SEDIMENT CONTROL NOTES

1) A minimum of 24 hours notice must be given to the Howard County Office of Inpsection 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 are 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.

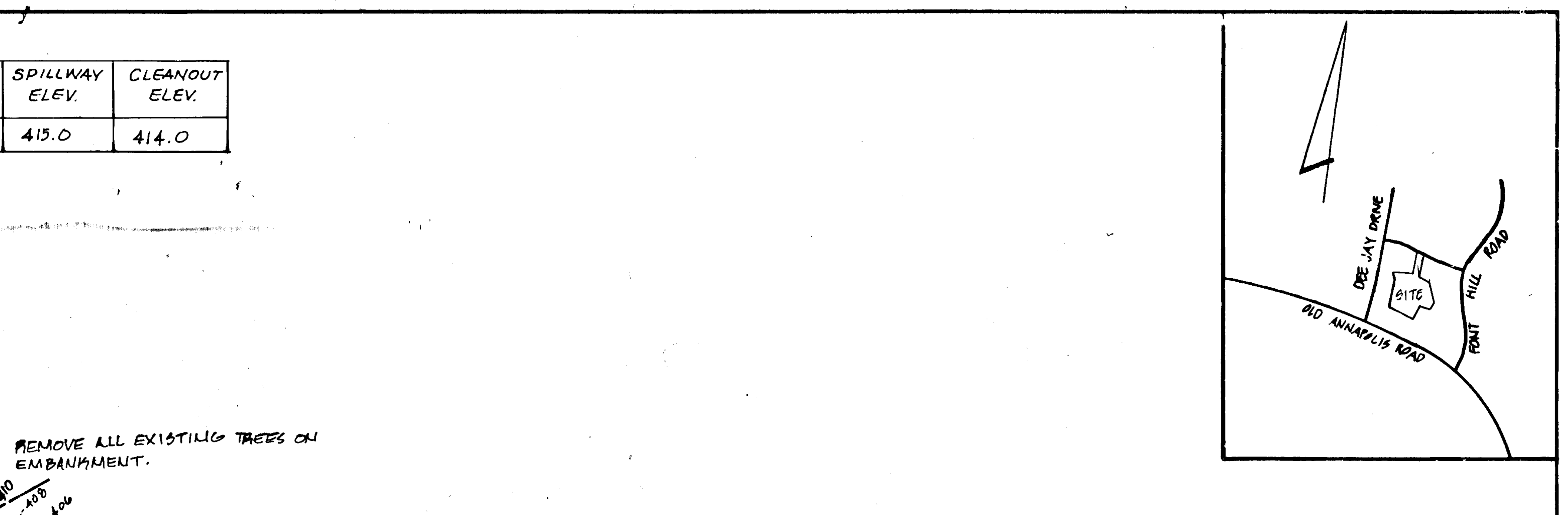
7) Site Analysis:

Total Area of Site	4.1	Acres
Area Disturbed	1.9	Acres
Area to be roofed or paved	0.3	Acres
Area to be vegetatively stabilized	1.6	Acres
Total Cut	2209	Cu. yds.
Total Fill	4806	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.

SEDIMENT TRAP SCHEDULE

TRAP NO.	D.A. (Ac.)	VOLUMES		BOTTOM SIZE	DEPTH	BOTTOM ELEV.	SPILLWAY ELEV.	CLEANOUT ELEV.
		REQ, D.	PROV.					
1	1.20	2160	2192	20'×41'	2'	413.0	415.0	414.0



GENERAL NOTES

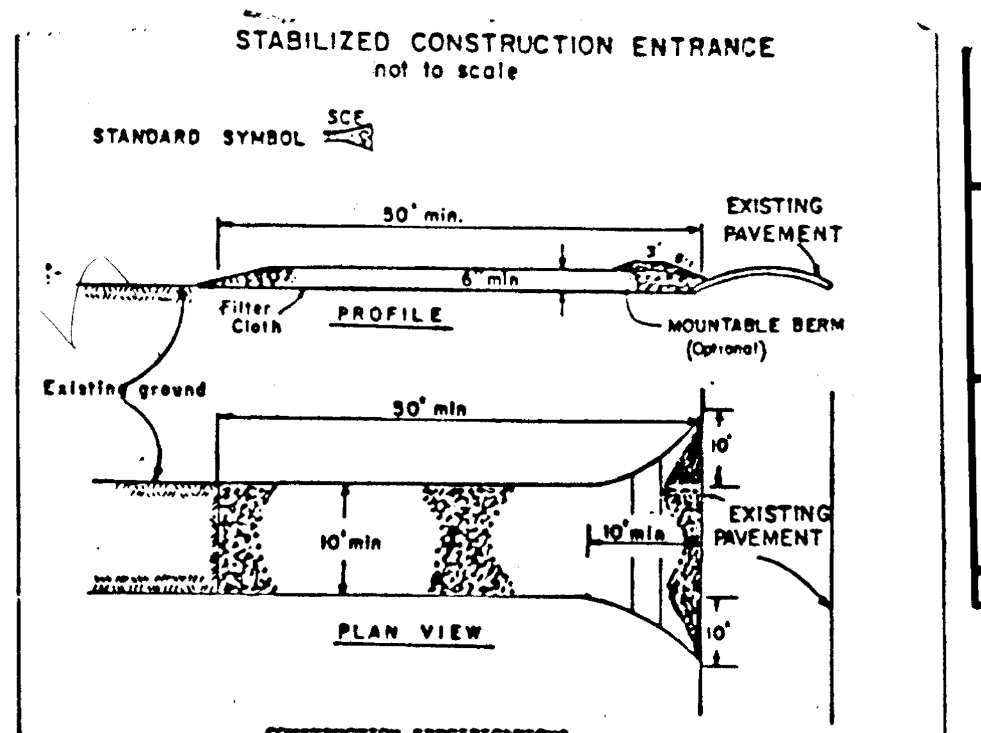
1. TAX MAP 24 ; PART OF PARCEL 983
2. DEED REFERENCE: 1049/285
3. EXISTING ZONING: R-20
4. TOPOGRAPHY SHOWN HEREON WAS FIELD RUN BY SHANABERGER & LANE
5. PUBLIC WATER AND SEWAGE IS TO BE UTILIZED.

