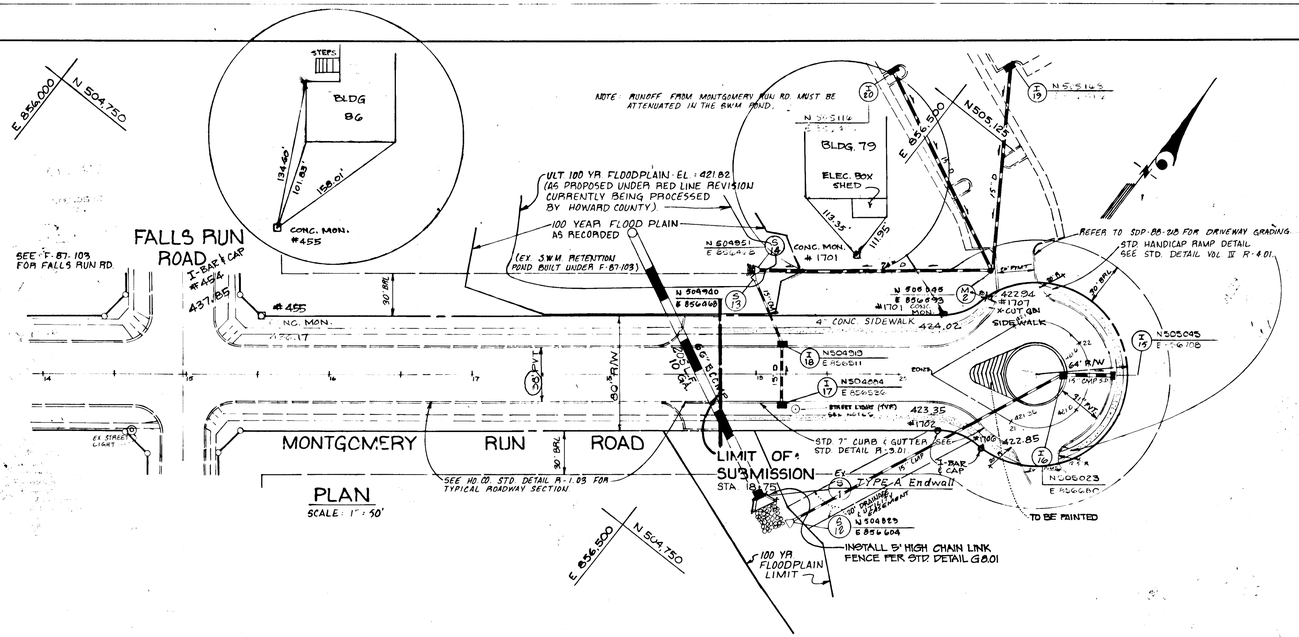
REVISION CHART		
DATE	REVISION	BY
12/14/89	REVISED LINEAR PROFILE	S.A.P.

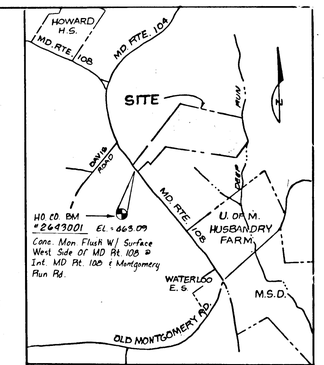
GENERAL NOTES

1. ALL STORM DRAIN & PAVING SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST DETAILS AND SPECIFICATION OF HOWARD CO.
2. TYPES OF STORM DRAIN STRUCTURES REFER TO THE STANDARD DETAILS OF HOWARD COUNTY.
3. TRENCH COMPACTION FOR STORM DRAINS WITHIN ROADS OR STREET RIGHT OF WAY LIMITS SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD CO. ROAD CODE. SEE HOWARD COUNTY DESIGN MANUAL VOL. IV.
4. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS. BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS, BY HAND, AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF CONSTRUCTION.
5. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK ON THESE DRAWINGS:

MISS UTILITY	1-800-257-7777
C&P TELEPHONE COMPANY	725-9976
HOWARD CO. BUREAU OF UTILITIES	992-2366
AT&T CABLE LOCATION DIVISION	393-3553
BALTIMORE GAS & ELECTRIC COMPANY	685-0123
STATE HIGHWAY ADMINISTRATION	531-5533
HOWARD CO. CONSTRUCTION/INSPECTION SURVEY DIVISION (24 HOURS NOTICE PRIOR TO COMMENCEMENT OF WORK)	792-7272

6. ALL TRAFFIC CONTROL SERVICES, PARKING AND SIGNING TO BE DONE ON ACCORDANCE WITH THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES", 1984 REVISED EDITION.
7. SAG AND CREST VERTICAL CURVES WERE DESIGNED IN ACCORDANCE WITH HOWARD COUNSTRY DESIGN MANUAL VOLUME III, ROADS & BRIDGES.
8. PROVIDE CONCRETE SIDEWALK RAMPS IN CURBS, WHERE SHOWN ON PLAN (MAX. 12:1 SLOPE: SEE HOWARD CO. STD. DETAIL R-4.01)
9. MINIMUM COVER OF 12" SHALL BE PROVIDED OVER STORM DRAIN PIPES ON ALL AREAS NOT BEING FINAL GRADED BY THESE PLANS.
10. DESIGN SPEED: 30 M.P.H. (MINOR COLLECTOR)
11. STREET LIGHTS SHALL BE 175 WATT MODERN MERCURY VAPOR LAMP POST. TOP FIXTURES ON 14 FOOT GRAY FIBERGLASS POLES, INDICATED BY OR 250W ON 30 FEET BRONZE-ALUM (OR EQ.)
12. ALL HORIZONTAL CONTROLS BASED ON MARYLAND STATE DATUM. VERTICAL ELEVATIONS BASED ON U.S.G.S. DATUM.
13. EXISTING TOPOGRAPHY SHOWN WAS FLOWN FEBRUARY, 1985.
14. REFER TO THE PREVIOUS F-PLAN 87-103 FOR PHASE 1.
15. ZONING: RSA 8
16. REFER TO SDP-88-218 FOR ADJACENT SUBDIVISIONS.





VICINITY MAP
SCALE: 1"= 2000'

DESIGNED RTTJR	VILLAGE OF MONTGOMERY RUN	SCALE AS SHOWN
DRAWN SGK	TAX MAPS 31 & 37 PARCELS 180 & 285 SECTION 1, AREA 2 1ST. ELECTION DISTRICT HOWARD COUNTY, MD.	DWG NO. 1 OF 7
CHECKED RA, DW		JOB NO. 1684136
DATE APRIL 1988	ROAD PLAN & PROFILE AND STORM DRAINAGE	FILE NO.

REVISION - 1-27-94: ADDED CHAIN LINK FENCE AT OUTFALL, & STA. 10+00± MONT. RUN RD, Rt.

OWNER:
NEWMISS LTD. PARTNERSHIP
6615 REISTERSTOWN ROAD
SUITE 201
BALTIMORE, MARYLAND 21215

DEVELOPER:
MACKS & MACKS, INC.
6615 REISTERSTOWN ROAD
BALTIMORE, MARYLAND 21215

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 10-3-88

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — Date 9/27/88

Chief, Bureau of Highways — Date 9/26/88

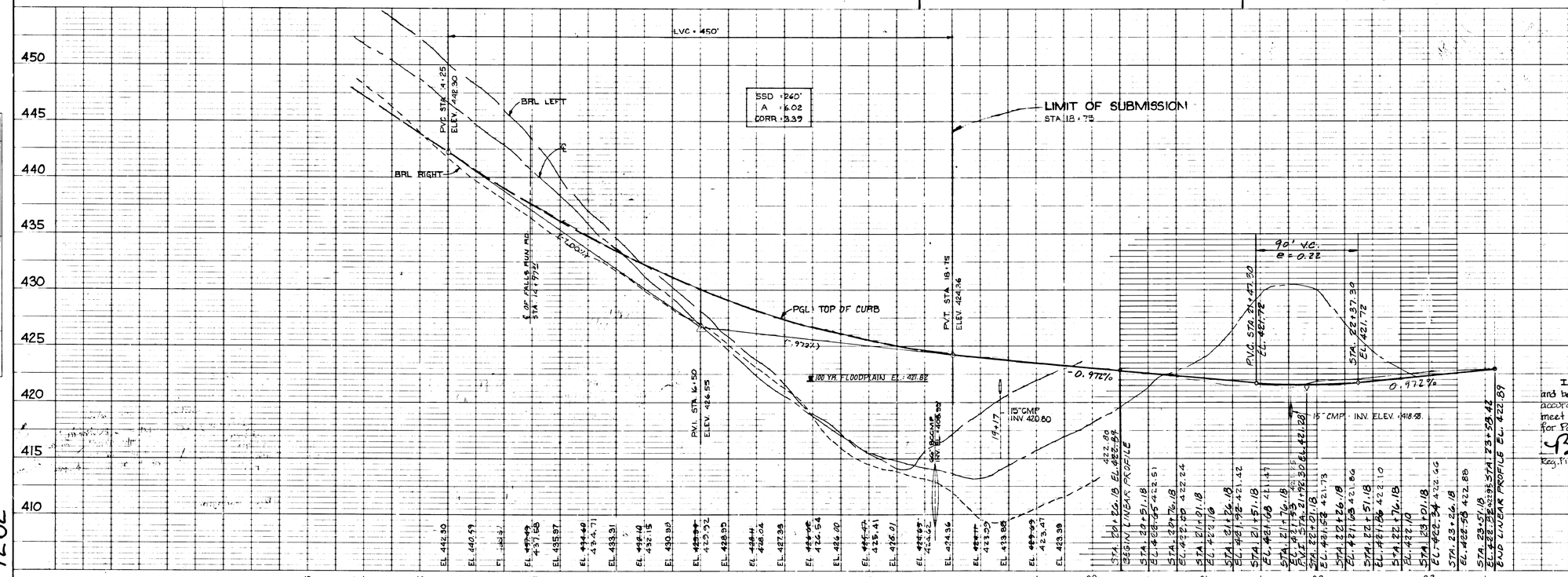
Chief, Bureau of Engineering — Date 9-27-88

KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS

DATE APRIL 1988 SCALE AS SHOWN

PROFILE LEGEND
- PGL
- ℄
- BRL RIGHT
- BRL LEFT

PROFILE SCALE
HORZ 1" = 50'
VERT. 1" = 5'



ENGINEERS CERTIFICATE

I hereby certify that to the best of my knowledge and belief that the as-built information shown hereon is accurate and complete and that the ponds as constructed meet the requirements of the Standards & Specifications for Ponds.

Reg. Prof. Engineer No. 10242 — 3/17/94 Date

1262

Keuffel & Esser Company
48 7024 Made in U.S.A.

F-88-258
AS-BUILT 3-14-94

RECORD OF SOIL EXPLORATION — Village of Montgomery Run — Boring B-1 — 11-16-1278 — Drilled 11-21-88 — 3 1/4" I.D. H.S.A. — S. Walsh — Elev. 410.0 — Depth 35.0

Depth	Sample	Blows	Description
0.0	S-1	3 4 5	Brown tan moist loose to dense micaceous fine to medium sand with some silt loose gravel (sandy loam)
5.0	S-2	3 3 3	
	S-3	3 3 3	
	S-4	3 3 3	
	S-5	3 3 3	
	S-6	3 3 3	
15.0	S-7	3 3 3	bottom of test hole at 15.0'
20.0			
25.0			
30.0			
35.0			

4" topsoil; water first encountered at 6.0'; water refusal encountered at 9.5'; auger refusal at 9.5'

UNIFIED CLASSIFICATION SAL

RECORD OF SOIL EXPLORATION — Village of Montgomery Run — Boring B-2 — 11-16-1278 — Drilled 11-22-88 — 3 1/4" I.D. H.S.A. — S. Walsh — Elev. 410.0 — Depth 35.0

Depth	Sample	Blows	Description
0.0	S-1	4 5 6	Brown tan moist loose to dense micaceous fine to medium silty sand with trace mica fragments (sandy loam)
5.0	S-2	3 3 3	
	S-3	3 3 3	
	S-4	3 3 3	
	S-5	3 3 3	
	S-6	3 3 3	
15.0	S-7	3 3 3	bottom of test hole at 15.5'
20.0			
25.0			
30.0			
35.0			

4" topsoil; water first encountered at 6.0'; water refusal encountered at 12.0'; auger refusal at 12.5'

UNIFIED CLASSIFICATION SAL

RECORD OF SOIL EXPLORATION — Village of Montgomery Run — Boring B-3 — 11-16-1278 — Drilled 11-22-88 — 3 1/4" I.D. H.S.A. — S. Walsh — Elev. 410.0 — Depth 35.0

Depth	Sample	Blows	Description
0.0	S-1	2 3 5	Green tan moist loose to dense micaceous fine to medium silty sand with trace mica and rock fragments (sandy loam) (fill)
5.0	S-2	3 3 3	
	S-3	3 3 3	
	S-4	3 3 3	
	S-5	3 3 3	
	S-6	3 3 3	
15.0	S-7	3 3 3	bottom of test hole at 15.5'
20.0			
25.0			
30.0			
35.0			

4" topsoil; water first encountered at 6.0'; auger refusal at 15.5'

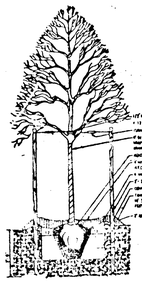
UNIFIED CLASSIFICATION SM

RECORD OF SOIL EXPLORATION — Village of Montgomery Run — Boring B-4 — 11-16-1278 — Drilled 11-21-88 — 3 1/4" I.D. H.S.A. — S. Walsh — Elev. 410.0 — Depth 35.0

