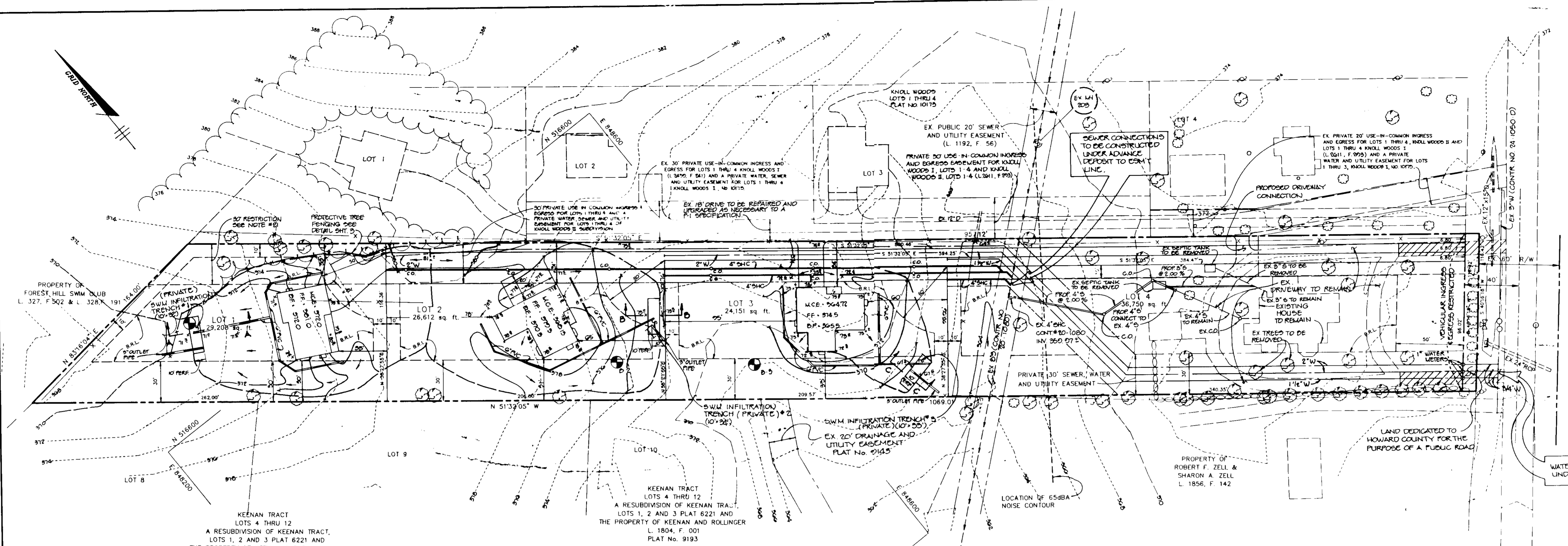


VICINITY MAP
SCALE: 1"=100'

SHEET INDEX	
1	SITE DEVELOPMENT PLAN
2	GRADING AND SEDIMENT CONTROL PLAN
3	PROFILE AND DETAIL SHEET

NOTE: THE EXISTING DRIVEWAY ENTRANCES ONTO OLD COLUMBIA ROAD FOR LOT 4 ARE TO BE ABANDONED UPON CONNECTION OF DRIVEWAY TO KNOLL WOODS II COMMON DRIVE. DRIVEWAYS SHOWN TO BE REMOVED.



SITE ANALYSIS

AREA OF PARCEL	2.706 AC. (117,873.4 SF.)
ZONING	R-20
PROPOSED USE	SINGLE FAMILY DETACHED

PLAN
SCALE: 1"=40'

GENERAL NOTES

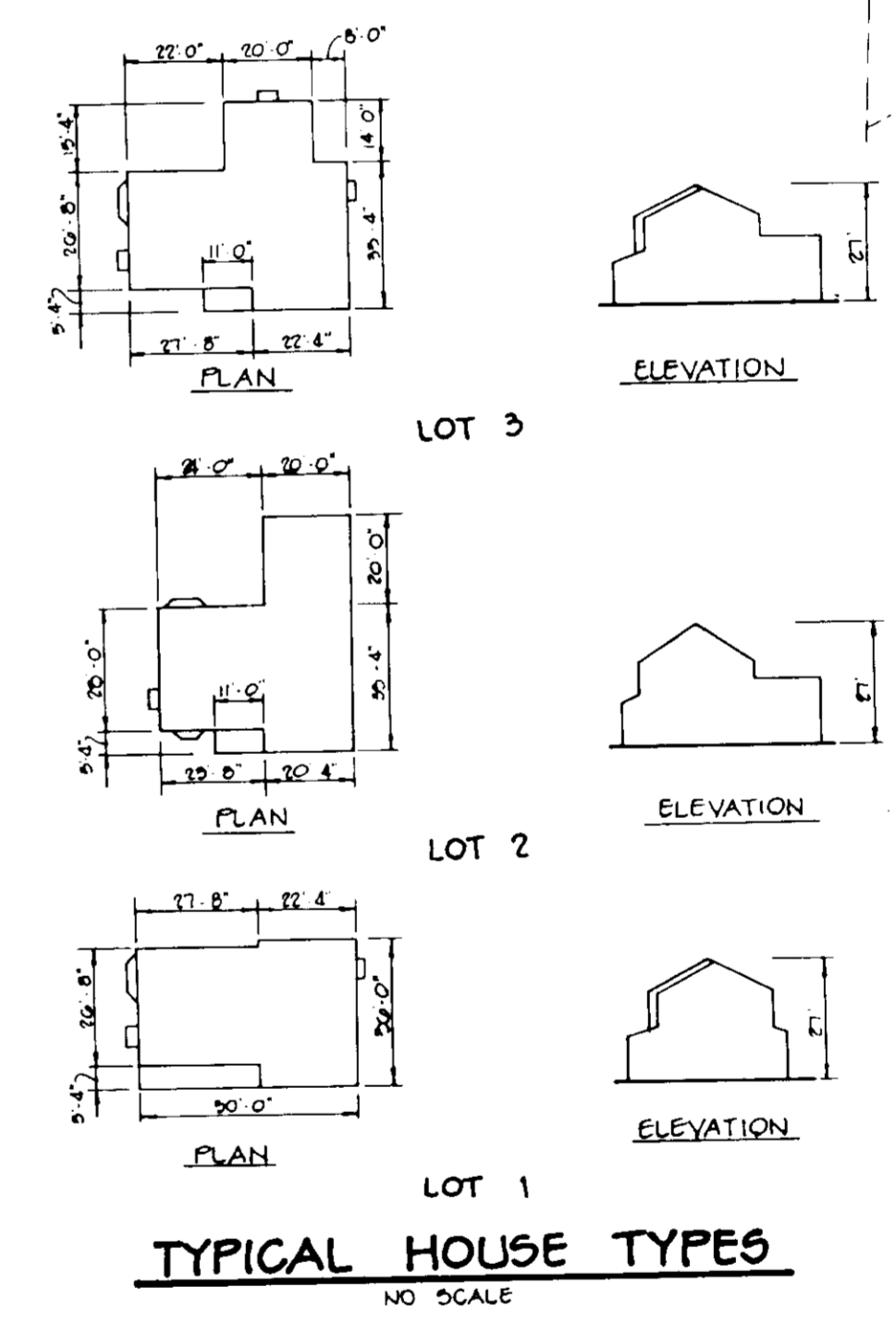
- ALL WATER LINES SHALL BE CONSTRUCTED A MINIMUM OF 42" COVER BELOW FINISHED GRADE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS M.S.H.A. STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FROM BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS TO VERIFY THEIR LOCATION AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF LOCATION OF UTILITIES IS OTHER THAN SHOWN.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF CONSTRUCTION INSPECTION AT (410) 915-1800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS:
 MISS UTILITY 1-800-257-7777
 CAP TELEPHONE COMPANY 726-8978
 HOWARD COUNTY BUREAU OF UTILITIES 313-4800
 AT&T CABLE LOCATION DIVISION 845-3553
 BALTIMORE GAS & ELECTRIC COMPANY 885-0123
 STATE HIGHWAY ADMINISTRATION 531-5533
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.
- PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- NO PIPE SHALL BE LAD UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT TO SURFACE.
- TOPG. TAKEN FROM FIELD RUN SURVEY DATED MAR. 1992 BY RIEMER MUEGGE AND ASSOCIATES, INC. CONTOURS SHOWN AT 2 FOOT INTERVAL.
- VERTICAL CONTROL ESTABLISHED USING H.D. CO. MONUMENT #2442003 & #2442002. HORIZONTAL CONTROL ESTABLISHED FROM MARYLAND STATE COORDINATE SYSTEM.
- UNLESS OTHERWISE NOTED ON PLAN, TREES ARE TO BE PRESERVED.
- ALL STORM DRAIN PIPE BEDDING SHALL BE AS SHOWN IN DETAIL 02.01 (TRENCH IN ROCK OR TRENCH IN EARTH) AS DETERMINED BY FIELD CONDITIONS) IN VOL. IV OF HOWARD COUNTY DESIGN MANUAL, UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR AS SHOWN ON THE DRAWINGS.
- THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR RIGHTS-OF-WAY THAT MAY BE REQUIRED FOR THE SEDIMENT AND EROSION CONTROL PRACTICES, STORMWATER MANAGEMENT PRACTICES AND THE DISBURSE OF STORMWATER OVER OR ACROSS ADJACENT OR DOMESTIC PROPERTIES INCLUDED IN THIS PLAN. HE IS ALSO RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS AND/OR WORK ON ADJACENT PROPERTIES INCLUDED IN THIS PLAN.
- STORMWATER MANAGEMENT FOR THIS DEVELOPMENT IS PROVIDED BY INFILTRATION TRENCHES. THE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE LOT OWNER.
- W.P. 02-155 IS A WAIVER OF SECTION 16.115 (b)(2) TO PROVIDE (5) G.B. WOOD PIPES AND SECTION 16.115 (c)(1) TO PROVIDE (3) ADJACENT PIPES. THE WAIVER WAS APPROVED APRIL 15, 1992.
- ALL ON SITE ROADWAYS ARE PRIVATE.
- THE 30' DETACK SHOWN ALONG NORTHEASTWEST AND SOUTHWEST PROPERTY LINES ARE AS PER COVENANTS REFERRED TO IN A DEED DATED MARCH 11, 1925 AND RECORDED AMONG THE LAND RECORDS OF HOWARD COUNTY, MARYLAND IN LIBER 123, FOLIO 286, WAS GRANTED AND CONVEYED BY EDWARD T. CLARK AND ADALIDE H. CLARK UNTO WILLIAM S. HODGES AND MATILDA GRIFFITH HODGES, HIS WIFE.

