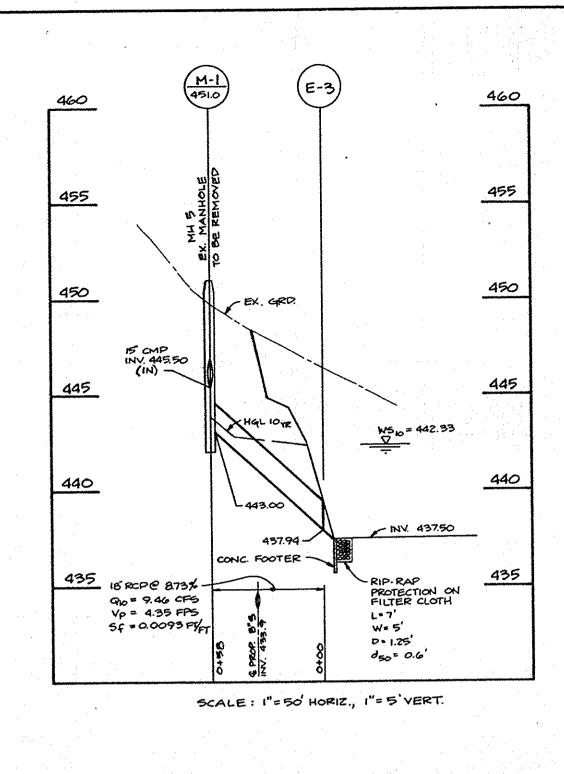
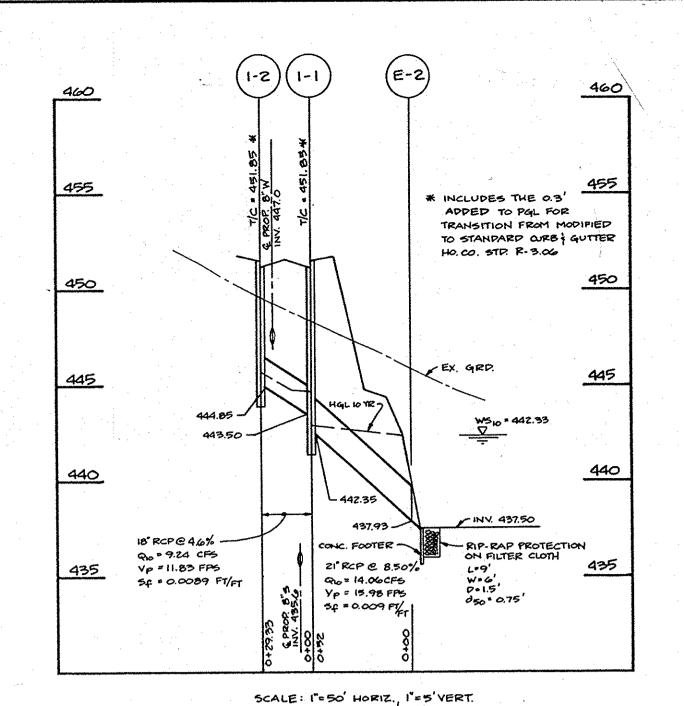


