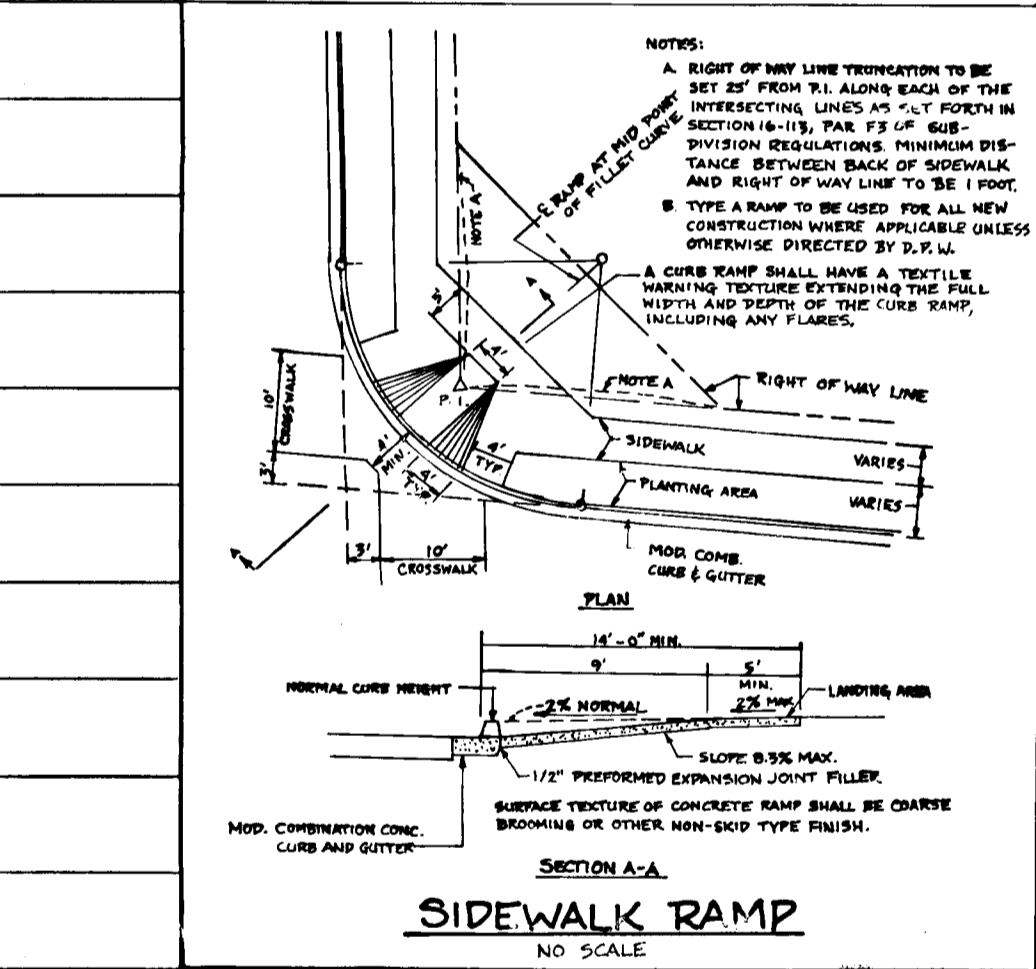


**TYPICAL PAVING SECTIONS -
BRUNNERS RUN CT. & OLD MONTGOMERY ROAD**

SECTION NUMBER	PAVEMENT MATERIALS	
	FULL DEPTH BIT CONC. ALTERNATE	GRANULAR BASE ALTERNATES
P-2	<ul style="list-style-type: none"> 1 1/2" BIT CONC. SURFACE 5" BIT CONC. BASE 	<ul style="list-style-type: none"> 1 1/2" BIT CONC. SURFACE 2 1/2" BIT CONC. BASE PRIME 8" CRUSHED RUN BASE COURSE (2 COURSES) OR 6" DENSE GRADED STABILIZED AGGREGATE BASE COURSE

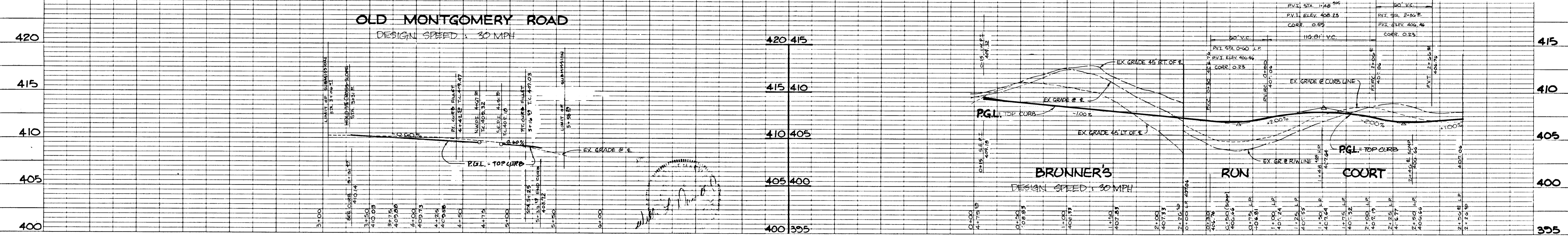
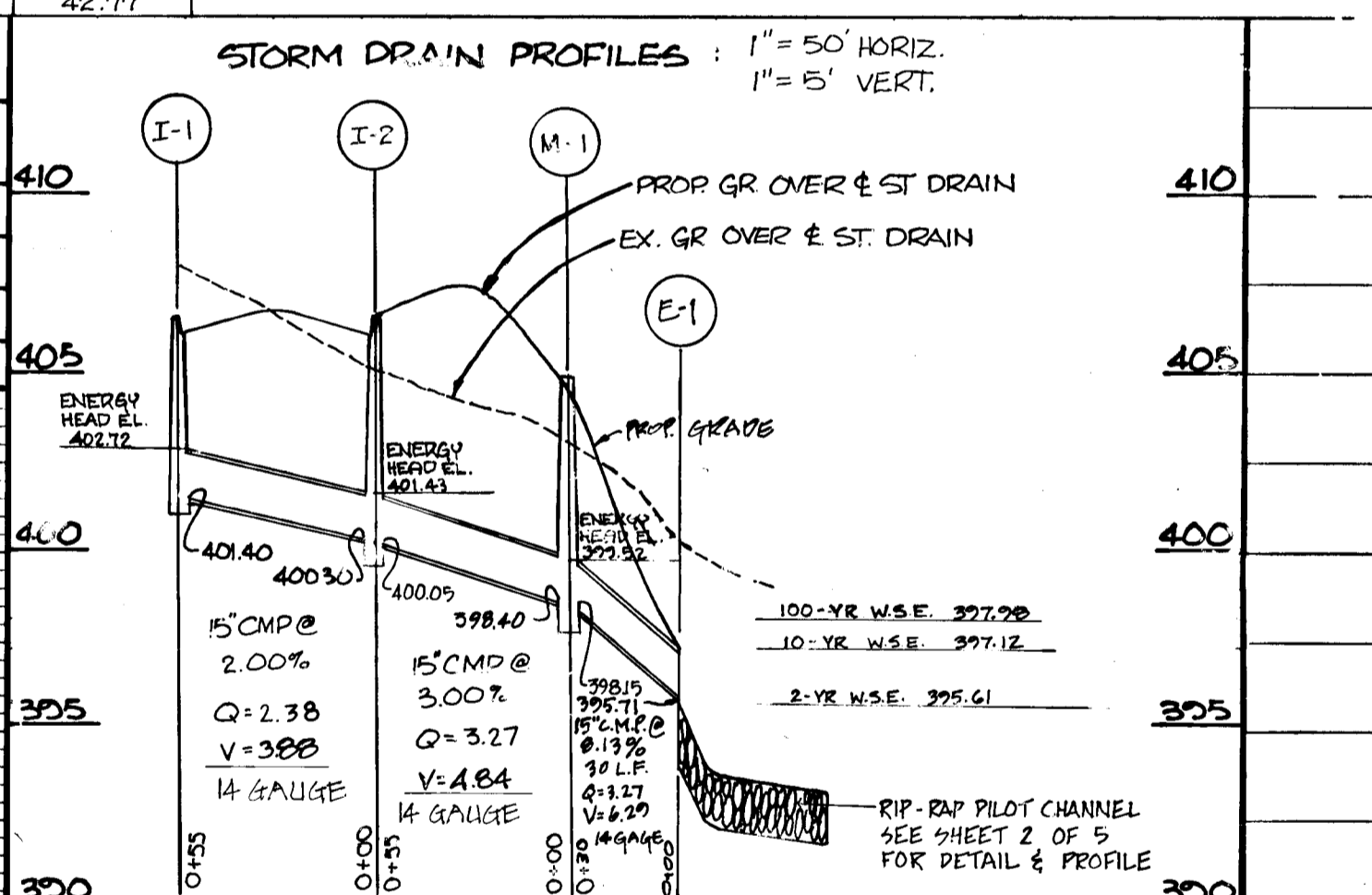
**OLD MONTGOMERY ROAD
TYPICAL HALF SECTION**
NO SCALE

PLAN
SCALE: 1" = 50'



STRUCTURE SCHEDULE

NUMBER	TYPE	STD. DETAIL NO.	TOP ELEVATION		INVERT ELEVATION		REMARKS
			UPPER	LOWER	IN	OUT	
I-1	A-5	SD. 4.01, R. 3.00	406.6676	406.6676	—	401.40	2+46" L.P.
I-2	A-5	SD. 4.01, R. 3.00	406.6676	406.6676	400.30	400.05	0+50" L.P.
M-1	RID. PRECAST MH	G. 5.13	405.0	405.0	398.40	398.15	—
E-1	END SECTION	SD. 5.01	—	—	—	375.71	—



APPROVED: OFFICE OF PLANNING AND ZONING
6/18/88
APPROVED: DEPARTMENT OF PUBLIC WORKS
5/26/88

APPROVED: DEPARTMENT OF PUBLIC WORKS
6/13/88
SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 203
ELICOTT CITY, MD. 21043
(301) 461-9563

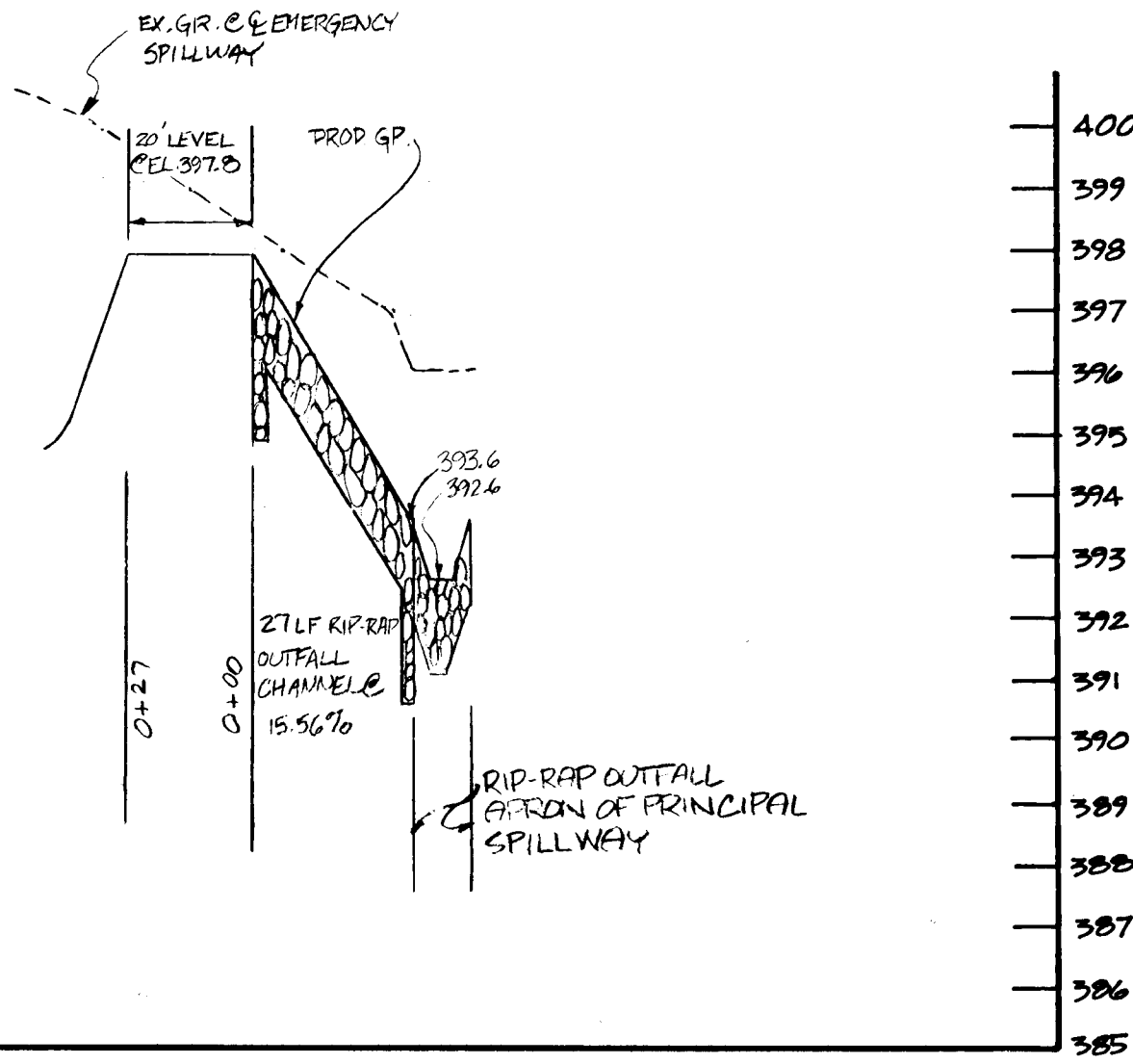
DES: GSS
DRN: LRC
CHK: GSS
DATE: 5/16/88
5/24/88
5/25/88
5/29/88

**BRUNNERS RUN
LOTS 1-11**
ROAD & STORM DRAIN
CONSTRUCTION DRAWINGS

**PLAN & PROFILE
OF
BRUNNERS RUN CT.**
SCALE AS SHOWN
SHEET 1 OF 5

1266

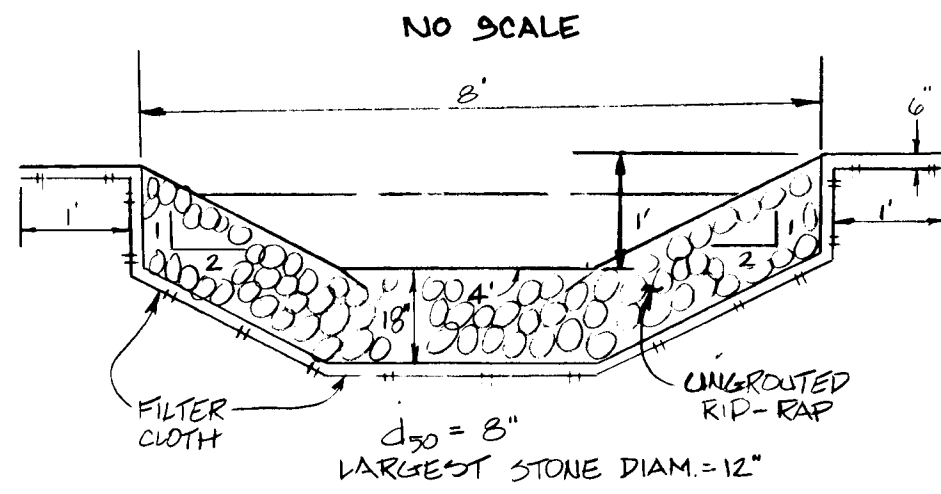
F-88-82



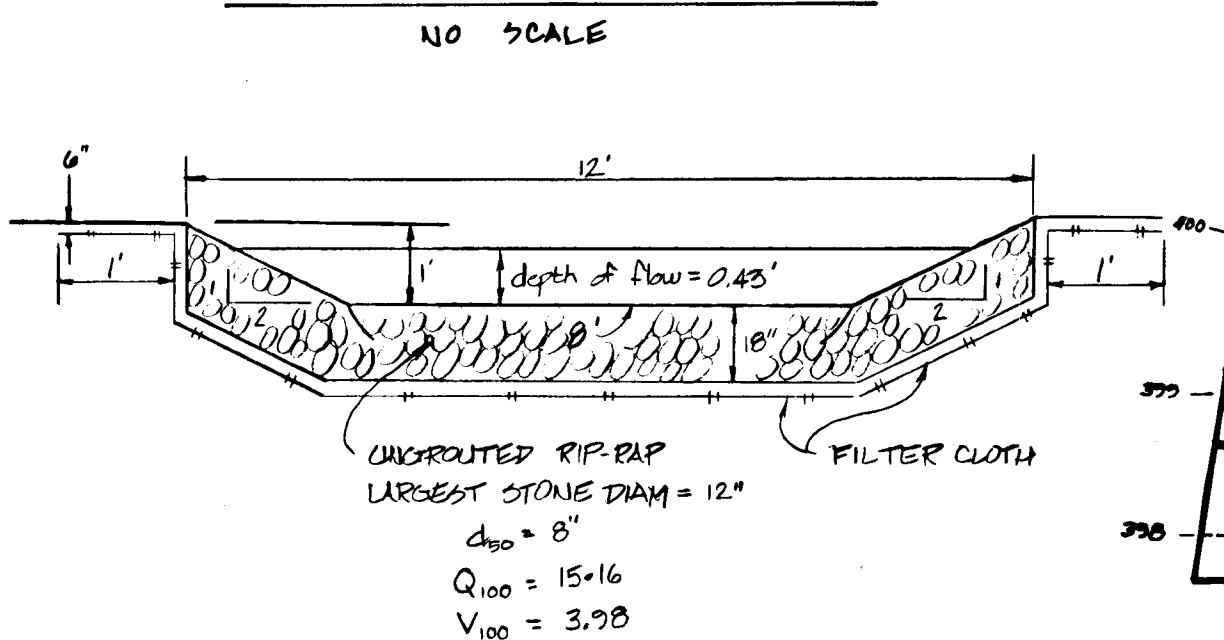
EMERGENCY SPILLWAY PROFILE

SCALE: 1" = 30' HORIZ.
1" = 3' VERT.