MINIMUM LOT SIZE TABULATION

LOT NO.	GROSS AREA	MINUS FLOORPLAN/25% STEEP SLOPES	MINUS PIPE/SEWER AREA	SUBTOTAL AREA	MINUS CREDIT FOR GREASED STREET SLOPES (NOT TO EXCEED AREA OF GREASED STREET SLOPES)	MINIMUM LOT AREA
1	20,208	0	2,444	17,764	0	17,764
2	20,612	0	4,042	16,570	0	16,570
3	24,151	0	2,915	21,236	0	21,236
4	30,750	0	0	30,750	0	30,750

LEGEND

- DRIVEWAY ON LOT 4 TO BE REMOVED
 - DRAINAGE AREA LINE
- NOTE: CONTRACTOR TO REPAIR/REPLACE ANY EXISTING DRAIN TILE ENCOUNTERED DURING CONSTRUCTION AS NECESSARY.



TYPICAL HOUSE TYPES
NO SCALE

ADDRESS CHART

LOT NUMBER	STREET ADDRESS
1	4301 COLUMBIA ROAD
2	4302 COLUMBIA ROAD
3	4303 COLUMBIA ROAD
4	4304 COLUMBIA ROAD

SUBDIVISION NAME -	KNOLL WOODS II	PARCEL -	307
PLAT # -	10466	TAX MAP NO. -	24
WATER CODE -	F00	SEWER CODE -	5750601

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
 COUNTY HEALTH OFFICER: [Signature] 9-2-92 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 DIRECTOR: [Signature] 9/15/92 DATE
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT: [Signature] 9/14/92 DATE

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
 DIRECTOR: [Signature] 9-28-92 DATE
 CHIEF, BUREAU OF ENGINEERING: [Signature] 9-28-92 DATE

2-16-92 2 REVISED SIZE OF INFILTRATION TRENCHES
 10-16-92 1 REVISED SEWER CONNECTION TO EX. HOUSE
 DATE NO. REVISION

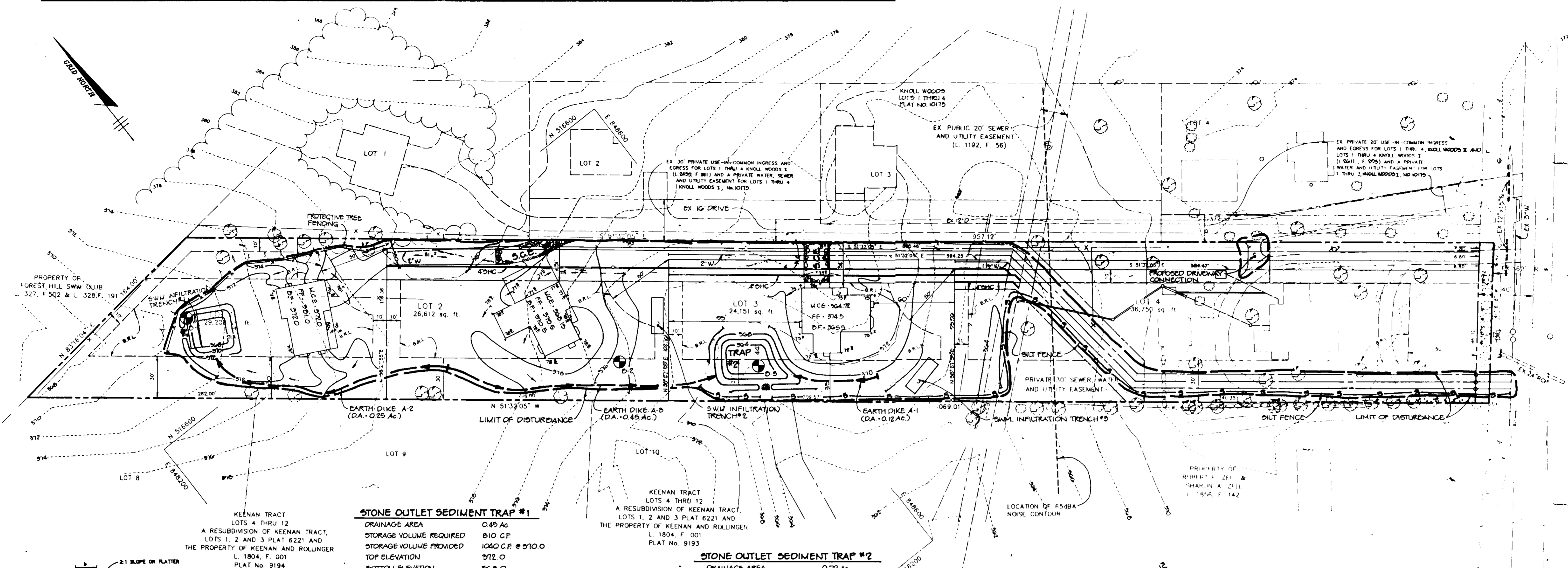
OWNER / DEVELOPER
 JACQUELINE LORD
 60 JAMES H. SELFREDGE BUILDERS, INC.
 8131 DORSEY RUN ROAD
 JESSUP, MARYLAND 20794

