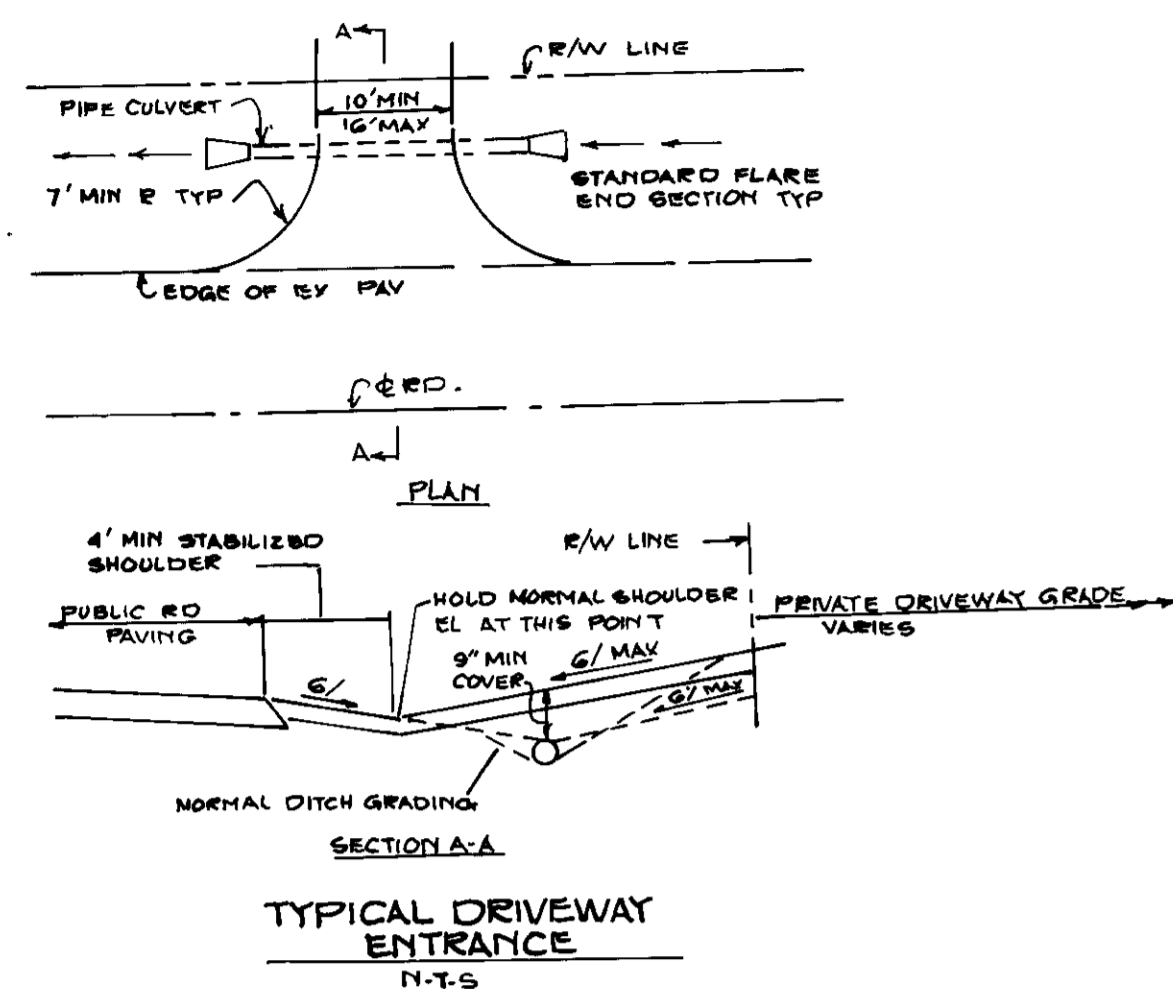
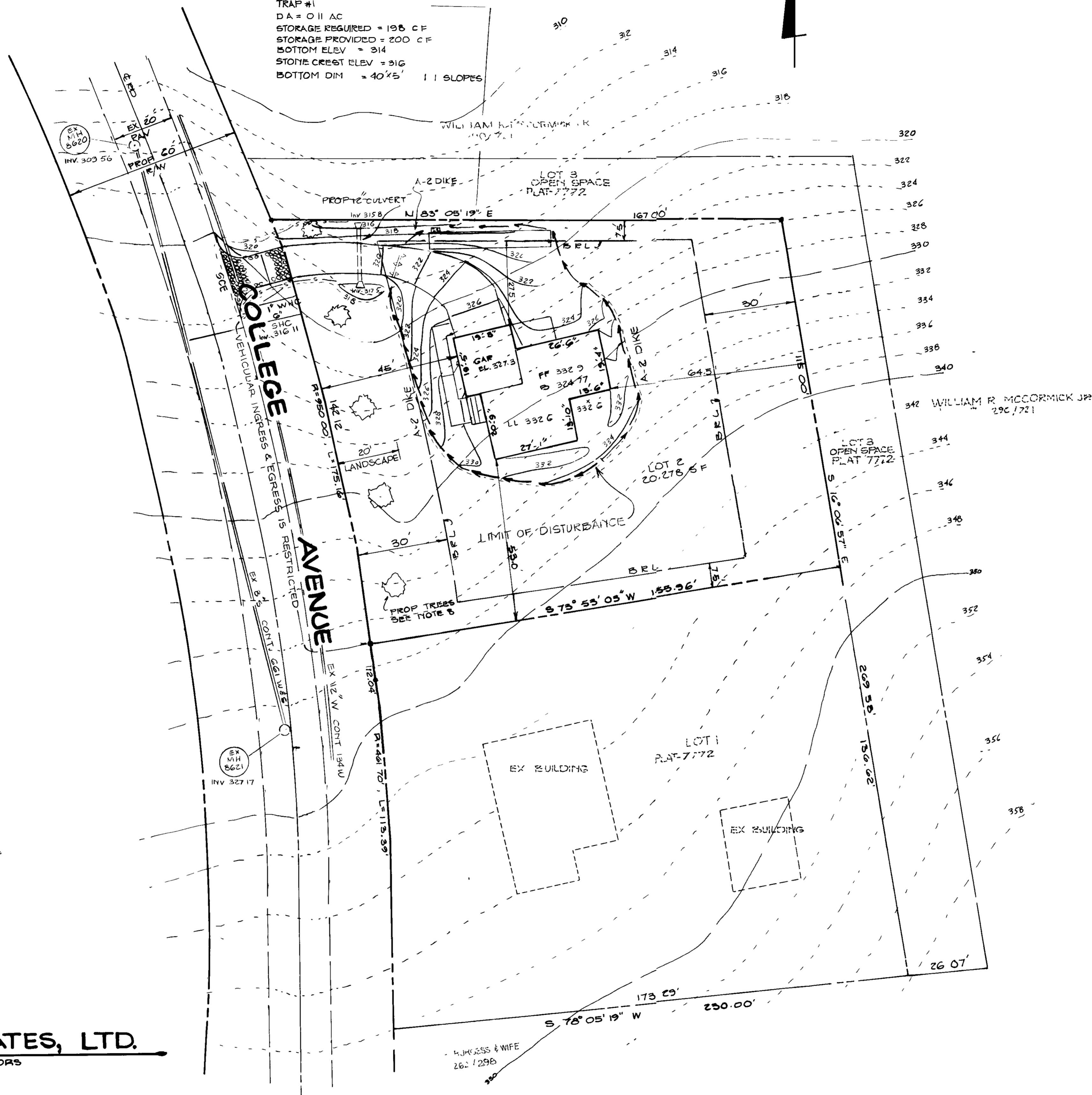