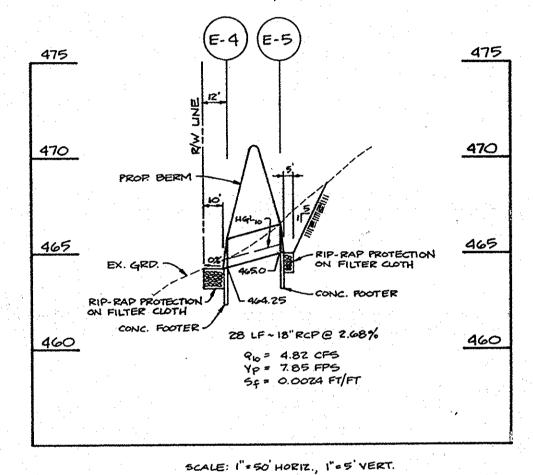
F-93-104

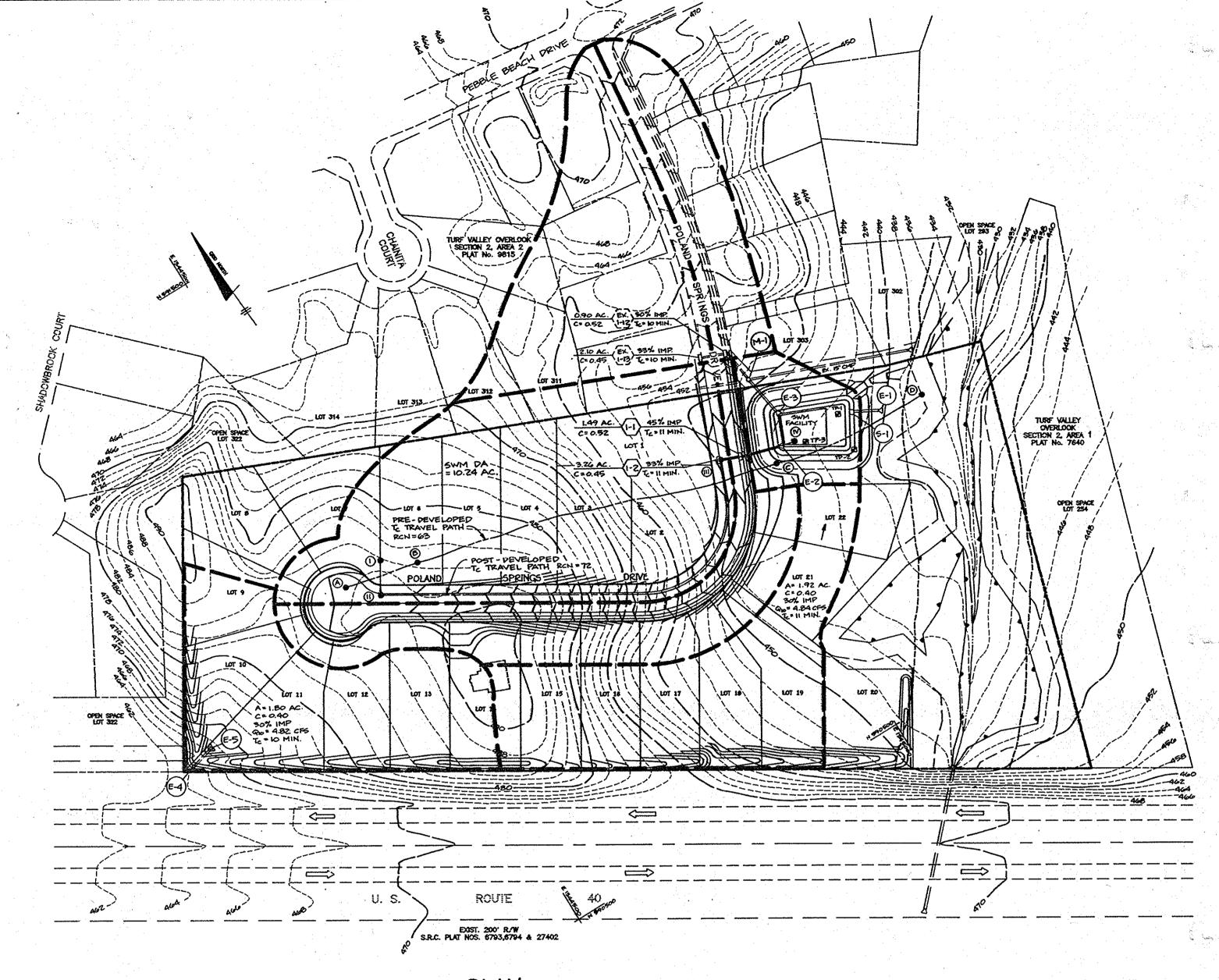
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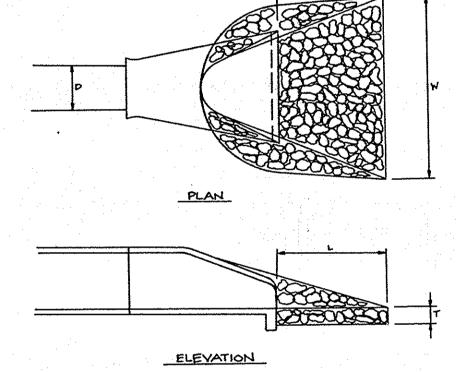








F	2	A	N		٠
SCALE	:	1"	=	100) '



STRUCTURE	∂-50	LENGTH	WIDTH	THICKNESS
E-I	0.50	13'	15	· 1.0
E-2	0.75	9'	6	1.5'
E-3	0.60'	7'	5	1.25
E-4	0.50	10'	11.5	1.0'
E-5	0.50	5'	6.5'	1.0'

