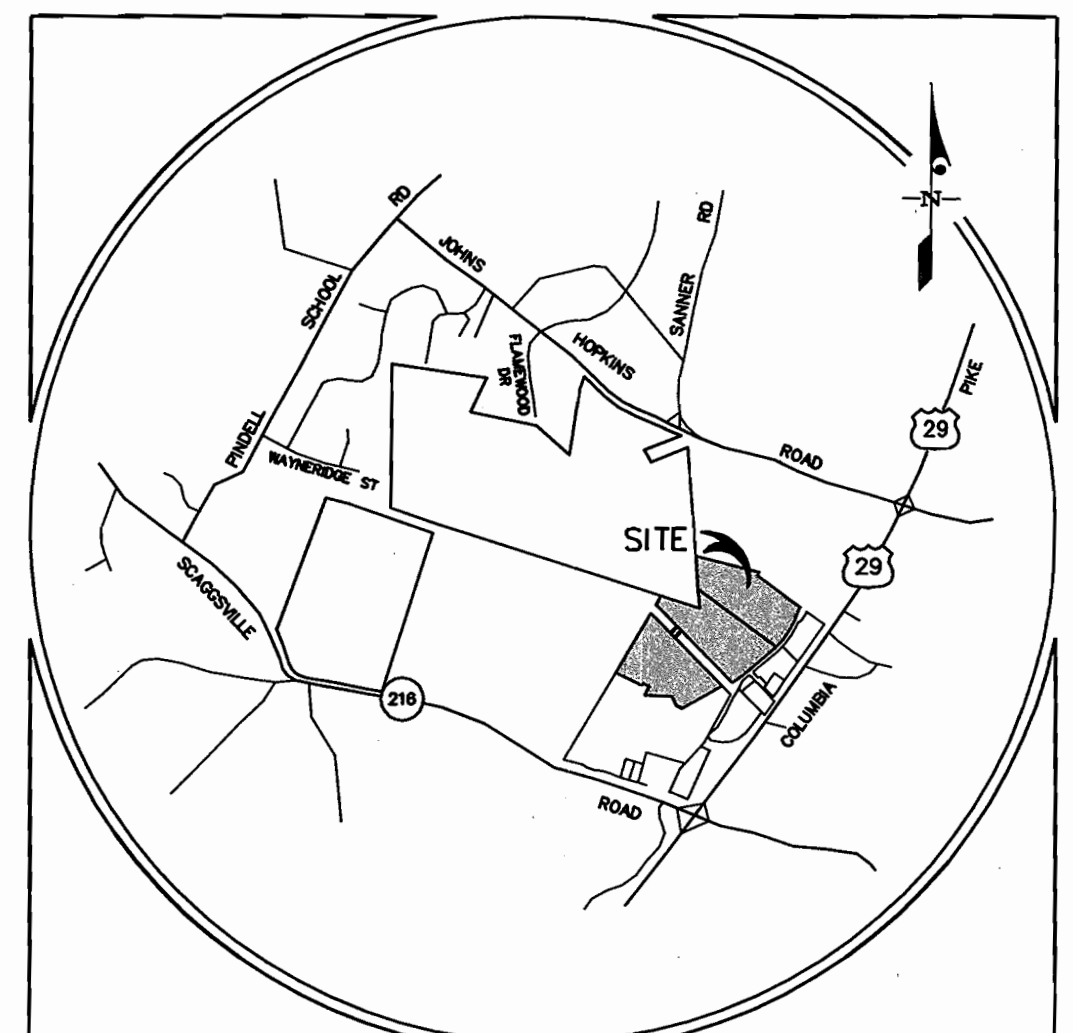


SITE PLAN FOR MASS GRADING MAPLE LAWN FARMS



VICINITY MAP
SCALE: 1" = 4000'

BENCHMARKS

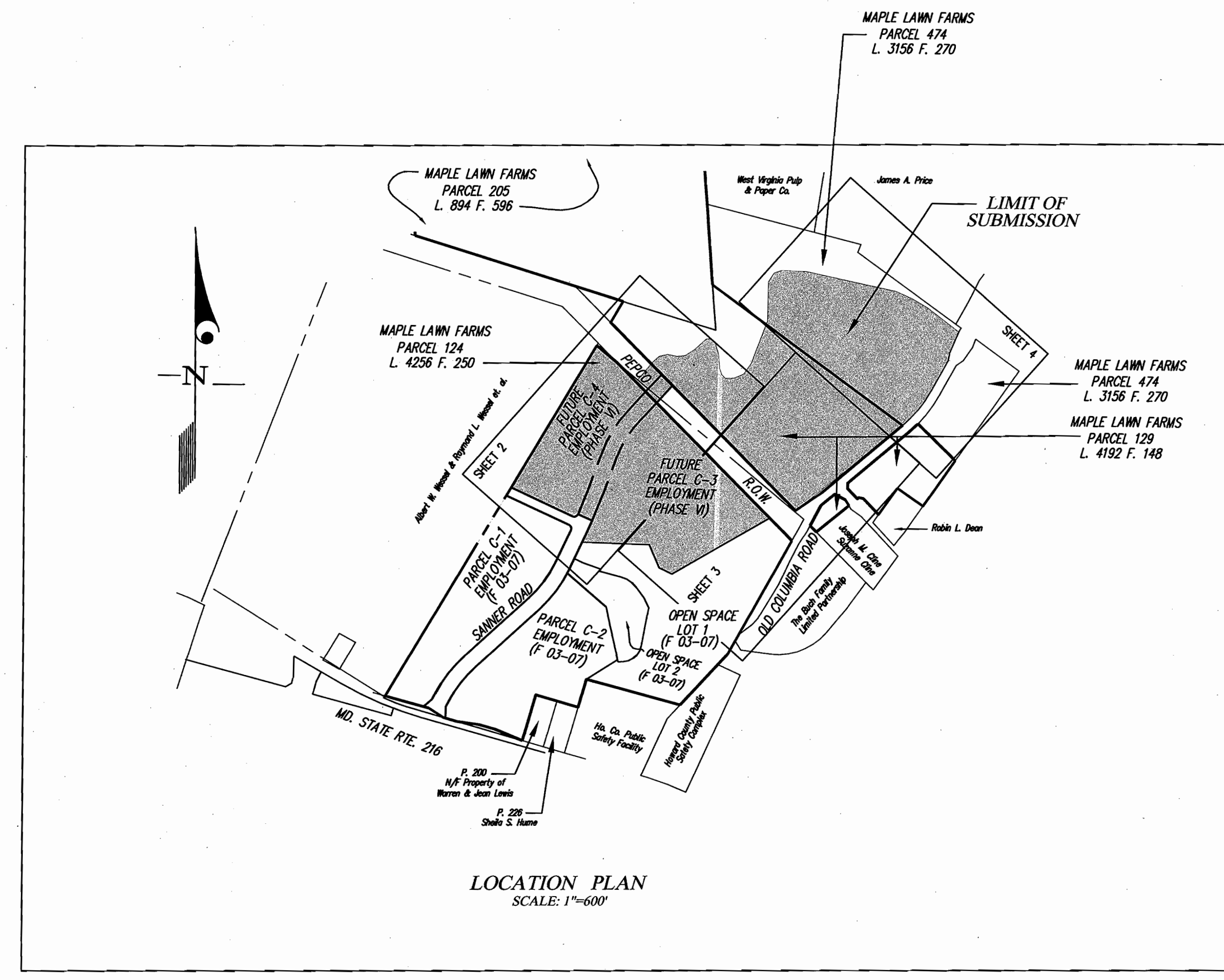
41GA STANDARD DISC ON CONCRETE MONUMENT	ELEV. = 462.16
46B2 STANDARD DISC ON CONCRETE MONUMENT	ELEV. = 474.67

SHEET INDEX

- COVER SHEET
- GRADING & SEDIMENT CONTROL PLAN (1"=50')
- GRADING & SEDIMENT CONTROL PLAN (1"=50')
- GRADING & SEDIMENT CONTROL PLAN (1"=50')
- SEDIMENT CONTROL OVERVIEW PLAN & DRAINAGE AREA MAP (BEFORE DEVELOPMENT) (1"=100')
- SEDIMENT CONTROL OVERVIEW PLAN & DRAINAGE AREA MAP (AFTER DEVELOPMENT) (1"=100')
- SEDIMENT CONTROL DETAILS
- SEDIMENT CONTROL DETAILS
- STORMWATER MANAGEMENT FACILITY DETAILS

SITE ANALYSIS

TOTAL PROJECT AREA: 507.9 ACRES
 AREA OF PLAN SUBMISSION: 60.95 ACRES
 LIMIT OF DISTURBED AREA: 60.95 ACRES
 ZONING: MXD-3
 EXISTING LAND USE: FARMLAND
 PROPOSED LAND USE: FARMLAND



LOCATION PLAN
SCALE: 1"=600'

LEGEND

	STABILIZED CONSTRUCTION ENTRANCE
	BEFORE DEVELOPMENT TO FLOW PATH
	AFTER DEVELOPMENT TO FLOW PATH
	EARTH DIKE
	SILT FENCE
	SUPER SILT FENCE
	LIMIT OF DISTURBANCE
	DRAINAGE DIVIDE
	REMOVABLE PUMPING STATION
	WETLAND BUFFER
	STREAM BUFFER
	FLOODPLAIN
	EX. CONTOUR
	PROP. CONTOUR

THE GRADING SHOWN ON THIS PLAN IS TO PROVIDE NECESSARY FILL MATERIAL AND TO SUPPLEMENT THE GRADING SHOWN ON F 03-07. NO INFRASTRUCTURE IS BEING CONSTRUCTED UNTIL FUTURE PHASES OF THE PROJECT. THE AMOUNT OF CUT BEING TAKEN FROM THE FUTURE HILLSIDE DISTRICT UNDER THIS PLAN WILL PROVIDE THE FILL NECESSARY TO BALANCE THE WORKPLACE DISTRICT. THE TOPSOIL IN THE DISTURBED AREA WILL BE STOCKPILED AND RESPREAD AS PART OF THE STABILIZATION OF THE DISTURBED AREA. ONCE STABILIZED, THE DISTURBED AREA WILL CONTINUE TO BE FARMED UNTIL THE DEVELOPMENT MAY OCCUR IN ACCORDANCE WITH THE PHASING OUTLINED ON S 01-17.



THE TEMPORARY LIMIT OF DISTURBANCE SHOWN ON THESE PLANS IS PART OF THE AREAS IDENTIFIED BY S 01-17 AS FUTURE ANNUAL PHASE 4 (ALLOCATION YEAR 2007) THROUGH PHASE 8 (ALLOCATION YEAR 2011). THESE AREAS ARE SHOWN AS PHASE 1/STAGE 1 AND 2, AND PHASE 2 STAGE 1 ON THE P.D.P.

ADDRESS CHART

WATER CODE:	SEWER CODE:	PARCEL NUMBER	STREET ADDRESS		
N/A	N/A	124,129,474	11320 SEAGSSVILLE RD. (MD. ROUTE 216)		
SUBDIVISION NAME:		SECTION/AREA	PARCEL		
MAPLE LAWN FARMS			P. 124, 129 & 474		
PLAT/L.F.	ZONE	TAX MAP	BLOCK	ELEC. DIST.	CENSUS TRACT
P. 124 4256/250 P. 129 4192/143 P. 474 3156/270	MXD-3	41 & 46	(41) 21 & 22 (46) 3 & 4	5	8091.02

