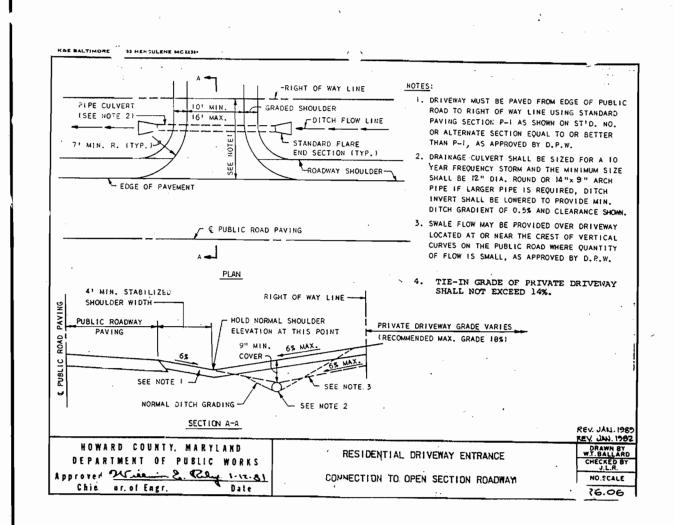


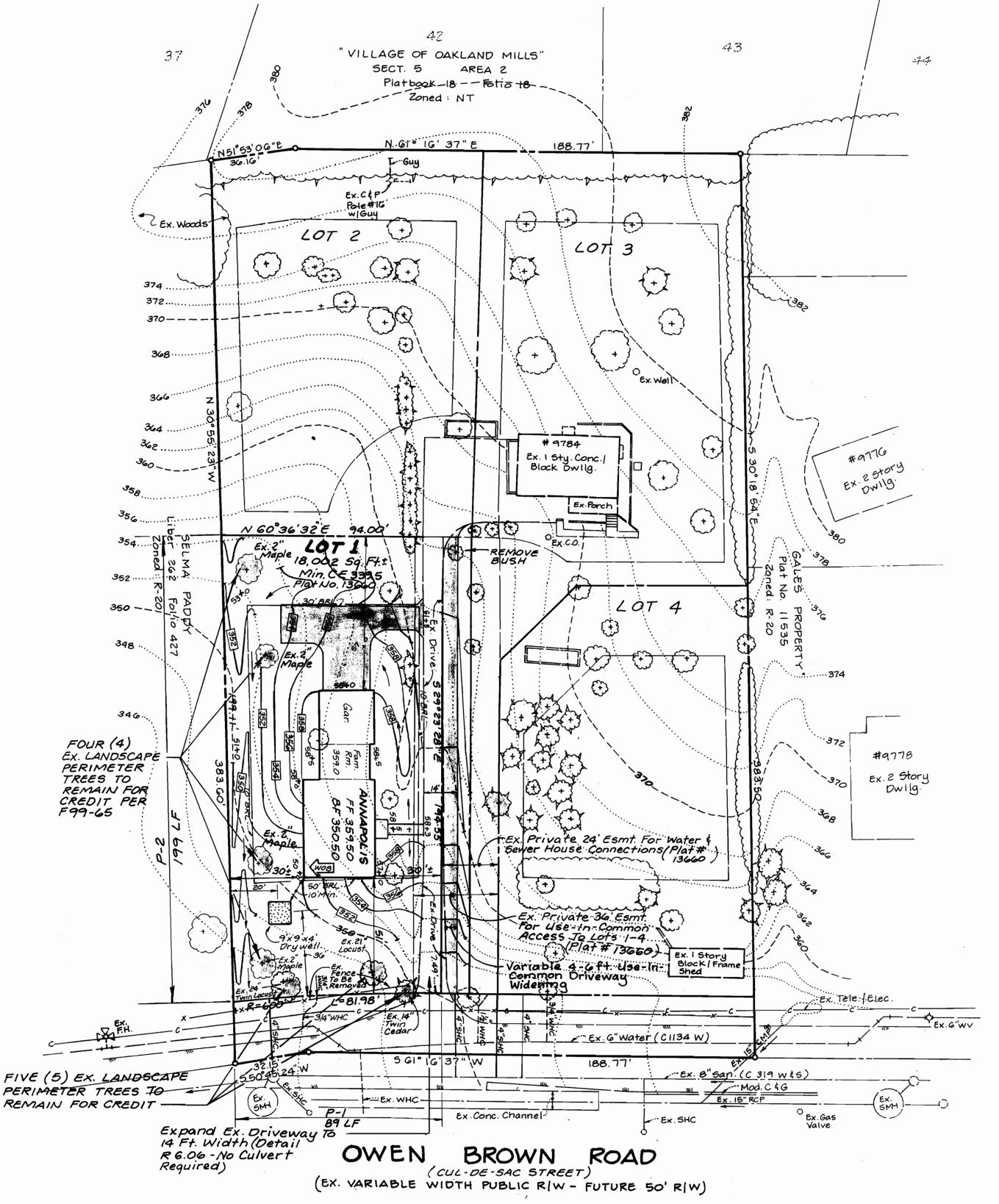
Category	Adjacent to Roadways	Adjacent to Perimeter Propertie
Landscape Type	В	A
Linear Feet of Roadway Frontage/Perimeter	89 LF	199 LF
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	Yes 89 LF (1)	Yes 199 LF (2)
Cradit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed)	No	No
Number of Plants Required Shade Trees Evergreen Trees Shrubs	2 2	3
Number of Plants Provided Shade Trees Evergreen Trees Other Trees (2:1 substitution) Shrubs (10:1 substitution) (Describe plant substitution credits below if needed)	3 2	4