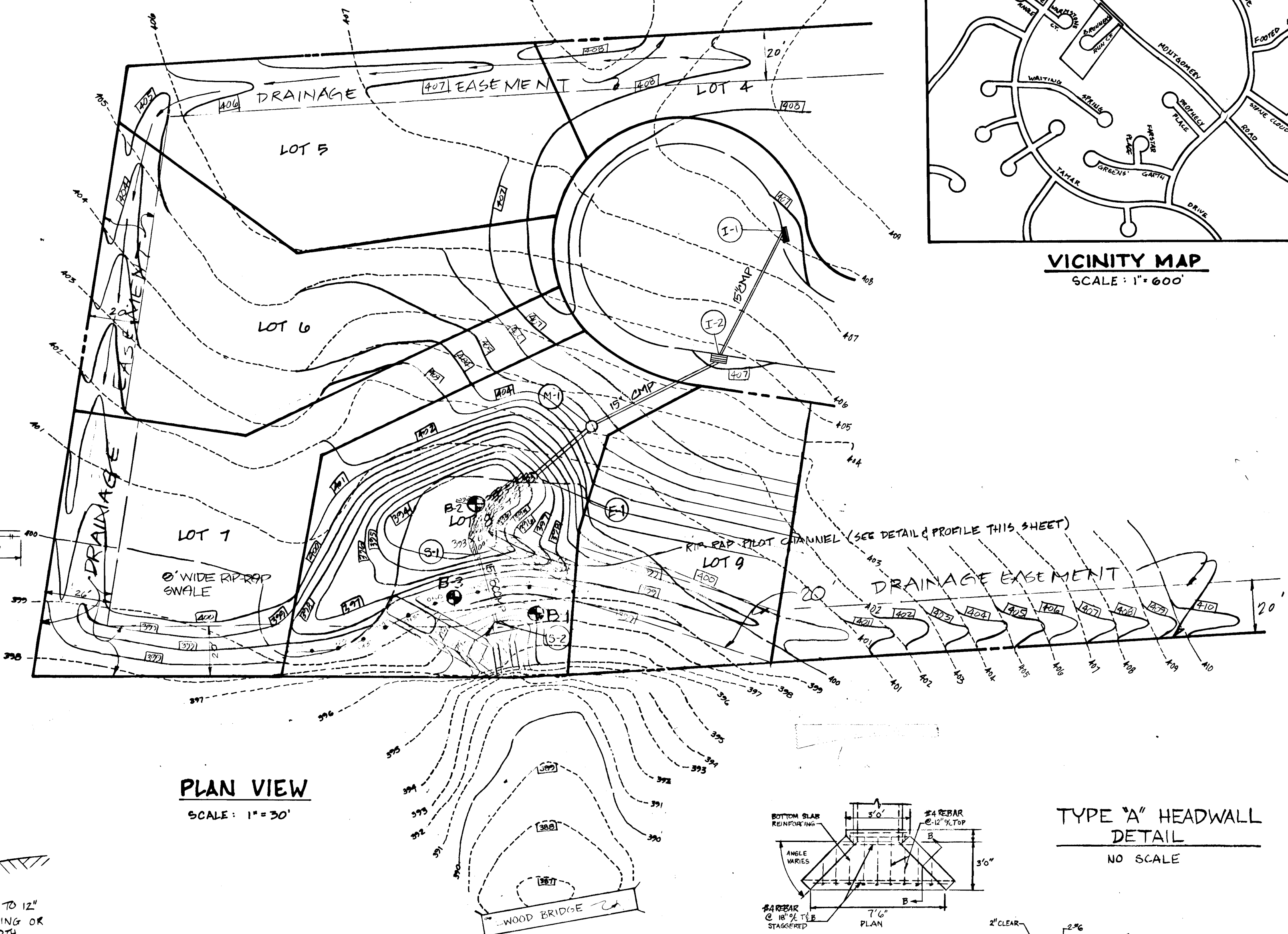
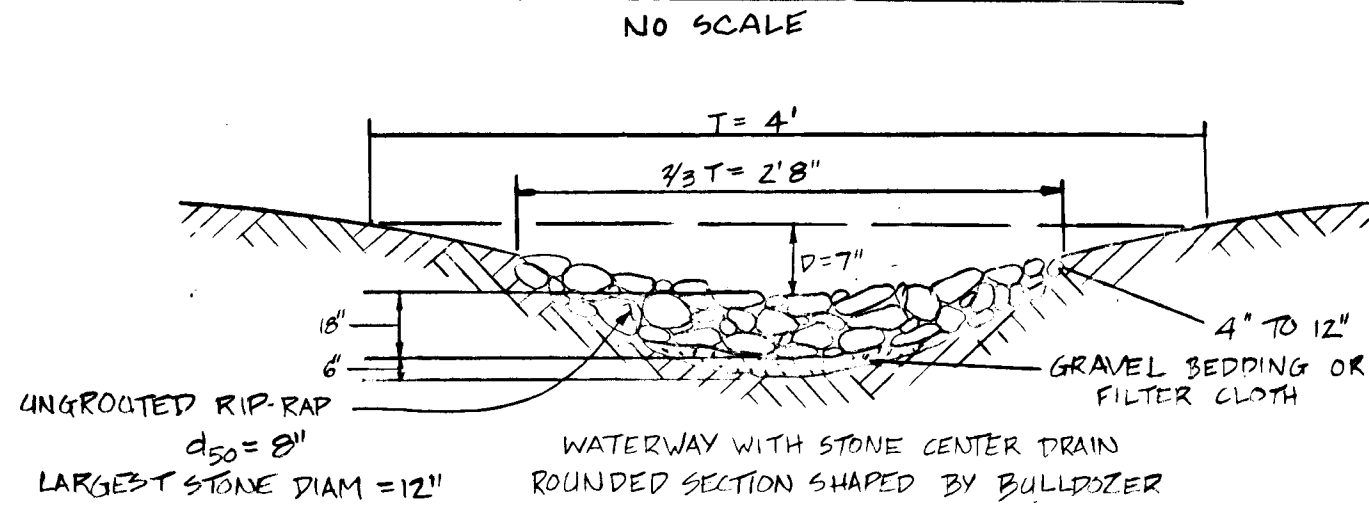
RIP-RAP OUTFALL PROTECTION PRINCIPAL SPILLWAY



RIP-RAP OUTLET PROTECTION EMERGENCY SPILLWAY

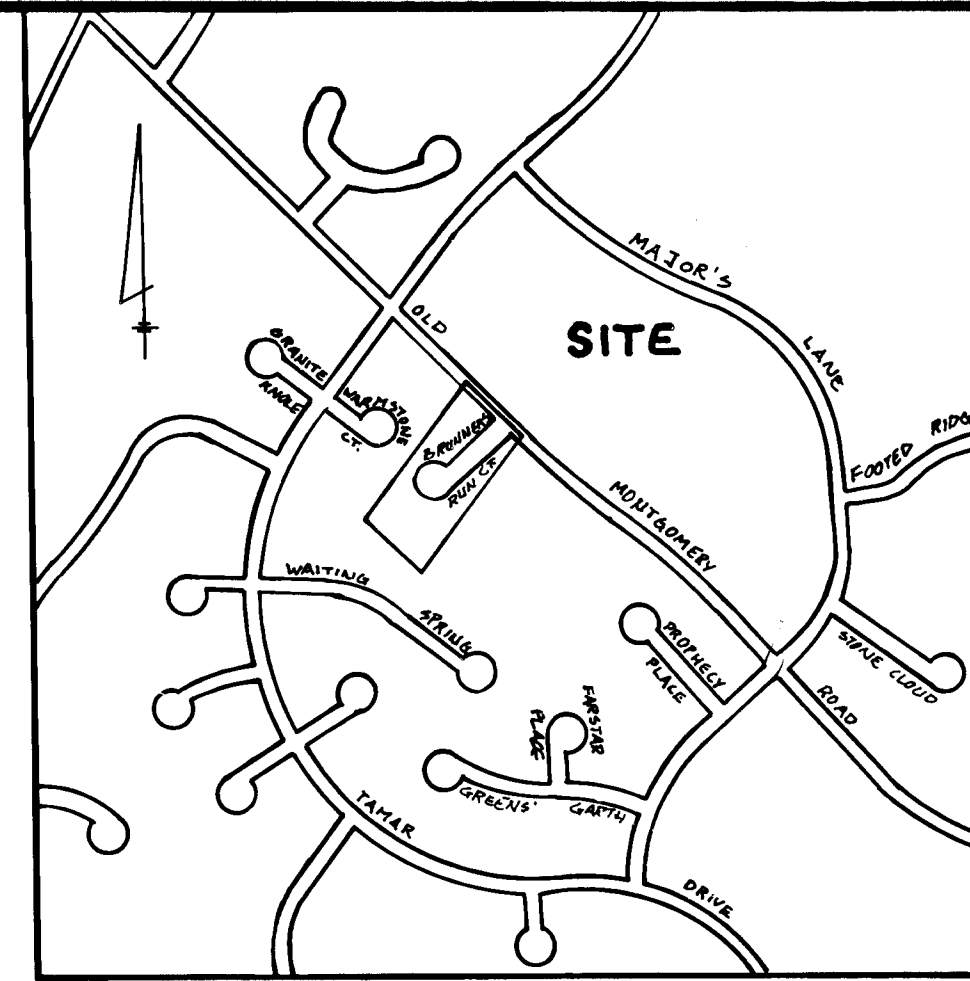


FILOT CHANNEL STORMWATER MANAGEMENT BASIN



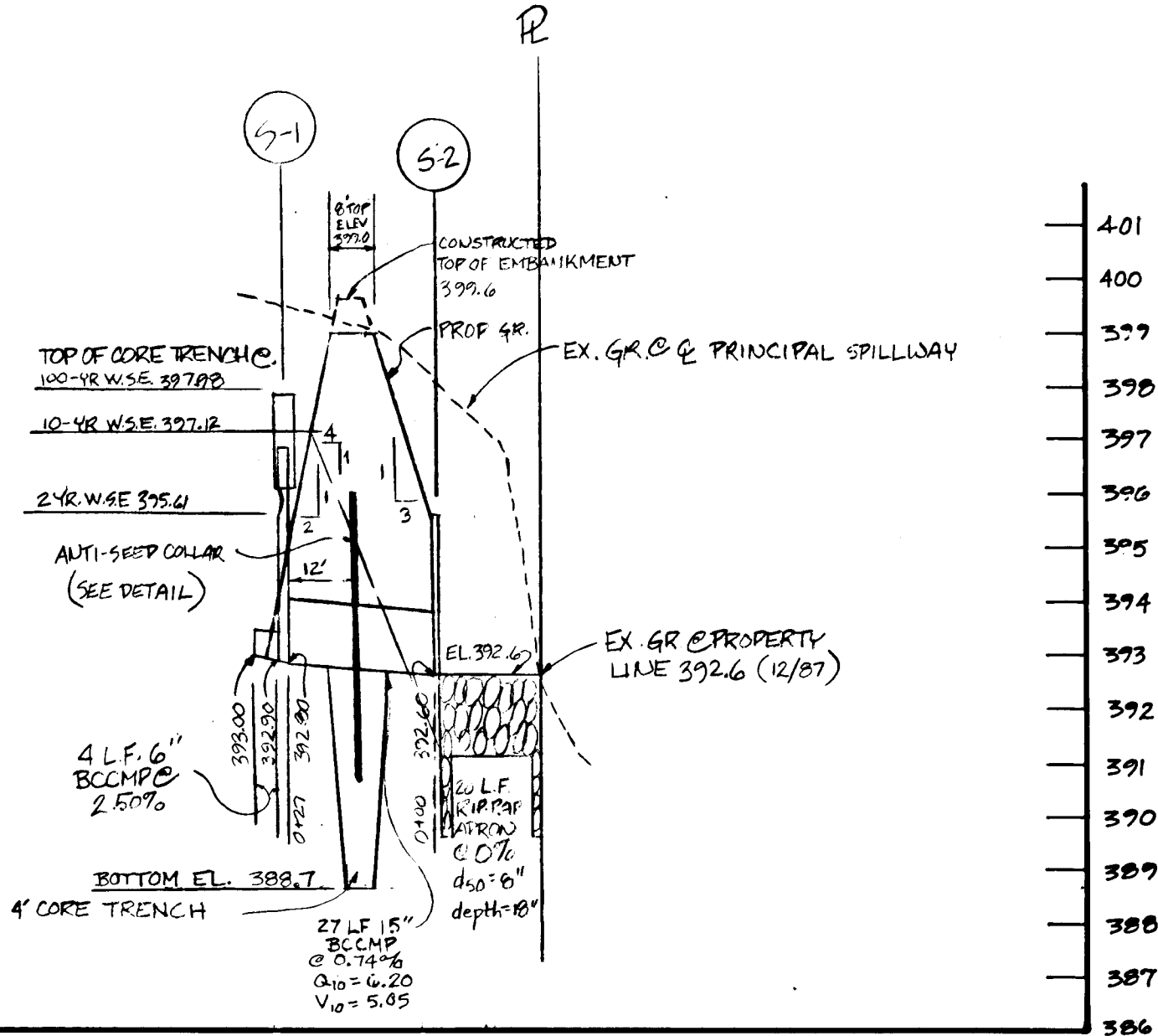
PLAN VIEW

SCALE: 1" = 30'



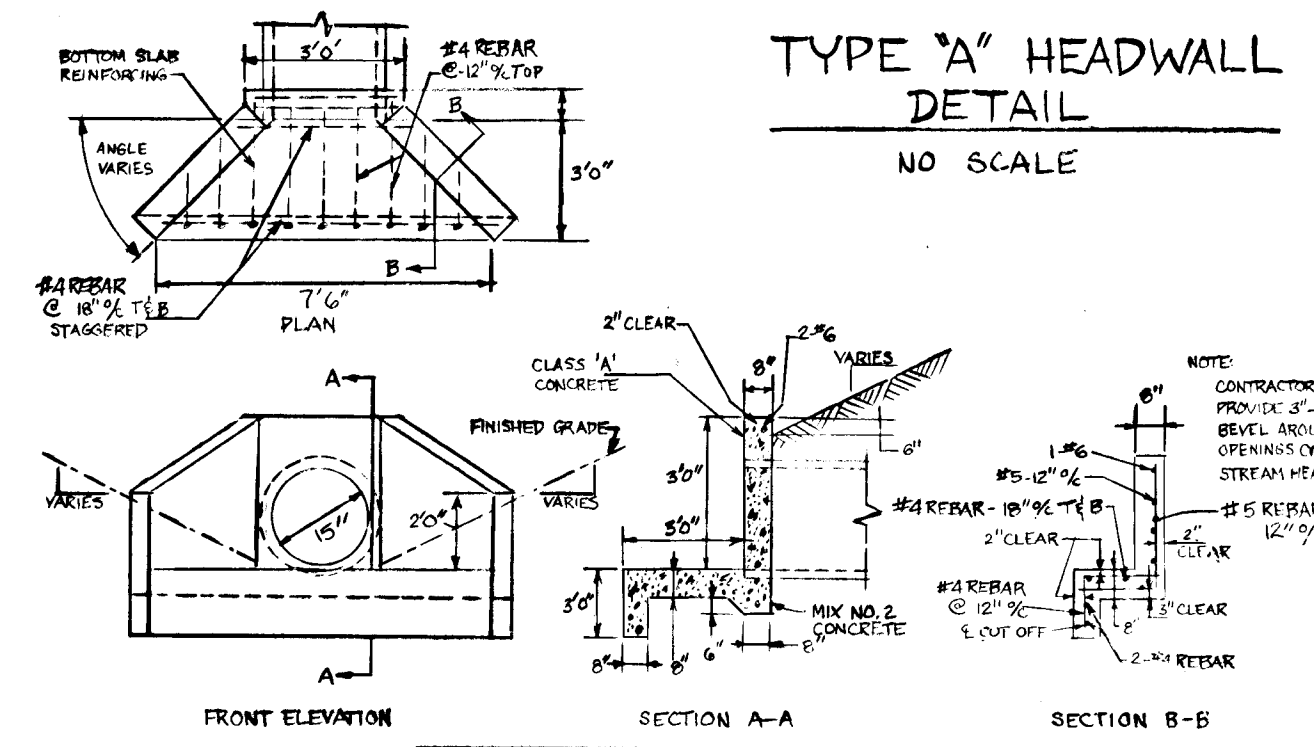
VICINITY MAP

SCALE: 1" = 600'



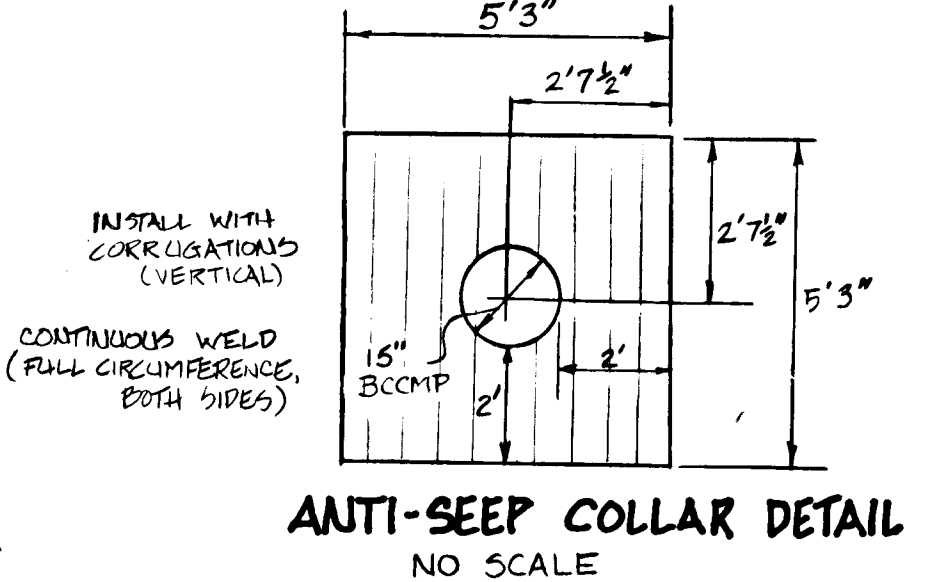
PRINCIPAL SPILLWAY PROFILE

SCALE: 1" = 30' HORIZ.
1" = 3' VERT.

