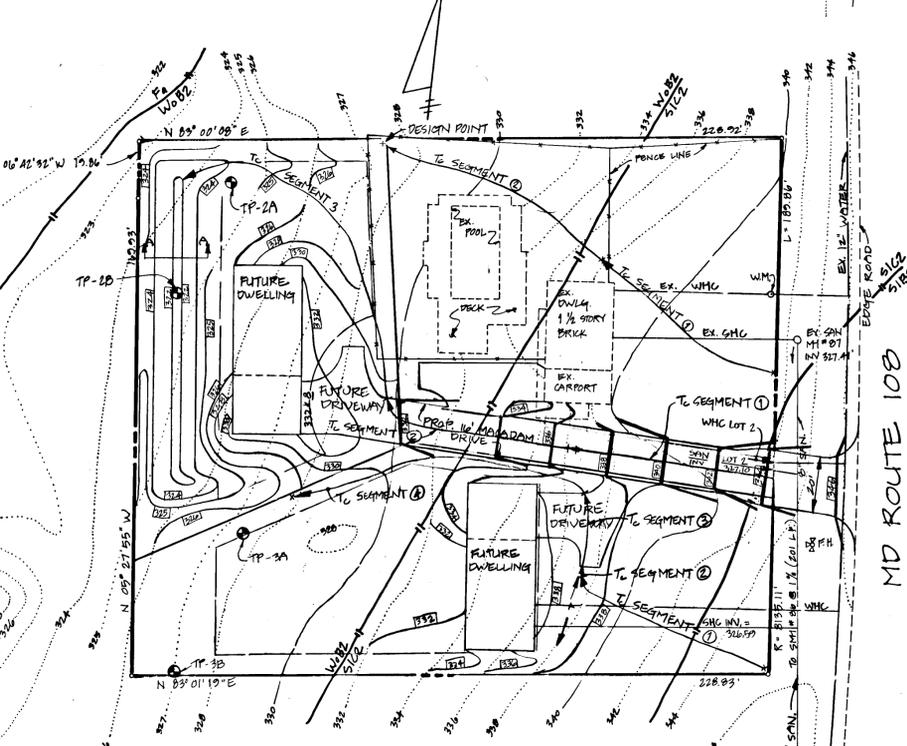


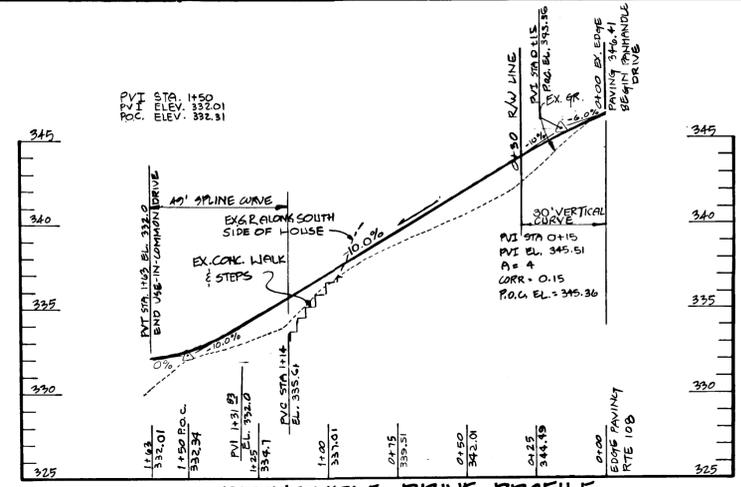
PRE-DEVELOPMENT DRAINAGE AREA MAP  
SCALE: 1" = 30'



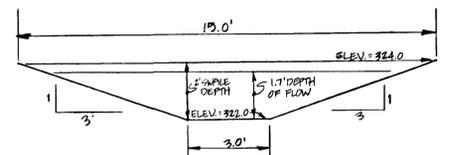
POST-DEVELOPMENT DRAINAGE AREA MAP  
SCALE: 1" = 30'