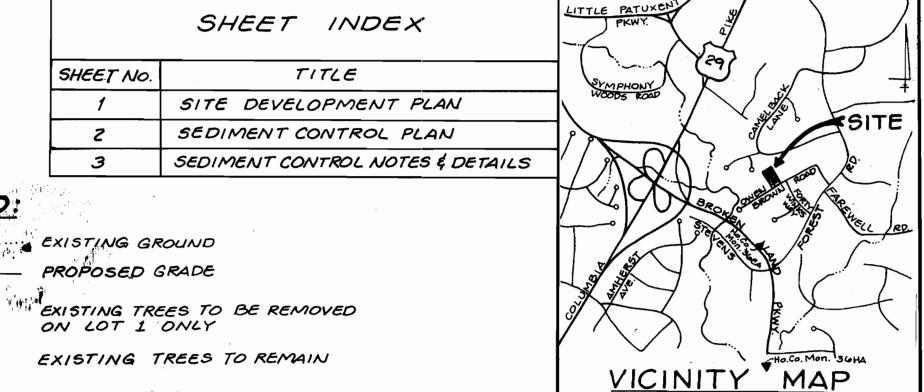
Comments (1) Credit for 3 Ex. Shade Trees (Twin 24"Locust and Ex. 21" Locust) Credit for 2 Evergreens (Twin 14" Cedar) (2) Credit for 4 Ex. Shade Trees.

Note: Complex projects may require expansion of the schedule to accommodate multiple land uses on-site or on adjacent properties.

1. This plan has been prepared in accordance with provisions of Section 16.124 of the Howard County Code and the Landscape Manual.







LEGEND:

PROPOSED GRADE ON LOT 1 ONLY

EXISTING TREES TO REMAIN



EXISTING FENCE

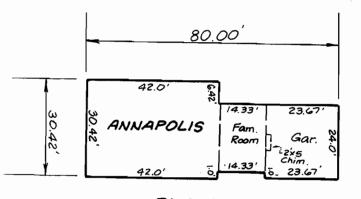
PROPOSED DRYWELL



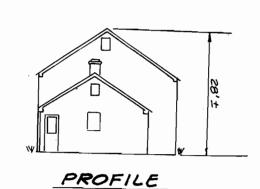
DRAINAGE DIRECTION

FLOOR PLAN NOTES

- 1. Dimensions shown reflect normal foundation plan (No brick)
- 2. Unless otherwise noted, all bumpouts, bay windows etc., reflect first floor projections.
- 3. The location of minor structures and minor architectural features including cornices, eaves, cantilevered building features, bay windows and window wells, oriels , vestibules, balconies, chimneys, heating or air conditioning units and exterior stairways and ramps (above or below grade) and open or enclosed porches are subject to Section 128.A. Supplementary Zoning District Regulations of the Howard County Zoning Regulations.



PLAN Scale: 1" = 30'



TYPICAL HOUSE PLAN AND PROFILE

Not To Scale

GENERAL NOTES

 Site Analysis: a. Total area of lot: 0.41 Ac+/-

d. Total number of units allowed: 1

b. Zoning: R-20 per 10/18/93 Comprehensive Zoning Plan
c. Proposed use of structure: Residential Single Family Detached Dwelling

SCALE : 1" = 2000'

- e. Total number of units provided: 1 All construction shall be in accordance with Howard County Standards,
- Specifications and Details, Volume IV. The Contractor shall notify the Department of Public Works/ Bureau of
- Engineering/Construction Inspection at (410)313-1880 at least five (5) working days prior to the start of work.
- The Contractor shall notify "Miss Utility" at 1-800-257-7777 at least forty-eight
- (48) hours prior to any excavation work. Previous submittals: F99-65
- Any damage caused by the Contractor to existing public right-of-way, existing paving, existing curb and gutter, existing utilities etc. shall be corrected at the Contractor's expense.
- The existing utilities shown hereon are located from field surveys and construction drawings of record and Water and Sewer Contract #319 W & S and #1134 W. The approximate location of existing utilities is shown for the Contractor's information and convenience. The Contractor shall locate existing utilities to his own satisfaction and well in advance of any construction activities. Additionally, the Contractor shall take all necessary precautions to protect all
- existing utilities and maintain uninterrupted service. Horizontal and vertical datums are related to the Maryland State Plane Coordinate System as projected from Howard County Control Stations No. 36EA and 36HA. Stormwater management for this lot is provided by payment of a Fee-In-Lieu for Quality Control. The Public Works Director approved the Fee-In-Lieu payment as part of the Final Plat (F99-65) on 12/11/98. Water Quality Control for this lot is