QUTLET PROTECTION PETAIL

	Associa		RIALS ENGINEERS	RECORD OF
PROJEC CLIENT LOCAT	T: College : TSA Grou	Farm/SWM p, Inc. and County,	NO: TP-1 JOS NO: 3 DATE: 7-2	0-03-92-0011 b-92
INSPEC	TOR: E.S		ELEVATIO	N:
DEPTH (FEET)		DEPTH (FEET)	DESCRIPTION OF MATERIALS	REMARKS
1	1	1.0	Dark brown, moist, Silty CLAY (CL)	Topsoil: 6"
2	2	2.0	Sandy Clay Loam Light brown, light grey to orange brown, moist, Silty and Sandy CLAY (CL).	
3	3	4.0	Sandy Clay Loam	
5	_4 5*	6.0 6.5	Grey, moist, Silty and Sandy CLAY (CL), trace mica.(Sandy Clay Loam)	In-Situ Infiltratio Test @6.5± ft Below Ground Surface
7 8			Orange and orange-brown, moist to very moist, micaceous Sandy SILT (MLs-SM), trace Clay	* taken from bottom
= 9 = 10 =	6	10.0	Sandy Loam	Water at 9± ft
11			Terminated @ 10± ft	
13				

ATEC GE	RECORD OF FACE EXPLORATION			
CLIENT LOCATI	T: College : TSA Grow ON: How TOH: E. S	up, Inc. ard County,	NO: TP- 2 JOB NO: 3 DATE: 7-2 ELEVATIO	0-03-92-0011 25-92
DEPTH (FEET)	SAM •	DEPTH (FEET)	DESCRIPTION OF MATERIALS	REMARKS
1		_	Dark brown and dark grey, moist, Silty and Sandy CLAY (CL).	Topsoil: 6"
2 -	1	1.5	Sandy Clay Loam Light brown nd grey, moist, Silty and Sandy CLAY (CL), trace	
3 - 4 - 5	3	4.0	mica. Sandy Clay Loam	
6	4*	5.5	Olive grey, moist, Silty and Sandy CLAY (CL), trace mica.	In-Situ Infiltration Test @5.5± ft Below Ground Surface
7	,		Sandy Loam/Sandy Clay Loam	Cave in at 7± ft Water at 8± ft
8 9			Multicolored, moist to very moist, micaceous Silty SAND (SM) Sandy Loam	* taken from bottom of test hole
10	5	10.0		
11			Terminated @ 10± ft	
12			* * * * * * * * * * * * * * * * * * * *	

GEOTECHNICAL AND MATI PROJECT: College Farm/SWM CLIENT: TSA Group, Inc. LOCATION: Howard County, INSPECTOR: E. Saba			SUBSURFACE EXPLORATION NO: TP- 3 NO: NO: 30-03-92-0013		
DEPTH (FEET)	SAM	DEPTH	DESCRIPTION OF MATERIALS	REMARKS	
1	1	1.0	Dark grey, moist, Silty CLAY (CL) little sand. Sandy Loam	Topsoil: 6"	
2 3	2	3.0	Brown to tan, moist, micaceous Sandy SILT (MLs), little Clay.		
5 6	3	5.0 6.0	Orange-brown to grey, moist, Silty CLAY (CL), trace to little mica and sand. Sandy-Clay Loam	In-Situ Infiltration Test @ 6 ± ft Below Ground Surface	
8 - 9 - 10 -	5	10.0	Orange-brown, moist, Silty SAND (SM), trace to little mica and Clay. Sandy Loam	Water at 8º ft * taken from bottom of tast hole	
11 12 13			Terminated @ 10± ft		

APF	PROVED: HO	WARD COUNTY DEPARTM	ENT OF PUBLIC WO	RKS	
СН	EF, CAND O	EVELOPMENT DIVISION) //		8/17/93 DATE
ट्मी	EF, BUREAU	of HIGHWAYS	onefor		7-30-93 DATE
CHI	Elejaha FE HURFAL	of Engineering Mik.	Palia		8/19/93 DATE
API	PROVED: H	HOWARD COUNTY DEPART	MENT OF PLANNING	AND ZONING	chales
CH	Kerlence IEF, DIVISION	N OF COMMUNITY PLANNI	NG AND LAND DEV	ELOPMENT COM	8/20/73 DATE
10	DATE		REVI5I	ON	
				£0	
	SA GROU	P, INC. architecture • enginee	ering		Pho au
848	O Baltizacre Nat	tional Pike • Ellicott City, Maryla	nd 21043 • (410) 465-61	06	12 lp A
					V
NWC	ER/DEVELO	PER:	PROJECT:	COLLEGE I	
. ′				SECTION 1, AR LOTS 1-23	EA-1

SDC GROUP, INC.