MD ROUTE 108

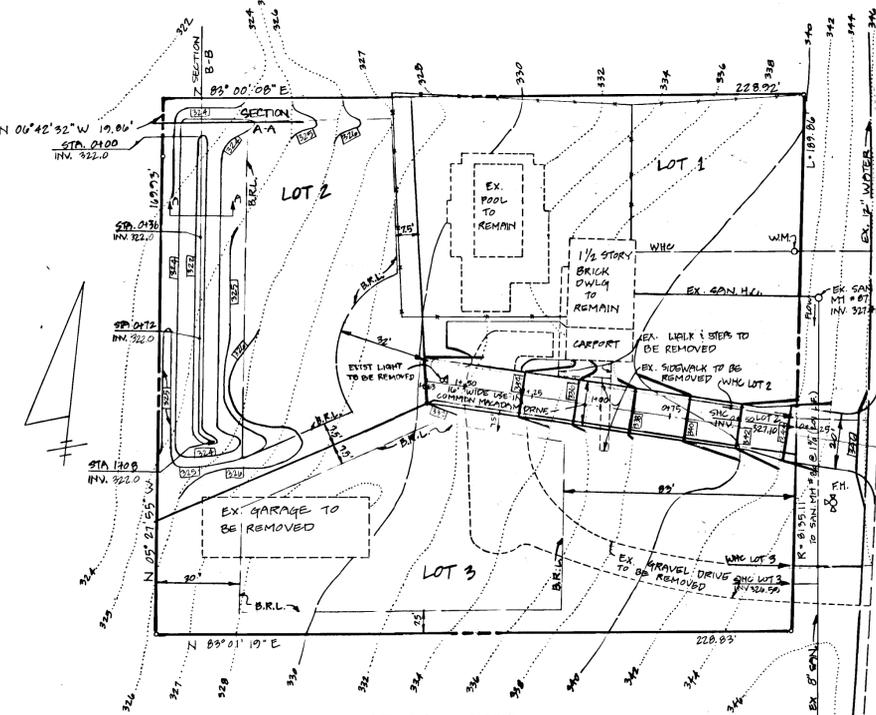
MD ROUTE 108



PANHANDLE DRIVE PROFILE  
SCALE: HORIZ - 1" = 30'  
VERT - 1" = 5'

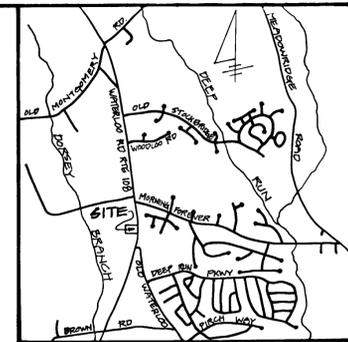


VEGETATED SWALE SECTION A-A  
SCALE: 1" = 3'



PLAN VIEW  
SCALE: 1" = 30'

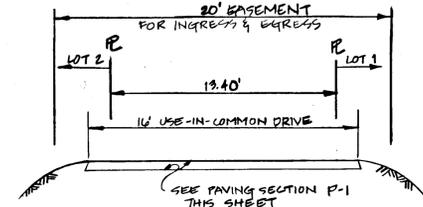
SECTION NUMBER	ROAD AND STREET CLASSIFICATION	PAVEMENT MATERIALS
P-1	PARKING AREAS AND TRAVELWAYS; APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH NO HEAVY TRUCKS.	GRANULAR BASE ALTERNATE
		TYPICAL PAVING SECTION FOR USE-IN-COMMON DRIVE



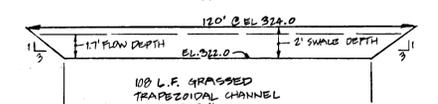
VICINITY MAP  
SCALE: 1" = 2000'