VICINITY MAP

SCALE 1"=1200'



TRAP #1
 DA = 0.11 AC
 STORAGE REQUIRED = 195 CF
 STORAGE PROVIDED = 200 CF
 BOTTOM ELEV = 314
 STONE CREST ELEV = 316
 BOTTOM DIM = 40 1/2' 1:1 SLOPES

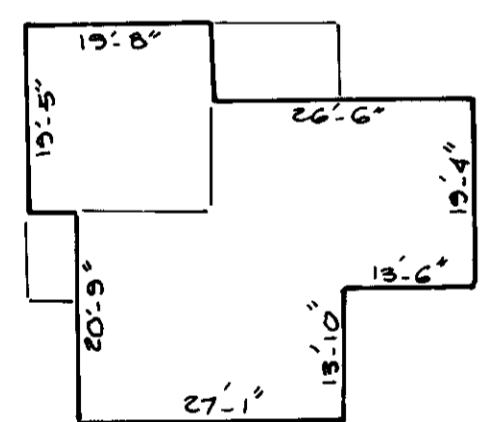
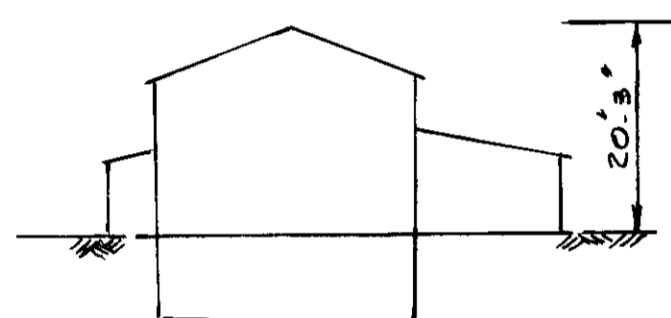