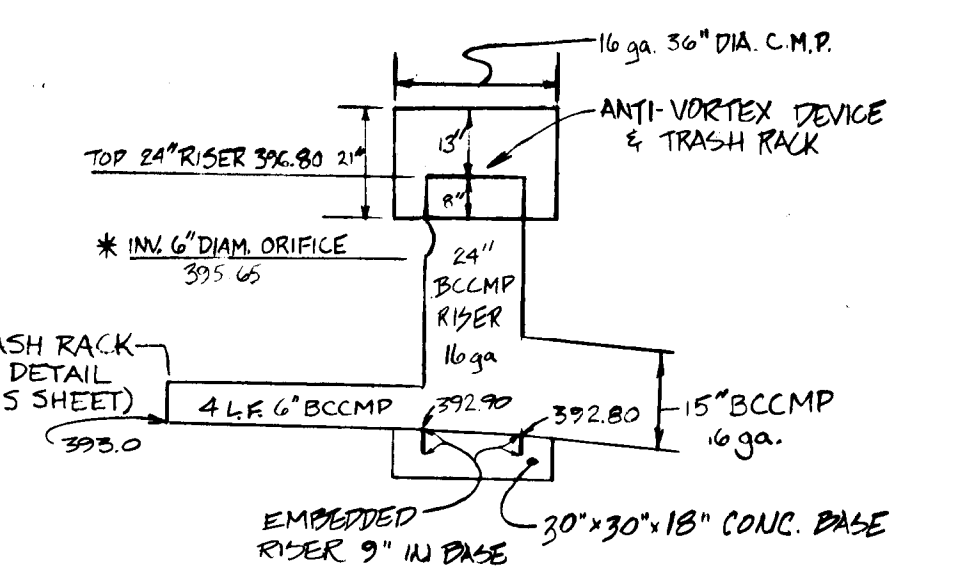


TYPE 'A' HEADWALL DETAIL

NO SCALE

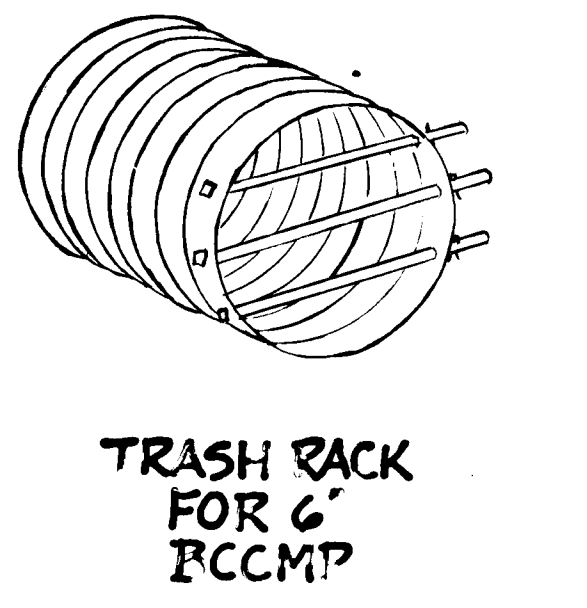


ANTI-SEEP COLLAR DETAIL

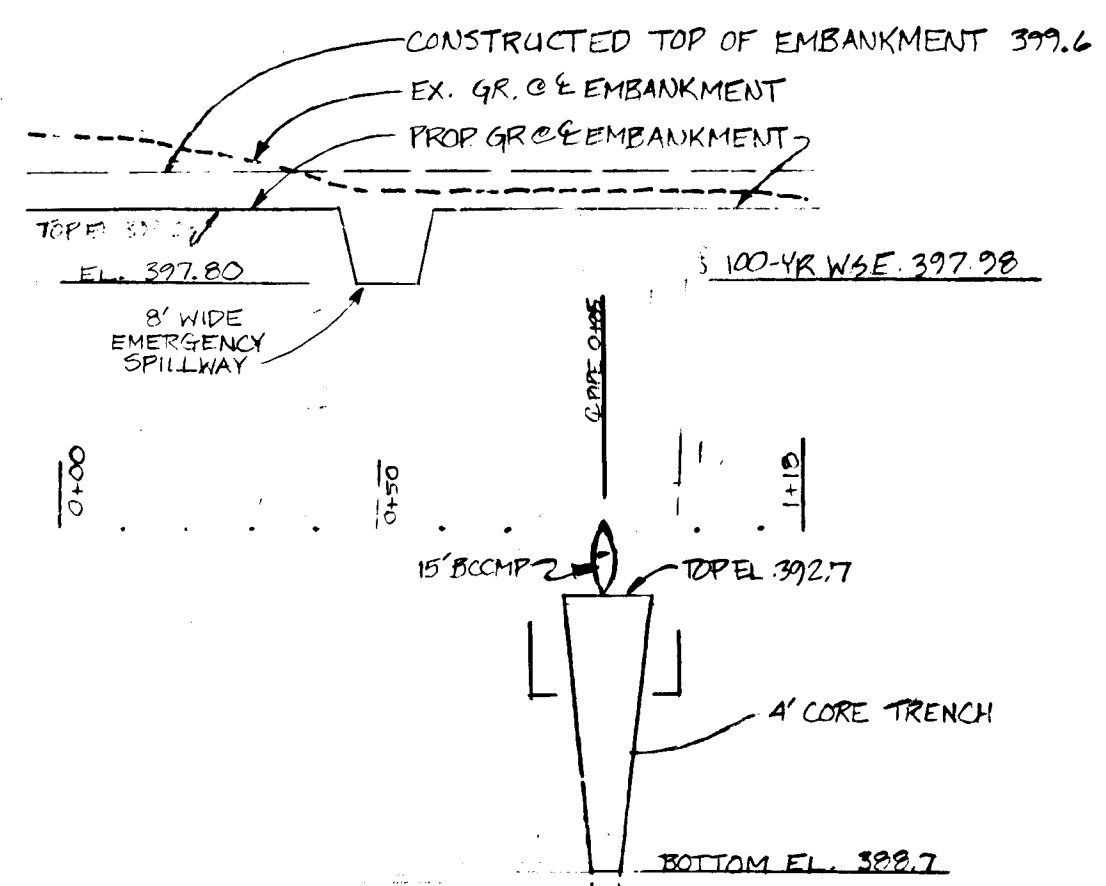


RISER DETAIL

* THIS ORIFICE TO BE CUT INTO RISER ONLY AFTER CONVERSION FROM SEDIMENT BASIN TO S.W.M. POND.

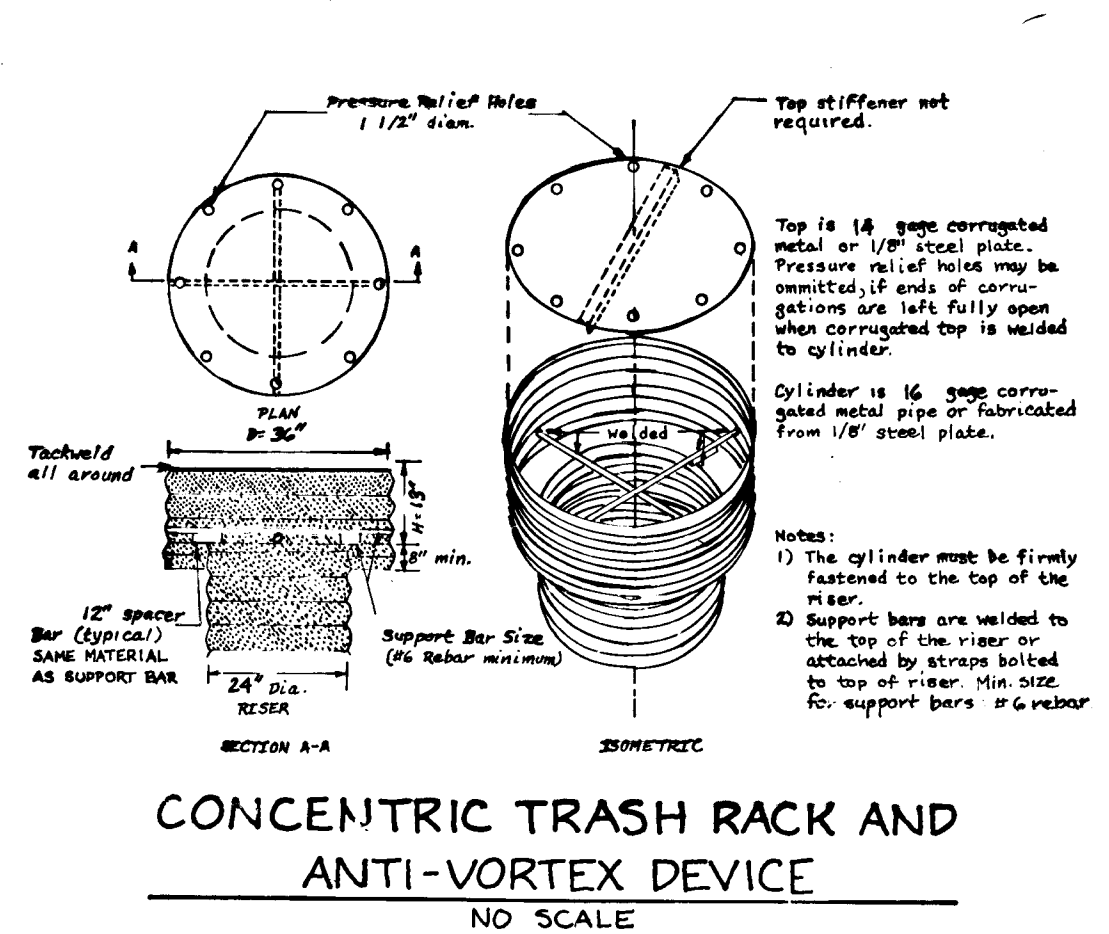


TRASH RACK FOR 6" BCCMP



EMBANKMENT PROFILE

SCALE: 1" = 30' HORIZ.
1" = 3' VERT.



CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE

NO SCALE

APPROVED: OFFICE OF PLANNING AND ZONING
Juanita Smith 6/3/88
CHIEF, DIVISION OF COMMUNITY PLANNING AND DEVELOPMENT

APPROVED: DEPARTMENT OF PUBLIC WORKS
Donald A. Lane 5/16/88
CHIEF, LAND DEVELOPMENT DIVISION

APPROVED: DEPARTMENT OF PUBLIC WORKS
Shawna M. Winstead 5/8/88
CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PUBLIC WORKS
William S. Ray 6-6-88
CHIEF, BUREAU OF ENGINEERING

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.

APPROVED: *Juanita Smith* 5/6/88
U.S. SOIL CONSERVATION SERVICE

APPROVED: *Robert W. Ziehm* 5/16/88
HOWARD SOIL CONSERVATION DISTRICT

NO.	REVISIONS	DATE
1	REVISE E-1 20' CLOSER TO M-1	3/20/88
2	REVISE PROPOSED CONTOURS WITHIN S.W.M. POND	3/29/88
3	ELIMINATE RIP-RAP SWALE LEADING TO POND FROM LOT 7	3/29/88

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 203
ELLICOTT CITY, MD. 21043
(301) 461-9563

STORMWATER MANAGEMENT PLAN
BRUNNER'S RUN, LOTS 1-11
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP 36 PARCEL 47
G-87-58, P-87-74

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Wilbur L. Duvall 5/3/88
WILBUR L. DUVAL
DATE

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 WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN 'AS-BUILT' PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

by *Christopher & Stubbs, P.C.* 10-1-87
CHRISTOPHER & STUBBS, P.C.
DATE

DATE	SHEET
9-25-87	2
DRAWN	OF 5
CHECKED	PROJECT NO.
SCALE: AS SHOWN	87-01

F-88-82

STORMWATER MANAGEMENT CONSTRUCTION SPECIFICATIONS

A. Site Preparation

Areas under the embankment, structural works, and stream diversion shall be cleared, grubbed, and the topsoil stripped to remove all trees, vegetation, roots, or other objectionable material. To facilitate clean out and restoration, the permanent pool area should be cleared of all brush and trees.

B. Earth Fill

Earth fill shall conform to SMA specification Article 31.05 and these specifications:

1. Material

The fill material shall be taken from an approved borrow area. The first two feet of excavation under the embankment is to be wasted at the designated spoil area. The final decision as to the suitability of the exposed soil shall be made by the Soil Engineer at the time of construction. All material shall be free from roots, stumps, wood, rubbish, oversized stones, frozen or other objectionable materials. The dam embankment should be formed of material conforming to the Unified Soil Classification SC, CL, and ML. As a minimum criteria, the fill material for the dam embankment (except as noted below) will have a maximum density not less than 100 pcf as determined by ASTM D 99 Method A. The liquid limit shall not exceed 40 and the Plasticity Index must be between 12 and 25. All material shall contain no stone larger than three inches in the greatest dimension. Such stones shall not be more than 25 percent by volume of the fill material. For dam core trenches, the material used can include clean and organic-free OH and MH material in addition to CL and ML. The embankment shall be constructed to an elevation which provides for anticipated settlement to the design elevation. The fill height all along the length of the embankment shall be increased at least ten percent above the design elevation (including freeboard) unless otherwise shown on the plans.

2. Placement

Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in eight-inch maximum thickness (before compaction) layers and shall be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of the embankment.

3. Compaction

The movement of hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be compacted to a minimum of 95 percent of the maximum dry density obtained in compaction tests of the fill materials performed in accordance with the requirements of the ASTM designation 99 Method A, prior to next lift being spread and be certified by the Soils Engineer at the time of construction. The fill density shall meet minimum specified density regardless of the compaction method used. The moisture content of the embankment material shall be within the designated upper and lower limits of the optimum moisture content. Limits of moisture content may be modified by the engineer during construction depending on material encountered. Fill placed at densities lower than the specified minimum density or at moisture contents outside the specified acceptable range of moisture content or otherwise not conforming to the requirements of the specifications shall be reworked to meet the requirements or removed and replaced by acceptable fill.

4. Core Trench/Cutoff Trench

Where specified, a core trench shall be excavated along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet or as shown on the plans. The side slopes of the trench shall be one-to-one or flatter. The backfill material for the core trench shall be approved prior to use and shall be free of all organic material. The fill for the trench shall be compacted with equipment or rollers to assure that a minimum of 95 percent of the maximum dry density and minimum permeability is achieved. Geotechnical Engineer to specify minimum depth during construction inspection.

C. Structural Backfill

Backfill material shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other compaction equipment. The material must completely fill all spaces under and adjacent to the structure or pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall the contractor drive equipment over any part of a concrete structure or pipe unless there is a compacted fill of 24 inches or greater over the structure or pipe.

D. Pipe/Conduits

All pipe denoted as "CMP" may be either corrugated aluminum pipe or asphalt coated or corrugated steel pipe. The barrel, riser, trash rack, and section, and anti-seep collars must all be made of the same material (either steel or aluminum).

1. Corrugated Metal Pipe

a. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and have full bituminous coating and shall conform to the requirements of ASTM Specification K-790, Type A, with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

b. Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of ASTM Specification M-196 or M-211 with watertight coupling bands. Coupling bands, anti-seep collars, and sections, etc., must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Not dip galvanized bolts may be used for connections. The pH of the surrounding soil shall be less than nine (9) and greater than four (4). Helically corrugated pipe, in addition to the requirements above, shall have either continuously welded seams or have lock seams which are caulked with a neoprene bead.

c. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around and shall be at the proper angle to provide a watertight connection. Watertight coupling bands shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight.

d. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

e. Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.

f. Backfilling shall conform to structural backfill as described above.

g. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

2. Reinforced Concrete Pipe

a. Materials - This pipe shall conform to SMA specification, Article 40.16. Class IV pipe shall be used unless otherwise specified. Reinforced concrete pipe shall have a rubber gasket joint and shall equal or exceed ASTM Specification C-361. Approved equivalents are ASTM Specifications C-300, -301, and -302.

b. Bedding - All reinforced concrete pipe shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least ten percent of its diameter with a minimum thickness of three inches.

c. Laying pipe - Bell and spigot pipe shall be placed with the bell and upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed on the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent and deviation from the original line and grade of the pipe.

d. All concrete pipe joints will be sealed with mortar inside and outside.

e. Backfilling shall conform to structural backfill as described above.

f. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

E. Concrete

Concrete shall meet minimum requirements set forth in SMA Specification and Supplement (August 1980), Article 20.07 (Portland Cement Concrete Mixtures), for Class 3(A-1) or 2(P-1) concrete and 20.10 for reinforcement. Concrete construction shall conform to SMA Specifications, Articles 38.05 and 38.09.

F. Rip Rap and Slope Protection

Rock for rip rap shall conform to SMA Specifications and Supplement (August 1980), Article 20.03-6. Plastic filter cloth shall be placed under all rip rap. Filter cloth shall be 75% Filter #2 or approved substitute.

