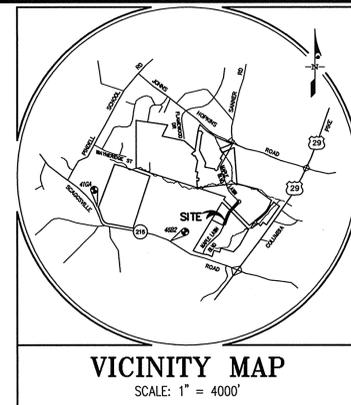


CONSTRUCTION PLAN

MAPLE LAWN FARMS

BUSINESS DISTRICT - AREA 2 / HILLSIDE DISTRICT - AREA 2

Maple Lawn Boulevard Extension



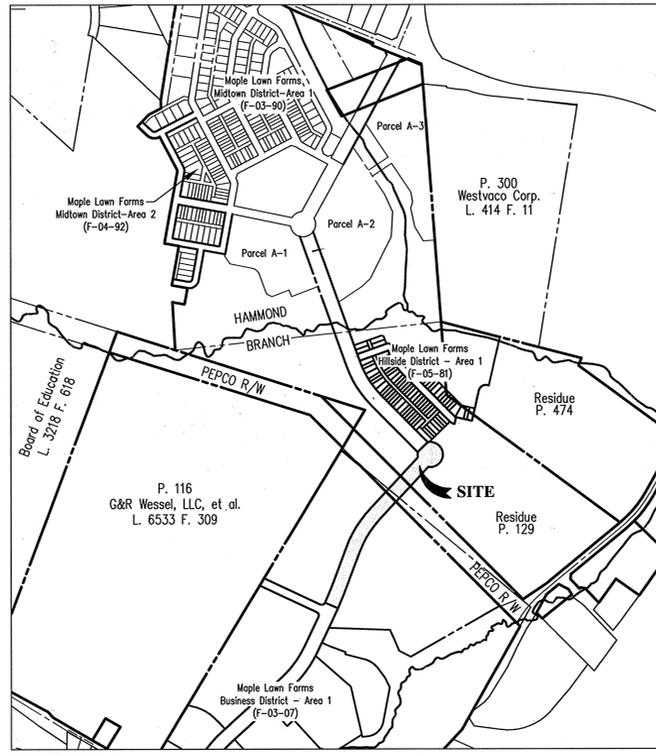
BENCHMARKS
 416A ELEV. = 462.16
 STANDARD DISC ON CONCRETE MONUMENT
 46B2 ELEV. = 474.67
 STANDARD DISC ON CONCRETE MONUMENT

LEGEND

- 400 ----- EX. CONTOUR
- PROP. CONTOUR
- EXISTING TREELINE
- SB SB STREAM BUFFER
- WB WB WETLAND BUFFER
- MH 20 STRUCTURE NUMBER
- 2 CENTERLINE CURVE
- 2 PROPERTY CORNER
- 15" HDPE PROP. STORM DRAIN
- PROP. BARRICADE
- EX BARRICADE
- 100 YEAR FLOODPLAIN
- LIMIT OF WETLAND
- WETLAND AREA
- CENTERLINE OF STREAM

- GENERAL NOTES:**
- Zoning: Site is being developed under MXD-3 regulations, per ZB-95M. Approved on 2/8/01. Underlying Zoning is RR-OEO.
 - The previous Department of Planning and Zoning file numbers: S-01-T1, ZB-95M, ZB-1029A, FB-353, F-02-12, F-05-02, F-05-07, F-05-07, F-04-13, F-04-55, F-05-81, F-05-82, F-05-113, SDF-05-06, SDF-04-44, SDF-04-44, SDF-04-46, SDF-05-06, SDF-05-36, SDF-05-47, MP-01-11, MP-02-54 and MP-05-22.
 - This project is in conformance with the latest Howard County standards and approvals.
 - The Cemetery Inventory Maps do not show any cemeteries within the project limits.
 - The Scenic Roads Map does not indicate any scenic roads within or adjacent to the project limits.
 - This property was brought into the Metropolitan District on August 8, 2001.
 - All roads in this development are public.
 - Site Analysis:
 Gross Site Area: 507.1 Acres ±
 Total Area of Phase 4c: 300 Acres ±
 Area of Open Space: 0.0 Acres ±
 Area of 100 Year Floodplain in Phase 4c: 0.0 Acres ±
 Total Limit of Disturbance: 22.6 Acres ±
 Area of Roadway (Public): 30.0 Acres ±
 Area of Roadway (Private): 0.0 Acres ±
 Area of Lots: 0.0 Acres ±
 - Open Space Requirements:
 Minimum Open Space Requirement for Project is 35%.
 Total Open Space Required: 1.05 Acres ± (35%)
 Total Open Space Provided: 0.0 Acres ± (0.0%)
 Recreational Open Space Required: 0.11 Acres (10%)
 Recreational Open Space Provided: 0 Acres (0%)
 (See Chart-1 on this sheet)
 The excess open space area may be used to fulfill the minimum open space requirement for future phases.
 - Soils data was taken from the Soil Survey of Howard County, Maryland issued July 1968.
 - Topography indicated was taken from aerial topography prepared during March 1991 by SDI. Some areas within the limit of submission have been mass graded under previous plans. The mass grading was performed under F-03-01 and SDF-03-06.
 - Boundary information shown is based upon a field survey prepared by Gutschick, Little, and Weber, P.A. on or about June, 2001.
 - Setback delineation by Exploration Research, Inc. approved by the Corps of Engineers on 5/17/95 on 5/14/95. Notice of intent to issue a permit is provided by MGE Tracking #01-NF-0544/200165421.
 - Horizontal and vertical datum is based on Howard County Station 4IE.
 - Existing utilities were taken from available Howard County records.
 - Public water and sewer to be utilized.
 Existing Water Contract Number: 24-4062D
 Existing Sewer Contract Number: 24-4062D
 - Traffic Study was prepared and submitted as part of S-01-T1, which was signed by the Planning Board on August 8, 2001.
 - Parking requirements will be determined and provided at the Site Development Plan stages.
 - 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.
 - Quantity stormwater management will be satisfied for the proposed development by the facility shown on these plans, the facility on Open Space Lot 60 under F-05-81, and the existing pond constructed under F-03-01. The pond constructed under F-03-01 will handle the runoff being picked up by existing I-5 and I-6. The facility being constructed under F-05-81 will handle the runoff being picked up by I-450 and I-451. The remainder will be handled by the facility proposed under these plans. Quality control for the area draining to existing I-5 and I-6, and the area shown on these plans will be provided in facilities that will be designed as part of a future site development plan. The area draining to I-450 and I-451 will be provided in a facility to be located on an open space lot in a future section of the Hillside District. The facility shown on these plans and constructed under F-03-01 are privately owned and will be maintained by the Business Owners Association. The facility being constructed under F-05-81 will be publicly owned and maintained.
 - 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.
 - As stated in the Decision and Order for this plan, The Planning Board shall review and approve site development plans for all single family attached and multi-family residential uses, and all employment and open space use development for the subject Maple Lawn Farms project. This and other Preliminary Subdivision Plans submitted for this project shall not be approved by PZP until finding test evaluation restrictions established by the Zoning Board on page 22-23 of its decision on the PZP are met consistent with the requirements of Section 121E.4.2 of the Zoning 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 flood plain areas, except as permitted under MP-02-54, MP-03-02, and MP-03-120.
 - Open space lots may contain active recreational facilities as allowed by the approved Comprehensive Development Criteria.
 - Phasing for this project is in accordance with the Decision and Order for Zoning Board Case No. ZB-95M and the Decision and Order for FB Case No. 353 (Comprehensive Sketch Plan, S-01-T1).
 - Development for this phase will be done in accordance with the Comprehensive Development Criteria approved with S-01-T1 and FB-353.
 - The transportation and transit design will be implemented as outlined in the Petitioner's Exhibit 55 as submitted as part of ZB 95M. Location and number of bus stops within the limits of this Phase will be determined at Final Plan Stage. Any shelters will be provided at Site Development Plan Stage for the development adjacent to that structure so that architectural and landscape features can be coordinated.
 - A Noise Study was prepared by Wildman & Associates for S-01-T1, which was signed by the Planning Board on August 8, 2001.
 - For soil types, descriptions and limitations, see S-01-T1.
 - In accordance with section 16.116 (c) of the Subdivision and Land Regulations, the location and design of the proposed utility lines and pedestrian pathways within environmental features and required buffers have been determined to be essential disturbances.
 - The street trees and sidewalks will be constructed with the Site Development Plan as shown on previous Final Plans.
- MP-01-11**
 Vehicular ingress and egress to Maryland Route 216 and along proposed Maple Lawn Boulevard Extension through the subdivision is restricted, except at the various points of access to be approved by the Department of Planning and Zoning under the conditions of MP-01-11(4), which was granted on May 2, 2001, allowing the following:
- A. Additional points along Maple Lawn Boulevard other than those permitted by section 16.116(1)(4), subject to further analysis and approvals at later plan stages, and
 B. Residential lots front on neighborhood parks instead of being limited to frontage on public rights of way as in section 16.120(c)(2), subject to adequate private alley access.
- MP-02-54**
 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 flood plain areas except as permitted under MP-02-54. MP-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.
- The approval is subject to the following conditions:
- The waiver petition approval pertains to the limits of disturbance to the wetlands, stream channel, and floodplain areas identified within the proposed employment district located in the southeast portion of Parcel C-2.
 - MDE waterway construction approval is required prior to road plan approval.
 - All grading, clearing and filling disturbances within the 100 year floodplain, wetlands, stream channel and their required buffers are subject to obtaining all necessary Water Quality Certificates and Permits from the Maryland Departments of the Environment and Natural Resources and the U.S. Army Corps of Engineers, prior to commencement of any grading disturbances. Reference the approved permits, certificates or tracking numbers on all future plan and permit submissions.
 - The Phase I stream channel mitigation and restoration plan shall be implemented for this project as proposed and shown on the Petitioner's Waiver Petition Plan Exhibit "E".
- MP-03-22**
 Waiver petition MP-03-22 was granted on October 4, 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-T1.



LOCATION PLAN
 SCALE: 1"=600'

OVERALL TRACKING CHART

PHASE NO.	FILE REF. NO.	GROSS ACREAGE	NON-BUILDABLE					S.F.D. AC. (%)	OR. AC. (%)	EMP. AC. (%)	OS. AC. (%)	PUB. RD.		PRIV. RD. ACREAGE	SFD UNITS	OR. UNITS (APT./S.F.A.)	S.F.D. DENSITY	OR. DENSITY	EMP. BLDG. AREA	EMP. F.A.R.	
			SF	OR	EMP	OS	%					SF	OR								
1	F-03-01	51.98	0.00	0.00	0.00	0.00	(0.0)	-----	-----	30.85 (59.3)	21.15 (40.7)	0.00	0.00	4.38	-----	-----	-----	-----	-----	-----	
2	F-03-40	51.43	0.52	0.43	0.24	0.00	(3.2)	10.84 (21.0)	8.09 (15.7)	1.56 (3.0)	15.15 (29.3)	5.12 (9.9)	3.14 (6.1)	1.68	55	65	5.1/AC.	8.0/AC.	-----		
3	F-04-42	58.80	-0.52	-0.43	2.31	0.00	(3.0)	7.11 (12.1)	12.28 (20.9)	14.80 (25.2)	22.85 (38.9)	2.52	0.46	0.00	1.00	71	71	5.8/AC.	6.4/AC.	-----	
4a	F-05-81/F-05-82	15.41	0.00	1.48	-1.61	0.00	(-1.4)	0.00 (0.0)	1.29 (8.1)	1.64 (10.9)	6.10 (43.3)	0.00	3.40	1.64	0.46	51	-----	8.0/AC.	-----		
4b	F-05-194	0.00	0.00	0.00	-1.26	0.00	(0.0)	0.00 (0.0)	0.00 (0.0)	1.26 (---)	0.00 (0.0)	0.00	0.00	1.26	-----	-----	-----	-----	-----		
4c	F-05-112 & F-05-113	3.00	0.00	0.00	0.00	0.00	(0.0)	0.00 (0.0)	0.00 (0.0)	3.00 (100.0)	0.00 (0.0)	0.00	0.00	3.00	-----	-----	-----	-----	-----		
TOTALS			166.68					1.48	(0.9)	17.95 (10.8)	27.66 (16.6)	53.14 (31.9)	66.45 (39.9)	25.75	3.14	96	203	5.5/AC.	7.5/AC.	0.00	0.00

OVERALL DENSITY TABULATION
 OVERALL S.F.D./GROSS ACRE 5.8 UNITS/AC. 2.8 UNITS/AC. LAND USE ACREAGES* 17.95 149.3
 OVERALL OR./GROSS ACRE 7.5 UNITS/AC. 14.0 UNITS/AC. SINGLE FAMILY DETACHED (S.F.D.) 24.4 59.0
 OVERALL EMPLOYMENT F.A.R. 0.55 OTHER RESIDENTIAL (OR.) 53.14 711
 OVERALL S.F.D./OR. DENSITY 1.8 UNITS/AC. 2.2 UNITS/AC. EMPLOYMENT 66.45 174.5
 OPEN SPACE 0.00 0.00
 TOTALS 166.68 507.1
 *LAND ACREAGES INCLUDE NON-BUILDABLE AREAS

NON-BUILDABLE TRACKING CHART

PARCEL	TOTAL NON-BUILDABLE PARCEL AREA	FILE UNDER WHICH PARCEL WAS CREATED	FILE UNDER WHICH PARCEL WAS CONVERTED	AREA CONVERTED	CONVERTED TO	AREA REMAINING
A	0.52	F-03-40	F-04-42	0.52	OR. LOTS	---
B	0.43	F-03-40	F-04-42	0.43	S.F.D. LOTS	---
C	0.24	F-03-40	SP-05-03	0.24	R/W (EMP.)	---
D	1.02	F-04-42	SP-05-03	1.02	R/W (EMP.)	---
E	1.64	F-04-42	F-05-81	1.64	R/W (EMP.)	---
F	1.58	F-05-81	---	0	---	1.58
G	0.10	F-05-81	---	0	---	0.10
TOTAL	5.58			0		1.48

OVERALL OPEN SPACE TRACKING CHART

PHASE NO.	FILE REF. NO.	GROSS ACREAGE	OS. AC. (%)	ACTIVE OS. AC. (%) *
1	F-03-01	51.98	21.15 (40.7)	---
2	F-03-40	51.43	15.15 (29.3)	5.35 (35.2) *
3	F-04-42	58.80	22.85 (38.9)	---
4a	F-05-81 / 82	15.41	6.10 (43.3)	0.24 (4.3) *
4b	F-05-194	0.00	0.00 (0.0)	---
4c	F-05-112/113	3.00	0.00 (0.0)	---
TOTAL	166.68	66.45 (39.9)	5.84 (8.8) *	

* The percent of active open space is based upon the total open space provided.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 William Z. ... 8-19-05
 Chief, Bureau of Highways
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 ... 8/24/05
 Chief, Division of Land Development
 ... 8/24/05
 Chief, Development Engineering Division

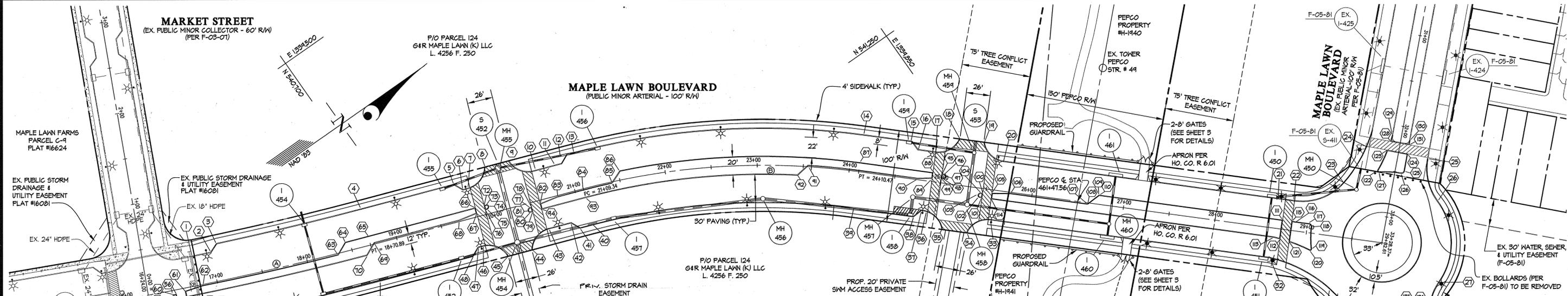
GLWGUTSCHICK LITTLE & WEBER, P.A.
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 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

PREPARED FOR:
 G&R MAPLE LAWN INC.
 SUITE 410 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: CHARLIE O'DONOVAN
 410-484-8400

COVER SHEET
MAPLE LAWN FARMS
BUSINESS DISTRICT - AREA 2 /
HILLSIDE DISTRICT - AREA 2
MAPLE LAWN BOULEVARD EXTENSION
P/O PARCEL 124 L. 4256 E. 250, P/O PARCEL 129
 SCALE AS SHOWN ZONING MXD-3 G. L. W. FILE NO. 04080
 DATE July, 2005 TAX MAP - GRID 41-22/46-3 SHEET 1 OF 22
 ELECTION DISTRICT No. 5 HOWARD COUNTY, MARYLAND

THIS PLAN PROPOSES THE EARLY CONNECTION OF MAPLE LAWN BOULEVARD TO CREATE A THROUGH ROAD CONDITION. IT DOES NOT INCLUDE ANY NEW DEVELOPMENT, EITHER RESIDENTIAL OR COMMERCIAL.