COUNTY FILE # SDP 03-06

- GENERAL NOTES**
- THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
 - PROJECT BACKGROUND:
 LOCATION: MD. RTE. 216
 TAX MAP: 41-21 & 22, 46-3 & 4
 ZONING: MXD-3
 ELECTION DISTRICT: 5
 GROSS AREA OF TRACT: 507.9 ACRES
 AREA OF SUBMISSION: 60.95 ACRES
 - SEE DEPARTMENT OF PLANNING & ZONING FILE NUMBERS:
 S 01-17, ZB-995M, PB-353, WP-01-111, WP-02-54, WP-03-02, WP-03-22, P-02-12, P-03-01, AND F-03-07
 - THE TOPOGRAPHY SHOWN WAS TAKEN FROM AERIAL TOPOGRAPHY PREPARED DURING MARCH 1997 BY JDI
 - HORIZONTAL AND VERTICAL CONTROL BASED ON HOWARD COUNTY CONTROL STATIONS 46 B2 & 41GA.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY AND MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
 - THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / DIVISION OF CONSTRUCTION INSPECTION AT 1 (410) 313 - 1880 AT LEAST FIVE (5) DAYS PRIOR TO THE START OF WORK.
 - THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THE PLANS.
 MISS UTILITY 1-800-257-7777
 VERIZON 1-800-446-5266
 HOWARD COUNTY BUREAU OF UTILITIES 410-313-4900
 AT&T CABLE LOCATION DIVISION 393-3553
 BALTIMORE GAS & ELECTRIC CO. 410-850-4620 & 410-787-9068
 - SEDIMENT CONTROL SHALL BE PROVIDED IN ACCORDANCE WITH 1994 MARYLAND STANDARDS AND SPECIFICATION FOR SOILS EROSION AND SEDIMENT CONTROL.
 - ZONING: SITE IS BEING DEVELOPED UNDER MXD-3 REGULATIONS, PER ZB995M, WHICH WAS APPROVED ON 2/8/01. UNDERLYING ZONING IS RR-DEO.
 - THE CEMETERY INVENTORY MAPS DO NOT SHOW ANY CEMETERIES WITHIN THE PROJECT LIMITS.
 - SOILS DATA WAS TAKEN FROM THE SOIL SURVEY OF HOWARD COUNTY, MARYLAND ISSUED JULY 1968.
 - BOUNDARY INFORMATION SHOWN IS BASED UPON A FIELD SURVEY PREPARED BY GUTSCHICK, LITTLE, AND WEBER, P.A. ON OR ABOUT JUNE, 2001.
 - WETLAND DELINEATION BY EXPLORATION RESEARCH, INC. APPROVED BY THE CORPS OF ENGINEERS JD 63787-3 ON 5/14/98. NOTICE OF INTENT TO ISSUE A PERMIT IS COVERED BY MDE TRACKING #01-NI-0344/200165421.
 - THE 100-YEAR FLOOD PLAIN LIMITS WERE DETERMINED BY THE FLOODPLAIN STUDY PREPARED BY GUTSCHICK, LITTLE AND WEBER, P.A. AS PART OF THE COMPREHENSIVE SKETCH PLAN.
 - EXISTING UTILITIES WERE TAKEN FROM AVAILABLE HOWARD COUNTY RECORDS.
 - PERENNIAL STREAM BUFFERS ARE DETERMINED BY LAND USE ADJOINING THE OPEN SPACE (I.E. EMPLOYMENT = 50' BUFFER, RESIDENTIAL = 75' BUFFER). ALL USES ADJOINING AN INTERMITTENT STREAM = 50' BUFFER.
 - AS A CONSEQUENCE OF THE SKETCH PLAN APPROVAL PRIOR TO NOVEMBER 15, 2001, THIS PROJECT IS GRANDFATHERED TO THE FOURTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
 - NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, OR PLACEMENT OF NEW STRUCTURES IS PERMITTED WITHIN LIMITS OF WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS, AND 100 YEAR FLOODPLAIN AREAS EXCEPT AS PERMITTED UNDER WP-02-54.
 WP-02-54 WAS GRANTED ON APRIL 2, 2002, ALLOWING THE FOLLOWING:
 DEVELOPMENT WITHIN A 100 YEAR FLOODPLAIN, AND
 GRADING AND REMOVAL OF VEGETATIVE COVER WITHIN A 25' WETLAND BUFFER AND A 50' STREAM BUFFER.
 - PHASING FOR THIS PROJECT IS IN ACCORDANCE WITH THE DECISION AND ORDER FOR ZONING BOARD CASE NO. ZB-995M AND THE DECISION AND ORDER FOR PB CASE NO. 353 (COMPREHENSIVE SKETCH PLAN, S-01-17).
 - WAIVER PETITION WP 03-02 WAS GRANTED ON OCTOBER 11, 2002 TO ALLOW THE FOLLOWING IN THE PHASE II PORTION OF MAPLE LAWN FARMS:
 - FILLING IN THE FLOODPLAIN IN ORDER TO CONSTRUCT A ROADWAY.
 - ELIMINATE TRUNCATIONS AT ROAD INTERSECTIONS.
 - GRADING WITHIN A 75' STREAM BUFFER.
 - WAIVER PETITION WP 03-22 WAS GRANTED ON OCTOBER 9, 2002 TO ALLOW FOR THE TEMPORARY DEFERRAL OF THE REQUIREMENTS FOR FOREST CONSERVATION TO BE FULFILLED WHEN THE AREAS WITHIN THE LIMIT OF DISTURBANCE SHOWN ON THESE PLANS ARE DEVELOPED IN ACCORDANCE WITH THE PHASING OUTLINED IN S 01-17.
 - LANDSCAPING REQUIREMENTS FOR THE AREAS WITHIN THE LIMIT OF DISTURBANCE WILL BE PROVIDED AT EITHER FINAL PLAN OR SITE DEVELOPMENT PLAN STAGE AS THE PHASES ARE DEVELOPED PER S 01-17.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Leah S. Smith 1/6/03
 Director Date

Cindy Hamilton 1/3/03
 Chief, Division of Land Development Date

Paul Anderson 12-31-02
 Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20868
 TEL: 301-421-4024 BALT: 410-883-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

NO.	DATE	REVISION	BY	APP.

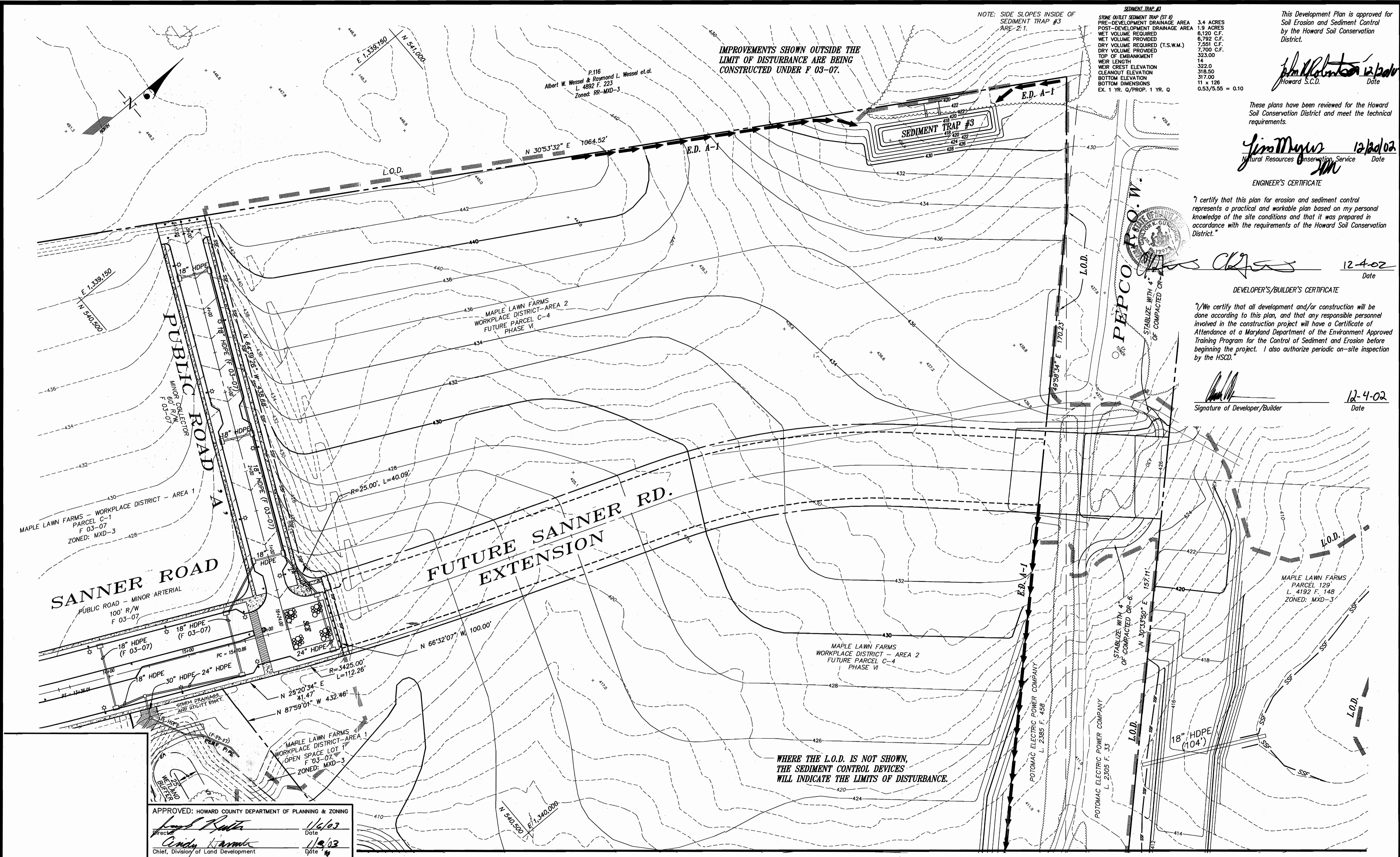
OWNER:
 G & R Maple Lawn, Inc. et al.
 Suite 410, Woodhams Center
 1829 Reisterstown Road
 Baltimore, Md. 21208
 Attn: Charlie O' Donovan
 410-484-8400

COVER SHEET
 SITE DEVELOPMENT PLAN FOR MASS GRADING ONLY
MAPLE LAWN FARMS
 P. 124 (L. 4256 F. 250), P. 129 (L. 4192 F. 143), P. 474 (L. 3156 F. 270)

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
DECEMBER 2002	41: 21 & 22 46: 3 & 4	1 OF 9

L:\CADD\DRAWINGS\96079\Phase 1 (96079)\Wg-Siteplans\96079SP1.DWG 07/08/2002 05:47:29 PM EDT

L:\CADD\DRAWINGS\96079\Phase 1 (96079)\Mg-Siteplans\96079SP2.DWG 07/09/2002 09:27:59 AM EDT



IMPROVEMENTS SHOWN OUTSIDE THE LIMIT OF DISTURBANCE ARE BEING CONSTRUCTED UNDER F 03-07.

NOTE: SIDE SLOPES INSIDE OF SEDIMENT TRAP #3 ARE 2:1.

SEDIMENT TRAP #3

STONE OUTLET SEDIMENT TRAP (ST 0)	3.4 ACRES
POST-DEVELOPMENT DRAINAGE AREA	1.9 ACRES
WET VOLUME REQUIRED	6,120 C.F.
NET VOLUME PROVIDED	6,792 C.F.
DRY VOLUME REQUIRED (T.S.W.M.)	7,551 C.F.
DRY VOLUME PROVIDED	7,700 C.F.
TOP OF EMBANKMENT	323.00
WEIR LENGTH	14
WEIR CREST ELEVATION	322.0
CLEANOUT ELEVATION	318.50
BOTTOM ELEVATION	317.00
BOTTOM DIMENSIONS	11 x 126
EX. 1 YR. Q/PROP. 1 YR. Q	0.53/5.55 = 0.10

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

John K. Robertson 12/20/02
Howard S.C.D. Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

Jim Myers 12/20/02
Natural Resources Conservation Service Date

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 K. Robertson 12-4-02
Date

DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that all development and/or 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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD.

John K. Robertson 12-4-02
Signature of Developer/Builder Date

WHERE THE L.O.D. IS NOT SHOWN, THE SEDIMENT CONTROL DEVICES WILL INDICATE THE LIMITS OF DISTURBANCE.

FOR CONTINUATION - SEE SHEET 3

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Frank R. Rosta 11/6/03
Director Date

Cindy Kramb 11/9/03
Chief, Division of Land Development Date

Paul Edwards 12-31-02
Chief, Development Engineering Division Date

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3609 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
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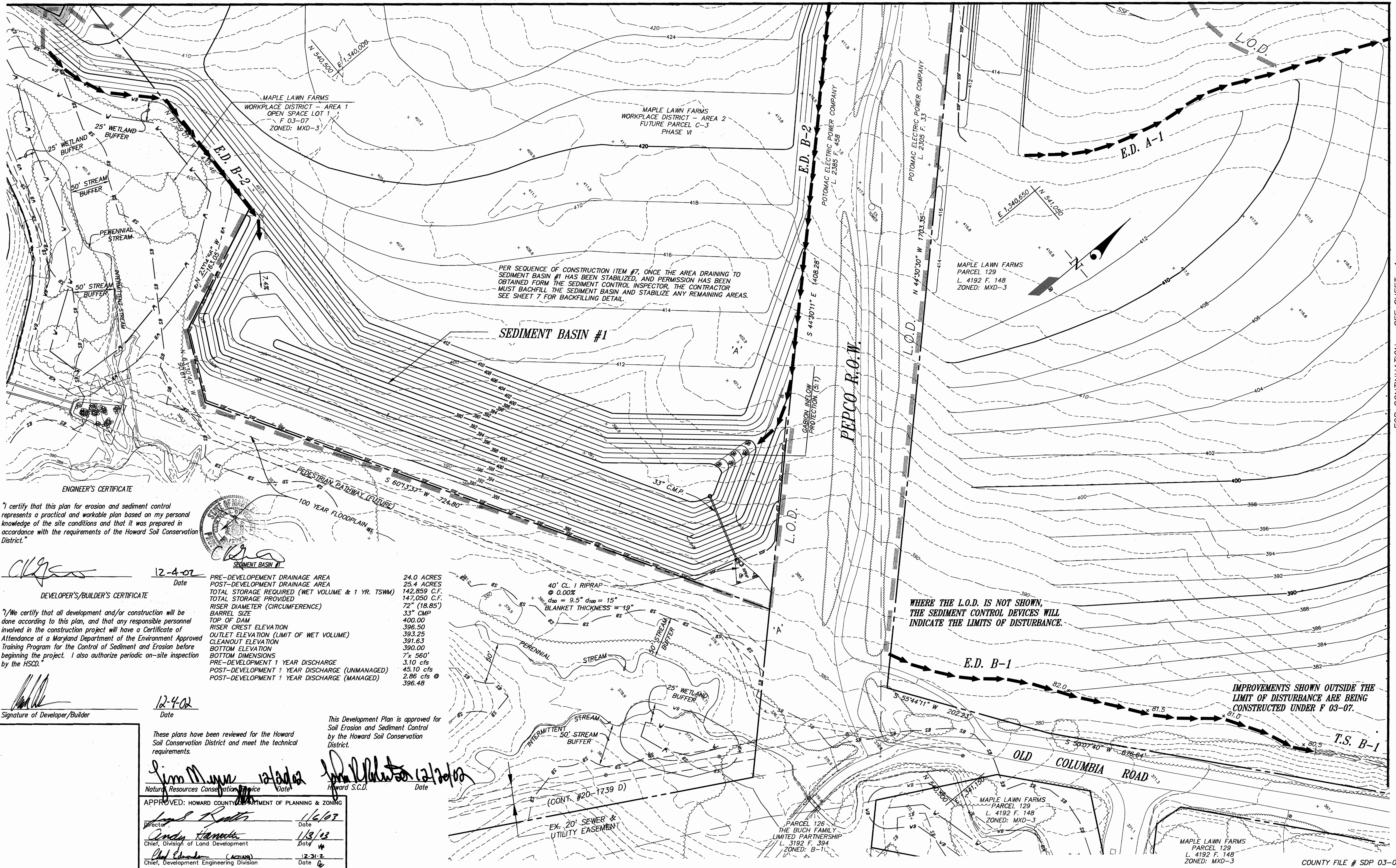
NO.	DATE	REVISION	BY	APP'R.