G. Fencing

When required by the Howard Soil Conservation District chain link fence fabric, fence posts, top rails, braces, gates, and accessories shall conform to the requirements of Federal Specification RR-7-191. Materials shall be as follows, except as otherwise specified:

- Fabric: Type 1, 2-inch mesh, 9-gauge, minimum weight of zinc coating - 1.8 ounces per square foot.
- Barbed Wire: Zinc-coated steel.
- Posts: Type 1, Class 1, zinc-coated.
- Top Rails: Type 11, Class 1, zinc-coated.
- Braces: Zinc-coated steel.
- Gates: Type 1, zinc-coated steel.

SOIL BORING B-1

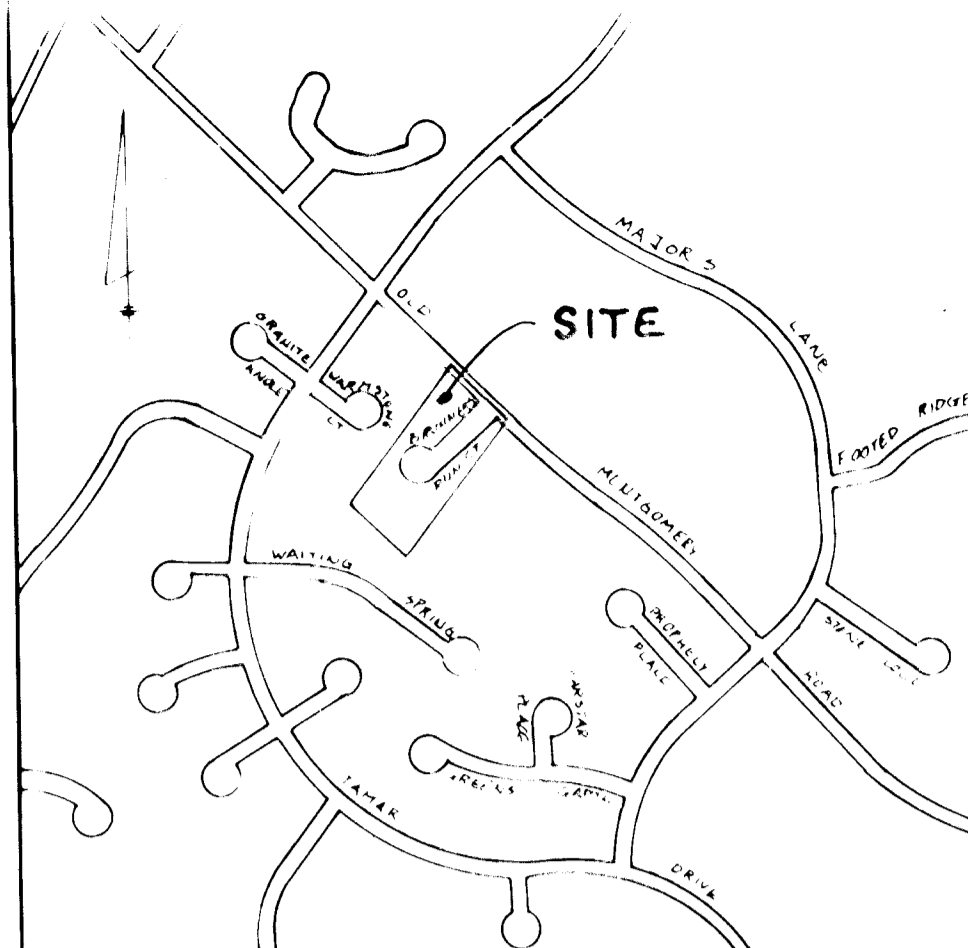
1	FILL
2	
3	
4	
5	SANDY LOAM (Sm)
6	
7	LOAMY SAND (Sm)
8	
9	
10	
11	
12	
13	
14	
15	

SOIL BORING B-2

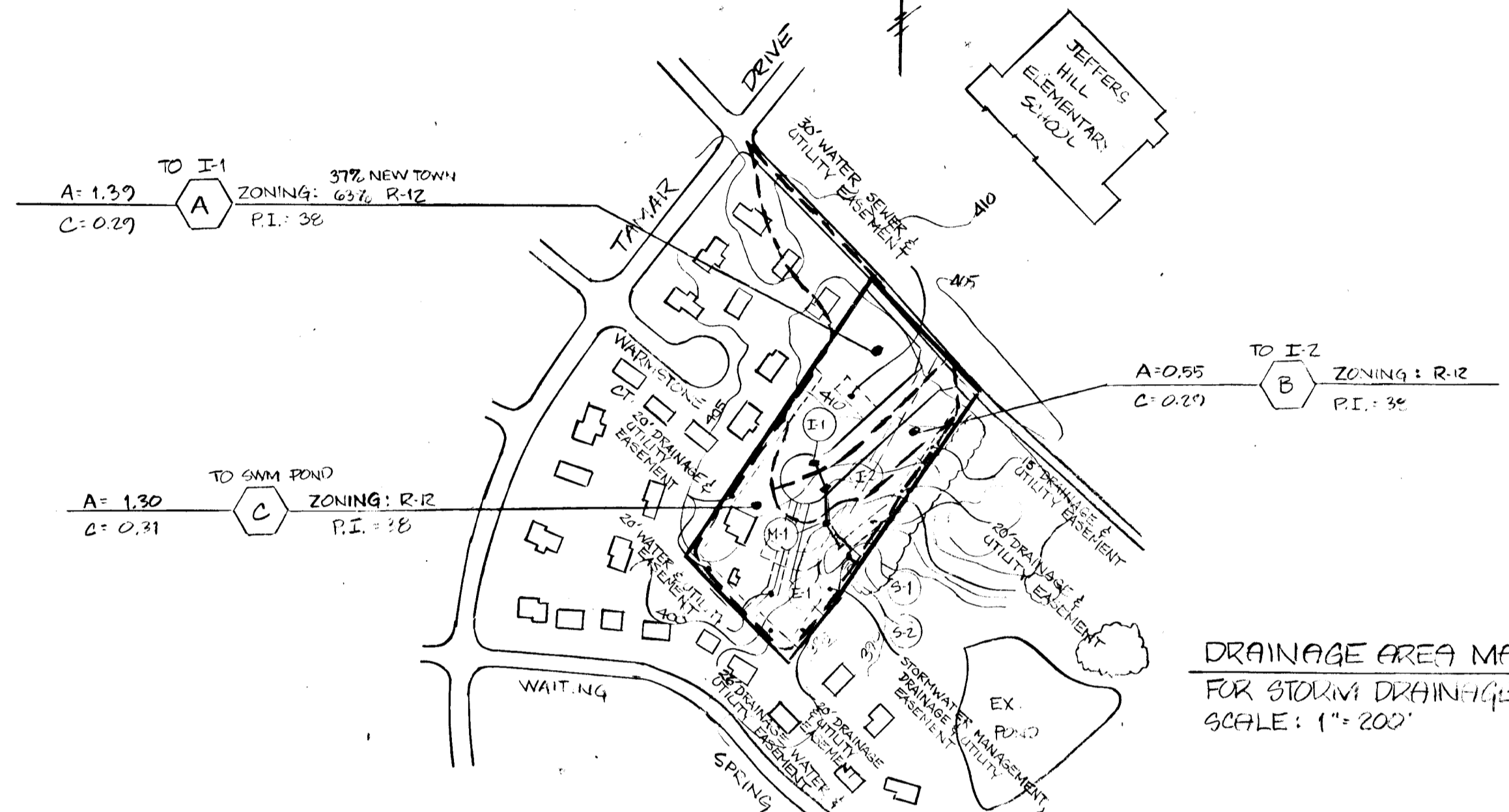
1	FILL
2	
3	
4	SANDY LOAM (Sm)
5	
6	
7	LOAMY SAND (Sm)
8	
9	
10	
11	
12	
13	
14	
15	

SOIL BORING B-3

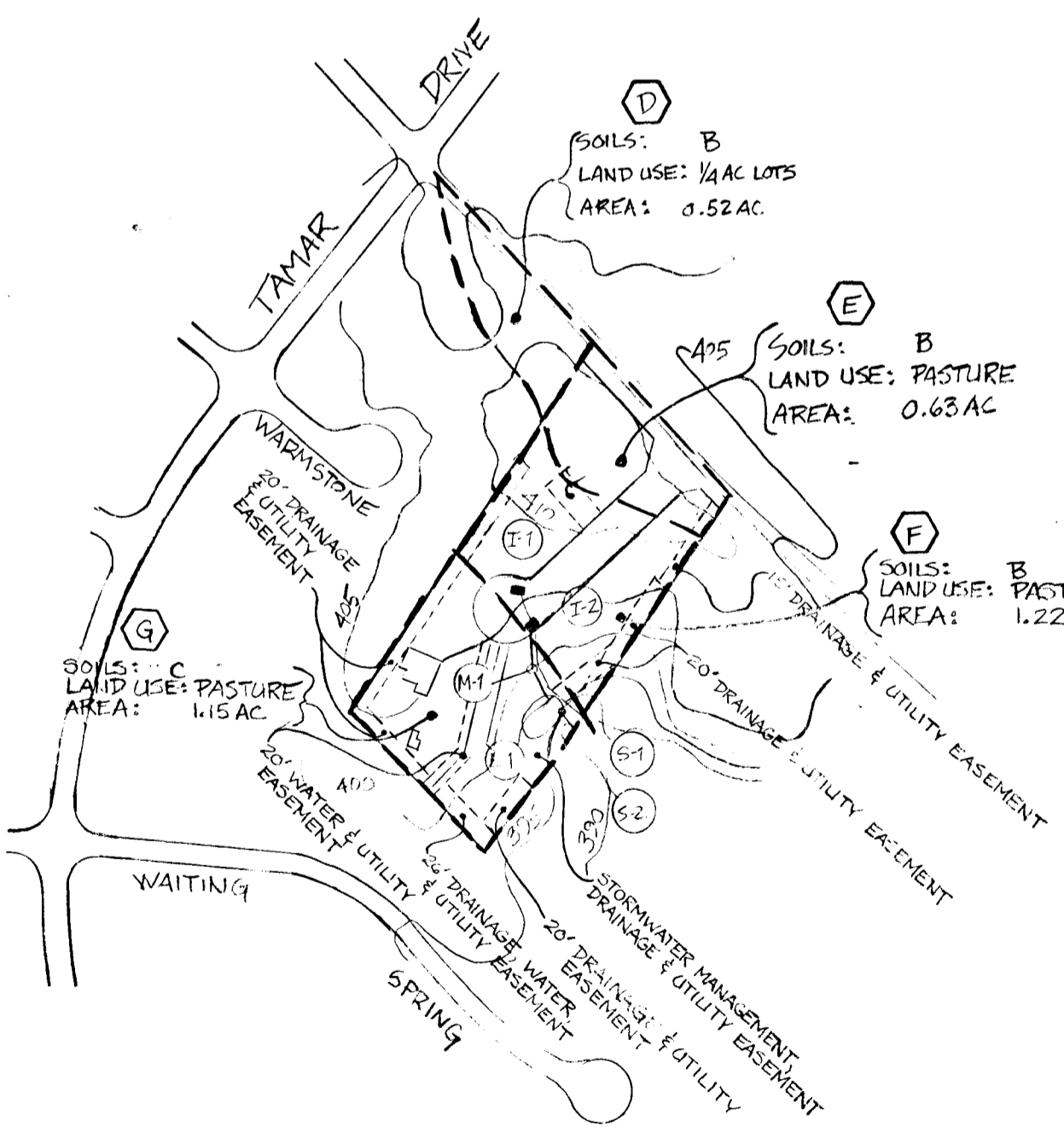
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2	
3	
4	SANDY LOAM (Sm)
5	
6	
7	LOAMY SAND (Sm)
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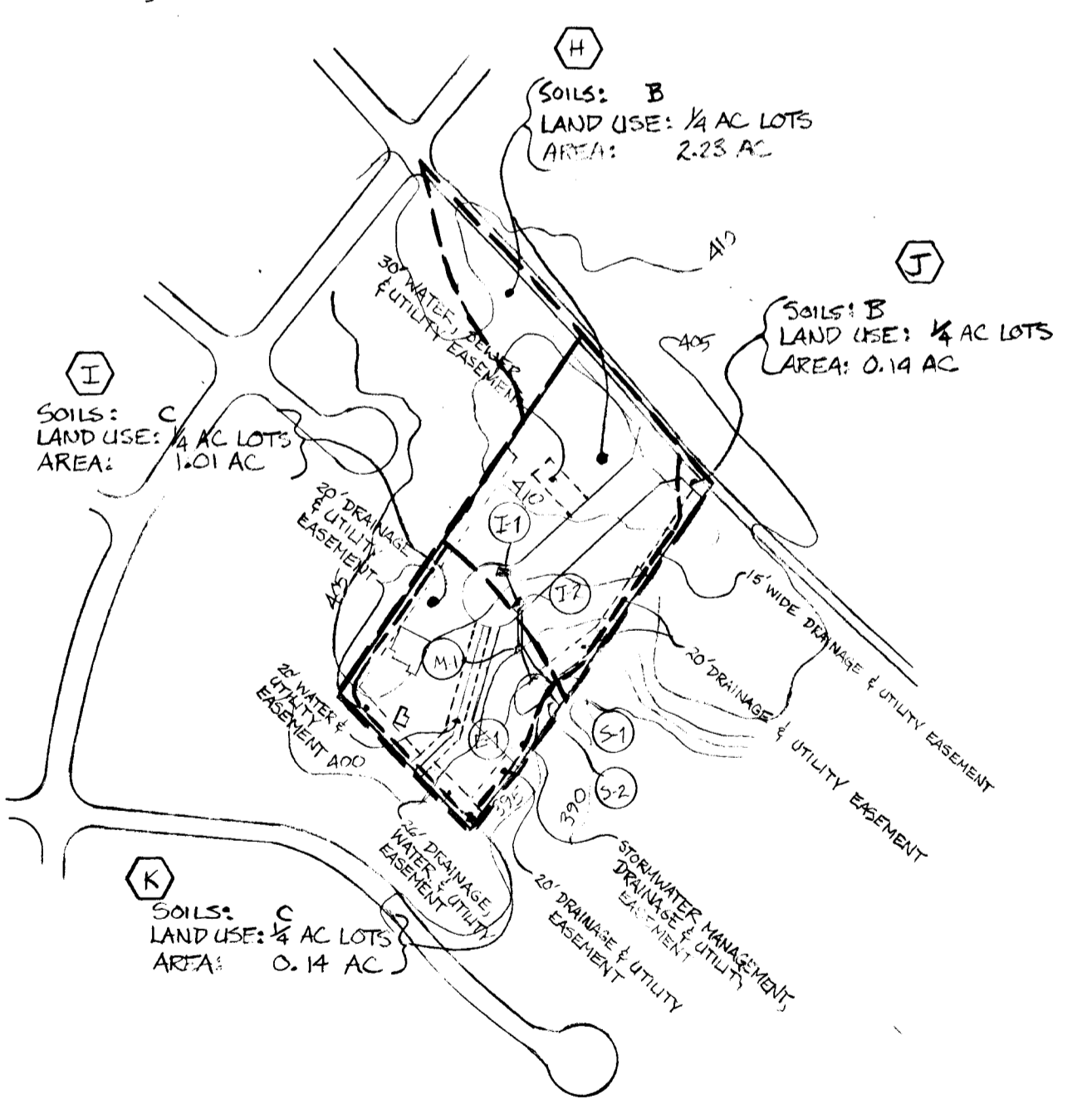
VICINITY MAP
SCALE: 1" = 600'



DRAINAGE AREA MAP
FOR STORM DRAINAGE ONLY
SCALE: 1" = 200'



DRAINAGE AREA MAP
FOR STORMWATER MANAGEMENT ONLY
PRE-DEVELOPMENT CONDITIONS
SCALE: 1" = 200'



DRAINAGE AREA MAP
FOR STORMWATER MANAGEMENT ONLY
POST-DEVELOPMENT CONDITIONS
SCALE: 1" = 200'

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.