PROFILE OF PRINCIPAL SPILLWAY

SCALES: HOR.: 1" = 20' VERT.: 1" = 5'

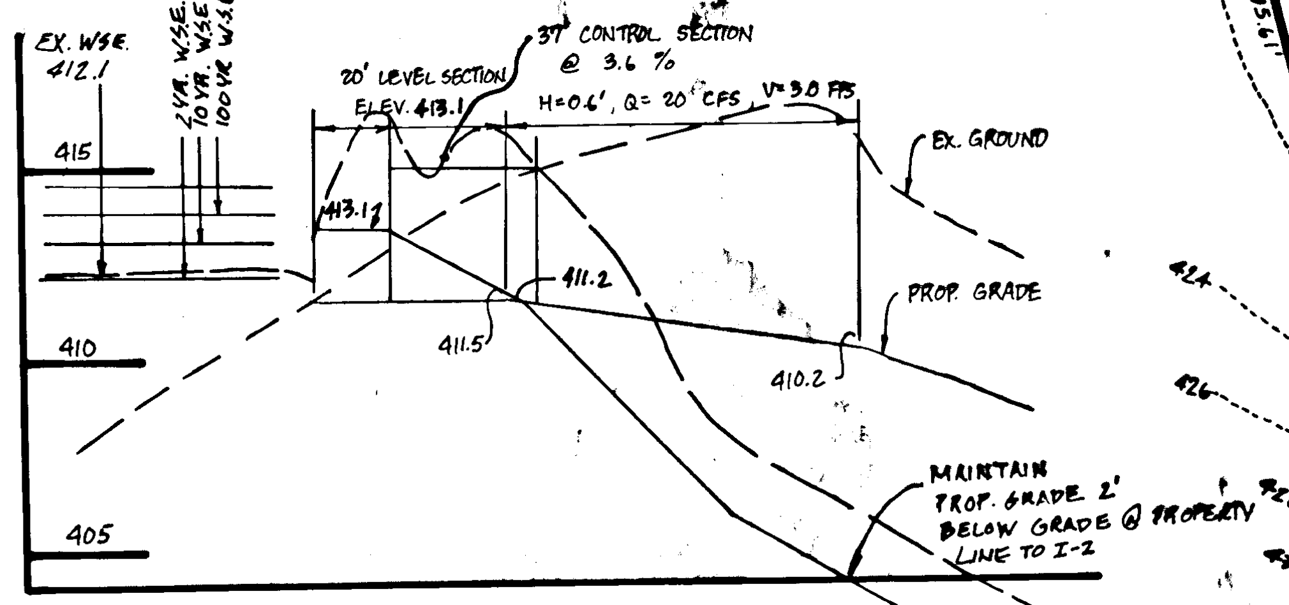
SEE SHEET 2 OF 2

STABILIZED CONSTRUCTION ENTRANCE
not to scale



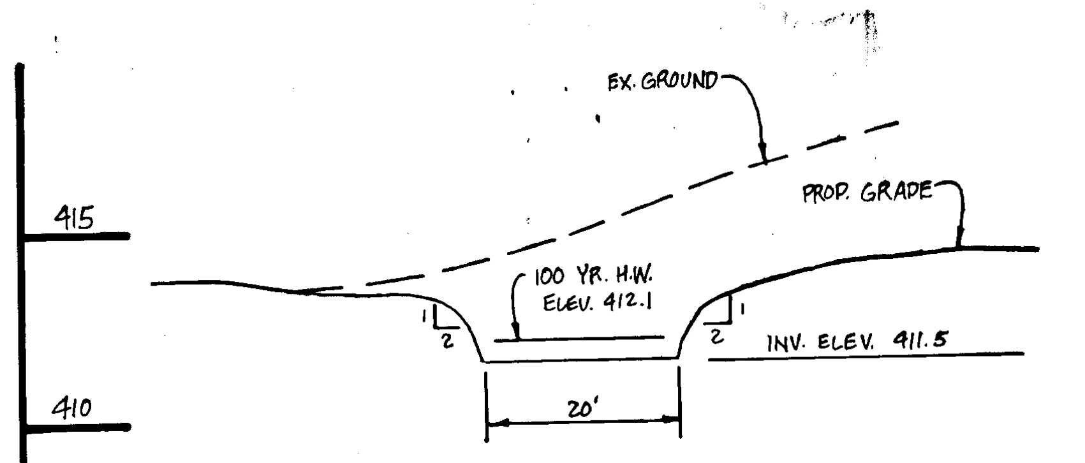
CONSTRUCTION SPECIFICATIONS

1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness - Not less than six (6) inches.
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.
7. 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.
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 device.
9. Periodic inspection and needed maintenance shall be provided after each rain.