PREPARED FOR:
G & R Maple Lawn, Inc., et al.
Suite 410, Woodholme Center
1829 Resisterstown Road
Baltimore, MD, 21208
Attn: Charlie O'Donovan
410-484-8400

GRADING & SEDIMENT CONTROL PLAN
SITE DEVELOPMENT PLAN FOR MASS GRADING ONLY
MAPLE LAWN FARMS
P. 124 (L. 4256 F. 250), P. 129 (L. 4192 F. 143), P. 474 (L. 3156 F. 270)
ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
DEC, 2002	41: 21 & 22 46: 3 & 4	2 OF 9

COUNTY FILE # SDP 03-06



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."

CKG
Date: 12-4-02

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or 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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD."

[Signature]
Date: 12-4-02

PRE-DEVELOPMENT DRAINAGE AREA	24.0 ACRES
POST-DEVELOPMENT DRAINAGE AREA	25.4 ACRES
TOTAL STORAGE REQUIRED (WET VOLUME & 1 YR. TSWM)	142,859 C.F.
TOTAL STORAGE PROVIDED	147,050 C.F.
RISER DIAMETER (CIRCUMFERENCE)	72" (18.85')
BARREL SIZE	33" C.M.P.
TOP OF DAM	400.00
RISER CREST ELEVATION	396.50
OUTLET ELEVATION (LIMIT OF WET VOLUME)	393.25
CLEANOUT ELEVATION	391.63
BOTTOM ELEVATION	390.00
BOTTOM DIMENSIONS	7' x 560'
PRE-DEVELOPMENT 1 YEAR DISCHARGE	3.10 cfs
POST-DEVELOPMENT 1 YEAR DISCHARGE (UNMANAGED)	45.10 cfs
POST-DEVELOPMENT 1 YEAR DISCHARGE (MANAGED)	2.86 cfs @ 396.48

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

Jim Mays 12/4/02
Natural Resources Conservation Service Date

[Signature] 12/2/02
Howard S.C.D. Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[Signature] 12/6/02
Director Date

[Signature] 1/3/03
Chief, Division of Land Development Date

[Signature] 12-31-02
Chief, Development Engineering Division Date

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3809 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20886
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DES. DEV	DRN. JAU	CHK. DEV	DATE	REVISION	BY	APPR.

PREPARED FOR:
G & R Maple Lawn Inc., et. al.
Suite 410, Woodholme Center
1829 Reisterstown Road
Baltimore, MD, 21208
Attn: Charlie O'Donovan
410-484-8400

GRADING/SEDIMENT CONTROL PLAN
SITE DEVELOPMENT PLAN FOR MASS GRADING ONLY
MAPLE LAWN FARMS
P. 124 (L.4256 F. 250), P. 129 (L. 4192 F. 143), P. 474 (L. 3156 F. 270)
ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
DEC, 2002	41: 21 & 22 46: 3 & 4	3 OF 9

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

[Signature] 12/10/02
Howard S.C.D. Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

[Signature] 12/10/02
Natural Resources Conservation Service Date

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.

[Signature] 12-4-02
Date

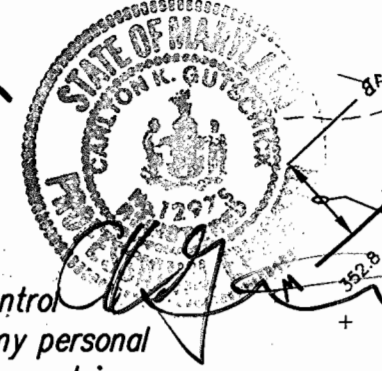
DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that all development and/or 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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD.

[Signature] 12-4-02
Signature of Developer/Builder Date

SEDIMENT BASIN #2

PRE-DEVELOPMENT DRAINAGE AREA	24.1 ACRES
POST-DEVELOPMENT DRAINAGE AREA	24.1 ACRES
TOTAL STORAGE REQUIRED (WET VOLUME & 1 YR. TSSM)	147,114 C.F., 150,479 C.F.
TOTAL STORAGE PROVIDED	72" (18.85')
RISER DIAMETER (CIRCUMFERENCE)	42' GMP
BARREL SIZE	374.08
TOP OF DAM	370.75
RISER CREST ELEVATION	367.75
OUTLET ELEVATION (LIMIT OF WET VOLUME)	366.68
CLEANOUT ELEVATION	366.00
BOTTOM ELEVATION	50' x 480'
BOTTOM DIMENSIONS	2-8 cfs
PRE-DEVELOPMENT 1 YEAR DISCHARGE	63.12 cfs
POST-DEVELOPMENT 1 YEAR DISCHARGE (UNMANAGED)	2.10 cfs
POST-DEVELOPMENT 1 YEAR DISCHARGE (MANAGED)	370.71



WHERE THE L.O.D. IS NOT SHOWN, THE SEDIMENT CONTROL DEVICES WILL INDICATE THE LIMITS OF DISTURBANCE.

PER SEQUENCE OF CONSTRUCTION ITEM #7, ONCE THE AREA DRAINING TO SEDIMENT BASIN #2 HAS BEEN STABILIZED, AND PERMISSION HAS BEEN OBTAINED FROM THE SEDIMENT CONTROL INSPECTOR, THE CONTRACTOR MUST BACKFILL THE SEDIMENT BASIN AND STABILIZE ANY REMAINING AREAS. SEE SHEET 7 FOR BACKFILLING DETAIL.

40' CL. 1 RIPRAP @ 0.00%
d₅₀ = 9.5" d₁₀₀ = 15"
BLANKET THICKNESS = 18"

MAPLE LAWN FARMS
PARCEL 474
L. 3156 F. 270
ZONED: MXD-3

MAPLE LAWN FARMS
PARCEL 129
L. 4192 F. 143
ZONED: MXD-3

IMPROVEMENTS SHOWN OUTSIDE THE LIMIT OF DISTURBANCE ARE BEING CONSTRUCTED UNDER F 03-07.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

<i>[Signature]</i>	11/6/03
Director	Date
<i>[Signature]</i>	1/3/03
Chief, Division of Land Development	Date
<i>[Signature]</i>	12-31-02
Chief, Development Engineering Division	Date

FOR CONTINUATION - SEE SHEET 3

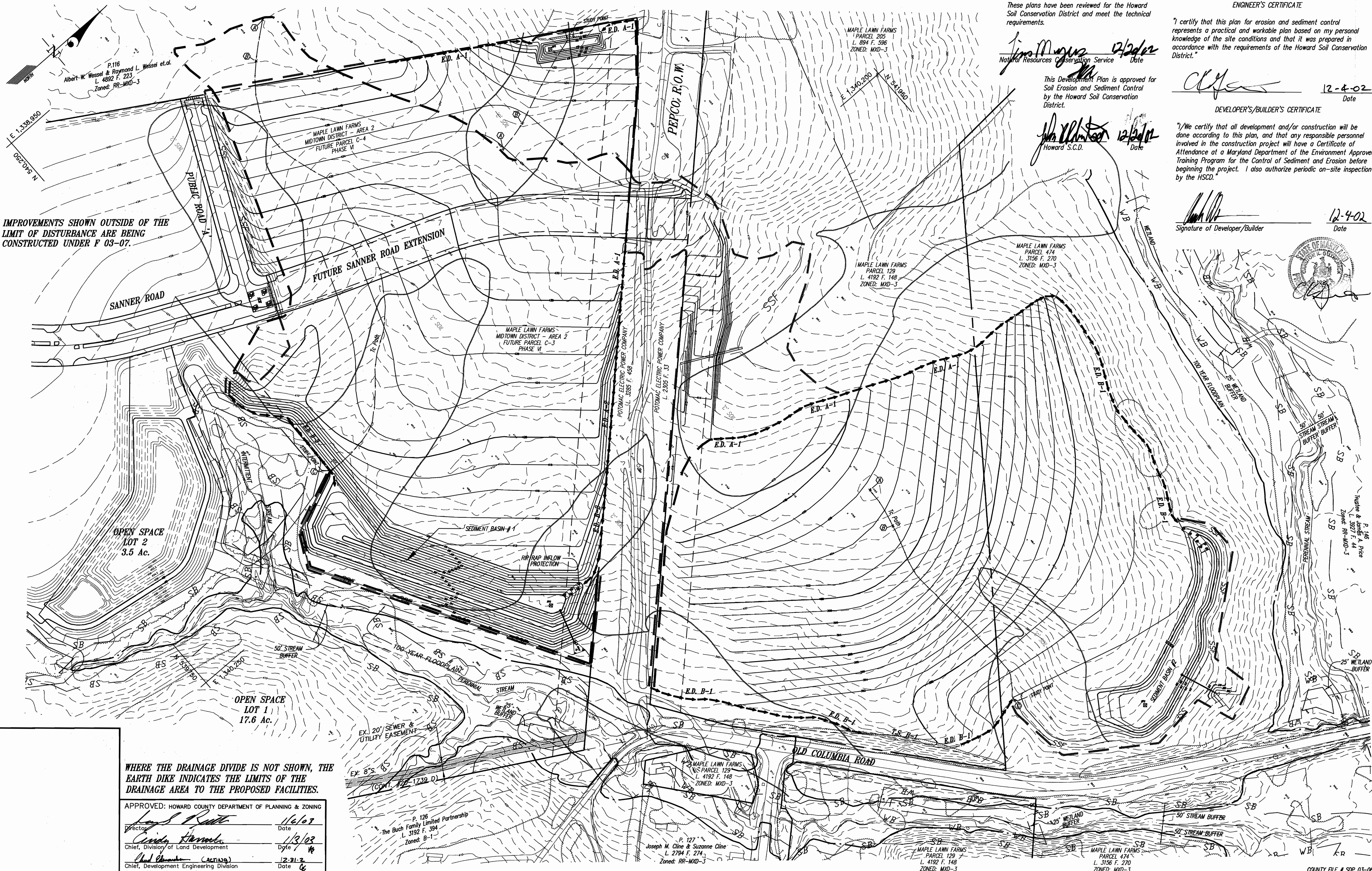
GLWGUTSCHICK LITTLE & WEBER, P.A.
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BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DES. DEV.	DRN. JAU	CHK. DEV.	DATE	REVISION	BY	APPR.

PREPARED FOR:
G & R Maple Lawn, Inc. et. al.
Suite 410, Woodholme Center
1829 Reisterstown Road
Baltimore, MD. 21208
Attn: Charlie O'Donovan
410-484-8400

GRADING/SEDIMENT CONTROL PLAN
SITE DEVELOPMENT PLAN FOR MASS GRADING ONLY
MAPLE LAWN FARMS
P. 124 (L. 4256 F. 250), P. 129 (L. 4192 F. 143), P. 474 (L. 3156 F. 270)
ELECTION DISTRICT NO. 5
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1"=50'	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
DEC, 2002	41: 21 & 22 46: 3 & 4	4 OF 9



IMPROVEMENTS SHOWN OUTSIDE OF THE LIMIT OF DISTURBANCE ARE BEING CONSTRUCTED UNDER F 03-07.

WHERE THE DRAINAGE DIVIDE IS NOT SHOWN, THE EARTH DIKE INDICATES THE LIMITS OF THE DRAINAGE AREA TO THE PROPOSED FACILITIES.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Joseph R. Smith 11/6/03
 Director Date

Cindy Hamrick 1/3/04
 Chief, Division of Land Development Date

Paul Chantler (ACT100) 12/31/02
 Chief, Development Engineering Division Date

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

Jim Maguire 12/2/02
 Natural Resources Conservation Service Date

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

John R. [Signature] 12/2/02
 Howard S.C.D. Date

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."

[Signature] 12-4-02
 Date

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or 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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD."