CONSTRUCTION SPECIFICATIONS FOR CHECK DAM SWALE

- ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBSTACLES SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE WATERWAY.
- THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN, AND BE FREE OF BANK PROTECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
- FILLS SHALL BE COMPACTED AS NEEDED TO PREVENT UNEQUAL SETTLEMENT THAT WOULD CAUSE DAMAGE IN THE COMPLETE WATERWAY.
- ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE WATERWAY.
- STABILIZATION SHALL BE DONE ACCORDING TO THE APPROPRIATE STANDARD AND SPECIFICATIONS FOR VEGETATIVE PRACTICES.
  - FOR DESIGN VELOCITIES OF LESS THAN 3.5 FEET PER SECOND, SEEDING AND MULCHING MAY BE USED FOR THE ESTABLISHMENT OF THE VEGETATION. IT IS RECOMMENDED THAT, WHEN CONDITIONS PERMIT, TEMPORARY DIVERSIONS OR OTHER MEANS SHOULD BE USED TO PREVENT WATER FROM ENTERING THE WATERWAY DURING THE ESTABLISHMENT OF THE VEGETATION.
  - FOR DESIGN VELOCITIES OF MORE THAN 3.5 FEET PER SECOND, THE WATERWAY SHALL BE STABILIZED WITH SOO, WITH SEEDING PROTECTED BY JUTE OR EXCAVATOR MATTING OR WITH SEEDING AND MULCHING INCLUDING TEMPORARY DIVERSION OF THE WATER UNTIL THE VEGETATION IS ESTABLISHED.
  - STRUCTURAL - VEGETATION PROTECTION
    - SUBSURFACE DRAIN FOR BASE FLOW SHALL BE CONSTRUCTED AS SHOWN ON THE STANDARD DRAWING AND AS SPECIFIED IN THE STANDARD AND SPECIFICATIONS FOR SUBSURFACE DRAIN.



USE-IN-COMMON DRIVE TYPICAL SECTION



VEGETATED SWALE SECTION B-B  
NOT TO SCALE

**DEVELOPER'S CERTIFICATE**  
I 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 NATURAL RESOURCES 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.  
*Robert A. Huffman* 3-13-89  
NAME DATE

**APPROVED:** HOWARD COUNTY OFFICE OF PLANNING & ZONING.  
*Robert A. Huffman* 5/23/89  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

**APPROVED:** DEPARTMENT OF PUBLIC WORKS.  
*Robert A. Huffman* 5/23/89  
CHIEF, BUREAU OF ENGINEERING DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.  
*Robert A. Huffman* 5/23/89  
HOWARD SOIL CONSERVATION DISTRICT DATE

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
*Robert A. Huffman* 5/23/89  
HOWARD SOIL CONSERVATION DISTRICT DATE

**SHANABERGER & LANE**  
8726 TOWN & COUNTRY BLVD.  
SUITE 107  
ELLCOTT CITY, MARYLAND 21043  
(301) 461-7563



DESIGNED	GLS	DATE	
DRAWN	SLM	DATE	
CHECKED	SAS	DATE	
BY	NO.	REVISION	DATE

**OWNER:**  
MR. ROBERT A. HUFFMAN  
4950 WATERLOO RD.  
COLUMBIA, MD 21045

**DEVELOPER:**  
FALCON DEVELOPMENT CO.  
4970 LONG LOOK LANE  
COLUMBIA, MD 21045

**STORMWATER MANAGEMENT PLAN**  
**HUFFMAN SUBDIVISION**  
6TH ELECTION DISTRICT  
HOWARD COUNTY, MD  
TAX MAP 37 PARCEL 157

SCALE: AS SHOWN  
**SHEET 1**  
**OF 2**

**PERMANENT SEEDING NOTES**

**Seedbed Preparation:** Loosen upper 3 inches of soil by raking, discing or other acceptable means before seeding.

**Soil Amendments:** Use one of the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 square ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq. ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (91 lbs./1000 sq. ft.).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs./1000 sq. ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs./1000 sq. ft.) before seeding. Harrow or 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 (.05 lbs./1000 sq. ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by: Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) use sod. Option (3) seed with 60 lbs./acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

**Mulching:** Apply 1 1/2 to 2 tons per acre (70 to 90 lbs./1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool 218 gallons per acre (5 gal./1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal./1000 sq. ft.) for anchoring.

