

GENERAL NOTES

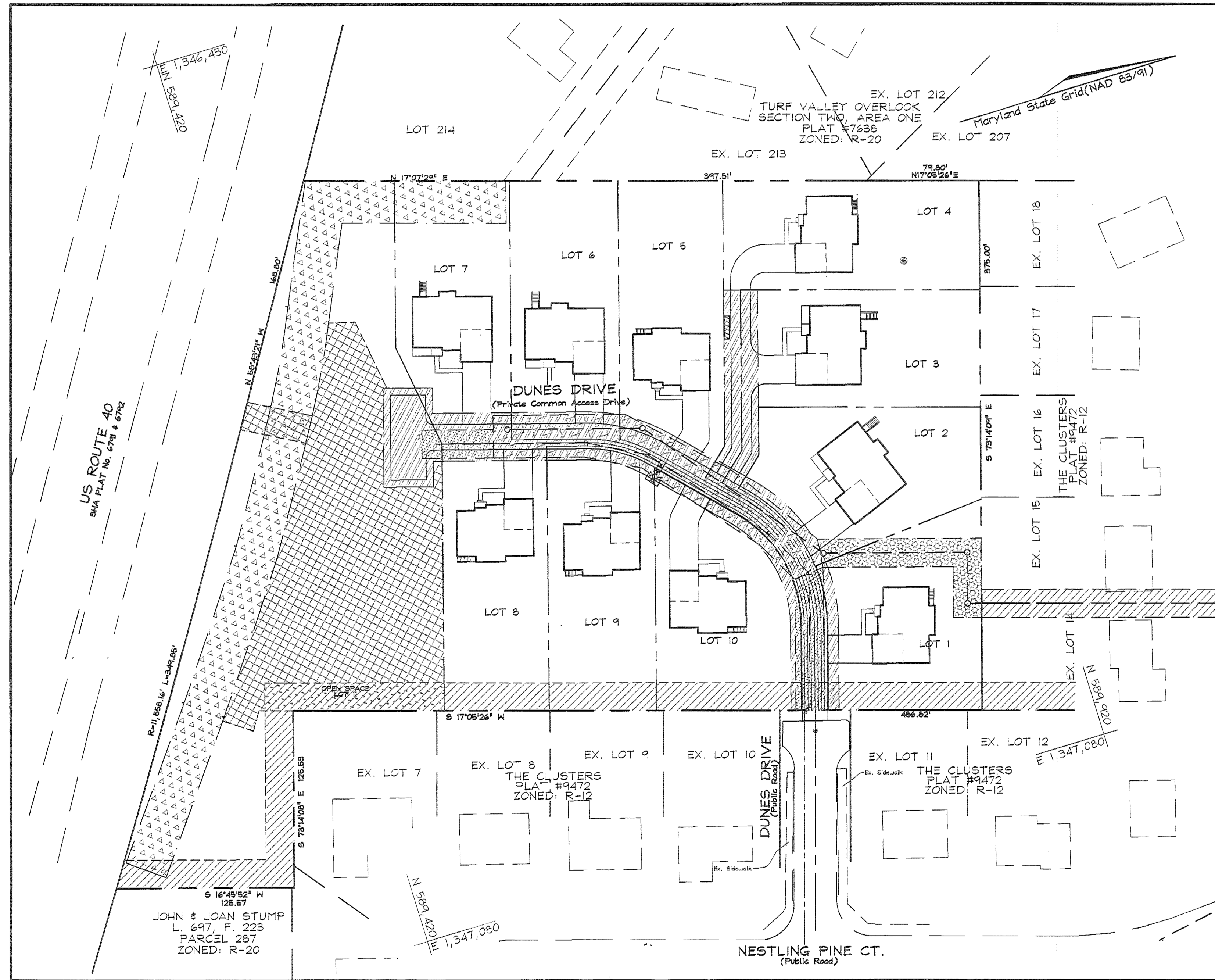
- Subject property Zoned "R-20" per 02/02/04 Comprehensive Zoning Plan and per the "Comp Lite" Zoning Regulation Amendments effective 7/28/06.
- Public water and sewer to be utilized.
- Howard County Soils map no. 15.
- Total area of site subject to subdivision: 4.842 ac.±
- Area of proposed public r/w: 0.000 ac.±
- Number of proposed buildable lots: 10
Area of proposed buildable lots: 3.388 ac.±
- Number of proposed Open Space lots: 1
Area of proposed Open Space Lots: 1.454 ac.±
- Open space requirements:
4.842 acres x 30% (14,000sq.ft. minimum lot size) = 1.453 ac.±
Open space provided: 1.454 ac.± (Lot 11)
Open space Lot 11, including noise wall and SWM facility, will be owned and maintained by H.O.A.
- The project is in conformance with the latest Howard County Standards unless Waivers have been approved.
- In accordance with Section 128 of the Howard County Zoning Regulations, bay windows, chimneys, or exterior stairways not more than 16 feet in width may project not more than 10 feet into the front or rear setback.
- No grading, removal of vegetative cover or trees, paving and new structures shall be permitted within the required wetlands, stream(s) or their buffers, forest conservation easement areas and 100 year floodplain.
- The 65dBA noise contour line drawn on this development plan is advisory as required by the Howard County Design Manual, Chapter 5, revised February, 1992, and cannot be considered to exactly locate the 65 dBA noise exposure. The 65 dBA noise line was established by Howard County to alert developers, builders and future residents that areas beyond this threshold may exceed generally accepted noise levels established by the U.S. Department of Housing and Urban Development. Approved under SP-02-06.
- There are no floodplains, historic structures or cemeteries on-site.
- Field Run Boundary Survey prepared by C.B. Miller and Associates in June, 2001.
- The existing topography based on a field run Topographic Survey prepared by C.B. Miller & Associates, Inc., in June 2001, with a 2 foot contour interval and F-07-060 Final Plans.
- The coordinates shown hereon are based on Howard County Geodetic Controls which is based upon the Maryland State Plane Coordinate System, Howard County Monuments 161A and 161B were used for this project. (See Vicinity Map)
- Existing utilities are based on existing construction drawings, Contract #24-1994-D, Existing Dunes Drive road drawing F-90-93.
- A.P.F.O. Traffic Study prepared by Street Traffic Studies Ltd. in February, 2002 and approved under SP-02-06.
- Wetlands Delineation and Report and Forest Stand Delineation and Report prepared by Exploration Research Inc. and approved under SP-02-06.
- The noise study for this project was prepared by Wilson T. Ballard Co. in July, 2002, and approved under SP-02-06.
- All proposed open channel ditches shall be lined with erosion control matting (see plan).
- Vehicular access is proposed along Dunes Drive and access is restricted along US Route 40.
- This property is subject to the 5th edition of the Howard County Subdivision and Land Development Regulations.
- The lots shown hereon comply with the minimum ownership width and lot area as required by the Maryland State Department of the Environment.
- Landscaping for this subdivision is provided in accordance with a Landscape Plan included with the road construction drawings under Howard County Plan F-07-060, in accordance with Section 16.124 of the Howard County Code and the Landscape Manual with the exception of lot 10, which have been addressed within this plan as perimeter one. Landscape survey for this lot is based on the required landscaping of 2 shade trees @ \$300.00 and 3 evergreen trees @ \$150.00 each, in the amount of \$1,050.00, which will be posted with the Grading Permit for lot 10.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual under plan F-07-060.
- Previous Howard County file numbers: SP-02-06, WP-03-32, F90-93 and F-07-060. Contract #24-4435-D.
- Waiver petition WP-03-32 approved on November 1, 2002 granted a waiver from sections 16.120(b)(4)(iv) and 16.121(e)(1) to reduce the frontage for access of open space lot 11 and the stormwater management facility from (40) feet to zero (0) feet, subject to recordation of a maintenance agreement for access to lots 1 thru 10 and open space lot 11.
- The Subject Property is located on Howard County ADC map II, Grid D-6.
- Driveway(s) 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 requirements:
a.) Width - 12 feet (14 feet serving more than one residence);
b.) Surface - six (6") inches of compacted crusher run base with tar and chip coating (1-1/2" minimum);
c.) Geometry - Maximum 14% grade, Maximum 10% grade change and 45-foot turning radius;
d.) Structures (culverts/bridges) - capable of supporting 25 gross tons (H25-loading);
e.) Drainage elements - capable of safely passing 100 year flood with no more than 1 foot depth over driveway surface;
f.) Maintenance - sufficient to ensure all weather use.
- For flag or pipestem lots, snow removal and road maintenance are provided to the junction of the flag or pipestem and road right-of-way line and not onto the pipestem lot driveway.
- Water and sewer service to these lots will be granted under the provisions of Section 18.122.B of the Howard County Code.
- Stormwater Management water quality (WQV) is provided through the sand filter within the proposed Pocket Sand Filter Facility. Channel Protection (CPV) is provided through extended detention of the one (1) year storm within the Pocket Sand Filter Facility. The SWM Recharge requirements are met through the grass channel credit using the recharge percent area method. SWM Overland Flood Protection (10 years) and Extreme Flood Volume (100 years) are not required for this site. All Stormwater Management pond ownership and maintenance is the responsibility of the Home Owners Association.
- All existing wells and septic systems shall be properly abandoned according to the Howard County Health Department Regulations.
- The contractor shall notify the following utility companies or agencies at least five(5) working days before starting work shown on these plans:
State Highway Administration 410.531.5533
BGE(contractor services) 410.850.4620
BGE(underground damage control) 410.787.9068
Miss Utility 1.800.257.7777
Colonial Pipeline Company 410.798.1390
Howard County, Dept. of Public Works, Bureau of Utilities 410.313.4900
Howard County Health Department 410.313.2640
- The contractor shall notify Miss Utility at 1-800-257-7777 at least 48 hours prior to any excavation work being done.
- The contractor shall notify the Department of Public Works/Bureau of Engineering Construction Inspection Division at (410) 313-1890 at least five (5) working days prior to the start of work. All fills for public road surfaces require 95% compaction (AASHTO-T-180).
- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications if applicable.
- The Forest Conservation Plan was prepared in accordance with the Howard County Forest Conservation Manual under F-07-060. The net tract area is 4.80 acres, with 0.9 acres of forest. There is no 100-year flood plain, wetlands, streams, steep slopes or associated buffers on site. Clearing below the forest conservation threshold consists of 0.9 acres, creating a 1.0 acre of reforestation obligation. This obligation will be met by offset planting on The E. Alexander Adams and Marian Harless Property, Lot 2, Plat No. 19705, Tax Map 7, Grid 17, Parcel 215. Surety in the amount of \$39,204.00 has been posted as part of the Developer's Agreement for 1.80 ac/78,408 sq. ft.
- See approved F-07-060 for additional mass graded Sediment and Erosion Control design and details.
- Contractor to verify all dimensions in the field and in case of discrepancy contact the engineer.
- All water house connections shall be for inside metering settings.
- REFUSE & RECYCLE COLLECTION FOR THESE LOTS SHALL BE PROVIDED CURBSIDE AS ALLOWED BY RIGHT OF ENTRY AGREEMENT BETWEEN DUNES VISTA, LLC AND HOWARD COUNTY, MARYLAND RECORDED AS LIBER 11720 AT FOLIO 137.