James M. Helms 5/6/88
U.S. SOIL CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Robert W. Ziehm 5/13/88
HOWARD SOIL CONSERVATION DISTRICT DATE

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE MUST PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

William S. Duval 5/13/88
WILBUR L. DUVAL DATE

DEVELOPER'S CERTIFICATE
I CERTIFY THAT ALL DEVELOPMENT AND 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 THE BEGINNING OF THE PROJECT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Christopher G. Spill 10-1-87
CHRISTOPHER G. SPILL, PRES. DATE

APPROVED: OFFICE OF PLANNING AND ZONING
Jeffrey R. Smith 6/6/88
CHIEF, OFFICE OF PLANNING AND ZONING

APPROVED: DEPARTMENT OF PUBLIC WORKS
Paul Johnson 5/26/88
CHIEF, LAND DEVELOPMENT DIVISION

APPROVED: DEPARTMENT OF PUBLIC WORKS
Shawnee M. McCreary 6/13/88
CHIEF, BUREAU OF HIGHWAYS

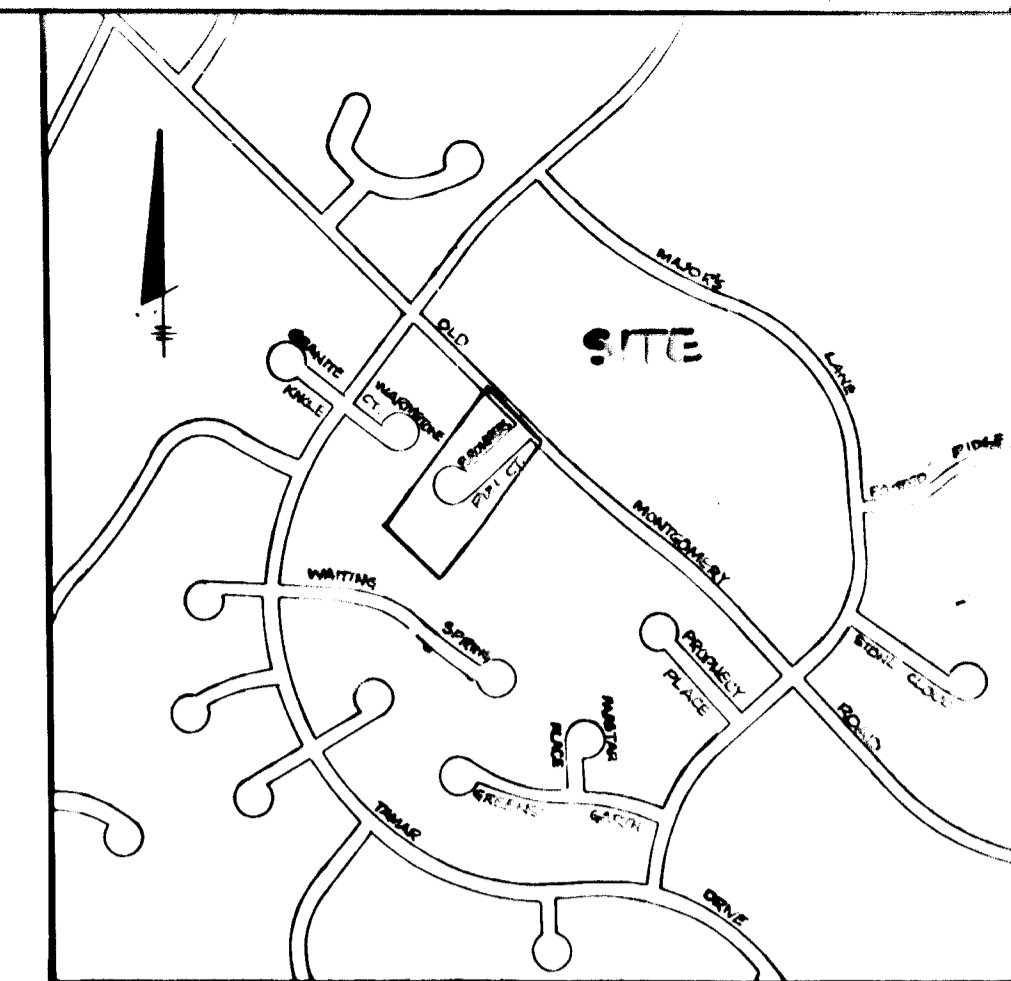
APPROVED: DEPARTMENT OF PUBLIC WORKS
William S. Duval 6-6-88
CHIEF, BUREAU OF ENGINEERING

OWNER:	NO.	REVISIONS	DATE
LOIS H & NORMAN E BRUNNER 9105 OLD MONTGOMERY RD COLUMBIA, MD 21045			

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD
SUITE: 203
ELLCOTT CITY, MD 21043
(301) 461-9563

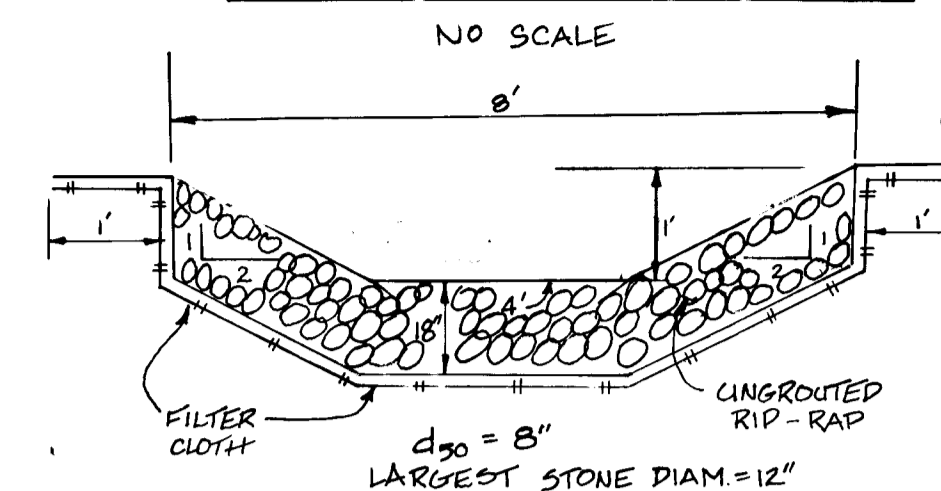
DRAINAGE AREA MAP & STORMWATER MANAGEMENT NOTES
BRUNNER'S RUN, LOTS 1-11
6th ELECTION DISTRICT HOWARD COUNTY MARYLAND
TAX MAP 36 PARCEL 47
8-87-88, P. 87-74

DATE	9-25-87	SHEET	3
DRAWN	SLM	OF	5
CHECKED	CSB	PROJECT NO	87-01
SCALE	1" = 200'		

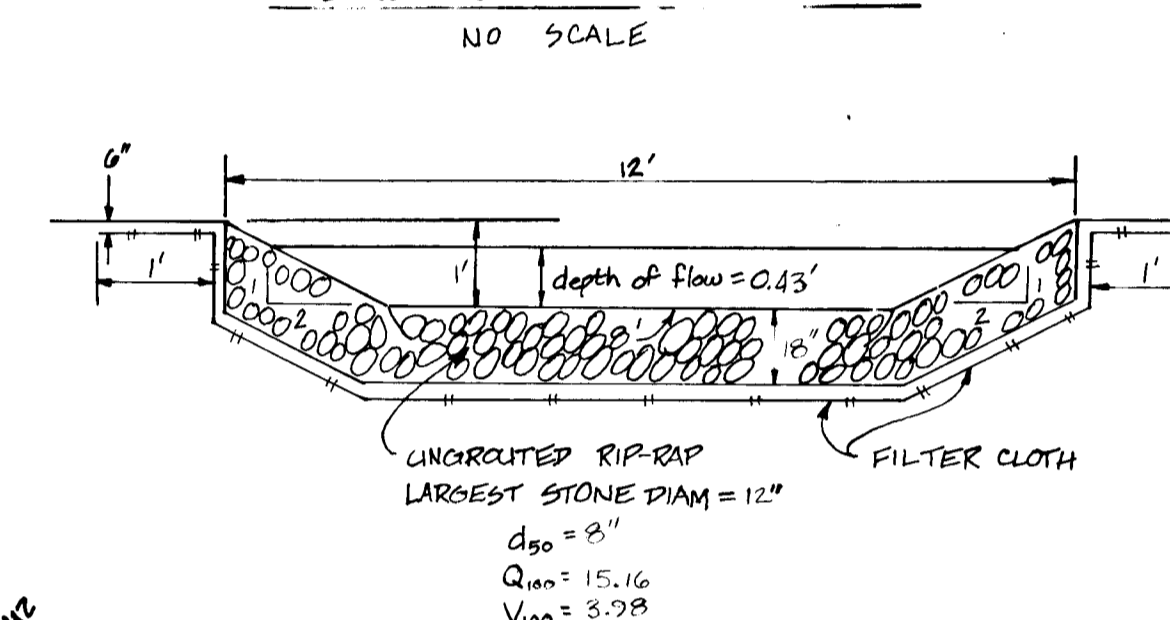


VICINITY MAP
SCALE: 1" = 500'

**RIP-RAP OUTFALL PROTECTION
PRINCIPAL SPILLWAY**

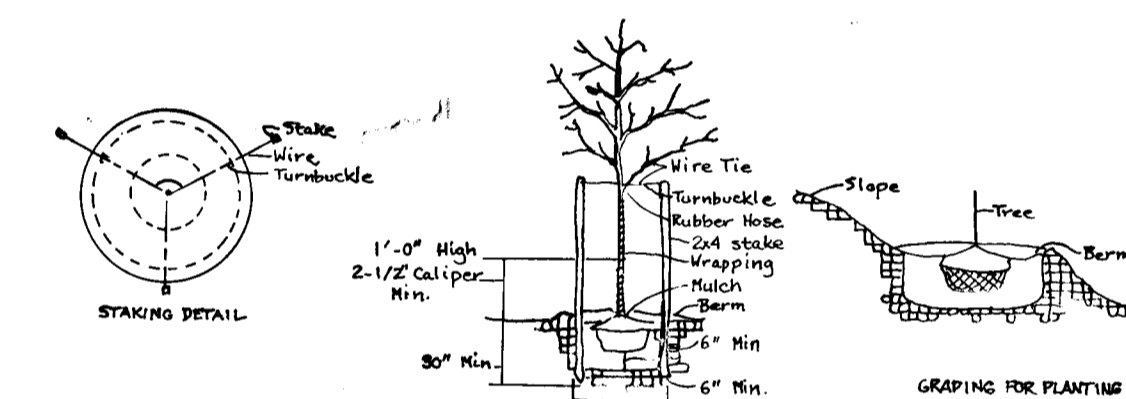


**RIP-RAP OUTLET PROTECTION
EMERGENCY SPILLWAY**



LEGEND

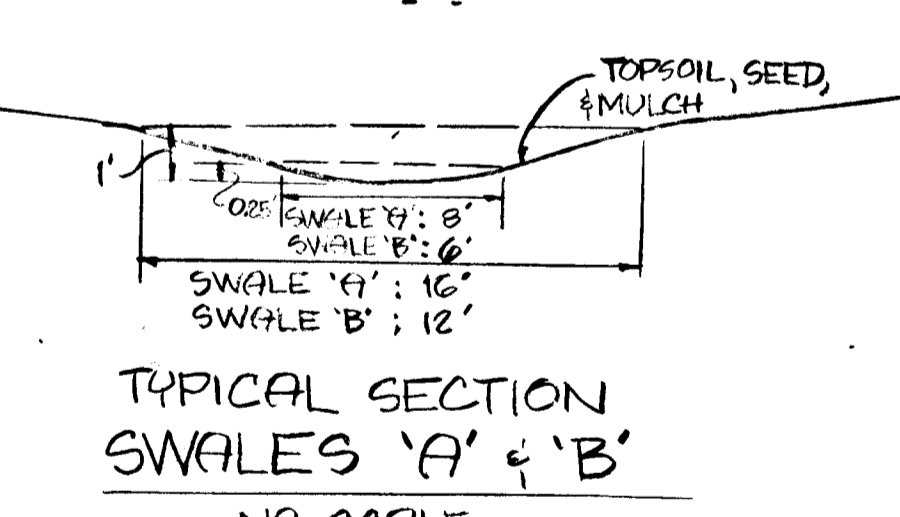
- 402 --- DESIGNATES EXISTING CONTOUR
- 402 --- DESIGNATES PROPOSED CONTOUR
- S --- S --- DESIGNATES SILT FENCE
- PD/S --- DESIGNATES PERMETER DIKE/SWALE
- SEE --- DESIGNATES STABILIZED CONSTRUCTION ENTRANCE
- IP --- DESIGNATES INLET PROTECTION
- MINIMUM 2 1/2" CALIBER SUGAR MAPLE (ACER SACCHARUM). QUANTITY: 22. SEE TREE PLANTING DETAIL & NOTES BELOW.



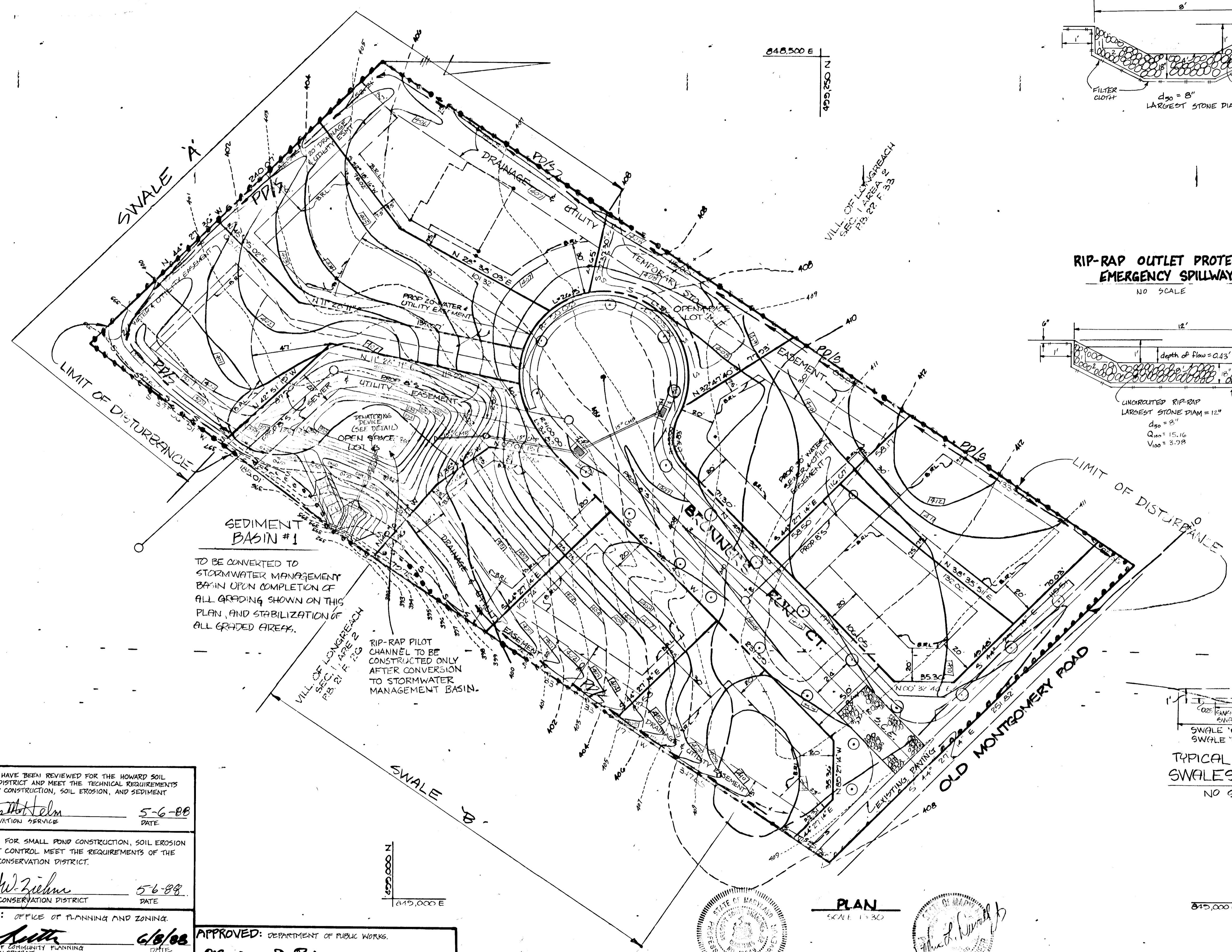
TREE PLANTING DETAIL
NO SCALE

NOTE: CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITIES PRIOR TO DIGGING. FINAL LOCATIONS OF TREES MAY BE ADJUSTED SLIGHTLY TO ACCOMMODATE FIELD CONDITIONS. PLANTING PROCEDURES SHALL COMPLY WITH "LANDSCAPE SPECIFICATIONS FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS". SUBSTITUTIONS 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.

STREET TREES:
- THE LOCATIONS, TYPE AND NUMBER OF TREES SHOWN ON THESE PLANS ARE TENTATIVE AND ARE USED FOR BOND PURPOSES ONLY. THE FINAL LOCATION AND VARIETY OF TREES MAY VARY TO ACCOMMODATE FIELD CONDITIONS AND BUILDERS LANDSCAPE PROGRAM. BOND RELEASE IS CONTINGENT UPON SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS, AS APPROVED BY THE OFFICE OF PLANNING AND ZONING.



TYPICAL SECTION
SWALES 'A' & 'B'
NO SCALE



THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.

James H. Helm 5-6-88
DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Robert W. Ziehm 5-6-88
DATE

APPROVED: OFFICE OF PLANNING AND ZONING
James H. Helm 6/6/88
DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Robert W. Ziehm 5/26/88
DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
James H. Helm 6/3/88
DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Robert W. Ziehm 6-6-88
DATE

OWNER:
LOIS H. & NORMAN E. BRUNNER
9105 OLD MONTGOMERY RD
COLUMBIA MD 21075

NO.	REVISIONS	DATE
1	RELOCATE SWALE 20' CLOSER TO M-1	3/27/90

SHANABERGER & LANE
8776 TOWN & COUNTRY BLVD.
SUITE 203
ELLICOTT CITY, MD 21043
(301) 461-0663

GRADING, EROSION, SEDIMENT CONTROL, & LANDSCAPING PLAN
BRUNNER'S RUN, LOTS 1-11
6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TAX MAP No. DISTRICT 47

9-25-87	SUBMIT
11-19-87	4
1-15-88	OF 5

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 conformance with the 1933 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 1933 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.
- 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 Area:
 - Total Area of Site: _____ Acres
 - Area Disturbed: _____ Acres
 - Area to be vegetatively stabilized: _____ Acres
 - Total Cut: _____ Cu. Yds
 - Total Fill: _____ Cu. Yds
 - Off-site waste/borrow area location: _____
- 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 control must be provided, if deemed necessary by the Howard County DSW sediment control Inspector.
- 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 control, 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.
- If houses are to be constructed on an "As-Sold" basis, at random, Single Lot Sediment Control as shown below shall be implemented.
- All pipes to be blocked at the end of each day (see detail below).
- The total amount of straw bale dikes/silt fence equals _____ L.P.