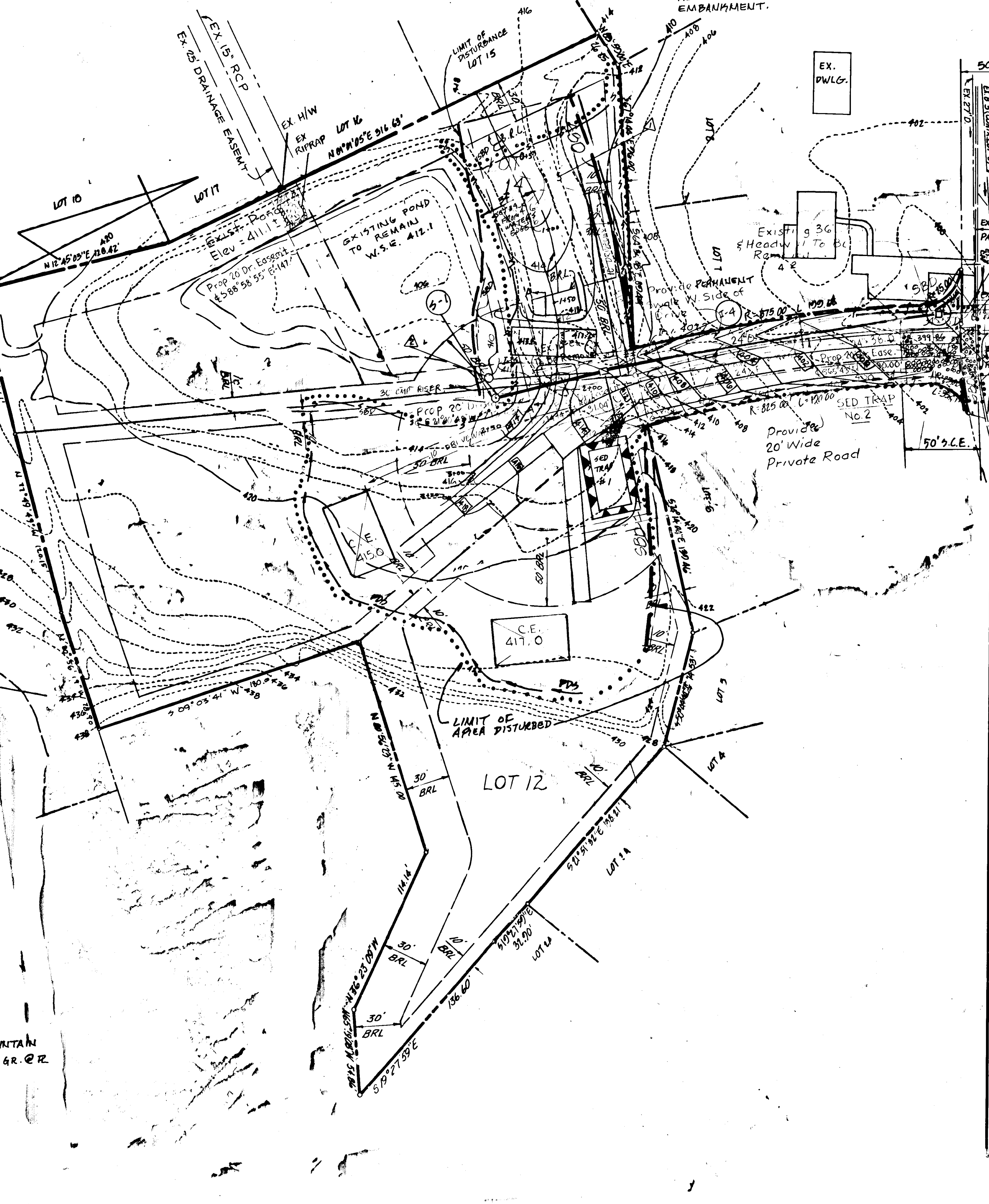
PROFILE OF EMERGENCY SPILLWAY

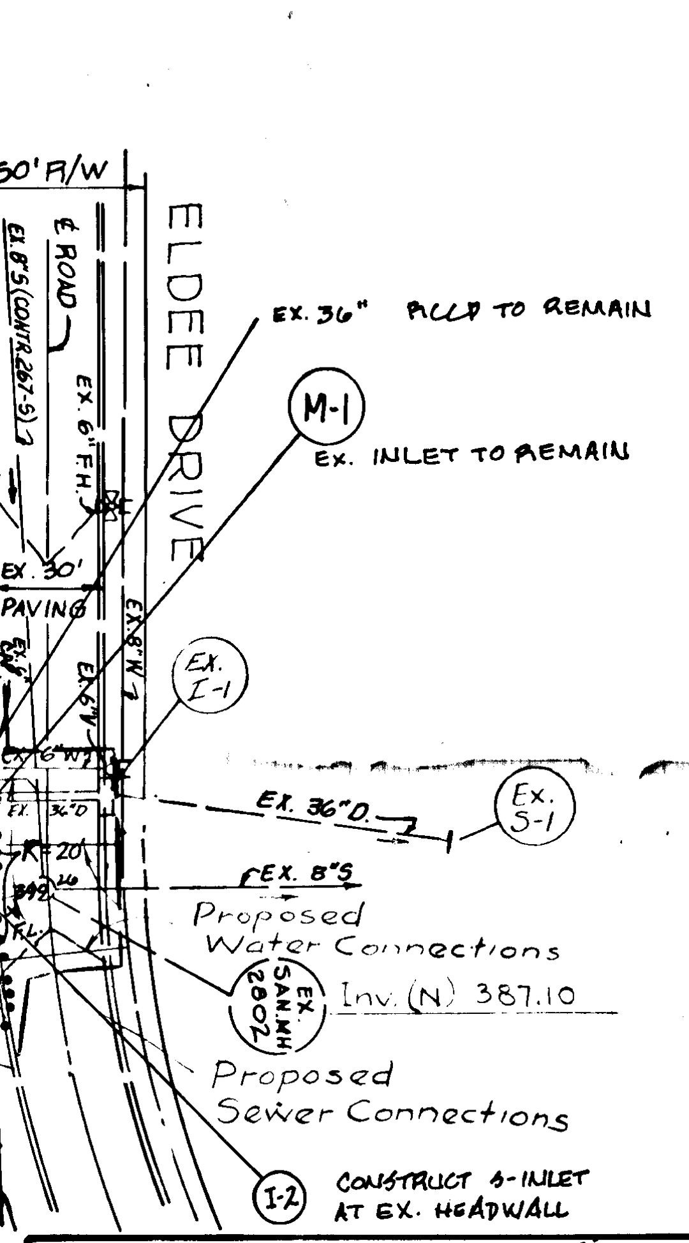
SCALES: HOR.: 1" = 20' VERT.: 1" = 5'