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MAPLE LAWN BOULEVARD CENTERLINE CURVE TABLE

CURVE	LENGTH	RADIUS	TANGENT	CHORD	BEARING	DELTA
(A)	124.41	3375.00	44.73	124.38	N21°51'25"E	31°23'56"
(B)	301.12	165.00	152.54	299.18	S91°31'33"W	22°33'11"

TOP OF CURB ELEVATION TABLE

PT. NO.	STATION	OFFSET	ELEV.	PT. NO.	STATION	OFFSET	ELEV.	PT. NO.	STATION	OFFSET	ELEV.	PT. NO.	STATION	OFFSET	ELEV.	PT. NO.	STATION	OFFSET	ELEV.
(1)	17+00.00	32.00'	L	420.55	(26)	32+73.49	51.11'	L	421.60	(51)	16+79.56	32.00'	R	420.41	(76)	20+00.80	5.00'	L	426.95
(2)	17+08.10	40.00'	L	420.40	(27)	32+73.49	51.11'	L	420.86	(52)	16+64.58	32.00'	R	420.09	(77)	20+48.42	5.00'	R	427.98
(3)	18+70.89	40.00'	L	423.38	(28)	32+73.49	51.11'	L	420.60	(53)	16+40.95	50.00'	R	420.95	(78)	20+50.04	5.00'	R	428.01
(4)	19+74.75	40.00'	L	425.61	(29)	32+73.49	51.11'	L	420.60	(54)	16+15.25	50.00'	R	421.05	(79)	20+50.04	10.00'	R	427.91
(5)	19+82.75	32.00'	L	426.02	(30)	29+78.46	74.89'	R	421.50	(55)	15+91.59	31.99'	R	418.52	(80)	20+47.42	10.00'	R	427.85
(6)	19+88.42	32.00'	L	426.15	(31)	29+33.37	57.45'	R	422.70	(56)	16+54.09	4.50'	R	420.43	(81)	20+45.42	8.00'	R	427.85
(7)	20+12.42	50.00'	L	427.02	(32)	28+64.61	32.00'	R	424.98	(57)	16+54.21	10.00'	R	420.32	(82)	20+60.04	3.68'	R	428.25
(8)	20+38.42	50.00'	L	427.58	(33)	25+59.06	32.00'	R	432.14	(58)	16+51.20	10.00'	R	420.26	(83)	20+60.04	1.00'	R	428.74
(9)	20+64.51	32.00'	L	427.78	(34)	25+35.06	50.00'	R	432.86	(59)	16+49.20	8.06'	R	420.25	(84)	21+09.34	1.00'	R	429.37
(10)	20+86.51	32.00'	L	428.25	(35)	25+08.98	50.00'	R	433.18	(60)	16+51.82	4.78'	R	420.38	(85)	21+41.17	0.72'	R	430.06
(11)	20+94.42	40.00'	L	428.19	(36)	24+84.98	32.00'	R	433.04	(61)	16+64.08	3.30'	R	420.67	(86)	21+52.07	10.00'	L	430.12
(12)	21+09.34	40.00'	L	428.51	(37)	24+83.35	32.00'	R	433.06	(62)	16+84.07	0.97'	R	421.15	(87)	24+10.47	10.00'	L	433.76
(13)	21+35.14	40.00'	L	432.26	(38)	24+75.69	40.00'	R	432.87	(63)	18+34.01	1.16'	R	424.37	(88)	24+87.02	10.00'	L	433.47
(14)	21+62.98	40.00'	L	432.94	(39)	24+10.47	40.00'	R	433.08	(64)	18+44.87	9.88'	L	424.42	(89)	24+90.35	3.50'	L	433.57
(15)	21+82.75	32.00'	L	433.13	(40)	21+09.34	40.00'	R	428.51	(65)	18+70.89	10.00'	L	424.06	(90)	24+74.21	1.00'	L	433.74
(16)	21+90.35	32.00'	L	433.98	(41)	20+95.24	40.00'	R	428.20	(66)	19+90.80	10.00'	L	426.64	(91)	23+55.45	1.00'	L	433.73
(17)	21+98.42	40.00'	L	432.98	(42)	20+87.24	32.00'	R	428.27	(67)	19+90.80	3.68'	L	426.76	(92)	23+44.41	10.00'	R	433.47
(18)	25+14.35	50.00'	L	433.30	(43)	20+62.33	32.00'	R	427.74	(68)	19+70.42	1.00'	L	426.38	(93)	21+09.34	10.00'	R	429.19
(19)	25+35.14	40.00'	L	432.26	(44)	20+38.33	50.00'	R	427.58	(69)	18+75.84	1.00'	L	424.35	(94)	20+60.04	10.00'	R	428.13
(20)	25+64.43	32.00'	L	432.03	(45)	20+12.33	50.00'	R	427.02	(70)	18+64.73	9.71'	R	423.94	(95)	25+00.35	9.92'	L	433.35
(21)	28+64.66	32.00'	L	424.98	(46)	19+88.33	32.00'	R	426.14	(71)	16+64.20	10.00'	R	420.54	(96)	25+02.97	9.92'	L	433.32
(22)	28+82.21	32.00'	L	424.55	(47)	19+82.75	32.00'	R	426.02	(72)	20+00.80	10.00'	L	426.85	(97)	25+04.97	7.92'	L	433.34
(23)	32+73.49	51.11'	R	422.00	(48)	19+74.75	40.00'	R	425.61	(73)	20+03.42	10.00'	L	426.91	(98)	25+01.97	4.92'	L	433.43
(24)	MATCH EXISTING				(49)	18+70.89	40.00'	R	423.38	(74)	20+05.42	8.00'	L	426.99	(99)	25+00.35	4.92'	L	433.45
(25)	MATCH EXISTING				(50)					(75)	20+02.42	5.00'	L	426.99	(100)	25+46.64	5.00'	R	432.88
(26)																			

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Chief, Bureau of Highways *W. F. M... 8-19-05*
 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Chief, Division of Land Development *K. S. D... 8/26/05*
 Date

Chief, Development Engineering Division *MK 8/26/05*
 Date

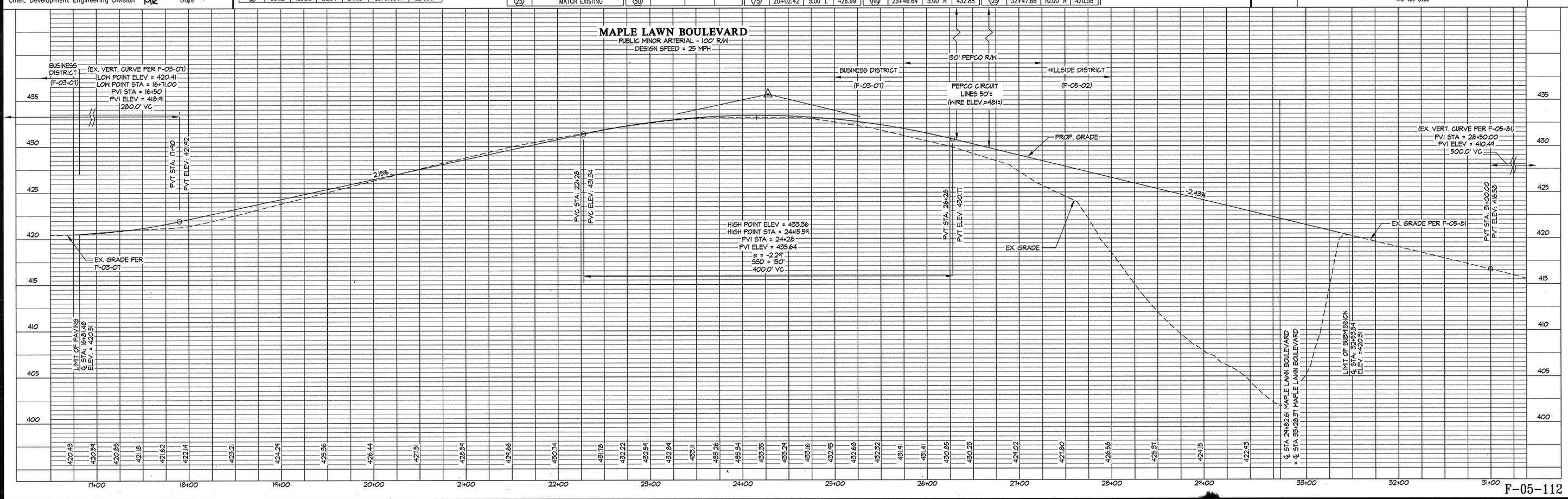
NOTE: THE STREET TREES AND SIDEWALKS WILL BE CONSTRUCTED AS PART OF THE IMPROVEMENTS PROPOSED UNDER FUTURE SITE PLANS. THE BUSINESS OWNER'S ASSOCIATION WILL BE RESPONSIBLE FOR THE FUTURE MAINTENANCE OF ITEMS BETWEEN THE BACK OF CURB AND BUILDINGS.

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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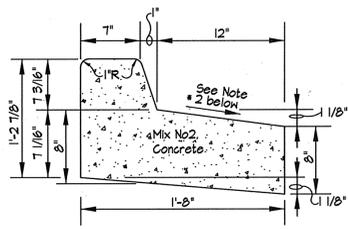
Road Construction Plans
MAPLE LAWN FARMS
 BUSINESS DISTRICT - AREA 2/
 HILLSIDE DISTRICT - AREA 2
 MAPLE LAWN BOULEVARD EXTENSION
 P/O PARCEL 124 L. 4256 F. 250, P/O PARCEL 129
 ELECTION DISTRICT No. 5 HOWARD COUNTY, MD

OWNER:
 GAR MAPLE LAWN INC.
 SUITE 410 WOODHOLME CENTER
 1828 REVERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: CHARLIE O'DONOVAN
 410-484-8100

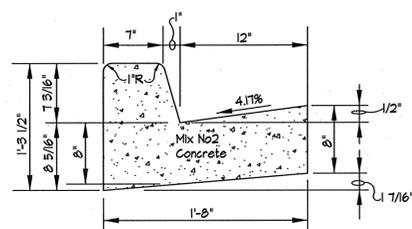
DESIGNED DEV: SCALE AS SHOWN
 DRAWN AWL: DRAWING 2 OF 22
 CHECKED DEV: ZONING MXD-3
 DATE: JULY, 2005 JOB No. 04080



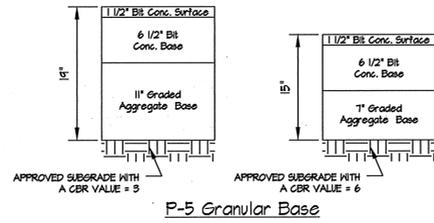
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Reverse T¹ Combination Curb & Gutter
N.T.S.

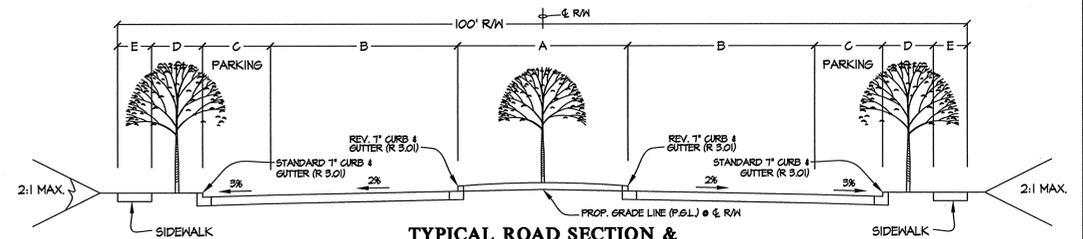


Standard T¹ Combination Curb & Gutter
N.T.S.



Paving Sections

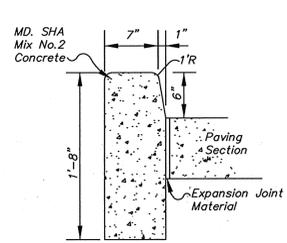
Note: Depending on the CBR values obtained in the field, the paving sections may be revised, if approved by a professional soils engineer. These substitutions must also be approved by the Howard County Dept. of Public Works.



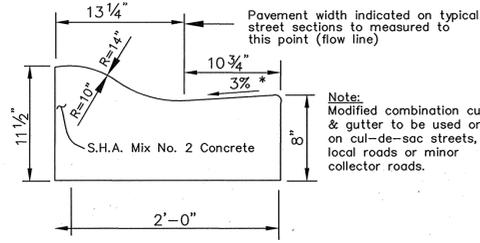
ROAD NAME	STATION	ROAD CLASSIFICATION	DESIGN SPEED	A	B	C	D	E	F	R/W	PAVING SECTION
MAPLE LAWN BLVD.	16+81.48 TO 25+50	MINOR ARTERIAL	25 MPH	20'	22'	20'	6'	4'	0'	100'	P-5

Notes:

- Standard T¹ Combination Curb and Gutter to be used in all public rights of way.
- Gutter pan at median edge of intermediate arterials or the high side of super-elevated sections shall be sloped at the same rate and in the same direction as the pavement. Match pavement cross slope when curb is located on the low side of super-elevated section and the rate of super-elevation is greater than 3% for modified curb and gutter.



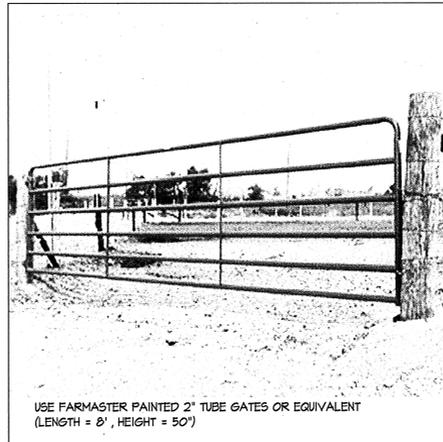
Barrier Curb (on-site)
N.T.S.



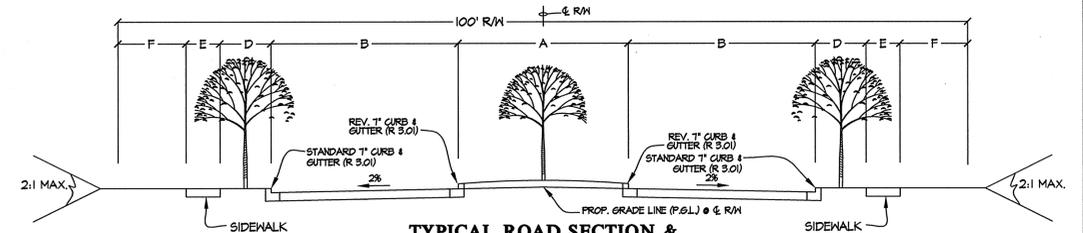
Modified Combination Curb & Gutter

- Gutter pan at the median edge of intermediate arterials or the high side of super-elevated sections shall be sloped at the same rate and in the same direction as the pavement. Match pavement cross slope when curb is located on the low side of super-elevated section and the rate of super-elevation is greater than 3% for modified curb and gutter.

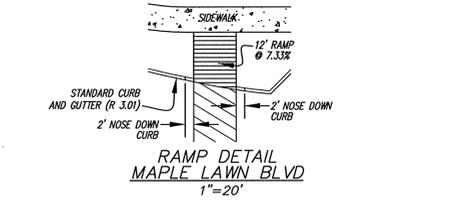
Combination Curb and Gutter



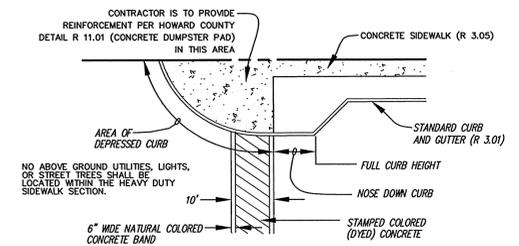
USE FARMSTEAD PAINTED 2' TUBE GATES OR EQUIVALENT (LENGTH = 8', HEIGHT = 50')



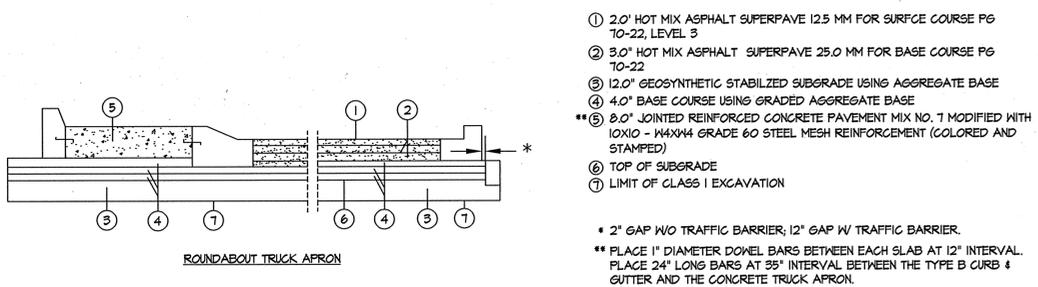
ROAD NAME	STATION	ROAD CLASSIFICATION	DESIGN SPEED	A	B	C	D	E	F	R/W	PAVING SECTION
MAPLE LAWN BLVD.	25+50 TO 29+00	MINOR ARTERIAL	25 MPH	20'	22'	0'	7'	4'	1'	100'	P-5



RAMP DETAIL
MAPLE LAWN BLVD
1"=20'



TYPICAL RAMPING/CROSSWALK DETAIL
N.T.S.