provided by on-lot drywell. The drywell will be privately maintained by the lot

- Open Space for this lot is provided by payment of a Fee-In-Lieu as part of the
- Forest Conservation obligation for this lot is provided by payment of a Fee-In-Lieu as part of the Final Plat (F99-65) to the Howard County Conservation Fund. 12. The Landscaping obligation for this lot is provided by preservation of existing vegetation in accordance with the provisions of Section 16.124 of the Howard County Code and Landscape Manual as part of the Final Plat (F99-65).
- 13. For flag or pipestem lots, refuse collection, snow removal and road maintenance are provided to the junction of the pipestem or flag and the right-of-way line only and not onto the pipestem or flag driveway.
- 14. Covenants governing the Use-In-Common driveway maintenance responsibilities are recorded in the Howard County Land Records. The driveway will be privately
- maintained by lots 1, 2, 3 and 4. Liber 4677 Folio 0374. 15. Driveways shall be provided prior to residential occupancy to insure safe access
- for fire and emergency vehicles per the following minimum requirements: a. Width: 12 ft. (14 ft. serving more than one residence).
- b. Surface: 6 inches of compact crusher run base tar and chip coating. c. Geometry: maximum 15% grade, maximum 10% grade change and
- minimum 45 ft. turning radius.
- d. Structures: (culverts and bridges) capable of supporting 25 gross tons -H25 loading
- e. Drainage Elements: capable of safely passing a 100 year flood with no
- more than one ft. depth over driveway surface. f. Structure Clearances: minimum 12 ft.
- g. Maintenance: sufficient to insure all weather use.
- 16. The boundary shown is based on a field run monumented boundary survey performed on or about June 1998 by Bruce E. Doak L.S. Reg. No. 531 Gerhold, Cross & Etzel, Inc.
- 17. The contractor shall be responsible for maintaining full vehicular ingress and egress to the existing dwelling on lot 3 via the private Use-In-Common driveway to Owen Brown Road.
- 18. Lots 2,3 and 4 are not part of this Site Development Plan.



PROPERTY OF: WESS HAVEN			SECTION / AREA		LOT NO. PARCEL 1 P/0 36		
PLAT REF. 1 366 0	BLOCK NO.	20A R -		TAX/ZONE 36		L. DIST. G +h	CENSUS TRACT GOGG.03
WATER CODE:				SEWER CODE: 5480000			
		TD	D.	TNC			



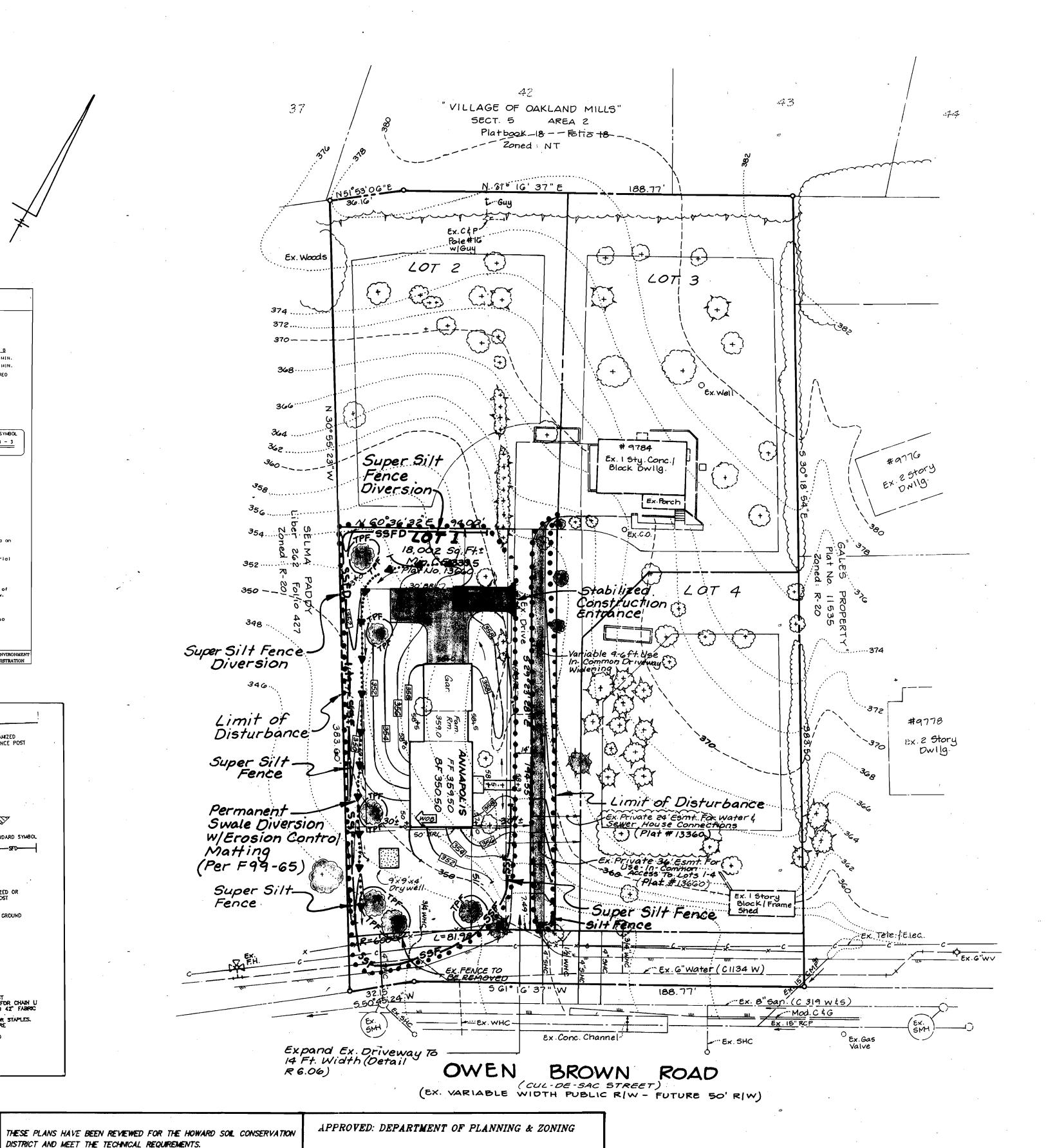
		William William Of Dol		E09	5480000	
			(410)	0 Rumsey Poad, Suit	, INC. ce 106, Columbia, MD. -3424 (410) 715-954	10 (Fax)
			DESIGNED : 	SITE DEVELO	DPMENT PLAN	SCALE: 1" = 30'
No.	DATE	DESCRIPTION	DRAWN: K.B.W.		+ 1	DRAWING
	<u> </u>	REVISIONS	СНЕСКЕD: В.D.В.		CK 9 POPARCEL NO. 36 ION DISTRICT - UNTY, MARYLAND	JOB No.
LOT N	o .	9788 OWEN BROWN ROAD ADDRESS	DATE:	Previous Submittal: F99-6	Builder	FILE No.
	ADDRESS CHART		8/99	JAMES P. HANSON 9843 Rain leaf Court Columbia, MD. 2104G (301) 776-0118	HAL C. MARKER CO., INC 10524 Hunters Way Laurel, Maryland 20723 (301) 776-8228	5DP00-2.