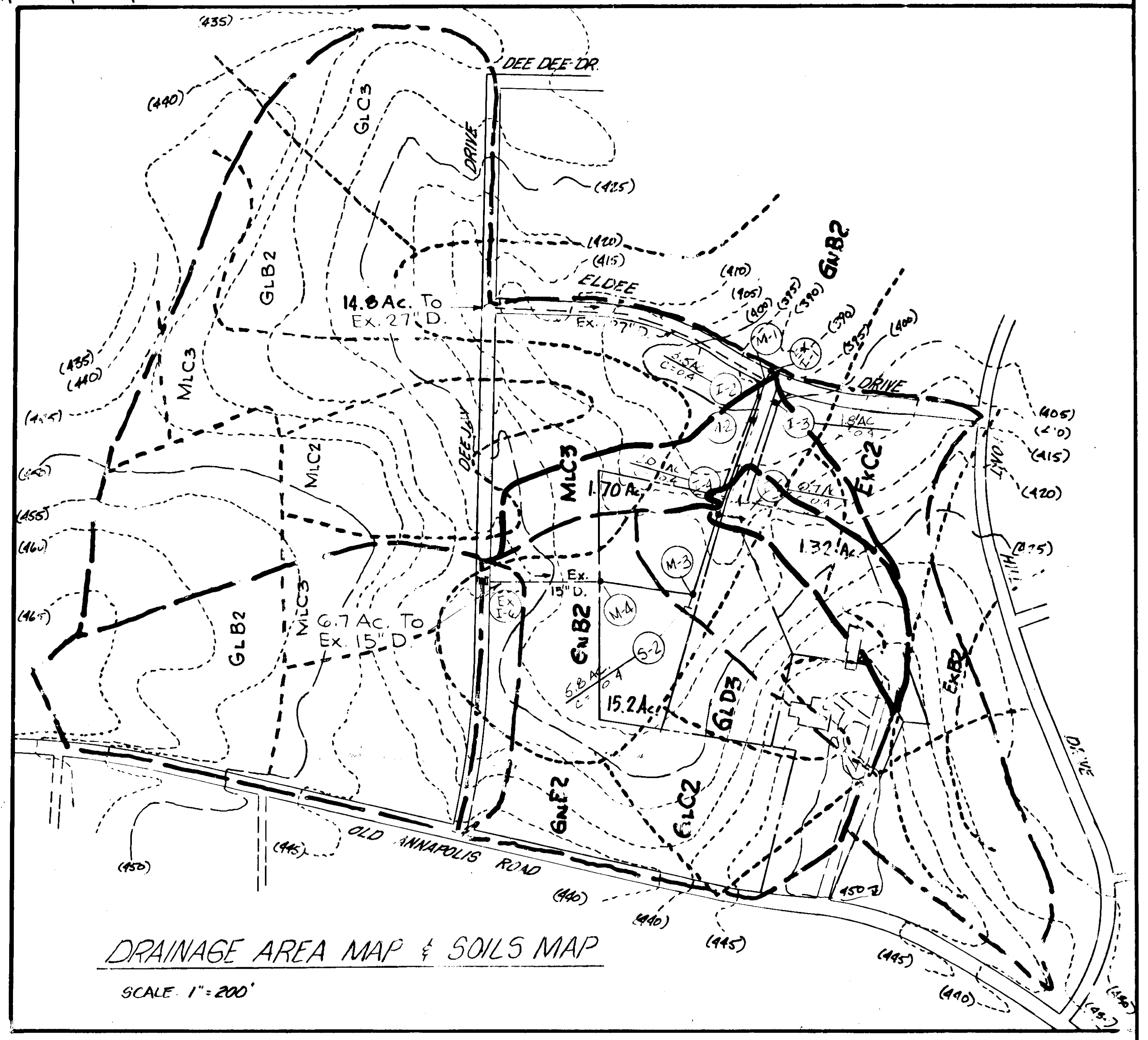


SECTION A-A OF EMERGENCY SPILLWAY

SCALES HOR.: 1" = 20' VERT.: 1" = 5'