[Signature] 12-4-02
 Signature of Developer/Builder Date



L:\CADD\DRAWINGS\96079\Phase 1 (96079)\Mg-Siteplans\96079SP5.DWG 08/20/2002 02:01:17 PM EDT

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
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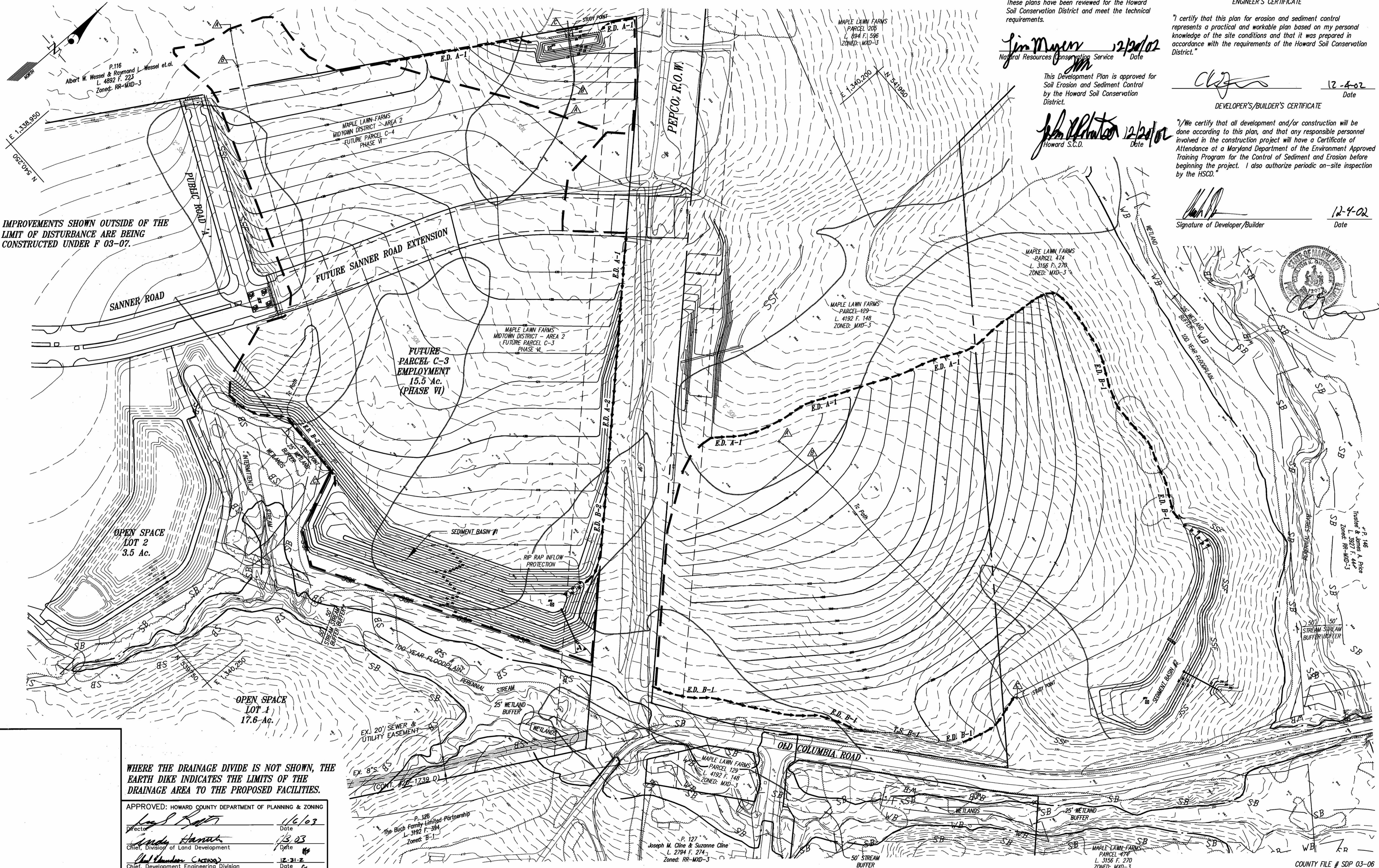
PREPARED FOR:
 G & R Maple Lawn, Inc. et. al.
 Suite 410, Woodholme Center
 1829 Reisterstown Road
 Baltimore, MD, 21208
 Attn: Charlie O'Donovan
 410-484-8400

SEDIMENT CONTROL OVERVIEW PLAN & DRAINAGE AREA MAP (BEFORE DEVELOPMENT)

SITE DEVELOPMENT PLAN FOR MASS GRADING ONLY
MAPLE LAWN FARMS
 P. 124 (L. 4256 F. 250), P. 129 (L. 4192 F. 143), P. 474 (L. 3156 F. 270)

ELECTION DISTRICT No. 5

SCALE	ZONING	G. L. W. FILE NO.
1"=100'	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
DEC., 2002	41: 21 & 22 46: 3 & 4	5 OF 9



IMPROVEMENTS SHOWN OUTSIDE OF THE LIMIT OF DISTURBANCE ARE BEING CONSTRUCTED UNDER F 03-07.

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

Jim Meyer 12/20/02
 Natural Resources Conservation Service Date

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

John Althoff 12/20/02
 Howard S.C.D. Date

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.

Clayton 12-4-02
 Date

DEVELOPER'S/BUILDER'S CERTIFICATE

I/We certify that all development and/or 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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD.

John Althoff 12-4-02
 Signature of Developer/Builder Date



WHERE THE DRAINAGE DIVIDE IS NOT SHOWN, THE EARTH DIKE INDICATES THE LIMITS OF THE DRAINAGE AREA TO THE PROPOSED FACILITIES.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Joseph M. Cline 1/6/03
 Director Date

Andy Hanan 1/3/03
 Chief, Division of Land Development Date

Paul Henderson 12-31-02
 Chief, Development Engineering Division Date

L:\CADD\DRAWINGS\96079\Phase 1 (96079)\Mg-SitePlans\96079SP6.DWG 08/27/2002 11:08:45 AM EDT

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

PREPARED FOR:
 G & R Maple Lawn, Inc. et. al.
 Suite 410, Woodholme Center
 1829 Reisterstown Road
 Baltimore, MD, 21208
 Attn: Charlie O'Donovan
 410-484-8400

SEDIMENT CONTROL OVERVIEW PLAN & DRAINAGE AREA MAP (AFTER DEVELOPMENT)
SITE DEVELOPMENT PLAN FOR MASS GRADING ONLY
MAPLE LAWN FARMS
 P. 124 (L. 4256 F. 250), P. 129 (L. 4192 F. 143), P. 474 (L. 3156 F. 270)
 ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
DEC, 2002	41: 21 & 22 46: 3 & 4	6 OF 9

CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds facility number 1 & 3. All references to ASTM and AASHTO specifications apply to the most recent version.

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. All trees shall be cleared and grubbed within 20 feet of the toe of the embankment.

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, shrubs, 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.

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 conform to Unified Soil Classification CC, SC, CL or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer.

Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

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 proximate 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 a minimum of one tread track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tire or vibratory roller. Fill material shall contain sufficient moisture such that the 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 so wet that water can be squeezed out.

When required by the reviewing agency the minimum required density 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 (Standard Proctor).

Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to the center of the 10-year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to ensure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the existing 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 pipe.

Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding), over and, on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent flooding the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil 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 shall completely fill all voids adjacent to the flowable fill zone. 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 structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structure locality (flowable fill) zone shall be of the type and quality conforming to other embankment materials.

Pipe Details

All pipes shall be circular in cross section.

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

1. Materials - (Polymer Coated Steel Pipe) - Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight coupling bands or flanges.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Aluminum Coated Steel Pipe, when used with flowable fill or when soil and/or water conditions warrant the use of flowable fill, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. Bit ep galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, and sections, etc., must be composed of the same material and coatings as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials of least 24 mils in thickness.

3. 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 re-rolled an adequate number of corrugations to accommodate the gasket. The following type connections are acceptable for pipes less than 24 inches in diameter: flanges on both ends of the pipe with a circular 3/8 inch closed cell neoprene gasket, prepared to the flange bolt circles, sandwiched between adjacent flanges; a 12-inch wide standard lap band with 12-inch wide by 3/8-inch thick closed cell circular neoprene gasket; and a 12-inch wide hugger type band with o-ring gaskets having a minimum diameter of 1/2 inch greater than the corrugation depth. Pipes 24 inches in diameter and larger shall be connected by a 24 inch circular corrugated band using a minimum of 4 (four) rods and lugs, 2 on each connecting pipe end. A 24-inch wide by 3/8-inch thick closed cell circular neoprene gasket will be installed with 12 inches on the end of each pipe. Flanged joints with 3/8 inch closed cell gaskets the full width of the flange is also acceptable.

Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

4. 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.

5. Backfilling shall conform to "Structure Backfill".

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

STANDARD AND SPECIFICATIONS FOR TOPSOIL DEFINITION

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

PURPOSE

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

CONDITIONS WHERE PRACTICE APPLIES

I. This practice is limited to areas having 2:1 or flatter slopes where:

- a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
- b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
- c. The original soil to be vegetated contains material toxic to plant growth.
- d. The soil is so acidic that treatment with limestone is not feasible.

II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the respective soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

I. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.

II. Topsoil must be free of plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

III. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

IV. For sites having disturbed areas under 5 acres:

I. Place topsoil (if required) and apply soil amendments as specified in 2.0.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

II. For sites having disturbed areas over 5 acres:

I. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:

- a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
- b. Organic content of topsoil shall be not less than 1.5 percent by weight.
- c. Topsoil having soluble salt greater than 500 parts per mill shall not be used.
- d. No sod or seed shall be placed on soil which has been with soil startants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of photo-toxic materials.

NOTE: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

II. Place topsoil (if required) and apply soil amendments as specified in 2.0.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

I. When topsoiling, maintain needed erosion and sediment control practices such as diversion, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.

II. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.

III. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water.

IV. Topsoil shall not be placed while the topsoil or subsoil is frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

V. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

I. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be listed areas under 5 acres shall conform to the following requirements:

- a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.

OPERATION AND MAINTENANCE

An operation and maintenance plan in accordance with Local or State Regulations will be prepared for all ponds. As a minimum, the dam inspection checklist located in Appendix A shall be included as part of the operation and maintenance plan and performed at least annually. Written records of maintenance and major repairs needs to be retained in a file. The issuance of a Maintenance and Repair Permit for any repairs or maintenance that involves the modification of the dam or spillway from its original design and specifications is required. A permit is also required for any repairs or maintenance that involve a substantial portion of the structure. All indicated repairs are to be done as soon as practical.

CONSTRUCTION SPECIFICATIONS

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Site Preparation

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Earth Fill

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Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding), over and, on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent flooding the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil 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 shall completely fill all voids adjacent to the flowable fill zone. 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 structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structure locality (flowable fill) zone shall be of the type and quality conforming to other embankment materials.

Pipe Details

All pipes shall be circular in cross section.

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1. Materials - (Polymer Coated Steel Pipe) - Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight coupling bands or flanges.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Aluminum Coated Steel Pipe, when used with flowable fill or when soil and/or water conditions warrant the use of flowable fill, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. Bit ep galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, and sections, etc., must be composed of the same material and coatings as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials of least 24 mils in thickness.

3. 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 re-rolled an adequate number of corrugations to accommodate the gasket. The following type connections are acceptable for pipes less than 24 inches in diameter: flanges on both ends of the pipe with a circular 3/8 inch closed cell neoprene gasket, prepared to the flange bolt circles, sandwiched between adjacent flanges; a 12-inch wide standard lap band with 12-inch wide by 3/8-inch thick closed cell circular neoprene gasket; and a 12-inch wide hugger type band with o-ring gaskets having a minimum diameter of 1/2 inch greater than the corrugation depth. Pipes 24 inches in diameter and larger shall be connected by a 24 inch circular corrugated band using a minimum of 4 (four) rods and lugs, 2 on each connecting pipe end. A 24-inch wide by 3/8-inch thick closed cell circular neoprene gasket will be installed with 12 inches on the end of each pipe. Flanged joints with 3/8 inch closed cell gaskets the full width of the flange is also acceptable.

Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

4. 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.

5. Backfilling shall conform to "Structure Backfill".

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

Plastic Pipe - The following criteria shall apply for plastic pipe:

1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1782 or ASTM D-2911. Corrugated High Density Polyethylene (HDPE) pipe couplings and fittings shall conform to the following: 4" - 10" inch pipe shall meet the requirements of AASHTO M252 Type S, and 12" through 24" inch shall meet the requirements of AASHTO M294 Type S.

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

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 371.

Geotextile 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 921.09, Class C.

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1. Materials - (Polymer Coated Steel Pipe) - Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (10 mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight coupling bands or flanges.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges. Aluminum Coated Steel Pipe, when used with flowable fill or when soil and/or water conditions warrant the use of flowable fill, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Any aluminum coating damaged or otherwise removed shall be replaced with cold applied with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. Bit ep galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

2. Coupling bands, anti-seep collars, and sections, etc., must be composed of the same material and coatings as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials of least 24 mils in thickness.