ROUNDABOUT TRUCK APRON

- 2.0' HOT MIX ASPHALT SUPERPAVE 12.5 MM FOR SURFACE COURSE PG 10-22, LEVEL 3
 - 3.0' HOT MIX ASPHALT SUPERPAVE 25.0 MM FOR BASE COURSE PG 10-22
 - 12.0' GEOSYNTHETIC STABILIZED SUBGRADE USING AGGREGATE BASE
 - 4.0' BASE COURSE USING GRADED AGGREGATE BASE
 - 8.0' JOINTED REINFORCED CONCRETE PAVEMENT MIX NO. 7 MODIFIED WITH 10X10 - 1/4X1/4 GRADE 60 STEEL MESH REINFORCEMENT (COLORED AND STAMPED)
 - TOP OF SUBGRADE
 - LIMIT OF CLASS I EXCAVATION
- 2' GAP W/O TRAFFIC BARRIER, 12' GAP W/ TRAFFIC BARRIER.
 - PLACE 1" DIAMETER DOVEL BARS BETWEEN EACH SLAB AT 12" INTERVAL. PLACE 24" LONG BARS AT 36" INTERVAL BETWEEN THE TYPE B CURB & GUTTER AND THE CONCRETE TRUCK APRON.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William F. Mahesh 8-19-05
 Chief, Bureau of Highways
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Kathleen L. Wolfson 8/26/05
 Chief, Division of Land Development
Mike 8/26/05
 Chief, Development Engineering Division



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

PREPARED FOR:
 G&R MAPLE LAWN INC.
 SUITE 410 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: CHARLIE O'DONOVAN
 410-484-8400

ROAD DETAILS
MAPLE LAWN FARMS
BUSINESS DISTRICT - AREA 2 /
HILLSIDE DISTRICT - AREA 2
 MAPLE LAWN BOULEVARD EXTENSION
 P/O PARCEL 124 L. 4255 R. 250, P/O PARCEL 129
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	04080
DATE	TAX MAP - GRID	SHEET
July, 2005	41-22/46-3	3 OF 22

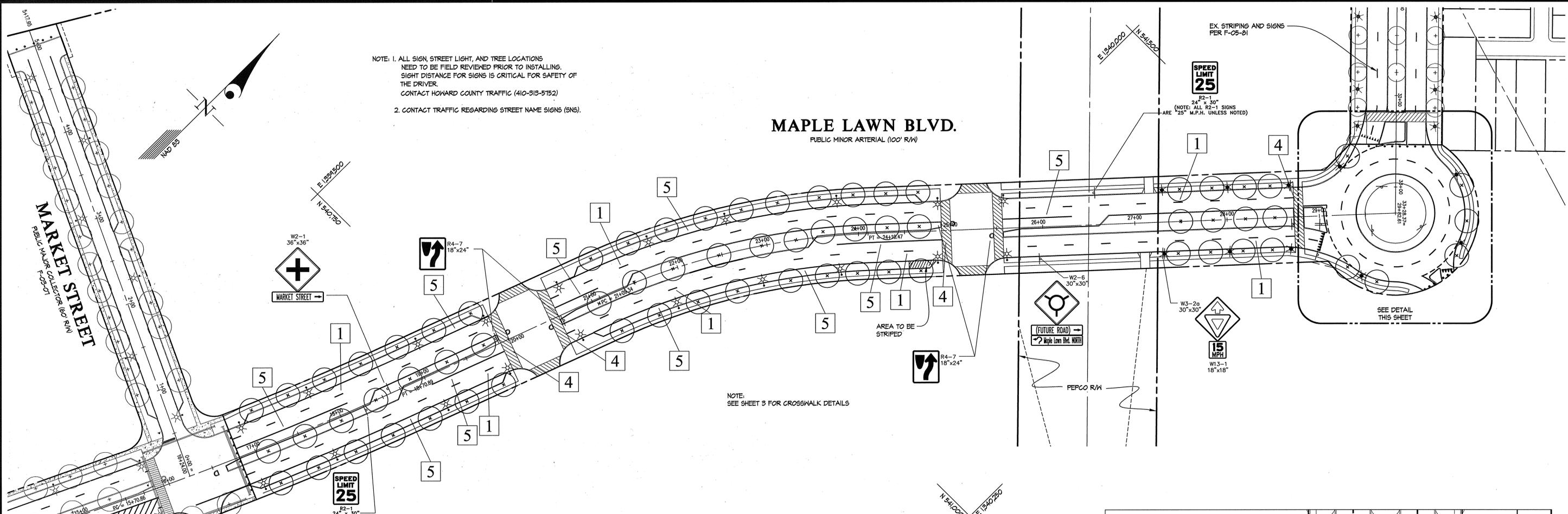
L:\CADD\DRAWINGS\04001\04001C\FINALS\04080S03.dwg 7/28/2005 11:38:36 AM EST

NOTE: 1. ALL SIGN, STREET LIGHT, AND TREE LOCATIONS NEED TO BE FIELD REVIEWED PRIOR TO INSTALLING. SIGHT DISTANCE FOR SIGNS IS CRITICAL FOR SAFETY OF THE DRIVER. CONTACT HOWARD COUNTY TRAFFIC (410-313-5152)

2. CONTACT TRAFFIC REGARDING STREET NAME SIGNS (SNS).

MAPLE LAWN BLVD.

PUBLIC MINOR ARTERIAL (100' R/W)



NOTE: SEE SHEET 3 FOR CROSSWALK DETAILS

STREET TREE REQUIREMENTS

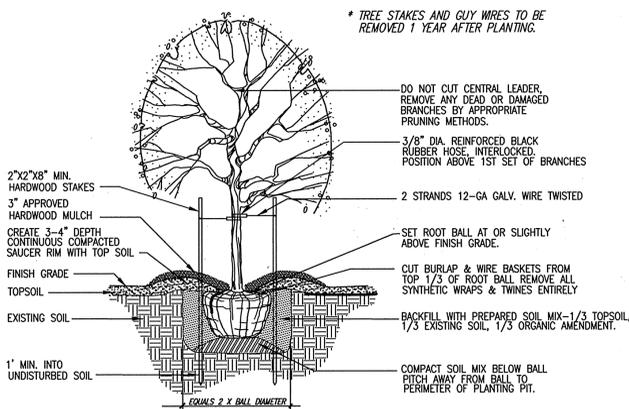
ROAD	LENGTH OF CURB	# OF TREES REQUIRED	# OF TREES PROVIDED
MAPLE LAWN BOULEVARD	2511'	63	63

SYMBOL	NAME (BOTANICAL/Common)	SIZE	REMARKS
(+)	Acer Saccharum / Green Mountain Sugar Maple	2 1/2" cal.	B & B Full Heads

SEE SHEET 10 FOR STORM DRAIN SIZE, TYPE AND LENGTH.
 Minimum tree quantities and preferred spacing are as follows:
 Maple Lawn Blvd. & larger Blvd. 1 tree per 40 linear feet, both sides.
 All other streets: 1 tree per 30 linear feet, both sides.
 Private Alleys No trees required.

These are only minimum standards. Trees should be placed to align where possible with lot lines and demising walls of units so as to avoid blocking the fronts and/or doors and windows of units.

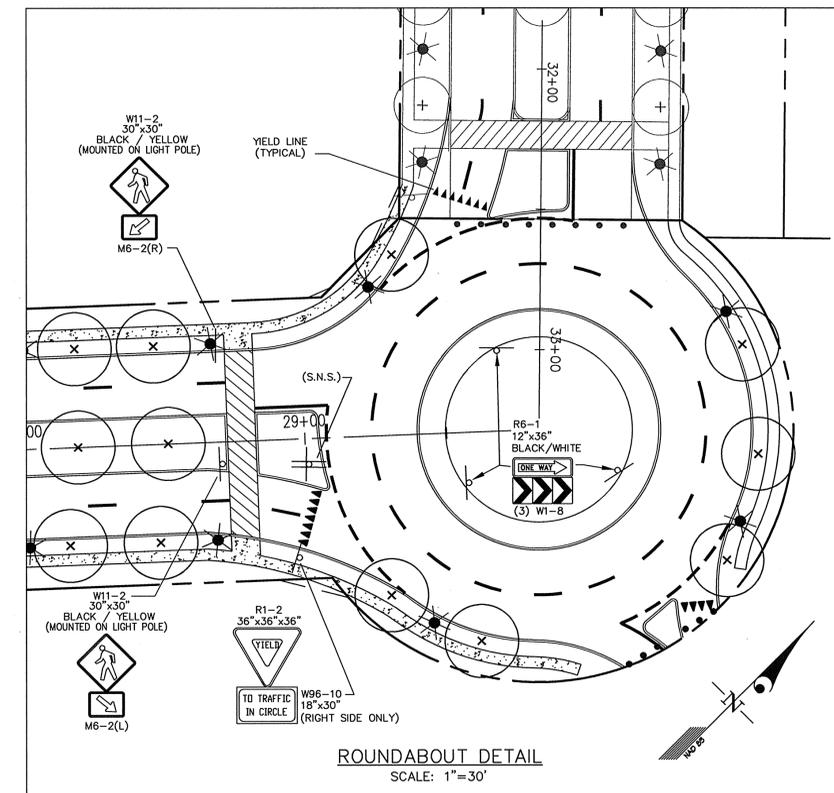
* TREE STAKES AND GUY WIRES TO BE REMOVED 1 YEAR AFTER PLANTING.



DECIDUOUS TREE PLANTING DETAIL FOR PLANTING MATERIAL UP TO 3 1/2" CALIPER NTS

STREET LIGHT SCHEDULE

LOCATION	LAMP TYPE	FIXTURE	POLE TYPE
Q STA. 16+95 MAPLE LAWN BLVD. 35' L.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 16+95 MAPLE LAWN BLVD. 43' R.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 17+18 MAPLE LAWN BLVD. 43' L.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 17+18 MAPLE LAWN BLVD. 43' R.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 19+09 MAPLE LAWN BLVD. 43' L.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 19+09 MAPLE LAWN BLVD. 43' R.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 19+26 MAPLE LAWN BLVD. 35' L.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 19+26 MAPLE LAWN BLVD. 35' R.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 20+14 MAPLE LAWN BLVD. 35' L.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 20+14 MAPLE LAWN BLVD. 35' R.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 21+20 MAPLE LAWN BLVD. 43' L.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 21+20 MAPLE LAWN BLVD. 43' R.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 22+23 MAPLE LAWN BLVD. 43' L.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 22+23 MAPLE LAWN BLVD. 43' R.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 22+68 MAPLE LAWN BLVD. 43' L.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 22+68 MAPLE LAWN BLVD. 43' R.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 23+17 MAPLE LAWN BLVD. 43' L.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 23+17 MAPLE LAWN BLVD. 43' R.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 24+25 MAPLE LAWN BLVD. 35' L.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 24+25 MAPLE LAWN BLVD. 35' R.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 24+81 MAPLE LAWN BLVD. 35' L.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 24+81 MAPLE LAWN BLVD. 35' R.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 25+51 MAPLE LAWN BLVD. 35' L.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 25+51 MAPLE LAWN BLVD. 35' R.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 25+60 MAPLE LAWN BLVD. 35' L.	250-WATT HPS VAPOR	TEARDROP	23' BLACK FIBERGLASS W/ 4' ARM
Q STA. 27+31 MAPLE LAWN BLVD. 35' R.	150-WATT HPS VAPOR	ACORN POST TOP	12' BLACK FIBERGLASS
Q STA. 27+31 MAPLE LAWN BLVD. 35' L.	150-WATT HPS VAPOR	ACORN POST TOP	12' BLACK FIBERGLASS
Q STA. 28+02 MAPLE LAWN BLVD. 35' R.	150-WATT HPS VAPOR	ACORN POST TOP	12' BLACK FIBERGLASS
Q STA. 28+02 MAPLE LAWN BLVD. 35' L.	150-WATT HPS VAPOR	ACORN POST TOP	12' BLACK FIBERGLASS
Q STA. 28+68 MAPLE LAWN BLVD. 35' R.	150-WATT HPS VAPOR	ACORN POST TOP	12' BLACK FIBERGLASS
Q STA. 28+68 MAPLE LAWN BLVD. 35' L.	150-WATT HPS VAPOR	ACORN POST TOP	12' BLACK FIBERGLASS
N 541486 E 1340364	150-WATT HPS VAPOR	ACORN POST TOP	12' BLACK FIBERGLASS
N 541588 E 1340415	150-WATT HPS VAPOR	ACORN POST TOP	12' BLACK FIBERGLASS
N 541637 E 1340394	150-WATT HPS VAPOR	ACORN POST TOP	12' BLACK FIBERGLASS
N 541554 E 1340263	150-WATT HPS VAPOR	ACORN POST TOP	12' BLACK FIBERGLASS



PAVEMENT MARKING LEGEND

- 1 Install 5 inch broken white line for lane line (10 ft. segment, 30 ft. gap).
 - 3 Solid band of natural concrete (6" wide)
 - 4 Colored Stamped Concrete (4" Wide)
 - 5 Install 5 inch white solid line
 - * 6 Install 12 inch broken white line (3 ft. segment, 3 ft. gap).
 - 7 Install 8 inch solid white line for edge line.
- * Use thermo-plastic markings

STREET LIGHT LEGEND

- ★ 250 WATT HPS VAPOR (SAG)
- ★ 150 WATT HPS VAPOR (ACORN POST TOP)

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Walter F. ... 8-15-05
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

... 8/26/05
 Chief, Division of Land Development Date

... 8/26/05
 Chief, Development Engineering Division Date

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.
 SUITE 410 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: CHARLIE O'DONOVAN
 410-484-8400

SIGNING, STRIPING PLAN / STREET TREE INFORMATION

MAPLE LAWN FARMS
 BUSINESS DISTRICT - AREA 2 /
 HILLSIDE DISTRICT - AREA 2
 MAPLE LAWN BOULEVARD EXTENSION
 P/O PARCEL 124 L. 4256 P. 250, P/O PARCEL 129

SCALE	ZONING	G. L. W. FILE No.
1"=50'	MXD-3	04080
DATE	TAX MAP - GRID	SHEET
July, 2005	41-22/46-3	4 OF 22

ELECTION DISTRICT No. 5

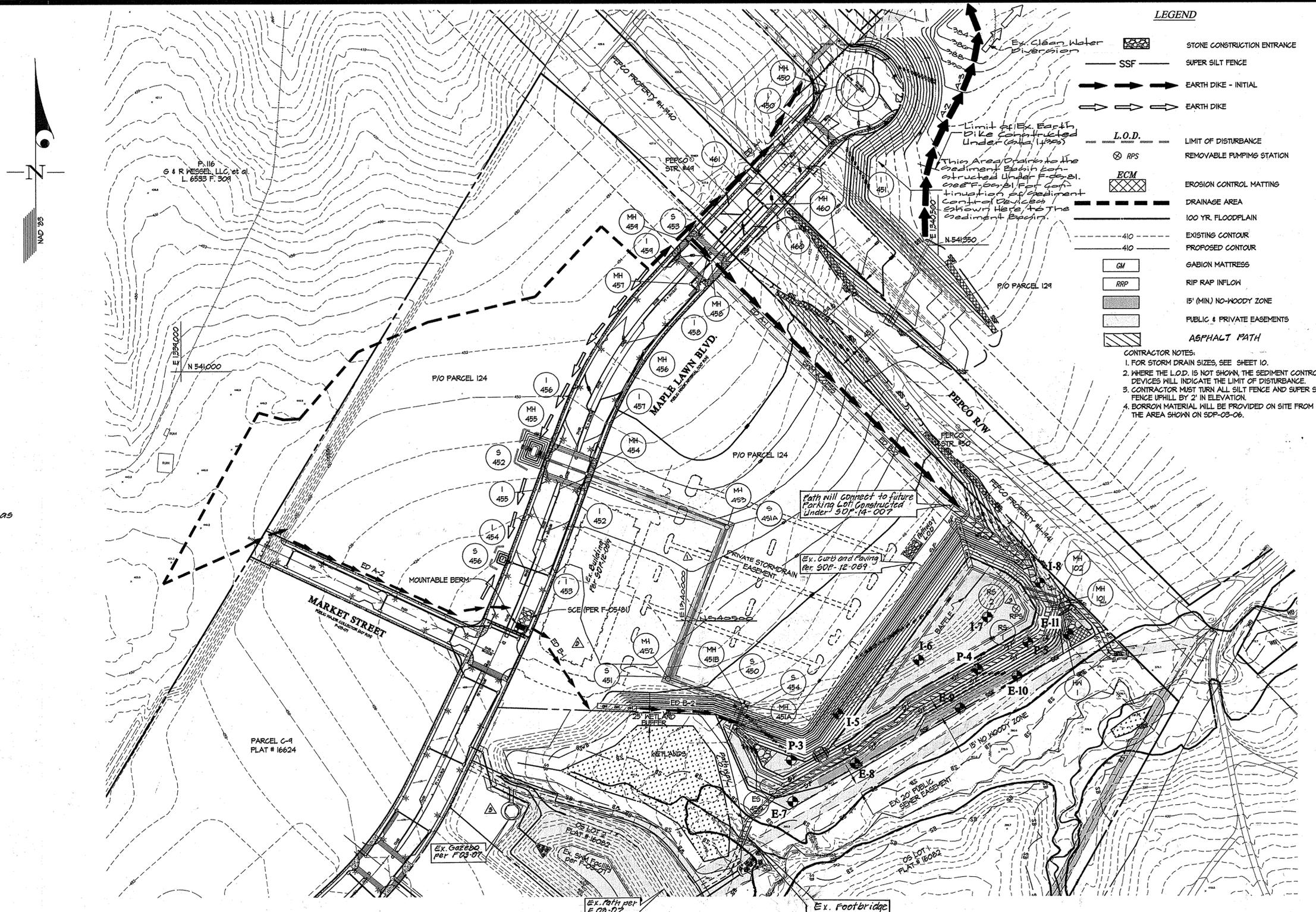
HOWARD COUNTY, MARYLAND

- Sequence of Construction**
1. Obtain grading permit and arrange for an on-site pre-construction meeting with the sediment control inspector. (1 day)
 2. Install earth dikes in the locations indicated as "initial". (2 weeks)
 3. Install super silt fence along south side of Maple Lawn Boulevard within the PEPCO R/W and at the toe of slope for the sediment basin. (1 day)
Note: When the limit of disturbance is adjacent to a tree save area, and silt fence is not required, install tree protection fence.
 4. Begin construction of the stormwater management pond. See sheet 6 for the initial grading of the pond. The contractor is not to install the gabion mattresses until item 13 below. It should be noted that the stormwater management pond will act as a sediment basin during construction. During construction the valve within RS-2 must remain closed and the 6" orifice must be blocked. (6 weeks)
 5. Once the fill for the pond reaches the top of dam elevation, install the earth dike as shown in order to provide positive drainage to the pond. Contractor must continue to provide positive drainage along the dikes as the fill continues and the earth dike is relocated. (1 week)
 6. With permission from the sediment control inspector, begin rough grading. (1 month)
As the fill progresses over the existing 18" HDPE the SSF must be relocated to along the top of pipe on both the upstream and downstream ends.
 7. Install storm drains per these road construction plans and the water and sewer per Cont. # 24-4274D. (3 weeks)
 8. Install temporary swale to divert the clean water through the roadway construction using the storm drain system. (2 days)
 9. Install curb and gutter, sidewalks, and base paving. (2 weeks)
 10. Fine grade site and stabilize disturbed areas in accordance with the topsoil and permanent permanent seeding notes. (1 week)
 11. Install surface course paving. (1 week)
 12. With permission from the sediment control inspector, remove erosion and sediment control devices and stabilize any disturbed areas as needed. (2 weeks)
 13. With permission from the sediment control inspector, convert the stormwater management facility to its final grades as shown on sheet 14. Once the contributing areas have been stabilized the 6" orifice can be opened and the 8" orifice used for temporary stormwater management must be blocked. The gabion mattresses may be installed at this time. (1 month)

- Sequence Of Construction for Pathway Construction**
1. Obtain Grading Permit and Arrange for an On-site Pre-Construction Meeting with the Sediment Control Inspector. (1 Day)
 2. Install Stabilized Construction Entrance and Silt Fence as shown on these Plans. (1 Week)
 3. With the permission of the Sediment Control Inspector Fine Grade the area of the asphalt path. (2 Weeks)
 4. Install asphalt path and steps. (1 Month)
 5. Stabilize disturbed areas in accordance with Permanent Seeding Notes. (1 Month)
 6. Once all contributing areas have been stabilized and the Sediment Control Inspector has granted permission, remove the sediment control devices and stabilize the disturbed areas in accordance with the Permanent Seeding Notes. (1 Week)

Site Analysis Associated with Pathway Construction

Total Area of Site	3.0 Acres (0.9 Lot 3)
Area Disturbed	0.64 Acres
Area to be Roofed or Paved	0.23 Acres
Area to be Vegetatively Stabilized	0.41 Acres
Total Cut	0 Cubic Yards
Total Fill	0 Cubic Yards
Offsite Waste/Borrow Area Location	N/A



LEGEND

- STONE CONSTRUCTION ENTRANCE
- SSF SUPER SILT FENCE
- EARTH DIKE - INITIAL
- EARTH DIKE
- L.O.D. LIMIT OF DISTURBANCE
- RPS REMOVABLE PUMPING STATION
- ECM EROSION CONTROL MATTING
- DRAINAGE AREA
- 100 YR. FLOODPLAIN
- EXISTING CONTOUR
- PROPOSED CONTOUR
- GM GABION MATTRESS
- RRP RIP RAP INFLOW
- 15' (MIN) NO-MOODY ZONE
- PUBLIC & PRIVATE EASEMENTS
- ASPHALT PATH

- CONTRACTOR NOTES:**
1. FOR STORM DRAIN SIZES, SEE SHEET 10.
 2. WHERE THE L.O.D. IS NOT SHOWN, THE SEDIMENT CONTROL DEVICES WILL INDICATE THE LIMIT OF DISTURBANCE.
 3. CONTRACTOR MUST TURN ALL SILT FENCE AND SUPER SILT FENCE UPHILL BY 2' IN ELEVATION.
 4. BORROW MATERIAL WILL BE PROVIDED ON SITE FROM THE AREA SHOWN ON SDP-03-06.