SITE DEVELOPMENT PLANS

DUNES VISTAS

LOTS 1 THRU 10 AND OPEN SPACE LOT 11

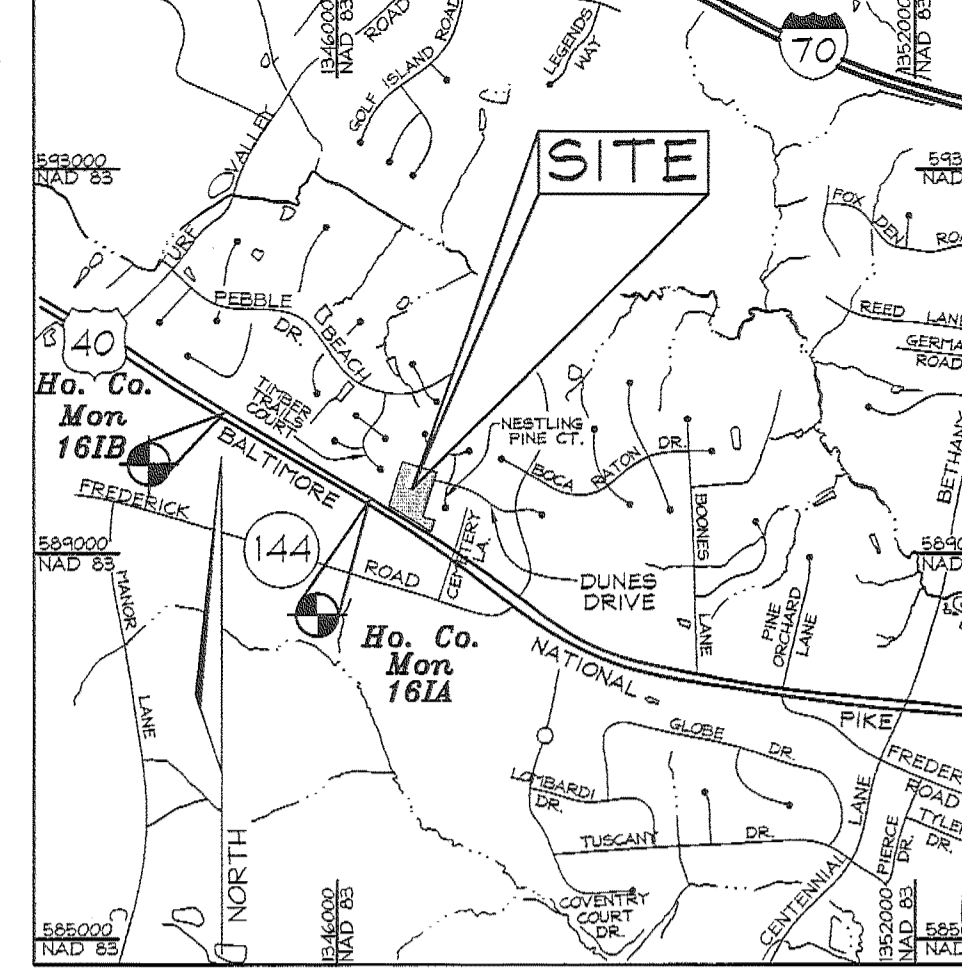
HOWARD COUNTY, MARYLAND



LOCATION MAP
SCALE: 1"=50'

LEGEND

- Existing contours - - - - - 552
- Proposed Elevation - - - - - 362.3
- Existing Spot Elevation - - - - - +82.5A
- Proposed Spot Elevation - - - - - +82.5A
- Direction of Flow - - - - -
- Soils Line - - - - -
- Limit of Disturbance - - - - -
- Existing Trees to Remain - - - - -
- Public Water & Sewer & Utility Easement - - - - -
- Public Sewer & Utility Easement - - - - -
- Public Water & Utility Easement - - - - -
- Private Access, Drainage & Utility Easement - - - - -
- Existing Easement - - - - -
- Private Noise Wall Access, Maintenance, Drainage & Utility Easement - - - - -
- Private SKM, Access, Drainage & Utility Easement - - - - -
- Private SKM Access Management Easement - - - - -
- Street Light - - - - -



VICINITY MAP
SCALE: 1"=2000'
ADC MAP II D6; E6

BENCHMARKS

Howard County Monument 161A	N 589,509.388	E 1,346,343.658	El.: 463.674
Howard County Monument 161B	N 590,475.281	E 1,344,753.967	El.: 470.576

SHEET INDEX

DESCRIPTION	SHEET No.
Cover Sheet	1 of 494
Site Development and Landscaping Plan	2 of 494
Sediment and Erosion Control Plan	3 of 494
Landscape and Sediment and Erosion Control Notes and Details	4 of 494