GENERAL NOTES:

- 1- The land included is zoned RED
- 2- Coordinates are based upon traverse controls established for Howard County, and which controls were tied to the Maryland State coordinate system.
- 3- All roads are public and existing.
- 4- Any damage to county owned right of way to be corrected at the owners expense.
- 5- Total area included 0.466 Acres
- 6- Total number of lots: 1
- 7- The contractor or developer shall contact Howard County Construction/ Inspection Division, 24 hours in advance of commencement of work at 792-7272.
- 8- TREES TO BE AT LEAST 2 1/2 INCH CALIPER AT AN AVERAGE OF 30 FEET ON CENTER

LEGEND

- 1- Contour interval 2 FT
- 2- Existing contour
- 3- Proposed contour
- 4- Spot elevation
- 5- Direction of drainage
- 6- Silt fence
- 7- Stabilized construction entrance
- 8- Dike



TYPICAL HOUSE
NO SCALE

APPROVED

9-28-88
J.B.

LORIA, SEDGHI & ASSOCIATES, LTD.

ENGINEERS • SITE PLANNERS • SURVEYORS
 3217 CORPORATE COURT
 ELLICOTT CITY, MD. 21043
 (301) 750-9003

OWNER & DEVELOPER
RICK & KAREN SHELSBY
 12030-C LITTLE PATENT PKWY
 COLUMBIA, MD 21044
 (301) 964-8023

ADDRESS CHART	
LOT No	STREET ADDRESS
2	3991 COLLEGE AVE

APPROVED OFFICE OF PLANNING AND ZONING
 DATE 11.15.87
 PLANNING DIRECTOR
 DATE 11.14.87
 CHIEF DIVISION OF COMMUNITY PLANNING & LAND DEVELOPMENT

APPROVED DEPARTMENT OF PUBLIC WORKS FOR PUBLIC WATER AND SEWER AND STORM DRAINAGE SYSTEMS AND ROADS
 DATE 10.24.88
 DIRECTOR, PUBLIC WORKS
 CHIEF, BUREAU OF ENGINEERING
 SUBDIVISION NAME SEWELL PROPERTY
 SECTION/AREA N/A
 LOT NO 2
 PLAT NO BLOCK NO ZONE TAX/ZONE FLEC DIST CENSUS TR
 WATER CODE F-04 SEWER CODE 1400200

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS
 U.S. SOIL CONSERVATION SERVICE
 DATE 10/11/88
 THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
 APPROVED
 DISTRICT HOWARD SOIL CONSERVATION DISTRICT

ENGINEER'S CERTIFICATE
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOILS CONSERVATION DISTRICT
 APPROVED
 DATE 10/11/88
 SIGNATURE OF ENGINEER
 DATE 8-9-89

DEVELOPER'S CERTIFICATE
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL 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 OR THEIR AUTHORIZED AGENTS AS ARE DEEMED NECESSARY.
 DATE 8/8/88
 SIGNATURE OF DEVELOPER