**Maintenance:** Inspect all seeded areas and make needed repairs, discing or other reseeding.

**TEMPORARY SEEDING NOTES**

**Seedbed Preparation:** Loosen upper 3 inches of soil by raking, discing or other acceptable means before seeding.

**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 August 15 thru November 15, seed with 2 1/2 bu. per acre of annual rye (3.2 lbs./1000 sq. ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (.07 lbs./1000 sq. ft.). For the period November 16 thru 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 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 218 gal. per acre (5 gal./1000 sq. ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 348 gal. per acre (8 gal./1000 sq. ft.) for anchoring.

**PERMANENT SEEDING**

All disturbed areas shall be stabilized as follows:

**Seedbed Preparation:** Loosen upper 3 inches of soil by raking, discing or other acceptable means before seeding.

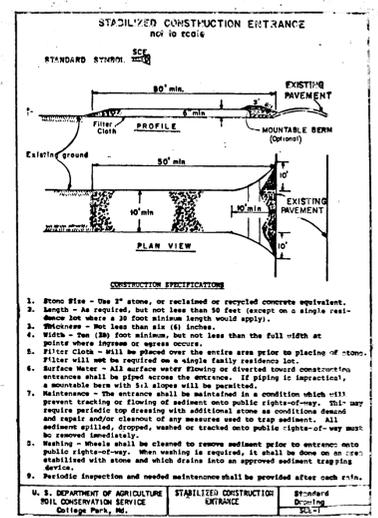
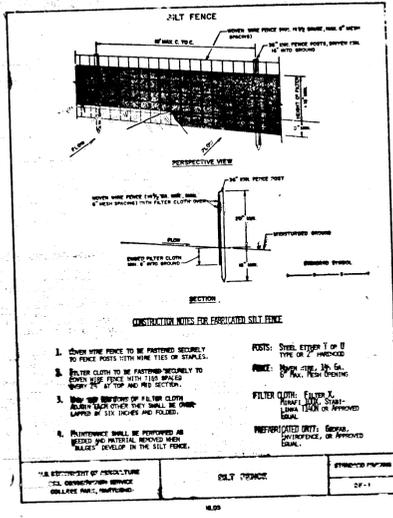
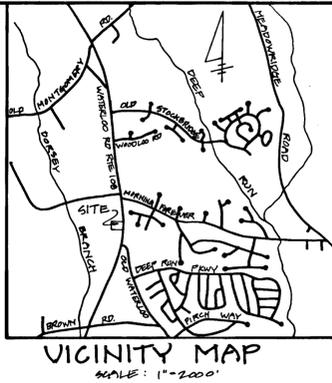
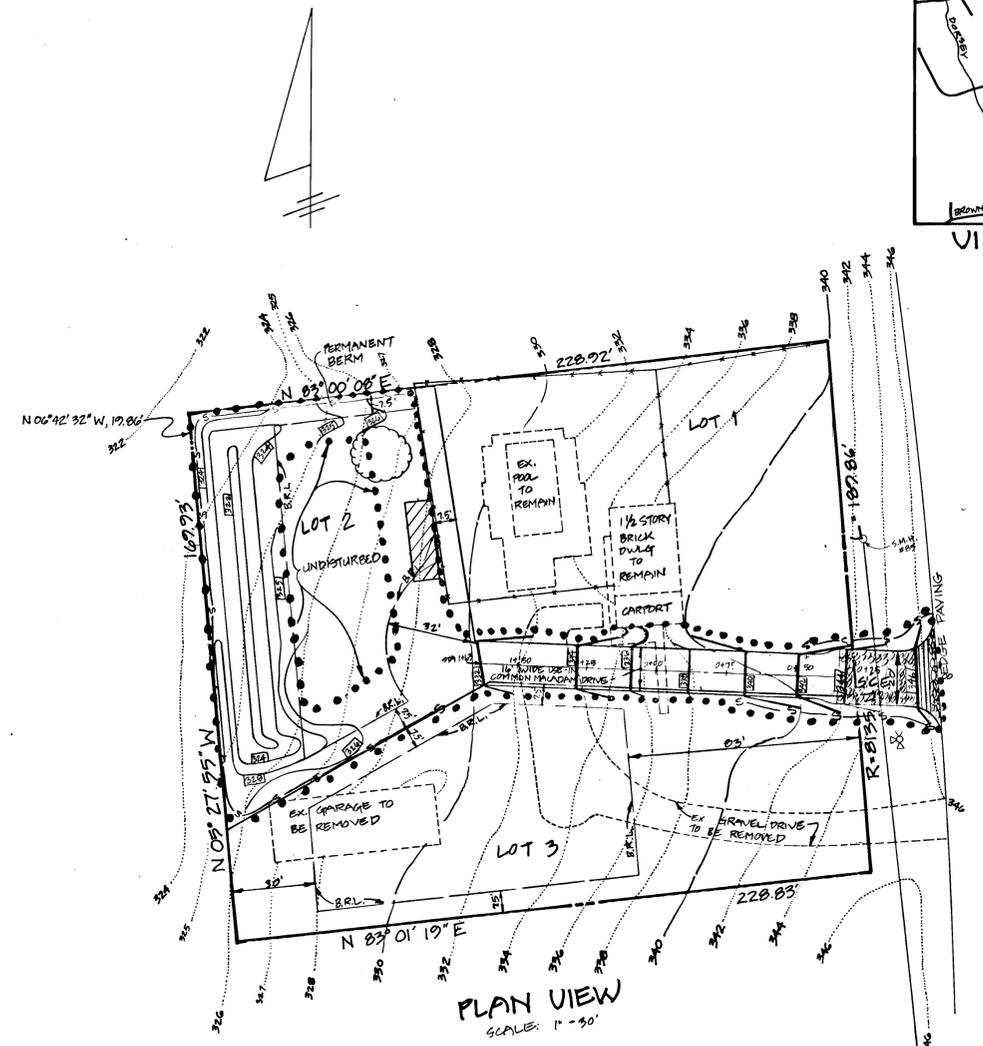
**Soil Amendments:** Apply 2 tons/acre dolomitic limestone and 600 lbs./acre 0-20-0 fertilizer. Harrow or disc lime and fertilizer into upper three inches of soil. At time of seeding, apply 400 lbs./acre of 38-0-0 ureaform fertilizer and 500 lbs./acre of 10-20-20 fertilizer.