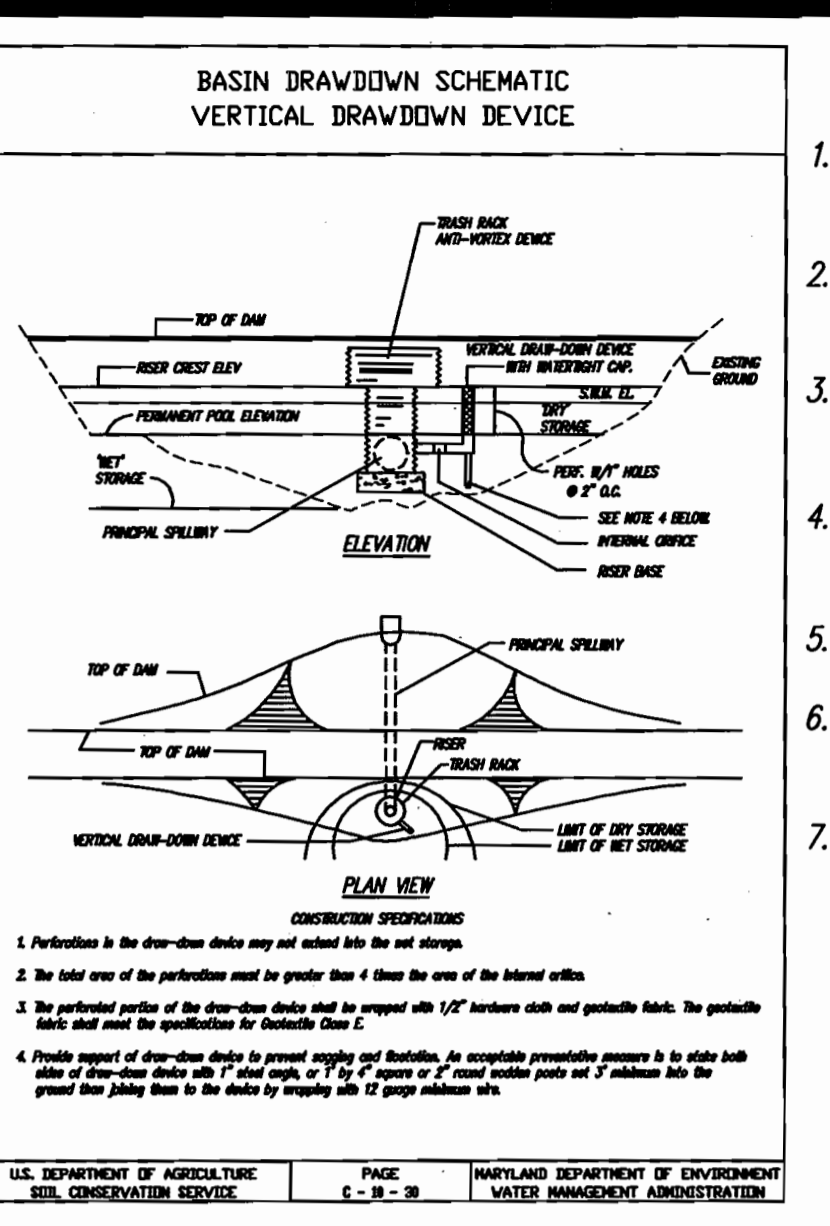
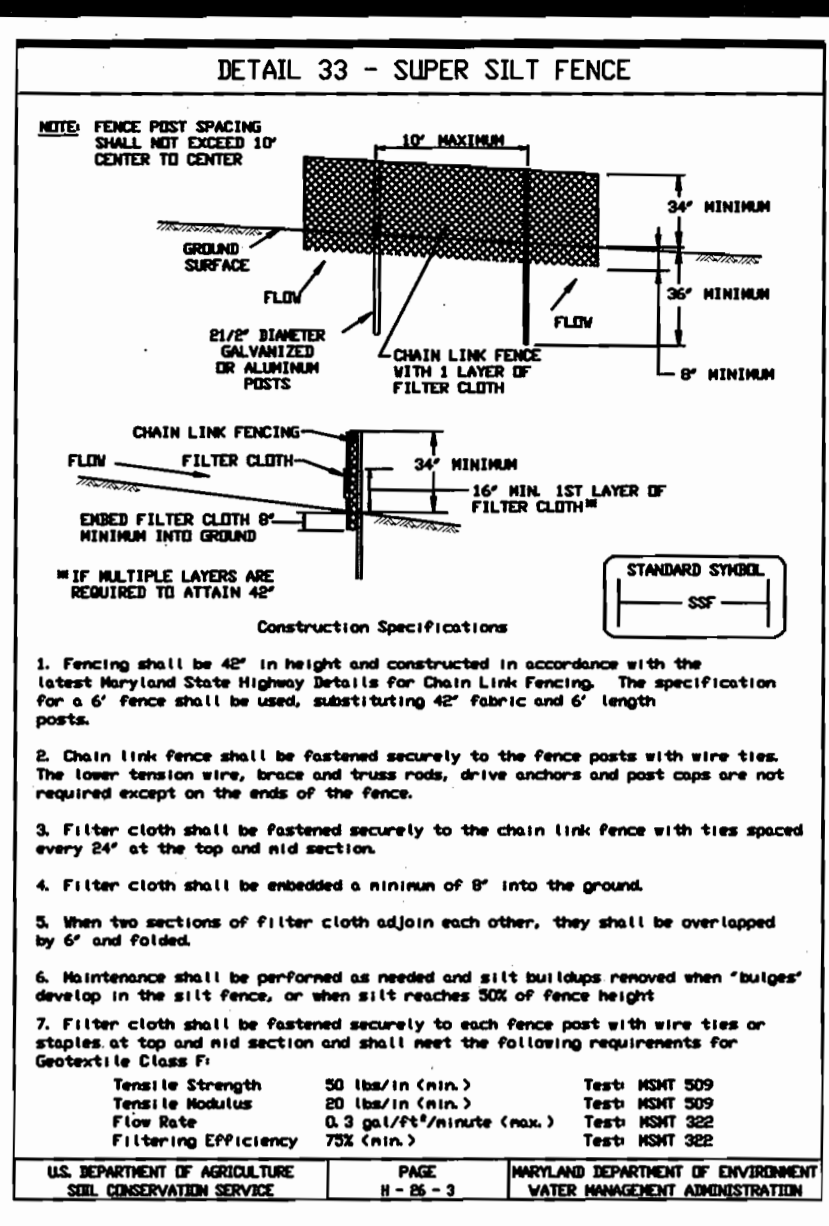
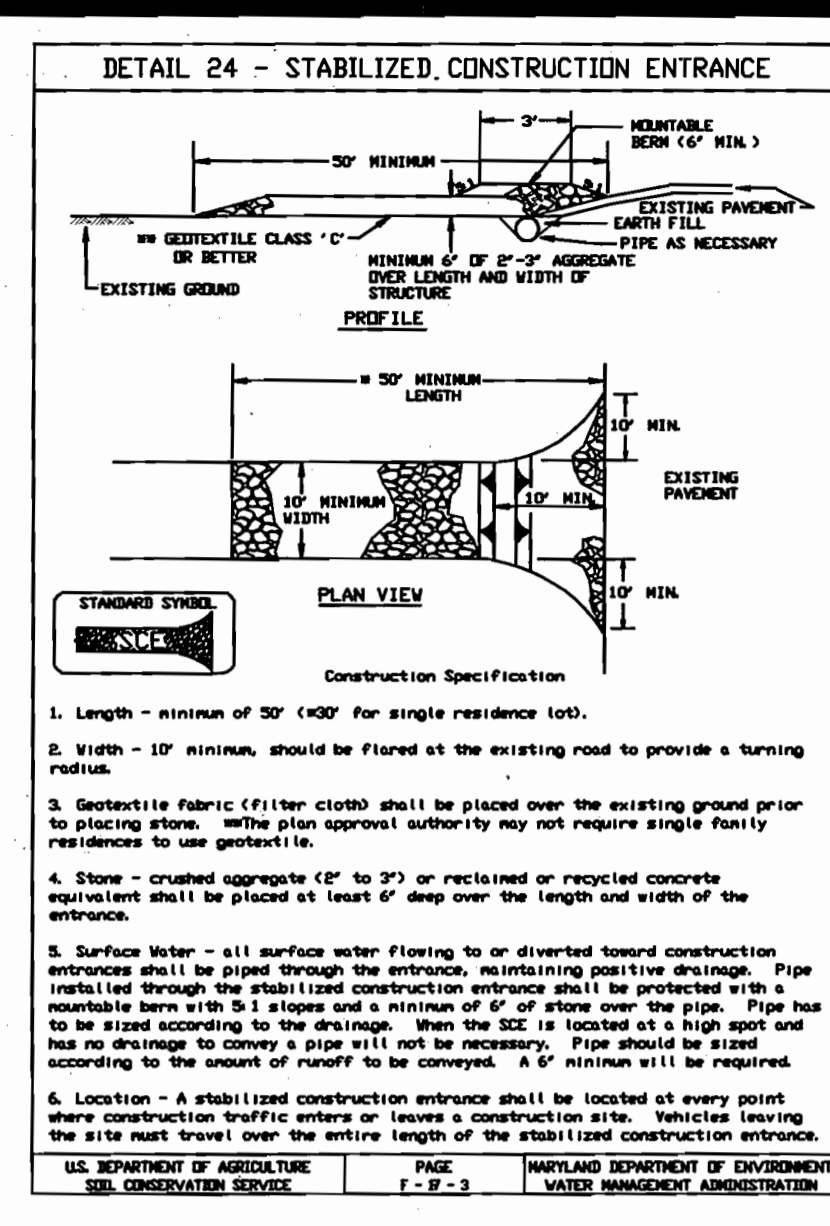
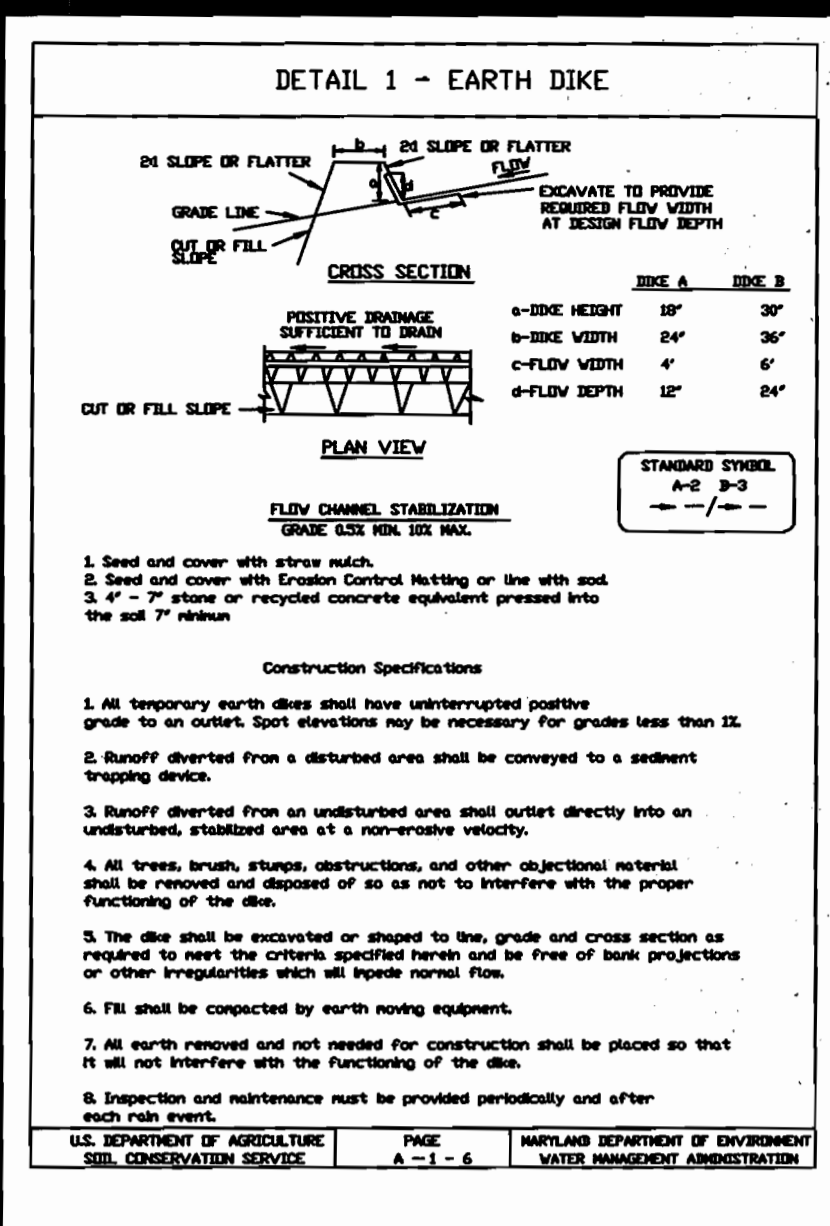
3. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are 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 re-rolled an adequate number of corrugations to accommodate the gasket. The following type connections are acceptable for pipes less than 24 inches in diameter: flanges on both ends of the pipe with a circular 3/8 inch closed cell neoprene gasket, prepared to the flange bolt circles, sandwiched between adjacent flanges; a 12-inch wide standard lap band with 12-inch wide by 3/8-inch thick closed cell circular neoprene gasket; and a 12-inch wide hugger type band with o-ring gaskets having a minimum diameter of 1/2 inch greater than the corrugation depth. Pipes 24 inches in diameter and larger shall be connected by a 24 inch circular corrugated band using a minimum of 4 (four) rods and lugs, 2 on each connecting pipe end. A 24-inch wide by 3/8-inch thick closed cell circular neoprene gasket will be installed with 12 inches on the end of each pipe. Flanged joints with 3/8 inch closed cell gaskets the full width of the flange is also acceptable.

Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.

4. 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.

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SEQUENCE OF CONSTRUCTION

1. Obtain grading permit and arrange an on-site pre-construction meeting. (1 day)
2. Install stabilized construction entrance, silt fence and super silt fence as shown on these plans. (1 week)
3. Construct sediment basins 1 and 2 and stone outlet sediment trap 3. (3 weeks)
4. Install 18" HDPE and bring construction (Haul) road up to grade. (2 weeks)
5. Begin mass grading. (6 months)
6. Stabilize disturbed areas in accordance with the permanent seeding notes. (2 weeks)
7. Contractor must backfill sediment basins and sediment trap 3 in accordance with the permanent seeding notes. (2 weeks)

SEDIMENT CONTROL NOTES

1. A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (410) 131-1880
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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
3. Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes and perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the 1993 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seedings (Sec. 51), sod (Sec. 54), temporary seedings (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 Project Area : 507.9 Ac. ±
 - Limit of Disturbance : 60.95 Acres
 - Area to be Roofed or Paved : 0.0 Acres
 - Area to be Vegetatively Stabilized : 60.95 Acres
 - Total Cut : 370496 c.y.
 - Total Fill : 254634 c.y.
 - Offsite Site Waste/Borrow Area Location : PHASE 1 F-03-07
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 control must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector.
10. 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.
11. Trenches for the construction of utilities is limited to 3 pipe lengths or that which shall be backfilled and stabilized within one working day whichever is shorter.