APPROVED: DEPARTMENT OF PLANNING & ZONING "I HEREBY CERTIFY THAT THIS PLAN FOR TROUGH AS SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKARD PLAN MASSEL ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS THAT IT WAS FREEZE IN ACCORDANCE WITH REQUIREMENTS OF THE CHOOSE OF CONSTRUCTION THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS. THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROISION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT. "'U'WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE AC-CORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVEL IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DE-

PARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR

10/26/99

SDP 00-23



16/25/99

10/20/99

DETAIL 2 - TEMPORARY SWALE

FLOW - 0.5% SLOPE MINIMUM

DRAINAGE AREA = 10 GC (MAX)

SLOPE = 10% (MAX)

1. Seed and cover with straw mulch.

proper functioning of the swale.

SOIL CONSERVATION SERVICE

42° CHAIN LIKK FENCE W/I
LAYER OF WRATI NOT 1212 OR
EQUIVALENT OVER UPHILL SIDE
SILE OF FENCE
10°

FLOW

Seed and cover with Erosion Control Matting or line with sod.
 4"-7" stone or recycled concrete equivalent pressed into soft in a mirrimum 7" layer.

1. All temporary swales shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.

3. Runoff-diverted from an undisturbed area shall outlet directly into an undisturbed stabilized area at a non-erosive velocity.

4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of sa as not to interfere with the

2. Runoff diverted from a disturbed area shall be conveyed to a

5. The swale shall be excavated or shaped to line, grade and cross

6. Fill. if necessary, shall be compacted by earth moving equipment

that it will not interfere with the functioning of the swale.

SUPER FENCE DIVERSION

PERSPECTIVE VIEW

URATI NOT 1212 OR EQUIVALENT

EMBED MIRATI

LAYER WRAT IN BOTTOM OF 14" MIN. WOE TRENCH

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BY SED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND PATENT WAS DEPLYATED IN AC-

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE AC-CORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE A" A DE-

PARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PE-RIODIC ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OF THEIR

UTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

SECTION YIEW

CONSTRUCTION SPECIFICATIONS

1. FENCINO SHUL, BE 42" HIGH CHAIR CONSTRUCTED IN ACCORDANCE WITH THE LATEST HARMAND STATE HIGHMAY ADMINISTRATION STANDARD DETAILS 690.01 AND 690.02 FOR CHAIR U. FENCING. THE SPECIFICATIONS FOR A 8"-0" FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND 6" POSTS. POSTS SHALL BE PLACED WITHOUT CONCRETE DIRECTIONS.

2. CHAIR LINK FENCE TO BE FASTENED SECURELY TO PROCE POSTS WITH WIRE THES OR STAPLES. THE LOWER TENSION WIRE BRACE AND TRUSS ROOS, ANCHORS AND POST CAP'S ARE HOT REDURNEL EXCEPT ON THE DICS OF THE FENCE.