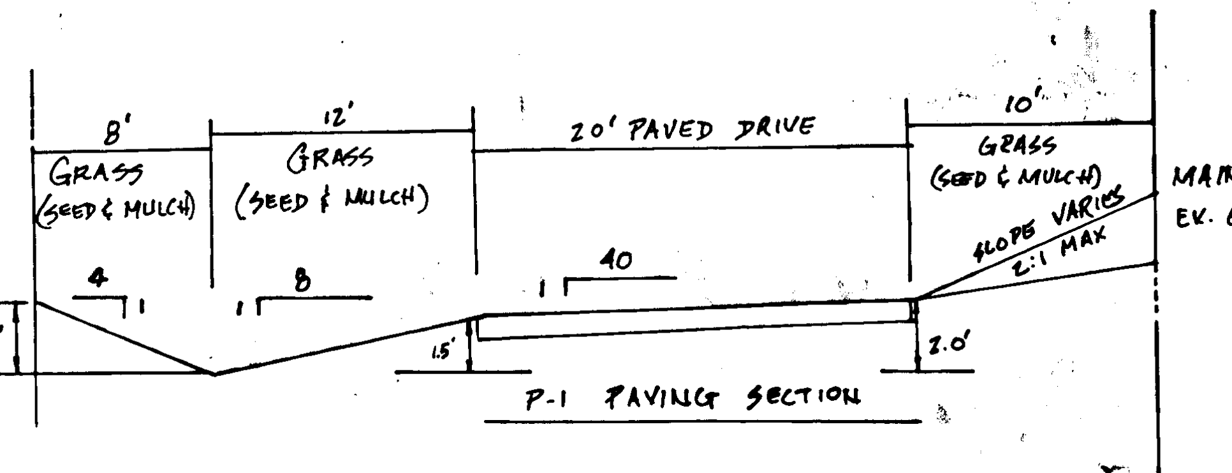






DRAINAGE AREA MAP & SOILS MAP

SCALE 1" = 200'



TYPICAL SECTION DRIVEWAY AND SWALE
(FACING ELDEE DRIVE FROM SITE)
NO SCALE

APPROVED: DEPARTMENT OF PUBLIC WORKS

4/7/86
CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: OFFICE OF PLANNING AND ZONING

4-1-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION DATE

REVIEWED: FOE HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

4-1-86
U.S. SOIL CONSERVATION SERVICE DATE

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

4/1/8
SOIL CONSERVATION SERVICE DATE

RTIFICATE

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

Walter Novash 11-1-85
ENGINEER DATE

DEVELOPER'S CERTIFICATE

I 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY

10-15-85
DEVELOPER DATE

REVISIONS	DATE: 8-12-86
1	PROPOSED BLDG. ON LOT 14 RELOCATED
2	ADDITION OF RISER AND SPILLWAY
3	ADDITION OF PROFILES (3)
4	REVISION OF MAIN STORM DRAIN PROFILE (SHEET 2)
5	REVISION OF CONSTRUCTION SEQUENCE (SHEET 2)
6	REDESIGN ST. DRAINS & DRIVEWAYS ; REVISE EXISTING CONDITIONS SHANABERGER & LANE 4/10/87

TITLE: GRADING & SED. CONT. PLAN
PROJECT: HEATHER GLEN, LOTS 12, 13, & 14
LOCATION: 2ND ELECTION DISTRICT HOWARD CO., MD.

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	DATE:
1" = 50		J.T.N.		OCT. 1985

FIELD BOOK	PAGE NO	JOB NO.:	DRAWING NO.:
		81016	1 OF 2

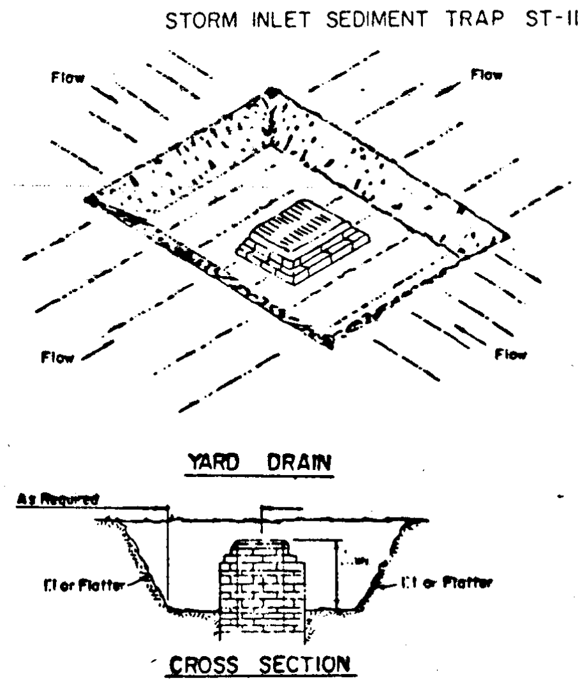
boender associates inc.
consulting engineers
land surveyors
land planners