P.O. BOX 417 ELLICOTT CITY, MARYLAND 21043 (410) 465-4244

DRN: DRK/DBT

00 19

F-93-104

TAX MAP 16 - PARCELS 212 & 376 2nd election district HOWARD COUNTY, MARYLAND

DRAINAGE AREA MAP,

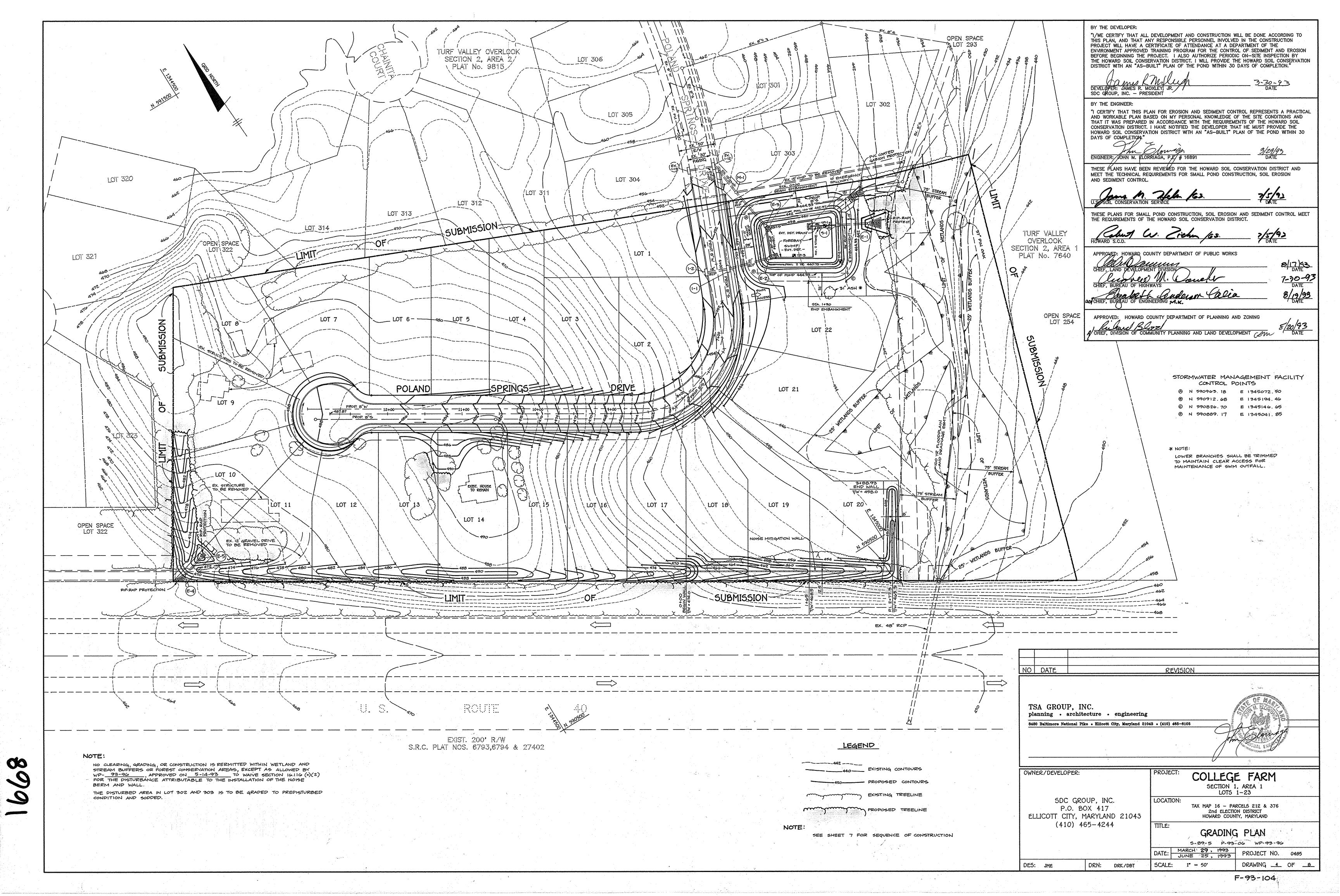
STORM DRAIN PROFILES AND DETAILS

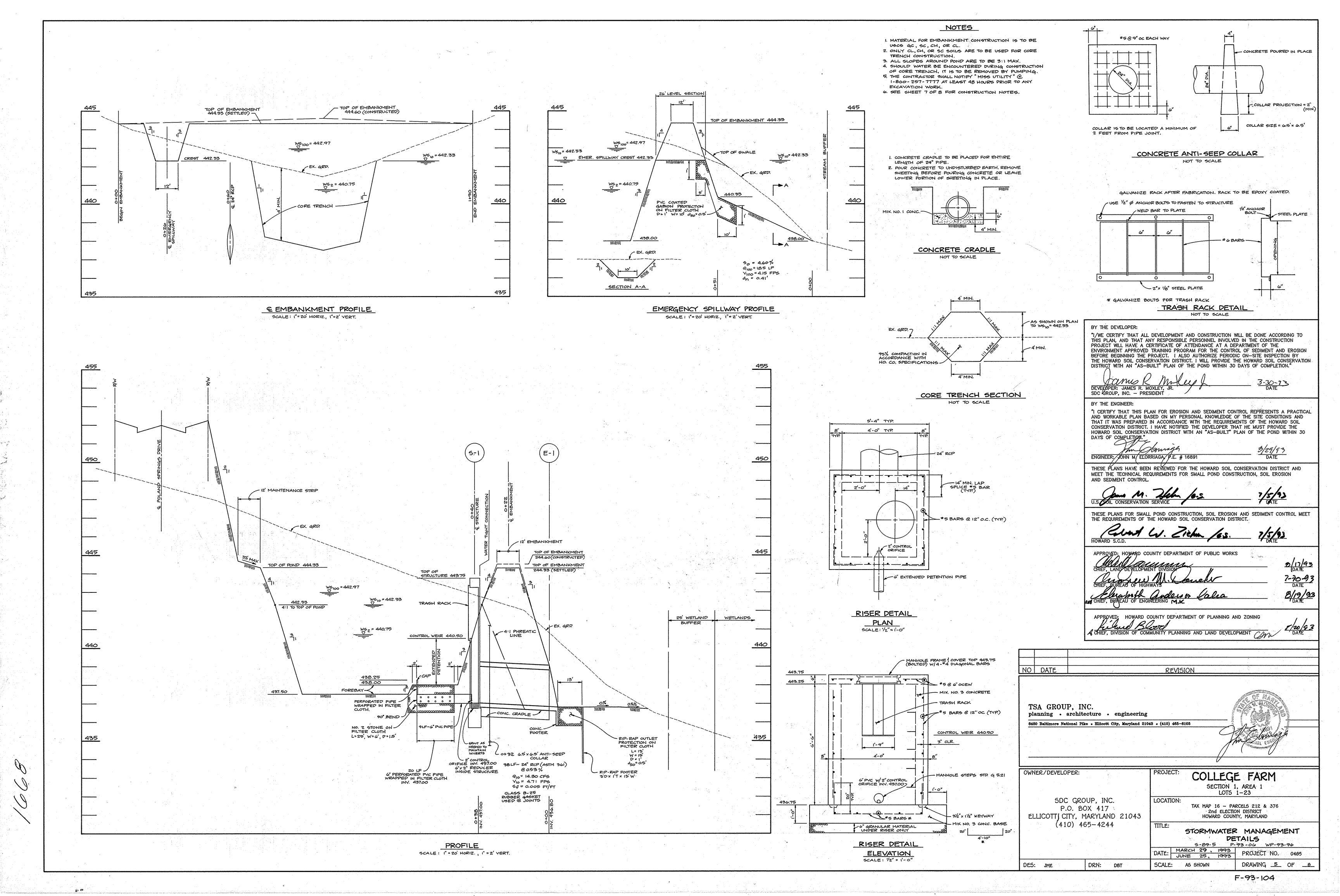
5-89-5 P-93-06 WF-93-96

DATE: MARCH 29, 1993 PROJECT NO. 0485

SCALE: AS SHOWN

DRAWING 3 OF 8





steeper than 1:1.

Areas to be covered by the reservoir will be cleared of all trees. brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stump shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +/-2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trenct shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

Backfill adjacent to pipes or structures 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 manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the 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 equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or

Pipe Conduits

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

Materials — (Steel Pipe) — This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. The following coatings or an approved equal may be used: Nexon, Plasti-Cote, Blac-Klad, and Beth-Cu-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.

Materials — (Aluminum Coated Pipe) — This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound.

Materials — (Aluminum Pipe) — This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M— 196 or M-211 with watertight coupling bands or flanges. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip gaivanized boits may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

- Coupling bands, anti-seep collars, end 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.
- Connections All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be rerolled an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 48" in diameter: flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gasket; and a 12" wide hugger type band with O-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 48" in diameter and larger shall be connected by a 24" long annular corrugated band using rods and lugs. A 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24". Helically corrugated pipe shall have either continuously welded seams or have lock

- 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.
- Backfilling shall conform to "Structure Backfill."
- Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

- Materials Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361. An approved equivalent is AWWA
- 2. Bedding All reinforced concrete pipe conduits 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 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the
- 3. Laying pipe Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.
- 4. Backfilling shall conform to "Structure Backfill".
- 5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

- Materials PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.
- 2. Joints and connections to anti-seep collars shall be completely watertight.
- 3. 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.
- 4. Backfilling shall conform to "Structure Backfill."
- 5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 608, Mix No.

