURFACED SHALL BE MILLED AT DEPTH OF 1 1/2" (MINIMUM).
3. THE RESURFACING SHALL BE PLACED TO THE CENTERLINE OF THE ROADWAY.
4. RESURFACING COURSE TO BE EQUAL TO THE SURFACE COURSE OF THE TYPICAL PAVEMENT SECTION.

Revised / Revised 5/7/2007 / Approved	Howard County, Maryland Department of Public Works — Approved: [signature] Chief, Bureau of Engineering	Existing Roadway; Widening Strip	Detail R-1.08





GRAVEL TRANSITION STRIP
NOT TO SCALE

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO: 19184, EXPIRATION DATE: 6/30/15."

SIGNED [signature] DATE 6/5/15
BRUCE D. BURTON

SEQUENCE OF CONSTRUCTION

1. Obtain grading permit	1 Day
2. Notify the Howard County Department of Public Works / Construction Inspection Division at 410-313-1880 at least 24 hours prior to the start of work.	1 Day
3. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work being done.	1 Day
4. Install stabilized construction entrance and silt fence in accordance with the approved grading and sediment control plan. Install Clearwater diversion along east side of property.	5 Days
5. Obtain permission from the sediment control inspector to proceed.	1 Day
6. Rough grade for proposed driveway and parking area.	5 Days
7. The disturbed areas of the site shall be stabilized at the end of each work day in accordance with the temporary seeding notes on this sheet.	
8. Fine grade driveway and parking area. Install base course	5 Days
9. Immediately stabilize all remaining disturbed areas in accordance with the permanent seeding notes on this sheet.	2 Days
10. With the permission of the sediment control inspector, remove the remaining silt fence and stabilized construction entrance.	2 Days
11. Install surface paving for new private driveway and parking area.	5 Days
12. With the permission of the sediment control inspector, stabilize any remaining disturbed areas in accordance with the permanent seeding notes on this sheet.	2 Days
TOTAL ESTIMATED CONSTRUCTION TIME:	30 Days

NOTE: Either temporary or permanent stabilization is to be provided at the direction of the Sediment Control Inspector or at the minimum time frames required by the 2011 Maryland Standards and Specifications whichever is more restrictive.

B-4-3 STANDARDS AND SPECIFICATIONS

FOR

SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

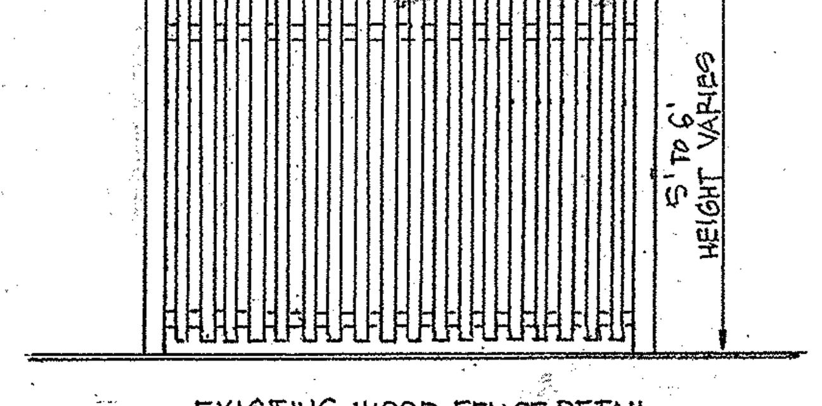
Criteria

A. Seeding

1. Specifications
   a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
   b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
   c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
   d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.
2. Application
   a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
      i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
   b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
      i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
      ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
   c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
      i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P_2O_5 (phosphorous), 200 pounds per acre; K_2O (potassium), 200 pounds per acre.
      ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
      iii. Mix seed and fertilizer on site and seed immediately and without interruption.
      iv. When hydroseeding do not incorporate seed into the soil.

B. Mulching

1. Mulch Materials (in order of preference)
   a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
   b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
      i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
      ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
      iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
      iv. WCFM material must not contain elements or compounds at concentration levels that will be phyto-toxic.
      v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.
2. Application
   a. Apply mulch to all seeded areas immediately after seeding.
   b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
   c. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
3. Anchoring
   a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
      i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
      ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
      iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
      iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.



EXISTING WOOD FENCE DETAIL
NOT TO SCALE

REVISIONS

No.	Date	Description

LDE Inc.
Engineers • Surveyors • Planners
Historic Carriage House • 7520 Main Street • Suite 203 • Sykesville, Maryland • 21784
(410)795-6391 • (410)795-6392 • FAX(410)795-9540 • www.Landsurveyormd.com

DESIGNED BDB	CONSTRUCTION, SEDIMENT CONTROL & LANDSCAPING NOTES & DETAILS	SCALE AS NOTED
DRAWN LDE	ARROWWOOD SHEPHERDS, INC. #3101 FLORENCE ROAD JENSON PROPERTY L.8854 / F.561	DRAWING 3 of 3
CHECKED BDB	TAX MAP 13 GRID 9 PARCEL 137 4TH ELECTION DISTRICT HOWARD COUNTY MD Previous Submittals: BA 09-030C, WP 12-167, BA 12-027C	JOB NO. 09-200.07
DATE 6/2015	OWNER. Wesley L. & Rebecca M. Jenson 3101 Florence Road Woodbine, MD 21797-7832 410-804-2714	FILE NO.

SDP 14-088