DEVELOPER'S/BUILDER'S CERTIFICATE
 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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction and 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.

ENGINEER'S CERTIFICATE
 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/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

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

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

7/28/05
 Signature of Developer/Builder Date
 Engineer's Signature Date
 Natural Resource Conservation Service Date
 Howard Soil Conservation District Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 8-19-05
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 [Signature] 8/26/05
 Chief, Division of Land Development Date

[Signature] 8/26/05
 Chief, Development Engineering Division Date



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: 301-421-4624 BALT: 410-880-1820 DC/VA: 301-999-2524 FAX: 301-421-4186			
7/22/05	Show Pathway, Ex. Curb and Building, Sediment Control, and Sequence of Construction	DEV	
11/29/05	Rev. Sediment Control Per F-03-01 and Updated Note #5	WJW	
DATE	REVISION	BY	APPR.

PREPARED FOR:
 G&R MAPLE LAWN INC.
 SUITE 410 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: CHARLIE O'DONOVAN
 410-484-8400

SEDIMENT CONTROL OVERVIEW PLAN

MAPLE LAWN FARMS
 BUSINESS DISTRICT - AREA 2 /
 HILLSIDE DISTRICT - AREA 2
 MAPLE LAWN BOULEVARD EXTENSION
 P/O PARCEL 124 L. 4256 F. 250, P/O PARCEL 129

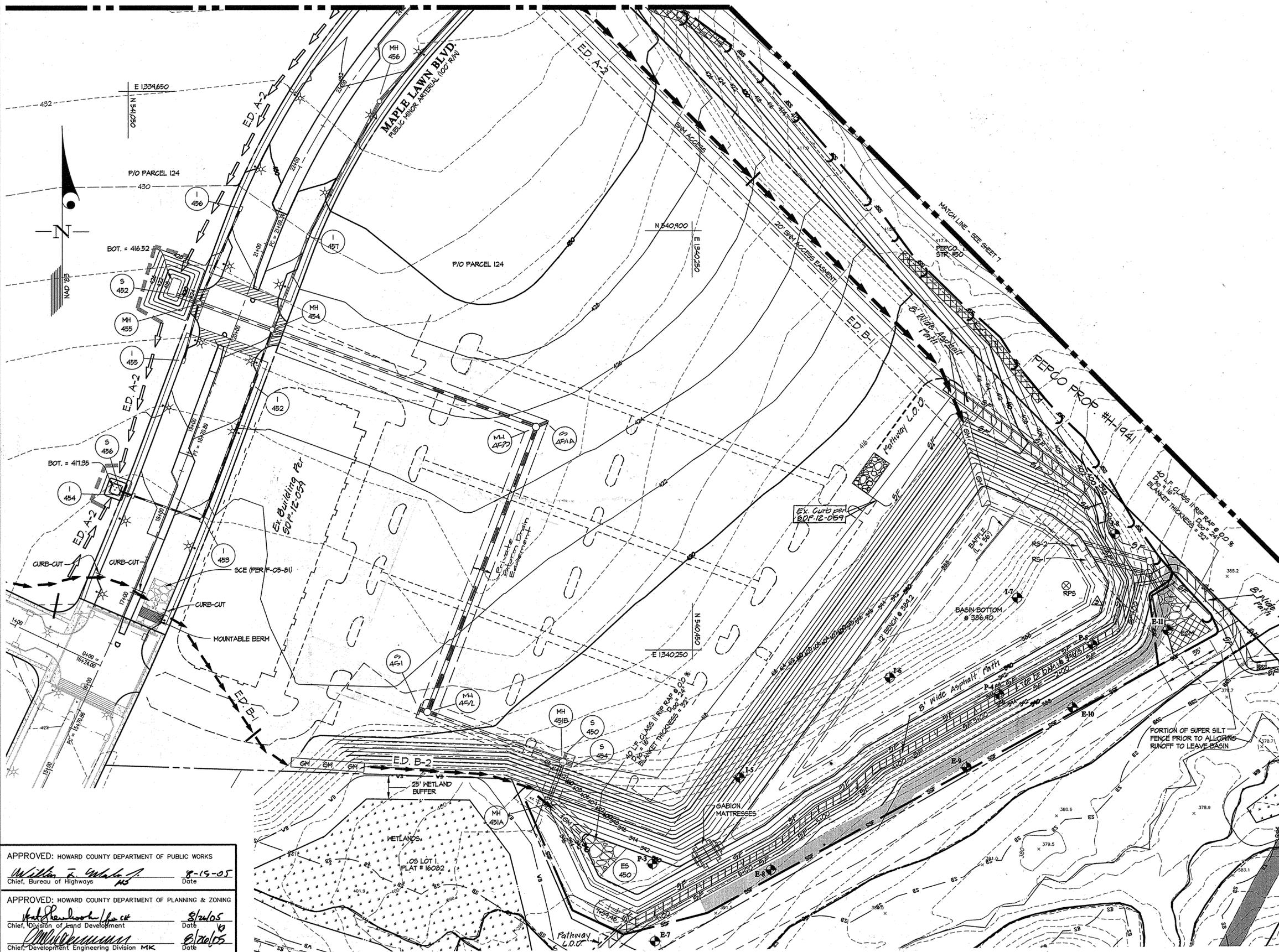
ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1"=100'	MXD-3	04080
DATE	TAX MAP - GRID	SHEET
July, 2005	41-22/46-3	5 OF 22

L:\CADD\DRAWINGS\04001\04001C\FINALS\04080SC05.dwg 7/28/2005 11:42:02 AM EST

MATCH LINE - SEE SHEET 1



DEVELOPER'S/BUILDER'S CERTIFICATE
 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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction and 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]
 Signature of Developer/Builder
 7/28/05
 Date

ENGINEER'S CERTIFICATE
 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/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.



[Signature]
 Engineer's Signature
 7-28-05
 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]
 Nature Resources Conservation Service
 8/1/05
 Date

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

[Signature]
 Howard Soil Conservation District
 8/1/05
 Date

	POND SUMMARY		
	Before	TEMPORARY SWM @ BASIN	Managed
1 YR	4,85 c.f.s.	43.24 c.f.s.	2.14 c.f.s. @ 34116
2 YR	11.63 c.f.s.	55.40 c.f.s.	2.51 c.f.s. @ 34116
10 YR	48.04 c.f.s.	45.51 c.f.s.	10.64 c.f.s. @ 34526

SEDIMENT BASIN	
DRAINAGE AREA	235 ACRES
NET VOLUME REQUIRED	42300 C.F.
NET VOLUME PROVIDED	65532 C.F. @ 384.20
DRY VOLUME REQUIRED	104252 C.F.
DRY VOLUME PROVIDED	104252 C.F. @ 34116
TOP OF EMBANKMENT	346.15
WEIR CREST ELEVATION	345.20
WEIR CREST LENGTH	84'
BOTTOM ELEVATION	336.40
CLEANOUT ELEVATION	330.00
BOTTOM DIMENSIONS	VARIES

Note: See sheet 5 for Continuation of Proposed Work.

NOTE TO CONTRACTOR
 EXISTING EMBANKMENT CONSTRUCTED UNDER SDP-03-06 MUST BE REMOVED PRIOR TO CONSTRUCTION OF THE FACILITY SHOWN ON THESE PLANS. THE LIMITS OF THE CORE TRENCH WILL BE DETERMINED BY THE GEOTECHNICAL ENGINEER IN THE FIELD.

- CONTRACTOR NOTES:**
- FOR STORM DRAIN SIZES, SEE SHEET 10.
 - WHERE THE L.O.D. IS NOT SHOWN, THE SEDIMENT CONTROL DEVICES WILL INDICATE THE LIMIT OF DISTURBANCE.
 - CONTRACTOR MUST TURN ALL SILT FENCE AND SUPER SILT FENCE UPHILL BY 2' IN ELEVATION.
 - BORROW MATERIAL WILL BE PROVIDED ON SITE FROM THE AREA SHOWN ON SDP-03-06.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature]
 Chief, Bureau of Highways
 8-15-05
 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signature]
 Chief, Division of Land Development
 8/26/05
 Date

[Signature]
 Chief, Development Engineering Division MK
 8/26/05
 Date

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	APPR.
7-22-05	Show Pathway Existing Curb and Building and Sediment Control	DEV	
1-10-06	Rev. storm drain from MH 457 to MH 452		

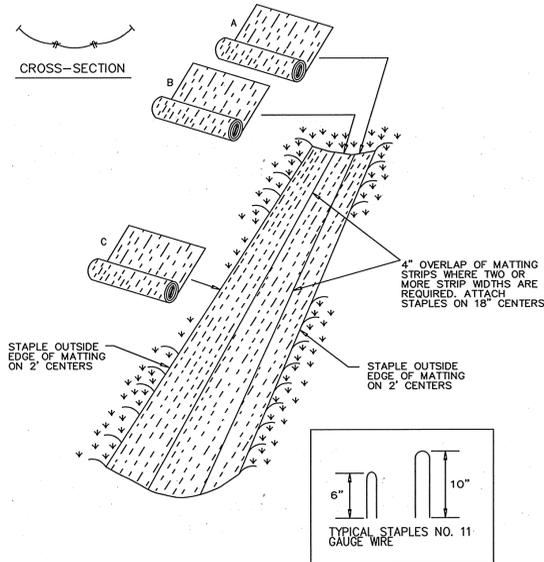
PREPARED FOR:
 G&R MAPLE LAWN INC.
 SUITE 410 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: CHARLIE O'DONOVAN
 410-484-8400

SEDIMENT CONTROL PLAN
MAPLE LAWN FARMS
BUSINESS DISTRICT - AREA 2 /
HILLSIDE DISTRICT - AREA 2
 MAPLE LAWN BOULEVARD EXTENSION
 P/O PARCEL 124 L. 4256 R. 250, P/O PARCEL 129
 ELECTION DISTRICT No. 5

SCALE	ZONING	G. L. W. FILE No.
1"=50'	MXD-3	04080
DATE	TAX MAP - GRID	SHEET
July, 2005	41-22/46-3	6 OF 22

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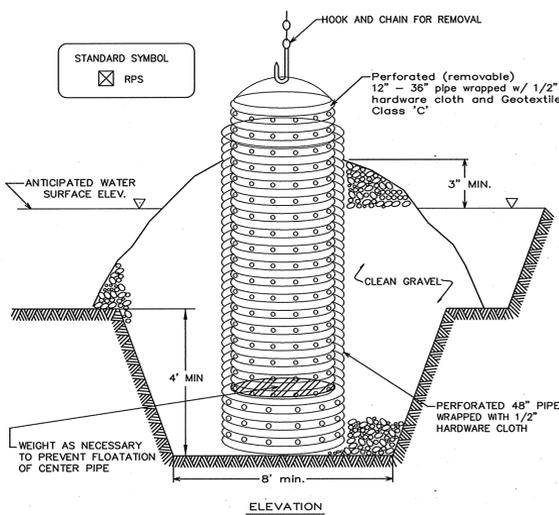
DETAIL 30 - EROSION CONTROL MATTING



- Construction Specifications**
- Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
 - Staple the 4" overlap in the channel center using an 18" spacing between staples.
 - Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
 - Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
 - Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
 - The discharge end of the matting liner should be similarly secured with 2 double rows of staples.
- Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

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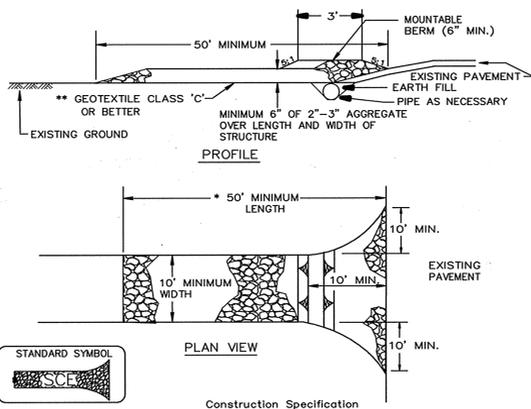
DETAIL 20A - REMOVABLE PUMPING STATION



- Construction Specifications**
- The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.
 - After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.
 - The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" x 6" slots or 1" diameter holes 6" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class C.
 - The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

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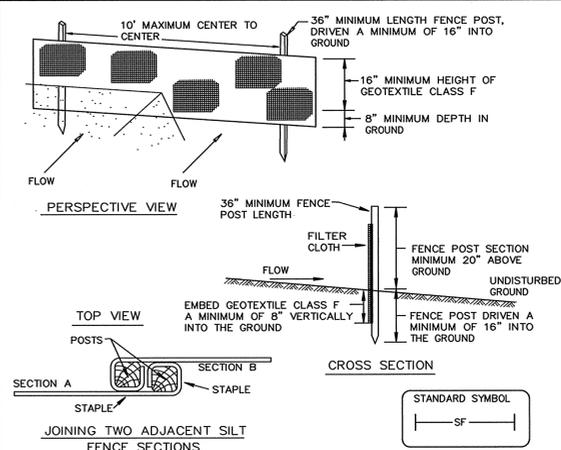
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



- Construction Specifications**
- Length - minimum of 50' (*30' for single residence lot).
 - Width - 10' minimum, should be flared at the existing road to provide a turning radius.
 - Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.
 - Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
 - Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
 - Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

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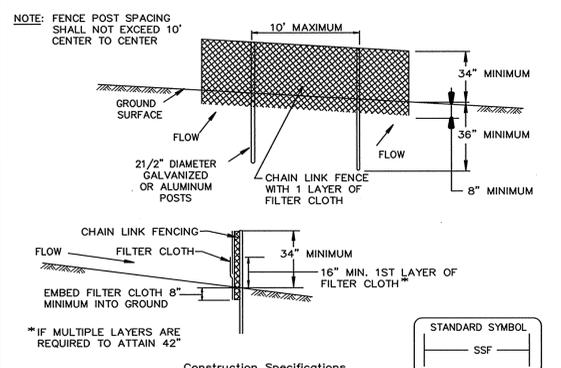
DETAIL 22 - SILT FENCE



- Construction Specifications**
- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pound per linear foot.
 - Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:
- | | | |
|----------------------|---------------------------|----------------|
| Tensile Strength | 50 lbs/in (min.) | Test: MSMT 509 |
| Tensile Modulus | 20 lbs/in (min.) | Test: MSMT 509 |
| Flow Rate | 0.3 gal/ft /minute (max.) | Test: MSMT 322 |
| Filtering Efficiency | 75% (min.) | Test: MSMT 322 |
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
 - Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

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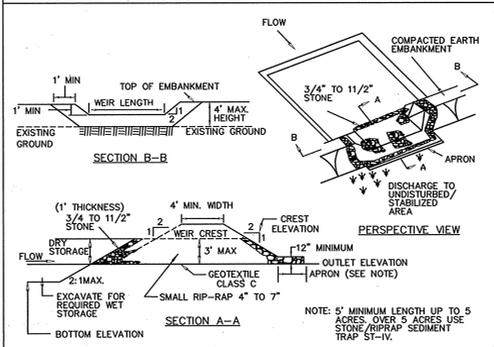
DETAIL 33 - SUPER SILT FENCE



- Construction Specifications**
- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
 - Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.
 - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
 - Filter cloth shall be embedded a minimum of 8" into the ground.
 - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
 - Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height
 - Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:
- | | | |
|----------------------|---------------------------|----------------|
| Tensile Strength | 50 lbs/in (min.) | Test: MSMT 509 |
| Tensile Modulus | 20 lbs/in (min.) | Test: MSMT 509 |
| Flow Rate | 0.3 gal/ft /minute (max.) | Test: MSMT 322 |
| Filtering Efficiency | 75% (min.) | Test: MSMT 322 |

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DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II



- Construction Specifications**
- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
 - The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by treading with equipment while it is being constructed.
 - All cut and fill slopes shall be 2:1 or flatter.
 - The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1" thick layer of 3/4" to 1 1/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.
 - Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

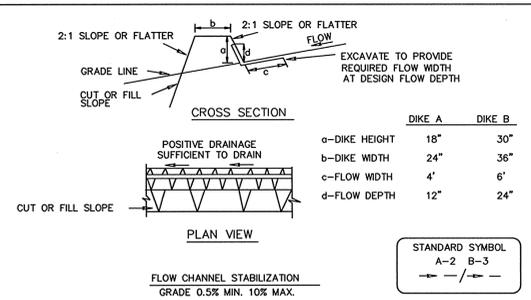
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STONE OUTLET SEDIMENT TRAP - ST II

- The structure shall be inspected periodically and after each rain and repairs made as needed.
- Construction of traps shall be carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentration inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.
- The structure shall be dewatered by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.
- Refer to section D for specifications concerning trap dewatering.
- Minimum trap depth shall be measured from the weir elevation.
- The elevation of the top of any dike directing water into the trap must equal or exceed the elevation of the trap embankment.
- Geotextile Class C shall be placed over the bottom and sides of the outlet channel prior to the placement of stone. Sections of filter cloth must overlap at least 1" with the section nearest the entrance placed on top. The filter cloth shall be embedded at least 6" into existing ground at the entrance of the outlet channel.
- Outlet - An outlet shall be provided, including a means of conveying the discharge in an erosion free manner to an existing stable channel.

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DETAIL 1 - EARTH DIKE



- Construction Specifications**
- Seed and cover with straw mulch.
 - Seed and cover with Erosion Control Matting or line with sod.
 - 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum
- All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
 - Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
 - Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area or a non-erosive velocity.
 - 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 dike.
 - The dike 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.
 - All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
 - Inspection and maintenance must be provided periodically and after each rain event.