SITE ANALYSIS DATA CHART

- Total project area: 4.842 Acres
- Limit of disturbed area: 3.210 Acres
- Area of proposed Open Space Lots: 1.454 Acres ±
- Subject property Zoned "R-20" per 02/02/04 Comprehensive Zoning Plan and per the "Comp Lite" Zoning Regulation Amendments effective 7/28/06.
- Proposed uses for site & structures: Single Family Detached Dwellings
- Floor space on each level of building(s) per use: See house templates.
- Building coverage of site: 0.497 Acres or 10.3% of Gross Area.
- DPZ file references: SP-02-06; F-90-93; F-07-060; WP-03-32; 24-4435-D
- Total number of units proposed for this submission: 10

ADDRESS CHART

LOTS	STREET
1	3144 Dunes Drive
2	3148 Dunes Drive
3	3152 Dunes Drive
4	3156 Dunes Drive
5	3160 Dunes Drive
6	3164 Dunes Drive
7	3168 Dunes Drive
8	3172 Dunes Drive
9	3176 Dunes Drive
10	3180 Dunes Drive

DEVELOPER/OWNER

Dunes Vistas LLC
c/o Brian D. Boy
11607 Nestlingford Court
Clerksville, MD 21029
Tel: (410) 792-2565

COVER SHEET

DUNES VISTAS

LOTS 1 THRU 10
SINGLE FAMILY DETACHED
PLAT #19703 - 19704

TAX MAP 16 GRID 24
2ND ELECTION DISTRICT
PARCEL 57
HOWARD COUNTY, MARYLAND

PERMIT INFORMATION CHART

Subdivision Name: Dunes Vistas	Section/Area N/A	Lot/Prcl No. 1-10 / 57
Plot # 19703 & 19704	Grid 24	Zoning R-20
Water Code 407	Tax Map No. 16	Elect. District 2nd
Sewer Code 5992000	Census Tract 6022	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

7/30/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION

8/28/08
CHIEF, DIVISION OF LAND DEVELOPMENT

8/25/08
DIRECTOR

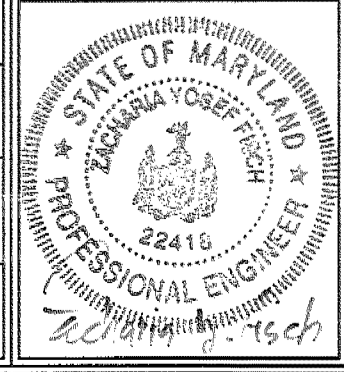
PROFESSIONAL CERTIFICATION

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. #22418, Expiration Date: 07/24/2009.

FOR REVISIONS BY BENCHMARK ENGINEERING INC

PROFESSIONAL CERTIFICATION 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. 22418, EXPIRATION DATE: 7-22-2011

10	9-30-2010	DELET REUSE COLLECTION FROM GEN NOTE 30, AND GEN NOTE 42	BY
NO.	DATE	REVISION	BY



FSH Associates
Engineers Planners Surveyors
6339 Foward Lane, Elkridge, MD 21075
Tel: 410-567-3200 Fax: 410-798-1582
E-mail: info@fshnet.com

DESIGN BY: MT
DRAWN BY: CED/RL
CHECKED BY: ZYF
SCALE: As Shown
DATE: Apr. 28, 2008
W.O. No.: 3503
SHEET No.: 1 OF 4

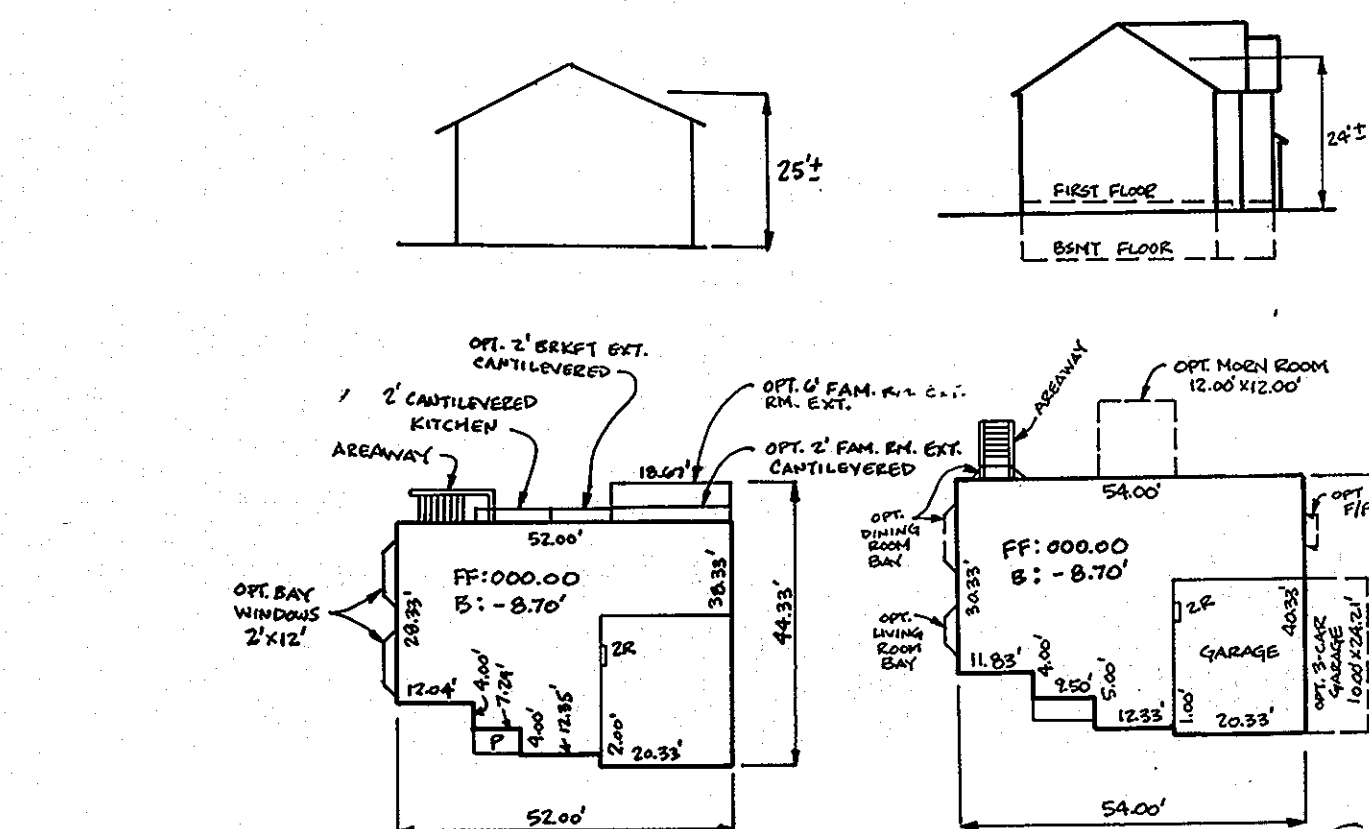
LANDSCAPE SCHEDULE			
KEY QUAN.	BOTANICAL NAME	SIZE	NOTE
AR 2	Acer rubrum, Shade Trees (Shade Trees)	2 1/2'-3' Cal.	B & B
PN 3	Pinus nigra (Evergreen Trees)	6'-8' Ht.	B & B

SCHEDULE A PERIMETER LANDSCAPE EDGE	
CATEGORY	ADJACENT TO ROADWAYS
Perimeter/Frontage Designation	B
Linear Feet of Roadway Frontage/Perimeter	105.21
Credit for Existing Vegetation (Yes, No, Linear Feet)	No
Remaining Perimeter Length	(105.21')
Credit for Wall, Fence or Berm (Yes, No, Linear Feet)	No
Remaining Perimeter Length	
Number of Plants Required	
Shade Trees	150 2
Evergreen Trees	140 3
Number of Plants Provided	
Shade Trees	2
Evergreen Trees	3
Other Trees (2:1 Substitution)	
Shrubs (10:1 Substitution)	
(Descriptive Plant Substitution Credits Below if needed)	

- LANDSCAPE NOTES**
- At the time of installation, all shrubs and other plantings herewith listed and approved for this site, shall be of the proper height requirements in accordance with the Howard County Landscaping Manual. In addition, no substitutions or relocation of required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from this approved Landscape Plan may result in denial or delay in the release of landscape survey until such time as all required materials are planted and/or revisions are made to applicable plans and certificates.
 - The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.
 - Financial surety for the required landscaping will be posted with the grading permit for lot 10 in the amount of \$1,050 (2 shade trees @ \$300.00 and 3 evergreen trees @ \$150.00 each).