APPROVED HOWARD COUNTY HEALTH DEPARTMENT FOR PUBLIC WATER AND SEWERAGE SYSTEMS
 DATE 10-31-88
 HEALTH OFFICER

DATE 10-24-88

DATE 10/11/88

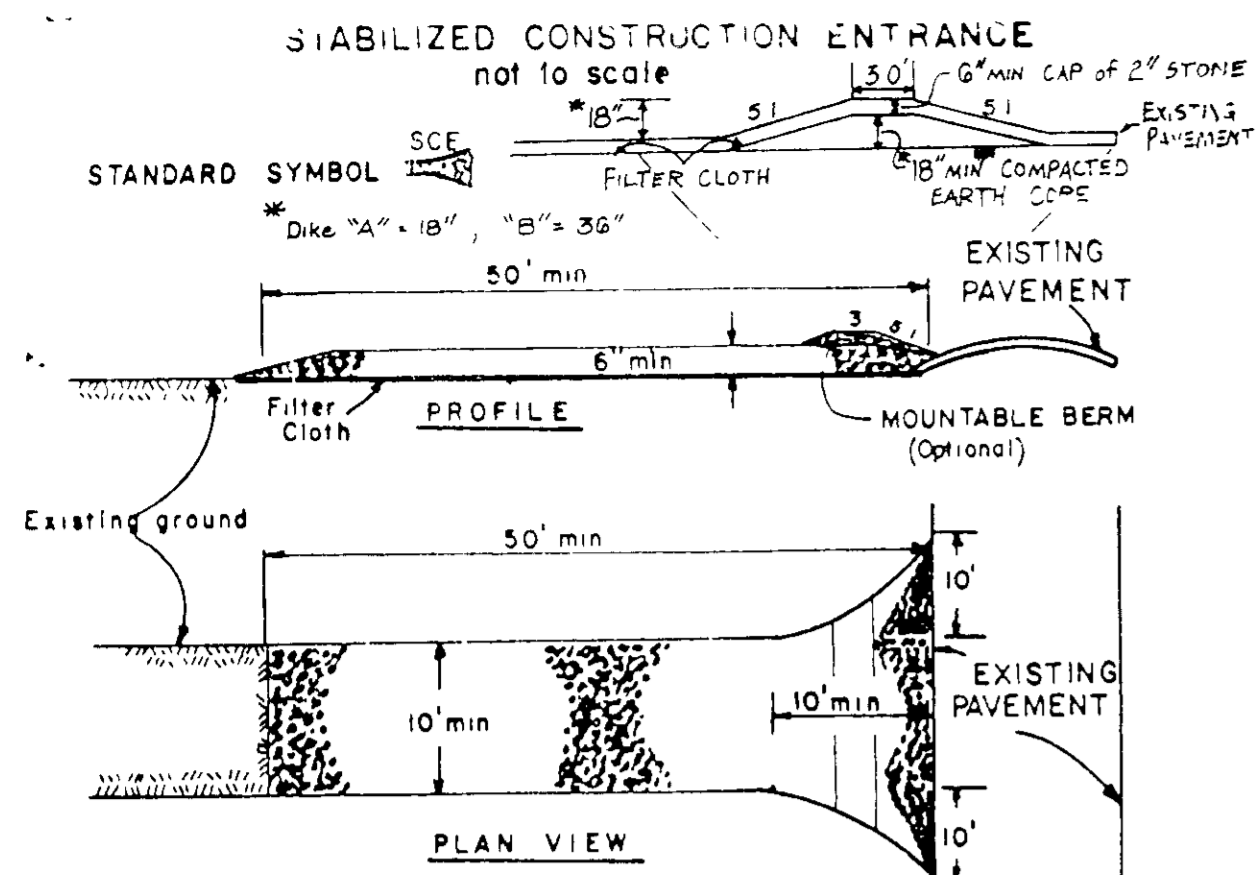
DATE 8-9-89

DATE 8/8/88

SITE DEVELOPMENT PLAN

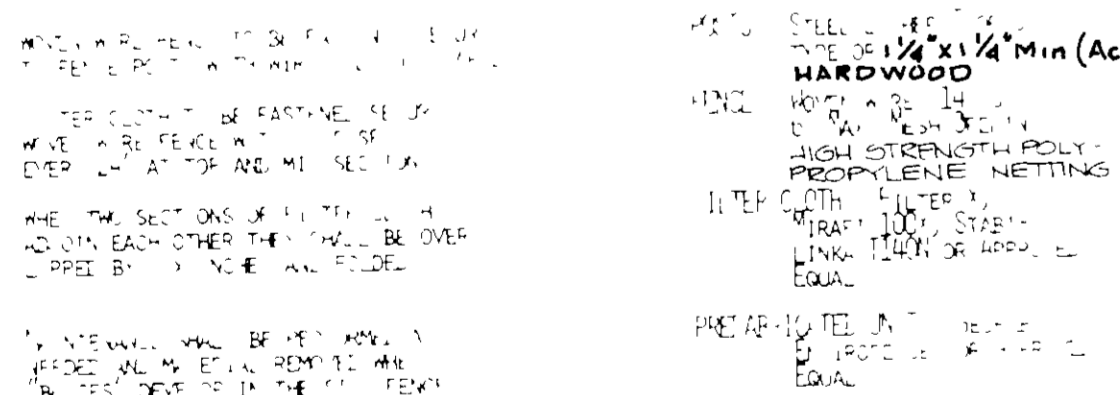
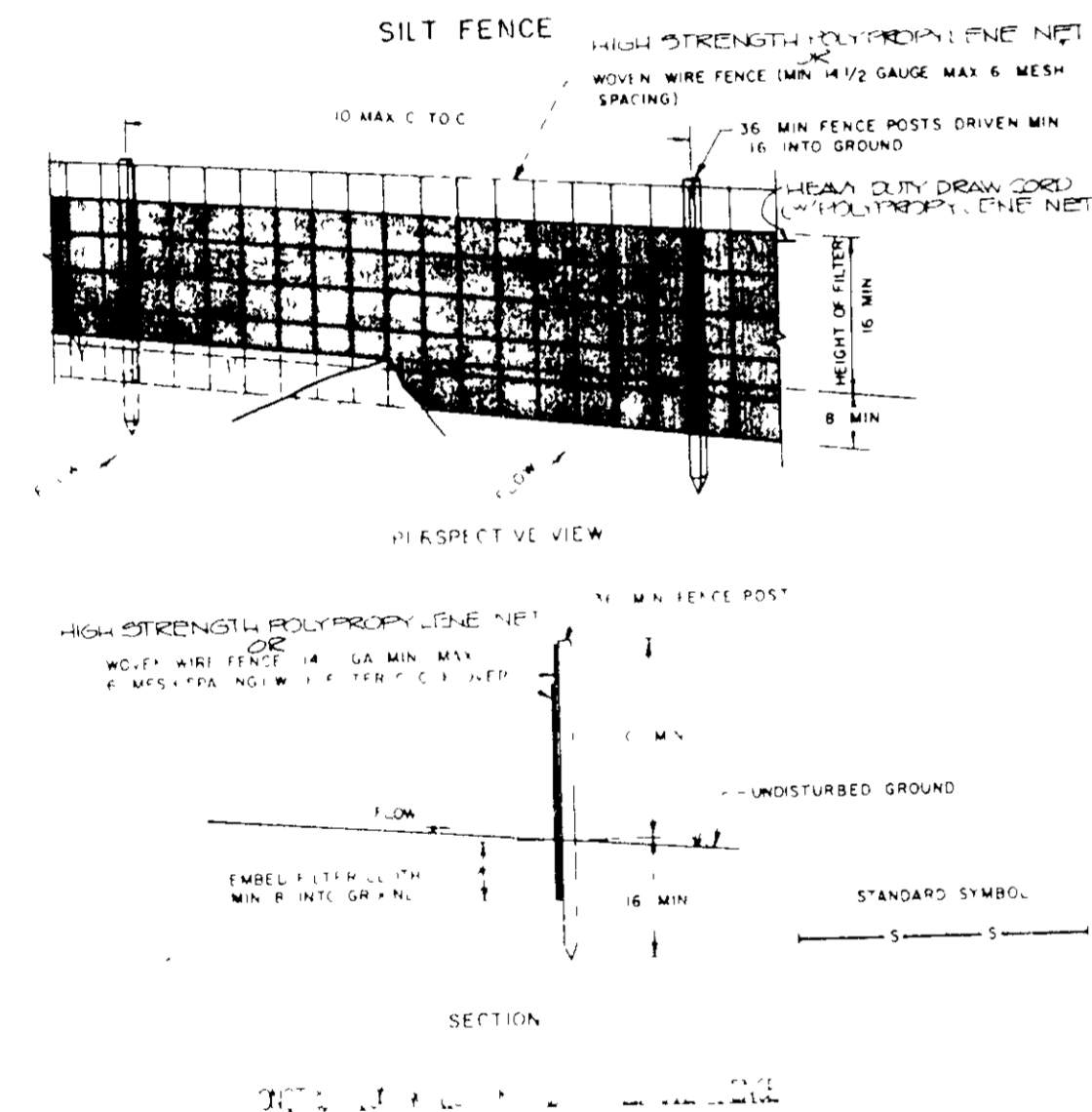
SEWELL PROPERTY

LOT # 2
 TAX MAP 25 PARCEL 296
 2ND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE: 1"=20' DATE: AUG 9, 1988
 SHEET 1 OF 2



CONSTRUCTION SPECIFICATIONS

- Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
- Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
- Thickness - Not less than six (6) inches.
- Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
- Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter will not be required on a single family residence lot.
- Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
- Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
- Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
- Periodic inspection and needed maintenance shall be provided after each rain.



APPLY TO GRADED OR CLEARED AREA NOT SUBJECT TO IMMEDIATE FUTURE DISTURBANCE WHERE A PERMANENT LONG-TERM VEGETATIVE COVER IS NEEDED

Soil Amendments - IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES

- Preferred - Apply 2 tons per acre of 0-10-10 limestone (92 lbs/1000 square ft) and 600 lbs per acre of 10-10-10 fertilizer (34 lbs/1000 sq ft) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs per acre of 0-0-0 ureaform fertilizer (91bs/1000 sq ft).
- Acceptable - Apply 2 tons per acre of 0-10-10 limestone (92 lbs/1000 sq ft) and 1000 lbs per acre of 10-10-10 fertilizer (34 lbs/1000 sq ft) before seeding. Harrow or disk into upper three inches of soil.

Seeding - For the periods March 1 thru April 15, and August 1 thru October 15, seed with 25 lbs per acre of annual ryegrass (2 1/2 lbs/1000 sq ft). For the period May 1 thru July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre of 05 lbs/1000 sq ft of creeping lovegrass. During the period of October 15 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) Sod with 10 lbs per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre of well anchored straw.

Mulching - Apply 1 1/2 to 2 tons per acre (75 to 100 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2 1/2 gal 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) of anchoring.

Maintenance - Inspect all graded areas and make needed repairs, replacements and reseeds.