Rock Riprap

All rock shall be dense, sound, and free from cracks, seams, and other defects conducive to accelerated weathering. The rock fragments shall be angular to subrounded in shape. The least dimension of an individual rock fragment shall be not less than one third the greatest dimension of the fragment.

The rock shall have the following properties:

- Bulk specific gravity (saturated surface—dry basis) not less
- Absorption not more than three percent
- Soundness: Weight loss in five cycles not more than 20 percent when sodium sulfate is used.

Bulk specific gravity and absorption shall be determined according to ASTM C 127. The test for soundness shall be performed according

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation. State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

Care of Water during Construction

All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install. operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which the water shall be pumped.

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Erosion and Sediment Control

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

- EPARTMENT OF INSPECTIONS, LICENSES, AND PERHITS, SEDIMENT CONTROL
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE HOST CURRENT HARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
- 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
- ALL SEDIMENT TRAPS/BASINS SHOWN HUST BE FENCED AND WARNING SIGHS 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 SPECIFIES ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS POR 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 POR PROPER GERMINATION AND
- 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 AREA DISTURBED AREA TO BE ROOFED OR PAVED TOTAL CUT

- OFFSITE WASTE/BORROW AREA LOCATION ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR
- ADDITIONAL SEDIMENT CONTROLS HUST BE PROVIDED, IF DEEMED NECESSARY BY
- 10. ON ALL SITES WITH DISTURBED AREAS IN ENCESS 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
- 11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LINITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE

PERHAMENT SEEDBED PREPARATION

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BE RAKING, DISCING OR OTHER ACCEPTABLE HEARS BEFORE SEEDING, IF NOT PREVIOUSLY

SOIL AMERDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE POLLOWING SCHEDULES. PREFERRED - APPLY 2 TORS PER ACRE DOLONIC LINESTONE

- (92 LBS/1000 SQ PT) AND 600 LBS PER ACRE 10-10-10 PERTILIZER (16 LBS/1000 SQ PT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREZ INCHES OF SOIL. AT TIME OF SEEDING, APPLY 40 LBS PER ACRE 30-0-0 UREAFORM PERTILIZER
- 2) ACCEPTABLE APPLY 2 TOWS PER ACRE DOLONIC LINESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/100 SQ FT) REFORE SEEDING. HARRON

POR PERIODS HARCH 1 THRU APRIL 30 AND AUGUST 1 THRU 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) O 31 TALL PESCUE. FOR PERIOD HAY 1 THRU JULY 31, SEED WITH 60 LBS OF KENTUCKY 31 TALL PESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SW FT) OF WEEPING LOVEGRASS. DURING THE PERIOD OF 1.05 LBS/1000 SW FT; OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU PEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW HULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 PESCUE AND MULCH WITH 2 TONS PER ACRE OF

HULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SHALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR HULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1996 SQ PT) OF EMULSIFIED ASPHALT O PLAT AREAS. ON SLOPER S PEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ PT) FOR ANCHORING.

HAINTEHANCE. INSPECT ALL SEEDED AREAS AND MAKE MEEDED REPAIRS, REPLACEMENTS AND RESMEDINGS.

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE

SEEDBED PREPARATION. LOOSEN UPPER THREE INCHES OF SOIL BY RAKING. DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER

SEEDING. FOR PERIOD HARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THE MOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ARBUAL RYS (3.2 LBS/1000 SQ PT). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVECRASS (.07 LBS/1000 SQ PT). FOR THE PERIOD MOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TOWS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS

MULCHING: APPLY 1-1/2 TO % TONS PER ACRE (76 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW INNEDIATELY AFTER SEEDING. ANCHOR MULCH INNEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT O PLAT AREAS. ON SLOPES, 8 PT OR HIGHER, USE 348 GALLONS PER ACE 18 CAL./1000 SO FT) FOR ANCHORING.

REPER TO THE 1983 HARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

PROFILE

PLAN VIEW

CONSTRUCTION SPECIFICATIONS

dence lot where a 30 foot minimum length would apply).

a mountable berm with 5:1 slopes will be permitted.