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APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William J. ... 8-19-05
 Chief, Bureau of Highways

HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Kate ... 8/26/05
 Chief, Division of Land Development

DEVELOPER'S/BUILDER'S CERTIFICATE
 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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction and 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.

... 7/28/05
 Signature of Developer/Builder

ENGINEER'S CERTIFICATE
 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/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

... 7-28-05
 Engineer's Signature

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

... 8/19/05
 Howard Soil Conservation District

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.

... 8/19/05
 Natural Resources Conservation Service

GLWGUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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 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.
 SUITE 410 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: CHARLIE O'DONOVAN
 410-484-8400

SEDIMENT CONTROL DETAILS

**MAPLE LAWN FARMS
 BUSINESS DISTRICT - AREA 2 /
 HILLSIDE DISTRICT - AREA 2
 MAPLE LAWN BOULEVARD EXTENSION
 P/O PARCEL 124 L. 4256 F. 250, P/O PARCEL 129**

ELECTION DISTRICT No. 5

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	04080
DATE	TAX MAP - GRID	SHEET
July, 2005	41-22/46-3	8 OF 22

HOWARD COUNTY, MARYLAND

SEDIMENT CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (410) 131-1800
- 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.
- 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.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 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.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

Total Area of Site	: 3.0 Acres
Area Disturbed	: 22.6 Acres
Area to be roofed or paved	: 3.0 Acres
Area to be vegetatively stabilized	: 14.6 Acres
Total Cut	: 46,000 Cu. Yds.
Total Fill	: 81,500 Cu. Yds.

BORROW MATERIAL WILL BE PROVIDED ON SITE FROM THE AREA SHOWN ON SDP-03-06.

- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County 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.
- 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.

Seeded 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
- Preferred - Apply 2 tons per acre dolomitic limestone (42 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 (14 lbs/1000 sq ft).
 - Acceptable - Apply 2 tons per acre dolomitic limestone (42 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 May 15, and August 15 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 (10 to 40 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2 1/2 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 3 ft 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 reseeds.

TEMPORARY SEEDING NOTES

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

Seeded Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding (unless previously loosened).

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

Seeding: For periods March 1 thru May 15 and from August 1 thru October 15, seed with 2-1/2 bushel per acre of annual ryegrass (5.2 lbs/1000 sq ft.). For the period May 1 thru August 14, seed with 5 lbs per acre of weeping lovegrass (.71 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 1-1/2 to 2 tons per acre (10 to 40 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2 1/2 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes, 3 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

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

- This practice is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - 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.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.
- For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

- 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 Experiment Station.
- Topsoil Specifications - Soil to be used must meet the following:
 - 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.
 - Topsoil must be free of plant parts such as bermuda grass, quackgrass, Johnson grass, nutgrass, poison ivy, thistle, or others as specified.
 - 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 1000 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.

III. For sites having disturbed areas under 5 acres:

- Place topsoil (if required) and apply soil amendments as specified in 2.02 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- For sites having disturbed areas over 5 acres:
 - On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - 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.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having soluble salt greater than 500 parts per mill shall not be used.
 - No sod or seed shall be placed on soil which has been with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min) to permit dissipation of photo-toxic materials.
 - 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.
 - Place topsoil (if required) and apply soil amendments as specified in 2.02 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and 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.

V. Topsoil Application

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

VI. 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:

- Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - 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.
 - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
 - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
- Composted sludge shall be amended with a potassium fertilizer applied at a rate of 4lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Seeding, MD-VA Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1975.

DUST CONTROL

Controlling dust blowing and movement on construction sites and roads.

Definition

To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.

Purpose

To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.

Conditions Where Practice Applies

This practice is applicable to areas subject to dust blowing and movements where on and off-site damage is likely without treatment.

Specifications

Temporary Methods

- Mulches - See standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.
- Vegetative Cover - See standards for temporary vegetative cover.
- Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12' apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.
- Irrigation - This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point that runoff begins to flow.
- Barriers - Solid board fences, silt fences, burlap fences, straw bales, and similar material can be used to control currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 10 times their height are effective in controlling soil blowing.
- Calcium Chloride - Apply at rates that will keep surface moist. May need retreatment.

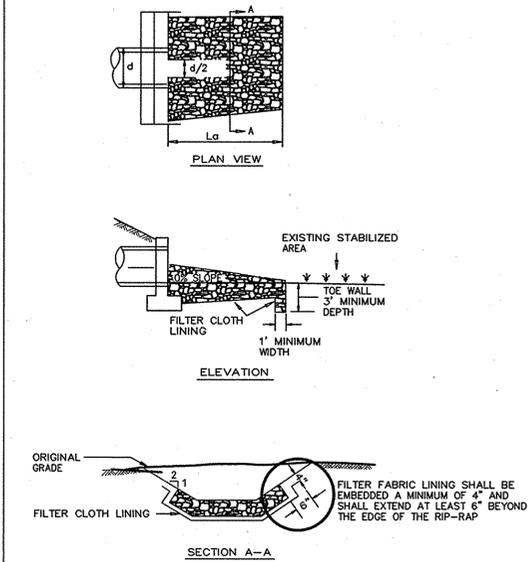
Permanent Methods

- Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
- Topsoiling - Covering with less erosive soil materials. See standards for topsoiling.
- Stone - Cover surface with crushed stone or coarse gravel.

Permanent Seeding Summary

Hardiness Zone: 6b		Seed Mixture: #9 (Tall Fescue/Kentucky Bluegrass)		Fertilizer Rate (10-20-20)	Lime Rate	
No.	Species	Application Rate	Seeding Dates	Seeding Depth		
9	Verticillate (95% by weight) Talon IV, Penn 1901, Rebel Extra and Certified Kentucky Bluegrass Blend (5% by weight) Courtyard Ravent, Yankee	6 to 8 lb/1000 sq ft	Mar 1 to May 15, Aug 15 to Oct 15	Tall Fescue Blend 1/4 - 1/2 in.	1.0 lb/1000 sq ft (45 lb/acre)	90 lb/1000 sq ft

DETAIL 27 - ROCK OUTLET PROTECTION III

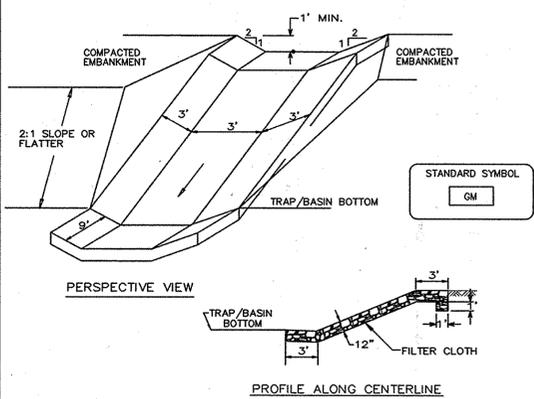


Construction Specifications

- The subgrade for the filter, riprap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
- The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.
- Geotextile shall be protected from punching, cutting, or tearing, by damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.
- Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.
- The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 8-7-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 6 - GABION INFLOW PROTECTION

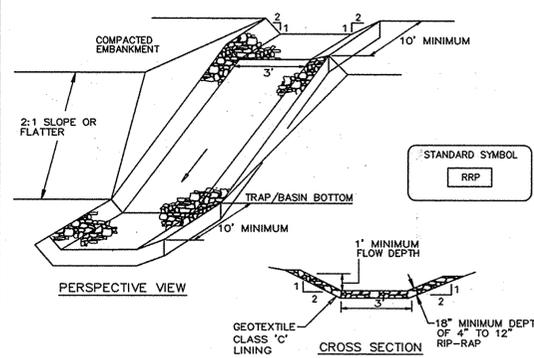


Construction Specifications

- Gabion inflow protection shall be constructed of 9' x 3' x 9" gabion baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes, and a 3' bottom width.
- Geotextile Class C shall be installed under all gabion baskets.
- The stone used to fill the gabion baskets shall be 4" - 7".
- Gabions shall be installed in accordance with manufacturers recommendations.
- Gabion Inflow Protection shall be used where concentrated flow is present on slopes steeper than 4:1.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 8-7-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 5 - RIP-RAP INFLOW PROTECTION



Construction Specifications

- Rip-rap lined inflow channels shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 3' (min.) bottom width. The channel shall be lined with 4" to 12" rip-rap to a depth of 18".
- Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.
- Entrance and exit sections shall be installed as shown on the detail section.
- Rip-rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.
- Gabion Inflow Protection may be used in lieu of Rip-rap Inflow Protection.
- Rip-rap should blend into existing ground.
- Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1, for slopes flatter than 10:1 use Earth Dike or Temporary Swale lining criteria.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 8-6-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Willa F. ... 8-19-05
Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

... 8/24/05
Chief, Division of Land Development

... 8/24/05
Chief, Development Engineering Division MK

DEVELOPER'S/BUILDER'S CERTIFICATE

"I certify that all development and/or construction will be done according to these plans, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction and 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/Builder: [Signature] Date: 7/28/05

ENGINEER'S CERTIFICATE

"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/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Engineer's Signature: [Signature] Date: 7-28-05

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: [Signature] Date: 8/14/05

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

Signature: [Signature] Date: 8/14/05

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20886
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-999-2524 FAX: 301-421-4186

7-22-14	Permanent Seeding Notes	DEV	BY	APPR.
DATE	REVISION			

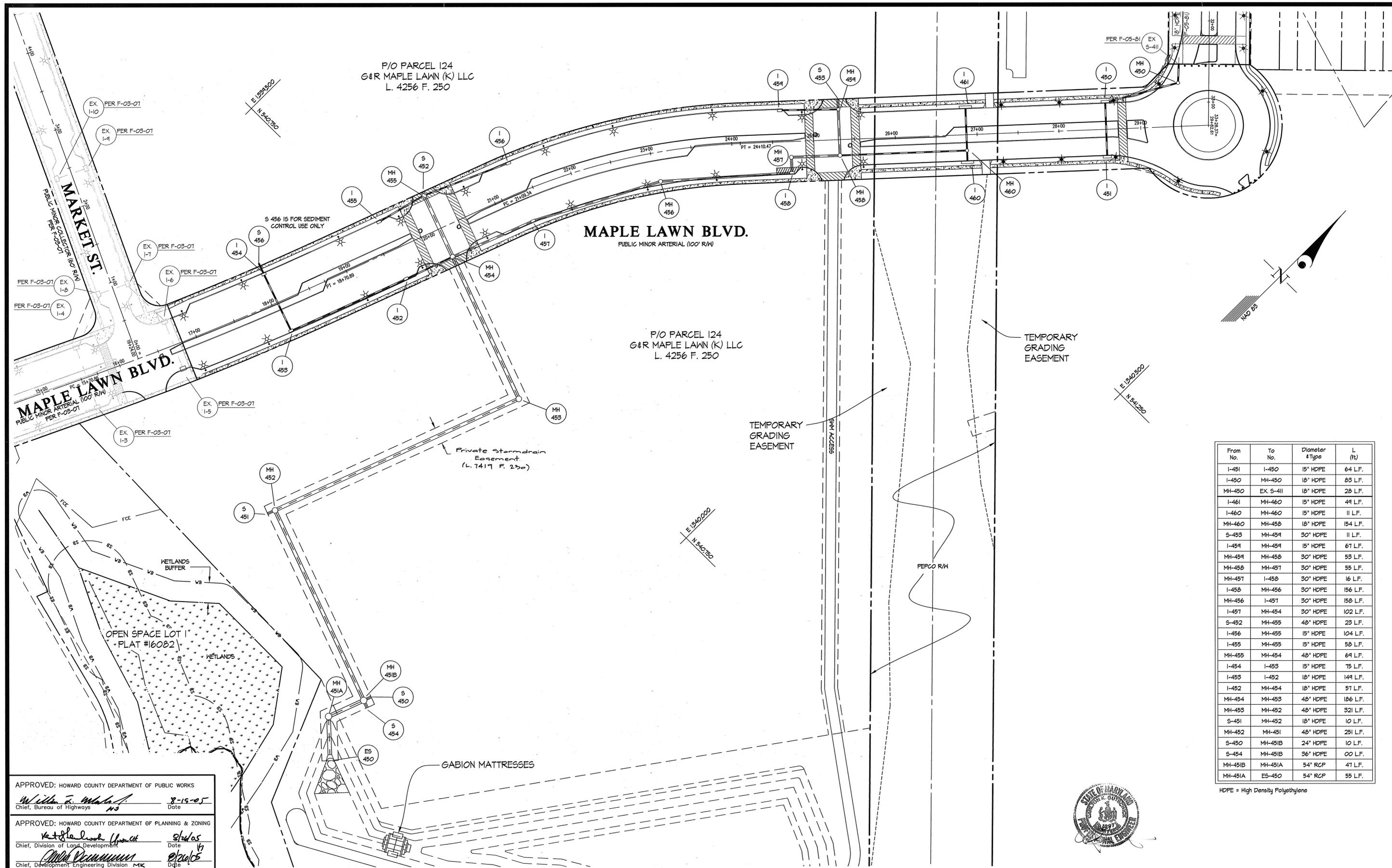
PREPARED FOR:
G&R MAPLE LAWN INC.
SUITE 410 WOODHOLE CENTER
1829 REISTERSTOWN ROAD
BALTIMORE, MD 21208
ATTN: CHARLIE O'DONOVAN
410-484-8400

SEDIMENT CONTROL DETAILS

MAPLE LAWN FARMS BUSINESS DISTRICT - AREA 2 / HILLSIDE DISTRICT - AREA 2
MAPLE LAWN BOULEVARD EXTENSION
P/O PARCEL 124 L 4256 P. 250, P/O PARCEL 129

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	04080
DATE	TAX MAP - GRID	SHEET
July, 2005	41-22/46-3	9 OF 22

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From No.	To No.	Diameter & Type	L (ft)
I-451	I-450	15" HDPE	64 L.F.
I-450	MH-450	10" HDPE	83 L.F.
MH-450	EX. S-411	10" HDPE	28 L.F.
I-461	MH-460	15" HDPE	49 L.F.
I-460	MH-460	15" HDPE	11 L.F.
MH-460	MH-458	10" HDPE	154 L.F.
S-453	MH-459	30" HDPE	11 L.F.
I-459	MH-459	15" HDPE	67 L.F.
MH-459	MH-458	30" HDPE	53 L.F.
MH-458	MH-457	30" HDPE	55 L.F.
MH-457	I-458	30" HDPE	16 L.F.
I-458	MH-456	30" HDPE	156 L.F.
MH-456	I-457	30" HDPE	158 L.F.
I-457	MH-454	30" HDPE	102 L.F.
S-452	MH-455	48" HDPE	23 L.F.
I-456	MH-455	15" HDPE	104 L.F.
I-455	MH-455	15" HDPE	58 L.F.
MH-455	MH-454	48" HDPE	69 L.F.
I-454	I-453	15" HDPE	75 L.F.
I-453	I-452	10" HDPE	149 L.F.
I-452	MH-454	10" HDPE	57 L.F.
MH-454	MH-453	48" HDPE	186 L.F.
MH-453	MH-452	48" HDPE	321 L.F.
S-451	MH-452	10" HDPE	10 L.F.
MH-452	MH-451	48" HDPE	251 L.F.
S-450	MH-451B	24" HDPE	10 L.F.
S-454	MH-451B	36" HDPE	00 L.F.
MH-451B	MH-451A	54" RCP	47 L.F.
MH-451A	ES-450	54" RCP	55 L.F.

HDPE = High Density Polyethylene

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William E. Mahan 8-15-05
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Ketia L. Lusk 8/24/05
 Chief, Division of Land Development Date

Mark P. ... 8/24/05
 Chief, Development Engineering Division Date

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 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

PREPARED FOR:
 G&R MAPLE LAWN INC.
 SUITE 410 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: CHARLIE O'DONOVAN
 410-484-8400

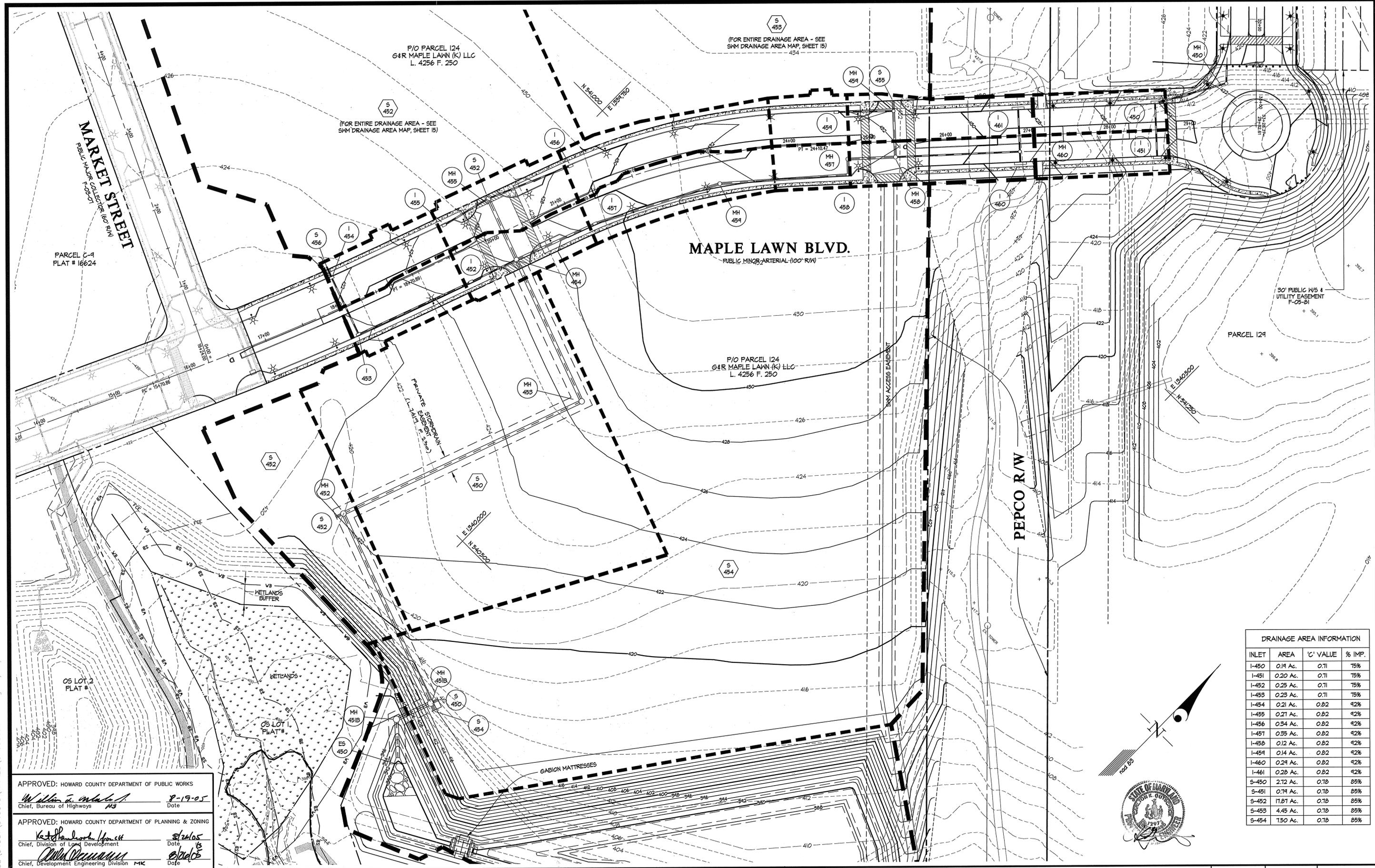
STORM DRAIN STRUCTURE INFORMATION

**MAPLE LAWN FARMS
 BUSINESS DISTRICT - AREA 2 /
 HILLSIDE DISTRICT - AREA 2
 MAPLE LAWN BOULEVARD EXTENSION
 P/O PARCEL 124 L. 4256 F. 250, P/O PARCEL 129**