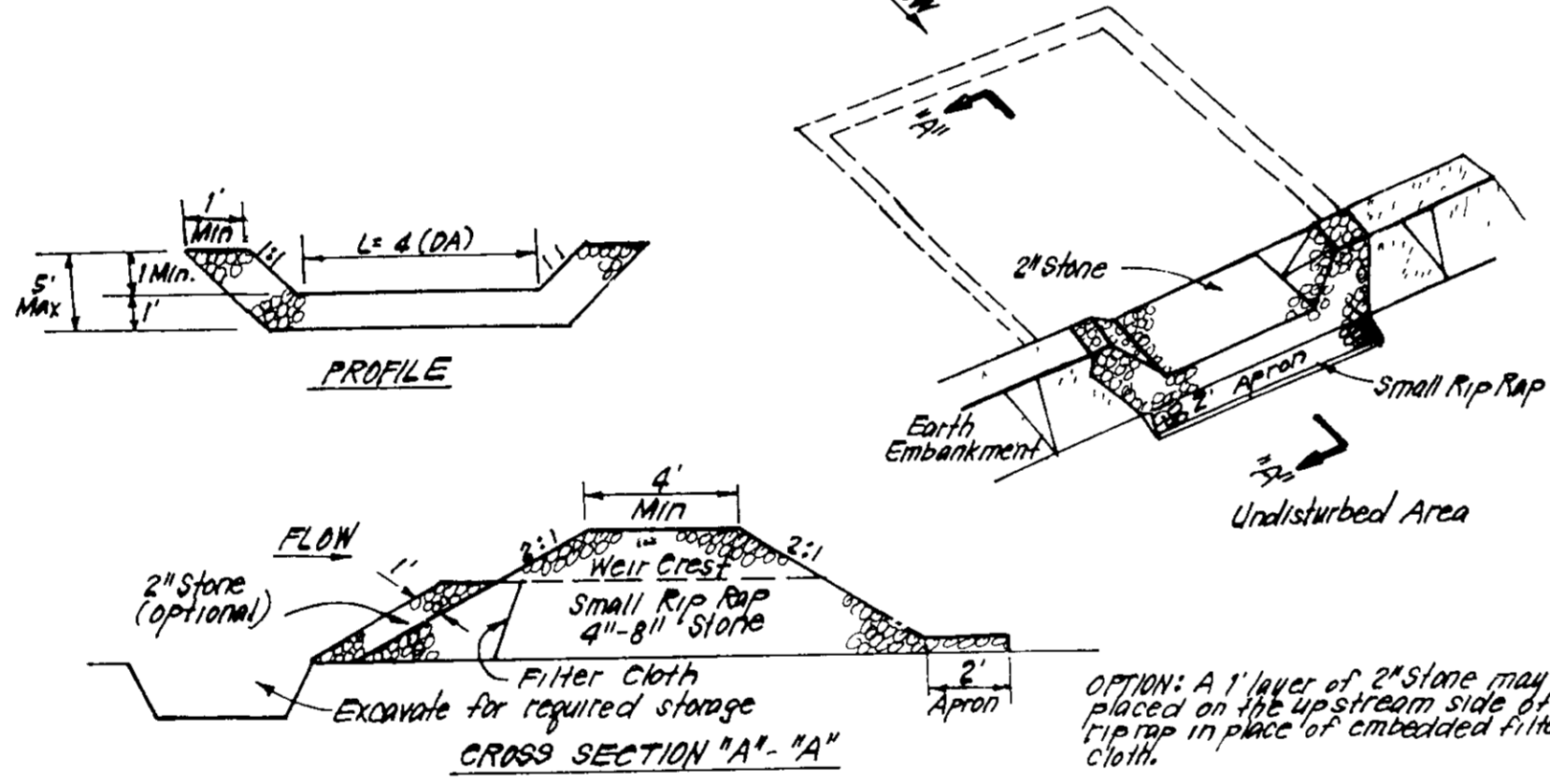
TEMPORARY SEEDING NOTICES
APPLY TO GRADED OR CLEARED AREA LIKELY TO BE REINSTATED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED

Soil Amendments - Apply 60 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 25 lbs per acre of annual ryegrass (2 1/2 lbs/1000 sq ft). For the period May 1 thru August 14, seed with 60 lbs per acre of creeping 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 (75 to 100 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2 1/2 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gal per acre (8 gal/1000 sq ft) of anchoring.