LEGEND

- Existing Contour
- Proposed Contour
- Spot Elevation
- Direction of Flow
- Existing Trees per F-07-060
- Proposed Shade Trees
- Proposed Evergreen Trees
- Landscape Perimeter One
- Existing Trees to Remain
- Proposed Bollard
- Public Water & Sewer & Utility Easement
- Private Access Place, Drainage & Utility Easement
- Private Noise Wall Access, Maintenance, Drainage & Utility Easement
- Existing Easement
- Private SHM Access Drainage & Utility Easement
- Public Sewer & Utility Easement
- Public Water & Utility Easement
- Private SHM Access Management Easement
- Proposed Street Light



PROFESSIONAL CERTIFICATION
 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. #22418, Expiration Date: 07/24/2009.

DEVELOPER'S BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

SIGNATURE OF DEVELOPER
 B. D. Boy
 DATE: 5/14/08

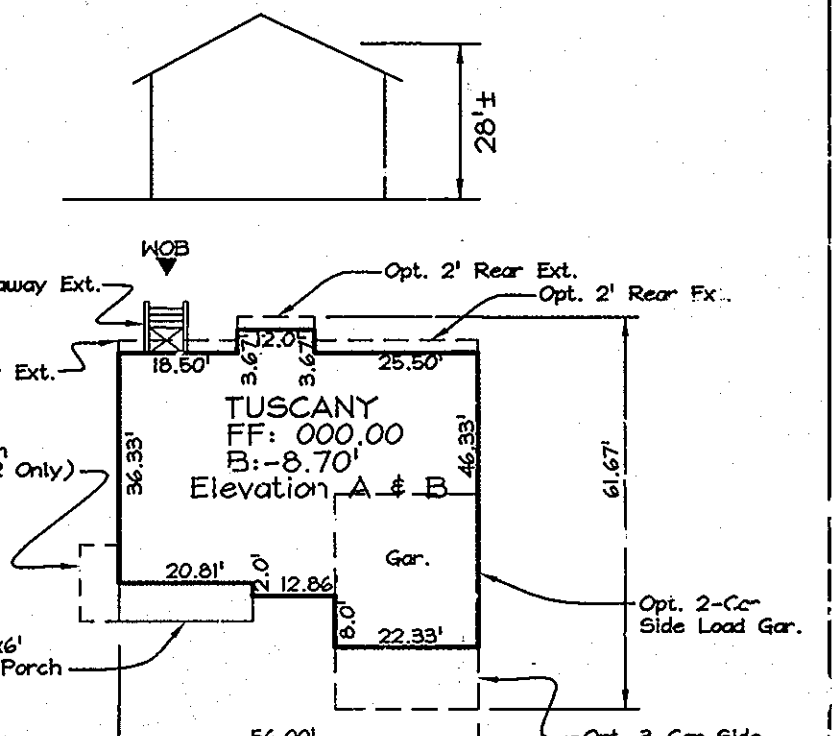
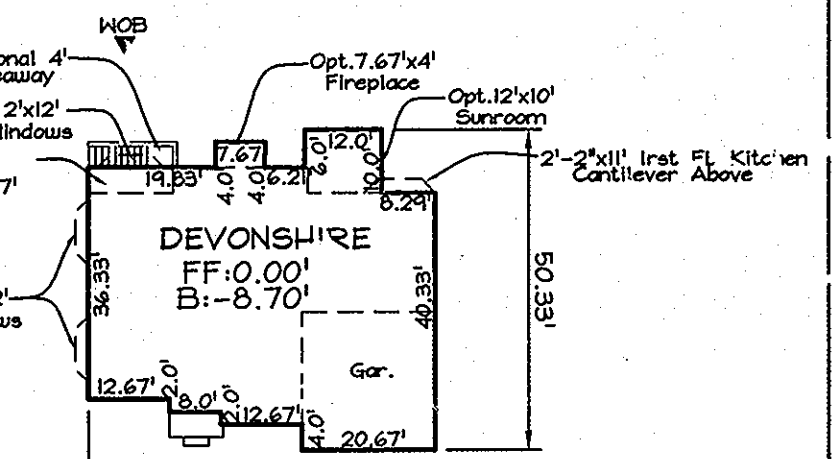
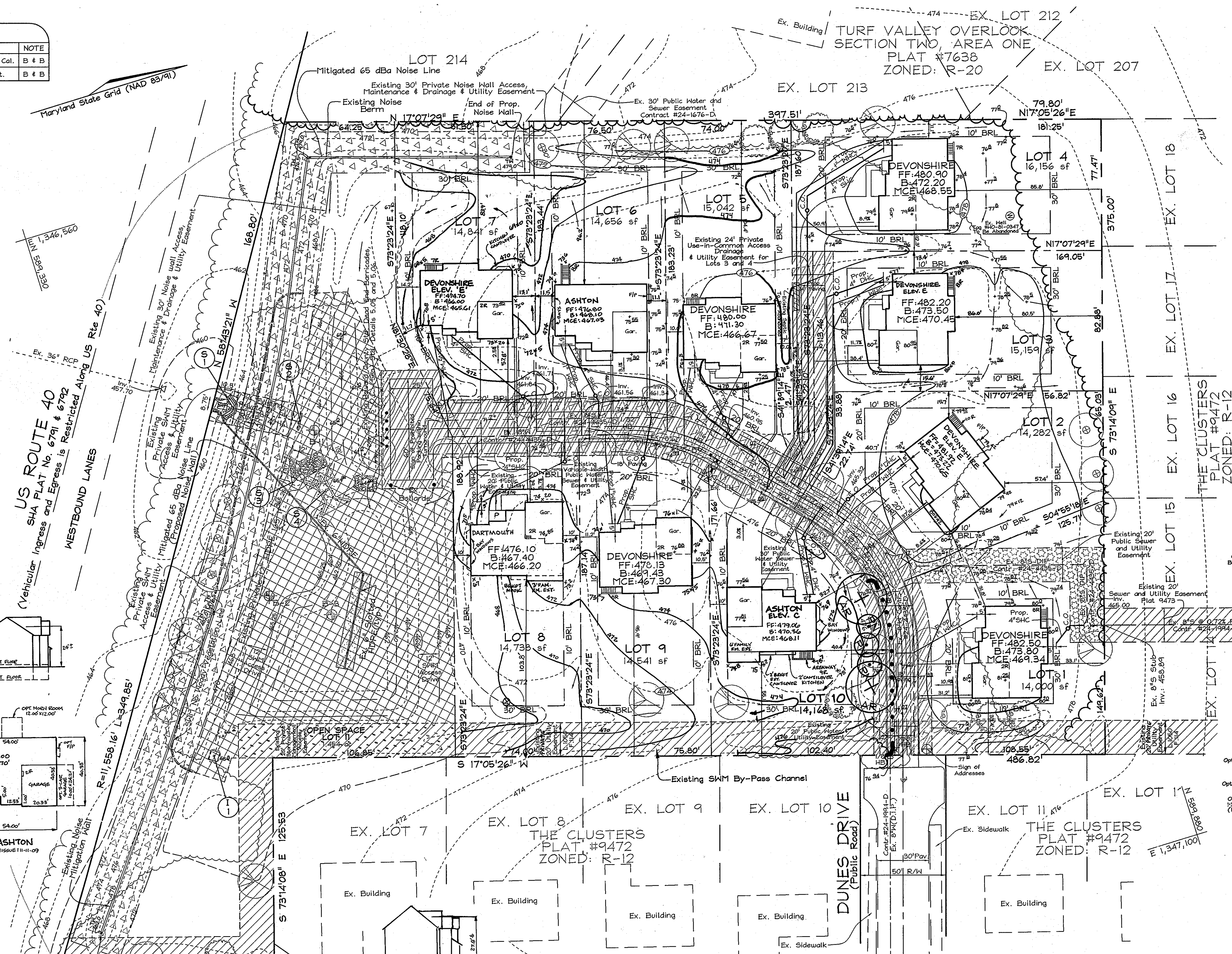
DATE
 5/14/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT-ENGINEERING DIVISION
 DATE: 5/23/08

CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 5/25/08

DIRECTOR



DEVELOPER/OWNER
 Dunes Vistas LLC
 c/o Brian D. Boy
 11807 Hollingford Court
 Clarksville, Md 21029
 Tel: (410) 742-2565

SITE DEVELOPMENT PLAN
DUNES VISTAS
 LOTS 1 THRU 10
 SINGLE FAMILY DETACHED
 PLAT #19703 - 19704

TAX MAP 16 GRID 24
 2ND ELECTION DISTRICT
 PARCEL 57
 HOWARD COUNTY, MARYLAND

FSH Associates
 Engineers Planners Surveyors
 6339 Howard Lane, Elkridge, MD 21075
 Tel: 410-567-5200 Fax: 410-799-1562
 Email: info@fsh.com

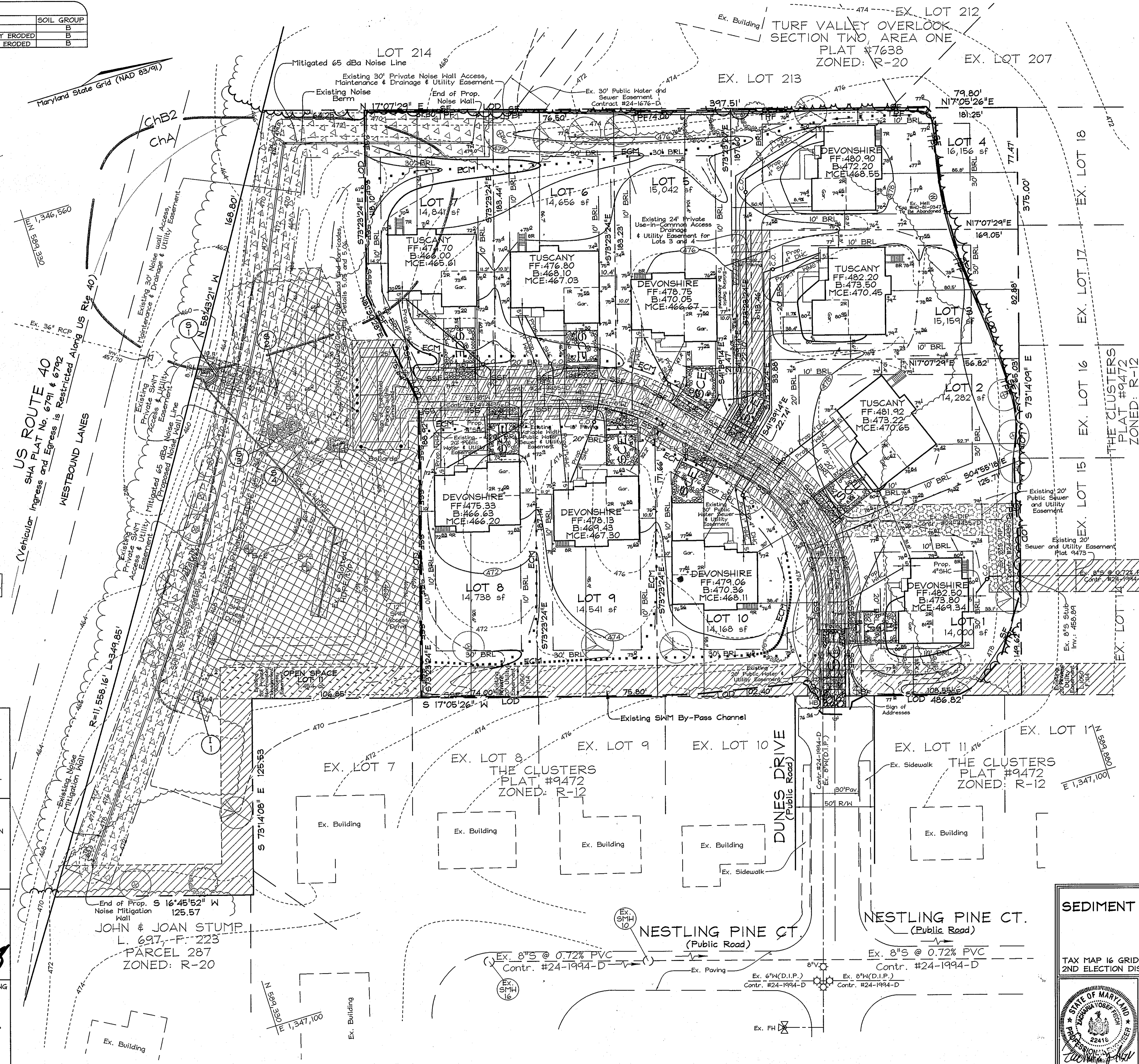
DESIGN BY: MT
DRAWN BY: CED
CHECKED BY: ZYF
SCALE: 1"=30'
DATE: APR. 25, 2008
I.O. No.: 38-03
SHEET No.: 2 OF 4

- | | | |
|----|----------|--|
| 10 | 9-30-08 | DELETE 4X10 REFUSE PAD AND STREET LIGHT, PAVEMENT SURFACE |
| 9 | 8-6-08 | REVISE GRADES ON LOT 5 PER AS-BUILT CONDITIONS |
| 8 | 4-9-08 | REVISE GRADES ON LOT 6 PER AS-BUILT CONDITIONS |
| 7 | 3-11-08 | ADD A DEVONSHIRE TO LOT 2, DELETE TUSCANY |
| 6 | 12-24-07 | ADD DEVONSHIRE TO LOT 2, DELETE TUSCANY |
| 5 | 11-6-07 | REVISE GRADES PER AS-BUILT CONDITIONS ON LOT 9 |
| 4 | 10-8-07 | REVISE GRADES PER AS-BUILT CONDITIONS ON LOT 10 |
| 3 | 9-18-07 | REVISE GRADES PER AS-BUILT CONDITIONS ON LOT 7 |
| 2 | 9-11-07 | ADD DARTMOUTH HOUSE TYPE, SITE DARTMOUTH ON LOT 8 |
| 1 | 5-8-07 | ADD ASHTON FOOTPRINT, SITE ASHTON AND LOT 10 (DELETE DEVONSHIRE) |

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	SOIL GROUP
ChA	CHESTER SILT LOAM, 0 TO 3 PERCENT SLOPES	B
ChB2	CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATLY ERODED	B
ChC3	CHESTER SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B

LEGEND	
Existing Contour	---
Proposed Contour	---
Spot Elevation	478.6
Direction of Flow	→
Tree Protection Fence	⊕
Existing Trees to Remain	⊕
Proposed Bollard	●
Stabilized Construction Entrance	▨
Silt Fence and Tree Protection Fence	— SF — TPF
Silt Fence	— SF —
Super Silt Fence	— SSF —
Limit of Disturbance	LOD
Erosion Control Matting	ECM
Soil Boundary	---
Public Water & Sewer & Utility Easement	▨
Private Access Place, Drainage & Utility Easement	▨
Private Noise Wall Access, Maintenance, Drainage & Utility Easement	▨
Existing Easement	▨
Private SHM, Access Drainage & Utility Easement	▨
Public Sewer & Utility Easement	▨
Public Water & Utility Easement	▨
Private SHM Access Management Easement	▨

NOTE: At the discretion of the Sediment and Erosion Control Inspector, a double row of "super" silt fence is to be installed for Lot 7.