Depth	Sample	Blows	Description
0.0	S-1	2 3 5	Brown tan moist loose to dense micaceous fine to medium silty sand with trace mica and rock fragments (sandy loam) (fill)
5.0	S-2	3 3 3	
	S-3	3 3 3	
	S-4	3 3 3	
	S-5	3 3 3	
	S-6	3 3 3	
15.0	S-7	3 3 3	bottom of test hole at 15.5'
20.0			
25.0			
30.0			
35.0			

4" topsoil; water first encountered at 6.0'; auger refusal at 15.5'

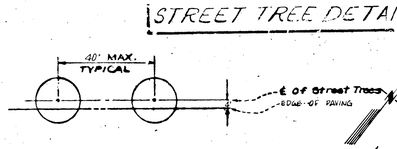
UNIFIED CLASSIFICATION ML



TREE PLANTING DETAIL
NO SCALE

SYMBOL	BOTANICAL NAME / COMMON NAME	QUANTITY
⊕	SUGAR MAPLES	21

STREET TREE DETAILS

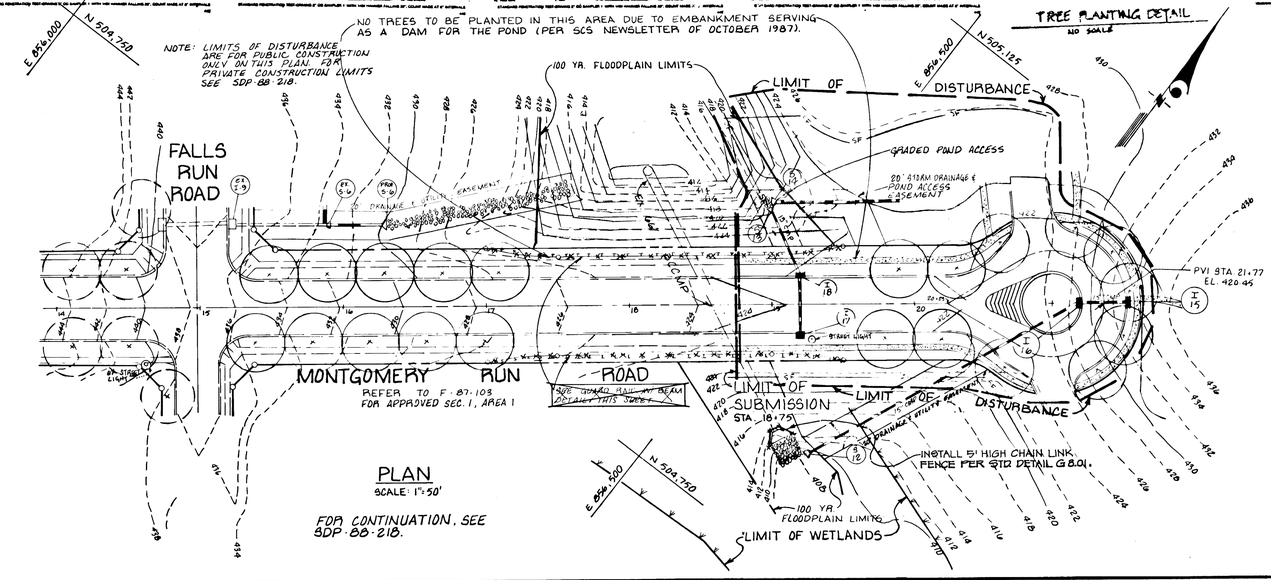


NOTE: STREET TREE TYPICAL PLAN PER SECTION 16.131 OF THE HOWARD COUNTY CODE.

TYPICAL STREET TREE SPACING DETAIL
NOT TO SCALE

NOTE: LIMITS OF DISTURBANCE ARE FOR PUBLIC CONSTRUCTION ONLY ON THIS PLAN. FOR PRIVATE CONSTRUCTION LIMITS SEE SDP-88-218.

NO TREES TO BE PLANTED IN THIS AREA DUE TO EMBANKMENT SERVING AS A DAM FOR THE POND (PER SCS NEWSLETTER OF OCTOBER 1987).



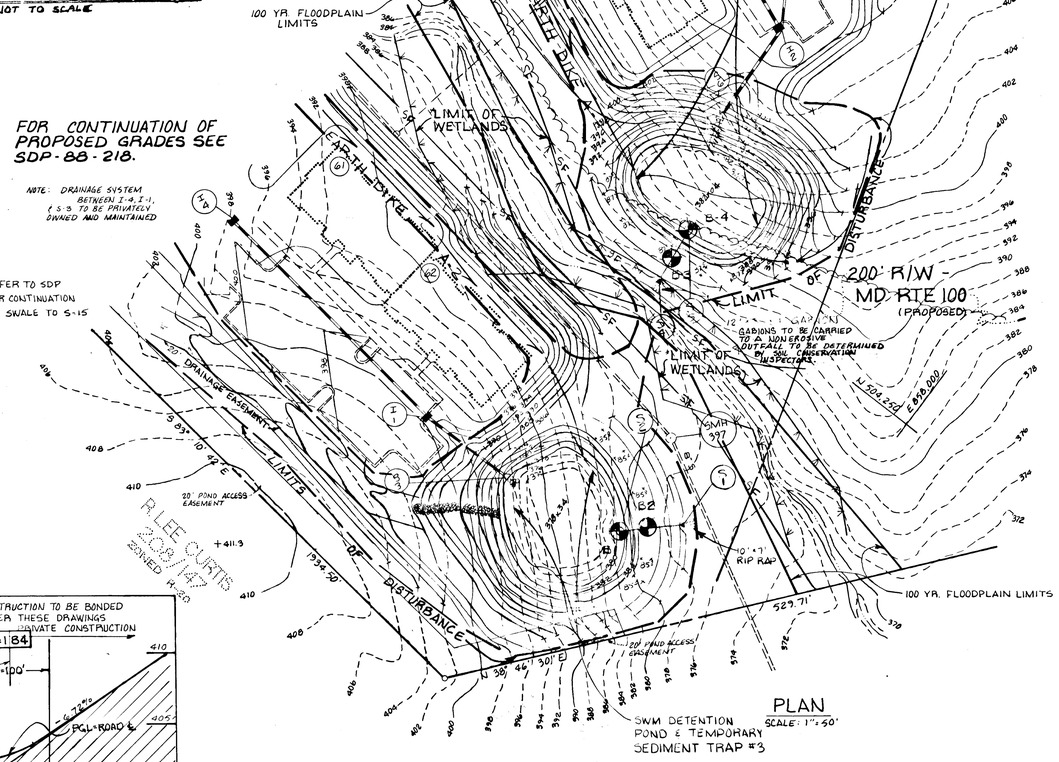
PLAN
SCALE: 1"=50'

FOR CONTINUATION, SEE SDP-88-218.

FOR CONTINUATION OF PROPOSED GRADES SEE SDP-88-218.

NOTE: DRAINAGE SYSTEM BETWEEN I-4 I-1, I-3 TO S-15 TO BE PRIVATELY OWNED AND MAINTAINED

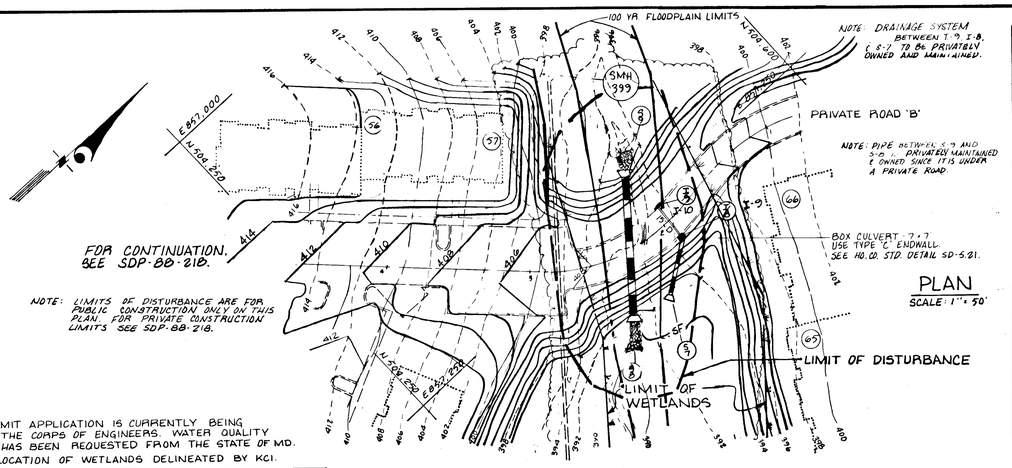
REFER TO SDP FOR CONTINUATION OF SWALE TO S-15



PLAN
SCALE: 1"=50'

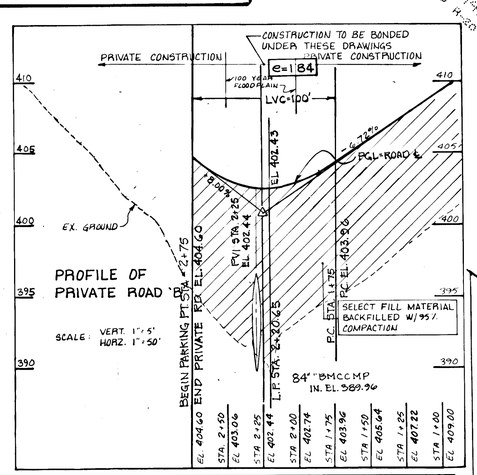
SWM DETENTION POND & TEMPORARY SEDIMENT TRAP #3

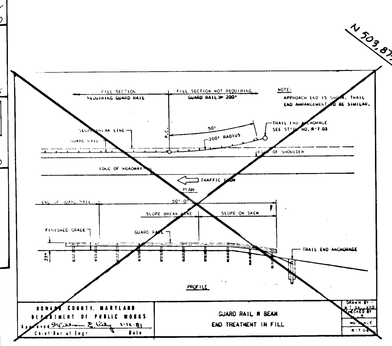
NOTE: PONDS TO BE CONSTRUCTED FOR PURPOSES OF TEMPORARY SWM DURING GRADING. PONDS WILL BE PRIVATELY MAINTAINED & OWNED ONCE PERMANENT



PLAN
SCALE: 1"=50'

NOTE: LIMITS OF DISTURBANCE ARE FOR PUBLIC CONSTRUCTION ONLY ON THIS PLAN. FOR PRIVATE CONSTRUCTION LIMITS SEE SDP-88-218.





*REVISED CONTOURS & ADDED 84" PIPE

1-27-04 - ELIMINATED GUARD RAIL NORTH & SOUTH SIDE MONT. RUN RD2 (STA. 17+00-10+50).
" - ADDED CHAIN LINK FENCE AT OUTFALL #STA. 5+00 MONT. RUN RD2, RT.

AS-BUILT STORMWATER MANAGEMENT PONDS

STREET TREE PLANTING, GRADING, SEDIMENT CONTROL AND STORM WATER MANAGEMENT

VILLAGE OF MONTGOMERY RUN

SECTION 1, AREA 2

TAX MAP 31 & 37 — PARCEL 108 & 285

1ST ELECTION DISTRICT — HOWARD COUNTY, MD

*WETLANDS PERMIT APPLICATION IS CURRENTLY BEING PROCESSED BY THE CORPS OF ENGINEERS. WATER QUALITY CERTIFICATION HAS BEEN REQUESTED FROM THE STATE OF MD.
*APPROXIMATE LOCATION OF WETLANDS DELINEATED BY KCI.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — Date 9/21/88

Chief, Bureau of Highways — Date 9/26/88

Chief, Bureau of Engineering — Date 9-27-88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 10-3-88

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Howard Soil Conservation District — Date 9/12/88

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.

U.S. Soil Conservation Service — Date 4-12-88

By the Engineer:

"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."

Signature of Engineer — Date 5-19-88

By the Developer:

"I/We 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 inspections by the Howard Soil Conservation District."

Signature of Developer — Date 5/19/88

DEVELOPER:

MACKS & MACKS
6615 REISTERSTOWN RD
SUITE 205
BALTIMORE, MD 21215
(301) 358-4934

OWNER:

NEWMISS LTD. PARTNERSHIP
6615 REISTERSTOWN RD
SUITE 201
BALTIMORE, MD 21215
(301) 358-4934

KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET - SUITE 30 - LAUREL, MD 20707
Washington 301-953-1821 - 792-8086 (Balt.)

STATE OF MARYLAND — JAMES E. JONES — No. 6978 — REGISTERED PROFESSIONAL ENGINEER

SHEET 2 OF 7

DATE APRIL 1988 — SCALE AS SHOWN

1262

F-88-258

AS-BUILT 3-14-94

SOIL CONSERVATION SERVICE
MARYLAND
CONSTRUCTION SPECIFICATIONS
FOR
PONDS

These specifications are appropriate to ponds within the scope of the Standard for practice 378.

I. SITE PREPARATION

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the pond or reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface.

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.

II. EARTH FILL

Material

The fill material shall be taken from approved designated borrow area or areas. It shall be free of roots, stumps, wood, rubbish, oversize stones, frozen or other objectionable materials. 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 above the design elevation (including freeboard) as shown on the plans.

Placement

Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in 8-inch maximum thickness (before compaction) layers which are to be continuous over the entire length of the fill. The most porous borrow material shall be placed in the downstream portions of 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 can be obtained with the equipment used.

Where a minimum required density is specified, each layer of fill shall be compacted as necessary to obtain that density and is to be certified by the Engineer.

Cutoff Trench

Where specified, a cutoff 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 as shown on the drawings, 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 1 to 1 or flatter. The backfill material for the cutoff trench shall be the most impervious material available and shall be compacted with equipment or rollers to assure maximum density and minimum permeability.

III. 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 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 twenty-four inches or greater over the structure or pipe.

IV. PIPE CONDUITS

All pipes shall be circular in cross section.

A. Corrugated Metal Pipe

1. 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 are commercially available: 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 - (Aluminized Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274-791 with watertight coupling bands or flanges.