3. FILTER CLOTH TO BE FASTENED SECURELY TO CHAIR LINK FENCE WITH THES SPACED EVERY 24" AT TOP AND IND SECTION.

4. FILTER CLOTH SHALL BE IMPEDIOD A MINIMUM OF 9" INTO THE GROUND,

5. WHEN TWO SECTIONS OF DIFFESSON CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SX INCHES AND FOLDED.

section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.

7. All earth removed and not needed for construction shall be placed so

8. Inspection and maintenance must be pravided periodically and after

PAGE MARYLAND DEPARTMENT OF ENVIRONMENT
A - 2 - 4 WATER MANAGEMENT ADMINISTRATION

- 21/2" DIL CALVANIZED OR ALUMHUM FENCE POST

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROISION AND SEDIMENT

ende Hamita

CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

SWALE A SWALE B

D 4' MIN. 6' MIN.

OUTLET AS REQUIRED

A - 2/B - 3

LEGEND

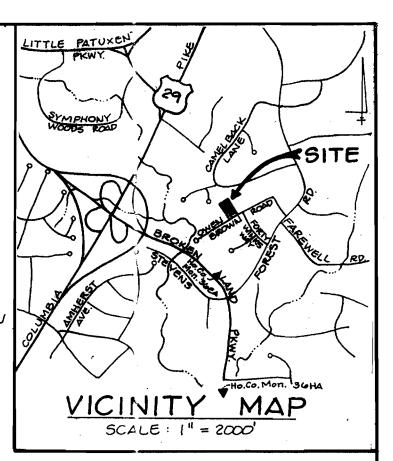
• • • • • • LIMIT OF DISTURBANCE

SF --- SF SILT FENCE

SSF --- SSF SUPER SILT FENCE

STABILIZED CONSTRUCTION ENTRANCE PERMANENT SWALE WITH EROSION CONTROL MATTING SUPER SILT FENCE DIVERSION

TREE PROTECTION FENCE



CONSTRUCTION SEQUENCE

- 1. OBTAIN GRADING PERMIT. (1 DAY)
- 2. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE. INSTALL SUPER SILT FENCE DIVERSION ALONG NORTH AND WEST PROPERTY LINE (2 DAYS)
- 3. INSTALL SUPER SILT FENCE AND TREE PROTECTION FENCE AS SHOWN (2 DAYS)
- 4. CONSTRUCT PERMANENT SWALE ALONG NORTH AND WEST PROPERTY LINES. INSTALL EROSION CONTROL MATTING (2 DAYS)
- 5. CLEAR AND GRUB SITE TO SUBGRADE (2 DAYS).
- G. BEGIN EXCAVATION FOR HOUSE FOUNDATION AND BEGIN HOUSE CONSTRUCTION (GO DAYS).
- 7. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT CONTROL DEVICES SHOWN ON THIS PLAN AFTER EACH RAINFALL AND ON A DAILY BASIS. (DAILY).
- 8. REMOVE SEDIMENT FROM OWEN BROWN ROAD, THE PRIVATE USE-IN-COMMON DRIVEWAY AND DRESS STABILIZED CONSTRUCTION ENTRANCES AS REQUIRED (DAILY).
- 9. FINE GRADE ALL DISTURBED AREAS AND STABILIZE INSTALL, D'RYWELL (1 DAY).
- 10. AFTER PERMISSION HAS BEEN GIVEN BY THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES. GRADE AND STABILIZE ALL REMAINING DISTURBED AREAS. (I DAY)

TOTAL TIME : 70 DAYS



LDE, INC.				
9250 Rumsey Road, Suite 106, Columbia, MD. 21045				
(410) 7	<u> 15-1070 (301) 596-3424 (410) 715-954</u>	(rax)		
DESIGNED:	SEDIMENT CONTROL PLAN	SCALE:		
B.D.B.		l" = 30'		
	WESS HAVEN			
DRAWN:		DRAWING		
K.B.W.	Lot 1	2 of 3		
•	TAX MAP NO. 36 BLOCK 9 POPARCEL No. 36			
CHECKED:	6th ELECTION DISTRICT	JOB No.		
B.D.B.	HOWARD COUNTY, MARYLAND	99-033		
	Previous Submittal: F99-65	_		
DATE:	Owner Bu lder	FILE NO.		
8/99	JAMES P. HANSON 9843 Rain leaf Court Columbia, MD. 21046 (301) 776-0118 HAL C. MARKER CO., INC 10524 Hunters Way Laurel, Maryland 20723 (301) 776-8228	SDP00-23		
	(301) 776-0118 (301) 776-8228	<u>L</u>		

SDP 00 - 23

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.
- Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be ferced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 7, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- 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 (Section G) for permanent seeding, sod, temporary seeding, and mulching. Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for
- proper germination and establishment of grusses. 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 of Site ____ 0.48 Acres 0.11 Acres 0.37 Acres Area Disturbed Area to be roofed or paved Area to be vegetatively stabilized _ Total Cut Total Fill Offsite waste/borrow area locution
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- 10. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which can be back filled and stabilized within one working day, whichever is shorter

HOWARD SOIL CONSERVATION DISTRICT PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

- SEEDSED FACEPARATION: Loosen upper three inches of soil by raking, disking, or other acceptable means before seeding, if not previously
- SOIL AMENDMENTS: In lieu of soil test recommendations, use one of the following schedules: 1 PREFERRED - Apply 2 tons per acres dolumitic limestone (92 lbs/1000sa.
- sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time or seeding, apply 400 lbs per acre 30-0-0 ureaform fertilizer (9 lbs/1000sq. ft.) 2) ACCEPTABLE — Apply 2 tons per acres dolumitic limestone (92 lbs/1000sq ft.) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three

ft.) and 600 lbs per acre :0-10-10 fertilizer (14 lbs/1000

- SEEDING For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/;000sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs per acre (1.4 lbs/1000sg. ft.) of Kentucky 3; Tall Fescue and 2 lbs. per acre '.05 lbs/1000sq. ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) - 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) — Use sod. Option (3) — Seed with 60 lbs.per acre Kentucky 31 Tall Fescue and muich 2 tons / acre well anchored
- MU_CHING -- Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/
- MAINTENANCE Inspect all seeding areas and make needed repairs, replacements and reseedinas.

TEMPORARY SEEDING NOTES Apply to graded or cleared areas likely to be redisturbed where a short-term

vegetative cover is needed.

SEEDBED PREPARATION: -- Loosen upper three inches of soil by raking, disking, or other acceptable means before seeding, if not previously

SOIL AMENDMENTS: — Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000sq.

- SEEDING For periods March 1 thru April 30, and from August 15 thru October 15 seed with 2-12 bushels per acre of annual rye (3.2 lbs/1000sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 /bs/1000sq. ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or
- MULCHING Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000sq. ft.) of unrotted weed free small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000sq. ft.) for anchoring.
- Rafer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR EROSON" AND USEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE OF A BASED CONTROL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH REQUIREMENTS OF THE BOYARD SOIL CONSTRUCTION

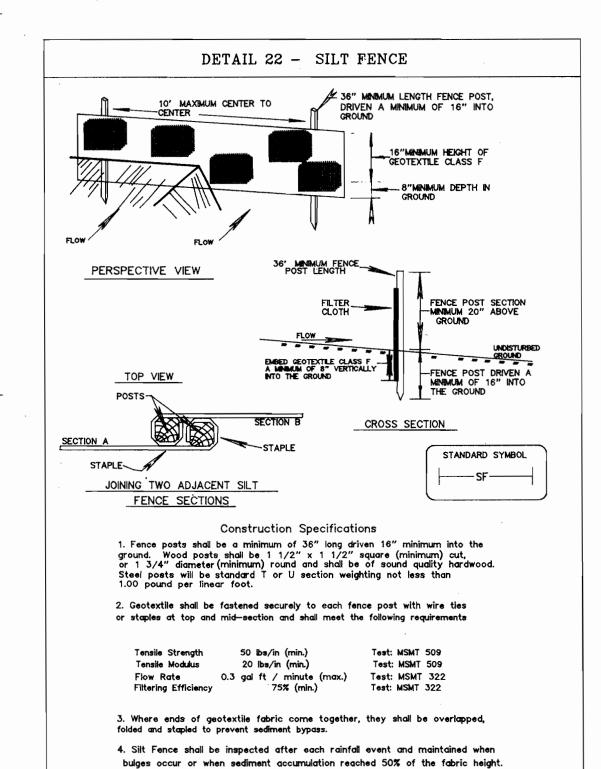
"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE AC-

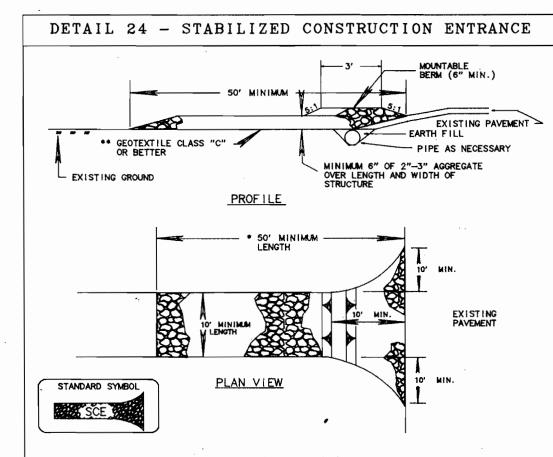
CORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DE

PARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT, I ALSO AUTHORIZE PERIODIC ONSITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR

AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY."

DISTRICT.





Construction Specification

1. Length - minimum of 50' (*30' for single residence lot). 2. Width - 10' minimum, should be flared at the existing road to provide a turning

3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior

to placing stone. **The plan approval authority may not require single family residences to use geotextile. 4. Stone — crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the

5. Surface Water — all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe 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. Pipe should be sized according to the amonut of runoff to be conveyed. A 6" minimum will be required.

 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

SOIL CONSERVATION SERVICE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROISION AND SEDIMENT

DISTRICT AND MEET THE TECHNICAL REQUIREMENTS.

CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

U.S. DEPARTMENT OF AGRICULTURE

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

APPROVED: DEPARTMENT OF PLANNING & ZONING

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

Definition Placement of topsoil over a prepared subsoil prior to establishment of permanent

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

Conditions Where Practice Applies

- This practice is limited to areas having 2:1 or flatter slopes where: a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative 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 c. The original soil to be vegetated contains material toxic to plant
- d. The soil is so acidic that treatment with limestone is not feasible. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall

have the appropriate stabilization shown on the plans.