PERMANENT SEEDING NOTES

Apply to graded or cleared area 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 (unless previously loosened).

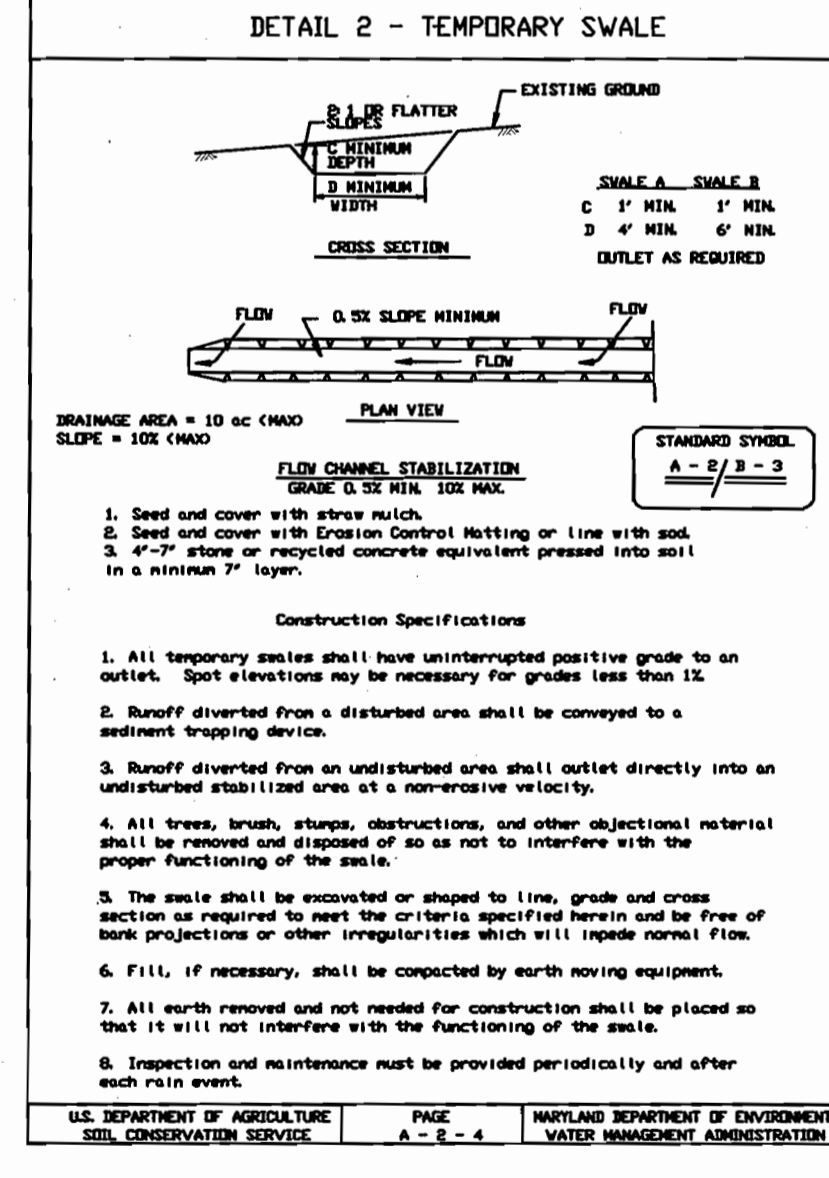
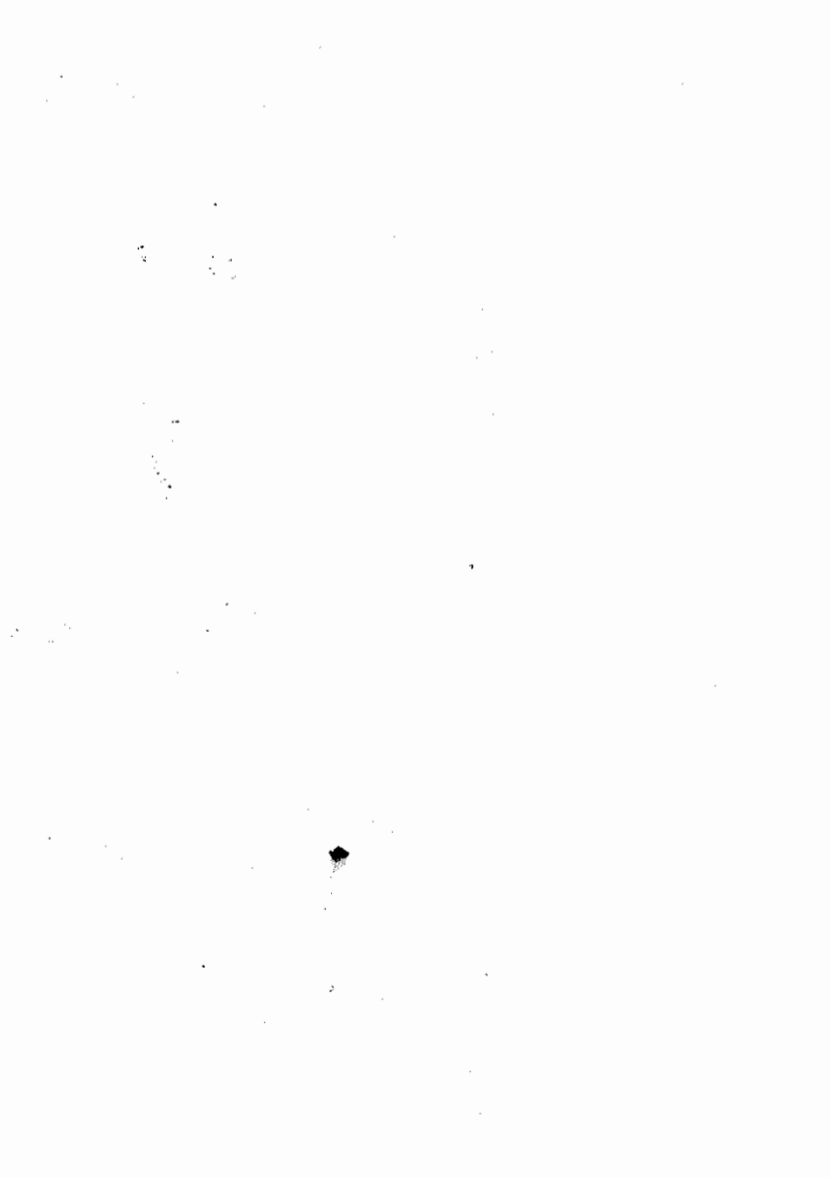
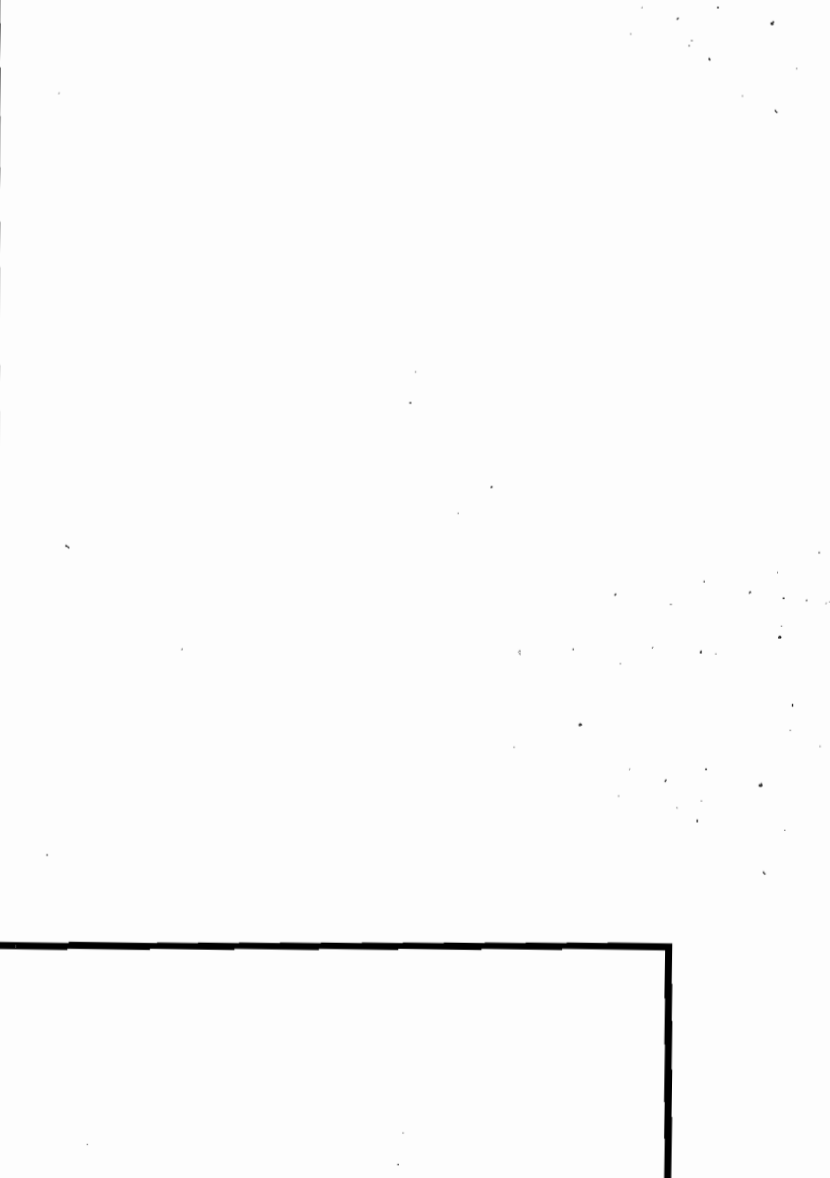
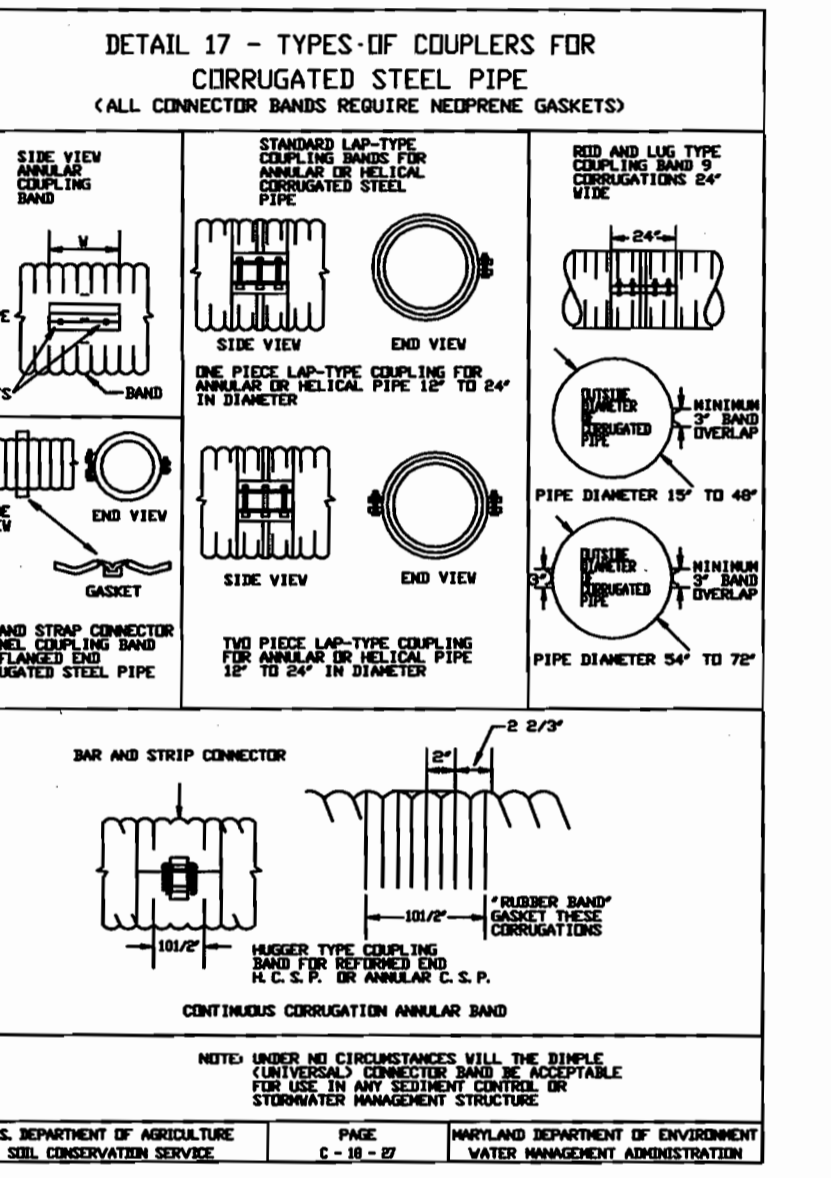
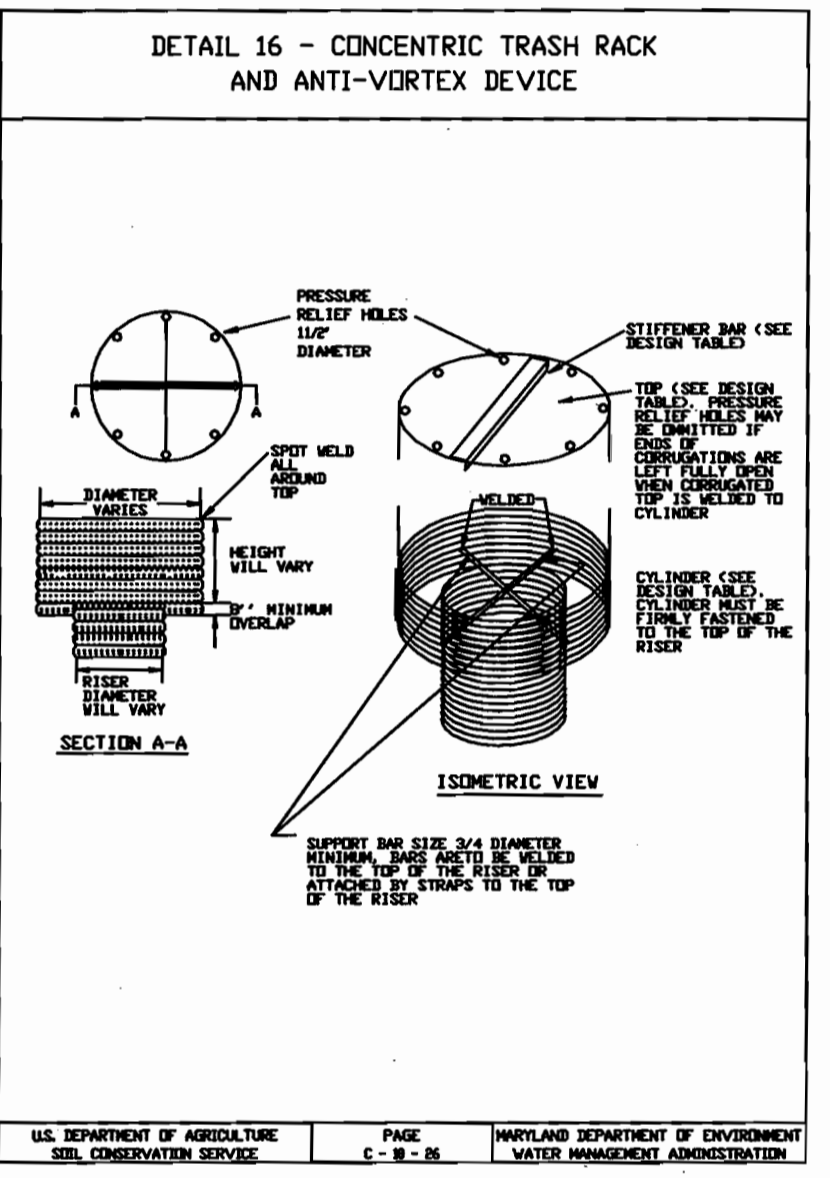
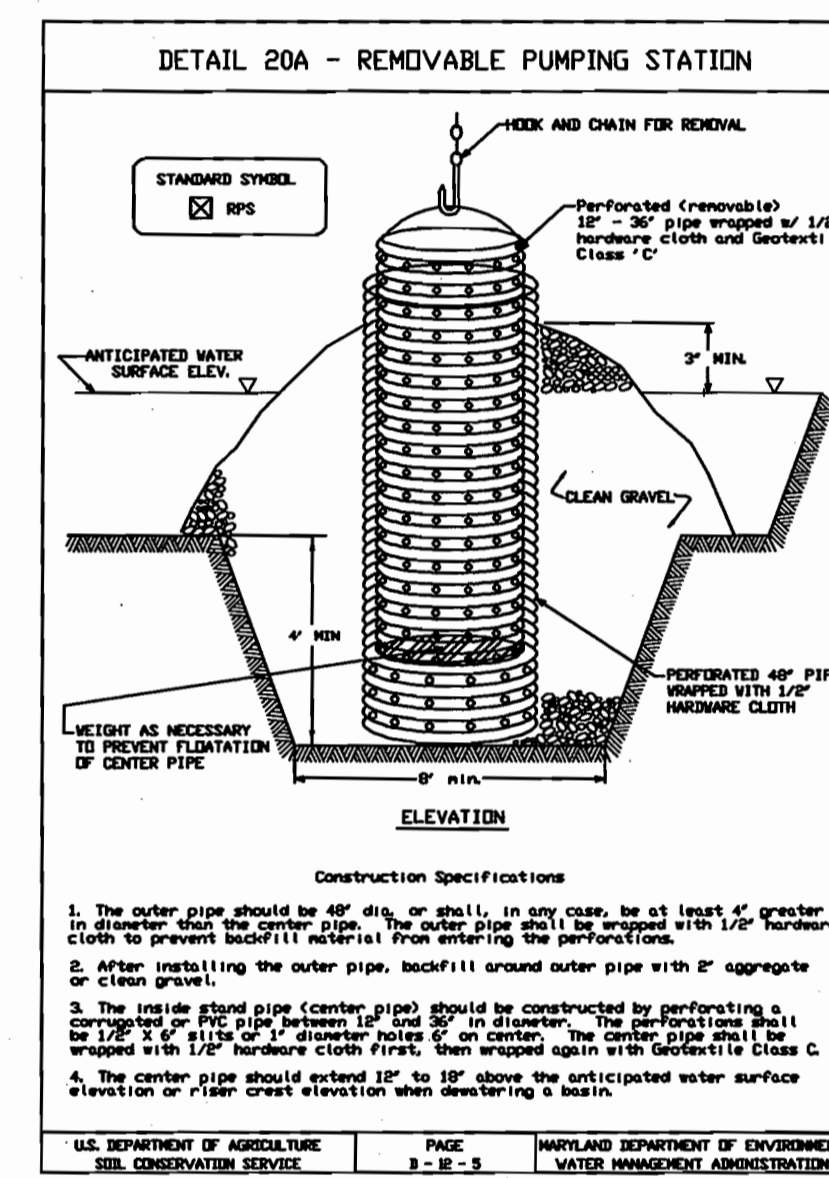
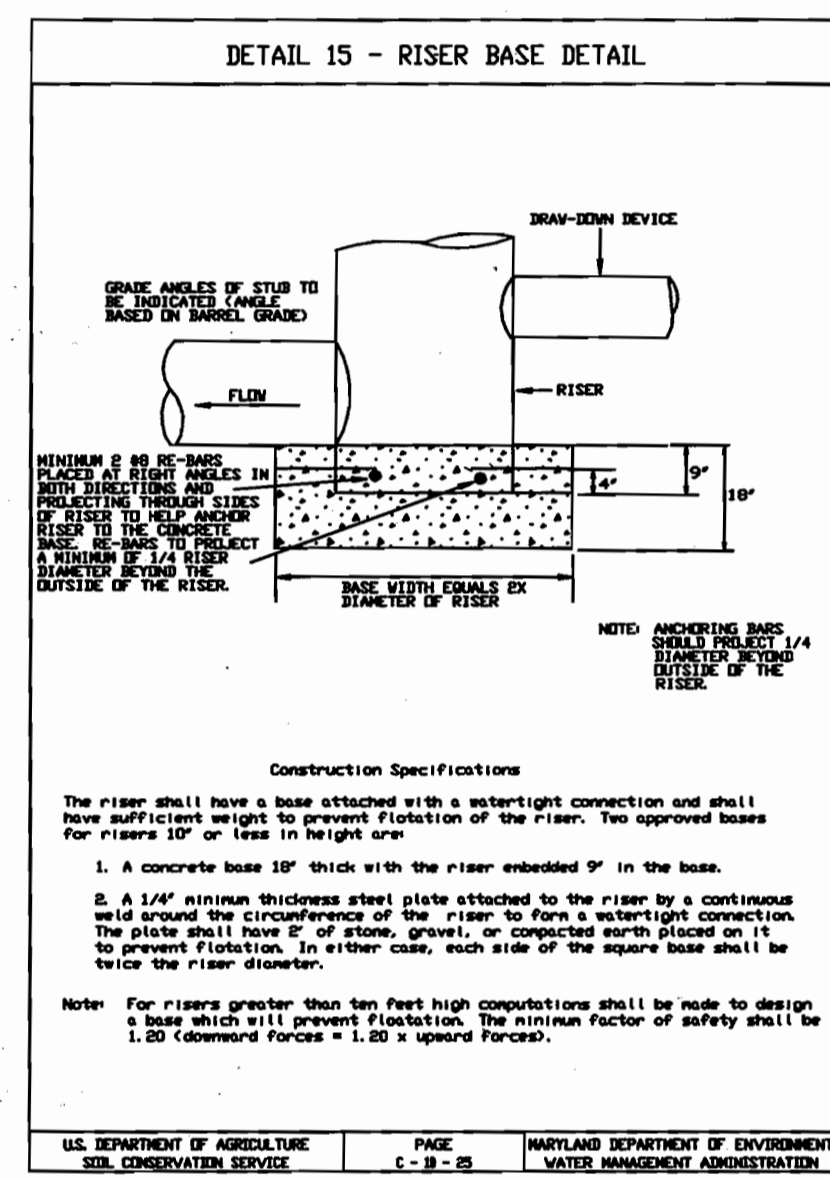
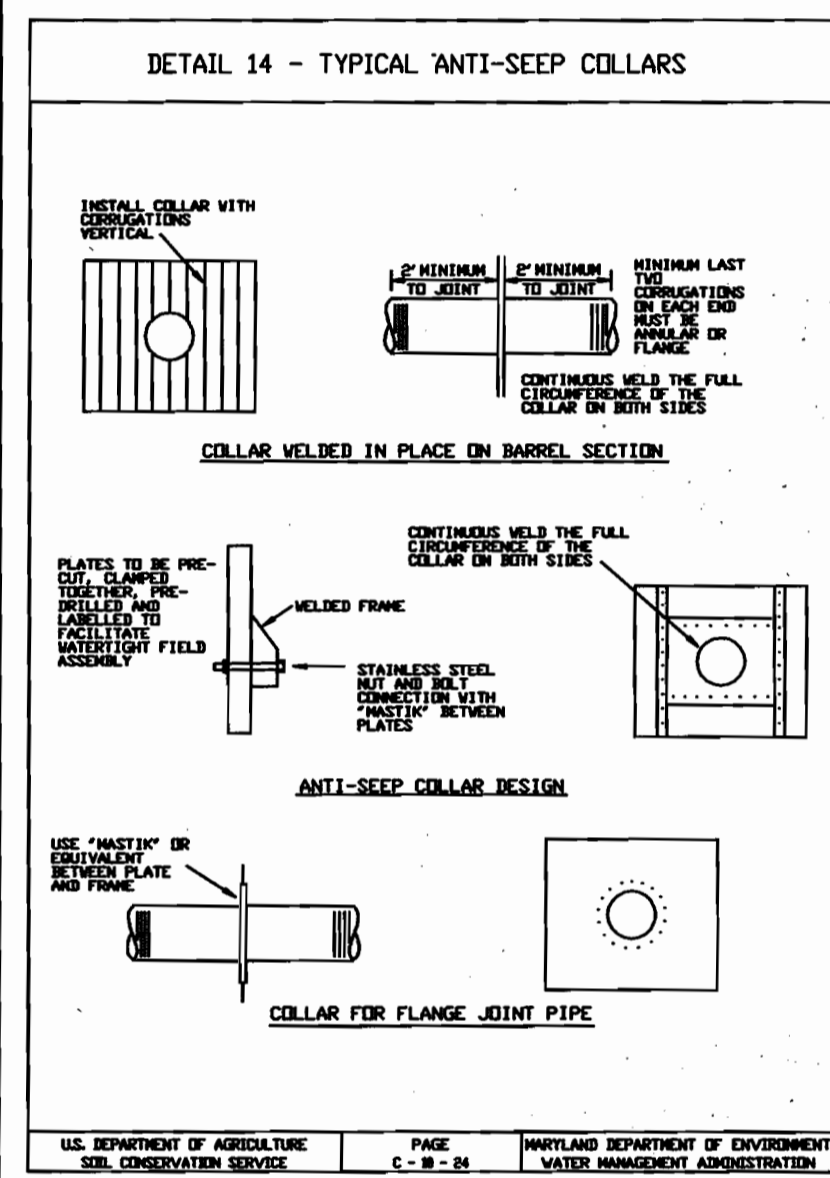
Soil Amendments: In lieu of soil test recommendations, use one of the following schedules

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) 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 square feet) 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 1-1/2 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.

Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseeding.



DEVELOPER'S/BUILDER'S CERTIFICATE

"I certify that all development and/or 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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD."

Signature of Developer/Builder: _____ Date: 12-4-02

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."

Signature of Engineer: _____ Date: 12-4-02

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: _____ Date: 11/6/03

Chief, Division of Land Development: _____ Date: 11/3/03

Chief, Development Engineering Division: _____ Date: 12-31-02

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONTOWN OFFICE PARK
 BURTONTOWN, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

NO.	REVISION	DATE	BY	APPR.