PROJECT
KNOLL WOODS II
 LOTS 1 THRU 4
 AREA TAX MAP NO. 24 PARCEL 307 ZONING R-20
 2nd ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
SITE DEVELOPMENT PLAN

RIEMER MUEGGE & ASSOCIATES, INC.
 A Land Planning, Engineering and Consulting Firm
 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045
 410-997-8900 FAX: 410-997-9282

DATE: F-02-150 W.P. 02-155
 DESIGNED BY: CJR
 DRAWN BY: IAM
 PROJECT NO: 70315
 DATE: MAY 15, 1992
 SCALE: AS SHOWN
 DRAWING NO. 1 OF 3



- 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 (892-2437).
 - All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in accordance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL.
 - Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within (a) 7 calendar days for all permanent sediment control structures, dikes, earth dikes, and slopes greater than 3:1; (b) 14 days for all other disturbed or graded areas on the project site.
 - All sediment traps/basins must be fenced and warning signs posted around the perimeter in accordance with the 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 AND EROSION CONTROL, for permanent seedings (Sec. 81) and (Sec. 84), temporary seedings (Sec. 50) and mulching (Sec. 32). Temporary stabilization with mulch alone can only be done when recommended seeding rates 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:

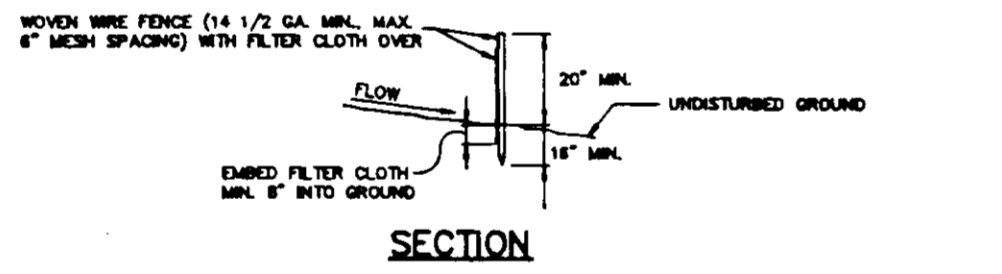
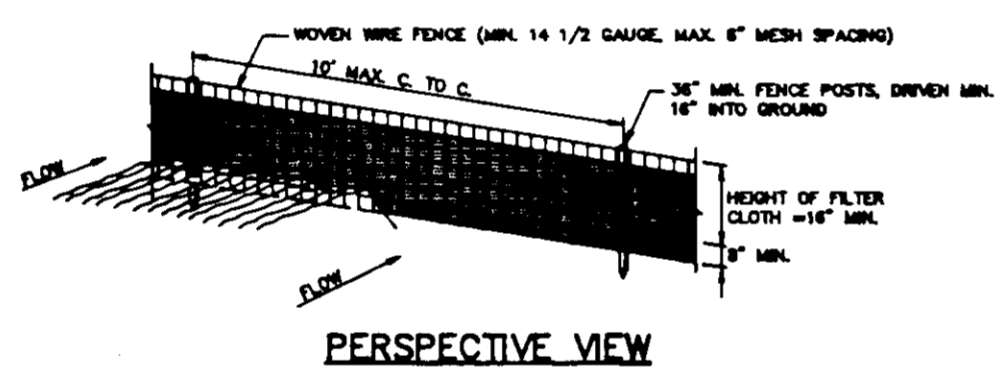
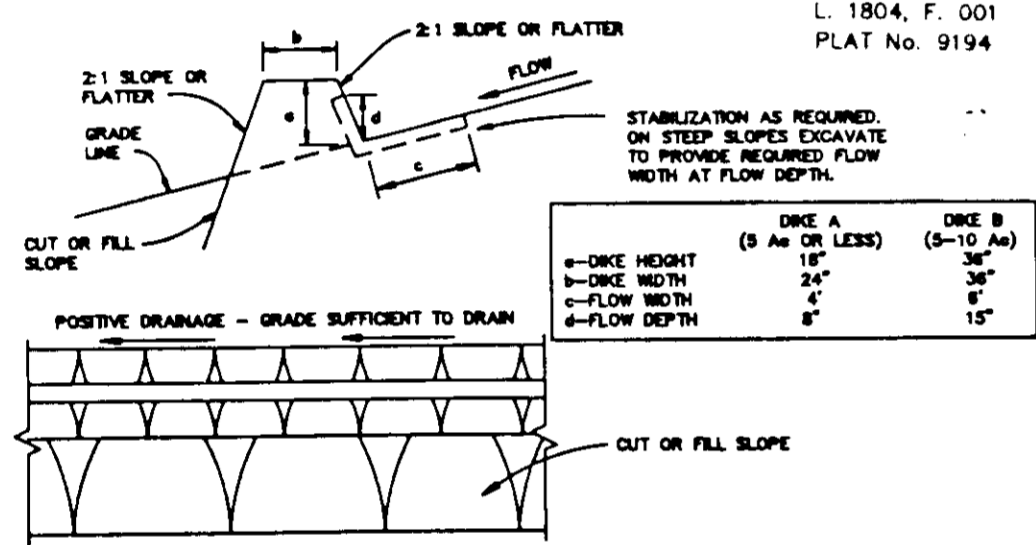
Total Area of Site	2,700	sq. ft.
Area to be disturbed	1,000	sq. ft.
Area to be seeded or planted	1,000	sq. ft.
Area to be vegetatively stabilized	1,000	sq. ft.
Total Dist.	1,000	sq. ft.
Total Pl.	1,000	sq. ft.
 - Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
 - Additional sediment controls must be provided, if deemed necessary by the Howard County Department of Public Works Sediment Control Inspector.
 - The grading will begin only after all permanent sediment control measures have been installed and are in a functioning condition.
 - Sediment will be removed from traps when its depth reaches clean out elevation shown on the plans.
 - Out and fill quantities provided under site analysis do not represent bid quantities. These quantities are the difference between proposed structural fill or embankment material, less the quantity of material to be removed from the site, and the quantity of material to be placed on the site. The contractor shall determine actual quantities and quantities which may affect the work.

STONE OUTLET SEDIMENT TRAP #1

DRAINAGE AREA	0.45 AC
STORAGE VOLUME REQUIRED	810 CF
STORAGE VOLUME PROVIDED	1040 CF @ 271.0
TOP ELEVATION	272.0
BOTTOM ELEVATION	266.0
CREST ELEVATION	271.0
CREST WIDTH	9'
CLEANOUT ELEVATION	266.0
DEPTH	2'

STONE OUTLET SEDIMENT TRAP #2

DRAINAGE AREA	0.72 AC
STORAGE VOLUME REQUIRED	1200 CF
STORAGE VOLUME PROVIDED	1710 CF @ 266.0
TOP ELEVATION	266.0
BOTTOM ELEVATION	264.0
CREST ELEVATION	267.0
CREST WIDTH	9'
CLEANOUT ELEVATION	266.0
DEPTH	2'



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- Posts shall be spaced to be installed according to have posts with 4" dia. or 2" dia. posts.
- Filter cloth to be installed according to have posts with 4" dia. or 2" dia. posts.
- When the installation of filter cloth is completed, the filter cloth shall be supported by the posts and folded.
- Maintenance shall be performed on needed and material removed when "blowup" develops in the filter.

POSTS: Steel, 2" or 4" U type or 2" hardwood.

FENCE: Heavy duty, 14 GA. 2' high, mesh opening.

FILTER CLOTH: Fibre 2, 1000, 1000, 1000, 1000 or approved equal.

PREFABRICATED UNIT: Geotex, Entrenchment or approved equal.