FOR REVISIONS BY BENCHMARK ENGINEERING INC. DATED: 9-30-2010

PROFESSIONAL CERTIFICATION. 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. 22416, EXPIRATION DATE: 7-22-2011

NO.	DATE	REVISION	BY
1	9-30-2010	REVISE EROSION AND SEDIMENT CONTROL, REMOVE EXISTING '20' PUBLIC UTILITY EASEMENT LINES R-114 TO BE 'PRIVATE'	BEI

PROFESSIONAL CERTIFICATION
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. #22416, Expiration Date: 07/29/2009.

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

Zacharia T. Fisch 8/4/08
SIGNATURE OF ENGINEER DATE
ZACHARIA T. FISCH

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

Brian D. Boy 8/4/08
BRIAN D. BOY (DUNES VISTAS L.L.C.) DATE

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

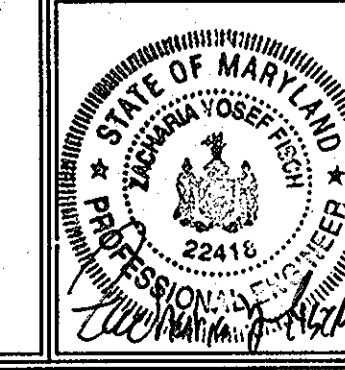
John R. Bluntson 8/14/08
HOWARD SCD DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE: 8/10/08
DATE: 8/22/08
DATE: 8/15/08

DEVELOPER/OWNER
Dunes Vistas LLC
c/o Brian D. Boy
11807 Nottingham Court
Clarksville, MD 21024
Tel: (410) 742-2565

SEDIMENT AND EROSION CONTROL PLAN
DUNES VISTAS
LOTS 1 THRU 10
SINGLE FAMILY DETACHED
PLAT #19703 - 19704
TAX MAP 16 GRID 24
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
PARCEL 57



FSH Associates
Engineers Planners Surveyors
6339 Howard Lane, Elkridge, MD 21075
Tel: 410-567-5200 Fax: 410-796-1562
E-mail: info@fsh.com

DESIGN BY: MT
DRAWN BY: CED
CHECKED BY: ZYF
SCALE: 1"=30'
DATE: Aug. 25, 2008
P.L.O. No.: 3503
SHEET No.: 3 OF 4

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, discing or other acceptable means before seeding, if not previously loosened.

SOIL AMENDMENTS: In lieu of soil test recommendations, use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (42 lbs/1000 sq.ft.) and apply 10-10-10 fertilizer (14 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At the time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq.ft.)
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (42 lbs/1000 sq.ft.) and apply 10-10-10 fertilizer (14 lbs./1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

SEEDING: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs/1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.5 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 well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

MULCHING: Apply 1 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 216 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 6 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

MAINTENANCE: Inspect all seeded areas and make needed repairs, replacements and reseedsings.

TEMPORARY SEEDING NOTES

SEEDBED PREPARATION: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if 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 November 15, seed with 2 1/2 bushels per acre (3.9 lbs./1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (7 lbs./1000 sq.ft.). For the period November 1 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, or use sod.

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 216 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 6 feet or higher, use 348 gallons per acre (8 gal/1000 sq.ft.) for anchoring.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEDIMENT CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspection, License and Permits Sediment Control Division prior to the start of any construction (410-313-1855).

2. All vegetation and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, and revisions thereto.

3. Following initial soil disturbance or redistribution, 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 to all other disturbed or graded areas on the project site.

4. All sediment traps/basins shall be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 7, HOWARD COUNTY DESIGN MANUAL, Storm Drainage.

5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding, sod, temporary seeding, and mulching (Sec. C). Temporary stabilization with mulch alone shall 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.

7. Site Analysis:

Total Area	4.84 Acres
Area Disturbed	3.21 Acres
Area to be seeded or paved	0.96 Acres
Area to be vegetatively stabilized	2.26 Acres
Total Fill	7,416 CY
Total Fill #111	115,022 CY
Offsite waste/borrow area location	##

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 controls must be provided, if deemed necessary by the Howard County Sediment Control Inspector.

10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

11. Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized within one working day, whichever is shorter.

* Earthwork quantities are solely for the purpose of calculating and Contractor to verify all quantities prior to the start of construction.

** To be determined by contractor, with pre-approval of the Sediment Control Inspector with an approved and active grading permit.

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Definition

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose

To provide a suitable soil medium for vegetable growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

I. This practice is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative 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.

II. 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

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

i. 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 a soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting 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 and 1/2" in diameter.

ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutgrass, poison ivy, thistle, or others as specified.

iii. 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 procedures.

II. For sites having disturbed areas under 5 acres:

1. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

III. For sites having disturbed areas over 5 acres:

1. 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 topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.

b. Organic content of topsoil shall be not less than 1.5 percent by weight.

c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.

d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.

NOTE: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

ii. Place topsoil (if required) and apply soil amendments specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

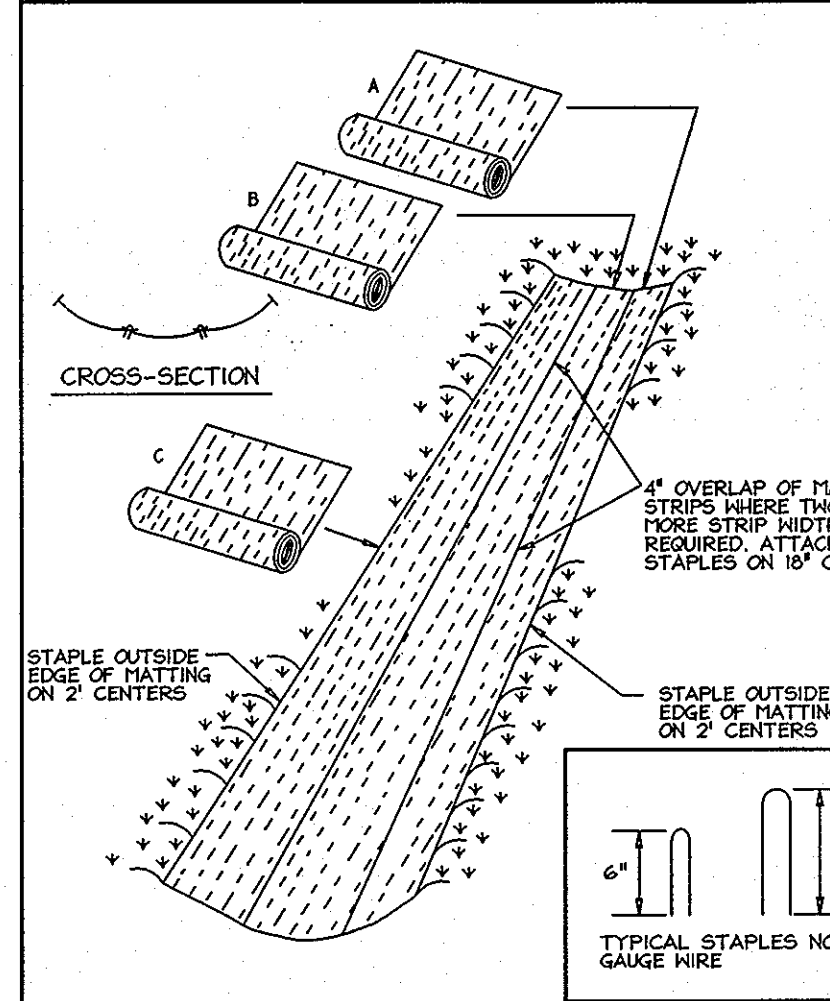
i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4"-8" higher in elevation.

iii. Topsoil shall be uniformly distributed in a 4"-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.

iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

DETAIL 30 - EROSION CONTROL MATTING



Construction Specifications

1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4' down slope from the trench. Spacing between staples to be 6'.

2. Staple the 4" overlap in the channel center using an 18" spacing between staples.

3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.

4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.

5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.

6. The discharge end of the matting line should be similarly secured with 2 double rows of staples.

NOTE: If flow will enter from the edge of the matting then the area affected by the flow must be key-in.