ELECTION DISTRICT No. 5

SCALE	ZONING	G. L. W. FILE No.
1" = 50'	MXD-3	04080
DATE	TAX MAP - GRID	SHEET
July, 2005	41-22/46-3	10 OF 22

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F/O PARCEL 124
G&R MAPLE LAWN (K) LLC
L. 4256 F. 250

(FOR ENTIRE DRAINAGE AREA - SEE
SWM DRAINAGE AREA MAP, SHEET 15)

(FOR ENTIRE DRAINAGE AREA - SEE
SWM DRAINAGE AREA MAP, SHEET 15)

MAPLE LAWN BLVD.
PUBLIC MINOR ARTERIAL (100' R/W)

F/O PARCEL 124
G&R MAPLE LAWN (K) LLC
L. 4256 F. 250

PEPCO R/W

DRAINAGE AREA INFORMATION

INLET	AREA	'C' VALUE	% IMP.
I-450	0.19 Ac.	0.71	75%
I-451	0.20 Ac.	0.71	75%
I-452	0.25 Ac.	0.71	75%
I-453	0.23 Ac.	0.71	75%
I-454	0.21 Ac.	0.82	92%
I-455	0.21 Ac.	0.82	92%
I-456	0.34 Ac.	0.82	92%
I-457	0.35 Ac.	0.82	92%
I-458	0.12 Ac.	0.82	92%
I-459	0.14 Ac.	0.82	92%
I-460	0.29 Ac.	0.82	92%
I-461	0.28 Ac.	0.82	92%
S-450	2.12 Ac.	0.78	85%
S-451	0.79 Ac.	0.78	85%
S-452	17.87 Ac.	0.78	85%
S-453	4.45 Ac.	0.78	85%
S-454	7.50 Ac.	0.78	85%

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William J. ... 8-19-05
 Chief, Bureau of Highways
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Kathleen ...
 Chief, Division of Land Development
...
 Chief, Development Engineering Division

GLWGUTSCHICK LITTLE & WEBBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20886
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

PREPARED FOR:
 G&R MAPLE LAWN INC.
 SUITE 410 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: CHARLIE O'DONOVAN
 410-484-8400

STORM DRAIN DRAINAGE AREA MAP
MAPLE LAWN FARMS
BUSINESS DISTRICT - AREA 2 /
HILLSIDE DISTRICT - AREA 2
MAPLE LAWN BOULEVARD EXTENSION
 P/O PARCEL 124 L. 4256 F. 250, P/O PARCEL 129
 ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=50'	MXD-3	04080
DATE	TAX MAP - GRID	SHEET
July, 2005	41-22/46-3	11 OF 22

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

LEGEND

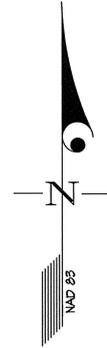
LAND USAGE

-  OPEN SPACE
-  EMPLOYMENT
-  RESIDENTIAL
-  ROAD R/W
-  DRAINAGE DIVIDE
-  SWM POND

NOTE: RESIDENTIAL LOTS AND COMMERCIAL PARKING LAYOUTS ARE FOR INFORMATIONAL PURPOSES ONLY.

NOTE: THIS AREA (DESIGNATED 'EMPLOYMENT' UNDER ZB CASE No. 995) HAS A PROPOSED DESIGNATION OF 'RESIDENTIAL' PER ZB CASE No. 1029M

E 1540500
N 541250



E 1539250
N 540250

E 1541000
N 540000



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William F. Mahan 8-19-05
 Chief, Bureau of Highways Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Kathleen H. Hance 8/26/05
 Chief, Division of Land Development Date

Chris Dammann 8/26/05
 Chief, Development Engineering Division Date

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

PREPARED FOR:
 G&R MAPLE LAWN INC.
 SUITE 410 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: CHARLIE O'DONOVAN
 410-484-8400

LAND USE PLAN FOR SWM PLAN ONLY

**MAPLE LAWN FARMS
 BUSINESS DISTRICT - AREA 2 /
 HILLSIDE DISTRICT - AREA 2
 MAPLE LAWN BOULEVARD EXTENSION**
 P/O PARCEL 124 L. 4255 E. 250, P/O PARCEL 129

ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD-3	04080
DATE	TAX MAP - GRID	SHEET
July, 2005	41-22/46-3	14 OF 22

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Pre Development		
SEGMENT	DESCRIPTION	TIME
(A) - (B)	100' OVERLAND FLOW (MEADOW) @ 1.0% (n=0.24)	0.31 hr.
(B) - (C)	1150' SHALLOW CONC. FLOW @ 4.4 % (n=3.4)	0.04 hr.
(C) - (D)	1000' STREAM FLOW @ 3.3'/SEC	0.08 hr.

LEGEND

- HYDROLOGIC SOIL GROUP
- C' SOIL □ D' SOIL
- NOTE: REMAINDER OF DRAINAGE AREA TO POND IS B' SOIL.
- · · · · · Time of Concentration Path
- --- --- Limit of Drainage to S/M Pond (Pre Development)
- A Tc Segment
- ⊙ Soil Boring Location



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William J. ... 8/19/05
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Ke ... 8/24/05
 Chief, Division of Land Development

... 8/24/05
 Chief, Development Engineering Division

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.
 SUITE 410 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: CHARLIE O'DONOVAN
 410-484-8400

PRE-DEVELOPMENT STORMWATER MANAGEMENT DRAINAGE AREA MAP

**MAPLE LAWN FARMS
 BUSINESS DISTRICT - AREA 2 /
 HILLSIDE DISTRICT - AREA 2
 MAPLE LAWN BOULEVARD EXTENSION**

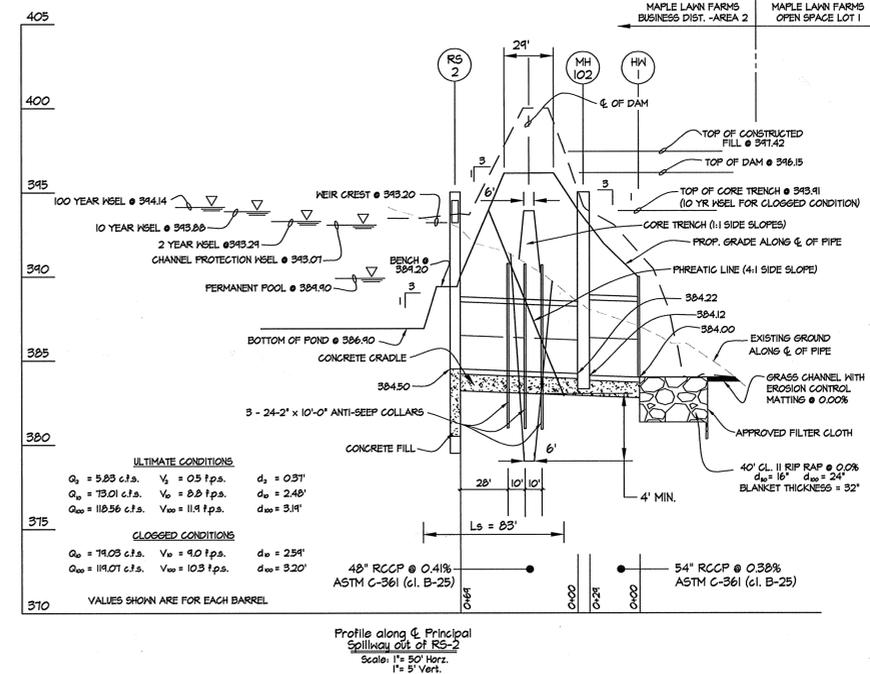
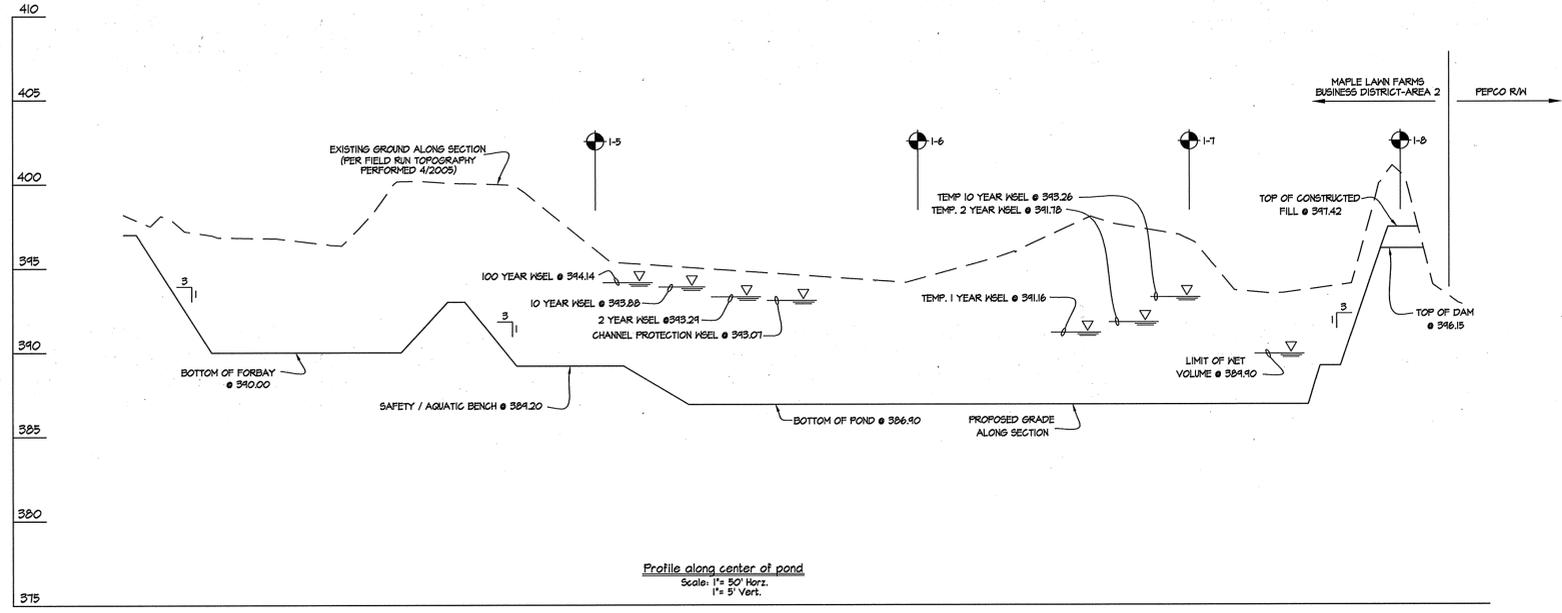
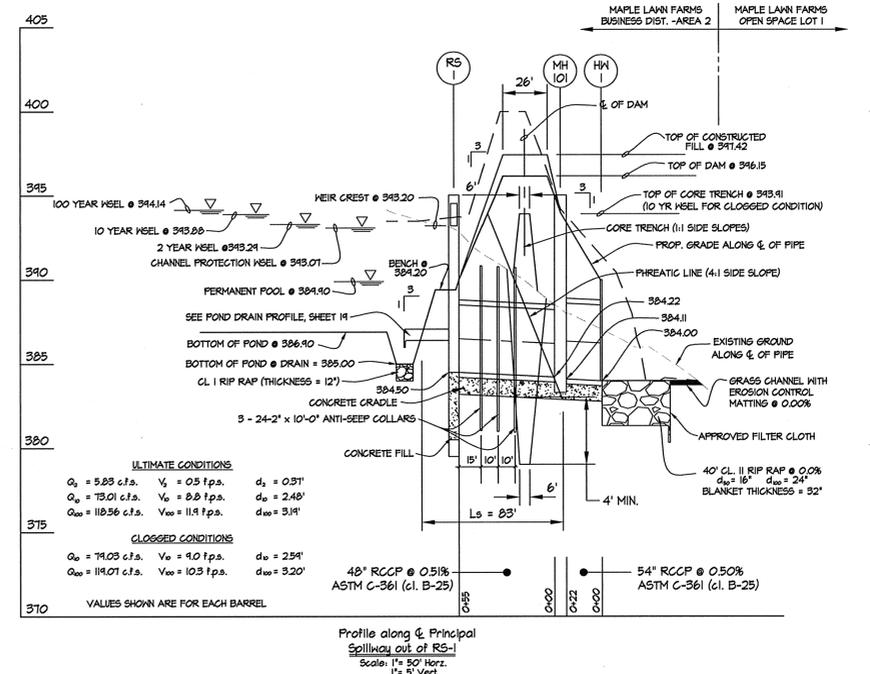
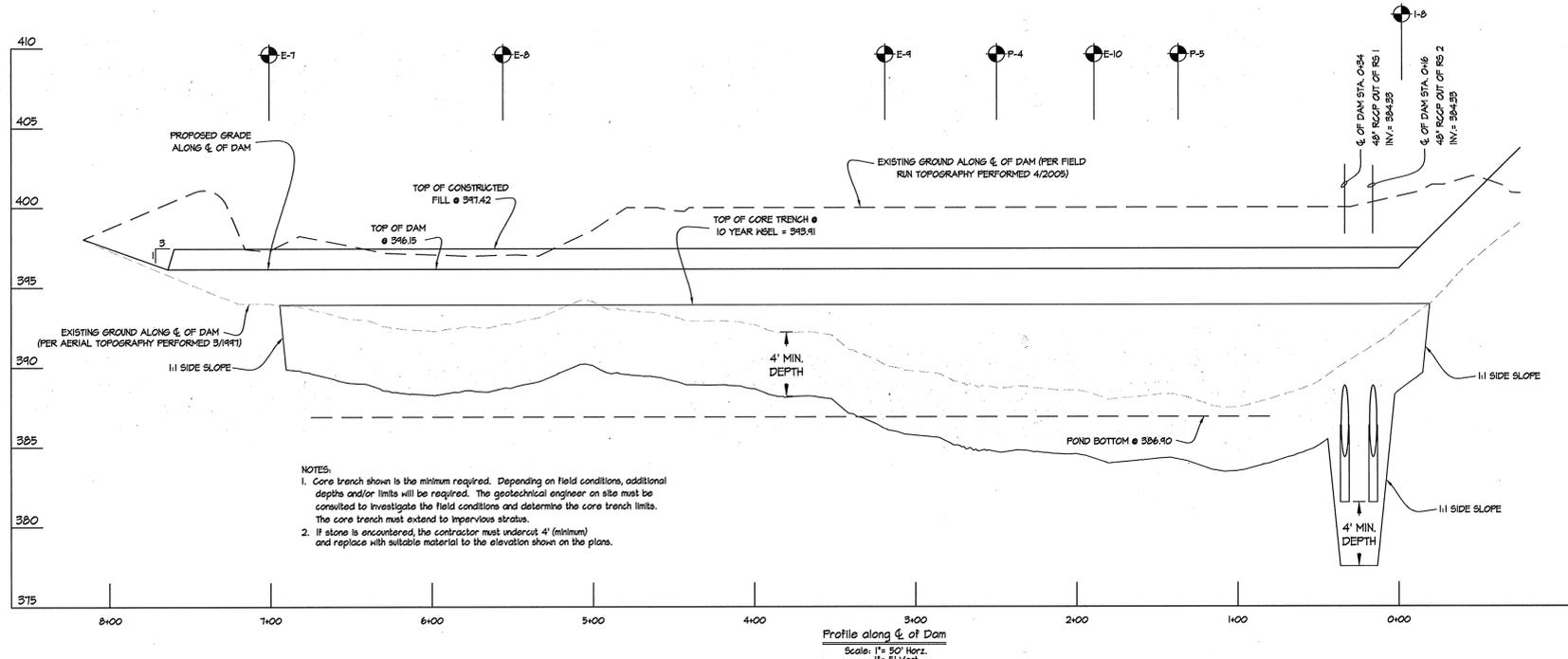
P/O PARCEL 124 L. 4256 F. 250, P/O PARCEL 129

ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=100'	MXD-3	04080
DATE	TAX MAP - GRID	SHEET
July, 2005	41-22/46-3	16 OF 22

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DEVELOPER'S/BUILDER'S CERTIFICATE
 "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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction and 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."

ENGINEER'S CERTIFICATE
 "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/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."



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

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

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 William J. ... 8-19-05
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 ... 8/26/05
 Chief, Division of Land Development

... 8/26/05
 Chief, Development Engineering Division

Signature of Developer/Builder: ... 7/28/05
 Engineer's Signature: ... 7-28-05
 Natural Resources Conservation Service: ... 8/1/05
 Howard Soil Conservation District: ... 8/1/05

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

PREPARED FOR:
 G&R MAPLE LAWN INC.
 SUITE 410 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: CHARLIE O'DONOVAN
 410-484-8400

STORMWATER MANAGEMENT PROFILES
MAPLE LAWN FARMS
BUSINESS DISTRICT - AREA 2 /
HILLSIDE DISTRICT - AREA 2
 MAPLE LAWN BOULEVARD EXTENSION
 P/O PARCEL 124 L. 4256 R. 250, P/O PARCEL 129
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	04080
DATE	TAX MAP - GRID	SHEET
July, 2005	41-22/46-3	17 OF 22

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OPERATION AND MAINTENANCE SCHEDULE
FOR PRIVATELY OWNED AND MAINTAINED RETENTION POND
(BY BUSINESS OWNER'S ASSOCIATION)

Routine Maintenance

- Facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the pond is functioning properly.
- Top and side slopes of the embankment shall be mowed a minimum of two (2) times per year, once in June and once in September. Other side slopes and maintenance access shall be mowed as needed.
- Debris and litter shall be removed during regular mowing operations as needed.
- Visible signs of erosion in the pond as well as the rip-rap or gabion outlet area shall be repaired upon the detection of any damage. The components shall be inspected during routine maintenance operations.