COURTHOUSE SQUARE
3565 ELLICOTT MILLS DRIVE
ELLICOTT CITY, MD. 21043
(301) 465-7777

F-86-07

1201

STORM INLET SEDIMENT TRAP ST-III



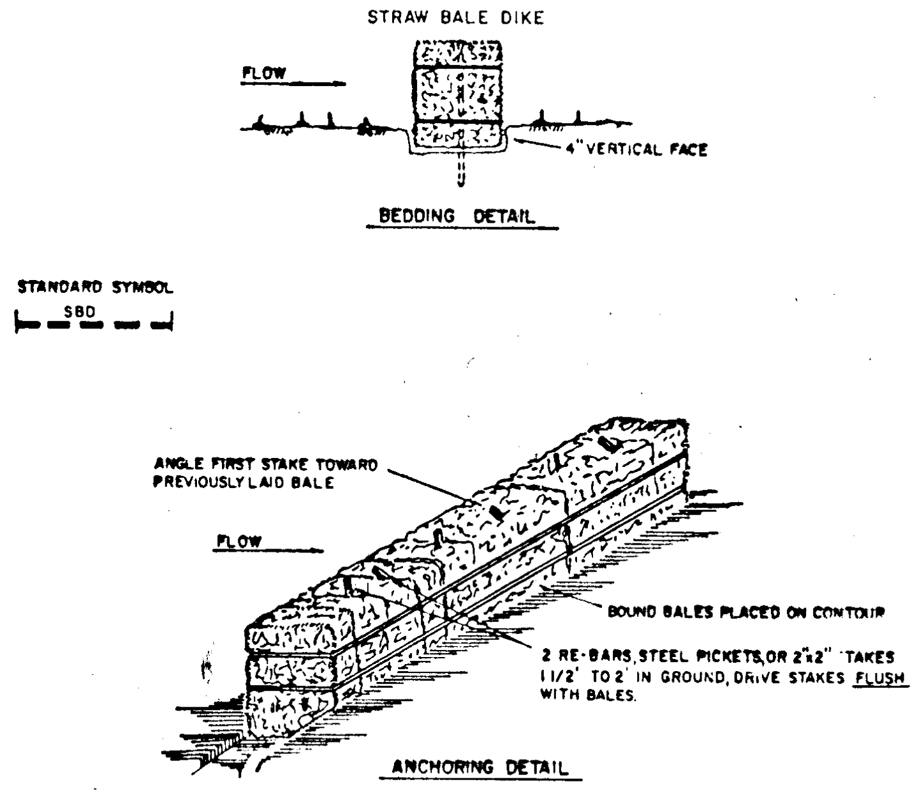
CONSTRUCTION SPECIFICATION FOR ST-III

1. Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to ½ the design depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
2. The volume of sediment storage shall be 1800 cubic feet per acre of contributory drainage.
3. The structure shall be inspected after each rain and repairs made as needed.
4. Construction operations shall be carried out in suc a ma er that erosion and water pollution shall be minimized.
5. The sediment trap shall be removed and the area stabilized when the constructed drainage area has been properly stabilized.
6. All cut slopes shall be 1:1 or flatter.

Maximum Drainage Area: 3 Acres

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	STORM INLET SEDIMENT TRAP	STANDARD DRAWING ST-III

STRAW BALE DIKE



CONSTRUCTION SPECIFICATIONS

1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
4. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	STRAW BALE DIKE	STANDARD DRAWING SBD-1

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, discing or other acceptable means before seeding.

Soil Amendments: In lieu of soil test recommendations, 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 (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 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 thre 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 1½ 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 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.

Matinenance - Inspect all seeded areas and make needed repairs, replacements and reseedings.

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, discing or other acceptable means before seeding.

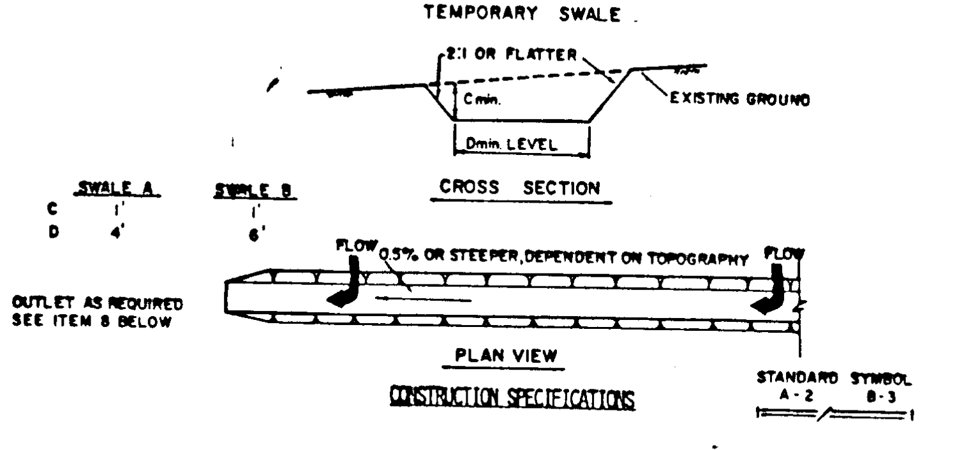
Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft)

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2½ 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 1½ 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 2 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

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

TEMPORARY SWALE



	SWALE A	SWALE B
C	1'	1'
D	4'	6'

CONSTRUCTION SPECIFICATIONS

1. ALL TEMPORARY SWALES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
4. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE.
5. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
6. FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED ON CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
8. STABILIZATION SHALL BE AS PER THE CHART BELOW:

FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	A (5 AC OR LESS)	B (5 AC - 10 AC)
1	0.5-3.0%	SEED AND STRAW MULCH	SEED AND STRAW MULCH
2	3.1-5.0%	SEED AND STRAW MULCH	SEED USING JUTE OR EXCELSIOR
3	5.1-8.0%	SEED WITH JUTE OR EXCELSIOR; SOD	LINED RIP-RAP 4-8" RECYCLED CONCRETE EQUIVALENT
4	8.1-20%	LINED 4-8" RIP-RAP	ENGINEERED DESIGN

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

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	TEMPORARY SWALE	STANDARD DRAWING TS-1