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE F-17-3, MARYLAND DEPARTMENT OF ENVIRONMENT & WATER MANAGEMENT ADMINISTRATION

SEQUENCE OF CONSTRUCTION

1. Obtain grading permit.
2. Notify Howard County Department of Inspections, License and Permits at (410) 313-1880 at least 24 hours before starting any work.
3. Install Stabilized Construction Entrance, Silt Fence, Super Silt Fence and repair any damaged existing controls to remain.
4. Rough grade site and begin house construction. (1 week)
5. Fine grade site. (1 week)
6. Upon stabilization of all disturbed areas and with the permission of the Sediment Control Inspector, remove all sediment control measures and stabilize any remaining disturbed area. (1 week)

Notes:

- Following initial soil disturbance or any redistributions, permanent or temporary stabilization shall be completed within:
 - a. 7 calendar days for all perimeter sediment control structures, dikes, swales and all slopes greater than 3:1.
 - b. 14 calendar days for all other disturbed areas.
- During grading and after each rainfall, contractor will inspect and provide necessary maintenance to the sediment control measures on this plan.

PERMANENT METHODS

1. Mulches - See standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.
2. Vegetative Cover - See standards for temporary vegetative cover.
3. Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12' apart, spring-toothed harrows, and similar plows are examples of equipment which may provide the desired effect.
4. Irrigation - This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point that runoff begins to flow.
5. Barriers - Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 10 times their height are effective in controlling soil blowing.
6. Calcium Chloride - Apply at rates that will keep surface moist. May need retreatment.

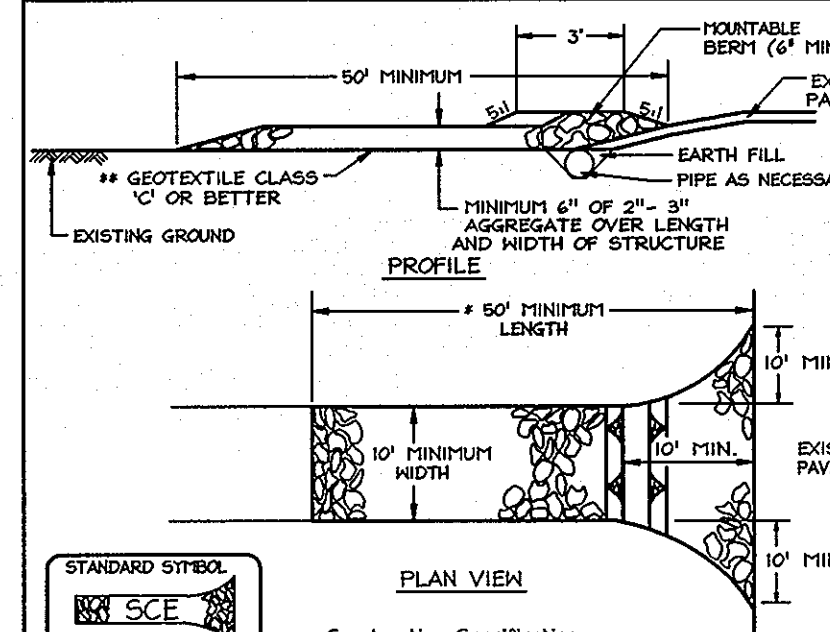
References

1. Agriculture Handbook 346. Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss
2. Agriculture Information Bulletin 354. How to Control Wind Erosion, USDA-ARS, 7, H-30-1.

DUNES DRIVE - TYPICAL ROADWAY SECTION CLASSIFICATION: PRIVATE ACCESS PLACE



DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



Construction Specifications

1. Length - minimum of 60' (45' for a single residence lot).

2. Width - 10' minimum, shall be flared at the existing road to provide a turning radius.

3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may require single family residences to use geotextile.

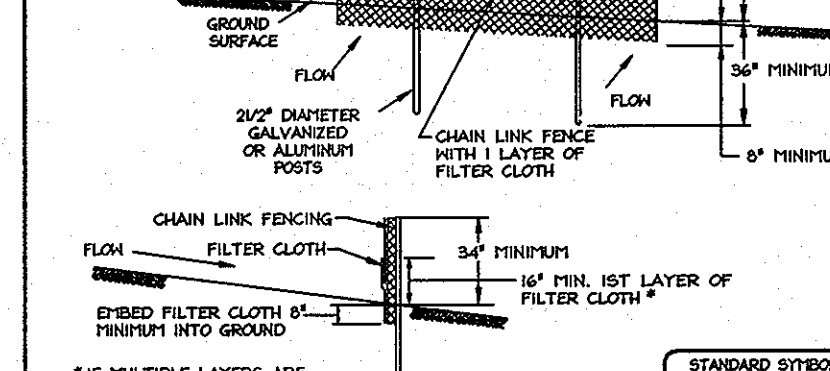
4. Stone - crushed aggregate (20 to 30) as reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

5. Surface water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipes installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of slope over the pipe. Flow has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey, a pipe will not be necessary. Flow should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.

6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE F-17-3, MARYLAND DEPARTMENT OF ENVIRONMENT & WATER MANAGEMENT ADMINISTRATION

DETAIL 33 - SUPER SILT FENCE



Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.

2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and trim rods, drive anchors and post caps are not required except at the ends of the fence.

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.

4. Filter cloth shall be embedded a minimum of 6" into the ground.

5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6' and folded.

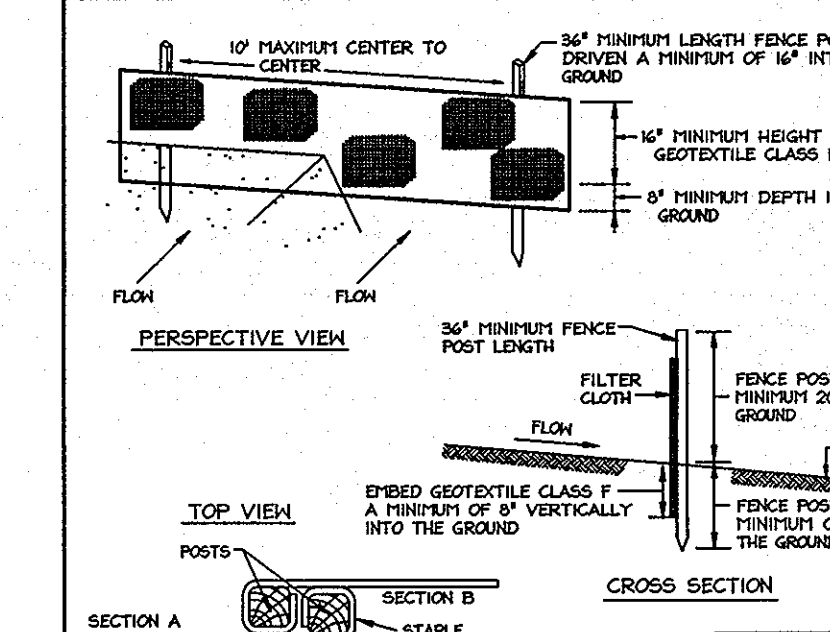
6. Maintenance shall be performed as needed and silt buildup removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height.