1. Stone Size - Use 2" stone, or reclaimed or recycled concrete equivalent

. Thickness - Not less than six (6) inches. Width - Ten (10) foot minimum, but not less than the full width at

2. Length - As required, but not less than 50 feet (except on a single resi-

Filter will not be required on a single family residence lot.

6. Surface Water - All surface water flowing or diverted toward construction

7. Maintenance - The entrance shall be maintained in a condition which will

entrances shall be piped across the entrance. If piping is impractical,

points where ingress or egress occurs.
Filter Cloth - Will be placed over the entire area prior to placing of stone.

prevent tracking or flowing of sediment onto public rights-of-way. This may

mediment spilled, dropped, washed or tracked onto public rights-of-way must

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

require periodic top dressing with additional stone as conditions demand

and repair and/or cleanout of any measures used to trap sediment. All

8. Washing - Wheels shall be cleaned to remove sediment prior to entrance onto

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

PAVENENT

EXISTIN

PAVEMENT

-ANCHOR POSTS SHOULD BE MINIMUM 2" STEEL "U"CHANNEL OR 2" X 2" TIMBER 6 IN LENGTH Carplant SECRITO HAR BOSTS MUST ---

SEQUENCE OF CONSTRUCTION

INSTALL STABILIZED CONSTRUCTION ENTRANCE. TREE PROTECTION

CONSTRUCT STORMWATER MANAGEMENT FACILITY/TEMPORARY SEDIMENT BASIN, RISER AND OUTPALL. PLACE TEMPORARY 10 INCH WEIR IN

RISER USING TIMBERS SECURELY ATTACHED TO PREVENT MOVEMENT

STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH PERMANENT

10. UPON APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

11. CONVERT SEDIMENT BASIN TO PERMANENT STORMWATER MANAGEMENT

REMOVE SEDIMENT CONTROL DEVICES AND STABILIZE.

DREDGE BASIN TO REHOVE ALL SEDIMENT.

GRADE ROADWAY TO SUBGRADE. CONSTRUCT NOISE MITIGATION BERN! CULVERT.

INSTALL CONTROL ORIFICE FOR EXTENDED PETENTION PRAIN AND

CONSTRUCT SEVER, WATER AND STORM DRAIN SYSTEMS REMOVE EXISTING IS CMP AND ENDWALL AS SHOWN ON PLANS. THE DISTURBED AREA IN LOT SOZIAND 303 IS TO BE GRADED TO PREDISTURBED CONDITION AND SODDED. STABILIZE ALL OTHER DISTURBED AREAS. CONSTRUCT CURB AND GUITER AND PAVING.

STABILIZE ALL DISTURBED AREAS. NOISE BERM TO BE CONSTRUCTED AND IMMEDIATELY STABILIZED IN 100' LENGTHS.

construct extended petention drain without control orifice.

OBTAIN GRADING PERMIT

PENCE AND SILT PENCE.

PACILITY AS FOLLOWS:

12. LANDSCAPE

DEMOLISH AND REMOVE EXISTING STRUCTURES

PUMP OUT IMPOUNDED WATER

RETURN POND TO PLAN SHAPE.

REPLACE NO. 2 AS NEEDED.

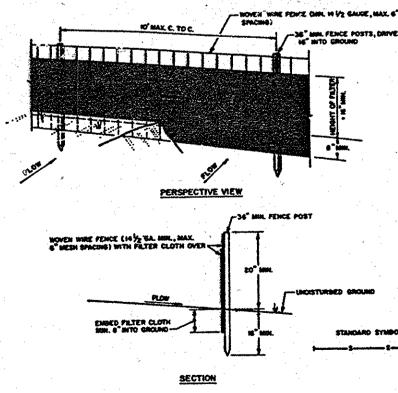
PERHANENTLY STABILIZE.

4. INSTALL EARTH DIKES.

- FOREST PROTECTION DEVICE ONLY. RETENTION AREA WILL BE OUT AS PART OF THE REVIEW PROCESS.
- BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLATION. 4. ROOT DAMAGE SHOULD BE AVOIDED
- 5. PROTECTIVE SIGNAGE MAY ALSO BE USEL . DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

TREE PROTECTION FENCE

NOT TO SCALE



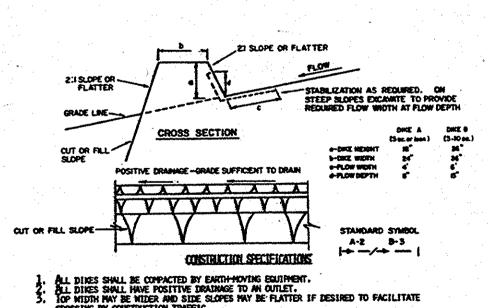
CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- 1. MOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES
- 2. FILTER CLOTH TO BE FASTEMED SECURELY TO NOVEN MIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. 3. MEN THO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.
- FILTER CLOTH: FILTER IV.
 AURAFI 1017, STABILINGA TIFON OR APPROVED 4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BLLGES" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER T OR U

FENCE: Movey wire, 1572 GA.

SILT FENCE NOT TO SCALE



COSSING BY CONSTRUCTION TRAFFIC.
FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
EARTH DIRES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIPUM OF EROSION RANOFF
SHALL BE COMPAND TO A SCHIENT TRAPPING DEVICE SUCH AS A SEDIMENT TRAP OR SCHIENT
BASIN WHERE EITHER THE DIRE CHANNEL OR THE DRAINAGE AREA ABOVE THE DIRE AME NOT ADEQUATELY STABILIZED.

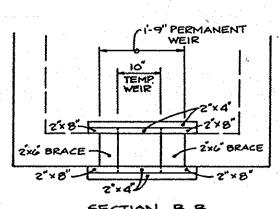
STABILIZATION SHALL BE: (A) IN ACCORDANCE MITH STANDARD SPECIFICATIONS FOR SEED AND STRAW HALCH OR STRAW MALCH IF NOT IN SEEDING SEASON, (B) FLOW CHANNEL AS PER THE CHART BELOW.

FLOW CHANGE STABILIZATION DIXE A DIKE B SEED AND STRAN PLACK SEED AND STRAW MALCH 5-3.00 3.1-5.0% SEED AND STRAK MOREH SEED USING JUTT, OR EXCELSION; SOO; 2" STONE LINED RIP-RAP 4-8" SEED WITH JUTE, OR SOD; LINED RIP-RAP 4-8" A. STONE TO BE 2 INCH STONE, OR RECYCLED CONCRETE EQUIVALENT, IN A LAYER AT LEAST 3 IN THICORESS AND BE PRESSED INTO THE SOIL WITH CONSTRUCTION EQUIPMENT.
P TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICORESS AND PRESSED INTO THE SOIL.

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

FRINDIC INSSECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

> EARTH DIKE NOT TO SCALE



CONTRACTOR TO USE 2x TIMBERS SECURELY FASTENED IN PLACE TO PREVENT MOVEMENT THIS IS A SUGGESTED DESIGN. ANY PRACTICAL DEVIATION IS ACCEPTABLE AS LONG AS THE 10" TEMPORARY WEIR AT ELEV. 440.5 IS MAINTAINED AND SECURED.

SECTION B-B A ----- 10" TEMP. WEIR (DURING CONSTRUCTION) 3% MIN. OVERLAP--2×4"

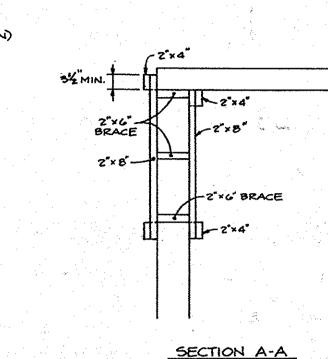
2 x4

ELEVATION

2"x8"

OPENING 443.25

CONTROL WEIR 440.50



CONTROL WEIR TEMPORARY SWM SCALE: 1/2" = 1'-0"

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 A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT. I WILL PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION." James K. Miller 3-30-93 DEVELOPER: JAMES R. MOXLEY, JR. SDC GROUP, INC. - PRESIDENT "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. 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. the fourige

ENGINEER: JOHN M/ ELORRIAGA/ P/E. # 16891 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

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 8/17/43 DATE 7-30-93 DATE 8/19/93 DATE

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT CAM

NO DATE TSA GROUP, INC. planning • architecture • engineering 8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6105

SCALE: AS SHOWN

OWNER/DEVELOPER: COLLEGE FARM SECTION 1. AREA 1 LOTS 1-23 LOCATION: 5DC GROUP, INC. TAX MAP 16 - PARCELS 212 & 376

P.O. BOX 417 ELLICOTT CITY, MARYLAND 21043 (410) 465-4244

DRN:

DES:

2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND STORMWATER MANAGEMENT NOTES AND SEDIMENT CONTROL PETAILS
5-89-5 P-93-06 WP-93-96

DATE: MARCH 29, 1993 PROJECT NO. 0485

> DRAWING 7 OF 6 F-93-104

00

NOT TO SCALE

STABILIZED CONSTRUCTION ENTRANCE