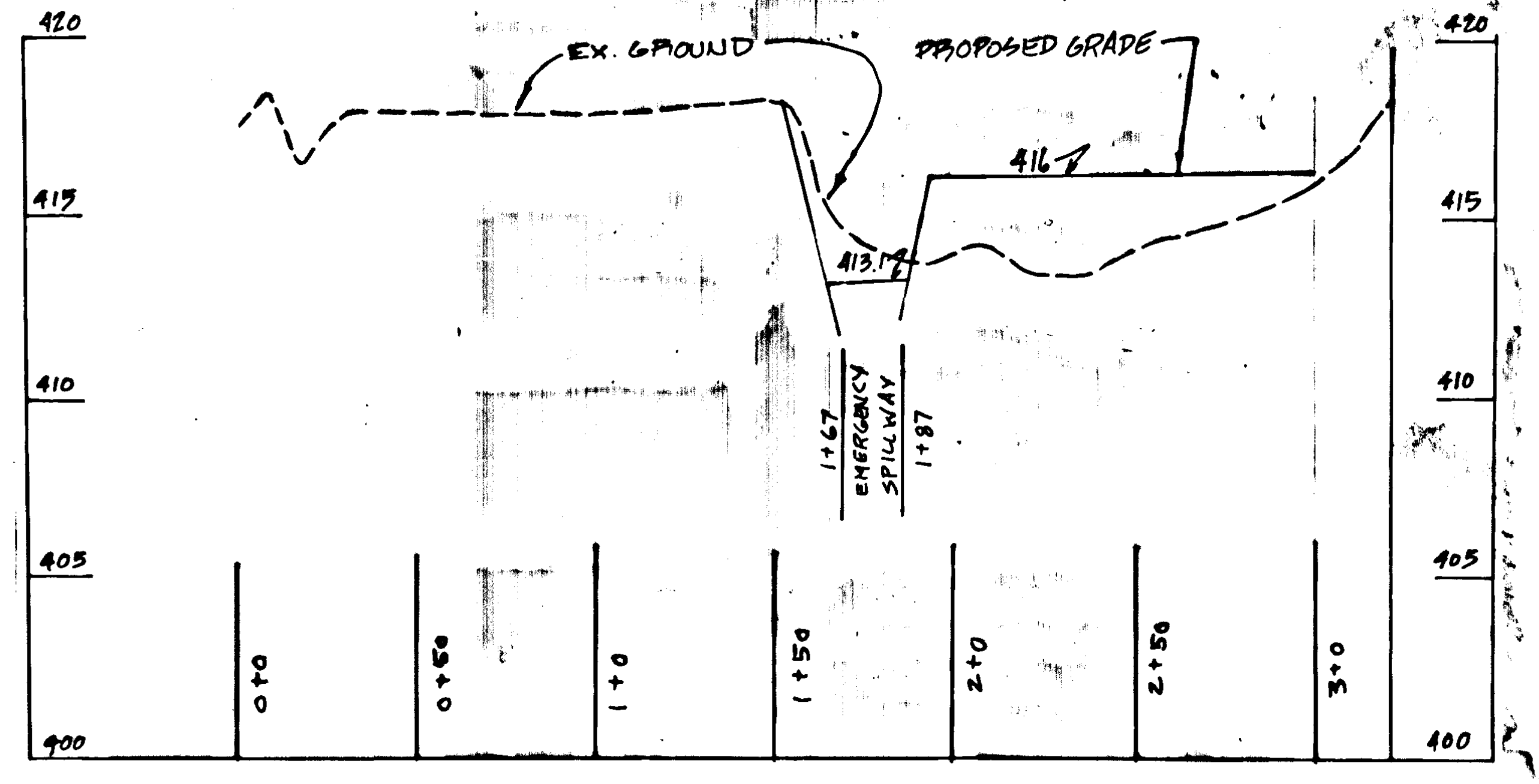
STRUCTURE SCHEDULE

NO.	TYPE	INV. IN	INV. OUT	TOP EL.	REMARKS
I-2	TYPE S INLET (3'x2'7" I.D)	394.94	394.94	398.97	HOWARD CO. ST. DETAIL S.D4.22
I-4	TYPE K INLET	397.66	396.66	402.0	HOWARD CO. ST. DETAIL S.D.4.12