7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: FHST 504
Tensile Picking	20 lbs/in (min.)	Test: FHST 509
Flow Rate	0.3 gal/ft Aniline (max.)	Test: FHST 322
Filtering Efficiency	75% (min.)	Test: FHST 322

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE H-26-3, MARYLAND DEPARTMENT OF ENVIRONMENT & WATER MANAGEMENT ADMINISTRATION

DETAIL 22 - SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 3/4" long, driven 10" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 2" diameter (minimum) round and shall be of sound quality, hardwood. Steel posts will be standard 1" or 1 1/2" section weighing not less than 1.00 pound per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

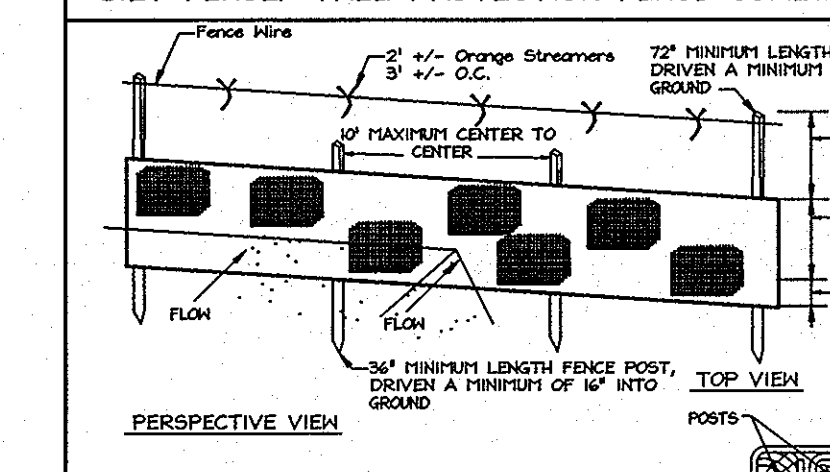
Tensile Strength	50 lbs/in (min.)	Test: FHST 504
Tensile Picking	20 lbs/in (min.)	Test: FHST 509
Flow Rate	0.3 gal/ft Aniline (max.)	Test: FHST 322
Filtering Efficiency	75% (min.)	Test: FHST 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, PAGE E-6-3, MARYLAND DEPARTMENT OF ENVIRONMENT & WATER MANAGEMENT ADMINISTRATION

SILT FENCE/ TREE PROTECTION FENCE COMBINATION



Construction Specifications

1. Fence posts shall be a minimum of 3/4" long, driven 10" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 2" diameter (minimum) round and shall be of sound quality, hardwood. Steel posts will be standard 1" or 1 1/2" section weighing not less than 1.00 pound per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: FHST 504
Tensile Picking	20 lbs/in (min.)	Test: FHST 509
Flow Rate	0.3 gal/ft Aniline (max.)	Test: FHST 322
Filtering Efficiency	75% (min.)	Test: FHST 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.

5. Boundaries of Retention Areas should be staked and flagged prior to installing fence.

6. Locate fence outside Critical Root Zone.

7. Avoid root damage when placing anchor posts.

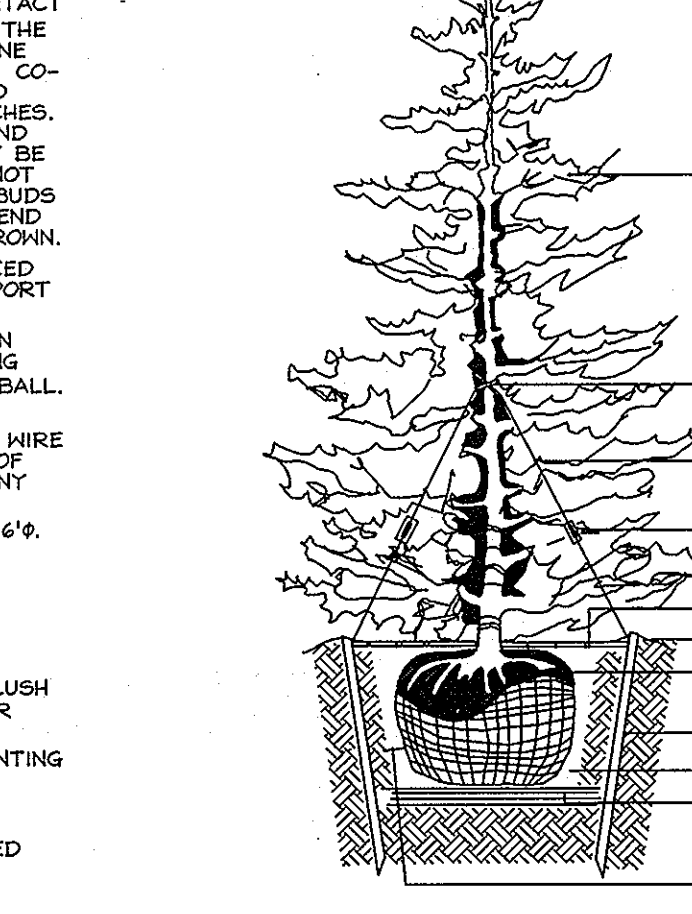
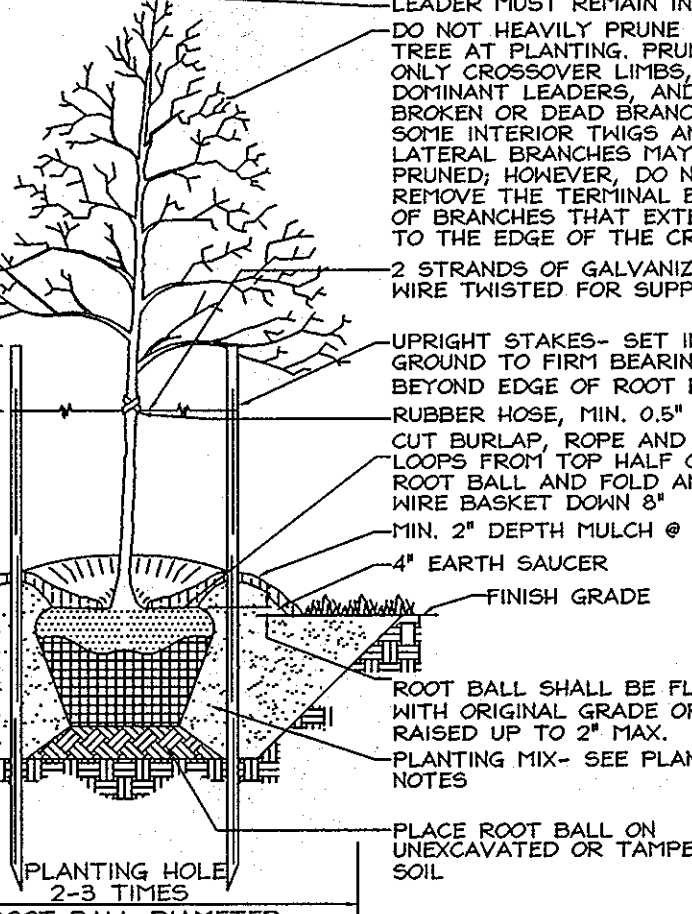
SEWER HOUSE CONNECTION CHART

Lot #	Inv. of Main	Inv. @ Easement*	MCE	Bsmt. El.
1	465.00	465.20	469.34	473.80
2	** 465.32	465.50	470.65	473.22
3	** 463.69	463.91	470.45	473.50
4	460.74	460.96	468.55	472.20
5	460.95	461.06	466.67	470.05
6	461.56	461.76	467.03	468.10
*** 7	461.84	462.04	465.61	*** 466.00
8	461.71	462.11	466.20	466.63
9	461.34	461.80	467.30	469.43
10	463.00	463.43	468.11	470.36

* Note: All S.H.C.'s are on a 2.0% slope, from sewer main to easement line.
** Invert elevation @ Type 'A' Drop House Connection.
***Note: The minimum basement elevation for Lot 7 was calculated to the rear of the proposed dwelling, not to the rear of the B.R.L., and the M.C.E. was calculated at a 1.00% slope, not the standard 2.00% slope.

NOTES:

1. CONSULT INTERNATIONAL SOCIETY OF ARBORICULTURE GUIDELINES FOR FURTHER DETAILS OF PLANTING SPECIFICATIONS OR CONSULT WITH A QUALIFIED PROFESSIONAL.
2. EACH TREE SHALL BE PLANTED SUCH THAT THE TRUNK PLANE IS VISIBLE AT THE TOP OF THE ROOT BALL.
3. STAKES SHALL BE REMOVED NO LATER THAN THE END OF THE FIRST GROWING SEASON AFTER PLANTING.
4. PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS.
5. KEEP MULCH 1" FROM TRUNK.
6. SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTING WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
7. TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWAGE EASEMENT.



TYPICAL TREE PLANTING AND STAKING
DECIDUOUS TREES UP TO 2-1/2" CALIPER NOT TO SCALE

TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 7/26/08
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 8/22/08
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 8/25/08
 DIRECTOR

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
 [Signature] 7/24/08
 HOWARD SCD

ENGINEERS CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT