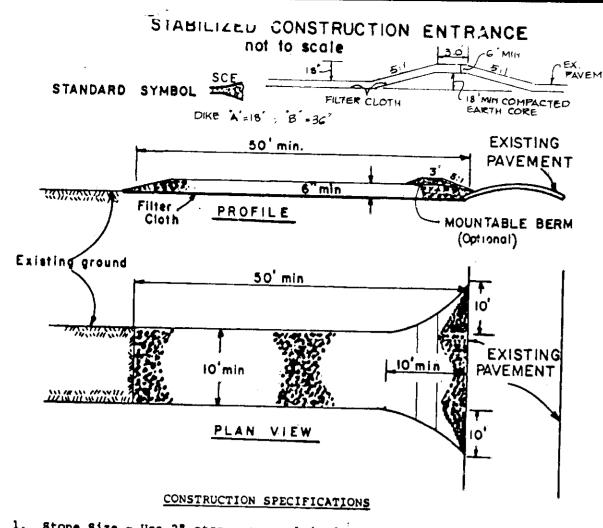




HOWARD COUNTY SOIL MAP# 30

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT COUNTY HEALTH DEFICERY APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND JONINS TOTAL APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND JONINS TOTAL APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND TONINS TOTAL THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION	REVISION BY DESCRIPTION DATE V.S REVISE HOUSE - LOT-5 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENT A PRACTICAL AND WORKABL 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.	PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RES- PONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT	DESIGNED BY: V.S. SEDIMENT CONTROL PLAN CEDAR II SECTION - 1 LOTS 1 TO 7 & 24 TO 28 TAX MAP 43 PARCEL 337 \$ 452 V.S. ATH ELECTION DISTRICT	M. Seden. SCALE: AS SHOWN DRAWING NO. 2 OF 3 DATE 8-01-41
DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. DATE OCCUPANT STATE CHIEF, BUREAU OF ENGINEERING DATE DISTRICT. DISTRICT. DISTRICT. DISTRICT. DISTRICT. DISTRICT. DISTRICT.	M 10-3-90 SIGNATURE OF ENGINEER DATE	THAMES INVESTMENT GROUP, LTD. by Bany Wessen Pass. SIGNATURE OF DEVELOPER DATE	DEVELOPER THAMES INVESTMENT GROUP LTD. 3701 COURT HOUSE DR. ELLICOTT CITY, MD. 21043 SDP-91-21	



4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.

5. 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. 6. 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 trup sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.

8. 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

9. Periodic inspection and needed maintenance shall be provided after each rain.

WOVEN WIRE FENCE (MIN. 14 1/2 GAUGE, MAX. 6"MESH

POSTS: STEEL EITHER T OR U

FENCE: HOVEN WINE, 14: GA. 6" MAX. MEGH OPENING

FILTER CLOTH: FILTER X. MIRAFI 100X, STABI-

PREFABRICATED UNIT: GEOFAB.

INVIROFENCE, OR APPROVED

TYPE OR 14 X 14 MIN (ACTUAL)

—36" MIN. FENCE POSTS, DRIVEN MIN

HEAVY DUTY DRAW CORD

SILT FENCE

PERSPECTIVE VIEW

SECTION

CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

IO MAX. C. TO.C.

HIGH STRENGTH POLYPROPYLENE NET

EMBED FILTER CLOTH MIN. 8" INTO GROUND --

. WOVEN WIRE FENCE TO DE FASTENED SECURELY

2. FILTER CLOTH TO BE FASTENED SECURELY TO WOMEN WIRE FENCE WITH TIES SPACED EVERY 24" AT JOP AND MID SECTION.

MHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-

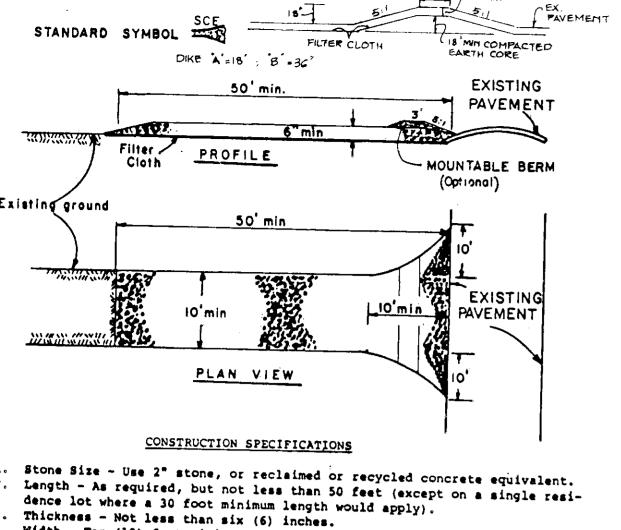
MAINTENANCE SHALL BE PERFORMED AS

NEEDED AND MATERIAL REMOVED WHEN DULGES DEVELOP IN THE SILT FENCE.

SIX INCHES AND FOLDED.

TO FENCE POSTS WITH WIRE TIES OR STAPLES

OR WOVEN WIRE FENCE (14 /2 GA. MIN. MAX.



21 SLOPE OR FLATTER -STABILIZATION AS REQUIRED. ON STEEP SLOPES EXCAVATE TO PROVIDE REQUIRED FLOW WIDTH AT FLOW DEPTH GRADE LINE CROSS SECTION DIKE A DIKE B CUT OR FILL -(5 oc. or less) (5-10 oc.) POSITIVE DRAINAGE-GRADE SUFFICIENT TO DRAIN AAAAAA CUT OR FILL SLOPE -STANDARD SYMBOL CONSTRUCTION SPECIFICATIONS

EARTH DIKE

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, PUNOFF 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

		FLOW CHANNEL STABILIZATION	
TYPE C IREAIME	F CHANNEL NI GRADE	DIKE A	DIKE B
1	.5-3 .07	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5 <u>.0%</u>	SEED AND STRAW MULCH	SEED USING JUTE, OR EXCELSION; SOD; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD; 2" STONE	LINED RIP-RAP 4-8"
4	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING DESIGN
A. S.	TONE TO BE 2 INCH STONE, O WCHES IN THICKNESS AND BE	R RECYCLED CONCRETE EQUIVALENT,	*** * * * * * * * * * * * * * * * * * *

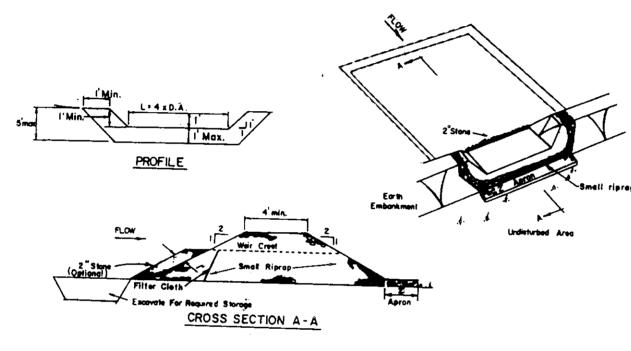
INCHES IN THICKNESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.

B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL:

(). APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.

(). PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

STONE OUTLET SEDIMENT TRAP T



OPTION: A one foot layer of 2" stone may be placed on the upstream side of the riprap in

CONSTRUCTION SPECIFICATIONS FOR ST-V 1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root

2. 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 traversing with equipment while it is being constructed.

All cut and fill slopes shall be 2:1 or flatter.

4. The stone used in the outlet shall be small riprap 4"-8" along with a 1' thickness of 2" aggregate placed on the up-grade side on the small riprap of embedded filter cloth in the

5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to a the design depth of the trap.

6. The structure shall be inspected after each rain and repairs made as needed.

7. Construction operations shall be carried out in such a manner than erosion and water

8. The structure shell be removed and the area stabilized when the drainage area has been

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, disking or other acceptable means before seeding, if not previously loosened. Soil Amendments: In lieu of soil test recommendations, use one of the following

1) Preferred -- Apply 2 tons per acres 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 disk into upper three inches of soil. At 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 (92 lbs/1000 sq ft) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sq. ft) before seeding. Harrow of disk 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 1bs/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 or 218 galions 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

Maintenance -- Inspect all seeded areas and make needed repairs, replacements and

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative

Seedbed preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

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 October 15, seed with 2-1/2 bushel 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.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

GENERAL NOTES

(1) Refer to "1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control for standard details and detailed specifications of each practice specified herein.

(2) With the approval of the sediment control inspector, minor field adjustments can and will be made to insure the control of any sediment. Changes in sediment control practices require prior approval of the sediment control inspector and the HOWARD County Soil Conservation

(3) At the end of each working day, all sediment control practices will be inspected and left in operational condition.

(4) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: (a) seven calendar days as to the surface of all perimeter controls, dikes, water, 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.

(5) Any change to the grading proposed on this plan requires re-submission to HOWARD County Soil Conservation District for approval.

(6) Dust control will be provided for all disturbed areas. Refer to 1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control, pp 62.01 and 62.02 for acceptable methods and specifications for dust control.

(7) Any variation from the sequence of operations stated on this plan requires the approval of the sediment control inspector and the County Soil Conservation District prior

to the initiation of the change. (8) 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 uses as applicable:

(9) 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.

STANDARDS AND SPECIFICATIONS 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 at 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%. 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.

6. 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

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 uniformily fine graded. Hard-packed earth shall be scarefied prior to placement of sod.

SEDIMENT CONTROL NOTES

(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 SOIL 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) and (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.

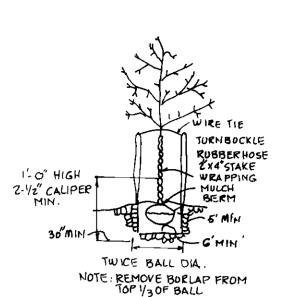
(7) Site Analysis: Total Area of Site Area Disturbed Area to be roofed or paved 032 Acres Area to be roofed or paved <u>0.33</u> Acres
Area to be vegetatively stabilized 1.62 Acres 600 Total Fill Cu. Yds Offsite waste/borrow area location

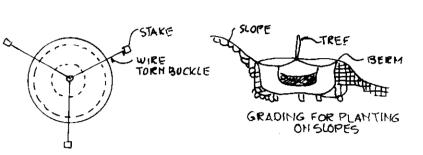
(8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.

(9) Additional sediment 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) The total amount of straw bale/dikes silt fence equals ________L.F.





TREE PLANTING. N. T. S

STAKING DETAIL

THE CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING. FINAL LOCATIONS OF TREES MAY BE ADJUSTED SLIGHTLY TO ACCOMODATE FIELD CONDITIONS. PLANTING PROCEDURES SHALL COMPLY WITH LANDSCAPE SPECIFICATIONS FOR BALTIMORE - WASHINGTON METROPOLITAN AREAS. SUBSTITUTION TO THE ABOVE SPECIES MAY BE PERMITTED, PROVIDED THAT THE PLANTING IS IN ACCORDANCE WITH THE STREET TREE AND LANDSCAPE REQUIREMENTS AS SPECIFIED IN SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS.

DENOTES APPROXIMATE LOCATION OF ACER SACCHARUM (SUGAR MAPLE) 2 1/2" CALIPER.

QUANTITES

M. Sodahi

Some mord us 9-13-91 DATE APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND CHIEF DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT.

CHIEF, BUREAU OF ENGINEERING

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. & amen 9/10/91 DIRECTOR, DATE Wissia & Rich 9-9-91

SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT

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

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION

DISTRICT AND MEETS TECHNICAL REQUIREMENTS NUMBER REVISION DATE

ENGINEER'S CERTIFICATE

HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENT 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 CONSERVA-TION DISTRICT

Mike Seden 10-3-40 SIGNATURE OF ENGINEER DATE DEVELOPER'S CERTIFICATE

1/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 RES-PONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CEPTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT, I ALSO AUTHORIZE PERIODIC ONSITE INSPECTOR BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS AS DEEMED NECESSARY.

THAMES INVESTMENT GROUP, LTD.

by Barry Wasanan PRES. SIGNATURE OF DEVELOPER DATE

SEDGHI & ASSOCIATES, LTD. Civil Engineers - Site Planners - Surveyors 3217 Corporate Court Ellicott City, MD 21043

(301) 750-9003 SEDIMENT CONTROL DETAIL CEDAR II , SECTION I

LOTS 1 TO 7 & 24 TO 28 TAX MAP 43 , PARCEL 337 & 452 6TH ELECTION DISTRICT HOWARD COUNTY, MD. DATE: 8-01-41 SHEET 3 OF 3

DEVELOPER THAMES INVESTMENT GROUP LTD. 3701 COURT HOUSE DR. ELLICOTT CITY, MD., 21043