CONSTRUCTION SPECIFICATIONS

- 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.
- DIKE LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
- EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF PROBLEMS. 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	CHANNEL GRADE	DIKE A (5' OR LESS)	DIKE B (5'-10' MAX)
1	0.5-1.0%	SEED & STRAW MULCH	SEED & STRAW MULCH
2	3.1-5.0%	SEED & STRAW MULCH	SEED USING ATE, OR EXCELLENOR, 500; 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOG; 2" STONE	LINED REPAIR 4-6" STONE
4	8.1-20%	LINED REPAIR 4-6" STONE	ENGINEERED DESIGN

SEED 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.

REPAIR TO BE 4-8 INCHES IN A LAYER AT LEAST 3 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.



SEQUENCE OF CONSTRUCTION

- OBTAIN A GRADING PERMIT.
- INSTALL STABILIZED CONSTRUCTION ENTRANCES, SILT FENCE, EARTH DIKE, STONE OUTLET SEDIMENT TRAPS #1 AND #2 AND PROTECTIVE TREE FENCINGS, AS SHOWN (CONVD)
- BEGIN ROUGH GRADING AND HOUSE CONSTRUCTION.
- INSTALL UTILITIES. CONTRACTOR TO REPAIR/REPLACE ANY EXISTING DRAIN TILE ENCOUNTERED DURING CONSTRUCTION AS NECESSARY. (1 WEEK)
- FINISH GRADING, HOUSE CONSTRUCTION INCLUDING DRIVEWAYS AND STABILIZE AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
- UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR INSTALL INFILTRATION TRENCHES #1 AND #2. TRENCHES SHOULD NOT BE INSTALLED UNTIL ALL CONTRIBUTING DRAINAGE AREAS HAVE BEEN STABILIZED.
- REMOVE REMAINDER OF SEDIMENT CONTROLS AND STABILIZE ALL AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES.

PERMANENT SEEDING

Soil Preparation: Flat areas and slopes up to 3:1 slope shall be tilled and diked to a depth of at least 3 inches. The top layer of soil shall be loosened by turning, tilling or other suitable means before seeding. Steeper slopes shall have the top 1 to 3 inches of soil loosened and diked before seeding.

Soil Amendments: Use one of the following schedules.

Use one of the following schedules for soil tests. Lines and fertilizer must be determined by a soil testing laboratory, such as the University of Maryland Soil Testing Laboratory.

In case of soil test results, use one of the following schedules.

- Preferred: Apply 2 tons per acre diammonium phosphate (28 LBS/1000 SF) and 800 lbs per acre 10-10-10 fertilizer (84 LBS/1000 SF) before seeding. Harvest or use into upper three inches of soil. All sites of seeding, apply 800 LBS per acre 30-0-0 urea-formaldehyde fertilizer (1.65/1000 SF).
- Alternative: Apply 2 tons per acre diammonium phosphate (28 LBS/1000 SF) and 1000 LBS per acre 10-10-10 fertilizer (2.2 LBS/1000 SF) before seeding. Harvest or use into upper three inches of soil.

On slopes steeper than 3:1 slope, the top layer shall be tilled and diked to a depth of at least 3 inches. The top layer of soil shall be loosened by turning, tilling or other suitable means before seeding. Steeper slopes shall have the top 1 to 3 inches of soil loosened and diked before seeding.

Seeding:

For the period March 1 thru April 30, and August 1 thru October 15. Seed with 80 LBS per acre (1.4 LBS/1000 SF) of Kentucky 31 Tall Fescue.

For the period May 1 thru July 31. Seed with 60 LBS per acre (1.2 LBS/1000 SF) of Kentucky 31 Tall Fescue per acre and 2 LBS per acre (0.8 LBS/1000 SF) of Weeping Lovegrass.

For the period October 16 thru February 28, protect site by Option (1) 2 tons per acre of soil mulch straw mulch and seed as soon as possible.

Option (2) Use seed: 80 LBS/acre (1.4 LBS/1000 SF) Kentucky 31 Tall Fescue and mulch with 2 tons per acre soil-mulch straw.

Apply seed uniformly with a system seeder, OR, outdrum seeder or hydroseeder (heavy mulch seed and fertilizer) as a firm, moist seedbed. Maximum seeding depth should be 1/4 inch on steep slopes and 1/2 inch on level sites, which allows for 1/2 inch of soil to be placed over the seed. If hydroseeding is used and the seed and fertilizer is moist, they shall be mixed and the seeding shall be immediate without interruption.

Mulching: See Mulching Specifications.

Irrigation:

If soil moisture is deficient, supply soil seedlings with adequate water for plant growth until they are firmly established, if feasible. This is especially true when seedlings are made late in the planting season, in consistently dry hot weather, or on adverse sites.

Maintenance:

Irrigation - If soil moisture becomes deficient, irrigate to prevent loss of stand of permanent vegetation, if feasible.

Repairs - Repairs for the seedlings shall be made as soon as possible in the planting season, if necessary.

1) If plants in bare areas for erosion control, removal and fertilizer application (heavy mulch seed and fertilizer) as a firm, moist seedbed. Maximum seeding depth should be 1/4 inch on steep slopes and 1/2 inch on level sites, which allows for 1/2 inch of soil to be placed over the seed. If hydroseeding is used and the seed and fertilizer is moist, they shall be mixed and the seeding shall be immediate without interruption.

2) If plants are not well established, remove and replace with new seedlings, fertilizer application and mulching recommendations.

STONE OUTLET SEDIMENT TRAP



CROSS SECTION A-A

OPTION: A ONE FOOT LAYER OF 2" STONE MAY BE PLACED ON THE UPSTREAM SIDE OF THE REPAIR IN PLACE OF THE DIMENSIONED FILTER CLOTH.

- 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 OBSTRUCTIVE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVELING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
 - ALL OUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
 - THE STONE USED IN THE OUTLET SHALL BE SMALL REPAIR 4-6" ALONG WITH A 1" THICKNESS OF 2" GRANULAR FILL PLACED ON THE UP-GRADE SIDE ON THE SMALL REPAIR OR DIMENSIONED FILTER CLOTH IN THE REPAIR.
 - SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE STRUCTURE HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP.
 - THE STRUCTURE SHALL BE REPECTED 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.

BY THE DEVELOPER:

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

DEVELOPER: *[Signature]* DATE: 8-1-92

BY THE ENGINEER:

"I 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 SOIL CONSERVATION DISTRICT."

ENGINEER: *[Signature]* DATE: 8-1-92

REVIEWED FOR HOWARD COUNTY S.C.D. AND MEETS TECHNICAL REQUIREMENTS

[Signature] DATE: 8/19/92

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

[Signature] DATE: 8/19/92

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

COUNTY HEALTH OFFICER: *[Signature]* DATE: 9-2-92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR: *[Signature]* DATE: 9/15/92

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT: *[Signature]* DATE: 9/14/92

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.

DIRECTOR: *[Signature]* DATE: 8-1-92

CHIEF, BUREAU OF ENGINEERING: *[Signature]* DATE: 8-29-92

REVISION: 2-10-92

OWNER / DEVELOPER: JACQUILINE LUKS, 36 JAMES H. SELFIDGE BUILDERS, INC, 831 DORSEY RUN ROAD, PESSUP, MARYLAND 20794

PROJECT: KNOLL WOODS II, LOTS 1 THRU 4

AREA TAX MAP NO. 24, PARCEL 10, 2nd EDITION, 1987, HOWARD COUNTY, MD.