   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. 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. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be less than 9 and greater than 4.

2. 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. Watertight coupling bands or flanges shall be used at all joints. Anti-seep collars shall be connected to the pipe in such a manner as to the completely watertight. Dimple bands are not considered to be 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. Laying pipe - The pipe shall be placed with inside circumferential laps pointing downstream and with the longitudinal laps at the sides.

5. Backfilling shall conform to structural backfill as shown above.

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

V. CONCRETE

1. Materials

   a. Cement - Normal Portland cement shall conform to the latest ASTM Specification C-150.

   b. Water - The water used in concrete shall be clean, free from oil, acid, alkali, scales, organic matter or other objectionable substances.

   c. Sand - The sand used in concrete shall be clean, hard, strong and durable, and shall be well graded with 100 percent passing a one-quarter inch sieve. Limestone sand shall not be used.

   d. Coarse Aggregate - The coarse aggregate shall be clean, hard, strong and durable, and free from clay or dirt. It shall be well graded with a maximum size of one and one-half (1-1/2) inches.

   e. Reinforcing Steel - The reinforcing steel shall be deformed bars of intermediate grade billet steel or rail steel conforming to ASTM Specification A-615.

2. Design Mix - The concrete shall be mixed in the following proportions, measured by weight. The water-cement ratio shall be 5-1/2 to 6 U.S. Gallons of water per 94 pound bag of cement. The proportion of materials for the trial mix shall be 1:2:3-1/2. The combination of aggregates may be adjusted to produce a plastic and workable mix that will not produce harshness in placing or honeycombing in the structure.

3. Mixing - The concrete ingredients shall be mixed in batch mixers until the mixture is homogeneous and of uniform consistency. The mixing of each batch shall continue for not less than one and one-half minutes after all the ingredients, except the full amount of water, are in the mixer. The minimum mixing time is predicted on proper control of the speed of rotation of the mixer and of the introduction of the materials, including water, into the mixer. Water shall be added prior to, during, and following the mixer-charging operations. Excessive overmixing requiring the addition of water to preserve the required concrete consistency shall not be permitted. Truck mixing will be allowed provided that the use of this method shall cause no violation of any applicable provisions of the specifications given here.

4. Forms - The forms shall have sufficient strength and rigidity to hold the concrete and to withstand the necessary pressure, tamping, and vibration without deflection from the prescribed lines. They shall be mortar-tight and constructed so that they can be removed without hammering or prying against the concrete.

   The inside of forms shall be oiled with a non-staining mineral oil or thoroughly wetted before concrete is placed.

   Forms may be removed 24 hours after the placement of concrete. All wire ties and other devices used shall be recessed from the surface of the concrete.

5. Reinforcing Steel - All reinforcing material shall be free of dirt, rust, scale, oil, paint or any other coatings. The steel shall be accurately placed and securely tied and blocked into position so that no movement of the steel will occur during placement of concrete.

6. Consolidating - Concrete shall be consolidated with internal type mechanical vibrators. Vibration shall be suplemented by spading and hand tamping as necessary to insure smooth and dense concrete along form surfaces, in corners, and around embedded items.

7. Finishing - Defective concrete, honeycombed areas, voids left by the removal of tie rods, ridges on all concrete surfaces permanently exposed to view or exposed to water on the finished structure, shall be repaired immediately after the removal of forms. All voids shall be reamed and completely filled with dry-patching mortar.

8. Protection and Curing - Exposed surfaces of concrete shall be protected from the direct rays of the sun for at least the first three (3) days. All concrete shall be kept continuously moist for at least ten (10) days after being placed. Moisture may be applied by spraying or sprinkling as necessary to prevent the concrete from drying. Concrete shall not be exposed to freezing during the curing period. Curing compunds may also be used.

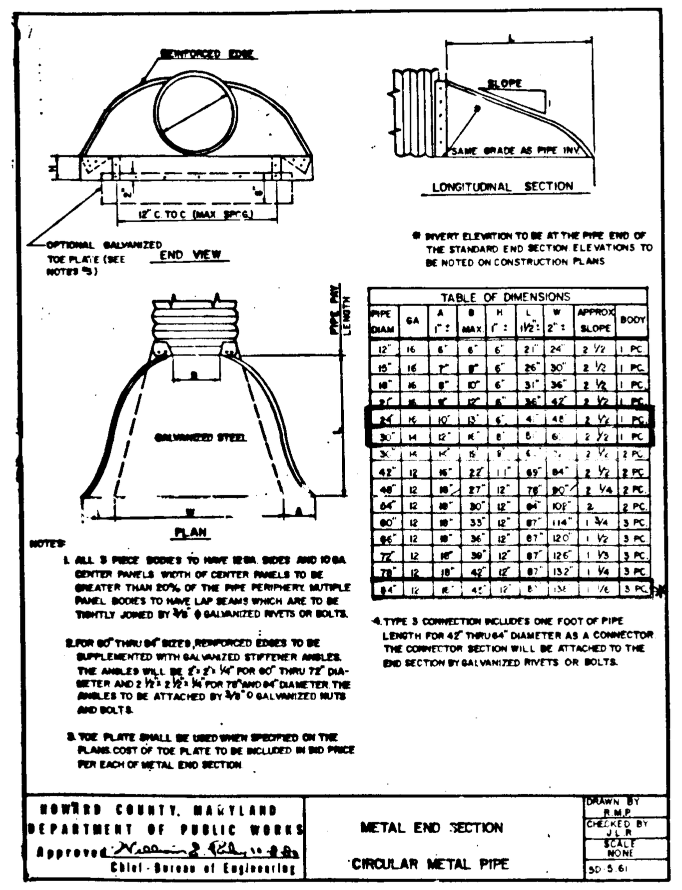
9. Placing Temperature - Concrete may not be placed at temperatures below 37° F with the temperature falling, or 34° with the temperature rising.

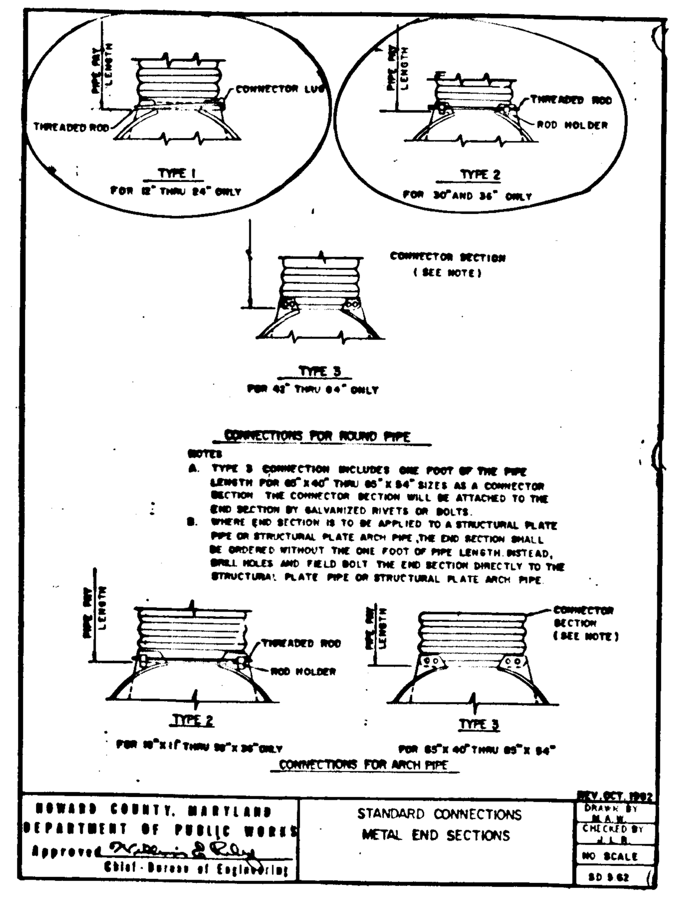
VI. STABILIZATION

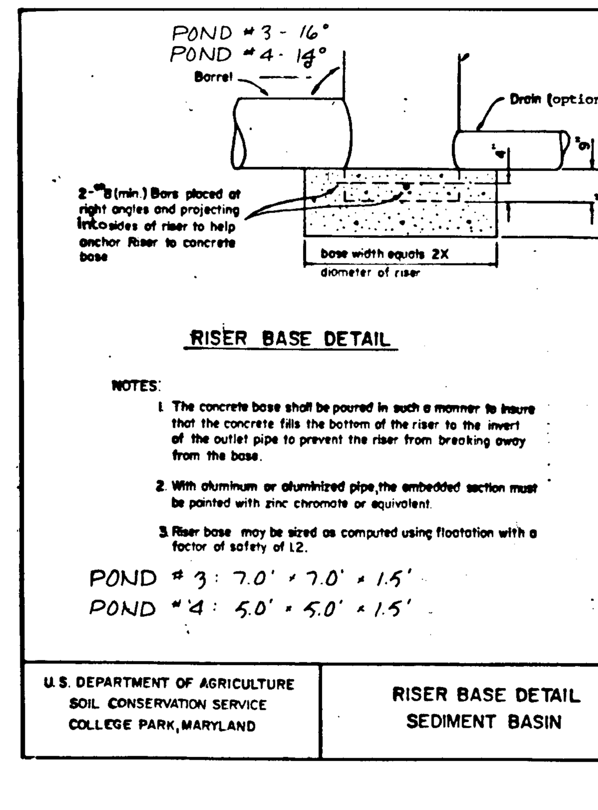
All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching (if required) in accordance with the vegetative treatment specifications or as shown on the accompanying drawings.

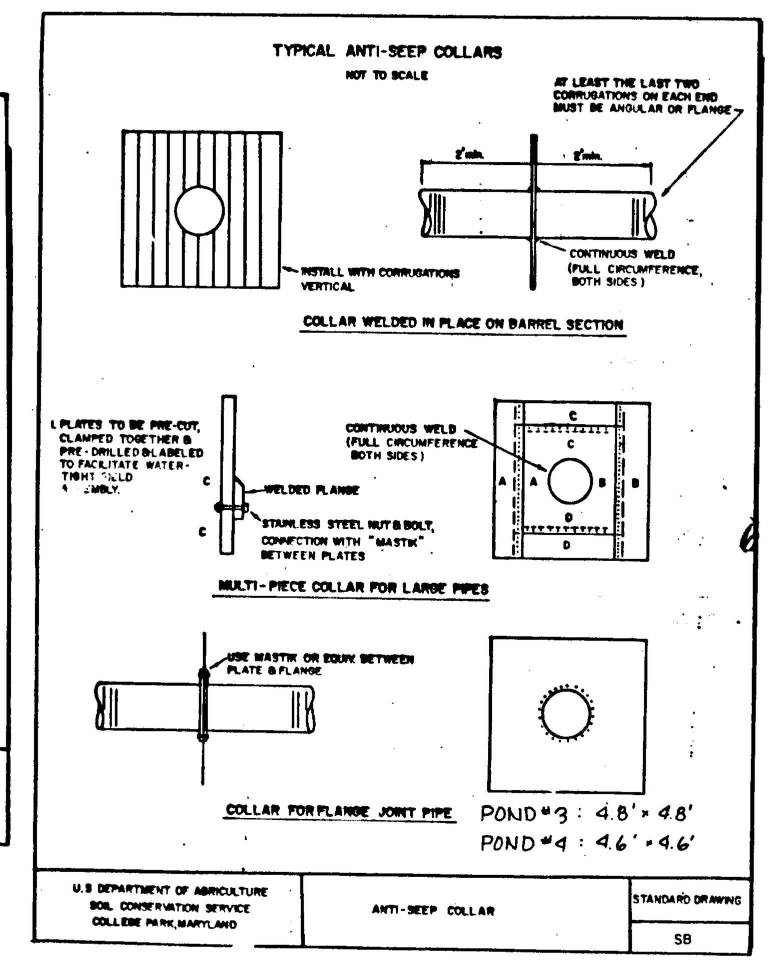
VII. EROSION AND SEDIMENT CONTROL

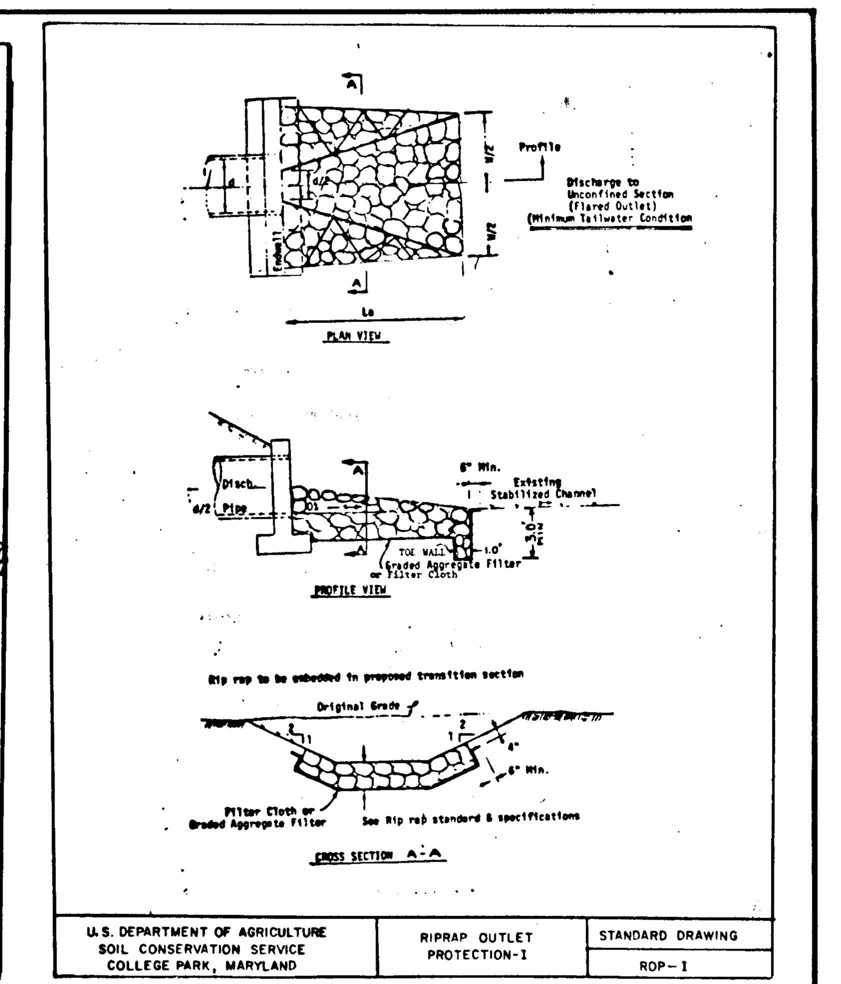
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction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





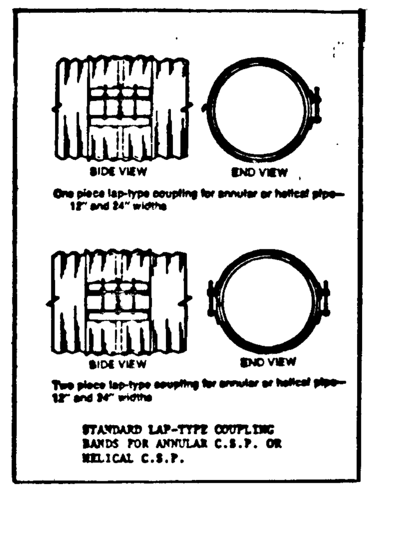


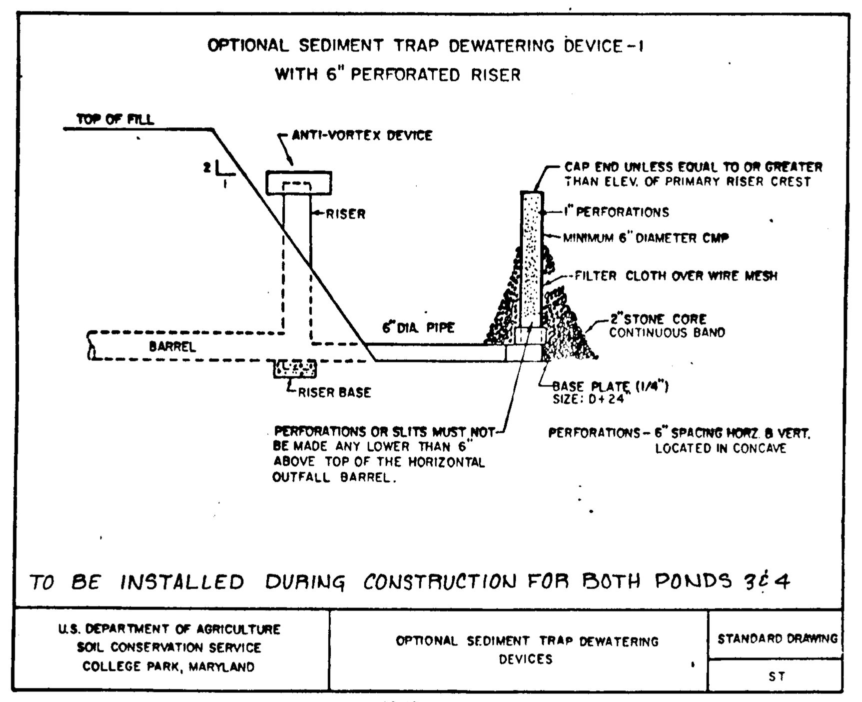




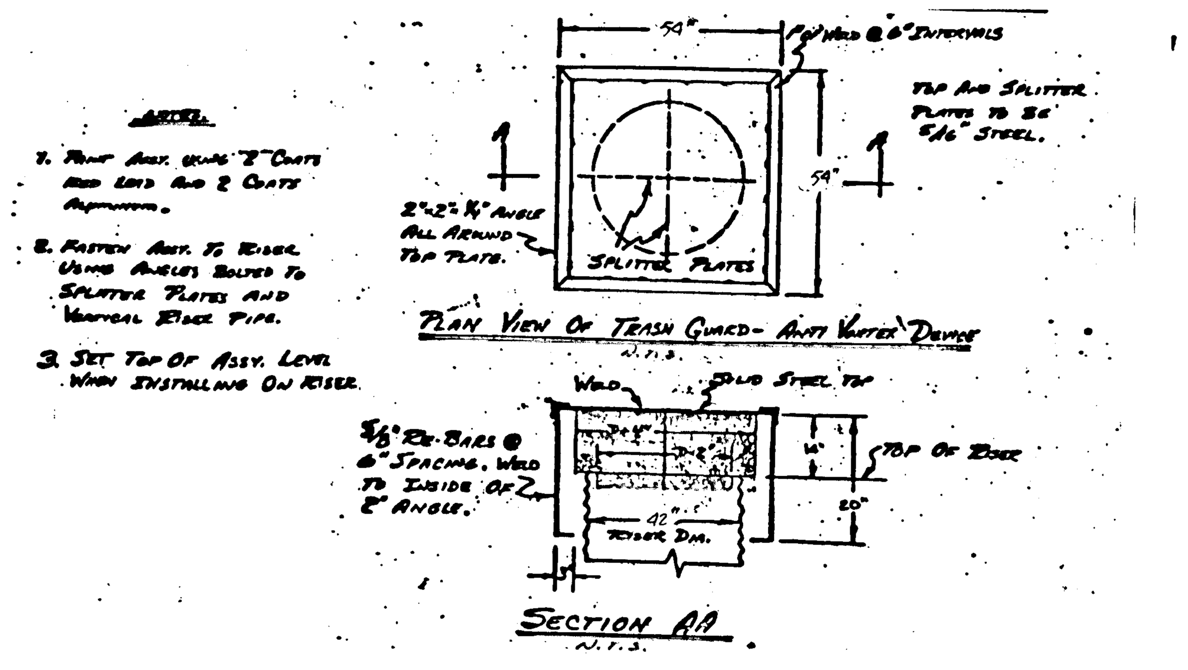
TYPES OF COUPLERS FOR CORRUGATED STEEL PIPE

(All connector bands require neoprene gaskets)



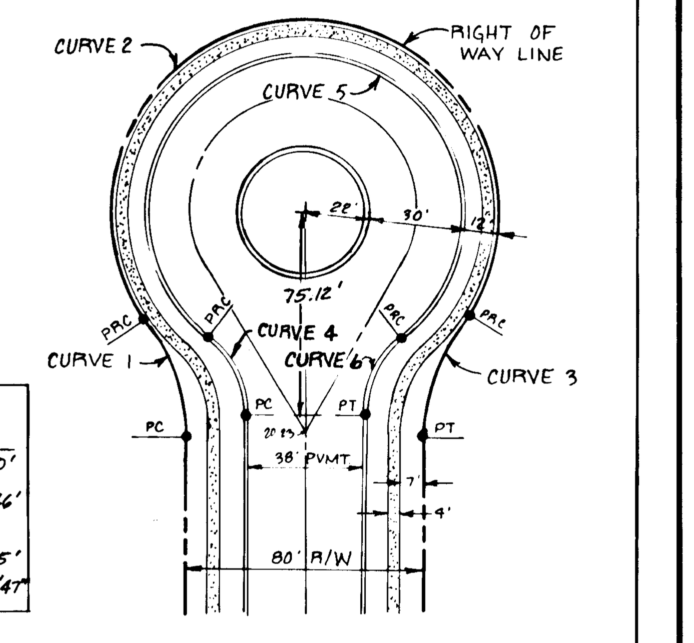


16.15



FABRICATION DETAILS FOR TRASH GUARD - ANTI VORTEX ASSEMBLY FOR ALL RISERS

TO BE USED FOR POND # 3



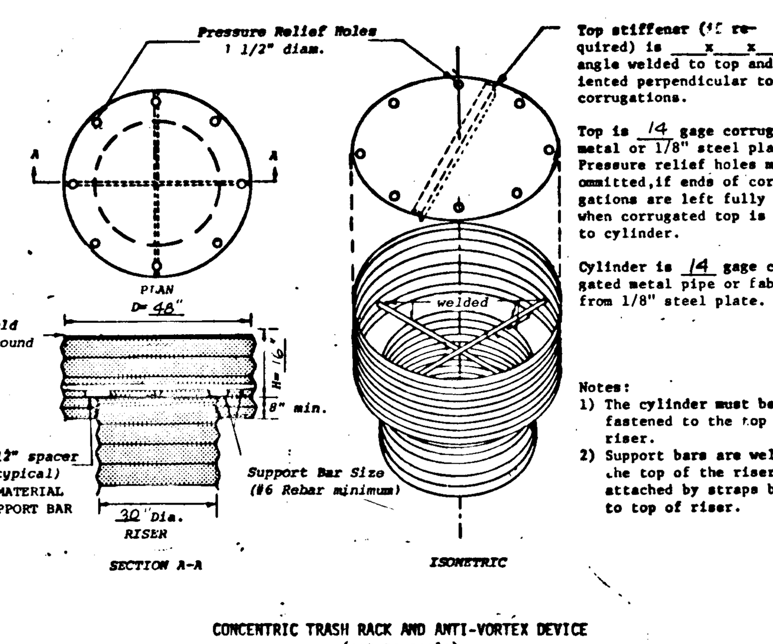
CURVE	CHORD BEARING
1	N 69° 48' 02" E
2	N 38° 06' 05" W
3	S 33° 59' 48" W
4	N 25° 35' 21" E
5	S 38° 06' 05" E
6	S 78° 12' 28" W

CURVE DATA

CURVE 1 & 3	2	4 & 6	5
R = 63.00'	64.00'	50.00'	52.00'
A = 39.37'	281.05'	41.39'	249.46'
T = 20.38'	-	21.96'	-
L.C. = 38.73'	103.81'	40.22'	70.35'
Δ = 35° 48' 14"	251° 36' 26"	47° 25' 54"	274° 51' 47"

CUL-DE-SAC WITH ISLAND

NO SCALE



Top stiffener (If required) is ___x___x___ angle welded to top and oriented perpendicular to corrugations.

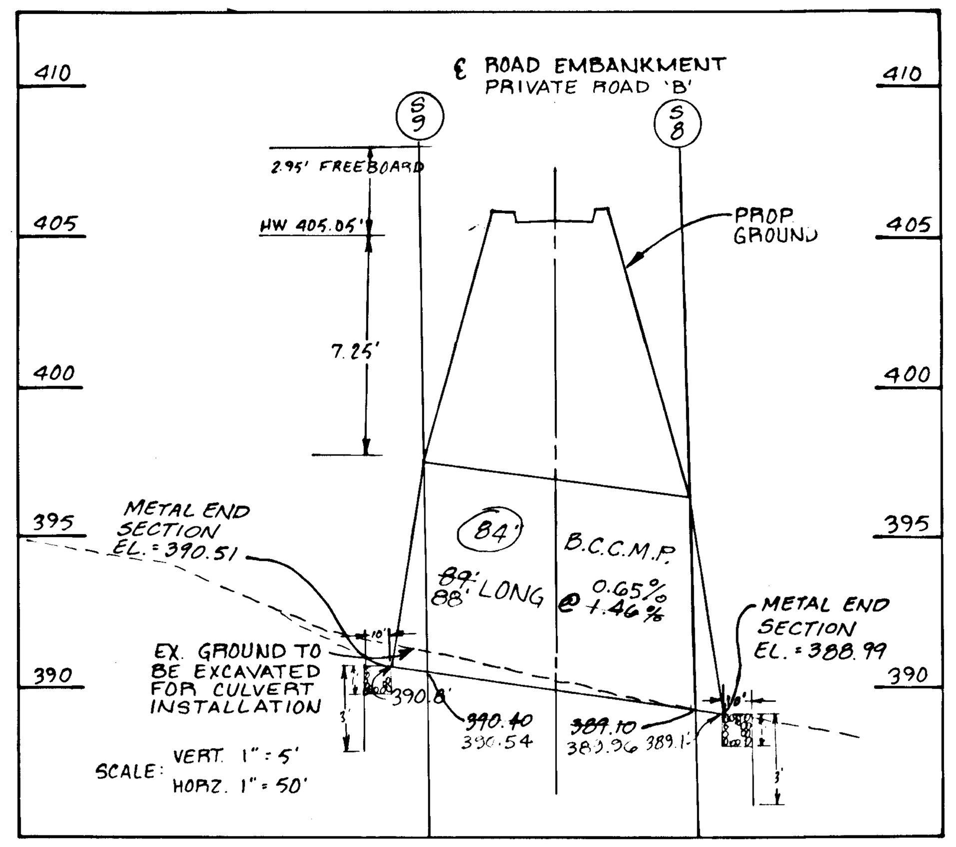
Top is 14 gage corrugated metal or 1/8" steel plate. Pressure relief holes may be ommitted, if ends of corrugations are left fully open when corrugated top is welded to cylinder.

Cylinder is 14 gage corrugated metal pipe or fabricated from 1/8" steel plate.

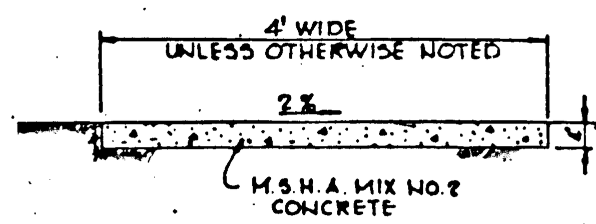
Notes:
1) The cylinder must be firmly fastened to the top of the riser.
2) Support bars are welded to the top of the riser or attached by straps bolted to top of riser.

CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE
(not to scale)

TO BE USED FOR POND # 4

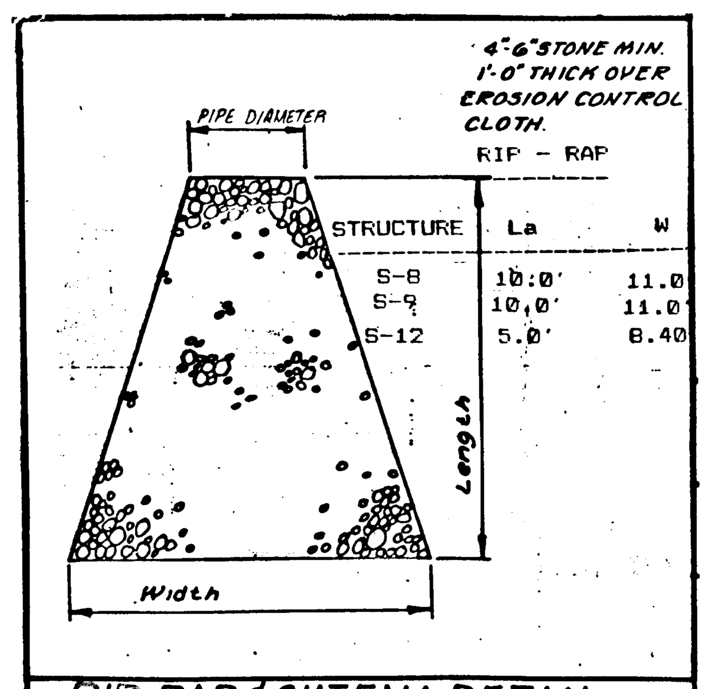


PROFILE OF ℄ STREAM AT PRIVATE RD CROSSING



SIDEWALK DETAIL

No Scale

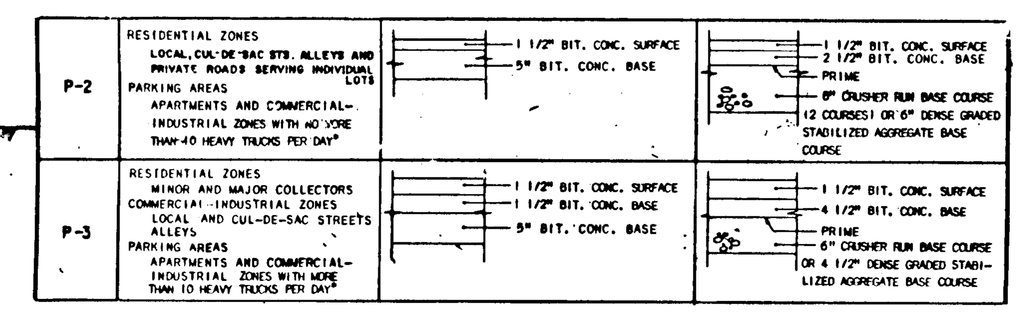


RIP - RAP

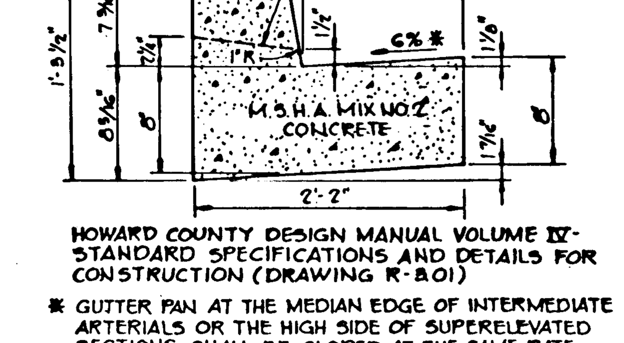
STRUCTURE	La	W
S-8	10.0'	11.0
S-9	10.0'	11.0
S-12	5.0'	8.40

RIP-RAP & OUTFALL DETAIL

NOT TO SCALE



P-2 FOR PRIVATE DRIVEWAY
P-3 FOR MONTGOMERY RUN ROAD



HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-8.01)

* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AS THE PAVEMENT.

STANDARD 7" COMBINATION CURB AND GUTTER

No Scale

SEQUENCE OF CONSTRUCTION

1) OBTAIN GRADING PERMIT.	1 DAY
2) INSTALL ALL SILT FENCE.	1 DAY
3) CLEAR AND GRUB FOR PONDS 3 & 4.	4 DAYS
4) INSTALL PONDS 3 & 4 AND OVEREXCAVATE BOTH PONDS AS PER GRADING PLAN; INSTALL TEMPORARY DEWATERING DEVICE ONTO THE 6 INCH ORIFICE IN BOTH PONDS. IMMEDIATELY STABILIZE ALL SURROUNDING AREAS.	2 WEEKS
5) INSTALL ALL EARTH DIKES.	2 DAYS
6) GRADE FOR THE EXTENTION OF MONTGOMERY RUN ROAD.	1 WEEK
7) INSTALL CONCRETE CURB AND GUTTER.	4 DAYS
8) INSTALL PUBLIC STORM DRAIN SYSTEM (I-15 TO I-16 & I-17 TO S-12) IMMEDIATELY BLOCK ALL INLETS.	1 WEEK
9) INSTALL THE BOX CULVERT UNDER THE PRIVATE ROAD.	4 DAYS
10) CONSTRUCT THE EMBANKMENT OVER THE BOX CULVERT.	1 WEEK
11) FINE GRADE MONTGOMERY RUN ROAD.	3 DAYS
12) INSTALL PAVING.	3 DAYS
13) STABILIZE ALL AFFECTED AREAS.	2 DAYS
14) WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES ADJACENT TO MONT. RUN ROAD. STABILIZE ANY REMAINING DISTURBED AREAS.	5 DAYS
15) BE SURE TO LEAVE ALL REMAINING SEDIMENT CONTROL DEVICES IN PLACE TO BE UTILIZED FOR PRIVATE CONSTRUCTION.	

12/12/89 REVISED STREAM PROFILE & CUL-DE-SAC CURVE DATA - S.A.P.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[signature] 9/27/88
Chief, Land Development Division — Date

Granville W. Wehland 9/26/88
Chief, Bureau of Highways — Date

William E. Riley 9-27-88
Chief, Bureau of Engineering — Date

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

[signature] 10-3-88
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District,

Robert W. Zielmer 9/12/88
Howard Soil Conservation District — Date

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.

[signature] 9-12-88
U.S. Soil Conservation Service — Date

By the Engineer:

"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."

John Eslamok 5-19-88
Signature of Engineer — Date

By the Developer:

"I/We 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 inspections by the Howard Soil Conservation District."

[signature] 5/19/88
Signature of Developer — Date

DEVELOPER :

MACKS & MACKS
6615 REISTERSTOWN RD
SUITE 205
BALTIMORE, MD 21215
(301) 358-4934

OWNER :

NEWMISS LTD. PARTNERSHIP
6615 REISTERSTOWN RD
SUITE 201
BALTIMORE, MD 21215
(301) 358-4934

STORM WATER MANAGEMENT
CONSTRUCTION DETAIL SHEET

VILLAGE OF MONTGOMERY RUN

SECTION 1, AREA 2

TAX MAP 31 & 37 — PARCEL 108 & 285

1ST ELECTION DISTRICT — HOWARD COUNTY, MD

KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS

STATE OF MARYLAND — JOHN E. ESLAMOK — No. 8978 — REGISTERED PROFESSIONAL ENGINEER

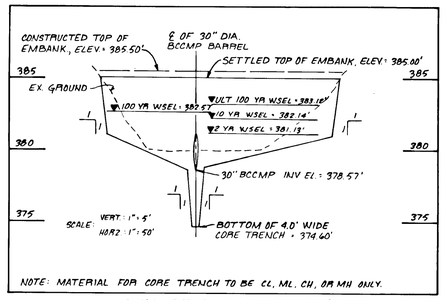
SHEET 3 OF 7

APRIL 1988 — AS SHOWN

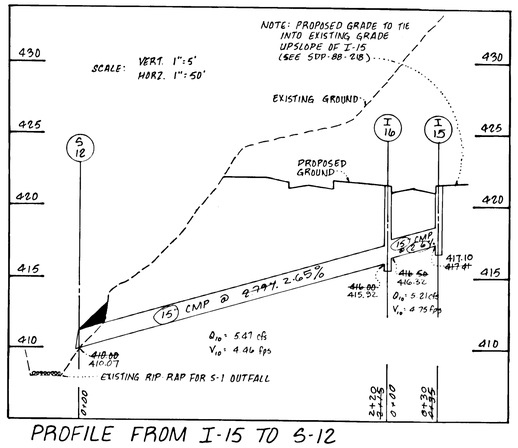
AS-BUILT 3-14-94

F-88-258

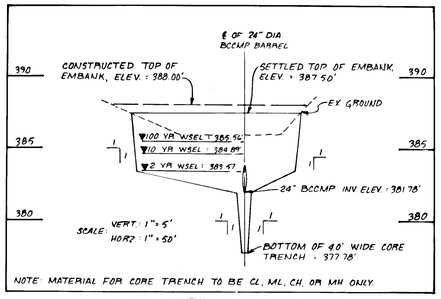
1262



SWM DETENTION POND #3
PROFILE ALONG ℄ OF EMBANKMENT



PROFILE FROM I-15 TO S-12

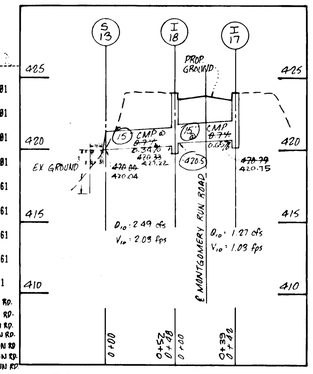


SWM DETENTION POND #4
PROFILE ALONG ℄ OF EMBANKMENT

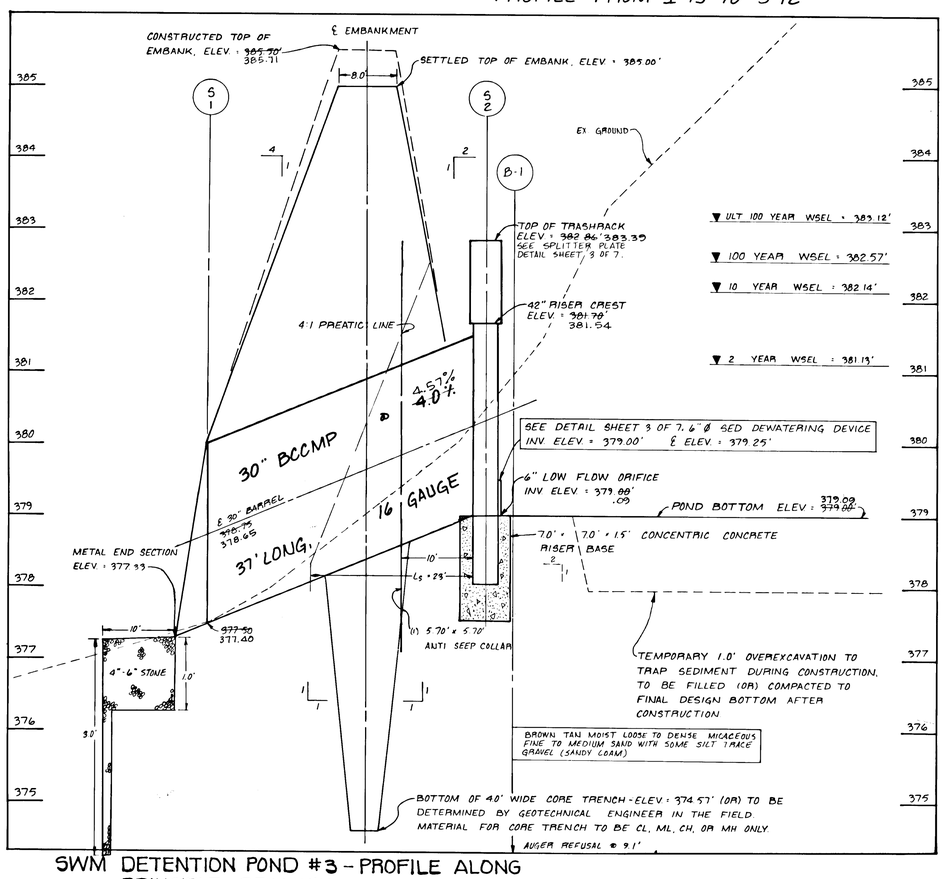
PUBLIC DRAINAGE STRUCTURE SCHEDULE

NO.	TYPE	INV. IN.	INV. OUT	TOP ELEV.	REMARKS
I-15	A-5	---------	417.41	~~421.50~~ 421.25	HO. CO. STD DETAIL SD. 4.01
I-16	A-5	416.50	416.00	~~421.50~~ 422.02	HO. CO. STD DETAIL SD. 4.01
I-17	A-5	---------	420.79	~~424.00~~ 423.94	HO. CO. STD DETAIL SD. 4.01
I-18	A-5	420.50	420.33	~~424.00~~ 423.85	HO. CO. STD DETAIL SD. 4.01
S-12	METAL END SEC	---------	418.00	~~413.25~~ 411.32	HO. CO. STD DETAIL SD. 5.61
S-13	METAL END SEC	---------	420.00	~~421.25~~ 421.29	HO. CO. STD DETAIL SD. 5.61
S-14	METAL END SEC	---------	418.00	~~420.00~~ 419.91	HO. CO. STD DETAIL SD. 5.61
~~S-15~~	~~METAL END SEC~~	DELETED	~~413.00~~	~~415.40~~	~~HO. CO. STD DETAIL SD. 5.61~~
~~B-1~~	~~STD MANHOLE~~	~~415.14~~	~~415.14~~	~~422.50~~	~~HO. CO. STD DETAIL G. 5.11~~

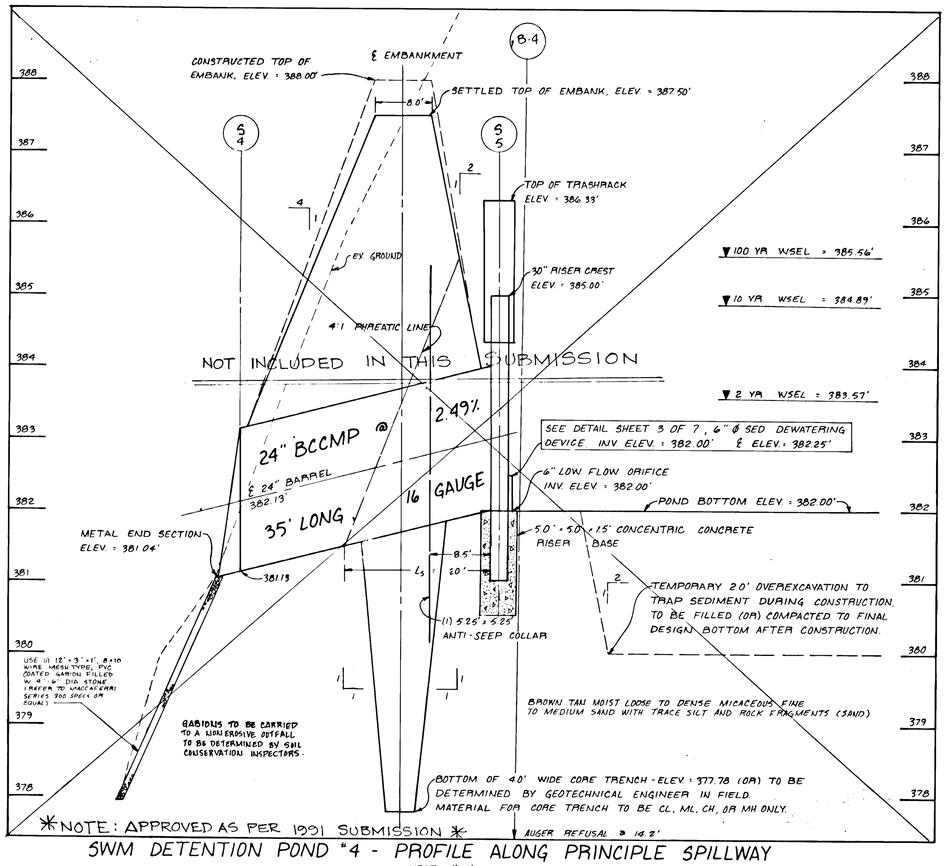
I-15	N 505,045	E 856,708	STA. 21+77	17.5'	NW FROM THE ℄ OF MONT. RUN RD.
I-16	N 505,023	E 856,480	STA. 21+77	17.5'	SW FROM THE ℄ OF MONT. RUN RD.
I-17	N 504,884	E 856,536	STA. 19+18	21'	W FROM THE ℄ OF MONT. RUN RD.
I-18	N 504,919	E 856,511	STA. 19+18	21'	E FROM THE ℄ OF MONT. RUN RD.
S-12	N 504,835	E 856,604	STA. 19+36	105'	W FROM THE ℄ OF MONT. RUN RD.
S-15	N 504,940	E 856,468	STA. 19+80	65'	E FROM THE ℄ OF MONT. RUN RD.
B-1	N 504,951	E 856,468	STA. 19+02	87'	E FROM THE ℄ OF MONT. RUN RD.
S-15	N 504,000	E 857,280		159'	W FROM PROP. MANHOLE NO.1
M-1	N 504,015	E 857,126		75'	S FROM PROP. ES. MANHOLE NO.9



PROFILE FROM I-17 TO S-13
SCALE: VERT. 1" = 5'
HORZ. 1" = 50'



SWM DETENTION POND #3 - PROFILE ALONG PRINCIPLE SPILLWAY HAZARD CLASS A
SCALE: VERT. 1" = 1'
HORZ. 1" = 10'



*NOTE: APPROVED AS PER 1991 SUBMISSION *

SWM DETENTION POND "4 - PROFILE ALONG PRINCIPLE SPILLWAY HAZARD CLASS A
SCALE: VERT. 1" = 1'
HORZ. 1" = 10'

NOTE: POND #4 TO BE CONSTRUCTED FOR PURPOSES OF TEMPORARY S.W.M. DURING GRADING. POND #4 WILL BE PRIVATELY MAINTAINED & OWNED ONCE PERMANENT.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — Date 9/27/88

Chief, Bureau of Highways — Date 9/26/88

Chief, Bureau of Engineering — Date 9-27-88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 10-3-88

These plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

Howard Soil Conservation District — Date 9/12/88

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.

U.S. Soil Conservation Service — Date 9/12/88

By the Engineer:

"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."

Signature of Engineer — Date 5-19-88

By the Developer:

"I/We 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 inspections by the Howard Soil Conservation District."

Signature of Developer — Date 5/19/88

ENGINEERS CERTIFICATE

I HEREBY CERTIFY THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE AS-BUILT SHOWN HEREON IS ACCURATE AND COMPLETE AND THAT THE POND AS CONSTRUCTED MEETS THE REQUIREMENTS OF THE STANDARDS & SPECIFICATIONS FOR PONDS.

REGISTERED PROFESSIONAL ENGINEER № 10242 — DATE 3/17/94

DEVELOPER:
MACKS & MACKS
6615 REISTERSTOWN RD
SUITE 205
BALTIMORE, MD 21215
(301) 358-4934

OWNER:
NEWMISS LTD. PARTNERSHIP
6615 REISTERSTOWN RD
SUITE 201
BALTIMORE, MD 21215
(301) 358-4934

VILLAGE OF MONTGOMERY RUN

SECTION 1, AREA 2
TAX MAPS 31 & 37 — PARCEL 108 & 285
1ST ELECTION DISTRICT — HOWARD COUNTY, MD

KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET SUITE 100 LAUREL, MD 2. 707
Wash (301) 953 1821 792 8086 Balt

SHEET 4 OF 7

APRIL 1988 — AS SHOWN

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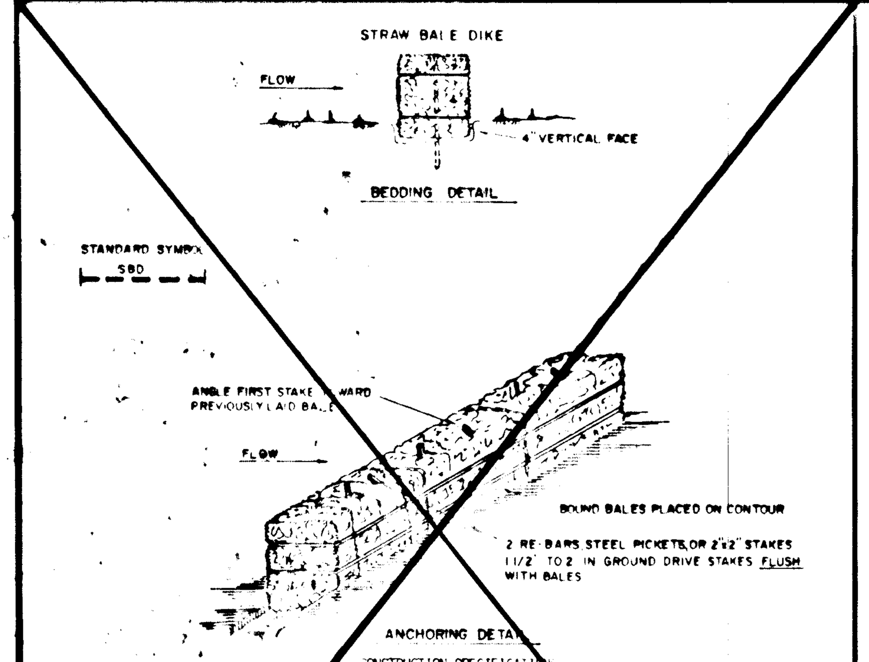
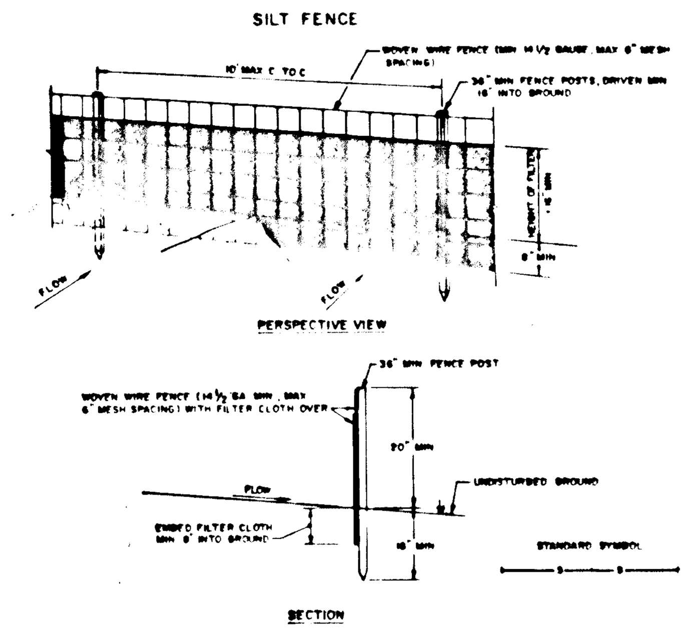
AS-BUILT 3-14-94



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



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

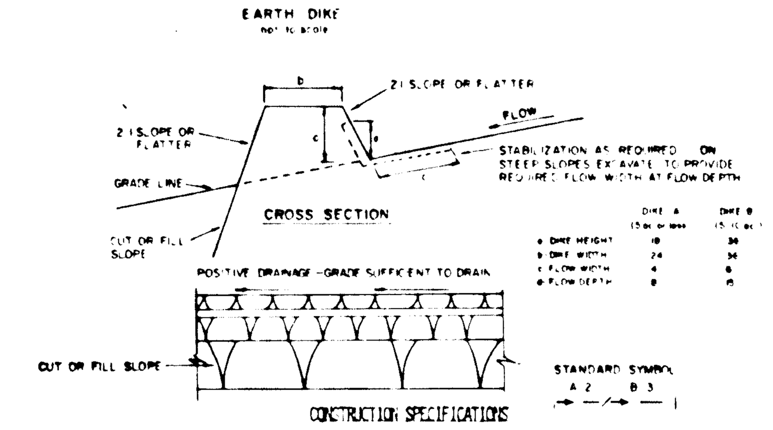
POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD

FENCE: WOVEN WIRE, 14 GA. 6" MAX. MESH OPENING

FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T140N OR APPROVED EQUAL

PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	SILT FENCE	STANDARD DRAWING SF-1



CONSTRUCTION SPECIFICATIONS

1. ALL DIKES SHALL BE COMPACTED BY EARTH-MOVING EQUIPMENT.
2. ALL DIKES SHALL HAVE POSITIVE DRAINAGE TO AN OUTLET.
3. TOP WIDTH MAY BE WIDER AND SIDE SLOPES MAY BE FLATTER IF DESIRED TO FACILITATE CROSSING BY CONSTRUCTION TRAFFIC.
4. FIELD LOCATION SHOULD BE ADJUSTED AS NEEDED TO UTILIZE A STABILIZED SAFE OUTLET.
5. EARTH DIKES SHALL HAVE AN OUTLET THAT FUNCTIONS WITH A MINIMUM OF EROSION. 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.
6. 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.

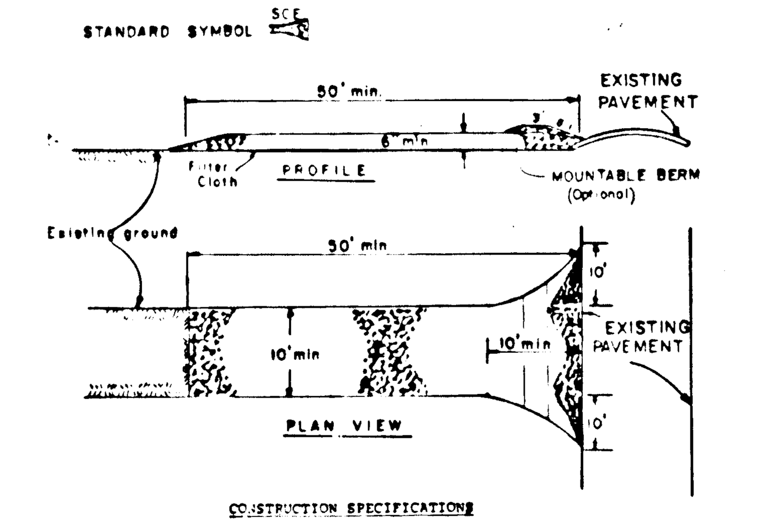
FLOW CHANNEL STABILIZATION

TYPE OF TREATMENT	CHANNEL GRADE	DIKE A	DIKE B
1	.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, SOD, 2" STONE
3	5.1-8.0%	SEED WITH JUTE, OR SOD, 2" STONE	LINED RIP-RAP 4-8"
4	8.1-20%	LINED RIP-RAP 4-8"	ENGINEERING DESIGN

A. STONE 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.
B. RIP-RAP TO BE 4-8 INCHES IN A LAYER AT LEAST 8 INCHES THICKNESS AND PRESSED INTO THE SOIL.
C. APPROVED EQUIVALENTS CAN BE SUBSTITUTED FOR ANY OF THE ABOVE MATERIALS.
7. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	EARTH DIKE	STANDARD DRAWING ED-1

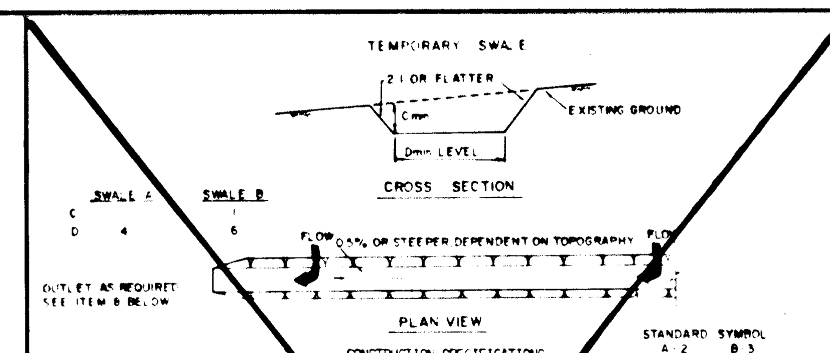
STABILIZED CONSTRUCTION ENTRANCE
not to scale



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.