Non-Routine Maintenance

- Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components shall be inspected during routine maintenance operations.
- Sediment shall be removed from the pond, and forebay, no later than when the capacity of the pond, is half-full of sediment or when deemed necessary for aesthetic reasons, upon approval from the Department of Public Works.

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, 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.

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 GC, SC, CH, 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 permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

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

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 of the line 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 at least 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 assure 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 adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over 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 pss, 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 floating 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 structural backfill (flowable fill) zone shall be of the type and quality conforming to other embankment materials.

Pipe Conduits

All pipes shall be circular in cross section.

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

- Materials - (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 need for increased durability, 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 bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands or flanges. Aluminum Pipe, when used with flowable fill or when soil and/or water conditions warrant increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-190 Type A. Aluminum surfaces that are to be in contact with concrete shall be painted with one coat of zinc chromate primer or two coats of asphalt. Hot dip galvanized bolts may be used for connections. The pH of the surrounding soils shall be between 4 and 9.

- 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 at least 24 mils in thickness.
- Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.

All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled an adequate number of corrugations to accommodate the bandwidth. 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, preannounced to the flange bolt circle, sandwiched between adjacent flanges; a 12-inch wide standard lap type 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 long annular corrugated band using a minimum of 4 (four) rods and nuts, 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.

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

- Backfilling shall conform to "Structure Backfill".

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

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

- Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. 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.

- Joints and connections to anti-seep collars shall be completely watertight.

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

- Backfilling shall conform to "Structure Backfill".

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

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 311.

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.

Care of Water during Construction

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

Stabilization

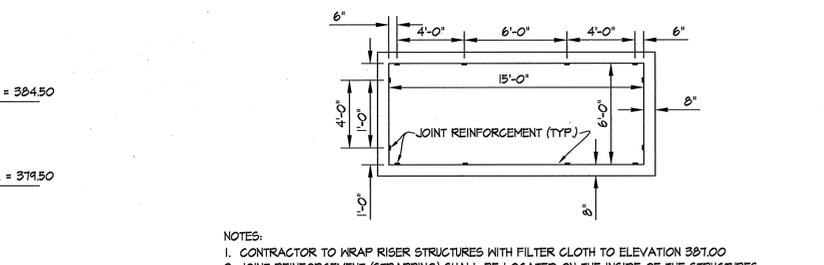
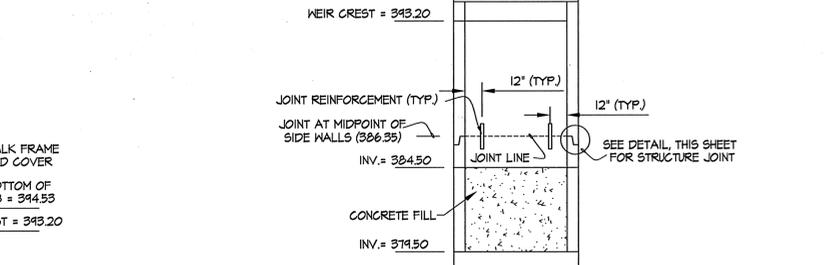
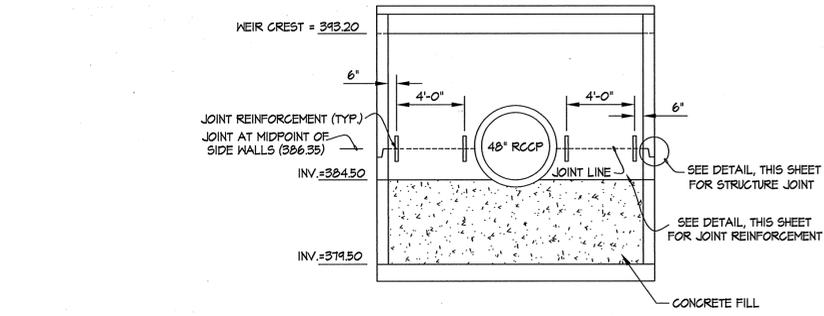
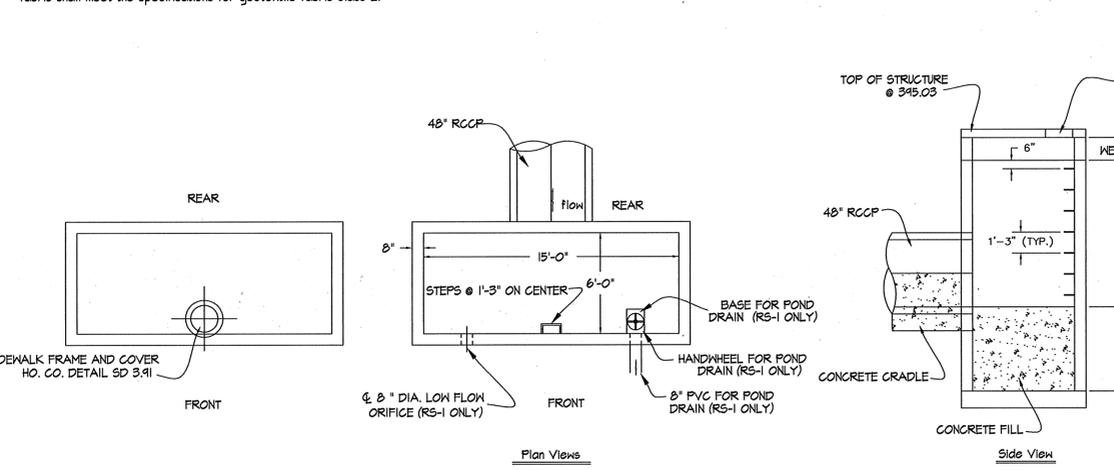
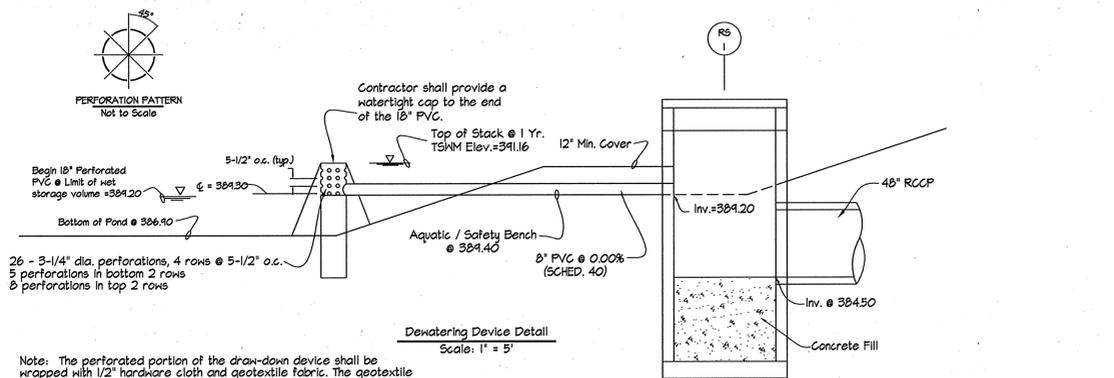
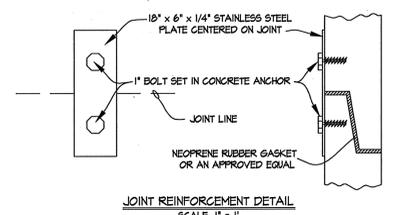
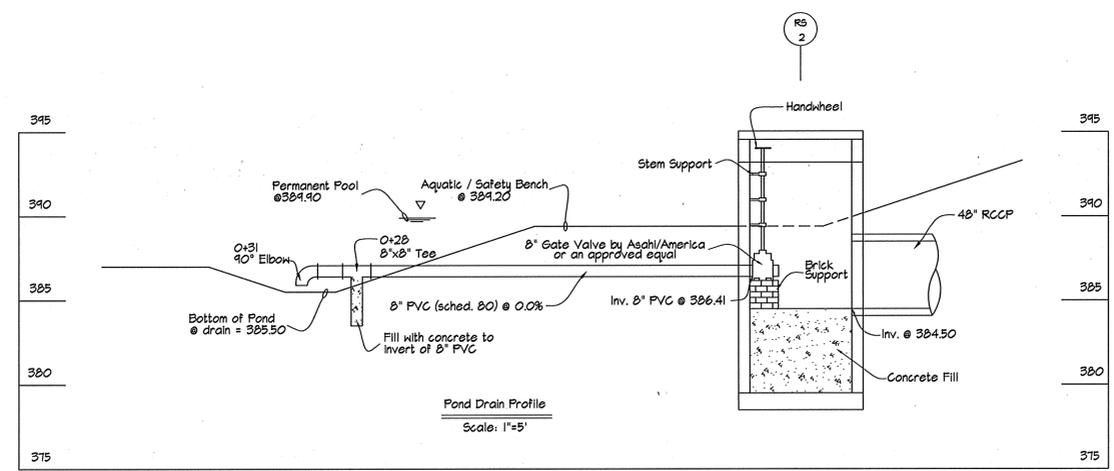
All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching.

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.

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 shall 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 reconstruction that involve a substantial portion of the structure. All indicated repairs are to be made as soon as practical.



- NOTES:
- CONTRACTOR TO WRAP RISER STRUCTURES WITH FILTER CLOTH TO ELEVATION 381.00
 - JOINT REINFORCEMENT (STRAPPING) SHALL BE LOCATED ON THE INSIDE OF THE STRUCTURES.

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



ENGINEER'S CERTIFICATE
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/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

Signature of Engineer
Date: 8/14/05

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 of Natural Resources Conservation Service
Date: 8/14/05

DEVELOPER'S/BUILDER'S CERTIFICATE

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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction and 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/Builder
Date: 7/28/05

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways
Date: 8-19-05

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Division of Land Development
Date: 8/26/05
Chief, Development Engineering Division
Date: 8/26/05

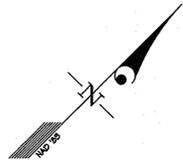
GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

PREPARED FOR:
G&R MAPLE LAWN INC.
SUITE 410 WOODHOLME CENTER
1829 REISTERSTOWN ROAD
BALTIMORE, MD 21208
ATTN: CHARLIE O'DONOVAN
410-484-8400

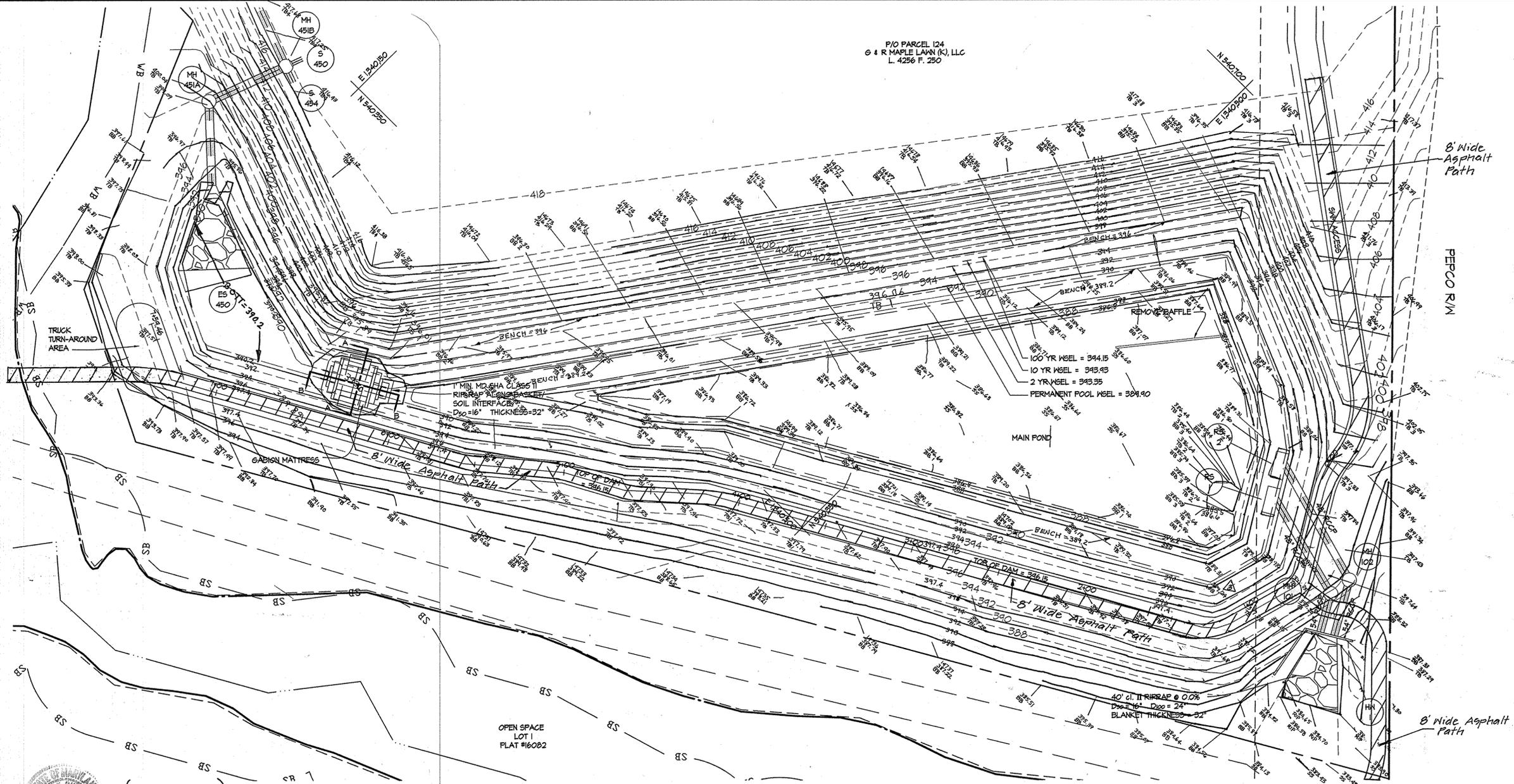
STORMWATER MANAGEMENT NOTES & DETAILS
MAPLE LAWN FARMS
BUSINESS DISTRICT - AREA 2 /
HILLSIDE DISTRICT - AREA 2
MAPLE LAWN BOULEVARD EXTENSION
P/O PARCEL 124 L. 4256 E 250, P/O PARCEL 129
ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	04080
DATE	TAX MAP - GRID	SHEET
July, 2005	41-22/46-3	19 OF 22

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P/O PARCEL 124
G & R MAPLE LAWN (K), LLC
L. 4256 F. 250



DEVELOPER'S/BUILDER'S CERTIFICATE

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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I shall engage a registered Professional Engineer to supervise pond construction and 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]
Signature of Developer/Builder

7/28/05
Date

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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/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

[Signature]
Engineer's Signature

7-28-05
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]
Natural Resources Conservation Service

8/11/05
Date

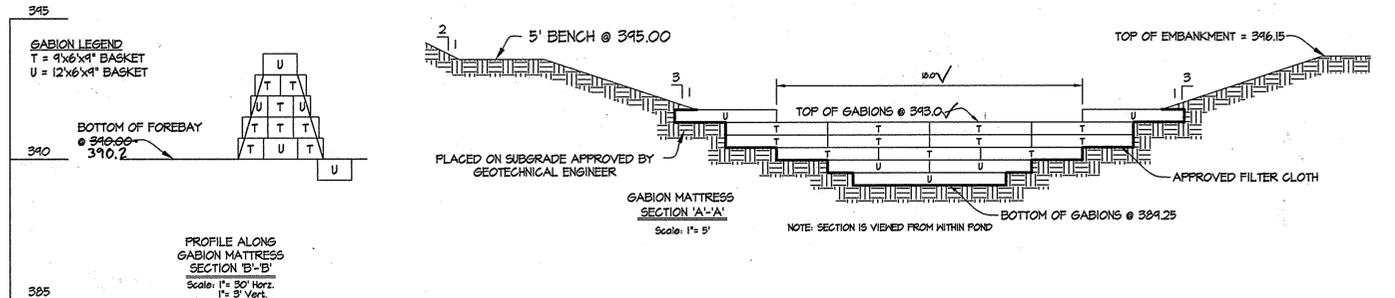
These Plans for small pond construction, soil erosion and sediment control meet the requirements of the Howard Soil Conservation District.

[Signature]
Howard Soil Conservation District

8/11/05
Date



(ALSO APPLIES TO ASBUILT)



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[Signature]
Chief, Bureau of Highways
8-15-05
Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[Signature]
Chief, Division of Land Development
8/26/05
Date
[Signature]
Chief, Development Engineering Division MK
8/26/05
Date

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 BALT: 410-380-1820 DC/VA: 301-959-2524 FAX: 301-421-4186

PREPARED FOR:
G&R MAPLE LAWN INC.
SUITE 410 WOODHOLME CENTER
1829 REISTERSTOWN ROAD
BALTIMORE, MD 21208
ATTN: CHARLIE O'DONOVAN
410-484-8400

STORMWATER MANAGEMENT POND CONVERSION PLAN & DETAILS

**MAPLE LAWN FARMS
BUSINESS DISTRICT - AREA 2 /
HILLSIDE DISTRICT - AREA 2
MAPLE LAWN BOULEVARD EXTENSION**
P/O PARCEL 124 L. 4256 F. 250, P/O PARCEL 129

SCALE	ZONING	G. L. W. FILE No.
1"=30'	MXD-3	04080
DATE	TAX MAP - GRID	SHEET
July, 2005	41-22/46-3	20 OF 22

DRAWINGS\04001\04001C\FINALS\04080SWM20.dwg DES. DEV DRN. AML CHK. DEV

7-22-14 DATE Show Pathway

REVISION

DEV BY APPR.

ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND

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Records of soil exploration for borings 1-5 and 1-6. Each record includes project name, location, date, sampler details, and a table of soil descriptions with depth, sample ID, and notes.

Records of soil exploration for borings 1-7 through 1-12. Each record includes project name, location, date, sampler details, and a table of soil descriptions with depth, sample ID, and notes.

6.0 RECOMMENDED ADDITIONAL SERVICES
Additional soil and foundation engineering, testing, and consulting services recommended for this project are summarized below.
Fill Placement and Compaction: A Geotechnical Engineer or experienced Soils Inspector should witness any required filling operations and should take sufficient in-place density tests to verify that the specified degree of fill compaction is achieved.
Foundation Excavation Inspection: A Geotechnical Engineer or experienced Soils Inspector should inspect the foundation excavations.
Additional Geotechnical Studies: When the footprints of the Commercial Buildings onsite are finalized, a geotechnical study including additional test borings should be performed to determine the soil conditions at the location of those specific structures, based upon the actual structural loading conditions and building elevations.