TITLE: GRADING AND SEDIMENT CONTROL PLAN

RIEMER MUEGGE & ASSOCIATES, INC. A Land Planning, Engineering and Consulting Firm, 8818 Centre Park Drive • Suite 200 • Columbia, Md 21045, 410-997-8900 FAX: 410-997-9282

DATE: 8-1-92

DESIGNED BY: *[Signature]*

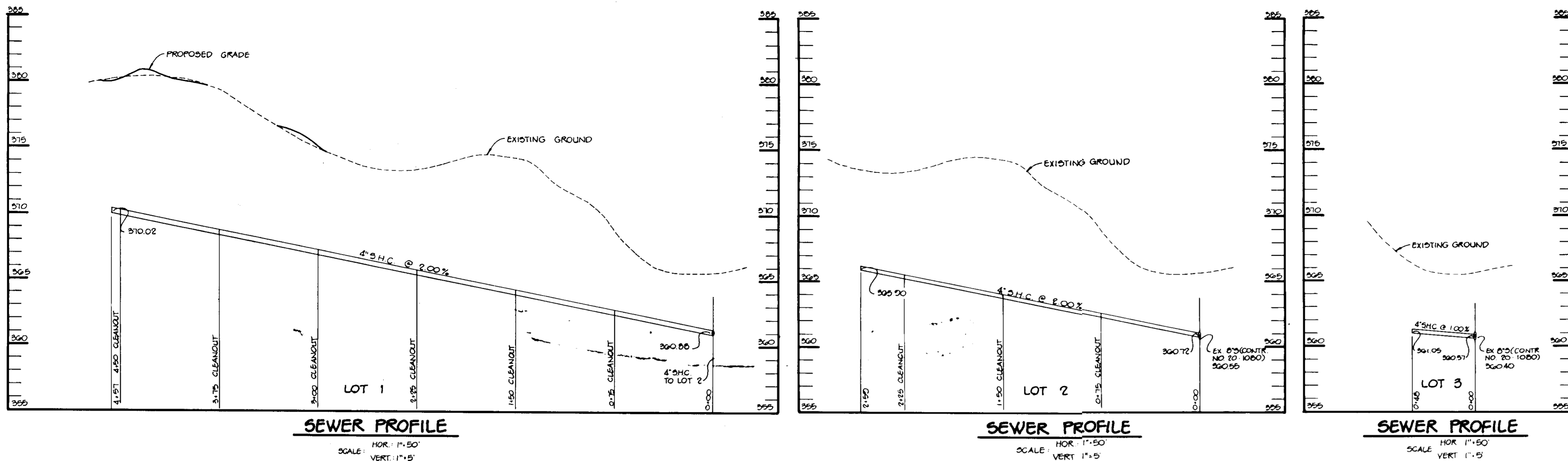
DRAWN BY: *[Signature]*

PROJECT NO: 70515

DATE: MAY 15, 1992

SCALE: 1" = 40'

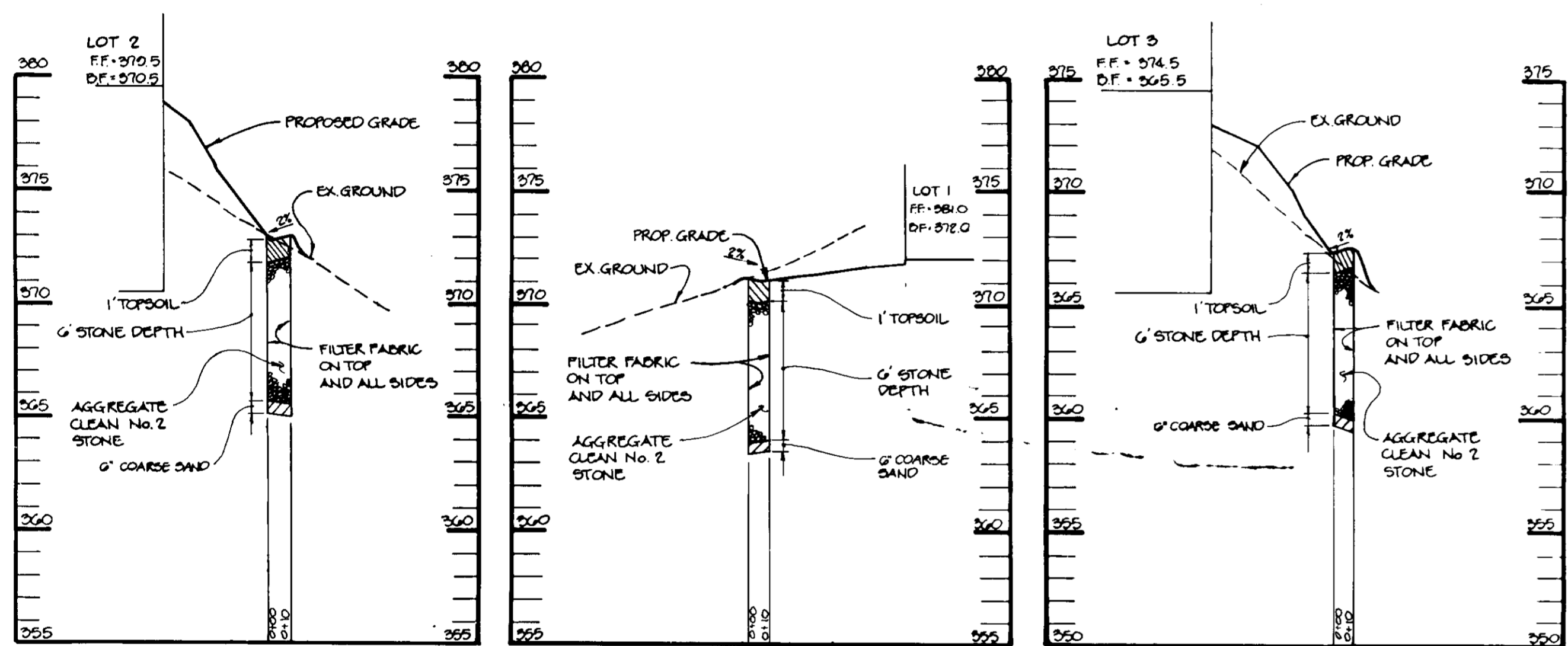
DRAWING NO: 2 OF 3



SEWER PROFILE
 SCALE: HOR: 1"=50'
 VERT: 1"=5'

SEWER PROFILE
 SCALE: HOR: 1"=50'
 VERT: 1"=5'

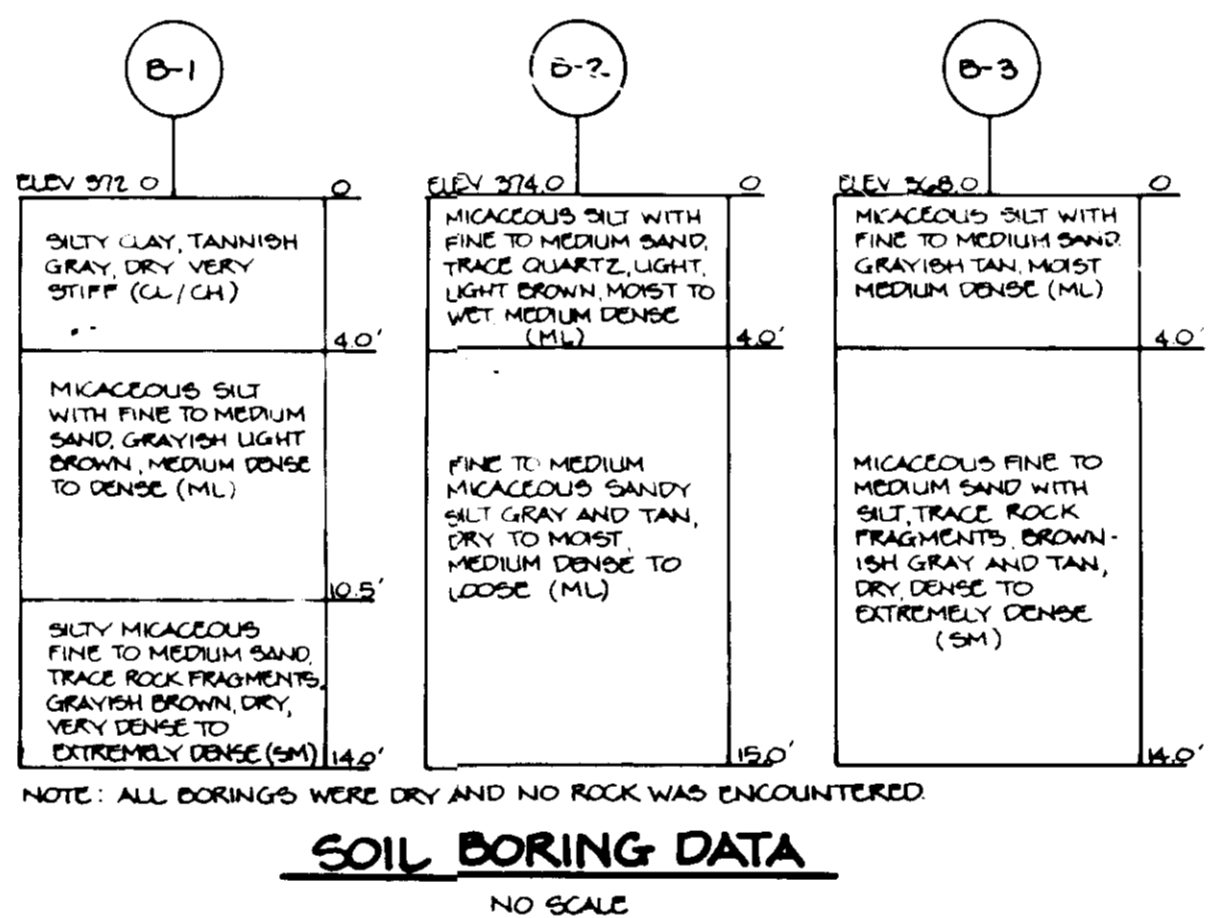
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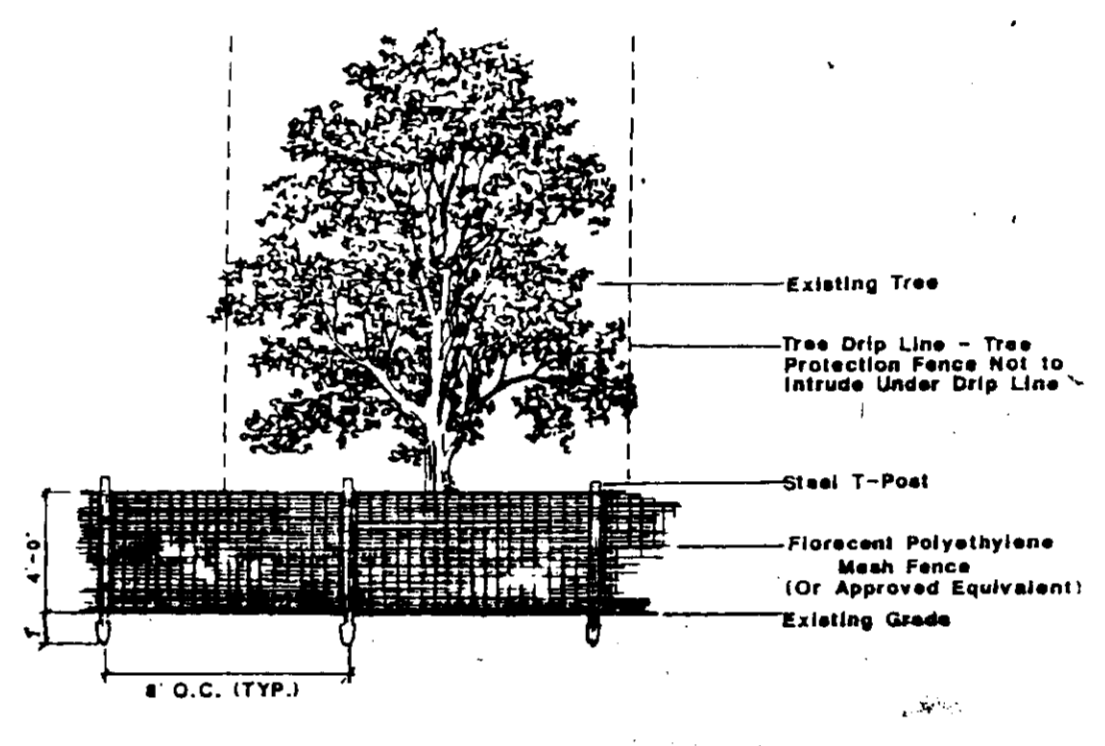
INFILTRATION TRENCH #2
SECTION B-B
 SCALE: HOR: 1"=50'
 VERT: 1"=5'

INFILTRATION TRENCH #1
SECTION A-A
 SCALE: HOR: 1"=50'
 VERT: 1"=5'

INFILTRATION TRENCH #3
SECTION C-C
 SCALE: HOR: 1"=50'
 VERT: 1"=5'