CONSTRUCTION SEQUENCE

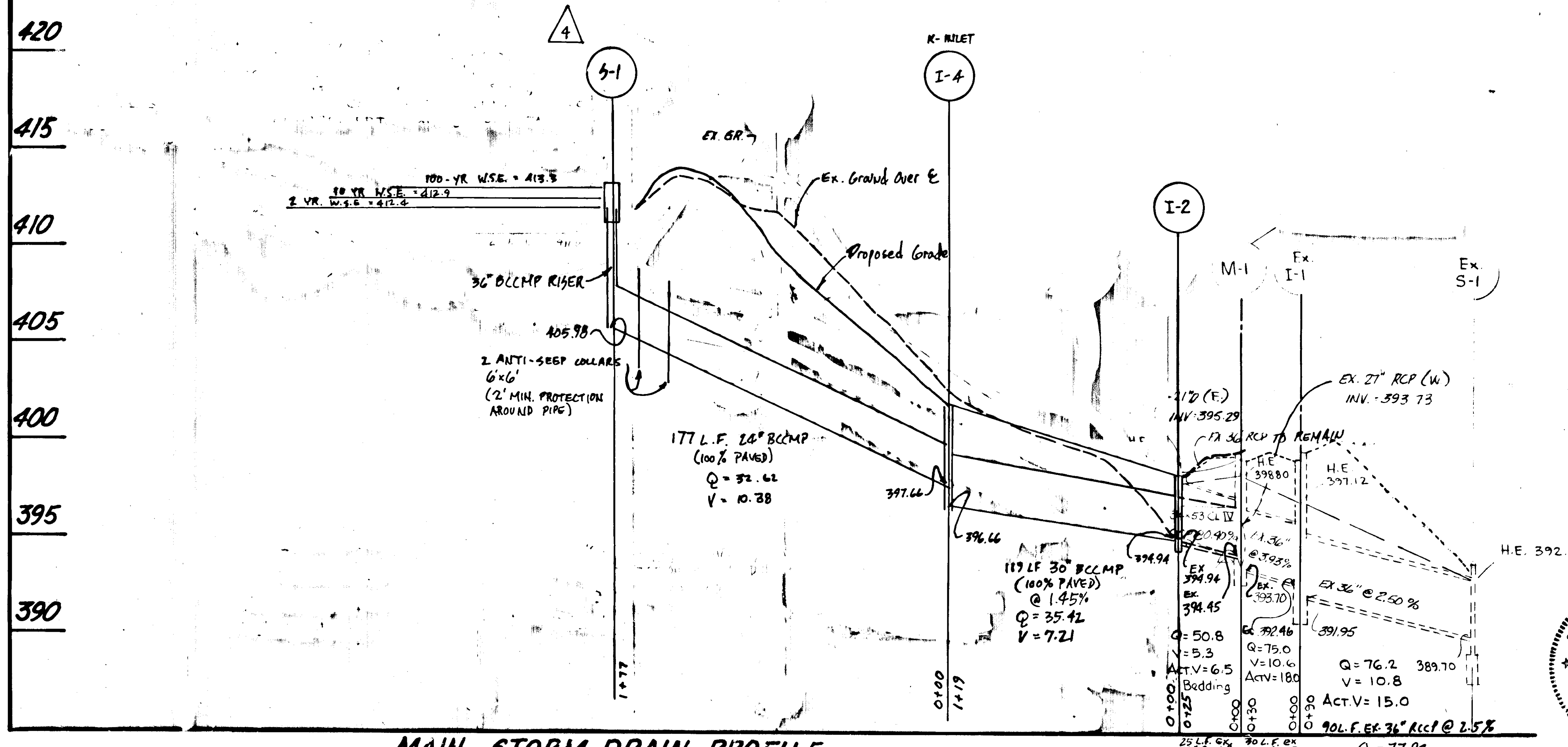
5

1) Obtain Grading Permit.
2) Notify Howard County Bureau of Licenses, Inspections and Permits 24 hours prior to grading operations. Phone: 992-2435.
3) Provide stabilized construction entrance (S.C.E) PERIMETER DIKE/SWALE & SILT FENCE (SBD) AND SEDIMENT TRAP #1 BEFORE DISTURBING SITE. CLEAR ALL TREES FROM EMBANKMENT. — 1 Week
4) Construct the storm drain system from I-2 AT THE EXISTING HEADWALL to I-4. Provide silt fence around I-2 & I-4. Grade permanent swale and driveway. Provide silt fence in swale as shown. Provide inlet protection at existing inlet M-1. — 4 Weeks
5) INSTALL 36" CMP RISER AND 24" CMP PRINCIPAL SPILLWAY TO I-4 TO PROVIDE STORMWATER MANAGEMENT. CONSTRUCT EMERGENCY SPILLWAY. REMOVE THE EXISTING 10" CMP POND DISCHARGE PIPE. — 2 WEEKS
6) Perform All remaining onsite grading. Construct the houses, private road, driveways and sewer and water taps. Provide inlet protection at existing inlets on Eldee Drive while working in the road. — 6 Months
7) Remove the curbing as necessary along the south edge — 2 Weeks
8) Final grade and stabilize disturbed areas, phasing out sediment traps as contributing areas are stabilized. — 2 Weeks
9) With the grading inspector's approval, remove all remaining sediment control measures and stabilize all remaining distubed areas. — 1 Week



TOP OF DAM PROFILE

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



MAIN STORM DRAIN PROFILE

SCALES HOR: 1"=50', VERT: 1"=5'

1201

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

James M. Helm — 4-1-86
U.S. SOIL CONSERVATION SERVICE — DATE

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

Stephen L. Hurley — 4/1/86
SOIL CONSERVATION DISTRICT — DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

4-7-86
CHIEF, BUREAU OF ENGINEERING — DATE

APPROVED: OFFICE OF PLANNING AND ZONING

John W. Musselman — 4-1-86
CHIEF, DIVISION OF LAND DEVELOPMENT AND ZONING ADMINISTRATION — DATE

DEVELOPER'S CERTIFICATE

I 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 INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY

10-15-85
DEVELOPER — DATE

ENGINEER'S CERTIFICATE

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

Walter Novash — 11-1-85
ENGINEER — DATE

STATE OF MARYLAND — WALTER NOVASH — REGISTERED PROFESSIONAL ENGINEER

TITLE: PROFILES AND DETAILS				
PROJECT: HEATHER GLEN, LOTS 12, 13, & 14				
LOCATION: SECOND ELECTION DISTRICT HOWARD CO., MD.				
SCALE: AS NOTED	DESIGNED BY: W.N.	DRAWN BY: JTN	CHECKED BY:	DATE: OCT. 1985
FIELD BOOK:	PAGE NO.:	JOB NO.: 81016		DRAWING NO.: 2 OF 2

boender associates inc.
consulting engineers
land surveyors
land planners

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