- 1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
- 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 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
- 3) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
- 4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- 5) All disturbed areas must be stabilized within the time period specified above in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51) sod (Sec. 54), temporary seeding (Sec. 50 and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- 6) All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- 7) Site Analysis:
 

Total Area of Site	0.99779 Acres
Area Disturbed	0.26820 Acres
Area to be Roofed or Paved	0.06074 Acres
Area to be Vegetatively Stabilized	0.20806 Acres
Total Cut	205 Cu. yds.
Total Fill	205 Cu. yds.
Offsite Waste/Borrow Area Location	N/A
- 8) Any sediment control practice which is disturbed by grading activity or placement of utilities must be repaired on the same day of disturbance.
- 9) Additional sediment control must be provided, if deemed necessary by the Howard County DPW 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) If houses are to be constructed on an "As-Sold" basis, at random, Single Lot Sediment Control as shown below shall be implemented.
- 12) All pipes to be blocked at the end of each day (see detail below).
- 13) The total amount of straw bale dikes/silt fence equals 419 L.F.

**SEQUENCE OF CONSTRUCTION**

1. OBTAIN GRADING PERMIT.
2. CONTRACTOR MUST SUBMIT WRITTEN NOTIFICATION 24 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITY TO THE HOWARD COUNTY SEDIMENT CONTROL SECTION STATING:
  - A. WHEN CONTRACTOR INTENDS TO BEGIN CONSTRUCTION
  - B. SOURCE OF BORROW MATERIAL
  - C. DISPOSAL SITE AREA
  - D. CONTRACTOR'S TENTATIVE CLOSING DATE
3. CLEARING AND GRUBBING FOR THOSE AREAS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS.
4. CONSTRUCTION OF PERIMETER SEDIMENT CONTROL MEASURES.
5. TEMPORARY STABILIZATION TO ADDRESS SEVEN (7) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL CRITICAL SLOPES GREATER THAN THREE (3) HORIZONTAL TO ONE (1) VERTICAL (3:1).
6. PROTECT SITE (CLEARING AND GRUBBING).
7. DESIGNATE STOCKPILE AREAS FOR RELATED TOPSOIL AND RELATED FILL.
8. DESIGNATE CONTRACTOR'S RELATED STAGING AREAS.
9. ROUGH GRADE PROJECT SITE.
10. INSTALL UTILITIES.
11. COMPLETE PROPOSED ROADWAY GRADING.
12. ADDRESS (PERMANENT OR TEMPORARY) STABILIZATION FOR ALL INACTIVE AREAS ON PROJECT SITE TO COMPLY WITH THE FOURTEEN (14) DAYS TO ALL OTHER DISTURBED OR GRADED AREAS ON PROJECT SITE.
13. EXCAVATE FOR PROPOSED BUILDING STRUCTURES AND RELATED FOUNDATIONS.
14. ERECT BUILDING STRUCTURES.
15. CONSTRUCT STORM WATER MANAGEMENT FACILITY.
16. COMPLETE FINE GRADING FOR REMAINING PERMANENT STRUCTURES.
17. FINE GRADE TOTAL PROJECT SITE, LANDSCAPE OR STABILIZE DISTURBED AREAS AS PROPOSED ON SEDIMENT CONTROL PLAN.
18. REMOVE SEDIMENT CONTROLS WITH PRIOR WRITTEN APPROVAL FROM THE HOWARD COUNTY SEDIMENT INSPECTOR WHEN STABILIZATION IS EVIDENT AT PROJECT SITE.
19. FINE GRADE ALL REMAINING AREAS AND STABILIZE AS SPECIFIED BY THE APPROVED SEDIMENT CONTROL PLANS.



**LEGEND**

- STABILIZED CONSTRUCTION ENTRANCE
- SILT FENCE
- LIMIT OF DISTURBANCE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- B.R.L. BUILDING RESTRICTION LINE
- STOCK PILE
- STAGING AREA

**CONSULTANT'S CERTIFICATION**

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

Sayed A. Saadati  
SEYED A. SAADATI PROFESSIONAL ENGR #1473

**DEVELOPER'S CERTIFICATE**

I 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 NATURAL RESOURCES 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.

Robert A. Huffman  
ROBERT A. HUFFMAN

APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING  
 APPROVED: DEPARTMENT OF PUBLIC WORKS

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEET TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

**SHANABERGER & LANE**  
 8726 TOWN & COUNTRY BLVD.  
 SUITE 107  
 ELLICOTT CITY, MARYLAND 21043  
 (301) 461-9563



DESIGNED	DRAWN	CHECKED	DATE	BY NO.	REVISION	DATE
SSS	GLM	SAS	3/4/89			

**OWNER:**  
 MR. ROBERT A. HUFFMAN  
 4800 WATERLOO RD.  
 COLUMBIA, MD 21045

**DEVELOPER:**  
 FALLON DEVELOPMENT CO.  
 2870 LONG LOOK LANE  
 COLUMBIA, MD 21045

**EROSION AND SEDIMENT CONTROL PLAN**  
**HUFFMAN SUBDIVISION**  
 6TH ELECTION DISTRICT  
 HOWARD COUNTY, MD  
 TAX MAP 37 PARCEL 437

SCALE: AS SHOWN  
 SHEET 2  
 OF 2