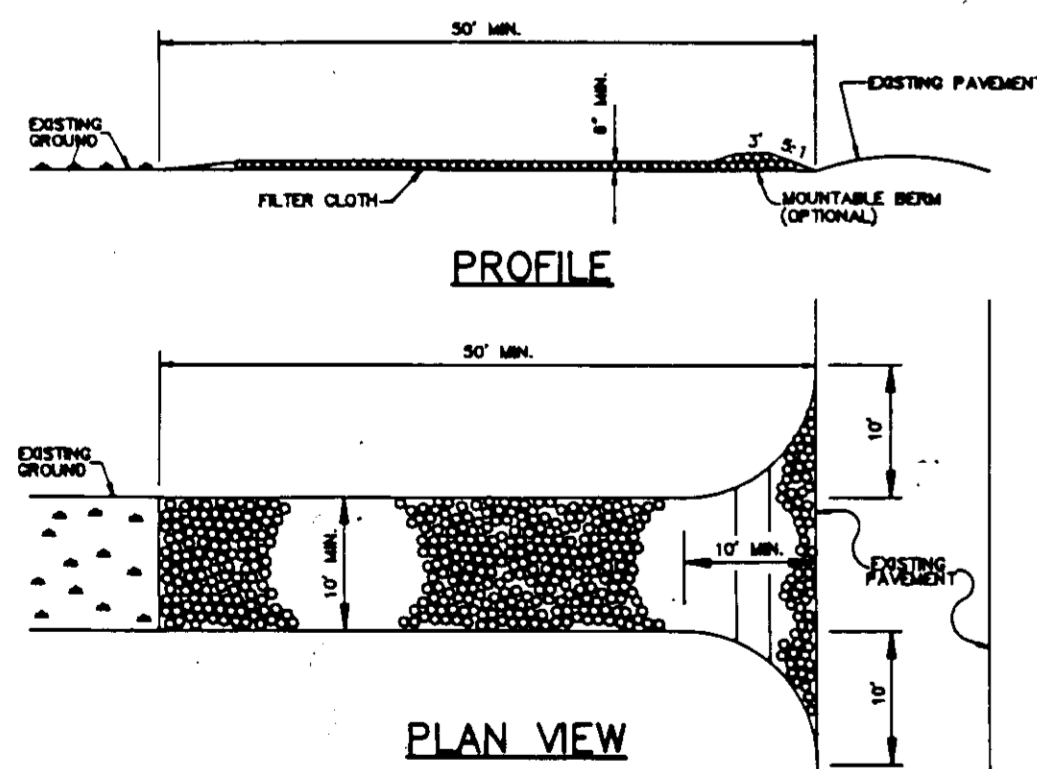


SOIL BORING DATA
 NO SCALE
 NOTE: ALL BORINGS WERE DRY AND NO ROCK WAS ENCOUNTERED



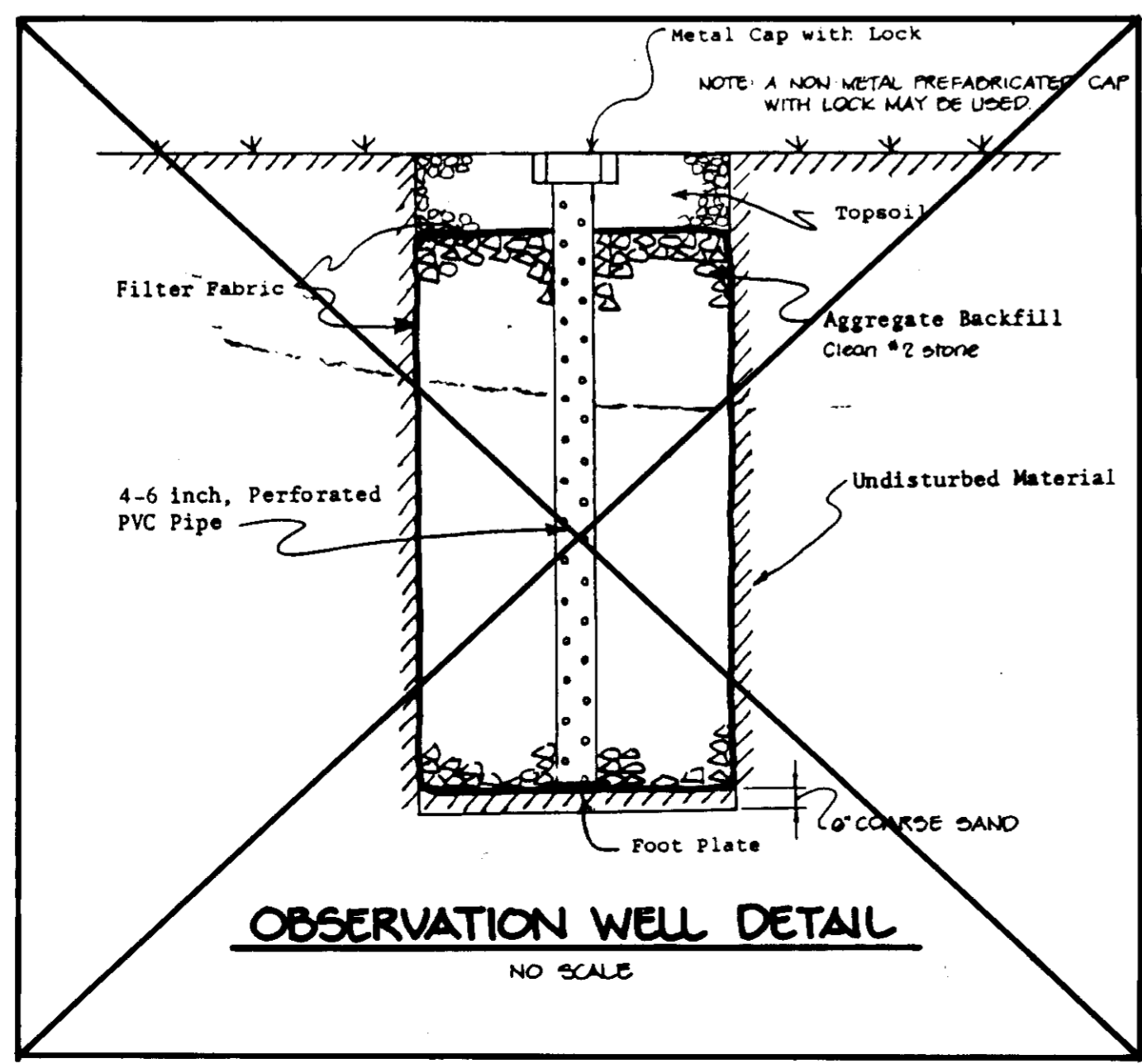
Protective Tree Fencing
 Elevation N.T.S.

- TREE PRESERVATION PROCEDURES**
- THE EDGE OF WOODS TO BE PROTECTED WILL BE MARKED IN THE FIELD PER THE APPROVED SITE DEVELOPMENT PLAN PRIOR TO THE START OF CONSTRUCTION ACTIVITY.
 - PROTECTIVE FENCING SHALL BE INSTALLED AT THE DAILY LINE OF THE EDGE OF WOODS. ALL AREAS WITHIN PROTECTIVE FENCES ARE TO BE CONSIDERED "OFF LIMITS" FOR ANY CONSTRUCTION ACTIVITIES.
 - PROTECTIVE FENCING WILL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR WILL AFFIX SIGNS TO THE FENCING INDICATING THAT THESE AREAS ARE TREE PRESERVATION AREAS. THE GENERAL CONTRACTOR SHALL TAKE STRICT CARE TO PROTECT TREE ROOT SYSTEMS DURING THE CONSTRUCTION CYCLE. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SHOULDERING, FLOODING, EXCESSIVE WEEDING FROM DE-WEEDING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE, AND DRAINAGE OF SOLUTIONS CONTAINING MATERIALS HARMFUL TO TREE ROOTS.
 - REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR MARKING ANY CONSTRUCTION EQUIPMENT, OR FROM STAGING BUILDING SUPPLIES OR SITES STOCKPILES WITHIN THE TREE PRESERVATION AREA.
 - FOOT TRAFFIC, AS WELL AS VEHICULAR TRAFFIC, IN THE TREE PRESERVATION AREA SHALL BE KEPT TO A MINIMUM. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TREE DAMAGED OR DESTROYED WITHIN THE TREE PRESERVATION AREA, WHETHER CAUSED BY THE CONTRACTOR, HIS AGENTS, EMPLOYEES, SUB-CONTRACTORS OR LICENSEES.
 - CONSTRUCTION ACTIVITIES EXPRESSLY RESTRICTED WITHIN THE TREE PRESERVATION AREA:
 - PLACING BACKFILL IN PROTECTED AREAS;
 - PELLING TREES INTO PROTECTED AREAS;
 - INSTALLING CONSTRUCTION EQUIPMENT INTO OR THROUGH PROTECTED AREAS;
 - BURNING IN OR IN CLOSE PROXIMITY TO PROTECTED AREAS;
 - STACKING OR STAGING SUPPLIES IN PROTECTED AREAS;
 - CONDUCTING TRENCHING OPERATIONS IN PROTECTED AREAS;
 - GRADING BEYOND THE LIMITS OF PRESERVATION.
 - THE GENERAL CONTRACTOR SHALL PROVIDE A "TREE OFF" AREA FOR CONCRETE TRUCKS OR MIXERS. MIXERS SHALL NOT DRAIN TOWARD A PROTECTED AREA.
 - ALL TREES WHICH ARE NOT TO BE PRESERVED WITHIN FIFTY FEET OF ANY TREE PRESERVATION AREA ARE TO BE REMOVED IN A MANNER THAT WILL NOT DAMAGE THOSE TREES THAT ARE DESIGNATED FOR PRESERVATION. IT IS HIGHLY RECOMMENDED THAT TREE STUMPS WITHIN THE FIFTY FEET AREA BE GROUND OUT WITH A STUMP GRINDING MACHINE TO MINIMIZE DAMAGE.

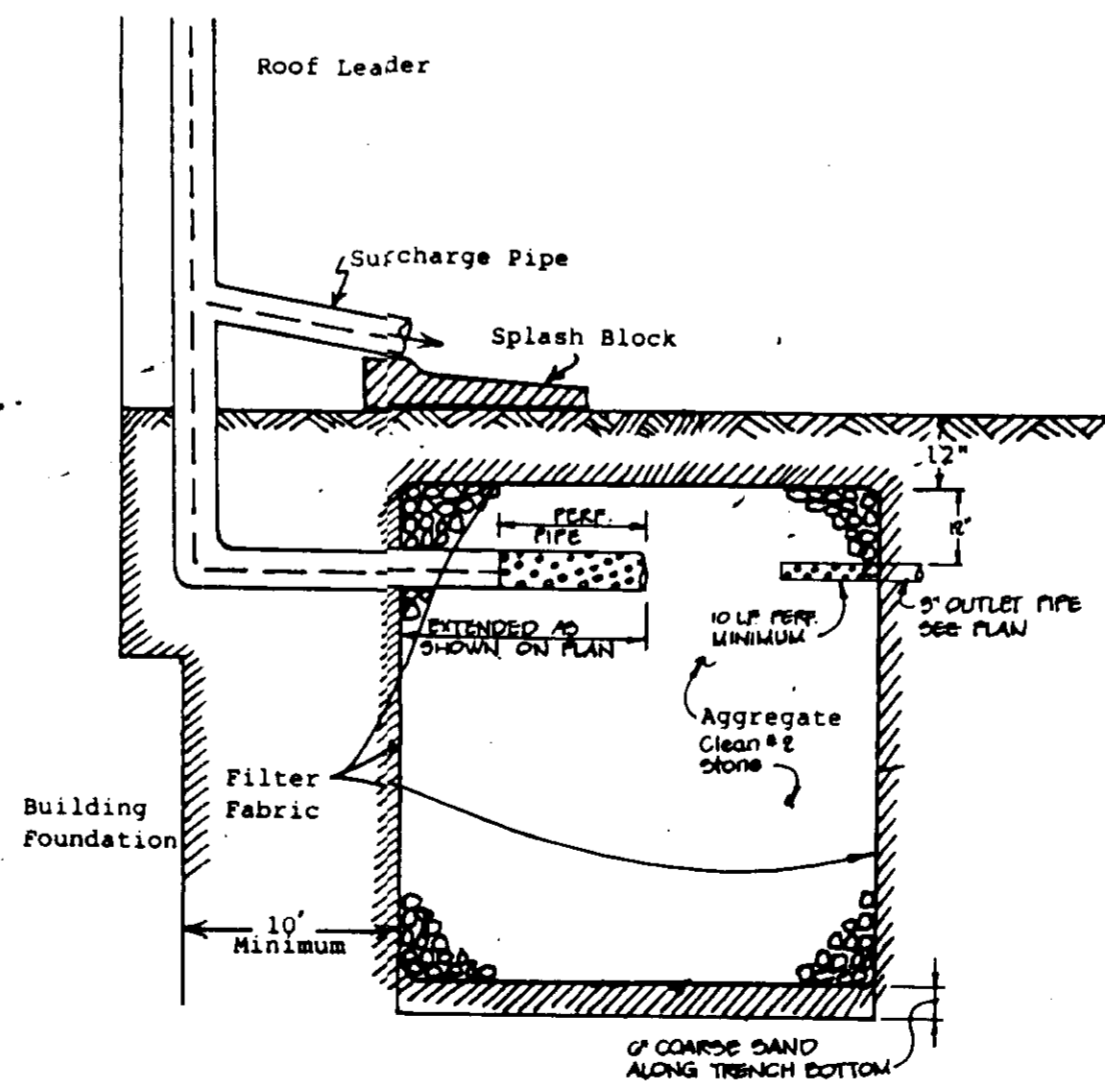


- CONSTRUCTION SPECIFICATIONS**
- Stone Size - Use 2" stone, or rounded or recycled concrete equivalent.
 - Length - As required, but not less than 30 feet (except on a single residence lot where a 20 foot minimum would apply).
 - Thickness - Not less than six (6) inches.
 - Width - Ten (10) feet minimum, but not less than the full width at points where ingress and egress occur.
 - Filter Cloth - Will be placed over the entire area prior to placing of stone. Filter cloth will not be required on a single family residence lot.
 - Surface Water - All surface water flowing or directed toward construction entrance shall be piped across the entrance. If piping is impractical, a maintainable berm with 5:1 slope will be permitted.
 - Maintenance - The entrance shall be maintained in a condition which will prevent tracking of debris of sediment onto public right-of-way. The contractor shall provide any measures used to dry sediment. All sediment applied, dropped, washed or tracked onto public right-of-way must be removed immediately.
 - Inspection - Inspection shall be observed to remove sediment prior to entrance onto public right-of-way. When needed to be removed, it shall be done on an area stabilized with stone and which creates little or no sediment tracking device.
 - Portable inspection and needed maintenance shall be provided after each run.

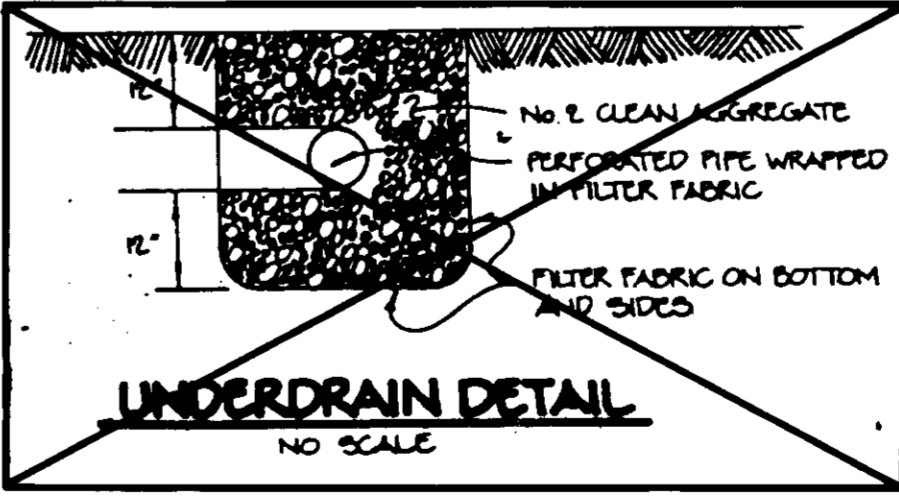
STABILIZED CONSTRUCTION ENTRANCE
 NO SCALE



OBSERVATION WELL DETAIL
 NO SCALE



TYPICAL ROOF DRAIN OUTLET DETAIL
 NO SCALE



UNDERDRAIN DETAIL
 NO SCALE

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

BY THE ENGINEER:
 "I 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 SOIL CONSERVATION DISTRICT."
 ENGINEER: _____ DATE: _____

REVIEWED FOR: HOWARD S.C.D.
 AND METS TECHNICAL REQUIREMENTS
 U.S. SOIL CONSERVATION SERVICE
 DATE: 8/19/92

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 DATE: 8/19/92

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT.
 COUNTY HEALTH OFFICER: _____ DATE: 9-2-92

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 DIRECTOR: _____ DATE: 9/15/92

APPROVED: FOR PUBLIC WATER, PUBLIC SEWERAGE, STORM DRAINAGE SYSTEMS AND PUBLIC ROADS.
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT: _____ DATE: 9/19/92

DIRECTOR: _____ DATE: 9-22-92
 CHIEF, BUREAU OF ENGINEERING: _____ DATE: _____

2. 10-23 1 REVISION: SITE OF INFILTRATION TRENCHED
 DATE NO REVISION

OWNER/DEVELOPER
 JACQUELINE LORD
 c/o JAMES H. SELFRIDGE BUILDERS, INC.
 8131 DORSEY RUN ROAD
 JESSE, MARYLAND 20704

PROJECT: **KNOLL WOODS II**
 LOTS 1 THRU 4
 AREA TAX MAP NO. 24 PARCEL 501 ZONED R-20
 2ND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: **PROFILE AND DETAIL SHEET**
 RIEMER MUEGGE & ASSOCIATES, INC.
 A Land Planning, Engineering and Consulting Firm
 8818 Centre Park Drive • Suite 200 • Columbia, Maryland 21045
 301-997-8900 • FAX: 301-997-9282

DATE: _____
 DESIGNED BY: C.J.R.
 DRAWN BY: M.A.D.
 PROJECT NO: 70215
 DATE: MAY 15, 1992
 SCALE: AS SHOWN
 DRAWING NO: 3 OF 3