REFER TO THE 1983 MD STANDARD AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED



CONSTRUCTION SPECIFICATIONS:

- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
- The fill material for the embankment shall be free of roots and other woody vegetation as well as over sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by tamping with equipment while it is being constructed.
- All cut and fill slopes shall be 2:1 or flatter.
- The stone used in the outlet shall be small rip rap 4" or larger with 1" thickness of 2" aggregate placed on the up-grade side on the small rip rap or embedded filter cloth in the rip rap.
- Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to the design depth of the trap.
- The structure shall be inspected after each rain and repairs made as needed.
- Construction operations shall be carried out in such a manner that erosion and water pollution is minimized.
- The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.

STONE OUTLET SEDIMENT TRAP (S.O.S.T.) STV

STANDARD AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION WITH SOD

SPECIFICATIONS

- Class of turfgrass sod shall be Maryland or Virginia State Certified, or Maryland or Virginia State approved sod.
 - Sod shall be machine cut to a uniform soil thickness of 3/4 inch, plus or minus 1/4 inch, at the time of cutting. Measurement for thickness shall exclude top growth and thatch.
 - Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
 - Individual pieces of sod shall be cut to the suppliers width and length. Maximum allowable deviation from standard widths and lengths shall be 5 percent. Broken pads and torn or uneven ends will not be acceptable.
 - Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
 - Sod shall be harvested, delivered and installed within a period of 36 hours. Sod not transplanted within this period shall be inspected and approved prior to its installation.
- Site Preparation**
- Fertilizer and lime application rates shall be determined by soil tests. Under unusual circumstances where there is insufficient time for a complete soil test, fertilizer and lime materials may be applied in amounts shown under B, below.

- Prior to sodding, the surface shall be cleared of all trash, debris, and of all roots, brush, wire, grade stakes and other objects that would interfere with planting, fertilizing or maintenance operations.
- Where the soil is acid or composed of heavy clays, ground limestone shall be spread at the rate of 2 tons/acre or 100 pounds per 1,000 square feet. In all soils, 1,000 pounds per acre or 25 pounds per 1,000 square feet of 10-10-10 fertilizer or equivalent shall be uniformly applied and mixed into the top 3 inches of soil with the required lime.
- All areas receiving sod shall be uniformly fine graded. Hard-packed earth shall be scarified prior to placement of sod.

SEDIMENT CONTROL NOTES

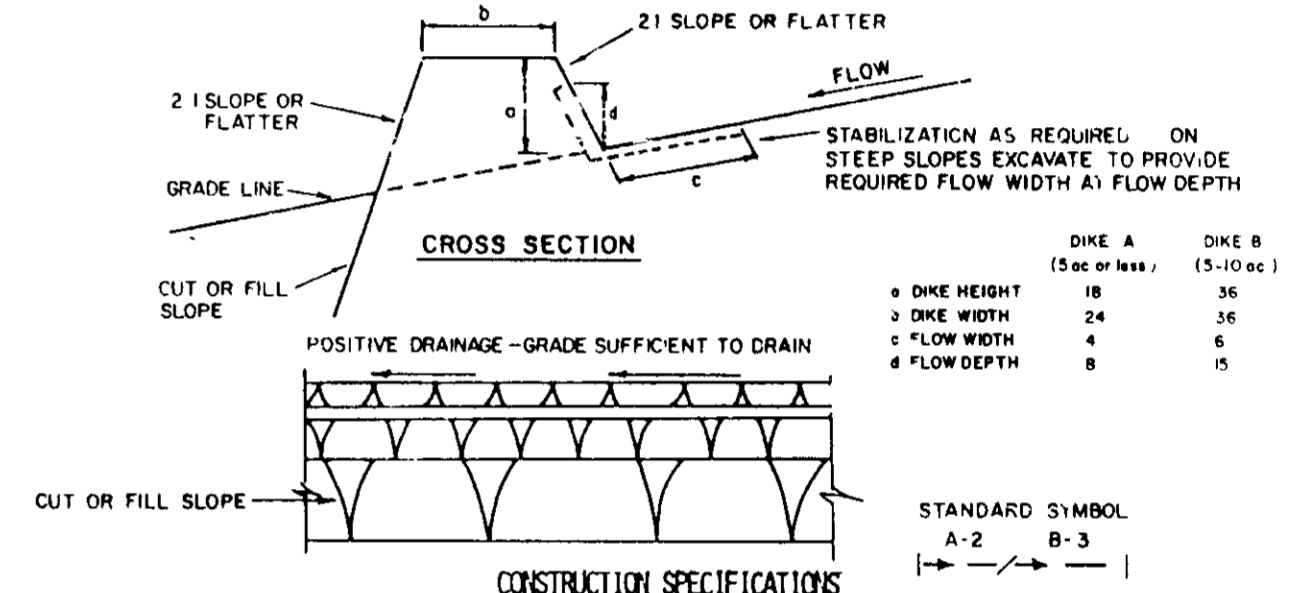
- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (992-2437)
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- 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 as to all other disturbed or graded areas on the project site.
- 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.
- 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. 31) sod (Sec. 34), temporary seedings (Sec. 30) and mulching (Sec. 32). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