Construction and Material Specifications

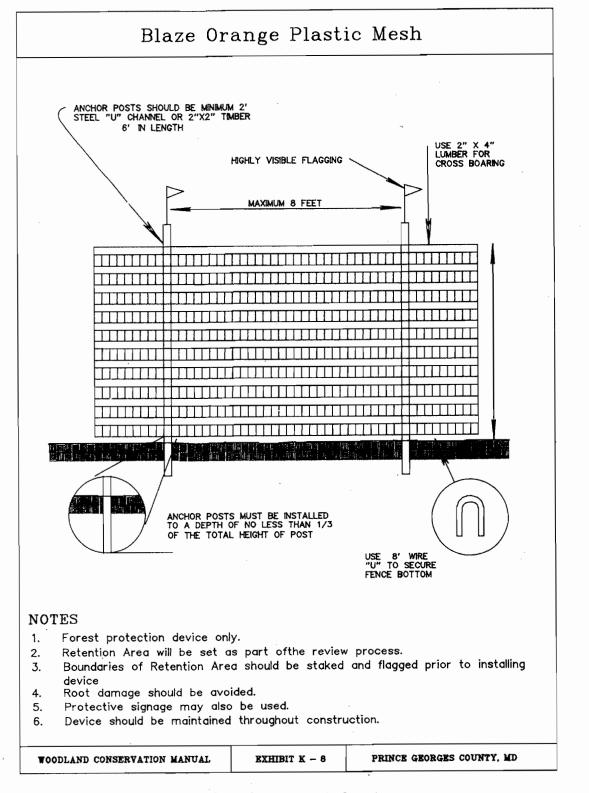
- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental
- Topsoil Specifications Soil to be used as topsoil must meet the followina:
 - 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 soil scientist and approved by the appropriate approva 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 11/2" in diameter. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as
 - 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.
- For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization — Section I — Vegetative Stabilization Methods and Materials.
- IV. For sites having disturbed areas over 5 acres:
 - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following: a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shail be prescribed to raise the pH to 6.5 or higher.

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

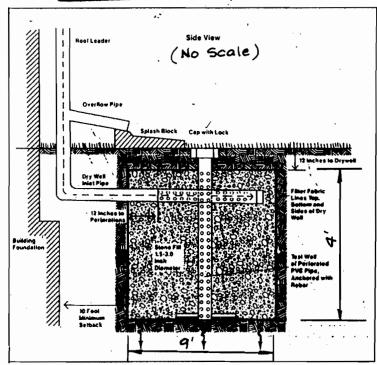
- percent by weight. Topsoil having soluble salt content greater than 500 parts per million shall not be used. d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.
- agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

Note: Topsoil substitutes or amendments, as recommended by a qualified

- ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization —Section I Vegetative Stabilization
- Topsoil Application
 - When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins. ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation iii. Topsoil shall be uniformly distributed in a 4" - 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
 - 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.
- Alternative for Permanent Seeding Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
 - Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements: a. Composted sludge shall be supplied by, or originate from, a
 - person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06. b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use. c. Composted sludge shall be applied at a rate of 1 ton/1,000
 - ii. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb./1,000 square feet, and 1/3 the normal lime application rate.
- References: Guideline Specifications, Soil Preparation and Sodding. MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.



DRYWELL DETAIL



3.4.6. CONSTRUCTION SPECIFICATIONS

A dry well shall not be constructed or placed in service until all of the contributing drainage area has been stabilized and approved by the responsible inspector

Dry Well Preparation

Excavate the dry well to the design dimensions. Excavated materials shall be placed away from the excavated sldes to enhance well stability. Large tree roots shall be trimmed flush with the sides in order to prevent fabric puncturing or tearing during subsequent installation procedures. The side walls of the dry well shall be roughened where sheared and sealed by heavy equipment.

3.4.6.3. Fabric Laydown

The filter fabric roll shall be cut to the proper width prior to installation. The cut width must include sufficient material to conform to wall perimeter irregularities and for a 6 inch minimum top overlap. Place the fabric roll over the well and unroll a sufficient length to allow placement of the fabric down into the well. Stones or other anchoring objects should be placed on the fabric at the edge of the well to keep the lined well open during windy periods. When overlaps are required between rolls, the upstream roll shall lap a minimum of 2 feet over the downstream roll in order to provide a shingled effect. The overlap ensures fabric continuity or the fabric shingled effect. The overlap ensures fabric continuity or the fabric conforms to the excavation surface during aggregate placement and

3.4.6.4. Aggregate Placement and Compaction

Drainage aggregate shall be placed in lifts and compacted using plate compactors. As a rule of thumb, a maximum loose lift thickness of 12 inches is recommended. The compaction process ensures fabric conformity to the excavation sides, thereby reducing the potential for Overlapping and Covering

Following aggregate placement, the fabric previously weighted by stones should be folded over the aggregate to form a 6 inch minimum longitudinal lap. The desired fill soil should be placed over the lap at sufficient intervals to maintain the lap during subsequent backfilling.