SEQUENCE OF CONSTRUCTION

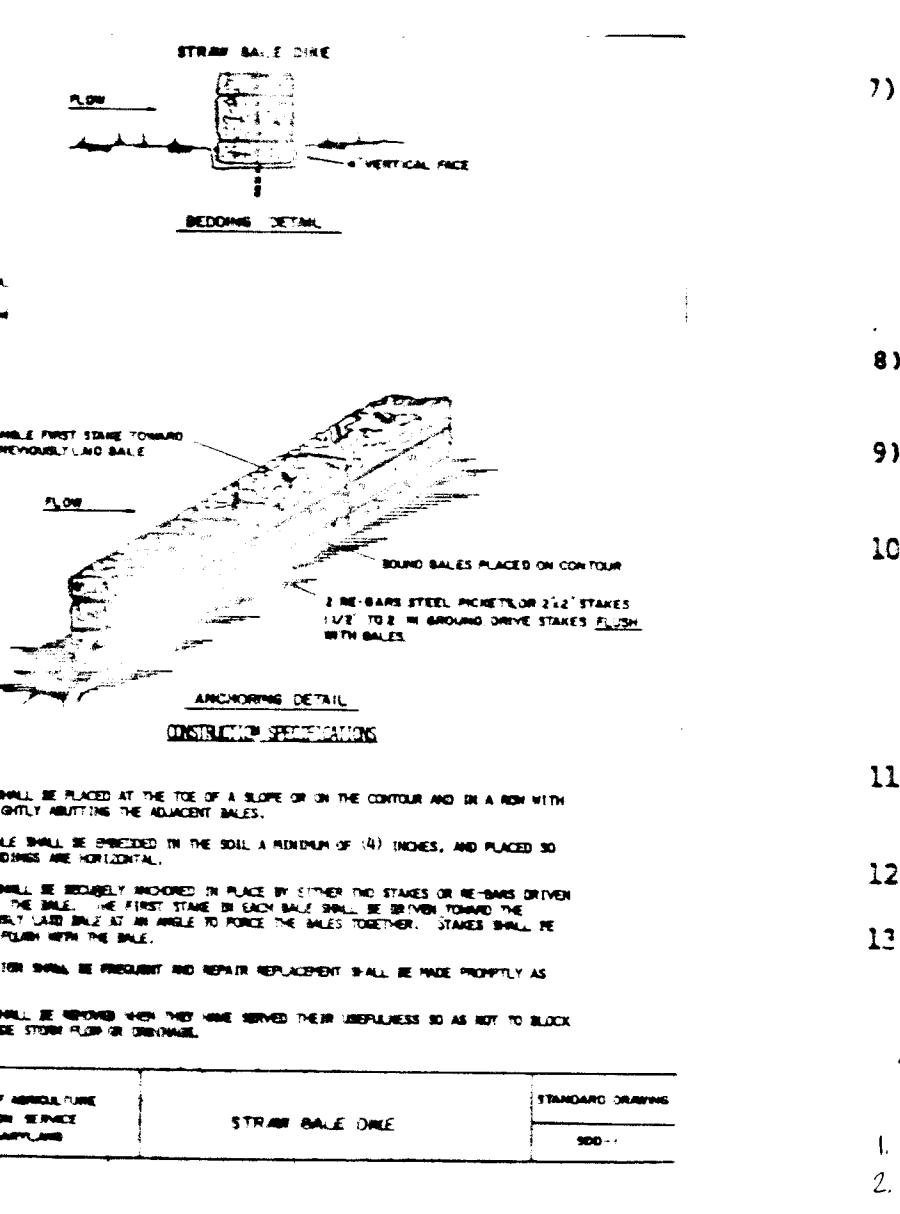
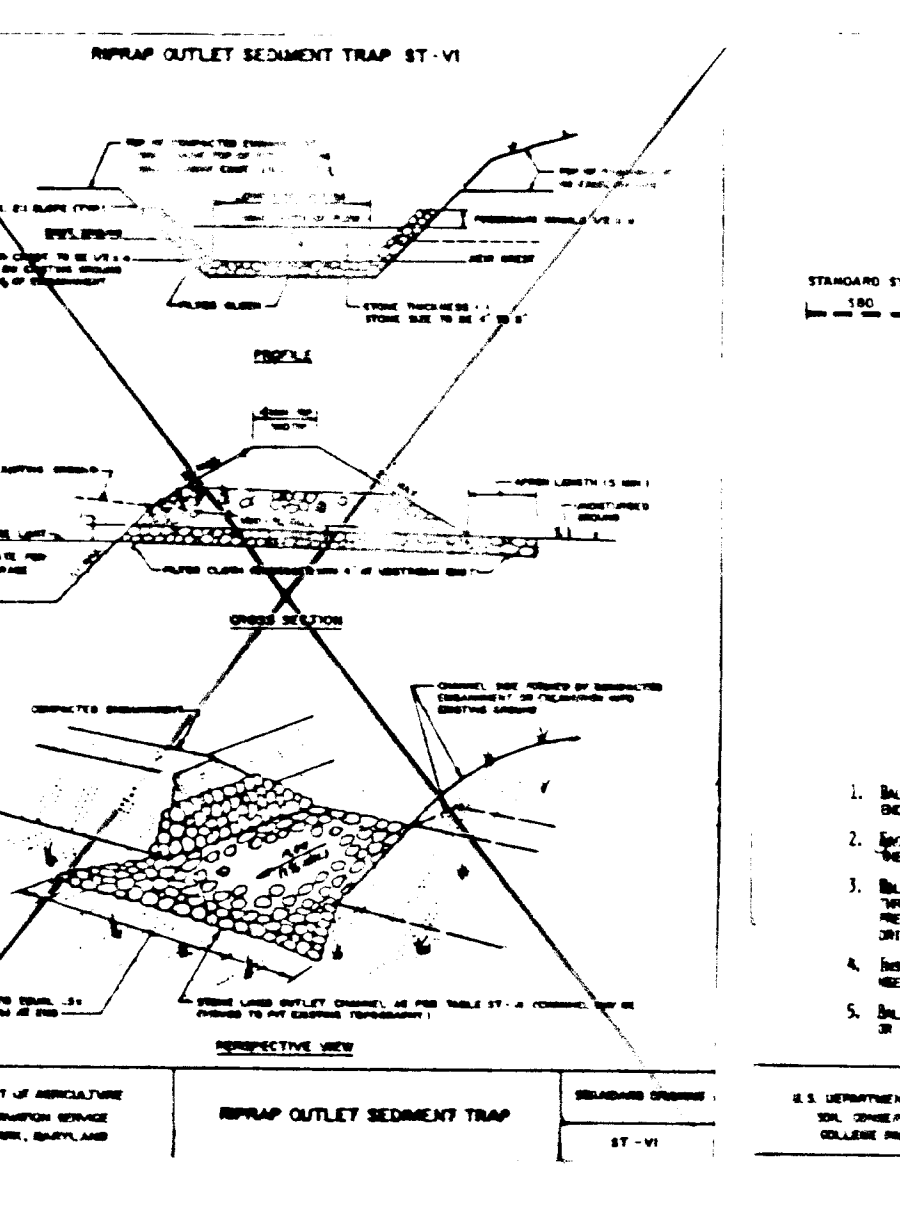
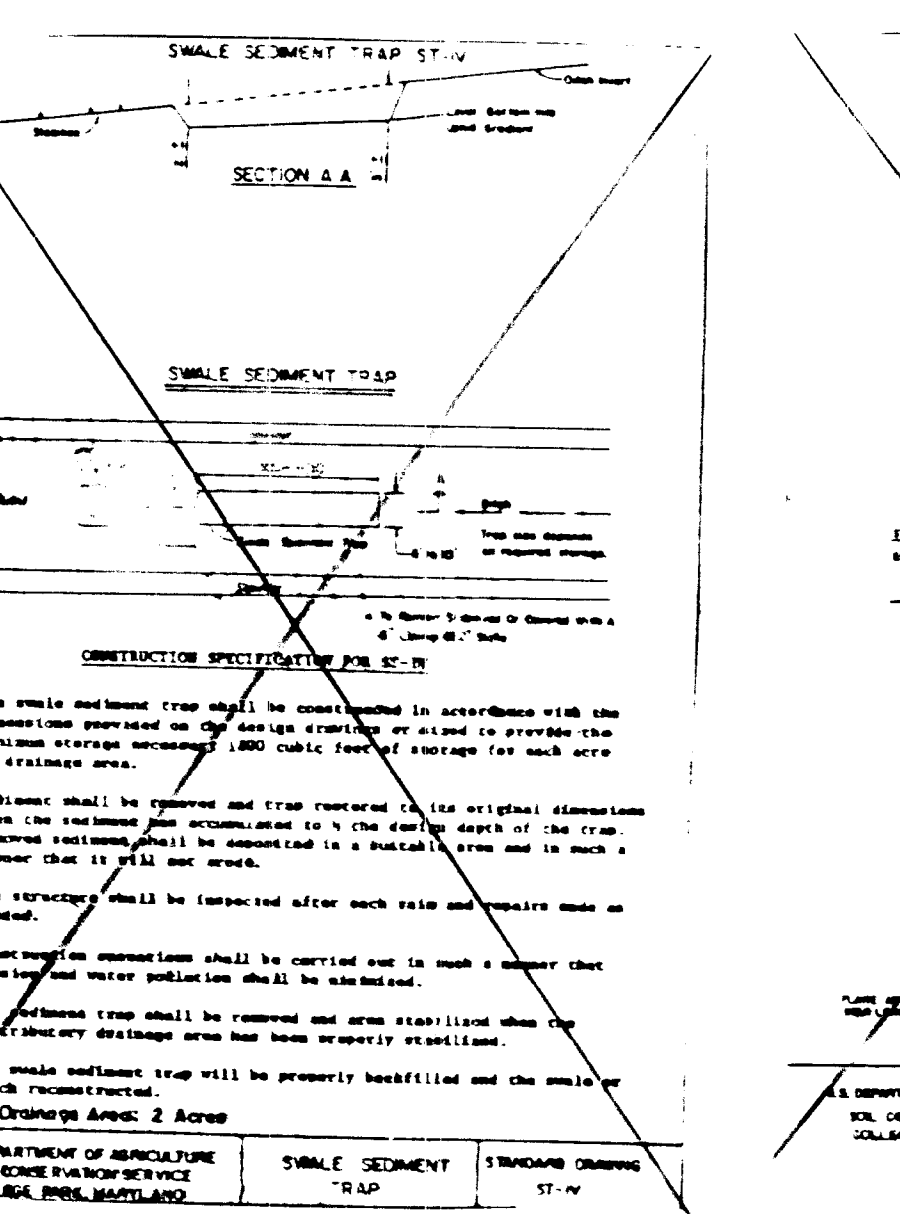
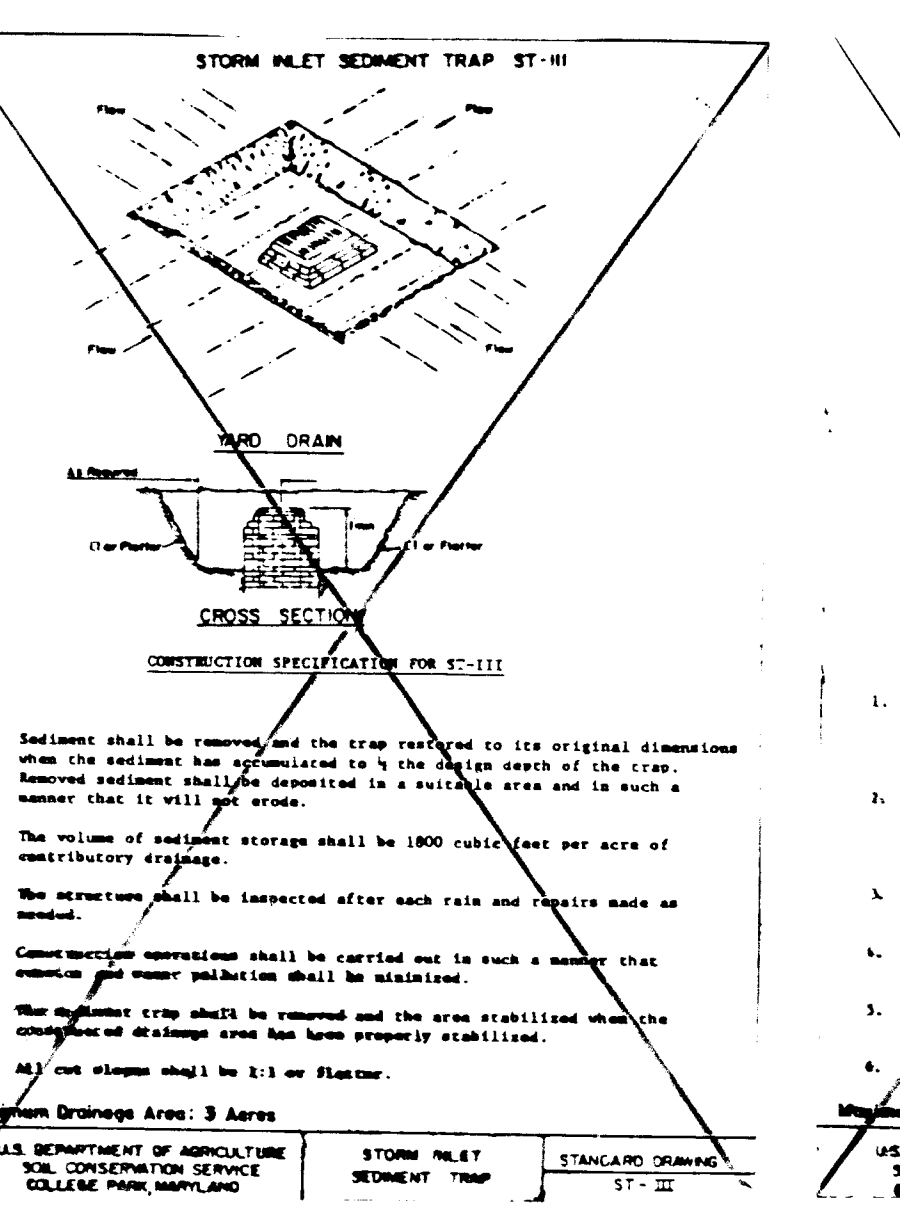
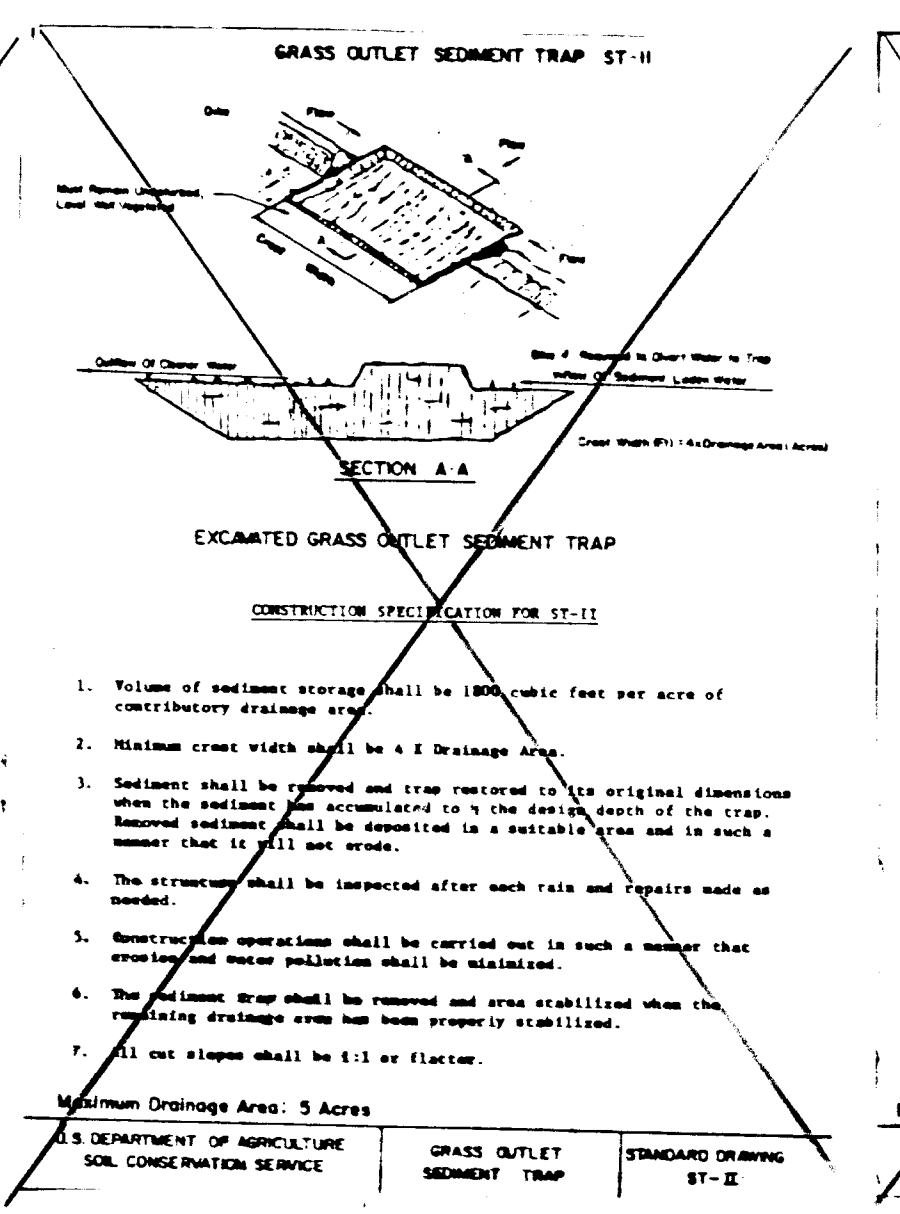
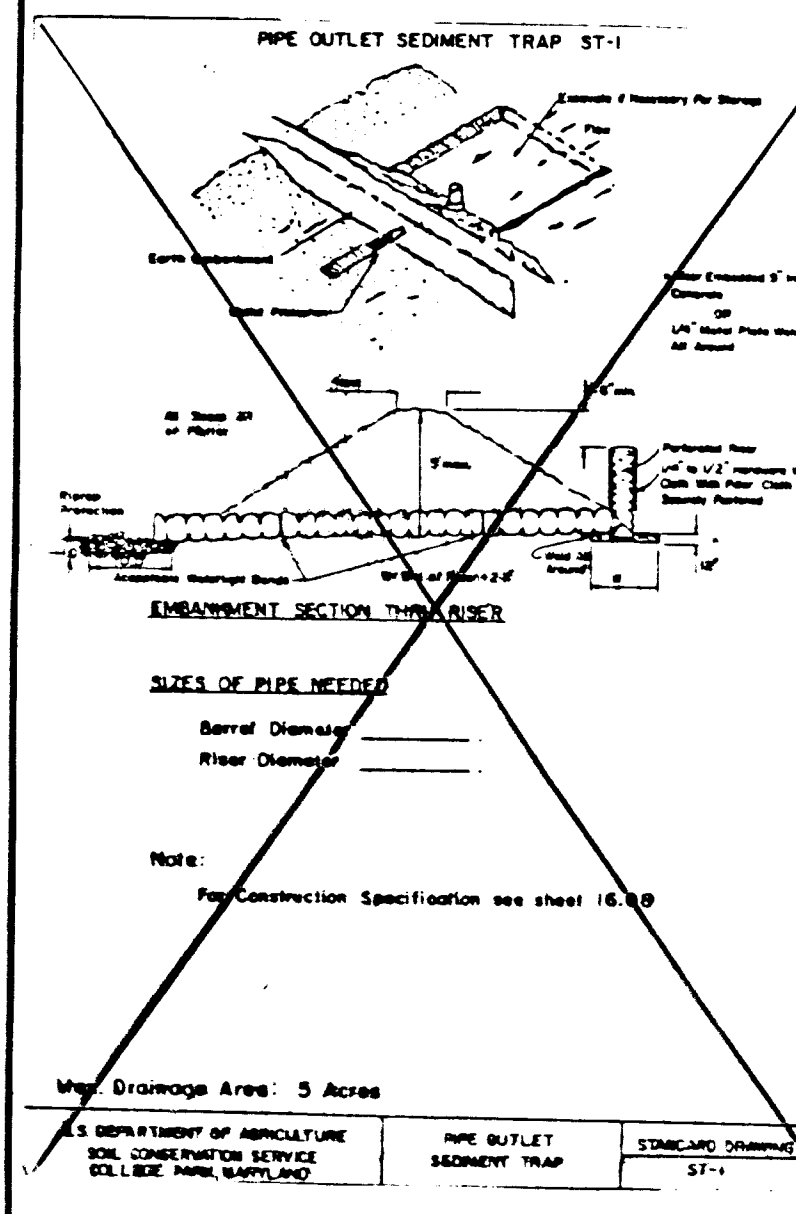
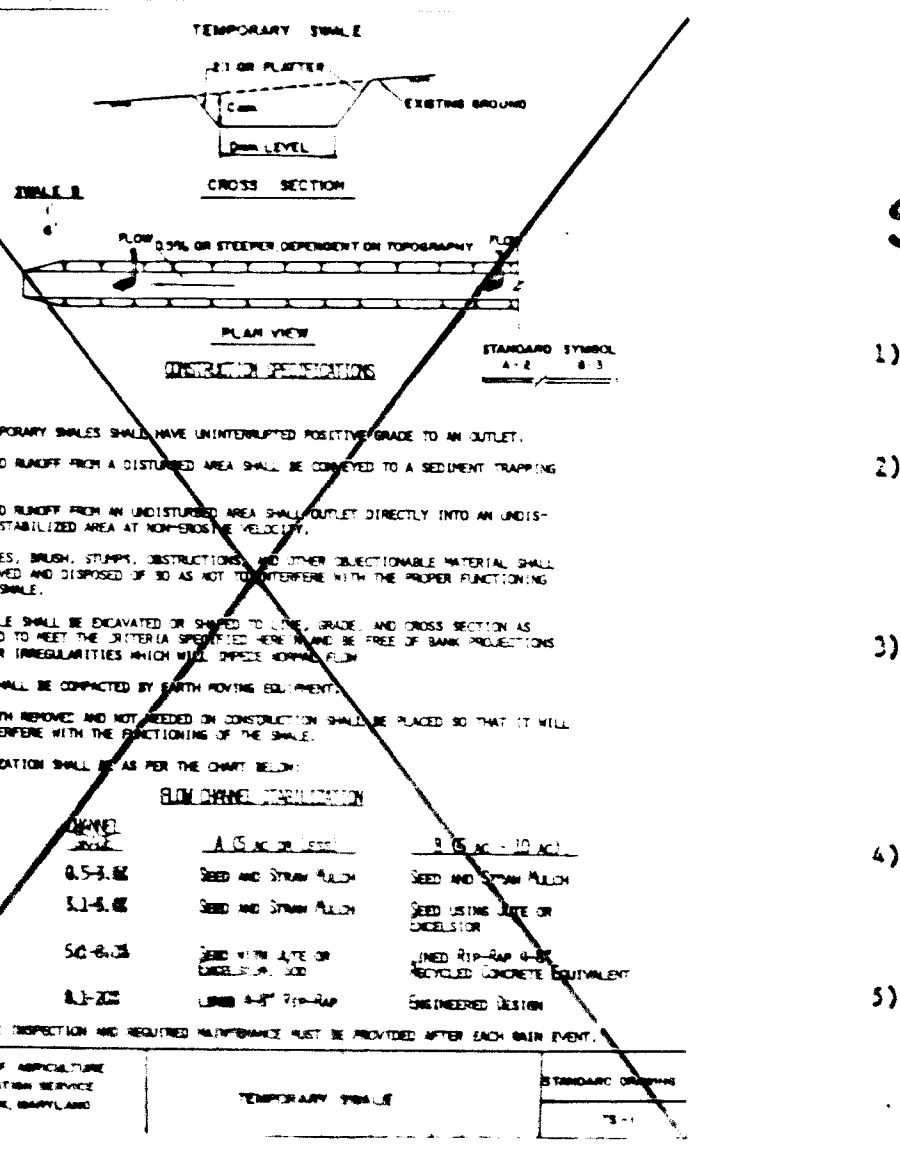
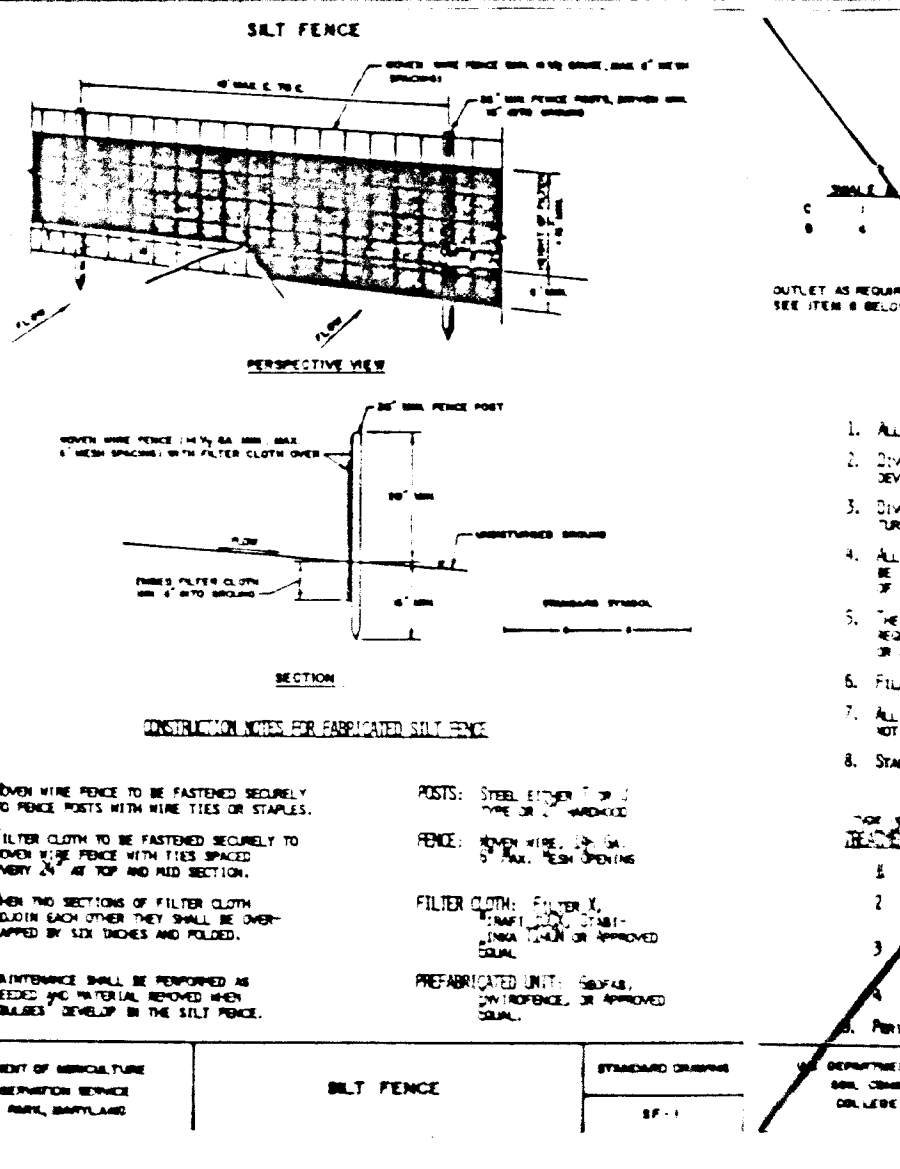
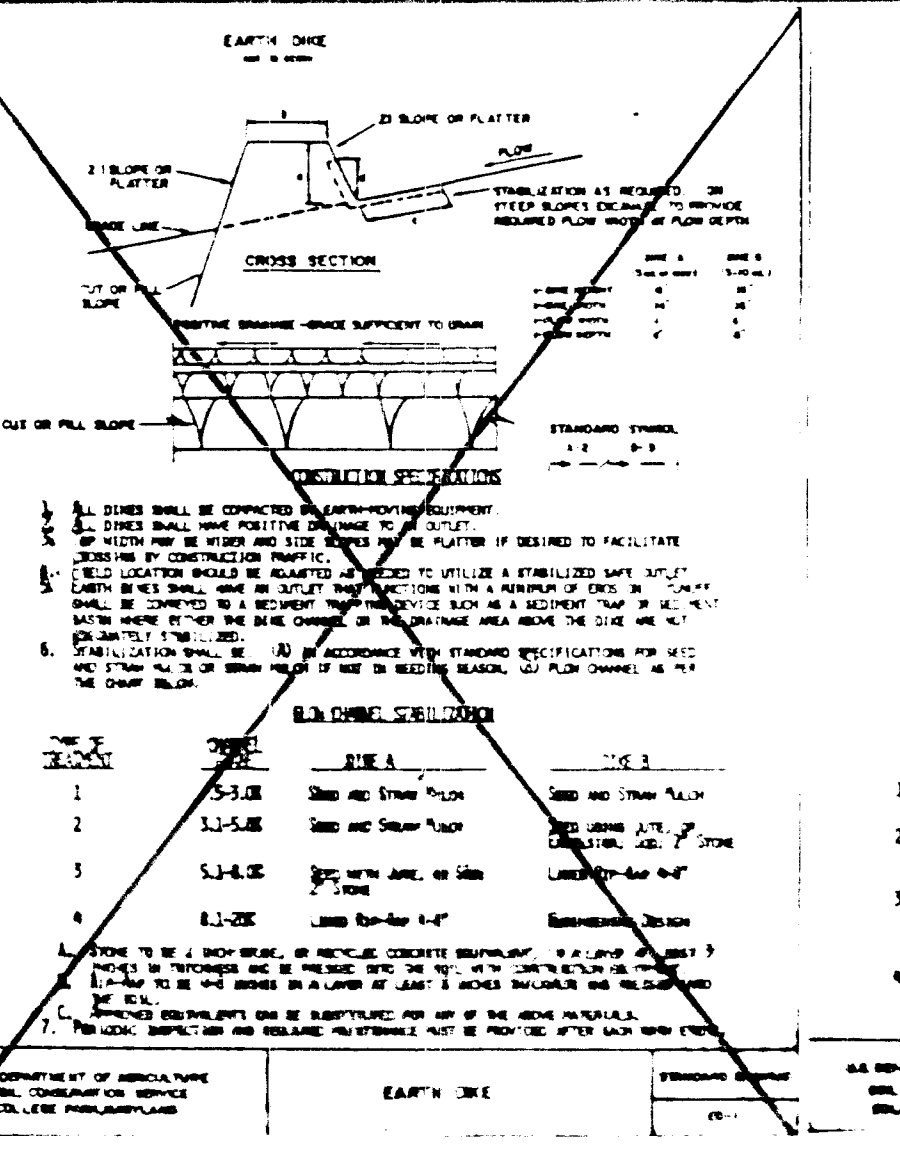
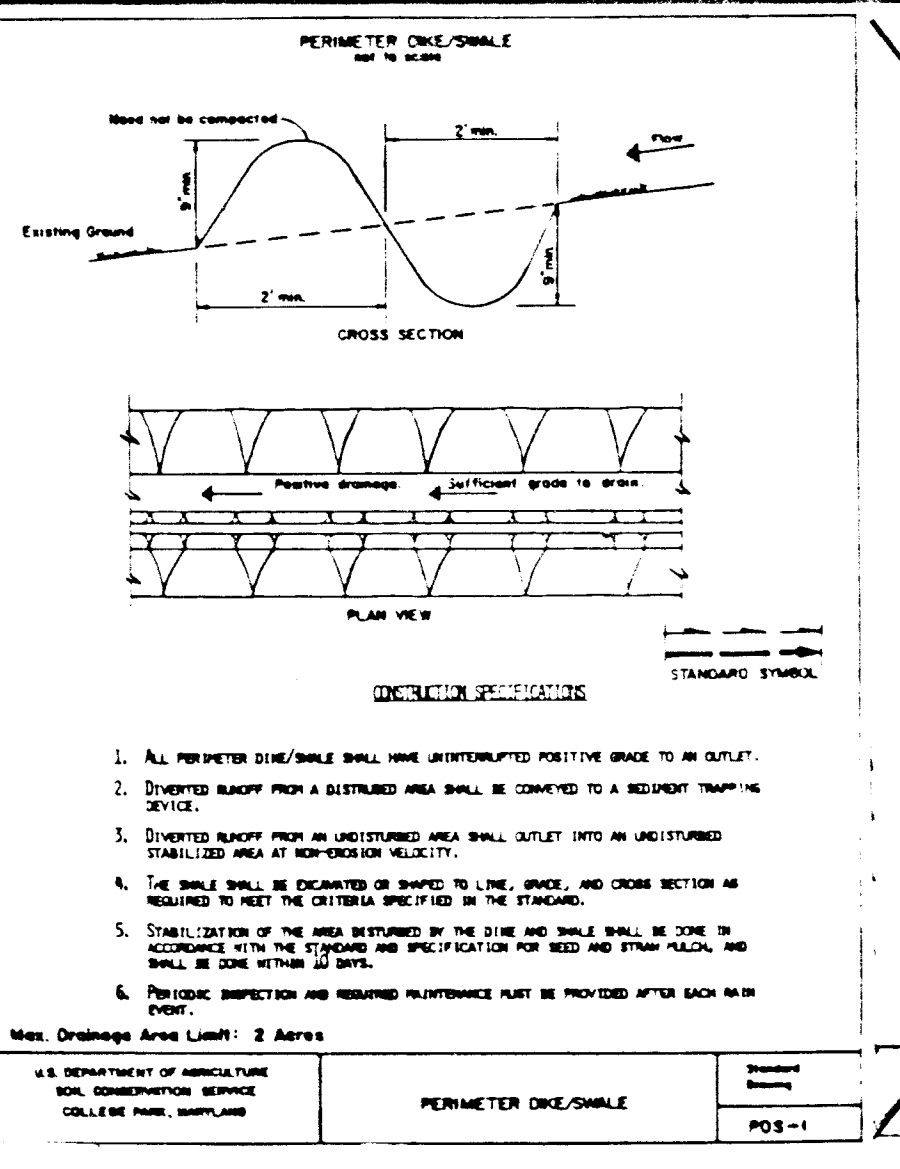
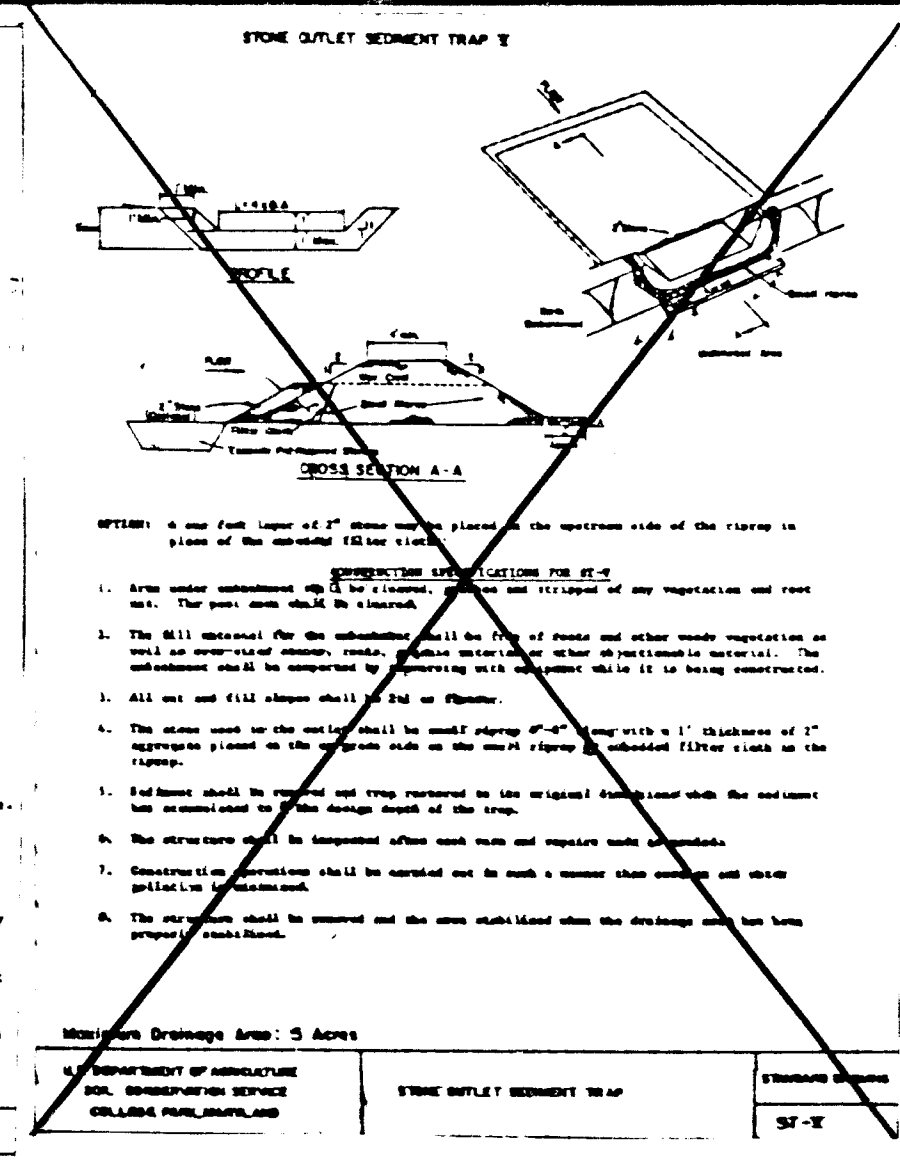
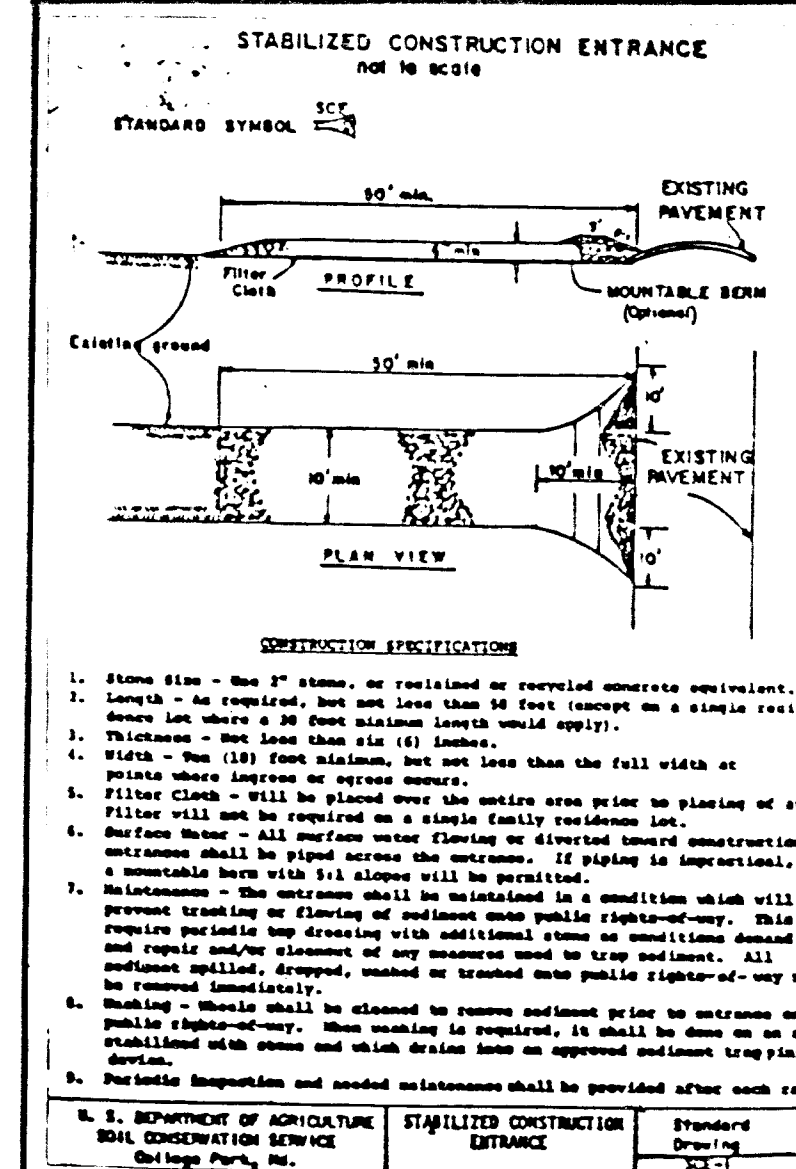
- OBTAIN GRADING PERMIT.
- NOTIFY HOWARD CO. SEDIMENT CONTROL DIVISION AT LEAST 48 HOURS BEFORE STARTING WORK.
- CLEAR FOR S.C.E., P.D/S, & SILT FENCE.
- INSTALL S.C.E., P.D/S, & SILT FENCE.
- CONSTRUCT BASIN NO. 1 & SWALE AROUND PERIMETER OF SITE.
- ROUGH GRADE.
- INSTALL UTILITIES.
- PINE GRADE R/W'S, CONSTRUCT ROADS, STABILIZE REMAINING AREAS.
- OBTAIN PERMISSION FROM HOWARD CO. SOIL CONSERVATION DISTRICT FOR CONVERSION OF BASIN NO. 1 TO SWM POND AFTER FINAL STABILIZATION OF ALL LOTS.
 - PUMP OUT IMPOUNDED WATER.
 - REMOVE SILT AND DEWATERING DEVICE.
 - SILT REMOVED FROM POND IS TO BE SPREAD IN EITHER STOCKPILE AREA, DRIED, AND USED TO FILL POND TO FINISHED DIMENSIONS.
 - GRADE POND TO FINISHED DIMENSIONS AS SHOWN ON SHEET, AND AS SHOWN IN REVISIONS OF S.D.P. PLAN. CUT 6" DIAM. CRIPIC INTO RIGER (INV. 395.00)
 - SEED POND AND STOCKPILE AREA ACCORDING TO PERMANENT SEEDING NOTES.
 - FURTHER APPROVAL OF SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES.