U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	STABILIZED CONSTRUCTION ENTRANCE	Standard Drawing



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.

DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK MARYLAND	TEMPORARY SWALE	STANDARD DRAWING TS-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, if not previously loosened

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 thru 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, if not previously loosened

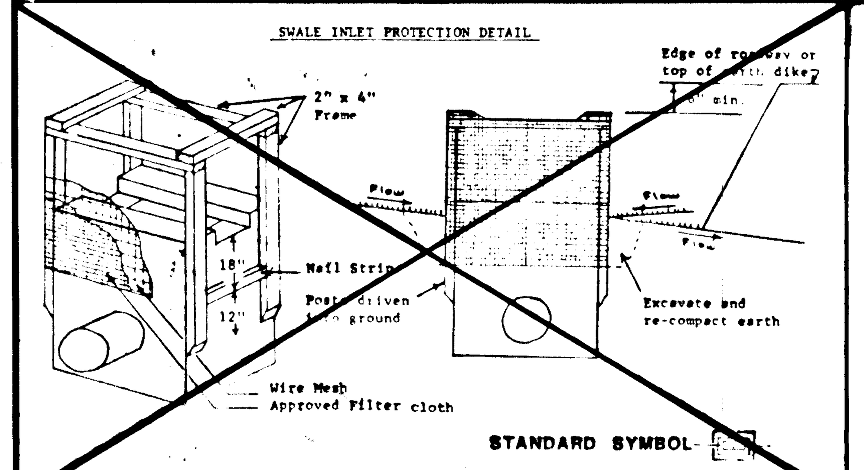
Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq ft)

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.

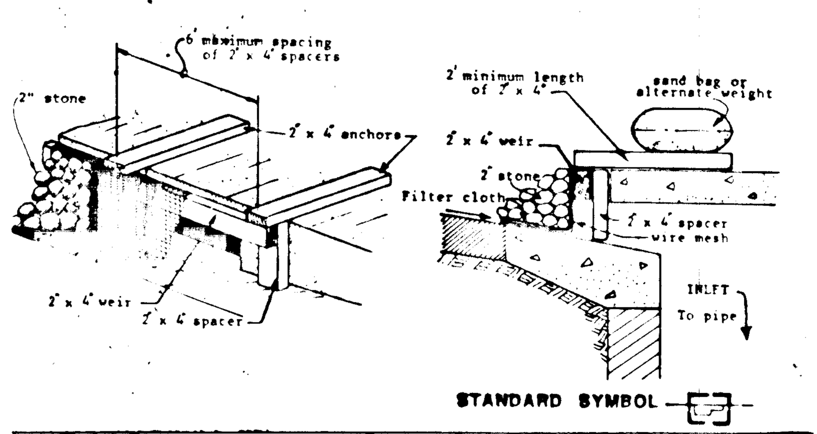
Mulching: Apply 1½ to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

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

SWALE INLET PROTECTION DETAIL



CURB INLET PROTECTION DETAIL



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	INLET PROTECTION DETAIL	STANDARD DRAWING IPD-1

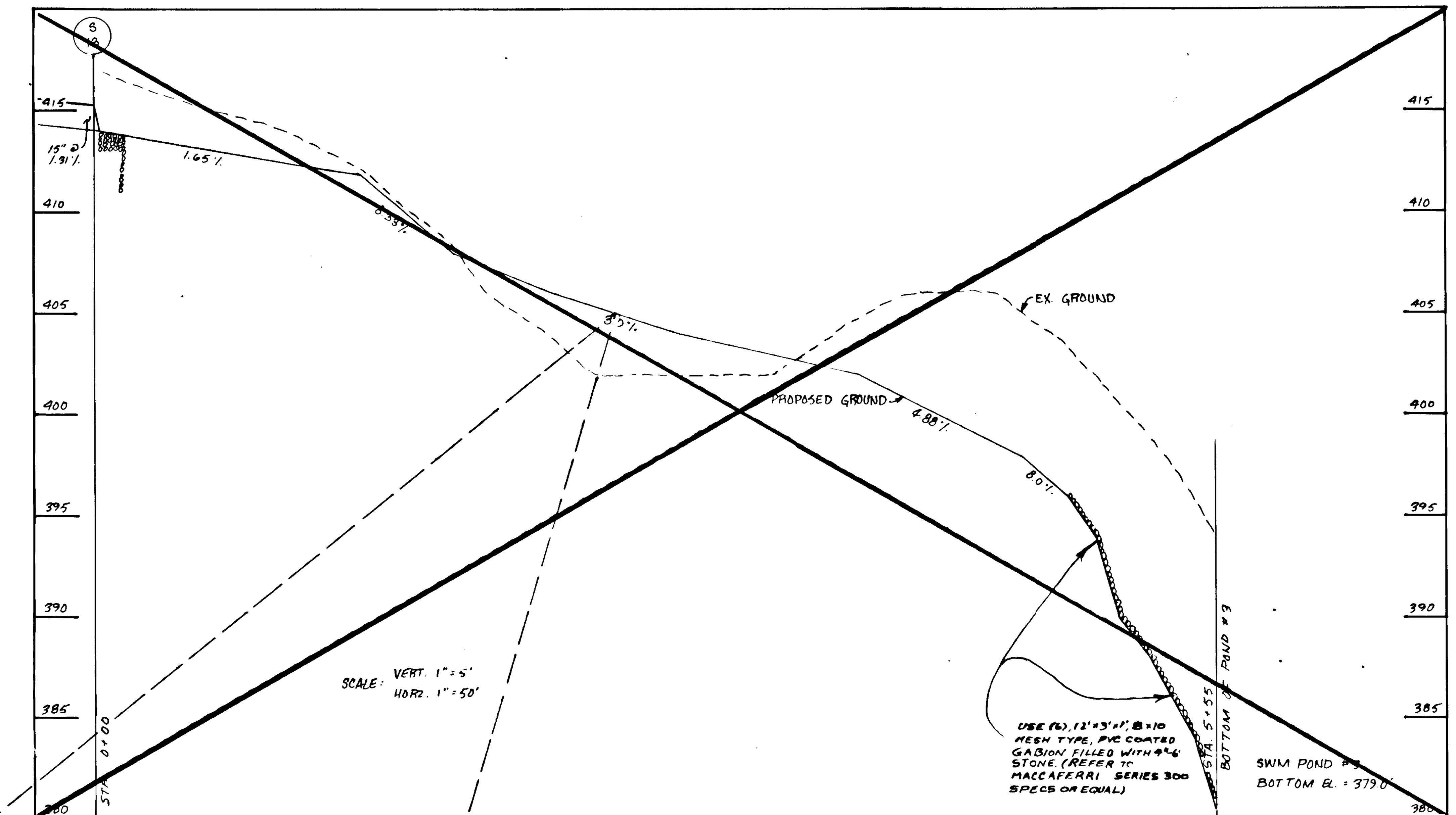
Construction Specifications

Materials

A. Wooden frame is to be constructed of 2"x4" construction grade lumber.
B. Plywood is to be a minimum thickness of 1/4" construction grade lumber.

Installation

1. Cut plywood to extend a minimum of 6" past throat along curb.
2. Attach to anchors in a secure manner which will insure a water tight fit against throat.
3. Brace securely using sandbag or alternate weight. If not watertight, use approved filter cloth under plywood and attach securely.



PROFILE OF TRAPEZOIDAL GRASS LINED CHANNEL CONVEYING RUNOFF INTO SWM POND #3

CONSTRUCTION SPECIFICATIONS FOR ST-VI

1. The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots or other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be five (5) feet, measured at centerline of embankment.
3. All fill slopes shall be 2:1 or flatter; cut slopes 1:1 or flatter.
4. Elevation of the top of any dike directing water into trap must equal or exceed the height of embankment.
5. Storage area provided shall be figured by computing the volume available behind the outlet channel up to an elevation of one (1) foot below the level weir crest.
6. Filter cloth shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Sections of fabric must overlap at least one (1) foot with section nearest the entrance placed on top. Fabric shall be embedded at least six (6) inches into existing ground at entrance of outlet channel.
7. Stone used in the outlet channel shall be four (4) to eight(8) inches (riprap). To provide a filtering effect, a layer of filter cloth shall be embedded one (1) foot back into the upstream face of the outlet stone or a one (1) foot thick layer of two (2) inch or finer aggregate shall be placed on the upstream face of the outlet.
8. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 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.
9. The structure shall be inspected after each rain and repaired as needed.
10. Construction operations shall be carried out in such a manner that erosion and water pollution are minimized.
11. The structure shall be removed and the area stabilized when the drainage area has been properly stabilized.
12. Drainage area for this practice is limited to 15 acres or less.

Riprap Outlet Sediment Trap

ST-VI (for Stone Lined Channel)

Contributing Drainage Area (Acres)	Depth of Channel (Feet)	Length of Weir (b) (Feet)
1	1.5	4.0
2	1.5	5.0
3	1.5	6.0
4	1.5	10.0
5	1.5	12.0
6	1.5	14.0
7	1.5	16.0
8	2.0	10.0
9	2.0	10.0
10	2.0	12.0
11	2.0	14.0
12	2.0	14.0
13	2.0	16.0
14	2.0	16.0
15	2.0	18.0

SEDIMENT CONTROL NOTES

1) A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits pror to the start of any construction. (992-2437)
2) All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3) Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
4) All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chaper 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 45.10 Acres
   - Area Disturbed 30.02 Acres
   - Area to be roofed or paved 9.67 Acres
   - Area to be vegetatively stabilized 20.35 Acres
   - Total Cut 106,560 Cu. yds
   - Total Fill 98,557 Cu. yds
   - Offsite waste/borrow area location 8,000 (STORED ON SITE)
8) Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9) Additional sediment controls must be provided, if deemed necessary by the Howard County DPW 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 controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.

NOTE: FOR SEQUENCE OF CONSTRUCTIONS, SEE SHEET 3 OF 7

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

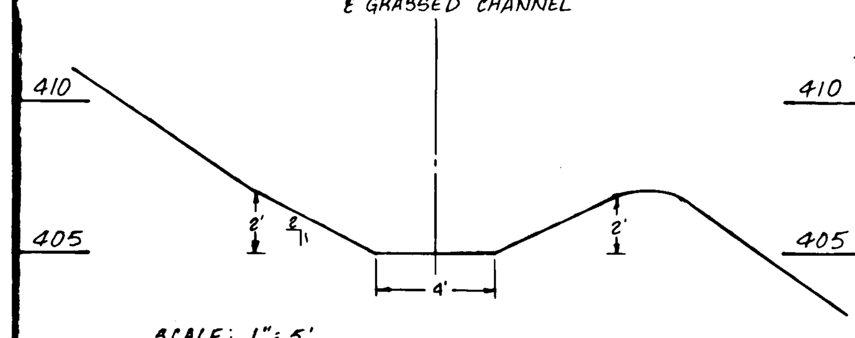
[signature] 9-12-88
SIGNATURE DATE

U.S. SOIL CONSERVATION SERVICE

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

Robert W. Zielun 9/12/88
Approved Howard S.C.D. DATE

CROSS SECTION OF GRASSED CHANNEL



OWNER:
NEWMISS LTD. PARTNERSHIP
6615 REISTERSTOWN ROAD
SUITE 201 BALTIMORE, MARYLAND 21215

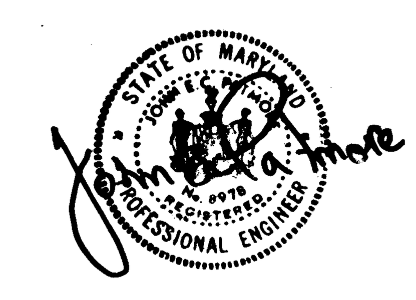
DEVELOPER:
MACKS & MACKS, INC.
6615 REISTERSTOWN ROAD
BALTIMORE, MARYLAND 21215

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[signature] 9/27/88
Chief, Land Development Division Date

Granville W. Wehland 9/26/88
Chief, Bureau of Highways Date

William E. Riley 9-27-88
Chief, Bureau of Engineering Date



SEDIMENT CONTROL DETAIL SHEET

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

[signature] 11-3-88
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

OWNER'S / DEVELOPER'S CERTIFICATION

"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 Natural Resources 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."

Signature [signature] Date 5/19/88
Name Macks & Macks Title Vice President Phone 358-7434
Firm Newmiss Ltd. Partnership Complete Address 6615 Reisterstown Rd Baltimore, Md 21215

ENGINEER'S CERTIFICATE

"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."