Records of soil exploration for borings 1-13 through 1-18. Each record includes project name, location, date, sampler details, and a table of soil descriptions with depth, sample ID, and notes.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 8-19-05
Date
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signature] 8/26/05
Date

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 FAX: 301-421-4186

HILLIS-CARNES ENGINEERING logo and contact information. PREPARED FOR: G&R MAPLE LAWN INC. SOIL BORING DETAILS. SCALE: AS SHOWN. ZONING: MXD-3. G. L. W. FILE No. 04080. DATE: July, 2005. TAX MAP - GRID: 41-22/46-3. SHEET: 21 OF 22. ELECTION DISTRICT No. 5. HOWARD COUNTY, MARYLAND.

FOREST CONSERVATION PLANTING NOTES

RETENTION / AFFORESTATION / REFORESTATION SUMMARY TABLE FOR MAPLE LAWN FARM PROJECT

PHASE NO.	GROSS AC.	FLOODPLAIN AC.	NET TRACT AREA	EXG. FOREST IN AC.	FOREST CLEARED	FOREST RETAINED	EXCESS RETENTION	REF/AFF REQUIRED	CREDITED PLANTING PROVIDED	EXCESS FOREST CON (PLANTING-RETENTION)	COMMENTS
1	51.98	3.40	48.58	9.45	0.51	8.94	0.83	0.00	4.56	5.19	Per F-03-07
2	75.20	2.38	72.82	0.00	0.00	0.00	0.00	10.92	6.67	-4.25	Per F-03-40
2	5.70	0.00	5.70	0.00	0.00	0.00	0.00	0.86	0.00	-0.86	Per SDF-03-140
3	14.04	14.85	4.24	0.21	0.00	0.21	0.00	0.43	10.49	10.06	Per F-04-42
3	-	-	-	-	-	-	-	-	-1.16	-1.16	(4) Per F-05-82
4a	15.48	3.00	12.48	1.92	1.65	0.27	0.00	3.21	0.90	-2.31	Per F-05-81
4b	3.12	0.35	2.77	0.00	0.00	0.00	0.00	0.42	-0.12	-0.54	Per F-05-139
4c	3.00	0.00	3.00	0.00	0.00	0.00	0.00	0.45	0.00	-0.45	Per this Plan
TOTAL	173.57	23.98	149.59	11.58	2.16	9.42	0.83	16.24	21.54	5.62	

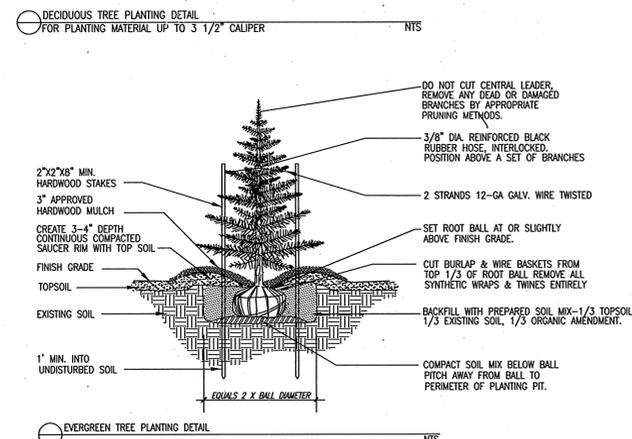
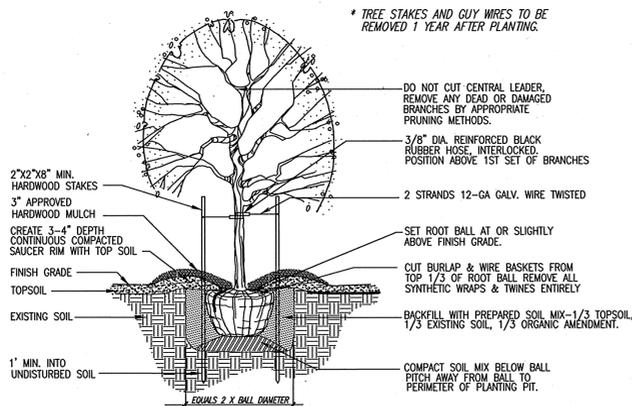
- (1) Includes future phase areas of Maple Lawn Farms. When these areas are recorded in future phases, the forest conservation requirements will already have been met.
- (2) 14.04 ACRES = 59.80 ACRES (Phase 3 site total) - 40.71 ACRES (Area of forest con. in Phase 3 already provided by F-03-40 (35.01 Ac) and SDF-03-140 (5.70 Ac.))
- (3) Reduced from 6.97 Ac. as shown on F-03-40 to 6.67 Ac. because of the 0.16 Ac. reduction of Conservation Easement #4 on F-04-74 and the 0.14 Ac. reduction of Conservation Easement #5 on F-04-88.
- (4) F-05-82 is a revision of Open Space Lots 221 & 222, and a conversion of Parcel E' to R/M. Forest Conservation Easement #4 will abandon 0.25 ac. and FCE #8 will abandon 0.91 ac.
- (5) 3.12 ACRES = 4.38 ACRES (Phase 4 site total) - 1.26 ACRES (Area of forest con. in Phase 4 already provided by F-03-40 and F-04-42).
- (6) 0.12 ACRES = Area subtracted from forest conservation area #11 to create Public Drainage and Utility Easement

GENERAL NOTES

- This afforestation plan is provided in accordance with the requirements of Subtitle 12 "Forest Conservation" of the Howard County Code.
- Implementation of this plan must be performed by a contractor that is knowledgeable and experienced in afforestation/reforestation techniques and practices.
- The owner is responsible for a 2-year (min.) post-construction maintenance period which involves activities necessary to ensure survival and growth of the conservation area. Two inspections per year by a qualified professional at beginning and end of the growing season, are recommended in order to take remedial steps as necessary. If, after one year, the possibility exists that the original planting (if applicable) will not meet survival rate standards, the applicant may choose to establish reinforcement plantings.
- At the end of the post-construction management and protection period, certification by a qualified consultant will be required before the owner can be released from his/her forest conservation obligation to the administrator of the Howard County Forest Conservation program.
- The contractor is responsible for the location of any existing utilities. The repair of any utilities damaged by the contractor shall be at the contractor's expense.
- Street trees provided at Final Plan Stage. Landscape and Buffering requirements to be provided at Site Plan and Final Plan Stage.
- The forest conservation easements shown on this plan will be established to fulfill the requirements of the Forest Conservation Program. No clearing, grading or construction is permitted within the forest conservation easements, however, forest management practices as defined in the Deed of Forest Conservation Easement are allowed.
- The forest conservation requirements per Section 16.1202 of the Howard County Code and the Forest Conservation Manual for Phase 4c of this project with an afforestation and reforestation obligation of 0.45 acres will be fulfilled by utilizing excess forest conservation from prior phases of this project.
- For Forest Conservation Easement Bearing and Distance Information, see the subdivision Plat associated with this Plan.
- Perimeter landscaping for non-residential parcels will be provided and shown on site development plans for this project in accordance with the approved landscape design criteria. Required perimeter landscaping for perimeters SWM-1, SWM-2, and SWM-3 is provided on this plan with surety in the amount of \$4,750.00 paid with the DPM, Developer's Agreement.

NOTES

- THE BUFFERS SHOWN IN THE SCHEDULES ARE IN ACCORDANCE WITH THE LANDSCAPE MANUAL. ACCORDING TO THE COMPREHENSIVE SKETCH PLAN CRITERIA, THE FOLLOWING ARE THE MINIMUM PLANTING TO BE PROVIDED ALONG A PERIMETER EDGE:
 SHADE TREE: 1:80 LINEAR FEET OF MEASURED PERIMETER EDGE, AND
 SMALL ORNAMENTAL DECIDUOUS TREE: 1:60 LINEAR FEET OF MEASURED PERIMETER EDGE AND
 EVERGREEN TREE: 1:20 LINEAR FEET OF MEASURED PERIMETER EDGE.
- THE BUFFERS SHOWN FOR SCHEDULE 'D' ARE IN ACCORDANCE WITH THE LANDSCAPE MANUAL. ACCORDING TO THE COMPREHENSIVE SKETCH PLAN CRITERIA, THE FOLLOWING ARE THE MINIMUM PLANTING TO BE PROVIDED ALONG BUFFER TYPE 'B':
 SHADE TREE: 1:50 LINEAR FEET OF MEASURED PERIMETER EDGE, AND
 EVERGREEN TREE: 1:40 LINEAR FEET OF MEASURED PERIMETER EDGE.
 BUFFER STORMWATER MANAGEMENT FROM A ROADWAY OR PERIMETER RESIDENTIAL PROPERTIES:
 SHADE TREE: 1:40 LINEAR FEET OF MEASURED PERIMETER EDGE, AND
 EVERGREEN TREE: 1:20 LINEAR FEET OF MEASURED PERIMETER EDGE.
- AFFORESTATION PLANTING SIZE SHALL BE LARGE ENOUGH TO MEET THE LANDSCAPE BUFFERING REQUIREMENT ALONG EXTERNAL PERIMETERS WHERE APPLICABLE.



Projected Bond Requirement:

Schedule 'D' Number of required Shade Trees for bonding:	20 x \$300 =	\$ 6,000.00
Schedule 'D' Number of required Evergreen Trees for bonding:	25 x \$150 =	\$ 3,750.00
		\$ 9,750.00

COMMENTS:

SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	ROOT	COMMENTS
AR	10	Acer rubrum 'Autumn Flame' Autumn Flame Maple	2 1/2-3" Cal.	B4B	
QP	10	Quercus palustris Pin Oak	2 1/2-3" Cal.	B4B	
PS	12	Pinus strobus White Pine	6'-8" HT.	B4B	
PO	16	Picea omorika Serbian Spruce	6'-8" HT.	B4B	



FOREST CONSERVATION WORKSHEET

SITE DATA

A. GROSS SITE AREA	3.00
B. AREA WITHIN 100-YEAR FLOOD PLAIN	0.00
C. NET TRACT AREA	3.00
D. LAND USE CATEGORY	MXD-3
E. AFFORESTATION THRESHOLD (5% x NET TRACT AREA)	0.45
F. CONSERVATION THRESHOLD (15% x NET TRACT AREA)	0.45

EXISTING FOREST COVER

G. EXISTING FOREST ON NET TRACT AREA	0.00
H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD (On Net Tract Area)	0.00
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD (On Net Tract Area)	0.00

PROPOSED FOREST CLEARING

J. FOREST AREAS TO BE CLEARED (On Net Tract Area)	0.00
K. FOREST AREAS TO BE RETAINED (On Net Tract Area)	0.00

PLANTING REQUIREMENTS

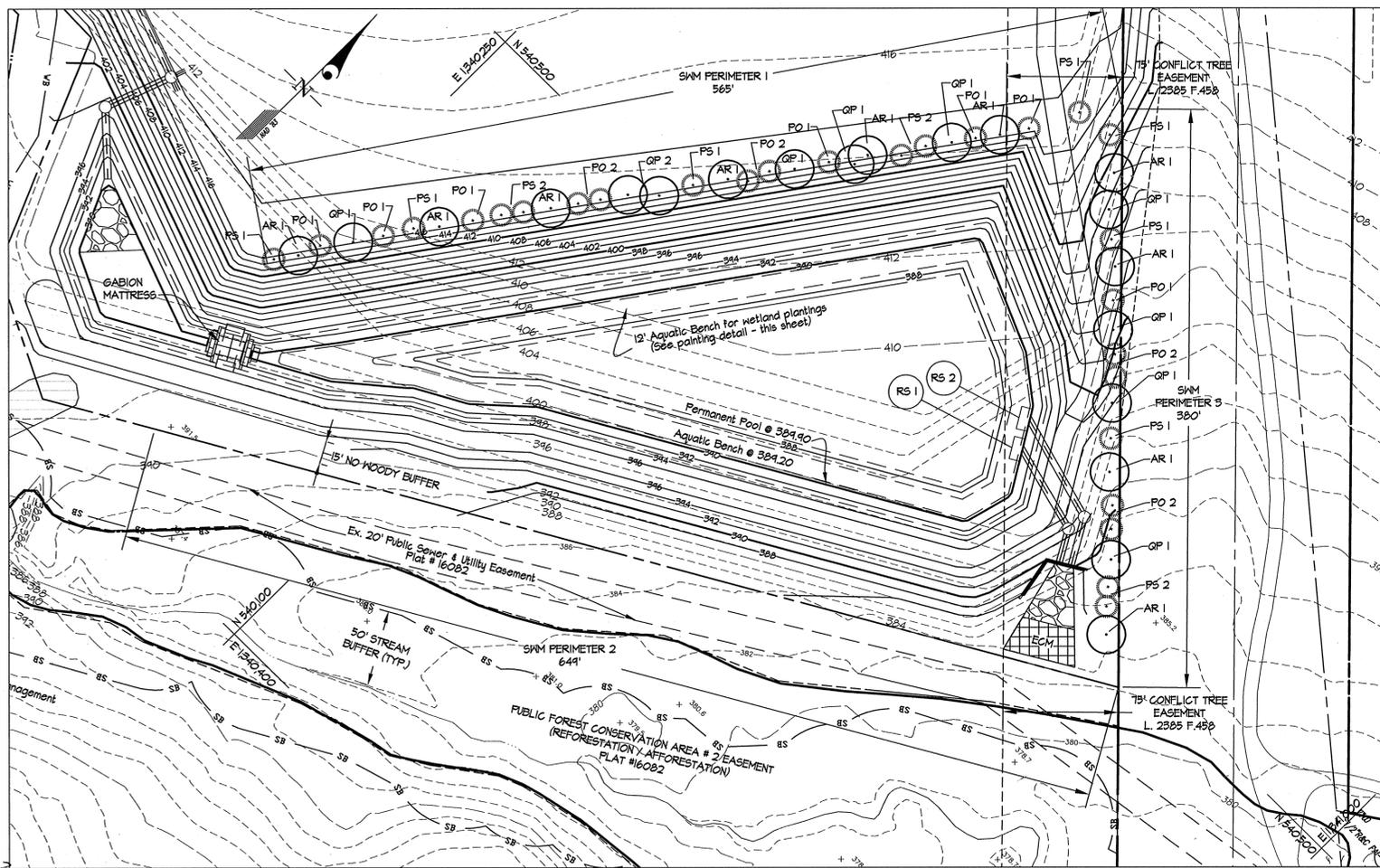
TOTAL REFORESTATION REQUIRED (J x 2.00)	0.00
TOTAL AFFORESTATION REQUIRED (E - G)	0.45
TOTAL AFFORESTATION AND REFORESTATION REQUIRED	0.45

PLANTING TO BE PROVIDED

	0.00
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CONSTRUCTION PERIOD PROTECTION PROGRAM

- The limit of forest retention shall be staked and flagged.
 - A pre-construction meeting at the site should be held to confirm the limits of clearing specified. The meeting should include the owner or the owner's representative, the on-site foreman in charge of land disturbance, the environmental consultant and the appropriate Howard County inspectors.
 - Forest protection devices and signs (see details) shall be installed prior to any clearing or grading. The protection devices and signs shall be maintained during the entire construction period. None of the devices shall be anchored or attached in any way to the trees to be saved. The maintenance time frame may be extended to accommodate subsequent phases of development.
 - Equipment, vehicles and building materials shall not be within the protected area. Activities strictly to implement any reforestation planting and maintenance (i.e. watering, fertilizing, thinning, pruning, removal of dead and diseased trees where necessary, etc.) of the conservation area are permitted. Clearing for the purpose of sodding or planting grass is not permitted within the forest conservation area once it's established.
 - At the end of the construction period, the designated qualified professional shall convey certification to the administrator of the Howard County Forest Conservation Program that all forest retention areas have been preserved, all reforestation and/or afforestation plantings (if applicable) have been installed as required by the forest conservation plan, and that all protection measures required for the post-construction period have been installed.
- Upon review of the final certification document for completeness and accuracy, the program coordinator will notify the owner of release from the construction period obligations. The 2-year (min.) post-construction management and protection period then commences.



STORMWATER MANAGEMENT AREA LANDSCAPING - SCHEDULE D

PERIMETER	PROPOSED LAND USE	ADJACENT LAND USE	TYPE OF BUFFER	LINEAR FEET OF PERIMETER	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) DESCRIBE BELOW IF NEEDED.	CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) DESCRIBE BELOW IF NEEDED.	NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES	NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES	HOW REQUIRED BUFFER IS BEING PROVIDED
SWM-1	SWM	FUTURE COMMERCIAL	'B' Buffer*	565 L.F.	NO	NO	12 15	12 18	PER THIS PLAN
SWM-2	SWM	OPEN SPACE	'B' Buffer*	572 L.F.	572' (FOREST CONSERVATION AREA)	NO	---	---	PER THIS PLAN
SWM-3	SWM	OPEN SPACE	'B' Buffer*	380 L.F.	NO	NO	8 10	8 10	PER THIS PLAN

* FOLLOWS COMPREHENSIVE SKETCH PLAN GUIDELINE REQUIREMENTS

LANDSCAPING REQUIREMENTS

ALL PERIMETERS CREATED BY THIS SUBMISSION WHICH ARE NOT SHOWN ABOVE ARE INTERNAL. ALL LANDSCAPING REQUIREMENTS FOR THESE PERIMETERS WILL BE FULFILLED UNDER FUTURE SITE DEVELOPMENT PLANS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 8/19/05
 Chief, Bureau of Highways

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 [Signature] 8/26/05
 Chief, Division of Land Development

APPROVED: [Signature] 8/26/05
 Chief, Development Engineering Division

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

PREPARED FOR:
 G&R MAPLE LAWN INC.
 SUITE 410 WOODHOLME CENTER
 1829 REISTERSTOWN ROAD
 BALTIMORE, MD 21208
 ATTN: CHARLIE O'DONOVAN
 410-484-8400

FINAL FOREST CONSERVATION & LANDSCAPE PLAN DETAILS & NOTES

MAPLE LAWN FARMS
 BUSINESS DISTRICT - AREA 2 /
 HILLSIDE DISTRICT - AREA 2
 MAPLE LAWN BOULEVARD EXTENSION
 P/O PARCEL 124 L. 4256 R. 250, P/O PARCEL 129

ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	MXD-3	04080
DATE	TAX MAP - GRID	SHEET
July, 2005	41-22/46-3	22 OF 22