PREPARED BY:
 G & R MAPLE LAWN INC., et. al.
 SUITE 410 WOODGLADE CTR.
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD. 21208
 ATTN: CHARLIE O'DONOVAN
 410-484-8400

SEDIMENT CONTROL DETAILS
 SITE DEVELOPMENT PLAN FOR MASS GRADING ONLY
MAPLE LAWN FARMS
 P. 124 (L. 4256 F. 250), P. 129 (L. 4192 F. 143), P. 474 (L. 3156 F. 270)
 ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
NO SCALE	MXD-3	96079
DATE	TAX MAP - GRID	SHEET
DEC, 2002	41: 21 & 22	8 OF 9
	46: 3 & 4	

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

Signature: _____ Date: 12-2-02

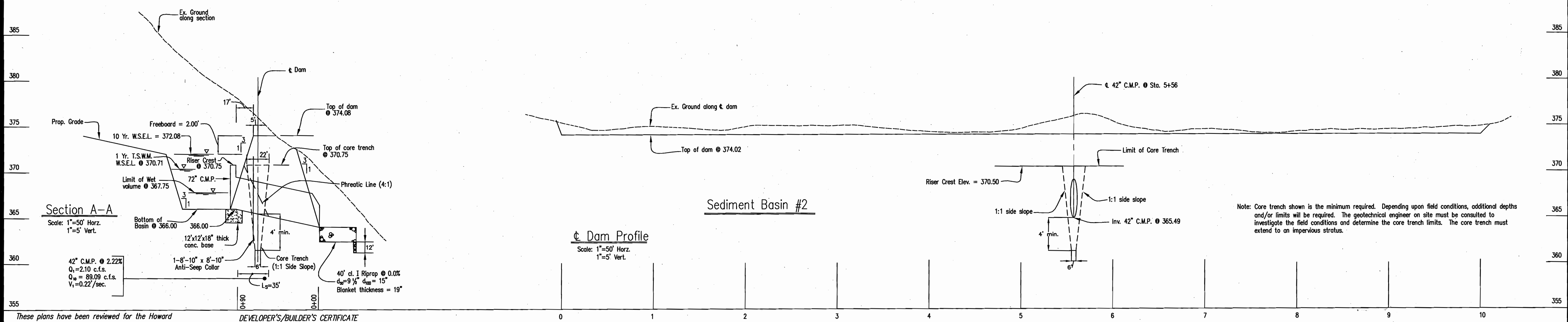
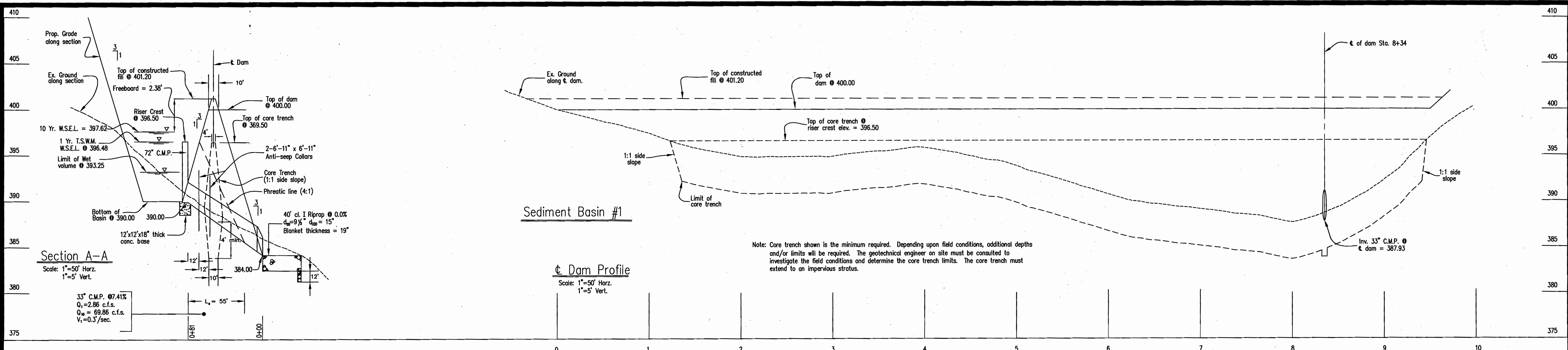
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Signature: _____ Date: 12/4/02

Signature: _____ Date: 12/4/02

COUNTY FILE # SDP-03-06

SDP-03-06



These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

Jan M. [Signature] 12/20/02
 Natural Resources Conservation Service
 This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

[Signature] 12/24/02
 Howard S.C.D.

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/we certify that all development and/or 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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD."

[Signature] 12-4-02
 Signature of Developer/Builder
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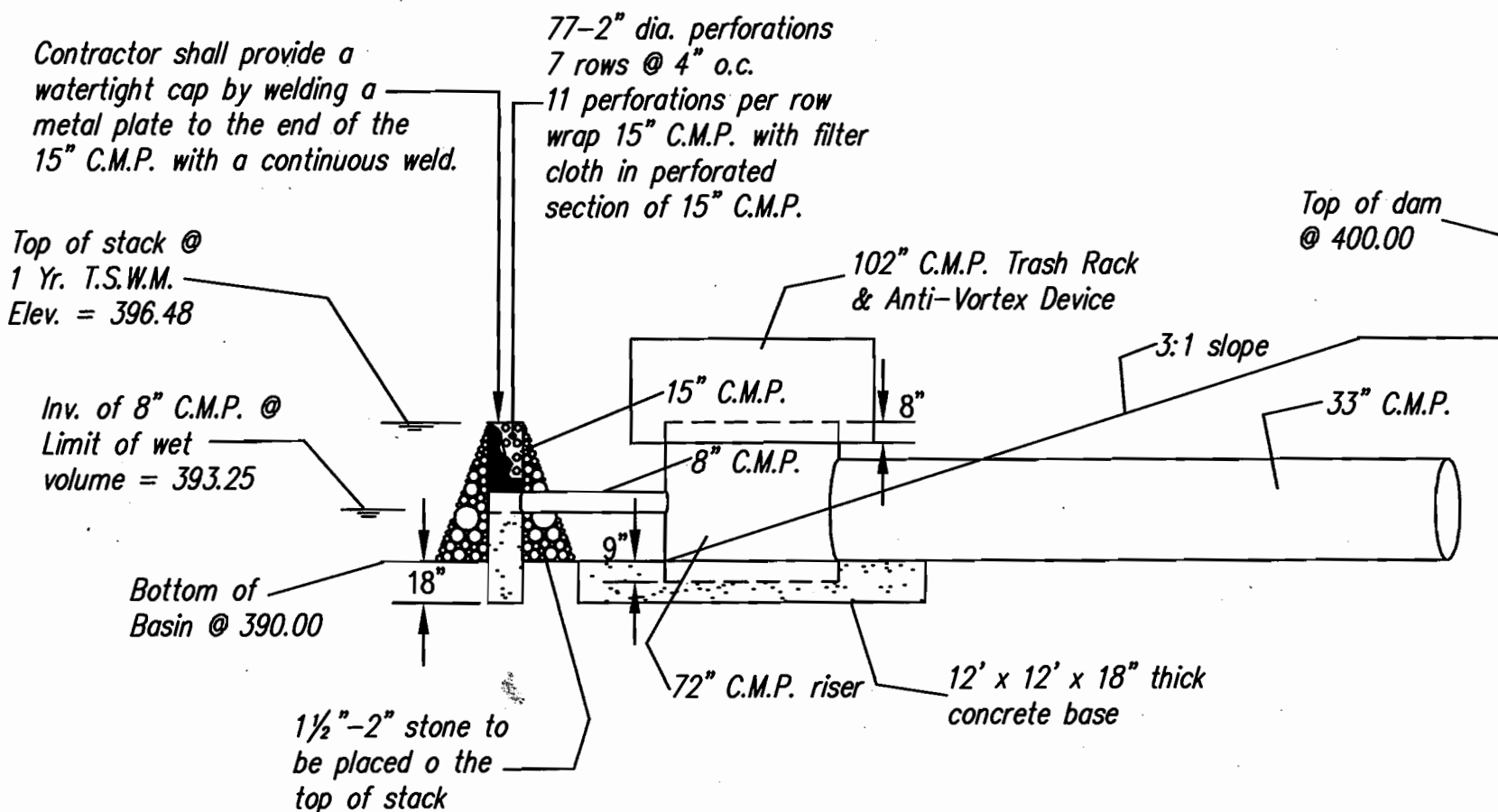
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 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

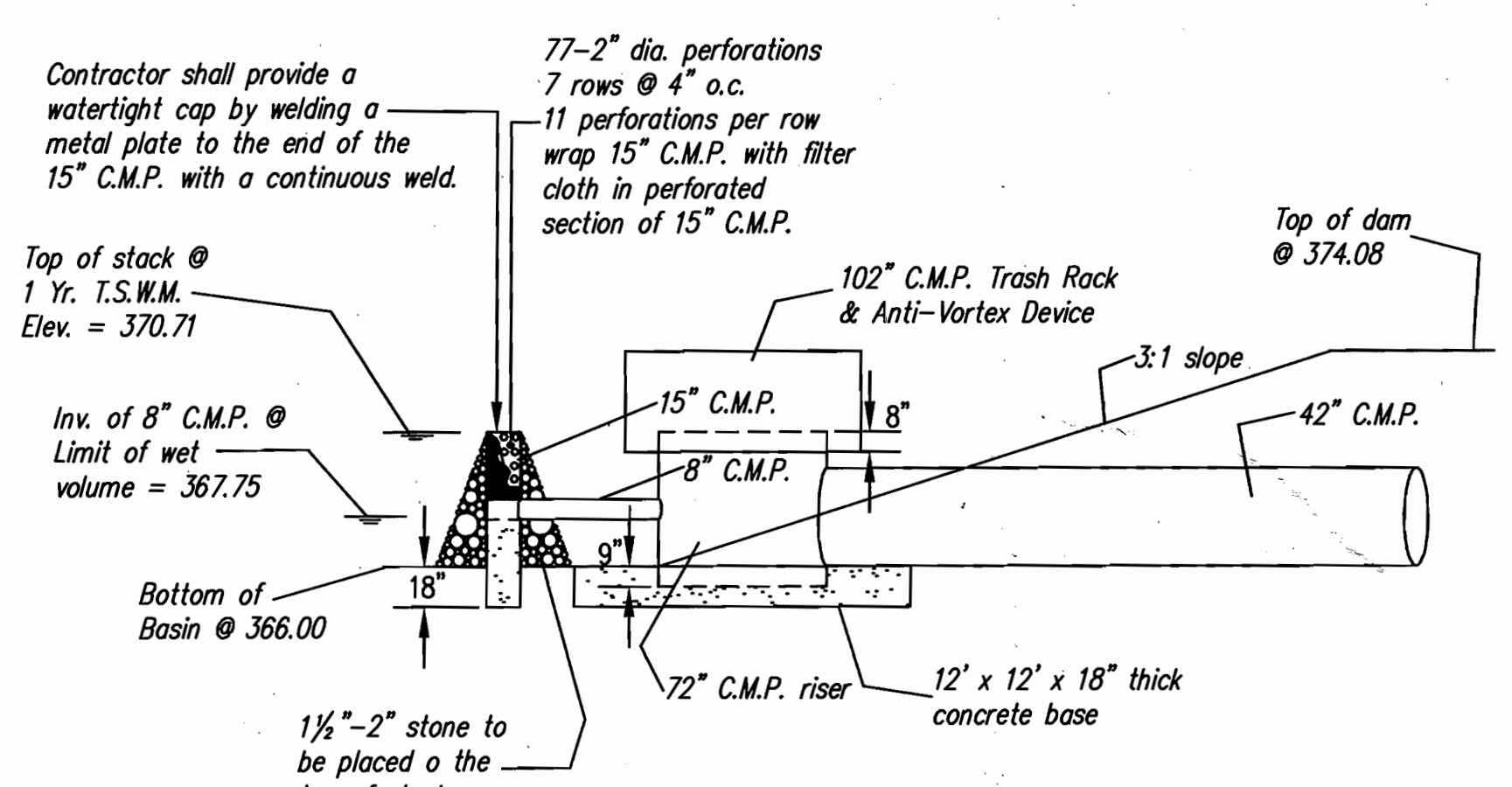
[Signature] 11/6/03
 Director

[Signature] 1/5/03
 Chief, Division of Land Development

[Signature] 12-31-02
 Chief, Development Engineering Division



Dewatering Device Detail
 Sediment Basin 1
 Not to Scale



Dewatering Device Detail
 Sediment Basin 2
 Not to Scale

GLW GUTSCHICK LITTLE & WEBER, P.A. CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK BURTONSVILLE, MARYLAND 20866 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186	PREPARED FOR: G & R Maple Lawn, Inc., et al. Suite 410, Woodbine Center 1829 Rafterstown Road Baltimore, MD 21208 Attn: Charlie O'Donovan 410-484-8400		STORMWATER MANAGEMENT FACILITY DETAILS SITE DEVELOPMENT PLAN FOR MASS GRADING ONLY MAPLE LAWN FARMS P. 124 (L. 4256 F. 250), P. 129 (L. 4192 F. 143), R. 474 (L. 3156 F. 270)		SCALE AS SHOWN	ZONING MXD-3	G. L. W. FILE No. 96079	
	96079\PH1\Mg-Siteplans\96079Sp6.DWG	DES. DEV DRN. AEJ CHK. DEV	DATE	REVISION	BY	APPR.	DATE DEC, 2002	TAX MAP - GRID 41: 21 & 22 46: 3 & 4

COUNTY FILE # SDP-03-06