John E. Calmore 5-19-88
Registered Professional Engineer # 8978

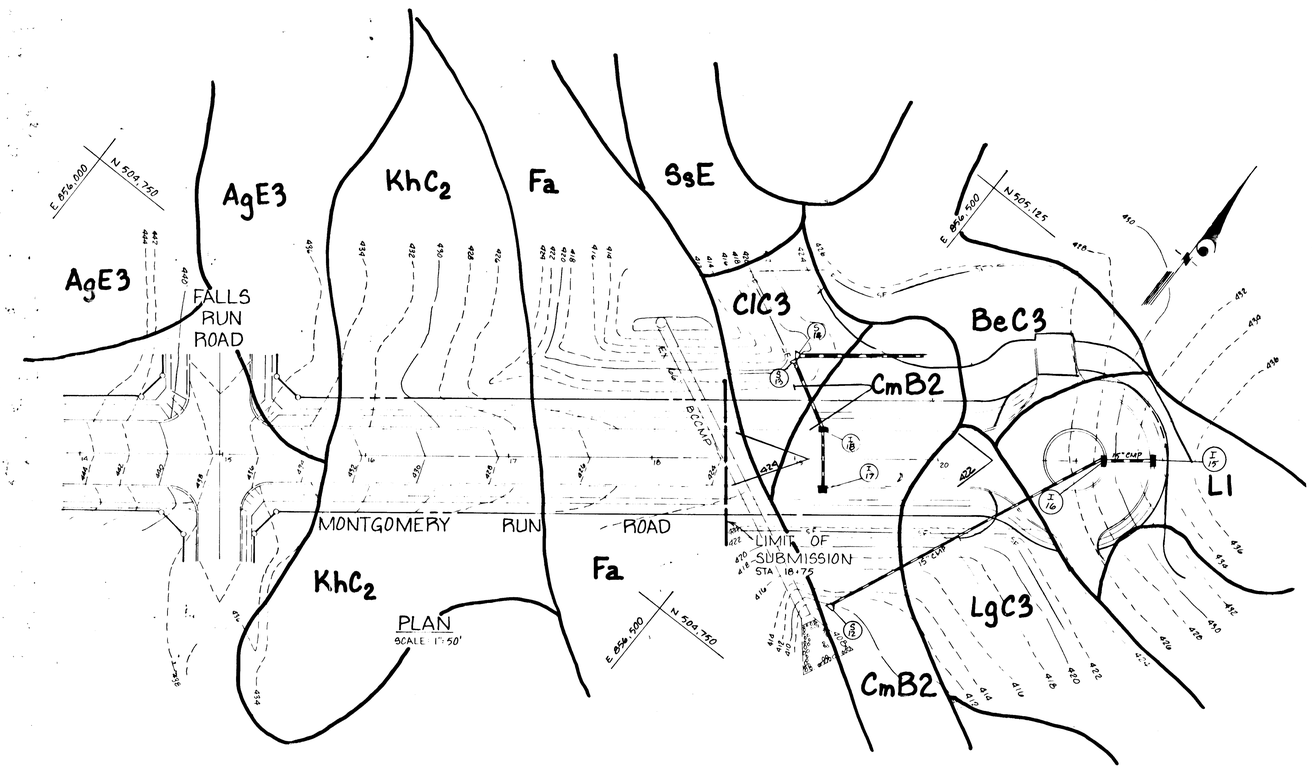
KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS
1100 WEST STREET / SUITE 100 / LAUREL, MD 20707
(Wash.) (301) 953-1821 / 792-8086 (Balt.)

VILLAGE OF MONTGOMERY RUN
SECTION 1, AREA 2
TAX MAP 31 & 37 PARCELS 108 & 285
1ST ELECTION DISTRICT HOWARD COUNTY, MD

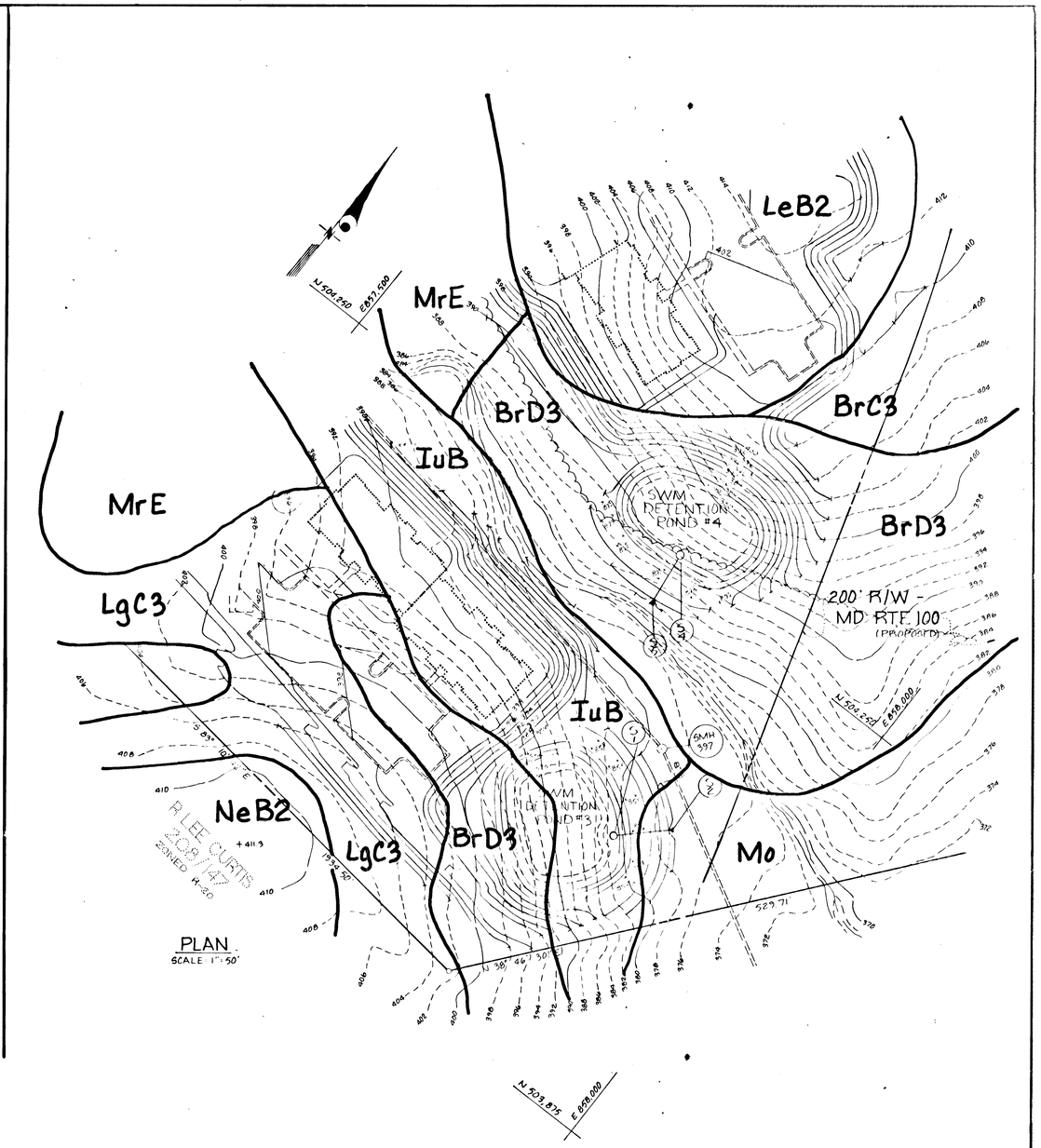
	DATE	REVISION	SHEET	DATE	NUMBER
Drafting			5 OF 7	APRIL 1988	1684136
Check	12/12/89	CROSSED OUT PROFILE		SCALE AS SHOWN	
Design					
Check					

F-88-258

1262



PLAN
SCALE 1"=50'



PLAN
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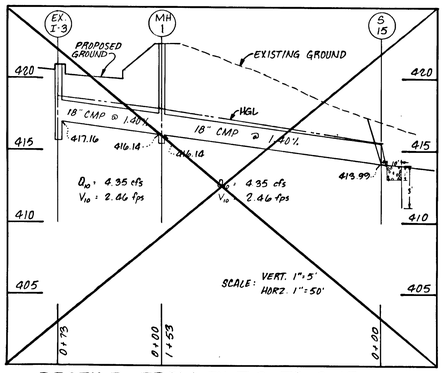


PROFILE FROM EX. I-3 TO S-15
(PUBLIC STORM DRAIN AT THE END OF FALLS RUN CUL-DE-SAC.)

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — Date 9/27/88

Granville W. Wehland — Date 9/26/88

Chief, Bureau of Engineering — Date 9-27-88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

Marsha S. McLaughlin — DATE 10-3-88

DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

12/12/89 CROSSED OUT PROFILE

SOILS MAP

VILLAGE OF MONTGOMERY RUN

SECTION 1, AREA 2

TAX MAP 31 & 37 — PARCEL 108 & 285

1ST ELECTION DISTRICT — HOWARD COUNTY, MD

DEVELOPER:
MACKS & MACKS
6615 REISTERSTOWN RD
SUITE 205
BALTIMORE, MD 21215
(301) 358-4934

OWNER:
NEWMISS LTD. PARTNERSHIP
6615 REISTERSTOWN RD
SUITE 201
BALTIMORE, MD 21215
(301) 358-4934

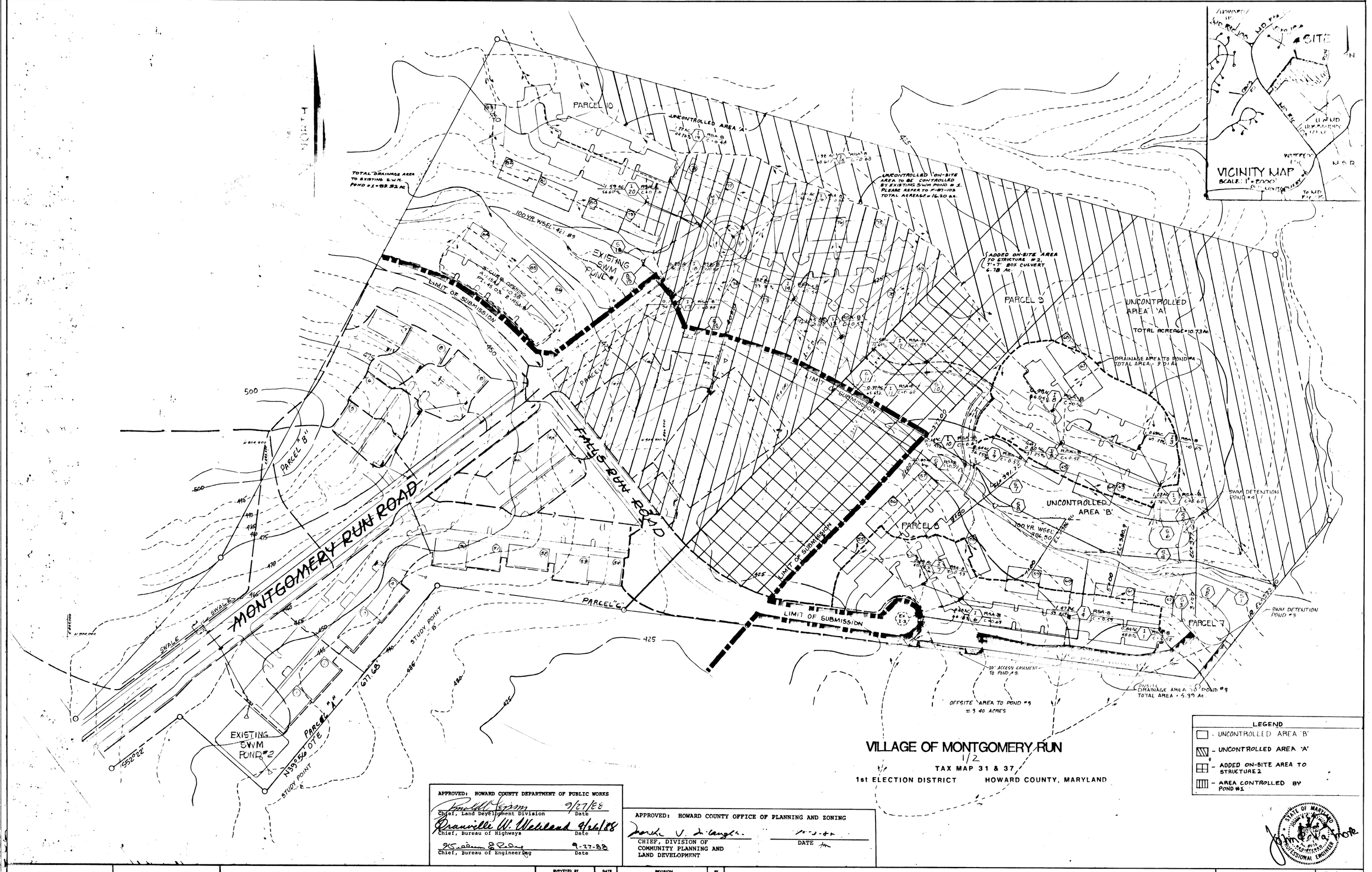
KIDDE CONSULTANTS, INC.
ENGINEERS • PLANNERS • SURVEYORS

STATE OF MARYLAND — REGISTERED PROFESSIONAL ENGINEER

SHEET 6 OF 7

DATE APRIL 1988 — SCALE AS SHOWN

F-88-258



VILLAGE OF MONTGOMERY RUN
1/2
TAX MAP 31 & 37
1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Land Development Division — Date 9/27/88

Chief, Bureau of Highways — Date 9/26/88

Chief, Bureau of Engineering — Date 9-27-88

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING

CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT — DATE 10-3-88

STATE OF MARYLAND — REGISTERED PROFESSIONAL ENGINEER

OWNER	DEVELOPER	KIDDE CONSULTANTS, INC.	SURVEYED BY	DATE	REVISION	BY	ON SITE DRAINAGE AREA MAP	JOB NO. 1684136	SHEET 7 OF 7
NEWMIGS LTD. PARTNERSHIP 6615 Reisterstown Road Suite 201 Balt. Md. 21215 301-358-4934	MACKS & MACKS INC. 6615 REISTERSTOWN RD. BALTIMORE, MD 21215	ENGINEERS • PLANNERS • SURVEYORS	KCI					SCALE 1" = 100'	
			COMPUTED BY KCI					DATE APRIL 1988	
			DRAWN BY JAL						

F-88-258