Care shall be exercised to prevent natural or fill soils from intermixing with the drainage aggregate. All contaminated aggregate shall be removed and replaced with uncontaminated aggregate. Voids Behind Fabric

Voids can be created between the fabric and excavation sides and should be avoided. Removing boulders or other obstacles from the trench walls is one source of such voids. Natural soils should be placed in these voids at the most convenient time during construction to ensure fabric conformity to the excavation sides. Soil piping, fabric clogging, and possible surface subsidence will be avoided by this remedial process. 3.4.6.8 Unstable Excavation Sides

Vertically excavated trench walls may be difficult to maintain in areas where the soil moisture is high or where soft cohesive or cohesionless soils predominate. These conditions may require laying back of the side slopes to maintain stability; trapezoidal rather than rectangular concerns may require.

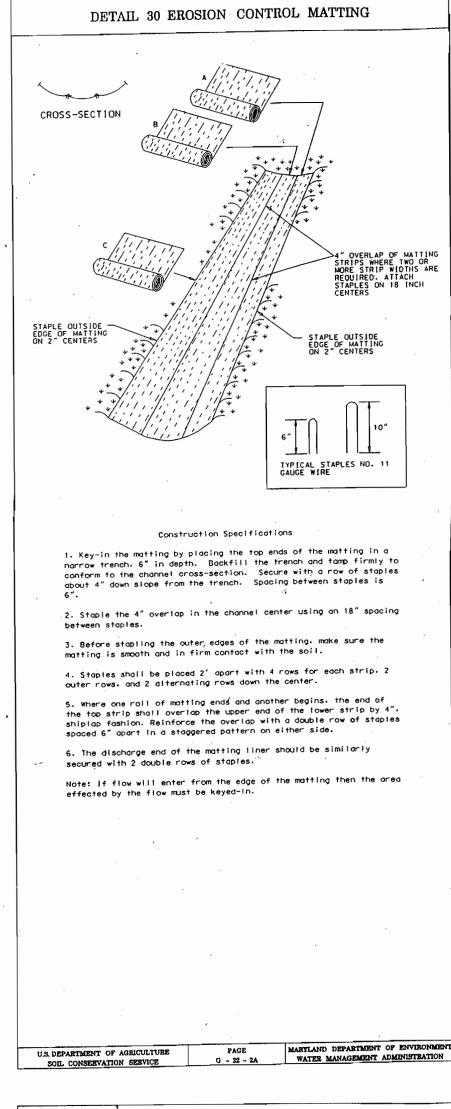
3.4.6.9. Foundation Protection

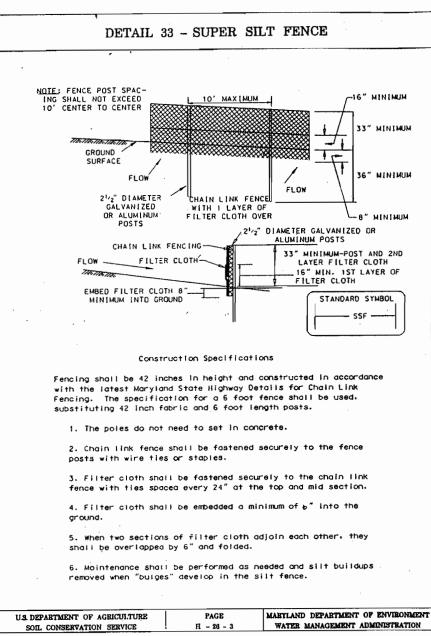
Infiltration structures.

Dry wells 3 or more feet deep shall be located at least 10 feet down 3.4.6.10 Observation Well An observation well, as described in subsection 3.4.4.8 and Figure 3–5, will be provided. The depth of the well, at the time of installation, will be clearly marked on the well cap.

MA INTENANCE Dry wells shall be designed to minimize maintenance. However, it is recognized that all infiltration facilities are subject to clogging by sediment, oil, grease, grit and other debris. In addition, the performance and longevity of these structures is not well documented. Consequently, a monitoring observation well is required for all

The observation well should be monitored periodically. For the first The observation well should be monitored periodically. For the first year after completion of construction, the well should be monitored on a quarterly basis and after every large storm. It is recommended that a log book be maintained indicating the rate at which the facility dewaters after large storms and the depth of the well for each observation. Once the performance characteristics of the structure have been verified, the monitoring schedule can be reduced to an annual basis, unless the performance data indicate that a more frequent schedule is required.





LDE, INC. 9250 Rumsey Road, Suite 106, Columbia, MD. 21045 (410) 715-1070 (301) 596-3424 (410) 715-9540 (Fax) SEDIMENT CONTROL NOTES and DETAILS N/A BDB WESS HAVEN DRA WING DRAWN Lot 3 OF 3 KBW TAX MAP NO. 36 BLOCK 9 POPARCEL No. 36 JOB NO. CHECKED 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND 99-033 BDB Previous Submittal: F99-65 FILE NO. HAL C. MARKER CO., INC JAMES P. HANSON SDP00-23 9843 Rainleaf Court Columbia, MD. 21046 (301) 776-0118

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