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

Signature: _____ DATE: _____
HOWARD SOIL CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT.

Signature: _____ DATE: _____
HOWARD SOIL CONSERVATION DISTRICT



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, if not previously loosened.

Soil Amendment: Apply 600 lbs per acre 20-20-20 fertilizer (14 lbs/1000 sq ft) and 400 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft) before seeding.

Seeding: For the periods March 1 thru April 30, and August 15 thru October 15, seed with 40 lbs per acre (4 lbs/1000 sq ft) of Kentucky 31 Tall Fescue per acre and 2 lbs per acre (0.5 lbs/1000 sq ft) of waving lovegrass. During the period of October 16 thru February 15, plant site by Option (1) 2 tons per acre of well anchored straw which will erode or as specified in the option. Option (2) 2 tons per acre of well anchored straw which will erode or as specified in the option. Option (3) 2 tons per acre of well anchored straw.

Mulching: Apply 1/4 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unweeded small grain straw immediately after seeding. Another which immediately after application using which mulching tool or 210 gallons per acre (3 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 4 feet or higher, use 340 gallons per acre (3 gal/1000 sq ft) for mulching.

Inspection: Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.

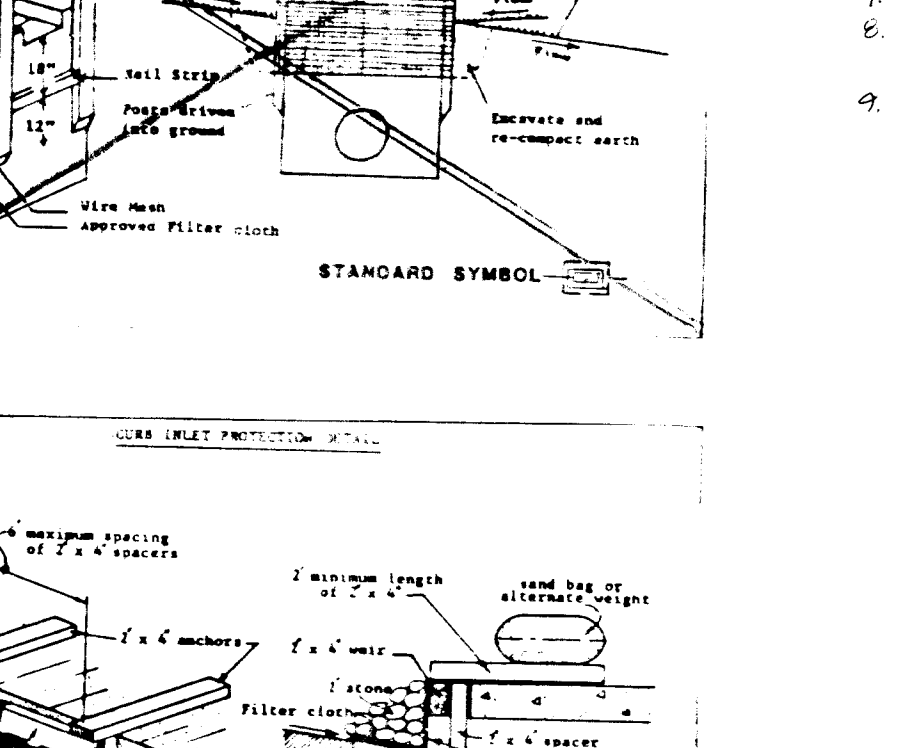
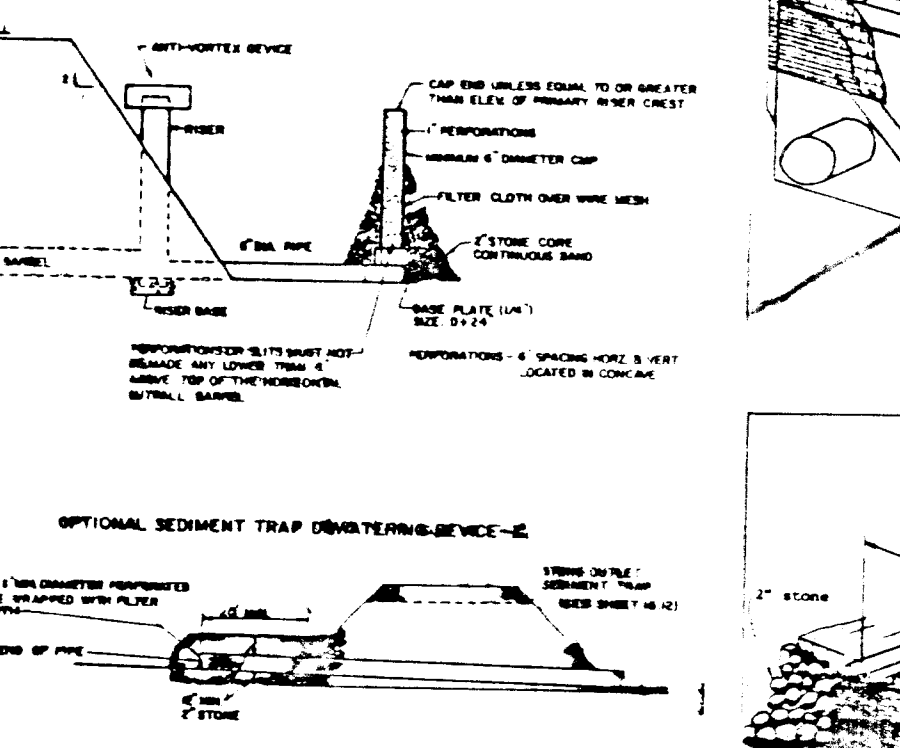
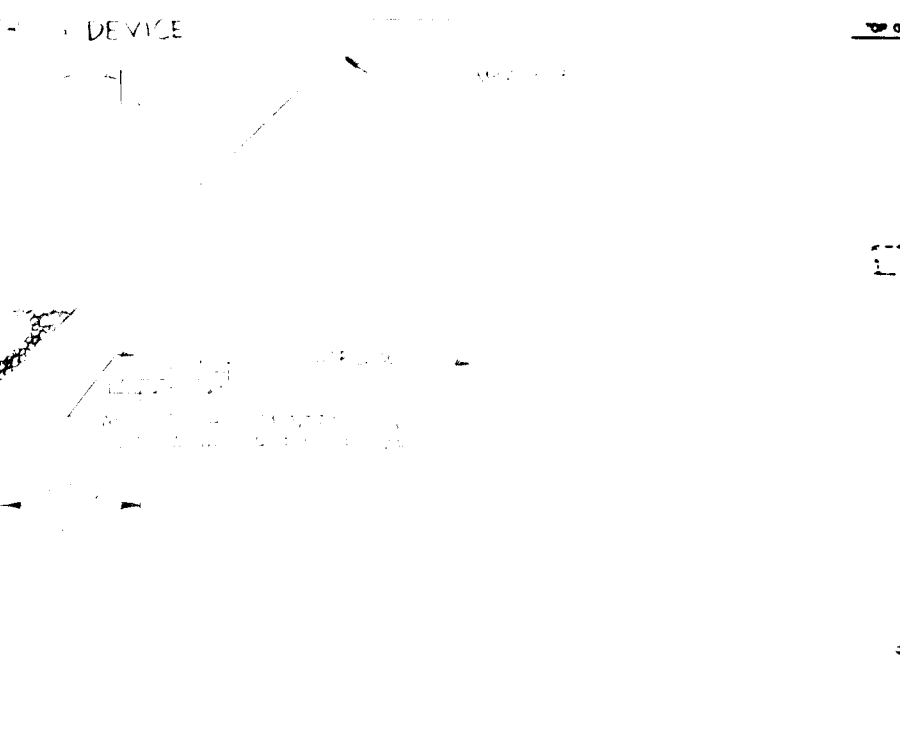
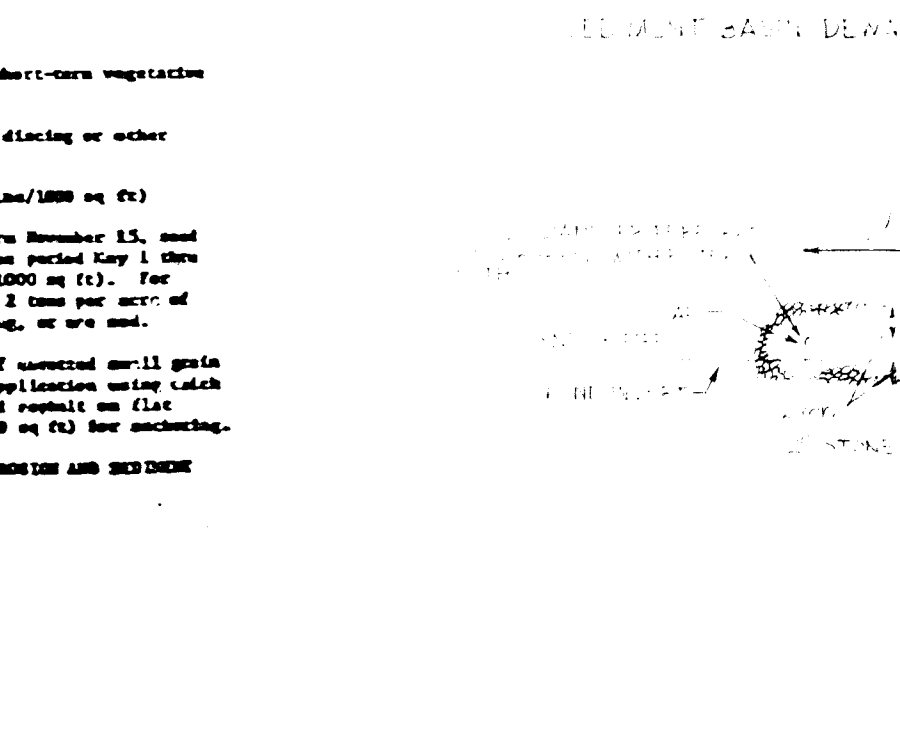
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Inspection: Inspect all seeded areas and make needed repairs, replacements and reseedings.



CONSULTANT'S CERTIFICATION

"I certify that this plan of pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the _____ County Soil Conservation District. I have notified the developer that he must provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Signature: _____ Md. License No. _____ Date: _____
Name: _____

OWNERS/DEVELOPERS CERTIFICATION

"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 as a requirement of the National Resources Appraisal Training Program for the Control of Sediment and Erosion before the project. I will provide to the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic, on-site inspections by the Howard Soil Conservation District."

Signature: _____ Date: _____
Owner/Developer (Name and Title)

APPROVED: OFFICE OF PLANNING AND ZONING
Signature: _____ DATE: _____

APPROVED: DEPARTMENT OF PUBLIC WORKS
Signature: _____ DATE: _____

APPROVED: DEPARTMENT OF PUBLIC WORKS
Signature: _____ DATE: _____

SHANABERGER & LANE
8726 TOWN & COUNTRY BLVD.
SUITE 203
ELLICOTT CITY, MARYLAND 21043
(301) 461-9563

DESIGNED: _____
DRAWN: _____
CHECKED: _____
DATE: 9-25-87

REVISION: _____

OWNER/DEVELOPER:
LOIS H. & NORMAN E. BRUNNER
2165 OLD MONTGOMERY RD.
COLUMBIA, MD. 21045

GRADING AND SEDIMENT CONTROL NOTES & DETAILS
BRUNNERS RUN, LOTS 1-11
TAX MAP 36, PARCELS 47
6TH ELECTION DISTRICT
HOWARD COUNTY, MD.

SCALE:
SHEET 5
OF 5

9-27-88, P-27-74