Total Area of Site	0.466 Acres
Area Disturbed	0.11 Acres
Area to be roofed or paved	0.06 Acres
Area to be vegetatively stabilized	0.05 Acres
Total cut	102 Cu yds
Total fill	102 Cu yds
Offsite waste/borrow area location	N/A

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 9-28-88

GENERAL NOTES

- Refer to "1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control" for standard details and detailed specifications of each practice specified herein.
 - With the approval of the sediment control inspector, minor field adjustments can and will be made to ensure the control of any sediment. Change in sediment control practices requires prior approval of the sediment control inspector and the Howard County Soil Conservation District.
 - At the end of each working day, all sediment control practices will be inspected and left in operational condition.
 - Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within a) seven calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than 3 horizontal to 1 vertical (3:1) and b) fourteen days as to all other disturbed or graded areas on the project site.
 - Any change to the grading proposed on this plan requires re-submission to Howard County Soil Conservation District for approval.
 - Dust control will be provided for all disturbed areas. Refer to 1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control, pp 601 and 62-62 for acceptable methods and specifications for dust control.
 - Any variation from the sequence of operations on this plan requires prior approval of the sediment control inspector and the County Soil Conservation District prior to the initiation of the change.
 - Excess cut or borrow material shall go to or come from, respectively, a site with an approved sediment control plan.
- The following item may be used as applicable:
- Refer to "Maryland's Guidelines to Waterway Construction" by the Water Resources Administration (WRA), dated January, 1986 for standard details and detailed specifications of each practice specified herein for waterway construction.



- All dikes shall be compacted by earth-moving equipment.
- All dikes shall have positive drainage to an outlet.
- Top width may be wider and side slopes may be flatter if desired to facilitate crossing by construction traffic.
- Field location should be adjusted as needed to utilize a stabilized safe outlet.
- Earth dikes shall have an outlet that functions with a minimum of erosion. Runoff shall be conveyed to a sediment trapping device such as a sediment trap or sediment basin where either the dike channel or the drainage area above the dike are not adequately stabilized.
- Stabilization shall be: (A) in accordance with standard specifications for seed and straw mulch or straw mulch if not in seeding season, (B) flow channel as per the chart below.

TYPE OF TREATMENT	FLOW CHANNEL STABILIZATION	
	DIKE A	DIKE B
1	5-3.0%	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE
4	8.1-20%	LINED RIP-RAP 4-8"

ENGINEER'S DESIGN

A. Stone to be 2 inch stone, or recycled concrete equivalent, in a layer at least 3 inches in thickness and be pressed into the soil with construction equipment.
 B. Rip-rap to be 4-8 inches in a layer at least 3 inches thickness and pressed into the soil.
 C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
 7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

EARTH DIKE

- SEQUENCE OF OPERATION**
- OBTAIN GRADING PERMIT
 - NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO THE START OF CONSTRUCTION
 - CLEAR & GRUB FOR SEDIMENT MEASURES ONLY
 - GRADE FOR SEDIMENT CONTROL MEASURES ONLY
 - INSTALL SEDIMENT CONTROL MEASURES
 - CLEAR & GRUB REMAINING OF SITE
 - FINISH GRADES, TOPSOIL, SEED AREAS IMMEDIATELY
 - AFTER SITE IS STABILIZED & UPON THE APPROVAL OF THE INSPECTOR, REMOVE SEDIMENT CONTROL MEASURES AND CLEAN UP SITE

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

10-31-88

APPROVED FOR HOWARD COUNTY OFFICE OF PLANNING & ZONING

11-15-88

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

10-24-88

10-24-88

Reviewed for Name SCD and meets technical requirements

SIGNATURE DATE

U.S. SOIL CONSERVATION SERVICE

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

Approved DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPT. 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 COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS DEEMED NECESSARY.

R. A. Melby DATE 8/1/88

ENGINEER'S CERTIFICATE

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

Mike Sedghi DATE 8-9-88

LORIA, SEDGHI & ASSOCIATES, LTD.
 ENGINEERS • SITE PLANNERS • SURVEYORS
 3217 CORPORATE COURT
 ELLICOTT CITY, MD 21043
 (301) 750-9003

DESIGNED	SEDIMENT + EROSION CONTROL DETAILS	SCALE	N/A
DRAWN	SEWELL PROPERTY	DRAWING	2 OF 2
CHECKED	TAX MAP 25 PARCEL 296	JOB NO.	
DATE	2ND ELECTION DISTRICT	FILE NO.	
AUG 11, 88	HOWARD COUNTY, MD.		
	SCALE: 1"=20'-DATE: 1/7		